PARKING and TRAFFIC SAFETY COMMITTEE

PORTSMOUTH, NEW HAMPSHIRE

ROOM 1

SENIOR ACTIVITY CENTER, 125 COTTAGE STREET

Members of the public also have the option to join the meeting over Zoom
*(See below for more details)**

6:30 PM **February 2, 2023**

ON-SITE COMMITTEE: Please meet on Tuesday, January 31st at 8:00 a.m. at the following location:

- Dennett Street, at Hunters Hill Avenue

AGENDA

I. CALL TO ORDER

II. ATTENDANCE

III. FINANCIAL REPORT

IV. PUBLIC COMMENT (15 MINUTES)
This is the time for all comments on any of the agenda items or non-agenda items.

V. PRESENTATIONS

VI. NEW BUSINESS
(No public comment during Committee discussion without Committee approval.)

A. Sagamore Avenue, speed reduction measures request, by resident. **Sample Motion: Move to refer to staff for evaluation and report back**.

B. Daniel Street, request for 15-minute space for Hearth Food Garden, by business owner. **Sample Motion: Move to table request for further evaluation.**

VII. OLD BUSINESS

A. Overnight camping on City streets and property, proposed draft ordinance to restrict. **Sample Motion: Move to approve draft of ordinance changes and send to City Council for first reading.**

B. Woodbury Avenue traffic calming, introduction of proposed plan for section between Rockingham Avenue and Echo Avenue. **Sample Motion: Move to continue discussion at next month's meeting, obtain feedback and input at public meeting with Neighborhood.**

C. Dennett Street, request for traffic calming, by resident.

D. Islington Street, Middle Road speed limit trials 6 month report back.

E. Maplewood Avenue pedestrian signal phasing at Congress, Hanover and Deer Street, status update. **Sample Motion: Move to place item on file.**

VIII. INFORMATIONAL

A. Monthly Accident Report from Police
B. Bartlett Street at Thornton Street mini-roundabout design
C. Sagamore Ave bike lane status update
D. Services Provided or Supported by Parking Revenues

IX. MISCELLANEOUS

Suggestions for new name of Committee, to incorporate all modes of transportation

X. ADJOURNMENT

**Members of the public also have the option to join the meeting over Zoom, a unique meeting ID and password will be provided once you register. To register, click on the link below or copy and paste this into your web browser:*
https://us06web.zoom.us/webinar/register/WN_iLqL2LsgRoq3hshGZGbG2g

After registering, you will receive a confirmation email containing information about joining the webinar.

City of Portsmouth

Parking Related Revenues

Unaudited

Percentage of Fiscal Year Complete	Preliminary Totals Thru December 31, 2022
50.00%	

	Total	Budgeted	% of Budget
FY 23			
Parking Meter Fees	2,134,541.81	3,250,000.00	66%
Meter Space Rental	67,680.00	150,000.00	45%
Meter In Vehicle	0.00	0.00	0%
EV Charging Stations	8,064.28	10,000.00	81%
Parking-Area Service Agreements	77,820.00	50,000.00	
High Hanover Transient	1,322,195.20	1,909,000.00	69%
High HanoverPasses	590,939.15	1,265,100.00	47%
Foundry Place Transient	215,503.30	502,000.00	43%
Foundry Place Passes	227,299.89	451,500.00	50%
Parking Sign Permit	0.00	0.00	
HH Pass Reinstatement	480.00	750.00	64%
Foundry Pass Reinstatement	474.75	750.00	63%
Parking Violations	566,119.50	700,000.00	81%
Immobilization Administration Fee	2,550.00	5,000.00	51%
Summons Admin Fee	0.00	0.00	0%
Total FY 23	5,213,667.88	8,294,100.00	63%

	BUDGETED	
	5,881,795	71% Transfer to Parking Fund
	2,412,305	29% Funds Remaining in Gen Fund

III. A

PARKING AND TRANSPORTATION

SERVICES PROVIDED OR SUPPORTED BY PARKING REVENUES

- $2.4M Offset to General Fund
- Transportation Planning and Engineering Support
- Downtown Snow Removal
- Downtown Waste Removal
- School Bus Support
- Senior Transportation
- Downtown Trolley
- Public Transit (COAST)
- Downtown Police Detail
- School Crossing Guards
- **Services Provided or Supported by Parking Revenues Realize an *Annual Tax Offset* of $318.00 per Median Single Family Home**



PARKPORTSMOUTH


Little Harbor Road
SPEED LIMIT 30
YOUR SPEED 26
Existing Speed Feedback Sign and Speed Limit Sign
SPEED LIMIT 30
Existing Speed Limit Sign
Wentworth House Road
VI. A
Sagamore Avenue Existing Conditions

From: Karen Conard
To: Stephen Stavis
Cc: Peter H. Rice; Eric B. Eby; Andrew Bagley (andrewbagleyportsmouth@gmail.com); Leila Birr; Jessica S. Griffin
Subject: RE: Hearth Food Garden
Date: Wednesday, January 11, 2023 1:56:38 PM

Good afternoon Stephen –

Thank you for reaching out. This request must be reviewed and approved by the City's Parking and Traffic Safety Committee. I have copied here the folks responsible for crafting the agenda for the next meeting of this group, which will be Thursday February 2nd.

As a member of this Committee, I will look forward to considering your request.

Regards,
Karen Conard

From: Stephen Stavis [mailto:stephen@hearthfoodgarden.com]
Sent: Tuesday, January 10, 2023 8:18 PM
To: Karen Conard <kconard@cityofportsmouth.com>
Subject: Hearth Food Garden

Hi Karen,

My name is Stephen and I am the business manager of Hearth Food Garden that will be on the first floor of the new 60 Penhallow building. I spoke to Marian last week about a parking question and she directed me to you.

We know parking can be an issue for downtown Portsmouth and we are hoping to figure out ways we can help serve our guests as well as alleviate issues with pick up/take out. I know there are some 15 min loading zone spots on Daniel St side and believe Penhallow. It would be very helpful if we would be allowed dedicated 15 min Hearth pick up parking spots during business hours to help guests come and go as they pick up their food.

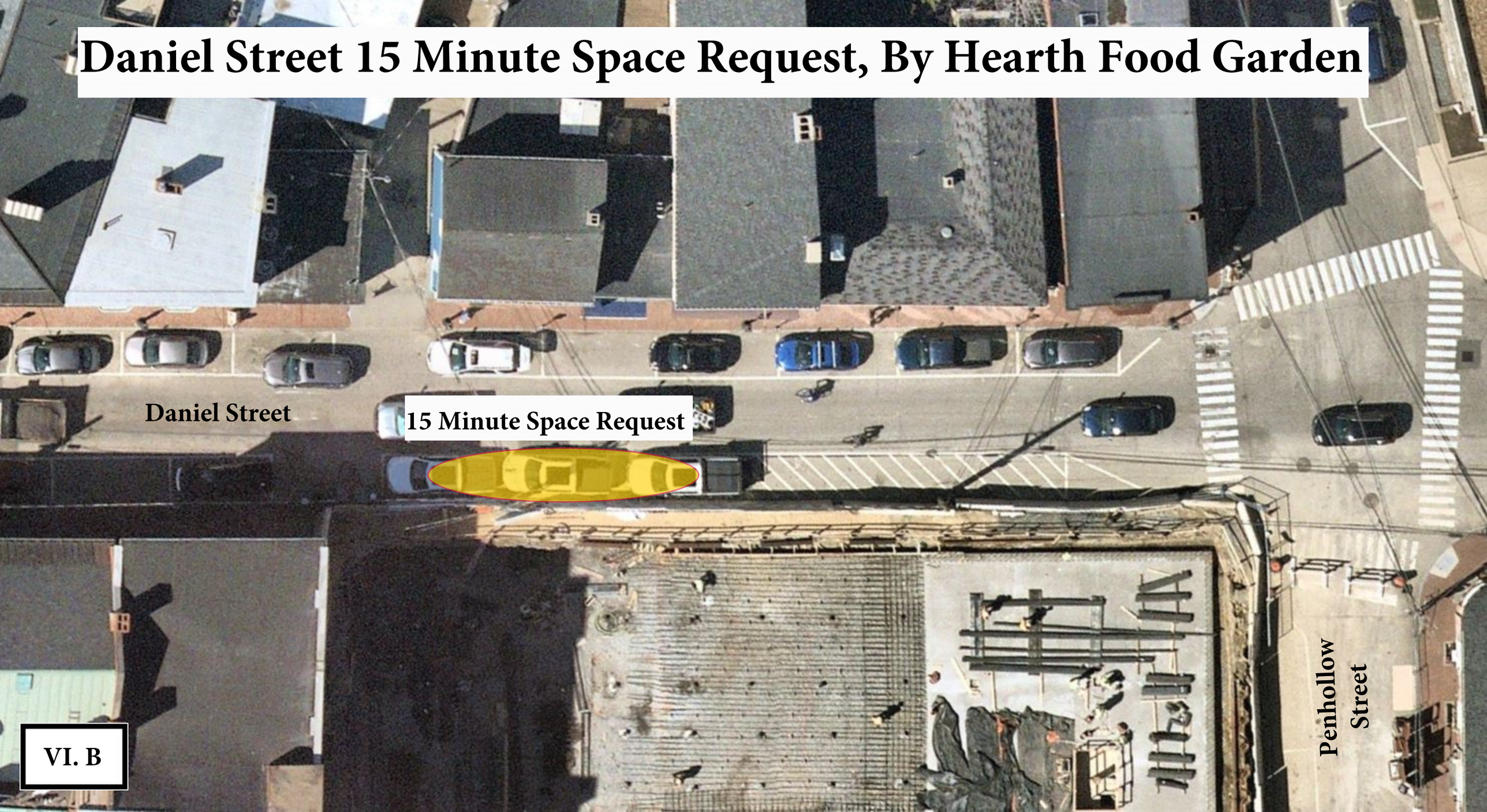
I would be more than happy to come down to meet you to discuss as well as answer any other questions you maybe have.

Be well,

Stephen Stavis
Business Manager
Hearth Food Garden
Cell: 603-380-4241

VI. B

Daniel Street 15 Minute Space Request, By Hearth Food Garden



Chapter 7, Article III, Section 7.324 is amended (currently a deleted section under Article III, Traffic Ordinances)

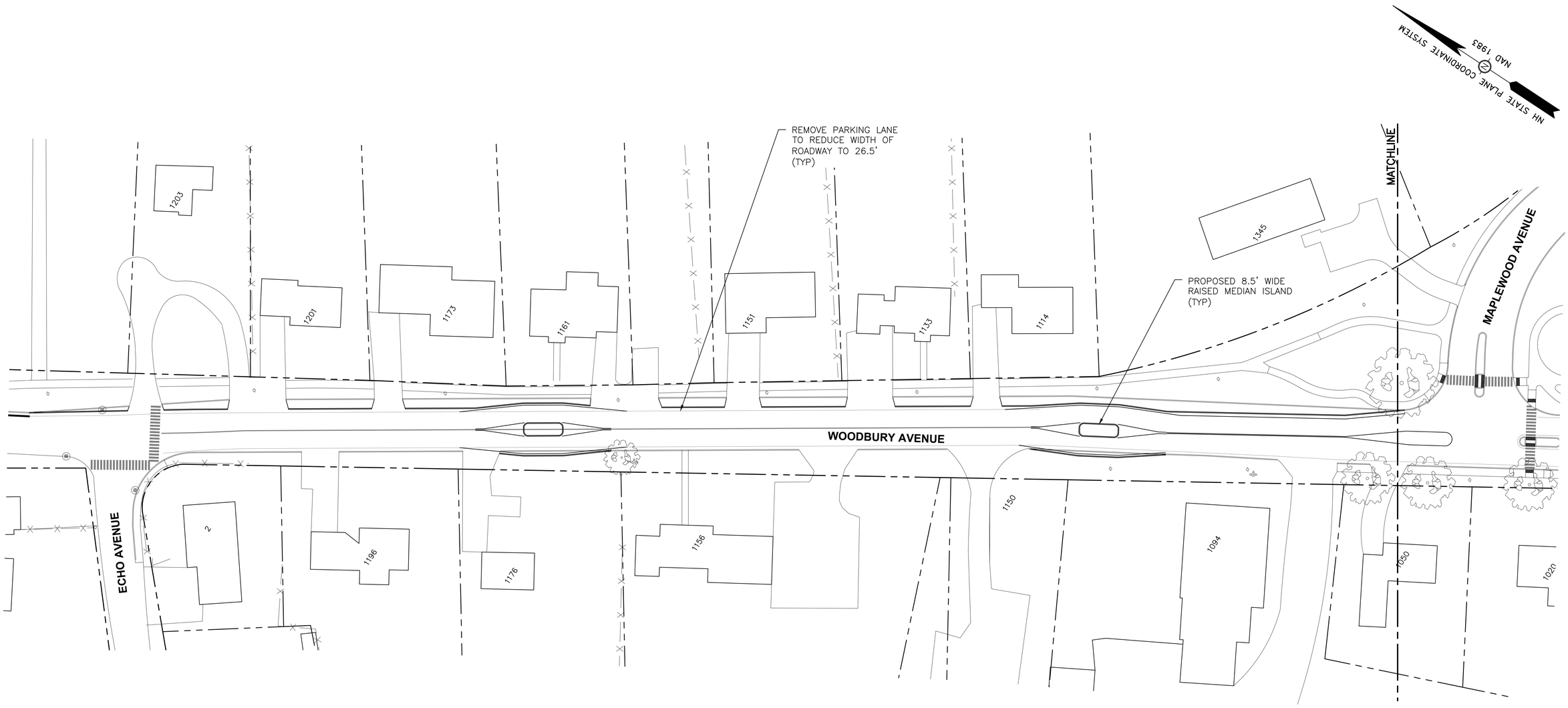
SECTION 7.324 CAMPING IN VEHICLES PROHIBITED

Notwithstanding any other provision of these ordinances, camping in vehicles is prohibited on any city street, off street parking area or city land.

For purposes of this provision, the term “camping in vehicles” is defined as any overnight occupancy of any vehicle and the term “overnight” is defined as from dusk to dawn.

Any person camping in a vehicle in violation of this ordinance shall be cited for such violation pursuant to Article IX and the vehicle may be towed at the vehicle owner’s expense pursuant to Article X at the direction of the enforcement authority, the Chief of Police or the Director of Public Works.

DRAFT



NO.	REVISIONS	APP'D	DATE
B	PUBLIC MEETING & FEBRUARY P.T.S.	MRB	1/26/23
A	INTERNAL REVIEW	MRB	1/20/23

PROJECT:
WOODBURY AVENUE TRAFFIC CALMING

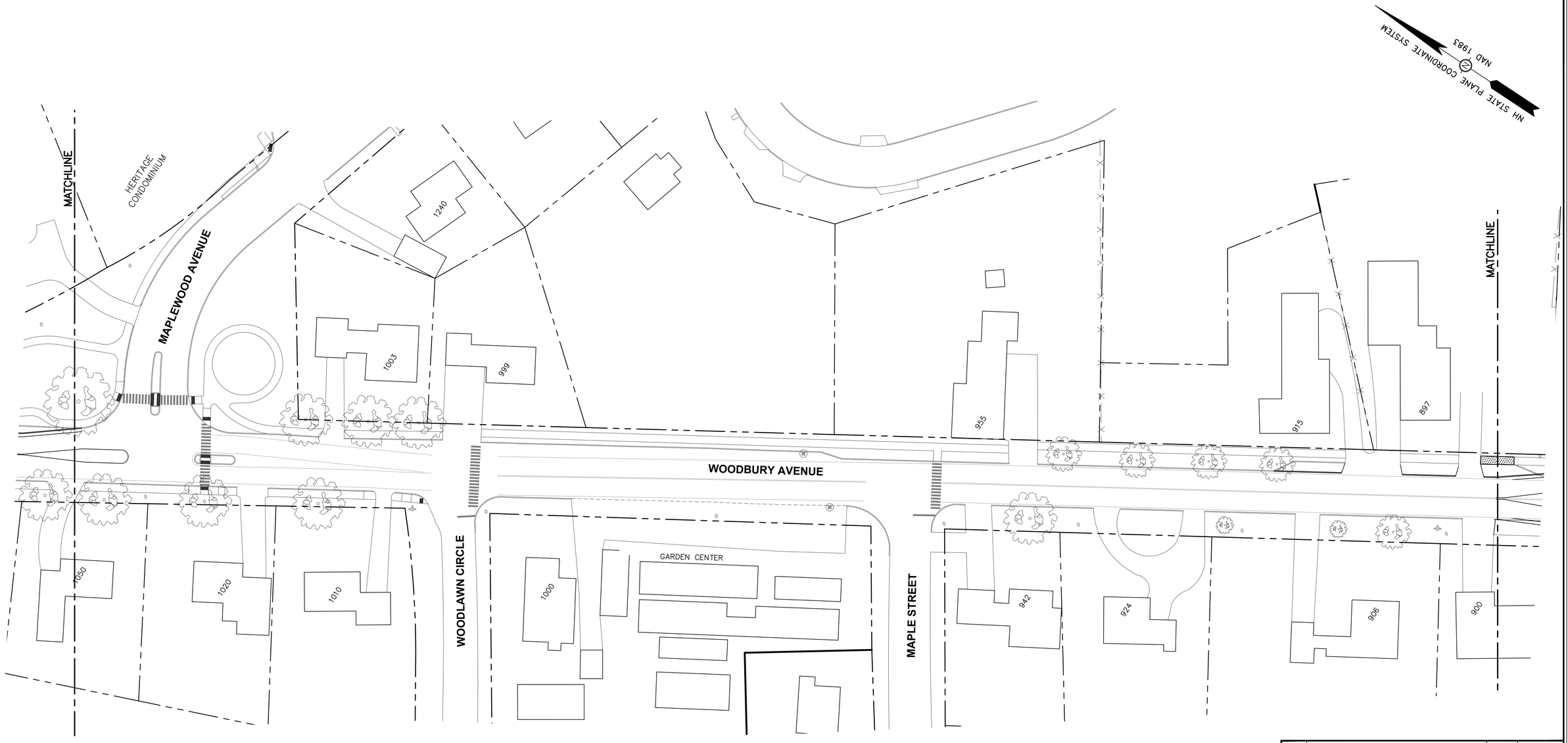
TITLE:
ROADWAY LAYOUT PLAN

DRAWING SCALE: AS SHOWN	DATE: JANUARY 2023
PROJECT NO.: 7247	SHEET: C–101
APPROVED BY: MRB	

GRAPHIC SCALE

30 0 50 100 120 FEET
10 5 0 10 20 30 METERS

VII. B



GRAPHIC SCALE

30 0 50 100 120 FEET
10 5 0 10 20 30 METERS

NO.	REVISIONS	APP'D	DATE
B	PUBLIC MEETING & FEBRUARY P.T.S.	MRB	1/26/23
A	INTERNAL REVIEW	MRB	1/20/23

PROJECT:
WOODBURY AVENUE TRAFFIC CALMING

TITLE:
ROADWAY LAYOUT PLAN

DRAWING SCALE: AS SHOWN	DATE: JANUARY 2023
PROJECT NO.: 7247	SHEET: C–102
APPROVED BY: MRB	

NH STATE PLANE COORDINATE SYSTEM
NAD 1983

MATCHLINE

MATCHLINE

REMOVE PARKING LANE TO REDUCE WIDTH OF ROADWAY TO 26.5' (TYP)

PROPOSED 8.5' WIDE RAISED MEDIAN ISLAND (TYP)

WOODBURY AVENUE

FARM LANE

ST CATHERINE'S

915
897
893
869
865
845
906
900
890
880
876
870
864
828
778
762

GRAPHIC SCALE

30 0 50 100 120 FEET
10 5 0 10 20 30 METERS

NO.	REVISIONS	APP'D	DATE
B	PUBLIC MEETING & FEBRUARY P.T.S.	MRB	1/26/23
A	INTERNAL REVIEW	MRB	1/20/23

PROJECT:
WOODBURY AVENUE TRAFFIC CALMING

TITLE:
ROADWAY LAYOUT PLAN

DRAWING SCALE: AS SHOWN	DATE: JANUARY 2023
PROJECT NO.: 7247	SHEET: C-103
APPROVED BY: MRB	

NH STATE PLANE COORDINATE SYSTEM
NAD 1983

MATCHLINE

ST CATHERINE'S

WOODBURY AVENUE

PROPOSED 8.5' WIDE
RAISED MEDIAN ISLAND
(TYP)

EDMOND AVE

MATCHLINE

RIGHT OF WAY

1 STY WF
#651

WOODE

828

778

782

740

759

737

710

717

700

690

673

620

606

6" PVC STOCKADE

GRAPHIC SCALE

30 0 50 100 120 FEET
10 5 0 10 20 30 METERS

NO.	REVISIONS	APP'D	DATE
B	PUBLIC MEETING & FEBRUARY P.T.S.	MRB	1/26/23
A	INTERNAL REVIEW	MRB	1/20/23

PROJECT:
WOODBURY AVENUE TRAFFIC CALMING

TITLE:
ROADWAY LAYOUT PLAN

DRAWING SCALE: AS SHOWN	DATE: JANUARY 2023
PROJECT NO.: 7247	SHEET: C-104
APPROVED BY: MRB	

NH STATE PLANE COORDINATE SYSTEM
NAD 1983

EDMOND AVE

MATCHLINE

RIGHT OF WAY

1 STY WF
#651

SLOPE EASEMENT

MB

DH FOUND/HELD

ROCKINGHAM AVE

BLUE STAR TURNPIKE
INTERSTATE 95 SB

PROPOSED 10' WIDE
MULTI-USE PATH

STONE WING WALL

6' CLF

CONC ABUTMENT

FLOOD LIGHT(TYP)

STONE WING WALL

CONC ABUTMENT

6' CLF

WOODBURY AVENUE

BRIDGE OVER

CONC ABUTMENT

6' CLF CONC ABUTMENT

STONE WING WALL

PROPOSED 6' WIDE
RAISED MEDIAN ISLAND

STONE
WING WALL

PROPOSED 10' WIDE
MULTI-USE PATH

6' CLF

6' PVC STOCKADE

606

SLOPE EASEMENT
BOOK 1952 PAGE 389

SLOPE EASEMENT

ROCKINGHAM AVE

BOX UP/
FOUND/HELD

T OF WAY

6' CLF

ENDOT BOUND
FOUND

ACCESS
OF WAY

GRAPHIC SCALE

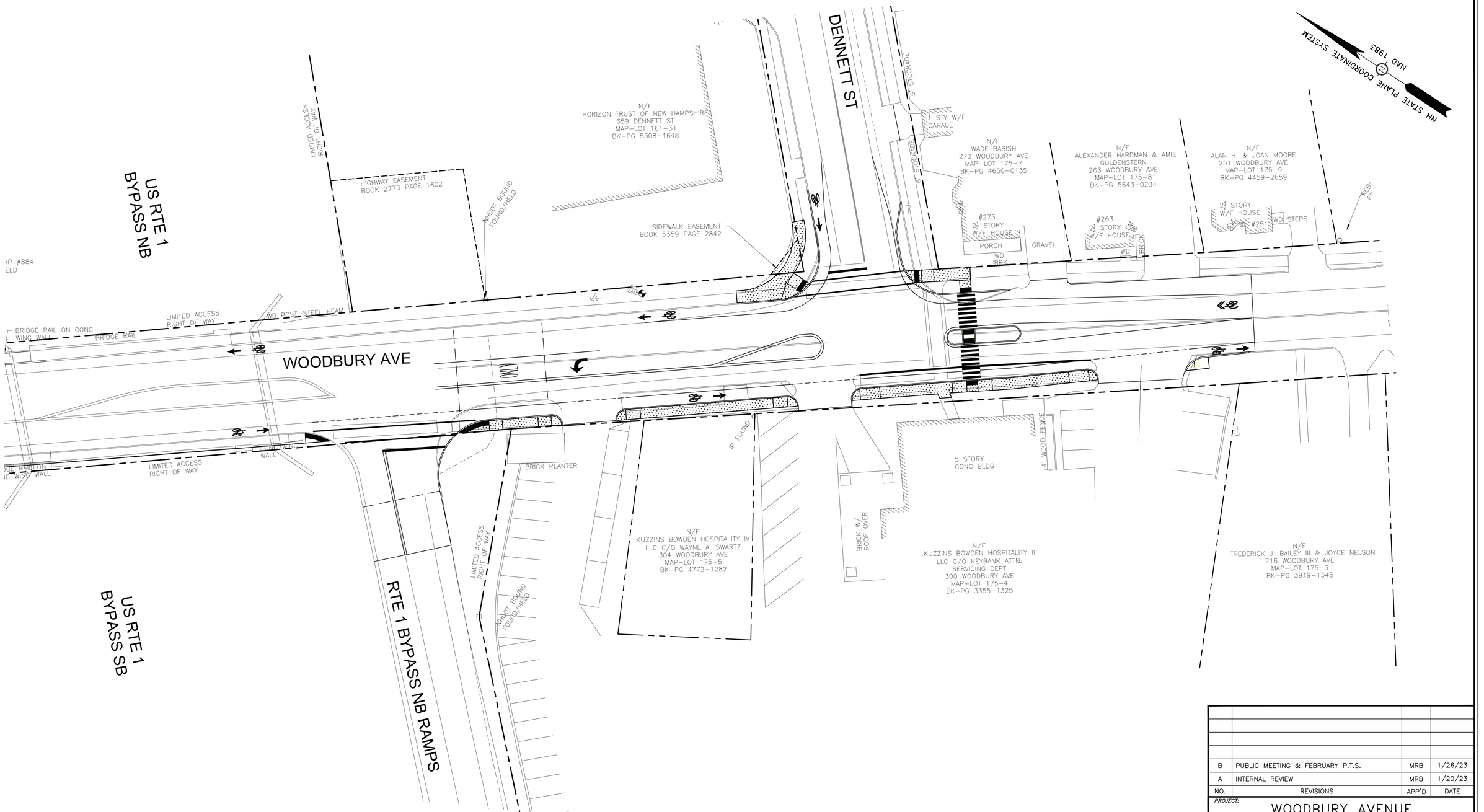
20 10 0 20 40 60 80 FEET
5 0 5 10 15 20 25 METERS

NO.	REVISIONS	APP'D	DATE
B	PUBLIC MEETING & FEBRUARY P.T.S.	MRB	1/26/23
A	INTERNAL REVIEW	MRB	1/20/23

PROJECT:
WOODBURY AVENUE TRAFFIC CALMING

TITLE:
ROADWAY LAYOUT PLAN

DRAWING SCALE: AS SHOWN	DATE: JANUARY 2023
PROJECT NO.: 7247	SHEET: C-105
APPROVED BY: MRB	



GRAPHIC SCALE

10 0 20 40 60 80 FEET
5 0 5 10 15 20 25 METERS

NO.	REVISIONS	APP'D	DATE
B	PUBLIC MEETING & FEBRUARY P.T.S.	MRB	1/26/23
A	INTERNAL REVIEW	MRB	1/20/23

PROJECT:
WOODBURY AVENUE TRAFFIC CALMING

TITLE:
ROADWAY LAYOUT PLAN

DRAWING SCALE: AS SHOWN	DATE: JANUARY 2023
PROJECT NO.: 7247	SHEET: C-106
APPROVED BY: MRB	

Dennett Street Aerial Map



VII. C

Speed Limit Adjustment Trials

6 Month Update

Islington Street

and

Middle Road

February 2023

VII. D

Background

Two speed limit reduction trials were approved by the Parking and Traffic Safety Committee on May 5th, 2022

- Islington Street, from Rt. 33 to Spinney Road, was reduced from 30 MPH to 25 MPH, effective June 20th, 2022.
- Middle Road was reduced from 30 MPH to 25 MPH, effective May 26th, 2022.

- Both were approved for a 6-month trial, with a report back.

Why a trial on only half of Islington Street?

Speed limits in New Hampshire may only be set to 25 MPH with an “engineering / traffic study”, which commonly utilizes the 85th percentile speeds of vehicles traveling along the existing section of roadway

Islington Street *(Spinney Road to Maplewood Avenue),* has previously recorded speed data indicating traffic flows are already at or below 25 MPH; as such, the limit could be lowered from 30 MPH to 25 MPH

Islington Street (Greenland Road to Spinney Road), did not have data supporting the lowering of the speed limit. As such, the trial was initiated to determine any impact of lowering the speed limit.

Islington Street- Rt. 33 to Spinney Road

Speed and volume data collected at two locations



Islington Street

1474 Islington Street *(near rail trail entrance)*

Date	Average Speed	85th Percentile Speeds
May 2022	32	36
SPEED LIMIT lowered to **25** MPH, June 20		
August 2022	32	35
September 2022	32	35
October 2022	32	36
November 2022	32	35
December 2022	30	35



Islington Street

1474 Islington Street *(near rail trail entrance)*

Date	% Exceeding Limit	% Exceeding 40 MPH
May 2022	65 %	2.5 %
SPEED LIMIT lowered to **25** MPH, June 20		
August 2022	95 %	1.1 %
September 2022	95 %	1 %
October 2022	96 %	1.9 %
November 2022	95 %	1.1 %
December 2022	90%	1.1%



Islington Street

1207 Islington Street *(near Barberry Lane)*

Date	Average Speed	85th Percentile Speeds
May 2022	33	38
SPEED LIMIT lowered to **25** MPH, June 20		
August 2022	32	37
September 2022	31	35
October 2022	33	37
November 2022	33	37
December 2022	32	36



Islington Street

1207 Islington Street *(near Barberry Lane)*

Date	% Exceeding Limit	% Exceeding 40 MPH
May 2022	78 %	4.2 %
SPEED LIMIT lowered to **25** MPH, June 20		
August 2022	94 %	3.1 %
September 2022	92 %	1.9 %
October 2022	96 %	4.4 %
November 2022	96 %	3.5 %
December 2022	94%	2.0%



Middle Road

Speed and volume data collected at three locations:



Middle Road

860 Middle Road *(near church)*

Date	Average Speed	85th Percentile Speeds
May 2022	33	37
SPEED LIMIT lowered to **25** MPH, May 26		
August 2022	31	35
September 2022	31	35
November 2022	31	35
December 2022	31	35



Middle Road

860 Middle Road *(near church)*

Date	% Exceeding Limit	% Exceeding 40 MPH
May 2022	80 %	3.6 %
SPEED LIMIT lowered to **25** MPH, May 26		
August 2022	94 %	1.6 %
September 2022	94 %	1.7 %
November 2022	94 %	1.8 %
December 2022	94 %	1.5 %



Middle Road

376 Middle Road *(near Spinney Road)*

Date	Average Speed	85th Percentile Speeds
May 2022	33	37
SPEED LIMIT lowered to **25** MPH, May 26		
August 2022	32	37
September 2022	32	36
October 2022	32	36
November 2022	31	36
December 2022	29	33



Middle Road

376 Middle Road *(near Spinney Road)*

Date	% Exceeding Limit	% Exceeding 40 MPH
May 2022	81 %	3.1 %
SPEED LIMIT lowered to **25** MPH, May 26		
August 2022	96 %	2.8 %
September 2022	95 %	2.1 %
October 2022	95 %	3.1 %
November 2022	93 %	1.6 %
December 2022	77 %	.8 %



Middle Road

127 Middle Road *(near Ward Place)*

Date	Average Speed	85th Percentile Speeds
May 2022	28	32
SPEED LIMIT lowered to **25** MPH, May 26		
August 2022	27	31
September 2022	28	32
October 2022	28	32
November 2022	28	32
December 2022	28	31



Middle Road

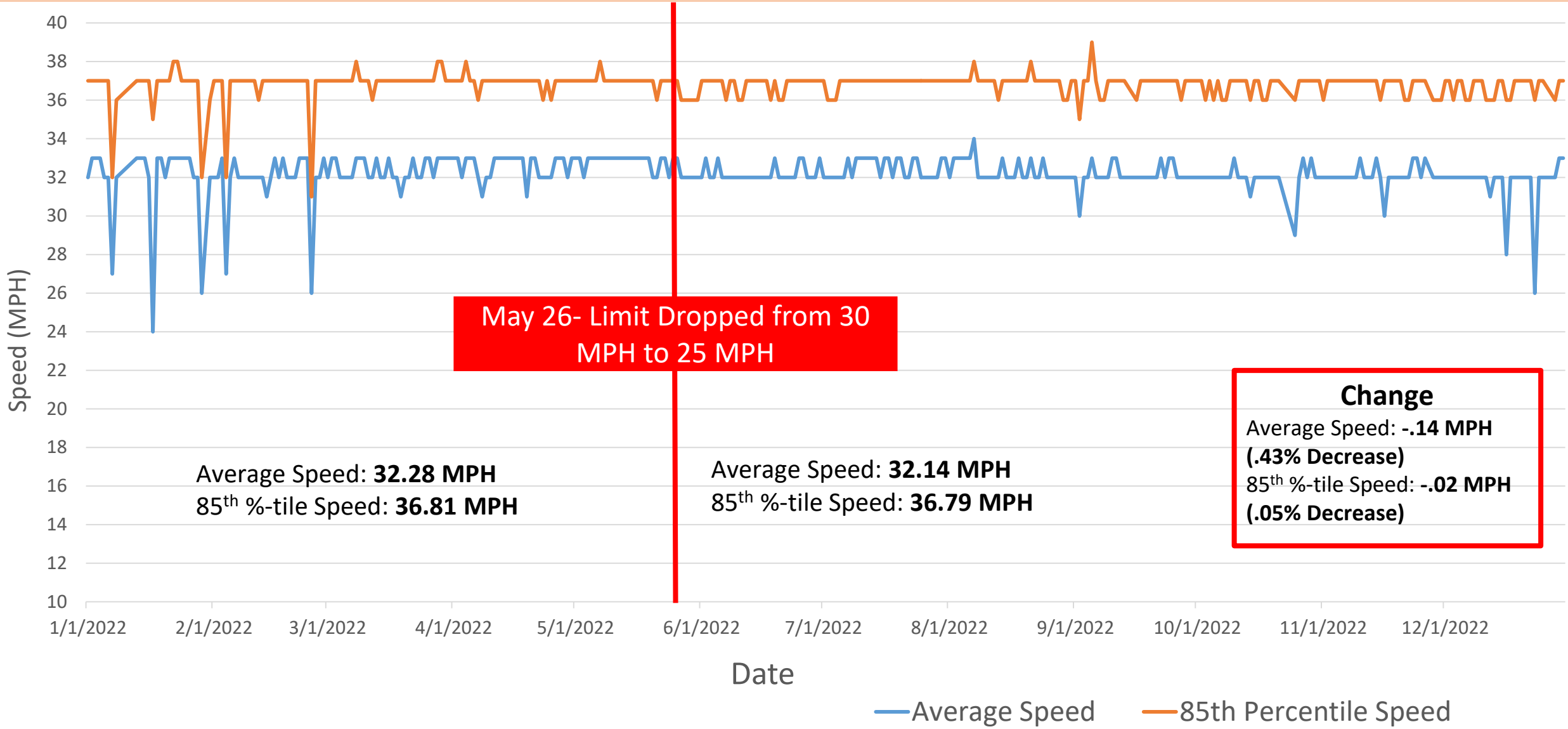
127 Middle Road *(near Ward Place)*

Date	% Exceeding Limit	% Exceeding 40 MPH
May 2022	26 %	0.1 %
SPEED LIMIT lowered to **25** MPH, May 26		
August 2022	63 %	0.1 %
September 2022	81 %	0.3 %
October 2022	75 %	0.3 %
November 2022	80 %	0.3 %
December 2022	76 %	0 %



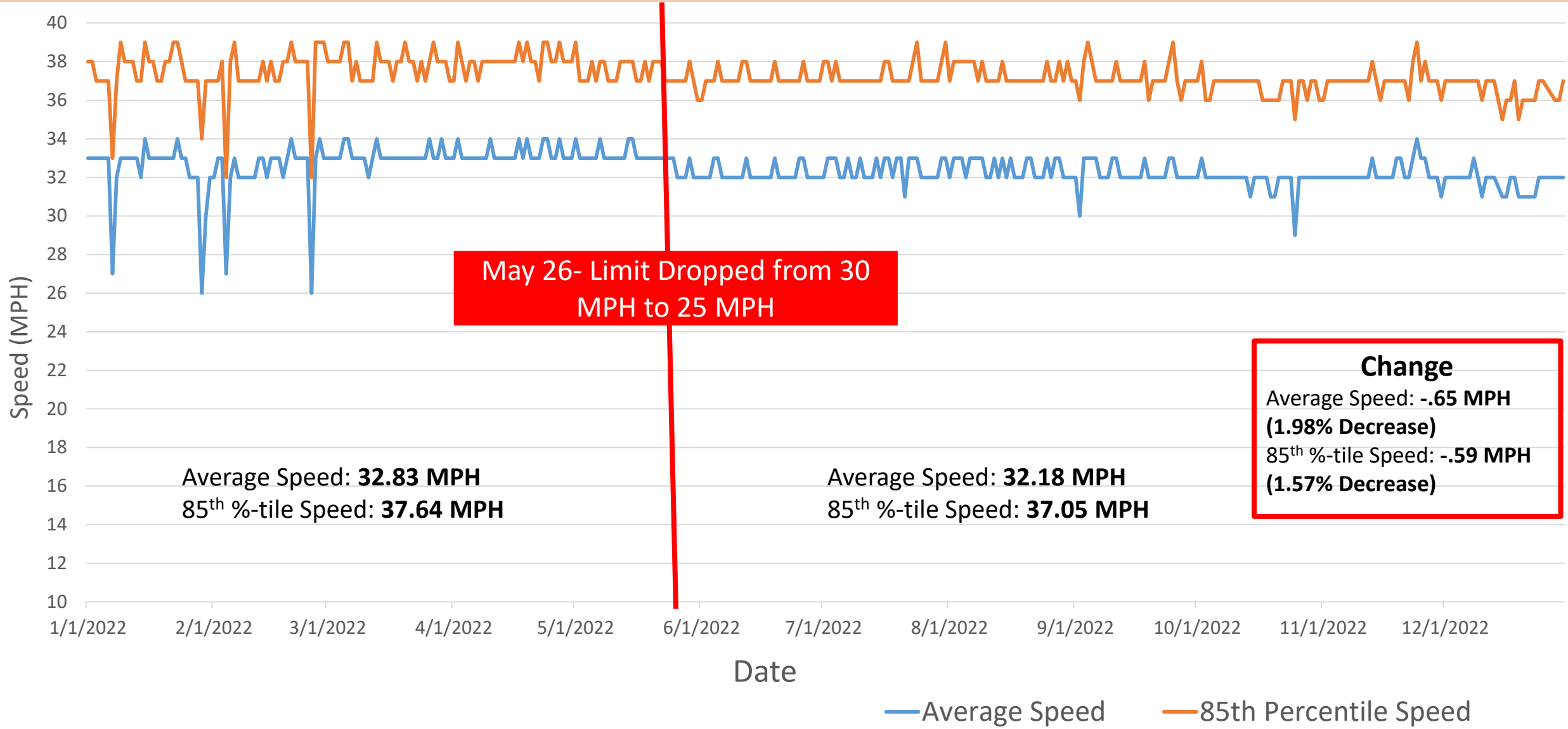
Data- Middle Road

Speed Feedback Sign-Outbound *(near Chase Home)*



Data- Middle Road

Speed Feedback Sign-Inbound *(near Chase Home)*



Conclusions and Recommendations

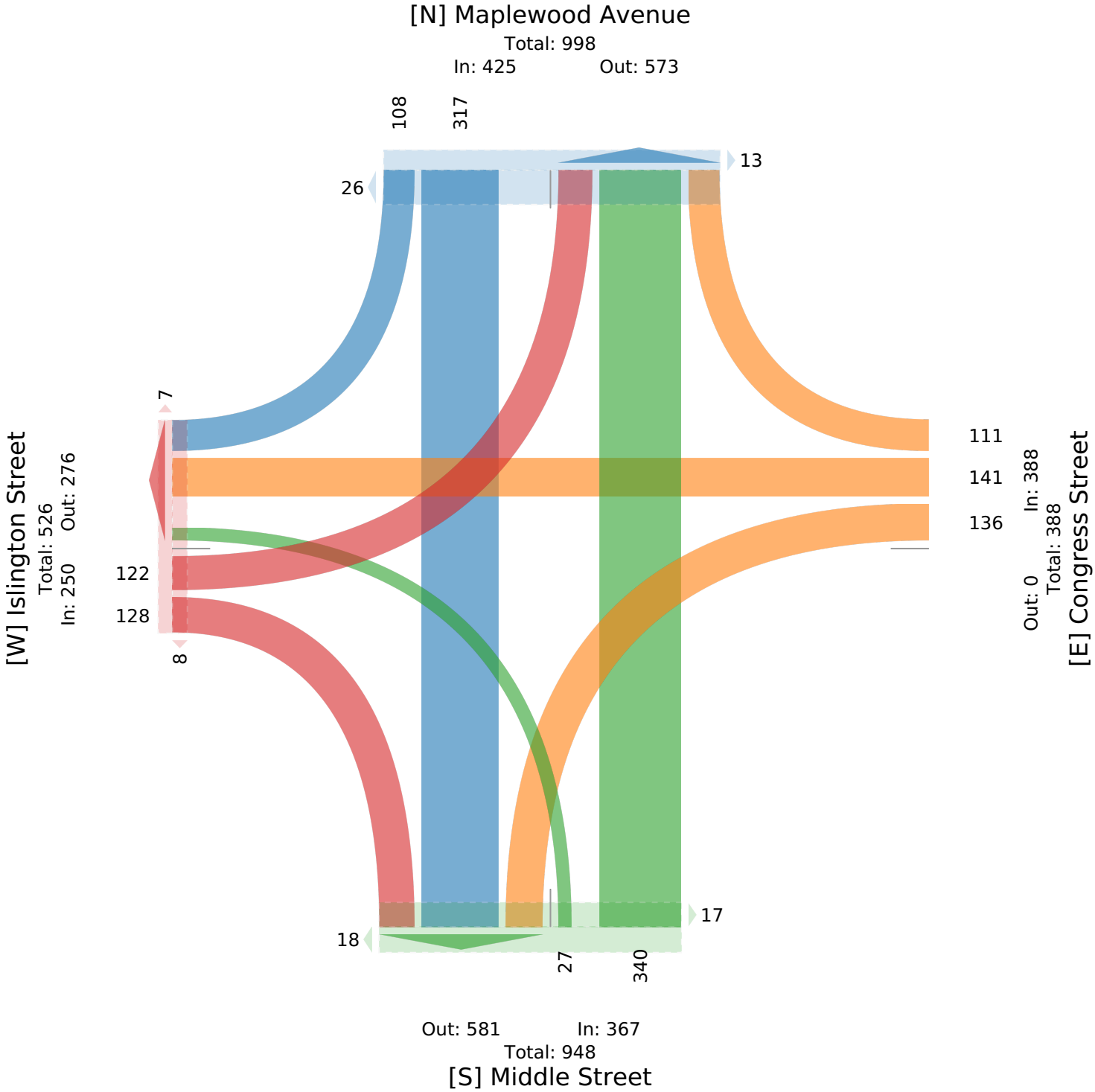
- Little effect on average and 85th percentile speeds.
- Some lowering of the percentage exceeding 40 MPH.
- Speed limits should be returned to 30 MPH on both roadways.
- Physical measures needed for meaningful reductions in speeds.

Maplewood Avenue/Congress Street/Islington Street/Middle Street Intersection



Middle Street at Islington - TMC
Thu May 12, 2022
PM Peak (4:30 PM - 5:30 PM) - Overall Peak Hour
All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1016595, Location: 43.07574, -70.760767

Provided by: City of Portsmouth
680 Peverly Hill Road,
Portsmouth, NH, 03801, US



VII. E

Original Memo on Pedestrian Phasing Changes from June 2020

CITY OF PORTSMOUTH

MEMO

June 30, 2020

To: City Manager, Karen Conard
From: Eric Eby, P.E. Parking & Transportation Engineer
Re: Downtown Maplewood Avenue Traffic Signal Upgrade Work starts Week of July 13

Starting the week of July 13, Electric Light Company of York, Maine will begin the upgrade to the traffic signals at three intersections along Maplewood Avenue at Deer Street, Hanover Street and Congress Street. During the work, there will be daily closures of one of the sidewalk corners at each of the intersections. Detour signing will be provided to direct pedestrians to the open crosswalks at each intersection. Pedestrian signals will remain operational during the work.

Background: City staff proposed and the Parking & Traffic Safety (PTS) Committee recommended the changes in December 2019. The signal upgrades are included in the Downtown Maplewood Avenue Complete Streets plan feasibility study presented in 2014. Public input sessions were held in November 2017 and January 2018 on this part of the plan. For more information: https://www.cityofportsmouth.com/planportsmouth/maplewood-ave-downtown-complete-street-project

The contract was awarded to Electric Light Company in February 2020.

NHDOT has implemented this system at their signals along the Lafayette Road corridor, including the intersections with Peverly Hill Road, Greenleaf Woods Drive, Greenleaf Avenue, and Wilson Road. This type of pedestrian signal phasing is now common in many other cities and towns.

The signal upgrade provides the following benefits:

- Improves pedestrian access to and from the Foundry Parking Garage
- Complies with ADA accessibility requirements for pedestrian traffic signals
- Shortens pedestrian wait times by up to 80 seconds
- Improves traffic flow, shortening the wait-time for stopped traffic by 30 seconds
- Reduces the number of pedestrians crossing against the signal (jaywalking)
- Helps offset any delays resulting lane closures for outdoor dining on Congress Street

Maplewood/Congress/Islington/Middle Intersection Timeline

June 13-14, 2019- Video Monitoring

September 12, 13, 14, 17, 2019- Video Monitoring

December 5, 2019- Eric Eby commented that there have been complaints from the public that it is too difficult for pedestrians to cross Maplewood Avenue. It is one of the reasons they are not using the Foundry Garage. The proposal is to change the signal timing. Pedestrians would be able to cross when the traffic parallel to them had a green light. This would require vehicles making a turn to yield to pedestrians in the crosswalks. It would be a big change, but it would reduce delays for vehicles and pedestrians. Eric Eby requested feedback from the Committee. Public Works Director Peter Rice clarified that this technique has been used across the country for a number of years. The timing would be adjusted so that the pedestrian has a head start when entering the intersection. This change would require an upgrade to the equipment at the intersection.

March 5, 2020- Eric Eby commented that they are in the process of awarding the bid to Electric Light Company. They will be updating the signal controllers along Maplewood Avenue and changing the pedestrian phasing. Today, all traffic stops while pedestrians cross the street. The change will allow pedestrians to cross with parallel vehicle traffic. Vehicles must yield to pedestrians in the crosswalk and then they may turn. The new signals will give pedestrians a few seconds head start before parallel traffic is allowed to go. Jonathan Sandberg was concerned about pedestrians crossing concurrently with traffic on Islington Street because they must make a left or right turn. Eric Eby responded that pedestrians would be crossing with the right-hand turns only. If this doesn't work, then it can easily be changed back. It should reduce delays for traffic and pedestrians.

June 4, 2020- Eric Eby explained the concurrent pedestrian phasing changes to the downtown signal. Pedestrians will cross with the parallel vehicle traffic. Vehicles turning across the pedestrian crosswalks must yield to pedestrians in the crosswalk. Delays will be reduced for pedestrians and vehicles. Because it will be new to the community, public outreach and education will be done. The project is scheduled to start on June 22, 2020. The project will include new equipment and crosswalks will be ADA compliant. Public Works Director Rice spoke to the Leading Pedestrian Interval (LPI), which gives the pedestrian a few seconds head start

when entering the intersection. This project addresses complaints from pedestrians and drivers about long wait times.

June 22 2020- Current pedestrian phasing implemented

October 7, 9, 10, 2020- Video Monitoring

October 8, 2020- Eric Eby noted that the contractor made the final changes to the signals downtown. Pedestrians will now get a 5 second head start to the traffic. Turning traffic must yield to pedestrians. There are now two buttons at each corner; one for each crosswalk. Overall, there is less delay for pedestrians and motorists. There will be a learning curve.

December 10, 2020- Concerns regarding new pedestrian traffic signal phasing, by Mary Lou McElwain

February 4, 2021- Eric Eby commented that the signal contractor will be installing a flashing right turn arrow. It will bring awareness to the traffic turning right that they should look for pedestrians. Signage warning traffic to look for pedestrians will be moved to eye level. Jonathan Sandberg commented that he passes through the intersection twice a day. The most dangerous point is going past Discover Portsmouth trying to cross Islington Street. Cars coming from Islington Street turning right onto Middle Street do not look for pedestrians.
The shrubs around Discover Portsmouth hide the sidewalk. The sidewalk should be pushed further into the intersection to force cars to go wider and pay more attention. Mary Lou McElwain agreed it is a dangerous intersection. She was almost hit by a car at the intersection. She thanked Eric Eby for taking action.

March 4, 2021- Eric Eby commented that the vendor had been out to change the signal heads. Now there is a flashing yellow right turn arrow if the pedestrian crossing is activated. The YIELD TO PEDESTRIAN signs still need to be lowered to the driver's view. Signage is the last change to be made and will be completed soon.

June 3, 2021- Chairman Peter Whelan spoke to the concerns expressed in public comment about the pedestrian signals on Maplewood Avenue, at Deer Street, Hanover Street and Congress Street. Eric Eby stated the signals are working properly and it is a matter of public education. Mary Lou McElwain requested the signals be discussed in-depth at the next meeting. Chairman Peter Whelan stated it would be on the agenda under old business for the next meeting.

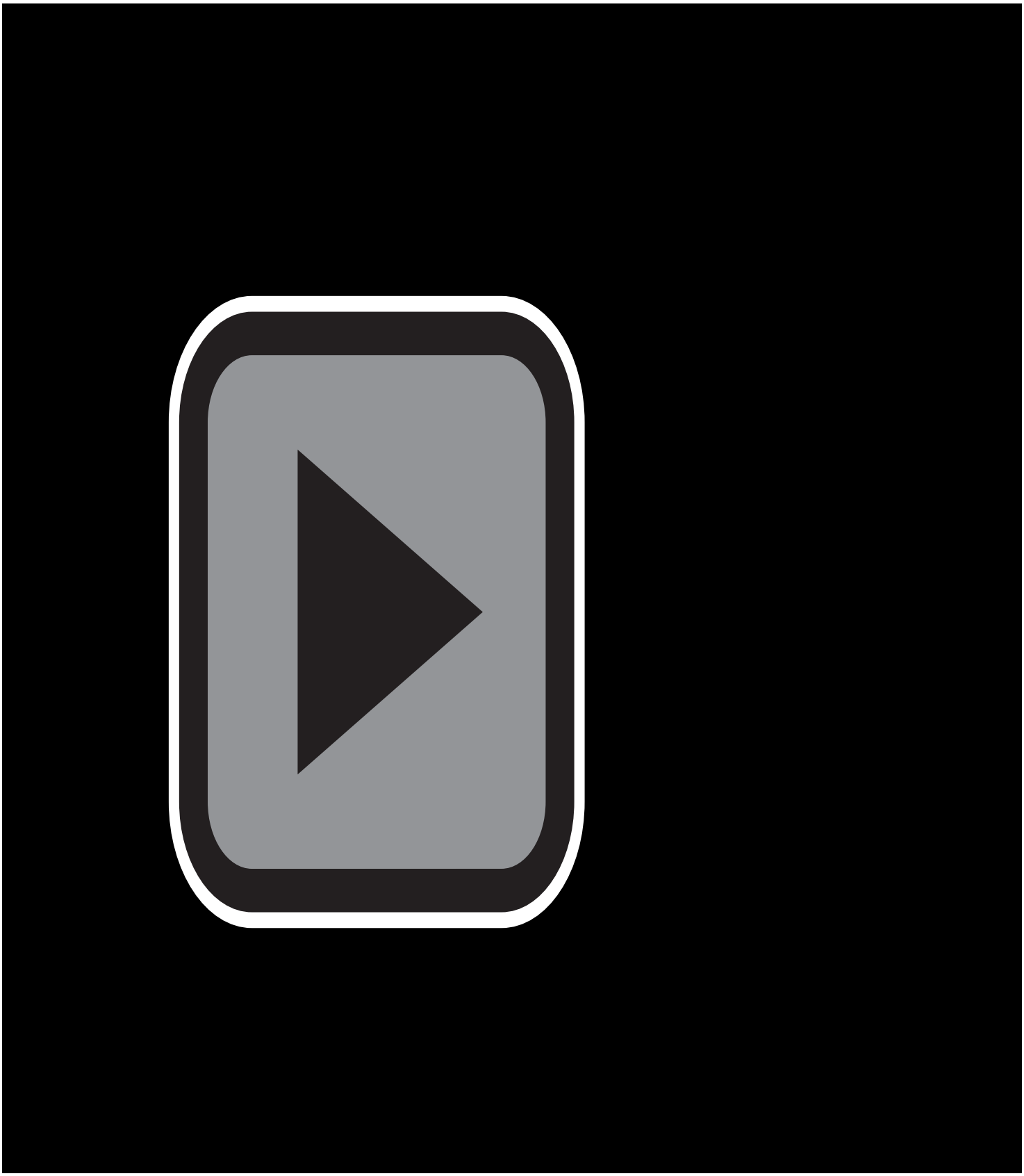
June 3-6, 2021- Video Monitoring

April 7, 2022- Parking and Transportation Engineer Eric Eby commented that this was a request from the Chairman because they were still receiving concerns on the pedestrian signal operation. The change was implemented to allow pedestrians to cross at the same time traffic was turning. They conducted observations a year ago and had over 80 hours of video monitoring. They didn't see any concern. The traffic is back to normal pre-covid levels. Summer is coming, so they can continue to monitor it. Vehicles are waiting for pedestrians then making the turn, which is what they are supposed to be doing

May 12-16, 2022- Video Monitoring

June 2, 2022- City Engineer Eric Eby commented that they have looked at another 4 days' worth of footage and are not seeing pedestrians being cut off by vehicles. It is operating as it should. There was one instance where a vehicle cut in front of a pedestrian, but that pedestrian waved the vehicle on. Cars are yielding as they should and turning behind pedestrians. There have not been any conflicts that were raised as a concern. Mary Lou McElwain commented that this happened to her frequently and she has seen it happen to other people. Until the light stays red while pedestrians are crossing it will be problematic. Chairman Andrew Bagley noted that it was challenging because there is anecdotal data. This has been a big change that some people don't like, but the engineering data supports that the change is working. They should go with the data. Mary Lou McElwain commented that the pedestrians do not have enough time for their head start.

Leading Pedestrian Interval Education Video



VII. E

Maplewood and Congress Intersection Pedestrian Crashes, Last 5 Years

2 reportable crashes; one in 2019 (with previous pedestrian phasing), and one in 2021 (with current pedestrian phasing)

2019 (with previous pedestrian phasing)

-Incident involved a vehicle and a jogger
-Incident occurred at night
-Jogger was not utilizing the existing crosswalk

2021 (with current pedestrian phasing)

- Incident involved a vehicle and a pedestrian entering crosswalk
- Incident occurred at night during heavy rain and reduced visibility
- Pedestrian was unsure if they had cross signal or not

Mid-Day Peak Hour Jaywalking Observations

		Pedestrian Count	Jaywalker Count	% Jaywalkers
Previous Pedestrian Phasing	**Sep. 7th, 2019 (Saturday)**	170	29	15%
	Sep. 13th, 2019 (Friday)	227	33	13%
	Sep. 14th, 2019 (Saturday)	221	52	19%
	Total	**618**	**114**	**18%**
Current Pedestrian Phasing (LPI)	**Oct. 7th, 2020 (Friday)**	117	11	9%
	May 14th, 2022 (Saturday)	220	10	5%
	Total	**337**	**21**	**6%**

VIII. E

66 % Decrease in Total Jaywalking

Jaywalking Conflicts with Previous Pedestrian Phasing



VII. E

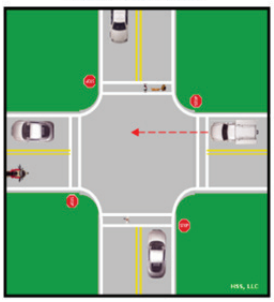
SECTION 5
BASIC DRIVING

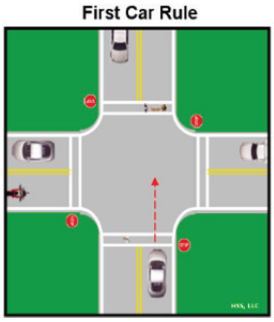
STEERING

Drivers' hands should be in the 9 o'clock and 3 o'clock, or the 8 o'clock and 4 o'clock positions. Knuckles and thumbs should stay on the outside of the wheel. Drivers may use hand-to-hand steering for slight steering, and hand-over-hand for greater steering inputs.

YIELDING RIGHT-OF-WAY

Yielding right-of-way rules provide drivers with guidance for situations when other drivers or pedestrians are present. These rules determine which driver should yield the right-of-way and the sequence for entering and driving through an intersection or other driving scenarios.





Although yielding right-of-way rules provide a guide to determine who should yield the right-of-way, no one should assume they automatically have the right-of-way. The situation and circumstances at the intersection must always be considered.

Drivers should yield the right-of-way to:

- The driver who is at or arrives at the intersection first;
- Drivers in the opposing traffic lane, when making a left turn;
- The driver on the right at a four-way intersection controlled by stop signs, if both drivers arrive at the intersection at the same time; although this is not specified in New Hampshire law, it's good practice
- Drivers on a public highway, when entering the highway from a driveway or a private road;
- Drivers already on a limited access or interstate highway, on the entrance or acceleration ramp;
- Pedestrians, bicyclists, and other drivers who are still in the intersection; and
- Funeral processions. Drivers should allow vehicles that have their headlights on while following a hearse to pass as a group.

SPEED MANAGEMENT

Driving safely means that a driver will have complete control of the vehicle in every situation. Safe speed is determined by:

- Road conditions
- Visibility (night driving, rain, fog, snow, etc.)
- Heavy traffic
- Fast moving traffic
- The condition of the vehicle

Speed limits are the maximum speed you may travel under ideal conditions. The maximum speed limits in New Hampshire are:

- 30 miles per hour in any business or urban residence district as defined in RSA 259:118;
- 35 miles per hour in any rural residence district as defined in RSA 259:93, and on any Class V Highway outside the compact part of any city or town as defined in RSA 229:5,IV;
- 45 or 55 miles per hour in other locations, except:
    - 65 miles an hour on the interstate system, the central New Hampshire turnpike and the eastern New Hampshire turnpike in locations where said highways are 4-lane divided highways or other divided highways of 4 or more lanes;

VII. E

SECTION 6
RULES OF THE ROAD

NEW HAMPSHIRE RULES OF THE ROAD

Every state has different rules and laws but the main principles usually remain the same. Some basic rules that should be followed are:

- Know all traffic signals, signs, and markings
- Be alert of what is happening around the vehicle
- Do not exceed the speed limit
- Do not drive fatigued
- Do not tailgate other vehicles
- Obey all laws and rules while driving in this State or any state/country
- Do not drive while under the influence of alcohol or drugs
- Do not drive while distracted
- A police officer directing traffic overrules any traffic light or sign and must be obeyed.

TRAFFIC CONTROL DEVICES

Traffic control devices include traffic signals, signs, pavement markings and directions provided by law enforcement, highway personnel and school crossing guards.

TRAFFIC SIGNALS

Traffic signals are lights that tell a driver when they should stop, go forward or turn while at an intersection.

Solid GREEN Traffic Light – This means a driver may go through the intersection and if it is clear to do so, proceed with caution. Drivers must yield to pedestrians and vehicles in an intersection.

Solid YELLOW Traffic Light – This is a warning light to let a driver know the traffic light is about to change to red.

Solid RED Traffic Light – This means stop prior to entering the intersection. Drivers must wait behind the stop line, crosswalk, or intersection until the traffic light turns green.

EXCEPTION: Drivers may make a right turn on a red signal ONLY IF there is no sign prohibiting a right turn on red, and the pedestrian "Don't Walk" signal or sign is displayed.

Flashing YELLOW Traffic Light – This means slow down and proceed with caution. Drivers should be prepared to stop for any traffic flow entering the intersection.

Flashing RED Traffic Light – This means drivers must come to a complete stop behind a stop line, crosswalk, or intersection before proceeding though the intersection, yielding any right-of-way.

GREEN arrow – this means drivers may turn in the direction of the arrow after yielding to traffic and pedestrians.

RED arrow – Drivers may not turn left on a red arrow. However, drivers may turn right on a red arrow only if there is no sign prohibiting a right turn on red, and if the pedestrian "Don't Walk" signal is displayed.

YELLOW arrow – this means slow down and proceed in the direction of the arrow with caution.



TRAFFIC SIGNS

Traffic signs advise drivers about traffic rules, hazards, roadway location, roadway directions and the location of roadway services. The shape, color, symbols, and words of these signs give clues to the type of information they provide.

WORK ZONE SIGNS



They are generally diamond or rectangular shaped and orange with black letters or symbols. These construction, maintenance or emergency operation signs alert drivers that there are work zones and that people are working on or near the roadway. These warnings include workers ahead, reduced speed, detours, slow moving construction equipment and poor or suddenly changing road surfaces.



Flagger Ahead



Workers Ahead



Road Construction Ahead



One Lane Road Ahead



Detour

In work zones, traffic may be controlled by a person with a sign or flag to tell drivers which direction to travel, to slow down or stop. Drivers must follow their instructions.

Barriers, such as drums, cones and tubes (panels) are used to keep traffic out of hazardous work zones. Along with signs and road markings, they guide drivers safely through the work zone. Barriers may be used to keep drivers from entering closed roads or other areas where it is dangerous to drive. Temporary traffic signals may be used in work zones. Drivers should reduce speed in work zones and be prepared to stop suddenly. Do not tailgate in work zones. Fines may be doubled in a work zone; however, this will be clearly marked before entering the work zone.



PAVEMENT MARKINGS

Pavement markings are lines, arrows, words or symbols painted on the roadway to give a driver directions or warnings. They are used to divide lanes, tell drivers when they may pass other vehicles or change lanes, which lanes to use for turns, define pedestrian walkways and where drivers must stop for signs or traffic signals.

Single, Broken (Dotted) Lines: These lines mark traffic lanes. White lines mean these lanes of traffic are moving in the same direction. Yellow lines mean the lanes of traffic are moving in the opposite direction. Driver may pass other vehicles over broken (dotted) lines when it is safe to do so.

Solid White Lines: Drivers are prohibited from changing lanes or to pass another vehicle.

Double White Or Yellow Lines: Drivers must not pass if the line on the driver's side is solid. If the line on the driver's side is broken (dotted), they may pass when safe to do so.

Edge Markings: Edge markings are the single line that marks the edge of the road. The line is white on two-way roads and on the right edges of one-way roads. The line is yellow on the left edges of one-way roads.

Stop Lines: White stop lines are located on the pavement to show drivers where to stop. After initially stopping at the required point, a driver should look both ways and proceed forward making sure it is safe to continue into the intersection. If there is no white stop line but only a crosswalk present then drivers must stop before the crosswalk. If no crosswalk lines are present, drivers should come to a full stop prior to entering the intersection.

Crosswalks: Crosswalk lines are painted across a road to show pedestrian crossing areas. Drivers are required to yield to pedestrians crossing the road in marked crosswalks or at intersections even if no crosswalk lines exist at the intersection.

SECTION 7
GENERAL DRIVING AND PARKING

TOLL ROADS

There are different types of roadways, such as state roads, rural roads, and highways. Highways can also be known as expressways, turnpikes, throughways and freeways. Some highways can be toll roads. There are two different ways to pay a toll. One is with cash, and another is through an electronic toll collection system known as E-ZPass, which allows drivers to drive through designated lanes without stopping to pay a cash toll, thereby reducing traffic congestion. To obtain an E-ZPass transponder, drivers must contact the New Hampshire Department of Transportation at www.ezpassnh.com.

Important safety information for Cash Only Toll Lanes

Drivers should:

- Obey posted speed limits within the toll plazas.
- Never back up or reverse direction at a toll plaza
- Come to a complete stop at staffed lanes
- Do not get out of your vehicle

Important safety information for E-ZPass Toll Lanes:

Drivers should:

- Obey posted speed limits in the toll lanes, but do not come to a stop.
- Never back up or reverse direction in the toll lane.
- Do not get out of your vehicle

TURNING AND U-TURNS

Before turning, drivers should:

- Search all corners for traffic controls, pedestrians, other vehicles, etc. and signal intentions.
- Enter and maintain proper position in the lane that is closest to the direction they want to go.
- Look through the turn to the farthest point possible along the intended path.
- Accelerate smoothly to appropriate speed, make sure turn signal is cancelled and check traffic to the rear.

Right turns

- Avoid swinging wide to the left before making the turn.
- Always turn right from the right-most portion of the lane.

Left turns

- When making a left turn yield to oncoming traffic.
- Always turn left from the left-most portion of the lane.

Multiple lanes turning

- Identify which lane and enter the lane.
- Stay in that lane until the turn is completed.

REVERSING DIRECTION

There are times when a driver must reverse direction; however, drivers must do so in a safe manner. Depending on the type of roadway, there are different ways to reverse direction safely.

Next Exit – If a driver misses an exit on a divided highway, they should drive to the next exit to reverse direction. Drivers should never stop, back up or try to turn around.

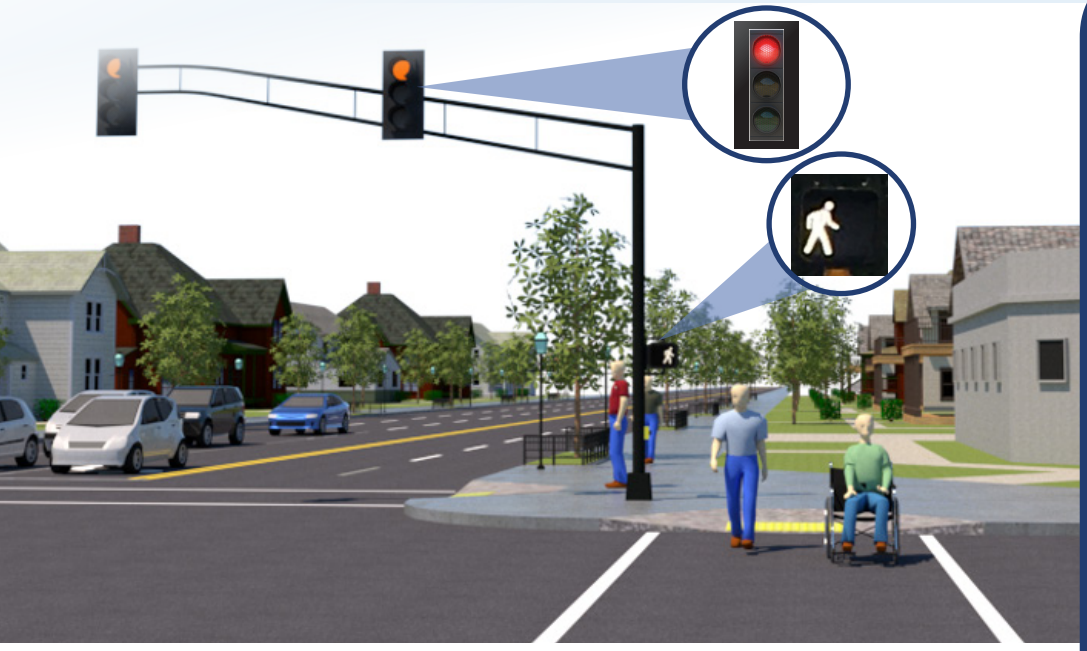
U-Turn – U-turns can be extremely dangerous and are not legal everywhere. If a driver must reverse direction, the driver should first check to see if it there are any signs indicating that U-turns are prohibited. Drivers should pull over to the shoulder of the road on the right using the

VII. E

Leading Pedestrian Interval (LPI)

SAFE TRANSPORTATION FOR EVERY PEDESTRIAN

COUNTERMEASURE TECH SHEET



Leading Pedestrian Intervals (LPIs) are low-cost adjustments to signal timing to increase pedestrian safety at signalized intersections. An LPI gives pedestrians a typical 3- to 7-second head start before vehicles in the parallel direction are given the green signal indication. LPIs can help reduce conflicts between pedestrians and left- or right- turning vehicles. The LPI works to position the pedestrian within the crosswalk thereby decreasing the likelihood of a conflict or crash with a left- or right-turning vehicle ahead of the turning traffic. Agencies will often consider restricting Right Turns on Red (RTOR) in association with LPIs to better control for conflicts with right-turning vehicles.

The Manual on Uniform Traffic Control Devices (MUTCD) offers guidance on signal timing when LPI is used. The MUTCD says an LPI "should be at least 3 seconds in duration and should be timed to allow pedestrians to cross at least one lane of traffic or, in the case of a large corner radius, to travel far enough for pedestrians to establish their position before the turning traffic is released." Using Accessible Pedestrian Signals (APS) with LPI provides indications for persons with disabilities. MUTCD guidance also offers considerations for accessible pedestrian signals when LPIs are used.[2]

LPIs reduce conflicts between pedestrians and vehicles.

LPIs improve visibility of pedestrians in the crosswalk.

LPIs can reduce pedestrian crashes by[1]

13%



FEATURES:

- **Increased likelihood of driver yielding.**
- **Enhanced safety for slower moving pedestrians.**

COMPLIMENTARY TREATMENTS:

- **Right Turn on Red (RTOR) Restrictions.**
- **Accessible Pedestrian Signals.**
- **Parallel Vehicular Green Extension Interval.[2]**

U.S. Department of Transportation
Federal Highway Administration

Safe Roads for a Safer Future
Investment in roadway safety saves lives

EDC

October 2019 | *FHWA-SA-19-040*

Leading Pedestrian Interval (LPI)

STEP: https://safety.fhwa.dot.gov/ped_bike/step/

LPI LENGTH

Researchers have developed formulas to help agencies calculate a desirable duration of an LPI, calculating the minimum time required for pedestrians to cross the first travel lane or halfway across one direction of travel. Streets with wide or multiple lanes may result in pedestrian crossing phases that are longer than the concurrent vehicle phase. This situation may lead the agency to consider elongated LPIs to reduce conflicts with left-turning vehicles.[3]

COST

LPI installation requires reprogramming the traffic signal to accommodate the advance pedestrian interval. In rare cases, agencies may need to upgrade signal controllers. The cost associated with LPI can range from $200 (controller setting changes only) to $1200 each (pedestrian/vehicle study, retiming analyses, incorporating the formers setting changes).[1]



Source: FHWA

SELECTING SITES FOR LPI

Several cities across the U.S. have decided to install LPIs across systems of signalized intersections to improve pedestrian safety. Agencies prioritize the intersections where they install LPIs to maximize limited resources and after considering several common factors:

- **Crash history.** A review of 3 or more years of crash data for intersections with multiple crashes or a history of severe injury/fatal crashes are often a priority. Cities also use information from observed conflicts to supplement crash data.
- **Pedestrian crossing volumes.** Cities may look for pedestrian volumes exceeding traditional pedestrian signal warrants when considering LPIs. The estimated exposure (product of pedestrian and turning traffic volumes) may be another consideration.
- **Vulnerable populations.** Agencies often prioritize LPIs where school-aged children or older adults are expected to cross. These pedestrians may enter the crosswalk more slowly than other pedestrians.
- **One-Way Streets or at T-intersections.** Where left-turning vehicles aren't typically expected to yield to oncoming vehicles, LPIs may be useful to increase yielding to pedestrians in the crosswalk.
- **Intersection Visibility.** LPIs may be prioritized where the visibility of a crosswalk is limited or restricted. General examples are geometry, location of stopped vehicles, vegetation, and streetside features.

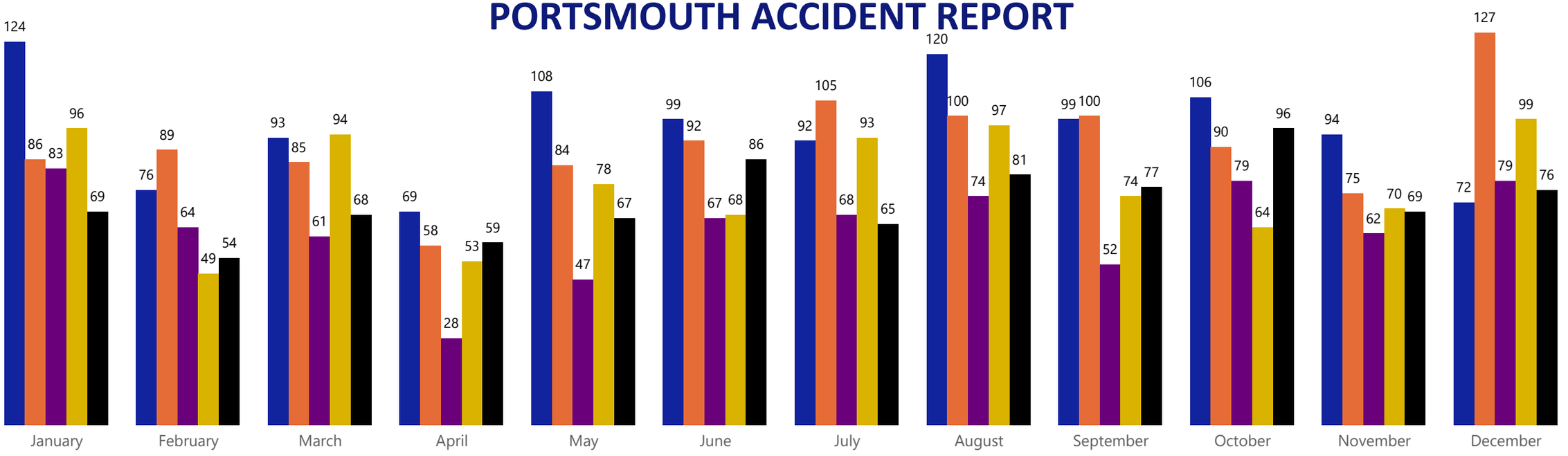
References

[1] Goughnour, E., Carter, D., Lyon, C., Persaud, B., Lan, B., Chun, P., ... Signor, K. (2018). Safety Evaluation of Protected Left Turn Phasing and Leading Pedestrian Intervals on Pedestrian Safety, Federal Highway Administration, Report No. FHWA-HRT-18-044. Washington, D.C.

[2] Federal Highway Administration. (2009). Part 4, Chapter 4E Manual on Uniform Traffic Control Devices. Federal Highway Administration. Washington, D.C.

[3] Dittberner, R., & Vu, N. (2017). How Long Is Your LPI?: Balancing Pedestrian Comfort and Traffic Impacts with an Elongated Leading Pedestrian Interval. ITE Journal. Washington, D.C.

PORTSMOUTH ACCIDENT REPORT



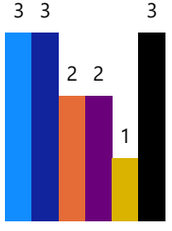
Dec. 2022 - 43 reportable crashes, damage > $1,000

2018 2019 2020 2021 2022

YEARLY TOTALS

VIII. A

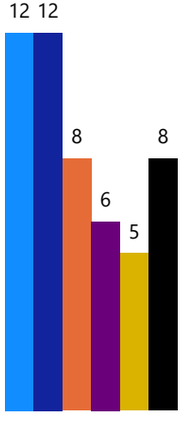




2017 2018 2019 2020 2021 2022

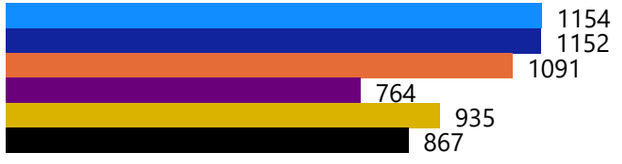
Month	2022
December	1
November	0
October	1
Total	**3**





2017 2018 2019 2020 2021 2022

Month	2022
December	1
November	1
October	2
Total	**8**





2017 2018 2019 2020 2021 2022

GRAPHIC SCALE

20 10 0 20 40 60 80 FEET

5 0 5 10 15 20 25 METERS

NH STATE PLANE COORDINATE SYSTEM N NAD 1983

TEMPORARY PAVEMENT MARKING TAPE (TYP)

REMOVE EXISTING CROSSWALK MARKINGS (TYP)

340 THORNTON

382 BARTLETT

TUFF CURB @ CENTERLINE (TYP)

18' DIAMETER MOUNTABLE FLEX CURB TRAFFIC CIRCLE

337 THORNTON

MOUNTABLE FLEX CURB (TYP)

REPLACE "STOP" SIGNS WITH "YIELD" SIGNS (TYP)

333 THORNTON

364 THORNTON

339 BARTLETT

333 BARTLETT

325 BARTLETT

315 BAR

THORNTON STREET

BARTLETT STREET

DASHED WHITE LINES (TYP)

346 BARTLETT

378 THORNTON

2" P.V.C. INV. EL=45.9'

NOTE:
INSTALL "ROUND-A-BOUT" SIGNS IN ALL DIRECTIONS, APPROX. 100' IN ADVANCE.

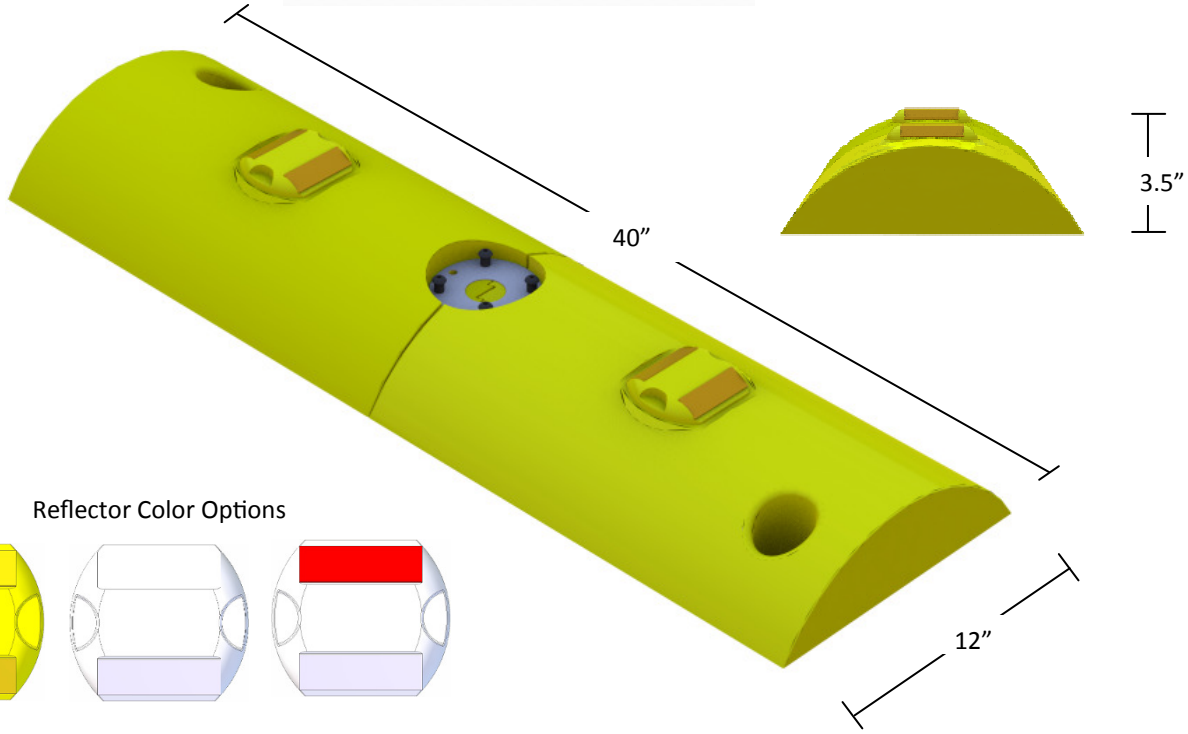
ROUNDABOUT OR W16-17P (optional)

VIII. B


Proposed
Temporary
Mini
Roundabout
VIII. B

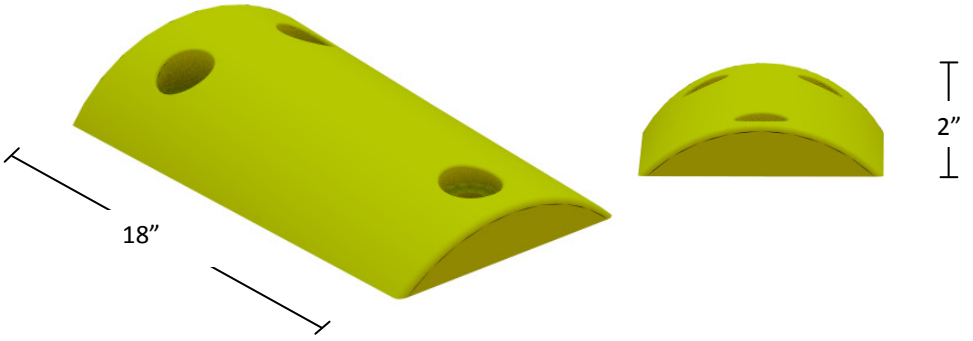
SPECSHEET DOCUMENT NO. / REV. DATE SPEC-TCB. 09/03/2014

Proposed Example of Splitter Island Curbing



Reflector Color Options

OPTIONAL END CAP



SPECIFICATIONS

- Tuff Curb® is constructed of highly durable injection-molded plastic that is resistant to: ultraviolet light, ozone, and hydrocarbons.
- Curb equipped with “Quick Release” feature which allows the upright to be removed from the base without the use of tools.
- NCHRP-350 accepted #WZ-243
- MASH 2009 accepted #WZ-318
- 40” curb section weighs 12 lbs.
- 18” end section weighs 4 lbs.

RECOMMENDED USES

- Ideal for use for curves, medians, edge lines, work zones, rail crossings, toll booths.

AVAILABLE COLORS

- White
- Yellow
- Other colors available on special order (minimum quantities required)

SLS SharpLine Solutions, Inc.

Tel: (626) 257-8328 | sales@sharpline-solutions.com
www.sharpline-solutions.com

VIII. B