

# Idaho Vulnerable Road User Assessment 2023

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Strategic Highway Safety Plan Addendum 2021-2025  
IDAHO TRANSPORTATION DEPARTMENT



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Peter Hartman, Administrator  
Federal Highways, Idaho Division  
3050 Lakeharbor Lane, #126  
Boise, ID 83703

Subject: ITD Vulnerable Road User Safety Assessment Approval

Dear Mr. Hartman,

Transportation is a vital part of every Idahoan's life. Providing the safest transportation system possible is at the forefront of everything we do at the Idaho Transportation Department (ITD) in our work to enhance the quality of life through transportation. A safe transportation system connects families and communities, enables a vibrant economy, and allows the movement of essential goods and services.

All states were required to develop a Vulnerable Road User Assessment (VRUA) under the *Bipartisan Infrastructure Law (BIL)/Infrastructure and Jobs Act (IIJA)*. ITD has completed a VRUA as outlined in the October 21, 2022, guidance document to improve safety for vulnerable road users, which builds on the goals and strategies in the Strategic Highway Safety Plan 2021-2025, and I approve it being added as an addendum to the current plan.

The final VRUA can be found at the following link: [https://apps.itd.idaho.gov/Apps/OHS/Plan/SHSP\\_2021-2025.pdf](https://apps.itd.idaho.gov/Apps/OHS/Plan/SHSP_2021-2025.pdf)

As the Governor's Highway Safety representative, I approve Idaho's VRUA.

Sincerely,

A handwritten signature in blue ink that reads "Scott Stokes".

 Scott Stokes  
Director, Idaho Transportation Department  
Governor's Representative for Highway

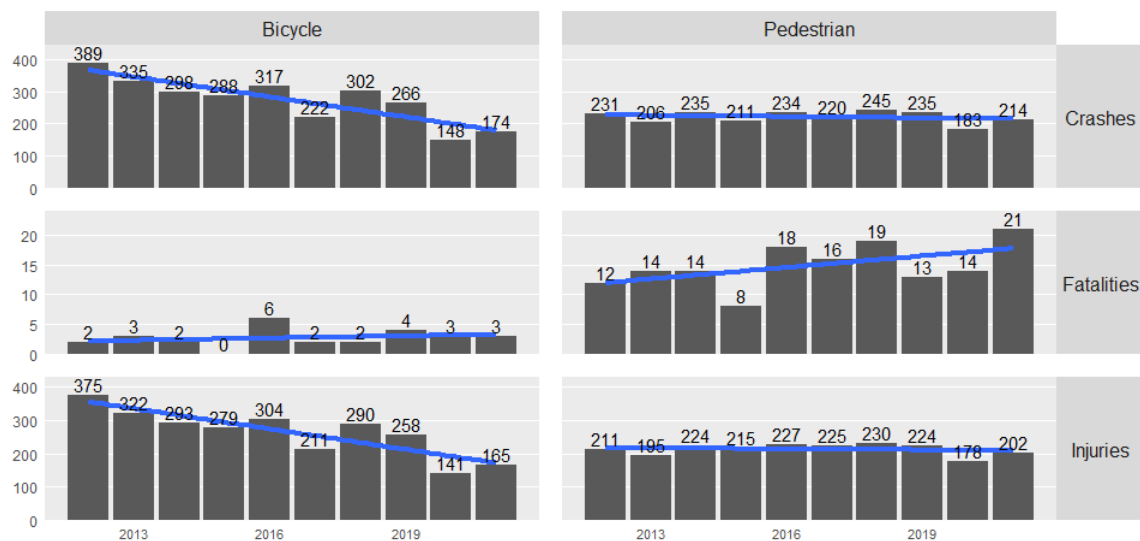
cc: Lance Johnson, FHWA  
Mollie McCarty: CEAO  
Jesse Barrus: DE D4, SST  
Josephine Middleton: HSM

# Vulnerable Road User Safety Assessment Summary

A vulnerable road user (VRU) for the purpose of this analysis is defined as bicyclists and pedestrians (which includes micro-mobility devices such as scooters and wheelchair users). ITD initiated a research project to provide a detailed analysis and report. The full technical report can be viewed on ITD’s Research Program page [here](#)). To have a larger dataset to analyze, this research effort collected 4,948 crash records pertaining to crashes involving motor vehicles and VRUs over a 10-year period (2012-2021), and on all roads in Idaho.

It is worth noting that Idaho has low pedestrian and bicycle fatality crash rates compared to other states. According to the National Highway Traffic Safety Administration, Idaho had one of the ten lowest pedestrian fatality crash rates in 2021 (1.10 fatalities per 100,000 population) and was in the lower third during the same year for bicyclist fatality crash rates (0.16 per 100,000 population). Of the pedestrian and bicycle fatalities that do occur, the vast majority are on local jurisdiction roads.

As shown in Figure 1 below, the results of the research study indicate that bicycle crashes of all types have declined over the ten-year period. While pedestrian crashes overall have held steady, fatalities have increased, and several crash types exhibit increasing trends: those occurring around parking lots, alleys, and driveways, and those involving motorists failing to signal at intersections, making improper left turns, and speeding near turns and hills.



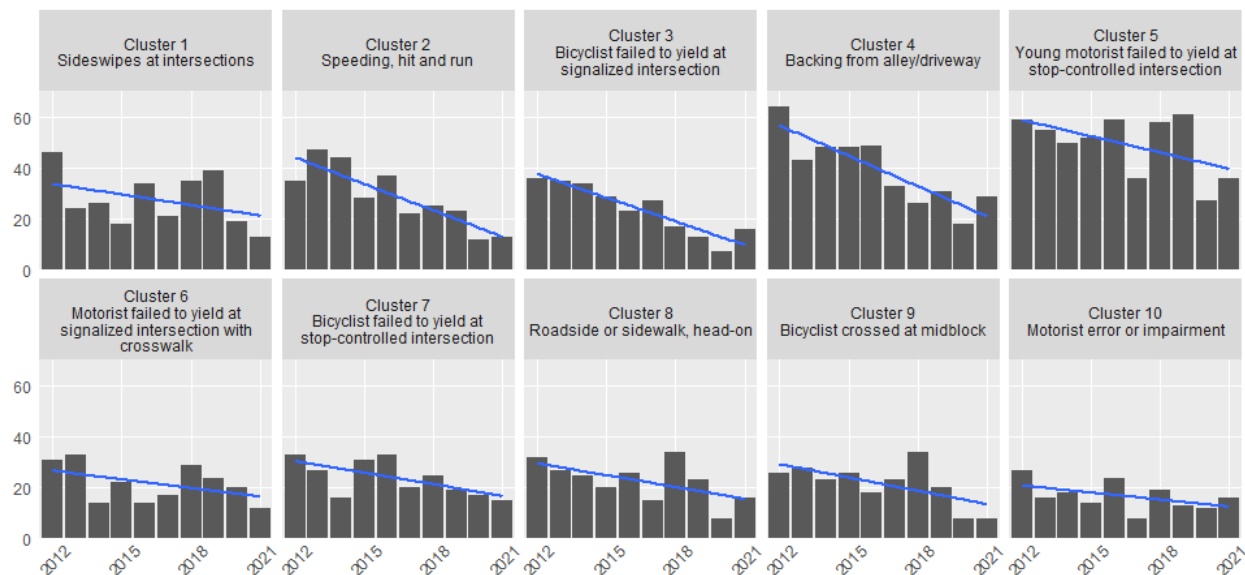
**Figure 1. Annual bicycle and pedestrian crashes, fatalities, and injuries (2012-2021)**

The research team used a combination of two crash typing methodologies, PBCAT2 (the current standard in crash typing) and clustering using a large language model. Combining these techniques can leverage a wealth of information to evaluate contributing factors and identify trends. A full description of the methodology is detailed in the Bicycle and Pedestrian Safety Research [technical report](#).

Factors examined included the roadway characteristics, human behavioral factors, vehicle type, demographics of the locations, land use (such as near schools), lighting, helmet use, and rural or urban settings. Given Idaho’s low incidence of serious or fatal pedestrian and bicycle crashes and the state’s large geographical area, it is difficult to target specific areas that may benefit from engineering solutions. However, key takeaways below from the analysis of bicycle and pedestrian involved crashes provide valuable information.

## Bicycle Crash Types

Figure 2 shows annual bicycle crash types identified via clustering; all these crash types exhibit a visible downward trend. The crash type clusters were geocoded and displayed in an interactive web map, allowing state and local staff to identify crash type clusters on corridors.



**Figure 2 Bicycle crash locations**

Boise, Coeur d’Alene, Nampa, Meridian, Idaho Falls, and Pocatello reported at least 100 bicycle crashes during the 10-year period, representing 68% of all bicycle crashes during the same period. Table 1 lists bicycle crashes in each location.

**Table 1 Highest occurrences for Bicycle crashes**

<i>Location</i>	<i>Corridors</i>
Boise	West Fairview Avenue North Orchard Street South Vista Avenue West Overland Road South Broadway Road North 9 <sup>th</sup> Street
Coeur d’Alene	West Appleway Avenue North Government Way
Nampa	12 <sup>th</sup> Avenue Road* 12 <sup>th</sup> Avenue South* Caldwell Boulevard*
Meridian	West Cherry Lane/Fairview Avenue North Eagle Road
Idaho Falls	West Broadway Street East Sunnyside Road East 17 <sup>th</sup> Street*
Pocatello	Pole Line Road Yellowstone Avenue* 4 <sup>th</sup> Avenue*

\*Also a highest occurrence for pedestrian crash location

## Pedestrian Crash Types

Figure 3 shows annual pedestrian crashes by clustering crash type. Five crash types exhibit increasing trends. Cluster 4 crashes (improper left turn) are the most numerous and exhibit a slight annual increase. Crashes in clusters 2 (parking lot, alley, driveway), 3 (failed to signal at intersection), and 8 (speeding near turns and hills) occur at similar rates, with those in cluster 2 increasing the fastest. Hit-and-run crashes (cluster 10) are the rarest but are also increasing. All other crash types show an overall decreasing trend over the ten-year period.



**Figure 3 Annual pedestrian crash locations by clustering crash type**

Boise, Nampa, Pocatello, Idaho Falls, Coeur d’Alene, Twin Falls, and Meridian reported at least 100 pedestrian crashes during the 10-year period, representing 62% of all pedestrian crashes during the same period. The table below identifies pedestrian crash locations.

**Table 2 Highest occurrences for pedestrian crashes**

<i>Location</i>	<i>Corridors</i>
Boise	West Fairview Avenue North Cole Road West State Street West Main Street 9 <sup>th</sup> Street
Nampa	12 <sup>th</sup> Avenue Road* 12 <sup>th</sup> Avenue South* Caldwell Boulevard*
Pocatello	North Arthur Avenue Yellowstone Avenue* 4 <sup>th</sup> Avenue* 5 <sup>th</sup> Avenue
Idaho Falls	East 17 <sup>th</sup> Street* South Woodruff Avenue
Coeur d’Alene	Sherman Avenue
Twin Falls	Blue Lakes Boulevard North Addison Avenue Washington Street
Meridian	Meridian Road

\*Also a highest occurrences for bicycle crashes

## Equity

In addition to looking at crashes, the ITD Office of Highway Safety examined the corridors with the Center for Disease Control's Social Vulnerability Index (SVI). The SVI uses U.S. Census data to determine the social vulnerability of every county and tract, based on 15 social factors, including poverty, lack of vehicle access, and crowded housing. A ranking of 1 indicates the most vulnerable, while a ranking of 0 indicates the least vulnerable.

Table 3 and Table 4 show the corridors with the highest occurrence locations for bicycle and pedestrian crashes listed above an overall SVI  $\geq$  0.8, which means the locations are more vulnerable than 80% of census tracts in the state or nation based on the SVI index criteria.

**Table 3 Bicycle Corridors with an Overall SVI  $\geq$ 0.8 that are also a high occurrence corridor**

<i>Location</i>	<i>Corridors</i>	<i>SVI Group</i>
Boise	Fairview Avenue	0.8-0.9
	9th Street	0.8-0.9
	Broadway Avenue	0.8-0.9
Coeur d'Alene	Appleway Avenue/Best Avenue	0.8-0.9
	Government Way	0.8-0.9
Nampa	12th Ave Road	0.8-0.9
	12th Ave South	0.8-0.9
Meridian	Fairview Avenue/Cherry Lane	0.8-0.9
Idaho Falls	Broadway Street	0.9-1.0
	17th Street	0.8-0.9
	Sunnyside Road	0.8-0.9
Pocatello	4th Avenue	0.9-1.0

**Table 4 Pedestrian Corridors with an Overall SVI  $\geq$ 0.8 that are also a high occurrence corridor**

<i>Location</i>	<i>Corridors</i>	<i>SVI Group</i>
Boise	Fairview Avenue	0.8-0.9
	9th Street	0.8-0.9
Nampa	12th Ave Road	0.8-0.9
	12th Ave South	0.8-0.9
	Caldwell Boulevard	0.8-0.9
	Caldwell Boulevard	0.9-1.0
Pocatello	4th Avenue	0.9-1.0
Idaho Falls	17th Street	0.8-0.9
	Woodruff Avenue	0.8-0.9
Twin Falls	Addison	0.8-0.9

## Strategies to Address Safety for Vulnerable Road Users

Traffic safety problems are often complex, with many contributing factors. Human behavior, engineering, and traffic operations all play a role. No one single countermeasure will address all the challenges, especially in a state as geographically diverse as Idaho. Each crash cluster presents its own set of challenges, and broad-based measures may best address overarching issues for vulnerable road users in the state.

As previously noted, the vast majority of these crashes occur in urban areas and on local roads which are outside the jurisdiction of ITD. ITD will continue to focus on the state highway system, while supporting local jurisdictions in evaluating safety for local roads. The preliminary results of the research were presented in 2023 with stakeholders in the Boise area, with consultation in other areas of the state planned for 2024. Metropolitan Planning Organizations (MPOs), cities and local highway districts will be consulted.

The Safe Systems approach offers a framework for making roads safer by addressing 5 elements that affect the cause and/or outcome of traffic crashes. Those 5 elements are Safer People (human behavior), Safer Roads (roadway design), Safer Vehicles (minimize impact of crashes), Safer Speeds, and Post-crash Care. Considering the Safe Systems Approach, listed below are some of the strategies that provide Idaho's transportation agencies the opportunity to potentially reduce the risks for bicyclists and pedestrians in Idaho.

### **1) Share the research report and VRUA summary with local jurisdictions.**

- Coordinate with the Local Highway Technical Assistance Council (LHTAC) to ensure that local agencies have access to the report to assess identified corridors on the local system.
- Make the VRUA summary and research report available to all stakeholders, including MPOs
- Inform MPOs and responsible entities about the findings in the VRUA summary.
- Schedule local outreach to MPOs and Cities by June 2024.
- ITD will update the VRUA following consultation with agencies in higher-risk areas to incorporate feedback.

### **2) Promote safer behaviors of all transportation users (Safer People)**

- **Partner with stakeholders to target education and enforcement in higher-risk areas using the identified crash cluster types.** Look for opportunities to partner with organizations that advocate for walkers and bicyclists. Work with driver's education to expand efforts to teach new drivers how to operate around bicyclists and pedestrians. Continue to work with law enforcement to help educate and enforce traffic laws.

### **3) Enhance infrastructure for all transportation users (Safer Roads)**

- **Utilize the best information** when selecting bicycle/pedestrian projects through Idaho's dedicated funding for **federal** (Transportation Alternatives Program or TAP) and **state** (Children Pedestrian Safety) programs, giving priority to projects that are most likely to reduce bicycle/pedestrian-involved crashes and coordinate with locals.
- **Support Local Road User Safety Assessments Upon Request** - ITD has established funding through the federal Transportation Alternatives Program (TAP), allowing interested jurisdictions to apply for resources to conduct a VRU safety assessment. ITD and LHTAC will continue to provide technical guidance regarding bicyclist and pedestrian safety, including the high occurrence areas noted in the research report, and to utilize the available trainings related to vulnerable road users.

- **ITD prioritizes the safety of all users on Idaho’s state highway system.** The most current information available is used when selecting, designing, and constructing associated bicycle and pedestrian elements into projects that have been proven to reduce bicycle/pedestrian involved crashes. The funding sources dedicated for bicycle & pedestrian projects are as follows:
  - Transportation Alternative Program (TAP). TAP funds are used to fund pedestrian underpasses, Rail to Trail Pathways, bike lanes, bicycle/pedestrian shared pathways, and educational programs focused on bicycle/pedestrian safety such as Child and Pedestrian Safety programs.
  - American with Disabilities Act (ADA). ADA funds are used to fund projects such as curb/ramp and sidewalks.
  - Children Pedestrian Safety Program. Priority given to projects that are most likely to improve child bicycle/pedestrian safety.
- **Other federal funding sources** utilized for highway projects that include elements such as sidewalks, bike paths, or enhanced lane shoulders:
  - \* Surface Transportation Block Grant (STBG) funds may be used on highway infrastructure projects which include elements such as sidewalks and bike paths.
  - \*HSIP-funded projects are submitted by ITD districts or through LHTAC for local jurisdictions. These projects may include elements such as sidewalks, bike paths or enhanced lane shoulders.
  - \*Carbon Reduction Program (CRP). While CRP funds may be used on projects which include elements such as sidewalks, bike paths, separated pathways, or lane shoulders, this is the third priority strategy for ITD. CRP funds in Transportation Management Areas (TMA) may be used on stand-alone projects.
    - \*May be incorporated with designated infrastructure projects.
- **When developing projects, especially in the identified corridors, consider all users of the facility.** Implement countermeasures when a project is programmed and when feasible.
- **Develop a Statewide Complete Streets Strategy** for ITD facilities to provide guidance on how, when, and where to install crosswalks or bicycle facilities on state highways to promote consistency throughout the state. Local agencies will be consulted through the development of the guidance, and technical resources will be made available to local jurisdictions.
- Additionally, local jurisdictions have a responsibility to maintain bicycle/pedestrian facilities as outlined in Idaho State Code § 40-502 and Idaho Code§ 50-317. ITD also utilizes Cooperative Maintenance Agreements and MOUs with local jurisdictions which establishes responsibility for maintenance of sides walks, bicycle/pedestrian facilities, and other associated bicycle/pedestrian features. ITD must adhere to Idaho Code 40-720(8), 40-708(2) and 40-104(5) which dictates how funds for infrastructure projects shall be utilized by the department.

**4) Implement appropriate traffic operations (Safer Speeds & Safer Roads)**

- **Assess the identified corridors on the state system.** Implement improvements to traffic operations as appropriate when a project is programmed and funded for construction.

**5) Promote safe practices during and after incident response (Post-crash Care)**

**Support post-crash care responders.** Increase coordination with EMS services, encourage local agencies to attend relevant training related to vulnerable road users, and to leverage the available funding sources to provide Traffic Incident Management Training (TIMS).