

September 23, 2025

Morrisville Town Council Update

Morrisville in Motion: A Safety Action Plan





Overall Project Objective

Create a model comprehensive safety action plan for a suburban community in the Central Pines region that describes urgent safety problems and outlines an approach for implementing strategies and projects aimed at reducing serious-injury and fatal crashes on roadways over the near- and long-term.



U.S. Department of Transportation
Federal Highway Administration



Morrisville
Live connected. Live well.



Presentation Agenda



Recap



Policy Review



Engagement Updates



Crash Reduction Framework and Goals

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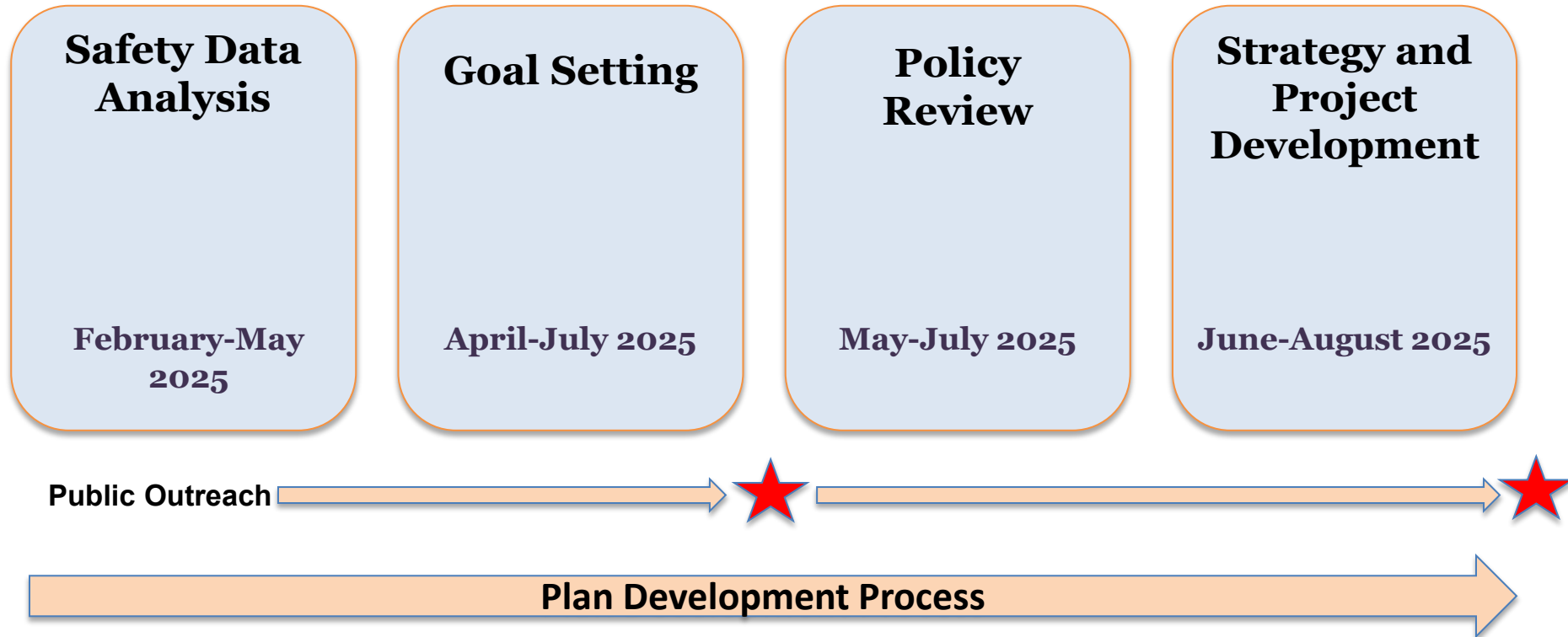
Recap

Partners and Approach



- Funded through USDOT Safe Streets for All (SS4A) planning grant awarded to Central Pines Regional Council (CPRC)
- Plan development by CPRC (supported by VHB as consultant) to serve as pilot/template for suburban municipalities in the region to follow in the future
- CPRC MOU with Town to complete plan - Town contributing \$13K toward total \$62,500 local match for \$250K grant
- Must be completed in accordance with Federal SS4A standards – Required plan elements and Safe System Approach lens
- Purpose of Plan
 - Identify safety deficiencies and outline approach for implementing projects and strategies to reduce serious-injury and fatal crashes on roadways
 - Eligibility for Federal SS4A implementation grants
 - Inform Town's 2025-2026 Comprehensive Transportation Plan Update

Plan Development Schedule



Anticipated Consideration of Adoption by Town Council in October

Morrisville Crash Summary: 2016 - 2023

2016
—
2023

4,569

Total Crashes

7

Fatalities

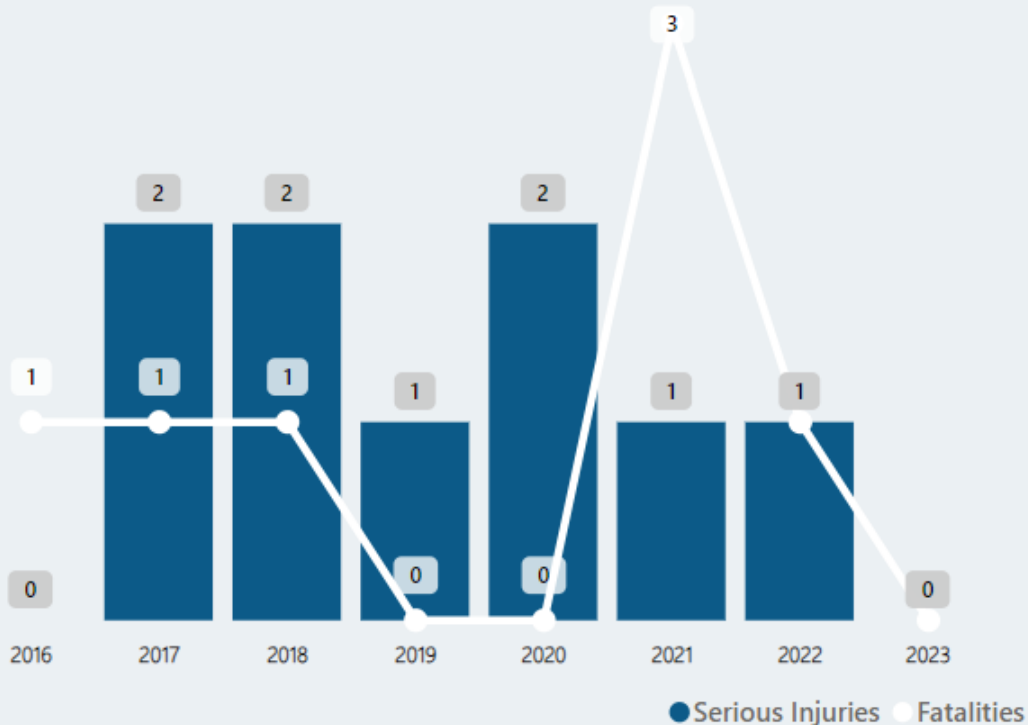
9

Serious Injuries

16

Fatal & Serious Injury Crashes

Fatal and Serious Injuries



Crash Type	Fatalities (K)	Serious Injuries (A)	Total KAs ▼	Total Crashes
Angle	1	3	4	623
Ran Off Road	4		4	276
Rear End	1	2	3	1,911
Left-Turn		2	2	649
Collision with Fixed Object		1	1	79
Sideswipe	1		1	519
Vulnerable Road User		1	1	28
Backing Up				109
Collision With Animal				48
Collision with Movable Object				29

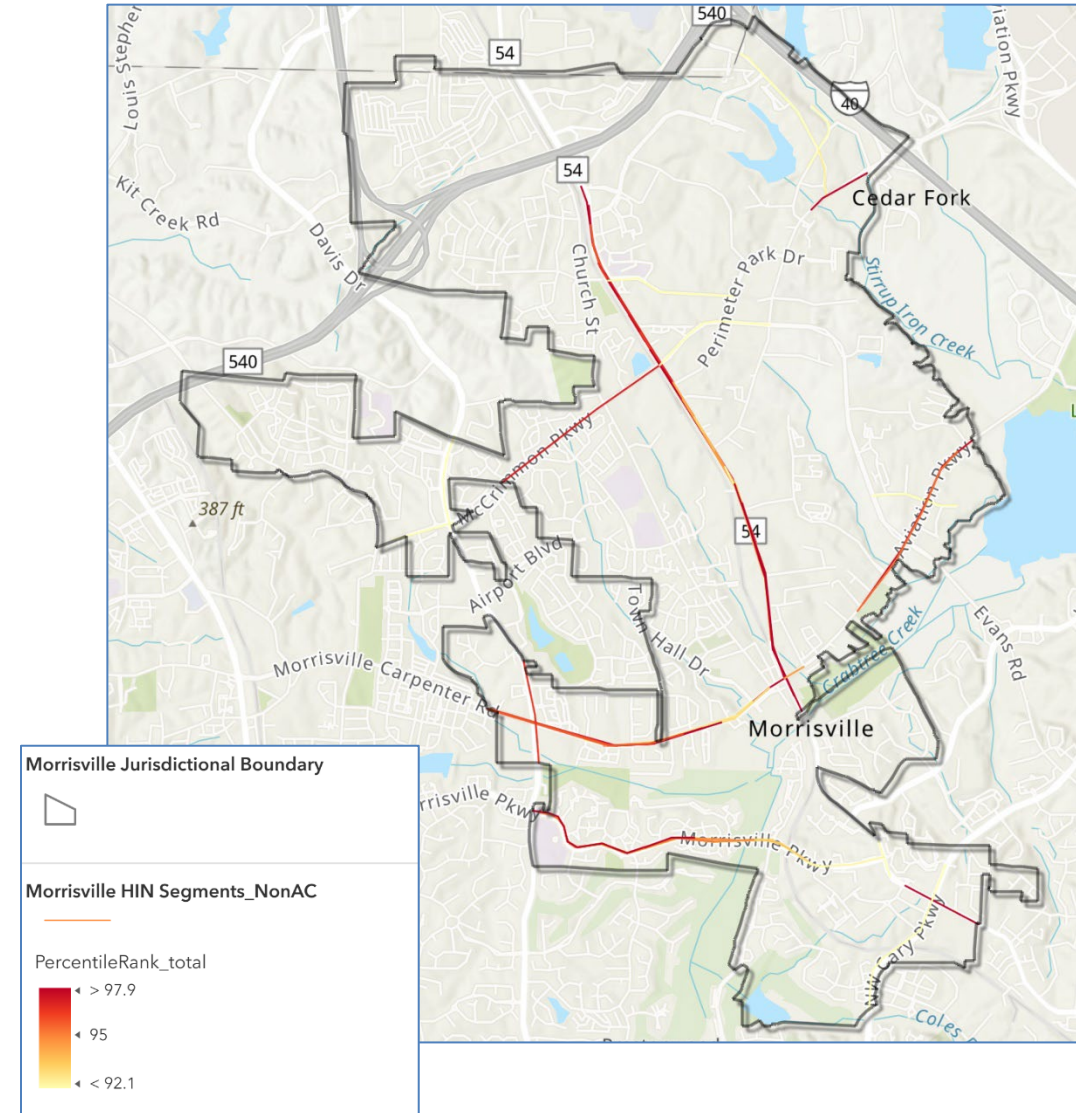
High Injury Network(s)

Methodology

- *Weighting of injury types applied (crash severity)*
- *Scoring based on crash frequency*
- *Removed access-controlled facilities (freeways such I-40 and NC 540)*

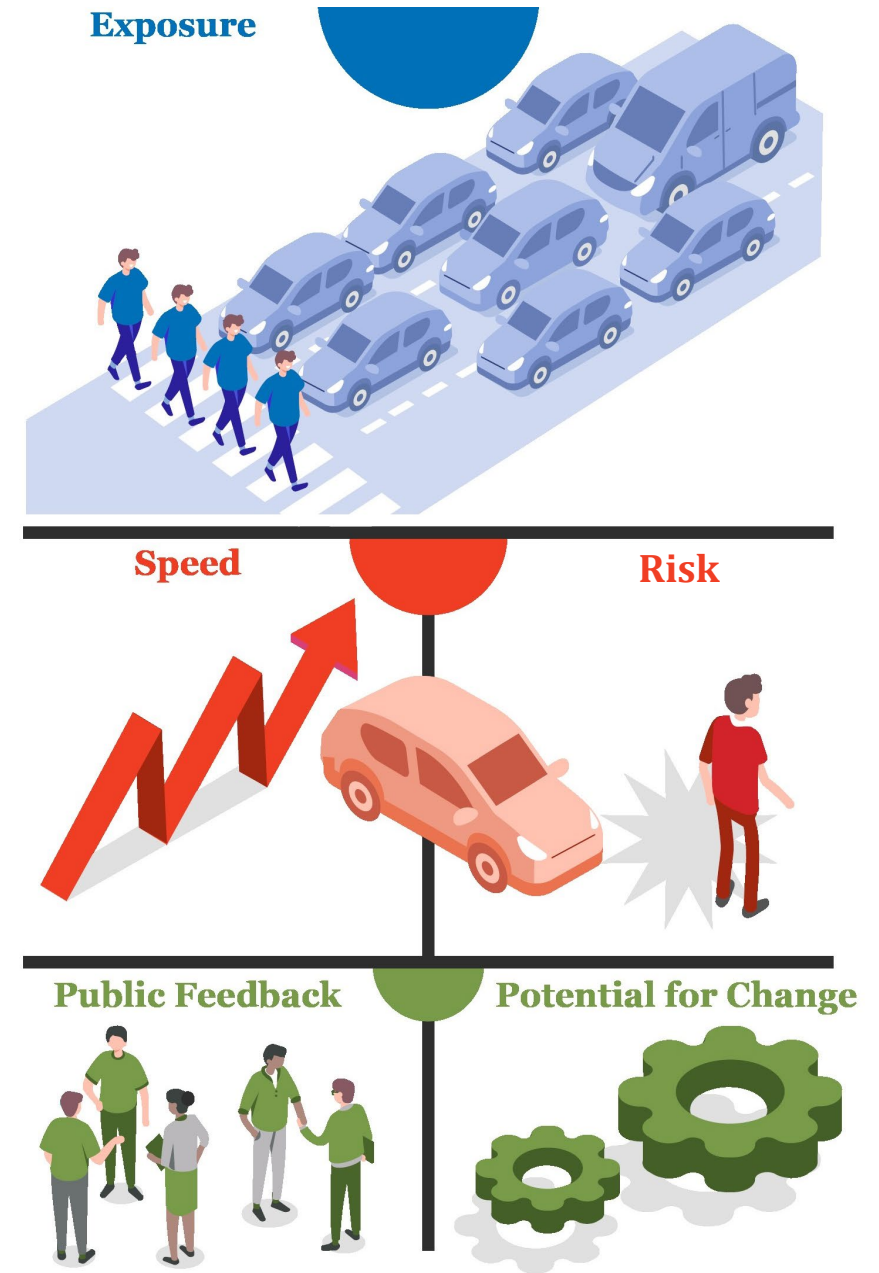
Where do we need to focus near-term safety improvements?

- *STIP project reviews*
- *Local and state maintenance projects*
- *Community education*
- *Targeted enforcement*



Risk Analysis

- **Likelihood or Crash Risk**
What severe crashes are most likely – regardless of crash history - and what countermeasures reduce the frequency of severe crashes?
- **Context and Exposure**
Where do traffic volumes impact crash frequency? Where are different roadway users most often in conflict?
- **Severity**
Increased kinetic energy (i.e., speed) results in greater injury. Where does speed need to be managed based on development context?



Morrisville in Motion Safety Goal

Reach and sustain zero fatal and serious injury crashes on streets and roads serving residents and visitors through 2035.

Policy Review

Policy and Program Assessment

- ❖ **Morrisville Comprehensive Transportation Plan (2019)**
- ❖ **Morrisville Intersection Improvements Study (2021)**
- ❖ **Morrisville TOD Subarea Plan (2024)**
- ❖ **Engineering Design and Construction Manual**
- ❖ **Morrisville Parkway Access Management Study (From Davis Dr to NC 54)**
- ❖ **Morrisville CTP (2019)**
- ❖ **Morrisville UDO**
- ❖ **Morrisville Land Use Plan 2021**

What was addressed:

- ❖ Location specific strategies
- ❖ Safety-focused roadway projects
- ❖ Multimodality
- ❖ Guidance specific to:
 - ✓ Roundabouts
 - ✓ Raised medians
 - ✓ Trail-roadway crossings
 - ✓ Raised crossings
 - ✓ Decorative features

Opportunities:

- ❖ Incorporate speed management, vehicle safety, post-crash care, and safety education strategies into plans and policies
- ❖ Guidance specific to:
 - ✓ Widened shoulder
 - ✓ All Way Stop
 - ✓ Pedestrian crossing
 - ✓ Overhead lighting
 - ✓ Crossing countermeasures for high-speed roads
 - ✓ Road Diet (e.g., roadway lane reallocation)
 - ✓ Detailed bikeway selection
 - ✓ Bicycle intersection improvements

Public Engagement Update

Public Engagement Plan

Goals for Engagement

- Discover
 - **Ask questions** about people's perspectives on safety and their core values.
- Collaborate
 - **Introduce the Safe System Approach** and data-driven safety planning. Review countermeasures, plan development.
- Accountability
 - **Engage communities** most affected by safety problems. Track progress.



Phase 1 Activities

- Online survey (June 2025)
- Tabling with engagement boards at:
 - June 6, 2025 – Music in the Park Event, Morrisville, NC
 - June 14, 2025 – Western Wake Farmers Market, Morrisville, NC

Phase 2

Goals

- Refine crash reduction framework
- Prioritize goals and actions
- Individual, agency, and community commitments to safety

Results

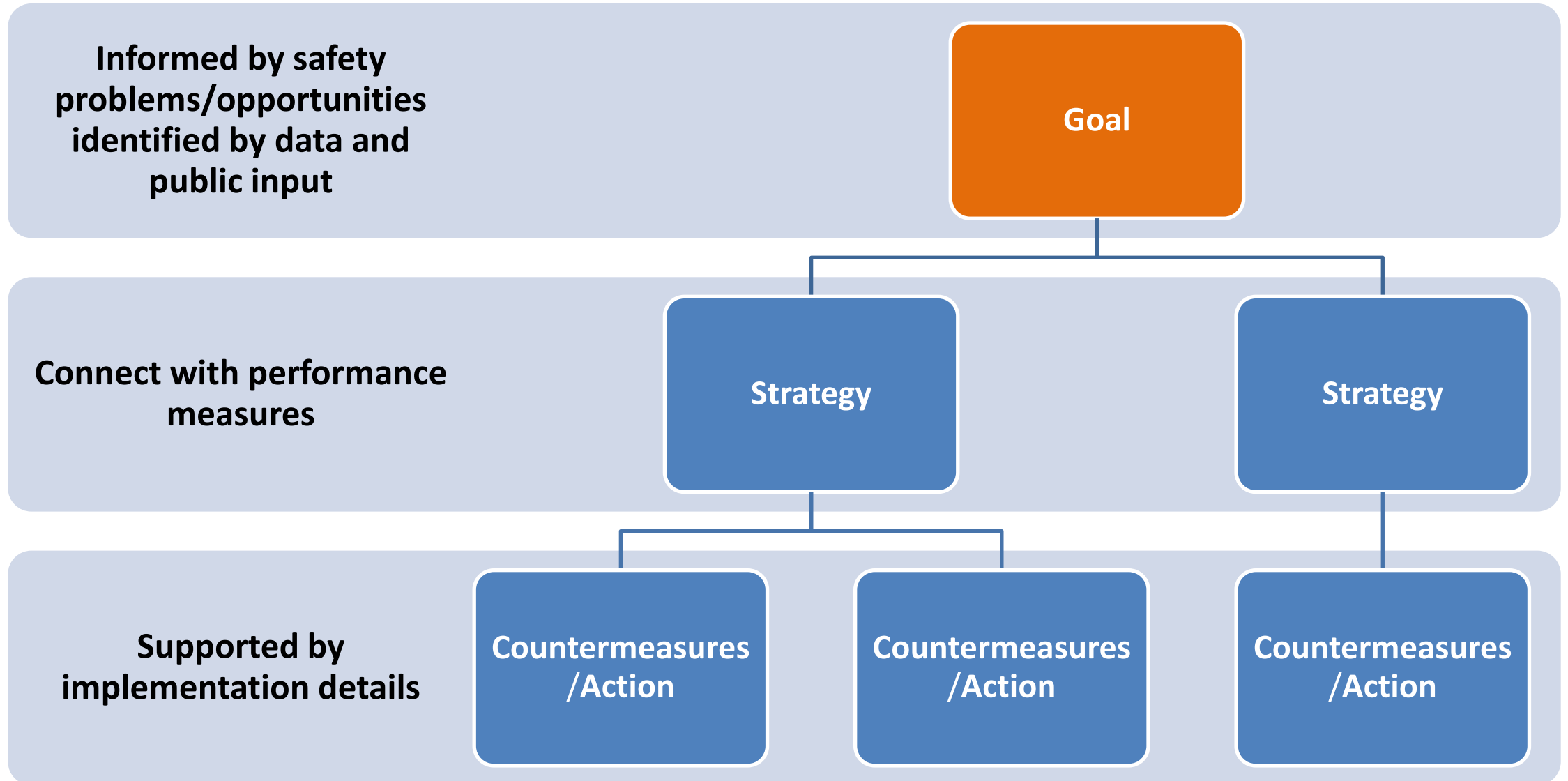
- 64 participants
- Top priorities: promote safety benefits and improve safety at unsafe locations
- Additional priorities: improve traffic enforcement, community education, and signage
- Results helped inform the plan's strategies and recommendations

Phase 2 Activities

- Stakeholder meeting with Town staff (Police, Fire, Engineering, Planning, Public Works, Communications) to inform strategy prioritization
- Tabling with engagement boards at:
 - *August 9, 2025 - S'Morrisville*
 - *August 16, 2025 – Western Wake Farmers Market*
 - *Online questionnaire*

Crash Reduction Goals and Strategies

Strategic Framework



Implement a “Safety in All Plans and Projects” Approach

- Work with NCDOT and CAMPO to consider crash risk and crash history in all proposed STIP and maintenance projects
- **Coordinate with NCDOT traffic safety unit to identify and prioritize transportation safety needs for near-term implementation**
- Integrate speed management treatments into local projects in urban contexts
- **Perform speed studies along roads with identified speed problems to identify potential safety improvements**
- **Set budget targets for and increase capital spending on safety projects**
- **Revisit multimodal network plans (bike, pedestrian, greenways, transit) with safety coordination as a primary objective**

*****Proposed near-term strategies (2025-2031) are bolded*****

Implement Systemic Safety Throughout Town, Prioritizing High-Risk Locations in Support of “Sustaining Zero”

- Create an inventory of, and implement systemic improvement projects for, pedestrian crossings and intersection safety
- Inventory and assess needs for all warning and regulatory signage for pedestrian and bicycle networks and crossings
- Develop recommendations for safer crossings at or near transit service passenger access points and trail crossings
- **Initiate planning/design to minimize pedestrian and bicyclist exposure at existing high-injury intersections and for planned and programmed intersections**
- Take actions to minimize pedestrian and bicyclist exposure at existing high-injury intersections and for planned and programmed intersection designs
- Assess distance between crossings on multilane arterials and install Pedestrian Hybrid Beacon (PHB)-controlled midblock crossings on high-speed, high-volume routes

*****Proposed near-term strategies (2025-2031) are bolded*****

Implement Safety Improvements Across the High Injury Network by 2035

- Perform Road Safety Assessments (RSAs) or similar safety studies along all **Priority HIN Locations**
- Create town-wide Access Management Plan

*****Proposed near-term strategies (2025-2031) are bolded*****



Integrate Safety Countermeasures in All Development and Community-led Projects

- **Update traffic impact analysis methods to identify and incorporate multimodal safety strategies**
- **Develop or update development standards to proactively include safety improvements or countermeasures for all roadway users (contingent on State enabling legislation)**
- **Develop a traffic calming program and guidance**

*****Proposed near-term strategies (2025-2031) are bolded*****



Promote the Benefits of a Safer Transportation System to Morrisville Residents

- Evaluate and communicate the performance of safety projects and experimental treatments to increase understanding of the effectiveness of countermeasures
- Continue and expand collaboration with healthcare, education, and community organizations to promote the benefits of improving transportation safety
- Establish a Local Safety Task Force (staff-level) to discuss safety project needs, strategies and plan implementation
- Hold “open streets” events or create pop-up “traffic gardens” to engage with the public and educate the community about local safety initiatives
- **Survey the community on a routine basis about safety problems and understanding of proven countermeasures**

*****Proposed near-term strategies (2025-2031) are bolded*****

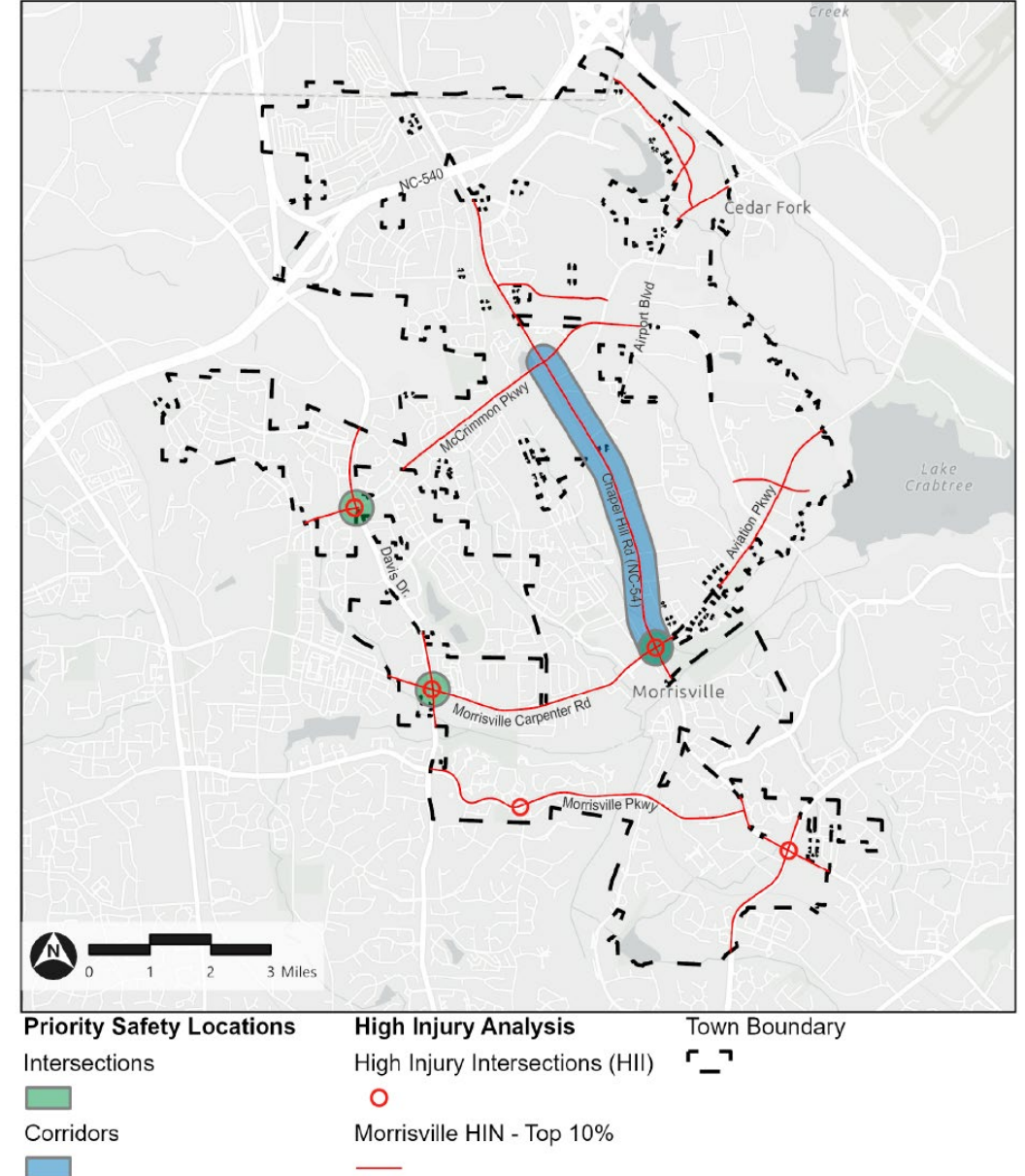
Promote the Benefits of a Safer Transportation System to Morrisville Residents (cont'd)

- Partner with Morrisville schools to develop an educational campaign for young drivers to understand the importance of driving safety
- Meet with regional and state partners to explore options incorporating traffic safety into other adult education programs
- Provide additional support for sustained enforcement and community education about impaired driving

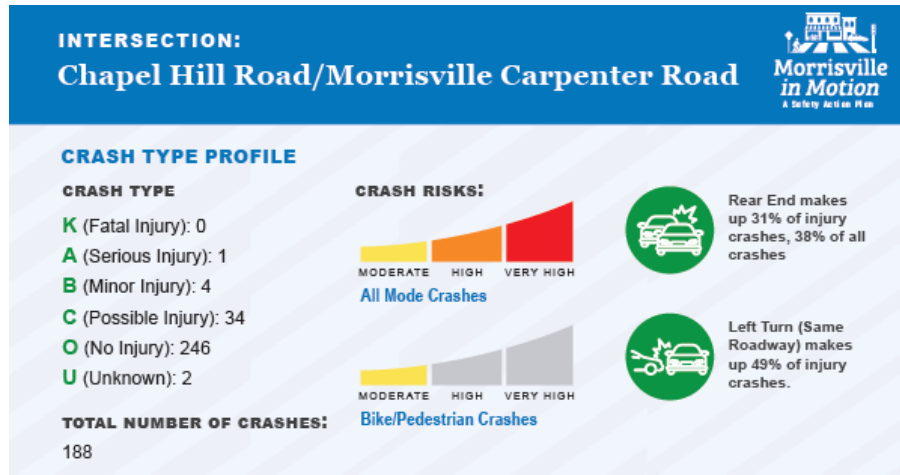
Priority Focus Areas

The priority locations focus on high-injury, high-risk locations that should be further examined for near-term improvements to address safety concerns.

- Focus areas were informed by crash history, crash risk, public and stakeholder input, and program review
- Some locations excluded due to ongoing or near-term roadway projects or studies
- Identified priority locations include **NC 54 between McCrimmon Parkway and Aviation Parkway** and the intersections of **Morrisville-Carpenter Road/Davis Drive**, **NC 54/Aviation Parkway**, and **McCrimmon Parkway/Davis Drive**



Priority Locations – Safety Review



Cut Sheets (Example on Left) in Safety Action Plan Document for Priority Locations Include:

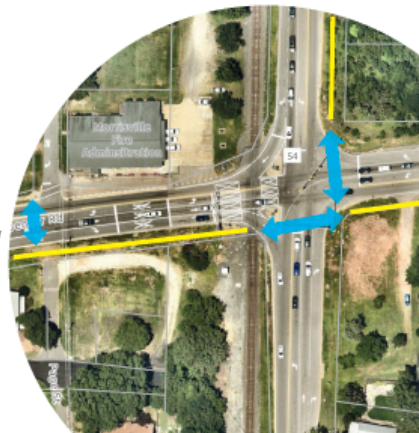
- Roadway Profile
- Crash Type Profile
- Risk Analysis and Roadway Characteristic Data
- Planned Projects
- Proposed Safety Countermeasures

PLANNED

This intersection has some planned projects in the 5-10 year horizon that will impact it's design. U-5811, a widening project for Aviation Pkwy, will include adding a quadrant loop along Aviation Pkwy in the northeast intersection quadrant and realigning the intersection further east. This project will also add sidewalk segments on the southwest, northwest, and northeast corners of the intersection, and a multi-use path segment on the southeast corner, with crosswalks on the northern and southern approaches of NC-54. U-5811 is anticipated to begin construction in 2029. North Carolina Railroad (NCRR) also has plans to add a second track on the rail corridor that runs through this intersection.

PROPOSED SAFETY COUNTERMEASURES

- » Add crosswalks on southern and eastern approaches.
- » Add sidewalk or MUP to southwest, southeast, and northeast corners
- » Review all corner radii and improve pavement markings to create tighter turning movements and more space for pedestrian facilities as feasible
- » Review turning movements for combining right turn and through movements on approaches as feasible.
- » Near-term improvements should attempt to align with future right of way plans for U-5811 for sidewalk/ MUP and crosswalk.



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Council Action

Local Government Leadership

The project team presented to the Morrisville Town Council at the following:

- January 9, 2025: Project initiation updates
- July 22, 2025: Safety analysis results and goal-setting
- September 23, 2025: Review draft plan
- October 14, 2025: Consideration of plan adoption

Council Action

- Q&A with Project Team
- Consider plan for adoption at October 14 Council Meeting

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Thank you!