



Road Safety Action Plan

JULY 2026 | REVISED DRAFT

TOOLE
DESIGN

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CHAPTER 1

INTRODUCTION

WHAT IS A ROAD SAFETY ACTION PLAN?

The Santa Cruz Road Safety Action Plan (SAP) provides a data-driven, actionable roadmap for the elimination of fatal and serious injury crashes in Santa Cruz. It includes a review of previous plans and efforts, an analysis of past crashes and risk factors, and a summary of community input on road safety in the city. This plan identifies multiple recommendations for policy and programmatic changes, as well as roadway infrastructure changes, to improve road safety outcomes in the City of Santa Cruz.

The information contained in this report will provide a foundation for decision making, prioritization of safety countermeasures, and support the city in seeking funding to construct projects that enhance safety for all road users in the city.

WHY DOES SANTA CRUZ NEED THIS PLAN?

In Santa Cruz, between 2020 and 2024, 16 people died and 94 were seriously injured in crashes while traveling in the city. On average, there were 22 people per year whose lives were significantly impacted or ended by traffic crashes.

Table 1. Summary of reported crashes in Santa Cruz, 2020-2024.

626	Reported crashes
94	People seriously injured in crashes
16	People killed in fatal crashes

Although crashes can occur to anyone at any time, local and national data show that fatal and/or serious injury crashes disproportionately affect certain populations. Vulnerable road users, such as pedestrians, bicyclists, and others traveling outside a vehicle, are more likely to be killed or seriously injured than a motor vehicle occupant. People who are unhoused experience several types of vulnerability - they are more likely to rely on walking and bicycling to travel, and more likely to be out of doors at night when lighting and visibility concerns lead to higher rates of fatal and serious injury crashes.

COMMITMENT TO ROAD SAFETY IN SANTA CRUZ

Santa Cruz has demonstrated a commitment to road safety through a variety of measures over the years. The city adopted a Vision Zero resolution on August 27, 2019, setting a goal to eliminate traffic fatalities and serious injuries on city streets by 2030. In 2021, the city completed a Local Road Safety Plan (LRSP) that outlined actions the city could take in implementing safety improvements on its roads. Since then, the City has focused policies, planning, and implementation efforts towards achieving this goal, including:

- Constructing Rail Trail Segment 7, improving safety and connectivity for people walking and bicycling,
- Installing separated bike lanes (Class IV) on Water Street, and designing and installing separated bike lanes on Bay Street,
- Upgrading traffic signals with retroreflective backplates and technology to provide advanced dilemma zone detection,
- Painting red curb and installing quick-build curb extensions to improve visibility at intersections, and
- Leveraging routine repaving projects to narrow travel lanes and install bicycle facilities and pedestrian crossings.

Despite these efforts, crashes have continued to occur, resulting in injuries and deaths. This SAP introduces a new framework for thinking about traffic safety called the Safe System Approach. To allow the City and its partners time to incorporate this approach into policies, programs, and infrastructure projects, the target year of the City's original Vision Zero resolution is being updated as well. While this SAP reaffirms the City's commitment to eliminating deaths and serious injuries, it recognizes that there is more work to be done and sets a more realistic timeline, updating the City's target year to 2050.

By adopting the Safe System Approach and implementing the recommendations in this Safety Action Plan, the City of Santa Cruz will eliminate deaths and serious injuries on city roadways by 2050.

RELATIONSHIP WITH THE SANTA CRUZ ACTIVE TRANSPORTATION PLAN

The Santa Cruz Active Transportation Plan (ATP) Update was adopted in April 2026. The vision of the plan is to promote Santa Cruz as a place where people of all ages and physical abilities can access safe, convenient, and enjoyable ways of getting around through walking, biking, and rolling.

The Active Transportation Plan is focused on transportation policies, programs, and projects that improve the system for people who walk, bike, and roll. The Safety Action Plan is focused on everyone on our roadways: people walking, biking, taking transit, and driving.

Most of the City's fatal and serious injury crashes (67%) involve people walking or biking, even though most trips in Santa Cruz are made by car. Concerns about the safety of walking and biking featured prominently during the outreach for the ATP Update. While this SAP addresses all road users, it also builds on the recommendations in the ATP Update, since meaningful reductions in serious and fatal crashes require reducing the number of crashes involving pedestrians and bicyclists.

THE SAFE SYSTEM APPROACH

The Santa Cruz SAP is rooted in the Safe System Approach,¹ which acknowledges human mistakes and vulnerabilities and encourages comprehensive and proactive steps to prevent serious injuries and fatalities on roadways. This approach acknowledges that people can and will fail, but that our systems should be designed so that when this happens, it does not result in death and serious injury. A key component of this is shifting from an individual view of roadway safety to a collective view.

The Safe System Approach has six key principles and five elements that work in tandem to create a safe system. Strengthening all the elements creates layers of protection against harm on the roads.

PRINCIPLES

- **Deaths and serious injuries are unacceptable.** Individuals should not die or face life-altering injuries when traveling from place to place.
- **Humans make mistakes.** Mistakes are an inevitable part of being human, but the transportation system can be designed to prevent these mistakes from becoming fatal.
- **Humans are vulnerable.** Human bodies have physical limits for tolerating crash forces before death or serious injury occurs.
- **Responsibility is shared.** Everyone has a role in preventing fatalities and serious injuries on roadways – not just drivers.
- **Safety is proactive.** It shouldn't take a fatal or serious injury crash for change to occur. Proactive changes can improve safety outcomes.
- **Redundancy is crucial.** Having multiple layers of protection in the transportation system allows for life-saving safety improvements when one element fails.

¹ <https://www.transportation.gov/safe-system-approach>

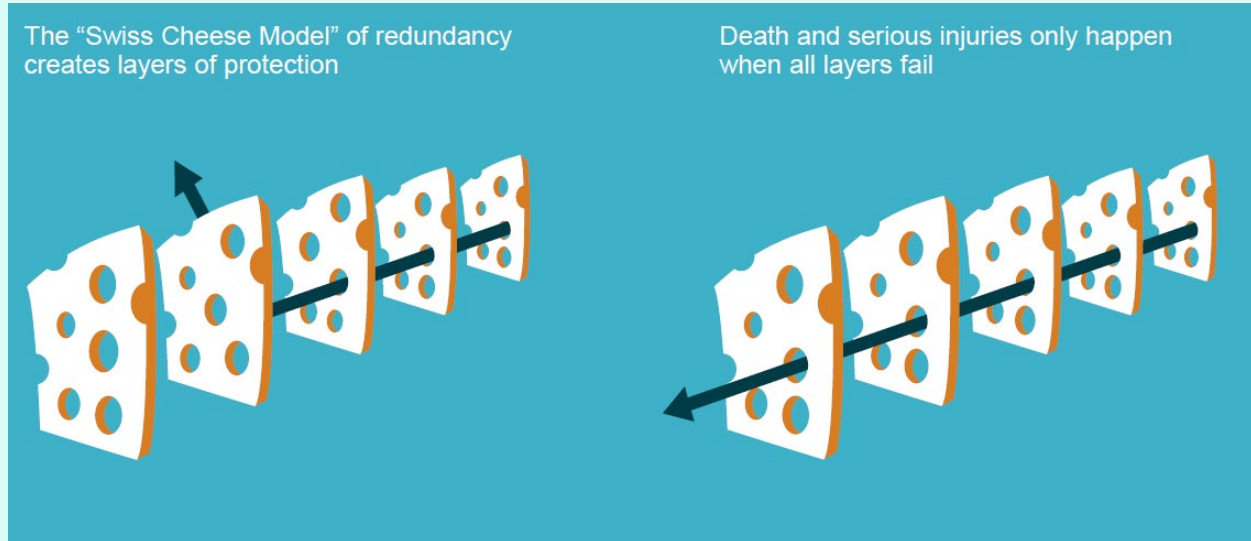


Figure 1. The "Swiss Cheese Model", which highlights the role that redundancy plays in the transportation system.

ELEMENTS

- **Safer People** – All road users play a role in improving roadway safety, whether walking, driving, biking, or rolling.
- **Safer Speeds** – Safe travel speeds should be encouraged through context-sensitive design, education, and outreach. Physics clearly demonstrates that the faster an object is traveling and the heavier the object is, the more serious the damage that will occur. By reducing speeds and kinetic energy forces, fatal crashes can be avoided.
- **Safer Vehicles** – While emerging vehicle technologies improve safety for those inside vehicles, the growth in vehicle sizes over the past decade has led to more severe injuries to those outside of vehicles. Safer vehicles for all road users are a crucial aspect of the Safe System.
- **Safer Roads** – Strategies can include separating users in space and time, as well as increasing attentiveness and awareness. Roadway design elements, such as providing protected, dedicated infrastructure for all travel modes can reduce the severity of roadway injuries.
- **Post-Crash Care** – Survivability of crashes can be improved drastically by providing access to appropriate emergency medical care.



CHAPTER 2

WHAT DOES THE DATA SAY ABOUT ROAD SAFETY IN SANTA CRUZ?

UNDERSTANDING CRASH DATA AND DATA LIMITATIONS

Crash data is the main tool used to understand how and where people are severely injured or killed while traveling. When someone reports or police respond to a crash that injures or kills someone, a police report is generated to document the details of the crash. These details include the locations, contributing factors, and some basic information about the people involved.

This plan uses data from the Statewide Integrated Traffic Records System (SWITRS) for the most recent five years of available data (2020-2024). This data can be explored on the [Data Dashboard](#), an interactive map that can be filtered by year, travel mode, and contributing factors.

Although crash reports are generally the best way to obtain information about a large quantity of crashes, they have some of the following limitations:

- The total number of crashes may be higher than captured because of unreported crashes, which may occur for a variety of reasons.
- Crashes that don't involve motor vehicles, such as a crash between a bicyclist and pedestrian, are frequently not reported.
- Crash severity may be underreported because the law enforcement officials who complete police reports typically don't have medical training, and victims of crashes may be unaware of internal injuries masked by adrenaline.
- The analysis and Safety Action Plan is focused on fatal and serious injury crashes, rather than all reported crashes, given the life altering impact of those crashes. By targeting safety improvements to reduce these crashes, the overall safety of roadways will be improved.
- Crash reports may not document the role of speeding in crashes, as first responders are typically on the scene after the crash occurred and witnesses outside a crash are not typically interviewed about operator speed.
- The City of Santa Cruz generally does not take collision reports on Property Damage Only (PDO) crashes.

In addition to these issues with crash reports, there is no data available that speaks to near misses or the self-limiting behavior of travelers who don't feel safe on certain roadways. For example, there may not be any fatal and serious injury pedestrian crashes on a particular roadway not because the conditions are safe, but because people walking tend to avoid using that route based on their perception of safety. All of these factors mean that while the crash analyses conducted for this section are useful and informative, they are not perfect and present only one piece of the story.

CRASH TRENDS

To establish an understanding of roadway safety in Santa Cruz, the project team reviewed data from crashes that occurred between 2020 and 2024. It’s important to note that both 2020 and 2021 saw impacts from the COVID-19 pandemic, which changed travel patterns and led to fewer travelers and fewer overall crashes.

During this period, there were 626 reported crashes with 94 people suffering serious injuries and 16 people losing their lives. This equates to an average of 22 fatal or serious injury crashes a year – with the overall number climbing – from 16 in 2020 up to 26 in 2024. Figure 2 shows the total number of fatal and serious injury crashes for all travel modes by year.

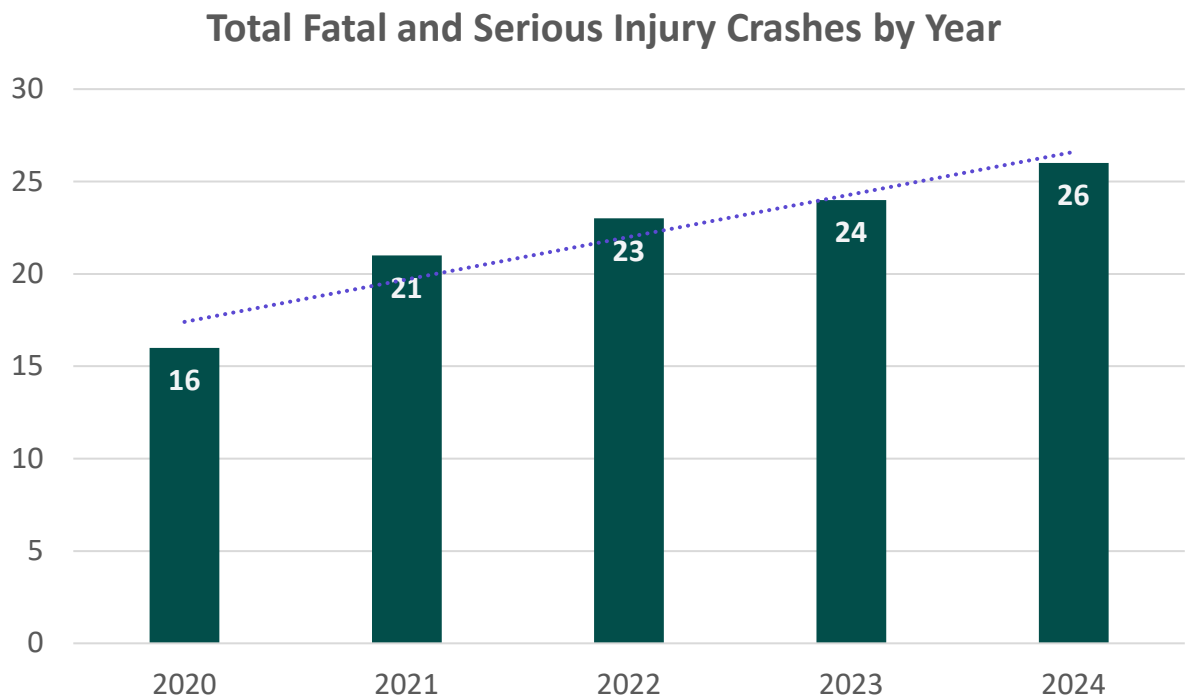


Figure 2. Total Fatal and Serious Injury Crashes by Year (2020 - 2024).

Figure 3 separates fatal and serious injury crashes by travel mode and shows how the number of crashes for each mode changes year to year. Bicyclists and pedestrians were involved in the most serious injury and fatal crashes each year except for 2021, when the number of fatal and serious injury crashes was highest for people in motor vehicles.

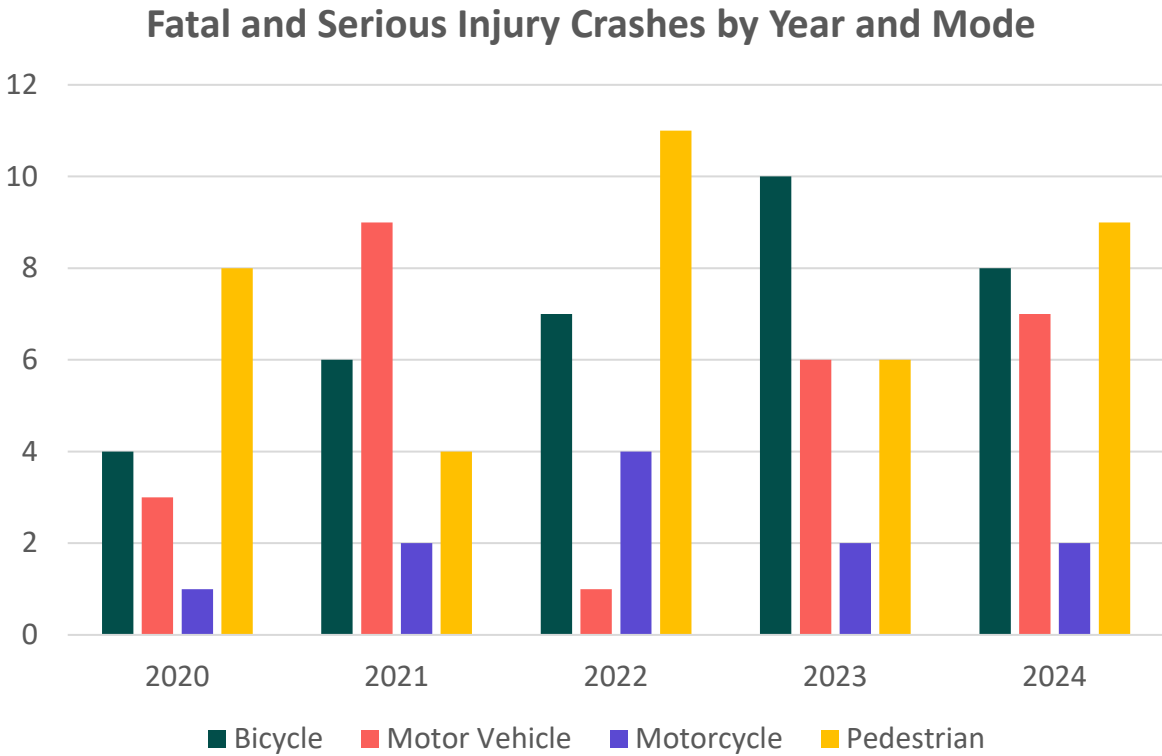


Figure 3. Fatal and Serious Injury Crashes by Year and Travel Mode (2020 - 2024).

WHO IS INVOLVED IN CRASHES?

Despite most trips being made by motor vehicle, there is a significantly higher rate of fatal and serious injury crashes for people walking and bicycling. To compare walking and bicycling safety with other modes, a fatal and serious injury (FSI) crash rate is calculated by dividing the number of FSI crashes by the total number of crashes.

- Pedestrian and bicycle crashes have an FSI rate of 33% and 14%, respectively.
- Motor vehicle crashes have an FSI rate of 12%.

In fact, two out of every three fatal or serious injury crashes involved a pedestrian or bicyclist. Of 626 injury crashes during the study period, 18% involved a person walking or bicycling. Of the subset of 110 fatal and serious injury crashes, 66% involved a person walking or bicycling.

Without the protective layers of a motor vehicle, people walking and biking are especially vulnerable. Figure 4 demonstrates that around 50% of motor vehicle crashes result in possible injury. However, for pedestrians and bicyclists, more than 75% of crashes result in a minor injury or worse.

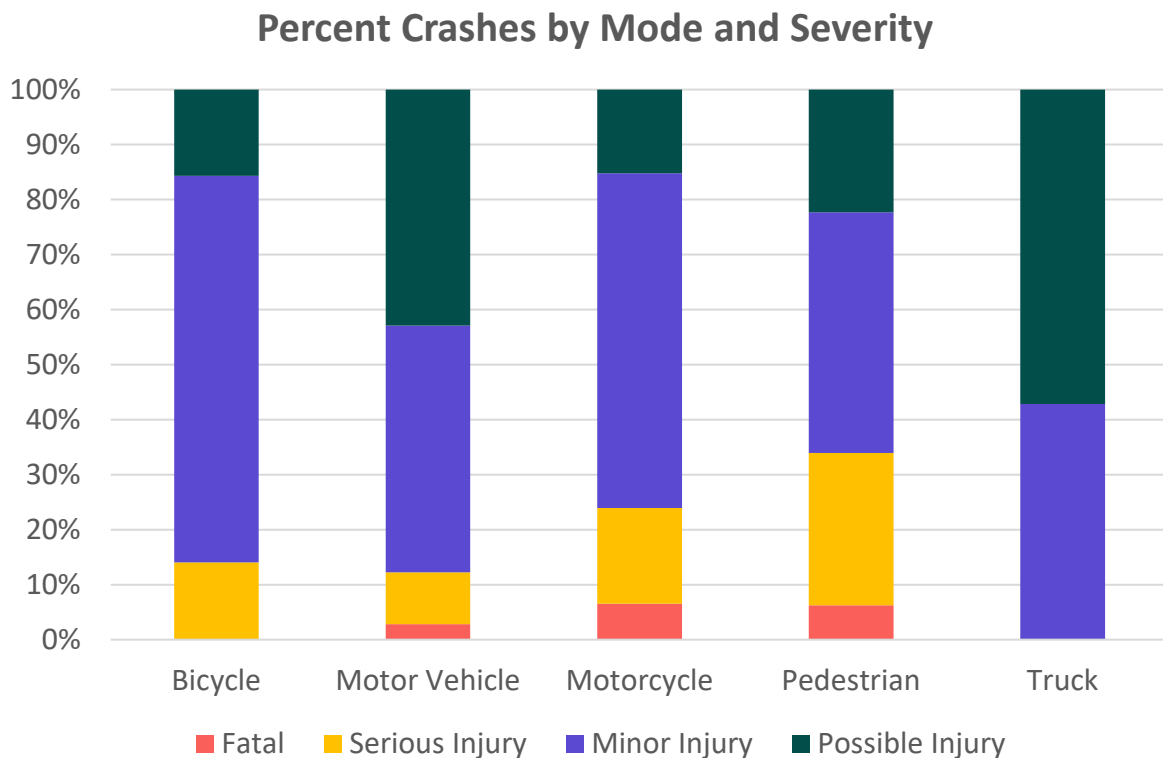


Figure 4. Percentage of Crashes by Mode and Severity (2020 – 2024).

Figure 5 shows crash victims by age group compared to their share of the city’s population. Adults between the ages of 26 and 75 are generally overrepresented, while children, young adults and seniors are underrepresented. This may be due to differences in the amount of travel by age group.

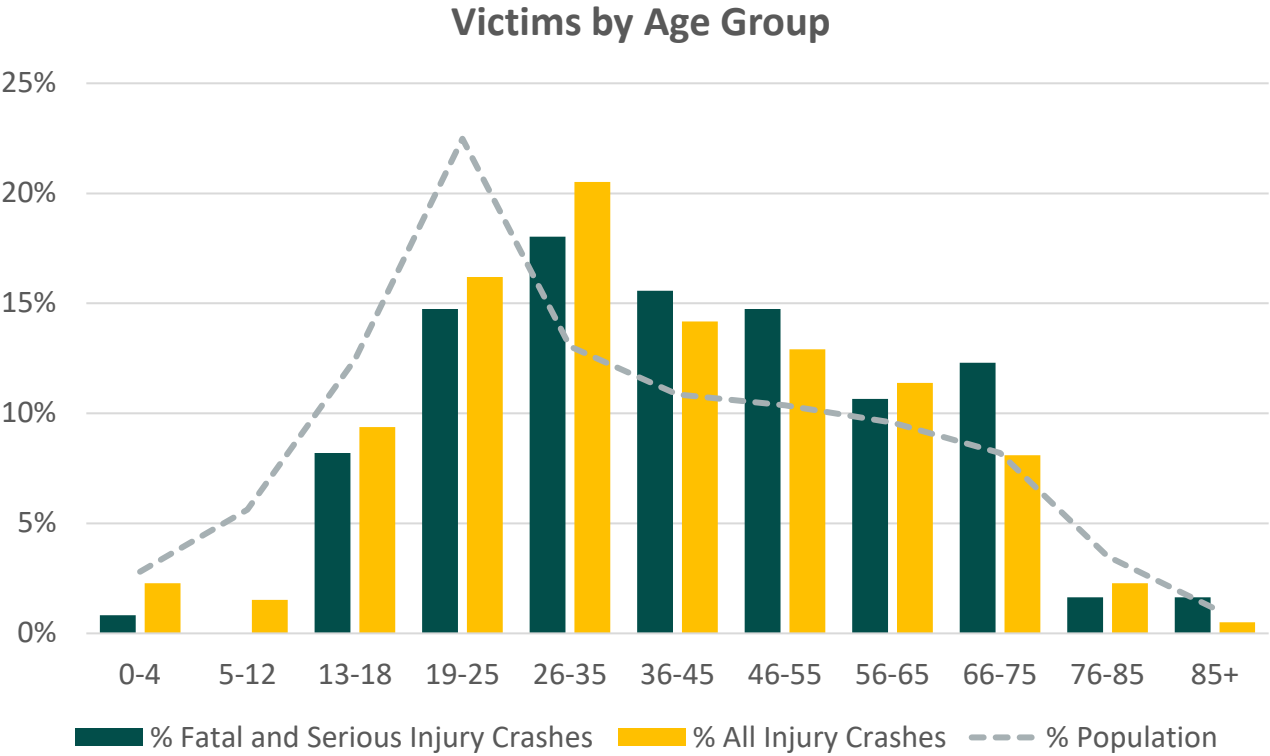


Figure 5. Crash victims by age group compared to percentage of city’s population.

Figure 6 shows the ages of fatal and serious injury crash victims by travel mode. Younger people aged 18-35 are more often involved in fatal and serious injury crashes as drivers and passengers. People aged 36 and older are more often involved in serious injury and fatal crashes as pedestrians and bicyclists.

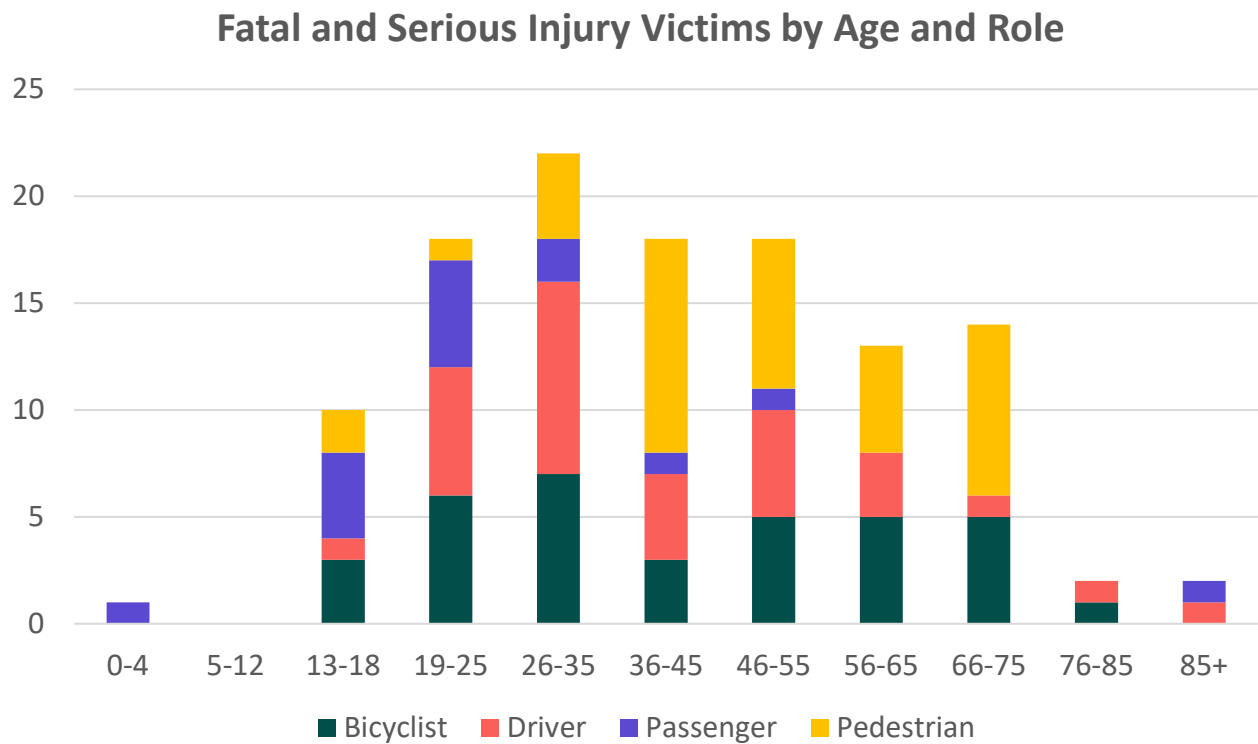


Figure 6. Fatal and serious injury crash victims by their age and role (2020-2024).

WHEN ARE CRASHES OCCURRING?

Despite higher travel volumes during the day, many fatal and serious injury crashes occur at night. Although these crashes can have varying contributing factors, such as speed or impairment, **45% of all fatal and serious injury crashes occur during dark conditions**, as seen in Figure 7. This finding is amplified for pedestrians, with **60% of pedestrian-involved fatal and serious injury crashes occurring in dark conditions**, as seen in Figure 8.

Fatal and Serious Injury Crashes by Lighting Conditions

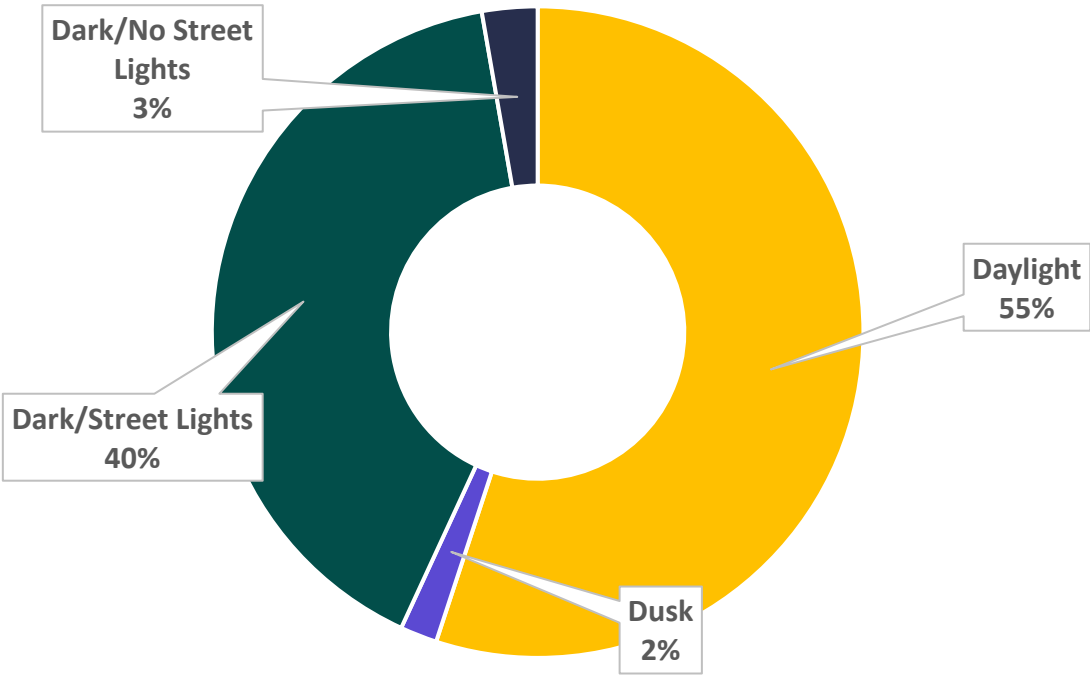


Figure 7. Total Fatal and Serious Injury Crashes by Lighting Condition (2020 - 2024).

Pedestrian Fatal and Serious Injury Crashes by Lighting Conditions

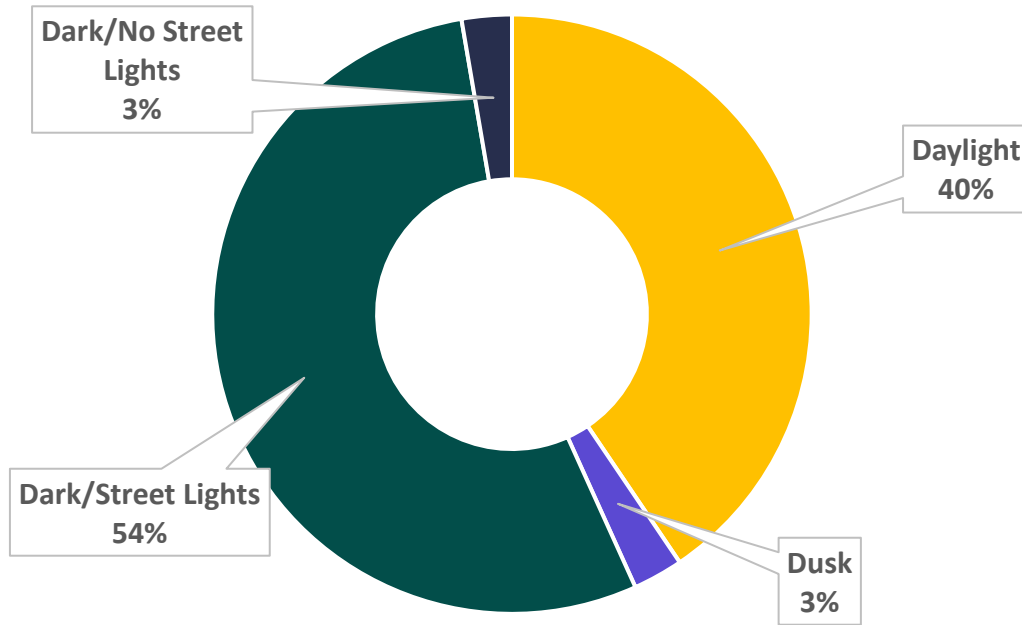


Figure 8. Pedestrian-involved fatal and serious injury crashes by lighting conditions (2020 – 2024).

WHAT IS CONTRIBUTING TO CRASHES?

When preparing a crash report, law enforcement personnel are required to identify a primary contributing factor. This is based on an on-scene assessment of the conditions, including photographs and videos, vehicle skid marks, and victim or witness interviews.

In Santa Cruz, the top contributing factors for fatal and serious injury crashes were **unsafe speed (17%)**, **pedestrian violation (17%)**, and **driver and bicyclist under the influence of alcohol or drugs (14%)**. Figure 9 shows the percent of crashes by primary contributing factor for all injury crashes and fatal and serious injury crashes.

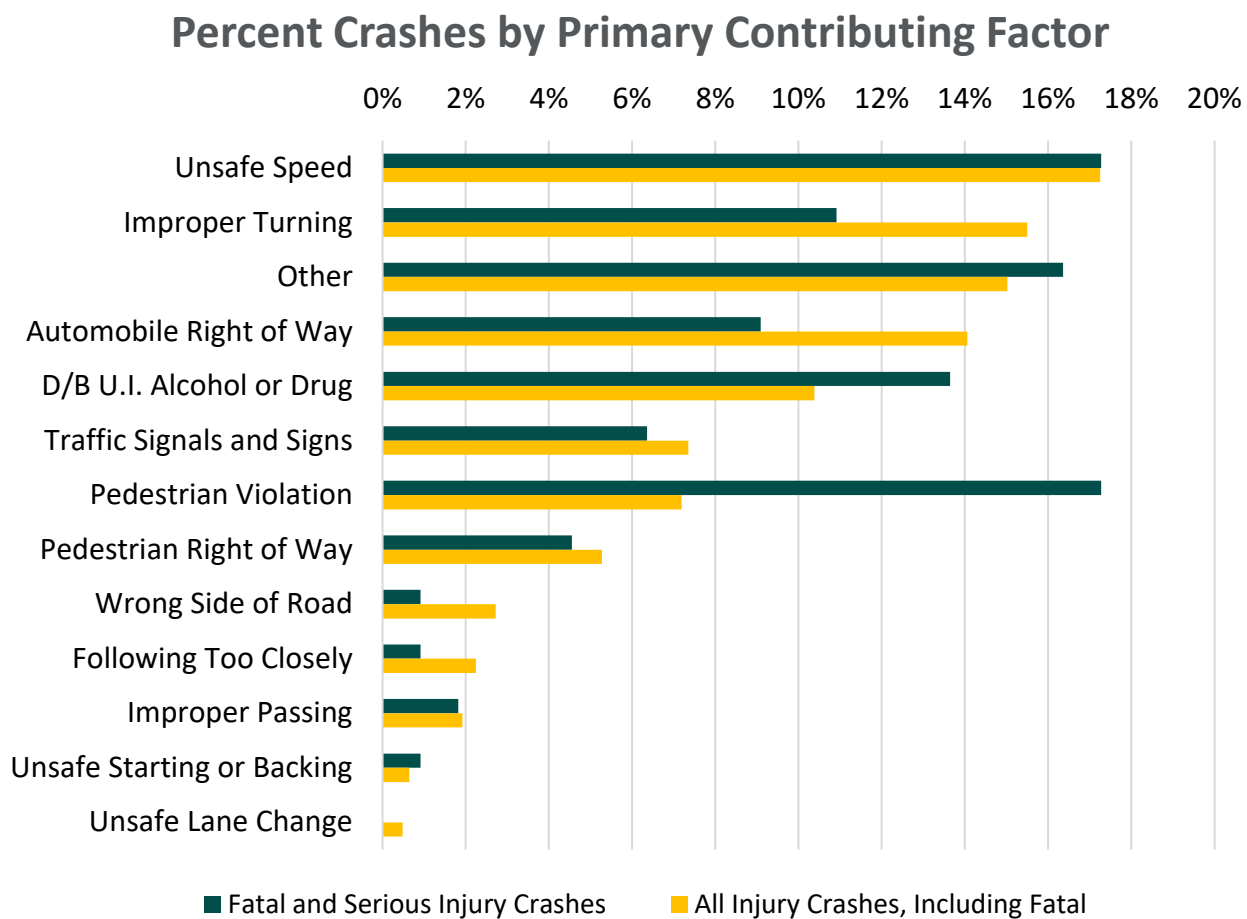


Figure 9. Percent of Crashes for all Travel Modes by Primary Contributing Factor.

Primary Contributing Factors

A primary contributing factor is the action or condition determined by the investigating officer to be the primary contributor to a crash based on available evidence. While these factors often describe road user behavior, they also help identify where engineering improvements can reduce conflicts, encourage safer behaviors, and lessen the severity of crashes. These contributing factors are revisited in the corridor-specific recommendations in Chapter 6.

- **Unsafe Speed:** A crash in which a driver or bicyclist is traveling too fast for roadway, traffic, or environmental conditions, regardless of whether the posted speed limit is exceeded.
- **Improper Turning:** A crash in which a driver or bicyclist makes an unsafe or illegal turning movement, such as improper left or right turns, wide turns, turning from the wrong lane, or turning without adequate clearance.
- **Other:** Crashes attributed to less common or unspecified factors that do not fall into the primary categories above, including miscellaneous driver actions, environmental factors, or conditions not otherwise classified.
- **Automobile Right of Way:** A crash in which a driver fails to yield the right of way to another motor vehicle, commonly occurring at intersections, during merging, or when entering or crossing a roadway.
- **DUI (Driving Under the Influence) Driving or Bicycling:** A crash in which a driver or bicyclist is impaired by drugs or alcohol, affecting judgment, reaction time, or vehicle control.
- **Traffic Signs and Signals:** A crash in which a road user does not obey traffic control devices, such as running a red light, stop sign, or disregarding other regulatory signs or signals.
- **Pedestrian Violation:** A crash in which a pedestrian crosses outside a crosswalk, against a signal, or unexpectedly enters the roadway.
- **Pedestrian Right of Way:** A crash in which a driver fails to yield to a pedestrian who has the legal right of way, such as a pedestrian in a marked or unmarked crosswalk or crossing with a walk signal.

Behaviors Contributing to Fatal and Serious Injury Crashes

Unsafe Speeds

More than 17% of fatal and serious injury crashes in Santa Cruz had unsafe speed as the primary contributing factor of the crash. One of the foundational pieces of the Safe System Approach is accommodating human injury tolerance by reducing speeds and impact forces. The more drivers in motor vehicles that are traveling at high speeds in a transportation system, the higher the impact forces are and the amount of kinetic energy in the transportation system.

Figure 10 shows the difference that 10 mph makes in terms of a pedestrian surviving the impact forces of a motor vehicle, emphasizing the importance of reducing vehicle speeds to improve safety outcomes. By reducing kinetic energy within the transportation system, we reduce the likelihood that if a crash occurs it will result in deaths or serious injuries.

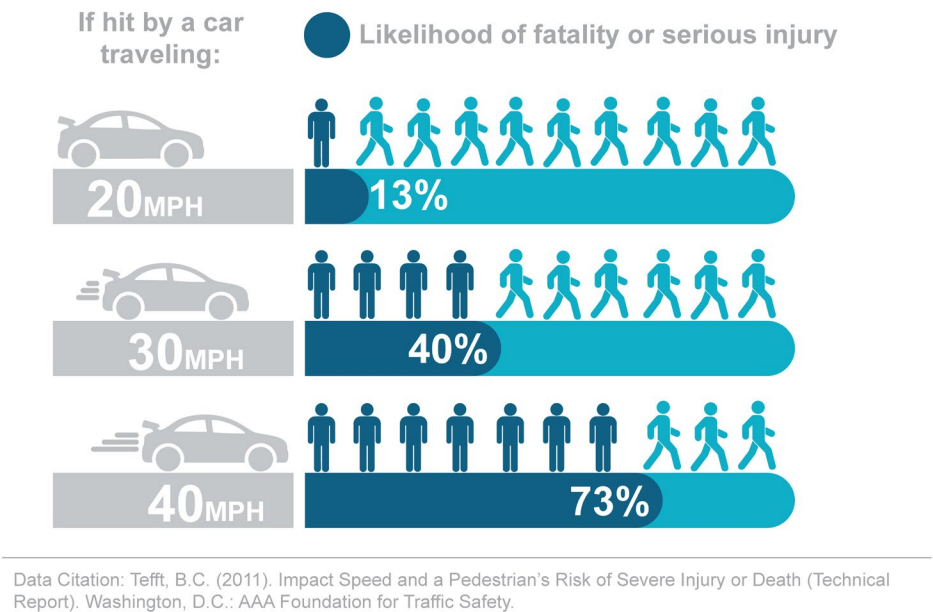


Figure 10. Percent change of survivability for pedestrians struck by a motor vehicle.

Pedestrian Violations

Tied with unsafe speeds, more than 17% of all fatal and serious injury crashes in Santa Cruz had pedestrian violations as the primary contributing factor of the crash. Although this typically means that a pedestrian crossed outside a crosswalk, against a signal, or unexpectedly entered the roadway, this often points to an infrastructure deficiency, rather than a behavioral issue only. Things like missing or obstructed sidewalks or curb ramps, long distances between marked crossings, and other deficiencies make it harder for pedestrians to travel safely.

Drug or Alcohol Impairment

The rate of drug or alcohol impairment in all crashes in Santa Cruz is similar to the statewide average, around 12%. However, in Santa Cruz the alcohol-involved crashes are more likely to result in serious injuries and fatalities, 27% versus the statewide average of 25%.²

Impaired driving was a top contributing factor in fatal and serious motor vehicle (31%) and motorcycle (27%) crashes. Alcohol-involved crashes are primarily concentrated on a limited number of roadways near the Wharf and Downtown, as well as along the main corridors in and out of the city including Mission Street, Ocean Street, and Soquel Avenue.

² Transportation Injury Mapping System. <https://tims.berkeley.edu/tools/dui/>

WHERE ARE CRASHES HAPPENING?

The project team evaluated the roadway network in Santa Cruz to understand where higher densities of fatal and serious injury crashes occurred and identified common roadway characteristics correlated with more severe crash outcomes. These analyses help the city identify locations for safety projects.

The analysis process resulted in the identification of the High Injury and High Risk Networks. The High Injury Network consists of locations on the roadway network that have a higher rate of fatal and serious injury crashes. The High Risk Network identifies locations in which crashes may not have occurred yet but exhibit the risk factors that increase the likelihood of a fatal or serious injury crash occurring in the future.

Combining the High Injury and High Risk Network provides the **Priority Network**, where reactive and proactive safety interventions have the most potential to save lives and prevent serious injuries. This network will be used to prioritize safety projects and guide data-driven policy changes, such as reduction in posted speeds.

Additional maps and more detail on the methodology used to develop the High Injury and High Risk Networks can be found in the Analysis Appendix.

HIGH INJURY NETWORK

To develop the High Injury Network (HIN), crashes from the last five years (2020-2024) were mapped onto the city's roadway network. The project team used what is referred to as a "sliding window" analysis to score roadway segments based on the number and severity of crashes that occurred. This methodology involves assigning a weighted score to quarter mile segments of the roadway network based on the occurrence of fatal and serious injury crashes. After evaluating the prevalence of different scores across the network, a threshold is set to define the High Injury Network.³

To understand where different types of crashes occur, the project team performed several analyses: for all crash types, for only those that involved pedestrians or bicyclists, for alcohol-

³ The methodology used to develop the HIN for Santa Cruz meets the criteria for Safety Corridors established in the California MUTCD. See [Table 2B-105\(CA\): Safety Corridor Definition Requirements, on Uniform Traffic Control Devices \(CA MUTCD\) \(California Department of Transportation 2023\)](#)

involved crashes, and for nighttime crashes. This provides an opportunity to connect crashes to roadway or environmental factors. For example, downtown has a higher number of pedestrian crashes, which may reflect its combination of many destinations, high level of activities, and a concentration of places that sell or serve alcohol.

Santa Cruz is similar to many cities in that a majority of fatal and serious injury crashes happen on a small percentage of the total roadway network. **Santa Cruz's High Injury Network constitutes 12% of city-owned roadway miles, but accounts for 74% of all fatal and serious injury crashes.**

HIGH INJURY INTERSECTIONS

Intersections represent the critical connection points and the locations of greatest conflict between modes in a transportation system. Intersections can serve as a transition zone from a high-speed, high-volume road into a lower-speed, pedestrian-heavy area like downtown Santa Cruz. Intersections also bring all road users into a shared space – that includes people crossing the street, cars turning, or bicyclists traveling through an intersection. Intersections can be controlled by traffic signals, roundabouts, and stop signs, and they all have different forms of interaction and conflicts between modes.

To supplement the High Injury Network, all intersections were scored based on the number and severity of crashes that have occurred there in the past five years. This enabled the project team to identify a subset of High Injury Intersections (HII), shown in Figure 11. Like the HIN, HII were identified for all modes, pedestrians, bicyclists, alcohol-involved crashes, and nighttime crashes; these maps can be seen in the Analysis Appendix.

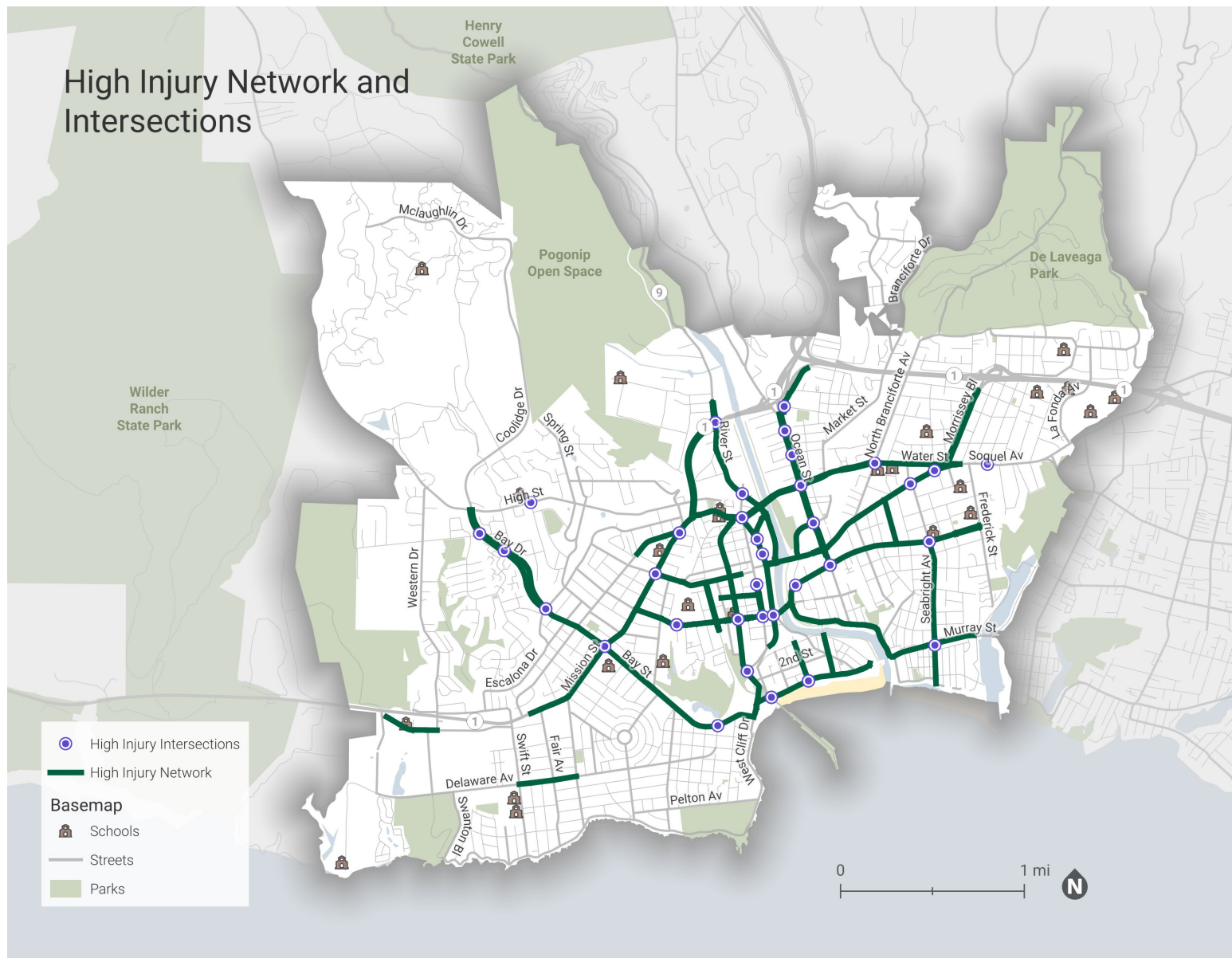


Figure 11. High Injury Network (HIN) and Intersections for all travel modes.

HIGH RISK NETWORK

The High Injury Network and High Injury Intersections show where fatal and serious injury crashes have occurred the most in the last five years. Knowing these locations allows the city to reactively identify and implement specific safety treatments where there is the greatest need. However, the process fails to identify locations that might have similar roadway characteristics, but between under-reporting, the limited timeframe of the analysis, or even chance, have not had a fatal and serious injury crash occur yet.

One principle of the Safe System Approach is proactively improving streets to prevent crashes before lives are lost or altered. Referencing crash data and national research, the project team identified a set of roadway and environmental characteristics aligned with higher frequencies of fatal and serious injury crashes. These characteristics include traffic volumes, posted speed limits, the number of travel lanes, demographic data, proximity to key destinations such as schools, and more (Table 2).

Table 2. Screening factors used to develop the high risk network.

Roadway Characteristics	Demographic Characteristics	Land Use and Transit Characteristics
Traffic Volume (AADT)	Household Poverty	Schools
Speed Limit	Zero Vehicles Households	Public Parks
Bicycle Facility	People of Color	Transit Stop or Station
Number of Lanes	Population Density	
Functional Classification	Caltrans Equity Index	

These factors were screened to identify unique combinations that are associated with the highest frequency and severity of crashes. The combinations were grouped into tiers representing the highest, high, medium, low, and lowest risk, and mapped to identify locations with these characteristics, whether or not crashes have happened. The highest and high risk tiers were used to create the High Risk Network (Figure 12). The combinations of factors on roadways included in the High Risk Network include:

- **Highest Risk** - Roadways with traffic volumes greater than 1,000 vehicles per day and more than two lanes.
- **High Risk** - Roadways with traffic volumes greater than 1,000 vehicles per day, fewer than two lanes, located in high population density areas, and with bike facilities present.

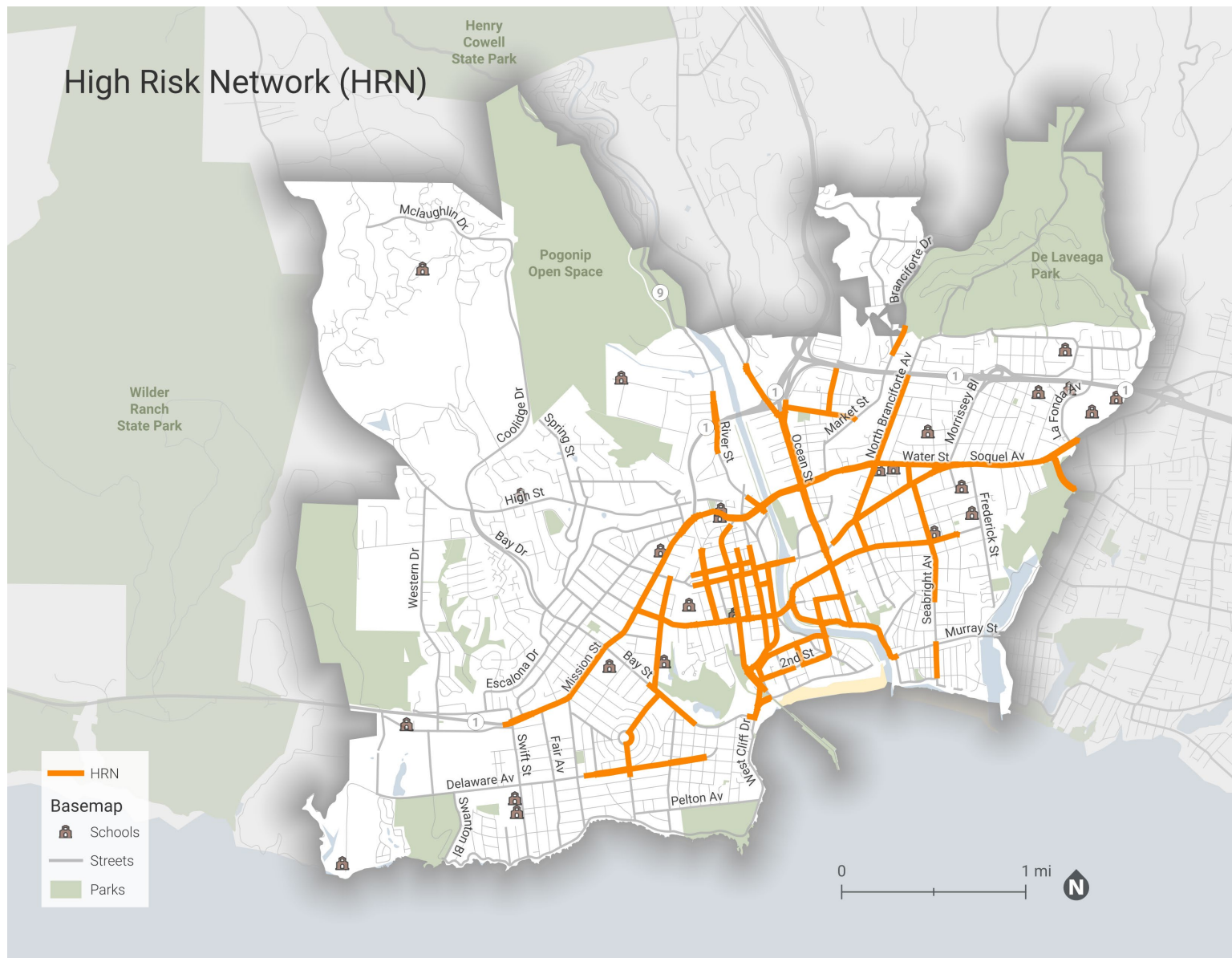


Figure 12. High Risk Network for all travel modes.

PRIORITY NETWORK

The Priority Network combines the reactive High Injury Network and Intersections and the proactive High Risk Network to identify a focused set of roadways for near-term safety interventions. Table 3 compares the percentages of city-owned roadway miles and fatal and serious crashes across the analyses. **Changes to less than 10% of city-owned roadway miles have the potential to address more 50% of fatal and serious injury crashes.**

Corridors on the Priority Network include: Mission Street, Laurel Street, Center Street, Front Street, Broadway, Ocean Street, and Soquel Avenue, with additional segments on River Street, Bay Street, Chestnut Avenue Water Street, River Street, East Cliff Drive and Seabright Avenue. Mission Street, the name for CA-1 within city limits, is owned and maintained by Caltrans, not the City of Santa Cruz. The issue of roadway ownership is discussed further in Chapter 4.

Figure 13 displays the combined Priority Network along with roadway segments identified in the crash-based High Injury Network and risk-based High Risk Network.

Table 3. Priority Network as a percentages of city-owned roadway miles and FSI crashes.

	% of Total City-Owned Roadway Network (miles)	% of FSI Crashes
Priority Network (High Injury AND High Risk Network)	7%	55%
High Injury Network	12%	74%
High Risk Network	13%	61%
High Injury OR High Risk Network	18%	80%

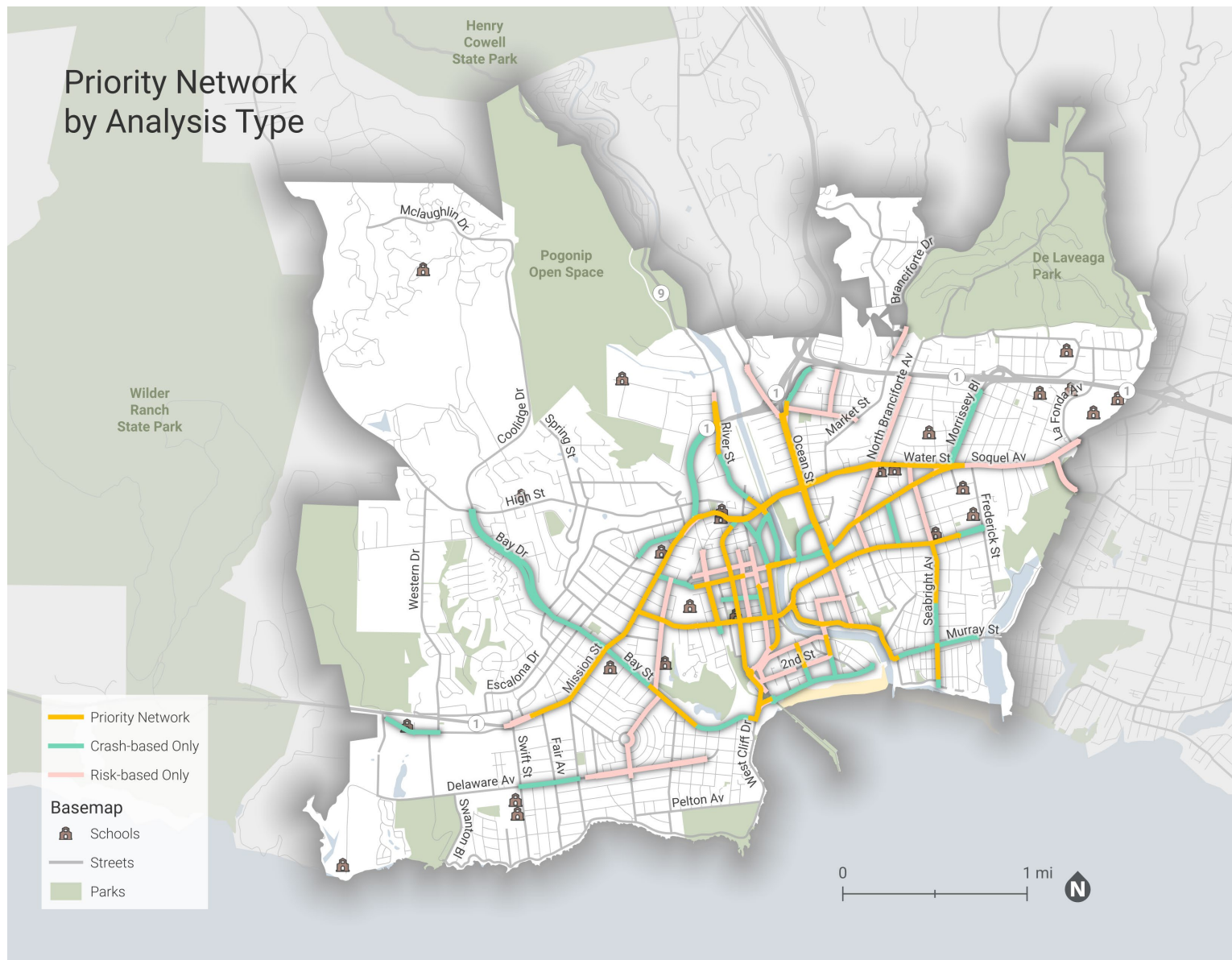


Figure 13. Priority Network, composed of the Crash- and Risk- based analysis results.



CHAPTER 3

WHAT DO PEOPLE SAY ABOUT ROAD SAFETY IN SANTA CRUZ?

Crash data is one part of the safety story – it provides quantitative data based on crash history and the existing conditions of the roadway network in Santa Cruz. However, qualitative data is another critical component of ensuring that there is a thorough understanding of the road safety landscape in Santa Cruz. Hearing firsthand experiences from Santa Cruz residents and other city stakeholders allows for key voices to be heard and data gaps to be filled.

SAFETY ACTION PLAN WORKING GROUP

To guide development of the SAP and ensure the recommendations address all elements of the Safe System Approach, the city convened a Safety Action Plan Working Group comprised of representatives from multiple city departments and partner groups, including:

- Caltrans District 5
- Ecology Action
- Public Health Division, Santa Cruz County Health Services Agency
- City of Santa Cruz
 - City Manager's Office
 - Department of Public Works
 - Fire Department and EMS
 - Police Department
 - Office of Emergency Services

The Working Group met three times during the SAP development process.

- **Safety Workshop, October 2025** – The first convening of the Working Group was a one-and-a-half-day workshop that served as both a training and capacity building opportunity and established a shared understanding of the internal safety culture in Santa Cruz. The workshop included training on the Safe System Approach and proactive safety measures, identified stakeholders' roles and responsibilities in creating safer roadways, discussions about current safety practices in the city, and a walk audit along the Laurel Street corridor.
- **Working Group Meeting, March 2026** – The Working Group reconvened in March 2026 to discuss analysis results, initial recommendations, and next steps. Working Group members reviewed and revised a draft list of strategies and actions that formed the basis for the recommendations in this plan.
- **Working Group Meeting, July 2026** – At the final meeting, the Working Group received an introduction to the SAP, reviewed specific infrastructure recommendations, and committed to staffing the post-fatal crash Task Force and working together to embed the Safe System Approach in city operations.

Input from the Working Group helped identify existing constraints and future opportunities that informed the recommendations in this plan, including a key recommendation to continue meeting on a regular basis to collectively implement the plan.

COMMUNITY OUTREACH

As mentioned in Chapter 1, both the Active Transportation Plan Update and the Safety Action Plan (ATP) share the goal of making travel safer for all road users. The ATP is focused on creating networks and supportive programming for people walking, biking, and rolling, and safety was a common topic of discussion with stakeholders and members of the public during the plan development process. Because safety featured so prominently, the project team decided to incorporate the feedback from the ATP process into the SAP, rather than launch a similar effort and risk engagement fatigue from residents.

Outreach and engagement for the Santa Cruz ATP Update took place across three phases beginning in early 2025 and wrapping up in early 2026. Feedback was consistent across all three phases, with safety being cited frequently by participants using the online map and at in-person events. Based on Technical Advisory Committee and city staff feedback, safety—measured by the number of serious and fatal crashes for bicyclists and pedestrians and Bicycle Level of Traffic Stress—was the most highly weighted factor in ATP project prioritization.

Other key themes from the ATP engagement include:

- **Arterial roads** like Mission Street, Ocean Street, Soquel Avenue, and Water Street were repeatedly mentioned as feeling unsafe for bicyclists and pedestrians due to driver speeds and lack of separation between vehicle travel lanes and bicycle lanes.
- Participants frequently expressed a desire for **slowing vehicle speeds**, including by lowering speed limits, deploying additional enforcement, and identifying specific areas near schools that needed traffic calming.
- Community members expressed concerns about the faster speeds and heavier weights of **e-bikes** and requested further education and resources for e-bike users and parents.
- Community members shared that more street **lighting**, especially around schools and along the Riverwalk, would make them feel safer walking and biking at night.



CHAPTER 4

ISSUES AND OPPORTUNITIES

The list of issues and opportunities below is based on findings from the data analysis, Working Group discussions, and ATP engagement. They set the stage for the recommendations in the following chapters.

ISSUES

VULNERABLE ROAD USERS

Vulnerable road users include people walking, bicycling, using mobility devices and riding motorcycles, as well as youth and older adults who are physically less able to withstand crash forces. **Two out of three fatal and serious injury crashes in Santa Cruz involve a pedestrian or bicyclist.** There are also specific demographic groups that are disproportionately impacted by traffic violence. In Santa Cruz, the unhoused population faces a disproportionate impact from traffic violence. Members of this group are frequently walking and biking, and many homeless services are separated from downtown and other parts of the city by the intersection of Mission Street (CA-1) and River Street (CA-9), which is owned and maintained by Caltrans.

STATE-OWNED ROADWAYS

A common challenge in local Safety Action Plans is addressing safety on state-owned roadways, which often experience the highest rates of severe and fatal crashes but fall outside of local agencies' direct control.

In Santa Cruz, Mission Street (CA-1) is a state-owned roadway on the Priority Network. One in ten crashes that occurred in Santa Cruz between 2020 and 2024 occurred on Mission Street; nearly half of these crashes (47%) involved a bicyclist or a pedestrian. About 20% of all crashes on Mission Street result in a serious injury or fatality, but the serious injury and fatality rate rises to 73% for bicyclists and pedestrians. The intersection of two state-owned highways, Mission Street (CA-1) and River Street (CA-9), scored the highest in the High Injury Intersections analysis.

Table 4. Crashes on Mission Street, 2020-2024, by mode and severity

	<i>Fatal</i>	<i>Serious Injury</i>	<i>Minor Injury</i>	<i>Possible Injury</i>	<i>Total</i>
Bicycle	0	3	13	2	18
Motorcycle	1	1	5	1	8
Motor Vehicle	0	2	14	10	26
Pedestrian	2	6	5	2	15
Truck	0	0	1	1	2
Total	3	12	38	16	69

Because of the crash history along Mission Street and this intersection, the Working Group felt strongly the city should continue to engage with Caltrans to address safety along the corridor. Any design changes would need to be led and approved by Caltrans, and these changes would be directly aligned with Caltrans Directors Policies DP-36 and DP-37.

- **DP-36:** This policy directive commits Caltrans to a vision to eliminate fatalities and serious injuries on California's roadways by 2050 using a Safe Systems approach.

Neither the City of Santa Cruz nor the state of California will eliminate fatalities and serious injuries by 2050 without addressing the Mission Street (CA-1) and River Street (CA-9) intersection.

- **DP-37:** This project is aligned with Caltrans Directors Policy DP-37 that "all transportation projects funded or overseen by Caltrans will provide comfortable, convenient, and connected complete streets facilities for people walking, biking, and taking transit or passenger rail unless an exception is documented and approved."
The policy further states, "Caltrans will maximize the use of design flexibility to provide context-sensitive solutions and networks for travelers of all ages and abilities."

For the intersection of two highways, grade-separation for pedestrians is one context-sensitive solution that should be considered.

EMERGENCY RESPONSE CONSTRAINTS

The wide-ranging conversation at the first Working Group meeting touched on several challenges facing emergency response in Santa Cruz. One issue is staffing; the police department is currently operating with a minimum number of officers and has very limited capacity to take on additional duties. The fire department has more staff, but not enough to fully staff all their fire engines and utilize smaller medical response vehicles, so engines are dispatched to respond to all calls.

Another challenge is navigating city streets, especially during peak commute times and summer tourism season. There are not many multilane streets in Santa Cruz, there are limited routes across the city due to the San Lorenzo River, and vertical separation between travel lanes and bicycle facilities discourages many drivers from pulling to the curb, even in an emergency.

A third challenge is there is no trauma center in Santa Cruz County. The closest Level 1 trauma center, Santa Clara Valley Medical Center, is approximately 30 miles away “over the hill” in San Jose, and there are limited landing zones within the city for medical helicopter evacuations. This distance increases response times for people in critical condition, increasing the chances they may succumb to their injuries.

ALCOHOL-INVOLVED CRASHES

The number of alcohol establishments per square mile in Santa Cruz County is more than three times higher than other suburban counties (1.61 vs. 0.46).⁴ This isn't surprising for a college town and popular summer tourism destination, but it means alcohol is readily available and creates an ongoing challenge for DUI prevention efforts. Campaigns need to be repeated annually to address the high turnover in the population but are often funded through grant programs with limited timeframes. The Working Group also discussed the expense and perceived inconvenience of using transportation network companies such as Uber and Lyft to get home after drinking, especially for visitors coming from outside of the city.

⁴ Alcohol Outlet Density in California, 2023. Sacramento, CA: California Department of Public Health, March 2025.

OPPORTUNITIES

STATE ENABLING LEGISLATION

California Assembly Bill 43 (AB 43), passed in 2021, allows local cities and counties more flexibility to lower speed limits. Some of the changes under this law include allowing local jurisdictions to:

- Establish 15 mph school zone speed limits on certain roadways adjacent to school grounds;
- Designate Business Activity Districts with 20 or 25 mph speed limits in commercial areas such as downtowns and neighborhood business corridors if the land use and roadway meet certain conditions;
- Lower speed limits by 5 mph on road segments with high concentrations of bicyclists and pedestrians or serious injury and fatality crashes. ⁵

COLLABORATION

The discussions at the Safety Workshop revealed many existing forms of collaboration across City agencies and departments, as well as opportunities to formalize and strengthen collaboration moving forward. For example, additional roadway lighting has the potential to reduce nighttime crashes and property crime. While the Police and Fire Departments are the first responders to collisions, often Public Works has the ability to address patterns of collisions by changing the infrastructure. This group identified a need to meet collaboratively soon after any fatal collisions to review if any roadway changes could be made that would address the collision factors. These existing relationships provide a solid framework for demonstrating a shared responsibility for roadway safety in the city.

⁵ California Safe Speeds Toolkit. <https://safetrec.berkeley.edu/tools/california-safe-speeds-toolkit/california-safe-speeds-toolkit-current-speed-limit-setting-law>



CHAPTER 5

SAFE SYSTEM RECOMMENDATIONS

While changes to the built environment, such as the implementation of safety countermeasures on the roadways, are part of the recommendations of this plan and described in Chapter 6, there are additional actions needed to create a Safe System. These include changes to internal operations, identifying sustainable funding sources to implement recommendations over time, and educational campaigns to establish a citywide safety culture.

The following pages describe the recommended strategies, supporting actions, and key partners to help the city meet its goal of eliminating serious and fatal crashes on its roadways. The strategies are grouped into four categories, and each strategy aligns with one or more elements of the Safe System Approach. The timeframes for each strategy are as follows:

- Ongoing: starting or continuing with the adoption of the Safety Action Plan.
- Short term: within the next 1-3 years.
- Medium term: within the next 4-6 years.
- Long term: beyond the next 7 years.



Figure 14. Safe System Approach graphic.

POLICY AND PROGRAMS

Strategies focused on institutionalizing safety through policy, governance, and accountability.

Strategy	Supporting Actions	Safe System Element	Departments	Timeframe
Establish a Road Safety Task Force	Conduct rapid reviews of fatal and serious crashes within two weeks and meet quarterly to track SAP implementation progress.	All	City Manager, Fire/EMS, Police, Public Works	Short term
Report on progress towards Vision Zero every other year	Track progress toward Safety Action Plan goals. Report to Transportation and Public Works Commission.	All	Public Works	Short term
Assess safe system impacts in staff reports	For all City Council and Transportation and Public Works Commission staff reports, add a section explaining how the agenda item impacts safe systems/Vision Zero to socialize the safe systems approach.	All	Public Works	Ongoing
Evaluate roadway projects before and after implementation	Measure safety and operational outcomes.	Safer Roads	Public Works	Ongoing
Revise development review protocols	Require roadway safety measures in development review.	Safer Roads	City Council, Community Development, Public Works	Medium term
Advocate at the state level for automated enforcement	Support speed and red-light enforcement tools.	Safer Speeds	City Council, City Manager	Short term

Strategy	Supporting Actions	Safe System Element	Departments	Timeframe
Municipal fleet safety	Add vehicle safety technologies and driver training.	Safer Vehicles	Procurement, Public Works	Medium term
Municipal fleet safety	Require side underrun guards on large city vehicles to prevent people walking, biking, or driving motorcycles from falling between wheels of a large vehicle during a crash.	Safer Vehicles	Procurement, Public Works	Medium term

CRASH EMPHASIS AREAS

Strategies focused on reducing fatal and serious injury crashes through roadway design, operational changes, and targeted interventions.

Emphasis Area	Strategies & Actions	Safe System Element	Departments	Timeframe
Impaired driving	Identify sustainable funding for ongoing DUI prevention programs.	Safer Road Users	Public Health, Police	Short term
	Partner with alcohol-serving establishments to provide safe ride options.	Safer Road Users	Police, Local Businesses, Public Health	Medium term
	Advocate for stronger impaired driving penalties, such as license suspensions.	Safer Road Users	DMV, Police, Public Works, City Council	Short term
Vulnerable road users	Implement Active Transportation Plan projects on high-collision corridors.	Safer Roads	Public Works	Long term
	Conduct outreach to unhoused populations on pedestrian safety.	Safer Road Users	Homelessness Response, Public Works	Short term
Nighttime crashes	Conduct corridor lighting studies on the HIN and implement recommendations.	Safer Roads	Public Works	Short term
Emergency response constraints	Collaborate with the Fire Department on traffic calming toolkit and implementation of traffic calming features.	Post-Crash Care, Safer Roads	Public Works, Fire/EMS, Police	Ongoing
	Identify new emergency access routes to Harvey West.	Post-Crash Care	Public Works, Fire/EMS	Short term

FUNDING

Strategies focused on securing and prioritizing resources for ongoing implementation.

Funding Strategy	Supporting Actions	Safe System Element	Departments	Timeframe
Identify additional funding opportunities	Pursue local, state, and federal grants to implement safety projects.	All	City Council, Fire/EMS, Police, Public Health, Public Works	Ongoing
Prioritize safety criteria in budgeting decisions	Incorporate safety into capital and operating budget decisions. Add section on safe system impacts to staff reports.	All	City Council, Public Works	Short term
Increase EMS funding	Advocate for expanded trauma care resources and staffing.	Post-Crash Care	City Council, Fire/EMS	Short term
Fund smaller emergency response vehicles and staffing	Improve ability to respond to medical emergencies with tailored equipment.	Post-Crash Care, Safer Roads	Fire/EMS, Police, Procurement	Short term

EDUCATION AND AWARENESS

Strategies focused on building a culture of shared responsibility and safe behavior.

Education Strategy	Supporting Actions	Safe System Element	Departments	Timeframe
Develop communications training on roadway safety	Improve how crashes and safety issues are discussed publicly.	All	Public Works, Communications Partners	Short term
Launch "Move Over for Emergency Vehicles" campaign	Incorporate into driver education and media campaigns.	Safer Road Users	Public Works, Fire/EMS, Police	Short term
Launch "20 is Plenty" campaign	Evaluate roadways for speed limit reduction. Build public support for lower speeds.	Safer Road Users, Safer Speeds	Public Works	Medium term
Build partnerships with e-bike vendors	Distribute rules-of-the-road and safety materials at point-of-sale.	Safer Road Users	Public Works, Local Businesses	Ongoing



CHAPTER 6

SAFER ROADS RECOMMENDATIONS

This chapter outlines the physical infrastructure recommendations that support Safer Roads, one of the core elements of the Safe System Approach. These recommendations include roadway design elements that account for human mistakes and injury tolerances, encourage safer behaviors, and facilitate safer travel for vulnerable road users.

These recommendations work to improve safety outcomes by separating users in space and time, reducing travel speeds, and improving the likelihood of surviving a crash if one does occur. Like the recommendations outlined in Chapter 4, these came as a result of crash analysis results, stakeholder conversations, and community input. There are both systemic, city-wide recommendations as well as corridor specific recommendations, informed by the High Injury and High Risk Networks.

PROVEN SAFETY COUNTERMEASURES

The recommendations presented below are largely informed by Federal Highway Administration's (FHWA) [Proven Safety Countermeasures initiative \(PSCi\)](#). Addressing roadway safety in Santa Cruz will require a combination of these countermeasures across the city. The selected countermeasures will vary depending on roadway conditions, safety concerns, land use, and other factors.



Figure 15. Icons representing different proven safety countermeasures (Source: FHWA).

SYSTEMIC RECOMMENDATIONS

These recommendations in Table 5 are not specific to any singular location in the city – they are meant to be applied broadly across the city, starting with the Priority Network. Rooted in the Safe System Approach, the implementation of these recommendations proactively addresses various safety issues for all road users before a crash occurs.

Table 5. Systemic Recommendations for Safer Streets.

Signalized Intersections
Prohibit Right Turn on Red citywide.
Add Leading Pedestrian Intervals (LPI) to signals to provide pedestrian and bicycle lead time to cross before drivers can begin turning.
Accommodate slower walking speeds (3 feet/second or less) at signalized intersections where appropriate, for example intersections near senior centers or early education centers. Slower walking speeds ensure that people of all ages and abilities can fully cross before a signal change.
Implement a nighttime “rest-in-red” pilot to evaluate for permanent implementation. Rest-in-red is a signal timing strategy where signals stay red until a car approaches the intersection. This strategy targets nighttime speeding when there are fewer vehicles on the road.
Speed Reduction
Utilize AB 43 to proactively reduce speed limits: - On HIN streets or streets with high concentrations of people walking or biking, conduct an Engineering & Traffic Survey and utilize the provisions of AB 43 to reduce speed limits. - In Business Activity Districts where more than half of the street frontage is commercial retail or restaurants, reduce speed limits to 20 MPH or 25 MPH.
Lower school zone speed limits to 15 mph when children are present, update signage, and add additional traffic calming as needed.
Pedestrian Crossings
In accordance with AB 413, improve visibility at intersections citywide with a focus on arterials, collectors, and intersections within ¼ mile of schools, parks, and libraries. Treatments may include painted curbs, no parking signs, and temporary or permanent curb extensions.
Apply the recommended 800-foot marked crosswalk spacing guidance from the ATP to arterials and collectors to identify where additional mid-block crossings are needed.

PRIORITY CORRIDORS

Based on the findings identified in Chapters 2 and 3, the following three corridors were identified as priority corridors for larger-scale engineering improvements. All three corridors are on the Priority Network. Conditions for each corridor are described below, along with the recommended engineering treatments.

OCEAN STREET (PLYMOUTH STREET TO SOQUEL AVENUE)

Ocean Street is a critical access route for residents and visitors alike, transitioning from CA-17 through the city to the beach. Terminating at East Cliff Drive, it connects travelers to key destinations like medical facilities, hotels, restaurants, and other local businesses. Sidewalks are generally present along the corridor, although there are a high number of driveway access points. The corridor currently has standard bike lanes (Class II) from Plymouth Street to Soquel Avenue, where it transitions to a shared lane. In some locations, the bike lanes also have buffers.

Safety Need

Ocean Street is on the High Priority Network, meaning it has a history of serious and fatal crashes, and exhibits several risk factors that research and analysis finds are correlated with crash frequency and severity. The corridor has four High Injury Intersection locations at Franklin Street, Hubbard Street, Water Street, and Dakota Avenue.

Nearly 60% of all crashes on Ocean Street involve a pedestrian or bicyclist, and all three of the fatalities within the data set involved a pedestrian. This highlights a significant safety challenge for people walking and biking, especially with long distances between marked crossings and complex signalized intersections.

The primary contributing factors were:

- **Right of way conflicts** were among the most common crash contributors, including both “Automobile Right of Way” and “Pedestrian Right of Way” violations.
- **Pedestrian-related violations** comprised a substantial portion of crashes, indicating that crossing behavior and pedestrian accommodation may be inconsistent with roadway design or operational expectations.
- **Unsafe speed and alcohol/drug involvement** were also notable contributing factors, reinforcing concerns about crash severity and survivability for vulnerable users.

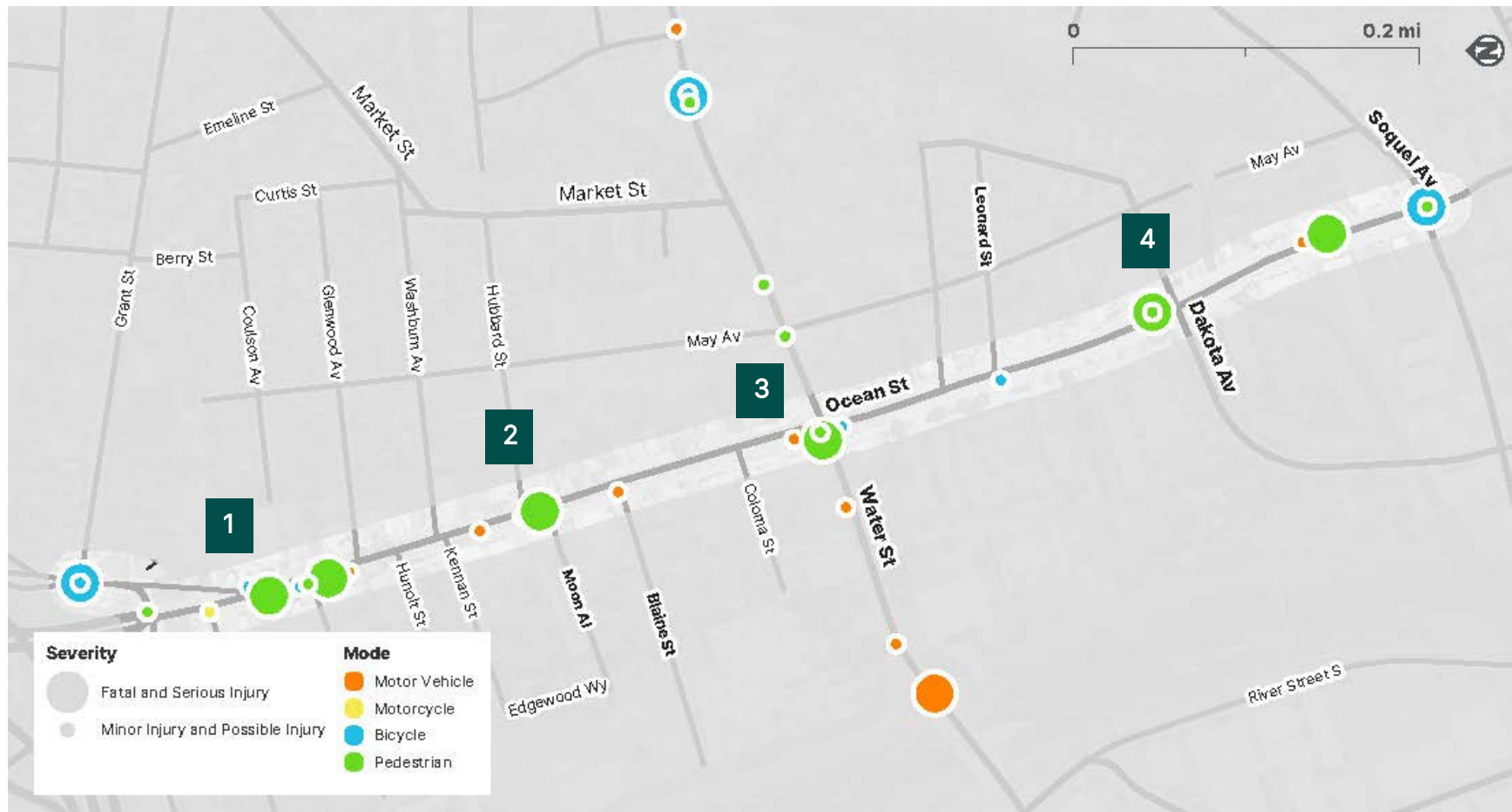


Figure 16. Map of crashes on Ocean Street shown by mode and severity, 2020-2024.

Recommendations

Location Specific – all High Injury Intersections:

1. Ocean Street & Franklin Street

- a. Install new crosswalk and Pedestrian Hybrid Beacon (PHB) across Ocean Street, approximately 20' north of Franklin Street. Ensure driveway impacts are avoided when placing new crossing. The closest existing marked crossing is 460' away at Plymouth St.
- b. Cut through median to provide pedestrian refuge island (6' minimum width).
- c. Install curb extensions at midblock crossings to shorten crossing distance.

2. Ocean Street & Hubbard Street

- a. Install new crosswalk and Pedestrian Hybrid Beacon (PHB) across Ocean Street that ties into the southeast curb ramp on Hubbard Street. The closest existing marked crossing is 870' away at Water Street.
- b. Extend median nose north to provide pedestrian refuge island (6' minimum width).
- c. Install curb extensions at midblock crossings to shorten crossing distance.

3. Ocean Street & Water Street

- a. Conduct traffic analysis and turning studies to evaluate feasibility of lane removals and future reconstruction of intersection.
 - a. If lane removal is feasible, install Class IV bike lanes at intersection approaches, pedestrian refuge islands, and/or curb extensions with turn radius reduction.
 - b. For future reconstruction, consider innovative intersections such as a U-turn median style intersection paired with mid-block signalized pedestrian crossings.
- b. Consider raised crossings in right turn slip lanes.

4. Ocean Street & Dakota Avenue

- Widen median at Dakota Avenue to at least 6' and extend nose south to provide pedestrian refuge island at existing marked crossing.
- Evaluate feasibility of closing slip lane off Dakota Ave on east side of Ocean St.
- Install curb extensions at midblock crossings to shorten crossing distance.

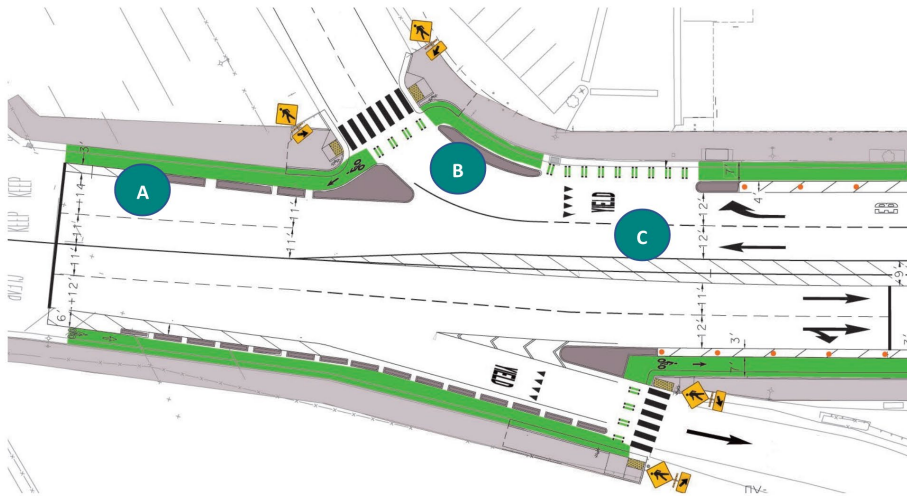


Figure 17. Co-located bicycle and pedestrian crossings across a free right turn lane (B).

Corridor-Wide:

- Following provisions in AB 43, lower posted speed limit to 25 mph.
- Review striping for opportunities to shorten conflict zones.
- Review existing curb ramps along corridor for compliance with PROWAG and ADA guidelines. Identify non-compliant curb ramps and reconstruct to align with current accessibility standards.
- Install more frequent lighting and/or pedestrian scale lighting. All of the fatal and serious injury crashes on this corridor occurred at night.
- Remove on-street parking to add separated bike lanes (Class IV) as recommended in the Active Transportation Plan.

Table 6. Proven Safety Countermeasures and Expected Crash Reductions.

Proven Safety Countermeasure	Expected Crash Reduction ⁶
Pedestrian Hybrid Beacons can reduce pedestrian crashes up to	55%
Medians with marked crosswalks can reduce pedestrian crashes by	46%
Intersection lighting can reduce nighttime pedestrian crashes up to	42%
Converting standard or buffered bike lanes to separated bikes lanes can reduce bicycle-vehicle crashes by	53%

⁶ FHWA Proven Safety Countermeasures.

<https://highways.dot.gov/safety/proven-safety-countermeasures>

LAUREL STREET (MISSION STREET TO FRONT STREET)

Laurel Street is a major east-west corridor across the city, bringing travelers from Mission Street (CA-1) into downtown Santa Cruz and across the San Lorenzo River. The west end of the corridor is mostly residential, but as it continues east it becomes more of a commercial corridor. It also fronts the south side of the Santa Cruz High School campus, providing access for students. The corridor is primarily one travel lane in each direction, with standard bike lanes (Class II), and some center turn lanes. There are also bus stops along Laurel Street and a high volume of transit service for students traveling to UCSC, emphasizing a need for safe first-last mile transit connections. Additionally, a steep grade from California Street to Walti Street contributes to visibility issues and safety concerns for downhill bicyclists.

Safety Need

Laurel Street is on the High Priority Network, meaning it has both a history of serious and fatal crashes, and exhibits risk factors research and analysis finds are correlated with crash frequency and severity. The corridor has four High Injury Intersection locations at Walti Street, Center Street, Pacific Avenue, and Front Street.

Nearly 75% of all crashes on Laurel Street involve a pedestrian or bicyclist, and 58% of the crashes on the corridor resulted in a serious injury or fatality. This highlights a significant safety challenge for people walking and biking, as well as students traveling to Santa Cruz High School and UC Santa Cruz.

The primary contributing factors were:

- **Unsafe speed** was the most common crash contributor, emphasizing the need for traffic calming measures and warning signs that will increase safety for all road users.
- **Improper turning** and **alcohol/drug involvement** were also notable contributing factors, reinforcing concerns about crash severity and survivability for vulnerable users.

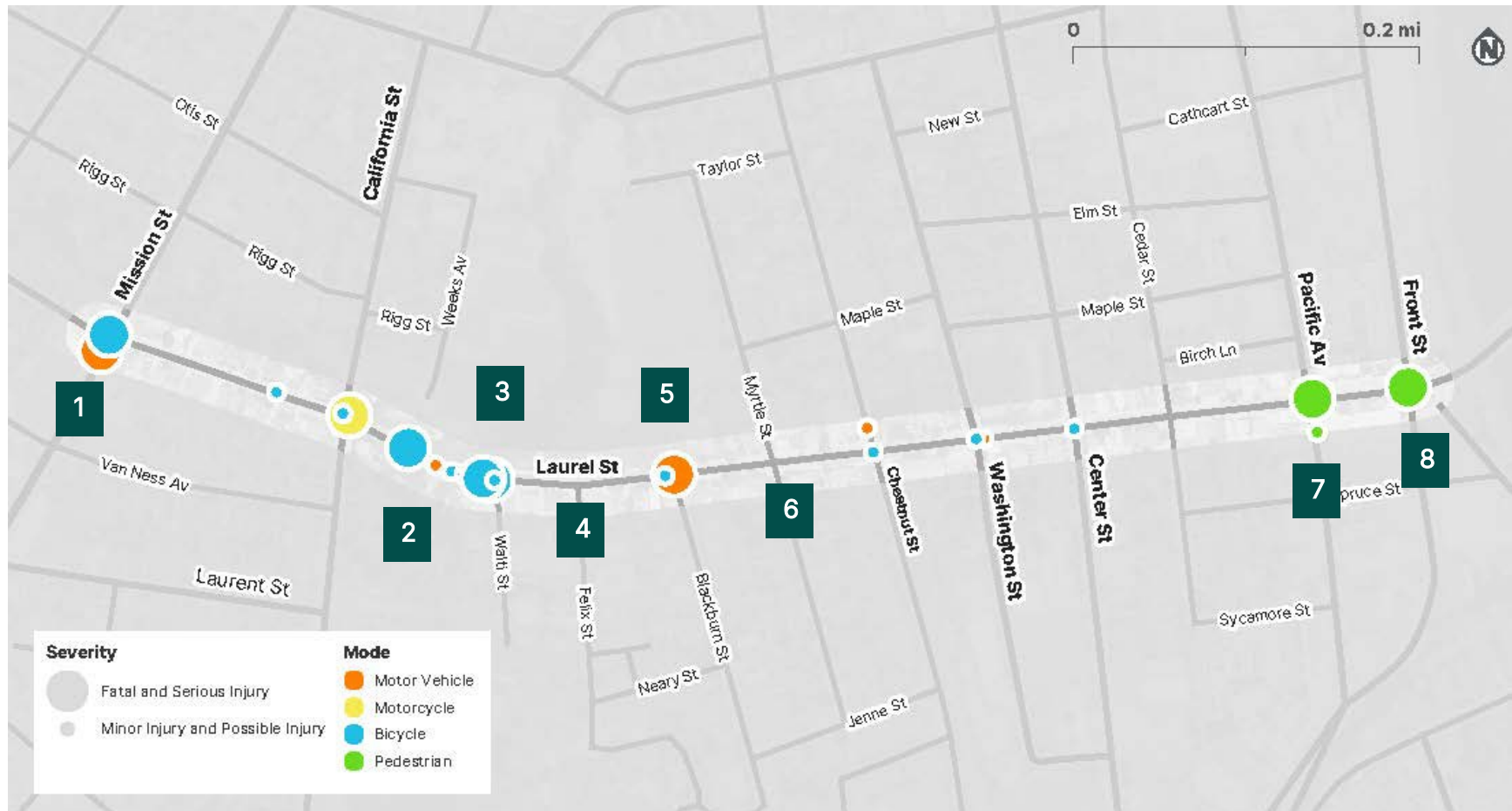


Figure 18. Map of crashes on Laurel Street shown by mode and severity, 2020-2024.

Recommendations

Location Specific:

1. Laurel Street & Mission Street

- a. Upgrade crosswalks to be high visibility continental on all intersection legs.
- b. Install 20' long curb extensions at eastbound and westbound intersection departures on Laurel St to reinforce daylighting, and upgrade curb ramps to be directional. Existing storm drain infrastructure at these corners will need to be considered during design.
- c. These recommendations will aid in reinforcing traffic control and improve site lines and visibility between modes.

2. Between California Street & Walti Street

- a. Consider transverse rumble strips or vertical separation along centerline to promote driver awareness.
- b. Install advanced school zone signage.
- c. Evaluate efficacy of vehicle speed feedback sign and consider relocating downhill if ineffective at current location.
- d. These recommendations will encourage slower vehicle speeds and address the persistent unsafe speeds that occur along this stretch.

3. Laurel Street & Walti Street (High Injury Intersection)

- a. Install curb extensions on southwest and southeast corners, upgrade curb ramps to be directional, and narrow travel lanes on Walti Street to 11'.
- b. These recommendations enhance accessibility and improve site lines and visibility between modes.

4. Laurel Street & Felix Street

- a. Install curb extensions on southwest and southeast corners, upgrade curb ramps to be directional, and narrow travel lanes on Felix Street to 11'.
- b. Widen existing pedestrian refuge island to be at least 6' wide.
- c. These recommendations provide a more comfortable resting place for pedestrians waiting to cross, enhance accessibility, and improve site lines and visibility between modes.

5. Laurel Street & Blackburn Street

- a. Install curb extensions on southwest and southeast corners, upgrade curb ramps to be directional, and narrow travel lanes on Blackburn Street to 11'.
- b. Widen existing pedestrian refuge island to be at least 6' wide.
- c. These recommendations provide a more comfortable resting place for pedestrians waiting to cross, enhance accessibility, and improve site lines and visibility between modes.

6. Laurel Street & Myrtle Street

- a. Establish new crossing across Laurel Street. Install high visibility continental crosswalks and directional curb ramps on all legs.
- b. These recommendations enhance accessibility and improve site lines and visibility between modes.

7. Laurel Street & Pacific Avenue (High Injury Intersection)

- a. Install 20' long concrete curb extensions at southbound intersection departure on Pacific Avenue to reinforce daylighting, and upgrade curb ramps to be directional.
- b. These recommendations will aid in reinforcing traffic control and improve site lines and visibility between modes.

8. Laurel Street & Front Street (High Injury Intersection)

- a. Study for right turn lane removal. If feasible, reallocate space to curb extensions, pedestrian refuge islands, and/or bike lane buffers with vertical elements.
- b. These recommendations narrow the travel lane width, promote slower speeds, enhance accessibility for pedestrians, and safety and comfort for bicyclists.

Corridor-Wide:

1. Review striping for opportunities to shorten conflict zones.
2. Review existing curb ramps along corridor for compliance with PROWAG and ADA guidelines. Identify non-compliant curb ramps and reconstruct to align with current accessibility standards.
3. Install more frequent lighting and/or pedestrian scale lighting.
4. Remove on-street parking to add separated bike lanes (Class IV) as recommended in the Active Transportation Plan.

Table 7. Proven Safety Countermeasures and Expected Crash Reductions.

Proven Safety Countermeasure	Expected Crash Reduction ⁷
High visibility crosswalks can reduce pedestrian injury crashes up to	40%
Advance yield or stop markings can reduce pedestrian crashes up to	25%
Medians with marked crosswalks can reduce pedestrian crashes by	46%
Intersection lighting can reduce nighttime pedestrian crashes up to	42%
Converting standard or buffered bike lanes to separated bikes lanes can reduce bicycle-vehicle crashes by	53%

⁷ FHWA Proven Safety Countermeasures.

<https://highways.dot.gov/safety/proven-safety-countermeasures>

WATER STREET (RIVER STREET TO MORRISSEY BOULEVARD)

Water Street serves as one of main corridors for residents and visitors on the east side of the city to access downtown Santa Cruz. The corridor itself has primarily commercial land uses, connecting people to grocery stores, restaurants, retail, medical offices, and hotels. Branciforte Middle School is also located just north of Water Street, and the Branciforte Small Schools campus is located at the corner of Branciforte and Water. Additionally, Santa Cruz County office buildings are located just east of the Riverwalk, bringing in commuter travel. Transit travels the length of the corridor. Between River Street and Branciforte Avenue, the corridor is four lanes wide with a striped bike lane (Class II). At Branciforte Avenue it transitions into two lanes with on-street parking.

Safety Need

Water Street is on the High Priority Network, meaning it has a history of serious and fatal crashes, and exhibits several risk factors that research and analysis finds are correlated with crash frequency and severity. The corridor has two High Injury Intersection locations at Ocean Street and North Branciforte Avenue.

Although only 16% of all crashes on Water Street were alcohol-involved, that ratio increased to 43% when looking at fatal and serious injury crashes. These are primarily motor vehicle-only crashes, highlighting impaired driving concerns on this corridor.

The primary contributing factors are:

- **Right-of-way conflicts** were among the most common crash contributors, including both "Automobile Right of Way" and "Pedestrian Right of Way" violations.
- **Unsafe speed, improper turning, and alcohol/drug involvement** were also notable contributing factors, reinforcing concerns about crash severity and survivability for vulnerable users, as well as turning conflict points.

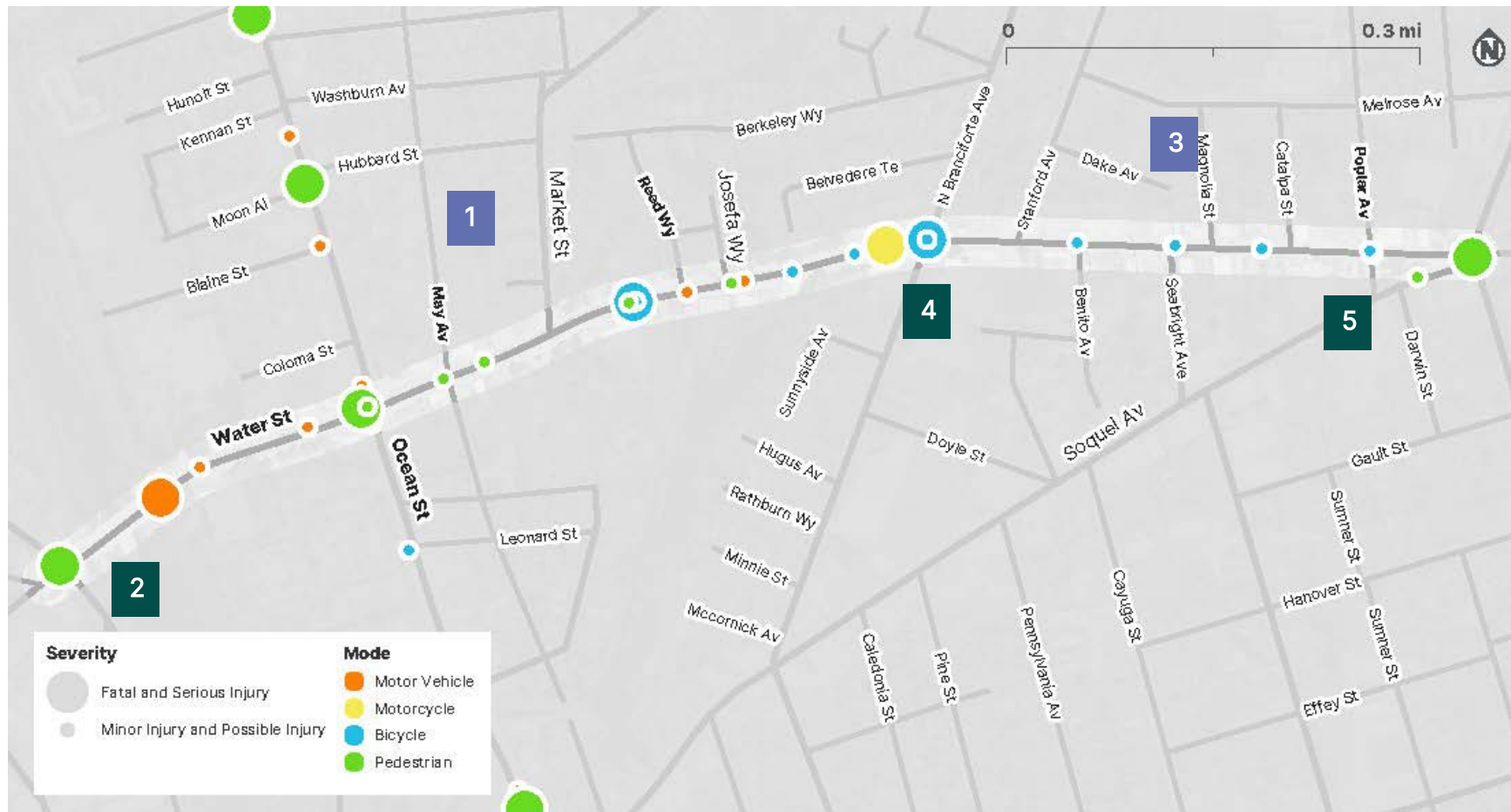


Figure 19. Map of crashes on Water Street shown by mode and severity, 2020-2024.

Recommendations

Location Specific:

1. Between Center St and Branciforte Ave

- a. Evaluate feasibility of a two-to-one lane reduction in each direction. If possible, reallocate road space to bike lane buffer and install vertical elements for separation.
- b. These recommendations narrow the travel lane width, promote slower speeds, and enhance safety and comfort for bicyclists.

2. Water Street & River Street

- a. Reduce number of through lanes on River Street from two to one. Install concrete curb extensions.
- b. These recommendations narrow the travel lane width, reallocate space to pedestrians, and reinforce traffic control.

3. Between Branciforte Avenue and Poplar Avenue

- a. Install 20' long concrete curb extensions at all intersections to reinforce daylighting and shorten crossing distances.
- b. Evaluate need for on-street parking along this stretch. If feasible, upgrade to Class IV bike lanes.
- c. Install bicycle conflict markings at intersections.
- d. Install midblock neckdowns to visually narrow roadway.
- e. These recommendations narrow the travel lane width, promote slower speeds, and enhance safety and comfort for bicyclists.

4. Water Street & N Branciforte Avenue

- a. Identify conflict zone and merge points for westbound bicyclists at intersection approach.
- b. Shorten conflict zone striping at eastbound approach to intersection on Water St. Restripe intersection to keep bike lanes adjacent to curb and encourage bicycle crossing at a location closer to the pedestrian crosswalk.
- c. These recommendations minimize potential conflicts between vehicles and bicyclists by limiting the merge opportunities to a clear and specific zone.

5. Water Street & Seabright Avenue

- a. Relocate Water St crossing to west of Seabright Ave and install pedestrian refuge island and curb extensions. Relocate bus stop if necessary.
- b. These recommendations remove the left turn conflict between vehicles and crossing pedestrians, and provide a designated rest zone for pedestrians waiting to cross Water St.

Corridor-Wide:

- 1. Following provisions in AB 43, lower posted speed limit to 25 mph.
- 2. Review striping for opportunities to shorten conflict zones.
- 3. Consider adding more reflective features to assist with nighttime visibility.
- 4. Install more frequent lighting and/or pedestrian scale lighting. All of the fatal and serious injury crashes on this corridor occurred at night.
- 5. Remove on-street parking to add separated bike lanes (Class IV) as recommended in the Active Transportation Plan.
- 6. At all intersections, review turning movement count data and evaluate need for existing turn lanes. At slip lane locations, reconfigure geometry to improve site lines and shorten conflict zones. See if median noses can function as pedestrian refuge island.

Table 8. Proven Safety Countermeasures and Expected Crash Reductions.

Proven Safety Countermeasure	Expected Crash Reduction ⁸
4- to 3- lane roadway conversions can reduce total crashes by	14-19%
Intersection lighting can reduce nighttime pedestrian crashes up to	42%
Converting standard or buffered bike lanes to separated bikes lanes can reduce bicycle-vehicle crashes by	53%

⁸ FHWA Proven Safety Countermeasures.
<https://highways.dot.gov/safety/proven-safety-countermeasures>



CHAPTER 7

WHAT HAPPENS NEXT?

COORDINATION

The Santa Cruz SAP includes several recommended strategies to eliminate fatal and serious injury crashes in Santa Cruz. To be successful, the SAP should influence decision making processes, including the way projects are selected and funding is allocated. By working together across departmental and agency boundaries, the City of Santa Cruz will continue to prioritize roadway safety.

PERFORMANCE MEASURES

Fatal and serious injury crashes will not be eliminated overnight, and the city should continue to monitor its progress towards this goal as the recommendations from this plan are implemented. Immediate progress may be hard to see, so this plan recommends monitoring both the safety actions and outcomes to identify which changes are having the largest impact on road safety.

Safety Actions

- Number of safety improvement projects implemented per year
- Evaluation of safety improvement projects implemented
- Number of impressions for safety-related public education campaigns
- Mileage of reduced speed limits posted per year
- Number of safety treatments installed on priority corridors
- Number of HII intersections with safety treatments installed
- Prioritization of HIN streets when evaluating for annual paving program

Safe System Outcomes

- Number of fatal and serious injury crashes for all travel modes
- Number of fatal and serious injury crashes for vulnerable road users
- Number of nighttime fatal and serious injury crashes
- Number of alcohol-involved fatal and serious injury crashes

TRANSPARENCY

A key part of maintaining accountability in the implementation of the Safety Action Plan is maintaining transparency with city residents and stakeholders. As part of both the funding requirements and the recommended actions and strategies in the plan, the city will complete a report every two years. These reports will be submitted to the Transportation and Public Works Commission and measure their progress in implementing actions and strategies, as well as infrastructure improvements. The reports will also include the impacts of safety improvements with updated crash data.

In addition to the biannual reports, the [Data Dashboard](#) provides year by year data of crashes by travel mode, severity, and contributing factors. Currently, the dashboard displays data from 2020-2024 but will be updated annually to display more recent crash data as it becomes available.

CALL TO ACTION

Ultimately, the Safe System Approach highlights the role everyone plays in improving safety outcomes. While decision makers and professional staff should lead the way, all road users share the responsibility of making sure their fellow travelers make it to their destinations safely, from the parents driving their kids to soccer, the college students riding the bus to campus, to the designated driver offering to give everyone a safe ride.

Zero traffic deaths isn't an impossible dream, and Santa Cruz is one of dozens of cities intent on the goal. As of June 2026, over 80 communities across the United States have committed to Vision Zero and are part of the Vision Zero Network.⁹ A small cohort of small- to mid-size cities have successfully recorded at least one year of zero traffic deaths since adopting Vision Zero. Hoboken, NJ leads the way and has not recorded a traffic fatality since 2017.

Jersey City, NJ and Alexandria, VA, have also recorded years with zero traffic fatalities, and Santa Cruz could be next.

⁹ "What is the Vision Zero Network?" <https://visionzeronetwork.org/about/vision-zero-network/>

Table 9. Vision Zero city comparison.

City	Hoboken, NJ	Alexandria, VA
	Zero fatalities since 2017	Zero fatalities recorded in 2023
Key strategies	• Daylighting intersections (removing parking near corners) • Raised crosswalks • Protected bike lanes • Lower speed limits (20 mph citywide) • Quick-build street redesigns Prioritizing pedestrians at intersections¹⁰	• Neighborhood slow zones • High-crash intersection audits • Pedestrian lighting improvements • No turn on red restrictions School zone speed cameras¹¹

¹⁰ "How Hoboken has gone years without a traffic death," Governing.com.

<https://www.governing.com/transportation/how-hoboken-has-gone-years-without-a-traffic-death>

¹¹ "FY 2024 Annual Report and Work Plan," City of Alexandria.

https://www.alexandriava.gov/sites/default/files/2024-07/Vision%20Zero%20FY24%20Report%20%26%20FY25%20Work%20Plan_For%20Web.pdf