



METROPLAN

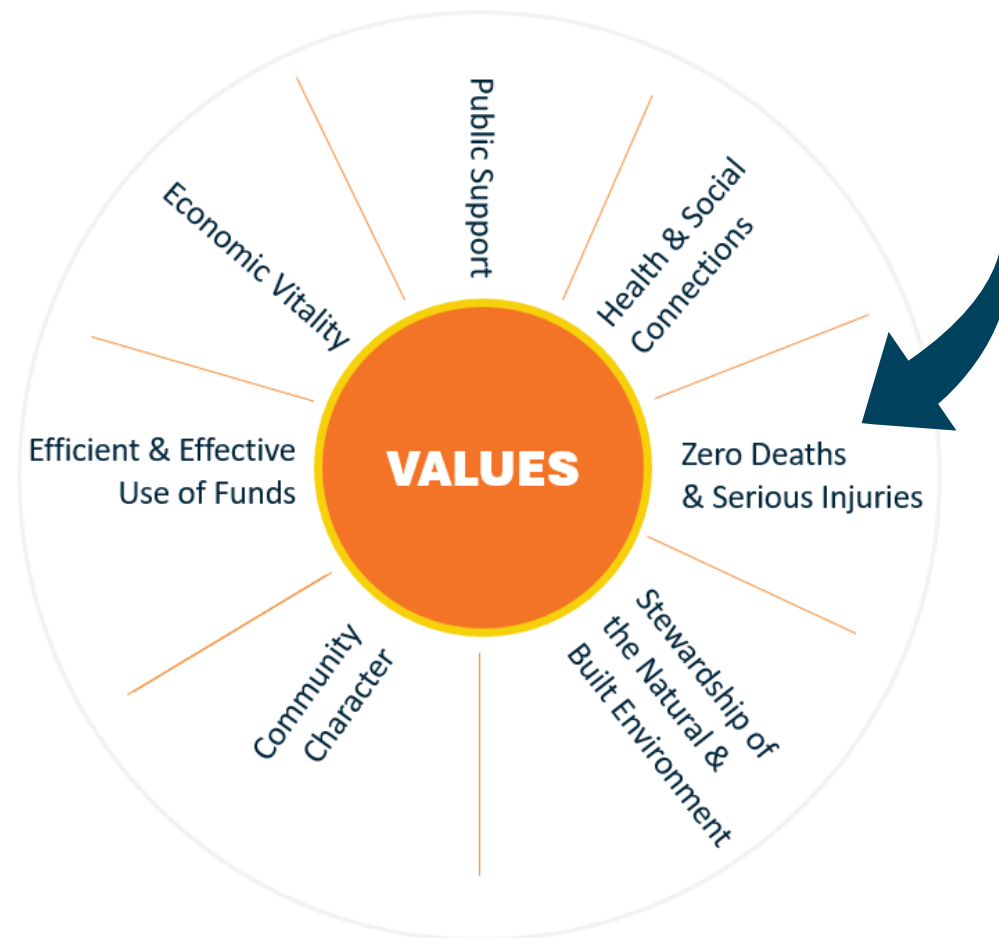
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Vision

The region is joined together by a transportation system that prioritizes the wellbeing of people and the environment.

Mission

To facilitate improvements and programs for all transportation modes through collaborative priority setting, planning, and the strategic pursuit of funding.





Vulnerable Road Users Safety Action Plan

VRU + Vision Zero




MetroPlan's Goal: To make the Flagstaff Region's streets safer for all who use them, especially those who are the most vulnerable – people who walk, bicycle, and roll.

VRU Purpose:

- Document the extensive amount of safety-related work that has already been done in the region
- Recommend VRU countermeasure to support existing safety projects
- Advise and educate jurisdictional partners on addressing traffic-related deaths and serious injuries.
- Conduct a systemic safety analysis that includes documentation of the High Injury Network (HIN), set performance measures for improving all-modes safety throughout the region, and provide policy.

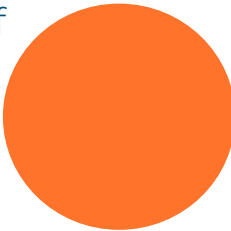
Establish MetroPlan's Commitment to Vision Zero



Vision Zero is the strategy to eliminate traffic fatalities and severe injuries on all roadways.

Vision Zero is built on the basis that traffic deaths and severe injuries are preventable.

Vision Zero emphasizes a Safe Systems approach, which acknowledges that people make mistakes, and focuses on influencing system-wide practices, policies, and designs to lessen the severity of crashes.





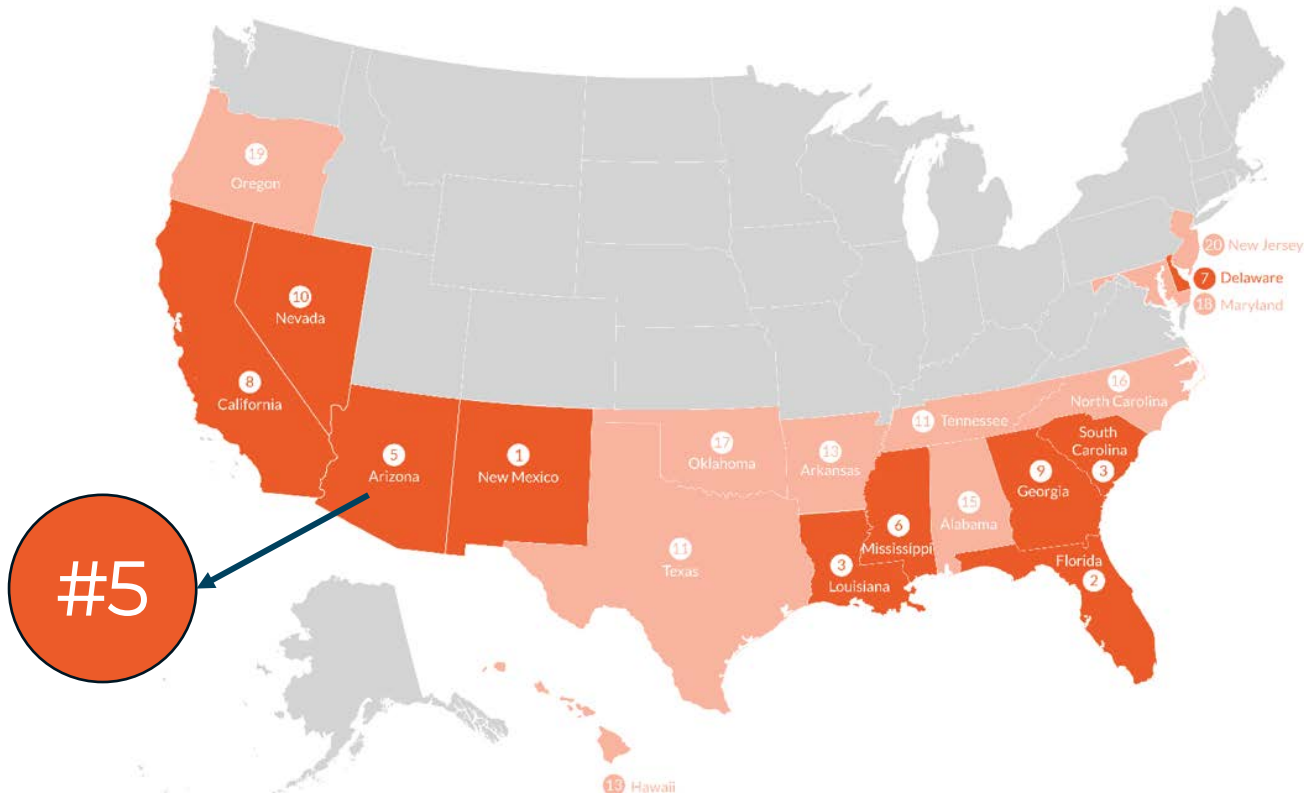
How will this plan be used?

- Identify countermeasure that can improve transportation safety
- Identify quick build, low-cost improvements that lead to immediate change
- Consolidate, review and prioritize existing safety recommendations with an emphasis on the VRU findings
- Prioritize safety projects
- Support grant/funding opportunities
- Support/advise partners to reach safety goals



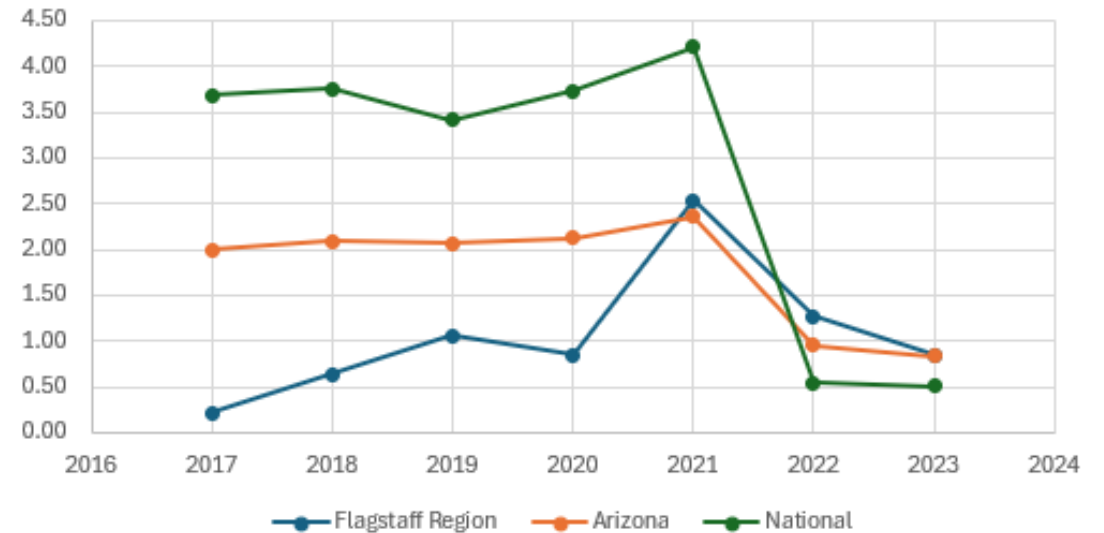
National Context

The top 20 most deadly states for people walking
By number of deaths per 100,000 people, 2018-2022



smartgrowthamerica.org/dangerous-by-design

Fatality rate per 100,000 population





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Local Crash Findings

VRU Safety Snapshot, 2017-2023



489 Pedestrian and Bicycle Crashes in the Flagstaff Region

27 Pedestrian Fatalities

8 Bicyclist Fatalities

28% Pedestrian crashes resulted in a serious injury or fatality

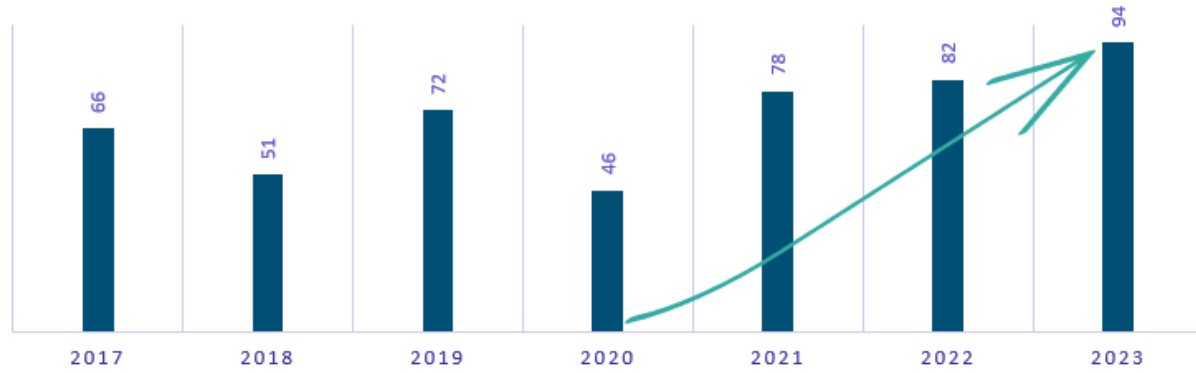
18% Bicyclist crashes resulting in a serious injury or fatality



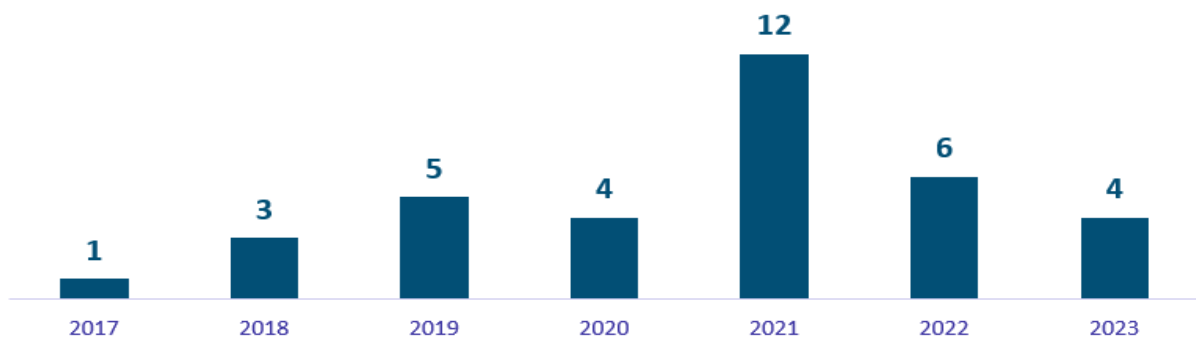


Local Crash Trends

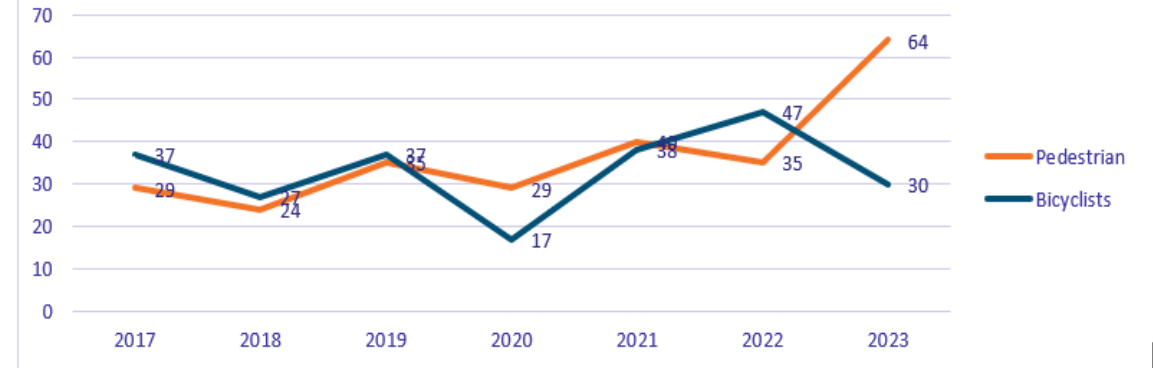
VRU TOTAL CRASHES



VRU FATALITIES (2017-2023)



Pedestrian & Bicyclist Crashes (2017-2023)

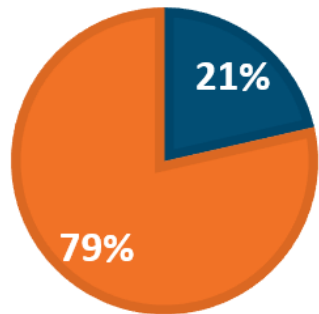


Who is impacted?

Fatal and Serious Injuries by Gender

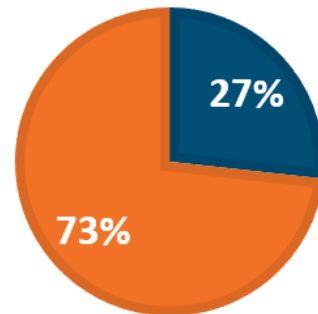
BICYCLE: FATAL AND SERIOUS INJURIES

Female Male

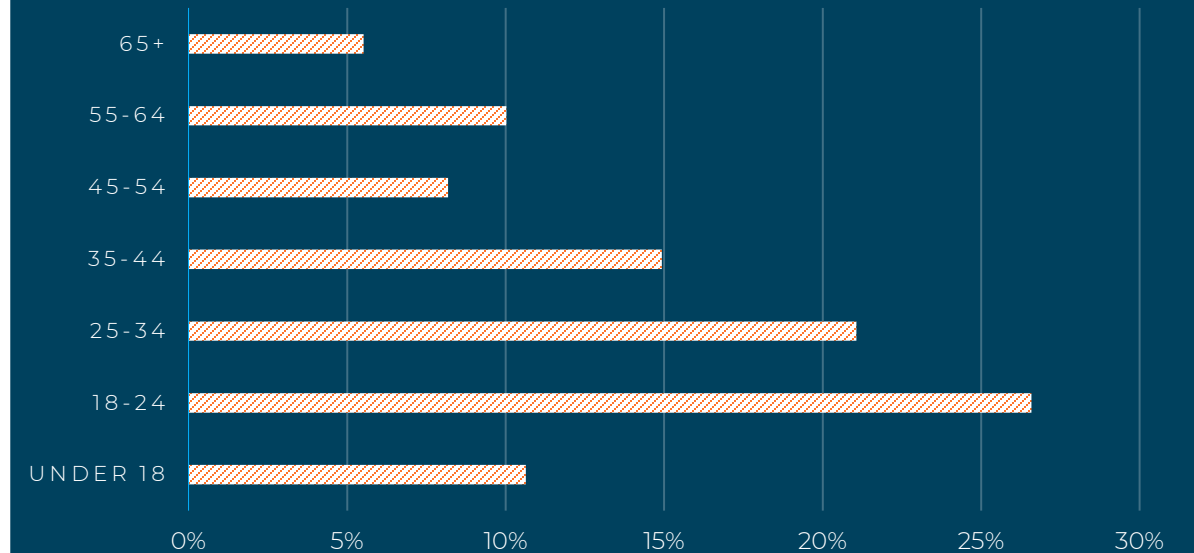


PEDESTRIAN: FATAL AND SERIOUS INJURIES

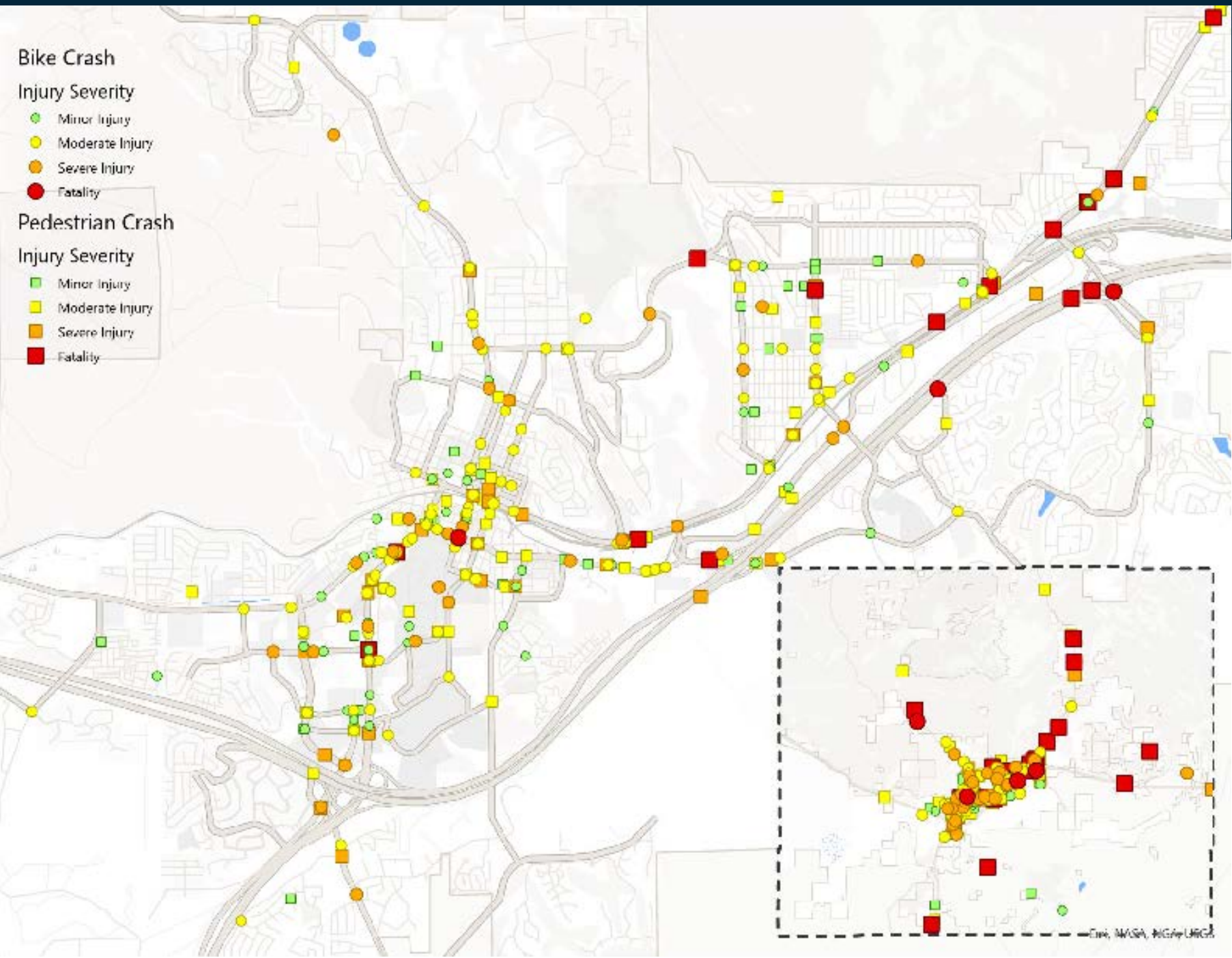
Female Male



% CRASHES BY AGE



Age Group	Serious Injury	Fatal	Total	% of Total Crashes
Under 18	9	2	11	2%
18-34	36	8	44	9%
35-54	24	15	39	8%
55+	15	8	23	5%



Where are VRU crashes happening?

Where are these crashes happening?

CONTRIBUTING FACTORS

- 1) Vehicles not yielding at intersections and crosswalks.
- 2) Peds/Bikes crossing the roadway at unmarked/mid-block crossings.
- 3) Bikes being struck in bike lane by vehicles or due to riding wrong way.

PEDESTRIANS AND BICYCLISTS COMBINED

	Total #	% of Total Crashes
1. MARKED CROSSWALK AT INTERSECTION	176	36%
2. NOT AT INTERSECTION ON ROADWAY NOT IN CROSSWALK	66	13%
3. BICYCLE LANE	49	10%
4. AT INTERSECTION NOT IN CROSSWALK	38	8%
5. SIDEWALK	34	7%
	363	74%



14% VRU crashes are a result of a *Hit and Run*

36% Happen in a marked crossing or intersection

10% Happen in a bike lane



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How have we used what we've learned?



Action Areas



Reduce potential for conflict between users



Slow vehicle speeds



Encourage safer practices among people driving, walking, and bicycling



Improve data collection and analysis



Support an institutional commitment to Vision Zero

ACTIONS WILL BE ORGANIZED INTO A 2-YEAR AND 5-YEAR TIME FRAMES.

These categories can be completed (*one-time actions*) or started (*ongoing actions*).

Focus on MetroPlan's ability to support and implement actions that are within the organization's control.

All other actions will be provided to our local agencies and partners to support the development of new standards and practices to reduce VRU crashes across the region.



Risk Exposure Assessment

PURPOSE:

- Understand safety risks related to infrastructure and geometry of design
- Understand influences on exposure to a crash
- Determine if higher risks impact disadvantaged communities
- Score roadways to further prioritize projects
- Proactive not reactive

Risk Exposure Assessment

A **risk factor** is a characteristic or behavior that increases the likelihood of a negative outcome.

In this case, it is the physical design of the roadway. (ex. number of through lanes)



Exposure is the condition of being exposed to something.

In this case, vulnerable road users are exposed to risk factors (road attributes).

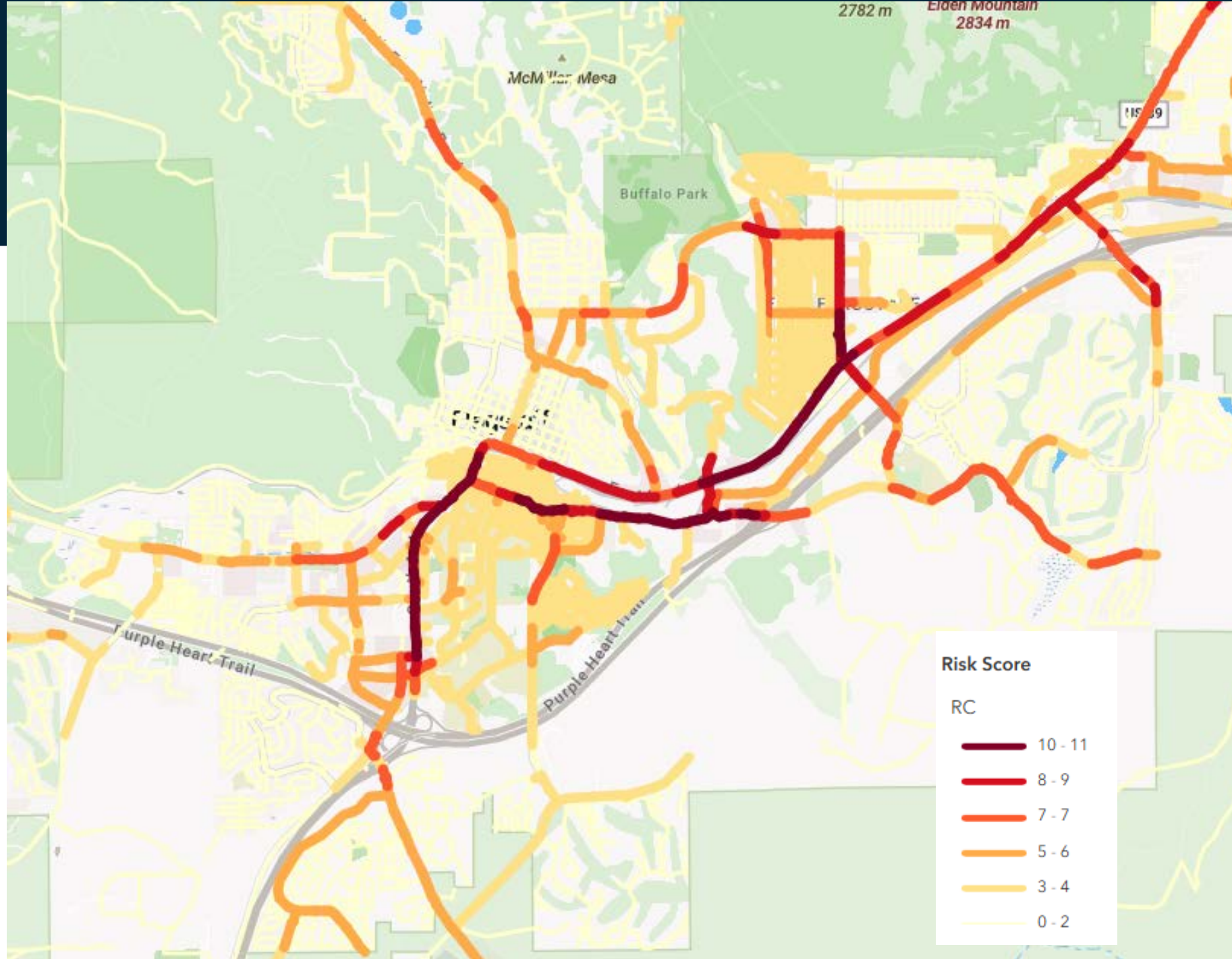


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Risk Score

Attributes	Points	
Equity Area	No	0
	Yes	2
Through Lanes	1-2	0
	3-4	1
	5-6	3
Right Turn	Not Dedicated	0
	Dedicated	1
Left Turn	Not Dedicated	0
	Dedicated	1
Bike Facility Width	Extra Width	0
	Narrow/ No Bike Lane	1
Median Type	TWLT	1
	No Median	0
Speed Limit	Less than 30MPH	0
	30MPH+	1
Vehicle Volume	<10k	0
	10-20k	1
	20k+	2
Total Points Possible	12	



Next Steps:



Adopt a Vision Zero
commitment



Develop MetroPlan
policies to support
transportation safety



Develop strategies



Propose prioritized
projects and programs
