

Massasoit Road

Resurfacing and Safety Improvements



The City of
Worcester

Department of Public Works | Department of Transportation & Mobility

Corridor Overview

- Grafton St – Sunderland Rd
 - 0.4 miles in length
 - Construction 2026
- Sunderland Rd – Blithewood
 - 0.9 miles in length
 - Construction anticipated in 2027
- Blithewood – SW Cutoff
 - 0.7 miles in length
 - Construction anticipated in 2028



Massasoit Road – Grafton St to Sunderland Rd

Existing Conditions



Roadway configuration

- Right of way
 - 47 to 63 ft wide right-of-way
 - Curb to curb width typically 40 ft
 - One travel lane in each direction. Left turn lanes northbound at Grafton St and at Heywood St.
 - Unmarked shoulder/parking lanes
 - Near Grafton St: Parking on west side only
 - Elsewhere: Parking generally allowed on both sides
 - Substandard, non-compliant sidewalks & ramps on both sides
 - Crosswalks at Grafton St, Heywood St, Church entrance, Rice Sq School (2), Sunderland Rd
 - No bike/micro-mobility facilities



Traffic characteristics

- Minor Arterial Roadway
 - 8,260 vehicle per day north of Heywood St
 - 14,280 vehicles per day Heywood to Sunderland Rd
 - Heavy traffic in early afternoon due to schools
- WRTA Route 1 Bus (WRTA Hub - Walmart) travels on segment between Grafton St and Heywood St only.
- Speed limit 25 mph, with 20 mph school zone at Rice Sq School.
- Average speed
 - 20 mph north of Heywood St
 - 27 mph Heywood to Sunderland Rd
- 85th percentile speed
 - 28 mph north of Heywood St
 - 34 mph Heywood to Sunderland Rd



Traffic operations

- Peak Hour Level of Service (LOS)

	AM Peak Hour	PM Peak Hour
Grafton St Intersection	LOS D	LOS D
Heywood St Intersection	LOS B	LOS B
Sunderland Rd Intersection (STOP approach only)	LOS B	LOS B

Level of Service Ranges	
LOS A	Light traffic with no congestion
LOS B	Stable traffic flow with only minor delays
LOS C	Heavy traffic with moderate delays and noticeable congestion
LOS D	Heavy traffic with moderate delays and noticeable congestion
LOS E	Very heavy traffic with significant delays
LOS F	Traffic volume exceeds capacity. Long delays and heavily congested



Parking

- Conducted 16 parking counts
 - 8:00 am to 7:30 pm, predominately Mon-Fri
 - Grafton St to Heywood St
 - Highest usage near Grafton St (#10 through #16)
 - Avg 2.4 parked vehicles, Max = 8 vehicles.
 - Heywood St to Sunderland Rd
 - Very low usage except during school pick-up
 - Avg 0.4 parked vehicles, Max = 3 vehicles



Crash History

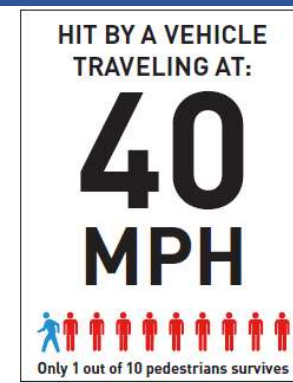
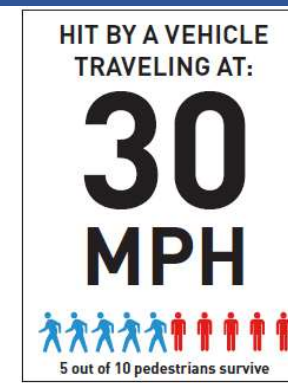
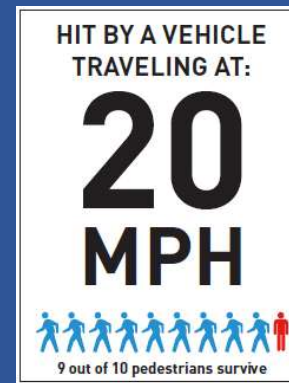
- 2022-2025 Four-year crash history
 - 50 crashes
 - Crash rate of 5.6 crashes per million vehicle miles traveled. **88% higher than statewide average for Minor Arterial roadways.**
(excluding Grafton St intersection)
 - Severity
 - 34 Property Damage Only
 - 6 Non-fatal Injury
 - 9 Unknown severity
 - 72% occurred in daylight
 - Crash Type
 - 30% angle crashes
 - 28% rear end
 - 28% sideswipe
 - 4% involved pedestrians or bike/micromobility



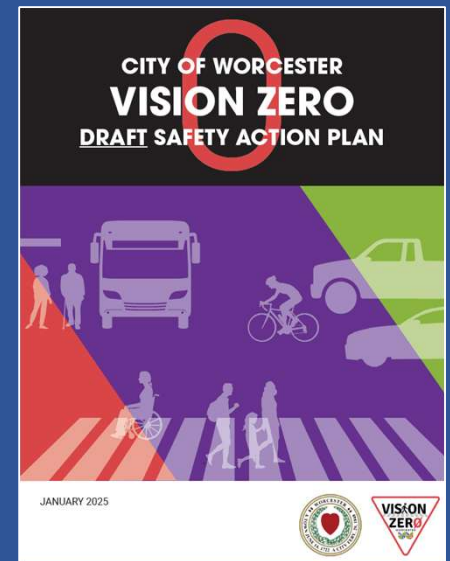
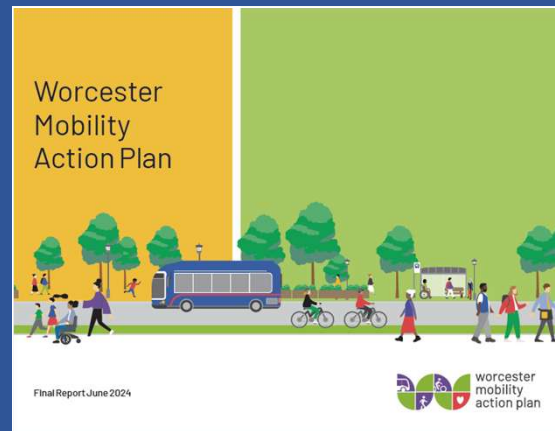
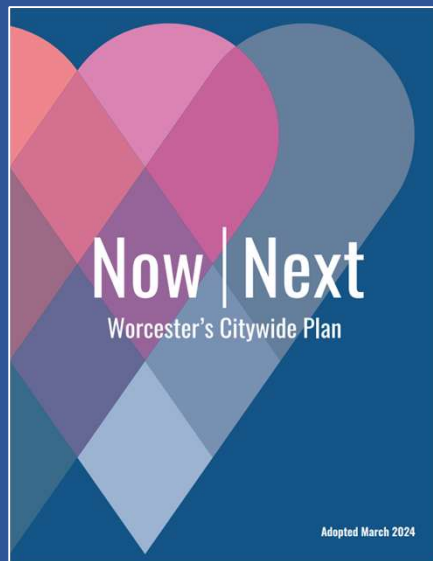
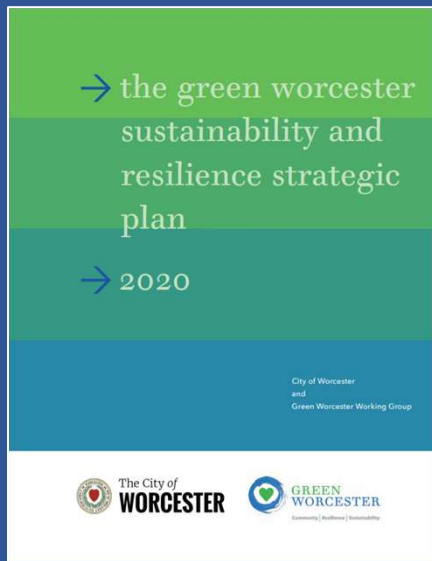
Massasoit Road – Grafton St to Sunderland Rd

➤ Safety Concerns (*'Dangerous by Design'*)

- Travel lane widths and lack of definition contribute to high motor vehicle speeds and crashes
- Crosswalks lack ADA/PROWAG compliant ramps
- Crosswalks are excessively long
- Lack of safe crossings at desired connection points throughout, including at public transit stops
- WRTA stops are not ADA/PROWAG Compliant
- No dedicated space for cyclists and micro-mobility users



WORCESTER POLICY GUIDELINES



FEDERAL, STATE, INDUSTRY DESIGN GUIDANCE

➤ **Federal Highway Administration**

- Manual on Uniform Traffic Control Devices (MUTCD), Safe System Approach Guidance, Guide for the Planning, Design, and Operation of Pedestrian Facilities, other policies and directives

➤ **United States & Massachusetts Architectural Access Boards**

- Americans with Disabilities Act (ADA) Accessibility Standards, Public Rights-of-Way Accessibility Guidelines (PROWAG)

➤ **National Association of City Transportation Officials (NACTO)**

- Urban Street Design Guide, Urban Bikeway Design Guide

➤ **American Association of State Highway and Transportation Officials (AASHTO)**

- Guide for the Planning, Design, and Operation of Pedestrian Facilities, A Policy on Geometric Design of Highways and Streets

➤ **Massachusetts Department of Transportation (MassDOT)**

- Procedures for Speed Zoning on State Highways and Municipal Roads, Safe Speeds Technical Toolkit, Separated Bike Lane Planning & Design Guide, other guidance policies and directives

➤ **Industry Best Practices**

- Institute of Transportation Engineers (ITE), AARP Livable Communities, Arbor Day Foundation, WHO Age-friendly Cities Framework



TRAFFIC SAFETY

Complete Streets improve safety for ALL roadway users

- *Current historic roadway design is dangerous for all roadway users*
 - 363 people killed in motor vehicle traffic crashes in 2024 on Massachusetts roads, 39,254 nationwide
 - 78 Pedestrians killed (322 seriously injured) in 2024 on Massachusetts roads, over 7100 nationwide
 - 8 cyclists killed (132 seriously injured) in 2024 on Massachusetts roads, 1103 nationwide
 - Worcester
 - 80 seriously injured crashes involving those traveling in/on motor vehicles in 2024 (8 fatalities)
 - Worcester had 23 seriously injured crashes involving pedestrians in 2024 (2 pedestrian fatalities)
 - Unofficial numbers from MassDOT indicate 3 pedestrian fatalities in 2025
 - Worcester had 5 seriously injured crashes involving cyclists in 2024
 - Unofficial numbers from MassDOT indicate 10 cyclists seriously injured in 2025
 - In 2024, pedestrians and cyclists in Worcester accounted for 40% of serious injury/fatal crashes, despite being involved in only 3% of crashes overall.
 - In Worcester, 30% of pedestrian and 32% of bicycle injury crashes occur within 1,000 feet of a school
 - Disproportionally affects communities of color
 - Disproportionally affects older populations
 - People over 65 made up 38.6% of fatal pedestrian crashes on Massachusetts roads in 2022, even though only 17.4% of the Massachusetts population is over 65



Grafton St – Heywood St

- Existing
 - Two northbound lanes at Grafton St intersection.
 - Parking allowed on west side of street.
 - Narrow sidewalks.
 - No bike accommodations.
 - Bus stops both directions.



Grafton St – Heywood St

- Proposed
 - Maintain two northbound lanes at Grafton St intersection.
 - Pavement markings to visually define and narrow the travel lanes.
 - Parking allowed only in vicinity of #18-#22.
 - Widen sidewalks & improve ramps to ADA PROWAG requirements.
 - In-street bike lanes.
 - Bus stops both directions (northbound is in-lane stop)



Heywood St – Kenberma Rd

- Existing
 - Northbound left turn lane at Heywood St.
 - Parking allowed on west side of street (1 vehicle observed on 3 occasions).
 - Narrow sidewalks.
 - No crosswalk on south side of Heywood St intersection.
 - No bike accommodations.

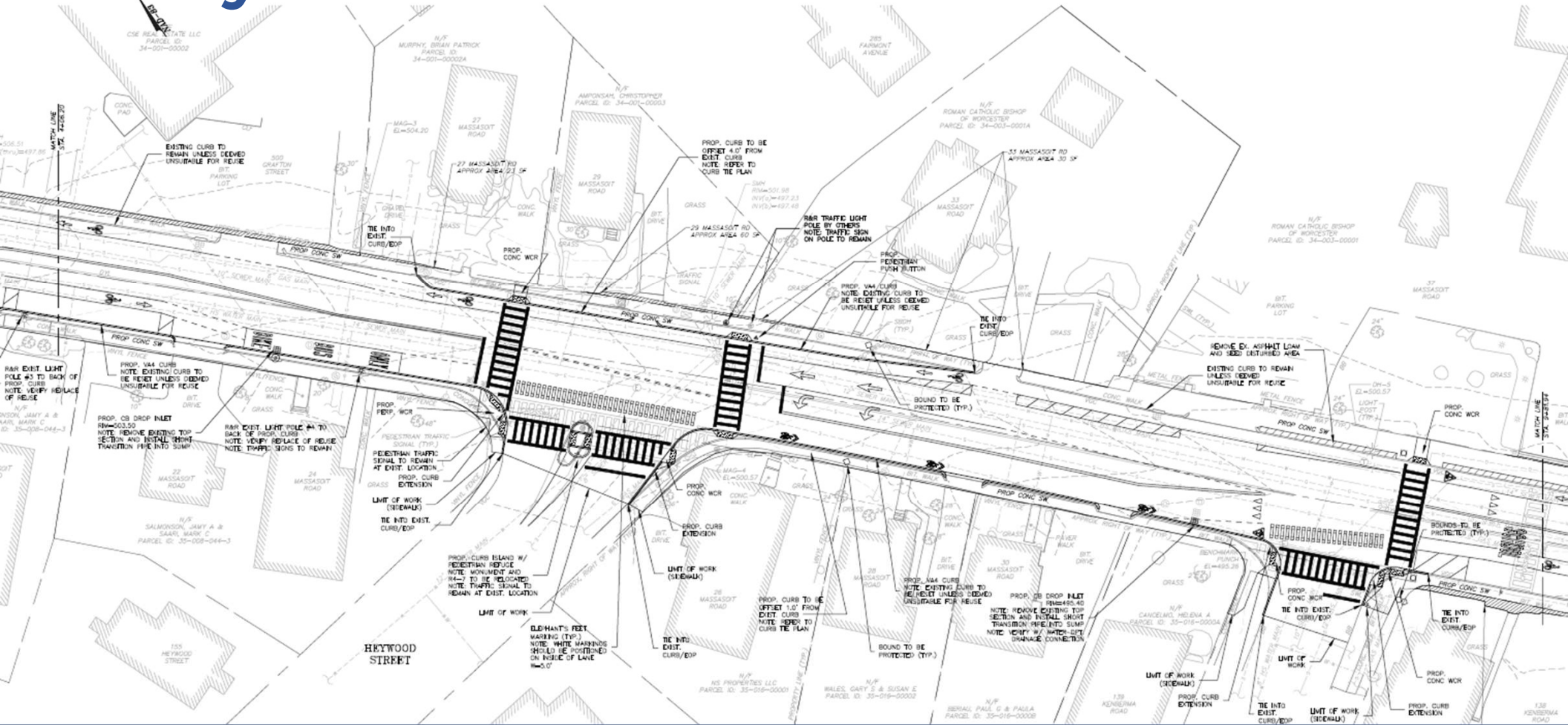


Heywood St – Kenberma Rd

- Proposed
 - Maintain northbound left turn lane at Heywood St.
 - Pavement markings to visually define and narrow the travel lanes.
 - No parking on this block.
 - Widen sidewalks & improve ramps to meet ADA PROWAG requirements.
 - Additional crosswalk on the south side of Heywood St.
 - Relocated crosswalk at Kenberma Rd
 - Northbound bike lane. Southbound shared lane (Sharrows) markings.



Heywood St – Kenberma Rd



Rice Square School

- Existing
 - One travel lane each direction.
 - Wide cross-section contributes to speeding.
 - Parking not allowed on west side of street during school hours.
 - Few parking opportunities on east side of street due to driveways.
 - Two crosswalks at school.
 - No bike accommodations.



Rice Square School

- Proposed
 - One travel lane in each direction.
 - Pavement markings to visually define and narrow the travel lanes.
 - Formalized pick-up/drop-off and/or bus parking on west side of street.
 - No parking on east side of street.
 - Improve sidewalks & ramps to meet ADA PROWAG requirements.
 - Consolidate to a single crosswalk at school with curb extension and RRFB for improved safety.
 - Intersection realignment at Crowningshield to improve safety
 - In-street bike lanes.



Indiana St – Lamar St

- Existing
 - One travel lane each direction.
 - Wide cross-section contributes to speeding.
 - Parking allowed both sides. Minimal usage.
 - Narrow and deficient sidewalks.
 - No crosswalks.
 - No bike accommodations.

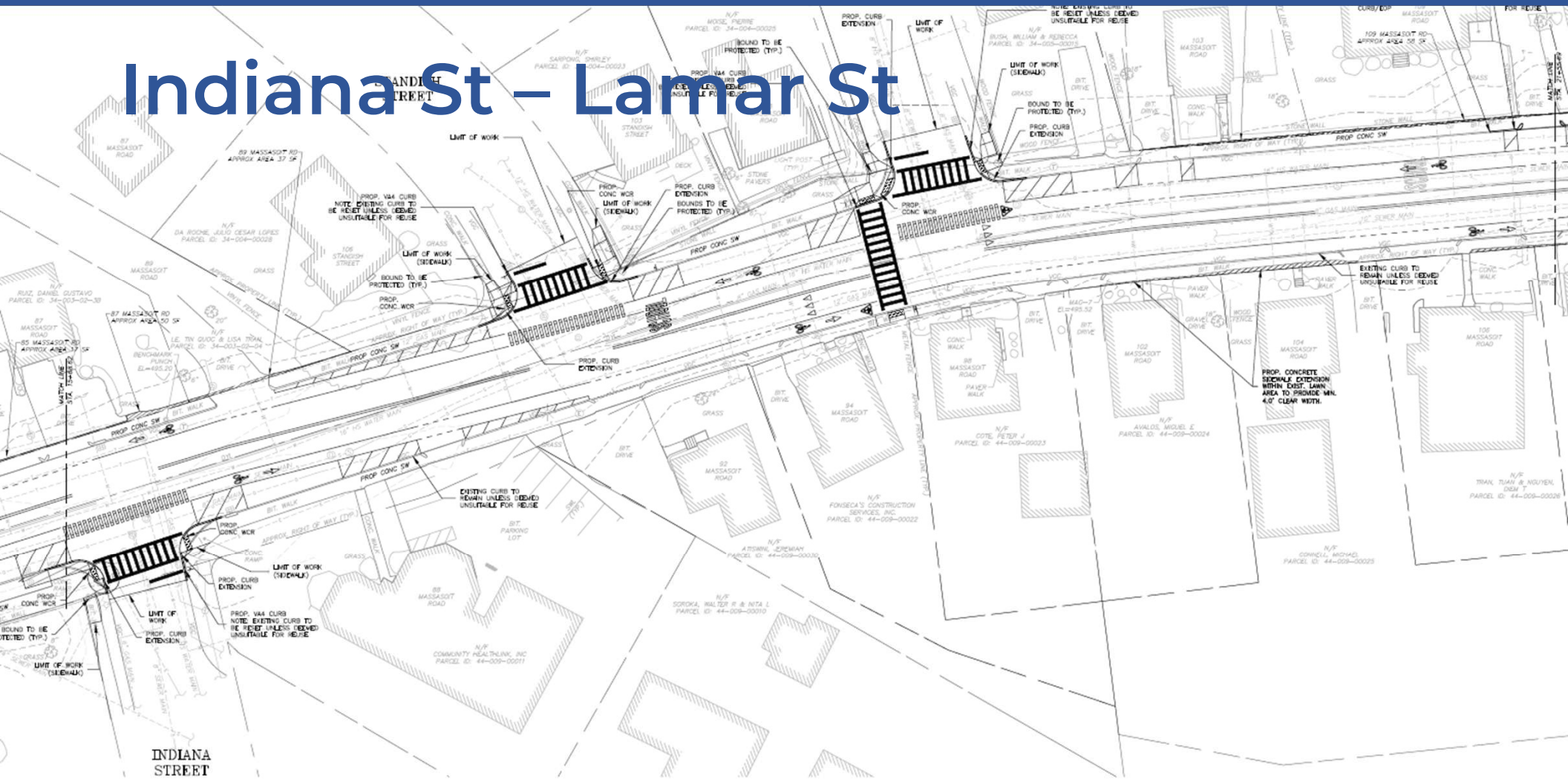


Indiana St – Lamar St

- Proposed
 - One travel lane in each direction.
 - Pavement markings to visually define and narrow the travel lanes.
 - Lateral shift to moderate vehicle speeds.
 - Parking on east side of street near #93, #103 and #109 (7 spaces)
 - Improve sidewalks & ramps to meet ADA PROWAG requirements.
 - New crosswalk at Lamar Ave.
 - In-street bike lanes.



Indiana St – Lamar St



Sunderland Rd

- Existing
 - One lane each direction.
 - Angled intersection with channelized slip lane for right turns.
 - Narrow and deficient sidewalks.
 - Long crossing distance.
 - No bike accommodations.



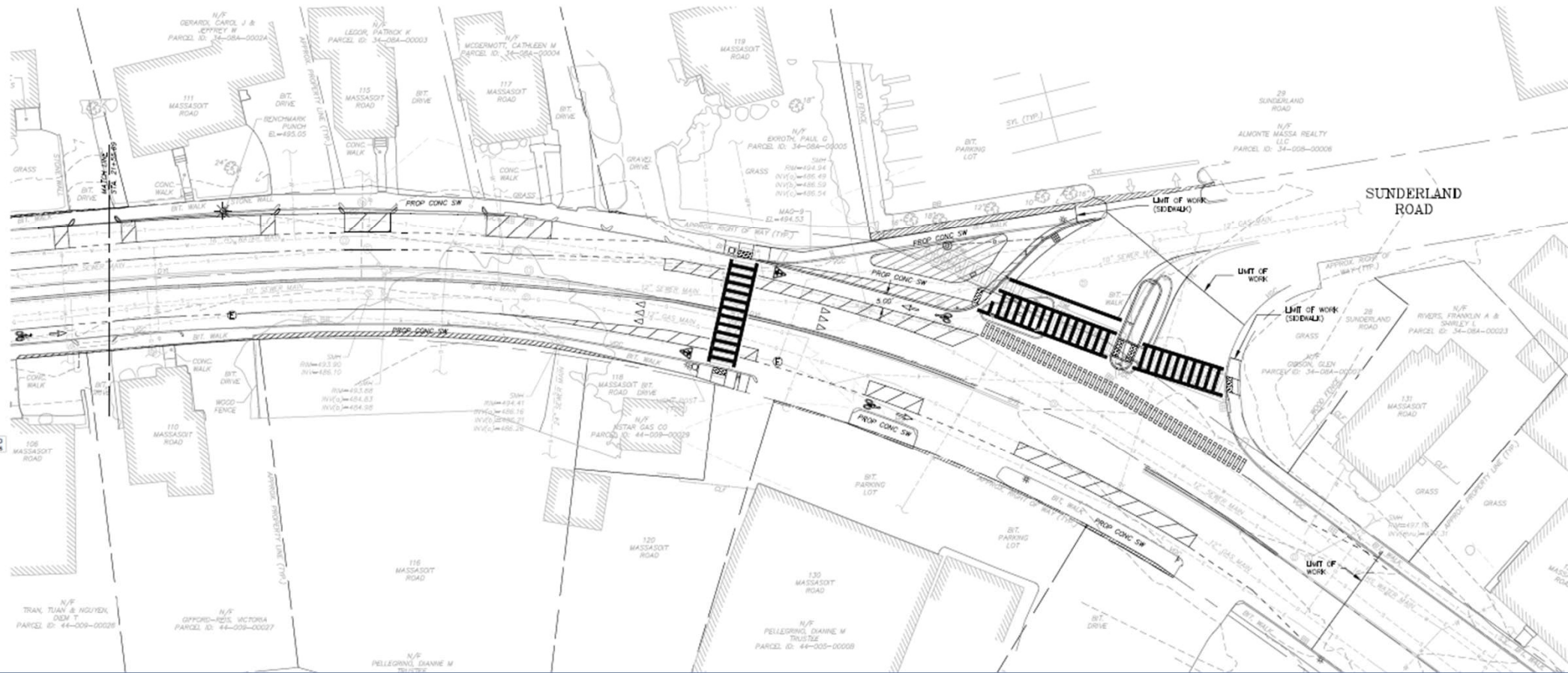
Sunderland Rd

- Proposed
 - One travel lane in each direction.
 - Pavement markings to visually define and narrow the travel lanes.
 - Reconfigure intersection to meet at 90 degrees to reduce speeds exiting Sunderland and improve sightlines for other approaches.
 - Parking provided on east side of street near #111 (2 spaces)
 - Improve sidewalks & ramps to meet ADA PROWAG requirements.
 - Shorter crosswalk across Sunderland Rd.
 - In-street bike lanes.





Sunderland Rd



Mobility Action Plan Goals

SAFETY

- Build safe streets for all users
- Prioritize safety of vulnerable roadway users
- Reduce crashes and severity of crashes

CONNECTIVITY

- Expand transportation Options
- Facilitate active transportation

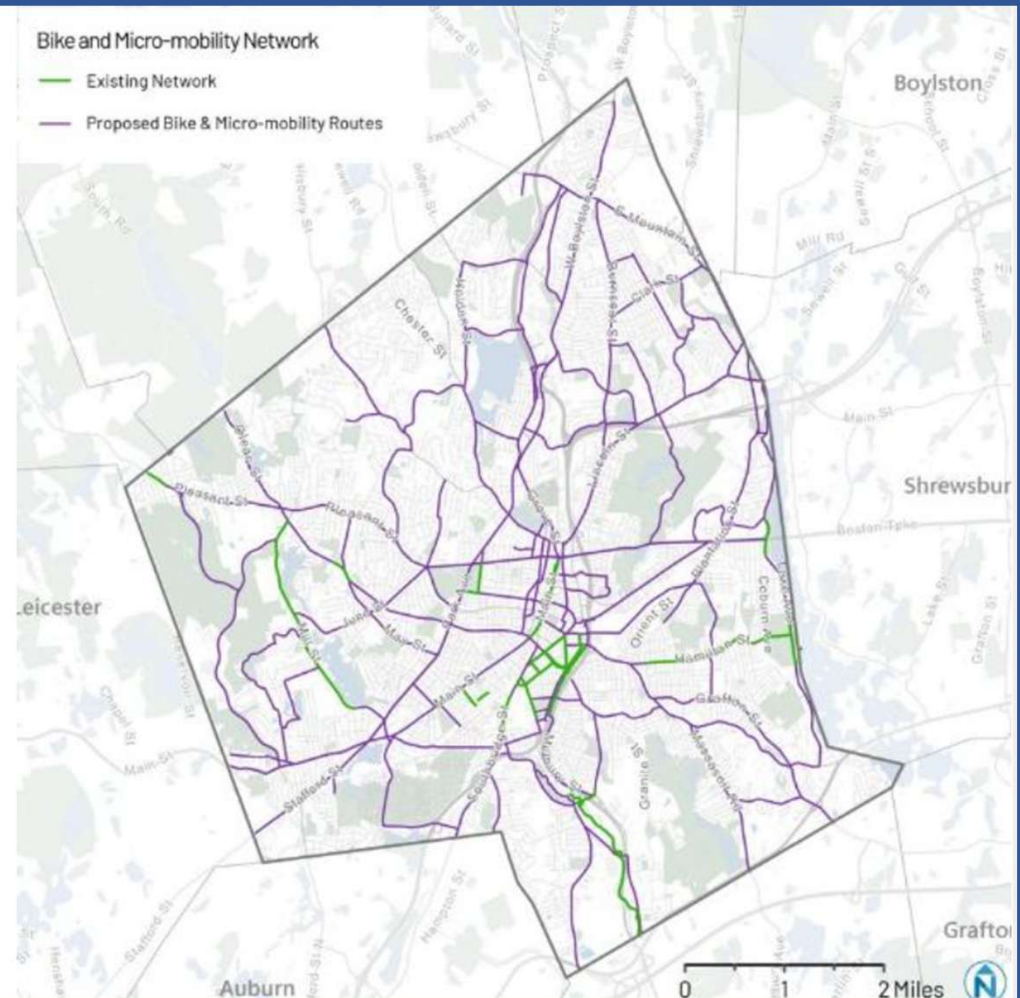
EQUITY

- Foster engagement and participation with communities
- Improve physical accessibility
- Improve transit rider experience
- Increase economic accessibility

SUSTAINABILITY

- Green the streets
- Improve transit reliability
- Increase non-auto mode share
- Reduce vehicle emissions

Source: Worcester Mobility Action Plan Report - May 2024



Roadway Reconstruction

- Utilities previously upgraded in advance of the project
- Sidewalks and ramps will be reconstructed to be ADA/PROWAG compliant
- Roadway will be milled and overlaid
- Curb will be reset, Curbline will be adjusted as needed
- Contractor: JH Lynch
- Project Engineer: Manny Tejada
tejadam@worcesterma.gov
508-929-1300 ext. 49179



Thank you!



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