TRIANGLE WEST
Transportation Planning Organization

Triangle West TPO's
2ND ANNUAL REGIONAL SAFETY SUMMIT

BREAKOUT SESSION SUMMARY REPORT

Thursday, November 20, 2025 I Chapel Hill Public Library, Chapel Hill, NC

The second annual Triangle West TPO Regional Safety Summit included breakout sessions for attendees that explored 5 of the 12 strategies that were identified in Triangle West's Regional Vision Zero Action Plan, with emphasis on immediate and short-term actions.

The breakout sessions were facilitated by staff from the UNC Highway Safety Research Center and Injury Prevention Research Center, and Triangle West TPO. This report provides a summary for each breakout session using a combination of live feedback and data gathering using Mentimeter, and notes taken by the facilitator teams during the discussion. Mentimeter results are included verbatim. This summary report was created to share thoughts, ideas, wins, and challenges to help advance safety through both technical work and policy & procedures. Please note that this summary of information may not reflect all discussion, thoughts, and ideas shared during each breakout session. Not all breakout sessions were able to discuss each action and question due to time constraints.

CONTENTS

Breakout Sessions Guide - **page 3**

Technical Session #1: Traffic Calming on Local Streets - **page 4**

Technical Session #2: Multimodal Safety Along Multilane Arterials - **page 12**

Technical Session #3: Safe Routes to School - **page 21**

Policy & Procedures Session #1: Land Development Practices and Procedures - **page 28**

Policy & Procedures Session #2: Behavior and Distraction - **page 35**

Street Safety Features Visual Guide - **page 39**

BREAKOUT SESSIONS GUIDE

Staff from UNC's Highway Safety Research Center and Injury Prevention Research Center, and Triangle West TPO, facilitated breakout sessions for attendees. The breakout sessions explored 5 of the 12 strategies that were identified in Triangle West's Regional Vision Zero Action Plan, with emphasis on immediate and short-term actions. (Explore all strategies in the Plan here). The breakout sessions used Mentimeter to engage, share, and discuss amongst each small group. Attendees were assigned to the breakout session they selected during online pre-registration.

How to Use the Action Item Tables

A. Strategy Category

Strategies are overarching changes that may be operational, contextual, or mode-specific to systematically address the factors that lead to fatal and serious injury crashes and promote a culture of safety.

B. Action Items

Each action item is a discrete, specific effort that can be advanced by the Triangle West TPO, member agencies, supporting agencies, or NCDOT.

C. Systemic Actions

Items followed by an asterisk represent systemic safety countermeasures that can be installed on the High-Injury Network (HIN) or proactively across the region where similar conditions exist for crashes to potentially occur.

D. Timeframe

Action items are assigned general timeframes to help action leaders prioritize their efforts. Although the timeframes note several years, these timeframes align with the level of effort for completing these actions.

Timeframes include:

- Immediate: Within 1 year;
- Short-term: 1-5 years; or
- Mid-term: 5-10 years.

E. General Cost

Although costs vary over time and by jurisdiction, the following cost ranges were used to assign a high-level estimate for each action:

- $ - low (less than $250k)
- $$ - medium (between $250k-$1M)
- $$$ - high ($1M and above)

F. Action Leaders and Partners

Each action item may have several agencies that can take the lead, and those along with agencies/organizations that can provide support are noted. This is not an exhaustive list, and each action may create opportunities for partnerships in each community and across the region.

G. Focus of Regional Safety Summit Breakout Sessions

Each breakout session will focus on selected **immediate** and **short-term** actions for each strategy. (All strategies and actions can be found in the Plan here).

TRAFFIC CALMING ON LOCAL STREETS

TECHNICAL SESSION #1 MEETING ROOM B

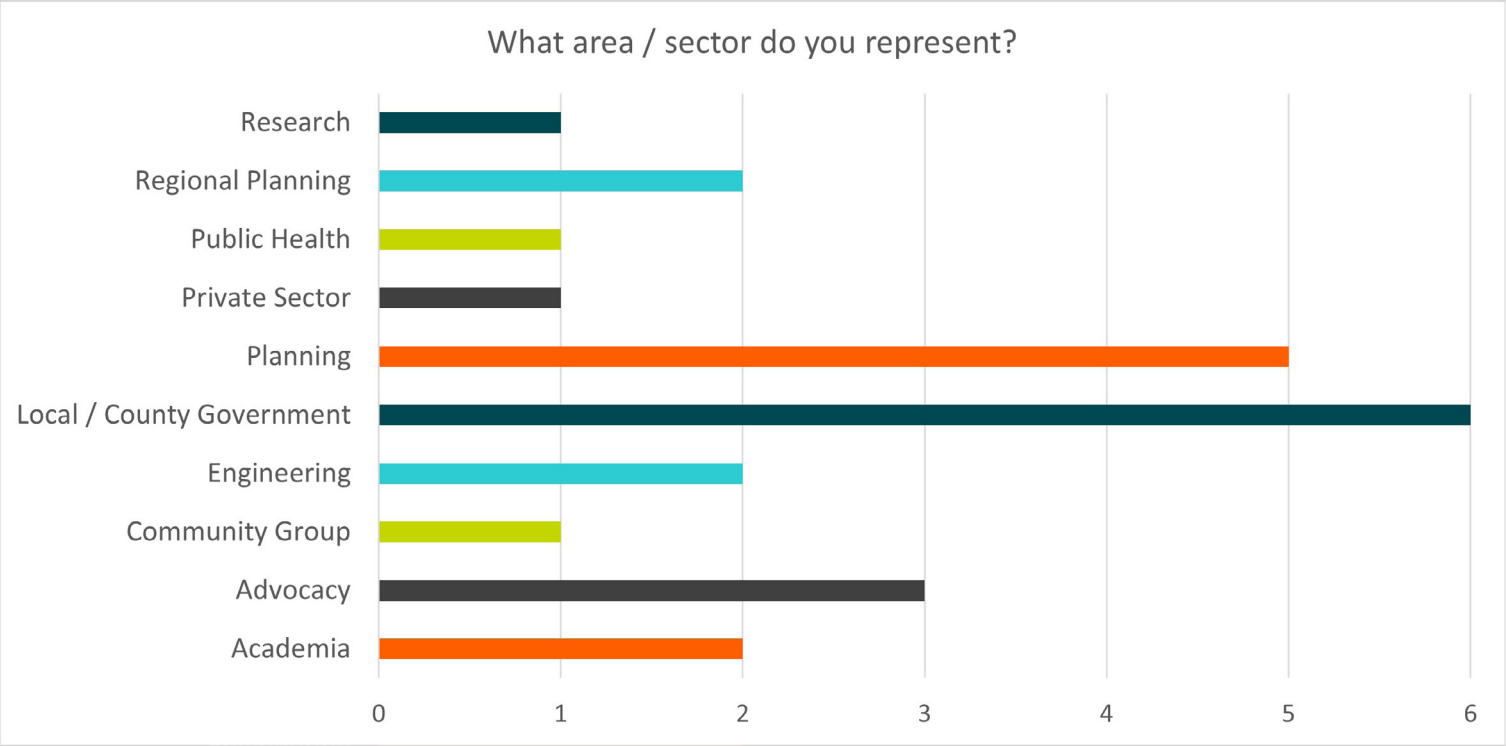
Traffic Calming on Local Streets

Reducing speed on local streets creates safer and more livable places for residents in communities across the region. Traffic calming actions emphasize changing streets to allow for shared spaces for a variety of users that are comfortable because of slower moving vehicles along streets and at intersections.

Action	Timeframe	Cost	Action Leaders and Partners
Implement road diets/lane removals to provide space for walking, bicycling, transit, green space, and/or on-street parking	Short	$$$	NCDOT, Municipalities
Develop a neighborhood slow streets program to support community requests for low vehicular traffic residential streets that emphasize slow and safe speeds and support a variety of uses and activities beyond driving	Immediate	$	Municipalities
Create a neighborhood traffic calming program to manage community traffic safety requests in a transparent, consistent, and equitable manner	Short	$	Municipalities
Deploy mini traffic circles, speed cushions, chicanes, neck downs, hardened centerlines, and curb extensions on residential streets to reduce vehicle speeds and cut through traffic	Short	$$	Municipalities

TRAFFIC CALMING ON LOCAL STREETS

Breakout session participants:



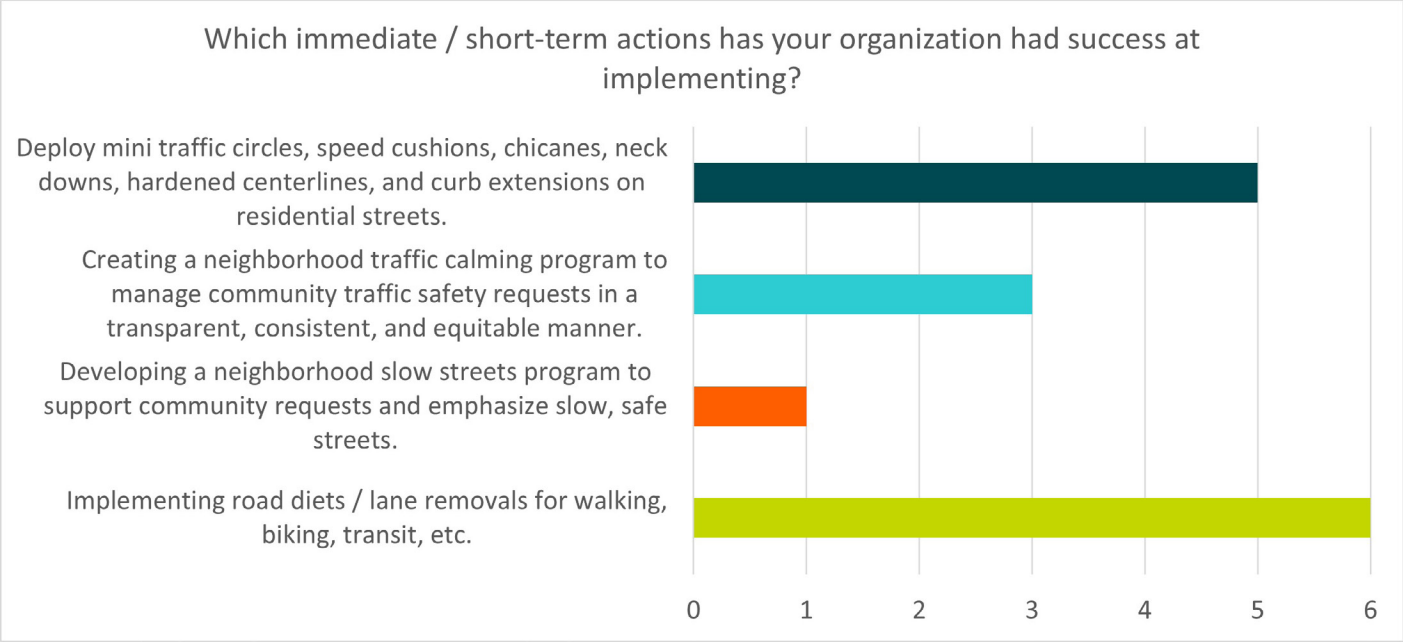
Question: Thinking BIG, how do you envision road safety being improved through Traffic Calming on Local Streets?

- The curb isn't a "cliff" between life and death
- Lower vehicle steers and placate fire brigade
- Leave your leaves (in your yard)
- Installing All-way Stops, adding contraflow bike lanes, widening or installing wide sidewalks
- Slower vehicles because speed kills
- Implement process for City/Town to (affordably) takeover ownership of NCDOT roads in local areas to allow greater flexibility
- I envision a world in which one neighbor cannot block a traffic calming effort
- Presence of cyclists/pedestrians is expected and compatible with use of the road
- Collaborative process (not just an engineering exercise) encourages longer-term community support

TRAFFIC CALMING ON LOCAL STREETS

- Flex posts are beautiful
- Oops. Lower vehicle SPEEDS whilst placating the fire brigade
- Engage neighborhood residents in their own traffic calming strategizing with education about various options
- Designing streets for all users and prioritizing PERSON throughput
- Need funding
- Durham Neighborhood Bike Routes help address challenges with dead ends. On local streets with lots of high speed cars, Durham is encouraging the neighborhood bike routes with signage (destinations, pavement markets, guidance). These bike routes aim to reduces stress and risk for bike-ped travel and create alternate routes. Implementation is relatively quick due to low cost.
- Funding is the problem. We know the issues, but funding is the hurdle.

Question: Which immediate / short-term actions has your organization had success at implementing?



Question: How do you define success?

- Seeing any degree of positive impact, such as a reduction in vehicle speed.
- Seeing pedestrians in areas they were not seen at before. On one block in Hillsborough, two neighbors take turns parking on the street to create a chicane. This can be considered a sacrifice to some rather than parking in a driveway or garage.

TRAFFIC CALMING ON LOCAL STREETS

Action 1: Implement road diets/lane removals to provide space for walking, bicycling, transit, green space, and/or on-street parking

Question: How are you making decisions on where / when to implement these projects? Where would you like to make these decisions if you could?

- Who owns the road
- NCDOT coordination and funding availability
- Focus on High-Injury Network
- Crash frequency data. Public feedback. Hearing from actual walkers and cyclists who use the facilities
- Trying to get community input on missed connections / tracking crashes
- Connecting destinations with context- and user- sensitive infrastructure
- Unilaterally staff-initiated
- Context of past engagements with the neighborhood
- Would like to see these in areas where peds are wanting to walk more but are currently too afraid (where data won't show us crashes due to peds being too afraid to walk/bike)
- Coordinating with municipalities to fund safety projects
- Systematic traffic/pedestrian counts
- Plans
- Resurfacing schedule
- Follow the traffic tickets -- there will be more of them in places where people have few options
- No consensus on cycling community
- Prioritizing equity - neighborhoods that have been consistently left behind.
- Identifying opportunities for basic maintenance and design - sometimes it's as simple as clearing a sidewalk
- Maintenance responsibility for calming infrastructure
- Municipalties do not always receive a "yes" from NCDOT right away, but it can be a long process and require a lot of funds to make change – it is helpful to look at the long-term view. Complexity due to right-of-way and utilities. On a local street, a completed project may take 3-5 years through a capital campaign. Compromises may need to be made along the way.
- Conversation with NCDOT is vital.
- Align with re-pavement schedules with NCDOT – could be a good solution.
- Inputs: HIN, connections to destinations, in areas where people want to walk more but the data does not show it (The Silent Sufferers), bike-ped counts, resurfacing schedule, prioritizing equity.

Question: What road blocks are stalling you from succeeding?

- Triangle West coordinates with 3 NCDOT divisions
- Fire Engines
- General Assembly
- State funding rules
- Funding obviously
- No one wants to maintain the traffic calming infrastructure
- Developers!
- That one neighbor

TRAFFIC CALMING ON LOCAL STREETS

- Trying to reduce speeds on roads where speeding isn't being reflected in the data but is a problem because the set speed limits are too high and the roads are too wide
- Car bound residents who can't see themselves or anyone else actually not wanting to drive
- Footprint of the existing road tough to accommodate ideal traffic calming
- Coordination with outside entities for right-of-way acquisition
- NCDOT.
- Antiquated thinking.
- The green book.
- Over representation by people who have time to attend a meeting over people who don't - these folks are missed in expressing input on their needs.
- Maintaining integrity of project from concept to design to construction
- Community perspective that "nobody uses that bike lane"
- On street parking
- Identity politics and social media
- Safety vs. Safety: misconception of safety.
- When people advocate for safety, impression they give is that they want to stop something (i.e. removing cyclists from the roads). Safety is a loaded term that means different things to different people.
- No one wants to maintain traffic calming features and countermeasures. No consistent funding stream for these counter measures. Requires a dedicated funding stream.
- I am curious about car-bound residents – are they at fault? Has the planning process involved the community to help define needs? Not a problem unique to Triangle West area.
- We are always going to have opponents for change. Our municipality has listened to residents in a specific neighborhood to learn about safety concerns: near misses, high speeds. We worked with them to develop traffic calming treatments. This has made a huge impact for safety and has resulted in neighborhood advocates that support us.
- Creating curb extensions – hard for people to advocate against people trying to walk safely across the street.

Action 2: Develop a neighborhood slow streets program to support community requests for low vehicular traffic residential streets that emphasize slow and safe speeds and support a variety of uses and activities beyond driving.

Question: Have you developed a program? How? Is it successful? Are there lessons learned?

- Pay the neighbors to do the work

TRAFFIC CALMING ON LOCAL STREETS

- I am interested in developing or be guided to develop a program in my neighborhood
- Shameless plug, would love to help
- No, but we will recommend municipalities to consider this
- Durham working to develop community-led traffic calming as part of Equitable and Green Infrastructure program in 7 identified neighborhoods
- Lessons: treat residents' feedback at data
- Community-led engagement and planning.
- Empowerment = ownership.
- Community expectations may not match government expectations - get away from prescribed processes. Change how success is measured
- Lesson: have a guide book/idea book so residents can see what works
- Allow temporary trials
- Would like to know how neighborhoods are defined. Could be open for interpretation from jurisdiction to jurisdiction. Could just be a subdivision.
- Consider using low cost, using yard signs (i.e. election signs) to repurpose for simple placement or visual cues that say this neighborhood supports safe neighborhood streets.
- Greensboro created a program called Slow Your Roll does this - they shared it at the annual Vision Zero Leadership Institute.
- From experience, going to the public to identify problem is a great way to get engagement, but things go awry quickly to envision solutions because public does not know construction, planning, maintenance. You then deal with personal agendas. Instead, ask "what problems are you facing" and then bring in experts to develop solutions to solve the problems – then go back to the public. Community-led process can lead to letting people down and not advancing things that are not possible.
- I used to have a lot of ideas to fix things, but have had to learn along the way. Need to find a way to educate and work with the public to not always trying to solve the problem on their own.
- Solutions that work for large cities do not always work for small towns.
- Municipalities could create their message and choose which route each takes.
- In our city's neighborhood traffic calming program, we've heard vehicle speeds are too fast. We created a toolbox ready to address neighborhood issues for different local contexts. This has also shown that we are activley working on solutions.
- Don't start with "what do you want to change about your neighborhood" - you'll hear EVERYTHING! Ask what the problem is instead. This approach helps people focus.
- People seem to like speed humps until there is one in front of their house with the "thump-thump" noise.

TRAFFIC CALMING ON LOCAL STREETS

Question: What road blocks are stalling you from succeeding?

- Uninformed public (everyone thinks they want speed bumps or stop signs)
- Low capacity for "smaller" projects, everything goes to larger corridor designs
- Limited resources are devoted to reactive traffic management program
- Town policy against speed tables
- On street parking
- Developers!
- Lack of funding and strict maintenance rules
- Community understanding of how treatments work. How do we explain that this new bike lane is narrowing your travel lane and making the street safer for all users?
- Attitudes that residents' lived expertise is worth less than technical training
- Lack of community trust.. Broken trust.
- Lack of engagement...but plenty on complaining.
- Manual of Uniform Traffic Control Devices
- Fear of congestion
- The belief that there *are* relevant and sufficient safety standards for road design in every situation
- As an advocate, I like jurisdictions taking the initiative (such as the toolbox mentioned previously). Advocacy organizations like to build on other's energy.
- For municipalities, development review can take a lot of time and can be complicated.
- University students are here for 4 years. Neighborhood ambassadors tend to be high income and long-term residents – we are missing out on hearing from everyone.
- Developers don't tend to listen to input and have motivations beyond safety. During development, that is the time to accommodate safety, though there seems to be no legal authority for locla jurisdictions to hold them accountable.
- Developers are sometimes seen as profit-driven. There is no incentive for them to consider what it is like to live in the town/city. Triangle West should consider developing a program that address development/ developers to not miss opportunities for safety improvements.
- One municipality shared they had a positive outcome for a raised crosswalk.
- Funding – can the UNC School of Government develop a canon on transportation?

TRAFFIC CALMING ON LOCAL STREETS

Action 3: Create a neighborhood traffic calming program to manage community traffic safety requests in a transparent, consistent, and equitable manner.

Question: How have you developed a program? Is it successful? Are there lessons learned?

- I managed to help facilitate a planned redesign of my market loop. I now want to initiate further improvements
- Program has been successful at reducing speeds but is inequitable and inefficient due to petition-based process
- Map of NCDOT roads should be easier to read and easier to find.
- Our city is having trouble with scale and getting everything accomplished.
- Building off City's build-it-yourself a good idea. Can free up staff time.
- The Town of Chapel Hill has a neighborhood traffic calming program.

Action 4: 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.

Question: Have you developed a program? How? Is it successful? Are there lessons learned?

- Need easy education for residents about these calming measures, pros, and cons
- NCDOT has a traffic calming program and guide.
- Some do not like words "cut through traffic" - why is it wrong? One reason could be that people may not like traffic on their local streets, especially when it becomes a thoroughfare.

MULTIMODAL SAFETY ALONG MULTILANE ARTERIALS

TECHNICAL SESSION #2 MEETING ROOM B

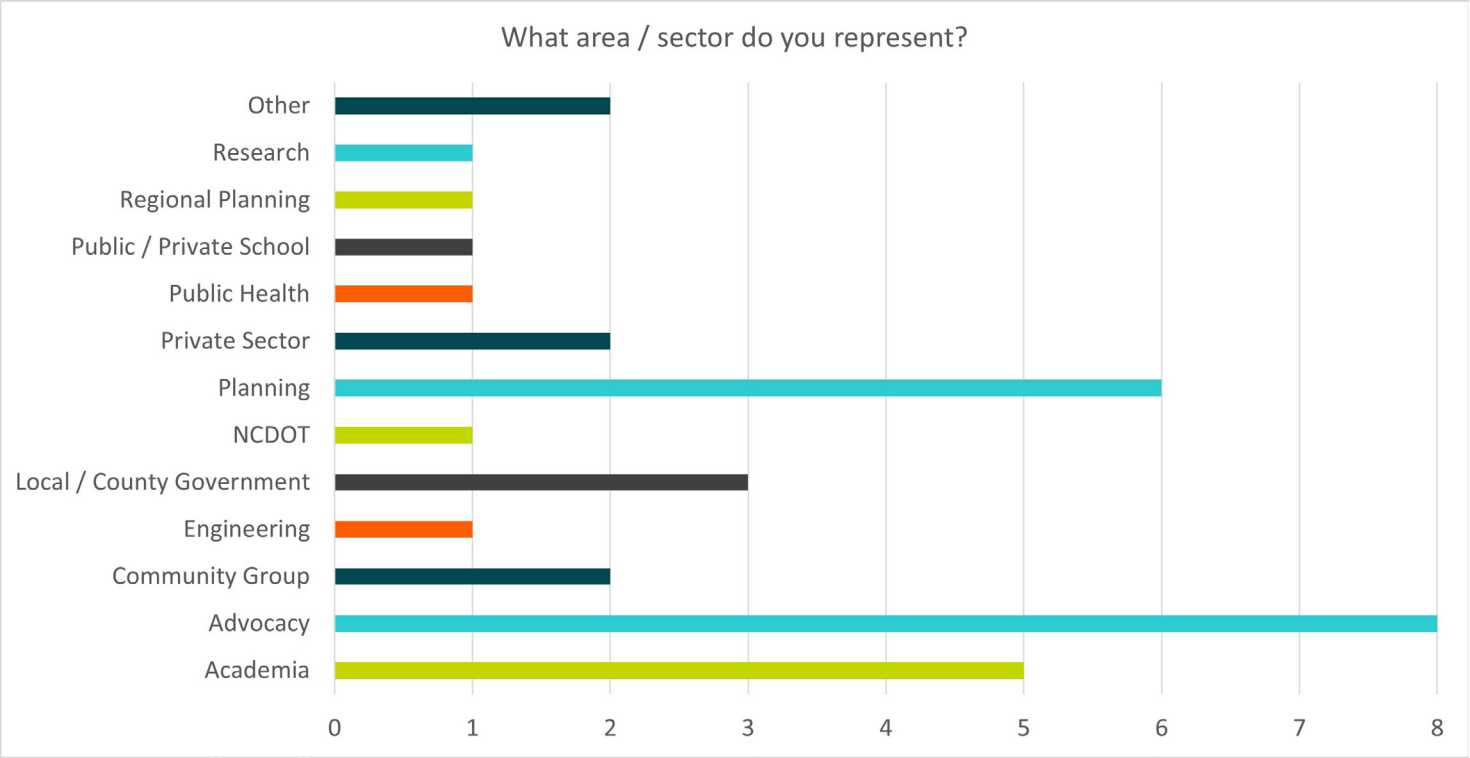
Multimodal Safety Along Multilane Arterials

Roadway safety is a key concern along corridors where people are walking, bicycling, using transit, and driving in conditions with high motor vehicle volumes and numerous travel lanes. Safety action items for these corridors must elevate the Safe System principles and framework to ensure that users are separated wherever possible, and design emphasizes slower speeds where conflicts occur. The following actions can impact project development and policy decisions, as well as encourage additional evaluation and study to understand key characteristics that impact local safety on multimodal multilane arterials.

Action	Timeframe	Cost	Action Leaders and Partners
Construct separated pedestrian and bicycle facilities-detached sidewalks, sidepaths, separated bike lanes	Short	$$$	NCDOT, Municipalities
Install speed feedback signage	Short	$	NCDOT, Municipalities
Set/reduce speed limits for multilane arterials based on context	Short	$$$	NCDOT, Municipalities
Conduct regular Road Safety Audits on high-risk arterials	Immediate	$	NCDOT, Municipalities

MULTIMODAL SAFETY ALONG MULTILANE ARTERIALS

Breakout session participants:



Question: Thinking BIG, how do you envision road safety being improved through Behavior and Distraction?

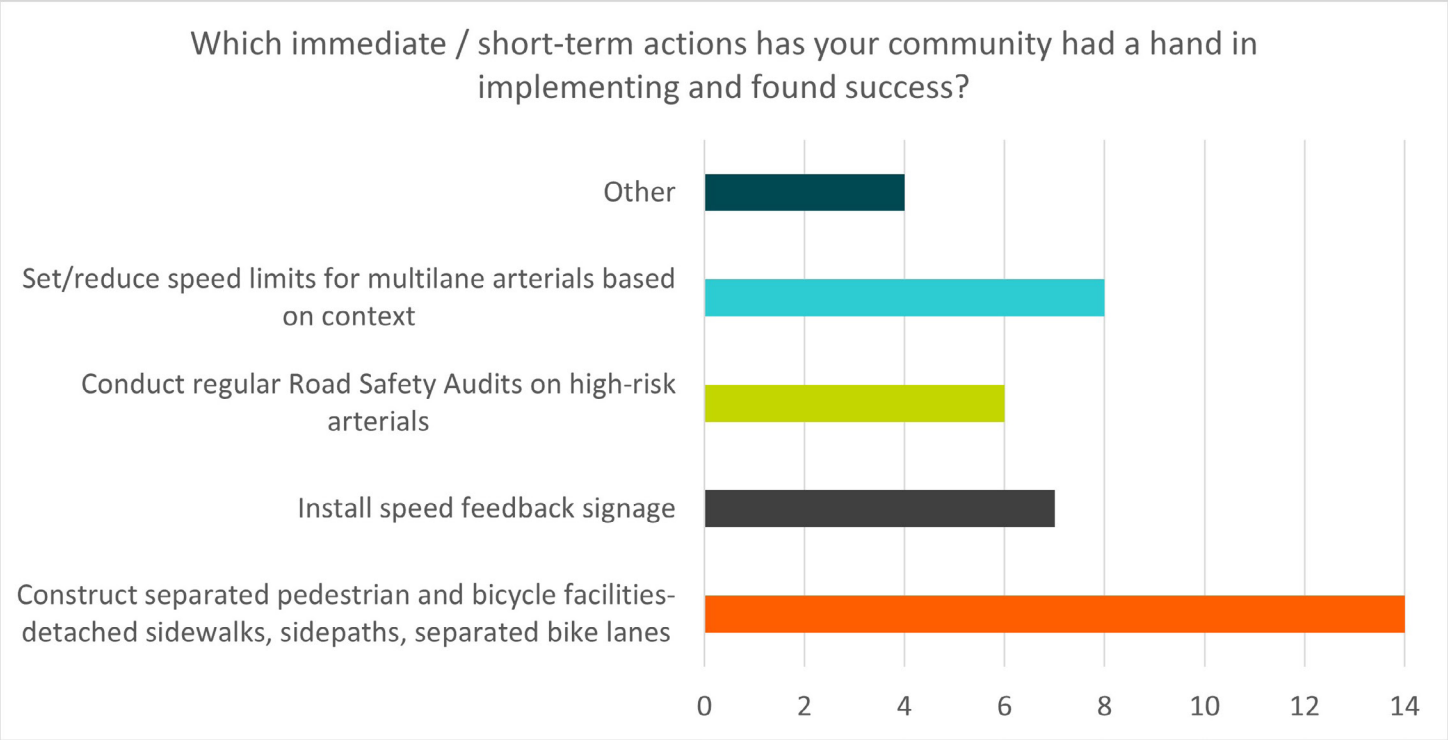
- Adding medians to undivided roads
- Taking state roads into municipal ownership
- Change in road ownership/maintenance responsibilities for certain multilane arterials
- Physical separation
- apply complete street guidelines to all new roads and road “improvements “
- Convert vehicle lanes to bike transit lanes, even if it lowers LOS.
- Increasing frequency of pedestrian crossings
- More complete streets. More dedicated spaces for ped/bike and transit.
- Repurposing excess lanes; separating and buffering modes
- Reducing conflicts
- More mobility options so that there are notably fewer cars on the roads.

MULTIMODAL SAFETY ALONG MULTILANE ARTERIALS

- Change state law to allow for stand alone bike/ped projects + more optional tax opportunities dedicated to transportation
- Physical barriers are the best way to ensure safety when you're asking pedestrians/cyclists to travel along cars at high speeds (see American Tobacco Trail)
- Prioritizing safety over congestion in project planning and design
- Adding more protected (signalized) pedestrian crossings
- Finding ways to reduce speed and separate people in space and time are critical
- By reducing vehicle speeds to reduce the impact to non-motorists when crashes do occur.
- Measuring person throughput rather than just vehicle LOS
- All lane additions should only be for dedicated HOV or transit
- Develop guidance agreement between TPO/Municipalities and NCDOT to reconcile priorities towards needs of local communities
- Developing green ways and shared use paths that connect triangle communities
- Land use that is matched to support multimodal network.
- Safety for all users of multilane arterials would be improved by more focus on the reduction of speed and more emphasis on cars not being the deciding factor in design. Also dedicated transit lanes
- Reducing lane sizes
- Reviewing bus stop locations for improved user safety
- Centerline hardening
- Consider revisiting local light rail
- Change how modeling for future population change is conducted to not assume car use but project multimodal use.
- Updating land use so people to build housing can easily walk, bike, or take transit

MULTIMODAL SAFETY ALONG MULTILANE ARTERIALS

Question: Which immediate / short-term actions has your community had a hand in implementing and found success?



Action 1: Construct separated pedestrian and bicycle facilities-detached sidewalks, sidepaths, separated bike lanes.

Question: How is your community making decisions on where and when to implement these projects?

- High Injury Network
- Funding
- Prioritize based on risk - not just community requests
- Using a high injury network and equity index.
- Funding funding funding
- 5 years of studies followed by “no money” refrain
- Safety/planning studies
- Proximity to school (safe routes to school)

MULTIMODAL SAFETY ALONG MULTILANE ARTERIALS

- Data driven decisions. Within the context of available funding
- Ideally, we are using adopted plan as an implementation tool, and debating project details not of a project should happen.
- Which countermeasures are acceptable to NCDOT Division 7?
- Identifying vulnerable users.
- “When” seems very disconnected from need.
- Utilizing previous planning documents, tactical urbanism techniques. roadblock funding allowed

Question: What are the opportunities? Are there road blocks are stalling your community from succeeding?

- Road block: funding limitations
- Opportunity - bike/ped advocacy community
- Rapid cost escalation
- NCDOT resurfacing projects
- Road safety audits on high risk arterials can identify short term improvements: sidewalk gaps, ped phases at signals, lighting
- More regional collaboration/communication on funding and design between NCDOT, TPO, locals
- Road block: resistance to innovative practices
- Road block - different interpretation of what makes a complete street (NCDOT vs municipality)
- We’ve got extremely supportive elected officials and a budget that reflects investment however working within the confines of NCDOT’s approval process prevents us from truly tackling the H.I.N.
- Orphaned maintenance responsibility outside of municipal boundaries.
- Over time, have seen NCDOT expand their willingness to incorporate multimodal and safety projects - on the flip side, willingness and creativity is inconsistent across divisions
- Shorten studies by using existing plans; get DOT to remove funding limitation; try to access toll revenue for projects
- Opportunity: when a pedestrian/cyclist is hit by a car. :/
- Opportunity- identity low cost quick build alternatives.
- Opportunity: giving locals more decision making influence on certain facilities
- Need more state safety funding!!!
- Develop a step by step guide for project development on ncdot streets
- Lowering speed limits
- Road block: shift in federal priorities
- Opportunity: changes in funding allocations between modes/categories
- Lobby more broadly for bike-ped funding. Talking points for electeds
- Ok to use temporarily- especially if used with an education campaign or coupled with a change (new project, speed limit change, etc.)
- Should be a second tier strategy, after physical changes (signal timing, geometric)
- Challenges include high project costs, limited funding, and a shortage of contractors are significant barriers. Gaining NCDOT

MULTIMODAL SAFETY ALONG MULTILANE ARTERIALS

approval for treatments on state-owned roads is difficult. It was noted that NCDOT may help fund sidewalk construction but not maintenance, and taking state roads into municipal ownership is often prohibitively expensive.

Action 2: Install speed feedback signage.

Question: Is this working well? Has road safety improved? Are there challenges or lessons learned?

- NO
- Short term effective. Over time the effects decrease.
- I think they need to be used in conjunction with other traffic calming measures like raised, illuminated crosswalks and more narrow lanes
- Works better when paired with increased enforcement.
- Keep these on rotation to prevent complacency

Action 3: Set/reduce speed limits for multilane arterials based on context.

Question: Is your community working on this or have you had success at implementation? Why or why not?

- We've tried and not had success with NCDOT approval
- We've had trouble because lowering the speed limit is viewed negatively on state owned roads because it reduces throughput
- Working on this but too soon to determine success.
- Local officials advocating for lower limits on arterials in town limits. Unsure if NCDOT will be amenable.
- Totally agree - but must be combined with engineering fixes and to a more limited extent, enforcement
- Who is collecting data and how is it being reported and recorded?
- No, pushback from NCDOT. Still seems like context (suburban, urban etc) of an area is subjective
- We need to test more physical changes to evaluate effectiveness to reduce actual speeds
- Lowered speed limit and implemented stop signs on in-town NCDOT road and it made a huge difference.

MULTIMODAL SAFETY ALONG MULTILANE ARTERIALS

- Still running into resistance from NCDOT associated with 85% speed.
- This should be done, yes with design changes.
- But studies also find that lowering limits even with no design changes lowers speeds by a proportion of the change
- Need to be more proactive in adjusting to community changes and growth
- It takes multiple interventions to significantly reduce speeds
- Transition/ing areas are difficult where the land use context doesn't yet seem to indicate lower speeds.
- The effectiveness of signs displaying a driver's speed was questioned on multi-lane roads. Alternatives were discussed, such as signs with smiley/frowny faces (used in Iceland) or signs indicating camera monitoring to encourage slower speeds.
- While discussing reducing speed limits, participants noted that simply lowering a speed limit is ineffective without engineering changes. Local officials are advocating for lower limits but sometimes face pushback from NCDOT. However, NCDOT is reportedly moving away from the "85th percentile" rule towards more context-sensitive approaches. It was also mentioned that reducing speed limits on rural roads, even without physical changes, has been shown to lower average speeds.
- Speed data is available to local governments through vendors via an NCDOT agreement, and Triangle West provides access to Streetlight data.

Question: What are the opportunities? Are there road blocks are stalling you from succeeding?

- Evaluate effectiveness of treatments to reduce speed
- Use new speed limit guidance from the state, communicate above the division level
- Road blocks - opposition from emergency services.
- Transitioning area or areas that do not appear urban, for example, are challenging to get any attention.
- Advocate for more funding for roundabouts and other treatments that reduce. crashes and manage speeds
- Use intelligent speed assist to control vehicle speeds

MULTIMODAL SAFETY ALONG MULTILANE ARTERIALS

Action 4: Conduct regular Road Safety Audits on high-risk arterials.

Question: Has your community done this? How have these improved road safety?

- Yes. Yes.
- Yes- Too soon to tell.
- YES!!!!!!!!
- Yes, they were integral in determining which projects to include in the connecting Durham bond projects
- To mention a success.....SCDOT works with communities to conduct RSAs and offers a quick turnaround on smaller fixes. Quick progress when possible.
- These are important, not just for existing roads but prior to building/improving other roads. ADA compliance seriously lacking
- Yes, helps ID quick builds and longer term improvements. Feeling the speed of traffic stays with auditors
- Incorporating the data / HIN in Chapel Hill's E2E project.
- RSAs are being implemented by communities like Durham and Chapel Hill as a tool to get an on-the-ground perspective and determine appropriate lane widths and speeds.
- The state performs most RSAs in rural, high-speed areas. A successful RSA should result in a project with short, mid, and long-term actions and can lead to quick fixes.
- However, implementation of findings is not guaranteed; an example was given of an ADA non-compliant curb identified during a walk audit that was not fixed by the town.
- The need to evaluate various road treatments, both individually and in combination, was emphasized, suggesting an evaluation plan should be built in to project scopes from the start.

Question: What other ways is your community using the Triangle West Regional Vision Zero Action Plan? Are there additional ways you would like to use it?

- We use it to advocate to elected officials during budget season
- TPO leadership to bring in NCDOT division involvement to drive the strategies
- Using HIN data for project prioritization
- High risk network is also a really helpful tool in addition to HIN
- Could bring some attention to non-infrastructure aspects of traffic safety
- Support for action, more safety projects
- Using high risk data for proactive projects

MULTIMODAL SAFETY ALONG MULTILANE ARTERIALS

- Justifies opportunities for redesign during resurfacing schedule
- Incorporating the data / HIN in Chapel Hill's E2E project
- Using not only High injury and high risk, but also collecting near miss data.
- How can VZ Action Plan be more directly incorporated into TPO's federal funding policy?
- Align SPOT projects and LAPP funding with priority safety needs
- Opportunity to match safety data with specific solutions

SAFE ROUTES TO SCHOOL

TECHNICAL SESSION #3 MEETING ROOM A

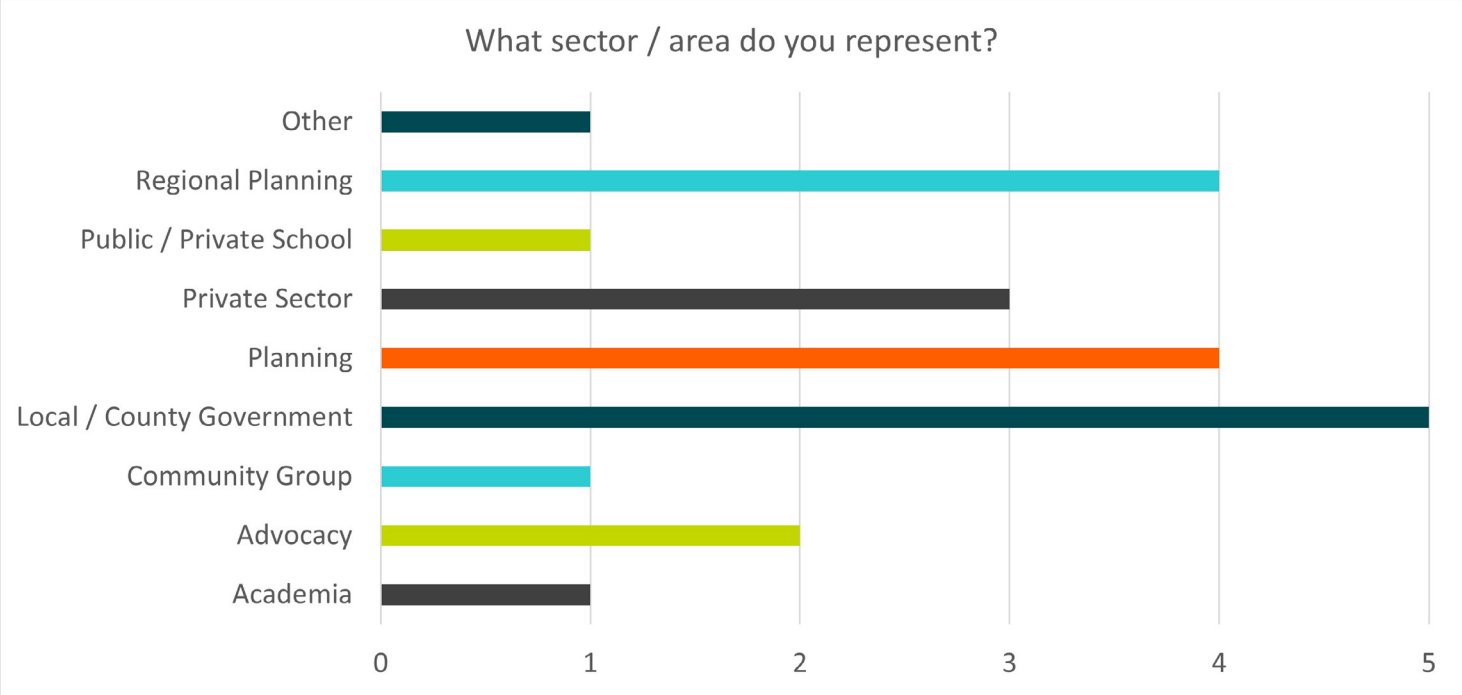
Safe Routes to School

Increasing safety for students is an opportunity to protect one of the most vulnerable populations in each community and provide opportunities to educate children about mobility in the built environment. These actions are focused on changing infrastructure at and approaching schools to create safer and more intuitive infrastructure for all roadway users.

Action	Timeframe	Cost	Action Leaders and Partners
Install high-visibility crosswalks within a one-mile travelshed of all schools	Immediate	$	School Districts, Municipalities
Install separated bikeway facilities—separated bike lanes or shared use paths—along corridors that are within a half-mile of schools	Short	$$	NCDOT, Municipalities, School Districts
Install speed feedback signage along with RRFBs/PHBs for mid-block crossings within a half mile of all schools	Short	$$	NCDOT, Municipalities, School Districts
Conduct targeted/automated enforcement of handheld device bans, distracted driving, yielding, and speeding within school zones	Short	$	Law enforcement
Develop a resident/ambassador program to support local SRTS programs (i.e., counts, safety audits, infrastructure project review)	Immediate	$	TPO, School Districts, Municipalities, SRTS

SAFE ROUTES TO SCHOOL

Breakout session participants:



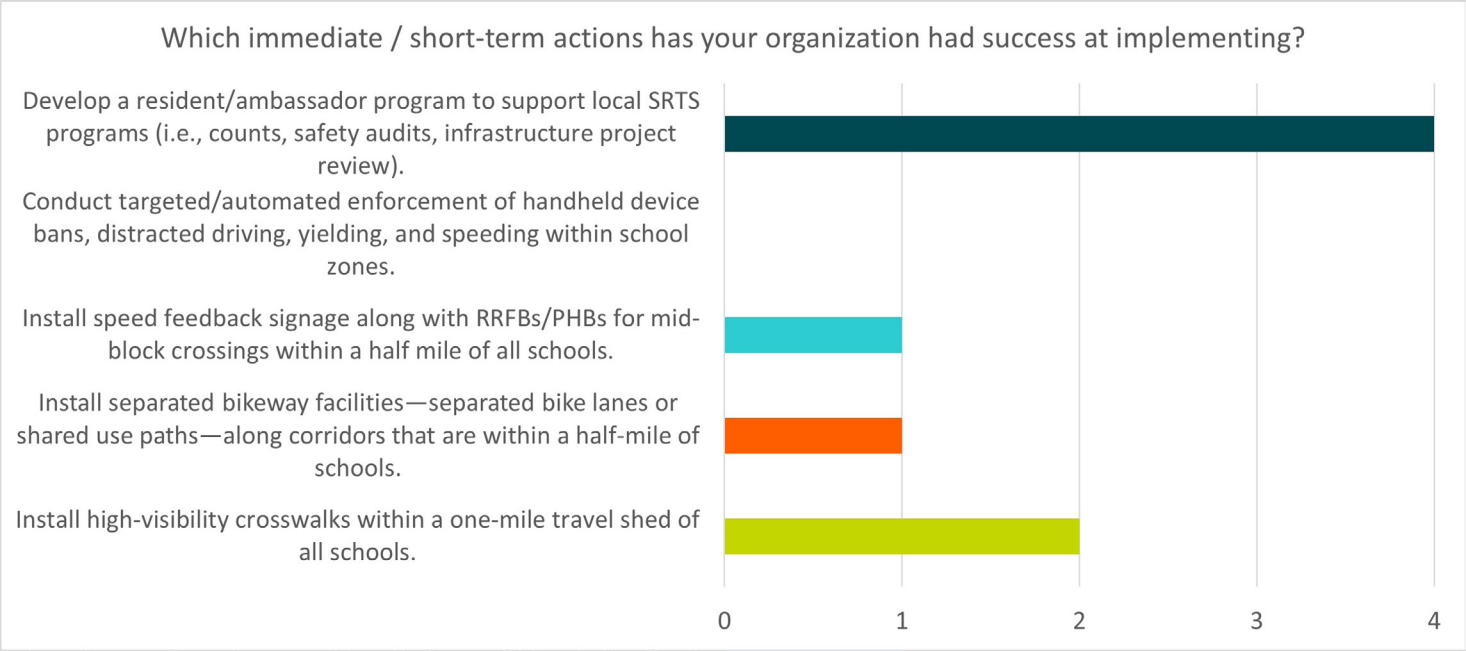
Question: Thinking BIG, how do you envision road safety being improved through Safe Routes to School?

- Lower speeds within close proximity to schools
- Ban cars
- Fully protected facilities beyond the immediate radius of the school
- Educational programs
- Ban cars x2
- Making the area directly around the school less dangerous and more accessible for everyone
- Making drivers the guest
- Motorists realize they not only share the road, but share the road with everyone
- Additional traffic calming measures
- Improving bike/ped infrastructure at and approaching schools while calming automobile traffic.
- Signalized crosswalks
- Sidewalks along all streets within at least a mile radius of the school
- Structural, systems change to enable young people to independently move around their communities
- Increasing compliance with the ADA for all students, staff, parents, and visitors around all schools public and private
- Building sidewalks
- Define the school as a major community destination.
- Encouraging more bike/walk and less short drive to schools

SAFE ROUTES TO SCHOOL

- Enabling parents the peace of mind to allow their children to walk or bike to school
- Safe streets within the school bus cut-off radius *and* between bus stops and homes
- Ebike loan programs so parents can try out ebike drop-offs!
- It demonstrates “proof of concept” of road safety for everyone to see and experience
- Improve road safety through Safe Routes to Schools (SRTS)
- Lower speeds near schools
- Fully protected intersections
- ADA compliance and general accessibility
- Make drivers the “guest”
- Consider car restrictions around schools
- Enable parents to feel confident allowing children to walk or bike
- Shift culture so safety becomes the default
- If streets are safe for children, they are safe for everyone
- Young people are people, not inherently “vulnerable road users”
- Build walking and biking habits early
- Need infill to create a cohesive infrastructure network
- Stakeholder Representation
- Local and regional governments
- Private sector
- Schools
- Advocacy groups

Question: Which immediate / short-term actions has your organization had success at implementing?



SAFE ROUTES TO SCHOOL

Action 1: Install high-visibility crosswalks within a one-mile travel shed of all schools.

Question: How are you making decisions on where and when to implement these projects?

- Walk audits
- Based on funding availability
- We are updating our SRTS plan, so we will use public input combined with data to improve our infrastructure.
- Ask school families where sketchy intersections are, whether or not they're on their current school route (I am not an implementer, this is just an idea)
- School stakeholder engagement
- Prioritize based on potential walkers, High Injury Networks, and equity.
- Does the location require NCDOT coordination or is it a local road?
- In accordance with the local government's ADA transition plan which all were required to be done by Jul 27, 1993
- Walk audits
- Opportunistic when NCDOT has a project that could add crosswalks
- The academic in me says network analysis for high-betweenness links, but this is restricted by lack of sidewalk data availability
- Looking for opportunities to add safety countermeasures into ongoing projects when funding comes available. Working with NCDOT to secure funding
- The MPO/TPO can't directly make these decisions, but can endorse policies that may influence communities/school systems to make the change.
- Often times it requires someone to be killed in a horrific manner before things are done due to the lack of political will

Question: What road blocks are stalling you from succeeding?

- NCDOT
- Funding
- Funding
- Funding
- Apathy
- funding!
- Funding. Staff capacity. Road ownership
- NCDOT
- Perceived liability
- Volume
- Throughput valued more than safety
- Local characteristics
- County authority and resources.

SAFE ROUTES TO SCHOOL

- Prioritizing road widenings over making people safe who are walking, biking, rolling, or using transit (or even driving).
- SUV and truck bloat
- Political will

Action 2: Install separated bikeway facilities—separated bike lanes or shared use paths—along corridors that are within a half-mile of schools.

Question: Is this working well? Has road safety improved? Are there challenges or lessons learned?

- We have had success, but there are challenges with funding, staff capacity, and NCDOT collaboration.
- TBD.
- Challenges with local, organized interest groups
- Yes
- What is the opposition?
- Harder to garner public support for bike infrastructure
- CH working on a major feasibility study to connect all trails/greenways across town - E2E. School proximity will be a factor.
- This requires significantly more money than a smaller improvement like crosswalks.
- Some success but ongoing challenges
- Harder to build public support for bike infrastructure
- Opposition from community groups
- Chapel Hill Trail/Greenways connection study underway
- Greenway projects are more expensive than smaller improvements

Question: What road blocks are stalling you from succeeding?

- Political will.
- Funding
- Difficult to coordinate a project between a city and county
- Money. Vocal public opposition on some projects. NCDOT cooperation. But ultimately money.
- John Locke Society's editorial opposition
- NIMOSPS (Not In My On Street Parking Space)
- The whole system
- Question: any success in installing these at *new* mid-block crossings, or only existing ones?
- Political will
- Funding
- Vocal opposition
- Coordination issues between city and county
- NIMBY/NIMOSPS concerns
- Jurisdictional conflicts on cross-border projects
- Broader systemic limitations
- Safety concerns on greenways (general safety and firearm concerns)

SAFE ROUTES TO SCHOOL

Action 3: Install speed feedback signage along with RRFBs/PHBs for mid-block crossings within a half mile of all schools

Question: Are you working on this or have you had success at implementation? Why or why not?

- Yes and yes
- We're working on it. We have several RRFBs in the works near schools.
- This is a municipal subject.
- question: any success at new mid-block crossings, or only existing ones?
- Many groups actively pursuing these
- Good DOT relationships improve implementation
- DOT appears more open as these treatments become common
- Some municipalities are targeting crossings that are key for school commutes
- RRFBs help slow drivers entering roundabouts

Question: What road blocks are stalling you from succeeding?

- Warrants
- Same as the last one: mostly money.
- Are these as effective as higher level treatments?
- Dangerous car designs and bloat increasing blind spots
- Lack of automatic enforcement e.g. cameras
- Parent concerns about 4-lane crossings
- Pedestrian leading signals increase comfort
- Pedestrian-first signal phasing (cars trigger green, not pedestrians triggering red)
- Large vehicle sizes and blind spots
- Limited funding

Question of whether these are enough without higher-level changes

- No automated enforcement

Action 4: Conduct targeted/automated enforcement of handheld device bans, distracted driving, yielding, and speeding within school zones.

Question: Is this working well? Has road safety improved? Are there challenges or lessons learned?

- Our police department is a good partner with school safety. They work with us on enforcement as well improving infrastructure.
- Without automated enforcement, compliance will be intermittent
- No. No data. The challenges are the lack of law enforcement, and funding resources.
- Chapel Hill Police Department patrol school zones at arrival / dismissal daily. We are about to start moving speed feedback signs around to different locations.
- Police-led enforcement in school zones

SAFE ROUTES TO SCHOOL

- More enforcement during arrival and dismissal times
- Speed camera ban no longer in place (but law poorly written)
- Police seen as good partners

Question: What road blocks are stalling you from succeeding?

- Without automated enforcement, compliance is inconsistent
- Limited data, enforcement capacity, and funding

Action 5: Develop a resident/ ambassador program to support local SRTS programs (i.e., counts, safety audits, infrastructure project review)

Question: How have you developed a program? Is it successful? Are there lessons learned?

- Resident SRTS ambassador program (success unclear)
- Hard to engage high school students
- Growing bike bus movement (four in Durham)
- Bike buses help parents feel more comfortable, allowing their children to bike
- Engaging high schoolers is very difficult!
- Not sure, but we have a burgeoning bike bus scene!
- Have an Interlocal Agreement with your county schools.
- UNC's football coach says that he has addressed the repeated excessive speeding tickets his players have been receiving. I guess this is an intervention at a local school
- Manual counts with volunteers, middle school walk audits, you - adult partnerships with high schoolers - working on these!

LAND DEVELOPMENT PRACTICES AND PROCEDURES

POLICY AND PROCEDURES SESSION #1 MEETING ROOM A

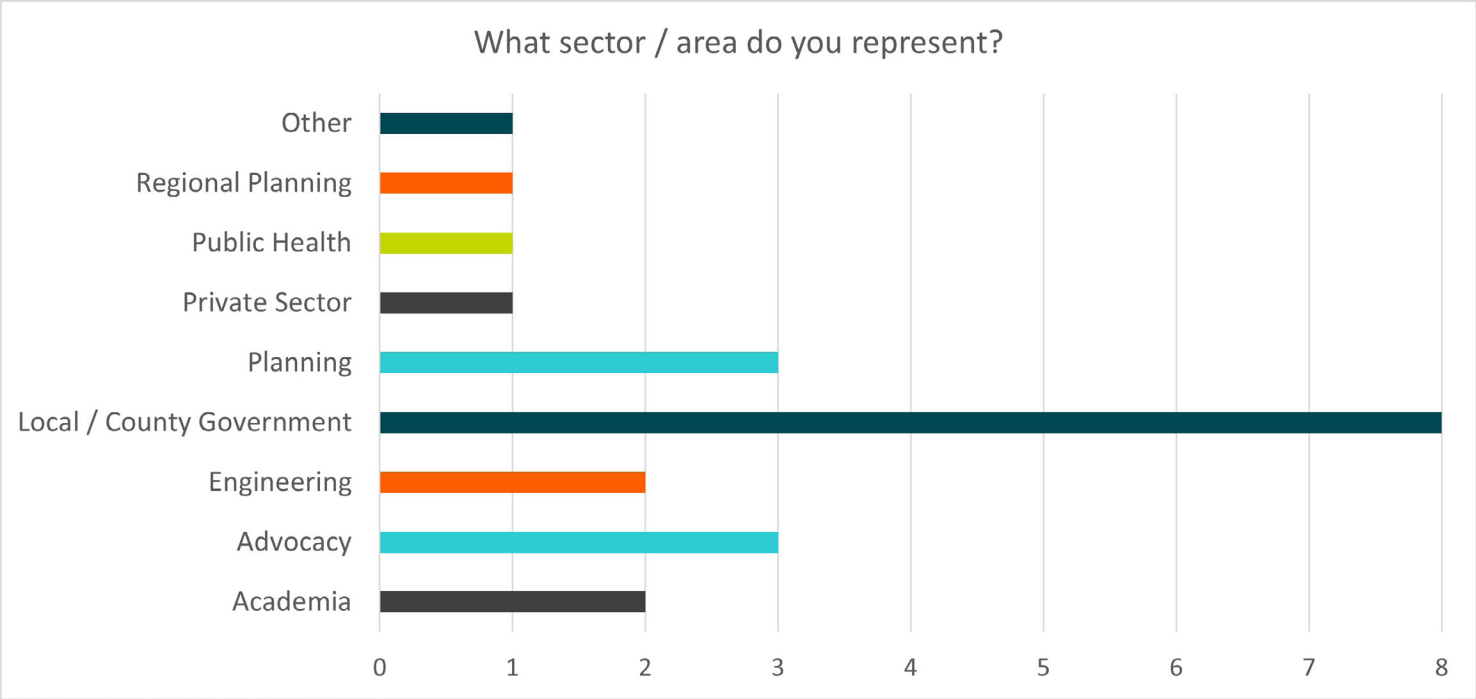
Land Development Practices and Procedures

The Safe System Approach is grounded in the reality that increasing safety will require making changes to the system, not only individual parts. Land use impacts on the transportation network are important, and the policies and plans that guide development are an opportunity to make transportation safety changes.

Action	Timeframe	Cost	Action Leaders and Partners
Integrate the High-Injury Network (HIN) into project and development reviews	Immediate	$	TPO, NCDOT, Municipalities
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 vehicles (SOV) trips	Short	$	TPO, CPRC, Municipalities
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)	Immediate	$$$	Municipalities
Update local and regional plans and policies to be inclusive of all modes and ensure safety is a primary priority. Plans include comprehensive plans, land use plans, mode-specific plans, etc.	Immediate	$	Local Government Agencies

LAND DEVELOPMENT PRACTICES AND PROCEDURES

Breakout session participants:



Question: Thinking BIG, how do you envision road safety being improved through Land Development Practices and Procedures?

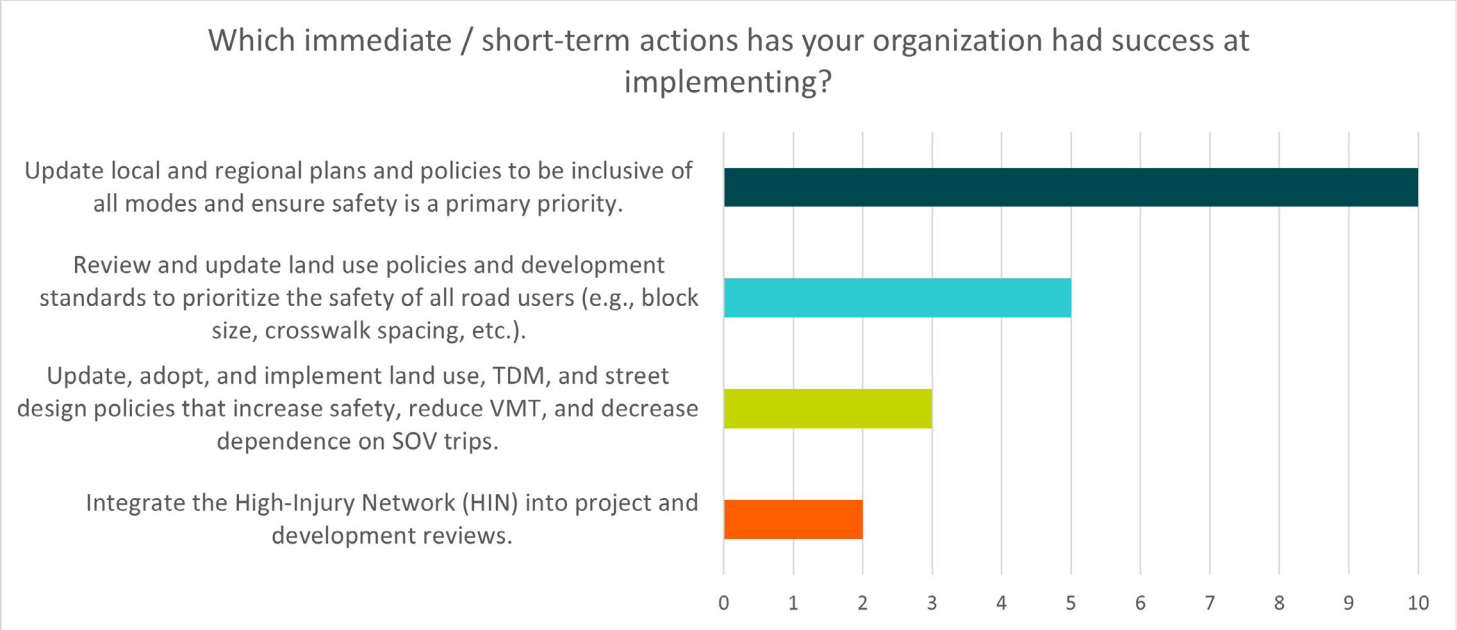
- Improvements to public transportation
- Fill sidewalk gaps
- Affordable housing near transit
- Density and more diverse housing choices. Especially urban housing for families
- Implementations of complete, safe street policies
- Protected bike lanes on all streets
- "15 min city"
- Enough space for all ages, abilities, and modes
- Supportive land uses adjacent to High Injury Network and High Demand Corridors.
- UDO development and more developer responsibility for transportation infrastructure
- Get away from peak hour trip generation for TIAs and improvements. Tighter radii to slow turning movements. Incentivize connections for peds to multimodal networks.

LAND DEVELOPMENT PRACTICES AND PROCEDURES

- Create plans to build street grids in parts of region where there is pressure for new development and require developers to incorporate those street grids plans
- Greenways and separated paths to encourage people to engage with nature and protect ped/bike users
- Determination of implementable compliance practices associated with TDM tool implementation.
- Ped/bike impact analyses (move away from traditional traffic impact analysis that looks at only vehicle accommodations)
- Identify land use nodes that would benefit from infrastructure like lighting, MUPs, pedestrian crossings while keeping the rural areas quieter but still with multimodal options like walk/bike.
- Requiring active transportation infrastructure with development, transit-oriented development, making active street public realms, having narrower streets
- Wider sidewalks for frontages.
- Create policies/standards/expectations for development community that prioritize truly useful multimodal transportation access, make sure multimodal infrastructure is included in new development
- Street trees!!
- Continuing to evaluate the ways that development plans can be even more responsive to the latest mobility best practices
- Require sidewalk construction with new development (including redevelopment of lots)
- Leveraging partnerships to implement infrastructure and critical infrastructure enhancements.
- Restrict individual driveways to primary corridors, and serve vehicle access separate from ped infrastructure.
- Develop street design guidelines and apply street types to all facilities in the city to guide street redesign requirements.
- Urban environments are still developing primarily for more single-occupancy environments. There are not many options for families besides a single home. How to design the city/urban environment for diverse families
- Different housing types in urban areas to allow different types of families, walkable environment
- Street trees are hard to do with NCDOT rules and NCDOT-owned places. Street trees are huge for safety, cause people to slow down when driving, and provide so many other benefits.
- Development regulations – how can we require more? We have to tip toe lightly with legislature. We need to leverage partnerships, but constraints on those partnerships prohibit us more. We need to develop partnerships to get infrastructure on the ground, as they can get things done faster than at the government's pace.
- Cost shares, P3s
- Challenge – government funding, if it goes over the statute, it gets pulled. There are willing partners if we did not have that red tape.

LAND DEVELOPMENT PRACTICES AND PROCEDURES

Question: Which immediate / short-term actions has your organization had success at implementing?



- Restricting UDO, not much of a success. It was adopted but you can't enforce it until the senate bill passes.
- SB32: Can't downzone, kind of in the middle of "purgatory"
- As the county, we don't do construction projects
- The City is updating the UDO to specifically address safety for all road users. Require developers to build a safer cross section intended for people, not vehicles. We hear a lot of communities talk about their neighborhoods. Hoping to have it finalized in Spring 2026

Question: Where are you seeing successful developments standards?

- Safety, land transportation. Crossing distances for pedestrians. Seeing some exemptions in the code. We have been able to get the bike/ped back into it. Clean transportation: more on the sustainability side, incentivizing more active transportation.
- Having staff, office of mobility, vision zero person, SS4A person – staff received a grant for putting a multi-use path near MLK to help make it safer to bike/walk to school. It helps to have designated staff. We were able to have the developer through conditional zoning, which is part of the negotiation of what they are required to do.

LAND DEVELOPMENT PRACTICES AND PROCEDURES

Action 1: Integrate the High-Injury Network (HIN) into project and development reviews

- Strong collaboration in Chapel Hill with Vision Zero efforts. Focus on implementing traffic calming, identifying places where we are seeing high speeds, accidents, and what can we do for temporary traffic calming while we develop funding.
- We receive a lot of emails about how the temporary traffic calming measures aren't aesthetically pleasing, but they are temporary to address the issue. We are trying to work on better communication with the public before putting these measures out. We put out some yard signs to alert neighborhoods. We are trying to focus more on areas in the High Injury Network. Quick builds that are fast and cost effective to address the issue.
- It might help for the public to see something done quickly that has an effect. Some of the quick builds are really good for perception that help them see the larger picture and can see solutions happening.
- Create a list of things you are willing to try. I work with a lot of municipal clients, where we ask "what's your plan for measuring success?" How do you communicate to the public that these measures need to be taken? A lot of countermeasures will take time, such as intersection design. Look at strategies to help determine how to "measure" the success.
- How do we celebrate wins?
- It is hard to cut through the noise. It can be difficult to learn about things that are happening. Signage is very powerful and attention-grabbing even when you are busy. We need to cut out the digital noise.
- Is there a mechanism when you assess the HIN? You complete a quick build and then see that this temporary solution is working and should be permanent. Is there a mechanism that needs to happen in the UDO that is nimble enough to refer to a quick build to make it permanent? We should challenge staff to figure this out. Plans seem limited to what we can do financially instead of what we want to do.
- In our city, if there is a development project that is going to tear up a road, the developer has to either put it back or make it better.
- NCDOT, funding, utilities and firetrucks can be a roadblocks.

LAND DEVELOPMENT PRACTICES AND PROCEDURES

Action 2: 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 vehicles (SOV) trips.

- We are updating our land use plan, which will including trying to make the town more walkable, bike friendly, and to create hubs.
- There is bus on a route from Durham to Chapel Hill every 15 minutes.
- One challenge is that you must have density to get funding for transit services. But then it's the chicken or the egg scenario. There are still people in these other communities, rural areas that need service. We are trying to figure out ridership, but without density it's hard to receive funding.
- Similarly, it is challenging to build affordable housing unless there is public transportation. But you can't get the public transportation without people.

Action 3: 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).

- We support our city's Planning Commission to review development, which includes walkability. It is probably too early to know how successful it has been. The Commission, rather than city staff - led the overhauling of the UDO, which expedited the process. This approach seems to have been benefical as our local staff tend to have heavy work loads and limited capacity.
- As a technical example – we see a lot of dense development, such as townhomes. When we create a residential street, there is a driveway every 20 feet. Regulation also allows each home to have a driveway. The result is that we end up with wide streets. Lessons learned. We are trying to untie that knot which is a challenge. We are trying to install more traffic calming measures. If you narrow the streets, you might run into another issue for access management.

Action 4: Update local and regional plans and policies to be inclusive of all modes and ensure safety is a primary priority. Plans include comprehensive plans, land use plans, mode-specific plans, etc.

- We have adopted the Complete Community Framework. That will be our biggest focus.

LAND DEVELOPMENT PRACTICES AND PROCEDURES

- Plans are important, but what about implementation? Plans should not sit on a shelf.
- Our community is generally very supportive, though we do hear from those who do not want development in their backyard.
- I give credit to Triangle West on having bicycle and pedestrian plans, and safety plans. Our biggest barrier of course is funding.
- Our local council adopted plans for active mobility with modal priorities: bike, transit, etc. Implementation is the key for these.

BEHAVIOR AND DISTRACTION

POLICY AND PROCEDURES SESSION #2 MEETING ROOM D

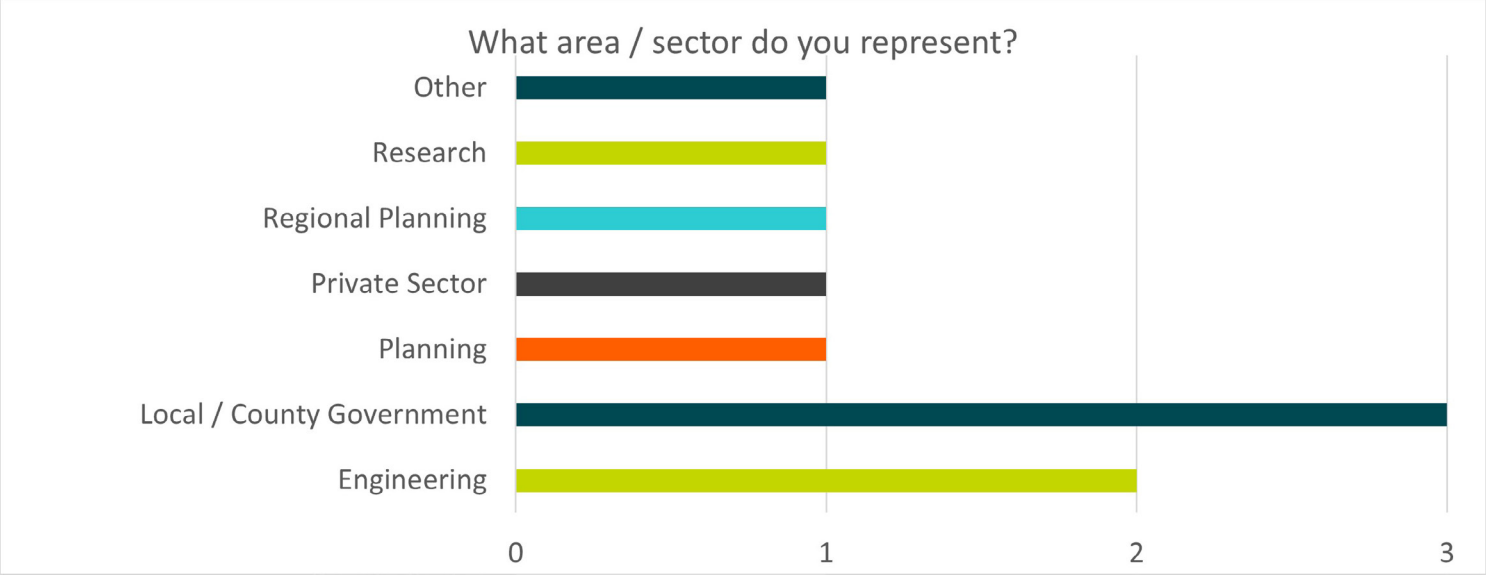
Behavior and Distraction

Addressing behavior of roadway users is one part of increasing safety and aligns with the Safe Road User element of the Safe System Approach. These actions should be used alongside other actions that make physical changes to the streets.

Action	Timeframe	Cost	Action Leaders and Partners
Establish county metrics for seatbelt and car seat public education campaigns	Short	$	TPO, Law enforcement, NCDOT, Municipalities, Health Departments
Promote and implement safe driving and anti-distraction messaging and policies	Short	$	TPO, Law enforcement, NCDOT, Municipalities
Host community conversations about roadway safety	Short	$	TPO, Municipalities, Trauma-Centers, Local advocacy groups
Develop a program for emergency responders to tell their stories about roadway safety that can be shared with communities to emphasize the impact of fatal and serious injury crashes have on people	Short	$	TPO, Trauma Centers, Law enforcement, Local advocacy groups

BEHAVIOR AND DISTRACTION

Breakout session participants:

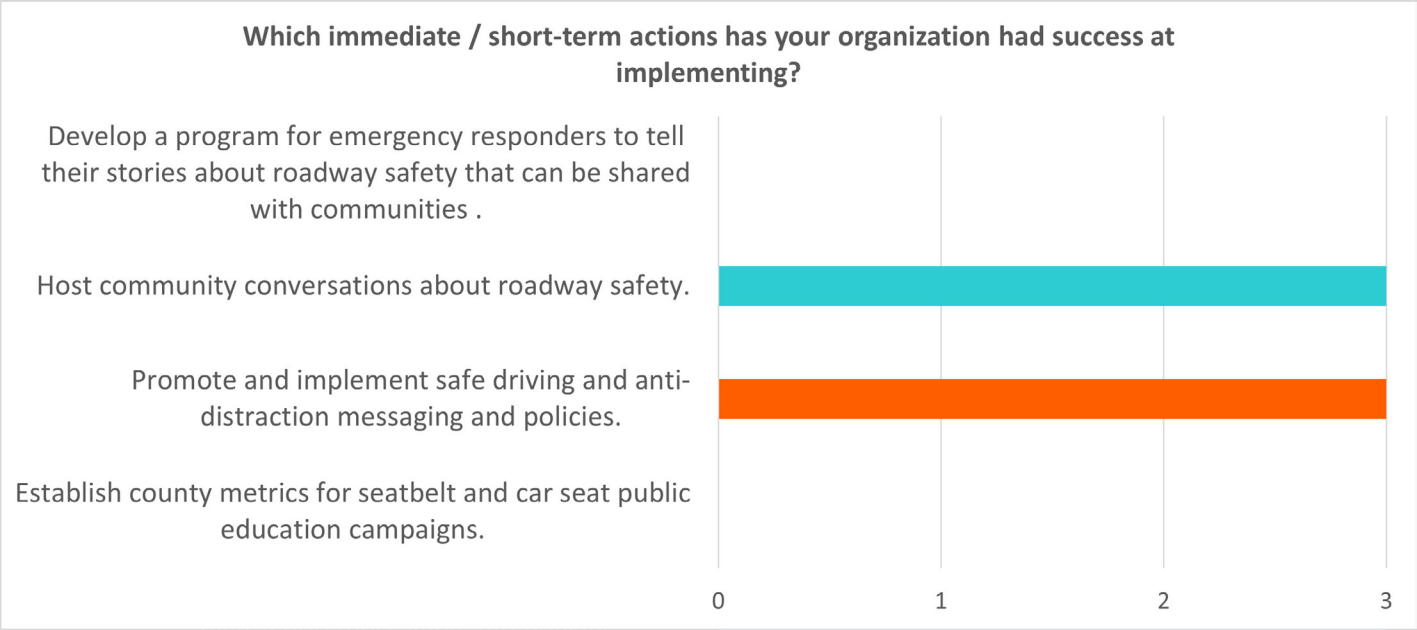


Question: Thinking BIG, how do you envision road safety being improved through Behavior and Distraction?

- Creating a sense of shared responsibility
- Lots of carrots and incentives
- Cell phone usage while driving (enforcement)
- Separating where people driving cars go from where people walking, biking and rolling go.
- ADA access, improved signals, more cross walks and reduced speed limits.
- Changing infrastructure so people aren't tempted.
- Less people on phones
- Preventing driving while impaired
- Less speeding
- Increased speeding enforcement
- Increased awareness about bike and ped safety
- Sharing the road
- Humans make mistakes. Using technology to limit cell phone access.
- Adding more public transit headways so that people can ride and it won't matter if they are on their devices.
- Informed when scheduled maintenance happens on highways.

BEHAVIOR AND DISTRACTION

Question: Which immediate / short-term actions has your organization had success at implementing?



Action 1: Establish county metrics for seatbelt and car seat public education campaigns

Question: Have you been successful at developing metrics for public campaigns? What reasons have made it successful? Are there lessons learned?

- We did a bike month through our BPAC
- We don't do campaigns around seat belts, typically ride sharing, micro mobility and transit use!
- We have a continuously running weekly CPS program and reporting data to county and state safety agencies

Question: What road blocks are stalling you from succeeding?

- I haven't seen any campaigns regarding this anywhere as of late
- Car seat safety is active in Chapel Hill for the past 23 years - does not seem to be the most pressing issue
- Speed laws in NC- financial standpoint with car insurance rates

BEHAVIOR AND DISTRACTION

Action 2: Promote and implement safe driving and ant distraction messaging and policies

Question: Have you been successful at developing messaging and policies? What reasons have made it successful? Are there lessons learned?

- Short video pieces that are catchy and not stale. Accompanying social media messaging that has similar look and feel.
- Successful because we partnered with creative, passionate people
- Lesson learned: look at typical messaging that comes out of public agencies and don't do that :)
- We have system where we implemented speed restrictions with speeding being tracked (in public cars). A constant reminder that you are "on the clock" and a high level of accountability. Some carshare programs allow that monitoring
- What gets measured gets done
- ISA policies are being pushed with families for safe streets monitor our car share program

Question: What road blocks are stalling you from succeeding?

- Money …. To pay for road engineering, chicanes, bulb outs to reduce speed.
- Resources!
- How much staff capacity is limited, is this something that can be added on to staff time. How do you make meaningful change when you are spread thin
- (Example: local government limitations and wearing the many hats)

Action 3: Host community conversations about roadway safety

Question: Have you been successful hosting community conversations? What reasons have made it successful? Are there lessons learned?

- Discussed walk audits, and photovoice as a tool. How you can advocate to policymakers to make changes. Tactical urbanism. Pay or incentives people for their input and time. Walk and Roll to school events in order to focus more on bike safety.
- Pay people to participate! Or feed them.
- Lots of advertising

BREAKOUT SESSIONS GUIDE

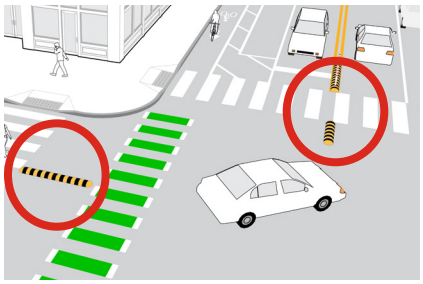
Street Safety Features: A Visual Guide

The following images of street safety features - as documented in Triangle West TPO's Regional Vision Zero Plan - will be referenced during the breakout sessions.

Chicane

Curb Extension

Daylighting



Hardened Centerline

High Visibility Crosswalk

Leading Pedestrian Intervals (LPIs)

Median Refuge Island

Mid-Block Trail Crossing

Mini Traffic Circle

No Turn On Red

Pedestrian Hybrid Beacon (PHB)

Protected Left Turn

BREAKOUT SESSIONS GUIDE

Street Safety Features: A Visual Guide

The following images of street safety features - as documented in Triangle West TPO's Regional Vision Zero Plan - will be referenced during the breakout sessions.

Raised Crossing

Rectangular Rapid Flashing Beacon (RRFB)

Road Diet

Roundabout

Separated Bike Lane (SBL)

Sidepath

Slip Lane

Speed Cushions

Speed Feedback Sign

Truck Apron

Turning Radii

Turn Wedge