

# ANNUAL CMMPO ENVIRONMENTAL CONSULTATION SESSION

Integrating LRTP development & project selection within  
the constraints of the natural environment

# AGENDA

01

## **Environmental Consultation Review**

02

## **TIP Project Screening & Selection**

- Example TIP Project - West Brookfield (Phase 3)
- CMAQ

03

## **Long Range Transportation Plan (LRTP) Program Development**

- EV Charging Infrastructure Updates

04

## **Unified Planning Work Program (UPWP)**

- Blackstone Watershed Collab. Grant
- Culvert Assessment Program Updates

05

## **Guest Presentation**

- Climate Pollution Reduction Grant - Ian McElwee, CMRPC

06

## **Adjourn**

# ENVIRONMENTAL CONSULTATION REVIEW

1

## Early Coordination

- Develop strategies to discuss environmental aspects of LRTP and TIP with stakeholders and public (i.e., Environmental Consultation)

2

## Environmental Resource Analysis

- Review environmental, cultural, and community resources and data
- Create candidate project location maps

3

## Mitigation

- Understand affected environment and assess transportation impacts throughout project development
- Minimize impacts from project by limiting degree/magnitude of the action and its implementation (i.e., rehabilitate affected environment as part of project)

4

## Consultation

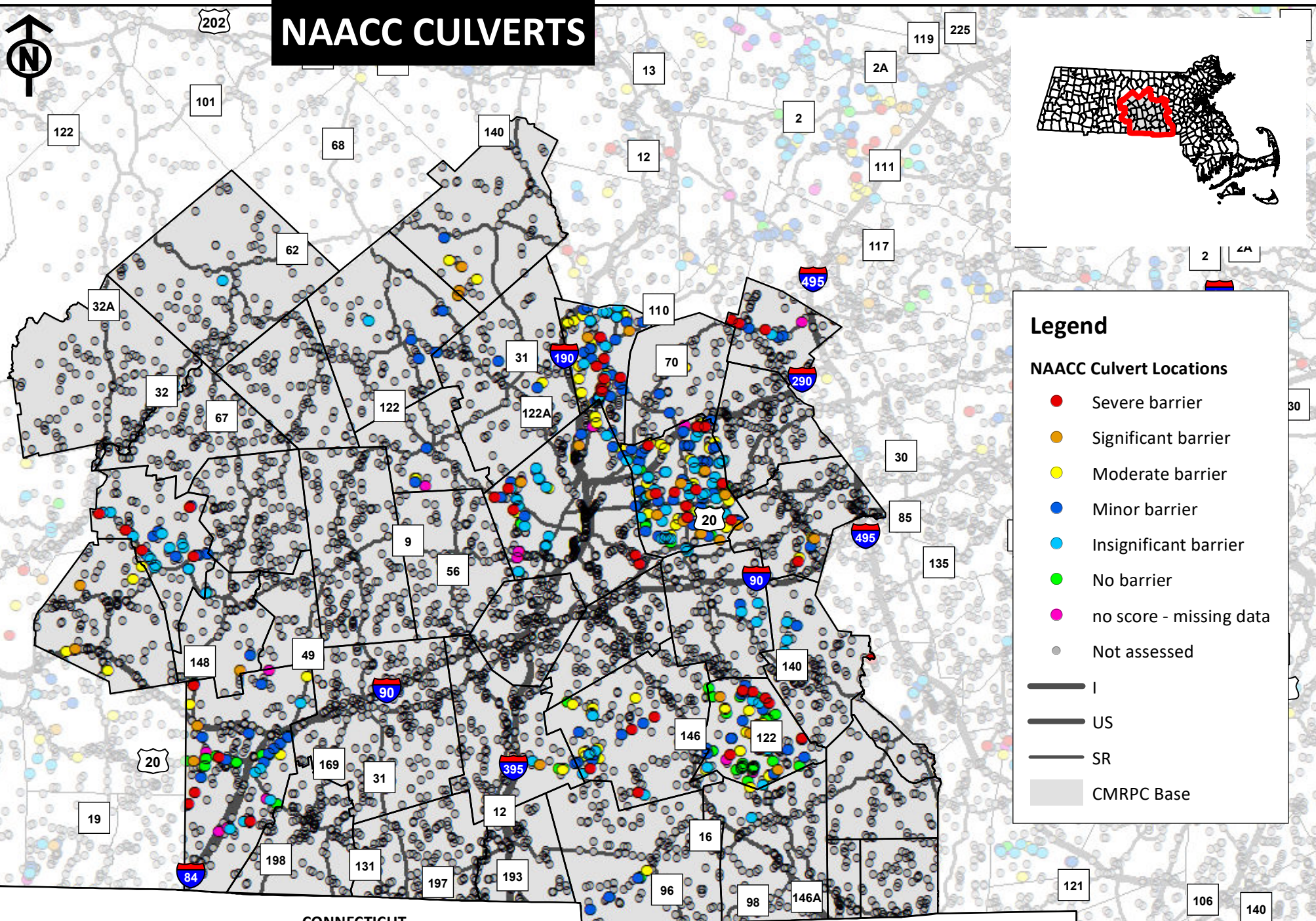
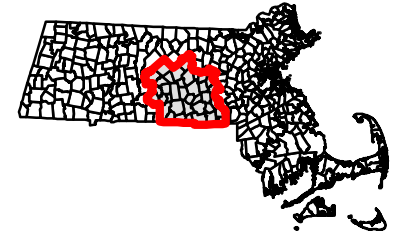
- MPO's consult with regulatory agencies responsible for natural resources, environmental protection, and historic conservation concerning development of transportation plans
- Includes a discussion of potential mitigation activities

5

## Planning Integration

- Use feedback from consultations, LRTP, TIP public outreach to select/program transportation projects, policies, and initiatives to minimize environmental impacts

# NAACC CULVERTS



### Legend

**NAACC Culvert Locations**

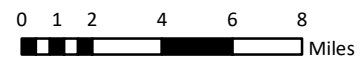
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- Not assessed

I  
 US  
 SR  
 CMRPC Base

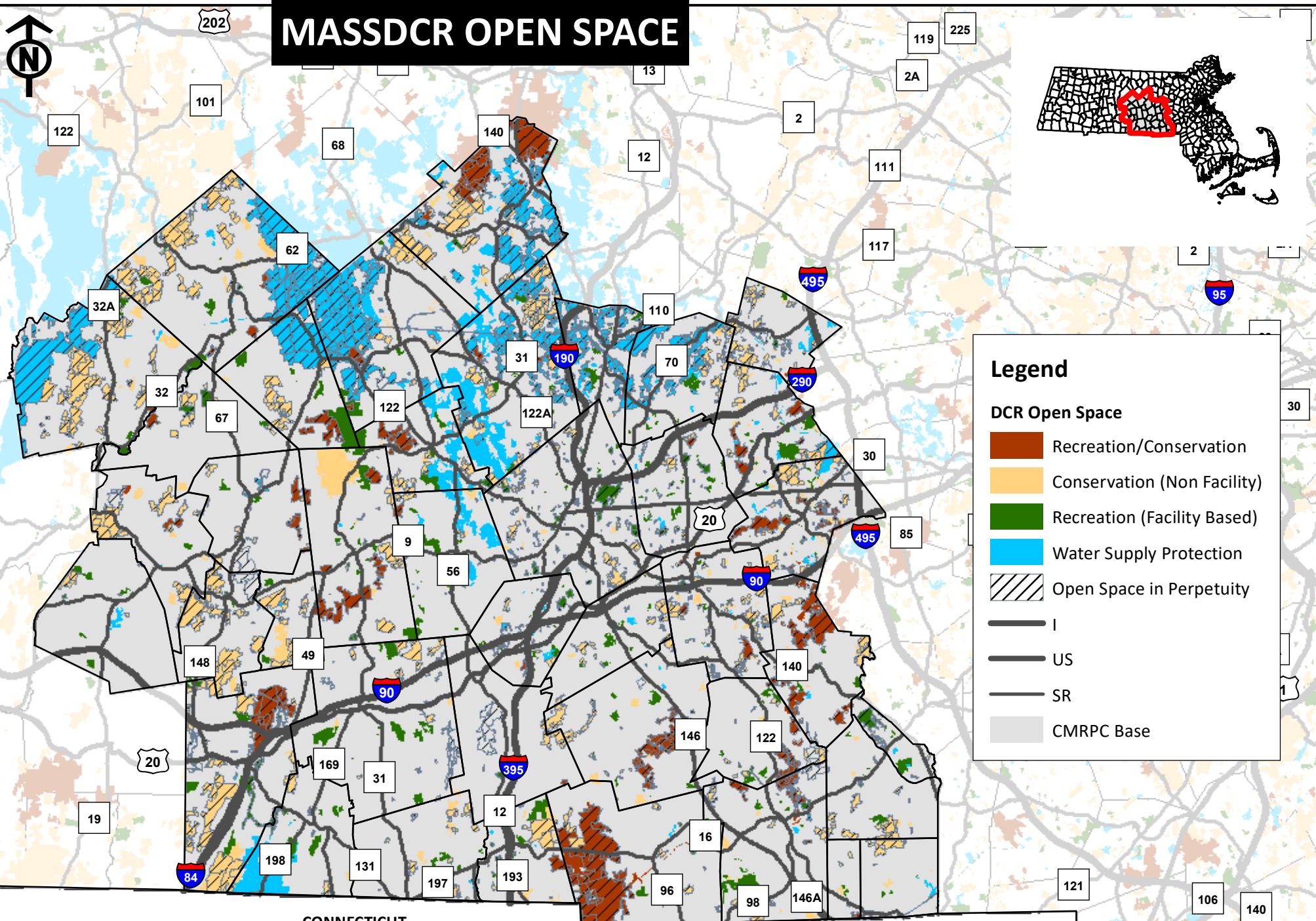
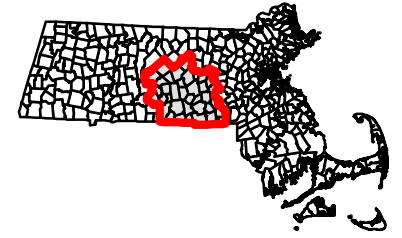
CONNECTICUT

RHODE ISLAND

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# MASSDCR OPEN SPACE



### Legend

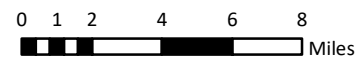
**DCR Open Space**

- Recreation/Conservation
- Conservation (Non Facility)
- Recreation (Facility Based)
- Water Supply Protection
- Open Space in Perpetuity
- I
- US
- SR
- CMRPC Base

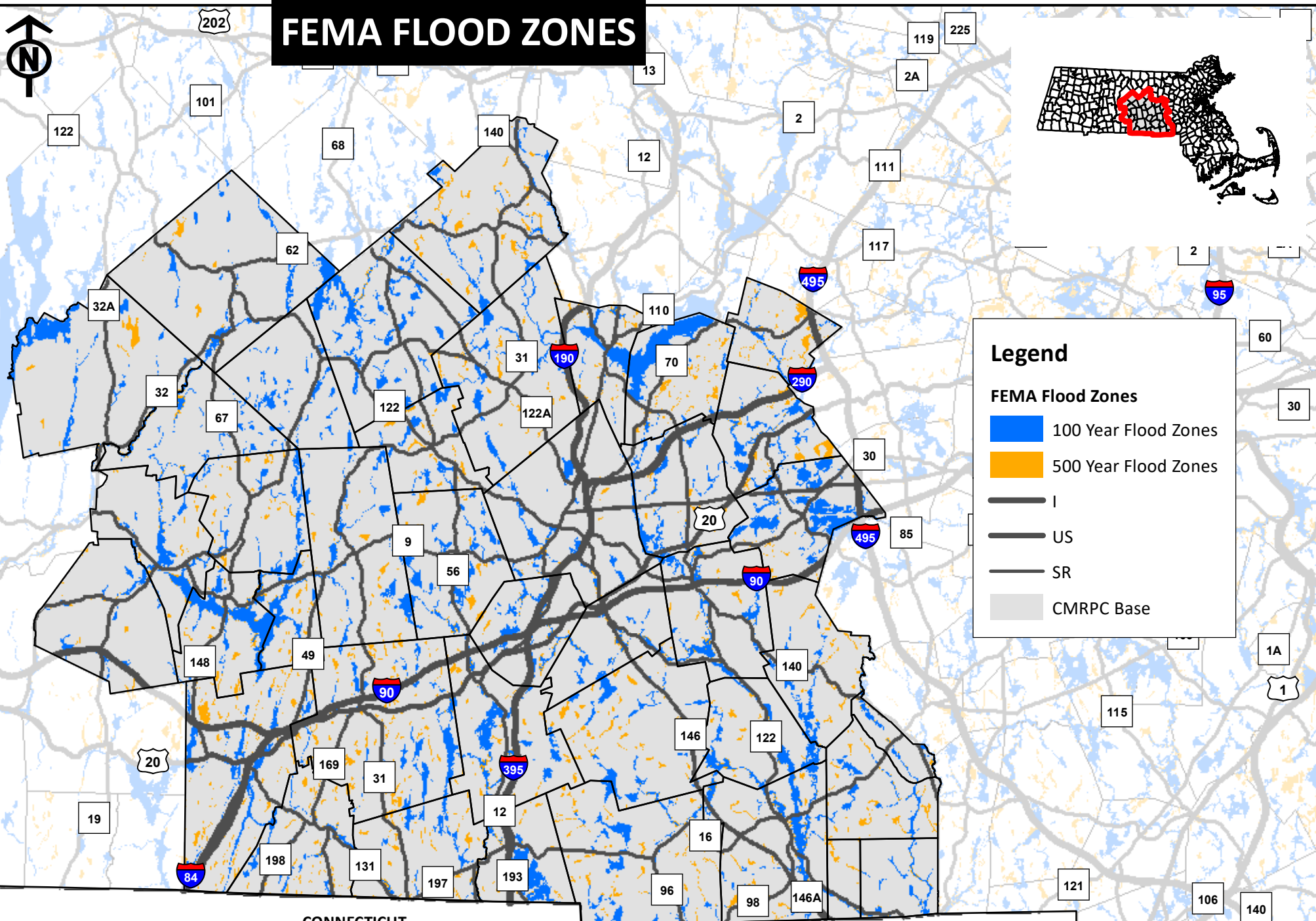
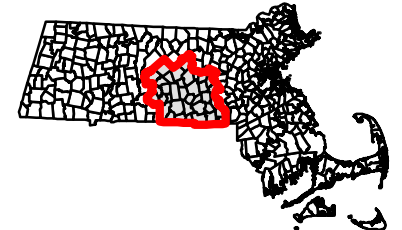
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# FEMA FLOOD ZONES



### Legend

**FEMA Flood Zones**

- 100 Year Flood Zones
- 500 Year Flood Zones

**Line Types**

- I
- US
- SR

**CMRPC Base**

**CONNECTICUT**

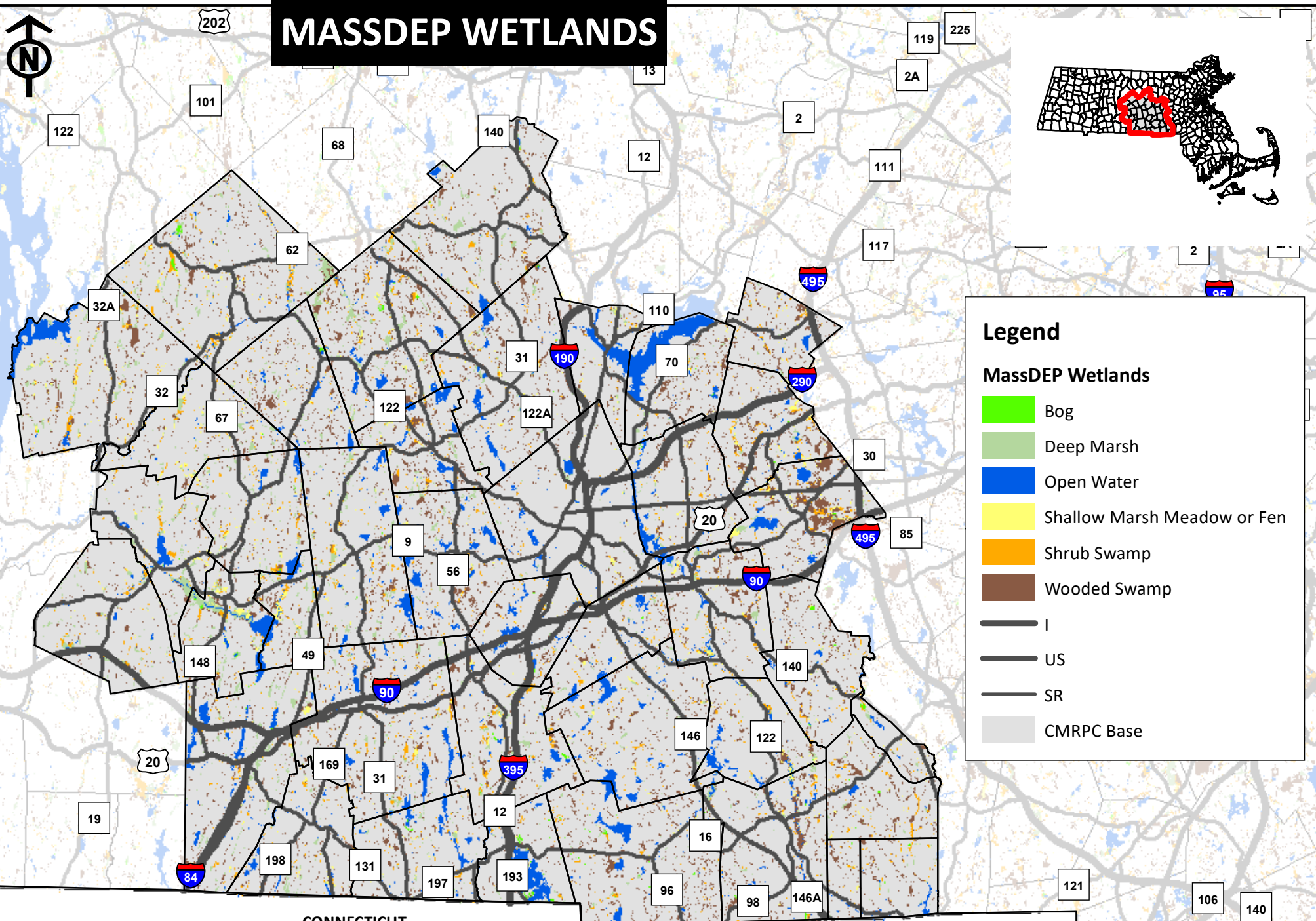
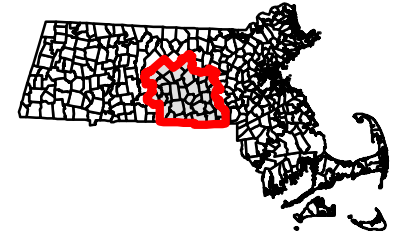
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**RHODE ISLAND**

0 1 2 4 6 8  
Miles



# MASSDEP WETLANDS



**Legend**

**MassDEP Wetlands**

- Bog
- Deep Marsh
- Open Water
- Shallow Marsh Meadow or Fen
- Shrub Swamp
- Wooded Swamp

- CMRPC Base

- I
- US
- SR

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**RHODE ISLAND**

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 Miles







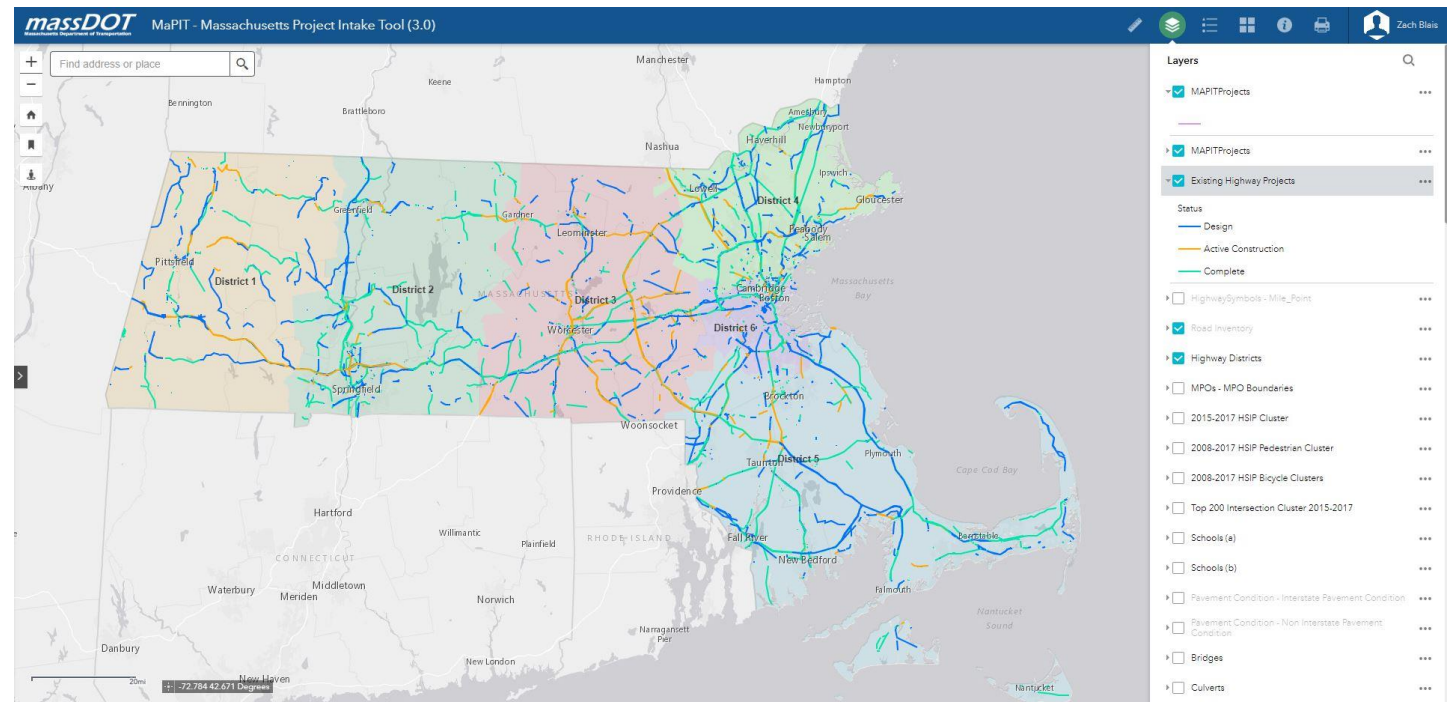
# MASSACHUSETTS PROJECT INTAKE TOOL (MAPIT)

The Massachusetts Department of Transportation (MassDOT) initiates new project proponents through a 3-step process using their online tool, MaPIT:

- 1. Project Need** - project proponent identifies project needs
- 2. Project Initiation** - project proponent works with MassDOT to define scope, costs, timeline, impacts, and responsibilities
- 3. Project Review Committee** - MassDOT submits projects to the Project Review Committee for approval

A GeoDOT account is needed to use MaPIT and initiate new project proponents.

[Request a GeoDOT Account](#)



# PROJECT SCREENING

## Long Range Transportation Plan (LRTP)

A 25-year regional vision that integrates all transportation modes adhering to and supporting federal, state, and regional legislation goals and performance management goals.

## Project Screening

Performance-based planning assessment of candidate projects (i.e., Environmental Consultation GIS analysis).

## Transportation Improvement Program (TIP)

CMMPO Advisory Committee and other committees consider proposed TIP highway/transit project listings and make recommendations to the CMMPO.



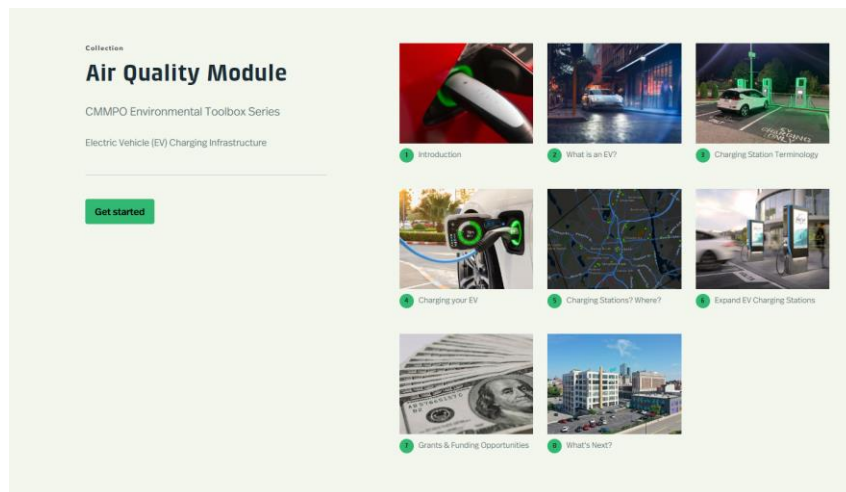
# CMRPC RESOURCES

Technical Grant Writing Support

NAACC Culvert Assessments

CMMPO Air Quality Module: EV Charging Infrastructure

Data Collection Programs (i.e., traffic counts)



# TIP PROJECT SCREENING & SELECTION

## (Project ID: 612779) FFY 2029: West Brookfield Resurfacing Work on Route 9 (Phase 3)

1

### Project Details

- Project Limits: Route 9, Pierce Road to Hadley Path (1.6 miles)
- Project Costs: \$11.4 million
- Pre-25% Project Design
- Phase 1 & 2 currently programmed

2

### Existing Conditions/Concerns

- Safety issues
- Pavement issues
- Drainage issues
- Snow and ice
- Steep slopes
- Shoulder width and visibility problems
- Truck traffic
- Speeding (enforcement locations)
- Lack of signage & pavement markings
- Bicycle and pedestrian accessibility

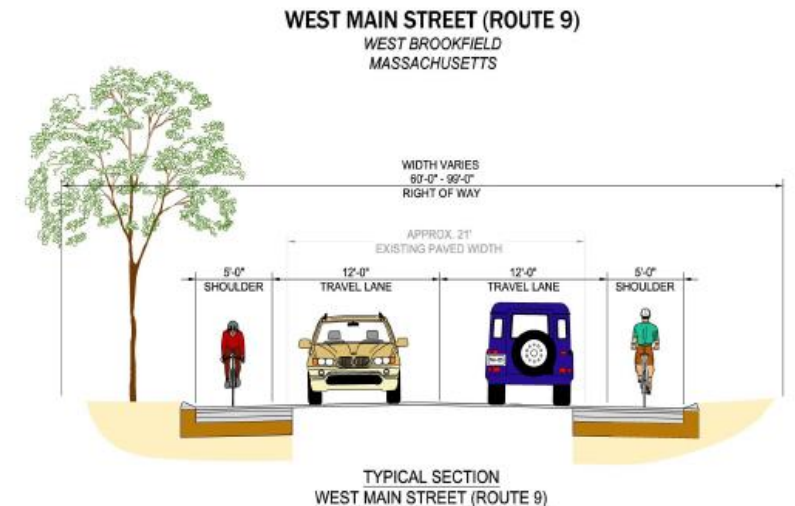
3

### Project Improvements

- Address safety concerns for all roadway users
- Roadway widening improvements
- Bicycle and pedestrian accommodations
- Lamberton Brook Culvert Extension
- New striping, signage, guard rails, slope stabilization



### PROPOSED TYPICAL SECTION



# TIP PROJECT SCREENING & SELECTION

(Project ID: 612779) FFY 2029: West Brookfield Resurfacing Work on Route 9 (Phase 3)



LINES OF SIGHT



INLET\*

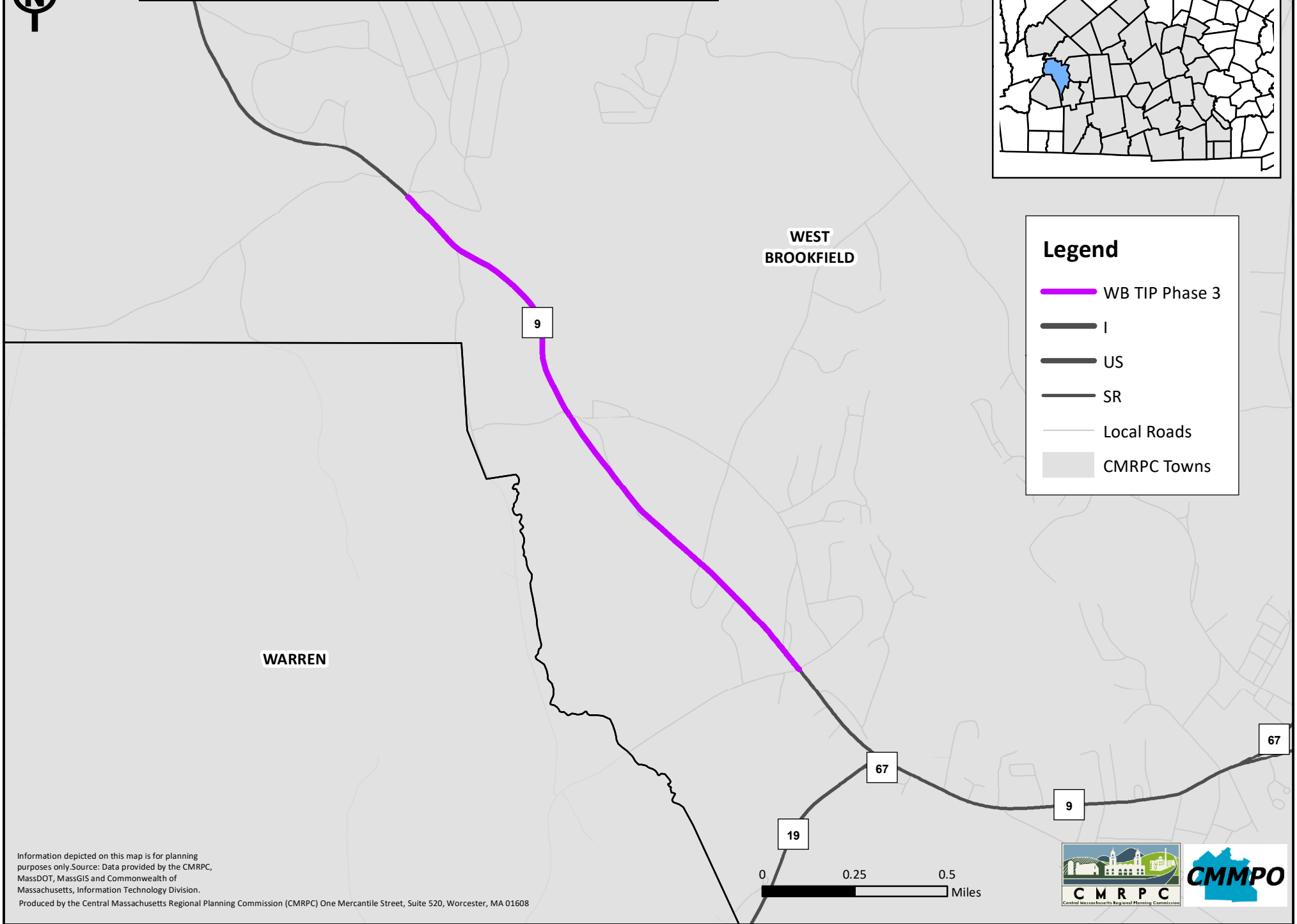
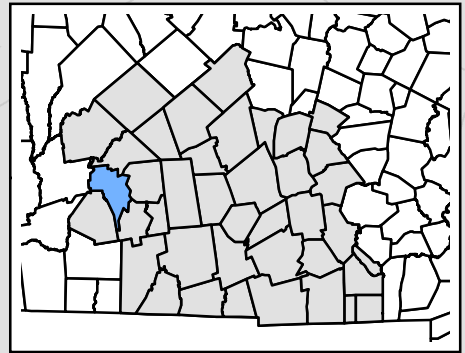


STEEP SLOPES

\*Culvert from the previous slide (Lamberton Brook)



# WEST BROOKFIELD TIP BASEMAP



## Legend

- WB TIP Phase 3
- I
- US
- SR
- Local Roads
- CMRPC Towns

WARREN

WEST  
BROOKFIELD

9

19

67

9

67



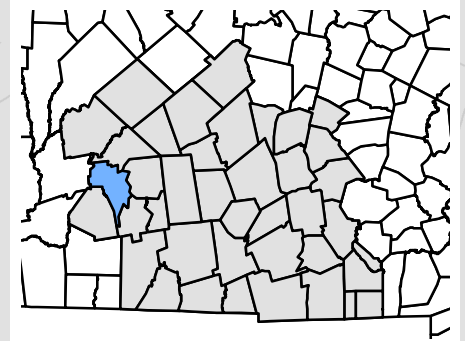
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# WEST BROOKFIELD TIP NAACC CULVERTS



Lamberton Brook Culvert Extension

WEST BROOKFIELD

WARREN

### Legend

**NAACC Culvert Locations**

- Severe barrier
- Significant barrier
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— WB TIP Phase 3

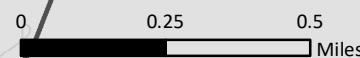
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US

SR

Local Roads

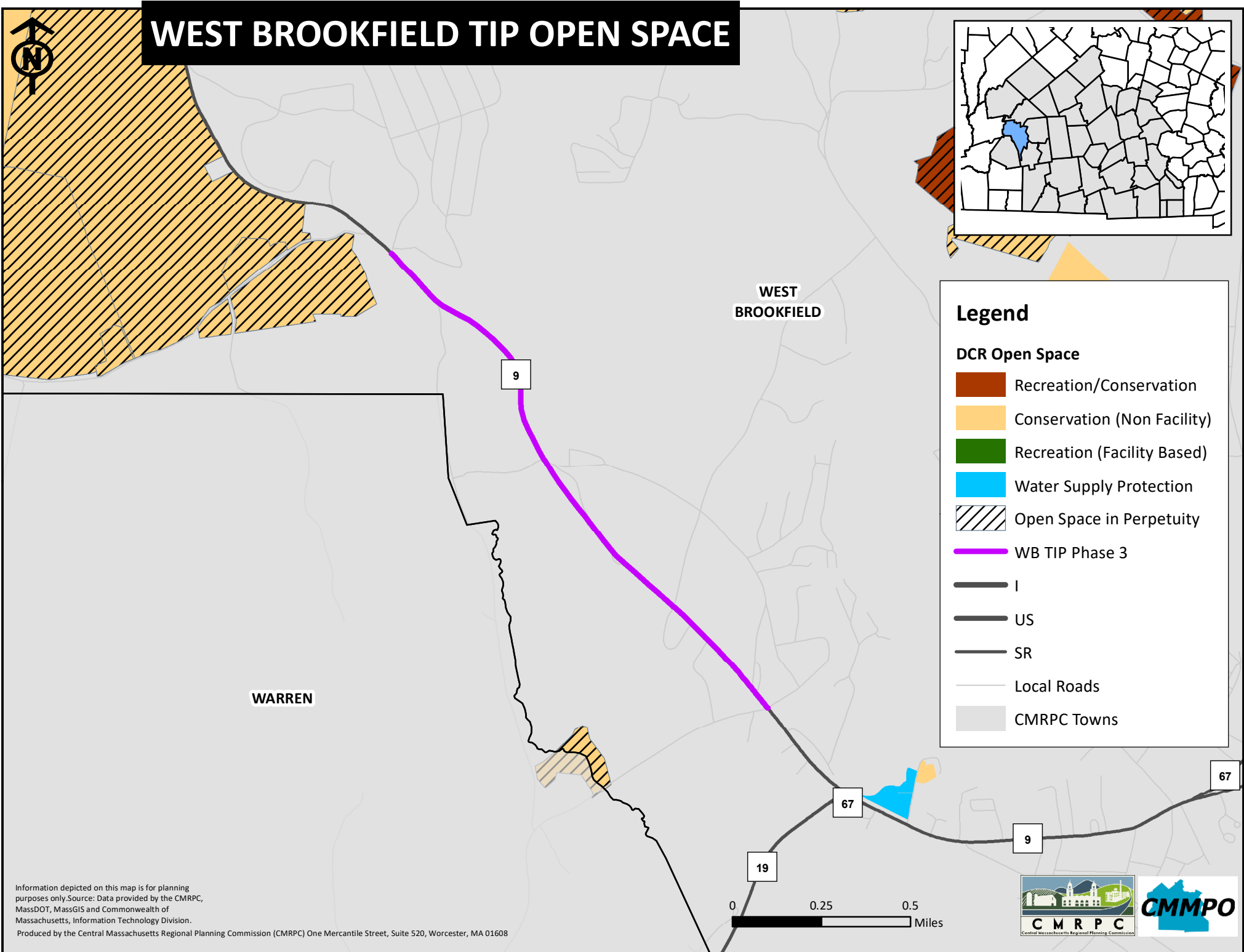
CMRPC Towns



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# WEST BROOKFIELD TIP OPEN SPACE



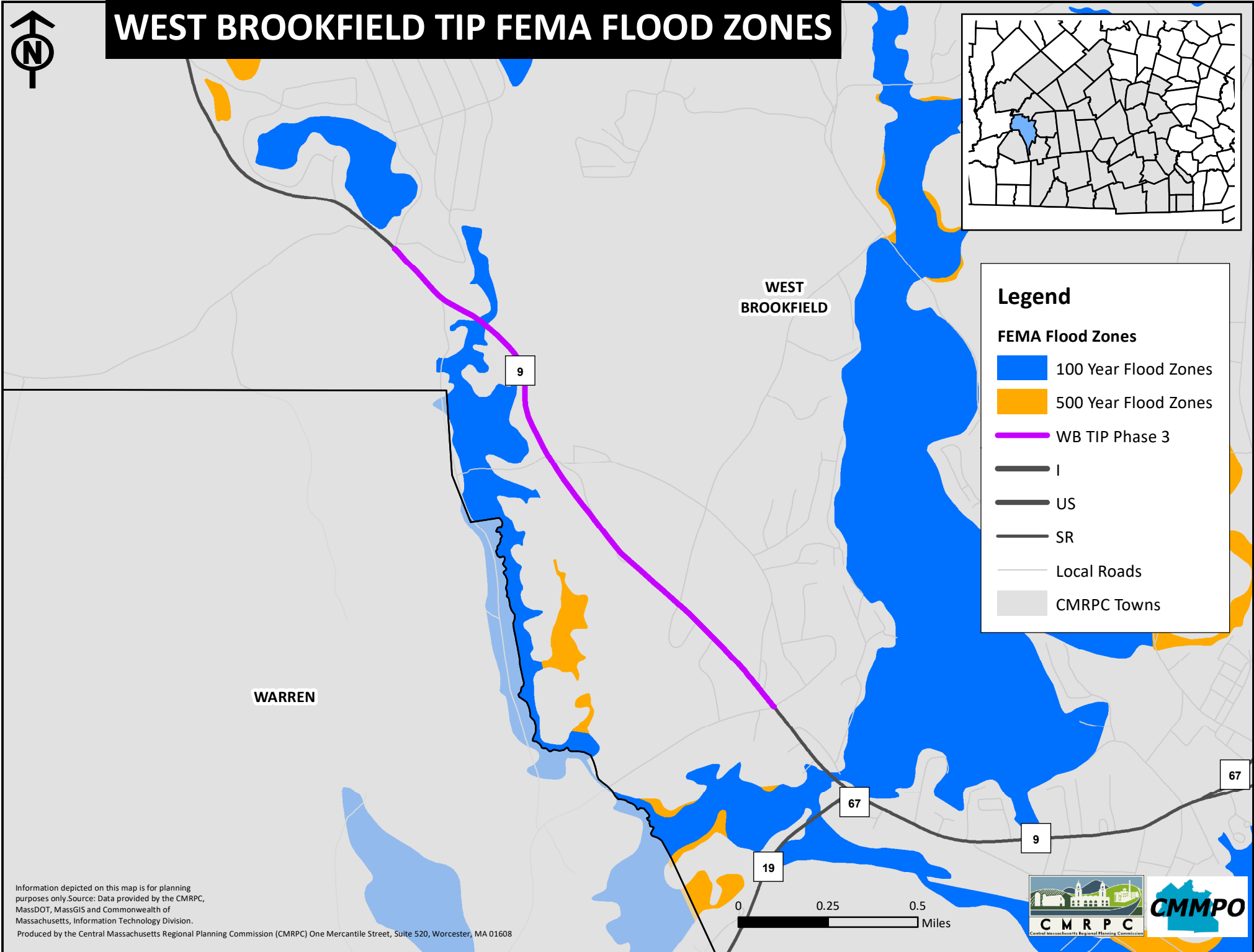
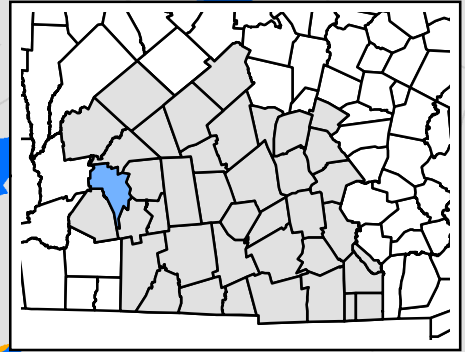
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# WEST BROOKFIELD TIP FEMA FLOOD ZONES



**Legend**

**FEMA Flood Zones**

- 100 Year Flood Zones
- 500 Year Flood Zones
- WB TIP Phase 3

I  
US  
SR

Local Roads

CMRPC Towns

WARREN

WEST  
BROOKFIELD

9

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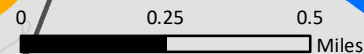
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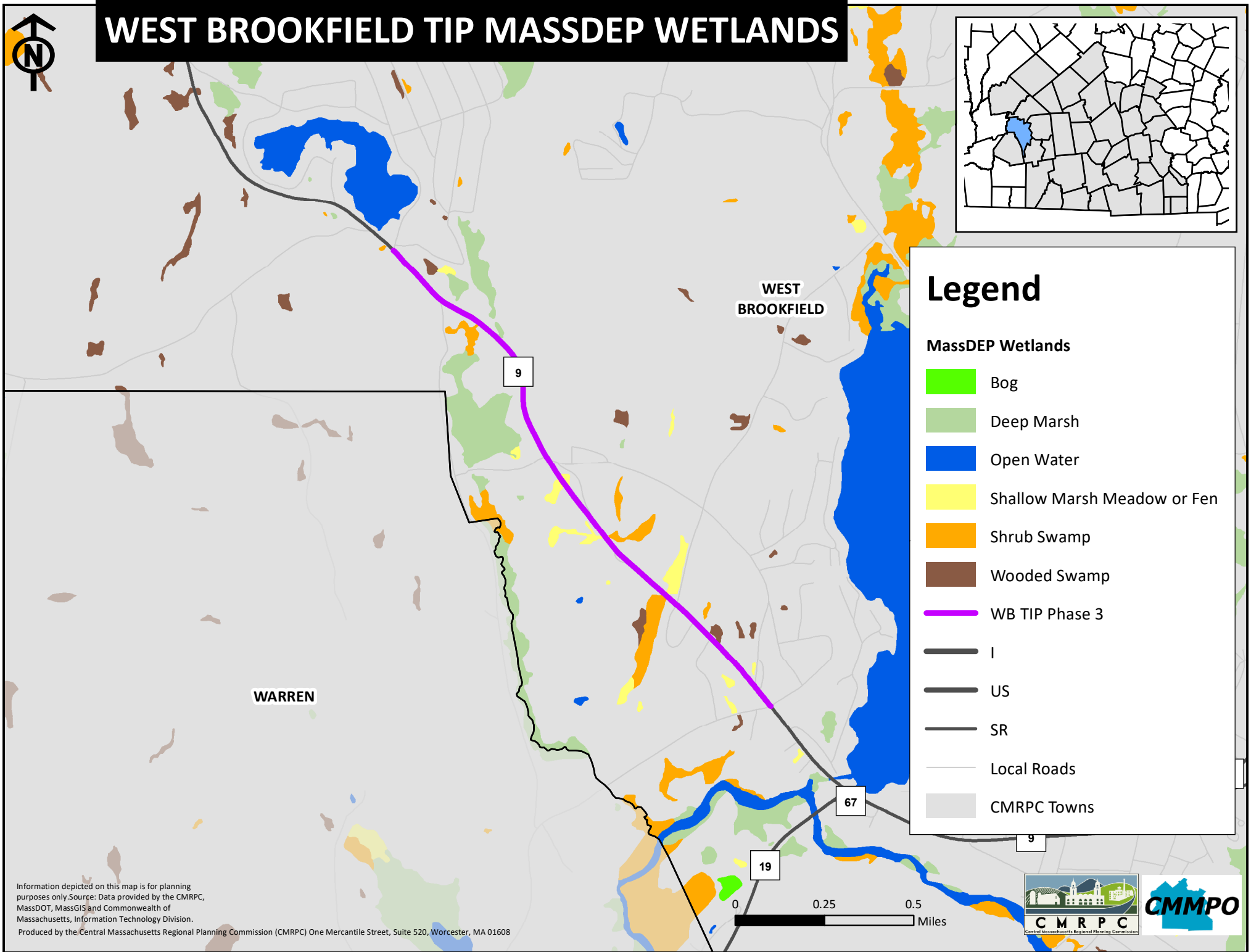
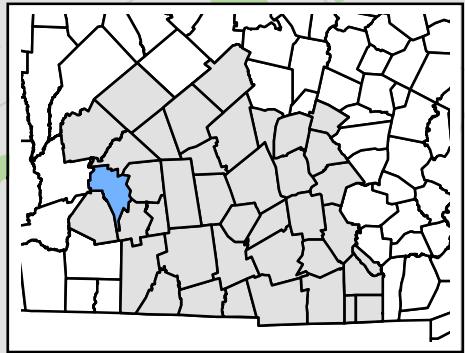
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# WEST BROOKFIELD TIP MASSDEP WETLANDS



## Legend

### MassDEP Wetlands

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- Deep Marsh
- Open Water
- Shallow Marsh Meadow or Fen
- Shrub Swamp
- Wooded Swamp
- WB TIP Phase 3

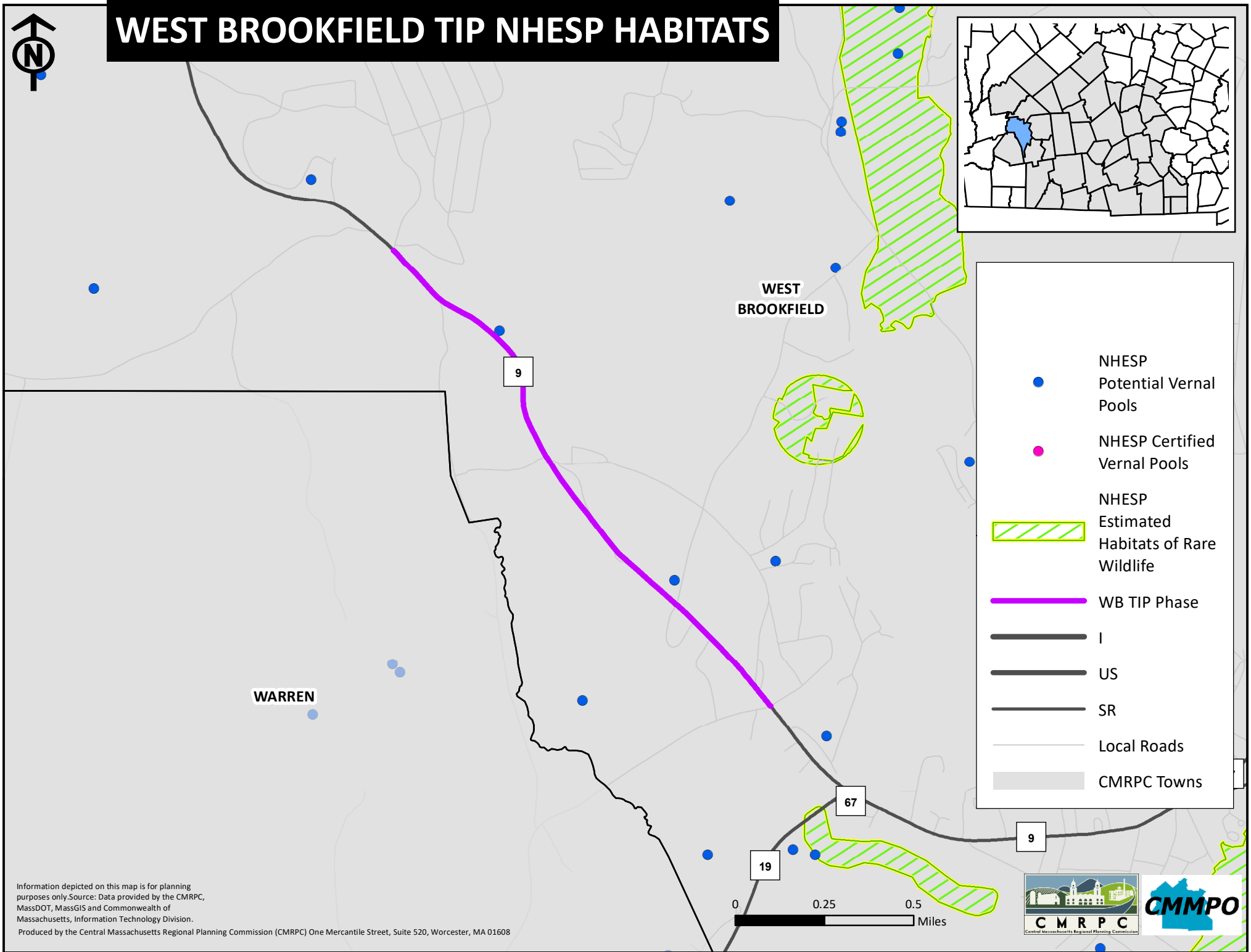
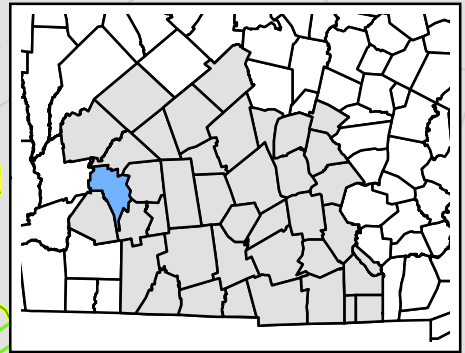
- I
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- Local Roads
- CMRPC Towns










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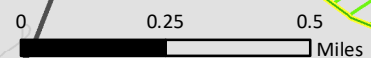


# WEST BROOKFIELD TIP NHESP HABITATS



-  NHESP Potential Vernal Pools
-  NHESP Certified Vernal Pools
-  NHESP Estimated Habitats of Rare Wildlife
-  WB TIP Phase
-  I
-  US
-  SR
-  Local Roads
-  CMRPC Towns

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# CONGESTION MITIGATION AIR QUALITY (CMAQ)

## CMAQ Project Types/Activities

CMAQ Project Types	FHWA CMAQ Eligible Activities
Travel Demand Management/Rideshare	<ul style="list-style-type: none"> <li>Rideshare Programs</li> <li>Park and Ride</li> <li>Employee Transit Benefits</li> <li>Carsharing</li> <li>Bikesharing</li> <li>Education and Outreach</li> </ul>
Congestion Reduction and Traffic Flow Improvements	<ul style="list-style-type: none"> <li>Incident Management</li> <li>Intersection Improvements</li> <li>Signal Improvements</li> <li>Roundabouts</li> </ul>
Transit Improvements	<ul style="list-style-type: none"> <li>Transit Service Expansion</li> <li>Park and Ride</li> <li>Employee Transit Benefits</li> </ul>
Freight Intermodal Projects	<ul style="list-style-type: none"> <li>Intermodal Freight Facilities and Programs</li> <li>Truck Stop Electrification</li> <li>Heavy Vehicle Engine Replacements</li> </ul>
Pedestrian Bicycle	<ul style="list-style-type: none"> <li>Pedestrian and Bicycle Paths (that are not solely for recreation)</li> <li>Bikesharing</li> </ul>
Alternate Fuel and Clean Vehicle	<ul style="list-style-type: none"> <li>Heavy Vehicle Engine Replacements</li> <li>Diesel Retrofit Technologies</li> <li>Extreme-Temperature Cold-Start Technologies</li> <li>Dust Mitigation</li> <li>Natural Gas Re-Fueling Infrastructure</li> <li>Electric Vehicle Charging Stations</li> </ul>

## Recently Approved CMAQ Projects

PROJECT ID#	Project	Location	Approval Date	TIP Year	CMAQ Approved Funds	Total Funds	Type	VOC Savings (kg/per year)	NOx Savings (kg/per year)	CO Savings (kg/per year)	
605740	Winthrop/Providence/Vernon/Granite St Improvements	Worcester	3/29/16	2017	\$1,305,638	\$3,853,939	Traffic Flow	20.6	54.8	242.7	
603251	Holden St/Drummond Ave/Shore Dr Intersection Improvements	Worcester	3/29/16	2017	\$2,705,655	\$2,705,655	Traffic Flow	135.2	360.2	1596.5	
602740	Main St Resurfacing	Shrewsbury	11/10/16	2017	\$2,000,000	\$6,278,484	Traffic Flow	158.3	158.9	1963.5	
606206	Charlton St Reconstruction	Oxford	11/10/16	2017	\$1,000,000	\$5,722,150	Traffic Flow	0.1	0.4	5.7	
606125	High St/Hopkinton Rd Reconstruction	Upton	4/4/18	2019	\$3,411,395	\$6,386,655	Traffic Flow	23.4	22.6	331.5	
	WRTA Demand Resonse Rideshare Service Pilot	Westborough	3/4/20	2021	\$632,032	\$632,032	New Service	3.3	6.1	107.7	
608778	Route 20 Reconstruction	Charlton/Oxford	1/22/21	2022	\$3,586,719	\$74,197,812	Traffic Flow	13.6	32.3	643.3	
602659	Downtown Improvements	Southbridge	4/26/21	2024	\$2,000,000	\$4,418,779	Bike & Ped	0.4	1.1	27.5	
608873	Meadow Road Rehabilitation	Spencer	4/26/21	2023	\$2,500,000	\$9,164,351	Bike & Ped	0.2	0.6	15.5	
609219	Shrewsbury St & Doyle Rd Pavement Rehabilitation	Holden	4/27/22	2023	\$4,000,000	\$10,542,121	Bike/Ped & Traffic Flow	53.77	127.3	2534.9	
608433	I-395 & Route 16 Intersection Improvements	Webster	3/13/23	2024	\$2,000,000	\$14,995,008	Traffic Flow	42.59	24.83	385.91	
	MicroProject: Quaboag Connector New Hybrid Van	Ware	3/13/23	2024	\$75,000	\$75,000	New Bus	9.79	71.52	376.95	
	MicroProject: Transit Media & Communications Campaign	Southbridge	3/13/23	2024	\$20,000	\$20,000	Education	-	-	-	
608961	Intersection Improvements on Chandler St & May St	Worcester	9/13/23	2025	\$2,000,000	\$6,240,547	Traffic Flow	5.38	5.26	39.5	
	MicroProject: Purchase of New Bike Racks	Worcester	2/20/24	2025	\$35,000	\$35,000	Bike & Ped	5.84	8.4	167.17	
					<b>Total Funds</b>	\$27,271,439	\$145,267,533	<b>Total Savings</b>	472.47	874.3	8438.33

# L RTP PROGRAM DEVELOPMENT:

## ELECTRIC VEHICLE (EV) CHARGING INFRASTRUCTURE UPDATES

### PAST

- **EV Survey** - November 2022
  - Sent to CMRPC community officials
  - Purpose: Identify community's need for EV charging stations, experience with EV charging stations, interest with installing more EV charging stations, and where EV charging stations could be installed in their community.
  - 16 communities responded
- **Air Quality Module** - Spring 2022
  - Part of the CMMPO Regional Environmental Toolbox Series.
  - Explores the topic of EVs, EV charging, EV charging grants and funding opportunities, and future work.
  - [Click here for the link](#)
- **Grant Opportunities**
  - Staff share federal and state grant opportunities with the region.
  - Staff attempted the Federal EV Charger Reliability and Accessibility Accelerator Program grant - Douglas (determined ineligible).



PlugShare Chargers at Auburn Mall

# L RTP PROGRAM DEVELOPMENT:

## ELECTRIC VEHICLE (EV) CHARGING INFRASTRUCTURE UPDATES

### PRESENT

- **EV Dashboards**

- [CMMPO EV Charging Stations Dashboard - \(updated 1/3/24\)](#)
  - Uses data from Alternative Fuel Data Center (AFDC) Station Locator.
  - Shows EV charging stations in the CMMPO Region, as well as the station network (i.e., ChargePoint).
  - Also uses data from the Massachusetts Vehicle Census to show EV and Plug-In Hybrid EV totals.
- [EV Charging Stations WayFinding App \(MapHub\)](#)
  - Uses data from AFDC Station Locator to show EV charging station locations.
  - Provides directions and information for each charging stations (i.e., charging level, plugs available, hours of operation).
  - Will be available soon.

- **EV Fact Sheets** - [click here to explore them](#)

- Set of fliers that briefly explain important EV vehicle and charging topics:
  - EV Basics
  - Charging Infrastructure
  - Operations and Maintenance
  - Signage
  - Residential Charging
  - Roadmap to Installing EV Charging

- **Presentations**

- Transportation Managers Group (TMG)
- Data Users Group (DUG)
- Municipal Energy Planning Workshop Series

**1 ASSESS THE NEED**

Assess what the intended use the charging station will be. This will help guide the station selection and site selection process. It will also help ensure that the use of the station is maximized and costs are minimized.

**2 CHOOSE A STATION**

There are three primary types of charging stations. Each type can be further customized depending on needs, and what the manufacturer offers.

Power	Time	Use
<b>Level 1</b> 120V	5-10 hours or more	Long term lot parking or overnight parking needs, workplace charging
<b>Level 2</b> 208V/ 240V	1-5 hours	Workplace charging, commercial/work vehicles used during the day that need midday charge
<b>DC Fast Charging</b> 480V	20 minutes to 1 hour	Best for highway or major roadway sites to enable longer and more essential trips

**3 SELECT A SITE**

The specifics of site selection are important to minimize installation costs. Selection can sometimes be only determined by the type of station and how it will be used, however other specifics are important to consider during the process.

**4 PROCURE & INSTALL**

**Green Communities** - statewide program that offers grant funding for charging stations. [Click here](#) to learn more.

**MassEV** - provides statewide programs for public charging, workplace/ fleet charging, multi-unit dwelling charging, DC fast charging, and more.

**EverSource** - provides programs for home charging and workplace charging, public charging, and multi-unit dwelling charging.

**National OIE** - provides programs for home charging, workplace charging, public charging, and multi-unit dwelling charging.

**VERDES** - statewide contract to install, maintain, and provide site assessment for alternative transportation equipment, hardware, software, and services. [Click here](#) to learn more.

**HOW TO USE THIS GUIDE**

Use this step by step guide as an initial understanding of which types of EV charging stations will meet the needs of your community, and what factors to consider.

**CMMPO EV Charging Stations Dashboard**

[Click here](#)

# L RTP PROGRAM DEVELOPMENT:

## ELECTRIC VEHICLE (EV) CHARGING INFRASTRUCTURE UPDATES

### FUTURE

- **Clean Cities Coalition**

- Staff joined a Board of Advisors (BOA) Group for the Massachusetts Clean Cities Coalition.
- Includes members from State government, other RPA staff, and other technical staff from the electric vehicle/sustainability realm.
- The group meets to discuss EV and other climate change/sustainability topics (i.e., congestion management).
  - Last met on March 25.

- **EV Toolkit**

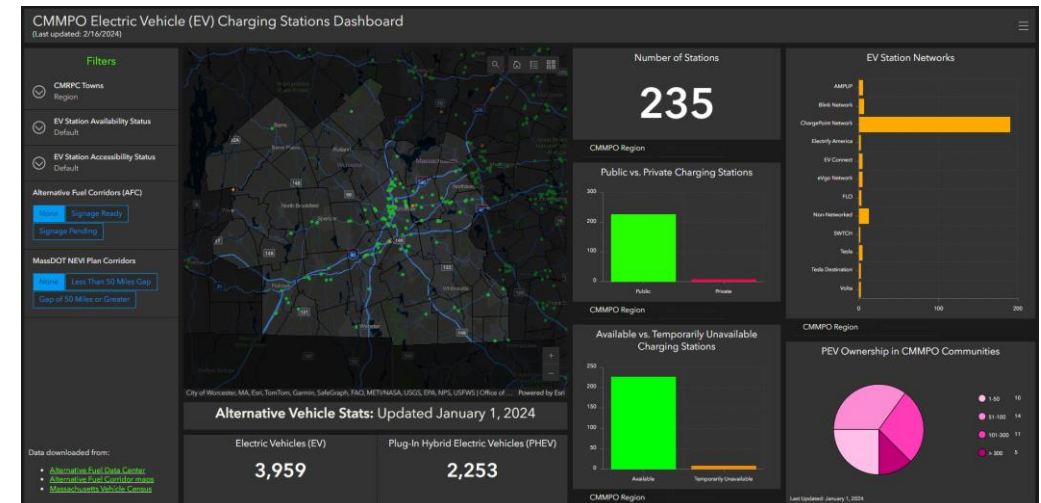
- Toolkit to assist communities in deployment of EV charging stations.
- Covers essential topics:
  - Partnership Opportunities
  - Planning and Site Selection,
  - Accessibility
  - Permitting
  - Maintenance and Operation; and more
- Expected to be completed in the coming months.

- **Massachusetts MPO Resilience Group**

- Organized by Boston Region MPO
- A working group of MPO's in the state to discuss climate resiliency topics
- Will include the topic of electrification

- **Continue assisting EV grant opportunities**

- **Continue updating EV Dashboard**



# UPWP: CULVERT ASSESSMENT PROGRAM UPDATES

## Blackstone Watershed Collaboration Grant

- In Fall 2023, staff partnered with the Blackstone Watershed Collaborative on a grant to help train individuals to assess culverts.
- Trained individuals to complete North Atlantic Aquatic Connectivity Collaborative (NAACC) Lead Observer certification.
- Trainings and assessments took place in Northbridge and Sutton.
- CMRPC staff assisted with training preparation, took part in a few trainings, and uploaded assessment data to the NAACC Data Center.
- 16 individuals completed Lead Observer certification.
  - 4 individuals from the CMRPC region (Northbridge, Uxbridge, and Sturbridge)
  - 1 Blackstone Watershed Collaborative staff
  - 2 VHB staff
  - 9 individuals from outside CMRPC region (Lexington, Hopkinton, and Kingston)
- About 60 total culverts were assessed as part of the training effort.





# UPWP: CULVERT ASSESSMENT PROGRAM UPDATES

## Regional Data Collection Updates

### CMRPC Data Collection Updates

- Completed assessments along federal-aid roadways in Sturbridge during 2023.
  - About 41 culverts assessed
- Continue to make updates to CMMPO Culvert Assessment Program Hub and Dashboard.
- Will begin assessing culverts in Berlin for 2024 season.
- Will continue to identify opportunities for training.
- Will continue to identify vulnerable culverts for replacement and grant opportunities.

### Regional Culvert Assessments Updates

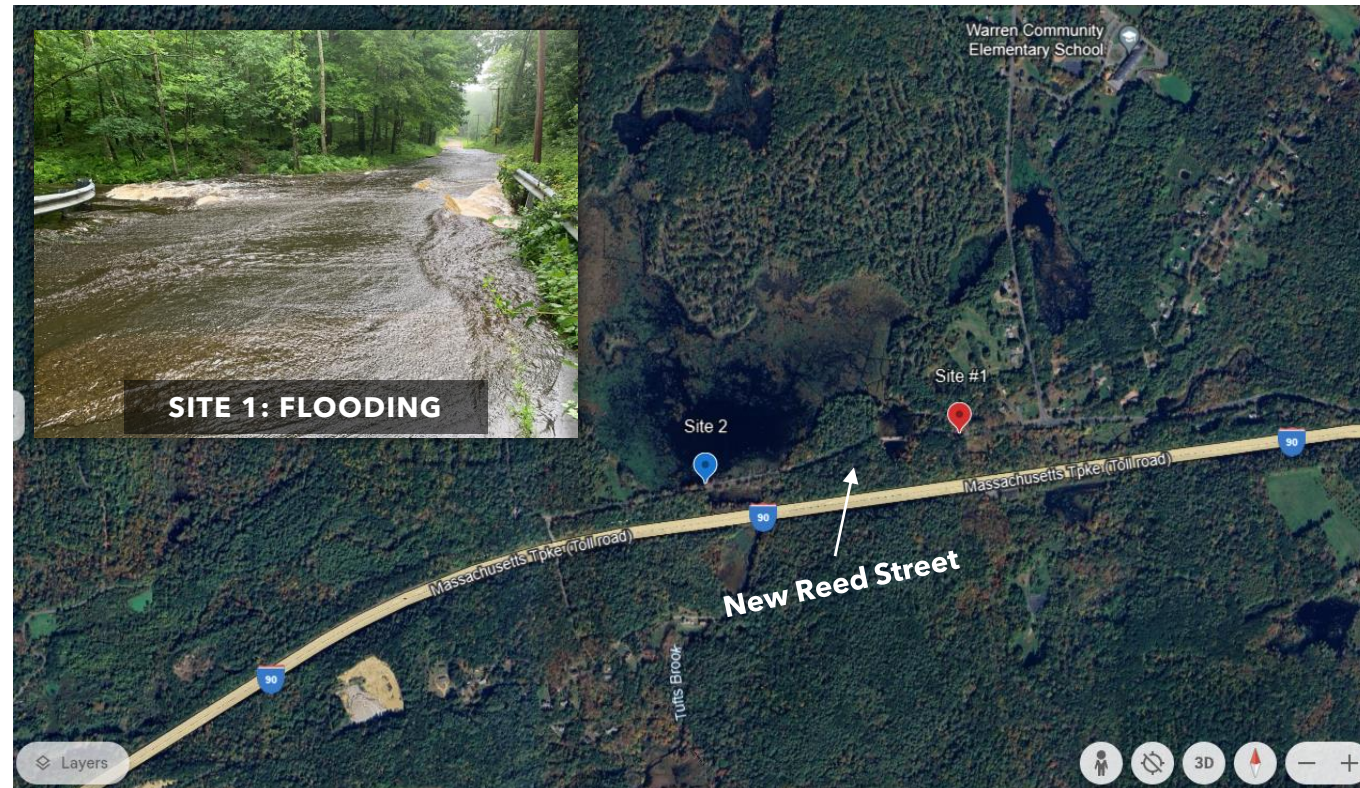
- Many culverts have been assessed in the region over the last year.
- More individuals have been NAACC Lead Observer trained.
- Highlight community: Shrewsbury
  - Town Staff is NAACC Lead Observer certified - trained by CMRPC.
  - About 2/3 of culverts have been assessed town-wide.

Aquatic Passability Score	Barrier Type	# of Culverts (2024)	# of Culverts (2023)	# of Culverts (2022)
N/A	No Score/Missing Data	26	12	8
1.0	No Barrier	70	10	2
0.80 - 0.99	Insignificant Barrier	113	70	29
0.60 - 0.79	Minor Barrier	154	99	35
0.40 - 0.59	Moderate Barrier	99	56	15
0.20 - 0.39	Significant Barrier	29	19	5
0.00 - 0.19	Severe Barrier	49	29	16
<b>Total</b>		<b>540</b>	<b>295</b>	<b>102</b>

# UPWP: CULVERT ASSESSMENT PROGRAM UPDATES

## FY 2025 DER Culvert Replacement Municipal Assistance (CRMA) Grant

- Grant aims to replace undersized, perched, and/or degraded culverts located in areas of high ecological value.
- Funded projects must meet Massachusetts Stream Crossing Standards.
- Projects can be for field data collection, design & engineering, permitting, and/or construction phases.
- Staff assisting the Town of Warren to complete an application.
  - Two double culverts along New Reed Street (Tufts Brook).
  - Application for field data collection and pre-design work.



**THANK  
YOU**

