

# Highway Safety and Active Transportation

Southern NH Planning  
Commission

Metropolitan Planning  
Organization

March 26, 2024





# Agenda

- Overview of New Hampshire Highway Safety/Active Transportation
- Strategic Highway Safety Plan
- Pedestrian and Bicycle Plan
- Vulnerable Road User Assessment
- Road Safety Audits (RSAs) and Highway Safety Demonstration Projects
- Challenges/ opportunities

# Highway Safety/Active Transportation

- NHDOT staff
  - Bill Lambert, Highway Safety/Active Transportation Administrator
  - Project Delivery
    - Corey Spetelunas, Highway Safety Project Manager
    - Amanda Joe Zatecka, Senior Highway Safety Engineer
    - Gerry Bedard, Active Transportation Engineer
    - Lilah Flynn, Highway Safety Engineer (CE I)(begins June 14, 2024)
  - Program Management
    - Mark Munroe, Highway Safety Program Manager (begins April 19, 2020)
    - Vacant, Highway Safety Data Analyst
    - Vacant, Highway Safety Transportation Planner

# Evolution of highway safety at NHDOT

- Prior to 2007
  - NHDOT “Safety Surveillance Team”
    - State Traffic Engineer, Highway Maintenance Engineer, Highway Design Administrator
  - Statewide “Regional Safety Conferences”
    - Biannual outreach to solicit specific safety concerns
  - Betterment funded intersection improvement projects
  - Monthly Traffic/Highway Maintenance district tours (ongoing)

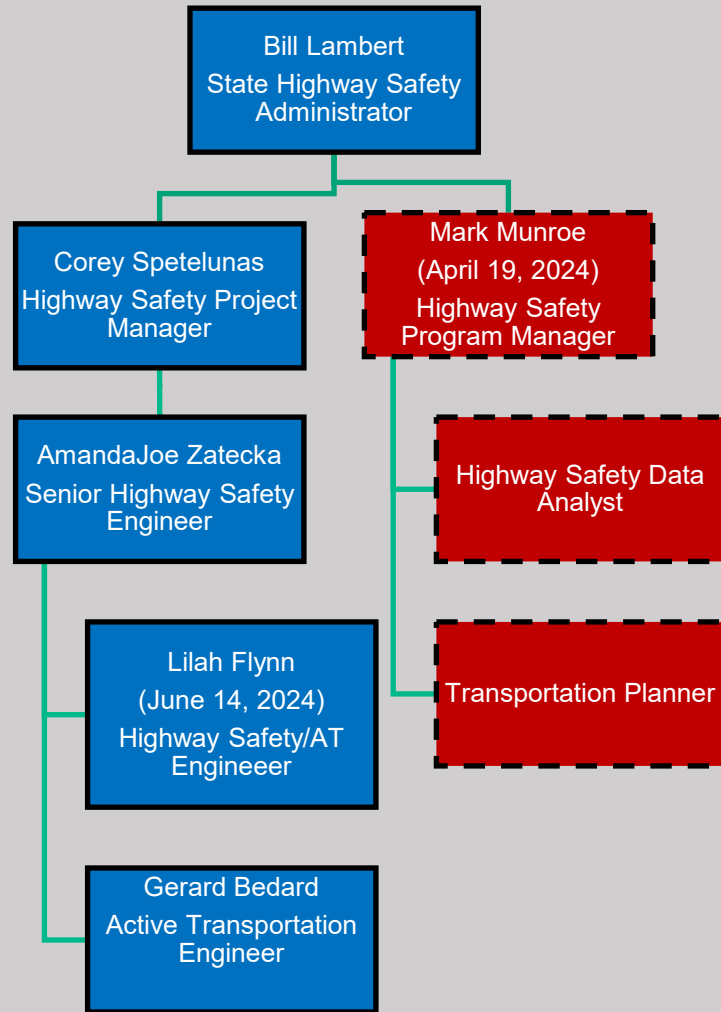
# Evolution of highway safety at NHDOT

- 2007 to 2013: Stuart Thompson is first “Highway Safety Engineer”, eventually adding Tim Harmon
- 2013 to 2017: Michelle Marshall replaces Stuart Thompson
- 2018 to 2022: Reorganization of Highway Design to include new Highway Safety/Active Transportation Section (Mike Dugas, Sally Gunn, Amanda Joe Zatecka, Larry Keniston, etc.)
- 2023 to present: Bill Lambert becomes first “Highway Safety, Active Transportation Administrator”

# Evolution of highway safety at NHDOT

- HSIP Committee
  - Oversight of Highway Safety Improvement Program
  - Approves and prioritizes HSIP projects
    - Systemic (guardrail, pavement marking, curve signing, etc.)
    - Site specific (intersections, highway segments, etc.)
  - Led by NHDOT Assistant Director of Project Development
    - Includes HS/AT staff, Highway Design, Highway Maintenance, Traffic, Planning and Community Assistance
    - External stakeholders include MPO, RPC, large municipality, and small municipality

# Evolution of highway safety at NHDOT



- Purpose of reorganization:

- Highway Safety and Active Transportation elevated to report to Assistant Commissioner
- Traditional Civil Engineering positions reclassified to “program management” classifications
  - Allows engineers to focus on project delivery
  - Provides resources to manage SHSP, HSIP Implementation, VRUA, and other plans
  - Opportunity to improve collaboration with safety partners

# Strategic Highway Safety Plan - 2022

- Initial SHSP, 2007
- Updates
  - 2012-2016
  - 2017-2021

## Vision

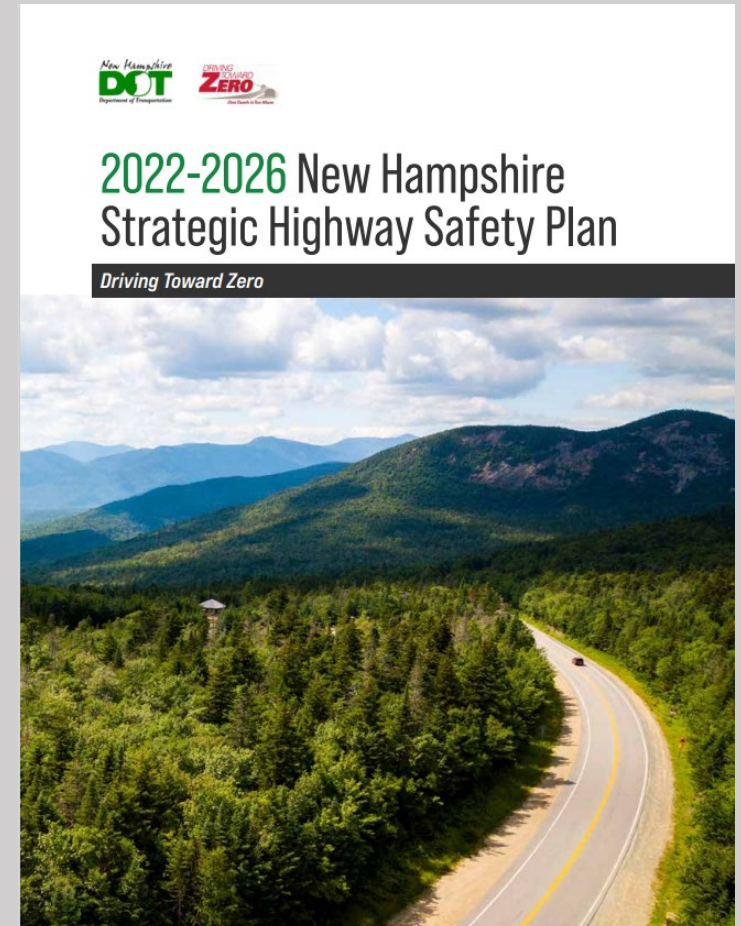
Through a comprehensive, systematic approach we will use data-driven methods to select and implement appropriate countermeasures that will reduce crashes on all New Hampshire roads.

## Mission

Foster and sustain collaboration among private and public stakeholders, in the implementation of education, enforcement, engineering, and emergency medical services (EMS) strategies, to create a safety culture where one death on a New Hampshire roadway is too many.

## Goal

Reduce the number of fatalities and serious injuries by 50% by 2035, working toward 0 by 2050.





# Strategic Highway Safety Plan – 2022

## Critical emphasis areas

- Intersections
- Roadway Departure
- Distracted, Impaired driving
- Speed and aggressive driving
- Vehicle Occupant Protection
- Older drivers, Teen traffic safety
- Vulnerable road users
  - Motorized
  - Non-motorized



# Strategic Highway Safety Plan – 2022

## Key action items

- Intersections:
  - Increase intersection conspicuity (signing and marking)
  - Educate drivers re: new (?) forms of intersection traffic control
- Roadway Departure:
  - Systemically install and maintain centerline and edge line rumble strips
  - Improve horizontal alignment warnings signs and devices
  - Improve work zone safety
- Distracted Driving:
  - Support law enforcement partners

# Strategic Highway Safety Plan – 2022

## Key action items

- Impaired Driving:
  - Support law enforcement partners (e.g. Wrong Way Driving action plan)
- Speed and Aggressive Driving:
  - Set credible speed limits using current practice
  - Educate the public of the dangers and consequences of excessive speed
- Vehicle Occupant Protection:
  - Partner with stakeholders to promote increased occupant protection
- Older Drivers:
  - Increase public transit and community transportation services

# Strategic Highway Safety Plan – 2022

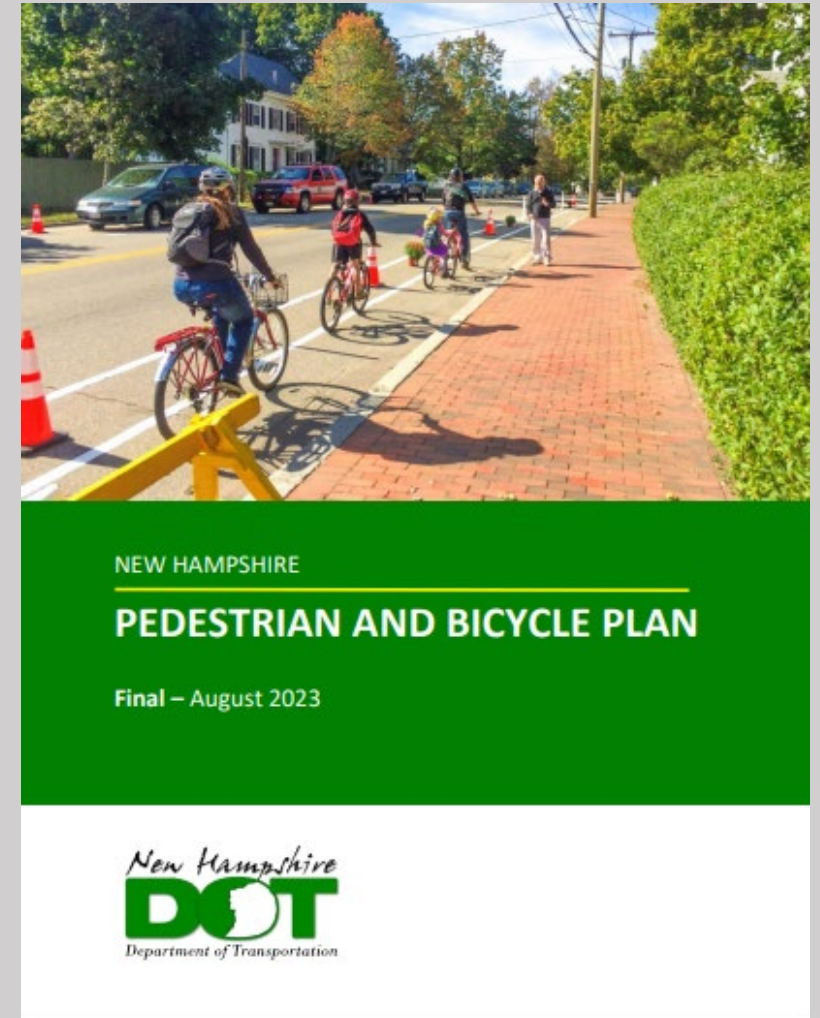
## Key action items

- Teen Traffic Safety
  - Continue education outreach to high schools and driving instructors
- Vulnerable Road Users - Motorized
  - Support behavioral and educational stakeholders in outreach efforts
- Vulnerable Road Users - Non-motorized
  - Institutionalize and implement Complete Streets practices
  - Incorporate best practices for safe pedestrian and bicycle accommodations on roadways
  - Address short- and long-term maintenance of pedestrian and bicycle infrastructure elements



# Pedestrian and Bicycle Plan - 2023

- Includes full chapter on “Complete Streets” practices
- Key action items
  - Updated staff (and partner) training
  - Data acquisition for shoulder widths and other MIRE elements
  - Develop relevant design guidance
  - Develop more specific performance measures
  - Improve ped/bike volume data collection
  - Pursue new programmatic funding dedicated to non-motorized modes



# Vulnerable Road User Assessment – 2023 Federal Requirements

- 2021 Bipartisan Infrastructure Law (BIL)
- **Data-driven process to identify areas of high-risk for vulnerable road users.**  
Specifically, the State must perform a quantitative analysis of VRU fatalities and serious injuries.
- **Consult with local governments, MPOs, and regional transportation planning organizations that represent high-risk areas.**
- **Develop program of projects/strategies** to reduce safety risks to vulnerable road users in areas identified as high-risk
- **Consider Safe System Approach**
- **Due to FHWA November 15, 2023**



# What is a Vulnerable Road User?

A Vulnerable Road User is defined by FHWA as “a non-motorist with a Fatality Analysis Reporting System (FARS) person attribute code for **pedestrian, bicyclist, other cyclist, and person on personal conveyance or an injured person that is, or is equivalent to, a pedestrian or pedal cyclist...**” It is important to note that unlike other organizations including the National Highway Traffic Safety Administration (NHTSA) and the National Safety Council, FHWA does not include motorcyclists among VRUs.

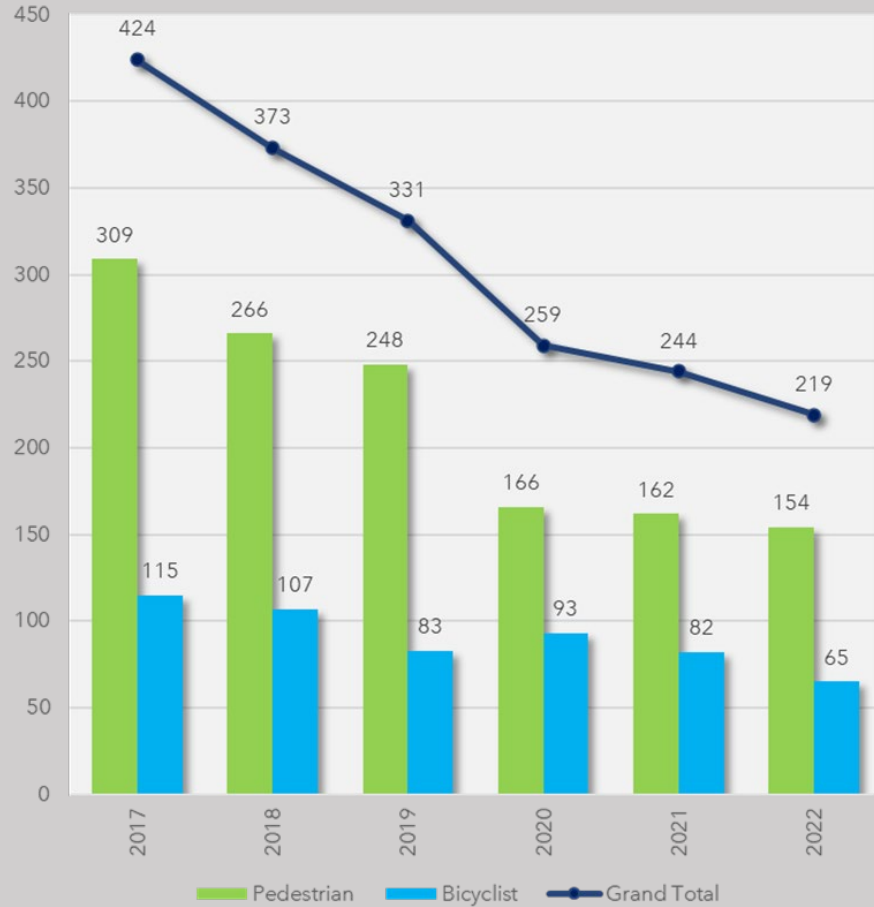
# 2002 – 2022 Non-motorist crashes



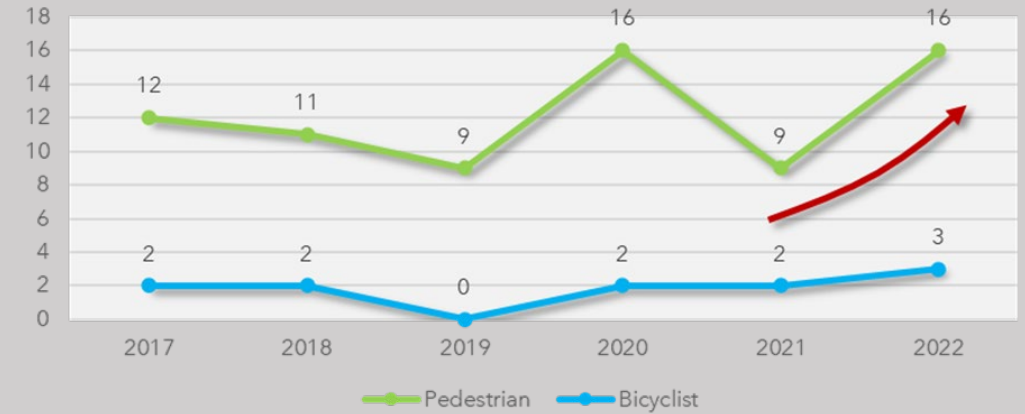


# 2017 - 2022

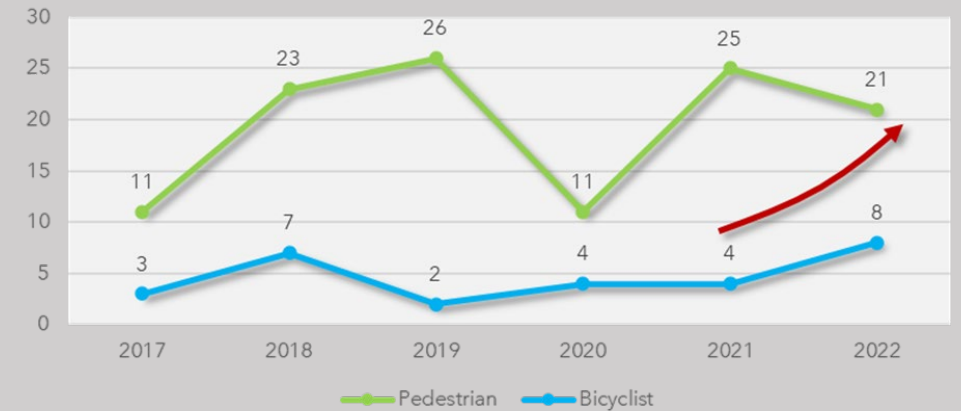
Non-Motorist Crashes



Non-Motorist Fatalities



Non-Motorist Suspected Serious Injuries



# Crash Severity

1,305 545  
    
**1,850**  
VRU Crashes

## FATALITIES

  **73**  **11**

## SUSPECTED SERIOUS INJURIES

  **117**  **28**

## SUSPECTED MINOR/POSSIBLE INJURIES

  **556**  **282**

## UNKNOWN

  **179**  **77**

## PROPERTY DAMAGE ONLY

  **380**  **147**

**12%**  
**SEVERE**

DESIGNATION  
12% of VRU CRASHES

**58%**

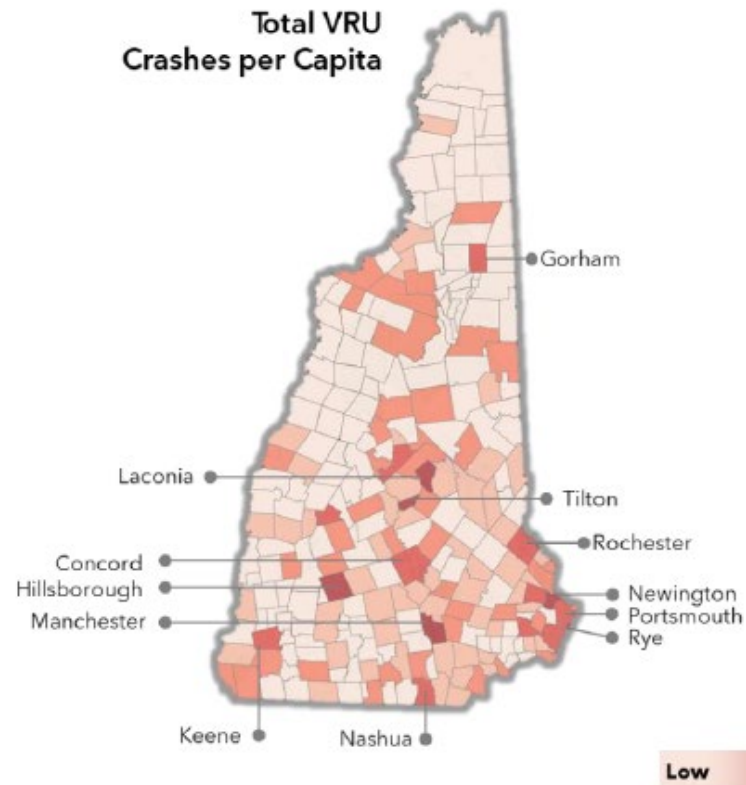
of VRU  
involved in  
crashes  
were injured  
to some  
degree

**72%**

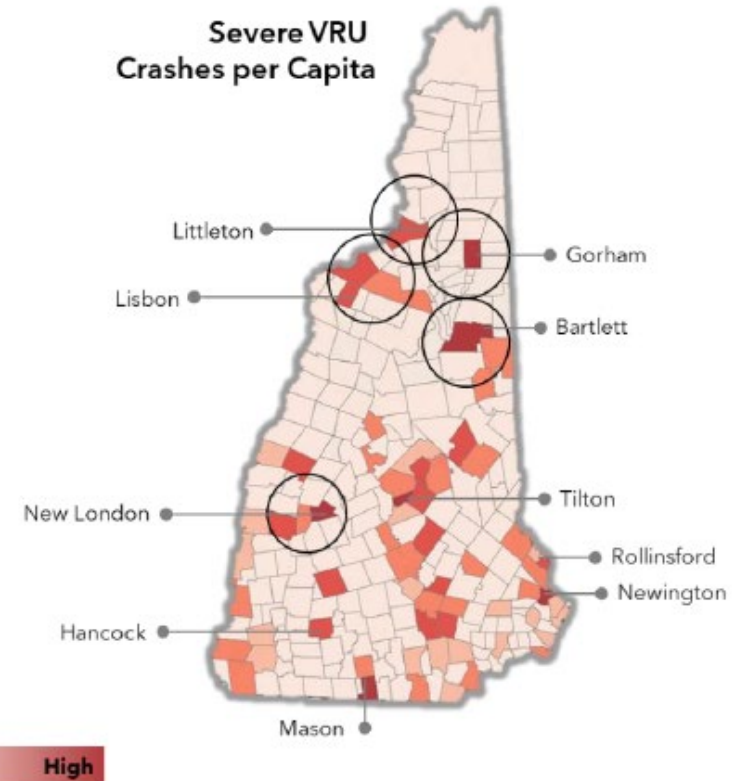
possible if  
unknown  
crashes  
resulted in  
injury

# Where are crashes occurring?

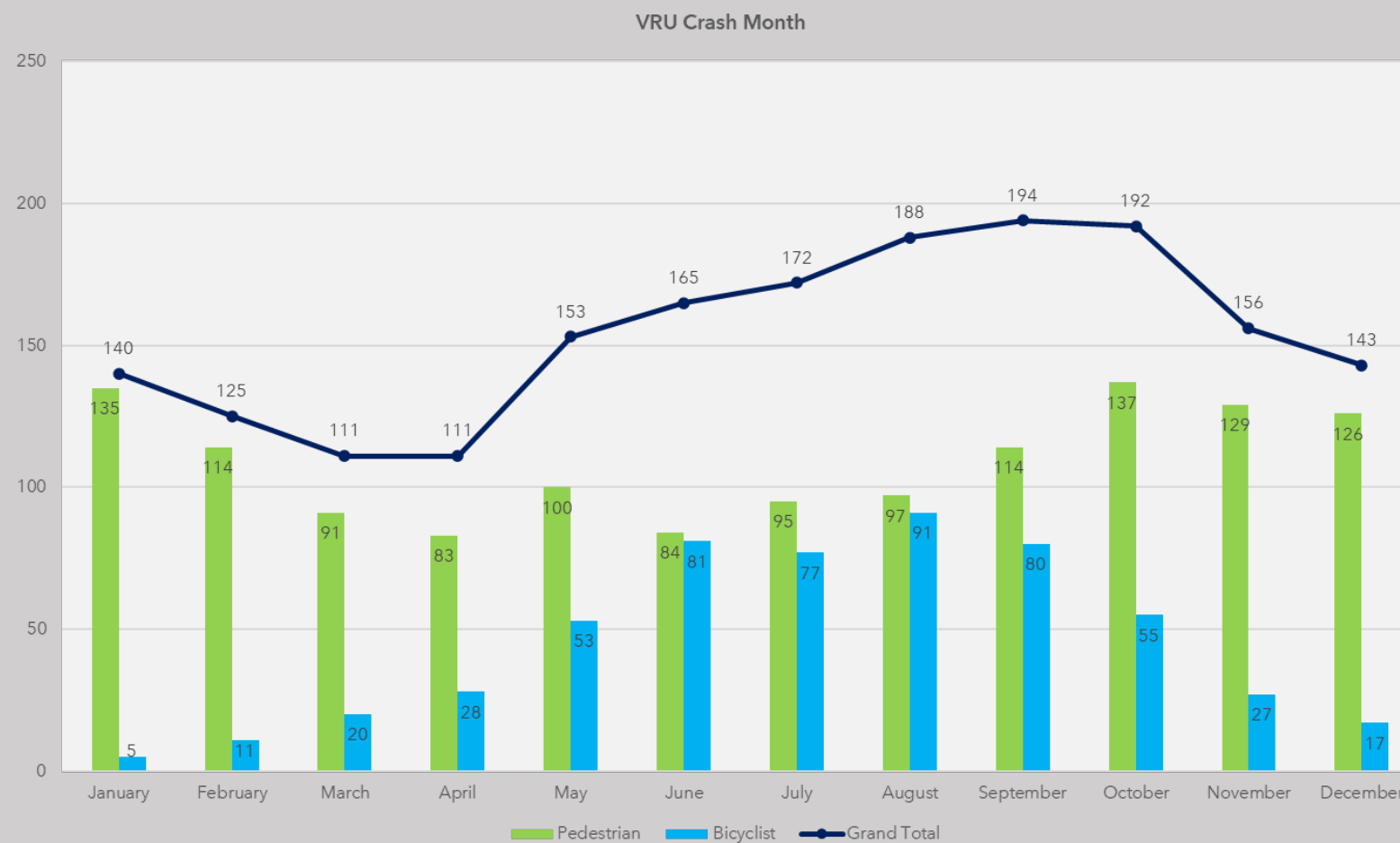
**Figure 20.** Total VRU Crashes per Capita



**Figure 21.** Severe VRU Crashes per Capita

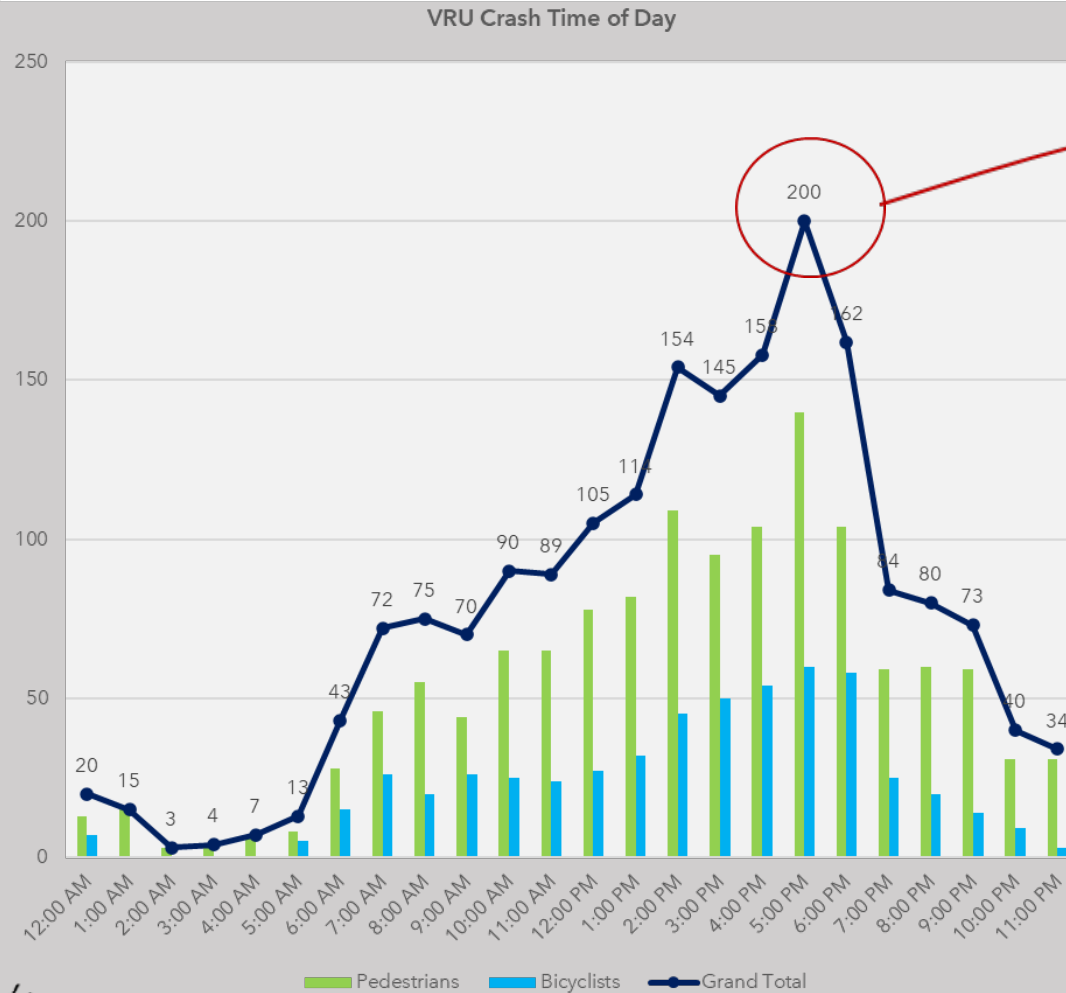


# When are crashes occurring (month)?





# When are crashes occurring (TOD)?



Month	% of 5 PM Ped Crashes
Jan	20%
Feb	6%
Mar	5%
Apr	7%
May	6%
Jun	5%
July	5%
Aug	4%
Sep	9%
Oct	6%
Nov	14%
Dec.	14%

# Who is involved?



**20%**

of pedestrian fatalities involved pedestrians under the influence of drugs or alcohol.



**5%**

of VRU fatalities involved driver impairment.



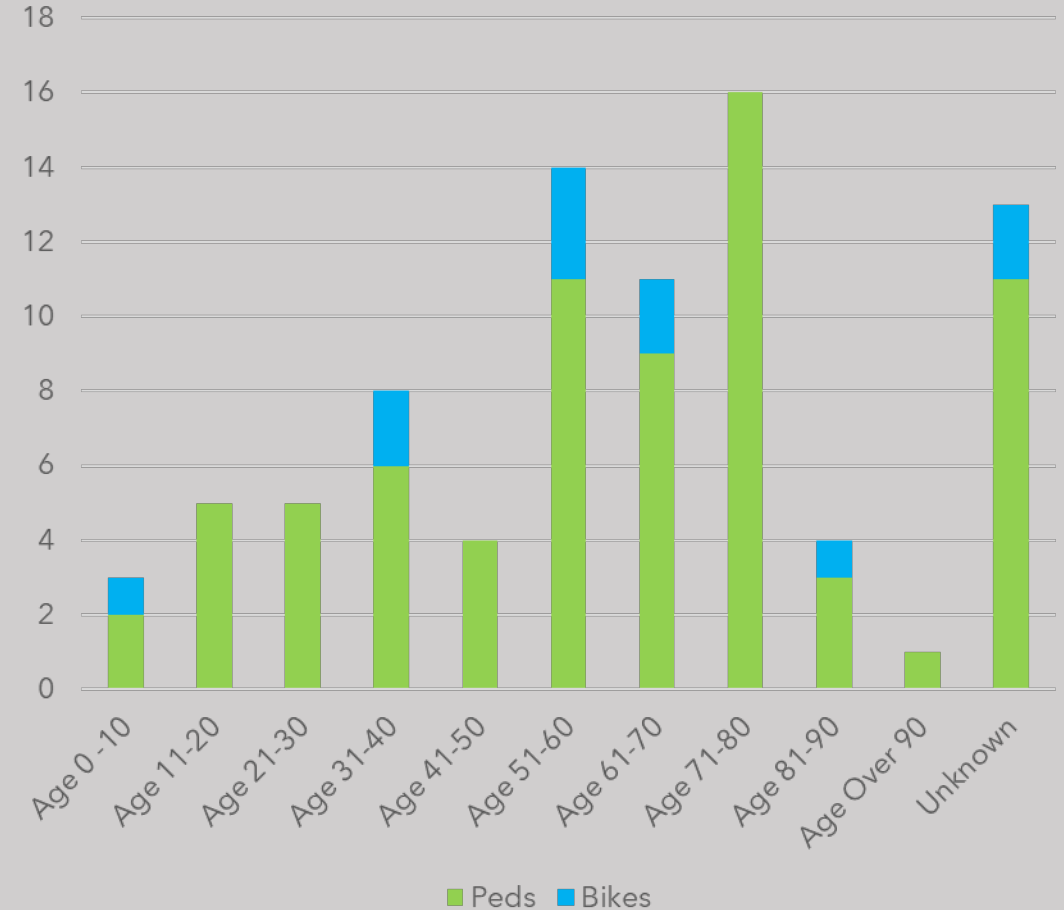
**45%**

of bike fatalities involved cyclists not wearing a helmet.



**30%**

of VRU fatalities were people aged 65+



# High Injury Network (HIN)

- Federal regulations mandate that states must pinpoint areas of elevated risk for vulnerable road users as part of the Vulnerable Road User Safety Assessment. Typically, this is done by developing a High Injury Network (HIN) which identifies specific locations or corridors within a region where a disproportionately high number of severe and fatal traffic injuries occur. Once identified, these areas become top priorities for safety interventions.

# Vulnerable Road User Strategies

## Safe Roads/Safe Speeds

1. Enhance pedestrian and bicyclist safety along the high injury network.
2. Identify, adopt, and encourage the use of best practices.
3. Develop a series of programs intended to provide technical assistance to local entities

## Safe Road Users

4. Educate State, external partners, and the public about the needs of Vulnerable Road Users.



# Vulnerable Road User Strategies

Data Improvements (all five SSA elements)

5. Improve data collection, data analysis, and data accessibility/transparency

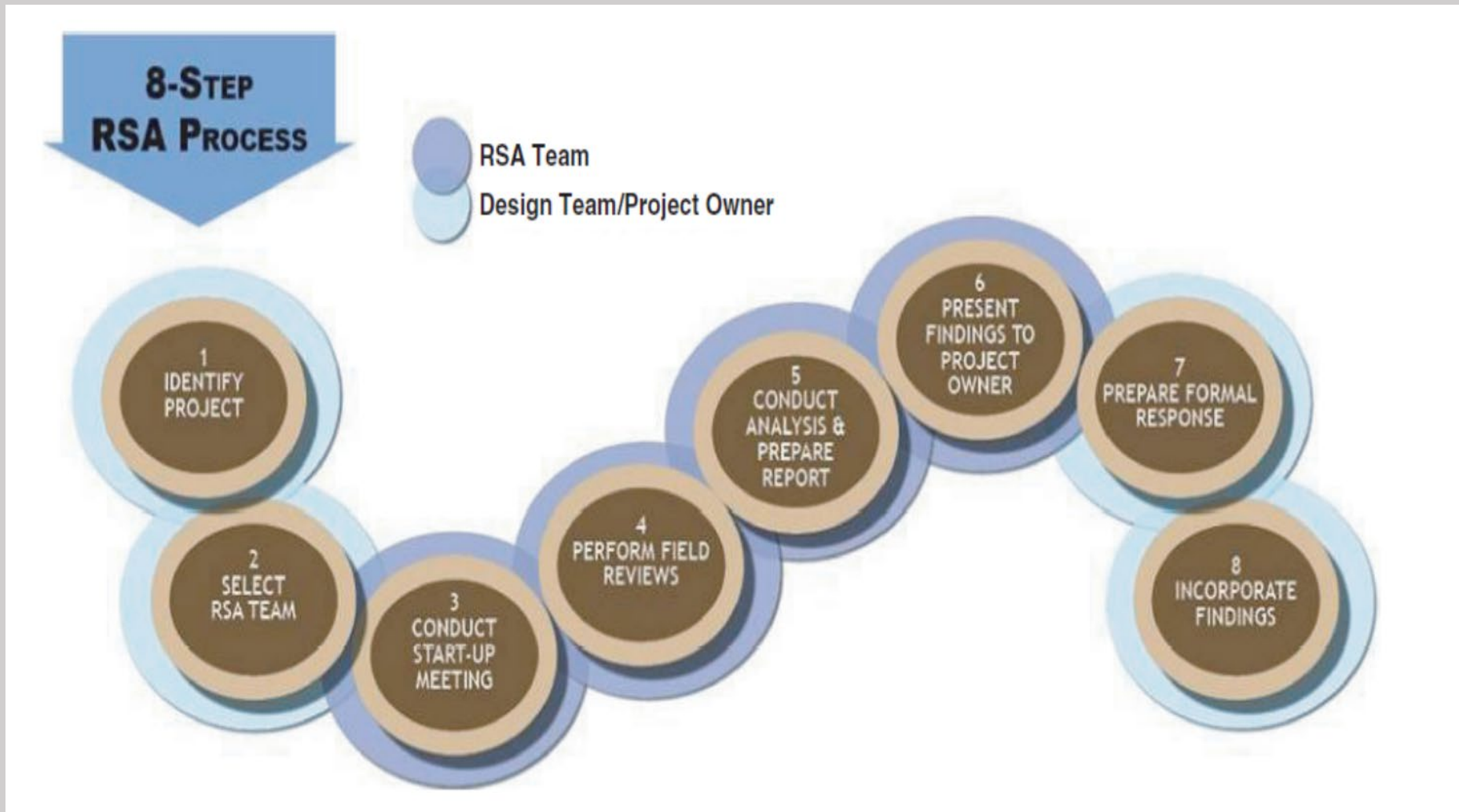
Future investments (all five SSA elements)

6. Invest in pedestrian and bicyclist safety

# Road Safety Audits (RSAs)

1. Applications submitted by towns/cities in collaboration with planning commissions
2. Multi-disciplinary team evaluation of specific safety concern and development of short-, intermediate-, and long-term safety countermeasures
3. Includes “table-top” discussion and field observation
4. Helps to identify and prioritize projects funded through Highway Safety Improvement Program

# Road Safety Audits (RSAs)



# Demonstration Projects

- Short-term application of innovative design elements using temporary materials
- Allows observation of alternatives without committing permanent resources
- Facilitates public input
- Provides opportunity for objective decision-making
- Communities should coordinate with planning commissions and NHDOT (typically, Highway Maintenance district office with support from Bureau of Traffic and Office of Highway Safety/Active Transportation)

# Challenges

- Motorist behavior
- Overcoming years of “car first” highway design, construction, maintenance, and operation
- Data
  - Pedestrian and bicycle volumes
  - Crash data quantity and quality
  - Inventory data for network screening
- Reaching consensus
- Resources versus demand





# Opportunities

- Adoption (and implementation) of a Complete Streets Policy
- Collaboration with law enforcement and other highway safety partners
- Big data and Artificial Intelligence
- Dedicated funding the IIJA/BIL
- Innovative design and design alternatives
  - Intersection control (2-way to All-way STOP control)
  - Roundabouts versus traffic signal control
  - Consideration of lesser traffic level of service during peak periods

# Opportunities

## Southern New Hampshire region

- Candia, NH 43 at Old Candia Road
  - [Google Maps](#)
- Fitzwilliam, NH 12 at NH 119
  - [Google Maps](#)
- Keene
  - NH 12 at Wyman Road/Corporate Drive
    - [Google Maps](#)
  - NH 9 at Whitcomb's Mill Road
    - [Google Maps](#)
- Others?



# Opportunities Southern NH Region

Manchester:  
Cilley Road at  
Jewett Street





# Opportunities Southern NH Region

Candia, NH 43 at  
Old Candia Road





# Opportunities Southern NH Region

Bedford:

New Boston Road at  
Joppa Hill Road





# Questions?

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