Vision Zero Action Plan

Date: June 2023
Crash Data Time Period: 2017-2021
Developed using the FHWA Systemic Safety Project Selection Tool and Risk-Based Safety Assessment

Prepared by:
Integrated Capital Management
Planning Services

CITY OF SPOKANE™

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Contents

Vision Zero Resolution

RESOLUTION NO. 2022-0107

IN SUPPORT OF A GOAL TO ELIMINATE FATALITIES AND SEVERE INJURIES ON CITY STREETS

A resolution committing to a goal to achieve zero traffic fatalities and severe injuries among all road users (including people walking, biking, using transit, and driving).

WHEREAS, the City of Spokane's Comprehensive Plan (2019), Spokane Downtown Plan (2021), Bicycle Plan (2017) and Pedestrian Plan (2015) all seek to reduce serious or fatal pedestrian and bicycle injuries; and

WHEREAS, as stated in Spokane City Bicycle Master Plan Policy BMP 2: Complete and maintain connected bikeways that provide safe transportation for Spokane cyclists throughout the City, BMP 4: Enhance the safety of people riding bicycles through detailed crash analysis, BMP 5: Develop a collaborative program between a variety of city departments and agencies and outside organizations to implement the Bike Master Plan through capital project delivery as well as community planning processes; and

WHEREAS, Vision Zero is a holistic strategy aimed at eliminating all traffic fatalities and severe injuries suffered by all road users in Spokane while increasing safe, healthy, and equitable mobility for all;

WHEREAS, similar efforts are founded on a Safe Systems approach that recognizes humans will make mistakes and roadway systems and policies should be designed to protect them; and

NOW THEREFORE, BE IT RESOLVED that the Spokane City Council adopts a goal to eliminate traffic deaths and severe injuries within the set timeframe of 2042, and adopts the analysis provided by the City's Local Road Safety Risk-Based Analysis as the City's Safety Action Plan.

Adopted by the City Council this 12th day of December, 2022.

City Clerk

Approved as to form:

Michael J. Piccolo

Assistant City Attorney

Introduction

The City of Spokane is committed to reducing fatal and serious injury crashes within its transportation network. Target Zero: Washington State Strategic Highway Safety Plan provides a data-driven approach to achieving this goal through established priorities and strategies, including guidance on using the Federal Highway Administration's (FHWA) *Systemic Safety Project Selection Tool*. Following the methodology in the *Target Zero* plan guides the City toward reducing fatalities and serious injury crashes through a proven approach.

Using the recommended, standardized methods of data analysis allows the City to efficiently direct resources towards efforts that create the greatest reduction of the most severe crash types. Using Washington State Department of Transportation's (WSDOT) crash data allows the City to efficiently sort crash types and locations, identify trends, select the most effective treatments, and undertake a logical approach to addressing the most critical locations and behaviors in the transportation network. By identifying priorities, creating common goals, developing a common language, and offering a menu of solutions, the Plan helps identify the unique risks in our community and the most effective strategies for addressing them.

Terminology

High Injury Network: Analyzing up-to-date local crash data allowed identification of street characteristics most frequently associated with severe or serious-injury crashes. Streets with these characteristics represent Spokane's High Injury Network, shown on Map 3.

Priority Study Area: Based on the results of the crash data assessment, the downtown area and adjacent census tracts emerged as an area with a high concentration of streets on the High Injury Network. With recent public involvement and street safety improvement concepts developed for this area through the Downtown Master Plan and other parallel planning processes, this area was well-situated for safety project implementation and was identified as the Priority Study Area shown on Map 4.

***Risk Based Safety Assessment*:** The City previously completed a Risk Based Safety Assessment to serve as a Local Road Safety Plan under WSDOT's City Safety Program. This assessment was updated with 2017-2021 data to serve as the basis for the City's Vision Zero Action Plan.

Assessment of Existing Plans, Policies, Guidelines

Over the past two decades Spokane has adopted several ordinances, policies and guidelines to improve safety.

SMC 17H.020* Complete Streets Program*: Adopted in 2011. This section focuses on providing better facilities for non-motorized and transit users throughout the city.

SMC 17H.010.210* Crosswalks*: Adopted in 2014. This section establishes typical locations for marked crosswalks by zoning and adjacent land use (parks, schools, trail crossings, etc.) without the need to conduct a detailed engineering evaluation first.

SMC 17H.010.215* Regional Trail Crossings*: Adopted in 2014. This section requires that raised crosswalks be installed for regional trail crossings. In addition, traffic control shall require street traffic to stop for the trail, if deemed appropriate by an engineering study.

SMC 16A.84* Pedestrian Safety*: Adopted in 2019. This section recommended implementation of pedestrian recall on downtown signals during the daytime hours. Leading pedestrian intervals are strongly encouraged at downtown signals and those near schools, childcare centers, hospitals, and any others with higher levels of pedestrian traffic. This

section sets a goal to deploy Accessible Pedestrian Signals at all signalized intersections.

***SMC 17H.010* Street Development Standards:** Updated in 2020. Along with updates to the City's Design Standards, staff updates several sections of code to allow narrower residential streets, wider sidewalks and buffers, narrower arterial lane widths, two ADA ramps per corner, and many other adjustments.

***SMC 16A.64* Automated Traffic Camera Systems:** Adopted in 2008. The City adopted code allowing Red Light cameras and School Zone Speedy cameras to reduce speeding and red lighting running. Proceeds from the fines are put into the City's Neighborhood Traffic Calming Program.

***Pedestrian Master Plan*:** Adopted in 2015. This plan prioritizes certain areas of the City for sidewalk investment based on population density and surround land uses.

***Bicycle Master Plan*:** Updated in 2022. Staff regularly updates the Bicycle Master Plan to reflect the needs and priorities for future bicycle facilities in the City.

***Downtown Plan Goal – Connected and Walkable*:** Updated in 2021. Energize streets as active pedestrian and bike-friendly connections. Capitalize on the City Line and support the transit network by improving access to it.

***Comprehensive Plan Goal F* – Enhance Public Health and Safety:** Updated in 2017. Promote healthy communities in Spokane by providing and maintaining a safe transportation system with viable active mode options that provides for the needs of all travelers, particularly the most vulnerable users.

***Comprehensive Plan Policy TR1* – Transportation Network for All Users:** Updated in 2017. Design the transportation system to provide a complete network for all users, maximizing innovation, access, choice and options through the four seasons. All streets must meet mandated accessibility standards.

Systemic Safety Project Selection

Methodology

Data for this analysis runs from January 1, 2017, through December 31, 2021, with data derived from accident reports provided by the Washington State Patrol.

This analysis seeks to identify trends in fatal and serious crashes and then propose solutions. In achieving this goal, the analysis follows five steps:

I. Classify fatal and serious crashes by crash type, and assign priority levels to each type,
II. Identify roadway characteristics associated with high priority crash types,
III. Identify locations within the City transportation network that have these characteristics,
IV. Identify treatments for these locations, and
V. Prioritize projects.

Step 1: Classify Crashes by Type and Assigning Priorities

In this step, WSDOT-provided data was sorted by crash type. Each crash type was then assigned a priority level, based on examples and approaches recommended in *Target Zero.* Based on this guidance, the selected priority levels are as follows:

- **Priority Level 1**: Contributing factors involved in 30% or more of fatal or serious injury crashes.
- **Priority Level 2**: Contributing factors involved in 10% to 30% of fatality or serious injury crashes.

- **Priority Level 3**: Contributing factors involved in all other fatality or serious injury crashes.

Table 1 quantifies the City's crash types and compared to the same accident types in Washington State overall and indicate priority levels for each crash type. Priority 1 and 2 crash types have been highlighted.

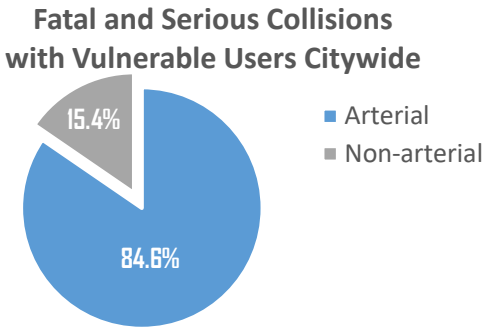
The most prominent collision pattern is the "Vulnerable User Involved" at 35.4% of all Fatal/Serious crashes within the City of Spokane. This collision pattern has been selected as the focus of the analysis and project list for the purposes of this action plan.

Table 1 Analysis of City Crash data 2017-2021

	Fatal/Serious Crashes				All Crashes				Priority Level
	City of Spokane		City-Owned Streets		City of Spokane		City-Owned Streets		
Overall	458	2.3%	5,012	1.7%	19,698		301,913		
By Primary Crash Type									
Angle	100	21.8%	1,183	23.6%	6,552	33.3%	110,168	36.5%	2
Fixed Object	54	11.8%	821	16.4%	2,200	11.2%	31,666	10.5%	2
Vulnerable User Involved	162	35.4%			972	4.9%			1
Bicyclist(s) Involved	34	7.4%			304	1.5%			3
Pedestrian(s) Involved	128	27.9%			668	3.4%			2
By Junction Relationship									
Intersection-Related	200	43.7%	2,443	48.7%	9,432	47.9%	153,454	50.8%	1
Non-Intersection-Related	159	34.7%	2,132	42.5%	6,594	33.5%	106,170	35.2%	1

Step 2. Identifying Roadway Characteristics

Staff analyzed the fatal/serious crash patterns for vulnerable users to home in on common roadway characteristics. Appendix A includes the detailed analysis, which shows that 85% of fatal and serious crashes involving vulnerable users occurs on Spokane's arterial street system.

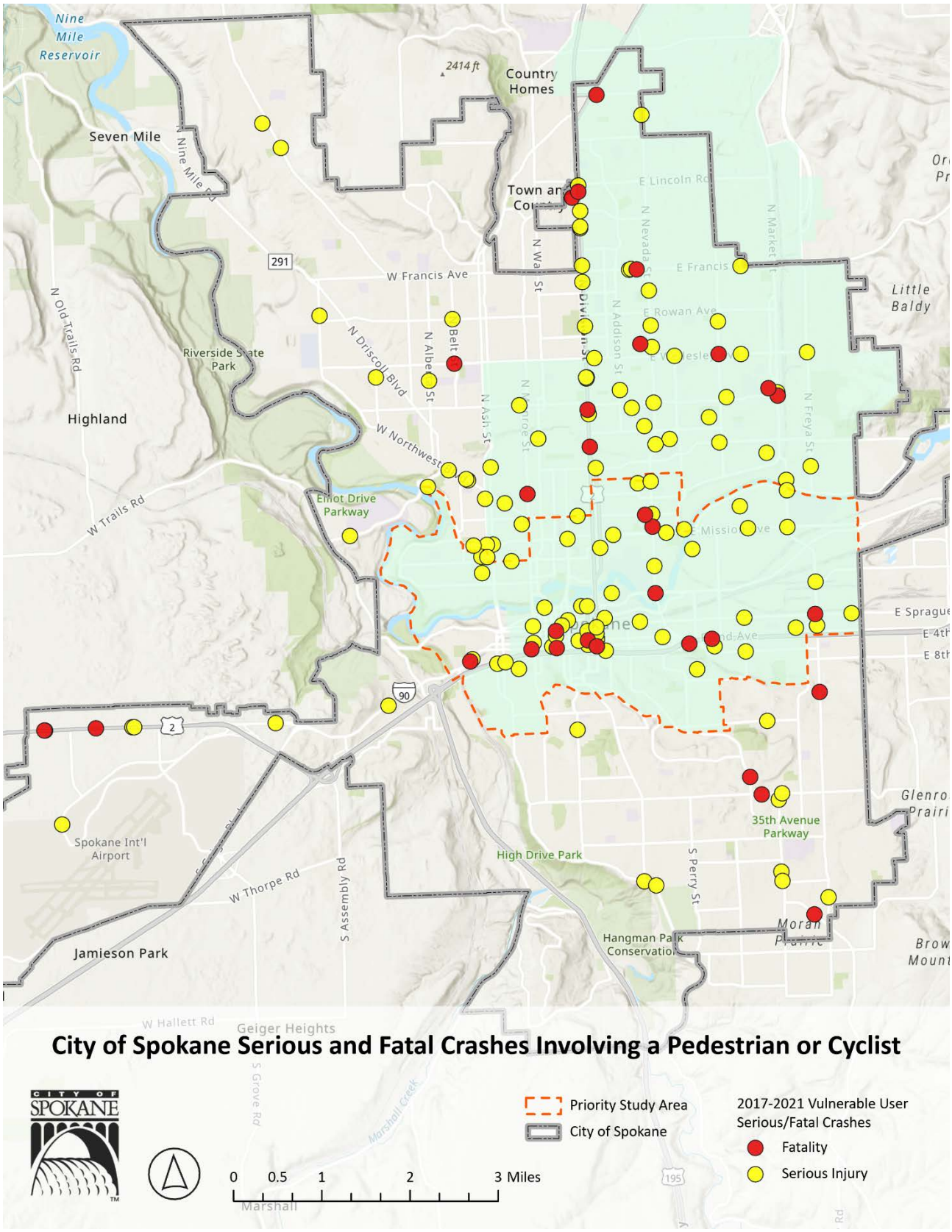


Contributing factors for Fatal and Serious Collisions with Vulnerable Users citywide can be drawn from the additional analysis in Appendix A and are summarized as follows:

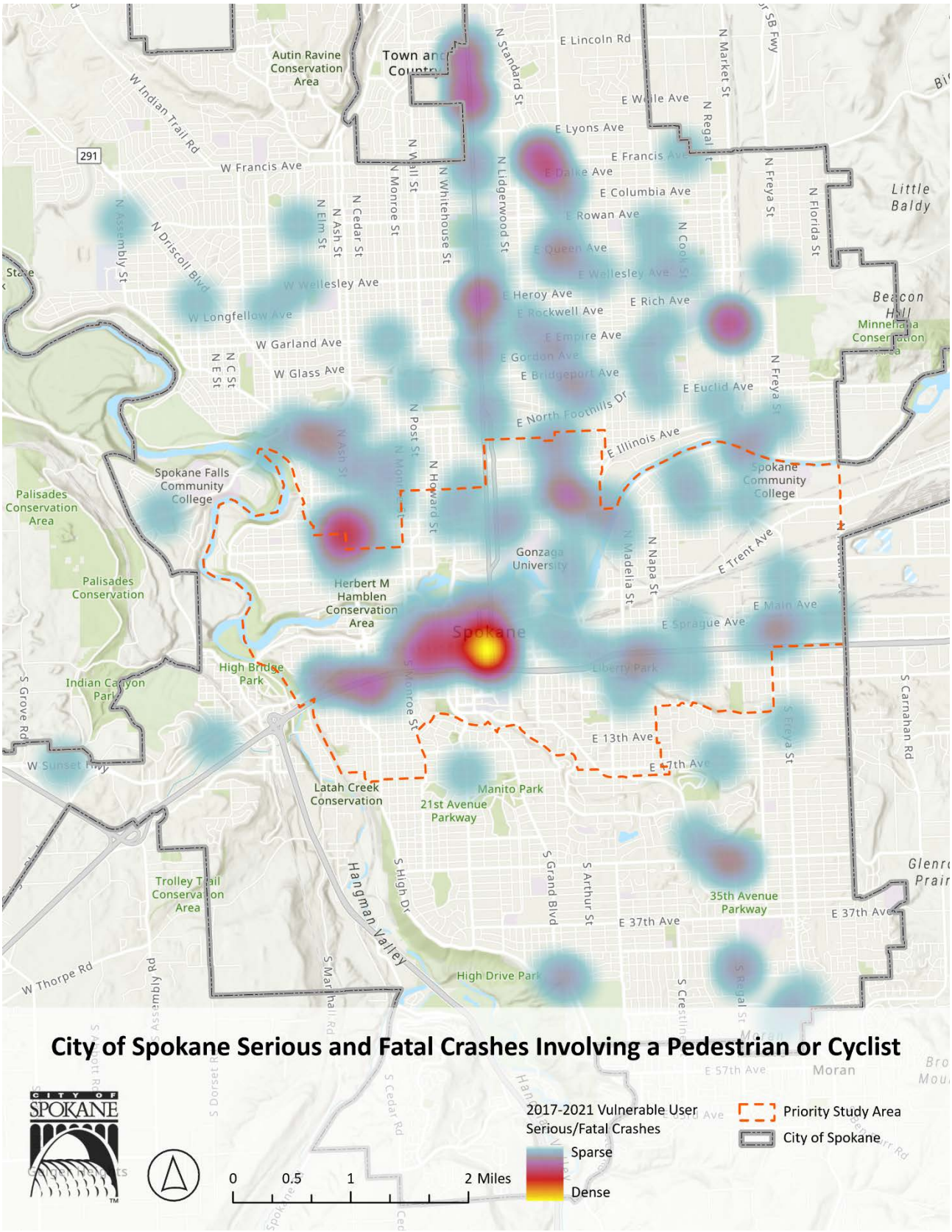
- 23% of these collisions occurred at arterial traffic signals.
- 58% of these collisions occurred at arterial intersections (all types of control).
- 40% of bicycle-specific collisions occurred on arterial roadway segments

A closer look at the arterials and crash locations indicates that 227.1 specific miles of arterial stand out as a High-Injury Street Network for the city. This High Injury Network includes Major & Minor Arterials, Highways, and collectors across the city and within the Priority Study Area (see Map 3).

Map 1 Vulnerable User (Ped & Bike) Serious and Fatal Crashes



Map 2 Vulnerable User Crash Heat Map



Step 3. Identify Priority Locations

Census Tracts Identified as Underserved or Disadvantaged

For purposes of this study the City is identifying disadvantaged communities using the 2023 Climate and Economic Justice Screening Tool. This tool identifies almost all the downtown core, surrounding areas and much of north Spokane as areas considered disadvantaged (see Map 3). According to the 2020 census tract data 127,255 people reside in disadvantaged community tracts. Spokane has a total population of 219,185[1] meaning that approximately 58% of residents reside in a disadvantaged community tract. Within these disadvantaged community tracts 126 of 162 (78%) vulnerable user fatal and serious crashes occurred. Total area of the disadvantaged community tracts is 39.4 square miles and total area of the City of Spokane is 69.5 square miles.

Total high risk road network[2] miles is 227.1 and within the disadvantaged community tracts total high risk road network miles is 65, or 29% of total high risk road network miles (see Map 3).

Causal factors specific vulnerable user collisions in the Disadvantaged Community census tracts include:

- 58% at intersection and related
- 68% had no traffic control device, indicating a mid-block or uncontrolled intersection
- 25% at signalized intersections
- Travelling in the dark

Data-driven safety enhancements for these neighborhoods may include: sidewalk infill on arterial streets, narrowing or removing vehicular travel lanes, installing bike lanes, shortened crossing distances, refuge islands, pedestrian hybrid beacons, crosswalk lighting and ADA ramps to ensure everyone can access the sidewalk.

[1] American Community Survey (2023). S0101 AGE AND SEX 2020: ACS 5-Year Estimates Subject Tables. Retrieved from https://data.census.gov/

[2] High risk road network includes major arterials, minor arterials, collectors, freeways, and highways. Also includes all streets and roads in the Downtown Plan Boundaries.

Map 3 City of Spokane High Injury Network & Disadvantaged Community Tracts

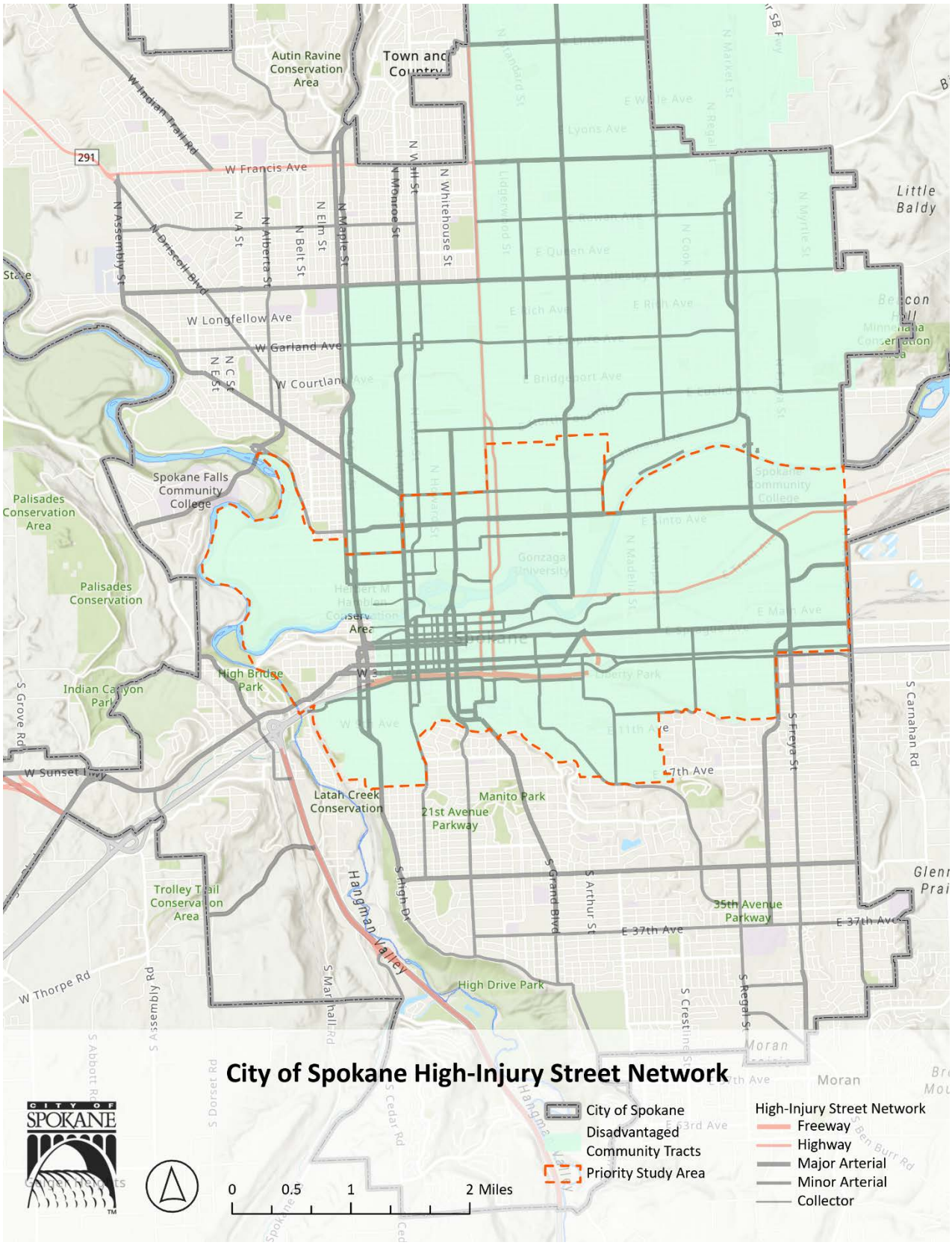


Table 2 Contributing Factors to Fatal and Serious Crashes with Vulnerable Users, within Disadvantaged Community Tracts

Contributing Factors	# of Severe and Fatal Injuries	% of Total Serious and Fatal Injuries (n=126)
Light Conditions		
Dark	62	49.21%
Daylight	58	46.03%
Dusk/Dawn	6	4.76%
Posted Speed		
20	2	1.59%
25	15	11.90%
30	53	42.06%
35	10	7.94%
45	1	0.79%
60	1	0.79%
<Null>	44	34.92%
Vehicle Action		
Backing	4	3.17%
Changing Lanes	2	1.59%
Going Straight Ahead	85	67.46%
Making Left Turn	18	14.29%
Making Right Turn	8	6.35%
Making U-Turn	1	0.79%
Other	3	2.38%
Starting From Parked Position	3	2.38%
Starting in Traffic Lane	2	1.59%
Junction Relationship		
At Driveway	4	3.17%
At Intersection and Not Related	4	3.17%
At Intersection and Related	74	58.73%
Exiting Roundabout	1	0.79%
Intersection Related but Not at Intersection	3	2.38%
Not at Intersection and Not Related	40	31.75%
Traffic Control		
No Traffic Control	86	68.25%
Other Traffic Control	1	0.79%
Signals	32	25.40%
Stop Sign	7	5.56%
Road Classification		
Alley	1	0.79%
Collector	6	4.76%
Freeway	3	2.38%
Highway	29	23.02%
Local	19	15.08%
Major Arterial	48	38.10%
Minor Arterial	20	15.87%

Priority Study Area

The Priority Study Area as identified in Map 4 contains 68 of the 162 vulnerable user fatal and serious injury crashes. This subsection of the total high injury network is 12 square miles of vital core for pedestrian and pedacyclist traffic. According to the 2020 census tract data, the study area has a population of 50,708 with 45,249 (89.23%) residents living within census tracts considered disadvantaged. Table 3identifies all crashes and some of the causal factors within the Priority Study Area boundaries.

89% of the 50,000 residents in the Priority Study Area are considered disadvantaged.

Causal factors specific to the Priority Study Area include:

- Lack of a traffic control device
- Speeding
- Turning at signalized intersections
- Travelling in the dark

In the Priority Study Area these types of collisions can be prevented through data-driven safety enhancements such as: leading pedestrian intervals, signal phasing improvements, lane reductions, protected bike lanes, shortened crossing distances, removing vehicular travel lanes, crosswalk lighting and ADA ramps to ensure everyone can access the sidewalk.

The Priority Study Area meets a significant number of criteria for being classified as being disadvantaged according to the Climate and Economic Justice Screening Tool. Some of the criteria for this area being considered disadvantaged include:

- **Low income**: People in households where income is less than or equal to twice the federal poverty level, not including students enrolled in higher ed. Most of the tracts within the study area exceed the 65th percentile according to the Climate and Economic Justice Screening Tool.
- **Asthma & Air Pollution**: A significant portion of the tracts within the priority study area are above the 90th percentile for the share of people who have been told that they have asthma. This is likely correlated to the high levels of PM2.5 in the air occurring in most of the tracts.
- **Housing Costs**: 40% of renters pay more than 35% of the gross household income on rent.[3]
- **Households without a vehicle**: On average, 18.66% of households in the priority study area do not have a vehicle available.[4] This ranges from 6% to 30% in some of the lowest socioeconomic status tracts. The lack of vehicle availability, depending on car-dependence of the physical environment, can contribute positively to the economic wellbeing of families through increased choices in living situations and employment. Alternatively, a well-designed street network oriented towards transit and active transportation can have similar benefits while also benefiting greenhouse gas emissions, congestion, and aesthetics of the area.
- **Transportation Proximity**: Most of the tracts within the priority study area are affected by interstates and state highways. I-90 bisects most of the tracts and creates a disconnection between the north-south neighborhoods and may cause significant noise and air pollution, increasing risks to physical health.

[3] U.S. Census Bureau. (2023). 2021 American Community Survey 5-year Estimates. DP04 Selected Housing Characteristics.
[4] Ibid.

Division St in the downtown area is classified as a state highway and carries a significant portion of the north-south traffic.

Included in the Priority Study Area is the Downtown Planning area. The Downtown Planning Area has the highest rate of serious and fatal collisions for vulnerable users (bicyclists and pedestrians). Of the 162 serious and fatal collisions across the city 28, or 17.2%, of those crashes occurred in the Downtown Planning Area while only account for 1.66 square miles of the 69.52 square miles, or 2.4%, of the land within City boundaries.

Why is the Downtown area (primarily located in tract 35, see Map 5) considered disadvantaged according to the Climate and Economic Justice Screening Tool?

- **95th Percentile** in "Low Income: People in households where income is less than or equal to twice the federal poverty level, not include students enrolled in higher ed."
- **91st percentile** in "Asthma: Share of people who have been told they have asthma."
- **96th percentile** in "Heart disease: Share of people ages 18 ears and older who have been told they have heart disease."
- **96th percentile** in "Low life expectancy: Average number of years a person can expect to live."
- **91st percentile** in "Lack of green space: Amount of land, not including crop land, that is covered with artificial materials like concrete or pavement."
- **97th percentile** in "Traffic proximity and volume: Count of vehicles at major roads within 500 meters."
- **96th percentile** in "Underground storage tanks and releases: Formula of the density of leaking underground storage tanks and number of all active underground storage tanks within 1500 feet of the census tract boundaries."
- **99th percentile** in "Low median income: Comparison of median income in the tract to median incomes in the area."
- **97th percentile** in "Poverty: Share of people in household where income is at or below 100% of federal poverty level. "

Though Downtown has been identified as a disadvantaged census tract, as highlighted above, The Downtown Plan recognizes that Spokane's Downtown is the hub of the region's economic viability and stability and is also the center of the region's cultural and art scene attracting diverse populations. The Downtown neighborhood has one of the overall lowest populations in the City but is representative of the diversity in Spokane being 16% non-white and is generally younger than Spokane's overall population at 82% under 62 years of age.

To implement the five goals of the Downtown Plan (see "Downtown Plan Public Workshops" on page 16) that were refined through community and stakeholder input, the plan has 15 priority actions that utilize a framework to implement improvements oriented towards increasing equitable access to services and amenities. These priority actions include the conversion of over-built low traffic streets to include bicycle and pedestrian infrastructure, activating pedestrian zones, decreasing land dedicated to vehicle storage, and implementing transportation demand management strategies.

Map 4 Priority Study Area boundaries

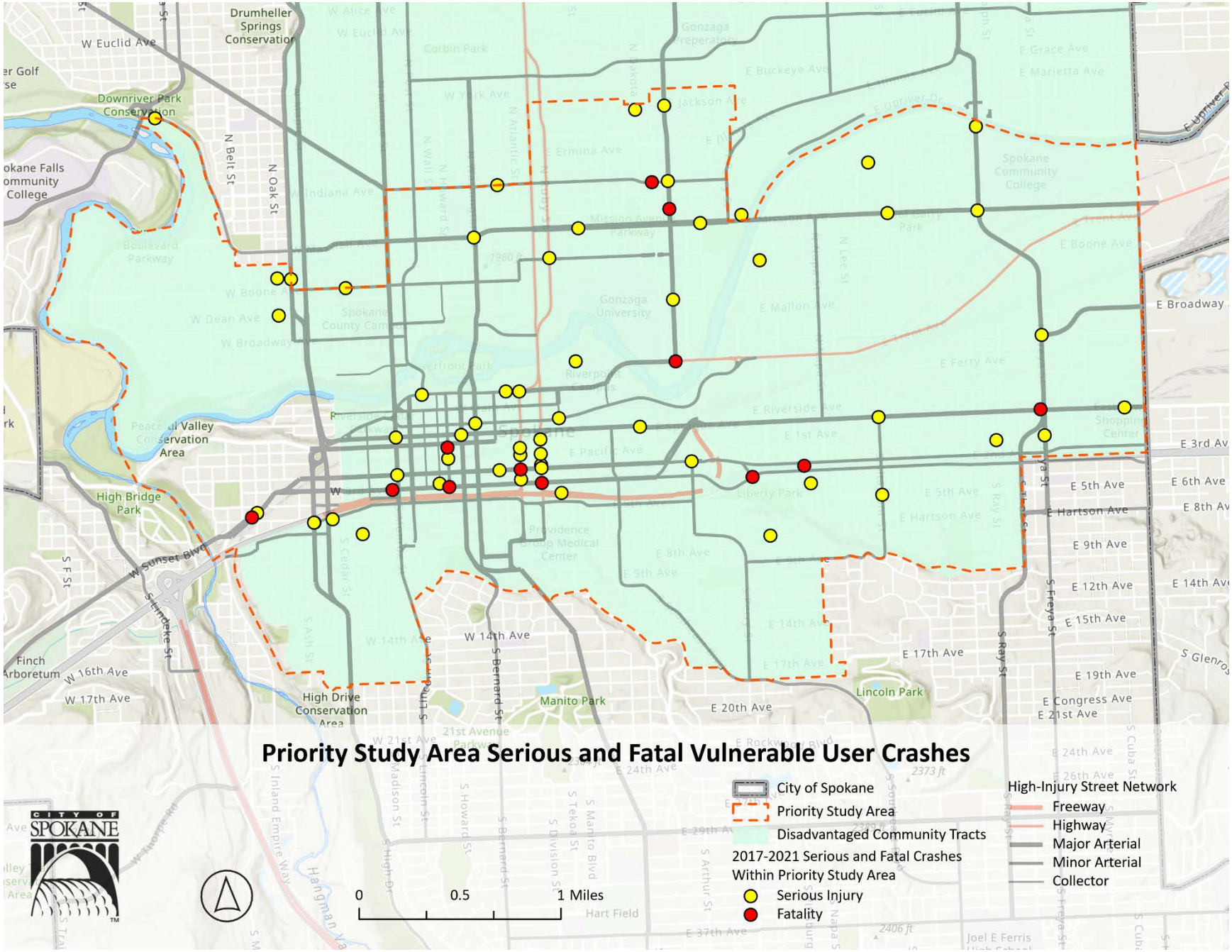


Table 3 Priority Study Area Boundary Crashes with a Vulnerable User

Contributing Factors	# of Severe and Fatal Injuries	% of Total Serious and Fatal Injuries (n=68)
Light Conditions		
Dark	34	50.00%
Daylight	32	47.06%
Dusk/Dawn	2	2.94%
Posted Speed		
25	7	10.29%
30	20	29.41%
35	2	2.94%
60	2	2.94%
<Null>	37	54.41%
Vehicle Action		
Backing	4	5.88%
Changing Lanes	2	2.94%
Going Straight Ahead	42	61.76%
Making Left Turn	12	17.65%
Making Right Turn	3	4.41%
Making U-Turn	1	1.47%
Other	2	2.94%
Starting	2	2.94%
Junction Relationship		
At Driveway	1	1.47%
At Intersection and Not Related	5	7.35%
At Intersection and Related	35	51.47%
Not at Intersection and Not Related	27	39.71%
Traffic Control		
No Traffic Control	45	66.18%
Signals	20	29.41%
Stop Sign	3	4.41%
Road Classification		
Collector	3	4.41%
Freeway	3	4.41%
Highway	13	19.12%
Local	11	16.18%
Major Arterial	26	38.24%
Minor Arterial	12	17.65%

Step 4: Select Countermeasures

Following identification of locations, effective countermeasures are identified for each crash type as shown in Table 4. Countermeasures are evaluated through FHWA's Crash Modification Factors (CMF) clearinghouse. The CMF clearinghouse contains safety countermeasures and scores its effectiveness at reducing crashes. The CMF rating estimates the reduced frequency of crashes following the installation of the countermeasure. For example, if the CMF is 0.70, the amount of crashes would be expected to be 70% of the existing number of crashes.

Table 4 CMF's for Fatal/Serious crashes with Vulnerable User

CMF	ID #	Countermeasure	Crash Type	Severity
0.75	#9017	Install advanced yield or stop markings and signs	Veh-Ped	All
0.60	#4123	Install high-visibility crosswalk markings	Veh-Ped	All
0.54	#175	Add raised median with marked crosswalk	Veh-Ped	All
0.61	#176	Add raised median without marked crosswalk	Veh-Ped	All
0.29	*	Install raised median	All	All
0.41	#441	Provide intersection illumination	Veh-Ped	S, M
0.5 (?)	-	Add curb extensions (estimated CMF)	all	all
0.53	#9024	Install RRFB	Veh-Ped	All
0.43	#9021	Install PHB with advanced yield or stop markings	Veh-Ped	All
0.77	#319	Install traffic signal	All	All
0.73	#10741	Install bike lanes with reduced vehicle lane width	All	All
0.84	#9903	Install Leading Pedestrian Interval	Veh-Ped	All
0.60	#11246	Install sidewalk	Veh-Ped	All
0.75	#9250	Install shared-use pathway	Veh-Bike	All
0.37	**	Install bicycle boulevard	Veh-Bike	All
0.61	#3258	Install colored bike lanes at signalized intersections	Veh-Bike	All
0.55	***	Install raised pedestrian crosswalks	Veh-Ped	All
0.59	***	Changeable speed warning signs	All	All
0.94	***	Corridor-specific traffic calming	All	All
n/a	n/a	Add bike runnels to existing public stairways	Veh-Bike	All
n/a	n/a	Add lighting, railing, etc to existing public stairways	Veh-Ped	All

* Correlating Access Management to Crash Rate, Severity and Collision Type
** Cyclist Safety on Bicycle Boulevard and Parallel Arterial Routes, 2011.
*** Handbook of Road Safety Measures, 2004.

Step 5: Recommended Projects and Strategies

Projects on the list are from a variety of sources, including the Downtown Plan, prior-year Local Road Safety Plans, the ADA Transition Plan, requirements from City Ordinances, and locations identified in the 2017-2021 crash analysis in this document, with the intent to mitigate many fatal and serious non-motorized collisions. Cost estimates are detailed in Appendix C.

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

Table 5 Projects and Strategies

Location	Improvement	Cost*	Time**
1st Avenue from Maple to Bernard	Remove travel lane, install protected bike lane	$786,000	5 yrs
Sprague Avenue from Maple to Lincoln	Remove travel lane, install protected bike lane	$334,000	5 yrs
Washington from 5th to Sprague	Remove travel lane, install protected bike lane	$331,000	10 yrs
Stevens from 5th to Sprague	Remove travel lane, install protected bike lane	$336,000	10 yrs
2nd Avenue from Division to Arthur	Adjust lane widths, install buffer and extend bike lane	$274,000	10 yrs
3rd Avenue from Division to Arthur	Remove travel lane, install protected bike lane, bus stop islands	$438,000	10 yrs
Broadway Ave from Chestnut to Lincoln	Reduce or remove TWLTL, install bike lanes, bus stop islands	$962,000	10 yrs
Mallon Ave from Lincoln to Howard	Reduce or remove TWLTL, install bike lanes	$148,000	10 yrs
Mallon Ave from Monroe to Lincoln	Add sidewalk north side	$165,000	5 yrs
Sharp Ave from Atlantic to Lidgerwood	Adjust striping to add bike lanes	$222,000	10 yrs
Maple Street Bridge north side (old toll plaza)	Replace stairway with combination stairs and shared-use pathway	$756,000	5 yrs
Iron Bridge shared-use pathway	Connect Iron Bridge to Ben Burr Trail	$516,000	5 yrs
14th Avenue Stairway west of Perry and Perry from 13th to 18th	Rebuild stairway with improved railings, bike runnel and lighting, sidewalk on Perry.	$535,000	5 yrs
Unsignalized intersections	ADA ramps, including allowances for drainage adjustments	$10,000 per corner	1-20 yrs
Unsignalized intersections	Bumpouts as an add-on to ADA ramp	$15,000 per corner	1-20 yrs
Signalized intersections	ADA ramps, including allowances for drainage adjustments, junction boxes	$15,000 per corner	1-20 yrs
Signalized intersections	Add accessible pedestrian pushbuttons	$10,000 per intersection	10 yrs
Signalized intersections	Implement Leading Pedestrian Intervals	$5,000 per intersection	5 yrs
Unsignalized crosswalks	Raised crosswalk	$30,000	1-10 yrs
Unsignalized crosswalks	Hard-wired RRFB with illumination	$200,000	1-20 yrs
Unsignalized multilane crosswalks	PHB with illumination	$300,000	20 yrs
Marked crosswalks (sig or unsig)	High visibility crosswalks per intersection leg	$1,000	10 yrs
Bike lanes through intersections	Green paint for high-volume conflict zones	$10,000 per intersection	10 yrs

*Concept level estimates that include design, construction, construction monitoring and contingency.

Public Engagement

The public engagement effort for elements of this action plan have taken place over several years and involved several different citizen groups. See Appendix D for a summary of the public engagement efforts.

Action Plan Committee Meetings

The City is working with the Plan Commission Transportation Subcommittee for further efforts on development, implementation and monitoring of the Vision Zero Action Plan. This group is a transportation-focused advisory committee to the Plan Commission, with representation from Spokane Public Schools, WSDOT, Spokane Regional Health District, several neighborhood councils, the Bicycle Advisory Board, Spokane Transit Authority, the Spokane Regional Transportation Council and several other citizens at large. These additional engagement efforts started in fall 2022 and ran through May 2023. The discussions were focused on the collision patterns, likely countermeasures, needed improvements to ordinances and methods to track progress over time. Their feedback was incorporated into the plan update in May 2023.

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

Downtown Plan Public Workshops

The City's Downtown Plan update started in 2019 and ran through adoption in 2021. This included a wide variety of outreach such as workshops, online surveys, open houses, targeted group presentations and eventual adoption by the Plan Commission and City Council. The 22 member steering committee included representation from business and property owners, neighborhood councils, restaurant employees, homeless assistance organizations, arts groups and the university district. Many of the comments from the workshops and open houses were transportation focused, and point to the need for improved safety of non-motorized users in the city center. Through the public workshops and various committees, five goals were identified for the Downtown Plan.

Five goals of the Downtown Plan

- *A connected and walkable Downtown;*
- *Thriving arts, culture and historic places*
- *A great place to live, work and play;*
- *Welcoming and engaging public spaces for all; and*
- *A well-organized Downtown*.

Along with the five overarching goals of the Downtown Plan, there were also seven key findings, four of which are related to transportation and equity issues, they include:

I. Many streets in Downtown are auto dominated and oversized for vehicle capacity: Opportunities sexist to energize streets by expanding space for pedestrians, cyclists, and other forms of micro-mobility.

II. Community members desire continued progress on two significant issues facing Downtown: providing services and solutions for those experiencing homelessness, followed by improved public safety. People consistently expressed concern for public safety.

III. Activity centers are disconnected: While areas of Downtown have successful concentrations of activity, they are disconnected both physically and visually from the core of Downtown. Enhancing connections through street and mobility improvements, wayfinding, and infill development will help connect the City and the man amenities in Downtown.

IV. Entries and connections into Downtown should feel safe, welcoming, and distinct: Major streets that are entrances to and exits from Downtown merit improvements as city-defining gateways. Other natural gateways like undercrossings can help offer a better experience and image of Downtown.

Outreach for City Ordinances

Because the City has adopted a number of safety-related ordinances for non-motorized travelers, the outreach associated with those efforts is also considered part of the public engagement effort for this action plan. All city ordinances involve a hearing in front of council and are often discussed in the local newspaper, giving citizens an opportunity to comment. These processes took place in 2011 with the Complete Streets Ordinance, in 2014 with the Crosswalk Ordinance and in 2019 with the Pedestrian Safety Ordinance.

Needed Policies, Plans, Guidelines, Standards

City staff has identified the following areas that need updates to provide safer facilities for our community:

- Comprehensive review of arterial speed limits to ensure appropriateness and consistency
- Speed limit downtown?
- Regular updates to the school zone and park speed limits
- Protected bike lane maintenance equipment and policy
- Clear view triangle updates for alleys, local roads, arterials, shared-use pathways
- Other vegetation blocking views or encroaching on sidewalks
- Crosswalk maintenance or new treatments
- Add to Standard Plans – shared-use pathway sections, protected bike lane design
- Comprehensive update of bicycle plan

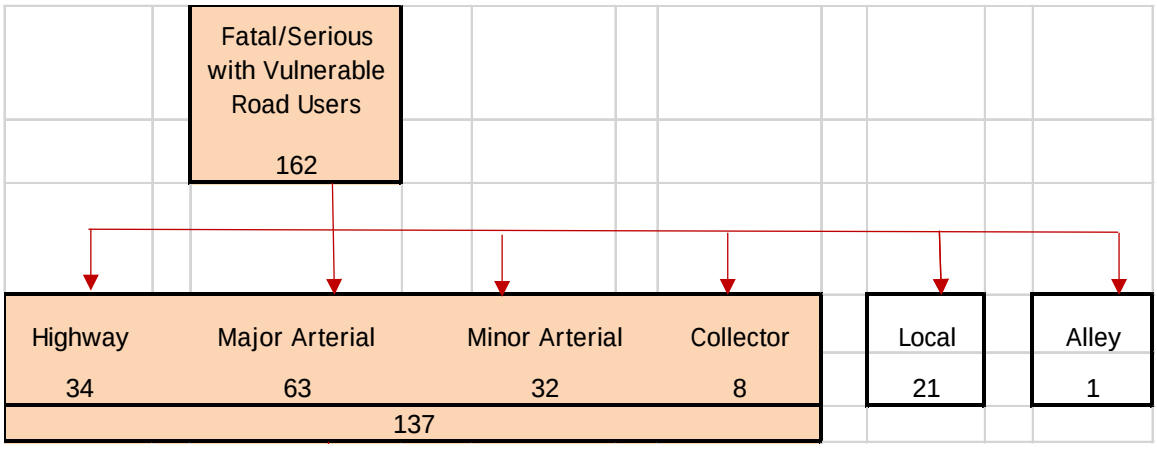
Measuring Progress

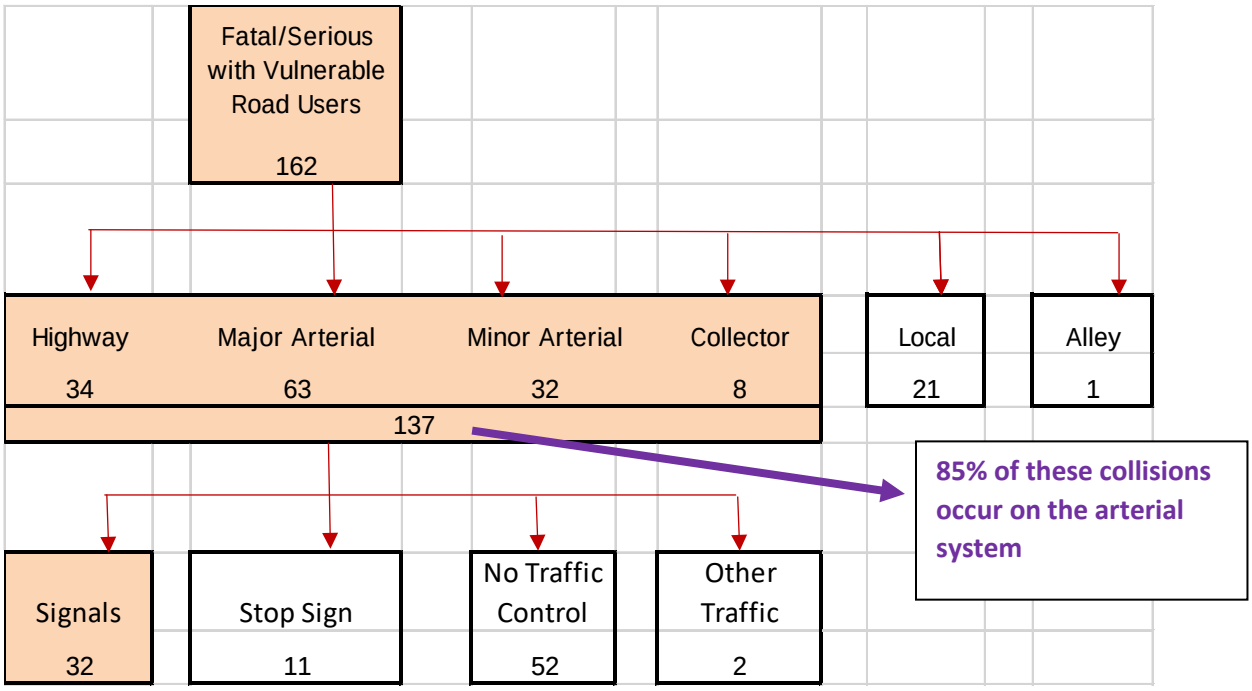
The City evaluates collision data through several planning and project level efforts. Much of this data is also available through WSDOT's online data portal, allowing more real-time monitoring. The City commits to tracking the following data points:

- Total number of collisions, fatalities and serious injuries citywide and downtown
- Total number of Pedestrian collisions, fatalities and serious injuries citywide and downtown
- Total number of bike collisions, fatalities and serious collisions citywide and downtown
- Most common contributing factors to these collision types
- STA boarding data in the downtown

Appendix A

Risk Factor Identified details





Appendix B

Pedestrian Crossing Treatments

Figure 1 FHWA-SA-18-018 "Field Guide for Selecting Countermeasures at Uncontrolled Crossing Locations"

Table 1. Application of pedestrian crash countermeasures by roadway feature.

Roadway Configuration	Posted Speed Limit and AADT								
	Vehicle AADT <9,000			Vehicle AADT 9,000–15,000			Vehicle AADT >15,000		
	≤30 mph	35 mph	≥40 mph	≤30 mph	35 mph	≥40 mph	≤30 mph	35 mph	≥40 mph
2 lanes (1 lane in each direction)	● 2 4 5 6	● 5 6 7 9	○ 5 6 ● 9	● 4 5 6	● 5 6 7 9	○ 5 6 ● 9	● 4 5 6 7 9	○ 5 6 7 9	○ 5 6 ● 9
3 lanes with raised median (1 lane in each direction)	● 2 3 4 5 7 9	● ● 5 7 9	○ ● 5 ● 9	○ 3 4 5 7 9	○ ● 5 ● 9	○ ● 5 ● 9	○ ● 4 5 7 9	○ ● 5 ● 9	○ ● 5 ● 9
3 lanes w/o raised median (1 lane in each direction with a two-way left-turn lane)	● 2 3 4 5 6 7 9	● ● 5 6 7 9	○ ● 5 6 ● 9	○ 3 4 5 6 7 9	○ ● 5 6 ● 9	○ ● 5 6 ● 9	○ ● 4 5 6 7 9	○ ● 5 6 ● 9	○ ● 5 6 ● 9
4+ lanes with raised median (2 or more lanes in each direction)	● ● 5 7 8 9	● ● 5 7 8 9	○ ● 5 8 ● 9	○ ● 5 7 8 9	○ ● 5 ● 8 ● 9	○ ● 5 8 ● 9	○ ● 5 ● 7 8 9	○ ● 5 8 ● 9	○ ● 5 8 ● 9
4+ lanes w/o raised median (2 or more lanes in each direction)	● ● 5 6 7 8 9	○ ● 5 ● 6 7 8 9	○ ● 5 ● 6 8 ● 9	○ ● 5 ● 6 7 8 9	○ ● 5 ● 6 ● 7 8 9	○ ● 5 ● 6 8 ● 9	○ ● 5 ● 6 ● 7 8 9	○ ● 5 ● 6 8 ● 9	○ ● 5 ● 6 8 ● 9

Given the set of conditions in a cell,

- # Signifies that the countermeasure is a candidate treatment at a marked uncontrolled crossing location.
- ● Signifies that the countermeasure should always be considered, but not mandated or required, based upon engineering judgment at a marked uncontrolled crossing location.
- ○ Signifies that crosswalk visibility enhancements should always occur in conjunction with other identified countermeasures.*

The absence of a number signifies that the countermeasure is generally not an appropriate treatment, but exceptions may be considered following engineering judgment.

1. High-visibility crosswalk markings, parking restrictions on crosswalk approach, adequate nighttime lighting levels, and crossing warning signs
2. Raised crosswalk
3. Advance Yield Here To (Stop Here For) Pedestrians sign and yield (stop) line
4. In-Street Pedestrian Crossing sign
5. Curb extension
6. Pedestrian refuge island
7. Rectangular Rapid-Flashing Beacon (RRFB)**
8. Road Diet
9. Pedestrian Hybrid Beacon (PHB)**

Appendix C

Project Cost Estimates

Date Prepared: 6/5/2023 **Prepared by:** J. Ball

Project Name: 1st Ave Bike Lanes - Maple to Bernard **$786,056** **Proj ID: ???**

Description: Reduce to 2 lanes, 3' buffered bike lane on south side. Add Green striping across intersections.

Item Description	Bid Item No.	Qty	Unit	Unit Cost	Extension
Division 1 - General Requirements					
SPCC Plan	1071020	1.0	LS	$2,000	$2,000
Public Liaison Representative	1070050	1.0	LS	$10,000	$10,000
Reference and Reestablish Survey Monument	1070060	1	EA	$1,000	$1,000
Mobilization	1090000	1.0	LS	$33,000	$33,000
Project Tremporary Traffic Control	1100000	1.0	LS	$33,000	$33,000
				subtotal:	**$79,000**
Division 2 - Earthwork					
Remove Existing Curb and/or Gutter	20200_0	50	LF	$12	$600
Remove Cement Concrete Sidewalk & Driveway	2020040	59	SY	$20	$1,180
Sawcutting Curb	2020130	2	EA	$45	$90
Sawcutting Rigid and Flexible Pavement	202015_	136	LFI	$1.50	$204
				subtotal:	**$2,074**
Division 4 - Bases					
CSTC for Sidewalk and Driveways	4040030	2	CY	$150	$300
				subtotal:	**$300**
Division 5 - Surface Treatments & Pavements					
Asphalt for Fog Seal	5020010	20	TON	$725	$14,500
HMA for Pavement Repair, CL 1/2 IN. Heavy Traffic, 6 In. Thick	50401__	33	SY	$100	$3,300
Pavement Repair Excavaton Including Haul	5040320	33	SY	$40	$1,320
				subtotal:	**$19,120**
Division 6 - Structures					
				subtotal:	**$0**
Division 7 - Drainage Structures, Storm Sewers, Sanitary Sewers, Water mains & Conduits					
				subtotal:	**$0**
Division 8 - Miscellaneous Construction					
Cement Concrete Curb and/or Gutter	80400__	25	LF	$40	$1,000
Cement Concrete Sidewalk	8140000	28	SY	$85	$2,380
Ramp Detectable Warning	8140040	112	SF	$35	$3,920
Signing, Permanent - City Manufactured Signs	8210070	1	LS	$40,000	$40,000
Pavement Marking (Durable Heat Applied, Inlay Tape, Durable, Paint)	82200_0	1	LS	$250,000	$250,000
Reinforced Doweled Curb	8910000	115	LF	$50	$5,750
Traffic Island Concrete - 4 Inch Thick	8910050	40	SY	$70	$2,800
Traffic Island Fill - CSTC		5	CY	$150	$750
				subtotal:	**$306,600**
Legacy ICM Items					
				subtotal:	**$0**
				Construction Subtotal	**$407,094**
Scope Contingency		20.0%			$81,419
				Construction Subtotal	**$488,513**
Construction Contingency		20.0%			$97,703
Construction total				**Construction Total**	**$586,215**
Property Purchase					$0
Geotech		0.0%			$0
Surveying		3.0%			$17,586
Design & Bid Docs		7.0%			$41,035
Admin, Legal, & Permits		1.5%			$8,793
Construction Mgmt		15.0%			$87,932
				Project Total	**$741,562**

	Unit costs from year…	for construction in…	
	2023	**2025**	
For Program			
Preconstruction	67	$71,460	
Property Purchase	0	$0	
Construction Total	586	$621,388	
Const mgmt	88	$93,208	
	742	**$786,056**	Project Cost

Date Prepared: 6/15/2023 **Prepared by:** J. Ball

Project Name: 2nd Ave - Division to Arthur **$273,946** **Proj ID: ???**

Description: Add 2' buffer to existing 6' bike lane against north curb line. Continue bike lane & buffer from Scott to Arthur. Remove northern most lane west of Aurthur.

Item Description	Bid Item No.	Qty	Unit	Unit Cost	Extension
Division 1 - General Requirements					
SPCC Plan	1071020	1.0	LS	$2,000	$2,000
Public Liaison Representative	1070050	1.0	LS	$10,000	$10,000
Mobilization	1090000	1.0	LS	$11,000	$11,000
Project Tremporary Traffic Control	1100000	1.0	LS	$11,000	$11,000
				subtotal:	**$34,000**
Division 2 - Earthwork					
				subtotal:	**$0**
Division 4 - Bases					
				subtotal:	**$0**
Division 5 - Surface Treatments & Pavements					
Asphalt for Fog Seal	5020010	15	TON	$725	$10,875
				subtotal:	**$10,875**
Division 6 - Structures					
				subtotal:	**$0**
Division 7 - Drainage Structures, Storm Sewers, Sanitary Sewers, Water mains & Conduits					
				subtotal:	**$0**
Division 8 - Miscellaneous Construction					
Signing, Permanent - City Manufactured Signs	8210070	1	LS	$2,000	$2,000
Pavement Marking (Durable Heat Applied, Inlay Tape, Durable, Paint)	82200_0	1	LS	$95,000	$95,000
				subtotal:	**$97,000**
Legacy ICM Items					
				subtotal:	**$0**
				Construction Subtotal	**$141,875**
Scope Contingency		20.0%			$28,375
				Construction Subtotal	**$170,250**
Construction Contingency		20.0%			$34,050
Construction total				**Construction Total**	**$204,300**
Property Purchase					$0
Geotech		0.0%			$0
Surveying		3.0%			$6,129
Design & Bid Docs		7.0%			$14,301
Admin, Legal, & Permits		1.5%			$3,065
Construction Mgmt		15.0%			$30,645
				Project Total	**$258,440**

	Unit costs from year…	for construction in…	
	2023	**2025**	
For Program			
Preconstruction	23	$24,904	
Property Purchase	0	$0	
Construction Total	204	$216,558	
Const mgmt	31	$32,484	
	258	**$273,946**	Project Cost

Date Prepared: 6/15/2023 **Prepared by:** J. Ball

Project Name: 3rd Ave - Division to Arthur **$438,439** **Proj ID: ???**

Description: Reduce to 2 travel lanes. Add 6' bike lane with 3'-5' buffer along south curb line. Install Bus Stop Islands w/ bike lane pass thru.

Item Description	Bid Item No.	Qty	Unit	Unit Cost	Extension
Division 1 - General Requirements					
SPCC Plan	1071020	1.0	LS	$2,000	$2,000
Public Liaison Representative	1070050	1.0	LS	$10,000	$10,000
Mobilization	1090000	1.0	LS	$18,000	$18,000
Project Tremporary Traffic Control	1100000	1.0	LS	$18,000	$18,000
				subtotal:	**$48,000**
Division 2 - Earthwork					
Remove Existing Curb and/or Gutter	20200_0	75	LF	$12	$900
Remove Cement Concrete Sidewalk & Driveway	2020040	56	SY	$20	$1,120
Sawcutting Curb	2020130	10	EA	$45	$450
Sawcutting Rigid and Flexible Pavement	202015_	600	LFI	$1.50	$900
				subtotal:	**$3,370**
Division 4 - Bases					
CSTC for Sidewalk and Driveways	4040030	14	CY	$150	$2,100
				subtotal:	**$2,100**
Division 5 - Surface Treatments & Pavements					
Asphalt for Fog Seal	5020010	14	TON	$725	$10,150
				subtotal:	**$10,150**
Division 6 - Structures					
				subtotal:	**$0**
Division 7 - Drainage Structures, Storm Sewers, Sanitary Sewers, Water mains & Conduits					
				subtotal:	**$0**
Division 8 - Miscellaneous Construction					
Cement Concrete Curb and/or Gutter	80400__	75	LF	$40	$3,000
Cement Concrete Sidewalk	8140000	237	SY	$85	$20,145
Ramp Detectable Warning	8140040	280	SF	$35	$9,800
Signing, Permanent - City Manufactured Signs	8210070	1	LS	$30,000	$30,000
Pavement Marking (Durable Heat Applied, Inlay Tape, Durable, Paint)	82200_0	1	LS	$75,000	$75,000
Reinforced Doweled Curb	8910000	510	LF	$50	$25,500
				subtotal:	**$163,445**
Legacy ICM Items					
				subtotal:	**$0**
				Construction Subtotal	**$227,065**
Scope Contingency		20.0%			$45,413
				Construction Subtotal	**$272,478**
Construction Contingency		20.0%			$54,496
Construction total				**Construction Total**	**$326,974**
Property Purchase					$0
Geotech		0.0%			$0
Surveying		3.0%			$9,809
Design & Bid Docs		7.0%			$22,888
Admin, Legal, & Permits		1.5%			$4,905
Construction Mgmt		15.0%			$49,046
				Project Total	**$413,622**

	Unit costs from year…	for construction in…	
	2023	**2025**	
For Program			
Preconstruction	38	$39,858	
Property Purchase	0	$0	
Construction Total	327	$346,592	
Const mgmt	49	$51,989	
	414	**$438,439**	Project Cost

Date Prepared: 6/8/2023 **Prepared by:** J. Ball

Project Name: Broadway Ave - Chestnut to Lincoln **$962,233** **Proj ID: ???**

Description: Remove TWLT lane. Add 6' bike lane against curb line, 1.5' buffer, 7.5 parking, 10.5+/- lanes. Install Bus Stop Islands w/ bike lane pass thru.

Item Description	Bid Item No.	Qty	Unit	Unit Cost	Extension
Division 1 - General Requirements					
SPCC Plan	1071020	1.0	LS	$2,000	$2,000
Public Liaison Representative	1070050	1.0	LS	$10,000	$10,000
Mobilization	1090000	1.0	LS	$41,000	$41,000
Project Tremporary Traffic Control	1100000	1.0	LS	$41,000	$41,000
				subtotal:	**$94,000**
Division 2 - Earthwork					
Remove Existing Curb and/or Gutter	20200_0	150	LF	$12	$1,800
Remove Cement Concrete Sidewalk & Driveway	2020040	111	SY	$20	$2,220
Sawcutting Curb	2020130	20	EA	$45	$900
Sawcutting Rigid and Flexible Pavement	202015_	1,200	LFI	$1.50	$1,800
				subtotal:	**$6,720**
Division 4 - Bases					
CSTC for Sidewalk and Driveways	4040030	23	CY	$150	$3,450
				subtotal:	**$3,450**
Division 5 - Surface Treatments & Pavements					
Asphalt for Fog Seal	5020010	15	TON	$725	$10,875
				subtotal:	**$10,875**
Division 6 - Structures					
				subtotal:	**$0**
Division 7 - Drainage Structures, Storm Sewers, Sanitary Sewers, Water mains & Conduits					
				subtotal:	**$0**
Division 8 - Miscellaneous Construction					
Cement Concrete Curb and/or Gutter	80400__	150	LF	$40	$6,000
Cement Concrete Sidewalk	8140000	414	SY	$85	$35,190
Ramp Detectable Warning	8140040	560	SF	$35	$19,600
Signing, Permanent - City Manufactured Signs	8210070	1	LS	$40,000	$40,000
Pavement Marking (Durable Heat Applied, Inlay Tape, Durable, Paint)	82200_0	1	LS	$240,000	$240,000
Reinforced Doweled Curb	8910000	850	LF	$50	$42,500
				subtotal:	**$383,290**
Legacy ICM Items					
				subtotal:	**$0**
				Construction Subtotal	**$498,335**
Scope Contingency		20.0%			$99,667
				Construction Subtotal	**$598,002**
Construction Contingency		20.0%			$119,600
Construction total				**Construction Total**	**$717,602**
Property Purchase					$0
Geotech		0.0%			$0
Surveying		3.0%			$21,528
Design & Bid Docs		7.0%			$50,232
Admin, Legal, & Permits		1.5%			$10,764
Construction Mgmt		15.0%			$107,640
				Project Total	**$907,767**

	Unit costs from year…	for construction in…	
	2023	**2025**	
For Program			
Preconstruction	83	$87,476	
Property Purchase	0	$0	
Construction Total	718	$760,659	
Const mgmt	108	$114,099	
	908	**$962,233**	Project Cost

Date Prepared: 6/1/2023 **Prepared by:** J. Ball

Project Name: Iron Bridge Trail Connection **$515,797** **Proj ID: ???**

Description: Construct 12' HMA (3"/4") path from Trent Bridge north to Iron Bridge Spur Trail. Also make Trail connection from Ben Burr trail north to trail previously built with the Trent/Erie Swale project.

Item Description	Bid Item No.	Qty	Unit	Unit Cost	Extension
Division 1 - General Requirements					
SPCC Plan	1071020	1.0	LS	$2,000	$2,000
Public Liaison Representative	1070050	1.0	LS	$5,000	$5,000
Mobilization	1090000	1.0	LS	$22,000	$22,000
Project Tremporary Traffic Control	1100000	1.0	LS	$11,000	$11,000
				subtotal:	**$40,000**
Division 2 - Earthwork					
Clearing & Grubbing	2010000	1	LS	$8,000	$8,000
Remove Existing Curb and/or Gutter	20200_0	500	LF	$12	$6,000
Remove Cement Concrete Sidewalk & Driveway	2020040	300	SY	$20	$6,000
Sawcutting Curb	2020130	2	EA	$45	$90
Sawcutting Rigid and Flexible Pavement	202015_	2,020	LFI	$1.50	$3,030
Roadway Excavation Including Haul	2030000	489	CY	$30	$14,670
Preparation of Untreated Roadway	2030090	1,467	SY	$3	$4,401
				subtotal:	**$42,191**
Division 4 - Bases					
Crushed Surfacing Base Course	4040020	195	CY	$75	$14,625
CSTC for Sidewalk and Driveways	4040030	7	CY	$150	$1,050
				subtotal:	**$15,675**
Division 5 - Surface Treatments & Pavements					
HMA CL 3/8 IN. Light Traffic, 3 INCH THICK	50400__	1,467	SY	$18	$26,406
HMA for Pavement Transition, CL 1/2 IN. PG ___, 2 In. Thick	504016_	12	SY	$100	$1,200
Soil Residual Herbicide	5040300	1,467	SY	$1	$1,467
				subtotal:	**$29,073**
Division 6 - Structures					
				subtotal:	**$0**
Division 7 - Drainage Structures, Storm Sewers, Sanitary Sewers, Water mains & Conduits					
				subtotal:	**$0**
Division 8 - Miscellaneous Construction					
Landscaping	8020000	1	LS	$10,000	$10,000
Topsoil Type A, 2 Inch Thick	8020010	1,103	SY	$6	$6,618
Hydroseeding	8020260	1,011	SY	$3	$3,033
Sod Installation	8020300	92	SY	$25	$2,300
Irrigation System - new and modify	8030000	1	LS	$5,000	$5,000
Cement Concrete Curb and/or Gutter	80400__	500	LF	$40	$20,000
Cement Concrete Driveway	8060000	48	SY	$110	$5,280
Chain Link Fence Type 3 - 6'	81200__	500	LF	$125	$62,500
Cement Concrete Sidewalk	8140000	25	SY	$100	$2,500
Ramp Detectable Warning	8140040	8	SF	$35	$280
Signing, Permanent - City Manufactured Signs	8210070	1	LS	$2,500	$2,500
Bollards - Removable		6		$1,000	$6,000
				subtotal:	**$126,011**
Legacy ICM Items					
				subtotal:	**$0**
				Construction Subtotal	**$252,950**
Scope Contingency		20.0%			$50,590
				Construction Subtotal	**$303,540**
Construction Contingency		20.0%			$60,708
Construction total				**Construction Total**	**$364,248**
Property Purchase					$40,000
Geotech		0.0%			$0
Surveying		3.0%			$10,927
Design & Bid Docs		7.0%			$25,497
Admin, Legal, & Permits		1.5%			$5,464
Construction Mgmt		15.0%			$54,637
				Project Total	**$500,774**

	Unit costs from year…	for construction in…	
	2023	**2024**	
For Program			
Preconstruction	42	$43,145	
Property Purchase	40	$41,200	
Construction Total	364	$375,175	
Const mgmt	55	$56,276	
	501	**$515,797**	Project Cost

Date Prepared: 5/23/2023 **Prepared by:** J. Ball

Project Name: Maple Street Pathway **$755,698** **Proj ID: ???**

Description: Remove concrete stairs. Construct 8-12' ADA compliant path from Summit Pkwy overpass traversing north along Maple St. cutslope to connection with Ash St. sidewalk north of the College & Ash Intersection. Install Lighting.

Item Description	Bid Item No.	Qty	Unit	Unit Cost	Extension
Division 1 - General Requirements					
SPCC Plan	1071020	1.0	LS	$2,000	$2,000
Mobilization	1090000	1.0	LS	$30,000	$30,000
Project Tremporary Traffic Control	1100000	1.0	LS	$30,000	$30,000
				subtotal:	**$62,000**
Division 2 - Earthwork					
Clearing & Grubbing	2010000	1	LS	$10,000	$10,000
Remove Existing Curb and/or Gutter	20200_0	360	LF	$12	$4,320
Remove Cement Concrete Sidewalk & Driveway	2020040	334	SY	$30	$10,020
Roadway Excavation Including Haul	2030000	700	CY	$30	$21,000
Common Borrow Incl. Haul	2030020	675	CY	$35	$23,625
Preparation of Untreated Roadway	2030090	756	SY	$3	$2,268
				subtotal:	**$71,233**
Division 4 - Bases					
Crushed Surfacing Base Course	4040020	84	CY	$75	$6,300
				subtotal:	**$6,300**
Division 5 - Surface Treatments & Pavements					
HMA CL 3/8 IN. Light Traffic, 3 INCH THICK	50400__	756	SY	$20	$15,120
Soil Residual Herbicide	5040300	756	SY	$1	$756
				subtotal:	**$15,876**
Division 6 - Structures					
Cem Conc Curb Wall	6020080	500	LF	$100	$50,000
				subtotal:	**$50,000**
Division 7 - Drainage Structures, Storm Sewers, Sanitary Sewers, Water mains & Conduits					
				subtotal:	**$0**
Division 8 - Miscellaneous Construction					
Topsoil Type A, 2 Inch Thick	8020010	1,389	SY	$6	$8,334
Hydroseeding	8020260	1,389	SY	$5	$6,945
Illumination System (Street Lights)	8200040	5	EA	$10,000	$50,000
Signing, Permanent - City Manufactured Signs	8210070	1	LS	$5,000	$5,000
Steel Pipe Railing	8900020	425	LF	$200	$85,000
				subtotal:	**$155,279**
Legacy ICM Items					
				subtotal:	**$0**
				Construction Subtotal	**$360,688**
Scope Contingency		25.0%			$90,172
				Construction Subtotal	**$450,860**
Construction Contingency		25.0%			$112,715
Construction total				**Construction Total**	**$563,575**
Property Purchase					$0
Geotech		0.0%			$0
Surveying		3.0%			$16,907
Design & Bid Docs		7.0%			$39,450
Admin, Legal, & Permits		1.5%			$8,454
Construction Mgmt		15.0%			$84,536
				Project Total	**$712,922**

	Unit costs from year…	for construction in…	
	2023	**2025**	
For Program			
Preconstruction	65	$68,700	
Property Purchase	0	$0	
Construction Total	564	$597,390	
Const mgmt	85	$89,608	
	713	**$755,698**	Project Cost

Date Prepared: 6/7/2023 **Prepared by:** J. Ball

Project Name: Perry & 14th Stairs & Sidewalk - 18th to 14th **$535,055** **Proj ID: ???**

Description: Remove & Replace concrete stairs and walk in 14th Ave ROW from 14th Cul de Sac east to Perry St. Infill sidewalk & driveway install from 18th to 14th on both sides of Perry. ADA updates.

Item Description	Bid Item No.	Qty	Unit	Unit Cost	Extension
Division 1 - General Requirements					
SPCC Plan	1071020	1.0	LS	$2,000	$2,000
Reference and Reestablish Survey Monument	1070060	2	EA	$1,000	$2,000
Mobilization	1090000	1.0	LS	$22,000	$22,000
Project Tremporary Traffic Control	1100000	1.0	LS	$22,000	$22,000
				subtotal:	**$48,000**
Division 2 - Earthwork					
Clearing & Grubbing	2010000	1	LS	$5,000	$5,000
Remove Trees (class I,II,III,IV)	20100__	3	EA	$1,000	$3,000
Tree Pruning	2010080	10	EA	$450	$4,500
Remove Existing Curb and/or Gutter	20200_0	200	LF	$12	$2,400
Remove Cement Concrete Sidewalk & Driveway	2020040	267	SY	$30	$8,010
Sawcutting Curb	2020130	20	EA	$45	$900
Sawcutting Rigid and Flexible Pavement	202015_	400	LFI	$1.50	$600
Roadway Excavation Including Haul	2030000	138	CY	$30	$4,140
				subtotal:	**$28,550**
Division 4 - Bases					
CSTC for Sidewalk and Driveways	4040030	54	CY	$150	$8,100
				subtotal:	**$8,100**
Division 5 - Surface Treatments & Pavements					
				subtotal:	**$0**
Division 6 - Structures					
Cem Conc Curb Wall	6020080	50	LF	$100	$5,000
Reinforced Concrete Retaining Wall	6110000	150	SF	$75	$11,250
				subtotal:	**$16,250**
Division 7 - Drainage Structures, Storm Sewers, Sanitary Sewers, Water mains & Conduits					
				subtotal:	**$0**
Division 8 - Miscellaneous Construction					
Landscaping	8020000	1	LS	$1,500	$1,500
Topsoil Type A, 2 Inch Thick	8020010	1,358	SY	$6	$8,148
Hydroseeding	8020260	933	SY	$5	$4,665
Sod Installation	8020300	425	SY	$25	$10,625
Irrigation System - new and modify	8030000	1	LS	$5,000	$5,000
Cement Concrete Curb and/or Gutter	80400__	200	LF	$40	$8,000
Cement Concrete Driveway	8060000	71	SY	$85	$6,035
Cement Concrete Driveway Transition	8060020	15	SY	$90	$1,350
Cement Concrete Sidewalk	8140000	817	SY	$85	$69,445
Ramp Detectable Warning	8140040	40	SF	$35	$1,400
Signing, Permanent - City Manufactured Signs	8210070	1	LS	$0	$0
Steel Pipe Railing	8900020	100	LF	$200	$20,000
Cement Concrete Stairways	8970001	200	SF	$135	$27,000
Bike Runnels		30	LF	$65	$1,950
				subtotal:	**$165,118**
Legacy ICM Items					
				subtotal:	**$0**
				Construction Subtotal	**$266,018**
Scope Contingency		20.0%			$53,204
				Construction Subtotal	**$319,222**
Construction Contingency		25.0%			$79,805
Construction total				**Construction Total**	**$399,027**
Property Purchase					$0
Geotech		0.0%			$0
Surveying		3.0%			$11,971
Design & Bid Docs		7.0%			$27,932
Admin, Legal, & Permits		1.5%			$5,985
Construction Mgmt		15.0%			$59,854
				Project Total	**$504,769**

	Unit costs from year…	for construction in…	
	2023	**2025**	
For Program			
Preconstruction	46	$48,641	
Property Purchase	0	$0	
Construction Total	399	$422,969	
Const mgmt	60	$63,445	
	505	**$535,055**	Project Cost

Date Prepared: 6/14/2023 **Prepared by:** J. Ball

Project Name: Sprague Ave Bike Lanes - Maple to Lincoln **$334,528** **Proj ID: ???**

Description: Reduce to 2 lanes, 3' buffered bike lane on North side against curbline. Add Green striping across intersections & driveways.

Item Description	Bid Item No.	Qty	Unit	Unit Cost	Extension
Division 1 - General Requirements					
SPCC Plan	1071020	1.0	LS	$2,000	$2,000
Public Liaison Representative	1070050	1.0	LS	$10,000	$10,000
Reference and Reestablish Survey Monument	1070060	1	EA	$1,000	$1,000
Mobilization	1090000	1.0	LS	$14,000	$14,000
Project Tremporary Traffic Control	1100000	1.0	LS	$14,000	$14,000
				subtotal:	**$41,000**
Division 2 - Earthwork					
				subtotal:	**$0**
Division 4 - Bases					
				subtotal:	**$0**
Division 5 - Surface Treatments & Pavements					
Asphalt for Fog Seal	5020010	10	TON	$725	$7,250
				subtotal:	**$7,250**
Division 6 - Structures					
				subtotal:	**$0**
Division 7 - Drainage Structures, Storm Sewers, Sanitary Sewers, Water mains & Conduits					
				subtotal:	**$0**
Division 8 - Miscellaneous Construction					
Signing, Permanent - City Manufactured Signs	8210070	1	LS	$15,000	$15,000
Pavement Marking (Durable Heat Applied, Inlay Tape, Durable, Paint)	82200_0	1	LS	$110,000	$110,000
				subtotal:	**$125,000**
Legacy ICM Items					
				subtotal:	**$0**
				Construction Subtotal	**$173,250**
Scope Contingency		20.0%			$34,650
				Construction Subtotal	**$207,900**
Construction Contingency		20.0%			$41,580
Construction total				**Construction Total**	**$249,480**
Property Purchase					$0
Geotech		0.0%			$0
Surveying		3.0%			$7,484
Design & Bid Docs		7.0%			$17,464
Admin, Legal, & Permits		1.5%			$3,742
Construction Mgmt		15.0%			$37,422
				Project Total	**$315,592**

	Unit costs from year…	for construction in…	
	2023	**2025**	
For Program			
Preconstruction	29	$30,412	
Property Purchase	0	$0	
Construction Total	249	$264,449	
Const mgmt	37	$39,667	
	316	**$334,528**	Project Cost

Date Prepared: 6/1/2023 **Prepared by:** J. Ball

Project Name: Stevens St. Bike Lanes - 5th Ave to 1st **$335,725** **Proj ID: ???**

Description: 3 lanes from 5th to 1st. 3' buffered bike lane on west side from 5th to 1st. Add Green striping across intersections.

Item Description	Bid Item No.	Qty	Unit	Unit Cost	Extension
Division 1 - General Requirements					
SPCC Plan	1071020	1.0	LS	$2,000	$2,000
Public Liaison Representative	1070050	1.0	LS	$10,000	$10,000
Mobilization	1090000	1.0	LS	$14,000	$14,000
Project Tremporary Traffic Control	1100000	1.0	LS	$14,000	$14,000
				subtotal:	**$40,000**
Division 2 - Earthwork					
Remove Existing Curb and/or Gutter	20200_0	15	LF	$12	$180
Remove Cement Concrete Sidewalk & Driveway	2020040	11	SY	$20	$220
Sawcutting Curb	2020130	2	EA	$45	$90
Sawcutting Rigid and Flexible Pavement	202015_	120	LFI	$1.50	$180
				subtotal:	**$670**
Division 4 - Bases					
CSTC for Sidewalk and Driveways	4040030	3	CY	$150	$450
				subtotal:	**$450**
Division 5 - Surface Treatments & Pavements					
Asphalt for Fog Seal	5020010	9	TON	$725	$6,525
				subtotal:	**$6,525**
Division 6 - Structures					
				subtotal:	**$0**
Division 7 - Drainage Structures, Storm Sewers, Sanitary Sewers, Water mains & Conduits					
				subtotal:	**$0**
Division 8 - Miscellaneous Construction					
Cement Concrete Curb and/or Gutter	80400__	15	LF	$40	$600
Cement Concrete Sidewalk	8140000	49	SY	$85	$4,165
Ramp Detectable Warning	8140040	56	SF	$35	$1,960
Signing, Permanent - City Manufactured Signs	8210070	1	LS	$20,000	$20,000
Pavement Marking (Durable Heat Applied, Inlay Tape, Durable, Paint)	82200_0	1	LS	$95,000	$95,000
Reinforced Doweled Curb	8910000	90	LF	$50	$4,500
				subtotal:	**$126,225**
Legacy ICM Items					
				subtotal:	**$0**
				Construction Subtotal	**$173,870**
Scope Contingency		20.0%			$34,774
				Construction Subtotal	**$208,644**
Construction Contingency		20.0%			$41,729
Construction total				**Construction Total**	**$250,373**
Property Purchase					$0
Geotech		0.0%			$0
Surveying		3.0%			$7,511
Design & Bid Docs		7.0%			$17,526
Admin, Legal, & Permits		1.5%			$3,756
Construction Mgmt		15.0%			$37,556
				Project Total	**$316,722**

	Unit costs from year…	for construction in…	
	2023	**2025**	
For Program			
Preconstruction	29	$30,520	
Property Purchase	0	$0	
Construction Total	250	$265,395	
Const mgmt	38	$39,809	
	317	**$335,725**	Project Cost

Date Prepared: 6/1/2023 **Prepared by:** J. Ball

Project Name: Washington St. Bike Lanes - 6th Ave to Sprague **$331,197** **Proj ID: ???**

Description: Drop 1 lane between 6th to 5th ave. 3 lanes from 5th to 1st. Bike lane on east side (3' buffer from 5th to 1st). Add Green striping across intersections.

Item Description	Bid Item No.	Qty	Unit	Unit Cost	Extension
Division 1 - General Requirements					
SPCC Plan	1071020	1.0	LS	$2,000	$2,000
Public Liaison Representative	1070050	1.0	LS	$10,000	$10,000
Mobilization	1090000	1.0	LS	$14,000	$14,000
Project Tremporary Traffic Control	1100000	1.0	LS	$14,000	$14,000
				subtotal:	**$40,000**
Division 2 - Earthwork					
				subtotal:	**$0**
Division 4 - Bases					
				subtotal:	**$0**
Division 5 - Surface Treatments & Pavements					
Asphalt for Fog Seal	5020010	9	TON	$725	$6,525
				subtotal:	**$6,525**
Division 6 - Structures					
				subtotal:	**$0**
Division 7 - Drainage Structures, Storm Sewers, Sanitary Sewers, Water mains & Conduits					
				subtotal:	**$0**
Division 8 - Miscellaneous Construction					
Signing, Permanent - City Manufactured Signs	8210070	1	LS	$20,000	$20,000
Pavement Marking (Durable Heat Applied, Inlay Tape, Durable, Paint)	82200_0	1	LS	$105,000	$105,000
				subtotal:	**$125,000**
Legacy ICM Items					
				subtotal:	**$0**
				Construction Subtotal	**$171,525**
Scope Contingency		20.0%			$34,305
				Construction Subtotal	**$205,830**
Construction Contingency		20.0%			$41,166
Construction total				**Construction Total**	**$246,996**
Property Purchase					$0
Geotech		0.0%			$0
Surveying		3.0%			$7,410
Design & Bid Docs		7.0%			$17,290
Admin, Legal, & Permits		1.5%			$3,705
Construction Mgmt		15.0%			$37,049
				Project Total	**$312,450**

	Unit costs from year…	for construction in…	
	2023	**2025**	
For Program			
Preconstruction	28	$30,109	
Property Purchase	0	$0	
Construction Total	247	$261,816	
Const mgmt	37	$39,272	
	312	**$331,197**	Project Cost

Appendix D
Public Engagement Dates

Downtown Plan Engagement Effort https://my.spokanecity.org/projects/downtown-plan-update/

Email list – staff established an email of list of more than 700 contacts to share project announcements

9/23/19 thru 9/24/19 – Stakeholder focus groups

10/14/19 thru 11/4/19 Online survey – 590 respondents took the survey on priority topics for the update and vision for Downtown Spokane.

10/22/19 Public Workshop – 55 attendees at a workshop focused on existing conditions, peer cities, best practices and preliminary survey results.

1/8/20, 1/30/20, 2/28/20, 6/26/20, 12/18/20 – Steering Committee meetings inviting 22 members from stakeholder groups to provide input and guidance.

2/5/20 Public Workshop – workshop focused on goals and strategies, including improving multi-modal access, new residential development, enhancing residential amenities and a historical trail.

8/18/20 Bicycle Advisory Board – present goals and strategies and discuss concepts with citizen bicycle board.

3/16/21 Virtual Open House – 89 attendees participated in the online open house to view the draft plan which included Q and A and polling. Polling focused on the concurrence with the strategies in the plan.

3/24/21 Plan Commission workshop – workshop for Plan Commission members to review and ask questions.

5/12/21 Plan Commission hearing – hearing in front of Plan Commission to approve the draft plan. With option for citizen testimony.

7/26/21 *City Council Hearing* – the Downtown Plan was adopted by the City Council. https://static.spokanecity.org/documents/projects/downtown-plan-update-2020/2021-07-26-spokane-downtown-plan-web.pdf

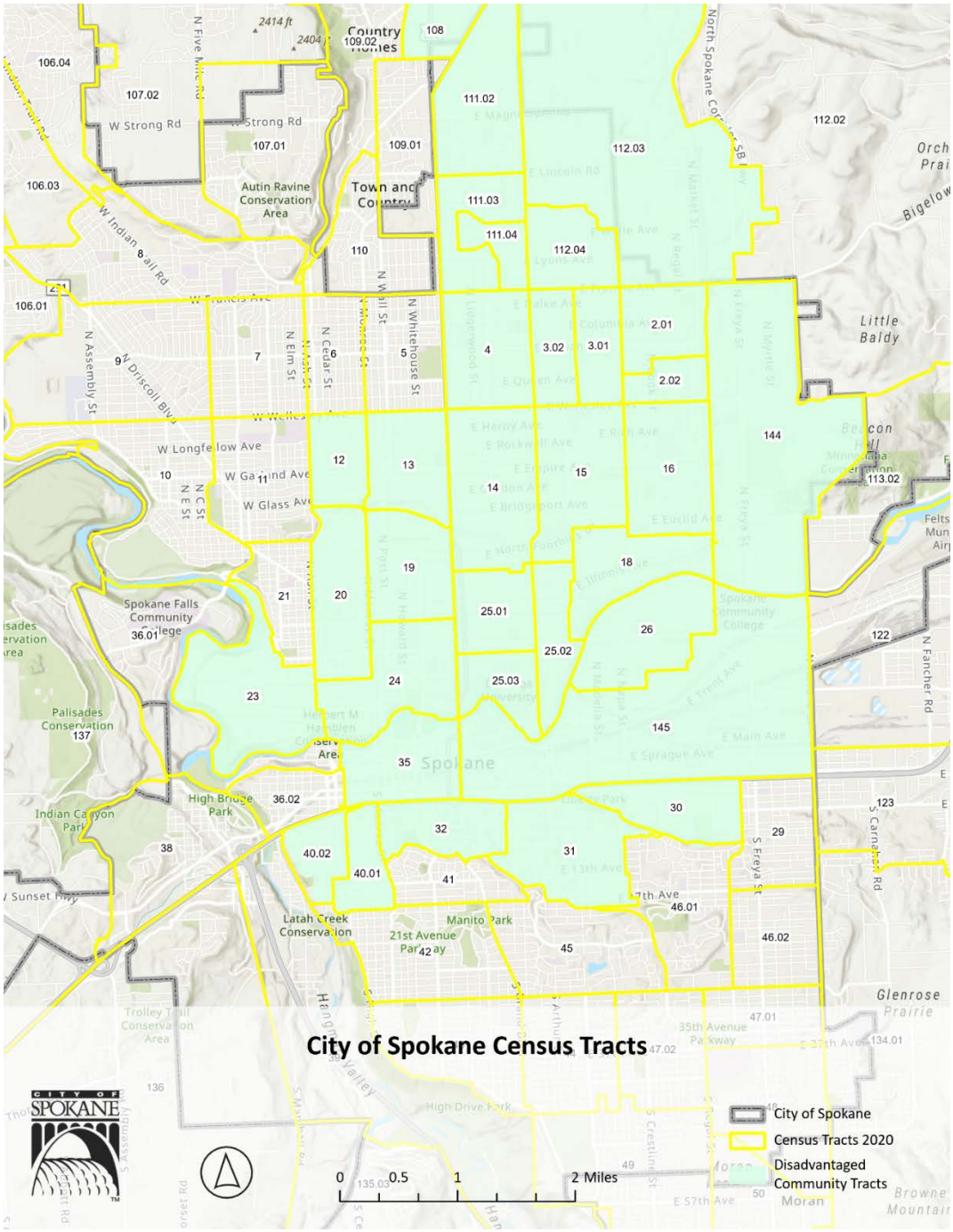
Plan Commission Transportation Subcommittee

5/2/23 Plan Commission Transportation Subcommittee meeting – Discussed the goals, collision analysis, and countermeasures of the draft Action Plan. Solicited feedback from the committee on measuring progress and needed policy updates.

6/6/23 Plan Commission Transportation Subcommittee meeting – Review and feedback on the draft Action Plan. Discussion of project priorities. Motion endorsing the Vision Zero Action Plan and the SS4A Grant Application.

Appendix E
Disadvantaged/Underserved Census Tracts

Map 5 – Disadvantaged/Underserved Census Tracts from 2023 CEJ Screening Tool

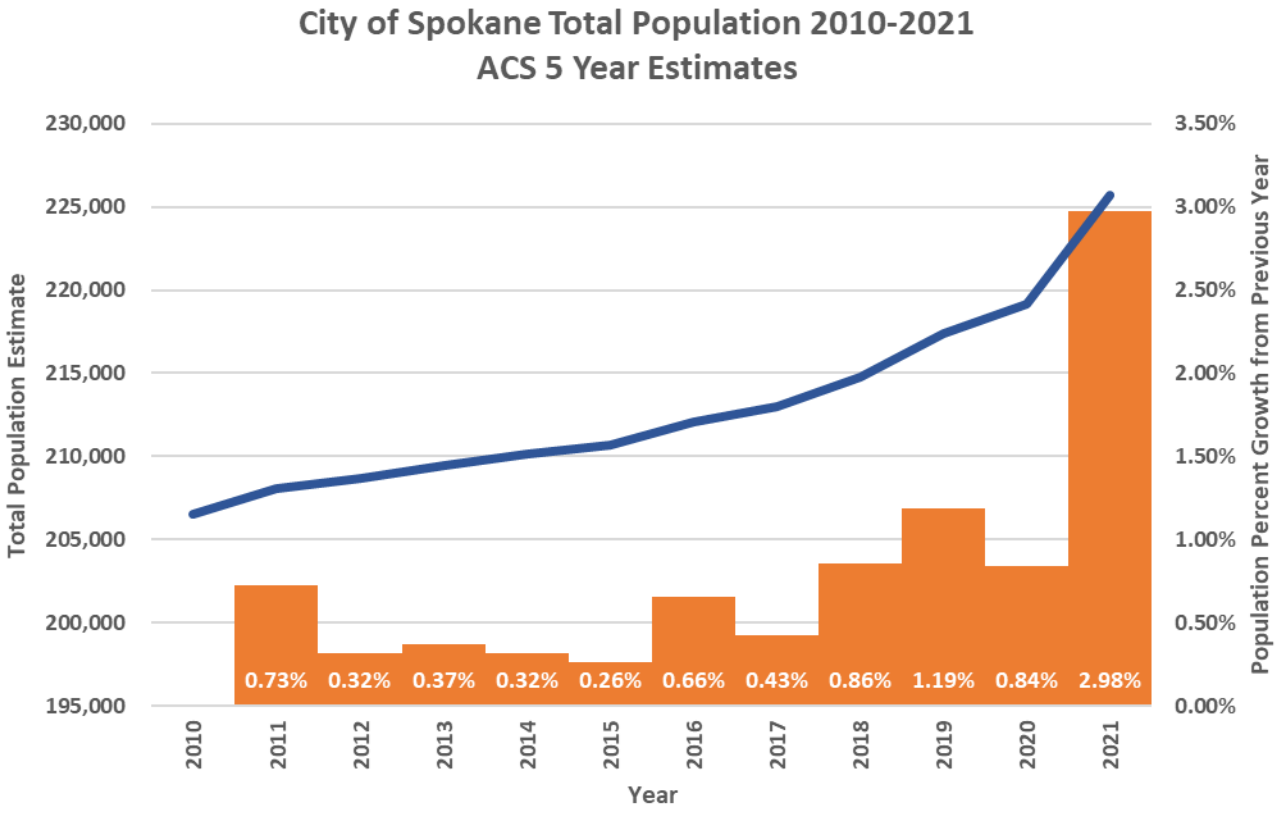


Appendix F
Required Background Data

This section includes background information on Spokane's population and some citywide data trends.

- The City of Spokane has a population of 219,185[5] (see Chart 1 City of Spokane Total Population 2010-2021 ACS 5 Year Estimates)
- Table 6 shows the total number of fatal crashes from years 2017-2021 according to the NHTSA Fatality and Injury Reporting System Tool (FIRST).
- Chart 2 Highlights the trend of fatalities by transportation mode type from 2010 to 2021.
- Table 7 Summary table for all crashes from 2017-2021 with priorities established for crash type and contributing factors.

Chart 1 City of Spokane Total Population 2010-2021 ACS 5 Year Estimates



[5] American Community Survey (2023). S0101 AGE AND SEX 2020: ACS 5-Year Estimates Subject Tables. Retrieved from https://data.census.gov/

Table 6 NHTSA Fatal Motor Vehicle Crashes

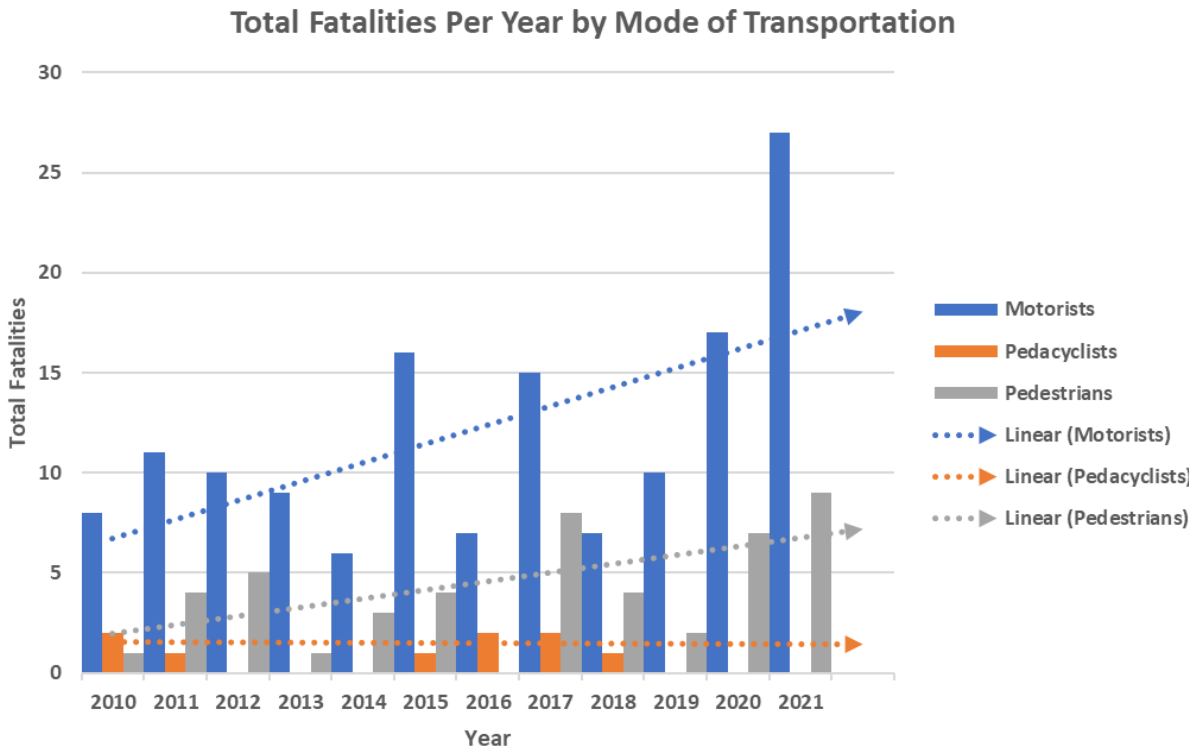
National Highway Traffic Safety Administration (NHTSA) Motor Vehicle Crash Data Querying and Reporting
Fatal Motor Vehicle Crashes
State: Washington and City: Spokane Years: 2017-2021

Fatal Motor Vehicle Crashes [1]

Crash Date (Year)	Crash Date (Month)												
	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
2017	1	1	1	0	0	0	1	3	2	3	2	1	15
2018	1	0	0	3	0	1	0	1	0	0	1	0	7
2019	0	0	2	0	0	2	1	0	1	3	1	0	10
2020	1	0	2	0	1	1	2	4	1	3	1	1	17
2021	3	1	2	0	5	2	1	2	3	2	2	4	27
Total	6	2	7	3	6	6	5	10	7	11	7	6	76

Data Sources:
[1]Fatality Analysis Reporting System (FARS): 2017-2020 Final File and 2021 Annual Report File (ARF)
Report Generated: Friday, April 7, 2023 (4:26:49 PM) VERSION 5.5, RELEASED APR 03, 2023

Chart 2 Total Fatalities Per Year by Mode of Transportation[6]



[6] Fatality Analysis Report System (FARS): 2010:2020 Final File and 2021 Annual Report File (ARF) Report Generated Tuesday, May 9, 2023. Version 5.5, Released Apr 03, 2023.

Table 7 Summary Table for Priority Crash Types

	Fatal/Serious Crashes				All Crashes				Priority Level	Serious/Fatal Higher than Statewide
	City of Spokane		City-Owned Streets		City of Spokane		City-Owned Streets			
Overall	458	2.3%	5,012	1.7%	19,698		301,913			x
Fatal Crashes	76	16.6%	713	14.2%	76	0.4%	713	0.2%		x
Serious Injury	382	83.4%	4,299	85.8%	382	1.9%	4,299	1.4%		
Workzone Related	6	1.3%			230	1.2%			3	
Hit & Run	63	13.8%			4,617	23.4%			2	
Drug/Alcohol-Related Collisions	77	16.8%	945	18.9%	1,450	7.4%	17,666	5.9%	2	
Under the Influence	65	14.2%			1,338	6.8%			2	
Wrong Way Crash	2	0.4%			58	0.3%			3	
Unrestrained	29	6.3%			377	1.9%			3	
By Primary Crash Type										
Angle (T)	73	15.9%	695	13.9%	4,885	24.8%	74,503	24.7%	2	x
Angle (Left)	27	5.9%	461	9.2%	1,519	7.7%	30,861	10.2%	3	
Angle (Right)	0	0.0%	27	0.5%	148	0.8%	4,804	1.6%	3	
Angle	100	21.8%	1,183	23.6%	6,552	33.3%	110,168	36.5%	2	
Wildlife/Animal	0	0.0%	4	0.1%	26	0.1%	515	0.2%	3	
Fixed Object	54	11.8%	821	16.4%	2,200	11.2%	31,666	10.5%	2	
Head On	8	1.7%	143	2.9%	61	0.3%	1,393	0.5%	3	
Other	15	3.3%	170	3.4%	549	2.8%	13,070	4.3%	3	
Overturn	10	2.2%	170	3.4%	86	0.4%	1,738	0.6%	3	
Hit Parked Car	5	1.1%	119	2.4%	1,852	9.4%	28,493	9.4%	3	
Hit Pedestrian	121	26.4%	1,485	29.6%	552	2.8%	8,641	2.9%	2	
Hit Cyclist	33	7.2%	503	10.0%	259	1.3%	5,779	1.9%	3	
Rear End	17	3.7%	280	5.6%	3,683	18.7%	75,835	25.1%	3	
Sideswipe	12	2.6%	123	2.5%	1,119	5.7%	24,470	8.1%	3	x
Train	0	0.0%	11	0.2%	4	0.0%	145	0.0%	3	
Vulnerable User Involved	162	35.4%			972	4.9%			1	
Bicyclist(s) Involved	34	7.4%			304	1.5%			3	
Pedestrian(s) Involved	128	27.9%			668	3.4%			2	

By Light Condition										
Dark-No Street Lights	12	2.6%	224	4.5%	429	2.2%	7,022	2.3%	3	
Dark-Street Lights Off	5	1.1%	48	1.0%	118	0.6%	1,584	0.5%	3	x
Dark-Street Lights On	146	31.9%	1,788	35.7%	4,114	20.9%	70,157	23.2%	1	
Dark	163	35.6%	2,060	41.1%	4,661	23.7%	78,763	26.1%	1	
Daylight	194	42.4%	2,706	54.0%	11,395	57.8%	205,970	68.2%	1	
Dusk/Dawn	16	3.5%	218	4.3%	633	3.2%	12,308	4.1%	3	
Unlisted	0	0.0%	28	0.6%	189	1.0%	4,872	1.6%	3	
By Fixed Object (First Object Struck)	54	11.8%	821	16.4%	2,200	11.2%	31,666	10.5%	2	
Bridge	0	0.0%	15	1.8%	166	7.5%	856	2.7%	3	
Building	2	3.7%	21	2.6%	92	4.2%	1,094	3.4%	3	x
Concrete Barrier	5	9.3%	28	3.4%	209	9.5%	864	2.7%	3	x
Crash Cushions	0	0.0%	1	0.1%	19	0.9%	56	0.2%	3	
Culvert	1	1.9%	7	0.9%	2	0.1%	124	0.4%	3	x
Curb/Median	11	20.4%	112	13.7%	129	5.9%	2,978	9.4%	2	x
Debris	0	0.0%	3	0.4%	26	1.2%	213	0.7%	3	
Embankment/Wall	5	9.3%	70	8.6%	117	5.3%	1,845	5.8%	3	x
Fallen Tree	0	0.0%	1	0.1%	1	0.0%	104	0.3%	3	
Fence	3	5.6%	53	6.5%	273	12.4%	3,724	11.7%	3	
Guardrail	5	9.3%	32	3.9%	78	3.5%	1,040	3.3%	3	x
Hydrant	0	0.0%	7	0.9%	42	1.9%	765	2.4%	3	
Mailbox	0	0.0%	15	1.8%	11	0.5%	953	3.0%	3	
Manhole Cover	0	0.0%	0	0.0%	0	0.0%	60	0.2%	3	
Other	4	7.4%	116	13.6%	284	12.9%	4,790	15.3%	3	
Rock	2	3.7%	7	0.9%	34	1.5%	434	1.4%	3	x
Sign Post/Pole	5	9.3%	30	3.7%	264	12.0%	2,985	9.4%	3	x
Signal Pole	0	0.0%	25	3.1%	47	2.1%	779	2.5%	3	
Temp Traffic Sign	1	1.9%	4	0.5%	18	0.8%	131	0.4%	3	x
Tree	6	11.1%	176	21.6%	176	8.0%	4,359	13.7%	2	
Utility Box	0	0.0%	8	1.0%	28	1.3%	384	1.2%	3	
Utility Pole	4	7.4%	90	11.0%	184	8.4%	3,128	9.9%	3	
By Junction Relationship										

Intersection-Related	200	43.7%	2,443	48.7%	9,432	47.9%	153,454	50.8%	1	
Non-Intersection-Related	159	34.7%	2,132	42.5%	6,594	33.5%	106,170	35.2%	1	
Driveway-Related	15	3.3%	421	8.4%	908	4.6%	39,868	13.2%	3	
Roundabout-Related	1	0.2%	16	0.3%	40	0.2%	2,421	0.8%	3	
Controlled	77	38.5%			3,758	39.8%			1	
Stop	47	23.5%			1,804	19.1%			2	
Signal	30	15.0%			1,896	20.1%			2	
Yield	0	0.0%			58	0.6%			3	
Other	0	0.0%			0	0.0%			3	
Traffic Circle	0	0.0%			0	0.0%			3	
Uncontrolled	12	6.0%			602	6.4%			3	
By Driver Contributing Circumstance	256				13,054					
Asleep/Driver Fatigue	2	0.8%	63	1.1%	38	0.3%	3,452	0.9%	3	
Disregarded Traffic Control	15	5.9%	320	5.5%	831	6.4%	16,438	4.5%	3	x
Operating Defective Equipment	3	1.2%	76	1.3%	295	2.3%	4,423	1.2%	3	
Exceeding Safe/Stated Speed	67	26.2%	902	15.5%	1,599	12.2%	24,912	6.8%	2	x
Failed to Yield	39	15.2%	605	10.4%	3,307	25.3%	61,804	17.0%	2	x
Failed to Yield to Ped/Bike	0	0.0%	378	6.5%	0	0.0%	3,747	1.0%	3	
Improper/Failure to Signal	0	0.0%	4	0.1%	23	0.2%	569	0.2%	3	
Following Too Closely	13	5.1%	110	1.9%	2,722	20.9%	33,885	9.3%	3	x
Headlight Violation	0	0.0%	15	0.3%	0	0.0%	224	0.1%	3	
Apparently Ill	3	1.2%	57	1.0%	63	0.5%	1,156	0.3%	3	x
Improper Movement	7	2.7%	268	4.6%	406	3.1%	25,261	6.9%	3	
Inattention/Distraction	44	17.2%	1,399	24.1%	2,566	19.7%	122,177	33.6%	2	
Under the Influence of Alcohol/Drugs	59	23.0%	670	11.5%	1,138	8.7%	14,384	4.0%	2	x
Wrong Side of Road	4	1.6%	183	3.1%	66	0.5%	3,456	0.9%	3	
Other	0	0.0%	761	13.1%	0	0.0%	48,031	13.2%	3	
By Pedestrian Contributing Circumstance	52				177					
Asleep	0	0.0%	1	0.1%	0	0.0%	12	0.3%	3	
Failure to Use Crosswalk	4	7.7%	140	13.2%	18	10.2%	459	11.1%	3	
Disregarded Traffic Control	0	0.0%	39	3.7%	3	1.7%	173	4.2%	3	
Failed to Yield	27	51.9%	254	24.0%	76	42.9%	881	21.2%	1	x

Failed to Yield to Ped/Bike	0	0.0%	10	0.9%	0	0.0%	40	1.0%	3	
Inattention/Distraction	12	23.1%	242	22.9%	51	28.8%	1,153	27.8%	2	x
Under the Influence of Alcohol/Drugs	9	17.3%	87	8.2%	29	16.4%	315	7.6%	2	x
Wrong Side of Road	0	0.0%	6	0.6%	0	0.0%	29	0.7%	3	
Other	0	0.0%	280	26.4%	0	0.0%	1,086	26.2%	3	
By Bicyclist Contributing Circumstance	15				122					
Disregarded Traffic Control	1	6.7%	54	13.7%	13	10.7%	345	9.8%	3	
Equipment Breakdown	0	0.0%	9	2.3%	9	7.4%	98	2.8%	3	
Exceeding Safe Speed	0	0.0%	22	5.6%	6	4.9%	162	4.6%	3	
Failed to Yield	10	66.7%	70	17.8%	46	37.7%	694	19.7%	1	x
Failed to Yield to Ped/Bike	0	0.0%	5	1.3%	0	0.0%	23	0.7%	3	
Improper/Failure to Signal	1	6.7%	2	0.5%	1	0.8%	12	0.3%	3	x
Following Too Closely	0	0.0%	5	1.3%	2	1.6%	47	1.3%	3	
Apparently Ill	0	0.0%	1	0.3%	0	0.0%	4	0.1%	3	
Headlight Violation	0	0.0%	10	2.5%	0	0.0%	82	2.3%	3	
Improper Movement	0	0.0%	17	4.3%	3	2.5%	126	3.6%	3	
Inattention/Distraction	2	13.3%	108	27.5%	35	28.7%	946	26.8%	2	
Under the Influence of Alcohol/Drugs	1	6.7%	9	2.3%	7	5.7%	76	2.2%	3	x
Wrong Side of Road	0	0.0%	19	4.8%	0	0.0%	253	7.2%	3	
Other	0	0.0%	62	15.8%	0	0.0%	661	18.7%	3	
By Facility Use (Pedestrians)	131				683					
Designated Bike Route	0	0.0%	4	0.2%	2	0.3%	24	0.3%	3	
Marked X walk	41	31.3%	597	36.4%	301	44.1%	4,612	49.2%	1	
Roadway	47	35.9%	664	40.5%	178	26.1%	2,481	26.4%	1	
Shoulder	2	1.5%	50	3.1%	11	1.6%	238	2.5%	3	
Sidewalk	7	5.3%	99	6.0%	50	7.3%	690	7.4%	3	
Unmarked X walk	20	15.3%	121	7.4%	96	14.1%	861	9.2%	2	x
Walkway	1	0.8%	8	0.5%	3	0.4%	74	0.8%	3	x
Other	13	9.9%	96	5.9%	42	6.1%	403	4.3%	3	x
By Facility Use (Bicycles)	34				306					
Designated Bike Route	2	5.9%	94	18.3%	15	4.9%	1,021	17.4%	3	
Marked X walk	6	17.6%	53	10.3%	59	19.3%	1,003	17.1%	2	x
Roadway	17	50.0%	255	49.7%	124	40.5%	2,255	38.5%	1	x

Shoulder	4	11.8%	32	6.2%	10	3.3%	285	4.9%	2	x
Sidewalk	4	11.8%	50	9.7%	61	19.9%	886	15.1%	2	x
Unmarked X walk	0	0.0%	16	3.1%	22	7.2%	224	3.8%	3	
Walkway	0	0.0%	1	0.2%	2	0.7%	33	0.6%	3	
Other	1	2.9%	12	2.3%	13	4.2%	145	2.5%	3	x
By Road Classification										
Highway	48	10.5%			1,265	6.4%			2	
Major Arterial	94	20.5%			2,529	12.8%			2	
Minor Arterial	48	10.5%			1,206	6.1%			2	
Collector	12	2.6%			340	1.7%			3	
Local	35	7.6%			1,601	8.1%			3	
Alley	1	0.2%			28	0.1%			3	
Unimproved	0	0.0%			1	0.0%			3	
By Speed Limit										
<= 25	29	6.3%			1,761	8.9%			3	
30	88	19.2%			3,850	19.5%			2	
35	28	6.1%			833	4.2%			3	
40	1	0.2%			83	0.4%			3	
45	5	1.1%			260	1.3%			3	
50	0	0.0%			6	0.0%			3	
55	5	1.1%			122	0.6%			3	
60	3	0.7%			186	0.9%			3	