Route 53/139 Corridor Transportation Planning Study
Introduction and Overview

Joint Transportation Committee Meeting Item 7-B

October 2, 2025

Old Colony Metropolitan Planning Organization

FFY 2026 UPWP Task 3500

OLD COLONY
PLANNING COUNCIL

Route 53/139 Corridor Transportation Planning Study

Why

1. Identified in High-priority Corridor Screening Assessment
2. Agreed and supported by the Town of Pembroke for a study
3. Programed under FFY 2026 UPWP #3500

Scope and Conditions:

Route 53/139 in the Town of Pembroke

- Route 53: 0.4 mile
- Route 139: 2.2 mile

Road Functional Classification: Principal Arterial

Urban Type: Large urban area

Jurisdiction: MassDOT/State

Speed Limit: 35MPH – 45MPH

Volume: range from 15,920 – 31,537 per day (Adjusted to the Year of 2018)

Intersection: Oak Street at Church Street (Route 139): State Top 5% Intersection Crash Clusters

Year 2019-2021

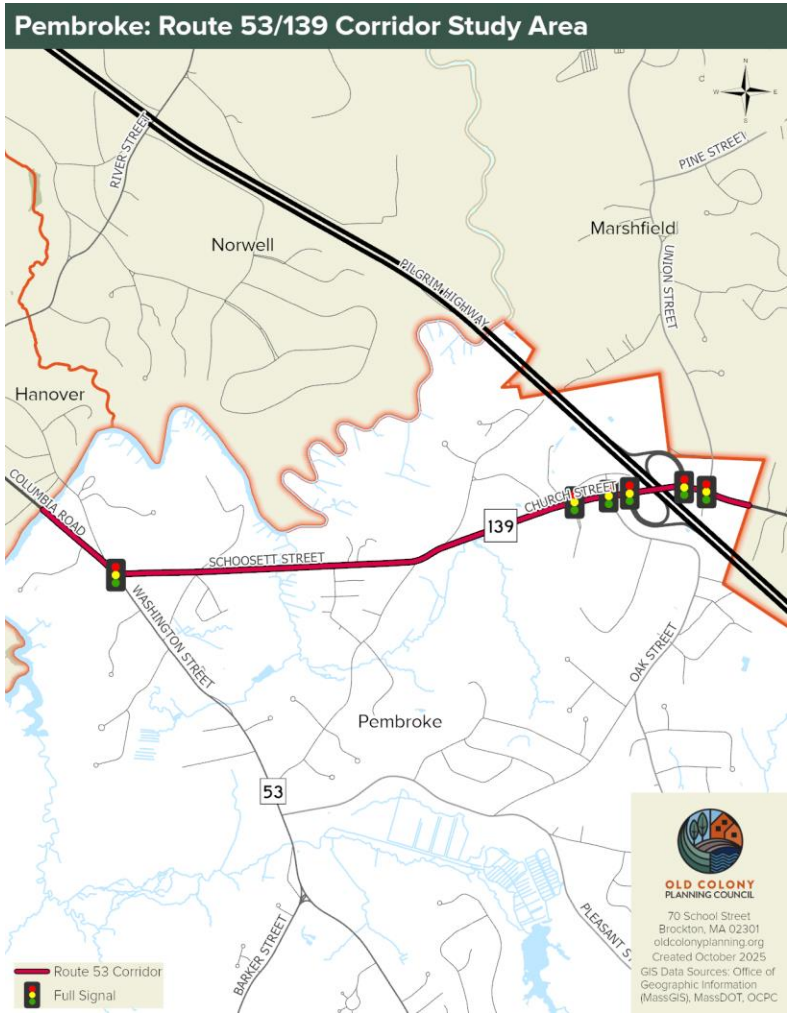
Year 2018-2020

Year 2017-2019

APPROXIMATELY

2.6 MILES

in centerline distance



Corridor Study Key Steps

Documentation of existing conditions	• ATR, TMC, intersection and corridor operation • Data platforms research and field audits
Short-term and long-term improvements developments	• Multimodal modeling, simulation • Evaluation of improvement alternatives
Prepare conclusions and recommendations	• Community and MassDOT/District 5 coordination • Current and future programs, and fundings opportunities
Public and communities outreach	• Survey Monkey • Meetings (Communities, stakeholders, MassDOT, regional partners and the public)

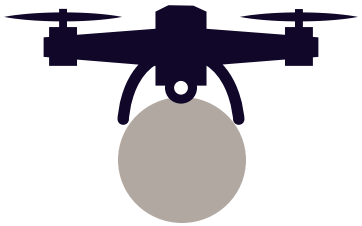
PLANNING STUDY IN A NUTSHELL

FIRST HAND DATA AND INFORMATION COLLECTION

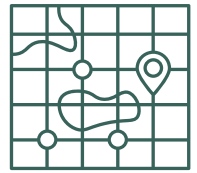
Field photos & recordings
available for problematic locations

Field operation & safety observations
at all major intersections

Dash Cam recorded
from both directions for entire corridor



Locations
Drone Recording Analysis deployed



GIS Mapping

TRAFFIC ANALYSIS

Capacity Analysis
- Synchro analysis
- AM and PM peak hour
- RITIS Data

Collision Analysis
- IMPACT Data
- Police Collision Reports

Future Analysis and Volume Adjustments
- Utilize seasonal factor
- Utilize annual growth rate
- Added trips from new development projects

Turning Movement Counts Locations (Completed in September 2025)

1	Columbia Road (Route 139/53) at Washington Street	Stop
2	Schoosett Street (Route 139) at Washington Street (Route 53)	Signal
3	Schoosett Street (Route 139) at Brick Kiln Road	Stop
4	Schoosett Street (Route 139) at Lorna Avenue	Stop
5	Schoosett Street (Route 139 at Water Street	Stop
6	Church Street (Route 139) at Water Street	Stop
7	Church Street (Route 139) at North River Plaza/Rainbow Square	Signal
8	Church Street (Route 139) at Oak Street Extension/Brigantine Village	Signal
9	Church Street (Route139) at Roue 3 southbound ramps	Signal
10	Church Street (Route 139) at Route 3 northbound ramps	Signal
11	Church Street (Route 139) at Old Oak Street	Signal

Automatic Traffic Recorder Counts Locations
(Scheduled for October 2025)

1	Route 139/53 Columbia Road at Hanover Town Line
2	Route 139 Schoosett Street East of Water Street
3	Route 139 Church Street East of Water Street
4	Route 139 Church Street West of Oak Street
5	Route 139 Church Street Underneath Route 3
6	Route 139 Church Street At Marshfield Town Line
7	Route 53 Washington Street south of Schoosett Street

Proposed Corridor Study Project Development Timeline

Tasks	Steps	Oct-25	Nov-25	Dec-26	Jan-26	Feb-26	Mar-26	Apr-26	May-26	Jun-26	Jul-26	Aug-26	Sep-26
Project Initiation	Initial interview with community, MassDOT and regional partners	■	■	■	■								
	Develop Scope of Work, plans for the studies	■	■	■	■								
	Review previous studies, plans and documents	■	■	■	■								
Public and Community Engagement	Formation of OCPC Study Team and Community Work Group	■	■	■	■								
	Initial stakeholders interview meeting	■	■	■	■								
	General public survey		■	■	■	■	■	■	■				
	Community, stakeholders meetings		■	■						■			
	JTC, or MPO project update meetings	■					■						■
	Public Meetings										■		
Data Collection	ATR count, TMC count	■	■										
	Collect and review speed regulation, signal permit and timing plans			■	■	■							
	Road inventory studies, on-line and field audit			■	■	■							
	Multi-modal planning data collection			■	■	■							
	Environmental data collection			■	■	■							
Mapping and Data Analysis	Develop GIS base and operational data maps			■	■	■	■	■	■				
	Capacity analysis (LOS, delay and air quality)			■	■	■	■	■	■				
	Safety analysis (collision cause and countermeasures)			■	■	■	■	■	■				
	Multi-modal planning analysis (bicycling, walking, transit, etc.)			■	■	■	■	■	■				
Existing Condition Assessment	Intersection operational evaluation			■	■	■	■	■	■				
	Corridor planning and operational evaluation			■	■	■	■	■	■				
	Transportation safe system analysis			■	■	■	■	■	■				
	Climate change and environmental review			■	■	■	■	■	■				
Future Projection and Assessment	Estimate background traffic growth and conditions				■	■	■	■	■	■			
	Compile site specific land use and road development plans				■	■	■	■	■	■			
	Identify future deficiencies				■	■	■	■	■	■			
Plan Design Alternatives Assessment	Alternatives analysis and comparison				■	■	■	■	■	■			
	Development recommendations				■	■	■	■	■	■			
Draft Report	Circulate draft report for review								■	■	■	■	
	Solicit comments and suggestions for updating draft report								■	■	■	■	
	Provide project development coordination in various funding resources								■	■	■	■	
Final Report	Circulate the final report									■	■	■	■
	Final Document and archive									■	■	■	■

*The Project Development Timeline provides estimated time for completion of each task. Use as a reference.

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QUESTIONS / COMMENTS?

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