Safety Summit

June 5, 2025

a program of Land of Sky
FRENCH BROAD RIVER
METROPOLITAN PLANNING ORGANIZATION

LAND OF SKY
REGIONAL COUNCIL

Welcome

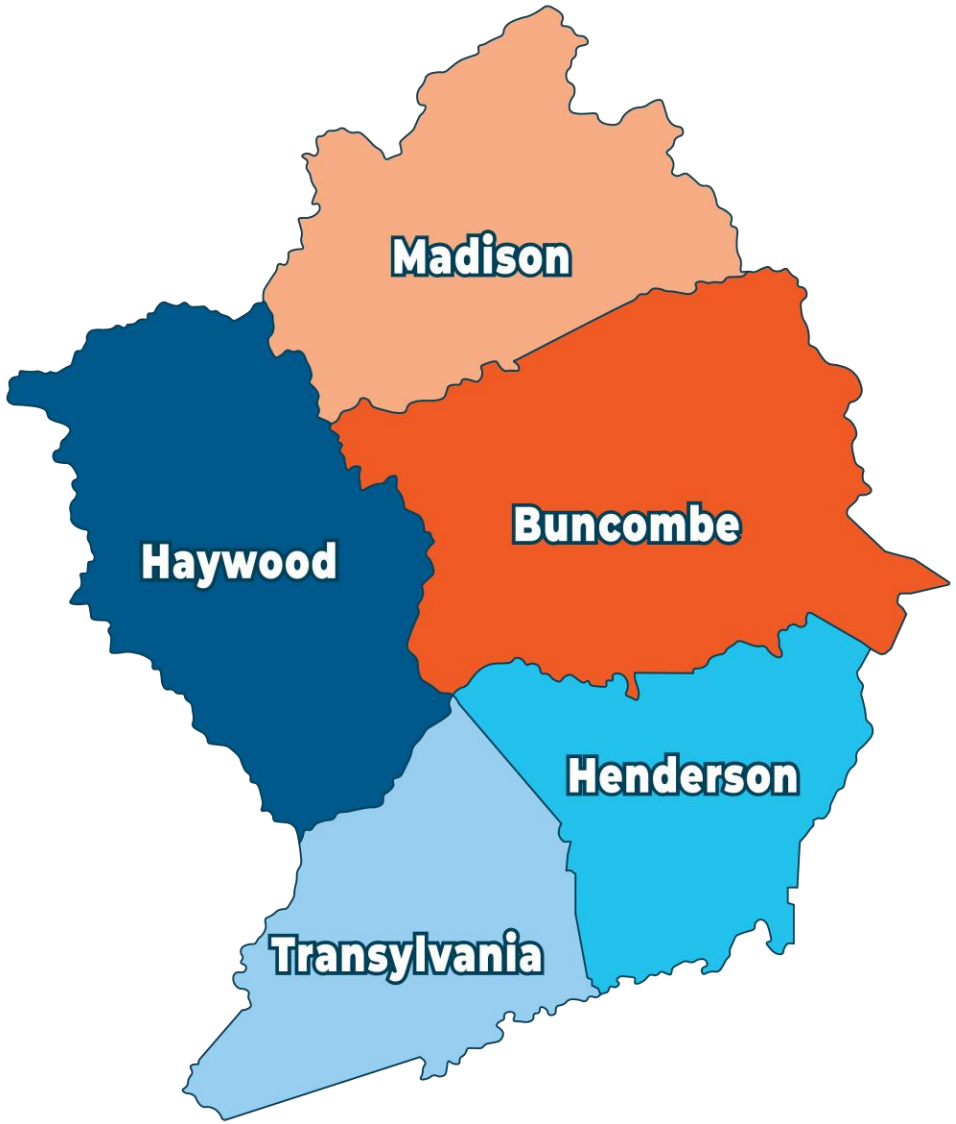
Buncombe County

Haywood County

Henderson County

Madison County

Transylvania County

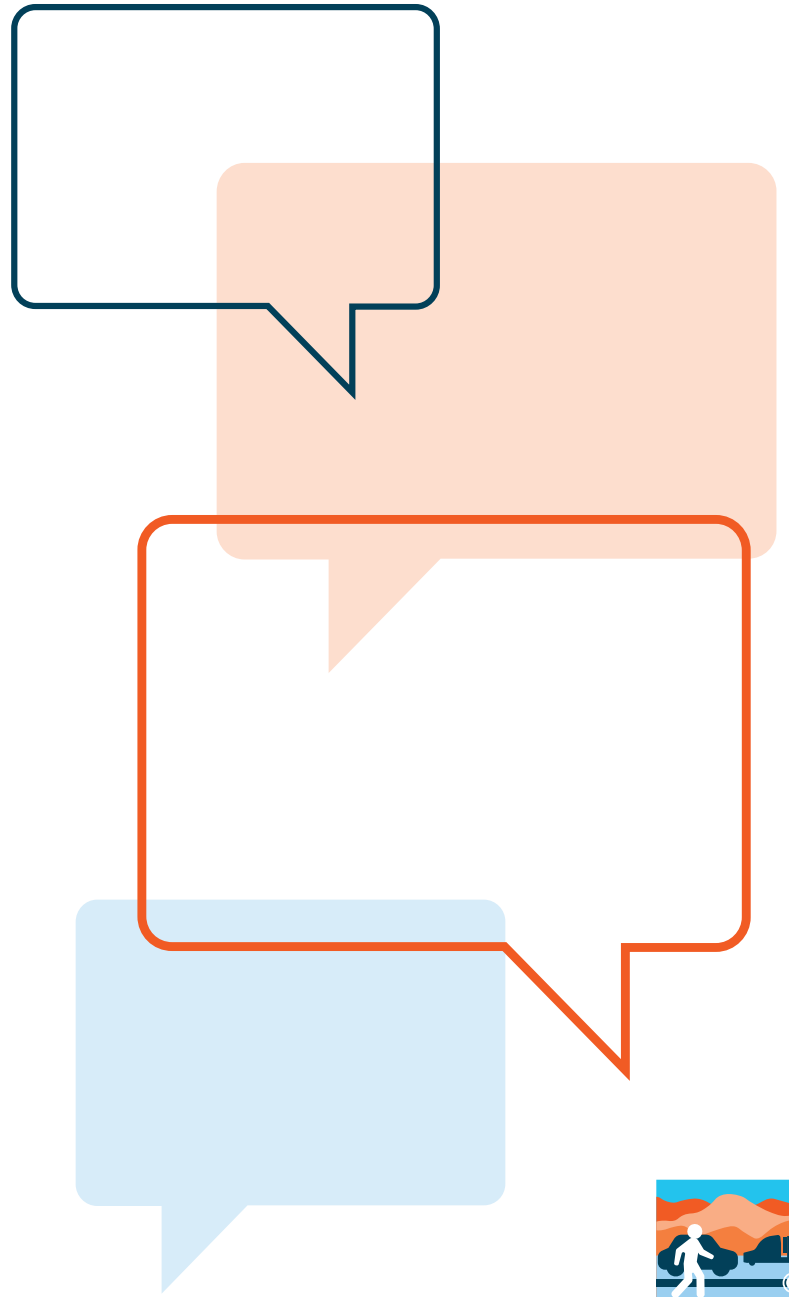


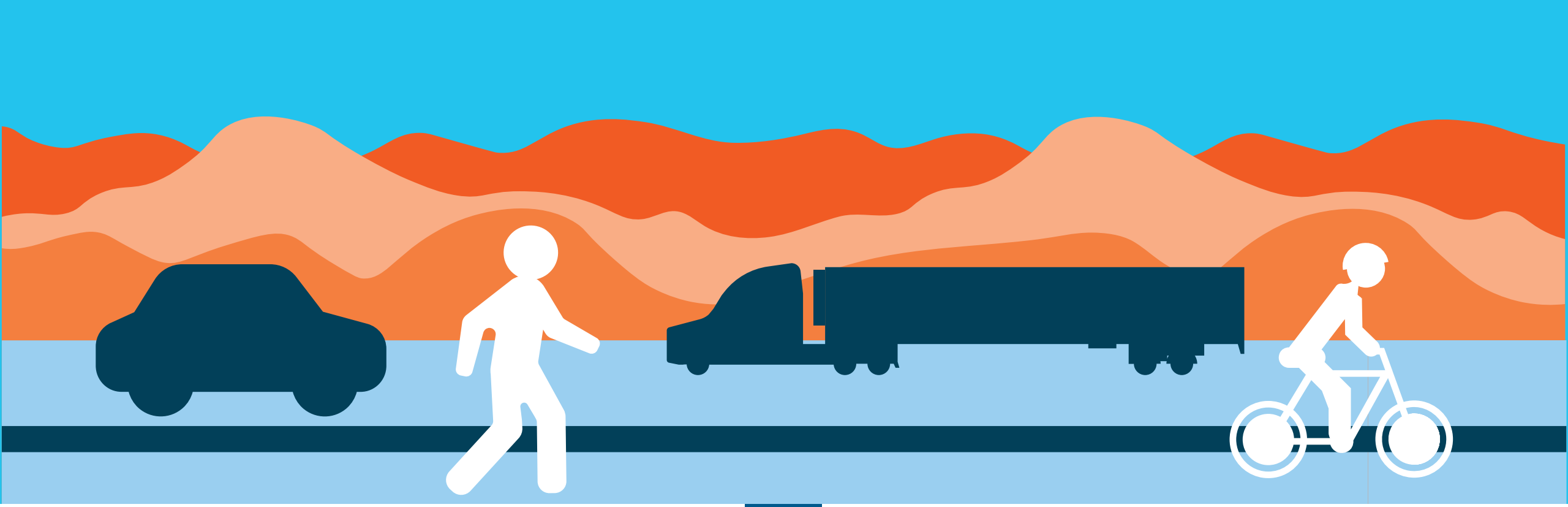
Agenda

- Opening Remarks and Introductions
- Safety Planning Process Recap
- Safety Plan Tools and Products
- Group Activity
- Public Engagement Recap
- Goals and Strategies
- Your Turn!
- Final Thoughts and Next Steps

Group Introductions

- Which agency are you here representing and how long have you been in your position?
- What have you learned or how has your understanding of traffic safety changed over the last year?





Safe Streets for WNC Recap

Partners in Safety

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

LAND OF SKY
REGIONAL COUNCIL

a program of Land of Sky
FRENCH BROAD RIVER
METROPOLITAN PLANNING ORGANIZATION

LAND OF SKY
RURAL PLANNING ORGANIZATION

U.S. Department of Transportation
Federal Highway Administration

dogwood
health trust

How do we improve safety?

https://frenchbroadrivermpo.org/safe-streets-for-wnc-regional-safety-action-plan/

Goals for the Plan

Identify strategies to achieve a significant reduction in fatalities and serious injuries on the region's transportation system.

Inform other regional efforts	Increase awareness of transportation safety and risks	Identify needs and recommended safety improvements	Ensure consistency with HSIP and USDOT funding programs	Follow a Safe System Approach

SCHEDULE	2024												2025							
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug
Task 1 - Project Management and Coordination																				
Kick Off		•	•																	
Monthly Project Team Meetings			•	•	•	•	•	•	•		•	•	•	•	•	•	•	•	•	•
Technical Steering Committee Meetings (3)				•					•							•				
Task 2 - Leadership Commitment and Goal Setting																				
Leadership Summits (2)						•												•		
Goal Setting																				
Task 3 - Safety Analysis																				
Crash Analysis																				
HIN and Systemic Analysis																				
Task 4 - Engagement and Collaboration																				
Public Engagement Plan																				
Website and Branding																				
Survey																				
Focus Groups (4)								•••							•					
Community Outreach Events (6)																				
Task 5 - Equity Considerations																				
Equity Analysis																				
Equity Approaches																				
Task 6 - Policy and Process Changes																				
Policy and Plan Assessment																				
Policy and Plan Recommendations																				
Task 7 - Strategy and Project Selection																				
Strategy and Countermeasure Toolbox																				
Implementation Plan																				
Draft and Final Report																				Adoption
Task 8 - Progress and Transparency																				
Performance Measures																				
Reporting Procedures																				

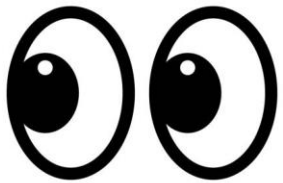
Crash and Safety Analysis

Crash Analysis: All Reports 2016-2023

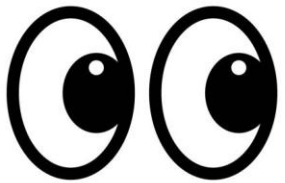
- Crash Type analysis
- Frequency by road classification & number of lanes
- Age, race and gender

Risk-Based Analysis

Exposure, likelihood, and severity

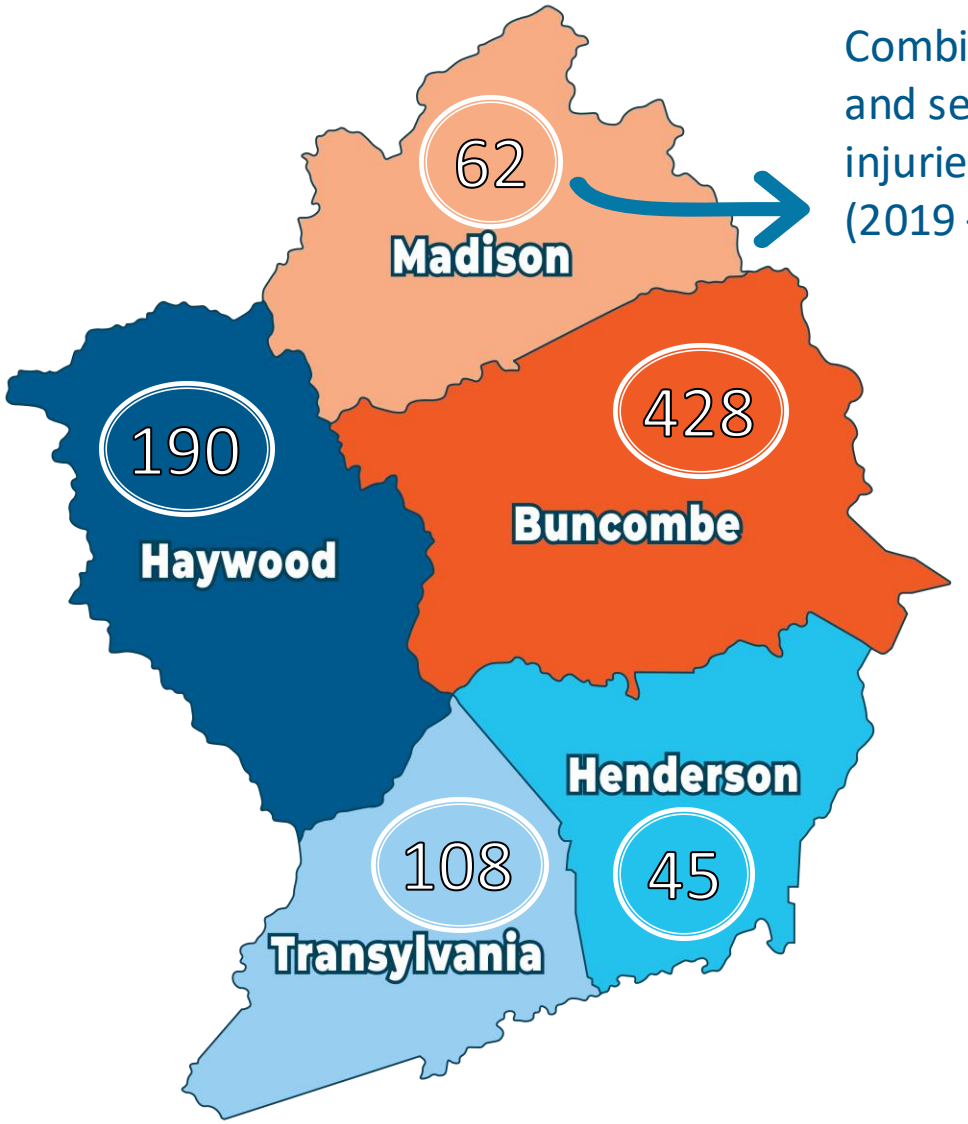


Looking back: understanding crash history



Looking forward: using data to understand future risk

Breakdown by County w/o Interstate Data



Combined fatal and serious injuries in a crash (2019 – 2023)

833 Fatal and Serious Injuries Due to Crashes

Focus Crash Types

Lane Departure (57%)

Older Driver (23%)

Seat belt/ car seat (22%)

Motorcycles (22%)

Impairment (19%)

Intersections (18%)

Speed (16%)

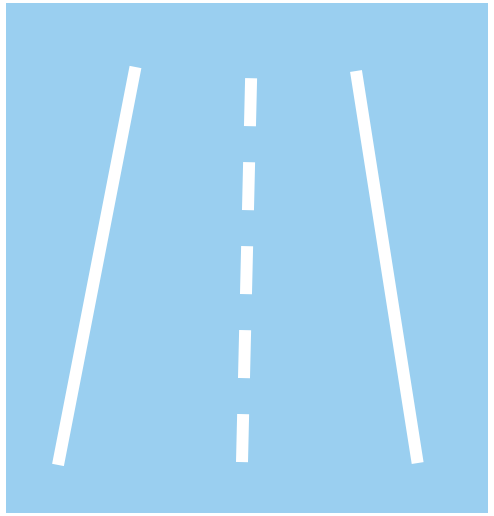
Pedestrians (8%)

Heavy Truck (8%)

Bicyclists (2%)

Key Roadway Types: Fatal and Serious Injury Crashes

76% occurred in rural areas*



50% occurred on 2-lane, undivided roads*

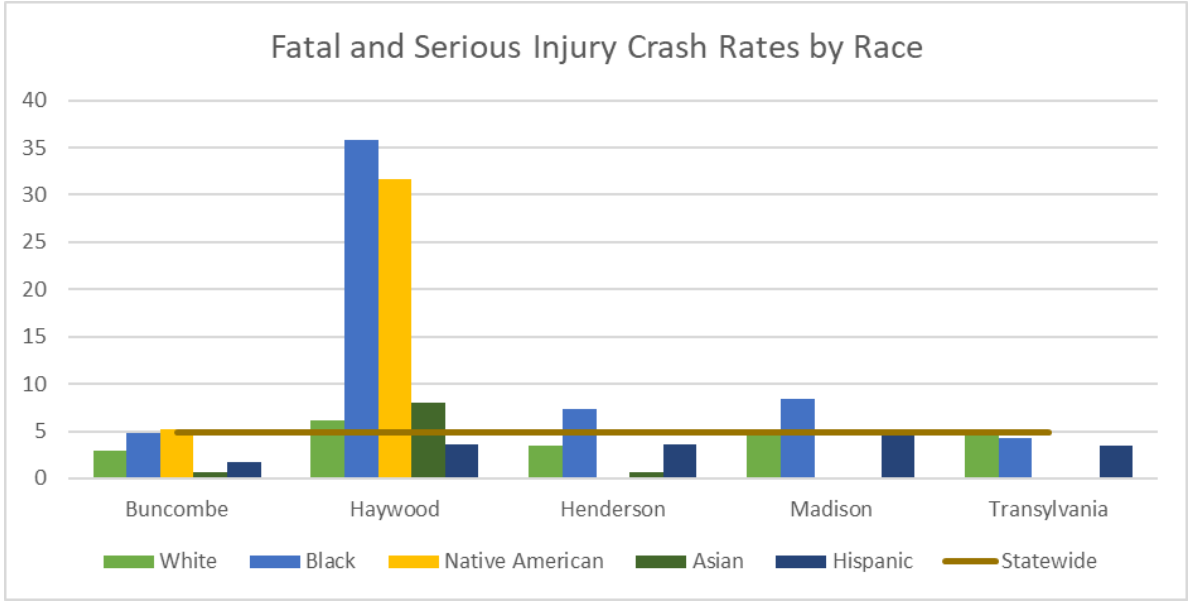
33% occurred on US Routes, which account for 3% of total region mileage

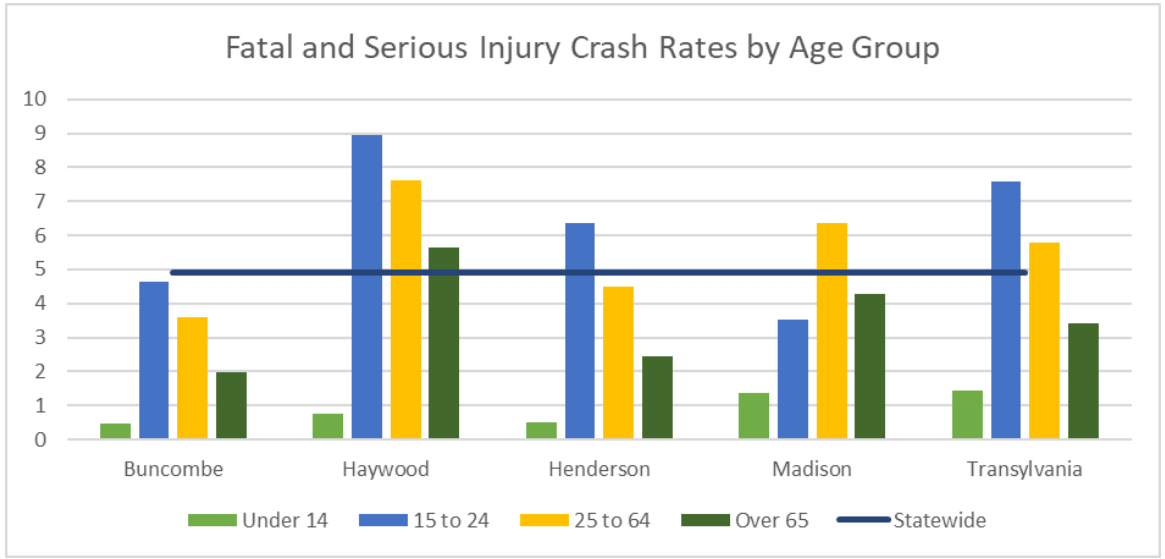
40%+ of pedestrian crashes occurred on multi-lane roads (majority undivided)*

Who is most impacted?

Fatal and serious injury crash rates per:

- Race
- Age groups
- Gender





High Injury Network

What is a HIN?

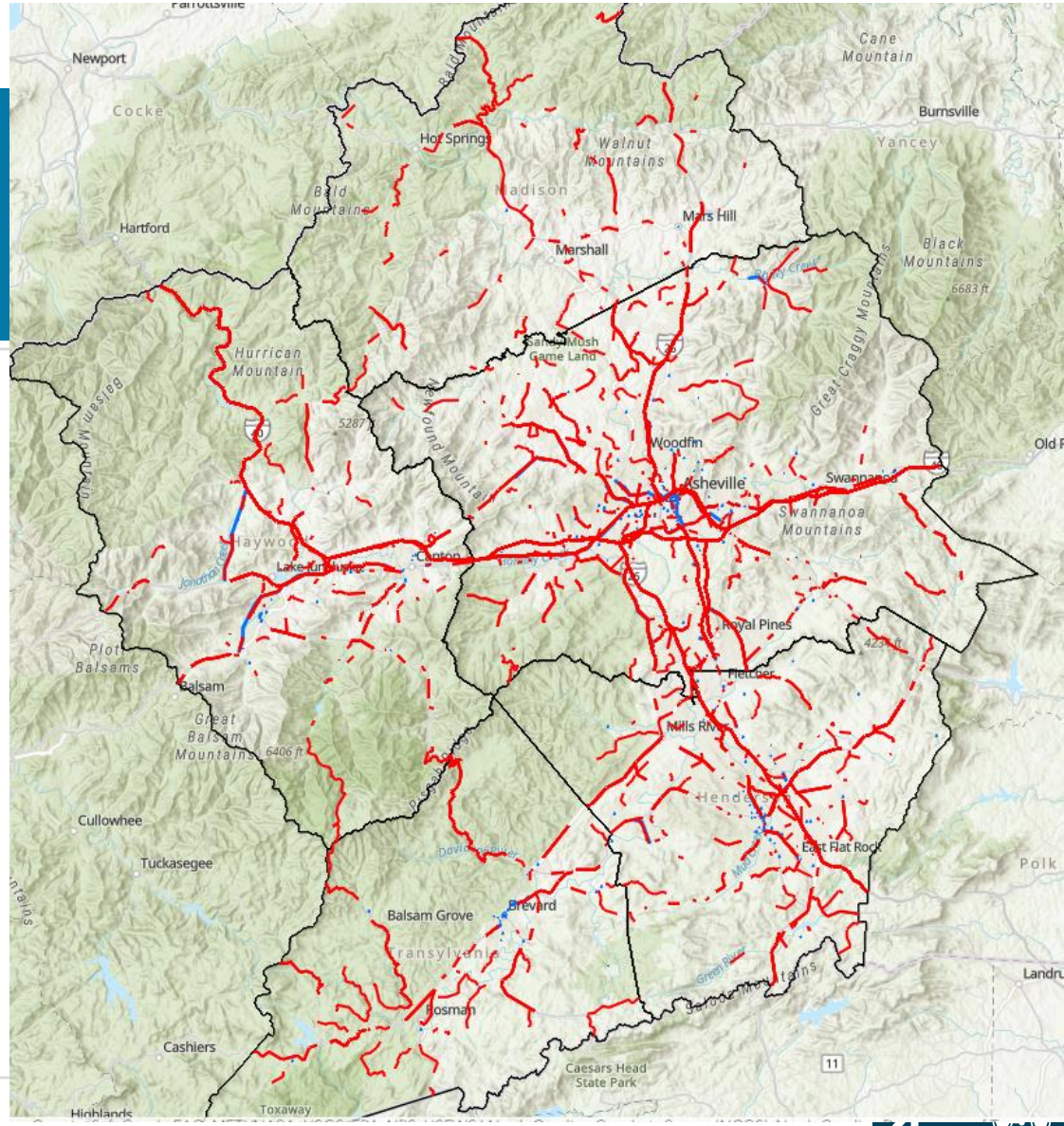
Locations with frequent crashes and with higher severities

- High Injury Network (top 3% segments or 7% of mileage)
- High Injury Intersections (top 1% of intersections)
- High Injury Bike Ped (non interstate, .5% of mileage)
- High Injury Intersections – Bike Ped (top 1% of intersections)

What does it show us?

Representation of Fatal / Serious Injury Crashes

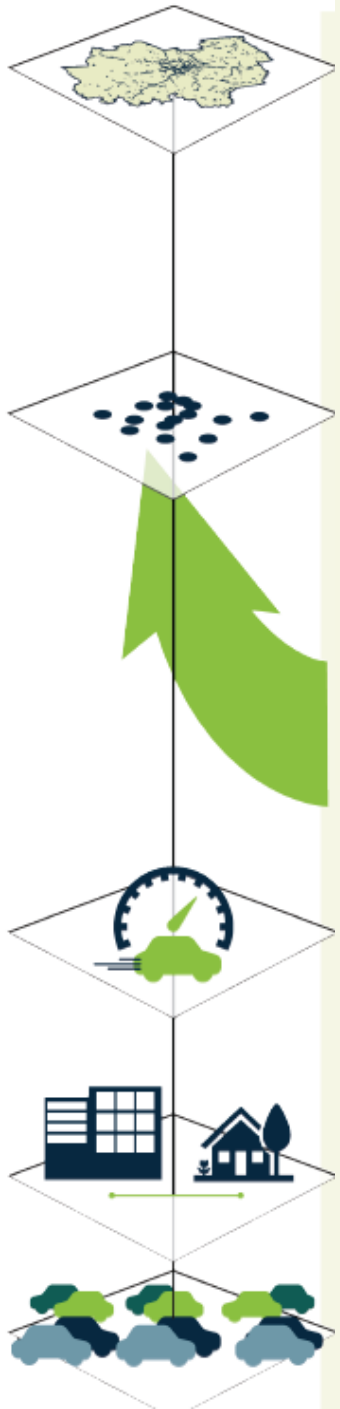
- 76% of fatal and serious injury crashes
- 39% of fatal and serious injury crashes at intersections
- 16% of fatal and injury crashes
- 89% of fatal and injury crashes at intersections



Risk Analysis

Components of Risk

- Likelihood
- Severity
- Context



Severity (Speed)

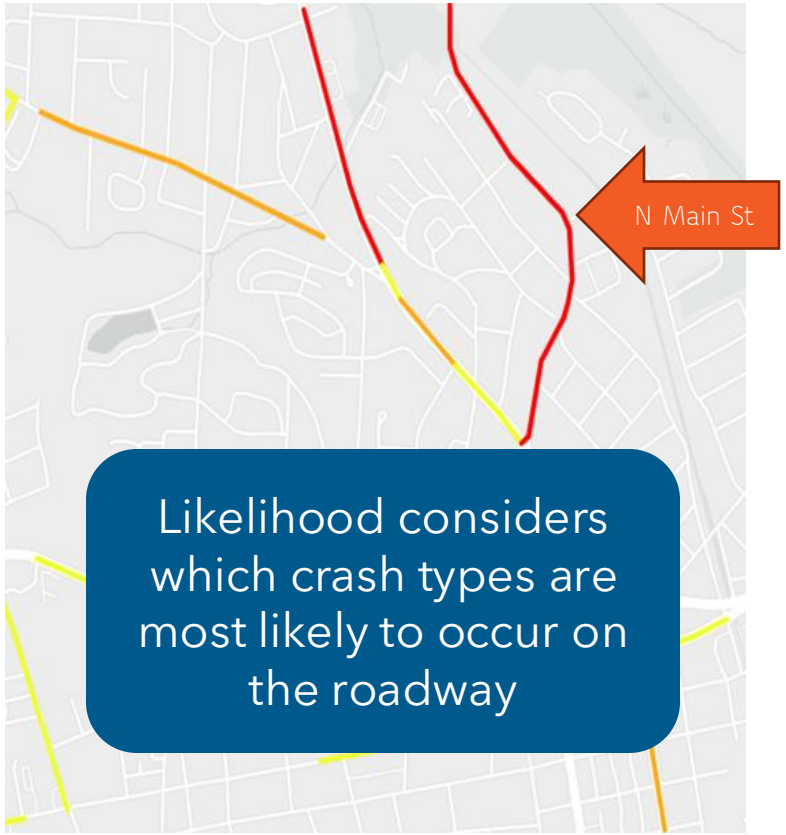
Context

Exposure (Traffic Volume)

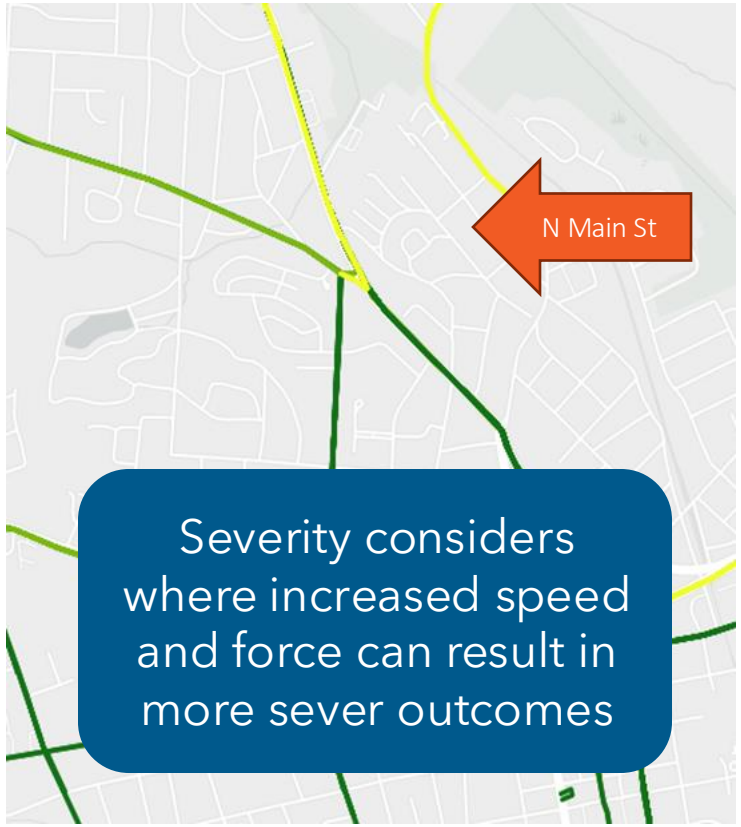
Risk Analysis

Likelihood (Risk)

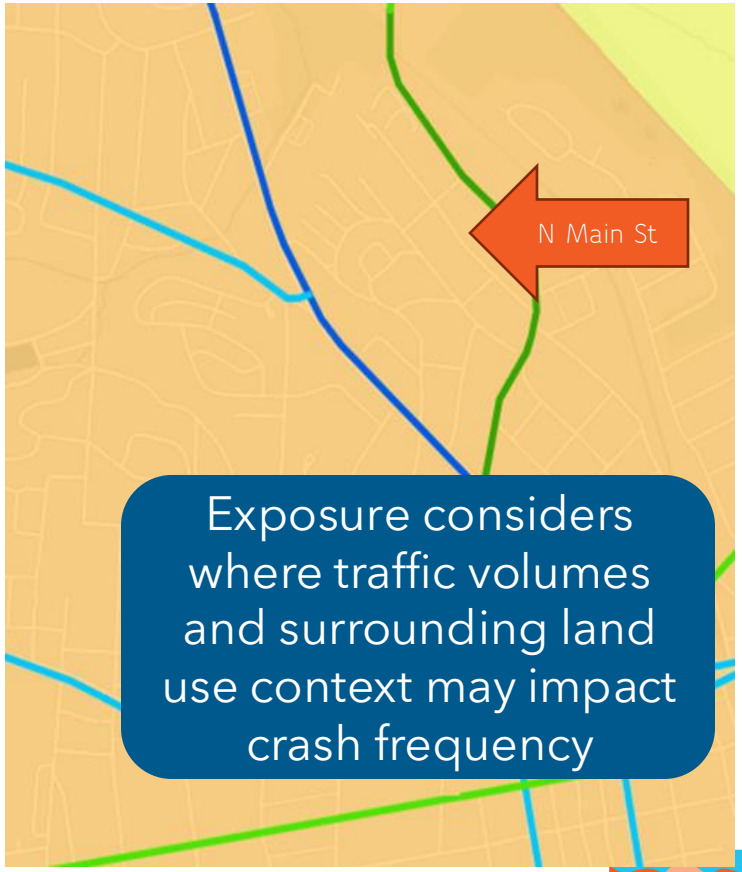
(Ex: Bicyclist Crash Risk Analysis)



Severity (Speed)



Exposure (Context and Volume)



Safety Plan Tools and Products

Summary Report (In Progress)

Safety Planning and Programs in WNC

- *Safe System Approach*
- *Plan and Policy Review*
- *Statewide Safety Programs*

Safety Analysis

- *Regional Safety Trends*
- *Crash Analysis: Focus Crash Types and Focus Facility Types*
- *Safety Data: High Injury Network and High-Risk Areas*
- *Population Analysis: Communities and Crash Disparities*

Stakeholder and Public Engagement

- *Engagement Activities*
- *Engagement Outcomes*

Crash Reduction Framework

- *Goals*
- *Strategies*
- *Performance Measures*
- *Implementation Leads and Partners*
- *Timelines*

Tools for Incorporating Safety in All Projects

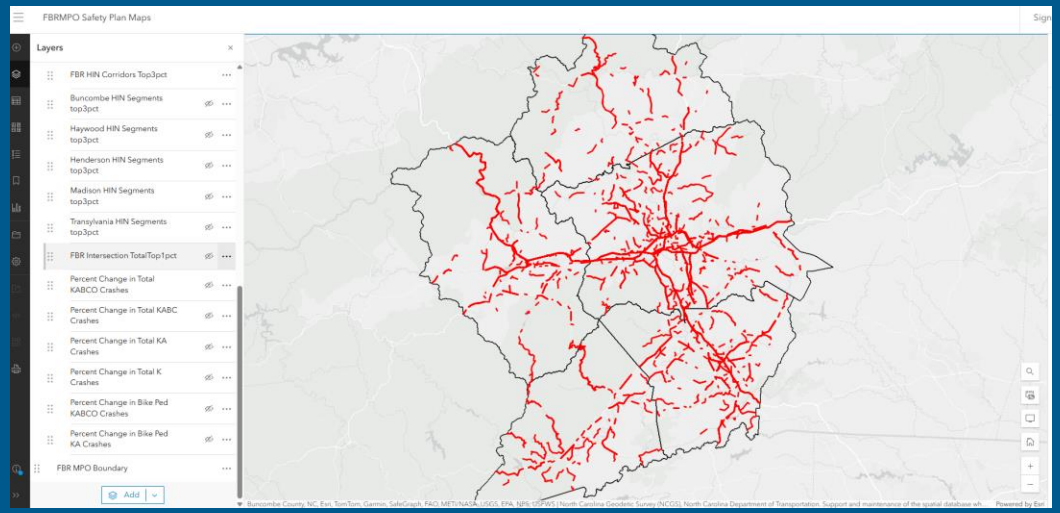
- *Project Scoping Process*
- *Countermeasure Toolbox*
- *Safety in Plans, Programs and Policies*
- *Implementation Approaches*
- *Project Funding*

Evaluating and Updating Safe Streets for WNC

- *Crash Risk Modeling and Project Prioritization*
- *Project Evaluation*
- *Monitoring and Reporting Progress*

Appendix

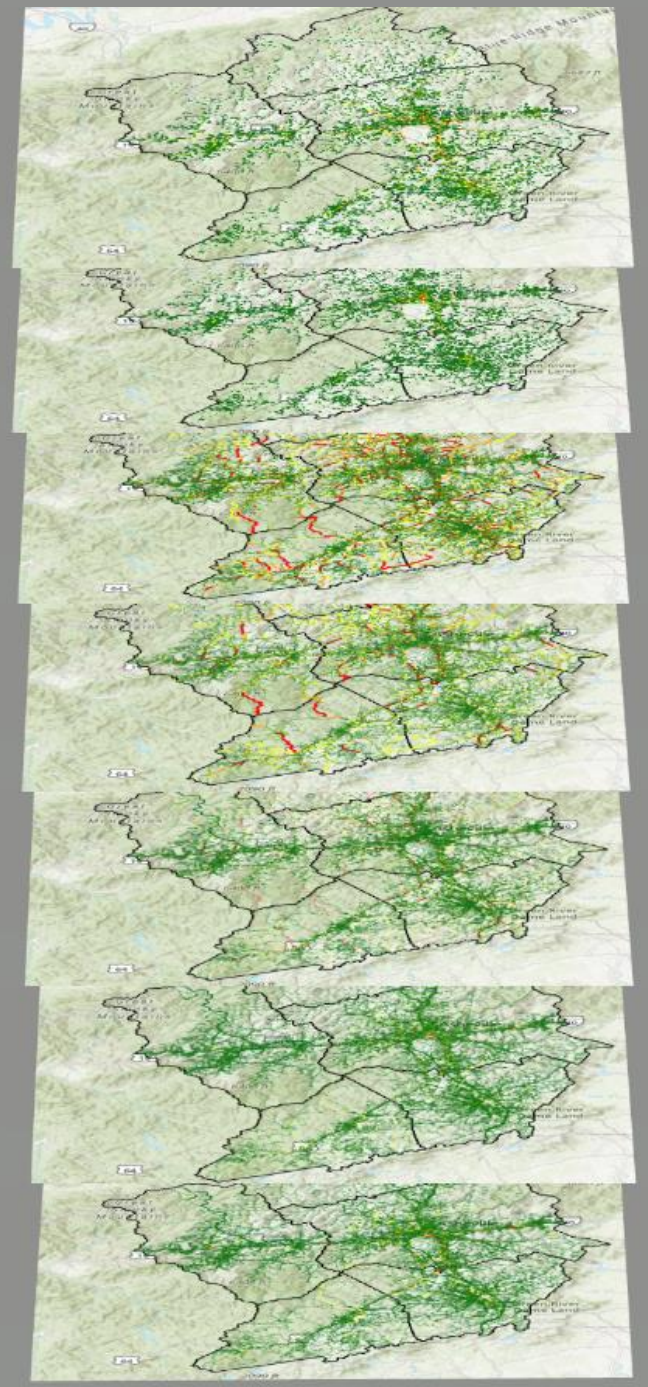
- *Annual Report Template*
- *Countermeasure Toolkit*
- *Data (metadata, terminology)*



Online Web Mapping

https://vhb.maps.arcgis.com/apps/mapviewer/index.html?webmap=ac33528411f04bffab64e482b696f374

- Intersection
- Intersection Bike/Ped
- Lane Departure
- Motorcycle
- Speed
- Bike
- Ped

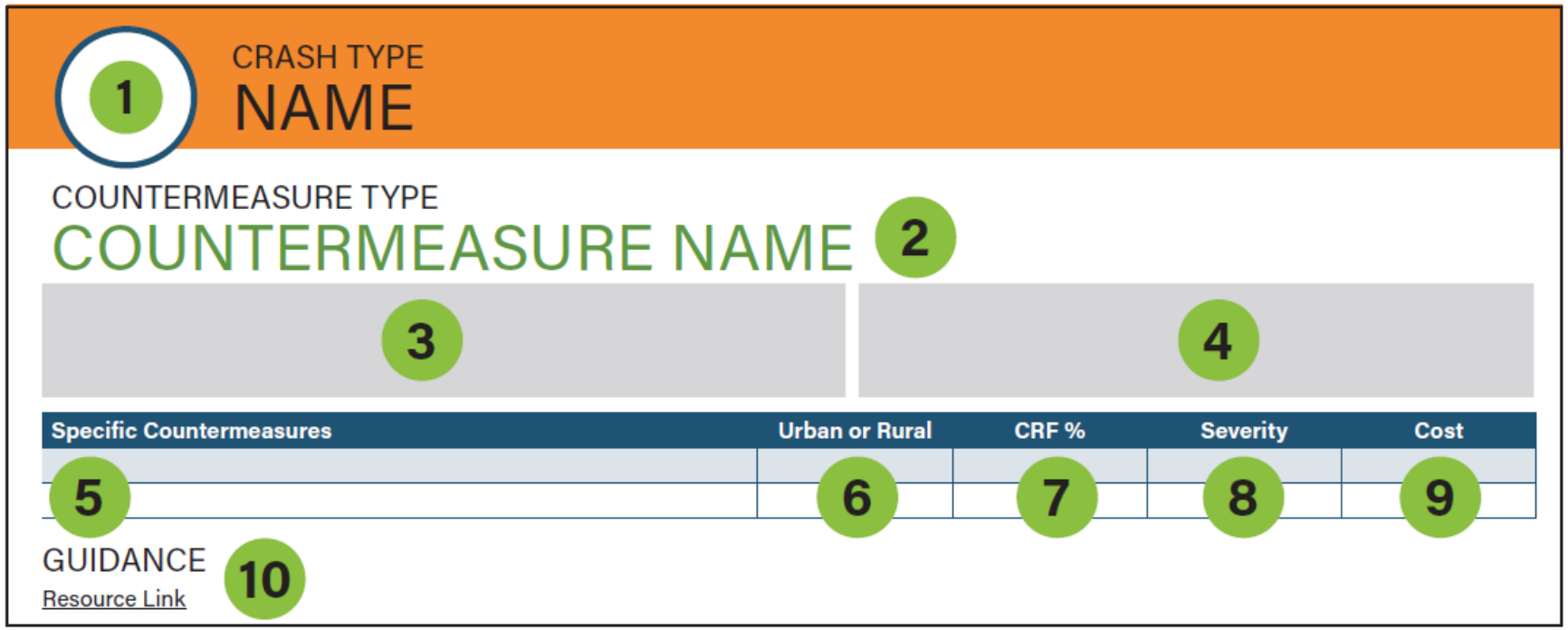


SAFETY COUNTERMEASURE LIBRARY

CONTENTS

HOW TO USE THIS DOCUMENT

This resource is a compilation of selected countermeasures, organized by countermeasure types and associated crash types, for consideration as an engineering treatment. This document does not include non-engineering countermeasures or address crash types associated with human factors, such as impairment or use of seat belts. The primary resource consulted for this document is the North Carolina Project Development Crash Reduction Factor (CRF) Information ("NCDOT CRF List").



1 Crash Type: Category of crashes, outlined as emphasis areas in the NC Strategic Highway Safety Plan (SHSP) - based on the first harmful event associated with a crash, such as a roadway element or mode of travel involved.

2 Countermeasure Type: Groups or sets of countermeasures broadly considered to address crash types.

3 Description of Countermeasure Type

4 Key Selection Factors: Highlights typical selection criteria - such as traffic volume, speed, number of lanes, and intersection configuration - used to determine the applicability of a counter-measure to a location.

5 Specific Countermeasures: An individual countermeasure and description of the applicable roadway element that has been studied for effectiveness to reduce crashes.

6 Location Type: Listed as "Urban", "Rural" or "All" depending on the context(s) in which the countermeasure is typically applied and/or studied for effectiveness to reduce crashes.

7 Crash Reduction Factor (CRF) Percentage: The percentage of expected crash reductions for a specific countermeasure based on research accepted for a treatment.

8 Severity: The severity of the injuries (as described in a crash report for the vehicles or persons involved) researched and described as crashes expected to be reduced by the specific countermeasure.

K = Fatality / A = Suspected Serious Injury
B = Suspected Minor Injury / C = Possible Injury

9 Cost: Relative cost to implement or construct a countermeasure. Costs increase (Low $) / Medium $$ / High $$$) based on factors such as project footprint, construction materials, and extent of analysis required.

10 Guidance: Resource links for additional information about conditions for safety implementation; does not include guidance for the design of specific treatments, typical sections or details.

CRASH TYPE

BICYCLE

COUNTERMEASURE TYPE

BIKEWAYS

Bicycle-related crashes involve a bicyclist or pedalcyclist struck by a motor vehicle. Bikeways are dedicated networks along the roadway for persons traveling by bicycle or roads where bicyclists are a prioritized mode of travel.

KEY SELECTION FACTORS

Consider a designated bike lane for roads with traffic speeds above 30 miles per hour or where traffic volumes exceed 3,000 vehicles per day. Review for additional separation using buffer markings or vertical separation for roads with speeds above 35 miles per hour or volumes in excess of 6,000 vehicles per day.

Specific Countermeasures	Urban or Rural	CRF %	Severity	Cost
Install Bicycle Boulevard	Urban	63	All	$$$
Install Buffered Bicycle Lane on 4-Lane Roadway	Urban	63	All	$$$
Removing Parking Lanes from Sides of Roadway	Urban	37	K, A, B, C	$$$
Install Buffered Bicycle Lane on 2-Lane Roadway	Urban	58	All	$$$
Install Bicycle Lane on 2-Lane Roadway	Urban	45	All	$$$
Install Bicycle Lane on 4-Lane Roadway	Urban	42	All	$$$
Convert Traditional or Flush Buffered Bicycle Lane to Separated Bicycle Lane with Flexible Delineator Posts	Urban	53	All	$$
Install Separated Bicycle Lane on 2-Lane Roadway	Urban	47	All	$$
Install Separated Bicycle Lane on 4-Lane Roadway	Urban	41	All	$$

NCDOT GUIDANCE

Multimodal Guidance: Transportation Mobility and safety Division (2024)

SUPPLEMENTAL GUIDANCE

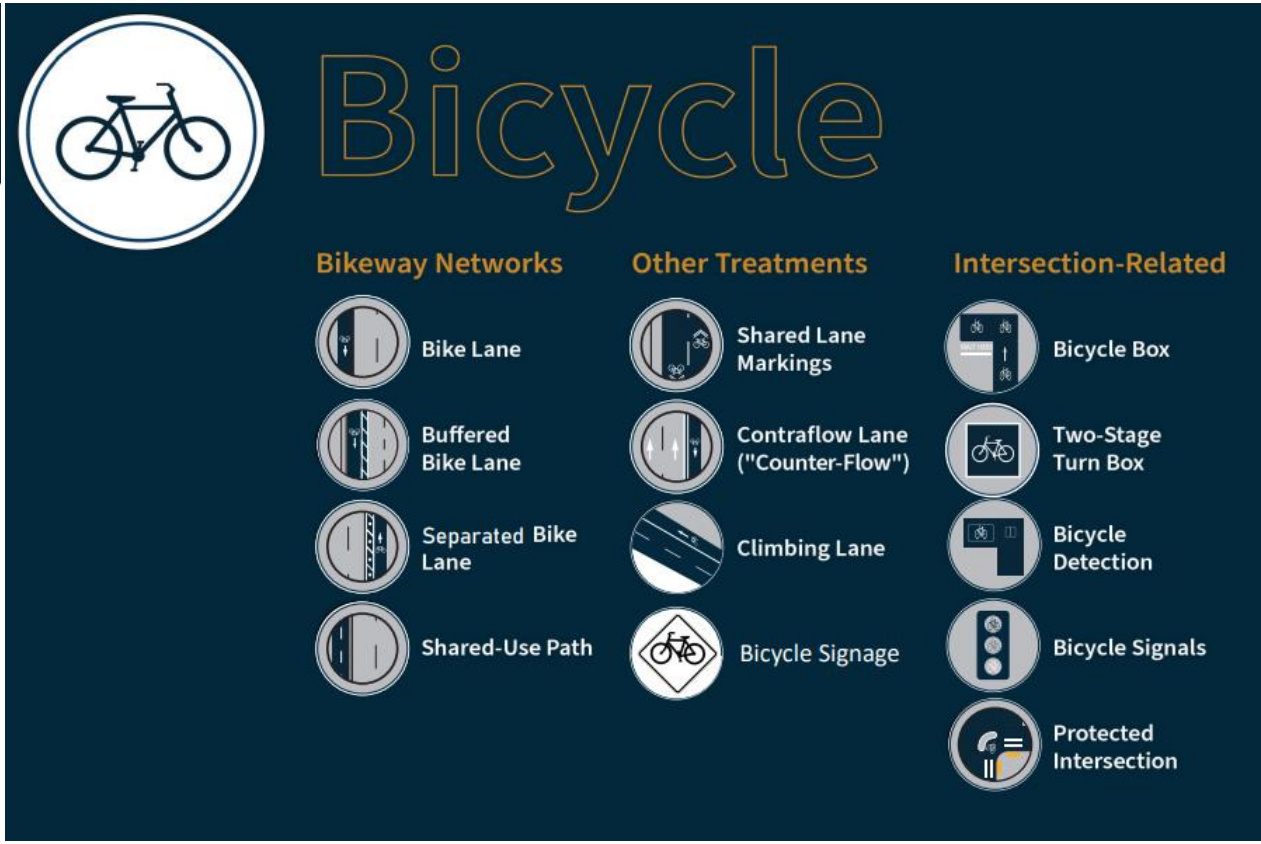
FHWA, Bikeway Selection Guide (2019)

FHWA, Proven Safety Countermeasures: Bicycle Lanes (2021)

FHWA, Separated Bike Lane Planning and Design Guide (2015)

FHWA, Separated Bike Lanes on Higher Speed Roadways: A Toolkit and Guide (2024)

Countermeasure Library



Group Exercise

Safety Scoping Process

Identify Location

- Prioritize locations for study
- Consider overlaps of HIN with other projects

Define Safety Problems and Risks

- Review crash risk, severity and exposure data
- Document site characteristics

Consider Countermeasure Options

- Identify potential countermeasures
- Assess complexity of site
- Follow an Implementation Approach

Safety Scoping Worksheet

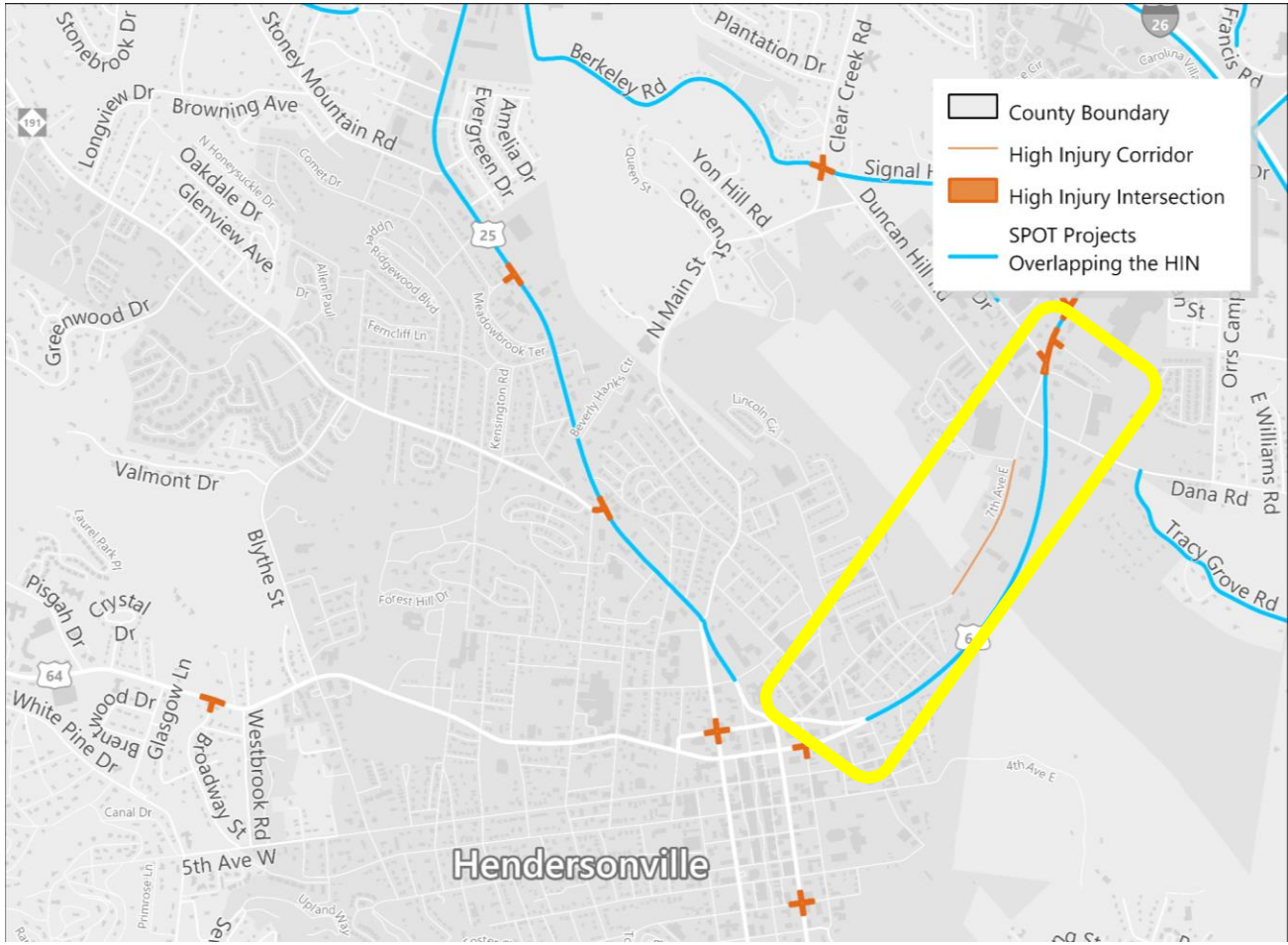
Understanding the Data:

- ☐ Crash history (HIN)
- ☐ Street characteristics
- ☐ Mobility infrastructure
- ☐ Context
- ☐ Risk

Location Characteristics	Existing Conditions
High Injury Network	Type of HIN (See HIN maps)
Lane or Intersection Configuration	Number of Lanes at Segment or by Approach to Intersection (Review aerial imagery or visit site)
Traffic Volumes	Annual Average Daily Traffic (AADT) (See Exposure maps)
Speeds (Observed or Posted)	Posted or observed speeds as Miles Per Hour (See Severity maps for observed 85th weekday speeds)
Pedestrian Facilities	Sidewalk present?
Bicycle Facilities	Designated bike lanes or separated path present?
Transit Facilities	Bus stops or shelters present?
Land Use Context	Urban Core, Urban, Suburban, Rural Town or Rural (See Block Group Classifications – Context maps)
Access Management	Center median or restricted turning movements?
High Crash Risk Types	» Intersection » Intersection: Bike-Ped » Bicycle » Pedestrian » Lane Departure » Motorcycle » Speed-Related

Hendersonville: US 64 (US 25 – Four Seasons Blvd)

Location Characteristics	Existing Conditions/ Analysis Output
HIN Location Type	HIN (all crashes)
Lane or Intersection Configuration	4-Lane
Traffic Volumes	26,000 vpd
Posted Speed	45 mph
Speed – 85th Percentile Weekday	41 mph
Pedestrian Facilities	Yes
Bicycle Facilities	No
Transit Facilities	Yes
Land Use Context	Urban-Suburban
Access Management	Undivided
High Risk Crash Types	Speed, Lane Departure. Pedestrian, Motorcycle, Intersection



Hendersonville: US 64 (US 25 – Four Seasons Blvd)

Implementation Approach: Road Safety Audit

Potential Countermeasures

- Signal Modifications
- New Pedestrian Crossings
- Median
- Sidewalk

Small Group Discussion

- Review the project location map, context packet, online maps/images
- Based on the information provided, what are the safety issues at this location? What is the data telling you?
- What improvements would you consider based on data and observations?

Public Engagement

Review & Efforts

Public Engagement Approach (Post-Helene)

COMMUNITY LEADERSHIP

- ✓ Technical Steering Committee Meetings (3 of 3)
- Leadership Summits (1 of 2)

SAFE STREETS FOR WNC
Land of Sky Regional Transportation Safety Action Plan

PROMOTIONS

- ✓ Project Brand
- ✓ Website / Updates
- ✓ Promotional Materials

COMMUNITY OUTREACH

- ✓ Focus Groups (3)
- ✓ In-Person Outreach Events (3)
- ✓ Webinars (2)
- ✓ Online Survey (1)

DOCUMENTATION

- ✓ Community Engagement Plan – Continually
- Community Engagement Summary

Joint Public Meetings w/ MTP

4/7/25

Hendersonville

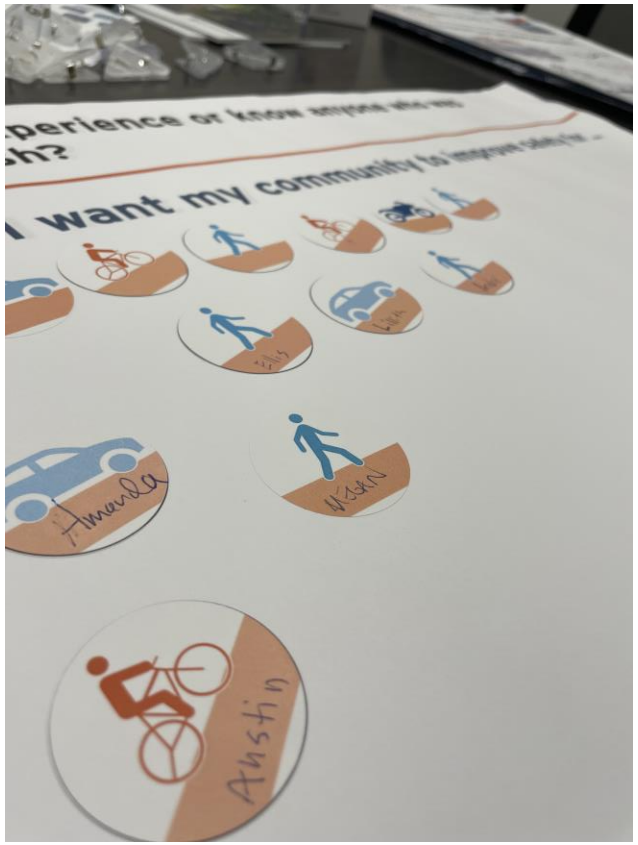
4/9/25

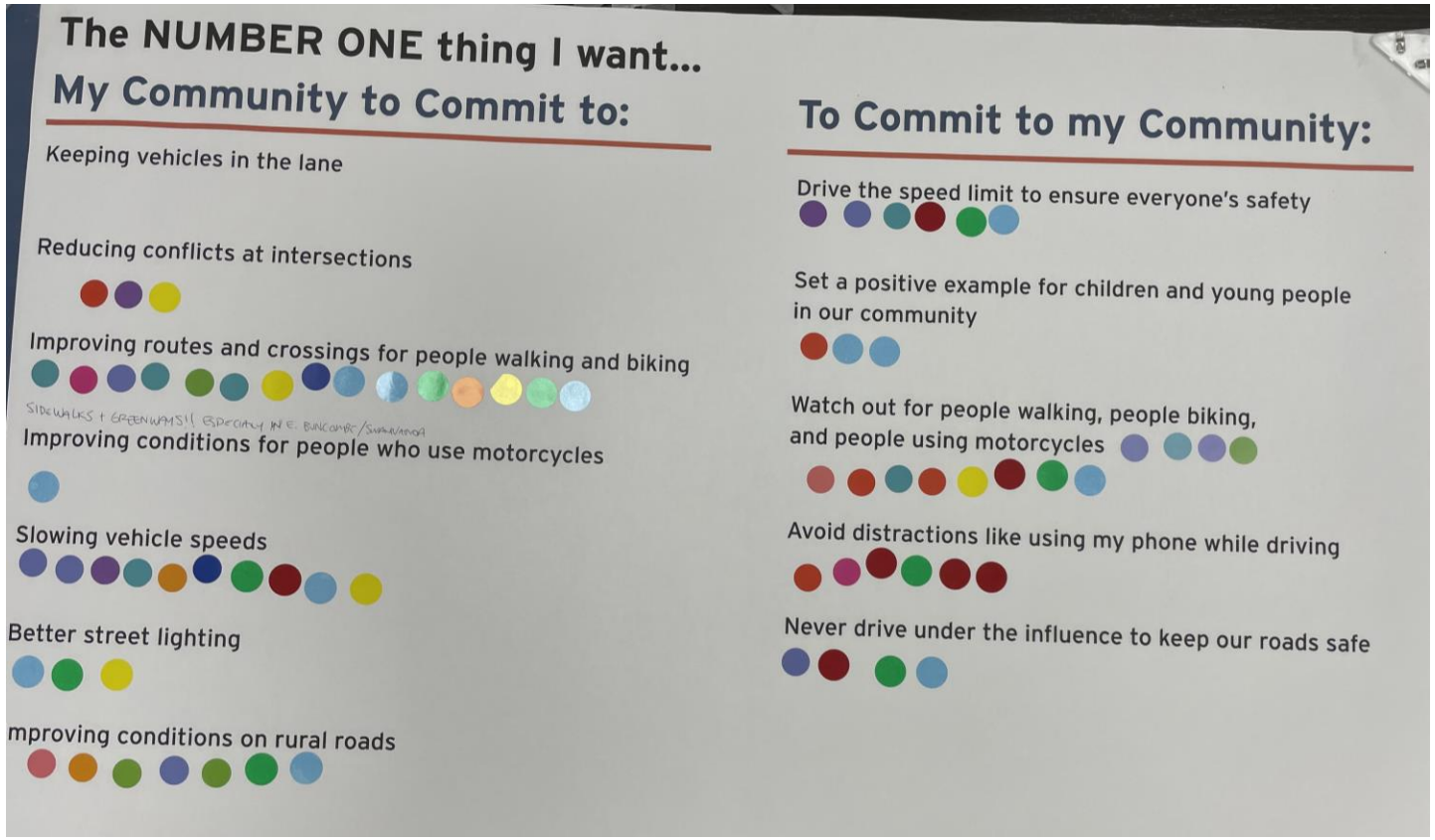
Canton

4/10/25

Asheville

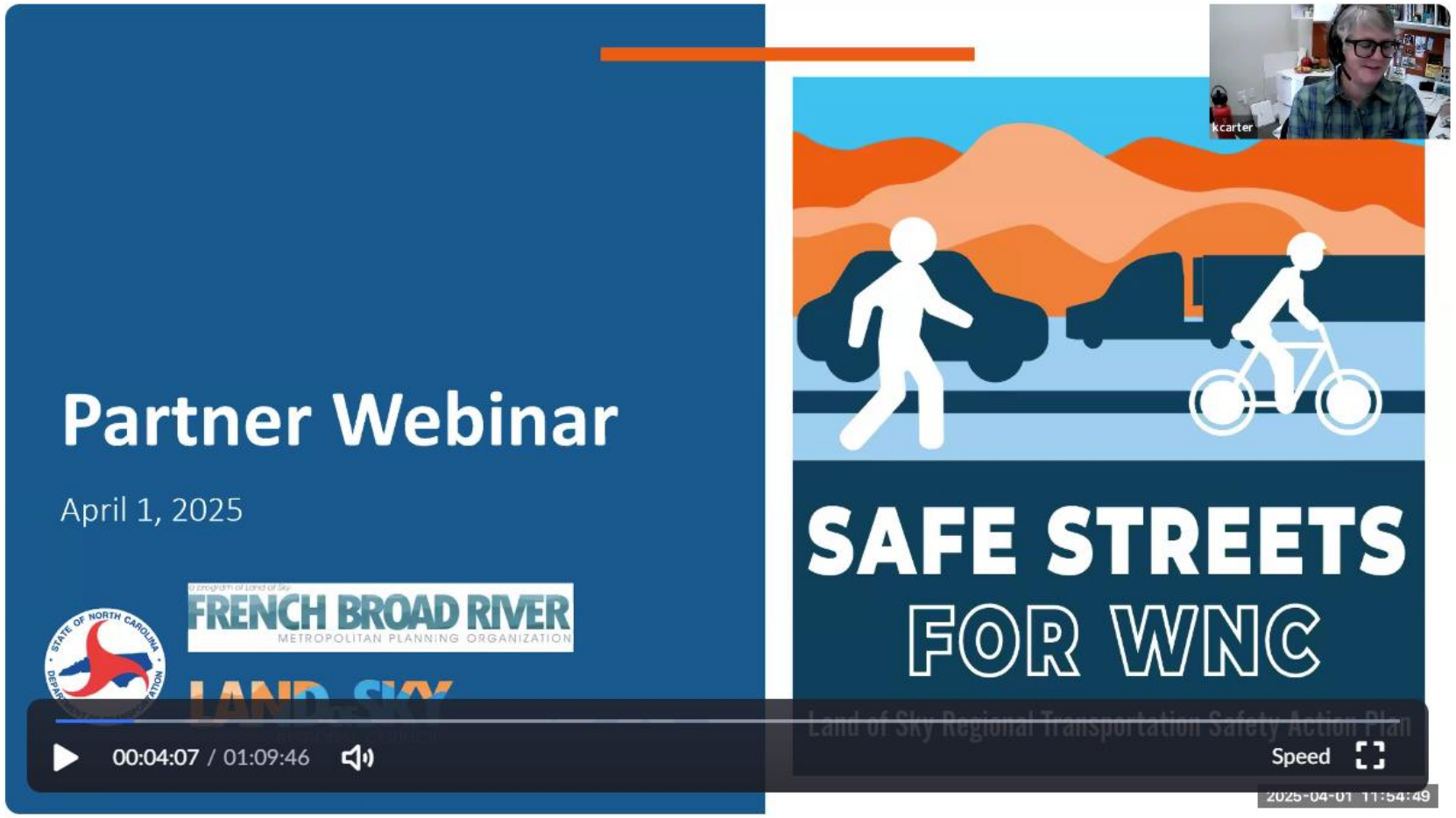
Joint Public Meetings w/ MTP

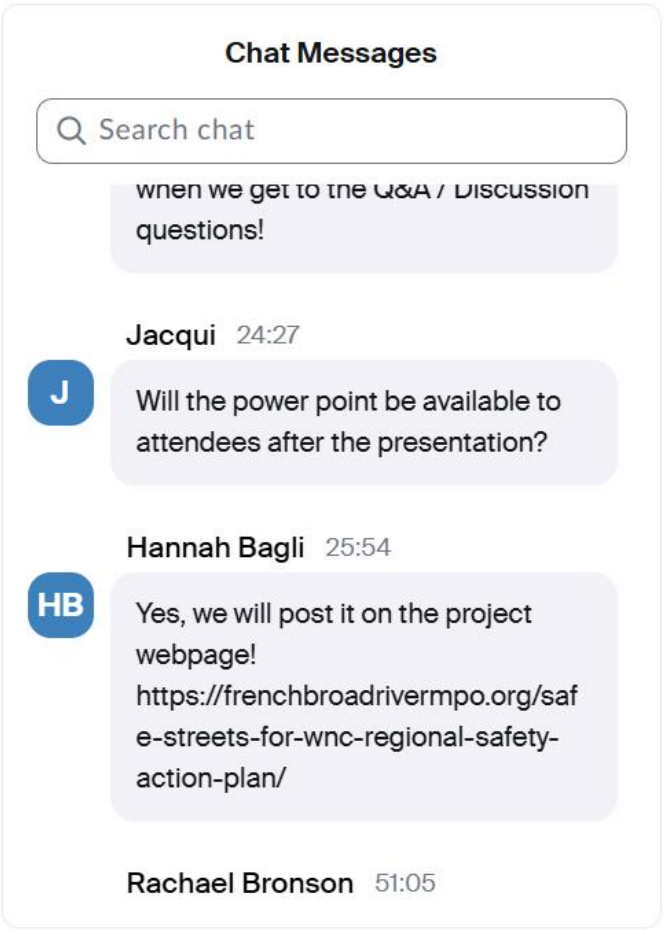




Engaged with 47 people in three communities.

Webinars


Partner Webinar
April 1, 2025
FRENCH BROAD RIVER
METROPOLITAN PLANNING ORGANIZATION
LAND of SKY
SAFE STREETS
FOR WNC
Land of Sky Regional Transportation Safety Action Plan
kcarter
00:04:07 / 01:09:46
Speed


Chat Messages
Search chat
when we get to the Q&A / Discussion questions!
Jacqui 24:27
J
Will the power point be available to attendees after the presentation?
Hannah Bagli 25:54
HB
Yes, we will post it on the project webpage! https://frenchbroadrivermpo.org/safe-streets-for-wnc-regional-safety-action-plan/
Rachael Bronson 51:05

Focus Groups

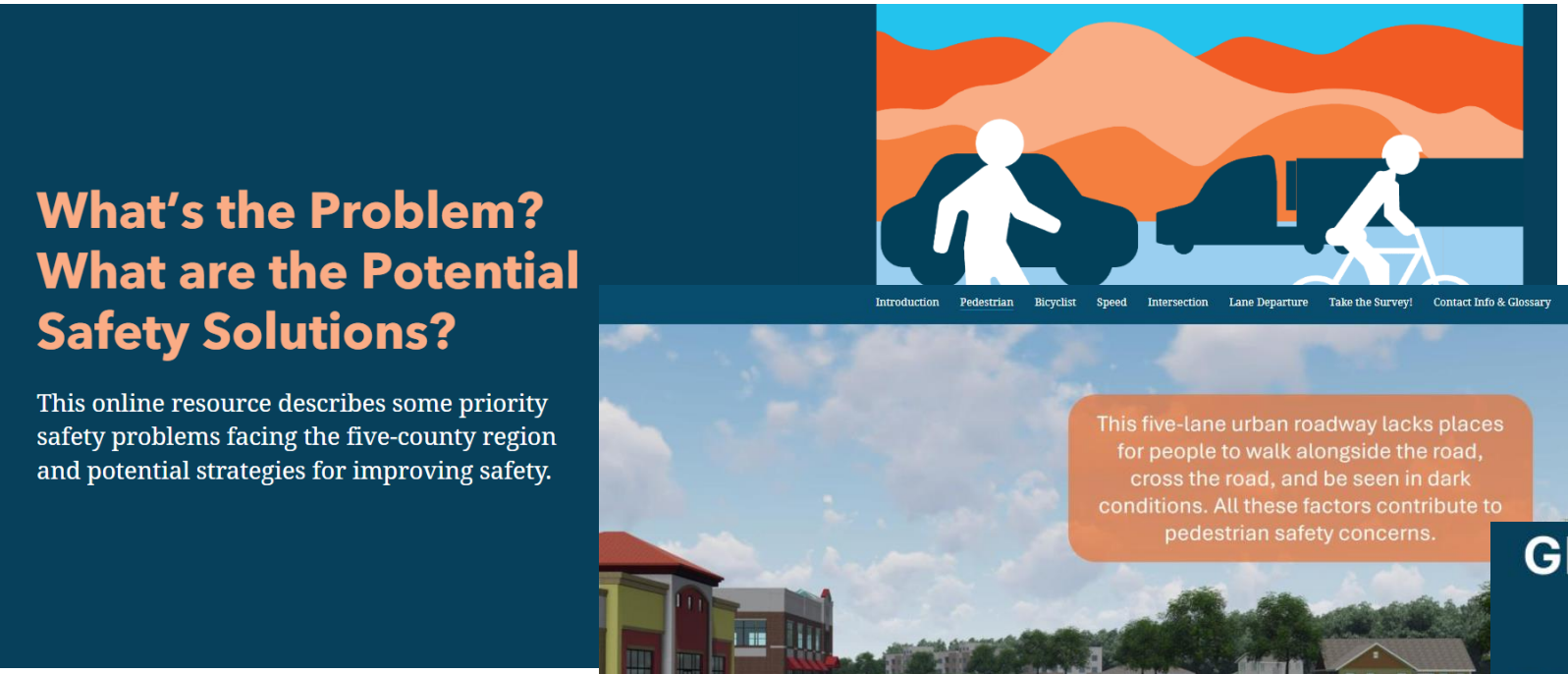
Event Name	Date	Takeaways/Ideas	Attendees
Post-Crash Care	8/5/24	Education campaigns; whole blood administration; rapid tow; speed control.	Highway patrol, police, emergency services.
Safer People	8/13/24	Targeted outreach; drivers ed; funding for promotion and marketing; media training.	Communications staff, public health, drivers ed, safe routes to schools.
Safer Speeds / Safer Roads	8/19/24	Road diets; Secondary Road Safety Program; speed management tools; NCDOT policies; land use and development.	Planning, engineering, public works.

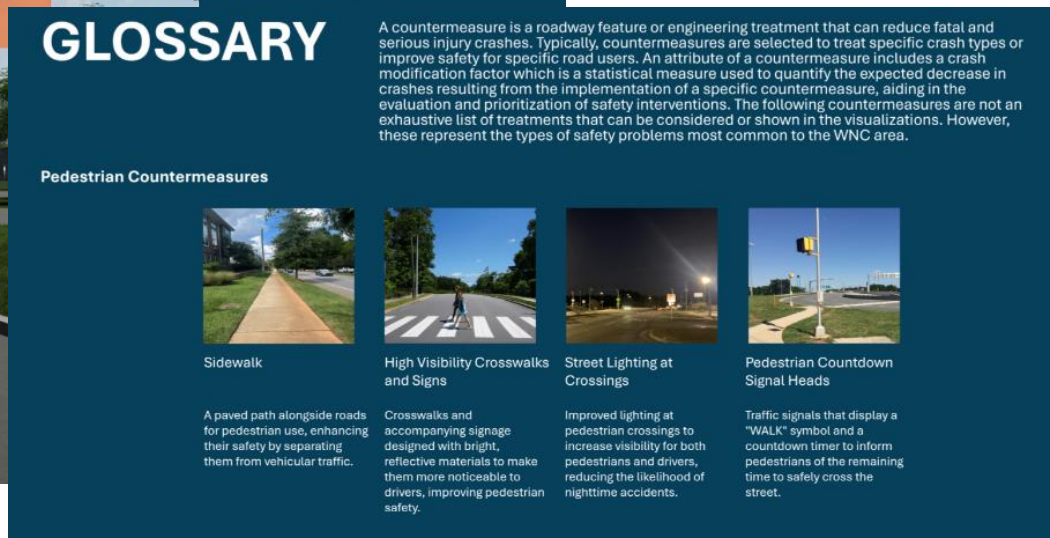
Project Website

https://frenchbroadrivermpo.org/safe-streets-for-wnc-regional-safety-action-plan/

Countermeasure Visualizations

- https://storymaps.arcgis.com/stories/09460cffd47e451dafd21b5d48c7394e



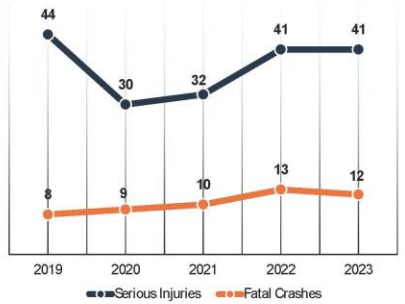


County Fact Sheets

Haywood County
Transportation Safety Action Plan
Fact Sheet

DID YOU KNOW THAT BETWEEN 2019 AND 2023 IN HAYWOOD COUNTY,

there has been **7,461** *reported crashes occurred on local and state roadways. Of those crashes,* **more than 230 people** *were killed or seriously injured.*



Fatal and Serious Injury Crashes (2019-2023)

Interstates, US routes, and NC routes represent about **8%** *of the roadway network in Haywood County, but* **more than 69%** *of fatal and serious crashes occurred on these roads*

INTERSTATES, U.S., AND N.C. ROUTES

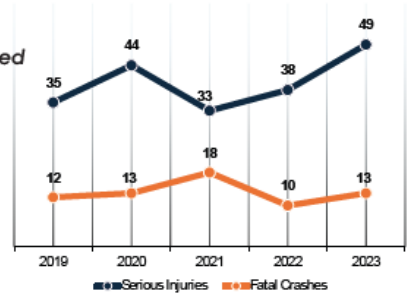
MOST DEATHS AND SERIOUS INJURIES CAN BE PREVENTED IF WE FOCUS ON ...

- *Keeping vehicles in the lane*
- *Decreasing drug and alcohol impairment*
- *Motercycle crashes*
- *Using seat belts and child car seats*
- *Improving routes and crossings for pedestrians, bicyclists and motorcyclists*
- *Slowing vehicle speeds*

Henderson County
Transportation Safety Action Plan
Fact Sheet

DID YOU KNOW THAT BETWEEN 2019 AND 2023 IN HENDERSON COUNTY,

there has been **15,583** *reported crashes occurred on local and state roadways. Of those crashes,* **more than 260 people** *were killed or seriously injured.*



Fatal and Serious Injury Crashes (2019-2023)

Interstates, US routes, and NC routes represent about **6%** *of the roadway network in Henderson County, but* **more than 50%** *of fatal and serious crashes occurred on these roads*

INTERSTATES, U.S., AND N.C. ROUTES

MOST DEATHS AND SERIOUS INJURIES CAN BE PREVENTED IF WE FOCUS ON ...

- *Keeping vehicles in the lane*
- *Decreasing drug and alcohol impairment*
- *Motercycle crashes*
- *Using seat belts and child car seats*
- *Improving routes and crossings for pedestrians, bicyclists and motorcyclists*
- *Slowing vehicle speeds*

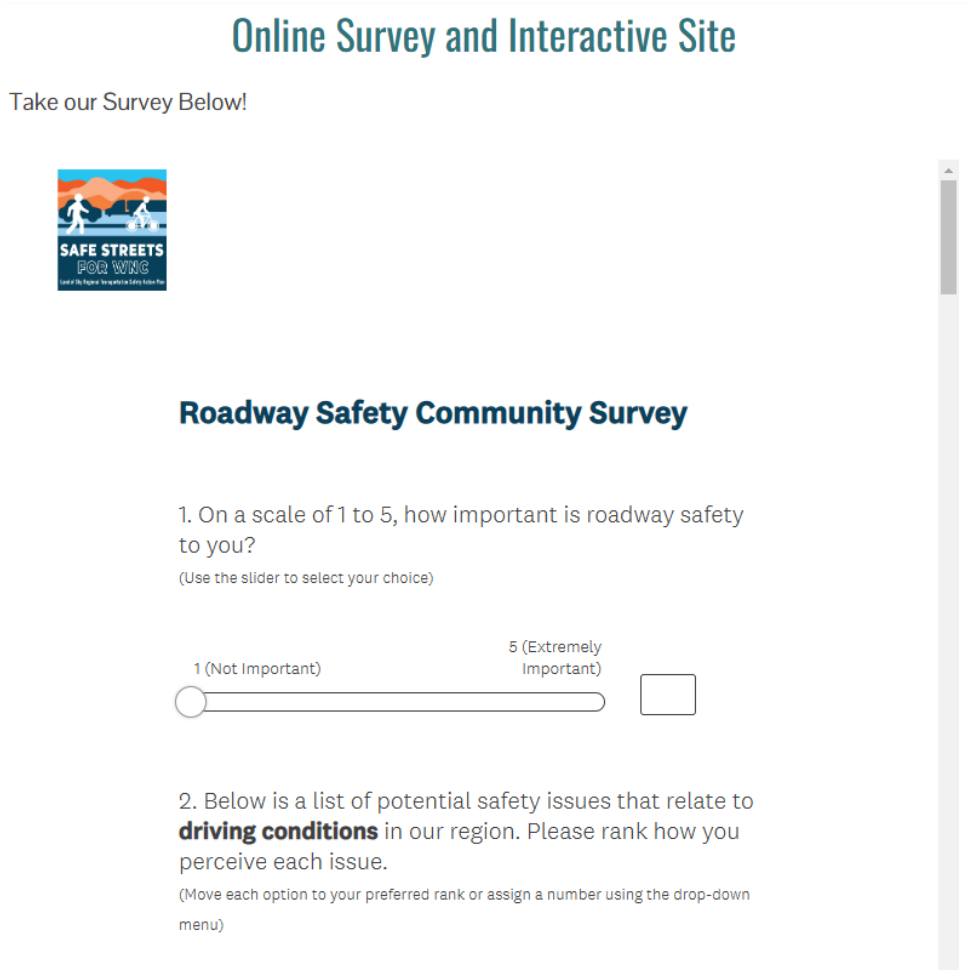
Online Survey

- March 6 - April 21
  (Launched September 2024)
- People who took the survey:
  - 162 total
  - 65% between 36 – 65 years old
  - 19.5% identify as non-white

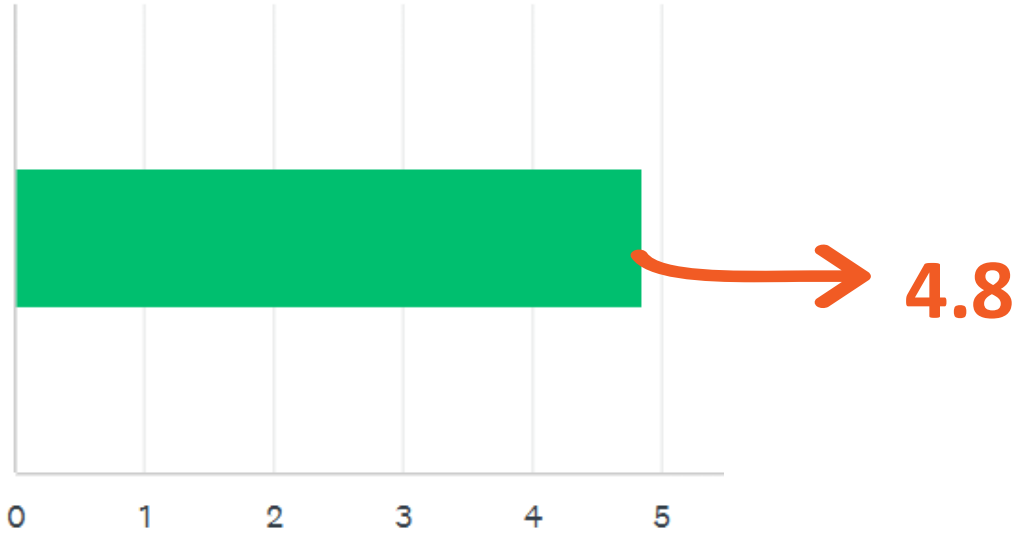
Q13 What is your home zip code?

28803 28715 28759 28716 28806 28804 28792 28753
28739 28729 28712 28754 28791 28801

- Hendersonville, Laurel Park, Brevard, Asheville

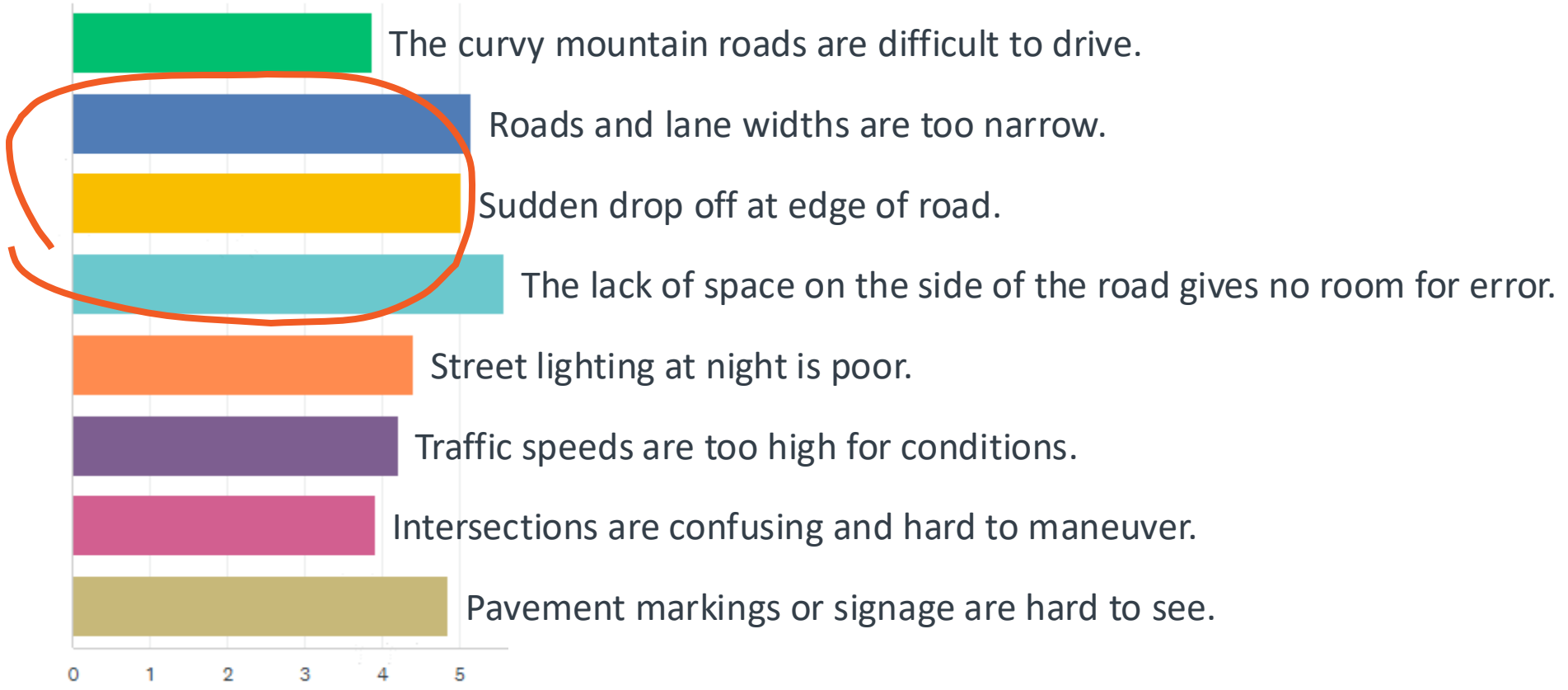


“On a scale of 1 to 5, how important is roadway safety to you?”



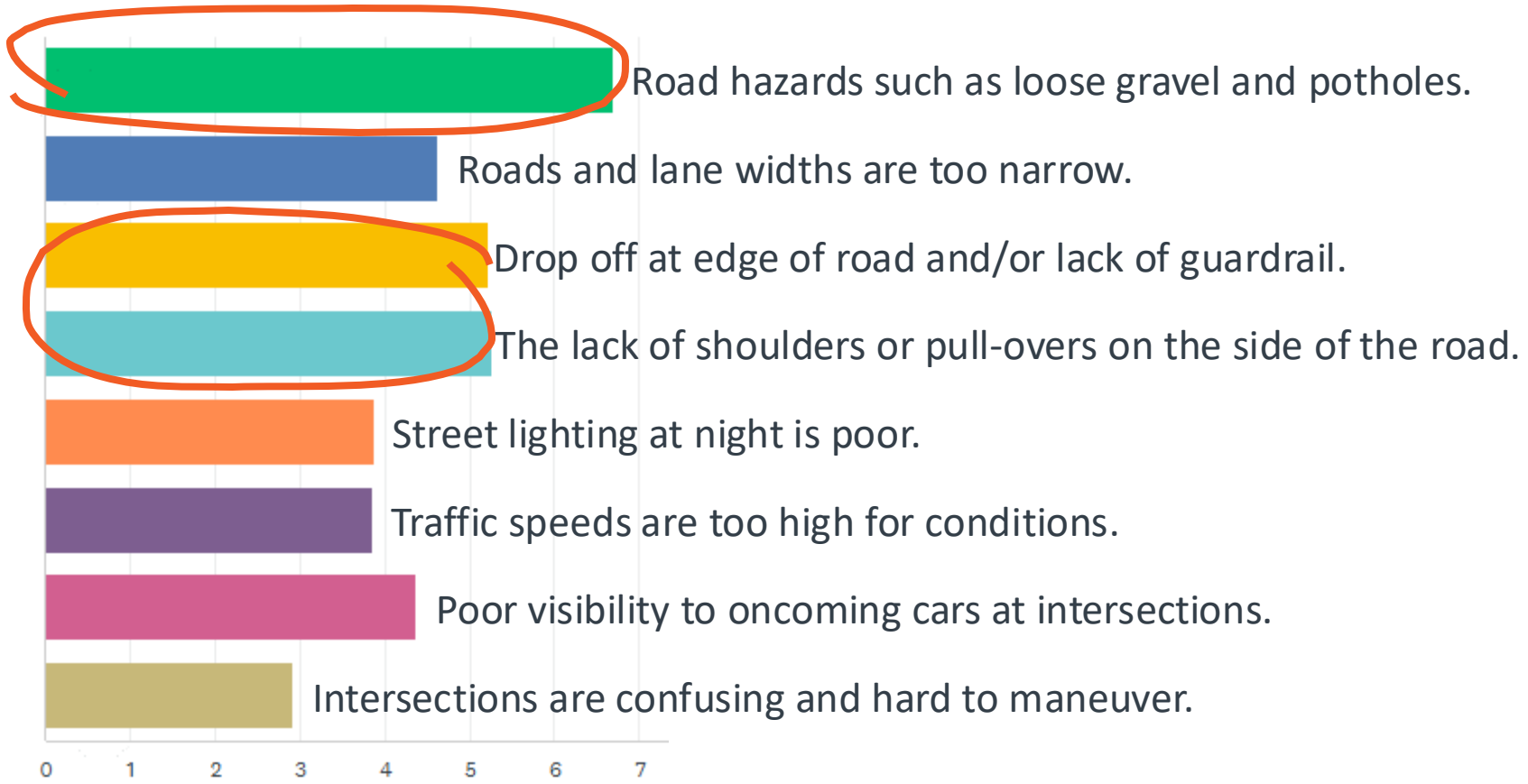
This is important.

“Driving conditions: rank how you perceive each issue.”



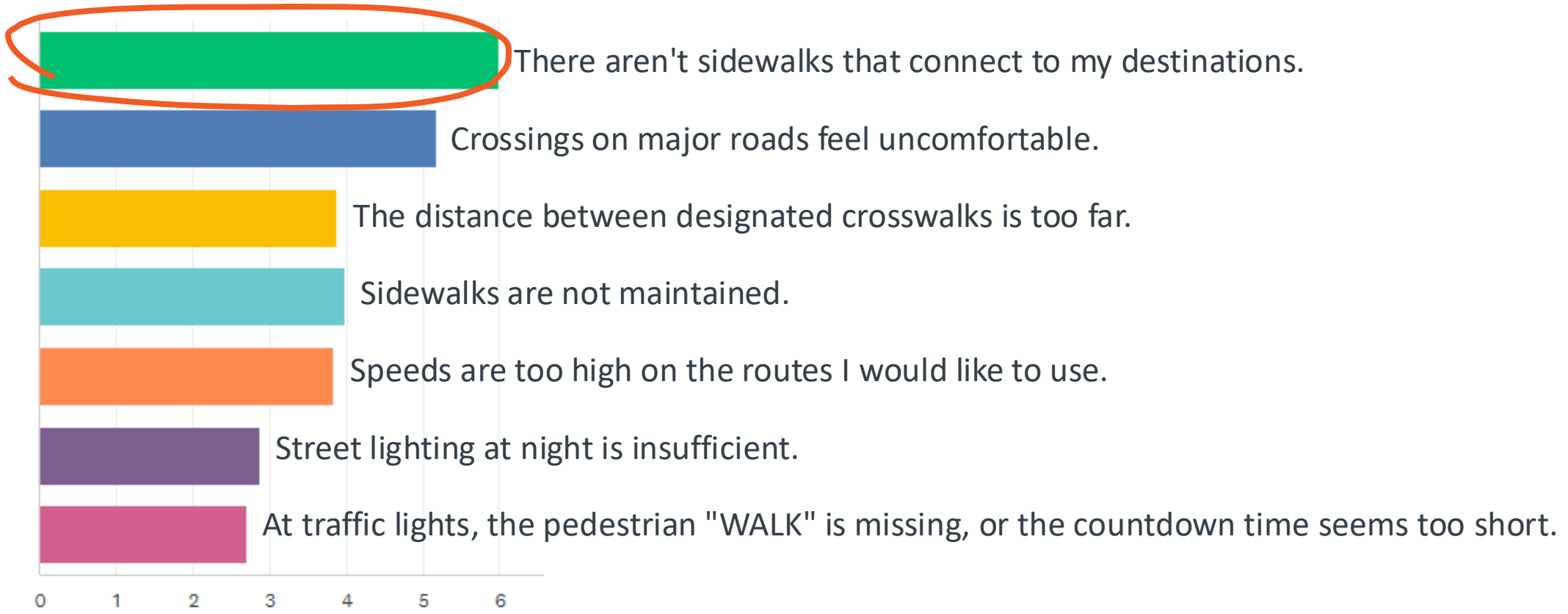
Discomfort driving in space provided.

“Motorcycle conditions: rank how you perceive each issue.”



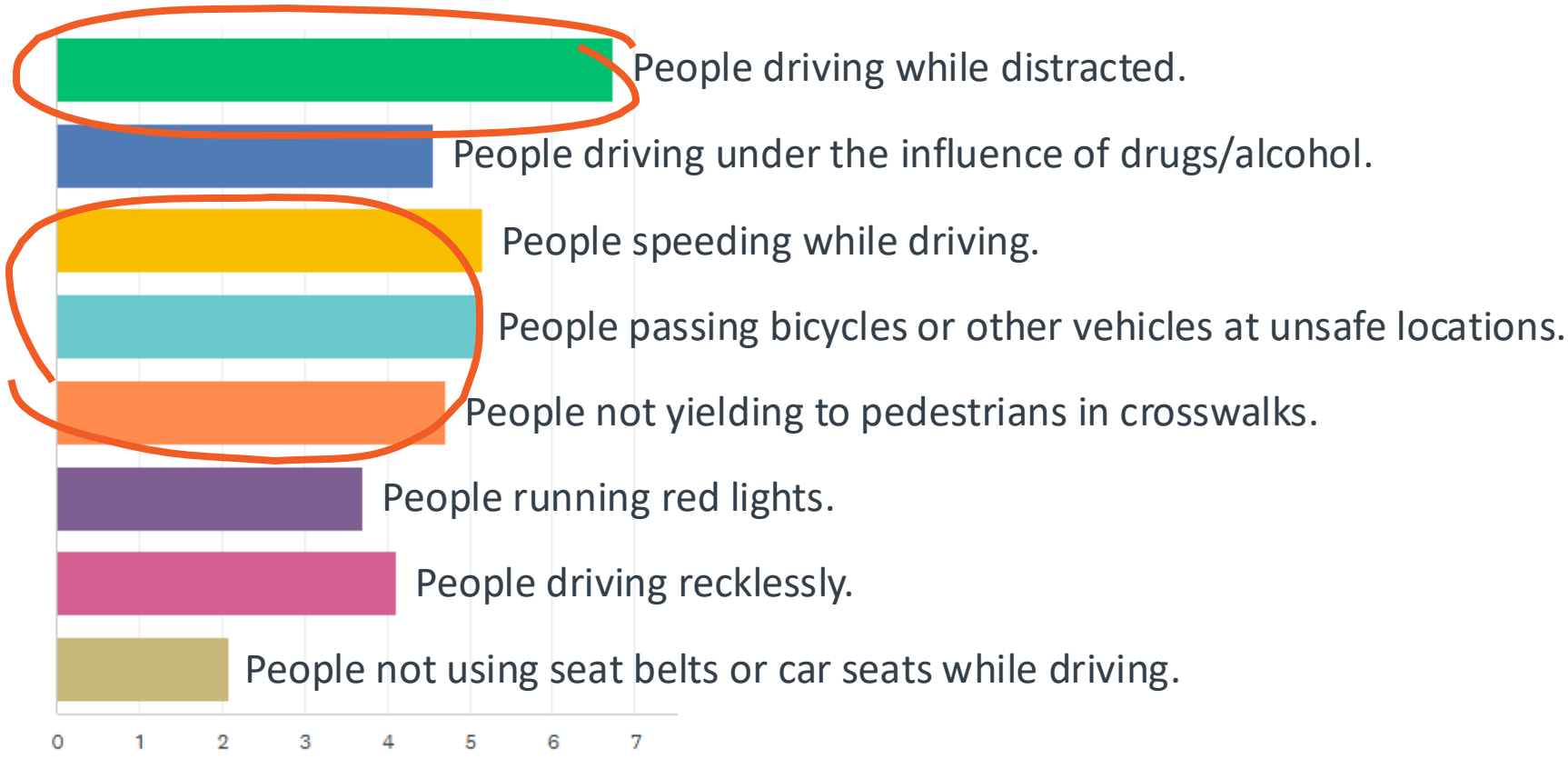
Discomfort riding in space provided and on road surface.

“Walking/wheeling/running conditions: rank how you perceive each issue.”



Lack of sidewalks is of most concern to people walking & biking.

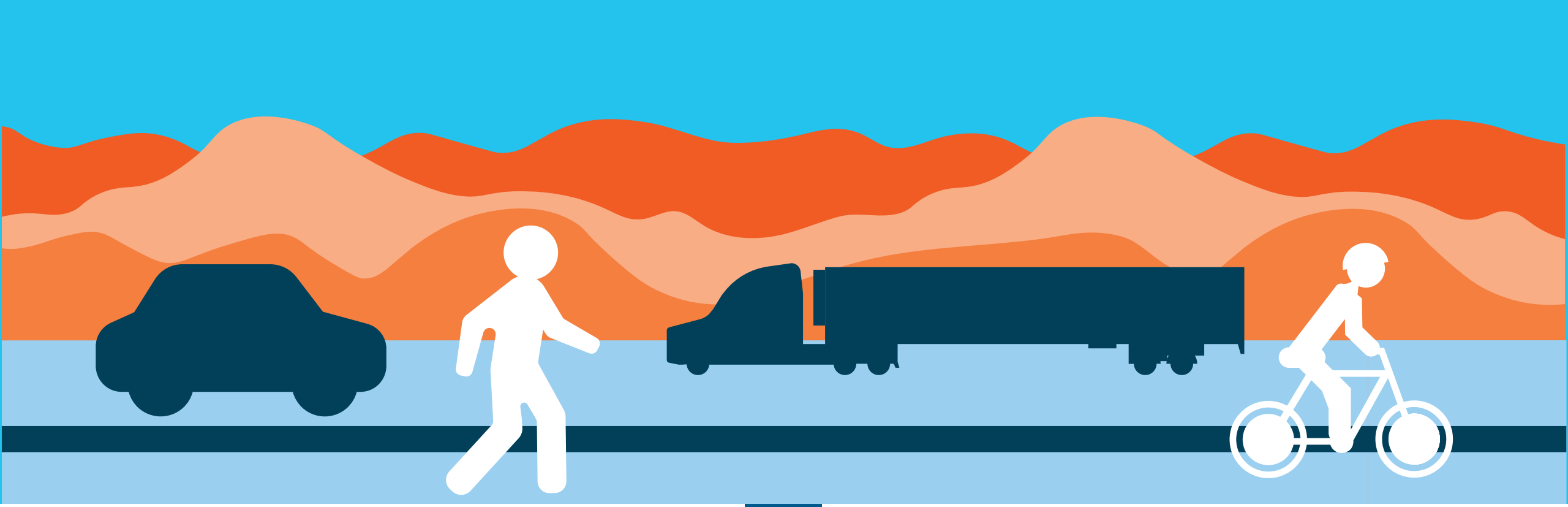
“Driving behavior: rank how you perceive each issue.”



Concerns about distraction, speeding, and sharing the road with others.

Desired safety improvements

Mode	Improvement Desired	Rank
Driving/Motorcycling	 Roundabouts.	81
	 Improved pavement surfaces for people driving and on motorcycles.	79
	 Protected turning movements at traffic lights.	67
Walking/Rolling	 Sidewalks.	126
	 Median refuge islands.	61
	 High visibility crosswalks and signs.	58
Biking	 Off-road greenways or separated bike lanes.	125
	 Bike lanes.	11
	 High visibility paint on roadway surfaces including colored paint in bike lanes.	64



Goals and Strategies

Strategic Framework

Safety PM Targets

Aspirational

Goals

"Improve the [problem/result of analysis] for [desired outcome]"

Strategy

Strategy

"…by [CM/action] with/for [specific who or resource] by [when]"

Countermeasures /Action

Countermeasures /Action

Countermeasures /Action

Safe Streets for WNC Goal

The region will achieve a 10% reduction in fatal and serious injury crashes by 2035, an additional 45% reduction by 2045, and move toward zero fatalities and serious injuries by 2050.

Safe Streets for WNC Draft Goals

- FBRMPO and LOSRPO and its members will integrate the Safe System Approach into all policies and programs for a more consistent application of safety into plans and projects.
- FBRMPO and LOSRPO and its members will incorporate safety into development and disaster recovery projects, to mitigate affects of rapid growth on traffic safety.
- FBRMPO and LOSRPO and its members will address severe speed related crashes through context-based speed management and traffic calming.
- Local leaders will increase commitment to a regional culture of safety by partnering with media, educating elected officials and improving communication with NCDOT.
- FBRMPO and LOSRPO and its members will leverage the capacity of funds for implementing safety projects through staff training, corridor safety assessments, and enhanced project delivery.
- Regional partners will increase awareness of risks and potential strategies to improve safety for focus populations and vulnerable road users.

Your Turn!

What do we want to start within the next 5 years?

- What strategies are of highest priority for you and your organization?
- What strategies can make the biggest impact on safety?
- Which strategies will you help implement?

Call to Action

- ❑ Champion the Safe Streets for WNC Plan
  - Develop a local safety plan
  - Adopt a local Vision Zero (or similar) goal
  - Endorse or adopt the plan
  - File a resolution of support
- ❑ Adopt safety policies and programs at the local level
- ❑ Prioritize safety in existing projects
- ❑ Coordinate with NCDOT and other partners to identify solutions
- ❑ Communicate value of safety in your personal and professional networks

What's Next

June 13 – Draft Plan Submittal

June 23 – Review Complete

July 14 – Final Plan posted to SS for WNC webpage

August 14 – FBRMPO and LOSRPO TCC meetings

August 21 – FBRMPO and LOSRPO TAC meetings and adoption

Questions?

Stay Connected

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Thank you