



North Main Street Road Diet Trial

UPDATE

Presented to
**The Town of West Hartford
Public Information Meeting**

April 28, 2022



Agenda

- Update on Trial
- General Observations
- Data Collection Overview
- Evaluation Measures
- Roll Plan Review
- Next Steps



Update/Observations

- Town Staff
- Consultant Team Bi-Weekly Meetings
- Review Operations
- Review Comments/Concerns
- Modifications at Beginning of Trial
- Deliveries
- Snow Plowing
- Mountain Road
- Trout Brook Drive

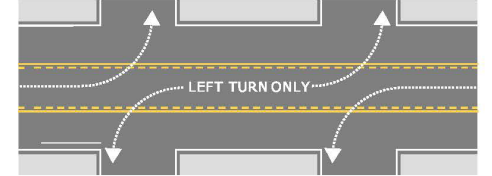
Two-Way Left Turn Lanes

INFORMATIONAL GUIDE



A two-way left-turn lane (TWLTL) is a street configuration that provides a center lane for left turning vehicles traveling in either direction.

A TWLTL removes left turning vehicles from the through lanes and allows vehicles to wait in the center lane until a safe gap in oncoming traffic is available before turning left.



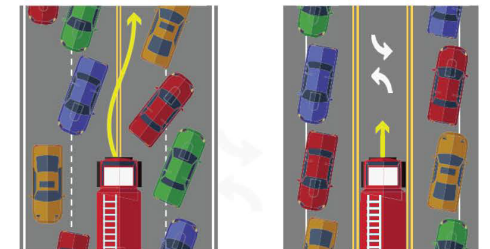
HOW TO USE THEM



1. Signal your turn at least 100 feet before making the turn.
2. Before entering, watch out for oncoming vehicles that may be using the center turn lane.
3. Only enter the center lane when you are ready to turn; the center lane is not to be used to bypass stopped through traffic.
4. Make sure no part of your vehicle is blocking through traffic.
5. Wait in the center left turn lane until it is safe to turn left.

CLARITY DURING EMERGENCIES

Three-lane roadways provide increased clarity in the event of an emergency by allowing for emergency vehicles to bypass stopped traffic by using the TWLTL. Drivers should pull to the side when possible, especially if they are stopped in the TWLTL.



For more information visit:
www.westhartfordct.gov/roaddiet

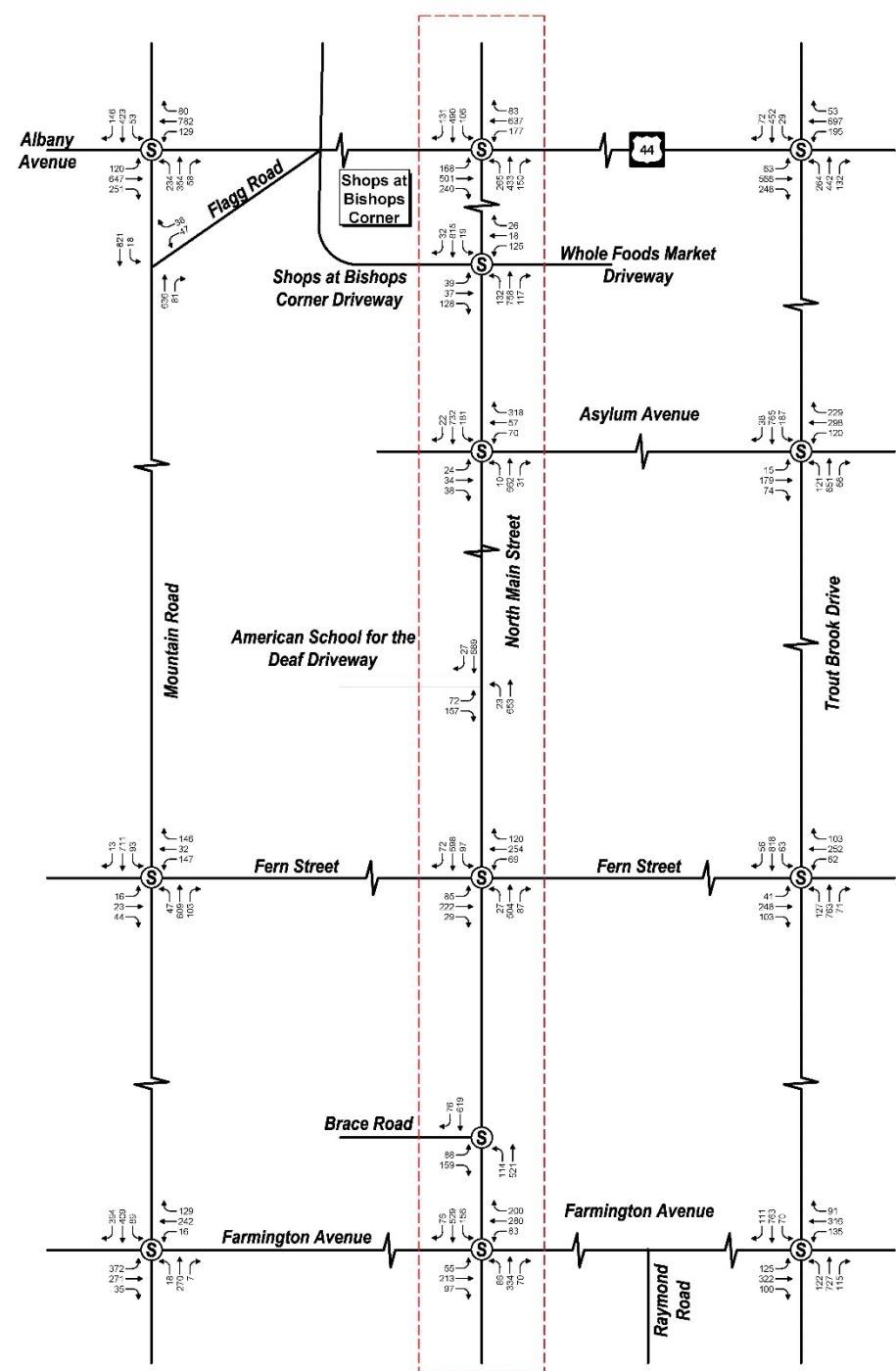
Data Collection

- Traffic Counts – Speeds - Queuing
- Intersection Cameras
 - Brace/Fern/Asylum/Sims
- Field Observations
 - Intersection Evaluations
 - Turning Vehicles/Buses
 - TWLTL
- Traffic Analysis
- Drone Flight
- Bike Ride



Traffic Counts

- Conducted in November 2021
- Comparison to Pre-Pandemic Volumes
- North Main Street
- Trout Brook Drive
- Mountain Road



Speed Surveys/Travel Times

- Conducted in Aug/Sept/Nov 2021
- Consultant and Town
- North Main
- Trout Brook Drive
- Mountain Road
- Again 2022
- March/April

North Main Street Road Diet Travel Time Summary												
11/5/2021												
Location	4:10 PM				4:30 PM				4:55 PM			
	Northbound	Southbound	Northbound	Southbound	Northbound	Southbound	Northbound	Southbound	Northbound	Southbound	Northbound	Southbound
	Run Time (s)	Notes	Run Time (s)	Notes	Run Time (s)	Notes	Run Time (s)	Notes	Run Time (s)	Notes	Run Time (s)	Notes
Farmington	0		395		0		317		0		204	
Brace	7.5		388		7.5		300		8		193	
			313	Loomis			245					
Fern	65		257		55		193		63		169	
	117	15 car q	310	Westwood			162		125		128	
			120	Q to Brookside								
ASD			222									
			190	Westwood						No Q		
			120	Q to Brookside								
Asylum	183		77		125						82	
	249	20 car q	54		150		79		206		190	
	291	2 cycles	14				38					44
Sims	341		0		172				241			
					211	Delays	0	Delays	248		351	
					253					0		0
Total Time	5 minutes 41 seconds		6 minutes 35 seconds		4 minutes 13 seconds		5 minutes 17 seconds		4 minutes 8 seconds		3 minutes 24 seconds	

Intersection Cameras

- Beginning and End of Trial Limits
 - Brace Road/Sims Road
- Signalized Intersections
 - Fern Street/Asylum Avenue
- Daily Observations
 - Peak Hours
- Turning Vehicles
- TWLTL
- Viewing of Recordings



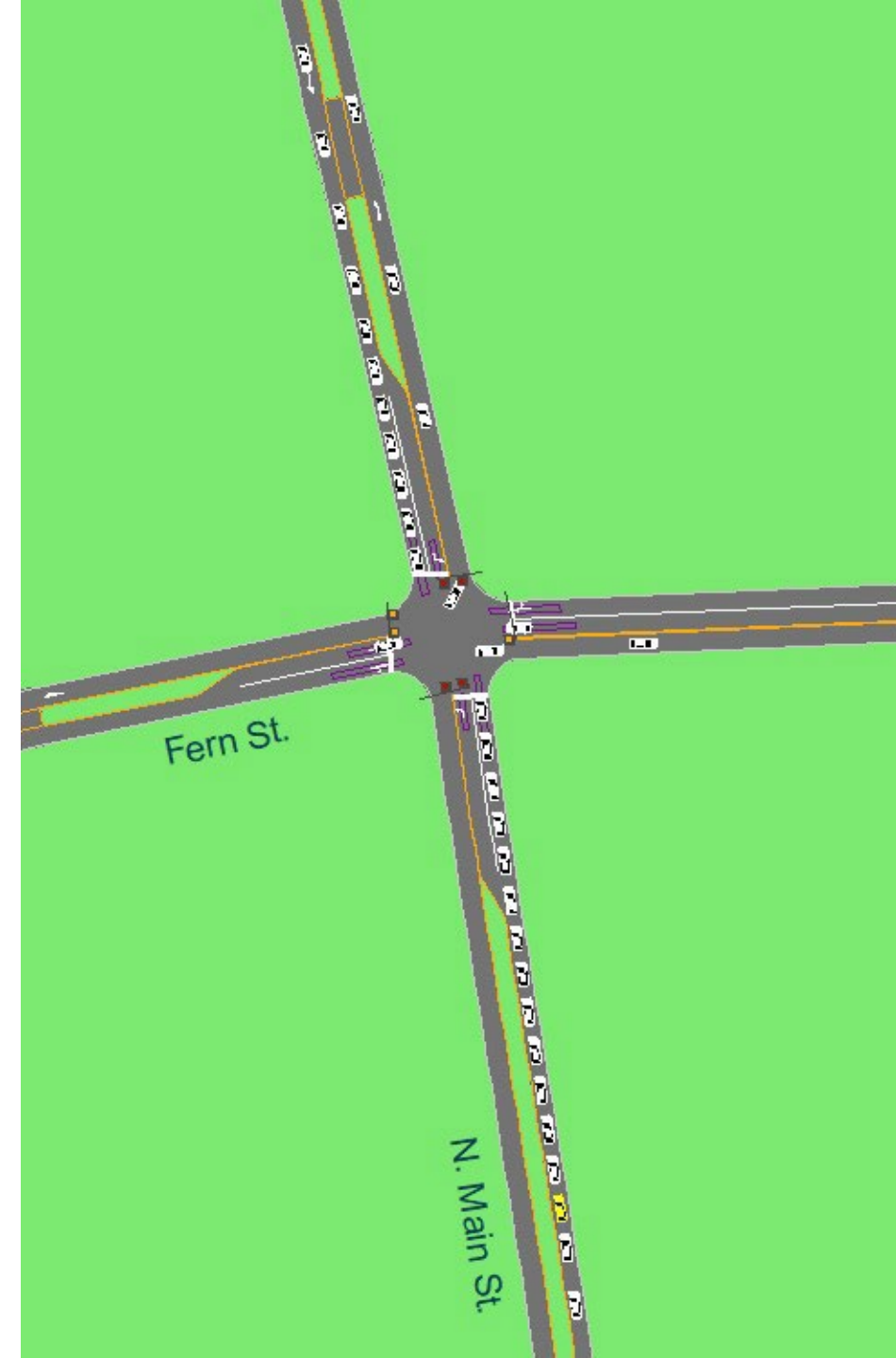
Field Observations

- Intersections
 - Queueing
 - Left Turns
- Turning Vehicles
 - Phasing
 - Buses
- TWLTL
 - Operations
 - Driveways



Traffic Analysis - Updated

- Traffic Counts
- Updated Capacity Analysis
- Suggested Timings
- Revised Cycle Lengths
- Ongoing Improvements in Queuing



Road Diet Implementation – Evaluation Measures

Performance Criteria

1. Crash frequency and severity
2. Traffic Operations- Roadway
3. Traffic Operations - Intersections
4. Emergency Services
5. Public feedback (summarized survey results)
6. *Pedestrian and bicyclist usage*
7. *Neighborhood traffic safety issues*
8. *Intersection/driveway accessibility*

How to Measure

Data

Data/Traffic Models

Traffic Models

Agency Provided Responses

Summary of Results

Observations

Observations/Data

Observations

RESULTS – North Main Street

Performance Criteria	Results	Effect
1. Crash frequency and severity	REDUCED CRASHES/RATES Across All Three Roadways	POSITIVE
2. Traffic Operations- Roadway	INCREASED TRAVEL TIMES Reduced Travel Speeds Moderate Diversion of Traffic	MANAGEABLE
3. Traffic Operations - Intersections	INCREASED CONGESTION Congested Operations Minimized Queues Mitigated at Fern/Asylum	MANAGEABLE
4. Emergency Services	Agency Provided Responses No Life Safety Concerns	SUPPORTIVE
5. Public feedback	Summary of Results	SUPPORTIVE

Crash Data

	Mountain Road Corridor					North Main Street Corridor					Trout Brook Drive Corridor				
	Sept 2017- March 2018	Sept 2018- March 2019	Sept 2019- March 2020	Sept 2020- March 2021	Sept 2021- March 2022	Sept 2017- March 2018	Sept 2018- March 2019	Sept 2019- March 2020	Sept 2020- March 2021	Sept 2021- March 2022	Sept 2017- March 2018	Sept 2018- March 2019	Sept 2019- March 2020	Sept 2020- March 2021	Sept 2021- March 2022
Crash Rate^a	0.44	0.35	0.87	0.61	0.35	0.93	1.25	1.77	2.65	0.83	0.91	1.39	0.86	1.44	0.34
Month Year															
September	0	1	0	2	0	1	6	2	5	1	3	6	0	5	1
October	2	1	4	3	2	5	0	8	3	3	2	6	7	4	1
November	1	2	2	2	1	2	4	2	3	3	4	3	1	6	0
December	2	1	2	2	1	1	3	3	13	4	4	3	3	4	2
January ^b	3	1	6	2	1	4	6	7	8	2	4	5	1	6	2
February	1	2	0	1	0	5	2	7	10	2	0	2	2	2	0
<u>March</u>	1	0	6	2	3	5	3	5	9	1	2	4	4	3	1
Total	10	8	20	14	8	18	24	34	51	16	19	29	18	30	7
Collision Type															
Angle	4	2	6	0	1	8	9	12	27	4	8	11	9	11	4
Head-on	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
Rear-end	3	5	9	8	4	5	7	11	12	8	8	9	7	15	1
Sideswipe, same direction	2	1	1	2	1	4	4	6	8	2	2	5	1	3	2
<u>Unknown</u>	1	0	4	2	2	1	4	5	4	2	1	4	1	1	0
Total	10	8	20	14	8	18	24	34	51	16	19	29	18	30	7
Severity															
Fatal Injury	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non-Fatal Injury	1	2	7	3	2	4	4	9	8	3	7	13	4	7	2
Property Damage Only	9	6	13	11	6	14	20	25	43	13	12	16	14	23	5
<u>Not Reported/Unknown</u>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	10	8	20	14	8	18	24	34	51	16	19	29	18	30	7
Time of day															
Weekday, 7:00 AM - 9:00 AM	1	2	4	0	1	3	0	2	2	3	3	1	3	6	0
Weekday, 4:00 - 6:00 PM	2	1	5	1	1	2	4	6	8	3	2	3	5	5	0
Saturday, 11:00 AM - 2:00 PM	0	1	0	1	1	2	1	0	2	0	1	2	0	0	0
Weekday, other time	5	2	9	10	3	9	14	19	9	8	9	15	8	17	6
<u>Weekend, other time</u>	2	3	2	2	2	2	5	7	10	2	4	8	2	2	1
Total	10	8	20	4	8	18	24	34	51	16	19	29	18	30	7
Pavement Conditions															
Dry	6	5	16	12	4	11	19	23	42	12	13	21	15	26	3
Wet	2	3	3	1	1	4	4	11	3	3	5	8	2	1	3
Snow	2	0	0	1	2	3	1	0	6	0	0	0	1	3	0
Ice	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
<u>Unknown</u>	0	0	1	0	0	0	0	0	0	1	1	0	0	0	0
Total	10	8	20	14	8	18	24	34	51	16	19	29	18	30	7
Light Conditions															
Daylight	7	5	14	8	7	13	15	21	44	9	10	21	10	26	5
Dawn/Dusk	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
Dark, Not Lighted	0	0	1	2	0	0	0	1	0	0	1	0	0	0	0
Dark, Lighted	3	3	5	4	1	5	9	12	7	6	8	7	8	4	2
<u>Unknown</u>	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
Total	10	8	20	14	8	18	24	34	51	16	19	29	18	30	7
Non-Motorist (Bike, Pedestrian)	0	0	1	0	0	0	1	1	1	1	1	2	0	0	0

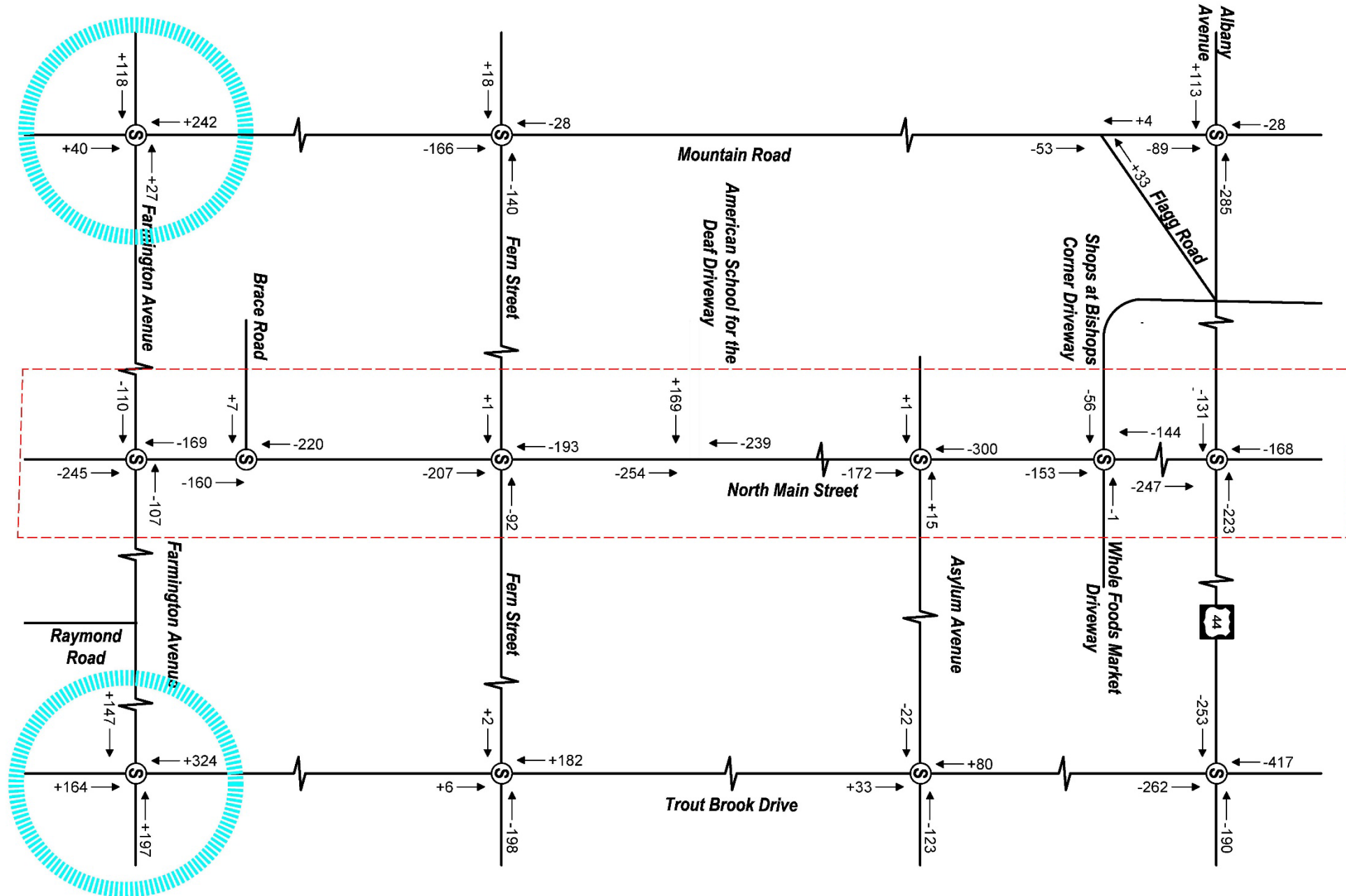
Speed Data

Speed Data Collected

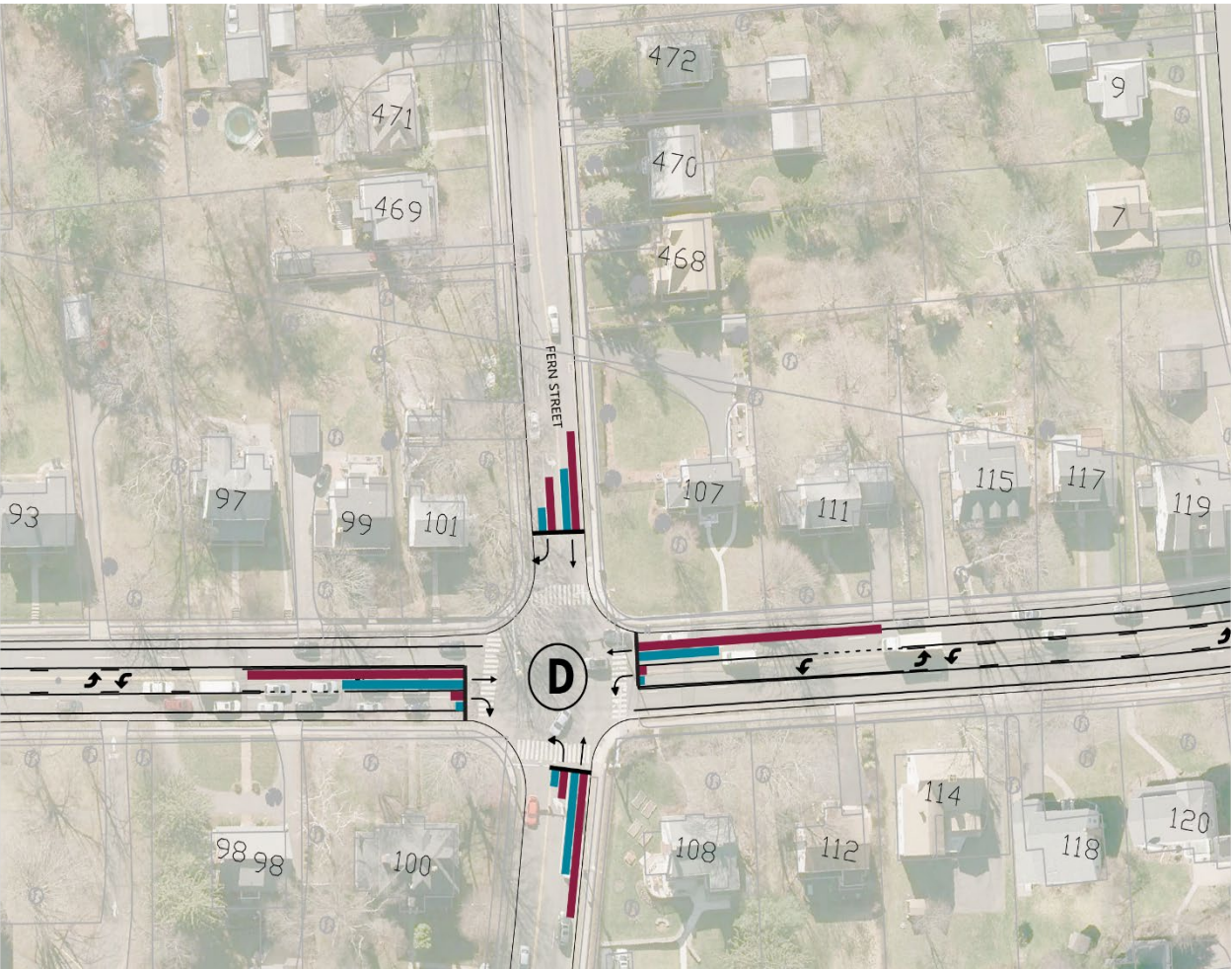
Location	Date/Condition	Mountain Road				North Main Street				Trout Brook Drive			
		NB		SB		NB		SB		NB		SB	
		50th %	85th %	50th %	85th %	50th %	85th %	50th %	85th %	50th %	85th %	50th %	85th %
south of Flagg Road near #1260	Nov. 2016	38	43	38	43					43	48	44	49
at Brookside Boulevard	Feb. 2017					42	46	43	48				
at Brookside Boulevard	Nov. 2017					42	46	43	48				
at Brookside Boulevard south of Flagg Road near #1260	Aug. 2021 (Bridge Construction)	40	45	43	48	39	43	41	46	43	48	43	48
at Brookside Boulevard	Aug. 2021 (Initial Road Diet Implementation)					37	42	39	43				
at Brookside Boulevard south of Flagg Road near #1260	Sept. 2021 (Road Diet Implemented)	40	44	42	47	37	42	38	43	43	48	43	48
north of Farmington Avenue north of ASD driveway south of Lawler Street south of Flagg Road south of Braeburn Road north of Farmington Avenue north of Fern Street	Nov. 2021	36 35	40 40	38 33	44 38	32 35 35	38 39 41	28 38 32	33 44 38	37 44	41 50	32 43	38 49
at Brookside Boulevard	March 2022 (Return to Work)					38	42	39	44				
north of Cliffmore Road souh of Whitman Avenue south of Brookside Boulevard south of Asylum Avenue	April 2022	42	48	41	44	31 32	36 37	34 37	39 43	38	45	37	43

Collected by VHB, Collected by Town of West Hartford

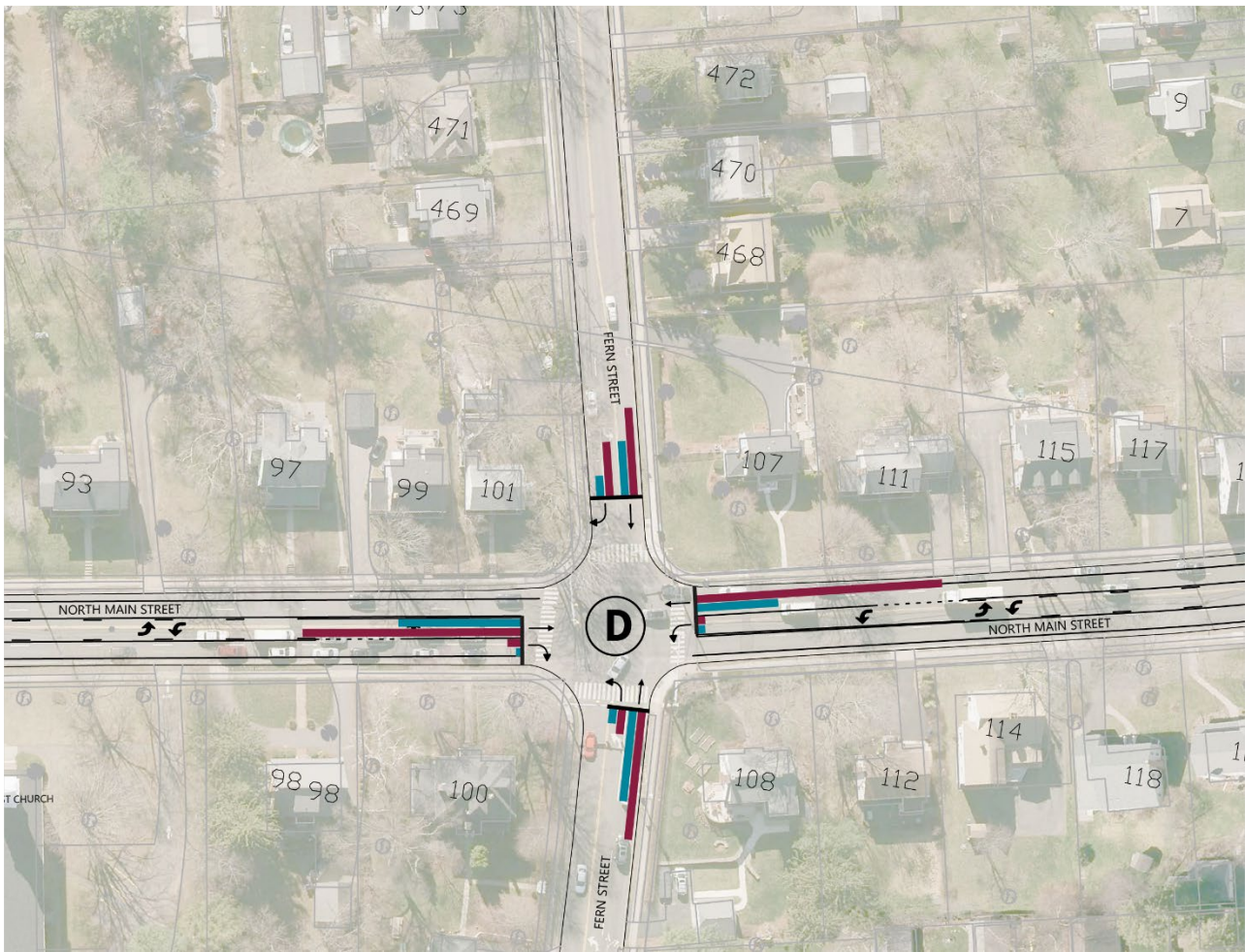
Traffic Volumes Differences



Previous Conditions

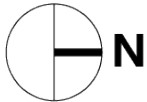


Current Conditions



LEGEND

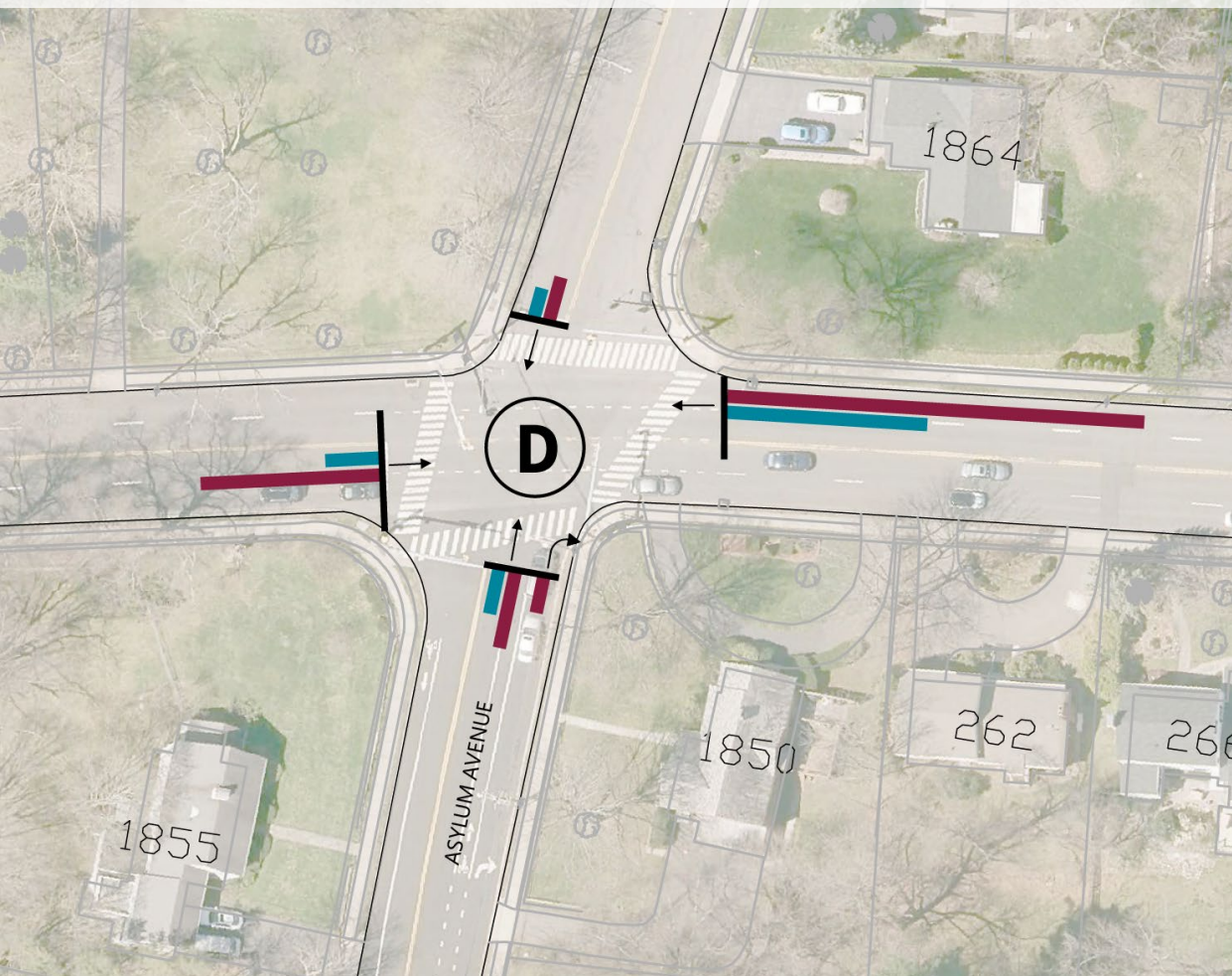
- █ Average queue
- █ Longest queue



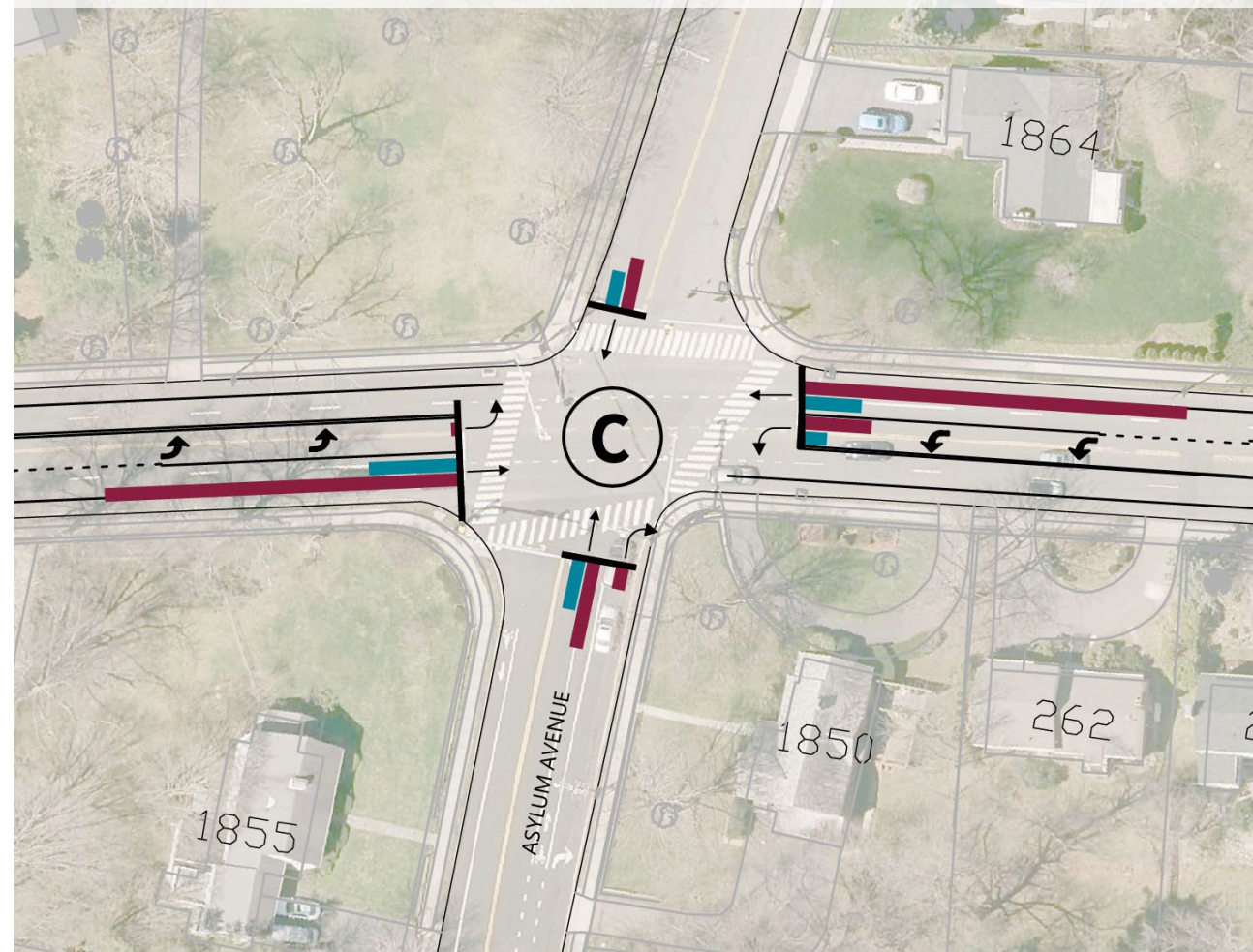
Fern Street Intersection



Previous Conditions

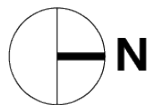


Current Conditions



LEGEND

-  Average queue
-  Longest queue



Asylum Avenue Intersection



Public Comments

Public Information Meeting 4-29-21

Road Diet Email

Telephone Comments

Summarized in Spread Sheet

200+ Documented Comments

August 13, 2021 Through

Present Day

<u>Public Comments</u>		
Date of Initial Call/Email	Comment	Action Taken/Response
1/21/2022	Think the road diet is excellent. Have not encountered bottlenecks or reduction in travel time. Would the Town be willing to do the same to Trout Brook?	Thanked for response, will consider suggestion.
1/22/2022	Center lane is safe and efficient but needs further clarification. Would like to see changes at the Asylum intersection, like a turning signal.	Thanked for response, investigating signal changes at Asylum.
1/27/2022	Math teacher at one of the public schools, would like someone to come in and present to her class of STEM students about the project.	Thanked for response, asked how long of presentation needed and time of day
2/5/2022	Drove through the road diet in vehicle, loved the change, would like shoulders widen for cycling. Would like to see the road diet extend through Farmington	Thanked for response, there were no shoulders before the trial.
4/7/2022	Would like to see removal of fence and shrubbery for better sight lines at North Main and Asylum.	Thanked for inquiry, will consider suggestion
4/8/2022	Southbound merge near Bishop's Corner is abrupt, left-turns from Asylum heading north on North Main are "a nightmare".	Thanked for response, will review pavement markings and turns at signal.
4/8/2022	Frequently walks along North Main Street, since the start of the road diet, walking on both sides of the roadway feels safer. Vehicles traveling slower and more distance between pedestrians and vehicles.	Thanked for response.
4/8/2022	Inquiring about road diet terminus and definition of road diet.	Thanked for response, shared technical terminology and locations.
4/9/2022	Noted improvements to the roadway making the corridor feel safer and has noticed reduction in crashes and only minor degradation (queuing) on the roadway, particularly during rush hours.	Thanked for response.
4/9/2022	Notes not much has changed during road diet trial: does not feel that much safer as a pedestrian, noise is still an issue, side streets now have more traffic, the lights back up more, etc. Disappointed that the road diet did not live up to expectations.	Thanked for response.
4/15/2022	Inquiring as to the crashes that have occurred on North Main Street and any future plans for a Road Diet on Route 44.	Thanked for response, will discuss crashes as part of study.
4/18/2022	In favor of Road Diet, workes better than expected. Notes that Fern Street northbound left-turn phase is too short.	Shared the webpage for the Road Diet.
4/19/2022	Noted increased traffic earlier in the day (3:30 PM) and that this queues up at Fern and Flagg on Mountain Road.	Thanked for response, will review timings.
4/19/2022	Thanked for response to initial questions. Clarified that was looking to see if there would be a road diet conducted on Route 44.	Thanked for response, have not noted the diversion to Mountain Road that initially predicted and the earlier peak hour is due to work from home.
4/22/2022	Would like Fern Street reviewed for timings as feels that nothing has changed since October email.	Thanked for clarification, cannot say at this time.
4/22/2022	Emailed again to ask about the timing of Asylum Avenue	Thanked for response and will share operational updates at public information meeting.
4/25/2022	Road Diet makes the roadway feel safer particularly for pedestrians and cyclists. Would love to see the change be made permanent.	Thanked for inquiry and will provide updates to Asylum as well
4/25/2022	Noted that traffic is "significantly calmer" and enjoys the road diet and hopes for it to remain in place.	Thanked for response and alerted to public information meeting.
		N/A

Public Surveys

Two Surveys Conducted

Spring 2021

460 Respondent

Fall/Winter 2021/2022

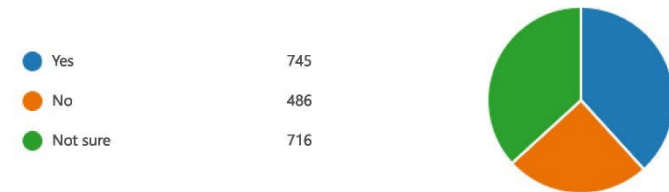
1900 Respondents

Town Website

5. If you have driven or are driving in the area, have you consistently changed your travel patterns to avoid the road diet trial and diverted to another route/roadway?



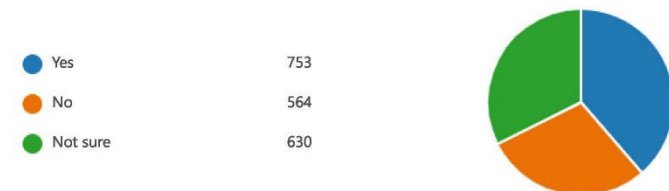
6. Do you think the road diet is more accommodating for pedestrians?



7. Do you think the road diet is more accommodating for bicycles?



8. Should the road diet shoulders be widened to accommodate bicycles?



Other Evaluation Measures

- Pedestrian and bicyclist usage
Observed and Noted Increased
- Neighborhood traffic safety issues
Cut Through Concerns Have Abated
- Intersection/driveway accessibility

Gaps in Traffic Flow Are Reduced in Peak Hours – Platooning Effect of One Lane Directional Flow



Bike Ride – Entire Corridor

April 24, 2022 Sunday Afternoon

- LaSalle Road to Albany Avenue
- Paved Shoulders
- Swept by Town
- Traffic Speed Variation
- Vehicles Giving Way





SPEED
LIMIT
30

CENTER
LANE
ONLY



CENTER
LANE



ONLY









SPEED
LIMIT
35







Fern Street (southbound on North Main
Street)





West Hartford
Center →
BIKE ROUTE





Drone Flight – Entire Corridor

December 7, 2021 Tuesday Afternoon Peak Hour

- Entire Corridor
- Asylum Avenue Intersection
- ASD Driveway
- Fern Street Intersection
- <https://www.westhartfordct.gov/town-departments/engineering/transportation/north-main-street-road-diet-study>































Google Maps – Streetview

- November 2020 ----->
- January 2022 ----->
- From Fern Street to North



350' OF AVAILABLE TWO LANE STORAGE

ROSENBERG ORTHODONTICS

URGENT CARE

ROUVIER INSURANCE AND SELECT PHYSICAL THERAPY

SANDORN MORTGAGE

OFFICES

PTSMC

WILLIAM RAVEIS

OFFICES

BUS STOP

STOP

CENTER LANE ONLY

31-0116 51-6621

31-0116

31-0552

NORTH MAIN STREET

LOOMIS DRIVE

OFFICES

BUS STOP

OFFICE BUILDING

CEMETERY

31-5505 31-0116 R3-9cP (MUTCD)

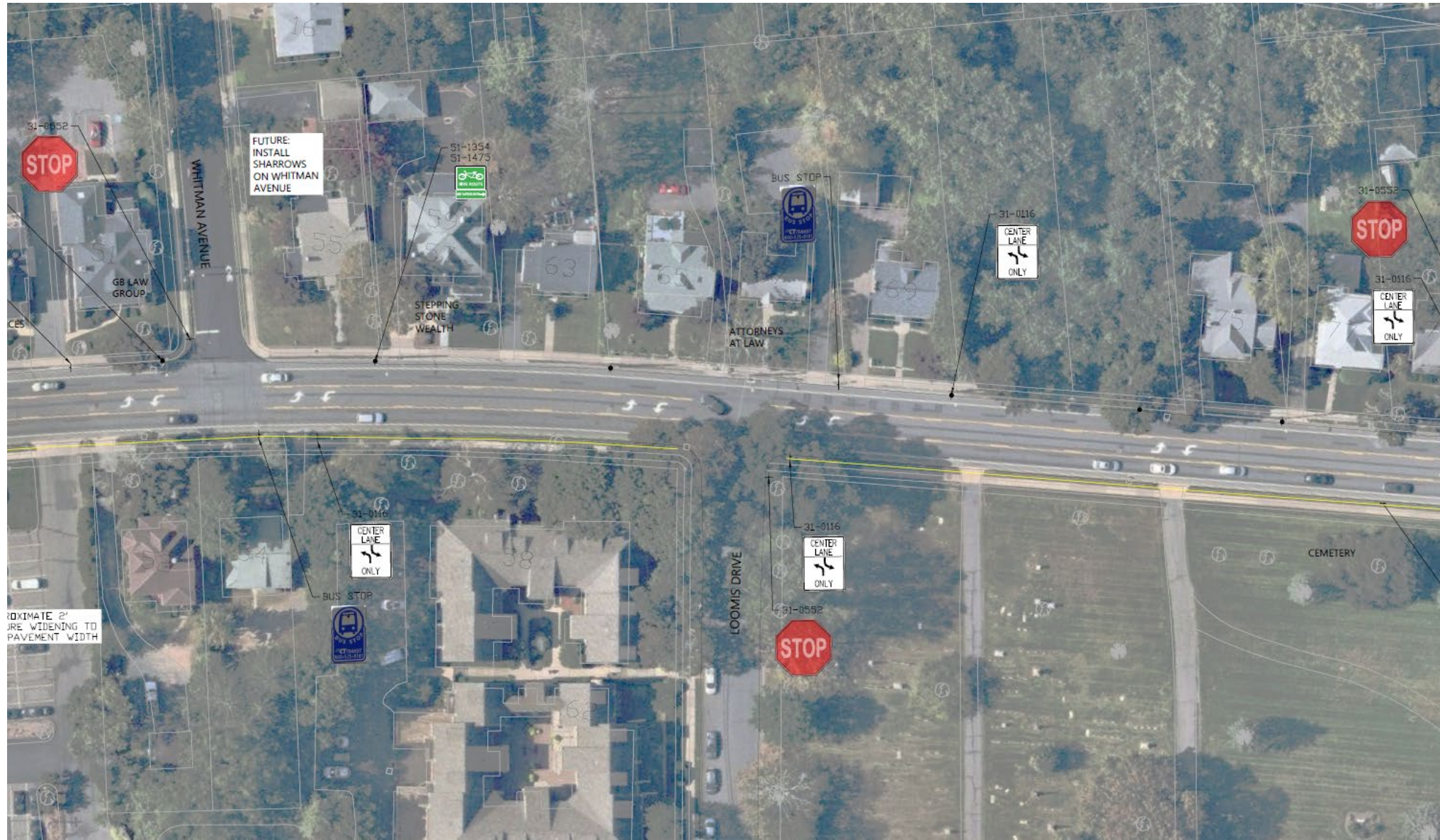
SPEED LIMIT 30

CENTER LANE ONLY

BEGIN

APPROXIMATE 2' FUTURE WIDENING TO 42' PAVEMENT WIDTH

Project Roll Plan – Aerial Map Showing Road Diet



[illegible]

[illegible]

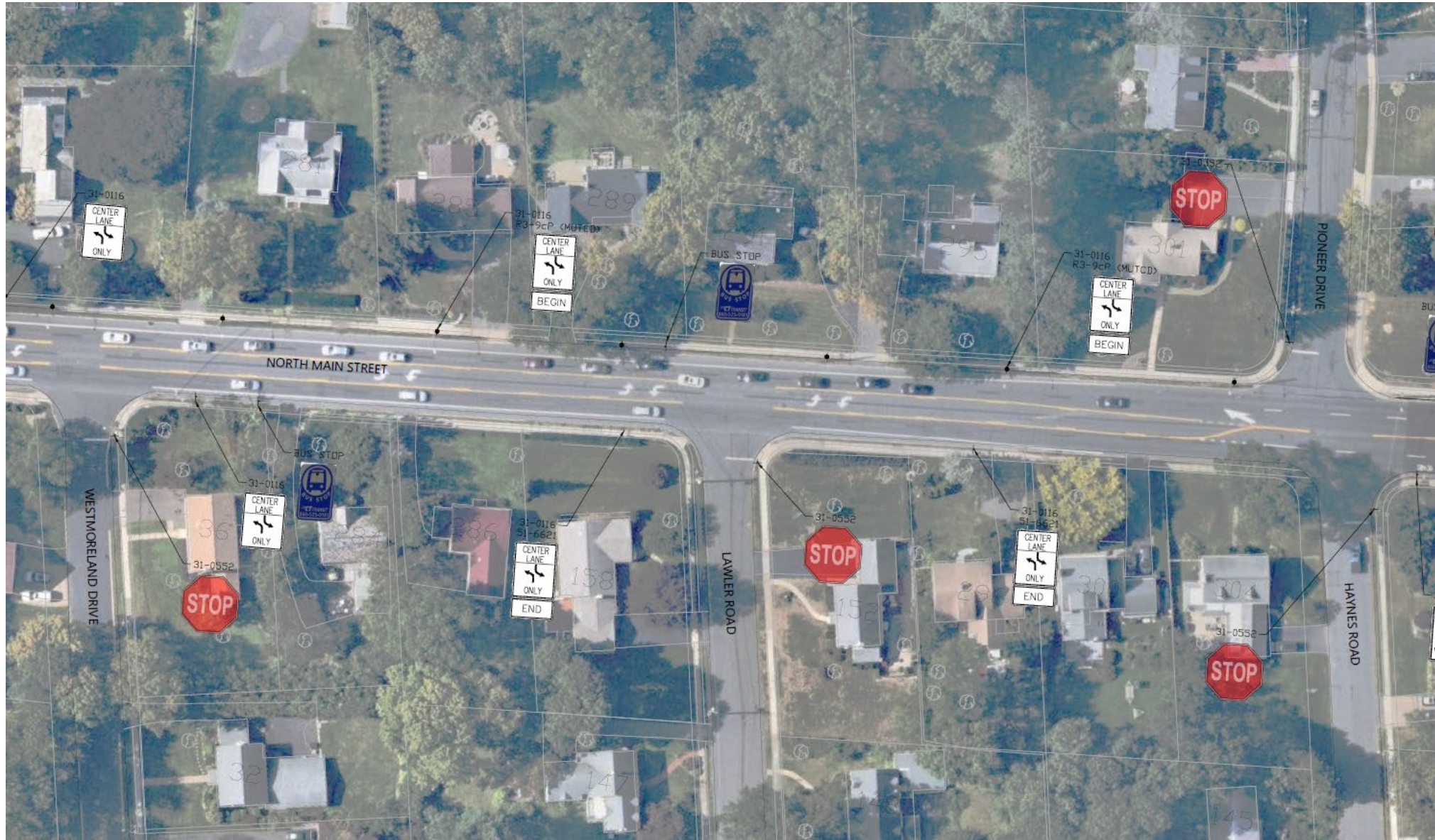
Project Roll Plan – Aerial Map Showing Road Diet







Project Roll Plan – Aerial Map Showing Road Diet



Project Roll Plan – Aerial Map Showing Road Diet



Next Steps

- Compile Public Information Meeting Comments
- Draft Report
- Town Council Presentation May 24
- **Finalize Recommendations - May**
- Project website: www.westhartford.gov/roaddiet
- Project email: roaddiet@westhartfordct.gov