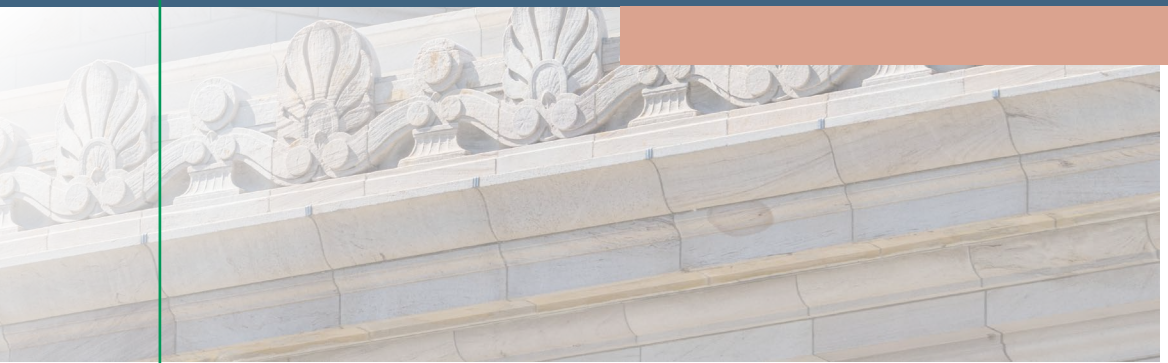
THURSTON COUNTY
WASHINGTON
SINCE 1852

Thurston County
SAFETY ACTION PLAN
2025



Prepared by Transpo Group

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Contents

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Glossary of Terms

ADT	Average Daily Traffic
CSAP	County Safety Action Plan
FHWA	Federal Highway Administration
FSI	Fatal or Serious Injury
HIN	High-Injury Network
HRN	High-Risk Network
LRSP	Local Road Safety Plan
MPA	Metropolitan Planning Area
MPO	Metropolitan Planning Organization
PBP	Pedestrian and Bicycle Program
PSC	Proven Safety Countermeasure
RAISE	Rebuilding American Infrastructure with Sustainability and Equity
RTPO	Regional Transportation Planning Organization
SS4A	Safe Streets and Roads for All grant funding program
SRTS	Safe Routes to School
TIB	Transportation Improvement Board
TDM	Transportation Demand Management
USDOT	United States Department of Transportation
WSDOT	Washington State Department of Transportation
WTSC	Washington Traffic Safety Commission

1 Introduction

What is a Comprehensive Safety Action Plan?

The USDOT's Safe Streets and Roads for All (SS4A) program designates the County 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 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 Vision Zero program, the Washington State Transportation Commission (WSTC) adapted USDOTs Safe System Approach to be more applicable to the needs and priorities of the state's roadway network.

Vision Zero Network Logo

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:

- Mental and emotional trauma suffered by surviving individuals and family members
- Personal financial costs from short-term medical bills and long-term treatments, rehabilitations, and other medical needs
- Increased financial cost to tax-payers 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.

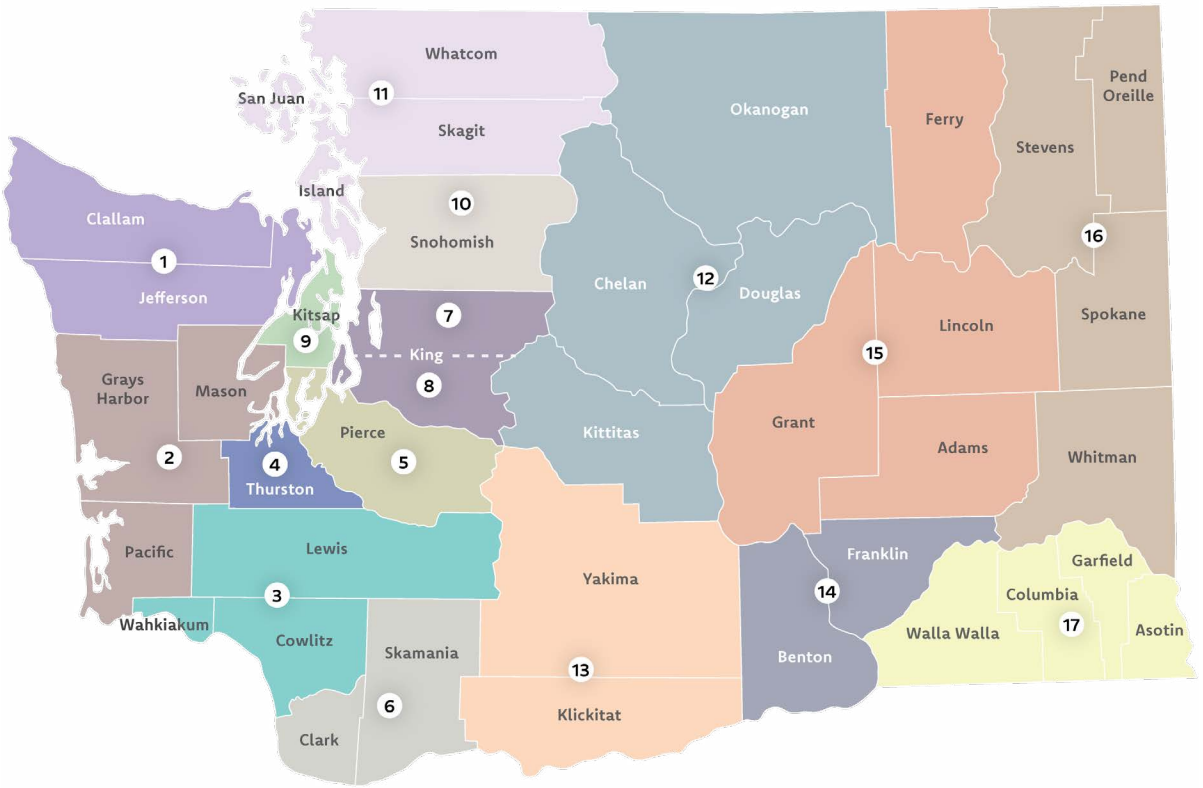
Committing to Vision Zero will require the following strategies:

- 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 potential 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 (and is in the process of updating) 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.

As part of these efforts, WTSC supports a statewide network of 17 Target Zero Managers (TZM) to facilitate the State's Target Zero Program at the local level and address regional safety concerns. Thurston County comprises TZM Region 4, shown in Figure 1. Through the Target Zero program, Washington State is building a strong safety culture in our communities.



1	Clallam & Jefferson Counties	7/8	King County (North)/King County (South)	14	Benton & Franklin Counties
2	Grays Harbor, Mason & Pacific Counties	9	Kitsap County	15	Adams, Ferry, Grant & Lincoln Counties
3	Lewis, Wahkiakum & Cowlitz Counties	10	Snohomish County	16	Pend Oreille, Spokane, Stevens & Whitman Counties
4	Thurston County	11	Island, San Juan, Skagit & Whatcom Counties	17	Asotin, Columbia, Garfield & Walla Walla Counties
5	Pierce County	12	Chelan, Douglas, Kittitas & Okanogan Counties		
6	Clark & Skamania Counties	13	Klickitat & Yakima Counties		

Figure 1: Target Zero Managers (TMZ) Regions in Washington State

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 2. The six statements wrapped around the outside ring are the fundamental principles upon which the 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.
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.
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.

Elements of the Safe System Approach

The six pie-shaped segments inside the ring of the graphic shown in Figure 2 are the implementation elements of the Safe System Approach.

1. **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.
2. **Safer Lane 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.
3. **Safer Vehicles.** Making vehicles safer can be done through advanced driver assistance systems and by ensuring future technology prioritizes vulnerable roadway users.
4. **Safer Speeds.** Slower vehicle speeds increase visibility and reaction times for drivers and reduce impact forces when crashes occur. Moving toward safer speeds can be done through speed limit reduction, traffic calming, and roadway design.
5. **Safer Roads.** Safer roads come from providing physical separation (such as separated bike lanes and sidewalks) as well as designing to accommodate human mistakes.
6. **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.

Figure 2: Safe System Approach
Source: Washington State Strategic Highway Safety Plan 2024

Thurston County Vision Zero Commitment

In the approved 2040 Thurston County Comprehensive Plan, Thurston County committed to reducing fatalities and serious injuries on Thurston County roadways to zero by 2030. This CSAP reiterates this commitment and guides progress toward the Target Zero goal.

2 Safety Analysis

This chapter summarizes existing conditions and current crash trends on Thurston County's transportation network.

Data sources

The report focuses exclusively on Thurston County maintained roadways. The roadways included in the analysis (unincorporated Thurston County) are shown in Figure 3.

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

Historical data was analyzed to understand crash risks from a systemic level and reveal information such as the quantities of different crash types, the quantities of crashes resulting in fatal and serious injuries (FSI), and the quantities of different contributing circumstances that influenced the 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 what the underlying behavioral issues may be.

The crash data was 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 lane delineation or signage lacking in contrast, wide crossings, or missing pedestrian facilities.

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.

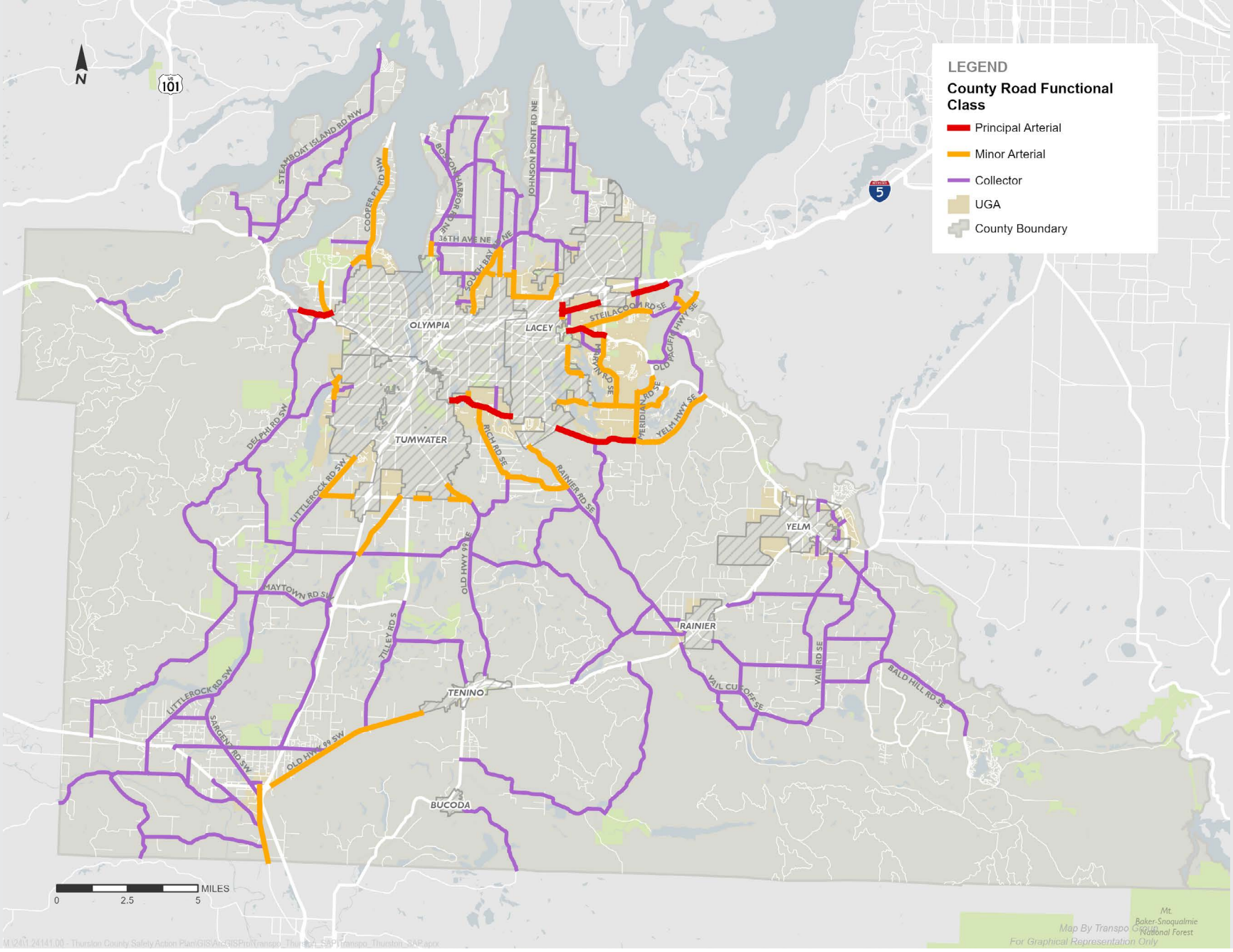


Figure 3: Study Area

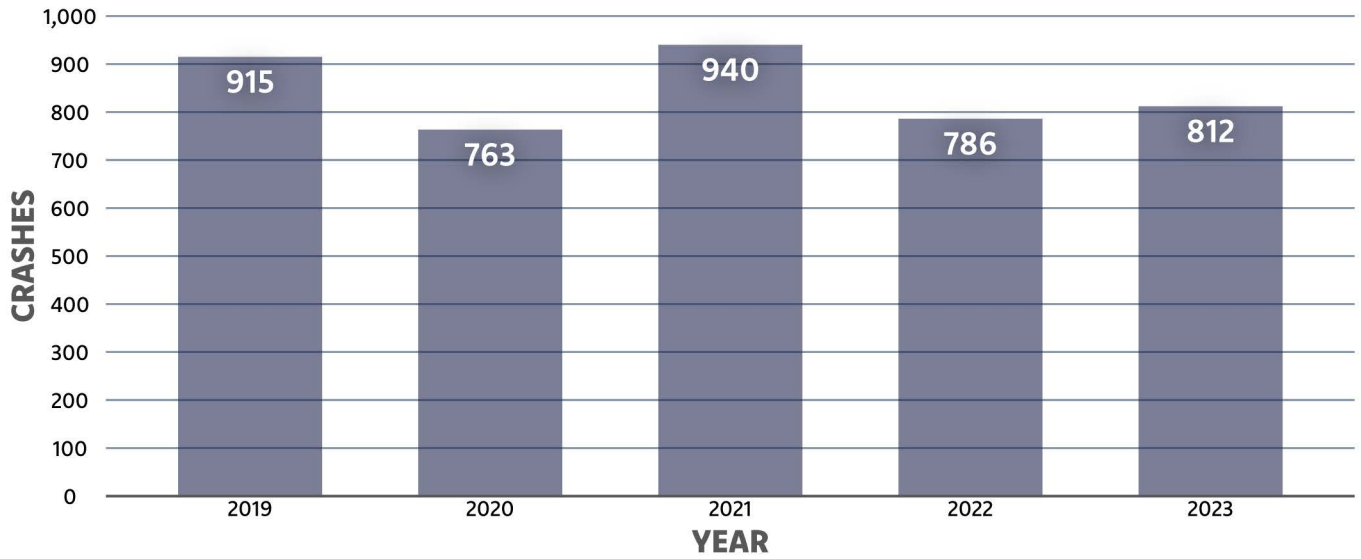


Figure 4: Thurston County, All Crashes Per Year 2019–2023
Source: WSDOT Collision Data, Thurston County maintained roadways only

Countywide Crash Analysis

A total of 4,216 crashes were reported on facilities owned by Thurston County between 2019 and 2023. Figure 4 shows that the highest number of crashes, 940, occurred in 2021. The number of annual crashes reported has fluctuated from year to year, generally decreasing slightly over the five-year period.

Figure 5 shows a map of the crashes reported in the county during the analysis period, displayed by severity and frequency.

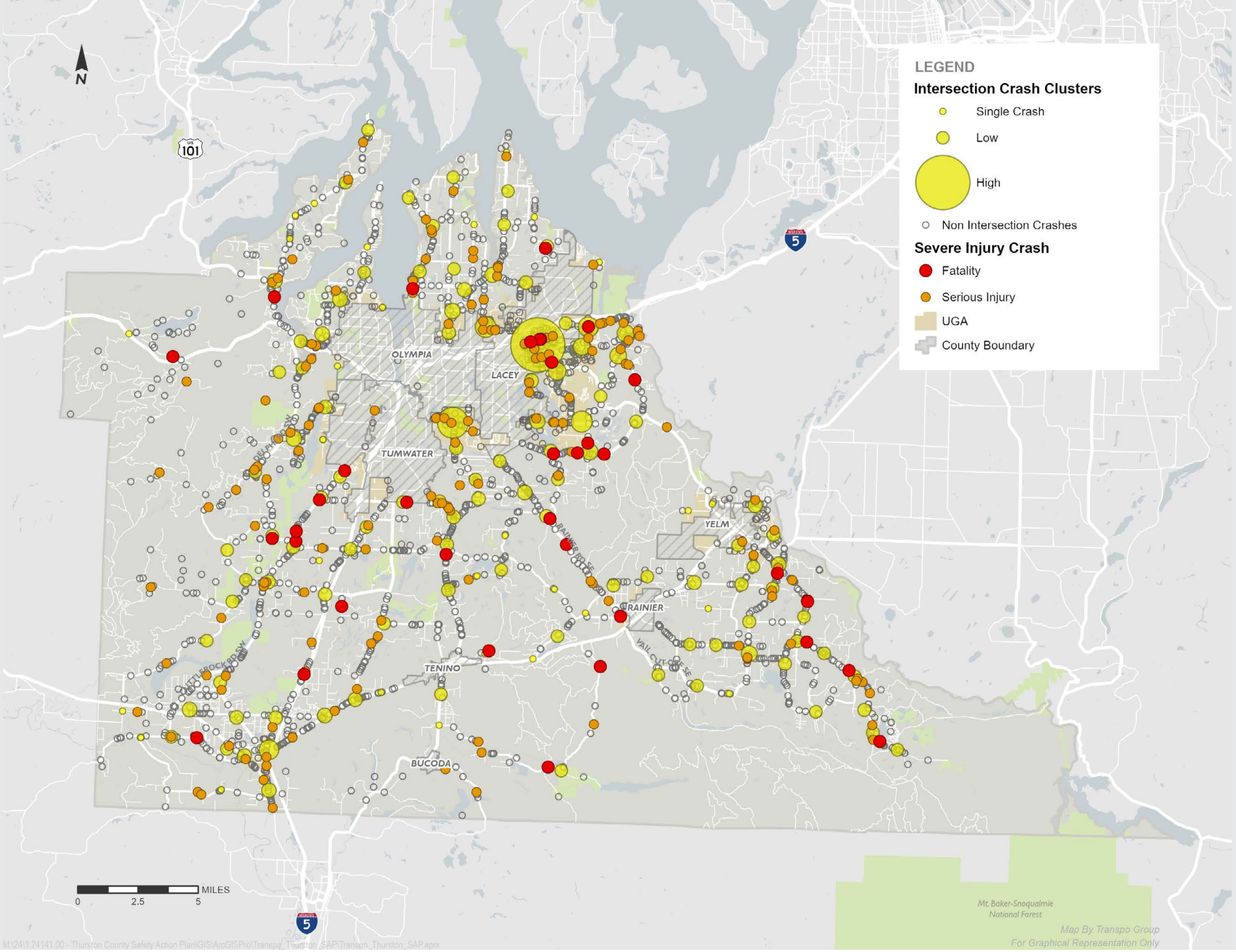


Figure 5: Crash Summary Map (2019-2023)
Source: WSDOT Collision Data, Thurston County maintained roadways only

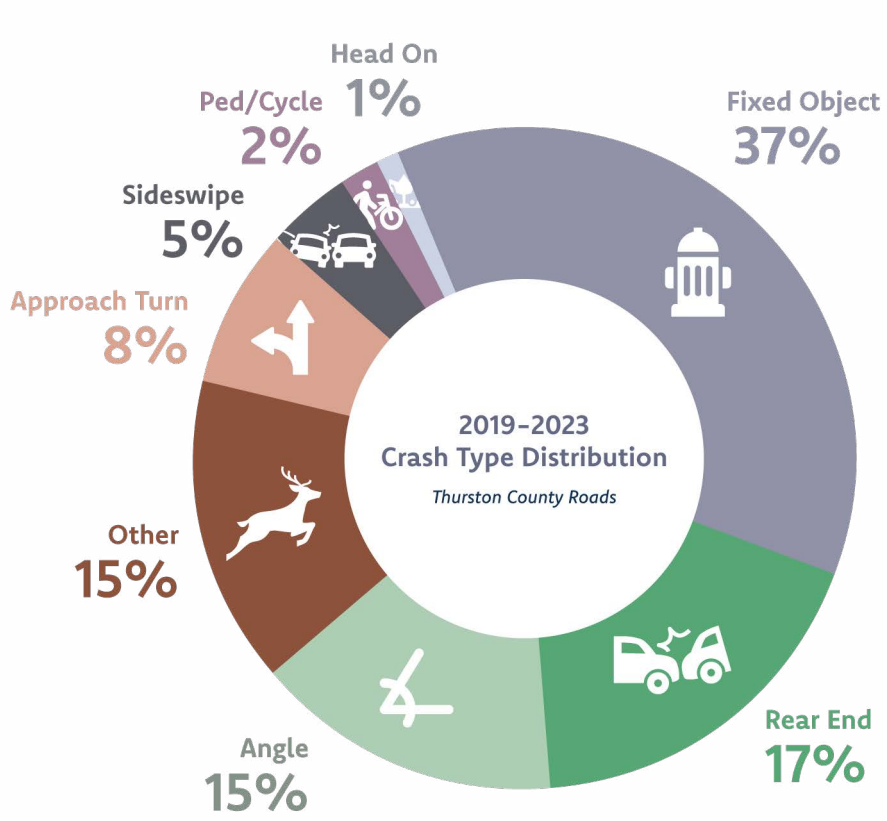


Figure 6: Thurston County Crash Type Distribution 2019–2023
Source: WSDOT Collision Data for Thurston County maintained roadways only

The crash type distribution is shown in Figure 6. The distribution represents the proportion of each type of crash reported in the data set and shows which types of crashes occurred disproportionately to others. Of the 4,216 crashes reported, the greatest number of crashes, by a wide margin, were fixed-object crashes, followed by rear end crashes, angle crashes, and "other" type crashes. Fixed object crashes occur when a motorist departs the travel lane and strikes an immovable, permanent object located at the roadside, such as a tree, utility fixture, ditch, or fence. The 1,575 fixed object crashes reported in Thurston County accounted for 37% of the total crashes during the analysis period. Of the fixed object crashes, 78 resulted in a serious injury or a fatality, representing 40% of the fatal and serious injury (FSI) crashes reported during the analysis period.

The second most frequent crash type was rear end crashes. There were 720 rear end crashes, 17% of the total. Rear end crashes occur when one vehicle following another strikes the forward vehicle from behind. Though rear ends were the second most frequent crash type reported during the analysis period, there were far fewer serious injuries or fatalities associated with these crashes. It is common for rear end crashes to occur in congestion at low speeds, therefore often reducing the severity. Of the 720 rear end crashes, 7 resulted in a fatality or serious injury, 3% of the FSI crash total.

The following section summarizes the historical crash analysis in Thurston County from 2019 through 2023.

Angle, and "other" type crashes accounted for 642 (15%), and 632 (15%) of the total crashes, respectively. Crashes occurring when one vehicle struck another at or near a 90-degree angle were coded as angle crashes. "Other" type crashes frequently involved wildlife strikes, such as deer or elk, but also included running off the road without hitting a guardrail or other barrier, and striking movable or impermanent objects such as railway vehicles and fallen tree branches. Of the angle and "other" crashes, 18 of the angle and 31 of the "other" crashes resulted in a serious injury, representing 9%, and 16% of the FSI crashes respectively.

Table 1 lists the rates at which the four most overrepresented crash types, fixed object, rear end, angle, and "other", were reported in Thurston County, compared to the rates at which the same crash types were reported for all roadways in the state of Washington as a whole. Of the four crash types listed in Table 1, fixed object, and other crashes had significantly higher rates of occurrence at nearly double and triple that of the state.

Table 1: County and State Comparison Crash Type Distribution (All Crashes, 2019–2023)

	Thurston County		Washington State	
Crash Type	Roads Total	All Roads (%)	All Roads Total	All Roads (%)
Fixed Object	1,575	37%	102,867	20%
Rear End	720	17%	138,835	27%
Angle	776	15%	93,452	18%
Other[1]	762	15%	25,990	5%

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.

Table 2: Contributing Circumstances in Most Frequent Crashes

Crash Type	Contributing Circumstances[1]
Fixed Object	Inattention/Distraction (26%), Speeding (20%)
Rear End	Inattention/Distraction (38%), Following Too Close (33%)
Angle	Fail to Yield Right of Way (34%), Inattention/Distraction (12%)
Other[2]	Inattention/Distraction (15%), Speeding (12%)

1. Contributing circumstances listed for all crash severity.
2. 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.
Source: WSDOT Collision Data for Thurston County maintained roadways only

Table 2 summarizes the most frequent contributing circumstances for the top four crash types in Thurston County. As seen in the table, inattention/distraction, and speeding were the most frequent contributing circumstances in the fixed object and "other" type crashes, and inattention/distraction, following too closely, and not granting the right of way to the other vehicle were frequent contributors in the rear end and angle crashes.

Fatal and Serious Injury Crashes

Of the 4,216 crashes that occurred on Thurston County roads, 198 (5%) resulted in a serious injury or fatality. Figure 7 shows the geographic spread of the fatal and serious injury crashes in Thurston County that occurred on county roadways during the analysis period (state routes and incorporated roadways are omitted).

Fatal and serious injury crashes are spread out across the county's roadway network. There is a cluster of fatal and serious injury crashes in the City of Lacey's Urban Growth Area (UGA) likely due to the increased activity on those roadways. Many of the more rural roadways in the southern half of the county show a high number of fatal and serious injury crashes.

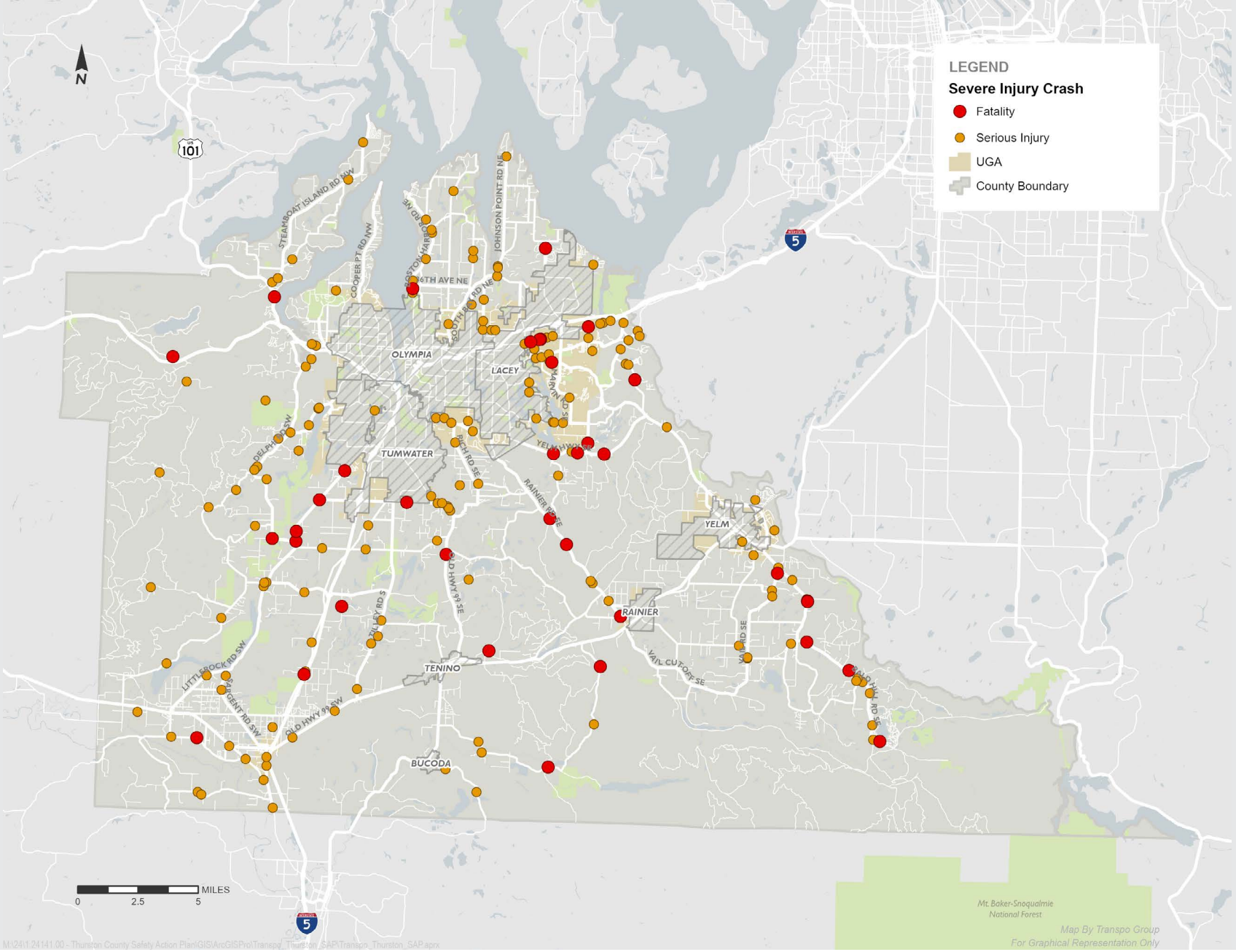


Figure 7: Map of Fatal and Serious Crashes in County (2019-2023)
Source: WSDOT Collision Data for Thurston County maintained roadways only

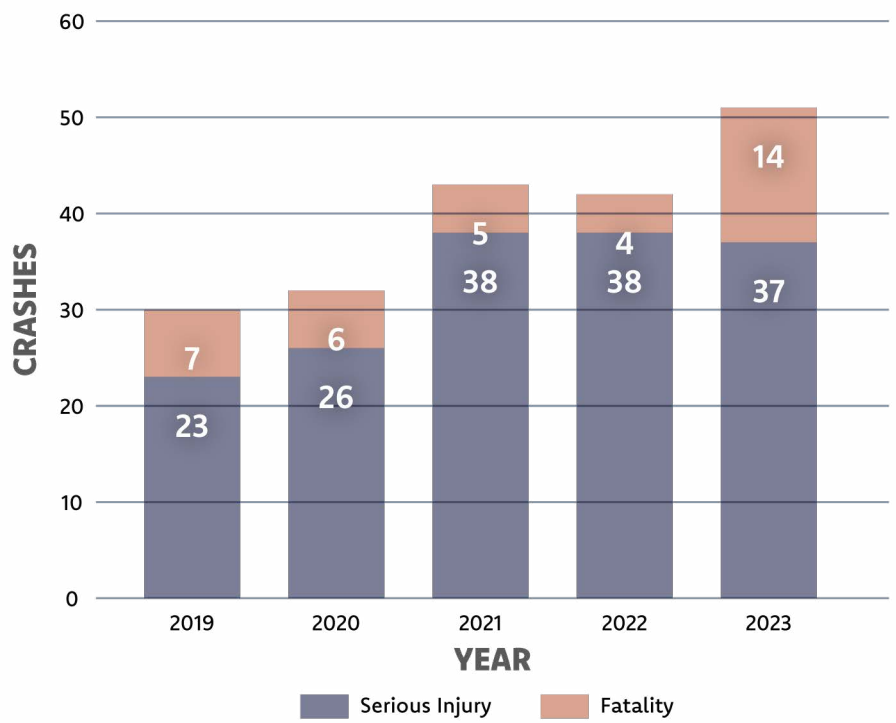


Figure 8: Serious Injury and Fatal Crashes in Thurston County (2019-2023)
Source: WSDOT Collision Data, Thurston County maintained roadways only

Table 3: County and State Comparison Crash Rates (FSI Crashes)

Crash Severity	Thurston County		Washington State	
	Roads Total	All Roads (%)	All Roads Total	All Roads (%)
Serious Injury	162	4%	2,576	4%
Fatality	36	1%	801	1%

Figure 8 shows the number of serious injury and fatal crashes per year, with the frequency of both severities increasing over the analysis period, and fatal crashes increasing sharply in 2023.

The overall rates of fatal and serious crashes in Thurston County between 2019 and 2023 are on par with the rates of crashes of the same elevated severity statewide, shown in Table 3. Though Thurston County's fatal and serious crash rates are not higher than the state, Washington's Strategic Highway Safety Plan, ***Target Zero (2024)***, advances the goal of reducing the number of traffic deaths and serious injuries on Washington's roadways to zero by the year 2030. Thurston County hosts a task force in support of Target Zero.

As Figure 8 (previous page) shows, both serious injury and fatal crash rates have approximately doubled since 2019. Serious injury crashes rose 38%, from 23 to 37, and fatal crashes doubled, rising from 7 to 14. Many of the fatal and serious injury crashes were influenced by speeding, shown in Figure 8, with the majority of severe crashes occurring on roadways with posted speed limits exceeding 40 mph.

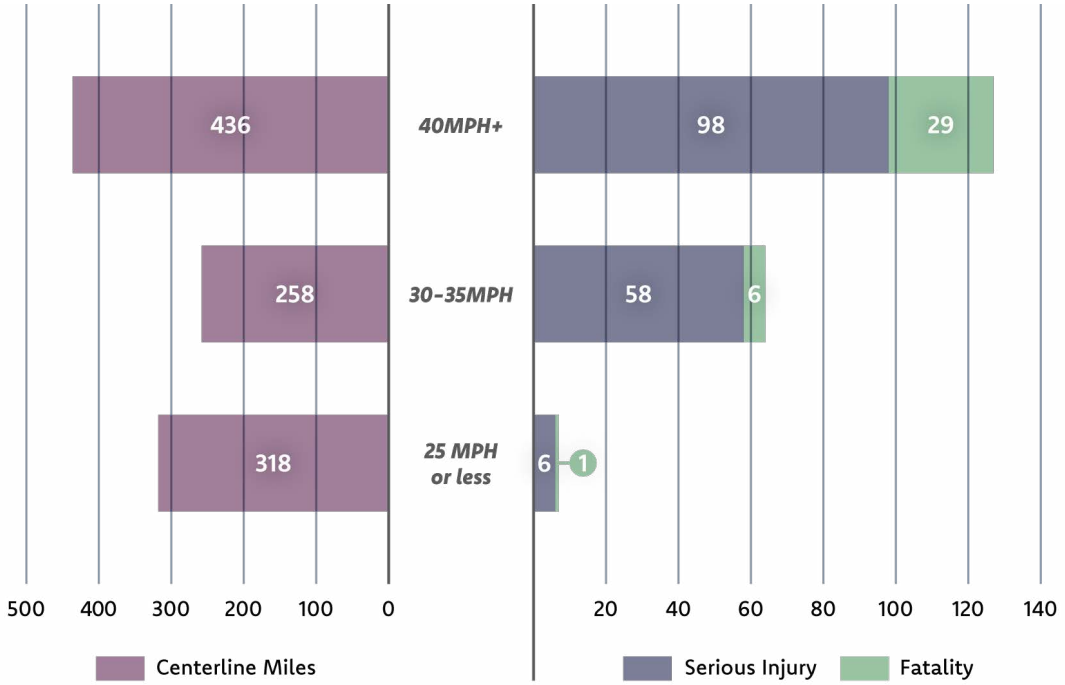


Figure 9: Thurston County Fatal and Serious Injury Crashes by Speed Limit

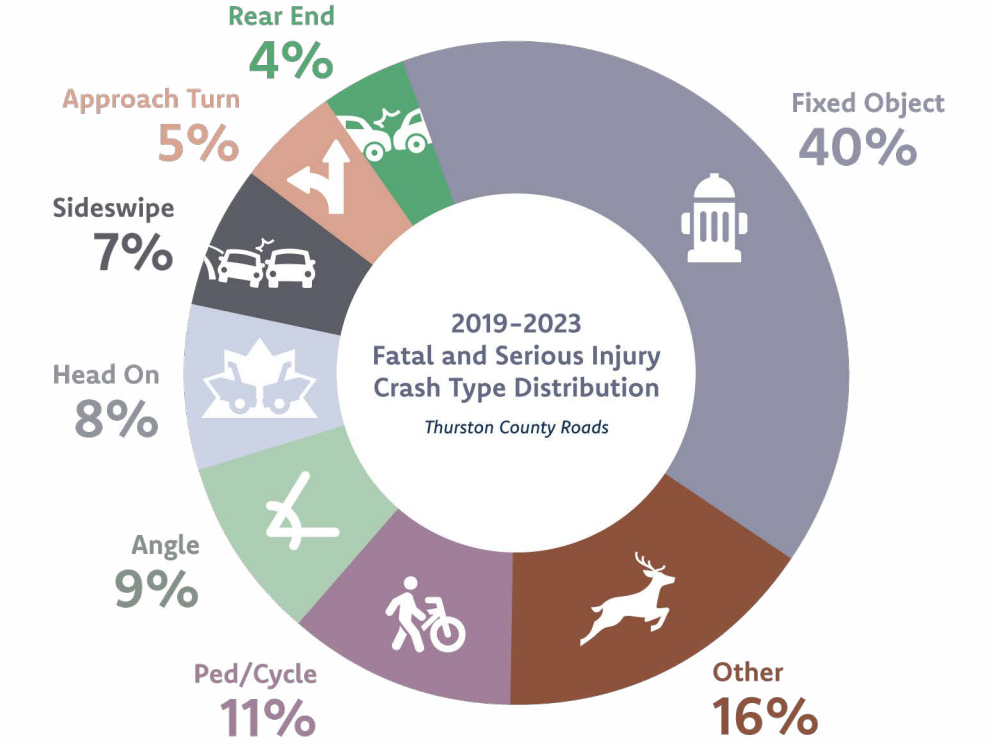


Figure 10 shows a distribution chart of FSI crashes by crash type. Fixed object crashes, "other" type crashes, and pedestrian and bike crashes were the most frequent among crashes with severe outcomes. Together, these crashes account for 67% of all serious injury and fatal crashes in Thurston County.

Figure 10: Thurston County Distribution of Serious Injury and Fatal Crashes by Type (2019–2023)
Source: WSDOT Collision Data for Thurston County maintained roadways only

Table 4 shows a comparison of County and statewide rates of FSI crashes. Several fatal or serious injury crash types were elevated in frequency compared to the state, highlighted in the table. In addition to being higher than statewide rates, fixed object, and "other" type crashes also accounted for over 55% of the total FSI crashes for the County. Though head on and sideswipe crashes also had rates somewhat higher than state rates, fatal and serious injury cases of these crash types occurred with lower frequency than other crashes within the county, including active mode crashes. While not higher than state rates, crashes involving active modes were elevated in the countywide rates of severe crashes, reported in over 10% of the FSI crashes in Thurston County.

Further analysis was conducted on the top three FSI crash types; fixed object, "other", and pedestrian/bicyclist crashes, to identify location characteristics or facility types where these crashes were concentrated, and to understand the contributing factors in the crashes.

Table 4: County and State Comparison Crash Type Distribution (FSI Crashes, 2019-2023)

	Thurston County		Washington State	
Crash Type	Roads Total FSI	Roads (% FSI)	All Roads Total FSI	All Roads (% FSI)
Fixed Object	78	40%	3,871	28%
Approach Turn	11	5%	1,073	8%
Rear End	7	4%	1,077	8%
Head On	18	9%	702	5%
Ped/Bike	21	11%	2,931	21%
Angle	18	9%	1,745	13%
Sideswipe	14	7%	606	4%
Other[1]	31	16%	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.
Source: WSDOT Collision Data for Thurston County maintained roadways only

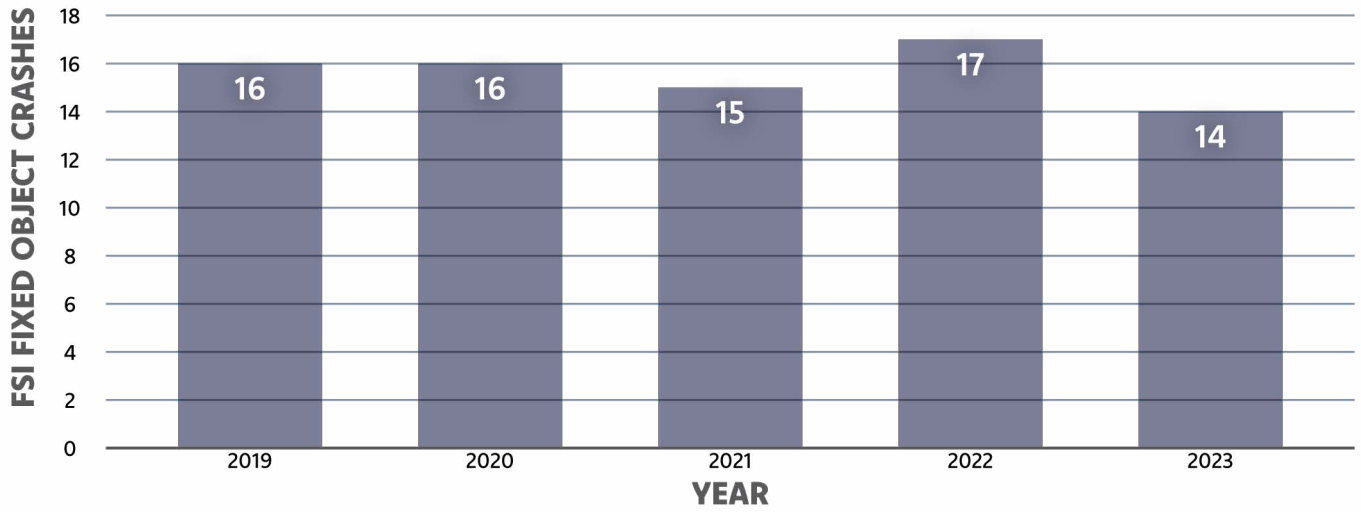


Figure 11: Serious Injury and Fatal Fixed Object Crashes Per Year (2019–2023)
Source: WSDOT Collision Data for Thurston County maintained roadways only

Top Fatal and Serious Injury Crash Types

Fixed object crashes

While rates of FSI fixed object crashes have been declining in recent years, as seen in Figure 11, fixed object crashes remain the most frequently reported type in crashes of all severity, and in crashes resulting in a fatality or serious injury during the analysis period.

Figure 12 shows a map of the locations and severity of the fixed object crashes in Thurston County.

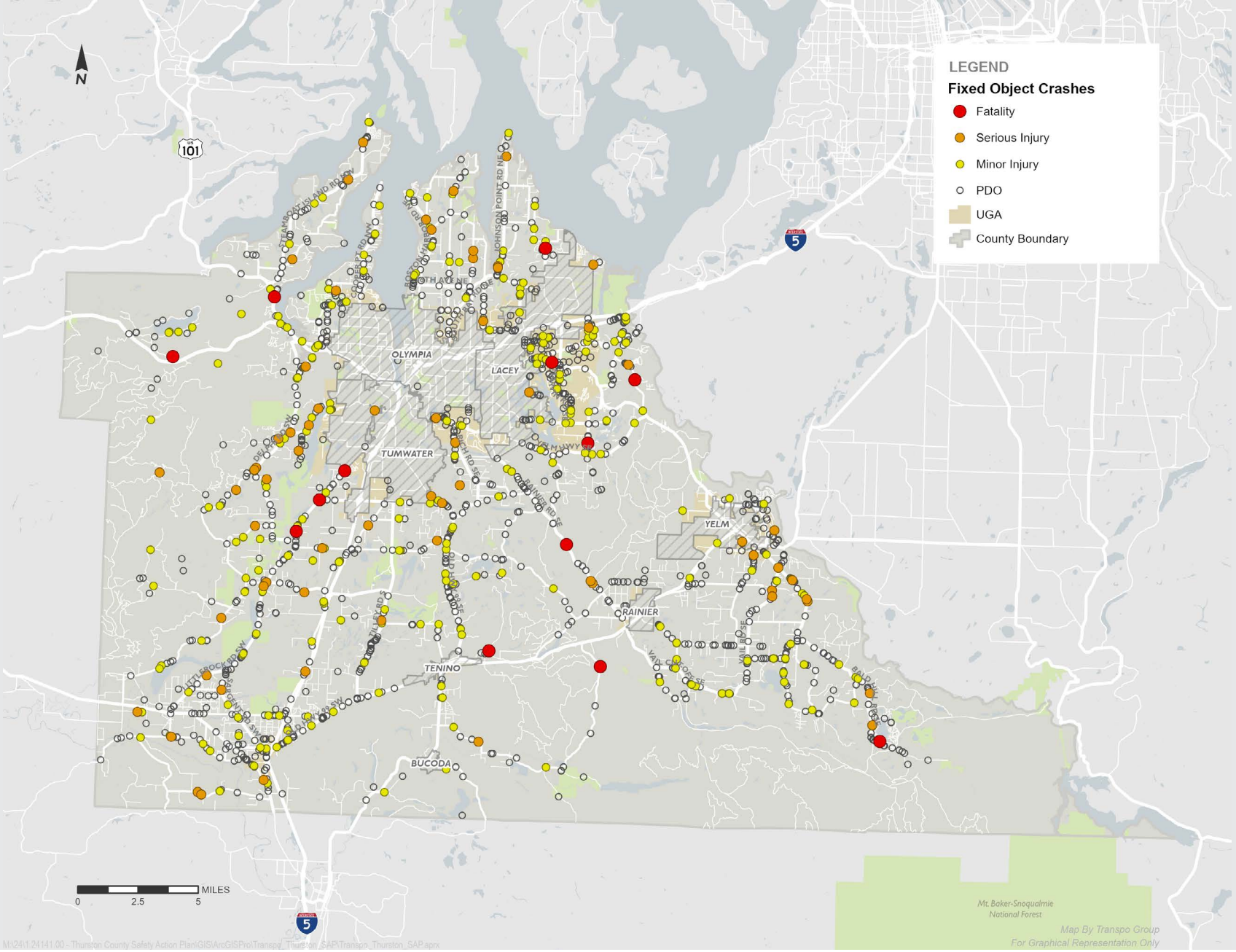


Figure 12: Map of All Fixed Object Crashes by Severity (2019-2023)
Source: WSDOT Collision Data for Thurston County maintained roadways only

Table 5: County and State Comparison FSI fixed object crash distribution (2019-2023) (County and State comparison crash type distribution (FSI crashes))

Crash Severity	Thurston County		Washington State	
Fixed Object – All	1,886	37%	102,867	20%
Fixed Object – FSI	93	40%	3,871	28%

Table 6: Most common contributing circumstances in FSI fixed object crashes

Crash Type	Contributing Circumstances
Fixed Object – All	Inattention/Distraction (26%), Speeding (20%)
Fixed Object – FSI	Speeding (12%), Driving Under the Influence (12%)

Source: WSDOT Collision Data for Thurston County maintained roadways only

Table 5 shows that, for crashes of all severity levels, fixed object crashes are reported with greater frequency in Thurston County than statewide. Fixed object crashes accounted for 40% of the FSI crashes in the county, and 28% of the FSI crashes in the state. In addition, for crashes of all severity levels, fixed object crashes accounted for 37% of the county and 20% of the state totals respectively.

Key contributing circumstances in fixed object crashes are summarized in Table 6. Speeding was a contributing factor in fixed object crashes of all severity levels, while driving intoxicated was more likely to influence the serious injury and fatal fixed object crashes, and inattention/distraction more frequently influenced the less severe fixed object crashes resulting in minor injuries or property damage only.

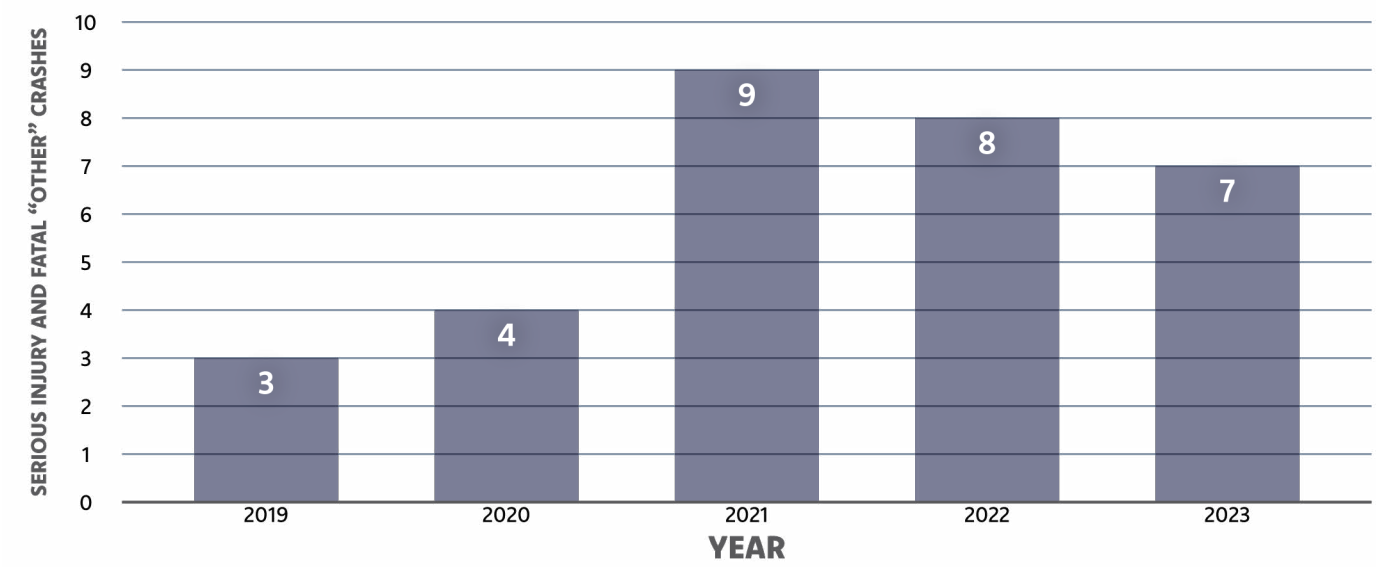


Figure 13: Serious Injury and Fatal "Other" Crashes Per Year (2019-2023)
Source: WSDOT Collision Data for Thurston County maintained roadways only

"Other type" crashes

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. Despite a slight reduction in serious injury and fatal "other" crashes in recent years, Figure 13 shows that, overall, "other" crashes are accounting for increasing numbers of the County's most serious crashes.

"Other" crashes were the third most frequently reported type in crashes of all severity and the second most frequent type in crashes resulting in a serious injury or fatality during the analysis period. Figure 14 shows a map of the locations and severity of the "other" type crashes in Thurston County. As seen on the map, many of the serious injury and fatal "other" crashes occurred along curves in the road in unincorporated areas of the county.

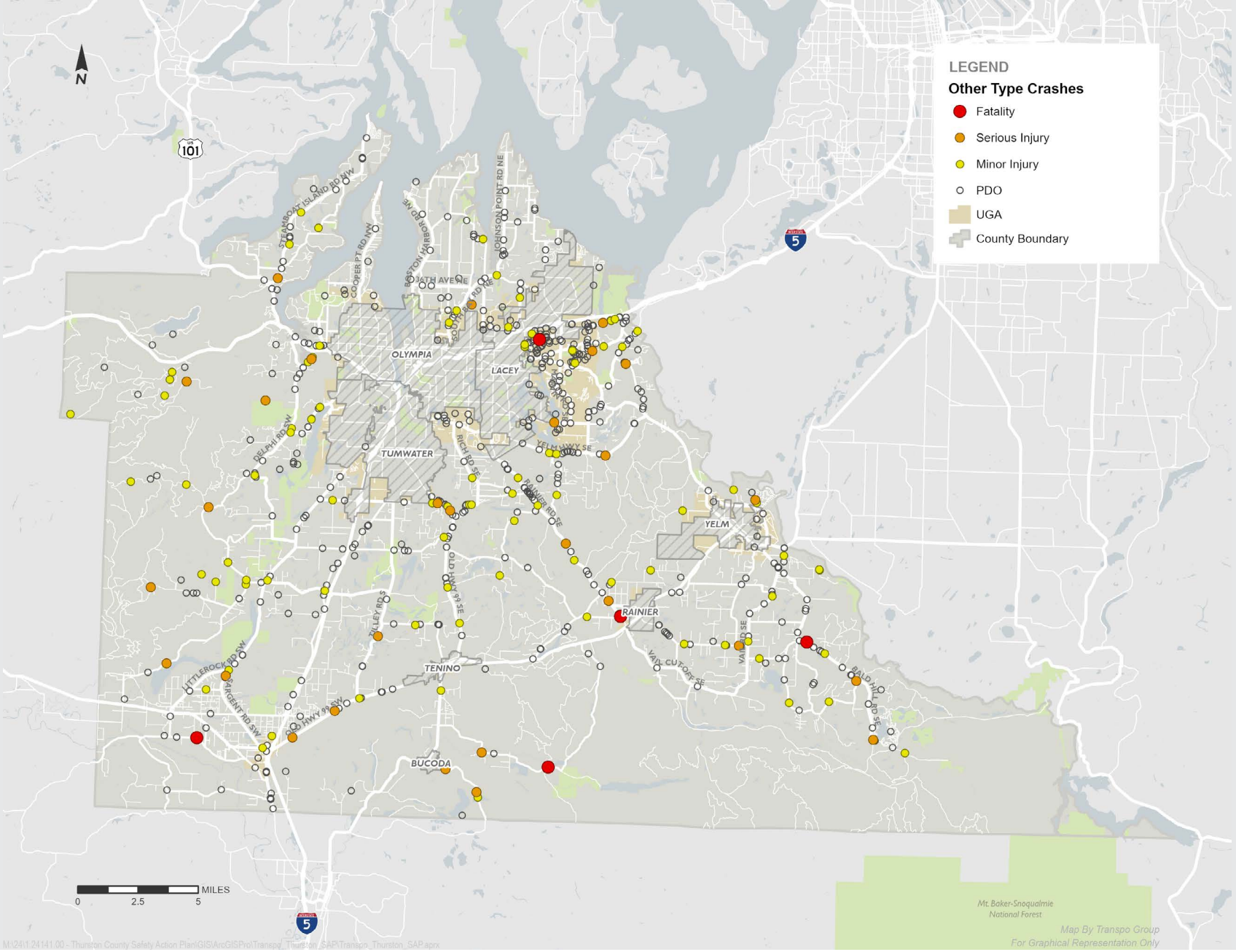


Figure 14: Map of All "Other" Crashes by Severity (2019-2023)
Source: WSDOT Collision Data for Thurston County maintained roadways only

Table 7 shows that the rates of "other" type crashes in Thurston County were higher than statewide rates of "other crashes for both all crash severities and for FSI crashes. "Other" crashes accounted for 16% of the serious injury and fatal crashes in the county, and 14% of the FSI crashes in the state. In addition, for crashes of all severity levels, "other" crashes accounted for 15% of the county and 14% of the state totals respectively.

Key contributing circumstances in "other" crashes reported in Thurston County during the analysis period are summarized in Table 8. Speeding and inattention/distraction were contributing factors in "other" crashes of all severity levels, with inattention contributing more often to less severe crashes and speeding contributing more often to serious injury and fatal crashes.

Table 7: County and State Comparison FSI "other" crash distribution (2019-2023) (County and State comparison crash type distribution)

Crash Severity	Thurston County		Washington State	
Other – All	632	15%	73,260	14%
Other – FSI	31	16%	1,825	14%

Table 8: Most Common Contributing Circumstances in FSI "Other" Crashes

Crash Type	Contributing Circumstances
"Other "– All	Inattention/Distraction (15%), Speeding (12%)
"Other" – FSI	Speeding (5%), Inattention/Distraction (2%)

Source: WSDOT Collision Data for Thurston County maintained roadways only

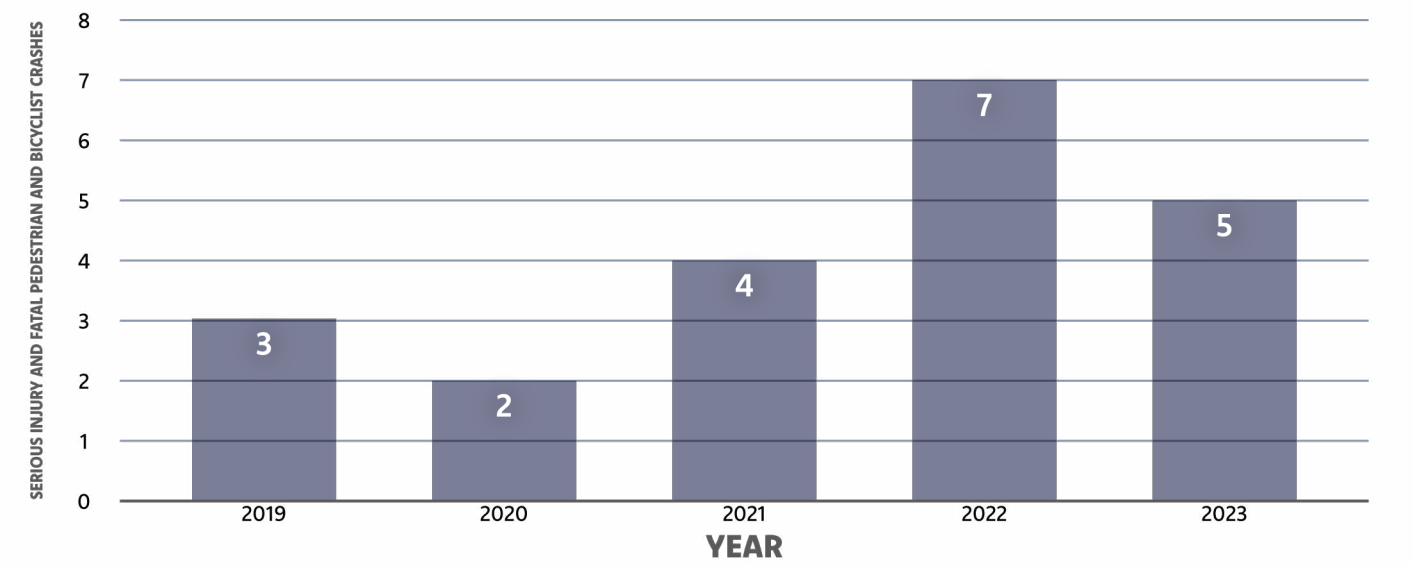


Figure 15: Serious Injury and Fatal Pedestrian and Bicyclist Crashes Per Year (2019–2023)
Source: WSDOT Collision Data for Thurston County maintained roadways only

Pedestrian and Bicyclist Crashes

Vulnerable Roadway Users

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, anti-lock

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.

During the analysis period, there were a total of 66 crashes that involved pedestrians or bicyclists. Out of the 66 crashes, 21 resulted in a serious injury or a fatality. Crashes involving the most vulnerable roadway users account for increasing numbers of the County's most serious crashes, despite a slight reduction in FSI pedestrian and bicyclist crashes from 2022 to 2023, as seen in Figure 15. Pedestrians, in particular, are experiencing high numbers of serious injury or fatality. Of the 21 FSI crashes, 15 involved a pedestrian. Figure 16 shows the geographic distribution of the pedestrian and bicyclist crashes in Thurston County, including those resulting in a fatality or serious injury. Crashes involving pedestrians or cyclists were the fourth most frequently reported type in crashes of all severity and the third most frequent type in FSI crashes.

As seen in the map, pedestrian and bicyclist FSI crashes primarily occurred at or near urban boundaries close to destination centers with high traffic volumes. Many of the pedestrian and bicyclist crashes occurred in urban growth areas where active mode users may wish to walk or bike to relatively nearby urban/suburban destinations, yet there may be insufficient or inappropriate facilities for safe active mode travel. While not higher than state comparison rates, FSI crashes involving pedestrian and bicyclists were reported with the third highest frequency for the county. Table 9 shows that pedestrian and bicyclist crashes accounted for 11% of the serious injury and fatal crashes in the county, and 21% of the FSI crashes in the state.

Key contributing circumstances in pedestrian and bicyclist crashes reported in Thurston County during the analysis period are summarized in Table 10. Among drivers, and active mode users alike, inattention/distraction and not yielding the right of way were contributing factors in crashes of all severity levels.

Table 9: County and State Comparison FSI Pedestrian and Bicyclist Crash Distribution (2019–2023) (County and State Comparison Crash Type Distribution (FSI Crashes))

Crash Severity	Thurston County		Washington State	
Ped/Bike – All	66	2%	14,370	3%
Ped/Bike– FSI	21	11%	2,931	21%

Table 10: Most Common Contributing Circumstances in FSI Pedestrian and Bicyclist Crashes

Crash Type	Contributing Circumstances		
	Driver	Pedestrian	Cyclist
Ped/Bike– All	CCs: Inattention/Distraction (15%), Not Yielding the Right of Way (13%)	CCs: Inattention/Distraction (7%), Not Yielding the Right of Way (5%)	CCs: Inattention/Distraction (6%)
Ped/Bike– FSI	CCs FSI: Inattention/Distraction (8%), Not Yielding the Right of Way (12%)	Pedestrian CCs FSI: Inattention/Distraction (8%), Not Yielding the Right of Way (4%)	CCs FSI: Inattention/Distraction (8%)

Source: WSDOT Collision Data for Thurston County maintained roadways only

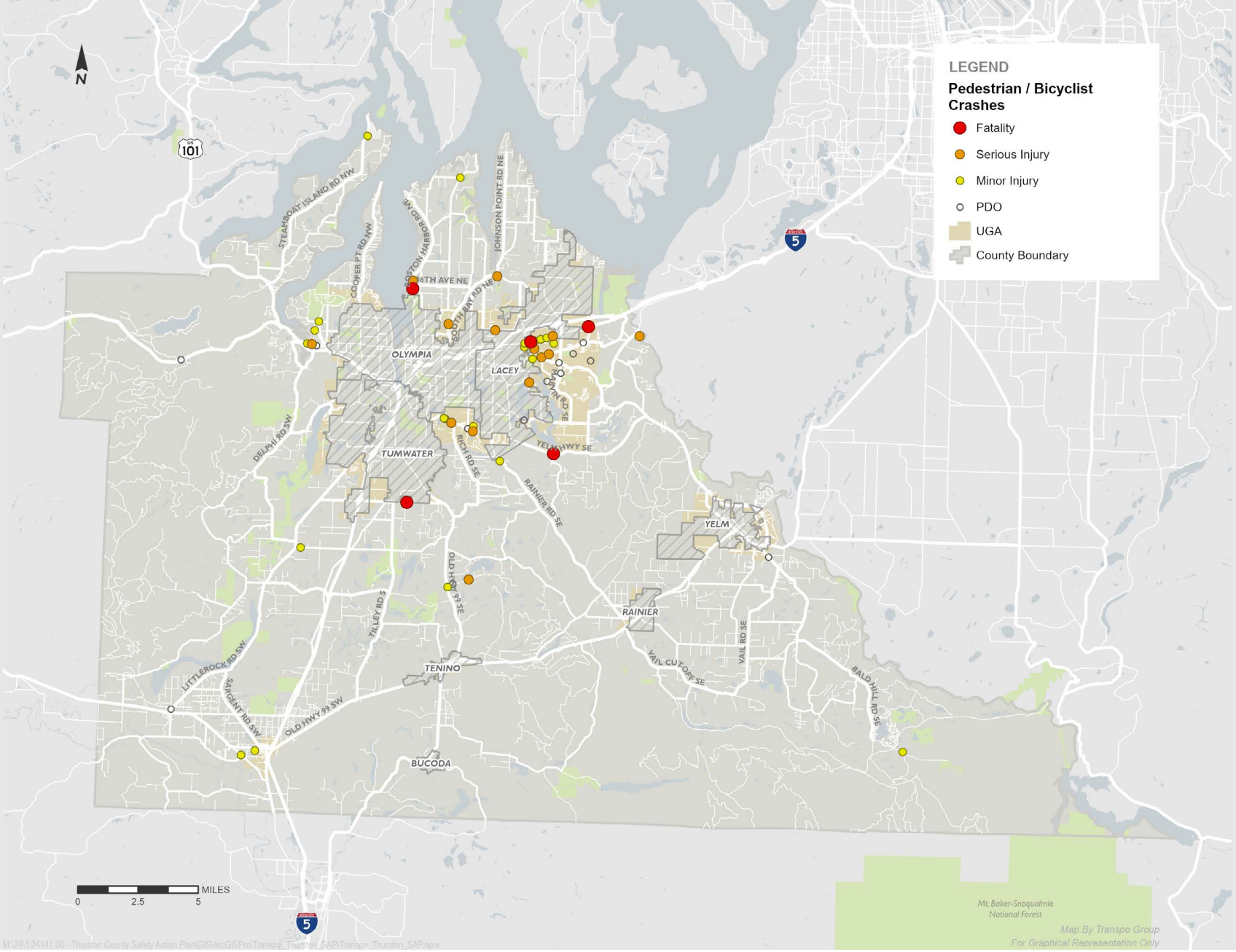


Figure 16: Map of All Pedestrian and Bicyclist Crashes Including Severity
Source: WSDOT Collision Data for Thurston County maintained roadways only

High Injury Network (HIN) & High Injury Intersections (HII)

The development of a HIN/HII[1] list is a key element of Safety Action Plans. The HIN development process involves developing crash density estimates along street corridors and at intersections throughout the county, weighted by crash severity, and then identifies the highest crash-density sections for each mode individually. The HII development process involves aggregating all intersection-related crashes near intersections throughout the county, weighted by crash severity. The High Injury Intersections were identified by examining intersection-related crashes that occurred within 250 feet of an intersection. These networks are meant to highlight specific areas of concern where targeted improvements can be implemented. Further description of the development of the HIN and HII are summarized in ***Appendix B***.

Figure 17 shows the corridor HIN for all modes, while Figure 18 shows the HII for county intersections.

The HIN primarily highlights rural roadways (Bald Hill Road, Rainier Road, Old Highway 99) and roadways within the Lacey UGA. The HII locations show a focus on intersections in the Lacey UGA (especially on Martin Way).

1. *High Injury Network and High Risk Network: Methodology and Development, Thurston County CSAP, 2025*

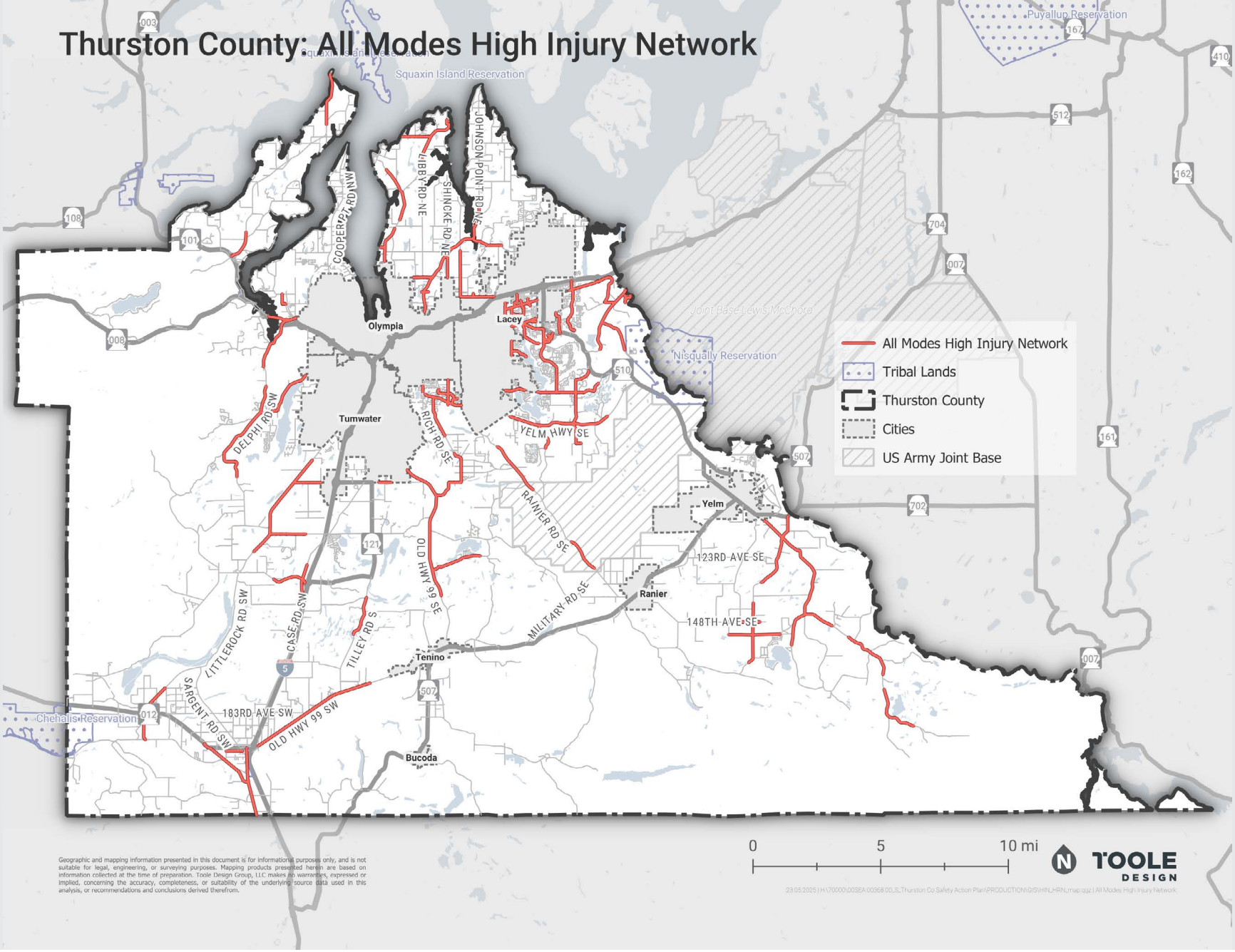


Figure 17: High Injury Network

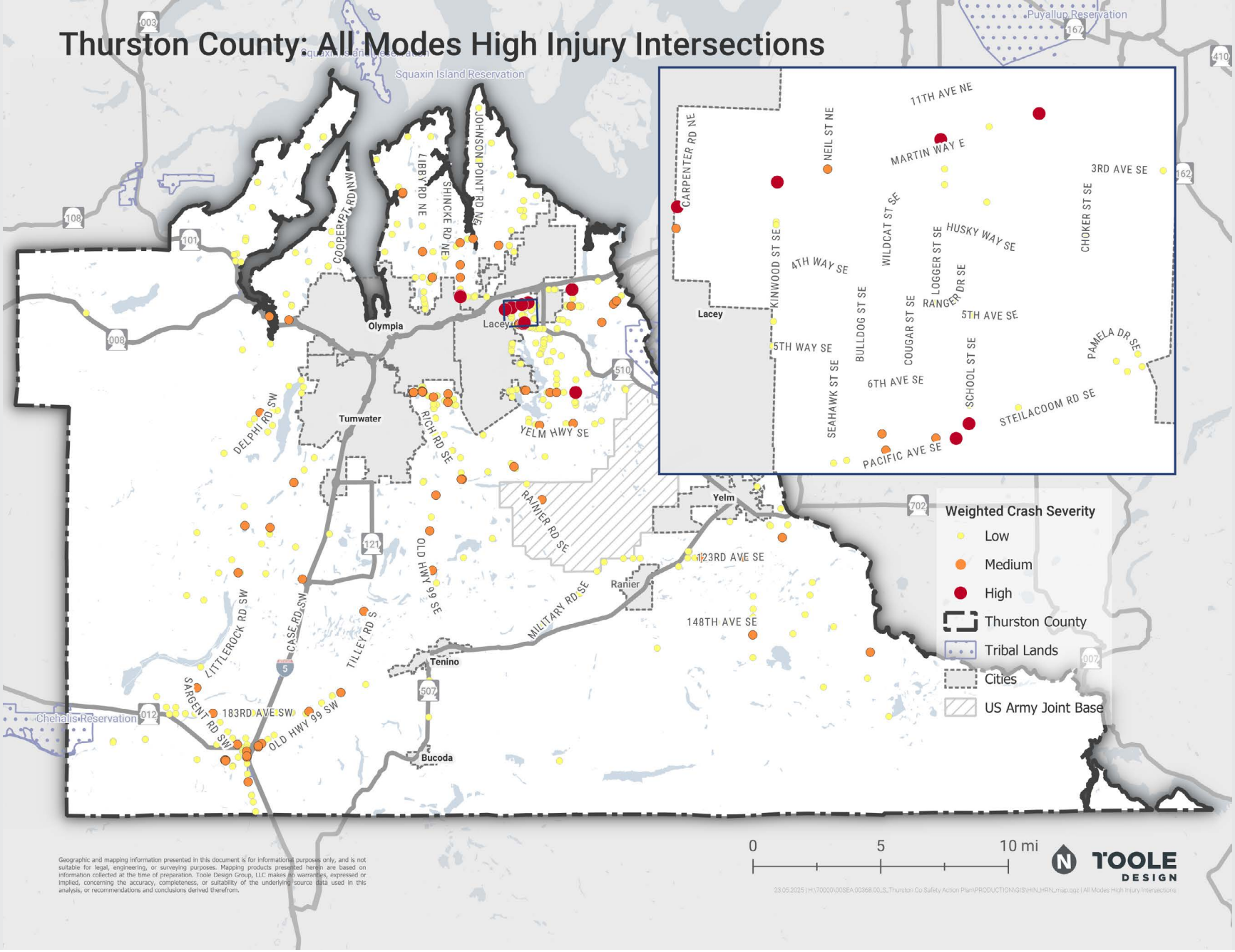


Figure 18: High Injury Intersections

High Risk Network

The High-Risk Network (HRN) identifies road segments that are most likely to result in future crashes. Identification of these streets help the county prioritize investment in proactive strategies to reduce the risk of crashes before they happen.

The HRN development process relies on historical crash data, roadway data and the national pedestrian fatality risk model. The methodology estimates the number of crashes within a Census tract and uses the national average rate of fatal crashes per mile on a roadway based on its roadway characteristics, such as speed limit, functional classification, shoulder width, and others. A detailed technical description of the methodology used in the development of the HRN can be found in ***Appendix B***.

Figure 19 shows segments where the crash cost score exceeded thresholds for either pedestrians or bicyclists. Figures 20 and 21 show segments where the crash cost scores exceeded thresholds for pedestrians or bicyclists individually.

Figure 22 shows the HRN for vehicles only.

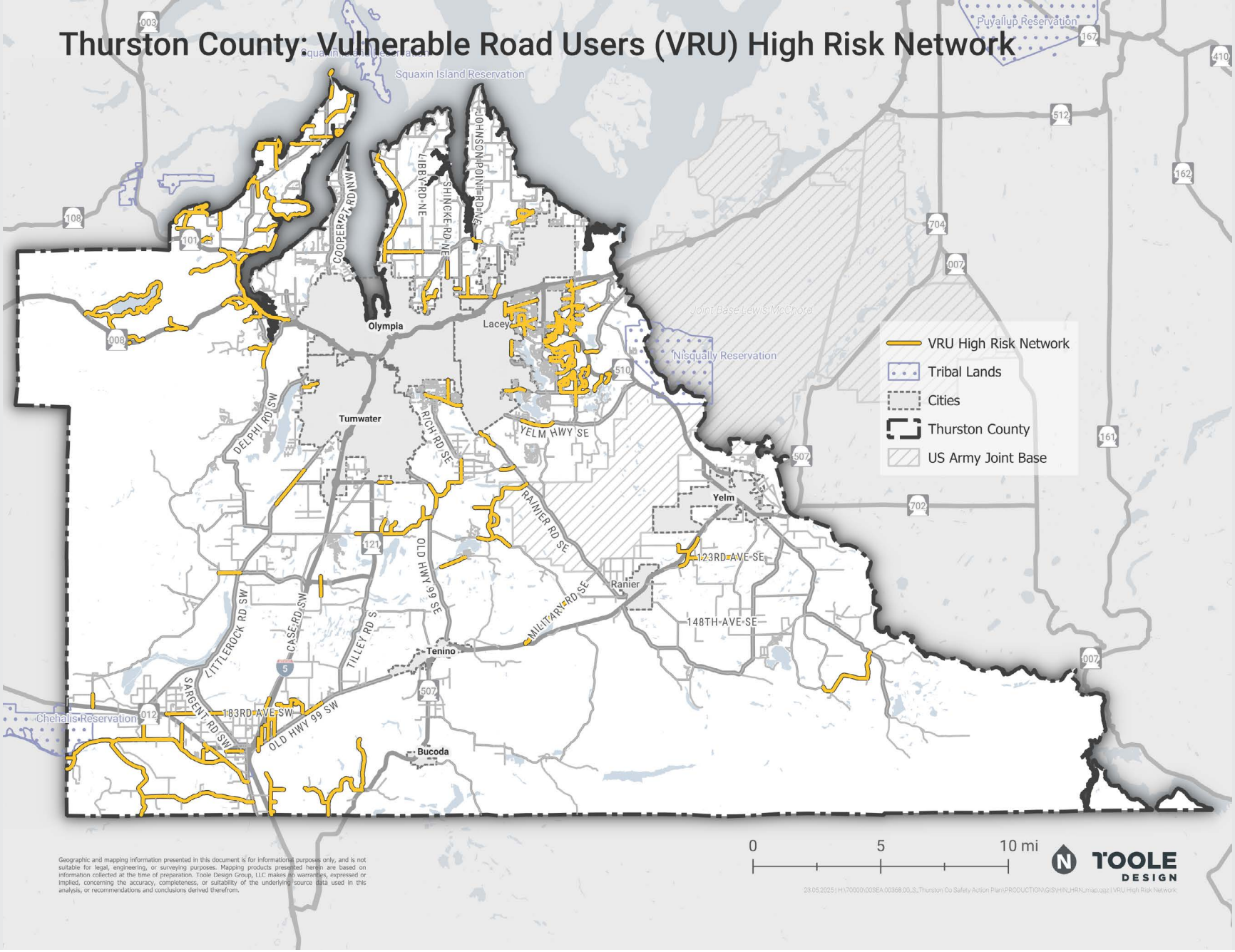


Figure 19: Thurston County Vulnerable Road Users (VRU) High Risk Network (SSPF)

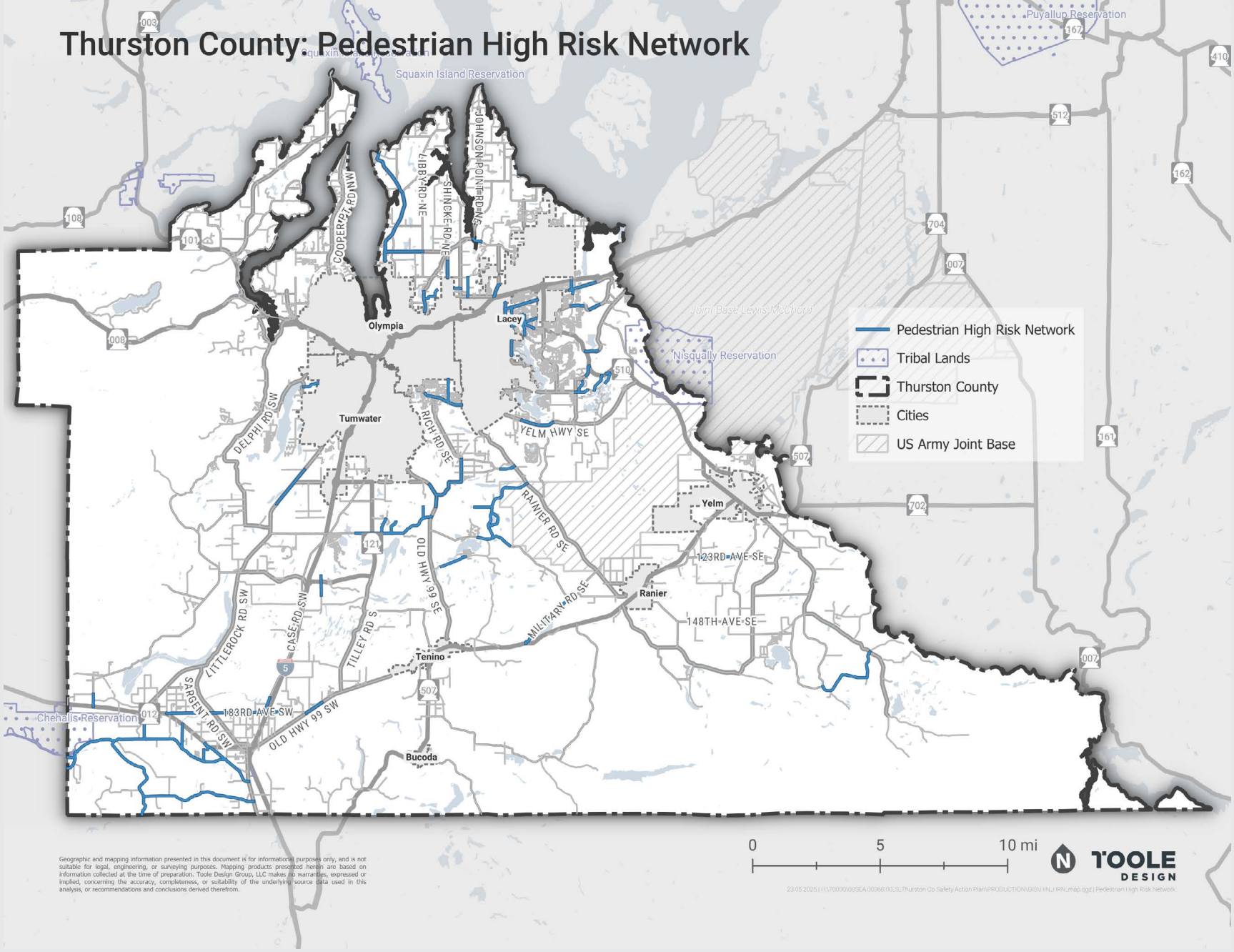


Figure 20: Thurston County Pedestrian High Risk Network (SSPF)

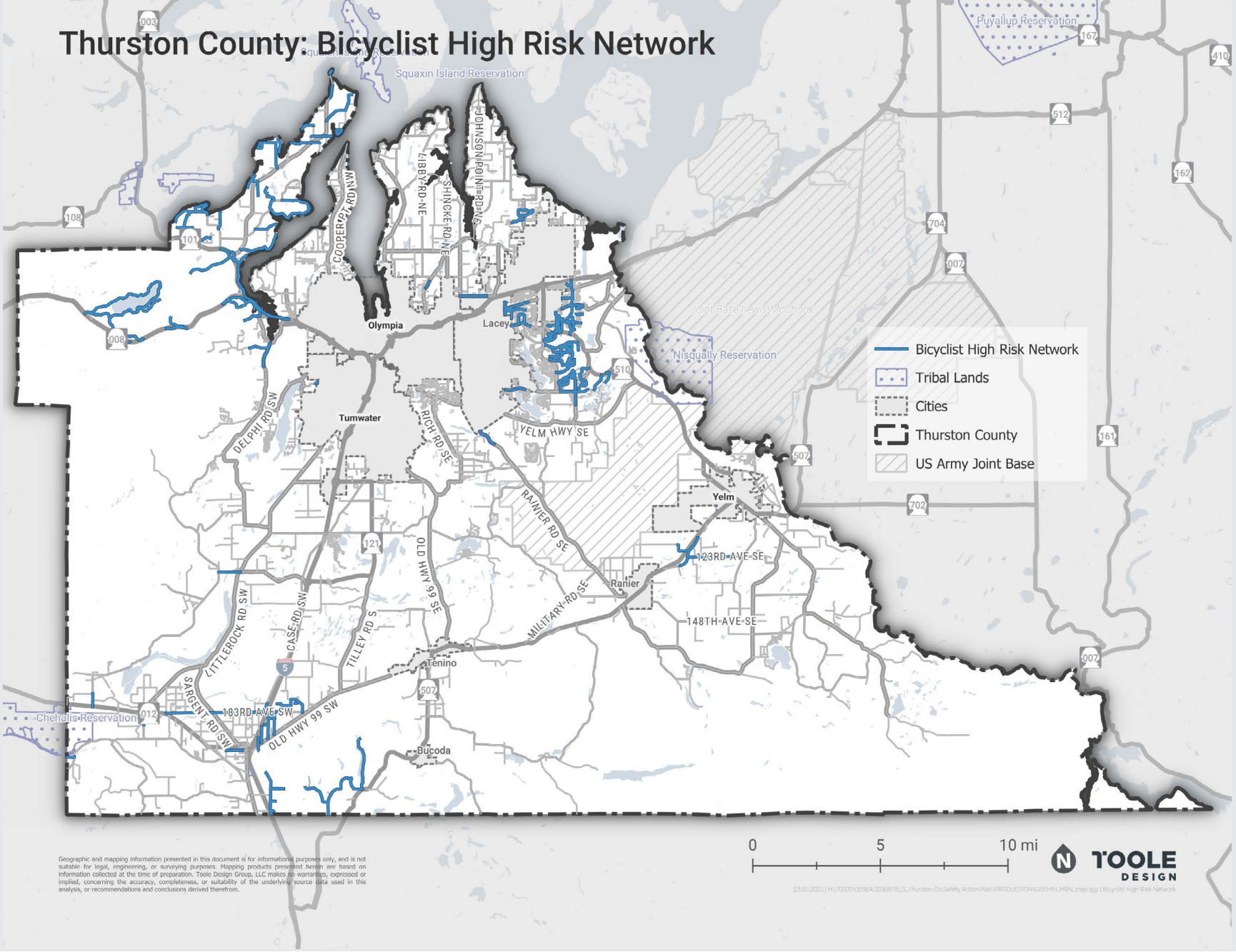


Figure 21: Thurston County Bicyclist High Risk Network (SSPF)

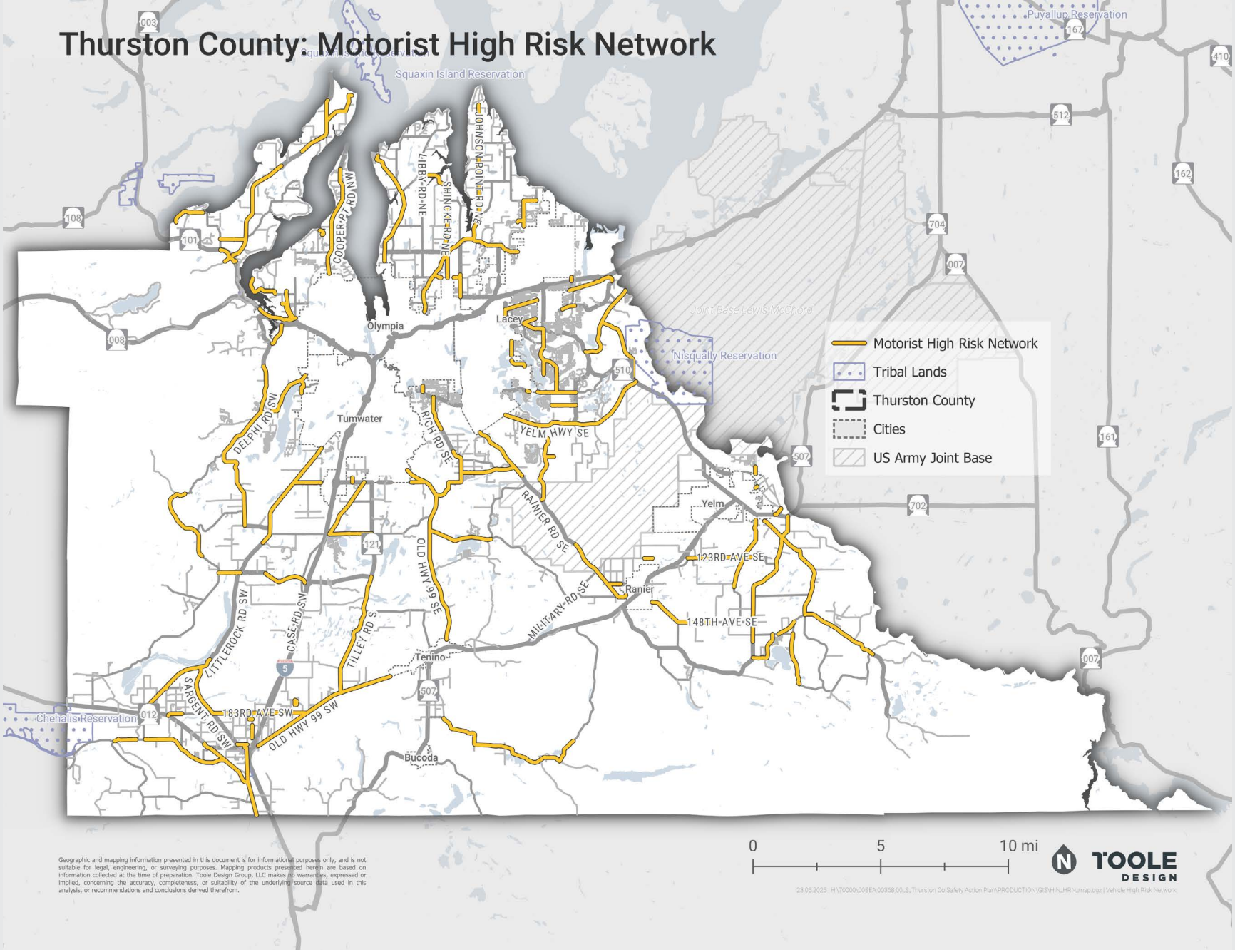


Figure 22: Thurston County Motorist High Risk Network (SSPF)

Table 11: Thurston County (Unincorporated) Demographics and Washington State (2022)

Geography	2022 Population	People Under 18 or Over 65 Years of Age	People Identifying as Black, Indigenous, Hispanic/ Latino, or a Person of Color	People With Language Other Than English Spoken at Home	People Living With a Disability	Populations Living Below 200% of the Federal Poverty Line	Households with Zero Vehicles
Unincorporated Thurston County	160,873	40.3%	31.8%	1.6%	11.9%	19.3%	3.4%
Washington State	7,688,549	37.6%	43.6%	3.8%	10.7%	23.0%	6.9%

Source: American Community Survey, 2022

Demographic Analysis

Table 11 summarizes six population groups that are most likely to face transportation challenges in Thurston County, and compares them to Washington State averages. The groups were identified to help Thurston County address disproportionate transportation safety impacts. ***Appendix C*** provides a detailed account of the methodology used to identify the six population groups and complete a demographic analysis.

The demographic analysis identified census block groups that had the highest concentration of disadvantaged populations leading to likely transportation insecurity noted as Transportation Need Areas on the following figures. Figure 21 shows the overlap of these census block groups with the High Injury Network. While the map shows limited overlap between HIN segments and Overall Disadvantaged Census Tracts.

The map in Figure 23 shows the HRN for vulnerable road users overlaid with Transportation Need Areas and identifies road segments that correlate with higher crash frequencies for vulnerable road users and motorists, indicating locations where future crashes could occur under similar conditions.

The map in Figure 24 shows the HRN for vehicle drivers overlaid with Transportation Need Areas, identifying locations with similar roadway or environmental crash risk characteristics. Some HRN segments overlap with overall Transportation Need Areas indicating that these communities not only face transportation burdens, but that the segments have a higher frequency of crash risk for vulnerable road users and motorists as well.

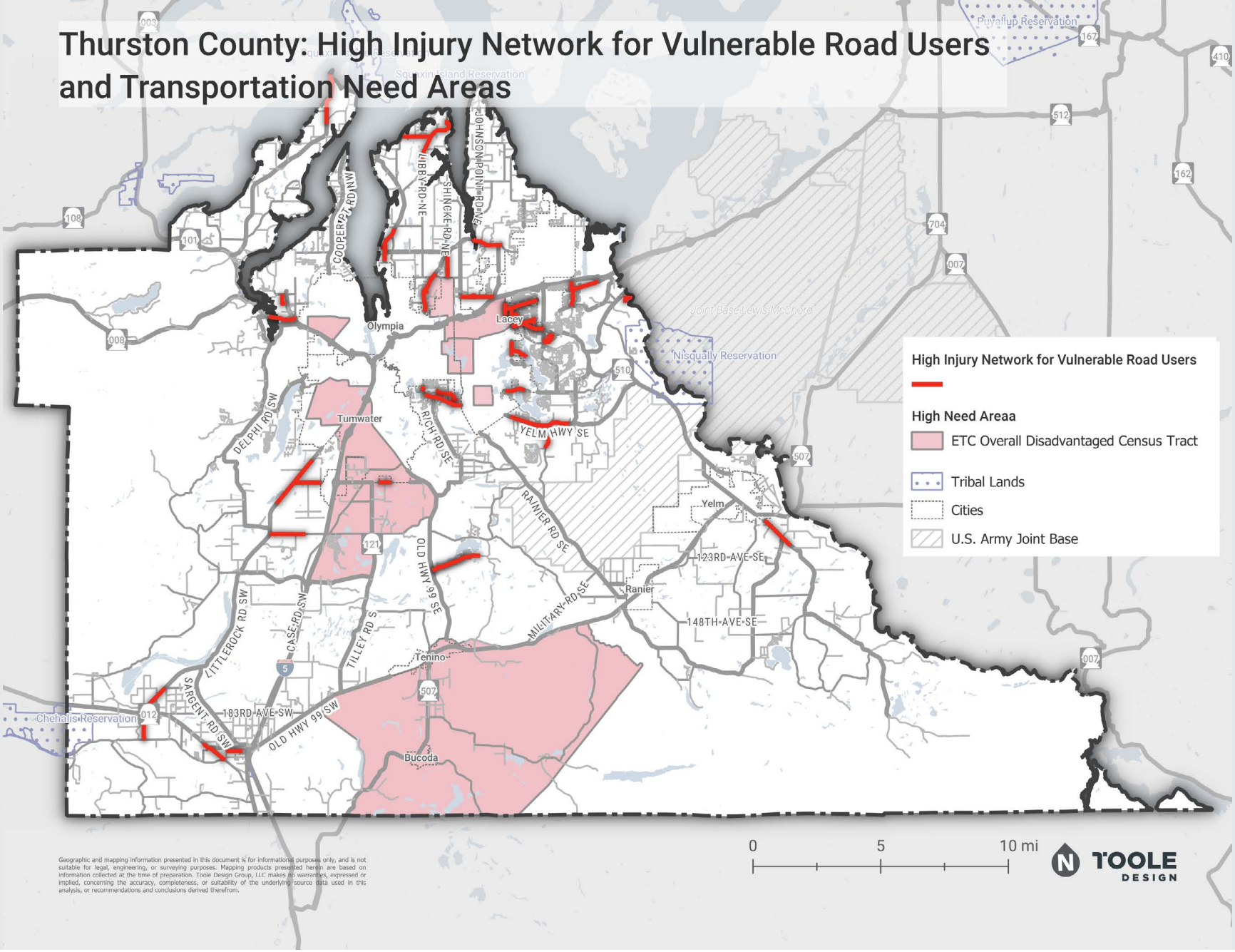


Figure 23: High Injury Network and Transportation Need Areas

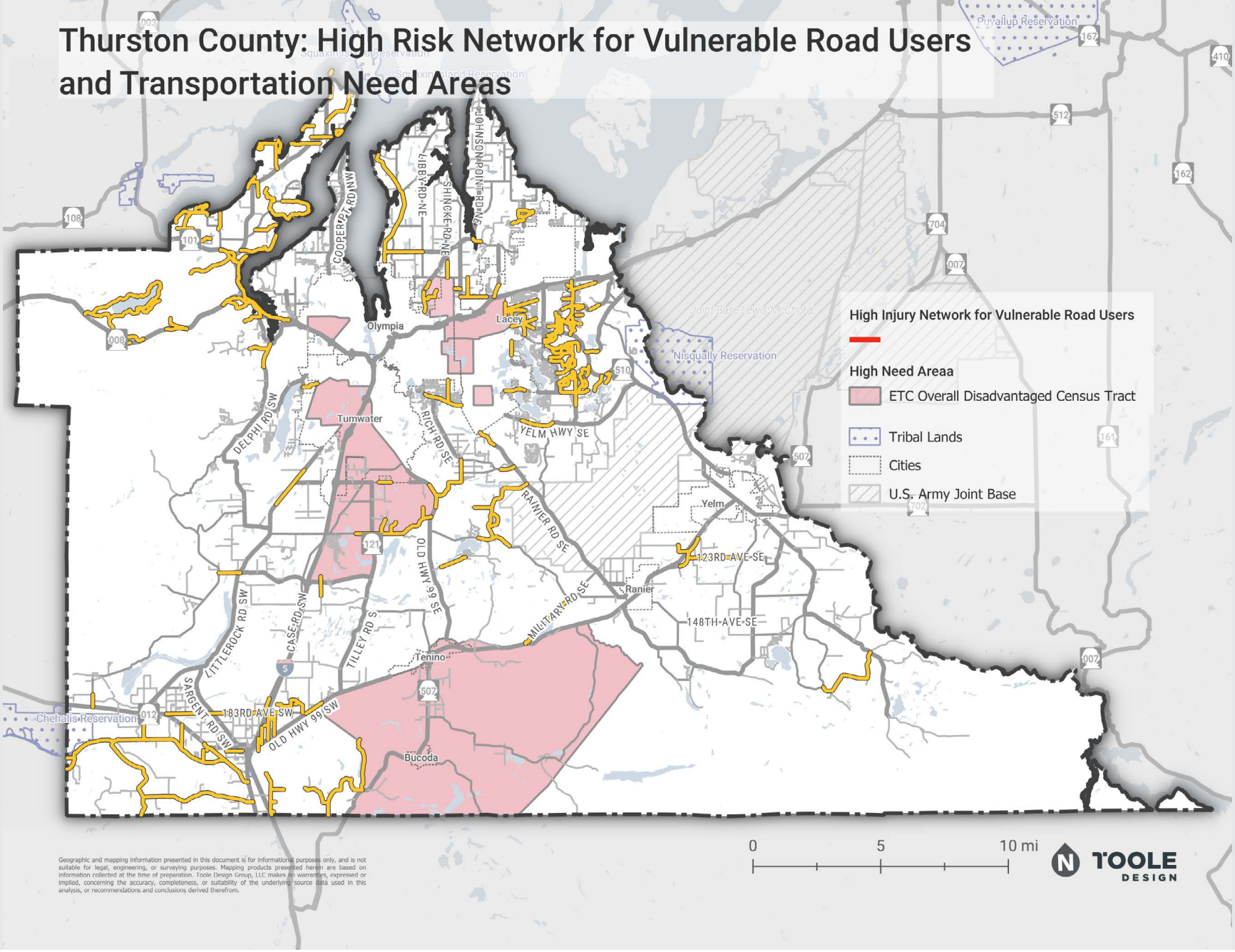


Figure 24: HRN for Vulnerable Road Users Overlaid with Transportation Need Areas

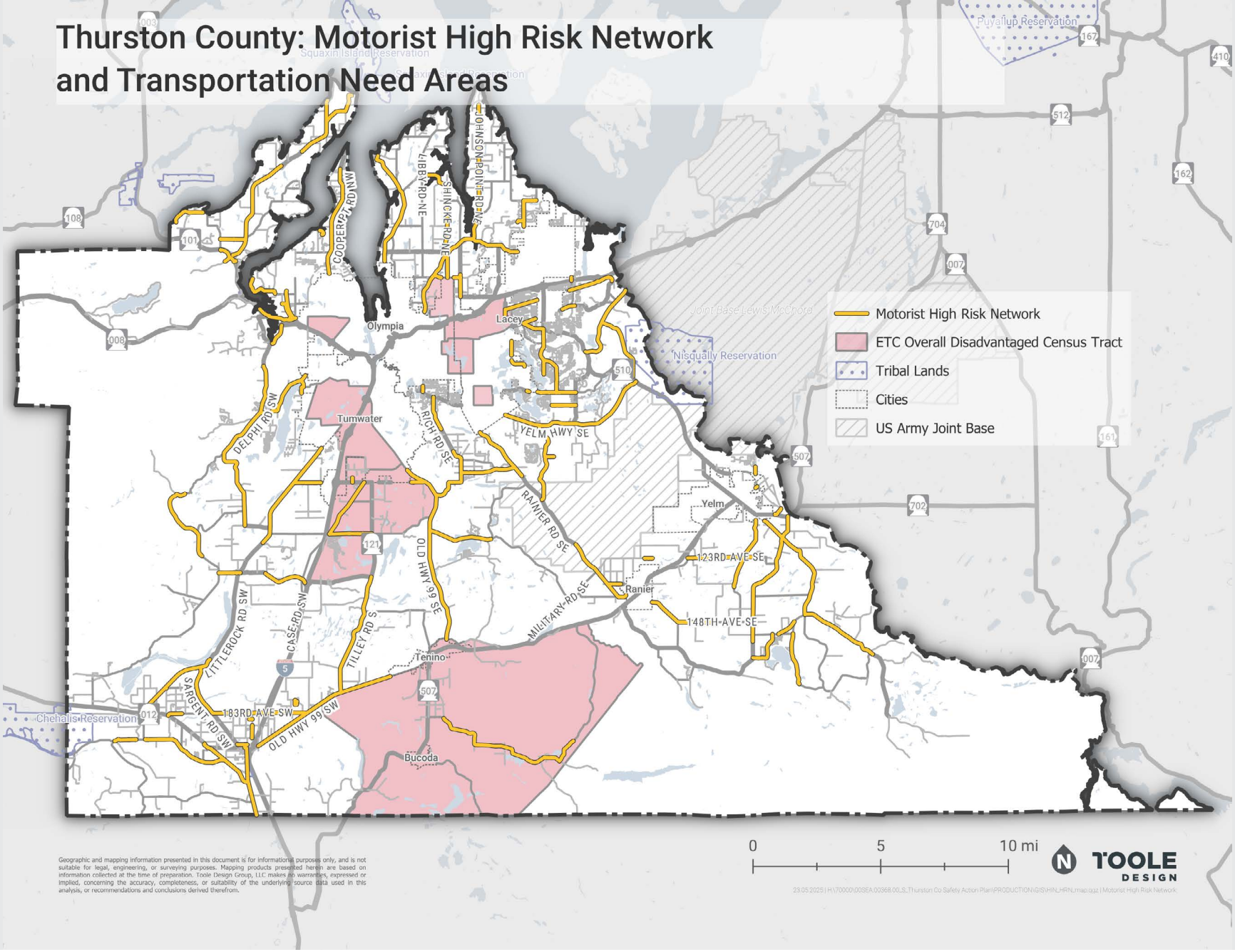


Figure 25: HRN for Motorists Overlaid with Transportation Need Areas

Residents in Transportation Need Areas are less likely to have access to safe transportation options. In many of these areas, lower densities can make it more costly to provide infrastructure, further exacerbating access gaps. Thus, populations in these areas have the most to gain from improvements implemented through the CSAP.

The demographic analysis provides context for setting initial priorities and beginning the project prioritization process. Beyond the CSAP, Thurston 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 C***.

3 Community Engagement and Outreach

The CSAP incorporated public engagement in all phases of plan development. Engagement activities were conducted as open engagement and targeted engagement. The outcomes and learnings from these community engagement activities are reflected in the CSAP's vision, goals, and recommendations.

Targeted engagement included:

- Listening sessions with community stakeholders, representing 4 different organizations.
- 9 Listening sessions with Thurston County members and partners
- A Community Advisory Committee representing Thurston County members and partners. At four meetings during the planning process, the committee engaged in discussions to provide input and direction on all aspects of the plan.

Public Engagement strategies included:

- Online Survey
- Participatory web map
- Three Pop-up events

Thurston County Public Engagement Overview

The Thurston County CSAP has been informed through a wide variety of public engagement activities and information gathering efforts with input provided as listed below:

- 188 survey participants
- 377 Webmap points and comments
- Thurston County CAC Meetings: 4
- Thurston County CAC Agencies Represented: 11
- 3 Pop-up events:
  - Nisqually Indian Tribe Housing Fair (Nisqually Indian Reservation): Friday, October 18, 2024
  - Boo-Coda Spook-Tacular (Bucoda): Saturday, October 26, 2024
  - Ruby Bridges Walk to School Day, Lydia Hawk Elementary School (Lacey): November 13, 2024

The outcomes and learning from these community engagement strategies are reflected in the CSAP vision, goals, and recommendations for safety improvements. The engagement methods listed above are described in more detail in ***Appendix D: Public Engagement***.

Targeted Engagement

The following sections summarize the targeted engagement conducted during the development of the CSAP.

Advisory Group

At the project outset, a Community Advisory Committee (CAC) was formed to help guide the development of the CSAP. The project team (consultants and County staff) met with Community Advisory Committee members representing the following Thurston County partners:

- Thurston County Public Works: Traffic Operations and Road Operations
- Thurston County Sheriff's Department
- North Thurston School District
- Olympia School District
- Tumwater School District
- WSDOT
- Thurston Regional Planning Council (TRPC)

intercitytransit.com/yard-signs

CAC meeting dates and topics covered included:

- **September 17, 2024:** Project Kick-Off - The meeting covered the elements of a Safety Action Plan and SS4A grant requirements, and the Public Engagement Plan
- **December 11, 2025:** The meeting included an update on public engagement, review of the High Injury Network, and Equity Analysis
- **February 12, 2025:** The meeting covered key findings from online engagement and proposed project locations and countermeasures
- **April 2, 2025:** Updated High Risk Network and key takeaways from public engagement

Ultimately, the CAC helped shaped the development of the CSAP by providing direction at critical points in the project development and ensured that the final plan was supportive of each agency's own safety initiatives.

Listening Sessions

From December 2024 to January 2025, the consultant team conducted nine listening sessions with interested parties for the CSAP. These sessions consisted of a brief presentation of the crash data in Thurston County and background context of the Plan, followed by a facilitated discussion with the attendees. Community advocates and staff of community-based organizations or partner agencies were invited to participate. County staff provided the consultant team with contact information of interested parties to invite to a listening session. The listening sessions were grouped into five categories, listed below, and conducted virtually.

1. Housing/Shelter Assistance Professionals (Jan 9, 2025)
   - Craig Chance, Housing Authority of Thurston County
2. People with Physical Disabilities (Dec 19, 2024)
   - Dawn Harrison, South Sound Parent to Parent
3. Schools (active transportation access to schools) (Dec 16, 2024)
   - Kerry Wilson, Intercity Walk N Roll Coordinator, Intercity Transit
4. People with Sensory Disabilities (Vision Impairment) (Dec 17, 2024)
   - Zandra Brown, President of Capital City Council for the Blind
   - Keevan Forbes-Kashani, Thurston County Public Works Dept
5. Bicyclists/Trail Users (Dec 5, 2024)
   - Chris Hawkins, WSDOT Active Transpo. Division and Thurston Thrives Community Design Action Team
   - Pete Kmet, Community Design Action Team, and former mayor of Tumwater
   - Karen Messmer, Community Design Action Team, advocate for safe walking/cycling

Key Takeaways from Listening Sessions

Risky human behavior is one of the most serious transportation safety issues in Thurston County according to attendees of the listening sessions. Participants gave examples like speeding, distracted driving, driving under the influence of alcohol and drugs, not using turn signals, or wearing dark clothing while walking at night.

There are several aspects of the sidewalk network that participants identified as transportation safety issues. Firstly, the lack of sidewalks altogether is a safety issue for vision impaired people because they have to detour into the roadway. Existing sidewalks are poorly maintained, or not cleared of debris, which creates a hazard for people with disabilities or people who use mobility devices.

Intersections don't feel safe to cross. Attendees mentioned driver behavior like speeding and red-light running that make them feel apprehensive of crossing, even if there is a marked crosswalk. In addition, many intersections have curb cuts that point to the middle of the intersection, instead of the direction of the crosswalk. This poses a challenge for vision impaired people because they use the direction of the curb cut as a direction cue of which direction to cross. Not every intersection has an Automated Pedestrian System (APS) pushbutton for pedestrians to press to cross safely.

For bicyclists, crossing county roads is challenging because the visual sight distance due to wide roads. In addition, cars were noted as often speeding so bicyclists wait a long time for a large enough gap in traffic to feel safe crossing.

Participants offered a variety of suggestions for how Thurston County can best support their organization's members to move safely:

- Build more sidewalks; maintain existing sidewalks
- Build more protected bike lanes; keep existing bike lanes clear of debris, including from snowplows
- Increase transit to rural areas
- Increase transit options for people with disabilities
- Improve access for people with disabilities
- Design crossings and roadways in such a way that it communicates to motorists that they need to go slower (e.g. narrow lanes, raised crosswalks)

Community Advisory Committee Interviews

Key findings from the CAC interviews suggested varying levels of familiarity with the Safe System Approach across agencies, with TRPC and WSDOT showing strong alignment through performance measures and planning frameworks like Target Zero. Agencies collectively hope the CSAP will identify high-risk areas, enhance collaboration, and support future funding and planning decisions. Specific safety concerns included high-speed corridors (e.g., Martin Way, Bald Hill Road), growing traffic near schools, and inadequate infrastructure for pedestrians and bicyclists. Strategies prioritized by participants included roundabouts, high-friction surface treatments, improved pedestrian visibility, and education and enforcement in school zones. Key needs identified were increased funding, expanded enforcement capacity, better data sharing, and interagency coordination. Agencies emphasized the importance of ongoing engagement, streamlined communication, and using data-driven approaches to collaboratively improve roadway safety across jurisdictions.

ruralTransit Driver and Rider Bus Intercept Survey Participants

Listening sessions were held with the following CAC members:

1. Public Safety
   Matthew (Matt) Kohlman, Deputy with Traffic Unit, Thurston County Sheriff's Department
2. Thurston Regional Planning Council (TRPC)
   Aidan Dixon, Associate Planner
3. Tumwater School District
   Stephan DeRout, Safety and Security Manager
4. Washington State Department of Transportation (WSDOT)
   Sarah Ott, WSDOT Olympic Region Traffic Engineer

A full result of CAC interview question and answers is available in ***Appendix D: Public Engagement***.

Community Partner Meetings and Bus Intercept Surveys

The project team attended the following community partner meetings to share information about the CSAP, invite participation in engagement events, the online survey, and web map, and listened to participant transportation safety concerns.

- Healthy Kids, Safe Streets Network: October 1, 2024
- Community Design Action Team: October 10, 2024

The Thurston Regional Planning Council operates ruralTRANSIT bus service with three routes in the southern area of Thurston County. Project staff rode on two ruralTRANSIT routes (#3 & #4) on the morning of November 13, 2024, to conduct bus intercept surveys with riders to find out more about their experiences getting to and from transit and their transportation safety concerns. ruralTRANSIT buses have approximately five rows of seats with a limited number of riders (there were never more than five riders on the bus at a time during the ride-alongs). Project team staff invited all passengers who boarded the bus to participate in the survey, with five riders and one driver who agreed to answer questions. While this number may seem small, it is similar to the number of participants expected for a similarly themed focus group. By talking to people while they were riding the bus, people did not have to take extra time out of their day to participate. Participants were offered a snack bar as a thank you for their participation. The bus intercept survey questions and responses are summarized in ***Appendix D: Public Engagement***.

Public Engagement

Engagement with the public was conducted both online and in person for the CSAP, as described below.

Survey

The survey and web map were open from October 31, 2024, to January 7, 2025. It was offered in both English and Spanish. However, there were no responses recorded in Spanish. It was advertised through posters and business cards which included a QR code, which were available at outreach events, on Thurston County's website, via Thurston County's social media channels, and with listening session participants who were asked to spread the word with their networks. Although the response numbers were not sufficient to be statistically valid, both the survey and web map results reveal significant concerns about road safety in Thurston County, especially regarding **bicyclists and pedestrians, speeding, impaired and distracted driving,** and **lack of safe infrastructure**. Respondents expressed a desire for more safety measures, safer road design especially for people who walk, bicycle, or use transit, and more enforcement of traffic laws. Stories from crash survivors and family and friends of people who have been severely injured or died in crashes emphasize the human impact of traffic collisions and highlight the importance of improving both infrastructure and motorist behavior to create safer conditions for all.

Web Map

Survey respondents were asked to identify locations on a map where they felt unsafe: "Please drop a pin at a location where you feel unsafe." Respondents identified 377 locations where they felt unsafe. Figure 26 shows that many of the locations identified as unsafe were within incorporated Thurston County. However, there were clusters of unsafe locations identified along Yelm Highway, on the roads east of Lacey, to the west of Olympia, south of Tumwater, and around Ground Mound.

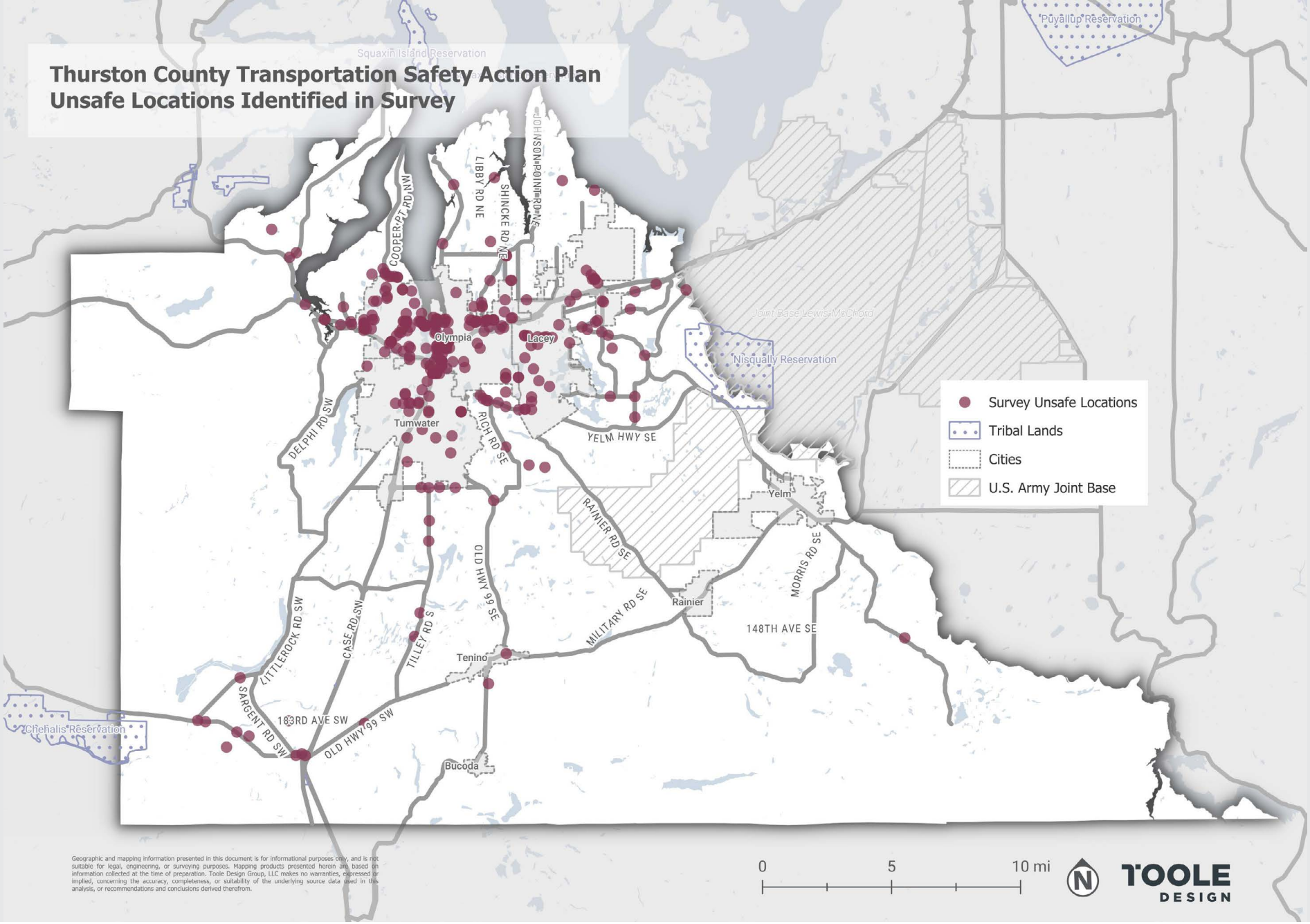


Figure 26: Unsafe Locations Identified in Survey

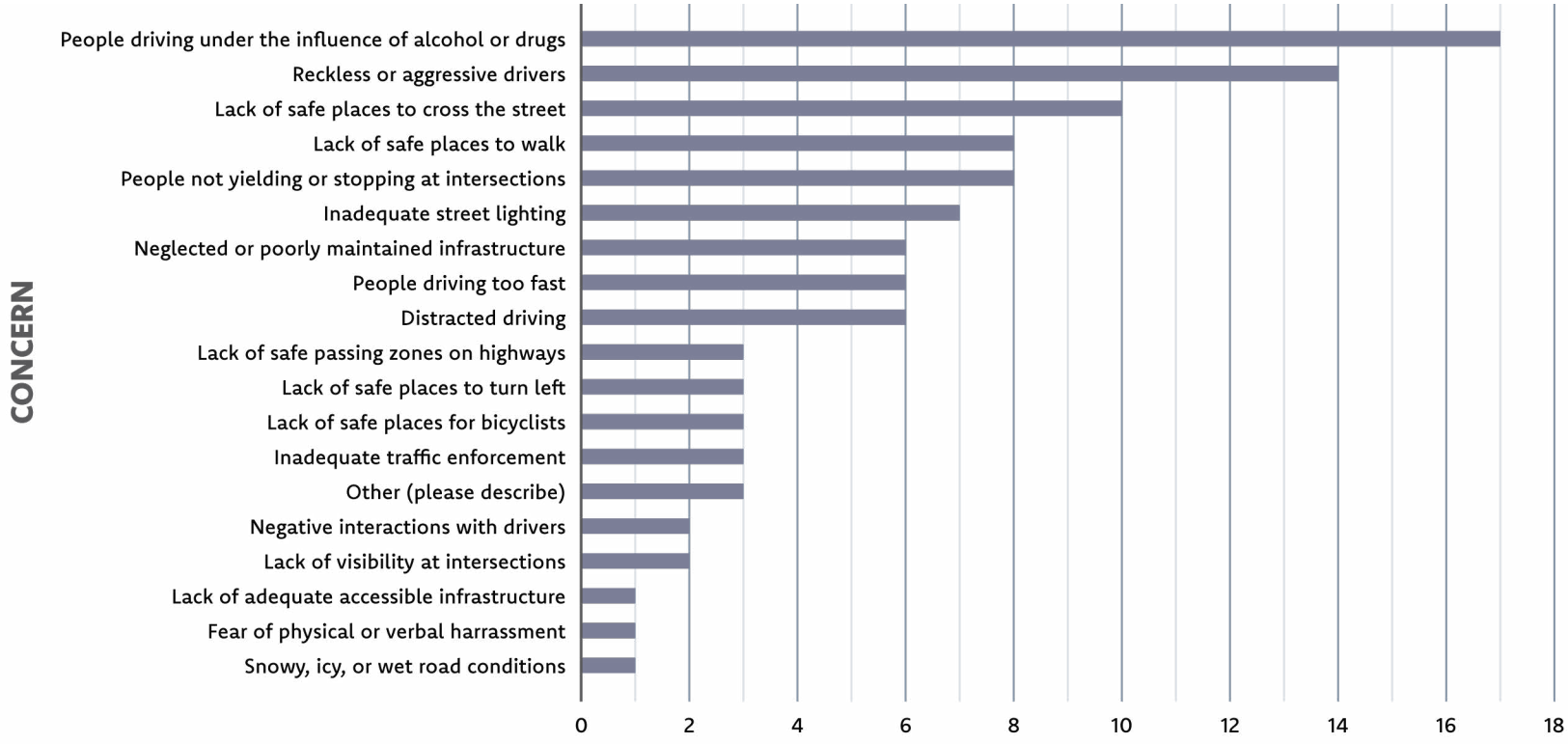


Figure 27: Nisqually Indian Tribe Housing Fair Top Transportation Safety Concerns

Pop-Ups

There were three pop-up events held, which engaged approximately 100 people at the Ruby Bridges Walk to School Day held at Lydia Hawk Elementary School, at the Bucoda Boo-Coda Spook-Tacular Halloween festival, and at the Nisqually Indian Tribe Housing Fair.

NISQUALLY INDIAN TRIBE HOUSING FAIR:

There were 35 people who stopped by the pop-up event table. Figure 27 shows transportation safety concerns for participants, with people driving under the influence of alcohol or drugs as the top concern, followed by reckless or aggressive drivers, and lack of safe places to cross the street.

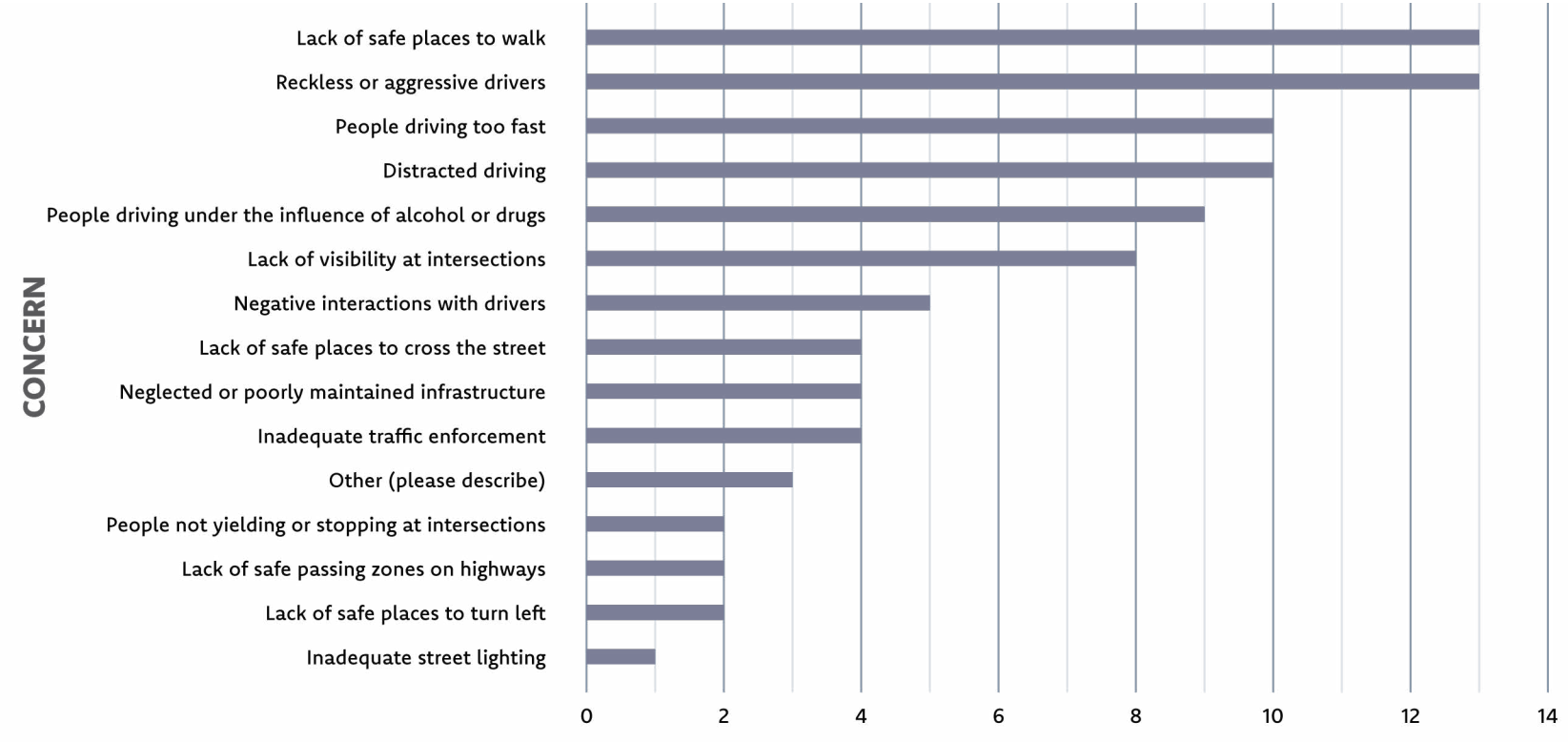


Figure 28: Boo-Coda Spook-Tacular Participant Top Transportation Safety Concerns

BOO-CODA SPOOK-TACULAR (BUCODA)

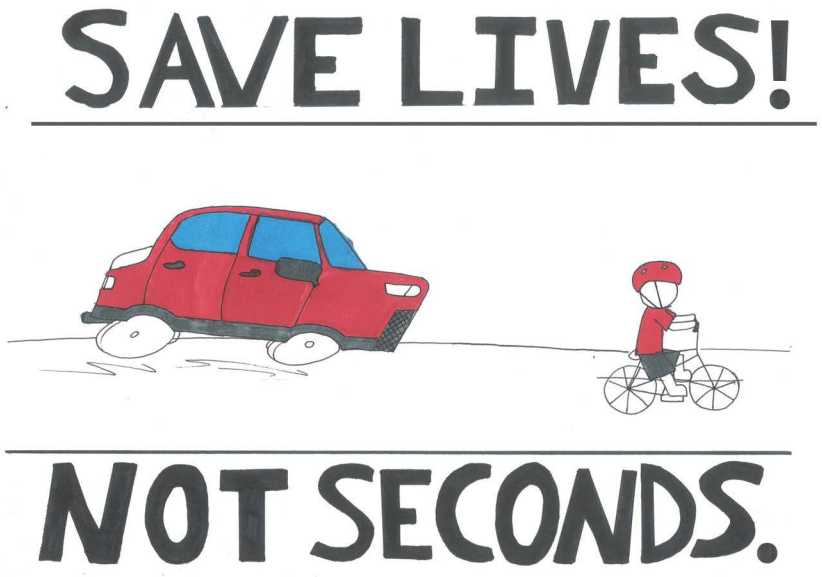
The project team provided Thurston County staff with a pop-up kit to set up a table at the Halloween festivities known as Boo-Coda Spook-Tacular held in Bucoda in the south-central area of the County. There were 33 people who stopped by the event table. Figure 28 shows their transportation safety concerns, with lack of safe places to walk, reckless or aggressive drivers, and people driving too fast.

Ruby Bridges Walk to School Day Participants at Pop-Up Table

RUBY BRIDGES WALK TO SCHOOL DAY (LYDIA HAWK ELEMENTARY SCHOOL)

This event focused on celebrating student and family participation in the Ruby Bridges Walk to School Day. Due to the brief time frame available at school event, the team focused on congratulating students on their participation in the Walk to School Day and sharing information about the safety plan with parents. The Intercity Walk N' Roll Program Supervisor and the physical education teacher at Lydia Hawk Elementary School were key partners in organizing participation in this event.

At the event, students were offered protein snack bars and a chance to spin a wheel with prompts to describe some things they enjoyed and did not enjoy about walking and bicycling in their neighborhood. Parents were given business cards with information and links about the CSAP and a QR code to participate in the online surveys. Events such as book fairs, and the Cookies and Cocoa Concert held in December would be good opportunities for future engagement with this community.



Key Themes

The CSAP was informed by comprehensive public and stakeholder engagement, which shaped its vision, goals, and recommended strategies. Key findings highlight broad concerns about roadway safety, particularly on:

- high-speed corridors,
- near schools,
- near transit stops, and
- in rural areas lacking pedestrian and bicyclist infrastructure.

Community members also emphasized the need for:

- better lighting,
- more separated facilities for non-motorized users,
- safer crossings, and
- increased enforcement of traffic laws—especially around schools and speeding hotspots.

Personal stories underscored the human toll of traffic, reinforcing the urgency of both infrastructure improvements and behavior change. Across the board, there was strong support for a Safe System Approach that combines data-driven planning, education, interagency coordination, and community input to create a safer, more accessible transportation network in Thurston County.

4 Recommended Safety Projects

The recommended safety projects include actions, capital projects, enforcement, and education, that Thurston County can take to proactively address the risk factors identified through the crash data 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.

The effectiveness of countermeasures was evaluated using several sources including the National Highway Traffic Safety Administration's Countermeasures that Work publication, Washington's Target Zero plan, and the FHWA's Crash Modification Factor (CMF) Clearinghouse website. The cited resources help to identify not only potential projects but provide research-backed documentation of the anticipated effectiveness of treatments at reducing crash rates.

For the County's projects that address intersections, the FHWA's Proven Safety Countermeasures research indicates that implementing systemic application of multiple low-cost countermeasures such as retroreflective sheeting on sign posts, removal of vegetation and other objects from sight lines, and properly placing stop bars can reduce fatal and injury crashes at rural intersections up to 27%.

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.

Identification of Risk Factors

Based on a combination of the statistical and spatial analysis of the crash data in Thurston County, the following risk factors were identified. The risk factors are presented in order of priority for the County and will guide the County's implementation of countermeasures in a proactive effort to reduce the risk and severity of future crashes. The priorities below have been identified based on the data and spatial analysis (see Chapter 2), with consideration for the safety of vulnerable roadway users.

Fixed Object Crashes

A focus on reducing the impact of roadside object collisions due to poor driving behavior choices is the highest priority risk factor. Inattention, speeding, and intoxicated driving contributed to over a third of the County's FSI fixed object crashes. The countermeasures for fixed object crashes include reducing the impact forces of fixed object crashes by removing, delineating, or relocating roadside objects that could seriously injure or kill someone in a crash, as well as efforts to educate and promote a strong safety culture.

Pedestrian and Bicycle Crashes (Vulnerable Road Users)

While pedestrian and bicycle crashes only account for 2% of the total number of crashes in Thurston County, they have a disproportionately high level of severity; accounting for 11% of all serious and fatal crashes in the County. The countermeasures for vulnerable road user crashes include proactive measures that reduce the risk of conflict with vehicle including dedicated pedestrian and bicycle facilities, safer crossings, improved lighting, and other physical improvements.

"Other" Crashes

Other Crashes include a variety of crash circumstances 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. These other crash types occur across the County but are most prevalent on more rural County roadways. Countermeasures to address "other" type crashes include the installation of wildlife crossing signs, campaigns to combat distracted driving, and systemic application of multiple low-cost countermeasures at stop controlled intersections.

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 Thurston County transportation facilities were selected from the list of Proven Safety Countermeasures, and the CMF based on several considerations including crash type, contributing user behavior and location characteristics, cost and complexity of implementation, and expected effectiveness in addressing the risks.

Recommended Projects

Table 12 summarizes the recommended capital improvement projects to improve safety throughout Thurston County. The projects are also shown in Figure 29. Project priority is discussed in the following section.

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

PROACTIVE, SYSTEMIC, & PROVEN SAFETY COUNTERMEASURES

PEDESTRIAN/BICYCLIST

- Bicycle Lanes
- Crosswalk Visibility Enhancements
- Leading Pedestrian Interval
- Walkways
- Ped. Hybrid Beacons (aka High-Intensity Activated Crosswalks – HAWK signals)
- Rectangular Rapid Flashing Beacons (RRFB)
- Road Diets (Roadway Reconfigurations)
- Meridian and Pedestrian Refuge Islands in Urban and Suburban Areas

CROSSCUTTING

- Lighting
- Local Road Safety Plans
- Pavement Friction Management
- Road Safety Audit

INTERSECTIONS

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

SPEED MANAGEMENT

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

ROADWAY DEPARTURE

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

Table 12: Recommended Safety Improvement Projects

Number	Project Name	Description	Type	Cost	Priority
SAP-01	Bald Hills Rd SE (110th Ave SE to Mile 12.4)	• Provide enhanced delineation (signs and/or pavement markings) at horizontal curves • Implement wider edge lines and shoulder rumble strips or profiled edge lines • Implement warning signage of deer and elk near Mountain Vista Dr SE. There have been several wildlife crashes in this area. • Systemic Application of Multiple Low-Cost Countermeasures at Stop-Controlled Intersections along side streets • Clear vegetation for entering vehicle sightlines • Clear vegetation to meet stopping sight distance at horizontal curves • Evaluate speed limit reduction (speed zone) and narrower lanes in areas with multiple and/or high-volume access points • "Stop Ahead", intersection, and/or warning treatments (signs, transverse rumble bars, etc.) • Clear vegetation to meet stopping sight distance at horizontal curves • Evaluate whether dedicated turn lanes could be added at select locations	Corridor	$2,100,000	High
SAP-02	Little Rock Rd SE (180th Way SW to 83rd Ave SW)	• Provide enhanced delineation (signs and/or pavement markings) at horizontal curves • Implement wider edge lines and shoulder rumble strips or profiled edge lines • Centerline rumble strips at problem areas • Systemic Application of Multiple Low-Cost Countermeasures at Stop-Controlled Intersections along side streets • Clear vegetation for entering vehicle sightlines • Clear vegetation to meet stopping sight distance at horizontal curves	Corridor	$1,480,000	High
SAP-03	Martin Way E (Meridian Way to Nisqually Cutoff Rd SE)	• Improved advance warning signs/beacons for WB traffic approaching Meridian Way intersection OR • Construct roundabout at Martin Way Nisqually Cut Off Rd SE intersection and/or Martin Way/Meridian Way intersection (if supported by traffic analyses) • Improve crest vertical curve near Ridgeview Dr SE intersection • Extend hard centerline (c-curb) on Martin Way at Mobile station driveway near Meridian Rd NE intersection • Improve lane control/destination pavement markings and/or signage (potentially overhead signage) for EB traffic on Martin Way approaching Nisqually Cut Off Rd SE intersection • Implement profiled lane lines • Anti-distracted driving campaign	Corridor	$2,520,000	Medium

SAP = New Safety Action Plan projects, TIP = from Thurston County's 6-year TIP, GBTS = Gate-Belmore Trail Study, GMTAP = Grand Mound Subarea Plan, MWCS = Martin Way Safe Crossing Study

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Table 12: Recommended Safety Improvement Projects

Number	Project Name	Description	Type	Cost	Priority
SAP-04	Rainier Rd E (Talcott Dr SE to Mile 9.1)	• Provide enhanced delineation (signs and/or pavement markings) at horizontal curves • Implement wider edge lines and shoulder rumble strips or profiled edge lines • "Stop Ahead", intersection, and/or warning treatments (signs, transverse rumble bars, etc.) • Clear vegetation to meet stopping sight distance at horizontal curves • Implement warning signage of deer and elk. There are several wildlife crashes within this stretch of roadway	Corridor	$800,000	Medium
SAP-05	Old Hwy 99 SW (Jare St SW to Melville St SE)	• "Stop Ahead", intersection, and/or warning treatments (signs, transverse rumble bars, etc.) • Evaluate speed limit reduction (speed zone) and narrower lanes in areas with multiple and/or high-volume access points • Clear vegetation for entering vehicle sightlines	Corridor	$630,000	High
SAP-06	Steamboat Island Rd NW (US Hwy 101 to Island Dr NW)	• Implement wider edge lines and shoulder rumble strips or profiled edge lines • Centerline rumble strips at horizontal curves • "Stop Ahead", intersection, and/or warning treatments (signs, transverse rumble bars, etc.) • Provide enhanced delineation (signs and/or pavement markings) at horizontal curves • Clear vegetation for entering vehicle sightlines • Clear vegetation to meet stopping sight distance at horizontal curves	Corridor	$1,490,000	Medium
SAP-07	Martin Way SE/Nisqually Automotive Driveways	• Consolidate driveways (close access nearest Nisqually Cut Off Rd) OR implement access management improvements to restrict left turns • Improved wayfinding signage for businesses	Intersection	$340,000	Medium
SAP-08	Vail Rd SE/Bald Hills Rd SE	• Remove slip lanes and redesign corner radii to encourage slower speeds; if slip lanes are needed, redesign slip lanes to encourage slower turning speeds • Restrict left turns to/from gas station driveway on Bald Hills • Relocate gas station driveway on Vail further from intersection • Systemic Application of Multiple Low-Cost Countermeasures at Stop-Controlled Intersections (all approaches) OR Convert intersection to roundabout (if supported by traffic analysis)	Intersection	$6,140,000	Medium
SAP-09	Old Pacific Hwy SE/7th Ave SE	• Consolidate driveways for gas station on both Old Pacific and 7th Ave • Clear vegetation for entering vehicle sightlines (from 7th Ave) • Low-cost improvements (edge line, hatching, painted curb extension, etc) to NW intersection corner to encourage slower turning speeds • Systemic Application of Multiple Low-Cost Countermeasures at Stop-Controlled Intersections (on 7th Ave)	Intersection	$400,000	Low

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Table 12: Recommended Safety Improvement Projects

Number	Project Name	Description	Type	Cost	Priority
SAP-10	Old Hwy 99 SE/ Rich Rd SE	• Clear vegetation for entering vehicle sightlines (from Rich Rd) • Enhanced intersection and/or warning treatments (signs, transverse rumble bars, etc.) • Systemic Application of Multiple Low-Cost Countermeasures at Stop-Controlled Intersections (on Rich Rd)	Intersection	$180,000	Medium
SAP-11	Old Hwy 99 SE/ Offut Lake Rd	• Enhanced intersection and/or warning treatments (signs, transverse rumble bars, etc.) • Clear vegetation, signs, and potentially railroad bungalow for entering vehicle sightlines (from Offut Lake Rd)	Intersection	$320,000	Low
SAP-12	Sargent Rd SW/183rd Ave SW	• Systemic Application of Multiple Low-Cost Countermeasures at Stop-Controlled Intersections, including potential overhead all way stop beacon • Consider full realignment of south leg, minor realignment of north leg, and reducing corner radii OR Convert intersection to roundabout (if supported by traffic analysis)	Intersection	$6,340,000	Low
TIP-01	Rainier Rd SE & Fir Tree Rd SE Intersection	• Conduct a traffic alternative study to determine future intersection improvements at the intersection of Fir Tree Rd SE and Rainier Rd SE • Clear vegetation for entering vehicle sightlines (from Fir Tree) • Implement intersection conflict warning system (ICWS) • Improve crest vertical curve along Rainier Rd • Enhanced intersection and/or warning treatments (signs, transverse rumble bars, etc.) • Consider left turn lane on Rainier Rd SE, if warranted	Intersection	TBD	Medium
TIP-02	Yelm Hwy and Spurgeon Crk Rd SE Intersection Improvements	Construct a roundabout at the intersection of Yelm Hwy SE and Spurgeon Creek Rd SE	Intersection	$4,000,000	High
TIP-03	Kingham St SE – 3rd Ave SE to Martin Way E Pedestrian Improvements	Construct new sidewalk and ADA ramps to improve mobility along Kingham St SE	Sidewalk	TBD	Low
TIP-04	196th Ave SW–Sargent Rd SW to Elderberry St SW	Widen and rehabilitate existing roadway, and construct urban improvements such as lighting, sidewalks, and bike lanes. Construct roundabouts at the intersections of 196th Ave SW/Elderberry St SW and 196th Ave SW/Sargent Rd SW	Corridor	$14,000,000	Low
TIP-05	Old Hwy 99/ Old Hwy 9 SW Intersection Improvements	Conduct a traffic alternative analysis to determine future intersection improvements at the intersection of Old Hwy 9 SW and Old Hwy 99 SW	Intersection	TBD	Medium

SAP = New Safety Action Plan projects, TIP = from Thurston County's 6-year TIP, GBTS = Gate-Belmore Trail Study, GMTAP = Grand Mound Subarea Plan, MWCS = Martin Way Safe Crossing Study

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Table 12: Recommended Safety Improvement Projects

Number	Project Name	Description	Type	Cost	Priority
TIP-06	Old Pacific Hwy/ Kuhlman Rd SE Intersection Improvements	Construct a roundabout at the intersection of Old Pacific Hwy SE and Kuhlman Rd SE	Intersection	TBD	Low
TIP-07	Trail Crossing Enhancement Study	Study to develop an inventory for all Thurston County trail crossings, recommend and prioritize low-cost improvements and develop trail standards for different crossing priorities	Study	$350,000	Low
TIP-08	Rochester Main Street Improvements (US 12)	Reconstruct roadway to provide 2 to 3 lanes with intersection improvements, bike lanes, pedestrian refuge islands, planter strips, medians, sidewalks, lighting, and drainage.	Corridor	TBD	Medium
TIP-09	Tilley Rd S (Old Hwy 99 SW to Goddard Rd SW)	Widen and reconstruct roadway at intersection to provide additional turning lanes, illumination, and drainage.	Corridor	$4,100,000	Low
GBTS-01	Gate-Belmore Trail: Belmore Section	• Grade trail and top with compacted gravel or asphalt • Replace two bridges • Install bollards at street crossings • Pavement markings and signage	Trail	TBD	Low
GBTS-02	Gate-Belmore Trail: Black River Section	• Clear and/or trim overgrown vegetation • Grade trail and top with compacted gravel or asphalt • Replace four bridges • Install bollards at street crossings • Pavement markings and signage	Trail	TBD	Low
GBTS-03	Gate-Belmore Trail: Gate Section	• Clear and/or trim overgrown vegetation • Realign and grade trail and top with compacted gravel or asphalt • Replace seven bridges • Install bollards at street crossings • Pavement markings and signage	Trail	TBD	Low
GMTAP-01	US 12/Old Highway 99/ Elderberry Street SW Intersection Improvements	Construction of pedestrian refuge islands for pedestrians crossing the east, west, and south legs of the intersection	Intersection	$230,000	Low
GMTAP-02	Old Highway 99 Improvements	Construction of a shared-use path on the west side of Old Highway 99 and connection of sidewalks on the east side and consolidation of access along Old Highway 99	Corridor	$8,200,000	Low

SAP = New Safety Action Plan projects, TIP = from Thurston County's 6-year TIP, GBTS = Gate-Belmore Trail Study, GMTAP = Grand Mound Subarea Plan, MWCS = Martin Way Safe Crossing Study

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Table 12: Recommended Safety Improvement Projects

Number	Project Name	Description	Type	Cost	Priority
GMTAP-03	Sargent Road Improvements	Construction of shared-use path on the south side of Sargent Road to accommodate bicyclists and pedestrians, with widening to provide left-turn storage lanes and sidewalks on the north side of the road.	Corridor	$2,900,000	Low
GMTAP-04	Power Line Trail	Construction of a multi-use trail following the current power lines alignment for bicyclists and pedestrians.	Trail	$3,000,000	Low
GMTAP-05	Rochester Grand Mound Trail	Install a shared-use trail to connect Grand Mound, Rochester, and the Chehalis Reservation.	Trail	TBD	Low
MWCS-01	Martin Way Crossing Improvements	Install safe crossings on Martin Way, between Carpenter and Kinwood, at the Thurston County Food Bank, School Street, and the Martin Way Mobile Home Park (7838 Martin Way) per the Martin Way Safe Crossing Study.	Crossing	$10,040,000	High

SAP = New Safety Action Plan projects, TIP = from Thurston County's 6-year TIP, GBTS = Gate-Belmore Trail Study, GMTAP = Grand Mound Subarea Plan, MWCS = Martin Way Safe Crossing Study

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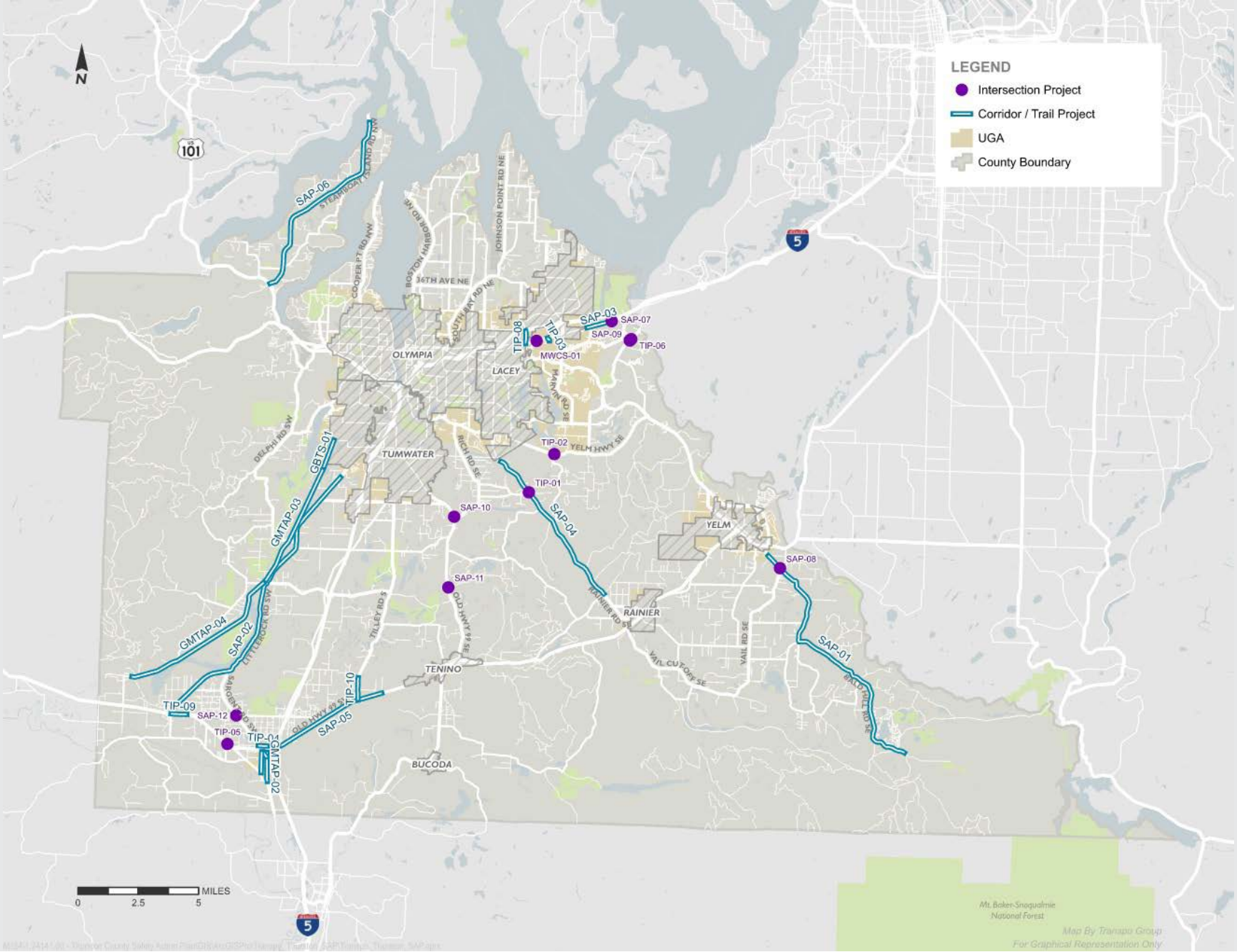

Figure 29: Recommended Safety Improvement Projects

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, along with an explanation of the prioritization criteria and scoring values.

Prioritization Criteria:

- ***Fatal /Severe Injury Collisions (Maximum Possible Points: 3)***: This criterion was used to give higher priority to the locations with a history of fatal and/or severe injury collisions. Locations with one or more fatal collisions over the crash analysis period (2019-2023) were assigned 3 points, while locations with one or more serious injury collisions were assigned 2 points. No points were assigned to locations at which zero fatal or severe injury collisions were reported.
- ***High Injury/High Risk Network (Maximum Possible Points: 3)***: This criterion was used to give higher priority to locations identified by the High Injury or High Risk Network (see ***Appendix B***). Projects identified on the High Injury Network or at High Injury Intersections were awarded 3 points, while projects on the High Risk Network were awarded 2 points.
- ***Top Crash Risk Factors (Maximum Possible Points: 4)***: This criterion was used to give higher priority to improvements that addressed the top four crash risk factors identified in the Safety Analysis. 2 points were given to projects that addressed fixed object crashes, 1 point for projects that address "other" type crashes, pedestrian or bicycle crashes and head on or angle crashes.
- ***Proximity to Schools or Trail Crossings/Park Entrances (Maximum Possible Points: 3)***: 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 quarter mile of a school were given 2 points, and projects immediately proximate to a park entrance or trail crossing were given 1 point.
- ***Overall Disadvantaged Census Tracts (Maximum Possible Points: 3)***: This criterion was used to give higher priority to the locations located in or adjacent to census tracts identified as having higher levels of transportation disadvantages. The ETC overall disadvantaged census tracts were developed as part of the Demographic Analysis (see ***Appendix C***).
- ***Other Criteria:*** Aligns with Current County Project (Maximum Possible Points: 2) – A criterion was included which gave higher priority to projects which align with intersections already identified for improvement as part of projects identified within the County's 6-year Capital Improvement Plan (CIP). When signal improvements can be combined with other planned projects, significant cost saving can be achieved by delivering the projects at the same time. As such, all signal locations at which improvements are planned as part of a CIP project were assigned 2 additional points in the prioritization process.

In total, 16 possible points were available within the prioritization framework. Projects scoring 11 points or higher were identified as high priority, while projects scoring between 7 and 10 points were identified as medium priority, and project scoring 6 or fewer points were identified as low priority. The full scoring breakdown and prioritization is provided in ***Appendix E***.

5 Implementation and Monitoring

Policy Review and Updates

One of the key elements of a Safety Action Plan is a review of the County's existing policies and processes to identify low cost, procedural and practice changes to increase the focus on safety and proactively address crashes, helping the County advance towards its Vision Zero goal. The improvements identified through the policies and process review are intended to be implemented not only in the current practices of the County, but also guiding future project development by private entities, such as developers, and the County's capital projects.

As part of the review process, the County's current policies, plans, guidelines, and standards were reviewed for opportunities to improve processes. A specific list of recommended action items is included here, while the full policy and plan review is summarized in ***Appendix G***.

CSAP Policy and Practice Analysis

Best Practices/Policies	Current Thurston County Practices/Policies	Recommendations
Safer People		
SAFETY CAMPAIGNS: Expand the focus of county-hosted education campaigns and outreach events to include motorists' responsibilities for creating a culture of safety, along with that of bicyclists and pedestrians.	Comprehensive Plan Policy T.1A.2 to "use a combination of education, enforcement, engineering, and evaluation to maintain and enhance the transportation system safety."	• Partner with youth organizations to create peer-to-peer anti-distraction messaging campaigns. • Work with media outlets to more accurately report traffic crashes to avoid victim-blaming, and report crashes in the systemic context of the Safe System Approach (e.g. noting shared responsibilities and the role of roads, vehicles, and speeds in the crash). • Develop comprehensive engagement strategies that create personal connections to traffic safety. Include messaging about stopping for pedestrians at all marked and unmarked crosswalks and giving bicycles at least 3 feet of space when passing. • Create partnerships with mobility providers to provide transportation alternatives that help prevent impaired driving (i.e. safe ride home programs).
SCHOOL SAFETY: Work with school districts to create pedestrian and bicycle safety curricula for students.	Comprehensive Plan Policy T.1A.5 to "provide and support safe routes to school programs and projects."	Consider the use of accessible pedestrian signals at signalized intersections and installation of PHBs and RRFBs at non-signalized crossings. Allow for extension of pedestrian crossing times based on actual walking speeds.
TRACK PROGRESS: Provide regular updates on plan implementation and project development on County safety and progress tracking web pages.	Comprehensive Plan Policy Objective 4C: "Develop performance measures that are realistic, efficient to administer, effective in assessing performance, and meaningful to the public."	Create a data dashboard (e.g., Tacoma's Vision Zero Dashboard) to track progress towards accomplishing Transportation Safety Action Plan objectives and meeting key metrics.

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CSAP Policy and Practice Analysis

Best Practices/Policies	Current Thurston County Practices/Policies	Recommendations
Safer Roads		

REDUCE VEHICLE MILES: Reducing vehicle miles traveled (VMT) reduces road user exposure and thereby decreases potential collisions.	• Comprehensive Plan Goal 3 includes several policies for improving access to non-vehicular modes including walking, biking, public transit, and paratransit. It also has policies for supporting programs and services that encourage employees to commute to work by means other than driving alone (T.3C.2).
	• Countywide Planning Policies include policies for supporting and increasing opportunities for riding transit, biking, walking, ridesharing, allowing and encouraging flexible work schedules, and teleworking.
	• The County Code contains multiple titles with development, zoning, and design standards relevant to building street grids and developments that incorporate pedestrian-oriented design and street connectivity, parking provisions, and support commute trip reduction programs, found under the titles Lacey Urban Growth Area (Title 21), Tumwater Urban Growth Area (Title 22), and Olympia Urban Growth Area (Title 23).
	• Ordinance 15929 for establishing a Complete Streets Policy was adopted on 9-22-2020 but has not been codified.
	• The Thurston County Bicycle Connectivity Strategy is an ongoing project launched in early 2025. The project recommends safety improvements to the county's regional bicycle facility network, identifying high-risk areas based on a safety analysis.
	• The Thurston County Parks, Open Space and Trails Plan Identifies five paved trails and bikeways as priority projects to improve safe, off-street bicycle connectivity.
	• Code 20.44.070 requires all commercial, industrial, institutional, and recreational uses with 25 or more parking spaces also provide a designated, secured bicycle parking area to accommodate a minimum of five bicycle spaces
		• Codify Ordinance 15929, which established a Complete Streets policy. Detail how to plan, design, and maintain streets so they are safe for all road users of all ages and abilities.
		• Work with transit providers to track trips made by public transportation. Use annual counts and/or existing trail counter data to track trips made through an active transportation mode such as walking, biking, etc.
		• Track accessibility to transportation services:
		  • Percentage of residents who have access to public transportation within a reasonable distance (0.5 to 1 miles) within Urban Growth Areas. Percentage of transportation infrastructure that is accessible to people with disabilities.*
		  • Percentage of streets within Urban Growth Areas that have sidewalks.*
		• Include VMT reduction as a foundational component of the CSAP.
		• Plan for active transportation and transit networks to provide alternatives to driving in the CIP. Prioritize funding for these projects.
		• Develop further strategies to increase the availability of safe bicycle parking, especially near transit.
		• Consider partnering with local transit providers to address mobility gaps and prioritizing low-income communities that lack other transportation options.

TEMPORARY INSTALLATIONS: Temporary installations are implemented using low-cost materials to test new designs and build support for changes.	Thurston County's Neighborhood Traffic Calming program offers educational, behavioral and environmental solutions to assist in addressing traffic safety concerns in neighborhoods. Eligible projects include low-cost activities to assist in changing driver behaviors and environmental changes to the roadway system (if deemed necessary).	Create pilot program for traffic calming (i.e. chicanes and neckdowns) and pedestrian facility improvements (i.e. curb extensions and walkways using paint, flex posts, planters, etc.). Study outcomes for pilot installations, publish results as feasible, and install permanent street design changes based on successful installations as capital projects where appropriate.

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CSAP Policy and Practice Analysis

Best Practices/Policies	Current Thurston County Practices/Policies	Recommendations

DATA COLLECTION & ANALYSIS: Prioritize safety improvements using a data-driven process and a focus on serving demographically diverse user groups.	• Comprehensive Plan Policy T.1A.6 to "develop and maintain a data-driven county road safety plans to identify priorities and proven, recommended, and new solutions to support the Target Zero safety goal."
	• The County currently tracks transportation safety incidents on an annual basis, measuring:
	  • Number of traffic fatalities and serious injuries.
	  • Percentage of roads with adequate safety features.
	• The Thurston County Strategic Plan identifies the implementation of a comprehensive asset management program "to optimize performance of infrastructure assets" as a short-term strategy (Initiative 8).
		• Develop a cross-cutting, interdepartmental traffic safety technical advisory team to evaluate crash trends, emerging issues, and opportunities to implement the "4E" approach.*
		• Build on the County's asset management system and/or roadway database to include data that would help to identify and refine risk factors through systematic safety analysis, such as: number of travel and turn lanes, street width, traffic signal phasing, transit frequency and ridership counts, location of fixed objects (utility poles, etc.), sidewalks, bicycle facilities, and marked crosswalks/crosswalk enhancements.
		• Collect additional data on pedestrian and bicyclist volumes to better understand exposure and crash risk for those modes.
		• Make sure that datasets relating to transportation projects and street design features include construction dates to enable before/after study. Consider more nuanced metrics to evaluate mobility and accessibility (i.e., sidewalk connectivity and ADA compliance, transit operating hours and frequency, and low-stress bicycle network connectivity).
		• Include the lived experiences of community members, obtained through engagement, as relevant data for transportation planning and design projects.

PROJECT PRIORITIZATION: Integrate safety as a priority for allocating funding through the Capital Improvement Program.	The Public Works ADA Program is used to meet requirements for government agencies to design, construct, retrofit, and maintain infrastructure that allows access for persons with disabilities or limited mobility. Public Works has developed a transportation plan to improve policies and procedures, road standards, and roadway features such as sidewalks and curb ramps for people with disabilities.	• Integrate safety projects into all stages of capital project planning and development Review other relevant capital projects to ensure that they are consistent with road safety best practices. • Prioritize funding for safety and access improvements on high crash corridors.
STREET RESURFACING: Evaluate and leverage resurfacing projects for implementing safety improvements.	Thurston County's transportation system consists of more than 1,000 miles of roadway, 150 bridges, 100 miles of sidewalks, 17,000 traffic control signs, and 1,000 streetlights. During the spring and summer months, the Public Works department completes pavement preservation projects designed to help maintain the County's roadway network. Roadway maintenance includes asphalt repairs, roadway mowing to improve line-of-site for drivers, and drainage system improvements to prevent flooding.	• Evaluate all resurfacing projects, planned maintenance activities (i.e., signal re-timing), and other major projects (i.e., new traffic signals) for the potential implementation of traffic safety improvements, particularly on the high-risk corridors. Traffic safety improvements that may qualify include re-striping (e.g., lane narrowing, bike lanes, crossings, etc.), ADA compliant curb ramps at intersections getting new traffic signals, and quick-build walkways. Dovetail this work to implement improvements without requiring substantial additional funding. Minor work and emergency repairs may not be able to support recommended safety improvements. • Develop a policy to support pedestrian crossing improvements when curb ramps are reconstructed (i.e., curb bulbs or pedestrian refuge islands as part of ADA improvements identified in ADA transition plan). • Use the CSAP as one criterion for prioritizing re-surfacing projects.

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CSAP Policy and Practice Analysis

Best Practices/Policies	Current Thurston County Practices/Policies	Recommendations

UPDATE STANDARDS: Update development standards and guidelines to align with the Safe System Approach.	• Comprehensive Plan Policies:
	  • T.1A.7: Consider the safety of all users when designing transportation facilities, and design infrastructure to encourage safe user behavior.
	  • T.2B.2. Plan, design and construct multimodal, context-sensitive, complete streets and roads.
	• The County recognizes levels of service for transportation facilities as adopted in the Thurston County comprehensive plan, including Joint Plans with cities and towns (TCC 17.10).
		• Update the County Public Works roundabout policy to prioritize roundabouts instead of traffic signals when intersection traffic control changes are being considered.
		• Develop signal timing policies that ensure all roadway users are considered and help facilitate a multi-modal transportation system, such as Leading Pedestrian Intervals or protected left turn phases.
		• Update Roadway Standards to include new street types that prioritize the safety and comfort of all users to comply with the County's Complete Streets ordinance.
		• Update TCC 17.10, the Transportation Facilities Concurrency Management System, to include:
		  • Transportation Demand Management (TDM) measures as a way to meet concurrency.
		  • Safety performance.
		  • Require contributions from new development to implement pedestrian and bicyclist facilities as needed, and safety improvements along high-risk corridors.

PRIORITIZE SCHOOL AREAS: Work with school districts to take a comprehensive approach to create safer schools and routes to schools.	Comprehensive Plan Policy T.1A.5 to "provide and support safe routes to schools programs and projects."	Prioritize safe routes to school projects that overlap with the County's high-risk corridors.
Safer Vehicles		
TRUCK FLEET: Require the adoption new safety technologies within the County's vehicle fleet.	Comprehensive Plan Policy T.4B.5.: Look for opportunities to integrate transportation technology considerations in all projects.	• Use more explicit policy language, such as identifying key safety features, related to adopting safety technologies in County's vehicle fleet. • Install side guards and crossover mirrors where applicable to all large fleet vehicles and require entities contracting with the County to have side guards on a certain proportion of their fleet over 10,000 lbs. Side guards, also known as "lateral protective devices", keep pedestrians, bicyclists, and motorcyclists from being run over by a large truck's rear wheels in a side-impact collision. • Explore centralized refuse compactors in high-density areas to minimize the number of conflict areas for drivers to stop and pick-up, manually or mechanically.

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CSAP Policy and Practice Analysis

Best Practices/Policies	Current Thurston County Practices/Policies	Recommendations
Safer Speeds		
REDUCE SPEEDS: Reducing vehicle operating speeds is done first by engineering streets that encourage slower, context-appropriate speeds and second by enforcing speed limits.	• Comprehensive Plan Policy T.1A.8.: Prioritize roundabouts instead of traffic signals at intersections to maintain traffic flow and improve safety performance. • Thurston County Code establishes that the maximum speed limit for all county roads is 50 mph, except for school zones, residential plats, marked school or playground crosswalks, and bridges and tunnels. • On bridges, where typical speed is 35 MPH or higher and significant pedestrian, bike and/or horseback traffic can be expected, the engineer may require that the lanes for these other modes of traffic be separated from motor vehicle traffic by a physical barrier. (Roadway Standards)	• Reevaluate current practice setting speed limits with an emphasis on roadway safety • Develop standard plans for quick implementation of low-cost, low-speed road design.
Post-Crash Care		

EMERGENCY RESPONDERS: Involve first responders in project design and design guidance development.	• Comprehensive Plan Policies:
	  • T.1B.3. - Encourage coordination between transportation system providers and emergency response providers who rely on that system.
	  • T.1B.5. - Develop and maintain a rapid-reaction strategy to assess safety of transportation facilities during an emergency.
		• Review and revise Fire and Emergency Medical Services call response procedures to ensure appropriate response vehicle per call type. Consider smaller vehicles/apparatuses where feasible.
		• Create a Fire and Emergency Medical Services map so streets designated for response can be designed appropriately for larger vehicle turning movements.
		• Determine the level and types of traffic calming that would be acceptable on all roadway classifications and response routes.

CRASH DATA: Work with police service providers to improve data collection methods around traffic crashes and unsafe driving behaviors.	Thurston County Code establishes that the peace officer present at the scene of any accident will make a report in the same manner as required of the parties to such accident.	• Enhance police officer training on accurate crash reporting and investigation, including the unique attributes required to accurately report the circumstances of crashes involving bicyclists, pedestrians, and other vulnerable road users. • Revise the County Code to use the phrase "crash" not "accident" in accordance with the Safe System Approach language.

5/5 (Table end)

Funding and Partnerships

The lists of recommended safety countermeasures presented in the tables above contain the information and improvement descriptions necessary for member agencies to align potential safety grant funding candidates with local investment priorities. The information below describing a wide variety of short-term grant funding opportunities will help local agencies 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. The following section describes potential approaches for developing projects and preparing applications under several funding programs.

USDOT Safe Streets and Roads for All (SS4A)

With the completion of this CSAP, Thurston County is eligible to apply for grant funding under UDSOT's SS4A grant program. The federal Notice of Funding Opportunity (NOFO) for 2025 USDOT SS4A implementation grants was issued March 28 with application deadlines on June 26, 2025. Agencies can apply for implementation grant funds to construct and/or install one or more of the countermeasures identified in the tables above to improve safety within their communities. 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. Using the tables of countermeasures above, Thurston County can develop eligible SS4A implementation projects by combining countermeasures into an overall improvement envelope which meets the minimum project size of $3,000,000 (inclusive of a minimum $500,000 local match). Agencies can apply for SS4A funds either on their own or as part of a joint application. Eligible applicants under this program include:

- Metropolitan planning organizations (MPOs),
- Political subdivisions of a state or territory,
- Federally recognized tribal governments, and
- Multi-jurisdictional groups of entities described in any of the three types of entities listed above.

As such, state departments of transportation, such as WSDOT, are not eligible funding recipients. However, an agency seeking funding for a project must have ownership and/or maintenance responsibility over the facility.

WSDOT County Safety Program (2025 and odd-numbered years thereafter)

This CSAP will qualify as the required LRSP for HSIP federal grant funds administered by WSDOT. Thurston County may apply for a series of safety improvements along a corridor, in a spot location, or as a batch of systemic safety improvements. Unlike SS4A, there is no minimum project cost and there is currently no local match requirement as long as funds can be completely obligated by 2028. However, if the County can offer some level local match requirement, it could improve the competitiveness of an application. These HSIP grants for safety improvements typically range from $500,000 to $2,000,000 with grant awards announced in October.

TIB Annual Grants (2025 and each year thereafter)

In June 2025, the Washington Transportation Improvement Board (TIB) will issue the annual call for Urban Arterial, Active Transportation, and Complete Streets grant funding programs. Counties are not eligible for the Urban Arterial Program but are eligible for the Active Transportation and Complete Streets grant programs. An adopted Complete Streets ordinance is required to be eligible for the Complete Streets grant and will be asked about in the Active Transportation and Urban Arterial grant applications. Local agencies in the Thurston County region that do not yet have Complete Streets ordinances could adopt an ordinance, based on national best practices, before May 2025 and be eligible for the TIB Complete Street grant. 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.

Federal Grants Administered by TRPC

Thurston Region Planning Council administers federal funding for three programs: Surface Transportation Block Grant; Carbon Reduction Program; and Transportation Alternatives. WSDOT provides TRPC allocations for each of these programs. Local agencies as participants in the TRPC program may apply for funds under these programs. Given small allocations for these programs, the TRPC does not complete calls for projects under these federal programs annually. Generally, calls for projects are completed every two years. The TRPC works with member agencies to establish regional priorities and scoring criteria used to award grant funding. The STBG program funds multimodal transportation projects, such as roadway and intersection safety improvements, while the TA program funds safety improvements for people walking, biking, and rolling, such as ADA upgrades, crossings, sidewalks, bikeways, and multiuse trails. Both STBG and TA federal grants require a 13.5% local match requirement, but toll credits may allow 100% federal share.

WSDOT City Safety Program (2026 and even-numbered years thereafter)

WSDOT will issue calls for projects for the 2027 County Safety Program in October 2026 and applications and LRSPs required for HSIP grants will be due in February or March 2026. All cities that participated in this CSAP will be

able use it as the required LRSP for the HSIP grant application, but prospective applicants will need to include systemic analysis of collision patterns for 2024 as a supplement to the CSAP. WSDOT will issue 2020-2024 collision data to interested agencies in October 2025, which allows time for each agency to meet this requirement with a relatively short technical memo to supplement the CSAP safety analysis. Each city may apply for a series of safety improvements along a corridor, in a spot location, or as a batch of systemic safety improvements. Unlike SS4A, there is no minimum project cost and currently there is no local match requirement if project funds can be completely obligated by 2029. Offering some level of local matching funds demonstrates local commitment and may improve the competitiveness of an HSIP application. WSDOT HSIP grants for safety improvements typically range from $500,000 to $2,000,000 with grant awards announced in October.

WSDOT Safe Routes to School (SRTS) and Pedestrian & Bicycle Program (PBP) Grants

(2026 and even-numbered years thereafter)

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 WSDOT call for projects for these two grant programs is expected in January-February 2026 and applications are expected to be due in May - June 2026. 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 2026 and a list of projects recommended for funding by the State legislature is expected to be issued in December 2026. Grant funding awards are expected to be announced upon adoption of the State budget in June 2027.

Other Grant Funding Opportunities

Other federally funded grant programs that are currently available to help fund safety improvements in this CSAP, may include:

- WSDOT Railway-Highway Crossings
- Reconnecting Communities
- Rebuilding American Infrastructure with Sustainability and Equity (RAISE)

All these grant funding sources can help Thurston County to rapidly implement the active transportation and safety improvement needs identified in this CSAP, which will help to make progress toward accomplishing regional goals to reduce fatal and serious injury collisions.

Monitoring and Evaluation

The final element of a Safety Action Plan is to identify a process for continually measuring progress towards reducing collisions and improving safety along Thurston County's roadway network. This document requires periodic revisions to reassess safety conditions within the County and determine whether risk factors have changed or if new solutions or countermeasures need to be identified. It is recommended that this document be updated at regular intervals to identify changes in collision patterns and evaluate the success with which previously implemented safety projects have reduced collisions.

Safety Action Plan 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 signal infrastructure, enhanced crosswalk locations, installation of pedestrian and bicycle facilities, etc.)
- Revisions to policy (e.g., speed limit policy changes, updates to complete street policies, development of traffic calming programs, etc.)

For both project implementation and policy revisions, the progress towards achieving successful outcomes from the CSAP can take many forms. For projects, this may include applying for and receiving grant funding; developing design plans and estimates; or full construction of identified safety improvements. For the policy revisions, this 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. The County's annual 6-year Transportation Improvement Program (TIP) will document and outline the County's progress towards implementing safety projects as improvements are funded and constructed.

Safety Action Plan Progress Evaluation

In addition to tracking the success to which the CSAP leads to implementation of safety-related projects and policy changes, the efficacy of the program will also be judged based on the success with which the proposed safety measures reduce fatal and severe injury collisions. The collision analysis conducted as part of the update process will be used to evaluate how the projects in the CSAP are improving safety within the County. Traffic safety statistics, including the number, type, and severity of collisions on the County's roadway network will be compared with historical collision data to determine whether the implemented safety measures had a successful impact towards 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 on collision rates and whether the

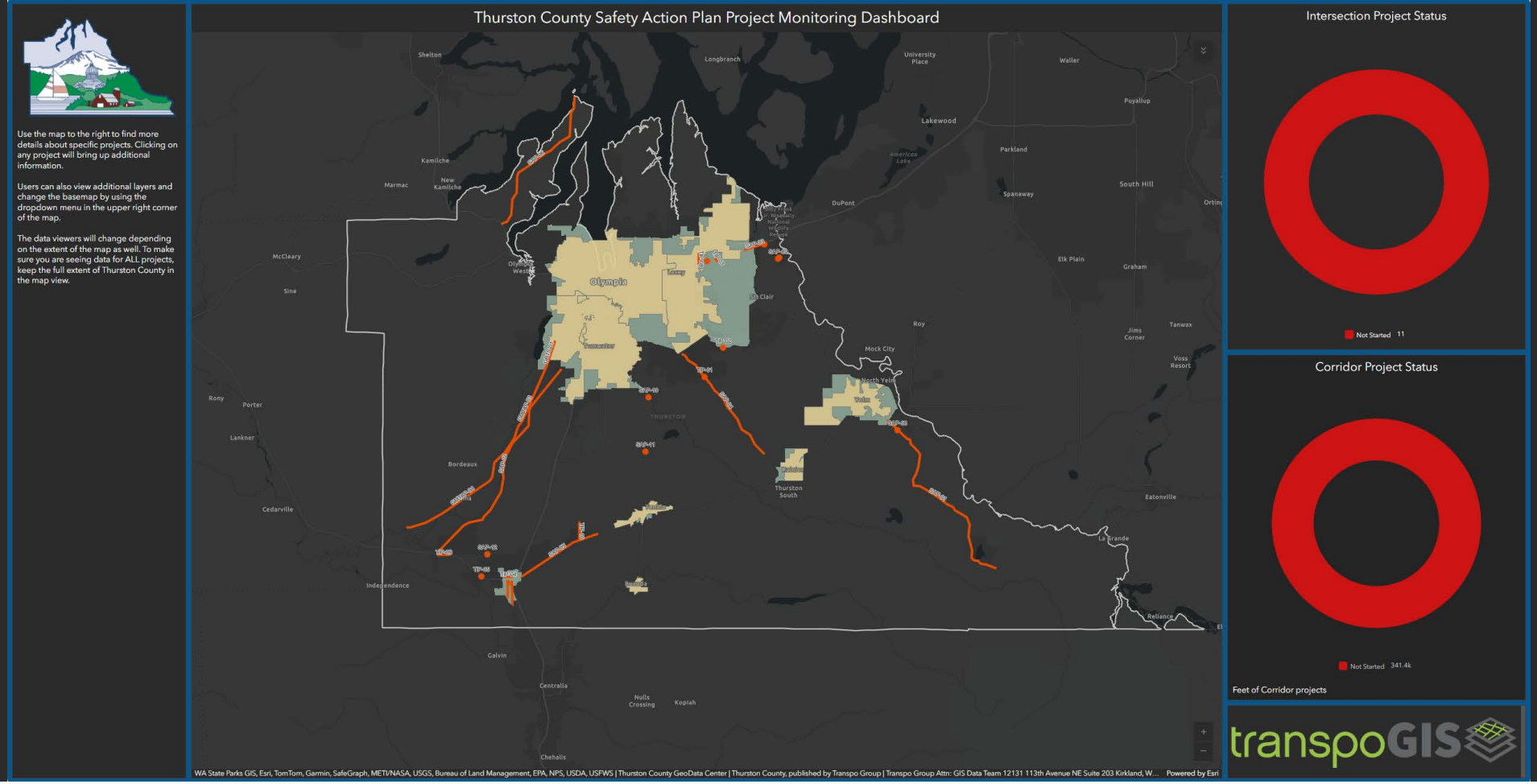


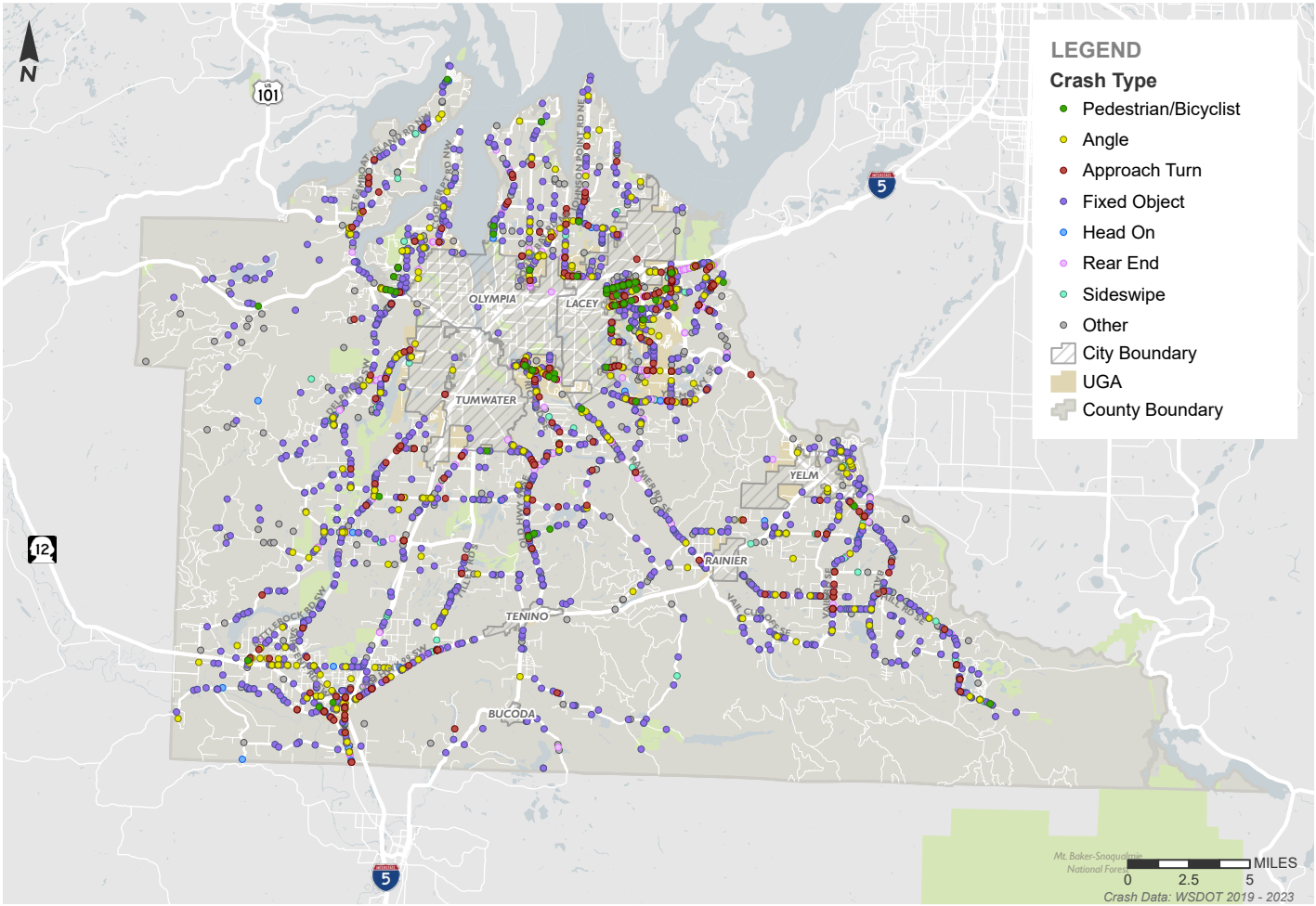
Figure 30: Online Dashboard Tool

implemented countermeasures achieved the predicted collision reductions.

Figure 30 shows a screenshot of the online dashboard tool to measure progress of the recommended safety improvements outlined within this plan. Thurston County staff will host the online GIS dashboard for internal monitoring purposes to measure and track progress.

Thurston County Public Works will be responsible for the development, implementation and monitoring of this CSAP into the future. The team at Public Works will be comprised of the traffic engineering team, asset management specialists, and communications personnel. Support will also be provided from the Thurston County Sheriffs office and Target Zero Program Manager as needed.

Appendix A:
Crash maps



Crash Types

Thurston County Safety Action Plan

FIGURE **XX**

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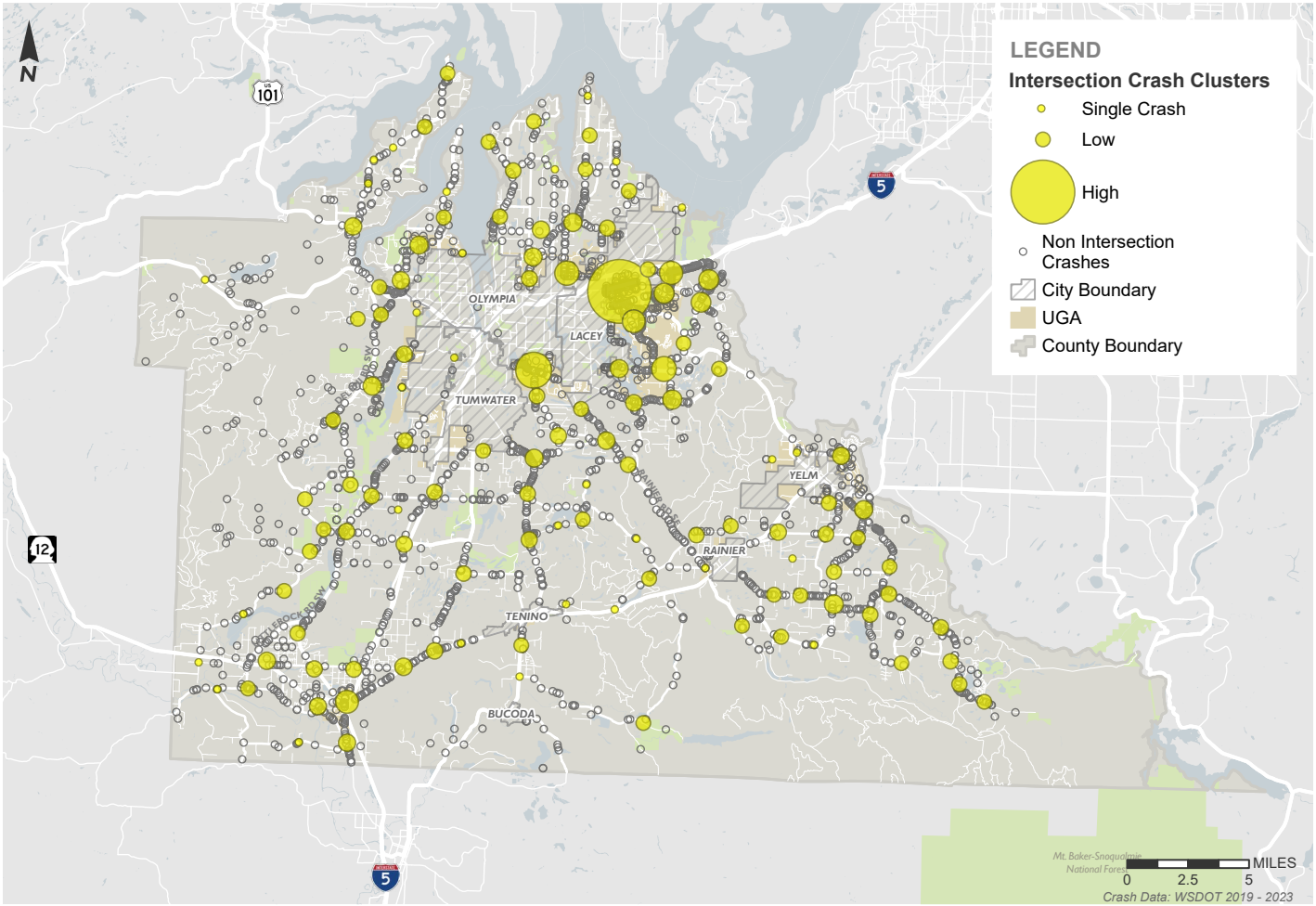

Intersection Related Crashes

Thurston County Safety Action Plan

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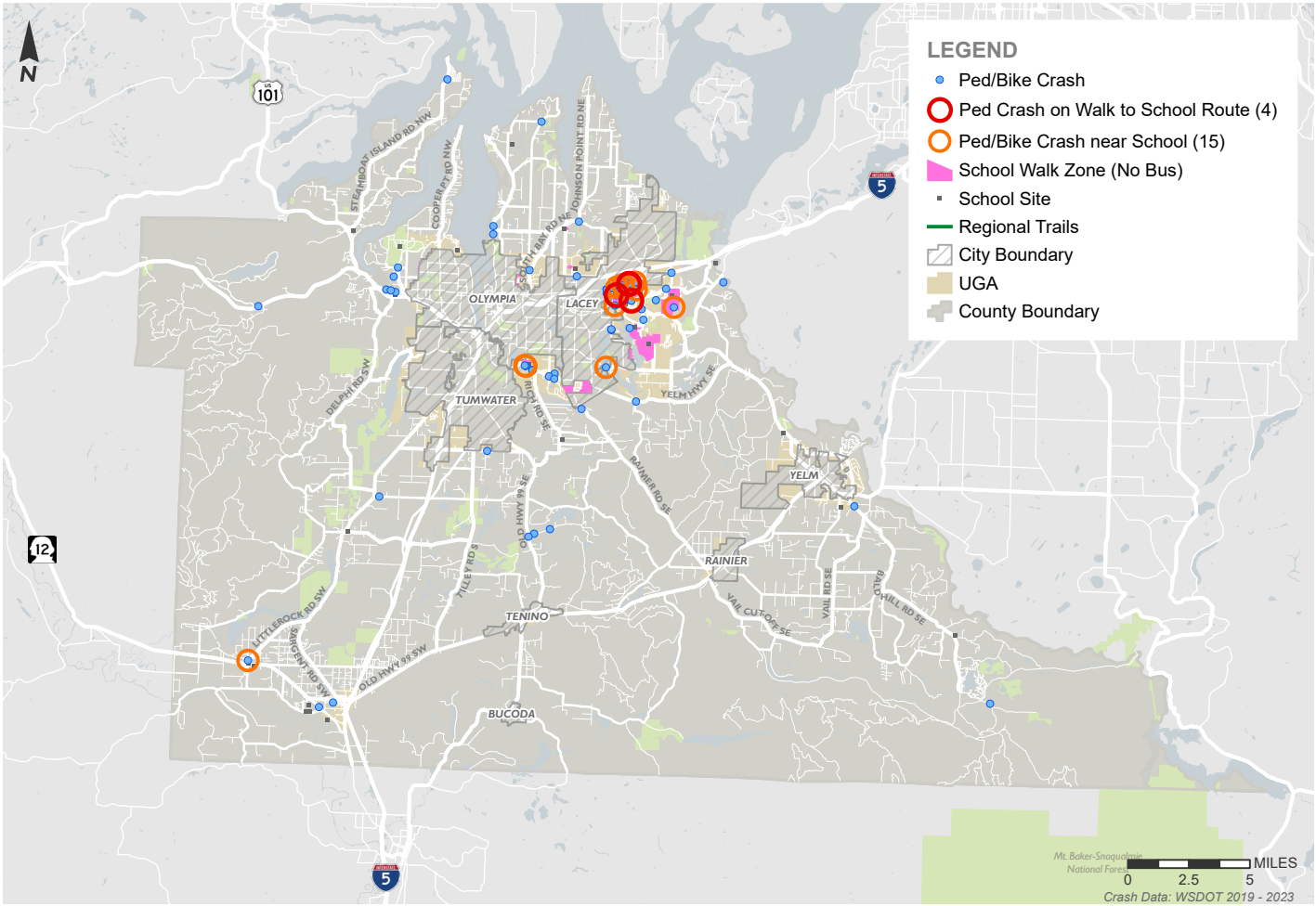

Pedestrian and Bicycle Crashes - Near Schools

Thurston County Safety Action Plan

FIGURE **XX**

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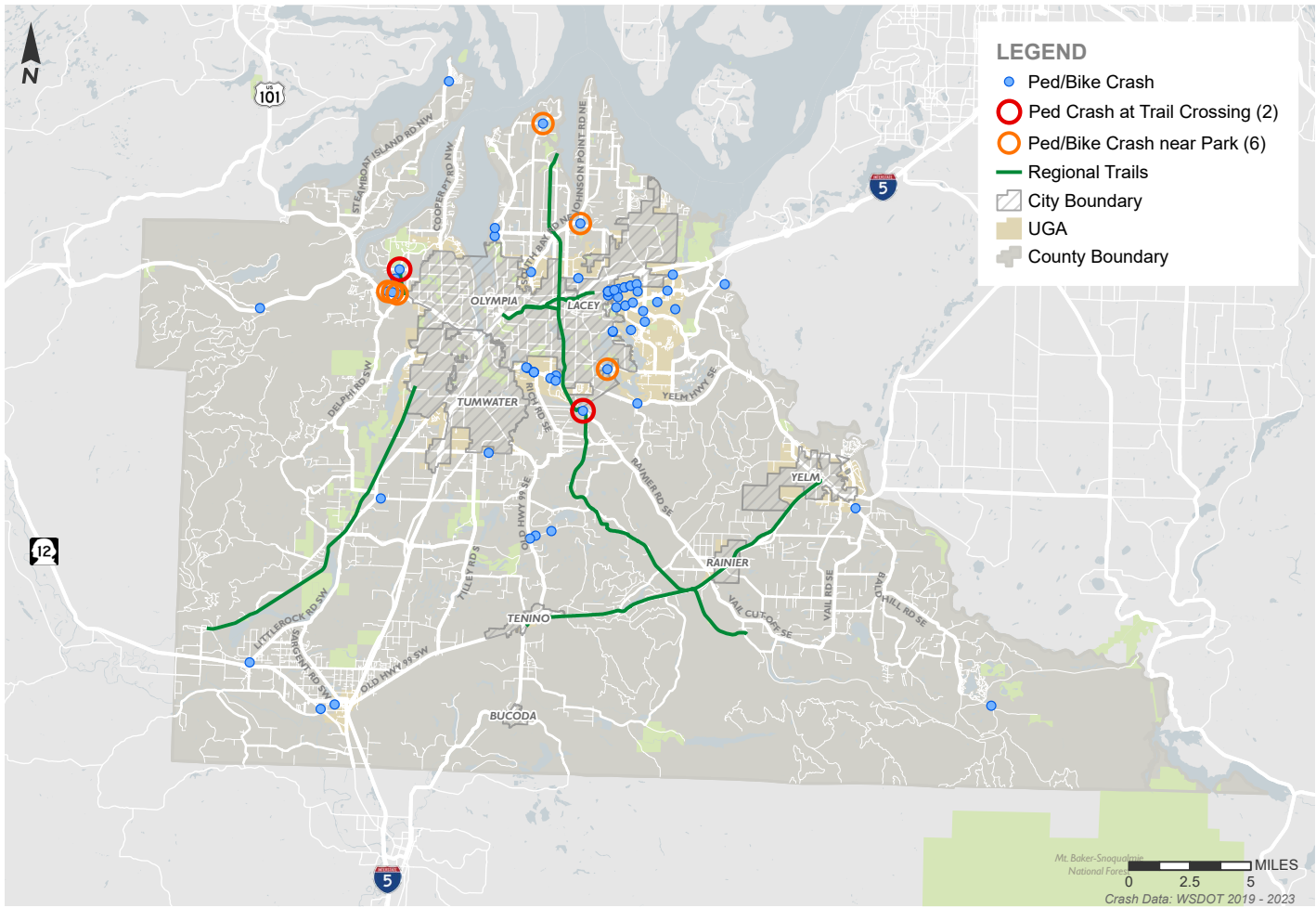

Pedestrian and Bicycle Crashes

Thurston County Safety Action Plan

FIGURE **XX**

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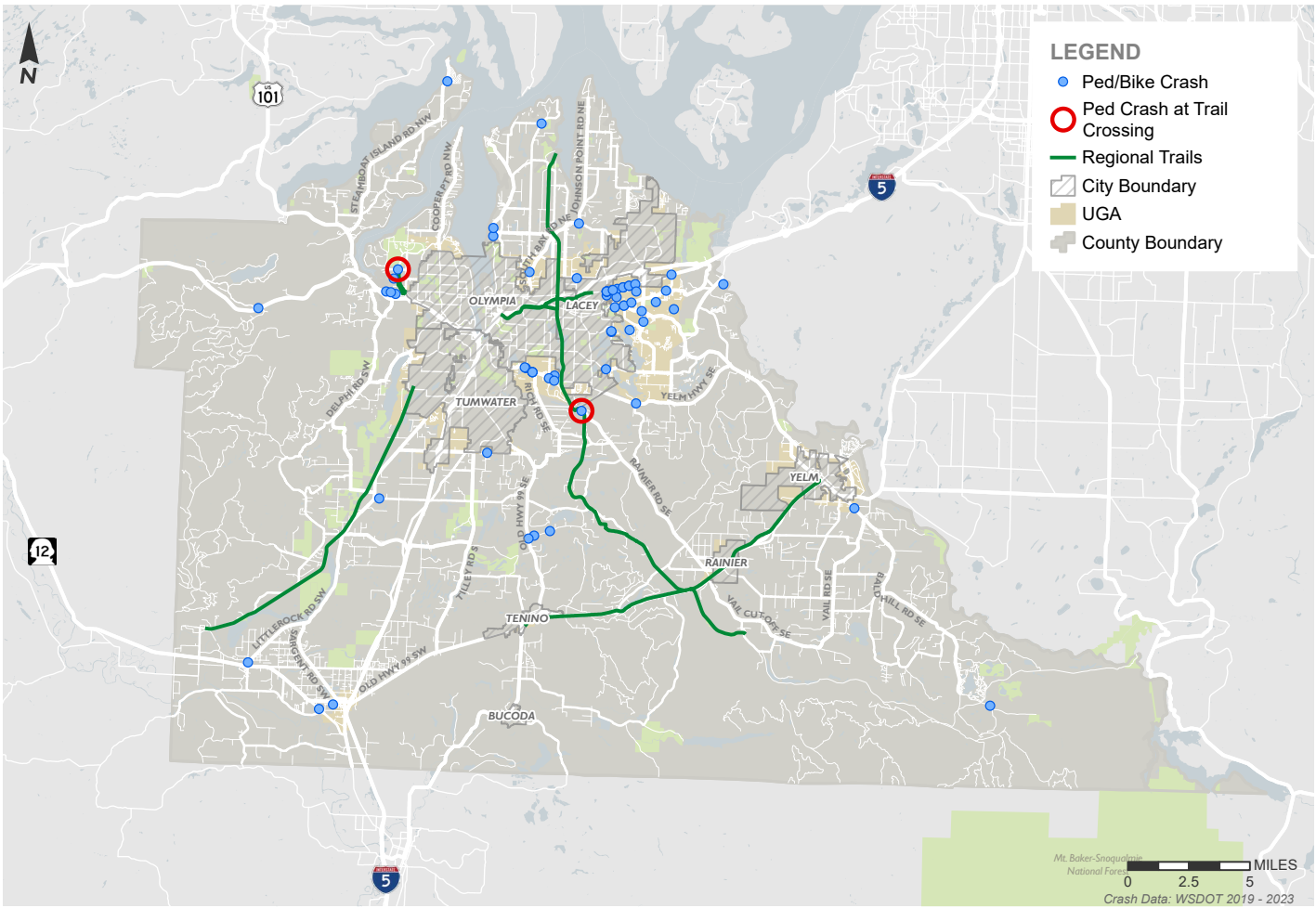

Pedestrian and Bicycle Crashes

Thurston County Safety Action Plan

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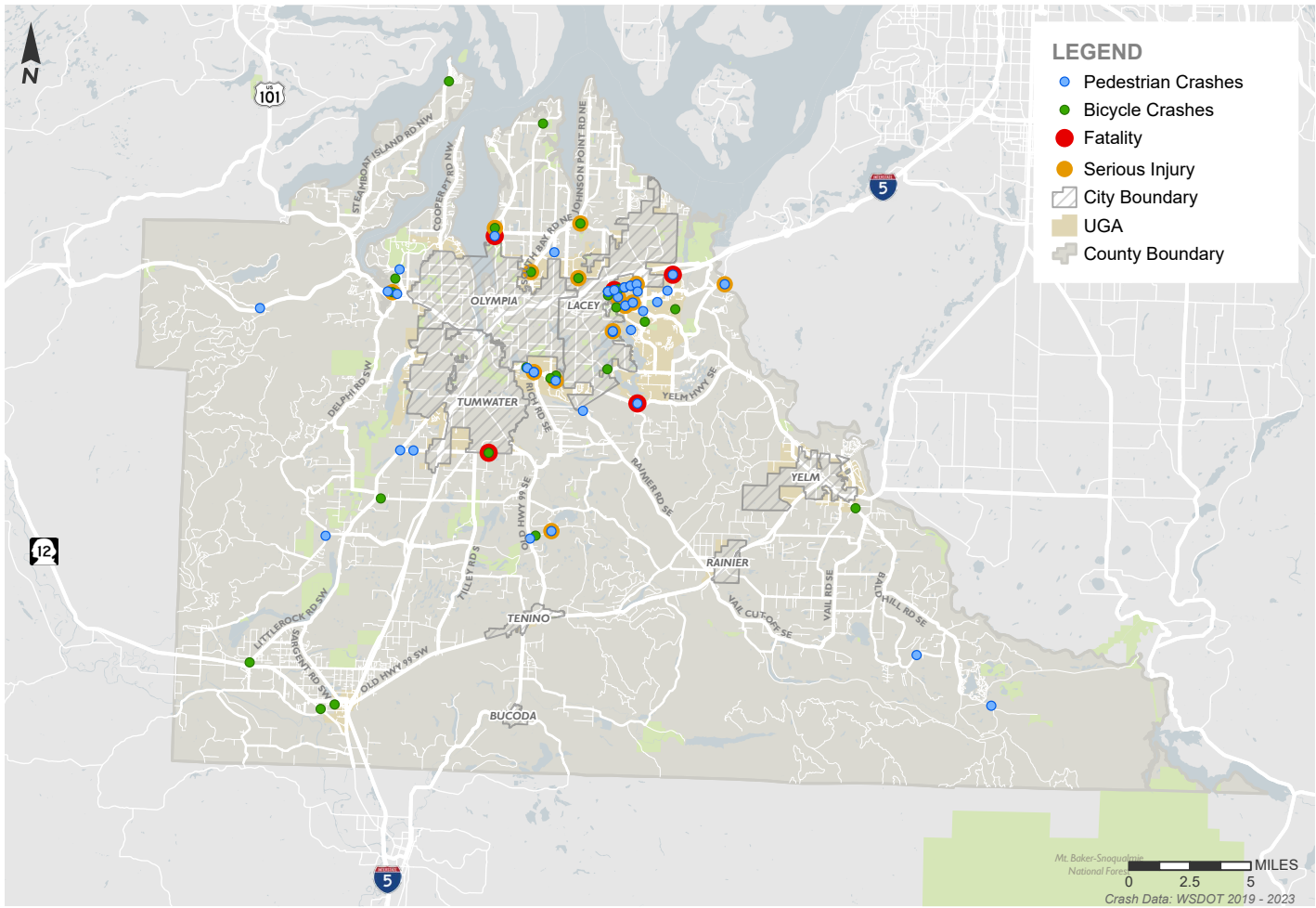

Pedestrian and Bicycle Crashes

Thurston County Safety Action Plan

FIGURE **XX**

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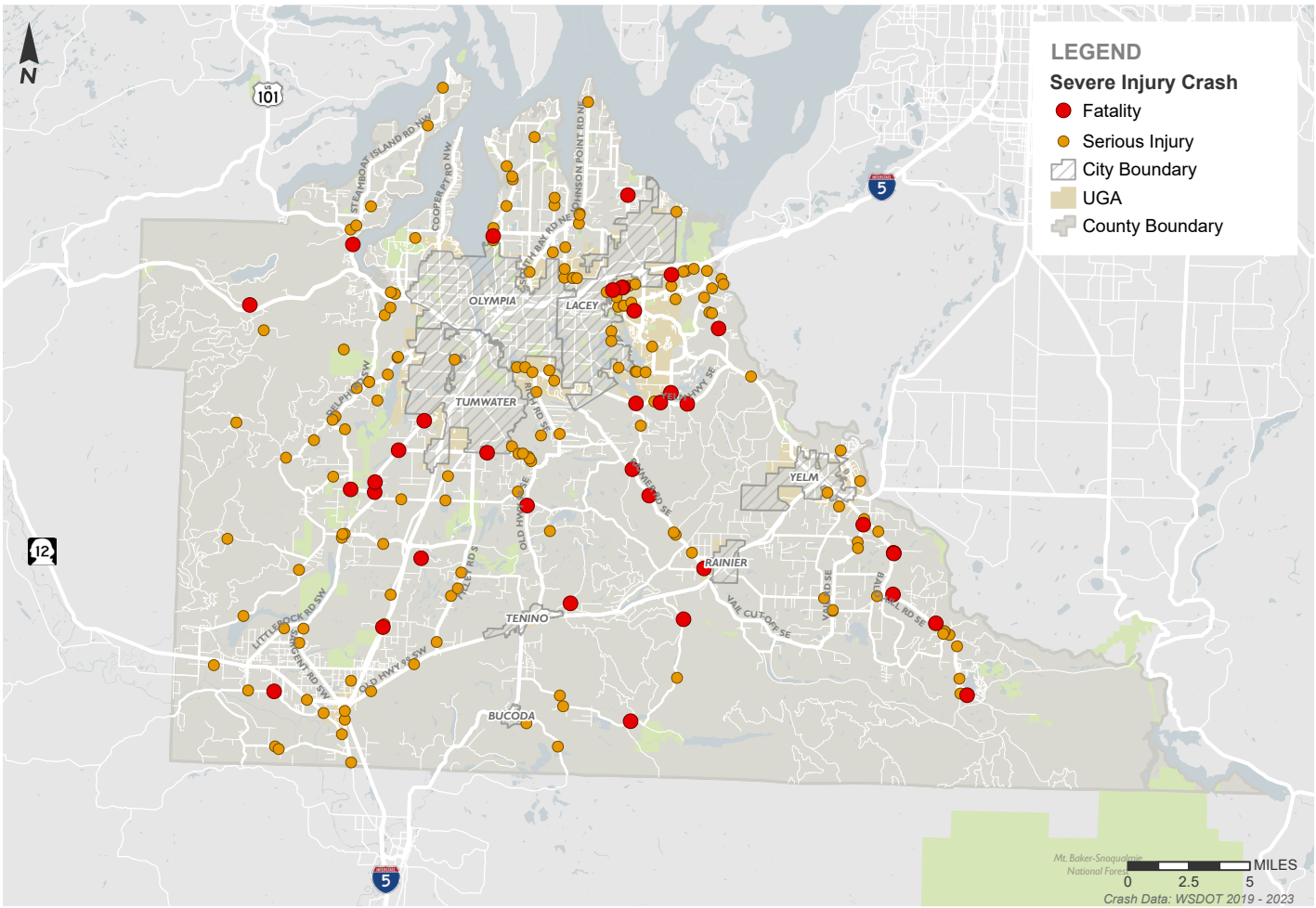

Severe Injury Crashes

Thurston County Safety Action Plan

FIGURE **XX**

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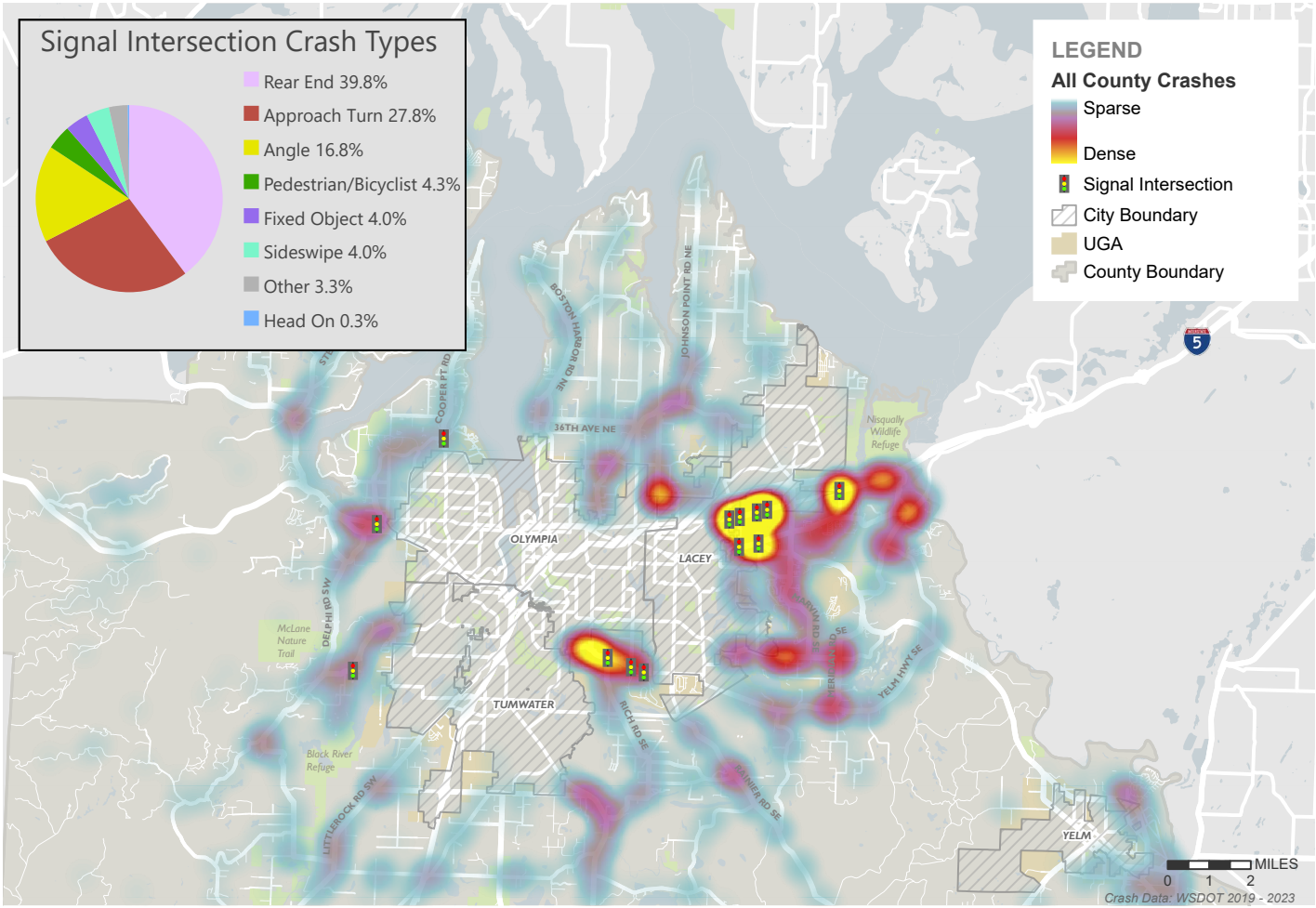

Crashes at Signal Intersections

Thurston County Safety Action Plan

FIGURE **XX**

transpogroup

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Appendix B: High Injury Network and High Risk Network Memos

HIGH INJURY NETWORK AND HIGH RISK NETWORK: METHODOLOGY AND DEVELOPMENT

Thurston County

Comprehensive Safety Action Plan

May 12, 2025

Table of Contents

Glossary & Key Terms

AADT: Annual Average Daily Traffic

Fatal and Serious Injury (FSI) crash: The term fatal injury is used where death occurs within thirty consecutive days from the time of the crash. A serious injury is defined as an incapacitating injury, other than a fatal injury, which prevents the injured person from walking, driving or normally continuing the activities the person was capable of performing before the injury occurred. FSI crashes include fatal (K) and serious injury (A) crash severities on the KABCO scale)

High Injury Network (HIN) identify stretches of roadways where the highest concentrations of collisions resulting in fatal or serious injuries occur on the transportation network.

High Risk Network (HRN) identifies street and road segments with the highest crash risks and societal cost estimates that may warrant special attention.

KABCO: KABCO is an acronym that stands for a scale used to categorize the severity of injuries in a crash.

- **K:** Fatal
- **A:** Incapacitating
- **B:** Non-Incapacitating
- **C**: Not visible but complains of pain
- **O:** Uninjured or Property Damage Only

Vulnerable Road Users (VRU) include pedestrians, individuals riding animals, and those operating vehicles like bicycles, mopeds, and motorcycles without an enclosed shell. These users face a higher risk of serious injury or death in crashes compared to motor vehicle drivers, who benefit from a protective shell of their vehicle and advanced safety technology. However, in this report VRU only refers to pedestrians and bicyclists because the Safer Streets Model analysis was used, and this model cannot estimate or model motorcyclist crashes at this time.

Safer Streets Priority Finder (SSPF) analyzes the risk to vulnerable road users (bicyclists and pedestrians) on a community's streets and roads.

Threshold: Thresholds are limits or boundaries that are reached and surpassed to result in new conditions. Within this analysis, thresholds are used for grouping the weighted crash score and estimated crash cost into low, medium and high. These thresholds represent the upper limits of the range. For the final HIN and HRN thresholds, the segment's weighted crash score or estimated crash cost must meet or exceed the listed thresholds. Those thresholds represent the lower limits of the range.

Toole Design prepared High Injury Network (HIN) and High Risk Network (HRN) maps for Thurston County as part of the safety analysis for the Thurston County Comprehensive Safety Action Plan. The following memo describes the crash data sources, methodologies, and thresholds for developing the maps.

Data Sources

Crash Data

Crash data used in this analysis was provided by the Washington State Department of Transportation (WSDOT). The crash data for Washington State was filtered for crashes that occurred between January 1, 2019, and December 31, 2023 (a five-year period). Only crashes that occurred within Thurston County and on county roads were included in this analysis. The consultant team coded crashes involving at least one bicyclist as a bicyclist crash, crashes involving at least one pedestrian and no bicyclist as a pedestrian crash, and crashes involving only motorists (no bicyclist or pedestrian) as a motorist crash.

Roads Data

Road and street network data used in this analysis was downloaded from Thurston County's Open Data portal.[1] This data was filtered to include only roads under the County's jurisdiction. The following assumptions were made regarding the listed functional classification of the network based on communication with Thurston County staff:

- Only roads where jurisdiction and ownership are listed as "county" are included within this project's study area.
- The road class "subdivision" is treated as "local" or "residential" roads.
- Roads without a functional classification listed (NULL) are treated as "local" or "residential" roads.

[1] https://gisdata-thurston.opendata.arcgis.com/datasets/thurston::thurston-roads/explore

Development of High Injury Network (HIN)

The development of a HIN is often a key element of Safety Action Plans and efforts. The HIN development process involves developing crash density estimates along street corridors throughout the county, weighted by crash severity, and then identifying the highest crash-density sections for each mode individually. HIN corridors are identified by applying a one-mile sliding window aggregation to the road network in Thurston County. The one-mile sliding windows were created to form corridors using the roadway street name. In this approach, this "window" is moved along each street, counting the number of crashes by severity and mode that occurred within each successive one-mile segment. Both intersection and segment crashes were included in this evaluation, as the focus is on overall corridor conditions.

The HIN development process relies on historical crash data, which is imperfect and incomplete because not every crash is reported to law enforcement. As such, this process is both an art and a science. The goal of the minimum HIN threshold setting process is to settle on a minimum sliding window score for each mode independently that will create a network that covers a relatively small portion of the city but a relatively large share of crashes with an emphasis on fatal and serious injury (FSI) crashes. The following process was used to develop the mode-specific HINs and the overall HIN:

1. Map the Sliding Windows analysis results for each mode (pedestrian, bicycle, and motor vehicle) individually.
2. For each mode, determine the threshold of the Sliding Window output required to be included in the HIN. This step eliminates streets that have a lower crash density thereby prioritizing streets that have higher crash severities and frequencies.
3. Produce maps that show the segments that meet the threshold for all modes individually and collectively.

Sliding Windows Analysis Methodology

A sliding window analysis helps in understanding **historical crashes** throughout a transportation network and identifies segments with the highest crash density, weighted by crash severity. This analysis was done by determining the number and severity of crashes within a **one-mile window** on a roadway and shifting that window along the roadway **1/5 of a mile** at a time. An example of a sliding window analysis is shown in Figure 1.

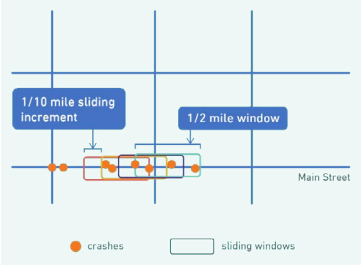

Figure 1: Example of a Sliding Window Analysis

Crash Weighting

Agencies that choose to include moderate or lesser injury crashes in the analysis sometimes weight them less than FSI crashes. This allows for their inclusion in the analysis but acknowledges that the key goal of Vision Zero is elimination of fatal and severe injury crashes, and therefore the more severe crashes should count more in the analysis. It also acknowledges the reality that FSI crashes have a greater impact on the victim's family and acquaintances, as well as a greater cost to society.

The method selected for this analysis includes less-severe injury crash types in addition to FSI crashes for pedestrian, bicyclist, and motorist crashes and applies a larger weight for FSI crashes. Each FSI crash is assigned a weight of 5, with all less severe injury crashes weighted at 2 and property damage only or unknown severity assigned a weight of 1. Once the weights are established and applied to the crashes, the total number of crashes are aggregated along a corridor while incorporating the crash severity weighting. For instance, with FSI crashes weighted at two and half times moderate injury crashes, a corridor with two FSI crashes will have the same weighted total as a corridor with five moderate injury crashes.

Moderate injury crashes were included in this analysis to augment the relatively small dataset of FSI crashes and in response to research that has found a significant percentage of pedestrian and bicyclist injuries to be underreported and/or misclassified between injury levels. **Error! Reference source not found.** describes each crash severity and how they were weighted. Each segment is scored and those scored results are found in the attached sliding window maps for pedestrians, bicyclists, and motorists accordingly.

Table 1: Crash Severity Weight for Sliding Window Analysis

KABCO Scale	Definition	Weight
K	Fatal Injury	5
A	Serious Injury	5
B	Minor Injury	2
C	Possible Injury	2
O	No Apparent Injury or Property Damage Only	1
U	Unknown Severity	1

Sliding Window Analysis Weighted Crash Score Thresholds

After the interim process for scoring corridors in the sliding window analysis, the corridors were then classified into low, medium, and high crash density based on the weighted crash score. Corridors with a crash density score of zero are filtered out. Using natural breaks in data distribution as the basis, the crash score thresholds were determined to:

- have at approximately 50% of the roadways in low crash density,
- have the high crash density category capture the segments with outstandingly high scores (top 10 to 20%), and
- collect the remaining segments in the medium crash density category.

The upper score thresholds for each crash density category and the percentages of road are listed in **Error! Reference source not found.**. The high crash density segments inform the final High Injury Network.

Table 2: Weighted Crash Score Threshold and Percentage of Total (%) by Crash Density Categories in Thurston County

	Low Crash Density	Medium Crash Density	High Crash Density
Pedestrian	4 (43.7%)	8 (46.0%)	21 (10.3%)
Bicyclist	2 (71.9%)	6 (23.4%)	10 (4.7%)
Motorists	5 (48.4%)	23 (37.7%)	337 (13.9%)

Sliding Window Analysis Maps

Figures 2 – 4 show the Sliding Window Analysis results for each mode. The ranges on the sliding window maps are weighted crash scores.

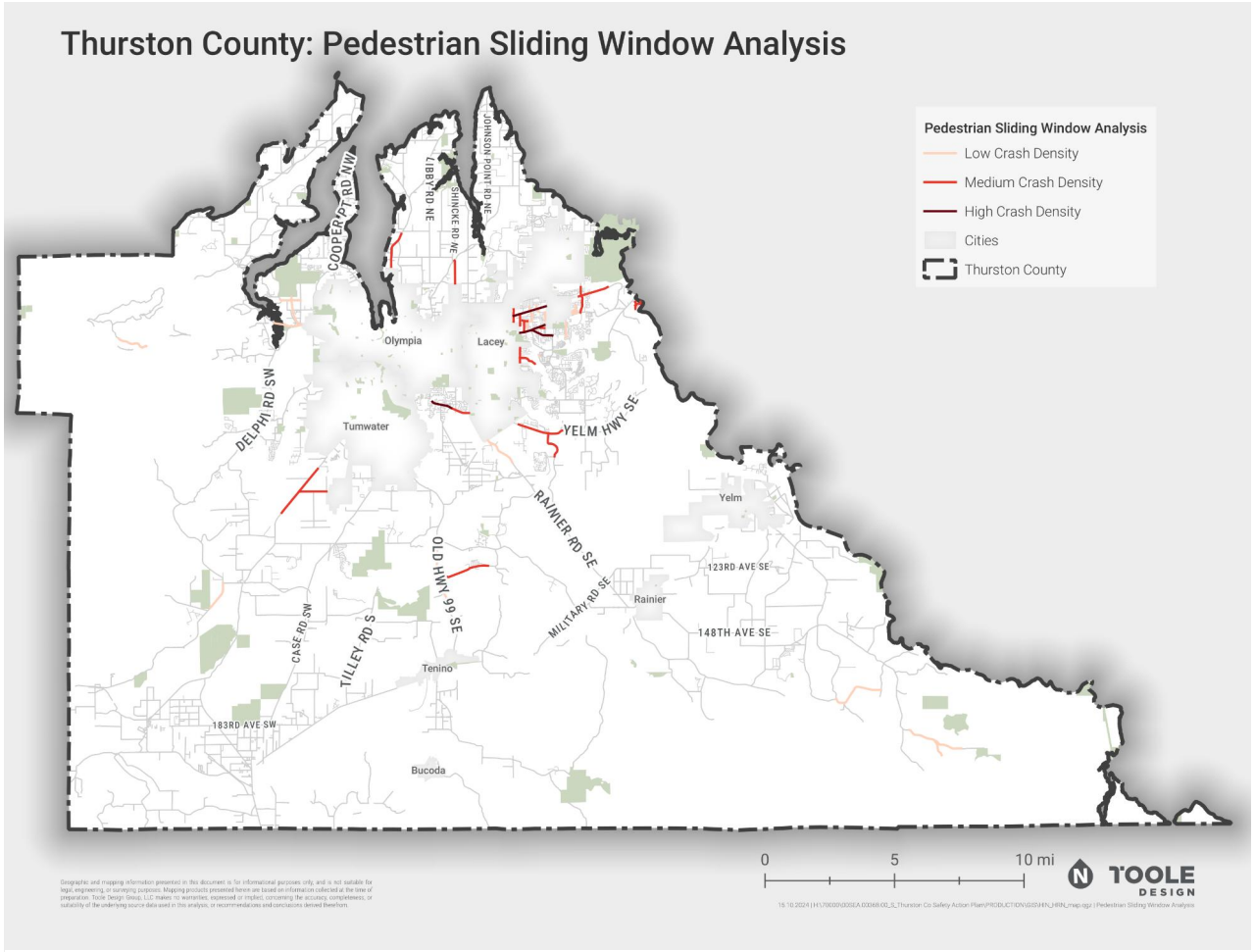

Figure 2: Thurston County Pedestrian Sliding Window Analysis

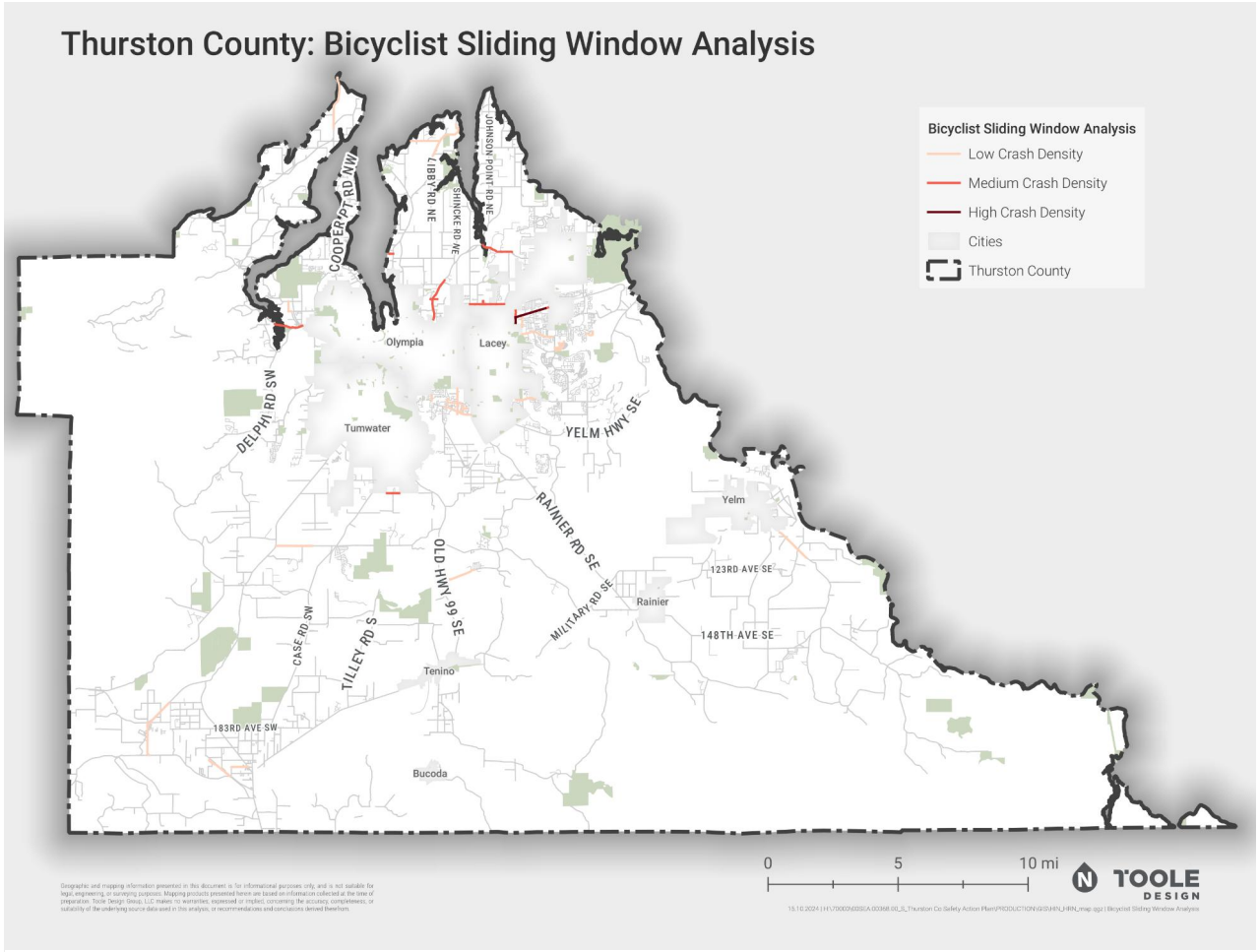

Figure 3: Thurston County Bicyclist Sliding Window Analysis

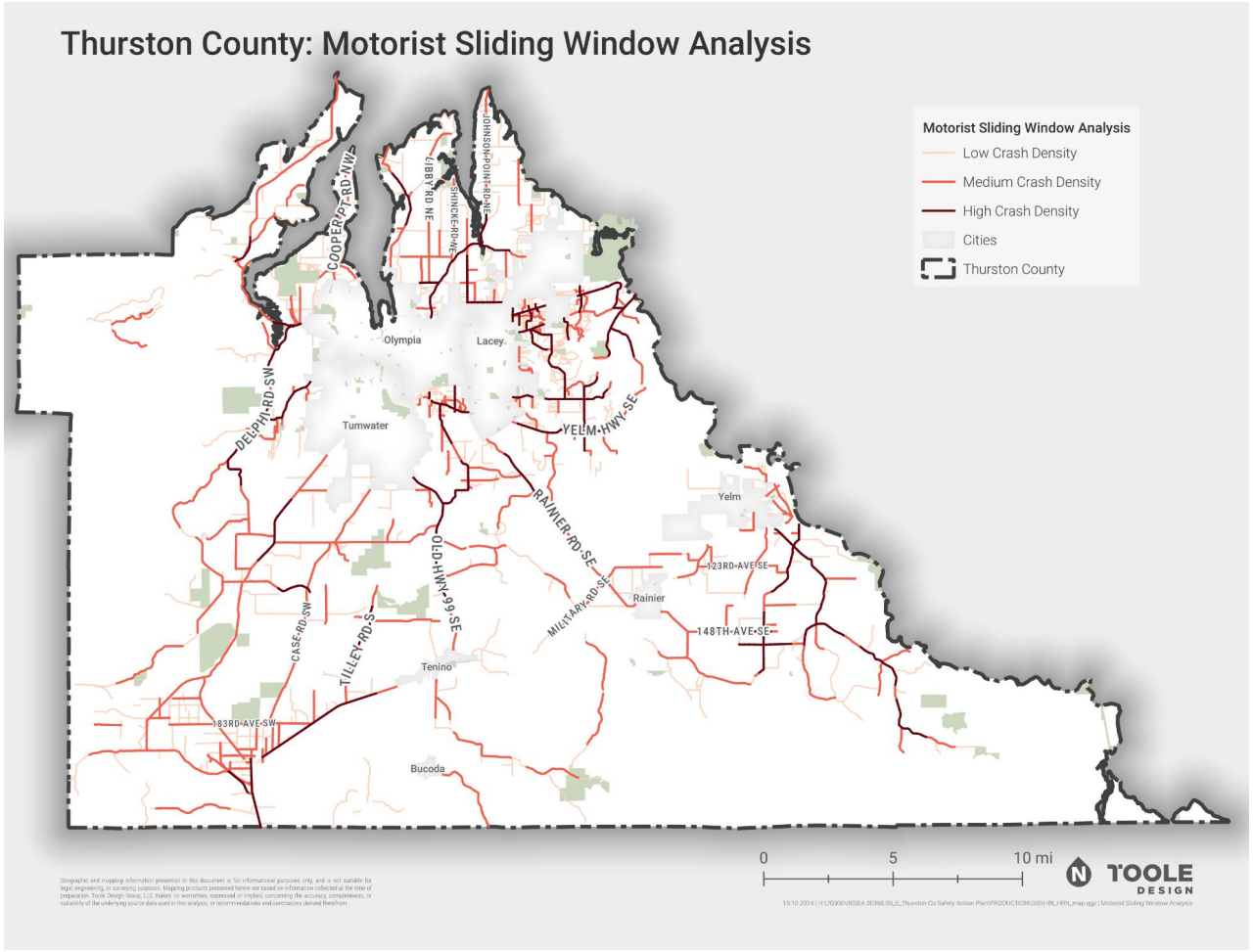

Figure 4: Thurston County Motorist Sliding Window Analysis

High Injury Network Thresholds

Thresholds for each mode included in the HIN are listed below. A segment that meets or exceeds the weighted crash score threshold noted below for each specific mode was included in the respective mode-specific HIN. A segment that meets or exceeds the weighted crash score threshold noted below for any of the three modes is included in the overall HIN. The overall HIN is a compilation of the highest weighted crash scores and includes any road segments that meet or exceed any of the mode-specific HIN crash score thresholds.

- Pedestrian: 5
- Bicyclist: 2
- Motorist: 23

The overall HIN covers 13.2% of the unincorporated road network in Thurston County and accounts for 64.4% of all FSI crashes. Most of the segments in the overall High Injury Network are arterials but include some collectors and local roads.

High Injury Network Maps

Using the methodologies outlined above, the project team produced the HIN map results. Figure 5 shows segments where the crash score exceeded the above listed thresholds for either pedestrians, bicyclists, or motorists. Figure 6, 7 and 8 show segments where the crash score exceeded the above listed thresholds for pedestrians, bicyclists, and motorists individually.

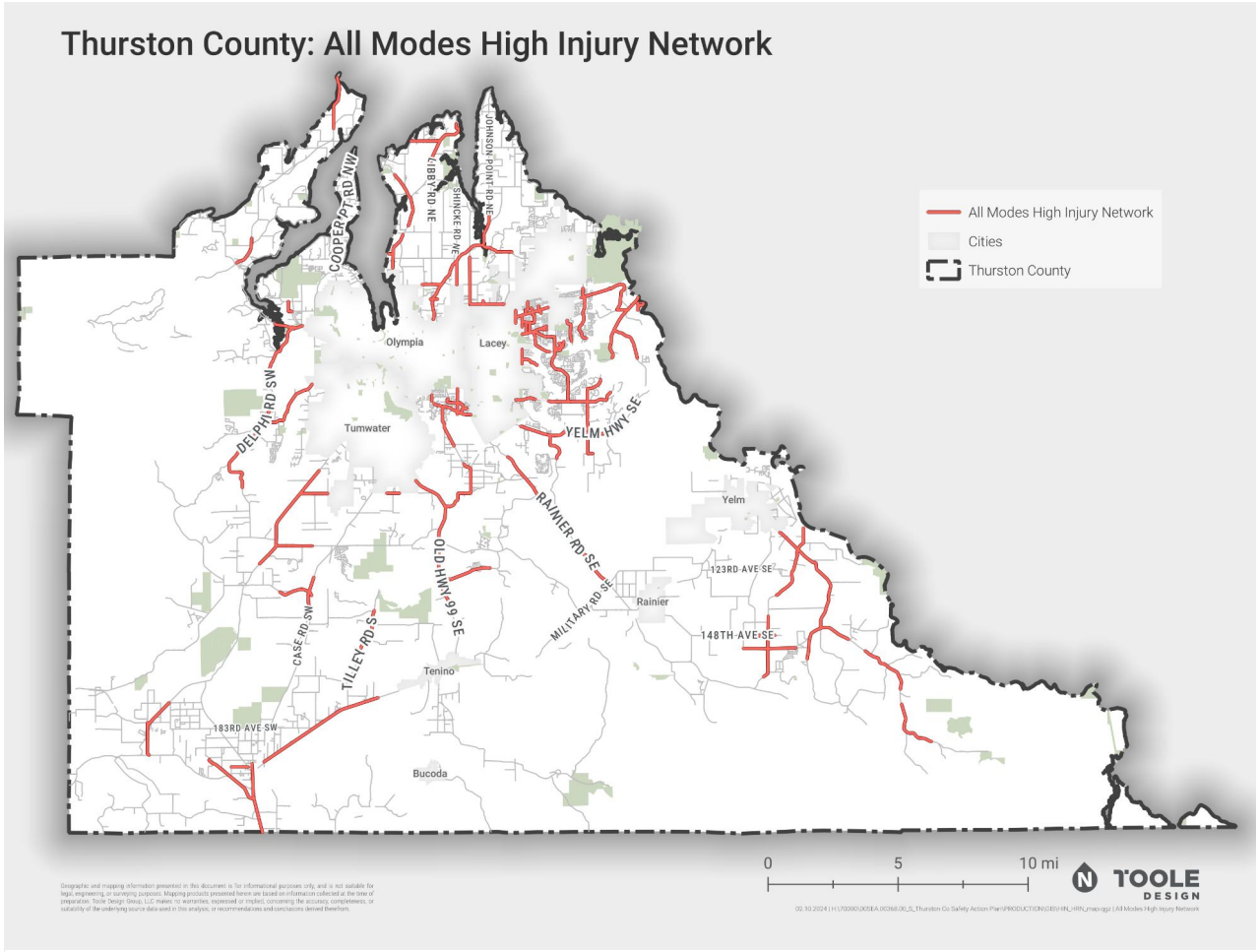

Figure 5: Thurston County All Modes High Injury Network

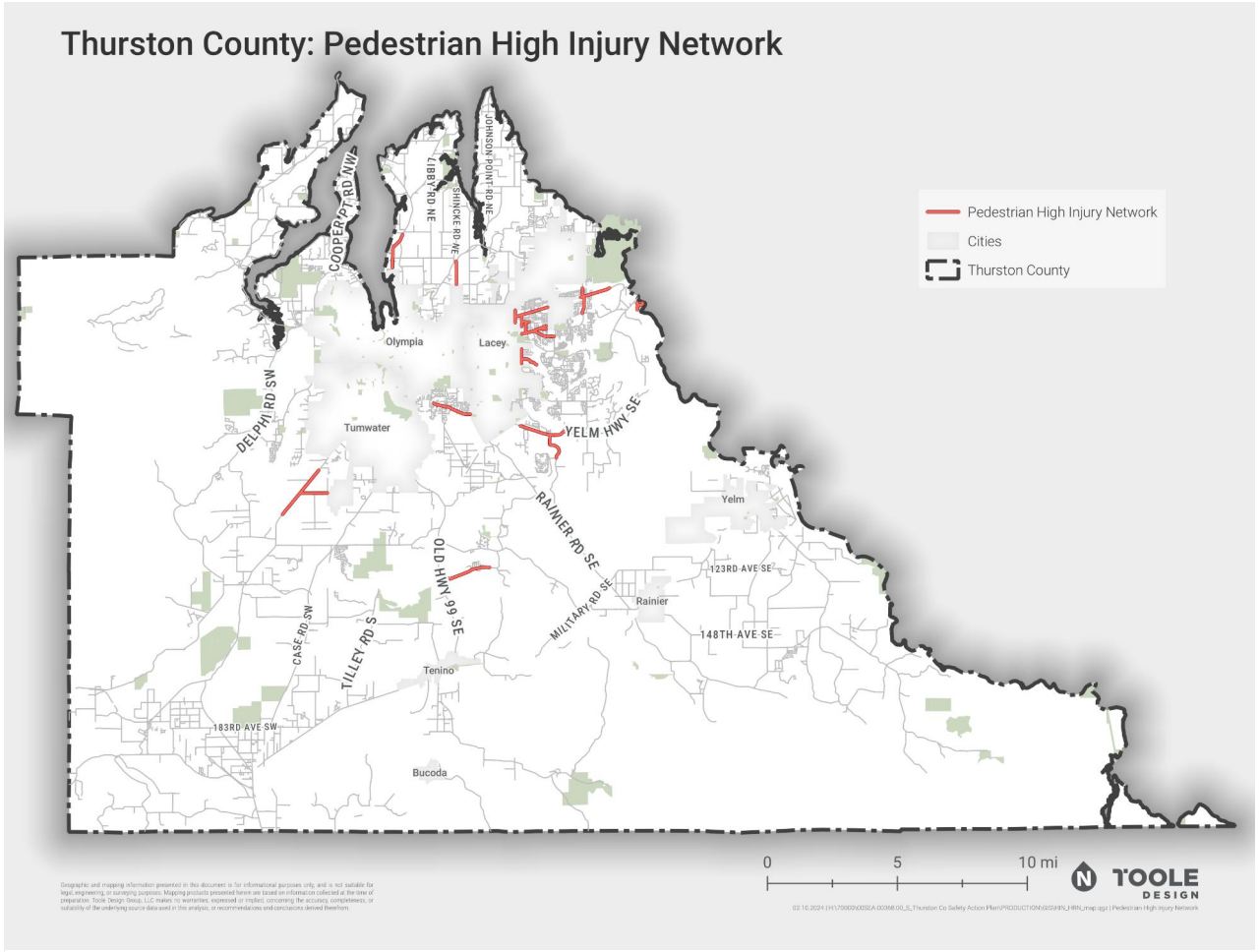

Figure 6: Thurston County Pedestrian High Injury Network

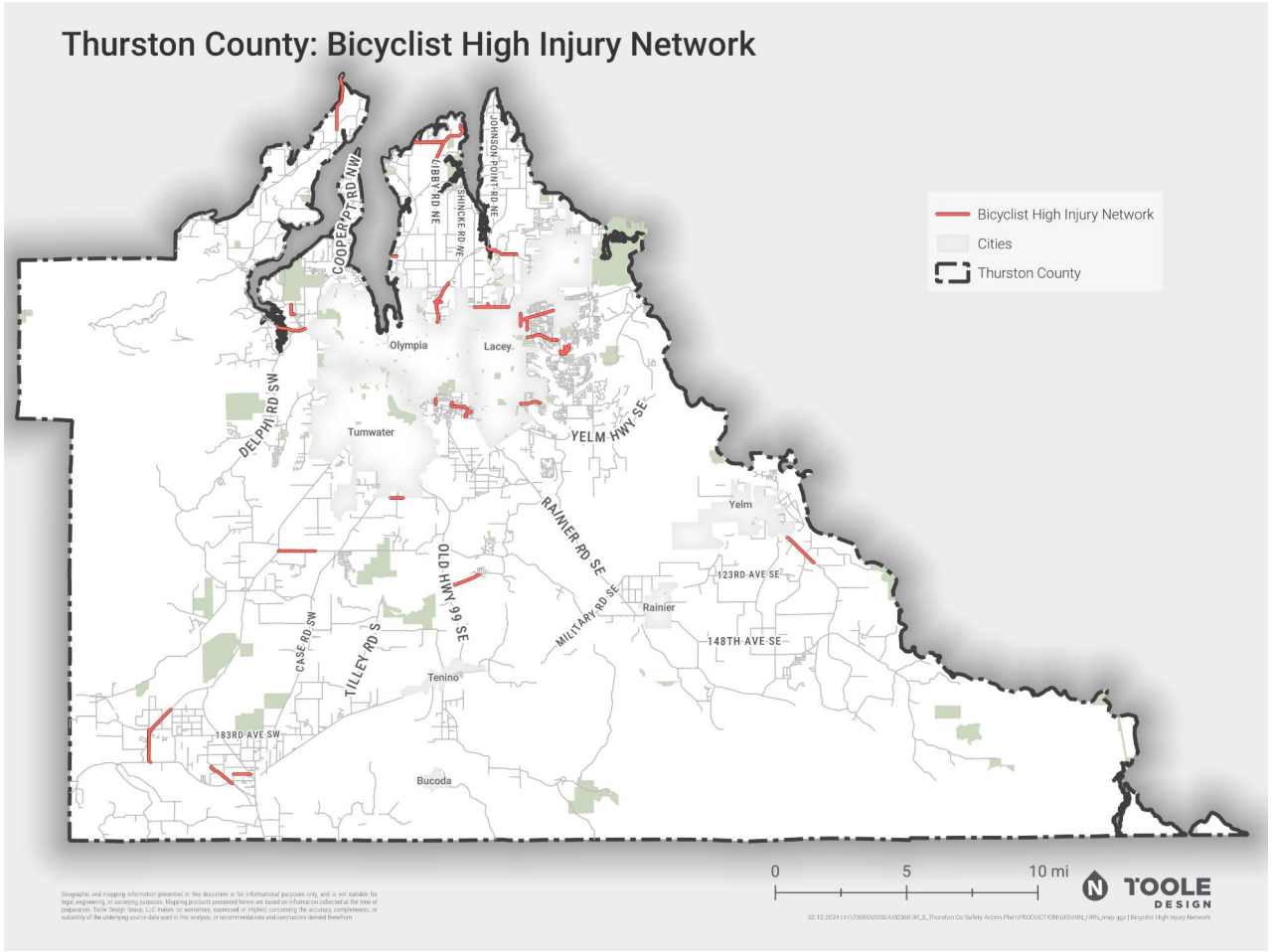

Figure 7: Thurston County Bicyclist High Injury Network

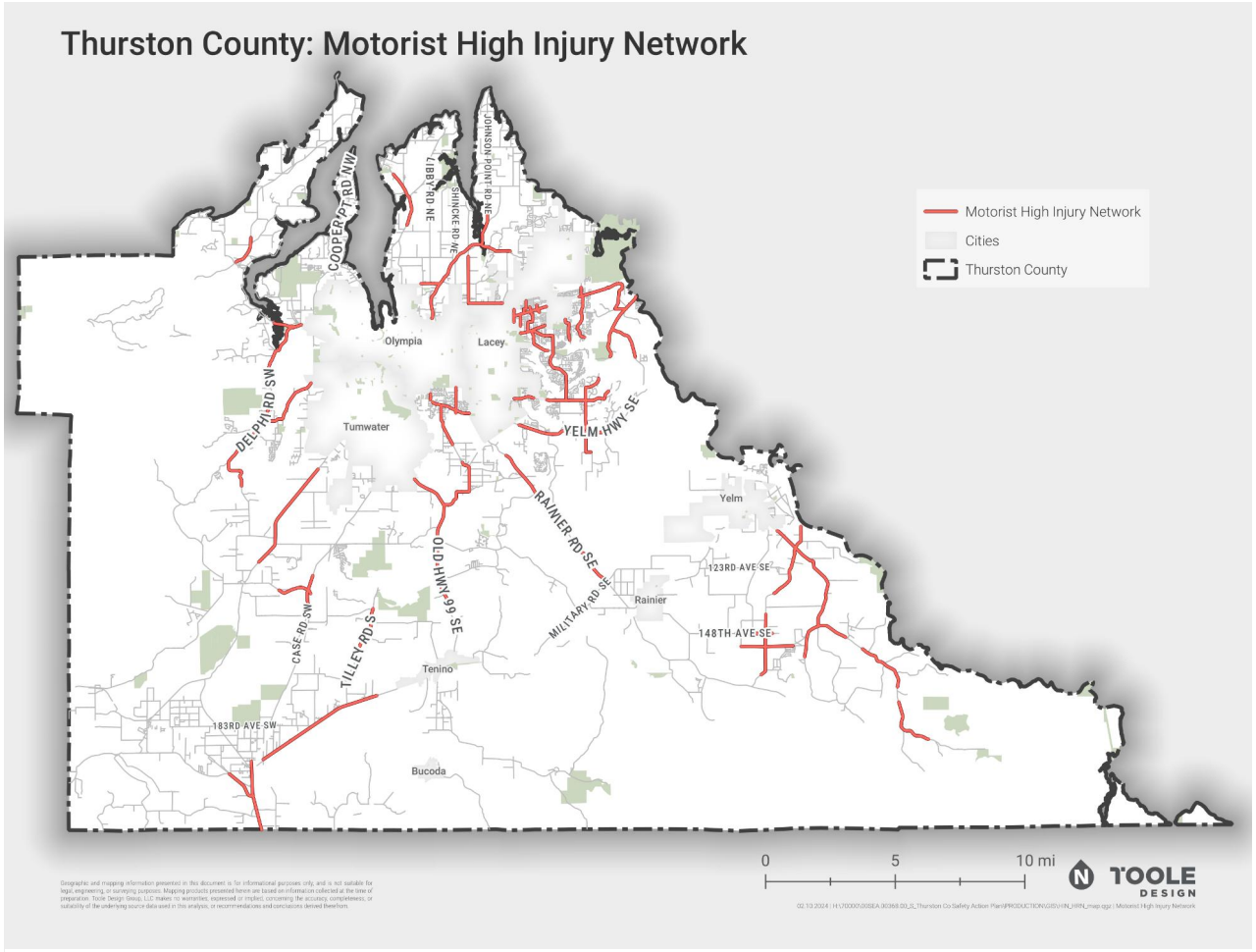

Figure 8: Thurston County Motorist High Injury Network

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Development of the High Risk Network

The draft High Risk Network (HRN) identifies road segments with the highest crash cost estimates that may warrant special attention. Identification of these streets help the county prioritize investment in the areas where crash history and roadway characteristics demonstrate the most serious problems and easily communicate those priorities to the community.

The HRN development process relies on historical crash data, roadway data and the national pedestrian fatality risk model. Specifically, the methodology estimates the number of crashes within a Census tract and uses the national average rate of fatal crashes per mile on a roadway based on its functional classification, developed from national fatal crash data (Fatal Accident Reporting System, or FARS). Functional classification is used as a proxy for roadway design elements that are associated with both the risk of crash occurring and the risk of a crash's outcome being severe, for example, motor vehicle travel speeds, number of lanes, motor vehicle AADT, etc.

This allows agencies to determine where crashes have occurred and be able to predict where crashes could occur in places with similar characteristics. As a result, agencies can be more proactive in their approach to eliminate fatal and serious injury crashes instead of just using a reactive approach based on historical crash data.

This process can be imperfect and incomplete because not every crash is reported to the law enforcement. As such, this process requires engineering judgement as well as local knowledge. The following process was used to develop the overall HRN:

1. Use the Safer Streets Priority Finder Tool to map the Safer Streets Model for pedestrians and bicyclists individually. Local roads and subdivisions a half mile in length or less were removed during this step because they tend to be lower traffic streets. A preliminary review suggested their inclusion was skewing the results.
2. For each mode, determine the threshold of the cost required to be included in the HRN. This step eliminates streets that have a lower crash risk thereby prioritizing streets that have higher risk.
3. Produce maps that show the segments that meet the threshold for both modes individually and collectively.

Safer Street Priority Finder (SSPF) Tool

Toole Design, in collaboration with the City of New Orleans, the University of New Orleans Transportation Institute, and the New Orleans Regional Transit Authority developed the Safer Streets Priority Finder Tool (SSPF Tool).[2] The SSPF Tool is a free, interactive, open-source resource available at a national scale that can help transportation practitioners identify a street network that is similar to a HIN for all modes (bicyclists, pedestrians, and motorists). The network goes further than a typical HIN because, in addition to considering areas where a disproportionate share of fatal and serious injury crashes has already occurred, it also includes areas with factors likely to contribute to future risk for bicyclists and pedestrians. By identifying these areas, the tool enables jurisdictions to target funding on projects that will have the greatest impact, which will help address access, safety, and mobility needs for people with disabilities and underserved communities. It will also help states, regions, and local agencies in their efforts to implement multimodal networks that are accessible, interconnected, and allow all users, including pedestrians and bicyclists, to reach their destination safely and conveniently. **Error! Reference source not found.** below illustrates the SSPF process, inputs, and outputs.

[2] https://www.saferstreetspriorityfinder.com/tool/

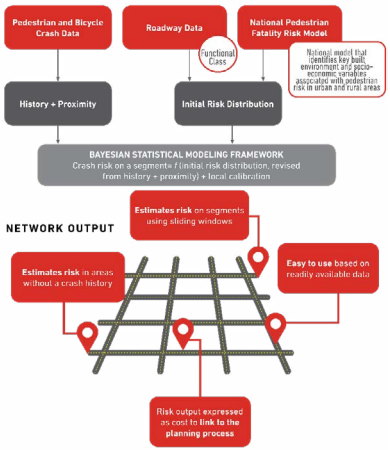

Figure 9: Illustration of SSPF Process[3]

The SSPF Tool produces the Safer Streets Model. The Safer Street Model provides a **predictive** analysis of future collisions and areas (how High Risk Networks (HRN) are defined) as an Estimated Future Societal Costs for bicyclist and pedestrian crashes only.

These analyses show intermediate results that will be used to develop the HRN. The following sections provide a high-level summary of each analytical methodology and the results from each analysis. For more detailed information on the methodologies for each analysis, please see SSPF Technical Report and/or https://www.saferstreetspriorityfinder.com/.

[3] The last box refers to risk output expressed as *the societal* cost of fatal and serious injuries. These societal costs include medical expenses and the loss of productivity due to fatalities or disabilities caused by the injuries, as well as the time family members must take off from work or school to care for the injured.

Safer Streets Model

The Safer Streets Model brings the segmented road network window segments (produced in the Sliding Windows Analysis) into a Bayesian statistical framework to estimate crash risk throughout the system (**predictive**). This framework calculates expected crashes by incorporating external information about number of predicted crashes (called a Bayesian prior), alongside the observed crash history.

The model estimates crash risk rates per mile for each road segment and each crash mode (pedestrian and bicyclist only) and severity. These values are then converted to crash cost estimates based on the costs assigned to each crash severity.

The Safer Streets Model is only available to model bicycle and pedestrian crashes. The model cannot estimate or model future motorist or motorcyclist crashes at this time.

Key Output: Corridors with highest potential risk for bicycle and pedestrian crashes to occur in the future using both historical crash data and a statistical model based on roadway functional classification.

Safer Streets Model Estimated Crash Cost Thresholds

The crash costs or estimated societal costs refer to the significant financial burdens for individuals, their families, and entire communities related to road traffic injuries. These costs stem from medical expenses and the loss of productivity due to fatalities or disabilities caused by the injuries, as well as the time family members must take off from work or school to care for the injured.[4]

Error! Reference source not found. summarizes the estimated social cost thresholds for each crash risk category. The high estimated crash cost segments inform the final High Risk Network.

Table 3: Estimated Crash Cost Thresholds ($) and Percentage of Total (%) by Crash Risk Categories

	Low Crash Density	Medium Crash Density	High Crash Density
Pedestrian	$20,000 (62.3%)	$100,000 (25.5%)	$3,300,000 (12.2%)
Bicyclist	$15,000 (68.5%)	$34,000 (14.2%)	$ 500,000 (17.3%)

Safer Streets Model Maps

Figures 10 - 12 show the Safer Streets Model maps results for pedestrians and bicyclists.

[4] World Health Organization (WHO). 2023. "Road Traffic Injuries." Who.int. World Health Organization: WHO. December 13, 2023. https://www.who.int/news-room/fact-sheets/detail/road-traffic-injuries#:~:text=Road%20traffic%20injuries%20cause%20considerable%20economic%20losses%20to

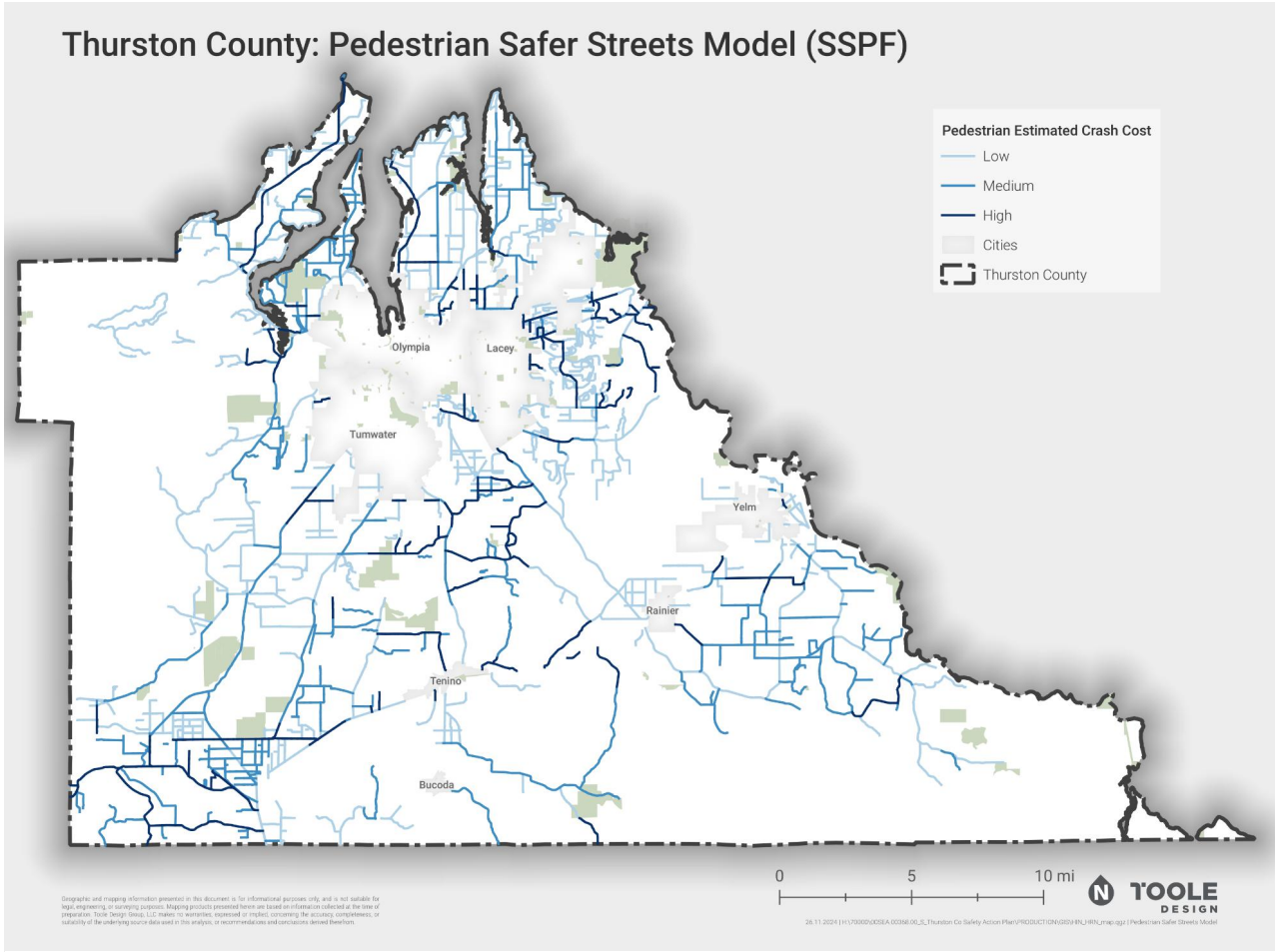

Figure 10: Thurston County Pedestrian Safer Streets Model (SSPF)

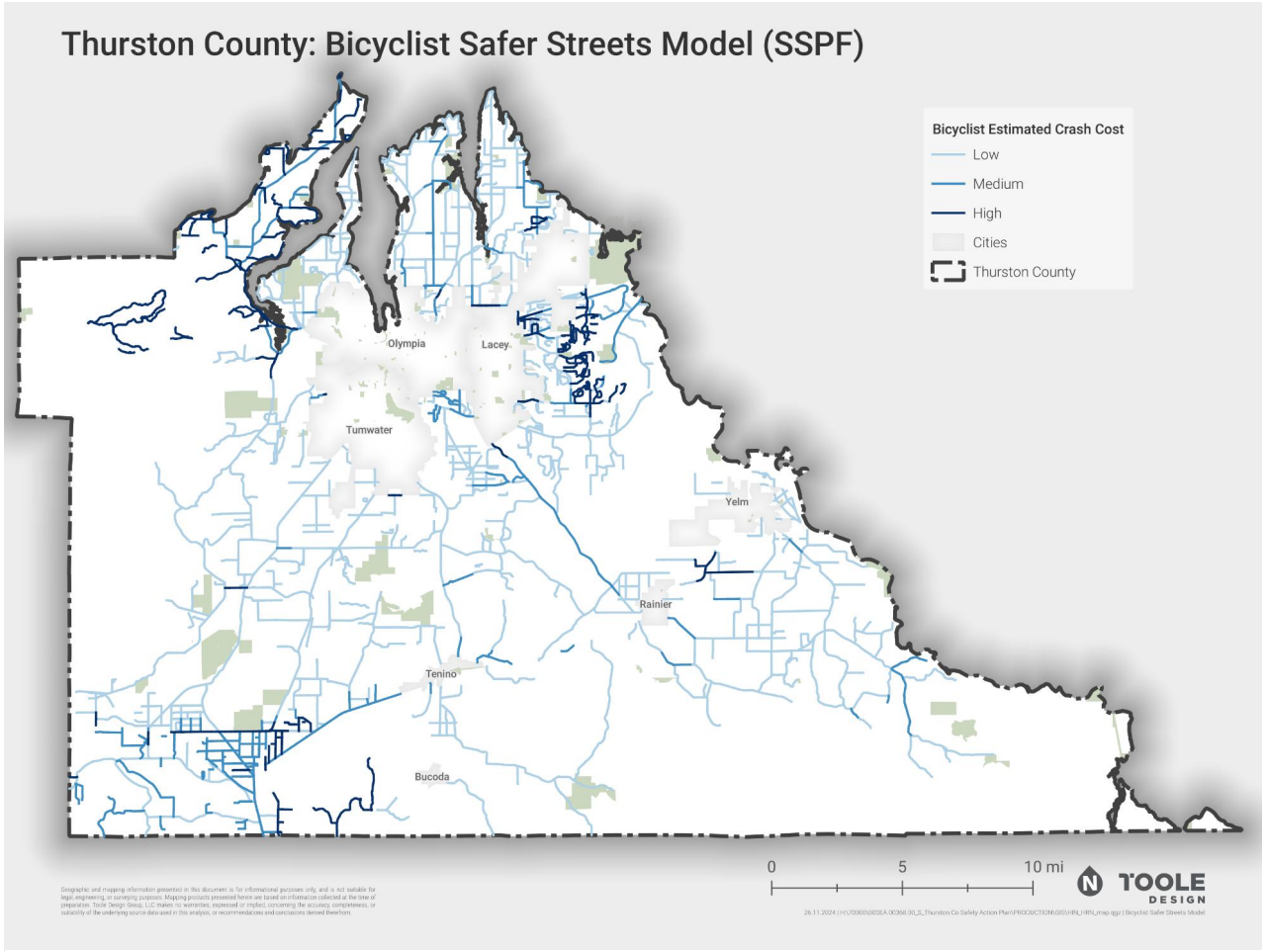

Figure 11: Thurston County Bicyclist Safer Streets Model (SSPF)

High Risk Network Thresholds

The goal of the minimum HRN threshold setting process is to settle on minimum crash cost estimates for each mode independently that will create a network that covers a selective set of the county streets but a relatively large share of crashes with an emphasis on FSI crashes.

Thresholds for each mode included in the HRN are listed below. A segment that meets or exceeds the weighted crash cost score threshold noted below for each mode were included in each mode-specific HRN. The HRN thresholds were determined based on the 80th to 90th percentile of segments with a crash cost score greater than zero. A segment that meets or exceeds the crash cost score noted below for either of the two modes is included in the Vulnerable Road User (VRU) HRN.

- **Pedestrian**: $150,000
- **Bicyclist**: $34,000

The VRU HRN includes about 16.9% of the unincorporated road network in Thurston County and accounts for 90.9% of all FSI crashes involving bicyclists or pedestrians and 70.4% of all crashes involving bicyclists or pedestrian.

High Risk Network Maps

Using the methodologies outlined above, the project team produced the HRN map results. Figure 12 shows segments where the crash cost score exceeded the above listed thresholds for either pedestrians or bicyclists. Figure 13 and Figure 14 show segments where the crash cost score exceeded the above listed thresholds for pedestrians or bicyclists individually.

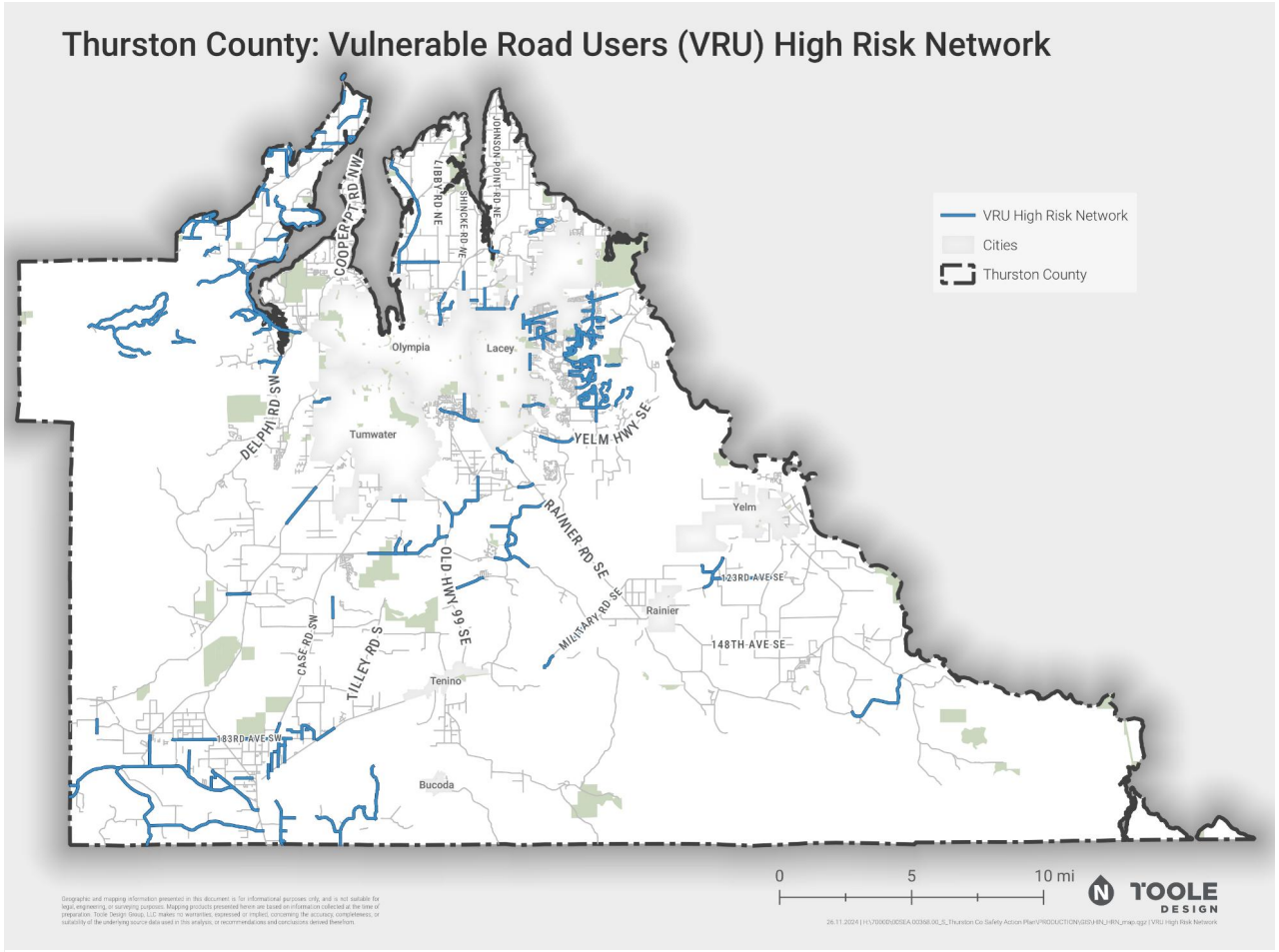

Figure 12: Thurston County Vulnerable Road Users (VRU) High Risk Network (SSPF)

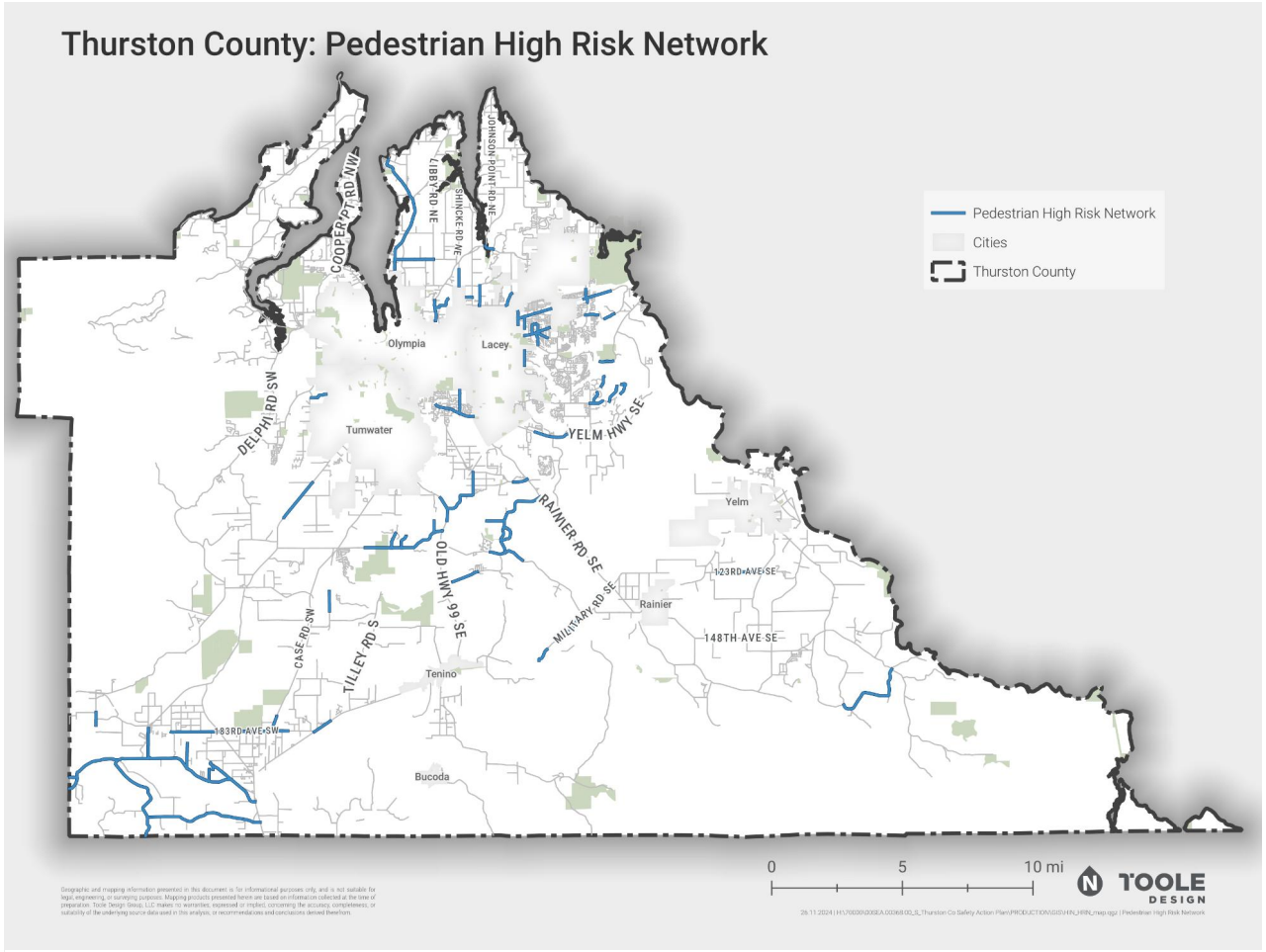

Figure 13: Thurston County Pedestrian High Risk Network (SSPF)

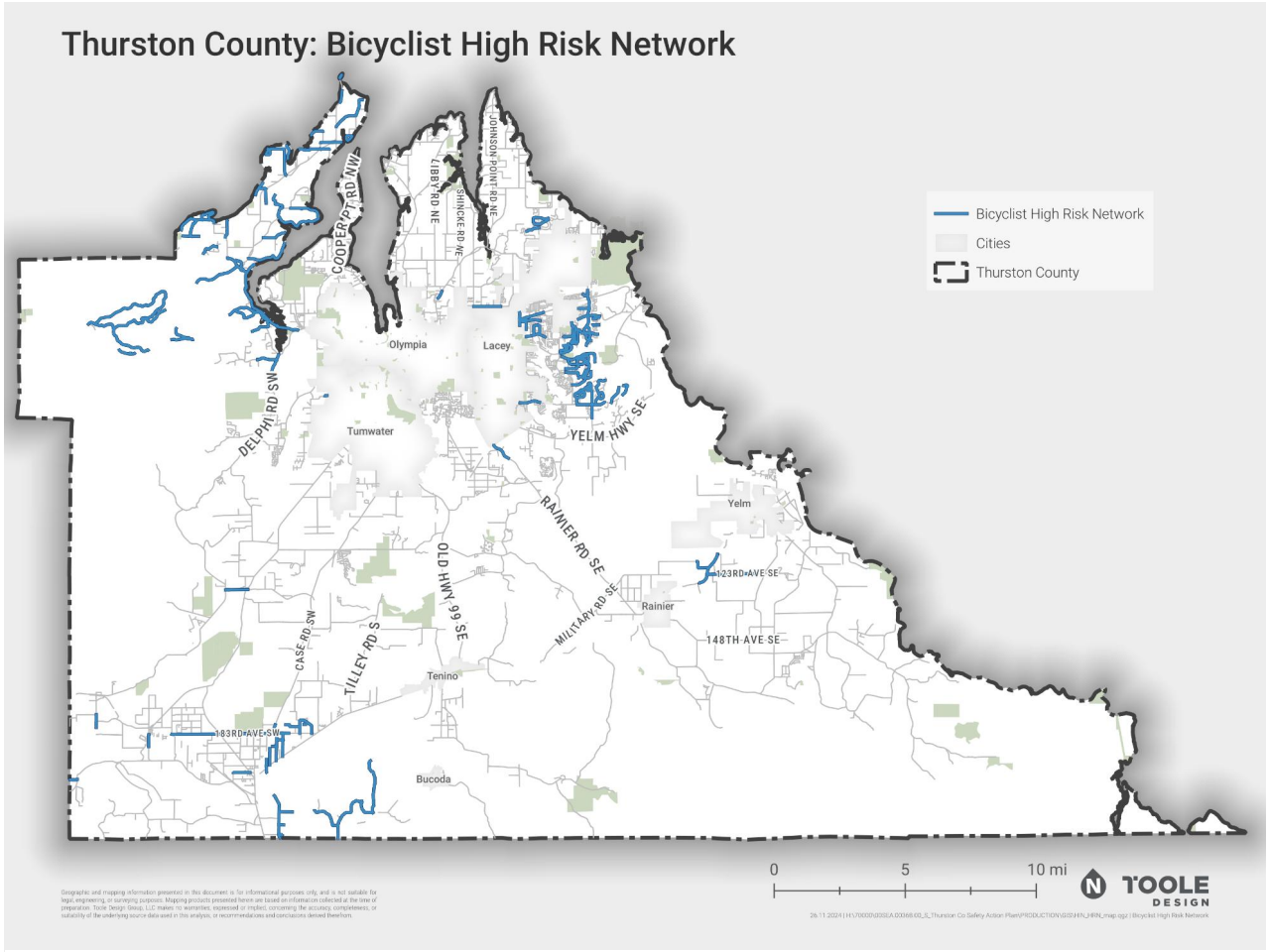

Figure 14: Thurston County Bicyclist High Risk Network (SSPF)

Development of High Injury Intersections

The development of High Injury Intersections (HII) can inform the Safety Action Plan and efforts. The HII development process involves aggregating all intersection-related crashes near intersections throughout the county, weighted by crash severity. The High Injury Intersections were identified by examining intersection-related crashes that occurred within 250 feet of an intersection. Crashes are considered intersection-related if the junction relationship field of the crash report includes one of the following:

- Entering Roundabout,
- Exiting Roundabout,
- At Driveway within Major Intersection,
- Circulating Roundabout,
- Roundabout Related but not at Roundabout,
- Traffic Calming Circle,
- At Intersection and Related, and
- Intersection Related but Not at Intersection.

The HII crash scores were calculated by adding up the number of each intersection-related crash within 250 feet of an intersection. Each crash was weighted based on crash severity using the same criteria used in the High Injury Network development (see Table 1: Crash Severity Weight for Sliding Window Analysis).

The following process was used to develop the all modes HII and the VRU HII:

1. Calculate the crash severity scores of intersections for all crashes and vulnerable road user crashes.
2. Map the High Injury Intersections for all modes and vulnerable road users individually.

High Injury Intersection Maps

The following maps show the High Injury Intersections crash severity scorings (low, medium and high) for all modes and vulnerable road users. Table 4 lists the intersections with the highest crash severity for all modes and vulnerable road users.

Table 4: High Injury Intersections

All Modes High Injury Intersections	VRU High Injury Intersections
Kingham Street NE @ Kingham St SE	Pacific Avenue SE @Steilacoom Road SE
Hensley Street NE @ Martin Way E	School Street SE @Steilacoom Road SE
Duterrow Road SE @ Martin Way E	Duterrow Road SE @Martin Way E
Kinwood Street SE @ Martin Way E	Hawks Prairie Road NE @Johnson Point Road NE
Meridian Road SE @ Mullen Road SE	Kinwood Street SE @Martin Way E
Pacific Avenue SE @ Steilacoom Road SE	--
School Street SE @ Steilacoom Road SE	--
Carpenter Road NE @ Carpenter Road SE	--
15th Court NE @ Sleater Kinney Road NE	--
15th Ave NE @ Sleater Kinney Rd NE	--

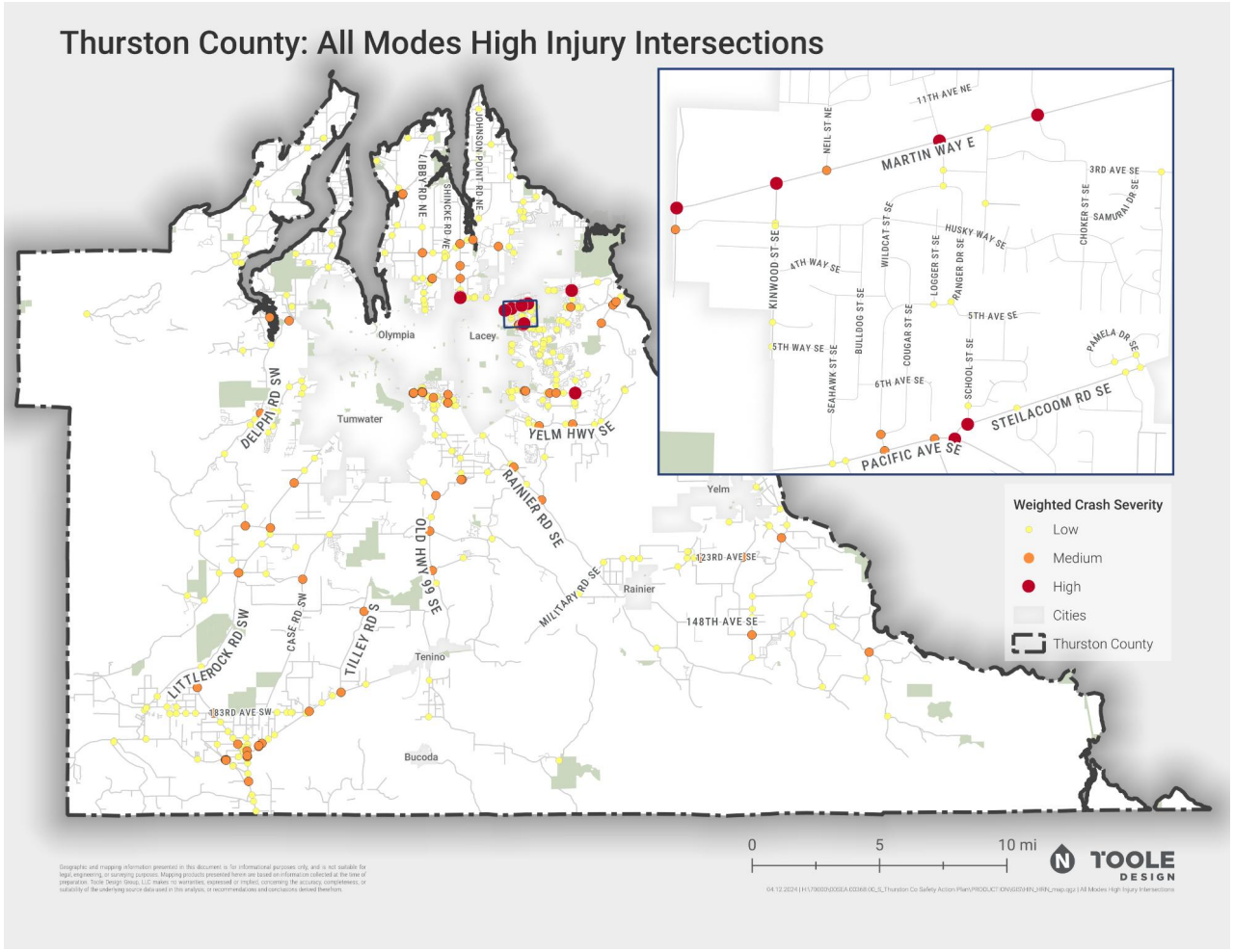

Figure 15: Thurston County All Modes High Injury Intersections

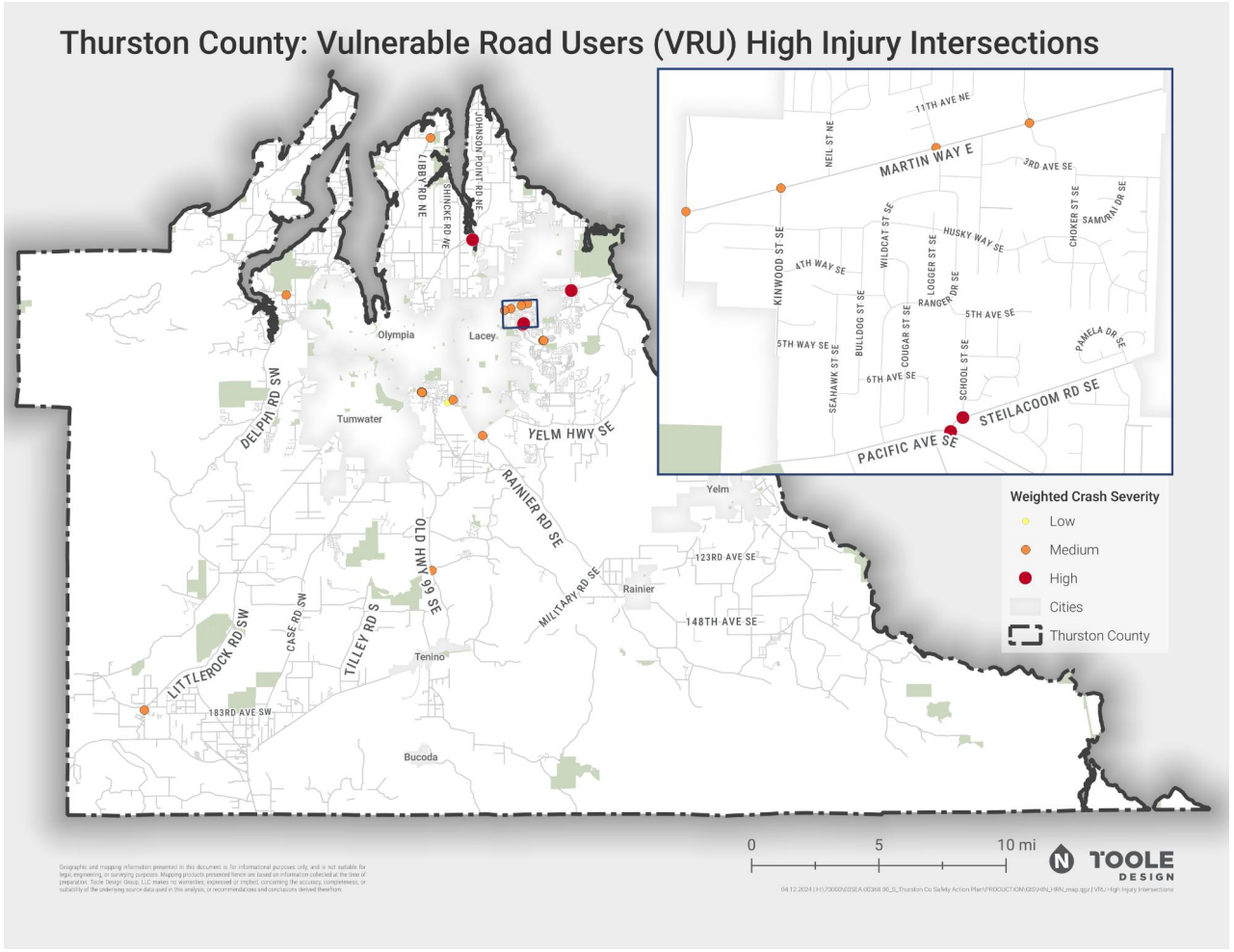

Figure 16: Thurston County Vulnerable Road User (VRU) High Injury Intersections

Takeaways

The overall High Injury Network covers 13.2% of the unincorporated road network in Thurston County and accounts for 64.4% of all FSI crashes. Most of the segments in the overall High Injury Network are arterials but include some collectors and local roads.

The Vulnerable Road User High Risk Network covers 16.9% of the unincorporated road network in Thurston County and accounts for 90.9% of all FSI crashes involving bicyclists or pedestrians and 70.4 % of all crashes involving bicyclists or pedestrians. The Vulnerable Road User High Risk Network includes major arterials, major collectors and local roads. Most of the segments are local roads but the segments with the highest crash cost score for pedestrians are predominately major collectors and major arterials while the segments with the highest crash cost score for bicyclists are predominately major arterials and local roads.

Road segments that are in both the overall High Injury Network and Vulnerable Road User High Risk Network and High Injury Intersections are primarily located in the areas east and south of Lacey, WA.

Next Steps

The High Injury Network and High Risk Network maps will be reviewed by the project team at Thurston County and the Community Advisory Committee. Based on these discussions and Thurston County and the Community Advisory Committee's unique local knowledge, manual adjustments will be made. Once these networks are finalized, the list of High Injury Network extents will be created, and the High Injury Network and High Risk Network will be incorporated into the ArcGIS Online Maps. Together with a subsequent equity analysis of the region they will be used to guide the prioritization of locations for safety countermeasures projects.

TOOLE DESIGN

MOTORIST HIGH RISK NETWORK REPORT

THURSTON COUNTY TRANSPORTATION SAFETY ACTION PLAN

May 12, 2025

Table of Contents

List of Abbreviations & Key Terms

AADT	Annual Average Daily Traffic
KABCO Injury Severity Scale	**K:** Fatal **A:** Incapacitating **B:** Non-Incapacitating **C**: Not visible but complains of pain **O:** Uninjured or Property Damage Only
FSI	Fatal or Serious Injury (K and A on the KABCO scale)
FI	Fatal and All Injuries (K, A, B, and C on the KABCO scale)
Vulnerable Roadway User	Pedestrian, bicyclist, or other non-automobile road user
Systemic screening factors	Attributes of roadway facilities that have been found to correlate with high crash frequency. Also known as risk factors.

Introduction

The purpose of this report is to document the systemic analysis process and results conducted as part of the Thurston County Transportation Safety Action Plan. This systemic analysis will help the agency identify roadway facilities with the greatest potential for safety improvements by identifying combinations of roadway attributes associated with fatal and serious injury crashes.

Crash Data Sources and Limitations

Crash data for the 5-year period of 2019-2023 was used for this analysis. Local law enforcement agencies submit the crash reports that provide the raw crash data. Although crash reports are currently the best way to obtain information about a large number of crashes, they have limitations. Crash severity may have limited accuracy because those completing reports typically don't have medical training, and victims of crashes may be unaware of internal injuries when the crash report is taken. The total number of crashes may be underreported due to fears, language barriers, financial concerns, and more. Crash reports may not capture the effects of speed in crashes, as first responders typically arrive on scene after a crash, operator speeds are difficult for witnesses outside a crash to estimate, and witnesses may not be interviewed about operator speeds. Even when crash reports are perfect, they do not record near misses or the self-limiting behavior of travelers who don't feel safe in currently configured networks. It is useful to keep these limitations in mind when using crash data and to vet data with priority populations as part of the planning process.

Systemic Screening Factors

One of the key outcomes of systemic safety analysis is the identification of attributes of roadway facilities that have been found to correlate with high crash frequency. These are also known as **systemic screening factors** or **risk factors**. These factors are combined to identify roadway facility profiles, or common roadway types across the county, associated with higher crash frequencies. However, it is important to note that these correlations do not necessarily indicate a causal relationship, nor should these individual factors necessarily be the target of treatments. For example, though the presence of nearby pedestrian generators may be found as a factor that correlates with increased pedestrian crash frequencies, this does not mean that these generators should be removed, but instead that facilities near such generators may require additional safety investment.

Systemic screening factors and roadway facility profiles should be studied from a practical and policy-driven perspective to determine the components that may be reasonable targets of safety improvements and understand components that should be viewed as **non-causal** correlations. The analysis does not control for exposure of motorists, pedestrians, or motorcycles.

Table 1 includes all roadway segment attributes that were prepared and identified as candidate risk factors for consideration in this analysis. Factors were limited by data quality and availability.

Table 1 Factors Screened for Systemic Analysis

Screening Factor	Description	Data Source
Land Use	Local land use and zoning codes are grouped into Residential, Commercial, Industrial, Mixed Use, and other land uses.	Thurston County
Functional class	Urban Local, Rural Local, Rural Major Collector, Urban Minor Arterial, Rural Minor Collector, Urban Major Collector, Urban Principal Arterial, Urban Minor Collector, and Rural Minor Arterial	Thurston County
Zero Vehicle Household Rate	Percent of households within the Census block group that have zero vehicles	Justice40[1]
Population Below 2X Poverty Level	Percent of population within the Census block group at or below two times the poverty level	Justice40
Elderly Population Rate	Percent of population 65 years or older	Justice40
Youth Population Rate	Percent of population 17 years or younger	Justice40
Traffic Volume Range	Average Annual Daily Traffic (AADT) of 0-1,000, 1,001-5,000, 5,001-10,000 or 10,001-20,000, or 20,000+	Thurston County
Proximity to Schools	Whether a roadway segment is within a quarter mile of any schools	Thurston County
Proximity to Parks	Whether a roadway segment is within a quarter mile of any parks	Thurston County
Speed Limit	Speed limit ranges of ≤25 MPH, 30-35 MPH, 40-45 MPH, or 50+ MPH	Thurston County
Lane Configuration	Number of lanes on the roadway	Thurston County
Presence and Type of Shoulder	Whether paved or unpaved shoulders are present on one side or both sides of the roadway.	Thurston County
Median Widths and Types	The type of median present on roadway and width of the median	Thurston County
Horizontal Curve	Both horizontal and vertical curves are classified in the following categories: 1 - Curves meet design standards for roadway & speed limit 2 – Some curves below standards but safe & comfortable 3 – Some curves reduce speed limit for safety purposes 4 – Unsafe and/or uncomfortable at speed or speed restricted	Thurston County
Vertical Curve		Thurston County

[1] U.S. Department of Commerce. "Justice40." Retrieved January 2025 from https://www.commerce.gov/justice40-initiative [*note that access to some Federal pages has been limited during January and February 2025.*]

Analysis Process

The systemic analysis focused on the study period of 2019 through 2023. The target study roadway facilities included all public roadways except for access-controlled roads. Consolidated roadway data was analyzed to retain all relevant roadway cross-sectional and context attributes. Additional Census and network data attributes were applied to the segmented data as needed to include the screening factors.

The systemic analysis screening process is based on a decision tree machine learning algorithm where each factor is screened individually to determine whether the factor can be used to distinguish between locations with relatively high and low average crash densities per mile. The algorithm considers each unique classification individually for categorical factors such as roadway types. For numerical factors, such as the elderly population rate, all potential breakpoints by which the numerical values could be split are considered. The algorithm screens all factors recursively to identify the most correlated factor and continues until a set of factors is identified as a facility profile.[2]

Figure 1 illustrates the decision tree algorithm where three correlated factors define a high-risk facility profile.

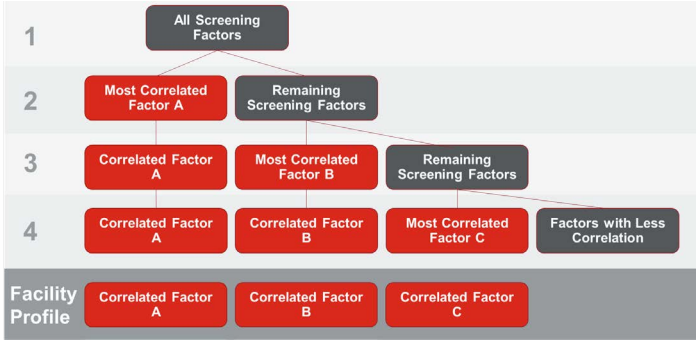

Figure 1 Illustration of Decision Tree Screening Process

Analysis Results

Systemic analysis results outline the unique risk factors, and their safety priority rankings associated with each unique facility profile. Each subsection provides definitions of unique facility profiles identified by the analysis and their associated risk factors, crash scores, and mileage metrics associated with these profiles. Profiles are grouped into risk tiers – critical, high, medium, low, or minimal – as relevant to each profile, highlighting the facilities associated with the highest to lowest crash risks. Tiers are differentiated by natural breaks in weighted crashes per mile statistics. Fatal and serious injury (FSI) crashes are weighted three times higher than other injury crashes. Critical and high tiers provide the greatest priority for focusing on reducing risks associated with fatal and all injury (FI) crashes; medium and low tiers provide useful information to reduce risk opportunistically. Risk tiers are mutually exclusive for crash risks.

Based on these profiles and their tiers, a network of roadway segments associated with higher levels of crash risks for all modes was identified, as shown in the High Risk Network (HRN) maps in the next section.

Motorists Injury Crashes

The tables and figures in this section represent results for the motorists on roadways within Thurston County. The analysis was conducted using FI crashes. Crash profiles that are associated with elevated crash risks for motorist FI crashes are:

- **Critical Risk:**
  - Roadways with paved shoulders on both sides, speed limit 30 mph or higher, and have level 1 horizontal curves (curves meet design standards for roadway & speed limit)
- **High Risk:**
  - Roadways with paved shoulders on both sides, speed limit 30 mph or higher, and have level 2 horizontal curve (some curves below standards but safe & comfortable) or higher (levels 3 and 4).

These critical and high risk profiles suggest that roadways with higher speed limit, especially those with some horizontal curves, can be the focus for reducing the risk of FI motorist crashes. Table 2 shows facility profile definitions for motorist FI crashes.

Table 2 Facility profile definitions for motorist FI crashes

Risk Tier	Paved Shoulder Presence	Speed (MPH)	Horizontal Curve	Land Use
Critical	Both sides	>=30	H1	-
High	Both sides	>=30	H2-4	-
Medium	One side or none	>=30	H1	-
	One side or none	>=30	H3 and H4	-
Low	Both sides	<=25	-	-
	One side or none	30-55	H2-4	Residential
Minimal	All remaining segments			

[2] Within a facility profile, categorical variables are mutually exclusive; continuous variables can have one or multiple ranges of values that fit within a facility profile.

Table 3 shows that within Thurston County, **critical risk facilities** comprise 10% (101 miles) of total unincorporated county roadway mileage and are associated with 36.5% of all motorist FI crashes (weighted by injury levels). **High risk facilities** comprise 9% (88 miles) of total unincorporated county roadway mileage and are associated with 23.5% of all motorist FI crashes (weighted by injury levels).

Table 3 Facility profile metrics for motorist crashes

Risk Tier	Miles	FI Crashes (weighted by injury)	Miles %	FI Crashes %	Weighted FI Crashes per Mile
Critical	101	621	9.9%	36.5%	6.15
High	88	400	8.7%	23.5%	4.55
Medium	176	328	17.3%	19.3%	1.86
Low	359	280	35.3%	16.4%	0.78
Minimal	293	75	28.7%	4.4%	0.26

Figure 2 shows the number of motorist FI crashes associated with each risk tier, and the roadway miles that fit each risk tier in bar graphs. The line graph shows the average motorist FI crash density. The critical and high risk tier roadway facilities have disproportionately high shares of crashes associated with relatively low mileage of roadways.

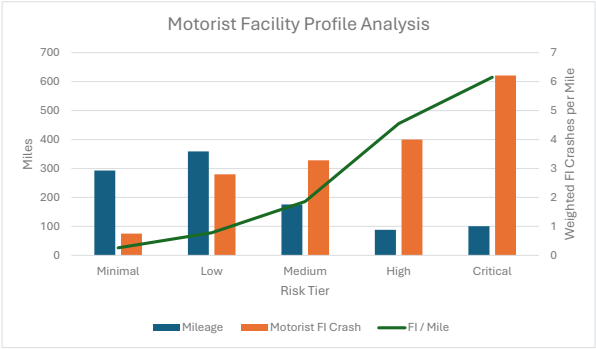

Figure 2 Motorist Facility Profile Analysis Tiers

Motorist High Risk Network

The critical and high risk tier facilities from the motorist systemic analyses are combined to create the High Risk Network (HRN) for Thurston County shown in Figure 3 below. The HRN accounts for 189 miles (19%) of the roadway mileage in unincorporated Thurston County. Most of the roadways that fall on the HRN are located in the northern and southwestern areas of Thurston County, with an additional concentration of roadways located in the Lacey area. Figure 4 provides the risk assessment results in full scale, including the critical and high risk tiers that defined Motorist High Risk Network, as well as the lower risk tier segments.

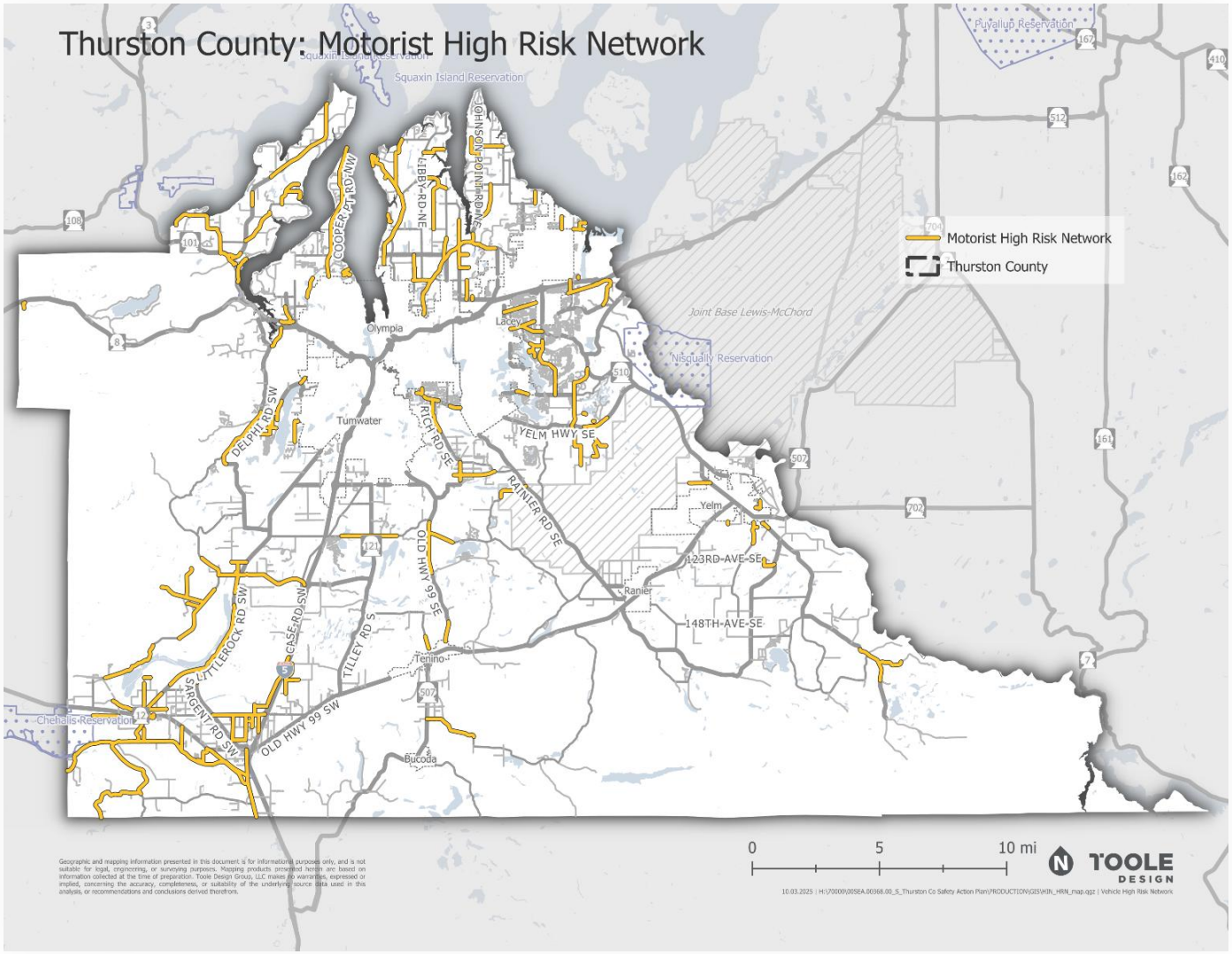

Figure 3 Motorist High Risk Network (Thurston County)

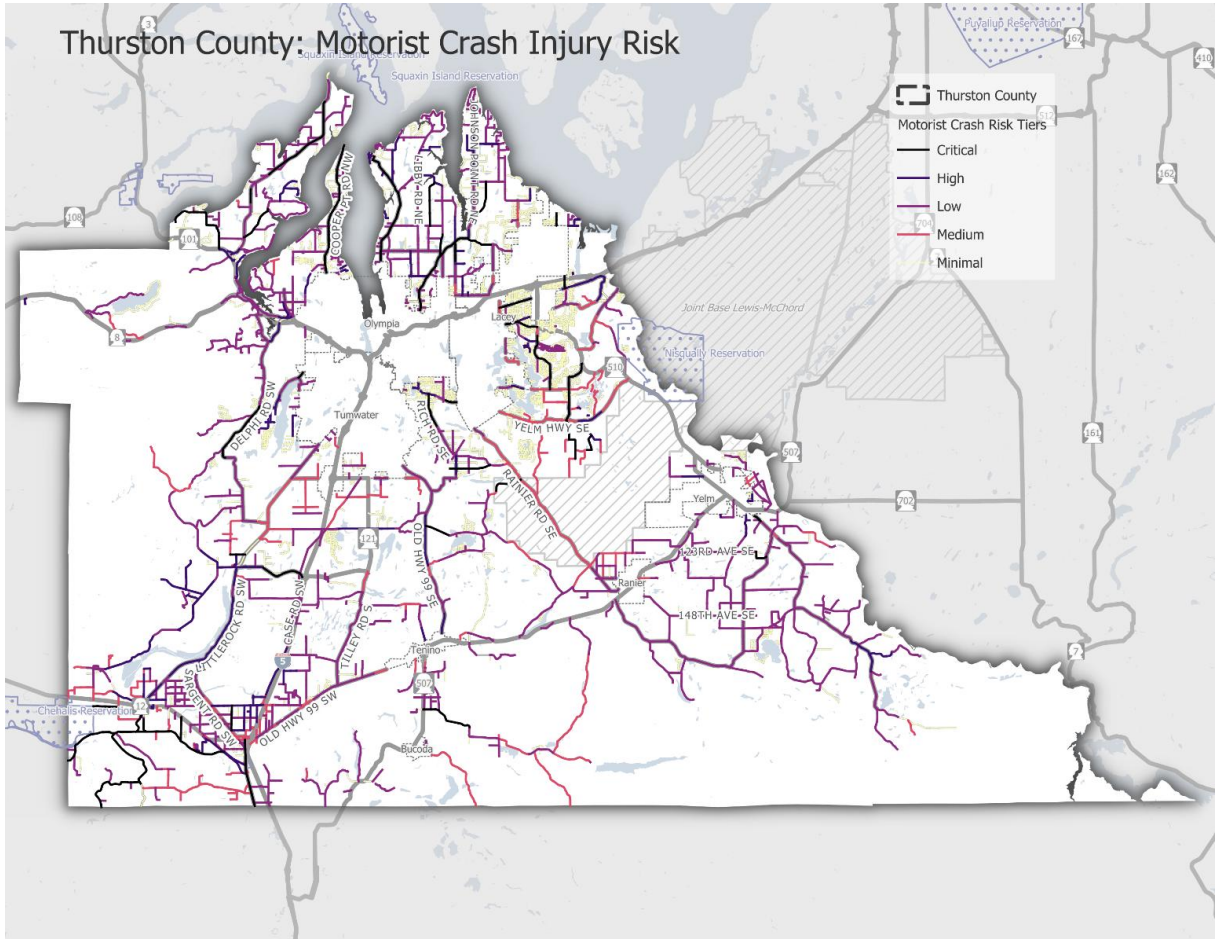

Figure 4 Motorist Crash Injury Risk Tiers (Thurston County)

The following two sections evaluate the risk factors associated with the top two crash types in the county, angle crashes and fixed object crashes.

Angle Crashes

The tables and figures in this section represent results for the angle crashes on roadways within unincorporated Thurston County. The analysis was conducted using FI crashes, where FSI crashes are weighted three times higher than other injury crashes. Crash profiles that are associated with elevated crash risks for motorist FI crashes are:

- **Critical Risk:**
  - Roadways with speed limit 30 mph or higher, and have level 1 horizontal curves (curves meet design standards for roadway & speed limit)
  - Roadways with speed limit between 40 and 45 mph
- **High Risk:**
  - Roadways with speed limit 50-55 mph, and has level 1 horizontal curve (curves meet design standards for roadway & speed limit)

These critical and high risk profiles suggest that roadways with higher speed limit, especially those with some horizontal curves, can be the focus for reducing the risk of angle crashes.

Table 4 Facility profile definitions for Angle crashes

Risk Tier	Shoulder Presence	Vertical Curve	Speed (MPH)	Horizontal Curve	Near Schools
Critical	-	-	>=30	H1	-
	-	-	40-45	-	-
High	-	-	50-55	H1	-
Medium	-	V1 or V3 and higher	30-35 or 50+	H2 or higher	-
	Both sides	V2	30-35 or 50+	H2 or higher	-
Low	-	-	<=25	-	Yes
	None	-	<=25	H3 and higher	No
Minimal	All remaining segments				

Within Thurston County, **critical risk facilities** comprise 12.4% (126 miles) of total unincorporated county roadway mileage and are associated with 42.4% of all angle FI crashes (weighted by severity level). **High risk facilities** comprise 9% (91 miles) of total unincorporated county roadway mileage and are associated with 22.6% of all angle FI crashes (weighted by severity level).

Table 5 Facility profile metrics for Angle crashes

Risk Tier	Miles	Angle Crashes (weighted by injury)	Miles %	FI Crashes %	Weighted Crashes per Mile
Critical	126	108	12.4%	42.4%	0.86
High	91	58	9.0%	22.6%	0.63
Medium	923	22	9.2%	8.8%	0.24
Low	365	51	35.9%	20.1%	0.14
Minimal	340	16	33.5%	6.2%	0.05

Figure 5 shows the number of motorist FI crashes associated with each risk tier, and the roadway miles that fit each risk tier in bar graphs. The line graph shows the average motorist FI crash density. The critical and high risk tier roadway facilities have disproportionately high shares of crashes associated with relatively low mileage of roadways.

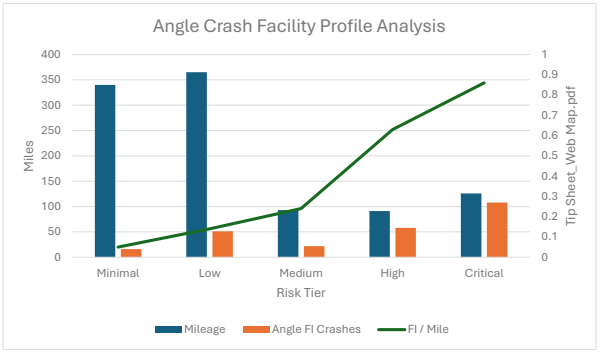

Figure 5 Angle Crash Facility Profile Analysis Tiers

Angle Crash High Risk Network

The critical and high risk tier facilities from the angle crash systemic analyses are combined to create the High Risk Network (HRN) for Thurston County shown in Figure 6Figure 3 below. The HRN accounts for 217 miles (21%) of the roadway mileage in unincorporated Thurston County.

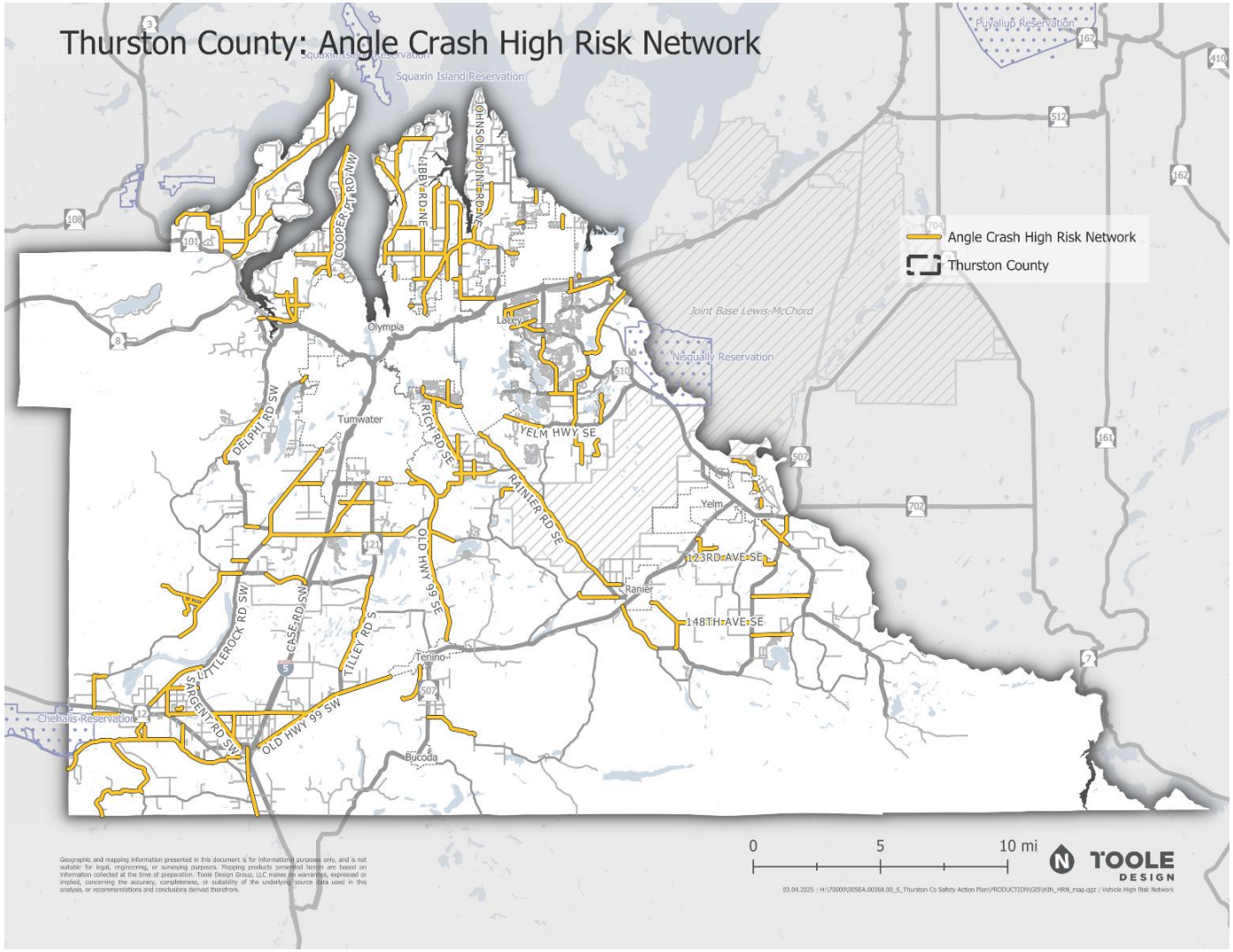

Figure 6 Angle Crash High Risk Network (Thurston County)

Fixed Object Crashes

The tables and figures in this section represent results for the fixed object crashes on roadways within unincorporated Thurston County. The analysis was conducted using FI crashes, where FSI crashes are weighted three times higher than other injury crashes. Crash profiles that are associated with elevated crash risks for fixed object FI crashes are:

- **Critical Risk:**
  - Roadways with paved shoulders on one or both sides, have level 2 vertical curves or higher, and are not urban local access roads.
- **High Risk:**
  - Roadways with paved shoulders on one or both sides, have level 1 vertical curves, and are not urban local access roads.

These critical and high risk profiles suggest that roadways with paved shoulders on one or both sides and are "not urban local access roads" can be the focus for reducing the risk of fixed object crashes.

Table 6 Facility profile definitions for Fixed Object FI crashes

Risk Tier	Presence of Paved Shoulders	Functional Class	Vertical Curve	Speed	Presence of Shoulders
Critical	One or both sides	Not Urban Local Access Roads	V2 or higher	-	-
High	One or both sides	Not Urban Local Access Roads	V1	-	-
Medium	None	Rural Major Collector	None	-	-
	None	Rural Minor Collector - Rural Minor Arterial and Urban Minor Collector and above	None	-	-
Low	None	Urban Local Access	-	30-45	-
	None	Rural Local Access	-	>=30	Both
	One or both sides	Urban Local Access	-	-	-
	None	Not Rural Major Collector	V2	<=25	-
	None	Urban Local Access	-	50-55	-
Minimal	All remaining segments				

Within Thurston County, **critical risk facilities** comprise 8% (81 miles) of total unincorporated county roadway mileage and are associated with 26% of fixed object FI crashes (weighted by severity level). **High risk facilities** comprise 10% (106 miles) of total unincorporated county roadway mileage and are associated with 25.5% of all fixed object FI crashes (weighted by severity level).

Table 7 Facility profile metrics for Fixed Object FI crashes

Risk Tier	Miles	Fix Object Crashes (weighted by injury)	Miles %	Crashes%	Weighted Crashes per Mile
Critical	81	171	8%	26%	2.11
High	106	166	10.4%	25.5%	1.57
Medium	161	165	15.8%	25.4%	1.02
Low	423	133	41.6%	20.4%	0.31
Minimal	246	16	24.1%	2.4%	0.07

Figure 7Figure 2 shows the number of fixed object FI crashes associated with each risk tier, and the roadway miles that fit each risk tier in bar graphs. The line graph shows the average fixed object FI crash density. The critical and high risk tier roadway facilities have disproportionately high shares of crashes associated with relatively low mileage of roadways.

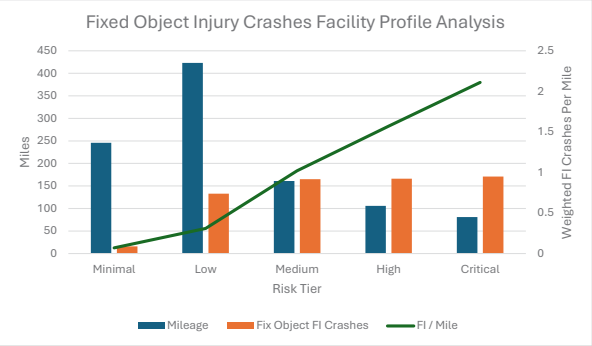

Figure 7 Fixed Object Crash Facility Profile Analysis Tiers

Fixed Object Crash High Risk Network

The critical and high risk tier facilities from the fixed object crash systemic analyses are combined to create the High Risk Network (HRN) for Thurston County shown in Figure 8 below. The HRN accounts for 187 miles (18%) of the roadway mileage in unincorporated Thurston County.

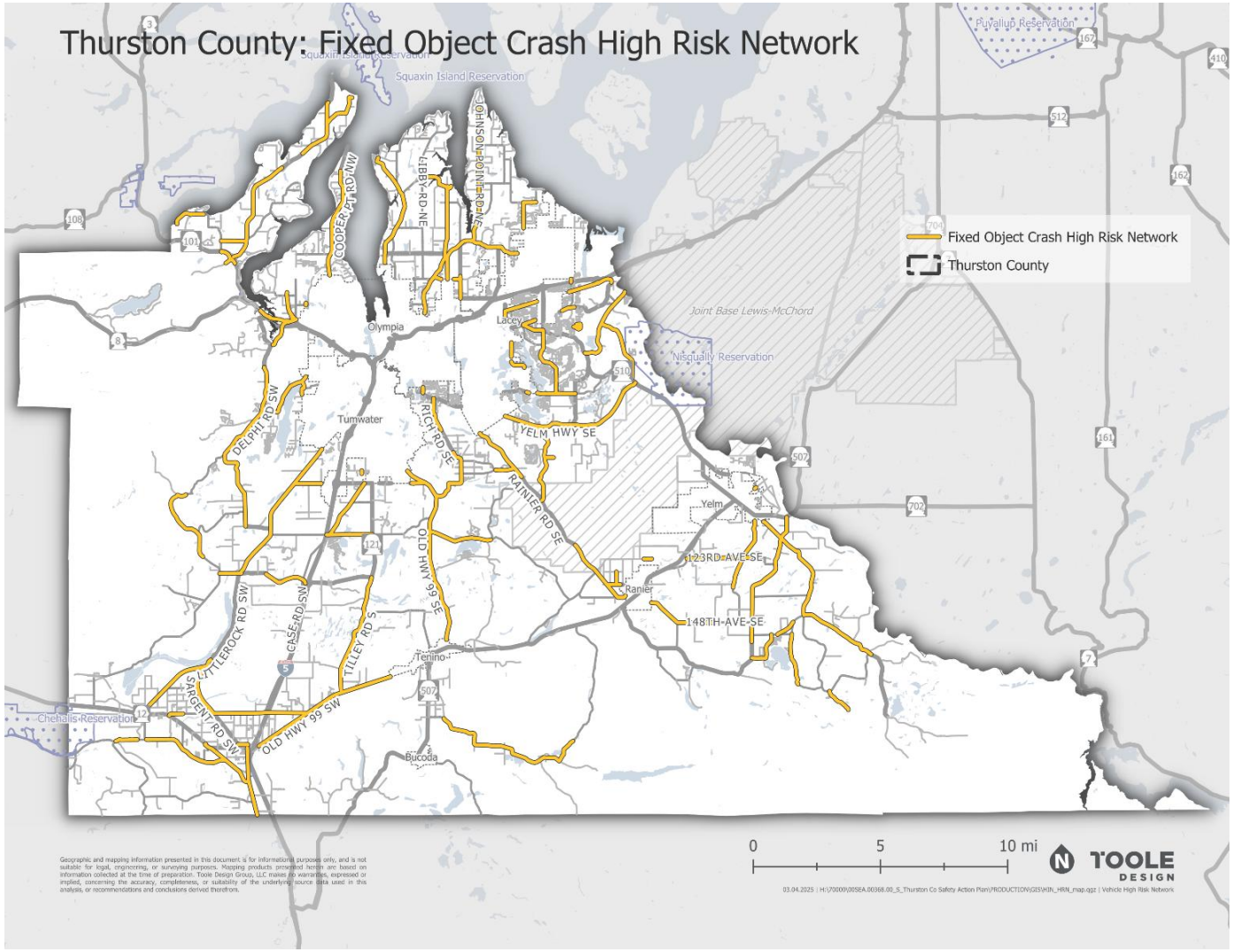

Figure 8 Fixed Object Crashes High Risk Network (Thurston County)

Appendix C: Demographic Analysis Memo

TOOLE DESIGN

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MEMORANDUM

May 12, 2025

To: Becky Conn, Traffic Engineering and Operations Manager
Organization: Thurston County Public Works
From: Allison Phillips, Sarah Udelhofen, Anish Tailor, and Maimoona Rahim
Project: Thurston County Transportation Safety Action Plan

Re: Revised Demographic Analysis: Methodology and Findings

INTRODUCTION

Thurston County's 2023 Racial Equity Action Plan and ongoing Racial Equity Program commits to pursuing systemic change by promoting equity, inclusion, and diversity in all aspects of county government. Thurston County acknowledges that racism is institutional and structural and emphasizes its pursuit of systemic change in its work. The development of the Transportation Safety Action Plan reflects this commitment, with components like the demographic analysis serving as a critical tool for understanding access to safe and efficient transportation options.

As part of the process of developing the Thurston County Transportation Safety Action Plan, the project team identified communities experiencing sociodemographic hardships, such as low household incomes, underinvestment in transportation, and higher rates of health and environmental challenges. To do this, two demographic analysis methods from two United States government geospatial analysis tools were used to locate communities experiencing disadvantage.

The goal of the demographic analysis is to identify communities in the Thurston County project area that experience disadvantage and are disproportionately vulnerable to unsafe road conditions. The results of the analysis reveal specific demographic communities that are experiencing high need related to transportation risk and safety. The results can provide an understanding of the implications of safety risk disparities on different communities when taken together with High Injury Network (HIN), High-Risk Network (HRN), and community feedback.

This document begins with definitions used in the demographic analysis and data for Thurston County, then describes the two demographic analysis methods used in the United States Government's geospatial analysis tools and the High Injury Network (HIN) and High-Risk Network (HRN) analyses. Next, it discusses the findings of these analysis tools and the communities experiencing disadvantage. It concludes with recommendations for applying the findings of the analysis.

Definitions

Community and **population** are often used interchangeably to describe groups of people sharing similar characteristics or experiences. In this document, "community" is used to mean a people that share experiences or cultures. "Population" is used to describe a group of people defined by shared demographic attributes, typically identified through Census data.

Racial minority and "non-white" are not terms used in this analysis. When referring to people who have been racialized, we will reference their specific identity (African American, Asian American, Pacific Islands, Latino/a/x/e, and Native American) or use the term Black, Indigenous, or Person of Color (BIPOC). Distinguishing Black and Indigenous people calls attention to the grave injustices that these communities have faced in this country.

Low-income refers to people or households that have financial constraints that impact their daily lives. There is not one threshold for what is considered low income. It can be described using poverty guidelines, median household income, housing burden, or transportation burden.

Historically Disadvantaged Communities refers to populations sharing a particular characteristic, as well as geographic communities, which have been systematically denied a full opportunity to participate in aspects of economic, social, and civic life.

Social Vulnerability refers to the potential negative effects on communities caused by external stresses on human health.

High Injury Network (HIN) identifies stretches of roadways where the highest concentrations of collisions resulting in fatal or serious injuries occurred on the transportation network.

High Risk Network (HRN) identifies street and road segments with the highest crash risks for bicyclists and pedestrians and societal cost estimates that may warrant special attention.

Transportation Insecurity is a key component of transportation disadvantage. It occurs when people are unable to get to where they need to go to meet the needs of their daily life regularly, reliably, and safely.

Vulnerable Road Users (VRU) include pedestrians, individuals riding animals, and those operating vehicles like bicycles, mopeds, and motorcycles without an enclosed shell. These users face a higher risk of serious injury or death in crashes compared to motor vehicle drivers, who benefit from a protective shell of their vehicle and advanced safety technology. However, in this report VRU only refers to pedestrians and bicyclists because the Safer Streets Model analysis was used to develop the High Risk Network for VRU, and this model cannot estimate or model motorcyclist crashes at this time.

Background Demographics of Thurston County

Six population groups that have historically faced marginalization, disenfranchisement, and disinvestment were identified to help understand the demographic landscape in Thurston County and Washington State: People under 18 or over 65; populations identifying as Black, Indigenous, Hispanic/Latino, or Person of Color; people with a language other than English spoken at home; people living with a disability; people living below 200% of the federal poverty line; and households with zero vehicles.[1] Historically, these groups have been disproportionately impacted by transportation safety issues and face heightened vulnerabilities. Table 1 summarizes the percentages of these groups that are present in unincorporated[2] Thurston County and the State of Washington to help reveal spatial patterns.

Table 1: Demographics of Thurston County (Unincorporated) and Washington State[3]

	2022 Population	People Under 18 or Over 65 Years	People identifying as Black, Indigenous, Hispanic/Latino, or Person of Color	People With Language Other Than English Spoken at Home	People Living with a Disability	Populations Living Below 200% of the Federal Poverty Line[4]	Households with Zero Vehicles
Unincorporated Thurston County	160,873	40.3%	31.8%	1.6%	11.9%	19.3%	3.4%
Washington State	7,688,549	37.6%	43.6%	3.8%	10.7%	23.0%	6.9%

In 2022, Washington State had a total population of 7,688,549 while unincorporated Thurston County accounted for 160,873 people, 40.3% of whom are under 18 or over 65. This proportion is slightly higher than Washington State's average of 37.6%. People of color represent 31.8% of the population in unincorporated Thurston County, which is lower than the State's average of 43.6%. Additionally, the percentage of Thurston County residents speaking a language other than English at home is 1.6%, lower than the State's average of 3.8%.

People living with a disability constitute 11.9% of the population in unincorporated Thurston County, slightly higher than Washington State's average of 10.7%. Regarding poverty, this analysis uses 200% of the federal poverty line as a broader measure, encompassing households with incomes up to twice the federal poverty level. Under this measure, 19.3% of the population (approximately 30,619 people) in unincorporated Thurston County has an income below 200% of the federal poverty line, compared to 23.0% statewide.

Figure 1 shows the percentage of zero vehicle households in each census block group across unincorporated Thurston County, overlaid with both Thurston Regional Planning Council's ruralTRANSIT and InterCity Transit's

[1] The term "Zero Vehicle Households" used by the US census refers to households without access to private motor vehicles such as cars or trucks.
[2] The following process was used to define and analyze the demographics of unincorporated Thurston County: When more than 50% of a census block group's land area fell within the boundaries of an incorporated city, the block group was excluded from the demographic data analysis.
[3] U.S. Census Bureau. *American Community Survey, ACS 5-Year Estimates Detailed Tables*, 2022, https://api.census.gov/data/2022/acs/acs5/variables.html. Accessed on November 15, 2024.
[4] 200% of the poverty line means twice the poverty threshold. It's a broader measure that includes households with incomes up to twice the federal poverty level (FPL).

routes and stops. Zero-car households may rely on public transit for their daily transportation needs, as they lack access to private vehicles. Examining zero-car households alongside transit availability helps identify where residents may face challenges in accessing jobs, healthcare, and other essential services.

On average, 3.4% of households (approximately 2,083 people) in unincorporated Thurston County lack access to a vehicle, compared to 6.9% across Washington State. In some block groups, between 10% and 15% of households lack vehicle access, with the highest percentage reaching 21.7% (approximately 231 of the 1,065 people) in a single block group on the northern edge of Olympia.

Transit Service in Thurston County:

- ruralTRANSIT operates three bus routes: one route runs once an hour from 6:00 PM to 7:00 PM, and two routes operate every two hours from 6:00 AM to 6:00 PM.[5] These bus routes connect locations in Thurston County south of Olympia/north of Tumwater to Tumwater, Tenino, Rainier, Bucoda, Grand Mound, Rochester, and Chehalis Reservation.
- Intercity Transit's service area, called a Public Transportation Benefit Area, encompasses the city limits of Olympia, Lacey, Tumwater, and Yelm and their urban growth areas. Communities such as Boston Harbor, Tenino, Rochester, Bucoda and Rainier are not currently eligible for Intercity Transit services because they are not inside the Public Transportation Benefit Area.[6] The western and southeastern areas of the County do not currently have transit service. There are census blocks in these areas in which 9-12% of the households do not have motor vehicle access.
- Intercity Transit's Dial-A-Lift service (a door-to-door, shared ride public transportation service for people with disabilities) saw 157,279 ADA passenger trips in 2018; however, the Public Transportation Benefit Area does not include unincorporated Thurston County.[7]
- Nisqually Transit "operates like an Uber" and offers free rides to Tribal and community members along with employees within a driving area of the Nisqually Tribal Administration from 6:00 am to 5:00 pm.[8]
- Non-Emergency Medical Transportation (NEMT) brokers are available in Thurston County, though ridership data is not readily available.

Although transit is present, it does not cover enough of the area or run frequently enough to meet residents' daily transportation needs, particularly for those who rely on transit to access jobs, healthcare, and other essential services. Infrequent service also limits mobility for those needing multiple stops or connections. While Thurston County does not have jurisdiction over transit service decisions, it can encourage collaboration with Intercity Transit and other agencies to improve service for these populations. Census blocks with high percentages of households without vehicles and limited transit service are likely to experience transportation access burden, creating barriers to employment, impacting wellbeing, and reducing access to essential opportunities.

In the southeastern portion of the County, a census block group with a high percentage of zero-vehicle households lacks any transit coverage, as does a block group southeast of Rainier and several communities north of Yelm. Along the western edge of the County, communities with 4% to 13% of households without vehicle

[5] Thurston Regional Planning Council. *ruralTRANSIT Schedule*. Thurston Regional Planning Council, https://www.trpc.org/656/Schedule. Accessed 20 Nov. 2024.
[6] Intercity Transit. "About Us." *Intercity Transit*, https://www.intercitytransit.com/about-us. Accessed 19 Nov. 2024.
[7] "Dial-A-Lift Study." *Intercity Transit*, June 2021, https://www.intercitytransit.com/sites/default/files/2021-08/Dial-A-Lift-Study-0621.pdf. Accessed 18 Nov. 2024.
[8] "Nisqually Indian Tribe: Transportation." 2024. Nisqually-Nsn.gov. 2024. http://www.nisqually-nsn.gov/index.php/administration/transportation/.

access also lack transit service. Meanwhile, a block group southwest of Tenino has 8.1% zero-vehicle households and limited transit coverage, though the service may be insufficient to meet residents' needs. Notably, the block group with the highest percentage of zero vehicle households (21.7%), located north of Olympia, lacks transit service. Many block groups outside of Tumwater, Olympia, and Lacey also report high percentages of zero-vehicle households, highlighting the need for improving access to transportation and mobility options across these areas.

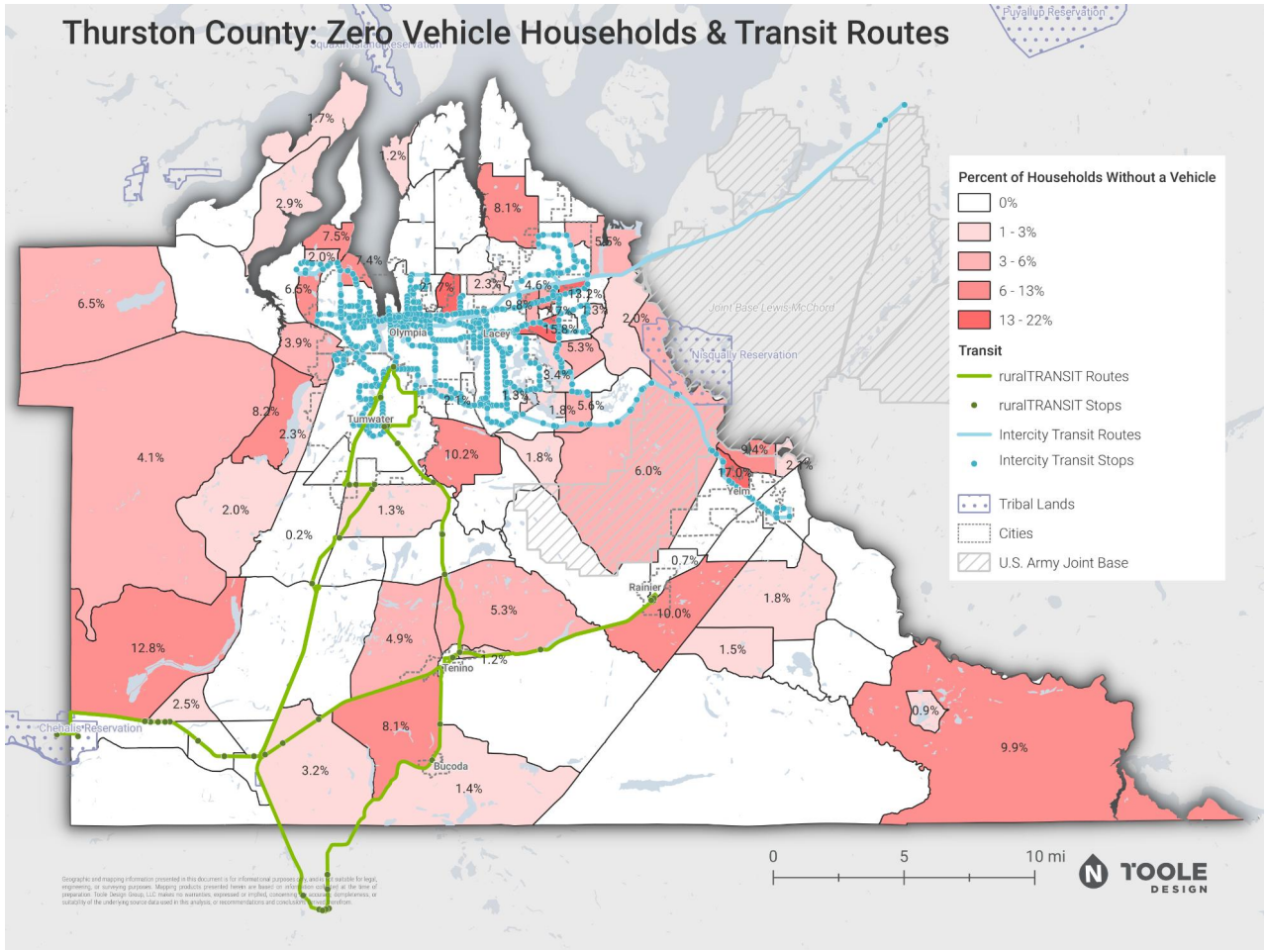

Figure 1: Zero Vehicle Households & Transit Routes

IDENTIFYING PRIORITY POPULATIONS

Demographic Analysis Methods

The team used demographic analysis methods from two United States Government geospatial analysis tools to spatially locate communities experiencing disadvantage. The following are the analysis methods used from the tools:

1. The U.S. Council on Environmental Quality's Climate and Economic Justice Screening Tool (CEJST) - Disadvantaged Communities
2. The U.S. Department of Transportation's Equitable Transportation Community (ETC) Explorer - Overall Disadvantaged Tracts and Transportation Insecure Tracts

To meet eligibility requirements for Safe Streets and Roads for All (SS4A) grant funding, applicants must use either the Equitable Transportation Community (ETC) Explorer or Climate and Economic Justice Screening Tool (CEJST) to determine if a census tract is an underserved community.[9]

The Climate and Economic Justice Screening Tool (CEJST)

Disadvantaged Communities

Figure 2 highlights disadvantaged census tracts across the US using the CEJST. A tract is considered disadvantaged if it meets the threshold for at least one of the tool's categories of burden and the accompanying sociodemographic burden or if it is on land within the boundaries of Federally Recognized Tribes. A census tract that is completely surrounded by disadvantaged communities and has a median income at or below the 50th percentile nationwide is also considered disadvantaged. Most of the indicators' thresholds are at or above the 90th percentile compared to all census tracts across the United States. Appendix A further describes the methodology and lists the indicators aggregated by the online tool.

The tool sources data from the American Community Survey (ACS), National Risk Index, Climate Risk Data Access, LEAD Tool, EJScreen, USDOT ETC Explorer and more. The indicators used to determine the Transportation category of burden are taken directly from the ETC Explorer:

- Census tract information and demographics,
- Low income,
- Diesel particulate matter exposure,
- Transportation barriers, and
- Traffic proximity and volume.

[9] US Department of Transportation, SS4A Frequently Asked Questions https://www.transportation.gov/grants/ss4a/faqs

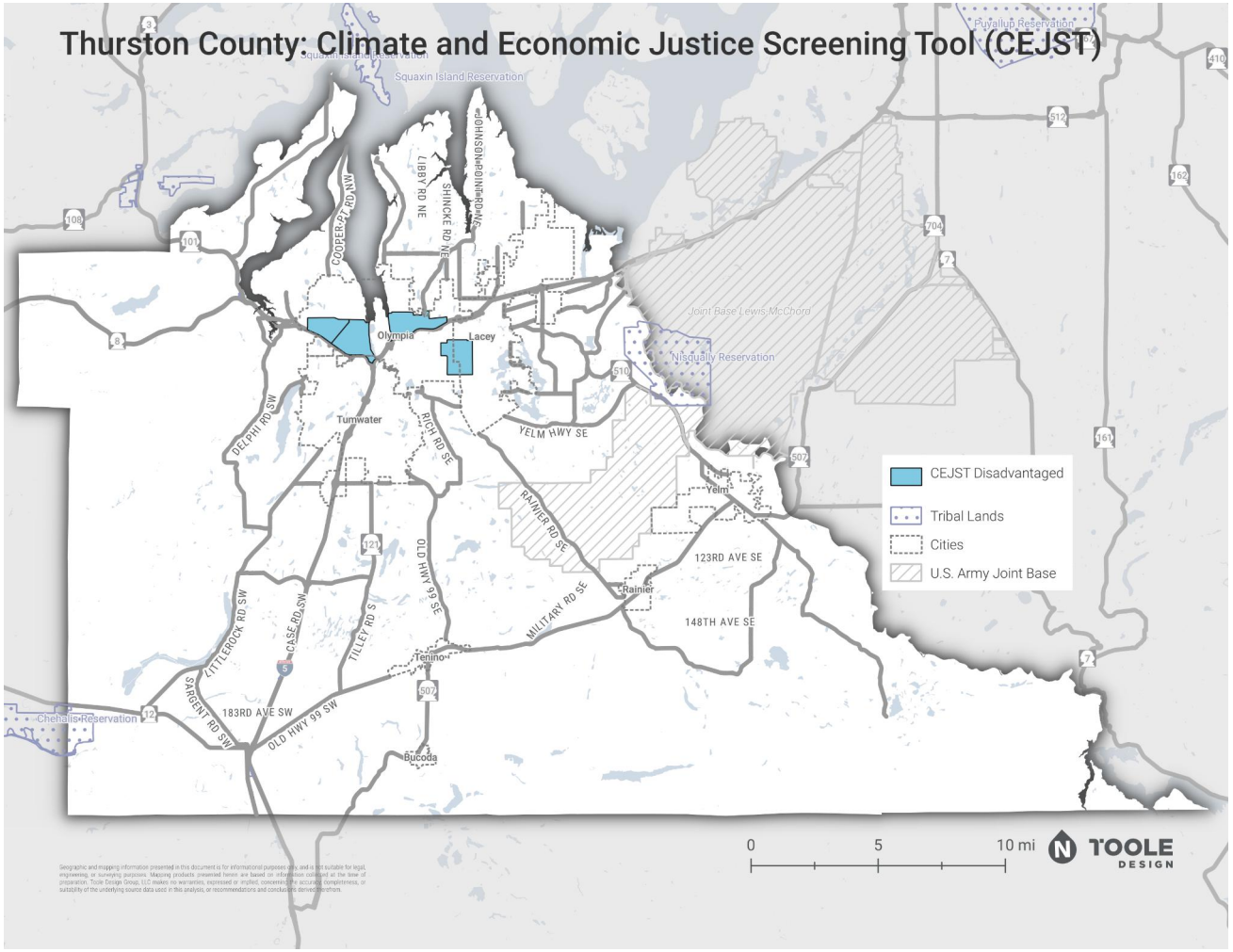

Figure 2: CEJST Disadvantaged Census Tracts in Thurston County

Equitable Transportation Community (ETC) Explorer – Overall Disadvantaged Tracts and Transportation Insecure Tracts

Overall Disadvantaged Tracts

The ETC Explorer is an online interactive map and dashboard developed by the US Department of Transportation under the Justice40 Initiative.[10] Using 2020 data at the census tract level, it assesses the cumulative burden communities experience as a result of underinvestment in transportation. The tool allows users to understand how a given census tract experiences adverse effects resulting from the transportation system compared to other Census tracts nationally. This enables communities to assess how transportation investments can alleviate or reverse transportation burdens they are facing. It was designed by the USDOT to work in conjunction with the CEJST.

The ETC Explorer tool uses over 50 indicators[11] to develop five components of transportation disadvantage:

- Transportation insecurity
- Environmental burden
- Social vulnerability
- Health vulnerability
- Climate and disaster risk burden

The ETC Explorer assigns every census tract a score for each of the five components of transportation disadvantage. It normalizes and sums each of the five scores to arrive at a Disadvantage Percentile Score[12]**Error! Reference source not found.**. The value of the score is based on a percentile ranking against all other census tracts in the nation.

Figure 3 shows the Disadvantage Percentile Score for each census tract using a gradient of lighter (low percentile scores) to darker shades of red (high percentile scores). This map uses a shadowed overlay surrounding the two darkest red colors to indicate areas classified by the ETC Explorer as Overall Disadvantaged (≥ 65 percentile score), in addition to the sequential color gradient.

Transportation Insecure Tracts

In order to understand the role of transportation insecurity on the ETC Explorer's Overall Disadvantage Tracts, the project team also isolated one of the five components of transportation disadvantage listed above: the census tracts identified as transportation insecure according to the Transportation Insecurity Analysis Tool (TIAT).

The Transportation Insecurity component is made up of following indicators:

- Percent of households with no car
- Average commute time to work
- Frequency of Transit Services per Sq Mi
- Jobs within a 45-min Drive
- Estimated Average Drive Time to Points of Interest (min)
- Estimated Average Walk Time to Points of Interest (min)
- Calculated average annual cost of Transportation as percent of household income
- Traffic Fatalities per 100,000 people

Figure 4 shows the Transportation Insecurity Percentile Score for each census tract using a color gradient indicating low percentile scores to high percentile scores. Areas classified by the TIAT as Transportation Insecure (≥ 65 percentile score) are indicated with pink.

[10] US Department of Transportation, ETC Explorer https://www.transportation.gov/priorities/equity/justice40/etc-explorer
[11] See Appendix B for a full list of all the indicators used to develop each component.
[12] See Appendix B for a full list of all the indicators used to develop each component.

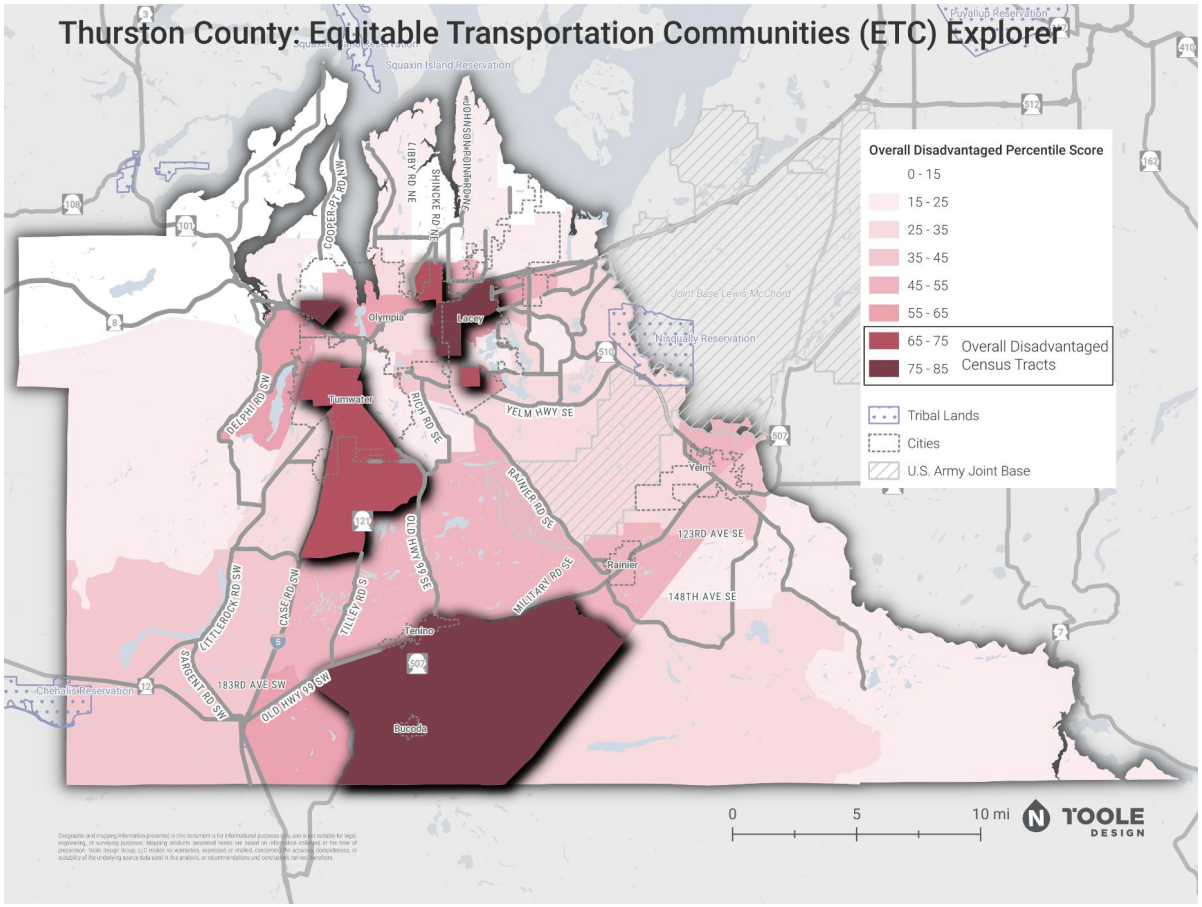

Figure 3: Overall Disadvantaged Tracts in Thurston County

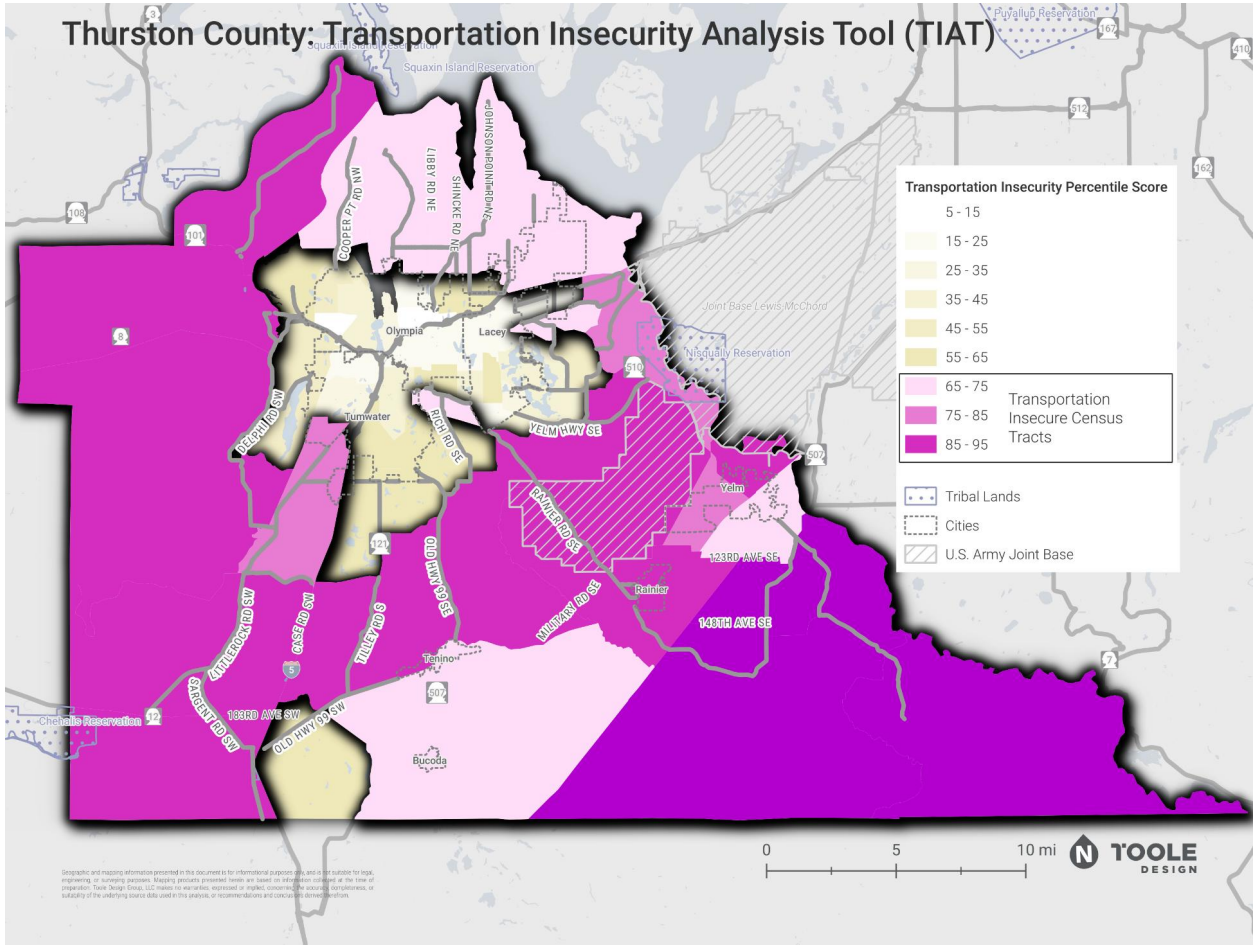

Figure 4: Transportation Insecure Tracts in Thurston County

HIN and HRN Overlay

High Need Areas with High Injury Network (HIN) Overlay

The project team created a High Injury Network (HIN) for Vulnerable Road Users, which identifies corridors with high densities of crashes that result in severe injuries and fatalities. The HIN was created by developing crash density estimates along street corridors throughout the county, weighted by crash severity, and then identifying the highest crash-density sections for pedestrians and bicyclists.

In Figure 5, the HIN analysis has been overlaid with ETC Overall Disadvantaged Census Tracts from Figure 3**Error! Reference source not found.**.

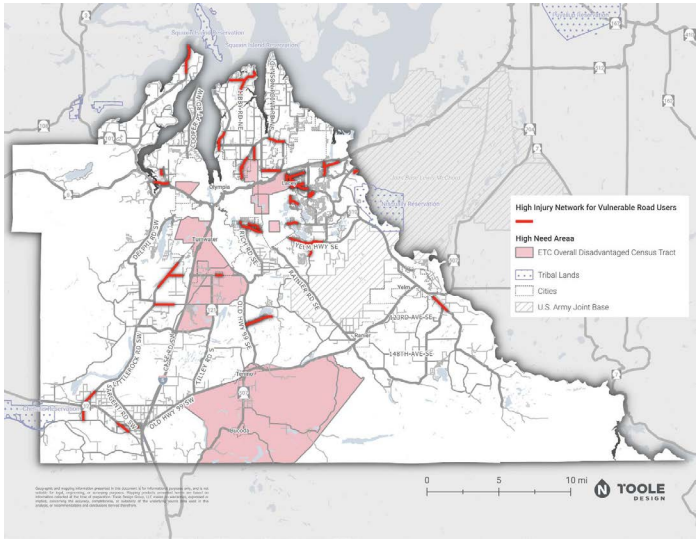

Figure 5: High Injury Network overlaid with High Need Areas

High Need Areas with High Risk Network (HRN) Overlay

The project team also created a High Risk Network (HRN) for Vulnerable Road Users (bicyclists and pedestrians) and a High Risk Network for Motorists, which identify road segments that correlate with higher crash frequencies and may warrant special attention. This allows agencies to determine where vulnerable road user (pedestrian and bicyclist) and motorist crashes have occurred and be able to predict where crashes could occur in places with similar characteristics.

In Figure 6, the HRN analysis for Vulnerable Road Users has been overlaid with ETC Overall Disadvantaged Census Tracts from Figure 3**Error! Reference source not found.**.

In Figure 7, the HRN analysis for Motorists has been overlaid with ETC Overall Disadvantaged Census Tracts from Figure 3.

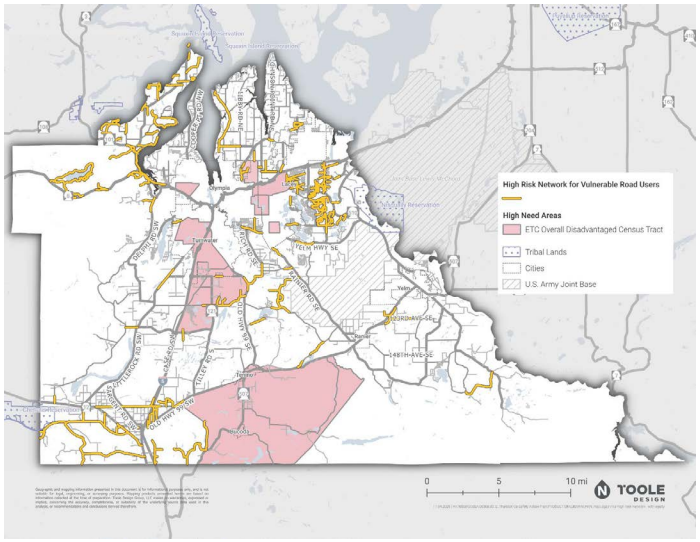

Figure 6: HRN for Vulnerable Road Users Overlaid with High Need Areas

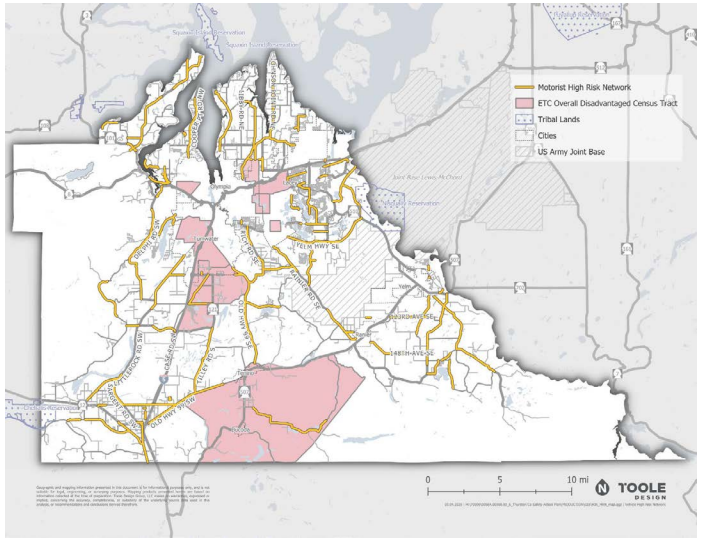

Figure 7: HRN for Motorists Overlaid with High Need Areas

SUPPORTING DISADVANTAGED COMMUNITIES & NEXT STEPS

Discussion of High Need Areas

Figure 2 highlights census tracts in Thurston County identified as disadvantaged by the CEJST. Based on this analysis, no census tracts in unincorporated Thurston County are classified as disadvantaged. However, three census tracts in incorporated areas—Olympia, Lacey, and Tumwater—are classified as disadvantaged.

Land within the boundaries of Federally Recognized Tribes are classified as disadvantaged by the CEJST tool. However, the boundaries of census tracts and the lands of Federally Recognized Tribes are different. The lands of the Nisqually Tribe cover 23% of a specific census tract, but because the tribal land does not encompass the entire tract, it is not marked as disadvantaged by the CEJST tool.[13] Similarly, the lands of the Chehalis Tribe cover only 4% of another census tract, and this tract is also not marked disadvantaged.

In Figure 3, the unincorporated communities spanning Bucoda and Tenino, South Union and Maytown, and just north of Olympia (near Woodward Glen and Newport) emerged as overall disadvantaged areas. These communities may face environmental, social, health, or climate-related vulnerabilities and disaster risk burdens. Historically, transportation burdens—such as proximity to heavily trafficked roads, higher rates of respiratory illnesses, and disproportionate injury and death rates—have disproportionately impacted low-income populations and communities of color worldwide, relative to their population shares.[14] With 19.3% of the population (approximately 30,619 people) living below 200% of the poverty line and 31.8% of the population (approximately 51,222 people) identifying as people of color in unincorporated Thurston County, these demographic concerns highlight the need for targeted transportation and infrastructure improvements.

In Figure 3, the census tracts surrounding Tumwater and Lacey show high Overall Disadvantage. However, when isolating the Transportation Insecurity Percentile Score in Figure 4, these tracts do not rank as having high transportation insecurity. This suggests that their overall disadvantage is driven more by other factors – such as environmental burden, social vulnerability, health vulnerability, or climate and disaster risk – rather than transportation insecurity. The census tract surrounding Bucoda ranks highly in Overall Disadvantage and also scores high when isolated in the Transportation Insecure figure, suggesting that transportation challenges play a significant role in this tract's overall disadvantage.

In Figure 4**Error! Reference source not found.**, nearly every census tract in unincorporated Thurston County exhibits some level of Transportation Insecurity, with the southeastern and northwestern tracts standing out as communities with the highest scores. These areas of higher transportation insecurity are also in rural settings where there may be longer commute times, higher transportation costs as a share of income, and fewer nearby job opportunities. The two Federally Recognized Tribes in the County—the Nisqually Tribe and the Chehalis Tribe—are also areas of focus for demographic needs, as they are designated as disadvantaged by the Council on Environmental Quality.

Our demographic analysis found that on average, 11.9% of residents in unincorporated Thurston County are living with a disability, approximately 10,936 residents. These individuals, along with the 40.3% (64,878 people) under 18 and over 65, may not have access to a car or the ability to drive. Although 3.4% of households in unincorporated Thurston County lack access to a vehicle on average, several census block groups report higher rates. In some block groups, between 10% and 15% of households lack vehicle access, with the highest percentage reaching 21.7% in a single block group. The barriers faced by these individuals, paired with the limited public transit availability across the County, further isolates residents and limits their ability to meet their daily needs.

Providing infrastructure that is safe for all transportation users, especially these vulnerable populations (those living with a disability, under age 18, and over age 65), is critical to help people reach their health care needs, education, jobs, and more. Providing accessible infrastructure for people with disabilities, including those that use mobility assistive devices, is critical for the safety and mobility. Access to safe, affordable, efficient, and

[13] "Climate and Economic Justice Screening Tool." *U.S. Council on Environmental Quality*, https://screeningtool.geoplatform.gov/en/#11.28/46.8113/-123.1004. Accessed 18 Nov. 2024.
[14] Pereira, Rafael H. M., and Alex Karner. "Transportation Equity." SocArXiv, 19 Oct. 2020. Web. https://osf.io/preprints/socarxiv/gykud.

convenient travel options such as public transit or pedestrian-friendly and accessible streets are necessary to ensure they can travel meet their daily needs.

Given that Thurston County's Safety Action Plan aims to reduce severe and fatal roadway collisions and identify opportunities for safety-related modifications, the County may choose to pay particular attention to the Overall Disadvantaged populations identified in Figure 3, as this tool assesses the cumulative burden communities experience as a result of underinvestment in transportation.

Discussion of HIN, HRN, & High Need Areas

Figure 5 identifies corridors that have historically had high densities of crashes resulting in severe injuries and fatalities for vulnerable road users. While there is limited overlap between HIN segments and Overall Disadvantaged Census Tracts, the County may choose to further investigate overlapping areas and engage with community members to better understand local safety concerns. As the Transportation Safety Action Plan process moves into project identification and prioritization, the project team can pay particular attention to these HIN segments that have seen a history of crashes.

Figure 6 and Figure 7 identify road segments that correlate with higher crash frequences for vulnerable road users and motorists, indicating locations where future crashes could occur under similar conditions. While Figure 5's HIN focuses on locations with a history of crashes, Figure 6 and Figure 7's HRN analysis takes a proactive approach, identifying locations with similar roadway or environmental crash risk characteristics. Some HRN segments overlap with overall Disadvantaged Census Tracts, indicating that these communities not only face systemic transportation burdens due to underinvestment but that the segments have a higher frequency of crash risk for vulnerable road users and motorists as well.

As the Transportation Safety Action Plan process moves into project identification and prioritization, both the HIN and HRN corridors identified in this analysis should be considered, as they indicate locations where vulnerable road users have historically experienced safety risks and areas where they have high potential for future crashes. Particular attention should be paid to areas where high-risk roadways coincide with historically underserved communities. These areas may benefit the most from targeted interventions that improve safety while addressing long-standing transportation disparities.

Recommendations and Next Steps

This demographic analysis focuses on safety outcomes given its application for the Transportation Safety Action Plan. Although the focus of this project is safety, accessibility is inherently related; accessibility assumes safety and safe transportation is in service of accessibility to destinations. Regardless of demographic factors that can limit one's mobility, such as age, ability, and income, expanding quality mobility options can remove some of the restrictions and enable more freedom of movement.

Historically across the United States, transportation decisions have disproportionately affected underserved, disadvantaged, and overburdened communities, placing the system's burdens on them while they do not receive its benefits.[15] As a result, residents in areas of high need are less likely to have access to safe and comfortable walking and bicycling facilities. In many of these areas, lower densities can make it more costly to provide

[15] "Public Roads." *Public Roads*, vol. 87, no. 1, Spring 2023, U.S. Federal Highway Administration, https://highways.dot.gov/sites/fhwa.dot.gov/files/Public%20Roads%20Spring%202023.pdf.

pedestrian and bicycle infrastructure, further exacerbating access gaps. Thus, populations in these areas have the most to gain from improvements implemented through the Transportation Safety Action Plan.

This demographic analysis provides context for setting initial priorities and beginning the project prioritization process. Beyond the Transportation Safety Action Plan, Thurston 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 demographic-based decision-making and help address any disparities in its transportation system to meet the needs of all road users.

Additionally, iterating on an demographic analysis can finetune the process over time by adjusting demographic factors and indicators as needed and focusing on relevant impacts. Repeating the analysis at regular intervals can also help evaluate outcomes over time to monitor improvement and direct ongoing efforts toward supporting communities experiencing disadvantage.

Finally, this demographic analysis and mapping provides only a piece of the puzzle. Ongoing community engagement efforts help to further define transportation disadvantage, identify areas of safety risk, highlight barriers to access and mobility, and establish the existing conditions and context. Thurston County and individual communities would benefit from continued engagement throughout the planning and project development.

APPENDIX A

Climate and Economic Justice Screening Tool (CEJST)

The tool aggregates data sourced from a variety of Federal agencies into indicators of burden. The indicators are grouped into eight categories: climate change, energy, health, housing, legacy pollution, transportation, water and wastewater, and workforce development (Table 2). Each category of burden consists of several indicators which are assigned a percentile threshold. The underlying data for each indicator is sourced from a variety of Federal agencies like the Environmental Protection Agency, Department of Transportation, US Census, among many others. A community is considered disadvantaged if it is in a census tract that (1) meets the thresholds for at least one of the tool's categories of burden, and (2) is at or above the threshold for an associated socioeconomic burden.[16] The tool utilizes the census tract boundaries from 2010 because many of the data sources in the tool use the 2010 census boundaries.

Table 2: List of indicators included in the CEJST

Category of burden	Threshold	Indicator
	Communities are identified as disadvantaged if they are in census tracts that…	
1. Transportation	ARE at or above the 90th percentile for:	diesel particulate matter exposure, OR transportation barriers, OR traffic proximity and volume,
	AND ARE at or above the 65th percentile for:	low income
2. Climate Change	ARE at or above the 90th percentile for:	expected agriculture loss rate, OR expected building loss rate, OR expected population loss rate, OR projected wildfire risk
	AND ARE at or above the 65th percentile for:	low income
3. Energy	ARE at or above the 90th percentile for:	energy cost, OR PM2.5 in the air,
	AND ARE at or above the 65th percentile for:	low income
4. Health	ARE at or above the 90th percentile for:	asthma, OR diabetes, OR heart disease, OR low life expectancy,
	AND ARE at or above the 65th percentile for:	low income
5. Housing	experienced:	historic disinvestment,
	OR ARE at or above the 90th percentile of:	housing cost, OR lack of green space, OR lack of indoor plumbing, OR lead paint,
	AND ARE at or above the 65th percentile for:	low income
6. Legacy pollution	have at least one:	abandoned mine land, OR Formerly Used Defense Sites,
	OR ARE at or above the 90th percentile for:	proximity to hazardous waste facilities, OR proximity to Superfund sites, OR proximity to Risk Management Plan facilities,
	AND ARE at or above the 65th percentile for:	low income
7. Water and wastewater	ARE at or above the 90th percentile for:	underground storage tanks and releases, OR wastewater discharge,
	AND ARE at or above the 65th percentile for:	low income
8. Workforce development	ARE at or above the 90th percentile for:	linguistic isolation, OR low median income, OR poverty, OR unemployment,
	AND more than 10% of people ages 25 years or older whose high school education is less than a high school diploma.	

[16] Methodology and definitions are described further on the CEJST's website https://screeningtool.geoplatform.gov/en/methodology

APPENDIX B
USDOT Equitable Transportation Community (ETC) Explorer

The ETC Explorer assigns every census tract a score for each of the five components of transportation disadvantage.[17] It normalizes and sums each of the five scores to arrive at an Overall Disadvantage Component Score. The value of the score is based on a percentile ranking against all other census tracts in the nation. A census tract is considered disadvantaged if it is in the 65th percentile or higher. **Error! Reference source not found.** in the main body of this memo shows census tracts in Thurston County by Overall score. Table 3 lists the ETC Explorer's indicators and their corresponding component.

Table 3: List of indicators in the ETC Explorer

Component	Indicator
1. Transportation Insecurity	Percent of households with no car
	Average commute time to work
	Frequency of Transit Services per Sq Mi
	Jobs within a 45-min Drive
	Estimated Average Drive Time to Points of Interest (min)
	Estimated Average Walk Time to Points of Interest (min)
	Calculated average annual cost of Transportation as percent of household income
	Traffic Fatalities per 100,000 people
2. Environmental Burden	Ozone level in the air
	Particulate Matter 2.5 (PM2.5) level in the air
	Diesel particulate matter level in air
	Air toxics cancer risk
	Percent of tract within 1 mile of known hazardous sites
	Percent of tract within 1 mile of known Toxics Release sites
	Percent of tract within 1 mile of known Treatment and Disposal Facilities
	Percent of tract within 1 mile of known Risk Management Plan Sites
	Percent of tract within 1 mile of non-abandoned Coal Mines
	Percent of tract within 1 mile of non-abandoned Lead Mines
	Percent of houses built before 1980
	Percent of tract within 1 mile of high volume roads
	Percent of tract within 1 mile of railways
	Percent of tract within 5 miles of airports
	Percent of tract within 3 miles of ports
	Percent of tract that intersects with a Watershed containing impaired water(s)
3. Health Vulnerability	Asthma prevalence
	Cancer prevalence
	High blood pressure prevalence
	Diabetes prevalence
	Poor mental health prevalence
4. Social Vulnerability	Percent of population with Income below 200% of poverty level
	Percent of people age 25+ with less than a high school diploma
	Percent of people age 16+ unemployed
	Percent of total housing units that are renter-occupied
	Percent of occupied houses that spend 30% or more of their income on housing with less than 75k income
	Percent of population uninsured
	Percent of households with no internet subscription
	GINI Index
	Percent of population 65 years or older
	Percent of population 17 years or younger
	Percent of population with a disability
	Percent of population (age 5+) with limited English proficiency
	Percent of total housing units that are mobile homes
5. Climate & Disaster Risk Burden	Estimated annualized loss due to disasters
	Increase in number of days over 90deg by mid-century
	Number of days exceeding 99th percentile of precip by mid-century
	Percent change in number of days with less than 0.01 inches of precip
	Percent of tract inundated by 0.5 sea level increase by 2100
	Average Percent Land classified as Impervious Surface per Tract

[17] USDOT ETC Explorer Technical Documentation (May 2023) https://www.transportation.gov/sites/dot.gov/files/2023-05/5.2.23ETC%20Explorer%20Technical%20DocumentationFinal.pdf

Appendix D: Public Engagement Plan

TOOLE DESIGN

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SEATTLE, WA 98104

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TOOLEDESIGN.COM

MEMORANDUM

May 12, 2025

To: Becky Conn, Traffic Engineering and Operations Manager
Organization: Thurston County Public Works Department
From: Allison Phillips and Anish Tailor
Project: Thurston County Transportation Safety Action Plan

Re: Public Engagement Summary

The Thurston County Transportation Safety Action Plan (TSAP) will focus on reducing fatal and serious injury crashes and identify projects, strategies, and programs to improve transportation safety in unincorporated Thurston County.

The Transportation Safety Action Plan incorporated public engagement in all phases of plan development. Engagement activities were conducted as open engagement and targeted engagement. The outcomes and learnings from these community engagement activities are reflected in the Transportation Safety Action Plan's vision, goals, and recommendations. These engagement methods and key findings are described below, after the Executive Summary of Overall Key Findings.

Executive Summary: Overall Key Findings

Safe System Approach and Planning

- Agencies vary in familiarity with the Safe System Approach; TRPC and WSDOT are the most aligned with Target Zero.
- The Safety Action Plan (SAP) is seen as an opportunity to identify high-risk areas and guide future planning and funding.
- TRPC wants to use the SAP to strengthen the safety focus in regional planning and grant scoring.

Safety Concerns and Hotspots

- High-speed corridors like **Martin Way**, **Bald Hill Road**, and **SR 507** are frequent crash sites.
- School areas such as **Peter G Schmidt Elementary** and **East Olympia Elementary** face congestion and pedestrian safety issues.
- There were many unsafe locations identified throughout the outreach such as **Old Hwy 99**, **Yelm Highway**, **Ruddell Road**, and **Chehalis Western Trail crossings**.
- **Rural roads** with no sidewalks or shoulders are are considered unsafe for walking or bicycling.

User Experience and Perceived Safety

- People feel safest while driving or carpooling; least safe while bicycling, motorcycling, or using mobility devices.
- Bicycling has the highest concern level; most respondents do not feel safe cycling in Thurston County.
- Walking was also a major concern, especially due to poor lighting, motorist behavior, and lack of safe infrastructure.

Top Safety Concerns (Behavioral + Infrastructure)

- Speeding was the most common concern across all outreach touchpoints.
- Other top concerns include:
  - Lack of safe walking and bicycling infrastructure.
  - Distracted, impaired, and aggressive driving.
  - Unsafe or poorly designed intersections and crossings.

Preferred Safety Strategies

- More separated bicyclist/pedestrian infrastructure.
- Improved crossings and lighting.
- Greater enforcement of traffic laws, especially speed limits.
- Roundabouts and traffic calming.
- Education campaigns for motorists near schools and around bicyclists.

Stories and Human Impact

- Stories from crash survivors and families emphasize the **emotional and long-term impacts** of traffic violence.
- Many crashes involved **pedestrians or bicyclists**, with contributing factors including **speeding, poor lighting, lack of sidewalks, and impaired driving**.

Enforcement and Education Needs

- **Thurston County Sheriff's Office** has limited traffic enforcement staff and resources.
- There's interest in greater of enforcement of safer motorist speeds and automated enforcement.
- There's a desire for **more consistent school zone enforcement** and better public awareness campaigns.
- Education regarding safety benefits of roundabouts and how to enter and exit them correctly would support broader acceptance of this infrastructure as well as improve the user experience in them.

Infrastructure and Maintenance Issues

- Sidewalks and bicycle lanes are often missing, obstructed, or poorly maintained.
- Debris from chip sealing and recycling glass creates hazards for bicyclists.
- Curb ramps often direct pedestrians into traffic rather than crosswalks, making it unsafe for vision-impaired individuals.

Lighting and Accessibility

- Participants want **better lighting** at crossings, transit stops, on streets accessing transit, and along rural roads.
- There's a call for **improved access for people with disabilities**, including better-maintained sidewalks and APS signals.

Land Use and Transit

- Participants support **land use changes** that reduce the need to drive for everyday trips.
- **Transit service gaps**, especially in **rural areas** and during evening hours, limit safe mobility options.

Community Input and Locations

- Sixteen percent of survey responses included **specific location-based feedback**—ranging from safety concerns to suggested improvements.
- Residents appreciate the roundabouts in some areas, but others find them confusing or poorly designed.

Nisqually Indian Tribe Community Concerns

- Speeding and impaired driving.
- Left-turn and crossing challenges on Hwy 507.
- Roundabout confusion and lack of pedestrian crossings near Red Wind Casino.

Bucoda Community Concerns

- Lack of safe pedestrian infrastructure, reckless driving, and excessive vehicle speeds, especially on Hwy 507 and Rainier Road.
- Additional issues included motor vehicle noise, unsecured loads, malfunctioning pedestrian signals (RRFB), and poor roadway visibility due to missing reflective striping.

RuralTRANSIT Bus Rider Feedback

- Desire for expanded transit frequency.
- Concerns about safe access to transit for people walking or bicycling along rural roads.
- Support for traffic calming and safer roadway design.

Engagement Plan Methods

Open Engagement

Open Engagement included an online survey, and participatory web map, and a pop-up event.

- The **online survey** was available in Spanish and English and included a series of questions to learn more about participants' transportation habits, priorities, and concerns. The survey was included alongside the online open house and web map, and responses were collected from October 31, 2024 – January 7, 2025. There were 188 responses to the online survey.

- A **participatory web map** was included in the online survey to create a space where community members could indicate locations where they felt unsafe. There were 377 points added to the map.

- During **pop-up events,** participants were invited to identify their top three transportation safety concerns with an interactive activity as well as identify locations on a map where they felt unsafe. Pop-up events were held at the following locations:
  - Nisqually Indian Tribe Housing Fair (Nisqually Indian Reservation): Friday, October 18, 2024
  - Boo-Coda Spook-Tacular (Bucoda): Saturday, October 26, 2024
  - Ruby Bridges Walk to School Day, Lydia Hawk Elementary School (Lacey): November 13, 2024

Targeted Engagement

- Toole Design staff attended the following **community partner meetings** to share information about the Transportation Safety Action Plan, invite participation in engagement events, the online survey, and web map, and listened to participant transportation safety concerns.
  - Healthy Kids, Safe Streets Network: October 1, 2024
  - Community Design Action Team: October 10, 2024

- **Bus Intercept Surveys:** Toole Design staff rode on two ruralTRANSIT routes (#3 & #4) on the morning of November 13, 2024, to conduct bus intercept surveys with riders and drivers to find out more about their experiences getting to and from transit and their transportation safety concerns

- The project's **Community Advisory Committee (CAC)** met with Technical Advisory Committee members representing the following Thurston County partners:
  - Thurston County Public Works: Traffic Operations and Road Operations
  - Thurston County Sherriff's Department
  - North Thurston School District
  - Olympia School District
  - Tumwater School District

  CAC meeting dates and topics covered included:

  - September 17, 2024: Project Kick-Off - The meeting covered the elements of a Safety Action Plan and SS4A grant requirements, and the Public Engagement Plan
  - December 11, 2025: The meeting included an update on public engagement, review of the High Injury Network, and Equity Analysis
  - February 12, 2025: The meeting covered key findings from online engagement and proposed project locations and countermeasures
  - April 2, 2025: Updated High Risk Network and key takeaways from public engagement

- The project team conducted five **listening sessions** with community partners and four listening sessions with CAC members, including:
  - Housing Authority of Thurston County
  - Capital City Council for the Blind
  - South Sound Parent to Parent
  - Intercity Walk N Roll Program
  - Trails/Bicyclist community advocates
  - Public Safety: Thurston County Sherrif's Department
  - Thurston Regional Planning Council
  - Tumwater School District
  - Washington State Department of Transportation (WSDOT)

Survey and Web Map

The survey and web map were open from October 31, 2024, to January 7, 2025. It was offered in both English and Spanish. However, there were no responses recorded in Spanish. It was advertised through posters and business cards which included a QR code, which were available at outreach events, on Thurston County's website, via Thurston County's social media channels, and with listening session participants who were asked to spread the word with their networks. Although the response numbers were not sufficient to be statistically valid, both the survey and web map results reveal significant concerns about road safety in Thurston County, especially regarding bicyclists and pedestrians, speeding, impaired and distracted driving, and lack of safe infrastructure. Respondents expressed a desire for more safety measures, safer road design especially for people who walk, bicycle, or use transit, and more enforcement of traffic laws. Stories from crash survivors and family and friends of people who have been severely injured or died in crashes emphasize the human impact of traffic violence and highlight the importance of improving both infrastructure and motorist behavior to create safer conditions for all.

Demographics

Answering demographic questions was optional for survey respondents. Approximately 88% of survey respondents answered the demographic questions. There was a roughly equal number of respondents identifying as a woman (46%) and a man (44%), a majority of these were people over age 65 years, identified as speaking English as their primary language at home (95%), and had incomes between $50,000-$124,999. Seventy-four percent of respondents said they have ready access to a working vehicle. Thirty-five percent of respondents said they have some type of disability, with the highest percentage of these indicating a mobility disability (17%), followed by 11% who had some kind of hearing disability, and 8% with some kind of vision disability. Both vision and hearing disabilities were often combined with other types of disabilities such as cognitive/mental and mobility disabilities. Table 1 shows a demographic summary of both survey respondents compared to unincorporated Thurston County and Washington State demographics. Survey respondents did not reflect the racial/ethnic, age, or economic diversity of Unincorporated Thurston County. For this reason, targeted outreach to communities typically underrepresented in planning work was included as part of the development of this Plan.

Table 1: Survey Respondent, Unincorporated Thurston County, and Washington State Demographics

	2022 Population	People Under 18 or Over 65 Years	People identifying as Black, Indigenous, Hispanic/Latino, or Person of Color	People With Language Other Than English Spoken at Home	People Living with a Disability	Populations Living Below 200% of the Federal Poverty Line[1]	Households with Zero Vehicles
Survey Respondents	188 (number of respondents)	49%*	8%	12%**	35%	N/A ***	N/A****
Unincorporated Thurston County	160,873	40.3%	31.8%	1.6%	11.9%	19.3%	3.4%
Washington State	7,688,549	37.6%	43.6%	3.8%	10.7%	23.0%	6.9%

*Forty-nine percent of survey respondents were ages 65 and over. There were no survey respondents under age 25 years. The next largest numbers of respondents per age group were people 35 to 44 years old (16%) and 55 to 64 years old (15%). The smallest number of respondents per age group was people ages 25 to 34 years (5%).

**Ninety-five percent of survey respondents spoke English as their primary language at home. Of these, 12% spoke an additional language. Additional languages included German (2%), Korean (1%), Russian (2%), Spanish (4%), Tagalog (1%), Vietnamese (1%), Arabic (1%), Other (1%).

***Two hundred percent of poverty level is calculated based on household income and household size. The survey only asked for income level, not household size. Thus, this figure is not included in this table. However, 14% of respondents had an income less than $25,000-49,000, 49% of respondents had an income between $50,000-124,999, and another 15% of respondents had an income between $125,000-200,000+.

****The survey question did not assess whether households had zero vehicles. However, 74% of respondents indicated they have access to a working vehicle.

Additionally, 46% of survey respondents identified as a woman, 44%as a man, 7% preferred not to say, and 3% as gender nonconforming or nonbinary.

[1] 200% of the poverty line means twice the poverty threshold. It's a broader measure that includes households with incomes up to twice the federal poverty level (FPL).

Figure 1 below shows the number of survey respondents by zip code. Most respondents reside in the Olympia zip codes of 98502, 98512, and 98501. A high number of respondents were also located in the northern zip code of 98506 and 98513. The southeastern area of the County saw less participation in the survey.

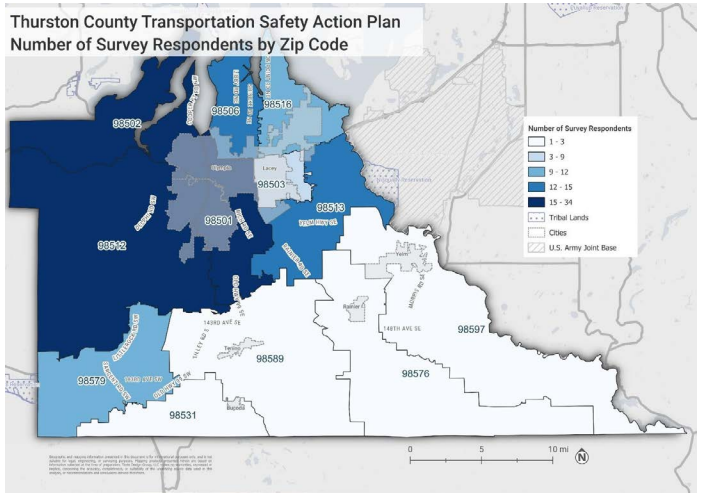

Figure 1: Survey Respondents by Zip Code

Responses To Survey Questions

Question 1: Please describe the area in which you live: City, Rural (outside city or suburbs), suburbs, and town.

Respondents live in the following contexts:

- City: 39%
- Rural (outside city or suburbs): 31%
- Suburbs: 26%
- Town: 4%

Question 2: How do you usually get around the area?

Participants could choose more than one answer. Figure 2 shows that a majority of respondents travel around the area in a personal motor vehicle (93%), followed by walking (46%), biking (29%), taking public transit (24%), using a wheelchair or other mobility aid (3%), riding a motorcycle (3%), in a carpool or vanpool (2%), personal electric scooter (2%), or by taxi or rideshare (1%).

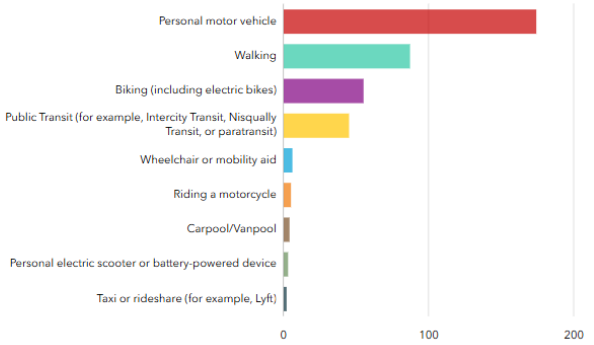

Figure 2: Survey Respondents' Travel Mode

Question 4: What makes you feel unsafe when you're using the streets or roads in Thurston County? Choose your top three transportation safety concerns.

Survey results shown in Figure 4 below suggest that top concerns involve a mix of behavior and infrastructure related concerns, with "people driving too fast" emerging as the highest concern followed by a nearly equal number of respondents citing "lack of safe places to walk" and "lack of safe places for bicyclists" as a top concern. The next concerns are related to driver behaviors of "reckless or aggressive drivers" and "distracted driving."

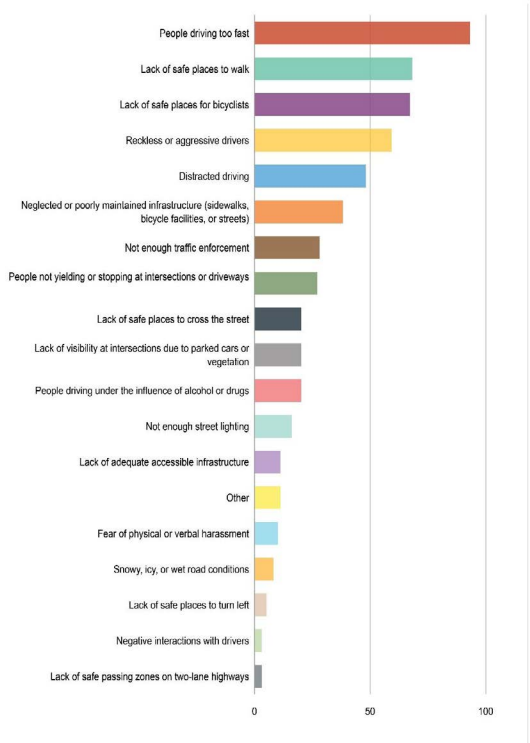

Figure 4: Survey Respondents' Top Transportation Safety Concerns

Question 5: Below are some safety measures that are generally effective in reducing traffic fatalities and serious injuries. Choose your top three that you would like to see implemented.

Survey results in Figure 5 below suggest that the top three preferences of respondents for safety measures were creating more space for people to walk or ride a bicycle that is separate from motor vehicles, improving crossings, and greater traffic safety enforcement. This is followed by improving intersections and encouraging safer driving speeds. These preferences correspond to the top concerns expressed in Questions 6 and 10.

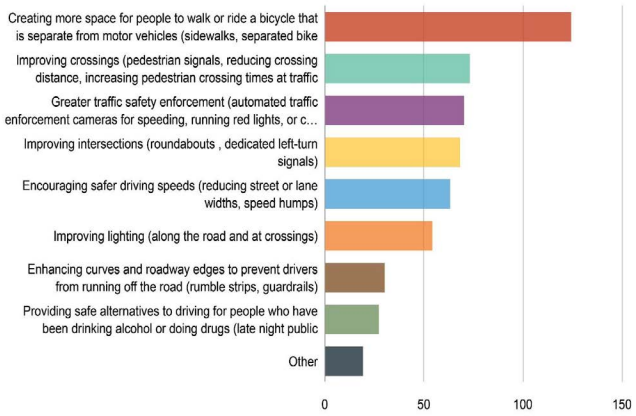

Figure 5: Survey Respondents' Top Preferred Safety Measures

Question 6: Have you or someone you are close to ever been involved in a crash that led to someone dying or being seriously injured in Thurston County?

Results: 83% of respondents answered "No" and 17% of respondents answered "Yes."

Question 7: If you answered yes, to the previous question, are you willing to share your story anonymously? Your story may be used in project materials to convey the personal impact of traffic violence. Please do so here:

Fifteen respondents chose to share the following stories below which included accounts of long lasting injuries and pain, paralysis, and death. Six of these stories involved crashes with pedestrians with crash factors related to lack of street lighting, crossing the street, lack of sidewalks, speeding motorist, impaired driving, and distracted driving. Two of these stories of crashes involved bicyclists, and four involved motorists. The motorcyclist crash involved speed and hitting a fixed object. The motorist crashes had head-on and angle (T-bone) crash types, and involved failure to yield, curves, gravel, impaired driving, and distracted driving.

Behind the numbers of fatal and serious injuries shown in the crash data analysis done as part of this Safety Action Plan, these stories show the significant human impact of our existing transportation system and driver behaviors. Community members have had their lives changed forever when loved ones, friends, colleagues, students, and neighbors have either lost their lives or suffered life altering injuries. These stories show the long term physical, emotional, and economic effects of these fatal and serious injury crashes.

Quotes from the 15 respondents are included below, organized by the modes involved in the crash. The quotes are taken directly from respondents and not edited, other than to remove personal information.

Involved a pedestrian:

- "Pedestrian hit and run. Not enough lighting on street."
- "Coworker was hit while crossing the street."
- "My neighbor's 15 year old daughter was walking on Steilacoom Road last year and was hit by a car and killed. There are no sidewalks on that road."
- "A fellow coworker of mine was hit in a crosswalk, was seriously injured and out of work for a few months."

Involved a pedestrian and impaired driving:

- "I was walking in a grocery store parking lot Dec 2015 when a drunk driver sped through, swerved toward me, and hit me with a Chevy Silverado. I flew and slid 60 ft and he left. I was found in the dark icy parking lot and EMTs arrived. They thought I was OK and weren't going to take me in but I had trouble speaking and couldn't remember my name. They agreed to take me to the ER when the Tumwater PD investigator suggested it to be safe and wanted the hospital docs to strengthen the case. I'm so thankful. I had a severely fractured skull and subarachnoid hemorrhage. I was overdosed on dilaudid and observed in neurology over 4 days for continued bleeding to determine if I needed brain surgery. I was off work for 6 months and had to start 12 hr/week. It was another year to hit FT. I'm diagnosed with personality change and my thyroid and hypothalamus no longer work correctly due to the damage. People are TERRIBLE drivers in parking lots and near pedestrians, bike riders - even sober."

Involved a pedestrian and distracted driving:

- "A person not paying attention ran me off the road where no lights no sidewalks inside the city"

Involved a bicyclist:

- "My neighbors, on either side of my house on the West side of Olympia, used to ride their bikes often. They were older adults, very safety conscious. One adult was hit by a car, they died a few months later, from the injuries. The other neighbor was a younger man, 30 yr old, who commuted to his job near

downtown Oly. He was also hit by a vehicle. His leg was in a cast for months and month, severe pain. He lived. I do not get on a bike here in OLY (once someone threw a beer at me)."

Involved a motorcyclist:

- "A young man I knew, loved to ride his motorcycle too fast. One day he was going too fast and hit a pole. It was entirely his own fault."

Involved a motorist:

- "Hubby hit head on by a semi Hwy 12 by Rochester HS. Almost died. Airlifted to Harborview in 2013. Student involved also almost died. Airlifted."
- "I was injured in a motor vehicle when another driver t-boned my car causing lasting injuries that I have still over 10 years later."
- "Our neighbor across the street from Tilley Rd and S Tenino was U-turning from his house and was T-boned by a car coming from the curve. The neighbor died instantly."
- "My sister and her family were hit by a person who was turning left and did not yield, their car was totaled, and my family had broken bones. Two children in the back seat were unharmed due to car seats. It was devastating, and my sister and brother-in-law were off work for months."
- "Loose gravel that is tracked out from roads where construction is being done or for whatever reason can be a real danger especially on corners, with wet weather. When I was 16, I went to my first funeral, it was my friend ___. My other friend was driving around a slight curve on Steamboat Island Road and it was dark, rainy and there was a lot of loose gravel on the main road. More could be done to monitor road conditions for track out hazards in specific, high risk locations."

Involved a motorist and impaired driving:

- "A friend almost died, ended up in a wheelchair for life, no use of his legs. It was a single car, single occupancy accident. Alcohol was involved."

Involved a motorist distracted driving:

- "Driver not paying attention, crashed into my daughter, totaling the car and leaving her to deal with back problems for the following 12 yeas"

Question 8: Is there anything else you would like to share with our team about traffic safety concerns or how to improve traffic safety in Thurston County?

There were 113 additional comments that respondents shared through the survey. The chief concerns that emerged among respondents were related to the following categories:

Bicycling: With 18% of the comments relating to bicycling, this was the top concern among survey respondents. Of these, a large share of respondents does not feel safe bicycling in Thurston County due to lack of bike lanes, bike lanes ending, motorists entering bike lanes or not seeing bicyclists, and roadway design. Respondents would like more dedicated separated bike lanes, safer trail crossings with traffic calming, more bicycle trails (like the Chehalis Western Trail), more education for motorists about safe passing distance, educating motorists to use the "Dutch Reach" to open door with far side hand, causing the driver to look behind when opening a car door, and installing "LBIs" or Leading Bicyclist Intervals at traffic signals to give bicyclists a head start.

Locations: More than16% of the comments related to specific locations that survey respondents with either concerns, suggestions for improvements, or positive feedback. These include the following (listed numerically and then alphabetically):

- 61st Avenue NE (road to Butterball Cove): Dangerous because of hairpin curves and lots of pedestrians
- 79th Avenue: Needs a sidewalk cross from Pick & Pull

- 93rd Ave: Please expand transit access off of this route because the closest bus stop is not accessible by walking or bicycling.
- Highway 12: Add a left turn lane for turning south onto Denmark
- Old Highway 99:
  - Intersection with Rich Road: Please add roundabout
  - Intersection with Hwy 507: Please add sidewalks and/or bike paths for older adults and schoolchildren who use roadway
- Highway 507: Dangerous for bicyclists especially during Seattle to Portland bike ride due to curves and lack of shoulder
- Abernathy Elementary: Lack of sidewalks and roadside improvements, walk zone for district is almost nonexistent, majority of Abernathy doesn't have safe walking facilities for students
- Bethel & 26th: Want intersection to be a four-way stop
- Chehalis Western Trail:
  - Want safe non-motorized access between this trail and nearby businesses.
  - Want improved crossings in the north especially by South Bay Road
- Delphi, Case, and Tilly Roads:
  - Chip Sealing causes problems for bicyclists on road shoulders
  - Have to swerve to avoid debris in bike lanes
- Martin Way: Motorists drive too fast
- Marvin Road: Should lower speed limit on the Cabella side of freeway
- Mullen and Stikes Dr: Want safer trail crossings because hills cause blind intersections with bike trails
- Linwood & Lake Park Drive: Like the cement barrier because it slows people down when turning
- Tenino and rural areas: Please add more crosswalks and sidewalks
- Road to Tolmie: Not safe for pedestrians and bicyclists
- Ruddell Road:
  - Fast traffic over 40 mph
  - Intersection with Pacific Avenue: confusion with two lane left turn, with people entering the wrong lane
- South Bay Road: Motorists drive faster than 40 mph; dangerous for pedestrians and bicyclists; poor lighting
- South Olympia/Tumwater/Scott Lake Area: Please expand a bus route there
- Tenino to Centralia: Want a dedicated trail to connect these towns
- Trosper Series of roundabouts: Like them because solves congestion and improves walking
- Ralph's by Pit Stop: Want more sidewalks
- Wiggins Road:
  - Motorists pass in no-passing zone
  - Roundabouts between Fones and Wiggins need to be improved
- Woodland Trail: Lack of vegetation maintenance obstructs visibility of motorists to see bicyclists
- Yelm Highway
  - Unsafe left turns and crossings
  - Motorists drive too fast
  - Unsafe for bicyclists

Behavior: Sixteen percent of respondents shared concerns related to motorists' speeds, impaired, reckless, and aggressive driving, and failure to yield.

Enforcement: Nine percent of respondents cited concerns related to enforcement. Of these, a considerable number desire more enforcement of safer driving speeds. Another concern was related to personal security while walking to transit and a desire for more police presence walking or bicycling.

Walking: Six percent of respondents' shared concerns related to pedestrian safety and infrastructure There is a desire for more sidewalks, safer access to transit stops, and safer crossings with more visibility for pedestrians.

Roundabouts: Five percent of respondents shared concerns related to roundabouts. About half of these want more roundabouts and like them, while the other half find them confusing and do not like how they are designed.

Maintenance: Five percent of respondents had concerns related to maintenance, particularly for maintenance of bikeways, including a desire for street sweeping after glass recycling due to dangers of broken glass to bicyclists, bumpy trail surfaces, and dangers to bicyclists due to debris from chip sealing on road shoulders. There was also a suggestion to take advantage of roadway and sidewalk repair projects to add bike lanes. Another person with a disability cited discomfort due to uneven, bumpy pavement while riding buses.

Infrastructure: Five percent of respondents had concerns regarding infrastructure. This included a desire for better signage on one-way streets, more traffic calming, more visible lane markings especially when the roadway is wet or it is dark outside. Others expressed a dislike for roadway reflectors on arterials and square curbs on traffic islands.

Lighting: Four percent of comments were related to a desire for improved lighting on rural roads, at pedestrian crossings, and on side roads that provide access to transit stops.

Land Use: Four percent of comments related to a desire for land use that allows people to reach everyday destinations without driving.

Transit: Two percent of comments were regarding transit with a desire for faster, more frequent bus service, "so it doesn't take two hours to get somewhere you could drive in 20 minutes" and to offer people with disabilities or others who cannot drive the ability to go places independently in the evening (currently cannot do this because bus service ends at 7 pm).

Web Map

Survey respondents were asked to identify locations on a map where they felt unsafe: "Please drop a pin at a location where you feel unsafe." Respondents identified 377 locations where they felt unsafe. Figure 6 shows that many of the locations identified as unsafe were within incorporated Thurston County. However, there were clusters of unsafe locations identified along Yelm Highway, on the roads east of Lacey, to the west of Olympia, south of Tumwater, and around Ground Mound.

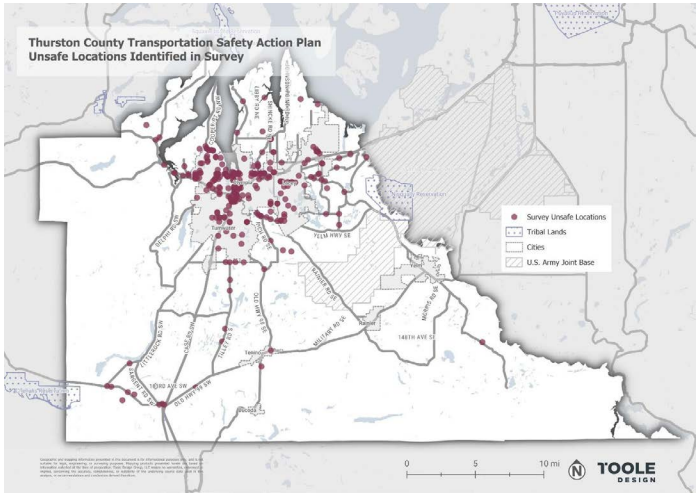

Figure 6: Unsafe Locations Identified in Survey

In-Person Outreach

Demographics

There were three pop-up events held, which engaged approximately 100 people at the Ruby Bridges Walk to School Day held at Lydia Hawk Elementary School, at the Bucoda Boo-Coda Spook-Tacular Halloween festival, and at the Nisqually Indian Tribe Housing Fair. While demographics were not gathered, there were a wide range of racially/ethnically diverse participants. Figure 7 shows the locations chosen for pop-up events and bus intercept surveys were in areas where the Equitable Transportation Community (ETC) analysis indicated there were higher proportions of disadvantaged populations.[2]

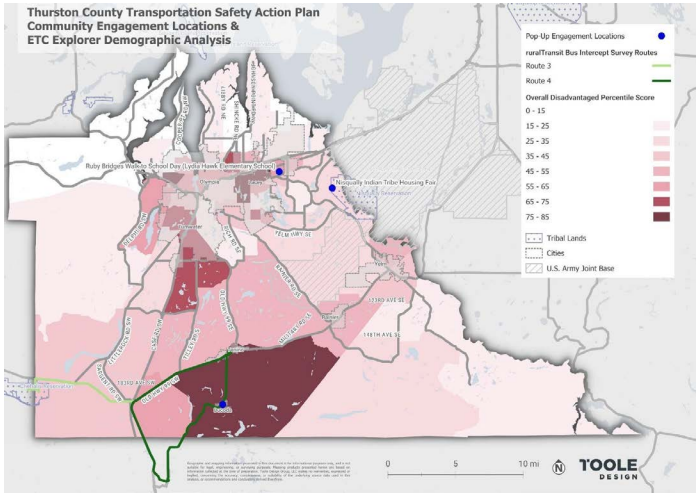

Figure 7: Engagement Locations and ETC Explorer Demographic Analysis

[2] The USDOT ETC Explorer Tool was an interactive web application that explored the cumulative burden disadvantaged communities experience resulting from underinvestment in transportation. The Tool is no longer available at the time of this memo (April 2025).

Pop-Up Events

- Nisqually Indian Tribe Housing Fair (Nisqually Indian Reservation): Friday, October 18, 2024
- Boo-Coda Spook-Tacular (Bucoda): Saturday, October 26, 2024
- Ruby Bridges Walk to School Day, Lydia Hawk Elementary School (Lacey): November 13, 2024

Top Transportation Safety Concerns at Pop-Up Events

Pop-up event participants identified the following top transportation safety concerns:

Nisqually Indian Tribe Housing Fair:

There were 35 people who stopped by the pop-up event table. Figure 8 shows transportation safety concerns for participants, with people driving under the influence of alcohol or drugs as the top concern, followed by reckless or aggressive drivers, and lack of safe places to cross the street. Additionally, participants shared the following concerns:

- Many motorists speed
- People not stopping at stop signs on Reservation Road SE
- Difficulty making left turns onto Highway 510
- Need more crosswalks near Nisqually Red Wind Casino
- People do not know how to enter roundabouts: either wait too long to enter or cut people off
- People drive erratically on Yelm Highway

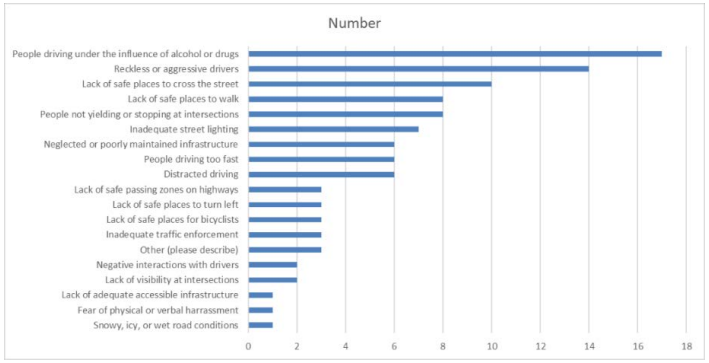

Figure 8: Nisqually Indian Tribe Housing Fair Top Transportation Safety Concerns

Boo-Coda Spook-Tacular (Bucoda)

Toole Design provided Thurston County staff with a pop-up kit to set up a table at the Halloween festivities known as Boo-Coda Spook-Tacular held in Bucoda in the south central area of the County. There were 33 people who stopped by the event table. Figure 9 shows their transportation safety concerns, with lack of safe places to walk, reckless or aggressive drivers, and people driving too fast. Participants also shared the following comments:

- Lack of pedestrian facilities (specifically between Yelm & urban areas)
- Speed people travel on Hwy 507 and Rainier Rd
- Motor vehicle noise is an issue
- Unsecured loads are an issue
- Rectangular Rapid Flashing Beacon (RRFB) at new crossing in Rainier is not operating correctly
- Lack of reflective striping on the roadways

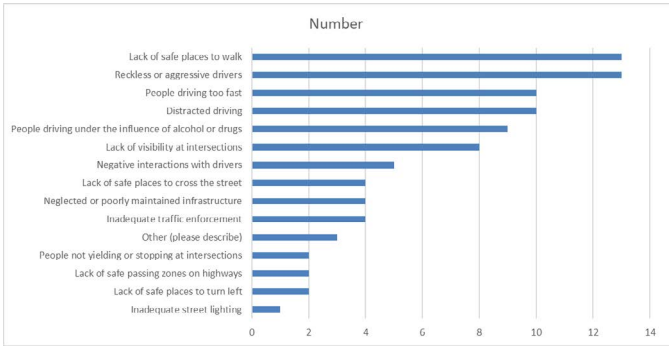

Figure 9: Boo-Coda Spook-Tacular Participant Top Transportation Safety Concerns

Ruby Bridges Walk to School Day

Lydia Hawk Elementary School, Lacey

This event focused on celebrating student and family participation in the Ruby Bridges Walk to School Day. Due to the brief time frame available at school event, the team focused on congratulating students on their participation in the Walk to School Day and sharing information about the safety plan with parents. The Intercity Walk N' Roll Program Supervisor and the physical education teacher at Lydia Hawk Elementary School were key partners in organizing participation in this event.

At the event, students were offered protein snack bars and a chance to spin a wheel with prompts to describe some things they enjoyed and did not enjoy about walking and bicycling in their neighborhood. Parents were given business cards with information and links about the Transportation Safety Action Plan and a QR code to participate in the online surveys. Events such as book fairs, and the Cookies and Cocoa Concert held in December would be good opportunities for future engagement with this community.

Figure 10: Ruby Bridges Walk to School Day Participants at Pop-Up Table

ruralTRANSIT– Bus Intercept Surveys

The Thurston Regional Planning Council operates ruralTRANSIT bus service with three routes in the southern area of Thurston County. Toole Design staff rode on two ruralTRANSIT routes (#3 & #4) on the morning of November 13, 2024, to conduct bus intercept surveys with riders to find out more about their experiences getting to and from transit and their transportation safety concerns. ruralTRANSIT buses have approximately five rows of seats with a limited number of riders (there were never more than five riders on the bus at a time during the ride-alongs). Toole staff invited all passengers who boarded the bus to participate in the survey, with five riders and one driver who agreed to answer questions. While this number may seem small, it is similar to the number of participants expected for a similarly themed focus group. By talking to people while they were riding the bus, people did not have to take extra time out of their day to participate. Participants were offered a snack bar as a thank you for their participation. The bus intercept survey questions and responses are included below. Responses were not edited, unless to summarize similar responses.

Figure 11: ruralTransit Driver and Rider Bus Intercept Survey Participants

Question 1: What bus route(s) do you usually ride?

Route #3: 3 participants
Route #4: 2 participants

Question 2: How do you usually get to and from your bus stop?

- Walking:
  - One respondent walks approximately 2 miles to get to and from the bus stop
  - Three respondents walk approximately ¼ - 3 blocks to their bus stop
- Biking: One respondent rides his bicycle to the road where the bus route passes, flags down the bus, and loads the bike onto the bus bike rack.

Question 3: Where do you feel the most safe while getting to a bus stop and/or waiting for the bus? Why do feel safe at this location?

Participants felt the most safe on well-lit sidewalks or in their neighborhood.

Question 4: Where do you feel the *least* safe getting to a bus stop or waiting for the bus? Why do feel unsafe at this location? Respondents shared concerns about lighting, lack of sidewalks, lack of safe bikeways, high motorist speeds, maintenance, bright lights on motor vehicles that make it difficult for bicyclists to see, and personal security at the Ground Mound Transit Center. Specific feedback included:

- "Ground Mound Transit Center doesn't feel safe; stolen cars; not a place to wait. I'm the only one walking to this location."
- "Little Rock Road isn't safe; no sidewalks, no space to walk; walk on opposite of road."
- Highway 12: "Not safe, no streetlights/no sidewalk, no bike path; have to ride on shoulder, dangerous, especially at night. Probably been 50 fatal crashes in past. One time a motorcyclist ran into horse that got loose. Road is narrow and most people exceed speed limit (55 mph). People come up right next to you to see how close they can be to you, it's scary. People should have to dim lights at bicyclists at night because it's hard to see."
- Dark street in the middle of the night.
- Places with poor street maintenance/landscaping.
- Places with "bad" lighting.
- Prism Street & Stone Street in Lacey.
- Stone Street and 66th Street in Lacey: "Two blocks on Stone Street very uneven."

Question 5: If you had a wish list for things that would make it safer to get to and from bus stops and to ride the bus in your community what would be on it?

- "More frequent buses (used to live in Renton where there was a bus every 15 minutes)."
- Multiple respondents mentioned wanting more sidewalks:
  - "It's scary when you're walking on a road without a sidewalk and hear a car coming. You hope they see you and aren't drunk. See a lot of crosses along the road where there have been crashes."
  - "If there were sidewalks, maybe more people willing to take the bus."
- "Bike paths like the one in Centralia that goes to Walmart or one in Tenino and Yelm."
- "Lighting on route to bus stop and at shelters, and at Little Rock Road."
- "Safe street crossings."
- "Appreciate how they give out flashing light key chain to help the bus driver know you're there; has helped in Yelm."
- "Even pavement from overgrown trees."

Question 6: Is there anything else you would like to share with our team about your traffic safety concerns or how to improve traffic safety in Thurston County?

- "Feel pretty safe on the bus with drivers."
- "Wish there was more bus frequency or a have them run a little bit earlier. The first bus is at 7:00 am, means arriving to work late."
- "More bike paths."
- "There are quite a few people out there who can't afford cars or have DUI that ride the bus."
- "Feel safer on bus than driving."
- "Love that buses are free; don't have to worry about change; Huge convenience; Totally respect and appreciate it."

Listening Sessions

From December 2024 to January 2025, the consultant team conducted nine listening sessions with interested parties for the Thurston County Safety Action Plan. These sessions consisted of a brief presentation of the crash data in Thurston County and background context of the Plan, followed by a facilitated discussion with the attendees. Community advocates and staff of community-based organizations or partner agencies were invited to participate. County staff provided the consultant team with the contact information of interested parties to invite to a listening session. The listening sessions were grouped into five categories, listed below, and conducted virtually.

Listening Session Categories and Participants

1. Housing/Shelter Assistance Professionals (Jan 9, 2025)
   Craig Chance, Housing Authority of Thurston County
2. People with Physical Disabilities (Dec 19, 2024)
   Dawn Harrison, South Sound Parent to Parent
3. Schools (active transportation access to schools) (Dec 16, 2024)
   Kerry Wilson, Intercity Walk N Roll Coordinator, Intercity Transit
4. People with Sensory Disabilities (Vision Impairment) (Dec 17, 2024)
   Zandra Brown, President of Capital City Council for the Blind
   Keevan Forbes-Kashani, Thurston County Public Works Dept
5. Bicyclists/Trail Users (Dec 5, 2024)
   Chris Hawkins, WSDOT Active Transpo. Division and Thurston Thrives Community Design Action Team
   Pete Kmet, Community Design Action Team, and former mayor of Tumwater
   Karen Messmer, Community Design Action Team, advocate for safe walking/cycling

Key Takeaways

Risky human behavior is one of the most serious transportation safety issues in Thurston County according to attendees of the listening sessions. Participants gave examples like speeding, distracted driving, driving under the influence of alcohol and drugs, not using turn signals, or wearing dark clothing while walking at night.

There are several aspects of the sidewalk network that participants identified as transportation safety issues. Firstly, the lack of sidewalks altogether is a safety issue for vision impaired people because they have to detour into the roadway. Existing sidewalks are poorly maintained, or not cleared of debris, which creates a hazard for people with disabilities or people who use mobility devices.

Intersections don't feel safe to cross. Attendees mentioned driver behavior like speeding and red-light running that make them feel apprehensive of crossing, even if there is a marked crosswalk. In addition, many intersections have curb cuts that point to the middle of the intersection, instead of the direction of the crosswalk. This poses a challenge for vision impaired people because they use the direction of the curb cut as a direction cue of which direction to cross. Not every intersection has an Automated Pedestrian System (APS) pushbutton for pedestrians to press to cross safely.

For bicyclists, crossing county roads is challenging because the visual sight distance due to wide roads. In addition, cars were noted as often speeding so bicyclists wait a long time for a large enough gap in traffic to feel safe crossing.

Participants offered a variety of suggestions for how Thurston County can best support their organization's members to move safely:

- Build more sidewalks; maintain existing sidewalks
- Build more protected bike lanes; keep existing bike lanes clear of debris, including from snowplows
- Increase transit to rural areas
- Increase transit options for people with disabilities
- Improve access for people with disabilities
- Design crossings and roadways in such a way that it communicates to motorists that they need to go slower (e.g. narrow lanes, raised crosswalks)

List of Questions and Expanded Answers, by Category

The questions asked to listening session participants are listed below, along with participants' answers. The answers are organized by each listening session (Housing, People with Physical Disabilities, Schools, People with Sensory Disabilities (Vision Impairment), and Bicyclists/Trail Users). The answers are summarized in bullet format from notetakers who attended the listening sessions.

Question 1: Does anything surprise or concern you about the crash data we have presented?

Housing:

- Yelm Hwy and Normandy
- Tumwater, between 2nd Ave and Cleveland
- Wiggins Rd has no shoulder and is a scary place to bike or walk

People With Physical Disabilities*:*

- Surprised the Yelm area didn't have as many crashes, and that Lacey had more
- Surprised at significance of gaps between Rural Transit and the zero vehicle households
- Hawks Prairie area of Lacey – there's tons of developments and apartment complexes up there now

Schools:

- Both Lydia Hawk and the other school have received safe routes to school funding in the past; interesting that they were highlighted even though they've received some improvements
- L.P. Brown School is next to a transit stop but they don't have safe access to the stop, which means they can't take transit to go on field trips, which a lot of other schools do

People with Sensory Disabilities (Vision Impairment):

- Surprised by number of households without vehicles

Bicyclists/Trail Users*:*

- Interesting to see Yelm Hwy in SE Olympia and east of Lacey on Martin Way pop up
  - There is a huge cluster of pedestrian and vehicular crashes there
- It would be nice to include incorporated areas, particularly for trails

Question 2: What do you believe is the most serious transportation safety issue in your community?

Housing:

- Human Behavior (e.g., People who choose to drink and drive; people who don't have turn signals in their cars, or don't turn their headlights on; people who like to wear dark clothing and walk in an intersection)

People With Physical Disabilities*:*

- Speeding and distracted driving – both very significant right now
- Increase in population

- People are not paying attention, doing things like crossing streets where there are marked crosswalks without looking

Schools:

- Gaps in pedestrian and bicyclist infrastructure
- Speed

People with Sensory Disabilities (Vision Impairment):

- Lack of sidewalks
- Bad maintenance of existing sidewalks (not cleared of debris, have cracks)
- Some sidewalks are curvy which is not accessible for vision impaired people
- Curb cuts are placed in a position that points to the middle of intersection, instead of one ramp going in each direction of crossing
- Roundabouts, especially multi-lane, are a nightmare
  - » Instructions on Access Board say to make eye contact with driver, but vision impaired people can't see
  - » Drivers are looking to the left for traffic, not to the right for pedestrians
  - » Roundabouts create a shut-in
- Not enough Accessible Pedestrian Signals (APS) with push buttons for audible directions saying which way is safe to cross

Bicyclists/Trail Users*:*

- Pedestrians crossing multi lane streets often stand in center lane in the middle of nowhere trying to get across
- Surprising there aren't even more FSIs on Martin Way (especially east of College Street), Pacific Ave, and Yelm Highway
- Capital Boulevard is another multi lane road that's dangerous
- County roads built without any shoulders are problematic, but they're far from where people live, so won't get as much use as roads closer to urban edges
- Crossings are always important to look at
- Crossings between transit stops have a high potential for collisions
- Traffic speeds
- People not stopping at RRFBs
- Since the pandemic traffic violations have gotten worse and enforcement has gone down
- Motorists running red lights

Question 3: What is the greatest challenge or barrier for the people who your organization serves to safely access your services and other everyday neighborhood destinations with the existing transportation system?

Housing:

- Homeless people set their stuff out on the sidewalk, and it becomes an ADA accessibility issue; patrons have to walk in the middle of the street to access their services
- Lack of access to public transportation is a barrier

People With Physical Disabilities*:*

- Lack of sidewalks or the existing sidewalks being in disrepair from tree roots, etc.
- Sidewalks being blocked or not clear
  - » We don't have Lime bikes, but often sidewalks aren't clear, then you're in the road with your wheelchair and people are distracted or get mad at you
- Lack of lighting
  - » Commercial areas are pretty good, but residential and transitional areas or residential getting out of city (like on the way from Lacey to Yelm) are not so good.

Schools:

- Gaps in ped and bike infrastructure and speed. Can have a great sidewalk, but there's that one spot or one intersection that's not safe
- Areas where jurisdictions meet might be overlooked. It seems like an issue when overlapping jurisdictions don't work together. For example, there are some areas, like in Tumwater (Black Lake Elementary), where there is somewhat safe access to school. But there's a county park that we don't have safe access to

People With Sensory Disabilities (Vision Impairment)*:*

- There are some holes in transportation system
- There are times we can't get to places we need to go
- It's incorrect to assume disabled people have caregivers
- Trail crossings at county roads are challenging
  - » We want to encourage people to use the trails, but if the crossings are unsafe it's hard to get people out

Bicyclists/Trail Users*:*

- We see cross traffic on semi-rural roads
  - » It's a challenge to get across county roads on a bike
  - » Visual sight distance is far because the road is wide
  - » Speed of traffic
  - » Solution would be to build a bridge but that's too expensive
- Another solution is to have bike bars next to the trail where you stop and yield to traffic
  - » It's a bar you can hold on to, so you don't have to dismount halfway while waiting for cars to pass
- Wider shoulders
- The solution to safety is to push for more off road trails
  - » Concern as urban sprawl continues that we'll lose opportunities for trail expansion
- Could also have a trail along the median, but that poses maintenance issues
- WSDOT sees trails as a transportation facility
  - » They serve most of the population centers in the county and run through some unincorporated areas
- Proven way to increase safety is to have separation of modes

- Rural roadways are unlikely to get separation of facilities, e.g. you can't do trail bridges over roads. So, the next best thing on the menu…Neck down lane widths. Decrease exposure for people crossing. Get speeds down as motorists approach those crossings.
- Where are vulnerable road users? Where is demand greatest for bike/ped infrastructure?
  - » It's probably not effective to use bike/ped counts. A proxy for that is equity needs data focused on socio economic status. Those folks are arguably more dependent on active transportation. They either don't have a vehicle or are dependent on transit. They're more likely to be out walking and biking. The methodology for Sandy Williams Connecting Communities is a good way to do it
- In addition to looking at where crashes have already occurred, think about where they might occur in the future.
  - » Look at LTS of roadways. Number of lanes, speeds, volumes. Because this is where danger is coming from.
- If we want people to feel safe on trail system and use it as transportation, then we can't wait till we have a crash. Need to make it into a place they already feel safe. That's a different look at it. Because it's a measure. It won't serve everyone, because some people will ride on the shoulder.
- People report that cars don't slow down at RRFBs. Adding lighting so drivers can see pedestrians and having slower speeds are just as important. It's intimidating to get to a county road crossing now and see the speeds of the cars going by.
- Make the crossings and approaches to the trail system as safe and inviting as possible. Trails are a critical part of active transportation infrastructure in Thurston County, and they do provide fairly decent access to most communities in the county.

Question 4: How can Thurston County best support the people who your organization serves to move safely either on foot, by bicycle, in public transit, or a motor vehicle in the city and region?

Housing:

- Bike paths are laden with debris and that discourages people from biking
- Bike lanes/paths have branches and don't get maintained
- Sometimes maintenance crews plow snow onto bike lanes

People With Physical Disabilities*:*

- Get more transit to rural areas. Dial a lift with intercity transit is great but doesn't go near where it should. Participant suggested dial a lift as an in between option or a friend with a disability (wheelchair?) and they couldn't get service in south Tumwater area.
- We haven't had to rely on public transit, but I think any expansion of public transit for folks with disabilities is good. They do a good job coming to events, being out there, being exposed. It is cumbersome to get initially enrolled with intercity transit dial a lift (could be improved).

Schools:

- More connected sidewalks
- Protected bike lanes
  - » The bike lane on Martin Way is not safe for anyone, especially children. There's a double white line, but it still doesn't feel safe enough.

People With Sensory Disabilities (Vision Impairment)*:*

- Build more sidewalks, safer sidewalks, clean sidewalks
- Clear away branches/roots that grow over sidewalks so blind people don't have to walk in the street
- Don't put garbage cans or signs on sidewalks
- Patio dining impair mobility

- I will find an obstacle with a cane, whereas with a guide dog it will navigate me around obstacle. But they're trained not to go into street. So, if there's an obstacle, I'd just end up standing there.

Bicyclists/Trail Users*:*

- Speed is a big factor
- Enforcement of traffic rules like red light cameras
- Geometrics drive people's behavior
  - » Design crossings and roadways in such a way that it communicates to motorists that you need to go slower via narrow lanes and raised crosswalks.
- Maintenance
  - » Make sure that shoulders are ridable with a bicycle
  - » Vegetation maintenance

Question 5: Suppose you had a wish list of policies and programs that you think would be particularly effective in supporting the people who your organization serves to access your services and everyday destinations safely. What would be included on the list?

Housing:

- Enhanced lighting at pedestrian crossings
- Improve signage and wayfinding

People With Physical Disabilities*:*

- A barrier is having to pay for or account for the caregiver as well as the person with disability. A lot of the time those folks are on low income. Policy that had the caregiver automatically accounted for, so that they are automatically included.
- Different loading and unload zone accounting for wheelchair spaces
- Any sort of extra high visibility and auditory things as well
- Keeping in mind all different types of disabilities
- People don't know how to drive in roundabouts
- Graded curb access is very hard to navigate in a wheelchair

Schools:

- Automated enforcement in school zones
- Slower speeds, traffic calming
- School streets
- Funding for walking school buses and bike buses
- School speed studies
- Safe Routes to School Action Plan

People With Sensory Disabilities (Vision Impairment)*:*

- Less roundabouts
  - » If there are roundabouts, a safe way to cross them such as RRFBs and refuge islands
- More sidewalks
- Use APS to tell vision impaired people when it's safe to cross
- Parallel curb cuts

Bicyclists/Trail Users*:*

- Expand Inner City Transit's programs county wide
  - » They do a good job with safety education, schoolwork. Can help with behavior and safety of bike peds.

- TRPC just approved a new plan, in which a key recommendation was to have an advisory committee that met regularly to talk about these issues. It would be an active group pointing these things out and bring attention to them. These plans are great, but they gather dust unless someone is continually advocating for what's in the plan.
- Continue tapping into community voices and perspectives in development of plan, and how it's implemented. Having the plan be more institutional with a board or committee. What gets washed out is whether this is impacting vulnerable road users. Economic justice argument for active transportation that we need to make more strongly. They don't have a voice in policy. And we're building things that don't work for them.

Community Advisory Committee Listening Sessions

Key findings from the Community Advisory Committee listening session suggested varying levels of familiarity with the Safe System Approach across agencies, with TRPC and WSDOT showing strong alignment through performance measures and planning frameworks like Target Zero. Agencies collectively hope the Safety Action Plan (SAP) will identify high-risk areas, enhance collaboration, and support future funding and planning decisions. Specific safety concerns included high-speed corridors (e.g., Martin Way, Bald Hill Road), growing traffic near schools, and inadequate infrastructure for pedestrians and bicyclists. Strategies prioritized by participants included roundabouts, high-friction surface treatments, improved pedestrian visibility, and education and enforcement in school zones. Key needs identified were increased funding, expanded enforcement capacity, better data sharing, and interagency coordination. Agencies emphasized the importance of ongoing engagement, streamlined communication, and using data-driven approaches to collaboratively improve roadway safety across jurisdictions.

Listening sessions were held with the following Community Advisory Committee members:

1. Public Safety
   Matthew (Matt) Kohlman, Deputy with Traffic Unit, Thurston County Sherrif's Department
2. Thurston Regional Planning Council (TRPC)
   Aidan Dixon, Associate Planner
3. Tumwater School District
   Stephan DeRout, Safety and Security Manager
4. Washington State Department of Transportation (WSDOT)
   Sarah Ott, WSDOT Olympic Region Traffic Engineer

Listed Questions and Expanded Answers, by Agency

Question 1: Does your agency have any safety-related goals? What role does roadway safety and/or the safe systems approach play in your agency?
Thurston County Sherrif's Department:

- No background of Safe System Approach

TRPC:

- TRPC keeps track of performance measures and is committed to target zero. TRPC has adopted Target Zero – adopted through regional transportation plan. RTP comes up next year – in the process of updating internally. No expected changes to vision zero as part of next update.
- Scoring criteria for STBG funds considers safety.

- Forthcoming SAP will be used to 'take it to the next step'
- Regional coordination on projects also typically includes a safety evaluation as part of plan development
- Would like to see more robust language about safety in RTP

Tumwater School District:

- Transportation department has a big role to play in disaster response
- Have drivers who can go out and check roads before buses go out in disaster scenario
- Most of Tumwater SD buses have cameras on school bus stop signs – transportation department provides information to Thurston County Sheriff's department or Tumwater PD
- Could look into to see if there's any data available on frequency / location of issues

WSDOT:

- Question skipped- good documents already summarizing WSDOT's guidance

Question 2: What do you hope this safety action plan accomplishes recognizing it is just for unincorporated Thurston County?
Thurston County Sherrif's Department:

- Fewer crashes on county roadways. Collisions mean injuries. County roadways have higher speed limits and people drive 'badly' – most of the collisions are vehicle-vehicle collisions. 50-60 mph collisions. Hopes that by education and implementation there will be a reduction in collisions.

TRPC:

- Hope that one of the outputs is identification of areas of note/concern. Hope to get a better sense of what is happening in unincorporated portion of County. Unincorporated county is quite large in terms of the portion of TRPC area.
- Would like safety to be a more direct input in their planning work, hoping that the SAP will be valuable in terms of what the state of the roadway safety is.
- Interested in ways to better understand how to fund these safety projects and what the impact to safety would be on future projects.

Tumwater School District

- Interested in having correct contacts at each agency to coordinate with in case of disaster

WSDOT:

- WSDOT's Safety Funding is allocated by Legislature – no other funding mechanism available. Very limited funds to achieve target zero.
- Having local agencies intentionally exclude where there is joint value and benefit, traveling public doesn't understand whether they're driving on a state or local agency – they just want a good system – to not work together to meet those shared mutual goals is a missed opportunity. Understand County focusing on their roadways but try to keep state highways / intersections included as part of analysis.
- Land use is so important (hence update to key component of Safe System as part of WSDOT standard) – how we organize our network around the land use is critical to improving safety. Are we forcing people to drive? Or are we providing other options?
- Highways don't get development mitigation even though a lot of additional freight use on rural highways – changed so much in last 20 years.

Question 3: Are there specific locations/corridors/or types of facilities you are concerned about in unincorporated Thurston County?

Thurston County Sherrif's Department:

- Martin Way Corridor. Most of those collisions are people taking the flashing yellow left turn arrow and not timing the gap correctly – sideswipe collision.
- North at Sleater Kenney / 15th. Going WB there's a stop sign. Most people make a left to get to Martin Way – sees a lot of sideswipe collisions here, cars getting hit trying to make the gap. Often, it's parents at school pickup time in the afternoon. Cars queue on 15th trying to make that left and people try to squeeze in.
- Four fatality collisions on Bald Hill Road in last year, two were impaired drivers, other two were cars hitting wildlife (Elk). Posted 50 mph. Often pulls people over going 70-80 mph. Especially southern end between Smith Prairie toward Clearwood / Clear Lake.

TRPC:

- No specific corridors in mind. The inter-relationship between North and South County is getting stronger over time, as the population grows in Thurston County. Expected to see more growth in Yelm and the N/S connectors like Rainier Road will be increasingly important and will evolve over time. County growth may be mostly concentrated in Noth County, but specific areas of south county are growing quite quickly. Many rural roadways will likely change in function over that time.
- Focused on corridors that connect density areas, but are not state routes, but may carry urban levels of traffic through urban area.

Tumwater School District:

- Peter G Schmidt Elementary School gets blocked on Capital Blvd and Dennis Street
- East Olympia Elementary School – Rich Road – no sidewalks, kids walking with lots of parent traffic
- Tumwater Middle School – Little Rock Road
- Generally, lots of challenges due to the number of parents who now drive their kids vs. take the bus, parents parking in the middle of the road

WSDOT:

- SR 510, SR 507, SR 101, US 12
- SR 121 (north end in Tumwater near 93rd) –million square foot new distribution center
- Mitigation levels are so low compared to impacts of growth
- Urban mileage of roadway has increased dramatically in last 10-20 years. Highway system has not kept up with the changing land use and density.

Question 4: What strategies do you feel need to be addressed to improve roadway safety? Which strategies are most important?

Thurston County Sherrif's Department:

- Site visibility – can people see other cars? Can cars see pedestrians? Most ped collisions are from pedestrians trying to cross the roadway. Have seen pedestrians hit walking on fog-line on Rainier Road. Most ped collisions are on Martin Way / Pacific Ave.

TRPC:

- TRPC focused on systemic safety – ensuring it is included in all areas of planning and design, enforcement.

Tumwater School District

- On-site circulation and safe pedestrian facilities
- Try to educate parents about safe behavior at school zones – email and/or newsletters
- Parents arriving early and parking on the side of the road 30-45 minutes early

WSDOT:

- Roundabouts – really efficient way of control intersections from a safety perspective (resilient, better ped access, safety, etc.)
- Opportunities for other modes of travel – highways with ped/bike and transit options
- Had great success with high friction surface treatments – great for roadway departure crash types – had a systemic program for high friction surface treatments and another for compact roundabouts
- Adding LPI phases have improved safety at intersections – flashing right or left turn arrow to give ped recall phases
- Speed Management – getting people to drive the speed limit and setting appropriate speed limits

Question 5: What does your agency need most to address or have a meaningful impact on transportation safety? If funding, what else (partnerships, analysis support, political will)?

Thurston County Sherrif's Department:

- Traffic unit is only two deputies, one of which is a field trainer so his role as a traffic deputy is diminished. Expanding traffic unit would very helpful (education and enforcement) but often falls short to other priorities.
- Don't know about automated enforcement, but doesn't see why it would be an issue
- Department receives money from Target Zero for state funded overtime. Added 4-6 hour block at specific times to focus on certain areas. Mostly focused on Martin Way and Pacific. School Zone emphasis at beginning of year – but would like to see it done more throughout the year. Approximately 20 schools under jurisdiction.
- Sherrif's office has been sent one photo from automated cameras on school buses
- School Zone Safety is a big priority
- No one in Sherrif's Office that knows what kind of grant money is available. Aware of Target Zero but don't have great knowledge of others. When is it the right time to apply?

TRPC:

- As the region's MPO – focused on supporting jurisdictions and county to have agency themselves and how they can affect safety on their roadways – both in terms of funding and having the most current information/data to support decision making. Want to be a good repository of data and information / knowledge that jurisdictions can tap into to make good decisions.
- TRPC also wants to make sure they are bringing money in to support jurisdictions in implementing their projects. Want to ensure they're eligible for all grant opportunities they can.

Tumwater School District

- Question skipped

WSDOT:

- Question skipped

Question 6: How can Thurston County best support your efforts to improve transportation safety? And how can you best support Thurston County?

Thurston County Sherrif's Department:

- Interested in getting resources and sharing knowledge from our other experience with Sherrif's Office. Traffic unit started in 2024 and doesn't have institutional knowledge. Has a crime analyst that works for Sherrif's Office who can compile crash hotspot data.

TRPC:

- Interested to see how the 'puzzle pieces' all fit together in terms of SAPs in the region. Lacey, Thurston County, TRPC – how can they complement one another?

Tumwater School District:

- Convey concerns to County about safety issues ASAP. The school district works often with Capital Projects and feels that County is responsive but that improvements often take a long time to implement.
- Tumwater School District does often implement minor re-designs as temporary improvements
- No standing meetings with County, just contact County when issues arise

WSDOT:

- Stay engaged. Advocate for each other as much as possible. Stick with WSDOT systems as they're data driven and proven ways to increase safety.

Conclusion

The Transportation Safety Action Plan (SAP) was informed by comprehensive public and stakeholder engagement, which shaped its vision, goals, and recommended strategies. Key findings highlight broad concerns about roadway safety, particularly on high-speed corridors, near schools, transit stops, and in rural areas lacking pedestrian and bicyclist infrastructure. Community members emphasized the need for better lighting, more separated facilities for non-motorized users, safer crossings, and increased enforcement of traffic laws—especially around schools and speeding hotspots. Personal stories underscored the human toll of traffic violence, reinforcing the urgency of both infrastructure improvements and behavior change. Across the board, there was strong support for a Safe System Approach that combines data-driven planning, education, interagency coordination, and community input to create a safer, more accessible transportation network in Thurston County.

Appendix E: Project Prioritization

				COLLISION CRITERIA								LOCATION CRITERIA		DEMOGRAPHICS		OTHER		
				Fatal/Severe Injury Collision History		High Risk / Injury Network		Top Crash Risk Factors Addressed				Proximity to		ETC Overall Disadvantaged Census Tract				
				Fatal	Severe Injury	High Injury Segment or Intersection	High Risk Segment or Intersection	Fixed Object	"Other"	Ped/Bike	Head on / Angle	Schools	Trail Crossings / Park Entrances	Yes	No	Aligns with Current County Project	Total	
ID	Intersection/Corridor Project	Project Type	Source	3	2	3	2	2	1	1	1	2	1	2	0	2	max = 15	Priority
SAP-02	Little Rock Rd SE	Corridor	NEW	X		X	X	X	X		X	X	X		X		15 /16	High
SAP-01	Bald Hills Rd SE	Corridor	NEW	X		X		X	X		X	X			X		12 /16	High
MWCS-01	Martin Way Crossing Improvements	Crossing	TRPC Martin Way Crossing Study		X	X	X			X	X				X	X	11 /16	High
SAP-05	Old Hwy 99 SW	Corridor	NEW		X	X	X	X						X			11 /16	High
TIP-02	Yelm Hwy and Spurgeon Crk Rd SE Intersection Improvements	Intersection	Thurston TIP (2025-2030)	X		X	X				X				X	X	11 /16	High
SAP-04	Rainier Rd E	Corridor	NEW	X		X		X	X				X		X		10 /16	Medium
SAP-06	Steamboat Island Rd NW	Corridor	NEW		X	X		X			X	X			X		10 /16	Medium
SAP-03	Martin Way E	Corridor	NEW		X	X	X				X				X		8 /16	Medium
SAP-07	Martin Way SE/Nisqually Automotive Driveways	Intersection	NEW		X	X	X				X				X		8 /16	Medium
SAP-08	Vail Rd SE/Bald Hills Rd SE	Intersection	NEW		X	X		X			X				X		8 /16	Medium
SAP-10	Old Hwy 99 SE/Rich Rd SE	Intersection	NEW			X	X				X			X			8 /16	Medium
TIP-01	Rainier Rd SE & Fir Tree Rd SE Intersection	Intersection	Thurston TIP (2025-2030)			X	X				X				X	X	8 /16	Medium
TIP-05	Old Hwy 99/Old Hwy 9 SW Intersection Improvements	Intersection	Thurston TIP (2025-2030)			X	X				X				X	X	8 /16	Medium
TIP-09	Rochester Main Street Improvements (US 12)	Corridor	Thurston TIP (2025-2030)							X	X	X		X		X	8 /16	Medium
GBTS-01	Gate-Belmore Trail – Belmore Section	Trail	2020 Gate-Belmore Trail Study							X			X	X		X	6 /16	Low
GBTS-02	Gate-Belmore Trail – Black River Section	Trail	2020 Gate-Belmore Trail Study							X		X	X		X	X	6 /16	Low
GMTAP-02	Old Highway 99 Improvements	Corridor	TRPC Grand Mound Transportation Action Plan			X				X					X	X	6 /16	Low
SAP-09	Old Pacific Hwy SE/7th Ave SE	Intersection	NEW		X	X					X				X		6 /16	Low
TIP-03	Kingham St SE – 3rd Ave SE to Martin Way E Pedestrian Improvements	Sidewalk	Thurston TIP (2025-2030)			X				X					X	X	6 /16	Low
TIP-06	Old Pacific Hwy/Kuhlman Rd SE Intersection Improvements	Intersection	Thurston TIP (2025-2030)			X					X				X	X	6 /16	Low
TIP-10	Tilley Rd S (Old Hwy 99 SW to Goddard Rd SW)	Corridor	Thurston TIP (2025-2030)		X						X				X	X	5 /16	Low
GBTS-03	Gate-Belmore Trail – Gate Section	Trail	2020 Gate-Belmore Trail Study							X			X		X	X	4 /16	Low
GMTAP-04	Power Line Trail	Trail	TRPC Grand Mound Transportation Action Plan							X			X		X	X	4 /16	Low
SAP-11	Old Hwy 99 SE/Offut Lake Rd	Intersection	NEW			X					X				X		4 /16	Low
TIP-04	198th Ave SW – Sargent Rd SW to Elderberry St SW	Corridor	Thurston TIP (2025-2030)							X	X				X	X	4 /16	Low
GMTAP-01	US 12/Old Highway 99/Elderberry Street SW Intersection Improvement	Intersection	TRPC Grand Mound Transportation Action Plan							X					X	X	3 /16	Low
GMTAP-03	Sargent Road Improvements	Corridor	TRPC Grand Mound Transportation Action Plan							X					X	X	3 /16	Low
GMTAP-05	Rochester Grand Mound Trail Feasibility Study	Study	SW Thurston County Trail Feasibility Study							X						X	3 /16	Low
SAP-12	Sargent Rd SW/183rd Ave SW	Intersection	NEW				X				X				X		3 /16	Low
TIP-07	Trail Crossing Enhancement Study	Study	Thurston TIP (2025-2030)							X					X	X	3 /16	Low

Appendix F: Project Cost Estimate Worksheets

Thurston County
Safety Action Plan
SAP-01 · Bald Hills Rd SE

Engineer's Opinion of Probable Cost for Planning Level Design

Description of Work:
1. Provide enhanced signs at horizontal curves.
2. Implement wide edge lines and shoulder rumble strips or profiled edge lines (where shoulder widths do not allow for rumble strips) at horizontal curves.
3. Implement animal (deer/elk) crossing warning signage near Mountain Vista Dr SE.
4. Systemic application of multiple low-cost countermeasures at stop-controlled intersections.
5. Clear vegetation for entering vehicle sight lines at side streets.
6. Clear vegetation to meet stopping sight distance at horizontal curves.

Assumptions and Exclusions:
1. Right of way impacts will be limited to permanent easements.

Date completed: 7/8/2025
Checked by: CAC

	Item Description	Quantity	Unit	Unit Cost	Total
	Warning Signs (Horizontal Curve)	28	EA	$ 700	$ 19,600
	Warning Signs (Animal Crossing)	2	EA	$ 700	$ 1,400
	Systemic Signs for Stop Control Intersections (Thru Approach)	40	EA	$ 700	$ 28,000
	Systemic Signs for Stop Control Intersections (Stop Approach)	61	EA	$ 700	$ 42,700
	Painted Wide Edge Line	20,000	LF	$ 2	$ 40,000
	Thermoplastic Stop Bar	400	LF	$ 35	$ 14,000
	Shoulder Rumble Strip	1.4	MI	$ 10,000	$ 13,949
	Clearing and Grubbing (Entering Sight Distance)	3.0	ACRE	$ 30,000	$ 90,000
	Clearing and Grubbing (Curves)	5.0	ACRE	$ 60,000	$ 300,000
				Sub Total	$ 549,649
CN	SPCC and TESC ($10k min.)	25%			$ 137,412
CN	Stormwater ($15k min.)	5%			$ 27,482
				Sub Total	$ 714,544
CN	Mobilization ($15k min.)	10%			$ 71,454
CN	Temporary Traffic Control ($15k min.)	10%			$ 71,454
				Sub Total	$ 142,909
CN	Contingency & Changes	35%			$ 300,108
				Construction Total	**$ 1,157,561**
CN	Construction Management and Survey	15%			$ 173,634
				Construction Management Total ($10k min.)	**$ 173,634**
PE	Engineering Design & Environmental	20%			$ 231,512
PE	County Project Management	10%			$ 115,756
				Prelim. Engineering Total ($30k min.)	**$ 347,268**
RW	Right of Way Acquisition and Compensation	70000	SF	$ 3	$ 210,000
RW	Right of Way Administration	14	Parcels	$ 15,000	$ 210,000
				Right of Way Total	**$ 420,000**
2025 Total Planning Level Cost Estimate (Rounded up to Nearest Ten Thousand)					**$ 2,100,000**

Thurston County
Safety Action Plan
SAP-02 · Little Rock Rd SW

Engineer's Opinion of Probable Cost for Planning Level Design

Description of Work:
1. Provide enhanced signs at horizontal curves.
2. Implement wide edge lines and shoulder rumble strips or profiled edge lines (where shoulder widths do not allow for rumble strips) at horizontal curves.
3. Install centerline rumble strips.
4. Systemic application of multiple low-cost countermeasures at stop-controlled intersections.
5. Clear vegetation for entering vehicle sight lines at side streets.
6. Clear vegetation to meet stopping sight distance at horizontal curves.

Assumptions and Exclusions:
1. Right of way impacts will be limited to permanent easements.

Date completed: 7/8/2025
Checked by: CAC

	Item Description	Quantity	Unit	Unit Cost	Total
	Warning Signs (Horizontal Curve)	24	EA	$ 700	$ 16,800
	Systemic Signs for Stop Control Intersections (Thru Approach)	32	EA	$ 700	$ 22,400
	Systemic Signs for Stop Control Intersections (Thru Approach)	48	EA	$ 700	$ 33,600
	Painted Wide Edge Line	11,000	LF	$ 2	$ 22,000
	Thermoplastic Stop Bar	200	LF	$ 35	$ 7,000
	Centerline Rumble Strips	1.0	MI	$ 15,000	$ 15,000
	Shoulder Rumble Strip	0.7	MI	$ 10,000	$ 7,372
	Clearing and Grubbing (Entering Sight Distance)	2.0	ACRE	$ 30,000	$ 60,000
	Clearing and Grubbing (Curves)	3.0	ACRE	$ 60,000	$ 180,000
				Sub Total	$ 364,172
CN	SPCC and TESC ($10k min.)	25%			$ 91,043
CN	Stormwater ($15k min.)	5%			$ 18,209
				Sub Total	$ 473,424
CN	Mobilization ($15k min.)	10%			$ 47,342
CN	Temporary Traffic Control ($15k min.)	10%			$ 47,342
				Sub Total	$ 94,685
CN	Contingency & Changes	35%			$ 198,838
				Construction Total	**$ 766,947**
CN	Construction Management and Survey	15%			$ 115,042
				Construction Management Total ($10k min.)	**$ 115,042**
PE	Engineering Design & Environmental	20%			$ 153,389
PE	County Project Management	10%			$ 76,695
				Prelim. Engineering Total ($30k min.)	**$ 230,084**
RW	Right of Way Acquisition and Compensation	60000	SF	$ 3	$ 180,000
RW	Right of Way Administration	12	Parcels	$ 15,000	$ 180,000
				Right of Way Total	**$ 360,000**
2025 Total Planning Level Cost Estimate (Rounded up to Nearest Ten Thousand)					**$ 1,480,000**

Thurston County
Safety Action Plan
SAP-03 · Martin Way E

Engineer's Opinion of Probable Cost for Planning Level Design

Description of Work:
1. Improve warning signs/beacons for WB traffic approaching Meridian Road NE intersection.
2. Re-grade crest vertical curve (approx. 500') east of Ridgeview Dr SE intersection to improve stopping sight distance.
3. Install hard centerline (c-curb) on Martin Way at Mobile station driveway near Meridian Rd NE intersection.
4. Implement profiled lane lines.
5. Existing side slopes can be steepened to eliminate need for retaining walls.

Assumptions and Exclusions:
1. Improvements do not require right of way acquisition.

Date completed: 7/8/2025
Checked by: CAC

	Item Description	Quantity	Unit	Unit Cost	Total
	Warning Sign(s) and Beacon System	1	LS	$ 25,000	$ 25,000
	Remove Lane Line	9,600	LF	$ 7	$ 67,200
	Clearing and Grubbing	0.7	ACRE	$ 60,000	$ 41,322
	Roadway Excavation Incl. Haul	4,300	CY	$ 45	$ 193,500
	Remove Traffic Curb	1,000	LF	$ 25	$ 25,000
	Base Course	2,300	TON	$ 65	$ 149,500
	HMA	900	TON	$ 180	$ 162,000
	Traffic Curb	1,000	LF	$ 60	$ 60,000
	Extruded Curb	200	LF	$ 40	$ 8,000
	Profiled Plastic Lane Line	11,200	LF	$ 8	$ 89,600
	Paint Line	1,000	LF	$ 1	$ 1,000
	Centerline Rumble Strips	0.2	LF	$ 15,000	$ 2,841
				Sub Total	$ 824,963
CN	SPCC and TESC ($10k min.)	5%			$ 41,248
CN	Stormwater ($15k min.)	25%			$ 206,241
				Sub Total	$ 1,072,452
CN	Mobilization ($15k min.)	10%			$ 107,245
CN	Temporary Traffic Control ($15k min.)	10%			$ 107,245
				Sub Total	$ 214,490
CN	Contingency & Changes	35%			$ 450,430
				Construction Total	**$ 1,737,373**
CN	Construction Management and Survey	15%			$ 260,606
				Construction Management Total ($10k min.)	**$ 260,606**
PE	Engineering Design & Environmental	20%			$ 347,475
PE	County Project Management	10%			$ 173,737
				Prelim. Engineering Total ($30k min.)	**$ 521,212**
RW	Right of Way Acquisition and Compensation	0	SF	$ 30	$ -
RW	Right of Way Administration	0	Parcels	$ 20,000	$ -
				Right of Way Total	**$ -**
2025 Total Planning Level Cost Estimate (Rounded up to Nearest Ten Thousand)					**$ 2,520,000**

Thurston County
Safety Action Plan
SAP-04 · Rainier Rd SE

Engineer's Opinion of Probable Cost for Planning Level Design

Description of Work:
1. Provide enhanced signs at horizontal curves.
2. Implement wide edge lines and shoulder rumble strips or profiled edge lines (where shoulder widths do not allow for rumble strips) at horizontal curves.
3. Implement animal (deer/elk) crossing warning signage.
4. Systemic application of multiple low-cost countermeasures at stop-controlled intersections.
5. Clear vegetation to meet stopping sight distance at horizontal curves.

Assumptions and Exclusions:
1. Right of way impacts will be limited to permanent easements.

Date completed: 7/8/2025
Checked by: CAC

	Item Description	Quantity	Unit	Unit Cost	Total
	Warning Signs (Horizontal Curve)	18	EA	$ 700	$ 12,600
	Warning Signs (Animal Crossing)	2	EA	$ 700	$ 1,400
	Systemic Signs for Stop Control Intersections (Thru Approach)	20	EA	$ 700	$ 14,000
	Systemic Signs for Stop Control Intersections (Stop Approach)	25	EA	$ 700	$ 17,500
	Painted Wide Edge Line	10,000	LF	$ 2	$ 20,000
	Thermoplastic Stop Bar	100	LF	$ 35	$ 3,500
	Shoulder Rumble Strip	0.7	MI	$ 10,000	$ 6,804
	Clearing and grubbing (Curves)	3.0	ACRE	$ 30,000	$ 90,000
				Sub Total	$ 165,804
CN	SPCC and TESC ($10k min.)	25%			$ 41,451
CN	Stormwater ($15k min.)	5%			$ 15,000
				Sub Total	$ 222,255
CN	Mobilization ($15k min.)	10%			$ 22,225
CN	Temporary Traffic Control ($15k min.)	10%			$ 22,225
				Sub Total	$ 44,451
CN	Contingency & Changes	35%			$ 93,347
				Construction Total	**$ 360,053**
CN	Construction Management and Survey	15%			$ 54,008
				Construction Management Total ($10k min.)	**$ 54,008**
PE	Engineering Design & Environmental	20%			$ 72,011
PE	County Project Management	10%			$ 36,005
				Prelim. Engineering Total ($30k min.)	**$ 108,016**
RW	Right of Way Acquisition and Compensation	45000	SF	$ 3	$ 135,000
RW	Right of Way Administration	9	Parcels	$ 15,000	$ 135,000
				Right of Way Total	**$ 270,000**
2025 Total Planning Level Cost Estimate (Rounded up to Nearest Ten Thousand)					**$ 800,000**

Thurston County
Safety Action Plan
SAP-05 - Old Hwy 99 SW

Engineer's Opinion of Probable Cost for Planning Level Design

Description of Work:
1. Systemic Application of Multiple Low-Cost Countermeasures at Stop-Controlled Intersections along side streets.
2. Evaluate speed limit reduction (speed zone) and narrow lanes in areas with multiple and/or high-volume access points.
3. Clear vegetation for entering vehicle sightlines at side streets.

Assumptions and Exclusions:
1. Right of way impacts will be limited to permanent easements.

Date completed: 7/8/2025
Checked by: CAC

	Item Description	Quantity	Unit	Unit Cost	Total
	Remove Edge Line	2,000	LF	$ 7	$ 14,000
	Systemic Signs for Stop Control Intersections (Thru Approach)	28	EA	$ 700	$ 19,600
	Systemic Signs for Stop Control Intersections (Stop Approach)	35	EA	$ 700	$ 24,500
	Speed Zone Signs	4	EA	$ 700	$ 2,800
	Thermoplastic Stop Bar	200	LF	$ 35	$ 7,000
	Paint Line	2,000	LF	$ 1	$ 2,000
	Clearing and Grubbing (Entering Sight Distance)	2.0	ACRE	$ 30,000	$ 60,000
				Sub Total	$ 129,900
CN	SPCC and TESC ($10k min.)	25%			$ 32,475
CN	Stormwater ($15k min.)	5%			$ 15,000
				Sub Total	$ 177,375
CN	Mobilization ($15k min.)	10%			$ 17,738
CN	Temporary Traffic Control ($15k min.)	10%			$ 17,738
				Sub Total	$ 35,475
CN	Contingency & Changes	35%			$ 74,498
				Construction Total	**$ 287,348**
CN	Construction Management and Survey	15%			$ 43,102
				Construction Management Total ($10k min.)	**$ 43,102**
PE	Engineering Design & Environmental	20%			$ 57,470
PE	County Project Management	10%			$ 28,735
				Prelim. Engineering Total ($30k min.)	**$ 86,204**
RW	Right of Way Acquisition and Compensation	35000	SF	$ 3	$ 105,000
RW	Right of Way Administration	7	Parcels	$ 15,000	$ 105,000
				Right of Way Total	**$ 210,000**
2025 Total Planning Level Cost Estimate (Rounded up to Nearest Ten Thousand)					**$ 630,000**

Thurston County
Safety Action Plan
SAP-06 - Steamboat Island Rd NW

Engineer's Opinion of Probable Cost for Planning Level Design

Description of Work:
1. Provide enhanced delineation (signs) at horizontal curves.
2. Implement wider edge lines and shoulder rumble strips, or profiled edge lines.
3. Centerline rumble strips at horizontal curves
4. Systemic Application of Multiple Low-Cost Countermeasures at Stop-Controlled Intersections along side streets
5. Clear vegetation for entering vehicle sightlines at side streets.
6. Clear vegetation to meet stopping sight distance at horizontal curves.

Assumptions and Exclusions:
1. Right of way impacts will be limited to permanent easements.

Date completed: 7/8/2025
Checked by: CAC

	Item Description	Quantity	Unit	Unit Cost	Total
	Warning Signs (Horizontal Curve)	14	EA	$ 700	$ 9,800
	Systemic Signs for Stop Control Intersections (Thru Approach)	52	EA	$ 700	$ 36,400
	Systemic Signs for Stop Control Intersections (Stop Approach)	79	EA	$ 700	$ 55,300
	Painted Wide Edge Line	15,000	LF	$ 2	$ 30,000
	Thermoplastic Stop Bar	400	LF	$ 35	$ 14,000
	Centerline Rumble Strips	1.4	MI	$ 15,000	$ 20,767
	Shoulder Rumble Strip	1.0	MI	$ 10,000	$ 10,384
	Clearing and Grubbing (Entering Sight Distance)	4.00	ACRE	$ 30,000	$ 120,000
	Clearing and Grubbing (Curves)	4.00	ACRE	$ 30,000	$ 120,000
				Sub Total	$ 416,651
CN	SPCC and TESC ($10k min.)	25%			$ 104,163
CN	Stormwater ($15k min.)	5%			$ 20,833
				Sub Total	$ 541,646
CN	Mobilization ($15k min.)	10%			$ 54,165
CN	Temporary Traffic Control ($15k min.)	10%			$ 54,165
				Sub Total	$ 108,329
CN	Contingency & Changes	35%			$ 227,491
				Construction Total	**$ 877,466**
CN	Construction Management and Survey	15%			$ 131,620
				Construction Management Total ($10k min.)	**$ 131,620**
PE	Engineering Design & Environmental	20%			$ 175,493
PE	County Project Management	10%			$ 87,747
				Prelim. Engineering Total ($30k min.)	**$ 263,240**
RW	Right of Way Acquisition and Compensation	35000	SF	$ 3	$ 105,000
RW	Right of Way Administration	7	Parcels	$ 15,000	$ 105,000
				Right of Way Total	**$ 210,000**
2025 Total Planning Level Cost Estimate (Rounded up to Nearest Ten Thousand)					**$ 1,490,000**

Thurston County
Safety Action Plan
SAP-07 - Martin Way SE & Nisqually Automotive Driveways

Engineer's Opinion of Probable Cost for Planning Level Design

Description of Work:
1. Implement access management to driveway nearest Nisqually Cut Off Road by eliminating left turn movements and converting driveway to inbound only.
2. Improve signage near driveways access points.
3. Improve lane control/destination pavement markings and add overhead sign for EB traffic on Martin Way approaching Nisqually Cut Off Rd SE intersection.

Assumptions and Exclusions:
1. Right of way impacts are anticipated to be temporary construction easements only.

Date completed: 7/8/2025
Checked by: CAC

	Item Description	Quantity	Unit	Unit Cost	Total
	Roadway Excavation Incl. Haul	50	CY	$ 100	$ 5,000
	Remove Traffic Curb	20	LF	$ 50	$ 1,000
	Base Course	46	TON	$ 65	$ 3,006
	Traffic Curb	160	LF	$ 60	$ 9,600
	Overhead Sign Structure (Type II Signal Pole) and Signs	1	LS	$ 45,000	$ 40,000
	Access Signs	8	EA	$ 600	$ 4,800
	Plastic Legends and Symbols	6	EA	$ 1,000	$ 6,000
	Paint Line	100	LF	$ 1	$ 100
	Thermoplastic Stop Bar	25	LF	$ 35	$ 875
	Seeding, mulching, fertilizing	0.03	ACRE	$ 30,000	$ 930
				Sub Total	$ 71,311
CN	SPCC and TESC ($10k min.)	5%			$ 10,000
CN	Stormwater ($15k min.)	25%			$ 17,828
				Sub Total	$ 99,139
CN	Mobilization ($15k min.)	12%			$ 15,000
CN	Temporary Traffic Control ($15k min.)	12%			$ 15,000
				Sub Total	$ 30,000
CN	Contingency & Changes	35%			$ 45,199
				Construction Total	**$ 174,337**
CN	Construction Management and Survey	15%			$ 26,151
				Construction Management Total ($10k min.)	**$ 26,151**
PE	Engineering Design & Environmental	30%			$ 52,301
PE	County Project Management	10%			$ 17,434
				Prelim. Engineering Total ($30k min.)	**$ 69,735**
RW	Right of Way Acquisition and Compensation	6,500	SF	$ 3	$ 19,500
RW	Right of Way Administration	3	Parcels	$ 15,000	$ 45,000
				Right of Way Total	**$ 64,500**
2025 Total Planning Level Cost Estimate (Rounded up to Nearest Ten Thousand)					**$ 340,000**

Thurston County
Safety Action Plan
SAP-08 - Vail Rd SE & Bald Hills Rd SE

Engineer's Opinion of Probable Cost for Planning Level Design

Description of Work:
1. Convert intersection to roundabout.

Assumptions and Exclusions:
1. Roundabout center will be located to the northwest of center of existing intersection to minimize impacts to parcels on the south and east corners of the intersection.
2. Single lane roundabout.
3. Project cost similar to County TIP projects: Old Hwy 99 at Intersections of Sargent Rd & 201st Ave, Yelm Hwy and Spurgeon Crk Rd SE, Johnson Point Rd & Hawks Prairie Rd, and Old Pacific Hwy & Kuhlman Rd.

Date completed: 7/8/2025
Checked by: CAC

	Item Description	Quantity	Unit	Unit Cost	Total
	Single Lane Roundabout	1	LS	$ 1,700,000	$ 1,700,000
				Sub Total	$ 1,700,000
CN	SPCC and TESC ($10k min.)	5%			$ 85,000
CN	Stormwater ($15k min.)	25%			$ 425,000
				Sub Total	$ 2,210,000
CN	Mobilization ($15k min.)	10%			$ 221,000
CN	Temporary Traffic Control ($15k min.)	20%			$ 442,000
				Sub Total	$ 663,000
CN	Contingency & Changes	35%			$ 1,005,550
				Construction Total	**$ 3,878,550**
CN	Construction Management and Survey	16%			$ 620,568
				Construction Management Total ($10k min.)	**$ 620,568**
PE	Engineering Design & Environmental	20%			$ 775,710
PE	County Project Management	10%			$ 387,855
				Prelim. Engineering Total ($30k min.)	**$ 1,163,565**
RW	Right of Way Acquisition and Compensation	12,300	SF	$ 30	$ 369,000
RW	Right of Way Administration	5	Parcels	$ 20,000	$ 100,000
				Right of Way Total	**$ 469,000**
2025 Total Planning Level Cost Estimate (Rounded up to Nearest Ten Thousand)					**$ 6,140,000**

Thurston County
Safety Action Plan
SAP-09 - Old Pacific Hwy SE/7th Ave SE

Engineer's Opinion of Probable Cost for Planning Level Design

Description of Work:
1. Consolidate driveways for gas station on both Old Pacific Hwy and 7th Ave.
2. Clear vegetation for entering vehicle sight lines (from 7th Ave).
3. Low-cost improvements (edge line, hatching, painted curb extension, etc.) to NW intersection corner to encourage slower turning speeds.
4. Systemic application of multiple low-cost countermeasures at stop-controlled intersections (on 7th Ave)

Assumptions and Exclusions:
1. Improvements do not require right of way acquisition.
2. Thurston County will compensate gas station property owner to relocate coffee stand on property, if needed. Relocation is estimated to be approximately 20' southwest with the coffee stand also rotated approximately 30 degrees counter clockwise.

Date completed: 7/8/2025
Checked by: CAC

	Item Description	Quantity	Unit	Unit Cost	Total
	Roadway Excavation Incl. Haul	70	CY	$ 200	$ 14,000
	Commercial Asphalt	40	Ton	$ 400	$ 16,000
	Extruded curb	210	LF	$ 70	$ 14,700
	Systemic Signs for Stop Control Intersections (Thru Approach)	4	EA	$ 700	$ 2,800
	Systemic Signs for Stop Control Intersections (Stop Approach)	4	EA	$ 700	$ 2,800
	Thermoplastic Stop Bar	40	LF	$ 35	$ 1,400
	Thermoplastic Curb Extension	1	LS	$ 5,000	$ 5,000
	Flexible Delineator Posts	20	EA	$ 250	$ 5,000
	Clearing and grubbing (Entering Sight Distance)	0.13	ACRE	$ 60,000	$ 7,800
	Seeding, mulching, fertilizing	0.02	ACRE	$ 50,000	$ 1,056
				Sub Total	$ 70,556
CN	SPCC and TESC ($10k min.)	5%			$ 10,000
CN	Stormwater ($15k min.)	25%			$ 17,639
				Sub Total	$ 98,195
CN	Mobilization ($15k min.)	12%			$ 15,000
CN	Temporary Traffic Control ($15k min.)	12%			$ 15,000
				Sub Total	$ 30,000
CN	Contingency & Changes	35%			$ 44,868
				Construction Total	**$ 173,063**
CN	Construction Management and Survey	15%			$ 25,959
				Construction Management Total ($10k min.)	**$ 25,959**
PE	Engineering Design & Environmental	30%			$ 51,919
PE	County Project Management	10%			$ 17,306
				Prelim. Engineering Total ($30k min.)	**$ 69,225**
RW	Right of Way Acquisition and Compensation	0	SF	$ 30	$ -
RW	Right of Way Administration	1	Parcels	$ 25,000	$ 25,000
RW	Cost to Cure	1	Est.	$ 100,000	$ 100,000
				Right of Way Total	**$ 125,000**
2025 Total Planning Level Cost Estimate (Rounded up to Nearest Ten Thousand)					**$ 400,000**

Thurston County
Safety Action Plan
SAP-10 - Old Hwy 99 SE & Rich Rd SE

Engineer's Opinion of Probable Cost for Planning Level Design

Description of Work:
1. Systemic application of multiple low-cost countermeasures at stop-controlled intersections.
2. Clear vegetation for entering vehicle sight lines from Rich Road.

Assumptions and Exclusions:
1. Right of way impacts will be limited to permanent easements.

Date completed: 7/8/2025
Checked by: CAC

	Item Description	Quantity	Unit	Unit Cost	Total
	Systemic Signs for Stop Control Intersections (Thru Approach)	4	EA	$ 700	$ 2,800
	Systemic Signs for Stop Control Intersections (Stop Approach)	4	EA	$ 700	$ 2,800
	Thermoplastic Stop Bar	32	LF	$ 35	$ 1,120
	Transverse Rumble Bars	72	LF	$ 25	$ 1,800
	Clearing and grubbing (Entering Sight Distance)	0.23	ACRE	$ 60,000	$ 13,760
				Sub Total	$ 22,280
CN	SPCC and TESC ($10k min.)	5%			$ 10,000
CN	Stormwater ($15k min.)	25%			$ 15,000
				Sub Total	$ 47,280
CN	Mobilization ($15k min.)	12%			$ 15,000
CN	Temporary Traffic Control ($15k min.)	12%			$ 15,000
				Sub Total	$ 30,000
CN	Contingency & Changes	35%			$ 27,048
				Construction Total	**$ 104,328**
CN	Construction Management and Survey	15%			$ 15,649
				Construction Management Total ($10k min.)	**$ 15,649**
PE	Engineering Design & Environmental	30%			$ 31,299
PE	County Project Management	10%			$ 10,433
				Prelim. Engineering Total ($30k min.)	**$ 41,731**
RW	Right of Way Acquisition and Compensation	660	SF	$ 3	$ 1,980
RW	Right of Way Administration	1	Parcels	$ 15,000	$ 15,000
				Right of Way Total	**$ 16,980**
2025 Total Planning Level Cost Estimate (Rounded up to Nearest Ten Thousand)					**$ 180,000**

Thurston County
Safety Action Plan
SAP-11 - Old Hwy 99 SE & Offut Lake Rd

Engineer's Opinion of Probable Cost for Planning Level Design

Description of Work:
1. Systemic application of multiple low-cost countermeasures at stop-controlled intersections.
2. Clear vegetation, signs, and sight obstructions for entering vehicle sight lines from Offut Lake Road.

Assumptions and Exclusions:
1. Improvements do not require right of way acquisition.
2. Railroad will develop plans and relocate bungalow.

Date completed: 7/8/2025
Checked by: CAC

	Item Description	Quantity	Unit	Unit Cost	Total
	Systemic Signs for Stop Control Intersections (Thru Approach)	4	EA	$ 700	$ 2,800
	Systemic Signs for Stop Control Intersections (Stop Approach)	4	EA	$ 700	$ 2,800
	Thermoplastic Stop Bar	17	LF	$ 35	$ 595
	Transverse Rumble Bars	72	LF	$ 25	$ 1,800
	Clearing and grubbing (Entering Sight Distance)	0.23	ACRE	$ 60,000	$ 13,760
	Remove/Relocate Private Signs	3	EA	$ 1,000	$ 3,000
				Sub Total	$ 24,755
CN	SPCC and TESC ($10k min.)	25%			$ 10,000
CN	Stormwater ($15k min.)	5%			$ 15,000
				Sub Total	$ 49,755
CN	Mobilization ($15k min.)	12%			$ 15,000
CN	Temporary Traffic Control ($15k min.)	12%			$ 15,000
				Sub Total	$ 30,000
CN	Contingency & Changes	35%			$ 27,914
				Construction Total	**$ 107,670**
CN	Construction Management and Survey	15%			$ 16,150
				Construction Management Total ($10k min.)	**$ 16,150**
PE	Engineering Design & Environmental	30%			$ 32,301
PE	County Project Management	10%			$ 10,767
				Prelim. Engineering Total ($30k min.)	**$ 43,068**
RW	Right of Way Acquisition and Compensation	0	SF	$ 30	$ -
RW	Right of Way Administration	0	Parcels	$ 20,000	$ -
				Right of Way Total	**$ -**
MISC	Railroad Design and Construction	Est.			**$ 150,000**
2025 Total Planning Level Cost Estimate (Rounded up to Nearest Ten Thousand)					**$ 320,000**

Thurston County
Safety Action Plan
SAP-12 - Sargent Rd SW/183rd Ave SW

Engineer's Opinion of Probable Cost for Planning Level Design

Description of Work:
1. Convert intersection to roundabout.

Assumptions and Exclusions:
1. Right of way acquisition from parcels on NW, NE, SE, and SW corners.
2. Single lane roundabout.
3. Project cost similar to County TIP projects: Old Hwy 99 at Intersections of Sargent Rd & 201st Ave, Yelm Hwy and Spurgeon Crk Rd SE, Johnson Point Rd & Hawks Prairie Rd, and Old Pacific Hwy & Kuhlman Rd.

Date completed: 7/8/2025
Checked by: CAC

	Item Description	Quantity	Unit	Unit Cost	Total
	Single Lane Roundabout	1	LS	$ 1,700,000	$ 1,700,000
				Sub Total	$ 1,700,000
CN	SPCC and TESC ($10k min.)	5%			$ 85,000
CN	Stormwater ($15k min.)	25%			$ 425,000
				Sub Total	$ 2,210,000
CN	Mobilization ($15k min.)	10%			$ 221,000
CN	Temporary Traffic Control ($15k min.)	20%			$ 442,000
				Sub Total	$ 663,000
CN	Contingency & Changes	35%			$ 1,005,550
				Construction Total	**$ 3,878,550**
CN	Construction Management and Survey	16%			$ 620,568
				Construction Management Total ($10k min.)	**$ 620,568**
PE	Engineering Design & Environmental	20%			$ 775,710
PE	County Project Management	10%			$ 387,855
				Prelim. Engineering Total ($30k min.)	**$ 1,163,565**
RW	Right of Way Acquisition and Compensation	19,900	SF	$ 30	$ 597,000
RW	Right of Way Administration	4	Parcels	$ 20,000	$ 80,000
				Right of Way Total	**$ 677,000**
2025 Total Planning Level Cost Estimate (Rounded up to Nearest Ten Thousand)					**$ 6,340,000**

Appendix G:
Plan and Policy Review

TOOLE DESIGN

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MEMORANDUM

May 12, 2025
To: Thurston County
From: Michael Houston; Allison Phillips; Sarah Gutschow; Adam Russell, Toole Design
Project: Thurston County Safety Action Plan

Re: Policy and Plan Review for Transportation Safety Action Plan

Purpose

Toole Design has analyzed available Thurston County and Thurston Regional Planning Council (TRPC) policies, practices, and guidelines relevant to the development of the Thurston County Transportation Safety Action Plan, with a focus on which should be endorsed as part of the Action Plan and which should be modified, updated, or discontinued.[1]

Project Background

This project is developing and updating the Thurston County Transportation Safety Action Plan. The purpose of the Transportation Safety Action Plan is to reduce fatal and serious injury crashes and identify projects, strategies, and programs to improve transportation safety in unincorporated Thurston County. The plan covers an area that encompasses about 1,000 miles of roadways, excluding city-, state-, and privately owned roads and highways.

Part of the Transportation Safety Action Plan includes a review of plans, policies, standards, and guidelines for Thurston County, to identify opportunities for safety-related modifications. This memorandum first overviews the documents reviewed and their relevant safety-related sections. It then provides a summary of recommended safety-related modifications to current policies and practices, and potential new policies for the County to consider. Findings from this review will be reflected in the Transportation Safety Action Plan's vision, goals, and recommendations.

Plan and Policy Review

Thurston County Comprehensive Plan (2019)

The Comprehensive Plan contains goals and policies to govern the unincorporated areas of Thurston County, as directed by the Growth Management Act and the Thurston County Countywide Planning Policies. This plan is then used to guide several other specialized plans: Joint City and Subarea Plans, and functional plans. This plan is currently being updated, with adoption of the updated plan set for 2025.

- **RELEVANT FINDINGS**:
  - The Transportation element (Chapter 5) of the Comprehensive Plan sets goals, objectives, and policies for roadway design and level of service, bicycle and pedestrian facilities, and the County's rail, air, and bus network. The Transportation element includes a policy (T.1.A.1) for Thurston County to adopt Washington State's Target Zero goal to reduce traffic deaths and serious injuries on Washington's roadways to zero by the year 2030.
  - The plan states that Thurston County uses a data driven approach for identifying the critical factors that contribute to crashes, and that those factors are used to identify strategies for reducing traffic deaths and serious injuries. These strategies are implemented through coordination, collaboration, and communication among traffic safety partners (e.g., Sheriff's Department, Health & Human Services, and Prosecuting Attorney's office).
  - Goals supportive of improving transportation safety include:
    - Goal 1 – enhance the safety and security of those who use, operate, and maintain the transportation system.
    - Goal 2 – ensure the design, function, and capacity of transportation facilities are consistent with and support sustainable, economically vibrant, healthy urban, suburban, and rural communities.
    - Goal 3 – provide mobility for all residents regardless of age, handicap, or income.
    - Goal 6 - Support a rail network that provides viable options for passenger, freight, and shared-use rail.
  - Specific policies supportive of safety are detailed in Table 1.

Road Standards (2017)

This document contains uniform construction standards and details for development within Thurston County, to ensure a quality product that is safe, reliable, convenient, and economical to maintain.

- **RELEVANT FINDINGS**:
  - The standards have a general purpose of ensuring a "quality end product that exemplifies safety, reliability, convenience, and economical maintenance."
  - The document contains many design standards applicable to the Transportation Safety Action Plan:
    - Medians shall be designed to accommodate pedestrian crossings at intersections, mid-block crossings, and bus stops. They are encouraged to be used for stormwater drainage facilities and be grassed or landscaped. On arterial roads with three (3) or more lanes, refuge islands for pedestrians shall be incorporated as part of the roadway improvements as determined by the County.
    - On bridges, where typical speed is 35 MPH or higher and significant pedestrian, bike and/or horseback traffic can be expected, the engineer may require that the lanes for these other modes of traffic be separated from motor vehicle traffic by a physical barrier.
    - Poles shall be located outside of Clear Zone areas unless they utilize a breakaway design. Poles shall not interfere with sight distance, and they should be located outside of sidewalks and walkways (where possible).
    - Roadway illumination may be required at school bus stops, critical intersections as required by the County, and all new or upgraded intersections with channelization.

[1] The project team's analysis was based on a review of publicly available documents available and provided by Thurston County's project team. It is possible that not all relevant and applicable plans, policies and other documentation were reviewed. The project team welcomes additional documentation to inform this analysis and the formulation of strategies and actions included in the Transportation Safety Action Plan.

- All proposed sidewalk curb ramps shall have a receiving curb ramp opposite of them that meets current Americans with Disability Act (ADA) standards to the maximum extent feasible.
- Bikeways may be required when a traffic analysis or traffic planning indicates substantial bicycle usage.
- Planter strip locations are encouraged to be used for stormwater conveyance and treatment.
- All roadway and trail utility installations shall be trenchless.
- Thurston County standard detail Appendix 6-E contains a street design section for a typical arterial, depicting 12' wide lane widths.

2025-2030 Capital Improvement Program (2024)

The Capital Improvement Program (CIP) outlines Thurston County's transportation program. It is prepared as part of the annual update to the Comprehensive Plan, Chapter 6 – Capital Facilities. The comprehensive plan goals guide the type of transportation improvement projects that are constructed. It details funding sources, revenues, and expenditures for transportation projects.

- **RELEVANT FINDINGS**:
  - The CIP includes safety improvements representing a variety of investments intended to support the goals outlined in the Washington State Strategic Highway Safety Plan, Target Zero. These could include spot improvements, systemic investments made throughout the roadway network, and the repair of compromised roadways deemed unsafe to use due to natural disaster.
  - Systemic investment projects and programs include:
    - County Road Safety Improvement Program - Install improvements including signing, placement markings, guardrails, and lighting.
    - Countywide Electrical Services Project - Provide street lighting and channelization improvements at several locations.
    - ADA Improvements - Construct curb ramp and sidewalk improvements.
    - Complete Streets ADA Program - Construct ADA accessible crossings through the installation of pedestrian refuge islands, by improving curb ramps and improving sidewalks.
  - Several individual projects list safety and improved multimodal infrastructure as important project benefits.

Thurston County - Countywide Planning Policies (2015)

Thurston County's Countywide Planning Policies are used to frame how the comprehensive plans of Thurston County and the seven cities and towns within the County will be developed and coordinated.

- **RELEVANT FINDINGS**:
  - The Transportation section includes the following safety-related policies:
    - 9.1 Increase transportation choices to support all ranges of lifestyles, household incomes, abilities, and ages.
    - 9.2 Increase opportunities for riding transit, biking, walking, ridesharing, allowing and encouraging flexible work schedules, and teleworking.
    - 9.3 Encourage efficient multi-modal transportation systems that are based on regional priorities and are coordinated with county and city comprehensive plans.

Thurston County Parks, Open Space and Trails Plan

The Parks, Open Space and Trails Plan identifies needs among the County's parkland assets and documents the existing inventory of regional and special-use parks, non-motorized trails, historic sites, and other open spaces. It identifies improvement opportunities for parks and trails, such as access enhancements.

- **RELEVANT FINDINGS:**
  - Identifies a consistent desire (through survey respondents) for non-motorized trail corridors as a separated facility type for traveling in Thurston County.
  - Sets a goal of expanding the County's regional trail system to better connect communities.
  - Establishes a maintenance policy to maintain parkland and open space assets in a manner that "maintains safety and reduces liability."
  - Identifies five paved trails and bikeways as priority projects to improve safe, off-street bicycle connectivity.

Thurston County Urban Area Bike Map

The Urban Area Bike Map documents existing bicycling routes by facility type throughout the northern section of Thurston County, focusing on Olympia, Lacey, and surrounding unincorporated county communities.

- **RELEVANT FINDINGS:**
  - The map highlights separated multi-use path and bike lane facility types existing in northern Thurston County, allowing bicyclists to choose separated bikeways where available.
  - The PDF map format also includes roadway safety best practices for bicyclists and information about proper helmet fit.

Thurston County Bicycle Connectivity Strategy

The Strategy is an ongoing project launched in early 2025, which proposes a collaborative county-level network plan that seeks to highlight gaps in bike routes between jurisdictions and key destinations. The project recommends safety improvements to the County's regional network, identifying high-risk areas based on a safety analysis. Further coordination on findings and recommendations is planned for summer 2026.

Thurston County Joint City and Subarea Plans

Joint City Plans (Joint Plans) denote policies and goals for urban growth areas in Thurston County, which include unincorporated county communities adjacent to incorporated cities. Each Joint Plan is composed through a collaborative process between the County and local cities. Joint Plans exist for Lacey, Olympia, Rainier, Tenino, Tumwater, and Yelm. Subarea Plans exist within the County Comprehensive Plan and guide growth for the three subareas of the County: Grand Mound, Rochester, and Nisqually.

RELEVANT FINDINGS

- **Lacey (2023)**
  - Identifies multimodal corridors where safety for other [non-motorized] modes should be prioritized. These include Martin Way, College Street, Yelm Highway SE, and others.
  - Key goals include prioritization of bicycle and pedestrian trips through safe infrastructure (Goal 3), which includes Lacey's Pedestrian Crossing Policy to apply new marked crosswalks.
- **Olympia (2023)**
  - Establishes goals for safe streets for pedestrians and bicyclists through creation of multimodal streets (GT1 and GT2), achieved policies such as consolidation of driveways, small blocks, new and enhanced bicycling infrastructure.
  - Prioritizes sidewalk construction to make walking and bicycling safe (GT19 and GT22), and encourages retrofits of sidewalk and bicycling facilities on streets.

- **Ranier (2004)**
  - The Plan requires new streets to meet existing design standards to promote safe travel for all modes, and seeks to complete sidewalk systems connecting to non-motorized trail systems (Goal T-2).
  - Prioritizes transportation projects that address areas of safety concern (Goal T-4).
- **Tenino (2007)**
  - Seeks to encourage pedestrian and bicyclist access by improving and expanding sidewalks (T-3.6), and looking to leverage investments in the Yelm-to-Tenino trail (T-2.5).
  - Commits to employing guidelines to reduce vehicle traffic in residential areas and provide facilities for bicyclists (T-3.2)
- **Tumwater (2021)**
  - Notes that the City should ensure development encourages "efficient multimodal transportation systems" (Goal 5), including that bicycle and pedestrian data collection efforts are expanded (5.13) and that safety education campaigns address bicyclists and pedestrians (5.15).
- **Yelm (2023)**
  - Goal 6 prioritizes improvements of active transportation infrastructure around schools. This includes sidewalks and safety improvements, which may work in concert with schools that have walking and biking safety education programs.
- **Grand Mound Subarea (2023)**
  - Sets a goal of reducing traffic fatalities by addressing factors that contribute to them (Goal 1), focusing on key intersections in the area.
  - Requires new development to provide infrastructure for vulnerable users (Action 6.4).
- **Nisqually Subarea (1992)**
  - Notes that bike lane should be expanded with new arterials.
  - The Nisqually Subarea Plan is currently being updated, with a final draft slated for 2026.
- **Rochester Subarea (2020)**
  - Refers to actions identified through the Main Street Rochester Multimodal Transportation Plan to improve safety along US-12, including crossing, transit stop, and maintenance improvements.

Thurston County Strategic Plan (2019/2020)

The Thurston County Strategic Plan informs the County's 2019 and 2020 budgets, as well as future budget cycle priorities. The Plan establishes a shared vision of the County's short- and long-term priorities, and the strategies identified to achieve them.

- **RELEVANT FINDINGS**
  - The Strategic Plan includes several strategies that relate to safety and safer transportation systems within initiative 8: Support robust and well-maintained infrastructure systems for a thriving community.
  - Strategies include developing "regional solutions for congestion and safety" and enhancing the County's trail system, providing a safe alternative for people walking and bicycling.

Thurston County Code of Ordinances

Thurston County's code was also reviewed to identify existing policies, regulations, and opportunities for improvement and updates. Several sections warrant particular attention based on their relevance to traffic safety, including the following:

12.105 - Speed Limits and Restrictions

Establishes that the maximum speed limit for all county roads is 50 MPH except where a lower or greater maximum lawful speed is established by this chapter or by state law. County code exceptions include speeds limits for school zones (25 MPH), residential plats (25 MPH), marked school or playground crosswalks (20 MPH), and bridges and tunnels (varies).

12.52 - Accidents and Reports

Establishes that the peace officer present at the scene of any accident will make a report in the same manner as required of the parties to such accident.

12.61.612 - Bicycle Routes

Bicycle routes are established on certain county roads on the last Sunday of each month from April through September of each year during the hours of 8 AM to 6 PM.

13.48 - Street Lights

Establishes responsibilities and locations with first priority for streetlight placement, including controlled access and arterial routes, and pedestrian crosswalks with a minimum of ten crossings per hour during darkness.

20.44.070 - Bicycle Parking Requirements

Requires all commercial, industrial, institutional, and recreational uses with 25 or more parking spaces also provide a designated, secured bicycle parking area to accommodate a minimum of five bicycle spaces.

Chapter 15.04 - Standards Adoption

Adopts by reference the road standards from the Washington State Department of Transportation (WSDOT) and American Public Works Association (APWA) edition of the Standard Specifications for Road, Bridge and Municipal Construction, and the Thurston County Road Standards for unincorporated Thurston County, except where separate development standards have been adopted for urban growth areas.

Chapter 17.10 - Transportation Facilities Concurrency Management System

Guidelines for evaluating and monitoring whether transportation facilities meet concurrency requirements. The County recognizes levels of service for transportation facilities as adopted in the Thurston County Comprehensive Plan, including Joint Plans with cities and towns.

Titles 21 – 23 - Sub-area Standards

The County Code contains multiple titles with development, zoning, and design standards relevant to building street grids and developments that incorporate pedestrian-oriented design and street connectivity, parking provisions, and support commute trip reduction programs, found under the titles Lacey Urban Growth Area (Title 21), Tumwater Urban Growth Area (Title 22), and Olympia Urban Growth Area (Title 23).

Ordinance 15929: Establishing a Complete Streets Policy

This ordinance was adopted on September 22, 2020, but has not been codified.

Policy and Practice Recommendations

Reviewing the County's policies and practices and identifying which policies and practices need to be strengthened, added, or eliminated is a critical step toward developing the Transportation Safety Action Plan. The County is working towards the goal of ensuring all road user feel safe and comfortable on Thurston County's streets. However, there is much more to be done in order to reach the goal of zero traffic fatalities and serious injuries by 2030.

Table 1 evaluates Thurston County's practices and policies next to notable best practices from leading communities around the state across the five Safe System Approach elements:

1. **Safer People**: Encourage safe, responsible driving and behavior by people who use our roads and create conditions that prioritize their ability to reach their destination unharmed.
2. **Safer Roads**: Design roadway environments to mitigate human mistakes and account for injury tolerances, to encourage safer behaviors, and to facilitate safe travel by the most vulnerable users.
3. **Safer Vehicles**: Expand the availability of vehicle systems and features that help to prevent crashes and minimize the impact of crashes on both occupants and non-occupants.
4. **Safer Speeds**: Promote safer speeds in all roadway environments through a combination of thoughtful, equitable, context-appropriate roadway design, appropriate speed-limit setting, targeted education, outreach campaigns, and enforcement.
5. **Post-Crash Care**: Enhance the survivability of crashes through expedient access to emergency medical care, while creating a safe working environment for vital first responders and preventing secondary crashes through robust traffic incident management practices.

This analysis reveals potential gaps and opportunities to build on existing practices and develop new ones that will enable Thurston County to meet its safety goals. The first column lists best practices culled from policies already in use by other jurisdictions. The second column includes relevant policies and practices from Thurston County. The third column describes whether existing policies and practices are in line with best practices and provides recommended updates.

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Table 1: Transportation Safety Action Plan Policy and Practice Analysis

Best Practices/Policies	Current Thurston County Practices/Policies	Recommendations
Safer People		
SAFETY CAMPAIGNS: Expand the focus of county-hosted education campaigns and outreach events to include motorists' responsibilities for creating a culture of safety, along with that of bicyclists and pedestrians.	Comprehensive Plan Policy T.1A.2 to "use a combination of education, enforcement, engineering, and evaluation to maintain and enhance the transportation system safety."	Partner with youth organizations to create peer-to-peer anti-distraction messaging campaigns. Work with media outlets to more accurately report traffic crashes to avoid victim-blaming, and report crashes in the systemic context of the Safe System Approach (e.g. noting shared responsibilities and the role of roads, vehicles, and speeds in the crash). Develop comprehensive engagement strategies that create personal connections to traffic safety. Include messaging about stopping for pedestrians at all marked and unmarked crosswalks and giving bicycles at least 3 feet of space when passing. Create partnerships with mobility providers to provide transportation alternatives that help prevent impaired driving (i.e. safe ride home programs).

Best Practices/Policies	Current Thurston County Practices/Policies	Recommendations
TRANSIT AND TRUCK OPERATORS: Reduce safety risks between buses, trucks, and other roadway users by requiring safety training for large vehicle operators within the County's vehicle fleet.	*No Thurston County practices/policies found*	Collaborate with transit and truck operators to develop an educational course for fleet drivers that emphasizes safe operations around bicyclists and pedestrians.
SCHOOL SAFETY: Work with school districts to create pedestrian and bicycle safety curriculums for students.	Comprehensive Plan Policy T.1A.5 to "provide and support safe routes to school programs and projects."	Consider the use of accessible pedestrian signals at signalized intersections and installation of PHBs and RRFBs at non-signalized crossings. Allow for extension of pedestrian crossing times based on actual walking speeds.
TRACK PROGRESS: Provide regular updates on plan implementation and project development on County safety and progress tracking webpages.	Comprehensive Plan Policy Objective 4C: "Develop performance measures that are realistic, efficient to administer, effective in assessing performance, and meaningful to the public."	Create a data dashboard (e.g., Tacoma's Vision Zero Dashboard) to track progress towards accomplishing Transportation Safety Action Plan objectives and meeting key metrics.

Best Practices/Policies	Current Thurston County Practices/Policies	Recommendations
Safer Roads		
REDUCE VEHICLE MILES: Reducing vehicle miles traveled (VMT) reduces road user exposure and thereby decreases potential collisions.	Comprehensive Plan Goal 3 includes several policies for improving access to non-vehicular modes including walking, biking, public transit, and paratransit. It also has policies for supporting programs and services that encourage employees to commute to work by means other than driving alone (T.3C.2). Countywide Planning Policies include policies for supporting and increasing opportunities for riding transit, biking, walking, ridesharing, allowing and encouraging flexible work schedules, and teleworking. The County Code contains multiple titles with development, zoning, and design standards relevant to building street grids and developments that incorporate pedestrian-oriented design and street connectivity, parking provisions, and support commute trip reduction programs, found under the titles Lacey Urban Growth Area (Title 21), Tumwater Urban Growth Area (Title 22), and Olympia Urban Growth Area (Title 23).	Codify Ordinance 15929, which established a Complete Streets policy. Detail how to plan, design, and maintain streets so they are safe for all road users of all ages and abilities. Work with transit providers to track trips made by public transportation. Use annual counts and/or existing trail counter data to track trips made through an active transportation mode such as walking, biking, etc. Track accessibility to transportation services: • Percentage of residents who have access to public transportation within a reasonable distance (0.5 to 1 miles) within Urban Growth Areas. Percentage of transportation infrastructure that is accessible to people with disabilities.* • Percentage of streets within Urban Growth Areas that have sidewalks.* Include VMT reduction as a foundational component of the Transportation Safety Action Plan.

Best Practices/Policies	Current Thurston County Practices/Policies	Recommendations
REDUCE VEHICLE MILES *(Cont'd)*	Ordinance 15929 for establishing a Complete Streets Policy was adopted on 9-22-2020 but has not been codified. The Thurston County Bicycle Connectivity Strategy is an ongoing project launched in early 2025. The project recommends safety improvements to the county's regional bicycle facility network, identifying high-risk areas based on a safety analysis. The Thurston County Parks, Open Space and Trails Plan Identifies five paved trails and bikeways as priority projects to improve safe, off-street bicycle connectivity. Code 20.44.070 requires all commercial, industrial, institutional, and recreational uses with 25 or more parking spaces also provide a designated, secured bicycle parking area to accommodate a minimum of five bicycle spaces	Plan for active transportation and transit networks to provide alternatives to driving in the CIP. Prioritize funding for these projects. Develop further strategies to increase the availability of safe bicycle parking, especially near transit. Consider partnering with local transit providers to address mobility gaps and prioritizing low-income communities that lack other transportation options.
TEMPORARY INSTALLATIONS: Temporary installations are implemented using low-cost materials to test new designs and build support for changes.	Thurston County's Neighborhood Traffic Calming program offers educational, behavioral and environmental solutions to assist in addressing traffic safety concerns in neighborhoods. Eligible projects include low-cost activities to assist in changing driver behaviors and environmental changes to the roadway system (if deemed necessary).	Create pilot program for traffic calming (i.e. chicanes and neckdowns) and pedestrian facility improvements (i.e. curb extensions and walkways using paint, flex posts, planters, etc.). Study outcomes for pilot installations, publish results as feasible, and install permanent street design changes based on successful installations as capital projects where appropriate.

DATA COLLECTION & ANALYSIS: Prioritize safety improvements using a data-driven process and a focus on serving demographically diverse user groups.	Comprehensive Plan Policy T.1A.6 to "develop and maintain a data-driven county road safety plans to identify priorities and proven, recommended, and new solutions to support the Target Zero safety goal." The County currently tracks transportation safety incidents on an annual basis, measuring: • Number of traffic fatalities and serious injuries. • Percentage of roads with adequate safety features. The Thurston County Strategic Plan identifies the implementation of a comprehensive asset management program "to optimize performance of infrastructure assets" as a short-term strategy (Initiative 8).	Develop a cross-cutting, interdepartmental traffic safety technical advisory team to evaluate crash trends, emerging issues, and opportunities to implement the "4E" approach.* Build on the County's asset management system and/or roadway database to include data that would help to identify and refine risk factors through systematic safety analysis, such as: number of travel and turn lanes, street width, traffic signal phasing, transit frequency and ridership counts, location of fixed objects (utility poles, etc.), sidewalks, bicycle facilities, and marked crosswalks/crosswalk enhancements. Collect additional data on pedestrian and bicyclist volumes to better understand exposure and crash risk for those modes. Make sure that datasets relating to transportation projects and street design features include construction dates to enable before/after study. Consider more nuanced metrics to evaluate mobility and accessibility (i.e., sidewalk connectivity and ADA compliance, transit operating hours and frequency, and low-stress bicycle network connectivity). Include the lived experiences of community members, obtained through engagement, as relevant data for transportation planning and design projects.

Best Practices/Policies	Current Thurston County Practices/Policies	Recommendations
PROJECT PRIORITIZATION: Integrate safety as a priority for allocating funding through the Capital Improvement Program.	The Public Works ADA Program is used to meet requirements for government agencies to design, construct, retrofit, and maintain infrastructure that allows access for persons with disabilities or limited mobility. Public Works has developed a transportation plan to improve policies and procedures, road standards, and roadway features such as sidewalks and curb ramps for people with disabilities.	Integrate safety projects into all stages of capital project planning and development Review other relevant capital projects to ensure that they are consistent with road safety best practices. Prioritize funding for safety and access improvements on high crash corridors.

Best Practices/Policies	Current Thurston County Practices/Policies	Recommendations
STREET RESURFACING: Evaluate and leverage resurfacing projects for implementing safety improvements.	Thurston County's transportation system consists of more than 1,000 miles of roadway, 150 bridges, 100 miles of sidewalks, 17,000 traffic control signs, and 1,000 streetlights. During the spring and summer months, the Public Works department completes pavement preservation projects designed to help maintain the County's roadway network. Roadway maintenance includes asphalt repairs, roadway mowing to improve line-of-site for drivers, and drainage system improvements to prevent flooding.	Evaluate all resurfacing projects, planned maintenance activities (i.e., signal retiming), and other major projects (i.e., new traffic signals) for the potential implementation of traffic safety improvements, particularly on the high-risk corridors. Traffic safety improvements that may qualify include restriping (e.g., lane narrowing, bike lanes, crossings, etc.), ADA compliant curb ramps at intersections getting new traffic signals, and quick-build walkways. Dovetail this work to implement improvements without requiring substantial additional funding. Minor work and emergency repairs may not be able to support recommended safety improvements. Develop a policy to support pedestrian crossing improvements when curb ramps are reconstructed (i.e., curb bulbs or pedestrian refuge islands). Use the Transportation Safety Action Plan as one criterion for prioritizing re-surfacing projects.

Best Practices/Policies	Current Thurston County Practices/Policies	Recommendations
UPDATE STANDARDS: Update development standards and guidelines to align with the Safe System Approach.	Comprehensive Plan Policies: • T.1A.7: Consider the safety of all users when designing transportation facilities, and design infrastructure to encourage safe user behavior. • T.2B.2. Plan, design and construct multimodal, context-sensitive, complete streets and roads. The County recognizes levels of service for transportation facilities as adopted in the Thurston County comprehensive plan, including Joint Plans with cities and towns (TCC 17.10).	Update the County Public Works roundabout policy to prioritize roundabouts instead of traffic signals when intersection traffic control changes are being considered.* Develop signal timing policies that ensure all roadway users are considered and help facilitate a multi-modal transportation system, such as Leading Pedestrian Intervals or protected left turn phases. Update Roadway Standards to include new street types that prioritize the safety and comfort of all users to comply with the County's Complete Streets ordinance. Update TCC 17.10, the Transportation Facilities Concurrency Management System, to include: • Transportation Demand Management (TDM) measures as a way to meet concurrency. • Safety performance. • Require contributions from new development to implement pedestrian and bicyclist facilities as needed, and safety improvements along high-risk corridors. Prepare a rural mobility strategy that will develop a concurrency strategy for the rural urban transition area and primary rural routes.

Best Practices/Policies	Current Thurston County Practices/Policies	Recommendations
PRIORITIZE SCHOOL AREAS: Work with school districts to take a comprehensive approach to create safer schools and routes to schools.	Comprehensive Plan Policy T.1A.5 to "provide and support safe routes to schools programs and projects."	Prioritize safe routes to school projects that overlap with the County's high-risk corridors.
Safer Vehicles		
TRUCK FLEET: Require the adoption new safety technologies within the County's vehicle fleet.	Comprehensive Plan Policy T.4B.5.: Look for opportunities to integrate transportation technology considerations in all projects.	Use more explicit policy language, such as identifying key safety features, related to adopting safety technologies in County's vehicle fleet. Install side guards and crossover mirrors where applicable to all large fleet vehicles and require entities contracting with the County to have side guards on a certain proportion of their fleet over 10,000 lbs. Side guards, also known as "lateral protective devices", keep pedestrians, bicyclists, and motorcyclists from being run over by a large truck's rear wheels in a side-impact collision. Explore centralized refuse compactors in high-density areas to minimize the number of conflict areas for drivers to stop and pick-up, manually or mechanically.

Best Practices/Policies	Current Thurston County Practices/Policies	Recommendations
Safer Speeds		
REDUCE SPEEDS: Reducing vehicle operating speeds is done first by engineering streets that encourage slower, context-appropriate speeds and second by enforcing speed limits.	Comprehensive Plan Policy T.1A.8.: Prioritize roundabouts instead of traffic signals at intersections to maintain traffic flow and improve safety performance. Thurston County Code establishes that the maximum speed limit for all county roads is 50 mph, except for school zones, residential plats, marked school or playground crosswalks, and bridges and tunnels. On bridges, where typical speed is 35 MPH or higher and significant pedestrian, bike and/or horseback traffic can be expected, the engineer may require that the lanes for these other modes of traffic be separated from motor vehicle traffic by a physical barrier. (Roadway Standards)	Reevaluate Thurston County's current practices around setting design speed and consider the approaches laid out in NACTO's *City Limits* guide to holistically evaluate and set speed limits based on context and the safety of all road users. Lower speed limits and implement traffic calming features that lower design speeds, starting with residential streets and commercial centers. Residential street speed limits can often be reduced without traffic calming measures, as can be seen from the City of Tacoma's efforts with Resolution No. 40559. Efforts should subsequently focus on high-risk corridors identified in the Transportation Safety Action Plan crash analysis. Prioritize interventions that go beyond those included in the Neighborhood Traffic Calming program, such as diverters or bulb-outs, and improve safety for vulnerable road users. Develop standard plans for quick implementation of low-cost, low-speed road design.

Best Practices/Policies	Current Thurston County Practices/Policies	Recommendations
Post-Crash Care		
EMERGENCY RESPONDERS: Involve first responders in project design and design guidance development.	Comprehensive Plan Policies: • T.1B.3. - Encourage coordination between transportation system providers and emergency response providers who rely on that system. • T.1B.5. - Develop and maintain a rapid-reaction strategy to assess safety of transportation facilities during an emergency.	Review and revise Fire and Emergency Medical Services call response procedures to ensure appropriate response vehicle per call type. Consider smaller vehicles/apparatuses where feasible. Create a Fire and Emergency Medical Services map so streets designated for response can be designed appropriately for larger vehicle turning movements. Determine the level and types of traffic calming that would be acceptable on all roadway classifications and response routes.
CRASH DATA: Work with police service providers to improve data collection methods around traffic crashes and unsafe driving behaviors.	Thurston County Code establishes that the peace officer present at the scene of any accident will make a report in the same manner as required of the parties to such accident.	Enhance police officer training on accurate crash reporting and investigation, including the unique attributes required to accurately report the circumstances of crashes involving bicyclists, pedestrians, and other vulnerable road users. Revise the County Code to use the phrase “crash” not “accident” in accordance with the Safe System Approach language.

** Denotes recommendation included in Draft Thurston County Comprehensive Plan 2045, Appendix B: Implementation Plan (April 2024).*

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