

# CITY OF LACEY SAFETY ACTION PLAN

June 2025

**PREPARED FOR:**

City of Lacey

**PREPARED BY:**

David Evans and Associates, Inc.



RESOLUTION 1167

CITY OF LACEY

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF LACEY RELATING TO ESTABLISHING A VISION ZERO POLICY TO WORK TOWARDS ZERO TRAFFIC DEATHS AND SEVERE INJURIES

**WHEREAS**, Traffic safety impacts our families, community neighborhoods, health and livability; and

**WHEREAS**, Vision Zero is a safety strategy to reduce and eventually eliminate traffic deaths and serious injuries using a data-driven, multi-disciplinary, and safe systems approach that increases safety, health, and mobility for all; and

**WHEREAS**, Vision Zero recognizes that while human error will always occur, a combination of engineering, education, and enforcement measures can reduce collisions and prevent collisions from causing death or severe injuries; and

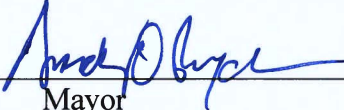
**WHEREAS**, the Lacey City Council has considered this matter during a regularly and duly called public meeting of said Council, has given said matter careful review and consideration, and finds that good government and the best interests of the City of Lacey will be served by passage of this resolution,

**NOW THEREFORE**, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF LACEY, WASHINGTON, as follows:

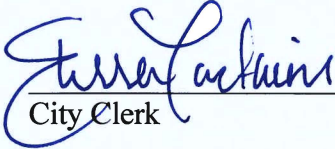
1. The council hereby recognizes the Comprehensive Safety Action Plan with the overriding goal of eliminating fatalities and serious injuries among all system users.
2. The City adopts a Vision Zero goal that by the year 2030 there are no serious injuries or deaths caused by traffic crashes involving any mode of transportation.
3. For City Staff to apply for grant funding to support infrastructure improvements/projects identified in the plan.
4. For City staff to monitor and periodically report on progress toward the Vision Zero goal.

PASSED BY THE CITY COUNCIL OF THE CITY OF LACEY, WASHINGTON,  
this 3<sup>rd</sup> day of June, 2025.

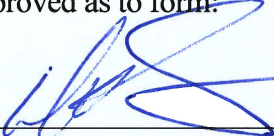
CITY COUNCIL

By   
Mayor

Attest:

  
City Clerk

Approved as to form:

  
City Attorney

# ACKNOWLEDGEMENTS

## City of Lacey

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Michael Cerovski – Lacey Fire District

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# EXECUTIVE SUMMARY

The City of Lacey prioritizes the safety of all who live, work, and travel in the community. Our vision is a future where everyone—regardless of how they get around—can reach their destinations safely and efficiently. The City of Lacey Comprehensive Safety Action Plan serves as a roadmap for improving roadway safety through better design, enhanced pedestrian and bicycle infrastructure, and a culture of safety education. By working together—residents, officials, and staff—we can create a safer, more connected Lacey.

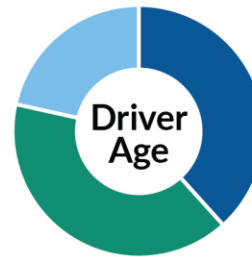
 Based on crash data from the Washington State Department of Transportation from 2019 to 2023 within the City of Lacey (including I-5):

**4,856** *Total Crashes Reported*  
Average of 971 crashes per year

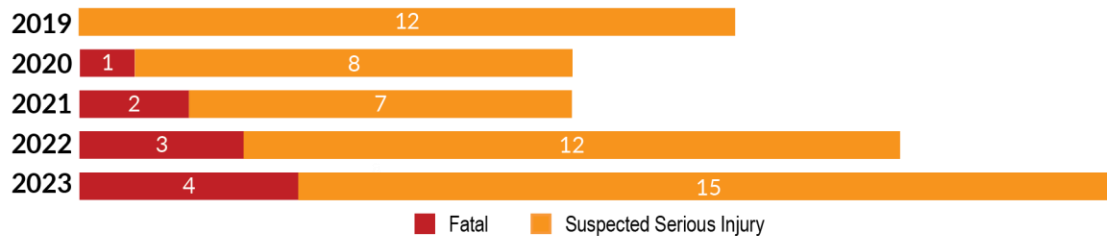
 **78** *Crashes Resulted in Fatal or Serious Injury*  
Average of 16 fatal or serious injuries per year

## Common Contributing Factors to Fatal Crashes in Lacey

- Inattention / Distraction** ← **Overrepresented in Lacey when compared to statewide data.**
- Failure To Yield Right-Of-Way
- Under the Influence of Alcohol / Drugs
- Speeding
- Disregard Traffic Sign and Signals



## Fatal and Serious Injury Crashes on Lacey streets are on the rise.



### Who is most likely to die or be seriously injured from crashes in Lacey?

**38%** of all fatal and serious injury crashes in Lacey impacted either a pedestrian or bicyclist, while **22%** involved a motorcycle.

### What Lacey residents are concerned about:

Speeding, congestion, poor visibility, dangerous left turns, safe bicycle and pedestrian routes and red light running.

# INTRODUCTION AND PURPOSE

## A SAFER LACEY

The City of Lacey Comprehensive Safety Action Plan (SAP) is the City's vision for improving transportation safety. The review of crash data from 2019-2023 indicates that fatal and serious injury crashes are on the rise in Lacey. Not only do these tragic events contribute to immeasurable personal loss, but they also put elevated pressure on the local emergency response, and the unsafe and uncomfortable environments that lead to severe crashes discourage the use of active modes, affecting communitywide health and mobility.

Lacey needs a plan to approach roadway safety, one that expands existing efforts and establishes a commitment to eliminating fatalities and serious injury crashes on its streets. As such, this plan is built around the following goal:

**By the year 2030, there are no serious injuries or deaths caused by traffic crashes involving any mode of transportation on the City of Lacey streets.**

The purpose of this SAP is to analyze crash history, community demographics, and citizen concerns to effectively identify risk factors and locations with a high risk for crashes on the City's street network. This approach enables effective prioritization and implementation of safety improvements to reduce crash frequency and severity in Lacey.

The implementation of this SAP will enhance transportation safety for everyone who lives, works, visits, or travels through Lacey.

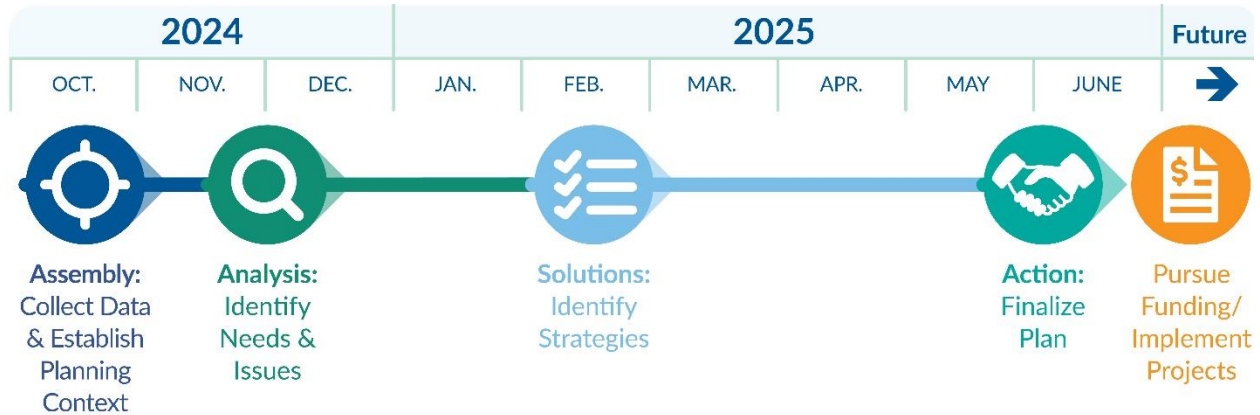
## Safe Streets and Roads for All Program

The City received a grant through the Federal Highway Administration's Safe Streets and Roads for All (SS4A) program to develop the plan. The purpose of the grant is to develop a comprehensive safety action plan to prevent roadway fatalities and serious injuries and to strengthen the communities' approach to roadway safety for all users. The Bipartisan Infrastructure Law (BIL) established the SS4A discretionary program to fund improvements and strategies to prevent roadway fatalities and serious injuries of all users. The SS4A program supports the U.S. Department of Transportation's (USDOT's) National Roadway Safety Strategy and a goal of zero roadway deaths using a Safe System Approach.

## Process

The Lacey Safety Action Plan included four phases: Assembly, Analysis, Solutions & Action. After the project kicked off and data was collected in the Assembly phase, meetings with the Task Force reviewed findings from each phase thereafter.

## Schedule



## Key Elements

This plan is anchored around two key elements: Emphasis Areas and a Strategy Table that provides a wealth of practical strategies to support Lacey’s roadway safety goals.

## Safe Systems Approach

There are six principles that form the basis of the Safe System approach:

- Deaths and serious injuries are unacceptable,
- Humans make mistakes,
- Humans are vulnerable,
- Responsibility is shared,
- Safety is proactive, and
- Redundancy is crucial.

WSDOT defines six elements that comprise a Safe System Approach. All six elements are required to function in concert to eliminate serious injuries and fatalities: These are:

- Safer Road Users
- Safer Land Use Planning
- Safer Speeds
- Safer Roads
- Safer Vehicles
- Effective Post-Crash Care and Response



Image Source: WSDOT

## STUDY AREA

The City of Lacey is within Thurston County in western Washington. The study area for the SAP includes all roads located within the city limits, as shown in Figure 1.

The 2024 guidance for Safe Streets and Roads for All Action Plan Components suggests the safety analysis “should include all roadways within the jurisdiction, without regard for ownership”. Within the City of Lacey, there are roads operated and maintained by both the city and the Washington Department of Transportation (WSDOT). The WSDOT facilities include Interstate 5 (I-5) and State Route 510 (SR 510). SR 510 is also referred to as Marvin Road for the segment south of I-5 within Lacey’s city limits.

## CONSISTENCY WITH STATEWIDE SAFETY PLANS

Washington State’s *Target Zero Plan (2024)* is the most recent version describing the State’s continued commitment to the goal of zero fatalities and serious injuries on Washington roads by 2030. The plan emphasizes the need to implement safety strategies in a more coordinated way and highlights the importance of evidence-based crash reduction strategies.

Policy recommendations outlined in the *Target Zero Plan* that are especially relevant to Lacey:

- **Safer Speeds:** Increase strategies to reduce driver speeds on all road types.
- **Prioritize Active Transportation Infrastructure:** Continue funding Complete Streets projects at the state and local levels to provide safe, accessible, and protected sidewalks, bike lanes, trails, and crossings for active transportation users.
- **Roadway Design:** Prioritize funding for roadway design strategies to reduce crossing conflicts for all road users at intersections, reduce travel speed, and keep vehicles on the roadway.

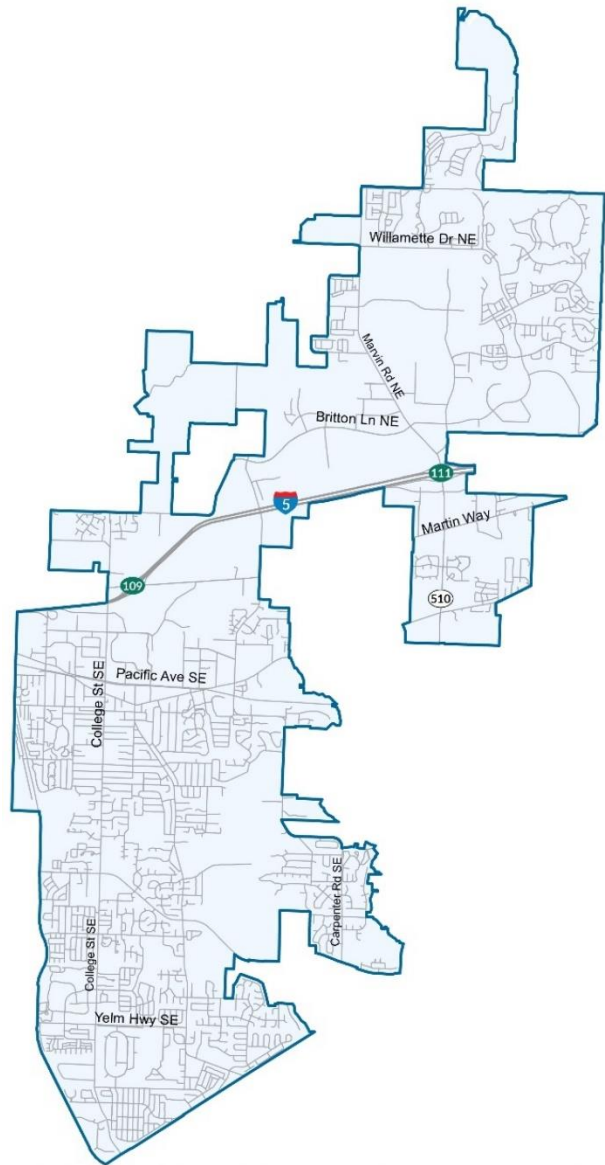


Figure 1. Study Area

## A DATA-DRIVEN PLANNING PROCESS

Crash data for the five most recent full years of data available at the time of analysis (2019-2023) was obtained from WSDOT. Crash records provide all data collected by the reporting officer, including crash identification (jurisdiction, route and postmile, location, date, time), demographics (age, race, sobriety, safety equipment usage), environmental (lighting, weather, road surface), and crash details (primary collision factor, type of collision, vehicle/party type, severity).

The most severe crashes, characterized as fatal and serious injury (FSI), are an important focus of this analysis.

**Fatal injury:** A collision that results in the death of a person within 30 days of the collision.

**Suspected serious (incapacitating) injury:** A collision that results in broken bones, dislocation, severe lacerations, or unconsciousness, but not death.

## COMMUNITY CONTEXT

Understanding who is using the City’s streets and roads and how people get around helps inform the identification and selection of strategies and solutions. A plan that serves the entire community acknowledges and addresses the relationship between transportation and the various types of users. Population demographics data regarding socioeconomic status, racial and ethnic minorities, access to private vehicles, disabilities, senior populations, and linguistically isolated populations was studied using census tract data from various sources.

## COMMUNITY DESTINATIONS

The City of Lacey is known for its natural environment and dedication to providing its community with parks, culture, and recreational activities. It is home to acres of forests, freshwater lakes, and views of Mount Rainier, and its park system covers over 1,263 acres. Clean air and water, outstanding schools, and a low crime rate make the City of Lacey a desirable place to live.

## DEMOGRAPHICS

Understanding who is using the City’s streets and roads and how people get around helps inform the identification and selection of strategies and solutions. A plan that serves the entire community acknowledges and addresses the relationship between transportation and the various types of users. Population demographics data regarding socioeconomic status, racial and ethnic minorities, access to private vehicles, disabilities, senior populations, and linguistically isolated populations was studied using census tract data from various sources.

Washington’s Healthy Environment for All (HEAL) Act established a coordinated state agency approach to environmental justice. It prioritizes voices from disproportionately impacted communities to reduce disparities in health, safety, and quality of life and considers 22 attributes that influence these areas.<sup>1</sup>

In Lacey, there are seven census block groups identified with high or medium-high social vulnerability, meaning they have an “overrepresentation” of five or more attributes.<sup>2</sup> These areas are described below:

1. Southwest of College St SE at 14<sup>th</sup> Avenue SE
2. Northwest of Carpenter Rd SE at Pacific Ave SE
3. Area bound by Pacific Ave SE / Lacey Blvd SE, College St SE, 14<sup>th</sup> Ave SE and Fones Rd SE.
4. Northwest of Marvin Rd SE and Martin Way E (south of I-5)
5. Area bound by 14<sup>th</sup> Ave SE, Sleater Kinney Rd SE, and west city limits.
6. Area bound by 14<sup>th</sup> Ave SE, Golf Club Rd SE, Chambers Lake and Sleater Kinney Rd SE.
7. Area bound by 22<sup>nd</sup> Ave SE, College St SE, 37<sup>th</sup> Ave SE and west city limits.

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<sup>1</sup> <https://wsdot.wa.gov/about/environmental-justice>

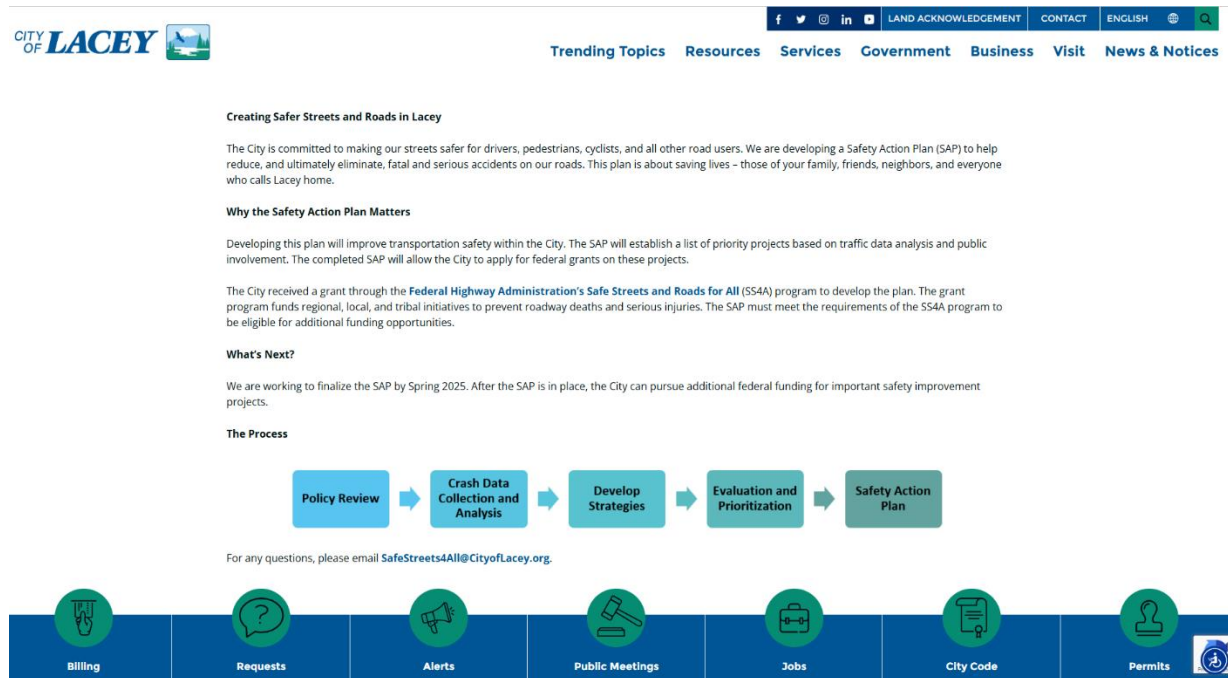
<sup>2</sup> For attributes measured by percentile, “overrepresented” attributes are those with a percentile of 80 or more. For attributes measured by percent (e.g. the lack of vehicle availability percentage), “overrepresented” attributes are those with a percentage exceeding the national average for that particular attribute.

# ENGAGEMENT

## METHODS OF OUTREACH

### Project Website

The project team created a website to act as a digital hub for the project, including information about the Safety Action Plan and the Safe Streets and Roads for All program. The website will also house the final plan and any subsequent updates.



### Online Survey

At the onset of the planning process, a public engagement survey was made available to collect information on specific locations of safety concerns, contributing factors and priorities. This was open from late December through January on the project website and was available in English and Spanish.

### Safety Action Plan Task Force Meetings

The City established a Task Force to consult with the development of the SAP and for further efforts on implementation and monitoring. This group includes representatives from the following groups:

- Lacey Fire District
- Lacey Police Department
- North Thurston Public Schools
- City of Lacey Equity and Inclusion Program

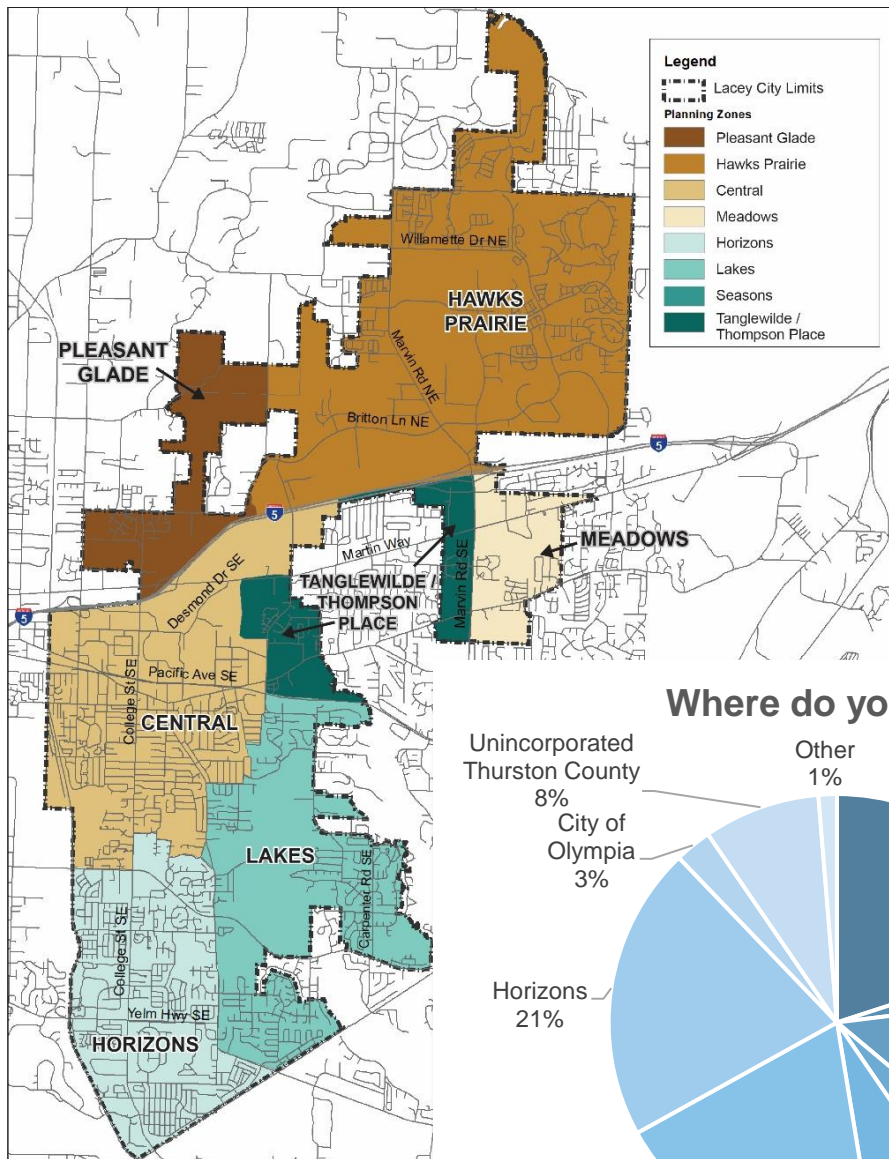
Going forward, the City will continue to work with this Task Force for guidance on allocating any awarded funds for systemic projects.

## WHAT WE HEARD

The online public engagement survey received 230 responses that provided feedback on areas of concern, contributing factors and thoughts on how the city should prioritize addressing safety issues.

### Who Provided Comments?

The majority of respondents were from neighborhoods south of I-5.



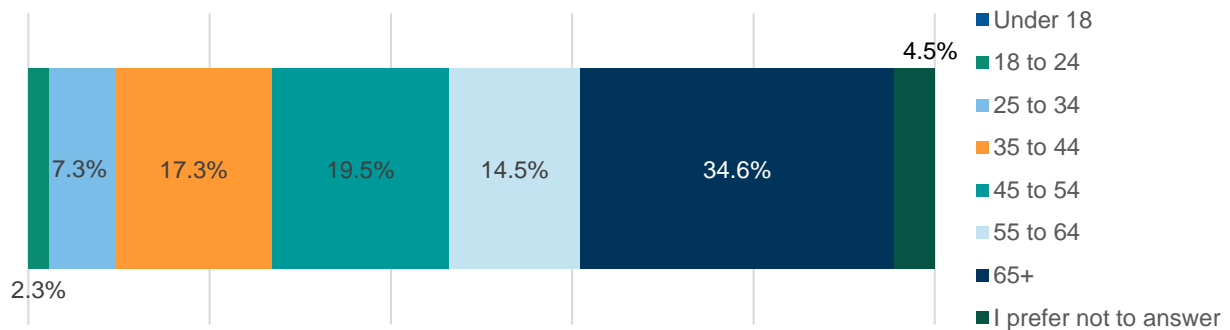
The survey also asked a series of demographic questions to understand whether respondents reflected a wide range of voices that reflect Lacey. The survey marked the questions as optional and noted that they were not required for the survey response to be documented.

### Gender

Of the 216 responses, 49.5% were male, 46.8% were female, 3.2% marked “I prefer not to answer” and 0.5% responded “Other”.

### Age

Of the 220 responses, nearly half of engagement participants (49.1%) are older than 55. No one younger than 18 participated.

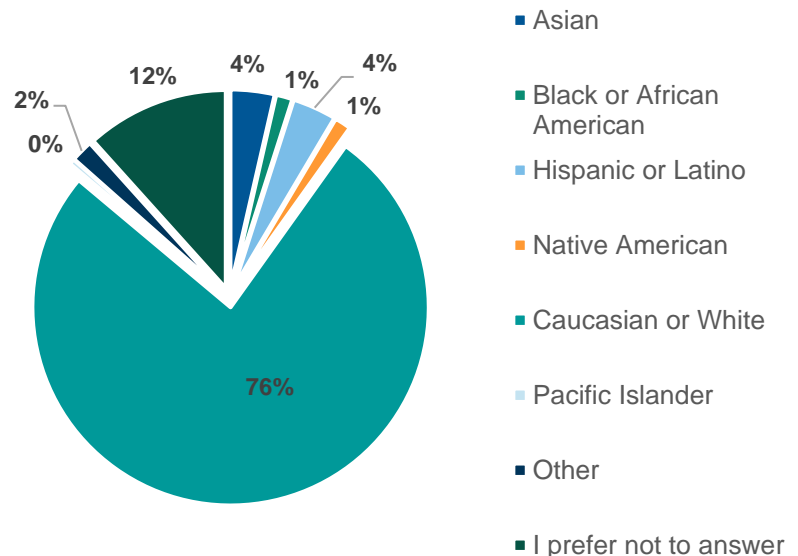


### Disability

Of the 224 responses, 12% identified as a person with a disability.

### Race/Ethnicity

The majority of respondents identify as Caucasian/White (78.2%). 3.7% identify as Hispanic or Latino and 3.7% identify as Asian.



### Language

Of the 220 responses, most respondents speak English at home (98.2%). Other languages spoken at home include Spanish (2.3%), German (0.9%), Chinese (0.5%), Vietnamese (0.5%), American Sign Language (1%), French (0.5%) and Khmer (0.5%). *Note: Respondents could identify more than one language.*

## Which street or intersection do you think is unsafe?

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This question allowed respondents to type in an open-ended response.

Most comments about intersection safety included concerns about speeding, congestion, dangerous left turns and red light running. Other concerns included unsafe crossings for pedestrians, insufficient separation between bicycle lanes and vehicle traffic, and roundabouts with vegetation blocking views.

In addition, comments were largely concentrated on the following streets:

- ◆ College Street
- ◆ Martin Way
- ◆ Mullen Road
- ◆ Pacific Avenue
- ◆ Lacey Boulevard
- ◆ Ruddell Road

### Speeding Issues

- College St, Martin Way, Ruddell Rd, Mullen Rd, and Yelm Highway were frequently cited as areas where drivers consistently exceed speed limits.
- Speeding is particularly concerning in school zones.

### Poor Visibility

- College St at Mullen Rd and Willamette Dr at Orion Dr, were flagged for poor visibility, especially at night or during foggy weather.
- Street lighting is inadequate in many areas, particularly along College St and Pacific Ave.

### Congestion & Traffic Flow

- I-5 at Martin Way, College St at Martin Way, and Marvin Road were noted as highly congested.
- Configuration at Pacific Ave at College St leads to last-minute merging, increasing crash risks.
- The Diverging Diamond interchange was described as confusing and contributing to traffic bottlenecks.

### Red Light Running

- Drivers running red lights, particularly at College St at Pacific Ave, Martin Way at Marvin Rd, and Pacific Ave at Ruddell Rd.

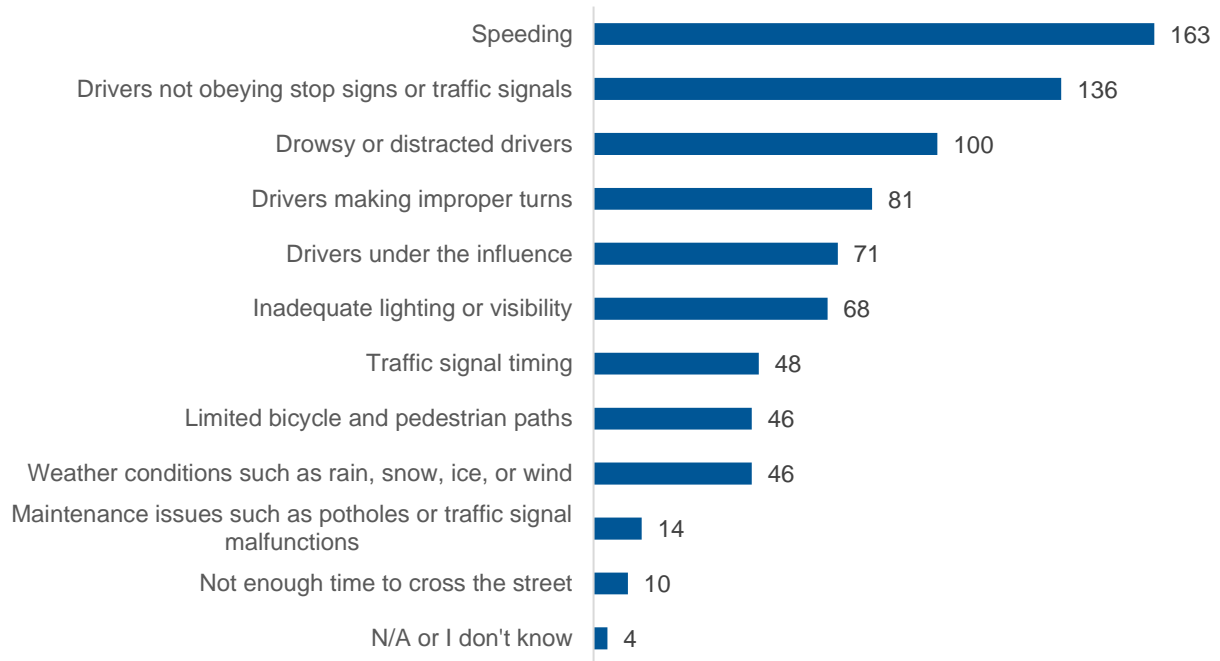
### Active Transportation

- Carpenter Rd, Mullen Rd, and Steilacoom Rd lack proper sidewalks and bike lanes, forcing pedestrians and cyclists onto the roadway.
- Drivers frequently fail to yield at crossings, and in some locations, flashing pedestrian signals not functioning properly.

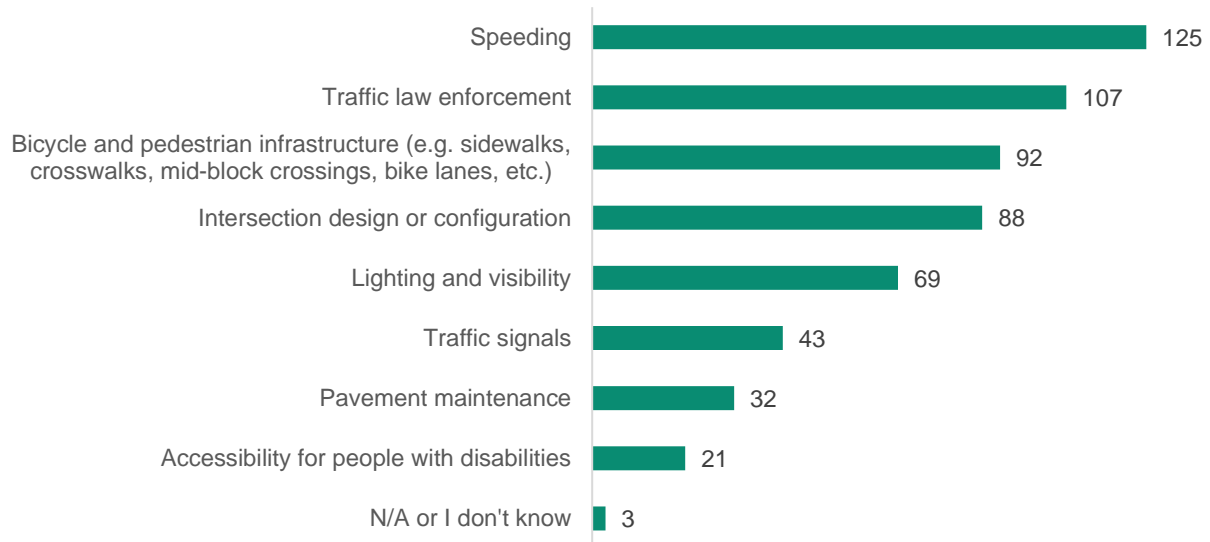
### Other

- Some bus stops cause drivers to make illegal maneuvers to bypass the buses.
- Neighborhood streets are being used as cut-through routes to avoid congestion, leading to higher speeds in residential areas.

## What do you think contributes to traffic crashes in Lacey?



## What areas are most important to address for safety in Lacey?



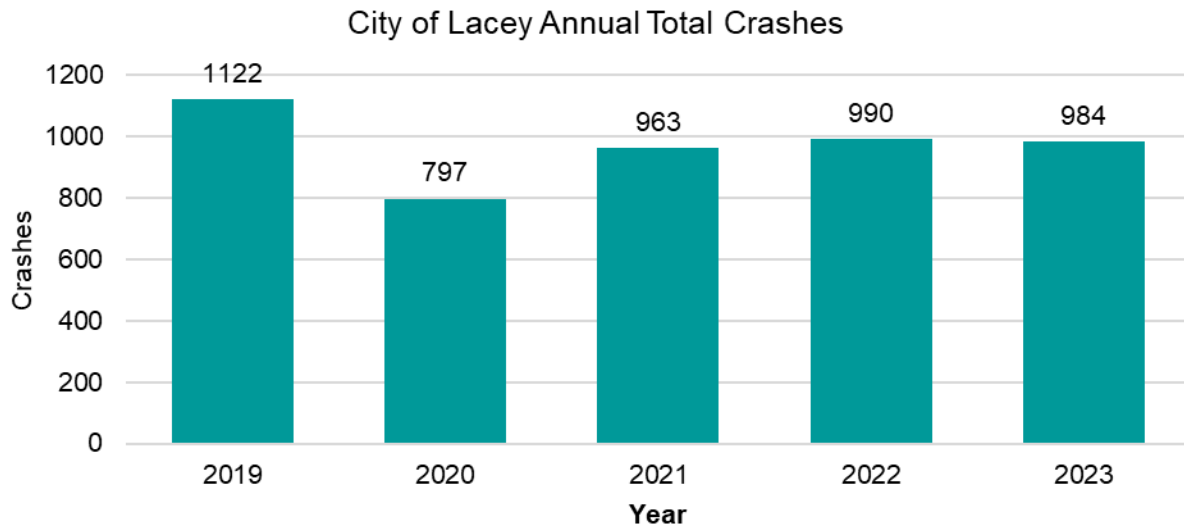
## SAFETY SUMMARY

Historical crash data from WSDOT was reviewed for the five most recent years of available data (2019-2023) for the study area. The following sections summarize the notable trends in reported crashes, focusing on fatal and serious injury crashes. This comprehensive review of the crash data helps to identify priority locations for safety investment and the types of countermeasures used to address identified issues. Investigating factors such as crash type, contributing factors, the involvement of various modes, and lighting condition helps to inform the development of potential strategies and projects.

### CITYWIDE PATTERNS AND TRENDS

There were a total of 4,856 crashes reported within Lacey's city limits between 2019-2023. Figure 2 shows that the highest number of crashes occurred in 2019, which represented 1,122 crashes. The number of annual crashes reduced by approximately 29% from 2019 to 2020; likely due to the effects of the COVID-19 pandemic. Since 2020, the number of crashes has increased but has not returned back to pre-COVID levels.

**Figure 2. Number of Crashes per Year**



*Crashes recorded within City of Lacey city limits, 2019-2023*

### Location

Of the reported crashes, approximately 20% were related to travel on I-5. As shown in Figure 3, outside of the I-5 interchanges, the highest density of crashes occurred along College Street and Marvin Road. On College Street, most crashes occurred near the intersections with Pacific Avenue SE, Lacey Boulevard SE and Yelm Highway SE. On Marvin Road, most crashes occurred at the intersections with Britton Parkway NE/Willamette Drive NE and Martin Way E.

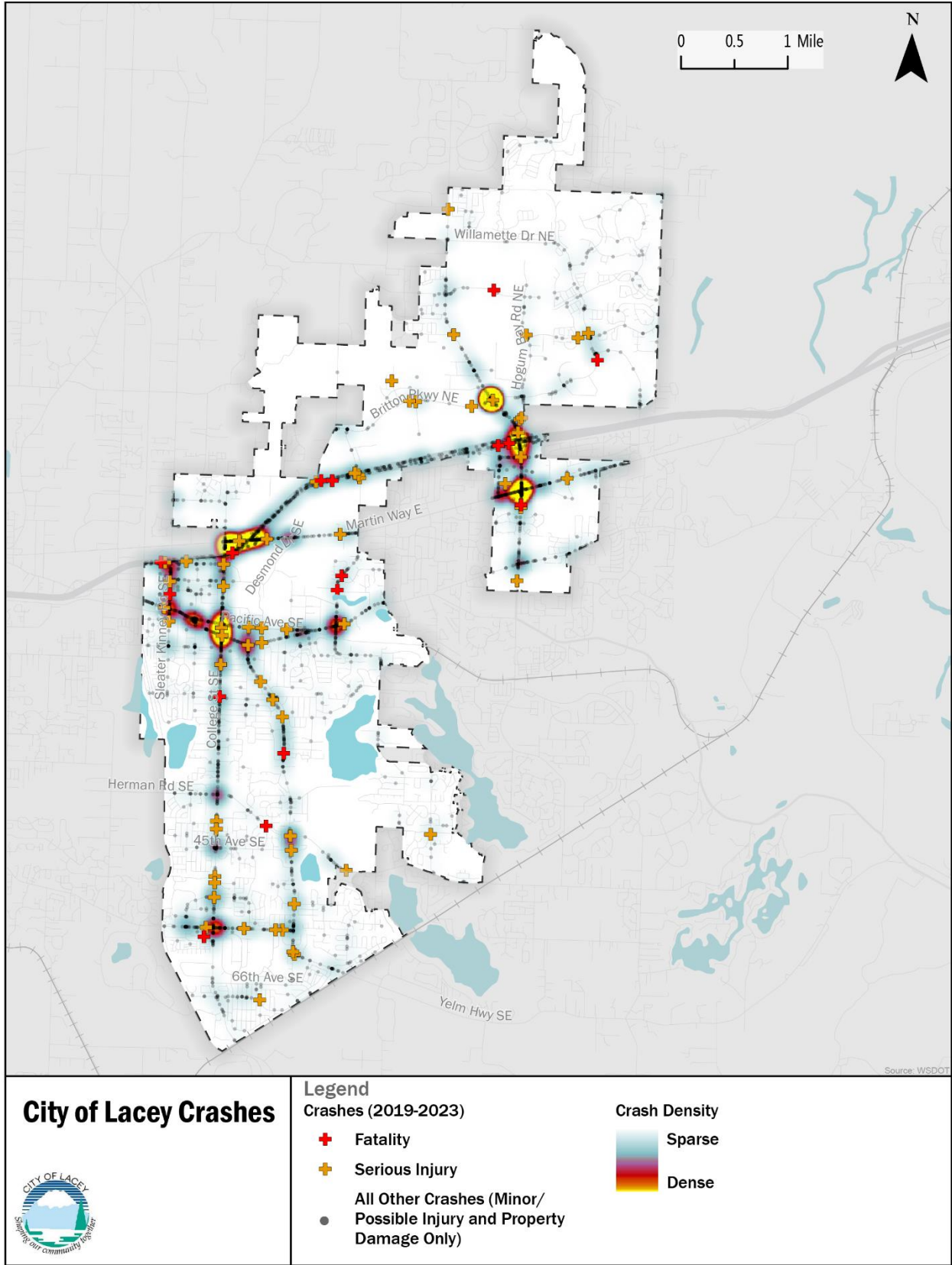
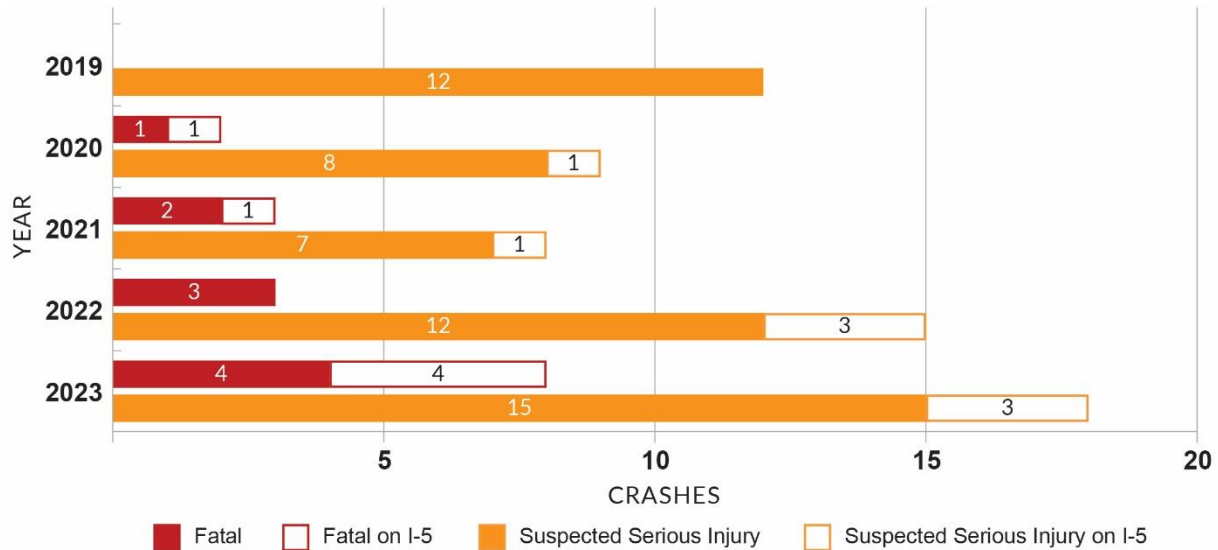


Figure 3. City of Lacey Crashes (2019-2023)

## FATAL AND SERIOUS INJURY CRASHES

The focus of the SS4A program is to reduce and eliminate fatal and serious injury (FSI) crashes. Figure 4 shows the number of annual FSI crashes over the five-year study period. The number of fatal crashes has increased within the study area since 2019. The dip in Lacey’s serious injury crashes during 2020 and 2021 aligns with the COVID-19 pandemic and may be related to reduced levels of travel resulting from stay-at-home orders. As of 2023, this metric had rebounded and surpassed 2019 (pre-pandemic) values.

**Figure 4. Fatal and Serious Injury Crashes by Year (2019-2023)**



## Crash Type

The primary crash types recorded in Lacey during the study period were rear end, angle (T) crashes, sideswipe (same direction), and fixed object crashes. Combined, these types of crashes account for 78% of the total crashes. The most common crash types resulting in fatal and serious injuries were hitting a pedestrian or cyclist, fixed object, and angle (T) crashes. Table 1 summarizes all the crashes by type and severity. Fixed object crashes resulted in the most fatalities (4) for a specific crash type.

Table 1. Crash Type By Severity (2019-2023)

Crash Type	Fatal	Serious Injury	Minor Injury	Possible Injury	No Apparent Injury	Unknown	Total
<b>FIXED OBJECT</b>	4	6	55	58	462	41	626
<b>HIT PEDESTRIAN</b>	3	17	17	24	3	0	64
<b>HEAD ON</b>	2	2	3	4	4	0	15
<b>OTHER</b>	2	0	10	26	143	1	182
<b>ANGLE (T)</b>	1	16	88	222	734	1	1062
<b>HIT CYCLIST</b>	1	7	32	21	1	0	62
<b>REAR END</b>	1	3	83	332	1032	3	1454
<b>ANGLE (LEFT TURN)</b>	1	2	55	111	338	2	509
<b>HIT PARKED CAR</b>	1	0	6	9	90	0	106
<b>OVERTURN</b>	0	5	6	12	6	1	30
<b>SIDESWIPE (SAME DIRECTION)</b>	0	4	10	42	572	3	631
<b>ANGLE (RIGHT)</b>	0	0	1	13	68	1	83
<b>SIDESWIPE (OPPOSITE DIRECTION)</b>	0	0	1	0	1	0	2
<b>ANIMAL</b>	0	0	0	0	30	0	30
<b>TOTAL</b>	<b>16</b>	<b>62</b>	<b>367</b>	<b>874</b>	<b>3484</b>	<b>53</b>	<b>4856</b>

*Note: Includes crashes on I-5.*

A closer review of the FSI crash types underscores the vulnerability of people walking and biking compared to occupants of a vehicle. Although there were 17 FSI angle (T) crashes, this was equivalent to just 2% of all angle (T) crashes. Conversely, 31% of pedestrian crashes and 13% of cyclist crashes were FSI crashes; people walking and biking are more vulnerable to injury than occupants of a vehicle.

## Contributing Factors

A review of contributing factors to recorded crashes in Lacey during the study period are documented in Table 2. Several factors may contribute to a single crash and thus the top 10 recorded driver contributing factors are summarized. The factors not listed combined were attributed to approximately 7% of total crashes.

The table provides the top 5 contributing factors for all crashes within the study area as well as for FSI crashes within the study area. In some cases, the contributing factor of a crash cannot be determined, and the responding officer will report “other” or “unknown”. Approximately 5% of the reported crashes from 2019 to 2023 did not have a reported driver contributing factor (report left blank or captured as “none”).

**Table 2. Top 5 Driver Contributing Factors**

All Crashes	FSI Crashes
1. Following Too Close	1. Inattention / Distraction
2. Failing to Yield	2. Failing to Yield
3. Inattention / Distraction	3. Under Influence of Alcohol / Drugs
4. Improper Turn/Merge	4. Exceeding Safe / Stated Speed
5. Other	5. Disregard Traffic Sign and Signals

A review of the data shows that the three most frequent contributing factors to FSI crashes were inattention/distraction, failing to yield, and drivers or pedestrians/cyclists under the influence of alcohol/drugs.

The *Washington Department of Transportation Strategic Highway Safety Plan 2024* reports impairment, speeding, distraction and lack of seat belt use as primary high-risk road user behavior contributing to fatal crashes in the state. These high-risk behaviors overlap with several of the top 5 contributing factors for crashes in Lacey.

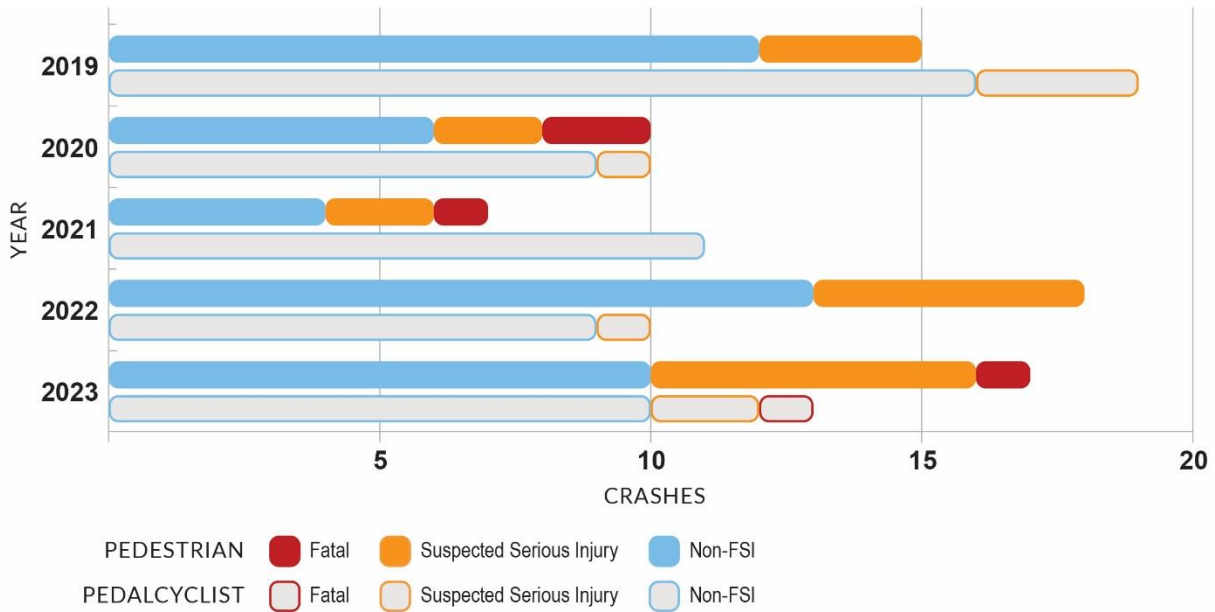
## ACTIVE TRANSPORTATION CRASHES

Active transportation crashes include crashes involving transportation users who use a human-scale and often human-powered means of travel to get from one place to another. Active transportation includes walking, bicycling, using a mobility assistive or adaptive device such as a wheelchair or walker, using micromobility devices such as skateboards, and using electric-assist devices such as e-bikes and e-foot scooters.

Between 2019 and 2023, there were 67 crashes involving pedestrians and 63 crashes involving pedalcyclists in Lacey. This differs slightly from the pedestrian and cyclist crash types in Table 1 because it includes all crash types that involved an active transportation user, even if indirectly. Pedestrian-involved collisions included 4 fatalities and 18 serious injuries. Pedalcyclist-involved collisions included 1 fatality and 7 serious injuries. The annual data is summarized in Figure 5.

As with serious injury crashes overall, Lacey’s pedestrian and bicyclist crashes dipped during 2020 and 2021, however the proportion of pedestrian fatal and serious injuries increased. The dip in overall crashes aligns with the COVID-19 pandemic and may be related to reduced levels of travel resulting from stay-at-home orders. As of 2023, pedestrian-related crashes had rebounded and surpassed 2019 (pre-pandemic) values for pedestrians.

**Figure 5. Active Transportation Crashes by Severity**



## Pedestrian Crashes

Figure 6 shows pedestrian crashes in the study area from 2019 to 2023. Pedestrian facilities are generally well developed in the section of Lacey south of Mullen Rd SE. These facilities provide connectivity to high-density housing, schools, shopping areas, and green spaces in the area. Pedestrians in this area have access to several alternate routes to each destination.

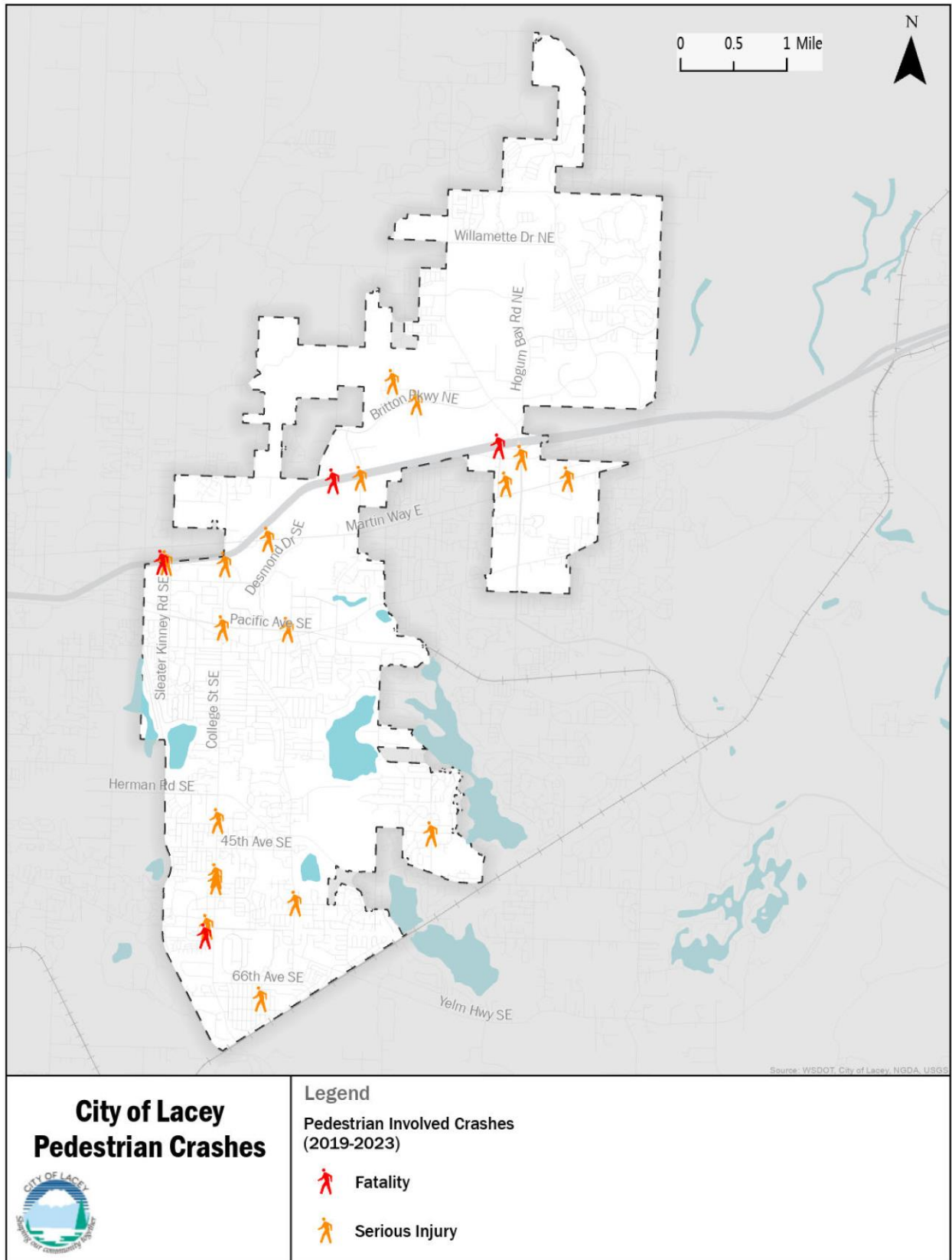
Of the 22 FSI crashes, 17 occurred on city-owned streets or SR 510, resulting in 1 fatal and 16 serious injury crashes. The remaining 5 FSI pedestrian crashes were interstate related, making up 3 of the 4 pedestrian fatalities in Lacey and 2 of the 18 serious injury crashes.

The crashes on Lacey facilities were reviewed in further detail and the key takeaways are:

- Five pedestrian FSI crashes occurred on College St SE.
- Prevalent contributing factors are related to either inattention/distraction or failing to yield.
- Most of these crashes (9 of the 17) took place along corridors rather than at intersections.

**College Street SE has a prevalence of pedestrian-related crashes that resulted in fatal and serious injuries. The corridor would benefit from improvements that separate vehicles from active transportation.**

Figure 6. City of Lacey Fatal and Serious-Injury Pedestrian Crashes



## Pedalcyclist Crashes

Figure 6 shows pedalcyclist crashes in the study area from 2019 to 2023. Similar to the pedestrian facilities, cycling facilities are also relatively well developed south of Mullen Rd SE. Designated bike lanes, and shared use paths provide access to high-density housing, schools, shopping areas, and green spaces.

Between Mullen Rd SE and I-5, the cycling network provides comparatively less access for bicyclists. The network does not serve several commercial and high-density housing areas, green spaces, and schools in this area. In addition to bike lanes and shared use paths, roads with a “wide shoulder” make up a significant portion of bicycle network. This suggests that these segments are not specifically designed to accommodate bicycles. The network also provides little connectivity between the areas of Lacey to the north and south of I-5.

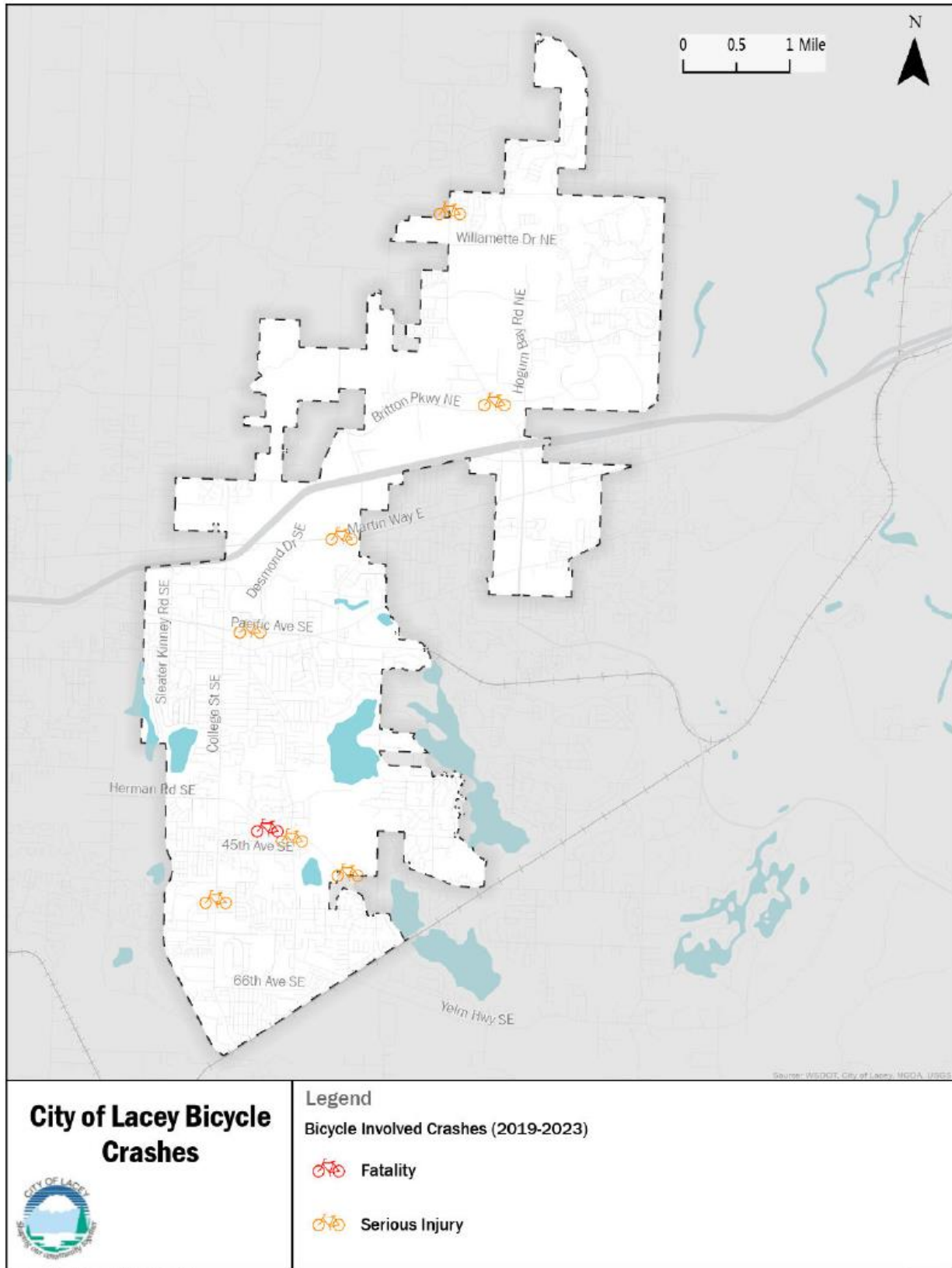
North of I-5, the cycling network consists of mostly bike lanes along with some wide shoulders and shared use paths. It provides access to parks, commercial areas, some high-density housing areas as well as to local schools.

Of the 8 FSI crashes involving cyclists in Lacey, all occurred on city-owned streets, resulting in 1 fatal and 7 serious injury crashes.

The crashes were reviewed in further detail and the key takeaways are:

- All but one of the FSI crashes involving cyclists were the result of a vehicle striking the bicyclist.
- Most of the crashes were related to an intersection or driveway.
- Common contributed factors include distraction, not granting the right of way, or turning/merging improperly.

Figure 7. City of Lacey Pedalcyclist Fatal and Serious-Injury Crashes



## SUMMARY OF ANALYSIS FINDINGS

Table 3 on the following page summarizes City of Lacey crash data for the study period. This summary reveals some notable trends relating to fatal and serious injury crashes in Lacey:

- Vulnerable road users are significantly overrepresented in FSI crashes. The data show that 38% of **all** FSI crashes impacted either a pedestrian or bicyclist.
- Low lighting conditions play a significant role in FSI crashes of pedestrians; 59% of FSI **pedestrian** crashes occurred outside of daylight conditions (dark, dusk or dawn).
- Most FSI crashes were not intersection or roundabout related, but either non-intersection or driveway related.
- None of the FSI crashes that were at a roundabout junction occurred circulating the roundabout, but either exiting or approaching the roundabout.
- Fixed object crashes account for nearly 13% of all crashes in Lacey and also almost 13% of all FSI crashes.
- Driver factors contributing to FSI crashes include Inattention / Distraction, Under Influence of Alcohol / Drugs, Exceeding Safe / Stated Speed, and Disregard Traffic Sign and Signals.

**Table 3. Summary of Lacey Crash Details (2019-2023)**

<b>Data Element</b>	<b>Crash Detail</b>	<b>% Collisions with This Detail</b>	<b>% FSI Collisions with This Detail<sup>1</sup></b>
<b>Collision Type</b>	Angle	34.1%	25.6%
	Rear End	29.9%	5.1%
	Overturn	0.6%	6.4%
	Head On	0.3%	5.1%
	Fixed Object	12.9%	12.8%
	Vehicle Hits Pedestrian	1.3%	25.6%
	Vehicle Hits Bicyclist	1.3%	10.3%
<b>Driver Contributing Factor<sup>2</sup></b>	Inattention / Distraction	14%	19%
	Failing to Yield	23%	17%
	Under Influence of Alcohol / Drugs	5%	15%
	Exceeding Safe / Stated Speed	7%	14%
	Disregard Traffic Sign and Signals	4%	12%
<b>Lighting Condition</b>	Dark / Dusk / Dawn	28.6%	38.5%
<b>Junction Relationship</b>	At Intersection/ Intersection-Related <sup>3</sup>	42.2%	38.5%
	At Roundabout/ Roundabout-Related <sup>4</sup>	9.9%	5.1%
<b>Roadway Surface</b>	Wet	30.5%	19.2%
	Ice / Snow / Slush	2.0%	0.0%

1. FSI is an abbreviation for “fatal and serious injury.”
2. A single crash may have multiple contributing factors.
3. Includes junctions coded as “At Intersection and Related”, “Intersection Related but Not at Intersection”, and “At Driveway within Major Intersection”.
4. Includes junctions coded as “Exiting Roundabout”, “Entering Roundabout”, “Circulating Roundabout”, “Roundabout Related but not at Roundabout” and “Traffic Calming Circle”.

# EMPHASIS AREAS AND HIGH-RISK NETWORK

## EMPHASIS AREAS

The crash characteristics most associated with fatal and serious-injury crashes—such as crash type, behavior, or infrastructure—are reflected in the emphasis areas listed below. Focusing treatments in these areas is likely to have the greatest impact on reducing fatal and serious injury crashes.



### Active Transportation

Focuses on crashes involving someone walking or riding a bicycle. Crashes involving pedestrians and bicyclists are more likely to result in a fatal or severe injury. In addition, many younger and older road users travel on foot or via bicycle, which compounds this vulnerability.



### Motorcycles

Focuses on crashes involving someone riding a motorcycle. Crashes involving motorcyclists are more likely to result in fatal or severe injuries in part because, compared to cars, motorcycles offer less physical protection to their operators, are smaller and lighter, and are harder for other vehicle operators to see.



### Recklessness

Focuses on recklessness as a driving behavior that puts the driver and other road users at risk. Reckless driving not only increases the risk of a crash occurring but also results in more severe injuries to those involved. This safety emphasis area considers crashes resulting from drivers intentionally operating aggressively by following too closely, exceeding safe speeds, disregarding traffic signs and signals, failing to yield, and improperly turning or merging. It also considers drivers operating under the influence of drugs and/or alcohol. Reckless behaviors like these are significant factors contributing to angle (T), fixed object, and rear end crashes.



### Inattention

Focuses on lack of attention as a driving behavior that puts the driver and other road users at risk. Distractors such as electronic devices and passengers take a driver's focus away from the road, increasing the likelihood of missing critical cues and potentially leading to collisions with severe consequences. These distractions can cause vehicle operators to turn and merge improperly, disregard traffic signs and signals, and fail to yield. Distracted behaviors like these are significant factors contributing to angle (T), fixed object, and rear end crashes.



### Intersections

Focuses on crashes that occur within the functional area of an intersection. Intersections are locations where travel paths of various road users temporarily come together and overlap, resulting in high concentrations of potential conflict points. Crash severity and patterns vary based on traffic control type, but intersection-related crashes that involve speeding, disregard of traffic signs and signals, and vulnerable users often result in fatal and serious injuries.

## HIGH-RISK NETWORK

Several factors were considered when developing the High-Risk Network, such as number of fatal and serious injury crashes, crash density and crash types and behaviors that fall in the emphasis areas listed above.

Crash frequency and crash severity were used to calculate a Weighted Crash Value (WCV) for intersections and corridors. Crashes are weighted based on severity level. No apparent injury collisions received a score of 1, possible and minor injury collisions received a score of 10, and serious injury and fatal collisions received a score of 100.

The sections below highlight the highest risk intersections and corridors in the City of Lacey. Figure 8 summarizes the high-risk intersections and corridors.

### High-Risk Intersections

Top 5 High-risk intersections based on the WCV in Lacey are:

1. College St SE at Lacey Blvd SE
2. College St SE and Martin Way E
3. Marvin Rd and Britton Pkwy / Willamette Dr NE
4. Marvin Rd and Martin Way E
5. College St SE and Pacific Ave SE

Other intersections considered high-risk:

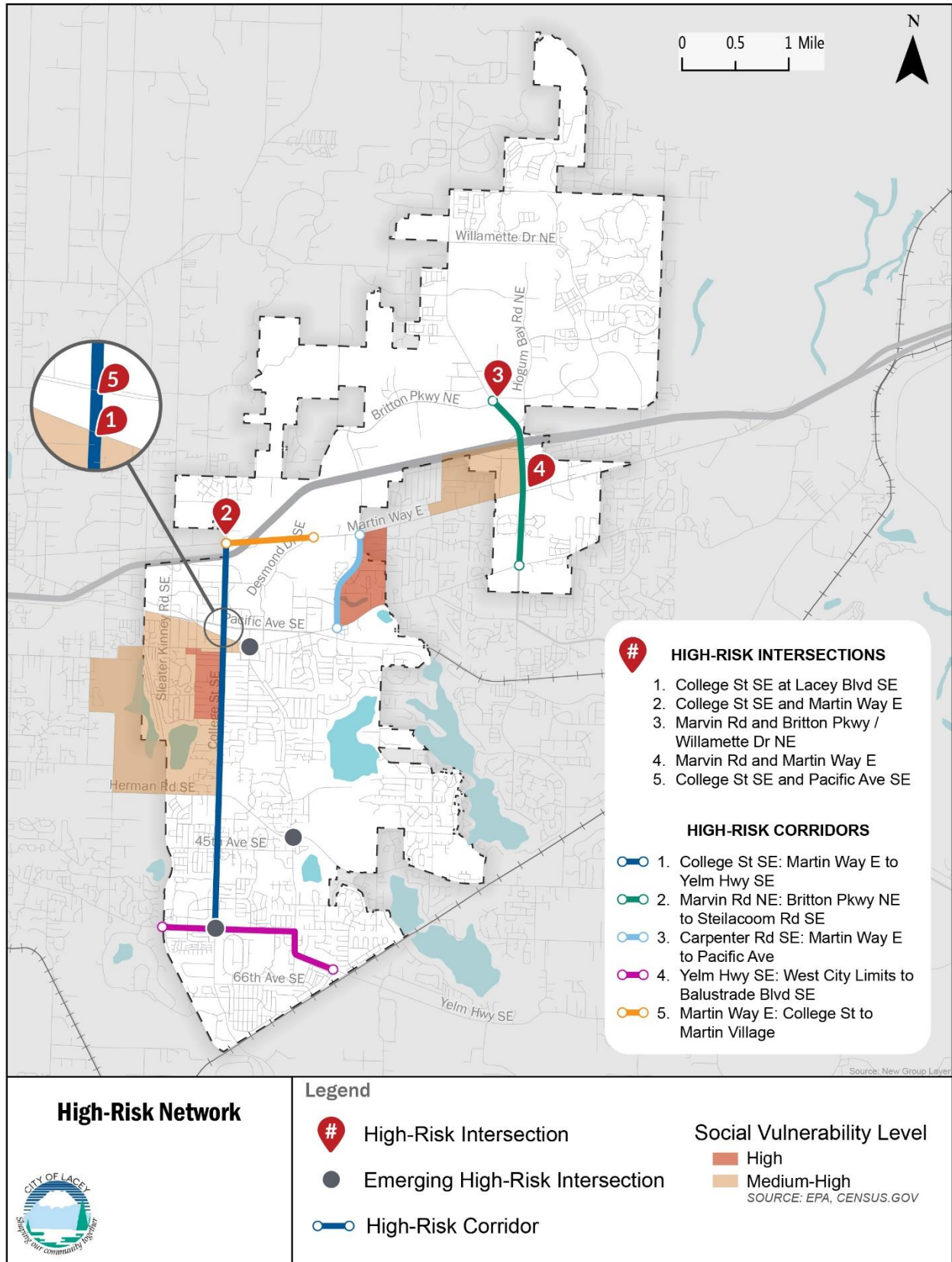
- College St SE at Yelm Hwy SE
- Ruddell Rd at Mullen Rd SE
- Ruddell Rd at Lacey Blvd SE

### High-Risk Corridors

High-risk corridors in Lacey are:

1. College St SE: Martin Way E to Yelm Hwy SE
2. Marvin Rd NE: Britton Pkwy NE to Steilacoom Rd SE
3. Carpenter Rd SE: Martin Way E to Pacific Ave
4. Yelm Hwy SE: West City Limits to Balustrade Blvd SE
5. Martin Way E: College St to Martin Village

Figure 8. High-Risk Network



# PROJECTS AND STRATEGIES

## EVALUATION

### Goal and Objectives

The goal and objectives of the SAP were developed through a review of the FHWA guidance for comprehensive safety action plans and the aforementioned Safe System Approach.

**Goal:** Implement a holistic, well-defined, equitable strategy to reduce roadway fatalities and serious injuries on City roadways by 2030.

**Objective 1:** Identify concrete, achievable actions designed to enhance the health and safety of travelers of all ages and abilities, whether they are walking, biking, rolling, riding transit, or driving.

**Objective 2:** Track progress towards the goal of fatality and serious injury reduction and adjust approaches over time as data indicates techniques that are or are not working.

### Project Development and Evaluation

Safety projects were developed and evaluated using a variety of factors as summarized in Table 4.

**Table 4. Project Evaluation Criteria**

Criteria	Description	Metric
Crash Severity	Prioritize projects that will address fatalities and serious injuries.	Total number of fatal and serious injuries over a 5-year period.
Community	Prioritize projects that will improve transportation options for vulnerable groups.	Number of overrepresented equity attributes existing in the proposed project location.
High-Risk Network	Prioritize the projects that address City of Lacey's stated high-risk areas.	Number of high-risk areas the project addresses.
Multimodal	Prioritize projects that improve travel conditions for multiple modes of transportation.	Number of modes of transportation for which the project improves travel conditions.
Existing Plans/Policies	Prioritize projects that align with existing plans and policies.	Does the project align with existing plans and policies?
Public Feedback/Concerns	Prioritize projects that address public feedback and concerns.	Does the project address an area of public feedback or concern?

## COUNTERMEASURES TOOLKIT

Following identification of emphasis areas and high-risk crash locations, countermeasures were identified and are included in Appendix A as a toolkit. The toolkit includes a series of countermeasures from FHWA’s Proven Safety Countermeasures list and Washington State Department of Transportation’s (WSDOT’s) Crash Modification Factor (CMF) Short List. These resources contain safety countermeasures and score their effectiveness at reducing crashes.

### How do they work?

Key safety countermeasures are applicable in different roadway contexts across Lacey. CMF ratings estimate the reduced frequency of crashes following the implementation of a countermeasure. For example, a CMF of 0.70 indicates a 30% reduction in crashes (in other words, a 30% crash reduction factor) of the identified type.

### Recommended Countermeasures

This section outlines a series of proven safety countermeasures designed to address common high-risk crash types in Lacey. Each summary includes a general description, expected crash reduction outcomes, and the specific crash type(s) each countermeasure targets.

<p><b>Roundabouts</b></p> <p>Roundabouts are designed to make intersections safer. The curved design naturally reduces speed and cuts down on the places where crashes can happen. Thanks to these features, roundabouts help prevent serious accidents and make the roads safer for everyone.</p>	<p><b>Crash Types Addressed:</b></p> <ul style="list-style-type: none"> <li>All crash types</li> </ul> <p><b>Factors Addressed:</b></p> <ul style="list-style-type: none"> <li>Speeding</li> <li>Failure to yield</li> </ul>	<p><b>Expected Crash Reduction:</b></p> <ul style="list-style-type: none"> <li>82% reduction in fatal and injury crashes (from stop-control)</li> <li>78% reduction in fatal and injury crashes (from signal)</li> </ul>
<p><b>Corridor Access Management</b></p> <p>Access management is about carefully planning where cars, bikes, and pedestrians can safely enter and exit a roadway. Good access management helps make roads safer for everyone, supports easier walking and biking, and keeps traffic flowing by reducing delays.</p>	<p><b>Crash Types Addressed:</b></p> <ul style="list-style-type: none"> <li>All crash types</li> </ul> <p><b>Factors Addressed:</b></p> <ul style="list-style-type: none"> <li>Failure to yield</li> </ul>	<p><b>Expected Crash Reduction:</b></p> <ul style="list-style-type: none"> <li>45% reduction in all severities</li> </ul>
<p><b>Enhanced Pedestrian Crossings</b></p> <p>Pedestrian refuges, marked with crosswalks, are added to streets at intersections without traffic signals or even mid-block. They give people a safe place to pause while crossing and allow them to focus on one direction of traffic at a time, making it easier and safer to get across the road.</p>	<p><b>Crash Types Addressed:</b></p> <ul style="list-style-type: none"> <li>Pedestrian crash types</li> </ul> <p><b>Factors Addressed:</b></p> <ul style="list-style-type: none"> <li>Inattention/distracted drivers</li> <li>Failure to yield</li> </ul>	<p><b>Expected Crash Reduction:</b></p> <ul style="list-style-type: none"> <li>46% reduction in pedestrian crashes (median with marked crosswalk)</li> <li>56% reduction in pedestrian crashes (refuge island)</li> </ul>

## ADDRESSING HIGH-RISK NETWORK

The City of Lacey has already invested time and effort to program a pipeline of projects to help improve the transportation network. These projects can be implemented by the city, or through development opportunities; the city supports efforts by private developers to increase safety, improve access and enhance or provide multimodal connections.

For the Safety Action Plan, the project team referenced the City of Lacey 2023-2042 Capital Facilities Plan with the intent to highlight projects that could mitigate fatal and serious non-motorized collisions on the high-risk network.

Prioritization of these projects and strategies shown in Table 5 are reflected in the “Priority” column. High-priority projects are expected within 5 years. Mid and lower priority projects are reflected with the 10 or 20 year implementation timeline.

**Table 5. City of Lacey High-Risk Network Projects**

Location	Project Title	Improvement	Cost Estimate	Priority
<b>College St SE</b>	College Street Phase 3 (College St & 16th Ave Roundabout)	Construct a multilane roundabout; Improved sidewalks, raised median, pedestrian crossings and repaving from Lacey Blvd to 22nd Ave SE	\$18,797,500	High
<b>College Street SE</b>	College St Phase 4 (College St & 29th Ave Roundabout)	Construct multilane roundabout at intersection of College St SE and 29th Ave SE; Includes improved sidewalks, planter strips, and repaving from 24th Ave SE to 37th Ave SE	\$37,000,000	High
<b>College St SE</b>	7th Avenue & College St Roundabout	Construct multilane roundabout with pedestrian crossing flashing beacons	\$6,000,000	High
<b>Marvin Rd NE</b>	Marvin Rd from Britton Pkwy to Columbia Wy	Widen Marvin Rd to 4 lanes with medians and auxiliary turn lanes from Britton Pkwy to Hawks Prairie Rd; Transition to 3-lane section to Columbia Wy NE; Includes bike lanes and sidewalks	\$19,000,000	Low
<b>Carpenter Rd SE</b>	Carpenter Rd Capacity and Safety Improvements	Widen Carpenter Rd between Pacific Ave SE and Shady Lane SE; Taper from 5-lane section to 3-lane section with bike lanes and sidewalks; Realign 14th Ave SE from a Y- to a T-intersection	\$4,400,000	Medium
<b>Carpenter Rd NE</b>	Carpenter Rd Widening from Martin Way to Britton Pkwy	Widen Carpenter Rd to 5-lane section with auxiliary turn lanes, bike lanes, sidewalks, and other urban amenities	\$24,500,000	Medium

Location	Project Title	Improvement	Cost Estimate	Priority
<b>Carpenter Rd NE</b>	Britton Pkwy Phase II (Gateway Blvd to Carpenter Rd)	Widen Britton Pkwy to four-lane boulevard from Gateway Blvd to Carpenter Rd NE	\$3,100,000	Medium
<b>College Street SE</b>	College St Phase 4 (College St & 29th Ave Roundabout)	Construct multilane roundabout at intersection of College St SE and 29th Ave SE; Includes improved sidewalks, planter strips, and repaving from 24th Ave SE to 37th Ave SE	\$37,000,000	Medium
<b>Yelm Hwy SE</b>	Yelm Hwy SE (Compton Blvd to Ruddell Rd)	Widen east side of Yelm Hwy from Compton Blvd to Ruddell Rd SE; Includes additional northbound lane, bike lanes, sidewalks, and other urban amenities	\$6,000,000	Low
<b>Martin Wy E (Galaxy Dr to River Ridge Dr)</b>	Martin Wy E Roadway Improvements	Improve access management and add bike lanes, sidewalks, and other urban amenities along Martin Wy E from Galaxy Dr to River Ridge Dr	\$5,500,000	Medium

## PROGRAMS, POLICIES AND STRATEGIES

A critical component of the Safe System approach is addressing risky behaviors like speeding, impairment, distraction, and aggressive driving, as crashes resulting from these behaviors are more likely to be severe. The following strategies are additional ways to work toward the goal of preventing roadway deaths and serious injuries, beyond implementing the infrastructure projects.

Programs, policies and strategies centered around three areas of interest:

- ◆ Education and Enforcement
- ◆ Design / Countermeasures
- ◆ Implementation Support

### Education and Enforcement

- Use social media platforms and the City website to distribute education materials prepared by WSDOT and other agencies. Education campaigns should emphasize crash patterns observed in Lacey, such as distracted driving, impairment and reckless driving/speeding.
- Consider developing targeted education programs to educate specific populations, like children, employers, and motorcyclists.
- Law enforcement should continue following established practices for traffic enforcement and continuously educate officers in best practices for traffic enforcement.

- Continue to support Safe Routes to School program involvement.
- Partnering with local hospitals or outreach groups can help provide bystander training courses to the public (i.e., train members of the public to respond to emergencies since they are sometimes the first on the scene at a crash)

## Design / Countermeasures

- Utilize portable dynamic radar speed feedback signs at strategic locations to alert drivers who are exceeding the posted speed limit (Managed by police department).
- Implement context-based speed limit policies and neighborhood traffic management strategies to encourage slower travel speeds.
- Employ traffic calming techniques (tree-lined streets, speed humps, roundabouts, traffic circles, bollards, etc.)
- Incorporate safety elements into already planned road improvement, utility, and street maintenance projects.
- Review countermeasures when conducting new roadway design or implementing safety-related improvements to existing facilities.

## Implementation Support

- Conduct a speed audit to confirm posted speed/signage.
- Conduct audit of existing signal operations to support safety goals and emphasis areas. This may include considerations for retiming signals to support safe speeds, as well as adding leading pedestrian intervals, restricted turn phases, and walk signals with countdown timers and activation buttons.
- Continue to collaborate with WSDOT and regional partners to implement identified countermeasures at priority locations on State Highways or County roads.
- Support transit agencies, businesses, and enforcement to provide discounted or free rides (transit or ride-hailing companies) during holidays or community events that are associated with increased DUI or drowsy driving.

## TRACKING PROGRESS

Monitoring progress is crucial for ensuring effectiveness, accountability, and continuous improvement. Tracking progress allows the City to evaluate the impact of strategies and actions to refine and adjust plans over time.

This Safety Action Plan is a policy document and should be regularly updated to evaluate its efficacy and track the City's progress toward reducing fatal and serious injuries. City of Lacey staff will continue to monitor fatal and serious injuries and prepare an annual memorandum that will summarize crash trends focused on the Emphasis Areas and the performance measures listed below. The timing of the annual reporting should be timed to allow the analysis results to inform the City's transportation project programming and grant funding applications.

The emphasis areas and systemic strategies identified in this plan will be re-evaluated every 3-5 years and revised based upon the results of the crash trend analysis.

## PERFORMANCE MEASURES

Evaluation of specific treatments may be conducted using observed crash data. The most important measure of success of the Safety Action Plan should be reductions in fatal and serious injury crashes.

### Measure

#### *Crash Statistics*

The number of fatal and serious injury crashes.

The number of fatal and serious injury crashes by emphasis area.

The number of fatal and serious injury crashes at high-risk intersections.

#### *Plan Implementation*

Number of safety projects/strategies implemented.

Number of safety projects/strategies continued from prior year.

Number of safety projects/strategies implemented on the High-Risk Network.

Number of annual updates to the City's Safety Action Plan website.

Frequency of communication with the Safety Action Plan Task Force.