MOVE SKAGIT
REGIONAL SAFETY ACTION PLAN

DRAFT Regional Safety Action Plan

Prepared for

SCOG
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Draft Date: December 10, 2025

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Regional Safety Action Plan Narrative Style

Transportation safety action plans address sensitive topics related to serious injuries and deaths resulting from crashes within the transportation system. The Safe System Approach (SSA) is promoted by the United States Department of Transportation (USDOT) as a framework for understanding and prioritizing reductions to serious injuries and deaths. Industry best practices inform the narrative style and terminology of a safety action plan, taking into account the sensitivity of impacts on the community and the technical precision required for understanding transportation system safety performance. Best practices for narrative style and terminology when discussing transportation safety performance include:

- The term “crash” will be used instead of “accident” when referring to instances of a collision. Collision may also be used.
- Focus on victims. A victim refers to an injured person or a person who suffered death as a result of a crash.
- Crashes are complex, and recorded information about the crash can be incomplete, failing to tell the whole story of the incident.
- Survivorship bias exists. In crashes involving multiple people where one participant dies, survivor accounts can often lead to inaccurate conclusions. This is particularly evident in bike and pedestrian fatalities, where the victim is assigned a violation-based contributing factor nearly 2.5 times more often than in cases of minor injuries.

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Table of Acronyms and Abbreviations

Abbreviation	Definition
AADT	Average Annual Daily Traffic
ACS	American Community Survey
HCL	High Crash Location
HIN	High Injury Network
IIHS	Insurance Institute of Highway Safety
IIJA	Infrastructure Investment and Jobs Act
FHWA	Federal Highway Administration
NRSS	National Roadway Safety Strategy
RCW	Revised Code of Washington
RSAP	Regional Safety Action Plan
SCOG	Skagit Council of Governments
SHSP	Strategic Highway Safety Plan
SSA	Safe System Approach
SS4A	Safe Streets and Roads for All
TAC	Technical Advisory Committee
TPB	Transportation Policy Board
USDOT	United States Department of Transportation
WSDOT	Washington State Department of Transportation
WTSC	Washington Traffic Safety Commission
Crash Data Abbreviations	**Definition**
K	Death or Fatality
A	Suspected Serious Injury (SI)
B	Suspected Minor Injury
C	Possible Minor Injury
O	Crashes Resulting in Property Damage Only
KABC	Deaths, Serious Injuries, and Minor Injuries
KABCO	All Reported Injury Classifications including Deaths, Serious Injuries, Minor Injuries and Property Damage Only
KSI (KA)	All Serious Injuries and Deaths

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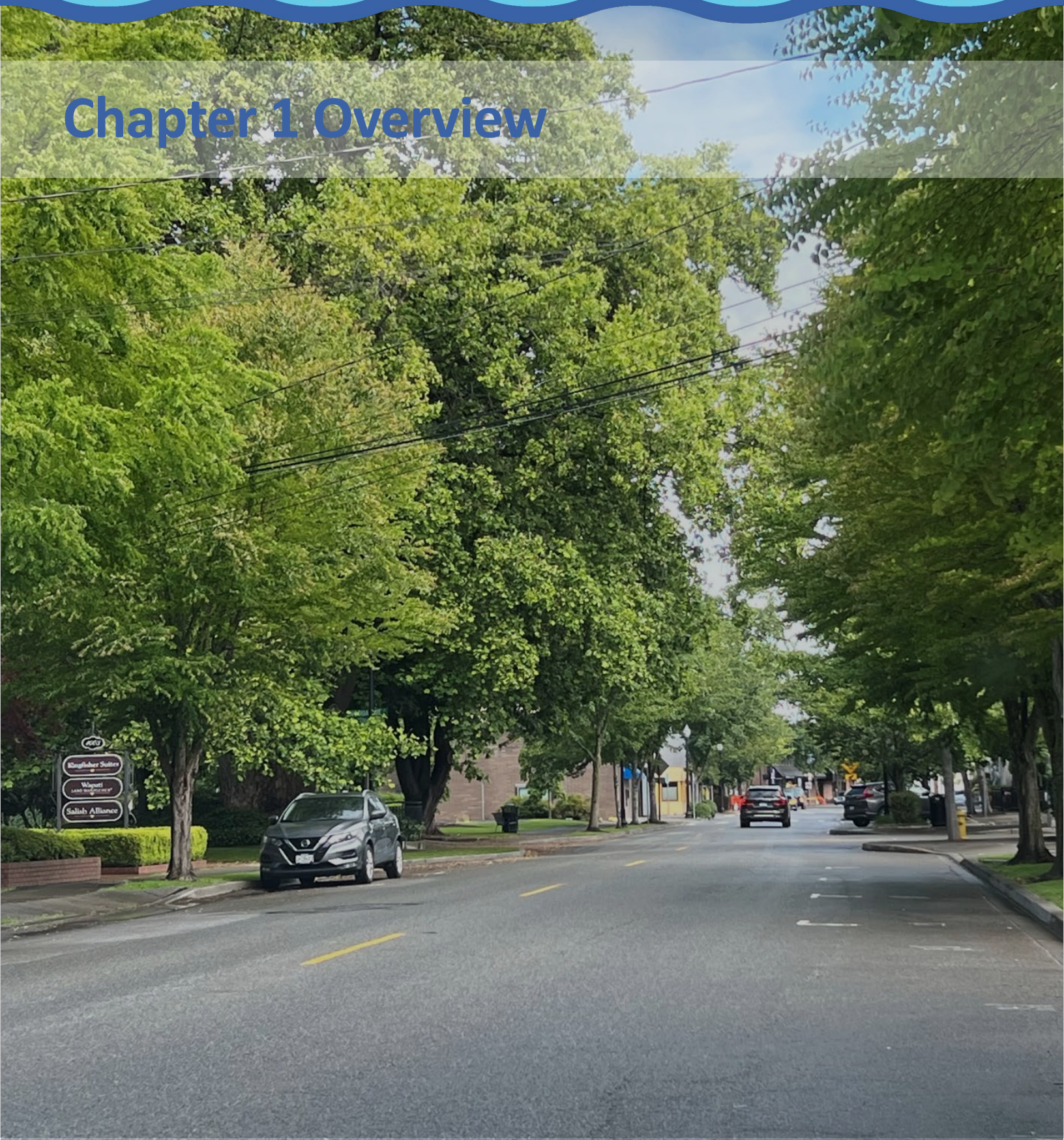
Chapter 1 Overview

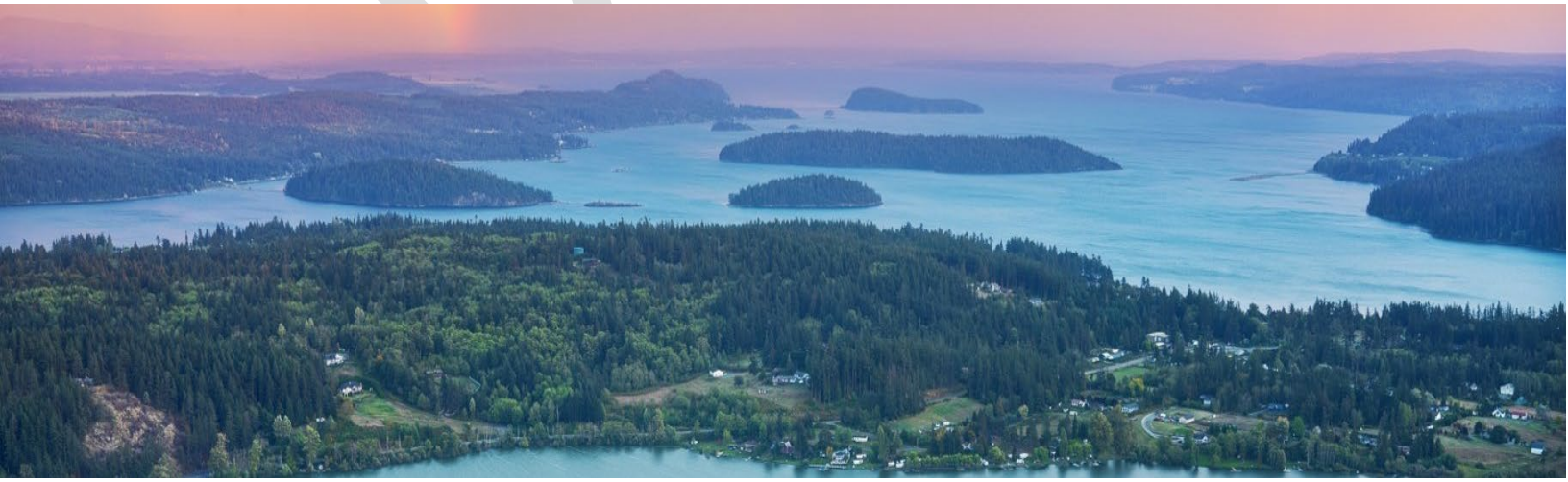


Introduction

The Skagit Council of Governments (SCOG) pursued and was awarded Safe Streets and Roads for All (SS4A) funding through the U.S. Department of Transportation (USDOT) to develop a Regional Safety Action Plan (RSAP). This SCOG RSAP is a strategic plan for communities in Skagit County to improve the safety of the transportation system by taking a systematic and data driven approach to reducing roadway deaths and serious injuries. The SCOG RSAP follows the USDOT National Roadway Safety Strategy principles and elements of the Safe System Approach.

Purpose

SCOG connects Skagit County's leaders to build a stronger Skagit County region and plan for future growth. As Skagit County's federal- and state-designated transportation planning organization, SCOG coordinates decision-making and policy development in transportation and regional growth management. Made up of 15 local and tribal jurisdictions, SCOG works with partner agencies to administer programs and develop long-term solutions for the region's challenges. Move Skagit is the multimodal planning process connecting three concurrent planning processes including the Regional Transportation Plan update, Regional Safety Action Plan and Transportation Resilience Improvement Plan. The Regional Safety Action Plan and the Transportation Resilience Improvement Plan inform the Regional Transportation Plan in key areas related to roadway safety and resilience.



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SS4A

The Infrastructure Investment and Jobs Act (IIJA) established the SS4A discretionary grant program administered through USDOT. The program funds regional, local, and Tribal initiatives through grants to prevent roadway deaths and serious injuries. The SS4A program was funded for federal fiscal years 2022 through 2026. The SS4A Program supports the USDOT National Roadway Safety Strategy to eliminate roadway deaths and serious injuries using the Safe System Approach.

SS4A Components

The primary goal of the SS4A program is to support the development and implementation of holistic, well-defined strategies to prevent roadway deaths and serious injuries in a locality, region, or on Tribal Lands through comprehensive safety action plans. USDOT provides some flexibility to achieve a successful Regional Safety Action Plan by requiring jurisdictions to complete fundamental SS4A components, while allowing agencies to complete three out of five of the other SS4A components. The required components include robust safety analysis, strategy and project selections, and completing the Regional Safety Action Plan within five years. SS4A Safety Action Plan components are described below:

1. **Leadership Commitment and Goal Setting.** An official public commitment to an eventual goal of zero roadway deaths and serious injuries.
2. **Planning Structure.** A committee, task force, implementation group, or similar body charged with oversight of the Action Plan development, implementation, and monitoring.
3. **Safety Analysis.** Data-driven analysis of existing conditions and historical trends provides a baseline level of crashes involving deaths and serious injuries across a jurisdiction, locality, Tribe or region. It includes crash severity, types, contributing factors, involved road users, systemic and location-specific safety needs, and geospatial identification of high-risk locations.
4. **Engagement and Collaboration.** Robust engagement with the public and relevant and regional partners.
5. **Policy and Process Changes.** Assessment of current local policies, plans, guidelines, or standards to identify opportunities to improve how processes prioritize transportation safety.
6. **Strategy and Project Selections.** Identification of a comprehensive set of projects and strategies informed by data, the best available evidence, and noteworthy practices, and community input that will address the safety problems described in the Regional Safety Action Plan.
7. **Progress and Transparency.** Methods to measure progress over time after a Regional Safety Action Plan is developed or updated, including crash outcomes and ensure ongoing transparency is established with residents and regional partners.

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Safe System Approach

USDOT adopted the Safe System Approach as the guiding framework to address roadway safety. The Safe System Approach has been embraced by the transportation community and state and local agencies as an effective way to address and mitigate the risks in our transportation system. It works by building and reinforcing multiple layers of protection to prevent crashes from happening, and minimizing harm caused to those involved when crashes do occur. It is a holistic and comprehensive approach that provides a guiding framework to make roadways safer for people. The Safe System Approach is a shift from the conventional safety approach because it focuses on both human mistakes and human vulnerability and prioritizes a transportation system with many redundancies to protect everyone.

Safe System Principles

The Safe System Approach incorporates the following principles:

1. **Death and Serious Injuries are Unacceptable.** A Safe System Approach prioritizes the elimination of crashes that result in death and serious injuries.
2. **Humans Make Mistakes.** People will inevitably make mistakes and decisions that can lead or contribute to crashes, but the transportation system can be designed and operated to accommodate certain types and levels of human mistakes and avoid death and serious injuries when a crash occurs.
3. **Humans Are Vulnerable.** Human bodies have physical limits for tolerating crash forces before death or serious injury occurs; therefore, it is critical to design and operate a transportation system that is human-centric and accommodates physical human vulnerabilities.
4. **Responsibility is Shared.** All stakeholders—including governments at all levels, industry, non-profit/advocacy, researchers, and the public, are vital to preventing deaths and serious injuries on our roadways.
5. **Safety is Proactive.** Proactive tools should be used to identify and address safety issues in the transportation system, rather than waiting for crashes to occur and react afterwards.
6. **Redundancy is Crucial.** Reducing risks requires that all parts of the transportation system be strengthened, so that if one element fails, the other elements still protect people.

Figure 1. Principles of a Safe System Approach

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Safe System Elements

A Safe System Approach suggests multiple and redundant protective layers are needed in transportation to both lower crash frequency and reduce their severity when they occur. This redundancy is modeled in a "Swiss Cheese" model as shown in Figure 2. Swiss Cheese Model of Roadway Safety noting the importance of adding layers of protection to achieve roadway safety.

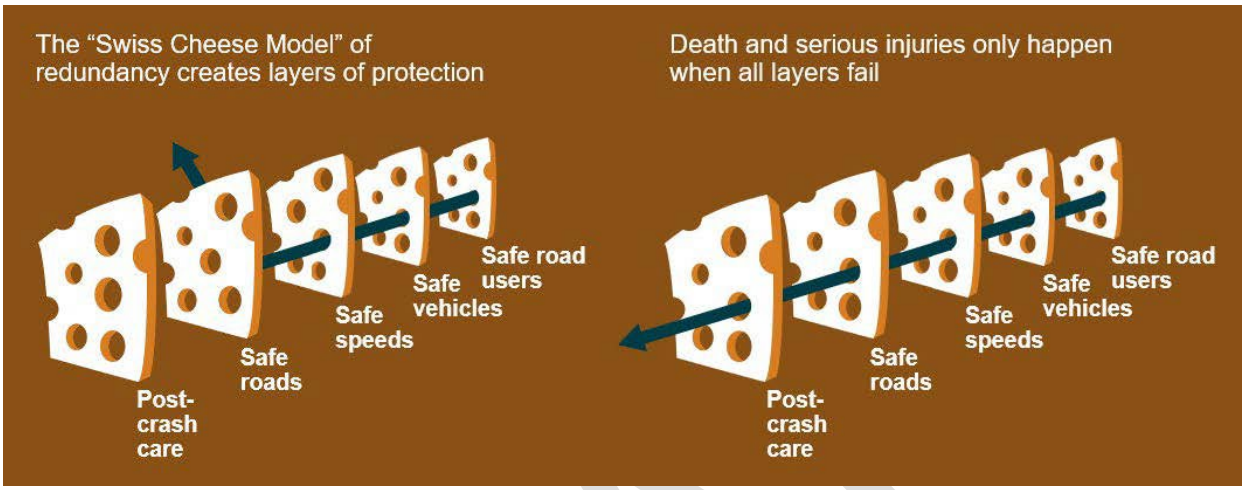

Figure 2. Swiss Cheese Model of Roadway Safety

A Safe System Approach incorporates the following elements:

1. **Safer People.** Encourage safe, responsible driving and behavior by people who use our roads through education and training. Strategies can include driver education, appropriate car-seat use and training.
2. **Safer Roads.** Design roadways that are orderly and intuitive following uniform design guidance. Strong design can minimize human mistakes while encouraging safer behaviors, specifically where systems include vulnerable road users – people walking, biking or rolling. Strategies can include roadway modifications to reduce speeds and designs that minimize crash conflicts such as roundabouts.
3. **Safer Vehicles.** Encourage transition of vehicles to those that are safer, minimizing blind spots and including safety features such as sensors and cameras. As an example, the Insurance Institute of Highway Safety (IIHS) has updated its testing criteria to prioritize safety for passengers in the back seat and pedestrians, requiring automakers to score a good rating in side crash tests and pedestrian crash prevention tests. These updates aim to improve the overall safety of vehicles and reduce the risk of pedestrian fatalities.
4. **Safer Speeds.** Promote safer speeds in all roadway environments through a combination of thoughtful, context-appropriate roadway design, appropriate speed-limit setting, targeted education, outreach campaigns, and enforcement.
5. **Post-Crash Care.** Enhance the survivability of crashes through expedient access to emergency medical care, while creating a safe working environment for first responders, and prevent secondary crashes through robust traffic incident management practices.

Washington Strategic Highway Safety Plan (Target Zero)

In 2024, the State of Washington updated their Strategic Highway Safety Plan (SHSP) titled Target Zero. The plan outlines the state's goal of eliminating traffic-related deaths and serious injuries by 2030. Despite past successes in reducing fatalities through new laws and safety measures, recent years have seen a troubling rise in crashes, prompting a renewed commitment to the Target Zero goal. The plan commits to the Safe System Approach while modifying the approach slightly to integrate safer road users, speeds, roads, vehicles, post-crash care, and new element, safer land use planning.

Safer Land Use

The Washington State Target Zero Plan introduces "safer land use" as a distinct sixth element of its Safe System Approach. This addition emphasizes the importance of designing communities where people can live, work, attend school, and shop with minimal reliance on long vehicle trips. By encouraging shorter travel distances and supporting safe access to all modes of transportation, including walking, rolling, biking, transit, and shared vehicles, safer land use planning aims to reduce exposure to crash risks and promote equitable mobility. The approach recognizes that thoughtful land use decisions can significantly influence travel behavior and safety outcomes, making it a critical strategy for achieving the state's goal of zero traffic deaths and serious injuries by 2030.

Figure 3. Washington State Strategic Highway Safety Plan Safe System Approach Wheel

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How to Use this Plan

This RSAP uses a data-driven approach to identify key safety issues through analysis of crash trends, contributing factors, crash types, and high-risk locations. This initial assessment is then validated and expanded through robust community engagement to surface additional concerns and priorities. This RSAP leverages geographic crash analysis to develop tools that support agencies and regional partners in understanding safety challenges spatially. Building on these insights, the plan provides a follow-up guide with targeted strategies and countermeasures to address identified safety issues and improve roadway safety outcomes across the region.

The plan is organized into 5 sections, each representing different phases in identifying tools, strategies, and implementation steps to eliminate roadway deaths and serious injuries. Chapter 2 provides a summary of partner agencies regional roadway safety-related plans, policies, and programs and an analysis of trends and findings in Skagit County based on crash data. Issues identified in Chapter 2 are used to inform tools and strategy recommendations Chapter 4 and 5. Additionally, Chapter 3 outlines a series of public engagements and outreach activities that have informed the plan. Chapter 4 details strategies to improve safety across both the High Injury Network and crash focus areas. Chapter 5 considers strategies that could be applied across the High Injury Network (HIN) and in concert with current transportation improvements and outlines implementation steps and next actions. Chapter 6 includes safety-related goals and policies for consideration of including within the Regional Transportation Plan.

This RSAP is supplemented by four appendices including Appendix A, State of Safety Practice identifies current safety-related plans, policies, and strategies impacting Skagit County and aligned with the Safe System Approach. Appendix B, State of the Region Report provides a data-driven analysis that identifies safety conditions, trends and key findings in Skagit County. Appendix C, Engagement and Collaboration includes a summary of the engagement and collaboration conducted to in the development of the Regional Safety Action Plan. Appendix D, Transportation Equity Review identifies disparities in transportation safety outcomes among historically underserved and overburdened communities in Skagit County.

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Chapter 2 State of Safety in the Region

Introduction

This chapter provides a summary of the region's roadway safety-related plans, policies, and programs from twelve jurisdictions across Skagit County. Table 1 notes these partner agencies that have safety-related existing plans, policies or programs. Partner agencies not included in the inventory, as they do not oversee roadway traffic safety, are the Ports of Skagit and Anacortes, as well as the Skagit Public Utilities District. This chapter also presents a summary analysis based on data that outlines safety conditions, trends, and findings in Skagit County. It lays the groundwork for the development of the crash focus areas to assist in defining potential strategies that form the core of the Regional Safety Action Plan.

Table 1. SCOG Partner Agencies Audited for Safety Plans, Policies, and Programs

SCOG Jurisdictions		
City of Anacortes	Swinomish Indian Tribal Community	Town of Concrete
City of Burlington	Samish Indian Nation	Town of Hamilton
City of Mount Vernon	Skagit County	Town of La Conner
City of Sedro Woolley	Skagit Transit	Town of Lyman

*__Note__: Port of Skagit, Skagit PUD, and Port of Anacortes do not have responsibility for roadway traffic safety.

State of Safety Data Key Findings

The following key findings provide critical insights into transportation safety trends and conditions within Skagit County:

1. **Rising Injuries and Deaths:** While total injuries related to roadway crashes including deaths, serious injuries and non-serious injuries have not changed over the last decade, there was a slight increase since the COVID-19 global pandemic of 27%. More prominent is the rise in deaths on the county's roadways which more than doubled from8 in 2016 to 17 in 2018 and stayed in the teens including 2023 when there were 15 deaths.
2. **Crash severity, deaths and injuries are higher in areas where there are income disparities:** Low-income census tracts experience 13% more injuries and deaths than the county average. Similarly, census tracts with an above average proportion of people with disabilities experience 21% more injuries and deaths than the county average, and 8% more serious injuries and deaths.

3. **Urban cities experience a higher proportion of injury crashes**: Urban incorporated cities had higher rates for all injuries and deaths than other non-urban areas in Skagit County. Burlington had a rate of 71% higher than the county average, while Lyman had 68% higher than the county average. The town of Hamilton had a lower rate of overall injuries and deaths compared to the county average, but an 8% higher rate when considering serious injuries and deaths.
4. **In the jurisdictions of La Conner and Burlington, injuries involving pedestrians and bicyclists result in a higher proportion of serious injuries and deaths**: Normalized for population size, the town of La Conner had the highest rate of pedestrian and bicyclist serious injuries and deaths at 145% above the county average. Burlington has the second-highest rate of pedestrian and bicyclist serious injuries and deaths, at 83% above the county average. Burlington also had an 83% higher rate of pedestrian and bicyclist deaths.
5. **Injury crashes involving pedestrians and bicyclists have more severe outcomes in unincorporated areas:** Although less than a quarter (21%) of crash-related pedestrian and bicycle injuries occur on roadways in unincorporated parts of the county, deaths are 33% higher than the County average. One in five of all crashes in unincorporated parts of the region and resulting in injuries (known as KABC crashes) results in a victim's death, compared to one in 21 in incorporated cities.
6. **Crashes resulting in fatalities are more prevalent in unincorporated communities compared to incorporated cities**: 75% of crash-related deaths occur in unincorporated areas, while only 25% happen in incorporated cities. The death rate is significantly higher in unincorporated areas, with one death for every 29 crash-related injuries, compared to one death for every 99 injuries in urban areas.
7. **State maintained divided and limited access highways have a greater propensity for serious injuries compared to local arterials**: Serious injuries and deaths occur more frequently on State Routes. While state roads account for only 13% of the centerline of roads, they account for 60% of deaths and 49% of deaths and serious injuries.
8. **Cars and light duty trucks are involved in the majority of injury crashes**: The majority of crashes resulting in injuries involve passenger cars and light duty trucks. However, although motorcycles, moped and scooters only account for 7% of crash-related injuries, one in three of those injuries results in a serious injury or death.
9. **Impairment leads the contributing factors for serious injuries**: Impairment, speeding, distraction, and recklessness are the most frequent factors resulting in serious injuries and deaths.
10. **Areas with a higher proportion of elderly people experience higher rates of fatal and serious injuries:** Census tracts with higher populations of elderly residents have a 12% higher rate of traffic related deaths than other areas of the county.

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State of Practice Review Key Findings

The following section presents findings from a comprehensive review of current safety plans, policies, and programs across local jurisdictions. These findings represent a foundational step in understanding the regional safety context at the local level. Among the 12 jurisdictions reviewed, all have adopted or are in the process of updating a long-range plan. Eight jurisdictions include safety policies within their comprehensive plans. However, there is a lower prevalence of more targeted safety plans, such as those addressing Safe Routes to School, active transportation, and enforcement strategies. A detailed breakdown of each policy or plan type is provided in Figure 4. For a full analysis, refer to Appendix B, which contains the complete State of Practice Review, including in-depth descriptions of identified safety plans, policies, and programs.

Figure 4. Summary of Safety Plans Policies and Programs with Partner Agencies

Crash Data Analysis Methodology

Crash analysis and trends were developed using crash data from 2013 to 2023 provided by the Washington State Department of Transportation (WSDOT). WSDOT compiles this data from local law enforcement and Washington State Patrol accident reports, as well as the federal Fatality Analysis Reporting System (FARS) database.

Please Note:

Under 23 U.S. Code § 148 and 23 U.S. Code § 407, safety data, reports, surveys, schedules, lists compiled or collected for the purpose of identifying, evaluating, or planning the safety enhancement of potential crash sites, hazardous roadway conditions, or railway-highway crossings are not subject to discovery or admitted into evidence in a federal or state court proceeding or considered for other purposes in any action for damages arising from any occurrence at a location mentioned or addressed in such reports, surveys, schedules, lists, or data.

Transportation Safety Performance Reporting Terminology

This Comprehensive Safety Action Plan assesses transportation system safety performance by traffic-related injury classifications. The following section introduces industry-standard acronyms for various traffic-related injury information

KABC (All Injuries and Deaths)

KABC refers to the quantity of people that died or were injured in any way (including seriously injured victims) resulting from a crash.

KSI (Deaths and Serious Injuries)

KSI refers to the quantity of people that died or were seriously injured resulting from a crash. KSI is the injury classification used for reporting if the victim died or received a serious injury as result of the crash.

K (Deaths/Fatalities)

K refers to the quantity of traffic-related deaths resulting from a crash. K is the injury classification used for reporting if the victim dies as result of injuries received in a traffic crash at the scene of the crash, dead on arrival to medical facility, or died at the hospital after arrival.

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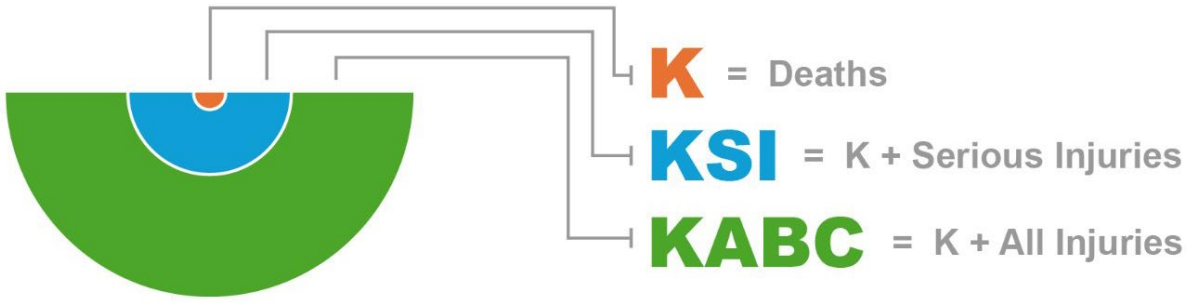
Traffic Injury Data Groupings and Methodologies

Figure 5 shows the hierarchy of crashes, crashes indicating the scale of KABC crashes (including all injuries) to KSI crashes including serious injuries to K (deaths). Specifically, injury count data is nested according to their level of severity starting with the largest group, all injuries and deaths (KABC) includes every portion of the colored half circles in Figure 5. The second-level data group is KSI and includes a subset of KABC crash-related outcomes including serious injuries and deaths. In Figure 5, KSI includes only the blue and orange colored half circles whereas the green portion of the half circle is excluded. The third-level data group contains only traffic-related deaths or the orange portion alone of the half circles in Figure 5. This plan uses proportions of KSI to KABC, K to KSI, and K to KABC ratios to understand which crash attributes have the most severe outcomes.

Figure 5. Injury Class Grouping



WSDOT Crash Data

WSDOT collects and maintains crash-related data for the state of Washington. This dataset includes information for each person involved in reported injury crashes (KABC crashes). It also includes records for all crashes including those where there are no injuries (KABCO crash records). Other pertinent information is provided for motor vehicle drivers, motor vehicle passengers, and pedestrians and bicyclists. Other types of information such as location, date and time, roadway conditions, quantities of vehicles, pedestrians and bicyclists involved, injuries, as well as driver actions and impairment information help in analyzing trends. Crash data for Skagit County roadways covers eleven years of data, from 2013 through 2023. While the 2013 through 2023 data supported review of regional trends, a more focused analysis of data starting from 2019 through 2023 (five full years of data) was conducted to assess existing conditions including contributing factors, crash types, high crash locations, High Injury Network, and crash focus areas.

Regional Network

Crash data was connected to a regional network for analysis. This network is comprised of two WSDOT roadway data sets consisting of interstates, State Routes, principal arterials, and minor arterials that serve transit. More detailed analysis considers the more recent five years of data (2019 through 2023). For the analysis period of this study, 89% of crash-related injuries, which include crash-related serious injuries and deaths in Skagit County, occurred on this regional network.

Crash Trend Analysis Findings (2013-2023)

Crash-related injuries and death victims from 2013 through 2023 were aggregated at the census tract level to examine regionwide trends. County population estimates from the 2010 and 2020 census, and 2021-2023 American Community Survey (ACS) data were used to control population growth over time.

Crash Trends for All Crash Victims

Figure 6 shows that the total quantity of KABC victims has remained relatively flat during the 11-year study period. KABC victims peaked in 2015 at 947 and have generally decreased year over year. However, since 2020 KABC victims have increased annually but have remained lower than those prior to 2020. KSI victims have trended upwards since 2019 with a peak in 2022, which is more than double the amount of KSI victims in the best performing year within the study period. Deaths or K crash victims have remained fairly constant in the latter half of the study period but are higher than much of the earlier half of the study period.

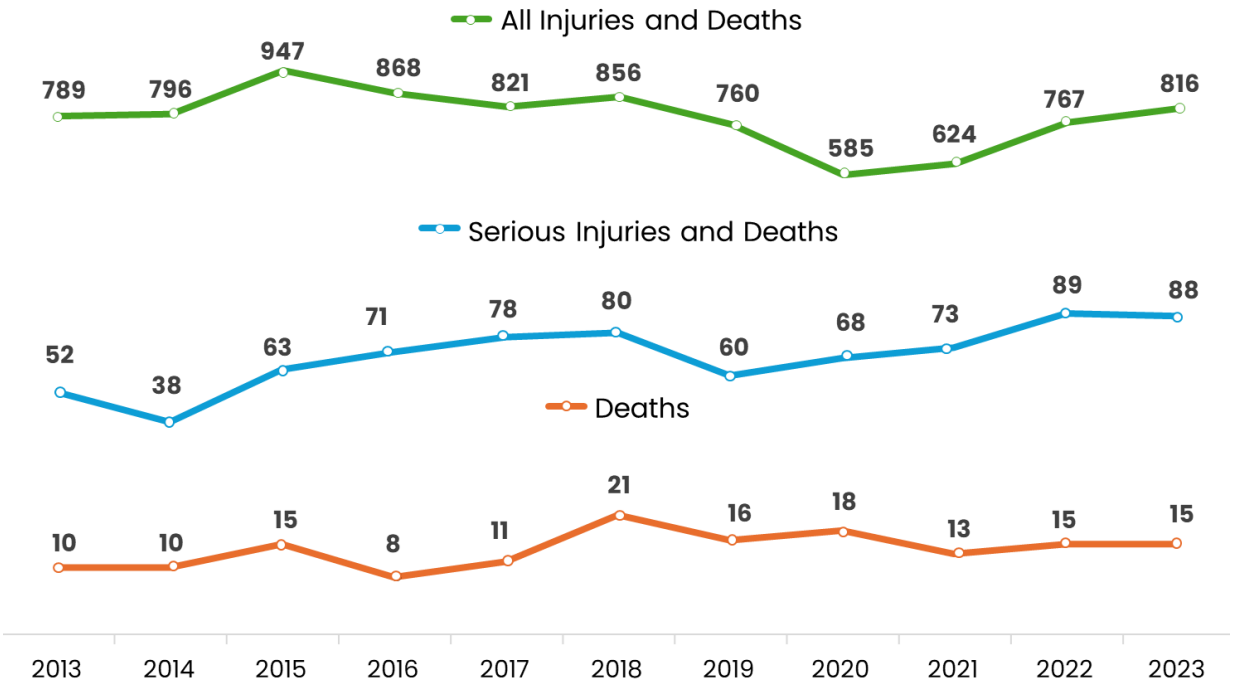


Figure 6. Annual Injuries and Deaths for All Crash Victims in Skagit County (2013-2023)

Crash Trends for Pedestrians and Bicyclists

Pedestrians and bicyclists are the most vulnerable road users. Table 2 shows that pedestrians were more affected by crashes of all severity levels from 2013-2023. Figure 7 shows that pedestrian and bicyclist KABC outcomes remained relatively stable during the study period, with a gradual decline after 2018 reaching a low of 29 victims in 2020 and 2021, a 44% decrease from the 2014 peak of 52. The year 2021 marked the best overall safety performance across all severity levels. Similarly, KSI and fatal outcomes declined after peaking in 2019, with KSI dropping to three and zero recorded deaths in 2021, a significant improvement from eight deaths in 2019. These improvements may reflect reduced travel during the 2020 COVID-19 pandemic. Since 2021, crash outcomes across all severities have returned to average levels.

Table 2. Comparison of Injury Severity by Mode for Pedestrian and Bicyclist Victims (2013-2023)

	Total KABC	Total KSI	Total K	K to KABC	KSI to KABC	K to KSI
Bicyclist	199	29	2	1 in 100	1 in 7	1 in 15
Pedestrian	260	80	23	1 in 11	1 in 3	1 in 3
Bicyclist and Pedestrian	459	109	25	1 in 18	1 in 4	1 in 4

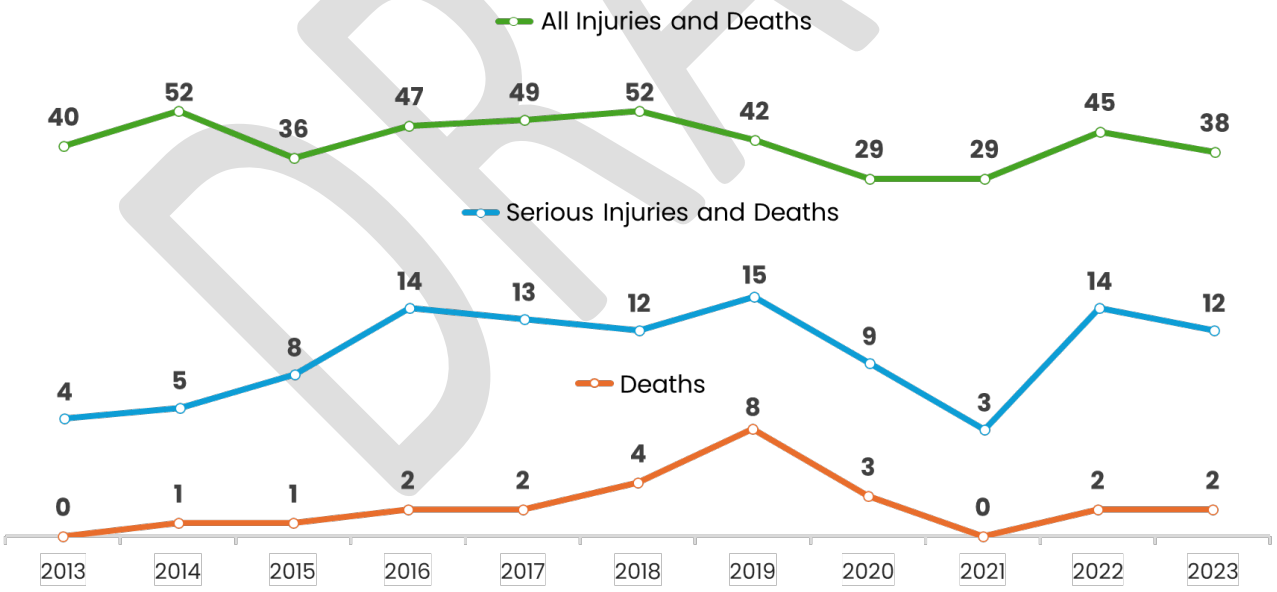


Figure 7. Annual Injuries and Deaths for Pedestrian and Bicyclist Victims in Skagit County (2013-2023)

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Crash Analysis Findings (2019-2023)

Crash Contributing Factors

The National Roadway Safety Strategy (NRSS) considers that humans are vulnerable and that they make mistakes[1]. To the extent crash records provide insight into transportation system user behaviors, trends in these contributing factors can provide insight into crash types resulting in serious injuries and deaths and potential strategies to ameliorate these deaths.

A contributing factors analysis focuses on identifying the specific behaviors, conditions, and circumstances that lead to traffic injuries. Unlike Vision Zero Focus Areas, which highlight other crash descriptive attributes, contributing factors dig deeper into the underlying reasons crashes occurred. This analysis isolates motor vehicle driver behavior and examines how these actions contribute to the severity of collisions.

All Road Users

Table 3 provides a summary of the top five crash contributing factors by severity. Alcohol and/or drug impairment significantly increases traffic injury risks and is the top contributing factor to deaths in Skagit County. Impaired drivers exhibit poor judgment, compromised motor skills, and reduced reaction times ("Impaired" includes people under the influence of drugs or alcohol or people under the influence of both drugs and alcohol). Impaired drivers are responsible for 39% of KABC outcomes in Skagit County, with 1 in 16 victims resulting in death.

Excessive speed significantly contributes to fatal crashes, as this factor accounts for the second-largest share of all crash-related deaths in Skagit County (25%). When drivers exceed posted speed limits, they compromise their ability to react to sudden obstacles or changes in traffic conditions.

Distractions, such as mobile phone use, divert attention from the road. This metric persists as a high contributing factor to crashes, with a 20% share of KABC outcomes, and results in 14% of deaths.

Reckless driving behaviors include aggressive maneuvers and racing. These are dangerous to everyone on the road. Notably this behavior makes up 10% of deaths, with one death resulting from every KABC outcome. Full table of all noted contributing factors are provided in Appendix A.

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[1] USDOT, National Roadway Safety Strategy, 2022

Table 3. Top 5 Contributing Crash Factors and Their Severity for all Crash Victims (2019-2023)

Contributing Factor	KABC	County Share of KABC	KSI	County Share of KSI	K	County Share of K	K to KABC	KSI to KABC	K to KSI
Impaired Driver	470	13%	125	33%	30	39%	1 in 16	1 in 4	1 in 4
Speeding Driver	609	17%	84	22%	19	25%	1 in 32	1 in 7	1 in 4
Distracted Driver	714	20%	58	15%	11	14%	1 in 65	1 in 12	1 in 5
Reckless Driver	96	3%	26	7%	8	10%	1 in 12	1 in 4	1 in 3
Failure to Yield to Vehicle	553	16%	36	10%	7	9%	1 in 79	1 in 15	1 in 5

Pedestrians and Bicyclists

Table 4 provides a summary of the top five crash contributing factors, by severity, related to pedestrians and cyclists. Failure to Yield to Non-Motorists is the most common contributing factor, making up 34% of KABC victims and 15% of KSI victims. Impaired Driving accounts for 2% of KABC, but it has a high severity rate; 1 in 2 of all injuries (KABC) involving impaired drivers results in a death. Speeding is the least common factor compared to the other top contributing factors at 1% of KABC, but like impaired driving, it results in a high severity rate, with half of all KABC injuries resulting in a death. Notably, compared to Table 3, Reckless Driving is not included when considering pedestrian and bicycle victims. A full table of all noted contributing factors are provided in Appendix A.

Table 4. Top 5 Contributing Crash Factors and Their Severity for Pedestrian and Bicyclist Victims (2019-2023)

Contributing Factor	KABC	County Share of KABC	KSI	County Share of KSI	K	County Share of K	K to KABC	KSI to KABC	K to KSI
Distracted Driver	31	17%	7	13%	2	13%	1 in 16	1 in 4	1 in 4
Impaired Driver	4	2%	3	6%	2	13%	1 in 2	1 in 1	1 in 2
Failure to Yield to Non-Motorist	63	34%	8	15%	1	7%	1 in 63	1 in 8	1 in 8
Speeding	2	1%	1	2%	1	7%	1 in 2	1 in 2	1 in 1
Other	19	10%	9	17%	3	20%	1 in 6	1 in 2	1 in 3

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Crash Type Analysis

Table 5 provides a summary of the top five crash types with a full summary of crashes in Appendix A. When considering crash types, fixed object crashes are the most common, claiming responsibility for 29% of KABC outcomes, accounting for the highest KSI share 45%, and 56% of deaths. Angle crashes are the second most common, causing 26% of all injuries and contributing to 20% of serious injuries and 19% of deaths. Pedestrian and bicycle crashes show a disproportionately high severity, accounting for 14% of KSI victims and 19% of deaths. Head-on crashes make up 3% of KABC, yet they still contribute to 10% of KSI and 12% of deaths. This crash type also has a high rate of severe outcomes, with 1 in 12 of KABC injuries leading to a death.

Overall, while fixed object and angle crashes are the most frequent, pedestrian/bicycle and head-on crashes often lead to more severe outcomes.

Table 5. Top 5 Crash Types and Their Severity for all Crash Victims (2019-2023)

Crash Type	KABC	County Share of KABC	KSI	County Share of KSI	K	County Share of K	K to KABC	KSI to KABC	K to KSI
Fixed Object	1,026	29%	169	45%	43	56%	1 in 24	1 in6	1 in 4
Angle	924	26%	75	20%	15	19%	1 in 62	1 in 12	1 in 5
Pedestrian/Bicycle	190	5%	52	14%	15	19%	1 in 13	1 in 4	1 in 3
Head-On	107	3%	36	10%	9	12%	1 in 12	1 in 3	1 in 4
Rollover	380	11%	63	17%	7	9%	1 in 54	1 in 6	1 in 9

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Crash Analysis by Location

Crashes occurring from 2019 through 2023 were analyzed spatially to identify regional hotspots with serious injuries and fatalities and to identify corridors producing more frequent crash-related deaths and serious injuries. In Skagit County, High Crash Locations were identified through geographic clustering, allowing for the detection of critical intersections and spot locations with elevated crash occurrences. Building on this, a High Injury Network analysis was conducted to identify and rank roadway segments with a high concentration of fatal and serious injury crashes across the Skagit Regional Roadway Network. Together, these two complementary approaches provide a comprehensive understanding of safety issues such as high-risk intersections, and systemic concerns, such as hazardous curves along key corridors.

High Crash Locations

Serious injuries and fatalities are aggregated based on the physical location of the crash, specifically if it is within 45 meters (about 148 feet) of another crash on the same street. Crashes that occurred on State Routes were differentiated from those that did not due to their distinct roadway characteristics, such as higher speeds, limited access, and differing jurisdictional responsibilities. For visualization purposes, high serious injury and death locations are defined as locations with at least four serious injuries or fatalities over the 2019 to 2023 study period. A more detailed map of High Crash Locations in the west, more urban section, of the county is shown in Figure 9. The broader full county High Crash Location map is shown in Figure 10.

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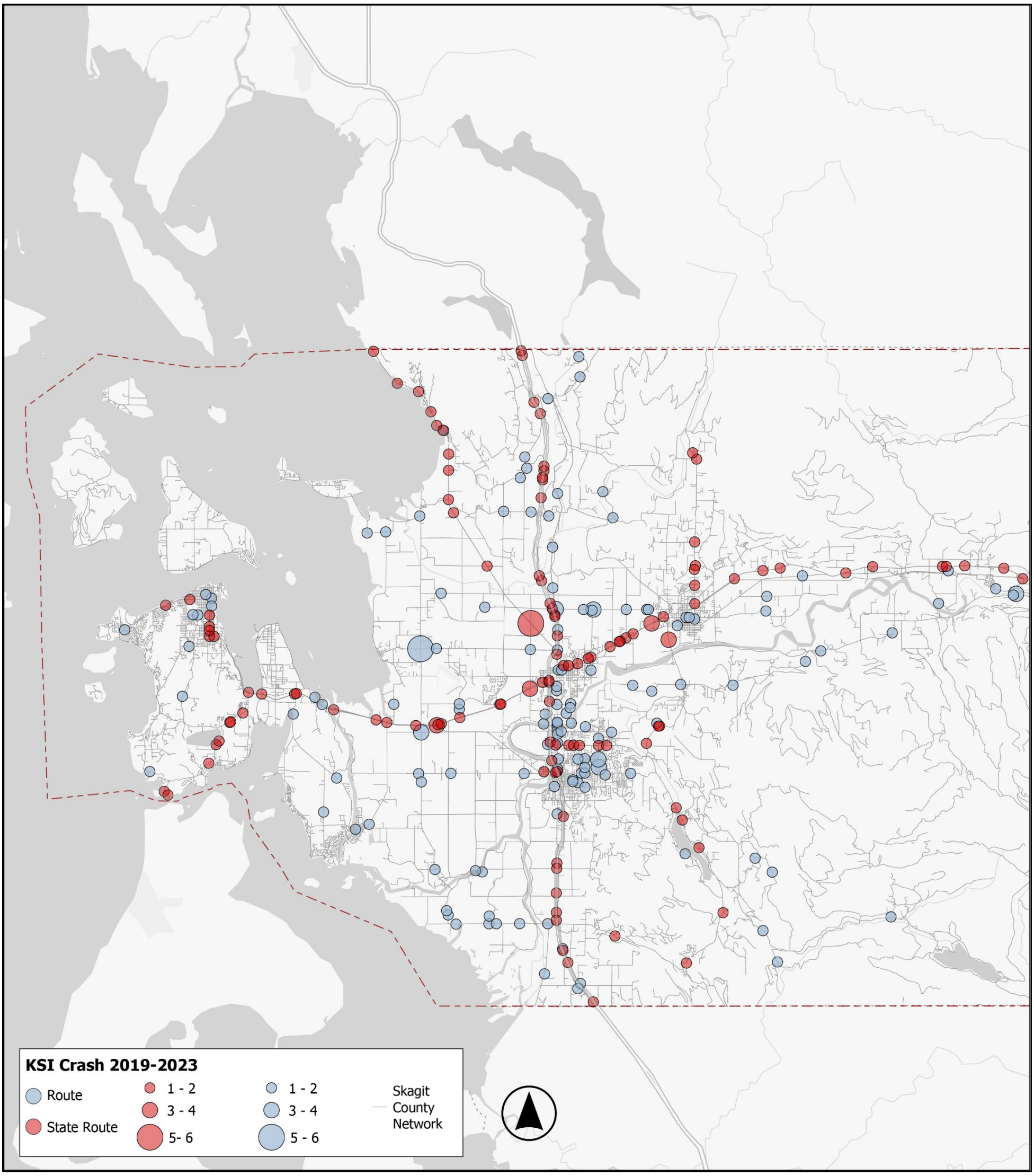

Figure 8. High Crash Locations in west Skagit County, from 2019-2023

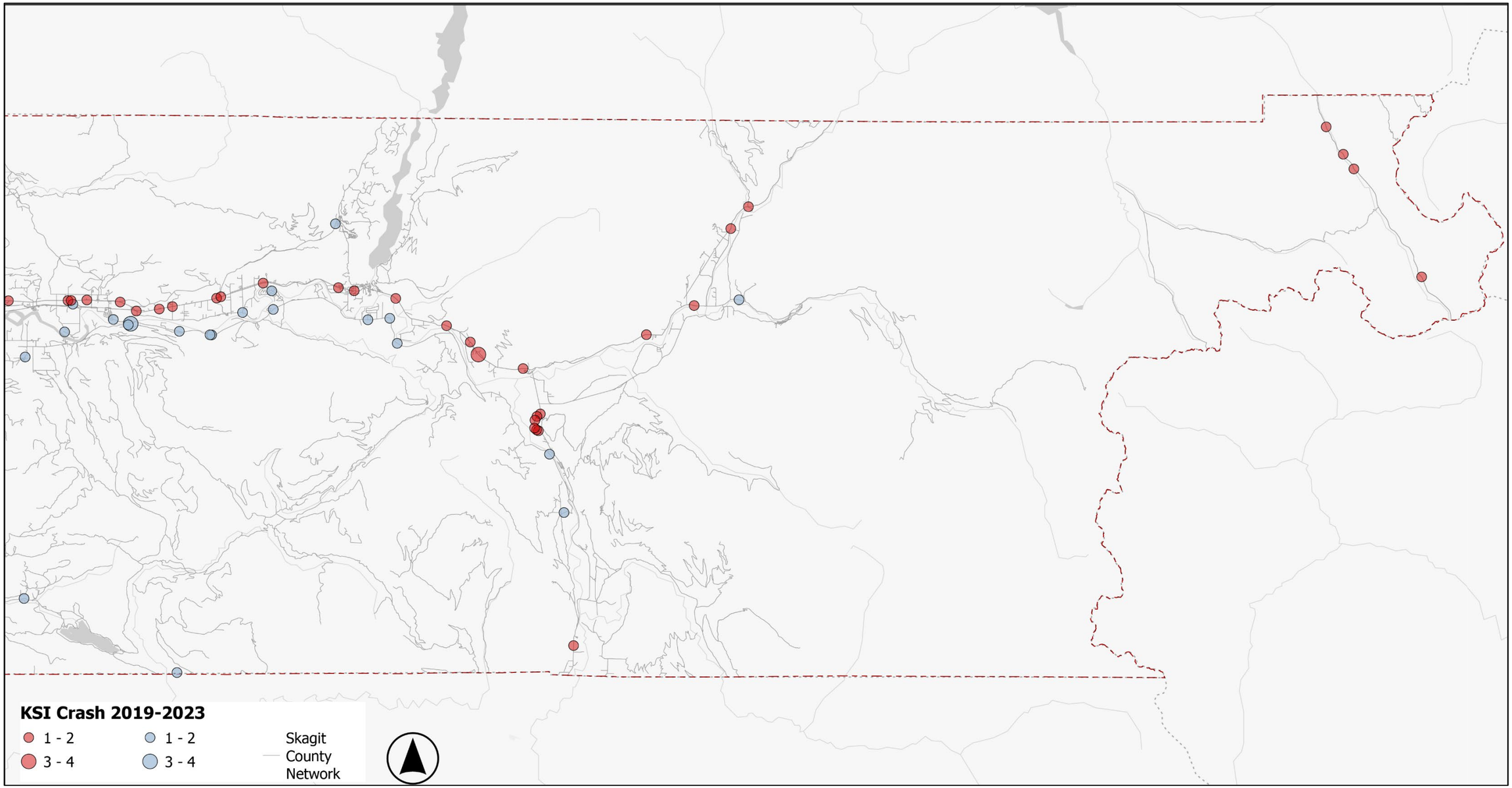

Figure 9. High Crash Locations in east Skagit County, from 2019-2023

High Injury Network

The High Injury Network (HIN) analysis identifies roadway corridors in Skagit County with the highest concentrations of fatal and serious injury (KSI) crashes between 2019 and 2023, as shown in Figure 10. Corridors were ranked based on the average number of KSI crashes per mile. The underlying roadway network is based on the WSDOT Functional Classification system for both State and Non-State Routes, segmented into 10-meter intervals to enable precise spatial attribution of KSI crashes. Then a sliding window algorithm was applied to compute average KSI values across contiguous 1,000-meter (approximately 0.6-mile) segments. The resulting HIN maps highlight corridors that exceed defined KSI per mile thresholds, which are 1.5 for both surface streets and controlled-access highways. These thresholds help isolate the most critical segments in need of targeted safety interventions.

This analysis ultimately identified the most injury-prone segments of the regional roadway network, offering a data-driven foundation for prioritizing safety improvements. While the current High Injury Network represents only 9% of the total network, it accounts for 44% of all fatal and serious injury crashes in Skagit County. Ongoing updates using future crash data will enable continued safety performance monitoring and support efforts to track progress along HIN corridors over time.

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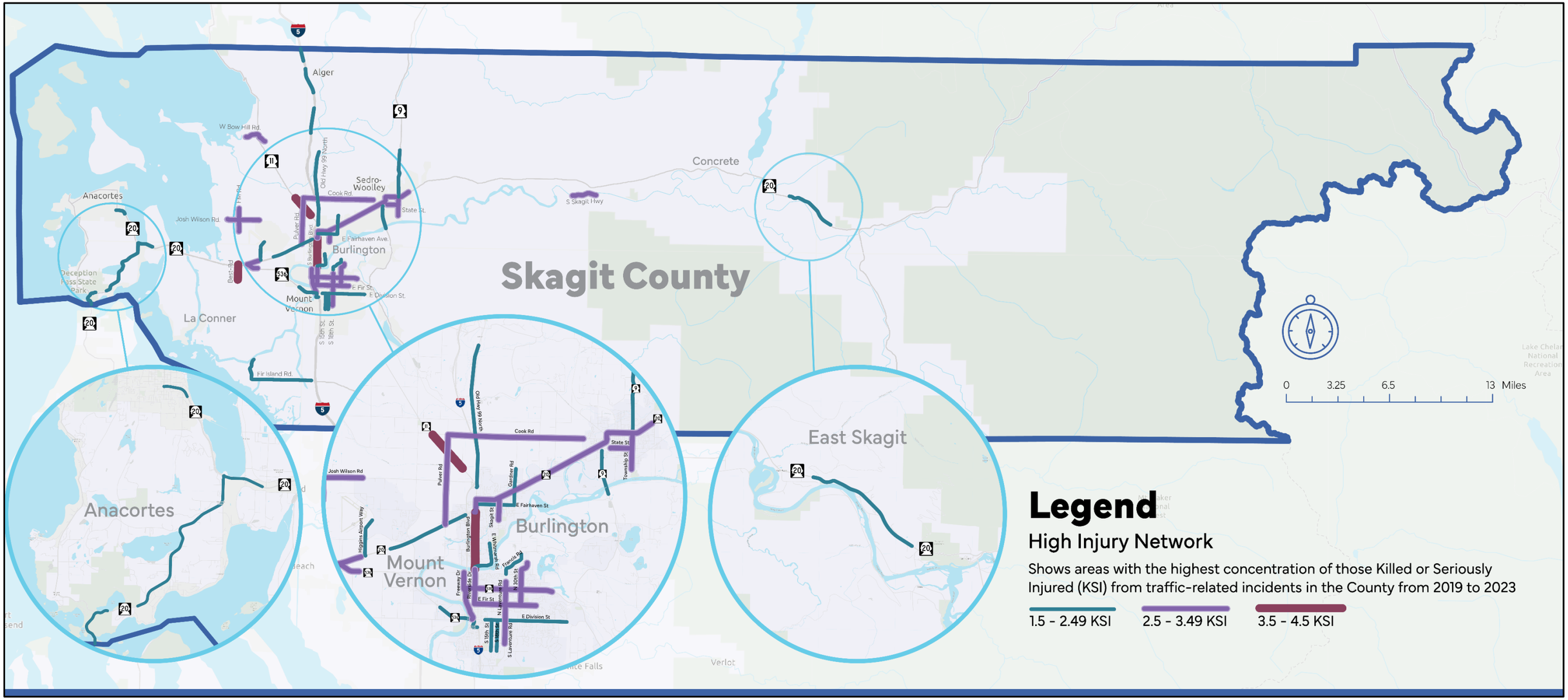

Figure 10. High Injury Network (HIN) of Skagit County, from 2019-2023

Contrast with State Target Zero Emphasis Areas

Analysis of crash data, a statewide driver survey, and public engagement shaped the primary emphasis areas for the Washington State 2024 Strategic Highway Safety Plan (SHSP). To identify these areas, KSI crashes were categorized by attributes such as road user behavior, age, vehicle type, and location. The emphasis areas were selected by examining the most common crash attributes during 2020 to 2022. A comparison between Skagit County and statewide data highlights both alignment and differences to statewide emphasis areas, and crash focus areas of Skagit County to be addressed in Chapter 4 and 5.

High Risk Behavior

The Washington State SHSP indicates that high-risk road user behavior includes factors of impairment, speeding, unrestrained occupants, and distracted driving are emphasis areas throughout the state. Of the high-risk behaviors, Skagit County also experiences impairment, speeding, and distracted driving as among the top identified behavioral factors resulting in KSI injuries. However, unrestrained occupants were not identified as a top issue within Skagit County.

Road Users Age Groups

The SHSP identifies driver age as an emphasis area, highlighting two categories particularly prone to KSI injuries: young drivers ages 15 to 24 and older drivers ages 70 and above. In Skagit County, this trend is also evident, though the age groups are defined slightly differently, with young drivers categorized as ages 16 to 24, and older drivers as 65 and older.

Crash Types/Location

Statewide, KSI crashes are emphasized by lane departure crash types and crashes that occur at intersections. Within Skagit County, roadways in unincorporated parts of the county are a major issue, producing 75 percent of all crash-related deaths in the county. Deaths on roadways unincorporated parts of the county were 1.33 times the county average for pedestrians and cyclists. Additionally, head-on collisions, angle crashes and lane departures were among the crash types reported as being particularly deadly. State routes were also among the worst performing segments in the county, with similar outcomes for pedestrians and cyclists, and similar crash types.

Road Users by Mode of Travel

The Washington State SHSP identifies road users by mode of travel as an emphasis area calling attention to higher rates of death and serious injuries among motorcycle riders, bicyclists, pedestrians and crash victims involved with heavy vehicles. This pattern is also evident in Skagit County, where these groups face an elevated risk of being killed or seriously injured in crashes. Motorcyclists, pedestrians and bicyclists are much more prone to KSI injuries in both unincorporated and urban contexts within Skagit County.

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MOVE SKAGIT

Chapter 3 Engagement and Collaboration

Introduction

As noted in Chapter 1, safety across the roadway transportation system is the responsibility of many including planners and engineers, law enforcement, emergency responders, system designers and maintenance crews. A safe transportation system benefits the entire traveling community. Community engagement plays a vital role in the development of a regional safety action plan by ensuring that the voices, concerns, and perspectives of residents and stakeholders are actively integrated into the planning process. Through a combination of public meetings, focus groups, online platforms, and direct outreach, engagement efforts gather diverse insights from those who use the transportation systems firsthand. These contributions help planners identify not only the most pressing safety issues, but also the unique challenges faced by specific communities within the region.

Engagement for the SCOG Regional Safety Action Plan was coordinated with other regional planning efforts, specifically – the Regional Transportation Plan and a regional Transportation Resilience Improvement Plan. Effective engagement fosters collaboration between agencies, tribal governments, and community organizations to enable any plan, and especially one targeted to improve safety to share priorities and leverage local knowledge. Feedback from the community helped shape the identification of crash focus areas, guided the prioritization of interventions, and helped ensure that the Regional Safety Action Plan is both comprehensive and responsive to the realities of Skagit County's communities. Aligning engagement for the Regional Safety Action Plan with the Regional Transportation Plan and Transportation Resilience Improvement Plan helps clarify transportation strategies that address various community objectives and present a unified regional perspective on the transportation system.

Move Skagit 2050 Branding

Move Skagit is branding associated with SCOG's planning efforts for 2025 including the Regional Transportation Plan, Regional Safety Action Plan, and Transportation Resilience Improvement Plan. SCOG has conducted public engagement for the three plans concurrent to each other as initiated with a strategy plan provided in Appendix C. Move Skagit branding helped to consolidate engagement efforts while eliminating potential public engagement burnout for the larger community.

Coordination with Agency Partners

Through its role as a voluntary organization of local governments, the Skagit Council of Governments (SCOG) seeks to foster a cooperative effort in resolving problems, policies and plans that are common to the membership and region. SCOG efforts address issues across the county. The following are voluntary members, participating in regularly scheduled committee meetings. SCOG member jurisdictions are shown in the Table 6 below:

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Table 6. SCOG Membership Jurisdictions

SCOG Member Jurisdictions	
City of Anacortes	Skagit County
City of Burlington	Skagit PUD
City of Mount Vernon	Skagit Transit
City of Sedro Woolley	Town of Concrete
Port of Anacortes	Town of Hamilton
Port of Skagit	Town of La Conner
Swinomish Indian Tribal Community	Town of Lyman
Samish Indian Nation	

Notably, two of the region's Tribes are voluntary members. The Swinomish Indian Tribal Community are a federally recognized Indian tribe with reservation lands of over 15 square miles. The Samish Indian Nation is also a federally recognized Indian tribe located within Anacortes. Other federally recognized Indian tribes within Skagit County include the Sauk-Suiattle Indian Tribe and Upper Skagit Indian Tribe. While these other two tribes are not voluntary members of SCOG the safety data analysis aggregates this data for tribal areas. All tribal areas are also assessed in a transportation analysis of equity focused areas (Appendix D)

Transportation Policy Board

The Transportation Policy Board is the governing body within SCOG that directs the transportation work program. The Transportation Policy Board approves the Regional Safety Action Plan and will oversee updates and revisions in the future. Their work program items are primarily related to SCOG's role as the federal enabled metropolitan planning organization and state-enabled regional transportation planning organization in Skagit County. Transportation Policy Board voting members consist of appointed elected officials from member governments, as well as WSDOT. Non-voting members include elected state Senators and Legislators serving Skagit County communities and. All meetings are open to the public. Approval and adoption of this Regional Safety Action Plan is being coordinated through review by the Transportation Policy Board. Aligned with the Safe System Approach, SCOG is leading the region's effort to reduce or eliminate serious injuries and deaths on the region's highway's vetting elements of the plan with partners at regularly scheduled meetings as noted below:

March 19, 2025 – Review of the Crash Data

December 17, 2025 – Tentative Draft Released for Public Review and Comment

January 21, 2026 – Tentative Approval of Regional Safety Action Plan

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Technical Advisory Committee

SCOG also hosts a Technical Advisory Committee (TAC) consisting of engineers, planners and other representatives from SCOG member jurisdictions in Skagit County. These planners and engineers oversee transportation safety within their jurisdictions and provide unique perspectives on the Regional Safety Action Plan including providing technical input to inform SCOG Transportation Policy Board decisions.

Technical aspects of the Regional Safety Action Plan development were described at the following meetings:

May 6, 2025 – Review of Crash Analysis and Methods

November 6, 2025 – Preview of Draft Plan recommendations including plans and policies.

January 8, 2026 – Tentative Draft Review and Recommendation of Regional Safety Action Plan

Non-Motorized Advisory Committee

SCOG also facilitates a Non-Motorized Advisory Committee (NMAC) as a subcommittee to the TAC to support development of an integrated transportation system with a focus on non-motorized components within the Skagit County region. The purpose of the committee is to elicit a dialog between levels of government, public agencies and private groups, and to consider transportation alternatives which are cost effective and incorporate non-motorized modes of travel. The Regional Safety Action Plan specifically addresses safety for those vulnerable road users, specifically those walking and biking. The NMAC's mission supports an integrated, effective, and affordable transportation system for Skagit County, emphasizing the system's non-motorized components. The Regional Safety Action Plan was discussed at the February 25, 2025 NMAC meeting.

Public Engagement

Coordinating community engagement for Move Skagit 2050 — including feedback for the resilience, safety and the long-range transportation efforts — was centered in the development of an online public website and engagement, and augmented with focus groups and tabling at community fairs and festivals.

Online Public Website and Public Comment Period

As part of the broader Move Skagit combined transportation planning efforts, an engaging public website was developed called Move Skagit 2050. The website supported broad public engagement and provided details of each of the planning efforts including the Regional Safety Action Plan. Within the website, the High Injury Network was displayed which showed where higher density of serious injuries and fatalities occurred. The High Injury Network served as the base map for a Social Pinpoint interactive web map, where the public was invited to place comments related to safety, transportation congestion, modal needs and resilience. This website was used to gather feedback on the draft plan prior to final approval. The Social Pinpoint interactive

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web map was published from June 5, 2025 to October 3, 2025, and received a total of 204 discrete comments. Of the comments, 65 related to safety concerns, and 122 comments related to potential improvement for walking, biking and rolling. Additionally, a public comment period will be conducted to collect feedback on the Draft Regional Safety Action Plan.

Focus Groups

During the Move Skagit 2050 planning process, targeted focus groups were formed to gather specific feedback. Recruitment and discussion guides were prepared for these groups. Two key focus groups—law enforcement/first responders and WSDOT—offered in-depth perspectives on roadway safety. Law enforcement/emergency responders discussed topics like emergency response in unincorporated areas and adapting to new legislation. The WSDOT group shared expert insights on state planning and strategies that informed other plans. Summaries of these discussions can be found in Appendix C.

Community Tabling

Fairs and festivals serve as established gatherings that bring people together in celebration, learning and exchange. These public community events are two-way information sharing opportunities for SCOG and can be catalysts for community engagement. Move Skagit 2050, representing all three plans, was present at the following community events:

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Figure 11 Tabling at Cascade Days

- August 15, 2025, Cascade Days in Concrete;
- August 16, 2025, Mount Vernon Block Party; and
- August 21, 2025, Burlington Senior Day in the Park.

At these tabling events the community was presented with information from the safety plan, specifically the High Injury Network, and invited to provide feedback on a range of transportation topics. Tabling resulted in 328 comments related to the three transportation plans and 94 unique comments gathered regarding transportation safety within Skagit County. In general, people agreed with the routes reflected in the HIN map and noted areas of specific safety concerns. These are reflected in Appendix C.

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Figure 12 Tabling at Senior Day in the Park, Burlington

Feedback Reflected in the Plan

Engagement was a central element of the plan, with community input directly shaping priorities, countermeasure selection, and strategies. including:

- Concurrence with the High Injury Network as a network with a high concentration of serious injury crashes;
- Consideration of upgraded and expanded pedestrian and bicycle facilities;
- Safe driving education programs;
- Emergency response times and access; and
- Speed management and automated enforcement.

MOVE SKAGIT

Chapter 4 Crash Countermeasures and Strategies

Introduction

This chapter provides a practical guide to improve roadway safety in Skagit County through a toolbox of design and engineering strategies, and a set of planning, policy, and programmatic safety improvement strategies that are effective at reducing roadway deaths and serious injuries. Together, the tools and strategies form the foundation for the development of safety initiatives which regional partners can take to consistently implement similar treatments, policies, infrastructure, enforcement, and education strategies to reduce impact of crashes and severity of crashes on the Skagit County community. It is important to note that the tools and strategies identified in this chapter are not meant to replace engineering studies, feasibility assessments or design processes that identify context-sensitive intervention appropriately. Chapter 5 takes these strategies with the needs and challenges defined in the data review and safety analysis in Chapter 2 and provides implementation strategies for communities in Skagit County. There are two broad categories of strategies within this toolbox including:

- **Design and engineering strategies.**
  - FHWA's Proven Safety Countermeasures include an evidence-based approach to roadway design strategies with crash modification factor (CMF) including estimated safety benefit. FHWA Countermeasures are potential design interventions that address safety focus areas.
- **Planning, policy and program strategies.**
  - Planning strategies involve working with SCOG and its member agencies through regional transportation planning processes, managing funding and fiscal matters, and coordinating with WSDOT on investment area plans.
  - Education and prevention programs aim to reduce crashes by increasing road user awareness and promoting safe driving, pedestrian, and cyclist practices, including speed management and seatbelt use. These programs communicate standards for safe behavior and help develop the skills needed to practice them. They also foster a culture of safety, shared responsibility, and equip individuals to make safer choices.
  - Enforcement helps reduce traffic crashes by promoting compliance with traffic laws and discouraging dangerous behaviors. By using targeted and equitable enforcement strategies, such as human or automated speed enforcement and monitoring, law enforcement agencies can address high-risk behaviors that contribute to severe crashes.
  - Emergency response aims to improve outcomes for people involved in roadway crashes. Rapid, coordinated, and well-equipped responses can significantly reduce injury severity and fatalities. This includes timely dispatch of EMS, fire, and law enforcement, as well as effective communication and trauma care protocols. The Safe System Approach recognizes that while crashes may still occur, swift emergency response can help mitigate their consequences.

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Design and Engineering Strategies

Transportation agencies and professionals are strongly encouraged to consider widespread implementation of FHWA's Proven Safety Countermeasures initiative to reduce traffic-related deaths and serious injuries. Proven Safety Countermeasures are evidence-based strategies endorsed by FHWA to reduce roadway deaths and serious injuries. Crash countermeasures are sorted into five safety focus areas, including:

- **Speed Management –** Focus on reducing vehicle speeds.
- **Pedestrian and Bicyclist –** Focus on improving safety for vulnerable road users.
- **Roadway Departure –** Focus on drivers to maintain lane.
- **Intersections –** Focus on reducing conflicts and improving visibility.
- **Crosscutting –** Focus on multiple focus areas and address multiple crash types.

Each Proven Safety Countermeasure (countermeasures) is supported by a Crash Modification Factor (CMF) which is a statistical estimate of its safety benefit for the given countermeasure based on empirical studies. Proven Safety Countermeasures and the affiliated Crash Modification Factors are published on FHWA's Crash Modification Factor Clearinghouse.[2] The CMF Clearinghouse is an official USDOT database that serves a searchable repository of CMFs for transportation safety professionals with information regarding the effectiveness when considering a particular roadway treatment intervention and provides results from a range of implementations and combinations based on actual crash data results. CMFs are expressed as a multiplicative factor, therefore a CMF assigned to a Proven Safety Countermeasure of less than one is anticipated to reduce the quantity of crashes after its implementation from the previous condition. Below are the FHWA Proven Safety Countermeasures reflecting a range of strategies for a variety of conditions for SCOG's agency partners to consider when planning roadway investments to address traffic safety and reduce deaths and serious injuries. CMFs in the CMF Clearinghouse can also address combined countermeasures when implemented together.

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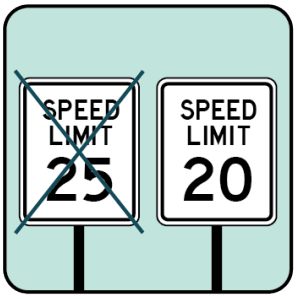
[2] FHWA, Crash Modification Factors Clearinghouse, https://cmfclearinghouse.fhwa.dot.gov/index.php

Speed Management

Speed-Limit Reduction



Description: Lower posted speed limits.

Prior Condition: No prior condition.

Category: Speed management.

CMF: 0.6993 – 0.9505 | CMF ID: 11288 / 11290 / 11289 / 11291

Variable Speed Limits

Description: Install Variable Speed Limit (VSL) system where posted speed limits change in real time according to traffic and/or weather conditions.

Prior Condition: No prior condition.

Category: Advanced technology and ITS.

CMF: 0.34 - 1.78 | CMF ID: 11002 / 11005 / 11003

Install Dynamic Speed Feedback Sign

Description: System consisting of a speed measuring device and a message sign that displays feedback to those drivers who exceed a predetermined threshold. It may be the actual speed, a message such as SLOW DOWN, or activation of a warning device, such as beacons or a curve warning sign.

Prior Condition: High-crash curve sites with identified speeding problem.

Category: Advanced technology and ITS.

CMF: 0.93 – 0.95 | CMF ID: 6885 / 6886 / 6887 / 6888

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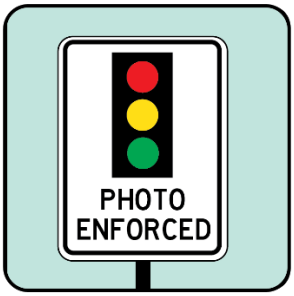
Speed Safety Cameras



Description: Implement automated speed enforcement cameras.

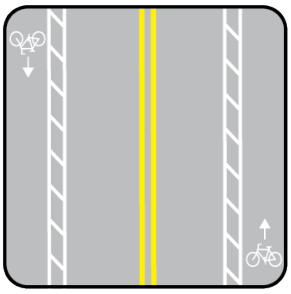
Prior Condition: No automated speed enforcement demonstration program; no photo radar.

Category: Advanced technology and ITS.

CMF: 0.46 – 0.85CMF ID: 7718 / 2915 / 2921 / 7582 / 10648

Pedestrian and Bicyclist

Bicycle Lanes



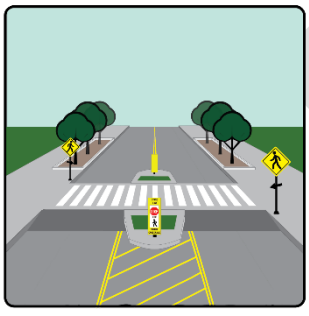
Description: Install bicycle lanes.

Prior Condition: No bicycle lane.

Category: Bicyclists.

CMF: 0.1639 – 2.24 | CMF ID: 10738 / 10742 / 9258

Crosswalk Visibility Enhancements



Description: High-visibility crosswalks aim to increase awareness of pedestrians at intersections by using highly visible marking patterns. The markings used in this study included a series of longitudinal white stripes constructed from thermoplastic material.

Prior Condition: No advanced yield or stop markings and signs.

Category: Pedestrians.

CMF: 0.6 - 0.81 | CMF ID: 4123 / 4124

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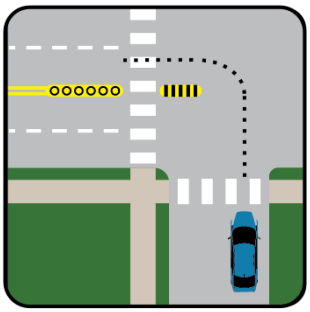
Hardened Centerlines



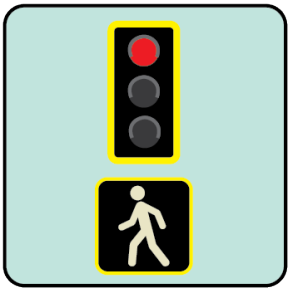
Description: small rubber barriers next to crosswalks that require people driving to make slower, squarer left-hand turns.

Prior Condition: No condition.

Category: Pedestrians.

CMF: All Crashes (at left turns): 0.90 (Source: ODOT Crash Reduction Factor Manual, 20238)

Leading Pedestrian Interval



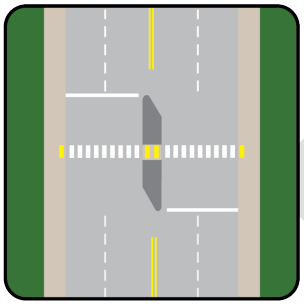
Description: Modify signal phasing (implement a leading pedestrian interval) allowing pedestrians to go in advance of vehicles turning at intersections.

Prior Condition: Signal phasing without leading pedestrian interval.

Category: Intersection traffic control; pedestrians.

CMF: 0.54 – 1.09 | CMF ID: 9901 / 9902 / 9903 / 9918

Medians and Pedestrian Refuge Islands



Description: Install raised medians or pedestrian refuge islands in curbed sections of urban and suburban multilane roadways.

Prior Condition: Marked crosswalks with no raised median at an uncontrolled pedestrian crossing.

Category: Pedestrians.

CMF: 0.54 – 0.81 | CMF ID: 175/ 7789 / 2220 / 2219

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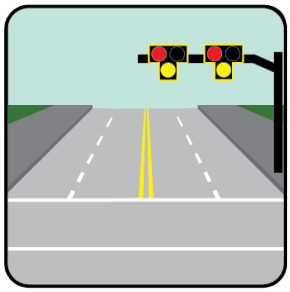
Pedestrian Hybrid Beacons



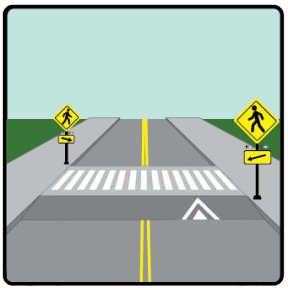
Description: Install a pedestrian hybrid beacon (PHB) or HAWK Signal.

Prior Condition: No pedestrian hybrid beacon.

Category: Pedestrians.

CMF: 0.309 – 0.883 | CMF ID: 9020 / 2911 / 2917

Rectangular Rapid Flashing Beacons (RRFB)



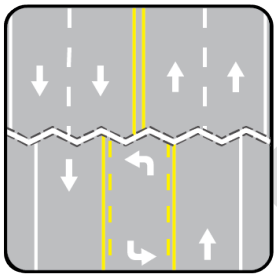
Description: Install rectangular rapid flashing beacon (RRFB).

Prior Condition: Marked crosswalks with no RRFB installation.

Category: Pedestrians.

CMF: 0.27 – 1.18 | CMF ID: 11171 / 9024 / 11158

Roadway Reconfiguration



Description: Conversion of road segments from a four-lane to a three-lane cross-section with two-way left-turn lanes/center turn lane.

Prior Condition: Four-lane undivided roadway.

Category: Roadway.

CMF: 0.53 - 0.812 | CMF ID: 2841 / CMF ID: 5554

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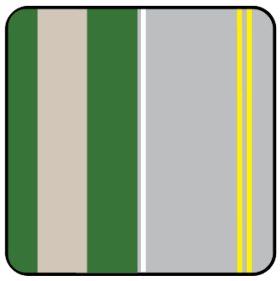
Walkways/Sidewalks



Description: Install defined space or pathway for use by a person traveling on foot or using a wheelchair.

Prior Condition: No prior condition.

Category: Pedestrian.

CMF: 0.75[3] | CMF ID: N/A[4]

Roadway Departure

Enhanced Delineation for Horizontal Curves

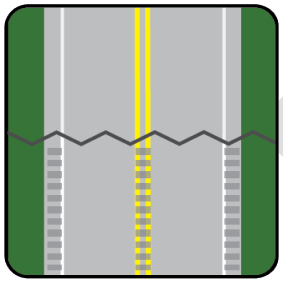
Description: Treatments can include new chevrons, horizontal arrows, and advance warning signs as well as the improvement of existing signs using fluorescent yellow sheeting.

Prior Condition: No sign; Smaller (12x18 inch) or (24x30 inch) signs.

Category: Signs.

CMF: 0.65 – 0.96 | CMF ID: 10613 / 2438 / 2431

Longitudinal Rumble Strips and Stripes on Two-Lane Roads



Description: Install milled or rolled rumble strips.

Prior Condition: No centerline rumble strips; No prior condition.

Category: Roadway.

CMF: 0.51-0.91 | CMF ID: 6974 / 6975 / 6850 / 10413

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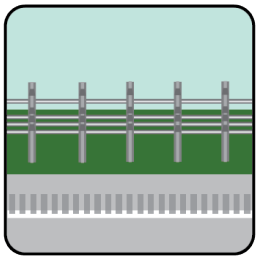
[3] Note: Pedestrian crash modification factors fluctuate between negative and positive numbers indicating that installing sidewalks may increase crashes involving a pedestrian. However, installing pedestrian infrastructure can increase the number of pedestrians using the roadway, which in turn increases the propensity for pedestrian-involved crashes.

[4] Source used by FHWA, Florida DOT, 'Update of Florida Crash Reduction Factors Countermeasures to Improve the Development of District Safety Improvements Projects', pg. 112, 2005, https://fdotwww.blob.core.windows.net/sitefinity/docs/default-source/research/reports/fdot-bd015-04-rpt.pdf

Median Barriers



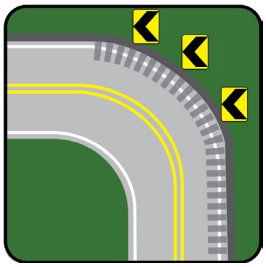
Description: Install raised medians.

Prior Condition: Roadways without median barriers.

Category: Roadside.

CMF: 0.04 – 2.6 | CMF ID: 47 / 9126 / 9129

Roadside Design Improvements at Curves



Description: Includes multiple improvements located at horizontal curves including, clear zones, slope flattening, adding/widening shoulders, adding cable barriers and guardrails.

Prior Condition: No prior condition.

Category: Roadside.

CMF: CMF ID: 4627/ 4632/ 35/ 36

Install Safety Edge Treatment

Description: The safety edge is a low-cost treatment that is implemented in conjunction with pavement resurfacing and is intended to help minimize drop-off-related crashes.

Prior Condition: Drop-off pavement edge.

Category: Shoulder treatments.

CMF: 0.59 – 2.317 | CMF ID: 9205 / 9211 / 9217

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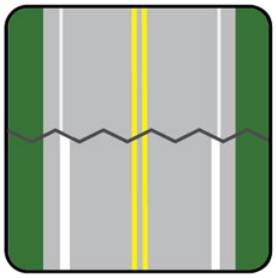
Wider Edge Lines



Description: Widen edge lines from 4 inches to 6 inches

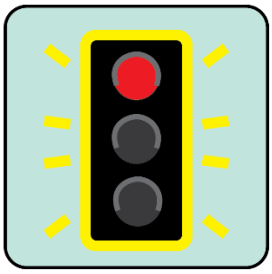
Prior Condition: 4-inch-wide edge lines.

Category: Delineation.

CMF: 0.63 – 0.87 | CMF ID: 4736 / 4737

Intersections/Signals

Backplates with Retroreflective Borders



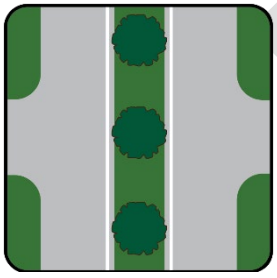
Description: Backplates added to a traffic signal head improve the visibility of the illuminated face of the signal by introducing a controlled-contrast background.

Prior Condition: No prior condition.

Category: Intersection.

CMF: 0.85 | CMF ID: 1410

Corridor Access Management



Description: Access management refers to the design, application, and control of entry and exit points along a roadway. This includes intersections with other roads and driveways that serve adjacent properties.

Prior Condition: No prior condition.

Category: Intersections.

CMF: 0.69 - 0.75 | CMF ID: 178/ 179

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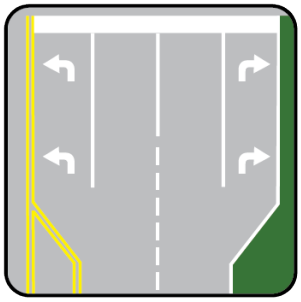
Dedicated Left- and Right- Turn Lanes at Intersections



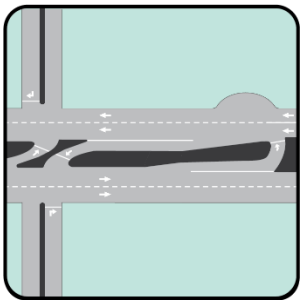
Description: Addition of left- or right-turn bypass lanes.

Prior Condition: No prior condition; left turn lanes with negative offset.

Category: Intersection geometry.

CMF: 0.81 – 1.25 | CMF ID: 296 / 297 / 295

Reduced Left-Turn Conflict at Intersections



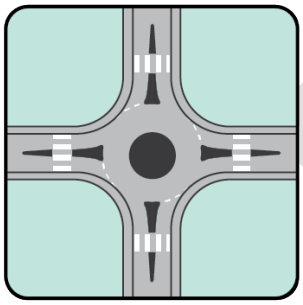
Description: Reduced left-turn conflict intersections are geometric designs that alter how left-turn movements occur.

Prior Condition: Conventional unsignalized intersection; conventional signalized intersection; two-way stop-controlled intersection.

Category: Intersections.

CMF: 0.37 - 0.78 | CMF ID: 4884/ 5556/ 9985/ 10867

Roundabouts



Description: Conversion of stop-controlled intersection to single-lane roundabout.

Prior Condition: No prior condition.

Category: Intersection geometry.

CMF: 0.12 – 0.42 | CMF ID: 207 / 210

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Implement Signing and Marking Improvements at Stop-Controlled Intersections

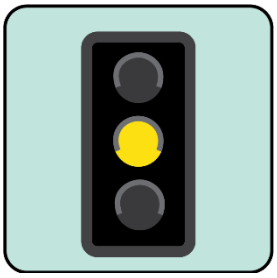
Description: Involves deploying a package of multiple low-cost countermeasures, including enhanced signing and pavement markings, at stop-controlled intersections.

Prior Condition: Stop-controlled intersections without systemic signing and marking improvements.

Category: Intersection traffic control.

CMF: 0.734 – 1.095 | CMF ID: 8867 / 8916 / 8900

Yellow Change Intervals



Description: Improve signalized intersection safety and reduce red-light running by reviewing and updating traffic signal timing policies and procedures concerning the yellow change interval.

Prior Condition: No prior condition.

Category: Intersection traffic control.

CMF: 0.88 - 0.92 | CMF ID: 380 / 384

Crosscutting

Increased Lighting

Description: Provide intersection illumination.

Prior Condition: No prior condition / Rural 2-lane intersection with no lighting.

Category: Crosscutting, Highway lighting.

CMF: 0.58 - 0.72 | CMF ID: 436/ 433/ 192/ 2376

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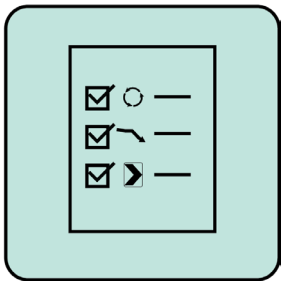
Local Road Safety Plans



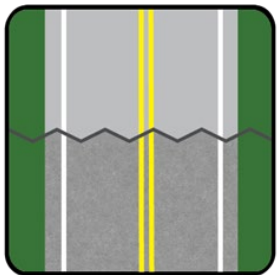
Description: A local road safety plan (LRSP) provides a framework for identifying, analyzing, and prioritizing roadway safety improvements on local roads.

Prior Condition: No prior condition.

Category: Crosscutting.

CMF: NA[5]

Pavement Friction Management



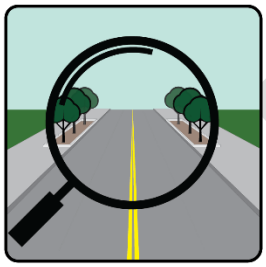
Description: Install high friction surface treatment (HFST).

Prior Condition: Curves/Ramps without High Friction Surface Treatment, or sections of pavement with both a high proportion (35-40%) of wet-road crashes and low friction numbers (<32).

Category: Roadway.

CMF: 0.124 – 1.086 | CMF ID: 10352 / 10342 / 2259

Road Safety Audit



Description: Conduct a Road Safety Audit (RSA) with multidisciplinary teams to consider all road users, account for human factors, and road user capabilities. Results are documented in a formal report and require a formal response from the road owner.

Prior Condition: No prior condition.

Category: Crosscutting.

CMF: N/A.[6]

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[5] 17% reduction in fatal and serious injury crashes observed on county-owned roads in Washington State. FHWA Proven Safety Countermeasures, https://highways.dot.gov/safety/proven-safety-countermeasures/local-road-safety-plans
[6] 10%-60% reduction in total crashes, FHWA, Proven Safety Countermeasures, https://highways.dot.gov/safety/proven-safety-countermeasures/local-road-safety-plans

Planning, Policy, and Programmatic Strategies

The following section presents planning, policy, and programmatic strategies to reduce traffic-related deaths and serious injuries.

Planning Strategies

Plan Updates and Monitoring

Maintaining up-to-date crash analysis is imperative to monitoring traffic-related safety performance over time. Continually tracking safety performance metrics could include comparing trends at the regional, state, and national level of traffic-related deaths and serious injuries for all roadway victims and pedestrians and bicyclists alone. Additionally, tracking key performance indicators such as deaths and serious injuries (KSI) per mile on the regional road network at regularly occurring intervals (such as five years) could be used to updates to the High Injury Network, and show progress made on poorly performing roadway sections. Additionally, monitoring safety performance on the regional road network could be used as a prioritization framework for the Regional Transportation Plan fiscally constrained transportation improvements.

Complete Streets Policy

Washington State required WSDOT to consider Complete Streets for state transportation projects over $500,000 that started design on or after July 1, 2022. However, in the 2025 legislative session, the threshold was revised to $1 million or more for projects that started design on or after August 1, 2025. Given that State Routes carry a significant proportion of the county's traffic-related deaths and serious injuries, SCOG can collaborate with WSDOT and local jurisdictions to develop Complete Streets policies or prioritization of Complete Streets strategies on corridor redesigns including State Routes with an interest in implementing tools and strategies from this RSAP where possible.

Education Program Strategies

Driver Education Programs

The Washington State Department of Licensing (DOL) requires young drivers aged 16 to 17 to complete a driver education program with 30 hours of classroom instruction and 6 hours behind-the-wheel. These driver education programs are expensive and out of reach for lower income youth. Studies have shown young driver education programs have resulted in safer drivers not only in their youth, but over the course of their lives. House Bill 1878 would expand the mandatory driver education to drivers up to 21 years old by 2030.[7] There are DOL approved driver education schools in Anacortes, Mount Vernon and Sedro-Woolley which can be

[7] Washington State Legislature, HB 1878-2025-26, https://app.leg.wa.gov/billsummary/?BillNumber=1878&Year=2025&Initiative=false

found on the Driver Training Schools and Testing Locations Website.[8] Additionally, the Washington State Transportation Commission is considering ways to improve young driver safety through a partnership with the Washington State DOL and Washington State University identified in the Improving Young Driver Safety Implementation Plan (ESSB 5583). In the second phase of the implementation plan, expanded access and capacity is called out with scholarship and grant programs rolling out for those without access.[9]

Peer-to-Peer Teen Traffic Safety Program

The Peer-to-Peer Teen Traffic Safety Program Guide is an educational program where teenagers and young adults are charged with identifying traffic safety problems in their schools and community and take action to address them.[10] The educational program guide is developed for adults tasked with setting up the program as a framework and is flexible based on the particular safety issues identified and how the young adults want to address issues. This program is supported by adults who provide resources, equipping young adults with information while empowering teens to identify problems and act, and by embedding peer accountability to promote safer roadway behaviors. Programmatic pillars include:

- **Teen led:** Teens are in charge, providing youth opportunities to engage in meaningful discussion and share opinions and experiences.
- **Inclusive:** Peer-to-peer programming is intended to engage all teens, attracting youth from different backgrounds, ethnicities, abilities, and genders is fundamental to the program.
- **Sustainable:** Adult support is essential for the success of peer-to-peer programs. While student turnover is high, funding, guidance, and educational resources are needed to support long-term program health.
- **Facilitated Training:** Training for teens and adults is important for content such as information about teen traffic safety. However, youth also need training and guidance related to team dynamics and the importance of active listening, communication, and resource management.
- **Defined Learning Objectives:** Program participants need to understand crash and citation outcomes most age-range related, before they can educate their peers. Additionally, learning outcomes or goals should be tied to the issues most prevalent among teen drivers.
- **Positivity:** Research indicates that positive teen learning experiences and messaging are more likely to encourage teens to choose safe driving behaviors.
- **Incentives and Recognition:** Incentives and recognition work in the short-term to incentivize good driving behavior but the program also acknowledges that additional strategies such as social norming are important to help teens recognize personal benefit to safe driving behaviors.

[8] Washington State Department of Licensing, the Driver Training Schools and Testing Locations, https://dol.wa.gov/driver-licenses-and-permits/driver-training-schools-and-testing-locations?type=Driver
[9] Washington State Department of Licensing, Improving Young Driver Safety (ESSB 5583) Implementation Plan, https://dol.wa.gov/sites/default/files/2024-11/ESSB-5583-Implementation-Plan.pdf
[10] USDOT, National Highway Traffic Safety Administration , Peer-to-Peer Teen Traffic Safety Program Guide, https://www.nhtsa.gov/document/peer-peer-teen-traffic-safety-program-guide

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- **Program Evaluation:** A final touchpoint of the program evaluation is encouraged to assess whether learning outcomes and goals were achieved.

Safe Routes to School

Safe Routes to School (SRTS) is a federal, state, and locally supported initiative with the expressed goal of making it safer for children to walk and bike to school.[11] Nine jurisdictions within Skagit County currently utilize SRTS programs. SRTS programs use a variety of education, engineering and enforcement strategies that help make routes safer for children to walk and bicycle to school and encouragement strategies to make walking and biking more attractive modes for commuting to school. Programmatic elements include:

- **Education:** For children and caregivers, education and training are focused on how to choose the safest routes for walking or biking to and from school, safe walking and biking behaviors, how to use common engineering treatments such as crosswalks and sidewalks, and traffic laws compliance.
- **Engineering:** Includes upgrades to sidewalks, crosswalks, bikes lanes, and traffic calming to encourage walking and biking while providing safer facilities.
- **Encouragement:** A complementary strategy to increase the number of children that walk and bike to school. Encouragement campaigns can include special events as well as regularly scheduled bike and pedestrian commuting groups.
- **Enforcement:** SRTS enforcement involves a network of community members working together to promote safe walking, biking, and driving practices. Includes localized accountability actions such as crossing guards, neighborhood watch programs, and school personnel working with law enforcement.

Community Walk Audits

A community walk audit is a collaborative form of public engagement that serves as an on-the-ground assessment of traffic related safety with the goal of identifying issues pedestrians face within a given area. During the audit, participants can include community members, advocates, and sometimes public officials to identify and document strengths and challenges related to safety, comfort, and accessibility for traversing the given location(s). Walk audits can be a first step towards policy, system, and environment change, and are primarily focused on community needs benefiting from broad perspectives. Elements of a community walk audit include:

- Organization and coordination on selecting the site.
- Outreach and engagement to advertise and entice community participation.
- Focus on elements including existing conditions of sidewalks, crosswalks, intersections, public transit access, driver behavior, and safety.

[11] Pedestrian and Bicycle Information Center, FHWA, National Highway Traffic Safety Administration, Safe Routes to School Guide, https://www.guide.saferoutesinfo.org

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- Collaboration in identifying existing conditions in relation to community needs.
- Documentation of conditions to be shared with local government.

High Visibility Enforcement (HVE)

USDOT National Roadway Safety Strategy (NRSS) recognizes the importance of law enforcement officers as critical in preventing and reducing roadway deaths and serious injuries. High Visibility Enforcement (HVE) is a universal traffic safety approach designed to deter drivers from dangerous driving behavior and increase compliance with traffic laws.[12] Enforcement elements include:

- **Saturation Patrol:** Involves conducting visible patrols in targeted areas to gain voluntary compliance with traffic laws.
- **Checkpoints:** Involves stopping vehicles, or a sequence of vehicles at a predetermined fixed location to detect drivers who are impaired by alcohol or drugs. (Note: Washington State does not currently permit DUI checkpoints for enforcement.)
- **Wave:** Includes increased enforcement of a particular type of traffic violation such as speeding.
- **Automated Enforcement Enhancements:** When co-locating HVE with speed safety cameras such as placing photo enforced signage, it can expand the coverage area of the speed safety camera.

Safety Camera Policy – Automated Enforcement

Automated enforcement such as speed, and red-light cameras have been shown to reduce the quantity of traffic violations where implemented. Washington state law RCW 46.63.220 has given counties and cities explicit authority to authorize and oversee automated enforcement programs, which they must approve through local legislative authority.

Road Safety Audits

Road Safety Audits (RSAs) are a formal, systematic method of safety assessment that differs significantly from other kinds of safety studies, often referred to in the sources as traditional safety reviews, standards compliance checks, or crash investigations. A focused road safety audit assembles a team of planners and engineers with safety credentials to review locations within the county with high crash frequencies and no current plans for improvements and countermeasures. Through a focused workshop environment that includes a field visit, they identify a range of improvements and strategies to address safety issues.

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[12] USDOT, National Highway Traffic Safety Administration, High Visibility Enforcement Toolkit, https://www.nhtsa.gov/enforcement-justice-services/high-visibility-enforcement-hve-toolkit

MOVE SKAGIT

Chapter 5 Implementation Strategies

Introduction

This chapter provides an implementation framework to advance roadway safety throughout Skagit County. It details the development of countermeasures in response to crash data trends, establishes processes for monitoring and performance measurement—particularly within the High Injury Network —and emphasizes reflective evaluation of investments and their impact on safety outcomes. Key metrics are defined to ensure alignment with agency values while embedding equity considerations, such that improvements benefit communities historically most affected by roadway deaths and serious injuries. As part of the coordinated Move Skagit process, this safety plan supports the Regional Transportation Plan. The Regional Transportation Plan defines potential for grant-eligible projects and considers a clear implementation schedule and delineates roles and responsibilities to ensure effective execution.

These countermeasures and strategies are intended as a resource to all agencies as they consider known and perceived safety issues in their communities. The in-depth crash analysis defined in Chapter 2, the equity analysis describing areas more disproportionately impacted by roadway death and serious injuries discussed in Appendix D and the crash countermeasures described in chapter 4 provide context for developing performance measures and evaluation metrics, development of implementation and investment strategies and prioritization processes that move Skagit County communities closer to eliminating deaths and serious injuries on roadways across the region.

This Chapter provides an assessment of countermeasures that respond to the region's crash focus areas, evaluates the highest density of segments of the High Injury Network as well as segments of the High Injury Network where there are proposed improvements. This chapter also defines evaluation metrics and measures that reflect on agency values, and addresses roles and responsibility and evaluation for prioritization.

Skagit County Crash Focus Areas

Chapter 2 describes 10 key focus areas based on safety data analysis and policy challenges within Skagit County and identifies plan and policy gaps for safety in the region. This Regional Safety Action Plan addresses some plan and policy gaps including:

- The development of a High Injury Network identifying priority segments of the regional roadway network experiencing the highest level of deaths and serious injuries. This network provides a regional focus for investments and a metric for comparison over time to test the efficacy of strategies and improvements.
- Agencies within the region have developed plans and policies that can be used as models to improve safety, including active transportation plans, ADA Transition Plans and have speed limit policies. Only one local agency has an adopted Target Zero Action Plan; however, the SCOG RSAP sets a policy that seeks to achieve Zero Deaths and Serious Injuries in line with the State of Washington Target Zero plan. Additionally, some agencies have also adopted safe routes to school plans and established speed

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policies. These plans and policies can serve as models for other communities. Model plans and policies can be found in Appendix A.

- While no agencies in Skagit County are currently implementing automated enforcement for speeding or red-light running, automated enforcement could assist local agencies in reducing angle crashes at urban intersections and reduce speeds in school zones. The Washington State Legislature has made significant changes to the use of automated enforcement cameras. House Bill 2384 allows cities and counties to use automated traffic safety cameras to detect stoplight and speed zone violations, which is a change for jurisdictions. Notably, the bill states that 25% of revenues from cameras must be deposited into the Cooper Jones Active Transportation Safety Account. In the focus areas, State Routes are a challenge for local agencies. Cities can deploy cameras on State Routes classified as city streets and in work zones, with specific placement requirements to minimize impacts on drivers. These changes aim to enhance roadway safety and improve traffic enforcement across Washington state.

To address the top 10 focus areas that result in deaths and serious injuries, countermeasures are discussed in the following section. Recommended strategies include design treatments from FHWA's Proven Safety Countermeasures for segments and intersections, as well as planning, policy and programmatic approaches. Together, these strategies form the foundation for safety initiatives that can be implemented within Skagit County, consistent with the Safe System Approach. The toolkit also includes a comprehensive set of policy, infrastructure, enforcement, and education strategies to reduce quantity of crashes and severity of crashes within Skagit County.

Countermeasures and Strategies Addressing Crash Focus Areas

Based on findings in the State of Safety in the Region Report (Appendix B), Crash Focus Areas were identified for the region. Crash Focus Areas were developed from the most common and severe crash outcomes within Skagit County. Crash Focus Areas are listed below with crash countermeasures most associated with reducing the Crash Focus Area components. For reference, Crash Modification Factors (CMFs) are reference specific safety emphasis areas and are detailed in Chapter 4.

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High Fatality and KSI Rates in Unincorporated Areas

- Problem: 75% of deaths occur in unincorporated areas; fatality rate is much higher than in urban areas.
- Recommended Countermeasures:
  - Rumble strips (shoulder and centerline) – CMF: ~0.65–0.75
  - Wider Edge Lines: (4 inches to 6 inches) – CMF: ~0.63 – 0.87
  - Paved shoulders (widening to 4ft+) – CMF: ~0.70
  - Access management / driveway consolidation – CMF: ~0.71
- Recommended Plan and Policy Strategies:
  - Enforcement: Speed feedback signs, and speed enforcement zones on higher speed rural roadways.
  - Education: Public Campaign on Rural Speeds.

Safety Performance of State Routes (accounting for 13% regional roadway network, but 60% of deaths)

- Problem: Overrepresentation of severe crashes on high-speed state-maintained routes.
- Recommended Countermeasures:
  - Median barriers on divided highways – CMF: ~0.30–0.50 (for head-on crashes)
  - Roundabouts on rural highways at intersections – CMF: ~0.26 (for converting stop-controlled intersection into a single lane roundabout).
  - Systemic lane departure countermeasures (rumble strips, enhanced markings and signage, guardrail infill) – CMF: ~0.63–0.71
  - Speed management through gateway treatments or dynamic signs – CMF: ~0.93–0.95
- Recommended Strategies:
  - Enforcement: Speed feedback signs, and speed enforcement zones on higher speed rural roadways. Include speed enforcement zones and potential automated enforcement.
  - Education: Public Campaign on Rural Speeds.

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Disproportionately High Fatalities on Tribal Lands (8× higher death rate)

- Problem: Very small population, yet significantly elevated death rates.
- Recommended Countermeasures:
  - Community-based speed enforcement and awareness campaigns – CMF: ~0.85 (education enforcement bundles)
  - Street lighting at intersections and crossings – CMF: ~0.65
  - Enhanced crosswalks with RRFBs or pedestrian refuge islands – CMF: ~0.40
- Recommended Strategies:
  - Enforcement: Establish speed enforcement zones.
  - Education Campaign: Focused driver education program for Tribal youth.

Vulnerable Road Users (VRU) at High Risk in Burlington, La Conner, Rural Roads

- Problem:
  - High KSI and death rates among pedestrians and bicyclists, especially in unincorporated contexts.
- Recommended Countermeasures:
  - Pedestrian hybrid beacons (HAWK signals) – CMF: ~0.49
  - Road diets (4-to-3 lane conversions) – CMF: ~0.70 (for all crashes)
  - Separated bike lanes / side paths – CMF: ~0.55–0.65
  - In-street pedestrian signs or curb extensions – CMF: ~0.70
- Recommended Strategies:
  - Education Campaigns: Community Walk Audits.
  - Develop Active Transportation Plans.

Impairment, Speeding, and Distracted Driving Are Top Contributing Factors

- Problem: Leading behavioral factors in fatal and serious injury crashes.
- Recommended Countermeasures:
  - Automated speed enforcement (ASE) – CMF: ~0.70 (especially in high-risk corridors)
  - Dynamic speed feedback signs – CMF: ~0.85
  - High-visibility enforcement combined with public education – CMF: ~0.80
- Recommended Strategies:
  - Enforcement: Establish speed enforcement zones, automated enforcement.
  - Education Campaigns and driver education programs.

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High Severity in Fixed Object, Head-On, and Angle Crashes

- Problem: These crash types account for most severe injuries and deaths.
- Recommended Countermeasures:
  - Clear zone improvements / object removal – CMF: ~0.75
  - Roundabout installation at high-angle crash intersections – CMF: ~0.35 (for fatal/injury crashes)
  - Cable median barriers for head-on crashes – CMF: ~0.55
- Recommended Strategies:
  - Enforcement: Automated enforcement.

Motorcycle and Light Truck Involvement in Severe Crashes

- Problem: Disproportionate share of KSI and fatalities.
- Recommended Countermeasures:
  - Motorcycle-specific safety campaigns and enforcement – CMF: ~0.85 (behavioral focus)
  - Install skid-resistant surfaces on curves – CMF: ~0.60
  - High friction treatments to reduce motorcyclist run-off road crashes on curves – CMF: ~0.48
  - Widen edge lines – CMF: ~0.60

Older Adults and Disabled Persons Overrepresented in Severe Injuries

- Problem: Age and disability correlate with higher fatal and serious injury rates.
- Recommended Countermeasures:
  - ADA-compliant infrastructure upgrades – CMF: ~0.60 (esp. tactile warnings, signal timing)
  - Advance stop lines for pedestrian crossings – CMF: ~0.80
  - Leading pedestrian intervals (LPI) – CMF: ~0.85

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Top High Injury Network Corridors and Strategies (3 KSI Per Mile and Greater)

The High Injury Network is a subset of roadways identified within Skagit County that experiences a disproportionately high number of severe traffic crashes, resulting in deaths or serious injuries. The purpose of identifying these networks is to prioritize safety interventions and improvements in areas where traffic injuries are concentrated. In Skagit County, the HIN and crash analysis included study period of 2019 through 2023 and is described in Chapter 2. The High Injury Network highlights segments with higher densities of deaths and serious injuries. In Skagit County, segments of the High Injury Network with at least 3 death or serious injury victims per mile were evaluated. Of the seven segments meeting this criteria, one project was already identified on the 2045 Regional Transportation Plan, leaving six segments where improvements were not identified in the Regional Transportation Plan. These six are noted in Table 7 including the level of deaths and serious (KSI) per mile. These top segments are noted in Table 7 noting seven deaths on these segments and 30 deaths and serious injuries. The top segments are described on the following page with potential countermeasures and improvements.

Table 7. Top HIN Corridors Victim Summary

HIN Roadway	From Street / MILEPOST	To Street / MILEPOST	LENGTH Mile	KABC Count	KABC PER MILE	KSI COUNT	KSI PER MILE	K COUNT	K PER MILE
Chuckanut Drive /SR 11	0.7	2.1	1.46	21	14.33	6	4.11	1	0.68
Best-Rd	Young Road	State Route 20	0.97	10	10.31	4	4.11	1	1.03
S Burlington Blvd	East/West Rio Vista Avenue	Skagit River	1.87	137	73.26	7	3.75	2	1.07
N 30th Street	Loch Ness Loop	East Fir Street	1.47	21	14.30	5	3.39	2	1.36
N Laventure Street	Sigmar Lane	E Division Street	1.25	43	34.40	4	3.19	0	N/A
Township Road	SR 20/ Moore Street	Dunlop Street	1.18	39	33.05	4	3.40	1	0.84

Notes:
KSI are deaths and serious injury outcomes; KSI Per Mile (KSI PM) are deaths and serious injuries per mile
KABC are all deaths and injury outcomes; KABC Per Mile (KABC PM) are deaths and injuries per mile.

Chuckanut Drive/SR 11

Existing Conditions

Shown in Figure 13, Chuckanut Drive/SR 11 from milepost 0.7 to milepost 2.1 is an arterial segment south of Cook Road to South of Packard Lane. On the state highway system map, this segment is designated as a Collector. It is located within the unincorporated area of Skagit County with one lane in each direction and shoulders. The paved roadway is 30' wide. Lanes are roughly 11' wide with shoulders that are 4' feet wide to accommodate pedestrians and bicyclists. The posted speed on this segment is 45 MPH.

Figure 13. Chuckanut Drive at Pulver Road HIN Segment

Figure 14. Streetview of Chuckanut Drive/SR 11

This 1.46-mile segment of Chuckanut Drive had six fatal and serious injuries (KSI) outcomes in the five-year period between 2019 and 2023. None of these KSI crashes involved pedestrians or people riding bicycles, however, this corridor is a popular bicyclist route leading to Larrabee State Park.

Over a 5-year period, 13 fatal or injury (KABC) crash incidents occurred along this corridor, resulting in 21 victims. Among these, 4 were fatal or serious (KSI) crashes, accounting for 6 victims, including 1 crash that resulted in a single death (K).

Please Note:

Table cell values may not add up to the sum of a column's values; this is due to the crash information falling into one or more categories as seen in Table 8, in addition to crash record marked as an angle crash 4 crashes were also rollover, and 5 crashes were fixed object. Additionally, it may be the case that a single crash was marked as an angle crash, with a fixed object, and the vehicle rolled over.

Table 8 shows that while angle-related crashes are not the only collision types on this corridor, they are the only crash type present in all injury and fatal crashes and contribute to 100% of KABC, KSI, K outcomes.

Table 8. All Victim Counts by Collision Types on Chuckanut Drive/SR 11 from MP 0.7 to 2.1

COLLISION TYPE	TOTAL KABC	SHARE OF KABC	TOTAL KSI	SHARE OF KSI	TOTAL K	SHARE OF K	RATIO OF KSI TO KABC	RATIO OF K TO KABC	RATIO OF K TO KSI
Angle	21	100%	6	100%	1	100%	1 in 4	1 in 21	1 in 6
Fixed Object	4	19%	1	17%	0	0%	1 in 4	N/A	N/A
Rollover	5	24%	3	50%	1	100%	1 in 2	1 in 5	1 in 3
All Crashes	**21**		**6**		**1**		**1 in 4**	**1 in 21**	**1 in 6**

Spatially, KSI crashes occurred exclusively at or near intersections (Table 9) and are highly concentrated at a single location: the intersection of Chuckanut Drive and Pulver Road. In fact, this intersection is identified as the most dangerous intersection in Skagit County in the high-crash location analysis. When overlaying this finding with the contributing factors (Table 10), disobeying signs and failure to yield appear to be the top contributing factors at this high crash intersection.

Table 9. All Victim Counts by Junction Types on Chuckanut Drive/SR 11 from MP 0.7 to 2.1

JUNCTION RELATIONSHIP	TOTAL KABC	SHARE OF KABC	TOTAL KSI	SHARE OF KSI	TOTAL K	SHARE OF K	RATIO OF KSI TO KABC	RATIO OF K TO KABC	RATIO OF K TO KSI
At Driveway	3	14%	0	0%	0	0%	N/A	N/A	N/A
At Intersection and Related	18	86%	6	100%	1	100%	1 in 3	1 in 18	1 in 6
All Crashes	**21**		**6**		**1**		**1 in 4**	**1 in 21**	**1 in 6**

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Table 10. All Victim Counts by Contributing Factors on Chuckanut Drive/SR 11 from MP 0.7 to 2.1

CONTRIBUTING FACTOR	TOTAL KABC	SHARE OF KABC	TOTAL KSI	SHARE OF KSI	TOTAL K	SHARE OF K	RATIO OF KSI TO KABC	RATIO OF K TO KABC	RATIO OF K TO KSI
Disobey Signal or Stop Sign	9	43%	4	67%	0	0%	1 in 2	N/A	N/A
Distracted	2	10%	0	0%	0	0%	N/A	N/A	N/A
Failure to Yield to Vehicle	12	57%	2	33%	1	100%	1 in 6	1 in 12	1 in 2
Speeding	3	14%	1	17%	0	0%	1 in 3	N/A	N/A
All Crashes	**21**		**6**		**1**		**1 in 4**	**1 in 21**	**1 in 6**
Crashes with Contributing Factor	**21**	**100%**	**6**	**100%**	**1**	**100%**	**1 in 4**	**1 in 21**	**1 in 6**

Though not pronounced, Table 11 shows that 2 KSI outcomes occurred in darkness, with no street light conditions. Installing street lighting may be one of the safety countermeasures applicable to study area.

Table 11. All Victim Counts by Lighting Conditions on Chuckanut Drive/SR 11 from MP 0.7 to 2.1

LIGHTING CONDITION	TOTAL KABC	SHARE OF KABC	TOTAL KSI	SHARE OF KSI	TOTAL K	SHARE OF K	RATIO OF KSI TO KABC	RATIO OF K TO KABC	RATIO OF K TO KSI
Dark-No Street Lights	8	38%	1	17%	0	0%	1 in 8	N/A	N/A
Dark-Street Lights Off	2	10%	1	17%	0	0%	1 in 2	N/A	N/A
Daylight	11	52%	4	67%	1	100%	1 in 3	1 in 11	1 in 4
All Crashes	**21**		**6**		**1**		**1 in 4**	**1 in 21**	**1 in 6**

Physical Roadway Countermeasures

As the findings point to crashes heavily concentrating at a single intersection, a controlled intersection, such as a roundabout at the intersection of Chuckanut Drive and Pulver Road, could be the most effective long-term solution. WSDOT in coordination with Skagit County recently installed turn-restrictions on Pulver Road at Chuckanut Drive/SR 11 along with other speed management and flashing stop signs. WSDOT recently reconfigured Chuckanut Drive and Pulver Road intersection by preventing left turns and through movements from Pulver Road, only allowing right turn movements onto Chuckanut Drive. WSDOT will monitor the recent improvements and assess whether future intersection improvements should be completed.

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Policy and Enforcement Strategies

Additionally, the corridor's long, straight design likely contributes to unsafe driving behaviors such as speeding, distraction, and failure to obey signals or signage. These risks are especially concerning given that this is not a limited-access highway facility, and conflicts with local traffic. Implementing enforcement strategies, such as Automated Speed Enforcement (ASE), High Visibility Enforcement (HVE) and dynamic speed feedback signs, can be effective in reducing these risky behaviors and improving overall safety along the corridor. Interviews with law enforcement suggest speeding along the corridor contributing to severity of crashes and remote location with circuitous alternative routing as contributing to severity of outcomes when a crash blocks the road and victims need to be taken to the hospital.

Best Road

Existing Conditions

Best Road is a 0.97-mile arterial segment extending from south of SR 20 and is located in unincorporated Skagit County as shown in Figure 15. It is classified as a Collector according to the WSDOT functional classification map. In May 2020, traffic data indicated an average daily volume of 2,362 vehicles along the corridor. The roadway consists of one lane in each direction with 4-foot shoulders, totaling a paved width of approximately 34 feet. Each lane is roughly 13 feet wide, and the posted speed limit is currently 35 MPH.

Figure 15. Best Road at SR 20 HIN Segment

Between 2019 and 2023, five KABC crashes were recorded along this HIN segment, resulting in 10 victims. Among these, there were four KSI victims, including one death, all resulting from a single serious injury or fatal crash. None of the KSI crashes involved pedestrians or bicyclists.

According to Table 12, angle crashes are the most severe collision type on this corridor, as they are present across all crash severity levels. Notably, there is 1 crash that resulted in 4 KSI victims, 1 of which was fatal. This crash occurred at the intersection of Young Road and Best Road (Table 13). This entering-at-angle crash involved a collision with a fixed object and was associated with impaired driving and failure to obey a stop sign (Table 14).

Table 12. All Victim Counts by Collision Types on Best Road from South of SR 20 to South of Young Road

COLLISION TYPE	TOTAL KABC	SHARE OF KABC	TOTAL KSI	SHARE OF KSI	TOTAL K	SHARE OF K	RATIO OF KSI TO KABC	RATIO OF K TO KABC	RATIO OF K TO KSI
Angle	10	100%	4	100%	1	100%	1 in 3	1 in 10	1 in 4
Fixed Object	4	40%	4	100%	1	100%	1 in 1	1 in 4	1 in 4
Parked car	1	10%	0	0%	0	0%	N/A	N/A	N/A
All Victims	**10**		**4**		**1**		**1 in 3**	**1 in 10**	**1 in 4**

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Table 13. All Victim Counts by Junction Types on Best Road from South of SR 20 to South of Young Road

JUNCTION RELATIONSHIP	TOTAL KABC	SHARE OF KABC	TOTAL KSI	SHARE OF KSI	TOTAL K	SHARE OF K	RATIO OF KSI TO KABC	RATIO OF K TO KABC	RATIO OF K TO KSI
At Driveway	1	10%	0	0%	0	0%	N/A	N/A	N/A
At Intersection and Related	9	90%	4	100%	1	100%	1 in 2	1 in 9	1 in 4
All Victims	**10**		**4**		**1**		**1 in 3**	**1 in 10**	**1 in 4**

Table 14. All Victim Counts by Contributing Factors on Best Road from South of SR 20 to South of Young Road

CONTRIBUTING FACTOR	TOTAL KABC	SHARE OF KABC	TOTAL KSI	SHARE OF KSI	TOTAL K	SHARE OF K	RATIO OF KSI TO KABC	RATIO OF K TO KABC	RATIO OF K TO KSI
Disobey Signal or Stop Sign	7	70%	4	100%	1	100%	1 in 2	1 in 7	1 in 4
Distracted	1	10%	0	0%	0	0%	N/A	N/A	N/A
Failure to Yield to Vehicle	3	30%	0	0%	0	0%	N/A	N/A	N/A
Impaired	4	40%	4	100%	1	100%	1 in 1	1 in 4	1 in 4
All Victims	**10**		**4**		**1**		**1 in 3**	**1 in 10**	**1 in 4**
Victims with Contributing Factor	**10**	**100%**	**4**	**100%**	**1**	**100%**	**1 in 3**	**1 in 10**	**1 in 4**

Lighting conditions in Table 15 indicate that this angle crash occurred in darkness, with no street lighting present, further compounding the severity and emphasizing the need for visibility improvements at this location. Additionally, the corridor's long, straight design and the lack of traffic controls likely contribute to poor speed management.

Table 15. All Victim Counts by Lighting Conditions on Best Road from South of SR 20 to South of Young Road

LIGHTING CONDITION	TOTAL KABC	SHARE OF KABC	TOTAL KSI	SHARE OF KSI	TOTAL K	SHARE OF K	RATIO OF KSI TO KABC	RATIO OF K TO KABC	RATIO OF K TO KSI
Dark-No Street Lights	4	40%	4	100%	1	100%	1 in 1	1 in 4	1 in 4
Daylight	3	30%	0	0%	0	0%	N/A	N/A	N/A
Dusk	3	30%	0	0%	0	0%	N/A	N/A	N/A
All Victims	**10**		**4**		**1**		**1 in 3**	**1 in 10**	**1 in 4**

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Physical Roadway Countermeasures

Based on these findings, a combination of intersection control improvements (e.g., upgraded signage or conversion to a roundabout), lighting installation, and speed management could reduce crash frequency and severity along this short corridor.

Policy and Enforcement Strategies

With failure to obey traffic signals and signage identified as a leading contributing factor, enhancing the visibility of enforcement, through measures such as targeted patrols, public education campaigns, or automated enforcement, can help deter violations and improve compliance.

South Burlington Boulevard

Existing Conditions

S Burlington Boulevard is a 1.87 mile five-lane arterial from East Rio Vista Avenue to the Skagit River. This segment shown in Figure 16, includes two travel lanes in each direction, a center two-way left-turn lane and sidewalks on both sides. The paved roadway is approximately 55’ wide and this almost 2-mile segment includes ten signal-controlled intersections. The posted speed on this segment is 35 MPH with fronting commercial and residential development.

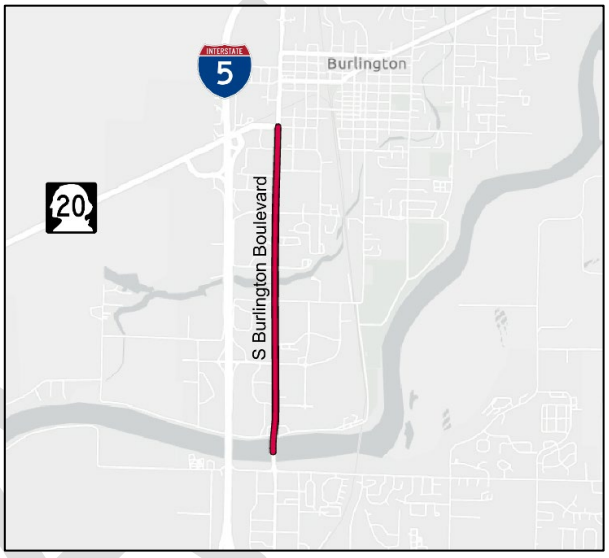

Figure 16. South Burlington Boulevard HIN Segment

Figure 17. Streetview of South Burlington Boulevard

This 1.87-mile HIN segment recorded 7 KSI victims in the five-year period between 2019 and 2023. Out of 105 KABC crashes, 17 involved pedestrians or people riding bicycles, resulting in 3 vulnerable road users seriously injured or killed. The segment had crashes that resulted in 2 deaths, including one pedestrian. There was also one crash resulting in a seriously injured bicyclist.

Crashes resulting in KSI outcomes on this corridor primarily involved either pedestrians/bicyclists or fixed objects, accounting for 43% and 29% of all KSI victims, respectively. Of the 2 fatal crashes, one was a rear-end collision, while the other involved a pedestrian being struck (Table 16).

Table 16. All Victim Counts by Collision Types on Burlington Boulevard Road from East Rio Vista Avenue to the Skagit River

COLLISION TYPE	TOTAL KABC	SHARE OF KABC	TOTAL KSI	SHARE OF KSI	TOTAL K	SHARE OF K	RATIO OF KSI TO KABC	RATIO OF K TO KABC	RATIO OF K TO KSI
Angle	64	47%	0	0%	0	0%	N/A	N/A	N/A
Fixed Object	3	2%	2	29%	0	0%	1 in 2	N/A	N/A
Head-on	1	1%	0	0%	0	0%	N/A	N/A	N/A
Opposite direction – Other	3	2%	0	0%	0	0%	N/A	N/A	N/A
Parked car	1	1%	0	0%	0	0%	N/A	N/A	N/A
Pedestrian/Bike	17	12%	3	43%	1	50%	1 in 6	1 in 17	1 in 3
Rear End	47	34%	1	14%	1	50%	1 in 47	1 in 47	1 in 1
Rollover	2	1%	1	14%	0	0%	1 in 2	N/A	N/A
Same direction – Other	3	2%	0	0%	0	0%	N/A	N/A	N/A
Sideswipe	4	3%	0	0%	0	0%	N/A	N/A	N/A
All Victims	**137**		**7**		**2**		**1 in 20**	**1 in 69**	**1 in 4**

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While Table 17 shows no clear pattern in the junction relationships of fatal crashes, there is a notable concentration of KABC crashes at intersections, particularly at South Burlington Boulevard and Gilkey Road, a location also identified as a high-crash hotspot.

Table 17. All Victim Counts by Junction Types on Burlington Boulevard Road from East Rio Vista Avenue to the Skagit River

JUNCTION RELATIONSHIP	TOTAL KABC	SHARE OF KABC	TOTAL KSI	SHARE OF KSI	TOTAL K	SHARE OF K	RATIO OF KSI TO KABC	RATIO OF K TO KABC	RATIO OF K TO KSI
At Driveway	22	16%	0	0%	0	0%	N/A	N/A	N/A
At Driveway within Major Intersection	8	6%	0	0%	0	0%	N/A	N/A	N/A
At Intersection and Not Related	4	3%	2	29%	1	50%	1 in 2	1 in 4	1 in 2
At Intersection and Related	59	43%	2	29%	0	0%	1 in 30	N/A	N/A
Intersection Related but Not at Intersection	19	14%	0	0%	0	0%	N/A	N/A	N/A
Not at Intersection and Not Related	25	18%	3	43%	1	50%	1 in 8	1 in 25	1 in 3
All Victims	**137**		**7**		**2**		**1 in 20**	**1 in 69**	**1 in 4**

Table 18 highlights the top behavioral factors such as speeding and reckless driving as the predominant contributing factors of KSI outcomes. Interviews with law enforcement suggested poor lane changing, and pedestrians crossing outside the protected crosswalks as contributing to crashes.

Table 18. All Victim Counts by Contributing Factors on Burlington Boulevard Road from East Rio Vista Avenue to the Skagit River

CONTRIBUTING FACTOR	TOTAL KABC	SHARE OF KABC	TOTAL KSI	SHARE OF KSI	TOTAL K	SHARE OF K	RATIO OF KSI TO KABC	RATIO OF K TO KABC	RATIO OF K TO KSI
Disobey Signal or Stop Sign	11	8%	0	0%	0	0%	N/A	N/A	N/A
Distracted	37	27%	0	0%	0	0%	N/A	N/A	N/A
Drowsy	1	1%	0	0%	0	0%	N/A	N/A	N/A
Equipment	2	1%	0	0%	0	0%	N/A	N/A	N/A
Failure to Use Due Care / Reckless	4	3%	2	29%	0	0%	1 in 2	N/A	N/A
Failure to Yield to Non-Motorist	6	4%	0	0%	0	0%	N/A	N/A	N/A
Failure to Yield to Vehicle	34	25%	0	0%	0	0%	N/A	N/A	N/A
Follow Too Closely	34	25%	0	0%	0	0%	N/A	N/A	N/A
Impaired	8	6%	2	29%	0	0%	1 in 4	N/A	N/A
Improper Passing	1	1%	0	0%	0	0%	N/A	N/A	N/A
Improper Turn/Merge	18	13%	0	0%	0	0%	N/A	N/A	N/A
Lane Violation	4	3%	0	0%	0	0%	N/A	N/A	N/A
Overcorrecting / Oversteering	1	1%	0	0%	0	0%	N/A	N/A	N/A
Speeding	16	12%	3	43%	1	50%	1 in 5	1 in 16	1 in 3
All Victims	**137**		**7**		**2**		**1 in 20**	**1 in 69**	**1 in 4**
Victims with Contributing Factor	**128**	**93%**	**4**	**57%**	**1**	**50%**	**1 in 32**	**1 in 128**	**1 in 4**

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Lighting conditions appear to play a role in crash severity, with 71% of KSI victim-involved crashes occurring in the dark, despite the presence of street lighting (Table 19).

Table 19. All Victim Counts by Lighting Conditions on Burlington Boulevard Road from East Rio Vista Avenue to the Skagit River

LIGHTING CONDITION	TOTAL KABC	SHARE OF KABC	TOTAL KSI	SHARE OF KSI	TOTAL K	SHARE OF K	RATIO OF KSI TO KABC	RATIO OF K TO KABC	RATIO OF K TO KSI
Dark-No Street Lights	7	5%	1	14%	0	0%	1 in 7	N/A	N/A
Dark-Street Lights On	32	23%	5	71%	2	100%	1 in 6	1 in 16	1 in 3
Daylight	90	66%	1	14%	0	0%	1 in 90	N/A	N/A
Dusk	8	6%	0	0%	0	0%	N/A	N/A	N/A
All Victims	**137**		**7**		**2**		**1 in 20**	**1 in 69**	**1 in 4**

Physical Roadway Countermeasures

The corridor's physical design, characterized by long blocks, wide lanes, and no medians likely encourage higher speeds and risk-taking behavior. To address these issues and enhance safety for all road users, several countermeasures should be considered. Dynamic feedback signs could be used along the corridor to alert drivers to their speed. A road diet including lowering speeds could modify the existing roadway configuration to calm traffic. Accommodating cyclists with buffered bike lanes may be considered as part of road narrowing. This method has proven to slow the drivers down and provide a safer space for vulnerable road users. Consider implementing pedestrian hybrid beacons or Rectangular Rapid Flashing Beacons (RRFBs) at mid-block locations to enhance pedestrian connectivity, facilitate safe roadway crossings, and promote traffic calming by introducing regular controlled crossing points along extended roadway segments.

Additional pedestrian countermeasures at intersections could include leading pedestrian intervals (LPIs), high visibility crosswalks, extending curbs at intersections and medians that provide pedestrian refuge may be considered in future improvements along the corridor. Medians also reduce vehicle conflict points at driveways.

Policy and Enforcement Strategies

With reckless driving and speeding identified as the top contributing factors in KSI crashes, automated traffic enforcement and improved high visibility of law enforcement could be effective strategies for deterring risky driving behavior and enhancing overall corridor safety. Red-light running cameras could reduce angle crashes.

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Dynamic feedback signs could be used along the corridor to alert drivers to their speed. Additionally, outreach and education could help reduce dangerous driving behaviors.

N 30th Street

Existing Conditions

Shown in Figure 18, N 30th Street is a 1.47-mile HIN segment in Mount Vernon extending from Loch Ness Loop in the north to East Fir Street in the south. N 30th Street is a Collector, according to the Mount Vernon Transportation Map.[13] N 30th Street consists of one travel lane in each direction with parking lanes and sidewalks on both sides north of Martin Road. South of Martin Road to the Kulshan Trail crossing, one travel lane in each direction continues throughout the segment; however, parking and sidewalks are located on the east side of the road. From Kulshan Trail crossing to East Fir Street, one travel lane in each direction is present with sidewalk on the west side of the road until Schuller Place where sidewalks are located on both sides of the roadway.

Figure 18. North 30th Street HIN Segment

Between 2019 and 2023, 18 KABC crashes were recorded along this HIN segment, resulting in 21 victims. Among these, there were five serious injuries victims, including two deaths. None of the KSI victims were pedestrians or bicyclists. Table 20 shows angle crashes are the most common collision type on the corridor and resulted in five serious injuries, including one death. Additionally, in all instances of the four serious injuries the crash was also a rollover. Table 21 shows that all serious injuries and deaths were related to an intersection. Of the serious injuries, three were assigned a crash contributing factor of impaired driving shown in Table 22.

[13] https://mountvernonwa.gov/DocumentCenter/View/62/Road-Type-Map-

Table 20. All Victim Counts by Collision Types on N 30th Street from South of Loch Ness Loop to E Fir Street

COLLISION TYPE	TOTAL KABC	SHARE OF KABC	TOTAL KSI	SHARE OF KSI	TOTAL K	SHARE OF K	RATIO OF KSI TO KABC	RATIO OF K TO KABC	RATIO OF K TO KSI
Angle	14	67%	4	80%	1	50%	1 in 4	1 in 14	1 in 4
Rollover	6	29%	5	100%	2	100%	1 in 1	1 in 3	1 in 3
All Victims	**21**		**5**		**2**		**1 in 14**	**1 in 11**	**1 in 3**

Table 21. All Victim Counts by Junction Types on N 30th Street from South of Loch Ness Loop to E Fir Street

JUNCTION RELATIONSHIP	TOTAL KABC	SHARE OF KABC	TOTAL KSI	SHARE OF KSI	TOTAL K	SHARE OF K	RATIO OF KSI TO KABC	RATIO OF K TO KABC	RATIO OF K TO KSI
At Intersection and Related	17	81%	4	80%	1	50%	1 in 4	1 in 17	1 in 4
Intersection Related but Not at Intersection	2	10%	1	20%	1	50%	1 in 2	1 in 2	1 in 1
All Victims	**21**		**5**		**2**		**1 in 4**	**1 in 11**	**1 in 3**

Table 22. All Victim Counts by Contributing Factors on N 30th Street from South of Loch Ness Loop to E Fir Street

CONTRIBUTING FACTOR	TOTAL KABC	SHARE OF KABC	TOTAL KSI	SHARE OF KSI	TOTAL K	SHARE OF K	RATIO OF KSI TO KABC	RATIO OF K TO KABC	RATIO OF K TO KSI
Disobey Signal or Stop Sign	1	5%	1	20%	0	0%	1 in 1	N/A	N/A
Distracted	2	10%	1	20%	1	50%	1 in 2	1 in 2	1 in 1
Impaired	3	14%	3	60%	1	50%	1 in 1	1 in 3	1 in 3
Overcorrecting / Oversteering	1	5%	1	20%	1	50%	1 in 1	1 in 1	1 in 1
All Victims	**21**		**5**		**2**		**1 in 4**	**1 in 11**	**1 in 3**
Victims with Contributing Factor	**20**	**95%**	**5**	**100%**	**2**	**100%**	**1 in 4**	**1 in 10**	**1 in 3**

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Physical Roadway Countermeasures

Given that nearly all serious injuries involved intersections, specifically State Route 538 (College Way), this corridor is a prime location for improvements at N 30th Street and East Fir Street. It is notable that it appears that there have been intersection improvements made to N 30th Street at E College Way within the past five years which may reduce the quantity of severe crashes in the future. However, the section of N 30th Street abutting Bakerview Park may benefit from upgrades for pedestrian and bicycle infrastructure and mid-block high visibility pedestrian crossings.

Policy and Enforcement Strategies

Disobeying traffic signs, distracted driving, and impaired driving are leading causes of KSI crashes. Effective countermeasures include high visibility enforcement, automated traffic enforcement, and community education programs, particularly near Centennial Elementary School at N 30th Street and Martin Road.

N Laventure Road

Existing Conditions

N Laventure Road is a 1.25-mile HIN segment in Mount Vernon extending from E Division Street in the south to near Sigmar Lane in the north. Show in Figure 19, N Laventure Road is classified as a Principal Arterial, according to the Mount Vernon Transportation Map.[14] N Laventure Road consists of one travel lane in each direction with parking lanes on and sidewalks on both sides from Division Street to Kushan Drive. North of Kulshan Ave the same conditions are present with a left turn lane present on the street through Sigmar Lane. Notably, La Venture Middle School and Skagit Valley College are located along the corridor.

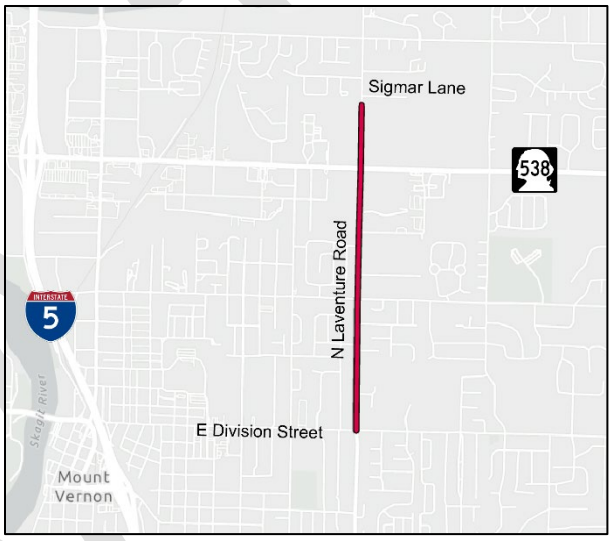

Figure 19. North Laventure Road HIN Segment

Between 2019 and 2023, 31 KABC crashes were recorded along this HIN segment, resulting in 43 victims. Among these, there were four serious injuries victims, and no deaths. Three of the KSI victims were pedestrians or bicyclists. Table 23 shows angle crashes are the most common collision type on the corridor and resulted in one severe injury. Additionally, eight crashes occurred with pedestrians or cyclists of which two resulted in a serious injury. Table 24 shows that although most injuries occurred at intersections, three of the four serious injuries occurred on the segment and not at an intersection. Of the serious injuries, two were assigned a crash contributing factor of distracted driving (Table 25).

[14] https://mountvernonwa.gov/DocumentCenter/View/62/Road-Type-Map-

Table 23. All Victim Counts by Collision Types on N Laventure Road from South of Sigmar Lane to E Division Street

COLLISION TYPE	TOTAL KABC	SHARE OF KABC	TOTAL KSI	SHARE OF KSI	TOTAL K	SHARE OF K	RATIO OF KSI TO KABC	RATIO OF K TO KABC	RATIO OF K TO KSI
Angle	20	47%	1	25%	0	0%	1 in 20	N/A	N/A
Fixed Object	4	9%	2	50%	0	0%	1 in 2	N/A	N/A
Parked car	2	5%	1	25%	0	0%	1 in 2	N/A	N/A
Pedestrian/Bike	8	19%	2	50%	0	0%	1 in 4	N/A	N/A
All Victims	**43**		**4**		**0**		**1 in 11**	**N/A**	**N/A**

Table 24. All Victim Counts by Junction Types on N Laventure Road from South of Sigmar Lane to E Division Street

JUNCTION RELATIONSHIP	TOTAL KABC	SHARE OF KABC	TOTAL KSI	SHARE OF KSI	TOTAL K	SHARE OF K	RATIO OF KSI TO KABC	RATIO OF K TO KABC	RATIO OF K TO KSI
At Intersection and Related	27	63%	1	25%	0	0%	1 in 27	N/A	N/A
Not at Intersection and Not Related	8	19%	3	75%	0	0%	1 in 3	N/A	N/A
All Victims	**43**		**4**		**0**		**1 in 11**	**N/A**	**N/A**

Table 25. All Victim Counts by Contributing Factors on N Laventure Road from South of Sigmar Lane to E Division Street

CONTRIBUTING FACTOR	TOTAL KABC	SHARE OF KABC	TOTAL KSI	SHARE OF KSI	TOTAL K	SHARE OF K	RATIO OF KSI TO KABC	RATIO OF K TO KABC	RATIO OF K TO KSI
Distracted	9	21%	2	50%	0	0%	1 in 5	N/A	N/A
Overcorrecting / Oversteering	1	2%	0	0%	0	0%	N/A	N/A	N/A
All Victims	**43**		**4**		**0**		**1 in 11**	**N/A**	**N/A**
Victims with Contributing Factor	**41**	**95%**	**4**	**100%**	**0**	**0%**	**1 in 10**	**N/A**	**N/A**

Physical Roadway Countermeasures

Pedestrian and bicycle investments like protected bike lanes and improved delineation around Skagit Valley College located on N Laventure Road and E College Way, could help reduce the quantity of college students prone to serious injuries. Additionally, south of Kulshan Avenue bicycle lanes on N Laventure transition into

parking lanes combined with intersection bulb-outs particularly near La Venture Middle School and the Boys and Girls Club at N Laventure Road and Kulshan Avenue. On one hand, the intersection bulb-outs located near the middle school provide added visibility for students crossing N Laventure and reduced crossing distances. However, students electing to ride bicycles on N Laventure Road have inconsistent bicycle facilities.

Policy and Enforcement Strategies

Given the presence of La Venture Middle School and Skagit Valley College along this corridor, implementing or bolstering safe routes to school programs and educational campaigns has the potential to decrease the severity of collisions on N Laventure Street.

Township Street

Existing Conditions

Shown in Figure 20, Township Street is a 1.18-mile segment in Sedro Woolley extending south from SR 20 / Moore Street to Dunlop Street. Township Street is classified as an arterial from Moore Street to State Street and a Major Collector from State Street to Dunlop Street, according to the Sedro-Woolley transportation element of the 2018 Comprehensive Plan. Township Street consists of one travel lane in each direction with sidewalks on both sides of the street from Moore Street to State Street. South of State Street, complete sidewalks are present on the east side of the street while incomplete sidewalks are present on the west side.

Figure 20. Township Street HIN Segment

Between 2019 and 2023, 31 KABC crashes were recorded along this HIN segment, resulting in 39 victims. Among these, there were four KSI victims, including one death. None of the KSI injuries involved pedestrians or bicyclists.

Table 26 shows angle crashes are the most severe collision type on the corridor, as they are the most common crash type and present across all severity levels including three KSI and one fatality. Additionally, collisions with parked cars accounted for two KSI and one fatality indicating the single death on the roadway was an angle crash involving a parked car.

Table 27 shows that nearly (34 of 39) all injuries on the corridor were located at an intersection and related to all KSI outcomes. Additionally, the single fatality crash was assigned crash contributing factors of failure to use due care/ reckless, impaired, and speeding shown in Table 28. The fatal crash occurred at the intersection of Township Street and Warner Street resulting in one death, one serious injury, and one minor injury.

Table 26. All Victim Counts by Collision Types on Township Street from SR 20/Moore Street to Dunlop Street

COLLISION TYPE	TOTAL KABC	SHARE OF KABC	TOTAL KSI	SHARE OF KSI	TOTAL K	SHARE OF K	RATIO OF KSI TO KABC	RATIO OF K TO KABC	RATIO OF K TO KSI
Angle	22	56%	3	75%	1	100%	1 in 7	1 in 22	1 in 3
Parked Car	5	13%	2	50%	1	100%	1 in 3	1 in 5	1 in 2
Rear End	8	21%	1	25%	0	0%	1 in 8	N/A	N/A
All Victims	**39**		**4**		**1**		**1 in 10**	**1 in 39**	**1 in 14**

Table 27. All Victim Counts by Junction Relationship on Township Street from SR 20/Moore Street to Dunlop Street

JUNCTION RELATIONSHIP	TOTAL KABC	SHARE OF KABC	TOTAL KSI	SHARE OF KSI	TOTAL K	SHARE OF K	RATIO OF KSI TO KABC	RATIO OF K TO KABC	RATIO OF K TO KSI
At Driveway	1	3%	0	0%	0	0%	N/A	N/A	N/A
At Intersection and Related	34	87%	4	100%	1	100%	1 in 9	1 in 34	1 in 4
All Victims	**39**		**4**		**1**		**1 in 10**	**1 in 39**	**1 in 4**

Table 28. All Victim Counts by Contributing Factors on Township Street from SR 20/Moore Street to Dunlop Street

CONTRIBUTING FACTOR	TOTAL KABC	SHARE OF KABC	TOTAL KSI	SHARE OF KSI	TOTAL K	SHARE OF K	RATIO OF KSI TO KABC	RATIO OF K TO KABC	RATIO OF K TO KSI
Failure to Use Due Care / Reckless	4	10%	2	50%	1	100%	1 in 2	1 in 4	1 in 2
Failure to Yield to Vehicle	7	18%	1	25%	0	0%	1 in 7	N/A	N/A
Impaired	12	31%	2	50%	1	100%	1 in 6	1 in 12	1 in 2
Speeding	5	13%	2	50%	1	100%	1 in 3	1 in 5	1 in 2
All Victims	**39**		**4**		**1**		**1 in 10**	**1 in 39**	**1 in 4**
Victims with Contributing Factor	**37**	**95%**	**4**	**100%**	**1**	**100%**	**1 in 9**	**1 in 37**	**1 in 4**

Physical Roadway Countermeasures

Intersection control improvements are recommended as effective safety measures for Township Street intersections. Recent upgrades at major intersections like Moore Street/SR 20 may lower future crash rates, while corridor changes such as speed reductions could further decrease crash frequency and severity.

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Policy and Enforcement Strategies

With leading contributing factors on the corridor noted as impairment, failure to use due care/reckless, failure to yield, and speeding, enhancing the visibility of enforcement through measures such as targeted patrols, public education campaigns, or automated enforcement, can help deter violations and improve compliance.

Future or Ongoing Projects on or Near the High Injury Network

The High Injury Network for the RSAP is described in Chapter 2 and detailed in the State of Safety in the Region Memo (Appendix B). Areas where plans, proposed improvements, or studies are ongoing for the HIN provide opportunities for addressing road safety as part of a planned or programmed improvement.

The following 10 projects from the inventory of plans and policies (Appendix A) address critical safety concerns on or near Skagit County's HIN, focusing on corridors with a history of fatal or severe collisions. Projects not directly located on the HIN but adjacent to or influencing high-risk corridors are noted accordingly. Sources for these projects include WSDOT, Skagit Regional Transportation Priorities (January 2025), and Skagit County 2025 – 2030 Six Year Transportation Improvement Program. Updating the Regional Transportation Plan is a part of the Move Skagit planning process. This assessment of plans and policies informed the Regional Safety Action Plan and, in turn, inform the update of the Regional Transportation Plan.

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Table 29. List of Ongoing/Future Projects on/near the HIN

PROJECT	LOCATION	DESCRIPTION	PROJECT MEASURES	HIN STATUS	SOURCE
1. Highway Speed Camera Pilot Program	SB I-5 between Cook Road and Bow Hill Road, Skagit County	Pilot project to install automated speed cameras along a rural I-5 segment. Intended to test effectiveness of non-penal automated enforcement.	Automated enforcement cameras	Near HIN – approx. 0.1 mile from the Cook Rd interchange which is on the HIN	WSDOT
2. South Commercial Avenue Corridor Plan	Commercial Avenue SR 20 Spur to 12th Street	Redesign of a principal arterial to incorporate proven safety countermeasures and complete street elements supporting pedestrian, bicycle, and transit access.	Traffic calming (lane narrowing and crossing bulb outs) Install bike lanes Signal upgrades Expand sidewalks to meet ADA standards Install pedestrian refuge islands at major crossings *Driveway consolidation*	Near HIN – approx. 0.1 miles from the nearest HIN-identified collision hotspot on SR 20	Skagit Regional Transportation Priorities (Jan 2025)
3. Riverside Drive Safety Improvements	Riverside Drive, Mount Vernon	Reconstruction project that includes utility relocation, ADA upgrades, and pavement rehabilitation on a key urban corridor.	New ADA-compliant sidewalks Intersection sight-distance fixes Pavement mill-and-overlay Utility undergrounding	On HIN	Skagit Regional Transportation Priorities (Jan 2025)
4. I-5/Kincaid Interchange Vicinity Improvements	I-5/Kincaid Street Interchange, Mount Vernon	Comprehensive redesign of the I-5/Kincaid interchange area to improve mobility and traffic flow into downtown and medical facilities.	Ramp intersection redesign Pedestrian safety near hospital access Capacity/mobility enhancements	On HIN	Skagit Regional Transportation Priorities (Jan 2025)
5. Cook Road /I-5 Interchange Improvements	Cook Road /I-5 Interchange (Exit 232), Skagit County	Upgrades to the Cook Road/I-5 interchange, including ramp signalization and lane	Ramp signal installation New through/right-turn lanes	On HIN	Skagit Regional Transportation Priorities (Jan 2025), Skagit County 2025 –

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PROJECT	LOCATION	DESCRIPTION	PROJECT MEASURES	HIN STATUS	SOURCE
		widening to reduce congestion and crashes.	Signalized intersection improvements Coordination for railroad preemptive safety		2030 Six Year Transportation Improvement Program
6. SR 20/Campbell Lake Road - Intersection Improvements	SR 20 and Campbell Lake Road, Skagit	Intersection reconstruction to add a three-legged roundabout at SR 20 and Campbell Lake Road for improved traffic control.	Roundabout construction Elimination of left-turn conflict points Realigned intersection geometry	On HIN	Skagit County 2025 – 2030 Six Year Transportation Improvement Program
7. SR 20 Safe Access Improvements	SR 20 at Casino Drive and Long John Drive, Swinomish Reservation	Intersection upgrades at two access points on SR 20 to enhance visibility, turning safety, and pedestrian infrastructure.	Dedicated turn lanes Multi-use path access Bus stop pullouts & lighting	Near HIN – about 1.3 miles from HIN-mapped segment on SR 20	Skagit Regional Transportation Priorities (Jan 2025)
8a. Francis Road Reconstruction (Section 1 & 3)	Section 1 - Francis Road, milepost 5.05 to 5.66 (between Debay's Isle Road and the Highway 9 roundabout) Section 3 - Francis Road, milepost 2.87 to 3.85, Skagit County (between 0.40 mi. north of Thillberg Road & Francis Lane)	Roadway reconstruction project to bring Francis Road to modern design standards and improve safety on a rural arterial.	Realigning horizontal curve Widen Road Improve clear zone Remove/replace bridge (Section 3 only)	Near HIN – Section 1 is about 2 miles away from HIN and Section 3 is adjacent to HIN	Skagit Regional Transportation Priorities (Jan 2025), Skagit County 2025 – 2030 Six Year Transportation Improvement Program
8b. Francis Road Reconstruction (Section 4)	Francis Road, milepost 1.48 to 2.75 (between Mount Vernon City Limits/Swan Road & 0.28 mi north of Thillberg Road)	Roadway reconstruction project to bring Francis Road to modern design standards and improve safety on a rural arterial.	Reconstruct, widen and re-align the roadway Widen bridge	On HIN	Skagit Regional Transportation Priorities (Jan 2025), Skagit County 2025 – 2030 Six Year Transportation Improvement Program

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PROJECT	LOCATION	DESCRIPTION	PROJECT MEASURES	HIN STATUS	SOURCE
9a. Josh Wilson Road Phases 2 & 2a	Josh Wilson Road from Avon Allen Road to SR 11, Skagit County	Phased reconstruction to stabilize the subgrade and bring the corridor up to current rural road standards.	Full-depth road base reconstruction Rural collector standard widening Subsurface drainage installation	Near HIN – About a mile from HIN	Skagit Regional Transportation Priorities (Jan 2025), Skagit County 2025 – 2030 Six Year Transportation Improvement Program
9b. Josh Wilson Road Phases 3 & 4	Phase 3 - Jensen Lane to Emily Lane Phase 4 - Higgins Airport Way to Farm To Market Road	Phased reconstruction to stabilize the subgrade and bring the corridor up to current rural road standards.	Full-depth road base reconstruction Rural collector standard widening Subsurface drainage installation	On HIN	Skagit Regional Transportation Priorities (Jan 2025), Skagit County 2025 – 2030 Six Year Transportation Improvement Program
10. District Line Road Railroad Safety Improvements	District Line Road railroad crossing south of SR 20, Sedro-Woolley	Railroad crossing enhancement project to reduce conflicts at the at-grade crossing and integrate with corridor-wide improvements.	Active warning signals & gates New or improved crossing surface Signal coordination with SR 20 improvements	On HIN	Skagit County 2025 – 2030 Six Year Transportation Improvement Program

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Crash Profiles for Plan or Project Extents Near the High Injury Network

Below are the relevant crash profiles for each of the plans/projects listed in Table 29. The purpose of this discussion is to provide context on how relevant projects address the safety context using data between 2019-2023. The crash analysis images are compatible with the HIN, noting that the network is buffered by 10 meters, equivalent to 32.81 feet unless it is a single point that represents an intersection location, which is buffered by 100 feet (30.48 meters). Based on the crash analysis and the improvements proposed by the projects, additional countermeasures may be suggested and could be considered in the further development of those projects.

1. Highway Speed Camera Pilot Program

WSDOT, with support from the Washington State Patrol, is conducting a temporary speed enforcement project on I-5 between Cook Road and Bow Hill Road to address speed-related issues. As part of this pilot program, speed cameras were used, and warnings were issued for drivers exceeding the speed limit of 70 miles per hour southbound. Traffic data indicated an average daily volume of 27,504 vehicles along the corridor. (WSDOT, 2024). While the speed demonstration program has ended, the results of the study are not complete.

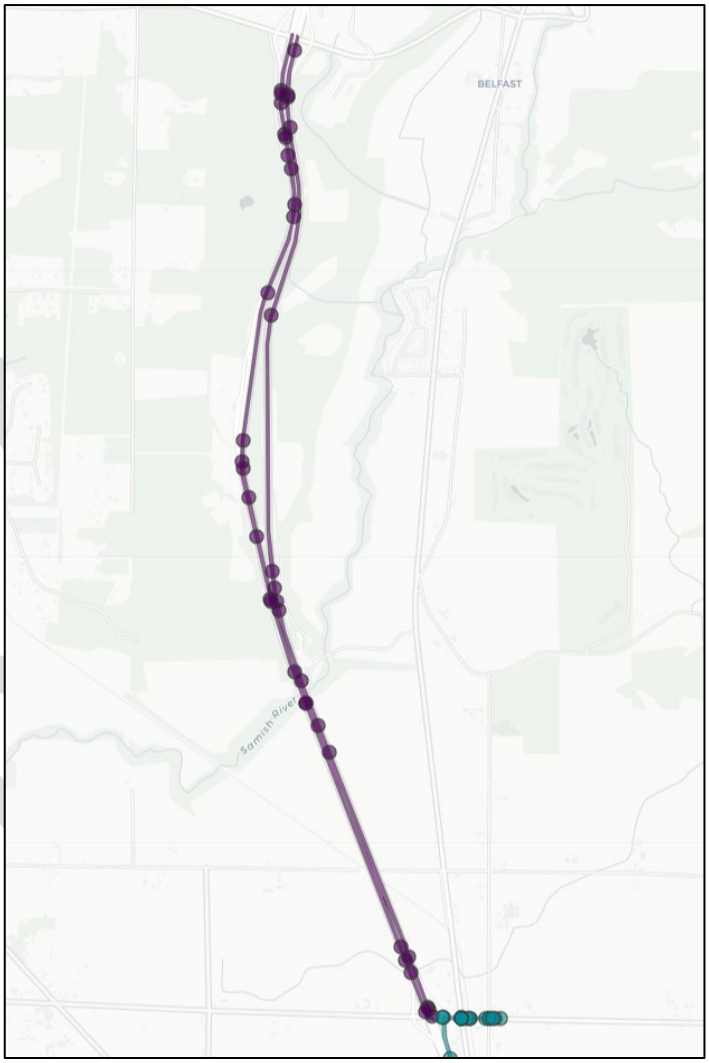

Figure 21. KABC Crash Incidents on Northbound and Southbound I-5 between Cook Road and Bow Hill Road

For the crash analysis on this segment, both northbound and southbound I-5 between Cook Road and Bow Hill Road were considered to allow for data misalignment when collected. Figure 21 shows KABC crash incidents on Northbound and Southbound I-5 between Cook Road and Bow Hill Road.

Based on the data provided in Table 30, speeding is the most common contributing factor on this corridor. Speeding is noted as a casual factor for 44% of all KABC victims and 67% of KSI victims. Furthermore, speeding is generally significantly underreported in crash reports as the assignment of causal factors relies on the opinion of the officer arriving at the scene after the crash, usually without the resources to execute a full-scale post-crash investigation. In fact, “only 53.4% of crashes designated as speeding-related contained narratives which described speeding as a causative factor” (Fitzpatrick, Rakasi &

Knodler Jr., 2017)[15]. Speeding is often only listed as a causal factor when the evidence is undeniable, indicating that not only were drivers speeding, but also, they exceeded the speed limit by a wide and reckless margin. WSDOT's speed enforcement demonstration project to enforce speed on I-5 have ended and results of that study are forthcoming. The speed camera pilot program could deter or reduce speeding on the corridor. Additional strategies for enforcing speeding could include some level of added or automated enforcement.

Table 30. Victim Counts by Contributing factors on both NB and SB I-5 between Cook Road and Bow Hill Road, Skagit County

CONTRIBUTING FACTOR	TOTAL KABC	SHARE OF KABC	TOTAL KSI	SHARE OF KSI	TOTAL K	SHARE OF K	RATIO OF KSI TO KABC	RATIO OF K TO KABC	RATIO OF K TO KSI
Distracted	9	17%	1	33%	0	0%	1 in 9	N/A	N/A
Drowsy	3	6%	0	0%	0	0%	N/A	N/A	N/A
Equipment	4	7%	0	0%	0	0%	N/A	N/A	N/A
Failure to Use Due Care / Reckless	2	4%	0	0%	0	0%	N/A	N/A	N/A
Follow Too Closely	8	15%	0	0%	0	0%	N/A	N/A	N/A
Impaired	9	17%	2	67%	0	0%	1 in 5	N/A	N/A
Improper Passing	1	2%	1	33%	0	0%	1 in 1	N/A	N/A
Improper U-Turn	1	2%	0	0%	0	0%	N/A	N/A	N/A
Overcorrecting / Oversteering	2	4%	0	0%	0	0%	N/A	N/A	N/A
Speeding	24	44%	2	67%	0	0%	1 in 12	N/A	N/A
All Crashes	**54**		**3**		**0**		**1 in 18**	**N/A**	**N/A**
Crashes with Contributing Factor	**53**	**98%**	**3**	**100%**	**0**	**0%**	**1 in 18**	**N/A**	**N/A**

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[15] Cole D. Fitzpatrick, Saritha Rakasi, Michael A. Knodler, an investigation of the speeding-related crash designation through crash narrative reviews sampled via logistic regression, Accident Analysis & Prevention, Volume 98, 2017, Pages 57-63, ISSN 0001-4575, https://doi.org/10.1016/j.aap.2016.09.017

Table 31. Victim Counts by Collision Types on both NB and SB I-5 between Cook Road and Bow Hill Road, Skagit County

COLLISION TYPE	TOTAL KABC	SHARE OF KABC	TOTAL KSI	SHARE OF KSI	TOTAL K	SHARE OF K	RATIO OF KSI TO KABC	RATIO OF K TO KABC	RATIO OF K TO KSI
Fixed Object	26	48%	1	33%	0	0%	1 in 26	N/A	N/A
Opposite direction – Other	1	2%	0	0%	0	0%	N/A	N/A	N/A
Other	1	2%	0	0%	0	0%	N/A	N/A	N/A
Parked car	1	2%	0	0%	0	0%	N/A	N/A	N/A
Rear End	22	41%	2	67%	0	0%	1 in 11	N/A	N/A
Rollover	22	41%	2	67%	0	0%	1 in 11	N/A	N/A
Same direction – Other	3	6%	0	0%	0	0%	N/A	N/A	N/A
Sideswipe	4	7%	1	33%	0	0%	1 in 4	N/A	N/A
All Crashes	**54**		**3**		**0**		**1 in 18**	**N/A**	**N/A**

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2. South Commercial Avenue Corridor Plan (SR 20 Spur to 12th)

The project objectives for the South Commercial Avenue Corridor Plan include redesigning this key arterial to incorporate complete street elements supporting pedestrian, bicycle, and transit access This proposed project is approx. 0.1 miles from the nearest HIN-identified collision hotspot on SR 20. Traffic data indicated an average daily volume of 14,666 vehicles along the corridor. (WSDOT, 2024). Figure 22 shows KABC crash incidents on South Commercial Avenue between 11th Street and 34th Street. In the newly adopted Anacortes Safety Action Plan, Anacortes identified two safety projects on Commercial Avenue, including Project ID 3, which spans from SR 20 to 12th Street, and Project ID 4, which spans from 12th Street to 4th Street. Both projects focus on increasing safety for each segment. Commonalities between projects include traffic calming and upgrades for pedestrians and bicyclists.[16] For the purpose of the Regional Safety Action Plan, South Commercial from SR 20 Spur to 12th Street is included due to its proximity to an HIN segment.

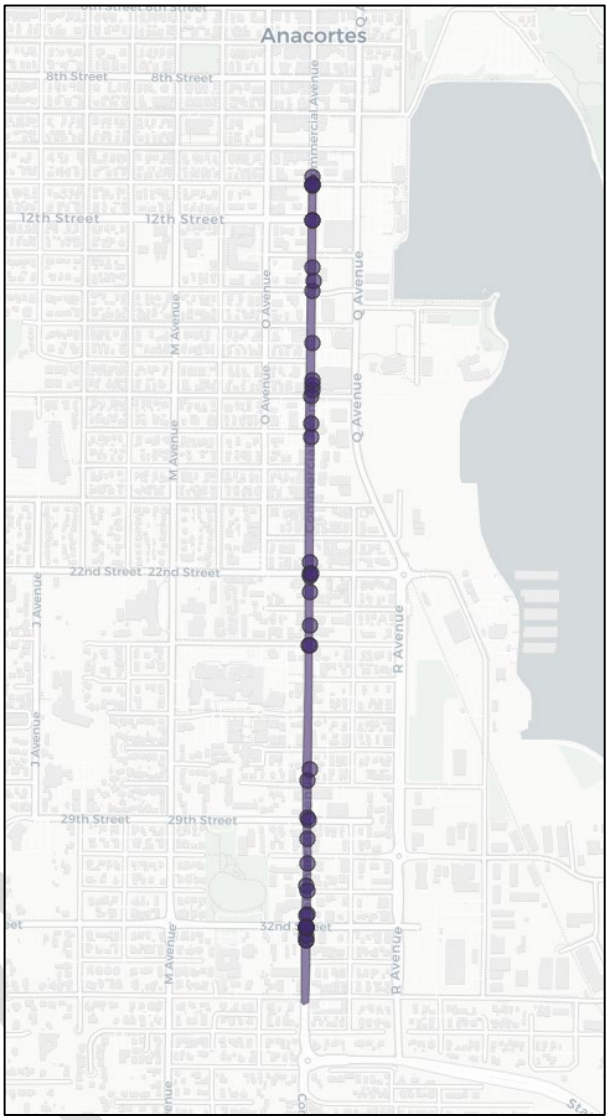

Figure 22. KABC Crash Incidents on South Commercial Avenue Corridor between 11th Street and 34th Street

When victims' outcomes are broken down by contributing factors in Table 32 they do relate to the countermeasures proposed for this project. These enhancements help reduce the severity of the crashes that involve disobeying signs, distraction, failure to yield, and speeding, which have also impacted vulnerable road users. These changes greatly enhance the pedestrian environment, especially by installing pedestrian refuge islands, which can ameliorate Failure to Yield to Non-Motorist crashes. These types of crashes on this corridor have resulted in injury crashes on the corridor as shown in Table 32 and while they are not common when they do occur, they are deadly (1 to 1 K to KABC ratio).

Additional improvements to enhance the environment for those walking biking or rolling along the corridor include Leading Pedestrian Intervals at signal-controlled intersections and additional controlled crossings for pedestrians. Additional improvements at signal-controlled intersections could include signal timing

[16] City of Anacortes, Anacortes Comprehensive Safety Action Plan, https://www.anacorteswa.gov/DocumentCenter/View/32676/Anacortes-Comprehensive-Safety-Action-Plan-2024_1

improvements such as increasing yellow phasing, and additional enforcement including automated enforcement to address red-light running.

Figure 23. Streetview of South Commercial Avenue

Table 32. Victim Counts by Contributing Factors on South Commercial Avenue Corridor

CONTRIBUTING FACTOR	TOTAL KABC	SHARE OF KABC	TOTAL KSI	SHARE OF KSI	TOTAL K	SHARE OF K	RATIO OF KSI TO KABC	RATIO OF K TO KABC	RATIO OF K TO KSI
Disobey Signal or Stop Sign	1	2%	1	33%	0	0%	1 in 1	N/A	N/A
Distracted	24	36%	0	0%	0	0%	N/A	N/A	N/A
Equipment	2	3%	0	0%	0	0%	N/A	N/A	N/A
Failure to Use Due Care / Reckless	1	2%	0	0%	0	0%	N/A	N/A	N/A
Failure to Yield to Non-Motorist	1	2%	1	33%	1	100%	1 in 1	1 in 1	1 in 1
Failure to Yield to Vehicle	17	26%	0	0%	0	0%	N/A	N/A	N/A
Follow Too Closely	17	26%	0	0%	0	0%	N/A	N/A	N/A
Impaired	8	12%	1	33%	0	0%	1 in 8	N/A	N/A
Improper Turn/Merge	8	12%	0	0%	0	0%	N/A	N/A	N/A
Speeding	2	3%	1	33%	0	0%	1 in 2	N/A	N/A
All Victims	**66**		**3**		**1**		**1 in 22**	**1 in 66**	**1 in 3**
Victims with Contributing Factor	**63**	**95%**	**2**	**67%**	**1**	**100%**	**1 in 32**	**1 in 63**	**1 in 2**

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Table 33. Victim Counts by Collision Types on South Commercial Avenue Corridor

COLLISION TYPE	TOTAL KABC	SHARE OF KABC	TOTAL KSI	SHARE OF KSI	TOTAL K	SHARE OF K	RATIO OF KSI TO KABC	RATIO OF K TO KABC	RATIO OF K TO KSI
Angle	28	42%	1	33%	0	0%	1 in 28	N/A	N/A
Fixed Object	4	6%	1	33%	0	0%	1 in 4	N/A	N/A
Other	2	3%	1	33%	0	0%	1 in 2	N/A	N/A
Pedestrian/Bike	5	8%	1	33%	1	100%	1 in 5	1 in 5	1 in 1
Rear End	28	42%	0	0%	0	0%	N/A	N/A	N/A
Rollover	2	3%	0	0%	0	0%	N/A	N/A	N/A
Sideswipe	2	3%	0	0%	0	0%	N/A	N/A	N/A
All Victims	**66**		**3**		**1**		**1 in 22**	**1 in 66**	**1 in 3**

3. Riverside Drive Safety Improvements

Riverside Drive from the Skagit River to south of East Fir Street is a four-lane roadway with a center two-way-left-turn lane and sidewalks, posted at 30 miles per hour. Planned improvements are to enhance connectivity and safety for pedestrians and cyclists to meet ADA standards. There are no designated bike lanes or medians; however, there are numerous driveway accesses to local businesses. Crossings are protected at signal-controlled intersections; however, there are intersections without traffic signals where pedestrians may desire to cross. There are also multiple driveways. This project focuses on ADA upgrades with intersection sight-distance fixes, pavement rehabilitation, and utility relocation. Investments that make the corridor accessible to all users may encourage more people to walk, bike, or use mobility devices.

During the analysis period, there were six injury-related crashes involving vulnerable road users, the highest among the ten projects evaluated, including one KSI crash. While no pedestrian or bicyclist fatalities were reported, the data underscores the critical need for inclusive, multimodal safety improvements along the corridor. Figure 24 shows KABC crash incidents on Riverside Drive between Skagit River and south of East Fir Street.

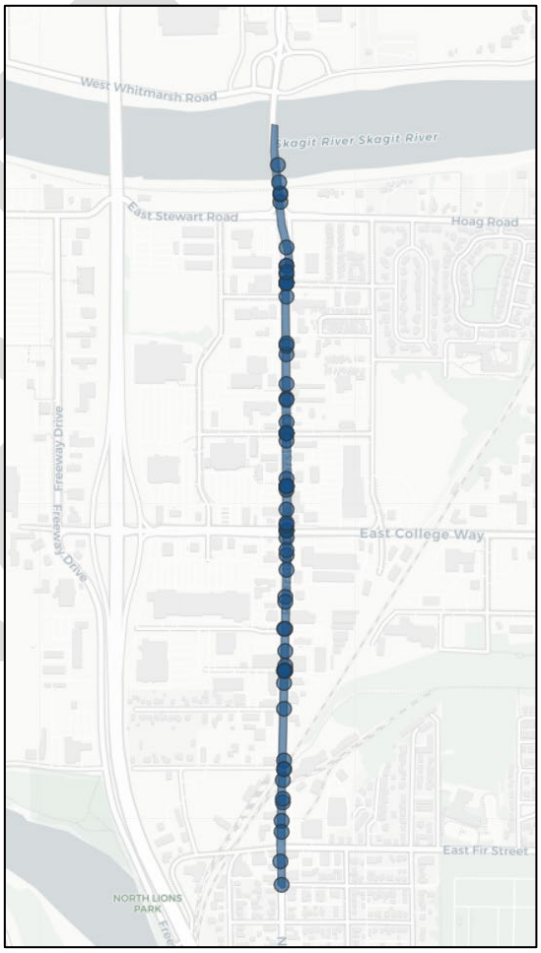

Figure 24. KABC Crashe Incidents on Riverside Drive between Skagit River and south of East Fir Street

Figure 25. Streetview of Riverside Drive

Figure 25 does not show how the countermeasures directly address the safety of vulnerable road users, but it can be inferred that these upgrades would mitigate the severity of crashes due to distracted drivers (most common, with a share of 27% of all KABC victims) shown in Table 34, especially for bicyclists and pedestrians. While speed is reasonably low at 30 miles per hour, additional protected mid-block crossings may be desirable. Protected with some level of separation between bike lanes and adjacent lanes near or on the corridor may reduce the number of bicycle crashes. Planned ADA improvements along the corridor could help improve safety for those walking or rolling, or biking along the corridor.

Additional improvements to enhance the environment for those walking biking or rolling along the corridor include Leading Pedestrian Intervals at signal-controlled intersections and additional controlled crossings for pedestrians. Additional improvements at signal-controlled intersections could include signal timing improvements such as increasing yellow phasing, and additional enforcement including automated enforcement to address red-light running.

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Table 34. Victim Counts by Contributing Factors on Riverside Drive

CONTRIBUTING FACTOR	TOTAL KABC	SHARE OF KABC	TOTAL KSI	SHARE OF KSI	TOTAL K	SHARE OF K	RATIO OF KSI TO KABC	RATIO OF K TO KABC	RATIO OF K TO KSI
Disobey Signal or Stop Sign	14	16%	0	0%	0	0%	N/A	N/A	N/A
Distracted	24	27%	1	33%	0	0%	1 in 24	N/A	N/A
Drowsy	1	1%	0	0%	0	0%	N/A	N/A	N/A
Failure to Yield to Non-Motorist	2	2%	0	0%	0	0%	N/A	N/A	N/A
Failure to Yield to Vehicle	18	20%	0	0%	0	0%	N/A	N/A	N/A
Follow Too Closely	21	24%	0	0%	0	0%	N/A	N/A	N/A
Impaired	7	8%	0	0%	0	0%	N/A	N/A	N/A
Improper Turn/Merge	4	4%	1	33%	0	0%	1 in 4	N/A	N/A
Speeding	8	9%	0	0%	0	0%	N/A	N/A	N/A
All Victims	**89**		**3**		**0**		**1 in 30**	**N/A**	**N/A**
Victims with Contributing Factor	**87**	**98%**	**2**	**67%**	**0**	**0%**	**1 in 44**	**N/A**	**N/A**

Table 35. Victim Counts by Collision Types on Riverside Drive

COLLISION TYPE	TOTAL KABC	SHARE OF KABC	TOTAL KSI	SHARE OF KSI	TOTAL K	SHARE OF K	RATIO OF KSI TO KABC	RATIO OF K TO KABC	RATIO OF K TO KSI
Angle	41	46%	2	67%	0	0%	1 in 21	N/A	N/A
Fixed Object	5	6%	0	0%	0	0%	N/A	N/A	N/A
Opposite direction – Other	4	4%	0	0%	0	0%	N/A	N/A	N/A
Parked car	2	2%	0	0%	0	0%	N/A	N/A	N/A
Pedestrian/Bike	6	7%	1	33%	0	0%	1 in 6	N/A	N/A
Rear End	32	36%	0	0%	0	0%	N/A	N/A	N/A
Rollover	1	1%	0	0%	0	0%	N/A	N/A	N/A
Same direction – Other	1	1%	0	0%	0	0%	N/A	N/A	N/A
Sideswipe	5	6%	0	0%	0	0%	N/A	N/A	N/A
All Victims	**89**		**3**		**0**		**1 in 30**	**N/A**	**N/A**

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4. I-5/Kincaid Interchange Vicinity Improvements

This project focuses on improving traffic flow and enhancing pedestrian safety near hospital access points. This section of West Kincaid Street is an arterial and includes an at-grade rail crossing. This project includes a comprehensive redesign of the I-5/Kincaid interchange area to improve mobility and traffic flow into downtown and medical facilities. Traffic data indicated an average daily volume of 16,460 vehicles along the corridor (WSDOT, 2024). Figure 26 shows KABC crash incidents on I-5/Kincaid interchange.

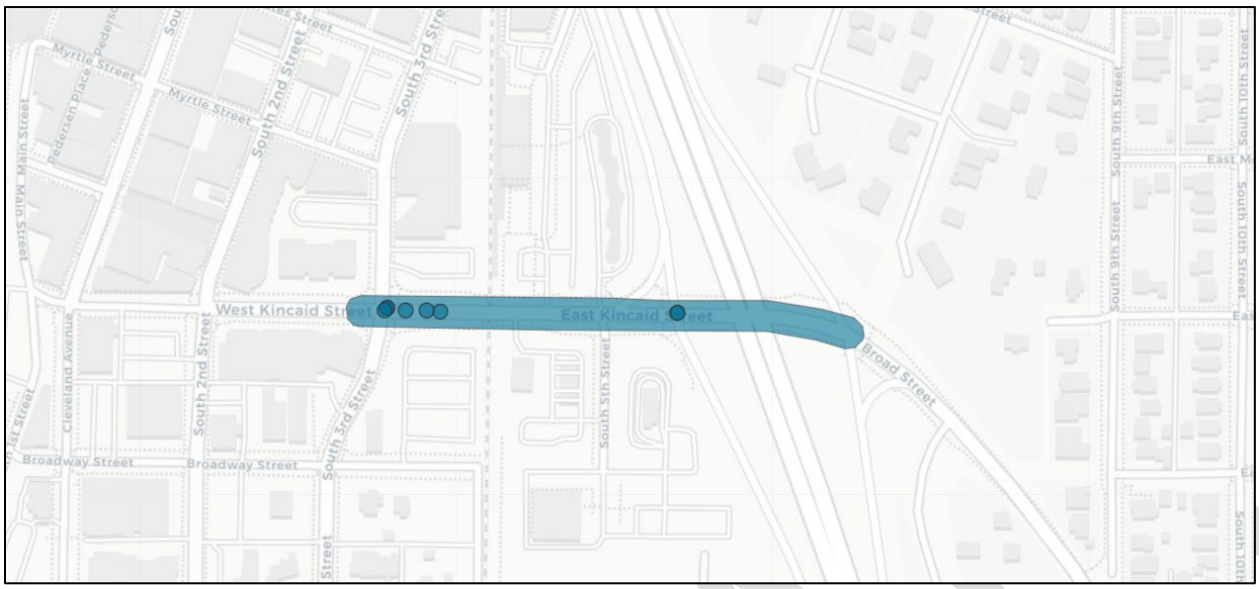

Figure 26. KABC Crash Incidents on I-5/Kincaid Interchange

According to Table 36, rear-end collisions are the most common crash type, accounting for 60% of all KABC victims along this corridor though they are not significant among KSI victims. While the crash data does not directly link the proposed countermeasures to specific collision types, rear-end collisions, when paired with risky behaviors like distraction (top KABC contributing factor in Table 37) are often associated with congestion and traffic flow issues, suggesting that the project's focus on mobility could help mitigate these crash types.

Table 36. Victim Counts by Contributing Factors on I-5/Kincaid Street Interchange

CONTRIBUTING FACTOR	TOTAL KABC	SHARE OF KABC	TOTAL KSI	SHARE OF KSI	TOTAL K	SHARE OF K	RATIO OF KSI TO KABC	RATIO OF K TO KABC	RATIO OF K TO KSI
Distracted	4	40%	0	0%	0	0%	N/A	N/A	N/A
Drowsy	2	20%	0	0%	0	0%	N/A	N/A	N/A
Equipment	1	10%	0	0%	0	0%	N/A	N/A	N/A
Follow Too Closely	2	20%	0	0%	0	0%	N/A	N/A	N/A
Impaired	1	10%	0	0%	0	0%	N/A	N/A	N/A
Improper Turn/Merge	1	10%	0	0%	0	0%	N/A	N/A	N/A
Speeding	1	10%	0	0%	0	0%	N/A	N/A	N/A
All Crashes	**10**		**0**		**0**		**N/A**	**N/A**	**N/A**
Victims with Contributing Factor	**10**	**100%**	**0**	**0%**	**0**	**0%**	**N/A**	**N/A**	**N/A**

Table 37. Victim Counts by Collision Types (1st and 2nd) on I-5/Kincaid Street Interchange

COLLISION TYPE	TOTAL KABC	SHARE OF KABC	TOTAL KSI	SHARE OF KSI	TOTAL K	SHARE OF K	RATIO OF KSI TO KABC	RATIO OF K TO KABC	RATIO OF K TO KSI
Angle	2	20%	0	0%	0	0%	N/A	N/A	N/A
Fixed Object	1	10%	0	0%	0	0%	N/A	N/A	N/A
Rear End	6	60%	0	0%	0	0%	N/A	N/A	N/A
Sideswipe	1	10%	0	0%	0	0%	N/A	N/A	N/A
All Victims	**10**		**0**		**0**		**N/A**	**N/A**	**N/A**

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5. Cook Road /I-5 Interchange Improvements

This project aims to upgrade the Cook Road/I-5 Interchange through ramp signalization and lane widening to reduce congestion and improve safety. Figure 27 shows KABC crash incidents in and around the Cook Road /I-5 Interchange.

Figure 27. KABC Crash Incidents on Cook Road /I-5 Interchange

Rear-end collisions account for 57% of all KABC victims along this corridor (Table 39) and the leading contributing factors as shown in Table 38, following too closely (30%) and distracted driving (27%), are commonly associated with congested conditions. These patterns highlight the need for ramp signalization and congestion mitigation as targeted strategies to address both traffic flow and crash reduction.

Additionally, pedestrian safety is also a focus on this corridor, though the data is not pronounced. Table 39 indicates that non-motorists are sometimes involved in wrong-way movements, likely due to limited pedestrian network connectivity. This lack of safe infrastructure may encourage pedestrians to take unsafe routes, leading to more severe crashes. Improving signage and enhancing pedestrian facilities could help reduce these risks.

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Table 38. Victim Counts by Contributing Factors on Cook Road /I-5 Interchange

CONTRIBUTING FACTOR	TOTAL KABC	SHARE OF KABC	TOTAL KSI	SHARE OF KSI	TOTAL K	SHARE OF K	RATIO OF KSI TO KABC	RATIO OF K TO KABC	RATIO OF K TO KSI
Disobey Signal or Stop Sign	2	7%	0	0%	0	0%	N/A	N/A	N/A
Distracted	8	27%	1	25%	0	0%	1 in 8	N/A	N/A
Failure to Use Due Care / Reckless	2	7%	0	0%	0	0%	N/A	N/A	N/A
Failure to Yield to Non-Motorist	1	3%	1	25%	0	0%	1 in 1	N/A	N/A
Failure to Yield to Vehicle	5	17%	1	25%	0	0%	1 in 5	N/A	N/A
Follow Too Closely	9	30%	0	0%	0	0%	N/A	N/A	N/A
Impaired	5	17%	2	50%	0	0%	1 in 3	N/A	N/A
Improper Turn/Merge	2	7%	0	0%	0	0%	N/A	N/A	N/A
Speeding	1	3%	1	25%	0	0%	1 in 1	N/A	N/A
Wrong Way / Non-Motorist	2	7%	1	25%	0	0%	1 in 2	N/A	N/A
All Victims	**30**		**4**		**0**		**1 in 8**	**N/A**	**N/A**
Victims with Contributing Factor	**29**	**97%**	**4**	**100%**	**0**	**0%**	**1 in 7**	**N/A**	**N/A**

Table 39. Victim Counts by Collision TYPES on Cook Road /I-5 Interchange

COLLISION TYPE	TOTAL KABC	SHARE OF KABC	TOTAL KSI	SHARE OF KSI	TOTAL K	SHARE OF K	RATIO OF KSI TO KABC	RATIO OF K TO KABC	RATIO OF K TO KSI
Angle	10	33%	1	25%	0	0%	1 in 10	N/A	N/A
Pedestrian/Bike	1	3%	1	25%	0	0%	1 in 1	N/A	N/A
Rear End	17	57%	1	25%	0	0%	1 in 17	N/A	N/A
Sideswipe	2	7%	1	25%	0	0%	1 in 2	N/A	N/A
All Victims	**30**		**4**		**0**		**1 in 8**	**N/A**	**N/A**

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6. SR 20/Campbell Lake Road - Intersection Improvements

This project involves intersection reconstruction to add a three-legged roundabout at SR 20 and Campbell Lake Road for improved traffic control. Figure 28 shows KABC crash incidents at SR 20/Campbell Lake Road intersection. As shown, there are a low number of reported incidents within 100 feet of the intersection, only 2 KABC victims and no KSI victims. The crash history (Table 40 & Table 41) alone may not justify the improvement. However, since this intersection is not signal controlled, with stop control on the local road intersecting a State Route, a roundabout may be able to address potential conflict points, where entering-at-angle crashes are common, reducing vehicle speeds, and reducing the severity of crashes when they do occur improving safety for all users, especially in a location that may have visibility concerns, complex turning movements, or growth in traffic demand.

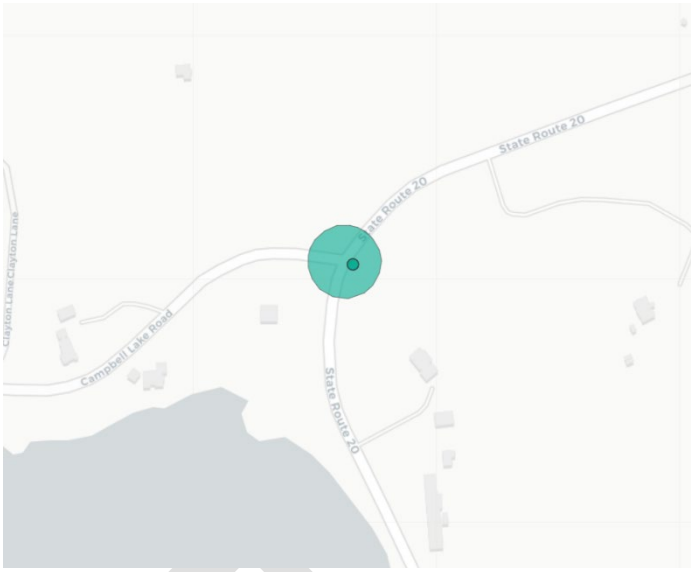

Figure 28. KABC Crash Incidents at SR 20/Campbell Lake Road Intersection

Table 40. Victim Counts by Contributing Factors within 100-foot buffer of the SR 20/Campbell Lake Road Intersection

CONTRIBUTING FACTOR	TOTAL KABC	SHARE OF KABC	TOTAL KSI	SHARE OF KSI	TOTAL K	SHARE OF K	RATIO OF KSI TO KABC	RATIO OF K TO KABC	RATIO OF K TO KSI
Disobey Signal or Stop Sign	1	50%	0	0%	0	0%	N/A	N/A	N/A
Distracted	1	50%	0	0%	0	0%	N/A	N/A	N/A
Speeding	1	50%	0	0%	0	0%	N/A	N/A	N/A
All Victims	**2**		**0**		**0**		**N/A**	**N/A**	**N/A**
Victims with Contributing Factor	**2**	**100%**	**0**	**0%**	**0**	**0%**	**N/A**	**N/A**	**N/A**

Table 41. Victim Counts by Collision Types within 100-foot buffer of the SR 20/Campbell Lake Road Intersection

COLLISION TYPE	TOTAL KABC	SHARE OF KABC	TOTAL KSI	SHARE OF KSI	TOTAL K	SHARE OF K	RATIO OF KSI TO KABC	RATIO OF K TO KABC	RATIO OF K TO KSI
Angle	1	50%	0	0%	0	0%	N/A	N/A	N/A
Fixed Object	1	50%	0	0%	0	0%	N/A	N/A	N/A
All Victims	**2**		**0**		**0**		**N/A**	**N/A**	**N/A**

7. SR 20 Safe Access Improvements

This project involves intersection upgrades at two access points, Long John Drive and Casino Drive, along the controlled-access SR 20, with the goal to enhance visibility, turning safety, and pedestrian infrastructure. Figure 29 shows KABC crash incidents on SR 20 at Casino Drive and Long John Drive access points.

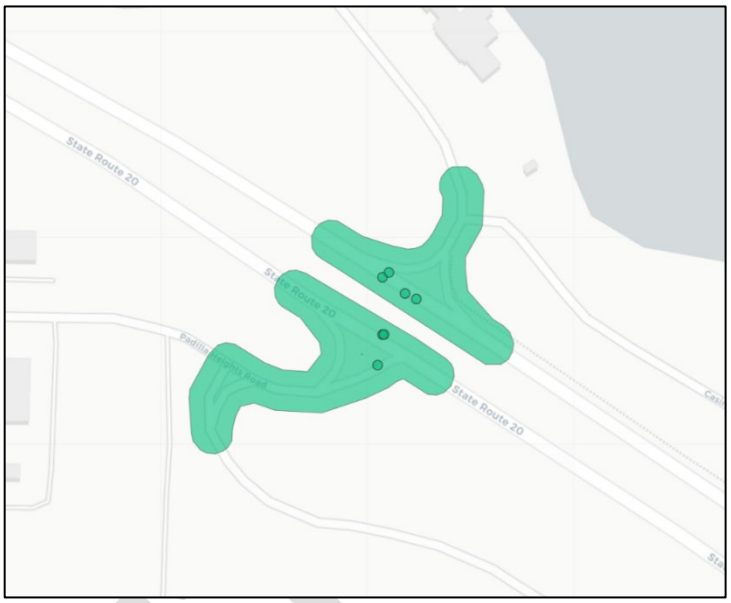

Figure 29. KABC Crash Incidents on SR 20 at Casino Drive and Long John Drive Access Points

The data in Table 42 and Table 43 suggests rear-end crashes are the only reported collision type near these access points, likely resulting from the two most common driving behaviors, distracted driving and tailgating. While these crashes are not severe (0 KSI victims), they occur frequently and result in minor injuries, especially when vehicles are slowing down to turn onto local roads or merging into the fast-moving traffic. Moreover, given the proximity to a high-speed corridor like SR 20, enhancing pedestrian infrastructure is essential to improve safety for non-motorists, especially with several transit stops located nearby. Countermeasures for this intersection location to reduce rear-end crashes could include improved lighting and extending merge lanes onto SR 20.

Table 42. Victim Counts by Contributing Factors on the Access points on SR 20 at Casino Drive and Long John

CONTRIBUTING FACTOR	TOTAL KABC	SHARE OF KABC	TOTAL KSI	SHARE OF KSI	TOTAL K	SHARE OF K	RATIO OF KSI TO KABC	RATIO OF K TO KABC	RATIO OF K TO KSI
Distracted	6	67%	0	0%	0	0%	N/A	N/A	N/A
Follow Too Closely	3	33%	0	0%	0	0%	N/A	N/A	N/A
All Victims	**9**		**0**		**0**		**N/A**	**N/A**	**N/A**
Victims with Contributing Factor	**9**	**100%**	**0**	**0%**	**0**	**0%**	**N/A**	**N/A**	**N/A**

Table 43. Victim Counts by Collision Types on the Access points on SR 20 at Casino Drive and Long John

COLLISION TYPE	TOTAL KABC	SHARE OF KABC	TOTAL KSI	SHARE OF KSI	TOTAL K	SHARE OF K	RATIO OF KSI TO KABC	RATIO OF K TO KABC	RATIO OF K TO KSI
Rear End	9	100%	0	0%	0	0%	N/A	N/A	N/A
All Victims	**9**		**0**		**0**		**N/A**	**N/A**	**N/A**

8. Francis Road Reconstruction (Section 1, 3, and 4)

These projects re-align the roadway (Section 4), address drainage concerns (Section 1 and 3), reconstruct, and widen to current design standards. While they primarily target long-term improvements for the motorized vehicle network, broader safety considerations should also be addressed. Figure 30 shows KABC crash incidents on Francis Road.

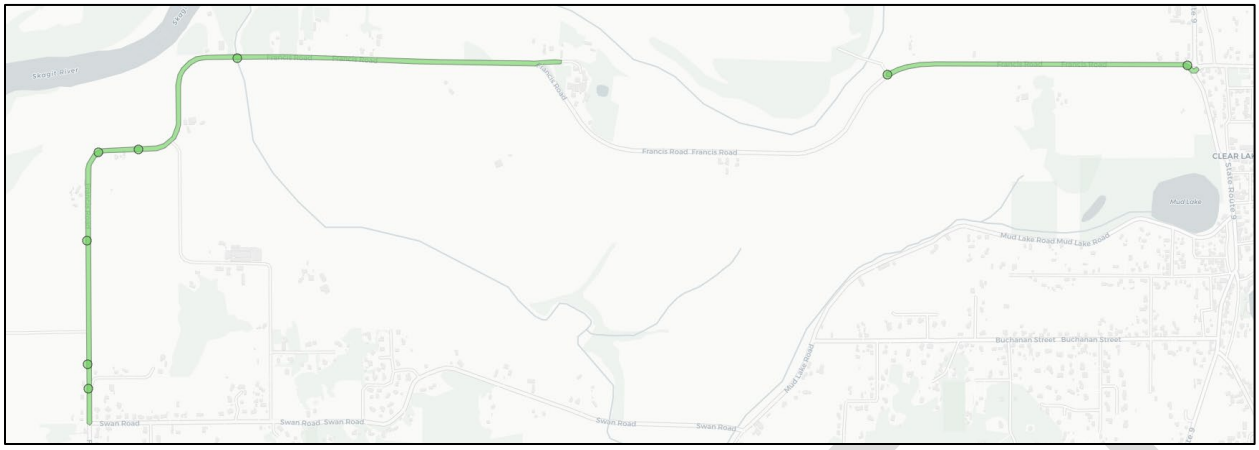

Figure 30. KABC Crash Incidents on Francis Road (Sections 1, 3, and 4)

As shown in Table 44, distracted driving is the leading contributing factor to injury crashes, accounting for 70% of all KABC victims.

Table 44. Victim Counts by Contributing Factors on Francis Road

CONTRIBUTING FACTOR	TOTAL KABC	SHARE OF KABC	TOTAL KSI	SHARE OF KSI	TOTAL K	SHARE OF K	RATIO OF KSI TO KABC	RATIO OF K TO KABC	RATIO OF K TO KSI
Distracted	7	70%	0	0%	0	0%	N/A	N/A	N/A
Follow Too Closely	1	10%	0	0%	0	0%	N/A	N/A	N/A
Speeding	1	10%	0	0%	0	0%	N/A	N/A	N/A
All Victims	**10**		**1**		**0**		**1 in 10**	**N/A**	**N/A**
Victims with Contributing Factor	**9**	**90%**	**0**	**0%**	**0**	**0%**	**N/A**	**N/A**	**N/A**

Notably, Table 45 shows that there is only one KSI outcome on the corridor, which involved a vulnerable road user under conditions of poor visibility (dark, no street lighting) and a wet road surface (Table 46 and Table 47), factors that significantly worsened crash severity.

Table 45. Victim Counts by Collision Types on Francis Road

COLLISION TYPE	TOTAL KABC	SHARE OF KABC	TOTAL KSI	SHARE OF KSI	TOTAL K	SHARE OF K	RATIO OF KSI TO KABC	RATIO OF K TO KABC	RATIO OF K TO KSI
Fixed Object	1	10%	0	0%	0	0%	N/A	N/A	N/A
Head-on	3	30%	0	0%	0	0%	N/A	N/A	N/A
Pedestrian/Bike	2	20%	1	100%	0	0%	1 in 2	N/A	N/A
Rear End	3	30%	0	0%	0	0%	N/A	N/A	N/A
Rollover	1	10%	0	0%	0	0%	N/A	N/A	N/A
All Victims	**10**		**1**		**0**		**1 in 10**	**N/A**	**N/A**

Table 46. Victim Counts by Roadway Surface Conditions on Francis Road

ROADWAY SURFACE CONDITION	TOTAL KABC	SHARE OF KABC	TOTAL KSI	SHARE OF KSI	TOTAL K	SHARE OF K	RATIO OF KSI TO KABC	RATIO OF K TO KABC	RATIO OF K TO KSI
Dry	6	60%	0	0%	0	0%	N/A	N/A	N/A
Wet	4	40%	1	100%	0	0%	1 in 4	N/A	N/A
All Victims	**10**		**1**		**0**		**1 in 10**	**N/A**	**N/A**

Table 47. Victim Counts by Lighting Conditions Condition on Francis Road

LIGHTING CONDITION	TOTAL KABC	SHARE OF KABC	TOTAL KSI	SHARE OF KSI	TOTAL K	SHARE OF K	RATIO OF KSI TO KABC	RATIO OF K TO KABC	RATIO OF K TO KSI
Dark-No Street Lights	1	10%	1	100%	0	0%	1 in 1	N/A	N/A
Dawn	1	10%	0	0%	0	0%	N/A	N/A	N/A
Daylight	5	50%	0	0%	0	0%	N/A	N/A	N/A
Dusk	3	30%	0	0%	0	0%	N/A	N/A	N/A
All Victims	**10**		**1**		**0**		**1 in 10**	**N/A**	**N/A**

Given these observations, these projects should also prioritize pedestrian infrastructure improvements, increase enforcement, and potentially install street lighting to enhance safety for all road users, including non-motorists, particularly in areas with limited visibility.

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9. Josh Wilson Road Phases 2, 2A, 3 & 4

This project focuses on stabilizing the subgrade base and bringing the corridor up to current rural road standards. While these improvements target long-term durability and ride quality, the crash history does not strongly suggest that infrastructure degradation is a primary safety concern. Figure 31 shows KABC crash incidents on Wilson Road between Chuckanut Drive/SR 11 and Farm to Market Road.

Figure 31. KABC Crash Incidents on Josh Wilson Road between Chuckanut Drive/SR 11 and Farm to Market Road

As shown in Table 48 and Table 49, most crashes occurred during daylight hours and on dry pavement, indicating that poor road surface conditions or adverse weather were not major contributing factors.

Table 48. Victim Counts by Lighting Condition on Josh Wilson Road

LIGHTING CONDITION	TOTAL KABC	SHARE OF KABC	TOTAL KSI	SHARE OF KSI	TOTAL K	SHARE OF K	RATIO OF KSI TO KABC	RATIO OF K TO KABC	RATIO OF K TO KSI
Dark - Unknown Lighting	1	7%	0	0%	0	0%	N/A	N/A	N/A
Daylight	14	93%	2	100%	0	0%	1 in 7	N/A	N/A
All Victims	**15**		**2**		**0**		**1 in 8**	**N/A**	**N/A**

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Table 49. Victim Counts by Roadway Surface Condition on Josh Wilson Road

ROADWAY SURFACE CONDITION	TOTAL KABC	SHARE OF KABC	TOTAL KSI	SHARE OF KSI	TOTAL K	SHARE OF K	RATIO OF KSI TO KABC	RATIO OF K TO KABC	RATIO OF K TO KSI
Dry	15	100%	2	100%	0	0%	1 in 8	N/A	N/A
All Victims	**15**		**2**		**0**		**1 in 8**	**N/A**	**N/A**

Instead, crash patterns point to driver behavior as the primary issue. A significant share of crashes involved angle collisions (Table 50), accounting for 73% of all KABC victims, with the most common contributing factors being failure to yield, distracted driving, and disobeying traffic signs (Table 51). These patterns suggest that while the pavement upgrades are necessary for operational and maintenance reasons, additional countermeasures—such as enforcement, improved signage, visibility enhancements, or access control—may be needed to address the behavioral crash risks.

Table 50. Victim Counts by Collision Types on Josh Wilson Road

COLLISION TYPE	TOTAL KABC	SHARE OF KABC	TOTAL KSI	SHARE OF KSI	TOTAL K	SHARE OF K	RATIO OF KSI TO KABC	RATIO OF K TO KABC	RATIO OF K TO KSI
Angle	11	73%	1	50%	0	0%	1 in 11	N/A	N/A
Fixed Object	5	33%	0	0%	0	0%	N/A	N/A	N/A
Rear End	2	13%	0	0%	0	0%	N/A	N/A	N/A
Rollover	3	20%	1	50%	0	0%	1 in 3	N/A	N/A
Sideswipe	1	7%	1	50%	0	0%	1 in 1	N/A	N/A
All Victims	**15**		**2**		**0**		**1 in 8**	**N/A**	**N/A**

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Table 51. Victim Counts by Contributing Factors on Josh Wilson Road

CONTRIBUTING FACTOR	TOTAL KABC	SHARE OF KABC	TOTAL KSI	SHARE OF KSI	TOTAL K	SHARE OF K	RATIO OF KSI TO KABC	RATIO OF K TO KABC	RATIO OF K TO KSI
Disobey Signal or Stop Sign	4	27%	0	0%	0	0%	N/A	N/A	N/A
Distracted	6	40%	0	0%	0	0%	N/A	N/A	N/A
Failure to Yield to Vehicle	3	20%	1	50%	0	0%	1 in 3	N/A	N/A
Impaired	2	13%	1	50%	0	0%	1 in 2	N/A	N/A
All Victims	**15**		**2**		**0**		**1 in 8**	**N/A**	**N/A**
Victims with Contributing Factor	**15**	**100%**	**2**	**100%**	**0**	**0%**	**1 in 8**	**N/A**	**N/A**

10. District Line Road Railroad Safety Improvements

This project focuses on enhancing the at-grade railroad crossing to reduce potential conflicts and align with broader corridor-wide improvements. Figure 32 shows KABC crash incidents on District Line Road railroad crossing south of SR 20.

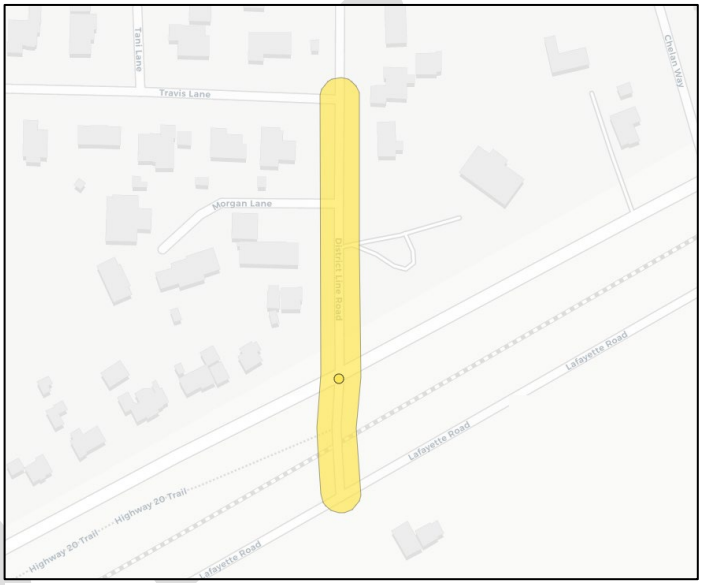

Figure 32. KABC Crash Incidents on District Line Road Railroad Crossing south of SR 20

Although the crash history is limited and does not reveal a clear pattern (Table 52 and Table 53), proactive countermeasures are still important to prevent future incidents at this high-risk location, particularly given that the railroad crossing is near an unsignalized intersection between a highway and a local road. Moreover, the area poses potential safety risks for vulnerable road users, with two transit stops nearby and a trail running along the crossroads. These factors highlight the need for multimodal safety enhancements, such as improved signage, lighting, crossing protection, and pedestrian infrastructure, which could be considered in a future project.

Table 52. Victim Counts by Contributing Factors on Josh Wilson Road

CONTRIBUTING FACTOR	TOTAL KABC	SHARE OF KABC	TOTAL KSI	SHARE OF KSI	TOTAL K	SHARE OF K	RATIO OF KSI TO KABC	RATIO OF K TO KABC	RATIO OF K TO KSI
Failure to Yield to Vehicle	1	100%	0	0%	0	0%	N/A	N/A	N/A
All Victims	**1**		**0**		**0**		**N/A**	**N/A**	**N/A**
Victims with Contributing Factor	**1**	**100%**	**0**	**0%**	**0**	**0%**	**N/A**	**N/A**	**N/A**

Table 53. Victim Counts by Emphasis Areas on Josh Wilson Road

EMPHASIS AREA	TOTAL KABC	SHARE OF KABC	TOTAL KSI	SHARE OF KSI	TOTAL K	SHARE OF K	RATIO OF KSI TO KABC	RATIO OF K TO KABC	RATIO OF K TO KSI
Driver Age 16-25	1	100%	0	0%	0	0%	N/A	N/A	N/A
All Victims	**1**		**0**		**0**		**N/A**	**N/A**	**N/A**
Victims in Emphasis Area	**1**	**100%**	**0**	**0%**	**0**	**0%**	**N/A**	**N/A**	**N/A**

Table 54. Victim Counts by Collision Types on Josh Wilson Road

COLLISION TYPE	TOTAL KABC	SHARE OF KABC	TOTAL KSI	SHARE OF KSI	TOTAL K	SHARE OF K	RATIO OF KSI TO KABC	RATIO OF K TO KABC	RATIO OF K TO KSI
Angle	1	100%	0	0%	0	0%	N/A	N/A	N/A
All Victims	**1**		**0**		**0**		**N/A**	**N/A**	**N/A**

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MOVE SKAGIT

Chapter 6 Goals and Policies

Introduction

As the regional planning agency for Skagit County, SCOG has an opportunity to set safer practices in motion to reduce or eliminate deaths and serious injuries on roadways in Skagit County. However, Skagit Council of Governments will not be able to do this alone, and regional collaboration will be highly important to meet this challenge. Similarly, Washington State has developed a goal to reduce the number of traffic deaths and serious injuries on Washington's roadways by the year 2030 through the Washington Strategic Highway Safety Plan: Target Zero and will be dependent on its partners throughout the state to support zero deaths and serious injuries by 2030. The Skagit Council of Governments will support the State's goal of reducing serious injuries and deaths through its planning and programming processes. To achieve this goal, SCOG can advance the following policies to support agency partners in the section below.

SCOG Safety Policy Language

Advance safety outcomes with regionally funded projects by including proven safety countermeasures. In addition to meeting other regional objectives, applications for regional funding should consider the project location's severe and injury crashes as presented on the High Crash Location map. Applicants for regional funding should include appropriate countermeasures and investments defined in Chapter 4.

> **Policy Statement**: **Funding Safety Countermeasures.** Regional funding for transportation projects should prioritize the advancement of safety outcomes by requiring consideration of the incorporation of proven safety countermeasures. In addition to fulfilling other regional objectives, all applications for regional funding should take into account the severity and frequency of injury crashes at the proposed project location, as identified on the High Crash Location map. Applicants are expected to include, as appropriate, countermeasures and investments as defined in Chapter 4 to effectively address identified safety concerns and contribute to the reduction of fatal and serious injury crashes within the region.

Support agencies in the consideration of automated enforcement strategies specifically in locations where speeding or other contributing factors suggest they have resulted in deaths and serious injuries. Work with agencies to develop model policies and strategies for enforcement that consider equity and fairness, allow for independent review of camera data. The statutes in RCW 46.63.210-.260 regulate city and county use of automated traffic safety cameras to detect certain traffic violations. These laws were passed by the Legislature in 2024 and replace RCW 46.63.170, the now-repealed law addressing this topic. RCW 46.63.220(2) requires every jurisdiction seeking to use traffic cameras to first adopt an ordinance authorizing their use. Jurisdictions with ordinances already in effect before enactment of the new laws should consider amending the ordinances to replace any RCW 46.63.170 references with applicable references to the new laws.

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Policy Statement: Support for Automated Enforcement by Local Agencies. The Skagit Council of Governments (SCOG) supports the use of automated enforcement strategies by local agencies within Skagit County as a tool to enhance roadway safety and reduce traffic-related deaths and serious injuries. Automated enforcement, such as speed and red-light cameras, should be considered in locations where data indicates that speeding or other high-risk behaviors have contributed to severe or fatal crashes. SCOG encourages local agencies to adopt model policies and procedures that emphasize equity, transparency, and fairness in the deployment of automated enforcement. These policies should ensure compliance with current state statutes (RCW 46.63.210-.260), require independent review of camera data, and include community engagement to address public concerns. By facilitating the responsible use of automated enforcement, SCOG aims to support member agencies in implementing evidence-based strategies that target the root causes of crashes and advance the Vision Zero goal of eliminating deaths and serious injuries on Skagit County roadways.

Implementation

To achieve the Safety Action Plan's goal of eliminating traffic-related deaths and serious injuries, the Skagit Council of Governments will need to address identified safety concerns with tangible countermeasures and consistently evaluate safety performance over time. SCOG does not own or maintain transportation infrastructure, so SCOG cannot implement safety projects on its own. However, SCOG will work with member agencies and regional safety partners, including local governments, tribal governments, transit agencies, law enforcement, public health officials, community organizations, and the public, to ensure safety efforts are aligned throughout the region and implementation.

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Project Evaluation and Prioritization

Skagit Council of Governments will approach a project evaluation and prioritization framework with the goal that the most impactful safety interventions within Skagit County are advanced. SCOG will evaluate and prioritize projects using criteria related to project locations in relation to the High Injury Network and High Crash locations, as well as content of project proposal including use of federally recognized proven safety countermeasures, or strategies to reduce the quantity of fatal or serious injury producing crashes identified in Chapter 4 and aligned with identified crash focus areas or Washington State Highway Safety Plan Emphasis Areas. Proposed evaluation criteria include:

Is statement, related to project location:

- Is the project located on the most severe Section of HIN (> 3.5 KSI Per Mile)?
- Is the project located on or near any section of HIN (> 1.5 KSI Per Mile)?
  - *Note: Near is defined as within one mile of limited access highways; 0.25 miles from surface streets.

Or statement, related to project location:

- Is the project located at a high-crash location?

And statement, related to project contents and intended outcomes:

- Does the proposed project align observed crash history with USDOT proven safety countermeasures or harm reduction strategies? (P/F)

Challenges

Meeting regional and state safety goals is constrained by significant funding challenges that fall short of addressing the scale of need. Safety projects rely on limited federal, state, and local resources, yet programs such as SS4A and HSIP are oversubscribed and cannot keep pace with demand. Even when funding is awarded, rising construction costs and inflation erode its impact, forcing agencies to delay or reduce the scope of improvements. Match requirements for federal grants create additional barriers for smaller jurisdictions and underserved communities, which often face the highest crash risks but lack the financial capacity to participate. These limitations result in a persistent gap between available funding and the investments required to deliver meaningful safety improvements, leaving critical infrastructure needs unmet and slowing progress toward zero deaths and serious injuries.

Many critical safety strategies fall outside SCOG's direct authority and require state-level leadership or legislative action. Decisions about statewide funding allocations and program flexibility, such as how HSIP and SS4A funds are distributed, are made at the state level and significantly influence regional capacity to deliver projects. Enforcement and education campaigns, including high-visibility impaired driving enforcement, speed

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management initiatives, and distracted driving crackdowns, are led by state agencies and law enforcement. Other impactful measures include adopting lower speed limits on state highways, expanding automated enforcement programs, and strengthening seat belt and child restraint laws. These policy and enforcement actions complement infrastructure improvements and are essential to achieving Target Zero, but they depend on coordination and commitment beyond the regional level.

SCOG Roles and Responsibilities

Achieving an aggressive reduction in the number traffic-related deaths and serious injuries are a shared responsibility. As such, SCOG's implementation efforts will include providing member agencies with information related to crash outcomes that have already been collected and share potential strategies to be deployed to reduce deaths and serious injuries. Additionally, SCOG will be responsible for tracking, evaluating, and updating the crash trends information of all victim deaths and serious injuries, and pedestrian and bicyclist serious injuries and deaths. Similarly, SCOG will update the High Injury Network and High Crash Locations coinciding with future updates to the Regional Transportation Plan, so that member agencies are aware of the region's most fatal and serious injury producing roadways.

SCOG Implementation Schedule

The implementation of the RSAP is structured to guide phased deployment of safety strategies over the five-year horizon period. In early 2026, updates to the Regional Transportation Plan's project evaluation and prioritization framework will include additions from recommendations of the Regional Safety Action Plan, including prioritization and evaluation criteria for the fiscally constrained Regional Transportation Plan list. Additionally, SCOG will continue to monitor and track safety performance of the High Injury Network and High Crash Locations within a fixed interval of five years coinciding with the next Regional Transportation Plan update in 2031.

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