



Task Force Meeting #3  
February 7, 2023





# Agenda

- Project Schedule
- Guiding Principles
- Systemic Safety Analysis
- Crash Profiles
- Safety Concerns + Strategies
- Engagement Update
- Next Steps





# Task Force Meetings

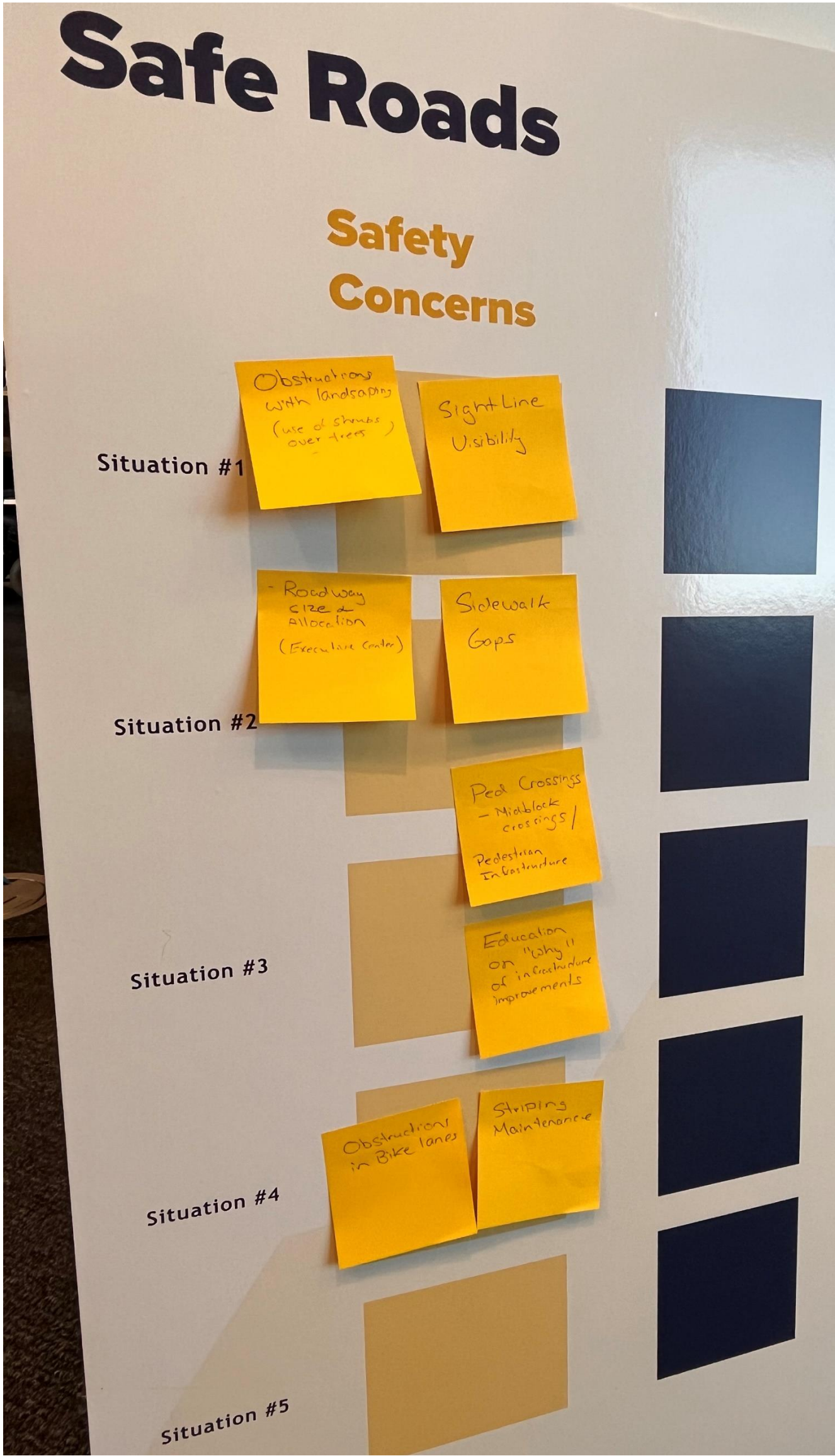
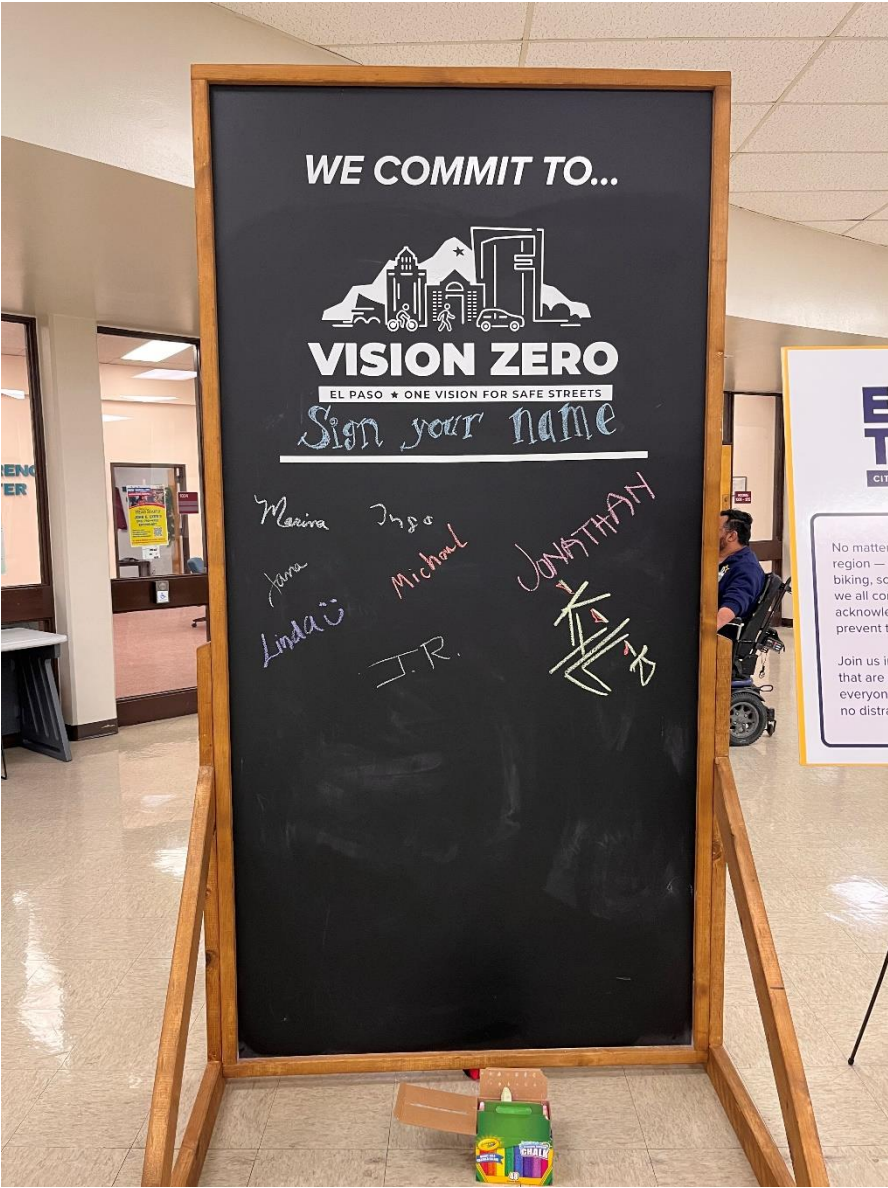
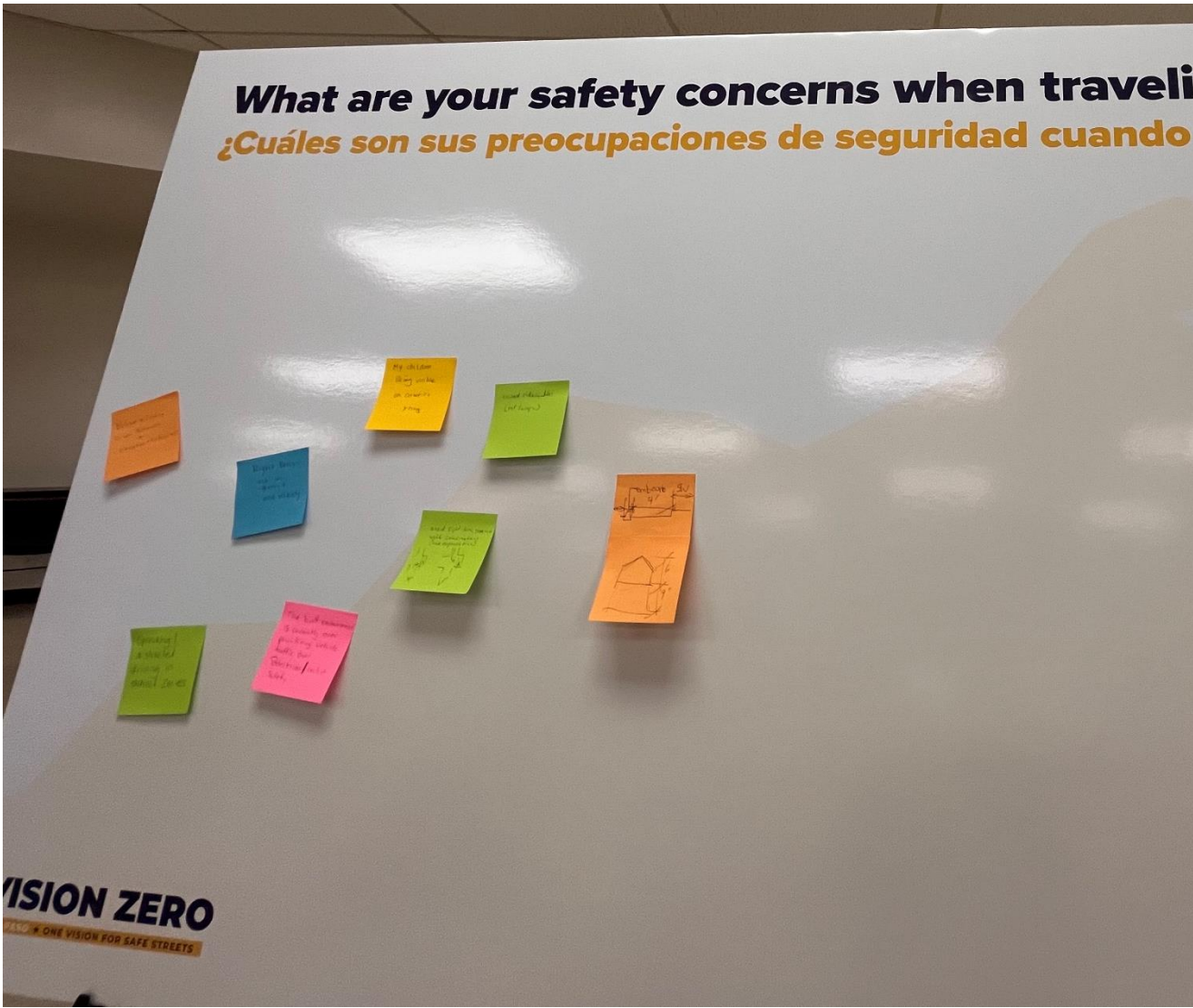




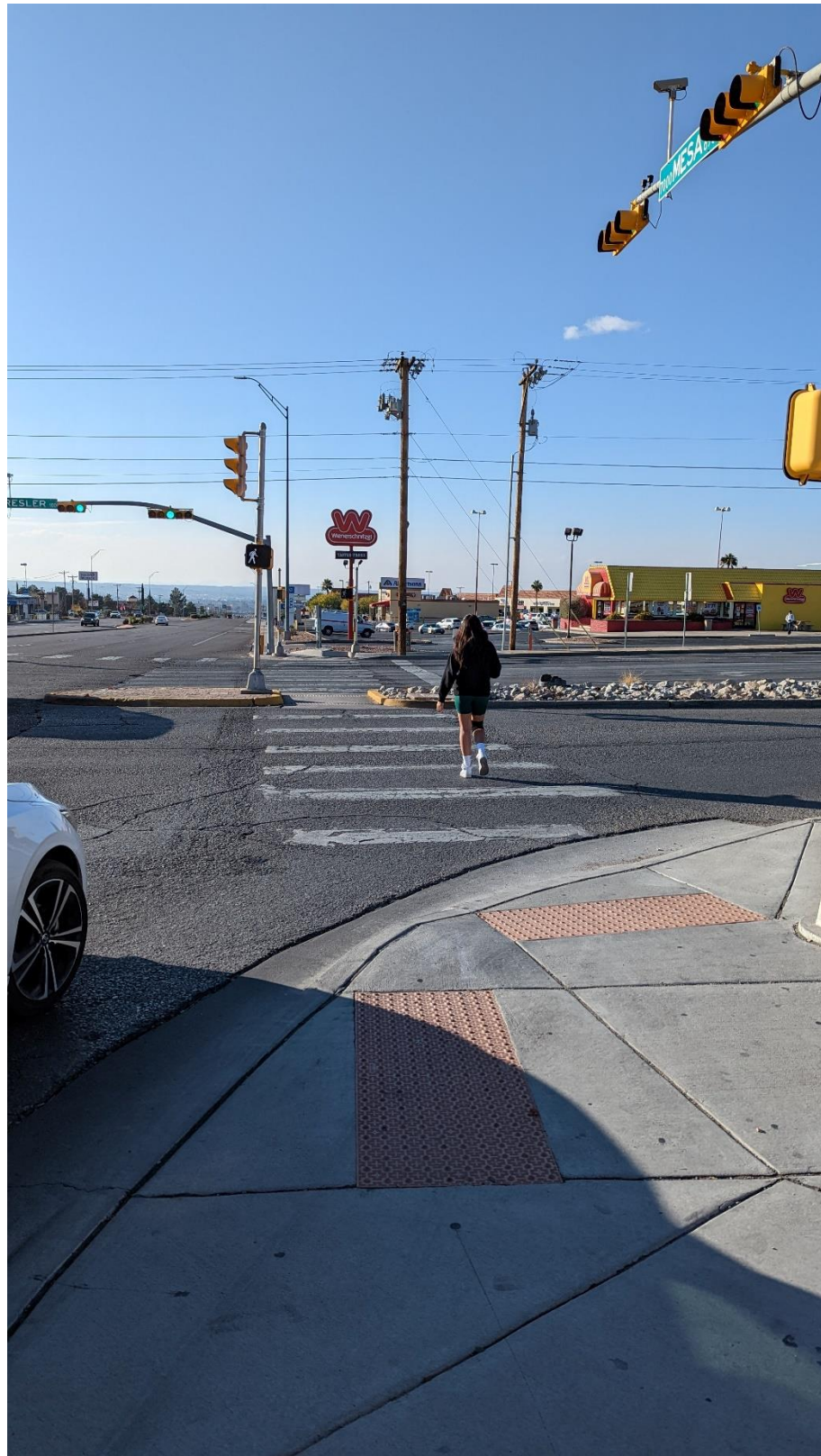
# December Site Visit













# What We Learned

- **Design and Operations:**
  - Long **crossing distances** – and long distances between crossings – influence pedestrian risk
  - Existing roadway designs largely reflect **vehicular throughput and speed**
  - Opportunity to update **roadway design standards** to improve current practices
  - **Maintenance practices and design practices** closely linked – opportunities to improve coordination
- **Existing Practices and Agency Coordination**
  - Not a strongly defined capital project **selection process/prioritization**.
  - **Safety** can be the common linkage and way of prioritizing projects.
  - Opportunities for improved **coordination and collaboration among departments** to emphasize safety, particularly with programs like traffic calming and maintenance priorities.
- **Overall**
  - Culture change toward safety and improved awareness at all levels – including the general public



# Guiding Principles





# El Paso's Guiding Principles



## **Death and Serious Injuries are Unacceptable.**

El Paso will prioritize actions that eliminate crashes that result in a serious injury or death.



## **Humans Make Mistakes.**

We know humans make mistakes, but one mistake should not end a life. Design of our streets should anticipate these risks and minimize harm.



## **Humans are Vulnerable.**

The impact of heavy, fast moving vehicles is often too much for our bodies. El Paso's streets should prioritize human life and community health on our streets.



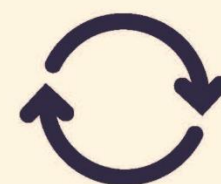
## **Responsibility is Shared.**

Everyone who lives, works, and visits El Paso shares responsibility for the safety of our streets. This includes the government, advocates, the vehicle industry, and all members of the public.



## **Safety is Proactive.**

Creating safe streets requires that we identify and mitigate risks proactively. Using data and other tools, we can create safer streets before a crash occurs.



## **Redundancy is Critical.**

Much like how humans make mistakes, it's inevitable that parts of the system will fail. Under Vision Zero, when one part of the system fails, the other parts must still protect people.





## **Safety is Proactive.**

Creating safe streets requires that we identify and mitigate risks proactively. Using data and other tools, we can create safer streets before a crash occurs.



## **Safety is Proactive.**

Creating safe streets requires that we identify and mitigate risks proactively. Using data to identify dangerous conditions, we can create safer streets before a crash occurs.

### **What Changed?**

Additional detail to specify that data analysis guides strategies and recommendations.





## **Everyone Deserves to be Safe.**

Actions and strategies must prioritize vulnerable communities who are disproportionately affected by traffic deaths and serious injuries.

### **What Changed?**

New principle that specifies inclusion of equity-based criteria in decision making.



# Systemic Safety Analysis





# Overview & Key Terms



- Systemic Safety Analysis: Looking beyond hot spots to understand common trends among collisions throughout the network, allows for a proactive approach
- Contextual data: Roadway, land use or other characteristics related to where a collision occurred and the related built environment factors
- Big data: Replica and Wejo data provide data on trips and non-collision incidents using cell phone and vehicle data
- Collision profiles: Uncover combinations of collision factors and contextual factors lead to most severe collisions



# About the Data



- Years: 2017-2021
- Does not include collisions resulting in property damage only
- Collisions are limited to local streets (does not include collisions on state-managed streets)
- The term KSI is used to described collisions that result in a fatality or serious injury



# Systemic Data Trends Summary





# Collision Factors

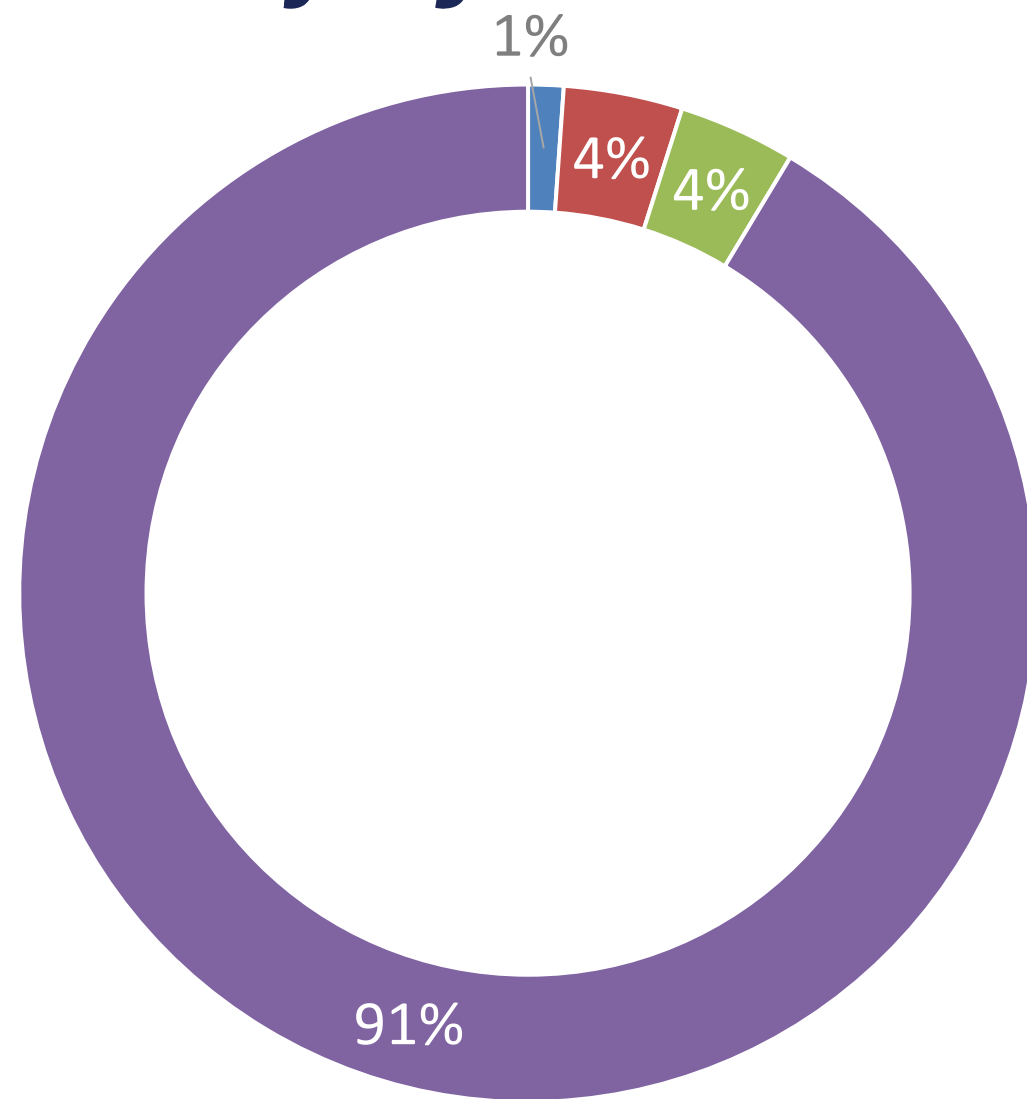




# Collision Mode & Severity

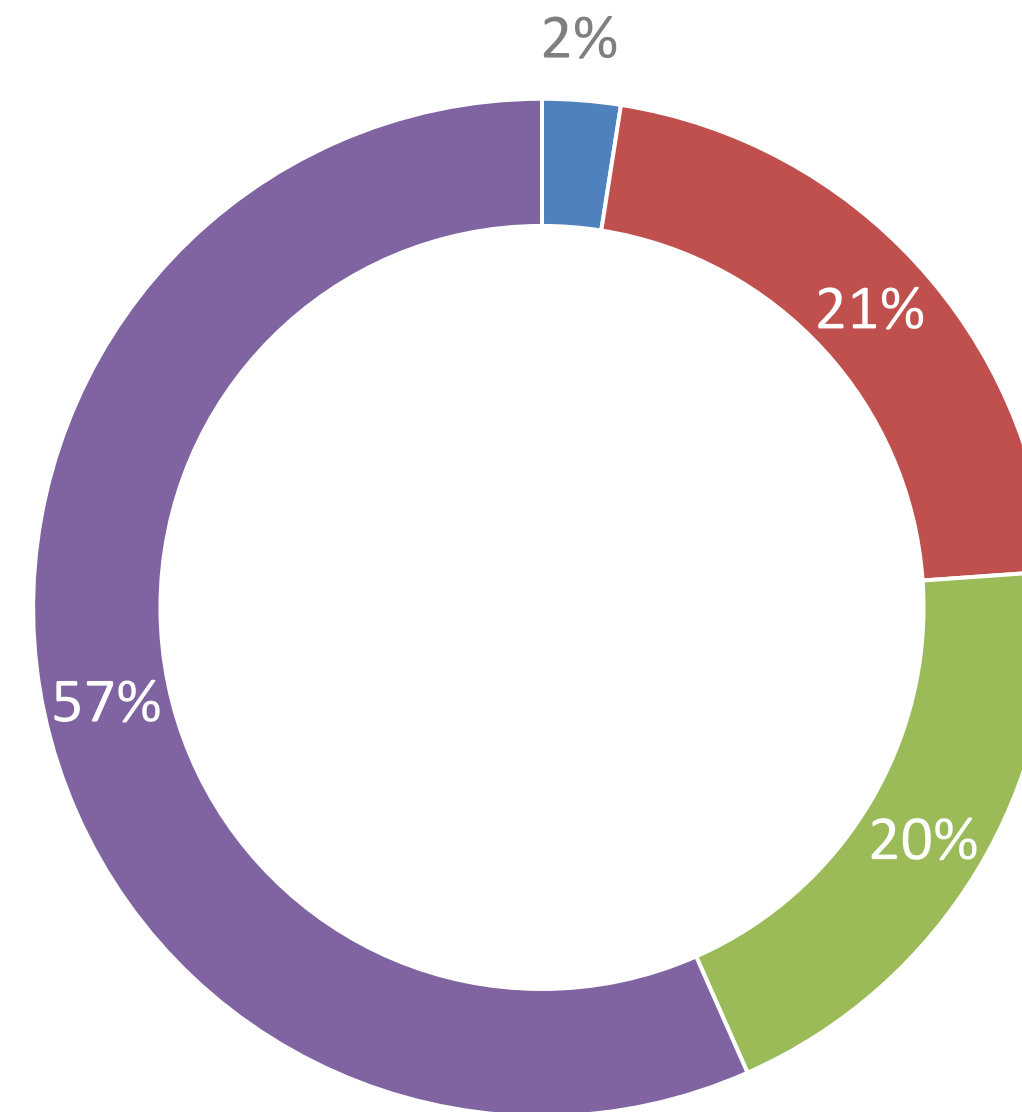


## All Injury Collisions



■ Bike ■ Ped ■ Motorcycle ■ Vehicle Only

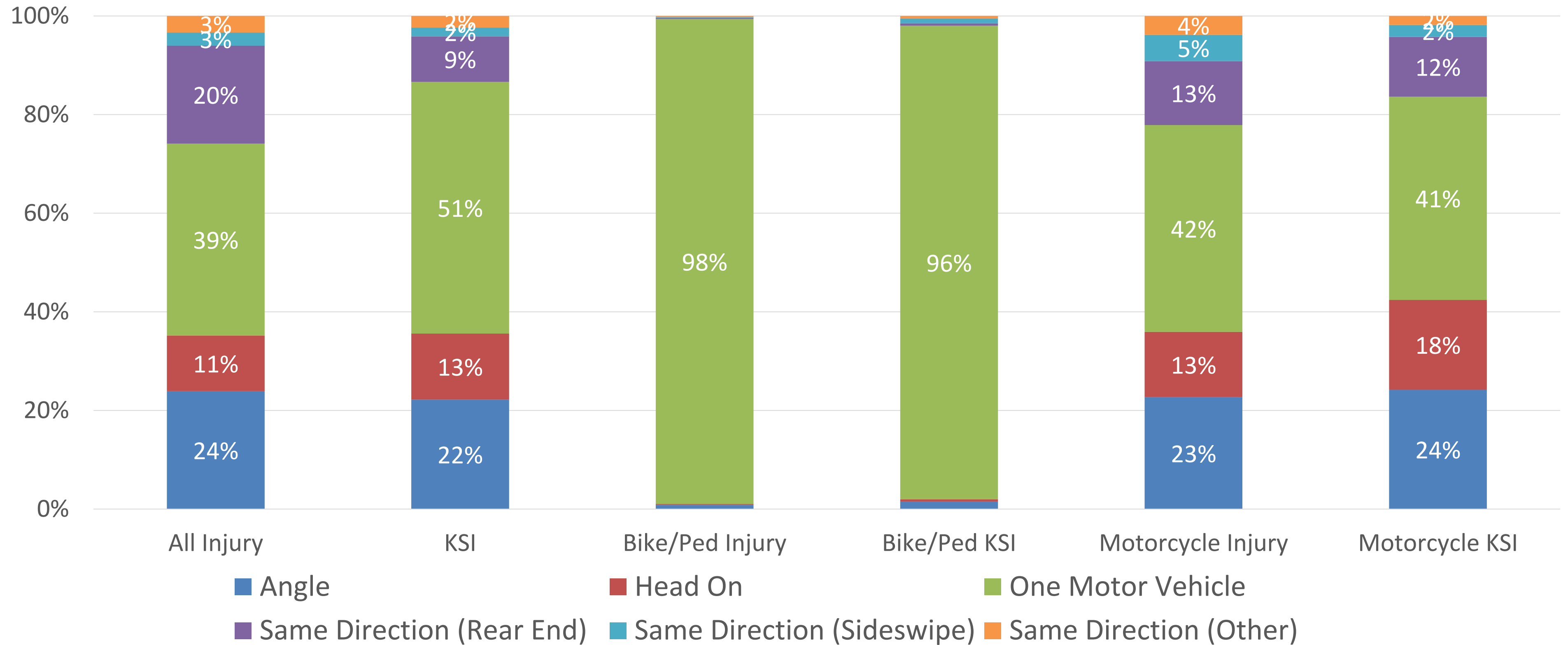
## KSI Collisions



■ Bike ■ Ped ■ Motorcycle ■ Vehicle Only

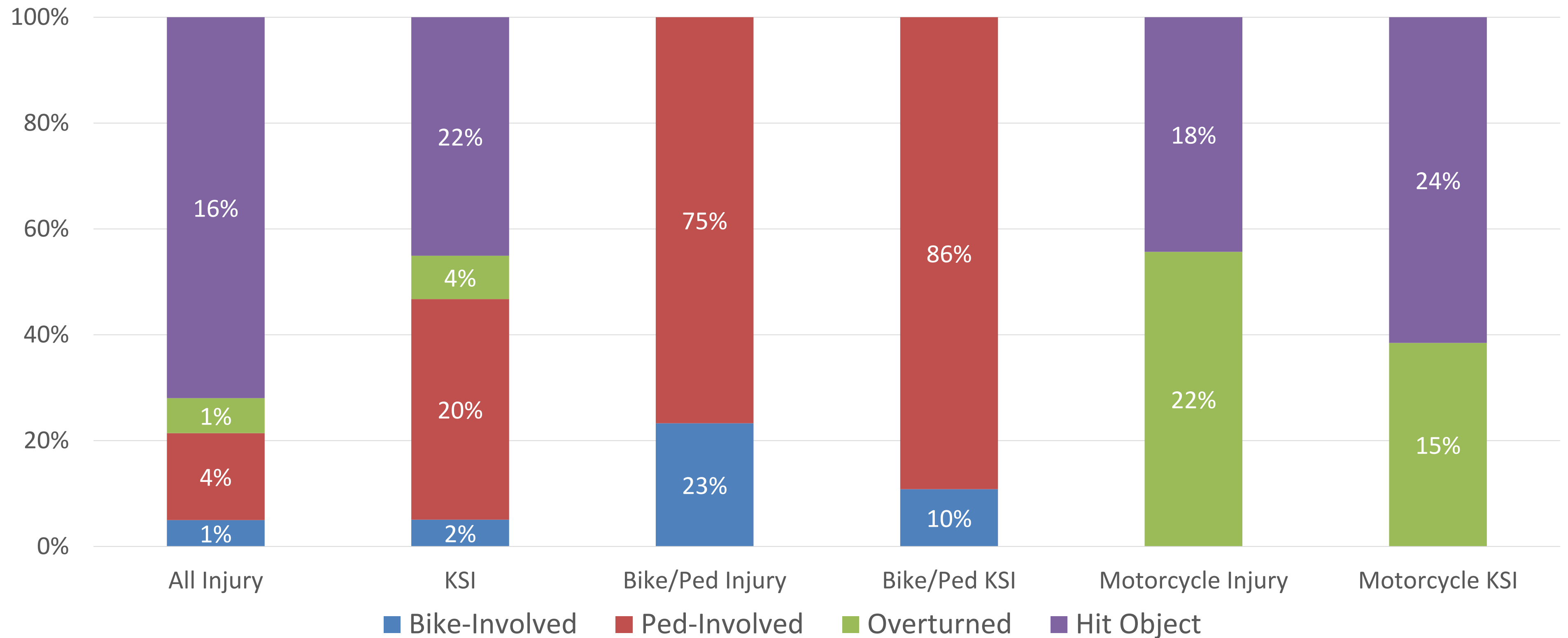


# Collision Type



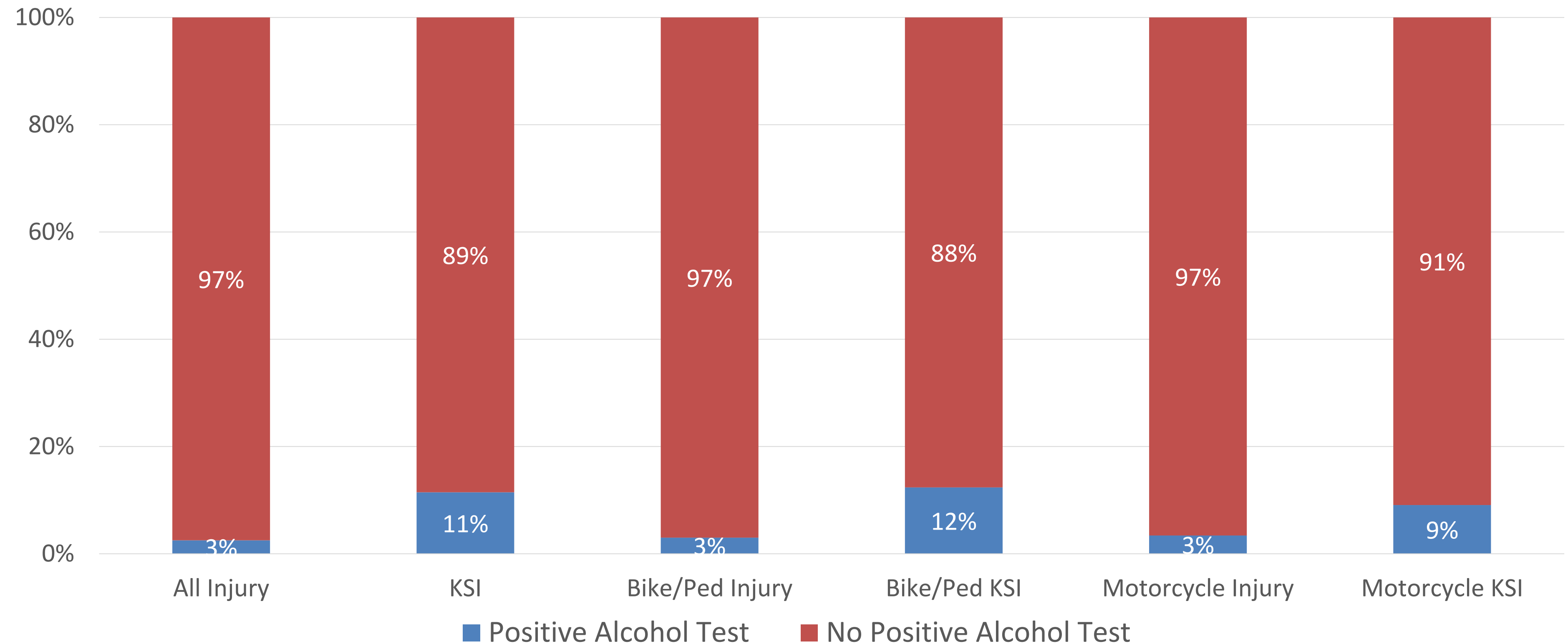


# One Vehicle Collisions - Type



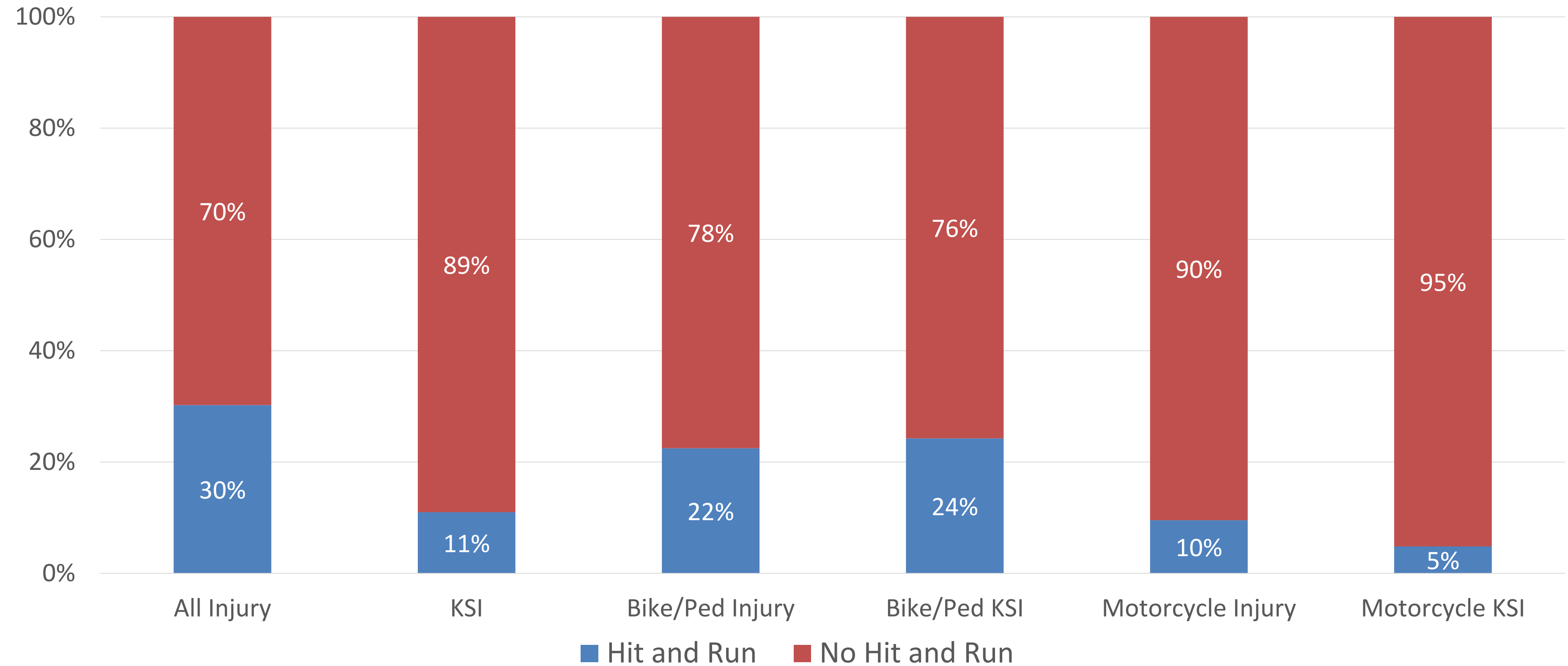


# Positive Alcohol Test



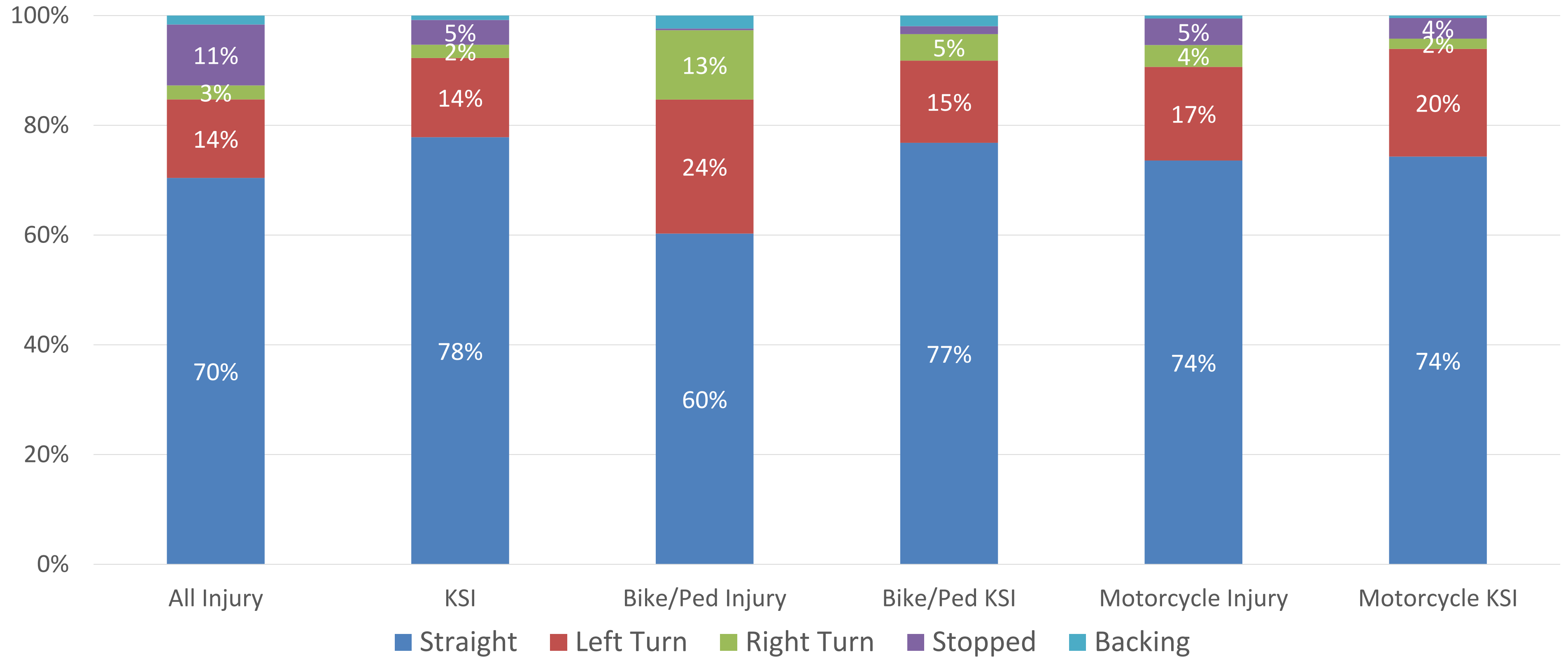


# Hit and Run





# Collision Movement





# Top Violations – Party at Fault



## Vehicle KSI

Failed to control speed

Failed to Yield ROW –  
Left Turn

Failed to Yield ROW –  
Stop Sign

## Motorcycle KSI

Failed to control speed

Failed to Yield ROW –  
Left Turn

Driver Inattention

## Bike/Ped KSI

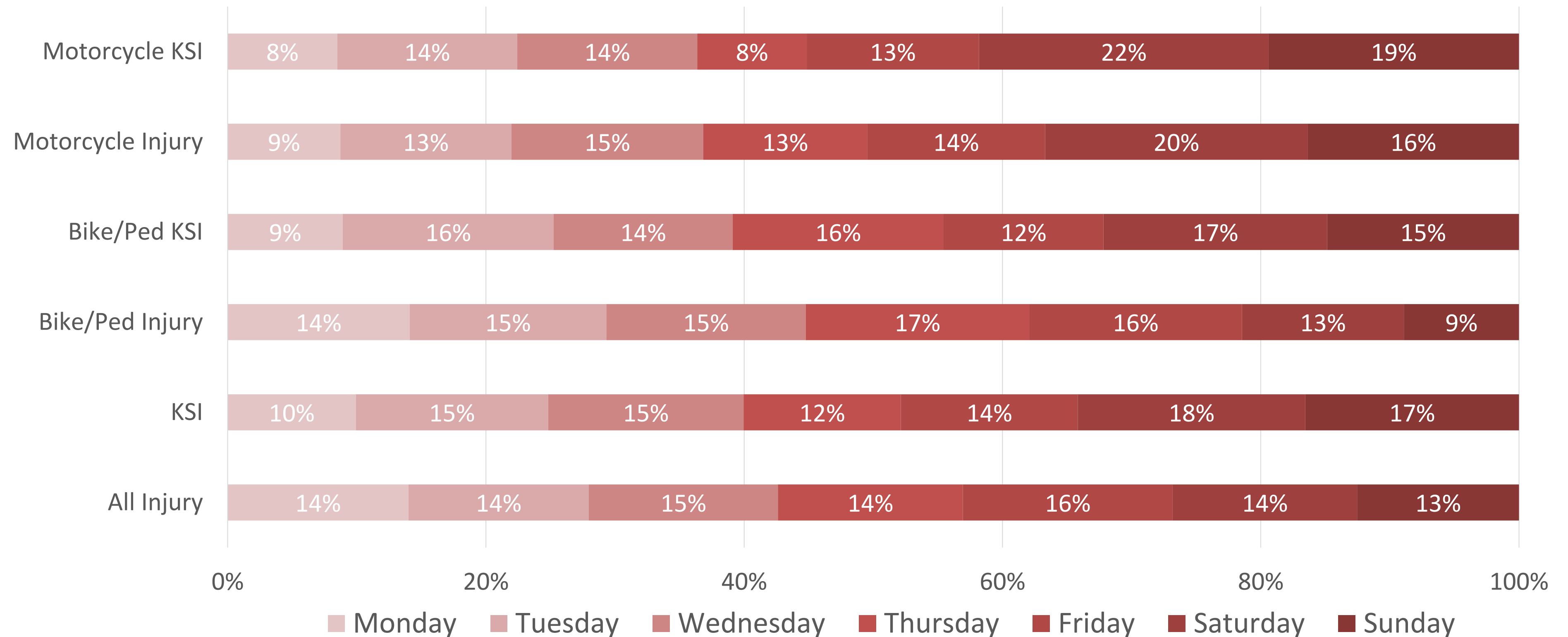
Failed to Yield ROW –  
to Pedestrian

Driver Inattention

Pedestrian Failed to  
Yield ROW

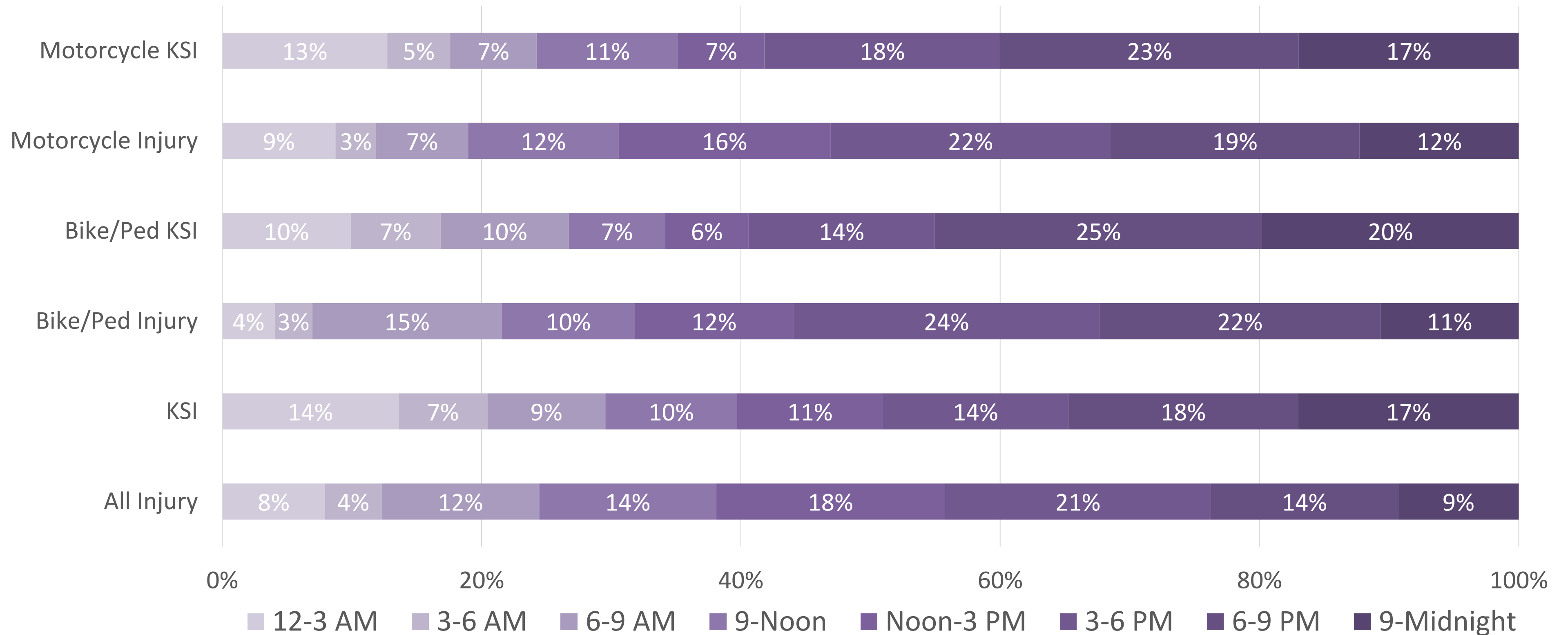


# Day of Week





# Time of Day



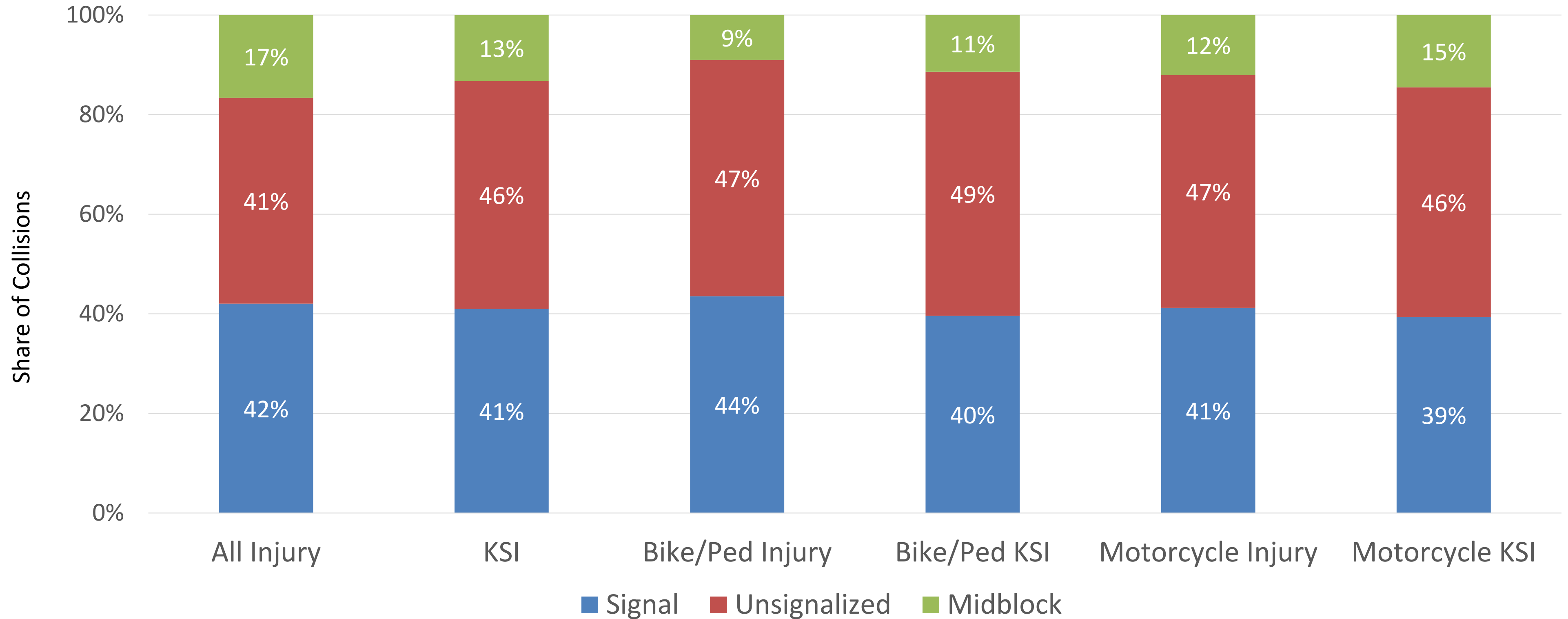


# Roadway and Contextual Factors



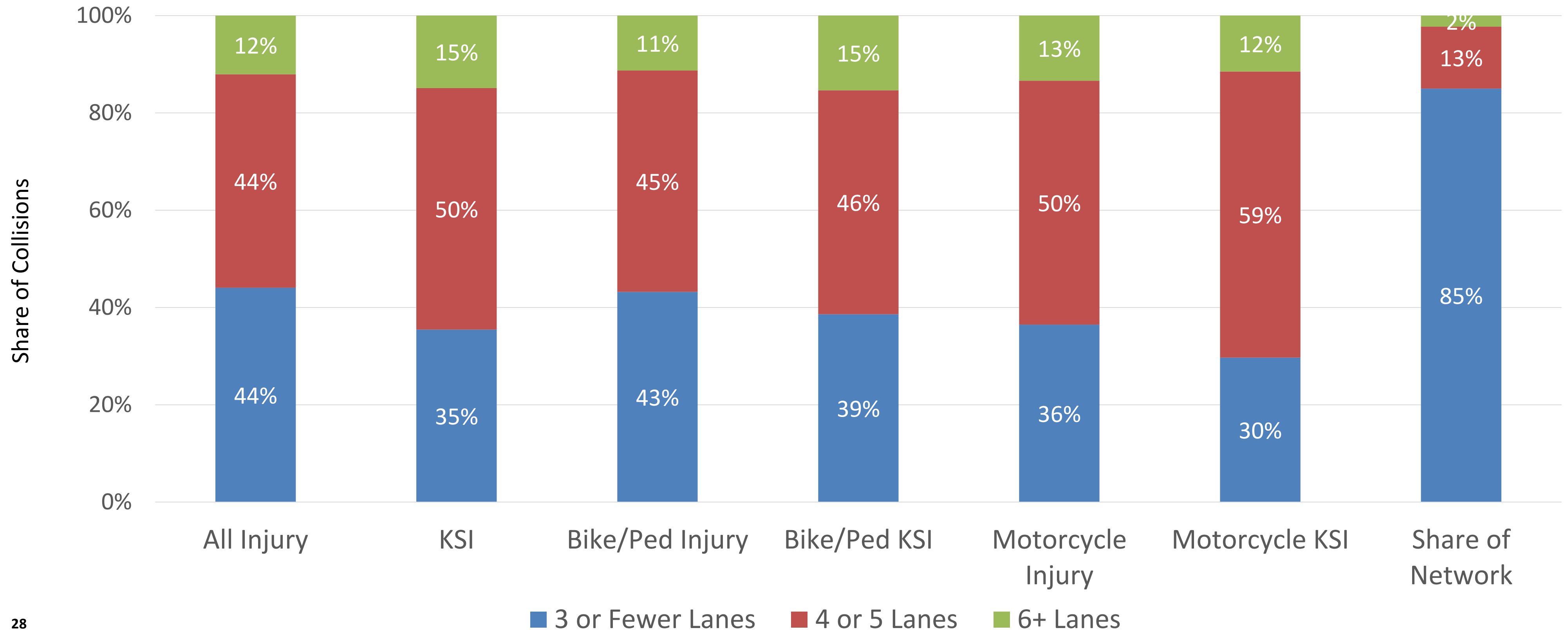


# Location



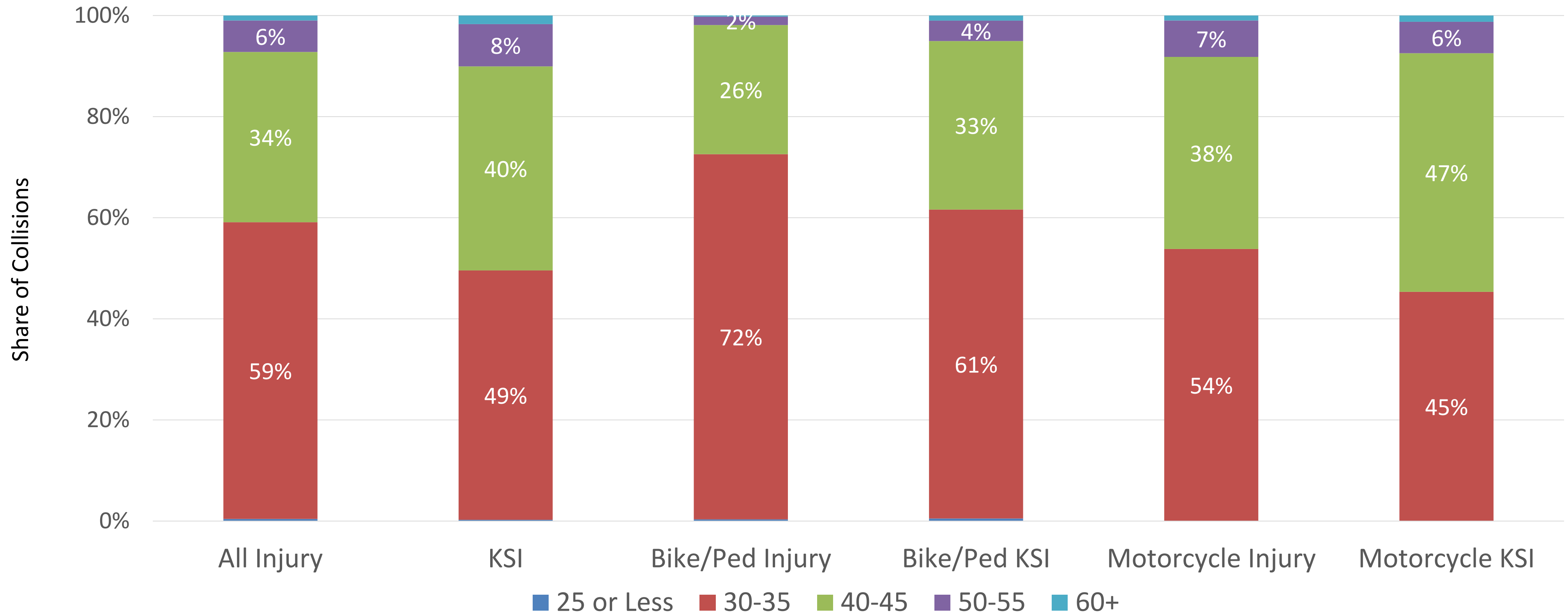


# Number of Lanes



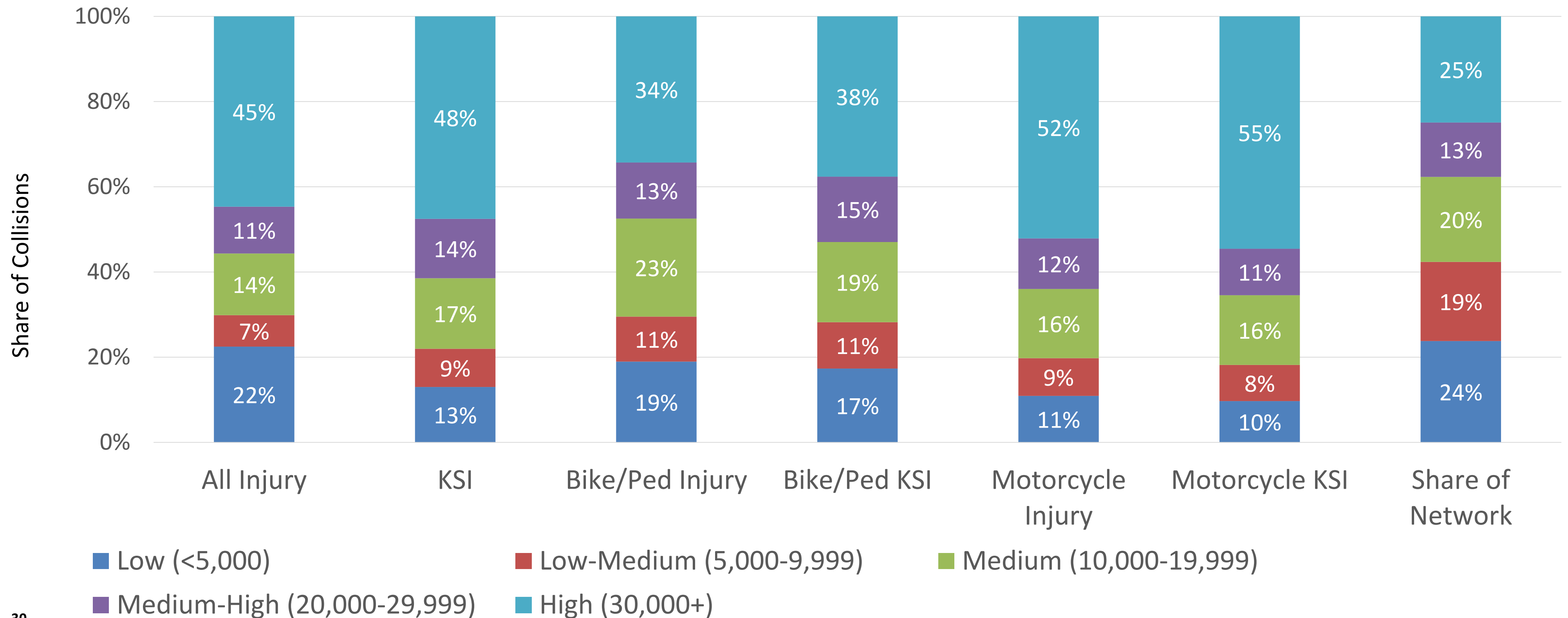


# Posted Speed



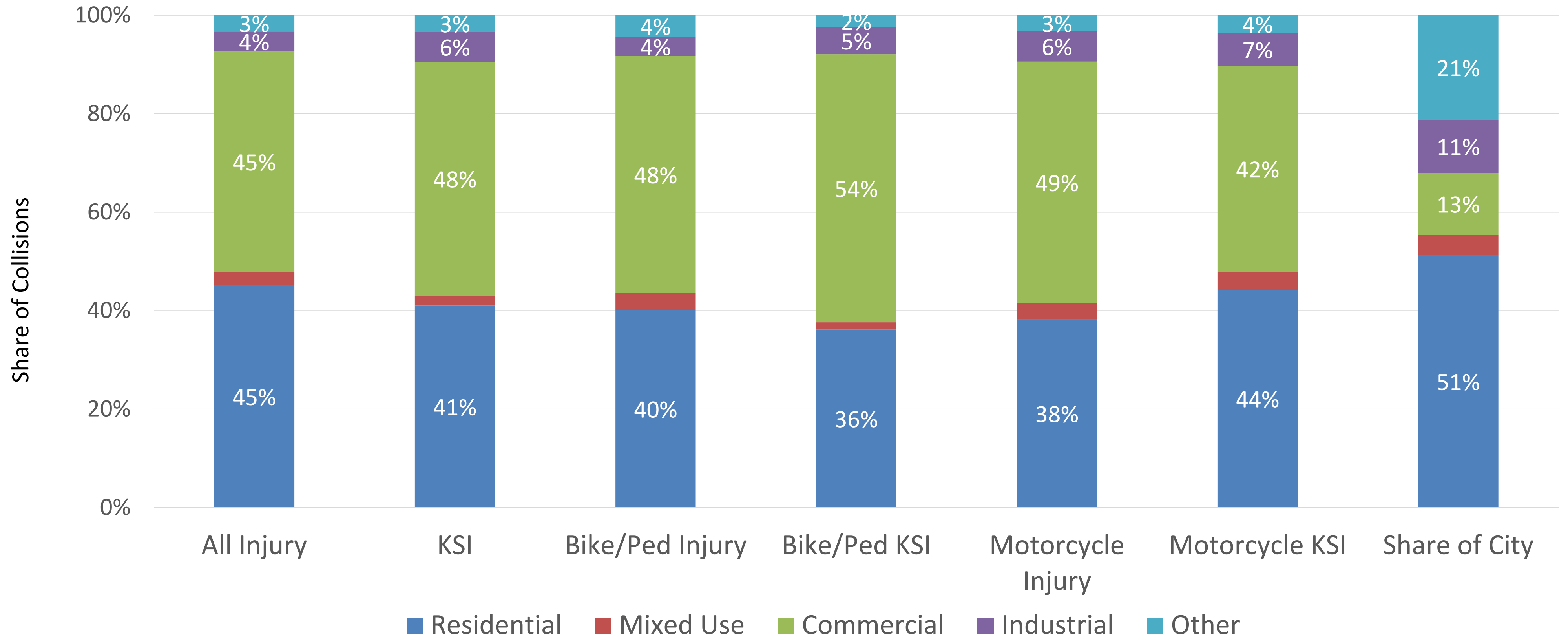


# Daily Vehicle Volumes



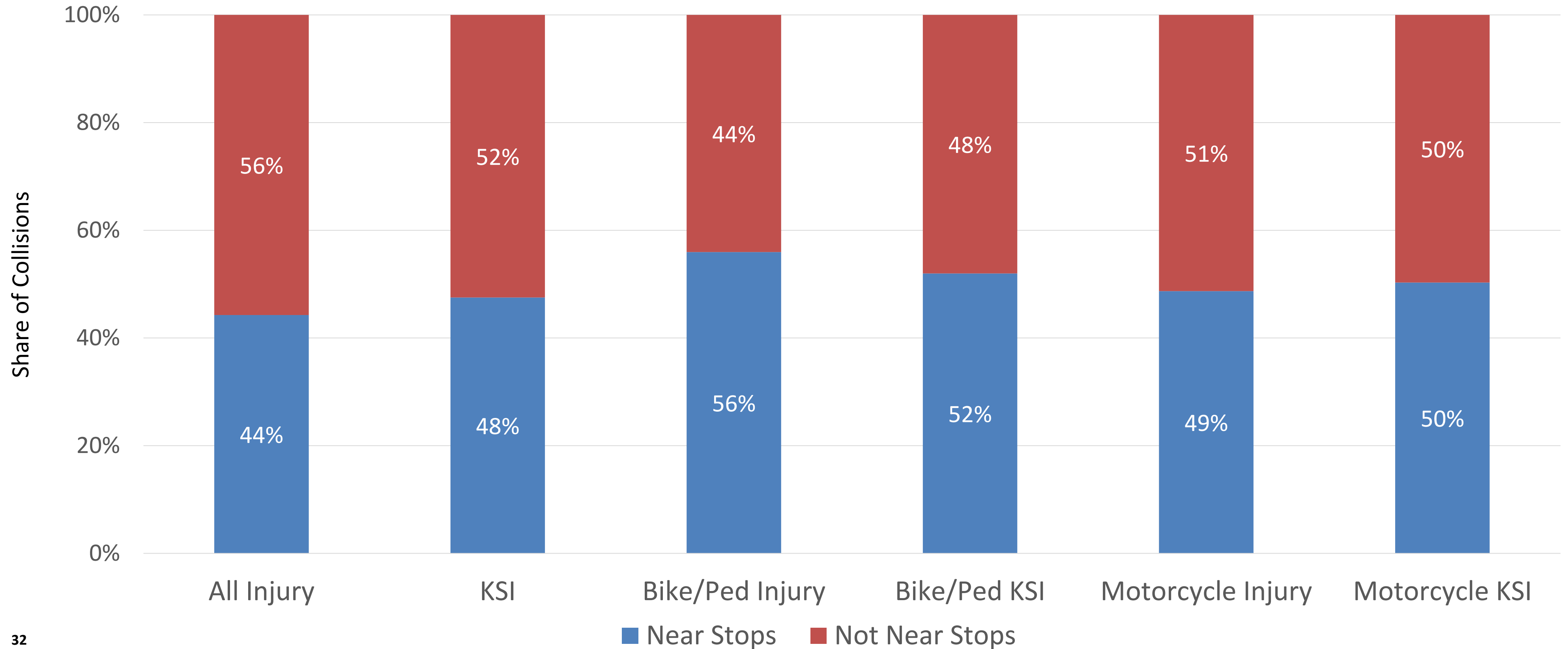


# Land Use



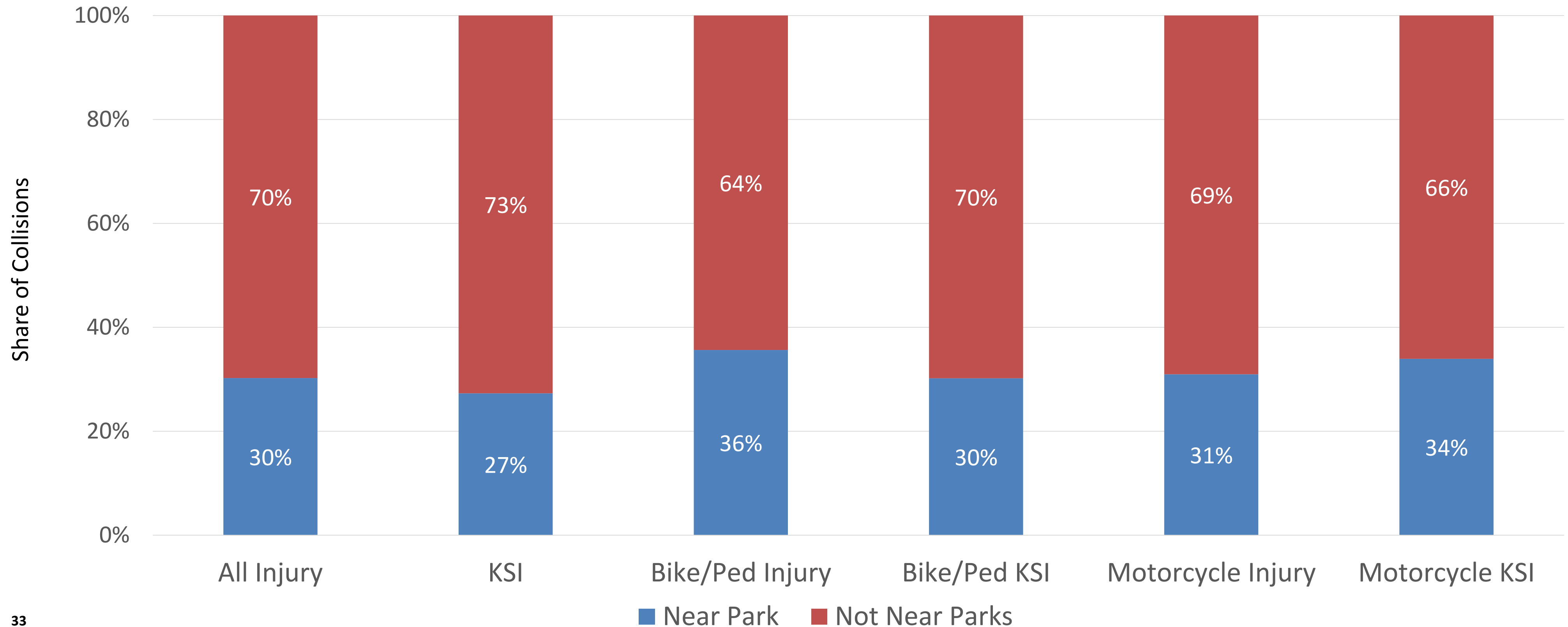


# Near Transit Stops (within 250')



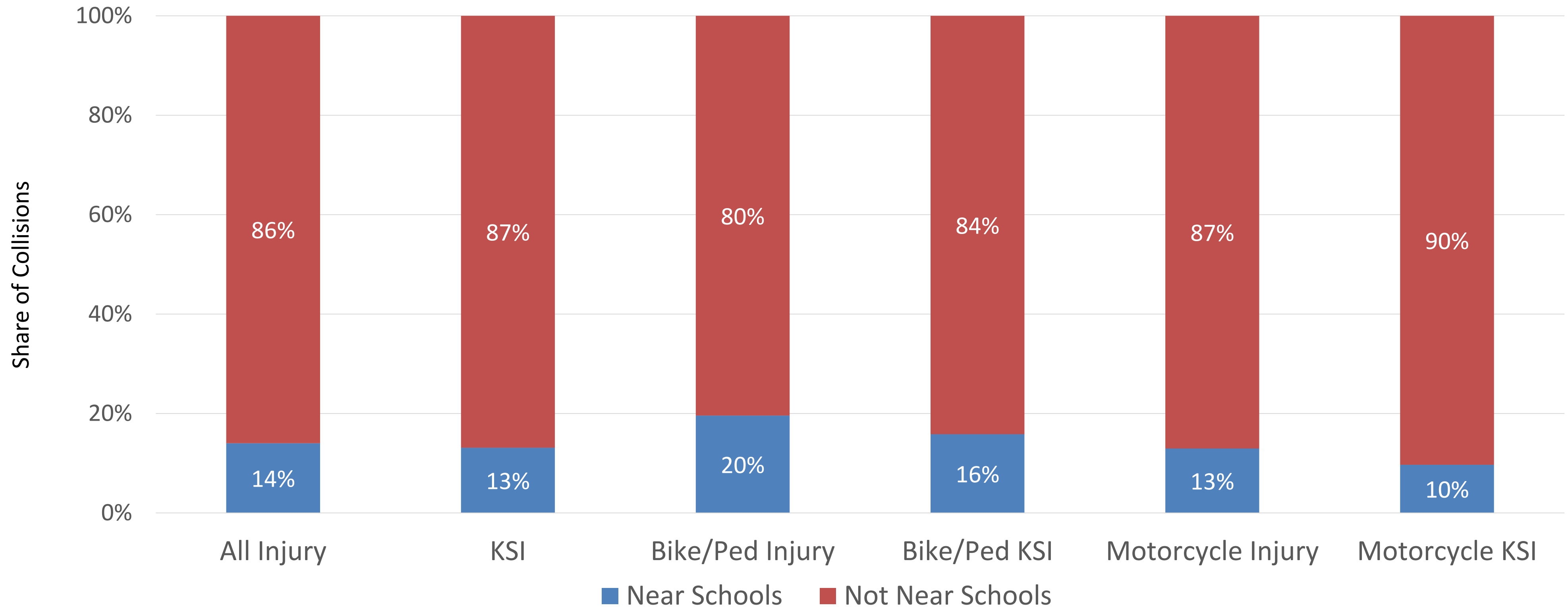


# Near Parks (within 1000')



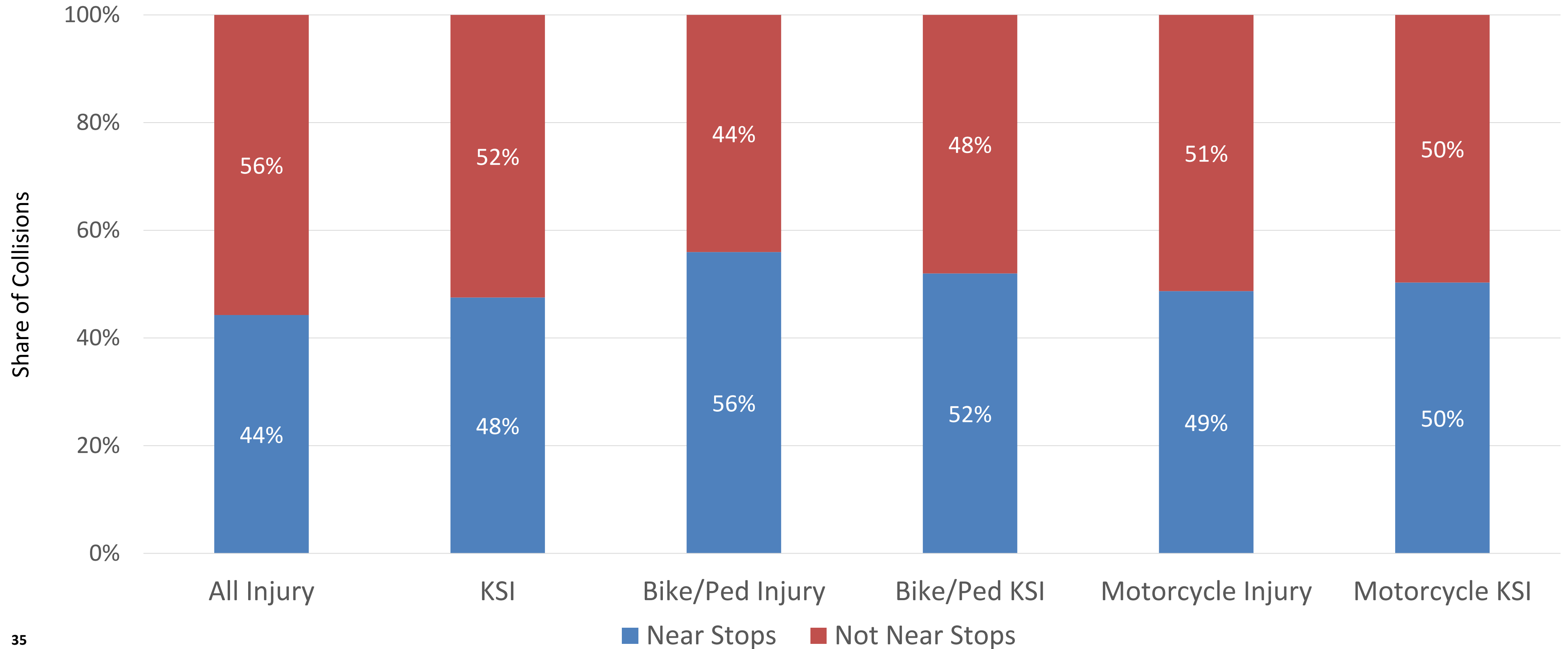


# Near Schools (within 1000')



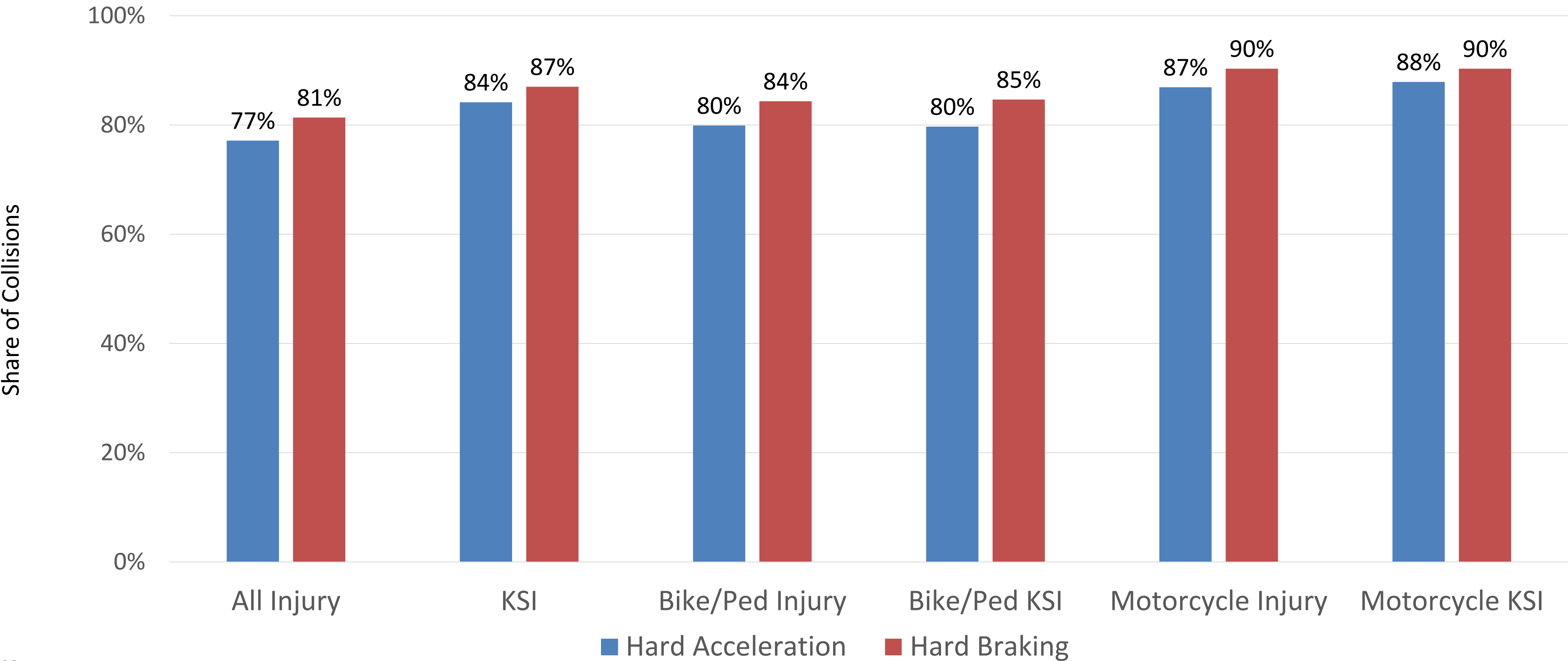


# USDOT Disadvantaged Communities



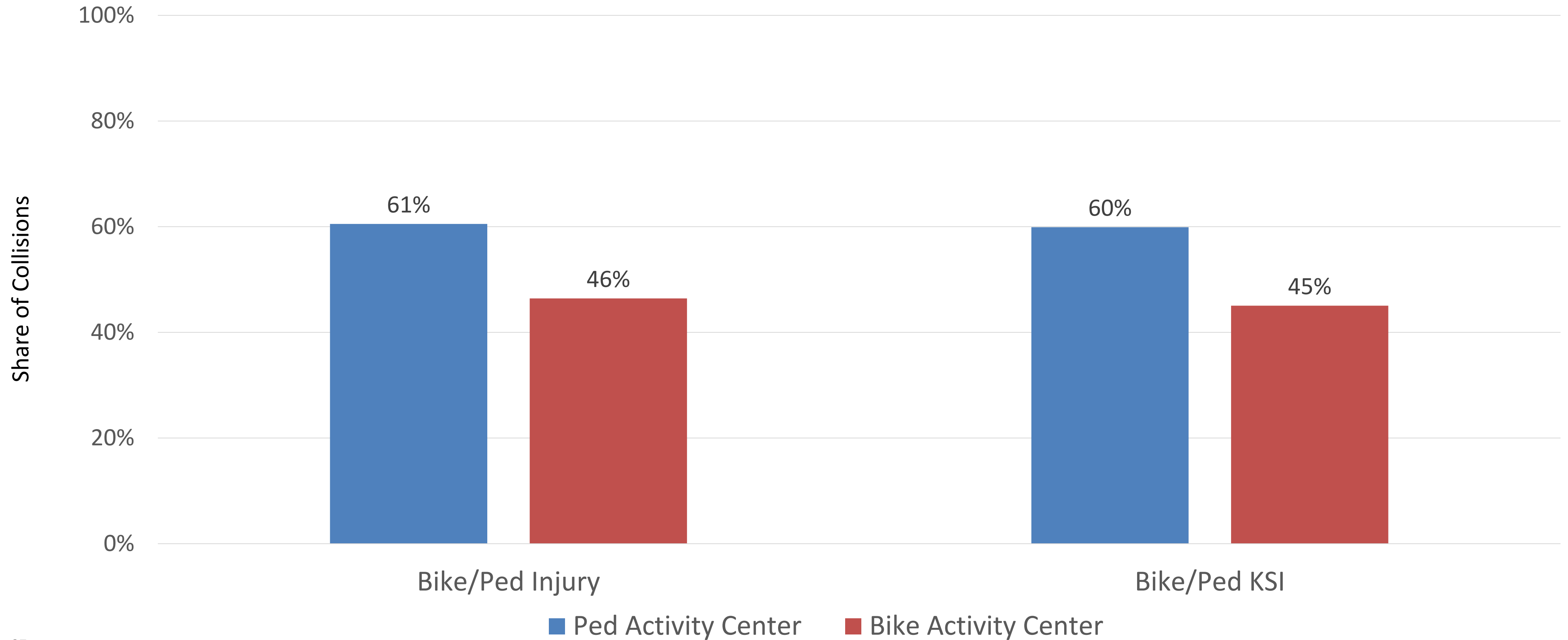


# Vehicle Incidents





# Activity Centers





# Systemic Safety Analysis Key Takeaways



- Vehicle speed plays a major role in crash severity. More than half of fatal and severe injury collisions on local streets occur where the posted speed is 40 mph or higher
- 65% of fatal and severe injury collisions occur on local streets with 4 or more vehicle travel lanes, though these streets account for just 15% of all local streets
- 87% of fatal and severe injury collisions on local streets occur at intersections
- Nearly half of fatal and severe injury collisions on local streets occur within commercial areas, though commercial land use takes up just 13% of the City



# Collision Profiles





# Profile 1

Mode: **Pedestrian**

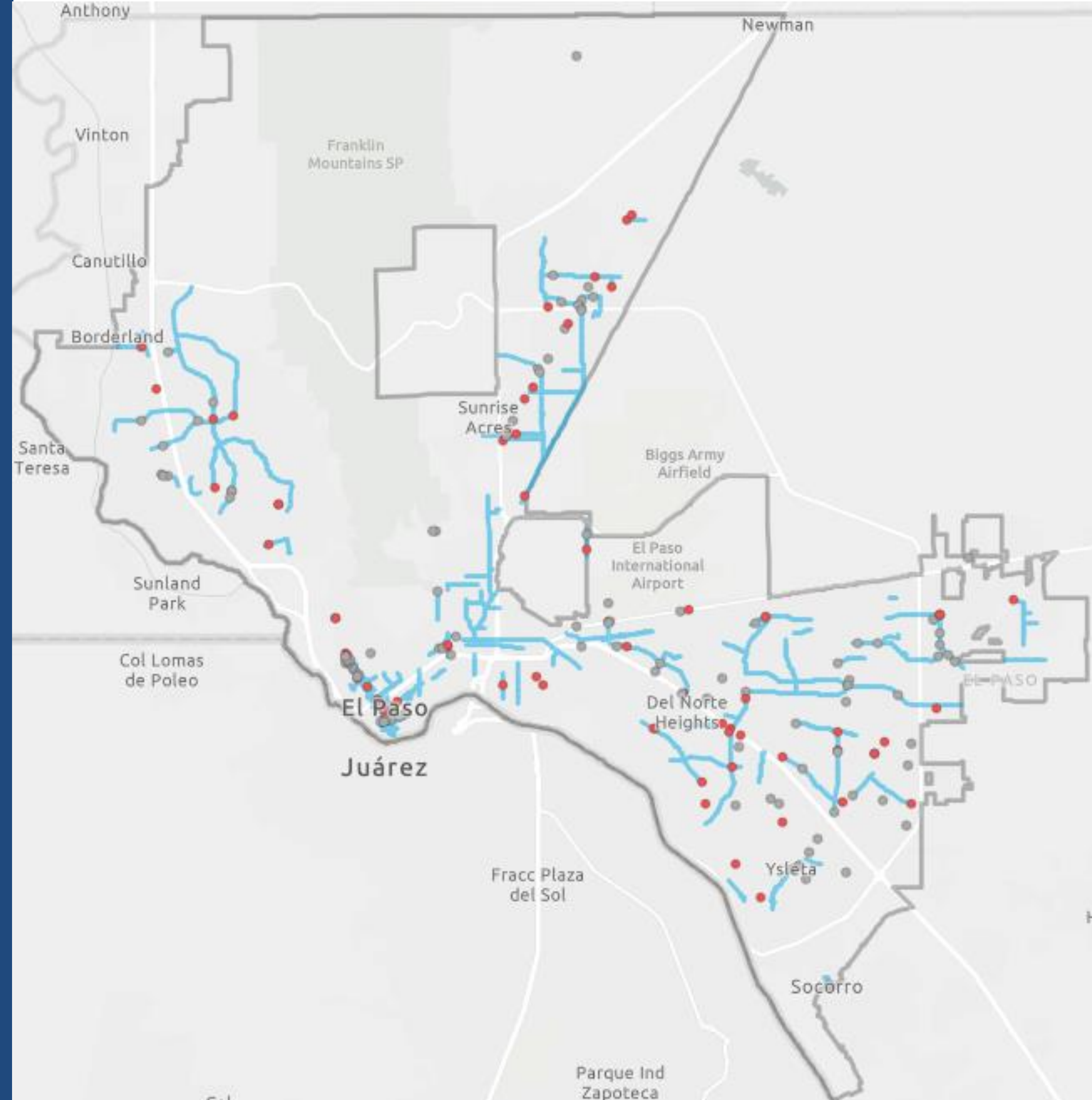
Collision factor: **Dark Conditions**

Contextual factor: **Pedestrian Activity Center**

Injury Collisions: **186**

KSI Collisions: **67**

Accounts for **37%** of pedestrian KSI





# Profile 2

Mode: **Pedestrian**

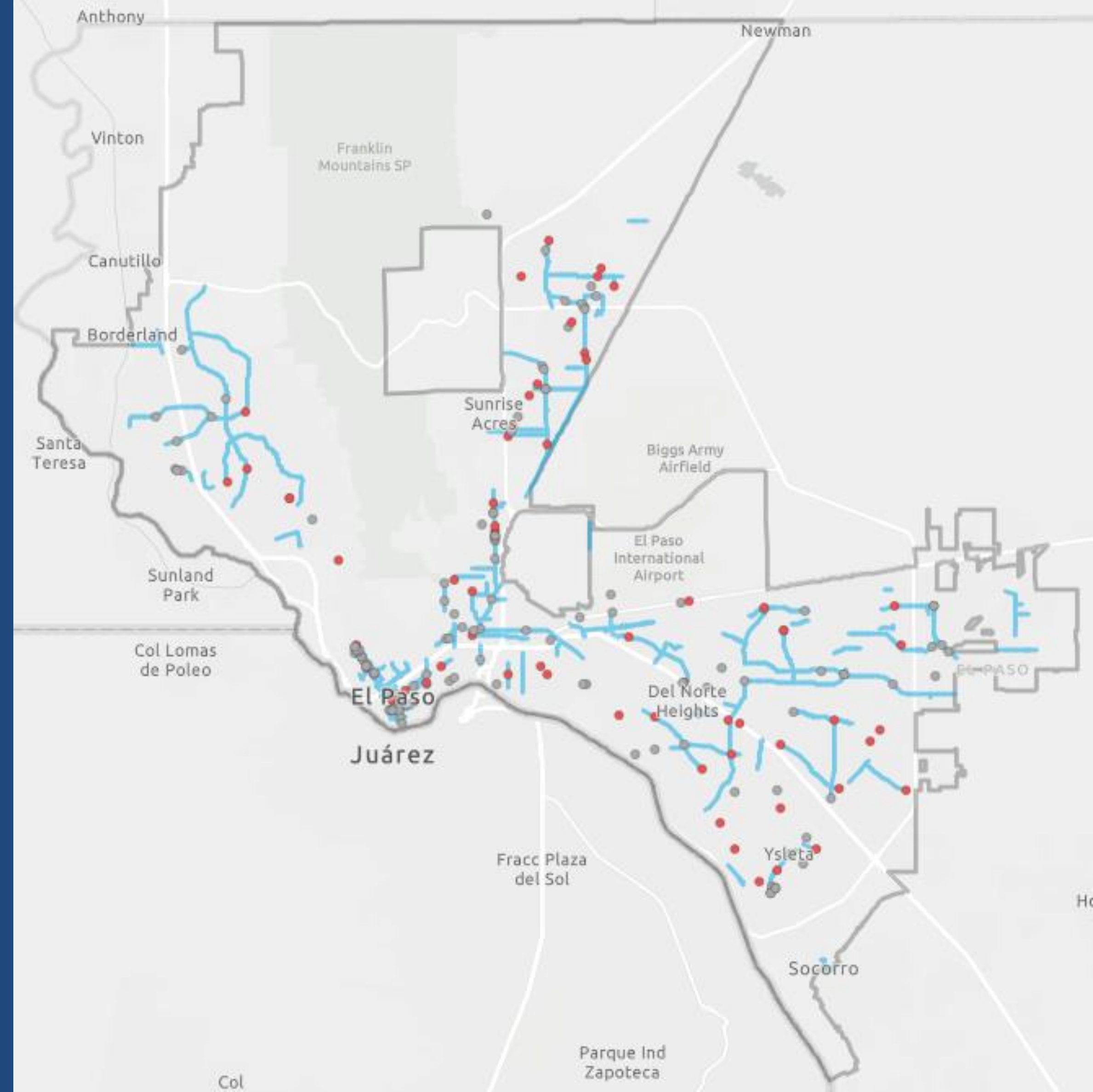
Collision factor: **Dark Conditions**

Contextual factor: **Near Transit Stop**

Injury Collisions: **184**

KSI Collisions: **62**

Accounts for **34%** of pedestrian KSI





# Profile 3

Mode: **Pedestrian**

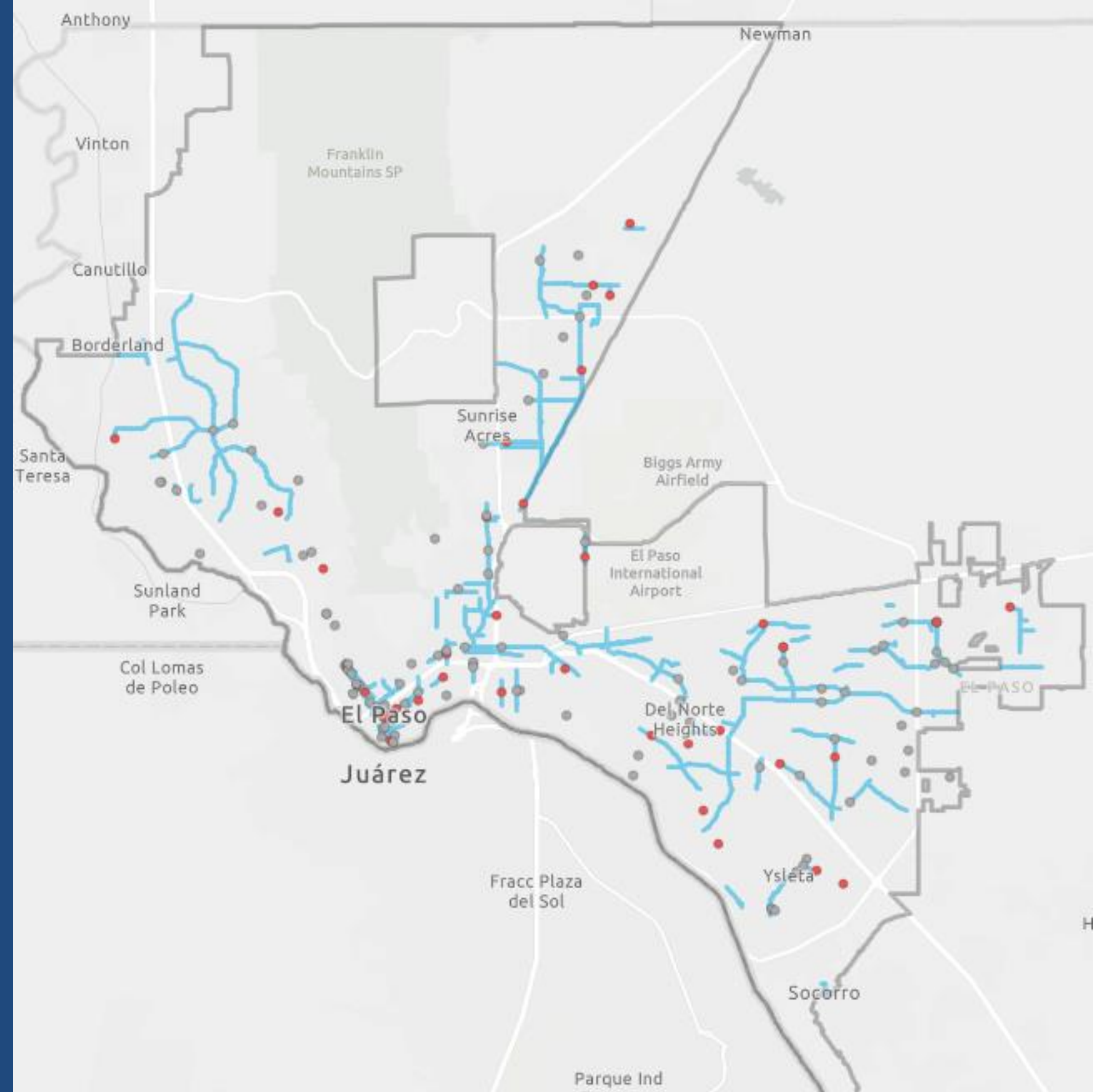
Collision factor: **Hit and Run**

Contextual factor: **Hard Braking Incidents**

Injury Collisions: **146**

KSI Collisions: **40**

Accounts for **22%** of pedestrian KSI





# Profile 4

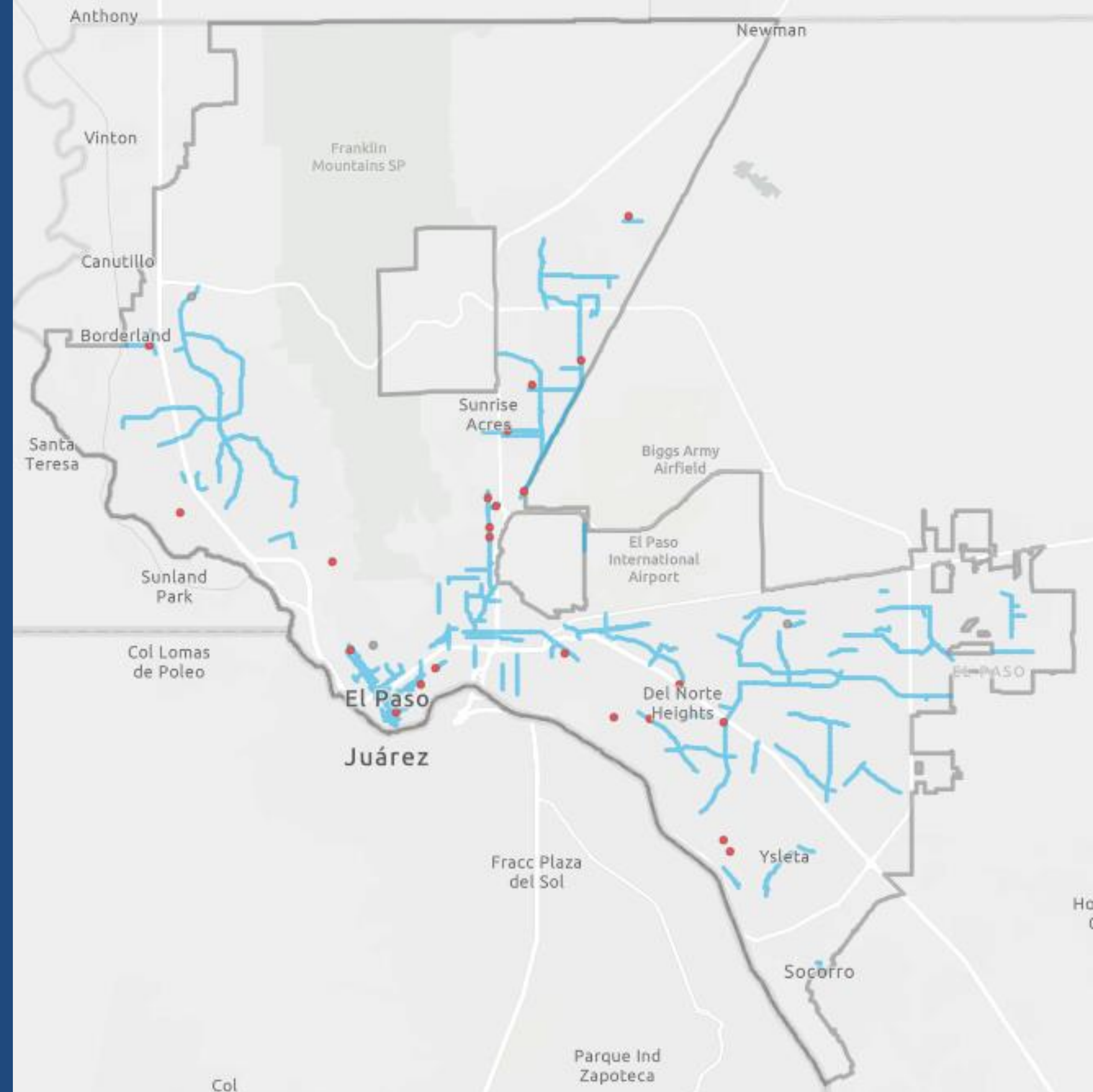
Mode: **Pedestrian**

Collision factor: **Positive Alcohol Test**

Injury Collisions: **27**

KSI Collisions: **24**

Accounts for **13%** of pedestrian KSI





# Profile 5

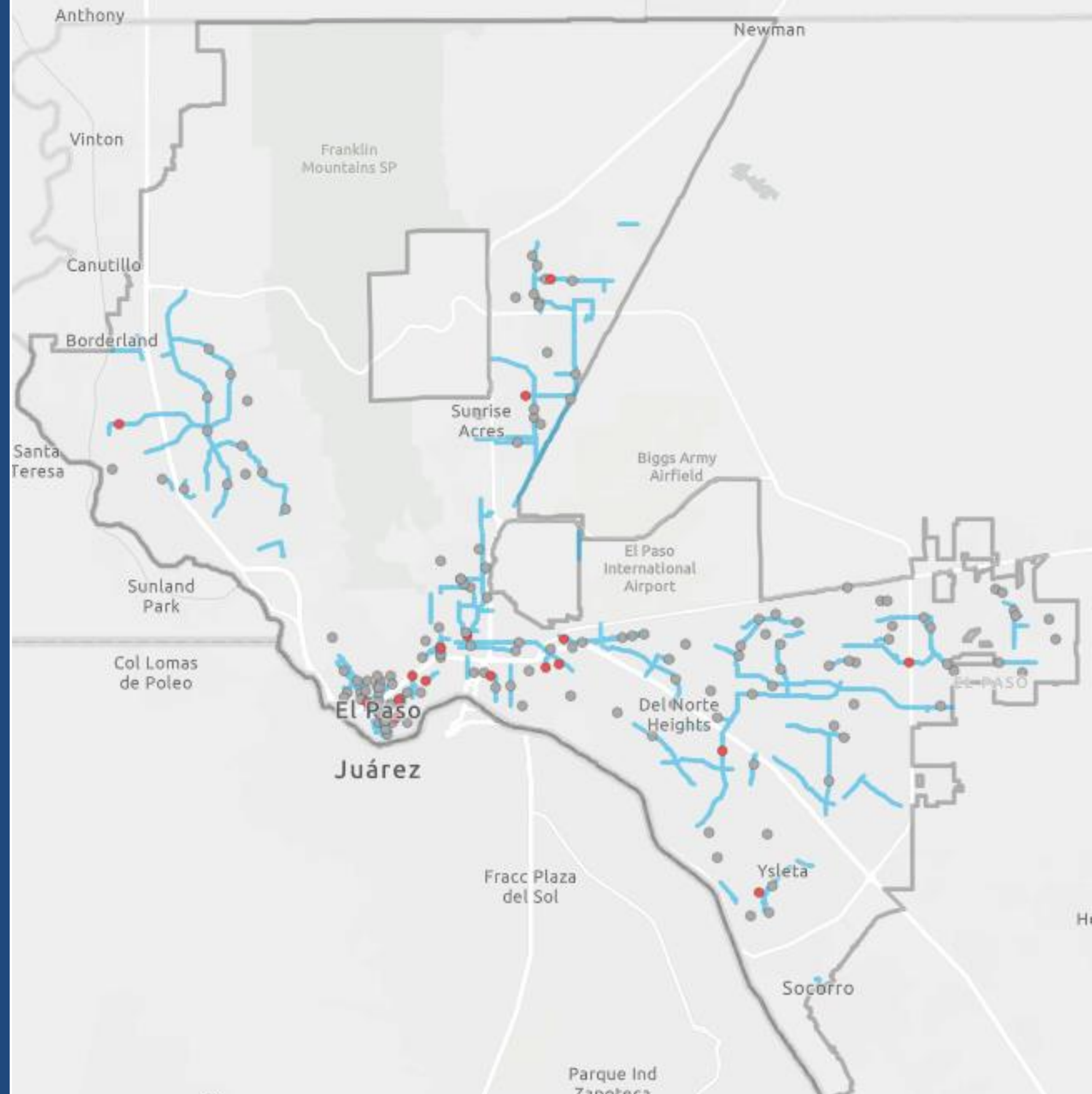
Mode: **Bicycle**

Contextual factor: **30-35 mph streets**

Injury Collisions: **165**

KSI Collisions: **17**

Accounts for **81%** of bicycle KSI





# Profile 6

Mode: **Motorcycle**

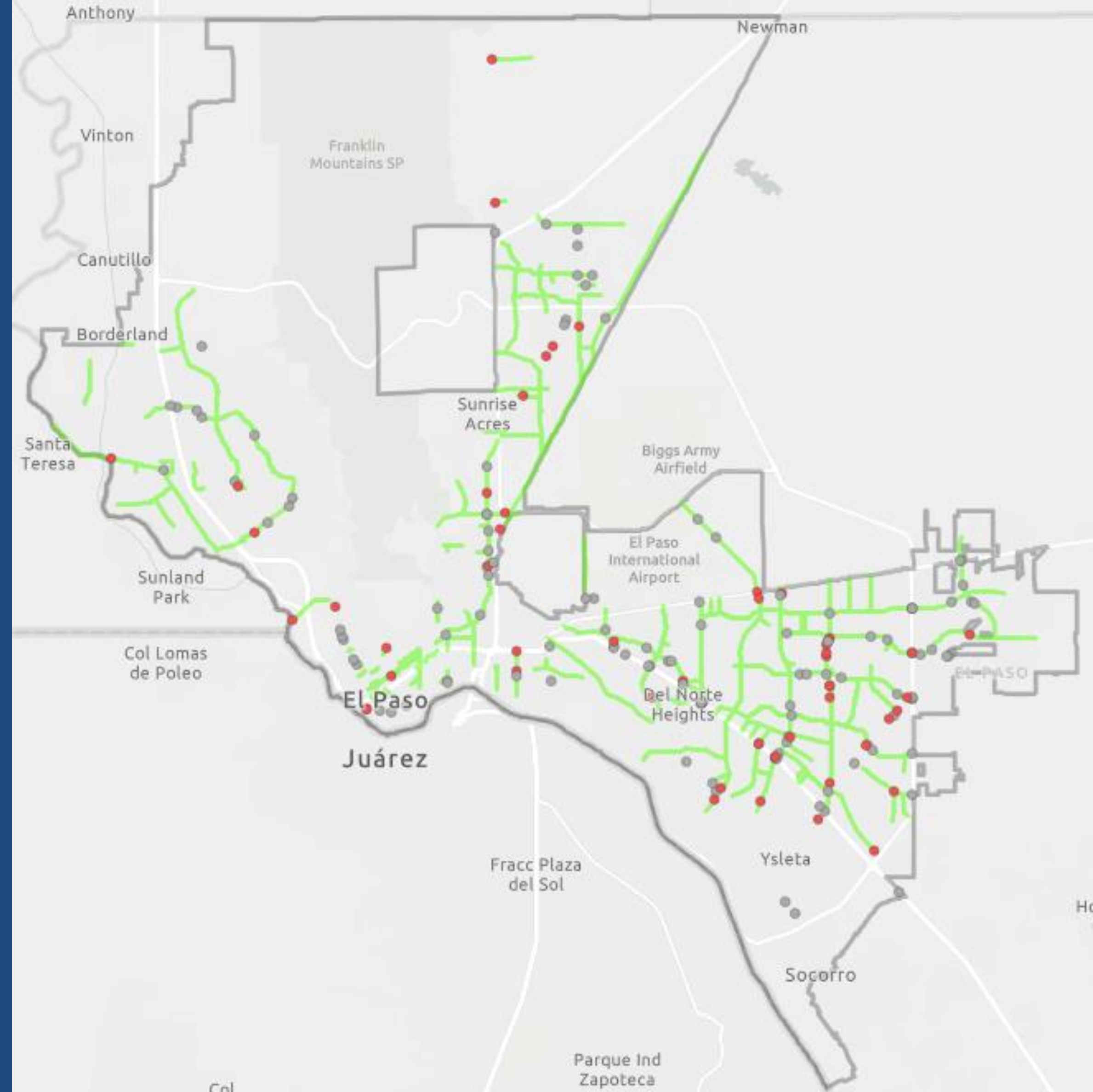
Collision Factor: **Dark Conditions**

Contextual factor: **Major Roadway**

Injury Collisions: **169**

KSI Collisions: **53**

Accounts for **32%** of motorcycle KSI



# Profile 7

Mode: **Motorcycle**

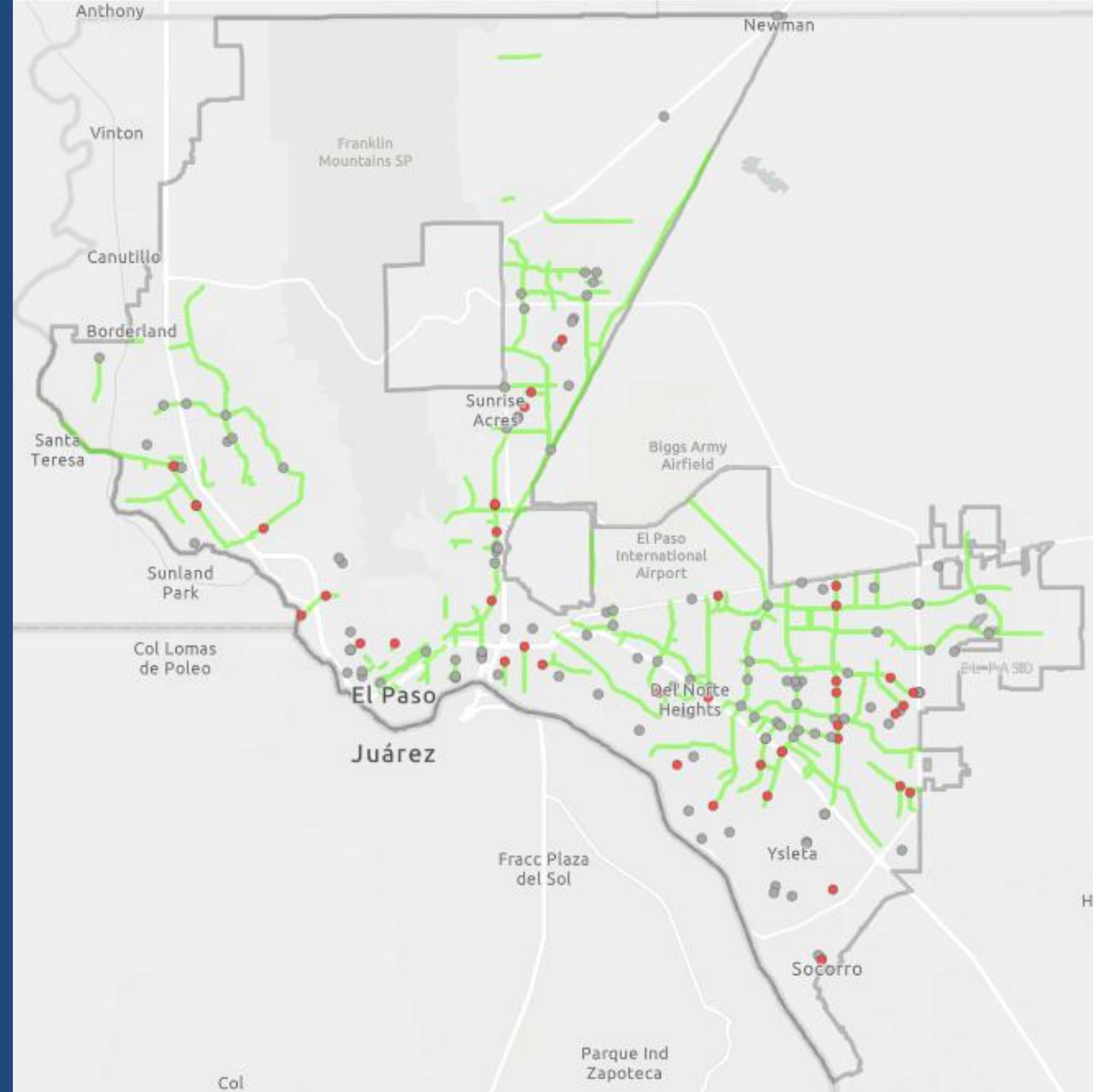
Collision Factor: **Left Turn**

Contextual factor: **Hard Braking Incidents**

Injury Collisions: **160**

KSI Collisions: **41**

Accounts for **25%** of motorcycle KSI





# Profile 8

Mode: **Motorcycle**

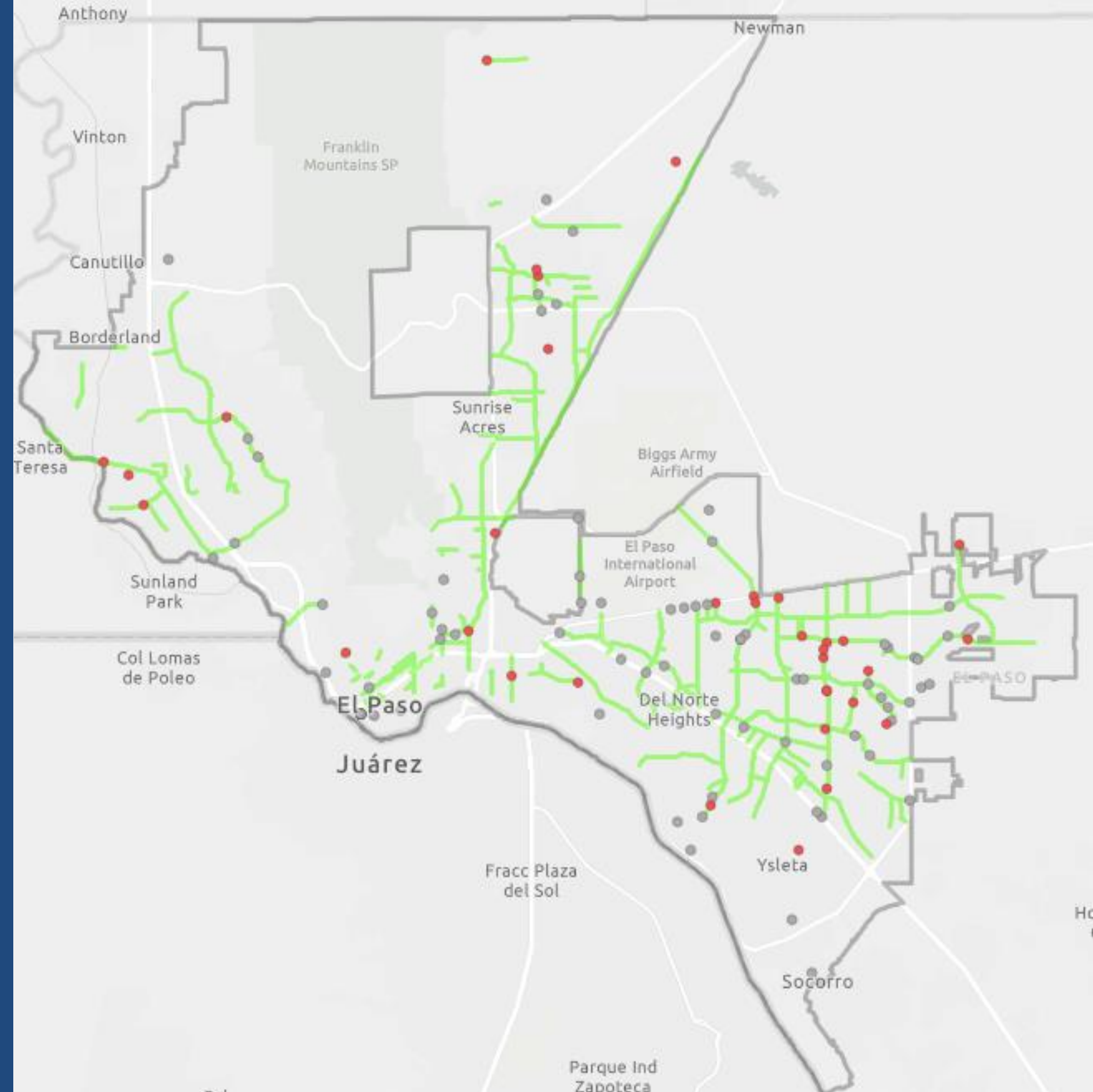
Collision Factor: **Hit Object**

Contextual factor: **Hard Acceleration Incidents**

Injury Collisions: **110**

KSI Collisions: **37**

Accounts for **22%** of motorcycle KSI



# Profile 9

Mode: **Vehicle**

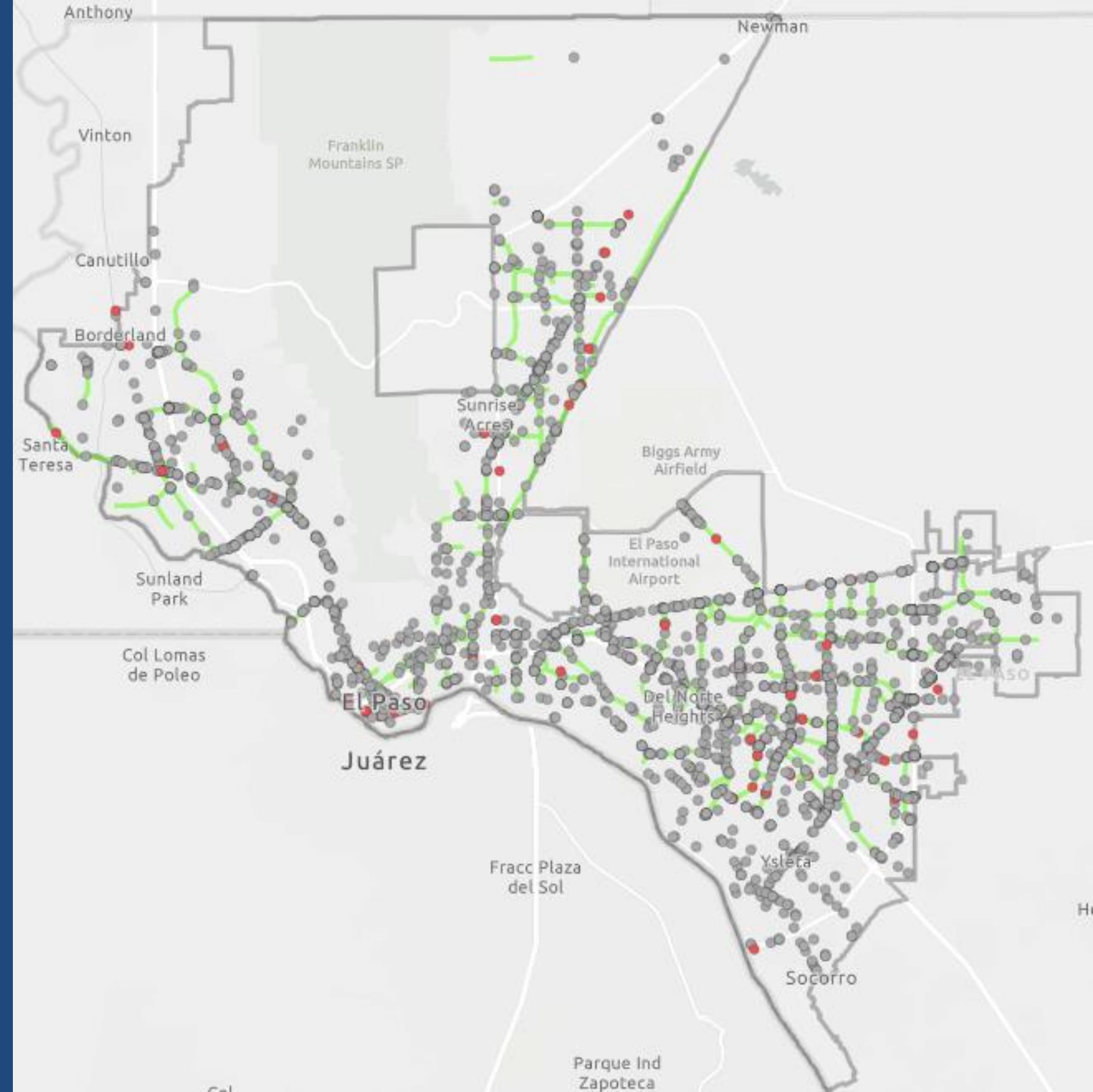
Collision Factor: **Failed to Control Speed**

Contextual factor: **Hard Acceleration Incidents**

Injury Collisions: **2,809**

KSI Collisions: **83**

Accounts for **17%** of vehicle KSI





# Profile 10

Mode: **Vehicle**

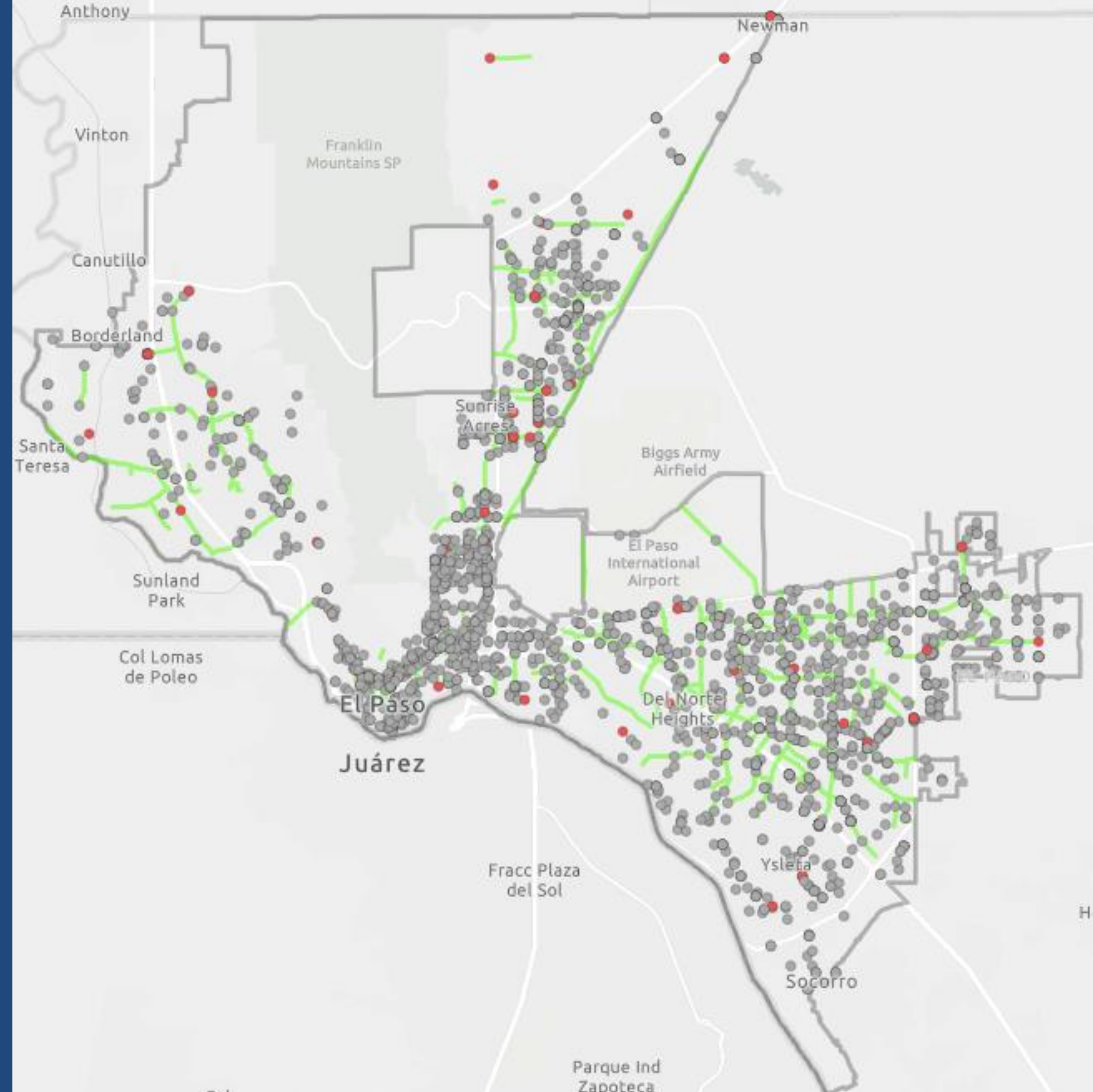
Collision Factor: **Angle**

Contextual factor: **Unsignalized intersection**

Injury Collisions: **2,159**

KSI Collisions: **78**

49 Accounts for **16%** of vehicle KSI





# Explore the Data



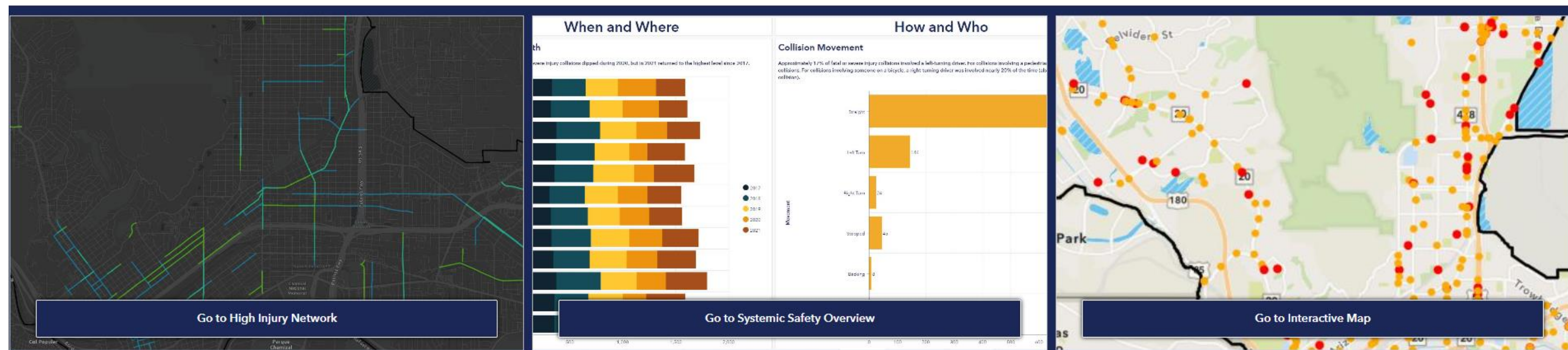
Welcome to the El Paso Vision Zero online dashboard. Use this tool to explore and visualize crash trends and locations within the city using data between 2017 and 2021. The interactive cards below provide three ways to explore the data. Hover over the card of interest to see more information and click the "Go to" button.

This dashboard was developed as a component of the Vision Zero program in El Paso. Vision Zero is a collection of tools, policies, strategies, and infrastructure aimed at eliminating all roadway traffic deaths and injuries.

30% of fatal and severe injury collisions in El Paso occur on state-maintained streets. The remaining 70% occur on local streets managed by the City of El Paso. The information shown on this page highlights the key trends seen in collisions occurring on local streets.

For the best performance please use a laptop or desktop computer to view the dashboard.

To learn more about Vision Zero, please visit the [project website](#).





# Exercise: Safety Concerns + Strategies





# Safe System Elements



## Safe Roads

Design roads so that a human error does not result in the loss of human life.



## Safe Speeds

Slower travel speeds help save lives and reduce the risk of a life-altering injury or death.



## Safe Road Users

People living, working, or traveling in El Paso should be safe walking, biking, rolling, taking transit, or driving.



## Safe Vehicles

Promote vehicle designs and regulation that minimize crashes, reduce severity, and incorporate safety measures using the latest technology.



## Post-Crash Care

When crashes do occur, reduce harm through rapid access to emergency medical care and analyze data to support system improvements.



# Safe System Activity Boards

- **Step One:** Individually identify 2-3 safety concerns (ex: Speeding, No bike lanes, No sidewalks)
- **Step Two:** Discuss individual safety concerns as group and select five regarding each Safe System Element.
- **Step Three:** Identify potential solutions and performance measures.
- **Step Four:** This will be a iterative activity to development a framework of recommendations.



# Safe Roads

Design streets so that a human error does not result in the loss of human life. Examples of Safety Concerns include unsafe pedestrian crossings, walking/biking too close to traffic, people driving too fast, dark streets. Examples of potential solutions include physically separating people traveling at different speeds, providing dedicated space for different users, and alerting users to hazards.



## Safety Concern

## Solutions

Situation #1

Separation of facilities

Use of vegetation as a buffer

Situation #2

Sight line visibility

Planting shrubs over trees

Median design that does not create visual obstructions

Situation #3

Lack of sidewalks and bicycle facilities and amenities/poor facility maintenance

Installation of pedestrian design street lighting

Situation #4

Lack of safe crosswalks

Mid-block crossings

pedestrian signals

Striping maintenance

Situation #5

Roadway design

Instillation of traffic calming measures on existing streets

Implementation of speed humps where needed

Reduction of roadway size and allocation



# Engagement Update





# Public Engagement



- **Survey**
  - Online Public Survey: 929 responses (as of 1/27/2023)
  - Intercept Surveys
- **Upcoming Events**
- **Website Update + Public Dashboard**



# Next Steps



- Finalize Crash Profiles and Identify Countermeasures
- Begin development of strategies and recommendations
- Develop Performance Measures







# Thank you!