



Route 146 Corridor Vision Study

Thank you for joining us.

This meeting will begin shortly.



Route 146 Corridor Vision Study

*The first public meeting for the MassDOT
Route 146 Corridor Vision Study*

December 11, 2024 | 6:00 PM

Project email: massdotroute146@dot.state.ma.us

Public meeting notes and procedures

Notification of video recording

- This virtual public meeting will be recorded. The Massachusetts Department of Transportation may choose to retain and distribute the video, images, audio, and/or chat transcript.
- All parts of this meeting are considered public record.
- By continuing attendance with this virtual public meeting, you are consenting to participate in a recorded event.
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Important notes for public attendees:

- Your microphone and webcam are automatically disabled upon entering the meeting.
- The meeting will be open to questions and answers at the end of the formal presentation.

All questions and comments are welcome and appreciated, however we do request that you refrain from any disrespectful comments.

Zoom webinar controls



- Ask a question and share comments



- Drop down menu to check microphone and speakers



- Raise your hand - *9 for users dialing in and Alt + Y to raise your hand



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- Use the View button in the upper right-hand corner to adjust the meeting view settings to your preference

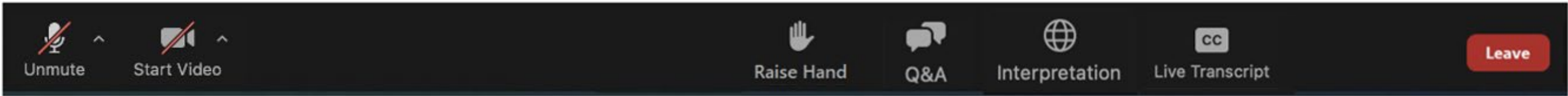


Live Transcript

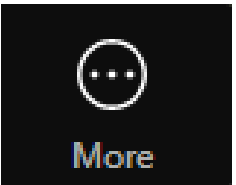
- Closed captioning automatically generated by Zoom

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Agenda

- 01** Project Overview
- 02** Study History
- 03** Existing Conditions
- 04** Identified Developments
- 05** Scenarios
- 06** Next Steps
- 07** Breakout Group Discussion
- 08** Report Back / Q&A



Route 146 and Douglas Street in Uxbridge

Study Purpose

- Develop transportation master plan for the corridor
- Analyze effects of different scenarios on traffic operations
 - Developments
 - Growth
 - Land Use changes
- Identify possible transportation improvements
- Develop plan for capital improvements



Study Area

- Route 122A to Rhode Island State Line
- Approximately 20-mile long corridor
 - includes 5 mile at-grade section
- Mix of signalized intersections and interchanges

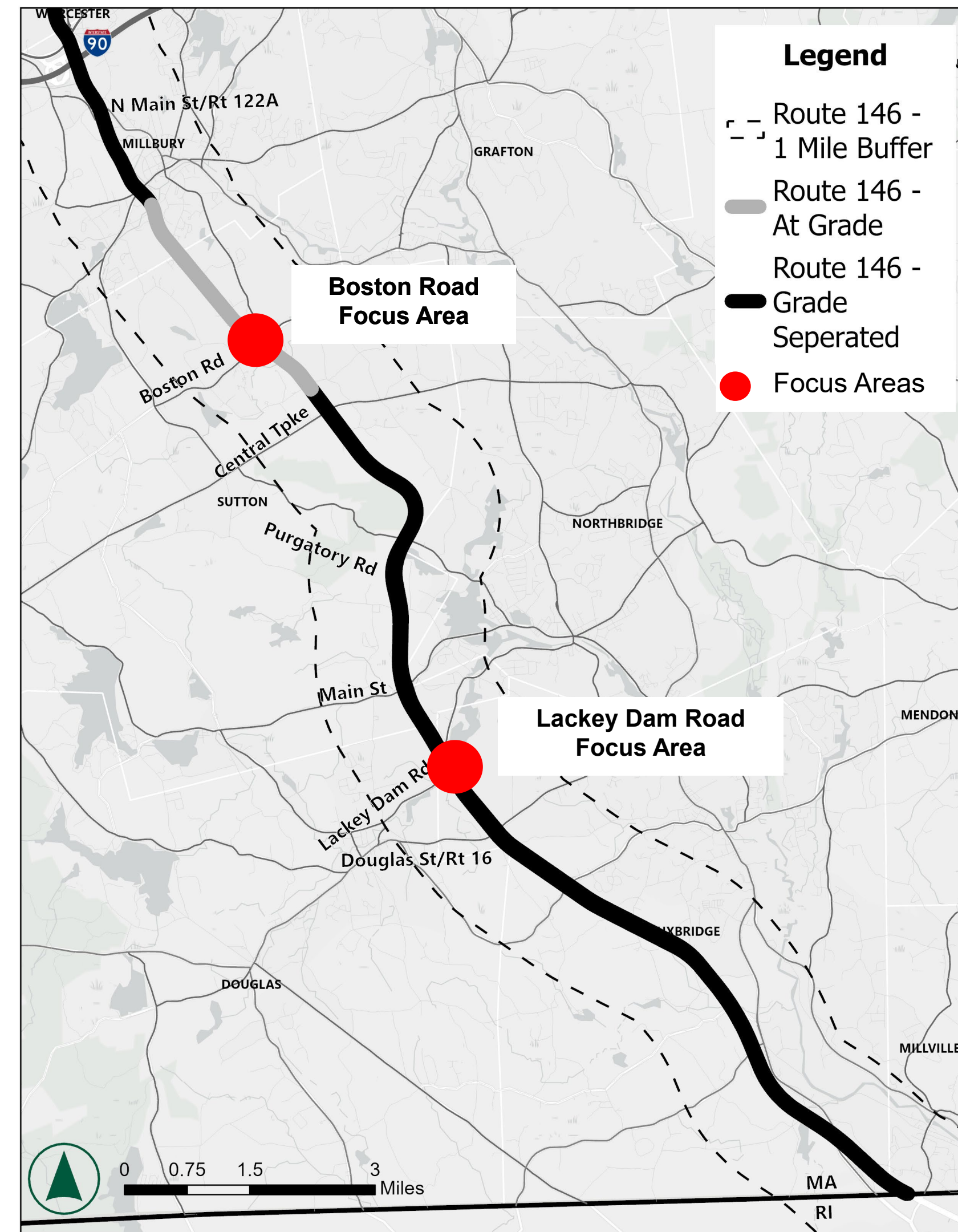
Study Intersections

Route 146 and Boston Road

- At grade
- Signalized intersection
- Crash cluster

Route 146 and Lackey Dam Road

- Grade separated
- Developments cluster



Study Area History



Study Area History: Boston Road Grade Separation Concept (2005)

- Executive Office of Transportation:
Route 146 Transportation Study
(2005)
- Partially grade separated diamond
interchange
- Route 146 Northbound and
Southbound at grade
- 4-way intersection
 - Boston Road
 - Route 146 Ramps



Study Area History: Other Studied Concepts

Central Massachusetts Regional Planning Commission: Route 146 Future Study (2006)

- 5 alternatives
- Suggested alternative:
 - Single lane frontage roads both sides of Route 146
 - Intersection improvements at West Main Street (completed)

Interim Improvements at Boston Road (2013)

- **Implemented Improvements**
 - Third through lane on Route 146 North Bound and South Bound
 - Additional left turn lane on Route 146 South Bound
 - Extended right turn lane on both Boston Road approaches
 - Dedicated left turn lane at Boston Road East Bound
 - Two left turn lanes at Boston Road West Bound
 - Jug Handle left turn using Pleasant Valley Road and Boston Road West Bound

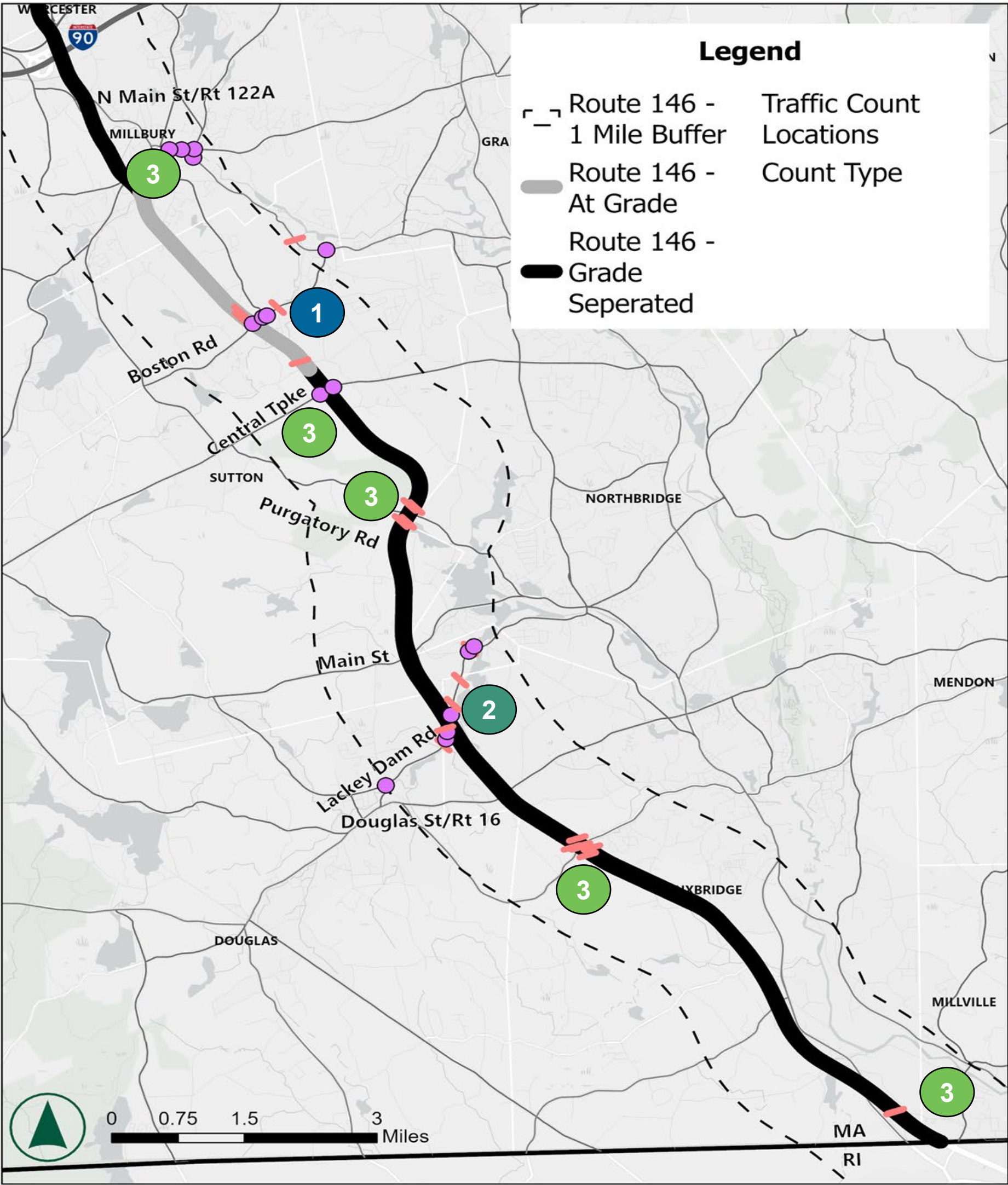
Existing Conditions Data

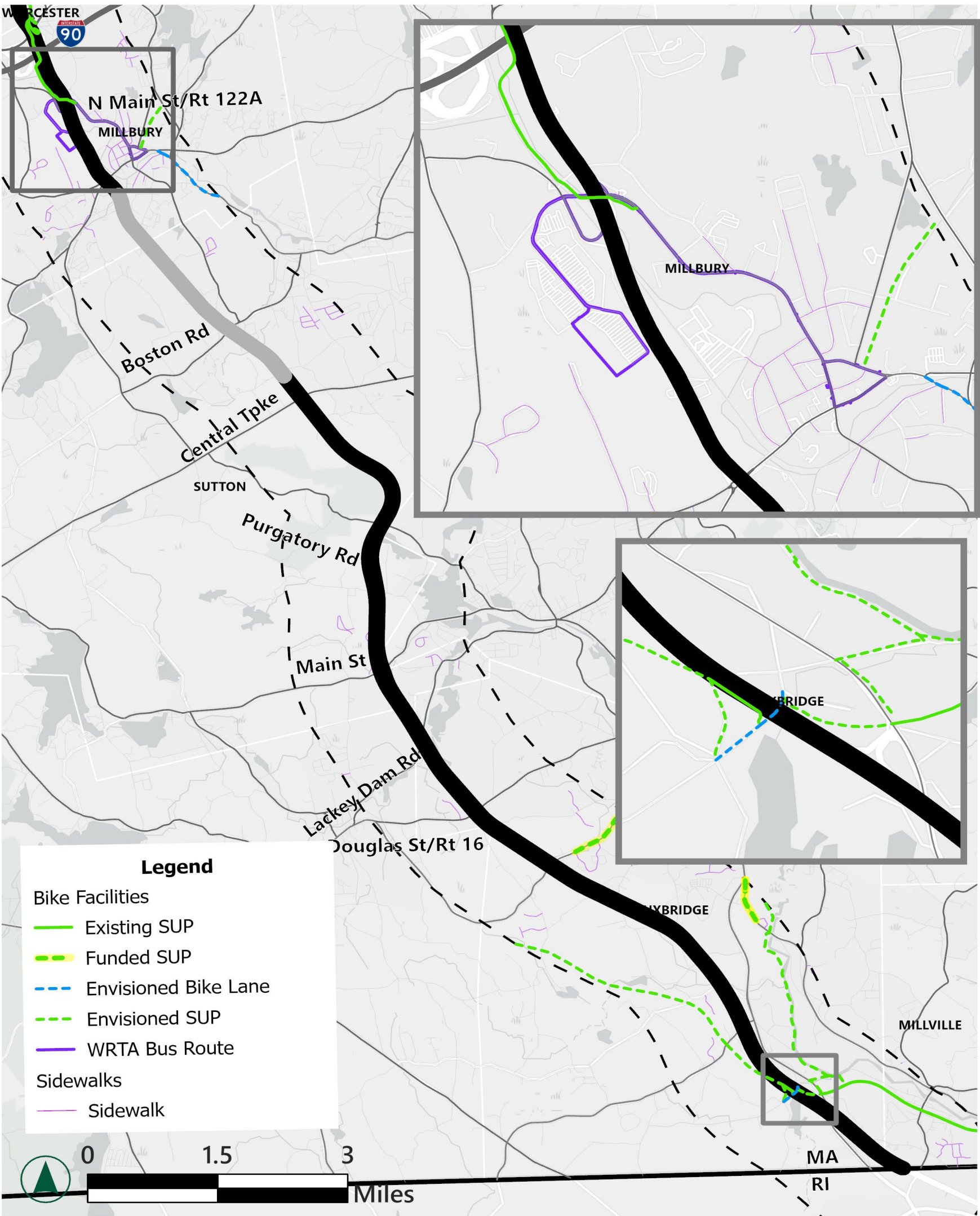


Existing Conditions – Traffic Data Collection

Traffic Count Sources:

- 1 Unified Parkway EIR – 2023
 - Route 146 and Boston Road
 - Boston Road and Pleasant Valley Road
- 2 New Data – September 2024
 - Route 146 and Lackey Dam Road
- 3
 - MassDOT Traffic Count Database





Existing Conditions – Multimodal Accommodations

Bus Route

- Route 4: The Shoppes at Blackstone Valley via Millbury Street

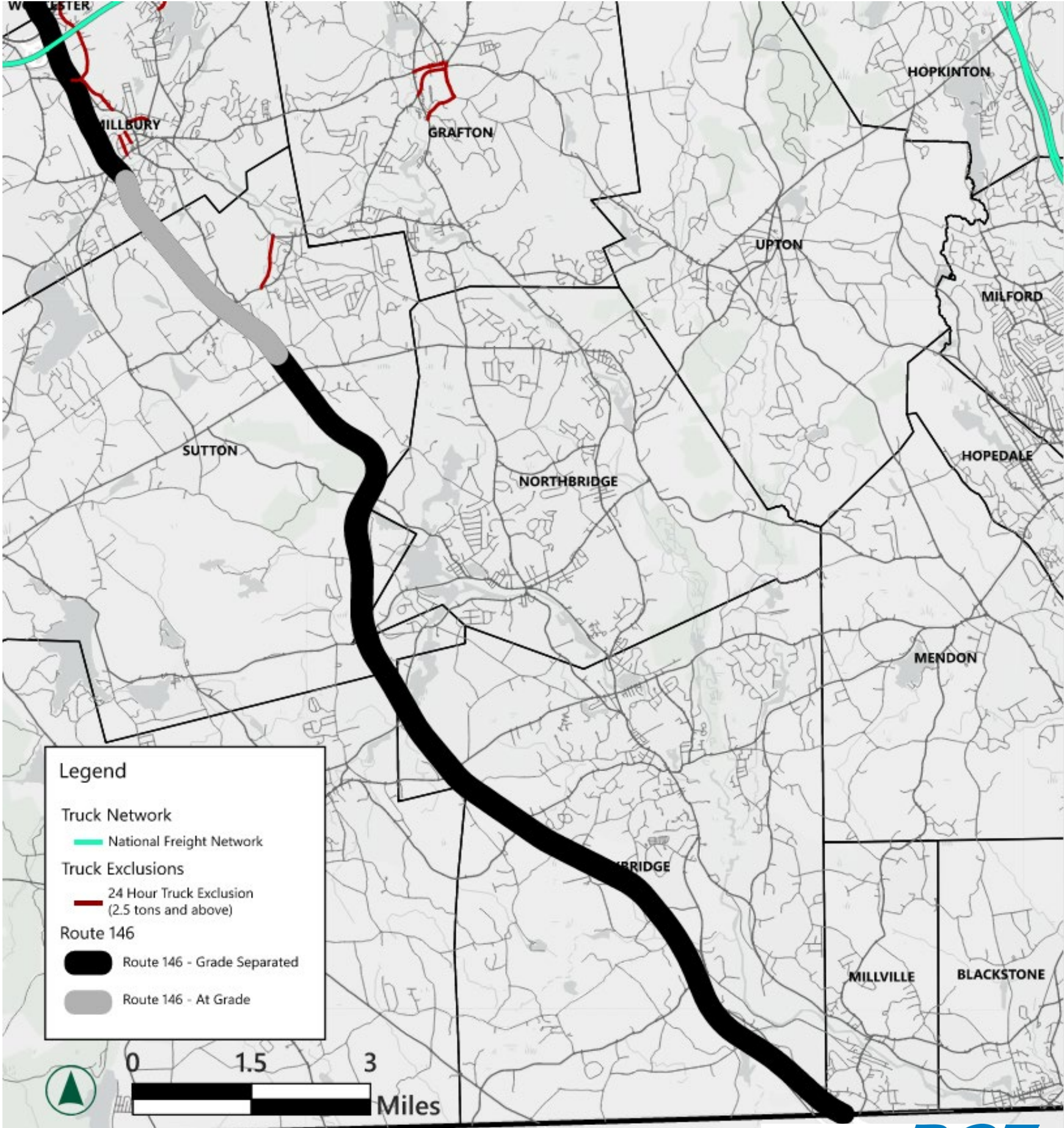
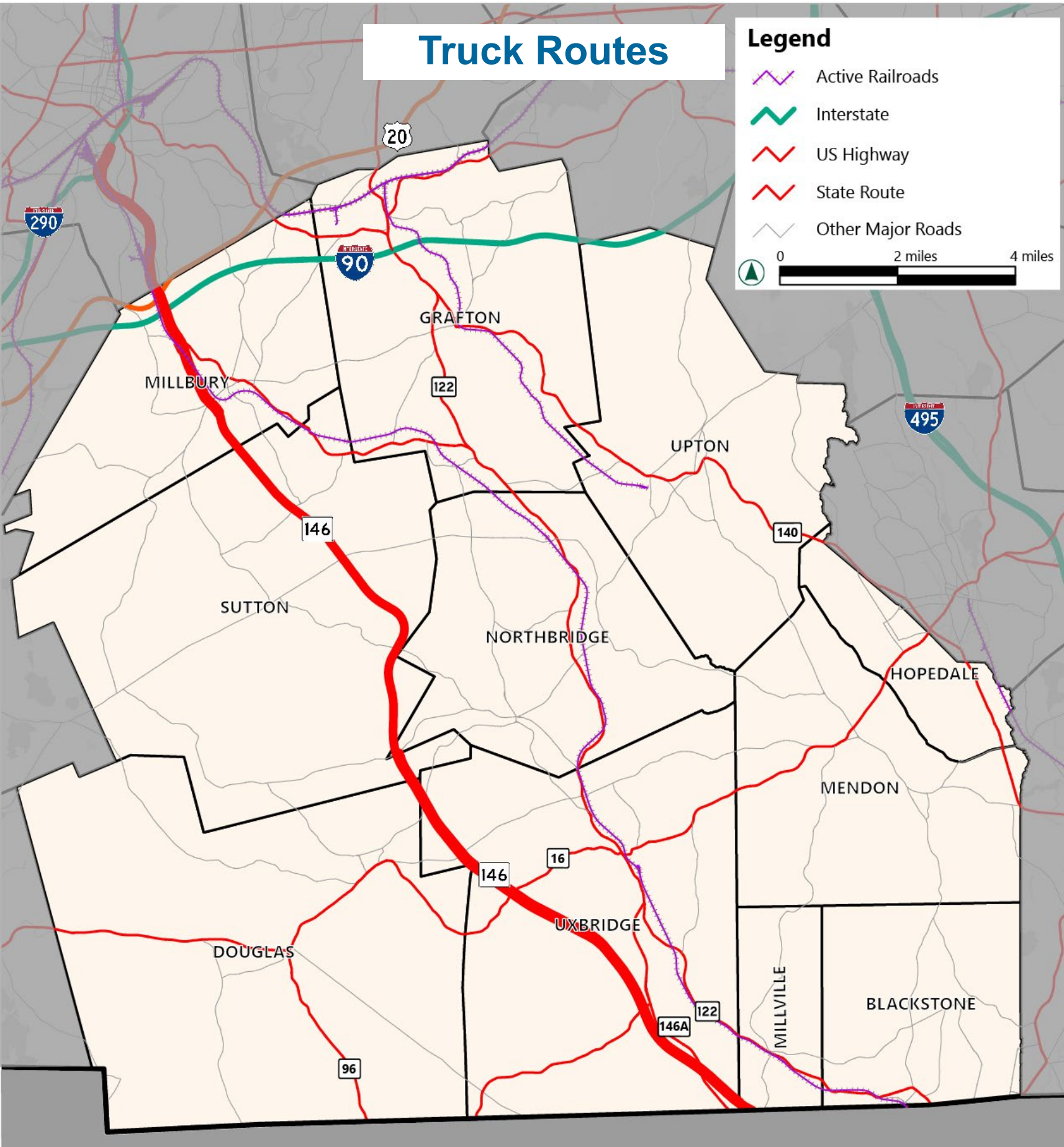
Bicycle Facilities

- Blackstone River Greenway
- Southern New England Trunkline Trail

Pedestrian Facilities

- Minimal sidewalks

Existing Conditions – Truck Routes and Exclusions



Safety Review

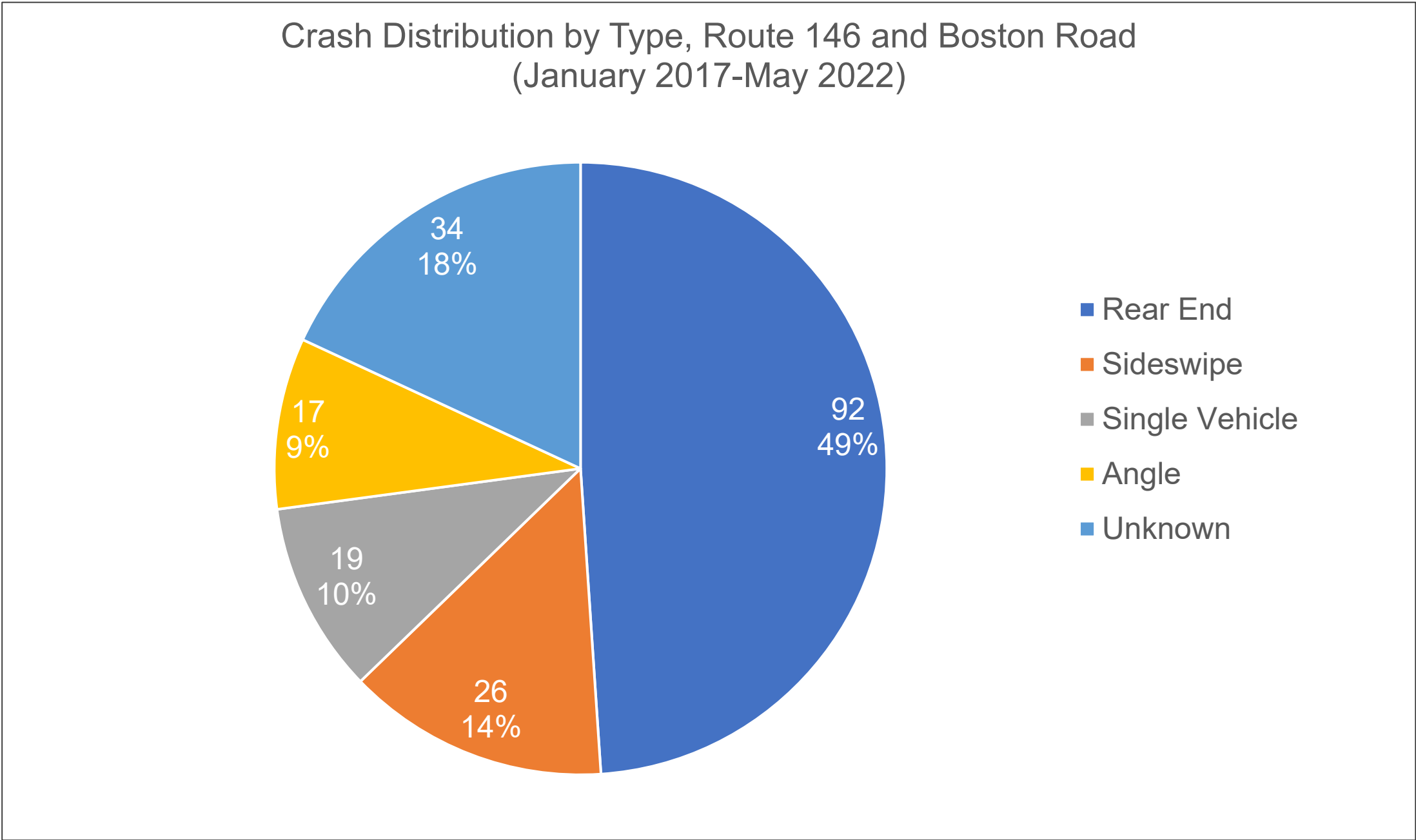
Boston Road at Route 146

- 2019-2021 Highway Safety Improvement Program (HSIP) Crash Cluster
- 2019-2021 Top 200 Crash Cluster

Crash Data Source

- MassDOT Road Safety Audit at Boston Road and Route 146

No other High-Crash Clusters or Top-200 Crash Locations on the study corridor



Source: MassDOT Road Safety Audit for Worcester-Providence Turnpike (Route 146) at Boston Road, October 25, 2022.

What is Level of Service (LOS)?

- Grade for quality of service based on delay experienced by vehicles.
- Related metrics
 - Travel Time /Speed
 - Maneuverability
 - Safety
 - Vehicle stops
 - Queueing

LOS A - C

- Minimal delay
- Stable traffic flow
- Minimal queuing

LOS D

- Tolerable delay
- Noticeable congestion
- Moderate queuing

LOS E

- Significant delay
- Volumes near capacity
- Long queues

LOS F

- Excessive delay
- Volumes exceed capacity
- Forced flow / jammed operation

Acceptable LOS for most scenarios

Consider improvements to traffic operations

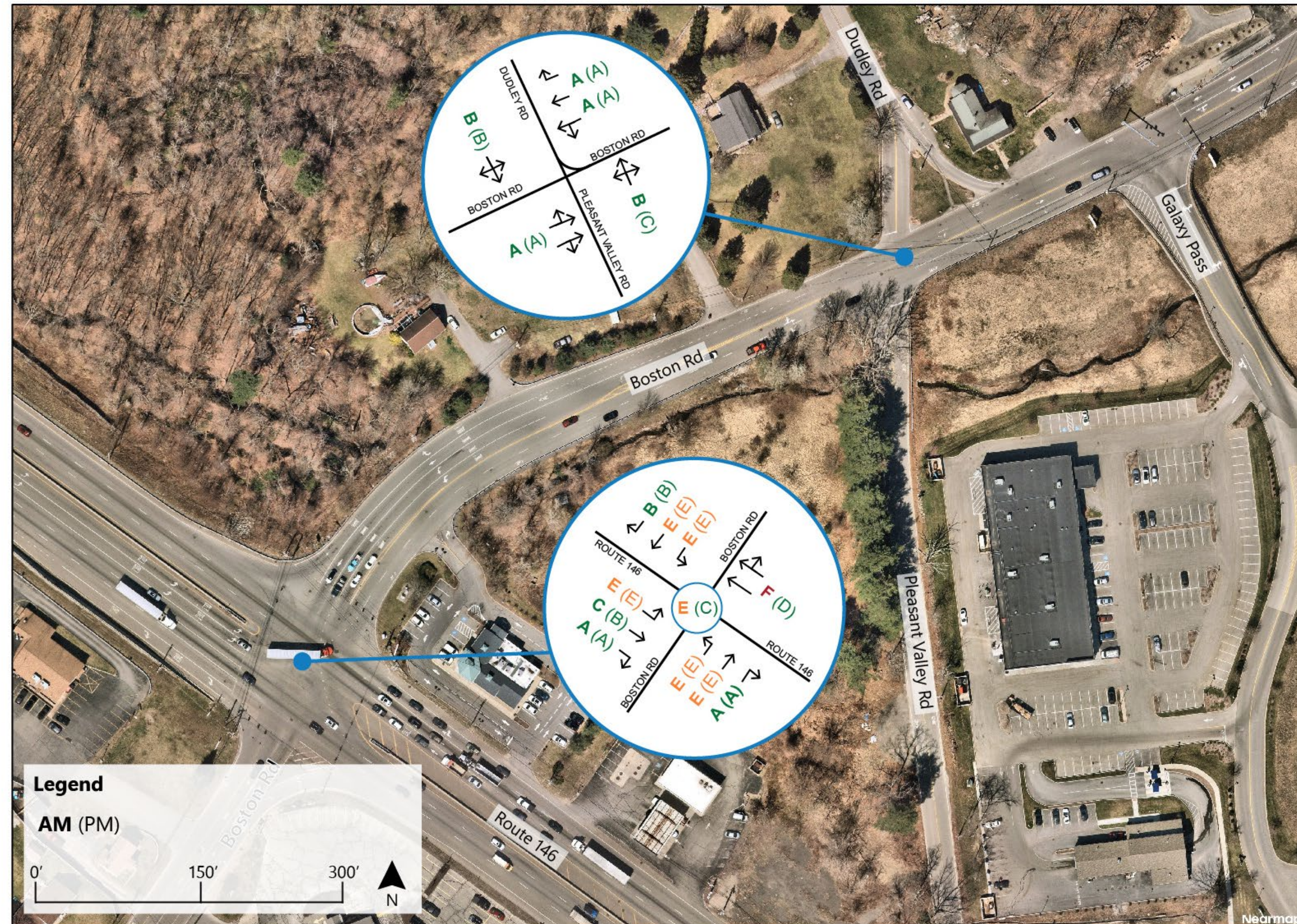
Route 146 and Boston Road Existing Conditions Results

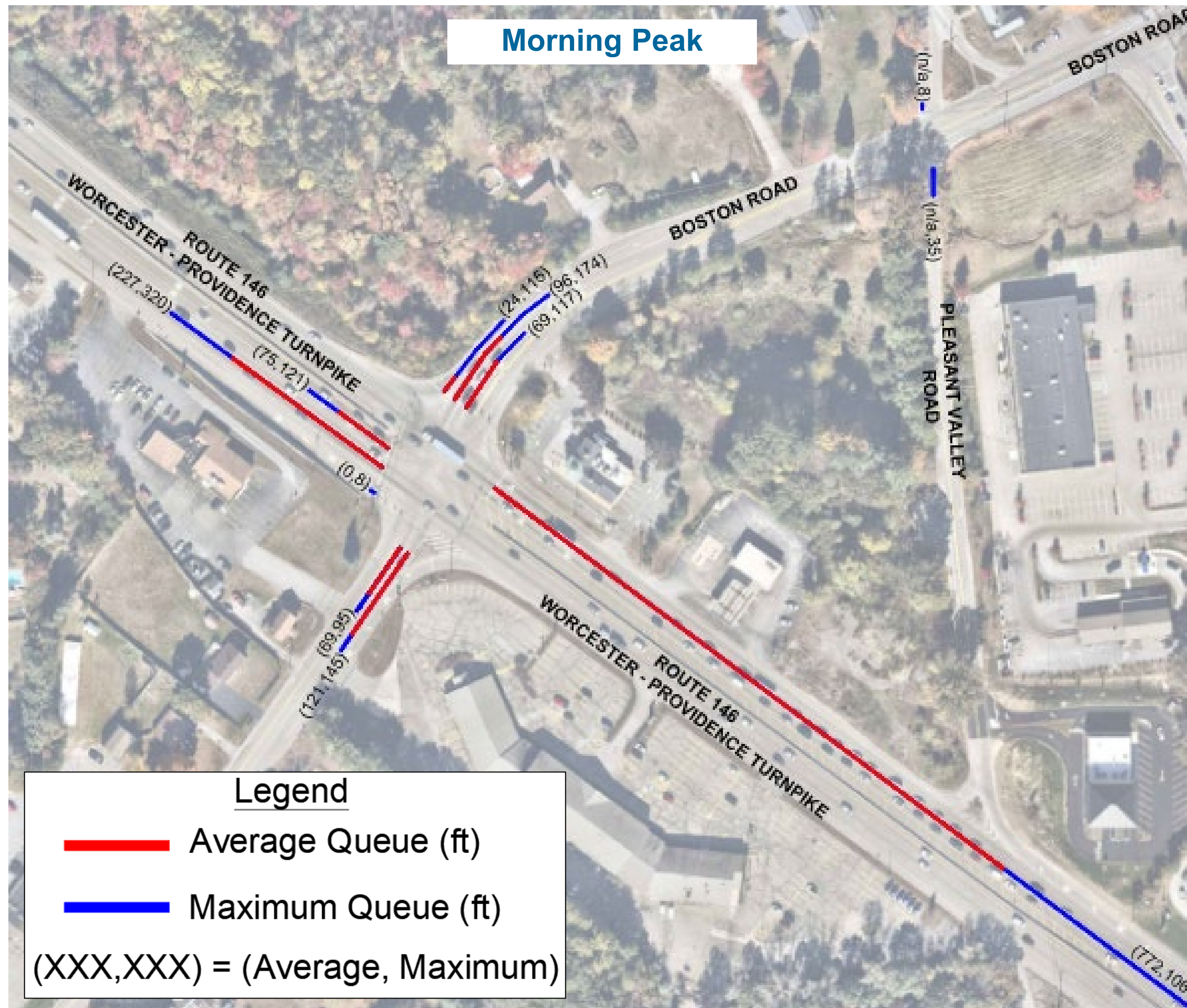
Morning Peak Hour (7:15-8:15 AM):

- Overall Level-of Service (LOS) E
- Northbound LOS F
- High levels of delay
- AM critical peak hour

Afternoon Peak Hour (4–5 PM):

- Overall LOS C
- High levels of delay (LOS E)
 - Boston Road approaches
 - Route 146 southbound left-turn

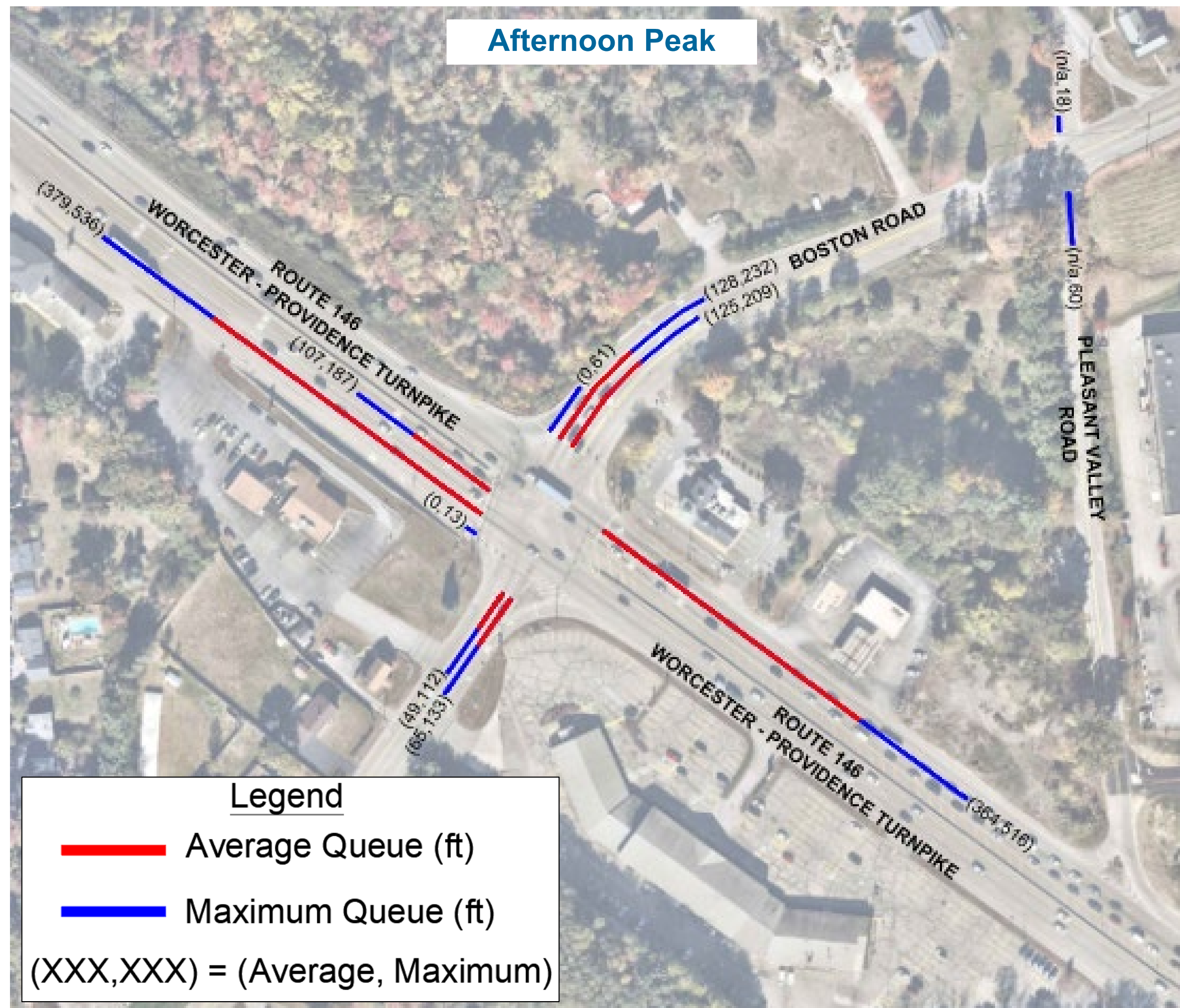




Route 146 and Boston Road Queue Lengths AM Peak

- Boston Road Queues
 - Around 3-5 vehicles
 - Manageable queue lengths
- Route 146 Queues
 - Southbound → ~10 vehicles
 - Northbound → ~30-43 vehicles

Northbound queue lengths extend past Pleasant Valley Road



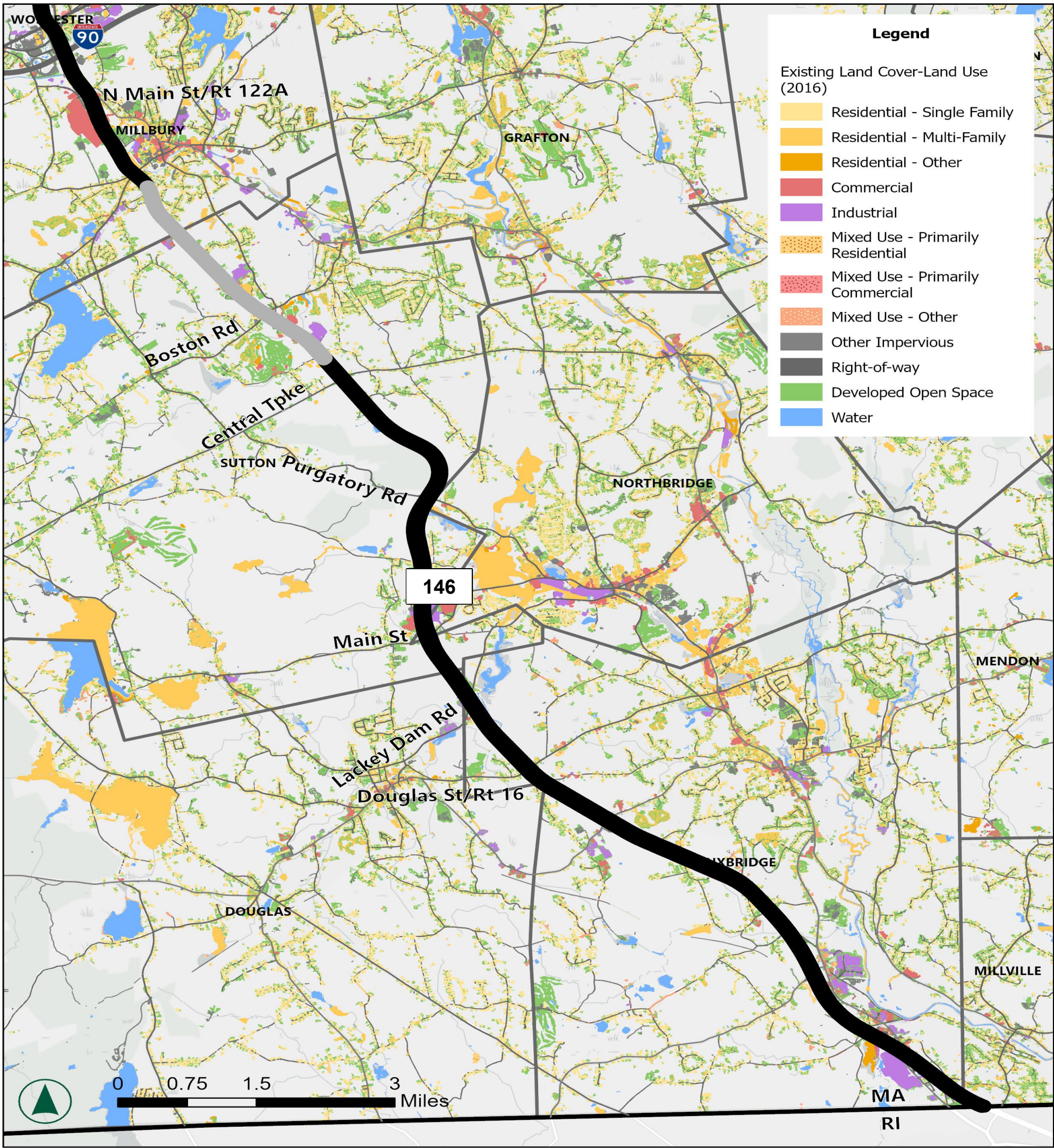
Route 146 and Boston Road Queue Lengths PM Peak

- Boston Road Queues
 - Manageable queues similar to AM
- Route 146 Queues
 - Southbound → ~15-22 vehicles
 - Northbound → about half as long as AM

Scenarios – Potential Development Growth

Scenarios

- 1. Growth within Existing Zoning
- 2. Known Development Growth
- 3. Future Growth Potential (TBD)



Identified Developments and Trip Generation

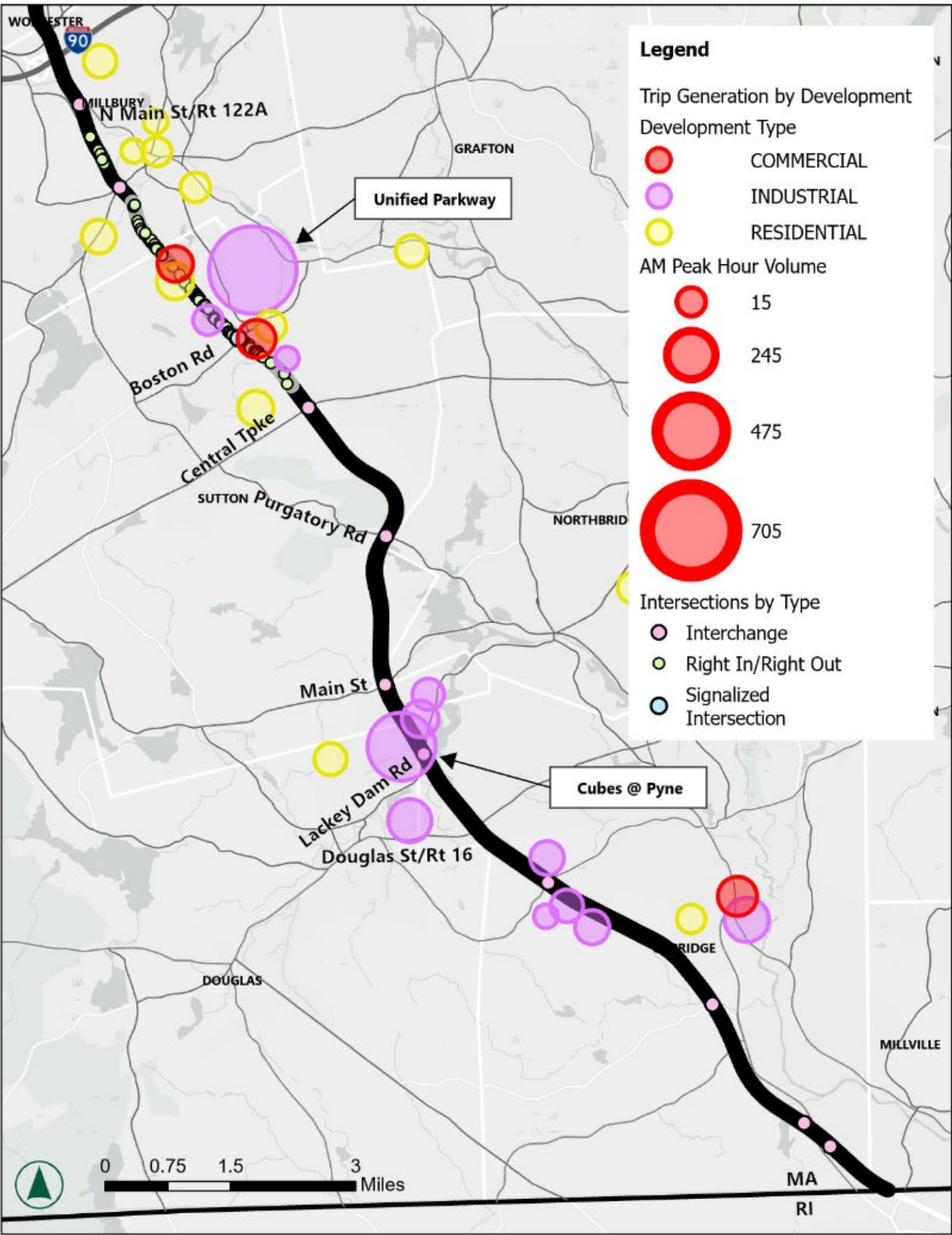
• **Total Developments: 24**

Residential	Industrial	Services	Mixed Use	Retail
10	9	3	1	1

• **Project Locations**

Uxbridge	Sutton	Millbury	Douglas	Northbridge	Grafton	Multiple Towns
6	6	4	2	1	1	4

- Projects with highest Trip Generation during critical AM peak hour:
 - Unified Parkway Industrial Park at Boston Road
 - Cubes at Pyne Warehousing facility at Lackey Dam Road
- Total projected trips added at Boston Road Intersection:
 - AM Peak – 1,196 (80% on Route 146 / 20% on Boston Road)
 - PM Peak – 1,842 (60% on Route 146 / 40% on Boston Road)



Boston Road Sensitivity Test - Methodology

1) Establish Baseline

- Assume signal optimization/rebalancing with future growth
- Overall Intersection LOS E (Existing) / LOS D (Optimized)

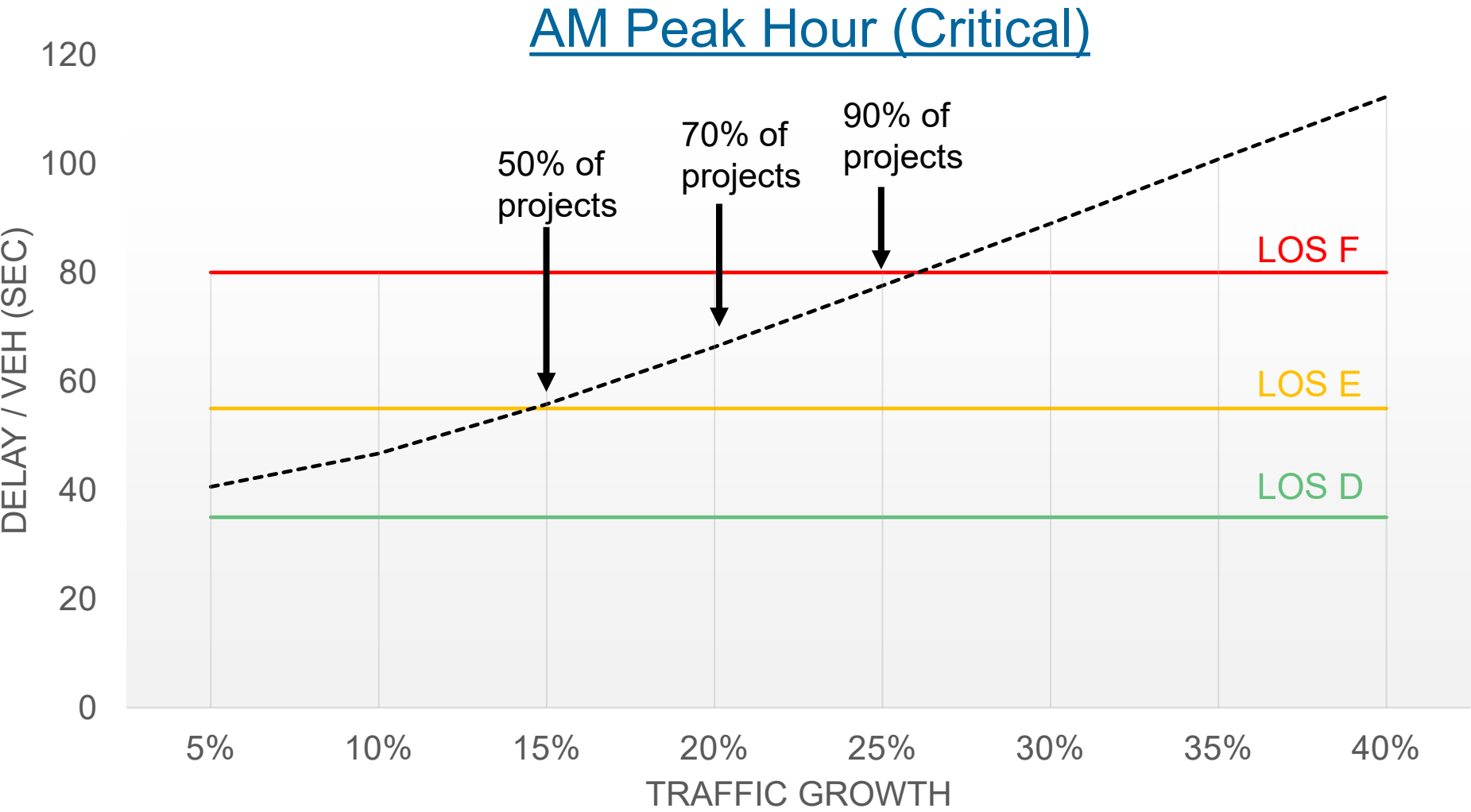
2) Testing Thresholds

Overall LOS E		Overall LOS F		
• High levels of delay	• Near capacity • Individual movements fail	• High levels of delay	• Over capacity	• Intersection failure

3) Analyze Results

- Identify % volume increase that will exceed operational thresholds
- How does this volume relate to potential developments?

Known Development Impact – Boston Road Sensitivity Test



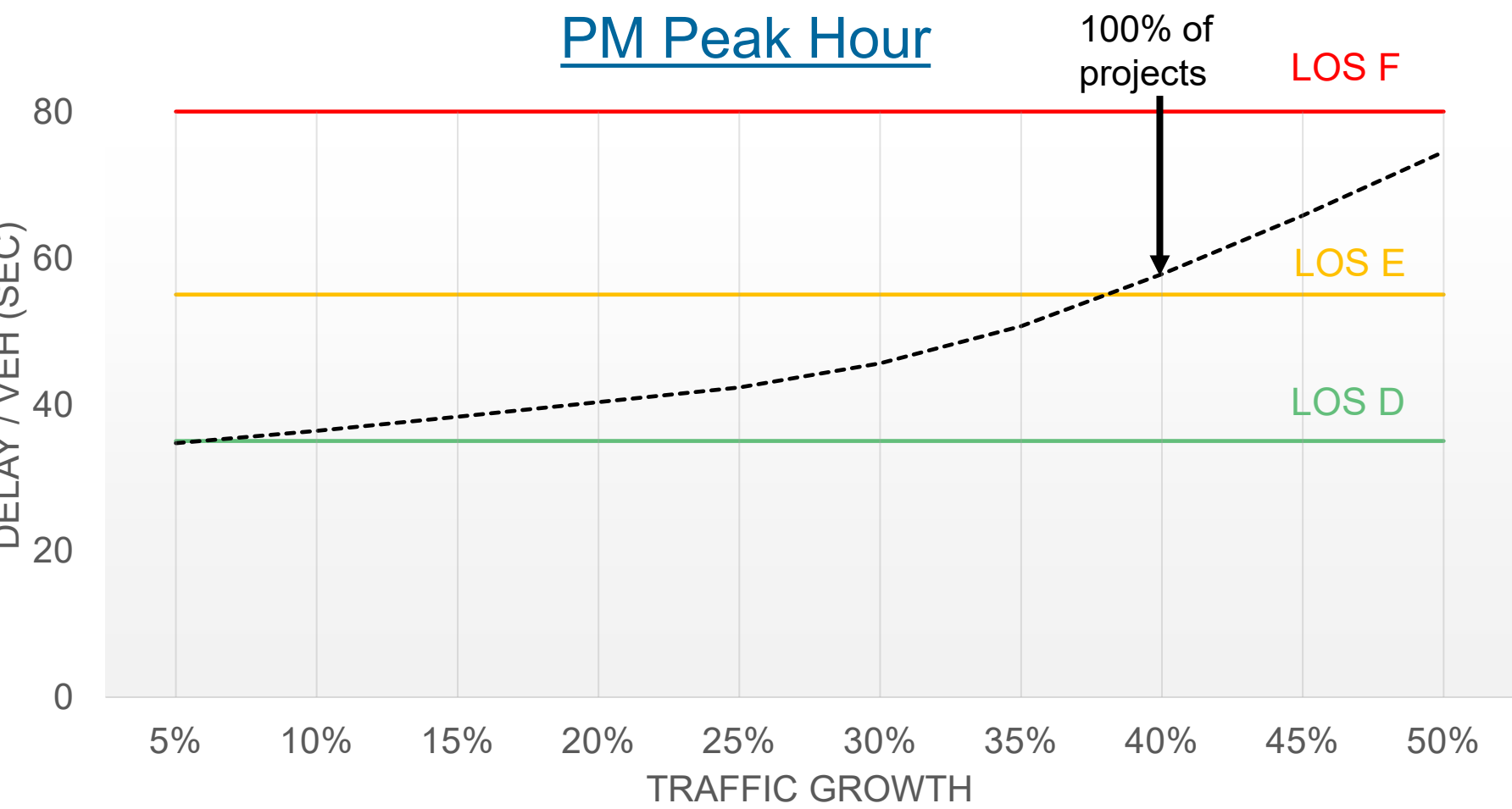
Sensitivity Testing		
Percent Volume Increase	Volume Change from Existing	LOS
Baseline	0	D
10%	436	D
15%	654	E
20%	872	E
25%	1,090	F
30%	1,308	F

Projected additional volume with all known projects: 1,196 veh/hr

- Sensitivity Testing: Intersection failure at 25% volume increase
- Anticipated Developments: Could represent a >25% volume increase

If just 1/2 of anticipated developments occur, the intersection would have multiple failing movements

Known Development Impact – Boston Road Sensitivity Test



Sensitivity Testing		
Percent Volume Increase	Volume Change from Existing	LOS
Baseline	0	C
10%	454	D
35%	1,585	D
40%	1,813	E
45%	2,040	E

Projected additional volume with all known projects: 1,842

Sensitivity Testing: Near to failure at 50% volume increase
Anticipated Developments represent around a 40% volume increase

Overall intersection is not projected to fail in the PM peak
Morning peak hour will dictate need for improvements

Known Development Impact – Boston Road Sensitivity Test

Critical AM Peak Hour

Morning Peak Period Vehicle Delay	Vehicle Level of Service										
Boston Road Eastbound	E	E	E	F	F	F	F	F	F	F	F
Boston Road Westbound	E	E	E	E	F	F	F	F	F	F	F
Route 146 Northbound	D	D	E	E	F	F	F	F	F	F	F
Route 146 Southbound	B	B	C	C	C	C	C	C	C	C	C
Volume Increase	Existing	5%	10%	15%	20%	25%	30%	35%	40%	45%	50%

Development increase



50% of projects

Failure of individual movements.

70% of projects

Overall intersection critically failing

All key approaches are failing at 70% of known development

Summary – Boston Road

Existing Conditions

- Operations: nearing capacity limits in AM Peak Hour
- Safety: Existing High-Crash Cluster / Top-200 Crash Location

Growth Potential

- Volume added from known developments
 - AM Peak → 1,196 veh/hr
 - PM Peak → 1,842 veh/hr

Operations with Known Developments

- LOS E at 1/2 development projects built, multiple movements failing
- LOS F at 2/3 development projects built, overall intersection failure.

Traffic from known developments exceeds point of total intersection failure with 2/3 of total build out

Summary – Lackey Dam Road

Existing Conditions

- Operations: Available capacity in both peak hours.
- Safety: No High-Crash Clusters; not a Top-200 crash location.

Growth Potential (at on/off-ramp intersections)

- Volume added from known developments
 - AM Peak → 803 veh/hr
 - PM Peak → 821 veh/hr

Operations with Known Developments

- Ramp intersections remain within theoretical capacity limits
- Improvements to lane capacity and/or control may still be beneficial in the future

Future conditions and scenarios to be further evaluated for capacity improvement needs at Lackey Dam Road

Next Steps



**Public Outreach Meeting #1
(Tonight)**



Scenario Analysis



Alternatives Development



Public Outreach Meeting #2



Key Findings and Recommendations

Breakout Group Discussion

- 1. What are challenges you experience traveling along Route 146?**
- 2. What opportunities, to benefit the study area, would you like to see explored?**
- 3. What is something unique you want the project team to know about Route 146 and the surrounding area?**
- 4. Have you noticed any recent, or long term, changes to Route 146 that you'd like us to know about?**
- 5. How predictable is travel time along Route 146?**

Report Back & Final Questions and Answers



- “Raise your hand” to be unmuted for verbal questions (*9 if using a phone)



- Submit your questions and comments using the Q&A button



- Please state your name and affiliation before your question



- Please share only 1 question or comment at a time, limited to 2 minutes, to allow others to participate



- To ask a question via phone, dial *9 and the moderator will call out the last 4-digits of your phone number and unmute your audio when it is your turn

Questions can be emailed to **massdotroute146@dot.state.ma.us**

All questions and comments are subject to disclosure for public records. Please use these functions for project related business only.



Thank You

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