# Local Road Safety Plan

City of Bellingham, WA

Prepared for City of Bellingham by Transpo Group

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# Introduction

The City of Bellingham places a high priority on the safety of its multimodal transportation system and is committed to people-oriented travel, including vulnerable active transportation users of all ages and abilities. The City of Bellingham seeks to reduce the total number of crashes, as well as the risk of crashes throughout the city, especially those which involve severe injury or fatality. To address transportation safety more effectively, Bellingham has created a **Local Road Safety Plan (LRSP)** which uses a data-driven, proactive approach to identifying potential safety concerns. In addition to guiding spot treatments, the LRSP allows the City to focus on systemic improvements to the transportation network which can not only address reported and observed crashes but also addresses specific conditions that introduce risk factors for potential crashes.

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## History of Safety Improvements and Plans

The City of Bellingham has a long history of working to improve the safety of the City's roadways and active transportation facilities. Bellingham's 2012 Pedestrian Master Plan (PMP), 2014 Bicycle Master Plan (BMP), 2016 Complete Networks program, the annual Six-Year Transportation Improvement Program (TIP), as well as the 2020, 2022, and 2024 Local Road Safety Plans (LRSP) all focused on improving the safety of Bellingham's citywide multimodal transportation system. The City completed updates to the PMP and BMP in 2024, adopted a new Comprehensive Plan in 2025, and updated the LRSP in 2026.

The City of Bellingham has also implemented several major corridor access management safety improvement projects (**Figure 1**), some of which have earned national recognition while also generating public controversy and opposition. Over time, all these projects have proven to be successful in reducing the number of total collisions and especially the number of fatal and serious injury collisions.

**SR 539 Guide-Meridian**
**(Interstate 5 to Kellogg Road):**
SR 539, known locally as the Guide-Meridian is a Highway of Statewide Significance (HSS) connecting Interstate 5 in Bellingham to the U.S. – Canada border at Aldergrove just north of Lynden. By 2011, SR 539 had become known as a significant safety hazard with a high number of vehicle collisions occurring every year and local residents could be seen sporting T-shirts that read "I Survived the Guide!" In 2012, the City and WSDOT worked with businesses and neighborhoods on each side of SR 539 to implement access management measures with a raised center median to prevent left-turns across multiple lanes and strategically located left-turn pockets.

**Alabama Street**
**(Cornwall Ave to Electric Ave):**
In 2012, WSDOT invited the City to apply for HSIP grant funds for Alabama Street because it had the second highest vehicle collision rate in Whatcom County behind SR 539 Guide Meridian. In 2014, the City completed a feasibility study and in 2015 implemented a road diet and bike lanes on the western third, access management on the central third, and rechannelization as a hybrid road diet on the eastern third. ADA upgrades were constructed on the entire corridor, 6 HAWK signals were installed at crossings for pedestrians, designated Bike Boulevards, and WTA transit shelters, and the speed limit was lowered from 35 to 30 mph. Alabama Street became a March 2016 ITE Journal case study and was awarded the **2016 ITE Complete Street Project of the Year**.

**West Bakerview Road**
**(Interstate 5 to Palisade Way):**
In 2018, the City of Bellingham worked with businesses and neighborhoods on each side of West Bakerview Road to implement access management measures in the form of a raised center median very similar to SR 539.

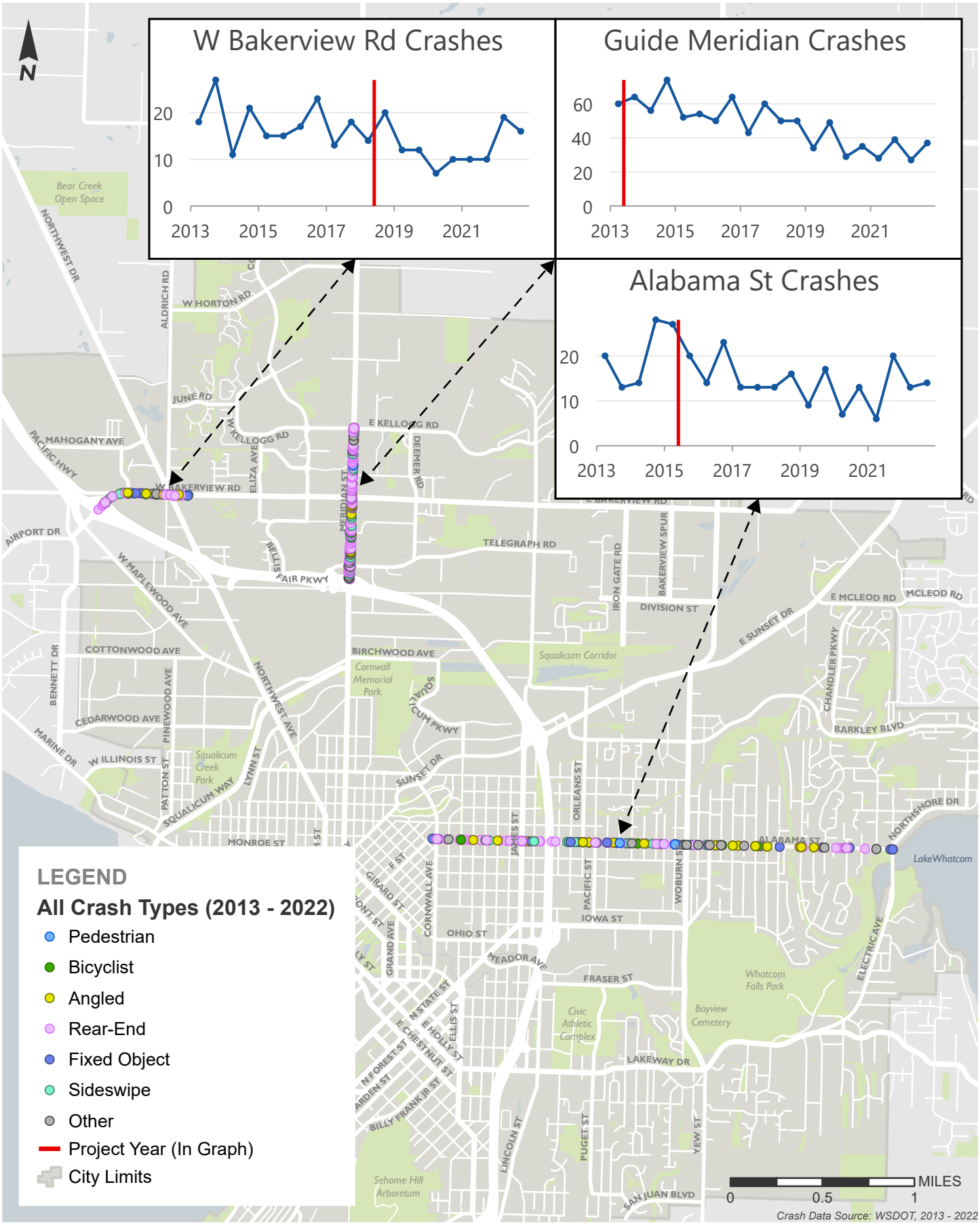


**Figure 1.** Crash Reduction from Access Management Projects

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## Local Road Safety Plan Process

**City Safety Program**

The Federal Highway Administration (FHWA) designates Local Road Safety Plans (LRSP) as a proven safety countermeasure for reducing fatality, serious injury, and non-injury collisions. The City of Bellingham's LRSP follows a process developed by WSDOT for the City Safety Program, which awards Highway Safety Improvement Program (HSIP) grant funding to city safety projects every other year. Cities examine crash data, crash locations, risk factors, social equity issues, land use context, and targeted safety countermeasures to pro-actively and systemically reduce crashes, fatalities, and injuries.

On behalf of the City of Bellingham, Transpo Group consultants analyzed crash data reports to identify risk factors throughout the city. Analysis includes a statistical look at the rate that certain contributing factors were cited in crashes, as well as a spatial examination of the locations and groupings of crashes. Crash locations are prioritized by the number of risk factors they present and their impact on historically underserved or vulnerable populations and compared to the City's transportation network and existing infrastructure to identify effective countermeasures and a program of prioritized improvements.

Improvements listed in the LRSP are intended to be systemic, proactive, safety improvements and may be recommended for roadways or intersections with or without a history of crashes. When improvements for locations with no history of reported crashes are included, it is due to the similarity of risk factors to locations which do have reported crash history, thus proactive measures are warranted.

The LRSP process includes plans for future updates on a biennial basis, aligned with the WSDOT funding cycle for HSIP funding. Future updates will document completed safety improvement projects and will repeat the analysis of future crash data to identify any changes from the current safety analysis.

**Data Sources**

Data for the City of Bellingham's LRSP comes from WSDOT resources, which are coordinated with the Washington State Patrol and the local Bellingham Police Department through the SECTOR system. The data for the LRSP is limited to a 5-year study period, January 1, 2020, through December 31, 2024. WSDOT verifies and calibrates crash data on a calendar year basis, therefore only data through the end of 2024 is included in the plan. Future updates to the LRSP will include a revised 5-year window and a historical comparison to identify trends or changes in crash frequency or severity.

## Existing Land Use - Transportation Integration

The Bellingham Comprehensive Plan Transportation Chapter incorporates the Safe System Approach, including the **Safer Land Use** element adopted by the 2024 WSDOT Strategic Highway Safety Plan (Target Zero) and adopts a safety goal and policy as the highest priority, as follows:

**Safety and reliability Goal T-A**

Provide a transportation system that prioritizes safety, comfort and reliability for all ages and abilities.

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**POLICY T-1.** Coordinate with Washington State Department of Transportation (WSDOT) and other transportation agencies to implement a comprehensive Safe Systems Approach that strives to eliminate serious injuries and fatalities.

The Safe Systems Approach includes overlapping and integrated elements that provide layers of safety. It focuses on both human mistakes and human vulnerability, with multiple protections in place.

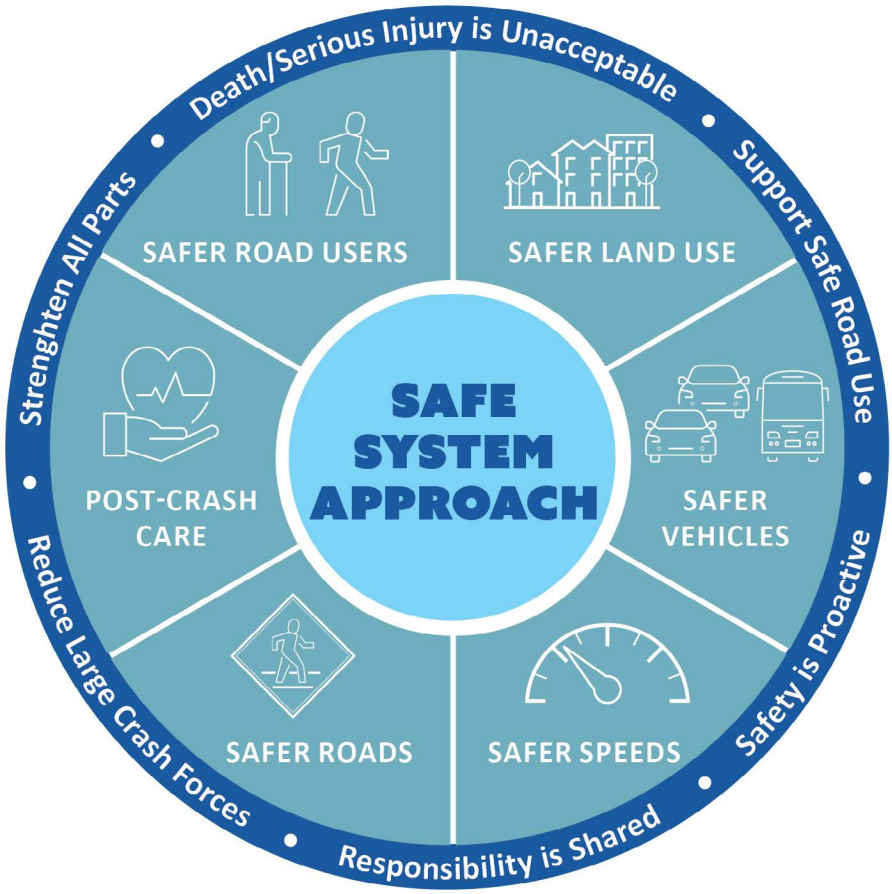


**Figure 2.** Bellingham's Safe System Approach

## Street Network

The Bellingham Comprehensive Plan Transportation Chapter describes the citywide surface street transportation system as a network of local arterial and residential streets mixed with three state highways (SR 11, SR 539, and SR 542) and bisected by the limited access freeway of Interstate 5. Some older parts of Bellingham have a grid street pattern while newer portions do not, and some streets have odd angles and intersections with other streets. This is largely due to four small towns (Fairhaven, Sehome, Whatcom, and Bellingham) merging into the City of Bellingham in 1904 as well as the emergence of environmental regulations in the 1960's, which limited the footprint, location, and impact of streets to protect wetlands, streams, and wildlife habitat.

Bellingham considers each street and its role or function within the context of the overall street network using a local functional classification system. This system identifies the role of each street along with its planned future

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size and profile. In addition to their specific functional classification, selected streets in Bellingham are designated as modal corridors, freight routes, or commercial streets to indicate their specific roles in the street network. Bellingham's roadway functional classifications include:

- State and Interstate Routes (Interstate 5, SR 11, SR 539, and SR 542)
- Principal arterials
- Secondary arterials
- Collector arterials
- Residential streets including local access and shared streets.

WA State Routes 11, 539, and 542 pass through Bellingham, as does Interstate 5 (I-5). SR 11 serves the south side of Bellingham, SR 539 serves the northcentral portion of Bellingham, and SR 542 serves the northeastern portion of Bellingham. I-5 generally runs north-south within the city limits and can be accessed at; Old Fairhaven Parkway (SR 11), South Samish Way/36th Street, Lakeway Drive, Iowa/Ohio Streets, East Sunset Drive (SR 542), Meridian Street (SR 539), Northwest Avenue, West Bakerview Road, and Slater Road.

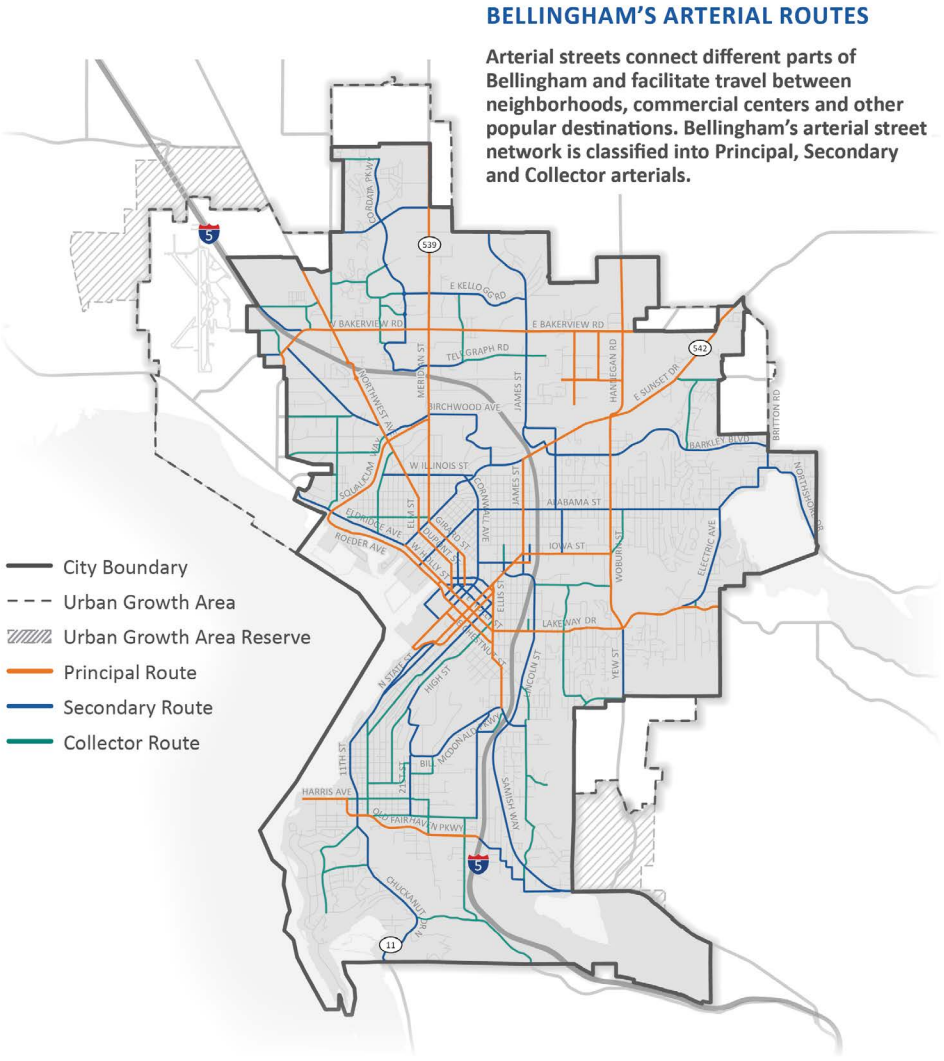


**Figure 3.** Bellingham Functional Classification

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## Urban and Demographic Context

The Bellingham urban land use context includes seven compact, mixed-use Urban Villages, all connected by high-frequency (15-minute) transit service, surrounded by residential neighborhoods, with various commercial and industrial areas located throughout the city. Numerous parks are available and over 80 miles of recreational trails exist throughout the city, several of which are 10 to 12-foot wide multiuse trails used regularly for active transportation trips.

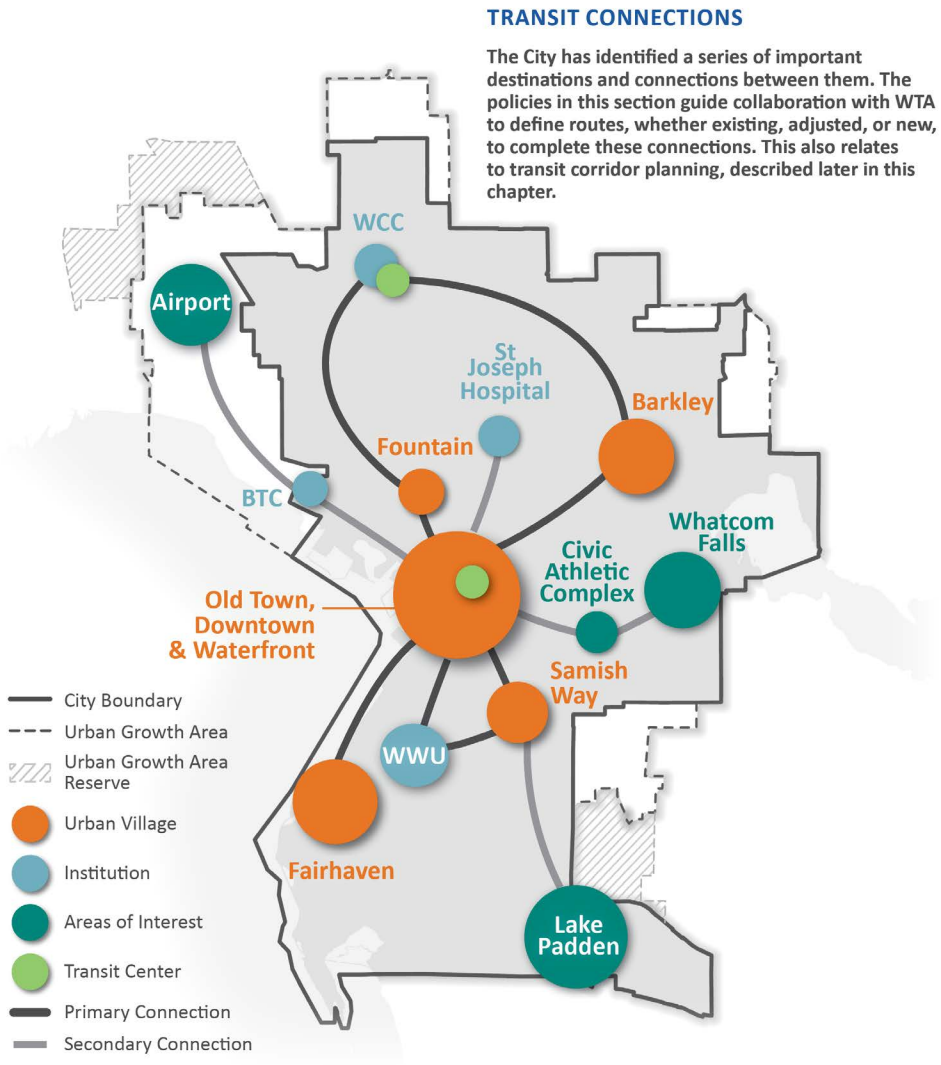


**Figure 4.** Bellingham's Urban Villages and Institutions Connected by WTA Transit

Demographically, the Bellingham urban area has a population of about 100,000 residents with a future forecast of about 130,000 residents by 2045. Bellingham has a high percentage of younger residents due to the presence of Western Washington University (WWU), Whatcom Community College (WCC), Bellingham Technical College (BTC), Northwest Indian College (NWIC), as well as a high percentage of retirees and senior citizens. Cultural diversity is somewhat limited with approximately 85% of the population documented as white.

Bellingham is a desirable place to live and is the largest center for employment, shopping, recreation, entertainment, higher education, and medical and social support services in the Whatcom region. Owner-occupied housing is in high demand with constrained supply, so prices are relatively high compared to other urban areas. Rental homes are also in high demand with vacancy rates somewhat below average compared to other urban areas, so rents are also relatively high.

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## Active Transportation and Transit

Bellingham has integrated land use and transportation planning, partners with regional public transit provider Whatcom Transportation Authority (WTA), and has been very pro-active in establishing active transportation networks and identifying facility improvements for people walking, biking, and rolling. All of Bellingham's Urban Villages are served by or are adjacent to WTA high-frequency (15-minute) GO lines and are well-connected with sidewalk, bikeway, and multiuse trail networks. In 2020 the League of American Bicyclists (LAB) recognized the City's commitment to fund and construct safe bicycle infrastructure and designated Bellingham as a **Gold-level Bicycle Friendly Community (BFC)** by – one of only two Gold BFCs in Washington and only 34 Gold BFCs in the United States.

The following active transportation, ADA, and transit plans have been adopted by Bellingham and WTA:

- 2024 Pedestrian Master Plan
- 2024 Bicycle Master Plan
- 2020 Mobility for All ADA Transition Plan
- 2021 WTA 2040: Long Range Transit Plan

Bellingham's annual Six-Year Transportation Improvement Program (TIP) is the funding mechanism for programming local and grant funds for active transportation, ADA, transit, and multimodal transportation improvements projects.

Bellingham's **transportation modal hierarchy** (**Figure 5**) prioritizes pedestrian, bicycle, and transit to ensure that all mobility needs for all modes must be carefully considered, balanced and implemented so that the citywide multimodal transportation system continues to work for everyone. To maximize safety and efficiency, some streets will prioritize cyclists through bike lanes and other infrastructure improvements, and other streets will prioritize transit in order to increase frequency and reliability.

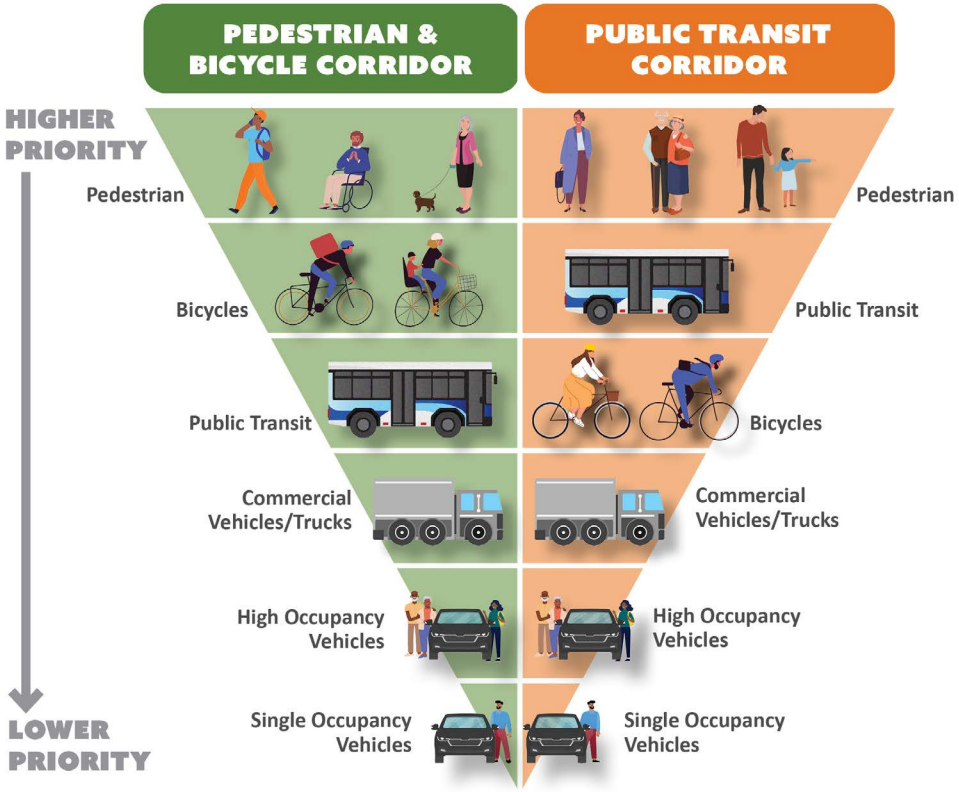


**Figure 5.** Bellingham's Transportation Modal Hierarchy

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# Data Analysis

# 2 Data Analysis

## Data Sources

The safety analysis is based on crash data in Bellingham for the years of 2020 – 2024, as provided by the Washington State Department of Transportation (WSDOT). Historical data was analyzed to understand crash risks from a systemic level and reveal information such as the quantities of different crash types, the quantities of crashes resulting in fatal and serious injuries (FSI), and the proportional quantities of different contributing circumstances that influenced the crashes. The results of the historical analysis provide a picture of crash trends over the five-year period, showing which types of crashes are most frequent and severe, and what the underlying infrastructure and behavioral issues may be.

The crash data was then mapped and analyzed spatially to identify contributing circumstances at specific locations that displayed a high number of overrepresented crash types and severe crashes. The spatial analysis enabled the identification of facility characteristics that may be affecting crash frequency and severity, such as lane delineation or signage lacking in contrast, wide crossings, or missing pedestrian facilities. Combining statistical and spatial analysis revealed the risk factors, showing what types of contributing behaviors and or facility characteristics present the greatest risk to roadway users, and which roadway users are at risk. The following section summarizes the historical crash analysis in the City of Bellingham from 2020 through 2024.

## Citywide Crash Analysis

A total of **4,803** crashes were reported on facilities owned by the City of Bellingham between 2020 and 2024, including 145 that resulted in a fatality or serious injury (FSI). **Figure 6** shows that the highest number of crashes, 1,052, occurred in 2024. The number of annual crashes reported has fluctuated slightly from year to year, generally increasing over the five-year period. The steady rise in crashes in Bellingham can partially be attributed to the steady growth in population the city has seen over the analysis period. According to U.S. Census data, the population of Bellingham was 91,482 in 2020. By 2024, Bellingham's population was estimated by the Washington State Office of Financial Management to be at 97,270 (Source: PopulationGrowthSince1980) representing an increase of over 5,000 new residents and transportation users.

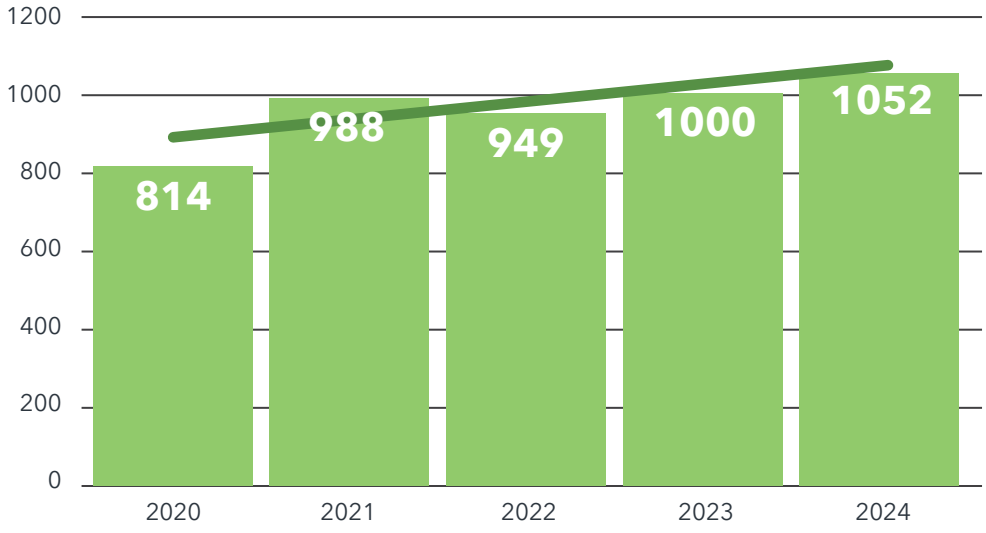


**Figure 6.** All Crashes Citywide by Year: 2020-2024

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## Citywide Crash Types

The crash type distribution, shown in **Figure 7**, represents the proportion of each type of crash reported in the data set and shows which types of crashes occurred disproportionately to others. Of the 4,803 crashes reported, the greatest portion of crashes were 1,205 angle crashes (25%), followed by 1,161 rear-end crashes (24%), 651 approach turn crashes (14%), 577 "other" crashes (12%), 478 fixed object, and 466 sideswipe crashes (10% each). Head on crashes (26) only accounted for 1% of the total crashes, and the 239 crashes involving pedestrians or bicyclists accounted for 5% of the City's total crashes.

The most frequent crash type was angle crashes. There were 1,205 angle crashes, 25% of the total. Crashes that occur when one vehicle strikes another at or near a 90-degree angle are coded as angle crashes. Angle crashes are often the result of a traveler not yielding due to obstructed sightlines, low gap tolerance or challenging intersection geometry. Of the 1,205 angle crashes, 17 resulted in a fatality or serious injury, 13.5% of the citywide FSI crash total.

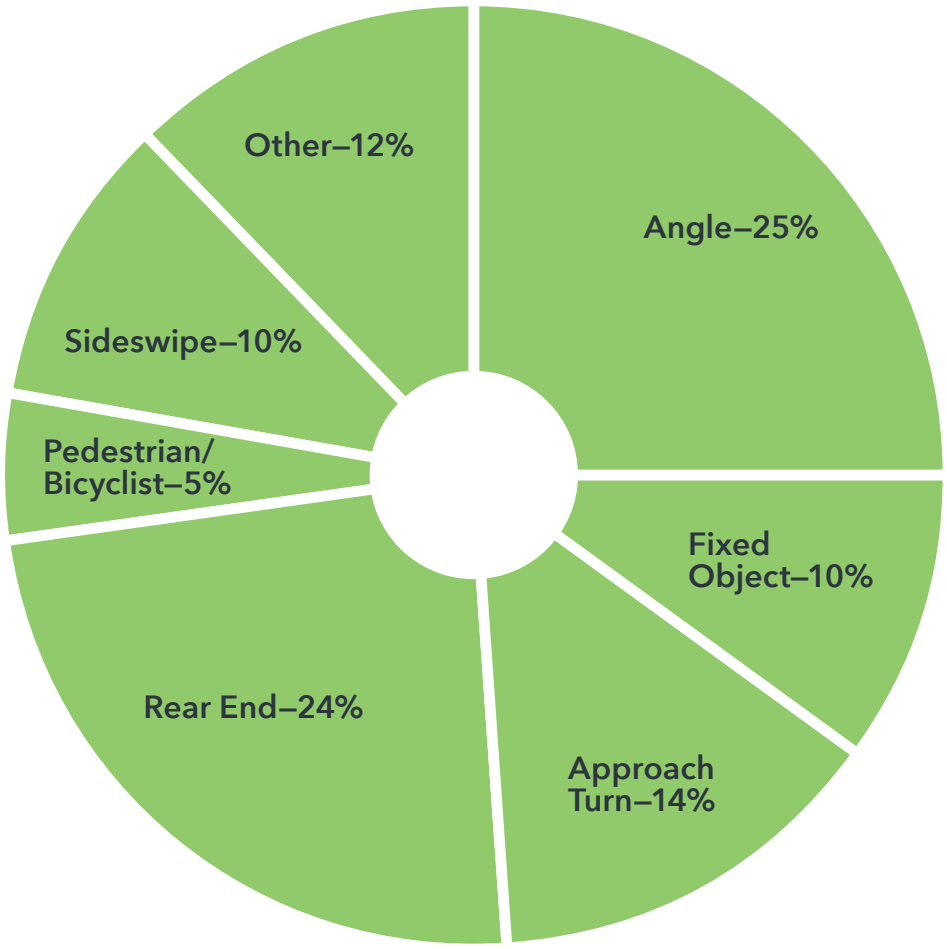


**Figure 7.** All Crashes by Percentage of Total Citywide: 2020-2024

Rear end crashes were the second most frequently reported crash type during the analysis period. There were 1,161 rear end crashes, 24% of the total. Rear end crashes occur when one vehicle following another strikes the forward vehicle from behind. Though rear ends were the second most frequent crash type reported during the analysis period, there were relatively fewer serious injuries or fatalities associated with these crashes. It is common for rear end crashes to occur in congestion at low speeds, therefore often reducing the severity of resulting crashes. Of the 1,161 rear end crashes, 8 resulted in a fatality or serious injury, 6.3% of the City's FSI crash total.

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Approach turn crashes typically occur at intersections and driveways when one or more vehicles are executing a turn and fail to yield or signal the intended movement, leaving the other driver or drivers without enough time to avoid a collision. Both left and right turns were coded as approach turn crashes. During the analysis period there were a total of 651 approach turn crashes, 14% of the citywide total. Of the 651 crashes, 11 resulted in a fatality or serious injury, 8.7% of the citywide FSI total.

"Other" type crashes in Bellingham frequently involved parked vehicles (58% of "other" crashes), other same direction crashes not meeting the full criteria for sideswipe (20%), and wildlife (deer) strikes (15%), but also included smaller numbers of opposite direction crashes not meeting the full criteria for sideswipe, overturned vehicles, vehicles crashing due to striking debris in the roadway, fire starting in the vehicle, and vehicles which had traveled over an embankment without first striking a guardrail or other fixed object. Of the "other" crashes, 8 resulted in a serious injury or fatality, 6.3% of the City's FSI crashes.

Fixed object crashes occur when a motorist departs the travel lane and strikes an immovable, permanent object located at the roadside, such as a tree, utility fixture, ditch, mailbox, or fence. In Bellingham the most common fixed objects involved in vehicular crashes were cable barriers (21% of the fixed objects) and trees or stumps (18%). The 478 fixed object crashes reported in Bellingham accounted for 10% of the total crashes during the analysis period. Of the fixed object crashes, 19 resulted in a fatality or serious injury, 15% of the City's total FSI crashes.

Sideswipe crashes occur when one vehicle strikes another laterally, making side-to-side contact with the other vehicle. Often, sideswipes occur due to careless actions such as failing to signal an intended lateral movement or failing to check a blind spot prior to making a lane change or merge and may be exacerbated by high speeds, pacing and refusing to yield, and distraction. During the analysis period, there were a total of 466 sideswipe crashes, of which 3 resulted in a fatality or serious injury, 2% of the citywide FSI total.

The map of citywide crash locations in **Figure 8** shows that crashes were concentrated along Meridian Street, downtown streets, Sunset Drive, Northwest Avenue/Northwest Drive, W/E Bakerview Drive, and Lakeway Drive.

**Table 1** compares the percentages of the City's most common crash types, each accounting for over 10% of the City's total, and the Pedestrian and Bicyclist crashes, to the percentages of the same crash types on all city streets in the state of Washington, and on city streets in Western Washington. Of the seven crash types listed in Table 1, four were overrepresented in comparison. Rear end, approach turn, and sideswipe crashes at all severity levels were overrepresented in comparison to both western Washington city streets, and city streets statewide. Rear end crashes that resulted in a severity or fatality were higher than the western Washington percentage, and FSI approach turn crashes were slightly overrepresented when compared to city streets statewide. Pedestrian/bicyclist crashes were on par with

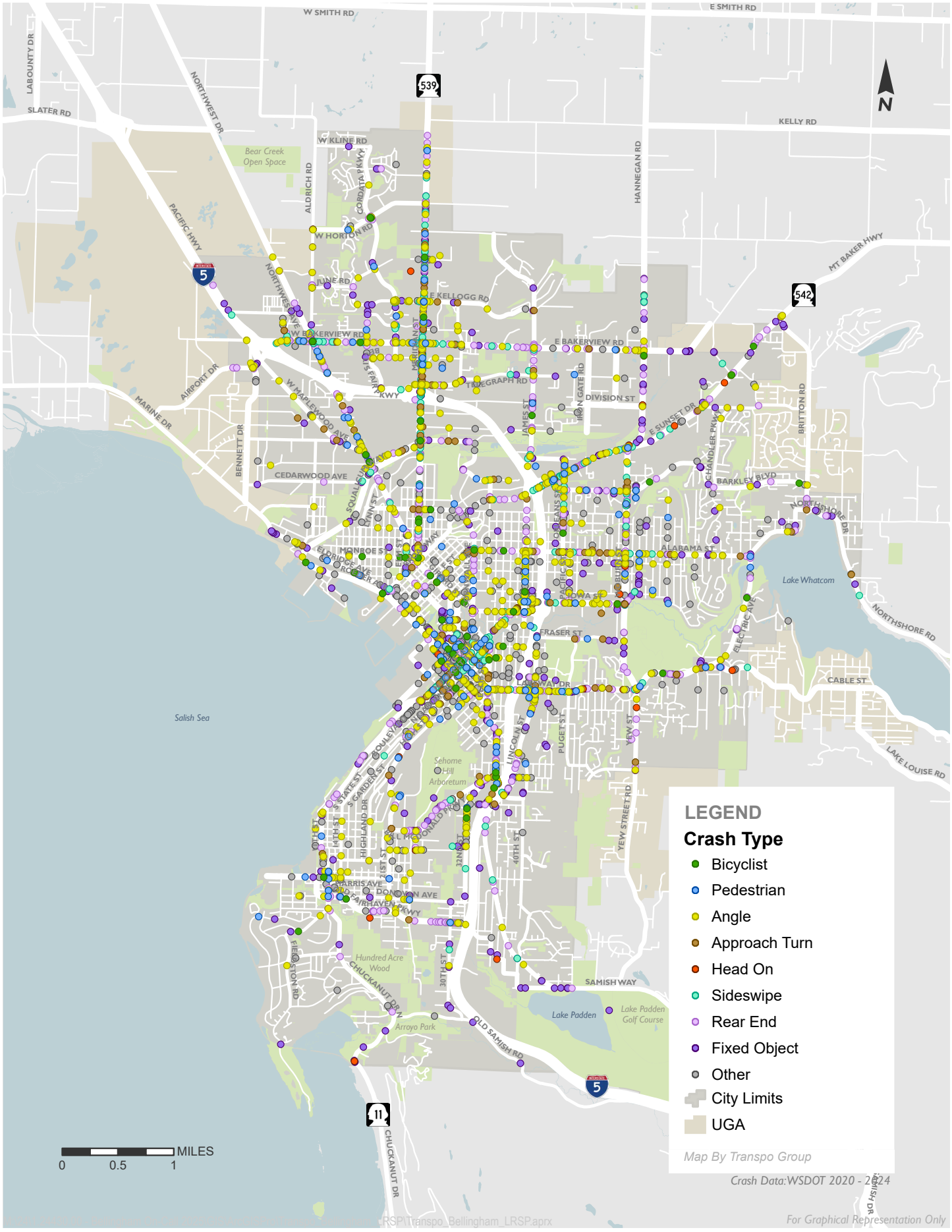


**Figure 8.** Geographic Distribution of All Crashes Citywide in Bellingham, WA: 2020-2024

# 2 Data Analysis

comparison percentages when crashes of all severity were compared, however, percentages of FSI crashes involving active mode users were 11% higher than city streets in western Washington, and 18% higher than western Washington city streets. Due to overrepresentation at the comparison and local levels, pedestrian/bike crashes, rear ends, approach turns, sideswipes, and angle crashes were analyzed for overrepresented contributing conditions including behavioral and infrastructure factors.

**Table 1.** Bellingham, Statewide, and Western Washington (city streets) Crash Percentages

| Crash Type | Bellingham Roads Total (%) | Bellingham Roads FSI Total (%) | City Streets Statewide Total (%) | City Streets Statewide FSI Total (%) | Western WA City Streets Total (%) | Western WA City Streets FSI Total (%) |
|---|---|---|---|---|---|---|
| **All** | **4,803** | **126 (3%)** | **202,705** | **5,720 (3%)** | **149,092** | **4,431 (3%)** |
| **Angle** | **1,205 (25%)** | 17 (13%) | 58,139 (29%) | 799 (14%) | 40,780 (27%) | 742 (17%) |
| **Rear End** | **1,161 (24%)** | **8 (6%)** | **35,165 (17%)** | 483 (8%) | **25,871 (17%)** | **189 (4%)** |
| **Approach Turn** | **651 (14%)** | **11 (9%)** | **22,342 (11%)** | **474 (8%)** | **16,745 (11%)** | 428 (10%) |
| Other[1] | 577 (12%) | 8 (6%) | 33,380 (16%) | 716 (13%) | 24,017 (16%) | 436 (10%) |
| Fixed Object | 478 (10%) | 19 (15%) | 27,513 (14%) | 1,288 (23%) | 20,923 (14%) | 806 (18%) |
| **Sideswipe** | **466 (10%)** | 3 (2%) | **15,303 (8%)** | 329 (6%) | **12,070 (8%)** | 130 (3%) |
| Head On | 26 (1%) | 2 (2%) | 1,334 (1%) | 279 (5%) | 1,049 (1%) | 161 (4%) |
| **Pedestrian/Bicyclist** | 239 (5%) | **58 (46%)** | 9,531 (5%) | **1,351 (24%)** | 7,648 (5%) | **1,539 (35%)** |

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

**Table 2** summarizes the most frequent contributing circumstances for the five overrepresented crash types in Bellingham. As seen in the table, not yielding contributed to all except for the rear end crashes. In addition to not yielding, pedestrian and bicyclist crashes were influenced frequently by either the pedestrian or the driver being intoxicated, by speeding drivers, and non-motorists crossing against the direction of traffic lights, cited as disregard for traffic controls. Angle crashes were also influenced by disregard for traffic controls, and improper turning or merging. Inattention/distraction and following too closely were frequent contributors in the rear end crashes.

**Table 2.** Contributing circumstances in most frequent crashes

| Crash Type | Contributing Circumstances1 |
|---|---|
| Pedestrian/Bicyclist | Did not Yield (to Non-Motorist 36%, to Vehicle 10%)<br>Inattention/Distraction (Driver 14%, Non-Motorist 9%)<br>Speeding (10%)<br>Intoxication (Non-Motorist 9%, Driver 3%)<br>Non-Motorist Disregard for Traffic Controls (7%) |
| Rear End | Following Too Close (63%)<br>Inattention/Distraction (38%) |
| Approach Turn | Did not Yield (73%)<br>Inattention/Distraction (36%)<br>Improper Turning (27%) |
| Sideswipe | Did not Yield (67%) |
| Angle | Did not Yield (35%)<br>Improper Turning (18%)<br>Disregard for Traffic Controls (18%) |

1. Contributing circumstances listed for all crash severity.

# 2 Data Analysis

## Fatal and Serious Injury Crashes

Of the 4,803 crashes that occurred on City of Bellingham streets, 125 (3%) resulted in a fatality or serious injury (FSI). **Figure 9** shows the number of fatal and serious injury crashes per year, with the frequency of both severities generally increasing since 2020. While the greatest numbers of fatal crashes occurred in 2021 and 2022, significant risk remains as serious injury crash numbers have continued to rise with the highest number of serious injury crashes, 33, occurring in 2024.

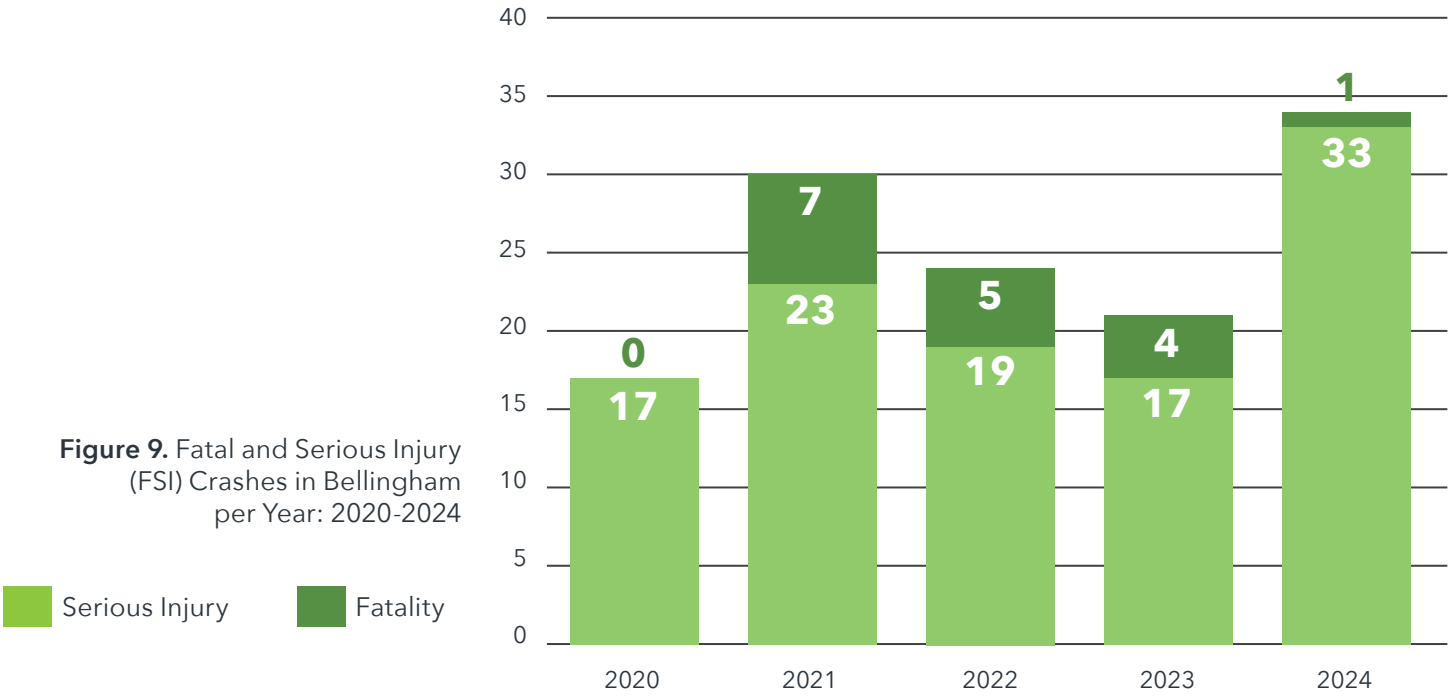


**Figure 9.** Fatal and Serious Injury (FSI) Crashes in Bellingham per Year: 2020-2024

The overall proportions of fatal and serious crashes in Bellingham between 2020 and 2024 are on par with the percentages of FSI crashes statewide, shown in **Table 3**. Though Bellingham's fatal and serious crash percentages are not higher than the state comparisons, Washington's Strategic Highway Safety Plan, Target Zero (2024), advances the goal of reducing the number of traffic deaths and serious injuries on Washington's roadways to zero by the year 2030. In support of this work, Bellingham has conducted several public safety campaigns since 2017, including Travel With Care (2017-2018), and Protecting Mobility for All (2021-2023).

**Table 3.** City and State FSI Comparison

| Crash Severity | Bellingham FSI (%) | Statewide City Streets FSI (%) | Western Washington City Streets FSI (%) |
|---|---|---|---|
| Serious Injury | 109 (2%) | 4,922 (2%) | 3,815 (3%) |
| Fatality | 17 (0.4%) | 798 (0.4%) | 616 (0.4%) |

**Figure 10** shows the geographic spread of the FSI and minor injury crashes in Bellingham that were reported during the analysis period. Portions of state routes within City limits, and ramps connecting to I-5 are included in the analysis, as these are included in the Local Programs data reports prepared by WSDOT that provide the comparison statistics for the general analysis. Fatal and serious injury crashes are spread out across the city's roadway network with most of the fatal crashes occurring on or near arterial roadway segments outside of the downtown area with posted speed limits of 30 mph or greater.

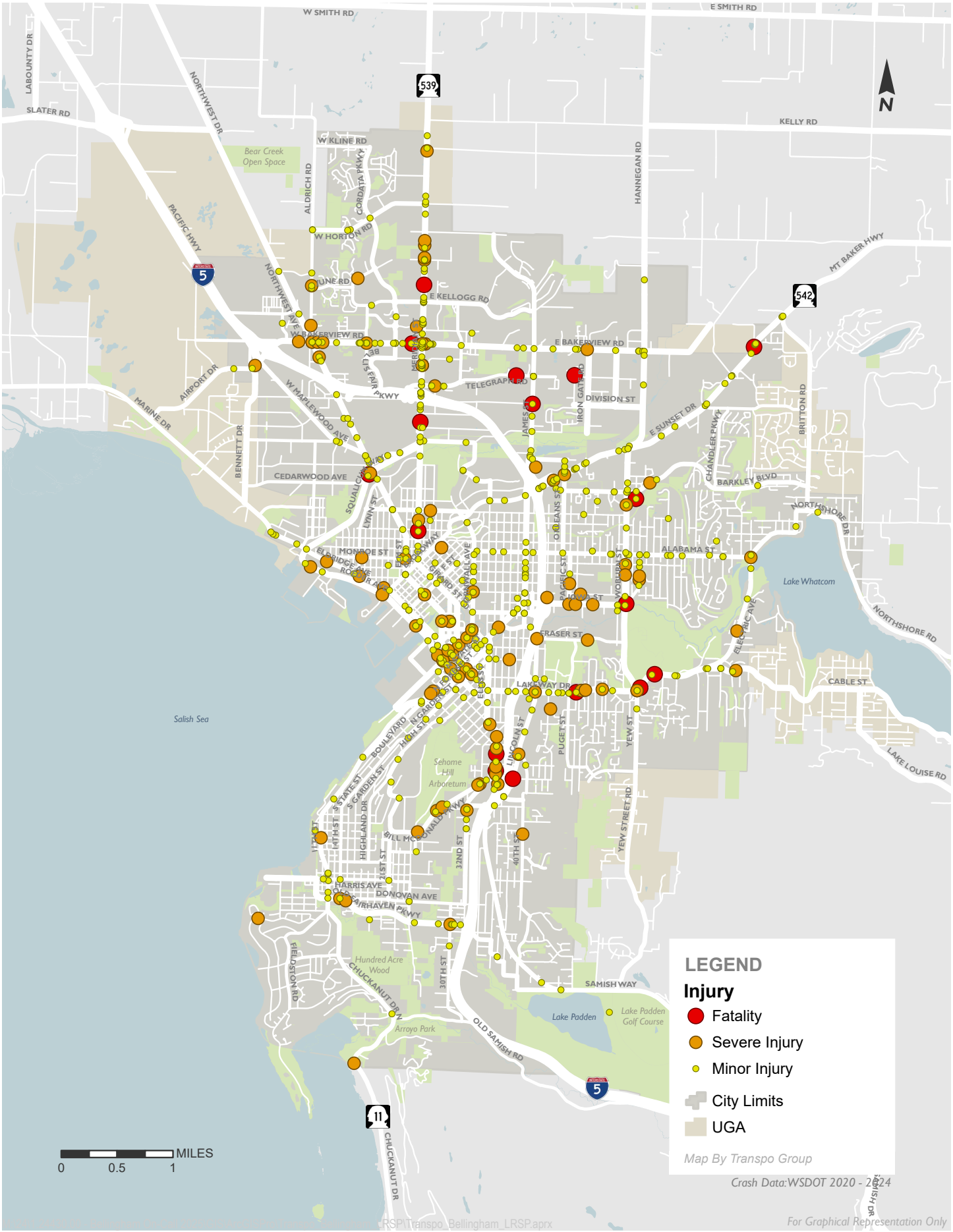


**Figure 10.** Geographic Distribution of Fatal and Serious Injury Crashes: 2020-2024

# 2 Data Analysis

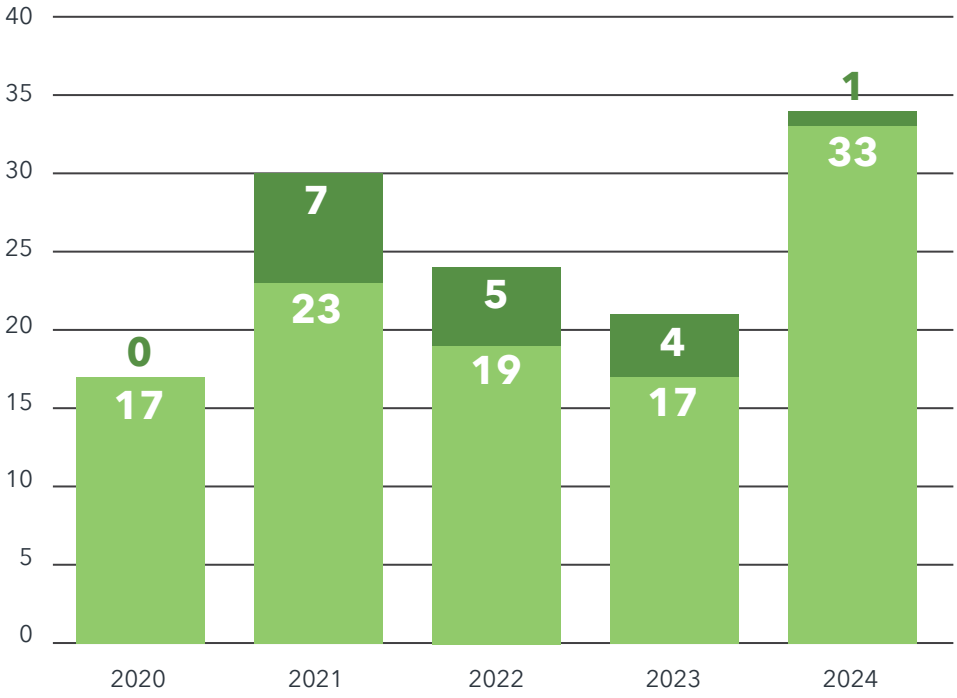


**Figure 11.** FSI crash rates have approximately doubled since 2020 rising from 17 to 34.

**Figure 12** shows a distribution chart of FSI crashes by crash type. Pedestrian and bicycle crashes accounted for nearly half of the City's FSI crashes. Together, angle and fixed object crashes accounted for nearly a third of the City's FSI total. Fixed object crashes accounted for only 10% of the total crashes during the analysis period, however those crashes comprised 15% of the FSI total and represent a greater risk than the City's sideswipe crashes, which also accounted for 10% of the City total, but only 2% of the FSI total.

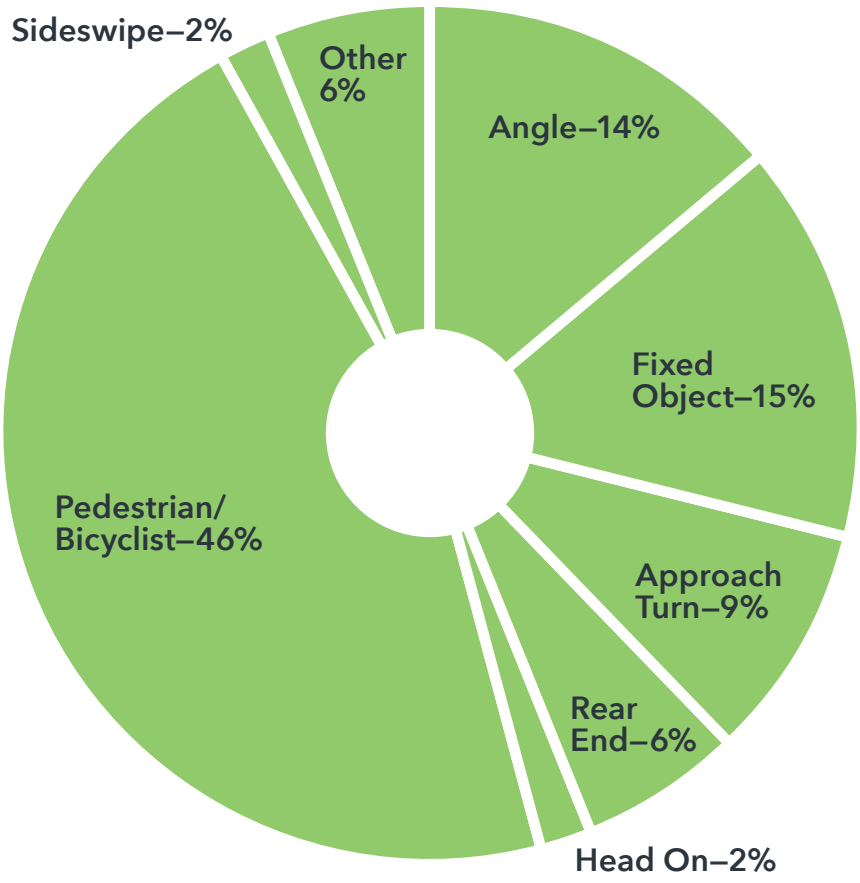


**Figure 12.** Fatal and Serious Crash Types: 2020-2024

# 2 Data Analysis

**Table 4** shows that three FSI crash types were elevated in their respective proportions compared to city streets statewide, to western Washington city streets, or both. Approach turn crashes are slightly elevated compared to statewide city streets, rear end crashes were elevated in comparison with western Washington city streets, and FSI crashes involving pedestrians and bicyclists were considerably higher than both. While not higher than comparative rates, angle and fixed object crashes accounted for 25% and 10% of the City's total, and 14% and 15% of the City's FSI crashes, respectively, and were therefore included in further analysis.

**Table 4.** City and State FSI Crash Comparison

| Crash Type | Bellingham FSI (%) | Statewide City Streets FSI (%) | Western Washington City Streets FSI (%) |
|---|---|---|---|
| **Fixed Object** | **19 (15%)** | 1,288 (23%) | 806 (18%) |
| **Approach Turn** | **11 (9%)** | **474 (8%)** | 428 (10%) |
| **Rear End** | **8 (6%)** | 483 (8%) | **189 (4%)** |
| Head On | 2 (2%) | 279 (5%) | 161 (4%) |
| **Pedestrian/Bicyclist** | **58 (46%)** | **1,351 (24%)** | **1,539 (35%)** |
| **Angle** | **17 (14%)** | 799 (14%) | 742 (17%) |
| Sideswipe | 3 (2%) | 329 (6%) | 130 (3%) |
| Other[1] | 8 (6%) | 716 (13%) | 436 (10%) |

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

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# Risk Factors

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# Risk Factors

## Pedestrians, Bicyclist, and Vulnerable Roadway Users

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

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

During the analysis period, there were a total of 239 crashes that involved pedestrians or bicyclists. Out of the 239 crashes, 58 (24%) resulted in a serious injury or a fatality. Crashes involving the most vulnerable roadway users account for increasing numbers of the City's most serious crashes, despite a slight reduction in FSI pedestrian and bicyclist crashes from 2021 to 2022, as seen in **Figure 13**. Pedestrians are experiencing high numbers of serious injuries or fatalities. Of the 58 FSI vulnerable road user crashes, 36 (62%) involved a pedestrian.

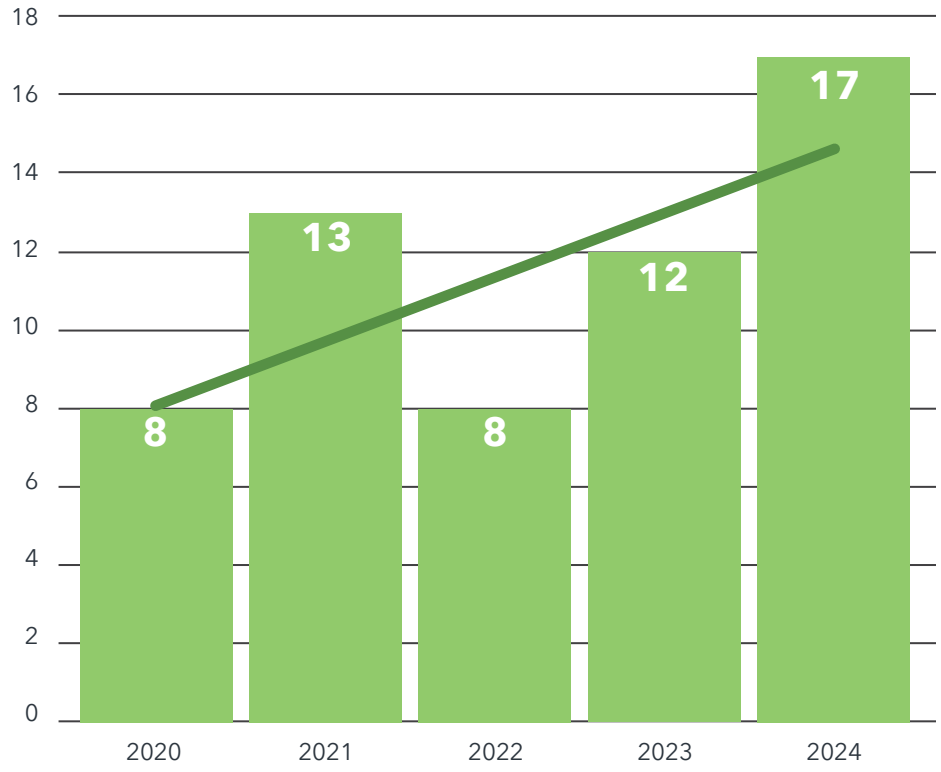


**Figure 13.** Pedestrian and Bicyclist Fatal and Serious Injury Crash Trend: 2020-2024

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**Table 5** shows that pedestrian and bicyclist crashes accounted for 46% of the FSI crashes in the City of Bellingham, 24% of FSI crashes statewide, and 35% of the western Washington FSI crashes.

**Table 5.** City and State Pedestrian and Bicyclist Crashes

| Crash Severity | Bellingham (%) | Statewide City Streets (%) | Western Washington City Streets (%) |
|---|---|---|---|
| Ped/Bike (% of All) | 239 (5%) | 9,531 (5%) | 7,648 (5%) |
| **Ped/Bike (% of FSI)** | **58 (46%)** | **1,351 (24%)** | **1,539 (35%)** |

**Figure 14** shows the geographic distribution of the pedestrian and bicyclist crashes in Bellingham, including those resulting in a fatality or serious injury. Concentrations of FSI pedestrian and bicycle crashes appeared on Samish Way between Abbott Street and Bill McDonald Parkway, and along Lakeway Drive, Meridian Street. FSI crashes were also scattered throughout neighborhoods northeast of I-5 and Sunset Drive and near Barkley village. Crashes involving a mix of serious and lesser injuries were concentrated in downtown and adjacent neighborhoods, in downtown Fairhaven, along James Street, and along Northwest Avenue.

Key contributing circumstances in pedestrian and bicyclist crashes reported in Bellingham during the analysis period are summarized in **Table 6**. Inattention/distraction and not yielding the right of way were cited on the part of both drivers and vulnerable road users alike. Speeding was cited as a driver contributing circumstance, while pedestrians/bicyclist contributing circumstances included intoxication and disregard for traffic signals.

Pedestrian and Bicyclist Crash Risk Factors include:

- Not Yielding
- Speeding
- Intoxication (pedestrian)
- Distraction/inattention and not obeying traffic control signals and guides (i.e. crossing against the walking signal or not at a crosswalk)

**Table 6.** Most common contributing circumstances in FSI pedestrian and bicyclist crashes

| Crash Type | Driver Contributing Circumstances | Pedestrian/Cyclist Contributing Circumstances |
|---|---|---|
| Ped/Bike–FSI | Fail to Yield (36%)<br>Inattention/Distraction (14%)<br>Speeding, Reckless Driving, Racing (10%) | Fail to Yield (10%)<br>Inattention/Distraction (9%)<br>Intoxication (9%)<br>Disregard for traffic controls (7%) |

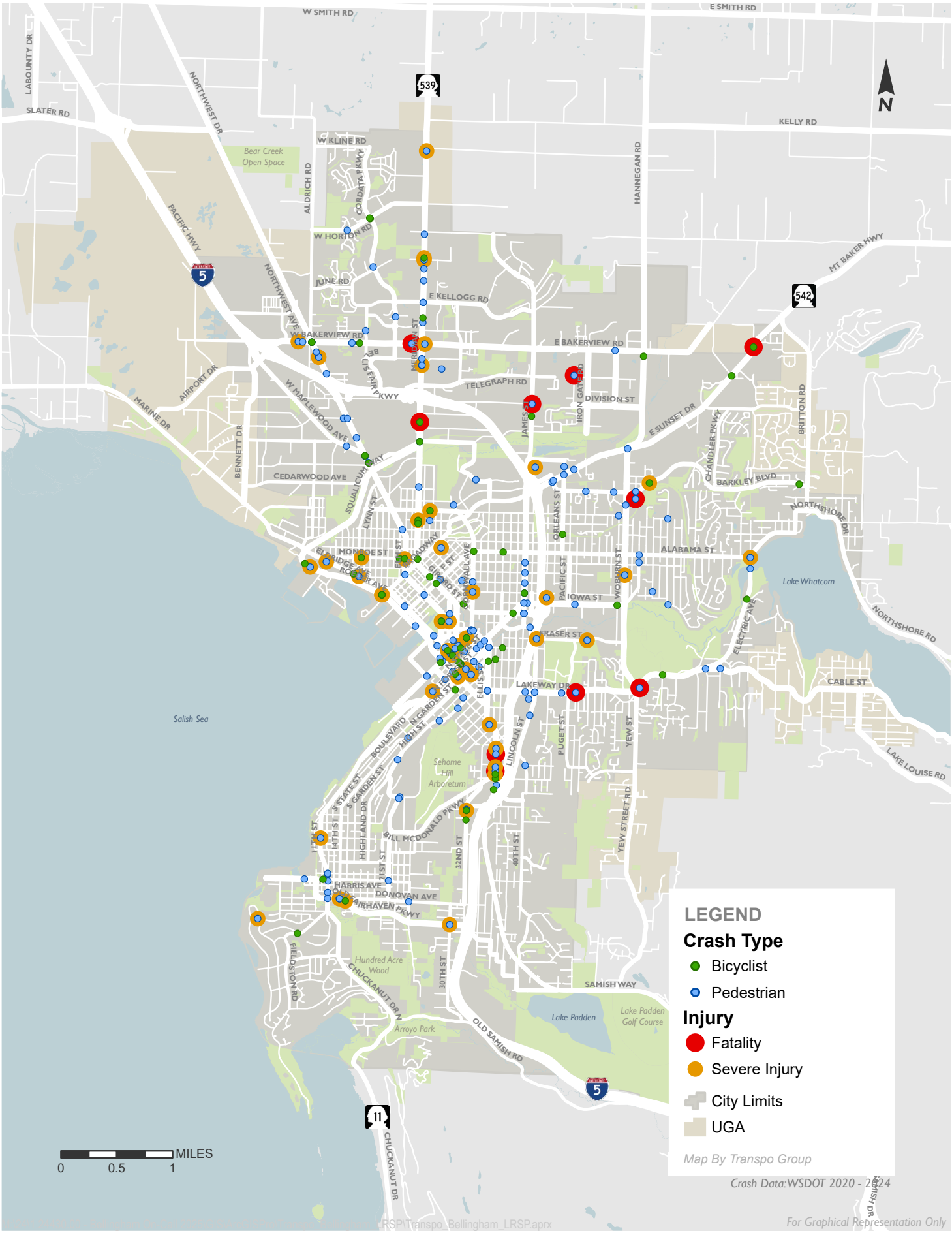


**Figure 14.** Geographic Distribution of Pedestrian and Bicyclist FSI Crashes: 2020-2024

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# Risk Factors

## Rear End Crashes

During the analysis period, there were a total of 1,161 rear end crashes. Out of the 1,161 crashes, 8 (6%) resulted in serious injury or fatality. Despite a slight reduction in FSI rear end crashes in recent years, **Figure 15** shows that, overall, rear end crashes are increasing.

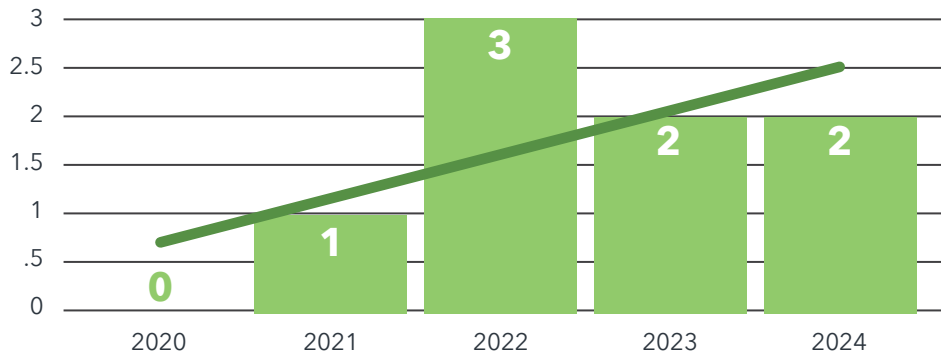


**Figure 15.** Fatal and Serious Injury Rear End Crash Trend: 2020-2024

**Table 7** shows that the percentages of FSI rear end crashes in Bellingham (6%) were higher than the percentage of FSI rear ends reported on city streets in western Washington (4%). In addition, rear ends accounted for 24% of all crashes in the city, and 17% of the crashes statewide and on city streets in western Washington.

**Table 7.** City and State Rear End crashes

| Crash Severity | Bellingham (%) | Statewide City Streets (%) | Western Washington City Streets (%) |
|---|---|---|---|
| Rear End (% of All) | 1,161 (24%) | 35,165 (17%) | 25,871 (17%) |
| **Rear End (% of FSI)** | **8 (6%)** | **483 (8%)** | **189 (4%)** |

**Figure 16** shows a map of the location and severity of the rear end crashes in Bellingham. As seen on the map, rear end FSI rear end crashes occurred more often in the northern half of the city, along or near Meridian Street and at the intersection of W Bakerview and Northwest Drive.

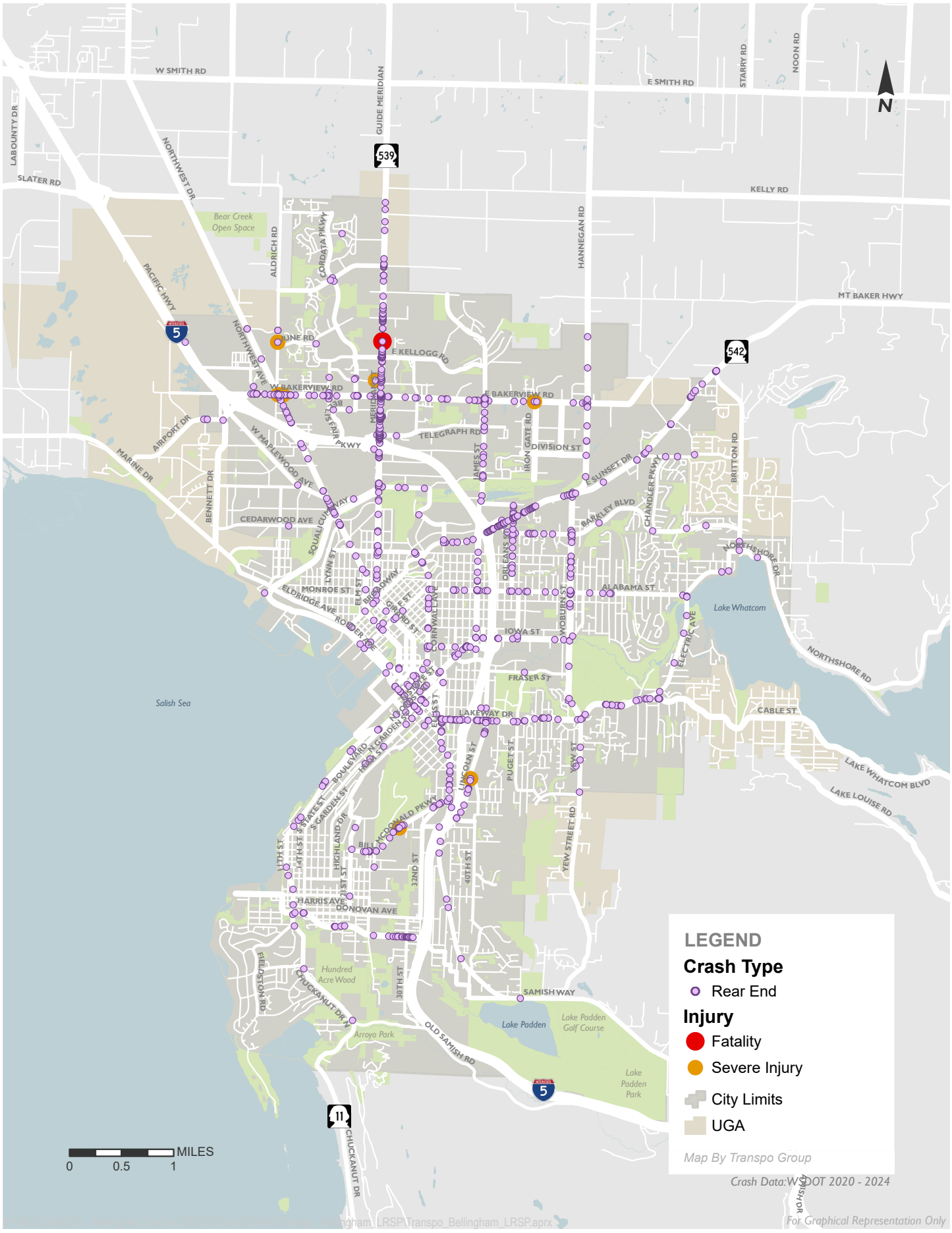


**Figure 16.** Geographic Distribution of Rear End FSI Crashes: 2020-2024

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# Risk Factors

Key contributing circumstances in rear end crashes reported in Bellingham during the analysis period are summarized in **Table 8**. Following too closely and speeding were the primary contributing factors in FSI rear end crashes.

**Table 8.** Most common contributing circumstances in FSI rear end crashes

| Crash Type | Contributing Circumstances |
|---|---|
| Rear End–FSI | Following Too Close (63%)<br>Speeding(38%) |

**Rear End Crash Risk Factors include:**

- Following too close in congestion
- Speeding

## Approach Turn crashes

During the analysis period, there were a total of 651 approach turn crashes, including 11 (9%) that resulted in a fatality or serious injury. Despite a slight reduction in serious injury and fatal "other" crashes in 2022 and 2023, **Figure 17** shows that, overall, FSI approach turn crashes are increasing.

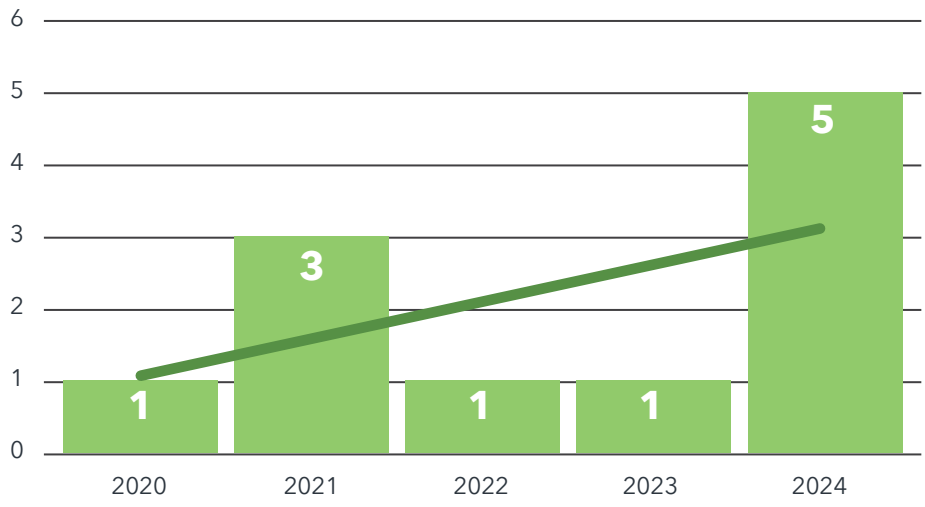


**Figure 17.** Fatal and Serious Injury Rear End Crash Trend: 2020-2024

**Figure 18** shows a map of the locations and severity of the approach turn crashes in Bellingham during the analysis period. As seen on the map, the FSI approach turn crashes primarily occurred at intersections along arterials, with several on Meridian Street.

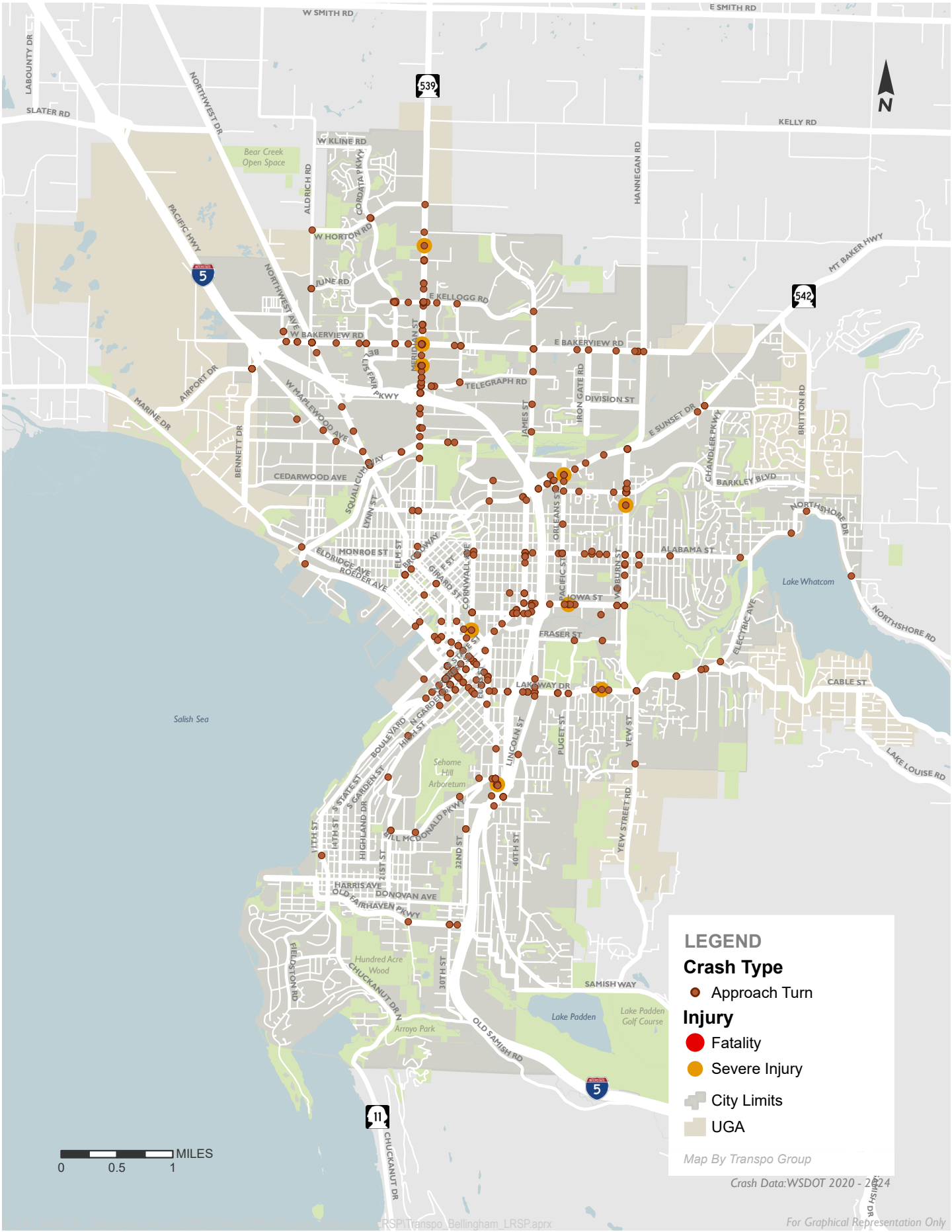


**Figure 18.** Geographic Distribution of Approach Turn FSI Crashes: 2020-2024

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**Table 9** shows that the percentages of approach turn crashes in Bellingham were higher than statewide percentages for FSI crashes, and higher than both comparisons for crashes of all severity. Approach turn crashes accounted for 11% of the serious injury and fatal crashes in the city, 8% of the FSI crashes statewide, and (10%) on city streets in western Washington. In addition, for crashes of all severity levels, approach turn crashes accounted for 14% of the city and 11% of each of the comparison totals.

**Table 9.** City and State Approach Turn crashes

| Crash Severity | Bellingham (%) | Statewide City Streets (%) | Western Washington City Streets (%) |
|---|---|---|---|
| Approach Turn (% of All) | 651 (14%) | 22,342 (11%) | 16,745 (11%) |
| **Approach Turn (% of FSI)** | **11 (9%)** | **474 (8%)** | **428 (10%)** |

Key contributing circumstances in approach turn crashes reported in Bellingham during the analysis period are summarized in **Table 10**. Not yielding, inattention/distraction, and improper maneuvers were contributing factors in the approach turn FSI crashes.

**Table 10.** Most common contributing circumstances in FSI approach turn crashes

| Crash Type | Contributing Circumstances |
|---|---|
| Approach Turn – FSI | Fail to Yield (73%)<br>Inattention/Distraction (36%)<br>Improper Maneuver (27%) |

**Approach Turn Crash Risk Factors include:**

- Not yielding and poor gap tolerance
- Not signaling
- Inattention/distraction

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# Risk Factors

## Fixed Object Crashes

During the analysis period, there were a total of 478 fixed object crashes, including 19 (15%) that resulted in a fatality or serious injury. Despite a slight reduction in FSI fixed object crashes in 2022 and 2023, **Figure 19** shows that, overall, while FSI crashes are slightly decreasing, they fluctuate considerably from year to year with the most crashes, 7, occurring in 2022.

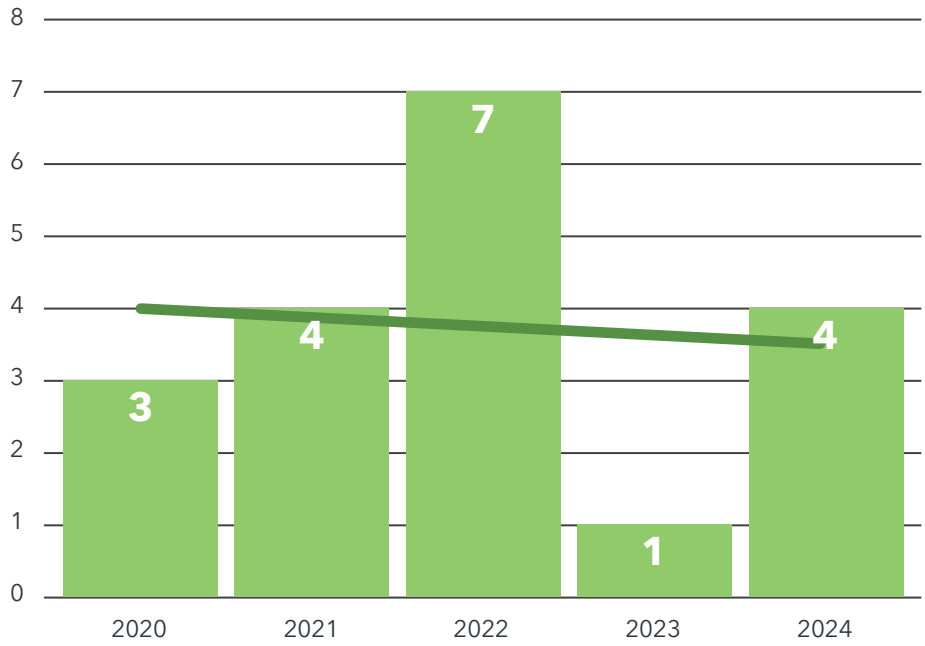


**Figure 19.** Fatal and Serious Injury Fixed Object Crash Trend: 2020-2024

**Table 11** shows that, for crashes of all severity levels, fixed object crashes represent a smaller percentage in Bellingham than comparisons, however fixed object crashes accounted for 15% of the FSI crashes in the city.

**Table 11.** City and State Fixed Object crashes

| Crash Severity | Bellingham (%) | Statewide City Streets (%) | Western Washington City Streets (%) |
|---|---|---|---|
| Fixed Object (% of All) | 478 (10%) | 27,513 (14%) | 20,923 (14%) |
| Fixed Object (% of FSI) | 19 (15%) | 1,288 (23%) | 806 (18%) |

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Key contributing circumstances in FSI fixed object crashes are summarized in **Table 12**. Intoxication and speeding were cited in 53% and 42% of the FSI fixed object crashes, respectively. Additionally, distraction and inattentive driving were cited in 32% of the FSI fixed object crashes and biological impairment such as driving while drowsy, driving while emotionally agitated or medically ill were cited in 26% of the FSI fixed object crashes.

**Table 12.** Most common contributing circumstances in FSI fixed object crashes

| Crash Type | Contributing Circumstances |
|---|---|
| Fixed Object – FSI | Intoxication (53%)<br>Speeding (42%)<br>Distraction/Inattention (32%)<br>Asleep, Emotional, Ill (26%) |

**Figure 20** shows a map of the locations and severity of the fixed object crashes in Bellingham during the analysis period. As seen on the map, the FSI fixed object crashes were scattered throughout the city, primarily south of Alabama Street.

**Fixed Object Crash Risk Factors include:**

- Intoxicated or biologically impaired driving and speeding along roads with cable barriers and street trees
- Inattention and distraction

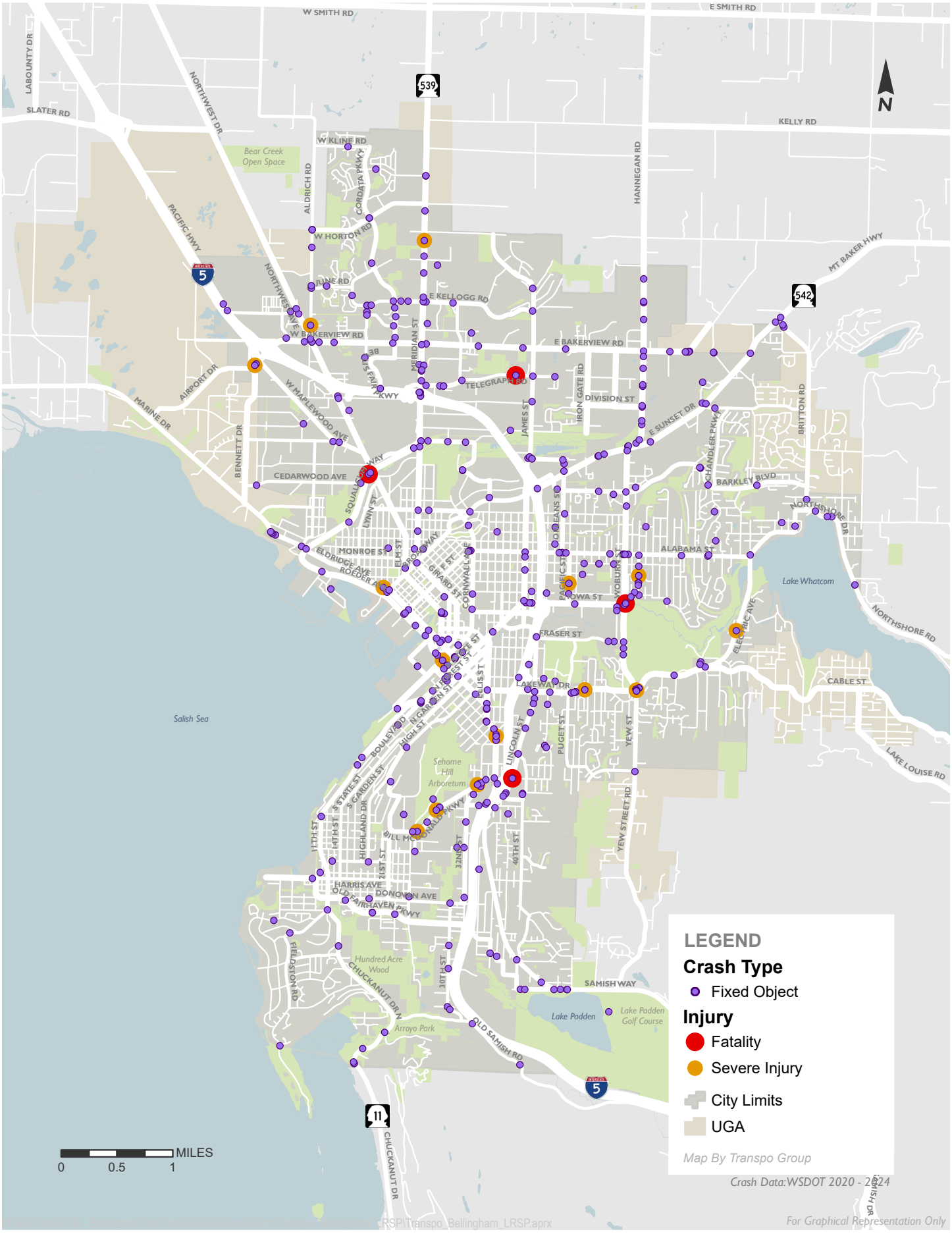


**Figure 20.** Geographic Distribution of Fixed Object FSI Crashes: 2020-2024

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# Risk Factors

## Angle Crashes

During the analysis period, there were a total of 1,205 fixed object crashes, including 17 (14%) that resulted in a fatality or serious injury. **Figure 12** shows that, while FSI angle crashes fluctuate considerably from year to year with the most crashes, 5, occurring in 2021, overall, FSI angle crashes are slowly increasing.

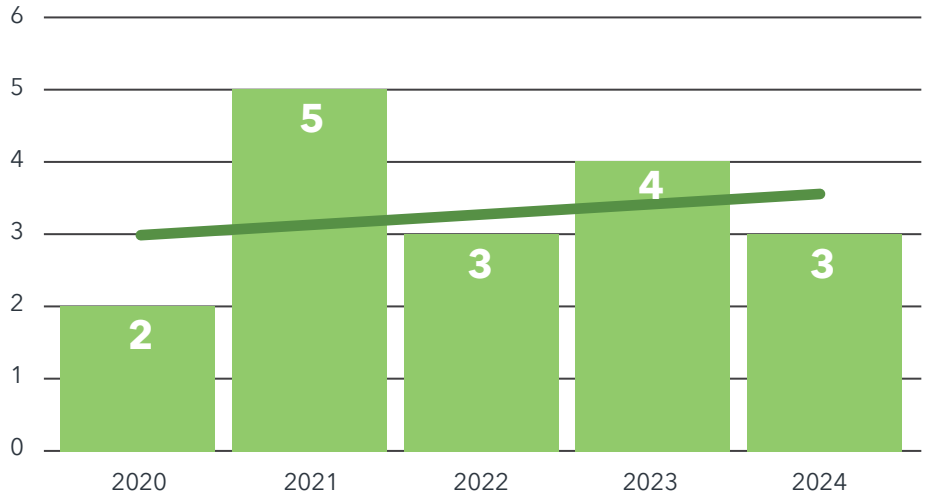


**Figure 21.** Fatal and Serious Injury Angle Crash Trend: 2020-2024

**Table 13** shows that, for crashes of all severity levels, angle crashes represent a slightly smaller percentage in Bellingham than comparisons, however angle accounted for 25% of all, and 13% the FSI crashes in the city.

**Table 13.** City and State Angle Crashes

| Crash Severity | Bellingham (%) | Statewide City Streets (%) | Western Washington City Streets (%) |
|---|---|---|---|
| Angle (% of All) | 1,205 (25%) | 58,139 (14%) | 40,780 (27%) |
| Angle (% of FSI) | 17 (13%) | 799 (14%) | 742 (17%) |

Key contributing circumstances in FSI fixed object crashes are summarized in **Table 14**. Not yielding, improper maneuvers, and disregard for traffic controls were the most often cited contributing circumstances in the FSI angle crashes. Several of the FSI angle crashes occurred at driveways or 2-way stop controlled intersections, indicating low gap tolerance, potential sightline issues, and drivers not fully stopping at stop signs before proceeding.

**Table 14.** Most common contributing circumstances in FSI angle crashes

| Crash Type | Contributing Circumstances |
|---|---|
| Angle – FSI | Fail to Yield (35%)<br>Improper Maneuver (18%)<br>Disregard for traffic controls (18%) |

**Angle Crash Risk Factors include:**

- Not yielding and poor gap tolerance at stop-controlled intersections
- Obstructed sightlines

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# Risk Factors

**Figure 22** shows a map of the locations and severity of the angle crashes in Bellingham during the analysis period. As seen on the map, the FSI angle crashes were scattered throughout the city, but occur primarily on arterial corridors that have many driveway or alley access points, such as:

- Meridian Street north of I-5 (aka Guide-Meridian and SR 539)
- West Bakerview Road (West of Meridian St-SR 539)
- East Sunset Drive (East of I-5)
- James Street (Iowa St to Sunset Dr)
- Alabama Street (F St to Electric Ave)
- F Street (Cornwall Ave to Roeder Ave)
- Iowa Street (James St to Woburn St)
- Ohio Street (Cornwall Ave to I-5)
- Lakeway Drive (Ellis St to east City limit)
- N. Samish Way-Maple St (Ellis St to I-5)
- 32nd Street (Donovan Ave to Bill McDonald Pkwy), and
- Several arterial streets in Downtown Bellingham.

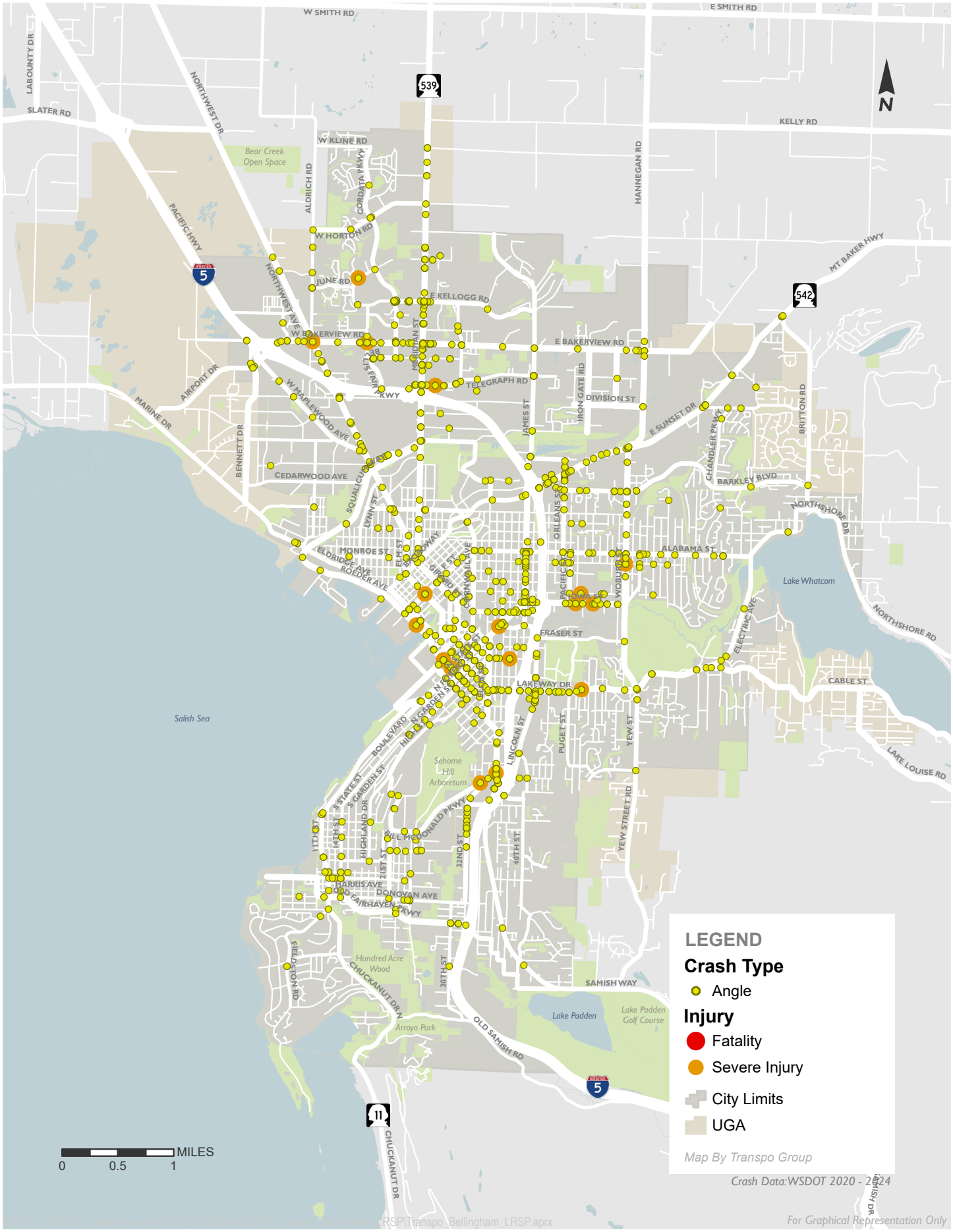


**Figure 22.** Geographic Distribution of Angle FSI Crashes: 2020-2024

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# Risk Factors

## High-Injury Corridors and High-Injury Intersections

Crashes reported during the analysis period were mapped in GIS, revealing the locations where high numbers of crashes have historically occurred. Crashes are ranked according to total societal cost, using costs defined by the FHWA , and listed in **Table 15**. A total of 30 corridors, and 30 intersections were selected from GIS for further analysis, illustrated as High Injury Networks (HIN) for pedestrian, bicycle, and vehicles in **Figures 23**, **24**, and **25** and summarized in **Tables 16** and **17**.

**Table 15.** Societal Cost by Crash Severity (2024 dollars)

| KABCO* Crash Severity | Economic Crash Unit Cost | QUALY Crash Unit Cost | Comprehensive Unit/Societal Cost |
|---|---|---|---|
| K | $2,238,500 | $13,749,500 | $15,988,000 |
| A | $272,700 | $1,432,400 | $1,705,100 |
| B | $80,800 | $303,200 | $384,000 |
| C | $53,000 | $151,600 | $204,600 |
| O | $18,100 | $0 | $18,100 |

Note*: K = Fatal; A = Suspected Serious Injury; B = Suspected Minor Injury; C = Possible Injury; O = No Apparent Injury

[1] https://highways.dot.gov/sites/fhwa.dot.gov/files/2025-10/CrashCostFactSheet_508_OCT2025.pdf

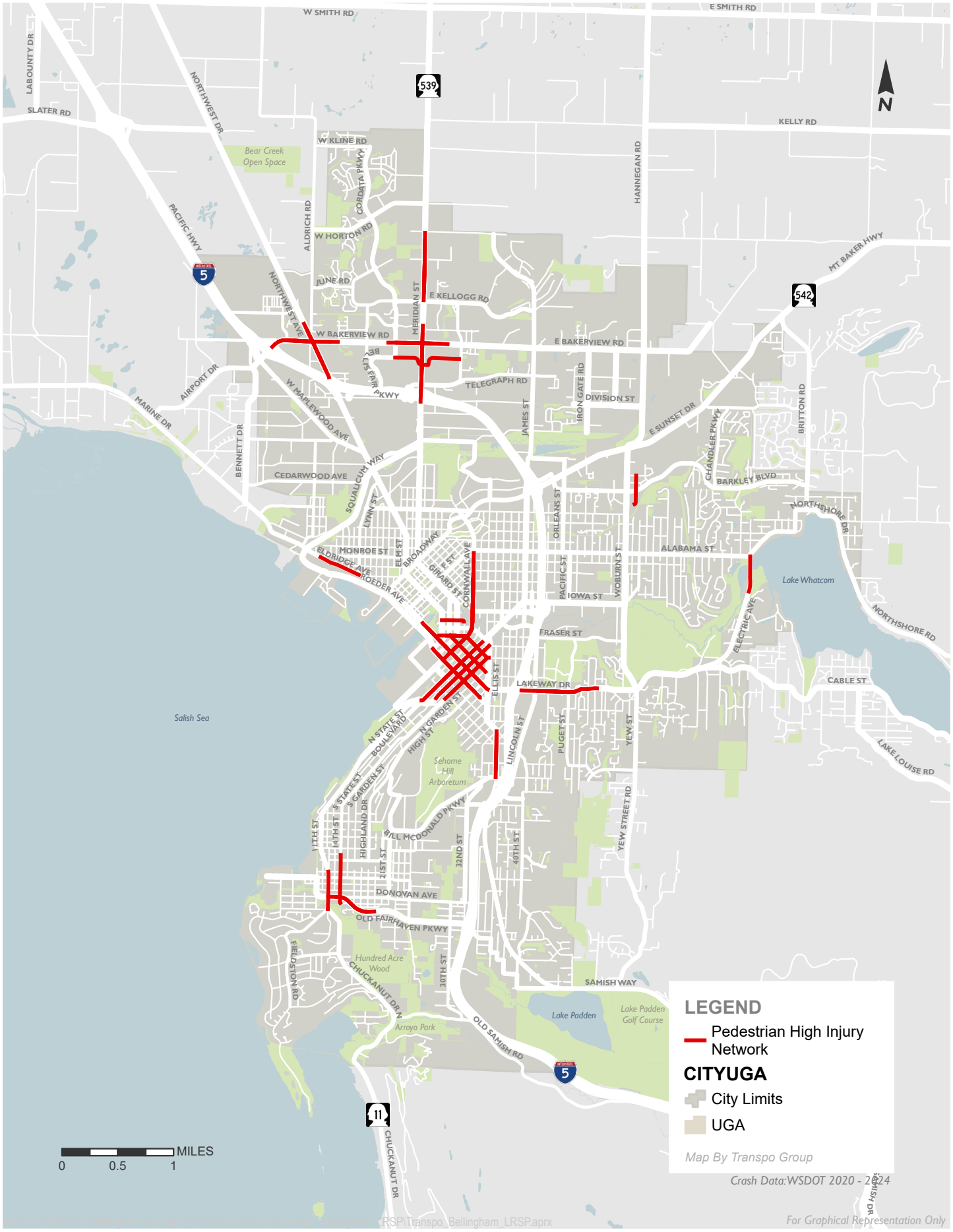


**Figure 23.** High Injury Network for Pedestrian-Involved Crashes in Bellingham: 2020-2024


**Figure 24.** High Injury Network for Bicyclist-Involved Crashes in Bellingham: 2020-2024

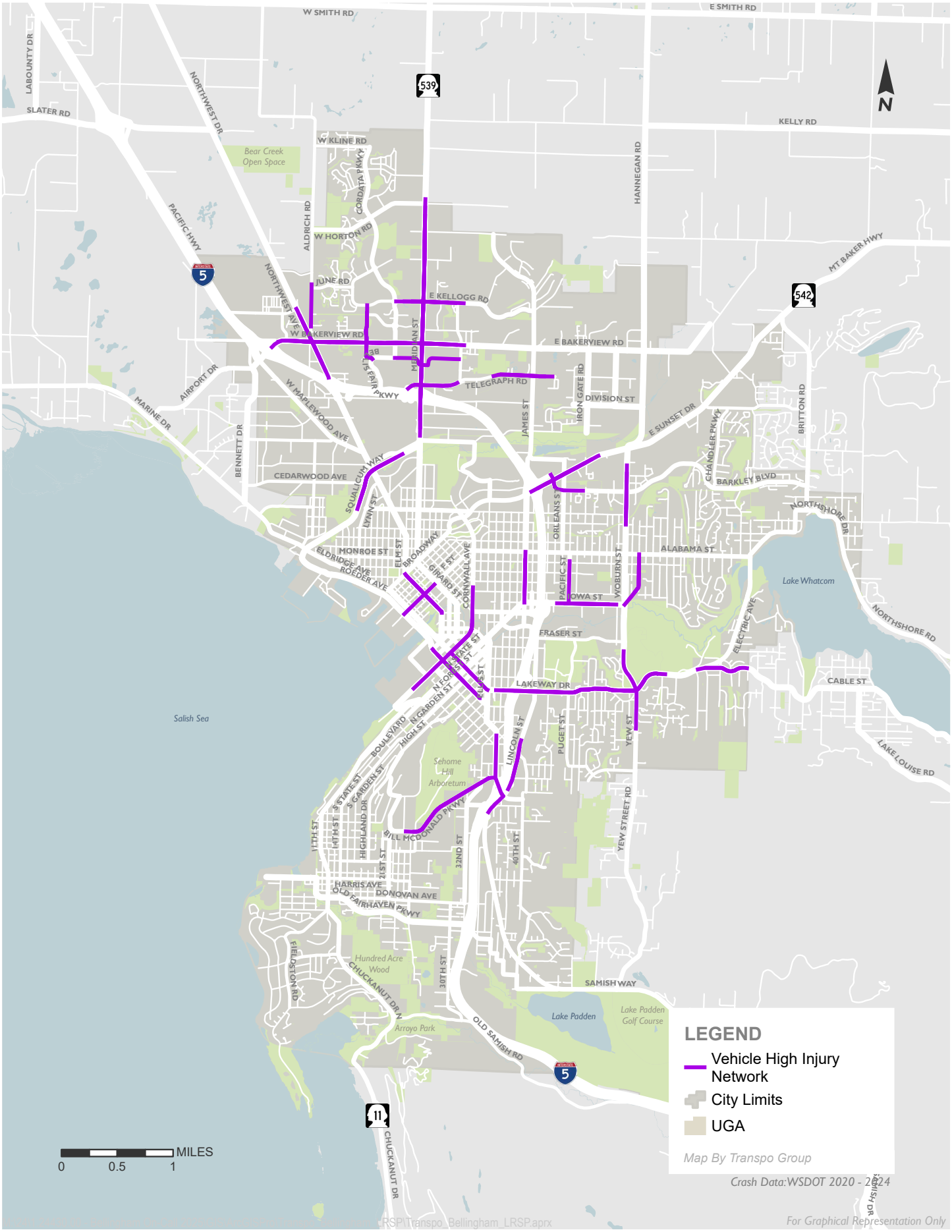


**Figure 25.** High Injury Network for Vehicle-Involved Crashes in Bellingham: 2020-2024

**Table 16.** High Injury Corridors

| Corridor | Total Crashes (% of citywide total) | $ Societal Cost/Year | FSI (% of citywide FSI) | Most Frequent Type (% of location total) | Most Frequent FSI Type (% FSI at location) | Pedestrian/Bicyclist (% of crashes at location) | FSI Pedestrian/ Bicyclist (% of citywide FSI Ped/Bike) |
|---|---|---|---|---|---|---|---|
| **Guide Meridian (SR 539)** | 486 (10%) | $21,336,360 | 10 (8%) | 157 Rear End (32%) | 4 Ped/Bike (40%) 4 Approach Turn (40%) | 14 (3%) | 4 (7%) |
| **Lakeway Dr** | 191 (4%) | $19,840,080 | 8 (6%) | 69 Rear End (36%) | 2 Fixed Object (25%)<br>2 Ped/Bike (25%)<br>2 Other (25%) | 5 (3%) | 2 (3%) |
| **W Bakerview Rd** | 174 (4%) | $10,932,020 | 7 (6%) | 54 Rear End (31%) | 2 Ped/Bike (29%) | 7 (4%) | 2 (3%) |
| **E Sunset Dr (SR 542)** | 290 (6%) | $10,869,040 | 3 (2%) | 114 Rear End (39%) | 1 Approach Turn (33%)<br>1 Ped/Bike (33%)<br>1 Sideswipe (33%) | 7 (2%) | 1 (2%) |
| **Samish Way** | 90 (2%) | $10,322,220 | 8 (6%) | 21 Approach Turn (23%) | 5 Ped/Bike (63%) | 6 (7%) | 5 (9%) |
| **Lincoln St** | 79 (2%) | $6,070,080 | 4 (3%) | 29 Angle (37%) | 1 Fixed Object (25%)<br>1 Rear End (25%)<br>1 Ped/Bike (25%)<br>1 Other (25%) | 3 (4%) | 1 (2%) |
| **Northwest Ave/Dr** | 129 (3%) | $5,303,900 | 2 (2%) | 47 Rear End (36%) | 1 Rear End (50%)<br>1 Ped/Bike (50%) | 13 (10%) | 1 (2%) |
| **James St n/o SR 542** | 51 (1%) | $4,838,160 | 1 (1%) | 20 Rear End (39%) | 1 Ped/Bike (100%) | 2 (4%) | 1 (2%) |
| **E Bakerview Rd** | 102 (2%) | $4,250,980 | 3 (2%) | 32 Angle (31%)<br>32 Rear End (31%) | 1 Approach Turn (33%)<br>1 Rear End (33%)<br>1 Ped/Bike (33%) | 2 (2%) | 1 (2%) |
| **N State St** | 150 (3%) | $3,735,740 | 3 (2%) | 38 Other (25%) | 1 Ped/Bike (33%)<br>1 Angle (33%)<br>1 Other (33%) | 4 (3%) | 1 (2%) |
| **Alabama St** | 127 (3%) | $3,650,460 | 1 (1%) | 39 Angle (31%) | 1 Ped/Bike (100%) | 4 (3%) | 1 (2%) |
| **Old Fairhaven Pkwy (SR 11)** | 74 (2%) | $3,603,000 | 4 (3%) | 37 Rear Ends (50%) | 3 Ped/Bike (75%) | 5 (7%) | 3 (5%) |
| **Cornwall Ave** | 88 (2%) | $3,366,960 | 3 (2%) | 25 Other (28%) | 2 Ped/Bike (67%) | 9 (10%) | 2 (3%) |
| **Woburn St** | 100 (2%) | $3,023,420 | 3 (2%) | 34 Rear End (34%) | 1 Fixed Object (33%)<br>1 Approach Turn (33%)<br>1 Ped/Bike (33%) | 1 (1%) | 1 (2%) |
| **Iowa St** | 71 (1%) | $2,999,320 | 3 (2%) | 28 Angle (39%) | 2 Angle (67%) | 2 (3%) | 0 (0%) |
| **E Holly St** | 58 (1%) | $2,703,260 | 3 (2%) | 15 Angle (26%) | 3 Ped/Bike (100%) | 10 (17%) | 3 (5%) |
| **James St s/o SR 542** | 80 (2%) | $2,047,700 | 0 (0%) | 25 Angle (31%) | n/a | 8 (10%) | 0 (0%) |
| **E Chestnut St** | 89 (2%) | $1,945,880 | 1 (1%) | 32 Angle (36%) | 1 Angle (100%) | 1 (1%) | 0 (0%) |
| **Eldridge Ave** | 27 (1%) | $1,935,400 | 3 (2%) | 9 Fixed Object (33%) | 2 Ped/Bike (7%) | 3 (11%) | 2 (3%) |
| **Barkley Blvd** | 58 (1%) | $1,922,240 | 1 (1%) | 18 Rear End (31%) | 1 Ped/Bike (100%) | 3 (5%) | 1 (2%) |
| **32nd St** | 33 (1%) | $1,551,260 | 1 (1%) | 12 Angle (36%) | 1 Ped/Bike (100%) | 4 (12%) | 1 (2%) |
| **N Garden St** | 46 (1%) | $1,329,740 | 0 (0%) | 17 Angle (37%) | n/a | 3 (7%) | 0 (0%) |
| **Orleans St** | 53 (1%) | $1,070,060 | 0 (0%) | 19 Rear End (36%) | n/a | 2 (4%) | 0 (0%) |

**Table 16.** High Injury Corridors

| Corridor | Total Crashes (% of citywide total) | $ Societal Cost/Year | FSI (% of citywide FSI) | Most Frequent Type (% of location total) | Most Frequent FSI Type (% FSI at location) | Pedestrian/Bicyclist (% of crashes at location) | FSI Pedestrian/ Bicyclist (% of citywide FSI Ped/Bike) |
|---|---|---|---|---|---|---|---|
| **Monroe St** | 10 (0.2%) | $934,480 | 2 (2%) | 4 Angle (40%)<br>4 Ped/Bike (40%) | 2 Ped/Bike (100%) | 4 (40%) | 2 (3%) |
| **Hannegan Rd** | 42 (1%) | $819,180 | 0 (0%) | 16 Fixed Object (38%) | n/a | 1 (2%) | 0 (0%) |
| **Bellis Fair Pkwy** | 28 (1%) | $628,280 | 0 (0%) | 15 Angle (54%) | n/a | 1 (4%) | 0 (0%) |
| **12th St** | 11 (0.2%) | $534,620 | 0 (0%) | 4 Angle (36%)<br>4 Ped/Bike (36%) | n/a | 4 (36%) | 0 (0%) |
| **Maplewood Ave** | 16 (0.3%) | $443,980 | 0 (0%) | 6 Angle (38%) | n/a | 1 (6%) | 0 (0%) |
| **Harris Ave** | 11 (0.2%) | $414,700 | 0 (0%) | 4 Angle (36%) | n/a | 3 (27%) | 0 (0%) |
| **S State St** | 9 (0%) | $190,120 | 0 (0%) | 4 Rear End (44%) | n/a | 0 (0%) | 0 (0%) |

**Table 17.** High Injury Intersections

| Intersection | Total (% of citywide total) | $ Societal Cost/Year | FSI (% of citywide FSI) | Most Frequent Type (% at location) | Most Frequent FSI Type (% FSI at location) | Pedestrian/Bicyclist (% of crashes at location) | FSI Pedestrian/ Bicyclist (% of citywide FSI Ped/Bike) |
|---|---|---|---|---|---|---|---|
| **E/W Bakerview/ Meridian St (SR 539)** | 121 (2.5%) | $7,495,500 | 4 (3%) | 37 Rear End (31%) | 2 Approach Turn (50%)<br>2 Ped/Bike (50%) | 2 (2%) | 2 (3%) |
| **W Bakerview Rd/ Northwest Dr** | 101 (2%) | $4,304,000 | 4 (3%) | 36 Approach Turn (36%)<br>35 Rear End (35%) | 2 Rear End (50%) | 7 (7%) | 0 (0%) |
| **Iowa St/Yew St/ Woburn St** | 11 (0.2%) | $3,473,180 | 1 (1%) | 3 Fixed Object (27%) | 1 Fixed Object (100%) | 0 (0%) | 0 (0%) |
| **James St/McLeod Rd** | 6 (0.1%) | $3,429,740 | 1 (1%) | 2 Other (33%) | 1 Ped/Bike (100%) | 1 (17%) | 1 (2%) |
| **Meridian St (SR 539)/ Bellis Fair Pkwy** | 45 (1%) | $2,671,000 | 3 (2%) | 18 Approach Turn (40%) | 2 Approach Turn (67%) | 3 (7%) | 1 (2%) |
| **Kellogg Rd/ Meridian St (SR 539)** | 67 (1%) | $1,856,800 | 0 (0%) | 20 Approach Turn (30%) | n/a | 2 (3%) | 0 (0%) |
| **Iowa St/Pacific St** | 16 (0.3%) | $1,629,940 | 2 (2%) | 5 Angle (31%)<br>5 Approach Turn (31%) | 1 Angle (50%)<br>1 Approach Turn (50%) | 1 (6%) | 0 (0%) |
| **Meridian St (SR 539)/ Telegraph Rd** | 49 (1%) | $1,320,620 | 0 (0%) | 22 Rear End (45%) | n/a | 0 (0%) | 0 (0%) |
| **Lincoln St/ Lakeway Dr** | 50 (1%) | $1,306,740 | 1 (1%) | 22 Rear End (44%) | 1 Other (100%) | 2 (4%) | 0 (0%) |
| **W Bakerview/ Arctic Ave** | 38 (1%) | $1,034,780 | 1 (1%) | 10 Rear End (26%)<br>10 Sideswipe (26%) | 1 Ped/Bike (100%) | 1 (3%) | 1 (2%) |
| **James St/ Telegraph Rd** | 27 (1%) | $914,080 | 0 (0%) | 21 Angle (78%) | n/a | 0 (0%) | 0 (0%) |

**Table 17.** High Injury Intersections

| Intersection | Total (% of citywide total) | $ Societal Cost/Year | FSI (% of citywide FSI) | Most Frequent Type (% at location) | Most Frequent FSI Type (% FSI at location) | Pedestrian/Bicyclist (% of crashes at location) | FSI Pedestrian/ Bicyclist (% of citywide FSI Ped/Bike) |
|---|---|---|---|---|---|---|---|
| **Samish Way/ Bill McDonald Pkwy** | 21 (0.4%) | $864,140 | 2 (2%) | 6 Sideswipe (29%)<br>6 Approach Turn (29%) | 1 Angle (50%)<br>1 Ped/Bike (50% | 2 (10%) | 1 (2%) |
| **Chestnut St/State St** | 41 (1%) | $841,040 | 1 (1%) | 12 Angle (29%)<br>12 Sideswipe (29%) | 1 Angle (100%) | 1 (2%) | 0 (0%) |
| **Alabama St/ Woburn St** | 27 (1%) | $826,420 | 0 (0%) | 10 Angle (37%) | n/a | 0 (0%) | 0 (0%) |
| **Cornwall Ave/ Flora St/York St** | 4 (0.1%) | $786,880 | 0 (0%) | 2 Angle (50%) | n/a | 1 (25%) | 0 (0%) |
| **Orleans St/Sunset Dr (SR 542)** | 31 (1%) | $773,680 | 1 (1%) | 11 Rear End (35%) | 1 Approach Turn (100%) | 1 (3%) | 0 (0%) |
| **Barkley Blvd/ Sunset Dr (SR 542)** | 25 (1%) | $771,940 | 1 (1%) | 12 Rear End (48%) | 1 Sideswipe (100%) | 1 (4%) | 0 (0%) |
| **Meridian St (SR 539)/Horton Rd** | 11 (0.2%) | $684,140 | 0 (0%) | 8 Rear End (73%) | n/a | 0 (0%) | 0 (0%) |
| **Hannegan Rd/ E Bakerview Rd** | 27 (1%) | $641,800 | 0 (0%) | 10 Rear End (37%) | n/a | 1 (4%) | 0 (0%) |
| **Kellogg Rd/ Cordata Pkwy RAB** | 49 (1%) | $626,720 | 0 (0%) | 30 Angle (61%) | n/a | 0 (0%) | 0 (0%) |
| **E Holly St/N State St** | 24 (1%) | $603,720 | 0 (0%) | 7 Angle (29%)<br>7 Other (29%) | n/a | 3 (13%) | 0 (0%) |
| **Northwest Ave/ Alderwood Ave** | 7 (0.1%) | $396,600 | 0 (0%) | 2 Angle (29%)<br>2 Approach Turn (29%)<br>2 Ped/Bike (29%) | n/a | 2 (29%) | 0 (0%) |
| **W Illinois/ Meridian St** | 10 (0.2%) | $361,040 | 0 (0%) | 4 Rear End (40%) | n/a | 0 (0%) | 0 (0%) |
| **State St/ James St/Iowa St** | 23 (1%) | $350,180 | 0 (0%) | 7 Angle (30%) | n/a | 1 (4%) | 0 (0%) |
| **E Holly St/ Ellis Ave/Lakeway Dr** | 19 (0.4%) | $333,500 | 0 (0%) | 8 Sideswipe (42%) | n/a | 2 (11%) | 0 (0%) |
| **N State St/E Maple St** | 25 (1%) | $332,400 | 0 (0%) | 7 Sideswipe (28%) | n/a | 1 (4%) | 0 (0%) |
| **Iowa St/King St** | 23 (1%) | $319,340 | 0 (0%) | 9 Angle (39%) | n/a | 0 (0%) | 0 (0%) |
| **Horton Rd/ Cordata Pkwy RAB** | 13 (0.3%) | $282,820 | 0 (0%) | 3 Angle (23%)<br>3 Rear End (23%) | n/a | 2 (18%) | 0 (0%) |
| **Harris Ave/12th St** | 4 (0.1%) | $143,060 | 0 (0%) | 2 Other (50%) | n/a | 1 (25%) | 0 (0%) |
| **12th St/ Old Fairhaven Pkwy (SR 11)** | 4 (0.1%) | $109,380 | 0 (0%) | 2 Rear End (50%) | n/a | 1 (25%) | 0 (0%) |

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# Countermeasure Toolbox

4

# Countermeasure Toolbox

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

Several of the most effective case tested countermeasures are also published in the FHWA's selection of Proven Safety Countermeasures . The countermeasures recommended to address the specific risks on Bellingham's transportation facilities were selected from the list of Proven Safety Countermeasures, and the CMF Clearinghouse based on several considerations including crash type, contributing user behavior and location characteristics, cost and complexity of implementation, and expected effectiveness in addressing the risks.

## Preliminary Countermeasure Options

Due to the length and breadth of information, the preliminary selection of countermeasure options to improve safety throughout the city, focusing on the most overrepresented crash types and contributing circumstances is presented in **Appendix A** in **Table A-1**. Selected countermeasures range from signal improvements and engineering modifications to education, encouragement, and enforcement strategies such as high visibility saturation patrols:

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

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

[2] https://cmfclearinghouse.fhwa.dot.gov/index.php

[3] https://highways.dot.gov/safety/proven-safety-countermeasures

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

4

# Countermeasure Toolbox

## Population Demographics and Social Equity Considerations

Population demographics and social equity are important factors when considering vulnerable users, spatial analysis, and the geographic distribution of crashes. The character and context of where people live, where they are traveling to, and how they choose to travel can factor into the risk for being involved in crashes.

Transpo Group performed a high-level social equity analysis using 2021 American Community Survey (ACS) Census data for Bellingham. The five social equity factors listed below were aggregated and scored to produce five levels of priority for safety countermeasures:

- Percent of population with Limited English Proficiency (LEP)
- Percent of population with Physical Disabilities
- Percent of population living Below Poverty level
- Percent of population Over 65 Years of Age
- Percent of population self-reporting as Racial Minority (non-white)

**Figure 26** shows that Downtown Bellingham had the highest number of total collisions (576) and north downtown generated a social equity priority index score of 1 out of 6 while south downtown has a score of 5 out of 6. Other significant crash cluster locations include East Sunset Drive (SR 542), Lakeway Drive, and Guide-Meridian (SR 539). It should be noted that the 2020 ADA Transition Plan, the 2020 WTA Long-Range Transit Plan, the 2024 Pedestrian and Bicycle Master Plan updates, and the 2025 Bellingham Comprehensive Plan update also included examination of a wide variety of social equity issues. All these transportation planning efforts and recommendations for project improvements have influenced the outcome of this 2026 Bellingham Local Road Safety Plan.

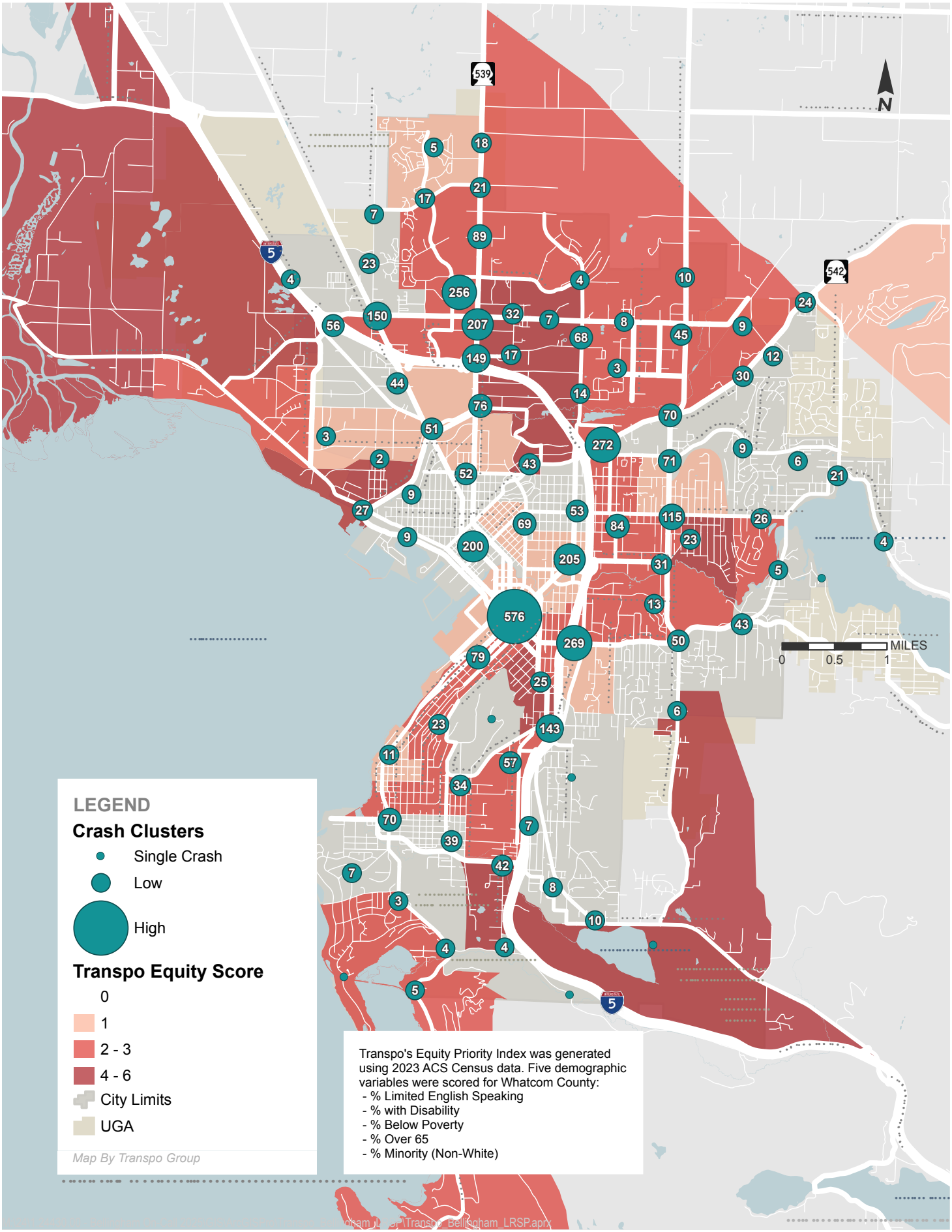


**Figure 26.** This map being updated with new crash data

4

# Countermeasure Toolbox

## Summary of Risk Factors

Based on a combination of the statistical and spatial analysis of the 2020-2024 crash data for Bellingham, risk factors were identified and prioritized to provide guidance to the City's implementation of countermeasures to reduce the frequency and severity of future crashes. The list of risk factors below is not inclusive of all potential risks for future crashes but is a prioritized set of factors that can be addressed through systemic implementation of countermeasures city-wide. A systemic approach to prioritized risk factors can provide a higher safety benefit to cost ratio compared to a spot-treatment approach for crashes that have already occurred, or when attempting to spread limited resources to address all possible risk factors. **The risk factors outlined below are presented in priority order**.

**1. Active Mode Crossings on Arterial Streets**

Pedestrian crash risk factors are highest on the arterial streets with more residential, commercial and retail development, which drives demand for crossings, especially as the city population grows. In some locations, the city installed crossing signals many years ago and the old technology needs to be replaced with new MUTCD-compliant crossing mechanisms, such as RRFBs. In other locations, the city is aware of crossing needs on arterial streets that are relatively wide with higher traffic volumes and vehicle travel speeds and has identified and prioritized new crossings in the 2024 Pedestrian and Bicycle Master Plans or potential speed reductions in the 2025 Safe Speed Study. The primary crossing risk factors include:

- Conflict with left turning vehicles at intersection crosswalks
- Pedestrians crossing arterial streets at or between marked crosswalks
- Long distances between crosswalks along higher volume arterials
- Arterials with traffic volumes and speeds not compatible with the adjacent land use context
- Old crossing technology in need of update to new crossing technology

**2. Intersection Control**

Intersection risk factors relate to intersection control and crash types such as angle crashes that occur at intersections. The primary risk factors include:

- Higher-density population and employment centers correlated with increased user conflicts
- Protected/Permissive left turns at signalized intersections
- Right turns on red phase at signalized intersections
- Failure to yield the right of way to the appropriate user
- Elevated crossing risk to vulnerable users, such as pedestrians and cyclists at intersections

**3. Following too Closely on High Volume Arterials**

Following too closely is a driver behavior that can contribute to rearend crash risk factors. This crash type was documented most frequently on arterial streets with frequent and closely spaced driveway access points to commercial and retail businesses. Examples include but are not limited to James Street, Ellis Street, and primary routes to and from I-5. The primary risk factors for this type of crash include:

- Driver inattention
- Exceeding the posted speed limit

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# Transportation Safety Countermeasures

Safety countermeasures are the actions, including engineering, enforcement, and education that Bellingham can take to proactively address the risk factors identified through the crash data analysis. To identify projects and programs that could address the risk factors for crashes, a full range of potential countermeasures was evaluated. The most broadly effective countermeasures which addressed the prioritized risk factors within reasonable resource constraints were selected for this LRSP and associated project list. Each of the listed countermeasures has proven effective in addressing the risk factors identified in Bellingham's transportation system. Effectiveness of the selected countermeasures was evaluated using:

- National Highway Traffic Safety Administration's Countermeasures That Work publication,
- Washington State's Target Zero plan, and
- FHWA's Crash Modification Factor (CMF) Clearinghouse website.

These resources help to identify appropriate projects and provide research backed documentation of the anticipated effectiveness of selected treatments on reducing crash rates.

The safety countermeasures proposed for this LRSP fall into five (5) general categories:

- Active Transportation Network improvements
- Crossing Enhancements (Mid-block & at intersections)
- Safety Improvements to Signalized Intersections
- Arterial Street Speed Reduction, and
- Education, Encouragement, Enforcement Programs

Each type of safety countermeasure proposed has been proven effective in addressing the type of risk factors identified at various locations on the City's multimodal transportation system. All proposed safety countermeasure improvements are in use in other similar sized western Washington agencies.

## Safety Countermeasure: Active Transportation Network improvements

The City of Bellingham adopted a Pedestrian Master Plan (PMP) in 2012, a Bicycle Master Plan (BMP) in 2014, and an ADA Transition Plan in 2020. These ADA and mode-specific plans created defined networks for local pedestrian and bicycle travel with network improvement lists prioritized by many criteria including, but not limited to safety, social equity, low-income housing, level of traffic stress, proximity to schools, parks, employment, shopping, entertainment, and medical service destinations.

The City completed updates to the PMP and BMP in 2024, adopted a new Comprehensive Plan in 2025, and updated the LRSP in 2026. This 2026 Bellingham LRSP considers active transportation network improvements in both spot and systemic locations from the PMP, BMP, and TIP to help the City implement and build out its citywide walkway and bikeway networks to improve safety for users of all ages and abilities.

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# Transportation Safety Countermeasures

## Safety Countermeasure: Crossing Enhancements (Mid-block and at intersections)

Pedestrian crossing enhancements include upgrading existing mid-block or intersection crossings with marked crosswalks and/or Rectangular Rapid Flashing Beacons (RRFBs) on 2-3 lane two-way arterial streets, or Pedestrian Hybrid Beacons (aka High-intensity Activated Crosswalks or HAWK signals) on multi-lane arterial streets depending on traffic volumes and speeds. The CMF clearinghouse indicates that pedestrian crossing improvements can reduce crashes between vehicles and users of active modes by 40-60 percent.

While all intersections are legal crossing points for people walking, biking, or rolling, ADA-compliant marked and signed crosswalks indicate the preferred and recommended crossing location(s) along an arterial street. The CMF Clearinghouse research indicates that improvements to the visibility, signing and markings at controlled intersections can reduce total crashes by 10 to 20 percent .

- A RRFB on a 2-to-3 lane two-way arterial street allows a person walking, biking, or rolling to press a pushbutton to activate amber flashing lights prior to entering the crosswalk to alert drivers of their presence. RRFBs come in both solar powered and hardwired options providing flexibility for application.
- A HAWK signal on a multi-lane arterial street allows a person walking, biking, or rolling to press a pushbutton to activate both amber and red flashing lights prior to entering the crosswalk to alert drivers of their presence. HAWK signals come in both solar powered and hardwired options providing flexibility for application.

Additional physical crossing enhancements for marked crosswalks, RRFBs, or HAWK signals include curb extensions and center lane refuges to shorten the crossing distance for people walking, biking, and rolling while providing better visibility of people to drivers.

- Curb extensions provide additional benefit when used in conjunction with RRFBs. Stop lines with associated signage indicate to drivers the appropriate location to stop a vehicle ahead of the crossing for mid-block locations provide additional visibility, driver warning and safety for people walking, biking, and rolling.
- A center lane refuge is a concrete island constructed in the center lane that allow a person walking, biking, or rolling to reach the mid-point of the crossing distance, pause, and look to be sure that approaching vehicles are not posing a risk for them to continue crossing.
- Street lighting is also a very effective way to improve visibility and safety for all users at or near crosswalks and along arterial streets. Additional lighting can reduce nighttime injury crashes by up to 42 percent.

Other options for improving the safety of pedestrians at crossing locations include the installation of advanced signing which could include LED or flashing components, as well as active transportation network improvements, such as separated walkways, bikeways, or multiuse pathways.

Currently, the City has 71 amber flashing crosswalks (Overhead and side-mounted RRFBs) and 10 amber/red flashing HAWK signals providing user-activated safe street crossings throughout the city.

[5] http://www.cmfclearinghouse.org/study_detail.cfm?stid=492

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# Transportation Safety Countermeasures

The 2024 Bellingham Pedestrian and Bicycle Master Plan updates include the following list of the top 20 crossing improvement locations, which have been prioritized using evaluation criteria including, but not limited to safety, social equity, low-income housing, level of traffic stress, proximity to schools, parks, employment, shopping, entertainment, and medical service destinations.

**Table 18 Prioritized Crossing Improvements From 2024 Pedestrian and Bicycle Master Plans**

| No. | PMP ID | PMP Rank | Crossing Location | Status |
|---|---|---|---|---|
| 1 | 92 | High (12.22) | Bay/Chestnut (Downtown-Waterfront) - RRFB | |
| 2 | 168 | High (11.94) | Garden/Oak St RRFB & Crosswalk | |
| 3 | 17 | High (11.65) | Laurel/Garden (WWU) - RRFB | |
| 4 | 104 | High (11.45) | Eliza/Westerly/Division St Trail (WCC) - RRFB | |
| 5 | 232 | High (10.90) | F St/Halleck (Whatcom MS) - RRFB | |
| 6 | 217 | High (10.90) | Iowa/Toledo RRFB, Crosswalk & Signage | |
| 7 | 64 | High (10.66) | Prospect/Dupont/Lottie RRFB | |
| 8 | 256 | Med High (9.84) | North Graden/ Pine St RRFB | |
| 9 | 129 | Med High (9.84) | Meridian/Monroe (Whatcom MS) – RRFB | |
| 10 | 153 | Med High (9.73) | Orleans/Safeway/WTA Gold Line (Senior Citizen Apts) – RRFB | |
| 11 | 120 | Med High (9.57) | Lakeway/Roland St RRFB | |
| 12 | 133 | Med High (9.11) | OFP/22nd St (Happy Valley Park) – RRFB | |
| 13 | 61 | Med Low (8.51) | Elm/Monroe (Whatcom MS) - RRFB | |
| 14 | 85 | Med Low (8.50) | Eliza/ Bellis Fair Pkwy - RRFB | |
| 15 | 35 | Med Low (8.49) | OFP/24th Street (Happy Valley ES) - ADA and RRFB | |
| 16 | 122 | Med Low (8.39) | E. Bakerview/Kramer Lane (King Mtn ES) - RRFB | |
| 17 | 105 | Med Low (8.06) | Boulevard at S. State St junction (WTA stop) – RRFB | |
| 18 | 20 | High (12.44) | Texas/James St - RRFB * | *TIP #19-James* |
| 19 | BMP 11 | High (12.29) | Kentucky St / James St - Bike RRFB * | *TIP #19-James* |
| 20 | 159 | Med Low (8.04) | 14th St/State-Boulevard (Boulevard Park) - RRFB | |
| 21 | 50 | Med Low (7.82) | Meridian/ Connecticut - RRFB | |
| 22 | 11 | Med Low (7.67) | Cornwall/Whatcom Creek Trail (BHS) - RRFB | |
| 23 | 54 | Med Low (6.91) | Electric Ave/Bloedel Park South (Whatcom Falls Park) – RRFB | |
| 24 | 207 | Med Low (6.80) | Cornwall/Kentucky (BHS-Assumption) - RRFB | |
| 25 | 207 | Med Low (6.76) | Cornwall/South Park (Parkview ES) – RRFB | |
| 26 | 29 | Low (5.83) | Electric Ave/Flynn St (Whatcom Falls Park) – RRFB | |
| 27 | 145 | Low (5.65) | Alderwood Ave/Bennett Drive (Alderwood ES-UGA) – RRFB | *UGA - County* |
| 28 | 112 | Low (5.38) | Marine Drive/W. Illinois (Little Squalicum Park-BTC) – RRFB | *UGA - County* |
| 29 | 25 | Low (5.21) | Barkley/Brandywine/Sussex (Trail) – Advanced Flashers & RRFB | |
| 30 | 41 | Low (5.01) | Samish Way/40th St (Senior Assisted Living Center) - RRFB | |
| 31 | 163 | Low (5.00) | McLeod Rd/Magrath Rd (Squalicum HS) – RRFB | |
| 32 | 144 | Low (4.85) | Sterling Drive/Bellis Fair Pkwy – ADA ramps and RRFB | |
| 33 | 128 | Low (4.24) | Samish Way/34th-36th (Montessori School) – ADA and RRFB | |
| 34 | 138 | Low (3.45) | SR-11 Chuckanut Dr/Viewcrest (100-acre Wood) – RRFB | |

* James St crossing proejcts to be constructed with James Street Multimodal Improvements (Iowa Street to Sunset Drive (TIP #19)

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# Transportation Safety Countermeasures

## Safety Countermeasure: Signalized Intersection Crossing Improvements for Active Modes

Crossing improvements for active mode users at signalized intersections include a variety of potential applications. **These types of safety countermeasures could prove extremely effective at signalized intersections in the Downtown area**.

- Programming signals to provide increased walk phase times or leading pedestrian intervals, which give pedestrians several additional seconds to cross before the signal changes to green for vehicles, can result in up to a 13 percent reduction in pedestrian-vehicle crashes alone. The City of Bellingham could Incorporate Leading Pedestrian Interval (LPI) phases in traffic signal operations at targeted intersections, such as those in Urban Villages, on major WTA transit routes, or on walk and bike routes to local schools. This low-cost, high-benefit measure is a relatively simple adjustment to signal operations and has been employed in many cities across Washington and the U.S.

  As of January 2026, the City of Bellingham has incorporated a Lead Pedestrian Interval (LPI) phase at traffic signals at the following intersections:

  - Holly-Ellis-Lakeway
  - Holly-Billy Frank Jr.
  - Holly-High
  - Holly-Garden
  - Holley-Forest
  - Holly-State
  - Holly-Railroad
  - Holly-Cornwall
  - Holly-Commercial
  - Holly-Bay-Prospect
  - Cornwall-Illinois
  - Telegraph-Deemer

- 'Blank-out' signs can be added to the signal array and programmed to tell vehicle drivers not to turn for a portion of the signal phasing and can impart a 45 percent reduction in all crash types.
- Assessments of visibility including sight distance and lighting can also be beneficial countermeasures to improve the safety of active mode users at signalized intersections.

## Safety Countermeasure: Signalized Intersection Operational Improvements

Improving safety at signalized intersections can be accomplished through application of the following countermeasures.

- Installation of flashing yellow arrows and protected left-turn arrows, or flashing yellow or red intersection control beacon can reduce all crash types for vehicles by up to 50 percent
- Adjustments to the visibility and lighting of signals can lead to a 10 - 48 percent reduction in crash rates.
- Reevaluating and making adjustment to the timing of the yellow-light phase of the signal can have a positive impact in terms of reducing crashes and incidence of red-light running.

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# Transportation Safety Countermeasures

The FHWA cites red-light running as a leading cause of severe crashes at signalized intersections, thus the yellow change interval must be appropriately timed. Too brief an interval may result in drivers being unable to stop safely and cause unintentional red-light running. Too long of an interval may result in drivers treating the yellow as an extension of the green phase and can invite intentional red-light running. Yellow change intervals, when appropriately timed can reduce the incidence of red-light running by up to 50 percent. The City of Bellingham could improve safety at its signalized intersections and reduce red-light running by reviewing and updating, as needed, their traffic signal timing policies and procedures concerning the yellow change interval.

## Safety Countermeasure: Arterial Street Speed Reduction

Recommended safety countermeasures to address vehicle speeding could include:

- Targeted speed enforcement and education to raise awareness of the hazard that exceeding posted speeds represents.
- Installation of radar speed readers and variable message speed feedback signs.
- Implementation of variable speed limits on congested corridors, such as SR 539 and SR 542.
- Implementation of Road Diets on arterial street corridors.
- Citywide speed limit study and implementation of context-based appropriate speed limits for all road users.

The FHWA clearinghouse of proven safety measures recommends the application of Variable Speed Limits, which display differing limits depending on the level of demand present, for reducing congestion and rear end crashes. While particularly effective for urban roads with speed limits over 40 mph, with effectiveness rates of up to 51 percent reduction of the incidence of FSI crashes and 65 percent reduction in rear-end crashes. The city may want to evaluate if this alternative could provide additional benefit on select arterials with speed limits of 30 mph or higher.


**Figure 27.** Vulnerable User Survival from Crashes Decreases as Vehicle Speed Increases

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# Transportation Safety Countermeasures

An alternative method of slowing vehicle speeds along arterial streets, recommended by the FHWA's proven safety measures clearinghouse, is the implementation of Road Diets. This safety countermeasure can reduce multiple lanes that invite weaving, passing, and speeding to single lane roadways where speed is subject to the pace of the slowest vehicle. Additional benefits of this method could include a reduction in rear-end and left-turn crashes, a reduction in right-angle crashes as drivers on side streets cross fewer travel lanes, shorter pedestrian crossings, and the opportunity to install features such as pedestrian refuge islands, bicycle lanes, ADA accessibility improvements, on-street parking, or transit stops. Road diets provide traffic calming and more consistent speeds and create a more community-focused, Complete Streets environment that better accommodates the needs of all road users and aligns with Bellingham's vision of supporting people-oriented travel, including vulnerable active transportation users of all ages and abilities. Road diets may also be a less costly solution when planned in conjunction with already slated projects such as pavement overlay.

As documented in the City of Bellingham 2023 Transportation Report on Annual Mobility (TRAM, Appendix page A-4), over the past 20 years, the City has implemented 12 arterial street road diets that removed over 12 miles of vehicle travel lanes to install over 14 miles of dedicated bicycle lanes. The 2020 Lincoln-Lakeway Multimodal Transportation Study recommended a road diet on State Street from York Street to Meador Avenue or Iowa Street. The city has included a road diet for James Street from Iowa Street to Sunset Drive as project number 19 in the 2026-2031 TIP.

In 2023, Public Works staff recorded traffic volumes and speeds on all of Bellingham's arterial streets to compile the 2023 Traffic Flow Map. This data helps transportation planners and engineers understand traffic volume and speed issues on specific streets, as well as big-picture transportation circulation issues. The data is also used in the regional travel demand model maintained by the Whatcom Council of Governments (WCOG), which is used for long-range forecasts throughout the Whatcom region. This data could be used to assess posted vs. recorded travel speeds and, where necessary or appropriate, set appropriate speed limits for all road users.

In 2025, Bellingham completed a **Citywide Speed Limit Study** to examine posted speed limits, known speeding issues, and methods to standardize speed limit policy based on land use context.

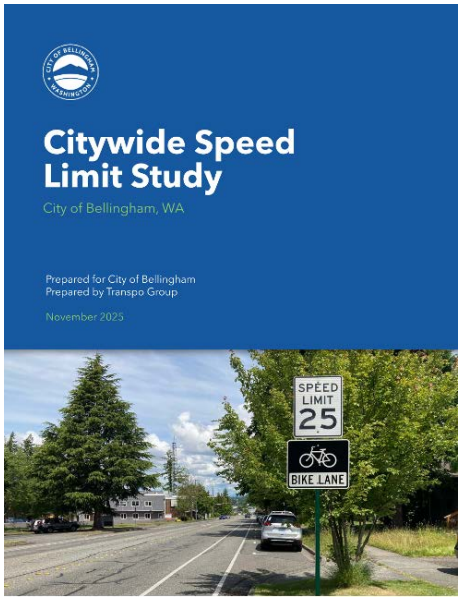


**Figure 28.** Bellingham 2025 Citywide Speed Limit Study

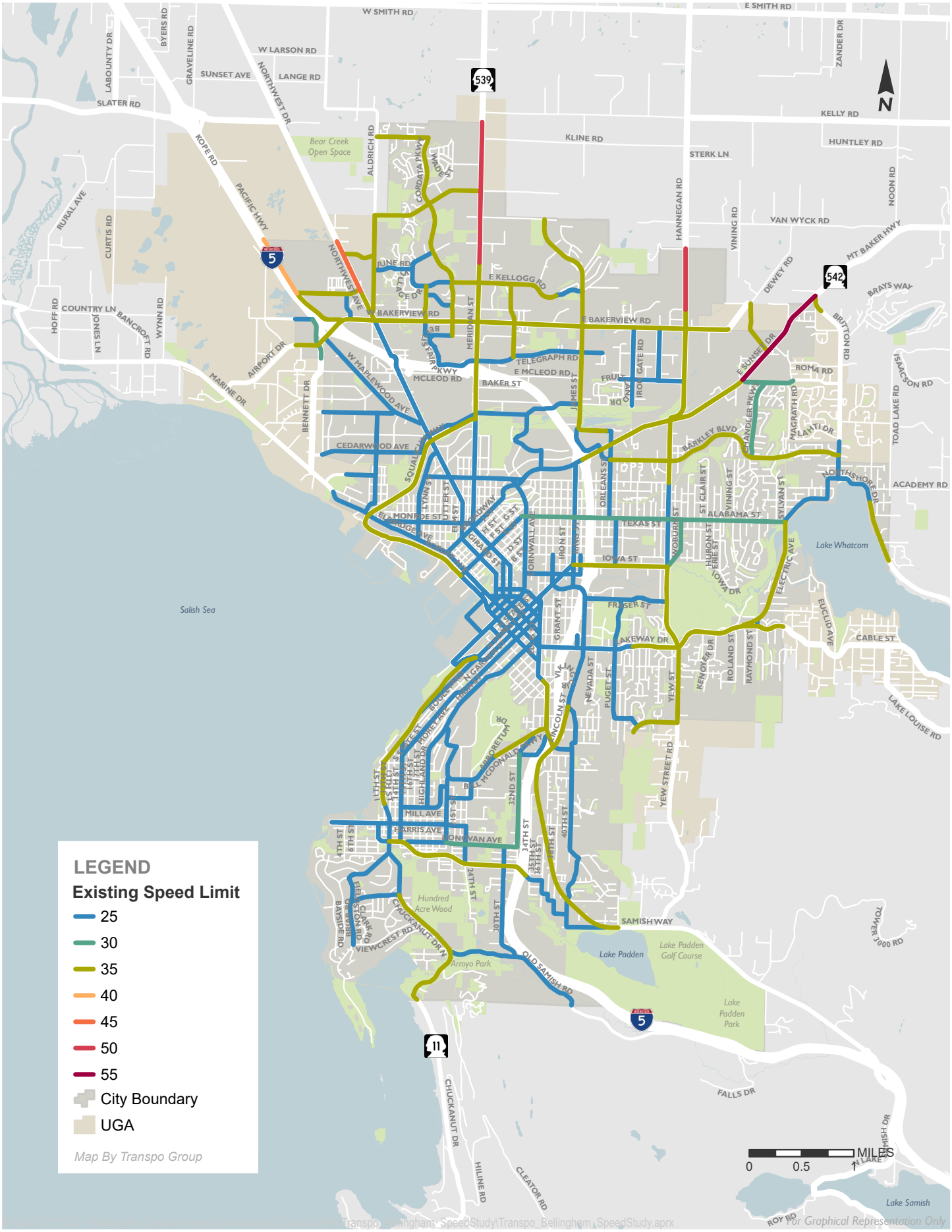


**Figure 29. 2025** Arterial Speed Limits in Bellingham

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# Transportation Safety Countermeasures

As shown in **Figure 29** and **30**, 97% of Bellingham's current posted speed limits on arterial streets are 35 mph or lower, as follows:

- 56% of posted arterial speed limits are 25 mph
- 5% of posted arterial speed limits are 30 mph
- 36% of posted arterial speed limits are 35 mph,
- 2% of posted arterial speed limits are 50* mph, and
- 1% of posted arterial speed limits are 55* mph,

* Five arterial entry/exit points for vehicles in north Bellingham have posted speeds over 35 mph.

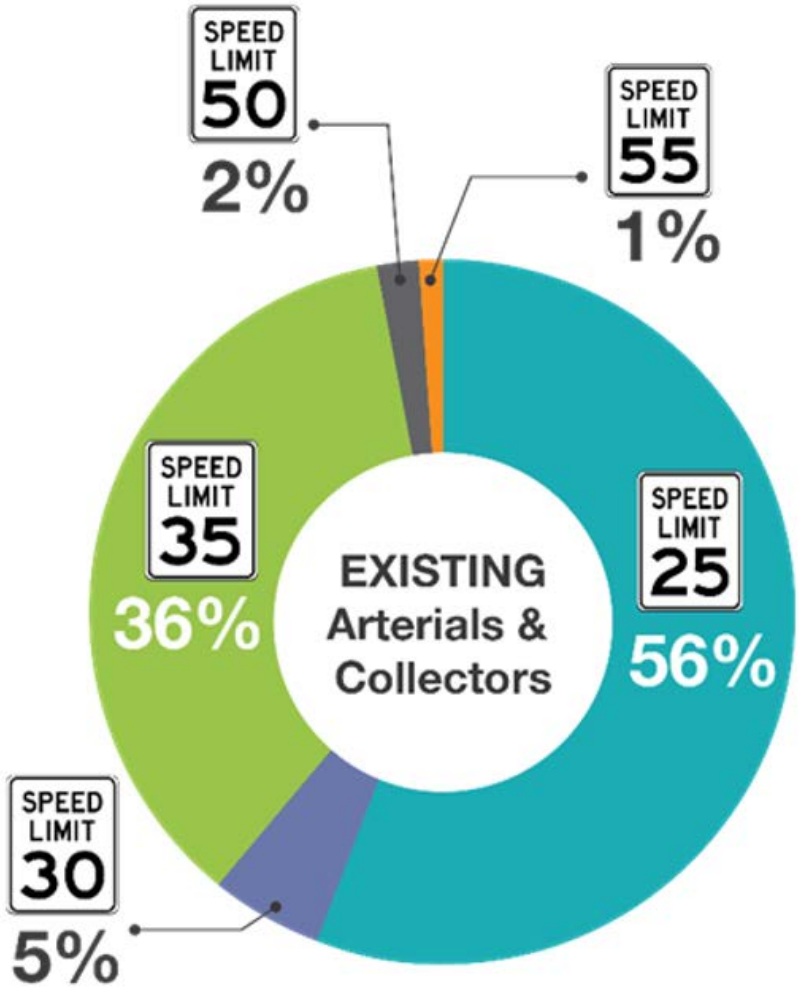


**Figure 30.** Range of Posted Speed Limits for Arterials/Collector Roadways in Bellingham

The 2025 Citywide Speed Limit Study established policy and procedures that will allow Bellingham to register speed limits with existing and planned land use contexts, especially in Urban Villages and around schools and universities. **Lower posted speed limits could help to reduce risk and to minimize severity of collision involving people walking, biking, and rolling, as well as vehicle drivers.**

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# Transportation Safety Countermeasures

## Education, Encouragement, and Enforcement Programs

Education and enforcement are two key components of transportation safety that, while non-engineering in nature, strongly complement engineering projects. Non-engineering programs are ineligible for funding through WSDOT's HSIP program. The Washington State Traffic Safety Commission (WTSC) Safety Grants program funds education and enforcement efforts and programs through the following grant opportunities:

- School Walk Route Improvement Projects Grants
- School Zone Crossing Guard Grants, and
- Law Enforcement Equipment Grants for School Zones.

## Education and Encouragement Campaigns and Programs

The City of Bellingham can continue to promote public safety for all users through the multi-agency Protecting Mobility for All public safety campaign, including the following areas of emphasis:

- Educating and training Bellingham Police officers on new Washington state laws to protect safety for vulnerable users, including people walking, biking, and rolling on public streets
- Community outreach in low-income neighborhood school zones and along walk and bike routes
- Education and encouragement activities in and around low-income neighborhood school zones and along low-income neighborhood school walk and bike routes
- Documentation of collision locations recorded in 2018-2022 and potential mitigating measures listed in this 2024 Local Road Safety Plan for Multimodal Safety Improvements
- Encourage the Bellingham School District (BSD) to:
  - Complete work to define and map all walk and bike routes to local public schools, to Start a local school crossing guard program, similar to other school districts in Washington
  - Partner with the City in advance of construction/reconstruction of new or existing schools to ensure that infrastructure can be funded and completed prior to school occupancy.

## Automated Speed Safety Camera (SSC) Enforcement

Automated Speed Safety Cameras (SSC) use automated speed measurement devices to detect speeding and capture photographic or video evidence of vehicles that are violating the posted speed limit and can also reduce the incidence of angle crashes. The City could consider changing the Bellingham Municipal Code (BMC) to allow the use of Automated Speed Safety Cameras (SSC) in school zones, as well as at signalized intersections to prevent red-light running. Many cities in Washington already do this and research by the Active Transportation Safety Council documents both the efficiency and effectiveness of this technology. The City of Bellingham could deploy SSCs as effective and reliable technology to supplement more traditional methods of enforcement, engineering measures, and education to alter the social norms of speeding. **SSCs are proven safety countermeasures and can reduce total crashes by up to 54 percent on urban principal arterials and up to 47 percent for FSI crashes.**

5

# Transportation Planning and Engineering Safety Projects

5

# Transportation Planning and Engineering Safety Projects

After consideration of many things, including, but not limited to all the factors and variables listed below, the City of Bellingham has prioritized a list of transportation planning and engineering safety projects with the top project recommended to seek HSIP grant funding in 2026.

- 2020-2024 collision data analysis for:
  - Collision types
  - Contributing circumstances
  - Risk factors
  - Proven safety countermeasures
- 2024 Pedestrian and Bicycle Master Plan updates
- 2025 Citywide Speed Limit Study
- 2026-2031 Transportation Improvement Program (TIP)
- A citywide transportation planning focus on:
  - Vulnerable users
  - Social equity
  - ADA compliance requests
  - Active transportation plans
- Planned WTA-City investments on transit routes
- Systemic safety improvement benefits to the greatest number of people

The five (5) projects listed below represent the safety countermeasure priorities that the City of Bellingham will seek to implement in the next few years using a mix of local, state, and federal funding. The City will continue to combine safety improvements into transportation capital improvement projects, as well as transportation resurfacing, maintenance, and repair projects, as opportunities arise.

## The transportation planning and engineering safety projects are listed in priority order.

**1. Active Transportation Crossing Safety Improvements**
(New RRFBs and amber flasher retrofits) [City HSIP grant candidate]

**2. Meador Ave/Lincoln St/James St/York St Multimodal Improvements**
(Ellis to Fraser) (TIP #17) [City seeking WSDOT PBP grant in 2026]

**3. James St Multimodal Improvements between Iowa St and Sunset Dr**
(TIP #19) [Candidate for 2026 TIB UAP, CS, or AT grants]

**4. Annual RRFB Non-motorized project**
(TIP #2) [City TBD-funded projects?]

**5. Pedestrian Hybrid Beacon Crossing Safety**
[Candidate for 2026 TIB CS or AT grants]

As listed, LRSP projects 2, 3, and are listed in the 2026-2031 TIP (**See Figure 31**) and the City is likely to seek other grant funding opportunities to fund these transportation improvements.

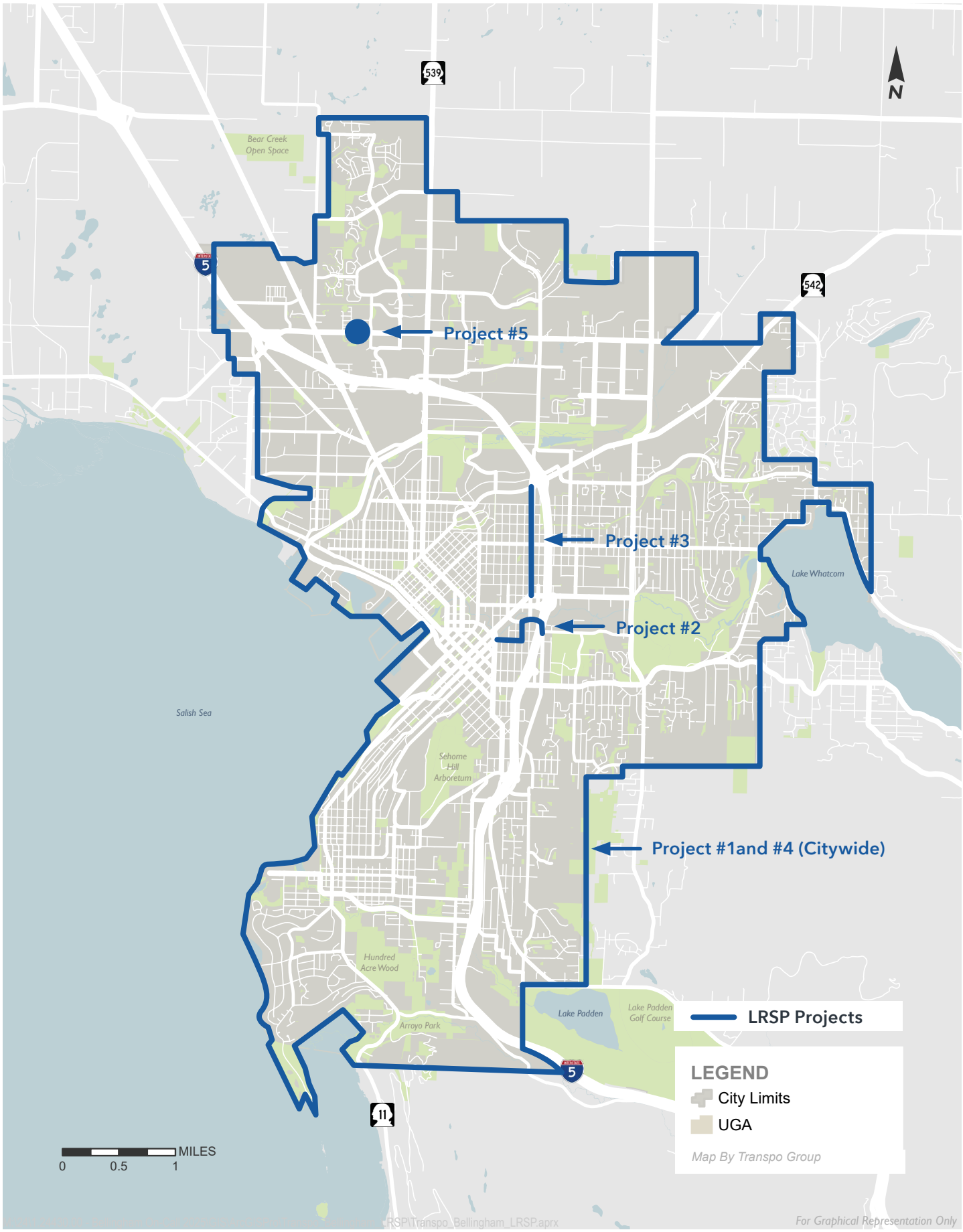


**Figure 31.** Bellingham TIP Projects 2, 17, and 19 are Listed in 2026 LRSP

5

# Transportation Planning and Engineering Safety Projects

Cost Estimate:
$1,500,000 to $1,750,000
(Depending on individual site factors)

## Project 1: Active Transportation Crossing Safety Improvements (Systemic)

Bellingham's 2026 LRSP top priority is completing systemic crossing safety improvements at 27 locations as listed in **Table 19** and illustrated in **Figures 32** and **33**.

The 2024 Bellingham Pedestrian and Bicycle Master Plans identify a list of new crossing improvement locations (**Table 18**), which have been prioritized using evaluation criteria including, but not limited to safety, social equity, low-income housing, level of traffic stress, proximity to schools, parks, employment, shopping, entertainment, and medical service destinations.

Bellingham has also discovered that crossings with **newer RRFB technology have a 60% increase in driver stopping compliance compared to older amber flasher technology and that hard-wired RRFBs are more reliable than solar-powered RRFBs and do not have the risk of failing to activate when requested by users**, which creates significant safety implications. Bellingham has identified 14 existing crossing locations that require critical safety enhancements to resolve these technological inadequacies along with the 6 highest priority crossing locations in **Table 18** from the Pedestrian & Bicycle Master Plans to seek HSIP grant funding. These 20 crossing safety improvement locations include:

**These 27 crossing safety improvement locations include:**

- 5 at public schools
- 3 at Western Washington University (WWU)
- 1 at Whatcom Community College (WCC)
- 2 at Senior retirement centers
- 1 low-income neighborhood shopping center
- 4 downtown Bellingham pedestrian and bicycle connections
- 3 Urban Villages, and
- 6 at public parks and trails

**Many of these locations are also on WTA transit routes and the pedestrian, bicycle, and transit crossing safety improvements will include:**

- Eighteen (18) new LED streetlights
- Eight (8) center lane refuges
- ADA-compliant marked and signed crosswalks with locator tones
- Rectangular Rapid Flashing Beacons (RRFBs), and
- Speed limit reductions as recommended in thew 2025 Bellingham Speed Study.
- Curb extensions where feasible
- Crossing realignments where appropriate
- Solar powered crossing converted to hard-wire power sources

In addition to the safety improvements, converting to hard wire power will also help the city advance climate goals. Based on the green power infrastructure the city utilizes, and considering battery replacements and maintenance, solar has a 50% greater carbon footprint than hard wired RRFBs. With the new ADA locator tone requirements, we expect a much higher demand from the batteries associated with the solar RRFBs and therefore, more battery replacements and maintenance.

Table 19. Proposed HSIP-Funded 20 Locations for New or Enhanced RRFB Crossing Safety Improvements

| Crossing Location | | Existing Condition | Improvement |
|---|---|---|---|
| **1.** | **Bay St/Chestnut St (Downtown)** | Unprotected | New RRFB |
| **2.** | **Garden St/Oak St (WWU)** | Unprotected | New RRFB |
| **3.** | **Laurel St/Garden St (WWU)** | Unprotected | New RRFB |
| **4.** | **Eliza Ave/Westerly St/ Division St Trail (WCC)** | Unprotected | New RRFB |
| **5.** | **F St/Halleck St (Whatcom Middle School)** | Unprotected | New RRFB |
| **6.** | **Prospect/Dupont/Lottie St (US Post Office)** | Unprotected | New RRFB |
| **7.** | **Bill McDonald Pkwy/Ferry St (Sehome HS)** | Overhead Flasher | New RRFB |
| **8.** | **Squalicum Pkwy/West St (Squalicum Park)** | Overhead Flasher | New RRFB |
| **9.** | **Chestnut St/Jersey St (Downtown)** | Overhead Flasher | New RRFB |
| **10.** | **Barkley Blvd/Chandler Pkwy (Barkley Trail)** | Overhead Flasher | New RRFB |
| **11.** | **Northwest Ave/Alderwood Rd (Birchwood ES)** | Overhead Flasher | New RRFB |
| **12.** | **21st St/Donovan Ave (Happy Valley ES)** | Side Flasher | New RRFB |
| **13.** | **S. Samish/48th St (Lake Padden Park)** | Overhead Flasher | New RRFB |
| **14.** | **Electric Ave/Portal Dr (Whatcom Falls Park)** | Side Flasher | New RRFB |
| **15.** | **Northwest/W. Maplewood (Birchwood Center)** | Overhead Flasher | New RRFB |
| **16.** | **Meridian St/E. Victor St (Cornwall Park)** | Overhead Flasher | New RRFB |
| **17.** | **S. State St/Boulevard Dr (Boulevard Park)** | Side Flasher | New RRFB |
| **18.** | **Bill McDonald/Burnham Wood (Sehome HS)** | Overhead Flasher | New RRFB |
| **19.** | **Telegraph Rd/Affinity Dr (Senior Retirement Ctr)** | Side Flasher | New RRFB |
| **20.** | **Kellogg Rd/Spring Creek Dr (King Mountain Trail)** | Overhead Flasher | New RRFB |

In addition to the 20 locations proposed above if HSIP grant funding is secured, Bellingham will fund the same type of crossing safety improvements at seven additional locations as part of other already-funded City projects.

Table 20. City-Funded 7 Locations for Crossing Safety Improvements with Other Projects

| Crossing Location | | Existing Condition | Improvement |
|---|---|---|---|
| **1.** | **Maple Ave/Newell St (Samish Urban Village)** | Overhead Flasher | New RRFB |
| **2.** | **N. Samish Way/Otis St (Samish Urban Village)** | Overhead Flasher | New RRFB |
| **3.** | **N. Samish/Abbott St (Samish Urban Village)** | Overhead Flasher | New RRFB |
| **4.** | **N. Samish/Consolidation (Urban Village)** | Overhead Flasher | New RRFB |
| **5.** | **York St/Railroad Ave (Downtown)** | Overhead Flasher | New RRFB |
| **6.** | **James St/Kentucky St (Bike Blvd – I-5 Underpass)** | Overhead Flasher | New RRFB |
| **7.** | **James St/Carolina St (Green Grocer & Brew Pub)** | Overhead Flasher | New RRFB |

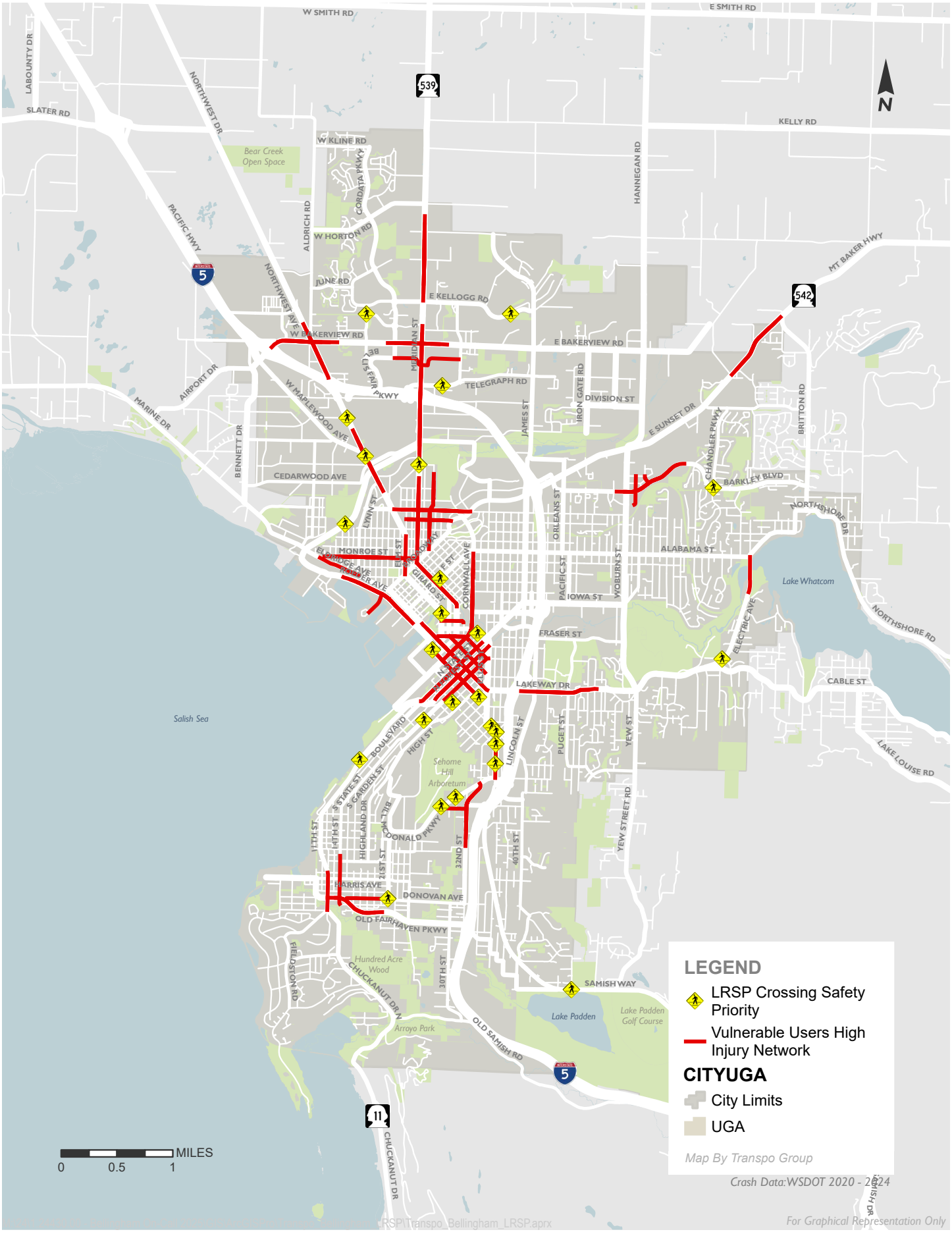


**Figure 32.** Crossing Safety Improvement Locations on the Vulnerable Users High Injury Network

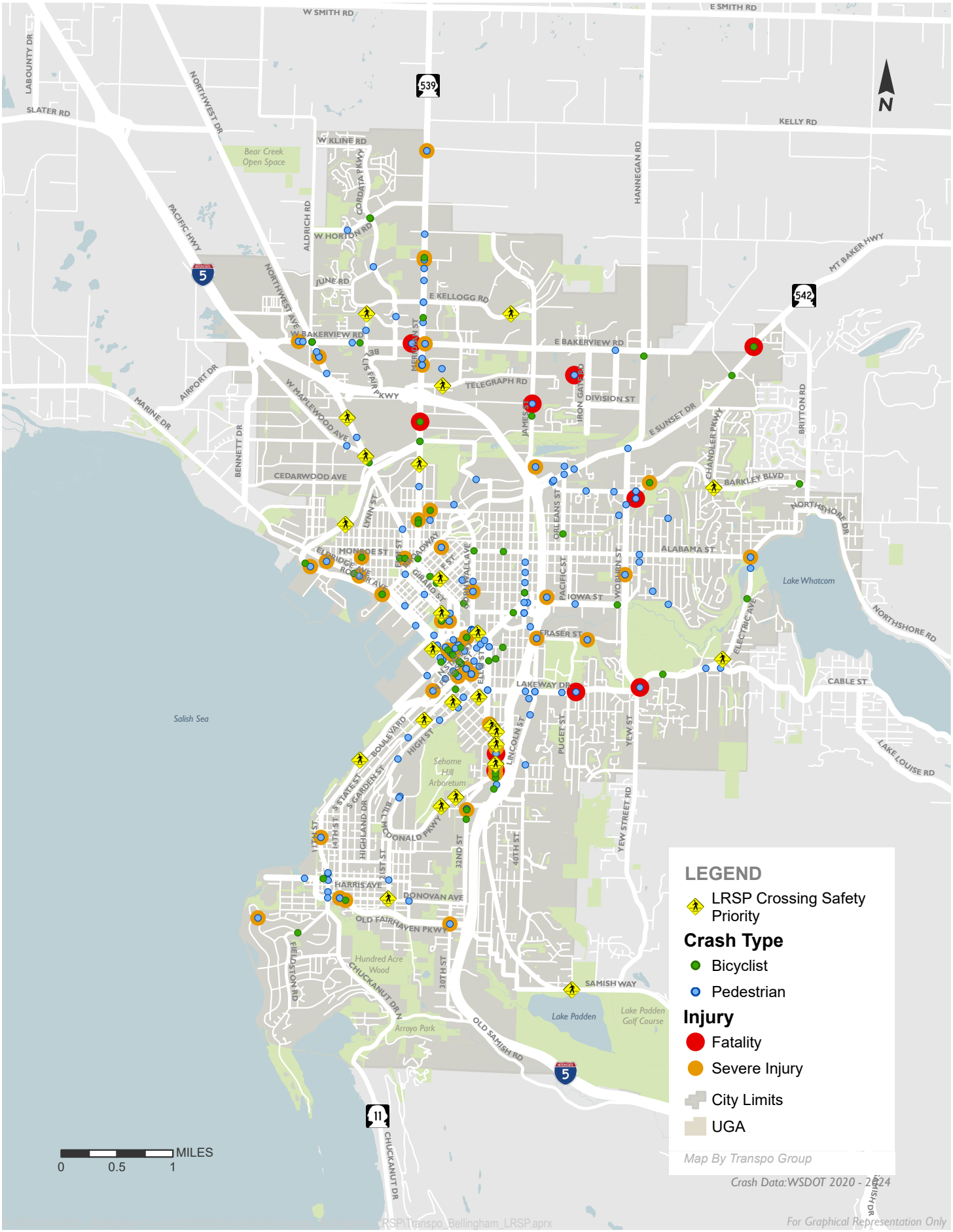


**Figure 33.** Crossing Safety Improvement Locations on the Vulnerable Users High Injury Network

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# Transportation Planning and Engineering Safety Projects

## Project 2: Lincoln-Meador Multiuse Pathway & Roundabout at Lincoln/Fraser (Spot Improvement)

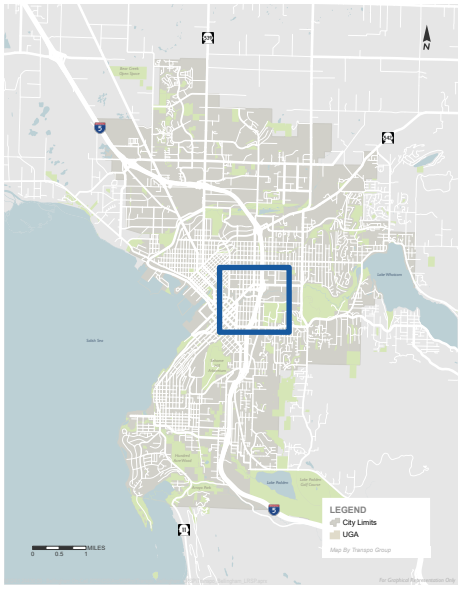
The project will construct a 12-ft multi-use path along the north/east side of the curved section of Meador Avenue and Lincoln Street through the I-5 undercrossing and improve the WTA transit stop. The plans also include installing a traffic signal or a compact roundabout at the Lincoln Street and Fraser Street intersection. Additionally, the project will include adding markings and signage to delineate a bike boulevard on James Street and York Street that will connect Meador Avenue and Ellis Street. (#ES577)

Completing the Meador Ave/Lincoln Street Multimodal Improvements between James Street and Fraser Street will provide a vital low-stress bike and pedestrian crossing of I-5 due to the absence of a vehicular interchange within the project area. Overall, the completion of the project will improve the cross-town connection of the bike and pedestrian network and provide a low-stress and safer option for users to cross the I-5 corridor.

**Project Status 2025**
The project is currently in the design phase. Conceptual drawings of the multi-use path and the intersection improvements at Meador Avenue and Fraser Street were provided as part of the 2020-2021 Lincoln-Lakeway Multimodal Transportation Study. This project is included in the City's Six-Year Transportation Improvement Program.

**Project Background**
The project was conceptualized in the 2020-2021 Lincoln-Lakeway Multimodal Transportation Study. Study results can be viewed using the following link: Lincoln-Lakeway Multimodal Transportation Study Final Report

Cost Estimate:
$4,300,000



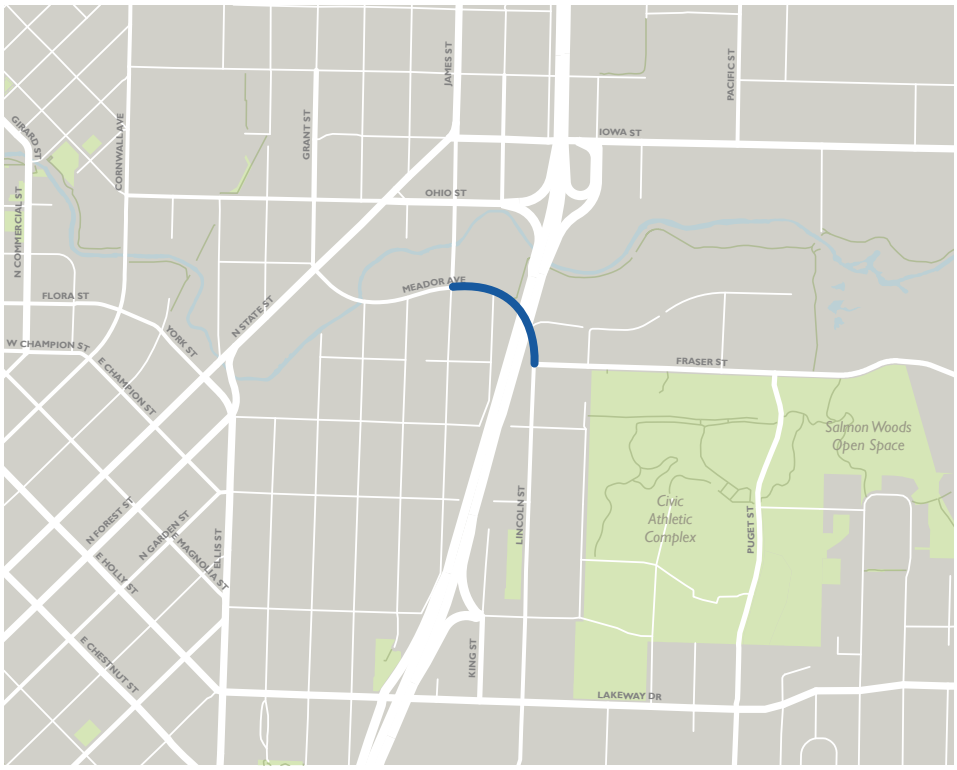




**Figure 34.** Lincoln-Meador Multiuse Pathway under I-5 into Downtown Bellingham

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# Transportation Planning and Engineering Safety Projects

## Project 3: James Street Multimodal Safety Improvements (Spot) (Iowa Street to Sunset Drive)

This project will remove some existing on-street parking and rechannelize the street surface from two lanes in each direction to one lane in each direction with a center turn lane. This will allow construction of protected bicycle lanes, improved crossings for pedestrians, transit riders, and bicyclists, and improved safety and comfort for all users of the corridor. This project will also improve streetlighting. In 2026, this project is listed as project #19 in the 2026-2031 Transportation Improvement Program. There is currently no design decisions made, no funding programmed, and no start date for this project.

Cost Estimate:
$1,300,000


**Figure 35.** Existing conditions on James Street: 4 vehicle lanes, 2 parking lanes, no bicycle facilities

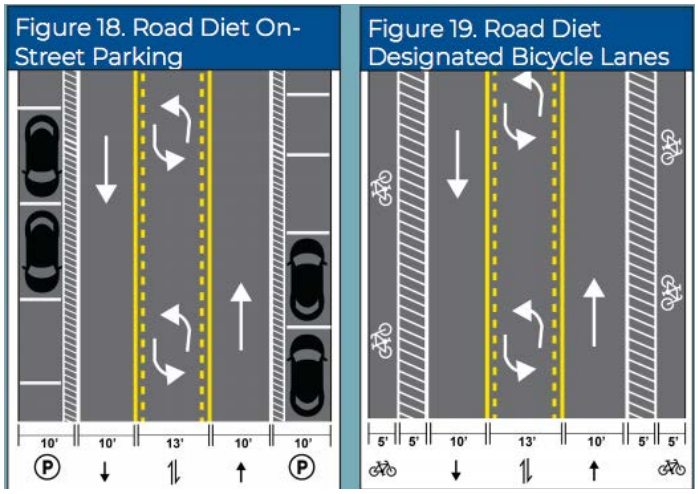


**Figure 36.** Potential future conditions on James Street: 3 vehicle lanes, bike lanes, parking unknown. Source: Road Diet Complete Streets - Search Images

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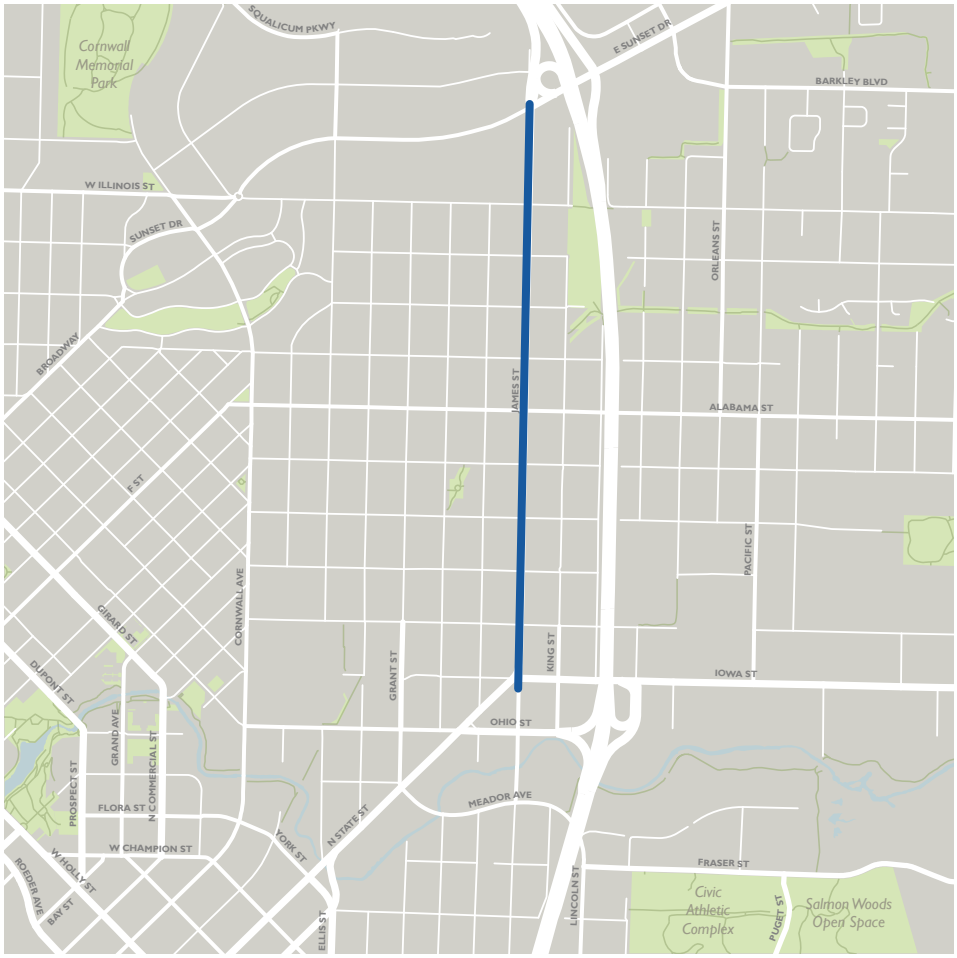
# Transportation Planning and Engineering Safety Projects



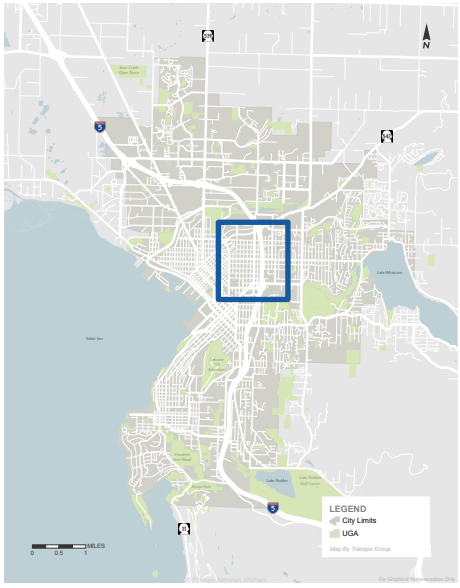




**Figure 37.** James Street Roadway Reallocation to Install Bike Lanes and Pedestrian Crossings

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# Transportation Planning and Engineering Safety Projects

Cost Estimate:
$2,000,000

## Project 4: Annual Active Transportation Safety Improvements (Systemic)

Package of active transportation improvements (sidewalks, bikeways, and multiuse trails) in various locations in conjunction with safety needs, larger capital improvements, private development projects, sewer – water - storm water utility repairs, and neighborhood enhancements.

In addition to sidewalks bikeways, and multiuse trails, the 2024 Bellingham Pedestrian and Bicycle Master Plans include the remaining list of crossing improvement locations that have not yet been programmed into other project improvements. These crossings have been prioritized using evaluation criteria including, but not limited to safety, social equity, low-income housing, level of traffic stress, proximity to schools, parks, employment, shopping, entertainment, and medical service destinations.

The City will look for opportunities to incorporate these crossing improvements into other capital projects throughout Bellingham and the Urban Growth Area.

Table 21. Unprogrammed Prioritized Crossing Improvements - 2024 Pedestrian & Bicycle Master Plans

| No. | PMP ID | PMP Rank | Crossing Location | Status |
|---|---|---|---|---|
| 1 | 256 | Med High (9.84) | North Garden/ Pine St (WWU) - RRFB | |
| 2 | 129 | Med High (9.84) | Meridian/Monroe (Whatcom MS) – RRFB | |
| 3 | 153 | Med High (9.73) | Orleans/Safeway/WTA Gold Line (Senior Citizen Apts) – RRFB | |
| 4 | 120 | Med High (9.57) | Lakeway/Roland St (Galbraith) - Pedestrian Hybrid Beacon or RRFB | |
| 5 | 133 | Med High (9.11) | OFP/22nd St (Happy Valley Park) – RRFB | |
| 6 | 61 | Med Low (8.51) | Elm/Monroe (Whatcom MS) – RRFB | |
| 7 | 85 | Med Low (8.50) | Eliza/ Bellis Fair Pkwy (Low-Income Apts) - RRFB | |
| 8 | 35 | Med Low (8.49) | OFP/24th Street (Happy Valley ES) – ADA and RRFB | |
| 9 | 122 | Med Low (8.39) | E. Bakerview/Kramer Lane (King Mtn ES) - RRFB | |
| 10 | 105 | Med Low (8.06) | Boulevard at S. State St junction (WTA stop) – RRFB | |
| 11 | 159 | Med Low (8.04) | 14th St/State-Boulevard (Boulevard Park) – RRFB | |
| 12 | 11 | Med Low (7.67) | Cornwall/Whatcom Creek Trail (Bellingham HS) – RRFB | |
| 13 | 207 | Med Low (6.80) | Cornwall/Kentucky (Bellingham HS-Assumption) – RRFB | |
| 14 | 207 | Med Low (6.76) | Cornwall/South Park (Parkview ES) – RRFB | |
| 15 | 29 | Low (5.83) | Electric Ave/Flynn St (Whatcom Falls Park) – RRFB | |
| 16 | 145 | Low (5.65) | Alderwood Ave/Bennett Drive (Alderwood ES-UGA) – RRFB | UGA - County |
| 17 | 112 | Low (5.38) | Marine Drive/W. Illinois (Little Squalicum Park-BTC) – RRFB | UGA - County |
| 18 | 25 | Low (5.21) | Barkley/Brandywine/Sussex (Trail) – Advanced Flashers & RRFB | |
| 19 | 41 | Low (5.01) | Samish Way/40th St (Senior Assisted Living Center) - RRFB | |
| 20 | 163 | Low (5.00) | McLeod Rd/Magrath Rd (Squalicum HS) – RRFB | |
| 21 | 144 | Low (4.85) | Sterling Drive/Bellis Fair Pkwy (Low Income Apts) – ADA ramps, RRFB | |
| 22 | 128 | Low (4.24) | Samish Way/34th-36th (Montessori School) – ADA and RRFB | |
| 23 | 138 | Low (3.45) | SR-11 Chuckanut Dr/Viewcrest (100-acre Wood) – RRFB | |

* James St crossing proejcts to be constructed with James Street Multimodal Improvements (Iowa Street to Sunset Drive (TIP #19)

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# Transportation Planning and Engineering Safety Projects

Cost Estimate:
$1,840,000

## Project 5: Pedestrian Hybrid Beacon Crossing Safety

The 2024 Bellingham Pedestrian and Bicycle Master Plan updates include a list of crossing improvement locations, which have been prioritized using evaluation criteria including, but not limited to safety, social equity, low-income housing, level of traffic stress, proximity to schools, parks, employment, shopping, entertainment, and medical service destinations.

The two high priority crossing improvements listed below are locations at WTA bus stops.

**Table 22.** Prioritized Pedestrian Hybrid Beacon (PHB-aka "HAWK" Signal) Crossing Improvements (PMP and BMP)

| Priority | PBMP ID | PBMP Rank (Score) | Crossing Location | Cost |
|---|---|---|---|---|
| 1 | | High (12.5) | West Bakerview Rd/Palisade Way—HAWK, ADA, Refuge | $1,350,000 |
| 2 | 217 | High (10.9) | Iowa St/Toledo St—HAWK, ADA, Refuge | $490,000 |
| | | | **Total** | **$1, 840,000** |

Source: 2024 Bellingham Pedestrian Master Plan, Appendix E Pedestrian Project List


**Figure 38.** Pedestrian Hybrid Beacon (aka "HAWK" signal) on Lincoln Street

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# Technical Appendix

Comprehensive List of Risk Factors and Safety Countermeasure Options

Table A-1. Preliminary Countermeasure Options for High Injury Corridors and Intersections

| Location | Overrepresented Crashes | Risk Factors | Countermeasure Options |
|---|---|---|---|
| **Guide Meridian (SR 539)** | Ped/Bike<br>Approach Turn<br>Rear End | • Not yielding (driver to ped/bike and ped/bike to driver) and poor gap tolerance<br>• Improper maneuver and disregard for traffic controls (drivers and ped/bike)<br>• Speeding and intoxication (drivers and ped/bike)<br>• Distraction/inattention (ped/bike and drivers)<br>• Following too close | • Signal improvements to yellow change interval CMF ID 380<br>• Increase all red clearance interval CMF ID 4211<br>• Implement mobile automated speed enforcement system CMF ID 7662<br>• Increase cycle length for pedestrian signal crossing CMF ID 4116<br>• Implement LPI CMF ID 9918<br>• Install high-visibility crosswalk markings and crosswalk visibility enhancements (ped-scale lighting) CMF ID 4123 |
| **Lakeway Dr** | Ped/Bike<br>Fixed Object<br>Rear End | • Distraction/inattention<br>• Not yielding (driver to ped/bike and ped/bike to driver) and poor gap tolerance<br>• Following too close<br>• Speeding<br>• Intoxication | • Increase cycle length for pedestrian signal crossing CMF ID 4116<br>• Implement LPI CMF ID 9918<br>• High Visibility Saturation Patrols<br>• Implement mobile automated speed enforcement system e/o Woburn/Yew St CMF ID 7662<br>• Curb extensions at Puget St CMF ID 1786 |
| **W Bakerview Rd** | Ped/Bike<br>Rear End | • Not yielding (driver to ped/bike and ped/bike to driver) and poor gap tolerance<br>• Improper maneuver and disregard for traffic controls (drivers and ped/bike)<br>• Following too close | • Install high-visibility crosswalk markings and crosswalk visibility enhancements (ped-scale lighting) CMF ID 4123<br>• Increase cycle length for pedestrian signal crossing CMF ID 4116<br>• Implement LPI CMF ID 9918<br>• Implement mobile automated speed enforcement system CMF ID 7662 |
| **E Sunset Dr (SR 542)** | Ped/Bike<br>Approach Turn<br>Sideswipe<br>Rear End | • Not yielding (driver to ped/bike and ped/bike to driver) and poor gap tolerance<br>• Improper maneuver and disregard for traffic controls (drivers and ped/bike)<br>• Intoxication (drivers and ped/bike)<br>• Following too close<br>• Distraction/inattention | • Install high-visibility crosswalk markings and crosswalk visibility enhancements (ped-scale lighting) CMF ID 4123<br>• Increase cycle length for pedestrian signal crossing CMF ID 4116<br>• Implement LPI CMF ID 9918<br>• Increase all red clearance interval CMF ID 4211<br>• Signal improvements to yellow change interval CMF ID 380<br>• High Visibility Saturation Patrols |
| **Samish Way** | Ped/Bike<br>Approach Turn | • Not yielding to ped/bike and poor gap tolerance<br>• Distraction/inattention (drivers and ped/bike)<br>• Improper maneuver<br>• Following too close<br>• Intoxication | • Install high-visibility crosswalk markings and crosswalk visibility enhancements (ped-scale lighting) CMF ID 4123<br>• Increase cycle length for pedestrian signal crossing CMF ID 4116<br>• Implement LPI CMF ID 9918<br>• High Visibility Saturation Patrols<br>• Implement mobile automated speed enforcement system CMF ID 7662 |

Table A-1. Preliminary Countermeasure Options for High Injury Corridors and Intersections

| Location | Overrepresented Crashes | Risk Factors | Countermeasure Options |
|---|---|---|---|
| **Lincoln St** | Ped/Bike<br>Rear End<br>Angle | • Improper maneuver (ped/bike)<br>• Disregard for traffic controls (ped/bike)<br>• Not yielding and poor gap tolerance<br>• Distraction/inattention | • Increase cycle length for pedestrian signal crossing CMF ID 4116<br>• Implement LPI CMF ID 9918<br>• Appropriate speed limits for all road users/Lower posted speed from 35 mph to 25 mph FHWA-SA-21-034 |
| **Northwest Ave/Dr** | Ped/Bike<br>Rear End | • Not yielding (driver to ped/bike and ped/bike to driver) and poor gap tolerance<br>• Speeding (drivers and cyclist)<br>• Intoxication (driver)<br>• Failure to use crosswalk<br>• Following too close | • Install high-visibility crosswalk markings and crosswalk visibility enhancements (ped-scale lighting) CMF ID 4123<br>• Increase cycle length for pedestrian signal crossing CMF ID 4116<br>• Implement LPI CMF ID 9918<br>• High Visibility Saturation Patrols<br>• Implement mobile automated speed enforcement system CMF ID 7662 |
| **James St n/o SR 542** | Ped/Bike<br>Rear End | • Distraction/inattention<br>• Following too close<br>• Not yielding and poor gap tolerance (drivers)<br>• Improper maneuver and disregard for traffic controls (drivers)<br>Speeding and intoxication (drivers) | • High Visibility Saturation Patrols (near Woodstock Way)<br>• Implement mobile automated speed enforcement system (near Woodstock Way) CMF ID 7662 |
| **E Bakerview Rd** | Ped/Bike<br>Approach Turn<br>Rear End<br>Angle | • Not yielding (driver to ped/bike) and poor gap tolerance<br>• Improper maneuver (drivers and ped/bike) and disregard for traffic controls<br>• Failure to use crosswalk<br>• Following too close | • Install high-visibility crosswalk markings and crosswalk visibility enhancements (ped-scale lighting) CMF ID 4123<br>• Increase cycle length for pedestrian signal crossing CMF ID 4116<br>• Implement LPI CMF ID 9918<br>• Implement mobile automated speed enforcement system CMF ID 7662 |
| **N State St** | Ped/Bike<br>Angle<br>Rear End | • Distraction/inattention<br>• Not yielding and poor gap tolerance<br>• Following too close | • Signal improvements to yellow change interval CMF ID 380<br>• Increase cycle length for pedestrian signal crossing CMF ID 4116<br>• Implement LPI CMF ID 9918 |
| **Alabama St** | Ped/Bike<br>Angle | • Not yielding (driver to ped/bike and ped/bike to driver) and poor gap tolerance<br>• Improper maneuver<br>• Distraction/inattention<br>• Disregard for traffic controls<br>• Following too close<br>• Intoxication | • Clear shrubbery and other obstructions from sightlines CMF ID 307, CMF ID 1023<br>• Implement systemic signing and marking improvements at stop-controlled intersections CMF ID 8867<br>• Increase cycle length for pedestrian signal crossing CMF ID 4116<br>• Implement LPI CMF ID 9918<br>• Install high-visibility crosswalk markings and crosswalk visibility enhancements near Bloedel-Donovan Park (ped-scale lighting) CMF ID 4123 |

Table A-1. Preliminary Countermeasure Options for High Injury Corridors and Intersections

| Location | Overrepresented Crashes | Risk Factors | Countermeasure Options |
|---|---|---|---|
| **Old Fairhaven Pkwy (SR 11)** | Ped/Bike<br>Rear End | • Not yielding and poor gap tolerance<br>• Improper maneuver (drivers) and disregard for traffic controls (driver and ped/bike)<br>• Following too close<br>• Distraction/inattention | • Install high-visibility crosswalk markings and crosswalk visibility enhancements (ped-scale lighting) CMF ID 4123<br>• Increase cycle length for pedestrian signal crossing CMF ID 4116<br>• Implement LPI CMF ID 9918<br>• Increase all red clearance interval CMF ID 4211<br>• Signal improvements to yellow change interval CMF ID 380<br>• Implement mobile automated speed enforcement system (near 30th St) CMF ID 7662 |
| **Cornwall Ave** | Ped/Bike | • Not yielding to pedestrians and distracted driving<br>• Pedestrians crossing against traffic signals<br>• Speeding<br>• Intoxication (pedestrian) | • High Visibility Saturation Patrols<br>• Signal improvements to yellow change interval CMF ID 380<br>• Increase cycle length for pedestrian signal crossing CMF ID 4116<br>• Implement mobile automated speed enforcement system CMF ID 7662 |
| **Woburn St** | Ped/Bike<br>Fixed Object<br>Approach Turn<br>Rear End | • Not yielding and poor gap tolerance<br>• Distraction/inattention<br>• Following too close | • Signal improvements to yellow change interval CMF ID 380<br>• Implement mobile automated speed enforcement system CMF ID 7662 |
| **Iowa St** | Angle | • Not yielding and poor gap tolerance<br>• Improper maneuver | • Appropriate speed limits for all road users/Lower posted speed from 35 mph to 25 mph FHWA-SA-21-034<br>• Signal improvements to yellow change interval CMF ID 380<br>• Clear shrubbery and other obstructions from sightlines (DQ and other driveways) CMF ID 307, CMF ID 1023 |
| **E Holly St** | Angle<br>Ped/Bike | • Not yielding and poor gap tolerance<br>• Obstructed sightlines<br>• Pedestrians crossing against traffic signals<br>• Speeding<br>• Intoxication (pedestrian)<br>• Distraction/inattention | • High Visibility Saturation Patrols[JH1.1]<br>• Signal improvements to yellow change interval CMF ID 380<br>• Increase cycle length for pedestrian signal crossing CMF ID 4116<br>• Clear shrubbery and other obstructions from sightlines CMF ID 307, CMF ID 1023 |

Table A-1. Preliminary Countermeasure Options for High Injury Corridors and Intersections

| Location | Overrepresented Crashes | Risk Factors | Countermeasure Options |
|---|---|---|---|
| **James St s/o SR 542** | Ped/Bike<br>Angle | • Not yielding (driver to ped/bike and ped/bike to driver) and poor gap tolerance<br>• Distraction/inattention<br>• Improper maneuver<br>• Following too close | • Increase cycle length for pedestrian signal crossing CMF ID 4116<br>• Implement LPI CMF ID 9918<br>• Implement mobile automated speed enforcement system (Alabama St to Iowa St) CMF ID 7662<br>• Implement systemic signing and marking improvements at stop-controlled intersections/ Relocate stop bars closer to travel lanes CMF ID 8872<br>• Increase triangle sight distance CMF ID 307 |
| **E Chestnut St** | Angle | • Improper maneuver<br>• Distraction/inattention<br>• Disregard for traffic controls | • Retroreflective backplates on signal heads CMF ID 1410 |
| **Eldridge Ave** | Ped/Bike<br>Fixed Object | • Intoxicated driving<br>• Improper maneuver<br>• Not yielding (driver to ped/bike and ped/bike to driver) and poor gap tolerance | • High Visibility Saturation Patrols<br>• Implement mobile automated speed enforcement system CMF ID 7662<br>• Implement systemic signing and marking improvements at stop-controlled intersections/ Relocate stop bars closer to travel lanes CMF ID 8872<br>• Increase triangle sight distance CMF ID 307 |
| **Barkley Blvd** | Ped/Bike<br>Rear End | • Distraction/inattention (driver)<br>• Not yielding (driver to ped/bike and ped/bike to driver) and poor gap tolerance<br>• Improper maneuver (drivers and ped/bike) | • Signal improvements to yellow change interval CMF ID 380<br>• Implement mobile automated speed enforcement system CMF ID 7662<br>• Increase cycle length for pedestrian signal crossing CMF ID 4116<br>• Implement LPI CMF ID 9918<br>• Install high-visibility crosswalk markings and crosswalk visibility enhancements (ped-scale lighting) CMF ID 4123 |
| **32nd St** | Ped/Bike<br>Angle | • Not yielding and poor gap tolerance (drivers)<br>• Speeding and intoxication (drivers)<br>• Distraction/inattention<br>• Improper maneuver | • High Visibility Saturation Patrols<br>• Implement mobile automated speed enforcement system CMF ID 7662<br>• Implement systemic signing and marking improvements at stop-controlled intersections/ Relocate stop bars closer to travel lanes CMF ID 8872<br>• Increase triangle sight distance CMF ID 307<br>• Install bike lanes CMF ID 10728 |

Table A-1. Preliminary Countermeasure Options for High Injury Corridors and Intersections

| Location | Overrepresented Crashes | Risk Factors | Countermeasure Options |
|---|---|---|---|
| **N Garden St** | Angle | • Disregard for traffic controls (drivers and ped/bike)<br>• Not yielding and poor gap tolerance<br>• Improper maneuver (drivers) and disregard for traffic controls (driver and ped/bike)<br>• Distraction/inattention | • Daylight intersections and move street parking down 100' from intersection (at E Oak St) CMF 1752<br>• Increase triangle sight distance CMF ID 307<br>• Install high-visibility crosswalk markings and crosswalk visibility enhancements (ped-scale lighting) CMF ID 4123 |
| **Orleans St (Alabama to Woodstock)** | Rear End | • Distraction/inattention<br>• Not yielding and poor gap tolerance<br>• Following too close | • Clear shrubbery and other obstructions from sightlines CMF ID 307, CMF ID 1023<br>• Signal improvements to yellow change interval CMF ID 380<br>• Implement mobile automated speed enforcement system CMF ID 7662 |
| **Monroe St** | Ped/Bike<br>Angle | • Not yielding and poor gap tolerance (drivers)<br>• Distraction/inattention | • Implement systemic signing and marking improvements at stop-controlled intersections/ Relocate stop bars closer to travel lanes CMF ID 8872<br>• Increase triangle sight distance CMF ID 307<br>• Install high-visibility crosswalk markings and crosswalk visibility enhancements (ped flags?) CMF ID 4123 |
| **Hannegan Rd** | Fixed Object | • Following too close<br>• Intoxication (driver)<br>• Speeding<br>• Distraction/inattention | • High Visibility Saturation Patrols<br>• Implement mobile automated speed enforcement system CMF ID 7662<br>• Rumble strips at lane edges CMF ID 3358<br>• 6-inch thermoplastic edge lines CMF ID 4737 |
| **Bellis Fair Pkwy** | Angle | • Not yielding (driver to ped/ bike and ped/bike to driver) and poor gap tolerance<br>• Speeding<br>• Improper maneuver and disregard for traffic controls (drivers) | • Increase all red clearance interval CMF ID 4211<br>• Implement mobile automated speed enforcement system CMF ID 7662<br>• Increase cycle length for pedestrian signal crossing CMF ID 4116<br>• Implement LPI CMF ID 9918<br>• Install high-visibility crosswalk markings and crosswalk visibility enhancements (ped-scale lighting) CMF ID 4123 |

Table A-1. Preliminary Countermeasure Options for High Injury Corridors and Intersections

| Location | Overrepresented Crashes | Risk Factors | Countermeasure Options |
|---|---|---|---|
| **12th St** | Ped/Bike<br>Angle | • Not yielding and poor gap tolerance (drivers)<br>• Distraction/inattention<br>• Following too close | • Improve signal visibility, including signal lens size upgrade, installation of new back-plates, addition of reflective tapes to existing back-plates, and installation of additional signal heads CMF 4113<br>• Increase cycle length for pedestrian signal crossing CMF ID 4116<br>• Implement LPI CMF ID 9918<br>• Install high-visibility crosswalk markings and crosswalk visibility enhancements (ped-scale lighting on both sides of street) CMF ID 4123 |
| **Maplewood Ave** | Angle | • Not yielding and poor gap tolerance (drivers)<br>• Speeding and intoxication (drivers)<br>• Distraction/inattention<br>• Improper maneuver | • High Visibility Saturation Patrols<br>• Implement mobile automated speed enforcement system CMF ID 7662<br>• Implement systemic signing and marking improvements at stop-controlled intersections/ Relocate stop bars closer to travel lanes CMF ID 8872<br>• Increase triangle sight distance CMF ID 307 |
| **Harris Ave** | Ped/Bike<br>Angle | • Not yielding and poor gap tolerance<br>• Improper maneuver (drivers) and disregard for traffic controls (driver and ped/bike) | • Prohibit right turn on red @ Harris/12th CMF ID 5194<br>• Install high-visibility crosswalk markings and crosswalk visibility enhancements CMF ID 4123<br>• Install raised pedestrian crosswalks (from 10th to 14th) CMF ID 136<br>• Increase triangle sight distance CMF ID 307 |
| **S State St** | Rear End | • Following too close and speeding | • Signal improvements to yellow change interval CMF ID 380 |
| **E/W Bakerview/ Meridian St (SR 539)** | Ped/Bike<br>Approach Turn<br>Rear End | • Not yielding (driver to ped/ bike and ped/bike to driver) and poor gap tolerance<br>• Failure to use crosswalk<br>• Improper maneuver<br>• Following too close | • Improve signal visibility, including signal lens size upgrade, installation of new back-plates, addition of reflective tapes to existing back-plates, and installation of additional signal heads CMF 4113<br>• Increase all red clearance interval CMF ID 4211<br>• Signal improvements to yellow change interval CMF ID 380<br>• Install high-visibility crosswalk markings CMF ID 4123<br>• Increase cycle length for pedestrian signal crossing CMF ID 4116<br>• Implement LPI CMF ID 9918 |

Table A-1. Preliminary Countermeasure Options for High Injury Corridors and Intersections

| Location | Overrepresented Crashes | Risk Factors | Countermeasure Options |
|---|---|---|---|
| **W Bakerview Rd/ Northwest Dr** | Ped/Bike<br>Rear End<br>Approach Turn | • Disregard for traffic controls (drivers and ped/bike)<br>• Improper maneuver (drivers and ped/bike)<br>• Failure to use crosswalk<br>• Not yielding and poor gap tolerance<br>• Following too close | • Improve signal visibility, including signal lens size upgrade, installation of new back-plates, addition of reflective tapes to existing back-plates, and installation of additional signal heads CMF 4113<br>• Increase all red clearance interval CMF ID 4211<br>• Signal improvements to yellow change interval CMF ID 380<br>• Install high-visibility crosswalk markings and crosswalk visibility enhancements (ped-scale lighting on both sides of street) CMF ID 4123<br>• Increase cycle length for pedestrian signal crossing CMF ID 4116<br>• Implement LPI CMF ID 9918 |
| **Iowa St/Yew St/ Woburn St** | Fixed Object | • Intoxicated driving | • • High Visibility Saturation Patrols |
| **James St/McCleod Rd** | Ped/Bike<br>Other | • Distraction/inattention (driver and ped/bike) | • Install high-visibility crosswalk markings with crosswalk lighting CMF ID 4123 |
| **Meridian St (SR 539)/ Bellis Fair Pkwy** | Ped/Bike<br>Approach Turn | • Not yielding and poor gap tolerance<br>• Improper maneuver<br>• Disregard for traffic controls (drivers and ped/bike) | • Improve signal visibility, including signal lens size upgrade, installation of new back-plates, addition of reflective tapes to existing back-plates, and installation of additional signal heads CMF 4113<br>• Increase all red clearance interval CMF ID 4211<br>• Signal improvements to yellow change interval CMF ID 380<br>• Install high-visibility crosswalk markings and crosswalk visibility enhancements (ped-scale lighting on both sides of street) CMF ID 4123<br>• Increase cycle length for pedestrian signal crossing CMF ID 4116<br>• Implement LPI CMF ID 9918 |

Table A-1. Preliminary Countermeasure Options for High Injury Corridors and Intersections

| Location | Overrepresented Crashes | Risk Factors | Countermeasure Options |
|---|---|---|---|
| **Kellogg Rd/Meridian St (SR 539)** | Ped/Bike<br>Approach Turn<br>Rear End | • Not yielding (driver to ped/bike and ped/bike to driver) and poor gap tolerance<br>• Improper maneuver<br>• Following too close | • Improve signal visibility, including signal lens size upgrade, installation of new back-plates, addition of reflective tapes to existing back-plates, and installation of additional signal heads CMF 4113<br>• Increase all red clearance interval CMF ID 4211<br>• Signal improvements to yellow change interval CMF ID 380<br>• Install high-visibility crosswalk markings CMF ID 4123<br>• Increase cycle length for pedestrian signal crossing CMF ID 4116<br>• Implement LPI CMF ID 9918 |
| **Iowa St/Pacific St** | Ped/Bike<br>Angle<br>Approach Turn | • Not yielding (drivers)<br>• Distraction/inattention<br>• Improper maneuver<br>• Following too close | • Increase all red clearance interval CMF ID 4211<br>• Signal improvements to yellow change interval CMF ID 380 |
| **Meridian St (SR 539)/ Telegraph Rd** | Rear End | • Distraction/inattention<br>• Following too close<br>• Not yielding and poor gap tolerance<br>• Improper maneuver and disregard for traffic controls (drivers) | • Improve signal visibility, including signal lens size upgrade, installation of new back-plates, addition of reflective tapes to existing back-plates, and installation of additional signal heads CMF 4113<br>• Increase all red clearance interval CMF ID 4211<br>• Signal improvements to yellow change interval CMF ID 380<br>• Install high-visibility crosswalk markings and crosswalk visibility enhancements (ped-scale lighting on both sides of street) CMF ID 4123<br>• Increase cycle length for pedestrian signal crossing CMF ID 4116<br>• Implement LPI CMF ID 9918 |
| **Lincoln St/Lakeway Dr** | Ped/Bike<br>Rear End<br>Other | • Distraction/inattention<br>• Following too close<br>• Not yielding and poor gap tolerance (drivers)<br>• Improper maneuver | • Improve signal visibility, including signal lens size upgrade, installation of new back-plates, addition of reflective tapes to existing back-plates, and installation of additional signal heads CMF 4113<br>• Increase cycle length for pedestrian signal crossing CMF ID 4116<br>• Implement LPI [JH3.1]CMF ID 9918<br>• Increase all red clearance interval CMF ID 4211<br>• Signal improvements to yellow change interval CMF ID 380 |

Table A-1. Preliminary Countermeasure Options for High Injury Corridors and Intersections

| Location | Overrepresented Crashes | Risk Factors | Countermeasure Options |
|---|---|---|---|
| **W Bakerview/Arctic Ave** | Ped/Bike<br>Rear End<br>Sideswipe | • Not yielding (driver to ped/bike and ped/bike to driver) and poor gap tolerance<br>• Improper maneuver<br>• Distraction/inattention<br>• Following too close | • Improve signal visibility, including signal lens size upgrade, installation of new back-plates, addition of reflective tapes to existing back-plates, and installation of additional signal heads CMF 4113<br>• Increase all red clearance interval CMF ID 4211<br>• Signal improvements to yellow change interval CMF ID 380<br>• Install high-visibility crosswalk markings CMF ID 4123<br>• Increase cycle length for pedestrian signal crossing CMF ID 4116<br>• Implement LPI CMF ID 9918 |
| **James St/Telegraph Rd** | Angle | • Disregard for traffic controls<br>• Distraction/inattention<br>• Not yielding and poor gap tolerance<br>• Obstructed sightlines | • Increase triangle sight distance CMF ID 307 |
| **Samish Way/Bill McDonald Pkwy** | Ped/Bike<br>Angle<br>Approach Turn<br>Sideswipe | Not yielding and poor gap tolerance (drivers)<br>Improper maneuver | Increase cycle length for pedestrian signal crossing CMF ID 4116<br>Implement LPI [JH4.1]CMF ID 9918<br>Increase all red clearance interval CMF ID 4211<br>Signal improvements to yellow change interval CMF ID 380 |
| **Chestnut St/State St** | Angle<br>Sideswipe | • Improper maneuver and disregard for traffic controls (drivers)<br>• Not yielding and poor gap tolerance (drivers)<br>• Intoxicated driving<br>• Distraction/inattention | • Install/modify One-Way signage: Improve one-way street signage contrast, size and placement for turns onto Chestnut St and State St – add red/white Do Not Enter Wrong Way CMF ID 11508<br>• Increase cycle length for pedestrian signal crossing CMF ID 4116<br>• Implement LPI [JH5.1]CMF ID 9918<br>• Increase all red clearance interval CMF ID 4211<br>• Signal improvements to yellow change interval CMF ID 380 |
| **Alabama St/Woburn St** | Angle<br>Rear End | • Improper maneuver<br>• Following too close | • RAB conversion – signalized to single lane RAB CMF ID 211 |
| **Cornwall Ave/ Flora St/York St** | Ped/Bike<br>Angle | • Disregard for traffic controls (driver)<br>• Not yielding and poor gap tolerance (drivers)<br>• Intoxicated driving | • Improve signal visibility, including signal lens size upgrade, installation of new back-plates, addition of reflective tapes to existing back-plates, and installation of additional signal heads CMF 4113<br>• Increase cycle length for pedestrian signal crossing CMF ID 4116<br>• Implement LPI CMF ID 9918<br>• Install high-visibility crosswalk markings and crosswalk visibility enhancements (ped-scale lighting on both sides of street) CMF ID 4123<br>• High Visibility Saturation Patrols |

Table A-1. Preliminary Countermeasure Options for High Injury Corridors and Intersections

| Location | Overrepresented Crashes | Risk Factors | Countermeasure Options |
|---|---|---|---|
| **Orleans St/Sunset Dr (SR 542)** | Ped/Bike<br>Approach Turn<br>Rear End | • Not yielding and poor gap tolerance<br>• Improper maneuver<br>• Distraction/inattention<br>• Disregard for traffic controls (drivers and ped/bike) | • Improve signal visibility, including signal lens size upgrade, installation of new back-plates, addition of reflective tapes to existing back-plates, and installation of additional signal heads CMF 4113<br>• Increase all red clearance interval CMF ID 4211<br>• Signal improvements to yellow change interval CMF ID 380<br>• Install high-visibility crosswalk markings and crosswalk visibility enhancements (ped-scale lighting on both sides of street) CMF ID 4123<br>• Increase cycle length for pedestrian signal crossing CMF ID 4116<br>• Implement LPI CMF ID 9918 |
| **Barkley Blvd/Sunset Dr (SR 542)** | Ped/Bike<br>Rear End<br>Sideswipe | • Distraction/inattention<br>• Disregard for traffic controls | • Improve signal visibility, including signal lens size upgrade, installation of new back-plates, addition of reflective tapes to existing back-plates, and installation of additional signal heads CMF 4113<br>• Increase all red clearance interval CMF ID 4211<br>• Signal improvements to yellow change interval CMF ID 380<br>• Install high-visibility crosswalk markings and crosswalk visibility enhancements (ped-scale lighting on both sides of street) CMF ID 4123<br>• Increase cycle length for pedestrian signal crossing CMF ID 4116<br>• Implement LPI CMF ID 9918 |
| **Meridian St (SR 539)/Horton Rd** | Rear End | • Distraction/inattention<br>• Following too close | • Improve signal visibility, including signal lens size upgrade, installation of new back-plates, addition of reflective tapes to existing back-plates, and installation of additional signal heads CMF 4113<br>• Increase all red clearance interval CMF ID 4211<br>• Signal improvements to yellow change interval CMF ID 380<br>• Install high-visibility crosswalk markings CMF ID 4123 |
| **Hannegan Rd/E Bakerview Rd** | Ped/Bike<br>Rear End | • Improper maneuver<br>• Distraction/inattention<br>• Not yielding and poor gap tolerance<br>• Intoxicated driving | • Improve signal visibility, including signal lens size upgrade, installation of new back-plates, addition of reflective tapes to existing back-plates, and installation of additional signal heads CMF 4113<br>• Increase cycle length for pedestrian signal crossing CMF ID 4116<br>• Implement LPI CMF ID 9918 |

Table A-1. Preliminary Countermeasure Options for High Injury Corridors and Intersections

| Location | Overrepresented Crashes | Risk Factors | Countermeasure Options |
|---|---|---|---|
| **Kellogg Rd/Cordata Pkwy RAB** | Angle | • Not yielding and poor gap tolerance<br>• Improper maneuver | • Install raised crosswalks CMF ID 136<br>• Install (refresh) high-visibility crosswalk markings CMF ID 4123 |
| **E Holly St/N State St** | Ped/Bike<br>Angle<br>Other | • Disregard for traffic controls (drivers and ped/bike)<br>• Improper maneuver<br>• Distraction/inattention<br>• Intoxicated driving | • Increase all red clearance interval CMF ID 4211<br>• Signal improvements to yellow change interval CMF ID 380<br>• Install high-visibility crosswalk markings CMF ID 4123<br>• Increase cycle length for pedestrian signal crossing CMF ID 4116<br>• Implement LPI CMF ID 9918 |
| **Northwest Ave/ Alderwood Ave** | Ped/Bike<br>Angle<br>Approach Turn | • Not yielding (driver to ped/ bike and ped/bike to driver)<br>• Distraction/inattention<br>• Following too close | • No new recommendation<br>• Verify operationality and functioning of existing RRFB, adjust ped interval if needed |
| **W Illinois/Meridian St** | Rear End | • Distraction/inattention<br>• Not yielding (drivers)<br>• Following too close | • Increase all red clearance interval CMF ID 4211<br>• Signal improvements to yellow change interval CMF ID 380 |
| **State St/James St/Iowa St** | Ped/Bike<br>Angle | • Improper maneuver (drivers and ped/bike)<br>• Distraction/inattention<br>• Disregard for traffic controls<br>• Not yielding | • Improve signal visibility, including signal lens size upgrade, installation of new back-plates, addition of reflective tapes to existing back-plates, and installation of additional signal heads CMF 4113<br>• Increase all red clearance interval CMF ID 4211<br>• Signal improvements to yellow change interval CMF ID 380<br>• Install high-visibility crosswalk markings CMF ID 4123<br>• Increase cycle length for pedestrian signal crossing CMF ID 4116<br>• Implement LPI CMF ID 9918 |
| **E Holly St/Ellis Ave/ Lakeway Dr** | Ped/Bike<br>Sideswipe | • Improper maneuver (drivers and ped/bike)<br>• Distraction/inattention<br>• Following too close | • Improve signal visibility, including signal lens size upgrade, installation of new back-plates, addition of reflective tapes to existing back-plates, and installation of additional signal heads CMF 4113<br>• Install high-visibility crosswalk markings and crosswalk visibility enhancements (ped-scale lighting on both sides of street) CMF ID 4123<br>• Increase cycle length for pedestrian signal crossing CMF ID 4116<br>• Implement LPI CMF ID 9918 |
| **N State St/E Maple St** | Ped/Bike<br>Sideswipe | • Improper maneuver<br>• Not yielding (drivers) | • Increase all red clearance interval CMF ID 4211<br>• Signal improvements to yellow change interval CMF ID 380<br>• Increase cycle length for pedestrian signal crossing CMF ID 4116<br>• Implement LPI CMF ID 9918 |

Table A-1. Preliminary Countermeasure Options for High Injury Corridors and Intersections

| Location | Overrepresented Crashes | Risk Factors | Countermeasure Options |
|---|---|---|---|
| Iowa St/King St | Angle | • Not yielding (drivers)<br>• Distraction/inattention<br>• Improper maneuver | • Improve signal visibility, including signal lens size upgrade, installation of new back-plates, addition of reflective tapes to existing back-plates, and installation of additional signal heads CMF 4113<br>• Increase all red clearance interval CMF ID 4211<br>• Signal improvements to yellow change interval CMF ID 380 |
| Horton Rd/Cordata Pkwy RAB | Ped/Bike<br>Angle<br>Rear End | • Distraction/inattention<br>• Not yielding and poor gap tolerance<br>• Following too close | • Install raised crosswalks CMF ID 136 |
| Harris Ave/12th St | Ped/Bike<br>Other | • Disregard for traffic controls<br>• Improper maneuver<br>• Distraction/inattention | • Improve signal visibility, including signal lens size upgrade, installation of new back-plates, addition of reflective tapes to existing back-plates, and installation of additional signal heads CMF 4113<br>• Increase cycle length for pedestrian signal crossing CMF ID 4116<br>• Implement LPI CMF ID 9918 |
| 12th St/Old Fairhaven Pkwy (SR 11) | Ped/Bike<br>Rear End | • Disregard for traffic controls<br>• Improper maneuver<br>• Distraction/inattention<br>• Following too close | • Improve signal visibility, including signal lens size upgrade, installation of new back-plates, addition of reflective tapes to existing back-plates, and installation of additional signal heads CMF 4113<br>• Increase cycle length for pedestrian signal crossing CMF ID 4116<br>• Implement LPI CMF ID 9918<br>• Install high-visibility crosswalk markings CMF ID 4123 |