

Local Road Safety Plans Virtual Workshop

Ed Spilker, City Safety and Traffic Programs Manager

Matthew Enders, P.E., Technical Services Manager

Paul Snow, Safety Analyst

WSDOT Local Programs Division

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Agenda

- 2024 City Safety Program Basics
- Safety Trends
- Local Road Safety Plans (in 7 steps)
- Resources for Local Road Safety Plans

Local Road Safety Plan

A data-driven, risk-based analysis and prioritization of an agency's roadways.



2024 City Safety Program

- **Key Dates**

- Call for projects opened October 1, 2023
- Applications are due **February 2, 2024**
- Funding to be awarded fall 2024
- 100% funding for all phases authorized prior to 4/30/27

- **Estimated Funds: \$35 million** in federal Highway Safety Improvement Program (HSIP) funds and **\$1 million** of state Traffic Conflict Screening Using Video Analytics funds

- **Call for Projects**

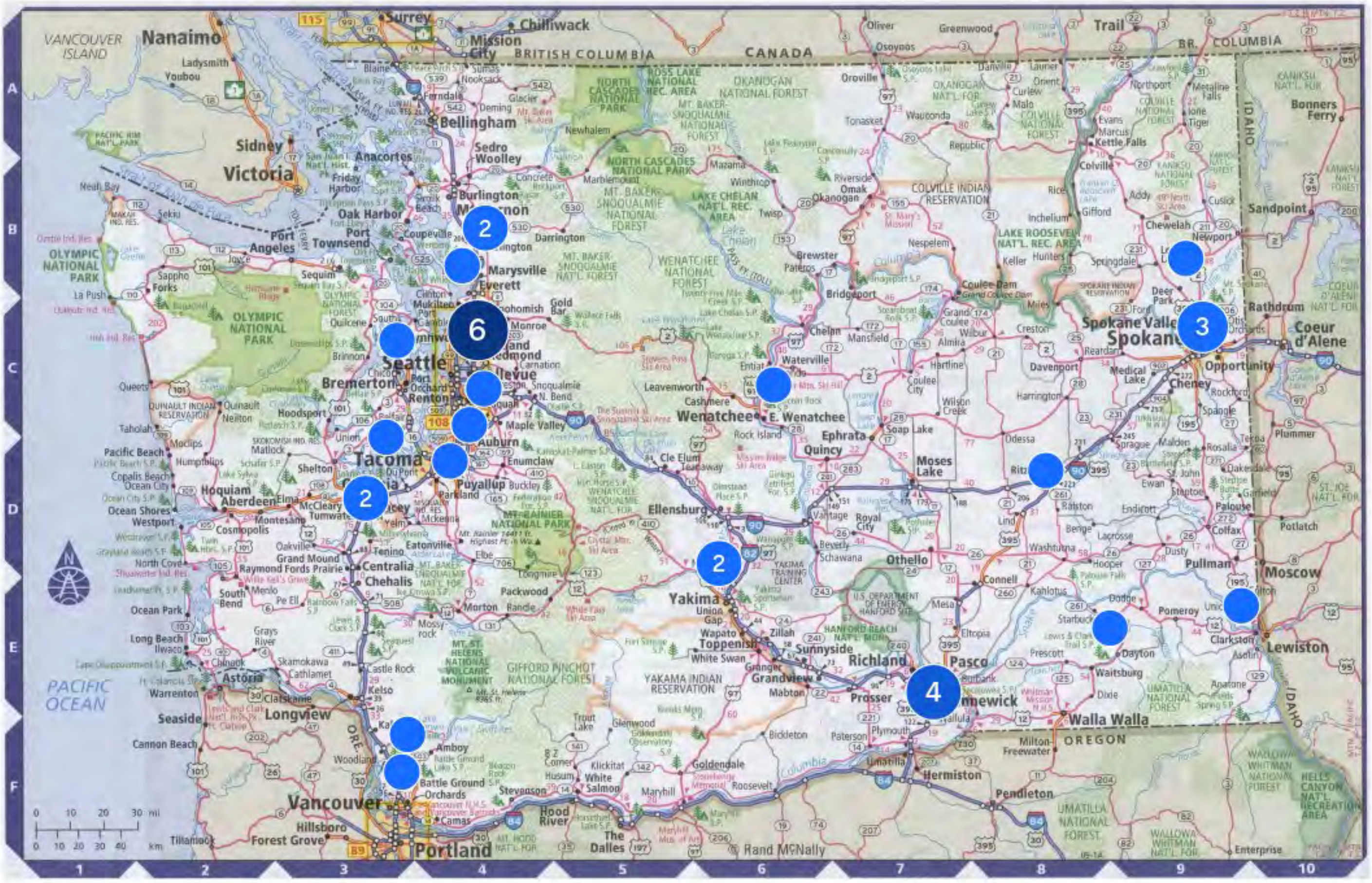
<https://wsdot.wa.gov/business-wsdot/support-local-programs/funding-programs/highway-safety-improvement-program/highway-safety-improvement-program-call-projects>



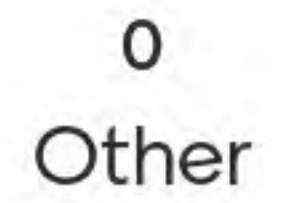
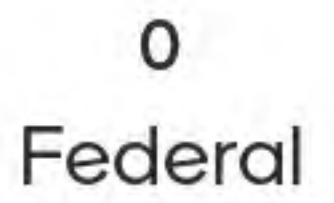
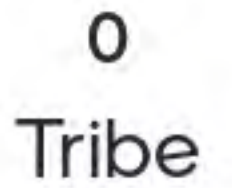
Traffic Conflict Screening Using Video Analytics

- State funding = \$1 million
- Intent of funding is to implement network-wide traffic conflict screening programs
- Uses video analytics at controlled intersections
- Locations should have disproportionate numbers of traffic violations and injuries to active transportation users

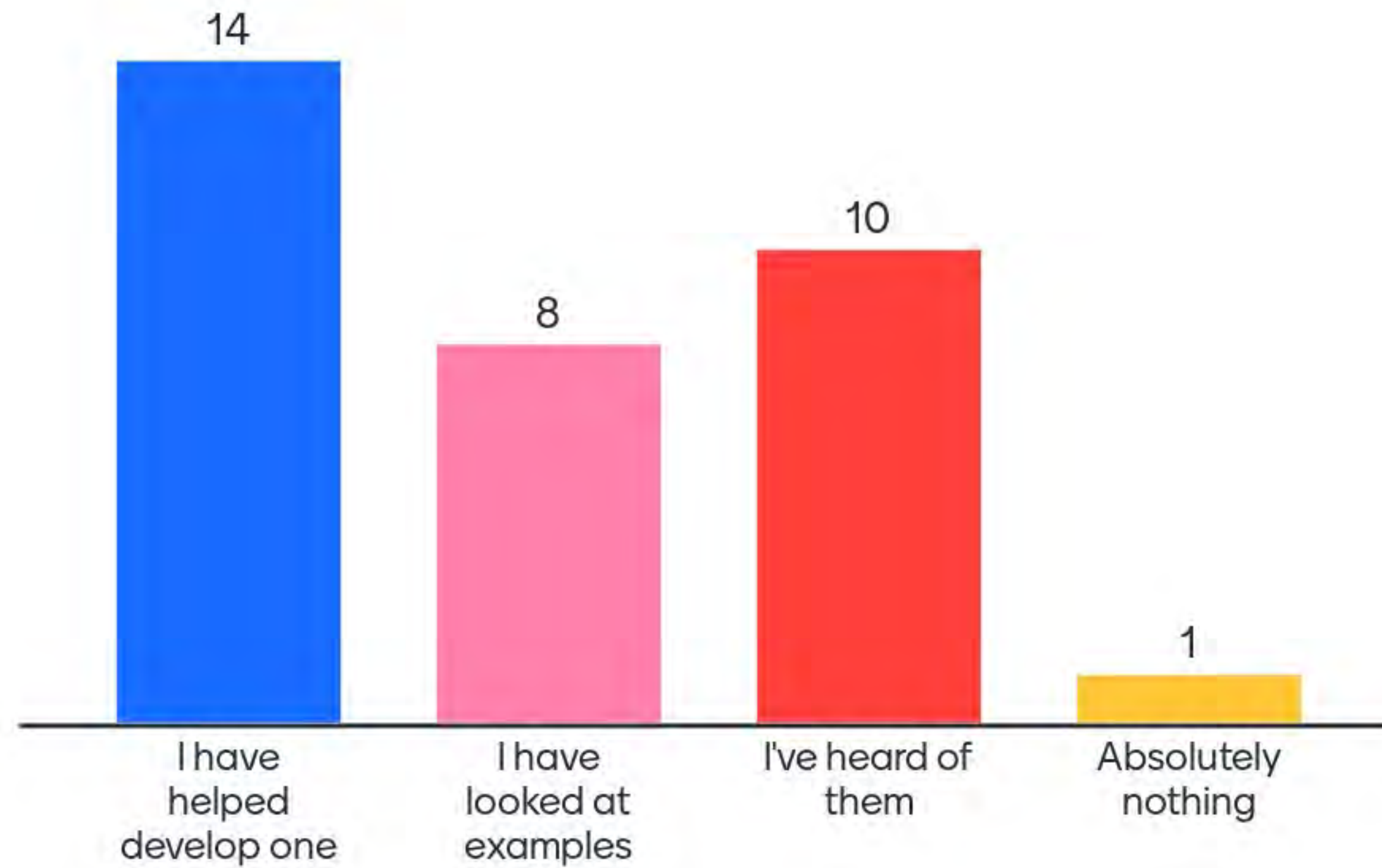
Where are you joining us from today?



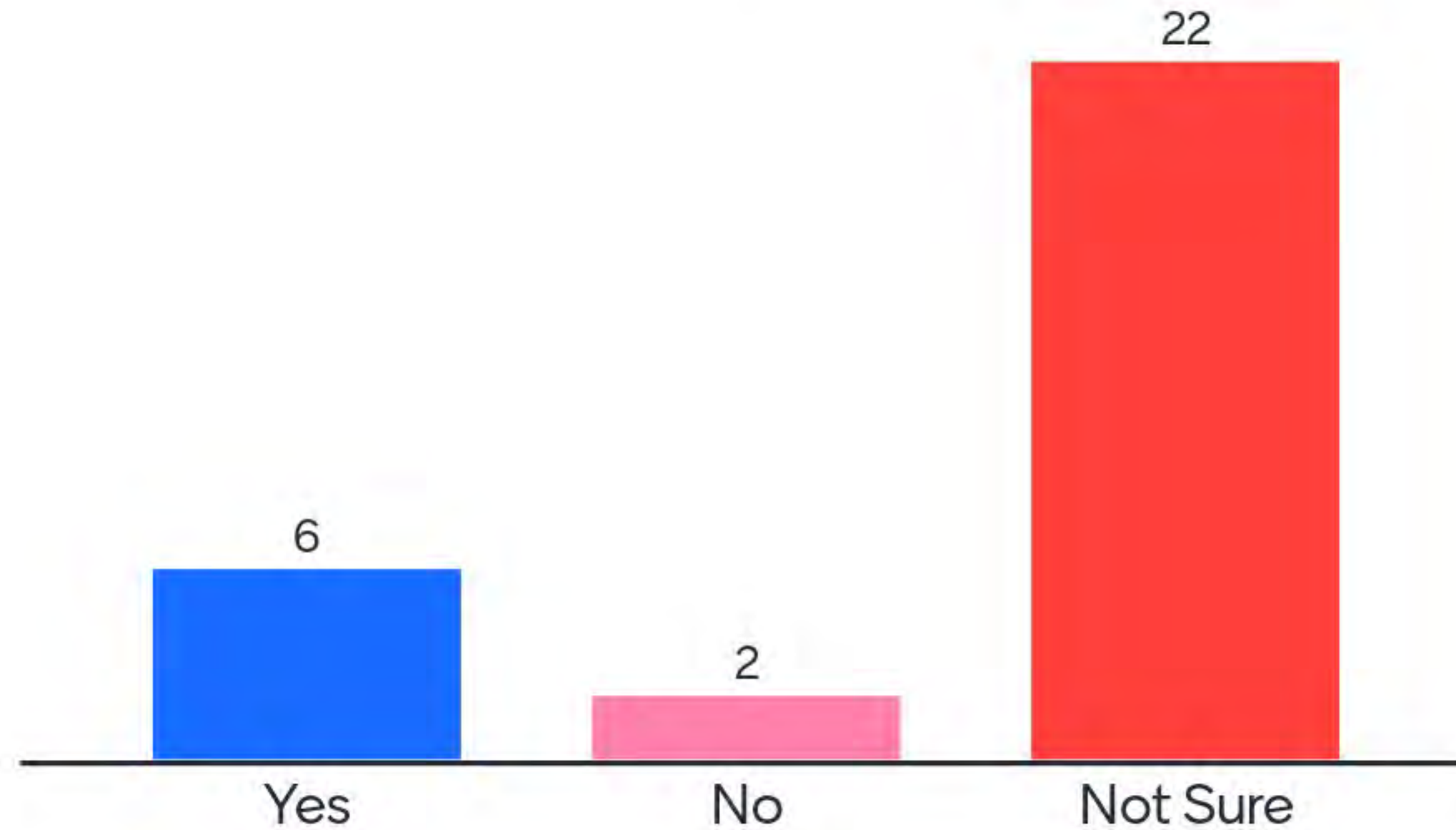
The following best describes where I work:



What is your experience with Local Road Safety Plans?

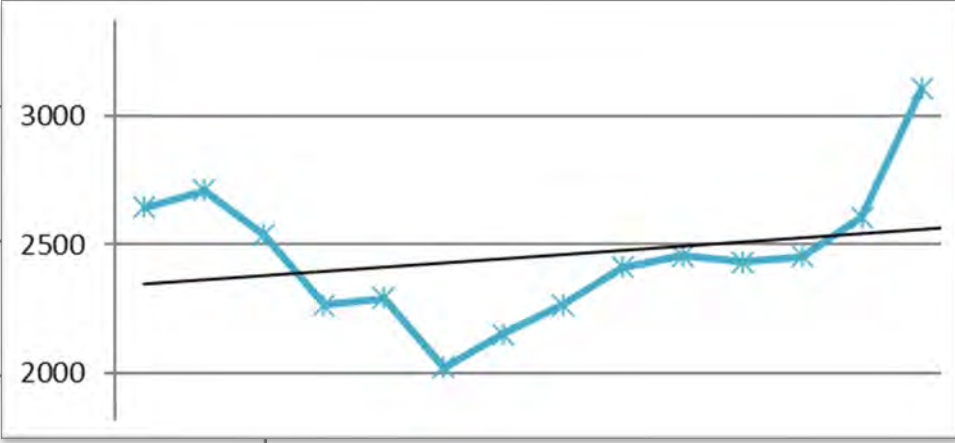
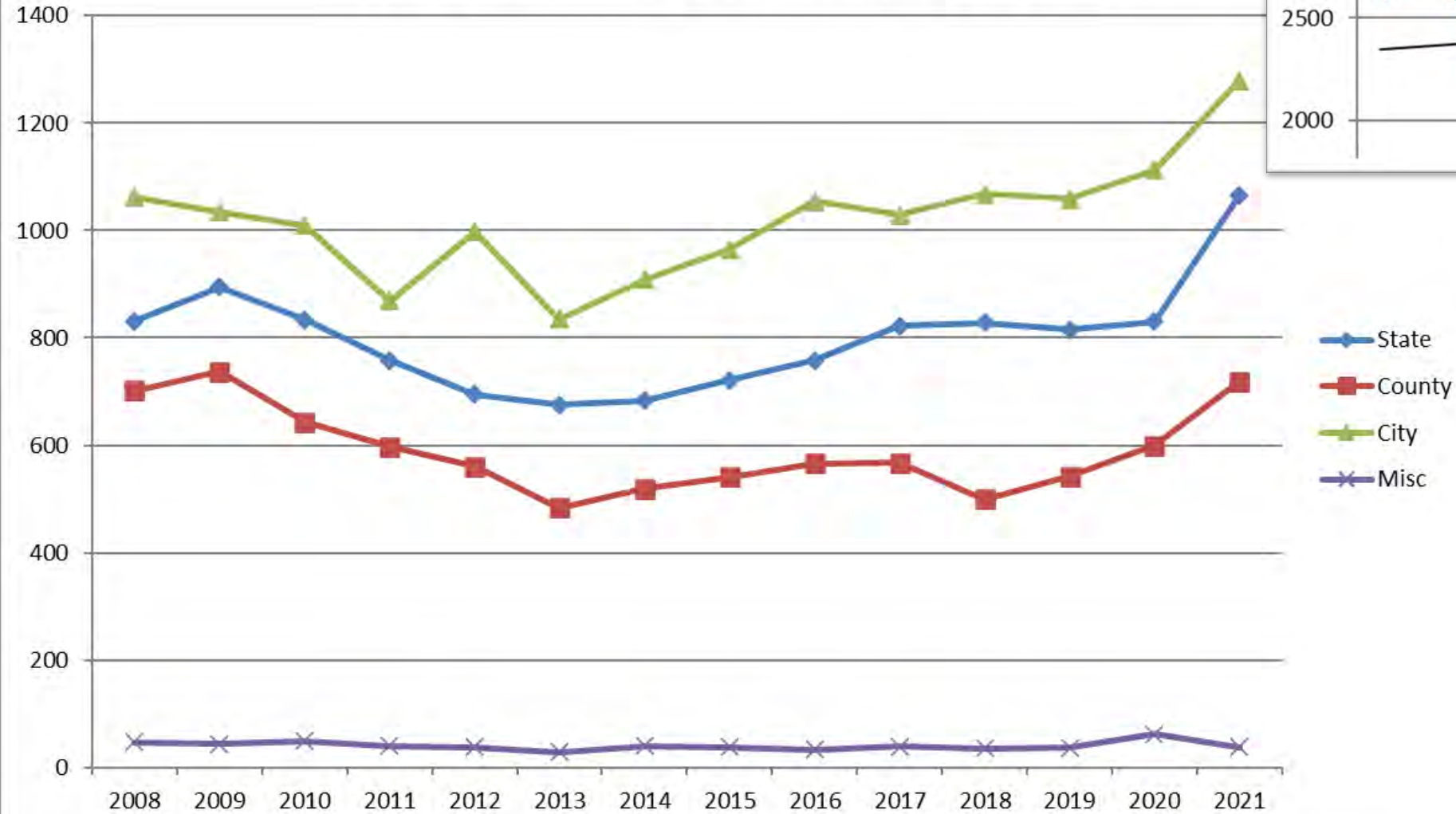


My agency might be interested in applying for the video analytics funding.



Safety Trends

Fatal / Suspected Serious Injury Crashes



In 2013 the number of fatalities was 436.

The 2022 number of fatalities is 750, the highest since 1990 (a 72% increase from 2013).

What do you think is the best way to reverse the fatal/serious crash trend? (1-3 words)

53 responses



Local Road Safety Plans

Local Road Safety Plan Step		Plan Element
1	Analyze data to identify focus/priorities	List of crash priorities based on data
2	Analyze individual fatal/serious crashes to identify risk factors	Description of risk factors & selection process
3	Select most common risk factors	
4	Analyze roadway network for presence of risk factors	
5	Create a prioritized list of roadway locations	Prioritized list of roadway locations
6	Identify countermeasures to address prioritized locations	Description of countermeasures & selection process
7	Develop a prioritized list of projects	Prioritized list of projects

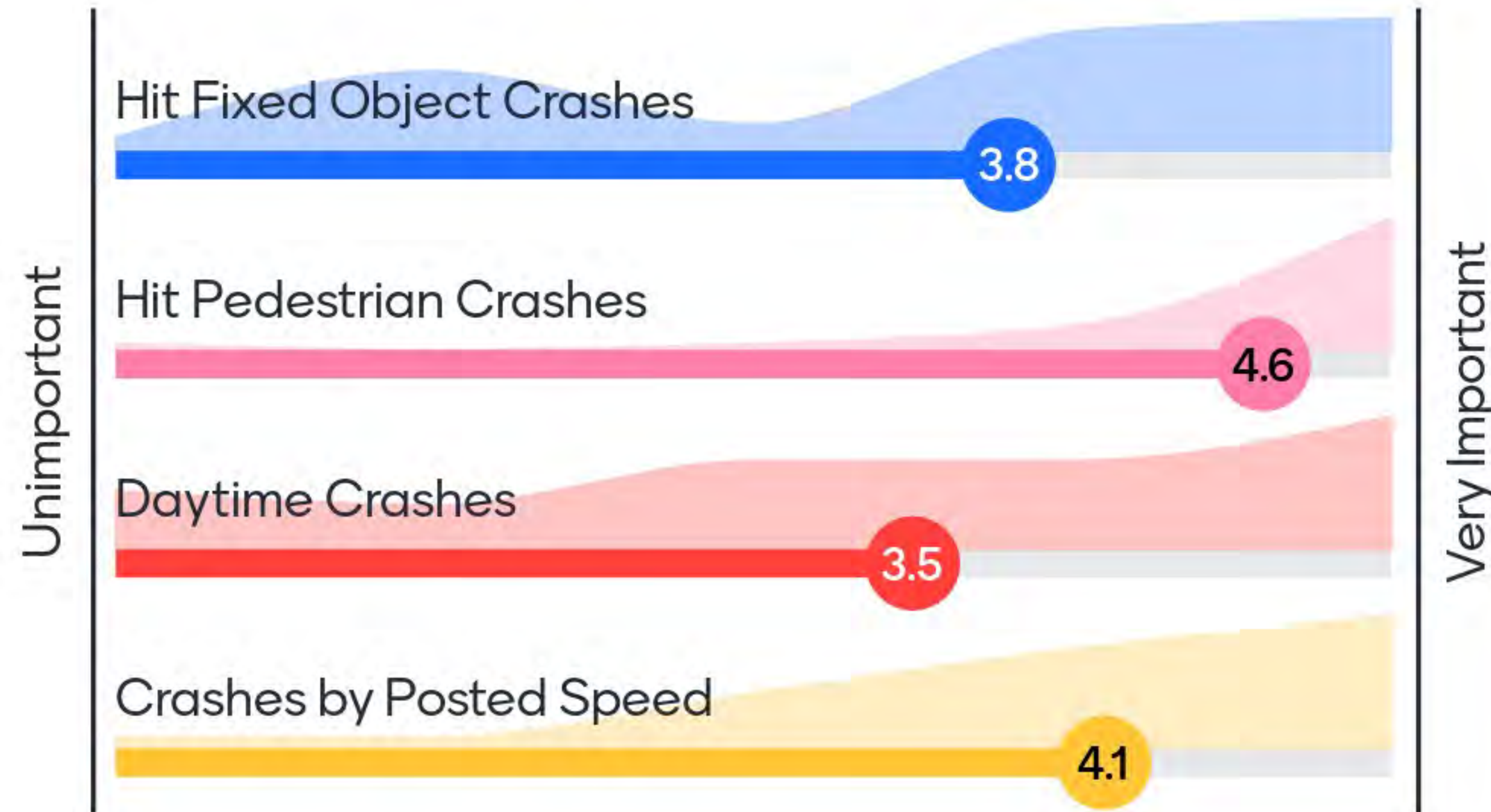
LRSP Step 1

Local Road Safety Plan Step		Plan Element
1	Analyze data to identify focus/priorities	List of crash priorities based on data
2	Analyze individual fatal/serious crashes to identify risk factors	Description of risk factors & selection process
3	Select most common risk factors	
4	Analyze roadway network for presence of risk factors	
5	Create a prioritized list of roadway locations	Prioritized list of roadway locations
6	Identify countermeasures to address prioritized locations	Description of countermeasures & selection process
7	Develop a prioritized list of projects	Prioritized list of projects

Step 1: Analyze Summary Data to Identify Focus/Priorities

2016-2020 Data	Fatal/Serious Injury Crashes Only															
City X	All Roads		All Cities													
	2016-2020	%	2016-2020	%	2016-2020	%	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011
Overall Numbers																
Total # of Collisions	12,359	-	5,323	-	115	-	32	18	22	24	19	24	26	32	41	49
By Collision Type																
Hit Pedestrian	2,119	17.1%	1,554	29.2%	27	23.5%	11	7	5	2	2	1	4	8	5	4
Hit Fixed Object	3,438	27.8%	906	17.0%	23	20.0%	9	0	4	5	5	6	2	8	2	11
Angle (Left Turn)	749	6.1%	445	8.4%	15	13.0%	2	4	2	4	3	6	2	4	7	4
Angle (T)	1,436	11.6%	780	14.7%	11	9.6%	3	3	2	1	2	3	4	3	5	12
By Light Condition																
Daylight	6,703	54.2%	2,871	53.9%	52	45.2%	17	8	10	9	8	11	19	14	29	36
Dark-Street Lights On	2,918	23.6%	1,889	35.5%	48	41.7%	11	6	10	12	9	8	4	13	8	9
Dusk	411	3.3%	178	3.3%	7	6.1%	2	1	1	1	2	1	1	3	1	3
Dark-No Street Lights	1,932	15.6%	238	4.5%	7	6.1%	1	3	1	2	0	1	2	2	2	0
By Speed Limit																
20 MPH	109	0.7%	86	1.3%	1	0.6%	1	0	0	0	0	0	0	0	0	0
25 MPH	1,911	11.6%	1,486	23.3%	14	8.9%	5	1	1	5	2	1	10	2	9	17
30 MPH	1,693	10.3%	1,466	23.0%	9	5.7%	4	4	0	0	1	3	2	1	8	4
35 MPH	4,282	26.1%	2,495	39.1%	91	57.6%	19	18	16	20	18	26	23	31	30	29
40 MPH	1,094	6.7%	454	7.1%	30	19.0%	6	4	8	6	6	5	2	3	18	19
45 MPH	1,025	6.2%	240	3.8%	13	8.2%	1	1	7	2	2	0	3	4	7	8

If this were my data, how important would it be to include the following in my LRSP analysis?



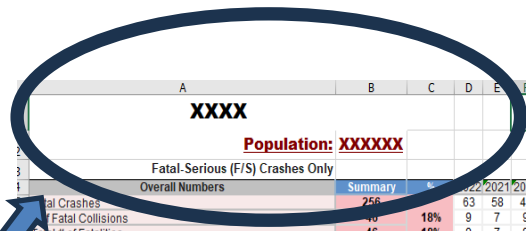
WSDOT Local Programs Crash Data Report Summary

Report Overview

1	Purpose:
2	The purpose of this report is to show summarized Collision Data by requesting agency. This report is for analysis use only and should be used as a starting point for analyzing Collision Data and identifying possible safety concerns.
3	
4	
5	<i>Under 23 U.S. Code § 148 and 23 U.S. Code § 409, safety data, reports, surveys, schedules, lists compiled or collected for the purpose of identifying, evaluating, or planning the safety enhancement of potential crash sites, hazardous roadway conditions, or railway-highway crossings are not subject to discovery or admitted into evidence in a Federal or State court proceeding or considered for other purposes in any action for damages arising from any occurrence at a location mentioned or addressed in such reports, surveys, schedules, lists, or data.</i>
6	
7	
8	
9	
10	Data Derived From:
11	This report was created by the Washington State Department of Transportation Local Programs Engineering Services Division. Data contained in this report is from WSDOT's Crash Data and Reporting Branch COGNOS crash data portal. All of the information provided to you in this report is presented in a 5 year block, which means the latest complete years of data are shown.
12	
13	
14	
15	Report Organization:
16	This report is organized into individual tabs representing specific Crash Data Fields. Each tab is sorted by Fatal/Serious Crashes only and by All Reportable Crashes. Comparison data is displayed for further analysis.
17	
18	<i>COGNOS reports will only display attributes that contain data, so if some years of crash data do not show up in the report, it is because the jurisdiction experienced zero of those specific crash types for the given year.</i>
19	
20	
21	This report displays 17 individual Crash Data fields and their attributes.
22	For cities over 27,499 population, crashes on managed access state highways and some state highway ramp locations are included in the data summary
23	
24	Data Field Tabs:
25	Crash Summary:
26	The 'Crash Summary' tab displays summarized data for both Fatal/Serious and All Reportable Crashes. Data displayed on this tab is limited to only the requesting agency data.
27	
28	Individual Crash Field Tabs:
29	Each tab displays the reporting agencies data for a specific Crash Data Field. Summarized comparison data for additional analysis along with a visual graph of the reporting agencies data is displayed.
30	
31	Data Summary:
32	The 'Data Summary' tab show the raw data for the requesting agency only. The data on this tab is the Crash Data used to populate this report.
33	
34	

Report Overview | Crash City Summary | By Crash Type | By Roadway Surface | By Roadway Surface Type | B ... (+) |

Crash Data Report Summary



Population: XXXXXX

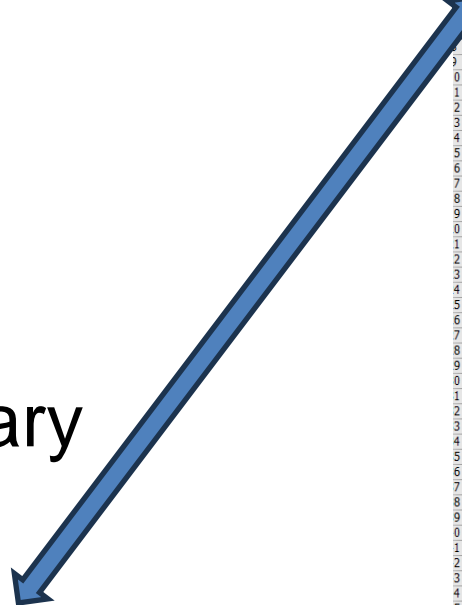
Fatal-Serious (F/S) Crashes Only						Total Crashes (All)							
Overall Numbers						Overall Numbers							
	Summary	2022	2021	2020	2019	2018	Summary	%	2022	2021	2020	2019	2018
Total Crashes	256	63	58	47	48	40	11,606		2,385	2,259	1,859	2,489	2,614
Total # of Fatalities	46	18%	9	7	9	10	46	0%	9	7	9	10	11
Total # of Injuries	335	89	70	60	62	54	4,624		908	915	838	1,127	1,038

By Crash Type (F/S)						By Crash Type (All)							
	Summary	2022	2021	2020	2019	2018	Summary	%	2022	2021	2020	2019	2018
Hit Pedestrian	78	30.47%	14	18	15	17	3,347	28.84%	616	660	515	725	831
Angle (T)	48	18.75%	18	10	11	5	3,006	25.90%	652	606	471	667	810
Hit Fixed Object	35	13.67%	6	12	6	5	1,291	11.12%	262	252	204	270	303
Rearend	22	8.59%	8	5	3	4	1,273	10.97%	280	213	205	279	296
Angle (Left Turn)	21	8.20%	6	3	2	5	1,093	9.42%	230	207	183	235	238
Other	13	5.08%	2	2	4	2	447	3.85%	91	98	78	77	103
Head-On	11	4.30%	5	1	2	1	313	2.70%	76	69	46	64	58
Hit Cyclist	9	3.52%	1	4	1	2	284	2.45%	48	49	57	60	70
Sideswipe (Opposite Direction)	8	3.13%	2	2	2	2	232	2.00%	60	37	49	41	45
Overtake	5	1.95%	1	1	1	2	95	0.82%	23	20	13	16	23
Hit Parked Car	2	0.78%	1	1	2	1	93	0.80%	16	18	17	23	19
Sideswipe (Same Direction)	2	0.78%				2	77	0.66%	19	20	12	16	10
Angle (Right)	1	0.39%	1				49	0.42%	9	8	9	16	7
Railway	1	0.39%	1				5	0.04%	2	2			1
							1	0.01%	1				

By Surface Condition (F/S)						By Surface Condition (All)							
	Summary	2022	2021	2020	2019	2018	Summary	%	2022	2021	2020	2019	2018
Dry	185	72.27%	49	38	33	38	7,835	67.51%	1,720	1,476	1,232	1,686	1,721
Wet	67	26.17%	13	19	12	10	3,482	30.00%	579	727	593	730	853
Ice	2	0.78%	1	1			123	1.06%	38	18	14	40	13
Snow/Slush	2	0.78%	1	1			60	0.69%	25	24	12	13	6
							60	0.52%	20	12	5	15	8
							16	0.14%	3	1	2	1	9
							3	0.03%					2
							3	0.03%				1	1
							2	0.02%					1
							2	0.02%			1		

By Lighting Conditions (F/S)						By Lighting Conditions (All)							
	Summary	2022	2021	2020	2019	2018	Summary	%	2022	2021	2020	2019	2018
Dark-Street Lights On	124	48.44%	34	29	21	19	7,596	65.45%	1,569	1,441	1,219	1,651	1,716
Davlight	107	41.80%	24	22	23	22	3,151	27.15%	663	632	485	644	727
Dark-No Street Lights	13	5.08%	2	3	2	3	318	2.74%	48	67	66	75	62
Dusk	5	1.95%	2	1		2	218	1.88%	43	50	25	56	44

City/County Summary



City or County Name

Population: 123456

Report Overview | **Crash City Summary** | By Crash Type | By Roadway Surface | By Roadway Surface Type ...

Crash Data Report Summary

City/County Summary

Fatal-Serious (F/S) Crashes Only							Total Crashes (All)								
Overall Numbers	Summary	%	2022	2021	2020	2019	2018	Overall Numbers	Summary	%	2022	2021	2020	2019	2018
Total Crashes	256		63	58	47	48	40	Total Crashes	11,606		2,385	2,259	1,859	2,489	2,614
# of Fatal Collisions	46	18%	9	7	9	10	11	# of Fatal Collisions	46	0%	9	7	9	10	11
Total # of Fatalities	46	18%	9	7	9	10	11	Total # of Fatalities	46	0%	9	7	9	10	11
# of Susp. Serious Inj. Collisions	210	82%	54	51	38	38	29	# of Susp. Serious Inj. Collisions	210	2%	54	51	38	38	29
# of Alcohol-Related Collisions	37	14%	8	11	3	8	7	# of Alcohol-Related Collisions	522	4%	86	96	68	135	137
Total # of Fatalities	46	18%	9	7	9	10	11	Total # of Fatalities	46	0%	9	7	9	10	11
Total # of Injuries	335		89	70	60	62	54	Total # of Injuries	4,824		908	915	836	1,127	1,038

Fatal-Serious (F/S) Crashes Only							Total Crashes (All)								
Overall Numbers	Summary	%	2022	2021	2020	2019	2018	Overall Numbers	Summary	%	2022	2021	2020	2019	2018
Total Crashes	256		63	58	47	48	40	Total Crashes	11,606		2,385	2,259	1,859	2,489	2,614
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# of Susp. Serious Inj. Collisions	210	82%	54	51	38	38	29	# of Susp. Serious Inj. Collisions	210	2%	54	51	38	38	29
# of Alcohol-Related Collisions	37	14%	8	11	3	8	7	# of Alcohol-Related Collisions	522	4%	86	96	68	135	137
Total # of Fatalities	46	18%	9	7	9	10	11	Total # of Fatalities	46	0%	9	7	9	10	11
Total # of Injuries	335		89	70	60	62	54	Total # of Injuries	4,824		908	915	836	1,127	1,038

Crash City Summary

Crash Data Report Summary

City/County Summary

XXXX

Population: XXXXXX

Fatal-Serious (F/S) Crashes Only						Total Crashes (All)											
Overall Numbers		Summary	%	2022	2021	2020	2019	2018	Overall Numbers		Summary	%	2022	2021	2020	2019	2018
Total Crashes	256	63	24.6%	58	47	48	40	40	Total Crashes	11,606	2,385	22.2%	2,259	1,859	2,489	2,514	
# of Fatal Collisions	46	18%	9	7	9	10	11	11	# of Fatal Collisions	46	0%	9	7	9	10	11	
Total # of Fatalities	46	18%	9	7	9	10	11	11	Total # of Fatalities	46	0%	9	7	9	10	11	
# of Susp. Serious Inj. Collisions	210	82%	54	51	38	38	29	29	# of Susp. Serious Inj. Collisions	210	2%	54	51	38	38	29	
# of Alcohol-Related Collisions	37	14%	8	11	3	7	7	7	# of Alcohol-Related Collisions	522	4%	86	96	88	105	137	
Total # of Fatalities	46								Total # of Fatalities	46							
Total # of Injuries	46								Total # of Injuries	908							

By Crash Type (F/S)						By Crash Type (All)											
Total Crashes		Summary	%	2022	2021	2020	2019	2018	Total Crashes		Summary	%	2022	2021	2020	2019	2018
Hit Pedestrian	78	30.47%	14	18	15	17	14	Rearend	3,347	28.84%	616	660	515	725	831		
Angle (T)	48	18.75%	18	10	11	5	4	Angle (T)	3,006	25.90%	652	606	471	667	610		
Hit Fixed Object	35	13.67%	6	12	6	6	5	Angle (Left Turn)	1,291	11.12%	262	252	204	270	303		
Rearend	22	8.59%	8	5	3	4	2	Sideswipe (Same Direction)	1,273	10.97%	280	213	205	279	296		
Angle (Left Turn)	21	8.20%	6	3	2	5	5	Hit Fixed Object	1,093	9.42%	230	207	183	235	238		
Other	13	5.08%	2	2	4	2	3	Other	447	3.85%	91	98	78	77	103		
Head-On	11	4.30%	5	1	2	1	2	Hit Parked Car	313	2.70%	76	69	46	64	58		
Hit Cyclist	9	3.52%	1	4	1	2	1	Hit Pedestrian	284	2.45%	48	49	57	60	70		
Sideswipe (Opposite Direction)	8	3.13%	2	2	2	2	2	Angle (Right)	232	2.00%	60	37	49	41	45		
Overturn	5	1.95%	1	1	2	1	1	Sideswipe (Opposite Direction)	95	0.82%	23	20	13	16	23		
Hit Parked Car	2	0.78%	1	1	2	1	1	Hit Cyclist	93	0.80%	16	18	17	23	19		
Sideswipe (Same Direction)	2	0.78%	1	1	2	1	1	Head-On	77	0.66%	19	20	12	16	10		
Angle (Right)	1	0.39%	1	1	1	1	1	Overturn	49	0.42%	9	8	9	16	7		
Railway	1	0.39%	1	1	1	1	1	Wildlife/ Animal	5	0.04%	2	2	2	2	1		
								Railway	1	0.01%	1	1	1	1	1		

By Surface Condition (F/S)						By Surface Condition (All)											
Total Crashes		Summary	%	2022	2021	2020	2019	2018	Total Crashes		Summary	%	2022	2021	2020	2019	2018
Dry	185	72.27%	49	38	33	38	27	Dry	7,835	67.51%	1,720	1,476	1,232	1,686	1,721		
Wet	67	26.17%	13	19	12	10	13	Wet	3,482	30.00%	579	727	593	730	853		
Ice	2	0.78%	1	1	1	1	1	Ice	123	1.06%	38	18	14	40	13		
Snow/Slush	2	0.78%	1	1	1	1	1	Unknown	80	0.69%	25	24	12	13	6		
								Snow/Slush	60	0.52%	20	12	5	15	8		
								Standing Water	16	0.14%	3	1	2	1	9		
								Other	3	0.03%	1	1	1	1	2		
								Oil	3	0.03%	1	1	1	1	1		
								Other	2	0.02%	1	1	1	1	1		
								Sand/ModDirt	2	0.02%	1	1	1	1	1		

By Lighting Conditions (F/S)						By Lighting Conditions (All)											
Total Crashes		Summary	%	2022	2021	2020	2019	2018	Total Crashes		Summary	%	2022	2021	2020	2019	2018
Dark-Street Lights On	124	48.44%	34	29	21	19	21	Daylight	7,596	65.45%	1,569	1,441	1,218	1,418	1,718		
Daylight	107	41.80%	24	22	23	22	16	Dark-Street Lights On	3,151	27.15%	663	638	538	644	727		
Dark-No Street Lights	13	5.08%	2	3	2	3	3	Dusk	318	2.74%	77	66	75	62	62		
Dusk	5	1.95%	2	1	2	1	2	Dark-No Street Lights	318	2.74%	77	66	75	62	62		

By Crash Type (F/S)			Summary					By Crash Type (All)			Summary				
	Total Crashes	%	2022	2021	2020	2019	2018	Total Crashes	%	2022	2021	2020	2019	2018	
Hit Pedestrian	78	30.47%	14	18	15	17	14	Rearend	3,347	28.84%	616	660	515	725	831
Angle (T)	48	18.75%	18	10	11	5	4	Angle (T)	3,006	25.90%	652	606	471	667	610
Hit Fixed Object	35	13.67%	6	12	6	6	5	Angle (Left Turn)	1,291	11.12%	262	252	204	270	303
Rearend	22	8.59%	8	5	3	4	2	Sideswipe (Same Direction)	1,273	10.97%	280	213	205	279	296
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Head-On	11	4.30%	5	1	2	1	2	Hit Parked Car	313	2.70%	76	69	46	64	58
Hit Cyclist	9	3.52%	1	4	1	2	1	Hit Pedestrian	284	2.45%	48	49	57	60	70
Sideswipe (Opposite Direction)	8	3.13%	2	2	2	2	2	Angle (Right)	232	2.00%	60	37	49	41	45
Overturn	5	1.95%	1	1	2	1	1	Sideswipe (Opposite Direction)	95	0.82%	23	20	13	16	23
Hit Parked Car	2	0.78%	1	1	2	1	1	Hit Cyclist	93	0.80%	16	18	17	23	19
Sideswipe (Same Direction)	2	0.78%	1	1	2	1	1	Head-On	77	0.66%	19	20	12	16	10
Angle (Right)	1	0.39%	1	1	1	1	1	Overturn	49	0.42%	9	8	9	16	7
Railway	1	0.39%	1	1	1	1	1	Wildlife/ Animal	5	0.04%	2	2	2	2	1
								Railway	1	0.01%	1	1	1	1	1

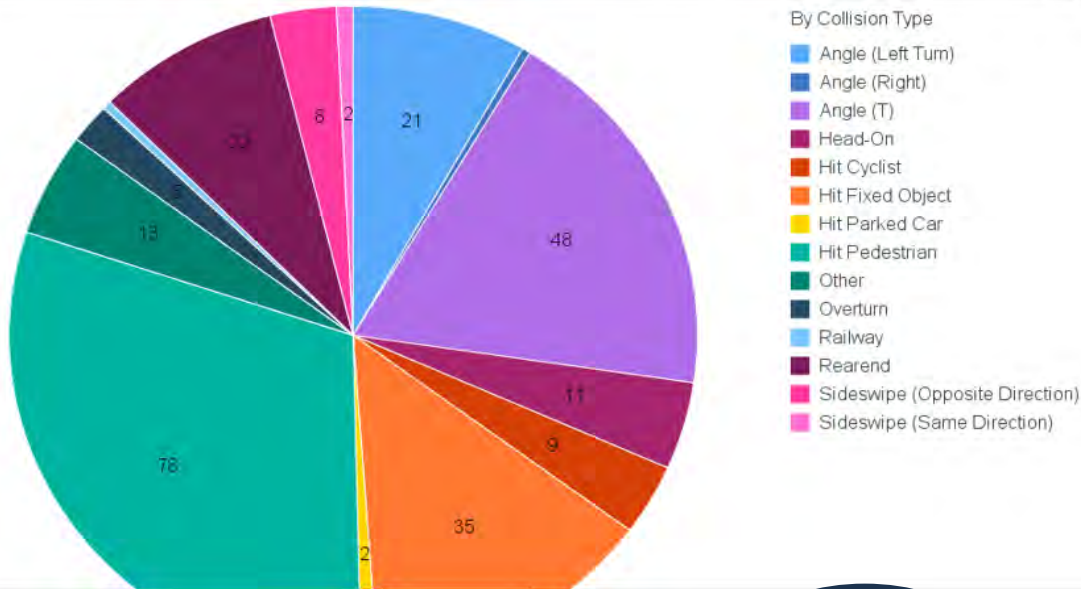
By Surface Condition (F/S)			Summary					By Surface Condition (All)			Summary				
	Total Crashes	%	2022	2021	2020	2019	2018	Total Crashes	%	2022	2021	2020	2019	2018	
Dry	185	72.27%	49	38	33	38	27	Dry	7,835	67.51%	1,720	1,476	1,232	1,686	1,721
Wet	67	26.17%	13	19	12	10	13	Wet	3,482	30.00%	579	727	593	730	853
Ice	2	0.78%	1	1	1	1	1	Ice	123	1.06%	38	18	14	40	13
Snow/Slush	2	0.78%	1	1	1	1	1	Unknown	80	0.69%	25	24	12	13	6
								Snow/Slush	60	0.52%	20	12	5	15	8
								Standing Water	16	0.14%	3	1	2	1	9
								Other	3	0.03%	1	1	1	1	2
								Oil	3	0.03%	1	1	1	1	1
								Other	2	0.02%	1	1	1	1	1
								Sand/ModDirt	2	0.02%	1	1	1	1	1

By Lighting Conditions (F/S)			Summary					By Lighting Conditions (All)			Summary				
	Total Crashes	%	2022	2021	2020	2019	2018	Total Crashes	%	2022	2021	2020	2019	2018	
Dark-Street Lights On	124	48.44%	34	29	21	19	21	Daylight	7,596	65.45%	1,569	1,441	1,218	1,418	
Daylight	107	41.80%	24	22	23	22	16	Dark-Street Lights On	3,151	27.15%	663	638	538	644	727
Dark-No Street Lights	13	5.08%	2	3	2	3	3	Dusk	318	2.74%	77	66	75	62	62
Dusk	5	1.95%	2	1	2	1	2	Dark-No Street Lights	318	2.74%	77	66	75	62	62

Report Overview | **Crash City Summary** | By Crash Type | By Roadway Surface | By Roadway Surface Type ... (+)

Crash Type (F/S)	All Rds		Crash Type (F/S)	All City Str		Crash Type (F/S)	West City Str		Crash Type (F/S)	East City Str		City or County Name							
	Total Crashes	%		Total Crashes	%		Total Crashes	%		Total Crashes	%	Crash Type (F/S)	Total Crashes	%	2022	2021	2020	2019	2018
Hit Fixed Object	3,871	27.79%	Hit Fixed Object	2,435	22.89%	Hit Pedestrian	1,032	27.03%	Hit Pedestrian	264	24.33%	Hit Pedestrian	78	30.47%	14	18	15	17	14
Hit Pedestrian	2,261	16.23%	Hit Pedestrian	2,009	18.89%	Hit Fixed Object	711	18.62%	Angle (T)	243	22.40%	Angle (T)	48	18.75%	18	10	11	5	4
Angle (T)	1,745	12.53%	Angle (T)	1,380	12.97%	Angle (T)	564	14.77%	Hit Fixed Object	180	16.59%	Angle (T)	35	13.67%	6	12	6	6	5
Rearend	1,077	7.73%	Rearend	937	8.81%	Hit Cyclist	376	9.85%	Angle (Left Turn)	101	9.31%	Hit Fixed Object	22	8.59%	8	5	3	4	2
Angle (Left Turn)	1,028	7.38%	Angle (Left Turn)	827	7.78%	Angle (Left Turn)	348	9.11%	Hit Cyclist	81	7.47%	Rearend	21	8.20%	6	3	2	5	5
Overturn	916	6.58%	Overturn	604	5.68%	Rearend	152	3.98%	Overturn	47	4.33%	Angle (Left Turn)	13	5.08%	2	2	4	2	3
Head-On	702	5.04%	Hit Cyclist	586	5.51%	Head-On	140	3.67%	Rearend	42	3.87%	Other	11	4.30%	5	1	2	1	2
Hit Cyclist	670	4.81%	Head-On	518	4.87%	Other	135	3.54%	Hit Parked Car	33	3.04%	Head-On	9	3.52%	1	4	1	2	1
Other	648	4.65%	Other	505	4.75%	Hit Parked Car	123	3.22%	Head-On	32	2.95%	Hit Cyclist	8	3.13%	1	2	2	2	1
Sideswipe (Same Direction)	338	2.43%	Sideswipe (Same Direction)	313	2.94%	Overturn	123	3.22%	Other	30	2.76%	Sideswipe (Opposite Direction)	5	1.95%	1	1	2	1	1
Sideswipe (Opposite Direction)	268	1.92%	Hit Parked Car	225	2.12%	Sideswipe (Same Direction)	48	1.26%	Sideswipe (Same Direction)	21	1.94%	Overturn	2	0.78%	2	1	1	2	1
Hit Parked Car	255	1.83%	Sideswipe (Opposite Direction)	197	1.85%	Sideswipe (Opposite Direction)	41	1.07%	Sideswipe (Opposite Direction)	7	0.65%	Hit Parked Car	2	0.78%	1	1	1	1	1
Wildlife/ Animal	94	0.67%	Wildlife/ Animal	55	0.52%	Angle (Right)	14	0.37%	Angle (Right)	3	0.28%	Sideswipe (Same Direction)	2	0.78%	2	1	1	1	1
Angle (Right)	45	0.32%	Angle (Right)	37	0.35%	Railway	8	0.21%	Wildlife/ Animal	1	0.09%	Angle (Right)	1	0.39%	1	1	1	1	1
Railway	12	0.09%	Railway	8	0.08%	Wildlife/ Animal	3	0.08%	Wildlife/ Animal	1	0.09%	Railway	1	0.39%	1	1	1	1	1

City or County Name



Data Fields Reported in Summary– 18 Tabs

- **Crash Type**
- **Roadway Surface Condition**
- **Roadway Surface Type**
- **Lighting Condition**
- **Junction Relationship**
- **Roadway Character (Curvature)**
- **First Object Struck**
- **Driver Contributing Circumstances**
- **Vehicle Actions**
- **Vehicle Type**
- **Traffic Control**
- **Posted Speed**
- **Roadway Type**
- **Pedestrian Contributing Circumstances**
- **Pedestrian Was Using**
- **Pedalcycle Contributing Circumstances**
- **Pedalcycle Was Using**
- **Data Summary**

Level of Review (WSDOT Analyst)

Accept what the law enforcement officer submits.
WSDOT analyst to review and update as needed.

Accept: Submitted by Law Enforcement

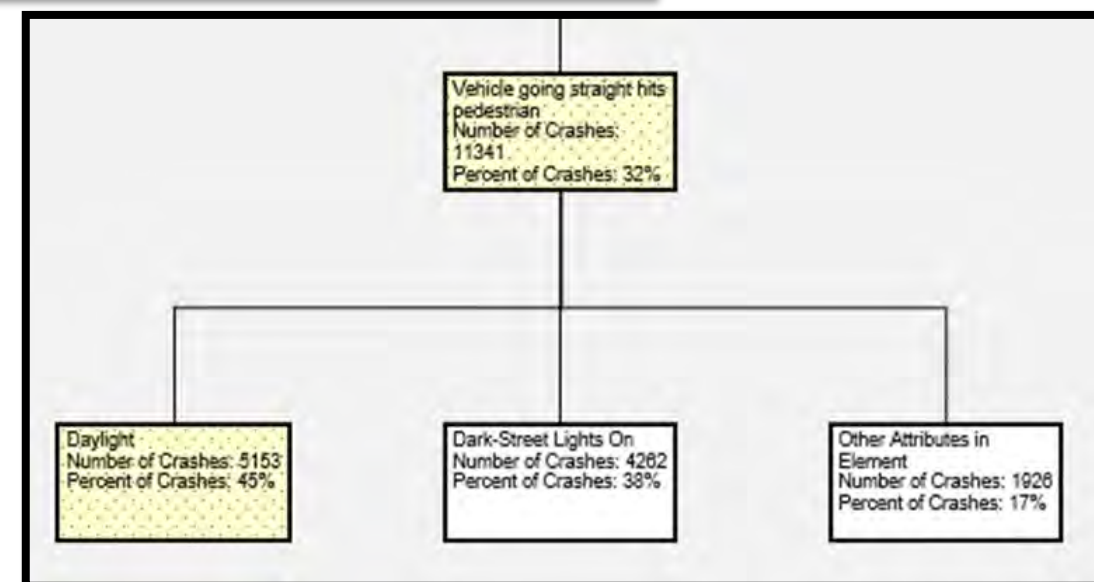
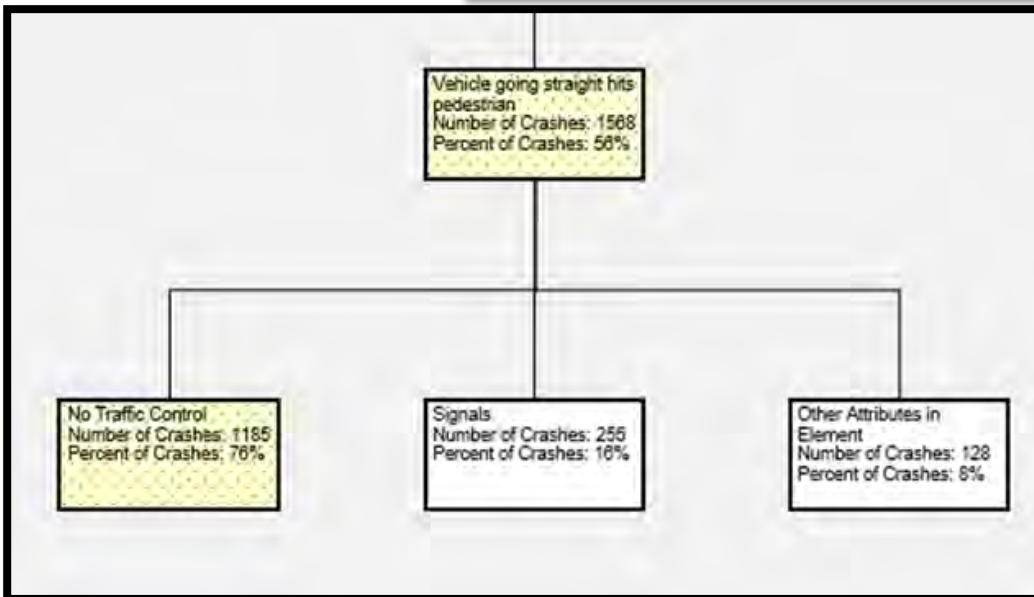
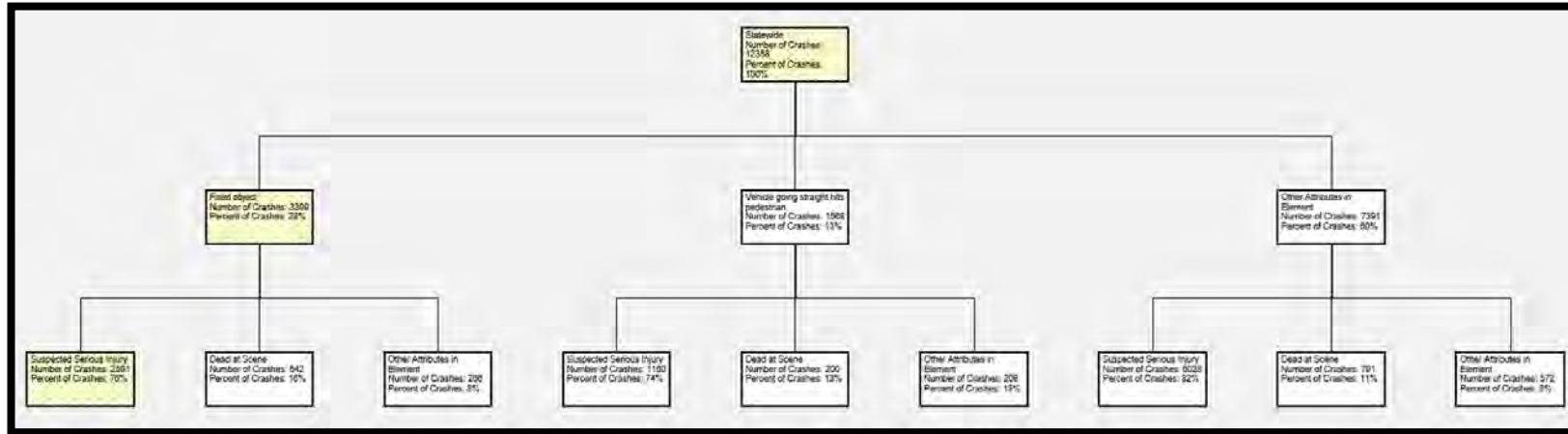
- **Roadway Surface Condition**
- **Lighting Conditions**
- **Roadway Character**
- **Traffic Control**
- **Posted Speed***
- **Type of Roadway**
- **Roadway Surface Type**
- **Roadway Surface Conditions**
- **Pedestrian Was Using**
- **Pedal Cyclist Was Using**
- **Driver CC's, Ped CC's, Bike CC's**

Reviewed and/or updated by (WSDOT Analyst)

- **First and/or Second Collision Type**
- **First and /or Section Object Struck**
- **Junction Relationship**
- **Vehicle Type**
- **Vehicle Actions**

FHWA Crash Tree Diagram Tool

<https://highways.dot.gov/safety/rwd/forrrwd/fhwa-crash-tree-diagram-tool>



Additional Resources and Information

For additional information on PTCR codes, Help with Data Summary Report or Creating Crash Trees:

Paul Snow

Safety Analyst

WSDOT Local Programs

paul.snow@wsdot.wa.gov

360-705-7380

Crash Data research:

Data Catalog:

<http://webapps.wsdot.loc/InformationTechnology/EnterpriseApplications/MetadataMgmt/>

FHWA Crash Tree Diagram Tool:

<https://highways.dot.gov/safety/rwd/forrrwd/fhwa-crash-tree-diagram-tool>

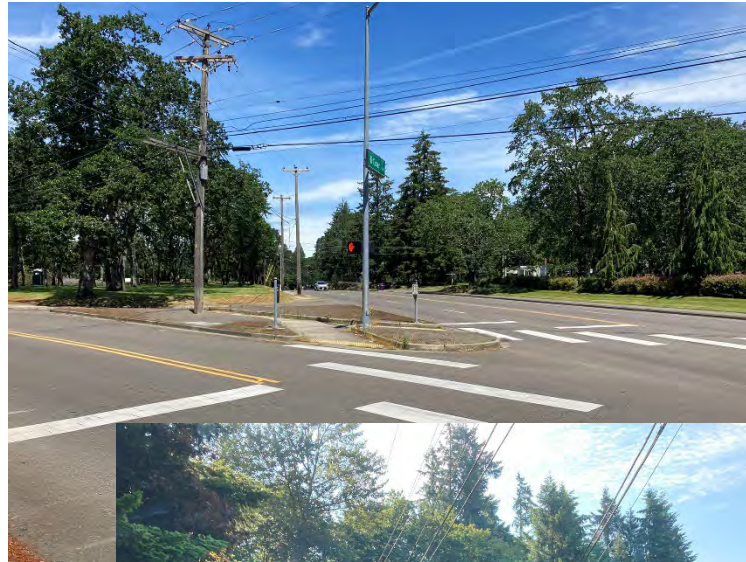
LRSP Step 2

Local Road Safety Plan Step		Plan Element
1	Analyze data to identify focus/priorities	List of crash priorities based on data
2	Analyze individual fatal/serious crashes to identify risk factors	Description of risk factors & selection process
3	Select most common risk factors	
4	Analyze roadway network for presence of risk factors	
5	Create a prioritized list of roadway locations	Prioritized list of roadway locations
6	Identify countermeasures to address prioritized locations	Description of countermeasures & selection process
7	Develop a prioritized list of projects	Prioritized list of projects

Step 2: Analyze Individual Fatal/Serious Crashes to Identify Risk Factors

Intersection

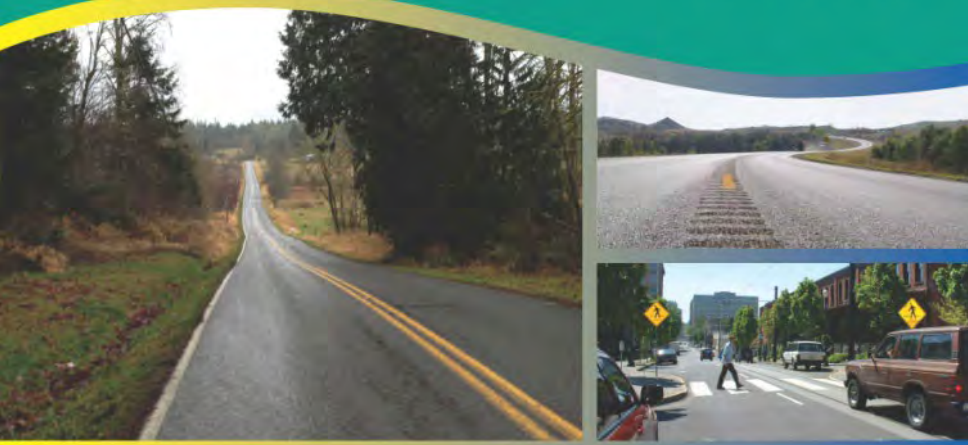
- Crash 1
- Crash 2
- Crash 3
- Crash 4
- Crash 61, etc.



Risk Factors

Page 18

Systemic Safety Project Selection Tool



Roadway and Intersection Features

- Number of lanes
- Lane width
- Shoulder surface width and type
- Median width and type
- Horizontal curvature, superelevation, delineation, or advance warning devices
- Horizontal curve density
- Horizontal curve and tangent speed differential
- Presence of a visual trap at a curve or combinations of vertical grade and horizontal curvature
- Roadway gradient
- Pavement condition and friction
- Roadside or edge hazard rating (potentially including sideslope design)
- Driveway presence, design, and density
- Presence of shoulder or centerline rumble strips
- Presence of lighting
- Presence of on-street parking
- Intersection skew angle
- Intersection traffic control device
- Number of signal heads vs. number of lanes
- Presence of backplates
- Presence of advanced warning signs
- Intersection located in or near horizontal curve
- Presence of left-turn or right-turn lanes
- Left-turn phasing
- Allowance of right-turn-on-red
- Overhead versus pedestal-mounted signal heads
- Pedestrian crosswalk presence, crossing distance, signal head type

Traffic Volume

- Average daily traffic volumes
- Average daily entering vehicles
- Proportion of commercial vehicles in traffic stream

Other Features

- Posted speed limit or operating speed
- Presence of nearby railroad crossing
- Presence of automated enforcement
- Adjacent land use type (e.g., schools, commercial, or alcohol-sales establishments)
- Location and presence of bus stops

Risk Factors Used (# Cities in 2022)

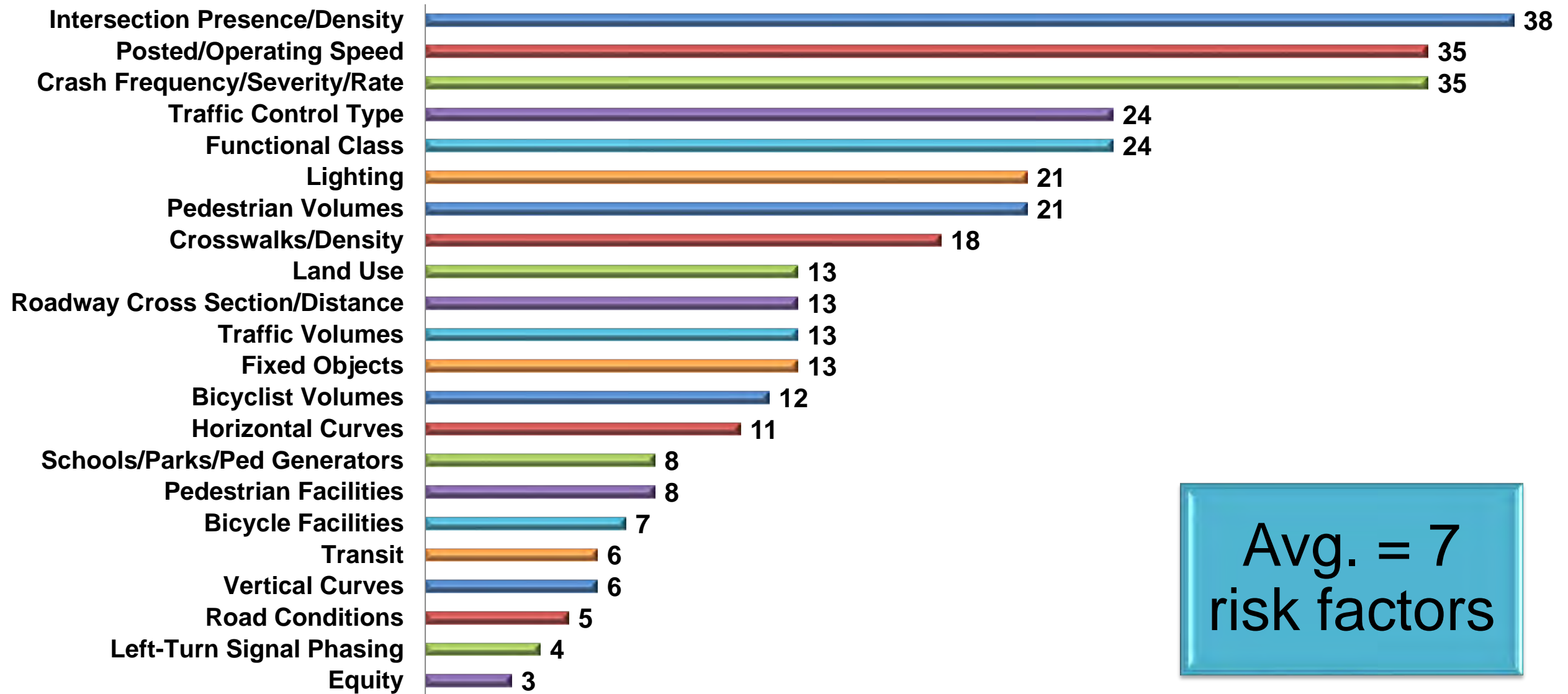




Photo #1: If this was a location where you had a fatal intersection-related crash, what risk factors might you identify here? (1-3 words)

121 responses





Photo #2: If this was a location where you had a fatal intersection-related crash, what risk factors might you identify here? (1-3 words)

69 responses





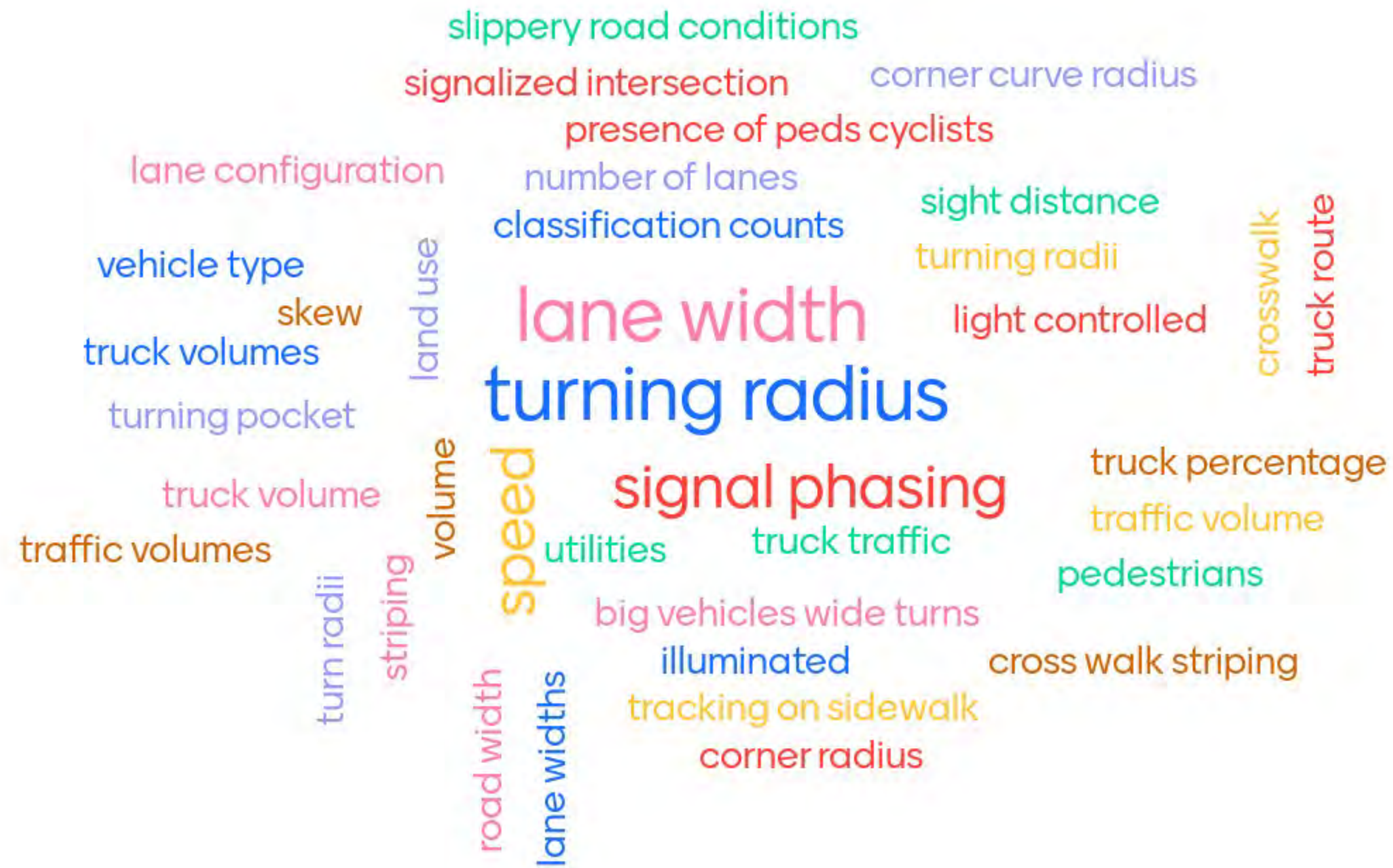
HARRISON AVE

C.R. England

C.R. England

Photo #3: If this was a location where you had a fatal intersection-related crash, what risk factors might you identify here? (1-3 words)

44 responses





LRSP Step 3

Local Road Safety Plan Step		Plan Element
1	Analyze data to identify focus/priorities	List of crash priorities based on data
2	Analyze individual fatal/serious crashes to identify risk factors	Description of risk factors & selection process
3	Select most common risk factors	
4	Analyze roadway network for presence of risk factors	Prioritized list of roadway locations
5	Create a prioritized list of roadway locations	
6	Identify countermeasures to address prioritized locations	Description of countermeasures & selection process
7	Develop a prioritized list of projects	Prioritized list of projects

Step 3: Select Most Common Risk Factors

Intersection

- Traffic Control Type
- Traffic Volume
- Lighting
- Turn Lanes
- Posted Speed

Pedestrian

- Posted Speed
- Pedestrian Volume
- Crossing Distance
- Lighting
- Ped/Bike Facilities

Qualitative & Surrogate Data

- **Use the data that you have**
- **Use qualitative ratings when needed**
 - Good, Fair, Not-So-Good (curve radius, roadside, etc.)
 - Number per segment, roadway (curves, driveways, intersections, etc.)
 - High, Medium, Low (traffic volumes, pedestrian volumes, crash frequency, etc.)
- **Use surrogate data when needed**
 - Land use vs ped volume, functional class vs roadway cross section
- **It is important to include the risk factors that are key to your roadway network**

Pedestrian

- Posted Speed
- **Pedestrian Volume**
- **Crossing Distance**
- Lighting
- Ped/Bike Facilities



Vulnerable Road Users (VRU)

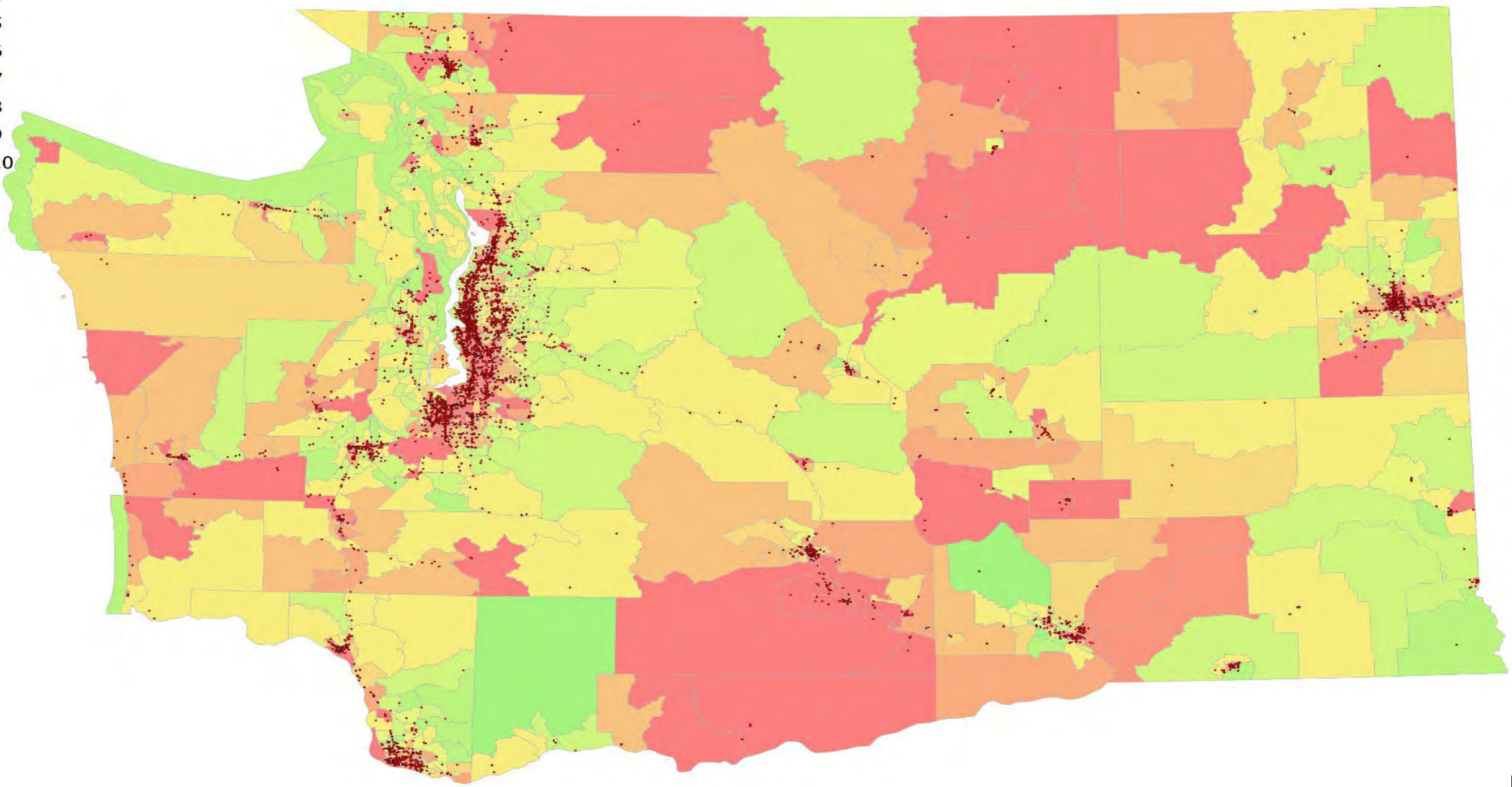
- Bipartisan Infrastructure Law (BIL) requirement to conduct a VRU assessment by November 15, 2023
- An updated VRU assessment must be part of future Target Zero updates
- Assessment must be data-driven & identify areas of high risk
- State must consult with local governments, MPOs, and RTPOs that represent these high-risk areas
- State must develop a program of projects or strategies to reduce safety risks in these identified areas

VRU Assessment

- Factors included in the tool are sociodemographic and equity characteristics
 - Uses the Social Vulnerability Index of the CDC and Washington specific Environmental Health Disparity Index from DOH
- Additional factors include:
 - Crash types, time of day, age of VRUs
 - Crash contributing factors (such as alcohol, drugs, distraction, failure to use crosswalks, speeding)
 - Crash location (including proximity to schools and transit stops)
- Priority locations submitted in applications will receive additional consideration & prioritization in safety calls for projects

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10

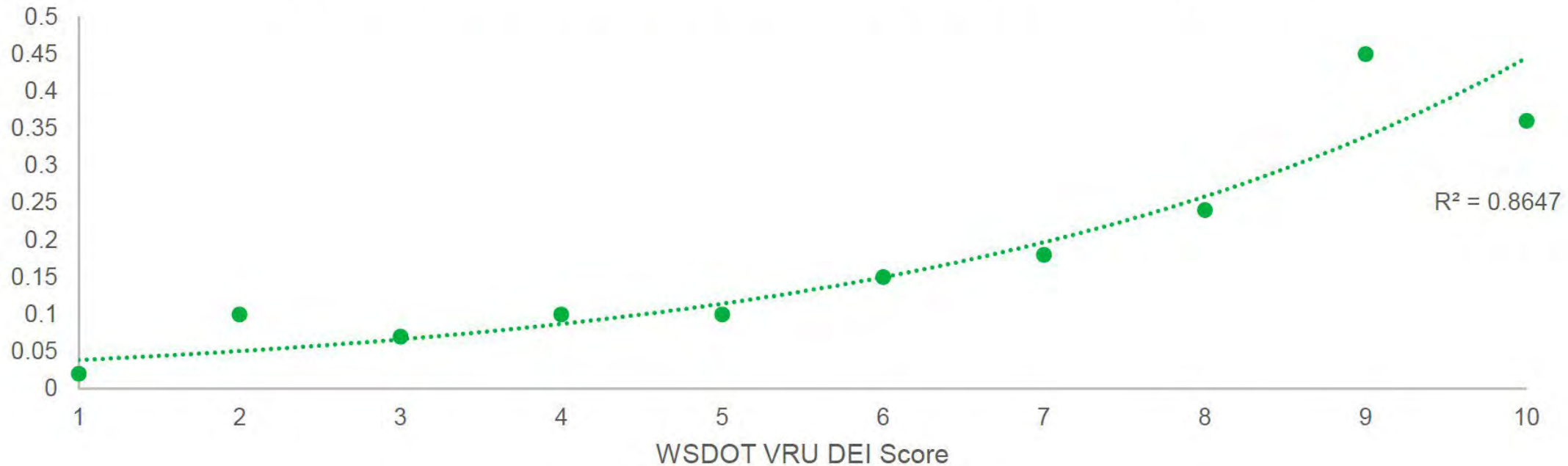
Draft VRU Prioritization



For state routes

The VRU DEI score correlates well with VRU fatal and serious injury crash density

WSDOT VRU DEI Score and SR VRU KA Crash Density per Mile



● VRU KA Crash Density per Mi Expon. (VRU KA Crash Density per Mi)

From what I have just seen about the VRU assessment (select all that apply):



This will likely affect my agency



This probably won't apply to my agency



I think the analysis looks good



I have concerns

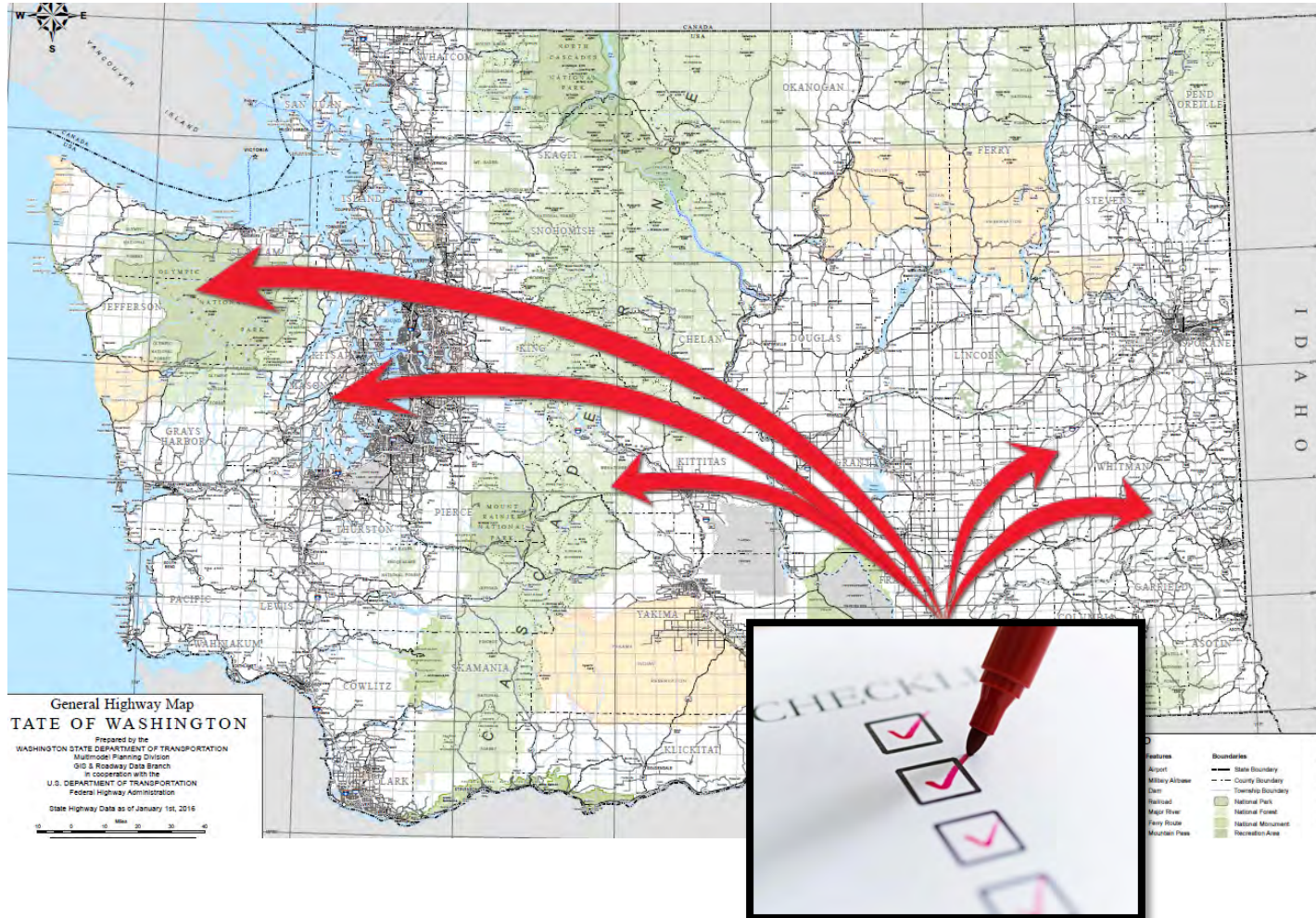


I will probably apply for projects at some of those locations

LRSP Step 4

Local Road Safety Plan Step		Plan Element
1	Analyze data to identify focus/priorities	List of crash priorities based on data
2	Analyze individual fatal/serious crashes to identify risk factors	Description of risk factors & selection process
3	Select most common risk factors	
4	Analyze roadway network for presence of risk factors	Prioritized list of roadway locations
5	Create a prioritized list of roadway locations	
6	Identify countermeasures to address prioritized locations	Description of countermeasures & selection process
7	Develop a prioritized list of projects	Prioritized list of projects

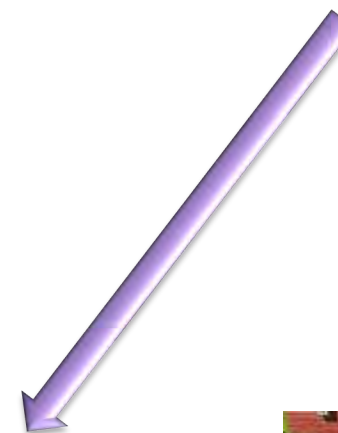
Step 4: Analyze Roadway Network for Presence of Risk Factors



Segmenting Your Network



Intersection by intersection



Block by block

Corridor by corridor



LRSP Step 5

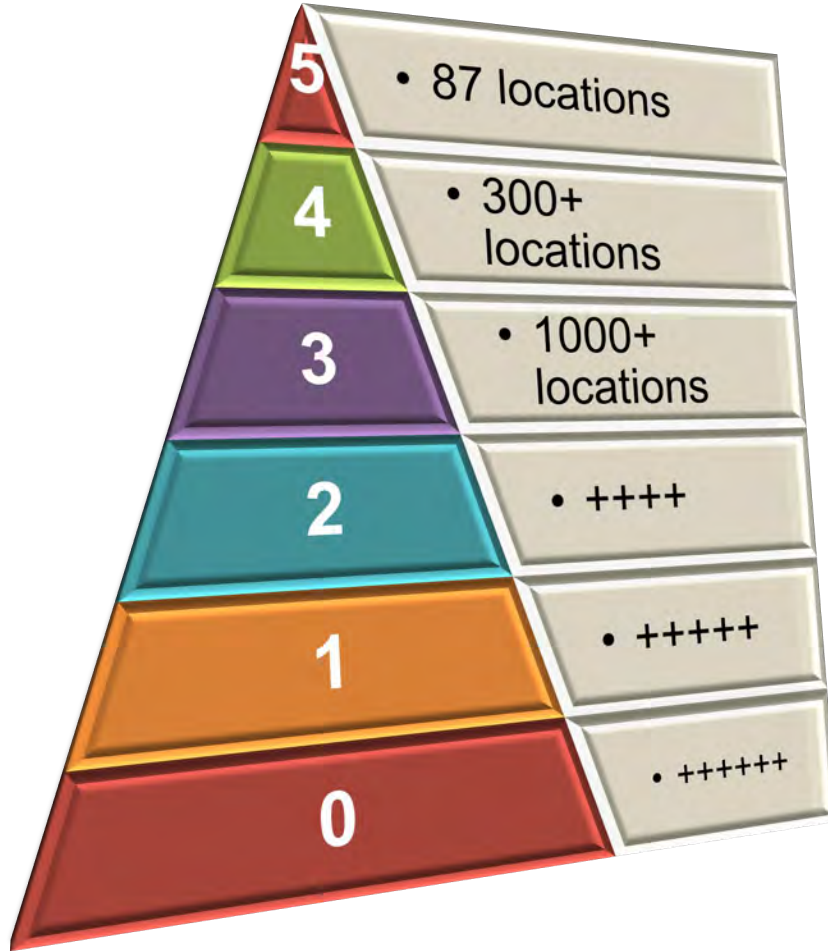
Local Road Safety Plan Step		Plan Element
1	Analyze data to identify focus/priorities	List of crash priorities based on data
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Step 5: Create Prioritized List of Roadway Locations



1. Intersection A & B, 5 risk factors
2. Intersection C & D, 5 risk factors
3. Road X, between Y & Z, 5 risk factors
4. Intersection E & F, 4 risk factors
5. Intersection B & G, 4 risk factors
6. Intersection B & H, 4 risk factors
7. Road V, between X & Y, 4 risk factors
8. Intersection I & J, 4 risk factors
9. Road W, between S & T, 4 risk factors
10. Road U, between A & C, 4 risk factors
11. Intersection J & K, 4 risk factors
12. Intersection J & L, 4 risk factors
13. Intersection J & M, 4 risk factors
14. Intersection A & E, 3 risk factors
15. Etc.

Number of Risk Factors



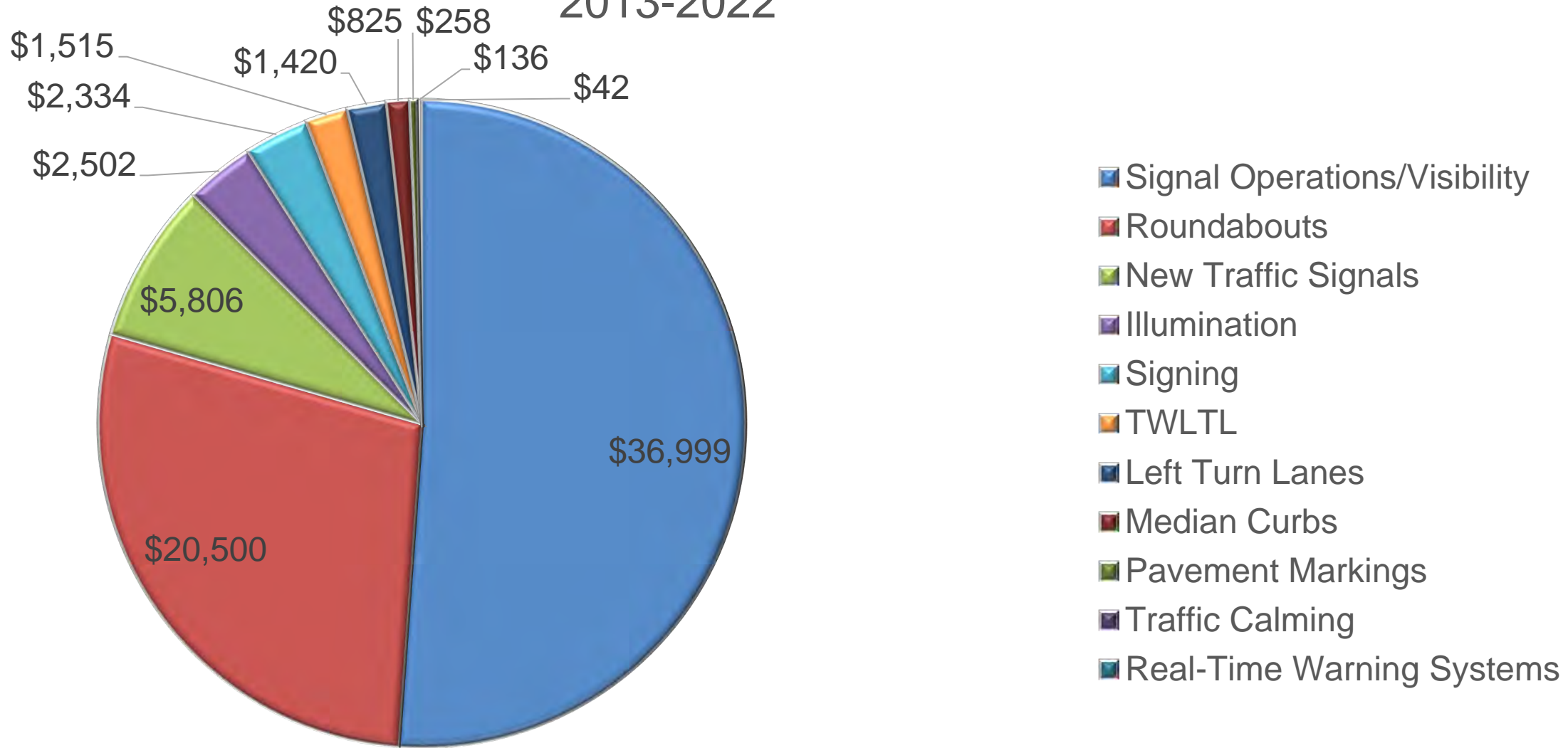
Add more risk factors!

LRSP Step 6

Local Road Safety Plan Step		Plan Element
1	Analyze data to identify focus/priorities	List of crash priorities based on data
2	Analyze individual fatal/serious crashes to identify risk factors	Description of risk factors & selection process
3	Select most common risk factors	
4	Analyze roadway network for presence of risk factors	
5	Create a prioritized list of roadway locations	Prioritized list of roadway locations
6	Identify countermeasures to address prioritized locations	Description of countermeasures & selection process
7	Develop a prioritized list of projects	Prioritized list of projects

City Safety Program

Intersection Countermeasures Funded (in \$1000s) 2013-2022



Intersection Countermeasures

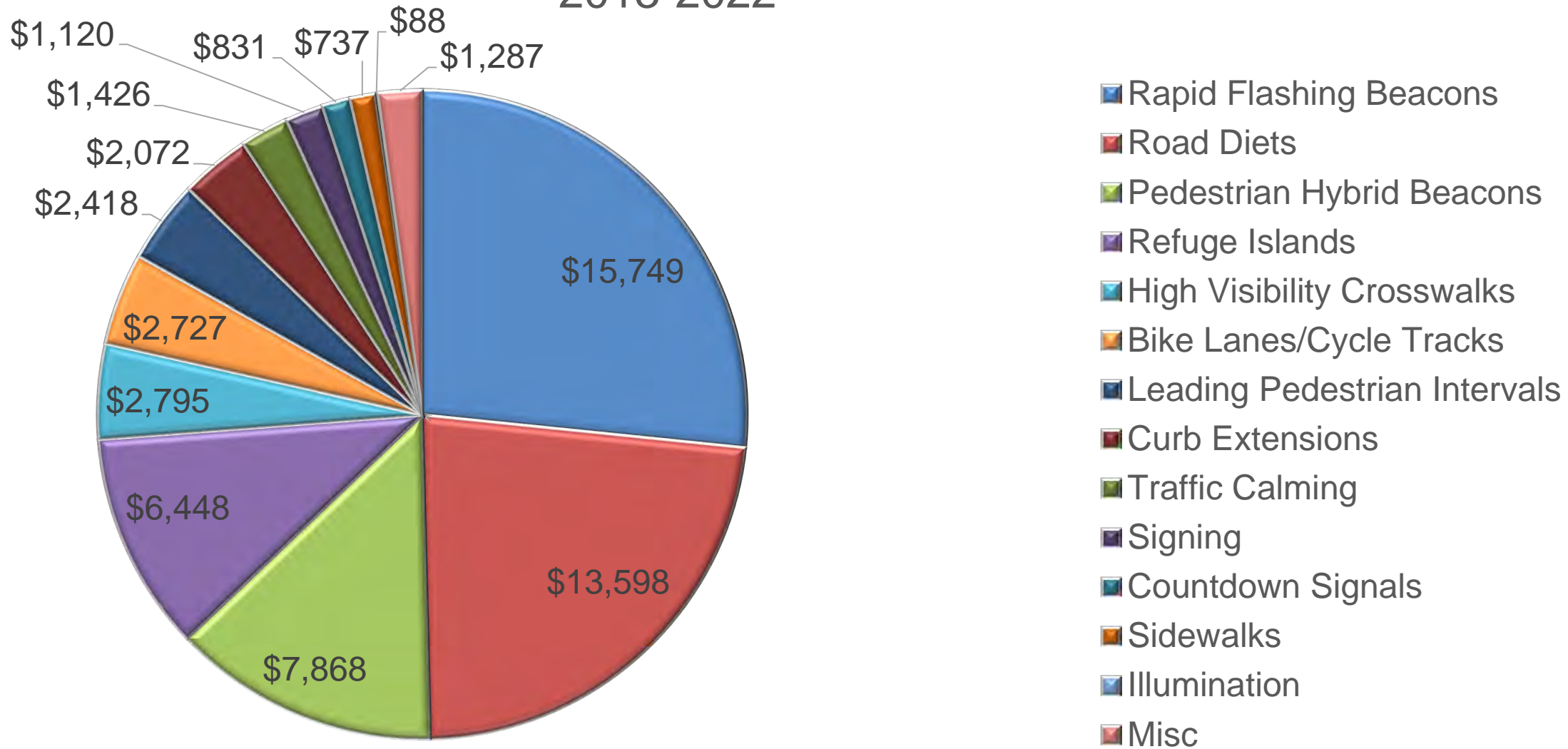
- Roundabouts
- Intersection Control Evaluations
 - WSDOT Design Manual (Ch 1300)

CMF= 0.28 (Fatal); 0.56 (Injury)



City Safety Program

Ped/Bike Countermeasures Funded (in \$1000s) 2013-2022



Pedestrian Crossing Countermeasures

Countermeasure	CMF
High-Visibility Crosswalk Markings	0.60
Median Refuge Island	0.69
Raised Crosswalk	0.55
Stop Lines/Bars	0.75
RRFBs	0.53
PHBs	0.45
Road Diets	0.53
Intersection Lighting	0.58
Leading Pedestrian Interval (LPI)	0.81
Curb Extensions/Bulb-outs	?

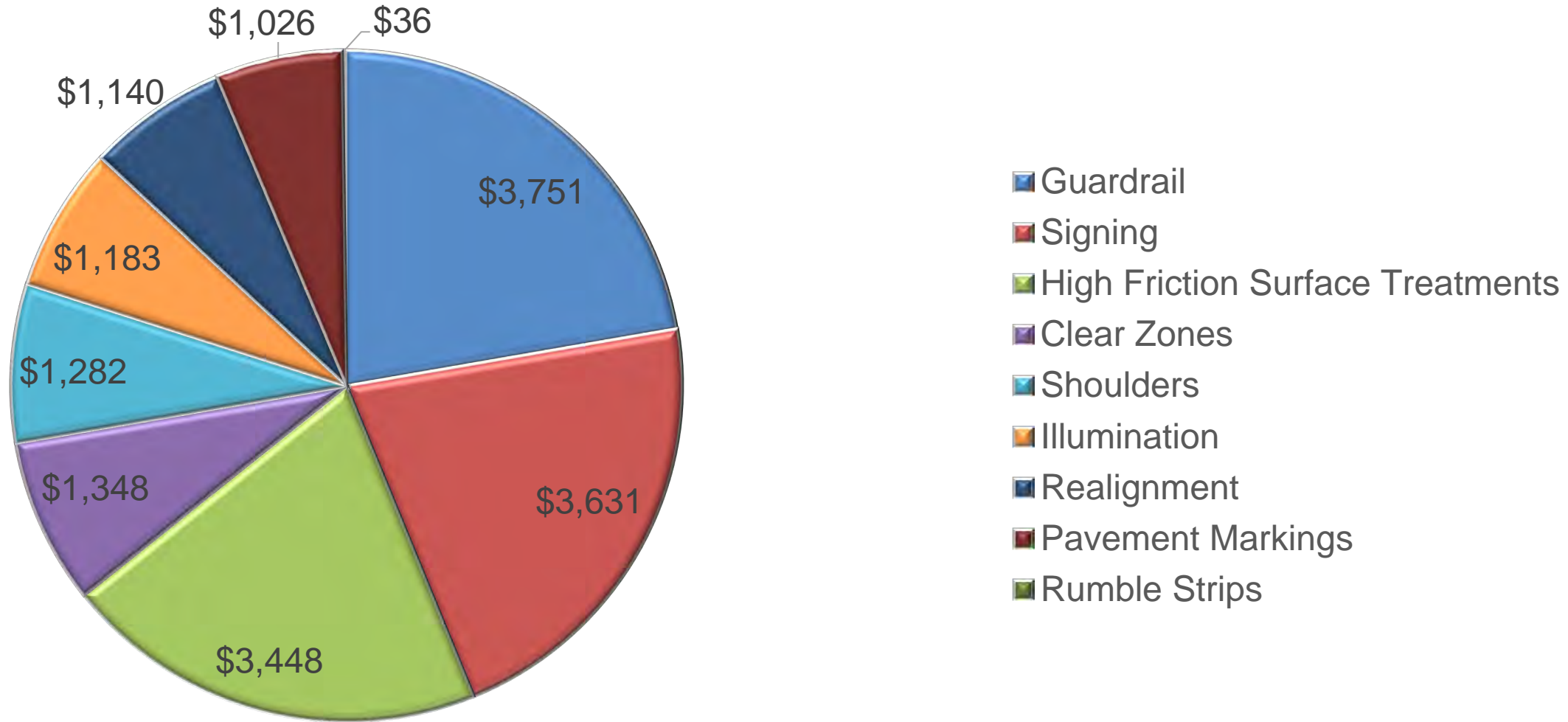
- FHWA Safe Transportation for Every Pedestrian (STEP)
https://safety.fhwa.dot.gov/ped_bike/step/

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

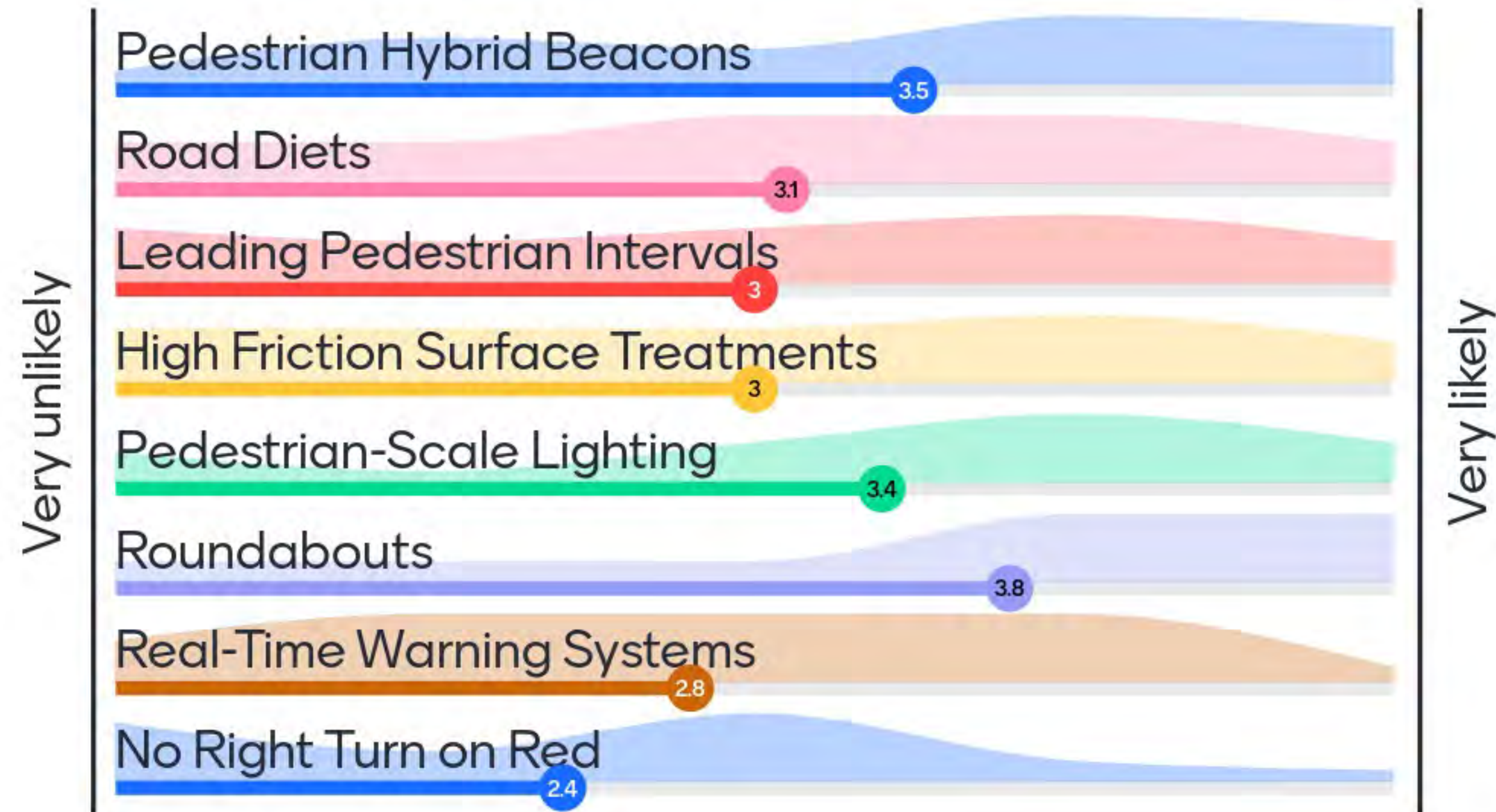
Roadway Configuration	Posted Speed Limit and AADT								
	Vehicle AADT <9,000			Vehicle AADT 9,000–15,000			Vehicle AADT >15,000		
	≤30 mph	35 mph	≥40 mph	≤30 mph	35 mph	≥40 mph	≤30 mph	35 mph	≥40 mph
2 lanes (1 lane in each direction)	① 2 4 5 6	① 5 6 7 9	① 5 6 ⑦ ⑨	① 4 5 6 7 9	① 5 6 7 9	① 5 6 ⑦ ⑨	①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

City Safety Program

Lane Departure Countermeasures Funded (in \$1000s) 2013-2022



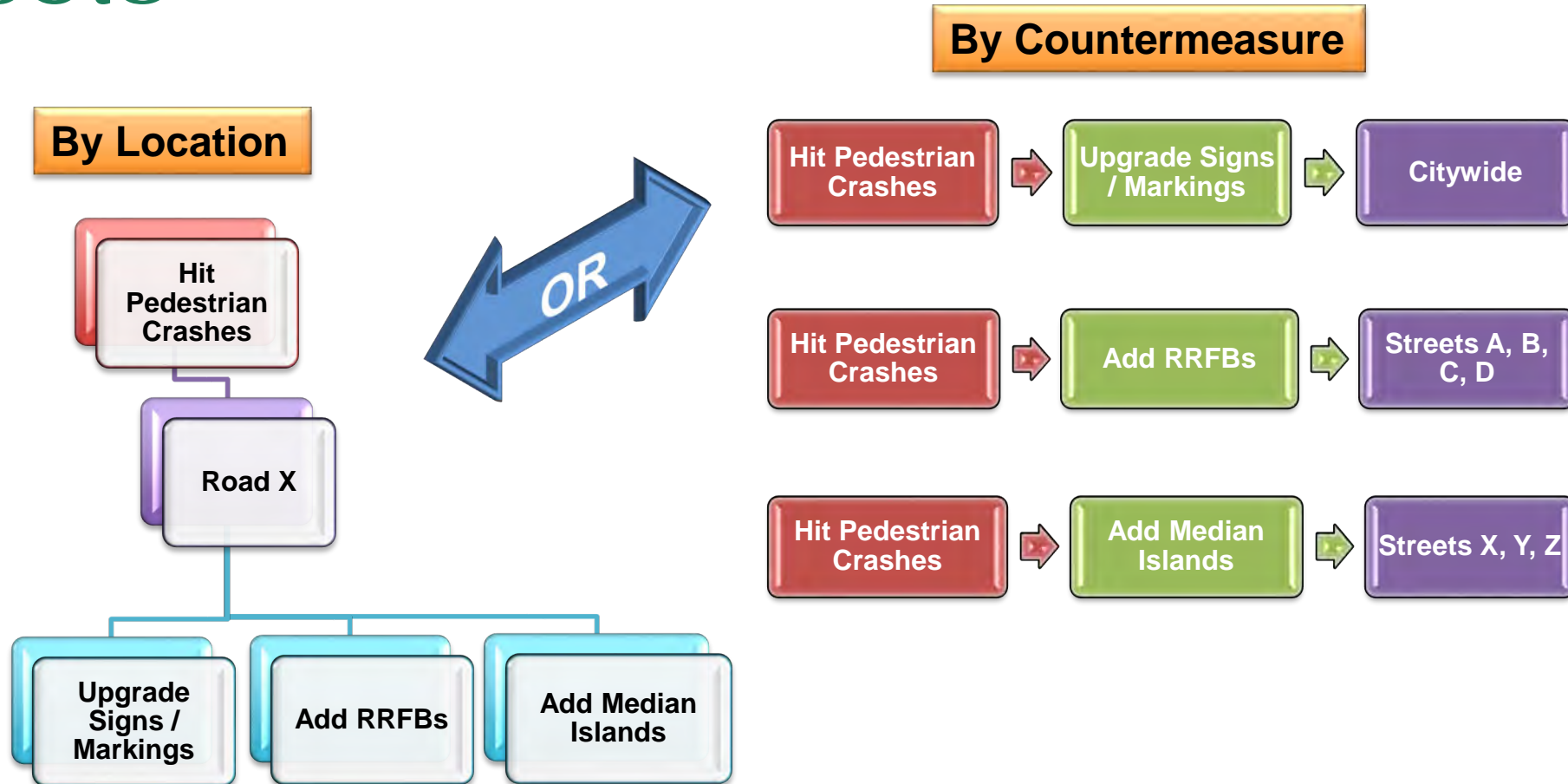
How likely would you be to implement the following countermeasures on your network?



LRSP Step 7

Local Road Safety Plan Step		Plan Element
1	Analyze data to identify focus/priorities	List of crash priorities based on data
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Step 7: Develop a Prioritized List of Projects



Resources

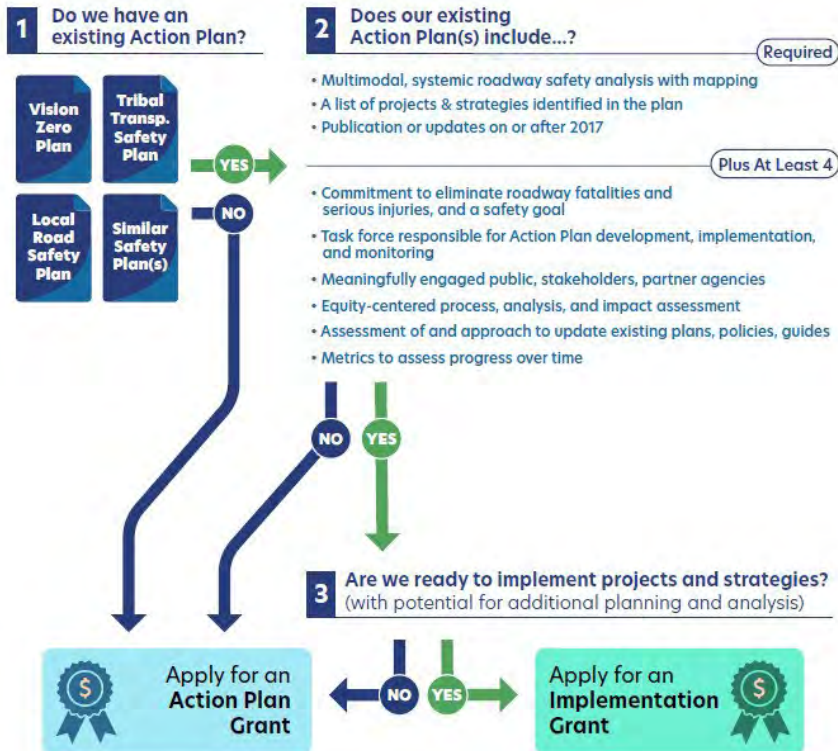
- Systemic Safety Project Selection Tool
 - <https://safety.fhwa.dot.gov/systemic/fhwasa13019/>
- Target Zero
 - <http://www.targetzero.com/>
 - Lane Departure (page 98)
 - Intersections (pages 107-108)
 - Pedestrians & Bicycles (pages 137-139)
- CMF Clearinghouse
 - <http://www.cmfclearinghouse.org/>
- FHWA LRSP DIY Website
 - <https://safety.fhwa.dot.gov/LRSPDIY/>
- FHWA Proven Safety Countermeasures
 - <https://safety.fhwa.dot.gov/provencountermeasures/>



Safe Streets and Roads for All (SS4A)

SS4A Safe Streets and Roads for All Application Decision Flow Chart

This flowchart is not meant to replace the NOFO. Applicants should follow the instructions in the NOFO to correctly apply for a grant. See the SS4A website for more information: <https://www.transportation.gov/SS4A>



2 Does our existing Action Plan(s) include...? Required

- Multimodal, systemic roadway safety analysis with mapping
- A list of projects & strategies identified in the plan
- Publication or updates on or after 2017

Plus At Least 4

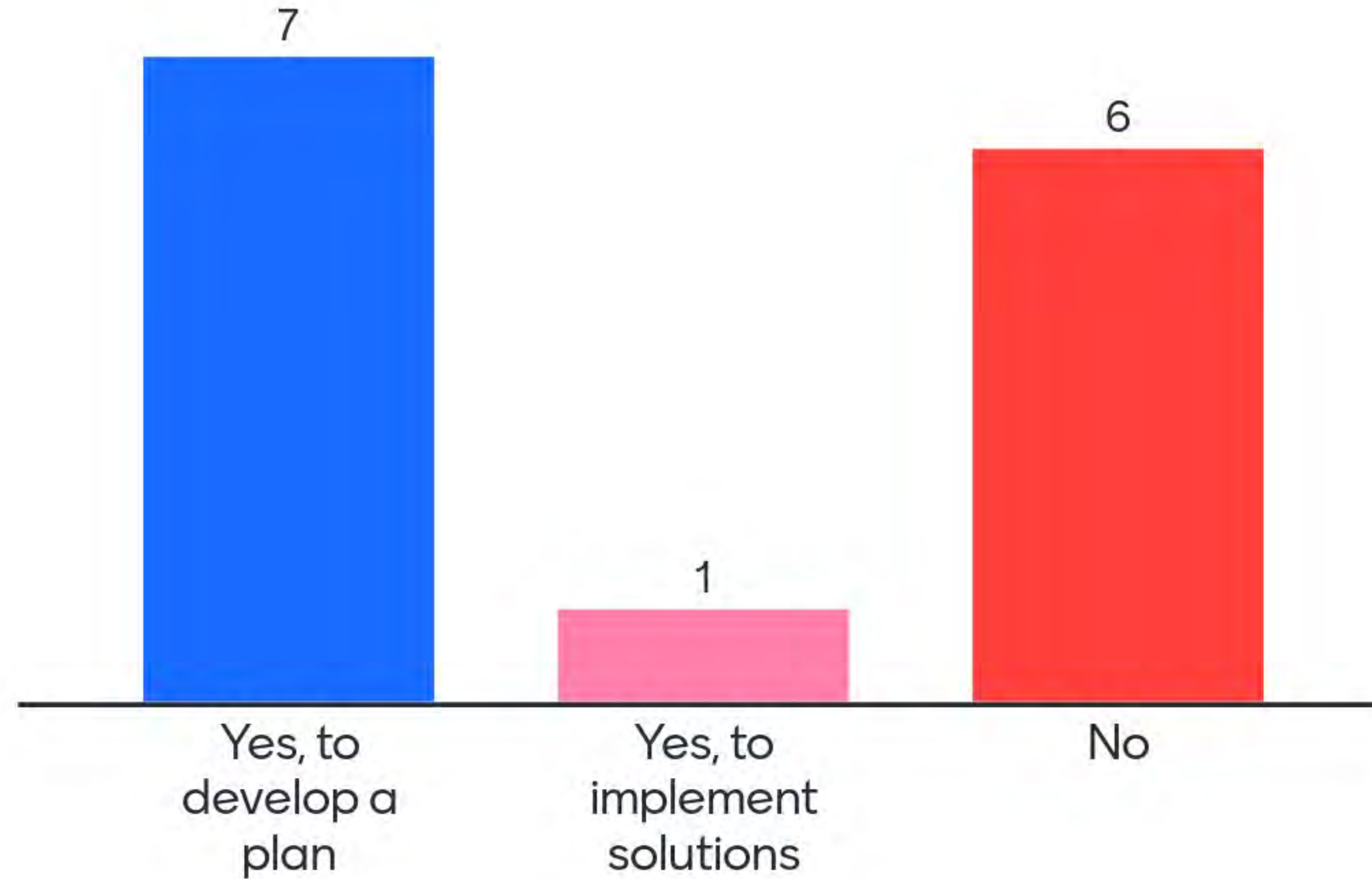
- Commitment to eliminate roadway fatalities and serious injuries, and a safety goal
- Task force responsible for Action Plan development, implementation, and monitoring
- Meaningfully engaged public, stakeholders, partner agencies
- Equity-centered process, analysis, and impact assessment
- Assessment of and approach to update existing plans, policies, guides
- Metrics to assess progress over time



U.S. Department of Transportation

Still have questions? Visit the [SS4A website](https://www.transportation.gov/SS4A)
SS4A Application Decision Flow Chart | Page 1 of 1

Has your agency applied for a SS4A grant?



Safe Streets and Roads for All (SS4A)

An applicant is eligible to apply for an Action Plan Grant that funds supplemental action plan activities, or an Implementation Grant, only if the following two conditions are met:

- Answer “yes” to Questions **3** **7** **9**
- Answer “yes” to at least four of the six remaining Questions **1** **2** **4** **5** **6** **8**

If both conditions are *not met*, an applicant is still eligible to apply for an Action Plan Grant that funds creation of a new action plan.

SS4A – Must Meet All 3

- 3** Does the Action Plan include all of the following?
 - Analysis of existing conditions and historical trends to baseline the level of crashes involving fatalities and serious injuries across a jurisdiction, locality, Tribe, or region;
 - Analysis of the location where there are crashes, the severity, as well as contributing factors and crash types;
 - Analysis of systemic and specific safety needs is also performed, as needed (e.g., high risk road features, specific safety needs of relevant road users; and,
 - A geospatial identification (geographic or locational data using maps) of higher risk locations.

- 7** Does the plan identify a comprehensive set of projects and strategies to address the safety problems in the Action Plan, time ranges when projects and strategies will be deployed, and explain project prioritization criteria?

- 9** Was the plan finalized and/or last updated between 2017 and 2022?

SS4A – Must Meet 4 of 6

1 Are both of the following true?

- Did a high-ranking official and/or governing body in the jurisdiction publicly commit to an eventual goal of zero roadway fatalities and serious injuries?
- Did the commitment include either setting a target date to reach zero, OR setting one or more targets to achieve significant declines in roadway fatalities and serious injuries by a specific date?

2 To develop the Action Plan, was a committee, task force, implementation group, or similar body established and charged with the plan's development, implementation, and monitoring?

4 Did the Action Plan development include all of the following activities?

- Engagement with the public and relevant stakeholders, including the private sector and community groups;
- Incorporation of information received from the engagement and collaboration into the plan; and
- Coordination that included inter- and intra-governmental cooperation and collaboration, as appropriate.

SS4A – Must Meet 4 of 6

5 Did the Action Plan development include all of the following?

- Considerations of equity using inclusive and representative processes;
- The identification of underserved communities through data; and
- Equity analysis, in collaboration with appropriate partners, focused on initial equity impact assessments of the proposed projects and strategies, and population characteristics.

6 Are both of the following true?

- The plan development included an assessment of current policies, plans, guidelines, and/or standards to identify opportunities to improve how processes prioritize safety; and
- The plan discusses implementation through the adoption of revised or new policies, guidelines, and/or standards.

8 Does the plan include all of the following?

- A description of how progress will be measured over time that includes, at a minimum, outcome data.
- The plan is posted publicly online.

Washington

Lead Applicant	Project Title	Type of Plan	Urban/ Rural	Funding Award
City of Ellensburg	Action Plan for the City of Ellensburg and Surrounding Urban Growth Area	Action Plan	Rural	\$160,000.00
City of Lacey	Lacey Safety Action Plan	Action Plan	Rural	\$68,000.00
City of Montesano	Action Plan for the City of Montesano t	Action Plan	Rural	\$200,000.00
City of Toppenish	SS4A Action Plan Grant	Action Plan	Rural	\$80,000.00
Cowlitz-Wahkiakum Council of Governments	Comprehensive Safety Action Plans for Cowlitz County and five incorporated cities.	Action Plan	Rural	\$200,000.00
Grant County	Grant County Safety Action Plan	Action Plan	Rural	\$280,000.00
Island Regional Planning Organization	Island Regional Transportation Planning Organization - Comprehensive Action Plan	Action Plan	Rural	\$403,200.00
King County Road Services Division	Safe Streets and Roads for All: King County Road Services Division Action Plan	Action Plan	Urban	\$800,000.00
Kittitas County Department of Public Works	Snoqualmie Pass Comprehensive Safety Action Plan	Action Plan	Rural	\$429,504.00
Northeast Washington Regional Transportation Planning Organization	Northeast Washington Regional Transportation Planning Organization (NEW RTPO) Safety Action Plan	Action Plan	Rural	\$352,000.00

Lead Applicant	Project Title	Type of Plan	Urban/ Rural	Funding Award
Puget Sound Regional Council	Safety Action Plan for the Central Puget Sound Region	Action Plan	Urban	\$4,860,363.00
Southwest Washington Regional Transportation Council	Southwest Washington Regional Transportation Council Comprehensive Safety Action Plan	Action Plan	Urban	\$300,000.00
Spokane Regional Transportation Council	SS4A Action Planning Grant for the Spokane, WA Region	Action Plan	Urban	\$400,000.00
Thurston County	Thurston County Action Plan	Action Plan	Rural	\$264,000.00
Walla Walla County Department of Public Works	Develop comprehensive Safety Action Plan in Walla Walla County, Washington	Action Plan	Rural	\$201,696.00
Whatcom Council of Governments	Whatcom Regional Safety Action Plan Development	Action Plan	Rural	\$200,000.00
Total Washington				\$9,198,763.00

Urban

Seattle Safe Streets

Applicant: City of Seattle

Seattle, Washington

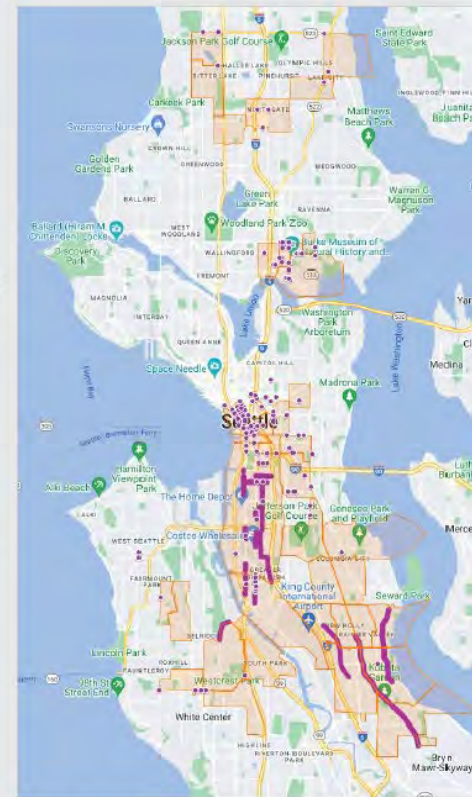
SS4A Award: \$25,654,000

Project Description

The City of Seattle will implement a vast array of safety treatments to address pedestrian collisions at intersections, including unsignalized intersections, and bicycle crashes.

The project will apply low-cost, high impact strategies on arterial streets in the southeast SODO neighborhood of Seattle, focused on the highest number of serious injury and fatal collisions.

The project will implement approximately 60 signalized intersection treatments, 6 unsignalized intersection treatments, 4 miles of protected bike lanes, 1.5 miles of new sidewalks, and 4.5 miles of arterial traffic calming treatments.



Purple: Planned project locations for SS4A

Contact Information

Ed Spilker

City Safety & Traffic Programs Manager

WSDOT Local Programs

ed.spilker@wsdot.wa.gov

360-705-7387

Matthew Enders, P.E.

Technical Services Manager

WSDOT Local Programs

matthew.enders@wsdot.wa.gov

360-705-6907

Paul Snow

Safety Analyst

WSDOT Local Programs

paul.snow@wsdot.wa.gov

360-705-7380

Local Road Safety Plans Virtual Workshop

Questions?

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