

CHELAN COUNTY
Safety Action Plan

COUNTY OF CHELAN

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WHAT TRANSPORTATION CAN BE.

September 2026

Prepared for:
Chelan County Public Works

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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.

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Statutory Notice

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Glossary of Key Terms

ACS	American Community Survey
ADA	Americans with Disabilities Act
ADT	Average Daily Traffic
BIL	Bipartisan Infrastructure Law
CDTC	Chelan-Douglas Transportation Council
CMF	Crash Modification Factor
CSAP	Comprehensive Safety Action Plan
DUI	Driving Under the Influence of Alcohol and/or Drugs
EHD	Environmental Health Disparities
EMS	Emergency Medical Services
EPDO	Equivalent Property Damage Only
FHWA	Federal Highway Administration
FSI	Fatal Serious Injury
GIS	Geographic Information Systems
HIN	High Injury Network
HRN	High Risk Network
HUD	Housing and Urban Development
HSIP	Highway Safety Improvement Program
LRSP	Local Road Safety Plan
MP	Milepost
PDO	Property Damage Only Crashes
P&R	Park and Ride
RRFB	Rectangular Rapid Flashing Beacon
RSP	Roadway Safety Plan
RCW	Revised Code of Washington
SAG	Stakeholder Advisory Group
SR	State Route
SRTS	Safe Routes to School
SS4A	Safe Streets and Roads for All
TIB	Transportation Improvement Board
TIP	Transportation Improvement Program
USDOT	United States Department of Transportation
VRU	Vulnerable Road User
WSDOT	Washington State Department of Transportation
WSTC	Washington State Traffic Safety Commission

1 Introduction

Chelan County's transportation network, which includes streets, roads, highways, and pathways, serves an essential role towards connecting residents and visitors to a wide range of destinations for employment, education, recreation, or other purposes. Ensuring the safety of all users, whether they are walking, biking, using a mobility device, riding a bus or driving a car, is a central priority for the County. This Comprehensive Safety Action Plan (CSAP) demonstrates the County's commitment to implementing a proactive approach advancing roadway safety and reducing traffic-related serious injuries and fatalities.

In 2025, approximately 659 traffic fatalities occurred within Washington state, of which eleven (11) occurred within Chelan County. This represents people whose futures are cut short, with countless more people forever changed by grief and loss. Crash victims' loved ones may struggle with trauma, grief, or economic hardship. Survivors might have to learn to live with a temporary or permanent disability. Witnesses to a crash can be deeply impacted, and the guilt of being responsible for a crash can linger for a lifetime.

To reduce and ultimately eliminate tragedies like these, the Federal Highway Administration (FHWA) created a new National Roadway Safety Strategy, setting a goal of zero roadway deaths. In support of that strategy, the Bipartisan Infrastructure Law (BIL) passed by Congress established the Safe Streets for All (SS4A) program to fund roadway safety projects across the country.

This CSAP establishes the roadmap for planning, designing, and operating a transportation system which emphasizes the safety of all users. Movement towards reducing, and ultimately eliminating, roadway fatalities and serious injuries will require collective buy-in from all users. The projects and strategies outlined in this plan will move Chelan County closer to its goal to provide a safer transportation system.

What is a Comprehensive Safety Action Plan?

The US Department of Transportation's (USDOT's) Safe Streets and Roads for All (SS4A) program designates the Comprehensive Safety Action Plan (CSAP) as the basic building block to significantly improve roadway safety. A CSAP is aimed at reducing and eliminating serious-injury and fatal crashes affecting all roadway users by conducting comprehensive data analysis to characterize roadway safety problems and strengthen a community's approach through projects and safety strategies that address the most significant safety risks and the most vulnerable roadway users. The SS4A program is guided by the Safe System Approach, which involves a paradigm shift to improve safety culture, increase collaboration across all transportation safety stakeholders, and refocus the design and operation of transportation systems to anticipate human error and lessen resulting impact forces to reduce crash severity and save lives. As part of the Target Zero program, the Washington Traffic Safety Commission (WTSC) adapted USDOT's Safe System Approach to be more applicable to the needs and priorities of the state's roadway network.

Safe System Approach

This CSAP presents the County's roadmap to achieving its Vision Zero goals. It is grounded in the Safe System Approach, which aims to eliminate fatal and serious injuries by anticipating human mistakes and minimizing impacts on the human body when crashes do occur.

The Safe Systems approach is visualized in ***Figure 1.1***. The six statements wrapped around the outside ring are the fundamental principles upon which the Washington State Traffic Safety Commission's Safe System Approach is built.

1. **Death and serious injury is unacceptable.** While no one is happy about being in a fender-bender, this plan places priority on addressing crashes that result in deaths and serious injuries.
2. **Support safe road use.** Even the most cautious and skilled drivers can make mistakes that can lead to a crash. Careful design and operation of our transportation system can ensure that mistakes, when they inevitably happen, do not have life-altering impacts.
3. **Prevent exposure to large forces.** Human bodies can only withstand so much impact force before death or serious injury occurs. Designing a system to accommodate and protect physical vulnerabilities is central to a safe network.

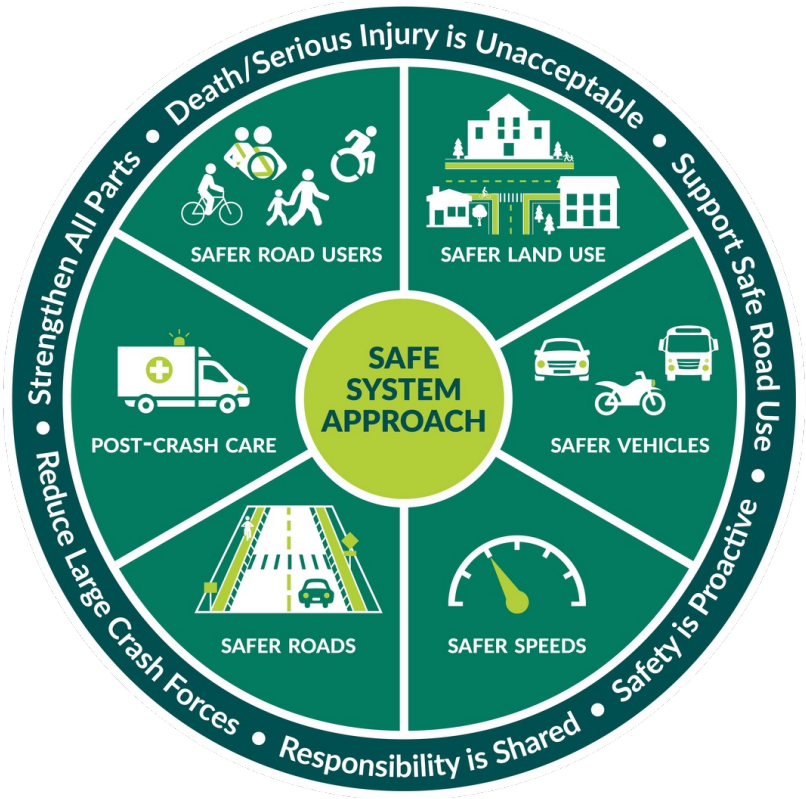


Figure 1.1: Safe System Approach
Source: Washington State Strategic Highway Safety Plan 2024

4. **Responsibility is shared.** All parts of our transportation system, from elected officials to everyday transportation users, to planners and engineers, play a role in Vision Zero.
5. **Safety is proactive.** Rather than waiting for crashes to occur, transportation agencies should seek to proactively identify and address risk factors when feasible.
6. **Strengthen all parts.** Improving all elements of the transportation system is key to creating a safe system. Redundancy is essential to ensure that roadway users are still protected if one part of the system fails.

The Safe System Approach

The six pie-shaped segments inside the ring of the graphic shown in ***Figure 1.1*** are the implementation elements of the Safe System Approach. Each element is described in ***Figure 1.2***.



Safe Land Use

When land use and transportation networks are planned together, strong multimodal connections allow greater access by walking and biking and reduce human exposure to collisions by reducing the number of vehicles on the road.



Safer Vehicles

Making vehicles safer can be done through advanced driver assistance systems and by ensuring future technology prioritizes vulnerable roadway users.



Safer Speeds

Slower vehicle speeds increase visibility and reaction times for drivers and reduce impact forces when crashes occur.



Safer Roads

Safer roads come from providing physical separation (such as separated bike lanes and sidewalks) as well as designing to accommodate human mistakes.



Post-Crash Care

A system-wide approach means working toward safety after crashes occur as well as before. This comes from improving emergency response, traffic incident reporting, and traffic management.



Safer Road Users

Working toward a culture of safety starts with developing a network of civic partners, educating road users, and creating personal connections to the County's Vision Zero efforts.

Figure 1.2: Safe System Approach Elements



Figure 1.3: Traditional vs. Vision Zero Approach

Vision Zero

Vision Zero is an internationally recognized strategy to eliminate traffic fatalities and serious injuries while improving healthy and equitable mobility options. Since its first implementation in Sweden in the 1990's, Vision Zero has gained increasing momentum across Europe and the United States as a critical tool to help reverse the trend of annual increases in fatal and serious injury collisions.

Since the rise of the automobile over 100 years ago, society has normalized traffic deaths as an inevitable part of modern transportation. Vision Zero recognizes and advances the reality that these tragedies can be reduced and even prevented by taking a proactive, preventative, and systemic approach that prioritizes traffic safety as a pressing public health issue. The significant loss of life and productivity that comes from traffic deaths and serious injuries exacts a deep and tragic toll on families and communities extending to many areas including:

- Ongoing mental and emotional trauma suffered by surviving individuals and family members
- Personal financial costs from short-term medical bills and long-term treatments, rehabilitations, other medical needs, and loss of productivity
- Increased financial cost to taxpayers in the form of spending on emergency response, law enforcement, and
- Increased long-term societal healthcare costs.

Additionally, many people form decisions about their mode choice based on the safety of the facilities available to them. Safer streets can lead to increased mobility options such as walking, biking and taking transit. In turn, support for active mode choices can lead to reduced rates of disease, reductions in vehicle miles traveled and associated greenhouse gas emissions and increased public health.

Vision Zero departs from the status quo in two major ways:

1. Vision Zero recognizes that people will make mistakes, so the road system and transportation policies should be designed to reduce the risk of severe injury and fatalities when mistakes occur. This means improving the roadway environment, policies such as speed management, and other related systems to lessen the severity of crashes.
2. Vision Zero is a multidisciplinary approach, drawing from a diverse array of necessary stakeholders to address the complex issue of transportation safety. In the past, meaningful, cross-disciplinary collaboration among local transportation planners, engineers, policymakers, and public health professionals has not been the standard practice. Vision Zero acknowledges that many factors contribute to safe mobility – including roadway design, speed management, road user behaviors, technology, and policies – and sets clear goals to achieve the shared goal of zero fatalities and severe injuries.

Communities that want to succeed at their commitment to Vision Zero need to acknowledge that a normative shift must occur with regard to the acceptance of severe crashes, and that systemic changes are needed to make meaningful strides.

Committing to Vision Zero will require the following strategies:

- Building and sustaining leadership, collaboration, and accountability; especially among a diverse group of stakeholders to include transportation professionals, policymakers, public health officials, police, and community members.
- Collecting, analyzing, and using data to understand trends and potentially disproportionate impacts of traffic deaths on certain populations, especially vulnerable road users and historically underserved areas.
- Prioritizing accessible, equitable and inclusive community engagement.
- Managing vehicle operating speeds to safe levels; and
- Setting a timeline to achieve zero traffic deaths and serious injuries, which brings urgency and accountability, and ensuring transparency on progress and challenges.

Washington State's Target Zero Program

In line with national initiatives to improve roadway safety, the State of Washington adopted the Target Zero vision for reducing traffic-related fatalities and serious injuries on Washington's roadways to zero by 2030. Washington State developed the nation's first Target Zero Plan in 2000 to guide efforts for achieving this goal. Since then, the State has continued to improve roadway safety, with the Washington Traffic Safety Commission (WTSC) tasked with advancing and implementing the best practices, priorities, and solutions outlined in the Target Zero Plan.

Chelan County Vision Zero Commitment

With the adoption of this CSAP, Chelan County plans to focus on eliminating roadway fatalities and serious injuries along County roads. Consistent with the goal established in the 2025 Chelan County Roadway Safety Plan (RSP), provided as ***Appendix A***, the County will support statewide efforts to achieve Target Zero and do its part to eliminate traffic fatalities and serious injuries on County roads by the year 2046. Chelan County will use both the RSP and the CSAP as a tool for monitoring, measuring, and advancing roadway safety in pursuit of this goal.



2 Existing Plan and Policy Review

One of the key elements of the CSAP is a review of the County's existing policies, programs, and practices to identify changes that will aid in increasing the focus on safety and proactively address crashes. The intention is to help the County advance towards the goal of eliminating fatal and serious injury crashes. The policy and process review was conducted for the list of plans and other guiding resources in ***Table 2.1***. The detailed evaluation of existing plans and policies is provided in ***Appendix B***.

The policy and plan review recommends methods to integrate the recommendations of all safety-focused planning efforts into the County policies and ordinances. Many of the strategies included in the Safer Streets Action Plan require minimal additional funding to implement but may require adjusting current processes to optimize better safety outcomes.

Focus areas analyzed for potential safety improvements:

- County policies and design standards revisions
- New or revisited programs
- Community outreach and engagement

Table 2.1: Policy and Program Assessment Documents

AGENCY	DOCUMENT	STATUS
Chelan County	Chelan County Roadway Safety Plan	Completed 2025
Chelan County Public Works	Annual Bridge Report 2024	Completed 2024
Chelan County Public Works	Complete Streets County Code DRAFT	Updating 2025
Chelan County	ADA Self-Evaluation Transition Plan	Draft 2024
Chelan County	Public Right of Way Facilities. A supplement to Chelan County ADA Transition Plan	Draft 2024
Chelan County	Transportation Element	Updating 2026
Chelan County	Transportation Element ***Appendix A-E***	Updating 2026
Chelan County	Transportation Element ***Appendix F-H***	Updating 2026
Chelan-Douglas Transportation Council (CDTC)	Chelan-Douglas Regional Transportation Plan Update	Completed 2020
Chelan County	Draft Automated Traffic Safety Cameras Code	Drafted 2025
Chelan County	Chapter 9.03 Traffic Safety Enhancement Program	Adopted 2013
Chelan County	Title 15 Development Standards	Various
Washington Traffic Safety Commission	Washington State Strategic Highway Safety Plan 2024	Completed 2024
WSDOT	Washington State Active Transportation Plan	Completed 2021
Washington Traffic Safety Commission	Street Lighting and Safety Study	Completed 2025
Washington State Legislature	Nondrivers: Population, Demographics & Analysis	Completed 2023

Based on the review of the focus areas, the following categories are recommended for areas of improvement:

- Revision of County documented policies and standards
- Adjustments of standard practices via cultural norms and advocacy
- Development and execution of new programs

Chapter 5 discusses the recommended non-infrastructure updates to plans and policies which the County can explore to advance roadway safety.

3 Safety Analysis

This chapter summarizes existing conditions and current crash trends on Chelan County's transportation network. It contains the analysis components used to help identify and prioritize locations in the County for potential safety improvements.

Analysis Approach

The analysis summarized within this section is based on crash data in Chelan County for the years of 2019 to 2023, as provided by the Washington State Department of Transportation (WSDOT).

Figure 3.1 presents steps conducted as part of safety analysis for Chelan County.

Historical data were analyzed to understand crash risks from a systemic level and reveal information such as the quantities of different crash types, crashes resulting in fatal and serious injuries (FSI), and circumstances contributing to crashes. The results of the historical analysis provide a picture of crash trends over the five-year period, showing which types of crashes are most frequent and severe, and potential underlying behavioral issues.

The crash data were then mapped and analyzed spatially to identify contributing circumstances at specific locations that displayed a high number of overrepresented crash types and severe crashes. The spatial analysis enabled the identification of facility characteristics that may be affecting crash frequency and severity, such as obstacles within clear zones, lane delineation lacking in contrast, obstructed sight lines, or missing active mode facilities.

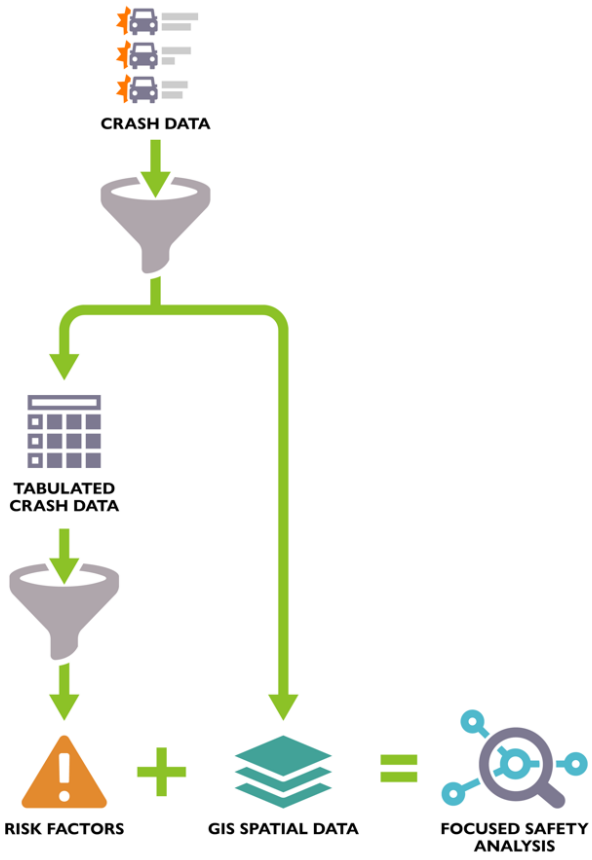


Figure 3.1: Safety Analysis Approach

Combining the historic and spatial analysis revealed the risk factors, showing what types of contributing behaviors and or facility characteristics present the greatest risk to roadway users, and which type of roadway users are most at risk.

The detailed evaluation of crashes within Chelan County is summarized in ***Appendix C***.

Countywide Crash Analysis

During the study period, a total of 581 crashes were reported in Chelan County, 39 (7%) of which resulted in a fatality or serious injury.

A breakdown of crashes by year and severity is shown in ***Figure 3.2***. As shown, the number of crashes has decreased since the high of 136 crashes in 2019, however, there has been an upward trend from 2020 through 2024. Preliminary crash data for 2024 is also included in ***Figure 3.2***, however at the time of analysis, this data was not finalized and therefore was not included in the full crash analysis.

The map in ***Figure 3.3*** shows the location of all the crashes reported with concentrations along Squilchuck Road, Manson Boulevard, Chumstick Highway, and Malaga Alcoa Highway. Crashes were also concentrated on roads within Peshastin, Cashmere, Leavenworth, Entiat, Manson, and Malaga.

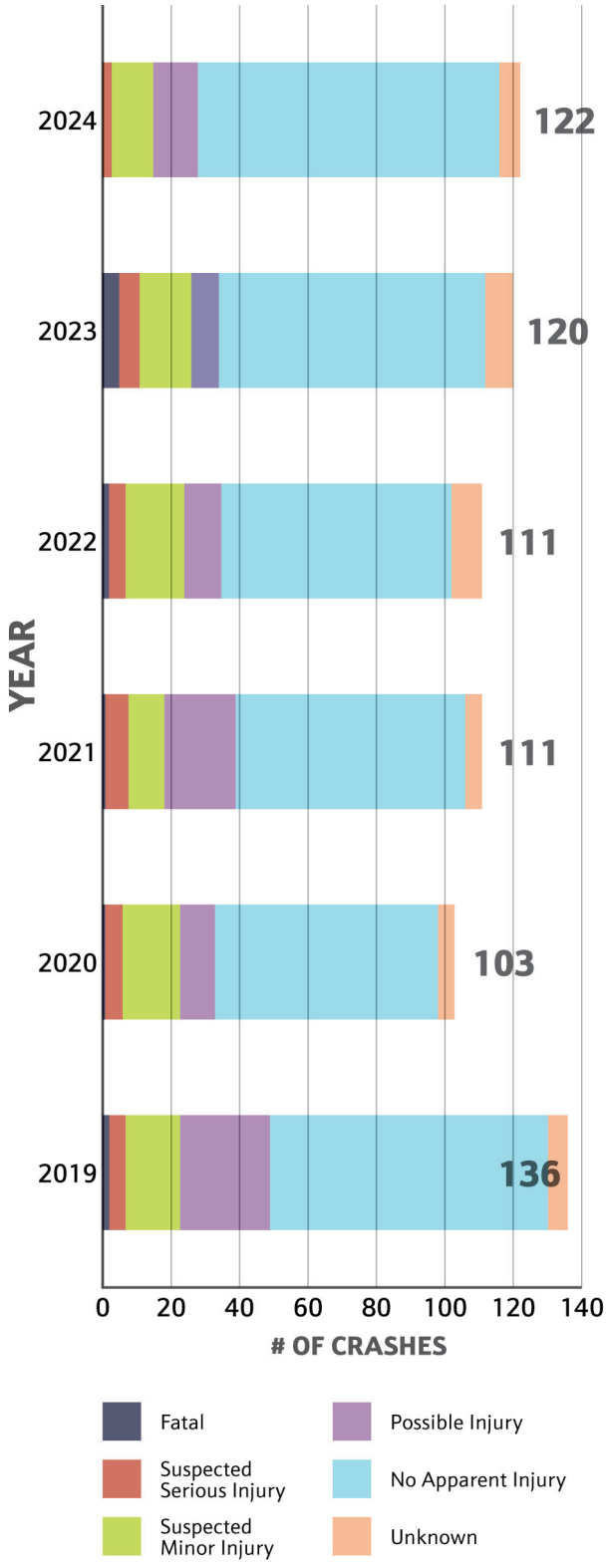


Figure 3.2: Crashes by Year and Severity

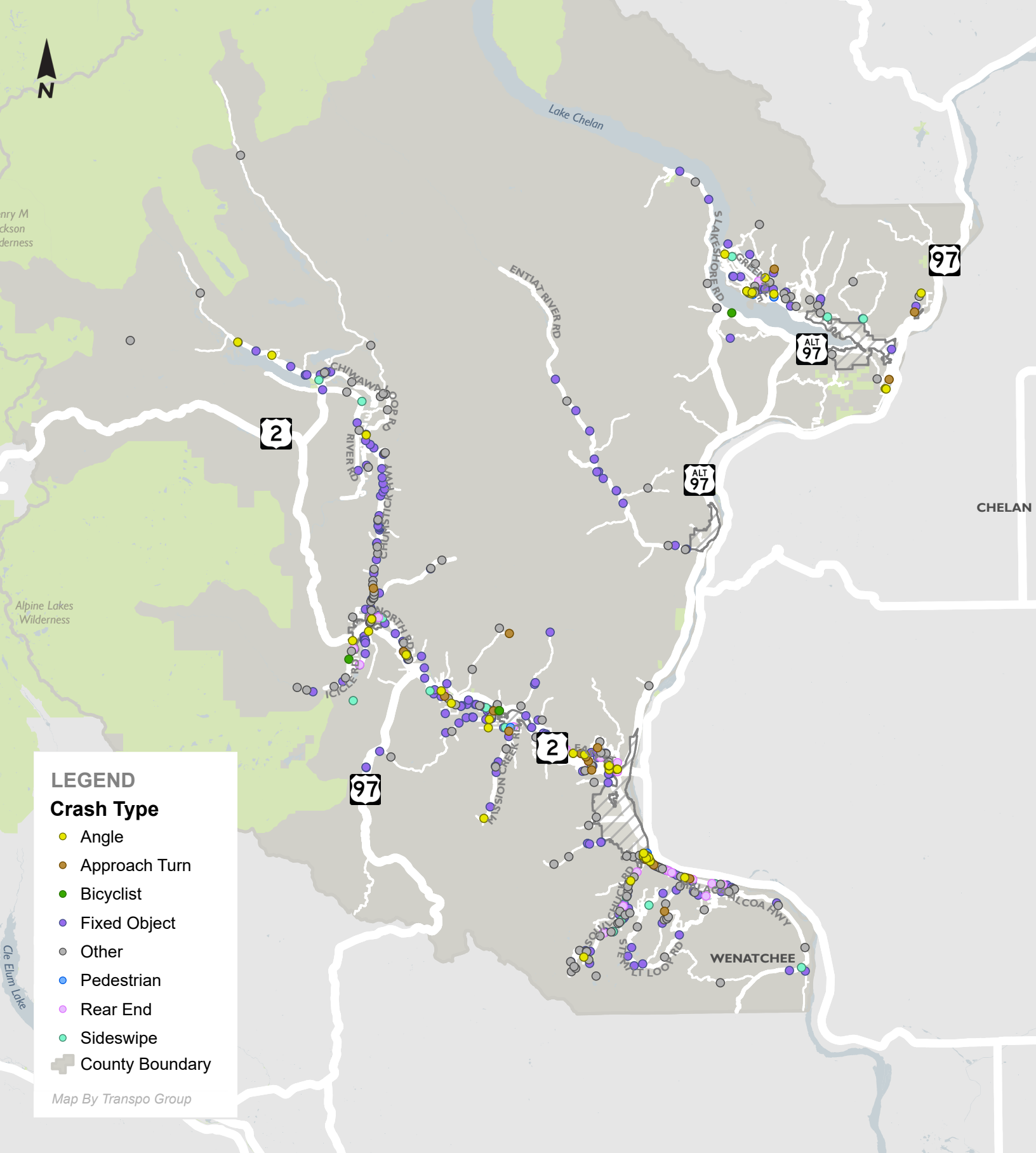


Figure 3.3: Countywide Crash Map by Crash Type

Table 3.1: County and State Crash Comparison – Crash Type

CRASH TYPE	CHELAN COUNTY ROADS		WASHINGTON STATE – ALL ROADS	
	TOTAL CRASHES	% OF CRASHES	TOTAL CRASHES	% OF CRASHES
Fixed Object	298	51.1%	102,867	20%
Angle	57	9.8%	93,452	18%
Rear-end	42	7.2%	138,835	27%
Overturn	35	6.0%	8,338	2%

Figure 3.4 shows the distribution of crashes by type. Fixed object crashes accounted for over half (51%) of the crashes and most frequently included collisions with trees/ stumps, earth banks/ledges, embankments, guardrails, wildlife, and drainage ditches although collisions with items such as fences, utility poles, and other objects alongside or adjacent to the roadway were also represented in the data.

The crash type reported second most frequently was angle crashes. There were 57 angle crashes, 9.8% of the total. Crashes occurring when one vehicle struck another at or near a 90-degree angle were coded as angle crashes. Of the 57 angle crashes, none resulted in a fatality or serious injury.

Rear-end and overturn type crashes accounted for 42 (7.2%), and 35 (6.0%) of the total crashes, respectively. Rear end crashes occur when one vehicle following another strikes the forward vehicle from behind. Of the rear-end and overturn crashes, 3 of the rear-end and 5 of the overturn crashes resulted in a serious injury, representing 8%, and 13% of the FSI crashes respectively.

Table 3.1 lists the percentages of the four most overrepresented crash types, fixed object, angle, rear-end and overturn, in Chelan County, compared to the percentages of the same crash types reported on all roadways in the state of Washington as a whole. Of the four crash types listed in ***Table 3.1***, fixed object, and overturn crashes accounted for significantly higher percentages than the statewide comparisons.

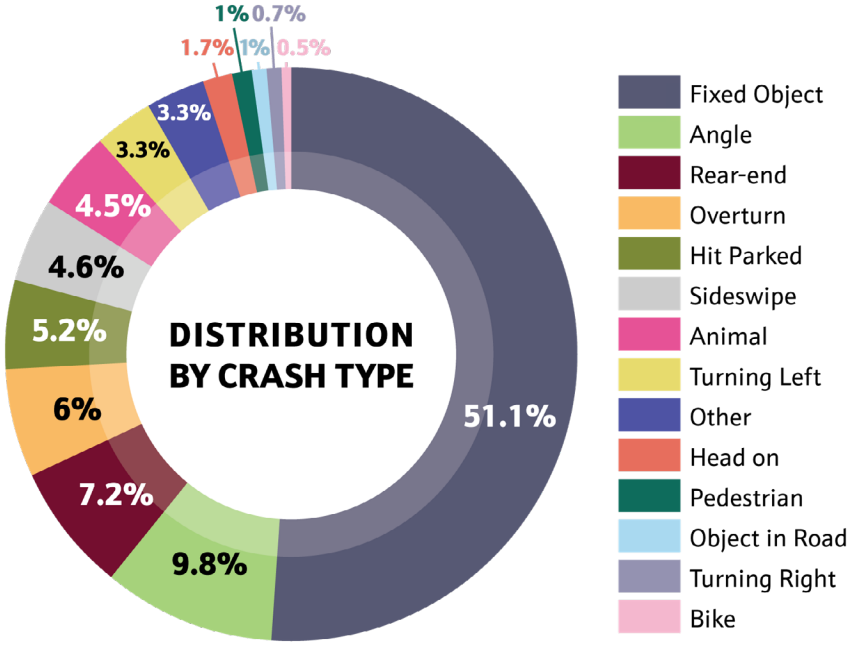


Figure 3.4: Distribution of Crashes by Type

Table 3.2: County and State Crash Comparison – Fatal & Severe Injury Crashes

CRASH SEVERITY	CHELAN COUNTY ROADS		WASHINGTON STATE – ALL ROADS	
	TOTAL CRASHES	% OF CRASHES	TOTAL CRASHES	% OF CRASHES
Serious Injury	28	5%	2,576	4%
Fatality	11	2%	801	1%

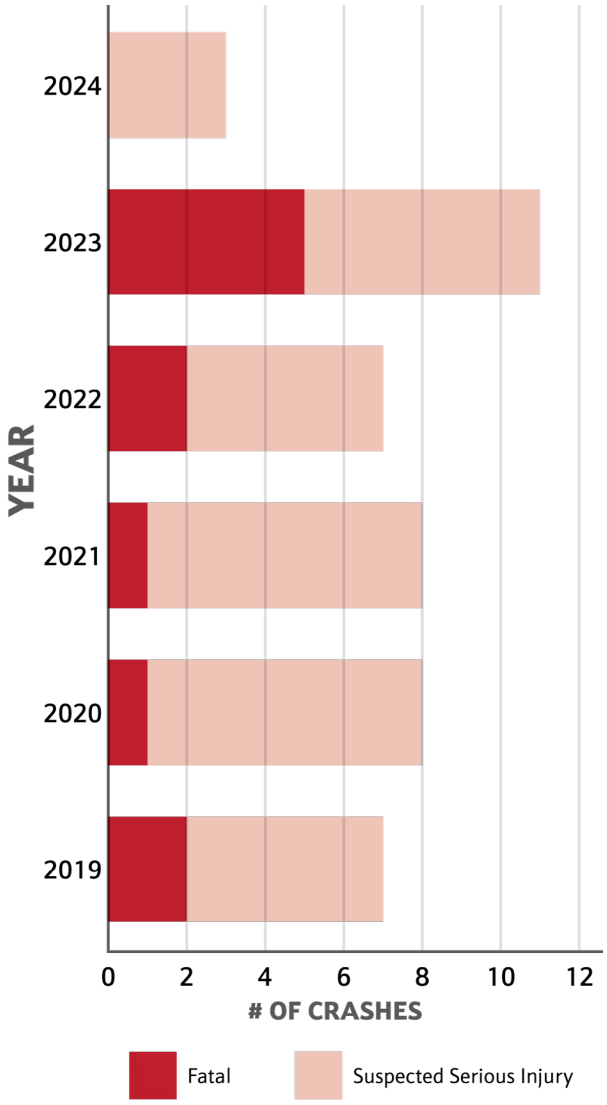


Figure 3.5: Fatal & Serious Injury Crashes
Note: Crash data for 2024 is included for reference purposes only. The data was obtained May 6, 2025, and has not been finalized by WSDOT at the time of analysis.

Fatal and Serious Injury Crashes

During the analysis period, there were a total of 11 fatal crashes and 28 serious injury crashes reported in the study area. Overall, the number of crashes resulting in fatal or serious injuries (FSI) increased to a high in 2023, as shown in ***Figure 3.5***. The preliminary data for 2024 shows the fewest fatal and serious injury crashes of the study period, however at the time of analysis, this data was preliminary and may not fully capture the extent of fatal and serious injury crashes.

Fatal and serious injury crashes are spread out across the county's roadway network. ***Figure 3.6*** shows clusters of FSI crashes in the urban areas of Wenatchee, Leavenworth, and Chelan, and along Chumstick Highway.

Table 3.2 shows that the overall percentages of fatal and serious crashes on county roads in Chelan County are higher than the FSI percentage of crashes on all roads statewide.

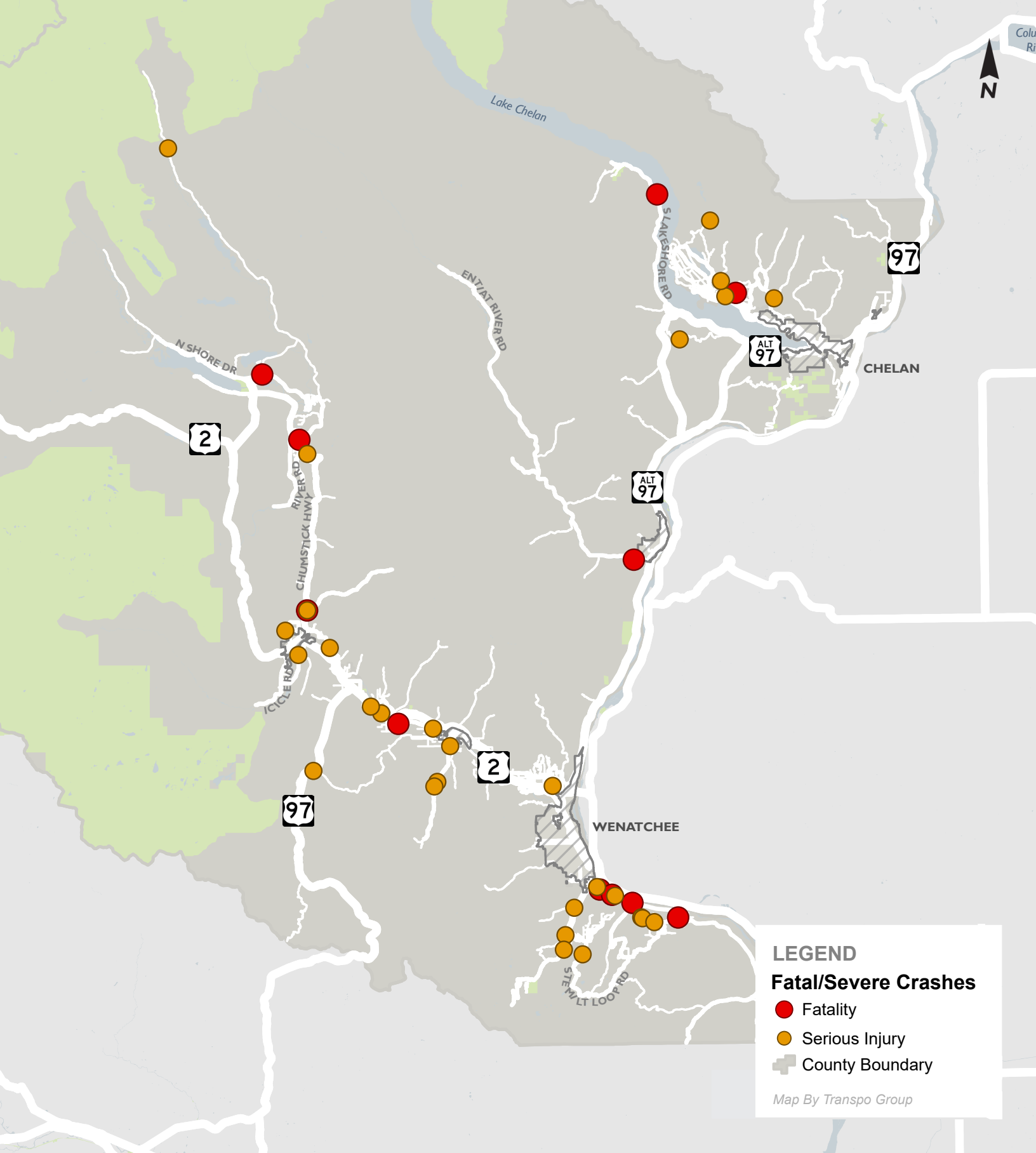


Figure 3.6: Map of Fatal and Serious Injury Crashes

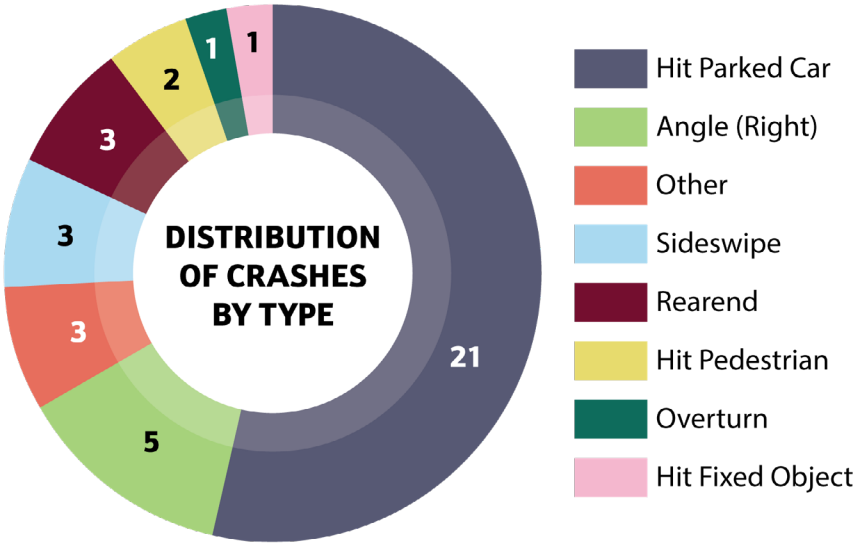


Figure 3.7: Distribution of Crashes by Type

Top Fatal and Serious Injury Crash Types

Figure 3.7 shows a distribution chart of FSI crashes by crash type. Fixed object and overturn crashes were the most frequent among crashes with severe outcomes. Together, these crashes account for 67% of all FSI crashes in Chelan County.

Table 3.3 shows a comparison of County and statewide percentages of FSI crashes by crash type. Along Chelan County roadways, some crash types resulted in a greater rate of fatal or severe injury crashes compared to the statewide averages, as highlighted in the table. In addition to being higher than statewide rates, fixed object, overturn, and sideswipe crashes accounted for 75% of the total FSI crashes for the County.

Due to over-representation when compared to countywide or state percentages, spatial analysis was conducted on the fixed object, overturn, and sideswipe crashes to identify hazardous location characteristics or facility types where these crashes were concentrated. In addition, motorcycle and pedestrian/bicyclist crashes were included in the additional analysis due to the increased vulnerability of active mode travelers when involved in crashes.

Table 3.3: County and State Crash Comparison, Fatal & Severe Injury Crashes by Crash Type

CRASH TYPE	CHELAN COUNTY ROADS		WASHINGTON STATE – ALL ROADS	
	FSI CRASHES	% FSI CRASHES	FSI CRASHES	% FSI CRASHES
Fixed Object	21	54%	3,871	28%
Overturn	5	13%	1,073	8%
Rear End	3	8%	1,077	8%
Ped/Bike	3	8%	2,931	21%
Angle	1	3%	1,745	13%
Sideswipe	3	8%	606	4%
Other[1]	2	6%	1,925	14%

1. A variety of crash circumstances are coded as "other" type crashes, including wildlife strikes, vehicles running off the road without first striking a barrier or fixed object, overturned vehicles, and vehicles striking impermanent objects such as debris in the roadway.

Vulnerable Roadway User Crashes

Vulnerable Roadway User Definition

This Plan uses the Revised Code of Washington (RCW) definition for vulnerable roadway users. Senate Bill SB 5326 passed during the 2011 Legislative Session, created a new traffic infraction called "Negligent Driving 2nd – Vulnerable Users" (RCW 46.61.526). This infraction is cited when a person operates a vehicle in a manner that was both negligent and was a proximate cause of substantial bodily harm, great bodily harm, or death of a vulnerable user of the public roadway. As listed in RCW 46.61.526 (11) (c) "Vulnerable user of a public way" means (i) A pedestrian; (ii) A person riding an animal; or (iii) A person operating or riding any of the following on a public way: (A) A farm tractor or implement of husbandry, without an enclosed shell; (B) A bicycle; (C) An electric-assisted bicycle; (D) An electric personal assistive mobility device; (E) A moped; (F) A motor-driven cycle; (G) A motorized foot scooter; or (H) A motorcycle.

When a crash occurs, people walking, bicycling, and riding motorcycles are much more likely to be killed or seriously injured than people driving vehicles. Vehicle safety technology has seen significant advancements in recent decades, with airbags, antilock brakes, and lane-awareness sensors all working to protect a driver in a crash. Unfortunately, pedestrians, bicyclists, and motorcyclists are unprotected on most roadways and are especially vulnerable to the impact of a crash.

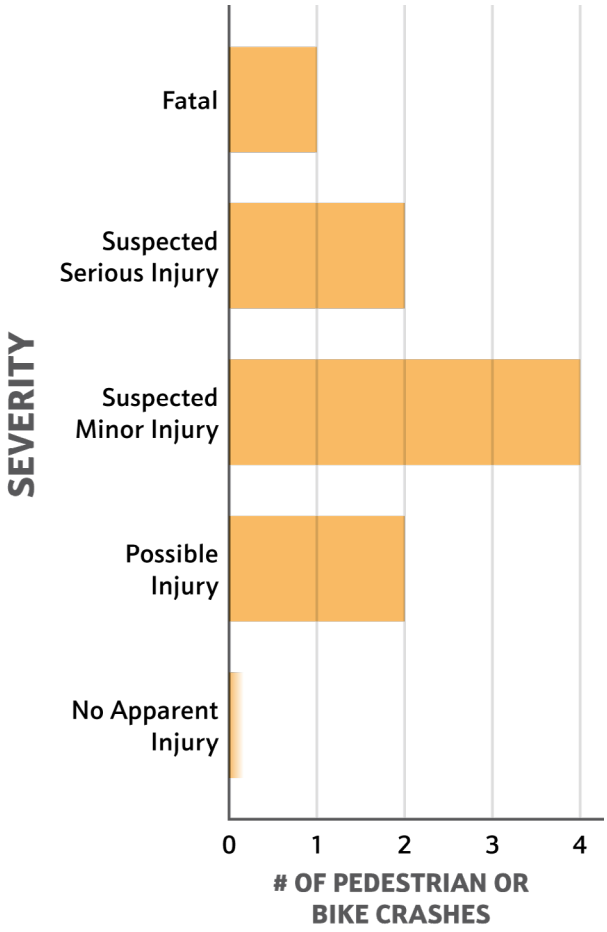


Figure 3.8: Pedestrian & Bicycle Crash Summary

Pedestrian & Bicycle Crashes

During the study period there were a total of 9 crashes that involved a pedestrian or cyclist, 3 (33%) of which were FSI crashes, shown in ***Figure 3.8***. ***Figure 3.9*** shows the locations of the pedestrian and bicyclist crashes. As shown, pedestrian and bicyclist crashes along County roads occurred in urban areas close to destination centers with high traffic volumes (e.g., Manson, Cashmere, Wenatchee, Leavenworth, etc.). Within these areas, active mode users may wish to walk or bike to urban/suburban destinations, yet there may be insufficient or inappropriate facilities for safe active mode travel. Within Chelan County, crashes involving pedestrians and/or bicyclists represented a larger share of all FSI crashes when compared to the state average. ***Table 3.4*** shows that pedestrian and bicyclist crashes accounted for 33% of the serious injury and fatal crashes in the county, and 21% of the FSI crashes across the state. A detailed summary of the pedestrian and bicycle crashes along County roads is presented in ***Appendix C***.

Table 3.4: County and State Crash Comparison – Pedestrian & Bicycle Crashes

	CHELAN COUNTY		WASHINGTON STATE	
CRASH SEVERITY	TOTAL CRASHES	% OF CRASHES	TOTAL CRASHES	% OF CRASHES
Ped/Bike – All	9	2%	14,370	3%
Ped/Bike– FSI	3	33%	2,931	21%

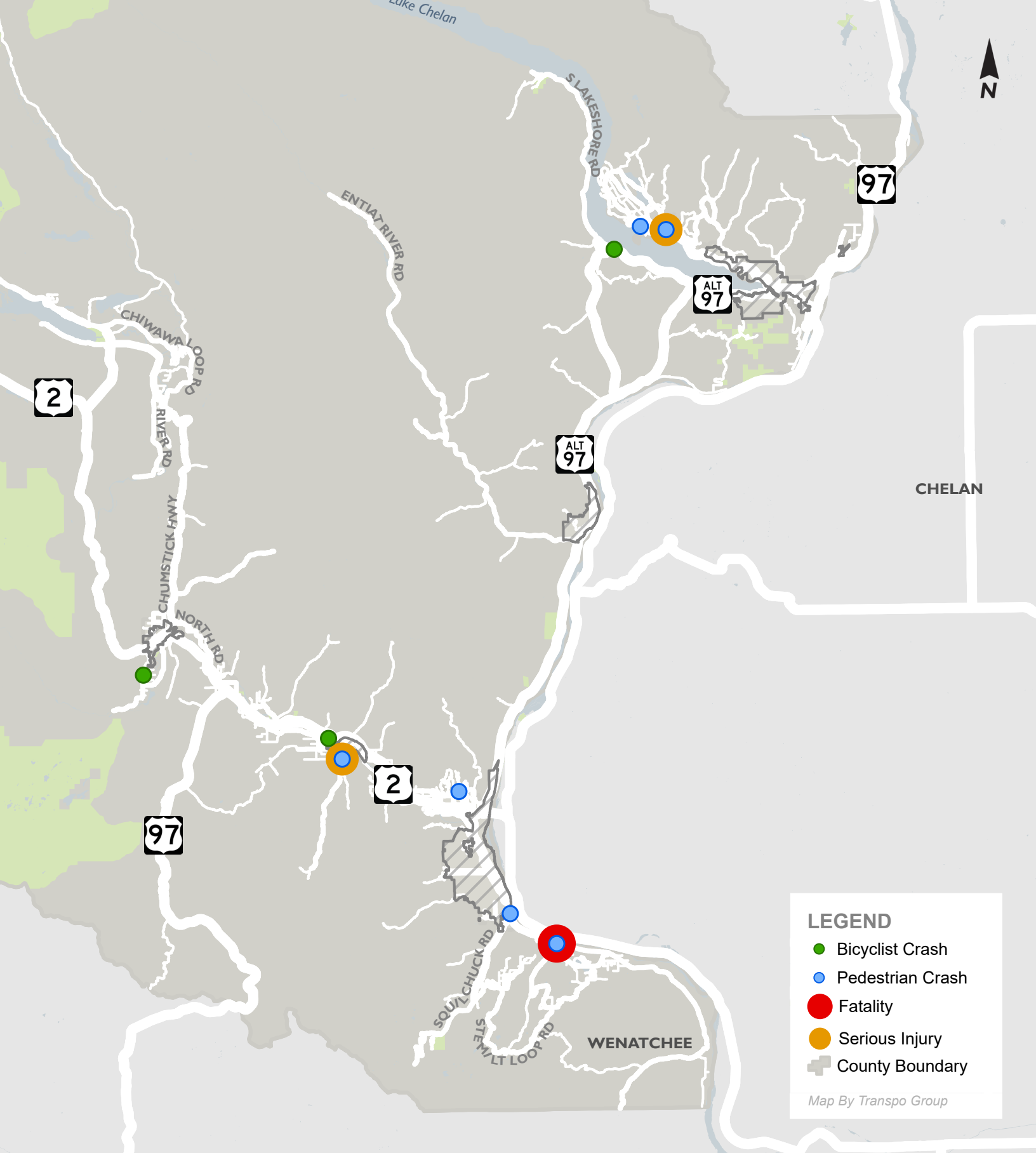


Figure 3.9: Map of Pedestrian & Bicycle Crashes

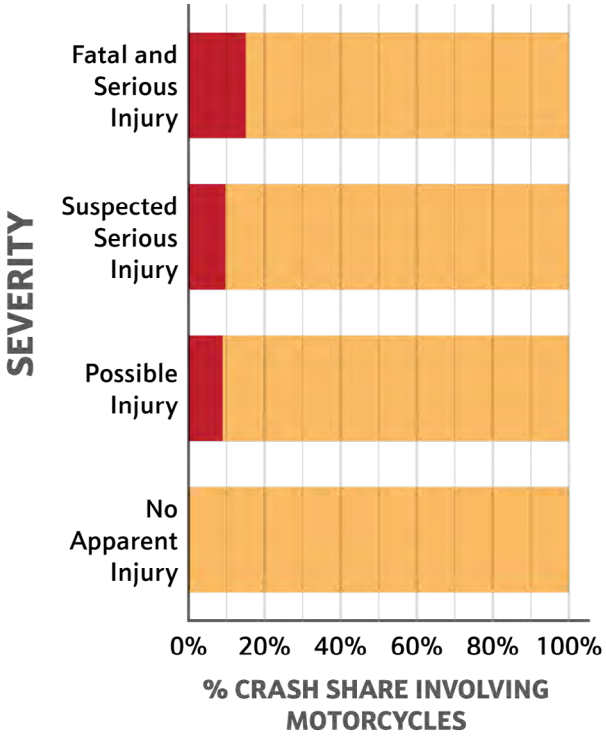


Figure 3.10: Motorcycle Crash Share by Severity

Motorcycle Crashes

During the study period, there were 25 motorcycle crashes, of which 9 (36%) resulted in fatality or serious injury. ***Figure 3.10*** shows the share of crashes occurring along Chelan County roads that involve motorcycles for each crash severity. As shown, although the motorcycle crashes represent only 4% of total crashes, they account for 15% of the County's total FSI crashes.

Figure 3.11 summarizes the motorcycle-involved crashes by crash type. As shown, over half of the motorcycle-involved crashes are overturned or fixed-object crashes. ***Figure 3.12*** presents the location of the motorcycle crashes occurring along County roads. Crashes are concentrated along Chumstick Highway, Chiwawa Loop Road, North Road, and Entiat River Road, as well as other roadways with a high number of horizontal curves.

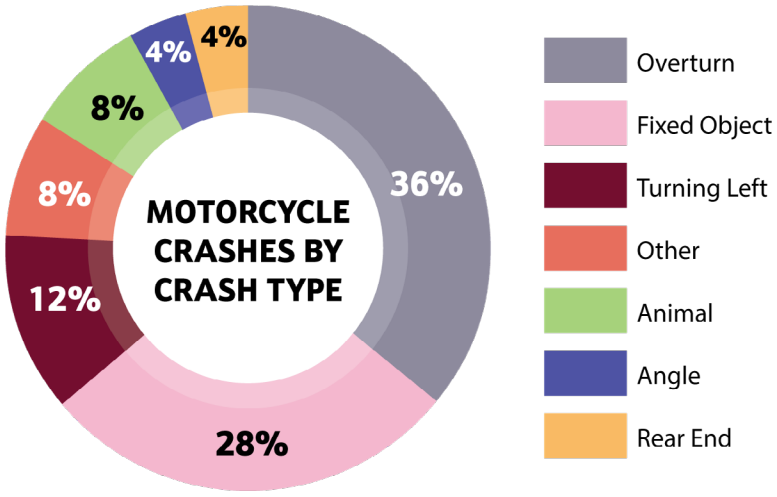


Figure 3.11: Motorcycle Crashes by Crash Type

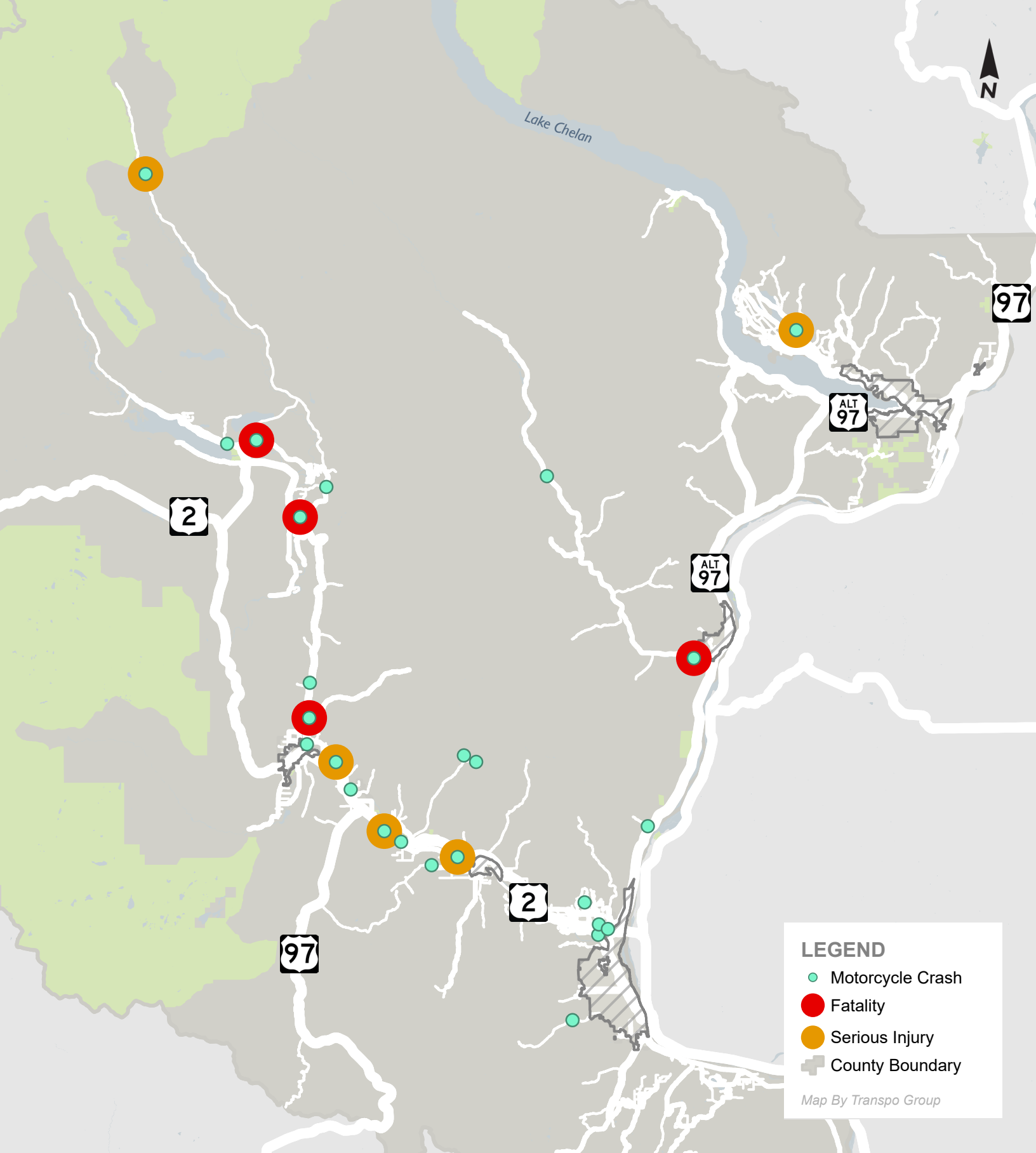


Figure 3.12: Map of Motorcycle-Involved Crashes

Table 3.5: High Risk Behavior Crash Summary

HIGH RISK BEHAVIOR	TOTAL CRASHES		CRASHES	
	# OF CRASHES	% TOTAL CRASHES	# FSI CRASHES	% FSI CRASHES
Impaired Drivers[1]	54	9%	9	23%
Distracted Drivers[2]	155	27%	10	26%
Speeding[3]	144	25%	18	46%

1. Crashes involving impaired drivers are defined as those involving drivers under the influence of drugs or alcohol
2. Crashes involving distracted drivers are determined by law enforcement and can include (but are not limited) to general distraction/inattention, interacting with cell phone, eating/drinking, adjusting audio/climate controls, distraction by outside person/object/event, distracted by other occupants, or daydreaming.
3. Speeding crashes are identified by law enforcement and are defined as crashes involving a vehicle exceeding the speed limit, traveling too fast for conditions, or racing.

High Risk Behaviors

Contributing circumstances for crashes within Chelan County were reviewed to determine the extent to which high-risk driving behaviors contribute to crashes and fatal and severe injuries. Key findings as they relate to high-risk driving behaviors are summarized below. ***Figure 3.13*** presents the overall share of crashes associated with each of the identified high-risk driving behaviors (impaired driving, distracted driving and speeding) and the severity of crashes associated with each high-risk behavior.

1. Crashes involving impaired drivers are defined as those involving drivers under the influence of drugs or alcohol.
2. Crashes involving distracted drivers are determined by law enforcement and can include (but are not limited to) general distraction/inattention, interacting with cell phone, eating/drinking, adjusting audio/climate controls, distraction by outside person/object/event, distracted by other occupants, or daydreaming.
3. Speeding crashes are identified by law enforcement and are defined as crashes involving a vehicle exceeding the speed limit, traveling too fast for conditions, or racing.

Given the prevalence of speeding-related crashes resulting in fatalities or serious injuries, spatial analysis of the speed related crashes was conducted. As shown in ***Figure 3.14***, speeding related crashes occur on roadways throughout the County and along key corridors, including Chumstick Highway, Squilchuck Road, and Malaga-Alcoa Highway.

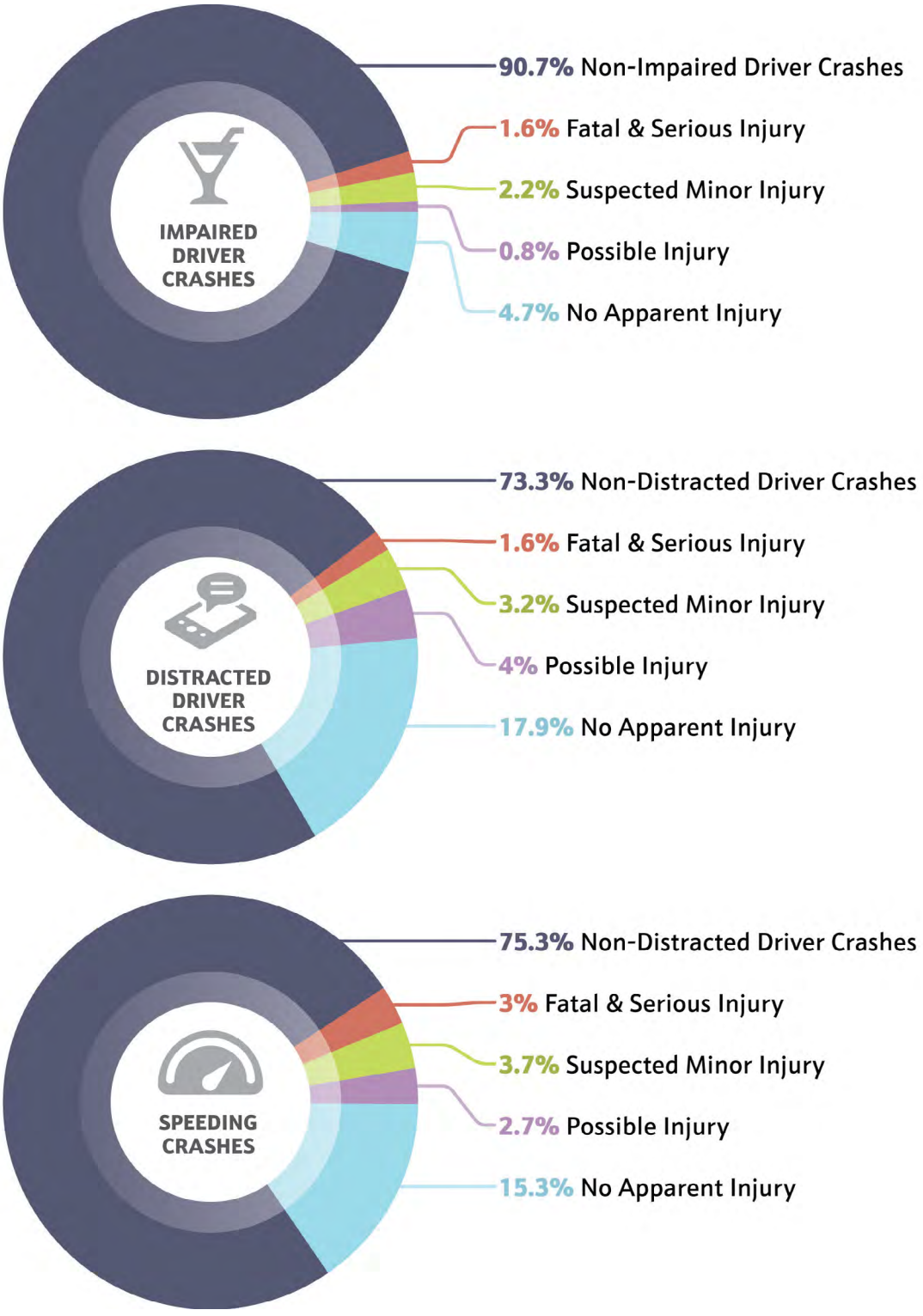


Figure 3.13: High-Risk Driving Behavior Crash Summary

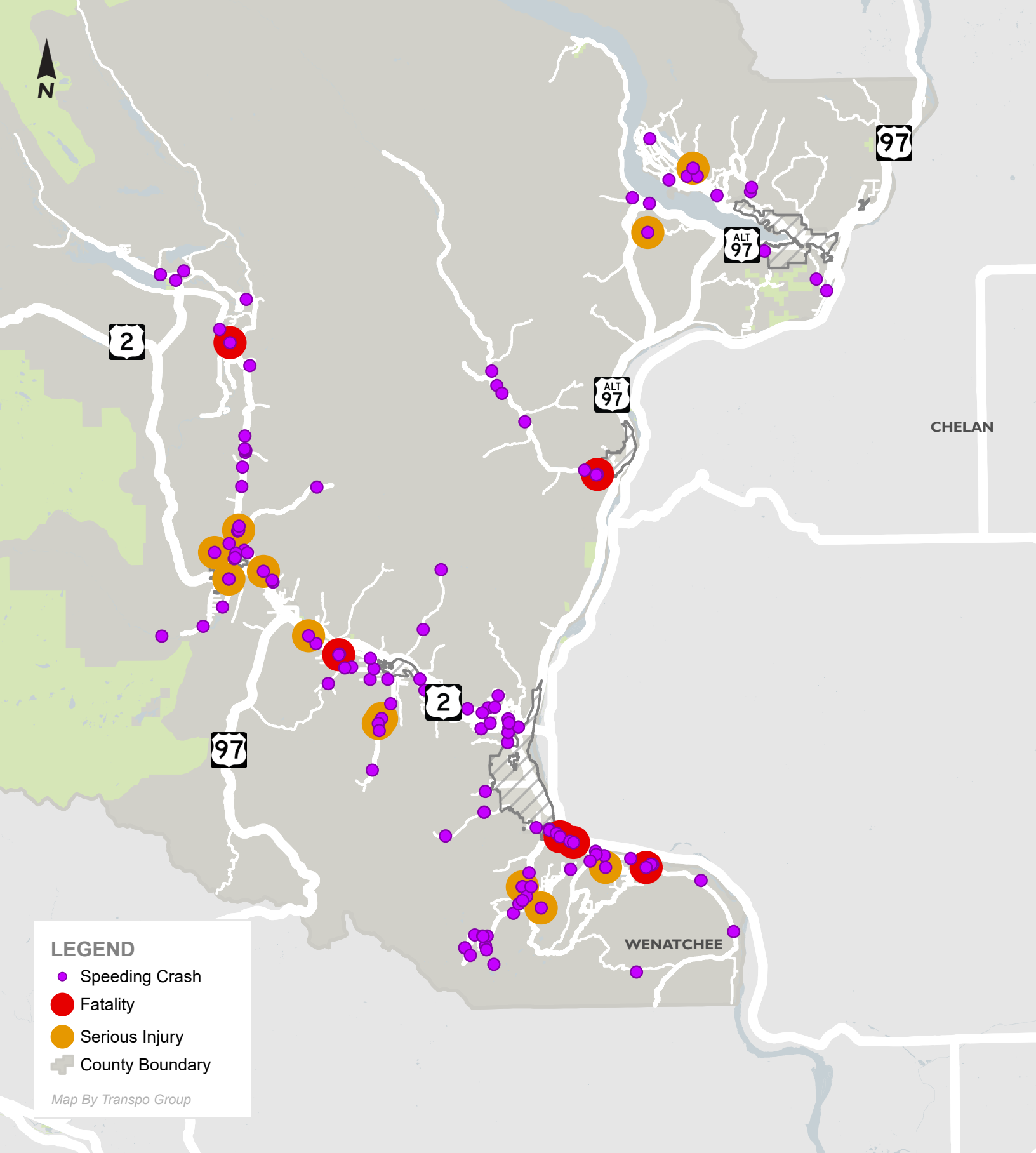


Figure 3.14: Map of Speeding-Related Crashes

High Injury Network (HIN) & High Risk Network (HRN)

High Injury Network

A High Injury Network (HIN) identifies the specific intersections and corridors where severe and fatal traffic injuries are concentrated. Rather than treating safety issues as isolated incidents, the HIN focuses attention on the small percentage of the roadway network that accounts for a disproportionately large share of serious injuries and deaths.

The development of a High Injury Network (HIN) is a key element of Safety Action Plans. By creating a HIN, focus areas can be identified to help reduce the number of fatal and serious injury crashes at locations that have been most affected.

The HIN development process involves developing crash density estimates along corridors throughout the County, weighted by crash severity, and then identifies the highest crash-density sections. This network is intended to highlight those roadways and areas of the network where targeted improvements can be implemented to address locations where injury crashes have historically occurred. Further discussion of the HIN methodology and roadways on the HIN is presented in ***Appendix D***.

Roadways identified in the HIN that displayed a concentration of serious injury and fatal crashes were selected for further analysis. Along the selected networks, crashes and facility characteristics were analyzed to understand the combinations of circumstances that resulted in elevated risk of crashes. Distraction, speeding, not yielding the proper right of way, and driving under the influence were frequent contributing behaviors, while roadway curvature, high speed limits or high-speed facility design, and roadside objects were frequently observed characteristics of locations where higher concentrations of crashes had been reported. The Chelan County HIN is presented in ***Figure 3.15***.

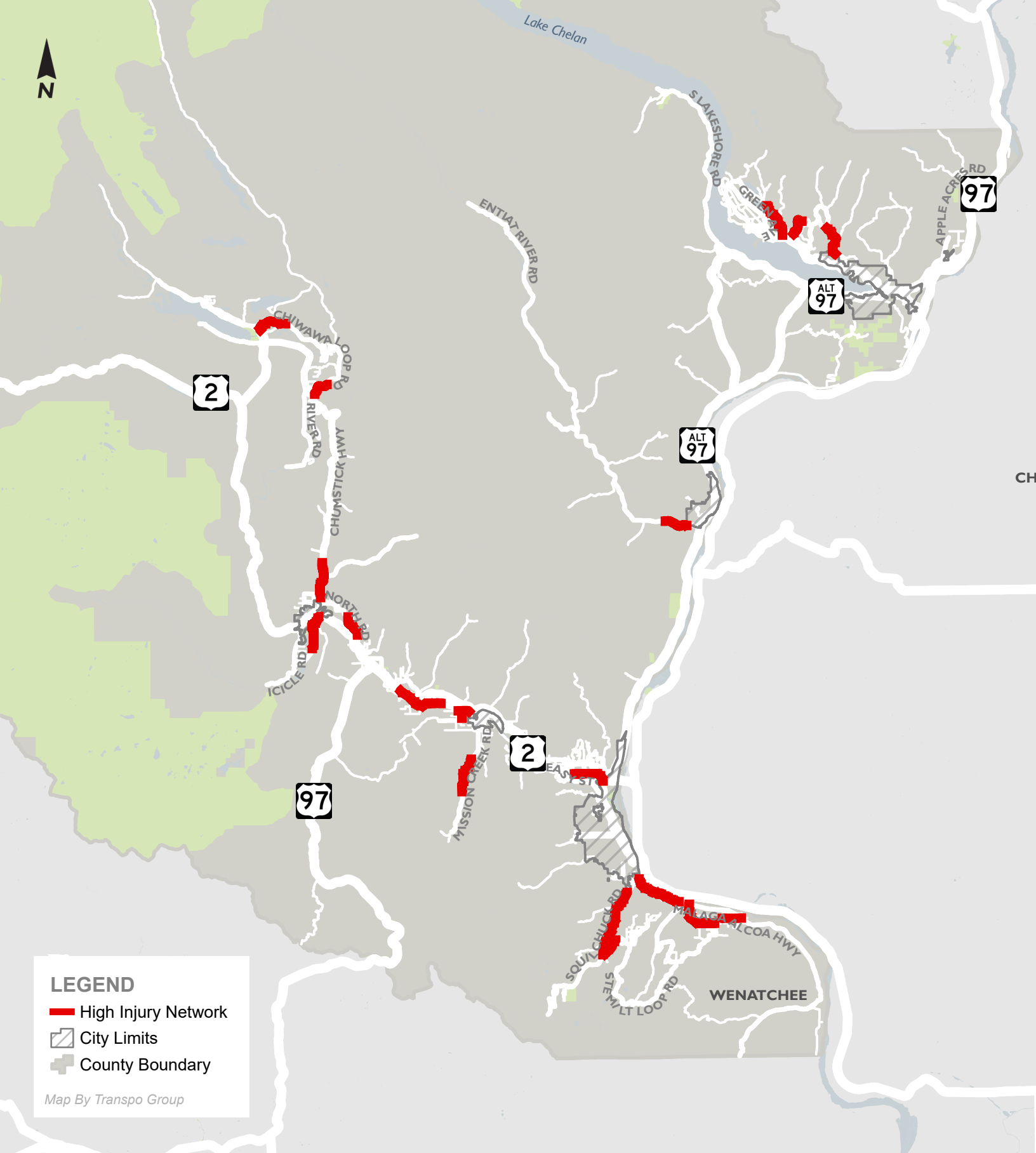


Figure 3.15: High Injury Network

High Risk Network

A High-Risk Network (HRN) identifies road segments with the highest crash cost estimates that may warrant special attention because they share similar risk characteristics to that of the High Injury Network, where crashes have historically occurred. The development of a HRN relies on the same historical data as the HIN, as well as other roadway data, to determine those locations that have the potential to exhibit higher crash risk. A HRN was developed for Chelan County based on the following roadway data:

- Adjacent Land Use
- Functional Classification
- Speed Limit
- Shoulder Presence

This data was combined with the EPDO scores calculated as part of the HIN to determine those roadways that exhibit similar characteristics to segments on the HIN that do not exhibit the same level of fatal and serious injury crash history. The development of the HRN also incorporated survey data to give added context from local roadway users and attempt to capture perceived risk on County roadways. The methodology used to identify the HRN segments is summarized in ***Appendix D***. The Chelan County HRN is presented in ***Figure 3.16***.

The intent for developing the HRN is to create an opportunity for the County to be more proactive in eliminating fatal and serious injury crashes rather than relying on a purely reactive approach based solely on historical crash data. While some overlap is identified between the HIN and HRN, the combination of the two networks strives to identify the highest priority locations within Chelan County for addressing potential safety concerns.

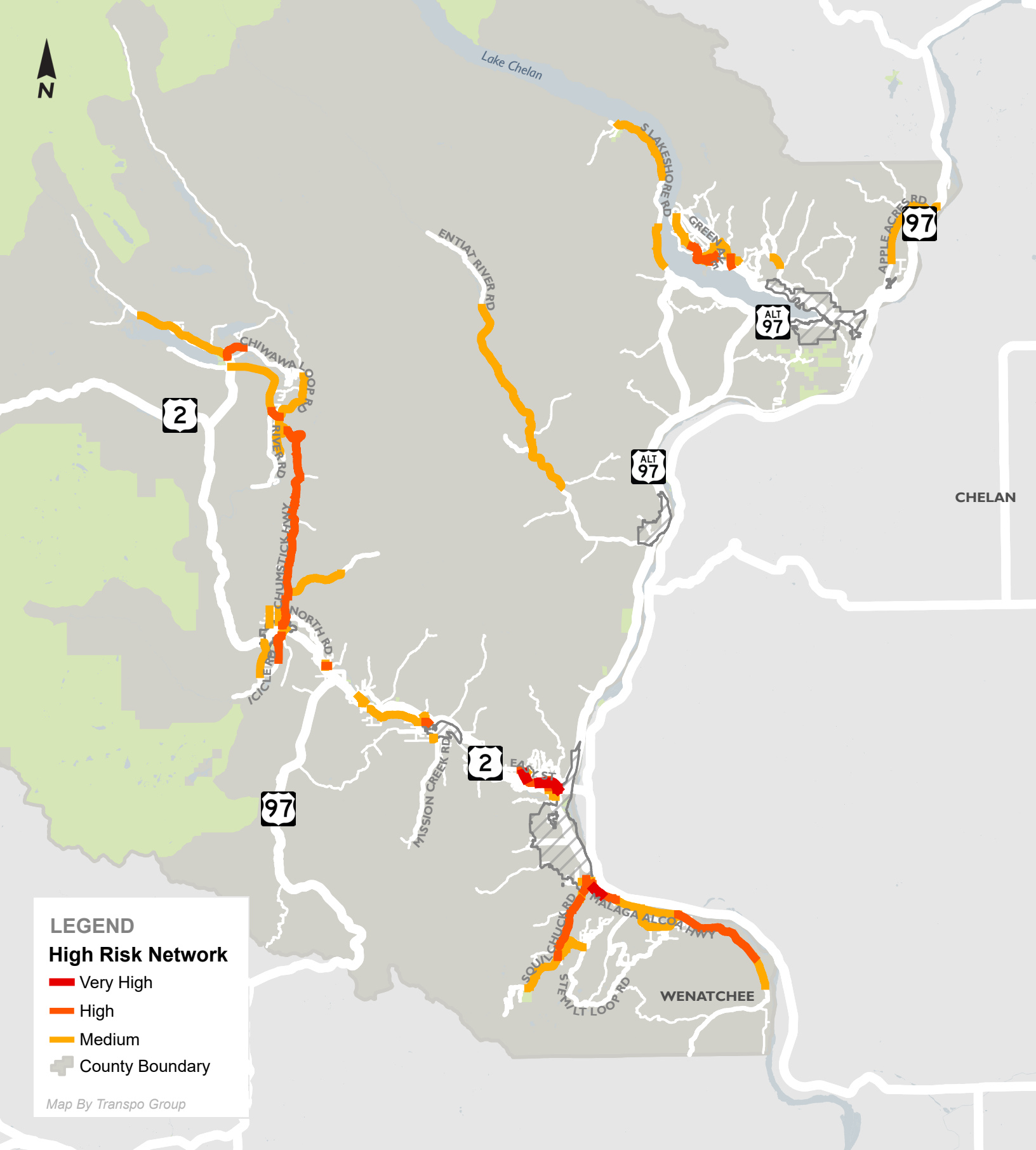


Figure 3.16: High Risk Network

Safety Risk Factors

Based on the safety analysis presented above, several safety risk factors were identified for Chelan County. These risk factors indicate crash types, roadway conditions, or user-types most likely to contribute to serious injury or fatal crashes along County roadways. For each of the identified risk factors, corresponding safety countermeasures are identified which have the potential to reduce the frequency or severity of crashes. Safety countermeasures represent the specific actions and infrastructure improvements that can be implemented to address the specific roadway or traffic safety issue identified by the crash history.

Fixed Object Crashes

A focus on reducing the impact of roadside object collisions is the highest priority risk factors within Chelan County. Fixed object crashes represented over half (51.1%) of the crashes within the County during the study period. The countermeasures for fixed object crashes include reducing the impact of forces of fixed object crashes by removing, delineating, or relocating roadside objects when feasible that could cause a major accident. In addition, efforts to educate and promote a strong safety culture could have a significant positive impact.

Speeding-Related Crashes

Speed can affect both the risk of a crash occurring and the severity of the crash. These crashes have most commonly occurred along long roadways stretched with low-density development along the roadway, such as, Squilchuck Road, Malaga-Alcoa Highway, and Chumstick Highway. Potential countermeasures could include automated speed enforcement, mobile speed feedback signs, and hot spot speed enforcement.

Motorcycle Crashes

Motorcycles were disproportionately involved in fatal and serious injury crashes. Motorcycle crashes make up just 4.3% of all crashes but accounted for 15% of all fatal and serious injury crashes. Most of these crashes were single-vehicle crashes, with the motorcycle either striking a fixed object or overturning. Motorcycle crashes were concentrated along Chumstick Highway, Chiwawa Loop Road, North Road, and Entiat River Road. Some potential countermeasures could include increased speed enforcement and widening the road.

Pedestrian and Bicycle Crashes

While less than two percent of crashes on County roads involved a pedestrian or cyclist, these crashes made up a much larger share of the serious and fatal injury collisions (7.69%). Since these crashes have a higher likelihood to result in fatalities or serious injuries, pedestrian and bicycle-involved crashes are considered a high priority risk factor. Countermeasures for vulnerable road user crashes can include widening & restriping the road, providing active transportation facilities, signage to notify people to share the road, as well as potential speed limit changes.

The intent for developing the HRN is to create an opportunity for the County to be more proactive in eliminating fatal and serious injury crashes rather than relying on a purely reactive approach based solely on historical crash data. While some overlap is identified between the HIN and HRN, the combination of the two networks strives to identify the highest priority locations within Chelan County for addressing potential safety concerns.



4 Demographics Analysis

Access to safe and reliable transportation allows users to reach essential destinations including school, work, healthcare, and social services. However, disparities in transportation access affect marginalized communities, including low-income populations, people of color, people with disabilities, and those living in rural areas. To address this, the CSAP included a demographic analysis that seeks to identify these communities in Chelan County so that they can have access to safe, reliable, and affordable transportation options.

The demographic analysis for Chelan County included a review of data from the following sources:

- Chelan County's Title VI Plan
- Climate and Economic Justice Screening Tool
- USDOT's Areas of Persistent Poverty and Historically Disadvantaged Communities
- ArcGIS Business Analyst Tool
- WSDOT's Sandy Williams Connecting Communities Viewer

Appendix E presents the detailed demographics analysis for Chelan County, while demographics findings from the Sandy Williams Communities Viewer are summarized below. In addition, data from the Chelan County Transportation Planning Community Engagement Final Report in ***Appendix G*** provided qualitative information utilized to inform where improvements in the transportation system should be prioritized.

Sandy Williams Connecting Communities Viewer

The demographic analysis was conducted using the Sandy Williams Connecting Communities Viewer to locate communities that are underserved or overburdened. The tool was developed by the Washington State Department of Transportation (WSDOT) to identify and prioritize locations for investment in the Sandy Williams Connecting Communities Program.[1]

The Connecting Communities Viewer uses the 2016–2020 American Community Survey (ACS) data and the Washington Environmental Health Disparities (EHD) Map to score each census block group based on several factors. These factors include:

1. **Transportation**: households spending a high percentage of income on transportation and/or no access to a vehicle
2. **Health**: residents with few healthy food choices and/or disproportionate health outcomes
3. **Economics**: households living on low incomes
4. **Family + Community**: youth (age 18 or younger) and seniors (age 65 or older), systemically oppressed and marginalized communities that have largely been historically left out of traditional planning processes, including but not limited to Black, Indigenous, Asian and Pacific Islander, Hispanic/Latinx, and other communities of color, those with limited English skills, and people with disabilities
5. **Environmental Justice**: communities with disproportionate exposure to pollutants, diesel pollution, and industrial contaminants

The resulting scores from each of these factors are added together to create a final Total Need Score. Communities that fall within Very High Need and High Need are the primary focus of the Sandy Williams Connecting Communities Program.

Figure 4.1 shows how the HIN within Chelan County intersects with the areas of greater need based on the Sandy Williams Connecting Communities overall need score. As shown, the areas of greatest need are south of Wenatchee and in Manson.

1 *WSDOT, Sandy Williams Connecting Communities Program, https://wsdot.wa.gov/business-wsdot/support-local-programs/funding-programs/active-transportation-funding-programs/sandy-williams-connecting-communities-program*

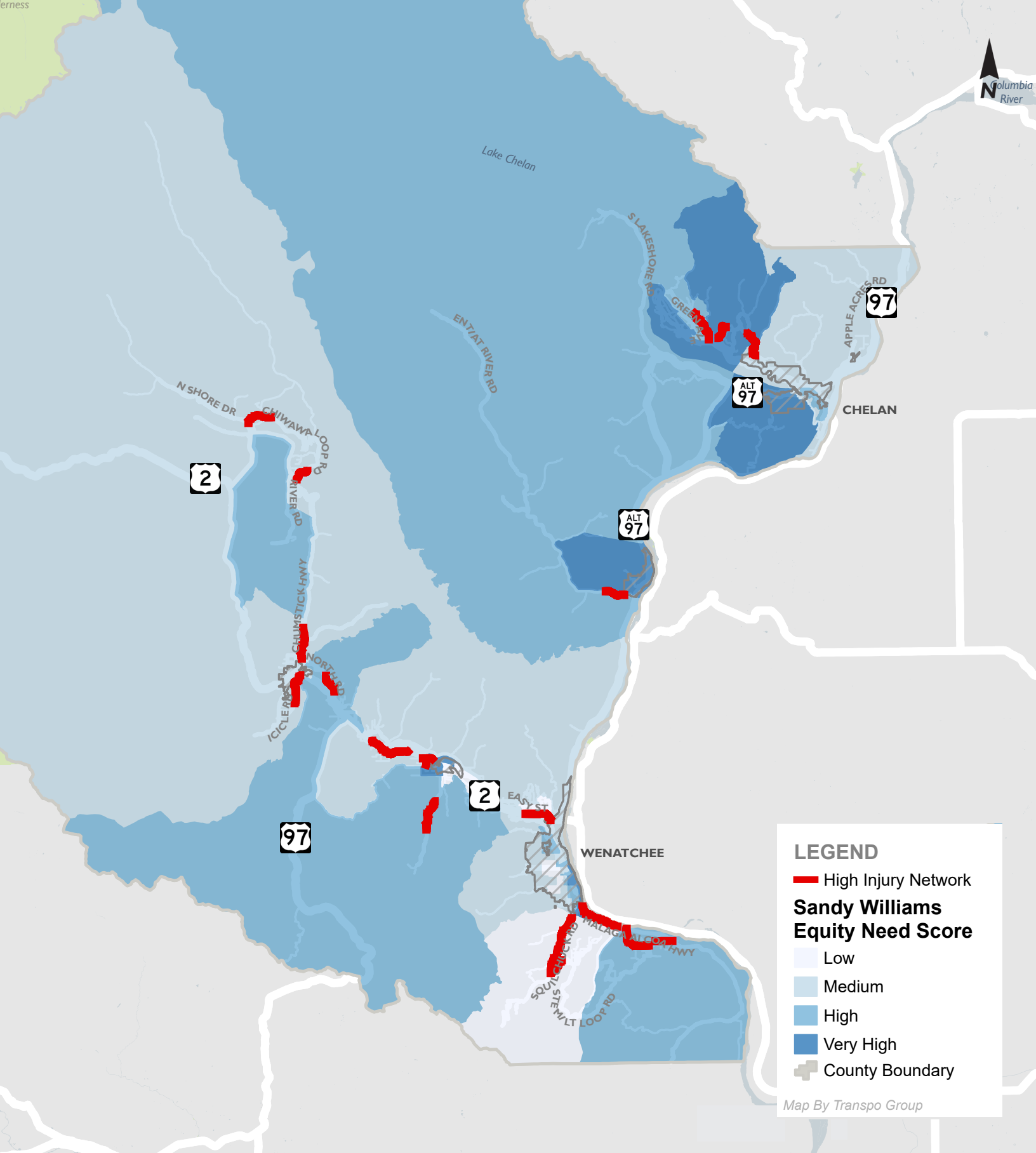


Figure 4.1: Countywide Demographic Need Scores and High Injury Network

Table 4.1: Chelan County Demographic Patterns

PATTERN	DESCRIPTION
Higher Youth Populations	• Found in some rural tracts • Highlights need for schools, safe transit, and access to youth services in those areas
Older Adults	• Concentrated in northern and rural areas • Higher need for age-friendly infrastructure and healthcare access
People of Color	• Concentrated in southeast Clean County • May face challenges such as poverty and limited English proficiency
Language Barriers	• ~10% of residents speak English less than "very well" • Spanish (primary non-English language)
Disability Prevalence	• Primarily found in urban tracts • Highlights broader regional needs for accessible infrastructure
Vehicle Access	• Limited in several areas • Increases challenges in accessing employment, education, and health services via active transportation and transit

Summary of Findings

Demographic Patterns

Chelan County has several at-risk populations which should be considered when planning for safe, efficient, and affordable transportation options for all populations. ***Table 4.1*** identifies these groups and highlights the specific transportation challenges that should be considered for each group.

Table 4.2: Transportation and Infrastructure Challenges

CHALLENGE	DESCRIPTION
Barriers to Mobility	• Limited access to safe, reliable, and affordable transportation options • Contributes to economic and social marginalization
Climate Vulnerability	• Risks from wildfires, flooding, and extreme weather • Tracts with older infrastructure and vulnerable populations (greater risk)
Workforce Challenges	• High unemployment and low median income (need for economic and mobility investment)

Transportation and Infrastructure Challenges

As Chelan County considers the needs of its most vulnerable populations, it faces several challenges regarding its transportation and infrastructure networks that are felt significantly with its vulnerable populations. ***Table 4.2*** describes each of these challenges.

The populations identified in ***Table 4.1*** are those more likely to experience the transportation and infrastructure challenges identified in ***Table 4.2***. These populations can be found within rural areas of the County where lower densities can make it more costly to provide infrastructure, further exacerbating access gaps.

The demographic analysis provides context for setting initial priorities and beginning the project prioritization process. Beyond the CSAP, Chelan County can further integrate demographic analyses into refining existing programs and services and developing new ones as well as project selection and prioritization. This will establish a systemic framework for decision-making and help address any disparities in its transportation system to meet the needs of all road users.

Additional recommendations and next steps for continuing to integrate demographic considerations are outlined in ***Appendix E***.



5 Community Engagement and Outreach

Engagement with the community and local and regional partners was another key component of the Chelan County Safety Action Plan. The feedback gathered from these groups was used to determine the key safety needs and priorities of the region. The community outreach efforts took many forms to maximize engagement from all groups, as described below.

Community Engagement Key Themes

Across all forms of community engagement, the following central themes were gathered regarding roadway and transportation safety within Chelan County:

- Separating bikes and people from vehicles was identified as the top priority improvement for addressing transportation safety throughout the County.
- Many Chelan County residents indicated walking as a frequently used mode of travel (several times a week) and supported measures that would improve safety for pedestrians along County roads (e.g., managing speeds, dedicated spaces for pedestrians, improved signage/visibility, etc.).
- Speeding was identified as a common safety concern throughout the County and support for potential opportunities to expand enforcement was expressed.

Stakeholder Engagement

Stakeholder Interviews

As part of the engagement process, stakeholder interviews were conducted with key individuals, groups, and agencies within Chelan County between May and September 2025. The interview process consisted of listening sessions, conversational discussions, as well as structured interviews that gave community organizations and the general public an opportunity to connect with the agencies coordinating the CSAP.

Interviews were conducted with members of the community ranging from fire chiefs, non-profit organization leaders, various public employees, and local business owners. Interviews were conducted with the following groups:

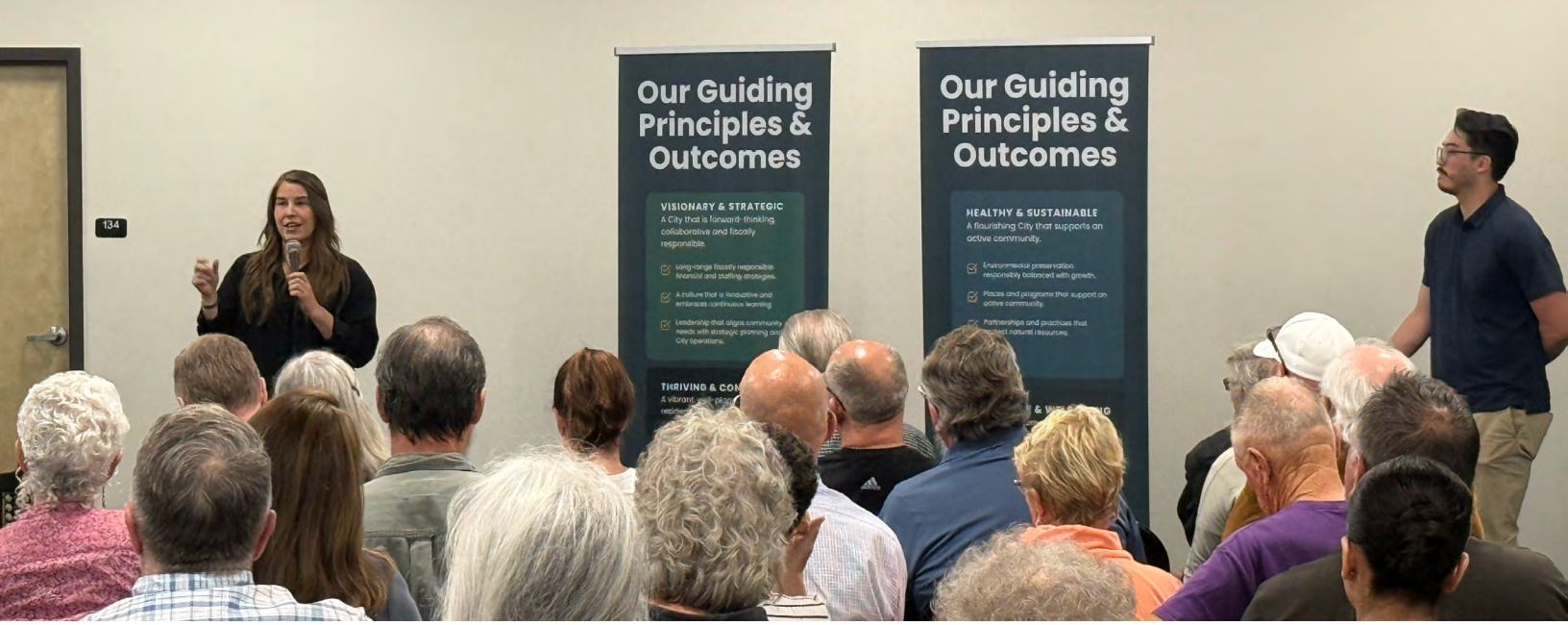
- Washington State Department of Transportation (WSDOT)
- City of Leavenworth
- City of Wenatchee
- Chelan County Fire Department
- Link Transit
- People for People
- Thriving Together
- Chelan PUD
- Ballard Ambulance
- Chelan-Douglas Transportation Council
- Wenatchee School District

Key Findings from Stakeholder Interviews

Feedback gathered from these groups often varied based on the goal/mission of each organization; however general themes that were gathered from all groups included:

- Speeding was identified as a Countywide issue by most stakeholders interviewed.
- Stakeholders discussed several strategies for improving roadway safety through changes to roadway infrastructure:
    a. limiting run-off crashes (WSDOT)
    b. better left-turn infrastructure (Link Transit, WSDOT)
    c. improved signage, guardrails (WSDOT)
    d. intersection improvements (City of Leavenworth, WSDOT Active Transportation, Deputy Fire Chief, Link Transit)





- Across the stakeholder interview process, many mentioned the need for improved infrastructure and enforcement for those who walk and/or bike. These include improvements in infrastructure, enforcing current bike laws, new regulations surrounding e-bikes, and more multimodal pathways.
- Link Transit specifically brought up the necessity for improved transit that included better infrastructure at stops (bike and pedestrian access) and paratransit improvements.
- Both Ballard Ambulance and the Chelan County Fire Department voiced their concerns on improving post-crash care. These strategies included making roadways wider for fire apparatus, the purchase and maintenance costs associated with equipment (i.e. ambulances), and improving communication with the Sheriff's department.
- Many stakeholders are in favor of enhanced enforcement to prevent risky driver behavior (e.g., distracted driving, impaired driving, speeding, etc.).

Stakeholder Advisory Group

In addition to one-on-one interviews with key stakeholders, a Stakeholder Advisory Group (SAG) was established as part of the Safety Action Plan which brought together representatives from local and regional agencies to provide updates on the plan progress and findings and gather input on plan recommendations. The SAG brought together members from the following agencies:

- Chelan County Public Works Department
- Chelan County Sheriff's Office
- Washington State Department of Transportation (WSDOT)
- Chelan-Douglas Transportation Council (CDTC)
- Link Transit
- Wenatchee School District

Throughout the development of the CSAP, meetings were held both virtually and in-person at the Chelan County Public Works Department office. Four SAG meetings were held at regular intervals to discuss the following topics:

Meeting 1

- Review Preliminary Safety Analysis
- Review Community Engagement Plan
- Discuss Project Goal Setting & Vision Zero

Meeting 2

- Discuss Policy Review Findings
- Review Outreach Results & Effectiveness to Date

Meeting 3

- Review Demographics Analysis Findings
- Discuss Safety Countermeasures & Safety Project Development
- Present Final Outreach Findings

Meeting 4

- Review Draft Safety Action Plan

Key Findings from the Stakeholder Advisory Group:

Feedback from the SAG was used to refine the policy recommendations (Chapter 6), safety countermeasures, and project improvements (Chapter 5) identified in the CSAP. Implementing the recommendations from this plan will require coordination between the agencies and organizations convened as part of the SAG. The County will continue to partner with these agencies to improve safety throughout the County's transportation network.

Survey Demographics

Demographic indicators from survey responses closely matched the Countywide demographics:

Demographics[1]:

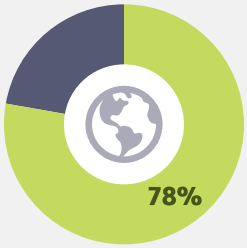
90.82% Chelan County residents:

- 24% Wenatchee
- 17% Manson
- 12% Union Valley
- 10% Leavenworth
- 9% Chelan

[1]Demographic questions within the survey provided a "Prefer not to Answer" response option, so the percentages listed above reflect percent of respondents that provided demographic information.

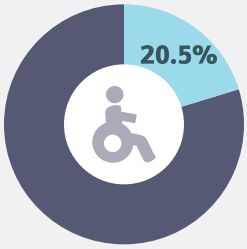
Race:

White/Caucasian only: 78%



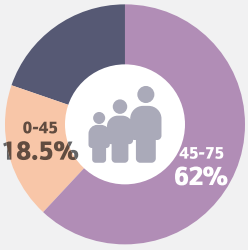
Disabilities:

20.5% have someone in the household with a disability



Age:

- 45-75 years old: 62%
- 45 & below: 18.5%



Public Outreach

Online Survey

As part of the CSAP, and in conjunction with the Transportation Element, the County conducted an online bilingual survey to gather community feedback on the safety of the transportation system. The survey was conducted between May and September 2025 and distributed throughout the County via a link posted on the County's website and flyers handed out at community events during the spring and summer. The transportation survey was also distributed through local network channels and via posts on the County's social media accounts and in community groups relative to Chelan County.

Survey questions covered household/ demographic, geographic, transportation, and safety question topics. The survey also included a mapping activity through which respondents could identify the specific location of transportation concerns or potential solutions for consideration. Overall, the survey was completed by 204 respondents with 273 markers identified as part of the mapping activity. ***Figure 5.1*** shows the locations on County roadways that were identified by survey respondents as part of the mapping activity. As shown, the locations identified were typically located along major travel corridors (e.g., US-2, US-97A, Chumstick Highway), with clusters also shown in the Manson, Plain, and Malaga areas.



Key Findings from Online Survey

High-level findings relating to roadway safety from the online survey are summarized below. Detailed analysis of the survey findings is presented in ***Appendix G***.

- Respondents throughout the County identified roadway maintenance and roadway safety as the top two priority areas for transportation funding allocation. Safety ranked as the top priority in the Upper Valley and Chelan Valley.
- Countywide, respondents indicated support for off-street multi-use path connections between major population centers (Manson to Chelan, Wenatchee to Cashmere to Leavenworth and beyond to Lake Wenatchee/Plain).
- Biking facilities throughout the County were generally rated as unsafe to use, especially in outlying rural areas.
- Vehicular safety improvements varied by location throughout County from improving visibility and intersection control to paving/maintaining roadways, to enforcing speed limits.

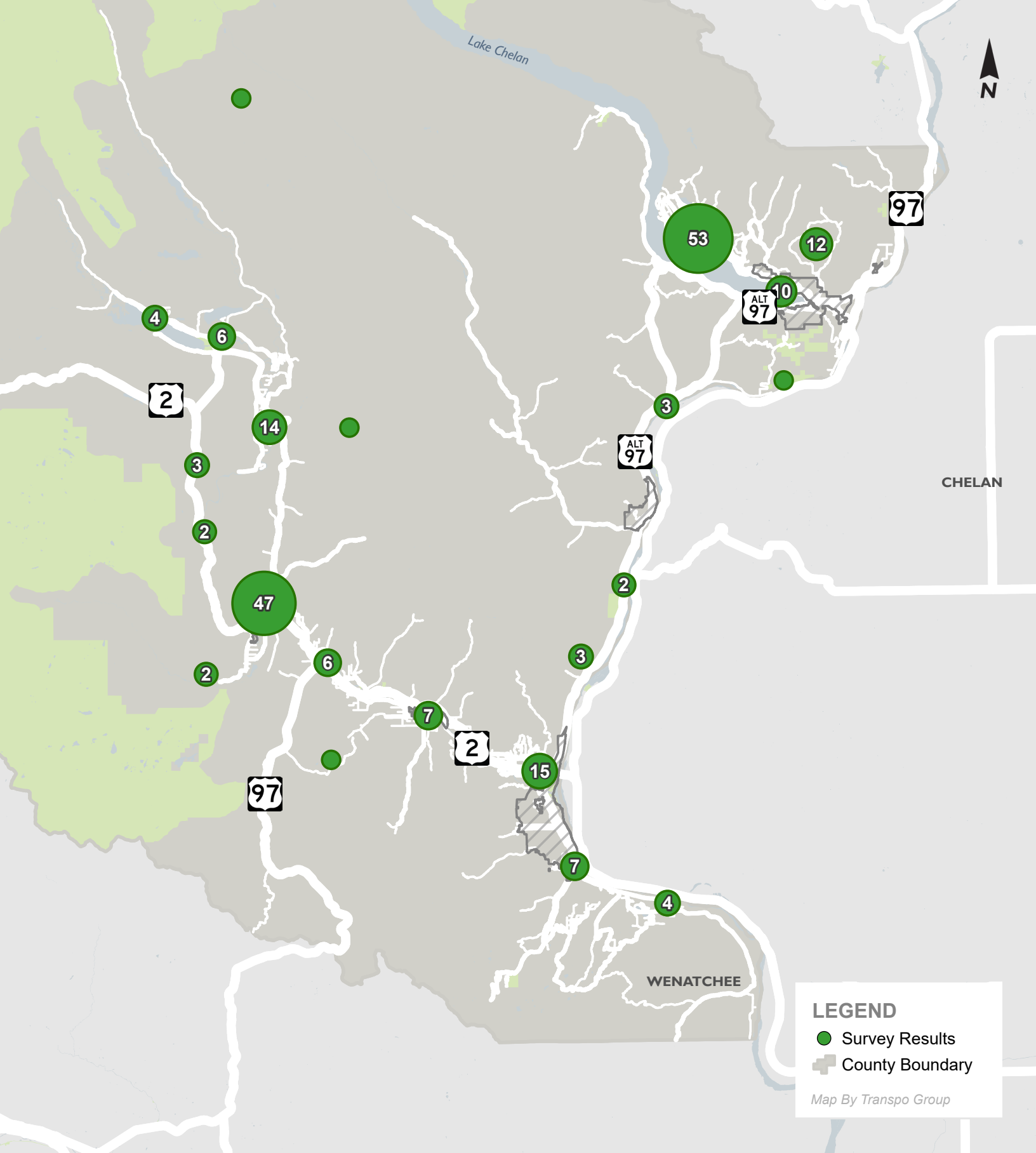


Figure 5.1: Survey Response Locations



Pop-Up Events

The project team attended events across Chelan County throughout the Spring and Summer to engage with community members and gain insights into how the public interacts with the local roadway network. At these events, the County's consultant team hosted a table featuring display boards sharing information on County's transportation systems and an interactive activity by which people could share feedback on the County's greatest transportation needs. The team held pop-up events at the following events in Chelan County:

- Leavenworth Open House, May 2025
- Wenatchee Open House, May 2025
- Touratech Rally (Plain), June 2025
- Manson Farmers Market (attended two separate markets), August 2025
- Cashmere Farmers Market, August 2025
- Manson Open House, August 2025
- Chelan County Fair (Cashmere), September 2025

Community outreach events were categorized by organic and complementary opportunities. Organic events include those planned in coordination with the project team such as the open houses in May and August. Complementary events are hosted by a third party and offer the project team an opportunity to have a table or be a part of the discussion; these included the Touratech Rally, Farmers Markets, and the Chelan County Fair.

Key Findings from the Pop-Up Events

Key findings from the outreach events coincided with the information gathered from the digital survey because questions and opportunities to provide feedback aligned with the survey structure. Select key themes included:

- Desire for safer spaces to walk and bike (such as a separated pathway)
- Strategies to reduce speed or aggressive driving especially on canyon roads or in residential areas
- Emphasis towards community education campaign

Open House Events

In addition to the pop-up events, formal open house events were also held to provide a more structured event during which community members could learn about the CSAP and provide feedback on the transportation system. The objective of these events was to provide Chelan County residents with a formal opportunity to learn about the ongoing transportation planning efforts and provide input which would be used to inform the outcomes of the plans.

In April 2025, three open houses were conducted in coordination with the team updating the Chelan County Comprehensive Plan to meet with community members and gather feedback on transportation safety needs. Open houses were held in Chelan, Leavenworth, and South Wenatchee and focused on gathering community input on roadways within the unincorporated portions of the County.

An additional open house was held in Manson in August 2025 which focused on the ongoing transportation projects within that community, including the Totem Pole Road improvement project. Open house participants were invited to review presentation boards and provide feedback on the most pressing safety concerns within their community.

Key Findings from the Open House Events

While the general themes from the open house events aligned with the overall feedback gathered as part of the outreach process, some of the these from these events differed based on location of the event:

- **Leavenworth Open House:** Several comments noted a need to provide dedicated roadways space for bicyclists and pedestrians. Community members noted conflicts between vehicles and bicyclists along roadways within the area, including Chumstick Highway and connecting roadways.
- **South Wenatchee Open House:** Most safety comments received regarding roadways within the South Wenatchee area noted a need for addressing speeding along Malaga-Alcoa Highway and improving paving conditions roadways providing access to agricultural uses.
- **Manson Open House:** Community members noted potential conflicts between pedestrians and trucks along the commercial segment of Manson Boulevard (SR 150).

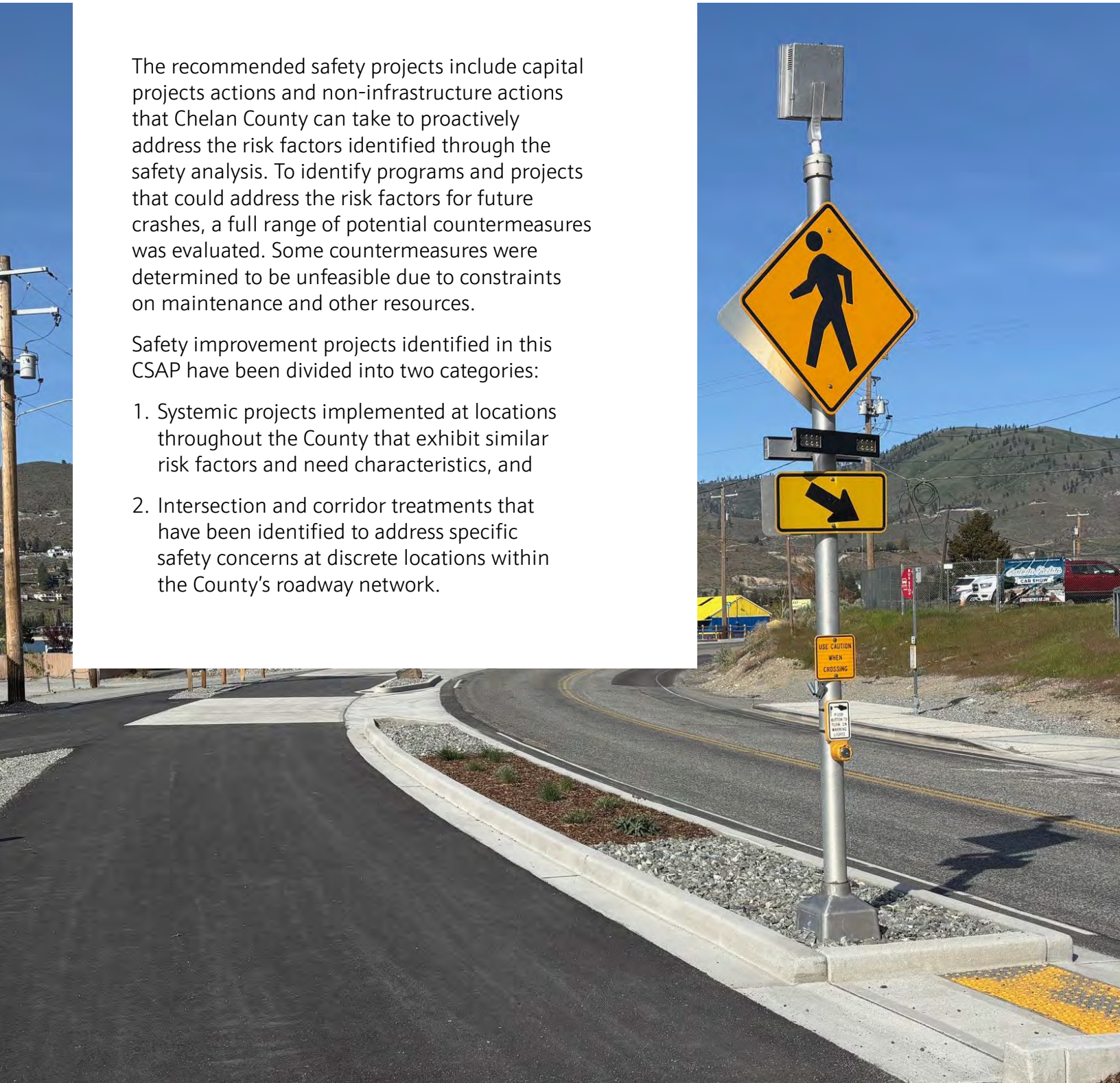


6 Recommended Safety Projects

The recommended safety projects include capital projects actions and non-infrastructure actions that Chelan County can take to proactively address the risk factors identified through the safety analysis. To identify programs and projects that could address the risk factors for future crashes, a full range of potential countermeasures was evaluated. Some countermeasures were determined to be unfeasible due to constraints on maintenance and other resources.

Safety improvement projects identified in this CSAP have been divided into two categories:

1. Systemic projects implemented at locations throughout the County that exhibit similar risk factors and need characteristics, and
2. Intersection and corridor treatments that have been identified to address specific safety concerns at discrete locations within the County's roadway network.



While several of the intersection and corridor projects include similar improvements, additional specific countermeasures have been included within each project to address the unique set of needs, conditions, and circumstances present at each location.

Project summaries, including descriptions, maps, high-level concepts, and cost estimates are provided on the following pages. Several of the projects on the list align with projects identified in the County's 6-year Transportation Improvement Program (TIP) or other recent transportation planning studies.

Improvement locations identified as part of the systemic projects were prioritized to determine the locations at which improvements should be installed first, should limited funding disallow for full project implementation. Similarly, the intersection and corridor locations were ranked and compared to determine which projects should be prioritized when seeking grant funding.

Safety Countermeasure Toolbox

The United States Department of Transportation Federal Highway Administration (USDOT FHWA) publishes a collection of safety countermeasures known as the Crash Modification Factor (CMF) clearinghouse.[1] Crash modification factors describe a multiplicative factor that indicates the proportion of crashes that would be expected after implementing a given countermeasure.

Several of the most effective, case tested countermeasures are also published in the FHWA's selection of Proven Safety Countermeasures. The countermeasures recommended to address the specific risks on Chelan County transportation facilities were selected from the list of Proven Safety Countermeasures, and the CMF based on several considerations including crash type, contributing user behaviors and location characteristics, cost and complexity of implementation, and expected effectiveness in addressing the risks. ***Figure 6.1*** presents categories and examples of proven safety countermeasures.

Recommended Projects

Table 6.1, ***Table 6.2***, and ***Table 6.3*** summarizes the recommended systemic, corridor and intersection improvement projects to improve safety throughout Chelan County. The systemic project locations are shown in ***Figure 6.2***, ***Figure 6.3***, and ***Figure 6.4***, while the corridor and intersection projects are shown in ***Figure 6.5*** and ***Figure 6.6***, respectively. Project prioritization is discussed in the following section.

1 https://highways.dot.gov/safety/proven-safety-countermeasures

Speed Management

- Appropriate Speed Limits for All Road Users
- Speed Safety Cameras
- Variable Speed Limits

Pedestrian/Bicyclist

- Bicycle Lanes
- Crosswalk Visibility Enhancements
- Leading Pedestrian Interval
- Medians and Pedestrian Refuge Islands in Urban and Suburban Areas
- Pedestrian Hybrid Beacons
- Rectangular Rapid Flashing Beacons (RRFB)
- Road Diets (Roadway Reconfiguration)
- Walkways

Roadway Departure

- Enhanced Delineation for Horizontal Curves
- Longitudinal Rumble Strips and Stripes on Two-Lane Roads
- Median Barriers
- Roadside Design Improvements at Curves
- SafetyEdge™
- Wider Edge Lines

Intersections

- Backplates with Retroreflective Borders
- Corridor Access Management
- Dedicated Left and Right-Turn Lanes at Intersections
- Reduced Left-Turn Conflict Intersections
- Roundabouts
- Systemic Application of Multiple Low-Cost Countermeasures at Stop-Controlled Intersections

Figure 6.1: Proven Safety Countermeasures

Table 6.1: Chelan County Recommended Safety Improvement Projects – Systemic Projects & Studies

PROJECT	DESCRIPTION	COST	PRIORITY
Number: SAP-S1 **Project Name:** Countywide Guardrail Improvement Program **Type:** Systemic Install guardrails and upgrade guardrail barrier terminal along the following roadways:	SAP-S1a Lake Wenatchee Hwy (MP 0.0 to 5.4)	$442,000	Medium
	SAP-S1b Beaver Valley Rd (MP 14.0 to 19.0)	$828,000	Medium
	SAP-S1c Chumstick Hwy (MP 11.1 to 12.4)	$414,000	Low
	SAP-S1d Chumstick Hwy (MP 0.8 to 8.1)	$330,000	Medium
	SAP-S1e North Rd (MP 0.6 to 3.2)	$99,000	Medium
	SAP-S1f Stine Hill Rd/Sunset Hwy (MP 0.8 to 4.9)	$687,000	Medium
	SAP-S1j Squilchuck Rd (MP 0.6 to 7.1)	$1,136,000	High
	SAP-S1k Mission Ridge Rd (MP 0.0 to 3.9)	$211,000	Medium
	SAP-S1l Malaga-Alcoa Hwy (MP 0.0 to 10.2) &Colockum Rd (MP 0.0 to 2.9)	$50,000	High
	SAP-S1m West Malaga Rd (MP 0.0 to 3.0)	$225,000	Medium
	SAP-S1n Entiat River Rd (MP 0.3 to 22.6)	$1,431,000	Medium
	SAP-S1o South Lakeshore Rd (MP 10.0 to 16.1)	$793,000	Low
	SAP-S1p South Lakeshore Rd (MP 6.0 to 8.3)	$330,000	Low
	SAP-S1r Chelan Falls Rd (MP 0.0 to 0.8)	$716,000	Low
	SAP-S1s Apple Acres Rd (MP 0.5 to 6.6)	$526,000	Low
Number: SAP-S2 **Project Name:** Countywide Rumble Stripe Program **Type:** Systemic Install rumble strips along the edgeline (where shoulders permit) of the following roadways:	SAP-S2d Chumstick Hwy (MP 0.9 to 12.38)	$328,000	Medium
	SAP-S2i Mission Creek Rd (MP 1.8 to 4.9)	$89,000	Low
	SAP-S2j Squilchuck Rd (MP 0.75 to 7.02)	$179,000	High
	SAP-S2k Mission Ridge Rd (MP 0.0 to 3.0)	$86,000	Low
	SAP-S2l Malaga-Alcoa Hwy (rumble strips outside the edgeline of the road) (MP 0.2 to 6.33)	$175,000	High
	SAP-S2m West Malaga Rd (MP 0.0 to 3.11)	$89,000	Medium
	SAP-S2n Eniat River Rd (MP 0.3 to 22.6)	$637,000	Medium
	SAP-S2q Wapato Lake Rd (MP 0.0 to 1.5)	$43,000	Medium
Number: SAP-S3 **Project Name:** Countywide Shoulder Improvement Program **Type:** Systemic Widen/install/restripe to provide shoulders along the following roadways (provide 11' travel lanes and a 4' shoulder in each direction):	SAP-S3a Lake Wenatchee Hwy (MP 0.0 to 1.2)	$1,838,000	Medium
	SAP-S3b Beaver Valley Rd (MP 16.6 to 19.0)	$3,676,000	Medium
	SAP-S3d Chumstick Hwy (MP 1.67 to 1.87 and 3.76 to 6.68). Restriping only (where roadway width permits)	$458,000	Medium
	SAP-S3e North Rd (MP 0.5 to 2.6)	$3,216,000	Medium
	SAP-S3i Mission Creek Rd (MP 2.6 to 4.9)	$3,522,000	Low
	SAP-S3j Squilchuck Rd (MP 1.65 to 4.45)	$2,935,000	High
	SAP-S3p South Lakeshore Rd (MP 6.0 to 6.64)	$981,000	Low
Number: SAP-S4 **Project Name:** Sunnyslope SRTS Design Project **Type:** Study	Traffic study to identify flow circulation paths and multimodal access around the Sunnyslope School (School St, W. Peters, E. Peters, Melody Ln, Easy St). Project will achieve a 60% design level improvement project	$250,000	N/A

Table 6.2: Chelan County Recommended Safety Improvement Projects – Corridor Projects

NUMBER	PROJECT NAME	DESCRIPTION	COST	PRIORITY
SAP-C1	Wapato Lake Rd Pedestrian Safety Improvements (MP 0.0 to 0.4)	• Install pedestrian connection between casino and SR 150	$1,162,000	Medium
SAP-C2	Totem Pole Rd Ped/Bike Safety Improvements (MP 0.0 to 0.8)	• Constructing wider lanes for vehicles • Constructing sidewalks or shared-use path • Illumination for pedestrians/school	$5,887,000	Medium
SAP-C3	East Leavenworth Rd Safety Improvements (MP 0.0 to 2.0)	• Dynamic speed feedback signs • Flashing chevron signage • Widen roadway to provide 30-foot cross section (11-foot travel lanes with 4-foot shoulders)	$3,574,000	High
SAP-C4	Peshastin Pedestrian Improvement Project	Sidewalk/pedestrian facility improvements from US-2 to Main/ School to ~1/4 mile east of Main St	$1,995,000	Medium
SAP-C5	Sunset Hwy Pedestrian Improvements (MP 0.7 to 1.0)	Complete sidewalk connection along the north side of the road between Goodwin Ave and Cashmere City limits	$1,035,000	Medium
SAP-C6	Easy Street – Phase 1 Pedestrian Improvement Project (MP 1.7 to 5.9)	Multi-use path along the north/east side of the road between School St and Ohme Garden Rd; Sidewalk improvements along Easy Street and Peters St	$2,040,000	High
SAP-C7	Easy Street – Phase 2 Pedestrian Improvement Project	• Left turn pockets at key intersections (American Fruit Rd, Lower Monitor Rd) • Construct road to Urban Minor Arterial standard west of School St (sidewalks and bike lanes)	$8,397,000	Medium
SAP-C8	School Street Pedestrian/Bicycle Safety Improvements (MP 0.5 to 1.0)	• Widen roadway to provide bike lanes • Construct new sidewalk with buffer and midblock crossings	TBD (based on findings of SRTS study)	High
SAP-C9	S Mission Street Safety Improvements (MP 0.0 to 0.5)	Fill in missing sidewalk gaps	$700,000	Medium
SAP-C10	Malaga-Alcoa Hwy Bicycle/Pedestrian Safety Improvements (MP 0.0 to 5.5)	• Install a multi-use path along the east/ north side of the roadway between Wenatchee City limits and West Malaga Rd (east intersection • Install left-turn pockets at major intersections (W Malaga Rd, Firehouse Rd)	$12,250,000	High

Table 6.3: Chelan County Recommended Safety Improvement Projects – Intersection Projects

NUMBER	PROJECT NAME	DESCRIPTION	COST	PRIORITY
SAP-I1	Boetzke Ave and Quatis St	Install stop bar for north and south legs; Clear sight triangles for stop-controlled approaches	$180,000	Low
SAP-I2	Wapato Lake Rd and Roses Ave	Clear sight triangles and install stop bars @ Roses Ave intersection	$165,000	Low
SAP-I3	Chumstick Hwy and Chiwawa Loop Rd	Reconfigure intersection @ Chiwawa Loop to improve sight distance	$864,000	Low
SAP-I4	Chumstick Hwy & North Rd	Install roundabout	$2,350,000	Medium
SAP-I5	Binder Rd – Phase 1 Pedestrian Improvement Project	Relocate stop sign location on north leg to be closer to intersection; Reduce NE corner curb radius and install ADA improvements; Clear sight triangles at intersection (cut back landscaping)	$1,490,000	Medium
SAP-I6	Easy St and Crestview Rd	Install crosswalk at Easy and Crestview (Assume RRFB installation for cost estimate)	$217,000	Medium
SAP-I7	Easy St and School St	Install roundabout	$3,100,000	High
SAP-I8	Easy St and W Peters St	Intersection improvements to address safety issues at the intersection (angle and left-turn crashes)	$1,300,000	High
SAP-I9	Mission St and Terminal Ave	Clear vegetation near intersection to improve sight lines; Install sidewalk on west side of S Mission St (bet. Intersection and the market)	$330,000	Medium
SAP-I10	Malaga-Alcoa Hwy and Stemilt Creek Rd	Install roundabout	$4,120,000	Medium

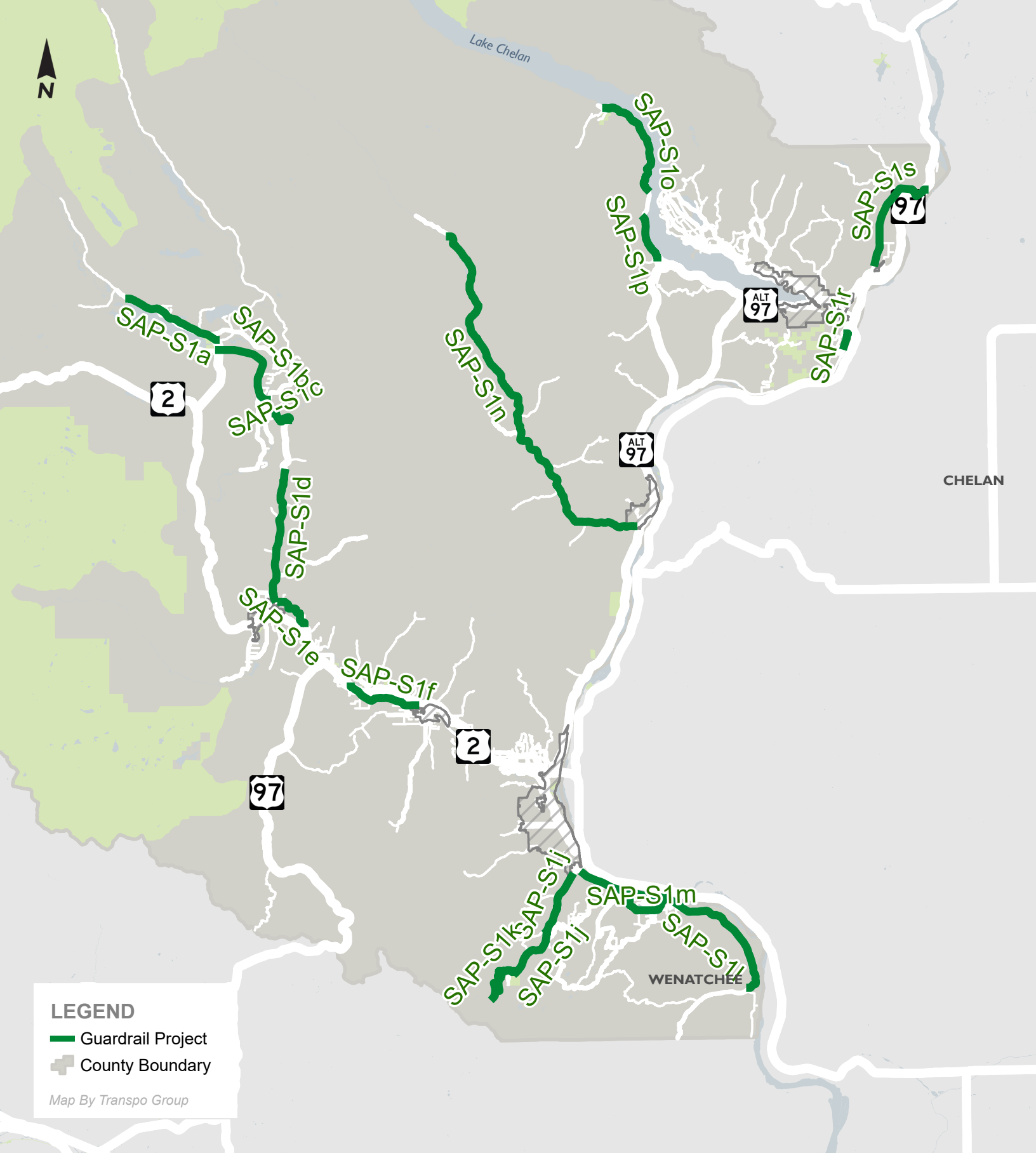


Figure 6.2: Systemic Safety Improvement Projects - Guardrail

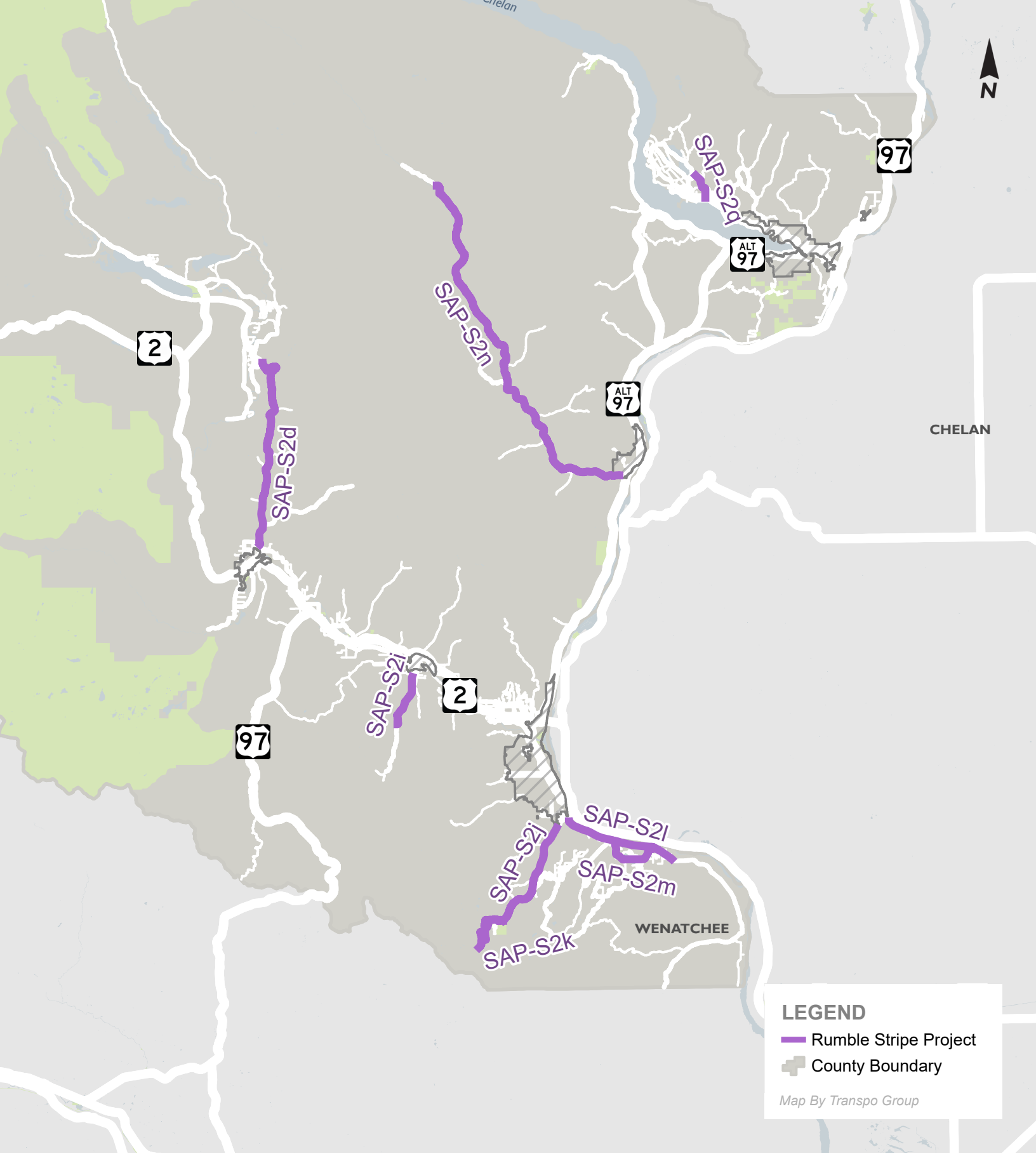


Figure 6.3: Systemic Safety Improvement Projects - Rumble Stripe

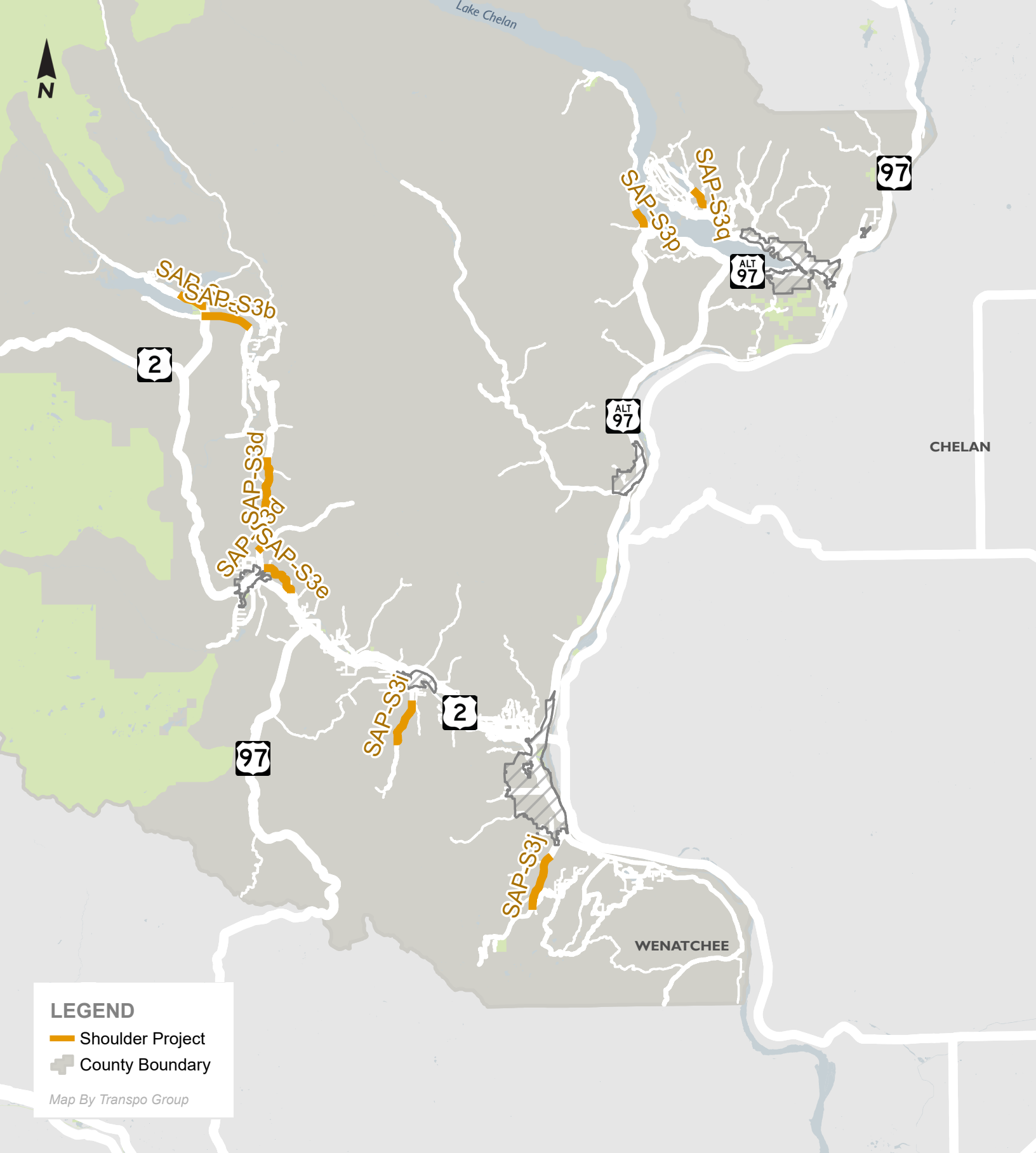


Figure 6.4: Systemic Safety Improvement Projects - Shoulder

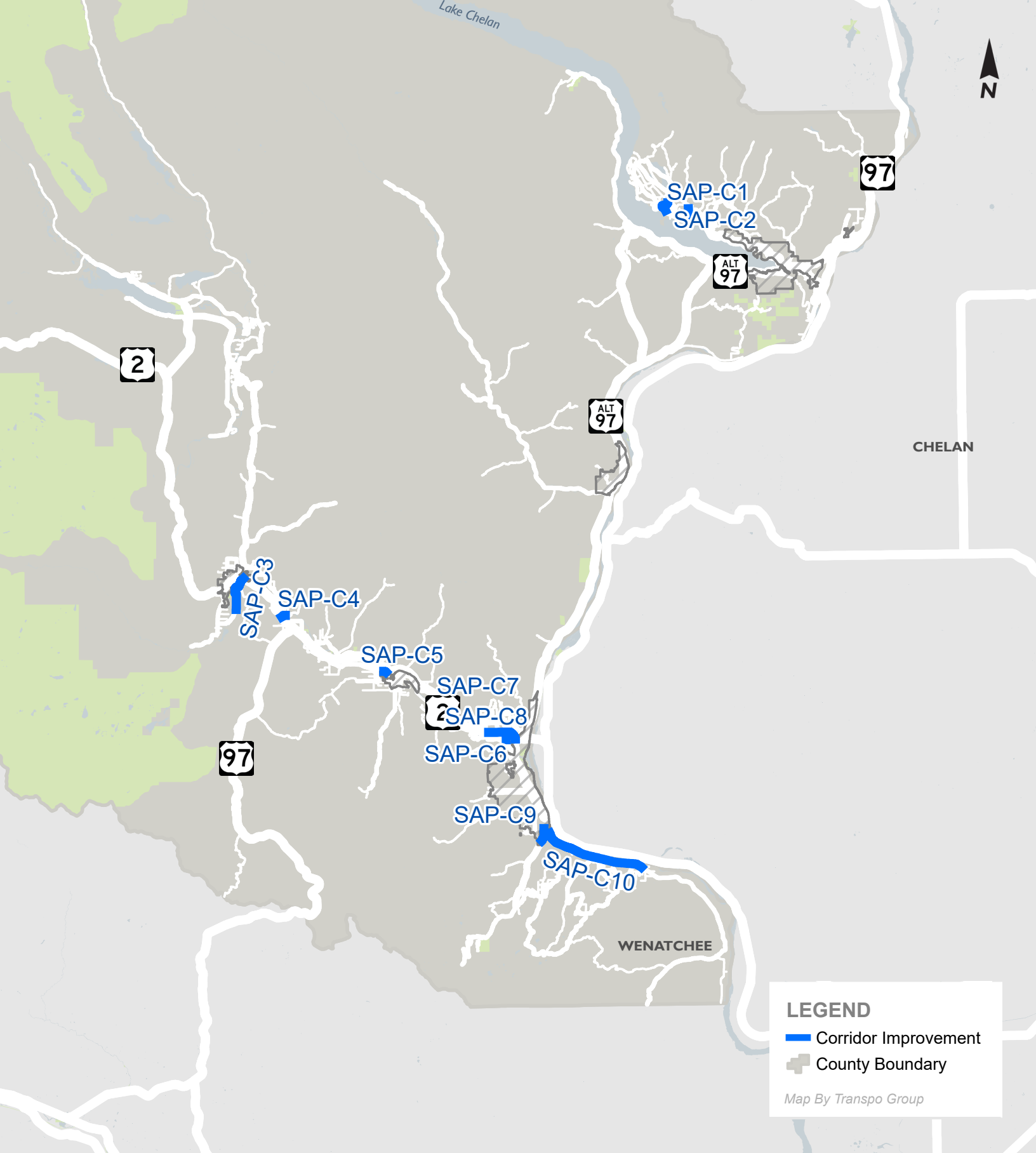


Figure 6.5: Corridor Safety Improvement Projects

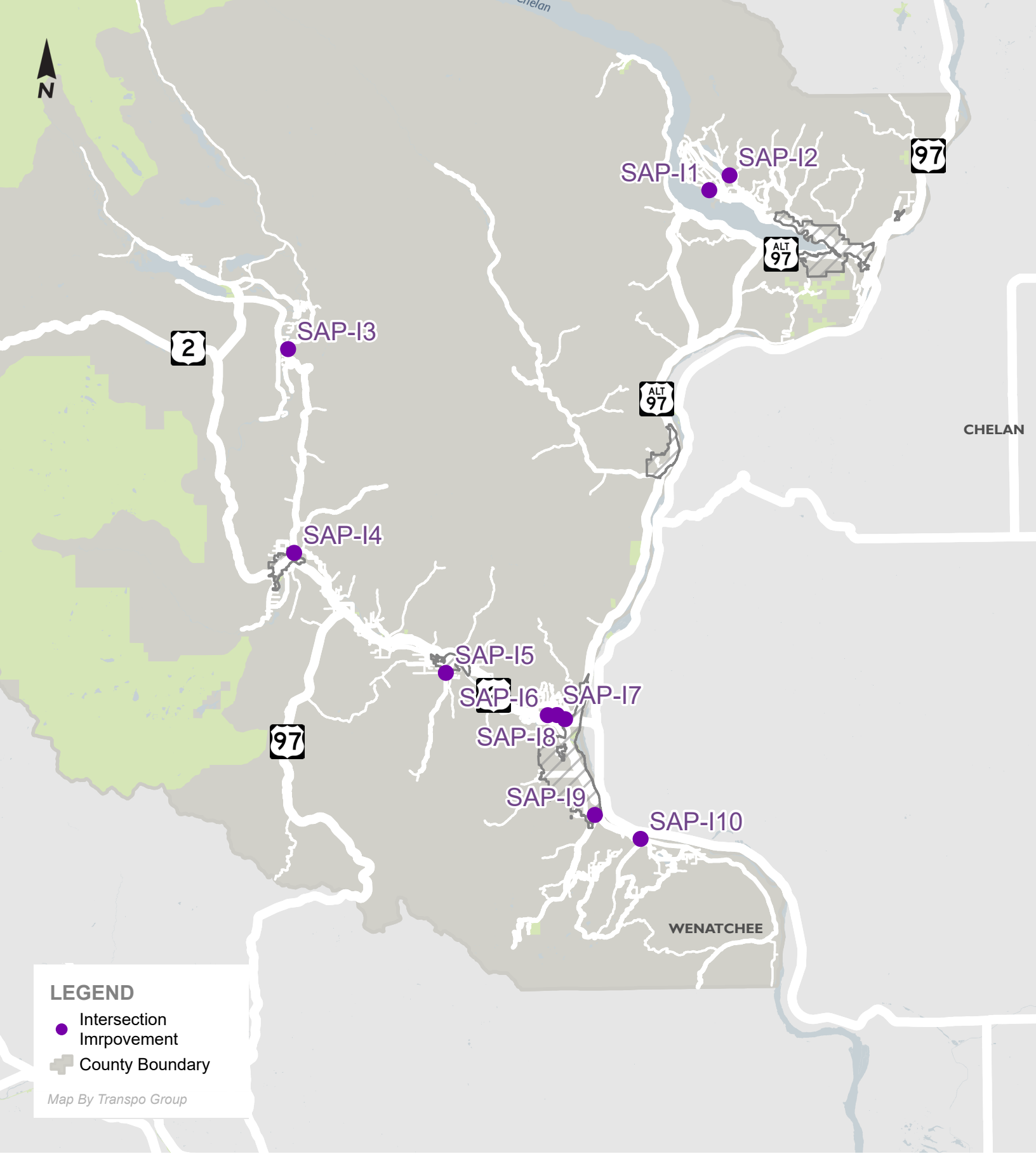


Figure 6.6: Intersection Safety Improvement Projects

Table 6.4: Safety Project Prioritization Scoring System

CRITERION	METRIC (POINTS)	MAXIMUM POINTS
SAFETY CRITERIA		
High-Injury Network (HIN)	• Project is Located along the HIN = 4 Points • Project is Not Located along the HIN = 0 Points	4
High-Risk Network (HRN)	Project is Located along the HRN: • HRN Score ≥ 13 = 3 Points • HRN Score 8-12 = 2 Points • HRN Score 6-7 = 1 Point	3
Risk Factors Addressed	Risk Factors Addressed by the Project: • Fixed-Object Crashes = 2 Points • Speeding-Related Crashes = 1 Point • Pedestrian/Bicycle Crashes = 1 Point	4
LOCATION CRITERIA		
Proximity to Key Destinations	Project is Located with 0.5-mile of: • Schools = 2 Points • Trail or Parks = 1 Point	3
DEMOGRAPHICS CRITERIA		
Connecting Communities Need Score	Based on the Sandy Williams Overall Need Score: • High Need = 2 Points • Moderate Need = 1 Point • Low Need = 0 Points	2
OTHER CRITERIA		
Alignment with the 6-Year TIP	• Project is Included on the 6-Year TIP = 2 Points; Project is Not Included on the 6-Year TIP = 1 Point	2
Grant Funding Status	Based on the Funding Status of the Project: • Funding Has Been Secured = 2 Points • Funding Program Has Been Identified = 1 Point • No Funding Programs Identified = 0 Points	2
	TOTAL SCORE	**#/20**

Project Prioritization

Given the limited funds available for implementing transportation improvements, prioritization criteria were identified and used to score each improvement. The prioritization process for each grouping of projects is summarized below. The prioritization process and criteria for both the systemic projects and the intersection/corridor projects are summarized in ***Table 6.4*** and detailed in ***Appendix H***.

Prioritization Criteria

Safety Criteria

Several safety-related criteria were used to prioritize the improvement projects, giving greater weight to projects proposed in locations which were shown to have higher collision incidence rates and result in more severe collisions. In addition, the collision criteria looked at the type and number of safety risk factors addressed by each project. The results of the collision analysis, summarized in Chapter 2 and the safety risk factors identified in this chapter were used to score/prioritize projects.

High Injury Network: This criterion was used to give higher priority to locations identified on the High Injury Network (see ***Figure 3.15***). These locations are those shown to result in fatal and serious injury crashes. Improvements at these locations have been identified to address the identified safety needs.

High Risk Network: This criterion was used to give higher priority to locations identified on the High Risk Network (see ***Figure 3.16***). These locations are those shown to have characteristics similar to locations with a history of fatal and/or severe injury crashes. Improvements at these locations have been identified to address the safety risk factors. Locations which received a higher HRN score were assigned more points in the prioritization weighting.

Risk Factors Addressed: This criterion was used to giver higher priority to those projects which addressed more of the safety risk factors identified based on the collision analysis. As discussed in this chapter, four safety risk factors were identified within the City: Fixed-Object Crashes, Speeding-Related Crashes, Motorcycle Crashes[1], and Pedestrian/Bicycle Crashes. Projects were assigned prioritization points based on the number of risk factors addressed. An additional prioritization point was assigned to projects addressing Fixed Object crashes given the prevalence of those crashes along Chelan County roads.

Location Criteria

This criterion was included in the prioritization process to evaluate the proximity of the proposed safety projects to key destinations that would likely generate trips. Based on discussions with County staff and project stakeholders, proximity to schools and trail crossings and park entrances were identified as key areas of safety concern. Projects within a half mile of a school were given greater weighting in the prioritization process.

Demographic Criteria

Additional criteria based on demographic considerations were used to identify those project locations at which improvements could provide the greatest benefits to adjacent communities. The WSDOT Sandy Williams Connecting Communities Need Score was used to score each project location. Project in location of greater need were given greater weighting.

1 *The Motorcycle-Crash risk factor was not incorporated into the prioritization process since all proposed improvements would address this crash type.*

Other Criteria

Additional criteria were included related to project status and delivery to give greater priority to projects that are further along in the planning and/or design process.

Does Project Align with a Project on the TIP: A criterion was included which gave higher priority to projects which align with projects identified within the County's 6-year Transportation Improvement Program (TIP). When roadway improvements can be combined with other planned projects, significant cost saving can be achieved by delivering the projects at the same time.

Grant Funding Status: A criterion was included to give higher priority to projects which have identified or secured grant funding for construction. Given the limited funding resources available to the County, outside funding will be required to implement most improvement projects. The County will implement a strategic approach to applying for funding to support implementation of the Safety Action Plan projects and programs.

Recommended Non-Infrastructure Policies and Programs

Based on the review of existing transportation-related plans and policies discussed in Chapter 1, a listing of potential non-infrastructure safety strategies were developed which the County may consider implementing as resources and funding become available. These policy and program recommendations, which consist of education, enforcement, and outreach, are intended to build on existing County efforts and address identified gaps. The non-infrastructure recommendations are intended to supplement the roadway safety projects with actions to promote safe behaviors and practices.

Table 6.5 provides policy or program recommendations by Safe System Approach Element. Each policy or program recommended includes a description, WSDOT Target Zero emphasis area, Chelan County emphasis area, who should lead the effort, who should support the effort, and a recommended timeline. The policy/programs are organized in the following order[2]:

- Safer People
- Safer Roads
- Safer Speeds
- Safer Vehicles
- Post-Crash Care

The recommended strategies focus on revising design standards, improving active transportation facilities based on community input, managing speed through studies and enforcement, and enhancing emergency response and crash data collection. Many of the recommendations are also complementary to each other, building upon the momentum, community messaging, and cultural change to prioritize transportation safety in the Chelan County and advance towards the Vision Zero goal.

2 Note that specific policy or program recommendations are not provided for the Safer Land Use emphasis area. Several strategies (e.g., Context Sensitive Design, School Zone Enhancement Program, etc.) address multiple emphasis areas, including Safer Land Use.

Table 6.5: Non-Infrastructure Policy and Program Recommendations *Table Part 1/3*

POLICY/PROGRAM RECOMMENDATION	DESCRIPTION	EMPHASIS AREAS		SUPPORTS		TIMELINE
		TARGET ZERO	CHELAN COUNTY	PRIMARY	SECONDARY	
SAFE SYSTEM APPROACH CORE ELEMENT: SAFER PEOPLE						
Proactive Safety: Data Analytics	Use data analytics to identify high-risk areas and times for targeted enforcement. Ensure strategies align with state-wide enforcement campaigns for consistency.	All Emphasis Areas	All Emphasis Areas	Enforcement	Public Works	Near-Term: 1 to 3 Years
Proactive Safety: Public Awareness Program	Educate the public about the dangers of excessive speed and speeding too fast for conditions, and its role in traffic fatalities	Education and Outreach	Education and Outreach	Chelan County	Public Works	Near-Term: 1 to 3 Years
Proactive Safety: Speed Management Enforcement	Increase enforcement strategies (speed feedback signs, High-Visibility Enforcement, etc.) that comply with Washington state laws regarding speeding within a school zone	Enforcement	Education and Outreach	Enforcement	Schools	Mid-Term: 3 to 5 Years
Proactive Safety: Work Zone Safety Enhancement Policy	Establish comprehensive safety protocols aligned with WSDOT's work zone safety regulations.	All Emphasis Areas	All Emphasis Areas	Chelan County	Public Works	Mid-Term: 3 to 5 Years
Proactive Safety: Distracted Driving Education Campaign	Work with Chelan-Douglas Transportation Council to establish an education campaign for all roadway users focused on reducing distracted driving.	All Emphasis Areas	All Emphasis Areas	Chelan-Douglas Transportation Council	Chelan County	Mid-Term: 3 to 5 Years
SAFE SYSTEM APPROACH CORE ELEMENT: SAFER ROADS						
Design Improvements: Safe Speed Prioritization Program	Develop an inventory of roadway speeds and analyze serious injury and fatal crashes in the context of posted speed limits and operating speeds. Use this analysis to prioritize locations for speed management treatments.	Speed Management	Speeding	Chelan County	Public Works	Near-Term: 1 to 3 Years
Design Improvements: Safe Curve Program	Inventory horizontal curves and gather data to support development of programs and projects to reduce the severity of lane departure crashes.	Roadway Treatments	Roadway Treatment	Chelan County	Public Works	Near-Term: 1 to 3 Years
Design Standards: Context Sensitive Design	Implement roadway design to be consistent with the surrounding context; provide for separation of modes based on context and use of the road.	Roadway Treatments	Roadway Treatment	Chelan County	Public Works	Near-Term: 1 to 3 Years
Design Standards: Implement New Policy	Add new policy adopting language recommended in ADA Self-Evaluation & Transition Plan.	All Emphasis Areas	All Emphasis Areas	Chelan County	Public Works	Near-Term: 1 to 3 Years
Proactive Safety: Complete Streets Policy	Adopt the Chelan County Complete Streets resolution to support context-sensitive, multimodal transportation improvements within unincorporated cities and urban growth areas.	All Emphasis Areas	All Emphasis Areas	Chelan County	-	Near-Term: 1 to 3 Years
Clear Zone Safety Program: Lane Departure	Install delineation on fixed objects that cannot be removed from the clear zone, such as guardrails and other roadway hardware.	Roadway Treatments	Roadway Treatment	Chelan County	Public Works	Mid-Term: 3 to 5 Years
Proactive Safety: Distracted Driving Education Campaign	Work with Chelan-Douglas Transportation Council to establish an education campaign for all roadway users focused on reducing distracted driving.	All Emphasis Areas	All Emphasis Areas	Chelan-Douglas Transportation Council	Chelan County	Mid-Term: 3 to 5 Years
Rural Roads Interventions: Clear Zones	Removing trees, utility poles, or steep embankments from the immediate roadside ensures that if a distracted driver does leave the road, they have space to recover rather than hitting a lethal obstacle.	Roadway Treatments	Roadway Treatment	Chelan County	Public Works	Long-Term: 5+ Years
Rural Roads Interventions: High-Friction Surface Treatments (HFST)	Consider applying at curves where distracted drivers are likely to enter too fast, these treatments provide extra grip to keep the vehicle on the road.	Roadway Treatments	Roadway Treatment	Chelan County	Public Works	Long-Term: 5+ Years

Table 6.5: Non-Infrastructure Policy and Program Recommendations *Table Part 2/3*

POLICY/PROGRAM RECOMMENDATION	DESCRIPTION	EMPHASIS AREAS		SUPPORTS		TIMELINE
		TARGET ZERO	CHELAN COUNTY	PRIMARY	SECONDARY	
SAFE SYSTEM APPROACH CORE ELEMENT: SAFER SPEEDS						
Speed Limit Sign Deployment	Review and correct speed limit signs so they are visible, conspicuous, and installed at appropriate intervals.	Speed Management	Speeding	Public Works	Public Works	Near-Term: 1 to 3 Years
School Zone Enhancement Program	Develop a program that collaborates with local schools and parent-teacher associations to identify areas of enhanced safety improvements (Rapid Flashing Beacons, speed feedback signs, etc.).	Speed Management	Speeding	Chelan County	Schools	Mid-Term: 3 to 5 Years
Automated Speed Enforcement Program	Adopt an ordinance authorizing the use of automated speed enforcement cameras along County roads consistent with RCW 46.63. See ***Appendix I*** for evaluation of potential implementation locations.	Speed Management	Speeding	Chelan County	Public Works	Near-Term: 1 to 3 Years
SAFE SYSTEM APPROACH CORE ELEMENT: SAFER VEHICLES						
Public Transportation Safety Policy	Develop a safety protocol for public transit systems that includes regular vehicle inspections, driver training programs, and emergency preparedness plans. Align with state and federal transit safety regulations and collaborate with transit agencies to implement best practices.	All Emphasis Areas	All Emphasis Areas	Transit Providers (LINK Transit, Amtrak)	Chelan County	Long-Term: 5+ Years
Truck/Freight Route Policy	Develop a policy in accordance with WDOT's guidelines on truck routes and consider local ordinances for designated truck routes to identify areas where freight routes and VRU paths intersect and implement measures to reduce conflicts, such as improved visibility or time-based restrictions to enhance safety.	All Emphasis Areas	All Emphasis Areas	Chelan County	Public Works	Long-Term: 5+ Years

Table 6.5: Non-Infrastructure Policy and Program Recommendations *Table Part 3/3*

POLICY/PROGRAM RECOMMENDATION	DESCRIPTION	EMPHASIS AREAS		SUPPORTS		TIMELINE
		TARGET ZERO	CHELAN COUNTY	PRIMARY	SECONDARY	
SAFE SYSTEM APPROACH CORE ELEMENT: POST-CRASH CARE						
Emergency Responders: Involve first responders in designing guidance development to focus on the "Golden hour," the critical window where medical intervention most effectively prevents death.	Traffic Incident Management (TIM) Training: Consider requiring multi-disciplinary training for police, fire, and EMS. This ensures responders use "blocking" procedures to protect the scene from secondary crashes, which are common on high-speed rural roads.	Post Crash Care	Emergency Response	Emergency Responders (Police, EMS, Fire)	-	Near-Term: 1 to 3 Years
Environmental Risk: Managing the aftermath to prevent the environment from becoming more dangerous.	Hazardous Materials (HazMat) Protocols: Rural County roads often carry agricultural or industrial chemicals. Post-crash policies should include specialized training for rural volunteer fire departments to contain spills quickly, preventing soil/water contamination and responder injury.	Post Crash Care	All Emphasis Areas	Emergency Responders (Police, EMS, Fire)	-	Near-Term: 1 to 3 Years
Crash Data: Work with police service providers to improve data collection methods around traffic crashes and unsafe driving behaviors. Employ the learning from failure practice by merging disparate datasets to find hidden risks.	Rapid Response Reviews (Fatality Reviews): Establishing a multi-agency task force that meets within 7–14 days of a fatal crash. If they visit the site to determine if infrastructure, lighting, or response delays contributed to the fatality may lead to quick-build safety fixes.	Improve Data Reporting	Outreach	Chelan County	Emergency Responders (Police, EMS, Fire)	Mid-Term: 3 to 5 Years
Emergency Responders: Enhanced Prehospital Hemorrhage Control and Early Resuscitation.	Prehospital Blood Administration Program: Developing and implementing a prehospital blood administration program. This program would enable Advanced Life Support (ALS) providers to initiate blood transfusion in the field for patients meeting defined clinical criteria, thereby advancing resuscitation earlier in the care continuum. See ***Appendix J***.	Post Crash Care	Emergency Response	Ballard Ambulance	-	Mid-Term: 3 to 5 Years

7 Implementation and Monitoring

The identification of the safety countermeasures, actions and strategies represents the initial step towards achieving the Vision Zero goal established in the CSAP. Effective implementation will require continued coordination among agency partners and stakeholders, ongoing monitoring of progress, and securing funding.

Regional Coordination and Communication

The County will continue to meet with key stakeholder and agency partners to discuss regional safety priorities and coordinate to discuss delivery of projects, check in on key action items, and provide support for implementation. These ongoing coordination efforts may be expanded to include other local agencies (e.g., Wenatchee, Leavenworth, Chelan, East Wenatchee, and Douglas County) which have also recently completed or are in the process of preparing their own Safety Action Plans. These meetings may be held through CDTC's Technical Advisory Committee (TAC) or through another forum to provide an opportunity for local agencies throughout the Chelan-Douglas region to discuss priorities and opportunities for alignment on future projects. Regular communication with agency partners may also help in identifying opportunities to bundle safety projects or initiatives with other related ongoing efforts across the region.

Continued coordination and communication with community members is also key for successful implementation of the CSAP. Encouraging community member involvement in transportation safety projects will build trust and increase buy-in from the public to support the established safety goals. The County will continue to communicate the ongoing progress of safety projects through project updates and tracking on the County's website and public conversations at Board of County Commissioner meetings. These communications forms will encourage visibility so that community members can see the actions being taken to prioritize roadway safety.

Monitoring and Evaluation

The CSAP also identifies a process for ongoing evaluation of program effectiveness in reducing collisions and improving safety on Chelan County roadways. This document requires periodic revisions to reassess safety conditions within the County and determine whether risk factors have changed or if new countermeasures and strategies need to be identified. It is recommended that this document be updated at regular intervals (every two years) to identify changes in crash patterns and evaluate the success with which previously implemented safety projects have reduced fatal and serious injury crashes. Updates to this plan will replace updates to the Chelan County Roadway Safety Plan in Appendix A.

To remain eligible for WSDOT's County Safety Program, it is recommended that the County prepare an addendum to this plan every two year which identifies any changes in safety trends or risk factors within the roadway network. At minimum this addendum should identify changes to:

- Crash locations and patterns
- Crash types (fatal and serious injury crashes)
- Safety Countermeasures
- Progress on Policy or Program Recommendation Implementation
- Alignment with Regional Priorities

This addendum will allow the County to reevaluate the findings of this Safety Action Plan and adjust the implementation priorities and strategies to best accommodate changing conditions.

Progress Reporting

The successful outcomes from the CSAP will be indicated by the projects and strategies that are implemented by the County in response to the findings in this document. The successful completion of projects or changes to policies, as discussed herein, will move the County closer to achieving its goal of eliminating roadway fatalities and serious injuries. Examples of progress from the CSAP include:

- Safety project implementation (e.g. upgrades to intersections, enhancements to crossing locations, installation of active mode facilities, etc.)
- Policy revisions (e.g. speed limit policy changes, updates to complete street policies, development of traffic calming programs, etc.)

For both implementation and policy revisions, progress toward achieving successful outcomes from the CSAP can take many forms. For projects, successful implementation may include applying and receiving grant funding; developing design plans and estimates; or full construction of identified safety improvements. Successful policy revision can include conducting a review of existing policies and procedures; developing draft and final safety policies or programs; and implementation of new safety-related policy changes.

Progress Evaluation

In addition to tracking the degree of success to which the CSAP leads to implementation of safety-related projects and policy changes, the efficacy of the program will be based on the success with which the proposed safety measures reduce incidence of fatal and serious injury crashes. Progress toward reducing crashes in the County will be measured through periodic updates to the CSAP. The collision analysis conducted as part of the CSAP will be used to evaluate how the projects recommended in the plan are improving safety within the County. Traffic safety statistics, including the number, type and severity of crashes on the County's roadway network will be compared with historical crash data to determine whether the implemented safety measures had a successful impact toward improving roadway safety. For intersection and corridor safety projects, pre-, and post-project collision data will be collected and compared at the improvement location to directly measure the impact of the safety improvement of collision rates and whether the implemented countermeasures achieved the predicted crash reductions.

Funding

The lists of recommended safety countermeasures presented in the tables in Chapter 5 contain the information and improvement descriptions necessary for Chelan County to align potential safety grant funding candidates with local investment priorities. ***Table 6.6*** summarizes a wide variety of grant funding opportunities and will help the County to decide which grant funding programs make the most sense for their transportation needs and resources.

USDOT grant applications for funding can be prepared for individual countermeasure improvements on their own or can be combined to create larger location-specific or system-wide projects. WSDOT HSIP grants also offer a choice between spot locations or system-wide improvements, while WSDOT Safe Route to School, Pedestrian and Bicycle Program, as well as TIB grants are more focused on specific locations.

Table 7.1: Transportation Safety Funding Sources *Table Part 1/2*

PROGRAM NAME	GRANT PROGRAM DESCRIPTION
FEDERAL SOURCES	
USDOT Safe Streets and Roads for All (SS4A)	The SS4A program supports development and implementation of a CSAP to identify and treat the most significant roadway safety concerns in a community. Applicants must have an eligible CSAP to apply for an implementation grant. The SS4A program can be used to support safety projects and strategies that address serious safety violations of drivers (e.g., speeding, alcohol, and drug-impaired driving), so long as the proposed strategies are data-driven. Eligible implementation projects can include either location-specific projects, which address several different safety risk factors at an intersection or along a corridor, or systemic projects, which address safety risk factors at several similar locations within project area. Agencies can develop eligible SS4A implementation projects by combining countermeasures into an overall improvement envelope which meets the minimum project size of $2,500,000 (inclusive of a minimum $500,000 local match).
Community Development Block Grant (CDBG) Program	The Community Development Block Grant (CDBG) program is a federal HUD funding program that provides flexible money to local governments for projects benefiting low-and moderate-income communities. For transportation safety, CDBG can be used for improvements such as sidewalks, curb ramps, crossings, traffic calming, lighting, and street upgrades that enhance pedestrian, bicycle, and neighborhood safety—particularly in underserved areas. These projects must meet a national objective, most commonly by improving safety and access for low- and moderate-income residents as part of broader community development and infrastructure goals.
Better Utilizing Investments to Leverage Development (BUILD) Grant Program	The Better Utilizing Investments to Leverage Development (BUILD) Grant Program is a competitive USDOT funding program that supports high-impact surface transportation projects with significant local or regional benefits. BUILD grants can fund both planning and construction for transportation safety improvements, including Complete Streets projects, pedestrian and bicycle facilities, traffic calming, intersection redesigns, lighting, and safety upgrades near transit, freight, and rail facilities. Safety is a core evaluation criterion, and projects that reduce crashes and improve access and connectivity—especially in rural, disadvantaged, or multimodal corridors—are well suited for BUILD funding.
Active Transportation Infrastructure Investment Program (ATIIP)	The Active Transportation Infrastructure Investment Program (ATIIP) is a competitive federal grant program administered by the Federal Highway Administration (FHWA) that was created by the Infrastructure Investment and Jobs Act to help communities plan, design, and construct safe, connected pedestrian and bicycle infrastructure. ATIIP funding can be used for transportation safety projects such as sidewalks, shared-use paths, protected bikeways, trails, safe crossings, and corridor-scale networks that connect people to schools, jobs, transit, and daily destinations. The program focuses on building connected active transportation networks or regional "spines" that remove barriers to walking and biking, reduce crashes, improve access to transit, and enhance safety—particularly in disadvantaged communities—making ATIIP a dedicated funding source for scalable, high-impact active transportation safety improvements.
Reconnecting Communities Pilot (RCP) Grant Program	The Infrastructure Investment and Jobs Act established the Reconnecting Communities Pilot (RCP) Program to advance community-centered transportation connection projects, with a priority for projects that benefit low-capacity communities. RCP focuses on improving access to daily needs such as jobs, education, healthcare, food, nature, and recreation, and foster development and restoration, and provide technical assistance to further these goals. The primary goal of the RCP Program is to reconnect communities harmed by past transportation infrastructure decisions, through community-supported planning activities and capital construction projects that are championed by those communities. The RCP Program provides funding for two types of grants. Planning Grants fund the study of removing, retrofitting, or mitigating an existing facility to restore community connectivity; conduct public engagement, and other transportation planning activities. Capital Construction Grants are to carry out a project to remove, retrofit, mitigate, or replace an existing eligible facility with a new facility that reconnects communities.
Railroad Crossing Elimination Grant Program	The Railroad Crossing Elimination (RCE) Program, authorized under the Infrastructure Investment and Jobs Act (IIJA), provides federal funding to improve safety and mobility at highway-rail and pathway-rail grade crossings. The program supports a wide range of projects, including grade separations, crossing closures, track relocations, installation of warning devices, and related planning and design efforts, all aimed at reducing conflicts between rail and roadway users. Eligible applicants include states, local governments, metropolitan planning organizations, Tribal governments, and port authorities. The program prioritizes investments that enhance the safe and efficient movement of people and goods while addressing risks at rail crossings through both infrastructure and technology-based solutions

Table 7.1: Transportation Safety Funding Sources *Table Part 2/2*

PROGRAM NAME	GRANT PROGRAM DESCRIPTION
STATE SOURCES	
Surface Transportation Block Grant (STBG)	The Surface Transportation Block Grant (STBG) program is a core Federal Highway Administration (FHWA) funding program that provides states and metropolitan areas with highly flexible transportation funding to address state, regional, and local priorities. Authorized under the Infrastructure Investment and Jobs Act (IIJA), STBG funds can be used for a wide range of projects, including transportation safety improvements such as roadway and intersection safety upgrades, traffic calming, Complete Streets treatments, bicycle and pedestrian facilities, ADA accessibility improvements, and safety enhancements for transit, freight, and non-motorized users. Because of its broad eligibility, STBG is frequently used to support Vision Zero initiatives, multimodal corridor safety projects, and systemic safety improvements, making it one of the most versatile funding sources for advancing transportation safety at the community scale.
Highway Safety Improvement Program (HSIP)	The federally funded Highway Safety Improvement Program (HSIP) allocates funds to local and state roadways in Washington based on fatal and serious injury crash data, with funding split between the County Safety Program and City Safety Program for targeted infrastructure improvements. Cities in Washington must have a Local Road Safety Plan to apply for HSIP funding, with a biennial call for projects under the City Safety Program. These HSIP grants for safety improvements typically range from $500,000 to $2,000,000 with grant awards announced in October.
Transportation Alternatives Program (TAP)	The Transportation Alternatives Program (TAP) is a federally funded program administered by the Federal Highway Administration (FHWA) that provides state-distributed funding for smaller-scale transportation projects that improve safety and expand non-motorized travel options. TAP funds can be spent on transportation safety projects such as sidewalks, shared-use paths, bicycle lanes, pedestrian crossings, traffic-calming features, lighting, ADA accessibility improvements, and Safe Routes to School initiatives. The program focuses on creating safer, more accessible streets and connections for pedestrians, bicyclists, and other non-drivers, particularly by addressing gaps in networks and improving safety at the neighborhood and community scale, making TAP a core funding source for local active transportation safety improvements.
Transportation Improvement Board Annual Grant Programs	The Washington Transportation Improvement Board (TIB) has an annual call for projects through the Urban Arterial, Active Transportation, and Complete Streets grant funding programs. An adopted Complete Streets ordinance is required to be eligible for the Complete Streets grant program and will be asked about in the Active Transportation and Urban Arterial grant applications. All TIB grant programs require local matching funds of 15% to 20% depending on agency valuation and all TIB applications are due in mid-August of each year. Grant funding amounts vary by program and grant awards are announced at the TIB Board meeting in late-November each year.
WSDOT Safe Routes to School (SRTS) and Pedestrian & Bicycle Program (PBP) Grants	WSDOT administers these two closely related competitive grant funding programs that focus on active transportation safety improvements for school-aged children and vulnerable users in both urban and rural areas. A demographic analysis is required as part of the application and active transportation improvements must be based on best practices given the land use context, demographic needs, and safety issues present in the vicinity of the project location. The applications for this grant program are typically due in April-May of even numbered years. There is no local match requirement to apply for either program, but WSDOT will ask applicants if they have adopted Complete Streets and/or Vision Zero ordinances, LRSPs, policies to reduce Greenhouse Gas (GHG) emissions, and other safety plans (such as a CSAP). Typical grant awards can range from $250,000 to $4,000,000 based on needs and available funding from cycle to cycle, but the average grant award is about $1,500,000. High-scoring projects will receive field visits by WSDOT staff in September-October and a list of projects recommended for funding by the State legislature is expected to be issued in December.
Walker and/or Roller Safety Enhancement Projects	The Washington Traffic Safety Commission (WTSC) offers $1.5 million in federal funding for Walker and Roller Safety Enhancement Projects to improve pedestrian and bicyclist safety through law enforcement training, public education, and enforcement campaigns. Eligible applicants, including state agencies, tribal governments, cities, counties, and nonprofits, can apply for grants ranging from $30,000 to $250,000, with a required minimum 10% cash match.
Law Enforcement School Zone Grant	The Traffic Safety Commission provides law enforcement equipment grants to agencies that actively conduct in-person enforcement for speed management in active school zones with funds available for traffic enforcement equipment and helping improve safety on the roads. Fund levels are based on the number of traffic citations issued within one year prior to the date of application with $25 awarded per citation.
Let's Go Program	The Let's Go program equips elementary schools with a multi-week bicycle and pedestrian safety curriculum for grades 3–5, fostering confidence, safe riding skills, and active transportation habits. Supported by Cascade Bicycle Club, the program has reached over 47,000 students across Washington, with expansions into middle schools through the Let's Go Further initiative to promote lifelong safe and sustainable mobility.
Sandy Williams Connecting Communities Program	The Sandy Williams Connecting Communities Program (SWCCP) is a Washington State grant program that funds projects aimed at improving safe, comfortable, and connected active transportation—walking, biking, and rolling—particularly in overburdened communities divided by current or former state highways. Established by the Legislature and funded through the Climate Commitment Act, the program prioritizes equity and environmental justice by supporting community-driven projects that reconnect neighborhoods to essential destinations like schools, transit, and services. No local match is required, and eligible applicants include local governments, Tribal governments, and transportation agencies. Funding can be for planning, design, quick-build, and construction projects. The program emphasizes strong partnerships with community-based organizations, meaningful public engagement, and innovative, safety-focused solutions that reduce barriers, improve mobility, and enhance overall community well-being.

Appendix A: Chelan County Roadway Safety Plan (2025)

CHELAN COUNTY ROADWAY SAFETY PLAN



2025

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EXECUTIVE SUMMARY

History

Initially created in 2017, the Chelan County Roadway Safety Plan (CCRSP) is Chelan County's blue print to achieve "Target Zero" on Chelan County roads. 2025 marks the 5th edition of the CCRSP. Much like the previous editions to the CCRSP, a data-driven analysis will be used to select and apply proven methods and strategies developed by various Traffic Safety Organizations. Chelan County stands committed to eliminating Fatal and Serious Injury collisions on Chelan County Roads by the year 2030.

Introduction

In order to comply with Federal Regulations, each state has been required to create a Strategic Highway Safety Plan (SHSP). Washington States SHSP has been titled "Target Zero". Washington State recognizes the significance of the regional and local differences throughout the State and has in turn delegated responsibility to each County and City to create a SHSP specific to the roads within their jurisdiction. Chelan County's SHSP is titled Chelan County Roadway Safety Plan. Please refer to Appendix E of the 2024 Washington State's Strategic Highway Safety Plan (SHSP) for an in-depth explanation of the federal laws that require establishing and updating the state Strategic Highway Safety Plan.

It is recognized that our transportation system is comprised of a variety of road users, vehicle types, agencies, laws, and of course the physical infrastructure itself. In order to increase safety within the transportation system, the Washington State Strategic Highway Safety Plan (2024 Edition of Target Zero) has evolved to recognize three base elements: Prosocial Traffic Safety Culture, the Safe System Approach, and an Equity Framework. To evaluate the base elements and define a safe transportation system, Target Zero has established the three road safety performance metrics below:

- Exposure: Quantifies road users as well as modes and duration of travel.
- Likelihood: Identifies road locations/types and road user behaviors involved in crashes.
- Severity: Identifies factors that increase crash severity like speed and post-crash medical care.

Since 2000, Washington State and its partners have been implementing Target Zero to reduce collisions based on proven and effective strategies. Local agencies are among the traffic safety partners, and the Target Zero goal of eliminating deaths and serious injuries on our roadways is a goal that Chelan County shares with Washington State.

According to Target Zero, "the foundation for successful outcomes begins with data-informed approaches to identify and better understand the contributing factors to fatal and serious injury crashes". Similarly, the Chelan County Roadway Safety Plan (CCRSP) will be data driven, utilizing crash data compiled and supplied by the Washington State Department of Transportation and gathered from Chelan County Public Works GIS. The CCRSP will be used to document and prioritize emphasis areas, evaluate and implement improvement strategies and projects, measure success of the strategies and report results.

Our Goal

Chelan County's goal is to help Washington State achieve Target Zero by doing its part to eliminate traffic fatalities and serious injuries on Chelan County roads by the year 2030. Development of the Chelan County Roadway Safety Plan is not just the starting point to our goal, it is a tool that will be used to monitor, measure, propel and achieve our goal.

Bringing About Change

The Chelan County Roadway Safety Plan will incorporate five strategies to improve the safety of the county's transportation system. Those strategies are:

Education & Outreach: Give road users the information to make good choices, such as driving unimpaired, wearing a seatbelt and avoiding distractions. Encourage community members to promote safe driving habits.

Enforcement: Use data-driven analysis to help law enforcement officers pinpoint and address locations with a high number of behavior-driven fatal and serious-injury crashes, such as speeding and impairment.

Engineering: Design transportation systems using practical solutions that consider all users which in-turn reduces crash frequency and or severity.

Emergency Medical Services (EMS): Provide high-quality and rapid medical response to injury crashes.

Leadership & Policy: Change laws, agency rules or policies to promote and support safer roads and driving.

When used in combination, the five strategies above resemble and reinforce Target Zero's Safe System Approach elements of: safer land use, safer vehicles, safer speeds, safer roads, safer road users, and post-crash care.

To ensure traffic safety continues to improve, it is essential that the CCRSP be flexible and adapt to change. As society changes and new technology and strategies are developed and implemented, it is likely that priority areas will change. The CCRSP will be utilized to identify priority changes and develop mitigation strategies. As with Target Zero, the CCRSP will be updated on a routine basis to reflect the current traffic safety priorities.

Finally, successfully reducing serious injuries and fatalities requires partnerships between government agencies, community organizations, non-profit groups and individuals. We invite everyone to join in our efforts in *Keeping Chelan County a Great Place to Live, Work and Play!*

HOW THE PLAN WORKS

The Chelan County Roadway Safety Plan will analyze crash data to develop strategies to improve safety within the county's transportation system. Strategies that have a documented measure of success will be formulated and implemented through projects. To evaluate the effectiveness of the Plan we will examine our completed projects and measure their success through a data-driven process.

A Data-Driven Effort

Data forms the foundation of this plan. It will support where and how Chelan County focuses its investments, develops its goals and action items, establishes what messages the public should hear more often and determines its success. Because data tells us where and why collisions occur, we will be able to use our resources most effectively by concentrating efforts on those specific locations, corridors or factors, saving staff resources and increasing effectiveness.

National and state traffic safety research and practices will be consulted to develop this plan. Our local Pavement Management System database maintained by the statewide County Road Administration Board plus onsite inventories will provide roadway attributes. Crash data from the WSDOT WA State Crash Data Portal will furnish descriptive factors and fatal/serious injury classification information for each crash. The Chelan County Public Works GIS will provide additional crash site details such as road surface, topography, and adjacent land use for each crash. Prominent resources, including but not limited to, **The American Association of State Highway and Transportation Officials "*Highway Safety Manual*"** (offers a list of risk factors based on roadway attributes) and **The National Highway Traffic Safety Administration's "Countermeasures that Work"** (appraises traffic safety efforts across the nation and rates each strategy according to its effectiveness) will be utilized to select proven strategies.

The above references provide necessary information to generate focus points, risk factors and strategies to assist in establishing project priorities. This Plan will allocate resources to locations and corridors where problems frequently occur, target behaviors and conditions that commonly cause collisions and employ proven strategies to mitigate these issues. Finally, the data becomes the basis for evaluating the effectiveness of completed projects.

Crash Data Sources

The CCRSP includes crash data for fatal and serious injury collisions on Chelan County roads only. Federal, state, incorporated city and private roads are not included because these agency facilities are not under the jurisdiction of Chelan County.

The crash data source for the CCRSP is from state- and county-maintained databases. The WSDOT Crash Data and Reporting Branch compiles data into the WSDOT Crash Data Portal using a team of WSDOT Crash Data Analysts to collect and classify data from Police Traffic Collision Reports (PTCR) completed by Law Enforcement Officers throughout Washington. Additional sources of crash data include WSDOT's Collision Location and Analysis System (CLAS), the County Road Administration Board's Pavement Management System (Mobility) and NHTSA Fatality Analysis Reporting System (FARS). Severe injury data is from CLAS and fatality data is from FARS.

Step 1: Retrieving Crash Data

The CCRSP starts by retrieving crash data from the WSDOT Crash Data Portal or from data provided by the WSDOT Crash Data and Reporting Branch. Information from these two sources is used to determine the location and time of each collision, if the collision is fatal or serious injury, and which primary factors are associated with each collision. The CCRSP then retrieves additional information about each collision using the Chelan County Public Works GIS system. The GIS system provides information from the PTCR which lists data for each collision such as vehicle direction of travel, collision milepost, road conditions, lighting conditions and roadway geometry.

Step 2: Prioritizing Crash Factors

To provide a common language between the State and County Plans, the CCRSP will utilize the same categories and emphasis areas (aka Factors) as Target Zero. Since the first edition of the CCRSP, the priority level ranking and criteria for has evolved per the below table.

PRIORITY LEVELS	PREVIOUS CRITERIA	CURRENT CRITERIA
LEVEL 1	Factors ≥ 30%	Factors ≥ 25%
LEVEL 2	10% ≤ Factors < 30%	Factors < 25%
LEVEL 3	Factors < 10%	Not Used
MONITOR	Factors not meeting Levels 1-3	Factors not meeting Levels 1-2

To Evolve with Target Zero, the CCRSP will assign Priority levels as follows:

- Priority Level 1: Factors involved in at least 25% of Chelan County's traffic fatalities or serious injuries.
- Priority Level 2: Factors in less than 25% of Chelan County's traffic fatalities or serious injuries.
- Monitor: Factors listed in the CCRSP but not currently involved in Chelan County's traffic fatalities or serious injuries (3 latest years of available data).

When compared to Target Zero, Chelan County is analyzing a much smaller set of crash data. Therefore, priority levels will be updated as frequently or more than Target Zero. It is important to use a smaller timeframe of crash data to identify current issues and trends but it should be recognized that due to a relatively small data set, several factors have little to no documented occurrence within the county. It is also important to use crash data within similar timeframes as Target Zero so the two plans remain on common ground.

Tracking the trend for each primary crash factor is also an essential element to the overall success of the plan. Trends tell you whether or not the occurrence of individual crash factors are increasing or decreasing with each passing year and help predict the year in which zero fatalities or serious injuries are expected to occur. The CCRSP will also use the same methodology (five-year Rolling Average) as Target Zero when tracking crash factor trends. This rolling average prevents skewing of a trend by a single year's data. Crash factors that continually show an increasing trend may be targeted for improvement regardless of priority level change.

Step 3: In Depth Analysis of Crash Factors

Once the primary crash factors have been prioritized, Chelan County will utilize the crash data to identify shared primary crash factors (i.e. Lane Departure while Speeding) as well as secondary crash factors, such as location, curved/straight roadway, and snow or icy road conditions.

In-depth analysis of each crash will clarify whether or not a spot location or corridor needs to be improved or if the issue is systemic and needs to be addressed on a countywide basis. This analysis is also essential in selecting effective countermeasures as well as determining and prioritizing safety improvement projects.

Step 4: Strategy and Countermeasure Selection

While technology continues to make vehicles safer, it simply is not progressing at the rate needed to achieve Target Zero by 2030. Achieving zero fatalities and serious injuries within the desired timeframe requires an increase in road user awareness, better user decision making and safer roads. Selecting proven or recommended countermeasures is the key to this achievement. Therefore, countermeasures will be selected from credible publications and organizations, which may include one or more of the following resources:

- Countermeasures That Work: A Highway Safety Countermeasure Guide for State Highway Safety Offices
- National Cooperative Highway Research Program (NCHRP) Report 500 Series
- Crash Modification Factor Clearinghouse

According to Target Zero, Countermeasures That Work focuses on behavioral countermeasures, Crash Modification Factors Clearinghouse focuses on engineering solutions, and the NCHRP Report 500 Series should be used when a strategy is not present in the first two resources.

All selected countermeasures will be categorized under one or more of the five primary strategies of the CCRSP. Those strategies are: **Education & Outreach, Enforcement, Engineering, Emergency Medical Services (EMS), and Leadership & Policy.**

There are often multiple solutions to the same problem. Recognizing this, the CCRSP may list and rank multiple strategies for each priority, which follows the foundation of the Safe System Approach. This is an important predecessor to establishing and prioritizing safety improvement projects, in particular projects that may include multiple strategies and countermeasures or a phased approach to correcting an issue.

Step 5: Identifying and Prioritizing Projects

Once the appropriate strategies have been identified, Chelan County will collaborate with its partners to determine feasibility and scope of strategies. This collaboration is important when using education/awareness and engineering strategies and required when seeking leadership and policy changes, using enforcement and improving EMS services.

The CCRSP will utilize several project types to reduce fatal and serious injury crashes. Those project types are Spot Improvements, Corridor Improvements and Countywide Improvements. Spot Improvements will target specific locations on a road, such as a single intersection or curve.

Corridor Improvements will target multiple locations or similar conditions along an entire road using one or more counter measures, for example improving intersection sight distance at multiple intersections on Chumstick Highway or removing clearzone obstructions from Entiat River Road. Countywide Improvements are systemic improvements that can be made in-kind to multiple roadways throughout Chelan County, such as installing wide edge lines or guide posts on all rural major collectors.

Chelan County will use the best engineering practices available when prioritizing projects. Once ranked, the projects will be examined for inclusion with other programmed maintenance, preservation or improvement projects. Inclusion with another project will help reduce reconstruction cost. An example of reconstruction cost would be when a safety improvement project installs curve warning signs on a highway fill and then the following year a road improvement project flattens and expands the fill, which requires removal or replacement of the previously installed signs.

Step 6: Evaluate and Report Results

The ability to calculate the impact of a safety improvement strategy is paramount to achieving Chelan County's goal. After a safety strategy has been applied and or constructed, pre and post-strategy crash data will be compared against each other. A reduction in fatal/serious injuries crashes associated with a targeted crash factor will indicate a positive impact; in contrast, an increase will indicate no impact. To understand the actual effective value of each strategy, a post-strategy benefit cost will be performed, using actual societal and investment costs.

Reporting the results of our data analysis, as well as the post-strategy findings, is important for all Target Zero partners. Sharing knowledge between agencies enables all partners to select proven strategies and apply them to similar crash factors.

Step 7: Monitor the Data and Update the Plan

Continuous monitoring of crash data is necessary to augment and perpetuate roadway safety. Collecting and analyzing current crash data will identify changes to primary factors and will allow Chelan County to always focus its efforts on eliminating collisions associated with Priority Level 1 crash factors, as stated in Step 2. Therefore, the CCRSP will routinely repeat Step 1 through Step 7.

Each time collision data is analyzed, Chelan County will track and report changes to all priority level crash factors and crash factor trends. Depending on changes to crash factor priority, projects may need to be reprioritized or new projects created. Results will be documented and included in an updated CCRSP.

PRIORITIES

Emphasis Areas

Target Zero has identified the most common types of crashes and contributing factors and labeled them as Emphasis Areas (Previously Referred to as Primary Factors). Target Zero then placed each Emphasis Area into one of four categories based upon characteristic. The four categories and the Emphasis Areas are as follows:

Category	Emphasis Area
High Risk Behavior	Impairment Involved, Speeding, Unrestrained Occupants, Distracted Road User
Crash Type/Location	Lane Departure and Intersection Related
Road Users by Age	Young Drivers 16-25 Involved and Older Drivers 70+ Involved
Road Users by Mode of Travel	*Active Transportation Users, Motorcyclists, Heavy Vehicle Involved
Other Monitored Emphasis Areas (CCRSP)	Wildlife, Work Zone, Vehicle-Train and School Bus-Involved, **Drowsy Driver Involved

TABLE 1 – PRIMARY FACTORS

*Active Transportation Users include Bicyclist, Pedestrians, and other non-vehicular modes of travel for Target Zero 2024.

**Drowsy Driver Involved has been moved from High Risk Behavior to Other Monitored Emphasis Areas group for Target Zero 2024.

As previously discussed, the CCRP will assign Priority Level 1, 2 or Monitor to each Emphasis Area based upon the percentage of traffic fatalities and serious injuries attributed to each factor. The priority levels assigned are as follows:

- Priority Level 1: Factors involved in at least 25% of traffic fatalities or serious injuries.
- Priority Level 2: Factors involved in less than 25% of traffic fatalities or serious injuries.
- Monitor: Factors not significantly involved in traffic fatalities or serious injuries.

The CCRSP will utilize the same Emphasis Areas as Target Zero when assigning priority. By operating on common ground, data interpretation and sharing is simplified and the CCRSP is easily updated to match future Target Zero plans. Use of a common ranking system will also aid Chelan County when seeking funds for future projects. Chelan County will be able to provide transparent, justified and equivalent data to WSDOT.

The CCRSP baseline is established using the Washington State Strategic Highway Safety Plan 2016 (Target Zero) as a template. The CCRSP base-line priorities are listed in Table 2. As data is gathered and analyzed, it is to be expected that priorities will change. The statistics shown in Table 3 represent the most current data available to the County. The time gap in data used for Target Zero compared to that used for Chelan County Roads is directly related to the update cycles of the two plans. Target Zero is

updated every 3 to 5 years while the CCRSP is updated on a two-year cycle. Therefore, the CCRSP analyzed county road crash data is from a similar but not always identical, timeframe. Target Zero represents crash data from all public roads within Washington while the CCRSP includes only those roads under Chelan County jurisdiction. The Target Zero and CCRSP results are compared in Table 3.

TABLE 2 - CCRSP Baseline (2017 Plan using data from 2012 through 2014)	
Priority Level 1	Impairment, Speeding, Distraction, Lane Departure, Young Drivers 16-25, and Motorcyclists
Priority Level 2	Unrestrained Occupants, Drowsy Drivers, Intersection Related, Pedestrians, Older Drivers 70+, and Wildlife
Priority Level 3	Not present in CCRSP baseline
Monitor	Unlicensed Drivers, Heavy Trucks, Bicyclists, Workzone, Vehicle-Train, and School Bus

TABLE 3 – CURRENT PRIORITY LEVELS

Washington State 2020-2022					vs		Chelan County Roads 2022-2024			
Fatalities		Serious Injuries		Level	Emphasis Area	Level	Fatalities		Serious Injuries	
Number	% Total	Number	% Total				Number	% Total	Number	% Total
1,991	100%	8,440	100%				8	100%	15	100%
HIGH RISK BEHAVIOR										
1,188	59.7%	1,928	22.8%	1	**Impairment**	1	3	37.5%	4	26.7%
633	31.8%	2,090	24.8%	1	**Speeding**	1	3	37.5%	5	33.3%
347	17.4%	1,525	18.1%	2	**Distraction**	1	3	37.5%	4	26.7%
417	20.9%	978	11.6%	2	**Unrestrained Occupants**	2	1	12.5%	3	20%
CRASH TYPE / LOCATION										
877	44.1%	3,363	39.9%	1	**Lane Departures**	1	7	87.5%	12	80%
472	23.7%	2,822	33.4%	1	**Intersections**	2	0	0.0%	1	6.7%
ROAD USERS BY AGE										
519	26.1%	2,419	28.7%	1	**Young Drivers 16-25**	1	1	12.5%	7	46.7%
251	12.6%	838	9.9%	2	**Older Drivers 70+**	2	1	12.5%	1	6.7%
ROAD USERS BY MODE OF TRAVEL										
428	21.5%	1,456	17.3%	2	**Active Transportation Users**	2	1	12.5%	0	0%
318	16%	1,440	17.1%	2	**Motorcyclists**	1	4	50%	2	13.3%
255	12.8%	506	6%	2	**Heavy Trucks**	M	0	0%	0	0%
OTHER MONITORED EMPHASIS AREAS										
39	2%	240	2.8%	M	**Drowsy Drivers**	2	1	12.5%	1	6.7%
11	0.6%	60	0.7%	M	**Wildlife**	2	0	0%	1	6.7%
18	0.9%	98	1.2%	M	**Work Zone**	2	0	0%	1	6.7%
1	0.1%	4	0.1%	M	**Vehicle-Train**	M	0	0%	0	0%
4	0.2%	20	0.2%	M	**School Buses**	M	0	0%	0	0%

As demonstrated in the table above, priority levels for several of the Emphasis Areas are the same between Washington State and Chelan County. For Target Zero 2024, the top 3 Emphasis Areas by Fatalities were Impairment, Lane Departure, and Speeding. Under the same criteria, Chelan County's top 3 Emphasis Areas would be Lane Departure, Motorcyclists, and three equal areas of Impairment, Speeding, and Distraction for years 2022 to 2024.

As with previous editions of the CCRSP, Chelan County has relatively few fatalities and serious injuries for the 2022-2024 sample years. Therefore, to further define priorities, Chelan County will compare crash data from 2005 to 2024 in an effort to determine which Emphasis Areas are shared amongst the various crashes. By using the larger sample timeframe, Chelan County is able to compare Emphasis Areas contributing to 29 fatalities and 114 serious injuries. Table 4, below, lists the top Emphasis Areas co-contributing to crashes. A few examples of how the table is interpreted are: 71% of Impairment Involved Fatalities also involve Lane Departure or 100% of Impairment Involved Serious Injuries also involve Lane Departure.

TABLE 4 – EMPHASIS AREAS INVOLVED

CHELAN COUNTY ROADS (Data Range 2005 to 2024)

Emphasis Area (Current Priority Level)	Leading Co-Contributor as a % of Individual Emphasis Area Fatalities		Leading Co-Contributor as a % of Individual Emphasis Area Ser. Injuries	
Impairment Involved (1)	71%	Lane Departure	100%	Lane Departure
Speeding Involved (1)	89%	Lane Departure	88%	Lane Departure
Distraction Involved (1)	63%	Young Drivers, Active Transportation Users	66%	Lane Departure
Unrestrained Occupants (2)	75%	Lane Departure	90%	Lane Departure
Drowsy Driver Involved (2)	100%	Lane Departure, Older Drivers	92%	Lane Departure
Lane Departure (1)	44%	Speeding	54%	Speeding
Intersection Related (2)	100%	Young Drivers, Older Drivers	54%	Motorcyclists
Young Drivers 16-25 Involved (1)	50%	Distraction, Lane Departure	87%	Lane Departure
Motorcyclists (1)	75%	Lane Departure	41%	Lane Departure, Speeding
Older Drivers 70+ Involved (2)	60%	Young Drivers	45%	Intersection, Motorcyclists
Heavy Truck Involved (M)	100%	Lane Departure, Young Drivers		None
Active Transportation Users (2)	100%	Distraction	56%	Distraction
Wildlife (2)	100%	Motorcyclists	100%	Motorcyclists
Work Zone (2)	100%	Motorcyclists	100%	Distraction, Young Drivers
Vehicle-Train (M)		None	100%	Intersection, Older Drivers
School Bus Involved (M)		None	100%	Distraction, Older Drivers

Lane Departure is the leading co-contributor for seven Emphasis Areas associated with fatalities and seven Emphasis Areas associated with serious injuries. Lane Departure is the leading co-contributor in 4 of the 6 Priority Level 1 Emphasis Areas associated with fatalities and 5 of the 6 Priority Level 1 Emphasis Areas associated with serious injuries.

Chelan County's Top Priorities for 2025

Chelan County has identified Impairment, Speeding, Distraction, Lane Departure, Young Drivers, and Motorcyclists as Priority Level 1 Emphasis Areas for the 2025 CCRSP. 2025 Priority level 2 Emphasis areas

include: Unrestrained Occupant, Intersections, Older Drivers, Active Transportation Users, Drowsy Drivers, Wildlife, and Workzone. Correspondingly, all Priority level 2 Emphasis Areas had a Priority Level 1 Emphasis Area listed as the top co-contributor.

The largest single contributing circumstance was Lane Departure Crashes which are composed of Ran Off Road crashes and Opposite Direction crashes (aka: head-on or sideswipe). The below table shows that from 2022 to 2024, 86% of Lane Departure fatalities and 83% of Lane Departure serious injuries were Ran Off Road crashes.

TABLE 5

LANE DEPARTURE CRASHES ON CHELAN COUNTY ROADS (Data Range 2022 to 2024)

	Ran Off Road		Opposite Direction		**LANE DEPARTURE CRASHES**	
Year	Fatalities	Serious Injuries	Fatalities	Serious Injuries	**Fatalities**	**Serious Injuries**
2022	2	4	0	0	**2**	**4**
2023	4	5	1	2	**5**	**7**
2024	0	1	0	0	**0**	**1**
Total	**6**	**10**	**1**	**2**	**7**	**12**

The 2022 to 2024 timeframe is not an anomaly. From 2005 to 2021, Ran Off Road crashes accounted for 82% of fatal and 88% of serious injury Lane Departure crashes on Chelan County roads. By separating Lane Departure Crashes into two categories, the CCRSP will be able to identify and select strategies to remedy a more specific type of crash.

Other Priorities

Target Zero 2024 discusses the importance of Emergency Medical Response and Traffic Data Systems as means of supporting a safe transportation system. Data collection and analysis is essential in the effort to reduce the likelihood and quantity of future fatal and serious injury collisions. A thorough, accurate, and detailed system to collect, process, and analyze crash data can help identify current issues and predict future problems.

Rapid response and effective post-crash medical treatment can drastically improve the outcome of crashes. This requires emergency response personnel, equipment, and facilities to be strategically located so that the appropriate medical care is provided as soon as possible. Unlike the Emphasis Areas listed in the tables above, these systems do not contribute to collisions but instead are strategies to prevent collisions, minimize the consequences of a crash and perpetuate improvement.

Chelan County will strive to utilize Traffic Data System strategies when feasible; will always Evaluate, Analyze and Diagnose crash data, as well as current and future strategies; and will support EMS and Trauma Response.

STRATEGIES

Safety improvements will be determined by a program of data-driven priorities and proven effective strategies. As mentioned previously, Chelan County's strategies will focus around Education and Outreach, Enforcement, Engineering, Emergency Medical Services, and Leadership and Policy which will be molded together within the Safe System Approach. The CCRSP will implement strategies to target the highest priority factors.

When determining effectiveness of the strategies and countermeasures, the following sources will often be consulted:

- Countermeasures That Work (CTW), A Highway Safety Countermeasure Guide for State Highway Safety Offices by the Governors' Highway Safety Association for NHTSA and the USDOT
- National Cooperative Highway Research Program (NCHRP) Report 500, Volumes 1-23
- Crash Modification Factors (CMF) Clearinghouse
- Washington State Strategic Highway Safety Plan (Target Zero)

Education & Outreach

Education and Outreach are key components to all safety improvement strategies. Whether you choose to ride a bike, walk, drive or all three, a basic understanding of the rules of the road and our responsibilities when using the road are vital to a safe travel. These rules and responsibilities provide a foundation and support for an efficient, safe transportation system. Through this plan we will identify and implement educational strategies that raise awareness of the cause, effect and prevention of crashes. The goal of education is to positively affect driver behavior and gain societal understanding of the importance of safe driving habits. Education and outreach will also be used to supplement and reinforce other safety improvement strategies.

Enforcement

Enforcement efforts will focus on eliminating collisions associated with high-risk behaviors. High-risk behaviors are actions taken by drivers that increase the probability and/or severity of a crash. High-risk behaviors include impaired driving (i.e. drunk or impaired driving), speeding, distracted driving (i.e. use of a cell phone while driving), unrestrained occupants (or driving without using a seat belt), driving without a license and drowsy driving. Currently, the state has regulatory codes prohibiting and penalizing all the previously mentioned behaviors. Crash data will be used to identify locations, corridors, days and times where these high-risk behaviors are resulting in increased traffic fatalities and serious injuries. As with education and outreach, enforcement will be used as a tool to improve driver behavior.

Engineering

Roadway geometry, road components and adjacent features impact the safety of our roads. We will continue to design and build roads that prioritize safety as well as retrofit existing roads with effective safety countermeasures as funding becomes available. We will continue to use the latest design guidance and criteria established by FHWA, AASHTO and WSDOT.

Engineering is also important in the selection of strategies and countermeasures, as well as the selection and prioritization of safety improvement projects. Due to limited budgets and funding availability at all levels of government, the most cost-effective strategies will most likely be implemented. To accomplish

this, it is essential that accurate estimates are prepared and countermeasures are weighed against each other.

Emergency Medical Services (EMS)

Speedy response, diagnosis, care and transport are vital to reducing deaths and serious injuries resulting from traffic collisions throughout Washington. Because crashes in Chelan County may and do occur on remote sections of roadways and near jurisdictional boundaries, EMS responsibilities in the county are shared amongst neighboring counties, cities, other government agencies and private EMS services. There are no boundaries to providing EMS services; meaning the closest EMS service responds to a crash and patients are transported to the appropriate trauma center, regardless of road jurisdiction or trauma center location. This is important due to Washington's EMS and integrated trauma care system. Currently, the state is developing the Washington EMS Information System (WEMSIS) to collect, analyze and provide data-based decisions regarding EMS performance and improvements.

Chelan County's role will be to provide support to the local, region and statewide EMS. Chelan County will continue to provide safe and reliable access to and from crash scenes by building and maintaining safe roadways. Chelan County will continue to provide equipment and personnel to control traffic at crash scenes and clear debris or other obstacles from the roadway when called upon to allow access to crash scenes. Chelan County also will monitor information provided by the State and act upon State decisions or recommendations when deemed necessary or essential.

Evaluation

Evaluating our work ensures that we can adjust the Plan to maximize our efforts. By routinely analyzing crash data and tracking collision trends, the CCRSP will be able to reprioritize primary crash factors, implement new improvement strategies and reprioritize projects to focus on the most effective safety improvements. The CCRSP will evaluate the success or shortcomings of safety improvement strategies by monitoring collision data prior to and after countermeasures are implemented. Recording and sharing results will support and enhance future decisions for Chelan County and agencies statewide.

Leadership & Policy

To achieve the goal of zero fatal or serious injury traffic collisions by 2030, changes to society, vehicles and the roadways themselves must occur. To implement change, leaders and policy makers within Chelan County must be open to change and willing to enact it. Changes to county code, operating procedures and budget will likely be necessary to implement strategies that have a positive, lasting impact on road safety. The County will need to assure that the Chelan County Sheriff's Office has the latest most effective training and tools required to identify alcohol, marijuana, and drug-impaired drivers. County leaders also will need to examine the feasibility of Federal and State recommended policies and programs.

Coordinated Strategies

The use of two or more strategies has been shown to be more effective at reducing collisions than stand-alone efforts; therefore, our actions will often employ multiple strategies to eliminate fatalities and serious injuries associated with the primary crash factors. At a bare minimum, education and outreach may be used as a stand-alone strategy.

As previously discussed, improvement strategies may be installed using a phased approach. For example, to deter speeding on a particular roadway, we may implement environmental changes to the roadway, provide public outreach about speeding, increase the frequency of enforcement patrols along a corridor and monitor the results. The strategies used in this example can be implemented in a sequence rather than all at once. For instance, public outreach may begin prior to initiating enforcement patrols, and patrols may begin prior to implementing changes to the roadway.

Strategies Targeting Chelan County's Top Priority

Crashes can occur for a variety of reasons and at random locations. In Chelan County, crashes resulting in serious injuries or fatalities appear to be spread throughout the county as only one location has accounted for more than one crash. However, there are some locations, circumstances and road conditions (secondary factors) that appear more frequently amongst the crashes. Tables 6 and 7 below show the percentage of occurance in regards to the total fatalities and serious injuries on Chelan County roads as well as the primary strategy Chelan County will utilize to combat the factor.

TABLE 6

FATALITIES = 29 (Data Range 2005 to 2024)

Factor	Number of Fatalities	Percentage	Key Strategy
Rural Major Collector	18	62%	Engineering
Rural Major/Minor/Arterial	20	69%	Engineering
All Rural Roads	24	83%	Engineering
All Urban Roads	5	17%	Engineering
Posted Speed ≥ 35 MPH	25	86%	Engineering
Occuring within a Curve	15	52%	Engineering
Occuring from Dusk to Dawn	13	45%	Engineering
Occuring on Dry Roads	25	86%	Engineering
Lane Departure	18	62%	Engineering
Speeding Involved	9	31%	Education & Enforcement
Impairment Involved	7	24%	Education & Enforcement
Distraction Involved	9	31%	Education & Enforcement
Motorcyclist Involved	8	28%	Education & Enforcement
Young Drivers 16-25 Involved	10	34%	Education & Enforcement

TABLE 7			
SERIOUS INJURIES = 114 (Data Range 2005 to 2024)			
Factor	**Number of Ser. Injuries**	**Percentage**	**Key Strategy**
Rural Major Collector	53	46%	Engineering
Rural Major/Minor/Arterial	74	65%	Engineering
All Rural Roads	90	79%	Engineering
All Urban Roads	24	21%	Engineering
Posted Speed ≥ 35 MPH	92	81%	Engineering
Occuring within a Curve	54	47%	Engineering
Occuring from Dusk to Dawn	40	35%	Engineering
Occuring on Dry Roads	94	82%	Engineering
Lane Departure	78	68%	Engineering
Speeding Involved	48	42%	Education & Enforcement
Impairment Involved	28	25%	Education & Enforcement
Distraction Involved	29	25%	Education & Enforcement
Motorcyclist Involved	32	28%	Education & Enforcement
Young Drivers 16-25 Involved	38	33%	Education & Enforcement

Education and Enforcement will be key strategies to reducing both fatalities and serious injuries as it is the most effective strategy to reduce crashes associated with the High Risk Behavior and Road User Emphasis Areas shown above. Enforcement and Education strategies, for the Primary Factors above, will be lead by the Chelan County Sheriff's Office. Other partners may need to assist with funding efforts and selection of education focal points/materials.

Engineering is listed as the key strategy for the factors involving road classifications, geometry and driving conditions; however, education and enforcement will be integrated with this strategy directly in the form of countermeasures or indirectly as factors overlap.

Because of the nonconsolidated and random occurrence of fatal and serious injury crashes as well as limited funding, Chelan County will emphasize systemic strategies that utilize low-cost safety improvements. Such strategies will allow Chelan County to effectively counteract the randomness of lane departure crashes and improve safety on a larger portion of its roads. Examples of low-cost safety improvements are adding shoulder and centerline rumble strips, adding warning signs where there are none, upgrading the retroreflectivity of signs, increasing warning sign size, adding lane delineations where there are none, and increasing the width of the edgeline delineation.

While low-cost safety improvements are the primary focus of Chelan County engineering strategies, other more costly systemic or site specific solutions, such as adding protective barrier, upgrading barriers and/or terminals, constructing roundabouts, constructing pedestrian and bicycle facilities, and slope flattening, will be examined for inclusion into future road improvement projects. Chelan County will always analyze the crash factors and potential improvement strategies associated with all projects.

PARTNERS

WTSC

Target Zero was created by the Washington Traffic Safety Commission (WTSC), composed of representatives from WTSC, the Governor's Office, Washington State Department of Transportation, Federal Highway Administration, National Highway Traffic Safety Administration, Federal Motor Carrier Safety Administration, Washington State Patrol, Washington Department of Licensing, Washington State Department of Health, Washington State Courts, Washington Health Care Authority, and various Local/Regional/Tribal Agencies, Boards, Associations, Councils, and Orginizations. Each member represents an agency or organization that possesses critical knowledge, a specific area of expertise and authority to enact or influence change. By combining its knowledge and abilities, the WTSC is able to identify and collect essential data, develop and prioritize solutions, provide funding and required policy changes, and educate, make aware and enforce the selected strategies.

CCRSP Partners

Building upon the foundation created by the WTSC and in recognition of the importance of a multi-faceted team, the framework of the CCRSP will be created, implemented and maintained as a partnership between various county stakeholders and organizations. The following is a list of CCRSP Partners and their corresponding role:

PARTNER	ROLE
Chelan County Board of Commissioners	Community Leadership, Policy/Code Creation, Provide Funding
Chelan County Public Works	Engineering, Analysis, Road Maintenance, Education, Maintenance of the CCRSP
Chelan County Sheriff's Office	Enforcement, Education, Emergency Management
Chelan County Fire Districts 3, 5, 6, 7, 8, and 9 and Wenatchee Valley Fire Department	Education, EMS
Chelan-Douglas Health District	Education
All Partners	Share Observations, Provide Data, Collaborate with Partners, Seek Funding Opportunities

FUTURE STEPS

Select Strategies and Identify Projects

The 2025 CCRSP has analytically identified the following emphasis areas as top priority: Impairment, Speeding, Distraction, Lane Departure, Young Drivers, and Motorcyclists. Chelan County will utilize the methods and resources outlined in the CCRSP to further examine crash site-specific details to determine if there are similarities between crashes. The refined analysis will aid with strategy and countermeasure selection followed by project establishment.

Funding

An important component of the CCRSP is that the information highlights which factors locally contribute to the most fatalities and serious injuries.

Community specific data will nable Chelan County to prioritize safety projects and programs, as well as maintain a relevant road safety plan. Using data-driven approaches to problem identification and prioritization provides local-level justification for allocating funds and resources.

Funding for safety improvement projects is available for local governments and organizations through multiple statewide grant programs such as: Highway Safety Improvement Program (HSIP), Safe Routes to School (SRTS), and the Pedestrian & Bicycle Program. The HSIP and SRTS programs are managed by WSDOT's Highways and Local Programs division and awards funding for local traffic safety engineering improvements.

In Chelan County, data collected from this plan will also be used to apply for a number of grants and funding programs. Those programs include, but are not limited to:

- Safe Routes to School and the Pedestrian and Bicycle programs, both grant programs of WSDOT
- Federal Lands Access Program, a program of the Western Federal Lands Highway Division
- Freight Mobility Strategic Investment Board, a state program
- Rural Arterial Program, a program of the County Road Administration Board
- Transportation Improvement Board, a state program
- Statewide Transportation Block Grant Program, a federal grant program administered by the Regional Metropolitan Planning Organization

Updating the Plan

As future data is gathered, strategies are implemented and projects are constructed, the CCRSP will begin its continual cycle of updates and reprioritizations. As stated before, in order to succeed, the Plan must adapt to change and enable response to current issues.

APPENDIX A

CRASHES BY EMPHASIS AREA

				Number of Fatalities by Emphasis Area																			
				High Risk Behavior						Crash Type		Fatalities for Road Users							Other Monitored Emphasis Areas				
Collision No.	Fatalities per Crash	Serious Injuries per Crash	Vehicles per Crash	Impairment Involved	Speeding Involved	Distraction Involved	Unrestrained Occupants	Unlicensed Driver Involved	Drowsy Driver Involved	Lane Departure	Intersection Related	Young Drivers 16-25 Involved	Motorcyclists	Older Drivers 70+ Involved	Heavy Truck Involved	Pedestrians	Bicyclists	Active Transportation Users	Wildlife/Domestic Animal	Workzone	Vehicle-Train	School Bus Involved	Year
1F	1		1			1											1	1					2005
2F	1	2	2				1			1													2007
3F	1		1	1						1													2007
4F	1		4							1		1			1								2007
5F	1		2	1			1																2008
6F	1		1							1		1											2008
7F	1		1	1						1			1										2011
8F	2		2								2	2		2									2011
9F	1	1	1		1		1			1													2012
10F	1	1	1										1						1				2013
11F	1		1			1				1		1											2013
12F	1		2			1						1		1									2014
13F	1		2										1							1			2015
14F	1		1			1						1					1	1					2016
15F	1		1	1		1						1				1		1					2018
16F	1		1		1	1											1	1					2018
17F	1		1		1					1			1	1									2019
18F	1		1		1					1													2019
19F	1		4		1					1													2020
20F	1		2		1					1		1			1								2021
21F	1		1		1					1													2022
22F	1		1						1	1				1									2022
23F	2		1	2	2					2			2										2023
24F	1		1			1				1		1	1										2023
25F	1		1			1										1		1					2023
26F	1		1	1			1			1													2023
27F	1		2			1				1			1										2023
	29	4	40	7	9	9	4	0	1	18	2	10	8	5	2	2	3	5	1	1	0	0	

			Number of Serious Injuries by Emphasis Area																			
			High Risk Behavior						Crash Type		Road Users							Other Monitored Emphasis Areas				
Collision No.	Serious Injuries per Crash	Vehicles per Crash	Impairment Involved	Speeding Involved	Distraction Involved	Unrestrained Occupants	Unlicensed Driver Involved	Drowsy Driver Involved	Lane Departure	Intersection Related	Young Drivers 16-25 Involved	Motorcyclists	Older Drivers 70+ Involved	Heavy Truck Involved	Pedestrians	Bicyclists	Active Transportation Users	Wildlife/Domestic Animal	Workzone	Vehicle-Train	School Bus Involved	Year
1S	1	1	1	1		1			1													2005
2S	1	1							1		1	1										2005
3S	1	1								1						1	1					2005
4S	1	1			1	1				1			1									2005
5S	1	1	1						1		1											2005
6S	1	1													1		1					2005
7S	2	1		2					2		2											2006
8S	1	1		1	1	1			1		1											2006
9S	1	1	1	1					1													2006
10S	1	1			1				1			1										2006
11S	1	1			1				1													2006
12S	3	3										3	3									2006
13S	1	1		1						1		1										2006
14S	1	2			1										1		1					2007
15S	1	1						1	1													2007
16S	1	1						1	1													2007
17S	1	1				1			1													2007
18S	1	1	1	1					1													2007
19S	1	2		1	1				1		1											2007
2F	2	2							2													2007
20S	1	1		1					1		1											2008
21S	1	1		1					1		1	1										2008
22S	1	1		1		1			1													2008
23S	1	2		1					1		1											2008
24S	1	1		1		1					1											2009
25S	1	1		1					1													2009
26S	1	2	1	1					1		1	1										2009
27S	1	1			1				1			1										2009
28S	1	1			1											1	1					2010
29S	1	2								1		1										2010
30S	1	2		1								1										2010
31S	1	1							1			1										2010
32S	1	1		1					1		1											2010

			Number of Serious Injuries by Emphasis Area																		
			High Risk Behavior						Crash Type		Road Users							Other Monitored Emphasis Areas			
Collision No.	Serious Injuries per Crash	Vehicles per Crash	Impairment Involved	Speeding Involved	Distraction Involved	Unrestrained Occupants	Unlicensed Driver Involved	Drowsy Driver Involved	Lane Departure	Intersection Related	Young Drivers 16-25 Involved	Motorcyclists	Older Drivers 70+ Involved	Heavy Truck Involved	Pedestrians	Bicyclists	Active Transportation Users	Wildlife/Domestic Animal	Workzone	Vehicle-Train	School Bus Involved	Year
33S	1	2								1			1							1		2010
34S	1	1										1										2011
35S	1	4		1								1										2011
36S	1	1						1	1													2011
37S	1	1	1	1					1		1											2012
38S	1	1							1													2012
39S	1	1													1		1					2012
40S	1	1										1						1				2012
9F	1	1		1		1			1													2012
41S	1	1	1	1					1													2013
42S	2	1	2			2		2	2		2											2013
43S	1	2		1	1				1													2013
44S	1	1			1										1		1					2013
45S	1	1		1						1												2013
10F	1	1										1						1				2013
46S	1	1		1					1			1	1									2014
47S	1	2		1						1	1	1										2014
48S	1	1										1										2014
49S	1	1	1	1					1		1	1										2014
50S	1	1	1	1					1			1										2015
51S	1	2								1		1										2015
52S	1	1		1					1		1											2015
53S	3	1	3	3	3	3			3													2015
54S	2	1	2	2	2				2		2											2015
55S	1	1			1							1										2015
56S	1	1			1				1		1					1	1					2015
57S	1	1		1					1		1											2015
58S	1	2	1						1													2016
59S	1	1								1		1										2016
60S	1	1			1			1	1													2017
61S	1	1	1						1													2017
62S	1	1		1					1			1										2017
63S	1	1	1						1													2017

			Number of Serious Injuries by Emphasis Area																			
			High Risk Behavior						Crash Type		Road Users							Other Monitored Emphasis Areas				
Collision No.	Serious Injuries per Crash	Vehicles per Crash	Impairment Involved	Speeding Involved	Distraction Involved	Unrestrained Occupants	Unlicensed Driver Involved	Drowsy Driver Involved	Lane Departure	Intersection Related	Young Drivers 16-25 Involved	Motorcyclists	Older Drivers 70+ Involved	Heavy Truck Involved	Pedestrians	Bicyclists	Active Transportation Users	Wildlife/Domestic Animal	Workzone	Vehicle-Train	School Bus Involved	Year
64S	1	1				1		1	1													2017
65S	1	1						1	1													2017
66S	1	1			1					1		1	1									2018
67S	2	1				2		2	2		2											2018
68S	1	1	1		1				1													2018
69S	1	2			1			1														2018
70S	1	1		1					1	1	1	1										2019
71S	1	1	1						1													2019
72S	1	1										1										2019
73S	1	2										1										2019
74S	1	1		1					1		1											2019
75S	1	2											1									2020
76S	1	1	1	1		1			1													2020
77S	1	1						1	1													2020
78S	1	1			1					1			1		1		1					2020
79S	2	3			2				2		2											2020
80S	1	1		1		1			1		1											2021
81S	1	1	1	1		1			1													2021
82S	1	2			1								1								1	2021
83S	1	1	1	1					1			1										2021
84S	1	1		1					1		1											2021
85S	1	2		1					1													2021
86S	1	1									1				1		1					2021
87S	1	1		1	1				1													2022
88S	1	1							1		1											2022
89S	1	1		1					1		1											2022
90S	1	3			1						1								1			2022
91S	1	1			1				1													2022
92S	1	1			1				1													2023
93S	1	1	1						1													2023
94S	1	1	1	1					1		1											2023
95S	1	1		1					1			1										2023
96S	1	1						1	1													2023

			Number of Serious Injuries by Emphasis Area																		
			High Risk Behavior						Crash Type		Road Users							Other Monitored Emphasis Areas			
Collision No.	Serious Injuries per Crash	Vehicles per Crash	Impairment Involved	Speeding Involved	Distraction Involved	Unrestrained Occupants	Unlicensed Driver Involved	Drowsy Driver Involved	Lane Departure	Intersection Related	Young Drivers 16-25 Involved	Motorcyclists	Older Drivers 70+ Involved	Heavy Truck Involved	Pedestrians	Bicyclists	Active Transportation Users	Wildlife/Domestic Animal	Workzone	Vehicle-Train	School Bus Involved	Year
97S	2	3	2			2			2		2											2023
98S	1	1										1						1				2024
99S	1	2								1	1		1									2024
100S	1	1		1		1			1													2024
	114	132	28	48	29	21	0	13	78	13	38	32	11	0	6	3	9	3	1	1	1	

APPENDIX B

EMPHASIS AREA COMPARISON

Top 3 Emphasis Areas Co-Contributing in Traffic Fatalities (Data Range 2005 to 2024)			
Factor	1	2	3
Impairment Involved	Lane Departure (71%)	Motorcyclists (43%)	Speeding, Unrestrained (29%)
Speeding Involved	Lane Departure (89%)	Motorcyclists (33%)	Impairment (22%)
Distraction Involved	Young Drivers 16-25, Active Transportation (63%)	Lane Departure (38%)	Motorcyclists (25%)
Unrestrained Occupants	Lane Departure (75%)	Impairment (50%)	Speeding (25%)
Unlicensed Driver Involved	Insufficient Data	Insufficient Data	Insufficient Data
Drowsy Driver Involved	Older Driver 70+, Lane Departure (100%)	None	None
Lane Departure	Speeding (44%)	Motorcyclists (33%)	Young Drivers 16-25, Impairment (28%)
Intersection Related	Young Drivers 16-25, Older Drivers 70+ (100%)	None	None
Young Drivers 16-25 Involved	Distraction, Lane Departure (50%)	Older Drivers 70+ (30%)	Intersection, Heavy Trucks, Active Transportation (20%)
Motorcyclists	Lane Departure (75%)	Impairment, Speeding, (38%)	Distraction (25%)
Older Drivers 70+ Involved	Young Drivers 16-25 (60%)	Lane Departure & Intersection (40%)	Speeding, Dstraction, Drowsy, Motorcyclists (20%)
Heavy Truck Involved	Young Drivers 16-25, Lane Departure (100%)	Speeding (50%)	None
Active Transportation Users	Distraction (100%)	Young Drivers 16-25 (40%)	Impairment, Speeding (20%)
Wildlife	Motorcyclists (100%)	None	None
Work Zone	Motorcyclists (100%)	None	None
Vehicle-Train	None	None	None
School Bus Involved	None	None	None

Top 3 Emphasis Areas Co-Contributing in Traffic Serious Injuries (2005 to 2024)			
Factor	1	2	3
Impairment Involved	Lane Departure (100%)	Speeding (61%)	Young Drivers 16-25 (39%)
Speeding Involved	Lane Departure (88%)	Young Drivers 16-25 (48%)	Impairment (35%)
Distraction Involved	Lane Departure (66%)	Speeding (31%)	Young Drivers 16-25 (28%)
Unrestrained Occupants	Lane Departure (90%)	Speeding (57%)	Impairment (48%)
Unlicensed Driver Involved	Insufficient Data	Insufficient Data	Insufficient Data
Drowsy Driver Involved	Lane Departure (92%)	Unrestrained (38%)	Young Drivers 16-25 (31%)
Lane Departure	Speeding (54%)	Young Drivers 16-25 (42%)	Impairment (36%)
Intersection Related	Motorcyclists (54%)	Older Drivers 70+ (38%)	Speeding (31%)
Young Drivers 16-25 Involved	Lane Departure (87%)	Speeding (61%)	Impairment (29%)
Motorcyclists	Lane Departure, Speeding (41%)	Intersection (22%)	Young Drivers 16-25 (19%)
Older Drivers 70+ Involved	Motorcyclists, Intersection (45%)	Distraction (36%)	Speed, Unrestrained, Lane Depart, Young, Active Transportation, Trains, School Bus (9%)
Heavy Truck Involved	None	None	None
Active Transportation Users	Distraction (56%)	Young Drivers 16-25, Intersection (22%)	Older Drivers 70+, Lane Departure (11%)
Wildlife	Motorcyclists (100%)	None	None
Workzone	Young Drivers 16-25, Distraction (100%)	None	None
Vehicle-Train	Older Drivers 70+, Intersection (100%)	None	None
School Bus Involved	Older Drivers 70+, Distraction (100%)	None	None

APPENDIX C

CRASHES BY:

ROAD NAME/FUNCTIONAL CLASSIFICATION/POSTED SPEED

FATALITIES BY ROAD NAME/CLASSIFICATION/POSTED SPEED

Road Name	No. of Fatalities	Rural Major Collector	Rural Minor Collector	Rural Minor Arterial	Rural Local Access	Urban Minor Arterial	Urban Major Collector	Urban Local Access	Unknown	15 mph	25 mph	30 mph	35 mph	40 mph	45 mph	50 mph	No Speed
Apple Acres	1		1													1	
Boetzkes Ave	1				1						1						
Camas Creek Rd	1				1							1					
Chiwawa Loop Rd	2	2											2				
Chumstick Hwy	3	2		1												3	
Dixie Ln	1							1					1				
Entiat River Rd	6	6													6		
Icicle Rd	1	1											1				
Klate Rd	1				1						1						
Malaga-Alcoa Hwy	3					2	1							1		2	
Manson Blvd	1						1				1						
S. Lakeshore Rd	1	1													1		
Squilchuck Rd	2	2													1	1	
Stine Hill Rd	1	1													1		
Sunitsch Canyon Rd	1				1								1				
W Malaga Rd	3	3												2	1		
	29	18	1	1	4	2	2	1	0	0	3	1	5	3	10	7	0
		62.07%	3.45%	3.45%	13.79%	6.90%	6.90%	3.45%	0.00%	0.00%	10.34%	3.45%	17.24%	10.34%	34.48%	24.14%	0.00%

DATA range 1/1/2005 to 12/31/2024

SERIOUS INJURIES BY ROAD NAME/CLASSIFICATION/POSTED SPEED

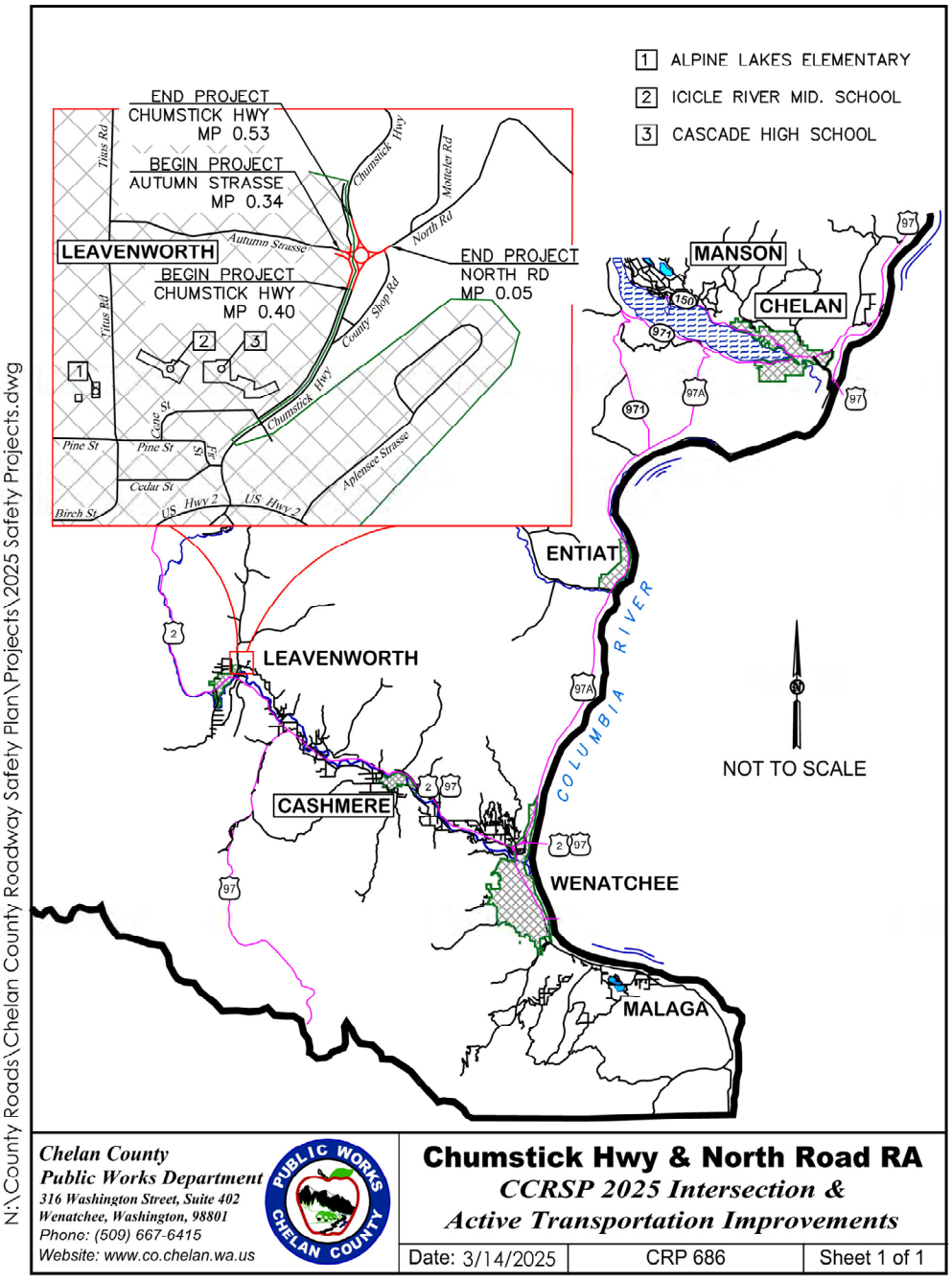
Road Name	No. of Serious Injuries	Rural Major Collector	Rural Minor Collector	Rural Minor Arterial	Rural Local Access	Urban Minor Arterial	Urban Major Collector	Urban Local Access	Unknown	15 mph	25 mph	30 mph	35 mph	40 mph	45 mph	50 mph	No Speed
American Fruit Rd	1						1				1						
Bear Mountain Rd	1				1					1							
Beaver Valley Rd	3	3									1		1			1	
Boodry St	1							1			1						
Boyd Rd	2	2											1	1			
Butler Rd	1				1						1						
Camas Creek Rd	1				1							1					
Campbell Rd	1				1								1				
Chiwawa Loop Rd	2	2											2				
Chiwawa River Rd	1				1								1				
Chumstick Hwy	15	13		2										1	3	11	
Dixie Ln	1							1			1						
E. Leavenworth Rd	1	1											1				
Easy St	4	3				1								4			
Entiat River Rd	7	7													6	1	
Grade Creek Rd	1				1						1						
Halvorson Canyon Rd	1				1						1						
Icicle Rd	1	1											1				
Josephine Ave	1				1						1						
Klate Rd	1				1						1						
Malaga Alcoa Hwy	9	5				4								2		7	
Manson Blvd	1	1											1				
Mission Creek Rd	4	1	3								1		3				
Mission Ridge Rd	2		2								1		1				
Nahahum Canyon Rd	2				2							2					
North Rd	1	1											1				
N Dryden Rd	1	1											1				
Olalla Canyon Rd	1				1								1				
Old Blewett Hwy	1				1												1
Old Monitor Rd	1		1										1				
River Rd	2		2										2				
S Lakeshore Rd	2	2											1		1		
S Mission St	2					2							2				
Spring St	1				1						1						
Squilchuck Rd	11	4	3	2		2							1		7	3	
Stemilt Creek Rd	2		2													2	
Stemilt Loop Rd	2		2										1		1		
Stine Hill Rd	1	1													1		
Sunset Hwy	1	1											1				
S. Wenatchee Ave	1							1			1						
Tarpiscan Rd	1				1								1				
Wapato Lake Rd	4	3					1						4				
Wapato Way	2							2			2						
Washington St	1				1							1					
Wenatchee Hts Rd	2		2										2				
W Malaga Rd	6	1					5						2		4		
Unknown	3								3			1	2				
	114	53 46.49%	17 14.91%	4	16 14.04%	9 7.89%	7 6.14%	5 4.39%	3 2.63%	1 0.88%	15 13.16%	5 4.39%	36 31.58%	8 7.02%	23 20.18%	25 21.93%	1 0.88%

DATA range 1/1/2005 to 12/31/2024

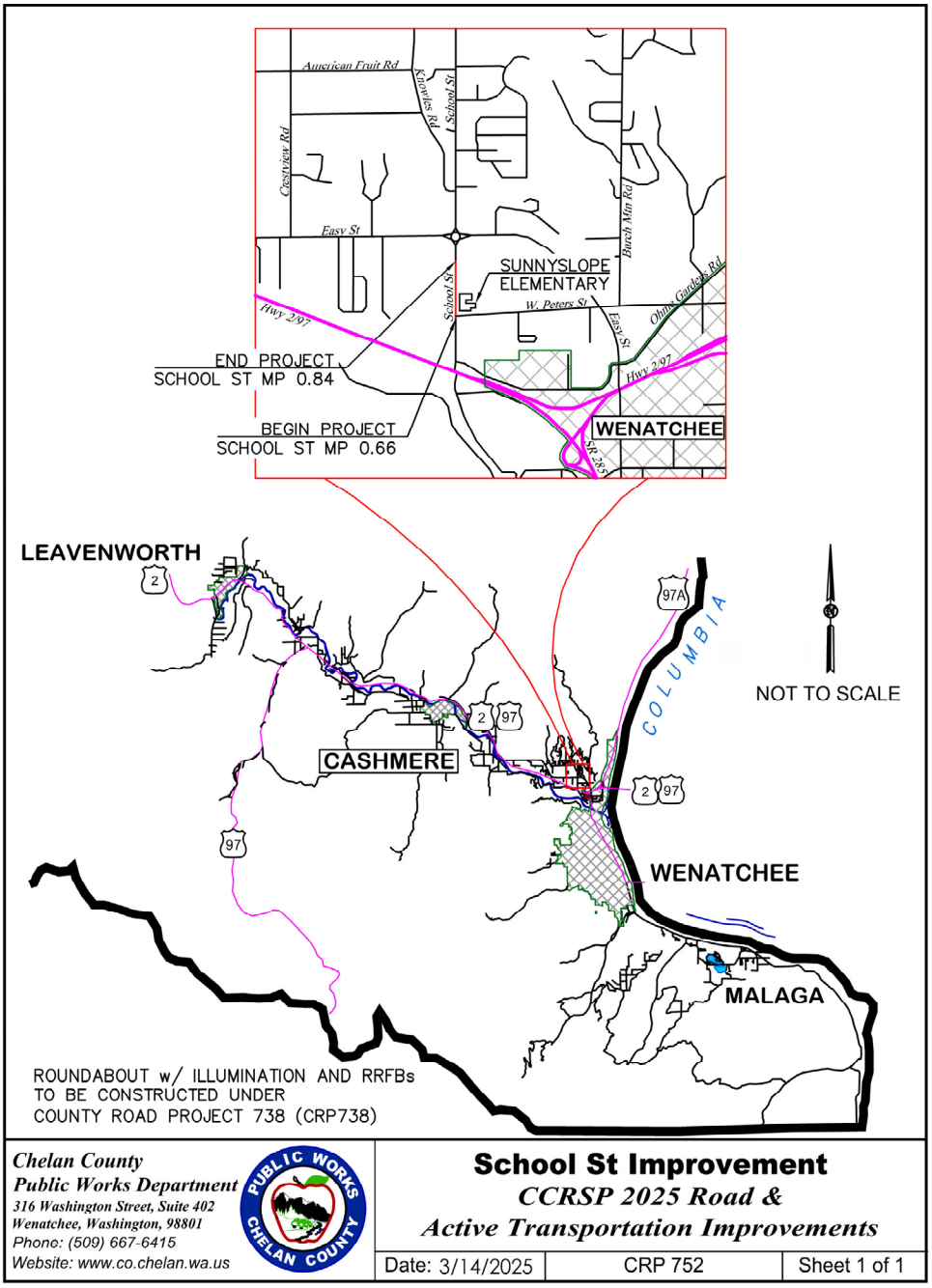
APPENDIX D

2025 PROJECTS

PROJECT No. 1


1 ALPINE LAKES ELEMENTARY
2 ICICLE RIVER MID. SCHOOL
3 CASCADE HIGH SCHOOL
END PROJECT
CHUMSTICK HWY
MP 0.53
BEGIN PROJECT
AUTUMN STRASSE
MP 0.34
BEGIN PROJECT
CHUMSTICK HWY
MP 0.40
END PROJECT
NORTH RD
MP 0.05
LEAVENWORTH
MANSON
CHELAN
ENTIAT
LEAVENWORTH
CASHMERE
WENATCHEE
MALAGA
COLUMBIA RIVER
NOT TO SCALE
Titus Rd
Chumstick Hwy
Motteler Rd
North Rd
Autumn Strasse
County Shop Rd
Crane St
Pine St
Cedar St
Birch St
US Hwy 2
Aplensee Strasse
N:\County Roads\Chelan County Roadway Safety Plan\Projects\2025 Safety Projects.dwg
Chelan County
Public Works Department
316 Washington Street, Suite 402
Wenatchee, Washington, 98801
Phone: (509) 667-6415
Website: www.co.chelan.wa.us
PUBLIC WORKS CHELAN COUNTY
Chumstick Hwy & North Road RA
CCRSP 2025 Intersection &
Active Transportation Improvements
Date: 3/14/2025
CRP 686
Sheet 1 of 1

PROJECT No. 2



N:\County Roads\Chelan County Roadway Safety Plan\Projects\2025 Safety Projects.dwg

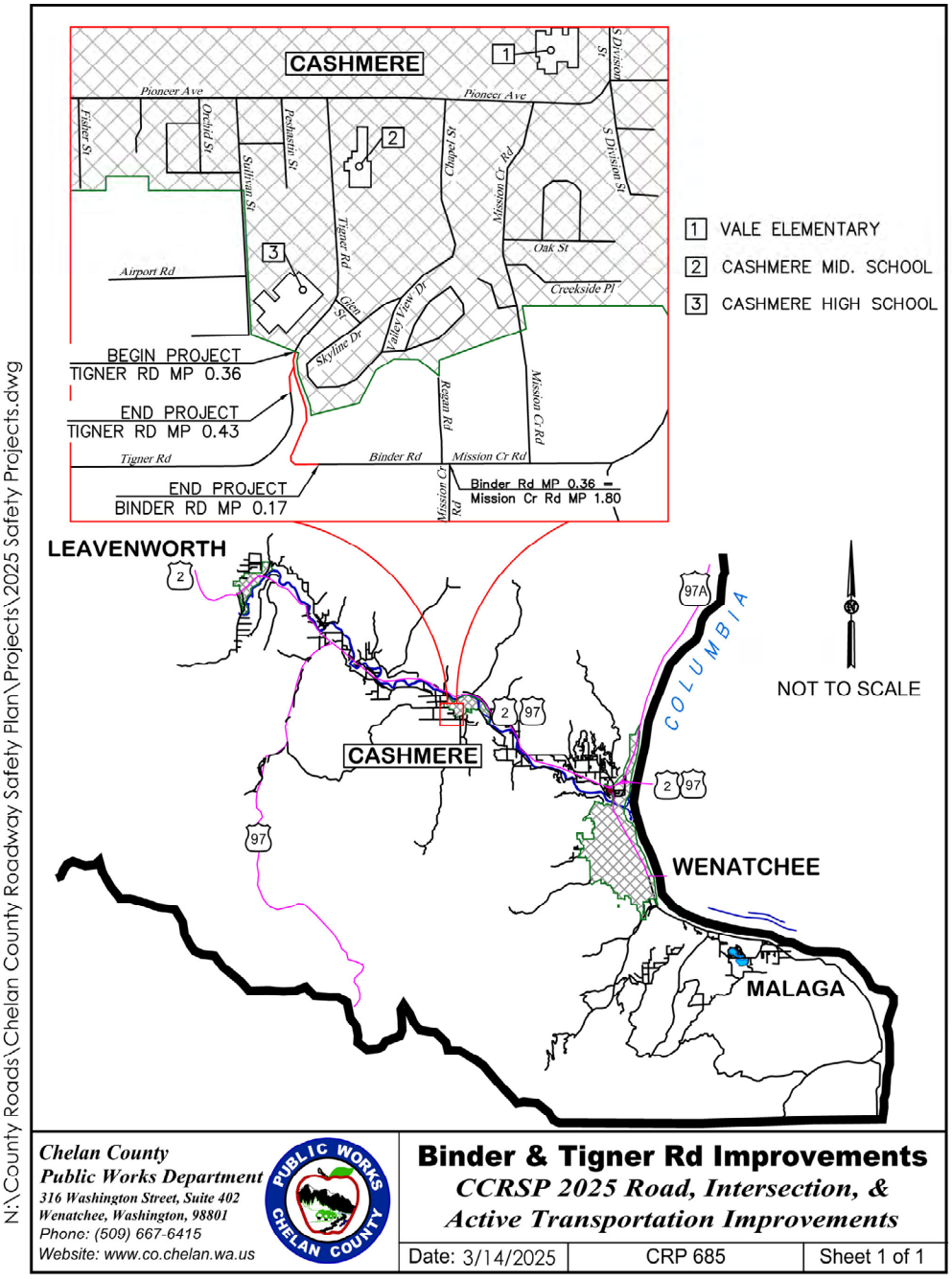
Chelan County
Public Works Department
316 Washington Street, Suite 402
Wenatchee, Washington, 98801
Phone: (509) 667-6415
Website: www.co.chelan.wa.us

PUBLIC WORKS CHELAN COUNTY

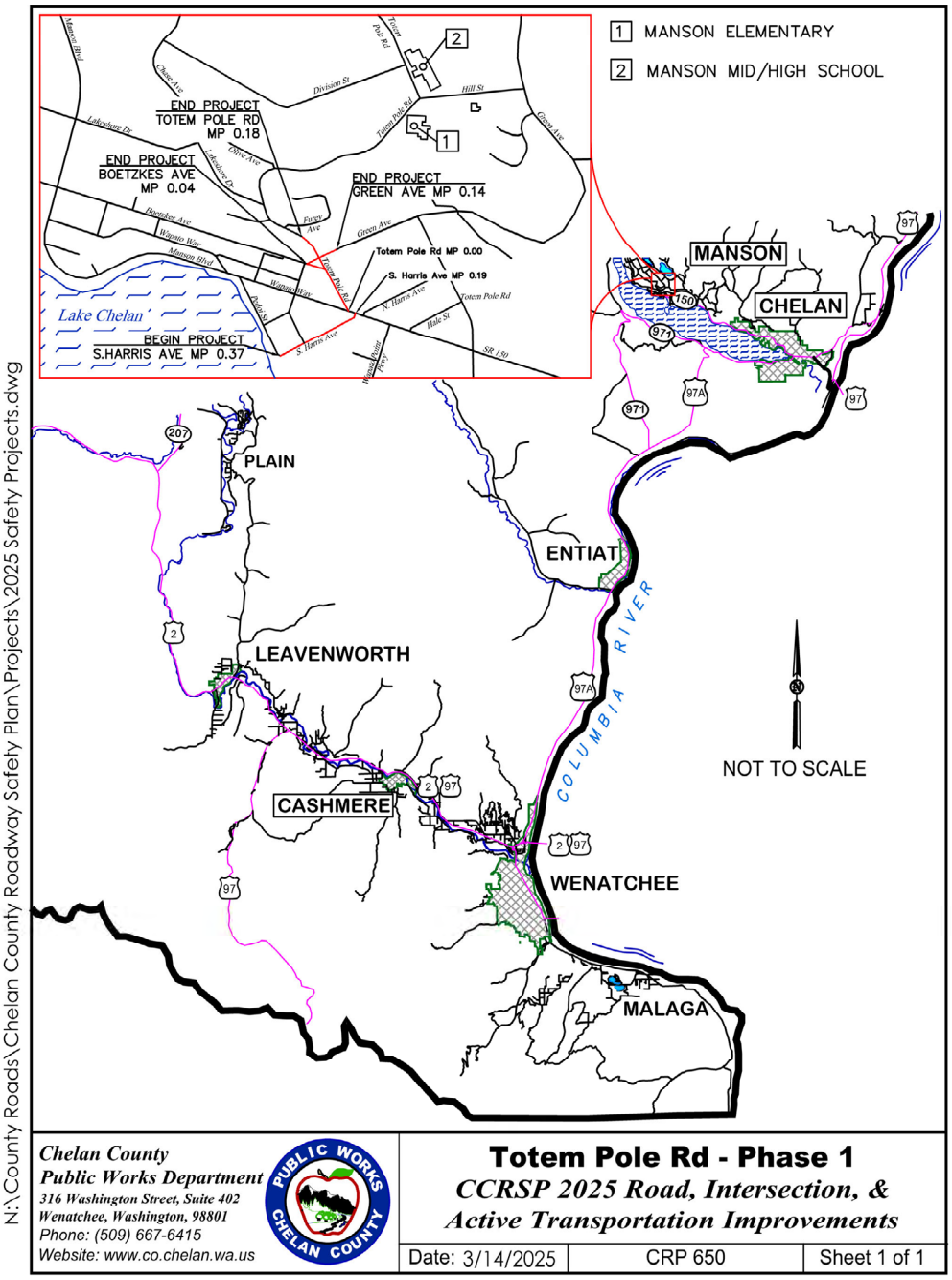
School St Improvement
CCRSP 2025 Road &
Active Transportation Improvements

Date: 3/14/2025	CRP 752	Sheet 1 of 1

PROJECT No. 3


CASHMERE
Pioneer Ave
Fisher St
Orchid St
Pedastin St
Sullivan St
Tigner Rd
Airport Rd
Glen St
Skyline Dr
Valley View Dr
Mission Cr Rd
Oak St
Creekside Pl
S Division St
1 VALE ELEMENTARY
2 CASHMERE MID. SCHOOL
3 CASHMERE HIGH SCHOOL
BEGIN PROJECT
TIGNER RD MP 0.36
END PROJECT
TIGNER RD MP 0.43
END PROJECT
BINDER RD MP 0.17
Binder Rd
Regan Rd
Binder Rd MP 0.36 =
Mission Cr Rd MP 1.80
LEAVENWORTH
CASHMERE
WENATCHEE
MALAGA
COLUMBIA
97A
97
2
NOT TO SCALE
N:\County Roads\Chelan County Roadway Safety Plan\Projects\2025 Safety Projects.dwg
Chelan County
Public Works Department
316 Washington Street, Suite 402
Wenatchee, Washington, 98801
Phone: (509) 667-6415
Website: www.co.chelan.wa.us
PUBLIC WORKS
CHELAN COUNTY
Binder & Tigner Rd Improvements
CCRSP 2025 Road, Intersection, &
Active Transportation Improvements
Date: 3/14/2025
CRP 685
Sheet 1 of 1

PROJECT No. 4


1 MANSON ELEMENTARY
2 MANSON MID/HIGH SCHOOL
END PROJECT TOTEM POLE RD MP 0.18
END PROJECT BOETZKES AVE MP 0.04
END PROJECT GREEN AVE MP 0.14
BEGIN PROJECT S.HARRIS AVE MP 0.37
Totem Pole Rd MP 0.00
S. Harris Ave MP 0.19
Lake Chelan
MANSON
CHELAN
PLAIN
ENTIAT
LEAVENWORTH
CASHMERE
WENATCHEE
MALAGA
COLUMBIA RIVER
NOT TO SCALE
N:\County Roads\Chelan County Roadway Safety Plan\Projects\2025 Safety Projects.dwg
Chelan County
Public Works Department
316 Washington Street, Suite 402
Wenatchee, Washington, 98801
Phone: (509) 667-6415
Website: www.co.chelan.wa.us
PUBLIC WORKS CHELAN COUNTY
Totem Pole Rd - Phase 1
CCRSP 2025 Road, Intersection, & Active Transportation Improvements
Date: 3/14/2025
CRP 650
Sheet 1 of 1

APPENDIX E

CURRENT PROJECTS

COMPLETED PROJECTS

FUTURE PROJECTS

CURRENT PROJECTS WITH SAFETY IMPROVEMENTS					
County Road Project No.	Project Name	Safety Improvement Description	Road No. (MP Limits)	Status	Expected Completion
FCD509	25-Mile Creek Culvert Replacement	Replace the culvert with a bridge, widen shoulders to accommodate bicycles	94710 (16.05 to 16.35)	In Design	September 2028
CRP 748	Squilchuck Rd Phase I	Reconstruct Roadway and widen, upgrade and install new guardail, upgrade signage	10070 (0.75 to 1.90)	In Design	Fall 2027
CRP743	South Lakeshore Road	Constructing wider lanes and shoulders for vehicles/bicycles and update Guardrail and End Terminals to current standards. Increase advanced curve warning sign sizes where warranted.	94710 (6.00 to 6.68)	In Design	Fall 2027
CRP 741	Countywide Guardrail Repair Program	Repair and upgrade damaged guardrail as damage occurs.	Various	In Design	On-Going
CRP 750	Chiwawa River Bridge	Replace Bridge Deck and upgrade rigid barrier	93300 (3.875 to 3.973)	In Design	Fall 2027
CRP738	Easy St and School St Intersection	Construct roundabout with pedestrian crossings to improve intersection safety.	94200 (5.08 to 5.20), 45890 (0.86 to 0.96)	In Design	Fall 2026
CRP650	Totem Pole Rd	Constructing wider lanes for vehicles and constructing sidewalks or shared-use path, and illumination for pedestrians/school	52690 (0.00 to 0.70)	In Design	Summer 2026

COMPLETED PROJECTS WITH SAFETY IMPROVEMENTS (Previous 5 Years)					
County Road Project No.	Project Name	Safety Improvement Description	Road No. (MP Limits)	Status	Completed
CRP746	Wenatchee Heights Rd Phase 2	Upgraded existing warning signs to larger sign size, upgraded guardrail & terminals to current standard	12990 (1.32 to 2.10)	Construction Complete	October 2024
CRP726	Goodwin Rd	Constructing wider lanes and shoulders for vehicles/bicycles and constructing sidewalks and illumination for pedestrians along Goodwin Rd, Sunset Hwy, and the intersection of Evergreen Rd.	28570 (0.00 to 0.14), 28860 (0.54 to 0.90), 92500(I/S)	Construction Complete	May 2024
CRP 693	West Cashmere Bridge Replacement	Constructing wider lanes and shoulders for vehicles/bicycles and constructing sidewalks and illumination for pedestrians along Goodwin Rd.	28570 (0.00 to 0.50)	Construction Complete	November 2023
CRP735	Chumstick Highway Phase V Preservation	Update Guardrail End Terminals to current standards. Increase advanced curve warning sign sizes.	93350 (5.15 to 6.60)	Construction Complete	October 2023
CRP740	Countywide Signing 2023	Install curve warning signs, install additional advanced curve warning signs, and upgrade existing advance curve warning signs to larger signs.	16800 (0.00 to 3.23), 11300 (0.00 to 10.20), 19390 (0.00 to 2.84), 10070 (0.00 to 7.02), 28860 (1.33 to 4.77), 93400 (0.00 to 5.33), 93350 (14.01 to 18.93)	Construction Complete	August 2023
CRP 725	Knowles Road Phase 2	Constructing wider lanes and shoulders for vehicles/bicycles and constructing sidwalks for pedestrians.	45650 (0.00 to 0.41)	Construction Complete	November 2022
CRP 733	Cascade Orchard Bridge Deck Preservation	Widened sidewalks on both sides of the bridge and provided ADA ramps to connect bridge walk to the road shoulder. Improved deck smoothness and friction for bicycles and vehicles.	93150 (0.80 to 0.88)	Construction Complete	November 2022
FCD503	Slide Ridge Culvert Replacement	Construct wider lanes and shoulders and update guardrail to current standards.	94710 (8.89 to 9.10)	Construction Complete	July 2022
CRP731	Countywide Signing Improvements - 2021	Install curve warning signs, install additional advanced curve warning signs, and upgrade existing advance curve warning signs to larger signs.	94710 (5.98 to 16.79), 95200 (1.11 to 4.26), 95100 (0.44 to 4.04), 56220 (0.80 to 3.31), 94470 (0.75 to 24.95)	Construction Complete	August 2021
CRP727	Mission Creek Road Preservation	Update Guardrail End Terminals to current standards. Increase advanced curvewarning sign sizes.	92410 (2.58 to 5.00)	Construction Complete	August 2021
CRP732	Countywide Barrier Terminal Improvements - 2021	Replace existing noncrashworthy terminals with crashworthy terminals on roads with 40mph posted speed limit. Focus primarily on leading end terminals.	11300 (4.83 to 5.24), 12990 (1.34 to 2.10), 93350 (7.90 to 12.32), 56220 (1.20 to 3.31), 95200 (0.68 to 3.20)	Construction Complete	July 2021

COMPLETED PROJECTS WITH SAFETY IMPROVEMENTS (Previous 5 Years)					
County Road Project No.	Project Name	Safety Improvement Description	Road No. (MP Limits)	Status	Completed
CRP702	Wenatchee Heights Rd	Constructed a wider shoulder in the uphill direction to improve bicycle use of the road. Updated guardrail terminals to current standard.	12990 (0.00 to 1.32)	Construction Complete	October 2020
CRP647	West Malaga Road Intersections	Constructed a left turn pockets for McDowney Rd and Golf Course Rd intersections with W. Malaga Rd.	16800 (0.20 to 0.50)	Construction Complete	June 2020
CRP720	Countywide Striping Improvements	Constructed 6" wide edge lines on roads with existing 4" wide edge lines. Entiat River (0 to 24.94), Mission Ridge (0 to 4.04), S. Lakeshore (5.99 to 16.46), Squilchuck (0 to 7.015), Stemilt Creek (0 to 2.95), W. Malaga (0 to 3.23), Beaver Valley (12.37 to 18.93), Boyd (0.74 to 3.31), Chiwawa Loop (0 to 3.13 and 7.35 to 8.58), Icicle (0 to 4.26), Malaga-Alcoa (0 to 10.2), Manson Blvd (0.68 to 3.2), Mission Creek (1.81 to 4.77), N. Dryden (0 to 1.7)	94470, 10080, 94710, 10070, 91190, 16800, 93350, 56220, 93300, 93150, 11300, 95200, 92410, 43010	Construction Complete	September 2019
CRP721	Countywide Signing Improvements	Constructed new curve warning signs and upgrade existing curve warning signs on roads that are too narrow for edgeline stripes.	92410 (4.77 to 8.00) Stemilt (0.00 to 8.78)	Construction Complete	September 2019

FUTURE PROJECTS WITH SAFETY IMPROVEMENTS					
Benefit vs. Cost	Project Name	Safety Improvement Description	Road No. (MP Limits)	Status	Expected Completion
	CRP686 Chumstick Hwy / North Rd Intersection Improvement	Construct Roundabout to accomodate motorists, bicyclists and pedestrians.	93350(0.40 to 0.50), 94310(0.00 to 0.03)	Scoping Complete	2028
	CRP752 School Street Pedestrian Improvements	Widen roadway to provide bike lanes, construct new sidewalk with buffer and midblock crossings	84955 (0.66 to 0.84)	Scoping Complete	2028
	CRP 685 Binder / Tigner Sidewalk	Constructing wider shoulders for bicyclists and constructing sidewalks for pedestrians.	27860 (0.00 to 0.17), 28000 (0.28 to 0.40)	Scoping Complete	2028
	CRP758 Knowles Rd Phase 1	Constructing wider lanes and shoulders for vehicles/bicycles and constructing sidwalks for pedestrians.	45650 (0.41 to 0.77)	Scoping	2028
	CRP757 Beaver Valley Rd 3R	Construct wider shoulders, improve road friction, and upgrade guardrail to current standards	93350 (16.60 to 18.93)	Scoping	2028
	CRP756 Chumstick Hwy PhaseVI	Upgrade guardrail and improve road friction	93350 (11.10 to 12.40)	Scoping	2029
	CRP760 Lake Wenatchee Hwy 3R	Construct wider shoulders, improve road friction, and upgrade guardrail to current standards	93400 (0.00 to 1.20)	Scoping	2029
13.6	Mission Ridge Guardrail	Install guardrail adjacent to embankments by extending two existing guardrail runs and installing one new guardrail run.	10080 (0.00 to 4.04)	Scoping	2027
7.8	Countywide Barrier Terminal Improvements 2027	Replace existing noncrashworthy terminals with crashworthy terminals on roads with 45mph posted speed limit. Focus primarily on leading end terminals.	16800 (0.00 to 0.38), 16800 (0.51 to 2.98), 10070 (3.95 to 6.93), 28650 (1.39 to 4.74), 93350 (14.08 to 15.78), 94470 (0.37 to 22.59)	Scoping	2027
	Chumstick Highway Rehabilitation	Constructing wider lanes and shoulders for vehicles/bicycles and updating Guardrail and End Terminals to current standards. Increase advanced curve warning sign sizes where warranted.	93350 (6.60 to 18.94)	Scoping	2028
	South Wenatchee Pedestrian Improvements Phase III	Provide bike lanes, construct new sidewalk	66599 (0.00 to 0.32)	Scoping	2029
0.8	Countywide Barrier Terminal Improvements 2029	Replace existing noncrashworthy terminals with crashworthy terminals on roads with 45mph posted speed limit. Focus primarily on leading end terminals.	94710 (6.63 to 8.33), 94710 (10.02 to 16.04)	Scoping	2029

FUTURE PROJECTS WITH SAFETY IMPROVEMENTS					
Benefit vs. Cost	Project Name	Safety Improvement Description	Road No. (MP Limits)	Status	Expected Completion
	Countywide Barrier Terminal Improvements 2031	Replace existing noncrashworthy terminals with crashworthy terminals on roads with 50mph posted speed limit. Focus primarily on trailing end terminals.	11300 (0.77 to 4.83), 11300 (5.24 to 10.20), 19390 (0.00 to 2.85), 93350 (0.76 to 7.90), 93350 (15.78 to 18.93), 93400 (0.00 to 5.32), 94830 (0.00 to 0.74), 59050 (0.55 to 6.60)	Scoping	2031
	North Road Phase II	Constructing wider lanes and shoulders for vehicles/bicycles and update Guardrail and End Terminals to current standards. Increase advanced curve warning sign sizes where warranted.	94310 (0.53 to 2.64)	Scoping	2032
	Countywide Barrier Terminal Improvements 2033	Replace existing noncrashworthy terminals with crashworthy terminals on roads with 45mph posted speed limit. Focus primarily on trailing end terminals.	16800 (0.00 to 0.38), 16800 (0.51 to 2.98), 10070 (3.95 to 6.93), 28650 (1.39 to 4.74), 93350 (14.08 to 15.78), 94470 (0.37 to 22.59)	Scoping	2033
	Countywide Barrier Terminal Improvements 2035	Replace existing noncrashworthy terminals with crashworthy terminals on roads with 45mph posted speed limit. Focus primarily on trailing end terminals.	94710 (6.63 to 8.33), 94710 (10.02 to 16.04)	Scoping	2035
	Countywide Barrier Terminal Improvements 2037	Replace existing noncrashworthy terminals with crashworthy terminals on roads with 40mph posted speed limit. Focus primarily on trailing end terminals.	11300 (4.83 to 5.24), 12990 (1.34 to 2.10), 93350 (7.90 to 12.32), 56220 (1.20 to 3.31), 95200 (0.68 to 3.20)	Scoping	2037

Appendix B: Policy/ Program Assessment Memorandum

CHELAN COUNTY SAFETY ACTION PLAN

DATE: June 13, 2025

TO: Chelan County

FROM: Justin Sheets | DKS Associates
Nikki Davis | DKS Associates

SUBJECT: Draft Policy / Program Assessment Project #25302-000

PURPOSE

The Chelan County Policy and Program Assessment reviews 11 key transportation-related plans and policies to support the development of a comprehensive Safety Action Plan. This review highlights current safety priorities across roadway infrastructure, multimodal access, ADA compliance, and public works efforts. It identifies where safety is well integrated, such as in crash reduction goals, and multimodal planning, and where gaps exist, including the possibility of outdated standards, and under-addressed behavioral risks. The assessment also evaluates how safety is prioritized in funding decisions and offers a foundation for engaging stakeholders in more inclusive, transparent conversations.

Importantly, the review aligns Chelan County's safety efforts with the FHWA Safe System Approach and Washington State's Target Zero goal, reinforcing a proactive, system-wide strategy to reduce serious injuries and fatalities. It also supports the identification and enhancement of non-infrastructure strategies—such as education, enforcement, and outreach—ensuring they are community-informed, data-driven, and equitably applied. By building on existing efforts and addressing identified gaps, the County is positioned to advance a more responsive, effective, and locally grounded transportation safety strategy.

Table 1 provides a summary list of the plans and policies reviewed, while Appendix A offers a detailed review of each document along with potential transportation safety improvements for future updates. Appendix B outlines additional non-infrastructure strategies that Chelan County may consider implementing over time, as resources and funding become available.

Table 1. Document Review List

Agency	Document	Status
Chelan County	Chelan County Roadway Safety Plan	Completed 2025
Chelan County Public Works	Annual Bridge Report 2024	Completed 2024
Chelan County Public Works	Complete Streets County Code DRAFT	updating 2025
Chelan County	ADA Self-Evaluation Transition Plan	Draft 2024
Chelan County	Public Right of Way Facilities - A supplement to Chelan County ADA Transition Plan	Draft 2024
Chelan County	Transportation Element	Developed 2017
Chelan County	Transportation Element Appendix A-E	Developed 2017
Chelan County	Transportation Element Appendix F-H	Developed 2017
Chelan County	Chelan County Multimodal Pathways Plan	Completed Oct. 2021
Chelan County Flood Control Zone District	Comprehensive Flood Hazard Management Plan	Completed Oct 2017
Chelan-Douglas Transportation Council (CDTC)	Chelan-Douglas Regional Transportation Plan Update	Completed 2020
Chelan County	Draft Automated Traffic Safety Cameras Code	Drafted 2025
Chelan County	Chapter 9.03 Traffic Safety Enhancement Program	Adopted 2024
Chelan County	Title 15 Development Standards	Various

INFORMING SAFETY ACTION PLAN THROUGH REVIEW

Reviewing existing plans, programs, and policies is a critical step in selecting effective non-infrastructure strategies for a transportation safety action plan. These reviews uncover insights that shape which behavioral, educational, enforcement, and programmatic strategies will have the greatest impact.

UNDERSTANDING EXISTING FRAMEWORKS AND COMMITMENTS

Looking at what's already in place helps the County understand existing safety goals. Many local plans are already looking at reducing serious crashes, keeping school bus routes safe, or helping drivers see better at night. In rural areas, it's also important to think about people walking or biking along busy roads, and how to share the road with farm equipment. By knowing these frameworks, the county can make sure new safety efforts support and strengthen those priorities.

IDENTIFYING GAPS AND MISSED OPPORTUNITIES

Reviewing existing plans helps uncover where safety is not fully addressed, where outdated design standards may still be in use, and where mobility has been prioritized over safety. Addressing these gaps ensures future strategies are aligned with modern safety principles and serve all road users more effectively.

ASSESSING PRIORITIZATION CRITERIA

Reviewing how transportation projects are prioritized reveals whether safety is a core factor in decision-making. It also shows if vulnerable road users—like pedestrians, bicyclists, or older adults—are being considered, and how crash data, risk levels, and community demographics influence funding and project selection. This ensures that future investments better reflect safety needs and equitable outcomes.

INFORMING STAKEHOLDER AND PUBLIC ENGAGEMENT

Reviewing existing plans provides a clear starting point for open conversations with the public and stakeholders. It highlights what's working, what's missing, and creates opportunities for communities to help shape safety goals that are more inclusive, responsive, and aligned with local needs.

INFORMING NON-INFRASTRUCTURE STRATEGIES

ALIGNMENT WITH FHWA'S SAFE SYSTEM APPROACH AND WASHINGTON STATE TARGET ZERO

Aligning non-infrastructure strategies with the Safe System Approach[1] and Washington State's Target Zero[2] reinforces a proactive, system-wide focus on reducing risk for all road users, especially vulnerable populations. This alignment emphasizes shared responsibility, demographically aware access, safe speeds, and responsible road use. Reviewing existing frameworks helps identify opportunities to expand and strengthen non-infrastructure efforts—such as education, enforcement, and outreach—ensuring they are data-driven, community-informed, and fully integrated into broader safety goals.

IDENTIFYING EXISTING NON-INFRASTRUCTURE EFFORTS TO BUILD UPON

Reviewing county-level policies, plans and programs helps highlight non-infrastructure safety efforts already in place, such as parks and pathway design standards, development standards, and law enforcement initiatives. This review helps identify which strategies are effective, where there are gaps, and how existing efforts can be expanded or better coordinated. It ensures the Safety Action Plan builds on local strengths while directing resources to the areas of greatest need.

UNCOVERING GAPS THAT NON-INFRASTRUCTURE STRATEGIES CAN ADDRESS

Additionally, these reviews identify areas where infrastructure improvements alone are not enough to address safety concerns. These gaps often include behavioral risks like speeding, distracted driving, or limited driver awareness of rural road conditions. By uncovering these policy shortfalls, Chelan County can prioritize non-infrastructure strategies, such as education, enforcement, and targeted outreach, that directly address human behavior and support a more comprehensive, system-wide approach to safety.

SUPPORT DEMOGRAPHIC STRATEGY SELECTION

Reviewing existing transportation policies and plans helps ensure safety strategies are inclusive and responsive to the needs of all community members, including those at higher risk, such as

[1] https://highways.dot.gov/safety/zero-deaths
[2] https://targetzero.com/

older adults, youth, people with disabilities, and those living in underserved or remote areas. This process helps identify where certain populations may be overlooked and that non-infrastructure strategies, like education and outreach, are tailored to reflect the unique demographics and travel behaviors of Chelan County.

CONCLUSION

The review of Chelan County's existing transportation plans, policies, and programs forms a critical foundation for shaping effective, demographically aware, and data-informed non-infrastructure strategies. This assessment identifies current safety goals, reveals gaps in policy coverage, and evaluates how safety is prioritized across decision-making processes. Aligning these findings with the Safe System Approach and Washington State's Target Zero framework ensures that future strategies not only address infrastructure needs, but also strengthen education, enforcement, and outreach efforts that reduce risk for all users, especially the most vulnerable. By building on what is already in place and identifying where additional support is needed, Chelan County is well-positioned to implement a comprehensive safety action plan that reflects local values, responds to real-world risks, and advances toward zero roadway fatalities and serious injuries

Safety Action Plan

COUNTY OF CHELAN

Prepared for:
Chelan County
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Reference Number	Agency	Document	Status
1	Chelan County	**Chelan County Roadway Safety Plan**	Completed 2025
2	Chelan County Public Works	**Annual Bridge Report 2024**	Completed 2024
3	Chelan County Public Works	**Complete Streets County Code DRAFT**	updating 2025
4	Chelan County	**ADA Self-Evaluation Transition Plan**	Draft 2024
4.1	Chelan County	**Public Right of Way Facilities - A supplement to Chelan County ADA Transition Plan**	Draft 2024
5	Chelan County	**Transportation Element**	Developed 2017
5.1	Chelan County	**Transportation Element Appendix A-E**	Developed 2017
5.2	Chelan County	**Transportation Element Appendix F-H**	Developed 2017
6	Chelan-Douglas Transportation Council (CDTC)	**Chelan-Douglas Regional Transportation Plan Update**	Completed 2020
7	Chelan County	**Draft Automated Traffic Safety Cameras Code**	Drafted 2025
8	Chelan County	**Chapter 9.03 Traffic Safety Enhancement Program**	Adopted 2013
9	Chelan County	**Title 15 Development Standards**	Various

1. Chelan County Roadway Safety Plan
Status: Completed 2025

Description

The 2025 Chelan County Roadway Safety Plan is a comprehensive, data-driven framework designed to eliminate fatal and serious injury crashes on county roads by 2030, and aligned with Washington State's Target Zero initiative. It builds on previous editions (beginning in 2017) and provides detailed strategies, analysis, and projects based on crash data and proven countermeasures.

How the document prioritizes safety

The Plan places transportation safety at the center of its mission, using a comprehensive, data-driven, and proactive approach rooted in the Safe System framework and aligned with Washington State's Target Zero goal of eliminating fatal and serious injury crashes by 2030.

Safety as the Primary Goal

The plan explicitly defines its core mission as:

• "Achieving zero traffic deaths and serious injuries on Chelan County roads by 2030."

This goal aligns with the statewide Target Zero plan and forms the foundation for all strategies, performance evaluations, and funding decisions.

Emphasis on Data-Driven Safety Prioritization

Using detailed crash data analysis to:

• Identify leading causes of fatal and serious injury (FSI) crashes.
• Map high-risk corridors and crash clusters.
• Determine which behaviors and roadway types present the greatest danger.
• Tiered Safety Emphasis Areas

Safe System Approach Integration

The plan embraces the five Safe System elements.

• Safe Roads – Engineering solutions like rumble strips, guardrails, wider shoulders, and intersection redesigns.
• Safe Speeds – Use of traffic calming measures, signage, and road geometry modifications.
• Safe Vehicles – Coordination with state partners to encourage crash avoidance technology.
• Post-Crash Care – Enhanced EMS coordination to improve trauma response and survival rates.

Project Prioritization Based on Safety Impact

Projects are selected not just by need or infrastructure condition, but by their potential to reduce fatal and serious injury crashes.

How the document prioritizes safety

Multidisciplinary Safety Strategy

Safety is addressed through multiple channels:

• Engineering: Redesigns and retrofits of roads, intersections, bridges.
• Education: Public campaigns to increase awareness of risks and encourage safe behaviors.
• Enforcement: Data-informed law enforcement targeting high-risk violations (e.g., DUI, excessive speed).
• EMS: Enhancing emergency response through improved access and communication.
• Policy & Leadership: Code updates and budget alignment to support systemic safety planning.

Continuous Evaluation of Safety Outcomes

1. Chelan County Roadway Safety Plan
Status: Completed 2025

• The County will track crash trends annually, using a rolling 5-year window to reassess priority crash types.
• Performance will be evaluated based on reductions in FSI crashes, not just total collisions.
• The plan supports adaptive management, allowing it to evolve based on new crash data, community input, and emerging technologies.

Funding Strategy Aligned with Safety Goals

The plan is designed to maximize access to state and federal safety grants, including:
• HSIP (Highway Safety Improvement Program), Safe Streets and Roads for All (SS4A) and TIB grants
• Pedestrian/Bicycle Program

Potential Improvements

While the Plan already has a strong, data-driven framework it can be enhanced through the following:

Consider Needs in Safety Investments

• Prioritize safety improvements in communities with limited access to safe mobility options, such as rural areas or aging populations where alternative modes of transporation are utilized

Expand Community Engagement for Localized Safety Insights

• Host regular community safety forums or partner with schools, and fire departments for locally informed feedback.

Consider including an advanced Speed Management Policy and Tools

Adopt context-sensitive speed management guidelines, including:
• Lowering speed limits near pedestrian generators such as churches, parks, schools or remote areas.
• Allow for temporary reductions during peak farm seasons, or tourist traffic spikes (e.g., snow season or lake access roads)
• Engineering-based solutions (e.g., road narrowing, raised crossings).
• Update speed policy to prioritize Safe System-compatible speeds based on conflict risk, land use context .
• Consider introducing a feasible scoring matrix to include selected and reasonable traffic calming measures

Set Plan Updates

• Specify plan update cycles
• Align with WSDOT Highway Safety Improvement Program funding opportunities

2. Annual Bridge Report 2024
Status: Completed 2024

Description

The report summarizes the status, maintenance and improvements of bridges within the Chelan Co transportation network, providing descriptions of completed, existing and recommended projects and programs including inventory
The program includes three main goals:

•Keep bridges open and safe for public use

•Preserve bridge infrastructure.

•Replace bridges with reliable new structures when repair and rehablitation is feasible or practicable.

This program is a proactive approach to preserve Chelan County's bridges and keep the transportation network safe and operational.

How the document prioritizes safety

The primary goals of the Bridge Program include:

Safety as a Primary Program Goal

•Goal 1: Keep the bridges open and safe for public use.

Rigorous Inspection Program for Risk Mitigation

•Extend bridge lifespane through inspections, repairs, and maintenance

• Preforms Primary and Condition Safety Inspections for structures crossing over public highways, which could

Load Ratings and Restrictions to Protect Users

The report provides load ratings for each bridge to determine its ability to safely carry legal and overload vehicles.

Scour Risk Management and High-Flow Safety

• These measures reduce the likelihood of sudden structural failures during high-water events.

Maintenance and Rehabilitation to Extend Safe Service Life

• Maintenance work—such as joint sealing, concrete patching, debris removal, and corrosion control—is framed as essential for preventing conditions that lead to unsafe deterioration.

Risk-Informed Project Selection

• Decisions are made not just for asset preservation but to eliminate user risk through proactive capital planning

Short Span and Pedestrian Bridge Monitoring

users. These include:

• Regular condition inspections by field staff.

• Maintenance for issues like plank replacement and railing repairs.

• Safety oversight for non-NBI structures crossing roadways, such as utility pipes or railroad overpasses.

These inspections ensure non-vehicular bridges remain safe and structurally sound.

2. Annual Bridge Report 2024
Status: Completed 2024

Potential Improvements

While the document is already strong in foundational inspection practices and risk management it could be enhanced by incorporating more proactive, performance-driven, and equity-aware safety strategies. These improvements would not only help the County stay ahead of structural risks but also align its program more closely with federal Safe System principles, grant program expectations (e.g., SS4A), and evolving public needs. Additions to

Include a Formal Safety Risk Scoring System for Project Prioritization

- Consider developing a safety-weighted scoring system that prioritizes:
  - Bridges near schools, hospitals, or emergency routes.
  - Structures with documented crash history or structural vulnerabilities.
  - Routes serving vulnerable users (e.g., pedestrians, cyclists, rural transit).

Expand Analysis of Crash and Incident Data

- Incorporate collision data (especially involving bridge approaches or narrow structures) into inspection findings.
- Flag bridges where roadway geometry, signage, or railing may effect to crash frequency.

Improve Integration of bridge location in Safety Decisions

- Prioritize safety improvements in rural or low-income areas where bridge alternatives are limited.

3. Complete Streets Program
Status: DRAFT 2025

Description

The Chelan County Complete Streets Program – Draft County Code Chapter 8.27 outlines a new ordinance intended
The ordinance establishes Chelan County's commitment to planning, designing, and constructing streets that

- Pedestrians
- Bicyclists
- Motorists
- Transit users

This aligns the County with the state's Complete Streets funding requirements, allowing it to compete for financial support from the Washington State Transportation Improvement Board.

How the document prioritizes safety

The document prioritizes transportation safety by embedding it as a core objective throughout the planning, design,

Safety as a Stated Core Principle

Section 8.27.020(2) directly identifies safety as a foundational principle:
"To improve safety by designing roads to accommodate all users."
This includes:

- Pedestrians
- Bicyclists
- Motorists
- Public transportation users

By integrating safety into its Complete Streets framework, the County commits to reducing conflicts, minimizing risk, and designing roadways that serve people of all ages and abilities, not just vehicles.

Multimodal Design for Safer Travel

The ordinance promotes multimodal facility design (e.g., sidewalks, bike lanes, transit access) as a strategy to:

- Encourage active modes of travel (walking, biking, transit),
- Separate modes where appropriate to reduce conflict,
- Increase visibility and predictability for all road users.

This supports a Safe System Approach, which reduces both the likelihood and severity of crashes by accommodating

How the document prioritizes safety

Context-Sensitive Safety Applications

Section 8.27.030(3) encourages context-sensitive design standards, balancing user safety with surrounding land uses and road types:

- Rural areas are not required to include Complete Streets elements unless safety-related multimodal connections
- Urban and suburban areas (e.g., UGAs, classified arterials and collectors) are expected to integrate Complete Streets elements, improving safety in more densely populated environments with greater exposure risk.

This tiered approach helps apply safety improvements where they're most needed while respecting local conditions.

Project Review & Exceptions Based on Safety Considerations

Section 8.27.030(4) allows projects to be exempted from Complete Streets requirements only under certain

3. Complete Streets Program
Status: DRAFT 2025

• Sound engineering principles (RCW 47.04.320)
• The absence of need, as defined by safety priorities in the County's adopted Transportation Element
• A requirement that exceptions cannot create adverse safety impacts unless such impacts are unavoidable and

This reinforces that safety must be actively evaluated before any design element is excluded.

Annual Safety Accountability through Reporting

Section 8.27.030(5) mandates that the County Engineer report annually on:

• How Complete Streets principles—including safety—were applied to TIP projects
• The rationale for any exemptions, particularly if safety elements were not included

This ensures transparency and ongoing accountability in prioritizing safe design across projects.

Phased Safety Integration in Construction (Section 8.27.040)

The ordinance allows safety improvements to be implemented incrementally through:

• Planning and programming
• Design and construction
• Maintenance and operations

immediately feasible—allowing early interventions like striping, signage, or crossings that can significantly reduce crash risk.

Potential Improvements

While the current draft embeds safety as a guiding principle, it can go beyond policy statements to adopt more systematic, measurable, and enforceable safety practices, aligning more closely with state and federal Safe System principles and enhancing its competitiveness for grants such as SS4A and WSDOT Complete Streets Awards. Considerations can include:

Incorporating a Safety Performance Framework

Add language directing the County to track key safety performance indicators such as:

• Crashes involving pedestrians and bicyclists.
• Percentage of transportation projects that include physical safety features (e.g., curb extensions, median refuges).

Strengthen Design Standards with Safe System Principles

• Consider requiring alignment with Safe System Approach elements (e.g., speed management, user separation, forgiving road edges).
• Reference most current design guides that emphasize safety

Prioritize Projects Based on Safety Risk

Consider prioritizing Complete Streets improvements in:

• Areas with a history of pedestrian/bike crashes.
• Along corridors with known speed concerns and existing non-motorized transportation use.
• Gaps in the existing pedestrian/bike network that may be prone to unsafe user behaviors.

Non-Infrastructure Safety Strategies

Add support for education, enforcement, and encouragement programs that:

• Promote safe travel behaviors (e.g., Safe Routes to School).
• Evaluate temporary demonstration projects.
• Encourage speed management and visibility campaigns.

Consider Community Characteristics in Prioritization

3. Complete Streets Program
Status: DRAFT 2025

- Prioritize Complete Streets improvements in communities with limited access to safe mobility, such as areas with no sidewalks, transit-dependent populations, or aging populations.

4. ADA Self Evaluation Transition Plan
Status: Draft March 2024

Description

The Plan is a comprehensive document developed to bring the County's facilities, programs, and infrastructure into compliance with the Americans with Disabilities Act (ADA), Title II, fulfilling the legal requirements for public

- Self-evaluation of policies, programs, public buildings, and public rights-of-way.
- Transition planning to remove barriers, prioritize improvements, and implement ADA-compliant changes.

How the document prioritizes safety

The Self-Evaluation & Transition Plan addresses transportation safety primarily through the lens of accessibility and safe mobility for individuals with disabilities, particularly within the County's public rights-of-way and pedestrian infrastructure. Although the document is focused on ADA compliance, it implicitly supports transportation safety by identifying and planning to eliminate barriers that create risks for disabled and vulnerable users. Measures include:

Safety as an ADA-Driven Outcome

While not a standalone safety plan, the document recognizes that inaccessible infrastructure is inherently unsafe for people with disabilities. Prioritizing ADA upgrades directly enhances safety by:

- Reducing fall risks from uneven sidewalks, steep slopes, and broken pavement.
- Improving visibility and predictability at crossings through compliant curb ramps and detectable warning surfaces.
- Ensuring access to safe travel paths, especially in areas with vehicular traffic conflicts.

Public Right-of-Way Evaluations

The plan includes a supplemental ADA evaluation of public sidewalks, curb ramps, and crossings, focused on:

- Surface conditions, width, obstructions, cross slopes, and running grades.
- Curb ramp presence and condition, especially at intersections.
- Crosswalk alignment and signage for visually impaired user

Safety Enhancements Identified:

- Installation or repair of ADA-compliant curb ramps to allow for smooth, predictable transitions between sidewalks
- Correction of cross slopes or steep ramps, which pose fall hazards or force users into the roadway.
- Improved wayfinding and tactile signage to aid visually impaired pedestrians.

How the document prioritizes safety

Prioritization Criteria Include Safety

Facilities and improvements are ranked using a tiered system that factors in:

- Risk to personal safety due to noncompliance (e.g., narrow sidewalks near high-speed roads).
- Level of public access—with emphasis on locations near essential services like courts, veterans' offices, and
- Potential for programmatic remedies where structural changes are difficult but temporary safety enhancements are feasible.
- This ensures that high-risk mobility barriers are addressed first, maximizing safety impact.

Spot Improvement Program Enhances Everyday Safety

The plan introduces a Spot Improvement Program targeting smaller, quicker fixes with major safety implications,

- Lowering high-threshold doorways that could cause trips.

4. ADA Self Evaluation Transition Plan
Status: Draft March 2024

• Adding slip-resistant surfaces and handrails on ramps.
• Improving lighting and signage in areas where navigation hazards exist.
• These targeted updates enhance safety in areas that are frequently used but may not qualify for full reconstruction immediately.

Integration with Other Transportation Plans

The ADA Transition Plan aligns with and supports broader safety goals in Chelan County's:
• Multimodal Pathways Plan (2021), which focuses on non-motorized safety and connectivity.
• Transportation Element (2017), which prioritizes safety through systemic risk reduction.
By ensuring that pedestrian facilities meet ADA standards, the plan reinforces these safety priorities with actionable steps and compliance benchmarks.

Design Guidance to Prevent Unsafe Conditions

To prevent future safety risks, the plan includes:
• Guidance on temporary construction zones, requiring alternate accessible paths and safety signage.
• Accessible design standards for EV charging stations and new construction.
• Documentation of technical infeasibility or design constraints, to avoid neglecting safety in constrained
The Plan enhances transportation safety by ensuring that the built environment does not endanger or exclude people with disabilities, and by integrating high-impact, risk-mitigating upgrades across the public right-of-way.

Potential Improvements

To further prioritize transportation safety, the Plan could consider incorporating the following:

Safety Risk as a Standalone Evaluation Metric

• Consider creating a Safety Risk Index to evaluate transportation facilities beyond usage volumes:
  • Proximity to high-speed rural highways that intersect with local pedestrian activity (e.g., near community centers, churches, or rural schools)
  • Crash history, including low-frequency but high-severity incidents, and community-reported near misses (especially in areas lacking formal crash data)
  • Design constraints that force pedestrians or mobility users into vehicular lanes, such as missing shoulders, ditches, or non-existent sidewalks

Integrate Crash and Incident Data Through Local Partnerships

• Partner with WSDOT, EMS, sheriff's departments, and health agencies to collect:
• Crash reports, injury response data, and call logs
• Public complaints or service requests regarding safety or accessibility
• Identify "hotspots" where multiple reports overlap with ADA barriers, poor lighting, or high speeds

Define Safety Performance Metrics and Reporting

• Include metrics that reflect both ADA and safety progress in rural settings:
• Number of rural ADA safety upgrades per year (e.g., compliant ramps, improved crossings)
• Reduction in hazardous pedestrian locations, including high-speed or poorly lit rural segments
• Community feedback metrics, such as perceived safety or satisfaction with recent improvements

Connect Safety More Directly to Local Context

• Prioritize low-income, aging, or underserved areas where infrastructure gaps create layered safety and access risks

4.1 Draft Public Right of Way Facilities - A Supplement to Chelan County ADA Transition Plan
Status: Drafted 2024

Description

The document outlines Chelan County's strategic approach for identifying, evaluating, prioritizing, and remediating

The supplment includes goals and objectives that:

- Ensure safe, accessible travel for individuals with disabilities on county-managed pedestrian infrastructure.
- Create a phased implementation plan based on data collection, public input, and engineering evaluation.
- Support a balanced, multimodal transportation system inclusive of all users.

Follows Required ADA Transition Plan Elements

As required by WSDOT and federal ADA standards, the plan includes:

- ADA Coordinator designation
- Grievance procedures
- Policy statements and self-evaluation summaries
- Design standards for facilities
- Prioritization and cost schedules
- Public involvement documentation
- Update schedules

How the document prioritizes safety

The document prioritizes transportation accessibility and safety through a targeted, structured approach to identifying and removing barriers that limit compliance with the Americans with Disabilities Act (ADA). By addressing these barriers, communities can create inclusive public rights-of-way that reduce hazards and expand equitable

A Focus on ADA-Compliant Pedestrian Infrastructure in Public Rights-of-Way

- The document emphasizes facilities where non-compliance can directly endanger pedestrians—particularly those with disabilities such as:
  - Sidewalks
  - Curb ramps
  - Accessible Pedestrian Signals (APS)

Addressing safety issues at these locations can:

- Reducing fall risks
- Preventing conflicts with vehicular traffic
- Improving signal visibility and crossing feedback

A Phased, Data-Driven ADA Safety Evaluation Process

The phased approach helps prioritize areas with high pedestrian traffic and vulnerability, directly enhancing pedestrian safety. Phases include:

- Phase 1: Inventory and Data Collection
  - Conducts a "windshield survey" of all Chelan County roads to:
  - Identify missing or deficient curb ramps
  - Document obstructions that narrow sidewalk width
  - Detect poor grades, abrupt level changes, and vaults
  - Note lack of APS at signalized crossings

4.1 Draft Public Right of Way Facilities - A Supplement to Chelan County ADA Transition Plan
Status: Drafted 2024

These hazards are cataloged in a geospatial database for formal evaluation.

- Phase 2: Evaluation and Mapping
  - Assesses each identified issue for ADA compliance and maps them against "routes of importance", including:
  - Schools
  - Parks
  - Business districts
  - Transit connections

This helps prioritize areas with high pedestrian traffic and vulnerability, directly enhancing pedestrian safety.

How the document prioritizes safety

Prioritization Criteria Rooted in ADA and Safety

The document outlines a clear prioritization framework that incorporates safety factors:

- Proximity to pedestrian generators = Reduces risk near schools, transit, businesses
- Alignment with priority pedestrian routes = Focuses on high-demand, likely high-risk corridors
- High benefit/cost ratio = Quickly improves safety in low-cost/high-impact areas
- Continuity of corridor = Closes gaps that force unsafe detours or mid-block crossings
- Pedestrian volume = Targets improvements where the most people are at risk
- Engineering judgment = Allows expert-driven safety interventions

APS (Accessible Pedestrian Signal) Policy for Safer Crossings

- Signals will be upgraded to include auditory and vibrotactile feedback, allowing vision-impaired users to cross safely and confidently.
- The policy mandates installing current APS systems in all signal-related construction or upgrades, enhancing crossing safety at intersections.

Long-Term Safety Commitment via Phased Improvements

The phased model ensures that safety issues are not neglected—even if they're not initially prioritized

Potential Improvements

The 2024 Chelan County Public Works ADA Transition Plan (DRAFT) provides a solid foundation for advancing transportation safety, especially for pedestrians with disabilities.

Integrate ADA Safety Performance Metrics

Include baseline and target metrics such as:

- Track ADA-related incidents or complaints particularly in rural town centers, near public buildings, and school zones where sidewalks or ramps may be non-existent or poorly maintained.
- Measure pedestrian injury and fatality rates in areas with existing ADA infrastructure
- Monitor progress on barrier removals, such as:
  - Percent of intersections with compliant curb ramps
  - Number of informal crossings upgraded annually
  - Community-reported safety satisfaction for mobility-impaired users

Expand ADA-Driven Risk-Based Prioritization

Incorporate risk-based layers using data such as:

4.1 Draft Public Right of Way Facilities - A Supplement to Chelan County ADA Transition Plan
Status: Drafted 2024

• Speed limits and actual operating speeds, especially on arterials passing through communities or near schools
• Sight distance and lighting gaps, such as on curves, hills, and unlit crossings
• Community-reported concerns or near misses, gathered through local outreach, surveys, or school district

This will direct county resources toward locations with the highest injury risk, not just the highest traffic.

Address Accessibilty for All Pedestrian Types

Consider broadening the safety lens beyond ADA compliance to address vulnerable pedestrians:

• Older adults, where mobility impairments may not trigger ADA improvements but still pose real safety challenges, especially in health care access zones or senior housing clusters

Include Interim ADA Accessibility Treatments

Add a section on interim or quick-build safety measures, such as:

• High-visibility paint for crosswalks at key crossings, like near post offices, stores, or churches
• Temporary or modular curb ramps to improve ADA access until full reconstruction
• Signage or flexible bollards to calm traffic and delineate pedestrian space in town centers or near schools
• Portable Accessible Pedestrian Signals (APS) at event sites, seasonal destinations, or rural main streets

5. Transportation Element
Status: Developed June 2017

Description

The overall vision for Chelan County's Transportation Element is to provide a safe, balanced, and efficient multi-

- Maintain existing transportation facilities in a state-of-good-repair to ensure their continued function, which is critical to achieving all of the county's mobility goals
- Create a transportation network that can be shared safely by all users and that provides sufficient access for emergency response
- Plan for a system that is financially viable, including consideration of lifecycle costs in infrastructure investments and leveraging outside funds wherever possible to maximize community benefits
- Provide a transportation system that complements existing and planned land uses, supports farm-to-market and recreational tourism needs, and balances economic development with existing users
- Avoid and minimize negative environmental and societal impacts from the transportation system and enhance the natural and social environment when possible
- Coordinate with a broad range of groups (including local, state, and regional agencies, key stakeholders, businesses, and the public) to develop and operate the transportation system.

How the document prioritizes safety

The Chelan County Transportation Element (June 2017) prioritizes transportation safety as one of its six core goals and weaves safety considerations throughout the plan's strategies, projects, and policies.

Safety as aCore Goal

Goal 2 – Provide a Safe System is dedicated entirely to safety.

This goal includes several specific policies:

- Recognize the needs of all users—motorists, freight, bicyclists, pedestrians, and transit users.
- Integrate safety into roadway design based on functional classification and 20-year travel demand.
- Improve railroad crossings and non-motorized travel infrastructure.
- Apply Americans with Disabilities Act (ADA) guidelines.
- Develop and maintain a countywide safety plan targeting rural roadways.

How the document prioritizes safety

Systemic Safety Planning Approach

The County has developed a Roadway Safety Plan, aligned with WSDOT's Target Zero strategy.

- Systemic safety analysis to identify high-risk crash types across the system.
- Prioritization of lane departure crashes, which account for over 54% of serious collisions, particularly involving stationary objects (trees, signs, guardrails).
- Apply technologies and manage acces to major roadways to improve safety.
- Identification of high-risk behaviors and locations to inform mitigation strategies.

Project-level Prioritization

Safety is a top criterion in the 20-Year Capital Project List:

- Projects that improve intersections, correct roadway geometry, or stabilize slopes are prioritized.

5. Transportation Element
Status: Developed June 2017

• Investments in school routes, pedestrian access, and multi-modal safety enhancements are common across

Funding Alignment

The plan's financial strategy recognizes safety as a funding priority:

• Recommends allocating resources to preservation and safety before system expansion.
• Seeks grant funding from programs like Safe Routes to School and state/federal safety grants.
• Seeks funding to improve pedestrian safety.
• Encourages use of Transportation Benefit Districts and impact fees for safety-related improvements.

Design and Maintenance Policies

To support safety:

• New and existing roads are to be designed with context-sensitive solutions.
• Maintenance prioritization includes routes critical to emergency services and school buses.
• Development regulations require access management to reduce conflict points.

Pedestrian, Bicycle, and Transit Safety

The plan emphasizes improving safety for non-motorized users:

• Establishes Level of Service (LOS) standards for walking and biking infrastructure.
• Identifies trail gaps and unsafe shoulders for improvement.
• Recognizes the importance of signage, lighting, and connectivity to transit.

How the document prioritizes safety

Regional Coordination

Partners with:

• WSDOT to improve intersections and coordinate safety on state highways.
• CDTC and LINK Transit to integrate transit safety measures.
• USFS to manage rural and forest roads used for recreation and emergency access.

Potential Improvements

To strengthen the prioritization of transportation safety in Chelan County's Transportation Element, several improvements could be made that build on its existing framework. While the plan already identifies safety as a core goal and includes systemic planning elements, the following recommendations could make its approach more robust, actionable, and aligned with leading-edge safety practices:

Expand Systemic Safety Analysis

• Include crash cost estimations and savings projections for proposed safety interventions to better prioritize

Integrate Community Context into Safety Prioritization

• Use data overlays to identify disproportionately affected communities (e.g., rural, low-income, or limited mobility
• Areas with high projected growth demand

Develop a Tiered Safety Performance Monitoring Framework

• Define quantitative safety indicators: crash rate per VMT, percent of roads with known safety features (e.g., rumble strips, guardrails), pedestrian-involved crash locations, etc.
• Establish a tiered monitoring system with short-, medium-, and long-term benchmarks.
• Publish an annual safety progress report to foster transparency and track implementation.

Embed Safety in All Project Phases

5. Transportation Element
Status: Developed June 2017

• Adopt a "Vision Zero" or "Safe System" project checklist to apply safety principles at all stages—from planning and design to construction and maintenance.
• Consider road safety audits or safety impact assessments for all major roadway projects, especially those affecting vulnerable users or school routes.

Strengthen Non-Infrastructure Strategies

• Incorporate a non-infrastructure safety program that includes:
  • Community outreach and education
  • Traffic enforcement strategies aligned with high-risk locations or behaviors.
  • Speed management planning, particularly in transition zones between rural and urban environments.

Enhance Interagency Coordination on Safety

• Consider coordination of data sharing with EMS, enforcement, and land use data for more holistic safety analysis.

5.1 Transportation Element Appendix A-E
Status: Developed June 2017

Description

The document supports the Chelan County regional transportation planning process with technical appendices that provide detailed data, methodology, and project-level evaluations for the Comprehensive Transportation Element. The document serves as a companion to the main plan, offering foundational material for land use forecasting,

How the document prioritizes safety

The document prioritizes safety as one of the six core criteria in its Project Prioritization Framework (Appendix D). In the "Goal 2: Safety" category, projects are evaluated and scored based on their relevance to known safety issues:

- Project addresses locations with a history of injury or fatal collisions, or is identified as a hot spot recieves= 4
- Project provides general safety enhancements, even if not at a hot spot = 2 points
- No direct safety benefit = 0 points

This system of scoring ensures projects that mitigate high-risk areas or improve dangerous corridors are ranked more

Potential Improvements

Improving how the document prioritizes transportation safety can enhance both the effectiveness and equity of project selection. While the current prioritization framework is structured and data-driven, there are several areas for

Incorporate Proactive Risk Assessment (Beyond Historical Crashes)

Integrate predictive safety analytics, such as:

- Use Roadway Safety Audits (RSAs) tailored for rural conditions
- Leverage Surrogate Safety Measures
  - Focus on context-specific indicators like:
  - Poor sight distances on hilly or curved rural roads
  - Lack of delineation or roadside hazards (e.g., ditches, utility poles)
  - Visibility and signage at rural intersections or driveways
- Near-miss data or close-call video analysis along corridors with known safety concerns and that may near vulnerable road user generators such schools, post offices, or town centers.
- Use Equivalent Propoerty Damage Only (EPDO) score and look at corridors (EPDO/Mile)

Mode-Specific Safety Subcategories

Assign project scoring points for:

- Missing or discontinuous shoulders and safe walking paths on rural roads
- Assess if there is a need for bike lane inclusion.
- Hazards in school zones or bus stops located along high-speed rural routes
- Points for pedestrian injury risks, bike lane gaps, or school zone hazards

Consider Weighted Scoring for High-Impact Safety Projects

Adjusting Evaluation Frameworks

- Increase the safety weighting in rural contexts where alternatives are limited and consequences of crashes are
- Use a tiered or minimum safety threshold system: Any rural project with high crash severity risk or critical safety need (e.g., corridor with frequent run-off-road crashes) automatically qualifies for high-priority status.

Consider Using Community-Based Safety Metrics

Highlight Underserved Rural Populations

- Incorporate metrics that reflect rural disadvantage:
- High poverty, aging populations, or lack of vehicle access• Use tools like USDOT's Transportation Disadvantaged

5.1 Transportation Element Appendix F-H
Status: Developed: June 2017

Description

The document is designed to supplement the Chelan County Transportation Element with materials from stakeholder engagement, public outreach, and performance analysis of state transportation facilities. These appendices provide insight into how planning decisions were developed, communicated, and supported by both

How the document prioritizes safety

Safety is one of six primary goals proposed. It is emphasized alongside maintenance, land use support, environmental stewardship, financial viability, and interagency partnership.

The goal is to ensure that the entire transportation system—roads, trails, bridges, sidewalks, and transit—is safe for

- Motorists
- Pedestrians
- Bicyclists
- Transit riders

This goal underlies project selection, system design, and investment prioritization.
Project Scoring – Safety Evaluation Criteria
In Appendix F, the document outlines a detailed project evaluation framework. Safety is one of the six weighted scoring metrics used to rank transportation projects.

- Project addresses a known fatality/injury location or a bike/ped hot spot = 4 points
- Project includes general safety improvements (e.g., signage, lighting) = 2 points
- Project has no identifiable safety component = 0 points

Safety indicators include:

- Crash history (injury or fatality)
- Bicycle/pedestrian conflicts
- Public or consultant-identified problem areas
- Infrastructure deficiencies (e.g., lack of guardrails, unsafe crossings)

Community Safety Concerns (Appendix G)
Safety was also a dominant theme in public outreach and feedback
Overall the County prioritizies safety through a multi-layered approach:

- Strategic Planning: Declaring safety a guiding transportation goal.
- Quantitative Scoring: Giving projects with proven or high safety benefit a maximum of 4 points in the evaluation
- Community-Driven Adjustments: Using public feedback to identify less-visible safety needs.
- Design Standards: Promoting safe, multimodal facilities through design, LOS policies, and sustainable networks.

5.1 Transportation Element Appendix F-H
Status: Developed: June 2017

Potential Improvements

The document is a thoughtful integration of safety into the County's transportation planning process. However, considering enhanced efforts to better prioritize safety, can include national best practices, Vision Zero goals, and Broaden the Definition of Safety Beyond Crash History

Incorporate predictive risk analysis tools that consider:

• Account for geometric risks such as narrow unstriped lanes, unbanked curves, limited sight distances at hills and intersections, and the absence of rumble strips or guardrails.

• Consider focusing on areas of high collisions that include agricultural vehicles, school buses, ATVs, or horse riders frequently share roadways. Also consider unmarked or unofficial pedestrian crossing zones near churches, post

• Identify corridors lacking shoulders, lighting, signage, or pavement markings, especially those serving recreational destinations (e.g., lakes, parks, trailheads).

• Emphasize Proactive Interventions: Prioritize areas where new subdivisions, vacation homes, or tourist attractions are increasing traffic but infrastructure hasn't kept pace. Use early warning indicators like increases in 911 call volume or school district bus routing changes to anticipate future safety risks.

Differentiate Safety Scoring by User Type

Incorporate Relevant User Types and Use Cases

• Pedestrians: Focus on zones near schools, senior centers, community halls, churches, and mail cluster boxes—common pedestrian generators that lack sidewalks or crossings.

• Cyclists: Evaluate "Level of Traffic Stress" (LTS) not just on designated bike facilities (which may be absent) but on shared rural roads—many of which have high speed limits, gravel shoulders, and steep ditch drop-offs.

• Transit and Demand Response Users: Consider first/last-mile connections for transit riders, who often rely on dial-a-ride, paratransit, or commuter buses. Give weight to road segments leading to park-and-ride lots, transit flag stops,

Adapt Scoring Criteria to Reflect Contexts

• Include a "vulnerability index"—scoring higher for areas where users must share space with fast-moving traffic, or where roadway design offers no separation or escape options.

• Consider seasonal and tourism-based surges, which may affect safety for pedestrians and cyclists in otherwise low-traffic areas.This effort ensures projects supporting vulnerable users (e.g., children, elderly, low-income residents

Historically Underserved and Isolated Populations:

• Elevate the prioritization of rural areas with known histories of disinvestment, low-income households, and high proportions of elderly or disabled residents.

• Geographic and Infrastructure Disparities:
  • Identify rural locations with:
  • Limited or delayed emergency service access due to geography or network gaps
  • High-speed corridors adjacent to residences, schools, or town centers
  • Sparse pedestrian or bike infrastructure despite local needs

• Language and Communication Barriers in Rural Areas:
  • Evaluate areas where Limited English Proficiency (LEP) may impede access to transportation safety information

Leverage Targeted Analytical Tools

• Align prioritization with federal tools that spotlight rural disadvantage and transportation equity

Tie Safety Investments to Measurable Outcomes

5.1 Transportation Element Appendix F-H
Status: Developed: June 2017

While safety is part of the evaluation matrix, there is no post-project mechanism to monitor if investments actually reduce risk or improve outcomes. Consider:

Incorporate Outcome-Based Metrics Post-Implementation

- Track safety performance for safety projects using indicators tailored to low-density, context-sensitive
  - Speed reduction on rural highways or local roads where high speeds are a key safety issue
  - Reduction in severe injury and fatality rates, especially at high-risk intersections or corridors in rural areas
  - Public satisfaction and perception of safety, gathered via surveys or community engagement in rural

8. Chelan-Douglas Regional Transportation Plan Update
Status: Completed 2020

Description

The 2020 Chelan-Douglas Regional Transportation Plan (RTP) Update, developed by the Chelan-Douglas Transportation Council (CDTC), is a comprehensive, federally required long-range plan that sets the transportation vision for Chelan and Douglas Counties through 2045. It addresses regional challenges, outlines investment priorities, and integrates performance-based and multimodal planning to support economic vitality, safety, mobility, and sustainability.

How the document prioritizes safety

The Plan prioritizes transportation safety as a central, cross-cutting goal. It aligns with state and federal safety
Safety as a Core Regional Goal

The RTP identifies “Safe” as the first of its four guiding goals:
• "Improve safety for all travel modes, and reduce the number of fatalities and serious injury collisions."
This goal underpins project selection, funding allocation, performance metrics, and policy development.

Performance-Based Safety Metrics and Targets
The RTP implements federally mandated Moving Ahead for Progress (MAP-21) and Fixing America's Surface Transportation (FAST) Act performance measures, with clear focus on:

• Number and rate of fatalities
• Number and rate of serious injuries
• Non-motorized fatalities and injuries
• Performance targets are tracked annually.

Safety-Driven Project Programming and Funding
Over $11.9 million in safety-focused projects programmed in the TIP
Projects include:

• Intersection and signal upgrades
• Access management treatments
• Non-motorized safety improvements (e.g., crossings, sidewalks, bike lanes)
• Enhanced transit stops and ADA compliance

Project evaluation criteria give weight to crash history, severity, and proximity to schools or pedestrian routes.

Corridor and Intersection Safety Analysis
The RTP includes regional crash trend analyses to inform priority corridors and intersections. It highlights:
• High-crash intersections
• Frequent left-turn, angle, and pedestrian crashes
• Overrepresentation of vulnerable users in fatal and serious injury statistics
The plan supports intersection upgrades, roundabouts, and access control as key tools to reduce conflict points and improve safety outcomes.

Non-Motorized and Multimodal Safety Emphasis

8. Chelan-Douglas Regional Transportation Plan Update
Status: Completed 2020

The RTP calls out pedestrian and bicyclist safety as a distinct strategic focus, including:
- A regional gap analysis of sidewalks and bikeways
- Implementation of the Wenatchee Valley Bicycle Master Plan
- Prioritization of routes to schools, parks, and commercial areas
- Funding for crosswalk enhancements, traffic calming, and ADA-compliant ramps

This supports safe multimodal travel, especially for youth, seniors, and people with disabilities.

Transit Safety Enhancements

Transit safety is addressed through:
- Upgrades to bus stops, shelters, and boarding areas for visibility and accessibility
- Use of real-time information systems to reduce pedestrian exposure at stops
- Coordination with LINK Transit on safety planning for riders and operators

Integration with Resilience and Emergency Planning

Safety is embedded in the RTP's approach to emergency management and hazard mitigation, including:
- Identifying critical evacuation routes in wildfire-prone areas
- Ensuring redundancy in case of bridge closures or floods
- Coordinating with WSDOT and local emergency responders for resilient routing

Safety Reporting

The RTP includes a commitment to:
- Annual safety performance reports
- Crash data mapping and monitoring through the Regional Safety Program
- Use of crash reduction potential and benefit-cost ratios for project prioritization

Potential Improvements

To further strengthen transportation safety prioritization, the 2020 Chelan-Douglas Regional Transportation Plan (RTP) can evolve from a solid performance-based framework to a more proactive, systemic, and equity-driven approach that reflects emerging best practices in Safe System planning. Below are targeted recommendations to Consider establishing quantifiable safety targets at the Local/Regional level

Set measurable local safety goals such as:
- Consider achieving zero traffic deaths and serious injuries on Chelan County roads by 2030, keeping in alignment with the Chelan County Roadway Safety Plan.
- Use disaggregated data (by mode, location, demographic) to set tailored targets.

Prioritize Demographics in Safety Investments
- Overlay crash data with Social Vulnerability Index (SVI), income, age, and language access data. This can be achieved by prioritizing safety upgrades:
  - Roads with limited alternatives.
  - Areas with high rates of walking but poor infrastructure.
  - Low-income neighborhoods with historically limited investment.

Expand Use of Systemic Safety Approaches
- Apply systemic safety screening tools (e.g., curve radius, volume/speed thresholds, intersection geometry) to:
  - Identify crash-prone segments before crashes occur.
  - Justify low-cost, systemwide improvements like signage, lighting, and shoulder widening.

8. Chelan-Douglas Regional Transportation Plan Update
Status: Completed 2020

These efforts support proactive safety investments rather than reactive ones.

Consider Integrating Safety into All Project Evaluation Phases

Require safety impact assessments (SIAs) or road safety audits (RSAs) for:

- All new capacity or reconstruction projects.
- Locations near schools, transit stops, or vulnerable user zones.
- Bridge replacements, and rural intersection reconstructions
- Locations near tribal lands, agricultural processing zones, or emergency service access routes.
- Include Farm and Forestry Users in reviews: Evaluate safety impacts for slow-moving vehicles or logging trucks.

This will assist in the prioritizatino of safety during design and not after construction.

Improve Safety Performance Monitoring

Consider the development of a regional safety dashboard that reports on:

- FSI crashes by mode, location, and user type.
- Investment impacts (e.g., crash reductions post-project).
- Include filters for county road segments, rural intersections, user types (e.g., ATV riders, bicyclists), and time-of-
- Integrate data from public input portals (e.g., near-misses, visibility issues, deer crossing concerns).

This effort will provide a public facing platform to demonstrate trends in public perception or safety behavior.

9. Draft Automated Traffic Safety Cameras Code
Status: Drafted 2025

Description

The document is designed to establish a new section in the Chelan County Code (Chapter 9.05) enabling the use of Automated Traffic Safety Cameras (ATSC) for detecting and enforcing speed violations, primarily in school zones, work zones, and other designated safety-sensitive areas.
The County is proposing a structured, equitable, and transparent system for using automated cameras to enforce speed limits. The law balances traffic safety improvements (especially near schools) with privacy, due process, and financial fairness (via fine reduction programs). With the inclusion of processing ATSC tickets as non-criminal infractions, ensures accessibility and avoids impacts on insurance or driver licensing.

How the document prioritizes safety

The document prioritizes transportation safety through the structured implementation of Automated Traffic Safety Cameras (ATSC), aimed at reducing speeding violations in critical areas. Safety is specifically emphasized throughout the draft ordinance:

Focuses on High-Risk Zones

• School zones

• Work zones

• Other locations with identified safety needs

By targeting these areas, the regulation focuses on protecting vulnerable users—especially children, construction workers, and pedestrians—where excessive speed is more likely to result in severe injury or death

Using Automated Enforcement to Deter Unsafe Behavior

The resolution states its goal to "modify unsafe behavior" to create safer roads for all users, not to generate revenue. The automated cameras are used as a neutral and consistent enforcement mechanism, which:

• Reduces reliance on active law enforcement presence

• Improves compliance in areas where speeding is common and dangerous

Fair and Equitable Enforcement

This effort ensures that safety enforcement is equitable, not disproportionately punitive, especially for vulnerable populations. With the use of:

• First-time violators and low-income individuals (e.g., on public assistance or WIC) are eligible for a 50% penalty reduction.

• Violations are processed as civil infractions, not affecting driving records or insurance, maintaining focus on compliance, not punishment.

Advance Notice and Transparency

Aiming to ensure public trust, compliance, and the lawful use of technology to improve road safety by:

• Signage required at least 30 days before camera activation.

• Only vehicles and license plates may be photographed—protecting privacy while enabling targeted enforcement.

• Revenue is to be managed transparently and used strictly for purposes consistent with RCW 46.63.220, which often includes safety-related infrastructure.

The document is a step toward creating safer, more predictable roadways in the county, especially for those at greatest risk.

9. Draft Automated Traffic Safety Cameras Code
Status: Drafted 2025

Potential Improvements

The Draft Automated Traffic Cameras County Code already takes meaningful steps toward enhancing transportation safety through targeted automated enforcement. If implemented consider broader best practices and strategies as outlined and following RCW 46.63 requirements:

Expand Eligible Enforcement Areas Beyond School and Work Zones

Expand allowable use (ensure compliance with RCW 46.63.220 - RCW 46.63.260) of ATSC to include:

- High-crash corridors with recurring speeding or red-light violations
- Neighborhood streets with known cut-through traffic or pedestrian activity
- Locations near parks, transit stops, or senior centers

Integrate Data-Driven Site Selection Criteria

Expand upon the process for identifying and selecting camera locations beyond basic categories by:

- Requiring a data-based site selection process using:
    - Crash history (fatal/injury collisions)
    - Speed studies
    - Pedestrian and cyclist volumes
    - Community input (e.g., 311 complaints, surveys)

Ths aligns enforcement with actual safety risks, ensuring cameras are deployed where they'll make the greatest impact.

Accompany Cameras with Infrastructure Improvements (ensure compliance with RCW 46.63.220 - RCW 46.63.260)

Consider including a provision that some camera revenue be allocated to:

- Crosswalk improvements
- Traffic calming installations (e.g., speed humps, bulb-outs)
- Flashing pedestrian beacons
- Bike/ped safety enhancements

Enhance Public Education and Transparency

Provide a public outreach component including:

- A community education campaign to:
    - Inform residents about the purpose and benefits of ATSC
    - Clarify privacy protections and legal rights
    - Promote safe driving habits, especially around schools

Require Annual Reporting and Performance Review

Add a requirement for annual public reporting that includes:

- Number of violations issued by location
- Speed reduction trends
- Crash data changes (before vs. after)
- Revenue collected and how it was invested into transportation safety improvements

10. Traffic Safety Enhancement Program
Status: Adopted 2024

Description

The document establishes a program for the purpose of promoting public safety on county roadways. The program establishes a special fund to improve safety along county roads and traffic policing policies.

How the document prioritizes safety

The document establishes transportation safety as its central objective through funding aimed at:

- Combining efforts between Public Works and County Law Enforcement
- Reduce speeds through speed enforement
- Removal of unsafe roadway obstructions/debris
- Roadway sign maintenance
- Traffic control within in maintenance and construction zones
- Collision data collection
- County road law enforcement

Potential Improvements

To further prioritize transportation safety, the program could integrate automated traffic safety enforcement

- RCW 46.63.200: Speed Safety Cameras
- RCW 46.63.230: Automated traffic safety cameras - Stoplight Violations
- RCW 46.63.240: Automated traffic safety cameras - Railroad grade crossings violations
- RCW 46.63.250: Automated traffic safety cameras -Speed Violations.

Include use of generated funds to support:

Data Collection

Use collected photo enforcement data to strengthen project scoring and prioritization

Project Scoring

Use historical citation data (from automated enforcement or police-issued tickets) to quantify safety risk and prioritize locations for safety improvement projects.

Educational Programs

Consider adding a section to suppoprt educational programs designed around transportation safety.

Reporting System

As decribed in further detail under RCW 46.63.200 develop a reporting system describing the uses of revenues generated from infractions that exceeds the costs of operation and administration.

11. Title 15 Development Standards
Status: Various timeline updates

Description

This document outlines the minimum standards for the development, design, construction, and reconstruction of roads and bridges, as established by the county engineer. These standards aim to encourage consistent and high-quality infrastructure while ensuring flexibility and professional judgment in design decisions. Developed by the county engineer, these standards aim to ensure consistent, safe, and effective transportation infrastructure while allowing for professional discretion and adaptability to varying local needs. Reference to Established Guidelines: Except where specified otherwise, design details, construction materials, and workmanship must conform to a broad suite of authoritative publications and manuals. These include:

- WSDOT Standards, Plans, Manuals (e.g., Design Manual, Construction Manual, Hydraulics Manual)
- AASHTO publications such as the Green Book, Roadside Design Guide, and guidelines for low-volume roads
- USDOT MUTCD (Manual on Uniform Traffic Control Devices)
- ITE, HEC22, ADA, USDA, and Washington State Department of Ecology technical manuals

Together, these references ensure alignment with state and national best practices in transportation engineering and environmental compliance.

How the document prioritizes safety

Code 15.30.240 Road Design Standards: demonstrate a clear prioritization of transportation safety through a flexible but structured approach to road classification and design.

Safety-Oriented Functional Classification

- Roads are categorized by anticipated traffic volumes (ADT) and land use context (urban, rural, private, industrial). safety.

Parking Design

- Off-premises parking requirements for subdivisions help minimize on-street parking, which improves visibility and reduces potential crash points.

Snow Storage

- Required snow storage ensures that roadways and sidewalks remain functional and safe in winter, preventing hazardous obstructions.

Geometric Design for Safer Travel

- Reduced widths are allowed only when offset by safety enhancements like pedestrian buffers or absence of on-street parking.

Emergency Access Standards

- Urban and rural emergency vehicle access roads have turnaround and turnout requirements for roads longer than 1,000 feet.
- Ensures unobstructed emergency response, in compliance with IFC (International Fire Code) standards.

Cul-de-Sac Design & Connectivity

- Permanent and temporary cul-de-sacs must meet turning radius and grade safety standards.
- Connectivity options, such as walkways or emergency access paths, may be required to link cul-de-sacs to nearby destinations like schools or parks, addressing pedestrian and emergency accessibility.

11. Title 15 Development Standards
Status: Various timeline updates

15.30.270 Pedestrian Facilities

Mandated Pedestrian Infrastructure in High-Activity Areas

• This reduces pedestrian-vehicle conflict in dense or economically active environments.

Multiple Design Options Based on Context

• Urban standards offer three tiers of facility design - from conventional sidewalks to WSDOT Class A separated paths - allowing flexibility without compromising safety.

• The inclusion of planter strips and separated facilities (Options 2 and 3) offers a physical buffer between pedestrians and vehicles, which greatly improves safety and comfort.

• In rural areas, offering gravel, concrete, or separated nonmotorized options reflects a pragmatic approach to safety based on feasibility and land use.

Compliance with National Accessibility and Safety Guidelines

• Designs must comply with the Americans with Disabilities Act (ADA) and WSDOT sidewalk standards, ensuring facilities are accessible to all users - including children, the elderly, and individuals with mobility impairments.

Connectivity and Logical Extension Requirements

• In both urban and rural areas, pedestrian facilities are required when they serve a clear function—such as connecting to bus stops, schools, or existing networks - supporting logical and safe pedestrian movement rather

Inclusion of Separated Nonmotorized Facilities

• The use of WSDOT Class A separated facilities - which are typically fully buffered, paved multi-use paths - demonstrates a high standard of protection from vehicular traffic in both urban and rural settings where applicable.

15.30.310 Site access and intersections - General criteria

Engineering-Based Access Review

• Requiring the applicant's engineer to submit an access plan ensures that professional engineering judgment is applied to every new connection to the county road system.

• This supports informed review of potential safety impacts, such as sight distance, traffic conflicts, and turning movements, before construction occurs.

Strategic Control of Intersection Location and Design

• Intersection location, spacing, and design are identified as foundational safety components.

Differentiated Design Criteria for Roadways vs. Driveways

• Distinguishing between roadway intersections and driveway approaches ensures the appropriate level of design complexity, signage, and traffic control is applied based on the access type and expected usage.

15.30.320 Roadway Intersections

Intersection Angle Requirements Improve Visibility and Predictability

• Mandating 90-degree angles (or within 15° of it) for all intersections ensures:

• Maximized sight distance for all road users

• Minimized skew-related blind spots, especially at rural intersections

• More predictable and efficient movements for turning vehicles

Corner Radii Tailored to Traffic Type Support Safe Turning

• Differentiating curb line radii based on road classification (local vs. collector vs. commercial) ensures turning paths accommodate real-world vehicle types.

11. Title 15 Development Standards
Status: Various timeline updates

Drainage and Grade Control Prevent Surface Hazards

- Requiring intersection plans with detailed grading and surface drainage controls reduces:
  - Pooling water, which contributes to hydroplaning
  - Winter ice hazards at low points
  - Erosion in rural areas

Entering Sight Distance is a Mandatory Design Factor

- All roads (public and private) intersecting with county roads must be designed for adequate entering sight distance,
  - Preventing "pull-out" crashes
  - Supporting safe gap acceptance
  - Enabling large vehicles and older drivers to judge time and speed effectively

Truck Traffic and Turning Design Criteria

- Access points with ≥10% truck traffic must be designed with appropriate radii (up to 70 ft), preventing:
  - Lane encroachment
  - Off-road tracking
  - Damage to infrastructure or adjacent properties

15.30.330 Access Points

Limiting and Managing Access Points Reduces Conflict

- Residential lots are limited to one access point, and commercial/industrial lots are restricted to one or two per 500
- Additional access points are only allowed if justified through a development or circulation plan, reviewed by the
- Joint use driveways are encouraged when frontage is narrow, promoting access consolidation.

Sight Distance Standards are Detailed and Context-Sensitive

- Applies stopping sight distance (SSD) for all driveways and entering sight distance (ESD) for all road intersections, based on posted speed limits.
- Includes specific design speeds and required distances for a range of speeds (20–50 mph) and turning movements
- Requires field measurements and diagrams for sight distance where conditions are marginal, and allows the county engineer to request detailed analysis.

Establishes Obstruction-Free Zones via Easements

- Requires an unobstructed sight distance triangle at all access points to county roads.
- Allows the county to require maintenance easements to preserve visibility into the future (e.g., for vegetation or structures near access points).

Vehicle Type and Volume-Based Design Criteria

- Driveway and access point designs must reflect:
  - Vehicle type (e.g., SU or WB trucks)
  - Traffic volumes
  - Land use
- For commercial/industrial developments, the county engineer can require a transportation impact study and prohibit access that creates hazards or impedes flow.

Encourages Driveway Placement for Safety

- Recommends placing driveways:
  - On lower-volume roadways
  - As far from intersections as possible
- Discourages closely spaced driveways, which can create driver confusion and increase crash risk.

11. Title 15 Development Standards
Status: Various timeline updates

15.30.350 Traffic Calming Measures

Enables Use of Proven Speed-Reduction Strategies

- By allowing traffic calming, the county signals support for tools such as:
  - Speed humps or cushions
  - Curb extensions (bulb-outs)
  - Chicanes or narrowing
  - Raised crosswalks

Roundabouts or mini-circles

These treatments are effective at reducing vehicle speeds, improving driver attentiveness, and increasing pedestrian

Potential Improvements

To better prioritize transportation safety for a county like Chelan, the current design standards can be enhanced and refined in several ways. While the existing framework provides a strong foundation, the following recommendations outline how updates to standards could further transportation safety.

Code 15.30.240 Road Design Standards

Strengthen Provisions for Vulnerable Road Users

- Consider establishing expanded requirements for nonmotorized facilities beyond just HD areas and LAMIRDs to include popular corridors or areas near schools, parks, and workplaces, as determined by the County Engineer.
- Require pedestrian and bicycle facility planning in all new subdivisions, not just where adjacent development exists, to create proactive rather than reactive networks.
- Consider including safe crossings and traffic calming as part of road design outside of urban growth areas, or unincorporated cities and where pedestrian or cyclist activity is high.

Make Snow Storage Safety-Oriented

- Require snow storage areas to preserve sight distances, avoid blocking sidewalks and be located where runoff won't refreeze on travel surfaces.

Formalize Emergency Response Integration

- Add requirements for emergency pullouts and turnaround signage, especially on roads near wildland-urban interface zones or high-risk evacuation areas; meeting Chelan County Fire Code.

Introduce Data-Driven Safety Prioritization

- Use crash data, sight distance concerns, and road geometry to flag higher-risk segments for enhanced design or retrofits that increase transportation safety.

15.30.270 Pedestrian Facilities

- Reframe to include Pedetrian and Bicycle Facilities

Elevate Design Minimums for Safety

space.

- Where paved sidewalks aren't feasible, require paved shoulders or shared-use paths for both pedestrians and

Define Safety-Based Exceptions and Conditions

- Require an engineering judgment-based exception, documented with justification when multimodal facilities are not feasible (e.g., ADT data, terrain, lack of destinations).
- Create positive triggers for safety measure inclusion along rural roadways, such as:
  - Within ¼ mile of a school or playground or in locations of known bicycle use.
  - Project with >10 dwelling units

11. Title 15 Development Standards
Status: Various timeline updates

Add Lighting and Visibility Guidelines

• Consider introducing minimum requirements or recommendations for reflective signage on roads with pedestrian
• Prioritize areas with:
  • Curves
  • Sightline constraints
  • Nighttime activity (e.g., shift work areas)

Incorporate Safety Data in Decision-Making

• Require periodic review of rural crash data, near-miss reports, or school district input to guide where pedestrian infrastructure is most needed.
• Integrate into the planning process for future developments and county capital projects that may be outlined in existing plans, or capital improvement projects.

15.30.310 Site access and intersections - General criteria

Consider reviewing rural roadway safety based on context

• Include rural-specific provisions to address:
  • Higher travel speeds
  • Curved or hilly topography
  • Longer emergency response times
  • When reviewing driveways and rural access points, add consideration for safe bicycle passage across

Rural roads have different risk factors than urban environments and should have customized access design criteria to mitigate those risks.

Require Sight Distance Analysis for All Rural Access Points

• Reference AASHTO rural sight distance charts and include requirements for vegetation or terrain removal when

Elevate Permit Review for Agricultural and Large-Vehicle Uses

• Require additional review for driveways or access points that will:
  • Serve farm equipment or oversize vehicles
  • Cross ditches or soft shoulders to determine if additional stablitiy measures are necessary for heavy vehicle
• Require hardened surfaces or appropriate turning radii to prevent shoulder degradation and vehicle rollovers.

15.30.320 Roadway Intersections

Add Intersection Warning System Guidance

• For rural roads with limited visibility or high crash risk, recommend or require:
  • Advance warning signage
  • Flashing beacons
  • Intersection Conflict Warning Systems (ICWS) if crash patterns justify

Introduce Vegetation and Grading Controls Near Intersections

• Require all rural intersection approaches to:
  • Clear sight triangles of obstructions (e.g., vegetation, signage, fencing)
  • Include annual maintenance agreements or easement language for long-term visibility preservation along public

Expand Drainage Design Standards for Rural Settings

• Require that drainage plans for rural intersections address:
  • Seasonal runoff and snowmelt
  • Ditch capacity and culvert sizing
  • Erosion control for adjacent gravel shoulders

11. Title 15 Development Standards
Status: Various timeline updates

Incorporate Crash Data and Risk Scoring

- Consider use of historic crash data or hazard scoring when siting or upgrading rural intersections.
- Require mitigation for intersections flagged as high-risk through:
  - Design changes
  - Access restrictions
  - Operational improvements (e.g., stop control upgrades)

15.30.330 Access Points

Formalize Vegetation and Obstruction Management in Sight Triangles

- Include a vegetation height cap and minimum clear zone in ordinance language, where feasible.

Define Spacing Requirements for Rural Driveways

- Restrict closely spaced residential driveways on rural collectors and arterials unless shared access is used.

Crash History Consideration for Access Approval

- Consider known crash clusters, speed data, or near-miss reports when evaluating new access points or approving exceptions during the approval process.

15.30.350 Traffic Calming Measures

Consider inclusion of traffic calming into the review of new or retrofit developments such as:

Define Applicable Contexts for Traffic Calming

- Explicitly identify suitable applications, such as:
  - LAMIRDs and rural villages
  - Areas near schools, parks, or community centers
  - Residential clusters along rural collectors
  - High-speed roads with documented speeding concerns
  - Shared-lane markings or signing where multimodal use is prominent.

Create a Toolbox of Appropriate Traffic Calming Measures

- Include a list of context-sensitive tools proven effective in rural areas, such as:
  - Speed feedback signs (radar signs)
  - Shoulder rumble strips
  - Gateways or entrance treatments to signal reduced-speed zones
  - Painted or raised crosswalks near bus stops

Set Safety-Based Criteria for Deployment

- Require data to justify installation, such as:
  - Speed studies
  - Crash history especially those involving pedestrians, cyclists, or fixed-object collisions
  - Public complaints combined with observational data

Include Emergency Access and Maintenance Considerations

- Maintain emergency vehicle clearance
- Avoid interference with snow plowing and maintenance

Policy and Program Recommendations

SAFE SYSTEM APPROACH CORE ELEMENT: POST CRASH CARE

POLICY/PROGRAM RECOMMENDATION

TRAUMA PREVENTION PROGRAM
Explore the concept of Trauma Prevention Programs within fire departments and other first responders to develop collaborative approaches to reducing serious injury and fatal crashes on streets through design and operations while providing for emergency response

TARGET ZERO EMPHASIS AREA:
All Emphasies Areas

CHELAN COUNTY EMPHASIS AREAS:
All Emphasies Areas

PRIMARY SUPPORT
County Staff
Emergency Responders (Police, EMS, Fire)

SECONDARY SUPPORT
Public Works
Emergency Responders (Police, EMS, Fire)

COLLISION DATABASE PROGRAM
Develop a centralized database to track collision data and response outcomes, aligning with local and state emergency response protocol and data-sharing agreements.

TARGET ZERO EMPHASIS AREA:
Post Crash Care

CHELAN COUNTY EMPHASIS AREAS:
All Emphasies Areas

PRIMARY SUPPORT
Emergency Responders (Police, EMS, Fire)

SECONDARY SUPPORT
Public Works
Emergency Responders (Police, EMS, Fire)

SAFE SYSTEM APPROACH CORE ELEMENT: SAFER PEOPLE

POLICY/PROGRAM RECOMMENDATION

EDUCATION PROGRAM
Educate the public about the effects of roadway conditions on appropriate motorist speed, such as weather, congestion, daytime/nighttime, and roadway user mix.

TARGET ZERO EMPHASIS AREA:
Speed Management

CHELAN COUNTY EMPHASIS AREAS:
Speeding

PRIMARY SUPPORT
County Staff

SECONDARY SUPPORT
Educational Institutes

Policy and Program Recommendations

PUBLIC AWARENESS PROGRAM
Educate the public about the dangers of excessive speed and speeding too fast for conditions, and its role in traffic fatalities

TARGET ZERO EMPHASIS AREA:
Speed Management

CHELAN COUNTY EMPHASIS AREAS:
Speeding

PRIMARY SUPPORT
County Staff

SECONDARY SUPPORT
Public Works

ENFORCEMENT PROGRAM
Increase enforcement strategies (speed feedback signs, High-Visibility Enforcement, etc.) that comply with Washington state laws regarding speeding within a school zone

TARGET ZERO EMPHASIS AREA:
Speed Management

CHELAN COUNTY EMPHASIS AREAS:
Speeding

PRIMARY SUPPORT
Enforcement

SECONDARY SUPPORT
Educational Institutes

ENFORCEMENT PROGRAM
Use data analytics to identify high-risk areas and times for targeted enforcement. Ensure strategies align with state-wide enforcement campaigns for consistency.

TARGET ZERO EMPHASIS AREA:
All Emphasies Areas

CHELAN COUNTY EMPHASIS AREAS:
All Emphasies Areas

PRIMARY SUPPORT
Enforcement

SECONDARY SUPPORT
Public Works

INTERSECTION IMPACT AWARENESS PROGRAM
Provide targeted public information and education about crash-contributing factors found at specific intersections

TARGET ZERO EMPHASIS AREA:
Lane Departure

CHELAN COUNTY EMPHASIS AREAS:
Lane Departure

PRIMARY SUPPORT
County Staff

SECONDARY SUPPORT
Emergency Responders (Police, EMS, Fire)

Policy and Program Recommendations

WORKZONE SAFETY ENHANCEMENT POLICY
Establish comprehensive safety protocols aligned with WSDOT's work zone safety regulations.

TARGET ZERO EMPHASIS AREA:
All Emphasies Areas

CHELAN COUNTY EMPHASIS AREAS:
All Emphasies Areas

PRIMARY SUPPORT
County Staff

SECONDARY SUPPORT
Public Works

SAFE SYSTEM APPROACH CORE ELEMENT: SAFER ROADS

POLICY/PROGRAM RECOMMENDATION

SAFE SPEED PRIORITIZATION PROGRAM
Develop an inventory of roadway speeds and analyze serious injury and fatal crashes in the context of posted speed limits and operating speeds. Use this analysis to prioritize locations for speed management treatments.

TARGET ZERO EMPHASIS AREA:
Speed Management

CHELAN COUNTY EMPHASIS AREAS:
Speeding

PRIMARY SUPPORT
County Staff

SECONDARY SUPPORT
Public Works

DESIGN STANDARDS
Implement roadway design to be consistent with the surrounding context; provide for separation of modes based on context and use of the road.

TARGET ZERO EMPHASIS AREA:
Lane Departure

CHELAN COUNTY EMPHASIS AREAS:
Run-off the Road

PRIMARY SUPPORT
County Staff

SECONDARY SUPPORT
Public Works

SAFE CURVE PROGRAM
Inventory horizontal curves and gather data to support development of programs and projects to reduce the severity of lane departure crashes.

TARGET ZERO EMPHASIS AREA:
Lane Departure

CHELAN COUNTY EMPHASIS AREAS:
Run-off the Road

PRIMARY SUPPORT
County Staff

SECONDARY SUPPORT
Public Works

Policy and Program Recommendations

CLEAR ZONE SAFETY PROGRAM
Install delineation on fixed objects that cannot be removed from the clear zone, such as guardrails and other roadway hardware.

TARGET ZERO EMPHASIS AREA:
Lane Departure

CHELAN COUNTY EMPHASIS AREAS:
Run-off the Road

PRIMARY SUPPORT
County Staff

SECONDARY SUPPORT
Public Works

INTERSECTION CONTROL EVALUATION PROGRAM
Evaluate identified intersections with a structured, data-driven process to determine the most appropriate form of traffic control at an intersection.

TARGET ZERO EMPHASIS AREA:
All Emphasies Areas

CHELAN COUNTY EMPHASIS AREAS:
All Emphasies Areas

PRIMARY SUPPORT
County Staff

SECONDARY SUPPORT
Public Works

WORK ZONE SAFETY ENHANCEMENT POLICY
Establish comprehensive safety protocols aligned with WSDOT's work zone safety regulations, utilizing smart work zone technologies.

TARGET ZERO EMPHASIS AREA:
All Emphasies Areas

CHELAN COUNTY EMPHASIS AREAS:
All Emphasies Areas

PRIMARY SUPPORT
County Staff

SECONDARY SUPPORT
Public Works

ROLLOVER RISK REDUCTION PROGRAM
Install truck rollover and curve warning signage.

TARGET ZERO EMPHASIS AREA:
All Emphasies Areas

CHELAN COUNTY EMPHASIS AREAS:
Run-off the Road

PRIMARY SUPPORT
County Staff

SECONDARY SUPPORT
Public Works

Policy and Program Recommendations

SAFE SYSTEM APPROACH CORE ELEMENT: SAFER SPEEDS

POLICY/PROGRAM RECOMMENDATION

SPEED MANAGEMENT PLAN
Implement roadway and intersection speed management strategies tailored to street context, ensuring effectiveness in achieving safe, injury-reducing speed limits.

TARGET ZERO EMPHASIS AREA:
Speed Management

CHELAN COUNTY EMPHASIS AREAS:
Speeding

PRIMARY SUPPORT
County Staff

SECONDARY SUPPORT
Public Works

SPEED LIMIT SIGN DEPLOYMENT
Review and correct speed limit signs so they are visible, conspicuous, and installed at appropriate intervals.

TARGET ZERO EMPHASIS AREA:
Speed Management

CHELAN COUNTY EMPHASIS AREAS:
Speeding

PRIMARY SUPPORT
Public Works

SECONDARY SUPPORT
Public Works

TRUCKING SPEED PROGRAM
Work with Trucking Association and Commercial Vehicle Enforcement Division to encourage company policies which, when backed with speed monitors or speed regulators, can reduce speeding in commercial vehicles.

TARGET ZERO EMPHASIS AREA:
Speed Management

CHELAN COUNTY EMPHASIS AREAS:
Speeding

PRIMARY SUPPORT
Trucking Agencies
Enforcement

SECONDARY SUPPORT
Trucking Agencies
Enforcement
County Staff

SCHOOL ZONE ENHANCEMENT PROGRAM
Develop a program that collaborates with local schools and parent-teacher associations to identify areas of enhanced safety improvements (Rapid Flashing Beacons, speed feedback signs, etc.).

TARGET ZERO EMPHASIS AREA:
Speed Management

CHELAN COUNTY EMPHASIS AREAS:
Speeding

PRIMARY SUPPORT
County Staff

SECONDARY SUPPORT
Schools

Policy and Program Recommendations

TRAFFIC CALMING PROGRAM
Develop a program that follow state andnational traffic calming guidelines and best practices.

TARGET ZERO EMPHASIS AREA:
Speed Management

CHELAN COUNTY EMPHASIS AREAS:
Speeding

PRIMARY SUPPORT
County Staff

SECONDARY SUPPORT
Schools

SAFE SYSTEM APPROACH CORE ELEMENT: SAFER VEHICLES

POLICY/PROGRAM RECOMMENDATION

TRUCK/FREIGHT ROUTE POLICY
Develop a policy in accordance with WDOT's guidelines on truck routes and consider local ordinances for designated truck routes to identify areas where freight routes and VRU paths intersect, and implement measures such as designated truck lanes or time-based restrictions to enhance safety.

TARGET ZERO EMPHASIS AREA:
All Emphasies Areas

CHELAN COUNTY EMPHASIS AREAS:
All Emphasies Areas

PRIMARY SUPPORT
County Staff

SECONDARY SUPPORT
Public Works

PUBLIC TRANSPORTATION SAFETY POLICY
Develop a safety protocol for public transit systems that include regular vehicle inspections, driver training programs, and emergency preparedness plans. Align with state and federal transit safety regulations and collaborate with transit agencies to implement best practices.

TARGET ZERO EMPHASIS AREA:
All Emphasies Areas

CHELAN COUNTY EMPHASIS AREAS:
All Emphasies Areas

PRIMARY SUPPORT
Transit Organizations

SECONDARY SUPPORT
County Staff

Appendix C: Safety Data Analysis Memorandum

SAFETY DATA ANALYSIS

DATE: July 23, 2025

TO: Daniel Hendricks, TE | Transpo Group
Jon Pascal, PE | Transpo Group

FROM: Justin Sheets, PE | DKS Associates
Crystal Chavez | DKS Associates

SUBJECT: Chelan County Safety Action Plan
Safety Data Analysis

DKS Project #25302-000

INTRODUCTION AND STUDY AREA

The Chelan County Safety Action Plan will uncover the traffic safety trends and guide the policy and investment decisions for reducing the number of fatal and serious injury crashes in Chelan County. The purpose of this memorandum is to analyze crash data and identify trends, risk factors, and high injury network locations. These findings will inform safety strategies and help prioritize investments in later stages of the plan's development.

Chelan County is in northern Washington. This county includes five incorporated cities (Cashmere, Chelan, Entiat, Leavenworth and Wenatchee) and 4 census-designated places (including Chelan Falls, Manson, South Wenatchee, and Sunnyslope).

The study area for this plan includes all roadways owned and operated by Chelan County. It does not include roadways within the incorporated cities, roadways owned and operated by Washington State Department of Transportation (WSDOT), nor miscellaneous trafficways such as forest service roads.

CRASH OVERVIEW

Crash data for the most recent available five years of data (2019 to 2023) was obtained from WSDOT and used for the crash analysis. Partial data from 2024 was obtained from WSDOT on May 6, 2025, and is included for reference only.

ALL CRASHES

During the study period, a total of 581 crashes were reported in the study area, an average of about 117 crashes per year. For comparison with a nearby county of similar population and roadway network, Douglas County had a total of 591 total crashes in this time period. There was a total of 39 fatal and serious injury crashes, making up close to 7% of the total crashes.

A breakdown of crashes by year and severity is shown in Figure 1. As shown, the number of crashes has decreased significantly since the high of 136 crashes in 2019, however, there has been an upward trend from 2020 through 2024. It is important to mention that 2024 crash data is also included in Figure 1, but this data has not yet been finalized and was not included in the full crash analysis for this reason.

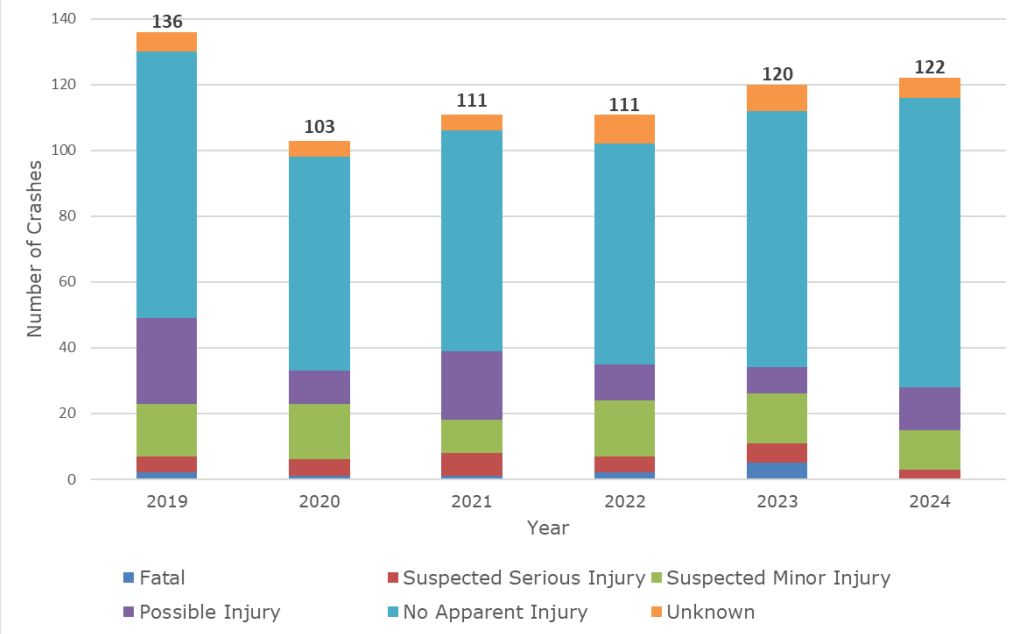


FIGURE 1: CHELAN COUNTY CRASHES BY YEAR AND SEVERITY

The most common crash type during the study period was fixed object, at 297 crashes (51.1%). Vehicles were most likely to strike a tree or stump (16.8% of fixed object crashes), earth bank/ledge (18.8%), embankment (11.1%), guardrail (11.5%), or ditch (9.8%). After fixed object crashes, the most common crash types were angle, overturn, rear end, and hit parked car, as shown in Figure 2.

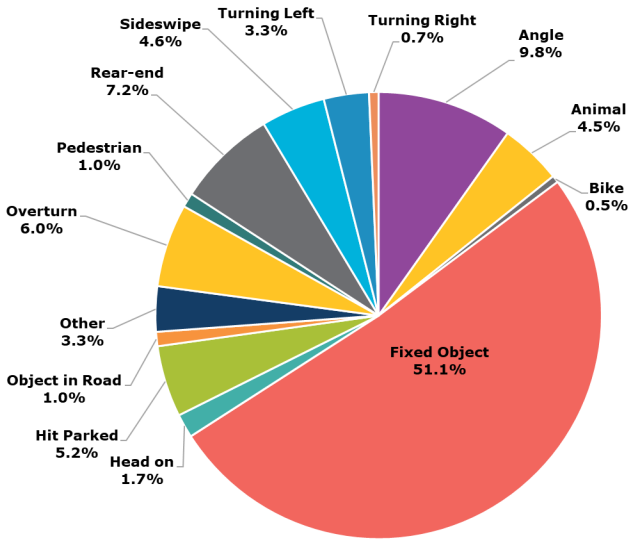


FIGURE 2: MOST COMMON CRASH TYPES, ALL SEVERITIES

Figure 3 shows the heat map of all the crashes reported. Crashes are concentrated on Squilchuck Road, Manson Boulevard, Chumstick Highway, and Malaga Alcoa Highway. There are also many crashes along roads within Peshastin, Cashmere, Leavenworth, Entiat, Manson, and Malaga.

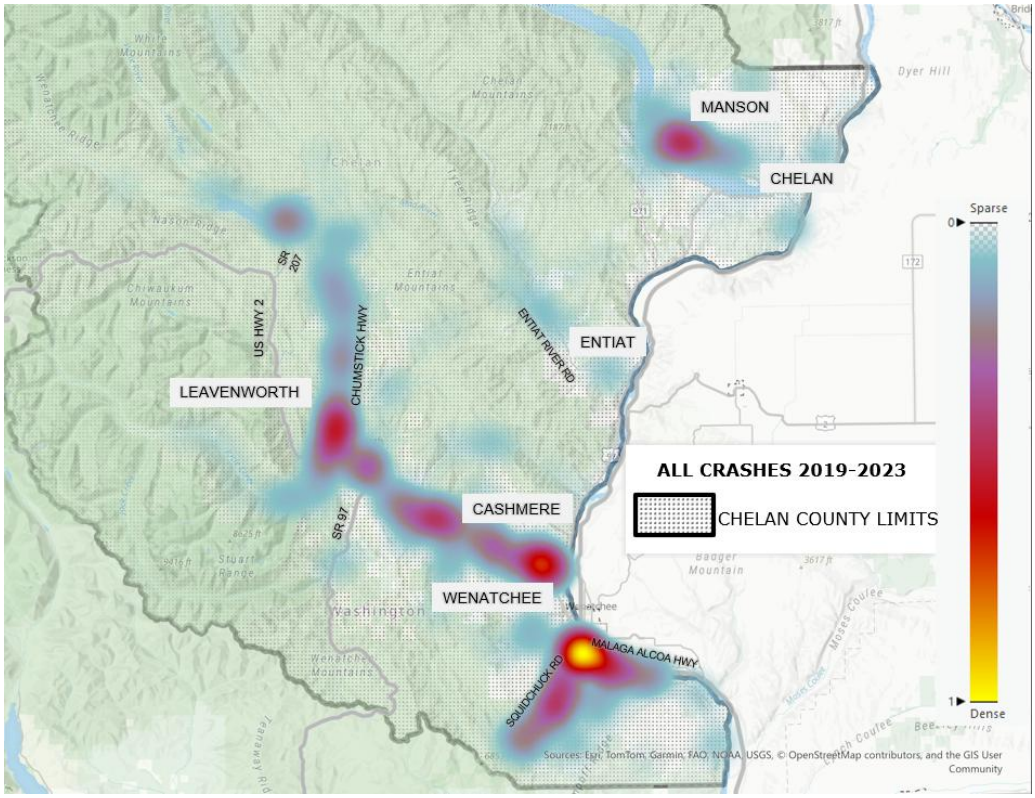


FIGURE 3: HEAT MAP OF ALL CRASHES

Figure 4 shows the location of all the crashes reported. Crashes are concentrated on Squilchuck Road, Manson Boulevard, Chumstick Highway, and Malaga Alcoa Highway. There are also many crashes along roads within Peshastin, Cashmere, Leavenworth, Entiat, Manson, and Malaga.

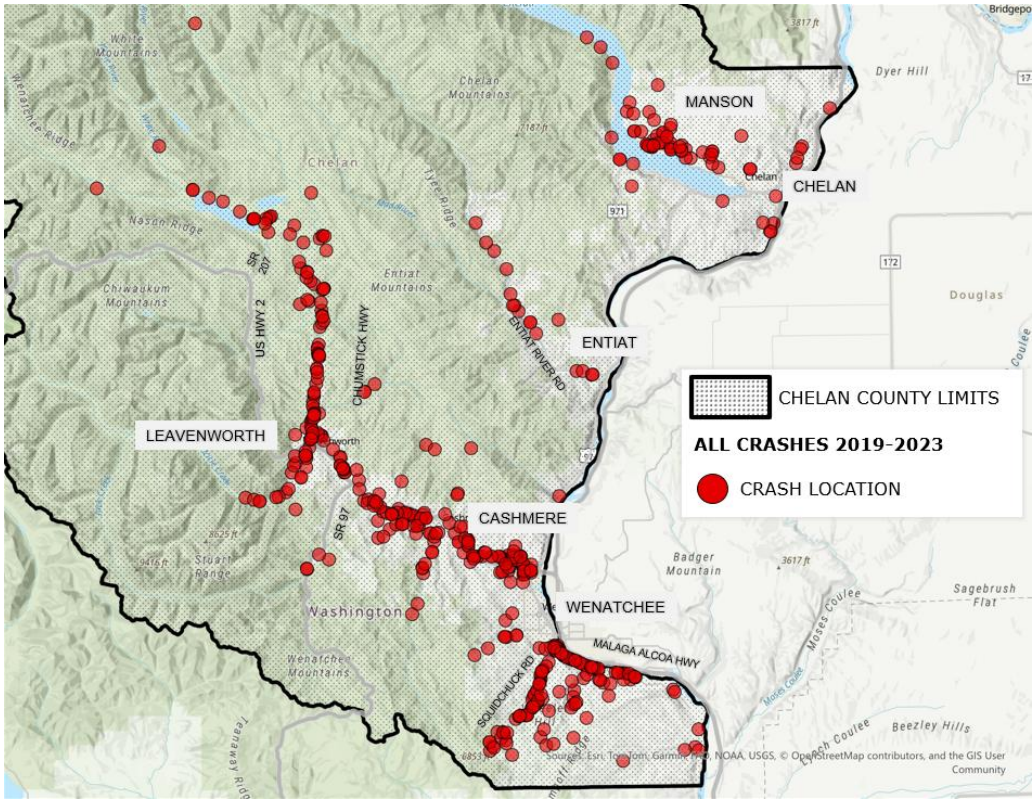


FIGURE 4: LOCATIONS OF ALL CRASHES

TEMPORAL TRENDS

To determine whether there are any temporal trends, crashes were examined by time of day, day of week, and month. Figure 5 shows the number of crashes by time of day. The highest number of crashes, 44, occurred between 5:00 and 6:00 p.m. The highest number of fatal and serious injury crashes, 3, occurred from 3:00 to 4:00 a.m., from 7:00 to 8:00 a.m., from 2:00 to 3:00 p.m., and from 8:00 to 9:00 p.m.

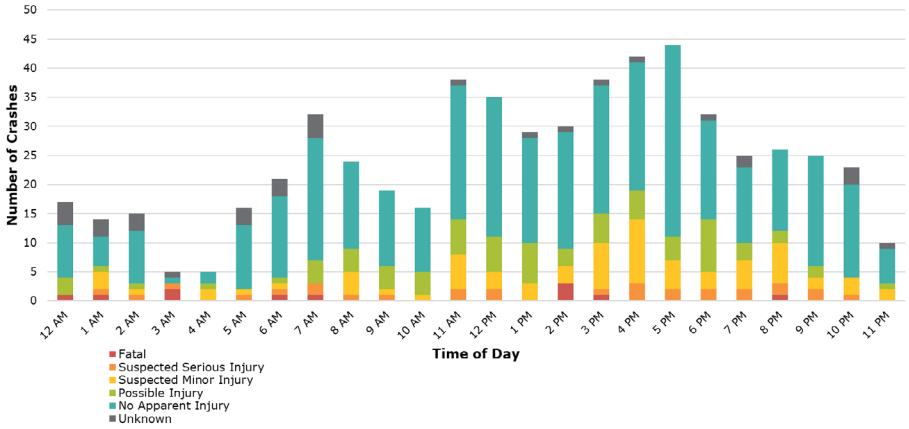


FIGURE 5: CRASHES BY TIME OF DAY

The number of crashes seems to correlate with the relative amount of traffic each hour (for example, the number of crashes peaks during morning commute times, during lunch hour, and during afternoon/evening activity times).

Figure 6 shows the number of crashes by day of week. The number of reported crashes was relatively consistent during the week, ranging from 73 to 91 crashes. Saturday and Sunday had the highest number of fatal and serious injury crashes.

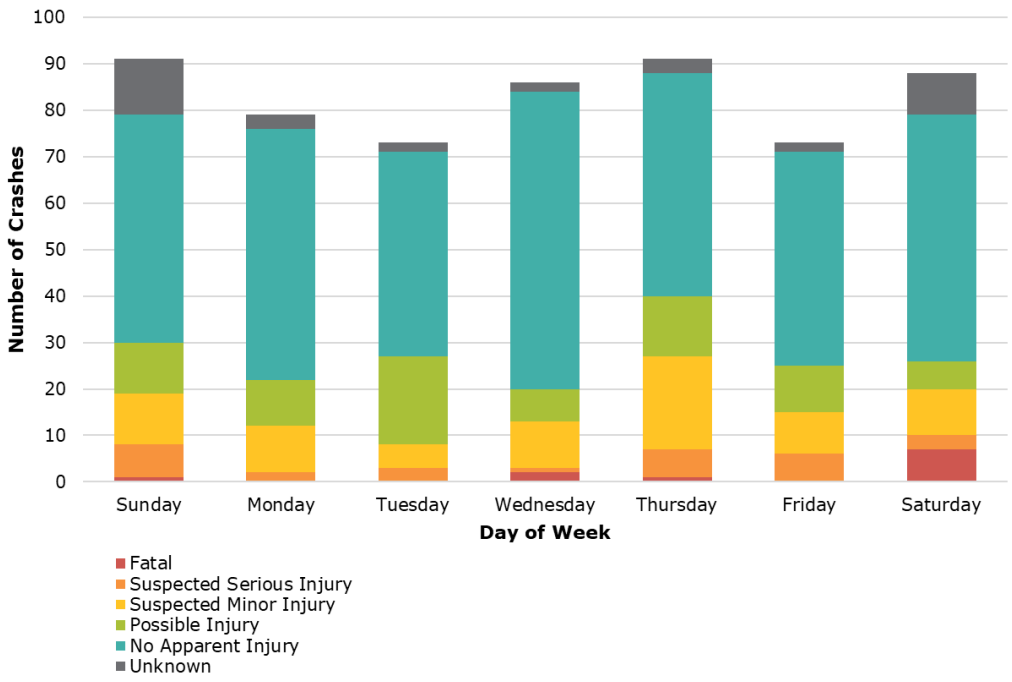


FIGURE 6: CRASHES BY DAY OF WEEK

Figure 7 shows the number of crashes on Saturday and Sunday by t he time of day. The highest number of crashes, 13, occurred from 5:00 to 6:00 p.m. and from 6:00 to 7:00 p.m. The highest number of fatal and serious injury crashes, 2, occurred from 1:00 to 2:00 a.m., from 3:00 to 4:00 a.m., from 2:00 to 3:00 p.m., from 3:00 to 4:00 p.m., from 6:00 to 7:00 p.m., and from 8:00 to 9:00 p.m.

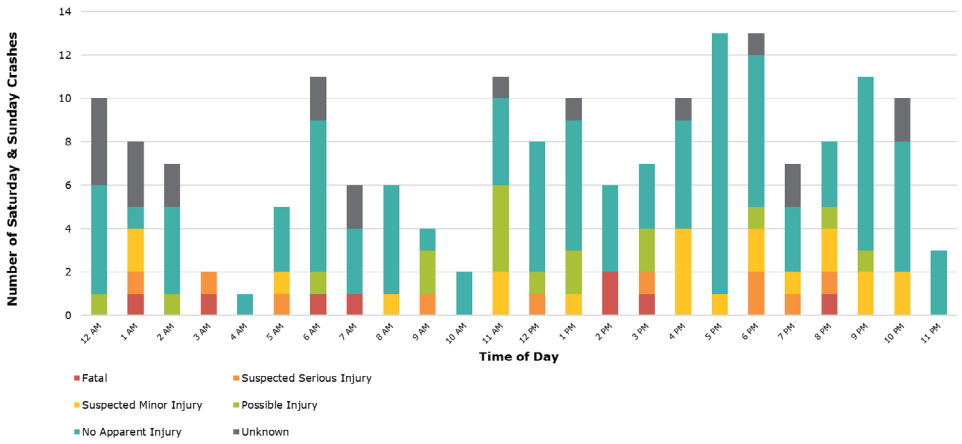


FIGURE 7: SATURDAY AND SUNDAY CRASHES BY TIME OF DAY

Figure 8 shows the number of crashes by month of the year. The number of crashes peaked at over 60 in December, with a low of 32 in the month of March. Crashes were generally the highest in the peak summer and winter seasons, likely correlating with travel and recreational trips. Also, the summer months had the highest number of fatal and serious injury crashes.

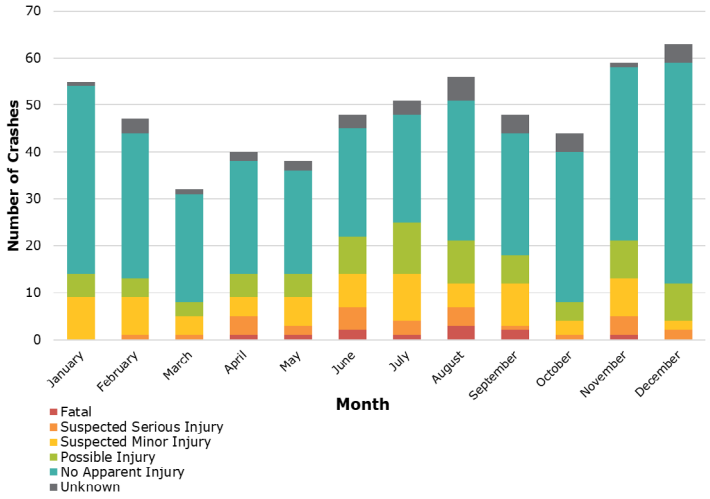


FIGURE 8: CRASHES BY MONTH

WEATHER TRENDS

WEATHER AT TIMES CAN BE A CONTRIBUTING FACTOR TO CRASHES, WHETHER IT AFFECTS THE DRIVERS' INDIVIDUAL ABILITY TO MANEUVER THE ROAD OR BY CHANGING THE ROAD SURFACE CONDITIONS.

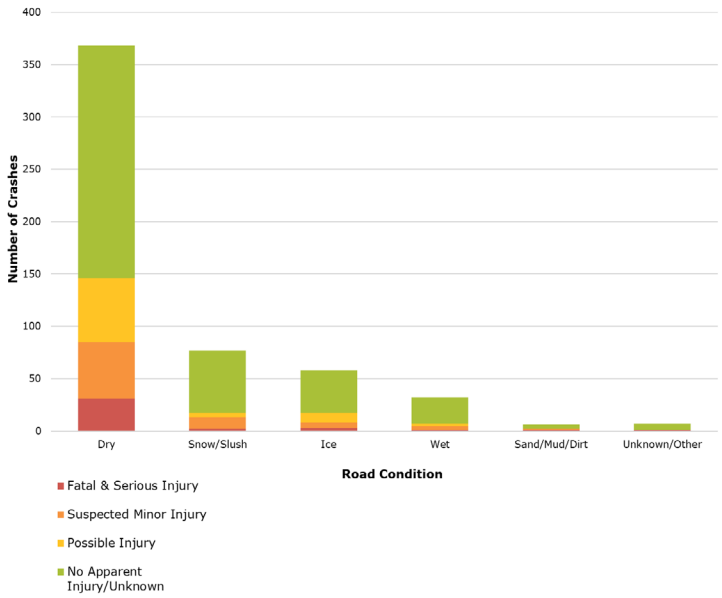


Figure 9 shows the number of crashes by the road condition and the severity. The highest number of crashes occurred with dry road conditions, following with snow/slush, ice, wet, sand/mud/dirt

and a few were listed as unknown.

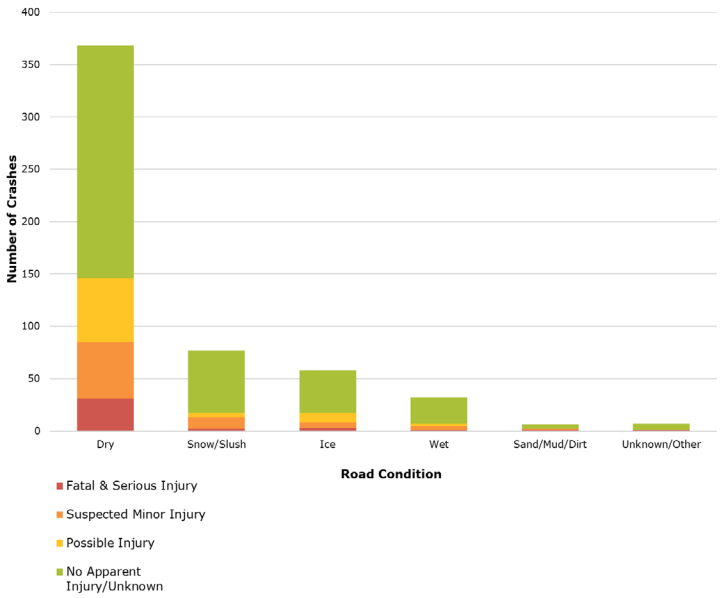


FIGURE 9: CRASHES BY ROAD CONDITIONS AND SEVERITY

Snow, slush and icy road conditions combined for a total of 157 crashes. For the combined categories, 4% of crashes had fatal and severe injuries, 12% had suspected minor injuries, 9% had possible injuries and 75% had no apparent injuries or unknown as shown in Figure 10.

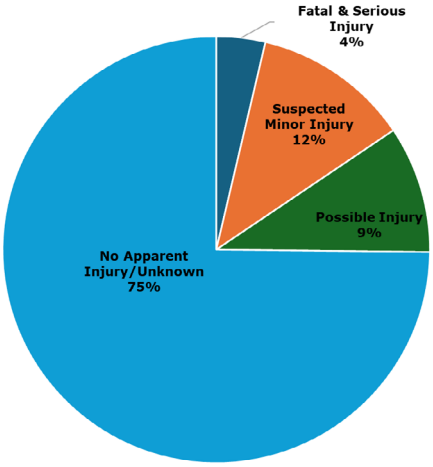


FIGURE 10: SHARE OF CRASH SEVERITY FOR ROAD CONDITIONS WITH SNOW/SLUSH AND ICE

Figure 11 shows the heat map of all the snow/slush and icy roads which had a crash reported. Crashes are concentrated along roads in Manson, near Lake Wenatchee, Leavenworth, Sunnyslope, and South Wenatchee.

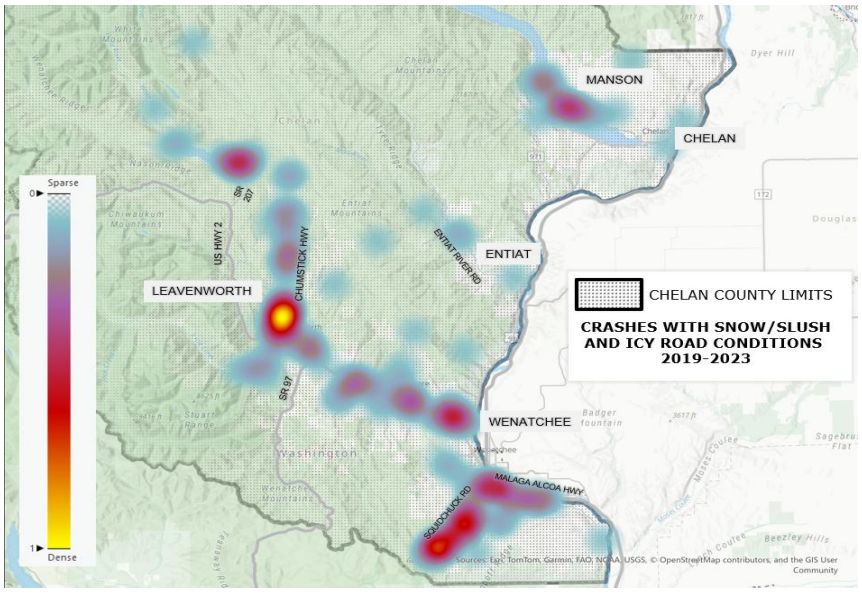


FIGURE 11: HEAT MAP OF SNOW/SLUSH AND ICY ROAD CONDITION CRASHES

Figure 12 shows the location of all the snow/slush and icy roads which had a crash reported in the Manson area. Crashes are concentrated along roads adjacent to Manson Boulevard/State Route 150 and on Washington Street.

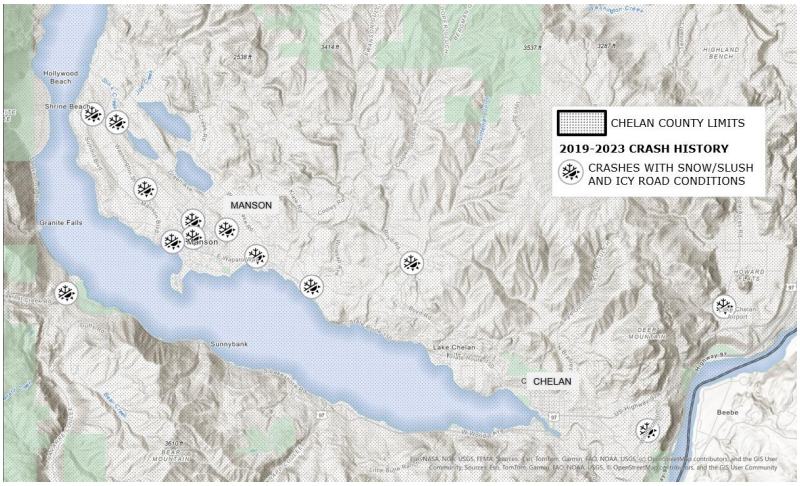


FIGURE 12: LOCATIONS OF SNOW/SLUSH AND ICY ROAD CONDITION CRASHES IN MANSON

Figure 13 shows the location of all the snow/slush and icy roads which had a crash reported near Lake Wenatchee. Crashes are concentrated along streets that provide access to Lake Wenatchee or Fish Lake.

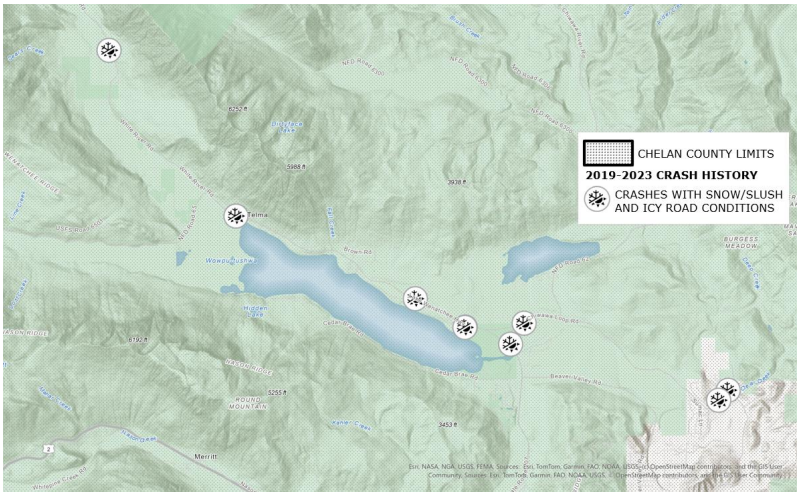


FIGURE 13: LOCATIONS OF SNOW/SLUSH AND ICY ROAD CONDITION CRASHES NEAR LAKE WENATCHEE

Figure 14 shows the location of all the snow/slush and icy roads which had a crash reported on county roads between Leavenworth and Wenatchee and up north near Ardenvoir. Crashes are concentrated along Chumstick Highway, Entiat River Road, and streets adjacent to U.S. Highway 2.

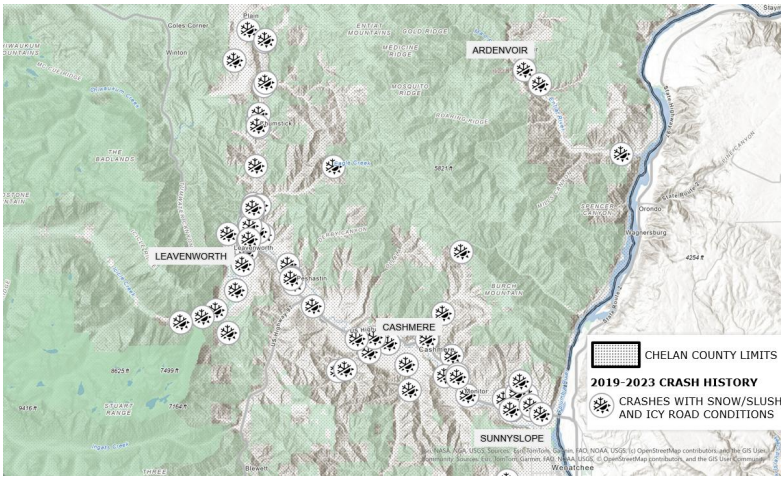


FIGURE 14: LOCATIONS OF SNOW/SLUSH AND ICY ROAD CONDITION CRASHES ON COUNTY ROADS BETWEEN LEAVENWORTH AND SUNNYSLOPE AND NEAR ARDENVOIR

Figure 15 shows the location of all the snow/slush and icy roads which had a crash reported on county roads in the South Wenatchee and Malaga areas. Crashes are concentrated along Squilchuck Road, Mission Ridge Road, and Malaga Alcoa Highway.

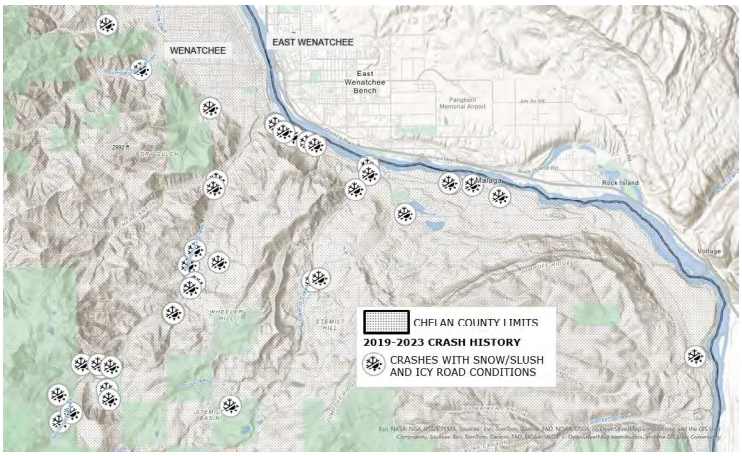


FIGURE 15: LOCATIONS OF SNOW/SLUSH AND ICY ROAD CONDITION CRASHES SOUTH WENATCHEE AND MALAGA

FATAL AND SERIOUS INJURY CRASH OVERVIEW

From 2019 to 2023, there were a total of 11 fatal crashes and 28 serious injury crashes reported in the study area.

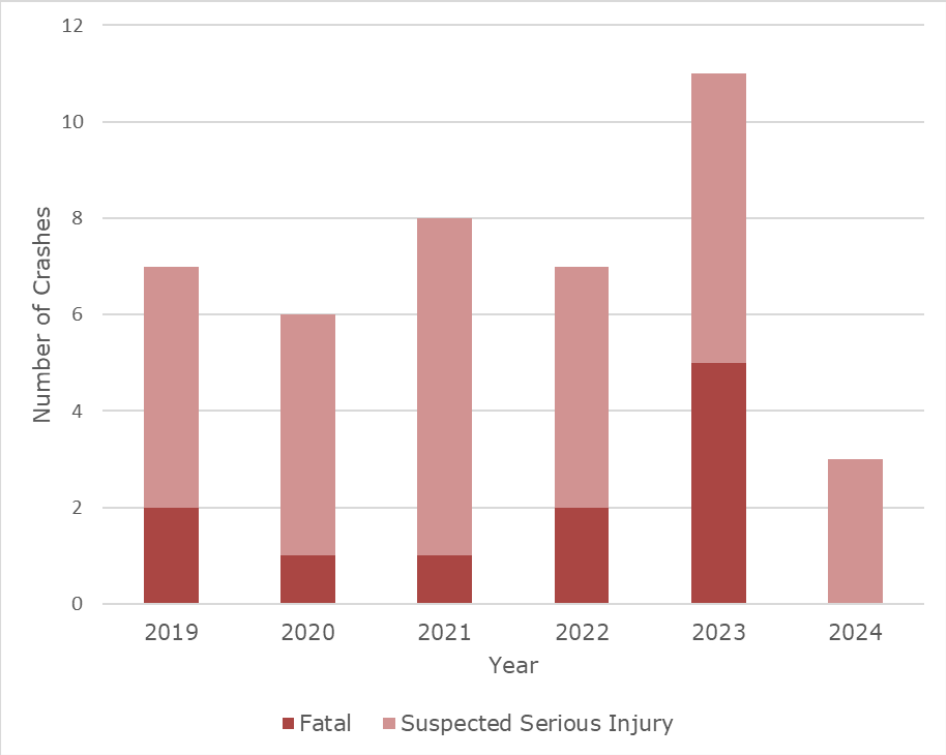


FIGURE 16: FATAL AND SERIOUS INJURY CRASHES IN CHELAN COUNTY BY YEAR

Note: Crash data for 2024 is included for reference purposes only. The data was obtained May 6, 2025 and has not been finalized by WSDOT at the time of this report.

Overall, the number of crashes resulting in fatal or serious injuries (F&SI) has increased to a high in 2023, as shown in Figure 16. However, the preliminary data in 2024 shows the fewest fatal and serious injury crashes of the study period.

Figure 17 shows the heat map of all the crashes with fatal or serious injuries. Fatal and serious injury crashes are more spread out and randomly distributed compared to total crashes. Locations with more than one fatal and serious injury crash include the following: Squilchuck Road, Stine Hill Road, Mission Creek Road, West Malaga Road, and Malaga Alcoa Highway.

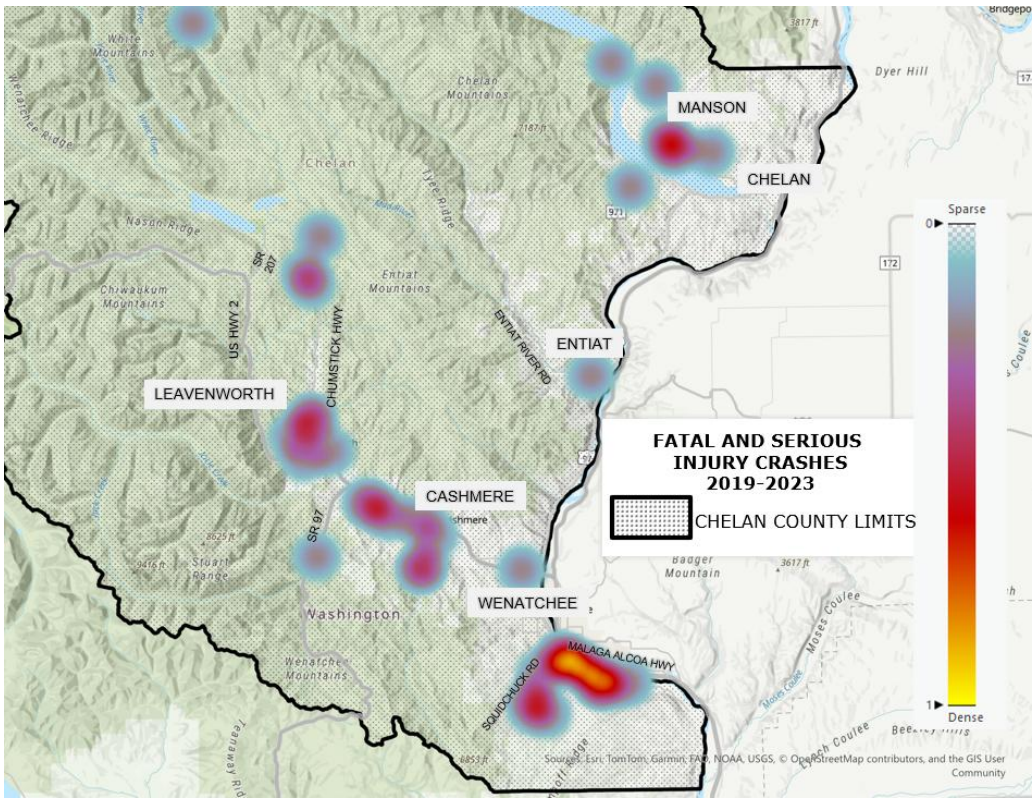


FIGURE 17: HEAT MAP OF FATAL AND SERIOUS INJURIES

Figure 18 shows the locations of all the crashes with fatal or serious injuries. Fatal and serious injury crashes are generally located in Cashmere, Leavenworth, Entiat, Manson, and Malaga.

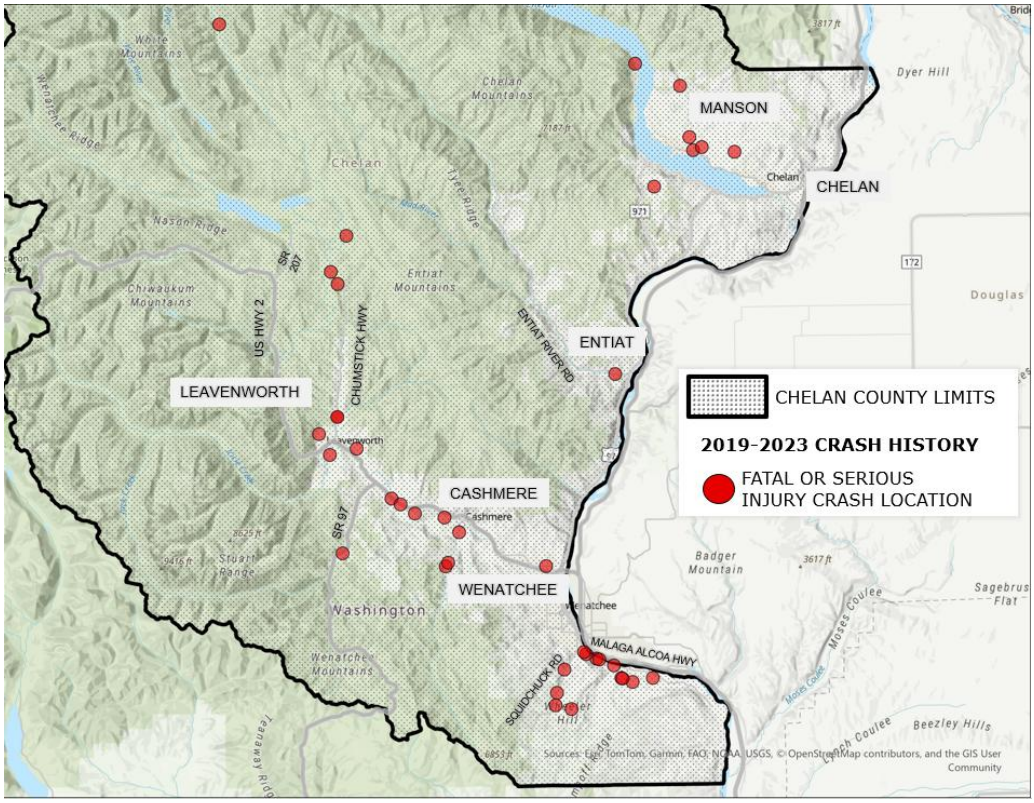


FIGURE 18: LOCATIONS OF FATAL AND SERIOUS INJURIES

ROAD USERS

PEDESTRIAN AND BICYCLE CRASHES

During the study period, 6 crashes involved pedestrians, and 3 crashes involved bicycles. Typically, these vulnerable users are often involved in a higher proportion of severe crashes, and this is true with the pedestrian and bicycle crashes in the County. As shown in Figure 19, 1 crash resulted in fatality, 2 crashes resulted in serious injury, 4 crashes resulted in minor injury, and 2 crashes resulted in possible injury.

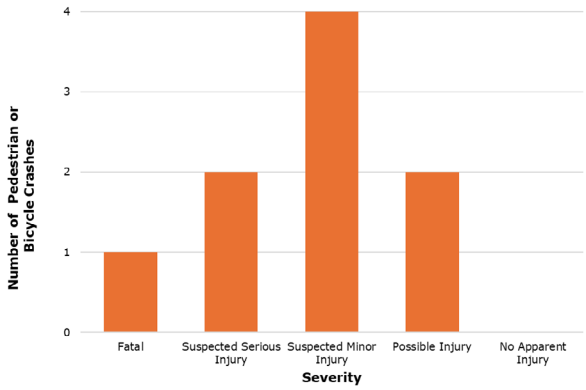


FIGURE 19: PEDESTRIAN OR BICYCLE CRASHES BY SEVERITY

Figure 20 shows the distribution of pedestrian and bicycle crashes throughout the time of day. The pedestrian crashes mostly occurred during the vehicular traffic peaks.

FIGURE 20: PEDESTRIAN OR BICYCLE CRASHES BY TIME OF DAY

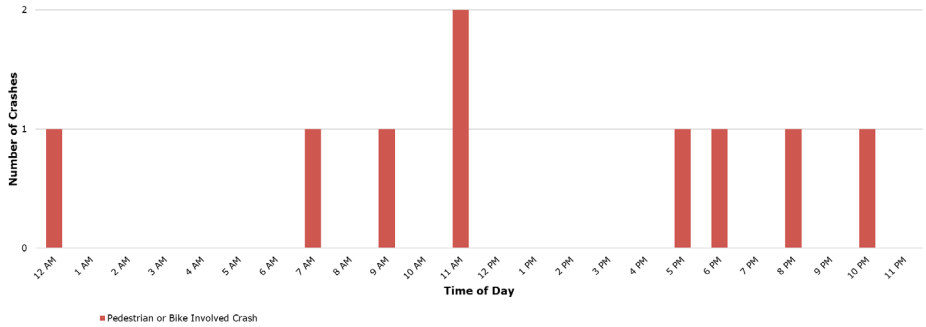


Figure 21 and Figure 22 show the location of the pedestrian crashes. Crashes are spread out along a few roads throughout the county.

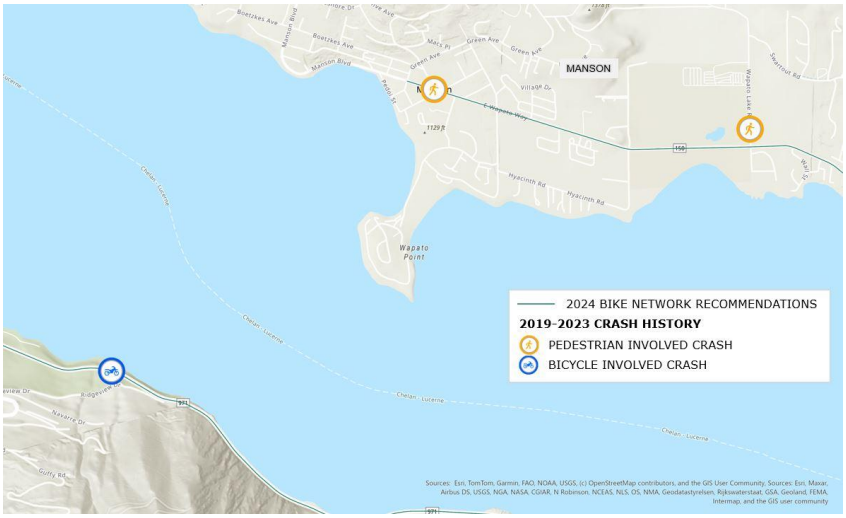


FIGURE 21: PEDESTRIAN CRASHES IN THE NORTH PART OF THE COUNTY

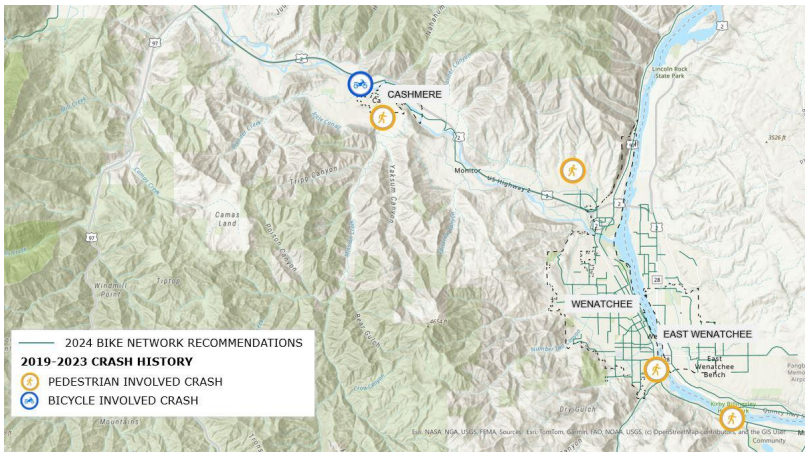


FIGURE 22: PEDESTRIAN CRASHES IN THE SOUTH PART OF THE COUNTY

There were 6 pedestrian-involved crashes summarized as followed:

- November 2019, vehicle turning left hits pedestrian, suspected minor injury, in Sunnyslope along Lilly Lane
- August 2020, vehicle turning left hits pedestrian, suspected serious injury, in Cashmere at the Mission Creek Road and Binder Road intersection
- July 2021, vehicle turning right hits pedestrian, suspected minor injury, in Manson at the Totem Pole Road and Manson Boulevard intersection
- December 2021, vehicle turning right hits pedestrian, suspected serious injury, in Manson north of East Wapato Way and Wapato Lake Road
- August 2023, vehicle going straight hits pedestrian, fatal, in South Wenatchee east of Malaga Alcoa Highway and Stemilt Creek Road
- September 2023, vehicle turning left hits pedestrian, suspected minor injury, in South Wenatchee at the South Viewdale Street and South Wenatchee Avenue intersection

There were 3 bicycle-involved crashes and the summary for the crashes are as followed:

- June 2019, cyclist strikes moving vehicle, possible injury, in Cashmere at the Sunset Highway and Evergreen Drive intersection
- August 2019, cyclist strikes moving vehicle, possible injury, in Manson along South Lakeshore Road
- October 2021, vehicle strikes cyclist, suspected minor injury, in Leavenworth south of Shore Street and Icicle Road

MOTORCYCLE-INVOLVED CRASHES

During the study period, motorcycles were involved in 25 crashes, accounting for 4.3% of all crashes. Of these, 9 resulted in fatal or serious injuries, accounting for 15% of all fatal and serious injury crashes and 36% of motorcycle crashes. As shown in Figure 23, the share of crashes involving motorcyclists increases with severity.

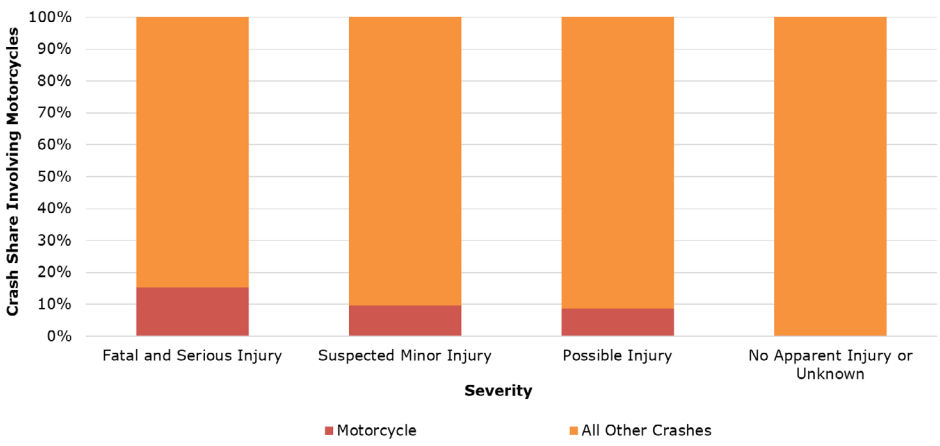


FIGURE 23: MOTORCYCLE CRASH SHARE

Figure 24 shows the location of all 25 motorcycle crashes. Crashes are concentrated along Chumstick Highway, Chiwawa Loop Road, North Road, and Entiat River Road.

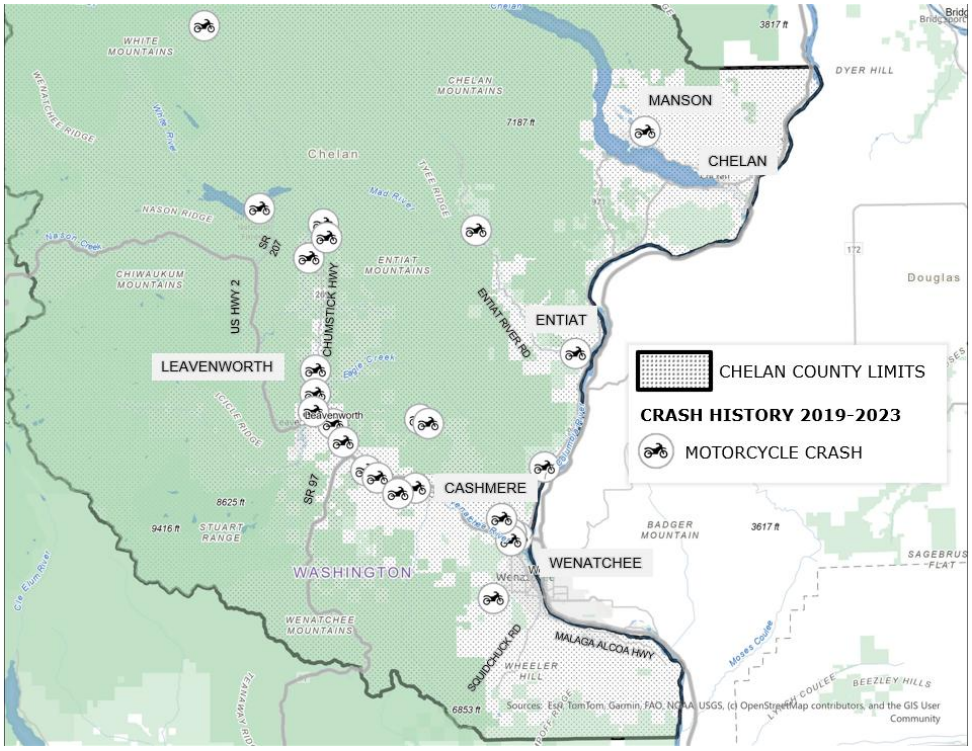


FIGURE 24: MOTORCYCLE CRASH LOCATIONS

Figure 25 shows the distribution of motorcycle crashes throughout the months. Crashes were more common during the summer months, with June having a high of 7 crashes and no crashes occurred between December and February. This is to be expected as these are peak travel periods for motorcyclists with warmer temperatures and the road conditions being dry.

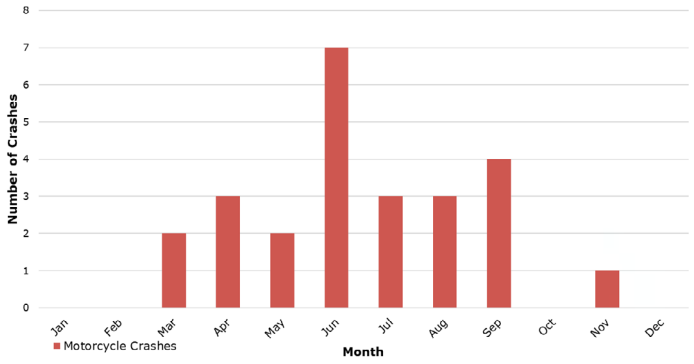


FIGURE 25: MOTORCYCLE CRASHES BY THE MONTH

Figure 26 shows the distribution of motorcycle crashes throughout the time of day. Crashes are more common during midday until late afternoon. The highest number of crashes occurred at 2:00 p.m. and there were no crashes between 10:00 p.m. and 4:00 a.m. There seems to be a peak again later in the night and this could be due to low light levels and increased traffic volumes due to people traveling home from work.

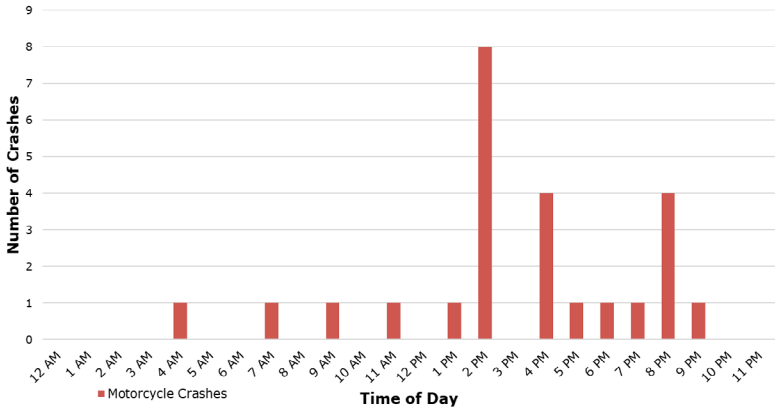


FIGURE 26: MOTORCYCLE CRASHES BY THE TIME OF DAY

Figure 27 shows the types of crashes involving motorcycles. The top two types of crashes were overturn (36%), which accounted for 9 crashes, and fixed object (28%), which accounted for 7 crashes. The next two types were left turning maneuvers (12%) with 3 crashes and animal (8%) and "Other" (8%) with 2 crashes each. The final two crash types are angle (4%) and rear-end (4%). The data shows that over two-thirds of all motorcycle crashes did not involve another vehicle.

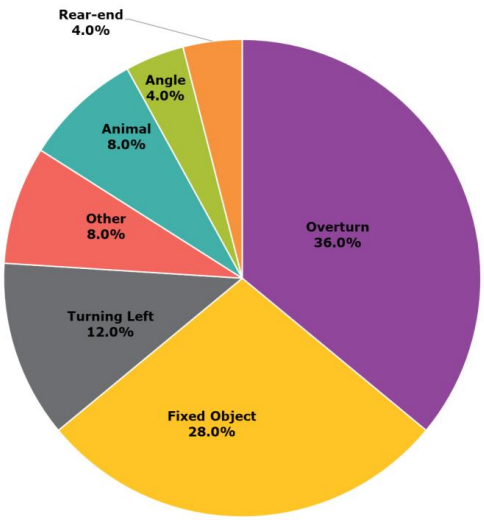


FIGURE 27: MOTORCYCLE CRASH TYPE

Figure 28 shows the number of motorcycle crashes by severity and age group.

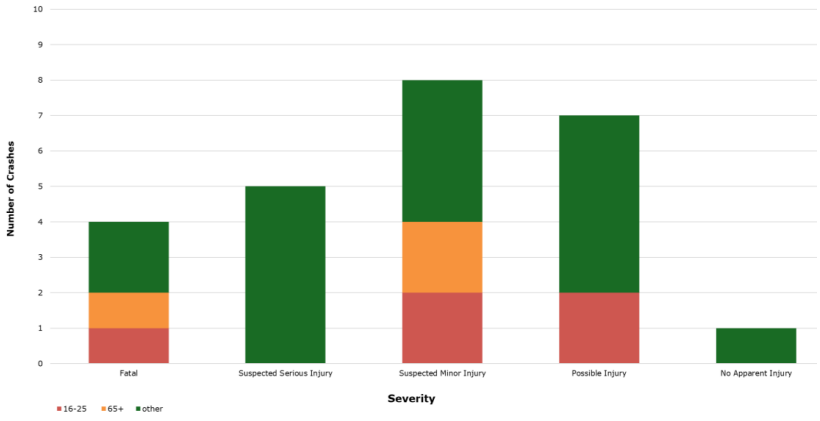


FIGURE 28: MOTORCYCLE CRASH SEVERITY BY AGE

Figure 29 shows the age group share of crashes involving a motorcycle. The age group of 16 to 25 years old accounts for 20% of the total crashes. The riders who are 65 years old or older are responsible for 12% of the crashes. Finally, 68% of the crashes are due to other age groups not mentioned (i.e. between 25 and 65 years).

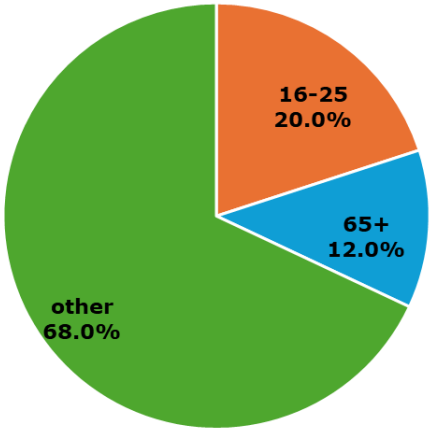


FIGURE 29: MOTORCYCLE CRASH SHARE OF AGE GROUPS

INTERSECTION-RELATED CRASHES

During the study period, a total of 91 crashes (15.7%) took place at intersections or were intersection-related.

There were 2 crashes that occurred at intersections that resulted in a serious injury and no fatal crashes. Overall, crashes at intersections were less likely to result in death or serious injury than crashes at segment locations.

The intersection-related crashes mostly took place in Manson, South Wenatchee area, Lake Wenatchee area, and along streets adjacent to U.S. Highway 2 from Leavenworth to Malaga. Figure 30 shows a heat map of all intersection-related crashes.

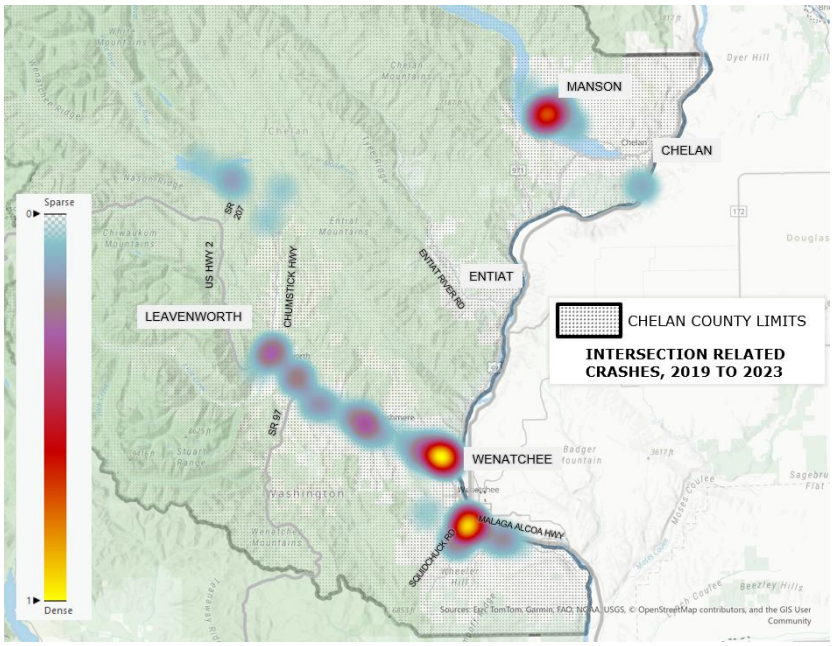


FIGURE 30: HEAT MAP OF INTERSECTION-RELATED CRASHES

The intersection-related crashes that took place in Manson are shown in Figure 31.

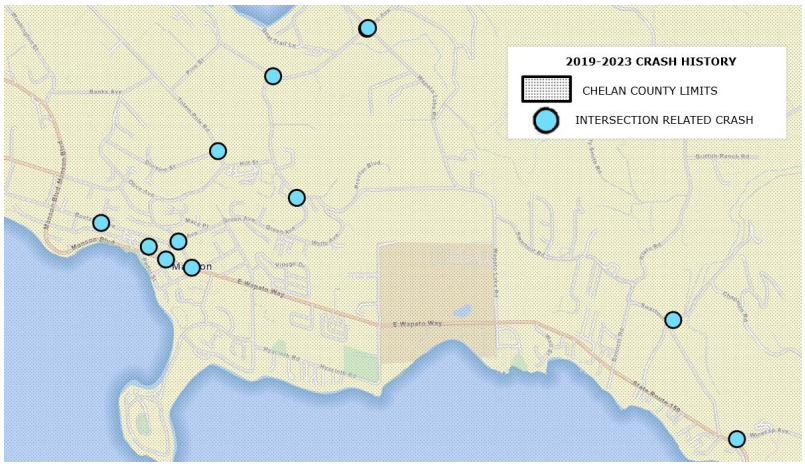


FIGURE 31: LOCATIONS OF INTERSECTION-RELATED CRASHES IN MANSON

The intersection-related crashes that took place south of Wenatchee are shown in Figure 32.

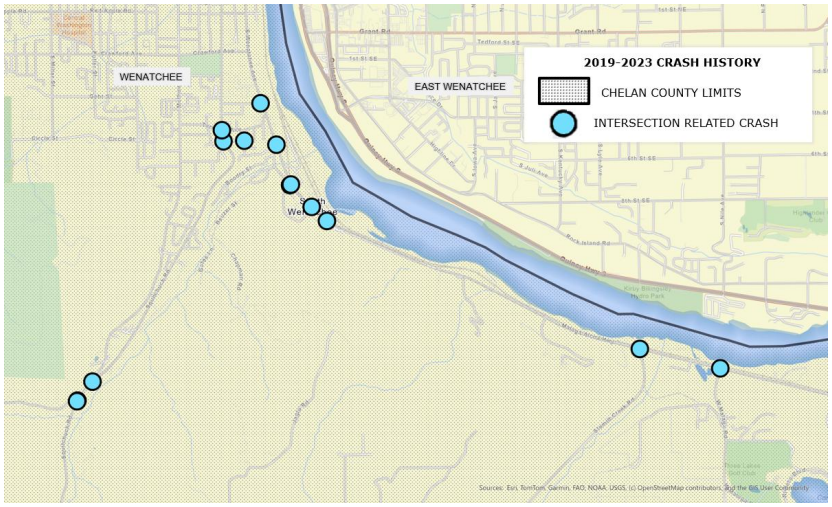


FIGURE 32: LOCATIONS OF INTERSECTION-RELATED CRASHES SOUTH OF WENATCHEE

THE INTERSECTION-RELATED CRASHES THAT TOOK PLACE NEAR LAKE WENATCHEE ARE SHOWN IN

Figure 33.

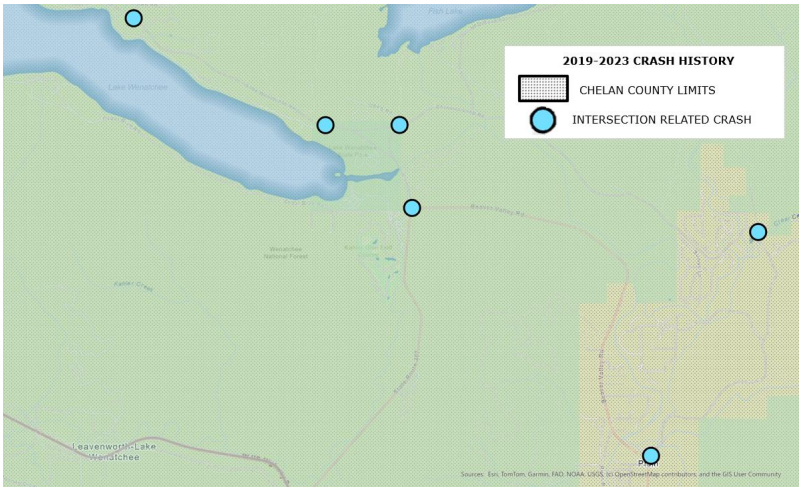


FIGURE 33: LOCATIONS OF INTERSECTION-RELATED CRASHES NEAR LAKE WENATCHEE

The intersection-related crashes that took place along streets adjacent to U.S. Highway 2 from Leavenworth to Wenatchee are shown in Figure 34.

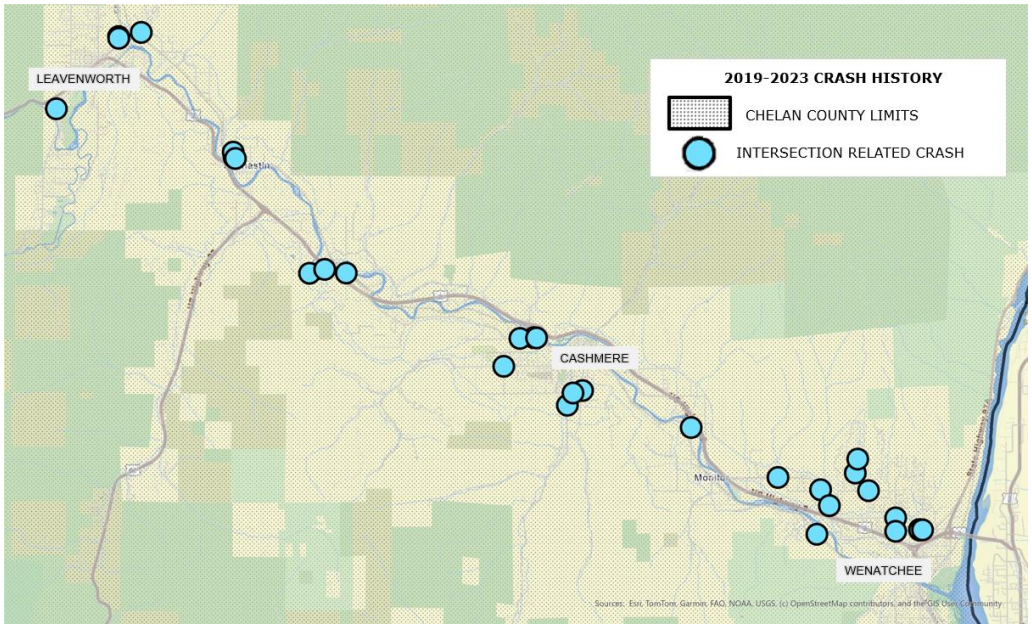


FIGURE 34: LOCATIONS OF INTERSECTION-RELATED CRASHES ON ADJACENT STREETS ALONG U.S. HIGHWAY 2

HIGH RISK BEHAVIORS

IMPAIRED DRIVERS

Impaired drivers were involved in 54 crashes, accounting for 9.3% of all crashes. Of these, 9 resulted in fatal or serious injuries, accounting for 23% of fatal and serious injury crashes. As shown in Figure 35, the share of crashes involving an impaired driver is higher with fatal and serious injury crashes.

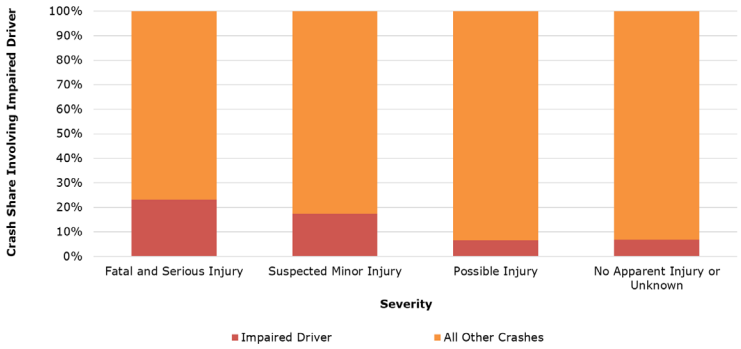
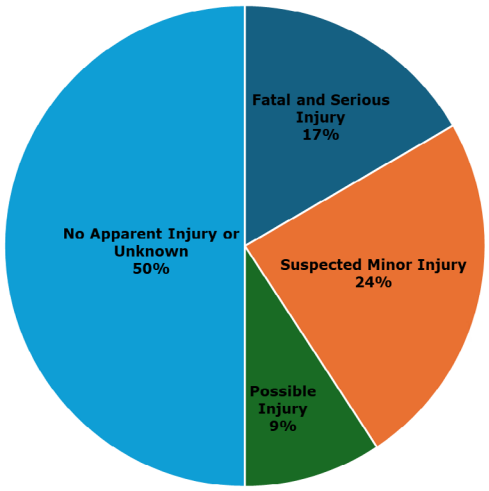


FIGURE 35: CRASH SHARE INVOLVING IMPAIRED DRIVER



Of all the crashes that involved an impaired driver, 17% resulted in fatal and serious injuries, 24% had suspected minor injuries, 50% had no apparent injuries or unknown, and 9% had possible injuries as shown in Figure 36.

FIGURE 36: CRASH SHARE INVOLVING IMPAIRED DRIVER

DISTRACTED DRIVERS

Distracted drivers were involved in 155 crashes, accounting for 26.7% of all crashes. Of these, 10 resulted in fatal or serious injuries, accounting for 26% of fatal and serious injury crashes. As shown in Figure 37, the share of crashes involving a distracted driver is relatively even throughout all the severity types.

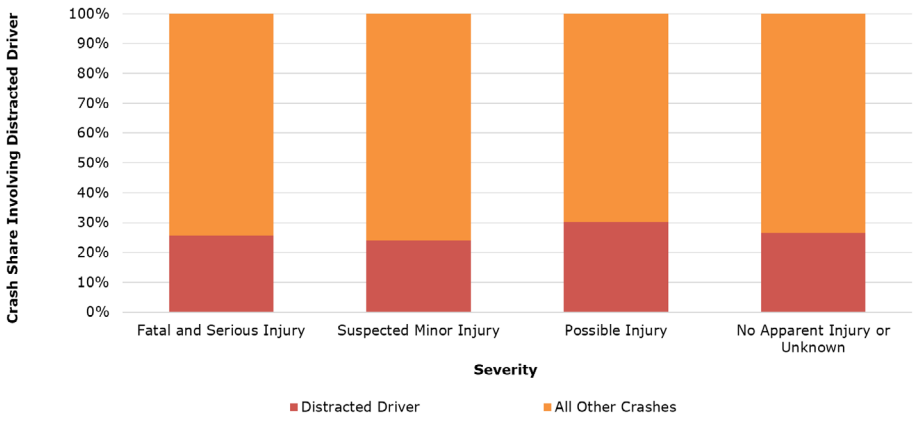


FIGURE 37: CRASH SHARE INVOLVING DISTRACTED DRIVER COMPARED TO ALL CRASHES

Of all the crashes that involved a distracted driver, 6% resulted in fatal and serious injuries, 12% suspected minor injuries, 67% had no apparent injuries or unknown, and 15% had possible injuries as shown in Figure 38.

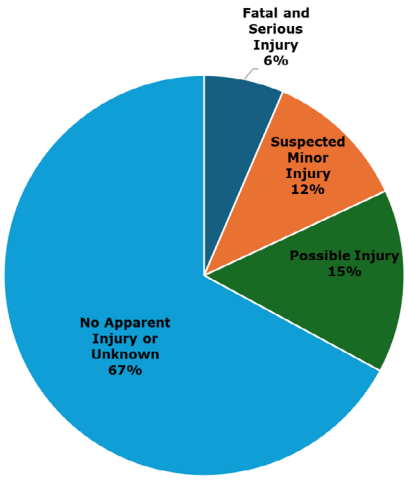


FIGURE 38: CRASH SHARE FOR DISTRACTED DRIVERS

SPEEDING

Speeding was involved in 144 crashes, accounting for 24.7% of all crashes. Of these, 18 resulted in fatal or serious injuries, accounting for 46% of fatal and serious injury crashes. As shown in Figure 39, the share of speed-related crashes increases with severity.

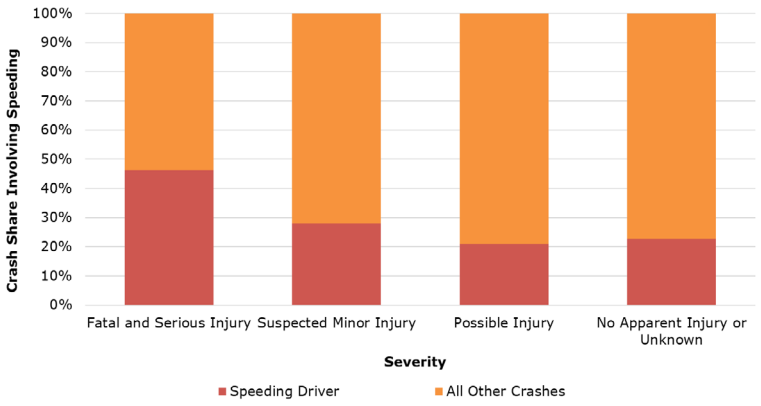


FIGURE 39: CRASH SHARE INVOLVING SPEEDING COMPARED TO ALL CRASHES

Of all the crashes that included speeding, 12% resulted in fatal and serious injuries, 15% had suspected minor injuries, 62% had no apparent injuries or unknown, and 11% had possible injuries as shown in Figure 40.

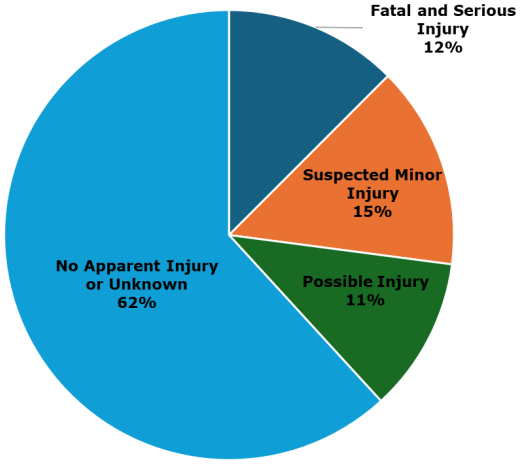


FIGURE 40: CRASH SHARE INVOLVING DISTRACTED DRIVER

Figure 41 shows the location of all 158 crashes that involved speeding. Crashes are concentrated within Cashmere, Dryden, Peshastin, Leavenworth, and Tumwater.

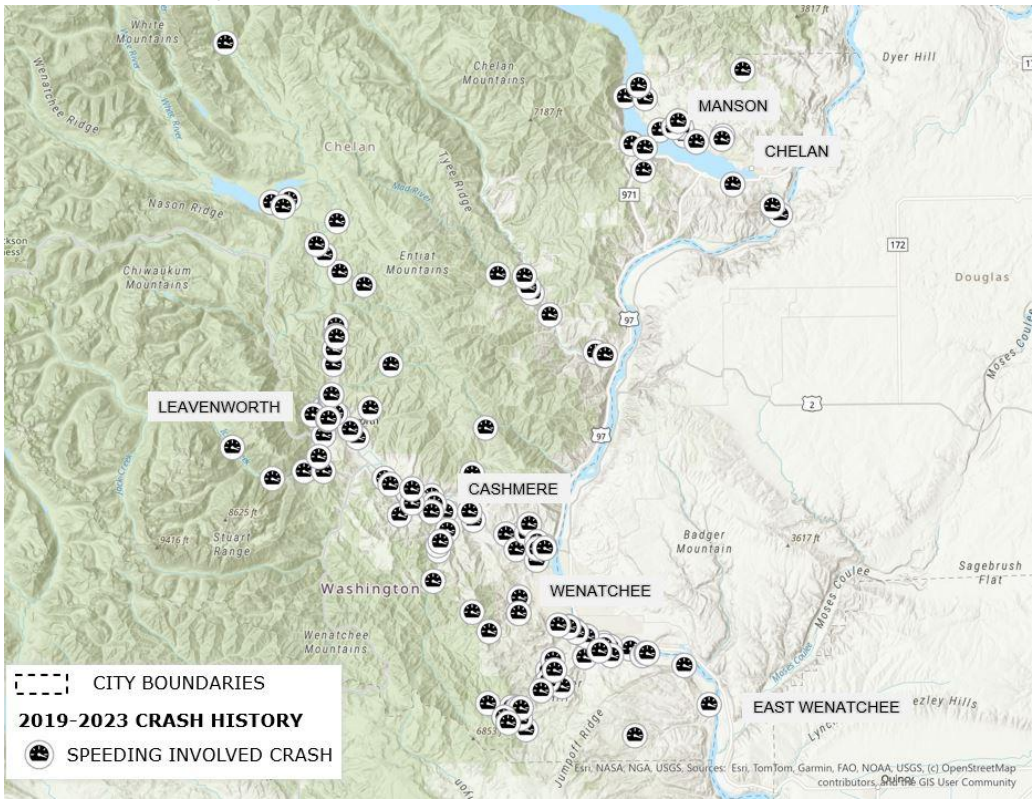


FIGURE 41: CRASH LOCATIONS THAT INVOLVED SPEEDING

RECENT COUNTYWIDE SAFETY IMPROVEMENT PROJECTS

In addition to the crash analysis performed, the project team reviewed all of the recent safety improvement projects in the County. These projects are consistent with the County's Roadway Safety Plan, which was adopted in 2019 and updated every two years. While the intent is not to determine the safety effectiveness of these projects, this information can be helpful in understanding the history of a corridor and in developing potential countermeasures to supplement these improvements as a part of the safety action plan. It is worth noting that many of these project locations are within identified high injury network corridors as summarized in the next section.

The County successfully implemented five countywide safety improvement projects between 2019 and 2023. The first project was completed in September 2019 and it was the Countywide Striping Improvements project. This project constructed 6" wide edge lines on roads with existing 4" wide edge lines along 14 different segments of the following corridors:

- Malaga Alcoa Highway
- West Malaga Road
- Squilchuck Road
- Stemilt Creek Road
- Mission Ridge Road
- Mission Creek Road
- North Dryden Road
- Icicle Road
- Chiwawa Loop Road
- Chumstick Road
- Entiat River Road
- Boyd Road
- Manson Boulevard
- South Lakeshore Road

This project also constructed new curve warning signs and upgraded the existing curve warning signs on roads that are too narrow for edge line stripes in the following corridors:

- Stemilt Creek Road
- Mission Creek Road

The Countywide Barrier Terminal Improvements – 2021 project was completed in July 2021. This project replaced existing non-crashworthy terminals with crashworthy terminals on roads with 40 mph posted speed limits and focused primarily on leading end terminals along 5 different segments of the following corridors:

- Malaga Alcoa Highway
- Wenatchee Heights Road
- Chumstick Highway
- Boyd Road
- Mason Boulevard

There were two Countywide Signing Improvement projects in the last five years. These projects installed curve warning signs, additional advanced curve warning signs, and upgraded existing advance curve warning signs to larger signs. The first project, completed in August 2021, included 5 different segments of the following corridors:

- Boyd Road
- Mason Boulevard
- South Lakeshore Road
- Entiat River Road
- Wapato Lake Road

The latest Countywide Signing Improvement project was completed in August 2023 and included 7 different segments of the following corridors:

- Chumstick Highway
- Stine Hill Road
- Malaga Alcoa Highway
- West Malaga Road
- Squilchuck Road

HIGH INJURY NETWORK

METHODOLOGY

The Chelan County Safety Action Plan's goal is to uncover the traffic safety trends and guide the policy and investment decisions for reducing the number of fatal and serious injury crashes in Chelan County. By creating a high injury network, the team can suggest focus areas for projects to help reduce the number of fatal and serious injury crashes.

The Equivalent Property Damage Only (EPDO) method was used to identify and create the high injury network. The severity of each collision was analyzed and assigned an EPDO score. Fatal and serious injury crashes were assigned the highest weight of 100, then the minor and possible injury crashes were assigned a weight of 10, and no apparent injury and unknown crashes were assigned a weight of 1. In other words, 1 fatal or serious injury crash is equivalent to 100 no apparent injury crashes.

The crash data was imported into GIS and viewed as a heat map based on EPDO. Intersection-related crashes were isolated and high injury locations were categorized based on total EPDO for the intersection. The crash data from 2019 to 2023 was analyzed and the intersections with any fatal or serious injuries were added to the high injury network list. Next, intersections with the highest frequency of total crashes were also chosen to supplement the list due to the limited number of intersections with fatal and serious injury crashes. The high injury network also includes corridors, which were selected based on EPDO per mile. Secondary corridors were also included to capture locations that do not have a high concentration of fatal and serious injury crashes but do

have a significant total crash history and potential for safety improvement. The high injury network is shown in Figure 42. The high injury intersections are shown in Table 1, Figure 43, Figure 44, and Figure 45. The high injury corridors are shown in Table 2, Figure 46, Figure 47, Figure 48, and Figure 49.

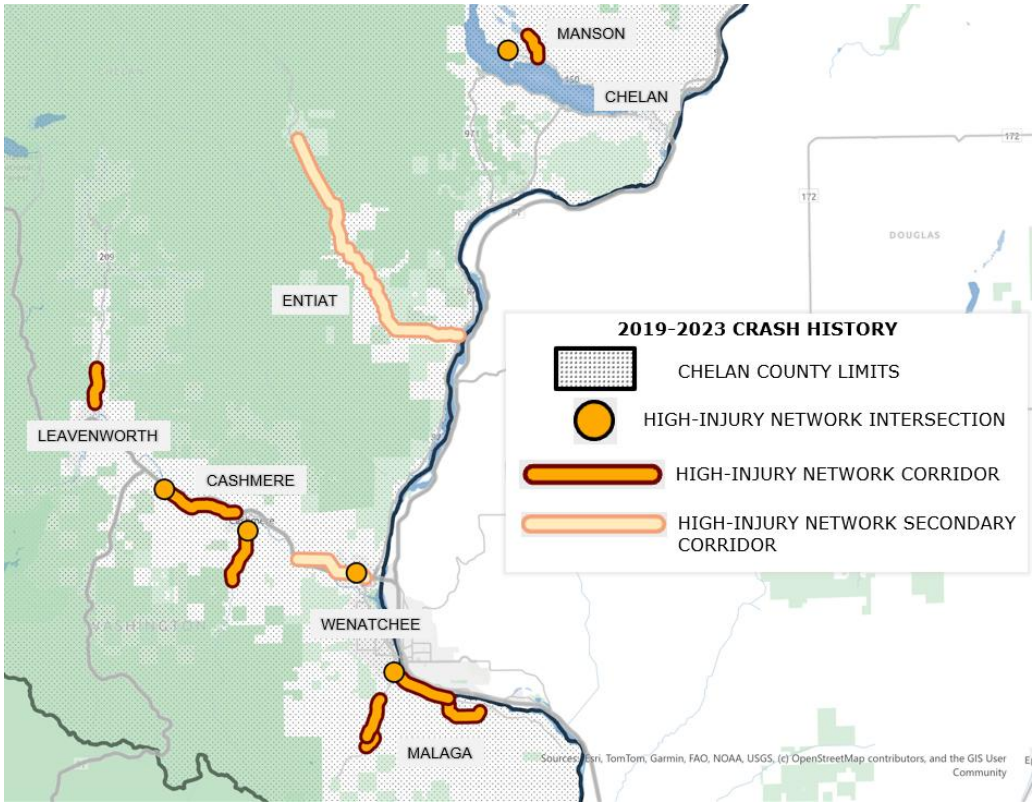


FIGURE 42: HIGH INJURY NETWORK

TABLE 1: HIGH INJURY NETWORK INTERSECTIONS

INTERSECTION	FATAL & SERIOUS INJURY CRASHES	TOTAL NUMBER OF CRASHES	EPDO SCORE
BINDER ROAD & MISSION CREEK ROAD	1 serious injury	1	100
ALICE AVENUE & JOSEPHINE ROAD	1 serious injury	1	100
EASY STREET & SCHOOL STREET	N/A	7	43
TERMINAL AVENUE & SOUTH MISSION STREET	N/A	7	34
BOETZKES AVENUE & QUATIS STREET	N/A	4	4

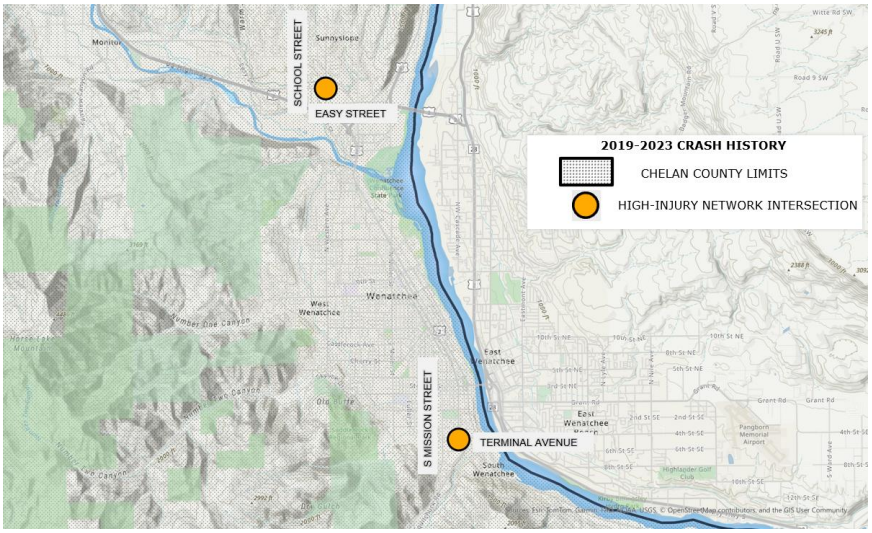


FIGURE 43: HIGH INJURY NETWORK INTERSECTIONS IN SUNNYSLOPE AND SOUTH WENATCHEE

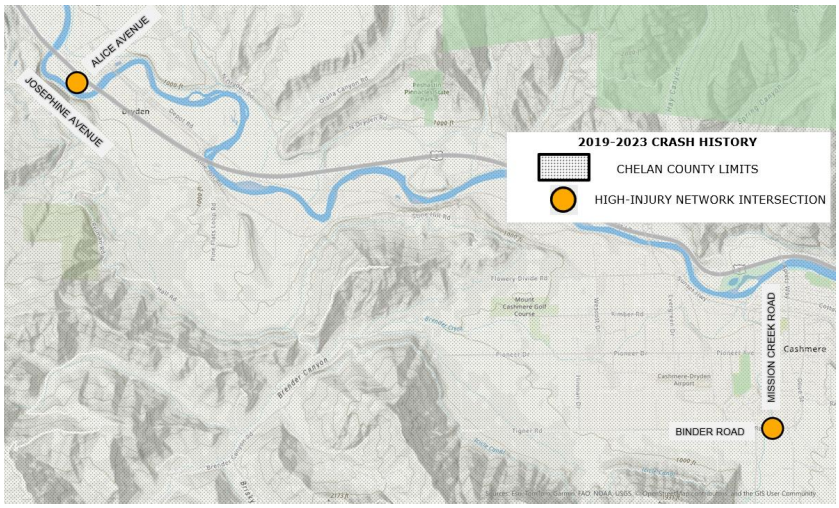


FIGURE 44: HIGH INJURY NETWORK INTERSECTIONS IN DRYDEN AND CASHMERE



FIGURE 45: HIGH INJURY NETWORK INTERSECTIONS IN MANSON

TABLE 2: HIGH INJURY NETWORK CORRIDORS

CORRIDOR	LIMITS	CORRIDOR LENGTH	TOTAL CRASHES	FATAL & SERIOUS INJURIES	TOTAL EPDO	EPDO PER MILE
MALAGA ALCOA HIGHWAY	Galloway Ln to West Malaga Rd	2.8 miles	44	2 serious injuries 3 fatal	656	234
WENATCHEE HEIGHTS ROAD	Squilchuck Rd to Canyon View Rd	0.7 miles	9	1 serious injury	117	167
WAPATO LAKE ROAD	Roses Ave to East Wapato Wy	1.4 miles	9	2 serious injuries	216	154
CHUMSTICK HIGHWAY	12089 Chumstick Hwy to 10605 Chumstick Hwy	1.9 miles	19	1 serious injury 1 fatal	271	143
WEST MALAGA ROAD	Malaga Alcoa Hwy to Dixie Ln	2.6 miles	6	3 serious injuries	303	117
STINE HILL ROAD/ SUNSET HWY	Johnson Rd to Evergreen Dr	3.7 miles	20	2 serious injuries 1 fatal	371	100
SQUILCHUCK ROAD	Methow St to Halvorson Canyon Rd/Cranmer Rd	2.8 miles	22	2 serious injuries	256	91
MISSION CREEK ROAD	Brunner Lane to 2930 Mission Creek Rd	2.8 miles	8	2 serious injuries	233	83
SECONDARY CORRIDORS						
EASY STREET	Tye Lane to Ohme Garden Road	3.7 miles	30	1 serious injury	237	64
ENTIAT RIVER ROAD	Stormy Creek Forest Service 5395 Road to State Route 97	14 miles	15	1 fatal	168	12

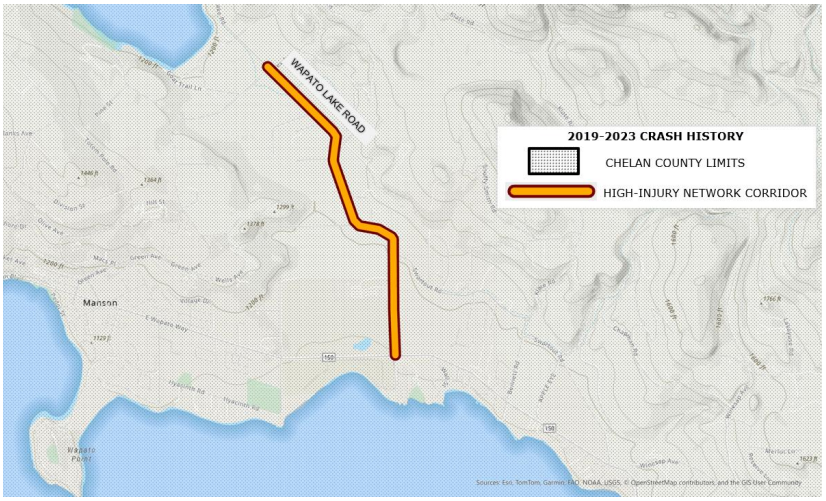


FIGURE 46: HIGH INJURY NETWORK CORRIDOR IN MANSON

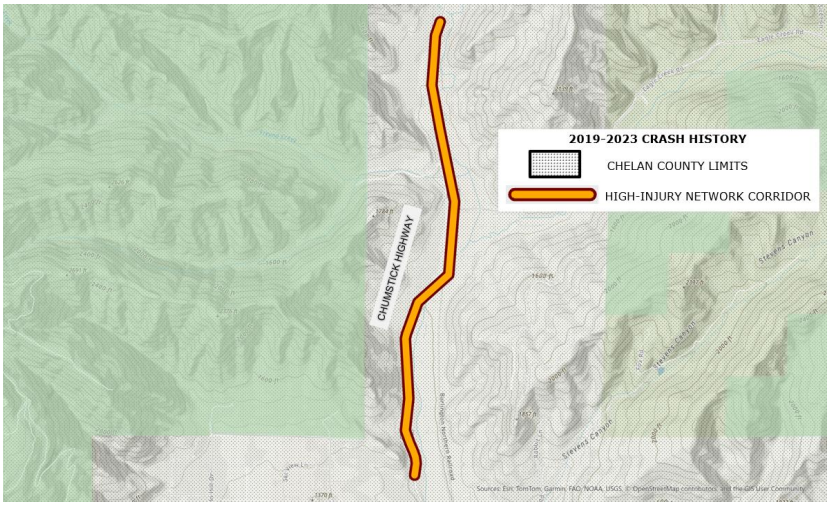


FIGURE 47: HIGH INJURY NETWORK CORRIDOR – CHUMSTICK HIGHWAY

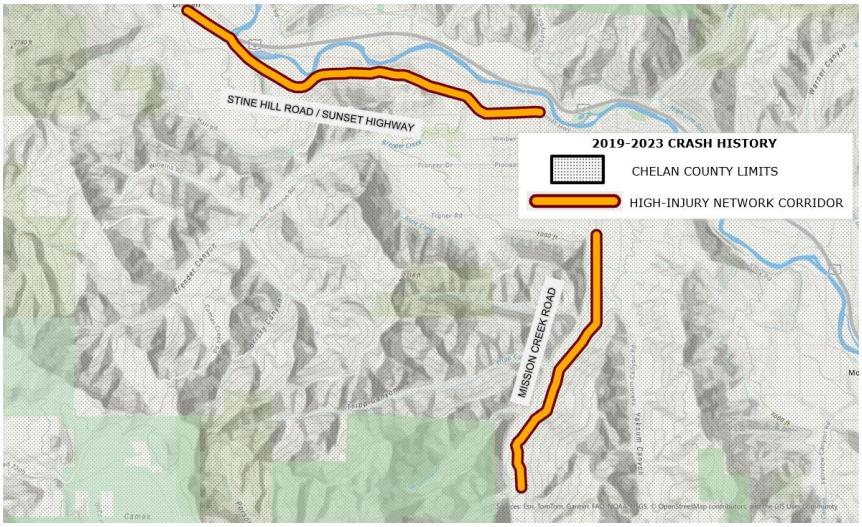


FIGURE 48: HIGH INJURY NETWORK CORRIDORS NEAR CASHMERE

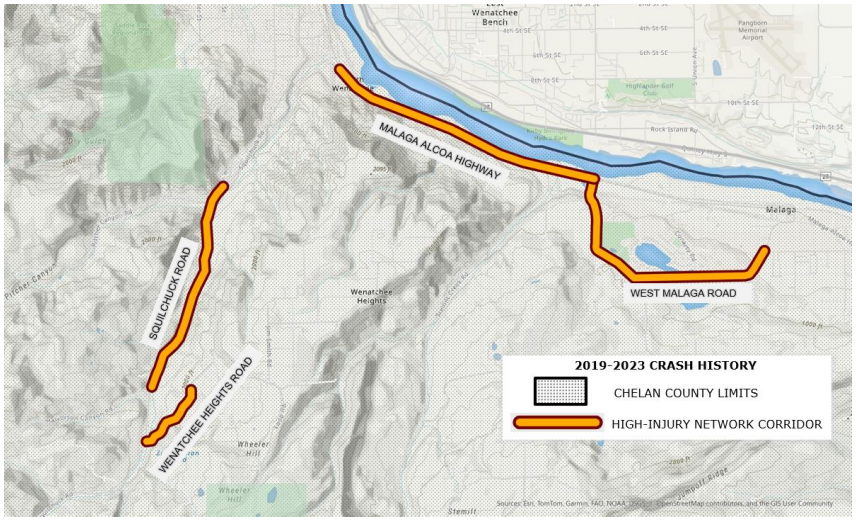


FIGURE 49: HIGH INJURY NETWORK CORRIDORS IN MALAGA AND WENATCHEE

HIGH INJURY NETWORK INTERSECTIONS

BINDER ROAD & MISSION CREEK ROAD

Binder Road and Mission Creek Road is located south of Cashmere, Washington, a city in Chelan County. This is a three-leg intersection with a stop sign control for the southbound approach. Binder Road runs east to west and is 25 mph; Mission Creek Road runs north to south and is also 25 mph. This intersection is in a residential area and each leg has one lane in each direction. There are no crosswalks or pavement markings visible at the intersection. Figure 50 shows the intersection for reference.



FIGURE 50: EASTBOUND VIEW OF BINDER ROAD & MISSION CREEK ROAD

There was one serious injury crash that occurred at this intersection in August 2020. The collision was reported a pedestrian was struck by a pickup truck turning left on Binder Road. The weather was reported to be clear and the roads were dry; the collision occurred with daylight and around 8am.

ALICE AVENUE & JOSEPHINE ROAD

Alice Avenue & Josephine Road is in Dryden, Washington, which is an unincorporated community in Chelan County. This is an uncontrolled three-leg intersection with no pavement markings. Josephine Road runs northwest to southeast and is 25 mph; Alice Avenue runs southwest to northeast and is also 25 mph. This intersection is in a residential area and each leg has one lane in

each direction. Figure 51 show the intersection for reference.



FIGURE 51: SOUTHWESTBOUND VIEW OF ALICE AVENUE & JOSEPHINE ROAD

There was one serious injury crash that occurred at this intersection in April 2019. The collision was reported as a motorcycle losing control due to turning too fast and striking the guardrail. The driver was not ejected. The weather was reported to be partly cloudy, and the roads were dry; the collision occurred in daylight and around 4pm. The motorcycle was reported to have been traveling at unsafe speeds.

EASY STREET & SCHOOL STREET

Easy Street & School Street is in Sunnyslope, Washington, which is an unincorporated community in Chelan County. This intersection had a stop control only for School Street until it was changed to an all-way stop-controlled intersection in 2023. This intersection is in a residential area and each leg has one lane in each direction. There is a roundabout construction scheduled for 2026 (Project #3 on the 2025-2030 TIP, W-1 on the 2017 TE). Easy Street runs east to west and has a 40 mph speed limit; School Street runs north to south and has a 25 mph speed limit. This intersection has crosswalks on the north and east legs and there are sidewalks on School Street and the west leg of

Easy Street. There is also on-street parking along School Street. Figure 52 shows the northbound view of the intersection for reference.



FIGURE 52: NORTHBOUND VIEW OF EASY STREET & SCHOOL STREET

There were 7 crashes that occurred at this intersection between 2019 and 2023. Six of the seven collisions involved a vehicle entering at an angle, and one involved a left-turning vehicle being struck by another vehicle going straight.

Figure 53 shows the number of crashes per year with the highest number of crashes being 3 occurring in 2022, and the second highest in 2020 with 2 crashes at this intersection.

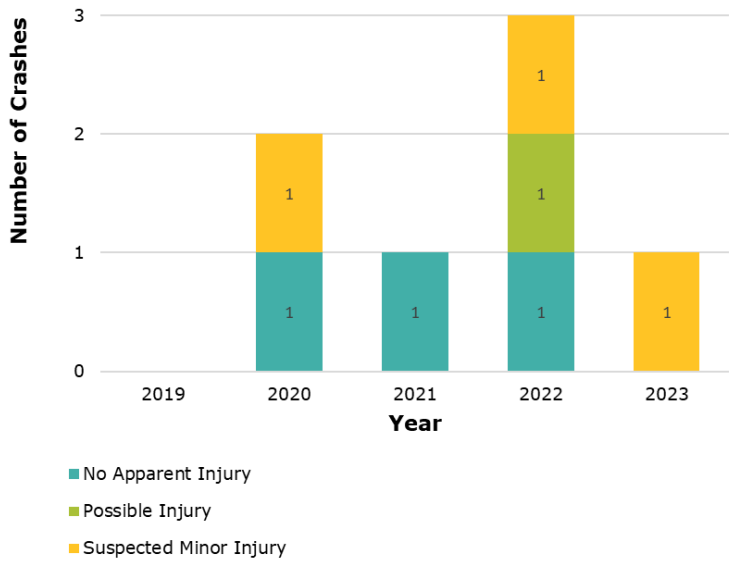


FIGURE 53: STUDY INTERSECTION CRASHES BY YEAR AND SEVERITY

TERMINAL AVENUE & SOUTH MISSION STREET

Terminal Avenue & South Mission Street is in South Wenatchee, Washington, which is an unincorporated community in Chelan County. This is a two-way stop-controlled intersection with Stop signs on the east and west legs. Terminal Avenue runs east to west and has a 25 mph speed limit; South Mission Street runs north to south and has a 30 mph speed limit. This intersection is in a residential area and each leg has one lane in each direction. This intersection has crosswalks on the north and east legs and is supplemented with a rectangular rapid flashing beacon for

pedestrians to cross the north leg. Mission Street also has roadway lighting along the corridor. Figure 54 shows the intersection for reference.



FIGURE 54: NORTHBOUND VIEW OF TERMINAL AVENUE & SOUTH MISSION STREET

There were 7 crashes that occurred at this intersection between 2019 and 2023. Six of the seven collisions involved a vehicle entering at angle and one occurred as a vehicle was turning left and struck by another vehicle going straight.

Figure 55 shows the number of crashes per year with the highest number of crashes being 2 occurring in 2019 and 2023, and the rest of the study years had one crash at this intersection.

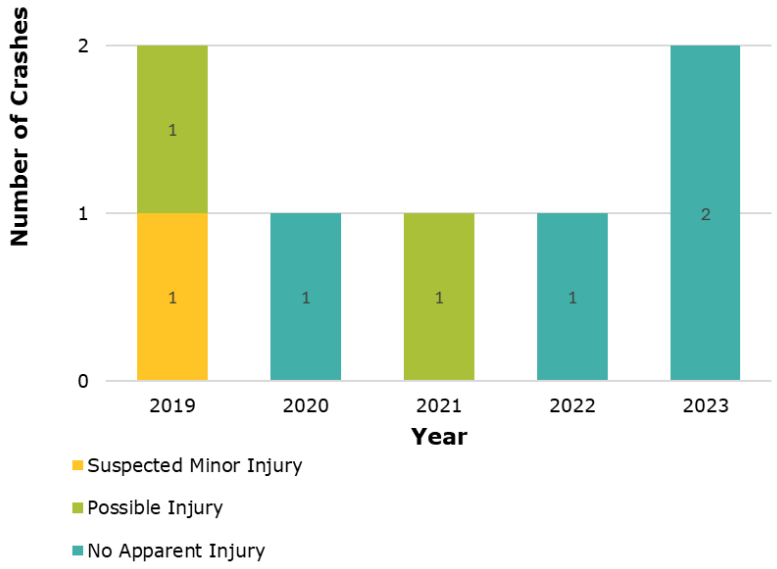


FIGURE 55: STUDY INTERSECTION CRASHES BY YEAR AND SEVERITY

BOETZKES AVENUE & QUATIS STREET

Boetzkes Avenue & Quatis Street is located in Manson, Washington which is an unincorporated community in Chelan County. This is a two-way stop-controlled intersection with stop signs on the north and south legs. Boetzkes Avenue runs east to west and is 25 mph. Quatis Street runs north to south and is assumed to be 25 mph. This intersection is in a residential area and each leg has

one lane in each direction. Figure 56 show the intersection for reference.



FIGURE 56: BOETZKES AVENUE & QUATIS STREET

There were 4 crashes that occurred at this intersection between 2019 and 2023. All collisions involved a vehicle entering at angle.

Figure 57 shows that all crashes resulted in no apparent injuries.

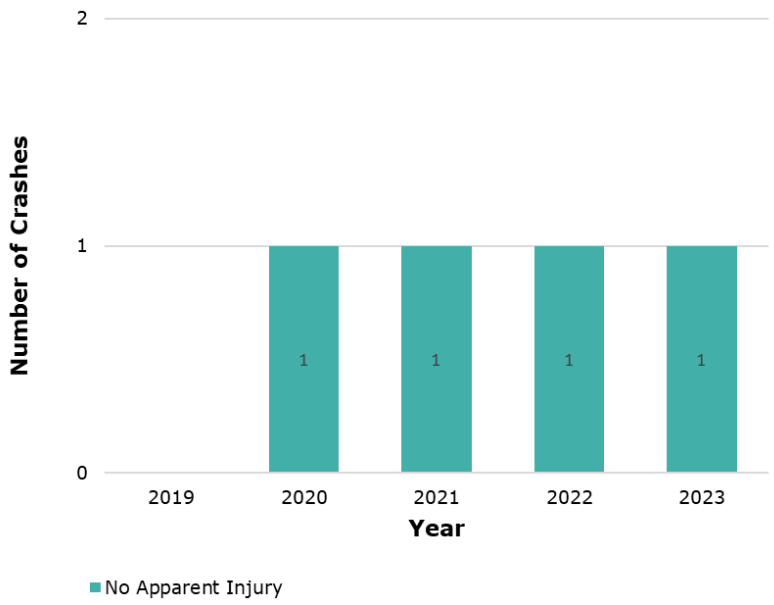


FIGURE 57: STUDY INTERSECTION CRASHES BY YEAR AND SEVERITY

HIGH INJURY NETWORK CORRIDORS

MALAGA ALCOA HIGHWAY

Malaga Alcoa Highway is located in Malaga and extends north to South Wenatchee, both unincorporated communities within Chelan County. The corridor was analyzed from Galloway Lane to the west entrance of West Malaga Road, a total of 2.8 miles. Malaga Alcoa/ Stemilt Creek Road Intersections Improvements project (TIP Project #36) was identified along this segment. The speed limit for Malaga Alcoa Highway ranges from 50 mph in rural areas, 40 mph, and 30 mph around the residential and business segments. The corridor has one lane in each direction and varying shoulder widths. This highway had a total of 44 crashes, including 3 fatal and 2 serious injuries. The EPDO score per mile for this corridor was determined to be 234. Figure 58 shows the typical cross section for the corridor within the study limits.

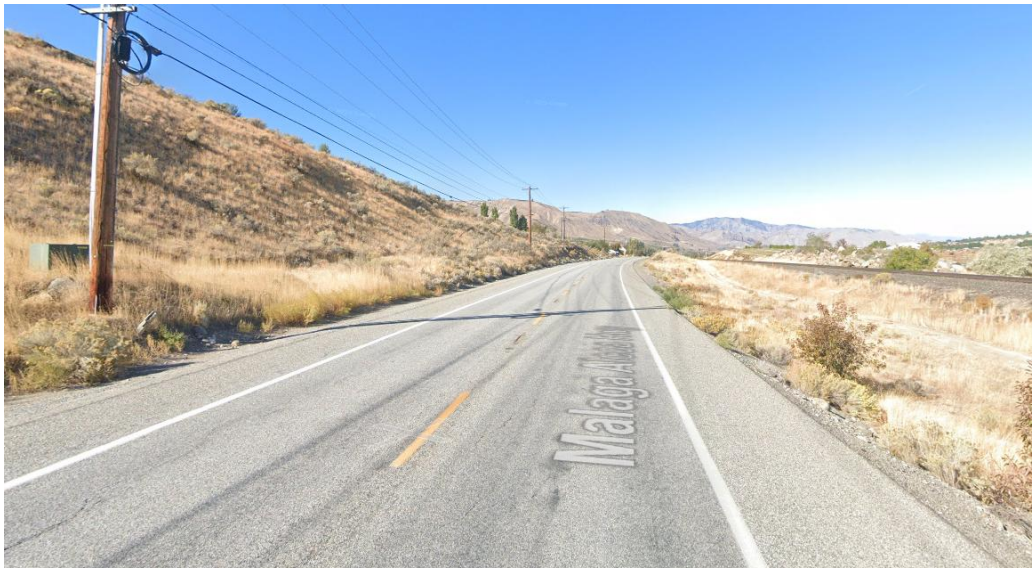


FIGURE 58: MALAGA ALOCA HIGHWAY CROSS SECTION

There were 3 fatal and 2 serious injury crashes along this corridor between 2019 and 2023. The summary for the five fatal and serious injury crashes are as followed:

- September 2020, opposite-direction sideswipe collision, suspected serious injury
- November 2020, opposite-direction sideswipe collision, fatal
- May 2022, collision with a fixed object (tree or stump), fatal
- August 2023, pedestrian struck by vehicle, fatal
- November 2023, collision with a fixed object (mailbox), suspected serious injury

None of these collisions were intersection-related.

Figure 59 shows the types of crashes along the corridor. The top two types of crashes were fixed object (37%) and rear-end (18%). For the fixed objects, the highest percentage of collisions were with the roadway ditch (19%) and utility poles (13%). The data shows that less than half of all crashes did not involve another vehicle.

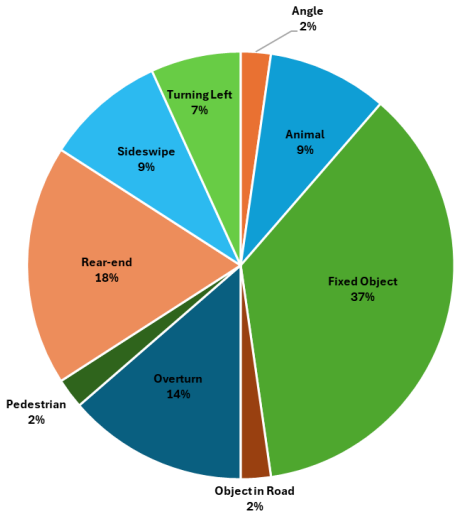


FIGURE 59: TYPES OF CRASHES ALONG MALAGA ALCOA HIGHWAY

The County had a Countywide Striping Improvement project which included Malaga Alcoa Highway. Six-inch-wide edge lines were upgraded on roads with existing four-inch-wide edge lines. This project was completed in September 2019, so during the first year of analyzed crash data. There was also a Countywide Signing 2023 project in which new and larger curve warning signs and advanced warning signs were installed, and that project was completed in August 2023. The latest project was completed so close to the end of our data study range that we are unable to determine if this project has had any significant effect on the reduction of crashes. Four of the five fatal and serious injuries happened after the first project was completed and before the second project was completed in 2023. Only one suspected serious injury occurred in November 2023, after both projects were completed. There was a curve warning sign installed less than 100 feet east of November 2023 serious injury crash location.

Figure 60 shows the number of crashes per year with the highest number of crashes being 11 occurring in 2021, and the second highest in 2019 and 2023 with 9 crashes along Malaga Alcoa Highway.

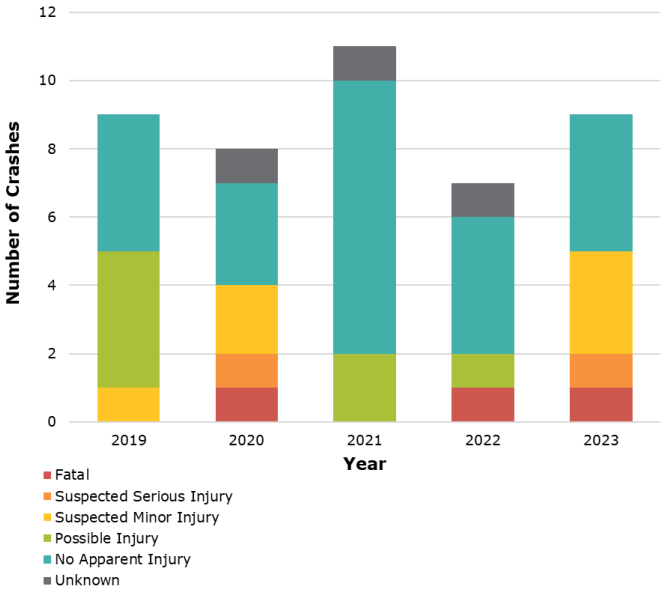


FIGURE 60: MALAGA ALCOA HWY CRASHES BY YEAR AND SEVERITY

WENATCHEE HEIGHTS ROAD

Wenatchee Heights Road is located near Wenatchee Heights, an unincorporated community within Chelan County. The corridor was analyzed from Squilchuck Road to Canyon View Road. A road reconstruction and upgrade existing shoulders project (Project W-3 from 2017 TE) was identified along this road. The speed limit for Wenatchee Heights Road is 40 mph. The corridor has one lane in each direction and varying shoulder widths. This highway had a total of 9 crashes, including 1 serious injury crash. The EPDO per mile for this corridor is 167. Figure 61 shows the typical cross section for the corridor within the study limits.



FIGURE 61: WENATCHEE HEIGHTS ROAD CROSS SECTION

There was 1 serious injury crash along this corridor between 2019 and 2023. This was an opposite-direction collision on an icy road surface in 2023. The contributing circumstance was listed as a driver being under the influence of alcohol.

Figure 62 shows the types of crashes along the corridor. The types of crashes were fixed object (45%), sideswipe (22%), other (22%), and overturn (11%). For the fixed objects, the highest percentage of collisions were with the earth bank or ledge (50%), leaving the least common as mailboxes (25%) and the guardrail face (25%). The data shows that 67% of all crashes did not involve another vehicle.

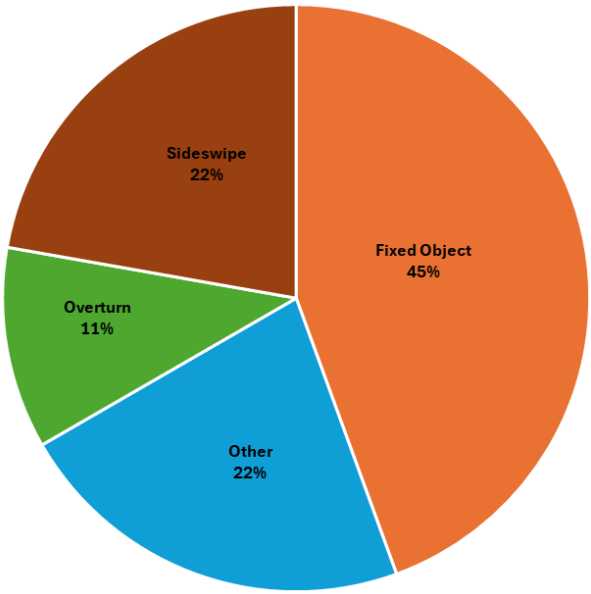


FIGURE 62: TYPES OF CRASHES ALONG WENATCHEE HEIGHTS ROAD

Figure 63 shows the number of crashes per year with the highest number of crashes occurring in 2022 and 2023 with 3 crashes along Wenatchee Heights Road. Overall, an upwards trend in reported injury severities and total crashes overall were observed throughout the study period.

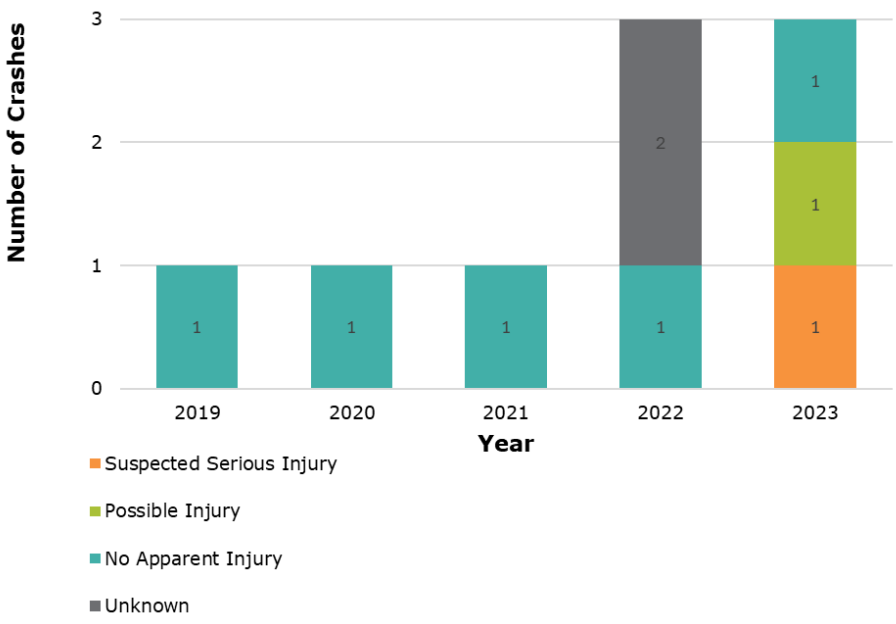


FIGURE 63: WENATCHEE ROAD CRASHES BY YEAR AND SEVERITY

WAPATO LAKE ROAD

Wapato Lake Road is located near Manson, an unincorporated community within Chelan County. The corridor was analyzed from Roses Avenue to East Wapato Way. The speed limit for Wapato Lake Road is 35 mph. This part of the segment includes a reconstruction and widening project (TIP Project #40 Wapato Lake Road – Lloyd Road to Lower Joe Creek Road, Project MAN-2 in the 2017 TE). The corridor has one lane in each direction and varying shoulder widths. This highway had a total of 9 crashes, including 2 serious injury crashes. The EPDO per mile for this corridor is 154. Figure 64 shows the typical cross section for the corridor within the study limits.



FIGURE 64: WAPATO LAKE ROAD CROSS SECTION

There were 2 serious injury crashes along this corridor between 2019 and 2023. One involved a vehicle turning right striking a pedestrian within a driveway. The roadway was icy at the time of the crash. The other serious injury crash involved a vehicle overturning. The county installed signage improvements to the northern section of this segment in August 2021.

Figure 65 shows the types of crashes along the corridor. The types of crashes were fixed object (34%), overturned (22%), angle (22%), pedestrian (11%) and rear-end (11%). For the fixed objects, all the objects struck were a tree or stump. The data shows that a third of all crashes did not involve another vehicle.

Figure 66 shows the number of crashes per year with the highest number of crashes being 4 occurring in 2021.

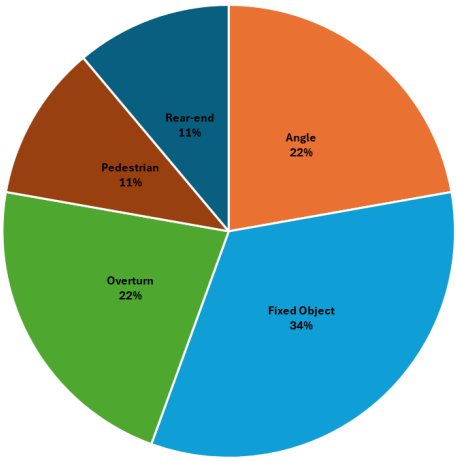


FIGURE 65: TYPES OF CRASHES ALONG WAPATO LAKE ROAD

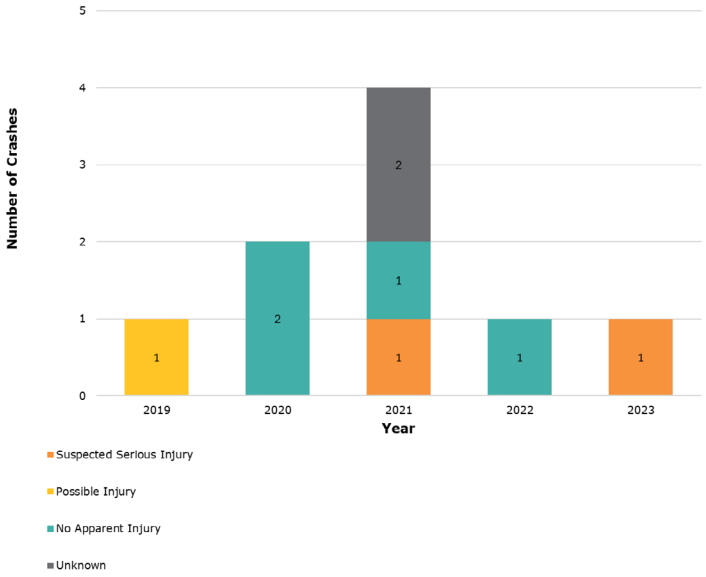


FIGURE 66: WAPATO LAKE ROAD CRASHES BY YEAR AND SEVERITY

CHUMSTICK HIGHWAY

Chumstick Highway begins north of Leavenworth, goes through Chumstick and up towards Plain, both of which are unincorporated communities within Chelan County. The corridor was analyzed

from 12089 Chumstick Highway to 10605 Chumstick Highway, which is a 1.9 mile segment. The speed limit for the Chumstick Highway segment being analyzed is 50 mph. The corridor has one lane in each direction and varying shoulder widths throughout. This highway had a total of 19 crashes, including 1 fatal crash and 1 serious injury crash. The EPDO score per mile for this corridor is 143. Figure 67 shows the typical cross section for the corridor within the study limits.



FIGURE 67: CHUMSTICK HIGHWAY CROSS SECTION

There was 1 fatal and 1 serious injury crashes along this corridor between 2019 and 2023. The summary for the fatal and serious injury crashes are as followed:

- December 2021, opposite-direction sideswipe collision, suspected serious injury
- September 2023, opposite-direction collision, fatal

The suspected serious injury crash happened in December 2021 and the road conditions were reported to be covered in snow and/or slush. It was also reported that the driver was exceeding reasonable safe speeds. After the collision between the two vehicles, one or both then struck the guardrail face. This guardrail has flashing curve warning signs on it.

The September 2023 fatal crash involve an individual riding a motorcycle, and there was an unknown distraction reported. There is limited information on the crash. The location of the fatal crash was at the same exact location as the serious injury crash in December 2021.

Figure 68 shows the types of crashes along the corridor. The top three types of crashes were fixed object (48%), sideswipe (16%), and overturn (16%). For the fixed objects, the highest percentage of collisions were with the earth bank or ledge (23%), followed by over embankment (22%). The next five types were object in road, animal, turning left, and other, all with 5% of the crashes each. The data shows that over half of all crashes did not involve another vehicle.

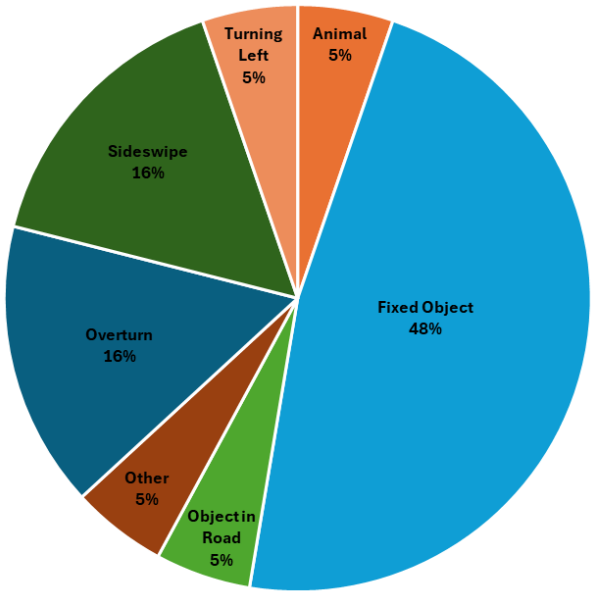


FIGURE 68: TYPES OF CRASHES ALONG CHUMSTICK HIGHWAY

The County completed the Countywide Barrier Terminal Improvements project in July 2021, which included a northern section of Chumstick Highway which is not included in the high injury network segment. This project replaced existing non-crashworthy terminals on roads with 40 mph posted speed limits and focused primarily on leading end terminals.

Figure 69 shows the number of crashes per year with the highest number of crashes being 6 occurring in 2019, and the second highest in 2021 with 5 crashes along Chumstick Highway.

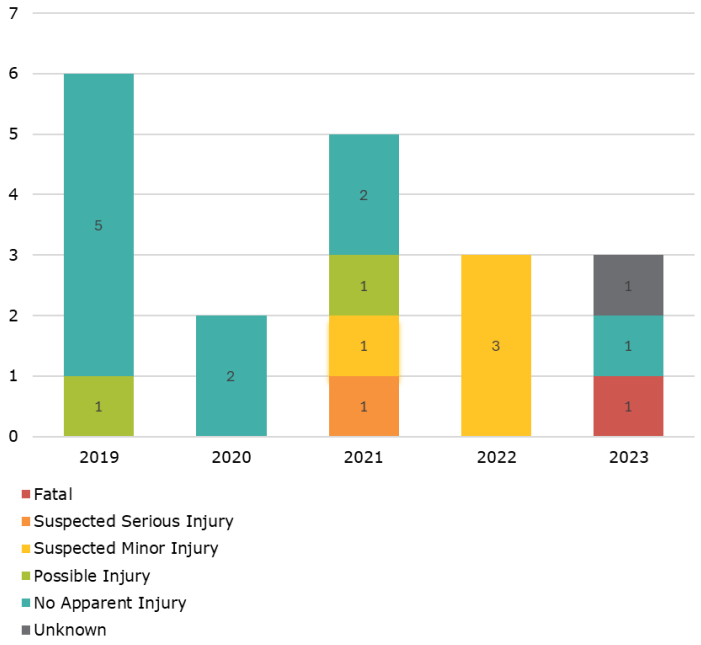


FIGURE 69: CHUMSTICK HIGHWAY CRASHES BY YEAR AND SEVERITY

WEST MALAGA ROAD

West Malaga Road is in Malaga, an unincorporated community within Chelan County. The corridor was analyzed from Malaga Alcoa Highway to Dixie Lane. The speed limit for West Malaga Road ranges from 45 mph on the west end to 25 mph on the east end. The corridor has one lane in each direction and varying shoulder widths. This highway had a total of 6 crashes, including 3 serious injury crashes. The total EPDO score per mile is 117. Figure 70 shows the typical cross section for the corridor within the study limits.



FIGURE 70: WEST MALAGA ROAD CROSS SECTION

There were 3 serious injury crashes along this corridor between 2019 and 2023. The summary of the 3 serious injury crashes are as followed:

- October 2019, collision with a fixed object (utility pole), suspected serious injury
- April 2021, rear-end collision, suspected serious injury
- November 2022, overturned vehicle collision, suspected serious injury

Figure 71 shows the types of crashes along the corridor. The three types of crashes were fixed object (67%), rear-end (17%), overturn (16%). For the fixed objects, there were collisions with utility poles (2), a guardrail face (1) and a wood signpost (1). The data shows that over two-thirds of all crashes did not involve another vehicle.

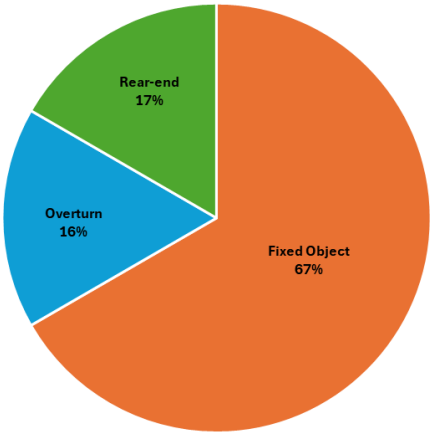


FIGURE 71: TYPES OF CRASHES ALONG WEST MALAGA ROAD

The county had a Countywide Striping Improvement project which included West Malaga Road. Six-inch-wide edge lines were upgraded on roads with existing four-inch-wide edge lines. This project was completed in September 2019. There was also a Countywide Signing 2023 project in which new and larger curve warning signs and advanced warning signs were installed, and that project was completed in August 2023. All of the serious injury crashes happened after the first project was completed and before the second project was completed in 2023.

Figure 72 shows the number of crashes per year with the highest number of crashes being 3 occurring in 2019, and the second highest in 2022 with 2 crashes along West Malaga Road.

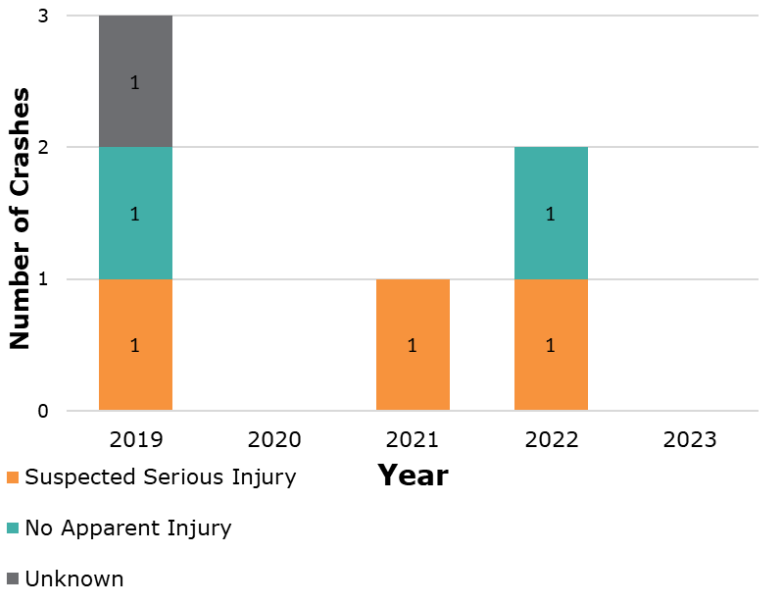


FIGURE 72: WEST MALAGA ROAD CRASHES BY YEAR AND SEVERITY

STINE HILL ROAD/SUNSET HIGHWAY

Stine Hill Road/Sunset Highway is west of Cashmere, a city within Chelan County. The corridor was analyzed from Johnson Road to Evergreen Drive. The speed limit for Stine Hill Road is 45 mph and 35 mph along Sunset Highway. The corridor has one lane in each direction and varying shoulder widths. This highway had a total of 20 crashes, including 1 fatal crash and 2 serious injury crashes. The EPDO per mile score is 100. Figure 73 shows the typical cross section for the corridor within the study limits.



FIGURE 73: STINE HILL ROAD/SUNSET HIGHWAY CROSS SECTION

There were 1 fatal and 2 serious injury crashes along this corridor between 2019 and 2023. The summary of the 2 serious injury crashes is as follows:

- July 2019, collision with a fixed object (wood sign post), fatal
- August 2019, rear-end collision, suspected serious injury
- June 2020, collision between two vehicles going the same direction, one turning right into a driveway and the other going straight, suspected serious injury

None of these crashes were intersection-related.

Figure 74 shows the types of crashes along the corridor. The top two types of crashes were fixed object (40%), animal (15%) and rear-end (10%). For the fixed objects, the objects were with the earth bank or ledge (25%), guardrail face (25%), wood sign post (13%), tree or stump(13%), concrete barrier/jersey barrier face (12%), and guardrail through, over or under (12%). Of the 3 animal collisions, two were deer and one was an unknown domestic animal. The data shows that over two-thirds of all crashes did not involve another vehicle.

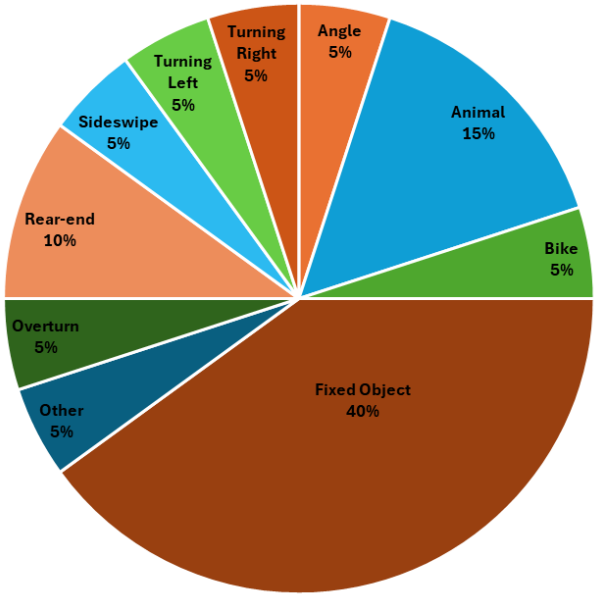


FIGURE 74: TYPES OF CRASHES ALONG STINE HILL ROAD

The County had a Countywide Signing Improvements project in 2023 in which new curve warning signs were installed, and existing curve warning signs were upgraded to larger signs. The fatal crash involved a wood sign post and occurred in July of 2019, prior to the completion of the project. The serious injury crashes occurred in August 2019 and June 2020, also before the project was constructed.

Figure 75 shows the number of crashes per year with the highest number of crashes being 7 occurring in 2019, and the second highest in 2021 with 6 crashes along Stine Hill Road/Sunset Highway.



FIGURE 75: STINE HILL ROAD/SUNSET HIGHWAY CRASHES BY YEAR AND SEVERITY

SQUILCHUCK ROAD

Squilchuck Road is in South Wenatchee, an unincorporated community within Chelan County. The corridor was analyzed from Methow Street to Halvorson Canyon Road/Cranmer Road. The northern section of this corridor from Methow to Putcher Canyon was identified by TIP Project #6. The speed limit for Squilchuck Road ranges from 35 mph to 50 mph. The corridor has one lane in each direction and varying narrow shoulder widths. This road had a total of 22 crashes, including 2 serious injuries. The total EPDO score per mile for this corridor is 91. Figure 76 shows the typical cross section for the corridor within the study limits.



FIGURE 76: SQUILCHUCK ROAD CROSS SECTION

There were 2 serious injury crashes along this corridor between 2019 and 2023. The summary of the 2 serious injury crashes are as follows:

- April 2019, collision with a fixed object (rock bank or ledge), suspected serious injury
- July 2022, collision with a fixed object (roadway ditch), suspected serious injury

Figure 77 shows the types of crashes along the corridor. The top two types of crashes were fixed object (55%) and animal (18%). For the fixed objects, the highest percentage of collisions were with the earth bank or ledge (34%), roadway ditch (17%). The next two most common types of crashes were rear-end (9%) and angle (9%). The data shows that over two-thirds of all crashes did not involve another vehicle.

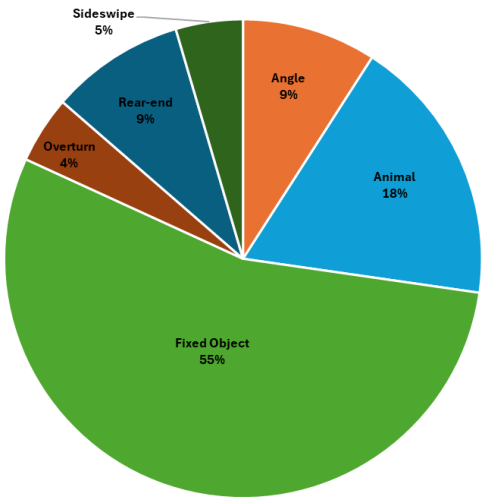


FIGURE 77: TYPES OF CRASHES ALONG SQUILCHUCK ROAD

The County completed the Countywide Striping Improvements in September 2019 and the Countywide Signing project in August 2023 along Squilchuck Road. This project installed curve warning signs, additional advanced curve warning signs were installed, and existing advanced curve warning signs were upgraded to larger signs. Both serious injuries happened before the project was completed, however, curve warning signs were added at the location of the 2019 serious injury crash.

Figure 78 shows the number of crashes per year with the highest number of crashes being 6 occurring in 2019 and 2022 on Squilchuck Road.

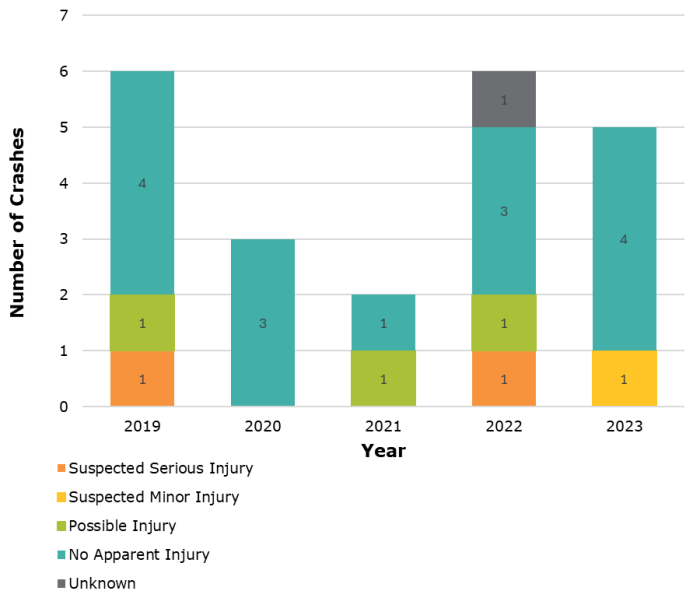


FIGURE 78: SQUILCHUCK ROAD CRASHES BY YEAR AND SEVERITY

MISSION CREEK ROAD

Mission Creek Road is located south of Cashmere, a city within Chelan County. The corridor was analyzed from Brunner Lane to 2930 Mission Creek Road. The speed limit for Mission Creek Road ranges from 30 mph to 35 mph. The corridor has one lane in each direction and varying shoulder widths. This highway had a total of 9 crashes, including 2 serious injuries. The total EPDO per mile score is 83. Figure 79 shows the typical cross section for the corridor within the study limits.



FIGURE 79: MISSION CREEK ROAD CROSS SECTION

There were 2 serious injury crashes along this corridor between 2019 and 2023. The summary of the 2 serious injury crashes is as follows:

- June 2020, collision with a fixed object (roadway ditch), suspected serious injury
- June 2023, collision with a fixed object (roadway ditch), suspected serious injury

Figure 80 shows the types of crashes along the corridor. The two types of crashes were fixed object (87%) and turning left (13%). For the fixed objects, the highest percentage of collisions were over the embankment with no guardrail present (43%), the roadway ditch (29%) and tree or stump (14%) and finally utility poles (14%).

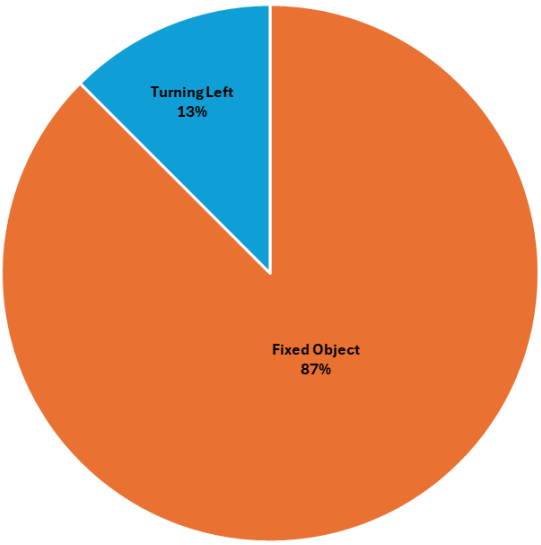


FIGURE 80: TYPES OF CRASHES ALONG MISSION CREEK ROAD

The county had a Countywide Striping Improvement project in 2019 which included the northern part of Mission Creek Road. Six-inch-wide edge lines were upgraded on roads with existing four-inch-wide edge lines. There was also a Countywide Signing Improvements 2019 project in which new curve warning signs were installed and existing curve warning signs were upgraded on roads that are too narrow for edge line stripes. Both serious injuries happened after the projects were completed.

Figure 81 shows the number of crashes per year with the highest number of crashes being 3 occurring in 2022 and 2023 with 3 crashes along Mission Creek Road. Overall, an increasing number of crashes along this segment has been observed since 2021.

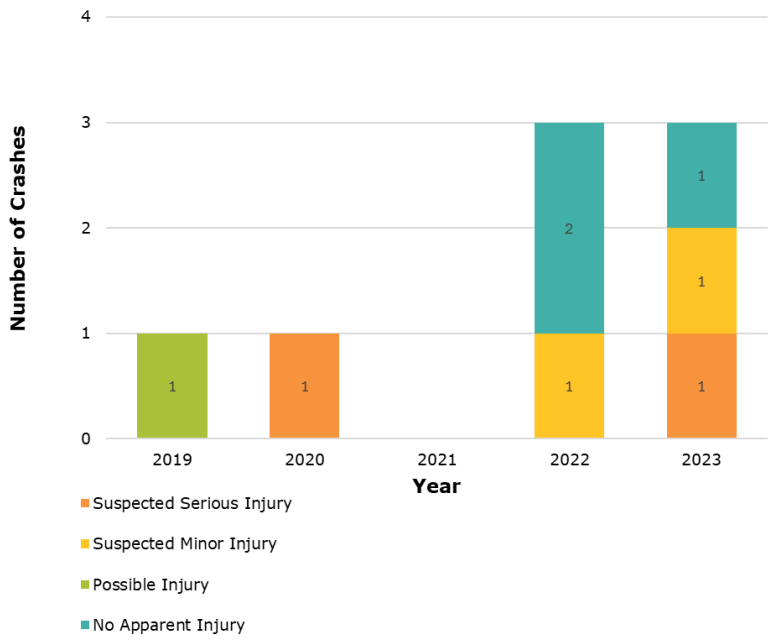


FIGURE 81: MISSION CREEK ROAD CRASHES BY YEAR AND SEVERITY

SECONDARY CORRIDORS

EASY STREET

Easy Street is located in Sunnyslope. The corridor was analyzed from Melody Lane/Ohme Garden Road to Tye Lane. The speed limit for Easy Street ranges from 40 mph throughout most of the corridor and drops down to 25 mph as it approaches Tye Lane. The corridor has one lane in each direction and is mostly within a residential area. This section does not have any bicycle or pedestrian facilities except for the area west of School Street where there are intermittent sidewalks. This highway had a total of 30 crashes, including 1 serious injury crash. The total EPDO score for this corridor is 237. Figure 82 shows the typical cross section for the corridor within the study limits.



FIGURE 82: EASY STREET CROSS SECTION

There was 1 serious injury crash along this corridor between 2019 and 2023. The serious injury crash occurred in 2022 and was caused by a rear-end collision with the cars both going straight. The crash was not intersection-related.

Figure 83 shows the types of crashes along the corridor. The top two types of crashes were angle (40%) and rear-end (23%). The next two types were turning left (17%) and fixed object (10%). For the fixed objects, the three collisions include: one vehicle striking the roadway ditch, one vehicle striking a fence, and one vehicle striking a tree or stump. The data shows that over 85% of all crashes involved multiple vehicles.

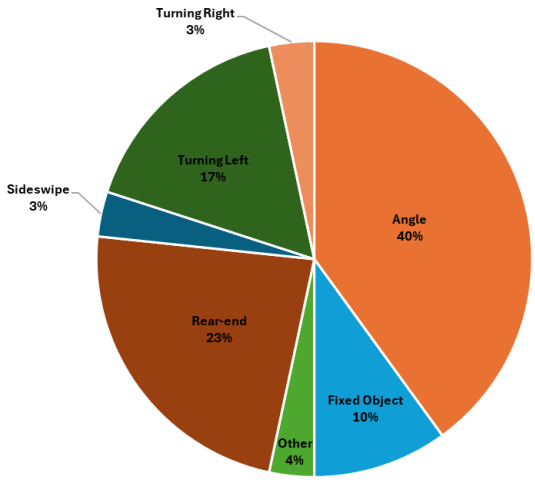


FIGURE 83: TYPES OF CRASHES ALONG EASY STREET

Figure 84 shows the number of crashes per year with the highest number of crashes being 10 occurring in 2022. While there was one crash that resulted in serious injury, no fatal crashes were reported.

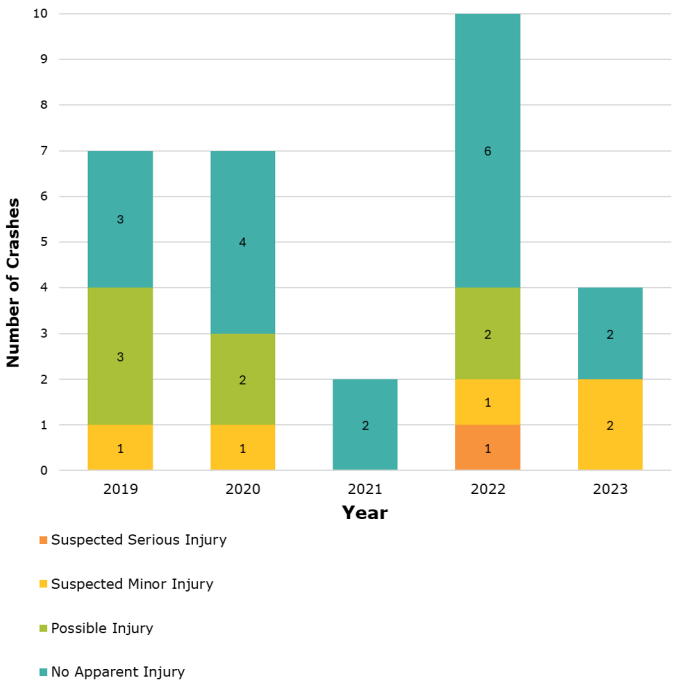


FIGURE 84: EASY STREET CRASHES BY YEAR AND SEVERITY

ENTIAT RIVER ROAD

Entiat River Road is located in Entiat, an unincorporated community within Chelan County. The corridor was analyzed from State Route 97 to Stormy Creek Forest Service 5395 Road. The speed limit for Entiat River Road ranges from 35 mph to 45 mph. The corridor has one lane in each direction and varying shoulder widths. This highway had a total of 15 crashes, including 1 fatal crash. The total EPDO score for this section is 168. Figure 85 shows the typical cross section for the corridor within the study limits.



FIGURE 85: ENTIAT RIVER ROAD CROSS SECTION

There was 1 fatal crash along this corridor between 2019 and 2023. The fatal crash involved a vehicle striking a tree or a stump.

Figure 86 shows the types of crashes along the corridor. The two types of crashes were fixed object (87%) and animal (13%). For the fixed objects, the highest percentage of collisions were with a tree or stump (23%), earth bank or ledge (15%), and utility pole (15%). The data shows that all crashes were single-vehicle.

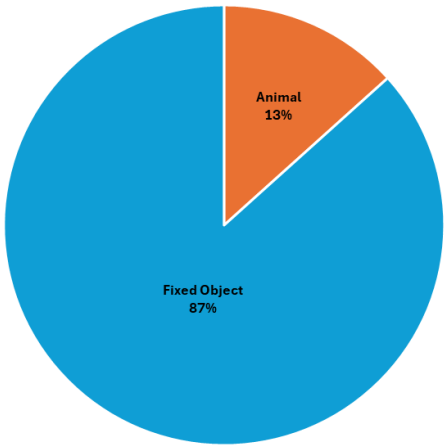


FIGURE 86: TYPES OF CRASHES ALONG ENTIAT RIVER ROAD

The county had a Countywide Signing Improvement project which included Entiat River Road. Curve warning signs were installed as well as additional advanced curve warning signs, and existing advance curve warning signs were upgraded to larger signs. This project was completed in August 2021. The fatal crash happened in April 2023, after the completion of the project.

Figure 87 shows the number of crashes per year with the highest number of crashes being 6 occurring in 2020.

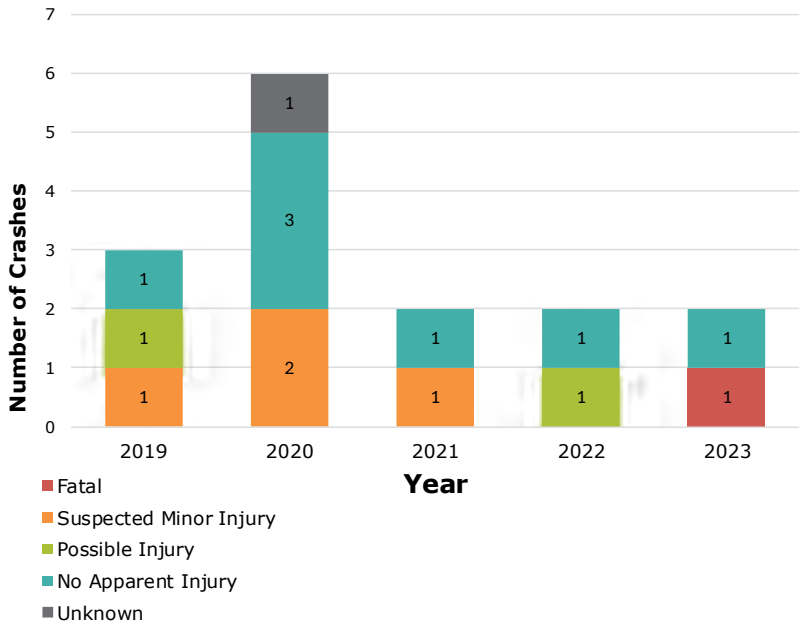


FIGURE 87: ENTIAT RIVER ROAD CRASHES BY YEAR AND SEVERITY

WSDOT-OWNED INTERSECTIONS

While this study focuses on crashes that occurred on County-owned roads, several intersections owned by WSDOT were analyzed in this section due to their known history of having frequent or severe crashes. These intersections have at least one intersection approach that is owned by Chelan County. It is important to note that while some of these intersections have higher EPDO scores, they were not included in the high injury network for Chelan County. The list of WSDOT intersections was provided by the County and shown in Table 3.

TABLE 3: WSDOT INTERSECTIONS

INTERSECTION	FATAL & SERIOUS INJURY CRASHES	TOTAL NUMBER OF CRASHES	EPDO SCORE
US 2 / DEADMAN HILL ROAD	1 fatal 1 serious injury	9	225
US 2 / MAIN STREET (MONITOR SIGNAL)	NA	32	131
US 2 / DRYDEN AVENUE (DRYDEN SIGNAL)	NA	11	65
US 2 / MAIN STREET (PESHASTIN SIGNAL)	NA	13	40
US 2 / HAY CANYON ROAD	NA	10	28
SR 150/WAPATO LAKE ROAD	NA	6	24
US 2 / SCHOOL STREET	NA	7	16
SR 971 / LAKESHORE ROAD	NA	NA	NA

US 2 and Deadman Hill Road

The intersection of US 2 and Deadman Hill Road is west of Dryden. This intersection had 9 crashes. Figure 88 shows the number of crashes per year along with the severity.

There was 1 fatal crash and 1 suspected serious injury crash at this intersection. The fatal crash happened as a vehicle going north turned right to enter US 2 was struck by another vehicle going straight from west to east on US 2. It was reported that a vehicle did not grant the right-of-way and a driver was under the influence of drugs. The serious injury crash happened as a vehicle going north turned right to enter US 2 was struck by another vehicle going straight from east to west on US 2. It was reported that a vehicle did not grant the right-of-way.

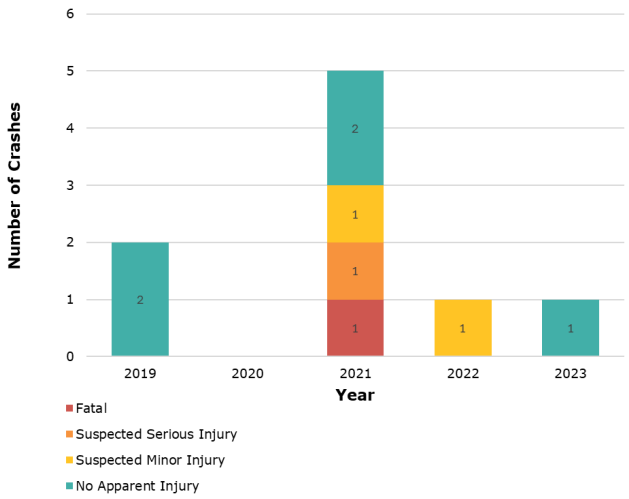


FIGURE 88: US 2 AND DEADMAN HILL ROAD CRASHES BY YEAR AND SEVERITY

The EPDO for this intersection is 225. Figure 89 shows the types of crashes that occurred at this intersection. The highest being crashes as vehicles are entering at an angle (89%) and collisions with animals (11%). All of the angle crashes involved a vehicle on Deadman Hill Road attempting to cross or turn right on US 2 and being struck by a vehicle traveling east or west on US 2.

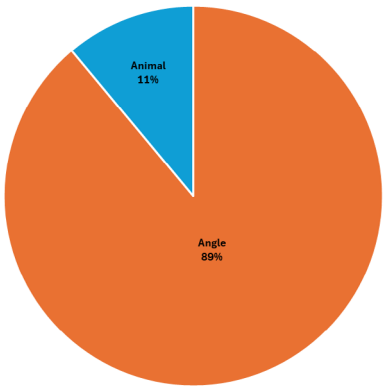


FIGURE 89: TYPES OF CRASHES AT US 2 AND DEADMAN HILL ROAD

US 2 / Main Street (Monitor signal)

The intersection of US 2 and Main Street is in Monitor. This intersection had 32 crashes. Figure 90 shows the number of crashes per year along with the severity. There were 5 suspected minor injury crashes, 5 possible injury crashes, and 21 crashes with no apparent injuries.

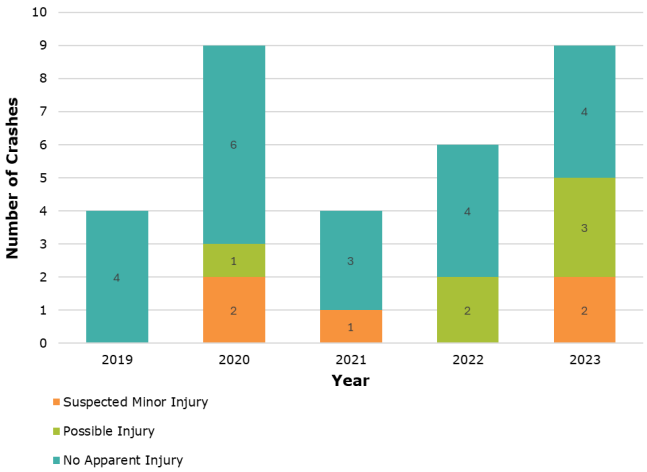


FIGURE 90: US 2 AND MAIN STREET CRASHES BY YEAR AND SEVERITY

The EPDO for this intersection is 131. Figure 91 shows the types of crashes that occurred at this intersection. The highest being rear-end crashes (59%), then angle crashes (22%), and then crashes as cars were approaching a turn (10%). Three angle crashes involved a vehicle on Main Street attempting to cross the intersection being struck by a vehicle going straight on US 2. Two angle crashes involved a southbound vehicle on Main Street turning right on US 2 and being struck by a westbound vehicle.

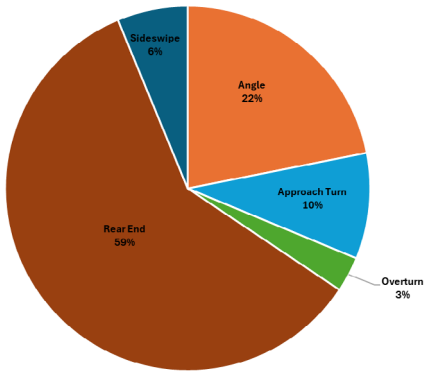


FIGURE 91: TYPES OF CRASHES AT US 2 AND MAIN STREET

US 2 and Dryden Avenue

The intersection of US 2 and Dryden Avenue is in Dryden. This intersection had 11 crashes. Figure 92 shows the number of crashes per year along with the severity. There were 3 suspected minor injury crashes, 3 possible injury crashes and 5 crashes with no apparent injuries.

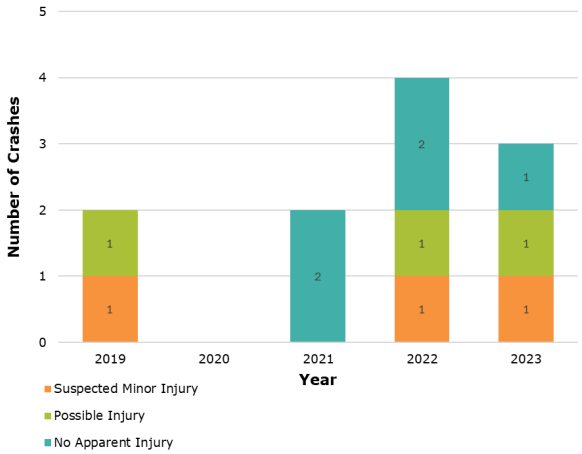


FIGURE 92: US 2 AND DRYDEN AVENUE CRASHES BY YEAR AND SEVERITY

The EPDO for this intersection is 65. Figure 93 shows the types of crashes that occurred at this intersection. The highest being rear-end crashes (37%), then crashes as a vehicle approached a

turn (27%), and angle crashes (27%). All of the angle crashes involved a right-turning vehicle either turning from or onto Dryden Avenue.

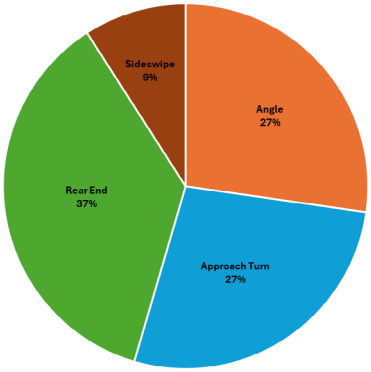


FIGURE 93: TYPES OF CRASHES AT US 2 AND DRYDEN AVENUE

US 2 and Main Street (Peshastin signal)

The intersection of US 2 and Main Street is in Peshastin. This intersection had 13 crashes. Figure 94 shows the number of crashes per year along with the severity. There were 3 suspected minor injury crashes, 2 possible injury crashes and 8 crashes with no apparent injuries.

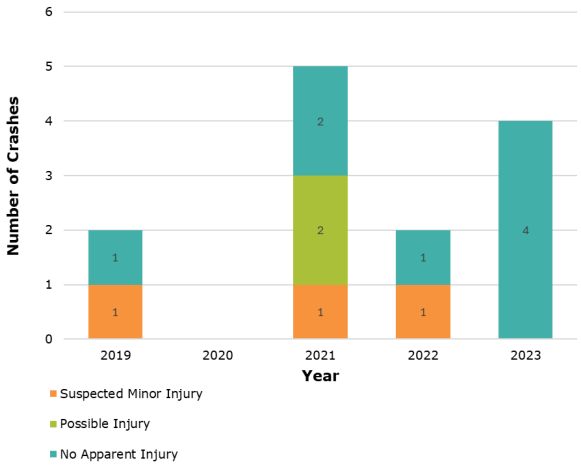


FIGURE 94: US 2 AND MAIN STREET CRASHES BY YEAR AND SEVERITY

The EPDO for this intersection is 40. Figure 95 shows the types of crashes that occurred at this intersection. The highest being rear-end crashes (61%) and fixed object crashes (15%). Sideswipe, angle, and turning crashes each made up 8% of the total.

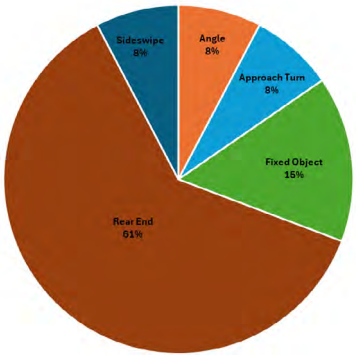


FIGURE 95: TYPES OF CRASHES AT US 2 AND MAIN STREET

US 2 and Hay Canyon Road

The intersection of US 2 and Hay Canyon Road is northwest of Cashmere. This intersection had 10 crashes. Figure 96 shows the number of crashes per year along with the severity. There were 2 suspected minor injury crashes and 8 crashes with no apparent injuries.

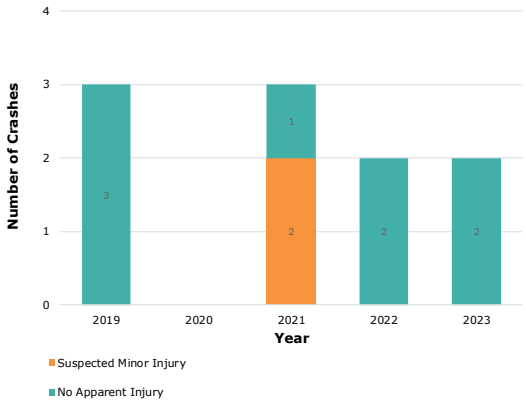


FIGURE 96: US 2 AND HAY CANYON ROAD CRASHES BY YEAR AND SEVERITY

The EPDO for this intersection is 28. Figure 97 shows the types of crashes that occurred at this intersection. The highest being rear-end crashes (80%), fixed object crashes (10%), and other (10%). The fixed object crash involved a vehicle striking a signal pole.

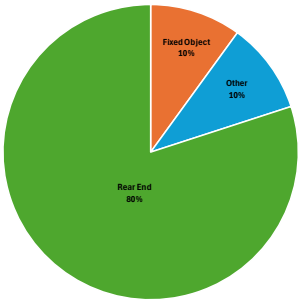


FIGURE 97: TYPES OF CRASHES AT US 2 AND HAY CANYON ROAD

SR 150 and Wapato Lake Road

The intersection of SR 150 and Wapato Lake Road is in Manson. This intersection had 6 crashes. Figure 98 shows the number of crashes per year along with the severity. There were 2 suspected minor injury crashes, 1 possibly injury and 3 crashes with no apparent injuries.

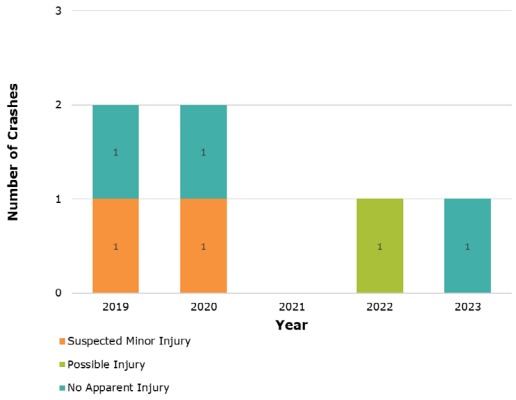


FIGURE 98: SR 150 AND WAPATO LAKE ROAD CRASHES BY YEAR AND SEVERITY

The EPDO for this intersection is 24. Figure 99 shows the types of crashes that occurred at this intersection. The highest being angle crashes (83%) and then rear-end crashes (17%). Two angle crashes involved a northbound vehicle, one making a left turn and one making a right turn onto SR 150. Two angle crashes involved a vehicle traveling east turning right onto Wapato Lake Road. One angle crash occurred as a vehicle traveling south turned left on to SR 150.

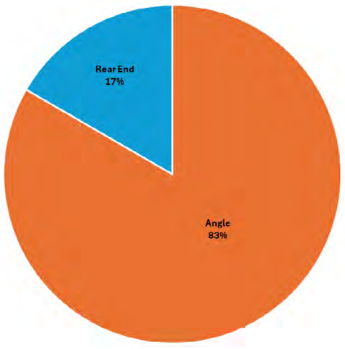


FIGURE 99: TYPES OF CRASHES AT SR 150 AND WAPATO LAKE ROAD

US 2 and School Street

The intersection of US 2 and School Street is in Sunnyslope, Washington. This intersection had 7 crashes. Figure 100 shows the number of crashes per year along with the severity. There was 1 suspected minor injury crash and 6 crashes with no apparent injuries.

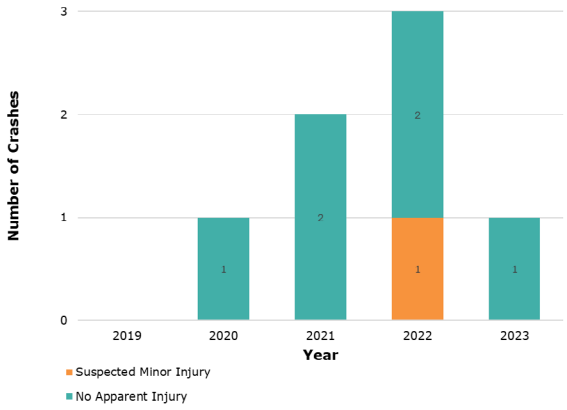


FIGURE 100: US 2 AND SCHOOL STREET CRASHES BY YEAR AND SEVERITY

The EPDO for this intersection is 16. Figure 101 shows the types of crashes that occurred at this intersection. The highest being fixed object crashes (43%), and the second highest was collisions with an animal (29%). Angle and turning crashes each made up 10% of the total. The fixed object crashes were with a traffic island, an earth bank or ledge, and a concrete barrier/ jersey barrier face. One angle crash occurred when a vehicle was traveling south and made a left turn onto School Street (which is a prohibited maneuver).

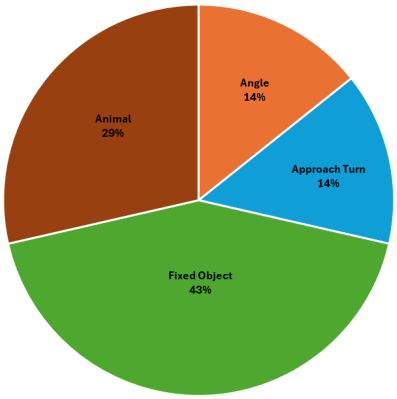


FIGURE 101: TYPES OF CRASHES AT US 2 AND SCHOOL STREET

SR 971 and South Lakeshore Road

The intersection of SR 971 and South Lakeshore Road is in Chelan, Washington. This intersection had zero crashes in the study period.

SUMMARY

The following provides a summary of safety data analysis for the Safety Action Plan:

- From 2019 to 2023, a total of 581 crashes were reported in Chelan County, with an average of 117 per year. Overall, crashes slightly trended upward since 2019. However, the number of fatal and serious injury crashes have increased during the study period making up 9.2% of all crashes in 2023.
- The most common crash type is fixed object.
- About one-in-four crashes occurred on snow/ice covered roadways. However, crashes on snow/ice only accounted for 4% of all fatal and serious injury crashes.
- Motorcycles are disproportionately involved in fatal and serious injury crashes. Motorcycle crashes make up just 4.3% of all crashes but accounted for 15% of all fatal and serious injury crashes. The majority of these crashes were single-vehicle either striking a fixed object or overturning.
- Intersection-related crashes accounted for 15.7% of all crashes, however, they were less severe than crashes which occurred on roadway segments with only two crashes that resulted in serious injury.

- High risk behaviors (driver impairment, distraction, and speeding) were all overrepresented in fatal and serious injury crashes with speeding being involved in 46% of all fatal and serious injury crashes.
- During the study period, a total of 91 crashes (15.7%) took place at intersections or were intersection-related. Both the stop-controlled intersections (46 crashes) and uncontrolled intersections (46 crashes) experienced similar crash frequencies. Overall, crashes at intersections were less likely to result in death or serious injury than crashes at segment locations.

Appendix D: High Injury Network (HIN) and High Risk Network (HRN) Methodology Memorandum

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WHAT TRANSPORTATION CAN BE.

MEMORANDUM

Date: May 21, 2026 **TG:** 1.24319.00

Subject: Chelan County Safety Action Plan - High Injury Network (HIN) and High Risk Network (HRN) Methodology Memorandum

This memorandum will document the methodology used to develop the High Injury Network (HIN) and High Risk Network (HRN) for the Chelan County Comprehensive Safety Action Plan (CSAP). The High Injury Network (HIN) and High Risk Network (HRN) are developed with the goal of highlighting roadways with a heightened history of injury-related crashes (HIN) and a risk of crashes in the coming years (HRN). In essence, the HIN looks backwards, while the HRN attempts to be forward looking, identifying locations within the County's roadway network where future crashes may occur.

High Injury Network

A high injury network (HIN) was developed for the Chelan County CSAP. A HIN is an analysis aimed at identifying roadway corridors that hold a disproportionately large share of injury-related crashes. This process uses a sliding window analysis on County roadways and weights crashes by severity.

For this plan, the HIN was initially developed as outlined in Appendix C and later refined to determine the specific segments along which greater incidences of injury-related crashes occurred. The methodology from Appendix C is defined below:

> *The Equivalent Property Damage Only (EPDO) method was used to identify and create the high injury network. The severity of each collision was analyzed and assigned an EPDO score. Fatal and serious injury crashes were assigned the highest weight of 100, then the minor and possible injury crashes were assigned a weight of 10, and no apparent injury and unknown crashes were assigned a weight of 1. In other words, 1 fatal or serious injury crash is equivalent to 100 no apparent injury crashes.*
>
> *The crash data was imported into GIS and viewed as a heat map based on EPDO. Intersection-related crashes were isolated and high injury locations were categorized based on total EPDO for the intersection. The crash data from 2019 to 2023 was analyzed and the intersections with any fatal or serious injuries were added to the high injury network list. Next, intersections with the highest frequency of total crashes were also chosen to supplement the list due to the limited number of intersections with fatal and serious injury crashes. The high injury network also includes corridors, which were selected based on EPDO per mile. Secondary corridors were also included to capture locations that do not have a high concentration of fatal and serious injury crashes but do have a significant total crash history and potential for safety improvement.*

The EPDO methodology and weighting factors as defined in Appendix C were retained for the analysis. The following refinements to the methodology above were conducted:

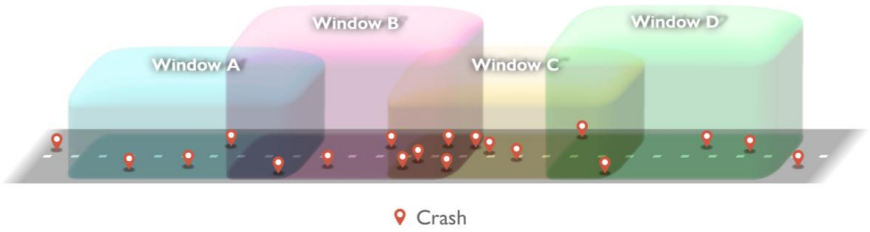
- A "Sliding Window Segmentation Process" was conducted to identify the specific segments along County roads which have the highest EPDO crash scores.
- Given the few intersection-related crashes resulting in serious injuries or fatalities, the high-injury intersections were removed, and the data was accounted for in the calculation of the EPDO scores for using the Sliding Window Segmentation Process.

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Sliding Window Segmentation Process

The roadway network was first prepared by dissolving roadway segments based on roadway name and functional classification to create continuous corridor features. A sliding window segmentation process was then applied to the roadway network (0).

Figure 1. Sliding Window Example



This approach evaluates crashes across overlapping roadway segments of a consistent length, allowing patterns of severe crashes to be identified without being constrained by existing roadway segmentation in GIS. A sliding window network is useful to generate a 'rolling average' of crashes along a roadway corridor.

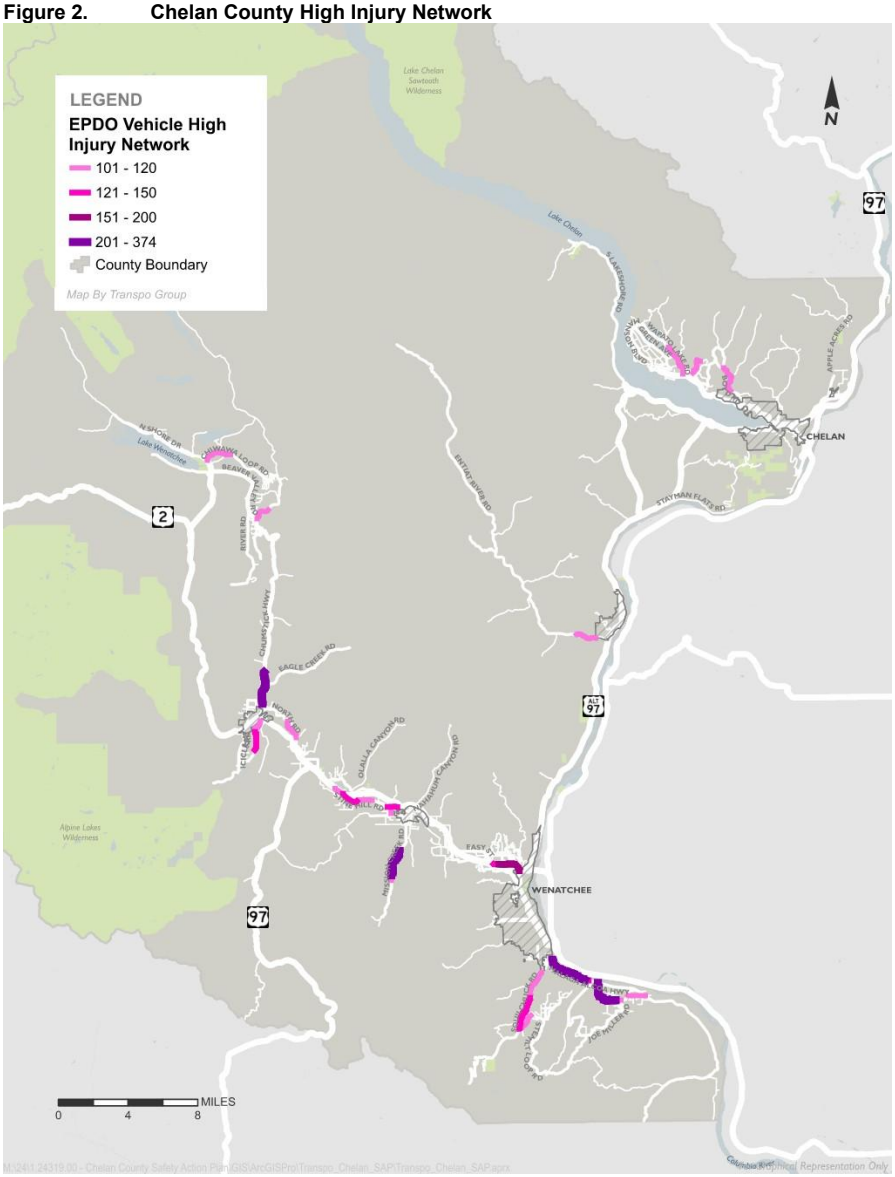
Crash records were spatially joined to the roadway network and categorized by injury severity. Crashes involving pedestrians, bicyclists, and motor vehicles were included in the analysis. Injury severity classifications included property damage only (PDO), minor injury, serious injury, and fatal crashes. Greater emphasis was placed on serious injury and fatal crashes to align the analysis with Safe System and Vision Zero principles, which prioritize reducing the most severe outcomes.

For Chelan County, roadways were split into half mile segments and scored by counting the number of crashes along each roadway, and weighing them by severity using the following formula:

- HIN Score = (Number of FSI Crashes x 100) + (Number of Minor Injury Crashes x 10) + Number of Property Damage Only Crashes.

Any roadway segment that scored a 101 or higher was included on the HIN. Figure 2 presents a map of the HIN in Chelan County using this methodology.

Figure 2. Chelan County High Injury Network



High Risk Network

A High-Risk Network (HRN) was also developed for Chelan County CSAP. The goal of the HRN is to look at roadway characteristics present in areas with high collision density and map those roadway characteristics throughout the County. The HRN development also incorporated survey data indicating locations within the roadway network with perceived safety needs.

The following roadway characteristics were reviewed along Chelan County roadways as part of the HRN development:

- Land Use
- Functional Class
- Speed Limit
- Shoulder Presence

For each of the four roadway characteristics, a risk factor score was developed by comparing the percent of total roadway milage represented by the roadway characteristic type against the percent of total EPDO score of crashes along those roadways. This calculation is intended to identify the land use types, functional classifications, speed limits, and shoulder presence that show a higher density of injury crashes. Risk factors are calculated using the equation below for each roadway characteristic type:

$$Risk\ Factor = \frac{\%\ of\ Total\ Countywide\ EPDO\ Score}{\%\ of\ Total\ Roadway\ Milage}$$

A higher risk factor score indicates a higher density of crashes and/or greater crash severities, and thus a potential indicator for potential future crashes. Tables 1 through 4 summarize the risk analysis calculations for the four roadway characteristics (Land Use, Functional Class, Speed Limit, and Shoulder Presence).

Table 1. Land Use Risk Analysis

Land Use	Road Length (mi)	Road %	Crash Weight (EPDO)	Crash %	Risk Factor
Industrial	12.00	2.30%	356	6.56%	2.86
High Density Residential	17.71	3.39%	423	7.80%	2.30
Commercial	6.55	1.25%	132	2.43%	1.94
Rural Village	20.78	3.97%	375	6.91%	1.74
Low Density Residential	258.94	49.53%	2,992	55.17%	1.11
Med Density Residential	26.70	5.11%	201	3.71%	0.73
Agriculture/Resource	174.19	33.32%	817	15.07%	0.45
Public	5.93	1.14%	26	0.48%	0.42

Table 2. Functional Classification Risk Analysis

Functional Class	Road Length (mi)	Road %	Crash Weight (EPDO)	Crash %	Risk Factor
16 - Urban Minor Arterial	4.28	0.82%	484	8.92%	10.89
06 - Rural Minor Arterial	23.39	4.47%	1066	19.66%	4.39
17 - Urban Major Collector	14.08	2.69%	339	6.25%	2.32
07 - Rural Major Collector	109.79	21.00%	2064	38.06%	1.81
08 - Rural Minor Collector	81.16	15.52%	586	10.81%	0.70
18 - Urban Minor Collector	2.25	0.43%	12	0.22%	0.52
09 - Rural Local Access	237.64	45.45%	797	14.70%	0.32
19 - Urban Local Access	50.22	9.61%	75	1.38%	0.14

Table 3. Speed Limit Risk Analysis

Speed Limit	Road Length (mi)	Road %	Crash Weight (EPDO)	Crash %	Risk Factor
40 mph	18.31	3.50%	740	13.65%	3.90
50 mph	30.17	5.77%	799	14.73%	2.55
45 mph	41.86	8.01%	856	15.78%	1.97
35 mph	149.90	28.67%	2022	37.29%	1.30
25 mph	238.89	45.69%	930	17.15%	0.38
20 mph	9.26	1.77%	25	0.46%	0.26
30 mph	34.41	6.58%	51	0.94%	0.14

Table 4. Shoulder Presence Risk Analysis

Shoulder Presence[1]	Road Length (mi)	Road %	Crash Weight (EPDO)	Crash %	Risk Factor
Yes	93.18	17.82%	2454	45.25%	2.54
No	429.62	82.18%	2969	54.75%	0.67

1. Shoulder presence was defined as a roadway having 4' paved shoulders on both sides of the road.

Based on the risk factor scores calculated in Tables 1-4 above, risk scores were assigned to the roadway characteristic types with the highest risk factors (indicating higher density of crashes and/or greater crash severities). The roadway characteristics, risk factors, and corresponding risk scores are summarized in Table 5.

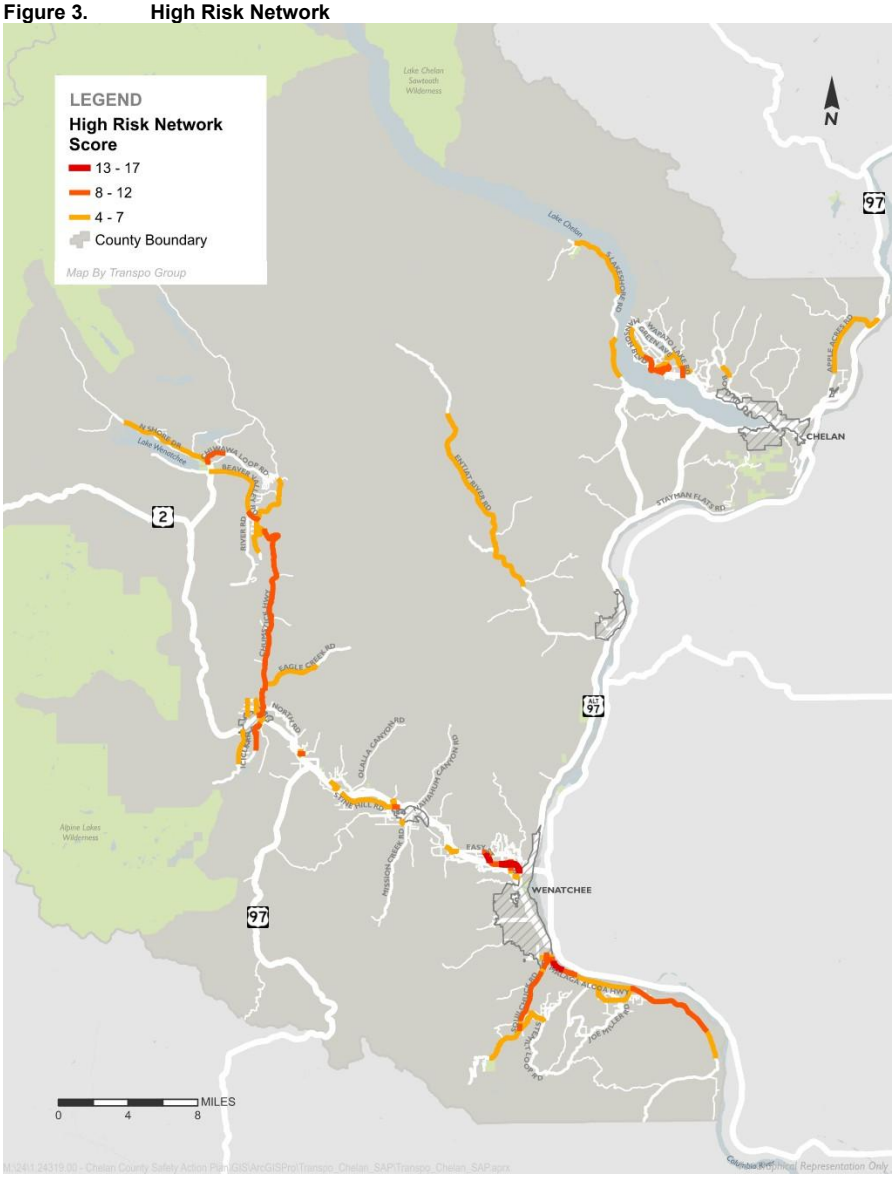
As mentioned, survey data was incorporated into the development of the HRN network to give added context and attempt to capture perceived risk on county roadways. The analysis incorporated survey results as an additional input category on top of four roadway characteristics (Land Use, Functional Class, Speed Limit, and Shoulder Presence). Risk scores for the survey data were assigned based on the number of survey responses identifying the roadway as having a potential safety concern. The assignment of risk scores based on the number of survey responses is summarized in Table 5.

Table 5. HRN Score Breakdown

Input Category	Input	Risk Factor	Risk Score
Land Use	Industrial	2.86	5
	High Density Residential	2.30	5
	Commercial	1.94	3
	Rural Village	1.74	3
	Low Density Residential	1.11	1
Functional Class	16 - Urban Minor Arterial	10.89	6
	06 - Rural Minor Arterial	4.39	4
	17 - Urban Major Collector	2.32	2
	07 - Rural Major Collector	1.81	1
Speed Limit	40	3.90	4
	50	2.55	3
	45	1.97	2
	35	1.30	1
Shoulder Presence	Yes	2.54	1
Survey Results Count	4 - 7		5
	2 - 3		3
	1		1

A GIS analysis was then conducted to assign an overall risk score to roadways throughout the County based on their alignment with the roadway characteristics in Table 5. The risk factor scoring in Table 5 allows a max score of 21. The highest scoring roadway in the County was assigned a score of 17, suggesting no roads met all of the 'high risk' factors. Figure 3 presents a map of the results of the high risk analysis. Roadways with a risk score of 4 or greater were included in the network.

Figure 3. High Risk Network



Appendix E: Demographic Analysis Memorandum

CHELAN COUNTY SAFETY ACTION PLAN

DATE: May 30, 2025

TO: Chelan County

FROM: Justin Sheets | DKS Associates
Nikki Davis | DKS Associates

SUBJECT: Draft Demographic Analysis Memorandum Project #25302-000

INTRODUCTION

Chelan County is developing a Safety Action Plan with a goal of eliminating fatal and serious injury crashes across all modes of transportation, including pedestrians, bicyclists, public transport users, motorists, and commercial vehicle operators. Transportation plays a critical role in ensuring access to essential opportunities such as employment, education, healthcare, and social services. However, disparities in transportation access can disproportionately impact marginalized communities, including low-income populations, people of color, individuals with disabilities, older adults, and those living in rural areas. This assessment aims to evaluate the fairness and inclusiveness of transportation systems, ensuring that all individuals—regardless of socio-economic status, geographic location, or physical ability—have access to safe, affordable, and efficient mobility options.

By identifying the disparities within the region, transportation policies, strategies, and infrastructure can be developed to promote inclusive mobility solutions. Ultimately, expanding transportation access to underserved populations to enhance social and economic opportunities, reduce environmental burdens, and foster more just and sustainable communities.

This analysis specifically excludes incorporated cities like Wenatchee, instead centering on unincorporated regions of Chelan County.

PURPOSE

The purpose of this memorandum is aimed at supporting Chelan County in gaining a deeper understanding of the needs within underserved communities, particularly in relation to transportation safety. The document will highlight the challenges these communities face and the heightened risk of fatal and serious injury collisions being experienced. By identifying these critical issues, the Chelan County Safety Action Plan can work to develop targeted solutions that improve safety, accessibility, and quality of life for all residents within the county.

The team will analyze existing census data to create a comprehensive framework for identifying priority groups and populations that face higher risks of serious traffic collisions. This framework will guide both community engagement efforts and strategies to improve roadway safety. Additionally, crash analysis, development of a High

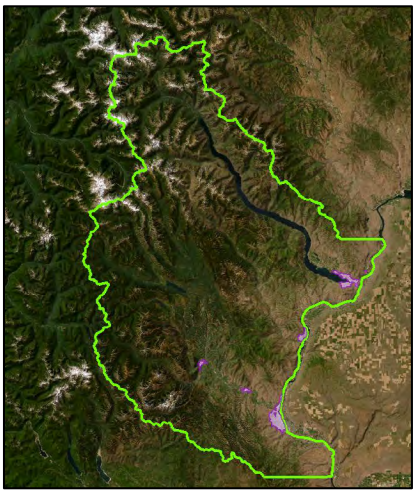
Injury Network, and community engagement activities will provide an assessment of how socio-economic and demographic factors contribute to crash risks, ensuring solutions are tailored to address the challenges faced by underserved communities.

STUDY AREA

Chelan County is located in north-central Washington State, characterized by a diverse landscape that blends mountainous terrain, fertile agricultural valleys, and prominent waterways, including stretches of the Columbia and Wenatchee Rivers. This geographically rich region is home to several incorporated cities and unincorporated communities such as Wenatchee, East Wenatchee, South Wenatchee, Leavenworth, Cashmere, Chelan, Manson, Entiat, Sunnyslope, Dryden, and Chelan Falls. These communities each contribute to the county's economic, cultural, and transportation dynamics.

This study, however, intentionally focuses on the unincorporated areas of Chelan County—the more rural and sparsely populated regions that lie outside city boundaries. These areas include residential clusters, agricultural communities, forested tracts, and critical transportation corridors that link residents to schools, health services, employment centers, and regional destinations. They also serve as essential routes for emergency access and seasonal travel associated with tourism and recreation.

Figure 1. Chelan County Boundary
Source: Chelan County GIS



A demographically focused approach to planning requires an acknowledgment that unincorporated communities often experience disparities in infrastructure investment, access to services, and representation in planning processes. Residents in these areas may face unique barriers such as longer travel distances to essential destinations, limited public transportation, and aging or insufficient roadway infrastructure. Furthermore, agricultural workers, low-income families, older adults, and historically underserved populations frequently reside in these rural zones—many of whom may not be adequately captured in traditional urban-focused planning models.

By focusing on Chelan County's unincorporated areas, this study seeks to address long-standing gaps in service and representation, ensuring that all residents—regardless of geography—benefit from transportation planning, safety improvements, and infrastructure development. The project aims to identify and eliminate barriers to access, promote inclusive engagement, and allocate resources in a manner that prioritizes communities most in need. This analysis aligns with broader goals of environmental justice, public health, and mobility for all.

DEMOGRAPHIC ANALYSIS

To ensure transportation safety for all residents within unincorporated Chelan County, this study will include a demographic analysis aimed at identifying where improvements are most needed to create safer, more accessible, and livable communities. The analysis will integrate both quantitative data and community input to inform strategies that prioritize populations who have historically faced systemic barriers or have been underserved in transportation planning and investment.

The first step is to define areas within the county that have historically been disadvantaged. These communities are defined with the use of demographic and socio-economic indicators from government databases.

DEFINING POPULATIONS

To ensure an understanding of communities with sociodemographic vulnerabilities and their geographical location, the project team conducted a review of:

- Chelan County Title VI Plan
- Climate and Economic Justice Screening Tool
- U.S. Department of Transportation MPDG – Areas of Persistent Poverty and Historically Disadvantaged Communities
- ArcGIS Business Analyst Tool
- Sandy Williams Equity Needs Map

CHELAN COUNTY TITLE VI PLAN

The Title VI Plan[1] for Chelan County outlines the County's commitment to ensuring nondiscrimination in federally funded programs and services, in compliance with Title VI of the Civil Rights Act of 1964. The plan identified persons who speak English less than "very well as comprising approximately 10% of the population in Chelan County.

Note: A subset of the Spanish-speaking or other languages population in the study area are classified as having limited English proficiency (LEP), defined as individuals who self-identify as speaking English less than 'very well' on the U.S. Census.

Table 1. Chelan County: Language Spoken at Home
Source: Chelan County Title VI Plan

Language spoken at home	Number of Individuals	Percentage
Population 5 years and over	73,883	100%
English only	54,701	74.0%
Spanish	17,756	24.0%
Spanish speak English less than "very well"	7,220	9.8%
Other languages	1,426	1.9%
Other languages other than Spanish that speak English less than "very well"	273	0.4%

[1] https://www.co.chelan.wa.us/legal/pages/title-vi-plan

CLIMATE AND ECONOMIC JUSTICE SCREENING TOOL

The Climate and Economic Justice Screening Tool[2] (CEJS) is an online resource that geographically identifies disadvantaged census tracts across the United States. It provides data on the various burdens communities face, helping to highlight environmental and economic disparities.[3]

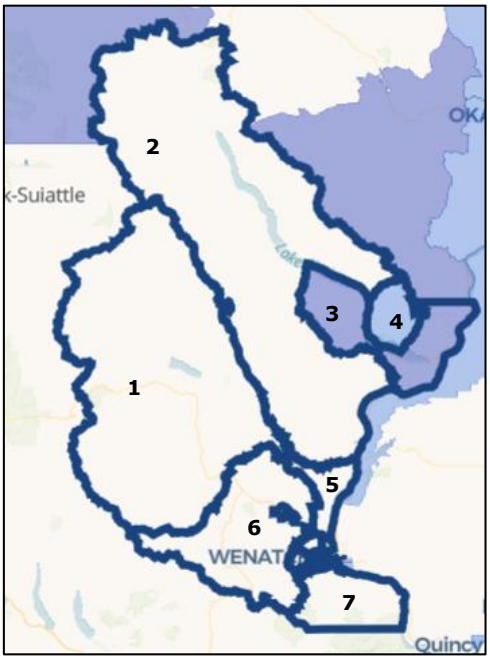
Chelan County can leverage this data to prioritize transportation investments in disadvantaged communities.

TRACT DEMOGRAPHICS

Tracts highlighted in purple are considered disadvantaged because it was identified as disadvantaged in version 1.0 of the tool.[4] Whereas tracts highlighted in blue are considered disadvantaged because they meet 1 burden threshold and the associated socioeconomic threshold.

This distinction helps to identify and prioritize communities facing compounded challenges for targeted support or resources.

Figure 2. Chelan County Census Tracts
Source: Climate and Economic Tool



[2] https://edgi-govdata-archiving.github.io/j40-cejst-2/en/#3/33.47/-97.5

[3] The Climate and Economic Justice Screening Tool (CEJST) is no longer supported or maintained by the federal government. The White House Council on Environmental Quality (CEQ), which originally developed and launched the tool, has ceased its involvement.

[4] Disadvantaged tracts within version 1 of the tool have been "grandfathered" for at least two years. This helps to reduce disruption and to support a smooth transition for agencies, applicants, and the public as new versions of the tool are released.

Table 2. Tract Demographic - Ethnicity by Group

Tract Demographic - Ethnicity By Group							
	Tract 1	Tract 2	Tract 3	Tract 4	Tract 5	Tract 6	Tract 7
White	90%	77%	68%	53%	89%	77%	71%
Black or African	0%	0%	0%	0%	0%	0%	0%
American Indian & Alaskan Native	0%	0%	0%	0%	0%	0%	1%
Asian	1%	6%	0%	0%	0%	1%	0%
Native Hawaiian or Pacific Islander	0%	0%	0%	0%	0%	0%	0%
Other	0%	2%	12%	26%	5%	8%	12%
Two or more races	1%	2%	0%	7%	1%	0%	0%
Hispanic or Latino	5%	13%	31%	45%	10%	19%	26%

Table 3. Tract Demographic – Age Group Tract

Tract Demographic – Age Group							
	Tract 1	Tract 2	Tract 3	Tract 4	Tract 5	Tract 6	Tract 7
Children under 10	11%	5%	9%	10%	16%	14%	11%
Ages 10 - 64	60%	69%	71%	69%	60%	69%	70%
Adults over 65	28%	24%	18%	20%	23%	15%	17%

CATEGORIES OF BURDENS

CEJST is a tool that uses datasets as indicators of burdens. Communities are identified as disadvantaged if they are in census tracts that are at or above the 90th percentile.

A community is highlighted as disadvantaged on the CEJST map if it is in a census tract that is (1) at or above the threshold for one or more environmental, climate, or other burdens, and (2) at or above the threshold for an associated socioeconomic burden. In addition, a census tract that is completely surrounded by disadvantaged communities and is at or above the 50% percentile for low income is also considered disadvantaged.

Listed below are the areas that have been recognized to be areas of burden within Chelan County.

Climate Change Tract refers to geographic areas often experiencing higher exposure to climate-related hazards (i.e., earthquakes, floods, wildfires, and extreme weather events), limited adaptive capacity, and greater socioeconomic burdens, amplifying the negative effects of climate change. Older adults, low-income populations, and individuals with disabilities face higher risks, especially in areas with poor infrastructure and inadequate emergency preparedness, which significantly increase fatality rates.

Transportation Census Tract is a geographic area where residents face significant obstacles in accessing safe, affordable, and efficient transportation options**.** These barriers can limit mobility, economic opportunities, and access to essential services such as jobs, education, and healthcare.

Low-Income Census Tract is a geographic area where economic hardship, limited resources, and infrastructure challenges affect residents' quality of life.

Workforce Census Tract is a geographic area where a significant portion of the population is engaged in the labor force**,** often characterized by employment trends, commuting patterns, and industry concentrations. These tracts provide insights into job accessibility, workforce participation, and economic development within a region.

Note: Tracts highlighted in purple are considered disadvantaged based on version 1 of the tool tracts highlighted in blue are considered disadvantaged because they meet one burden threshold and an associated socioeconomic threshold.[5]

Figure 3. Chelan County Census Tracts 3, and 4
Source: Climate and Economic Tool

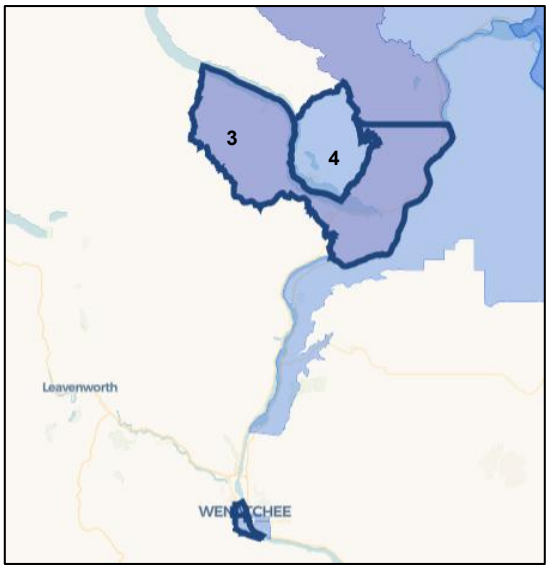


Table 4. Chelan County Census Percentiles

Climate Change		
	Tract 3	**Tract 4**
Expected Population loss Rate (Fatalities and injuries resulting from natural hazards each year.)	90th	94th
Projected Flood Risk	83rd	62nd
Projected Wildfire Risk	86th	88th
Transportation		
Transportation Barrier (Average of relative cost and time spent on transportation.)	43rd	71st
Traffic Proximity and Volume (Count of vehicles at major roads within 500 meters.)	43rd	10th
Workforce Development		
Low Median Income	50th	62nd
Poverty	38th	30th
Unemployment	83rd	53rd

[5] Disadvantaged tracts within version 1 of the tool have been "grandfathered" for at least two years. This helps to reduce disruption and to support a smooth transition for agencies, applicants, and the public as new versions of the tool are released.

Linguistic isolation (Share of households where no one over age 14 speaks English very well)	77th	88th
High School Education		
Percent of people ages 25 years or older whose high school education is less than a high school diploma.	14%	23%
Low Income		
People in households where income is less than or equal to twice the federal poverty level, not including students enrolled in higher education.	62nd	71st

To address disparities in census tracts, decision makers will need to develop targeted policies and investments to ensure all communities, especially disadvantaged ones, have access to jobs, housing, transportation, and essential services**.** This helps create more resilient and thriving communities across different regions.

Key Findings:

- Tract 3 faces high unemployment and climate risks, but fewer transportation barriers.
- Tract 4 shows moderately high climate and income vulnerability, with notable linguistic isolation.

These indicators highlight areas that would benefit most from targeted investments, language-accessible outreach, and resilience planning that considers environmental, economic, and transportation disparities together.

U.S. DEPARTMENT OF TRANSPORTATION MPDG – AREAS OF PERSISTENT POVERTY AND HISTORICALLY DISADVANTAGED COMMUNITIES

To determine if a county is eligible for grant funding via the Bipartisan Infrastructure Law, the U.S. Department of Transportation (USDOT)[6] provides a mapping tool to determine if an area is defined as an "Area of Persistent Poverty". These are designated geographic regions that have experienced long-term economic hardship, specifically in terms of poverty levels and limited access to transportation infrastructure. These areas are identified to help target federal resources and funding for transportation projects that improve mobility, economic opportunity, and quality of life.

Areas of Persistent Poverty

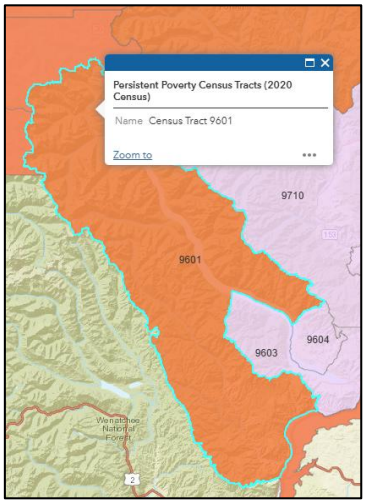
A project is located in an Area of Persistent Poverty if:

1. The **County** in which the project is located consistently had greater than or equal to 20 percent of the population living in poverty in all three of the following datasets: (a) the 1990 decennial census; (b) the 2000 decennial census; and (c) the most recent *(2022)* Small Area Income Poverty Estimates; **OR**

2. The **Census Tract** in which the project is located has a poverty rate of at least 20 percent as measured by the 2014-2018 5-year data series available from the American Community Survey of the Bureau of the Census; **OR**

3. the project is located in any territory or possession of the United States.

Figure 4. USDOT Census Tract (2020 Census)
Source: USDOT webpage



Highlighted Census Tract

- The map identifies Census Tract 9601 as a designated Persistent Poverty area.
- The area outlined in blue shows this tract classified under the status per the 2020 census criteria.
- The tract 9601 meets the federal definition of an Area of Persistent Poverty, likely due to consistent poverty levels exceeding 20% over multiple data periods. It is a key reference for project eligibility and strategic planning in underserved regions.

[6] https://www.transportation.gov/grants/mpdg-aeas-persistent-poverty-and-historically-disadvantaged-communities

Historically Disadvantaged Community

A Historically Disadvantaged Community is defined by the Office of Management and Budget (OMB)'s Interim Guidance for the Justice40 Initiative and the 2023 Addendum to this Guidance. Specifically, a project is located in a Historically Disadvantaged Community if:

1. the project is located in certain qualifying census tracts that are identified as "disadvantaged" in this Climate and Economic Justice Screening Tool[7]; **OR**

2. the project is located on Tribal land.

Figure 5. USDOT Census Tract (2020 Census)
Source: USDOT webpage

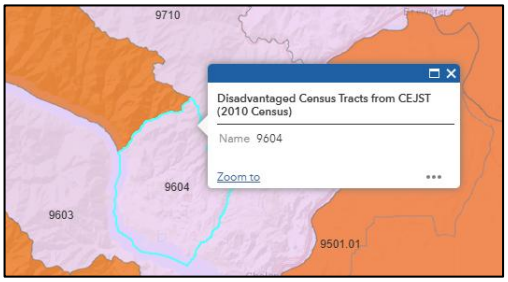
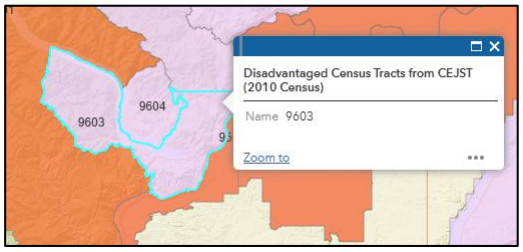


Figure 6. USDOT Census Tract (2020 Census)
Source: USDOT webpage



Highlighted Census Tract

Figures 5 and 6 illustrate CEJST-designated disadvantaged census tracts within Chelan County, highlighting areas that meet environmental and/or socioeconomic criteria for federal and state support.[8]

Tract 9603 and 9604, highlighted with a cyan outline, is marked as a disadvantaged census tract.

The purple shading generally represents areas that meet multiple burden thresholds (e.g., environmental pollution, health risks) and/or associated socioeconomic criteria such as:

- poverty,
- low education,
- or high housing costs.

These graphics help visualize areas in Chelan County where residents may experience higher environmental risks, poorer health outcomes, or economic hardships. This mapping is a crucial tool for guiding investment and policy decisions which address the needs of historically underserved populations.

[7] The Climate and Economic Justice Screening Tool (CEJST) is no longer supported or maintained by the federal government. The White House Council on Environmental Quality (CEQ), which originally developed and launched the tool, has ceased its involvement.
[8] ibid

ARCGIS BUSINESS ANALYST TOOL

The ArcGIS Business Analyst[9] is a geospatial analytics tool developed to assist in analyzing market trends, demographics, economic data, and geographic insights for better decision-making. For the purpose of this review, the analysis focused on demographics and economic data, to better assess at risk populations, infrastructure needs, improve route planning, supply chain logistics, and public transit planning.

Figure 7. Chelan County At Risk Population Profile, presents the at-risk population profile for Chelan County, created using demographic and socioeconomic data. The information highlights vulnerable groups and indicators tied to poverty, age, disability, language, and housing, providing essential context for demographic-focused planning and funding decisions.

The combination of aging residents, language isolation, areas of poverty, and unaffordable housing reveals a multidimensional risk profile. These insights should guide targeted policy responses, community engagement, and federal funding strategies across sectors such as transportation, housing, climate resilience, and public health.

Understanding the demographic composition of Chelan County in comparison to Washington State provides valuable insight into regional trends and community characteristics. While both areas share similarities, notable differences exist in age distribution, racial and ethnic makeup, and economic indicators. These variations shape local needs, priorities, and opportunities, and offer important context for policy development, planning initiatives, and service delivery across the county and the state.

When comparing Chelan County to Washington State there are a few demographics that stand out.

Table 5. Chelan County and Washington State Demographic comparison

Category	Chelan County	Washington State	Key Insight
Total Population	81,760	8,023,688	Chelan is <1% of state population
Median Age	**41.7 years**	**38.8 years**	**Chelan has an older population**
Median Household Income	$86,745	$97,013	Slightly lower income in Chelan
Median Home Value	$533,058	$632,296	Chelan has less affordable housing
Wealth Index	113	121	Slightly less affluent than state average
Housing Affordability	**65**	**61**	**Chelan housing is less affordable**
Diversity Index	70	67	Chelan is slightly more diverse
Population 65 +	**22.1%**	**17.5%**	**Chelan has a significantly older population**
Households with Disability	10,594	767,319	Similar disability when scaled
Households without vehicles	**1609 (5.1%)**	**205,391 (2.5%)**	**Chelan experiences higher households without vehicles.**
Spanish Speakers	**22%**	**~9%**	**Chelan has a higher Spanish-speaking population**
Limited English (Spanish & No English)	**~2.7%**	**~5.1%**	**Chelan has localized language barriers.**
Households Below Poverty Line	8%	10%	Chelan shows lower poverty rate, but pockets remain

[9] https://www.esri.com/en-us/arcgis/products/arcgis-business-analyst/overview

Figure 7. Chelan County At Risk Population Profile
Source: Esri (2024, 2029), Esri-Data Axle (2024)

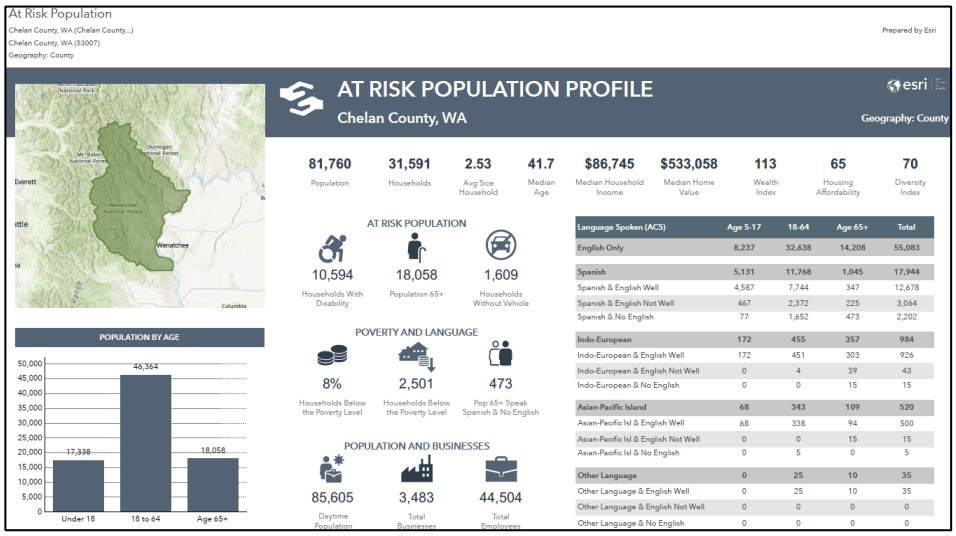
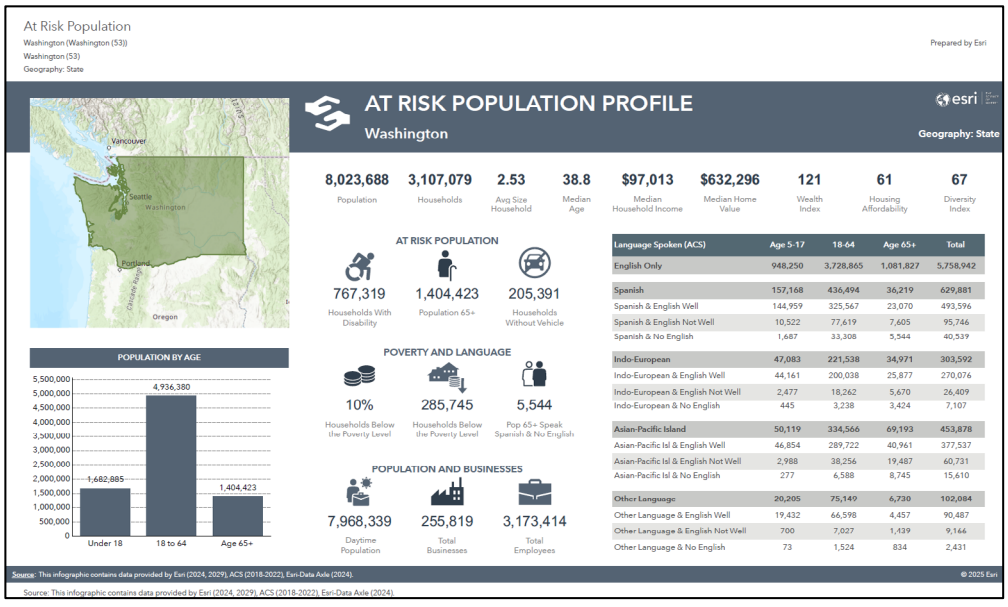


Figure 8. Washington State At Risk Population Profile
Source: Esri (2024, 2029), Esri-Data Axle (2024)



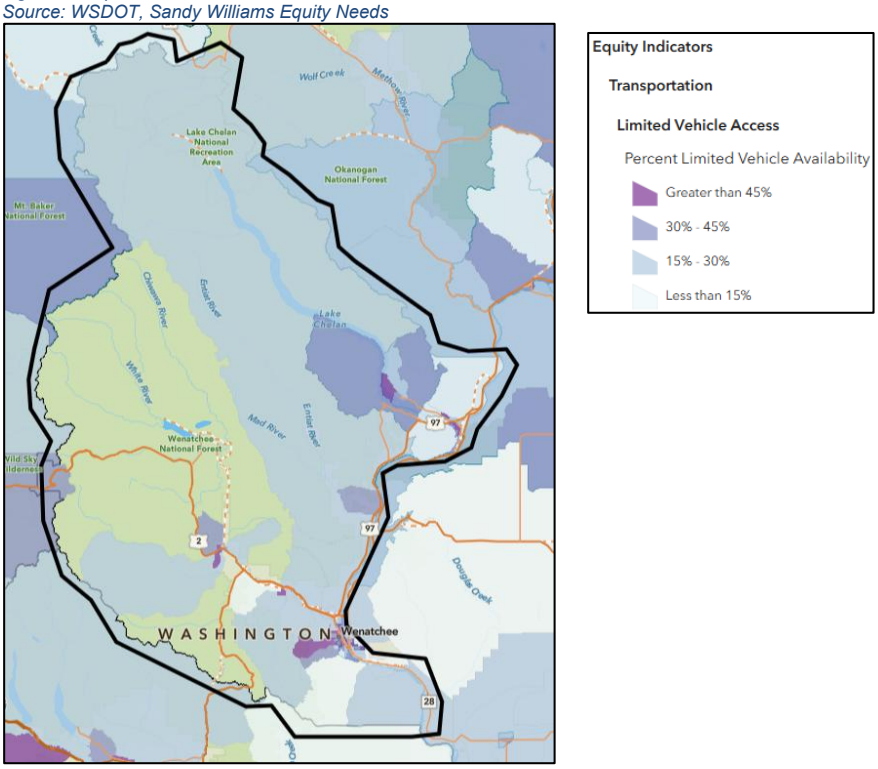
SANDY WILLIAMS EQUITY NEEDS MAP

The Sandy Williams Equity Needs Map[10] is provided by Washington Department of Transportation, identifies census block groups with demographic characteristics indicating populations with greater needs. Below is a set of maps depicting Limited Vehicle Access, Households Below 200% Poverty Threshold, Unemployment, and Populations.

LIMITED VEHICLE ACCESS

The map below highlights areas within Chelan County with limited vehicle access.

Figure 9. Map of Limited Vehicle Access
Source: WSDOT, Sandy Williams Equity Needs



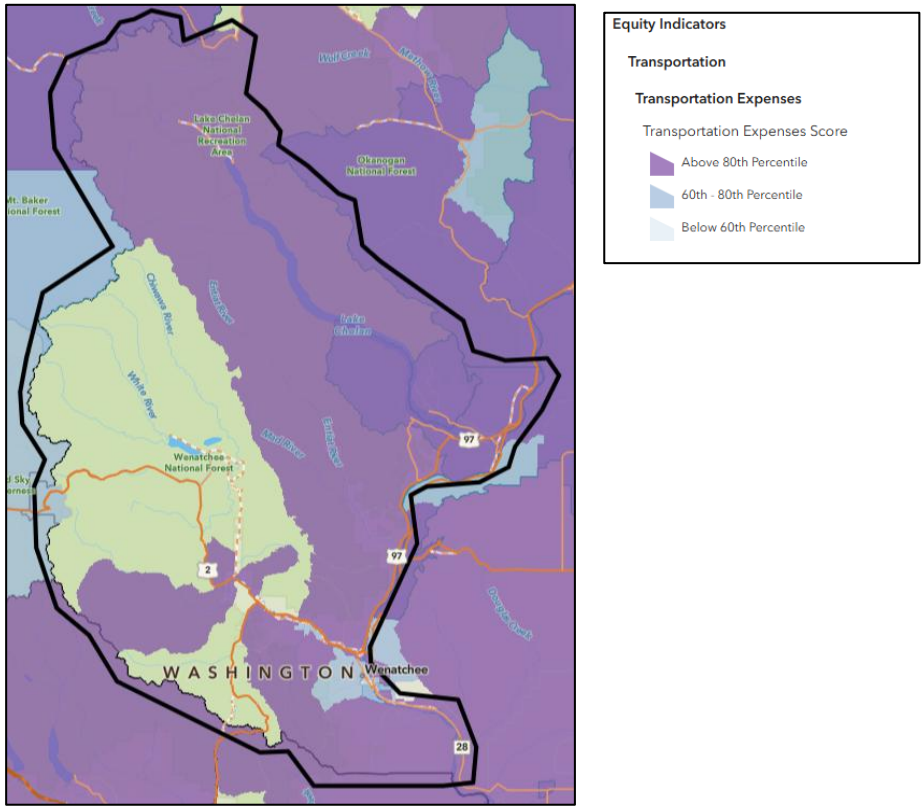
Throughout Chelan County there are notably households without access to a vehicle, which creates significant barriers to:

- Employment
- Healthcare
- Education
- Emergency services

[10] https://experience.arcgis.com/experience/03cb82fc4a524e8c9723192e72c80a0e

Transportation Expenses

The map below highlights areas of transportation expenses within Chelan County.



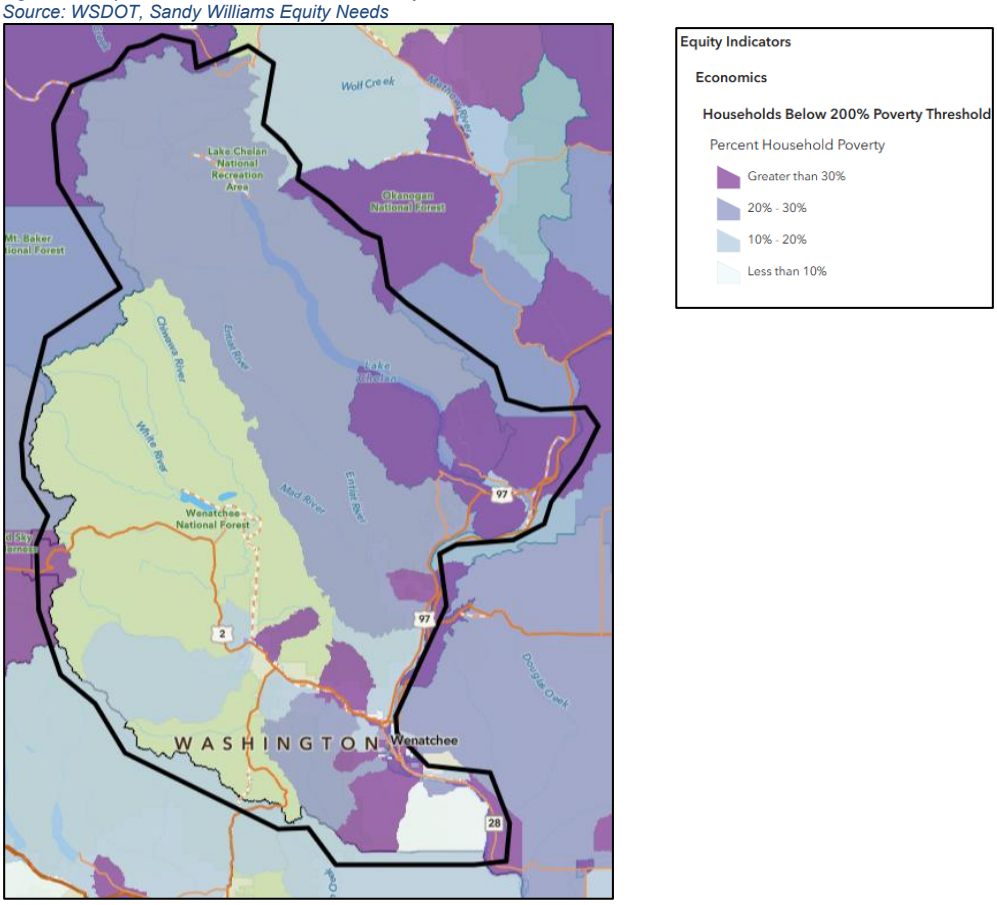
Transportation Expenses generally refer to the share of household income that is spent on transportation, including costs such as:

- Vehicle ownership (car payments, insurance, maintenance)
- Fuel
- Public transit fares
- Ride-hailing services
- Bicycle maintenance or purchase
- Parking fees

HOUSEHOLDS BELOW 200% POVERTY THRESHOLD

The map below highlights areas in Chelan County where households fall below 200% of the poverty threshold.

Figure 10. Map of Households Below 200% Poverty Threshold
Source: WSDOT, Sandy Williams Equity Needs

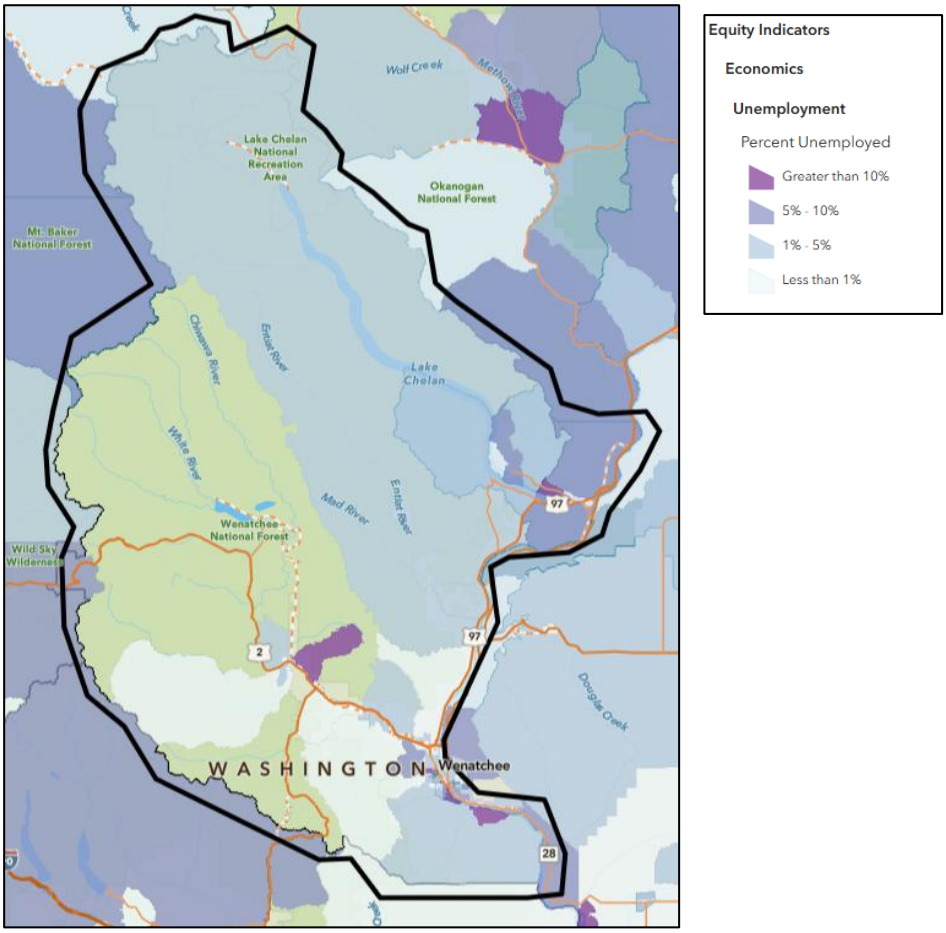


Much of Chelan County shows high concentrations of economically vulnerable households, where residents earn less than twice the federal poverty level. These zones are critical targets for anti-poverty interventions, job training, and housing assistance.

UNEMPLOYMENT

The map below illustrates the unemployment rates across various areas within Chelan County.

Figure 11. Map of Percent Unemployment
Source: WSDOT, Sandy Williams Equity Needs

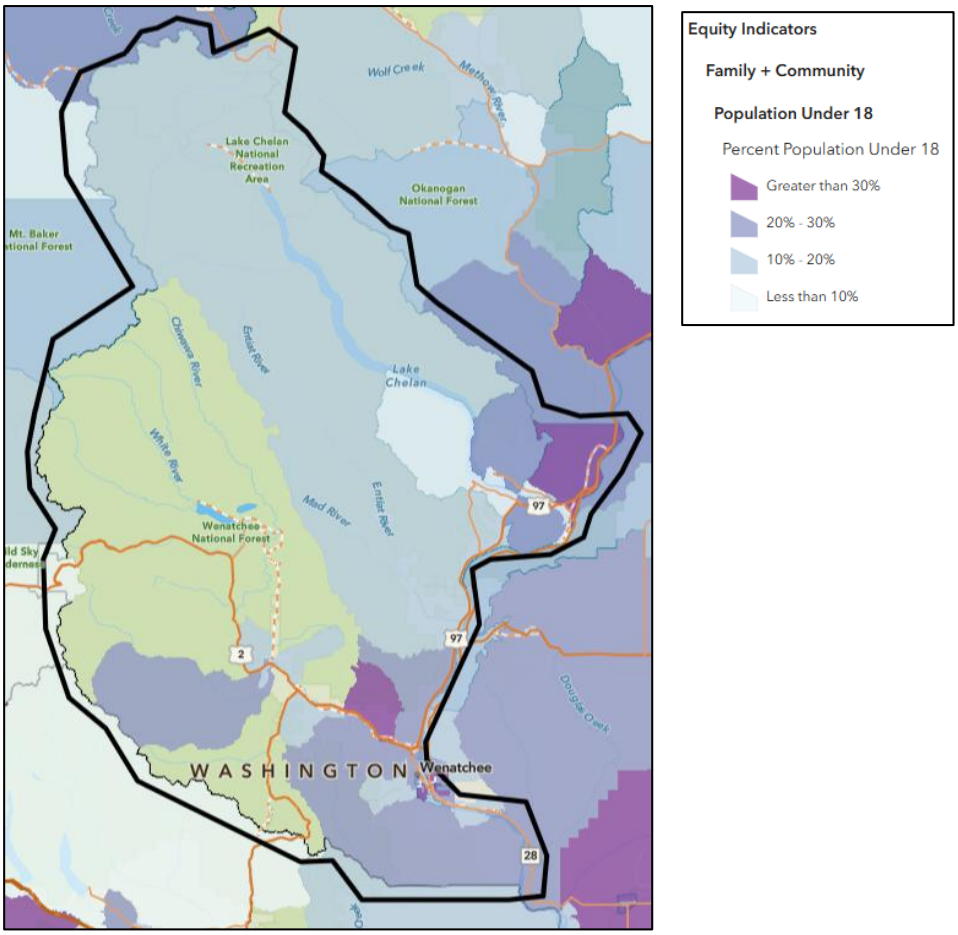


Disparities are most evident in the southern and rural areas of Chelan County, particularly in rural areas, where limited access to employment and workforce training makes economic hardship even worse.

POPULATION UNDER 18

Below is a map of Chelan County, displaying percentage distributions for people under 18 years of age across different areas.

Figure 12. Map of Population Under 18
Source: WSDOT, Sandy Williams Equity Needs

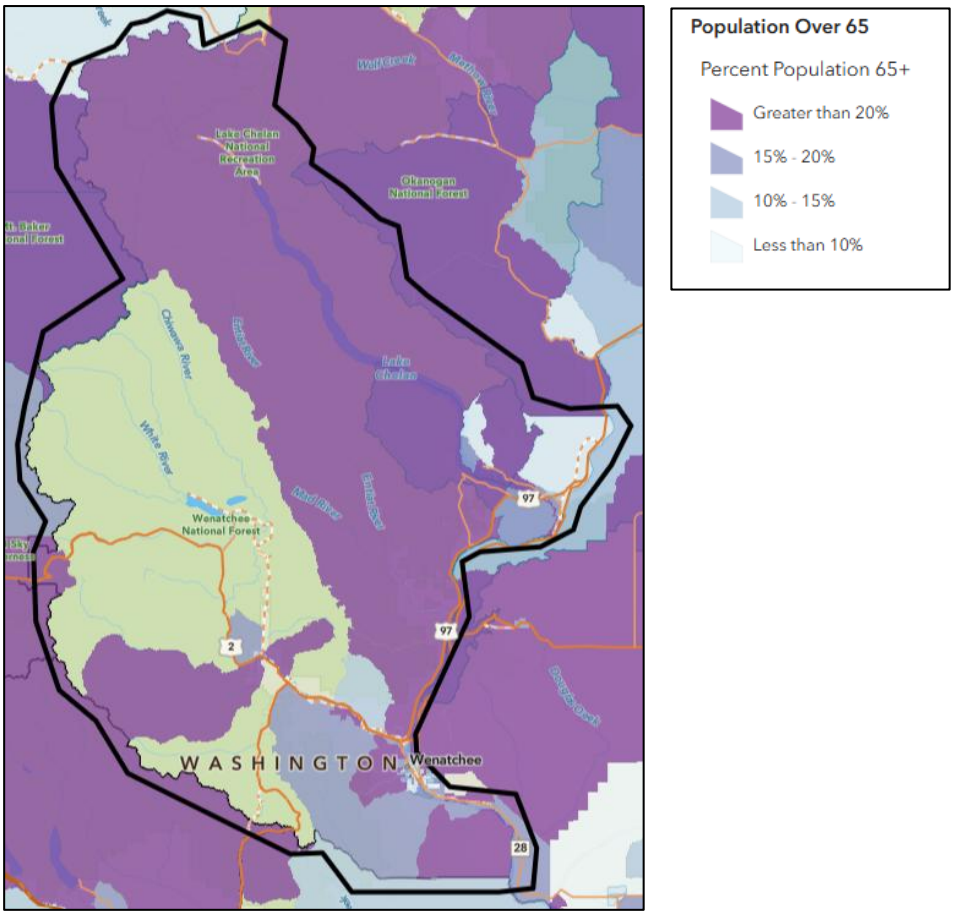


Many areas in Chelan County have high percentages of youth, indicating a strong need for school access, youth services, and safe transportation infrastructure.

POPULATION OVER 65

Below is a map of Chelan County, displaying percentage distributions for people over 65 years of age across different areas.

Figure 13. Map of Population over 65
Source: WSDOT, Sandy Williams Equity Needs

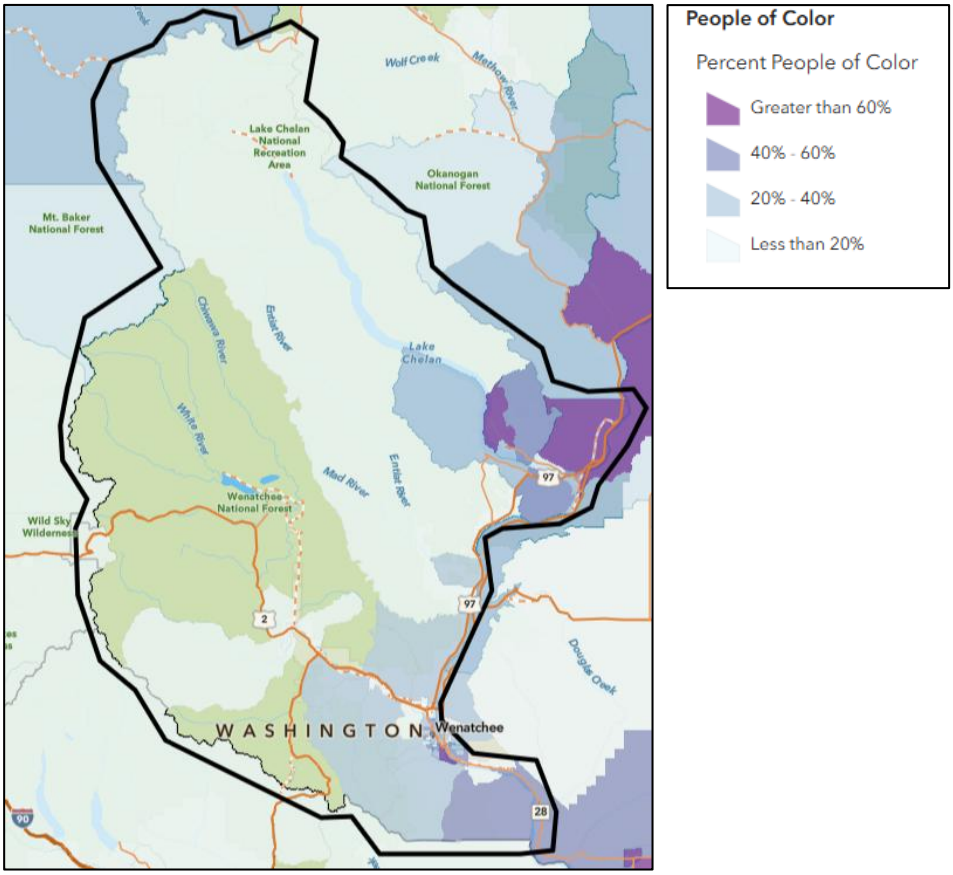


Much of Chelan County and its rural areas have higher percentages of elderly residents, highlighting the need for age-friendly design, mobility support, and improved healthcare access.

PEOPLE OF COLOR

Below is a map of Chelan County, displaying percentage distributions for people color across different areas.

Figure 14. Map of People of Color
Source: WSDOT, Sandy Williams Equity Needs

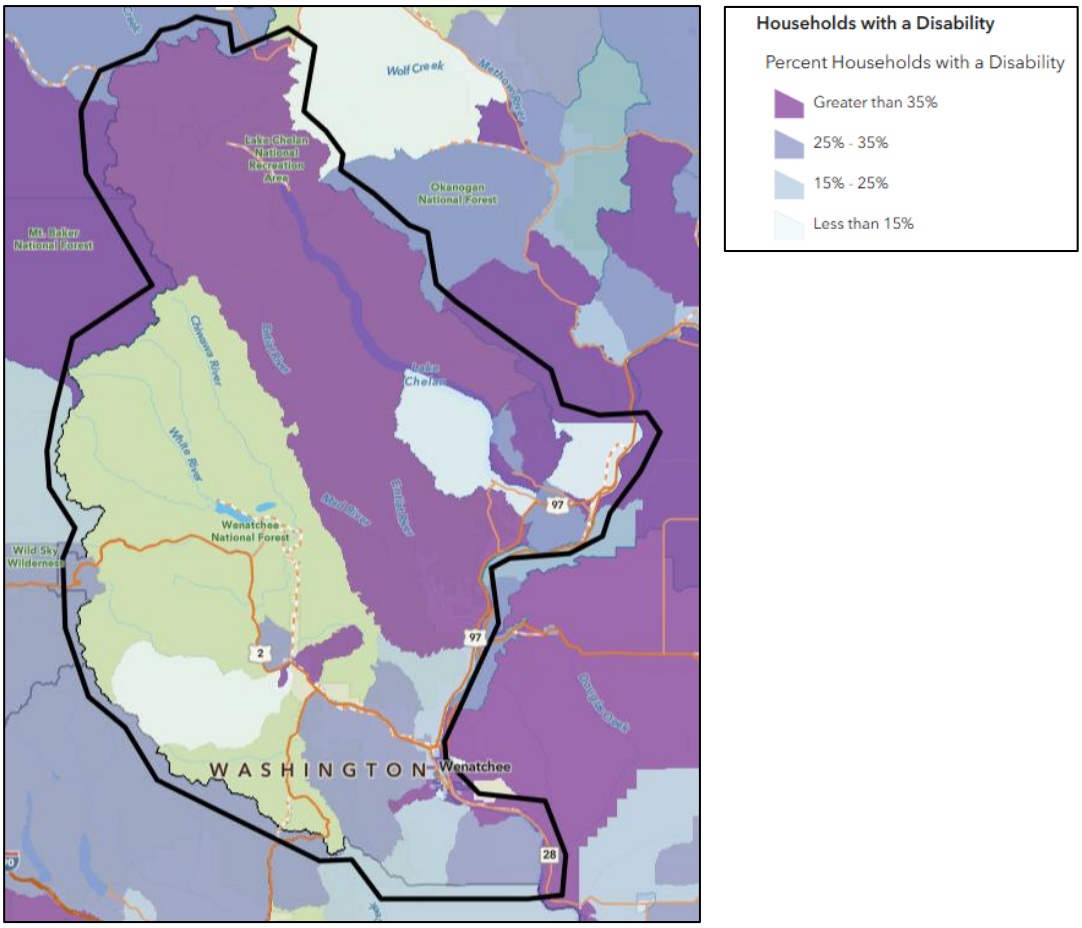


Although not included in this analysis, South Wenatchee is known for its significant racial and ethnic diversity, particularly large Latino/Hispanic populations, often overlapping with areas of high poverty and limited English proficiency—factors that suggest layered disadvantage. In southeast Chelan County, some areas also show populations that are more than 60% people of color, highlighting additional pockets of concentrated diversity.

HOUSEHOLDS WITH DISABILITY

Below is a map of Chelan County, displaying percentage distributions of households with a person or persons experiencing a disability across different areas.

Figure 15. Map of Households with Disability
Source: WSDOT, Sandy Williams Equity Needs

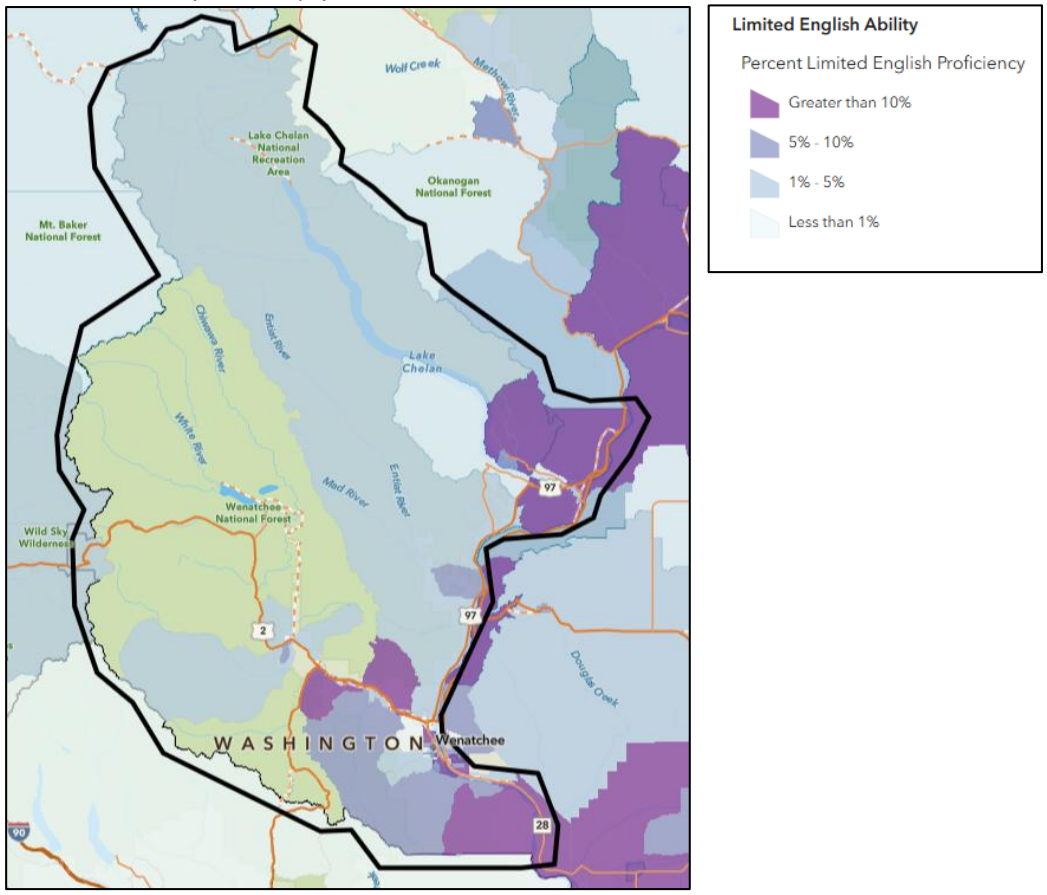


Disability prevalence appears most concentrated in central and northern urban tracts, particularly in Wenatchee. These communities may require targeted improvements in accessibility and inclusive infrastructure.

LIMITED ENGLISH PROFICIENCY

Below is a map of Chelan County showing the percentage distribution of individuals with limited English proficiency across different areas.

Figure 16. Map of Households with Limited English Ability
Source: WSDOT, Sandy Williams Equity Needs



Large portions throughout Chelan County are shown to represent language barriers. The most severe language barriers are found in South Wenatchee and northeastern areas, mirroring patterns seen in racial/ethnic diversity and poverty. This is a triple-burdened area, also scoring high on unemployment and vehicle access limitations.

Key Findings

The greatest disparities are concentrated in South Wenatchee and parts of rural Chelan County, where overlapping economic, linguistic, demographic, and infrastructure challenges highlight the need for comprehensive planning and targeted resource allocation.

CONCLUSION

This Demographic Framework is a key component of Chelan County's Safety Action Plan, which aims to eliminate fatal and serious injury crashes across all transportation modes. It seeks to identify and address disparities in access to safe, efficient, and affordable mobility, especially for marginalized and underserved populations in unincorporated and rural areas. This analysis builds a foundation for inclusive, data-driven transportation planning.

By integrating data-driven analysis, strategic investments, and community-driven solutions, the county can advance transportation access, improve mobility, and develop safer, more accessible infrastructure, particularly in disadvantaged areas. Leveraging demographic trends and collaborative engagement, Chelan County can implement sustainable solutions that enhance transportation safety, accessibility, and overall quality of life.

KEY FINDINGS

Identified Disadvantaged Tracts

- Tracts 3 and 4: Flagged as disadvantaged due to high climate change risks, poverty, linguistic isolation, and limited education.
- Tract 9601: Recognized as an Area of Persistent Poverty by USDOT.
- Tracts 9603 and 9604: Classified as historically disadvantaged

Demographic Patterns

- **Higher Youth Populations** in certain rural tracts highlight needs for schools, safe transit, and youth services.
- **Older Adults** are more concentrated in northern and rural areas, requiring age-friendly infrastructure and healthcare access.
- **People of Color** are concentrated in southeast Chelan County; these areas may face compounded challenges such as poverty and limited English proficiency.
- **Language Barriers:** Around 10% of residents speak English less than "very well," with Spanish being the primary non-English language.
- **Disability Prevalence:** Significant in urban tracts like Wenatchee (though not included in this study), suggesting broader regional needs.
- **Vehicle Access**: Limited in several areas, intensifying challenges in accessing employment, education, and health services.

Transportation and Infrastructure Challenges

- **Barriers to Mobility:** Limited access to safe, reliable, and affordable transportation options contributes to economic and social marginalization.
- **Climate Vulnerability:** Tracts with older infrastructure and vulnerable populations are at greater risk from wildfires, flooding, and extreme weather.
- **Workforce Challenges:** High unemployment and low median income in select tracts signal a need for economic and mobility investment.

RECOMMENDATIONS AND STRATEGY

Demographic-Focused Planning Should:

- Prioritize underserved rural areas in infrastructure investment.
- Incorporate language-accessible outreach and public engagement.
- Address intersecting burdens such as poverty, transportation barriers, and environmental risk.
- Leverage federal and state tools and grant programs for targeted interventions.

Appendix F: County of Chelan Community Engagement Plan

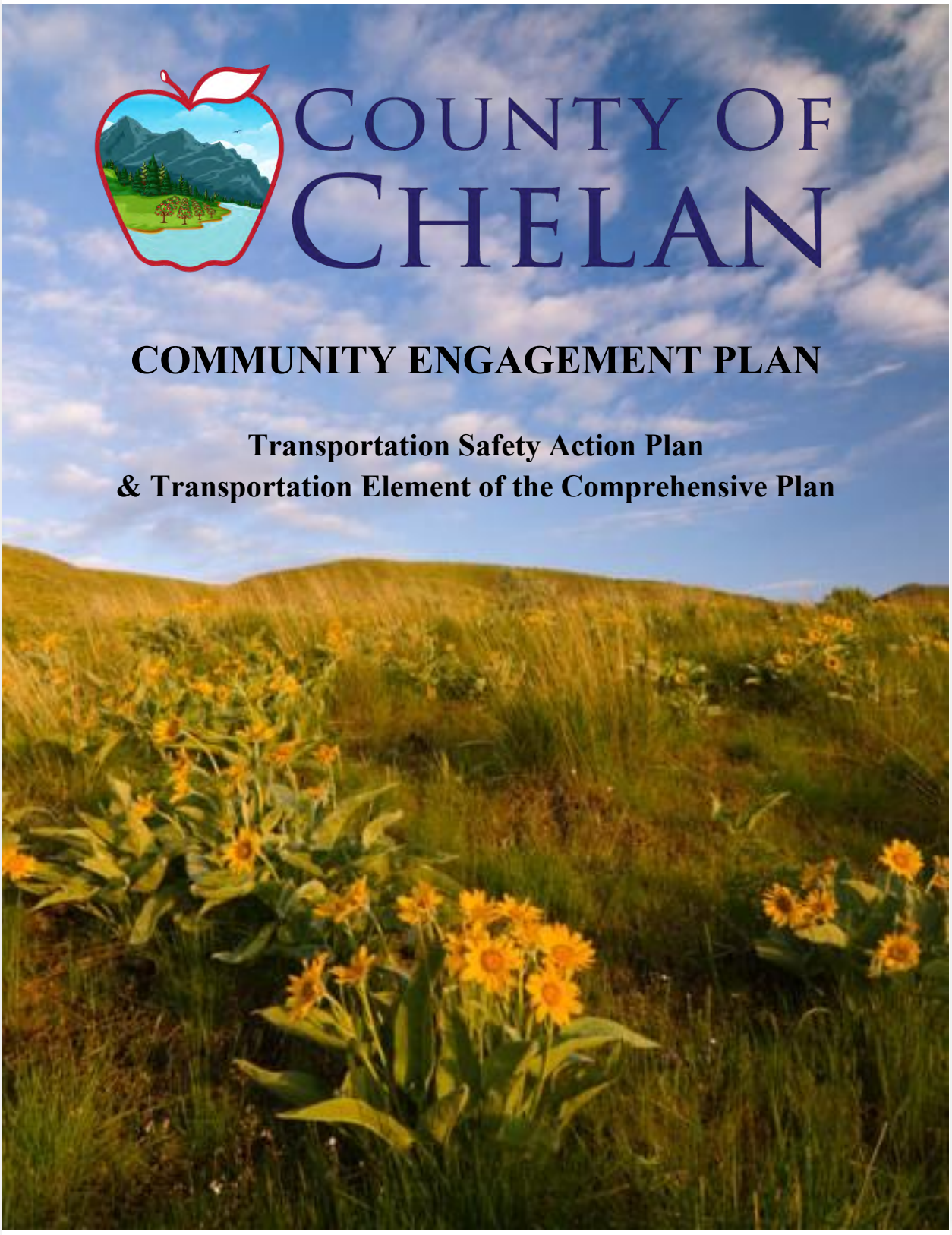

COUNTY OF
CHELAN
COMMUNITY ENGAGEMENT PLAN
Transportation Safety Action Plan
& Transportation Element of the Comprehensive Plan

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PURPOSE

The Community Engagement Plan (CEP) is a guide for engaging the individuals and agencies connected to the community. Allowing for an iterative process, the CEP adapts to stakeholder needs and centers the community members as experts in their own lived experiences and making space for their valued feedback. To create cohesive engagement materials and maintain consistent messaging through the life of the project, the CEP will provide project identity and branding strategy to be used in all public outreach materials to help associate information with this specific effort.

A successful CEP will result in:

- Building Community Trust
- Identifying Systemic Inequities
- An Educated Community
- Clear Community Priorities

Details for how these results can be achieved are provided herein. To most efficiently and effectively conduct an outreach strategy, this CEP also guides stakeholder engagement including identifying appropriate audiences, timelines, and approach. It is important to note that as strategy is implemented, contents of the CEP may be adjusted to achieve the following outreach goals:

1. Gather community feedback to understand quantitative and qualitative metrics
    a. Demographic and geographic information
    b. Common or preferred modes of travel
    c. Perceived causes of traffic crashes and "close calls"
    d. How improvements might affect user behavior
    e. Safety concerns and potential solutions
    f. Priorities related to travel and safety
    g. Personal experiences with traffic crashes
2. Educate the Community
    a. The Vision Zero/Target Zero plan for eliminating fatalities and severe injuries
    b. Systemic System Approach and how it relates to safer land use, vehicles, speeds, roads, post-crash care, and road users.

EXISTING DATA

For over 125 years, Chelan County has been serving its community. Efforts of building trust and relationships do not begin with this initiative and as such it is important that the outreach strategy is informed by existing data.

This includes examining the following:

- Previous plans, policies, or projects that included outreach efforts;
- The County's approach towards outreach materials/design;
- Effectiveness of previous outreach to understand what may contribute to initiatives that were more successful vs where engagement fell short; and
- Representatives that have created a relationship with stakeholders to include in efforts and those who may benefit from beginning to be a part of the work.

It is important to note that as strategy is implemented, some contents of this plan may be adjusted in the best interest in the outcomes being sought for public engagement in Chelan County.

In addition to efforts and materials, the County has also provided insight valuable or shaping the outreach strategy including planning outreach events that are conducted in partnership with community-based organizations and timelines that are flexible around normal working hours.

COMMUNITY ADVISORY COMMITTEE (CAC)

A requirement of the Safety Action Plan is to have a group of individuals, known as the Task Force or Community Advisory Committee (CAC) charged with informing the plan's development, implementation, and monitoring. The CAC includes County staff and representatives from agencies and/or organizations that are able to contribute to systemic safety improvements. The CAC is to be engaged early and regularly for valuable contributions.

MEMBERSHIP

The following agencies, groups, and individuals are identified as preferred CAC members:

1. Chelan County
    a. Rivercom ~ Doug Jones
    b. Sheriff ~ Mike Morrison
    c. Public Works Director and County Engineer, Eric Pierson
    d. Public Works Assistant Director, Josh Patrick
    e. Senior Staff Engineer, Lawrence Dillin
    f. Senior Staff Engineer, Shaun Honeycutt
2. Transportation Agencies
    a. Chelan Douglas Transportation Council, Executive Director, Jeff Wilkens
    b. Link Transit, CEO, Nick Covey
    c. WSDOT, Local Agency Coordinator, Terri Berends
3. Community Entities
    a. Chelan Douglas Regional Port Authority, Dir. of Econ Dvlpmn & Cap. Projects, Stacie de Mestre
    b. Wenatchee School District, Superintendent, Dr. Kory Kalahar

Additional representation to consider including on the CAC may be:

1. School District Superintendent(s) from Cascade, Entiat, or Lake Chelan
2. Freight managers such as Eagle Transfer
3. People with disabilities or ADA needs
4. Chelan Douglas Health District

MEETINGS

The CAC meetings are primarily focused around the plan development. To best align with the schedule for analysis, outreach, drafting, and adoption, the following tentative timeline is proposed:

#1 ~ To be scheduled between April 21 - 30

- Discuss/identify project goals and priorities
- Review safety analysis findings
- Review CEP and provide feedback for additional outreach partners/opportunities

#2 ~ To be scheduled between June 16 - 30

- Discuss policy review findings
- Provide an update on outreach effectiveness to date

#3 ~ To be scheduled between October 20 - 31

- Review equity analysis, safety countermeasures, and safety project development
- Present the final outreach data

#4 ~ To be scheduled between December 1-12

- Review the Draft Safety Action Plan

CHARTER

The following Charter provides background, expectations, agreements, and responsibilities for members of the Community Advisory Committee. This is not a document for signature though is provided as information to ensure all members understand the CAC's purpose and focus.

CHELAN COUNTY
SAFE STREETS AND ROADS FOR ALL (SS4A)
COMMUNITY ADVISORY COMMITTEE (CAC)

CHARTER

BACKGROUND

With funding from the US Department of Transportation's (USDOT) Safe Streets and Roads for All (SS4A) grant program, Chelan County is able to develop a SS4A Safety Transportation Action Plan (Action Plan). This Action Plan will guide the County towards significantly reducing the traffic fatalities and severe injuries while increasing safe, healthy, and equitable mobility for all with a "Vision Zero" goal. Adopting a plan with a vision zero goal provides the County with:

- Eligibility status for SS4A transportation grant funding;
- A comprehensive strategy for safety project implementation; and
- Effective policies and metrics to support measurable progress towards goals.

A requirement of this plan is to have a Steering Task Force charged with informing the plan's development, implementation, and monitoring. The County recognizes the value partners in transportation, health, education, and public safety have towards a safe system for all users.

OFFICIAL DESIGNATION

Chelan County Safe Streets For All (SS4A) Action Plan Community Advisory Committee (SS4A CAC).

DURATION

Continual until monitoring of the SS4A Action Plan is deemed complete. Review of CAC effectiveness should take place one year after the SS4A Action Plan is adopted.

AUTHORITY

The Task Force is responsible for informing the Action Plan's development, implementation, and monitoring. Any recommendations and supporting documentation should be included in CAC meeting minutes.

The SS4A CAC shall not hold any decision-making authority on behalf of Chelan County.

COMPOSITION

To the extent possible, the SS4A CAC should include membership that represents multiple sectors and engages interagency representation such as:

- Multimodal
- Emergency Response
- Public Health
- Education
- Economics
- Public Transit
- Social Service
- Regional Transportation
- WSDOT
- Community

CHARGE

The SS4A CAC is charged with oversight of the Action Plan development, implementation, and monitoring. Oversight is likely to include:

- Reviewing data and offering recommendations;
- Identifying goals and policies to ensure long-term implementation of the plan and effective measuring;
- Assisting in the development of a public engagement plan to ensure all interested members of the public can participate;
- Review the draft plan and provide recommendations for adoption.

TERMS OF SERVICE

Development, implementation, and monitoring of the SS4A Action Plan is expected to be an ongoing initiative. Initial SS4A Task Force commitments may extend through December 31, 2026 at which time the County will conduct a review for effectiveness.

MEETINGS

SS4A CAC meetings are expected to occur four times during 2025 in the months of April, June, October, and December. The meeting schedule may be adjusted, as needed, to ensure effective contribution by the SS4A CAC and for the development of the SS4A Action Plan.

DECISION MAKING

All SS4A CAC meetings shall be conducted on the basis and philosophy of mutual respect and ethical decision making. The SS4A CAC will report its advice and recommendations to the County in a manner that provides context for any relevant research, evidence, sources, and alternative considerations.

Any final decision made by the SS4A CAC provided in a formal manner of recommendation shall be done so by a simple majority vote.

LETTER OF INVITATION

Below is a draft letter of invitation that is personalized and sent to the desired member list. Included with this letter of invitation is the above Charter. The letter is formatted with the jurisdiction's letterhead.

March XX, 2025
Agency
Name, Title
Address
City, State, Zip

RE: Chelan County Transportation Safety Action Plan ~ Invitation to Join Community Advisory Committee

First/Last Name,

Thank you for your service to transportation, health, education, or public safety in our community. You have been identified as a leadership partner in our community and you are invited to join a Community Advisory Committee (CAC) to advise the development of Chelan County's Transportation Safety Action Plan. This CAC would be advisory in nature, as we have a consultant to conduct the detailed production.

Background: With funding from the US Department of Transportation's (USDOT) Safe Streets and Roads for All (SS4A) grant program, the County is able to develop a SS4A Safety Transportation Action Plan (Action Plan). This Action Plan will guide the County towards significantly reducing the traffic fatalities and severe injuries while increasing safe, healthy, and equitable mobility for all with a "Vision Zero" goal. Adopting a vision zero goal provides the County with:

- Eligibility status for SS4A transportation grant funding;
- A comprehensive strategy for safety project implementation; and
- Effective policies and metrics to support measurable progress towards goals.

A requirement of this plan is to have a Steering Task Force charged with informing the plan's development, implementation, and monitoring. The County recognizes the value partners in transportation, health, education, and public safety have towards a safe system for all users. Your participation is critical in reaching the "Vision Zero" goal towards no fatalities or severe injuries. Attached is a CAC Charter that provides additional detail specific to participation and responsibility.

I would like to encourage you to join the CAC and help steer the development of the Transportation Safety Action Plan. Please let me know if you are available, as soon as

practicable. If you are unavailable, please consider recommending an alternative representative from your agency. Meetings will be of limited frequency and geared towards virtual participation with only a select number in-person.

Transpo Group and Firm Foundations Community Consulting are supporting the community engagement and as such will be leading communications for the CAC. You can expect to receive information directly from the Transpo/FFCC team and if there are any Task Force related questions, please direct those to Daniel Hendricks (daniel.hendricks@transpogroup.com) or Brooklyn Holton (connect@firmfoundationscc.com).

Sincerely,

Chelan County
Title, Name

OUTREACH STRATEGY

OUTREACH TIMELINE:

Development and implementation of the CEP includes steps to ensure understanding of existing data, finalize list of priority stakeholders, confirm strategy is expected to meet CEP goals, and monitor effectiveness for engaging diverse geographic and demographic audiences.

MARCH:

- 20-27 ~ Team reviews initial draft of the CEP and CAC membership
- 27-31 ~ Invitations to participate on the CAC are sent out to invitees

APRIL

- 1-30 ~ Finalize known outreach materials, design, scheduling, and trainings
- 21-30~ CAC reviews the CEP and provides feedback for additional outreach partnerships and opportunities. Including confirming CAC capacity for outreach support; AND Begin stakeholder interviews

MAY

- 1-15 ~ Finalize stakeholder interviews as available; AND Provide campaign materials to outreach partners for distribution
- 12 ~ Launch bilingual outreach campaign
- 12-30 ~ As appropriate, develop campaign script for radio
- Partner with the Comp Plan update for Transportation Element outreach

JUNE

- 1-30 ~ Implementing digital and in-person outreach strategy
- 15 ~ Conduct audit of responses for demographic and geographic representation
- Partner with the Comp Plan update for Transportation Element outreach

JULY

- 1-31 ~ Implementing digital and in-person outreach strategy
- 16 ~ Conduct audit of responses for demographic and geographic representation

AUGUST

- 1-31 ~ Implementing digital and in-person outreach strategy
- 16 ~ Conduct audit of responses for demographic and geographic representation

SEPTEMBER

- 1-15 ~ Final outreach push and then close of campaign on the 15th
- 16-30 ~ Analyze data and develop Outreach Report
- 18 ~ Provide preliminary data from survey responses to the County

OCTOBER

- 9-16 ~ Review the final outreach data with the County
- 16-31 ~ Finalize the Outreach Report
- 20-31 ~ Present the final outreach data to the Community Advisory Committee

OUTREACH METHODS:

Depending on stakeholder level and phase of the project, different methods will be more, or less, effective. Below are descriptions of how various methods may be used to implement an effective outreach campaign. All methods utilized are designed to accomplish the following:

1. Obtain survey responses from diverse geographic and demographic audiences
2. Educate the public on the Safe Systems Approach
3. Strengthen County-community relations

Effective outreach is imperative to developing a community-informed plan. Therefore, ongoing monitoring of outreach will inform of any necessary shifts towards emphasizing an adjusted approach, timeline, or audience. In addition to ongoing review, as shown in the timeline, there are designated timeframes for monthly reviews that take a detailed look at the response data.

- Digital Campaign
  Online and virtual elements of the campaign are considered digital. This format provides materials (maps, fliers, updates, graphics, etc.) in a consistent, cohesive message through communication partners and for the duration of the outreach timeline. Distribution of materials are most effective by establishing partnerships with agencies, groups, and individuals that have existing connections with priority engagement audiences. Costs for the digital campaign may be incurred if it is appropriate or necessary to boost media, utilize a third party (radio/podcast/interview), or leverage advertisement opportunities.

- Engagement Events
  Available in both organic and complementary structures, engagement events can strengthen, or be strengthened by, the digital campaign. Organic events are those planned and produced by the project team and are often in the form of an open house, listening session, or presentation. These can be hosted by the County at a County facility or with a location host such as a business or community organization. Complementary events are those planned and produced by a third party with an option for the outreach team to participate by hosting a table, canvassing, presenting, or listening in. The outreach strategy will prioritize complementary events.

- Interviews
  Applicable for individuals and groups, the interview format offers an opportunity for greater detail in the discussions around technical components of the plan or understanding needs and priorities for target engagement audiences. These interviews offer enhanced understanding on behalf of both the stakeholders and the team. Formats include listening sessions, conversational, and/or structured; all of which can be valuable when connecting with agencies, community organizations, and the general public.

ENGAGEMENT AUDIENCES

There are three levels of stakeholder considered in the outreach strategy. Within each level are various individuals, groups, agencies, and organizations each identified by a specific sector, demographic, or geographic area. The following levels are:

LEVEL 1 ~ Stakeholders that can "approve or deny" the plan and its contents. They should be engaged in the beginning to ensure alignment with jurisdictional expectations and directions.

LEVEL 2 ~ Stakeholder that can "advance or delay" the plan and its contents. They may not have the authority over the project though they are important voices to engage have support of.

LEVEL 3 ~ Stakeholders that can "advocate or disrupt" the development or future implementation of the plan and its contents. These are often community champions, vocal members of the public, or general community members with opposing views. It is important to communicate in clear, transparent, and accessible ways.

Each level of stakeholders provides a unique feedback element to the process. As such, to evaluate if appropriate engagement for each specifically identified stakeholder has taken place, the following questions should be applied:
NOTE: Level 3 stakeholders include the general public so these questions apply to stakeholders specifically identified and listed out as important to the process.

LEVEL 1	**LEVEL 2**	**LEVEL 3**
Do they know this effort is taking place?	Should they be considered for an interview?	Should they be considered for an interview?
Do they have appropriate and adequate information for being informed at this time?	Are there any specifics topics to focus on when conducting an interview?	What engagement audiences are they most likely to serve or connect with?
Do they think any content or phrasing should be excluded to avoid public discourse?	Do they need regular updates?	

Do they have technical expertise invaluable to the process and should be considered for an interview?		
Do they need regular updates?		

A significant value provided by the CEP is identifying priority demographic and geographic populations and having a plan for engagement with them. Focusing outreach efforts to target audiences requires understanding of existing community characteristics and barriers.

- Population of 81,228 (with incorporated cities adding 47,000 in population) 128,134
- Median Age of 43
    - 22% of individuals over the age of 65 and drastically reducing for 75+ 65-74(12.8%); 75-84 (7.7%); and 85+ (1.4%)
    - 22% are under the age of 18 with 5-14 accounting for 13.1%

- 21.5% of households speak a language other than English in the home
- 7.2% are veterans (with almost 92% being male)
- 104 individuals completed the unsheltered PIT County survey, 405 were sheltered
- 10.2% of the County are living in poverty
    - Under 18 (8.8%); 18-64 (7.7%); and 65+ (11.9%)
- 67% of people drive alone to work with 3% using public transportation and then 7.3% and 1.2% walking or biking to work; respectively.
- 17.2% of population is disabled
    - Hearing (4.5%); Vision (3.2%); Cognitive (8.7%); Ambulatory (7.4%); Selfcare (3.7%); and Independence (6.1%)
    - Under the age of 65 (12.5%)
- Race/Ethnicity
    - American Indian/Alaska Native (2.1%))
    - Asian (1.4%)
    - Black or African American (1.1%)
    - Hispanic/Latino (30%)
    - Native Hawaiian/Pacific Islander (0.3%)
    - Caucasian, Not Hispanic/Latino (66.5%) Caucasian alone (92.8%)
    - Two or more Races (2.4%)

These general census statistics provide an overview snapshot of Chelan County. While grassroots organizations and boots-on-the-ground partners can provide more specificity and accuracy, this information is reliable to determine priority audiences. Based on the information available, the following groups will be emphasized in outreach efforts:

1. Minority Race and Ethnicity ~ Respondent Goal: 30%
2. People with Disabilities ~ Respondent Goal: 10%
3. Low- to Moderate-Income Households ~ Respondent Goal: 25%
4. Older Adults ~ Respondent Goal: 20%
5. Youth Under 18 ~ Respondent Goal: 10%
6. Unhoused ~ Respondent Goal: 5%
7. Chelan County Unincorporated ~ Respondent Goal: 65%
8. Geographic Areas Outside of City of Wenatchee ~ Respondent Goal: 40%

Obtaining these respondent goals will be dependent on the outreach strategy, effective utilization of existing relationships, and broad dissemination of the opportunity to engage. Available in the "Chelan County Engagement Audience" spreadsheet is a list of Chelan County partners and stakeholders that will support plan development (via interviews) and outreach to the general population and target audiences.

BILINGUAL SURVEY

Designed to accommodate digital and hardcopy response, the Survey will be the primary method for collecting feedback and is designed to support the outreach goals identified in the Purpose section of this Plan. Refinement of these questions is possible prior to publishing.

HOUSEHOLD QUESTIONS:

What is your age:

- Under 18; 18-24; 25-34; 35-44; 45-64; 65-74; 75+

What is your race (select all that apply)

- White/Caucasian; Black/African American; American Indian/Alaskan Native; Asian; Native Hawaiian/Pacific Islander; Other

What is your ethnicity?

- Hispanic/Latino; Not Hispanic/Latino

How do you identify?

- Male; Female; Other

How many people are in your household including you?

- 1; 2; 3; 4; 5; 6; 7; 8; 9; 10+

How many vehicles does your household have?

- 1; 2; 3; 4; 5+

GEOGRAPHIC QUESTIONS:

- Please indicate which applies to you (select all that apply)
  - I live in Chelan County; I own property in Chelan County; I own a business in Chelan County; I visit Chelan County
- In what community do you live?
  - Stehekin; Manson; Chelan, Entiat; Ardenvoir; Sunnyslope; Wenatchee; Malaga; Wenatchee Heights; Monitor; Dryden; Cashmere; Peshastin; Peshastin-Blewett Pass; Leavenworth; Plaine; Lake Wenatchee; Merritt; Merrit-Steves Pass; East Wenatchee; Douglas County; NCW; Other
- Which communities in Chelan County are you familiar with?
  - Stevens Pass; Leavenworth; Cashmere; Wenatchee; Mission Ridge; Entiat; Chelan; Manson; Stehekin

TRANSPORTATION QUESTIONS:

- How do members of your household get to/from destinations (work, school, grocery store, park, visiting family, etc.)?
  - Vehicle; walk; bike; roll (scooter, skateboard); motorized chair; public transit; other
- How easy is it to walk or bike in Chelan County? (1 = I can go anywhere I want to with no issues : 10 = It is too difficult to walk or bike anywhere).
  - 1; 2; 3; 4; 5; 6; 7; 8; 9; 10 with a walk/bike matrix
- What makes it easy to walk or ride a bike in Chelan County? What are challenges?
  - This can be a short answer or a drop down question
- How often do you walk/bike/roll throughout the year?
  - Daily, Weekly, Monthly, A few times a year, I only use a vehicle for transportation
- If Chelan County improved or constructed new sidewalk, bike lanes, or recreational pathways, how often might you walk/bike/roll?
  - Daily, Weekly, Monthly, A few times a year, I will only use a vehicle
- How often do you use public transportation?
  - Daily, Weekly, Monthly, A few times a year, I never use public transportation

SAFETY QUESTIONS

- How safe do you feel driving in Chelan County?
- Have you ever been involved in a crash within Chelan County?
  - Option for short answer to tell about it

- What factors do you think contribute to crashes or near-misses in Chelan County?
    - Dropdown of: speed; lighting; visibility; signage; curves; impairment
- Do you think any of the following would help make driving in Chelan County safe?
    - Reduce speeds, education programs, increase enforcement; better lighting; wider road striping; wider shoulders; etc.
    - Option to share their own ideas.
- Please prioritize the following safety projects:
    - To match solution options above.

ENGAGEMENT OPPORTUNTIES

Considering the outreach timeline stretches from May through September, the following organic and complementary events are opportunities for outreach. This list will be updated regularly as additional events and opportunities become available.

- April 24 - May 4 ~ Apple Blossom Festival (Wenatchee)
- May 9/10 ~ Hell on Hooves Rodeo (Wenatchee)
- May 10/12 ~ Maifest (Leavenworth)
- May 17 ~ Mexico en el Corazon
- May 15/18 ~ Spring Birdfest (Leavenworth)
- May 18 ~ Moe Palooza (Chelan)
- May 23/25 ~ Alphorn Festival (Leavenworth)
- June 27/30 ~ Touratech Rally (Plain)
- September 4-7 ~ Chelan County Fair
- September 12-14 ~ Fiestas Mexicanas

Opportunities that are reoccurring through the outreach timeframe are:

- Farmers Markets (Leavenworth, Cashmere, Wenatchee, and Chelan)
- Makers Market (Entiat)
- Municipality meetings such as council, project open houses, town halls, etc.
- Art in the Park (Leavenworth)
- Summer Theater (Leavenworth)
- Special Olympics (Wenatchee, Upper Valley, and Chelan)

National, State, or Local Event Days celebrated in multiple locations include:

- May 7 ~ Bike to School Day
- May 15 ~ Bike to Work Day
- May 26 ~ Labor Day
- June 19 ~ Juneteenth
- July 4 ~ Independence Day
- September 1 ~ Labor Day

FINAL REPORT

Together, the Safety Acton Plan and Transportation Element of the Comprehensive Plan will result in a significant stakeholder engagement process. To best document the voices of those who live, work, play, learn, and worship in Chelan County, a Final Outreach Report will be developed. Included in this report will be the following:

- Executive Summary
- Data Analysis conducted to inform the outreach strategy
- Details about the outreach strategy and process of launching the campaign
- Stakeholder engagement including efforts to connect, actual communication, and results
- Statistics related to outreach initiatives such as media interactions, fliers distributed, interviews held, events, tabled, meetings attended, etc.
- Overview of the survey structure and categorizing of its data
- Summary of community education, awareness, priorities, and preferences
- Overall outreach results from all approaches combined
- Visuals such as graphs, photos, and tables recapping the outreach
- Appendices providing information such as:
    - List of stakeholders and their associations and contact info,
    - Stakeholder interview details (listening sessions, conversational, structured)
    - Copy of the survey and insight into data tables
    - Examples of material distributed
    - Original CEP

Appendix G: Chelan County Transportation Planning Community Engagement Final Report



CHELAN COUNTY TRANSPORTATION PLANNING

COMMUNITY ENGAGEMENT FINAL REPORT

Chelan County transportation planning included developing a Transportation Safety Action Plan through the Safe Streets and Roads for All (SS4A) program and updating the Transportation Element of the Comprehensive Plan. Incorporating the voices of those who live, work, play, and learn in Chelan County provided a civically-informed transportation planning process. The outreach strategy was designed to comprehensively understand the short- and long-term needs of the system and this report provides a summary of quantitative and qualitative feedback collected and the methods to do so.

Led by Firm Foundations Community Consulting and completed as a subconsultant with Transpo (Primary) and Chelan County (Client)

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PLAN
IMPROVE SAFETY + PRIORITIZE PROJECTS
The Safe Streets and Roads for All (SS4A) and Transportation Element (TE) plans provide guidance for making progress towards established transportation system and safety goals.

EXECUTIVE SUMMARY

Serving 80,000 residents and over 2 million annual visitors, the transportation infrastructure in Chelan County serves a vital role for safely accessing destinations throughout the area. In 2025, Chelan County focused efforts towards multimodal transportation system planning and safety through two efforts:

1. Transportation Safety Action Plan through the Safe Streets and Roads for All program
2. Transportation Element Update as part of the regular Comprehensive Plan update

Each of these plans called for a robust community engagement process. It was found that the engagement timelines for each overlapped and created an opportunity to combine outreach efforts. This approach conserved resources and improved the outreach experience for the community. All information provided in this report is a reflection of feedback used in the development of both planning efforts.

The process included an existing conditions analysis, development of a Community Engagement Plan (CEP), feedback analysis, and providing a final report.

This Final Report provides insight to the each of these elements and includes via appendices much of the original or raw information used in the process.

Highlights from this process are:

- 225+ map locations for multimodal improvement
- Almost 92% of respondents live in Chelan County
- 1 in 4 households have someone living with a disability
- Secondary to driving a vehicle, walking is the preferred mode of transportation for daily and weekly travel.
- Respondents identified (1) Public Transit, (2) School Zones, and (3) Trails/Recreation Routes as the most "very safe to use" options for travel.
- Respondents identified (1) Bike Lanes/Bike Paths, (2) County Roads, (3) Sidewalks/ADA Infrastructure, and (4) Pedestrian Crossings as the most "very unsafe to use" options for travel.
- Across all responses, the top reasons for being in Chelan County are to Recreate Outdoors, Live as a Resident, and to Socialize/Visit Family or Friends.
- "Separate Bikes/People from Vehicles" was overwhelmingly the highest rated transportation goal the community voted for Chelan County to allocate resources towards achieving.



PARTNER

BRINGING PEOPLE TO THE TABLE BRINGS PROGRESS



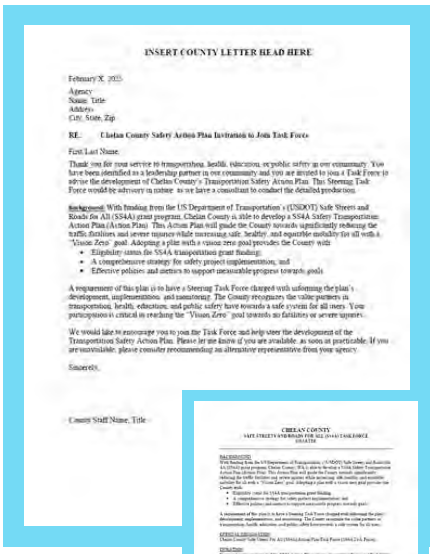
The transportation system is connected to many agencies beyond the County. Working to bring everyone together can increase the County's capacity to implement the adopted plans.

COMMUNITY ADVISORY COMMITTEE (CAC)

A requirement of the SS4A program is to have a group of individuals, known as the Community Advisory Committee (CAC) who is charged with informing the plan's development, implementation, and monitoring. Designed to represent the county's broader transportation partners and service provides, the CAC had the following representation*:

- Chelan County Public Works
- Washington State Department of Transportation
- Chelan Douglas Transportation Council
- Link Transit
- Wenatchee School District

A formal invitation was provided to prospective members of the CAC requesting participation by themselves or an agency representative. To ensure clear understanding of the commitment and CAC responsibilities, and informational Charter was also developed and provided at the time of inquiry.


INSERT COUNTY LETTER HEAD HERE

February X, 2025

Agency
Name, Title
Address
City, State, Zip

RE: Chelan County Safety Action Plan Invitation to Join Task Force

First Last Name,

Thank you for your service to transportation, health, education, or public safety in our community. You have been identified as a leadership partner in our community and you are invited to join a Task Force to advise the development of Chelan County's Transportation Safety Action Plan. This Steering Task Force would be advisory in nature as we have a consultant to conduct the detailed production.

Background: With funding from the US Department of Transportation's (USDOT) Safe Streets and Roads for All (SS4A) grant program, Chelan County is able to develop a SS4A Safety Transportation Action Plan (Action Plan). This Action Plan will guide the County towards significantly reducing the traffic fatalities and severe injuries while increasing safe, healthy, and equitable mobility for all with a "Vision Zero" goal. Adopting a plan with a vision zero goal provides the County with:

- Eligibility status for SS4A transportation grant funding;
- A comprehensive strategy for safety project implementation; and
- Effective policies and metrics to support measurable progress towards goals.

A requirement of this plan is to have a Steering Task Force charged with informing the plan's development, implementation, and monitoring. The County recognizes the value partners in transportation, health, education, and public safety have towards a safe system for all users. Your participation is critical in reaching the "Vision Zero" goal towards no fatalities or severe injuries.

We would like to encourage you to join the Task Force and help steer the development of the Transportation Safety Action Plan. Please let me know if you are available, as soon as practicable. If you are unavailable, please consider recommending an alternative representative from your agency.

Sincerely,

County Staff Name, Title

CHELAN COUNTY
SAFE STREETS AND ROADS FOR ALL (SS4A) TASK FORCE
CHARTER

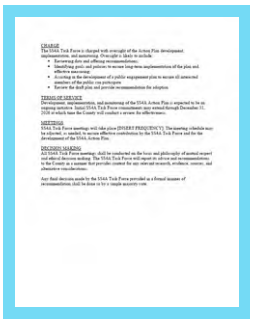
BACKGROUND

TASK FORCE DEVELOPMENT

PURPOSE

AUTHORITY

COMPOSITION


CHARTER

TERMS OF SERVICE

MEETINGS

DECISION MAKING

While this level of formality is not a requirement, it is completed with the intention to respect the time each member contributes and provides clear expectations for all parties in the planning process.

In addition, as the plan development process concludes and the focus of the CAC shifts to implementation and monitoring, the Charter identifies the timeline for involvement and purpose review.

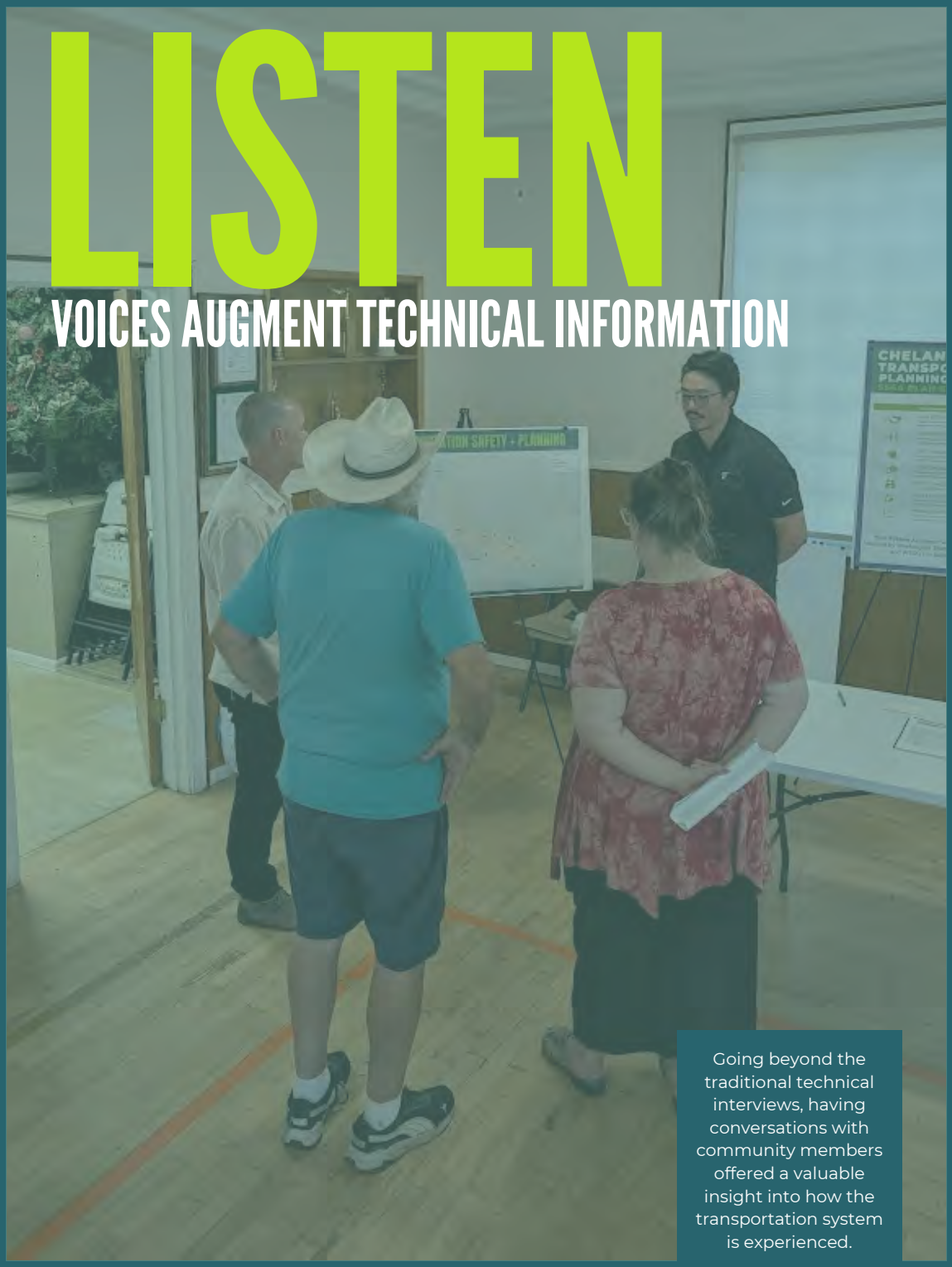
Four CAC meetings supported the plan development process and to best align with the schedule for analysis, outreach, drafting, and adoption, the following timeline and topic areas were pursued:

- Meeting #1, April 30, 2025
  - Discuss/Identify project goals and priorities
  - Review safety analysis findings
  - Review CEP and provide feedback for outreach
- Meeting #2, June 26, 2025
  - Discuss policy review findings
  - Review outreach results & effectiveness to date
- Meeting #3, October 3, 2025
  - Review Equity Analysis Findings
  - Discuss Safety Countermeasures & Safety Project Development
  - Present Final Outreach Findings
- Meeting #4, January 21, 2026
  - Review the draft safety action plan

2

LISTEN

VOICES AUGMENT TECHNICAL INFORMATION



Going beyond the traditional technical interviews, having conversations with community members offered a valuable insight into how the transportation system is experienced.

COMMUNITY ENGAGEMENT PLAN (CEP)



The Community Engagement Plan (CEP) is a guide for engaging the individuals, groups, and agencies connected to the community. Allowing for an iterative process, the CEP adapts to stakeholder needs. It centers the community members as experts in their own lived experiences and guides the process for making space for their valued feedback. To create cohesive engagement materials and maintain consistent messaging through the life of the project, the CEP also provides a project identity and branding baseline that all public-facing materials are designed with to help connect information with the project.

A successful CEP results in:

- Building Community Trust
- Identifying Systemic Inequities
- An Educated Community
- Clear Community Priorities

It is important to note that as the CEP is implemented, the strategy is flexible to ensure progress towards the two outreach goals is most effective:

1. Gather community feedback to understand quantitative and qualitative metrics:
   a. Demographic and geographic information
   b. Common or preferred modes of travel
   c. Perceived causes of traffic crashes and "close calls"
   d. How improvements might affect user behavior
   e. Safety concerns and potential solutions
   f. Personal experiences with traffic crashes
2. Educate the community
   a. The Vision Zero/Target Zero plan for eliminating fatalities and sever injuries
   b. Systemic System Approach and how it related to safer land use, vehicles, speeds, roads, post-crash care, and road users

EXISTING DATA

For over 125 years, Chelan County has been serving its community. Efforts to build trust do not begin with this initiative so it is important that the outreach strategy be informed by existing data. Appendix E includes the community-informed plans used for the CEP.

This includes examining the following:

- Previous plans, policies, and projects that included outreach efforts;
- The County's approach towards outreach materials/design;
- Effectiveness of previous outreach to understand what may contribute to initiatives that were more successful vs where engagement fell short; and
- Representatives that have created relationships with stakeholders to include in efforts and those who may benefit from beginning to be a part of the work.

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COMMUNITY ENGAGEMENT PLAN (CEP)

OUTREACH STRATEGY

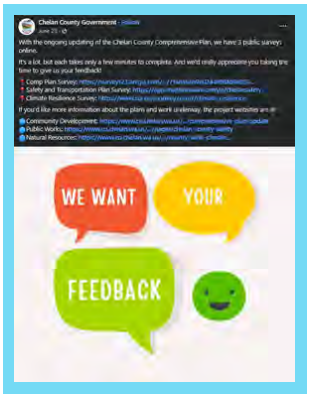
Depending on stakeholder level and phase of the project, different methods will be more, or less, effective. Below are descriptions of how various methods were used to implement an effective outreach campaign. All methods used were designed to accomplish:

- Obtain survey responses from diverse geographic and demographic audiences
- Educate the public on the Safe Systems Approach
- Strengthen County-community relations

Effective outreach is imperative to developing a community-informed plan. Therefore, ongoing monitoring was used to identify when a shift in approach, timeline, or audience was necessary to maintain effective progress towards collecting feedback. The following three categories were methods used to throughout the process.

Digital Campaign

A digital campaign includes online and virtual elements. This format provides materials (graphics, fliers, maps, etc.) in a consistent, cohesive message through communication partners and for the duration of the outreach timeline. Distribution of materials are most effective by establishing partnerships with agencies, groups, and individuals that have existing connections with priority engagement audiences. The digital campaign is the most efficient method for communication with stakeholders as local government, organizations, and media stations are able to share and distribute the same graphics, message, and link to the community creating a coordinated effort collecting feedback.









COMMUNITY ENGAGEMENT PLAN (CEP)

OUTREACH STRATEGY CONTINUED

Engagement Events

Available in both organic and complementary structures, engagement events can strengthen, or be strengthened by, the digital campaign. Organic events are those planned and produced by the project team and are often in the form of an open house, listening session, or presentation. These can be hosted by the County at a County facility or with a location host such as a business or community organization. Complementary events are those planned and produced by a third party with an option for the outreach team to participate by hosting a table, canvassing, presenting, or listening in. The outreach strategy prioritized complementary events. The following events either hosted or attended as part of the strategy for gathering survey responses and feedback on personal experiences:

1. May 20 ~ Leavenworth Open House
2. May 21 ~ Wenatchee Open House
3. June 27 ~ Plain Touratech Rally
4. August 13 ~ Manson Farmers Market
5. August 16 ~ Manson Farmers Market
6. August 16 ~ Leavenworth Farmers Market
7. August 17 ~ Cashmere Farmers Market
8. August 20 ~ Manson Open House
9. September 6 & 7 ~ Chelan County Fair





Above Left: The FFCC team attended the Manson Farmers Market to encourage participate at the Manson Open House and to share the survey. **Above Right:** Chelan County Commissioner Shon Smith welcomes attendees to the Leavenworth Open House supported by team members from both Firm Foundations Community Consulting and Transpo Group.



Above: The Chelan County Fair was the final outreach event before the outreach phase wrapped up on September 14th.





The digital campaign provided awareness for various events including the Open Houses for Manson (**top left**), Wenatchee and Leavenworth (**bottom left**).







Above: Wenatchee Open House held at Mission View elementary was focused on the South Wenatchee/Malaga areas.



Left: Chelan County Commissioner Brad Hawkins welcoming community members to the Manson Open House which included activities for sharing what is important for transportation planning & safety.

Valuable outreach events for connecting with people who live, work, and visit Chelan County were the local farmers markets. In addition to the Manson Farmers Market, the FFCC team also attended the Cashmere Community Farmers Market (**above left**) and the Leavenworth Community Farmers Market (**above right**) which occur during the weekend through summer and fall.

COMMUNITY ENGAGEMENT PLAN (CEP)

OUTREACH STRATEGY CONTINUED

Stakeholder Interviews

Applicable for individuals, groups, and agencies, the interview format offered an opportunity for greater detail in the discussions around technical components of the plan or understanding needs and priorities for target engagement audiences. These interviews offered enhanced understanding on behalf of stakeholders and the team. Formats included listening sessions, conversational, and structured; all of which were valuable for connecting with agencies, community organizations, and the general public. Interviews were conducted using both in-person and virtual formats. They were scheduled for sixty minute timeframes during the outreach phase between May and September, 2025. The following is a list of the interviews that were able to be scheduled and completed. There were additional individuals, groups, and agencies contacted with a request for an interview though schedules or lack of response created limitations.

- Wenatchee School District
  - Kory Kalahar, Superintendent
  - Jennifer Sea, Director of Transportation,
  - Tom Couey, Director of Safety and Security
  - Bryan Brockie, Director of Maintenance and Operations
- Washington State Department of Transportation
  - David Kieninger, North Central Region Traffic Engineer
  - Charlotte Claybrook, Active Transportation Programs Manager
- Thriving Together North Central Washington
  - John Schapman, Executive Director
- Ballard Ambulance
  - Mike Battis, Director of Operations, MSO
- Chelan County Public Utility District
  - Justin Erickson, Chief Strategy and Stakeholder Officer
- Wenatchee Valley Fire
  - Brandon Kunz, Deputy Chief
  - Andrew Davidson, Deputy Chief
- North Central Washington Libraries
  - Barbara Walters
- People for People
  - Jake Cooney, Transportation Operations Supervisor
- Link Transit
  - Donald BIllen
- City of Leavenworth
  - Andi Zontek-Backstrum, Director of Public Works Department
- City of Wenatchee
  - Tom Wachholder, Director of Public Works Department

COMMUNITY ENGAGEMENT PLAN (CEP)

PRIORITY AUDIENCES

Local Data

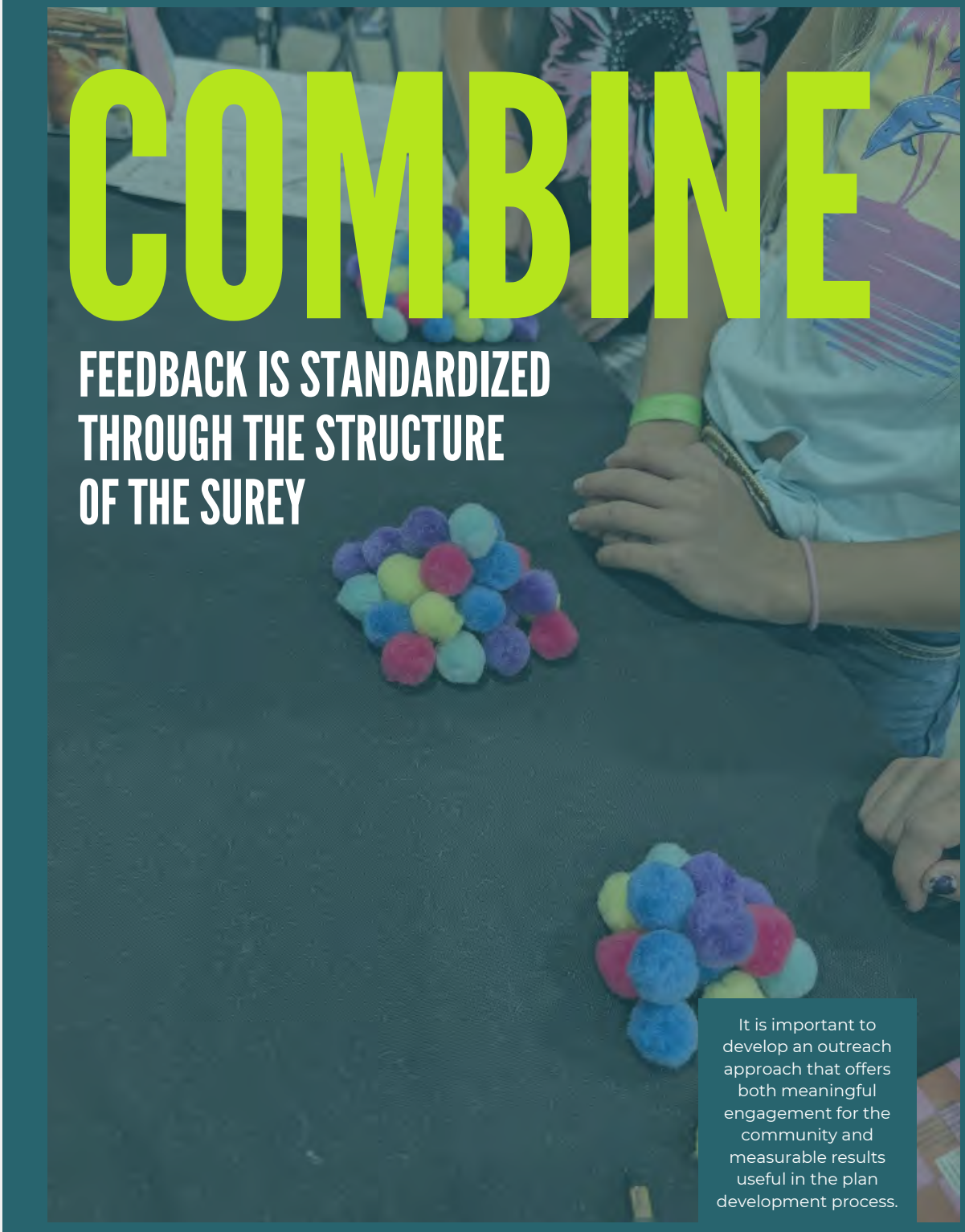
A significant value provided by the CEP is identifying demographic and geographic populations and having a plan for engagement with them. Focusing outreach efforts to priority audiences requires understanding of existing community characteristics and barriers. In addition to the County's direction, feedback from the CAC, and experience by local community stakeholders, the following census data was also used to help shape and define what metrics should be used to understand diversity of the respondent audience.

Chelan County characteristics include:

- Population of 81,228 (with incorporated cities adding 47,000 in population) 128, 134
- Median age of 43 years
  - 22% of individuals over the age of 65yrs
    - 65-74 (12.8%); 75-84 (7.7%); and 85+ (1.4%)
- 21.5% of households speak a language other than English in the home
- 7.2% are veterans (with almost 92% of them being male)
- Individuals during the Point in Time (PIT) Count, 104 unsheltered and 405 sheltered
- 10.2% of the County are living in poverty
  - Under 18 (8.8%); 18-64 (7.7%); and 65+ (11.9%)
- 67% of people drive alone to work with 3% using public transportation and then 7.3% and 1/2% walking or biking to work; respectively
- 17.2% of the population is disabled
  - Hearing (4.5%); Vision (3.2%); Cognitive (8.7%); Ambulatory (7.4%); Selfcare (3.7%); and Independence (6.1%)
- Race/Ethnicity
  - American Indian/Alaska Native (2.1%); Asian (1.4%); Black/African American (1.1%); Native Hawaiian/Pacific Island (0.3%); Caucasian, Not Hispanic/Latino (66.5%); Caucasian No Other Race (92.8%); Two or more races (2.4%)
  - Hispanic/Latino (30%)

Survey Respondent Goals

1. Minority Race & Ethnicity ~ 30%
2. People with Disabilities ~ 10%
3. Low- to Moderate- Income Households ~ 25%
4. Older Adults ~ 20%
5. Youth Under 18 ~ 10%
6. Unhoused ~ 5%
7. Chelan County Unincorporated ~ 65%
8. Geographic Area Outside of City of Wenatchee ~ 40%



COMBINE

FEEDBACK IS STANDARDIZED THROUGH THE STRUCTURE OF THE SUREY

It is important to develop an outreach approach that offers both meaningful engagement for the community and measurable results useful in the plan development process.

BILINGUAL SURVEY

To best understand the survey results, it is important to understand the options that were available. The bilingual survey was available in English and Spanish and are available in the appendices for reference.



Questions on the survey were designed to inform about the audience and who was being reached. Each household is unique in its access and/or barriers to opportunity and it is important to ensure voices from all residents are heard, understood, and validated. The following survey information has been summarized from its original data form to provide a clear picture of what the community prioritizes for transportation planning and safety throughout Chelan County.

Responses were categorized in the following ways:

- Geography ~ Identifying what area or city, state respondents live in
- Demographics ~ Learning age, race, ethnicity, sex, household size, vehicle ownership, household income, and anyone in the household with a disability. Prefer not to answer was an option offered for these questions.
- Transportation Planning ~ reflected on the current Transportation Element vision, requested respondents to rank current 20-year transportation goals, and provided an opportunity to provide new ideas for transportation projects in the next 20 years.
- Transportation Safety ~ Focused on understanding frequency of various modes, reasons for being in Chelan County, sense of safety related to different route options, budgeting priorities to improve safety for all, and how they would describe transportation.
- Mapping ~ Answering the question "Where can [insert mode] safety be improved" followed by "What could be done to improve [insert mode] safety?" allowed respondents to place markers on a map to identify locations of safety concern.
- Final Thoughts & Questions ~ This encouraged respondents to provide any narrative feedback related to transportation safety and projects in the next 20 years.

Once the survey was completed, respondents were invited to share the survey link with others and then were rerouted to the Chelan County's project page on their website.

1000+ CONNECTIONS VIA MATERAILS AND DISCUSSIONS



For those who live, work, play, and learn in Chelan County, engagement took place via social media, community events, group discussion, interviews, and digital formats.

OUTREACH RESULTS ~ ALL

Responses to the outreach guided two Chelan County efforts:

1. Safety Action Plan ~ Focused on developing a transportation system so every person can safely walk, bike, roll or drive in unincorporated Chelan County; and
2. Transportation Element of the Comprehensive Plan ~ Focused on maintaining and shaping transportation in unincorporated Chelan County over the next 20 years.

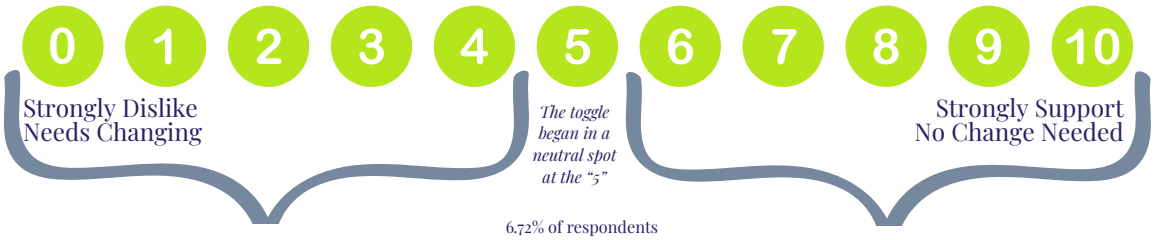
Unincorporated Chelan County includes areas outside a city's limits. The communities of Manson, Peshastin, Dryden, Plain, and Malaga are in unincorporated Chelan County. State highways are not included in the county road system. Outreach reflected this detail.

CHELAN COUNTY TRANSPORTATION ELEMENT CURRENT VISION

Current Chelan County Vision for the Transportation Element:

"Provide a safe, balanced, and efficient multimodal transportation system that serves anticipated local and regional growth."

The community was asked to use a sliding scale from 0 to 10 to share their thoughts on whether or not the vision needed to be refined. A score of 0 meant "Strongly Dislike ~ Needs Changing" and a score of 10 meant "Strongly Support ~ No Change Needed."



40.39% indicated a need for change by choosing 0-4

6.72% of respondents kept the toggle at "5" indicating no preference for keeping or changing the vision.

52.89% indicated no need for change by choosing 6-10

RECOMMENDATION(S):

- While the majority of respondents leaned towards supporting the current vision, a brief review of the vision to consider refinement of the language is recommended.
- If resources limitations do not support a review at this time, it is a recommendation to include a visioning process in the next Transportation Element update process.

OUTREACH RESULTS ~ ALL

CHELAN COUNTY TRANSPORTATION ELEMENT CURRENT GOALS

The Transportation Element Goals were presented to the community via the survey in both digital and hardcopy formats. Respondents were then asked to prioritize the goals by ranking them from 1 (most important) to 6 (least important. The language included in the survey is that of the simplified version though the exact text is provided for transparency.

Current Chelan County Goals for the Transportation Element:	Language Used to Simplify Goals for the Outreach Process
Maintain existing transportation facilities in a state-of-good repair to ensure their continued function, which is critical to achieving all of the county's mobility goals.	**Maintain Existing Transportation Facilities in Good Condition**
Create a transportation network that can be shared safely by all users and that provides sufficient access for emergency response.	**A Transportation Network that can be Shared Safely by all Users**
Plan for a system that is financially viable, including consideration of lifecycle costs in infrastructure investments and leveraging outside funds wherever possible to maximize community benefits.	**A System that is Financially Viable and Leverages non-County Funding Wherever Possible**
Provide a transportation system that complements existing and planned land uses, supports farm-to-market and recreational tourism needs, and balances economic development with existing users.	**Have the Transportation System Complement Existing and Planning Land Uses**
Avoid and minimize negative environmental and societal impacts from the transportation system and enhance the natural and social environment when possible.	**Avoid and Minimize Negative Environmental and Societal Impacts**
Coordinate with a broad range of groups (including local, state, and regional agencies, key stakeholders, businesses, and the public) to develop and operate the transportation system.	**Coordinate with a Broad Range of Groups for Development and Operations of the System**

OUTREACH RESULTS ~ ALL

CHELAN COUNTY TRANSPORTATION ELEMENT CURRENT GOALS CONTINUED

In the survey, this specific question did not require respondents to rank every goal. Instead, it was requested that they rank at least their top three. **83.9%** of respondents ranked no more than three goals. Provided below are the current Transportation Element Goals in order of highest priority to lowest; results are inclusive of all responses.

1. Maintain Existing Transportation Facilities in Good Condition
2. A Transportation Network that can be Shared Safely by all Users
3. Have the Transportation System Complement Existing and Planned Land Uses
4. A System that is Financially Viable and Leverages non-County Funding Wherever Possible
5. Avoid and Minimize Negative Environmental and Societal Impacts
6. Coordinate with a Broad Range of Groups for Development and Operations of the System

When analyzing the responses by those who ranking more than only three goals, the only difference was found in their first and secondary priorities as they saw "A Transportation Network that can be Shared Safely by all Users" as more important than "Maintain Existing Transportation Facilities in Good Condition." All other goals had the same ranking order.

A contributing population group to this difference is people who walk regularly (at least daily or weekly). This group, when filtered, identified "A Transportation Network that can be Shared Safely by all Users" as the highest ranking. This group also made up **70%** of the individuals that chose to rank more than only three goals.

RECOMMENDATION(S):

- Recognize the value of each goal (as it is done in the current plan) while also acknowledging that there are distinct community priorities in relation to both maintenance of facilities and a network that can be safely shared by all users.
- Utilize the top 3 prioritized goals as opportunities to share with the community when progress has been, or is being, made in support of these specific goals.

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OUTREACH RESULTS ~ ALL

CHELAN COUNTY TRANSPORTATION ELEMENT CURRENT & FUTURE PROJECTS

Inviting the community to "think big" towards what is possible in the next 20 years for transportation in Chelan County, the survey provided examples of substantial capital projects in conjunction with an open-ended question.

What transportation improvement or projects would you most like to see in Chelan County in the next 20 years?

To spark ideas, the following examples were provided:

- West Cashmere Bridge extending over Highway 2
- Apple Capital Loop Trail connecting communities
- Guardrail repair/installation along various county roads
- Intersection control like at Easy Street and School Street
- Peshastin Bridge replacement

COMMUNITY RESPONSE ~ MAJOR THEMES

- Connect communities via multimodal pathways
- Improve condition of existing, and build new, bridges
- Prioritize road improvement and maintenance
- Manage intersections to reduce user speed/conflicts
- Infrastructure for people riding bikes and walking
- Enhance/Expand Transit so Link is a 1st choice mode
- Manage speeds and design roads to handle traffic

The major themes found in responses to this question are in alignment with the themes included in the question (page NN) regarding funding considerations and the type of safety goals the community things Chelan County should prioritize resources towards.

RECOMMENDATION(S):

- When communicating about transportation planning and safety progress, utilize language that is consistent with the themes that arise from the feedback.
- Much of the individual responses were more related to transportation operations or areas within City limits. As such, the County could look to clearly communicate which roads they manage and how operations differ from 20-year planning.

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OUTREACH RESULTS ~ ALL

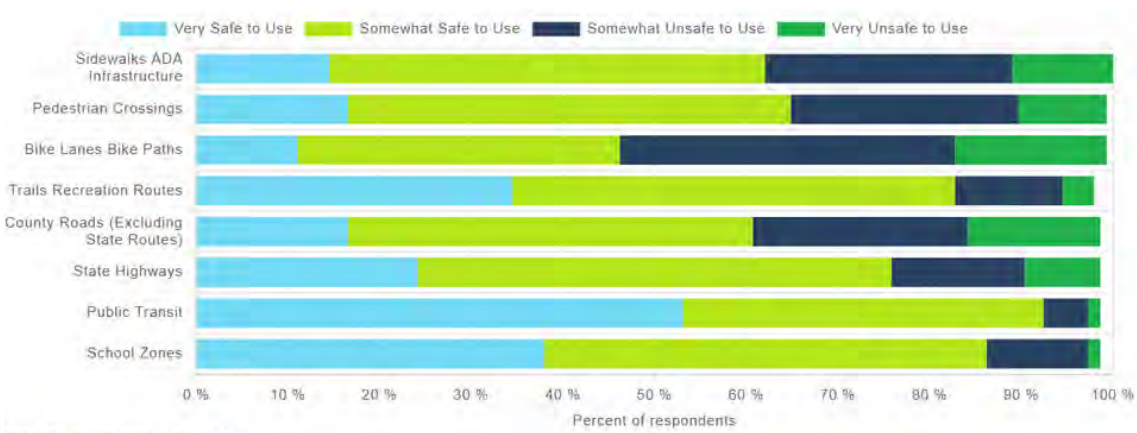
CHELAN COUNTY TRANSPORTATION SAFETY MODE USE, PERCEPTIONS, & PRIORITIES

The following questions provide insight into the community's experience. This focused on understanding the modes being used, perceptions of safety when using specific types of infrastructure, and how resources can best be used to improve transportation safety.

FIGURE 1: On a daily basis, **78.3%** of respondents use a personal vehicle and **36.8%** walk. It is worth noting that when compared to the Bicycle, the E-Bike/E-Scooter option is a comparable alternative for both a daily and weekly mode of transportation.



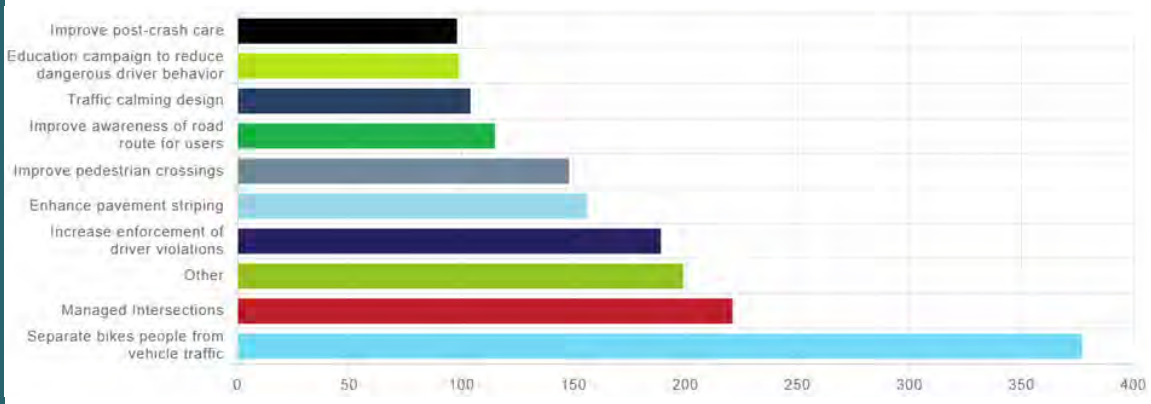
FIGURE 2: Travelers indicated Bike Infrastructure, County Roads, and Pedestrian Infrastructure as **"very unsafe to use"** compared to traveling via School Zones, Public Transit, and Trails/Recreational Routes which were those identified as being **"very safe to use."**



OUTREACH RESULTS ~ ALL

CHELAN COUNTY TRANSPORTATION SAFETY MODE USE, PERCEPTIONS, & PRIORITIES CONTINUED

FIGURE 3: Provided with $15 dollars to spend in $1 increments, respondents voted for how Chelan County allocates funding to meet safety goals. **"Separate bikes/people from vehicle traffic"** accounted for **94.25%** of all allocations. Options reflected the 6 Safe Systems areas.



The "other" option was an opportunity for respondents to identify additional funding priorities that they did not think were reflected in the provided list. When selected, a follow up question was provided asking them to describe their thoughts in the open-ended space provided. A review of the details provided the following insight.

- Solutions for traffic getting to/from tourist heavy areas
- Pavement preservation to improve condition of roads
- Appropriate transportation network size for growth
- Improvements along State Highways or in Cities
- Adjust road and intersection designs

RECOMMENDATION(S):

- Through both in-person outreach and survey results, it was apparent that increasing the community's familiarity and understanding of transportation terms could be of value and added benefit when providing updates regarding implementation and projects. Terms such as "traffic calming" and "managed intersections" were common to explain and well as concepts such as "how pavement striping can be enhanced."

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OUTREACH RESULTS ~ ALL

CHELAN COUNTY TRANSPORTATION PLANNING
IMPROVING WALKING, BIKING, DRIVING, & TRANSIT

NOTE: The survey map included digital boundaries identifying unincorporated Chelan County and markers were only allowed to be placed in this area. Markers placed within city limits or outside of Chelan County were not recorded. A popup window reminded respondents of the applicable area. Once a marker was placed, a popup box provided an opportunity for an explanation of what improvement was needed at that location

FIGURE 4: Available in the survey and at in-person events were maps of Chelan County with a request to identify places where safety improvements are needed for people walking, riding their bike, driving, or riding public transit. This map shows all modes collectively.

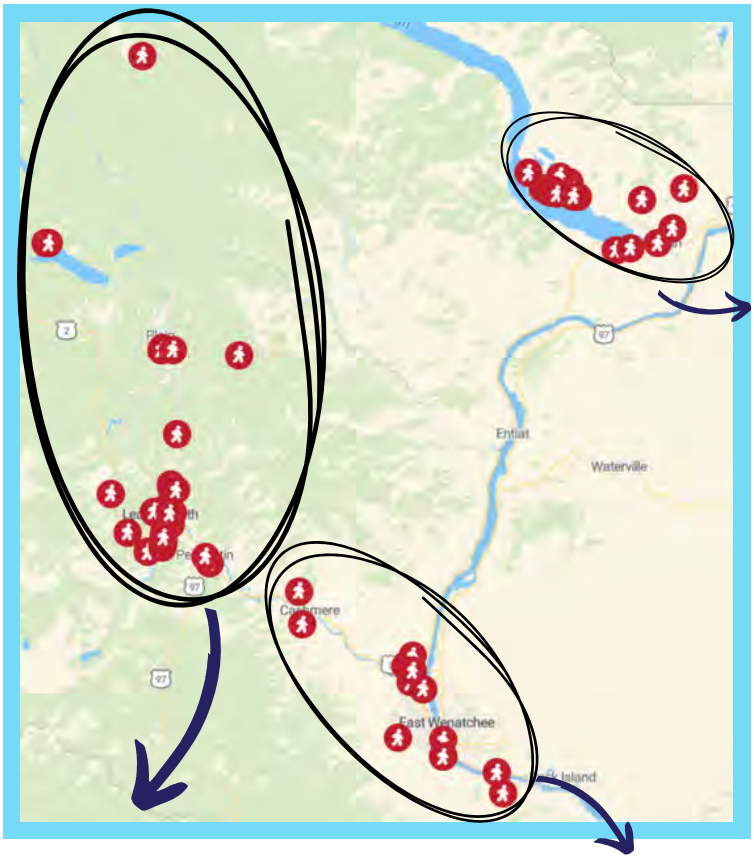


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OUTREACH RESULTS ~ ALL

CHELAN COUNTY TRANSPORTATION PLANNING
IMPROVING WALKING, BIKING, DRIVING, & TRANSIT CONTINUED

FIGURE 5: Markers placed in response to the question, "Where Can Walking be Safer" and a follow up question of "What could be done to improve pedestrian safety" via a pop up box.



WALKING: Below are general comment themes on how to improve the location for pedestrians.

- Sidewalks and wayfinding for walking
- One-way/wider roads
- Pave Union Valley road
- Separate people and bikes from vehicles
- Slow vehicle speeds especially freight trucks
- Vegetation reducing visibility for drivers of people walking/running along the orchard roads
- Multimodal connection between Chelan/Manson
- Manage intersections with appropriate pedestrian crossing areas/facilities

- Manage/reduce vehicle speeds
- Widen the roadway and add shoulders
- Sidewalks and separated multiuse pathways
- Connections from Leavenworth to Eagle Creek and out to Plain along Chumstick Hwy
- Signage indicating presence of people on roadways because dips and blind corners reduce visibility of walking and crossing

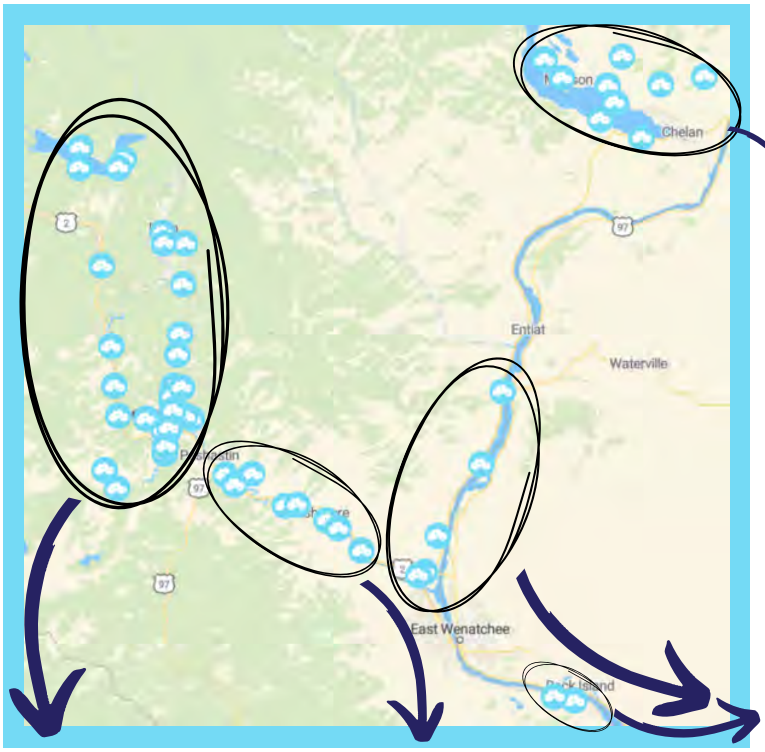
- Separated pathway for walking and biking
- Canyon roads have poor sight distance
- Safer walking/biking facilities on bridges
- Crossing at roundabouts is not safe
- Add sidewalks or widen the shoulders
- Concerns about personal safety due to the social environment along walking paths

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OUTREACH RESULTS ~ ALL

CHELAN COUNTY TRANSPORTATION PLANNING
IMPROVING WALKING, BIKING, DRIVING, & TRANSIT CONTINUED

FIGURE 6: Markers placed in response to the question, "Where Can Biking be Safer" and a follow up question of "What could be done to improve bicycle safety" via a pop up box.



BIKING: Below are general comment themes on how to improve the location for people riding a bike.

- Shared use path/road
- Lower vehicle speeds
- One-way traffic
- Widen the roads
- Pave Union Valley
- Roundabout to Manson
- Improve Chelan tunnel
- Widen the shoulders
- Separate people and bicycles from vehicles
- Manage traffic volumes

- Widen bike lanes
- Signage telling drivers to share the road
- Highways are too narrow for people/bikes
- Roundabouts are dangerous to ride or walk a bike through
- Separated pathway from Wenatchee to Chelan & Wenatchee to Quincy

- Wider shoulders
- Signage/lighting to share road
- Slow down vehicle traffic
- Separated multiuse pathways
- Intersection management
- Multimodal pathway from Leavenworth to Lake Wenatchee connecting Eagle Creek and Plain
- Education for bike safety

- Bike lanes
- Separated/Protected pathway from Wenatchee to Cashmere and on to Leavenworth
- Education for drivers about sharing the road throughout unincorporated areas
- Connect Sunburst Ln to Hwy 2
- Address condition issues on bridges that are dangerous for bikes next to highway traffic such a broken concrete and glass

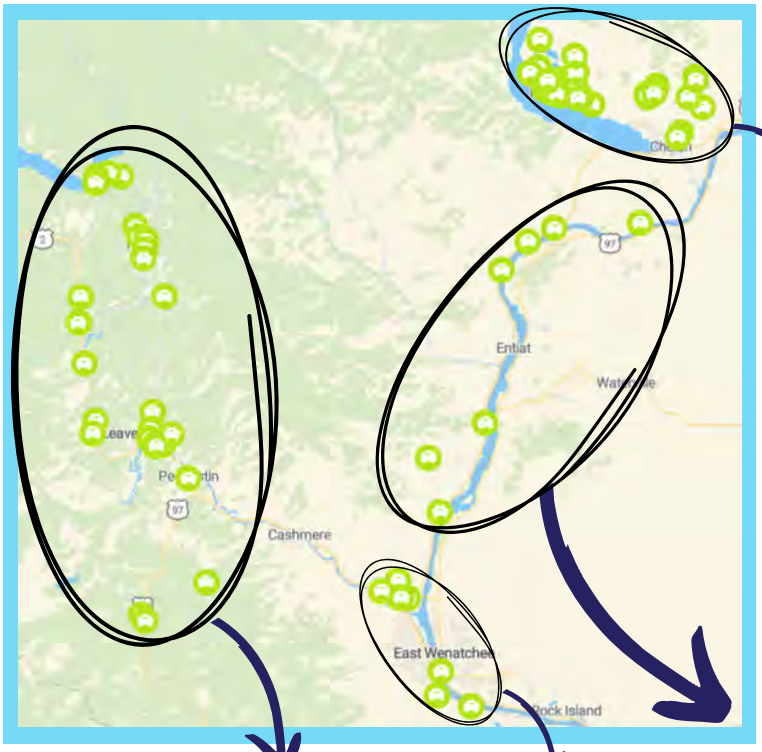
- Sharp corners and dips in the road (E. Leavenworth/Chiwawa) reduce vehicle sight lines of people

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OUTREACH RESULTS ~ ALL

CHELAN COUNTY TRANSPORTATION PLANNING
IMPROVING WALKING, BIKING, DRIVING, & TRANSIT CONTINUED

FIGURE 7: Markers placed in response to the question, "Where Can Driving be Safer" and a follow up question of "What could be done to improve driver safety" via a pop up box.



DRIVING: Below are general comment themes on how to improve the location for vehicles.

- Pave Union Valley Road
- Widen the roads
- Additional guardrails
- Visibility is limited due to vegetation & fences
- Add striping to all roads
- Manage speeds
- Reduce traffic volumes
- Difficult road sight lines
- Signage for sharp curves
- Reduce speeding and remove trucks from downtown Manson
- Revise Manson truck rte
- Reduce conflict points
- Improve ped. safety

- Widen & straighten the roadways
- Manage traffic from growing tourism and new units being built
- Manage speeds & improve visibility
- Wildlife crossing over the highways
- Signage/reminders to slow down
- Traffic calming designs
- Traffic enforcement and consider automated enforcement options

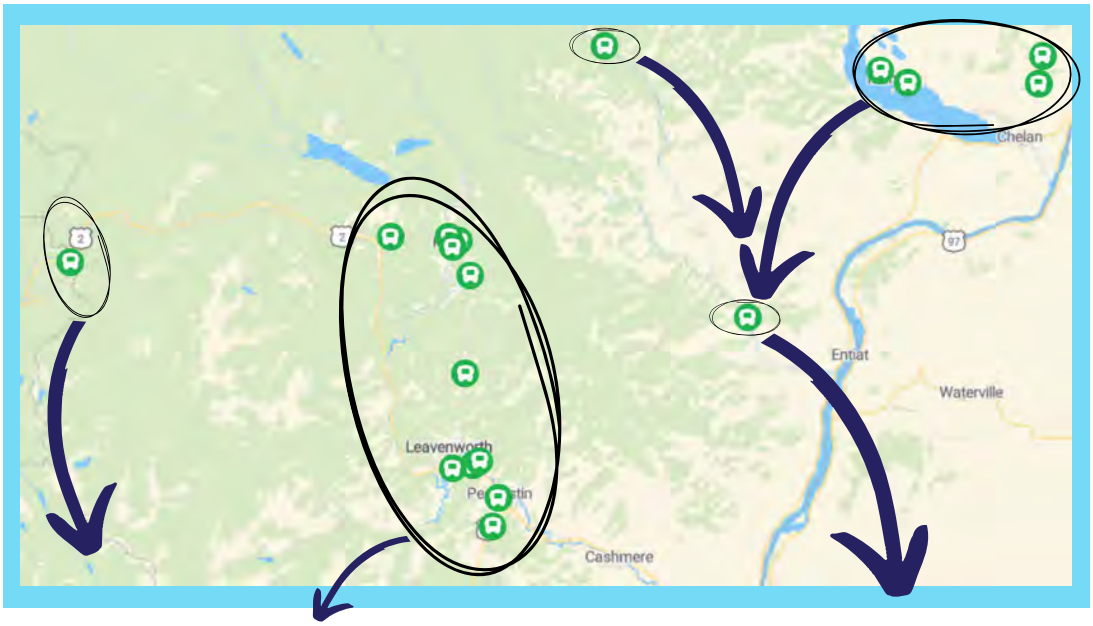
- Increase patrols for traffic stops/citations
- Widen the roadway
- Improve roundabout designs for trucks
- Finish the parkway
- Reduce speeds & use signage in areas when speed changes

- Widen the highway and create space in the center for separation
- Increase patrols to reduce reckless driving
- Add extra lanes/space

OUTREACH RESULTS ~ ALL

CHELAN COUNTY TRANSPORTATION PLANNING
IMPROVING WALKING, BIKING, DRIVING, & TRANSIT CONTINUED

FIGURE 8: Markers placed in response to the question, "Where Can Public Transit Services or Safety be improved" and a follow up question of "What improvements would you like to see"



- Access to recreation and employment along Hwy2 like they do for Mission
- Routes that serve Plain via Chumstick Hwy
- Connect the Upper Valley to the airport
- Improved service and circulation in the Peshastin area
- More routes in the Upper Valley to help reduce traffic volumes

TRANSIT: General comment themes on how to improve the location for public transit are to the right and left

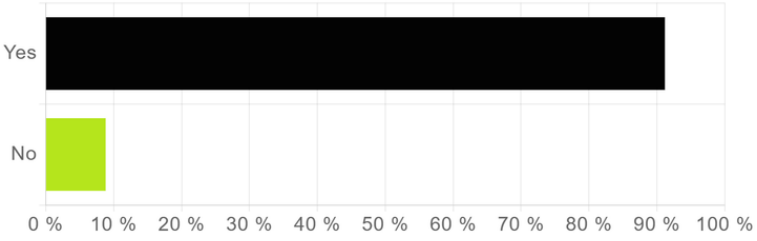
- Service up Entiat River Road towards Ardenvoir
- Pullouts for buses to not block lanes of travel
- Improved roadways so buses can traverse more of the area and serve additional communities.

OUTREACH RESULTS ~ ALL

GEOGRAPHIC AND DEMOGRAPHIC DISTRIBUTION

The following geographic and demographic data are only reflective of the survey. During interviews or in-person events, this information was not collected.

FIGURE 9: From the survey, **over 90%** of respondents answered, "yes" when answering the question, "Do you live in Chelan County?"



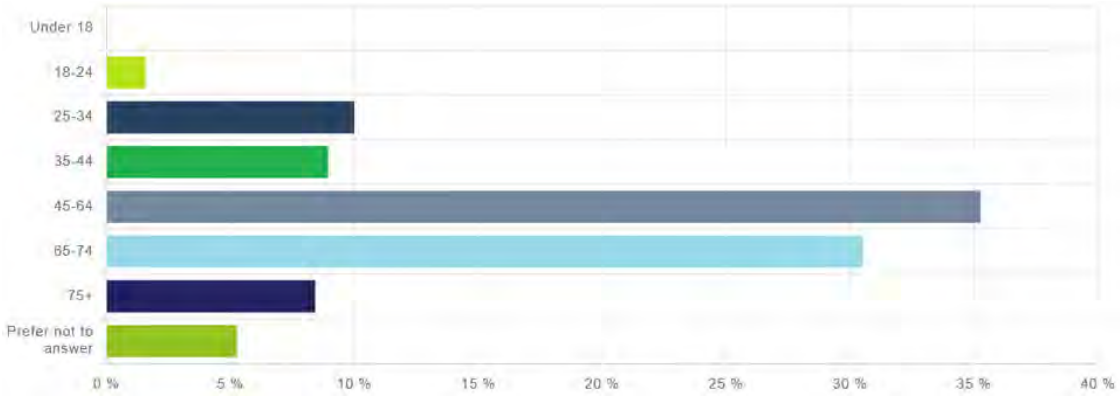
Represented Communities outside of Chelan County

Coupeville	Quincy	Surprise, Arizona
Washington State	Tacoma	
East Wenatchee	Marysville	There were also
Seattle	Ephrata	respondents who did
Twisp	Orondo	not provide this data.

Represented Communities in Chelan County

Cashmere	Malaga
Chelan	Manson
Cole's Corner	Monitor
Dryden	Peshastin
Entiat	Plain
Fish Lake	Sunnyslope
Lake Wenatchee	Union Valley
Leavenworth	Wenatchee

FIGURE 10: Age distribution of survey respondents. Apart from the "Under 18" category, all age groups are represented. Since over 5% preferred not to answer, it is possible that individuals under the age of 18 are captured without identifying their age.



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OUTREACH RESULTS ~ ALL

GEOGRAPHIC AND DEMOGRAPHIC DISTRIBUTION CONTINUED

FIGURE 11: Distribution of Sex

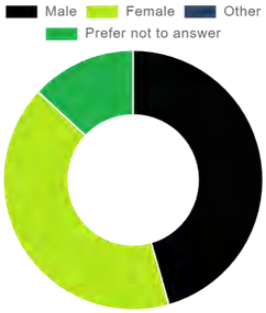


FIGURE 12: Household size

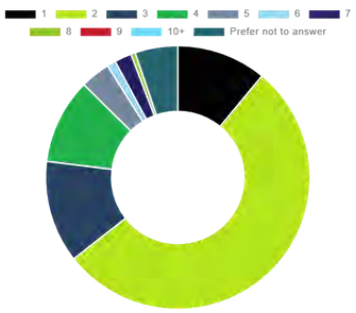


FIGURE 13: Vehicle Ownership

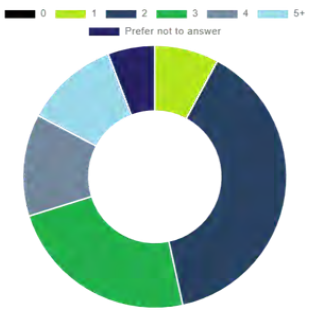
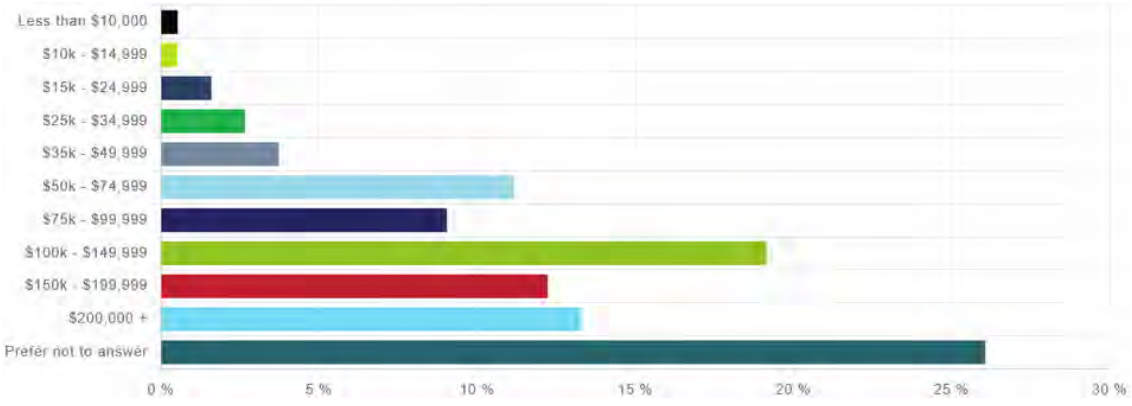


FIGURE 14: **Over 22%** of households have someone living with a hearing, vision, cognitive, or physical disability or an independent living difficulty.



NOTE: More than 1 in 5 households have someone living with a disability or an independent living difficulty.

FIGURE 15: Household income distribution included the incomes of all people over the age of 18 years. Despite the majority of respondents preferring not to answer, all income levels were represented in the responses with the vast majority over $100,000 in household income.



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OUTREACH RESULTS ~ ALL

GEOGRAPHIC AND DEMOGRAPHIC DISTRIBUTION CONTINUED

FIGURE 16: Race distribution of survey respondents. White/Caucasian was the majority represented followed by almost 15% preferring not to answer. It is possible that individuals other than White/Caucasian are captured without identifying their race.

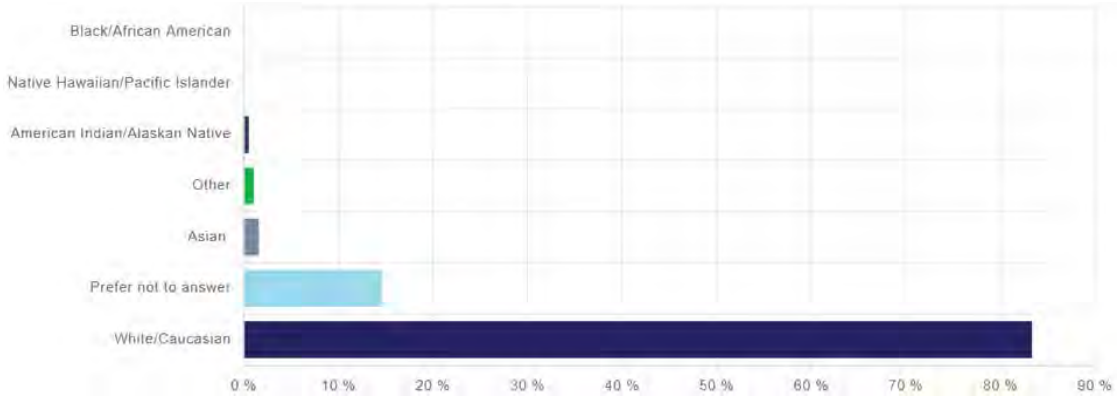
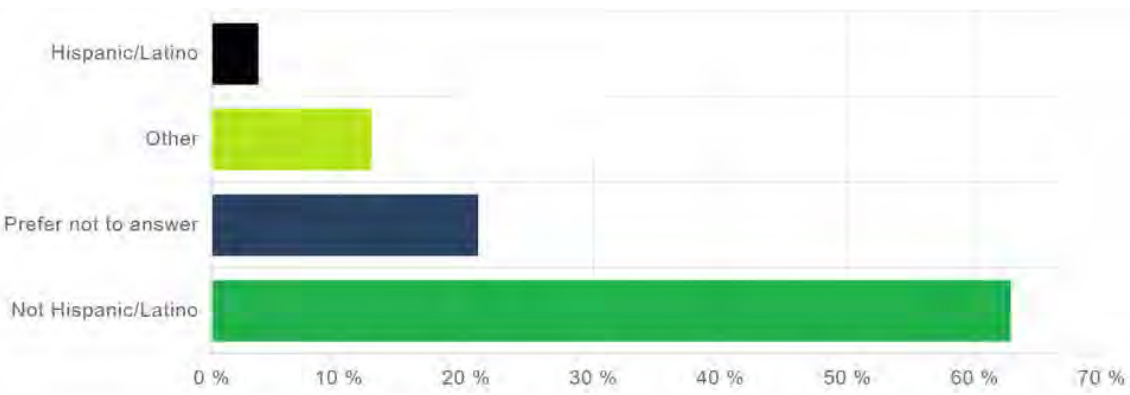


FIGURE 17: Ethnicity distribution of survey respondents. Combine, Hispanic/Latino and Other accounted for **16.23%** of respondents and **almost 21%** preferred not to answer.



22

Reports

PROVIDE A CIVICALLY-INFORMED SNAPSHOT OF COMMUNITY PRIORITIES



Engaging with the community is about meeting them where they are, when they are available, and in ways that allow for quality discussions and true understanding.

SUPPORTING DOCUMENTS

APPENDICES

The following appendices are included for reference and to be used as resources for future outreach efforts.

A. Chelan County SS4A Survey Analysis by Communities in Chelan County
- Includes Chelan Valley, Wenatchee Valley, Upper Valley, Mid Valley, and Entiat Valley

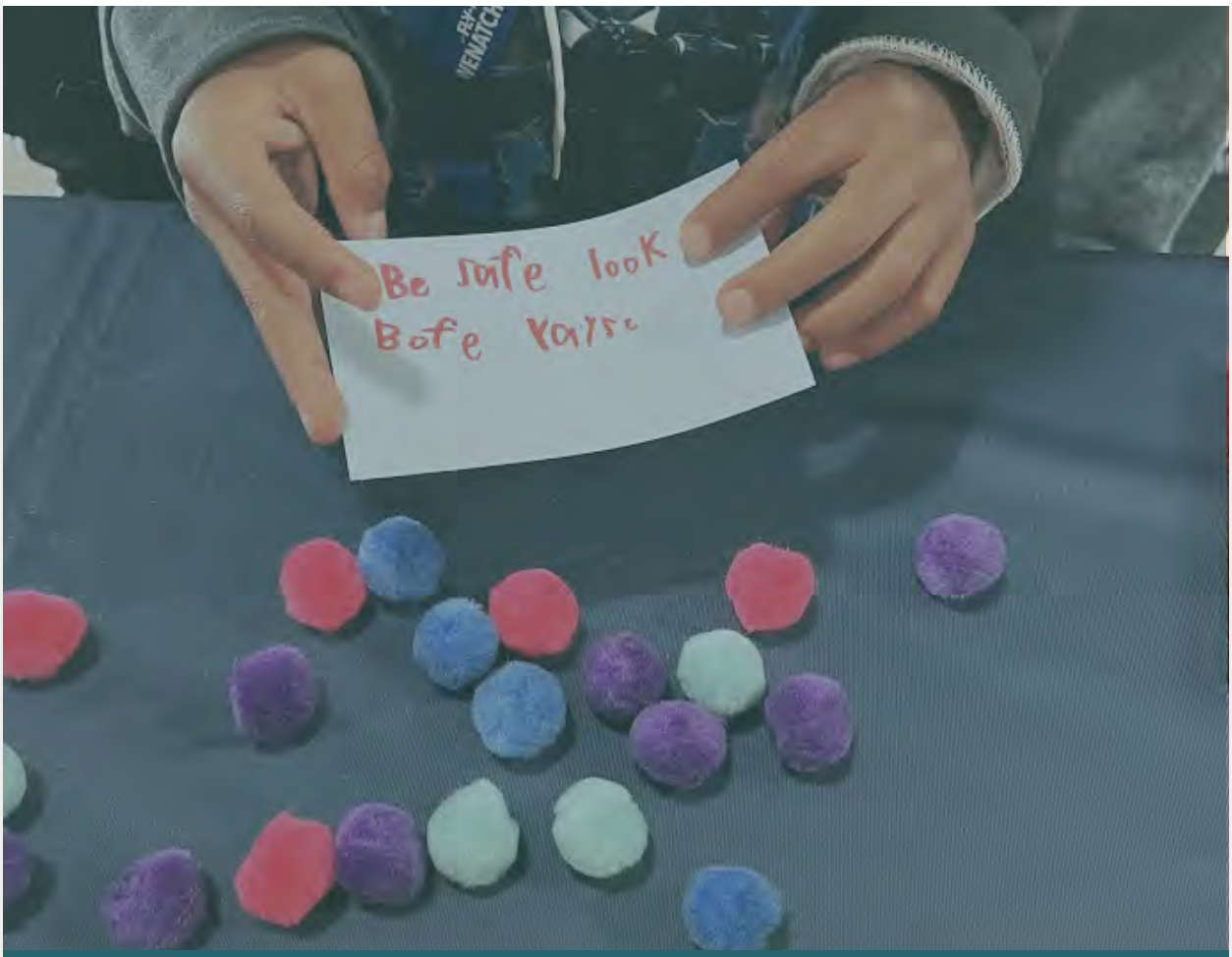
B. Community Survey
- This was available online and in-person and in both English and Spanish

C. Outreach Materials
- Fliers in English and Spanish
- Branding Guide

D. Community Engagement Plan

E. Community-Informed Planning Efforts

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CHELAN COUNTY TRANSPORTATION PLANNING

COMMUNITY ENGAGEMENT FINAL REPORT

Thank you to Chelan County for recognizing the importance of a collective decision-making process.

transpogroup

FIRM FOUNDATIONS COMMUNITY CONSULTING

APPENDIX A

Chelan County SS4A Survey Analysis by Communities in Chelan County

Chelan Valley

Wenatchee Valley

Upper Valley

Mid Valley

Entiat Valley

LOCATION: Chelan Valley 38% of respondents

(Union Valley, Chelan, Manson)

Vision

52% in favor of changing; 38% in favor of keeping

Priorities:

1. Maintain Existing Transportation Facilities in Good Condition
2. A Transportation Network that can be Shared Safely by All Users
3. Have the Transportation System Complement Existing and Planned Land Uses
4. A System that is Financially Viable and Leverages Non-County Funding
5. Coordinate with a Broad Range of Groups for Development and Ops of the System
6. Avoid and Minimize Negative Environmental and Societal Impacts

NOTE: Priorities 5 and 6 are reversed when comparing results for all survey respondents versus survey respondents identified as residing in the Chelan Valley area.

Mode Use:

Regularly means daily or weekly; Not Regularly means monthly or fewer times per year. All modes had responses for monthly or a few times a year. There was no mode with “never” as the only frequency identified.

- Vehicle: 91% Regularly and 9% not regularly
- Motorcycle: 17% Regularly and 83% not regularly
- Walk: 72% Regularly and 28% not regularly
- Bike: 10% regularly and 90% not regularly
- Transit: 3% regularly and 97% not regularly
- E-device: 10% regularly and 90% not regularly
- Wheeled-device: 0% regularly and 100% not regularly

NOTE: Mode use by respondents in the Chelan Valley vs all survey respondents significantly differed in motorcycle use (Chelan Valley double the use percentage), walking (Chelan Valley were a few points higher), and biking (Chelan Valley was almost half the use percentage).

Safety in Traveling

A question asks about very safe, somewhat safe, somewhat unsafe, and very unsafe perceptions of the below traveling routes, when bifurcated to safe and unsafe, the following are reflective of Chelan Valley with different indicated with an underline.

- Sidewalks ADA Infrastructure: Safe (65%) Unsafe (35%)
- Pedestrian Crossings: Safe (69%) Unsafe (31%)
- Bike Lanes/Paths: Safe (45%) Unsafe (55%)
- Trails/Rec Routes: Safe (79%) Unsafe (21%)
- County Roads: Safe (44%) Unsafe (56%)

- State Highways: Safe (61% Unsafe (39%)
- Public Transit: Safe (96%) Unsafe (4%)
- School Zones: Safe (85% Unsafe (15%)

NOTE: In the Chelan Valley, Trails/Recreation Routes, County Roads, and State Highways are all perceived to be less safe (lower "safe" percentage rating) than the combined survey responses.

Priority Safety Project Types

Participants were given a budget to fund approaches to improving safety. The list below shows the highest to lowest funding categories (excluding "Other" which was funded the highest and described below)

1. Separate bikes and people from vehicles (15%)
2. Enhance pavement striping (13%)
3. Manage Intersections (13%)
4. Increase Enforcement of Driver Violations (9%)
5. Improve awareness of road/route for users (9%)
6. Improve Pedestrian Crossings (8%)
7. Education to Reduce Dangerous User Behaviors (5%)
8. Improve Post-Crash Care (4%)
9. Traffic Calming (3%)

NOTE: The Chelan Valley respondents had differing priorities from what all respondents provided and the "all respondents" scoring is provided below. They were consistent with the top priority being "separate bikes and people from vehicles."

1. *Separate bikes and people from vehicles (22%)*
2. *Manage Intersections (13%)*
3. *Increase Enforcement of Driver Violations (11%)*
4. *Enhance pavement striping (9%)*
5. *Improve Pedestrian Crossings (9%)*
6. *Improve awareness of road/route for users (7%)*
7. *Traffic Calming (6%)*
8. *Education to Reduce Dangerous User Behaviors (6%)*
9. *Improve Post-Crash Care (6%)*

"Other" was funded using 28% and the respondents were asked to share what they would like to fund and responses are below. Some of them are appropriate to fit under one of the above nine categories though were not evaluated that way.

- Pave Union Valley Road
- Upgrade and maintain county roads. I live on a county road that i and my neighbors have to primarily maintain. I thought that was what my taxes were for.
- How much more money does Washington State want to rob from their already taxed to death constituents?
- Pave Union Valley Road
- Build a new highway.
- Guard rails on steep roads that don't have them.

- Slowing traffic through downtown Manson.
- Install guardrails on 3 or 4 sections of Union Valley Road before someone plummets to their death avoiding oncoming traffic.
- Winter maintenance de icer
- Use it to fix the roads that actually need to be fixed.
- Pave Union Valley Rf
- Maintain county roads that are not improved. Specifically Union Valley Road and Cagle Gulch.
- There's a head on collision every week on 97 or 97A. Something must be done!!!
- Pave Union Valley to the end of the road.
- Pave Union Valley Road
- SR 150 pull outs
- More guardrails in roads with steep embankments edging the road
- Make Washington Street in Manson wider and safer between SR150 and Blueberry Hills, including guardrail on lower side where necessary.

Priority Transportation Improvements

- #3 guardrail repair & widening some of the roads
- Union Valley Rd needs help and is not safe. I understand paving can be costly, but at least address adding guard rails to high risk areas. Improvements have been promised for years. With increases in residents and traffic it's increasing the risk.
- Chelan Tunnel integrity
- Pave Union Valley Road
- Adding painted center lines to rural roads.
- Improve public transportation between major population centers (Chelan, Manson, Wenatchee), including potentially link rail. Improving bike trails to encourage bike transportation
- Keep Cagle Gulch Road upper end at the same level of care as other primitive roads and the lower part currently
- Pave UnionValley Rd
- Improving rural roads in the Manson area. With expanded tourism and growth, many roads are unsafe for automobiles, bikes, E bikes, powered toys, walkers and children to coexist.
- The Union Valley roads must be evaluated for safety & bad road conditions. One of my family members was recently hit head-on on Union Valley Road. Two winters ago, snow trucks pushed the snow off the roads, creating a false side bank where vehicles thought were a part of the road. Many got stuck and thank God, none rolled off.
- The City of Chelan is a major tourist hub and has needs that differ from other cities within the county. Tourism has increased significantly along with second home and vacation rental ownership all over the Chelan valley. More people are buying and building in Union Valley to either live, vacation or for use as STAs most likely because of the wide open spaces, the peacefulness and it's still with within 10 to 30 minutes into town, depending on the location. The traffic is increasing even though it is not a paved road. There are serious potential risks on this road if the growth issue is not addressed,

particularly for emergency responders. Additionally, the traffic along Hwy 150, the main road from Manson through Chelan is becoming overburdened. This is of particular concern again, to emergency responders. You can't leave this highway out when you're planning for the growth in this community.

- Paved road on Union Valley to the fire station. The road has maintenance done quite often but can't keep the road in a safe manageable state. The road itself tears the vehicles up with how rough it is. This would be almost a 1 and done type of work...
- I live in the Union Valley area above the town of Chelan and have been concerned over the past 5 years about the danger of Union Valley Rd. There are 250 households served by this 1 dirt road. In the spring and fall when the dirt is wet it is extremely slick and going downhill is treacherous to maintain control and is every bit as dangerous in the winter. There is a 2' ditch on one side and most of the other side does not have guardrails, with straight drops of 20-30 feet. A couple of years ago one of my neighbors slid into the ditch and when the front tire caught, his truck went hard left and over the side straight down 20' with a head-on stop. It almost cut off his ear and could have killed him. I've seen many other close calls and have had my vehicle slide towards the edge while going only 10mph. The road width is non-standard and approaching vehicles (especially large trucks) do not have sufficient room to easily pass with the ditch on one side and drop off on the other. In the past the excuse has been that there were not enough permanent residents up here which is no longer the case. Tiffany Gering ran for commissioner back in 2020 and pledged to get the road addressed (see email below) but nothing has happened. Another factor that should be considered is that every vehicle going to town carries a ton of sand and mud which then gets deposited on the roads in town and washed into the sewers. It should not take someone getting killed on this road in order to get it paved and safe. Legal cases related to unsafe road injury liability generally hinge on whether the municipality has been notified of the hazards. I'm asking on the behalf of all my neighbors that this road be addressed ASAP before there is a tragedy.
- Address congestion on Wenatchee Avenue
- Keep access to Manson limited / as is
- Manson to Chelan road. So dangerous.
- Chelan - Manson Highway (SR 150), Traffic is increasing, visitors are slowing it down. Need more emphasis; delay of vehicles behind you, pull over. DOT thinks the answer is to slow traffic down, incorrect! Be courteous if you want to drive slower, pull over. Add pull out lanes where possible.
- Pave and improve Union Valley Road (Chelan) to at least the 6 mile marker to support all of the new construction and traffic the unimproved road is supporting and to ensure safe passage in a wildfire emergency.
- A bypass road north of Lake Chelan, between Manson and Chelan .
- Cagle Gulch improvement for fire egress with trailers if union valley is blocked. Right now a trailer cannot get past the tight switch back
- Maintenance/Repair/improvement to upper union valley rd and cagle gulch road in Chelan.

- Pave Union Valley Road past mile marker 3 to the end of the road. This is a major county road and is unsafe in its current condition. There is a lot of building and growth in Union valley and the dirt road past mile marker 3 is unacceptable.
- Complete the sidewalk program for Totem Pole in Manson from the Manson Highway up to the schools. We thought it was to be completed this year.
- Complete paving of Union Valley Road
- "Coordination of traffic lights at E. Johnson Ave.,N.Sanders St and E.Woodin Ave. Traffic backs up.
- Install a right turn light to N.Columbia St from westbound E.Johnson Ave. Many vehicles in the right turn lane go straight onto hiway 150."
- Safety features installed on rural roads like Union Valley Road in Chelan. These were designated primitive long before the county approved building and developments. Now there are major safety issues and widening and guardrails are badly needed. As traffic increases, there is extreme danger.
- Bridge over Lake Chelan from Manson to South Shore.
- "Better connection between Chelan & Manson for walkers, bikes, and other non motorized options. Looking at rural road alignments, with more traffic should traffic changes be made at intersections that volume has changed to secondary road and primary road now be the stop or yield. Larger more comprehensive sealing/paving of roads in rural areas. Many times rural roads go years without crack repair and are in even worse condition when you come around and paving needs to be done so much sooner because sealing and small patches are not being done on an annual basis."
- "Erosion mitigation on 97A & Hwy 2 - lots of rock slides. Pot hole & pavement improvements on Hwy 2."
- "Work hard with the state to alleviate SR 150 traffic, congestion and intersection dangers. County roads tie into traffic problems on SR 150. Reduce the number of County Road intersections on SR 150 by using collector feeder routes and possibly adding service roads for new developments."
- More consideration for bikes as the use of ebikes grows
- Better maintenance of Union Valley Road. We all pay our taxes up here and yet somehow road maintenance including plowing seems to be at the bottom of the list for services. We should not be told if we want better maintenance we will have to fund it ourselves. There are plenty of primitive roads that have better maintenance than we do with far less residents. Fix it.
- The only non-permeative road in Chelan County paved - Union Valley
- "I have owned property in Union Valley for 22 years. Union Valley Road is increasingly unsafe. With more and more traffic. Every year the unpaved portion of the road deteriorates faster. The county work crews cannot keep up? Cagle Gulch is even worse. Please help. Thanks Please help. "
- "Paving at least two more miles of Union Valley Road. Installing guard rails on lower Union Valley Road"
- Maintaining Sawmill road
- Pave Union Valley Road!

- "Improve roads and water runoff in Manson downtown.provide better Parking space for downtown"

Describe Transportation in a few Words

- There is nobody on the public transit buses.
- Somewhat adequate
- Rural roads improved
- Unpaved roads are costly
- Ok
- Not bad
- Not great
- Not equally maintained
- Useful, helpful and available
- Back burner
- don’t have public transportation in Union Valley
- Primitive, like 1940s
- We don’t use it.
- Good
- Link Bus (Free)
- Ok
- Good but limited
- Doesn’t serve today’s needs.
- Dangerous. Union Valley Road needs guardrails.
- "Roads maintained well
- Too much traffic"
- Upkeep needed
- Not keeping up
- Lack of adherence to speed limits and pedestrians.
- No public transportation available 😕😞
- Some of the roads could use some improvement
- Not good for escape route in case of emergency
- Stop trying to fix things that aren't broken
- Streets are often narrow and lack sidewalks.
- Scary and dangerous. Poorly maintained
- Pave Union Valley Rd
- Need repairs
- DANGEROUS! Union Valley Rd and HWY 97 & 97A
- Fair to good
- Inconsistent maintenance
- Mostly good
- How many people are on the buses?
- Pretty good
- Union Valley needs pavement
- Pave Union Valley Road

- Adequate now
- rural undeveloped
- moderately safe
- Safe and flowing now. Can it support growth trends
- Very good
- Fine as is
- Not well maintained
- very good
- Fine
- "maintaing dirt roads

Final Thoughts about Transportation Safety

- west hwy 155 improvements to decongest
- With projected population growth in the next 20 years in this area, especially near Chelan, it's important to invest in public transportation and infrastructure to support this population growth
- Pave Union Valley Road
- Keep primitive county roads graded
- "Need to plan for 5 - 20 years in advance for schools and business. How is it best to make the county livable and easy for people to get around.
- I was talking to a life long resident of Manson and they will not go to Wenatchee on the weekend because of the messed up traffic pattern they created with the old bridge in Chelan. Talks about how backed up the streets are every day since Chelan changed the old bridge to inbound only. It really makes no since, and I've lived her permanently for 5 + years. Didn't make since then and makes less now with more people."
- Speed bumps are effective
- The 97A and the 97 both need more passing lane locations.
- "The volume of traffic to Manson in recent years is getting dangerous and needs to be thought out better.
- Speed limits past Chelan Winery towards Manson are dangerous- numerous driveways, hidden intersections and blind spots, passing lanes and high speed limits in residential areas, poor pedestrian safety. Similar safety issues along congested regions between Chelan and Manson in general. This is a highly residential zone (entire Chelan to Manson route) and should be prioritized as such.
- Given the rate of development, it is getting worse rapidly."
- Many roads in unincorporated Chelan County were installed over 75 years ago. Most do not have curb and gutters. Over the years the edges have crumpled and deteriorated. Unfortunately the patch work that is done after a big rain doesn't fix the problems. I feel as the population increases the problem will increase.
- Please please don't ignore us in Union Valley. The road, especially the blind curve just past Milkweed is really dangerous with no guardrail. Every remaining lot in Chelan Vista Heights sold in past 5 years. Many are building. The portion of Union Valley Rd past Milkweed is often ignored by County in winter, not plowed or maintained as often, and many of us have had near misses on that blind curve. If we have to swerve in slippery

conditions in winter, someone will go right off the cliff. Please help before someone is killed.

- If the county is going to push for more tourism, the road infrastructure has to be improved accordingly.
- Many roads need to be reconstructed with better base to reduce spring break up damage and widened. Also spots with blind corner or curve have slope reduction for better visibility. Union valley road in Chelan district has many examples of this.
- If union valley is blocked because of fire, Cagle Gulch isn't a safe traversal route off the mountain.
- Survey was frustrating
- Pave Union Valley Rd
- Please consider increasing maintenance on Union Valley Road and Cagle Gulch road. Thanks you.
- I reiterate the danger of hwy 97A. How many people have to die? Furthermore in 2025 it is ridiculous to have union valley road unsafe, unpaved and one way in and out for 250 households. In addition to what I wrote earlier, a wildfire would trap us all and firetrucks have to navigate the narrow dirt road.
- I love Chelan county. Great place to be alive!!
- Union Valley has become very populated. By the county's own admission, Union Valley Road is the only non-primitive road in the county that is not paved. Ruts develop quickly shaking and rattling cars... many cars drive on the wrong side of the road to avoid ruts which is especially dangerous on blind corners (which there are several). The poor condition of the road slow emergency vehicles which could be life threatening. It is beyond me why the county ignores Union Valley Road. Paving the road would eliminate multiple road maintenance endeavors each year.
- Pave Union Valley Road past mile marker 3. It is a very busy route and is unsafe as a dirt road.
- Pave real roads that get so much traffic that they are dangerous and require almost constant maintenance like Union Valley Road.
- When the Colville Tribe builds their destination resort. Traffic in and out of Manson will deteriorate to as fast as the slowest car wants to drive, long waits in intersections. Manson has the capability to grow more than any other community. The road infrastructure is very insufficient to handle growths impact.
- With the increase in population, I see a significant increase of drivers on the Manson Highway between Manson and Chelan. I do not know if it is feasible to create alternate routes or make the highway larger but that is something that I can see the need for 10 or more years in the future. It is not dire now but increasing.

LOCATION: Wenatchee Valley 30% of respondents

(Wenatchee, East Wenatchee, Malaga, Sunnyslope)

Vision

32% in favor of changing; 64% in favor of keeping

Priorities:

1. A Transportation Network that can be Shared Safely by All Users
2. Maintain Existing Transportation Facilities in Good Condition
3. Have the Transportation System Complement Existing and Planned Land Uses
4. Avoid and Minimize Negative Environmental and Societal Impacts
5. A System that is Financially Viable and Leverages Non-County Funding
6. Coordinate with a Broad Range of Groups for Development and Ops of the System

NOTE: Compared to "all respondents" the priorities are slightly different. Priorities 1 and 2 are switched as well as priorities 4 and 5.

Mode Use:

Regularly means daily or weekly; Not Regularly means monthly or fewer times per year.

- Vehicle: 100% Regularly and 0% not regularly
- Motorcycle: 3% Regularly and 97% not regularly
- Walk: 73% Regularly and 27% not regularly
- Bike: 30% regularly and 70% not regularly
- Transit: 5% regularly and 95% not regularly
- E-device: 26% regularly and 73% not regularly
- Wheeled-device: 6% regularly and 94% not regularly

NOTE: Mode use by respondents in the Wenatchee Valley vs all survey respondents significantly differed in motorcycle use (Wenatchee Valley is around ⅓ of use percentage), and E-device (Wenatchee Valley is around 10% higher in use).

Safety in Traveling

A question asks about very safe, somewhat safe, somewhat unsafe, and very unsafe perceptions of the below traveling routes, when bifurcated to safe and unsafe, the following are reflective of Wenatchee Valley with different indicated with an underline.

- Sidewalks ADA Infrastructure: Safe (51%) Unsafe (49%)
- Pedestrian Crossings: Safe (55%) Unsafe (45%)
- Bike Lanes/Paths: Safe (50%) Unsafe (50%)
- Trails/Rec Routes: Safe (85%) Unsafe (15%)
- County Roads: Safe (69%) Unsafe (31%)

- State Highways: Safe (73% Unsafe (28%)
- Public Transit: Safe (92%) Unsafe (8%)
- School Zones: Safe (90% Unsafe (10%)

NOTE: In the Wenatchee Valley, Sidewalks/ADA Infrastructure, Pedestrian Crossings, and County Roads are viewed as less safe (by around 10%) than the all respondents' results.

Priority Safety Project Types

Participants were given a budget to fund approaches to improving safety. The list below shows the highest to lowest funding categories (excluding "Other" which was funded the highest and described below)

1. Separate bikes and people from vehicles (26%)
2. Manage Intersections (15%)
3. Increase Enforcement of Driver Violations (11%)
4. Improve Pedestrian Crossings (10%)
5. Enhance pavement striping (8%)
6. Improve Post-Crash Care (8%)
7. Traffic Calming (7%)
8. Improve awareness of road/route for users (6%)
9. Education to Reduce Dangerous User Behaviors (6%)
10. Other (3%)

NOTE: In the Wenatchee Valley, the top 5 are the same as the all respondents' results with the adjustment that priority number 4 and 5 are switched.

"Other" was funded using 3% and the respondents were asked to share what they would like to fund and responses are below. Some of them are appropriate to fit under one of the above nine categories though were not evaluated that way.

- continued repair and maintenance of our roads
- Improve the roads, wider, straighter
- Preservation of existing county roads.
- Add more lanes
- Roundabouts are way too small to be effective, poor planning on city driving structure long term.

Priority Transportation Improvements

- Adding more options to get through quickly. Maybe overpass, extra roads. Anything to make traffic move quicker.
- "Apple Capital Loop Trail connecting communities.
- Bridge from Chelan to Douglas Counties past Malaga to Rock Island. "
- "2.Apple Capital Loop Trail connecting community
- 5. Peshastin Bridge replacement"
- "Maintained roads

- Widening of county roads
- Enforce bikers to use designated existing biking lanes
- New automobile bridge over Columbia River
- Multiuse trail that extends from Wenatchee to Leavenworth
- "Biking trails between cities in Chelan County
- Bus rapid transit between Wenatchee and Grant County
- Lower speeds on paved, rural county roads"
- "Turn lanes on the Malaga Alcoa highway.
- Passing lanes on the Malaga Alcoa highway."
- Multimodal trails connecting smaller communities to large such as extending the loop trail from Wenatchee to Malaga, or Wenatchee to Cashmere and or Entiat. This would maximize healthy lifestyles, and transportation for those who don't drive. This would also be safer for cyclist and drivers to keep road bikes off the shoulder of County and State Hwys.
- None of the above, stop adding round abouts
- bike/ped trail between Wenatchee (AC Loop Trail), Cashmere, and Leavenworth
- Add more lanes
- New Malaga bridge over the Columbia River to Douglas County -- primarily to enhance emergency evacuation routes and emergency vehicle access to Malaga/Colukum area
- Only thing I can think of off-hand is road/street improvement (paving) on King Street near the Chelan County campus.
- I would like to see an improvement on making all sidewalks and roadways accessible and safe.
- Apple capital loop expanding to Leavenworth and connecting the townships in between. Along with providing better bike lanes that actually connect to one another through the city for safer commuting to work and recreation
- I definitely want to see more safety measures on existing roads. Guardrail repair/installation is so important with all of our wild areas to explore. I am scared of when my son starts to drive, and just want it as safe as possible.
- "Light rail connecting wenatchee, Quincy, chelan, leavenworth.
- Major increase and improvement in public transport such that Most people choose that over driving their own car.
- Bike paths connecting all areas, with lanes for bikes and pedestrians."
- "Mixed use trail connecting Malaga, Wenatchee and Cashmere.
- Bike path connecting Chelan to 25 mile creek state park.
- Pedestrian and Bike bridge across the river from Malaga to the hydro park. Connecting into the apple capital loop trail. "
- Expansion of multi-use trail system to connect communities.
- "Sidewalk connectivity for Boodry and Beuzer Streets.
- Any sort of pathway along East Leavenworth Rd and Icicle Road that allows pedestrians and bicyclists safer lanes of travel."
- I'd like to see improved lane and road markings that are more visible at night and in poor weather conditions particularly for those with some vision impairment that can still drive.
- road bicycle friendly

- Apple Capital Loop Trail connecting communities, replacing bridges in poor condition
- New crossing of the Columbia
- Extend paved pedestrian/bike trails to Lake Wenatchee and Lake Chelan.
- Extend paved trails to Lake Chelan and Lake Wenatchee.
- High speed rail between all cities and towns. Public transit that is so good (frequent reliable fast), that people actually prefer to use it rather than drive their cars. Think BIG and FUTURE.
- "Motorcycle only parking. Scooter/bicycle safe storage. Less roundabouts. More waypoint signs for tourist destinations.
- Connect Wenatchee to Ellensburg via Malaga
- Increase speed limits on major arterials
- Prepare for a major highway
- Connect entiat to orondo
- Improve rock island area highway safety
- "Extend paved pedestrian/bike trails to Lake Wenatchee and Chelan.
- "Expand pedestrian/bike trails to Chelan and Lake Wenatchee.
- Provide safer crosswalk at the Easy St./Hwy 2 roundabout. "
- intersection and safety improvements, widening of roads, turn lanes, etc.
- Improvements to maintenance of roads and sidewalks, especially in residential neighborhoods.
- Redo county roads that lead to recreation poop. Example #2 Canyon
- Bridge in Malaga to Douglas County, Malaga Hwy widened. Bridge over Stemilt Creek needs better site lines, hump removed.

Describe Transportation in a few Words

- More routes needed
- well maintained
- Natural, individual, traffic
- Hit or miss.
- better than average
- okay
- More than adequate
- Needs improvement
- Barebones
- Slow, too many side roads, too many cars.
- safe for vehicular use
- limited
- The roads are old and need improvement
- Bus service is good.
- pretty good
- Fine
- Need outgrowing infrastructure
- Safety is priority.
- Free, Reasonably easy.

- Could be better, the round a a outs are too small
- Safe some places
- Basic good bus
- Car centric.
- Lacking sidewalks
- Car-centric
- Mediocre at best
- unavailable
- Accessible, easy-to-use
- Inconsistent
- Could be better.
- Could be better.
- basic
- Could be better.
- Could be better.
- good considering the wide area
- Transportation is getting worse every day.
- In need of slight maintenance, but overall safe.

Final Thoughts about Transportation Safety

- more people need to learn how to use a round about, they are great when used properly.
- Create safe bicycling paths between Leavenworth Washington, Cashmere Washington, Wenatchee Washington, and Quincy Washington
- More enforcement of existing traffic laws.
- I focused on Malaga because there is a significant planned growth in new housing units, and the roads/sidewalks/bike lanes/highway intersections will need significant improvements. We are also sensitive to wildfire threats and note only one two-lane road serves as an emergency evacuation route AND emergency vehicle ingress route. We can easily picture the roadway becoming entirely blocked by traffic as thousands of residents try to flee to the west in hundreds or more vehicles at the same time.
- Thanks so much for all that you do!
- I don't want it to impact taxes too much, but I do want safer roads for my family.
- Transportation infrastructure should keep pace with community growth. This is especially true for smaller communities impacted by arrival of large commercial and industrial developments. Those commercial entities should be compelled to bear the cost of improvements required to accommodate the additional traffic generated.
- There should be more bicycle lanes. And raise awareness about bicyclers. I do not really prefer to mountain bike; I like to use my bicycle in town and from town to town. I would like to ride around the whole county using a road that I will being run over or hit by a car.
- We should continue to improve non-motorized options for commuting.
- Think out farther than 20 years so we are not in the same place in 20 years. Adding more car lanes and making more housing within the cities will only push the problem down the road. We need good, fast, timely, frequent public transit such that people can

live out towards quincy where there is more land and space for housing and they can get from there to wenatchee easily and quickly.

LOCATION: Upper Valley 15% of respondents

(Leavenworth, Plain/Coles Corner, Lake Wenatchee/Fish Lake, Merrit)

Vision

41% in favor of changing; 53% in favor of keeping

Priorities:

1. A Transportation Network that can be Shared Safely by All Users
2. Maintain Existing Transportation Facilities in Good Condition
3. A System that is Financially Viable and Leverages Non-County Funding
4. Avoid and Minimize Negative Environmental and Societal Impacts
5. Have the Transportation System Complement Existing and Planned Land Uses
6. Coordinate with a Broad Range of Groups for Development and Ops of the System

NOTE: Compared to "all respondents" the priorities for the Upper Valley have the top two priorities consistent though switched. The remaining 3-5 are consistent though in a different order (all has Complement Land Uses, Financial Viability, and Avoid Impacts as 3, 4, and 5; respectively), though priority number 6 is consistent across the board.

Mode Use:

Regularly means daily or weekly; Not Regularly means monthly or fewer times per year.

- Vehicle: 96% Regularly and 4% not regularly
- Motorcycle: 4% Regularly and 96% not regularly
- Walk: 96% Regularly and 4% not regularly
- Bike: 48% regularly and 52% not regularly
- Transit: 25% regularly and 75% not regularly
- E-device: 25% regularly and 75% not regularly
- Wheeled-device: 0% regularly and 100% not regularly

NOTE: Mode use by respondents in the Upper Valley vs all survey respondents significantly differed in motorcycle (around 10% less than "all), walking (higher than "all" by around 30%), and transit (higher than "all" by nearly 15%).

Safety in Traveling

A question asks about very safe, somewhat safe, somewhat unsafe, and very unsafe perceptions of the below traveling routes, when bifurcated to safe and unsafe, the following are reflective of Wenatchee Valley with different indicated with an underline.

- Sidewalks ADA Infrastructure: Safe (62%) Unsafe (38%)
- Pedestrian Crossings: Safe (69%) Unsafe (31%)
- Bike Lanes/Paths: Safe (38%) Unsafe (62%)
- Trails/Rec Routes: Safe (81%) Unsafe (19%)
- County Roads: Safe (58%) Unsafe (42%)
- State Highways: Safe (77% Unsafe (23%)

- Public Transit: Safe (96%) Unsafe (4%)
- School Zones: Safe (85% Unsafe (15%)

NOTE: In the Upper Valley, results are in alignment with all respondents. There is a slight difference (~5-10%) related to the Upper Valley seeing pedestrian crossings more safe and bike lanes/paths more unsafe.

Priority Safety Project Types

Participants were given a budget to fund approaches to improving safety. The list below shows the highest to lowest funding categories (excluding "Other" which was funded the highest and described below)

1. Separate bikes and people from vehicles (28%)
2. Manage Intersections (13%)
3. Increase Enforcement of Driver Violations (12%)
4. Enhance pavement striping (10%)
5. Improve Pedestrian Crossings (9%)
6. Traffic Calming (7%)
7. Improve Post-Crash Care (6%)
8. Other (6%)
9. Improve awareness of road/route for users (5%)
10. Education to Reduce Dangerous User Behaviors (5%)

NOTE: In the Upper Valley, the top 5 are the same as the all respondents' results without including the "other" option.

"Other" was funded using 5% and the respondents were asked to share what they would like to fund and responses are below. Some of them are appropriate to fit under one of the above nine categories though were not evaluated that way.

- Leavenworth pedestrian
- Pedestrian tunnel in Leavenworth
- Address the traffic backups in/out/around Leavenworth by changing what you can as the County and working aggressively with the State.
- Traffic flow improvements
- Cross highway tunnel
- Couldn't get the next page (6) to show where pedestrian crossings need to be improved. They are in Leavenworth and at the roundabout on Easy Street and Hwy 2 in Wenatchee...this is a super scary location to try to cross the street, I've almost been hit here multiple times.
- Create more routes in/out/around tourist areas

Priority Transportation Improvements

- A multimodal trail that reaches from Coles Corner to Plain to Leavenworth to Wenatchee to Entiat to Chelan.
- Extend the free bus system to Cole's Corner and Plain
- Expansion into areas not typically served
- Multiuse pathway along chumstick highway or paving the gravel access road along the railroad to create a mixed use pathway. Pedestrian tunnel under highway 2 in Leavenworth.
- "Circle at North Rd/Chumstick Hwy /Autumn Strasse
- Second bridge into Peshastin to facilitate development west of Peshastin including a circle at bridge/Hwy 2
- More access to and from vacation areas to ease congestion. Widen shoulders on popular bicycle routes (Chumstick, Shore roads at Lakes, North Road, etc.
- "Safer walking and bike paths along East Leavenworth Road. It is a death trap waiting to happen.
- The south end Wenatchee bridge traffic is being stretched and will be a nightmare if not addressed now.
- The traffic circle at Easy street is beginning to break down already. Why was a right turn lane not put in onto East Street? How long until this design, which seemed dumb from the start, begins to fail? When will an actual interchange be needed here?
- The lack of County voicing their concerns during SEPAs in the County and other municipalities has allowed developers to get away with impactful building that then requires fixing at taxpayer expense. Use your voice to follow concurrency requirements and be sure you are accurately measuring real times of peak traffic in studies.
- The Peshastin bridge is a time in for impact as development starts to creep there. Hold entities like Bergren, Weidner accountability for their impacts on traffic and safety.
- Influence State to prioritize Hwy 2 between Big Y and Leavenworth. We are coming toward the need for 4 lanes plus turn along there.
- Underground pedestrian crossings in Leavenworth
- Safe lanes for bicycles
- "Chumstick/ Hwy 2/Front St intersection needs to be safer for other users besides vehicles.
- Speed limit on East Leavenworth & Icicle Rd should be a consistent 30 mph.
- East Leavenworth Rd needs to include a bike/pedestrian lane. There are no shoulders on either side. Too much vehicle traffic so other users are not able to access safely."
- "Redo East Leavenworth Rd to make it safer for nonmotorized recreation.
- Connect communities via the Loop Trail.
- Peshastin. Ridge Replacement
- Additional bridge over the Columbia south of Wenatchee
- Planning for population growth prior to, not after.
- But you are highlighting city infastructure in your above examples but dont want similair suggestions. Weird.
- Chumstick multiuse pathway along the road and/or railroad up to Plain. North road multiuse pathway.

- Multi use trails connecting Leavenworth to Plain & Cashmere
- "A safe bike trail from Wenatchee to Leavenworth would be great! Improvements would be:
- -Complete the one block of sidewalk on Hwy 2 in Leavenworth from Cascade Vet to Sage Mountain.
- -Take out the sidewalk on the bridge on Hwy 2 NW of Alice Avenue in Dryden. This is full of broken concrete and glass.
- -Build a short paved connector from Sunburst Lane to Hwy 2, west of Hay Canyon in Cashmere
- "Traffic issues into and out of the Leavenworth tourist area focusing on Chumstick ingress/egress in the new apartment areas.
- Traffic issues on North Road trying to avoid the mass backups on Highway 2.
- Work with the State to improve the flow in the Leavenworth area and lessen the mass backups."
- Bike and walking path between Leavenworth and Cashmere Wa
- Biking trail between Leavenworth and cashmere.
- Biking trail between Leavenworth and cashmere.
- Paths (pedestrian and bike) connecting towns, such as Sunnyslope to Cashmere, Cashmere to Leavenworth, and Leavenworth to Plain.
- Do not put a roundabout on Chumstick Highway! What a fiasco this will be, just like the horrible roundabout at the Safeway in East Wenatchee.
- Widen Chumstick Highway to allow a bike lane.

Describe Transportation in a few Words

- OK
- Pretty good.
- Fine
- Acceptable, could be better
- Link Transit is Amazing
- fairly good
- Incomplete - car based.
- Car dependent. Incomplete.
- Takes credit for city infrastructure.
- In need of improvement to handle the traffic!
- Lacking infrastructure now and for future
- Car focused, incomplete
- Good
- ok
- Opportunity to help people walking and biking.
- Shoulder expansion needed
- Not user friendly
- Good where existing, not easily accessible for all
- adequate
- barely adequate

- I wouldn't be safe to use
- Unfriendly to cyclists
- "Unavailable here in Plain.

Final Thoughts about Transportation Safety

- Couldn't get the map to work in page six of this survey.
- Expand range and make drivers and bikers safer by managing shoulders and education for everyone
- Link Transit is amazing for providing free, efficient transportation across the county. More bike and pedestrian lanes would be helpful.
- Multiuse pathways are the only way to accommodate our growing communities. We focus far too much on parking availability and not enough on reducing our reliance on vehicles. More roundabouts are needed too!
- PLEASE be more aggressive in pushing on the State DOT to address the massive traffic backups in the Leavenworth area that spill on to County roads and impact all of us in the area.
- Thanks for your time in asking these questions and getting public insight to places of danger. Our infrastructure has NOT kept up with growth and municipalities will need to hold the line on growth that impacts infrastrature without developers finding the mitigation. Clearly the impacts of such growth should not fall on the taxpayers.
- I think multi use pathways, particularly for bikes should be a priority, but I'd like to see some well designed roundabouts in critical areas. And I think that wildlife crossings should be built to reduce deer collisions.
- DO NOT put in a round about on Chumstick Hwy. in Leavenworth. I can't stress this enough.
- A lot is needed for people to be able to even walk and bike in Chelan County let alone do it safely.
- Wider shoulders on county roads. Alternated roads created to ease traffic in tourist areas, mainly the Cities of Leavenworth and Chelan.
- Chelan County is forward thinking in many ways; I love the free electric bus system! In the future we can improve on integrating the outskirts of the county, helping the elderly with getting around, and making recreational modes of transportation (hiking, biking, Nordic skiing) more accessible and safer for locals and visitors alike.
- "Too many red light pedestrian crossings on Hwy 2 in Leavenworth. Yellow caution signs make more sense, similar to one by ranger station. People still cross wherever. Pedestrian overpasses are safer for all users . There should be one by city hall. The two red pedestrian lights on Hwy 2, through Leavenworth create traffic backups.
- Be visionary, ask residents who reside in Leavenworth who to improve transportation. Don't rely on city, county officials or politicians."

LOCATION: Mid Valley <7% of respondents

(Cashmere, Dryden, Peshastin, Monitor)

NOTE: With such a low level of respondents, the mid valley survey responses are not considered statistically significant.

Responses are still provided below without analysis.

Vision

40% in favor of changing; 50% in favor of keeping

Priorities:

1. Maintain Existing Transportation Facilities in Good Condition (21%)
2. A System that is Financially Viable and Leverages Non-County Funding (19%)
3. Have the Transportation System Complement Existing and Planned Land Uses (14%)
4. A Transportation Network that can be Shared Safely by All Users (7%)
5. Avoid and Minimize Negative Environmental and Societal Impacts (5%)
6. Coordinate with a Broad Range of Groups for Development and Ops of the System (5%)

Mode Use:

Regularly means daily or weekly; Not Regularly means monthly or fewer times per year.

- Vehicle: 100% Regularly and 0% not regularly
- Motorcycle: 12.5% Regularly and 87.5% not regularly
- Walk: 33% Regularly and 67% not regularly
- Bike: 11% regularly and 89% not regularly
- Transit: 0% regularly and 100% not regularly
- E-device: 0% regularly and 100% not regularly
- Wheeled-device: 11% regularly and 89% not regularly

Safety in Traveling

A question asks about very safe, somewhat safe, somewhat unsafe, and very unsafe perceptions of the below traveling routes, when bifurcated to safe and unsafe, the following are reflective of Mid Valley.

- Sidewalks ADA Infrastructure: Safe (88%) Unsafe (13%)
- Pedestrian Crossings: Safe (88%) Unsafe (13%)
- Bike Lanes/Paths: Safe (63%) Unsafe (38%)
- Trails/Rec Routes: Safe (100%) Unsafe (0%)
- County Roads: Safe (88%) Unsafe (13%)
- State Highways: Safe (88%) Unsafe (13%)
- Public Transit: Safe (88%) Unsafe (13%)
- School Zones: Safe (75% Unsafe (25%)

Priority Safety Project Types

Participants were given a budget to fund approaches to improving safety. The list below shows the highest to lowest funding categories.

1. Manage Intersections (18%)
2. Separate bikes and people from vehicles (16%)
3. Increase Enforcement of Driver Violations (13%)
4. Improve Post-Crash Care (11%)
5. Improve Pedestrian Crossings (9%)
6. Improve Awareness of Road/Route for Users (8%)
7. Traffic Calming (8%)
8. Education to Reduce Dangerous User Behaviors (7%)
9. Enhance pavement striping (6%)
10. Other (4%)

Priority Transportation Improvements

- "Widen highway heading into Leavenworth and include a bike lane
- More roundabouts and consistent connectivity.
- If I'm thinking BIG I'd say create a bypass for Hwy 2 at Leavenworth. Or at least pedestrian overpasses.
- "Use AI to time the traffic lights between Wenatchee and Leavenworth to eliminate delays and improve efficiency.
- Finish the Olds Station 2nd bridge over the Wenatchee River.
- Beaver hill switch back, Methow St improvements city limits to Squilchuck, E Leavenworth dogleg

Describe Transportation in a few Words

- Simple
- I don't feel qualified to respond to this question
- Fairly good
- Rural and narrow roads with high tourism
- Focused on vehicles
- Fine if you're careful
- rural get a car
- Safe

Final Thoughts about Transportation Safety

- Education for a shift in culture needs to accompany changes for multimodal pathways. Work with partner organizations to educate and have fun events that increase awareness and respect for transportation other than cars.
- There's no way to remove all risks.

LOCATION: Entiat Valley ~2% of respondents

(Entiat)

NOTE: With such a low level of respondents, the Entiat Valley survey responses are not considered statistically significant.

Responses are still provided below without analysis.

Vision

Data not collected

Priorities:

1. Maintain Existing Transportation Facilities in Good Condition
2. Have the Transportation System Complement Existing and Planned Land Uses
3. A Transportation Network that can be Shared Safely by All Users
4. A System that is Financially Viable and Leverages Non-County Funding
5. Avoid and Minimize Negative Environmental and Societal Impacts
6. Coordinate with a Broad Range of Groups for Development and Ops of the System

Mode Use:

Regularly means daily or weekly; Not Regularly means monthly or fewer times per year.

- Vehicle: 100% Regularly and 0% not regularly
- Motorcycle: 0% Regularly and 100% not regularly
- Walk: 33% Regularly and 67% not regularly
- Bike: 0% Regularly and 100% not regularly
- Transit: 0% regularly and 100% not regularly
- E-device: 0% regularly and 100% not regularly
- Wheeled-device: 0% Regularly and 100% not regularly

Safety in Traveling

A question asks about very safe, somewhat safe, somewhat unsafe, and very unsafe perceptions of the below traveling routes, when bifurcated to safe and unsafe, the following are reflective of Entiat Valley.

- Sidewalks ADA Infrastructure: Safe (67%) Unsafe (33%)
- Pedestrian Crossings: Safe (33%) Unsafe (67%)
- Bike Lanes/Paths: Safe (33%) Unsafe (67%)
- Trails/Rec Routes: Safe (100%) Unsafe (0%)
- County Roads: Safe (67%) Unsafe (33%)
- State Highways: Safe (33%) Unsafe (67%)
- Public Transit: Safe (67%) Unsafe (33%)
- School Zones: Safe (67%) Unsafe (33%)

Priority Safety Project Types

Participants were given a budget to fund approaches to improving safety. The list below shows the highest to lowest funding categories.

1. Other *(comment included: Improve and take care of all the existing roads)*
2. Education to Reduce Dangerous User Behaviors
3. Improve Post-Crash Care
4. Manage Intersections
5. Increase Enforcement of Driver Violations
6. Traffic Calming
7. Improve Pedestrian Crossings
8. Enhance pavement striping
9. Improve Awareness of Road/Route for Users
10. Improve Pedestrian Crossings

Priority Transportation Improvements

- Utilize one-way roads to reduce private property impacts when improving roads. Improve Manson area roads road facilities to provide biking and walking options along all major roads. Replace the West Monitor Bridge with a bridge that is functional and structurally sound for all traffic. Improve sunnyslope area road facilities to provide biking
- and walking options along all major roads. Replace the Monitor Bridge.
- Improving ride quality of all county roads. Pavement preservation is critical and nowhere close to keeping up with the decay.

Describe Transportation in a few Words

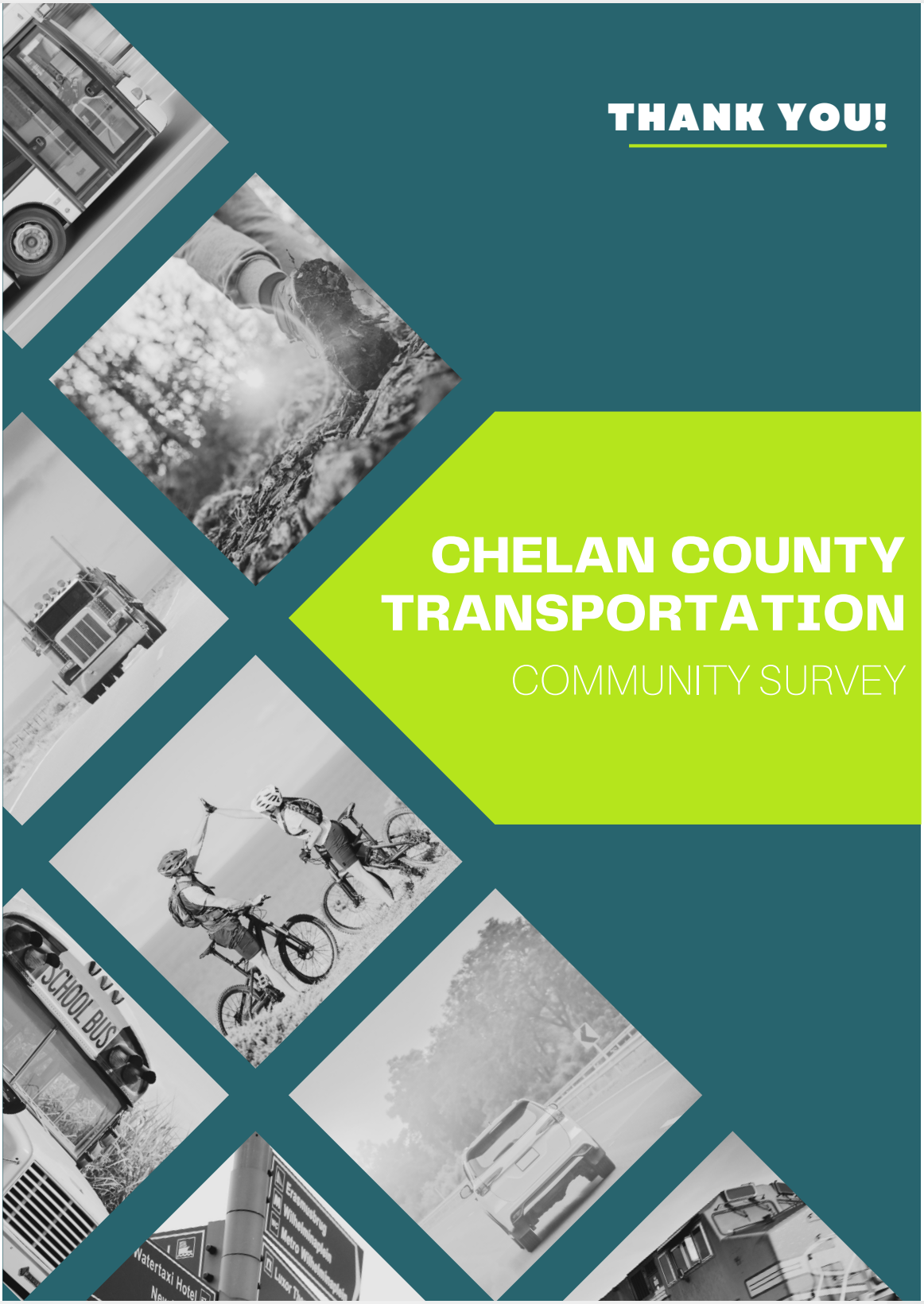
- Hectic, can be dangerous, not easy
- Confined.
- The roads are falling apart.

Final Thoughts about Transportation Safety

- We need to keep up with the growth in all of the outline areas. Our rural roads are not receiving the funding to keep up with the rate they are falling apart.

APPENDIX B

Community Survey


THANK YOU!
CHELAN COUNTY TRANSPORTATION
COMMUNITY SURVEY
SCHOOL BUS

THIS SURVEY WILL HELP GUIDE THE NEXT 20 YEARS OF TRANSPORTATION IN CHELAN COUNTY. IT WILL ALSO HELP THE COUNTY DEVELOP A SAFETY ACTION PLAN TO HAVE SAFE STREETS FOR ALL WHO WALK, BIKE, ROLL, AND DRIVE IN CHELAN COUNTY.

THIS SURVEY IS FOR UNINCORPORATED CHELAN COUNTY
SO IT DOES NOT APPLY TOAREAS IN CITIES/TOWNS.

What City, State do you live in? _____

How often do you use the following modes of transportation in unincorporated Chelan County?

	Daily	Weekly	Monthly	A few times/year	Never
Personal Vehicle	☐	☐	☐	☐	☐
Motorcycle	☐	☐	☐	☐	☐
Walking	☐	☐	☐	☐	☐
Bicycle	☐	☐	☐	☐	☐
Public Transit	☐	☐	☐	☐	☐
E-Bike/E-Scooter	☐	☐	☐	☐	☐
Wheel-Based (skateboard, roller blades/skates, etc.)	☐	☐	☐	☐	☐

Rank the following safety goals from most to least important starting with #1.

_____ Improve pedestrian crossings (shorter distance, curb ramps)

_____ Separate bikes/people from vehicle traffic using shoulders, bike lanes, sidewalks or multimodal pathways)

_____ Traffic calming design (narrow lanes or roads)

_____ Improve post-crash care (reduce response time/improve traffic at crash site)

_____ Improve driver awareness (wayfinding, warning signs, lighting, etc.)

_____ Enhance pavement striping (wide edge line striping)

_____ Education programs to reduce dangerous driver behavior (speeding, impaired, aggressive)

_____ Increase enforcement of driver violations (targeted patrols or automated enforcement)

_____ Managed intersections (stop signs, signals, or roundabouts)

_____ Other (If other, please describe in the space below. Use this option to identify any missing safety goals.)

_____
_____
_____

Please select all the ways you spend your time in unincorporated Chelan County:

☐ Live ☐ Work ☐ Shop ☐ Recreate Outdoors ☐ Staycation/Vacation
☐ Learn/Attend School ☐ Socialize/Visit Family or Friends ☐ Other

Please rate the following Transportation Elements in unincorporated Chelan County:

	Very Safe to Use	Somewhat Safe to Use	Somewhat Unsafe to Use	Very Unsafe to Use
Sidewalks/ADA Infrastructure	☐	☐	☐	☐
Pedestrian Crossings	☐	☐	☐	☐
Bike Lanes/Bike Paths	☐	☐	☐	☐
Trails/Recreation Routes	☐	☐	☐	☐
County Roads (excluding state highways)	☐	☐	☐	☐
State Highways	☐	☐	☐	☐
Public Transit	☐	☐	☐	☐
School Zones	☐	☐	☐	☐

Using 2-3 words, describe Transportation in unincorporated Chelan County?

_____
_____

Place an "x" along the bar to indicate your thoughts on Chelan County's current vision for transportation as written below.

"Provide a safe, balanced, and efficient multimodal transportation system that serves anticipated local and regional growth."

Strongly Dislike
It needs changing



Strongly Support
No Change Needed

Thinking about the next 20 years, please rank Chelan County's six Transportation Goals from Most Important (1) to Least Important (6).

_____ Maintain existing transportation facilities in good condition

_____ A transportation network that can be shared safely by all users

_____ A system that is financially viable and leverages non-County funding wherever possible

_____ Have a transportation system complement existing and planned land uses

_____ Avoid and minimize negative environmental and societal impacts

_____ Coordinate with a broad range of groups for development and operations of the system

In the next 20 years, what transportation improvements or projects would you most like to see in unincorporated Chelan County? Please share below.

What is your age?

☐ Under 18 ☐ 18 - 24 ☐ 25 - 34 ☐ 35 - 44 ☐ 45 - 64 ☐ 65 - 74 ☐ 75+

What is your race?

☐ White/Caucasian ☐ Black/African American ☐ American Indian/Alaskan Native
☐ Asian ☐ Native Hawaiian/Pacific Islander ☐ Other

What is your ethnicity?

☐ Hispanic/Latino ☐ Not Hispanic/Latino ☐ Other

How do you identify?

☐ Male ☐ Female ☐ Other

How many people are in your household including you? _____

How many functional vehicles does your household have? _____

What is your household income (include total for everyone over 18yrs)

☐ Less than $10,000 ☐ $10,000 - 14,999 ☐ $15,000 - 24,999 ☐ $25,000 - 34,999
☐ $35,000 - 49,999 ☐ $50,000 - 74,999 ☐ $75,000 - 99,999 ☐ $100,000 - 149,999
☐ $150,000 - 199,999 ☐ $200,000+ ☐ Prefer not to answer

Does anyone in your household live with any of the following disabilities: Hearing, Vision, Cognitive, Physical, or Independent Living Difficulty?

☐ Yes ☐ No

THANK YOU FOR TAKING THE TIME TO COMPLETE THIS SURVEY AND CONTRIBUTE TO A SAFER TRANSPORTATION SYSTEM FOR EVERY PERSON TRAVELING IN CHELAN COUNTY NO MATTER IF THEY ARE WALKING, BIKING, ROLLING, OR DRIVING.

APPENDIX C

Outreach Materials

SAFER

PEOPLE
ROADS
SPEEDS
VEHICLES
LAND USES &
POST-CRASH CARE

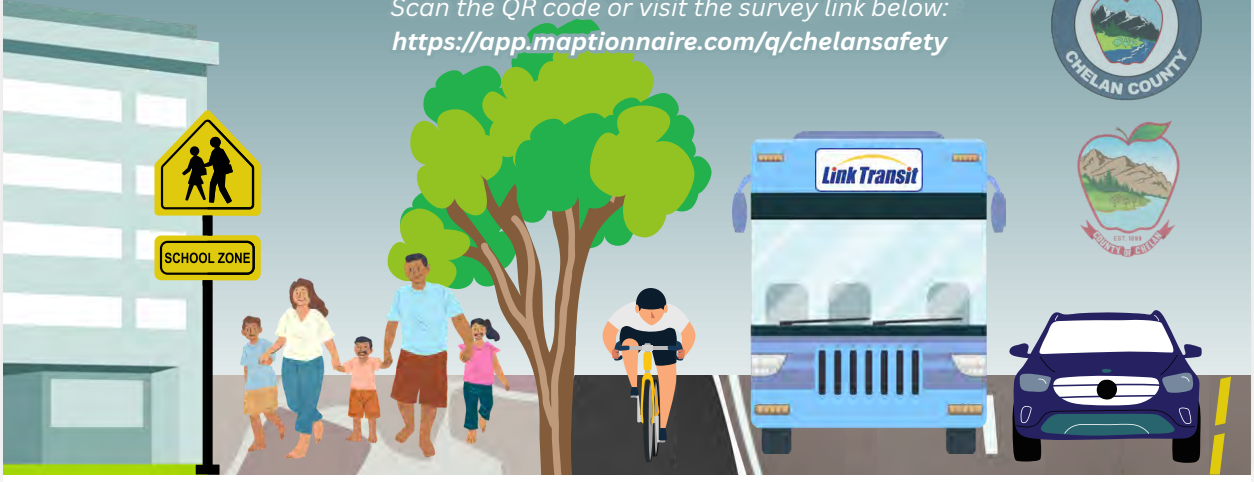
SCAN HERE

IS IT SAFE TO WALK, BIKE, ROLL, OR DRIVE EVERYWHERE IN CHELAN COUNTY?

VISION ZERO SURVEY FOR CHELAN COUNTY

TAKE THE SURVEY FOR VISION ZERO!
It takes all of us helping to achieve a vision zero goal of no fatal or serious injury collisions across all modes of transportation within Chelan County.

Scan the QR code or visit the survey link below:
https://app.maptionnaire.com/q/chelansafety



SEGURO

PERSONAS **SEGURAS**
MODOS **SEGUROS**
CARRETERAS **SEGURAS**
VELOCIDADES **SEGURAS**
COMUNIDADES **SEGURAS**
RESPUESTAS **SEGURAS**

¿ES SEGURO CAMINAR, ANDAR EN BICICLETA, RODAR O CONDUCIRIT EN TODAS PARTES DEL CONDADO DE CHELAN?

¡PARTICIPE EN LA ENCUESTA PARA VISIÓN CERO!
Es necesario que todos ayudemos a lograr el objetivo de visión cero de que no haya colisiones fatales o con lesiones graves en todos los modos de transporte dentro del condado de Chelan.

.

ENCUESTA DE VISIÓN CERO PARA EL CONDADO DE CHELAN

Escanee el código QR o
visite el enlace de la encuesta a continuación
https://app.maptionnaire.com/q/chelansafety



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Plus White, Black, & Greys

APPENDIX D

Community Engagement Plan

CHELAN COUNTY
COMMUNITY ENGAGEMENT PLAN

TRANSPORTATION SAFETY ACTION PLAN
&
UPDATE TO THE TRANSPORTATION ELEMENT
OF THE COMPREHENSIVE PLAN



PURPOSE

The Community Engagement Plan (CEP) is a guide for engaging the individuals and agencies connected to the community. Allowing for an iterative process, the CEP adapts to stakeholder needs and centers the community members as experts in their own lived experiences and making space for their valued feedback.

To create cohesive engagement materials and maintain consistent messaging through the life of the project, the CEP will provide a project identity and branding strategy to be used in all public outreach materials to help associate information with this specific effort.

A successful CEP will result in:

- Building Community Trust
- Identifying Systemic Inequities
- An Educated Community
- Clear Community Priorities

Details for how these results can be achieved is provided through the remainder of this document.

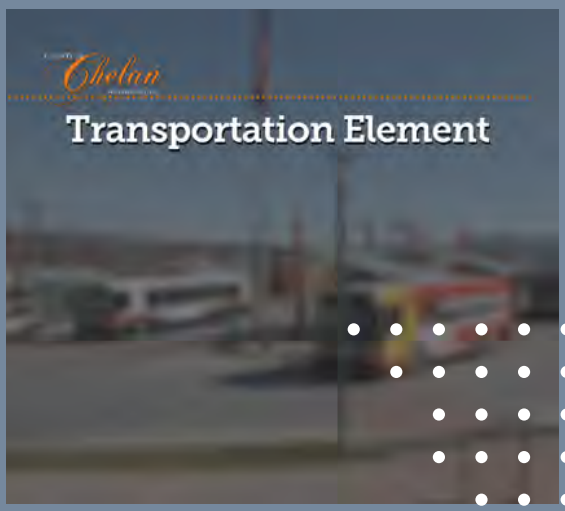
To most efficiently and effectively conduct an outreach strategy, this CEP also guides stakeholder engagement including identifying appropriate audiences, timelines, and approach.

It is important to note that as strategy is implemented, some contents of this plan may be adjusted in the best interest in the outcomes being sought for public engagement in Chelan County.



EXISTING DATA

For over 125 years, Chelan County has been serving its community. Efforts of building trust and relationships do not begin with this initiative and as such it is important that the outreach strategy is informed by existing data.



This includes examining the following:

- Previous plans, policies, or projects that included outreach efforts;
- Reviewing the County's approach towards outreach materials/design
- Effectiveness of previous outreach to understand what may contribute to initiatives that were more successful vs where engagement fell short.
- Representatives that have created a relationship with stakeholders to include in efforts and those who may benefit from beginning to be a part of the work.



It is important to note that as strategy is implemented, some contents of this plan may be adjusted in the best interest in the outcomes being sought for public engagement in Grant County.

Consistent with the County's Public Participation Plan, outreach efforts to engage the Chelan County community include a collective approach of different activities, sources of communication, and broad initiatives to disseminate information and maximize opportunities for involvement.

The outreach strategy is described herein.

OUTREACH TIMELINE

SAFETY ACTION PLAN

Dates for the following are still to be determined at this time therefore, general timeframes are used in place of specific dates until finalized.

Early March
- Team reviews the CEP and content is finalized
- Task Force invitee list is finalized and invitations to participate are sent

Late March
- Task Force meetings are scheduled

April
- CEP is reviewed by the Task Force members
  - Ensure outreach capacity/partnership opportunities are established.
- Outreach strategy is finalized and materials are designed and prepared

Early May ~ Launch Bilingual Outreach Campaign
- Includes digital and physical approaches
  - Focus 1: Obtain survey responses
  - Focus 2: Educate the public
  - Focus 3: Strengthen relations between County and community

Mid-Summer ~ Report on outreach effectiveness to the Task Force

Late July ~ Outreach campaign closes

Aug - Oct
- Analyze both qualitative and quantitative outreach data
- Prepare finalize outreach report
- Review public engagement results with the Task Force members

TRANSPORTATION ELEMENT

March - April
- Agency and community stakeholder interviews

May - June
- Workshops with the general public

OUTREACH STRATEGY

METHODS FOR OUTREACH

Depending on the stakeholder level and phase of the project, different methods will be more, or less, effective. Below are description of how various methods may be used:

Digital Campaign
The launch includes putting out the digital format of project materials (maps, fliers, surveys, etc.) in a consistent, cohesive message through the stakeholders and for the duration of the plan. Partnerships with the County, nonprofits, transportation agencies, businesses, and organizations will increase the effectiveness of a digital campaign. Costs of the campaign may be incurred if the team finds it necessary to boost media, utilize a third party (radio), or leverage advertisements.

Engagement Events
Events can offer a complementary approach to a digital campaign and also provide direct, in-person connections. Options can include organic (planned and produced by the project team) or complementary (joining an existing event) depending on goals and capacity. Team members will be onsite with outreach materials and making available necessary translation and interpretation for team members and/or members of the community.

Interviews
Applicable for individuals and groups, interview formats offer an opportunity for greater detail in the discussions resulting in enhanced understanding on behalf of both the stakeholders and the team. Formats can include listening sessions, conversational, and/or structured; all of which can be applicable for agencies, community organizations, and the general public.

Monitoring Outreach Data
Effective outreach is imperative to a successful project and thus ongoing monitoring of outreach will inform any necessary shifts in approach, timeline, or audience focus.

Translation & Interpretation
All methods for outreach will include bilingual (English and Spanish) access.

OUTREACH AUDIENCES

There are three levels of stakeholders considered in the outreach strategy. Within each level are various individuals, groups, agencies, and organizations each identified by a specific sector, demographic, or geographic area.

LEVEL 1: Stakeholders that can “approve/deny” the plan and its contents. These are individuals that should be engaged in the beginning to ensure alignment with jurisdictional expectations.
LEVEL 2: Stakeholders that can “advance/delay” the plan and its contents. They may not have authority over the project though they are important voices to engage and have support from.
LEVEL 3: Stakeholders that can “advocate/disrupt” the plan’s development. These are often community champions or vocal members of the general community. It is important to communicate in clear, transparent, and accessible ways.

OUTREACH STRATEGY

OUTREACH AUDIENCES CONTINUED

Level 1 Stakeholders:

- County Commissioners & Administrative Staff
- County Directors & Management Staff

Level 2 Stakeholders:

- Link Transit
- Chelan Douglas Transportation Council (CDTC)
- Chelan County Pubic Utility District (PUD)
- Washington State Department of Transportation (WSDOT)
- Chelan Douglas Regional Port Authority (CDRPA)
- Education (WVCC, Cascade, Cashmere, Wenatchee, Entiat, Lake Chelan, Manson, Stehekin)
- Emergency Services (Sheriff's office, Fire Marshal, Paramedics, Rivercom)
- Railroad (Burlington Northern Santa Fe and Amtrak)
- Our Valley Our Future (OVOF)
- Local Municipalities (Leavenworth, Cashmere, Wenatchee, Entiat, Chelan, Manson, Stehekin)
- Reclamation Districts (Wenatchee and Lake Chelan)

Level 3 Stakeholders:

- City of Wenatchee and Chelan County Housing Authority
- Community for the Advancement of Family Education (CAFE)
- Action Health Partners (AHP)
- Thriving Together NCW
- Indigenous Roots & Reparations Foundations
- Lilac Services for the Blind
- Wenatchee Valley Senior Activity Center (WVSAC)
- NCW Libraries
- NCW Equity Alliance
- TREAD and Wenatchee Outdoors
- Chelan Douglas Health District (CDHD)
- Clinical Health Partners (Confluence, Columbia Valley Community Health, Cascade Medical)
- Upper Valley Connection
- Chambers of Commerce (Leavenworth, Cashmere, Wenatchee, Entiat, Chelan)
- Local Businesses Owners & Employees (Retail, Industrial, Manufacturing, Recreation, etc.)
- Faith Based Organizations (Leavenworth, Cashmere, Wenatchee, Entiat, and Chelan)
- Social Service Organizations (Community Action, DSHS, Upper Valley MEND, People for People)
- Demographic Priority Households
  - Low- and Moderate-Income, English as a Second Language (ESL), Youth, Senior Citizens, and Minority Race (non-white) and Ethnicity (Hispanic)
- Geographic Areas for Outreach
  - Chelan to Stehekin; Wenatchee to Malaga; Cashmere to Leavenworth; Plain to Steven Pass; and Lake Entiat to Ardenvoir
- General Public that lives, works, plays, learns, and worships in Chelan County

OUTREACH STRATEGY

OUTREACH OPPORTUNITIES

Considering the outreach timeline stretches from May through July, the following organic and complementary events are expected.

- April 24 - May 4 ~ Apple Blossom Festival (Wenatchee)
- May 9/10 ~ Hell on Hooves Rodeo (Wenatchee)
- May 10/12 ~ Maifest (Leavenworth)
- May 15/18 ~ Spring Birdfest (Leavenworth)
- May 18 ~ Moe Palooza (Chelan)
- May 23/25 ~ Alphorn Festival (Leavenworth)
- June 27/30 Touratech Rally (Plain)

Reoccurring through summer

- Farmers Markets (Leavenworth, Cashmere, Wenatchee, and Chelan)
- Makers Market (Entiat)
- Municipality meetings such as councils, project open houses, town halls, etc.
- Art in the Park (Leavenworth)
- Summer Theater (Leavenworth)

Holidays celebrated in multiple locations

- May 7 ~ Bike to School Day
- May 15 ~ Bike to Work Day
- May 26 ~ Labor Day
- June 19 ~ Juneteenth
- July 4 ~ Independence Day

Organizations to Partner with for future events not currently scheduled:

- Community for the Advancement of Family Education (CAFE)
- Team Naturaleza
- Sustainable NCW
- Thriving Together
- Pybus Public Market
- Chambers of Commerce
- Downtown Associations
- Wenatchee Valley Community College
- Wenatchee River Institute
- The Sidestreet in Cashmere
- TREAD, Wenatchee Outdoors
- NCW Tech Alliance
- School Districts
- Social Service and Free-Clinic Partners

COMMUNITY ADVISORY COMMITTEE

PURPOSE

A requirement of the Safety Action Plan is to have group of individuals, known as the Task Force or Community Advisory Committee (CAC) charged with informing the plan's development, implementation, and monitoring. The CAC is comprised of County staff and representatives from agencies and/or organizations that are able to contribute to systemic safety improvements. In order to best contribute to the process, the CAC is to be engaged early and regularly.

MEMBERSHIP

Potential members of the CAC may include:

- Chelan County representatives such as
  - Commissioner
  - Public Works
  - Engineering
  - Emergency Response (Sheriff and Fire)
- Local Municipality with a strong planning relationship with the County (Leavenworth/Entiat)
- School District Superintendent from outlying community(Cascade, Entiat, or Lake Chelan)
- Washington State Department of Transportation (WSDOT)
- Chelan Douglas Transportation Council
- Chelan Douglas Regional Port Authority
- Link Transit

Additional sectors to consider for member representation include:

- Economic
- Freight
- Bike/Pedestrian
- ADA / People with Disabilities

MEETINGS

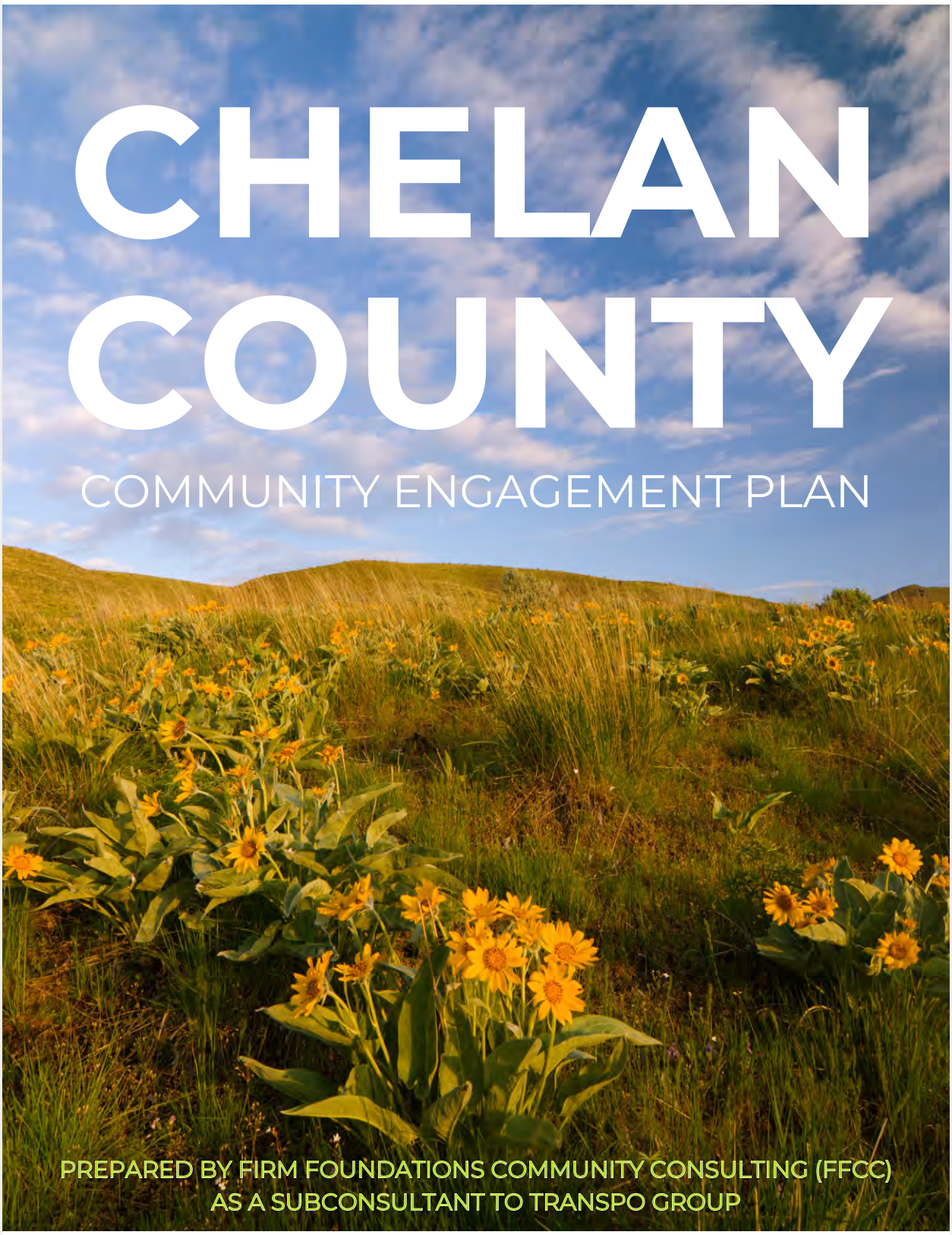
Below is the anticipated timeline for CAC meetings and content specific to outreach that will be reviewed or presented.

- April ~ Review of the CEP and provide feedback for additional outreach opportunities
- June ~ Receive an update on outreach effectiveness to date
- October ~ Present the final Outreach Report and data
- December ~ No outreach specific content planned at this time.

FINAL OUTREACH REPORT

Together, the Safety Acton Plan and Transportation Element of the Comprehensive Plan will result in a significant stakeholder engagement process. To best document the voices of those who live, work, play, learn, and worship in Chelan County, a Final Outreach Report will be developed. Included in this report will be the following:

- Executive Summary
- Data Analysis conducted to inform the outreach strategy
- Details about the outreach strategy and process of launching the campaign
- Stakeholder engagement including efforts to connect, successful communication, and results
- Statistics related to outreach initiatives such as media interactions, fliers distributed, interviews held, events, tabled, meetings attended, etc.
- Overview of the survey structure and categorizing of its data
- Summary of community education, awareness, priorities, and preferences
- Overall outreach results from all approaches combined
- Visuals such as graphs, photos, and tables recapping the outreach
- Appendices providing information such as:
    - List of stakeholders and their associations and contact info,
    - Stakeholder interview details (listening sessions, conversational, structured)
    - Copy of the survey and insight into data tables
    - Examples of material distributed
    - Original CEP


CHELAN
COUNTY
COMMUNITY ENGAGEMENT PLAN
PREPARED BY FIRM FOUNDATIONS COMMUNITY CONSULTING (FFCC)
AS A SUBCONSULTANT TO TRANSPO GROUP

APPENDIX E

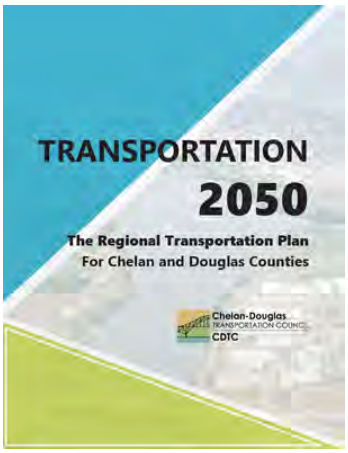
Community-Informed Planning Efforts

COMMUNITY ENGAGEMENT PLAN (CEP)

EXISTING DATA

Through both previous and parallel efforts, Chelan County and its local partners have captured diverse thoughts from the community related to multimodal transportation. This information is highlighted below and was incorporated into considerations that guide the findings as a result of the outreach results.

Transportation 2050



Approved on September 11, 2025 by the Chelan Douglas Transportation Council (CDTC), the Transportation 2050 plan focuses on the region's transportation goals, policies, and programs, and identifies investments on regionally significant transportation infrastructure, which includes infrastructure for all transportation modes on state highways, primary county roads, and city streets; multi-use paths; local routes that provide regional bicycle mobility; sidewalks, and any other transportation infrastructure associated with regional mobility. A foundational process in the development of this regional transportation plan is engaging the public to understand its preference and opinions on relevant regional transportation issues. Via a survey distributed to 1,074 randomly selected residents of Chelan and Douglas counties, the CDTC gathered data on active transportation and transit use, vehicle ownership costs, teleworking, electric vehicles, investment priorities and ways to fund maintenance and preservation. The outreach included Douglas County feedback so, as able, Chelan County specific data was considered and is provided below:

- When asked to prioritize funding investment for current and future infrastructure, Chelan County respondents ranked "Road Improvements that Reduce Congestion" at the top followed by "Active Transportation" and then "New Roads to Accommodate Growth" with "Charging for Electric Vehicles" at the bottom.
  - NOTE: "Charging for Electric Vehicles" was ranked second to "Road Improvements that Reduce Congestion" for ONLY the Lake Chelan area with respondents voting 29% and 30%; respectively.
- When asked to choose factors that discourage the use of Link Transit, 1 in 3 respondents identified "service scheduling and design inconveniences" as their reason(s).
- When asked to choose factors that discourage the use of bicycle infrastructure, 1 in 3 respondents identified "not feeling safe" or "not having bike lanes" as their reason(s).

COMMUNITY ENGAGEMENT PLAN (CEP)

EXISTING DATA

Regional Bicycle Plan



Serving as a blueprint for incorporating bicycle transportation as a viable and attractive option for both the incorporated and unincorporated areas of Chelan and Douglas counties in and near Wenatchee, East Wenatchee and Rock Island, the Regional Bike Plan was adopted on August 11, 2022. Through public events, social media, and surveys, the public was engaged through the 2013 and 2018 planning processes. Available in the plan are summarized preferences and opinions from the 2018 Plan Update process, specifically.

- Barriers to Bicycle Transportation (response percentages)
  - Lack of bike lanes, trails, or routes (30%)
  - Safety around vehicles (16%)
  - Weather (15%)
  - Bike Parking (8%)
  - Business including work, kids, pets, and hobbies (7%)
  - Hilly terrain (7%)
  - Other single barriers identified account for 9%
- Where people would like to bike
  - To trailheads, parks, and recreation
  - To shopping, dining, and errands
  - To the workplace
- How to improve the bike network
  - Connections to intercity trails (like the Loop Trail)
  - Use wayfinding signs and bike route information
  - Create safe routes around schools (including walking)
  - Improved facilities
    - Protected or buffered bicycle lanes
    - Add bicycle lanes
    - Off-street trails (multimodal pathways like the Loop Trail)
- Bike education opportunities
  - Youth bike programs and education
  - Resources to encourage and support bike-to-work options
  - Classes and events geared towards bike education for cyclists (bike rodeos)

COMMUNITY ENGAGEMENT PLAN (CEP)

EXISTING DATA

Coordinated Mobility Plan

Adopted on November 10, 2022, by the CDTC, the Coordinated Mobility Plan brings together the Coordinated Public Transit Plan and the Human Services Transportation Plan. It outlines how transit and social services agencies can work together with other transportation providers to improve regional mobility for individuals with special transportation needs throughout the two-county area (Chelan/Douglas).



Using "Lunch & Learn" events, the CDTC held a series of virtual focus groups with professionals from local government, public and private transportation, housing advocates, healthcare, non-profits, and social service providers. Through four categories of focus groups (Seniors and Disabilities; Youth; Disadvantaged Assistance; and Medical and Employment), the CDTC analyzed needs that were previously identified during the 2019 Coordinated Mobility Plan update.

Outreach included representatives from:

- Department of Social Health Services
- Central Washington Disability Resources
- Chelan-Douglas Community Action Council
- Catholic Charities of North Central Washington
- Washington State Department of Transportation
- Communities in Schools of North Central Washington
- Columbia Valley Community Health
- Lake Wenatchee Fire & Rescue
- Eastmont School District
- Cascade Medical Center
- Confluence Health
- Oxford House
- YMCA

The planning and plan update process included a survey with 800 English responses, 63 Spanish responses, and numerous engagement requests with no response. This was during covid so it is likely a result of the pandemic environment. Relevant information is below:

1. Access to bus stops (walking) is challenging due to disabilities
2. Need transit along Chumstick Highway as walking/biking safety is a concern
3. Lake of infrastructure for walking/biking (sidewalks, lighting, and bike lanes/parking)
4. Consider a bike sharing program

COMMUNITY ENGAGEMENT PLAN (CEP)

EXISTING DATA

Multimodal Pathways Plan

With the goals of (1) Connectivity for All; (2) Recognizing Opportunities; and (3) Improving Health and Safety for All, the Multimodal Pathways Plan was adopted in October of 2021. Focused on inter-urban trail types and related facilities, nearly 1,500 survey respondents provided valuable guidance that is directly relevant to transportation planning and safety in 2025.



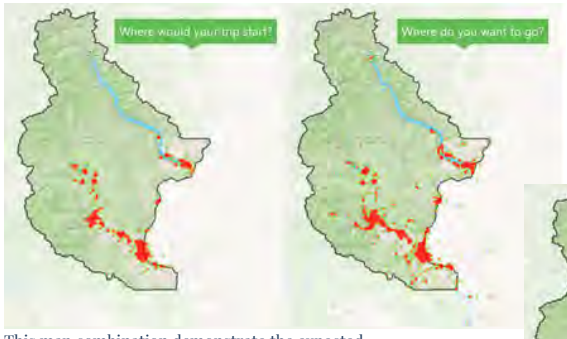
Demographic and Geographic Distribution

- Incomes were majority between $50k - $99,999 and $150k+
- Almost 1 in 3 respondents were live in the Wenatchee area
- Ages 35-54 made up 43% of the respondents
- Sex provided no statistical difference (M 50%; F 49%)
- White/Caucasian made up 81% followed by other at 2%

Pathway Specific Questions

- Reason for use showed 65% for "Exercise or Recreation" and 27% for "Commuting"
- Top elected modes to use would be bicycle, walk/run, and then E-bike/E-Scooter
- People indicated "feeling most comfortable using a Separated Shared Use Path"
  - Followed by "Bike Lanes and Sidewalks", "Paved Shoulder", then "Shared Roadway"
- Funding preferences leaned towards grants from government, private, or donations
  - Visitor taxes were a tie for 3rd with "Private Grants or Donations"

Below are map visuals reflecting community feedback for routes and challenges.



This map combination demonstrate the expected geographic origin area for trips (**above left**) as in "Where would your trip start?" and the geographic destination area they would like to go (**above right**) as in "Where do you want to go?"

This map combination demonstrate the problem areas within Chelan County indicated as a heat map (**below left**) and also the routes (origin/destination) that people would like to have the ability to take (**below right**).



COMMUNITY ENGAGEMENT PLAN (CEP)

EXISTING DATA

Chelan-Douglas Pathways Project

Current as of November, 2025, the CDTC is working on the Chelan-Douglas Pathways Master Plan project is studying potential pathway routes in several corridors throughout the Chelan-Douglas region to better connect communities with safe walking and biking routes. Of the four routes in consideration, three of them are located within Chelan County. Expected to (1) expand opportunities for active transportation; (2) provide cost-efficient mobility options; (3) catalyze economic development; (4) foster tourism while improving quality of life for residents; and (4) develop transportation infrastructure that promotes public health, these routes are being considered for best balancing feasibility and alignment with community goals. The Pathways Plan is not yet finalized though current feedback information relevant to this planning effort is provided below:

- 52% of respondents were interested in providing feedback for the "Leavenworth to Cashmere to Wenatchee Corridor"
- 97% of respondents live within either Chelan or Douglas county
  - 70% of respondents are from Chelan County
- 62% of respondents are interested in using the pathways for pleasure and recreation
- 70% of respondents are from Chelan County



This map indicates the four pathways being considered:

- Between Manson and Chelan (MC)
- Between East Wenatchee and Rock Island (EWRI)
- Between Malaga and Wenatchee (MW)
- Reaching from Leavenworth to Wenatchee with a route through Cashmere (LWC)

Respondents indicated that they would use these pathways for recreation, commuting, and to be safer.

For all four pathways, respondents indicated their mode of choice would be biking followed by walking/jogging and then E-bike/scooter.

Use of a wheelchair along the pathways account for 2% of respondents across all Chelan County routes.

Use of each pathway was recorded at being highest on a weekly basis followed by monthly and then daily. Below are the rates that each Chelan County route would be used at the weekly frequency:

- MC ~ 49%
- MW ~ 56%
- LWC ~ 52%

COMMUNITY ENGAGEMENT PLAN (CEP)

EXISTING DATA





Our Valley, Our Future (OVOF) Action Plan

In the process of its regular update, the 2022-2026 OVOF Action Plan was developed through the engagement of over 2,000 community members regarding the region's challenges, strengths, and weaknesses. Designed to improve everyone's quality of life, the Action Plan uses various methods of outreach to engage stakeholders including digital surveys, focus groups, panel discussions, and research on emerging trends. The following statistics and results are reflective of the broader plan approach.

- Of the 2,041 participants, 67% were from Chelan County
  - About 1 in 4 live outside of the Wenatchee area
- Almost 63% were over the age of 45
- Transportation has barriers related to racial/social equity
  - Over 21% of overall respondents identified this factor
  - Over 24% of Latino respondents identified this factor
- Urbanization + transportation is seen as a major challenge

The "Our Well-Planned Region" focus includes transportation:

- Active Transportation: Prioritize development of bike- and pedestrian-friendly transportation infrastructure, including building pathways that connect local communities and installing bike lanes and pedestrian sidewalks in urbanized areas.
- Transportation Improvements: Explore financial opportunities to improve roads and streets and the flow of traffic within communities. Redevelop downtowns and neighborhoods to include better internal traffic flow, more walkable areas, more public transportation options, and less single-use zones (referring to vehicle centric).

The OVOF team put together a Latino Focus Group (~150 people) to reflect on the needs, challenges, ideas, and values for the region across multiple categories. Some of the considerations from this initiative relative to multimodal transportation are as follows:

- Space for food and items to be sold on the sidewalks
- Bus stops that are accessible and serve as shelter during extreme weather (sun/snow)
- Include community members with disabilities in the technical and creative processes
- Adjust street lighting to be pedestrian-scale
- Provide more trees and expanded shade options during extreme weather
- Expand transportation options for everyone because if there is only what we have now, we will find ourselves with more people and more traffic but fewer options.

Appendix H: Safety Project Prioritization Methodology

MEMORANDUM

Date:	September 21, 2026	**TG:**	1.24319.00
Subject:	Chelan County Safety Action Plan – Project Prioritization Memorandum		

SAFETY PROJECT PRIORITIZATION

Given the limited funds available for implementing transportation improvements, prioritization criteria were identified and used to score each improvement/project location. A separate prioritization process was conducted for locations identified as part of each systemic safety projects, as well as for the specific intersection/corridor improvement projects. The prioritization process for each grouping of projects is summarized below, along with an explanation of the prioritization criteria and scoring values.

SYSTEMIC SAFETY PROJECTS – PROJECT SAP-S1: COUNTYWIDE GUARDRAIL INSTALLATION

The prioritization process developed for the Countywide Guardrail Installation project incorporates criteria associated with safety (high injury network, high risk network, and fixed-object/run-off-the-road crashes), location (proximity to schools, trail crossings, and park entrances), and demographic criteria (based on WSDOT's Sandy Williams Equity Score). The prioritization criteria are defined in greater detail below. The current prioritized list of improvements for this project is shown below in Table H-4.

Prioritization Criteria:

- **Safety Criteria (Maximum Possible Points: 10)** – Several criteria relating to the frequency, severity, and risk of collisions were used to prioritize improvements at those locations which were shown to have greater safety concerns.
    - *High injury Network (Maximum Possible Points: 4)* – This criterion was used to give higher priority to roadways that appeared on the high injury network (HIN), reflecting a history of crashes resulting in serious injuries or fatalities. The methodology used to develop the HIN is explained in Appendix D. If a roadway was on the high injury network, it was assigned four points. No points were assigned to locations that were not on the high injury network.
    - *High Risk Network (Maximum Possible Points: 3)* - This criterion was used to give higher priority to roadways that appeared on the high risk network (HRN). This network identifies roadways that exhibit characteristics associated with locations of higher crash rates within the County. As part of the HRN, County roads were evaluated an assigned an overall risk score. The methodology used to develop the HRN is explained in Appendix D. Prioritization points were assigned to projects based on the overall risk score as shown in Table H-1.

Table H-1. High Risk Network Weighting Factors

High Risk Network Score	Points
≥ 13	3 points
8 - 12	2 points
6 – 7	1 points
< 6	0 points

- *Fixed Object and Run-off-the-Road Crashes (Maximum Possible Points: 3)* – This criterion was used to give higher priority to roadways that experience a greater density of fixed object and run-off-the-road crashes. These types of crashes are those addressed by the installation of guardrails. Points were assigned based on the number of crashes per mile on a roadway as shown in Table H-2.

Table H-2. Fixed Object/Run-off-the-Road Crashes Weighting Factors

Fixed Object/Run-off-the-Road Crashes (crashes/mile)	Points
0 to < 3	1 points
3 to < 5	2 points
≥ 5	3 points

- **Location Criteria (Maximum Possible Points: 3)** – This criterion was used to assign higher priority to projects close to schools, trail crossings, and park entrances. Projects within half a mile of a school were assigned two points, and projects within half a mile of a trail crossing or park entrance were assigned one point.

- **Demographic Criteria (Maximum Possible Points: 2)** – Additional criteria based on equity considerations were used to identify projects at which improvements could provide the greatest benefits to adjacent communities. Equity scoring was based off the Sandy Williams Equity Viewer from WSDOT, which looks at areas adjacent to current and former state highways and provides an index score based off "indicators of conditions related to transportation, health, economic, family and community and environmental justice". Table H-3 outlines the different index scores and how each were weighted.

Table H-3. Equity Criteria Weighting Factors

Sandy Williams Equity Index Score	Points
Very High Need	2 points
High Need	2 points
Moderate Need	1 points
Low Need	0 point
Lowest Need	0 points

SYSTEMIC SAFETY PROJECTS – PROJECT SAP-S1: COUNTYWIDE GUARDRAIL INSTALLATION

Table H-4. Countywide Guardrail Installation Location Prioritization

	SAFETY CRITERIA							LOCATION CRITERIA		DEMOGRAPHIC CRITERIA				
		High Risk Network Score			Fixed Object/Run-off-the-Road Crashes (crashes/mile)			Proximity to (0.5 mile)		Sandy William Connecting Communities Need Score				
	High Injury Network	6 or 7	8 to 12	≥ 13	0 to <3	3 to <5	≥ 5	Schools	Trail Crossings / Park Entrances	High	Moderate	Low	Total	
Systemic Improvement Location	4	1	2	3	1	2	3	2	1	2	1	0	max = 15	Priority
Squilchuck Rd (MP 0.6 to 7.1)	X		X				X		X			X	10 /15	HIGH
Malaga Alcoa Hwy (MP 0.0 to 10.2) & Colockum Road (MP 0.0 to 2.9)	X			X	X				X		X		10 /15	HIGH
Beaver Valley Road (MP 14.0 to 19.0)			X				X	X	X			X	8 /15	MEDIUM
Sunset Hwy (MP 0.8 to 4.9)	X		X		X				X			X	8 /15	MEDIUM
Chumstick Hwy (MP 0.8 to 8.1)	X		X			X						X	8 /15	MEDIUM
W Malaga Rd (MP 0.0 to 3.0)	X	X			X				X		X		8 /15	MEDIUM
Entiat River Rd (MP 0.3 to 22.6)	X				X				X		X		7 /15	MEDIUM
North Road (MP 0.6 to 3.2)	X				X				X			X	6 /15	MEDIUM
Lake Wenatchee Hwy (MP 0.0 to 5.4)			X				X		X			X	6 /15	MEDIUM
Mission Ridge Rd (MP 0.0 to 3.9)						X			X			X	3 /15	LOW
Apple Acres Road (MP 0.5 to 6.6)		X			X				X		X		4 /15	LOW
Chumstick Hwy (MP 11.1 to 12.4)			X		X							X	3 /15	LOW
S Lakeshore Rd (MP 6.0 to 8.3)					X				X			X	2 /15	LOW
S Lakeshore Rd (MP 10.0 to 16.1)					X				X			X	2 /15	LOW
Chelan Falls Road (MP 0.0 to 0.8)					X						X		2 /15	LOW

SYSTEMIC SAFETY PROJECTS – PROJECT SAP-S2: COUNTYWIDE RUMBLE STRIP PROGRAM

The prioritization process for the Countywide Rumble Stripe program incorporates criteria associated with safety (high injury network, high risk network, and fixed-object/run-off-the-road crashes), location (proximity to schools, trail crossings, and park entrances), demographic criteria (based on WSDOT's Sandy Williams Equity Score), project alignment with the Transportation Improvement Program (TIP), and grant funding status. The prioritization criteria are defined in greater detail below. The current prioritized list of improvements for this project is shown below in Table H-5. The feasibility of rumble strips should be evaluated on a case-by-case basis before being considered for scoring. At minimum, the roadway characteristics below should be considered when deciding whether to install rumble strips along a roadway:

- Pavement Age & Condition
- Pavement Type and Thickness
- Shoulder Width
- Speed Limit
- Roadway Classification
- Maintenance Type and Frequency
- Noise Impacts to Adjacent Land Uses

Prioritization Criteria:

When a roadway has been determined to be a possible candidate for rumble strip installation, the criteria below can be used to prioritize locations for implementation.

- **Safety Criteria (Maximum Possible Points: 10)** – Several criteria relating to the frequency, severity, and risk of collisions at each of the intersections were used to prioritize improvements at those locations which were shown to have greater safety concerns.
    - *High injury Network (Maximum Possible Points: 4)* – This criterion was used to give higher priority to roadways that appeared on the high injury network, as described in the Project 1 criteria.
    - *High Risk Network (Maximum Possible Points: 3)* - This criterion was used to give higher priority to roadways that appeared on the high risk network, as described in the Project 1 criteria.
    - *Fixed Object and Run-off-the-Road Crashes (Maximum Possible Points: 3)* – This criterion was used to give higher priority to roadways that experience a greater density of fixed object and run-off-the-road crashes. These types of crashes are most likely to be addressed by the installation of rumble strips. Points were assigned as described in the Project 1 criteria.
- **Location Criteria (Maximum Possible Points: 3)** – This criterion was used to assign higher priority to projects close to schools, trail crossings, and park entrances, as described in the Project 1 criteria.

- **Demographic Criteria (Maximum Possible Points: 2)** – Additional criteria based on equity considerations were used to identify projects at which improvements could provide the greatest benefits to adjacent communities. Points were assigned as described in the Project 1 criteria.

- **Alignment with the TIP (Maximum Possible Points: 2) –** This criterion was used to prioritize projects that align with a project on the Chelan County six-year Transportation Improvement Program (TIP). Projects that align with the TIP were assigned two points.

- **Grant Funding Status (Maximum Possible Points: 2) –** This criterion was used to prioritize projects based on their grant funding status. Projects that have secured grant funding were assigned two points. Projects that align with an identified grant program but have not received funding are given one point. Projects with no grant funding or identified grant program receive zero points.

SYSTEMIC SAFETY PROJECTS – PROJECT SAP-S2: COUNTYWIDE RUMBLE STRIP PROGRAM

Table H-5. Countywide Rumble Strip Program Location Prioritization

	SAFETY CRITERIA							LOCATION CRITERIA		DEMOGRAPHIC CRITERIA			OTHER CRITERIA					Total	Priority
		High Risk Network Score			Fixed Object/Run-off-the-Road Crashes (crashes/mi)			Proximity to (0.5 mile)		Sandy William Connecting Communities Need Score			Does Project Align with a Project on the TIP?		Grant Funding Status				
	High Injury Network	6 or 7	8 to 12	≥ 13	0 to <3	3 to <5	≥ 5	Schools	Trail Crossings / Park Entrances	High	Moderate	Low	Yes	No	Secured	Program Identified	None		
Systemic Improvement Location	4	1	2	3	1	2	3	2	1	2	1	0	2	0	2	1	0	max = 19	
Malaga-Aloca Highway (MP 0.2 to 6.33)	X			X			X	X	X		X		X				X	16 /19	HIGH
Squilchuck Road (MP 0.75 to 7.02)	X		X			X						X	X		X			12 /19	HIGH
Wapato Lake Road (MP 0.0 to 1.5)	X		X		X					X			X				X	11 /19	MEDIUM
W Malaga Road (MP 0.0 to 3.11)	X	X				X			X		X			X		X		10 /19	MEDIUM
Chumstick Highway (MP 0.9 to 12.38)	X		X		X							X	X				X	9 /19	MEDIUM
Entiat River Rd (MP 0.3 to 22.6)	X				X				X		X			X			X	7 /19	MEDIUM
Mission Creek Road (MP 1.8 to 4.9)	X				X							X		X			X	5 /19	LOW
Mission Ridge Road (MP 0.0 to 3.0)							X		X			X		X			X	4 /19	LOW

SYSTEMIC SAFETY PROJECTS – PROJECT SAP-S3: COUNTYWIDE SHOULDER IMPROVEMENT PROGRAM

The prioritization process for the Countywide Shoulder Improvement program incorporates criteria associated with safety (high injury network, high risk network, and fixed-object/run-off-the-road crashes), location (proximity to schools, trail crossings, and park entrances), demographic criteria (based on WSDOT's Sandy Williams Equity Score), project alignment with the Transportation Improvement Program (TIP), and grant funding status. The prioritization criteria are defined in greater detail below. The current prioritized list of improvements for this project is shown below in Table H-6. Shoulder width requirements are defined in the County's road standards based on roadway functional classification and average daily traffic (ADT) volumes. All shoulders with widths of 5 feet or greater are classified as shared-use bicycle shoulders.

Prioritization Criteria:

- **Safety Criteria (Maximum Possible Points: 10)** – Several criteria relating to the frequency, severity, and risk of collisions at each of the intersections were used to prioritize improvements at those locations which were shown to have greater safety concerns.
    - *High injury Network (Maximum Possible Points: 4)* – This criterion was used to give higher priority to roadways that appeared on the high injury network, as described in the Project 1 criteria.
    - *High Risk Network (Maximum Possible Points: 3)* - This criterion was used to give higher priority to roadways that appeared on the high risk network, as described in the Project 1 criteria.
    - *Fixed Object and Run-off-the-Road Crashes (Maximum Possible Points: 3)* – This criterion was used to give higher priority to roadways that experience a greater density of fixed object and run-off-the-road crashes. These types of crashes are most likely to be addressed by the widening or installation of shoulders. Points were assigned as described in the Project 1 criteria.
- **Location Criteria (Maximum Possible Points: 3)** – This criterion was used to assign higher priority to projects close to schools, trail crossings, and park entrances, as described in the Project 1 criteria.
- **Demographic Criteria (Maximum Possible Points: 2)** – Additional criteria based on equity considerations were used to identify projects at which improvements could provide the greatest benefits to adjacent communities. Points were assigned as described in the Project 1 criteria.
- **Alignment with the TIP (Maximum Possible Points: 2) –** This criterion was used to prioritize projects that align with a project on the Chelan County six-year Transportation Improvement Program (TIP). Projects that align with the TIP were assigned two points.
- **Grant Funding Status (Maximum Possible Points: 2) –** This criterion was used to prioritize projects based on their grant funding status. Projects that have secured grant funding were assigned two points. Projects that align with an identified grant program but have not received

funding are given one point. Projects with no grant funding or identified grant program receive zero points.

SYSTEMIC SAFETY PROJECTS – PROJECT SAP-S3: COUNTYWIDE SHOULDER IMPROVEMENT PROGRAM

Table H-6. Countywide Shoulder Improvement Program Location Prioritization

	SAFETY CRITERIA							LOCATION CRITERIA		DEMOGRAPHIC CRITERIA			OTHER CRITERIA						
		High Risk Network Score			Fixed Object/Run-off-the-Road Crashes			Proximity to (0.5 mile)		Sandy William Connecting Communities Need Score			Does Project Align with a Project on the TIP?		Grant Funding Status				
	High Injury Network	6 or 7	8 to 12	≥ 13	0 to <3	3 to <5	≥ 5	Schools	Trail Crossings / Park Entrances	High	Moderate	Low	Yes	No	Secured	Program Identified	None	Total	Priority
Systemic Improvement Location	4	1	2	3	1	2	3	2	1	2	1	0	2	0	2	1	0	max = 19	
Squilchuck Road (MP 1.65 to 4.45)	X		X			X						X	X		X			12 /19	HIGH
Chumstick Highway (MP 1.67 to 1.87 and 3.76 to 6.62)	X		X				X					X	X				X	11 /19	MEDIUM
Wapato Lake Road (MP 0.5 to 1.5)	X		X		X					X			X				X	11 /19	MEDIUM
Lake Wenatchee Highway (MP 0.0 to 1.2)			X		X				X			X	X				X	6 /19	MEDIUM
Beaver Valley Road (MP 16.6 to 19.0)		X			X				X			X	X			X		6 /19	MEDIUM
North Road (MP 0.5 to 2.6)	X				X				X			X		X			X	6 /19	MEDIUM
Mission Creek Road (MP 2.4 to 4.9)	X				X							X		X			X	5 /19	LOW
South Lakeshore Road (MP 6.0 to 6.64)					X				X			X	X				X	4 /19	LOW

INTERSECTION/CORRIDOR SAFETY PROJECTS

As noted previously, the three systemic safety projects (Projects SAP-S1, SAP-S2, and SAP-S3) were prioritized separately from the other intersection/corridor safety projects. The prioritization process developed for the proposed intersection/corridor projects within the County incorporates criteria associated with safety risk factors, proximity to key locations, demographic considerations, alignment with the Transportation Improvement Program (TIP), and grant funding status. The prioritization criteria are defined in greater detail below. The current prioritized list of intersection/corridor projects is shown below in Table H-8.

Prioritization Criteria:

- **Safety Criteria (Maximum Possible Points: 10)** – Several criteria relating to the frequency, severity, and risk of collisions at each of the intersections were used to prioritize improvements at those locations which were shown to have greater safety concerns.
    - *High injury Network (Maximum Possible Points: 4)* – This criterion was used to give higher priority to roadways that appeared on the high injury network, as described in the Project 1 criteria.
    - *High Risk Network (Maximum Possible Points: 3)* – This criterion was used to give higher priority to roadways that appeared on the high risk network, as described in the Project 1 criteria.
    - *Top Crash Risk Factors (Maximum Possible Points: 3)* – This criterion was used to give higher priority to projects that address the Countywide risk factors identified in the plan (fixed-object, speeding, and pedestrian/ bicycle-related crashes). Points were assigned as shown in Table H-7.

Table H-7. Crash Risk Weighting Factors

Top Crash Risk Factor Addressed	Points
Fixed Object	2 points
Speeding	1 point
Pedestrian/Bicycle	1 point

- **Location Criteria (Maximum Possible Points: 3)** – This criterion was used to assign higher priority to projects close to schools, trail crossings, and park entrances, as described in the Project 1 criteria.
- **Demographic Criteria (Maximum Possible Points: 2)** – Additional criteria based on equity considerations were used to identify projects at which improvements could provide the greatest benefits to adjacent communities. Points were assigned as described in the Project 1 criteria.
- **Alignment with the TIP (Maximum Possible Points: 2) –** This criterion was used to prioritize projects that align with a project on the Chelan County six-year Transportation Improvement Program (TIP). Projects that align with the TIP were assigned two points.
- **Grant Funding Status (Maximum Possible Points: 2) –** This criterion was used to prioritize projects based on their grant funding status. Projects that have secured grant funding were

assigned two points. Projects that align with an identified grant program but have not received funding are given one point. Projects with no grant funding or identified grant program receive zero points.

INTERSECTION/CORRIDOR SAFETY PROJECTS

Table H-8. Intersection/Corridor Project Prioritization

			SAFETY CRITERIA							LOCATION CRITERIA		DEMOGRAPHIC CRITERIA			OTHER CRITERIA						
				High Risk Network Score			Top Crash Risk Factors Addressed			Proximity to (0.5 mile)		Sandy William Connecting Communities Need Score			Does Project Align with a Project on the TIP?		Grant Funding Status				
Project ID	Intersection/Corridor Project	Project Type	High Injury Network	6 or 7	8 - 12	≥ 13	Fixed Object	Speeding	Ped / Bike	Schools	Trail Crossings / Park Entrances	High	Moderate	Low	Yes	No	Secured	Program Identified	None	Total	Priority
			4	1	2	3	2	1	1	2	1	2	1	0	2	0	2	1	0	max = 20	
SAP-I7	Easy Street & School Street	Intersection	X			x		X	X	X				X	X		X			15 /20	HIGH
SAP-C8	School Street	Corridor	X			x			X	X				X	X		X			14 /20	HIGH
SAP-C10	Malaga-Alcoa Highway	Corridor	X			x			X	x	x	X				X			X	13 /20	HIGH
SAP-C6	Easy Street - Phase 1 Pedestrian Improvement Project	Corridor	X			x		X	X	x	x			X		X		X		13 /20	HIGH
SAP-C3	E Leavenworth Road	Corridor	X		x		X	X	X		x		X			X		X		13 /20	HIGH
SAP-I8	Easy Street & Peters Street	Intersection	X			x			X	X	x			X	X				X	13 /20	HIGH
SAP-C2	Totem Pole Road	Corridor			x				X	X		X			X		X			11 /20	MEDIUM
SAP-C7	Easy Street - Phase 2 Pedestrian Improvement Project	Corridor	X			x			x	x				X		X			X	10 /20	MEDIUM
SAP-C1	Wapato Lake Road	Corridor	X		x		X					X				X			X	10 /20	MEDIUM
SAP-C5	Sunset Highway Pedestrian Improvements	Corridor	X		x				X			X				X		X		10 /20	MEDIUM
SAP-I4	Chumstick Highway & North Rd	Intersection			x			X	X		x			X	X		X			9 /20	MEDIUM
SAP-C4	Peshastin Main Street Sidewalk	Corridor			x				X	x	x			X	X			X		9 /20	MEDIUM
SAP-I6	Easy Street & Crestview Road	Intersection	X		x				X					X	X				X	9 /20	MEDIUM
SAP-I10	Malaga-Alcoa Highway & Stemilt Creek Rd	Intersection		x			X	X	X		x			X	X				X	8 /20	MEDIUM
SAP-C9	S Mission Street	Corridor			x				x	x		x				x		x		8 /20	MEDIUM
SAP-I9	Terminal Avenue & S Mission Street	Intersection			x				X	x		X				X			X	7 /20	MEDIUM
SAP-I5	Binder Road & Mission Creek Road	Intersection	X						X			X				X			X	7 /20	MEDIUM
SAP-I3	Chumstick Highway & Chiwawa Loop Road	Intersection	X		x									X		X			X	6 /20	LOW
SAP-I1	Boetzke Avenue & Quatis Street	Intersection	X									X				X			X	6 /20	LOW
SAP-I2	Wapato Lake Road & Roses Ave	Intersection	X										X			X			X	5 /20	LOW

Appendix I: Evaluation of Automated Speed Camera Placement Memorandum

transpogroup
WHAT TRANSPORTATION CAN BE.

MEMORANDUM

Date:	March 30, 2026	**TG:**	1.24319.00
To:	Lawrence Dillin, PE – Chelan County		
From:	Daniel Hendricks, PE, - Transpo Group Drew Heckathorn – Transpo Group		
Subject:	DRAFT Evaluation of Automated Speed Camera Placement		

This memorandum evaluates potential locations to install automated speed enforcement cameras in Chelan County (County). The analysis and information contained in the memorandum is meant to assist the County in determining whether speed cameras should be installed and at what locations.

Purpose

Chelan County is considering the installation of automated speed enforcement cameras along County roads. The purpose of the cameras would be to enhance roadway safety by encouraging and enforcing compliance with posted speed limits. This memorandum evaluates potential locations for the cameras by evaluating available speed data along roadways with identified safety concerns to determine if additional enforcement would improve compliance with posted speed limits. The analysis aligns with RCW 46.63.220 and RCW 46.63.250, which govern the use of automated speed cameras in the State of Washington.

Approach

The memorandum evaluates traffic speeds along County roadways to determine whether the combination of speed and safety data would support installation of automated speed enforcement cameras. The analysis considers vehicle speeds, traffic volumes, and roadway context to assess current conditions. The study examines the potential for automated speed cameras to address the requirements of RCW 46.63.220 and RCW 46.63.250.

State Law on Automated Speed Cameras

State laws RCW 46.63.220 and RCW 46.63.250 allow the use of automated speed cameras to monitor speed violations in specific locations, including school speed zones, school walk zones, hospital speed zones, public park speed zones, roadway work zones, and additional locations – one additional per each 10,000 people in a local jurisdiction – with excessive vehicle speeds. Per RCW 46.63.250(3), these additional locations are defined as “locations deemed by the local legislative authority to experience higher crash risks due to excessive vehicle speeds”. The analysis contained herein identifies the locations within the County which meet these requirements based on available speed and crash data.

Before implementing cameras, an analysis of proposed locations must be conducted and documented. The law also mandates public notice, signage indicating automated speed camera enforcement, and annual reporting on traffic safety outcomes for each location with a camera. Additionally, cameras may only capture vehicle information, preserving privacy by excluding driver or passenger identification.

For this analysis, two conditions must be met for a location to be deemed a location which experiences “higher crash risk due to excessive vehicle speeds”:

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1. The location must have documented safety needs by being identified as part of the High Injury Network (HIN) or High Risk Network (HRN) within the County's *Safety Action Plan*.
2. The location must exhibit excessive vehicular speeds, as indicated by key metrics within the speed data – primarily the percent of vehicles traveling a

This analysis evaluates the speed data at locations along the County's HIN and HRN to determine whether the conditions above are met to qualify the roadway as experiencing "higher crash risk due to excessive vehicle speeds".

Automated Speed Enforcement Cameras along the HIN and HRN

As mentioned, State law RCW 46.63.220 and RCW 46.63.250 allow the use of automated speed cameras to monitor speed violations at select locations (up to one per 10,000 people in a local jurisdiction) with excessive vehicle speeds. The following corridor segments are along the County's HIN or HRN and includes segments where speed data was available, focusing on locations with documented or potential speeding concerns.

Corridor Segment Descriptions

Squilchuck Rd (County Highway 711) is a two-way north-south county route with a posted speed limit of 50 miles per hour (mph) from the southern city limits of Wenatchee to Wenatchee Heights Road. The speed limit decreases to 45 mph between Wenatchee Heights Road to its convergence into Mission Ridge Road. The roadway has a single lane in each direction and is classified as a rural minor arterial, passing primarily through residential areas along its length.

Malaga Alcoa Highway is a two-way east-west county route with a posted speed limit of 40 mph from S Wenatchee Avenue to Appleyard Drive. The speed limit increases to 50 mph between Appleyard Drive and Edward Street, where it decreases briefly back to 40 mph until Firehouse Road, where it increases back to 50 mph. The road has a single lane in each direction and is classified as a rural major collector. The route primarily passes through agricultural areas, with a section that passes through the community of Malaga.

Chumstick Highway/Beaver Valley Rd is a two-way north-south county route with a posted speed limit of 25 mph between US-2 and past North Road. The speed limit increases to 35 mph between shortly after North Road and Eagle Creek Road, and increases to 50 mph up past Camp 12 Road, where it decreases to 40 mph until it transitions into Beaver Valley Road, where it becomes 30 mph. The road has a single lane in each direction and is classified as a rural minor arterial. The route primarily passes through rural residential and commercial areas, with some notable landmarks including Cascade High School, Chelan County Fire District #3 station, and the Leavenworth Reindeer Farm, connecting downtown Leavenworth with smaller communities like Chumstick and Plain.

North Road is a two-way east-west and north-south county route with a posted speed limit of 35 mph, briefly becoming 25 mph south of Mad Dog Lane as it enters Peshastin. The road has a single lane in each direction and is classified as a rural major collector. The route primarily passes through agricultural areas, with a connection through downtown Peshastin.

Entiat River Road (County Highway 19) is a two-way east-west and north-south county route with a posted speed limit of 45 mph. The road has a single lane in each direction and is classified as a rural major collector. The route primarily passes through agricultural and forested areas, connecting Entiat with the Okanogan-Wenatchee National Forest.

Manson Boulevard is a two-way east-west and north-south county route with a posted speed limit of 25 mph between Wapato Way and Washington Street, increasing to 45 mph from Washington Street onwards. The road has a single lane in each direction and is classified as a rural major collector. The route primarily passes through agricultural and residential areas, connecting downtown Manson with the rest of the community.

East Leavenworth Rd is a two-way east-west and north-south county route with a posted speed limit of 25 from US 2 to MP 1.19 and 35 mph from MP 1.19 to Icicle Road. The road has a single lane in each direction and is classified as a rural major collector. The route primarily passes through residential areas and serves as a connection between US-2 and Icicle Road outside Leavenworth.

As mentioned, this evaluation focused on locations with documented or potential speeding concerns. Other routes that are on the High Injury Network and High Risk Network but were not evaluated[1] include:

- Chiwawa Loop Road
- Easy Street
- Stine Hill Road
- Sunset Highway
- Wapato Lake Road
- West Malaga Road

The HIN and HRN are shown in Figures 1-5. Circles along each network indicate locations where speed data was collected using tube counters as part of this study effort. Only a selection of data points shown below have speed data for them, which are presented in the following tables in the next section.

[1] The 85th percentile speed data for these locations were reviewed and were generally shown to be less than 5 mph above the posted speed limit, which was determined to not indicate excessive vehicle speeds.

Figure 1. Cashmere Area HIN, HRN, and Speed Data Collection Sites

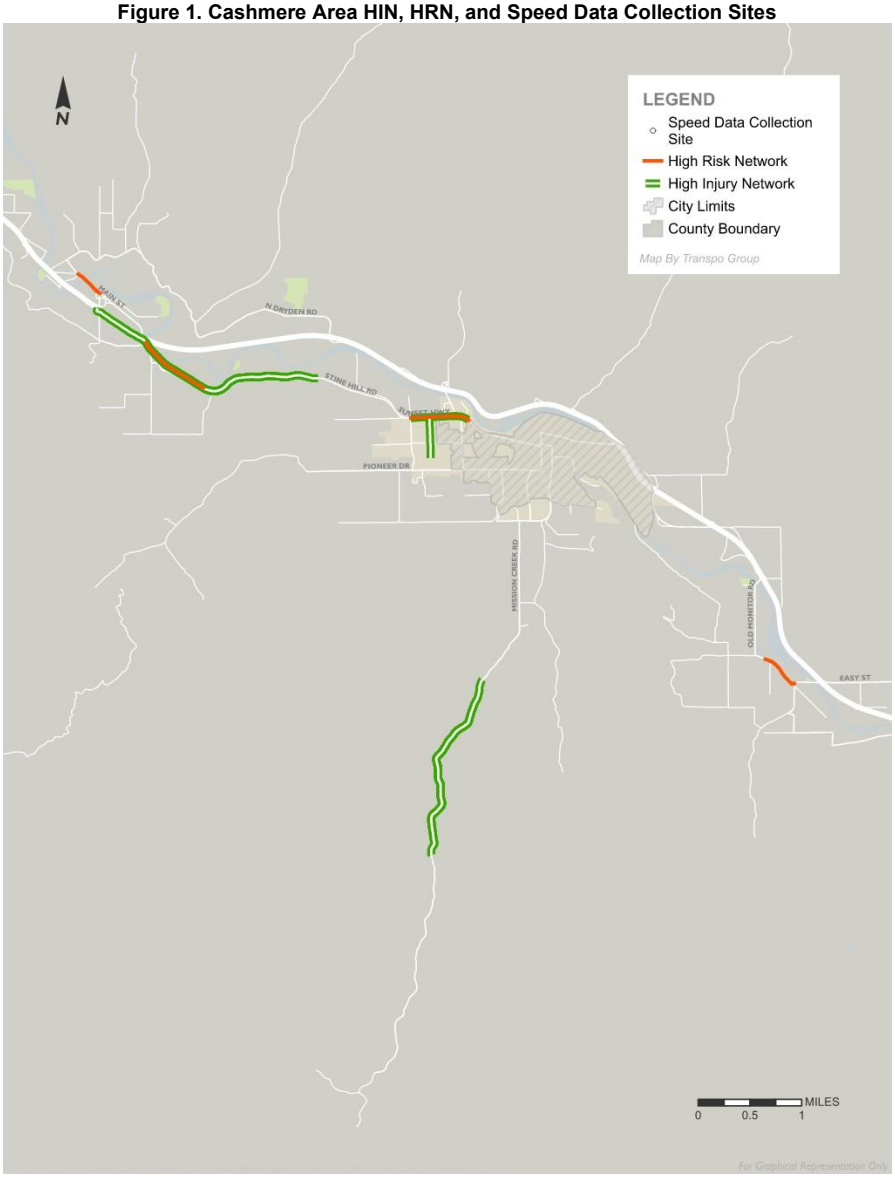


Figure 2. Manson Area HIN, HRN, and Speed Data Collection Sites

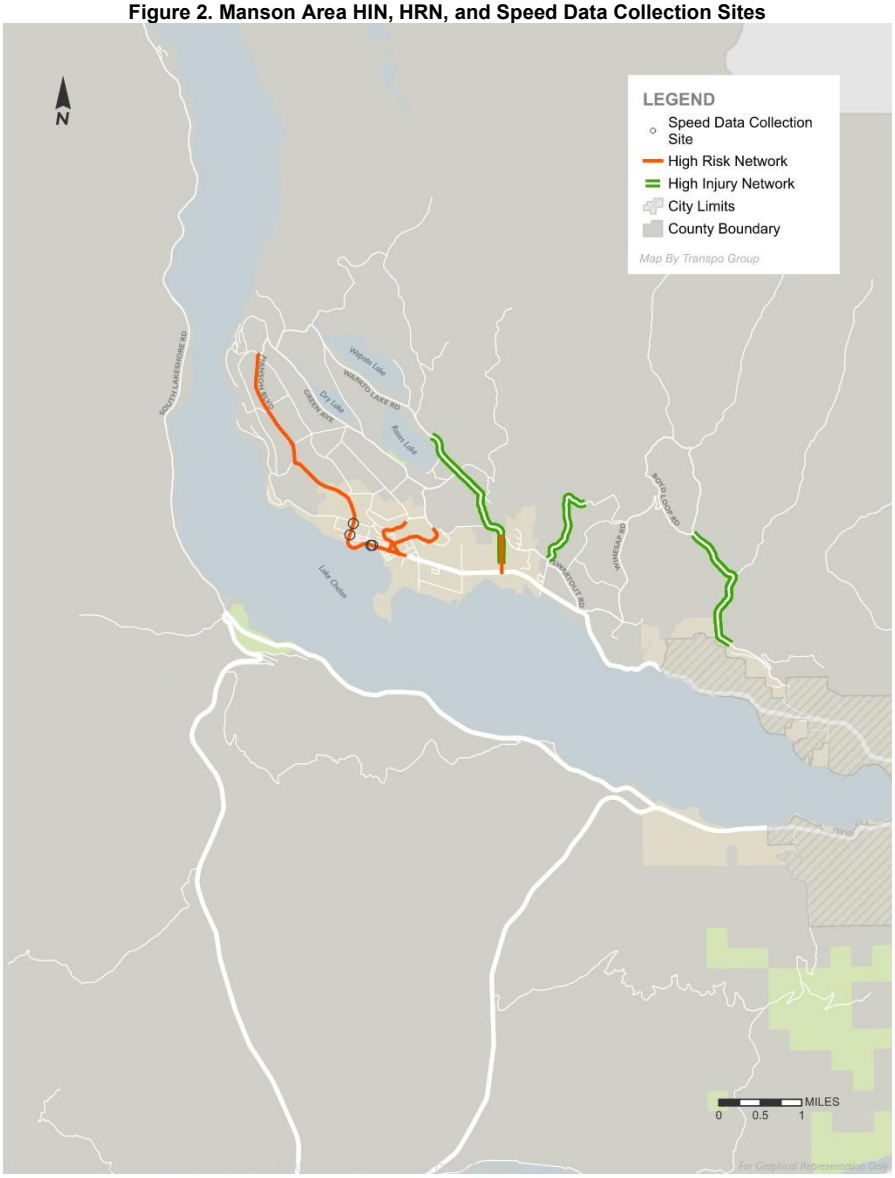


Figure 3. Plain Area HIN, HRN, and Speed Data Collection Sites

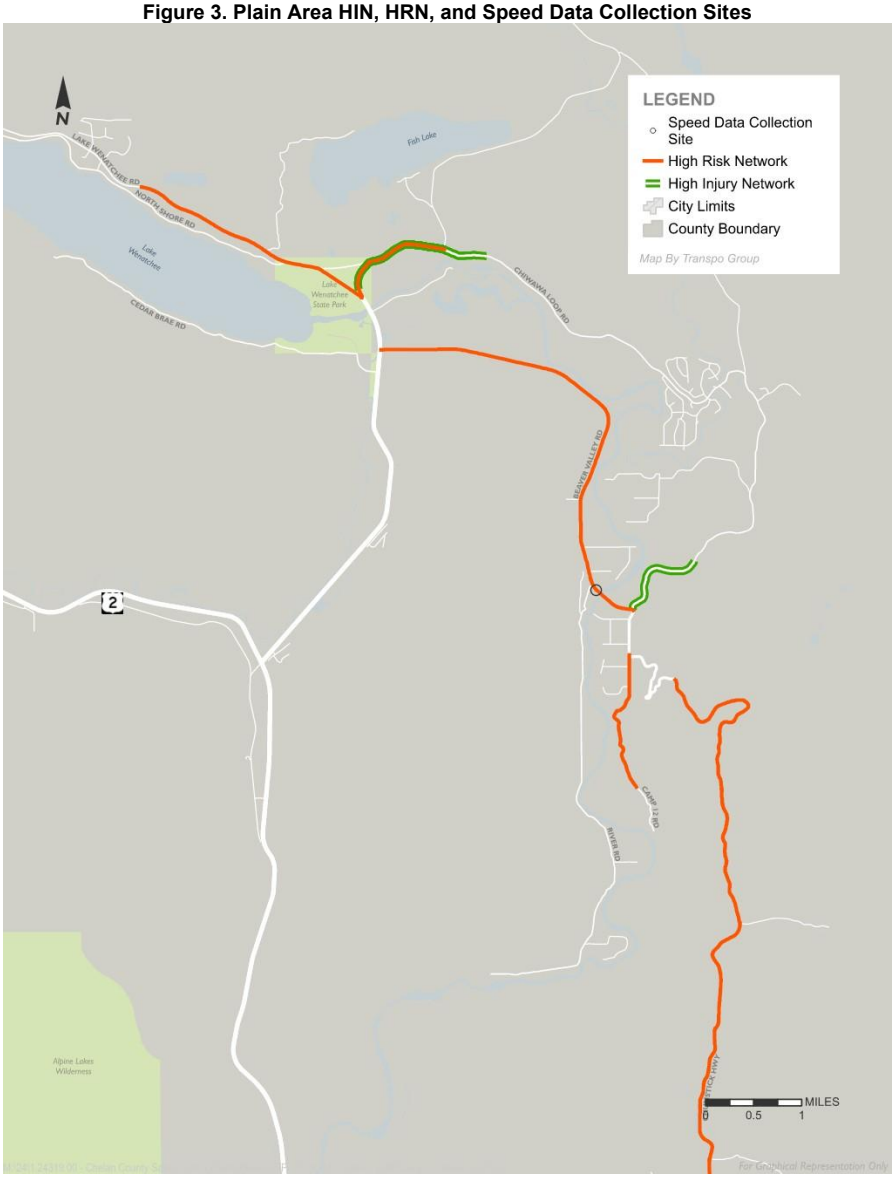


Figure 4. Leavenworth Area HIN, HRN, and Speed Data Collection Sites

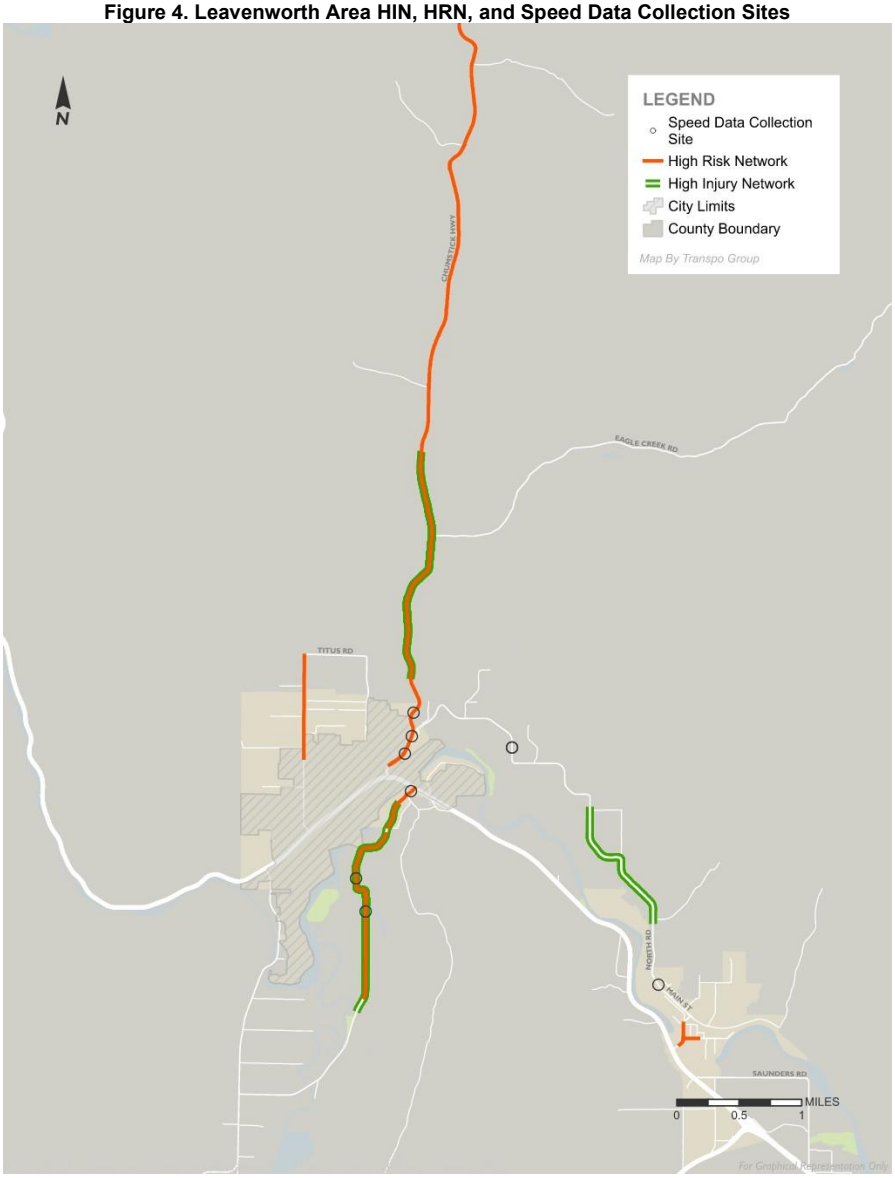
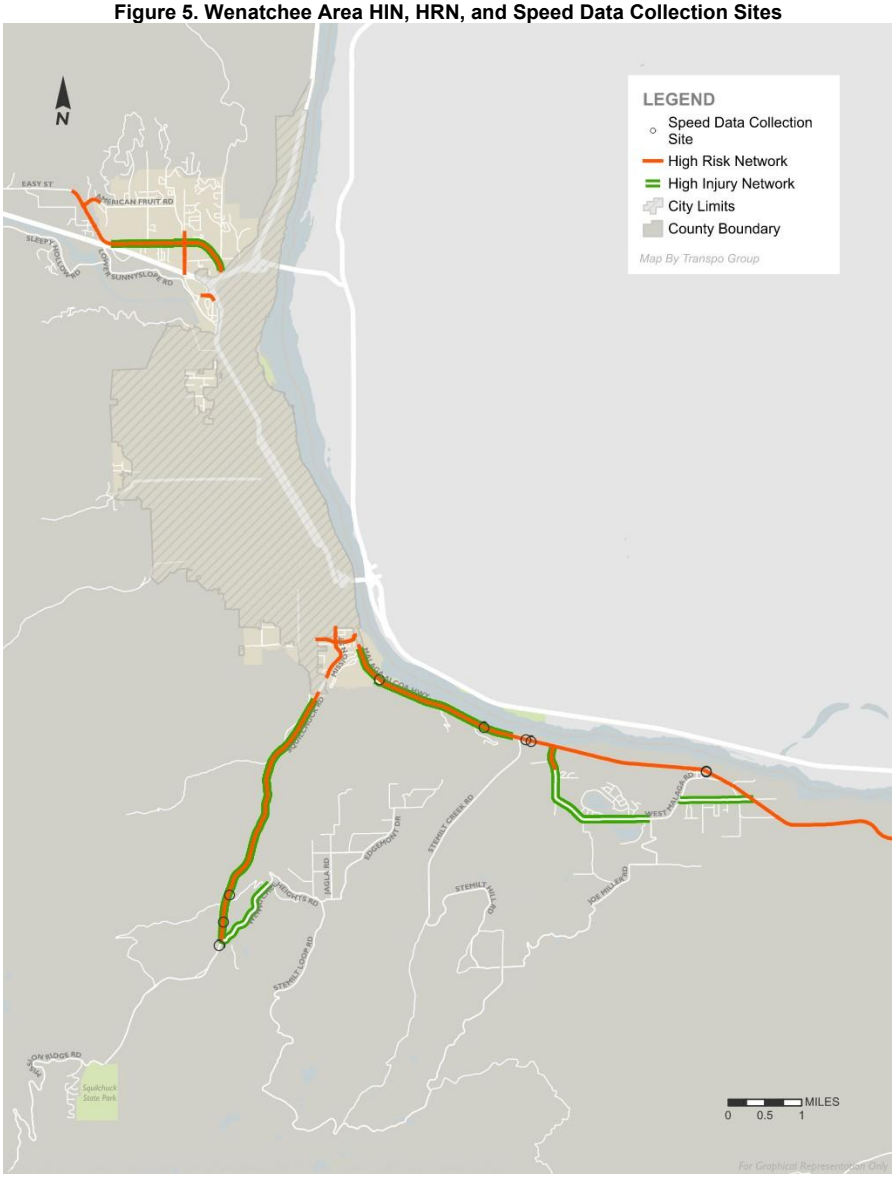


Figure 5. Wenatchee Area HIN, HRN, and Speed Data Collection Sites



Vehicle Speeds

Vehicle speeds were recorded along the County's HIN and HRN at the locations shown in Figures 1-5. Data was collected for one week at each location and captured hourly speed measurements at each site.

Key speed indicators include the median speed, 85th percentile speed, 10 mph pace, percent in pace, and percent of vehicles 5 mph over the speed limit. The key indicators are used to help identify if a speeding problem exists and to what extent. The definition and purpose of the speed indicators are described below. Tables 1 through 7 summarize the key speed indicators along each of the HIN and HRN roadway segments.

Key Speed Indicators

Median Speed. The speed at which 50 percent of all traffic is traveling at or below. The statistical median is used as a point of reference in understanding the prevailing conditions. Ideally, the median speeds should be at or under the posted speed limit.

85th Percentile Speed. The speed at which 85 percent of the traffic is traveling at or below. Typically, the 85th percentile speed should be within 0 to 5 mph of the posted speed. 85th percentile speeds of 5 to 10 mph over the posted speed are of concern, but still within typical ranges, and are typically addressed with education and enforcement such as speed feedback signs.

10 mph Pace. The 10 mph pace is a measure of the range in speeds and is defined as the consecutive 10 mph range containing the highest number of vehicles. Typically, the upper limit of the 10 mph pace should be near the posted speed limit.

Percent in Pace. The percent in pace represents the percentage of all vehicles traveling within the 10 mph pace. It is desirable to have a high percentage of the total number of vehicles in the 10 mph pace.

Percent of Vehicles 5 mph Over the Speed Limit. A measure representing the number of vehicles traveling over the posted speed limit by at least 5 mph. This represents the percentage of vehicles that could be the target of automated speed cameras since citations are usually given to vehicles exceeding the speed limit by more than 5 mph.

Squilchuck Road Vehicle Speeds

As shown in Table 1, between 10 and 20 percent of total daily traffic along Squilchuck Road travel more than 5 mph above the posted speed limit.

The speed distribution along Squilchuck Road indicates that most vehicles travel near the posted speed limit.

Table 1. Squilchuck Road Speed Data Summary (2023)

Indicator	MP 3.795	MP 4.248	MP 4.524
Posted Speed Limit (mph)	50	50	45
Average Daily Traffic (vehicles)	2,285	2,034	897
Median Speed (mph)	47	48	45
85th Percentile Speed (mph)	54	54	51
10 mph Pace (mph)	42-52	43-53	40-50
% in Pace	60%	65%	61%
% of Vehicles 5 mph over Speed Limit[1]	10%	11%	20%

1. Represents the vehicles exceeding the posted speed limit by at least 5 mph.

Malaga Alcoa Highway Vehicle Speeds

As shown in Table 2, between 6 and 40 percent of total daily traffic along Malaga Alcoa Highway, where the posted speed limit is 50 mph, travel more than 5 mph above the posted speed limit. Where the posted speed limit is 40 mph, 55 percent of total daily traffic along Malaga Alcoa Highway travel more than 5 mph above the posted speed limit.

The speed distribution along Malaga Alcoa Highway indicates exceeding the posted speed limit occurs frequently, especially along the 40 mph segments.

Table 2. Malaga Alcoa Highway Speed Data Summary (2023, 2025)

Indicator	MP 0.470	MP 2.100	MP 2.746	MP 2.750	MP 5.180	MP 5.169
Posted Speed Limit (mph)	40	50	50	50	50	40
Average Daily Traffic (vehicles)	8,645	7,083	6,414	7,445	3,267	2,178
Median Speed (mph)	46	50	53	51	47	45
85th Percentile Speed (mph)	51	54	61	56	52	51
10 mph Pace (mph)	40-50	45-55	47-57	46-56	42-52	41-51
% in Pace	68%	80%	54%	76%	67%	65%
% of Vehicles 5 mph over Speed Limit[1]	55%	11%	40%	18%	6%	55%

1. Represents the vehicles exceeding the posted speed limit by at least 5 mph.

Chumstick Highway/Beaver Valley Road Vehicle Speeds

As shown in Table 3, between 22 and 50 percent of total daily traffic along Chumstick Highway where the posted speed limit is 25 mph travel more than 5 mph above the posted speed limit. Where the posted speed limit is 35 mph, between 5 and 6 percent of total daily traffic along Chumstick Highway travel more than 5 mph above the posted speed limit. Where the posted speed limit is 30 mph, 28 percent of total daily traffic along Beaver Valley Road travel more than 5 mph above the posted speed limit.

The speed distribution along Chumstick Highway/Beaver Valley Road indicates exceeding the posted speed limit occurs frequently along the 25 mph and 30 mph segments. However, most vehicles travel near the posted speed limit along the 35 mph segment.

Table 3. Chumstick Highway/Beaver Valley Road Speed Data Summary (2021-2025)

Indicator	MP 0.021	MP 0.230	MP 0.400	MP 0.600	MP 13.843
Posted Speed Limit (mph)	25	25	35	35	30
Average Daily Traffic (vehicles)	4,411	5,101	4,504	3,803	2,403
Median Speed (mph)	26	30	33	33	32
85th Percentile Speed (mph)	31	34	37	37	37
10 mph Pace (mph)	21-31	25-35	28-38	28-38	27-37
% in Pace	72%	75%	73%	79%	68%
% of Vehicles 5 mph over Speed Limit[1]	22%	50%	6%	5%	28%

1. Represents the vehicles exceeding the posted speed limit by at least 5 mph.

North Road Vehicle Speeds

As shown in Table 4, 3 percent of total daily traffic along North Road where the posted speed limit is 35 mph travel more than 5 mph above the posted speed limit. Where the posted speed limit is 25 mph, 54 percent of total daily traffic along North Road travel more than 5 mph above the posted speed limit.

The speed distribution along North Road indicates exceeding the posted speed limit occurs frequently along the 25 mph segment. However, most vehicles travel near the posted speed limit along the 35 mph segment.

Table 4. North Road Speed Data Summary (2021, 2024)

Indicator	MP 1.044	MP 3.730
Posted Speed Limit (mph)	35	25
Average Daily Traffic (vehicles)	854	1,081
Median Speed (mph)	32	30
85th Percentile Speed (mph)	36	35
10 mph Pace (mph)	27-37	26-36
% in Pace	79%	71%
% of Vehicles 5 mph over Speed Limit[1]	3%	54%

1. Represents the vehicles exceeding the posted speed limit by at least 5 mph.

Entiat River Road Vehicle Speeds

As shown in Table 5, between 29 and 63 percent of total daily traffic along Entiat River Road travel more than 5 mph above the posted speed limit.

The speed distribution along Entiat River Road indicates exceeding the posted speed limit occurs frequently.

Table 5. Entiat River Road Speed Data Summary (2022)

Indicator	MP 2.860	MP 3.820	MP 4.807
Posted Speed Limit (mph)	45	45	45
Average Daily Traffic (vehicles)	1,599	1,410	1,274
Median Speed (mph)	48	47	52
85th Percentile Speed (mph)	54	53	58
10 mph Pace (mph)	43-53	42-52	46-56
% in Pace	66%	67%	63%
% of Vehicles 5 mph over Speed Limit[1]	37%	29%	63%

1. Represents the vehicles exceeding the posted speed limit by at least 5 mph.

Manson Boulevard Vehicle Speeds

As shown in Table 6, between 18 and 62 percent of total daily traffic along Manson Boulevard travel more than 5 mph above the posted speed limit.

The speed distribution along Manson Boulevard indicates exceeding the posted speed limit occurs frequently.

Table 6. Manson Boulevard Speed Data Summary (2023-2024)

Indicator	MP 0.070	MP 0.090	MP 0.509	MP 0.642
Posted Speed Limit (mph)	25	25	25	25
Average Daily Traffic (vehicles)	1,841	2,045	1,787	1,994
Median Speed (mph)	27	28	27	32
85th Percentile Speed (mph)	30	31	32	38
10 mph Pace (mph)	22-32	23-33	22-32	26-36
% in Pace	85%	88%	75%	63%
% of Vehicles 5 mph over Speed Limit[1]	18%	25%	26%	62%

1. Represents the vehicles exceeding the posted speed limit by at least 5 mph.

East Leavenworth Road Vehicle Speeds

As shown in Table 7, between 0 and 12 percent of total daily traffic along East Leavenworth Road travel more than 5 mph above the posted speed limit.

The speed distribution along East Leavenworth Road indicates most vehicles travel near the posted speed limit.

Table 7. East Leavenworth Road Speed Data Summary (2025)

Indicator	MP 0.052	MP 1.249	MP 2.866
Posted Speed Limit (mph)	35	35	35
Average Daily Traffic (vehicles)	2,067	1,429	1,014
Median Speed (mph)	24	34	34
85th Percentile Speed (mph)	28	38	39
10 mph Pace (mph)	19-29	28-38	30-40
% in Pace	83%	76%	75%
% of Vehicles 5 mph over Speed Limit[1]	0%	7%	12%

1. Represents the vehicles exceeding the posted speed limit by at least 5 mph.

Findings/Recommendations

The key findings and recommendations of the speed analysis associated with the analysis of candidate locations for potential installation of automated speed enforcement cameras are detailed below. Segments of the following HIN or HRN roadways are those that would meet the criteria to be considered locations which experience "higher crash risk due to excessive vehicle speeds":

- Malaga-Alcoa Highway
- Chumstick Highway/Beaver Valley Road
- North Road
- Entiat River Road
- Manson Boulevard

Squilchuck Road Corridor

- **Vehicle Speeds:** Existing speed data shows that while some speeding occurs along the corridor, most vehicles travel near the posted speed limit.

Recommendation for Squilchuck Road: *Given the analysis findings, the County could consider traffic calming measures other than automated speed enforcement cameras for this corridor, such as speed radar feedback signs or education/awareness programs.*

Malaga Alcoa Highway Corridor

- **Vehicle Speeds:** Existing speed data shows a persistent trend of vehicles traveling over the speed limit, particularly along the 40 mph segments. Where the posted speed limit is 40 mph, 55 percent of total daily traffic travel more than 5 mph above the posted speed limit.

Recommendation for Malaga Alcoa Highway: *Given the analysis findings, the County could consider the use of automated speed enforcement cameras based on state law RCW 46.63.220 and RCW 46.63.250, which allow such cameras to be used in locations experiencing consistent speeding. The potential locations where speeding is most prevalent along Malaga Alcoa Highway are the 40 mph segments. Either 40 mph segment could be a candidate for automated speed enforcement cameras.*

Chumstick Highway/Beaver Valley Road Corridor

- **Vehicle Speeds:** Existing speed data shows a persistent trend of vehicles traveling over the speed limit along the 25 mph and 30 mph segments. Where the posted speed limit is either 25 mph or 30 mph, between 22 and 50 percent of total daily traffic travel more than 5 mph above the posted speed limit.

Recommendation for Chumstick Highway/Beaver Valley Road: *Given the analysis findings, the County could consider the use of automated speed enforcement cameras based on state law RCW 46.63.220 and RCW 46.63.250, which allow such cameras to be used in locations experiencing consistent speeding. The potential locations where speeding is most prevalent along Chumstick Highway/Beaver Valley Road are the 25 mph and 30 mph segments. Either the 25 mph or 30 mph segment could be a candidate for automated speed enforcement cameras.*

North Road Corridor

- **Vehicle Speeds:** Existing speed data shows a persistent trend of vehicles traveling over the speed limit along the 25 mph segment. Where the posted speed limit is 25 mph, 54 percent of total daily traffic travel more than 5 mph above the posted speed limit.

Recommendation for North Road: *Given the analysis findings, the County could consider the use of automated speed enforcement cameras based on state law RCW 46.63.220 and RCW 46.63.250, which allow such cameras to be used in locations experiencing consistent speeding. The potential location where speeding is most prevalent along North Road is the 25 mph segment. The 25 mph segment could be a candidate for automated speed enforcement cameras.*

Entiat River Road Corridor

- **Vehicle Speeds:** Existing speed data shows a persistent trend of vehicles traveling over the speed limit. Between 29 and 63 percent of total daily traffic travel more than 5 mph above the posted speed limit.

Recommendation for Entiat River Road: *Given the analysis findings, the County could consider the use of automated speed enforcement cameras based on state law RCW 46.63.220 and RCW 46.63.250, which allow such cameras to be used in locations experiencing consistent speeding. Entiat River Road could be a candidate for automated speed enforcement cameras.*

Manson Boulevard Corridor

- **Vehicle Speeds:** Existing speed data shows a persistent trend of vehicles traveling over the speed limit. Between 18 and 62 percent of total daily traffic travel more than 5 mph above the posted speed limit.

Recommendation for Manson Boulevard: *Given the analysis findings, the County could consider the use of automated speed enforcement cameras based on state law RCW 46.63.220 and RCW 46.63.250, which allow such cameras to be used in locations experiencing consistent speeding. Manson Boulevard could be a candidate for automated speed enforcement cameras.*

East Leavenworth Road Corridor

- **Vehicle Speeds:** Existing speed data shows that while some speeding occurs along the corridor, most vehicles travel near the posted speed limit.

Recommendation for East Leavenworth Road: *Given the analysis findings, the County could consider traffic calming measures other than automated speed enforcement cameras for this corridor, such as speed radar feedback signs or education/awareness programs. Additionally, due*

to the surrounding residential land use context along East Leavenworth Road, the County could consider reducing the posted speed limit aligning with speed limit setting guidance from resources such as the National Association of City Transportation Officials (NACTO). Given feedback received from the community, this corridor may warrant additional speed studies in the future. Future counts measuring vehicular speeds should be taken along straight, flat segments of the road which are likely to exhibit the highest travel speeds.

Appendix J: Post-Crash Care Strategy: Enhanced Prehospital Hemorrhage Control and Early Resuscitation

Post-Crash Care Strategy: Enhanced Prehospital Hemorrhage Control and Early Resuscitation

Post-crash care is a critical component of the Safe System Approach and plays a significant role in reducing fatalities and serious injuries following roadway incidents. While efforts to prevent crashes are essential, improving survivability from a crash is equally important in achieving long-term reductions in roadway fatalities.

In Chelan County, particularly in rural and geographically dispersed areas, patients involved in high-severity motor vehicle collisions may experience prolonged transport times to definitive care. These delays can impact access to time-sensitive interventions, including blood transfusion, which is a key component in the management of traumatic hemorrhagic shock. Hemorrhage remains a leading cause of preventable death in trauma, and delays in resuscitation can significantly worsen patient outcomes.

Currently, blood products are not available in the prehospital setting in most cases, resulting in a gap between injury occurrence and definitive treatment. Addressing this gap represents an opportunity to improve outcomes for patients experiencing severe traumatic injuries.

To address this need, Chelan County will support the development and implementation of a prehospital blood administration program. This program would enable Advanced Life Support (ALS) providers to initiate blood transfusion in the field for patients meeting defined clinical criteria, thereby advancing resuscitation earlier in the care continuum.

This strategy enhances the post-crash care system by reducing time to critical intervention, improving early physiological stabilization, and strengthening the overall trauma response network within the county.

Program Components and Implementation Approach

The prehospital blood administration program would be developed in coordination with regional EMS agencies, healthcare partners, and system stakeholders. Key components may include:

- **Clinical protocols and criteria:**
  Development of standardized guidelines to identify patients with suspected hemorrhagic shock who may benefit from early blood administration
- **EMS training and competency:**
  Initial and ongoing training for paramedics and ALS providers to ensure safe and effective administration of blood products in the prehospital environment
- **Equipment and logistics:**
  Deployment of appropriate storage systems, temperature monitoring, and transport processes to maintain blood product integrity in the field

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- **Healthcare system coordination:**
  Collaboration with regional partners, including Confluence Health, for blood supply, storage, rotation, and integration into the broader trauma system
- **Quality improvement and performance monitoring:**
  Collection and analysis of key data points, including time to administration, patient response, and outcomes, to guide continuous improvement

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Equity and Rural Considerations

This strategy is particularly relevant for rural and underserved areas within Chelan County, where extended response and transport times can increase the risk of adverse outcomes following serious crashes. By enabling earlier access to life-saving interventions, this program aims to reduce disparities in trauma care and improve outcomes regardless of geographic location.

Expected Outcomes and Safety Benefits

Implementation of this strategy is expected to:

- Reduce time to blood product administration for patients with traumatic hemorrhage
- Improve early stabilization of critically injured patients prior to hospital arrival
- Decrease preventable mortality associated with hemorrhagic shock
- Strengthen coordination between EMS providers and healthcare systems
- Enhance the overall effectiveness of the post-crash care system

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Early Implementation Opportunity

Given the current development timeline of the Safety Action Plan, this initiative represents a strong opportunity for early implementation. Advancing this strategy would allow Chelan County to proactively enhance post-crash care capabilities and improve survivability following high-severity roadway incidents, particularly in rural and extended transport environments.

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