



BURLINGTON-GRAHAM MPO

# Transportation Safety Plan

Public Meeting February 23, 2022

Presented by VHB



BURLINGTON - GRAHAM MPO  
**TRANSPORTATION  
SAFETY PLAN**

February 2022

# Presentation Today

- Introduction
- Purpose of Study and Schedule
- Existing Conditions / Data Analysis
- Vision, Mission, and Goals
- Public Engagement
- Questions





# **BGMPO Transportation Safety Plan Purpose and Key Tasks**

# Transportation Safety Planning and Vision Zero



Source: FHWA



# 5 E Approach

Engineering



Education



Enforcement



Emergency Services



Source: North Carolina DOT

## ***Everyone!***

Also addressing the need for **transportation equity** – a transportation network that is safe for **all** users.



# Safe System Approach



Death/serious injury is unacceptable



Responsibility is shared



Humans make mistakes



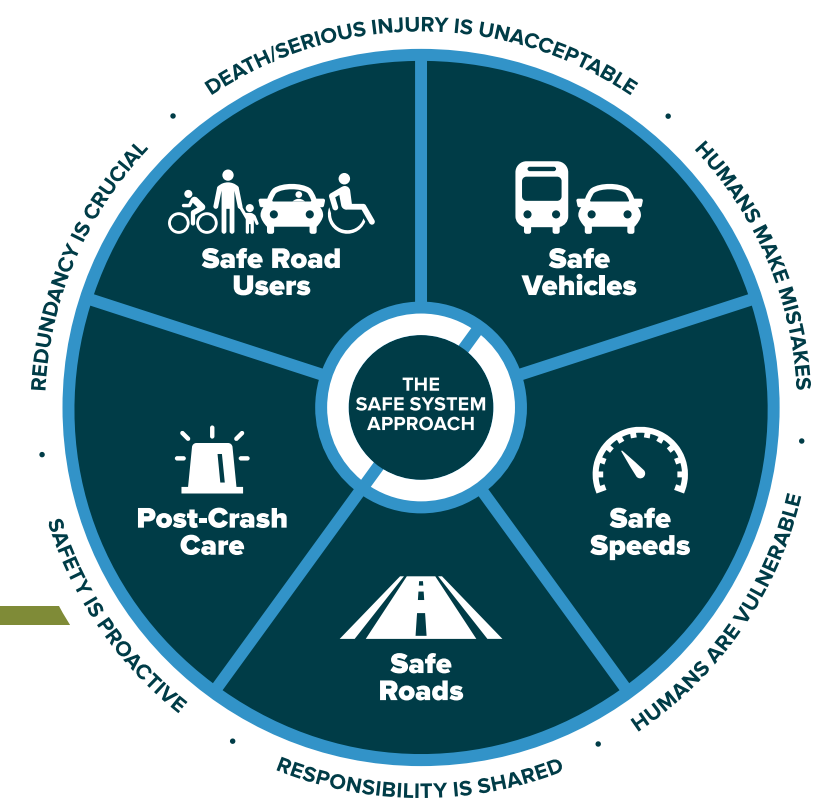
Safety is proactive



Humans are vulnerable



Redundancy is crucial



Source: FHWA

Source: FHWA

# BGMPO Transportation Safety Plan

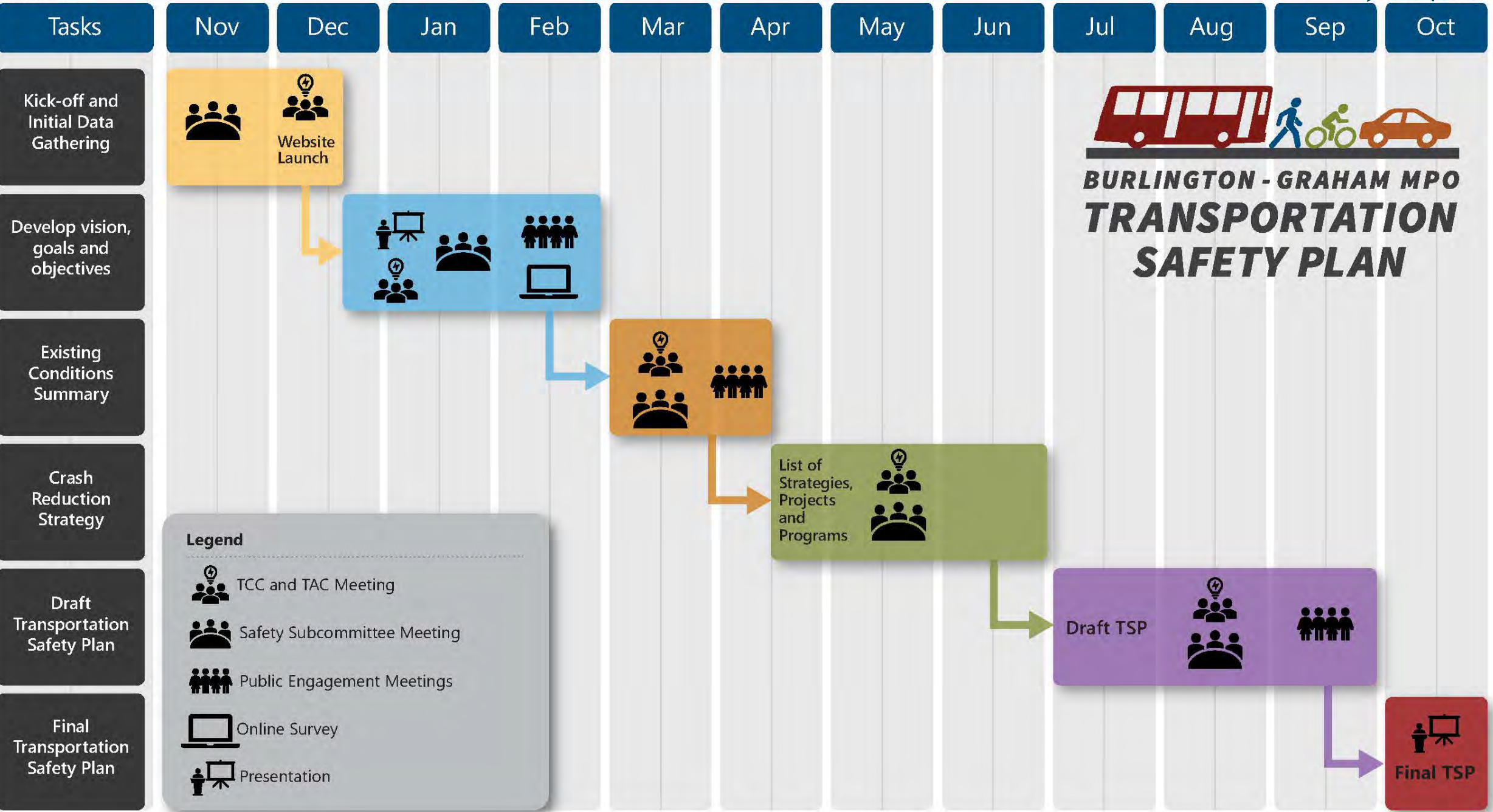
- Data-Driven Safety Planning Process
  - Identify Stakeholders and Public Outreach
  - Collect and Analyze Data
  - Select Goals
  - Identify Focus Areas
  - Determine Strategies
  - Develop Plan Document



Source: FHWA











# Existing Conditions/ Crash Data Analysis

# Existing Conditions and Data Analysis

- Sequential process intended to determine most relevant crash and facility types.
  - Align with North Carolina's 2019 Strategic Highway Safety Plan (SHSP) update
- Identify priority emphasis areas and high-risk/high-crash locations in the MPO.
- Plan process:
  - Overview.
  - Emphasis area(s).
  - Overlapping issues.
  - Comparison to peer MPOs.
  - Future steps – High Injury Network.



# Existing Conditions and Data Analysis: Overview

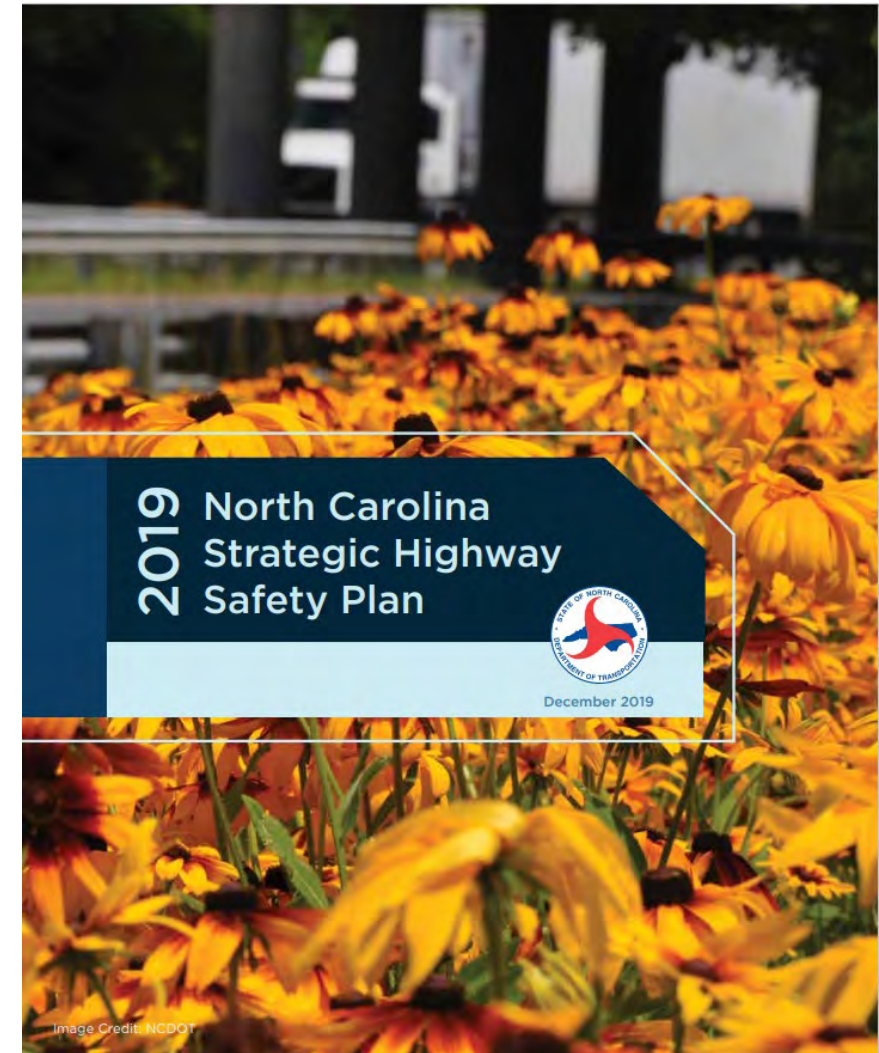
- Overrepresentation is a key component of regional safety plans.
  - What is specific to the Burlington-Graham MPO as opposed to the rest of the State or peer MPOs
- The Federal Highway Administration's (FHWA's) Crash Data Summary Template provides a way to identify overrepresentation.
  - Total crashes.
  - Pedestrian and Bicyclist crashes.
- Focus on fatal and serious injury crashes.
  - **108 fatal crashes between 2016-2020.**
  - **376 suspected serious injury crashes.**
  - **~2% of all crashes result in a fatal and/or serious injury.**
  - **~15% of pedestrian and bicyclist crashes result in a fatal and/or serious injury.**

Crash Data Summary Template														
Accessibility: OFF														
Year 1 - Year 5 Subject Data	Fatal and Serious Injury Crashes							All Crashes						
	BGMPO							BGMPO						
	Year 1 - Year 5	%	2016	2017	2018	2019	2020	Year 1 - Year	%	2016	2017	2018	2019	2020
First Harmful Event														
ANGLE	65	13.4%	5	10	14	17	19	2,548	10.5%	534	486	483	524	521
ANIMAL	3	0.6%	0	0	0	2	1	1,593	6.6%	308	269	327	375	314
BACKING UP	1	0.2%	0	0	1	0	0	562	2.3%	110	104	119	118	111
FIXED OBJECT	91	18.8%	5	10	30	17	29	2,763	11.4%	521	579	623	502	538
HEAD ON	47	9.7%	2	5	11	13	16	225	0.9%	44	52	45	41	43
JACKKNIFE	0	0.0%	0	0	0	0	0	14	0.1%	3	7	2	2	0
LEFT TURN, DIFFERENT ROADWAYS	21	4.3%	3	4	2	6	6	1,545	6.4%	274	310	324	339	298
LEFT TURN, SAME ROADWAY	36	7.4%	5	8	8	6	9	1,363	5.6%	271	267	300	280	245
MOVABLE OBJECT	6	1.2%	0	2	2	1	1	660	2.7%	121	112	114	156	157
OTHER COLLISION WITH VEHICLE	7	1.4%	0	0	1	1	5	461	1.9%	74	89	108	109	81
OTHER NON-COLLISION	5	1.0%	0	1	2	0	2	138	0.6%	31	25	32	26	24
OVERTURN/ROLLOVER	25	5.2%	1	9	1	9	5	215	0.9%	46	60	39	35	35
PARKED MOTOR VEHICLE	6	1.2%	0	3	0	2	1	528	2.2%	89	129	86	108	116
PEDALCYCLIST	4	0.8%	1	0	0	0	3	32	0.1%	5	9	3	5	10



# Existing Conditions and Data Analysis: Emphasis Areas

- Emphasis areas that make up a disproportionate share of fatal and serious injury crashes:
  - Substance impaired driving.
  - Speed.
  - Occupant protection (unbelted occupants).
  - Motorcyclists.
  - Pedestrian, bicyclists, and personal mobility.
  - Lane departure.
- Build emphasis area specific considerations based on detailed data analysis.
  - Intersection, bicycle, and pedestrian safety are more urban-oriented issues.
  - Lane departure and speeding are more rural-focused.



# Existing Conditions and Data Analysis: Emphasis Areas

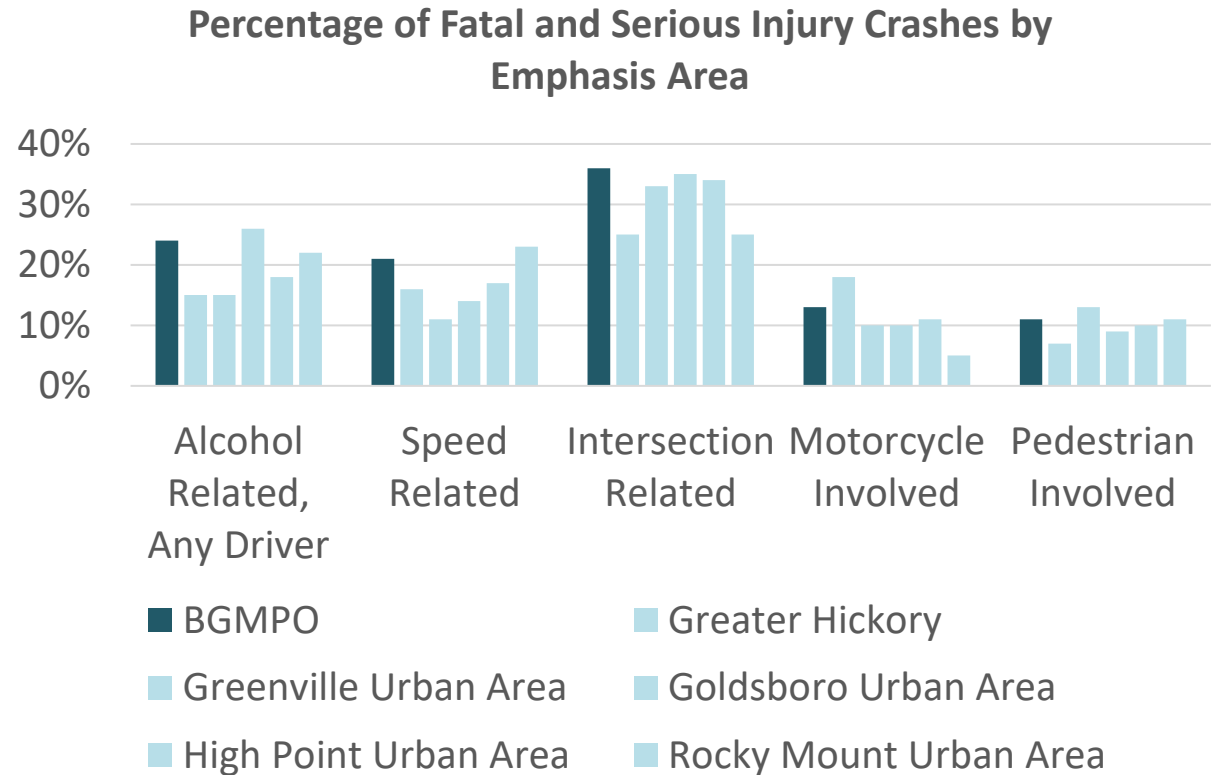
- Emphasis areas are interrelated.
  - 72% of speed-related fatal and serious injuries involve lane departure.
  - 60% of alcohol involved fatal and serious injuries involve lane departure.
  - 32% of speed-related fatal and serious injuries involve alcohol impaired driving.
- Helps drive discussion and planning around countermeasures, strategies, and actions.



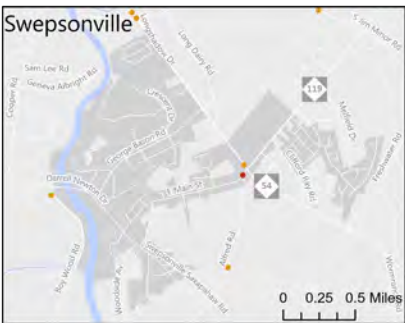
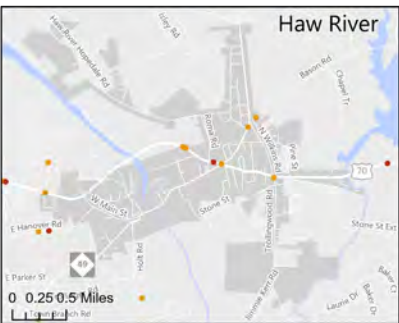
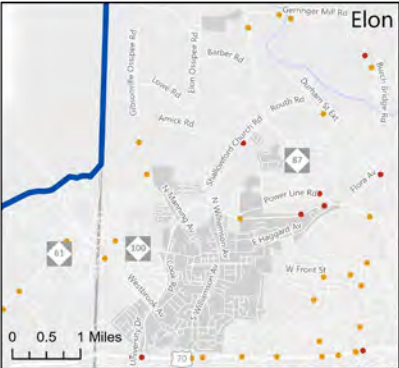
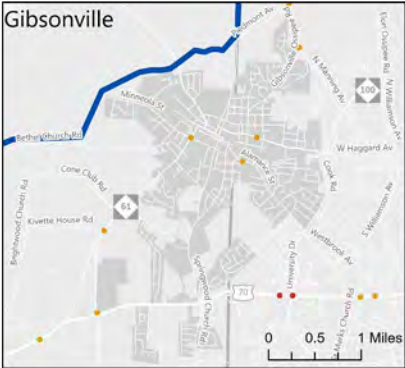
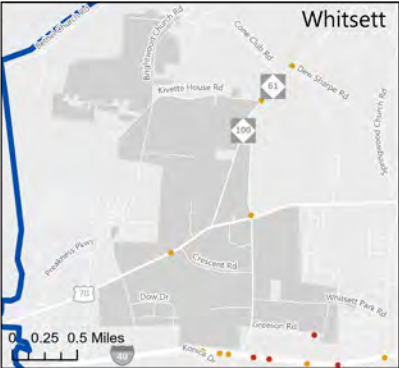
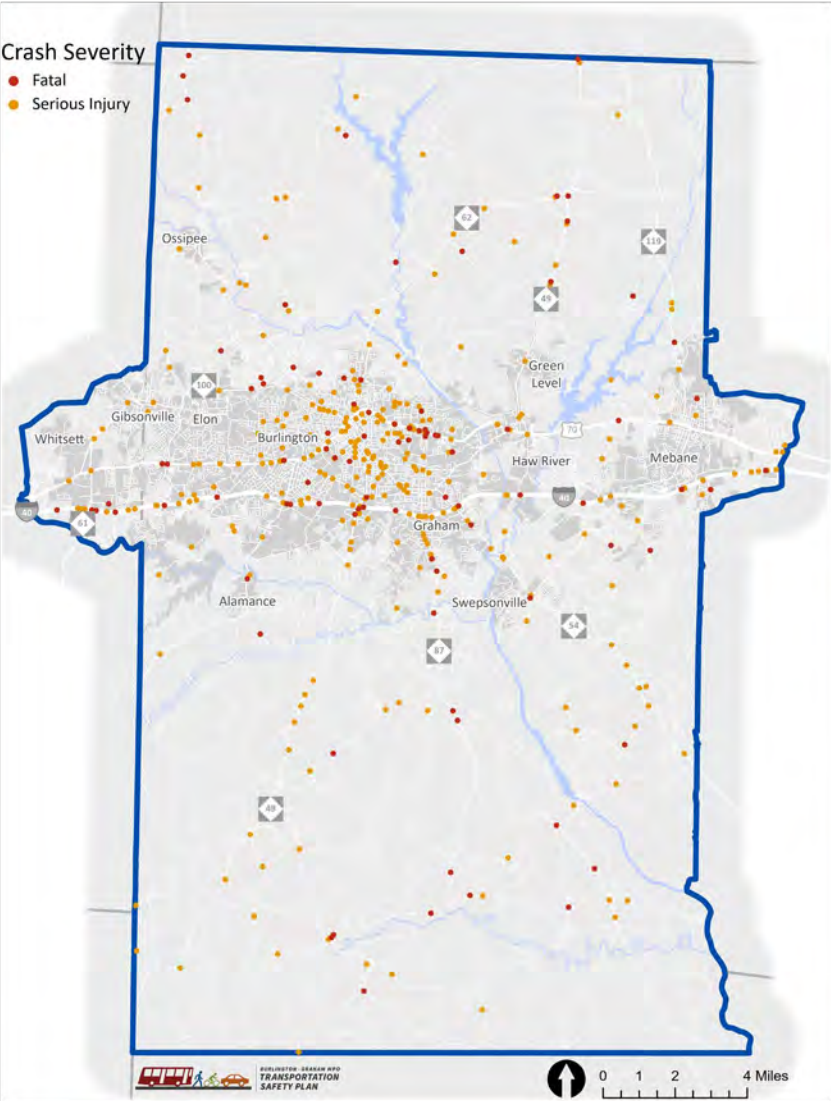


# Existing Conditions and Data Analysis: Peer MPOs

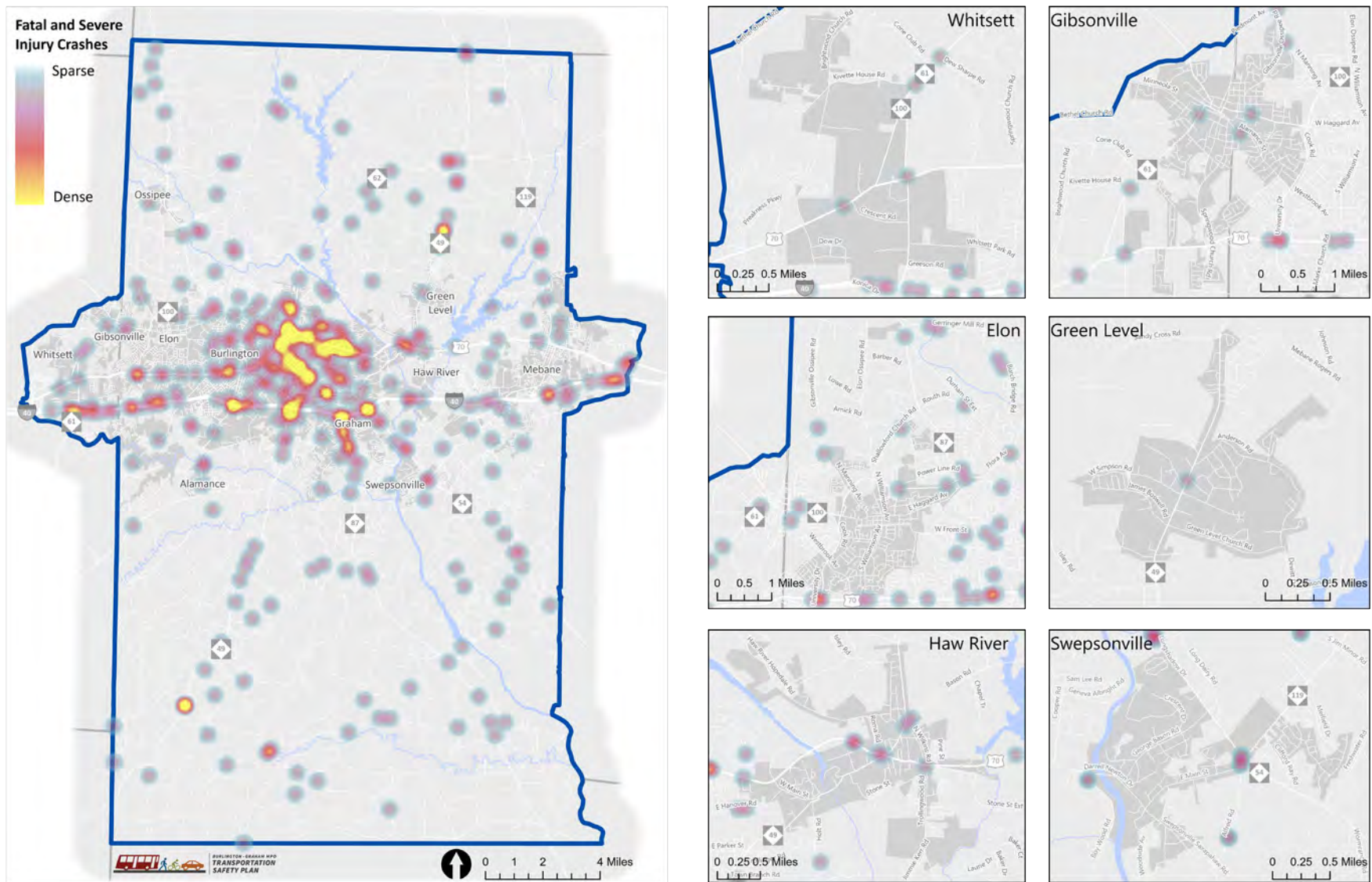
- Selected 5 other peer MPOs for comparison:
  - Greater Hickory.
  - Greenville Urban Area.
  - Goldsboro Urban Area.
  - High Point Urban Area.
  - Rocky Mount Urban Area.
- Generally similar outcomes, but some emphasis areas stand out as priorities for BGMPO:
  - Substance impaired driving (particularly alcohol).
  - Speed.
  - Motorcyclists.
  - Pedestrians.
  - Intersections.
  - Younger Drivers.



# Existing Conditions: Sample Mapping (Fatal and Serious Injury Crashes)

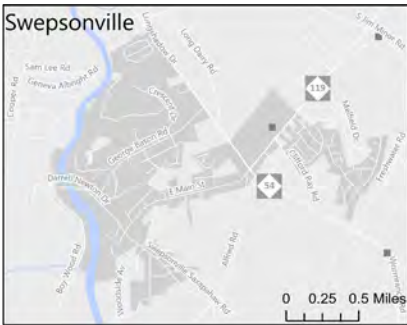
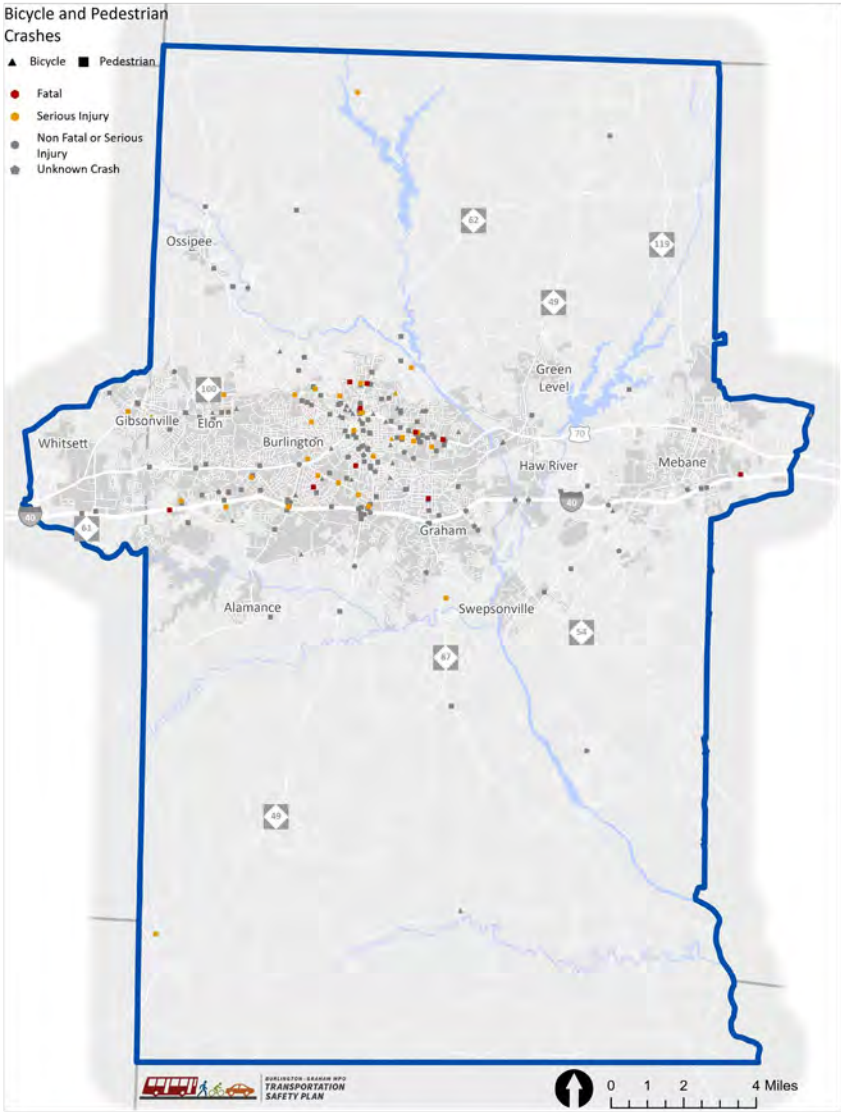


# Existing Conditions: Sample Mapping (Hot Spot)

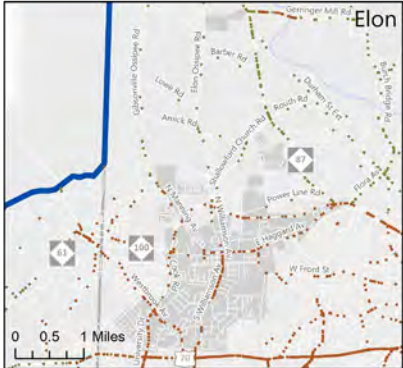
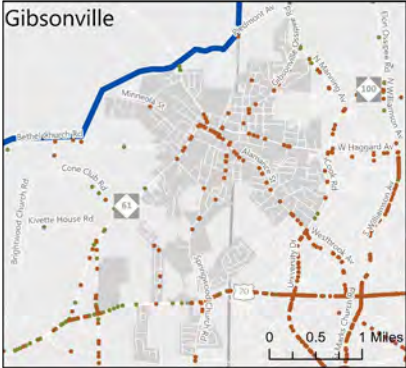
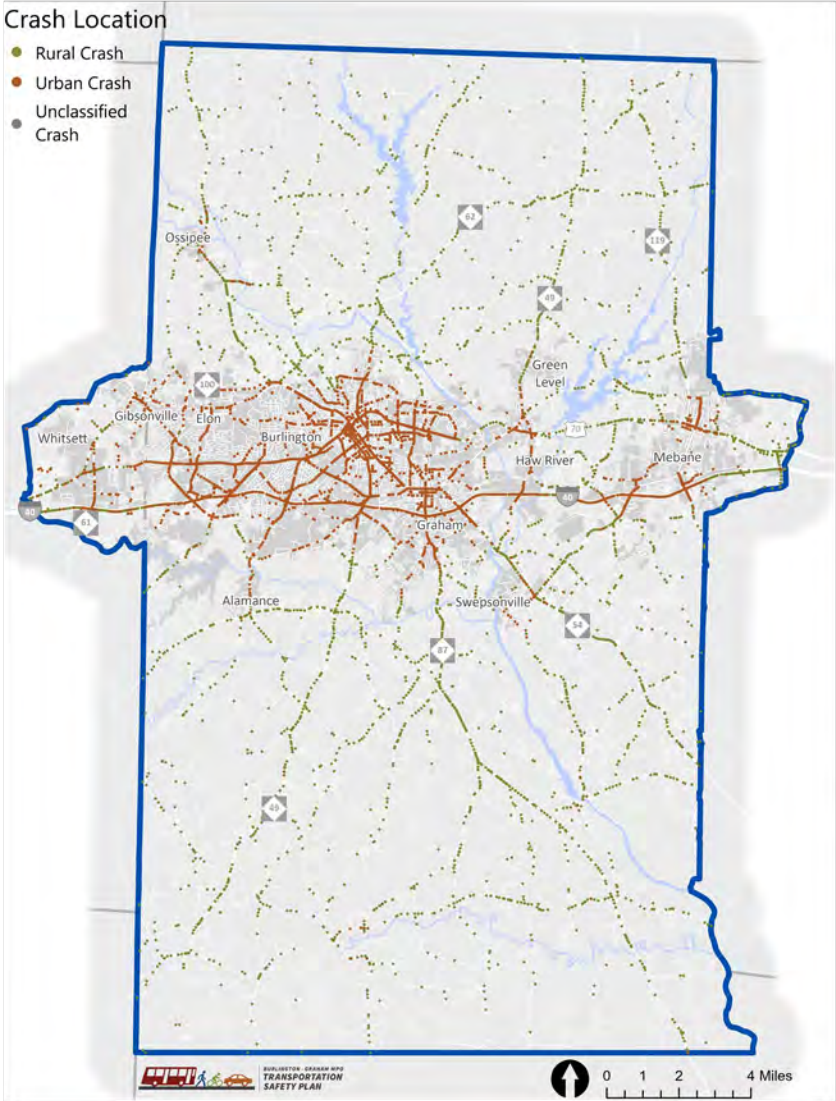




# Existing Conditions: Sample Mapping (Bike Ped Crashes)

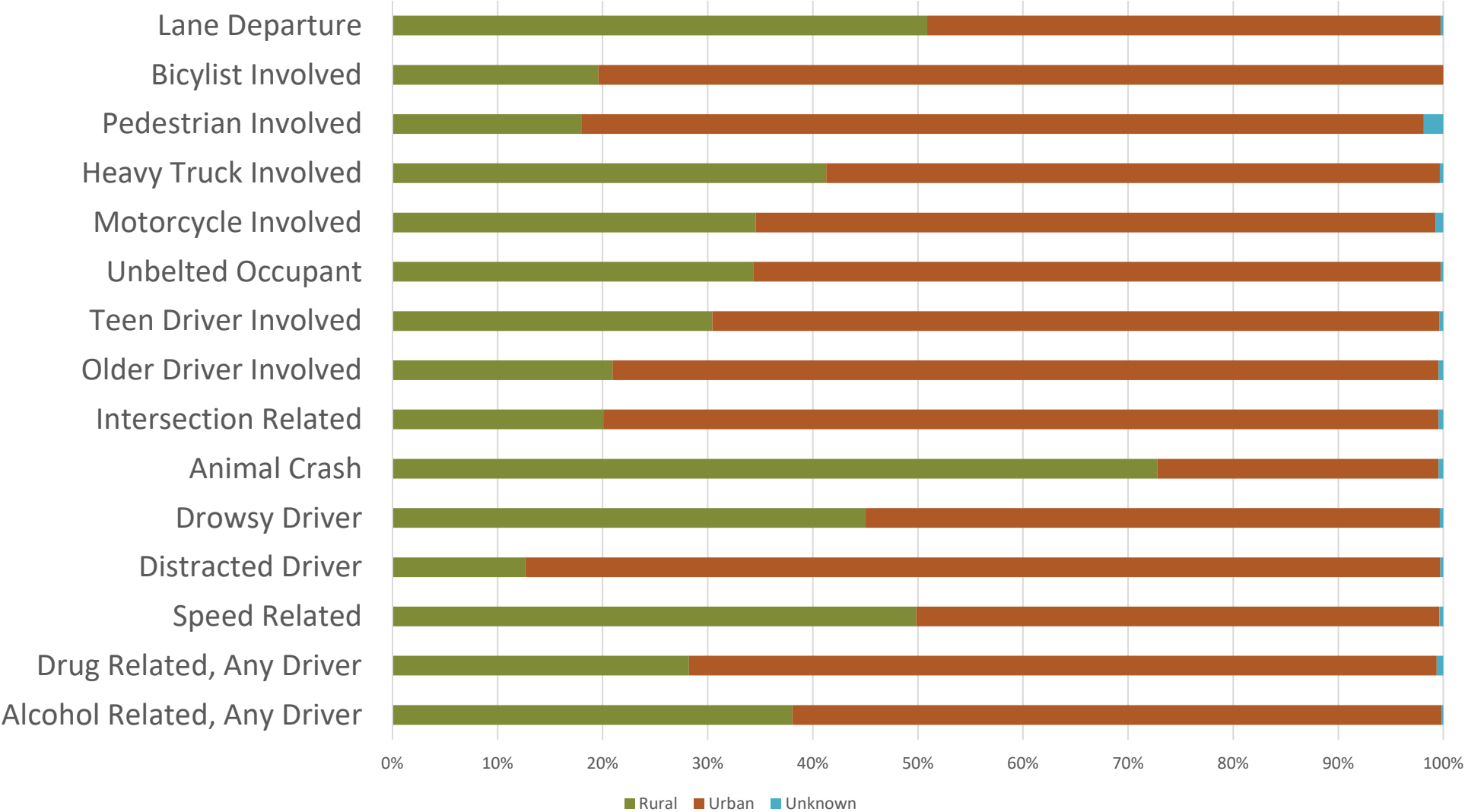


# Existing Conditions: Sample Mapping (Rural Urban Split)



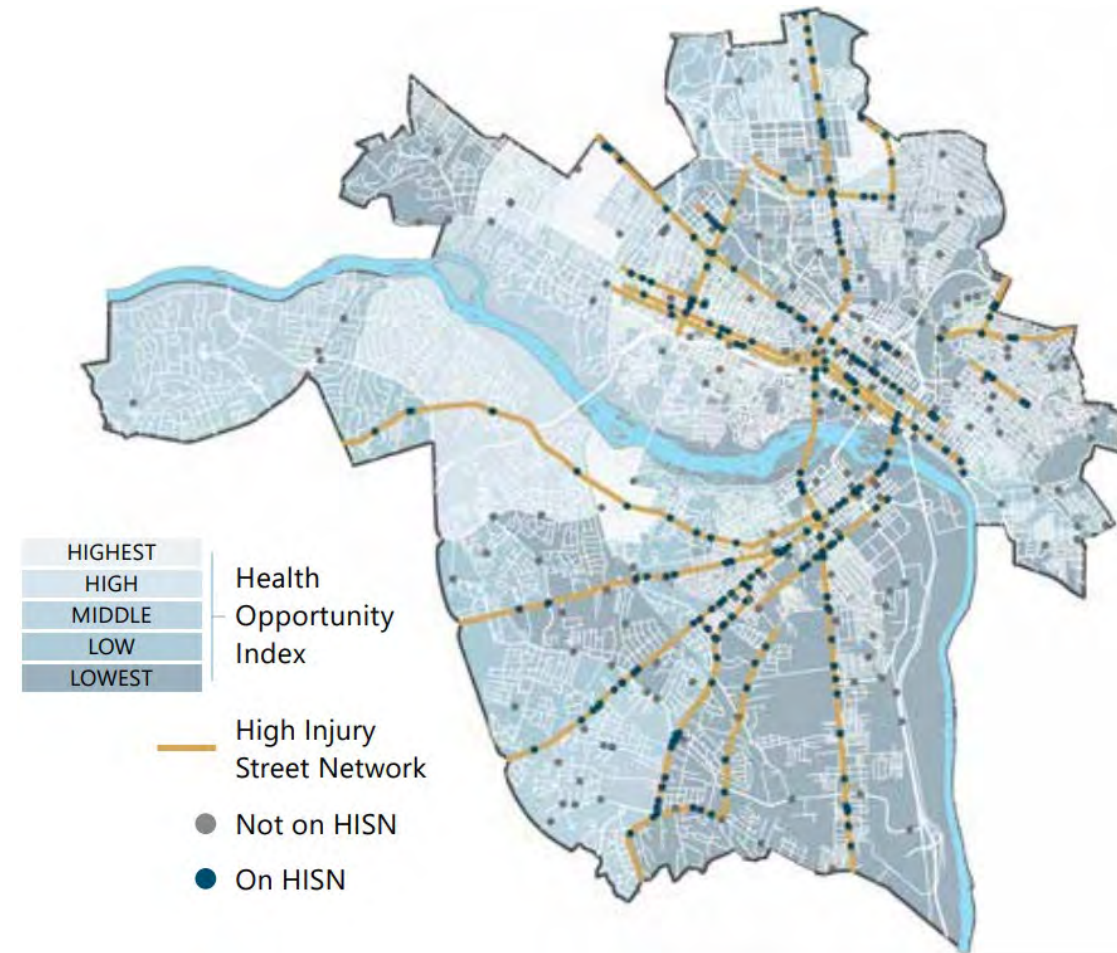


# Existing Conditions: Rural Share versus Urban Share



# Existing Conditions and Data Analysis: High Injury Network

- High Injury Networks are planning-level tools for identifying high crash locations relative to the entire network.
- In most communities, a small percentage of the road network experiences most fatal and serious injury crashes.
- Promising locations for engineering countermeasures or policy changes (e.g., posted speed limits).
- Can be overlaid with community-level data for greater insight on the affected community.



Source: Richmond, VA Vision Zero: Safer Roads for All Modes



# Peer Agency Review- Performance Measures Targets



# Peer Agency Review

- East Grand Forks MPO (North Dakota/Minnesota)
  - Adopted MPO-specific Safety PM targets due to differing levels set by ND and MN
  - Desire to have uniform planning/programming across MPO area
  - Update the targets each year by coordinating with the States for crash data within the planning area
  - Analyzes crash data using 5-year rolling averages
- Mid-Ohio Regional Planning Commission (Ohio)
  - Established regional targets in the 2016-2040 MTP
  - Motivated by characteristics and challenges that differed from other parts of the State
  - Used State targets as starting point and adjusted based on local data
  - Collaborates with ODOT to align targets and safety programs with statewide goals



# Peer Agency Review



MID-OHIO REGIONAL  
**MORPC**  
PLANNING COMMISSION

Performance Measure	2016 Benchmark	2020 Target	2020 Benchmark	2025 Target	2050 Target
Number of Fatalities	96	10% reduction (86)	106	8% reduction (98)	27% reduction (77)
Rate of Fatalities	0.69	0.63	0.74	0.69	0.54
Number of Serious Injuries	896	10% reduction (806)	868	8% reduction (799)	27% reduction (634)
Rate of Serious Injuries	6.4	5.83	6.11	5.64	4.43
Number of Nonmotorized Fatalities and Serious Injuries	138	10% reduction (124)	145	8% reduction, 1% reduction annually (133)	27% reduction, 1% reduction annually (106)





# Peer Agency Review

- Mid-America Regional Council (Kansas/Missouri)
  - Establishes regional targets due to differences with statewide safety trends
  - Collaborates with Destination Safe Coalition to set trends (law enforcement, hospitals, health departments, non-profits, businesses)
  - Analyzed crash data and considered region's Together Toward Zero goal
  - Barriers: target update schedule does not allow use of most recent year's data; MPO has limited capacity to run statistical analyses
- East-West Gateway Council of Governments (Missouri/Illinois)
  - Analyzed State targets, regional crash trends, and safety funding trends.
  - Ultimately chose to align with Illinois targets (percent-reduction basis)





# **Transportation Safety Plan Vision and Goals: Examples from Other Regions**

# 2019 NC Strategic Highway Safety Plan

## Vision

Through our partnerships, we foster safety awareness and provide safe access throughout North Carolina for all users and modes of travel such that everyone arrives safely at their destination.

## Mission

Establish a collaborative, strategic approach to the identification and implementation of safety improvement programs and policies to achieve the statewide goals to reduce fatalities and serious injuries related to crashes on North Carolina's transportation system.

## Goal

**Reduce fatalities and serious injuries by half by 2035, moving towards zero by 2050.**



# Safety Plan Vision and Goals-Greensboro Example

- *The goal of Vision Zero Greensboro is to make transportation safety a top priority. Stakeholder collaboration and community engagement will be key to moving towards zero fatal and serious injury crashes by 2040*
- Greensboro objectives
  - Prevent crashes resulting in fatalities and serious injuries
  - Promote a safety systems approach to transportation in Greensboro
  - Engage partners and the public to foster a culture of safety



## Goal:

The goal of Vision Zero Greensboro is to make transportation safety a top priority. Stakeholder collaboration and community engagement will be key to moving towards zero fatal and serious injury crashes by 2040.

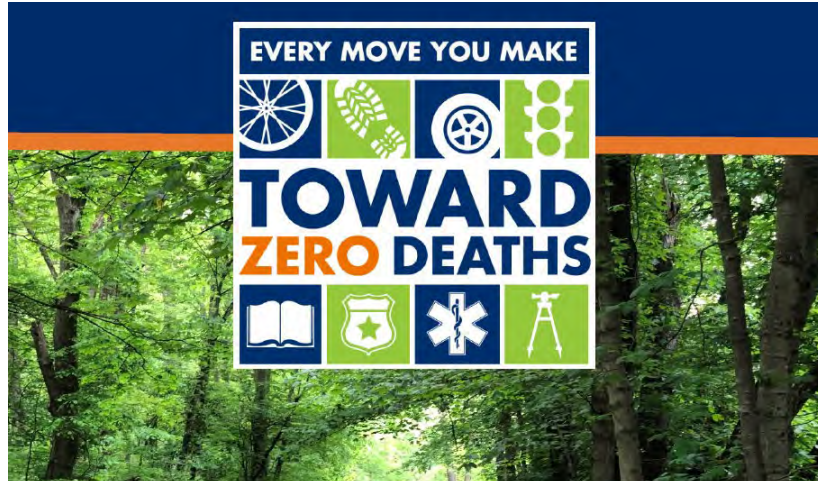
## Objectives:

- Prevent crashes resulting in fatalities and serious injuries.
- Promote a safe systems approach to transportation in Greensboro.
- Engage partners and the public to foster a culture of safety.





# OMEGA (Ohio Mid-Eastern Governments Association) Regional Roadway Safety Plan 2021



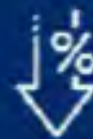
## VISION

Well-funded and safer OMEGA roads for all transportation modes.



## GOAL

Reduce OMEGA region traffic crashes and increase education and funding for improving drivers and roads.



## OBJECTIVE

A 1% annual reduction in fatalities and serious injuries.





# Missoula Community Transportation Safety Plan 2019, Missoula MPO

- Vision of “Target Zero”, previously identified for the 2013 Community Transportation Safety Plan
- Goal to reduce the 5-year average of fatal and serious injuries by 25 percent by 2023 (reducing the 5-year rolling average to less than or equal to 67 fatalities and serious injuries by 2023)



# Proposed BGMPPO Statements

- **Vision:** Fatalities and serious injuries on our roadways are unacceptable; Everyone should arrive at their destination safely no matter the transportation mode.
- **Mission:** Using a data-driven approach that engages a multidisciplinary group of stakeholders, the Burlington-Graham metropolitan region will implement safety strategies and programs to reduce fatalities and serious injuries on its roadways.
- **Goal:** Reduce fatalities and serious injuries on our roadways by half by 2035.





# Breakout Groups

# Breakout Group Discussion

- What are your transportation safety priorities?
- What is your day-to-day experience traveling on the region's roads and how safe do you feel when driving?
- What key phrases or concepts need to be included in the proposed vision, mission, and goal statements?
- Any additional thoughts?





# Website and Survey



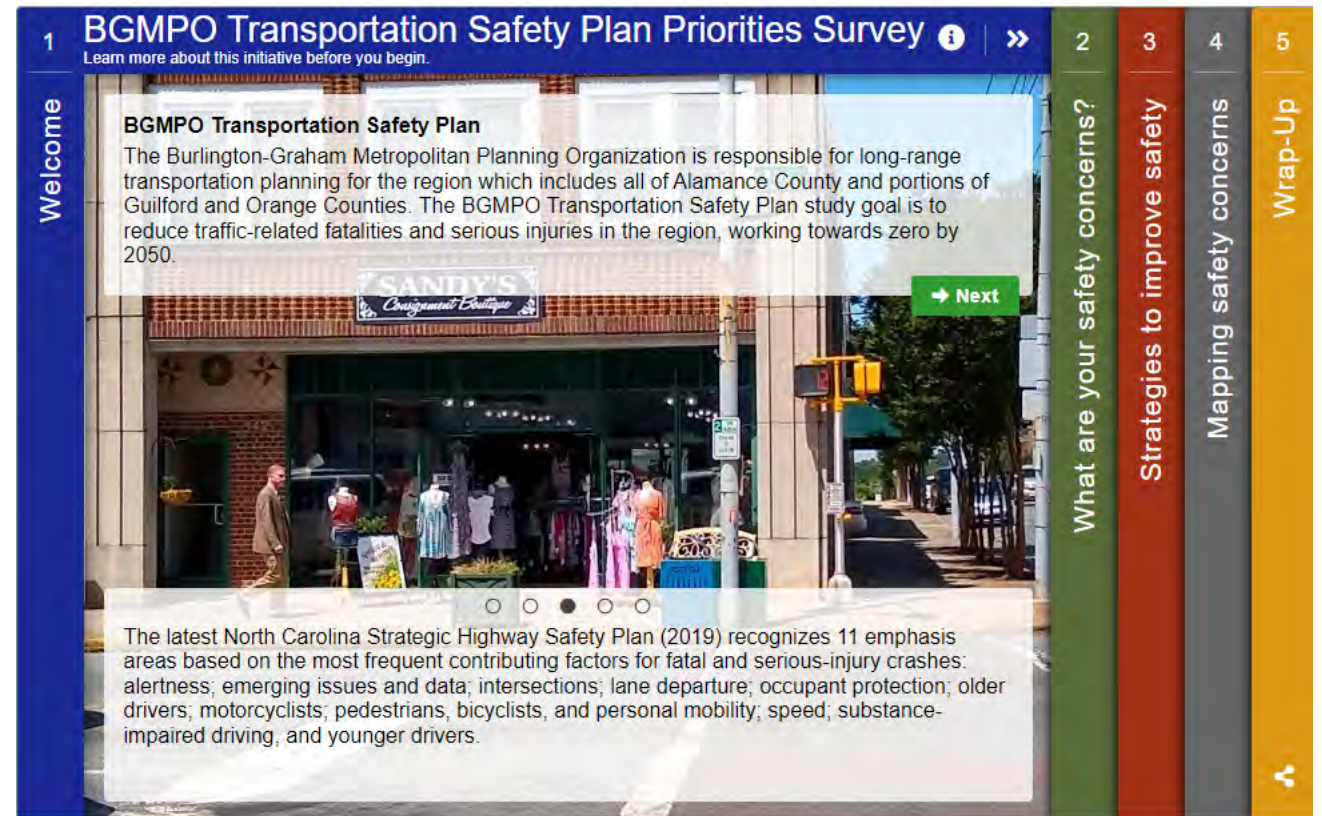
# Public Engagement and Survey

- Website:  
[BGMPOTransportationSafetyPlan.com](https://www.BGMPOTransportationSafetyPlan.com)

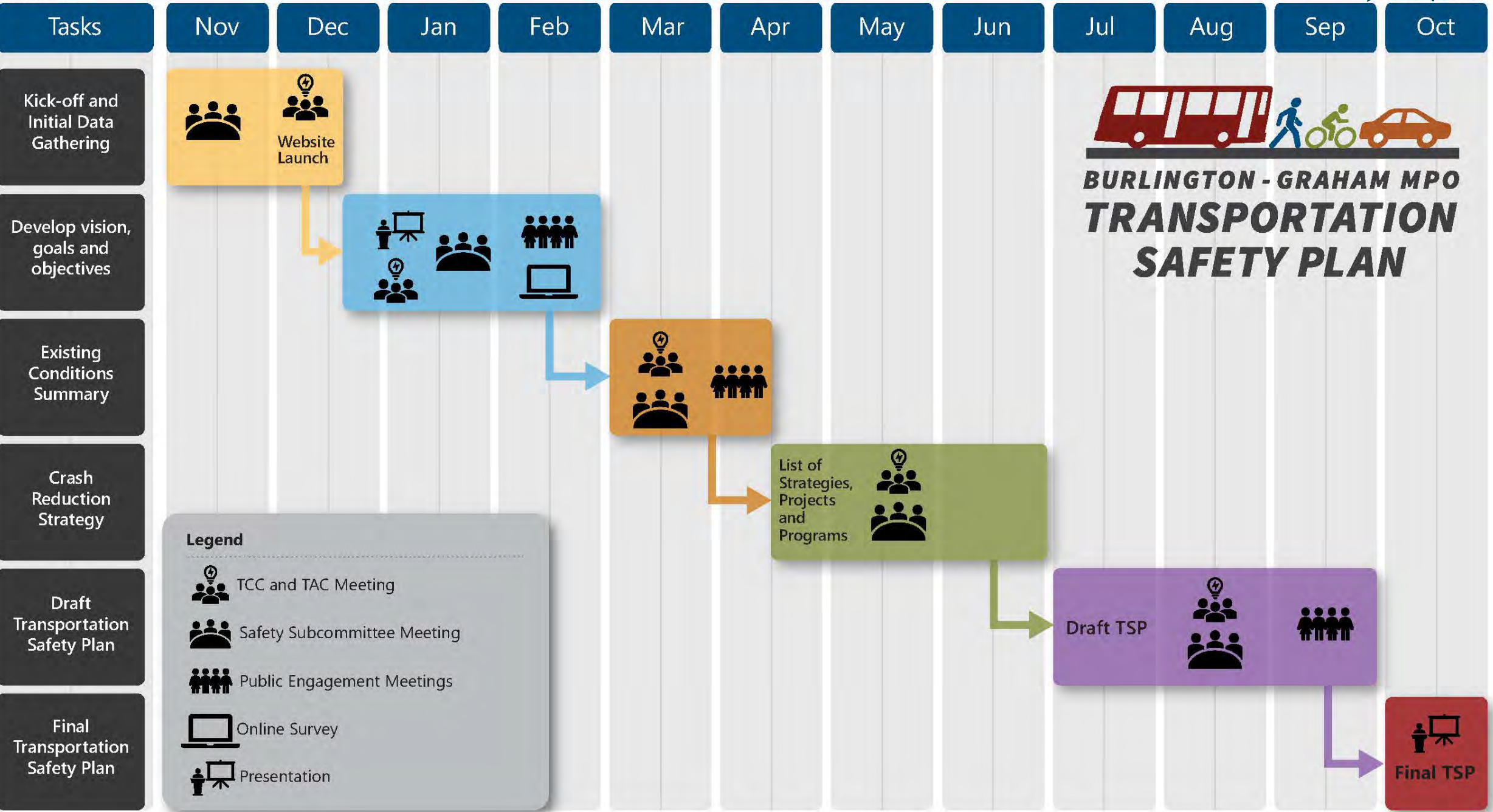
- Survey in MetroQuest open until  
March 31, 2022

<https://bit.ly/BGMPOSafety>

- Two additional public meetings in  
April and September







# Any Additional Questions or Comments?

- **Wannetta Mallette**

BGMPO Administrator

(336) 513-5418

[wmallette@burlingtonnc.gov](mailto:wmallette@burlingtonnc.gov)

- **Eric Tang**

VHB Consultant team

[etang@vhb.com](mailto:etang@vhb.com)

- **Lyuba Zuyeva**

VHB Consultant team

(704) 960-8991

[lyuyeva@vhb.com](mailto:lyuyeva@vhb.com)

