



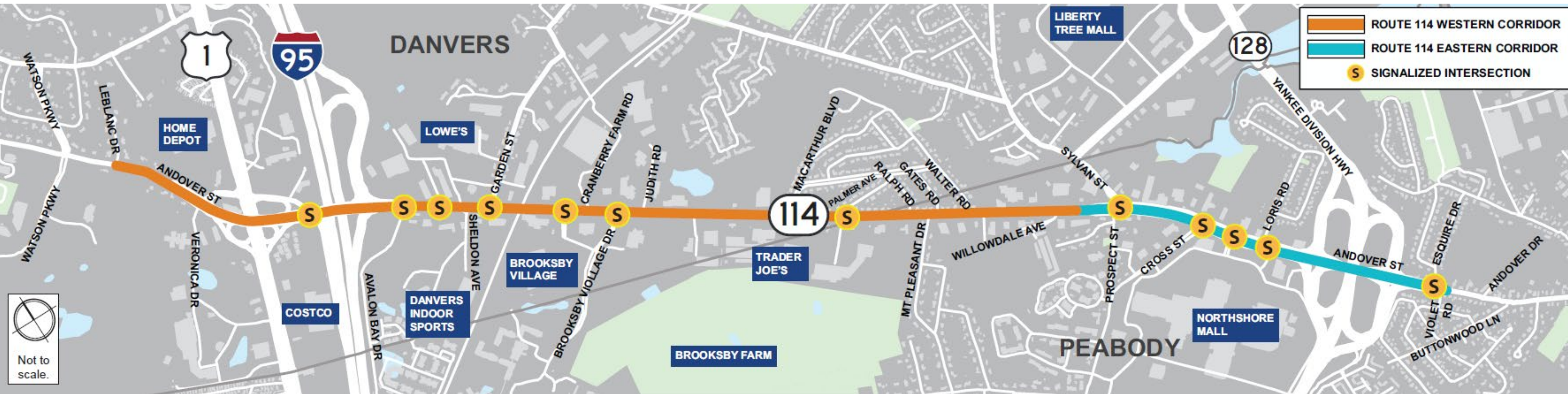
# Route 114 Safety Improvements Project Danvers/Peabody

*Tier 2 Public Workshop*

Torigian Senior Center, Peabody, MA | December 13 | 6pm



# Project Location



- 12 signalized intersections included in analysis
- Two separate Road Safety Audits were conducted along the corridor, so it will be referred to as the “Western Corridor” and “Eastern Corridor”
- Project exists both in Danvers and Peabody on state-owned roadway



# Purpose & Need

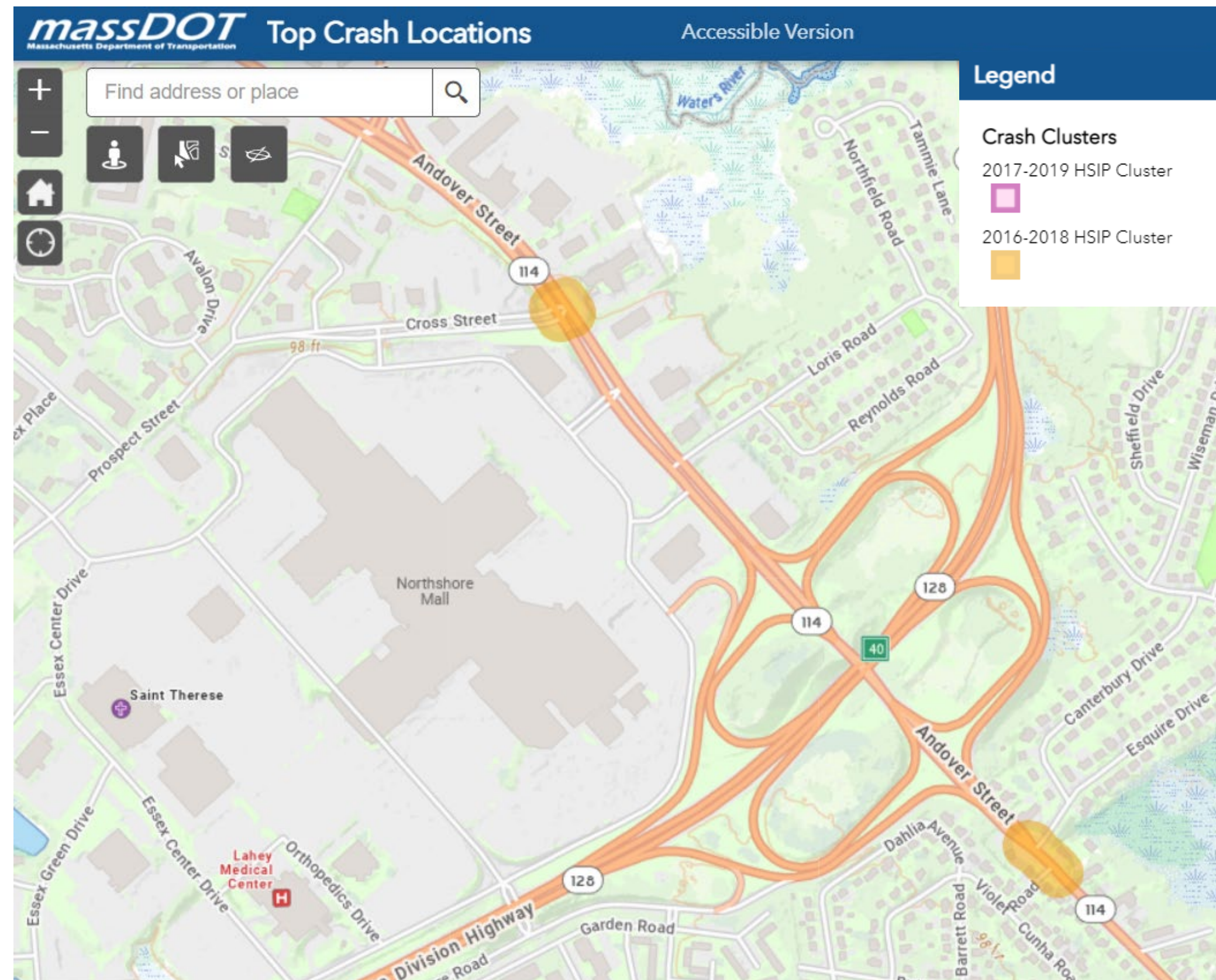
**! SAFETY FIRST !**

## Need

- Reduce Speeds and Decrease Injury Crashes
- Studied **285 Crashes** on the Western Corridor (2017-2019) inclusive of fatality crashes in 2020 and 2021
  - **4 Fatalities** within Study Period
  - **35% Injury** Crashes
  - **1 pedestrian** and **1 bicyclist** crash
- Studied **195 Crashes** on the Eastern Corridor (2012-2015)
  - **33% higher than** statewide average crash rate
  - **Zero** fatalities during study period
  - Most crashes were **rear end**
  - **Zero** crashes involving pedestrian/bicyclist

## Purpose

- Incrementally improve safety along the corridor in a tiered approach instead of waiting for a full long-term roadway reconstruction project



## Purpose & Need

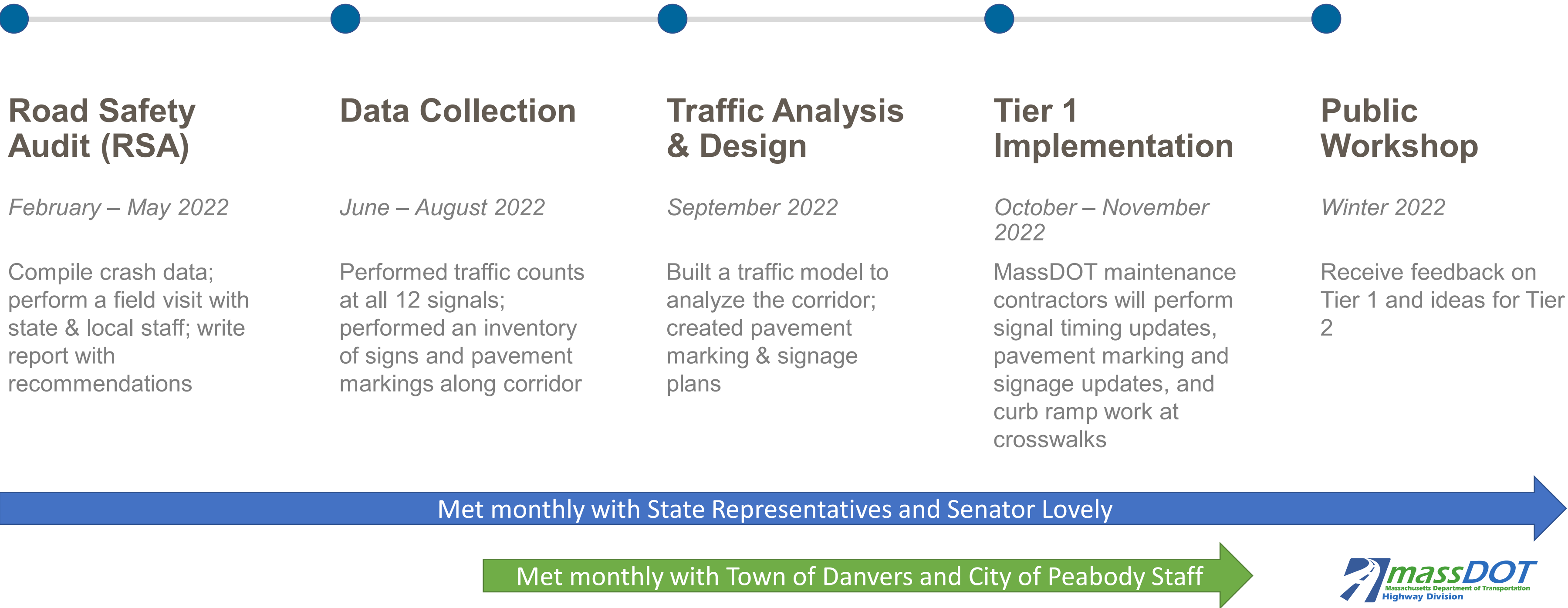


Roadways must balance the needs of many competing factors:

- Safety
- Operations
- Access
- Multimodal mobility
- And more!

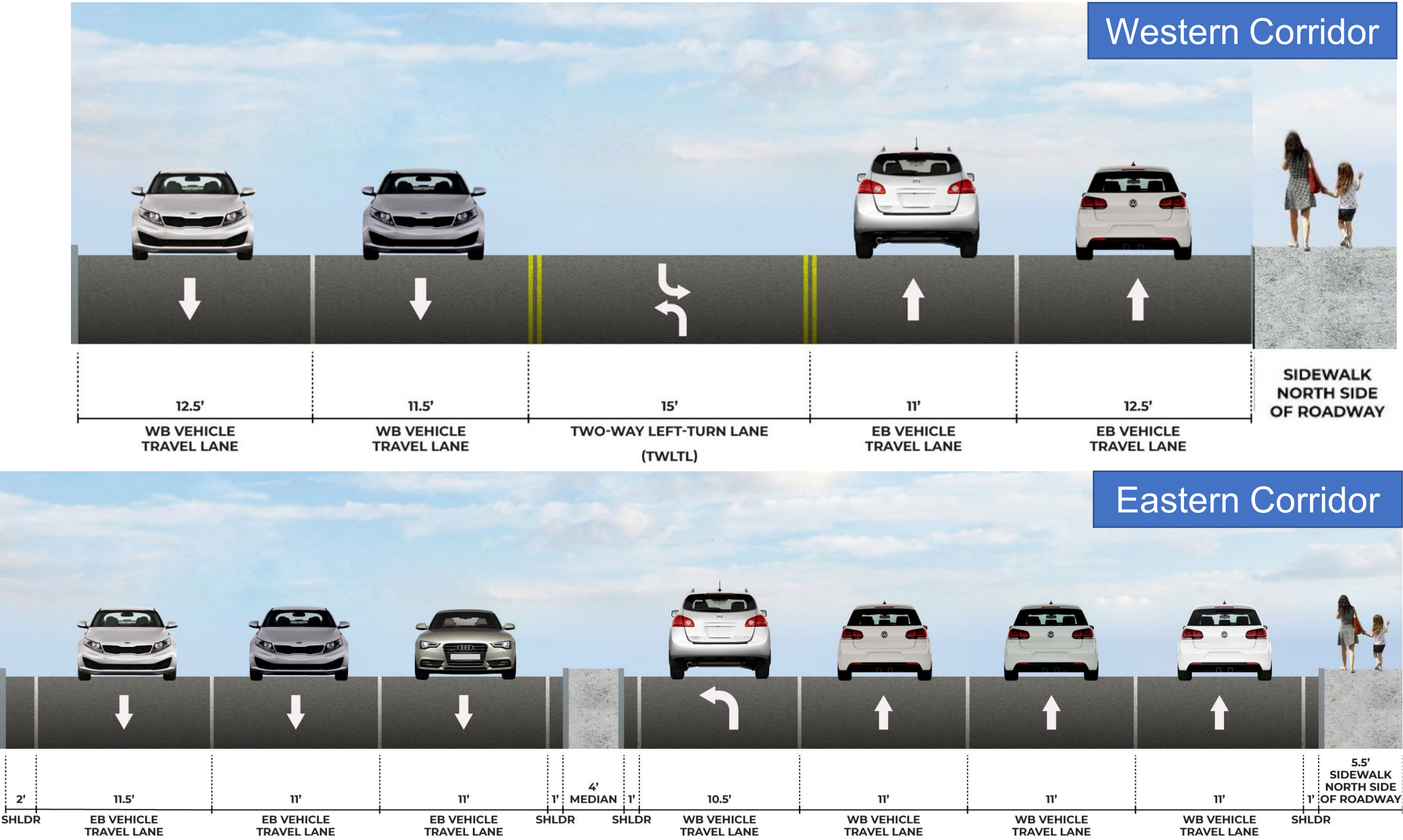


# Process To Date








# Existing Conditions: Cross Section

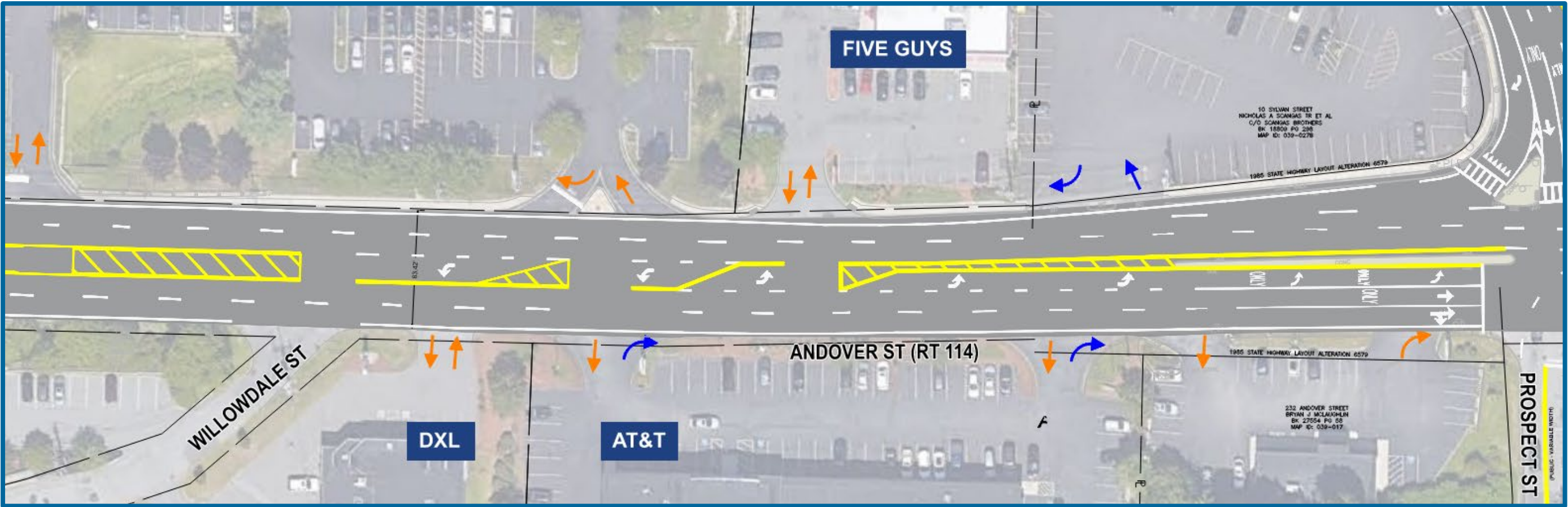




# Fall Implementation/Tier 1 Scope

The following elements will be implemented in the Fall/Winter 2022 Improvements:

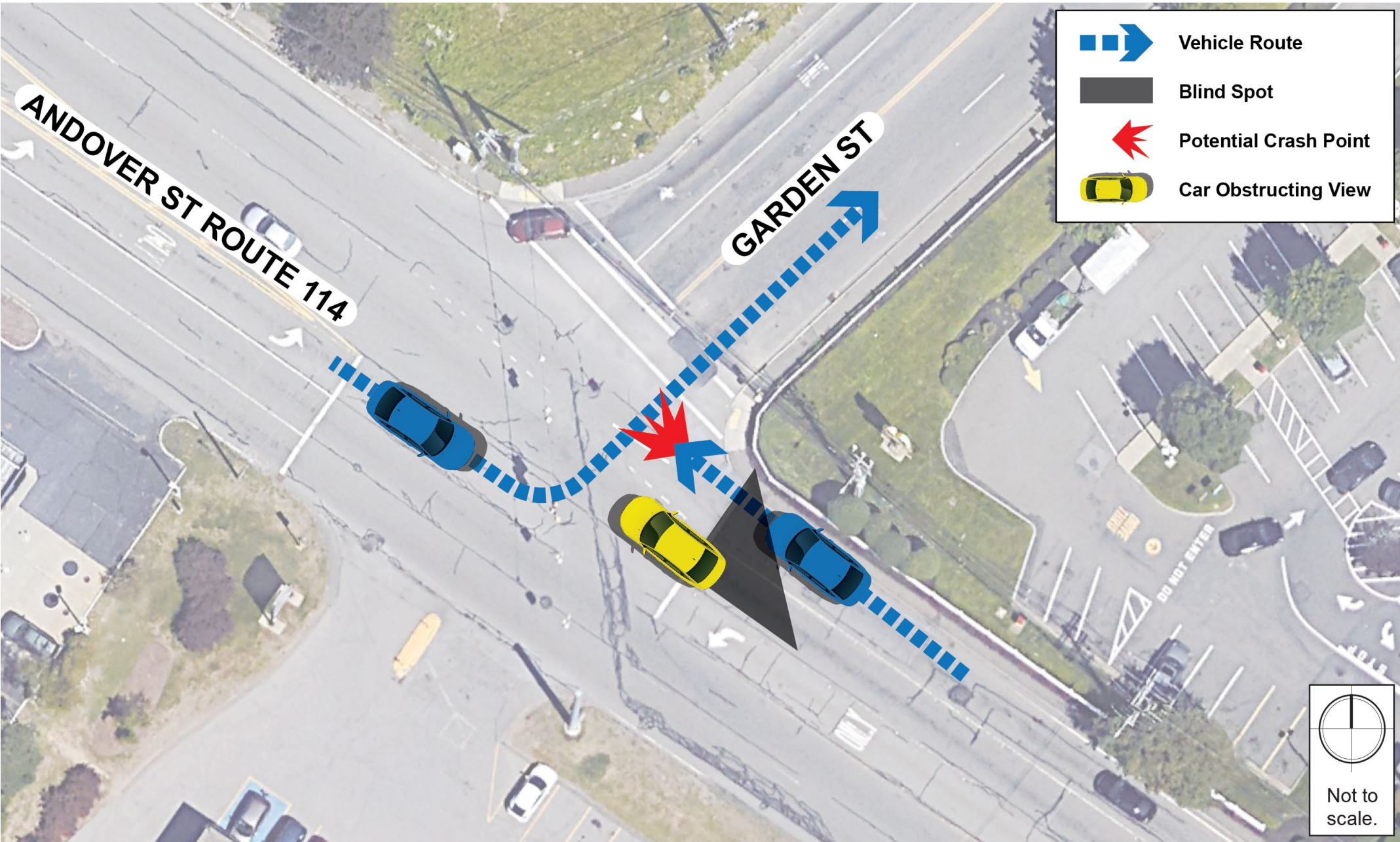
-  Signal timing updates including new protected left turns
-  Pavement marking & signage updates
-  Provide two new crosswalks across Route 114 at Garden Street and Palmer Avenue






# Tier 1: Protected Left Turns

Intersection	# of Angled Crashes
Route 114 at Garden Street	3
Route 114 at Walmart Driveway	0
Route 114 at Brooksby Village Drive	3
Route 114 at Cross Street	5



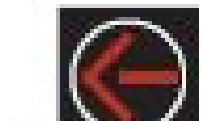
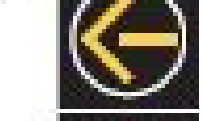

## Existing



-  **STOP.** Left-turning drivers must stop and wait.
-  **WARNING / CAUTION.** The left turn signal is changing to red.
-  **CAUTION.** You may cautiously turn left **after** yielding to oncoming traffic and to pedestrians (similar to a green ball). Oncoming traffic will typically have a green light.
-  **GO.** Left-turning drivers have the right of way.

## Proposed

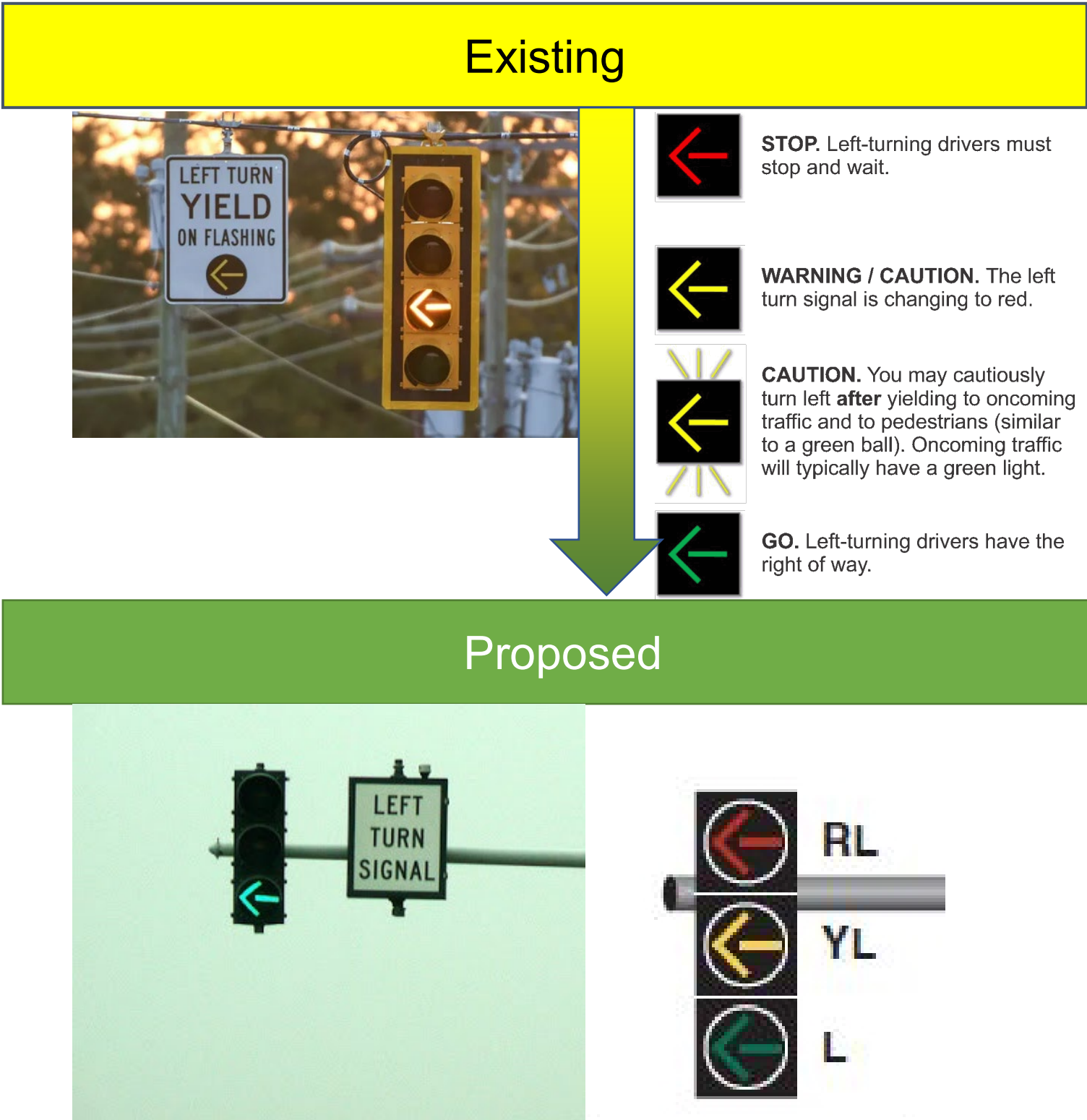
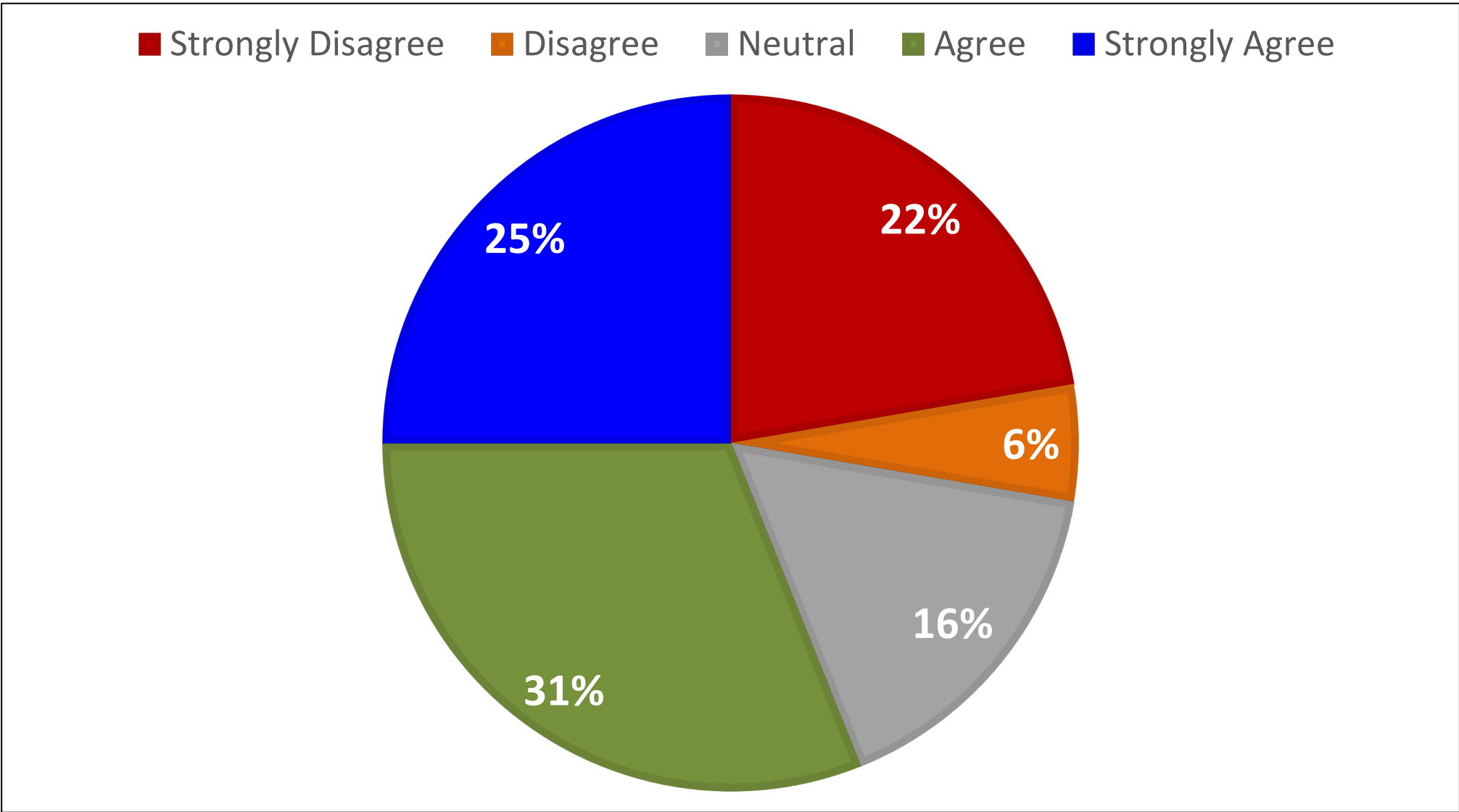


-  **RL**
-  **YL**
-  **L**



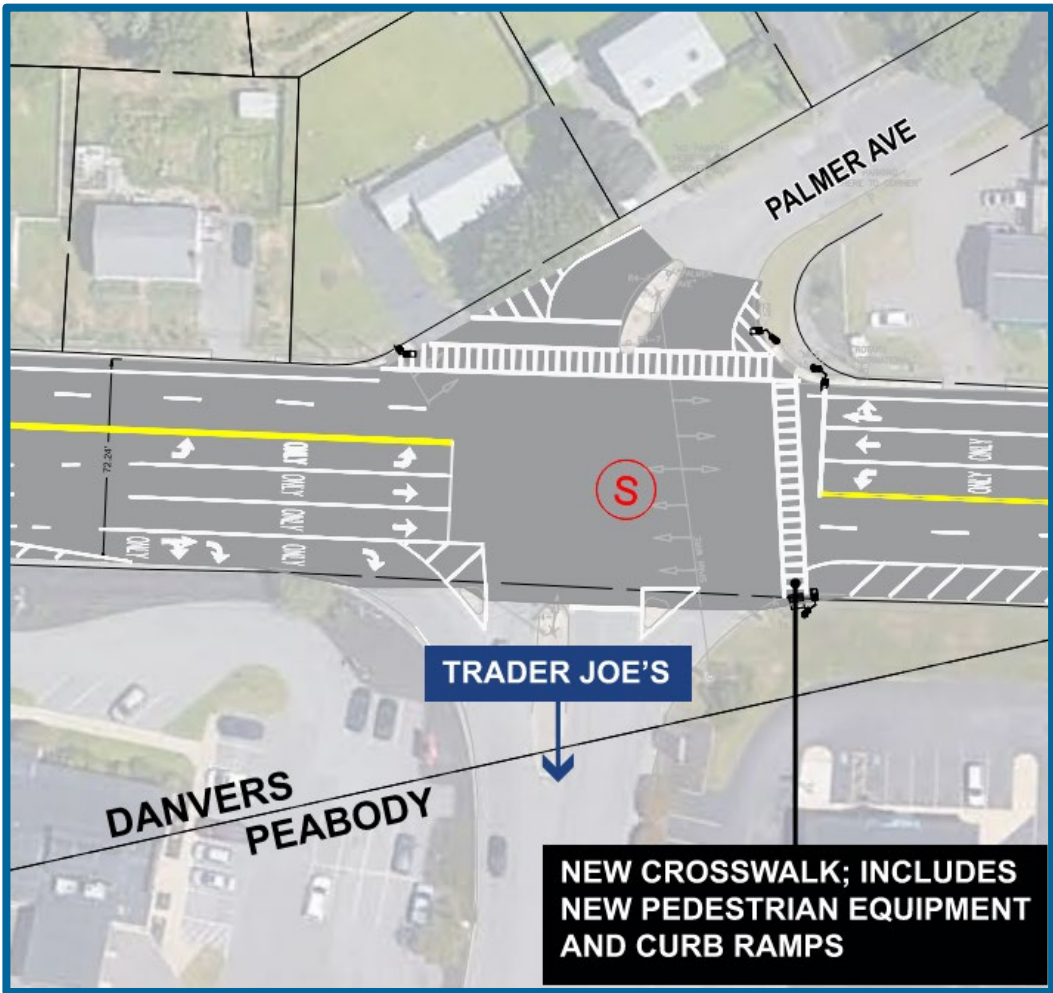
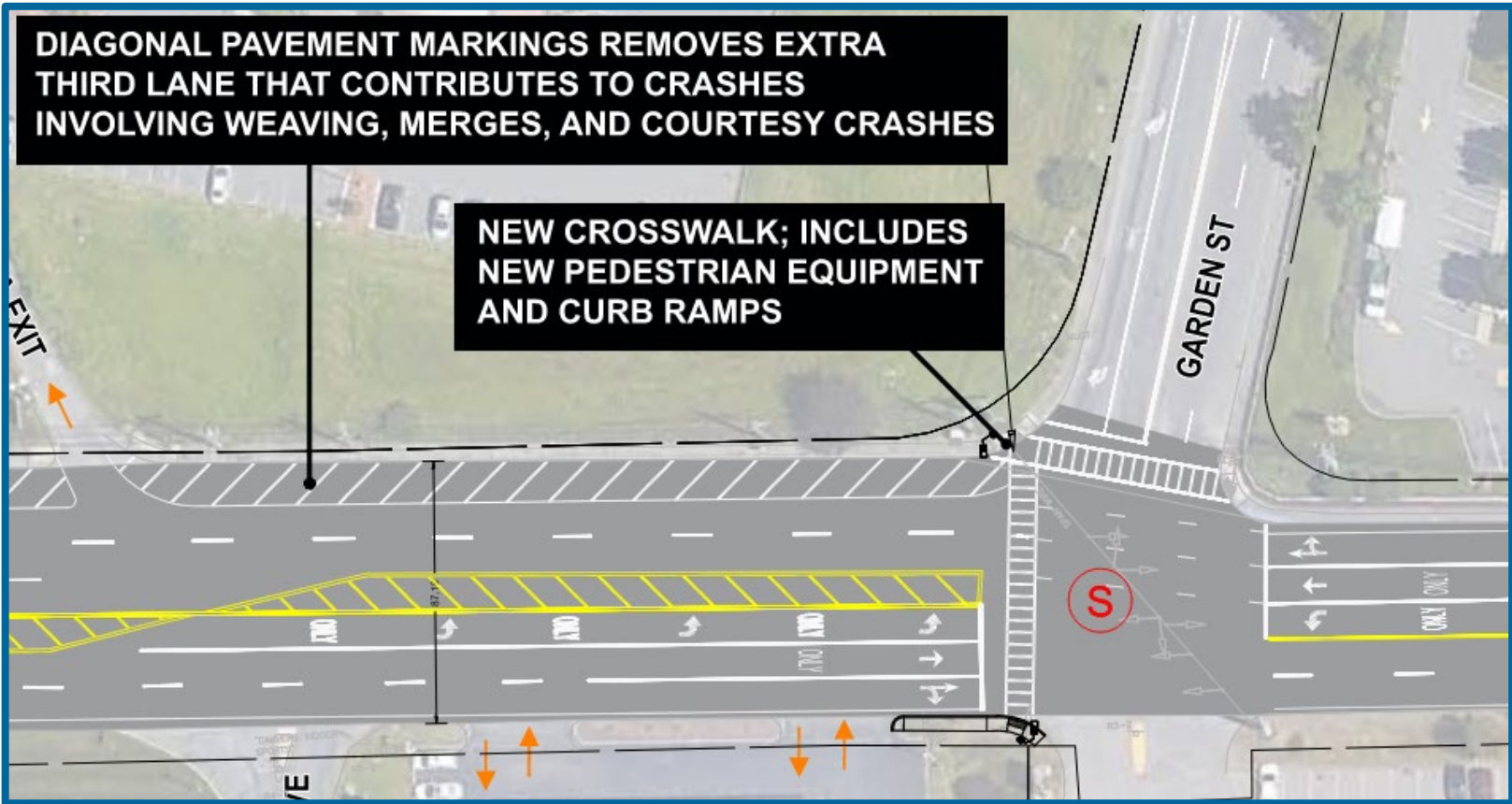
# Tier 1: Protected Left Turns

Was this effective?  
(Survey results as of 12/12 at 4pm)





# Tier 1: Crosswalks



1.5 - mile stretch between crosswalks across Route 114 (Brooksby Village Drive to Loris Road)

Two new crosswalks at Garden and Palmer to meet demand created by land use on both sides of the road

Locations selected by crash history, pedestrians counted and feasibility

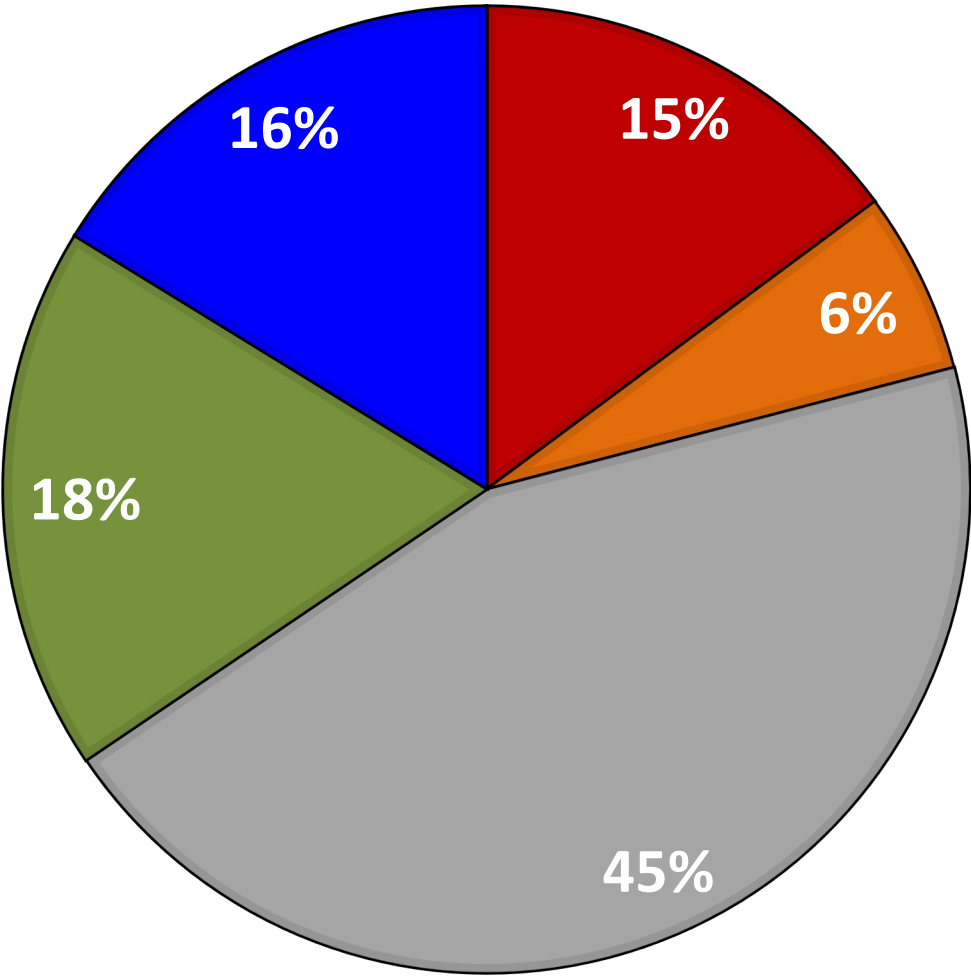
More crosswalks to be evaluated for Spring/Summer



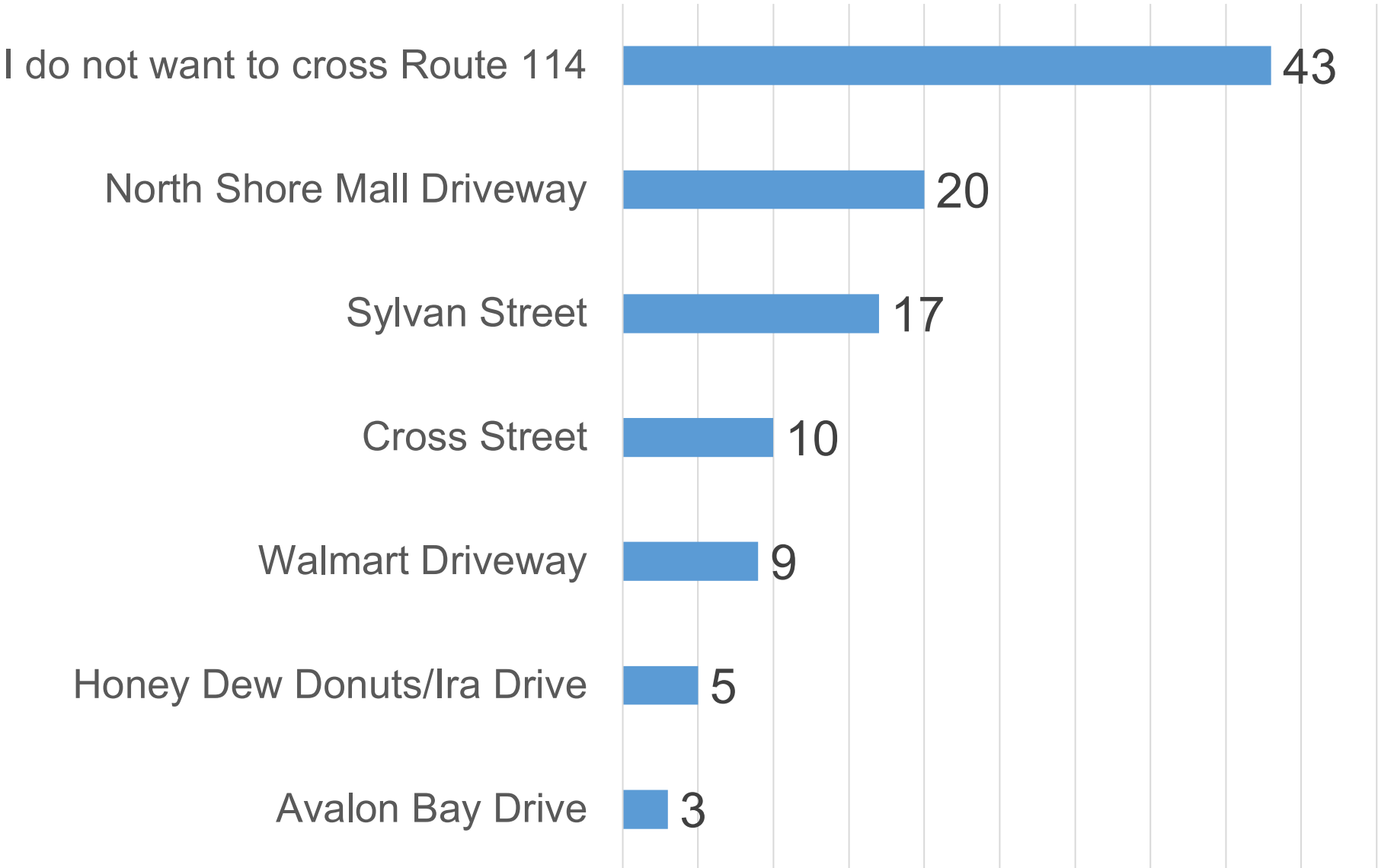
# Tier 1: Crosswalks

Was this effective?  
(Survey results as of 12/12 at 4pm)

Strongly Disagree Disagree Neutral Agree Strongly Agree

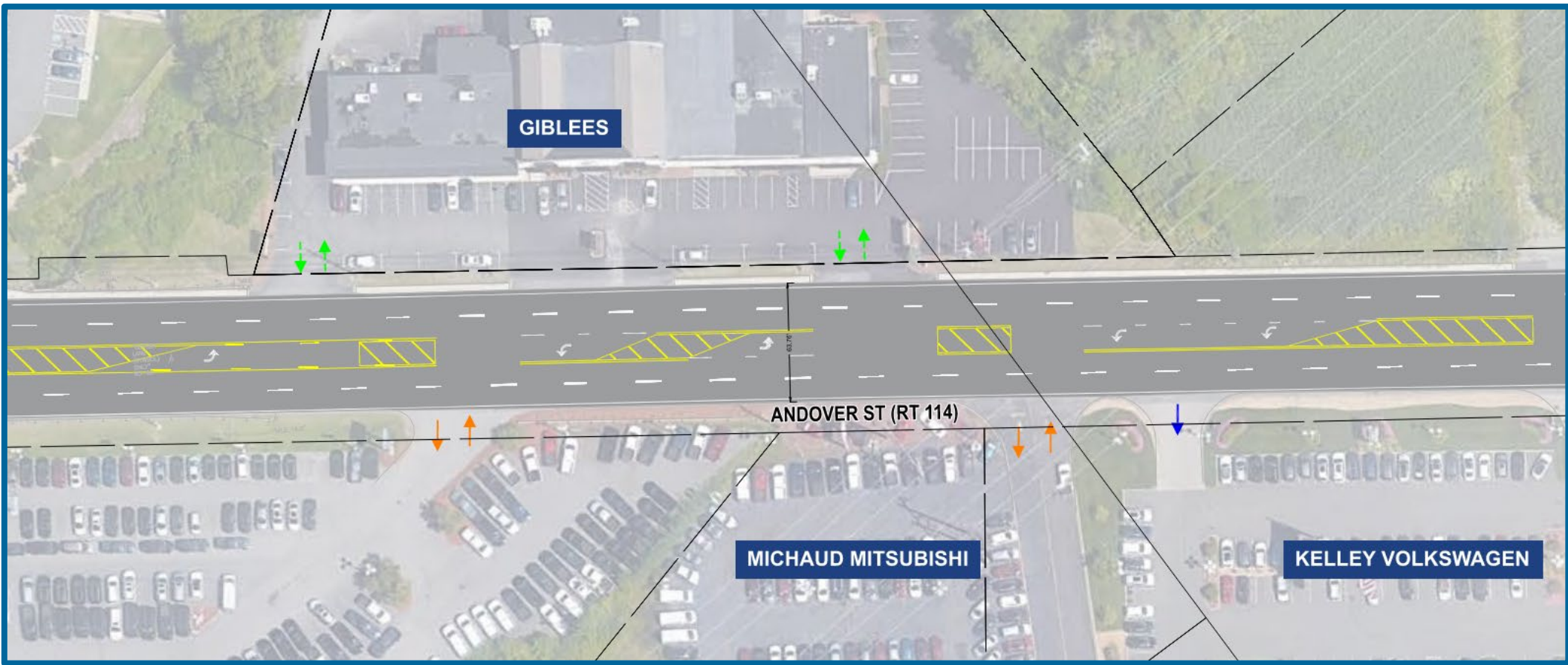
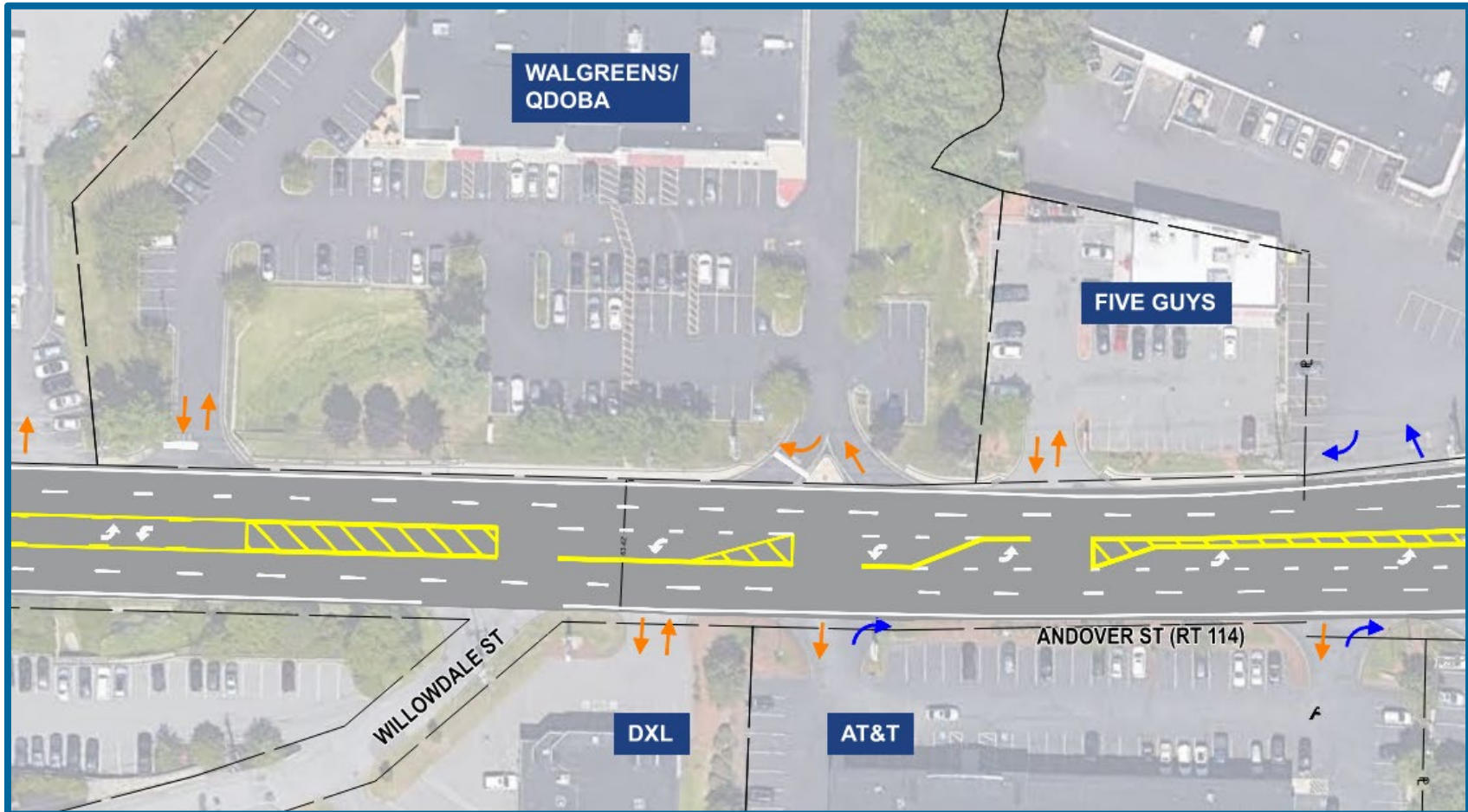
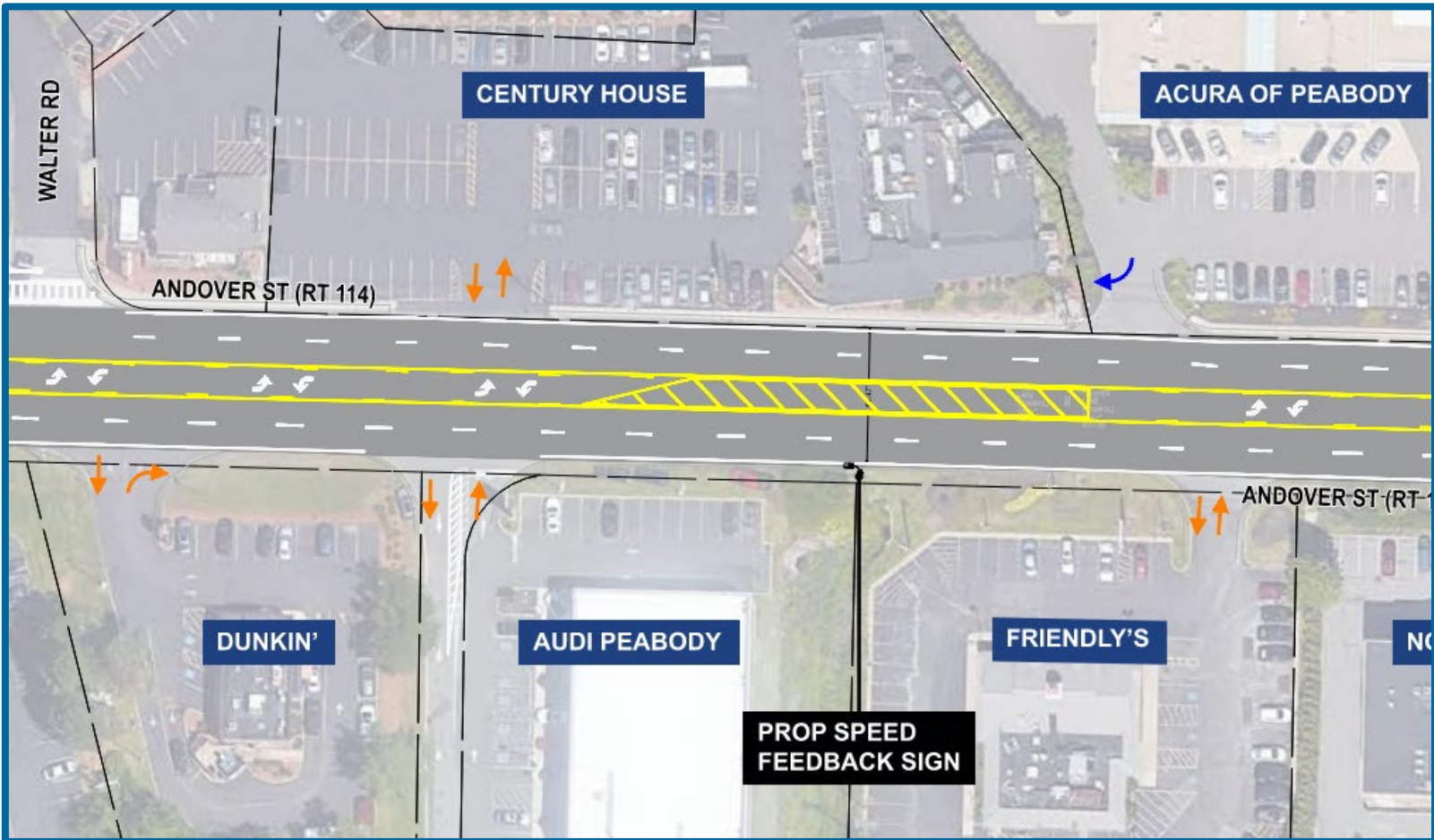


Where would you like to cross?  
(Survey results as of 12/12 at 4pm)





# Tier 1: Changes to Two Way Left Turn Lane



Add diagonal hatching to areas of the two-way-left-turn-lane that do not require turns

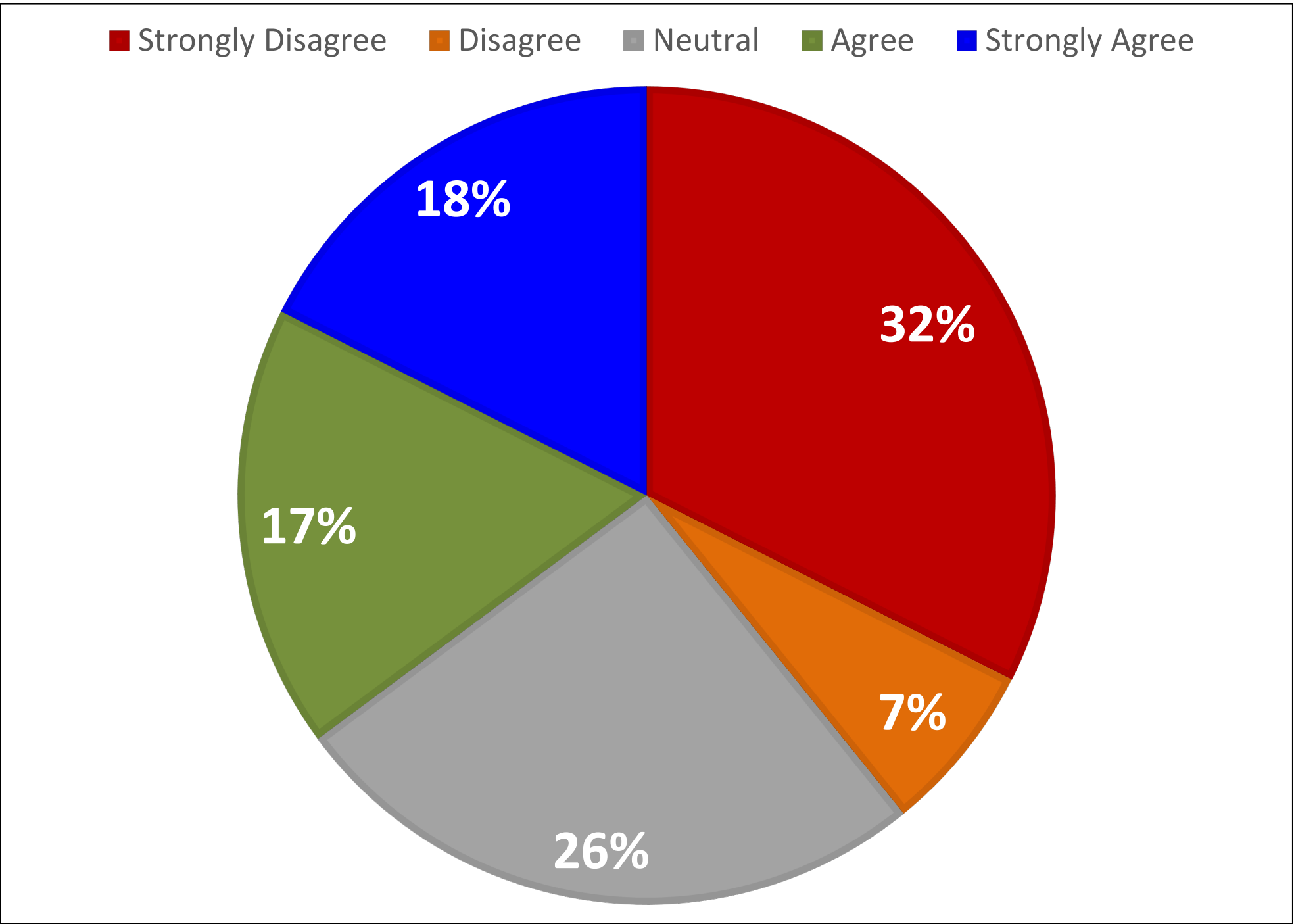
Convert TWLTL to pocket lefts as appropriate

Goal is to provide visual breaks in the TWLTL to avoid unnecessary driving in it, reducing head-on conflicts and speeding



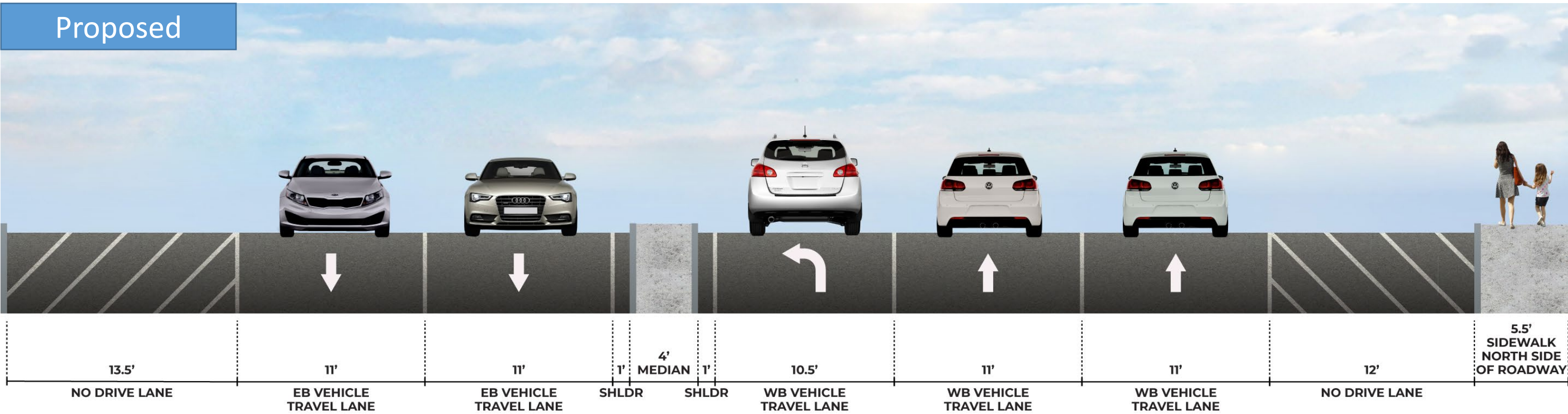
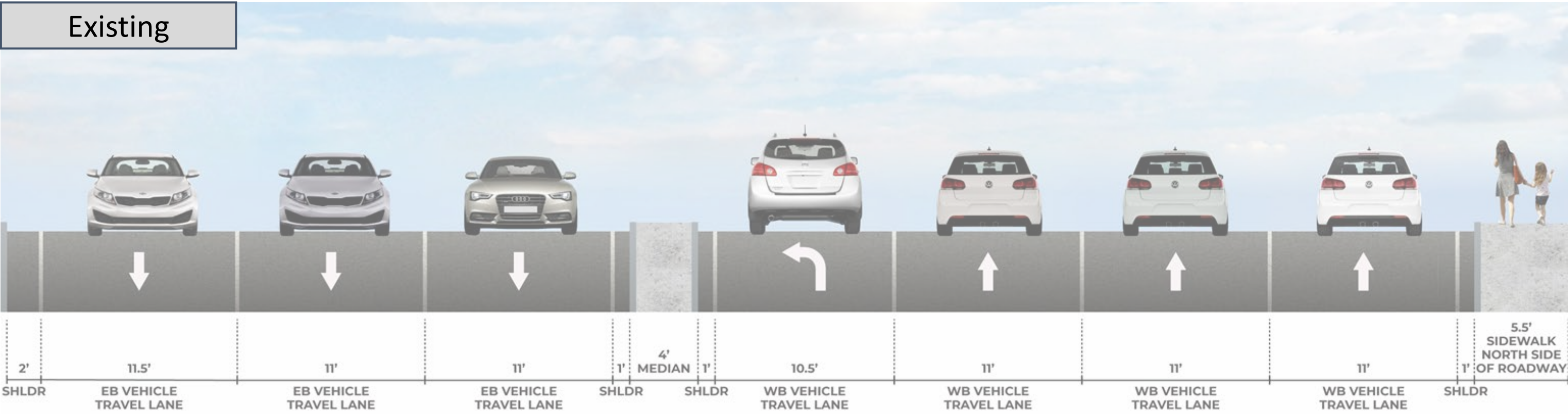
# Tier 1: Changes to Two Way Left Turn Lane

Was this effective?  
(Survey results as of 12/12 at 4pm)





# Tier 1: Remove Extra Travel Lane



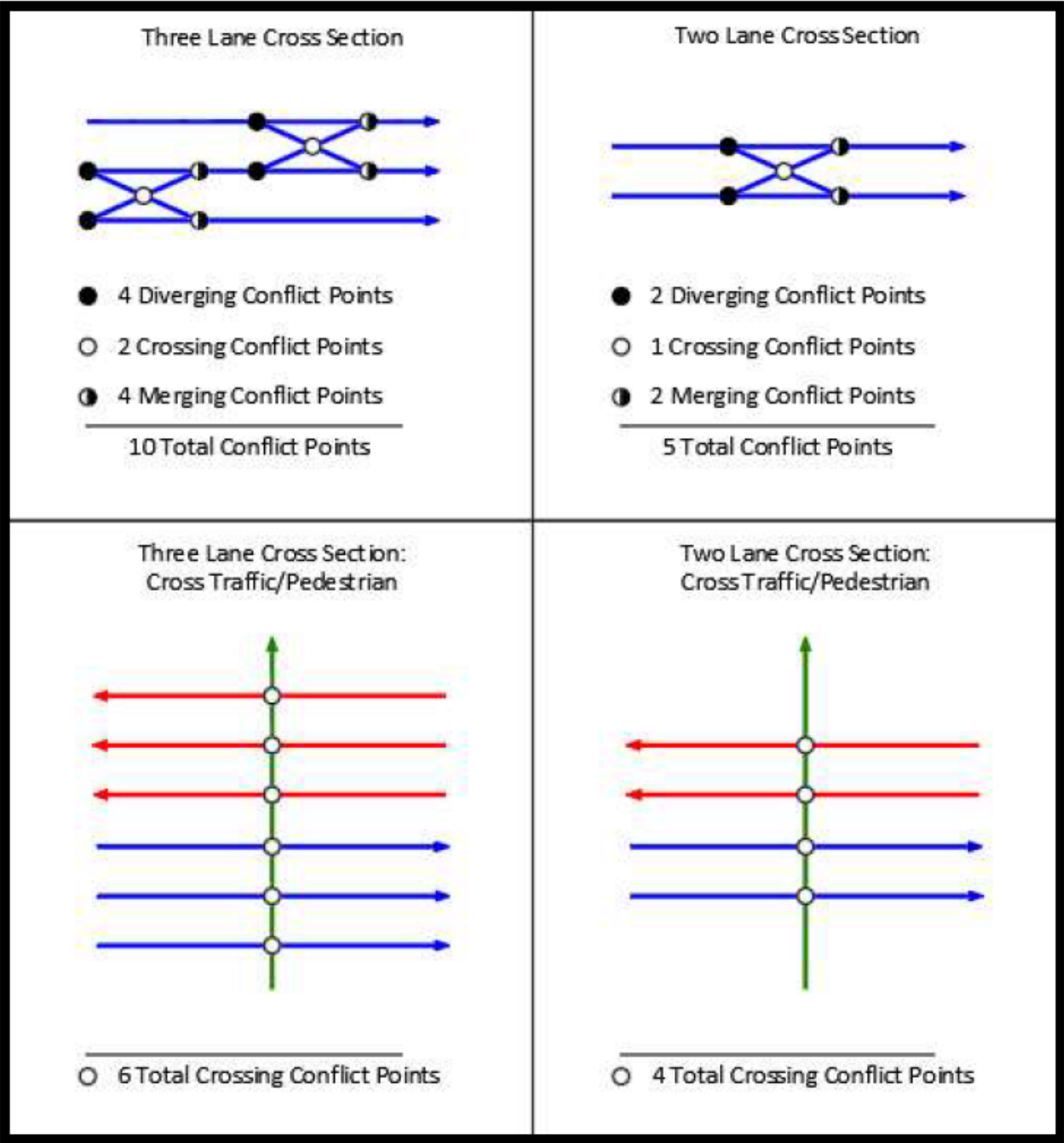


# Tier 1: Remove Extra Travel Lane

A lane reduction reduces the number of conflict points for all road users

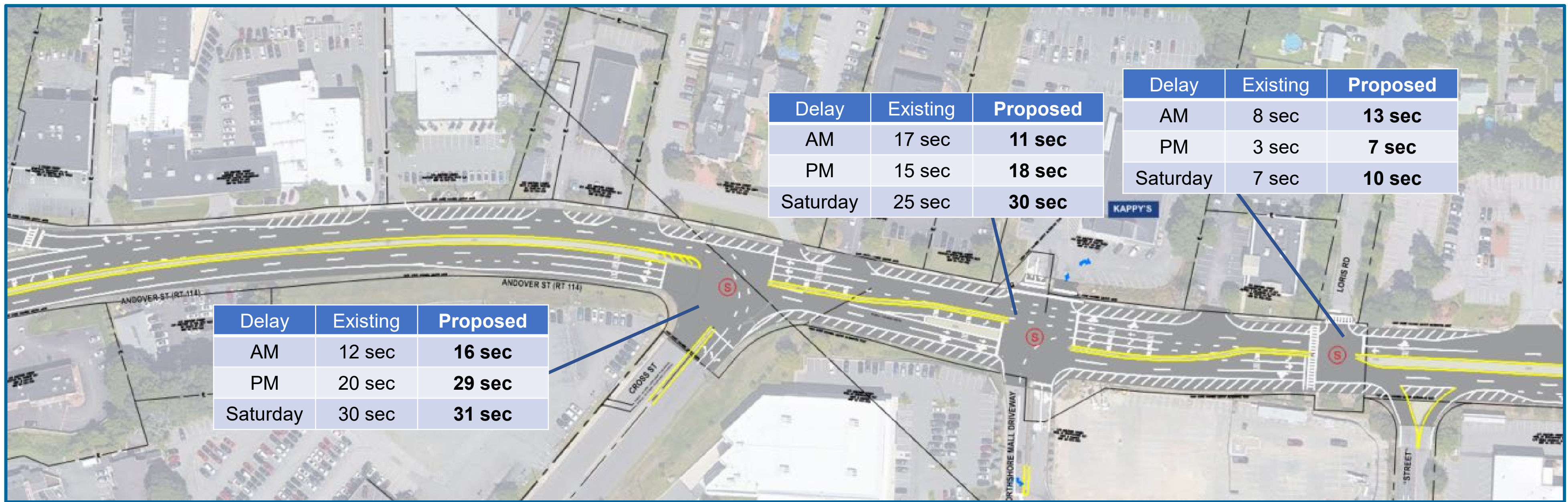
Can reduce in sideswipe, rear end, and angle crashes

Intersection	Rear End	Sideswipe	Angle	Other
Sylvan Street	62%	24%	12%	3%
Cross Street	56%	30%	4%	11%
Mall Entrance/Loris Road	43%	38%	17%	2%
Route 128 Interchange	82%	10%	8%	0%
Esquire Drive	68%	17%	15%	0%





# Tier 1: Remove Extra Travel Lane

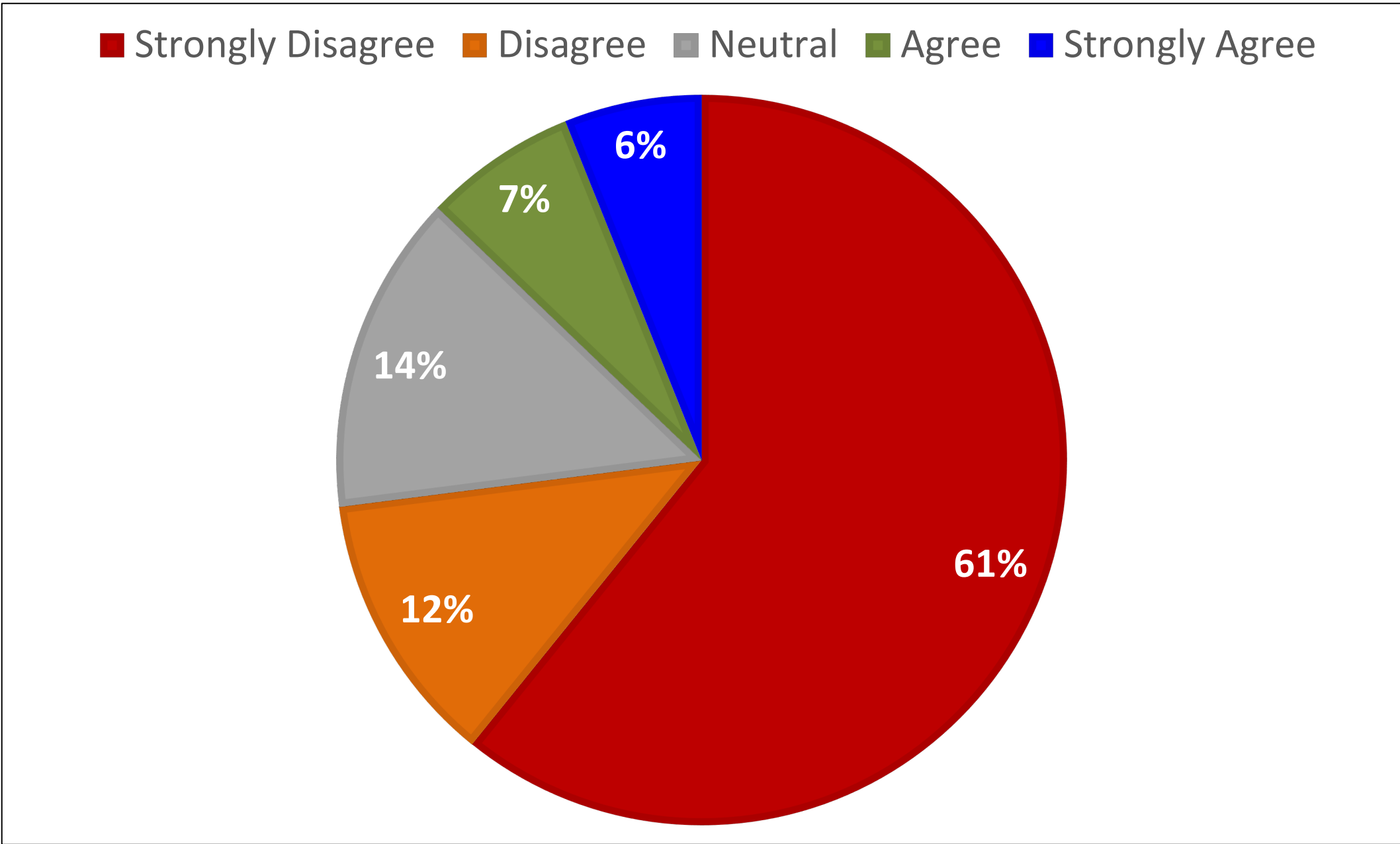


Traffic analysis for intersection delay (in seconds) showed negligible changes due to the proposed design... not what we've heard is actually happening!



# Tier 1: Remove Extra Travel Lane

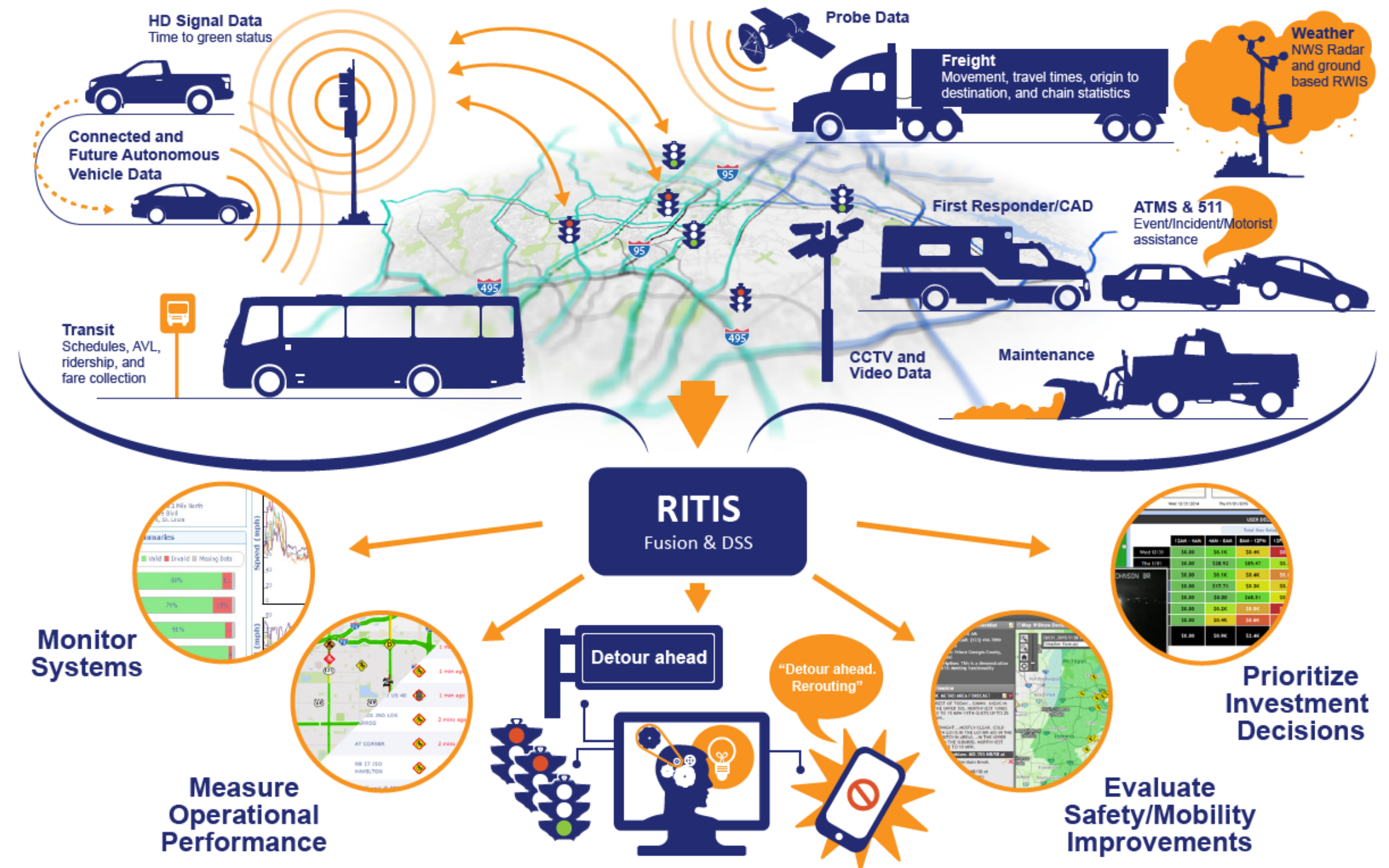
Was this effective?  
(Survey results as of 12/12 at 4pm)





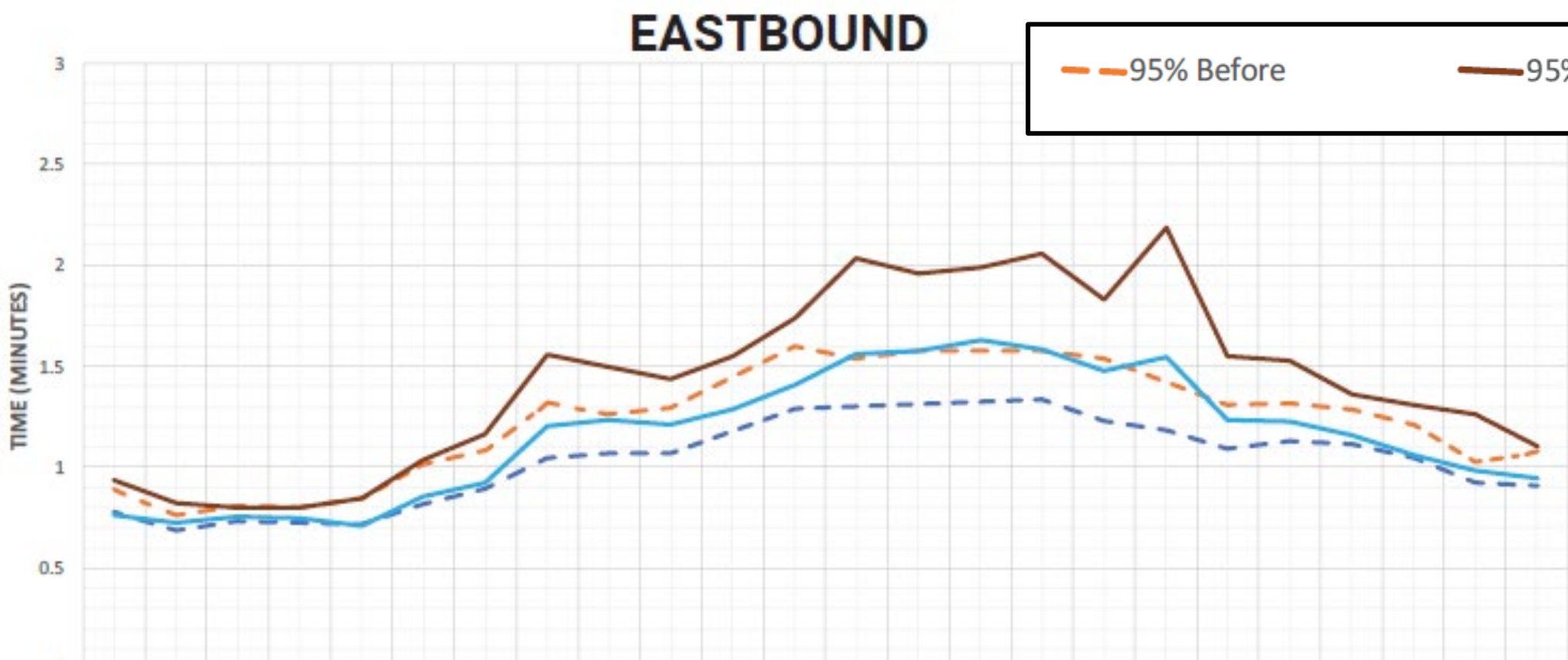
# Road Diet Evaluation – How Are We Evaluating?

- Emails and survey – responses to the road diet have been very negative
- Sending out staff to do travel runs and spot observations – reviewing videos from the field
- Video units were just assembled to allow for 24/7 monitoring
- Probe data from our Regional Integrated Transportation Information System (RITIS)





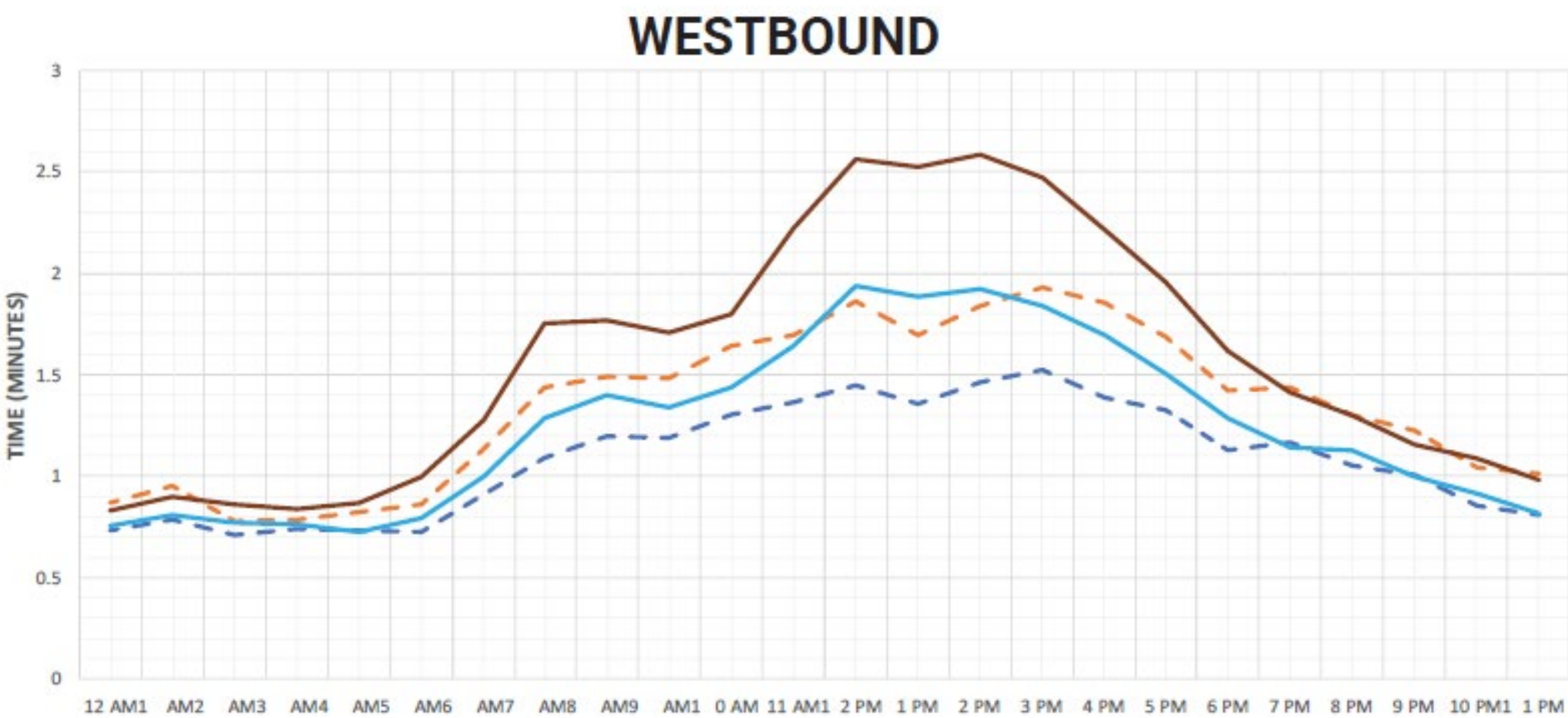
# Road Diet Evaluation – Travel Time Comparison



### EASTBOUND

Peak Travel Time (mins)	Before*	After**
Average	1.33	1.62
95th percentile	1.59	2.18

\*Before: September 12-16, 2022  
\*\*After: November 7-11, 2022



### WESTBOUND

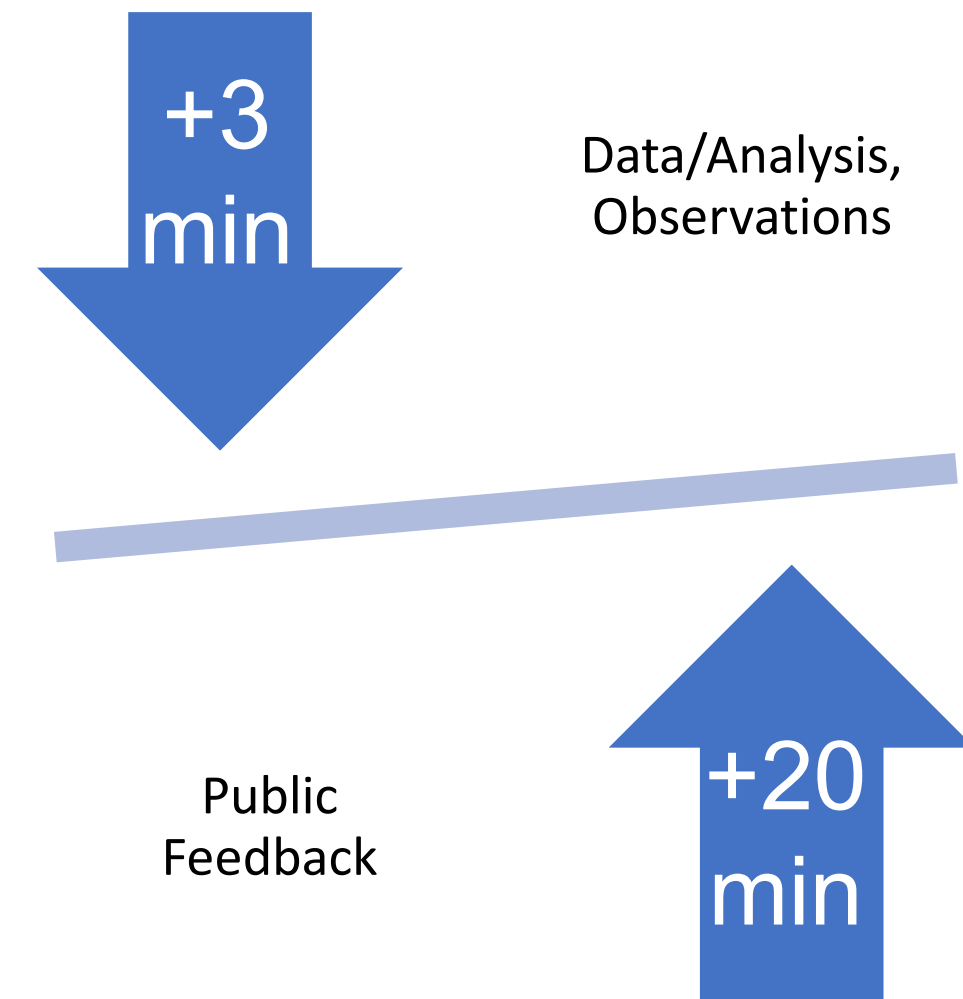
Peak Travel Time (mins)	Before*	After**
Average	1.52	1.93
95th percentile	1.93	2.58

\*Before: September 12-16, 2022  
\*\*After: November 7-11, 2022



## Road Diet Evaluation – High-level findings so far

- There is a disconnect between the data/analysis and what the public is communicating to us, and we are working to bridge that gap
  - The public has reacted very negatively to the road diet
  - Travel time runs and probe data are showing that it takes 3-4 minutes to travel from the Route 128 ramps to Sylvan Street at peak traffic – when it previously took 1-2 minutes
- Timing was everything with the lane removal implementation
- We are still working to investigate this disconnect and quantitatively determine delay caused by the road diet





## Other Trends from Survey

*Route 114 is a State Highway for driving not walking or biking. Pedestrian bridges are needed for crossing the street.*

*Traffic is backing up into Cross Street from Sylvan Street.*

*Bring back the right turn lanes for North Shore Mall and Loris Road.*

*We asked for a delay on the [Loris Road] light and you did everything BUT that.*



# Next Steps



Fall Implementation of Tier 1 Improvements & Evaluation



Public Meeting for Discussion of Tier 2 Improvements



Reach out to stakeholders and businesses for coordination and rights-of-entry as needed



Design of Tier 2 Improvements over the Winter/Spring

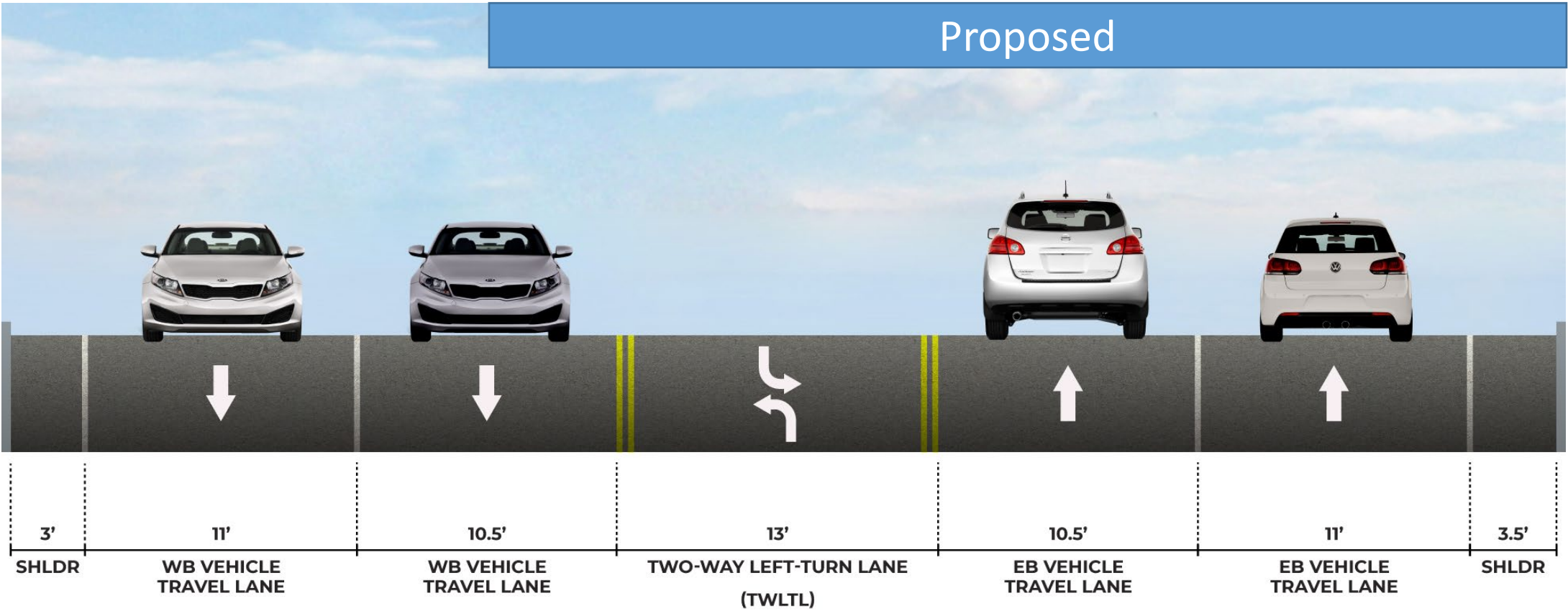


Spring/Summer Implementation of Tier 2 Improvements



# Next Steps: Tier 2 Implementation

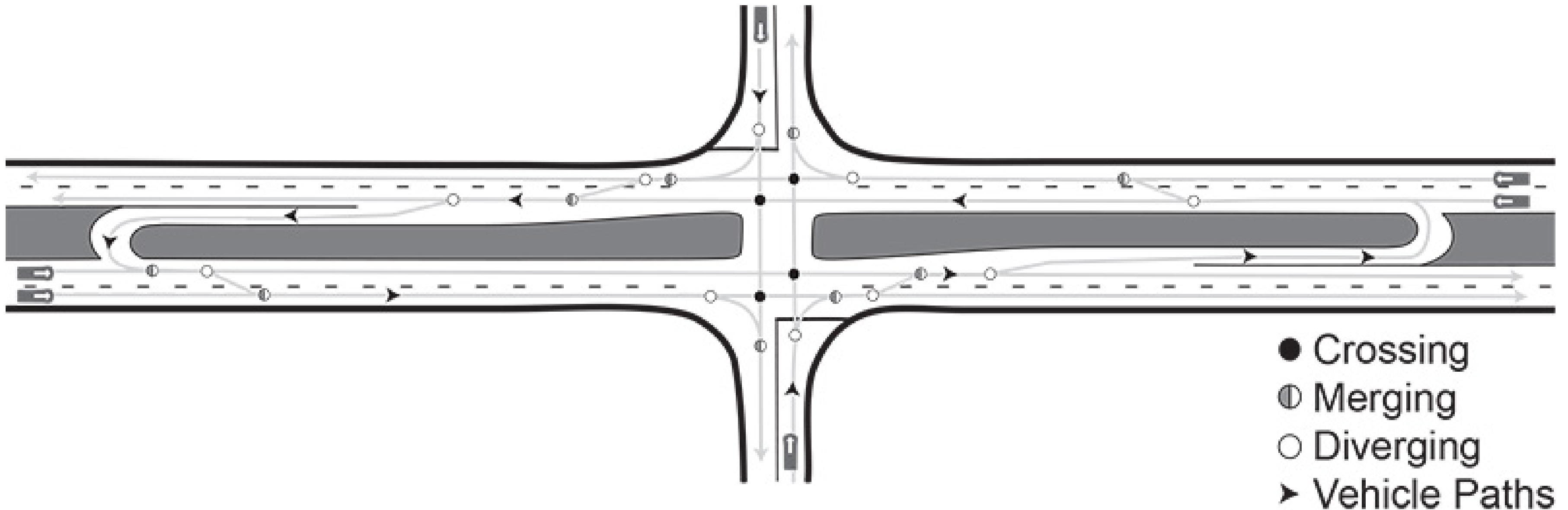
- Resurfacing of the corridor and providing narrower travel lanes to reduce speeding
- Installing flex posts, signs, and pavement marking in targeted locations to restrict left-turns with high potential for conflict and/or significant crash history
- More pedestrian crossing opportunities and targeted sidewalks to connect to destinations on the south side and fill desire lines
- Evaluate road diet for a few more months before determining final lane configuration on Eastern Corridor
- Coordination with Northeastern on speed study





## Next Next Steps: Corridor Study

- A corridor study has been commissioned by the MassDOT Office of Transportation Planning (OTP) to evaluate options for a long-term reconstruction project – **this will have its own public process**
  - What happens if a median is placed along the entire road?
  - Can a partial median have safety benefits but allow for some access along the roadway?
  - What are the impacts of bringing ped/bike facilities onto the road?





## How Will We Keep You Informed?



Project Website: <https://www.mass.gov/route-114-danverspeabody-safety-improvements-project>



Project survey: <https://www.mass.gov/forms/route-114-safety-improvements-feedback>

*Will remain open until January 5, 2023*



Project email: [route114safety-peabodydanvers@dot.state.ma.us](mailto:route114safety-peabodydanvers@dot.state.ma.us)

*Reach out with questions, concerns, or to sign up for future updates!*

# Goals of the Workshop

## INFORM

- There are three (3) easels, each with different information about the project:
  1. Western corridor collision diagrams
  2. Eastern corridor collision diagrams
  3. Travel time data for eastern corridor

## LISTEN

- There are tables with maps of each corridor for the project team to collect feedback
  1. Tier 1 Implementation
  2. Tier 2 Next Steps





# *Thank You*

## *Route 114 Safety Improvements Project Danvers/Peabody*

Tier 2 Public Workshop | December 13 | 6pm

MassDOT Project Manager: Kayla Sousa

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