

# Triangle West TPO Vision Zero Plan

Technical Committee Meeting  
March 11, 2025



# Draft Plan

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# Vision & Goals

- Roadway Safety Vision
- Regional Crash Summary
- Engagement and Input
- Focus Areas and Priority Projects
- Strategies and Actions
- Metrics and Accountability
- Appendices
  - Safety Analysis Methodologies
  - Equity Mapping & Analysis
  - Engagement Summary
  - Member Agency Strategies & Actions

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**TRIANGLE WEST**  
Transportation Planning Organization

March 2025 DRAFT

**Triangle West Transportation  
Planning Organization**

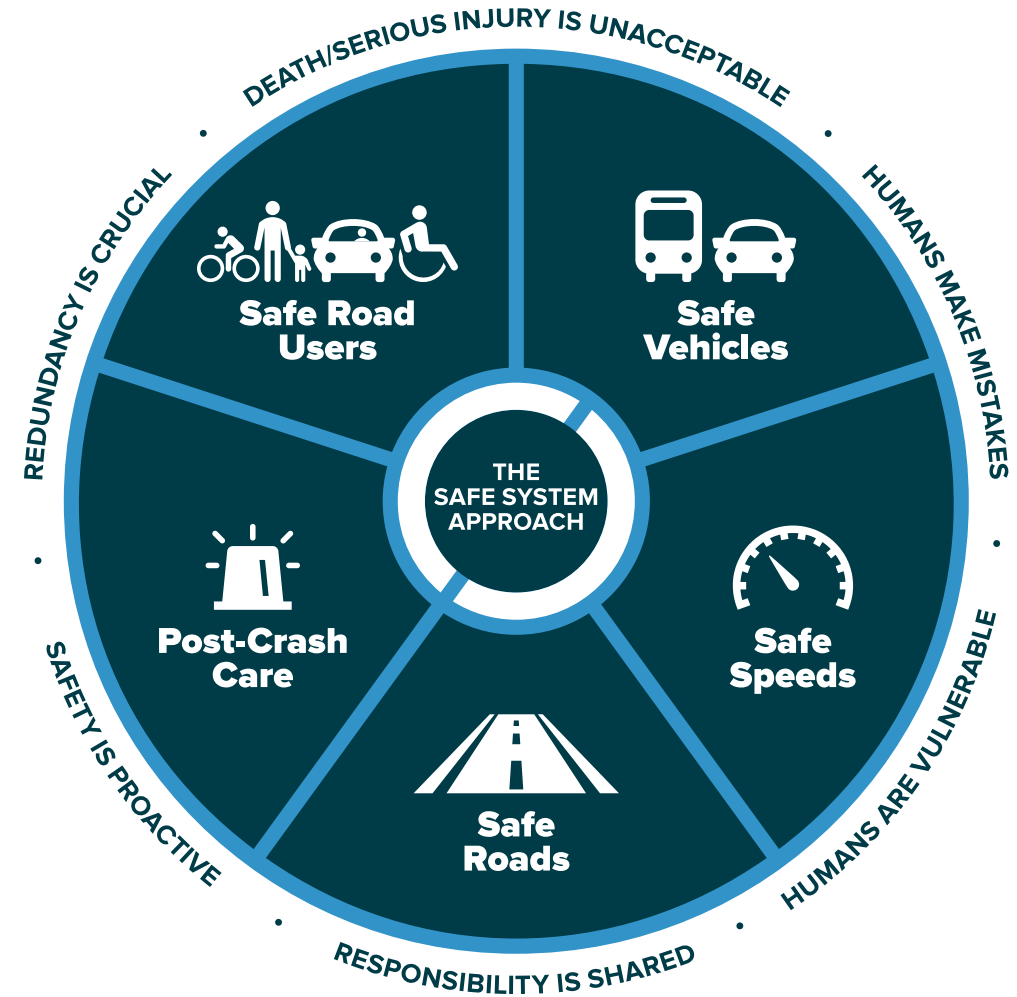
**VISION ZERO PLAN**

# Roadway Safety Vision

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# Vision & Goals

- Safe System Approach
  - Aims to eliminate fatal and serious injuries for all road users by:
    - accommodating human mistakes
    - keeping impacts on the human body at tolerable levels



# Principles

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**Death/serious injury  
is unacceptable**



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**Humans make  
mistakes**



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**Humans are  
vulnerable**



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**Responsibility is  
shared**



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**Safety is  
proactive**



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**Redundancy  
is crucial**

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# Elements

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**Safe road users**



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**Safe vehicles**



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**Safe speeds**



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**Safe roads**



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**Post-crash care**

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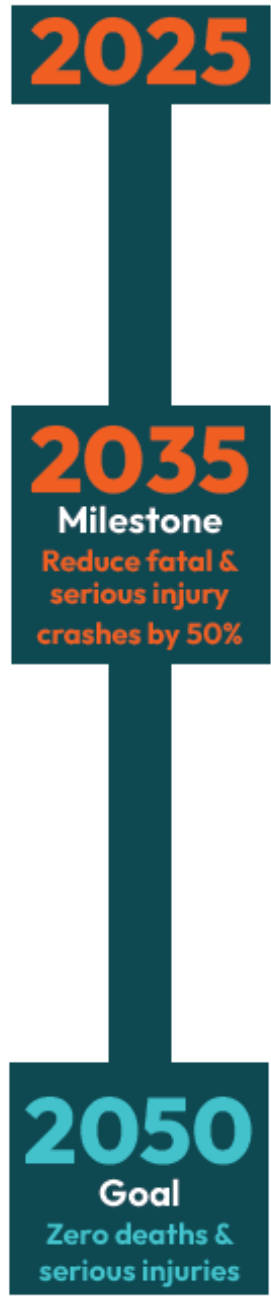
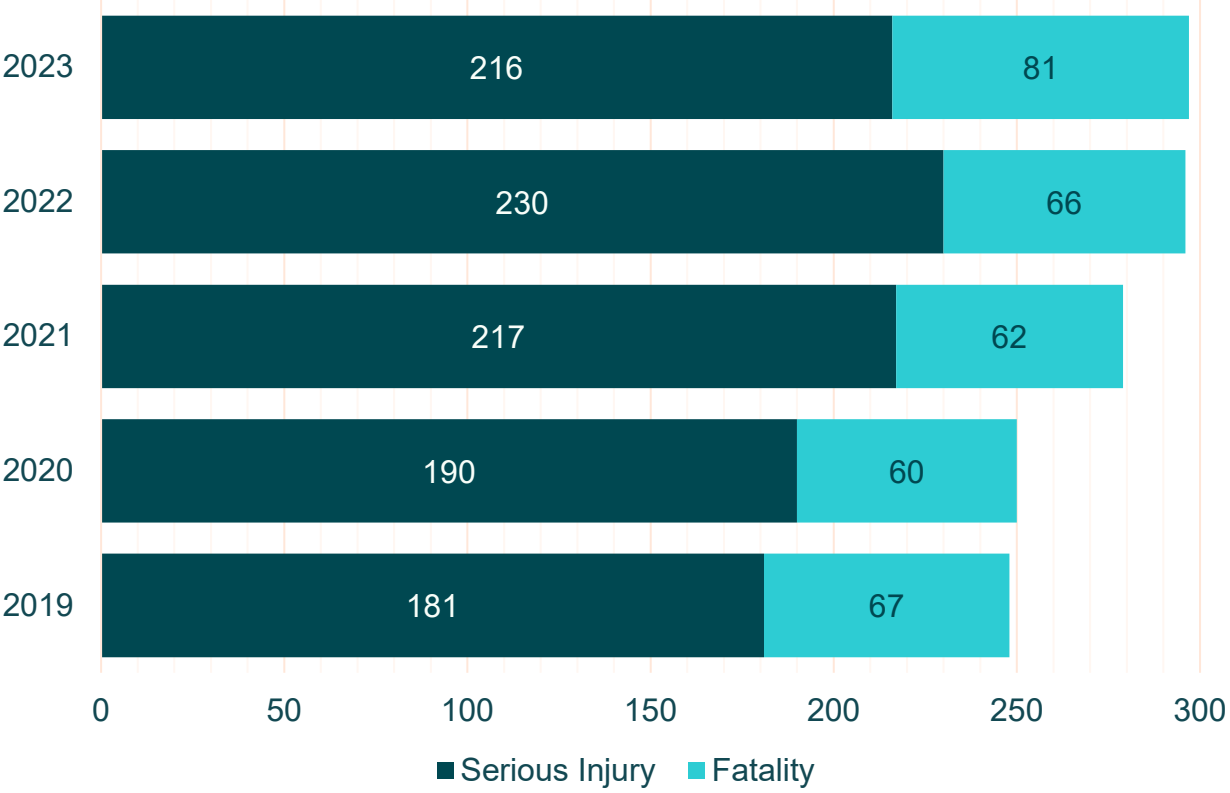


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# Target Year



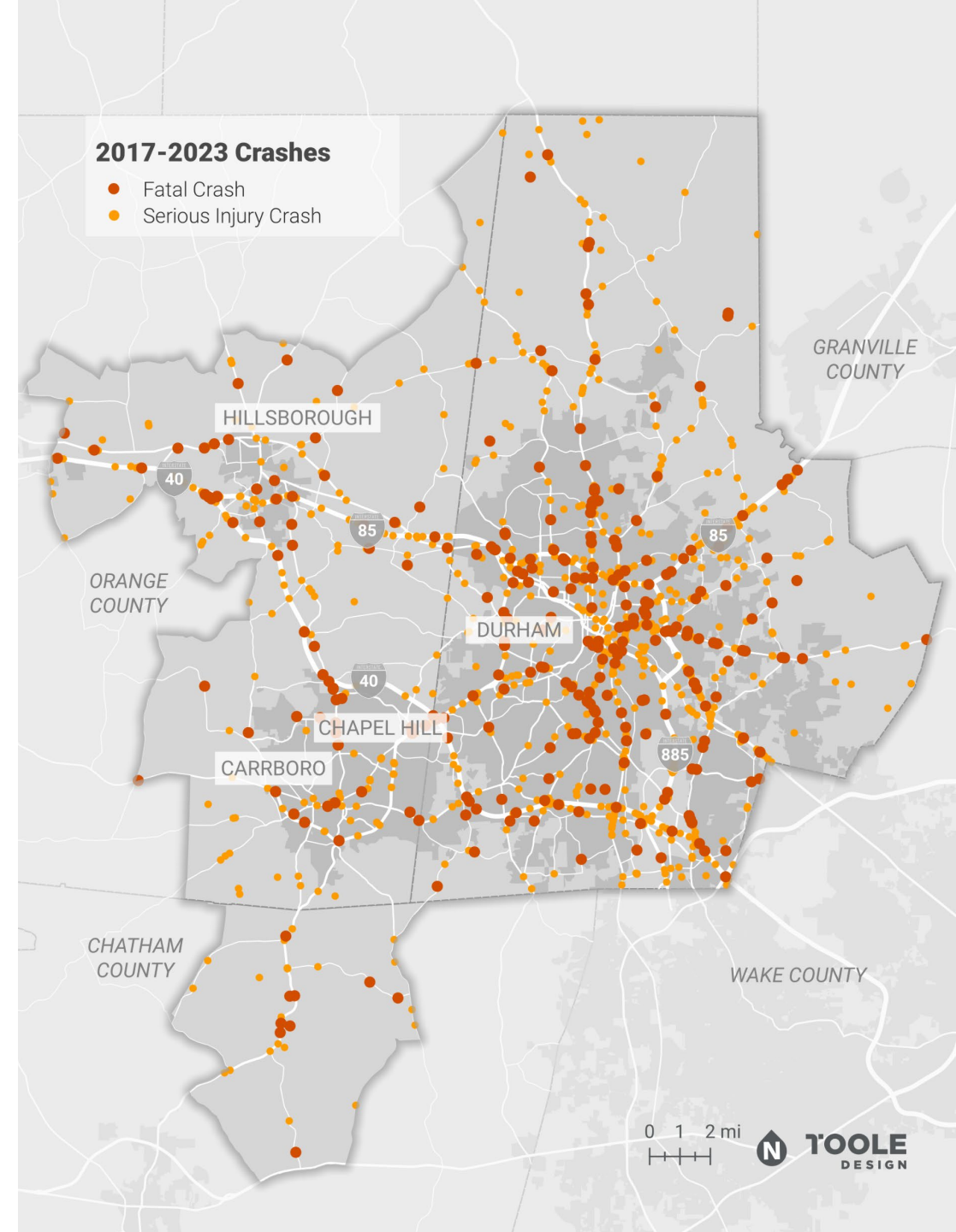


# Regional Crash Summary

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# Crash Data

- 1,467 Fatal and Serious Injury Crashes (2017-2023)



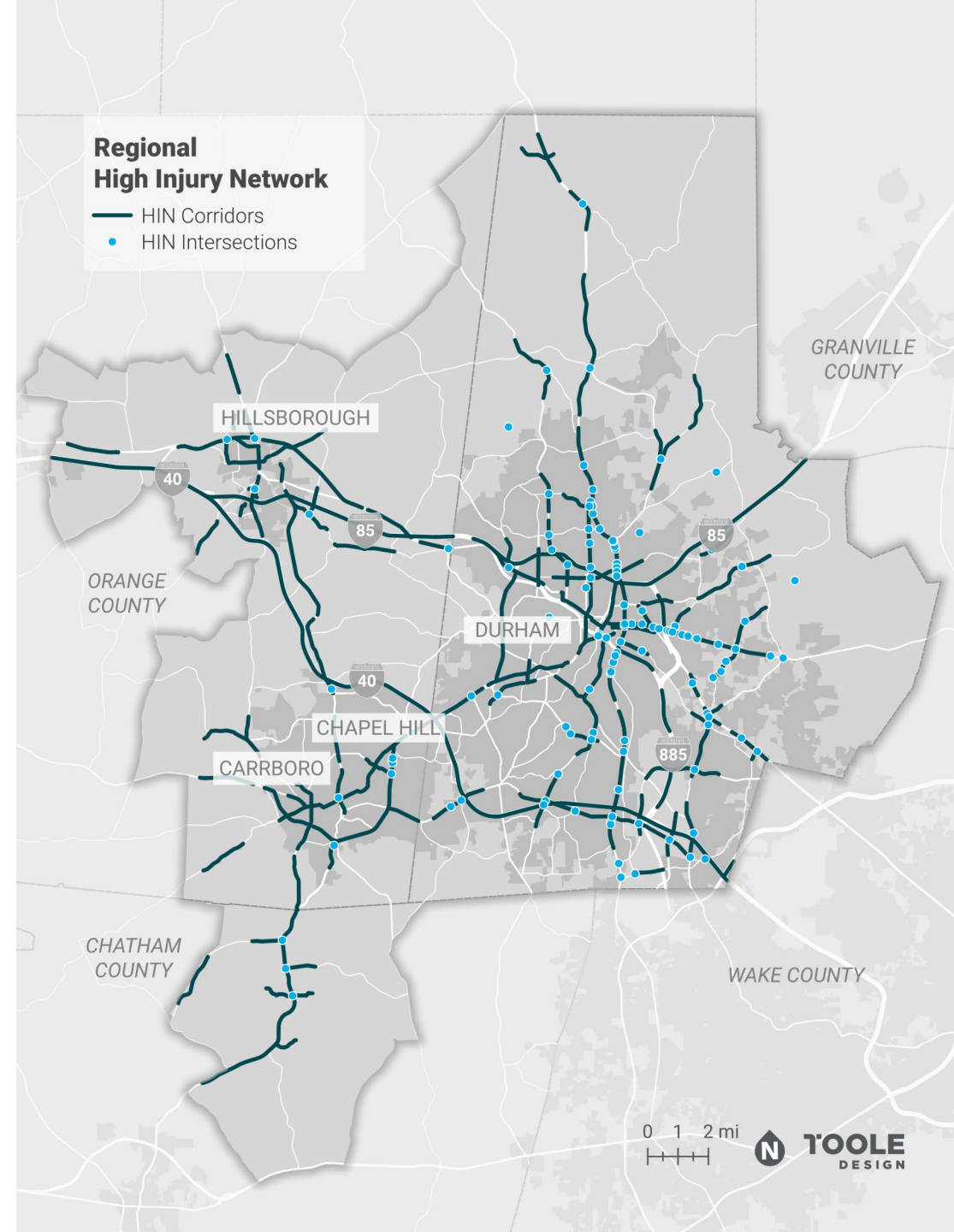
# Regional Crash Summary

- High Injury Network Coverage
  - TWTPO – 7.8% covers 63.5% KSI
  - Carrboro – 13.5% covers 100% KSI
  - Chapel Hill – 13.7% covers 88% KSI
  - Durham – 10% covers 74% KSI
  - Hillsborough – 16.2% covers 100% KSI
  - Chatham County – 11.7% covers 94% KSI
  - Durham County – 13.3% covers 72% KSI
  - Orange County – 10.7% covers 78% KSI

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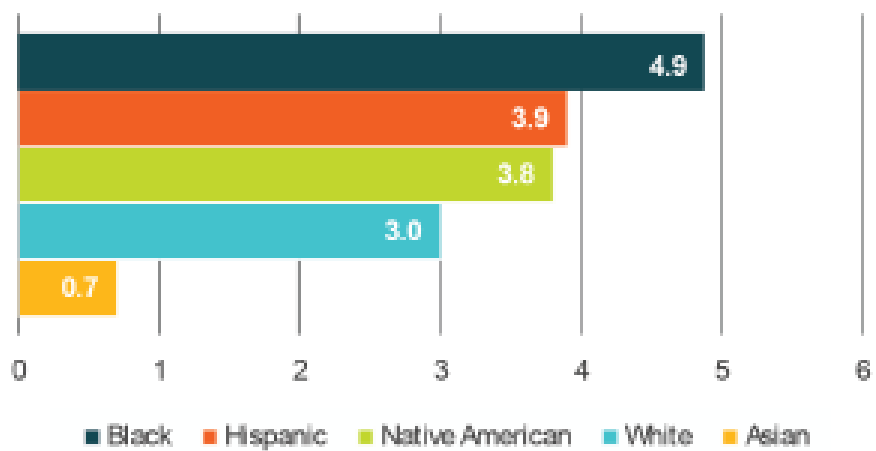


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# Equity

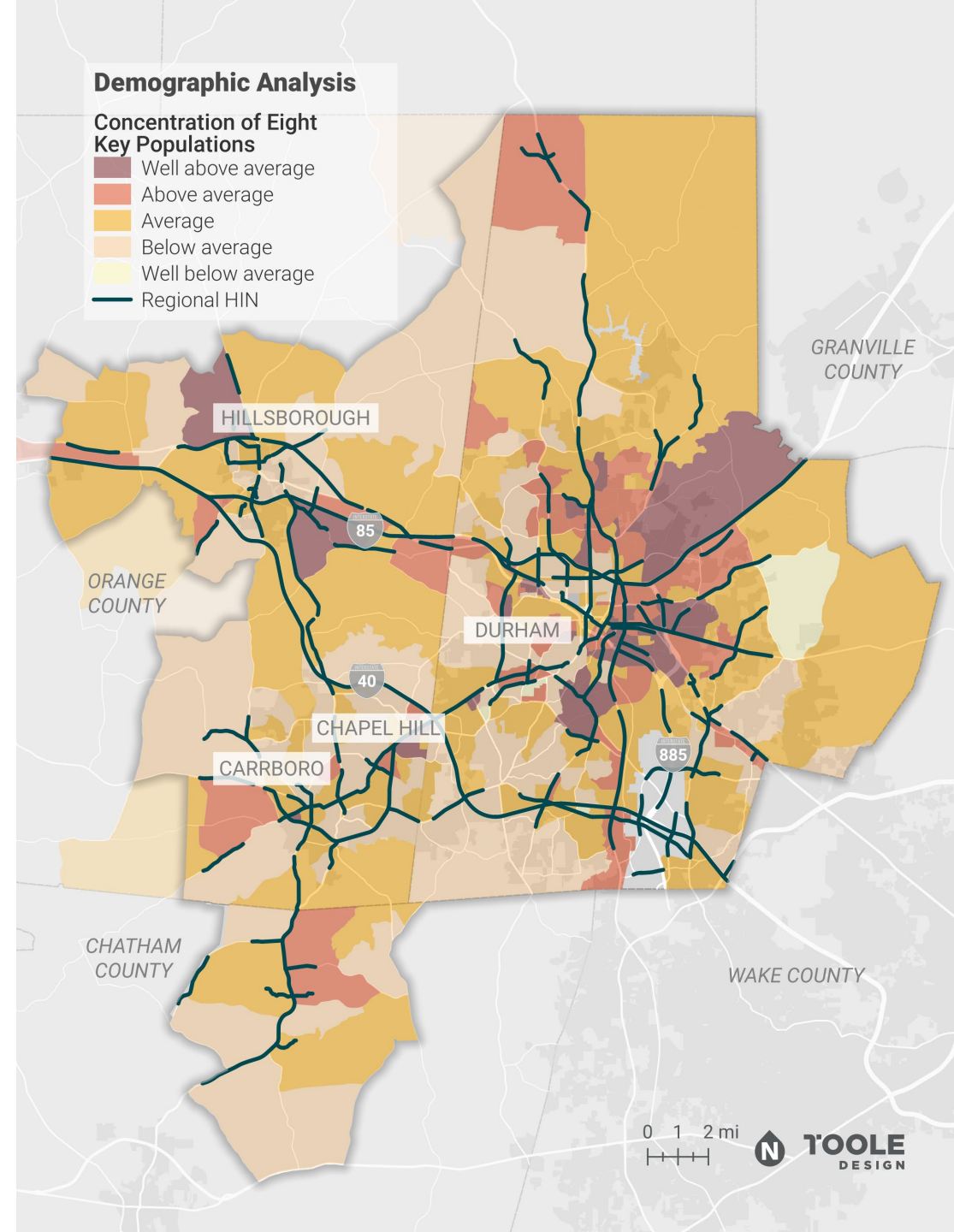
## Fatal and Serious Injury Crash Rate per 1,000 People



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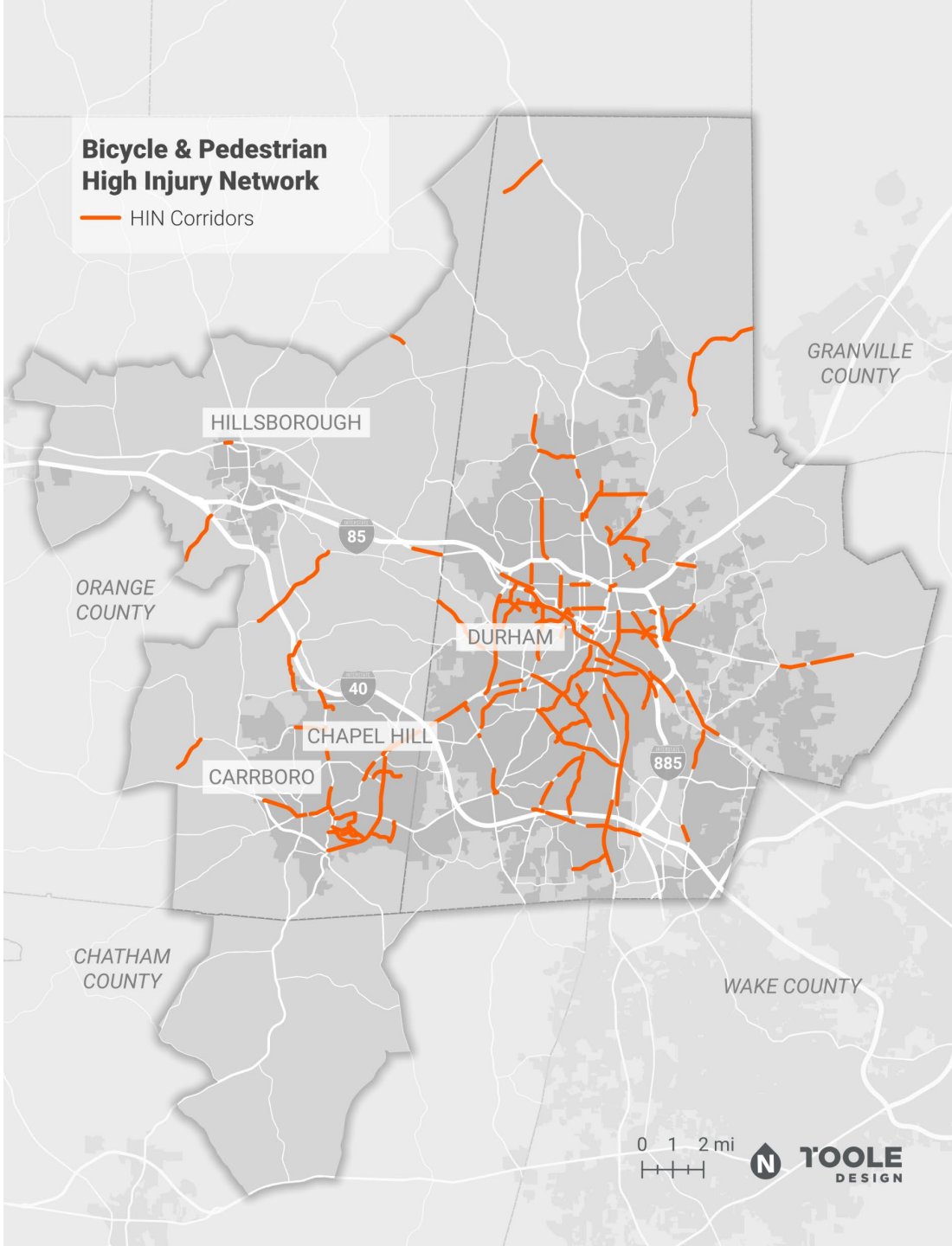




# Vulnerable Road Users

- From 2017-2023
  - 80 people killed
  - 127 people seriously injured

	People Riding Bicycles	People Walking
Total Fatalities	6	74
Total Serious Injuries	16	111





# Engagement and Input

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# Engagement & Input

- ***Safety Summit*** – October 8<sup>th</sup>, 2024
  - Purpose: Discuss regional roadway safety challenges & solutions
  - Attendees: Transportation professionals, Policymakers, Community Orgs
  - Format: Breakout sessions covering-
    - Community Perceptions & Equity (safety concerns, engagement gaps)
    - Technical & Infrastructure Solutions (design, data-driven improvements)
    - Policy & Collaboration (safety messaging, interagency coordination)





# Engagement & Input

- **Project Advisory Meetings (3)**— Aug 20<sup>th</sup>, Dec 10<sup>th</sup>, 2024 & Feb 25<sup>th</sup> 2025
  - Purpose: Discuss regional roadway safety challenges & solutions
  - Attendees: Transportation professionals, Policymakers, Community Orgs
  - Format: Breakout sessions covering-
    - Community Perceptions & Equity (safety concerns, engagement gaps)
    - Technical & Infrastructure Solutions (design, data-driven improvements)
    - Policy & Collaboration (safety messaging, interagency coordination)

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# Engagement & Input

- ***Open House (1)*** – November 20<sup>th</sup>, 2024
  - Purpose: Gather community feedback on preliminary recommendations
  - Attendees: Residents and working professionals in Chapel Hill
  - Engagement Method:
    - Interactive boards
    - Informational boards
    - Online survey



# Engagement & Input

- **Online Survey**– October 2024 to March 2025
  - Survey Focus Areas:
    - Roadway Safety Concerns
    - Behavioral Insights
    - Crash & Safety Experiences
    - Demographics & Accessibility



## Take the Survey!

The online survey is open! Click the link below to share how our region can make streets safe for all users and eliminate fatal and serious injury crashes.

Take the Survey!

## Something needs to change

Every year, people in our region lose family, friends, neighbors, and colleagues to preventable traffic crashes on our roads.

For the last century, our transportation system has been built on the belief that these crashes are accidents – events no one can fully prevent or predict.

The DCHC MPO Vision Zero Action Plan is a paradigm shift in how our communities think about roadway safety. It will lay out a new set of principles for engineering roads, educating travelers, and creating a sense of collective responsibility. We're taking action because *no one should be killed or severely injured by traffic crashes.*



Last year **174 people** were killed or seriously injured on roadways in the Durham–Chapel Hill–Carrboro Region.



# Focus Areas and Priority Projects

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# Proactive Countermeasures

- Eliminate excess roadway widths that contribute to higher speeds
- Install roundabouts
- Reduce the crossing distance and spacing between crossings
- Provide appropriate dedicated bicycle facilities
- Implement leading pedestrian intervals
- Install pedestrian-scale lighting
- Implement no turn on red
- Adjust signal timing and signage

## Roadway Departure



Enhanced Delineation for Horizontal Curves



Median Barriers



Longitudinal Rumble Strips and Stripes on Two-Lane Roads



Roadside Design Improvements at Curves



Safety Edge



Wider Edge Lines

## Intersections



Backplates with Retroreflective Borders



Corridor Access Management



Dedicated Left & Right-Turn Lanes at Intersections



Yellow Change Intervals



Reduced Left-Turn Conflict Intersections



Systemic Application of Multiple Low-Cost Countermeasures at Controlled Intersections



Roundabouts

## Crosscutting



Local Road Safety Plans



Pavement Friction Management



Road Safety Audit

# Prioritization Criteria



## **Severity – Reduce the kinetic energy associated with collisions**

Projects that reduce the kinetic energy of collisions will be prioritized. Crashes that occur at higher speeds and at more severe angles are more likely to result in a fatality or serious injury. The most effective proven safety countermeasures are effective because they can either 1) reduce the speed at which a potential collision occurs or, 2) reduce the angle (i.e., sideswipes instead of head on or angle crashes) at which crashes occur.



## **Exposure – Reduce the interactions where potential collisions may occur**

Reducing exposure to collisions is another method of reducing severe crashes. This can take many forms, but a simple example may be the presence of bicycle and pedestrian traffic generators near major traffic thoroughfares. Priority is given to corridors that have higher daily motor vehicle volumes and is context specific, meaning that exposure may be higher in urban areas along streets with daily volumes greater than 15,000 due to multimodal conditions and density of intersections as compared with a rural roadway.

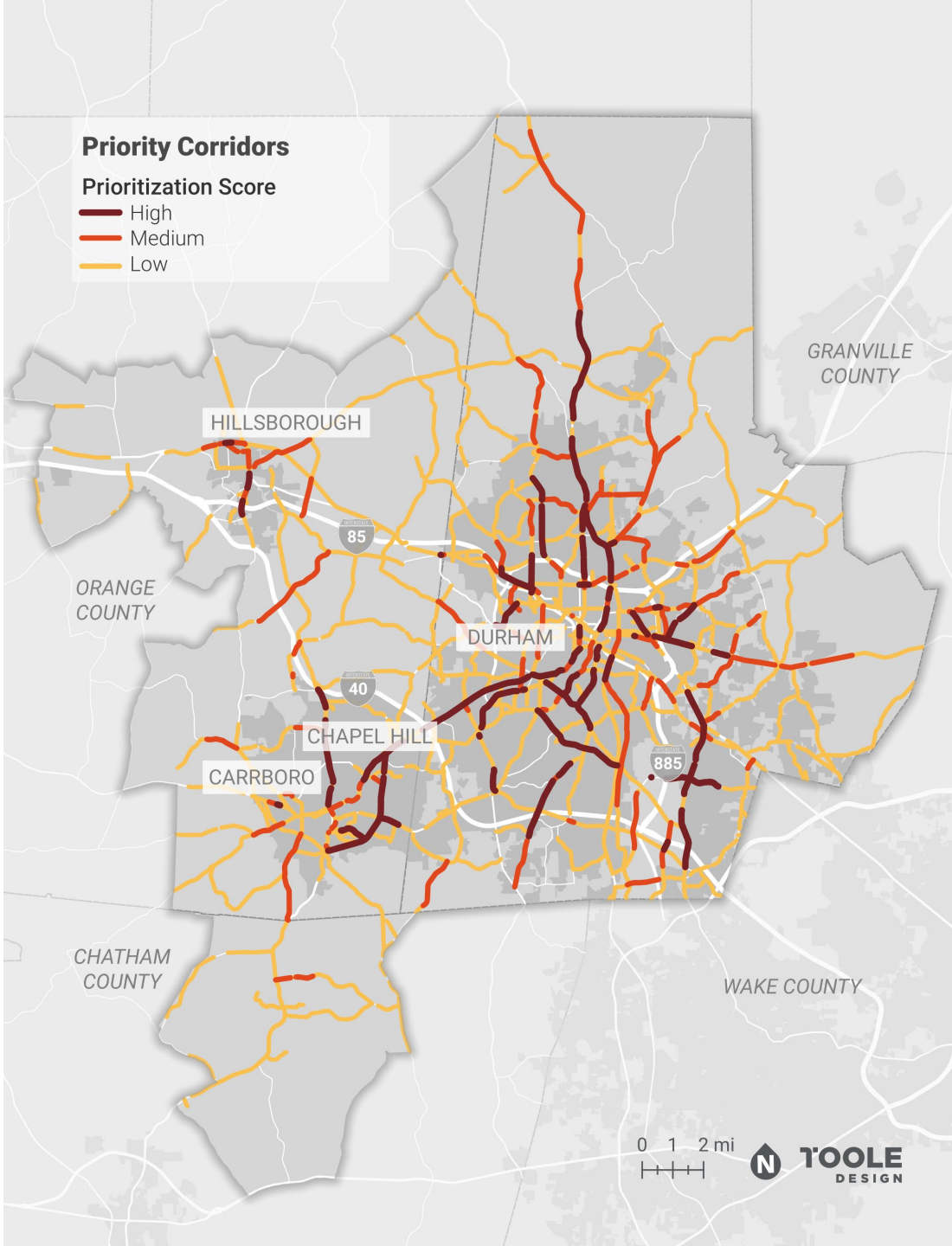


## **Risk/Likelihood – Reduce the likelihood of a collision occurring**

Proactive projects that prevent a collision from occurring should be prioritized. The Action Plan may include projects that remove or reduce potential conflicts that tend to result in more severe outcomes. Priority is given to corridors and intersections identified in the High Injury Network, Risk Networks, or the High Injury Intersections.

# Regional Priority Corridors

Corridor Name	Municipality
NC-86 / Martin Luther King Jr Blvd	Chapel Hill
US-70 BUS/ Hillsborough Rd	Durham
US-15 Fordham Blvd	Chapel Hill
US-15 Business/N Roxboro St	Durham
US-15 BUS/ Durham Chapel Hill Blvd	Durham
US-501 N Duke St	Durham



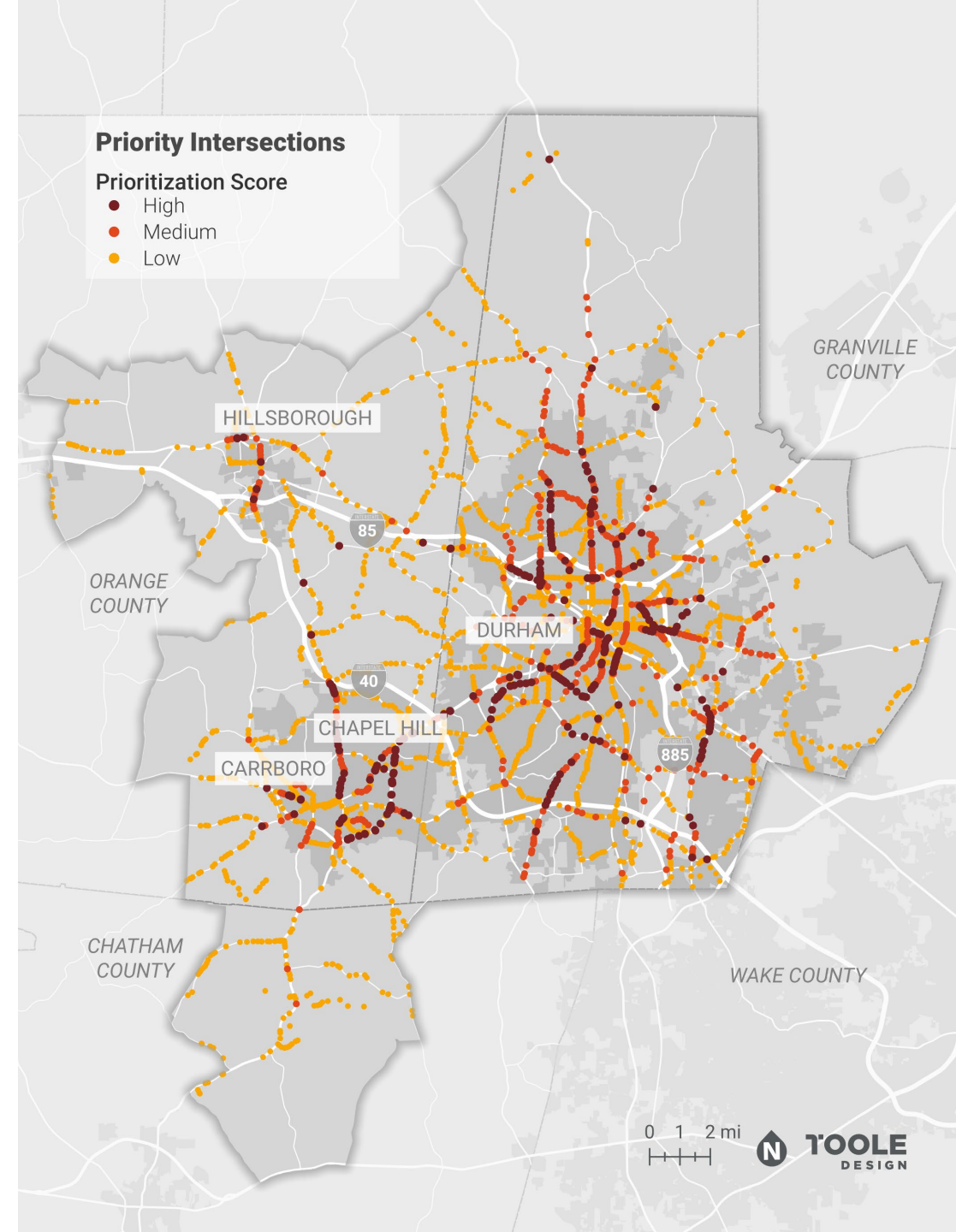
# Regional Priority Intersections

Intersection	Municipality
NC-86 at Central Park Ln	Chapel Hill
Hillandale Rd (SR-1321) at W Wilson St	Durham
NC-86 at North St	Chapel Hill
Hillandale Rd (SR-1321) at Sprunt Ave	Durham
Timber Hollow Ct at NC-86	Chapel Hill
Manning Dr at Woodbine Dr	Chapel Hill
NC-86 at Piney Mountain Rd	Chapel Hill
NC-55 at Mint St	Durham
US-15 at Fordham Blvd	Chapel Hill
SR-1118 at Woodcroft Pkwy	Durham

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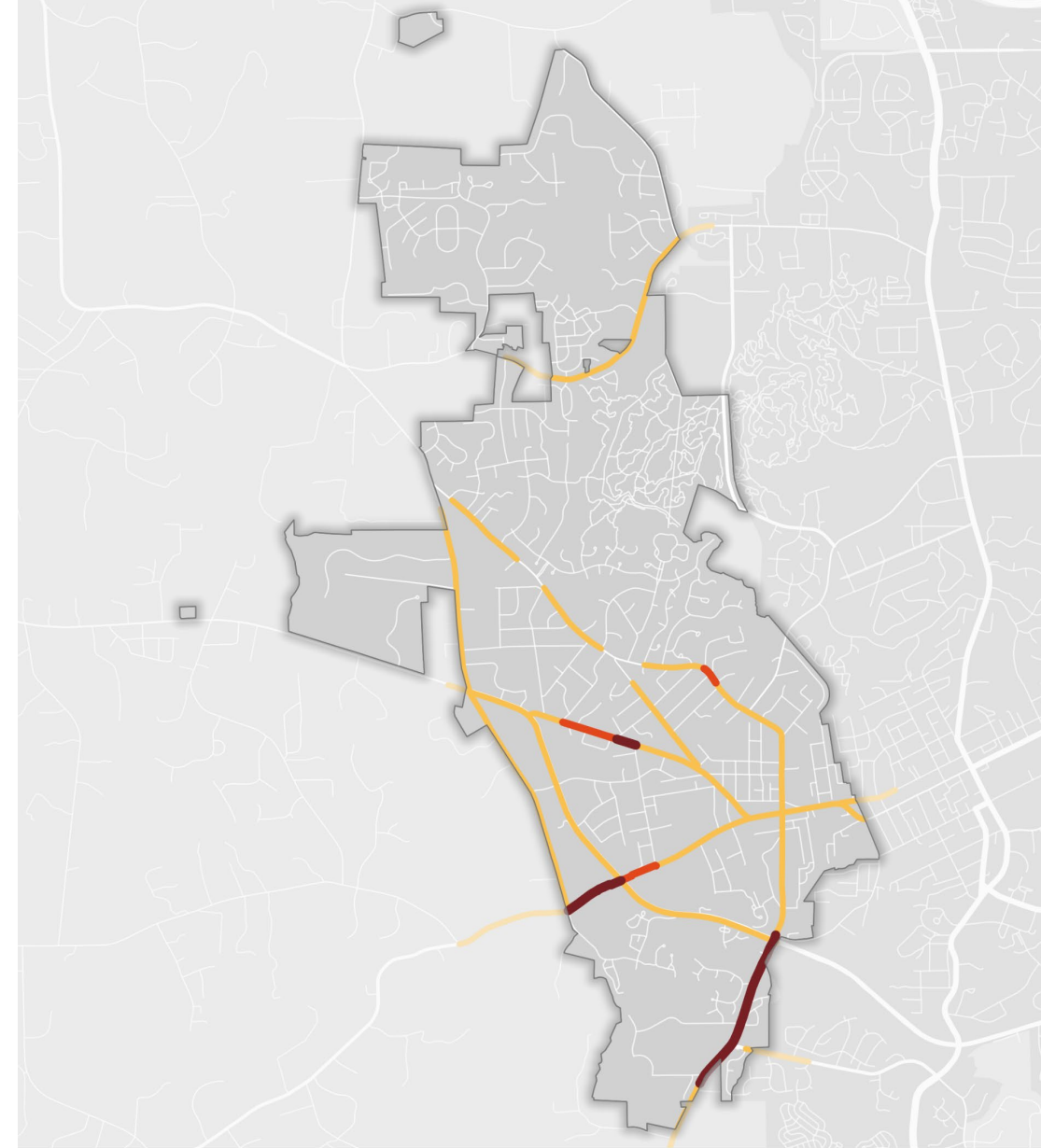
# Carrboro

- Corridors
  - W Main
  - Jones Ferry
- Intersections
  - NC-54 at Old Fayetteville Road (SR-1107)
  - Hillsborough Road (SR-1009) at Shelton Street
  - Main Street (SR-1010) at Davie Road

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Carrboro

Local Priority Corridors:  
Prioritization Score

- High
- Medium
- Low

0 0.4 0.8 mi



# Chapel Hill

## ■ Corridors

- MLK Jr. Boulevard
- US-15

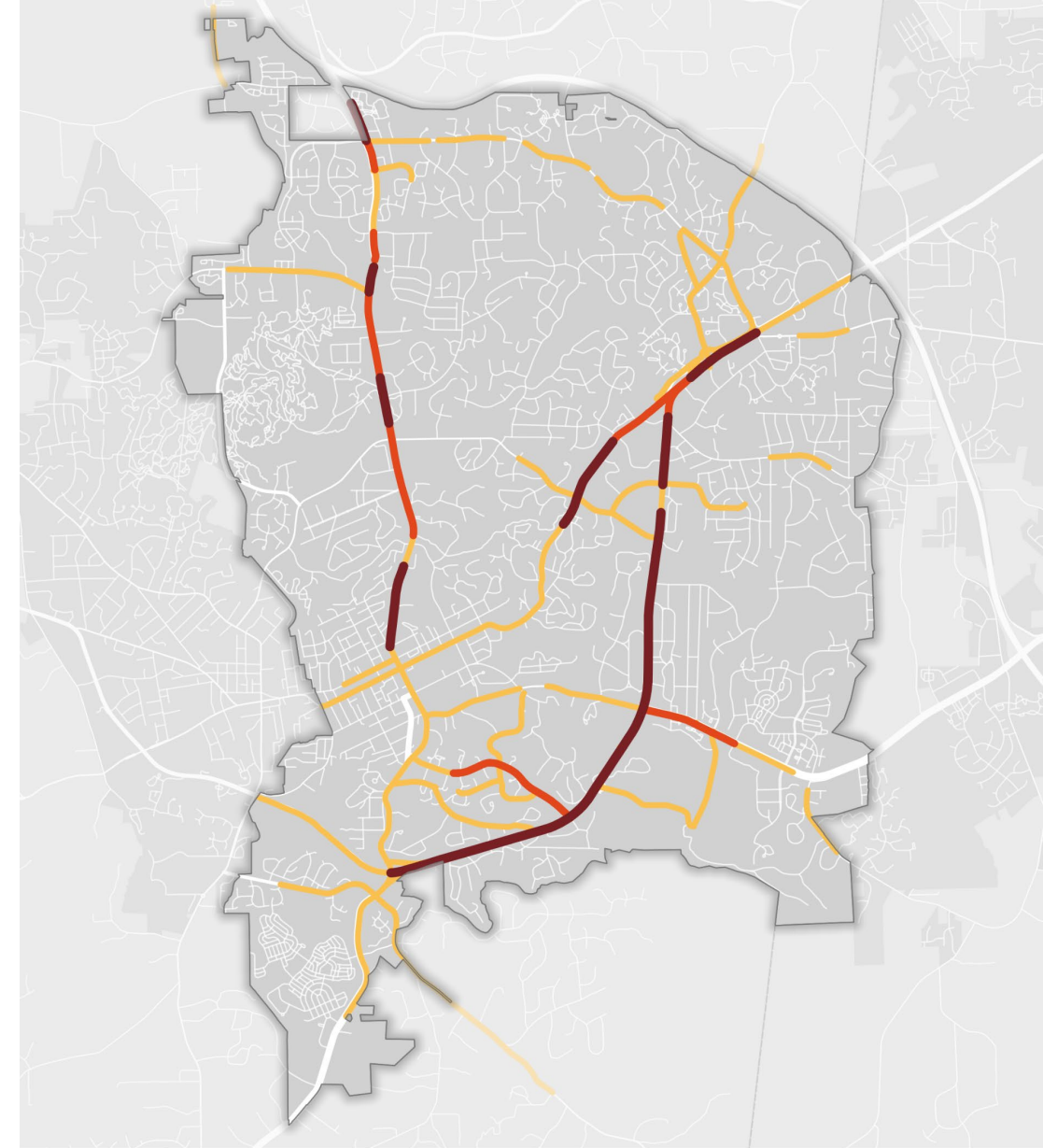
## ■ Intersections

- NC-86 at Central Park Ln
- NC-86 at Stephens St
- NC-86 at North St
- NC-86 at BOLIN HEIGHTS
- Timber Hollow Ct at NC-86

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Chapel Hill

Local Priority Corridors:  
Prioritization Score

- High
- Medium
- Low

0 0.5 1 mi



# Durham

## Corridors

- US-70 BUS Hillsborough Rd
- US-15 BUS N Roxboro St
- US-15 BUS Durham Chapel Hill Blvd

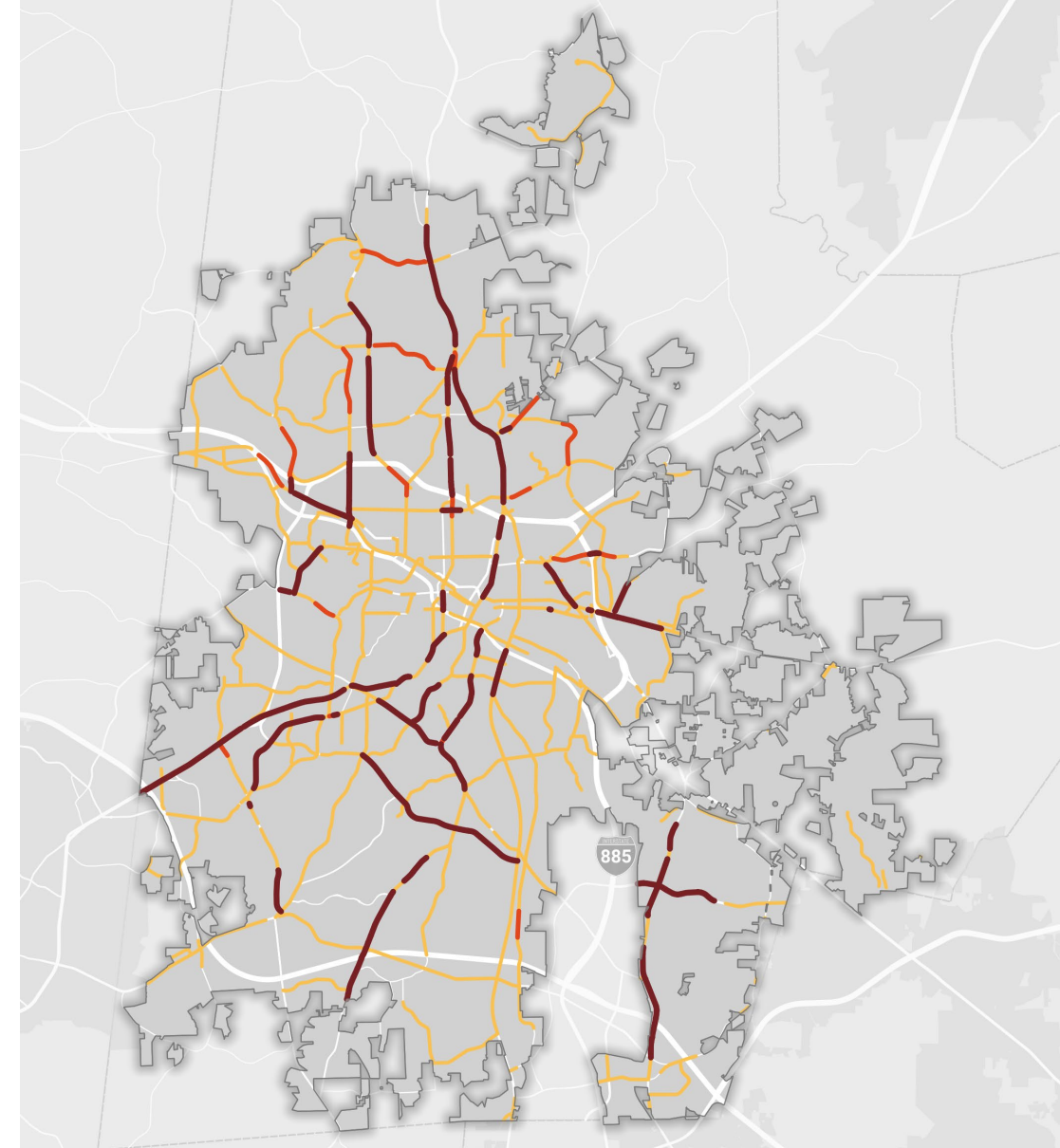
## Intersections

- SR-1321 (Hillandale Rd) at Sprunt Ave
- NC-55 at Mint St
- SR-1118 (Fayetteville Rd) at Woodcroft Pkwy

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Durham

Local Priority Corridors:  
Prioritization Score

- High
- Medium
- Low

0 1 2 mi



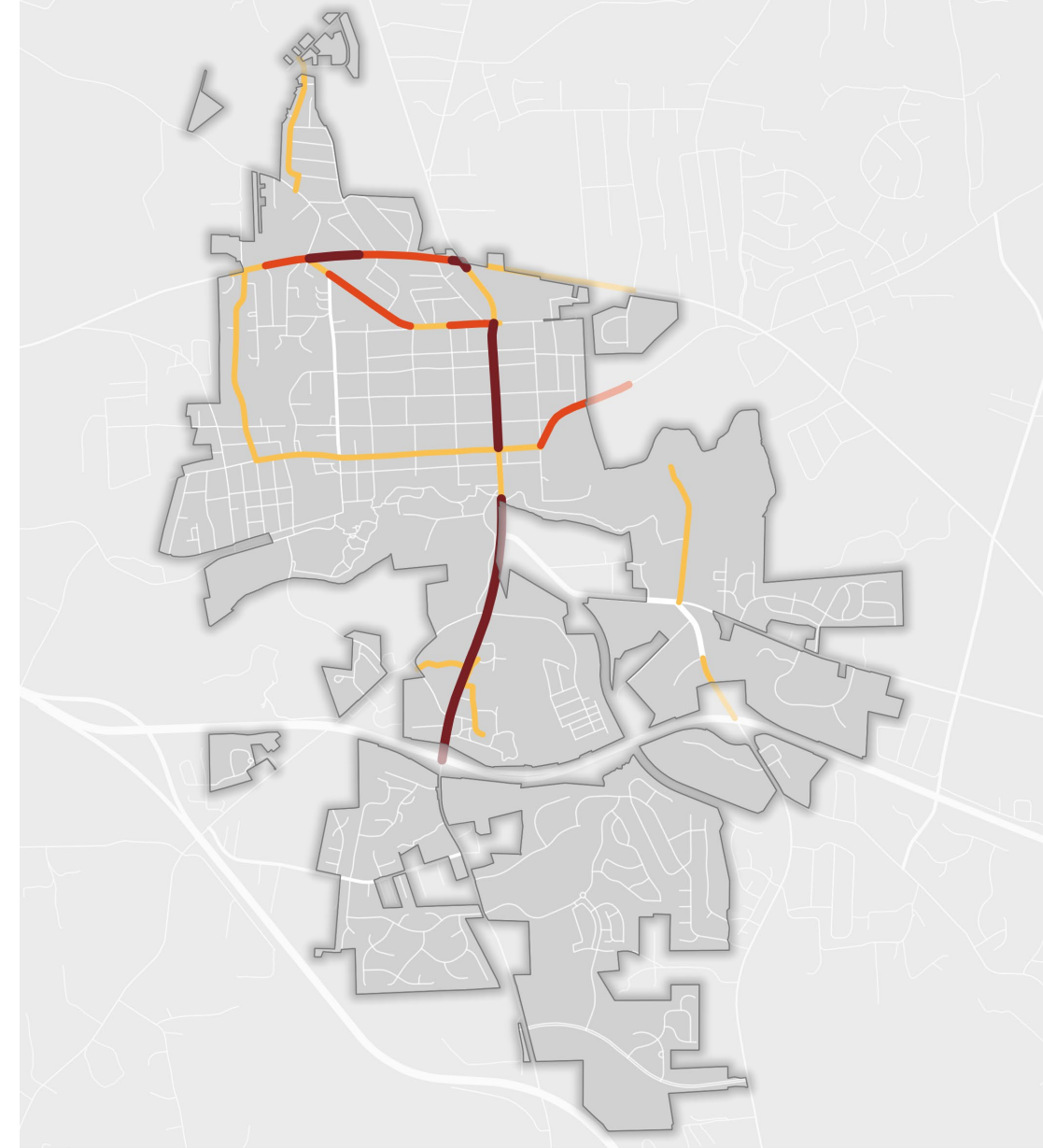
# Hillsborough

## ■ Corridors

- US-70 Cornelius St
- US-70 BUS S Churton St
- SR-1009 S Churton St

## ■ Intersections

- US-70 Business at St. Mary's Road (SR-1002)
- Old NC 86 (SR-1009) at John Earl Street
- US-70 Business at West Short Street
- US-70 at Faucette Mill Road (SR-1328)



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Hillsborough

Local Priority Corridors:  
Prioritization Score

- High
- Medium
- Low

0 0.3 0.6 mi



TOOLE  
DESIGN

# Strategies and Actions

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# Strategies & Actions

- A- Roadway Safety Resources & Guidance
- B- Walking and biking in urban/downtown contexts
- C- Multimodal safety along multilane arterials
- D- Rural high-speed corridors
- E- Safer Routes to Schools
- F- Traffic calming on local streets
- G- Trail and railroad crossings
- H- Unsafe intersections
- I- Behavior and distraction
- J- Land Development practices and procedures
- K- Vulnerable Road Users (VRUs) at night



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## Roadway Safety Resources and Guidance

Although the TWTPO is not an implementing agency, there are numerous resources that can support roadway safety across the region. Additionally, member agencies are consistently developing new policies and programs that can be useful to other communities. These actions identify opportunities to create resources that can be hosted by the TPO and shared among its members.

**TABLE 2** Roadway Safety Resources and Guidance: Actions & Implementation

Action	Timeframe	Cost	Action Leaders and Partners
Create and adopt a regional Complete Streets Design Guide as a resource for the region	Short	\$	Municipalities, NCDOT
Convene a standing Transportation Safety Committee or Vision Zero Task Force to review crash and safety audit reports, coordinate efforts between jurisdictions, and track progress toward Vision Zero goals	Immediate	\$	Municipalities, NCDOT
Develop a region-wide safety campaign to share information with the community about traffic safety for all modes	Short	\$	Municipalities, TPO
Develop an annual program budget to support the TWTPO region's Vision Zero Program	Short	\$\$	TPO
Ensure that asset management and maintenance programs reflect Vision Zero priorities.	Immediate	\$	Municipalities, NCDOT
Publish annual reports for measuring progress with Vision Zero implementation, including crash data and other safety metrics for transparency and accountability.	Immediate	\$	TPO, Municipalities
Adopt a Vision Zero Quick Build/Interim Design Policy that identifies interim design solutions with proven safety countermeasures that can be installed for safety projects while the more permanent solution is in the design and pre-construction processes.	Short	\$	TPO, Municipalities
Develop and adopt a regional framework for developing annual safety targets that are focused on aggressively reducing fatal and serious injury crashes in the TWTPO region.	Immediate	\$	TPO
Develop a region-specific traffic calming guide that identifies best practices and applications for specific design elements.	Short	\$	TPO, Municipalities NCDOT



## Walking and Biking in Urban/Downtown Contexts

Although the TWTPO is not an implementing agency, there are numerous resources that can support roadway safety across the region. Additionally, member agencies are consistently developing new policies and programs that can be useful to other communities. These actions identify opportunities to create resources that can be hosted by the TPO and shared among its members.

**TABLE 3** Walking and Biking in Urban/Downtown Contexts: Actions & Implementation

Action	Timeframe	Cost	Action Leaders and Partners
Install No Turn on Red signs at all signalized intersections*	Immediate	\$	NCDOT
Install Leading Pedestrian Intervals (LPIs) on auto recall at all signalized intersections*	Short	\$	NCDOT, Municipalities
Construct curb extensions (interim solutions or concrete curbing) to daylight mid-block and intersection crossings along with formalizing parking/loading locations*	Short	\$\$\$	NCDOT, Municipalities
Deploy protected left turn signal phases (removing permissive left turns during active pedestrian crossing phases) in downtown areas and along high-volume pedestrian and bicycle corridors*	Short	\$\$	NCDOT, Municipalities
Create a sidewalk gap program to fill short segments outside of the private development or CIP processes*	Short	\$\$\$	Municipalities
Host Complete Streets design trainings/workshops for local government staff, elected officials, NCDOT project managers, consultants, etc.	Immediate	\$	TPO, Municipalities, NCDOT
Consider rest in red phase for downtown signals in off-peak, late night, or early morning periods*	Short	\$	NCDOT, Municipalities

# Roadway Safety Resources & Guidance



Action	Partners	Timeframe	Cost
Create and adopt a regional Complete Streets Design Guide as a resource for the region	Municipalities, NCDOT	Short	\$
Convene a standing Transportation Safety Committee or Vision Zero Task Force to review crash and safety audit reports, coordinate efforts between jurisdictions, and track progress toward Vision Zero goals	TPO, Municipalities, NCDOT	Immediate	\$
Develop a region-wide safety campaign to share information with the community about traffic safety for all modes	Municipalities, TPO	Short	\$
Develop an annual program budget to support the TWTPPO region's Vision Zero Program	TPO	Short	\$\$
Ensure that asset management and maintenance programs reflect Vision Zero priorities.	Municipalities, NCDOT	Immediate	\$
Publish annual reports for measuring progress with Vision Zero implementation, including crash data and other safety metrics for transparency and accountability.	TPO, Municipalities	Immediate	\$
Adopt a Vision Zero Quick Build/Interim Design Policy that identifies interim design solutions with proven safety countermeasures that can be installed for safety projects while the more permanent solution is in the design and pre-construction processes.	TPO, Municipalities	Short	\$
Develop and adopt a regional framework for developing annual safety targets that are focused on aggressively reducing fatal and serious injury crashes in the TWTPPO region.	TPO	Immediate	\$
Develop a region-specific traffic calming guide that identifies best practices and applications for specific design elements.	TPO, Municipalities, NCDOT	Short	\$

# Walking and biking in urban/downtown contexts



Action	Partners	Timeframe	Cost
Install No Turn on Red signs at all signalized intersections*	NCDOT	Immediate	\$
Install Leading Pedestrian Intervals (LPIs) on auto recall at all signalized intersections*	NCDOT, Municipalities	Short	\$\$
Construct curb extensions (interim solutions or concrete curbing) to daylight mid-block and intersection crossings along with formalizing parking/loading locations*	NCDOT, Municipalities	Short	\$\$\$
Deploy protected left turn signal phases (removing permissive left turns during active pedestrian crossing phases) in downtown areas and along high volume pedestrian and bicycle corridors*	NCDOT, Municipalities	Short	\$\$
Create a sidewalk gap program to fill short segments outside of the private development or CIP processes*	Municipalities	Short	\$\$\$
Host Complete Streets design trainings/workshops for local government staff, elected officials, NCDOT project managers, consultants, etc.	TPO, Municipalities, NCDOT	Immediate	\$
Consider rest in red phase for downtown signals in off-peak, late night, or early morning periods*	NCDOT, Municipalities	Short	\$
Deploy hardened centerlines and turn wedges for motor vehicle turning movements at intersections*	Municipalities	Short	\$

# Multimodal safety along multilane arterials



Action	Partners	Timeframe	Cost
Construct separated pedestrian and bicycle facilities--detached sidewalks, sidepaths, separated bike lanes.	NCDOT, municipalities	Short	\$\$\$
Install speed limit feedback signage	NCDOT, municipalities	Short	\$
Set/reduce speed limits for multilane arterials based upon context (source: <a href="https://safety.fhwa.dot.gov/provencountermeasures/appropriate-speed-limits.cfm">https://safety.fhwa.dot.gov/provencountermeasures/appropriate-speed-limits.cfm</a> )	NCDOT, municipalities	Immediate	\$
Conduct regular Road Safety Audits on high risk arterials	TPO, NCDOT, municipalities	Immediate	\$
Remove permissive left turns during active pedestrian phases at intersections starting with intersections that include trail crossings and adjacent to transit stops.	NCDOT, municipalities	Short	\$\$
Develop corridor studies for HIN corridors, including crash types, speeds, multimodal facilities, crossings, and lighting/visibility	TPO, NCDOT, municipalities	Mid	\$\$
Narrow travel lane widths on multilane arterials to support traffic calming and identify opportunities for repurposing existing roadway for multimodal facilities/amenities.	NCDOT, municipalities	Short	\$\$



# Rural high-speed corridors



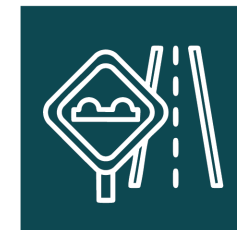
Action	Partners	Timeframe	Cost
Install enhanced delineation for horizontal curves for corridors along the HIN or HRN	NCDOT, Municipalities	Immediate	\$
Install wider edge lines on high speed rural roadways	NCDOT	Mid	\$\$
Create a policy, procedure, and multi-agency team to conduct a Road Safety Audit for rural corridors along the HIN and in response to future KSI crashes.	TPO, Municipalities, counties	Immediate	\$
Review speed limits on the rural HIN, evaluate the speed limit change process, and explore rural corridors for design and signal improvements and speed limit reduction	NCDOT, Municipalities, counties	Short	\$
Consider a roundabout-first policy to address speeds and dangerous intersections along rural high-speed corridors	TPO, NCDOT, Municipalities, counties	Immediate	\$
Install high visibility and enhanced trail crossings (i.e., high visibility crossings, RRFBs, PHBs, raised crossings, neck downs, etc.) along rural corridors	NCDOT, Municipalities	Short	\$\$
Create and adopt an intersection control/design selection process.	TPO, local governments	Immediate	\$

# Safer Routes to Schools



Action	Partners	Timeframe	Cost
Install high visibility crosswalks within a one-mile travelshed of all schools*	NCDOT, Municipalities, school districts	Immediate	\$
Construct curb extensions and median refuge islands for street crossings within a half mile of all schools*	NCDOT, Municipalities, school districts	Short	\$\$
Install separated bikeway facilities--separated bike lanes or shared use paths--along corridors that are within a half mile of schools*	NCDOT, Municipalities, school districts	Short	\$\$
Install RRFBs and PHBs for mid-block crossings within a half mile of all schools*	NCDOT, Municipalities, school districts	Short	\$\$
Provide raised crosswalks at mid-block crossings and at intersections used for walking and bicycling to/from schools	NCDOT, Municipalities, school districts	Mid	\$\$\$
Conduct targeted/automated enforcement of handheld device bans and other distracted driving within school zones	Law enforcement	Short	\$
Implement a comprehensive crossing guard program	school districts, Municipalities	Short	\$\$
Develop resident/ambassador program to support local SRTS programs (i.e., counts, safety audits, infrastructure project review, etc.)	school districts, Municipalities, SRTS	Immediate	\$
Create a walking and bicycling school bus leader guide and program development information.	school districts, Municipalities, SRTS	Immediate	\$
Create a traffic playground pop-up toolkit that can be used at local events to teach walking and bicycling in a playful manner.	County health departments, school districts, Municipalities, SRTS, TPO	Immediate	\$
Identify locations for permanent traffic playground for each community	County health departments, school districts, Municipalities, SRTS, TPO	Short	\$\$
Adopt a Safe Routes to School Action Plan	Municipalities	Short	\$

# Traffic calming on local streets



Action	Partners	Timeframe	Cost
Implement road diets/lane removals to provide space for walking, bicycling, transit, green space, and/or on-street parking	NCDOT, Municipalities	Short	\$\$\$
Develop a neighborhood slow streets program	Municipalities	Immediate	\$
Create a neighborhood traffic calming program to manage community traffic safety requests in a transparent, consistent, and equitable manner.	Municipalities	Short	\$
Deploy mini traffic circles, speed cushions, chicanes, neck downs, hardened centerlines, and curb extensions on residential streets to reduce vehicle speeds and cut through traffic	Municipalities	Short	\$\$
Install a network of bicycle boulevards/neighborhood slow streets to expand existing bicycle networks and reduce motor vehicle speeds.	Municipalities	Mid	\$\$
Narrow travel lane widths along local streets at the corridor level or at strategic locations.	Municipalities	Short	\$\$

# Trail and railroad crossings



Action	Partners	Timeframe	Cost
Daylight intersections (removing obstacles that impair sight lines) for all trail and railroad crossings	NCDOT, municipalities	Short	\$\$
Construct grade separated crossings for trails at streets with posted speeds of greater than 45 mph	NCDOT, municipalities	Mid	\$\$\$
Install crossings arms and enhanced warning devices at all uncontrolled railroad crossings	NCDOT, NCRR, other rail partners	Mid	\$\$\$
Install lighting at all mid-block trail crossings	NCDOT, municipalities	Short	\$\$\$
Install RRFBs or PHBs for trail crossings on high-speed corridors until grade separated crossing is constructed.	NCDOT, municipalities	Short	\$\$
Coordinate with Railroad companies ahead of time to create a strategic plan to address crossing locations ahead of time (maybe create a standardized process)	Railroad Companies	Mid	\$



# Unsafe intersections



Action	Partners	Timeframe	Cost
Implement Systemic Safety Improvements at highest risk rural intersections annually	NCDOT	Short	\$\$
Implement daylighting at urban high risk and mid-block intersections with on street parking	NCDOT, Municipalities	Short	\$\$
Add pedestrian countdown signals and Leading Pedestrian Intervals (LPIs) at high risk signalized intersections	NCDOT, Municipalities	Immediate	\$\$
Study the implementation of automated enforcement for red light running in school zones	TPO, NCDOT, Municipalities, school district	Short	\$
Remove permissive left turns during active pedestrian phases	NCDOT, Municipalities	Short	\$
Tighten turning radii to reduce turning speeds and include truck aprons on freight routes	NCDOT, Municipalities	Mid	\$\$\$
Consider a roundabout-first policy to address speeds and dangerous intersections along the HIN and high-risk corridors	NCDOT, Municipalities, counties, TPO	Immediate	\$
Close slip lanes where applicable, starting with the HIN	NCDOT, Municipalities	Mid	\$\$\$
Deploy protected intersections for pedestrians and bicyclists along multilane arterials and where bikeways exist or are planned.	NCDOT, Municipalities	Mid	\$\$\$
Use intersection control/design selection process to determine appropriate intersection treatments.	Municipalities	Short	\$

# Behavior and distraction



Action	Partners	Timeframe	Cost
Establish county-metrics for seatbelt and carseat public education campaigns	TPO, law enforcement, NCDOT	Short	\$
Conduct High Visibility Enforcement for seatbelts and impaired driving	Law enforcement	Short	\$
Update local and regional plans and policies to be inclusive of all modes and ensure safety as a primary priority. Plans include comprehensive plans, land use plans, mode specific plans, etc.	LGAs	Immediate	\$
Promote and implement safe driving and anti-distraction messaging and policies.	TPO, law enforcement, NCDOT	Short	\$
Host community conversations about roadway safety.	TPO, local governments, trauma-centers, local advocacy groups	Short	\$
Develop program for emergency responders to tell their stories about about roadway safety that can be shared with communities to emphasize the impact fatal and serious injury crashes have on people.	TPO, trauma-centers, law enforcement, local advocacy groups	Short	\$

# Land Development practices and procedures



Action	Partners	Timeframe	Cost
Deploy access management strategies to combine driveways to adjacent properties, provide cross-access between developments, and construct medians to reduce conflicts near driveways and intersections	Municipalities	Mid	\$
Incorporate into TPO Federal Funding Policy a regional Project Evaluation Framework to exclude undivided multi-lane highways from regional funding priorities. Every multilane road must have median (preferred) and/or turn lane (at a minimum).	TPO, NCDOT	Short	\$
Develop guidance and coordinate with external stakeholders to ensure that access for people walking, bicycling, and using transit is maintained during roadway or site construction and special events	Local governments	Immediate	\$
Integrate the HIN into project and development reviews	TPO, NCDOT, local governments	Immediate	\$
Update, adopt, and implement land use, Transportation Demand Management (TDM), and street design policies that increase safety, reduce Vehicle Miles Travelled (VMT), and decrease dependence on single-occupancy vehicle (SOV) trips	TPO, CPRC, local governments	Short	\$
Review and update land use policies and development standards to prioritize the safety of all road users (e.g., block size, crosswalk spacing, access management)	Local governments	Immediate	\$

# Vulnerable Road Users (VRUs) at night



Action	Partners	Timeframe	Cost
Install street lighting along high frequency transit corridors, specifically at transit stops and crossings	NCDOT, local governments	Mid	\$\$\$
Deploy high visibility crosswalks	NCDOT, local governments	Immediate	\$
Install RRFBs or PHBs to catch attention of drivers, specifically at night	NCDOT, local governments	Short	\$\$
Narrow lane widths to support traffic calming and reduce crossing distances for pedestrians and bicyclists.	NCDOT, local governments	Mid	\$\$
Conduct night-time Road Safety Audits along key high-risk roadways and for fatal or serious injury crashes that involve a VRU at night.	TPO, NCDOT, local governments	Immediate	\$
Install pedestrian-scale lighting strategically along the HIN and high-risk roadways, especially at trail crossings, to improve visibility to drivers	NCDOT, local governments	Mid	\$\$\$



# Metrics and Accountability

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# Performance Metrics

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- Number and rates of fatal and serious injury crashes
- Changes in the number and rates of fatal and serious injury crashes over time
- Crashes along the HIN and changes in crash rates over time
- Crashes involving bicycles and pedestrians
- Crashes resulting from unsafe speeds
- Crashes on NCDOT roadways versus local roadways
- Crashes occurring on roadways in communities where a high number of indicators of potential disadvantage exist

# Target Setting Framework

- Consider:
  - Totals numbers and rates
  - Roadway Ownership/Maintenance
  - Context: Urban and Rural

Context	Type	1-Year Target				5-Year Milestone			
		Number		Rate		Number		Rate	
		Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural
NCDOT									
	PEDESTRIAN								
	BICYCLIST								
	MOTORIST								
	SUBTOTAL								
LOCAL									
	PEDESTRIAN								
	BICYCLIST								
	MOTORIST								
	SUBTOTAL								
TOTALS									

# Appendices

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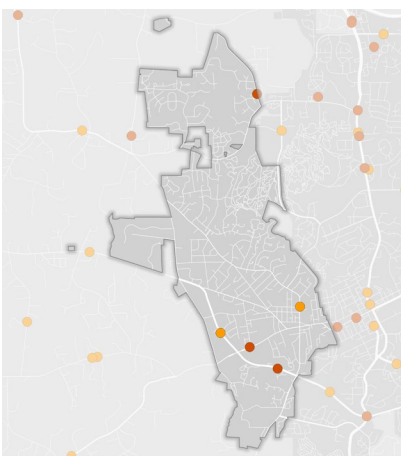
# Appendices

- Safety Analysis Methodologies
- Equity Mapping & Analysis
- Engagement Summary
- Member Agency Maps & Actions

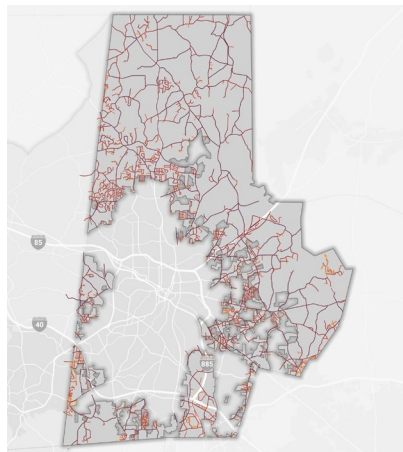
Table 2 Risk-Factors by Crash Type

Risk Factor	Lane Departure	Speed-Related	Pedestrian	Bicycle	Motorcycle	Total Intersection	Bike/Ped Intersection
School or University Nearby							
Transit Stop Present							
Fewer Travel Lanes							
More Travel Lanes							
Higher AADT							
US Route							
NC Route							
SR Route							
Rural Context Classification							
Suburban Context Classification							
Urban Context Classification							
Higher CDC Social Vulnerability Index							
Higher Proportion of Zero Vehicle Households							
Higher Population and Employment Density							
Four Legs							
Signalized							
Greater Intersection Skew							

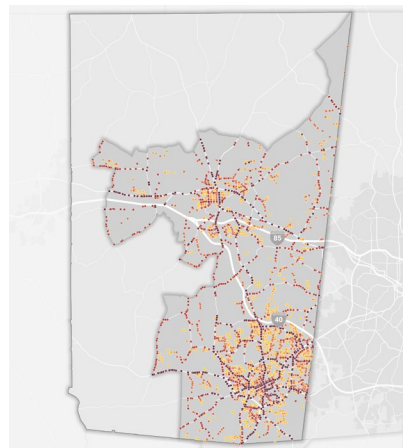
# Member Agency Maps & Actions



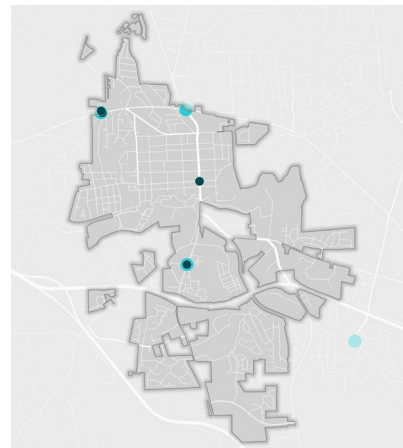
**Carrboro**  
2019-2023 Crashes  
● Fatal Crash  
● Serious Injury Crash  
0 0.2 0.4 mi  
TOOLE DESIGN



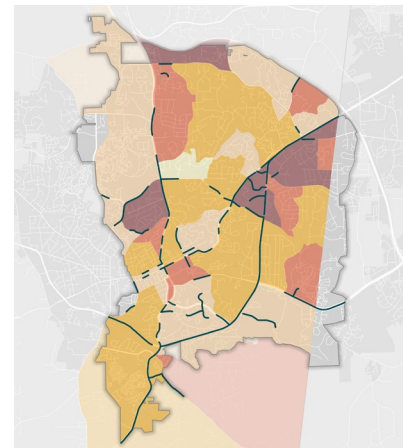
**Durham County**  
High Risk Segments:  
Likelihood of a fatal  
or injury crash  
— High  
— Medium  
— Low  
0 2 4 mi  
TOOLE DESIGN



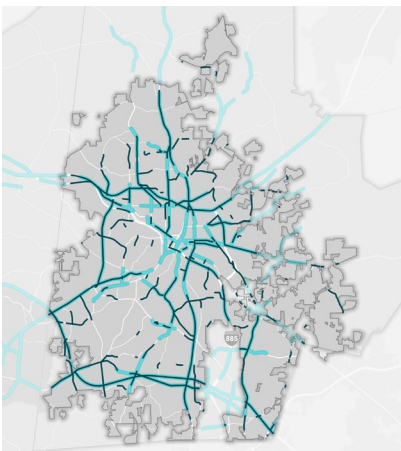
**Orange County**  
High Risk Intersections:  
Likelihood of a fatal  
or injury crash  
● High  
● Medium  
● Low  
0 2 4 mi  
TOOLE DESIGN



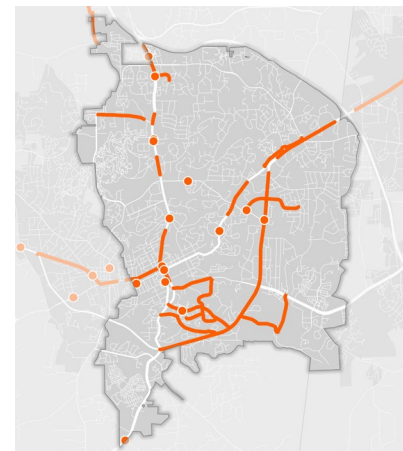
**Hillsborough**  
High Injury Network  
● Local HIN  
● Regional HIN  
● Intersections  
0 0.3 0.6 mi  
TOOLE DESIGN



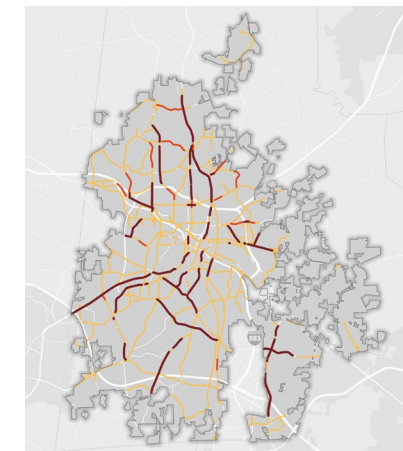
**Chapel Hill**  
Concentration of Eight Key Populations  
■ Well above average  
■ Above average  
■ Average  
■ Below average  
■ Well below average  
— Local HIN  
0 0.3 0.6 mi  
TOOLE DESIGN



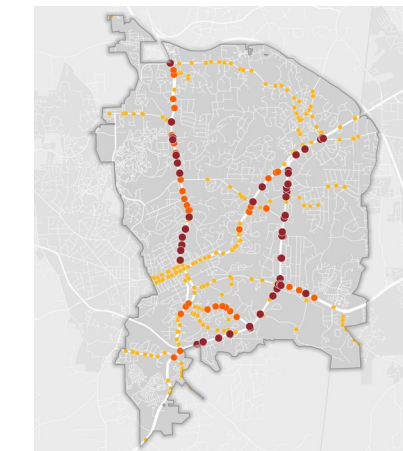
**Durham**  
High Injury Network  
● Local HIN  
● Regional HIN  
● Intersections  
0 1 2 mi  
TOOLE DESIGN



**Chapel Hill**  
Bicycle & Pedestrian  
High Injury Network  
● HIN Intersections  
● HIN Corridors  
0 0.5 1 mi  
TOOLE DESIGN



**Durham**  
Local Priority Corridors:  
Prioritization Score  
— High  
— Medium  
— Low  
0 1 2 mi  
TOOLE DESIGN



**Chapel Hill**  
Local Priority Intersections:  
Prioritization Score  
● High  
● Medium  
● Low  
0 0.5 1 mi  
TOOLE DESIGN



# Questions

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