



Elm Square Safety Forum #4



April 10, 2025



Introduction & Agenda

- Summary of completed safety action items
- Summary of current planning and design tasks
- Review of updated intersection alternatives
- Questions & comments
- Looking Ahead to Next Steps

Email Questions & Comments To:
Elmsquaresafety@andoverma.us



Key Speakers & Available Resources



- Andrew Flanagan – Town Manager
- Michael Lindstrom – Deputy Town Manager
- Patrick Keefe - Police Chief
- Glen Ota – Safety Officer
- Janet Nicosia – Town’s Director of Facilities
- Carlos Jaquez, PE – Town’s Director of Public Works
- Arthur Martineau, PE – Town Engineer
- Joseph Assenza – Asst. Town Engineer
- Paul Materazzo, Town’s Director of Planning & Land Use
- Monica Gregoire, AICP – Associate Planner
- Kevin Dandrade, PE, PTOE – TEC, Inc.
- Samuel Gregorio, PE, PTOE, RSP – TEC, Inc.
- Rebecca Dean – TEC, Inc.



Where We Have Been



May 2023

Initial TEC Field Work & Data Collection

June 8, 2023

Elm Square Safety Forum #1

June 26, 2023

TEC-led Road Safety Audit

August 7, 2023

Elm Square Safety Forum #2

Fall 2023

Short-Term Improvements Implemented

Spring 2024

Topographic Survey

Summer 2024

Mid-to-Long Term Conceptual Design Development

October 9, 2024

Elm Square Safety Forum #3 with Public Feedback on Alternatives

Winter '24-'25

Narrowing-in on Conceptual Designs Alternatives & Truck Data Collection

March 12, 2025

Collaboration with MassDOT on Final Alternatives

April 10, 2025

Elm Square Safety Forum #4



Implemented Short-Term Improvements

- Received MassDOT approval and implemented immediate action items in Fall 2023:
 - Converted to exclusive pedestrian phase
 - Converted N. Main Street to a single southbound through lane entering downtown with an exclusive left-turn lane to Elm Street
 - Adjusted stop line locations on Elm Street
 - Added 'No Turn on Red' signs on Main Street / N. Main Street
 - Optimized traffic signal timings
 - Improved sight lines from High Street stop line
 - Relocated Central Street crosswalk from Essex Street further west

Long-Term Planning & Design Goals



Design goals:

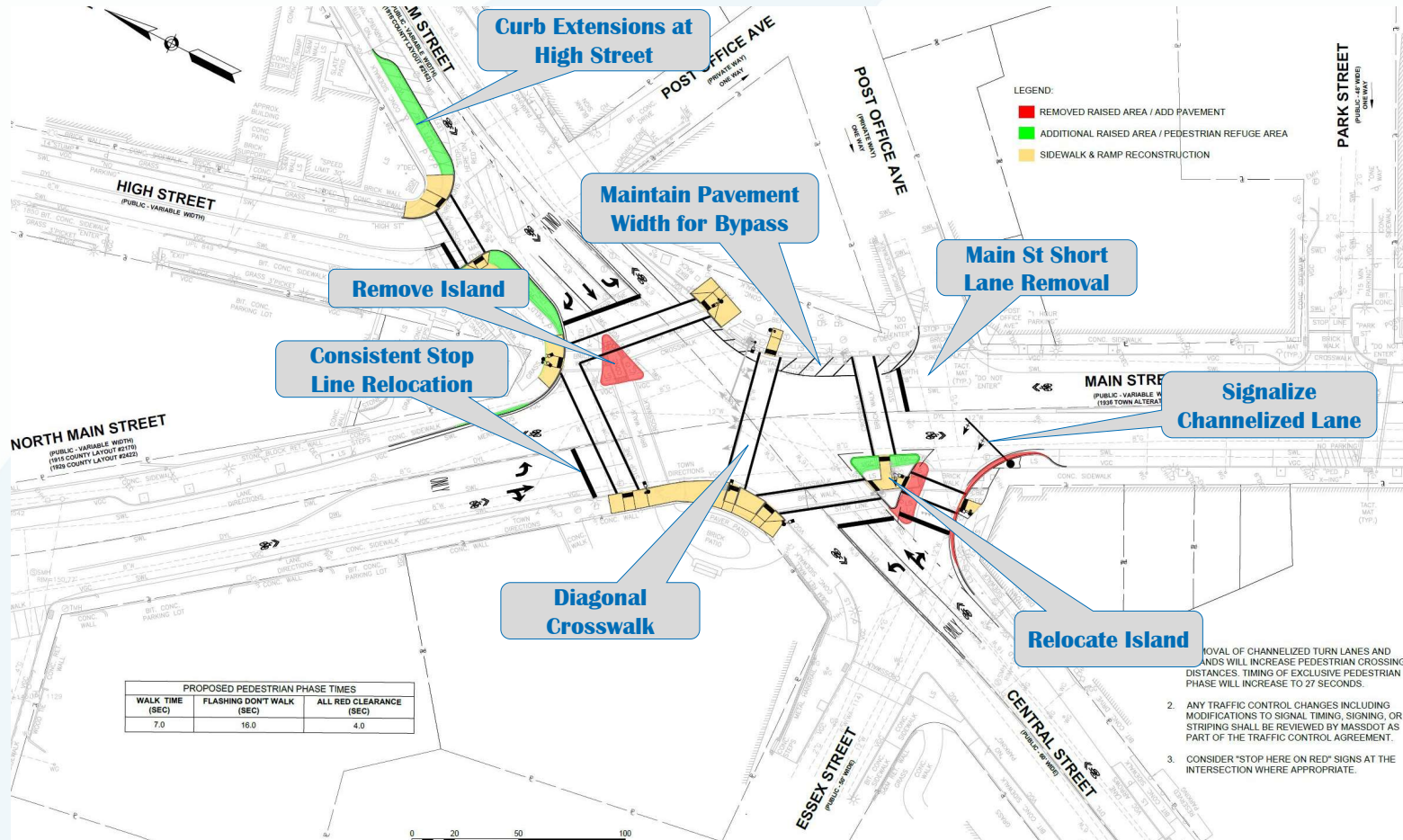
- Improve pedestrian access and safety. All alternatives will:
 - Maintain exclusive pedestrian phasing
 - Introduce a new diagonal crosswalk
 - Seek to minimize pedestrian exposure within the intersection
- Maintain or improve accommodations for safe truck movements
- Maximize/expand sidewalk areas where possible
- Alert drivers to the presence of bicyclists
- Minimize vehicle conflict areas and backups over crosswalk areas
- Maintain a reasonable level of vehicular traffic delays on each approach

Original 6 Alternatives (Public Forum #3)

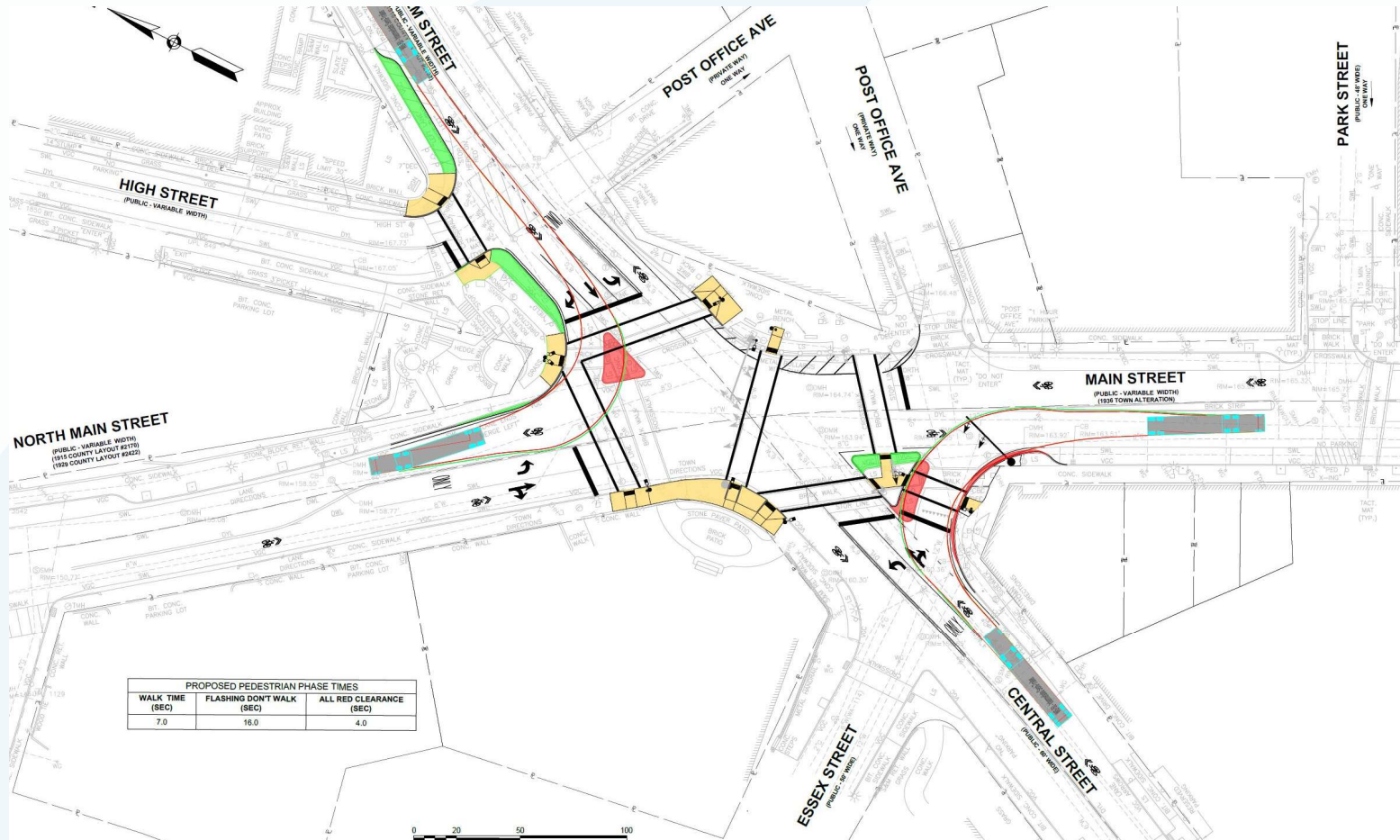


- Alternative A - Signalization both channelized right-turn lanes while generally retaining the overall intersection geometrics.
- Alternative B - Signalization of both channelized right-turn lanes w/ shift of islands to improved HV turning capabilities.
- Alternative C - Removal of both channelized right-turn lanes w/ current approach lane cross-section (long crossing distances).
- Alternative D1 – Removal of both channels w/ removal of Elm Street WB right turn lane & Main Street NB outer lane (by curbing adjustment).
- Alternative D2 – Removal of both channelized right-turn lanes w/ current approach lane cross-section (long crossing distances) & Main Street NB outer lane (by pavement marking).
- Alternative D3 – A hybrid alternative that removed the Elm St WB channelized right-turn lane while maintaining the Central St EB right-turn lane and island.

NEW Alternative #1 (formerly Alt D3)



NEW Alternative #1 – Truck Movements



NEW Alt #1 – Advantages & Disadvantages



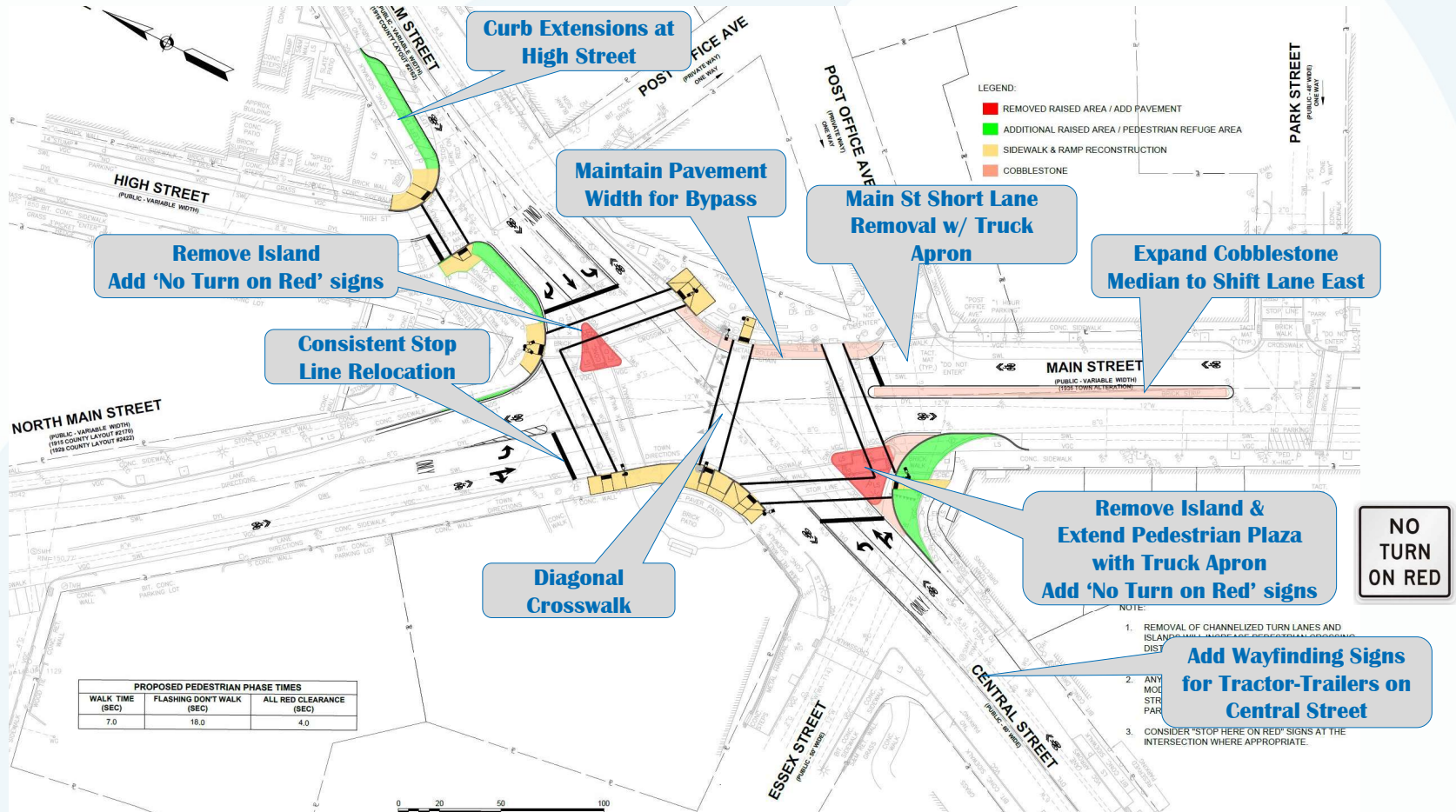
Advantages

- Creates a one-stage pedestrian crossing to cross Elm St and N. Main St approaches.
- Signalizes pedestrian crossing across Central St channelized right-turn.
- Introduces diagonal crosswalk at key desire line from Oyster Co. ↔ Library
- Exclusive pedestrian time increases only **6 secs** [Elm Street 70' crosswalk controls]
27 sec total pedestrian phase needed
- Improves truck turning right from Central St to Main St SB & Elm St to North Main St
 - SU-40 | Fire | WB-50 – **No encroachment**
- Minimal need for re-laid brick crosswalks

Disadvantages

- Maintains two-stage pedestrian crossing to cross Central St and Main St approaches.
[Pedestrian delay = more than one cycle]
- Traffic Level of Service degrades slightly to LOS E *[just above D/E now]*
 - AM - Main St northbound lane reduction increases Main St delay
 - AM - Main St southbound delay increase due to increase ped time per cycle
 - PM – Central St delay increase due to increase ped time per cycle

NEW Alternative #2 (formerly Alts C, D3)

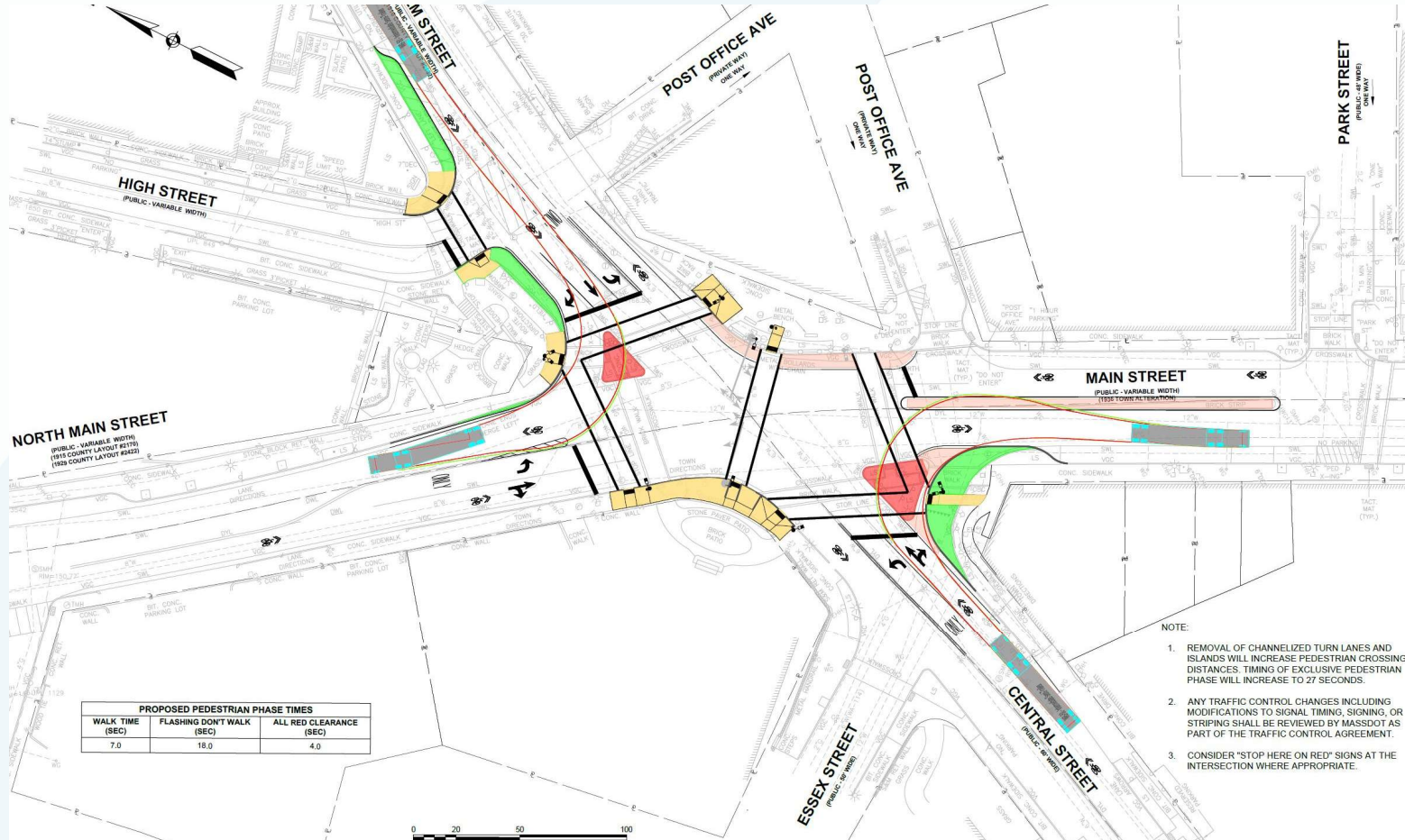


Alt #2 – Heavy Vehicle Breakdown



Date	#	Time	Type	Company	From
Tuesday, February 4, 2025	1	5:05:01 AM	Front End Loader	DPW	Behind Church Lot
Tuesday, February 4, 2025	2	5:08:51 AM	Front End Loader	DPW	Behind Church Lot
Tuesday, February 4, 2025	3	5:08:56 AM	Dump Truck	DPW	Brook Street
Tuesday, February 4, 2025	4	5:12:56 AM	Front End Loader	DPW	Behind Church Lot
Tuesday, February 4, 2025	5	5:18:44 AM	Front End Loader	DPW	Behind Church Lot
Tuesday, February 4, 2025	6	5:28:43 AM	Front End Loader	DPW	Behind Church Lot
Tuesday, February 4, 2025	7	6:44:47 AM	18 Wheeler Semi	CVS Health	Brook Street
Tuesday, February 4, 2025	8	6:49:38 AM	Front End Loader	DPW	Behind Church Lot
Tuesday, February 4, 2025	9	6:52:45 AM	Front End Loader	DPW	Behind Church Lot
Tuesday, February 4, 2025	10	6:57:33 AM	Front End Loader	DPW	Behind Church Lot
Tuesday, February 4, 2025	11	7:03:19 AM	Front End Loader	DPW	Behind Church Lot
Tuesday, February 4, 2025	12	7:22:44 AM	Front End Loader	DPW	Behind Church Lot
Tuesday, February 4, 2025	13	7:28:08 AM	Front End Loader	DPW	Behind Church Lot
Tuesday, February 4, 2025	14	7:33:59 AM	Front End Loader	DPW	Behind Church Lot
Tuesday, February 4, 2025	15	9:24:35 AM	Large Van	Crown Uniform and Linen	Central Street NB
Tuesday, February 4, 2025	16	9:28:17 AM	Large Box Truck	Manoney Enviromental	Central Street NB
Tuesday, February 4, 2025	17	10:05:31 AM	Shuttle Bus	MEVA Transit	Brook Street
Tuesday, February 4, 2025	18	11:19:26 AM	18 Wheeler Semi	A. DuiePyle	Brook Street
Tuesday, February 4, 2025	20	11:45:00 AM	Box Truck	Kinnearley Quality Treats	27 Main Street Rear Lot
Tuesday, February 4, 2025	21	12:32:25 PM	Shuttle Bus	MEVA Transit	Brook Street
Tuesday, February 4, 2025	22	1:43:44 PM	Shuttle Bus	MEVA Transit	Brook Street
Tuesday, February 4, 2025	23	2:50:56 PM	Shuttle Bus	MEVA Transit	Brook Street
Tuesday, February 4, 2025	24	4:05:16 PM	Shuttle Bus	MEVA Transit	Brook Street
Wednesday, February 5, 2025	25	8:00:29 AM	Sewage Tanker Truck	Waynes Drains	Central Street NB
Wednesday, February 5, 2025	26	8:45:38 AM	Large Box Truck	Baldor	27 Main Street Rear Lot
Wednesday, February 5, 2025	27	9:08:35 AM	Dump Truck	Masonry	Central Street NB
Wednesday, February 5, 2025	28	10:06:45 AM	Mail Truck	USPS	27 Main Street Rear Lot
Wednesday, February 5, 2025	29	10:17:41 AM	Shuttle Bus	MEVA Transit	Central Street NB
Wednesday, February 5, 2025	30	11:17:11 AM	Plow Dump Truck	DPW	Brook Street
Wednesday, February 5, 2025	31	11:25:32 AM	Shuttle Bus	MEVA Transit	Central Street NB
Wednesday, February 5, 2025	32	12:34:02 PM	Shuttle Bus	MEVA Transit	Brook Street
Wednesday, February 5, 2025	33	1:35:08 PM	Large Box Truck	WB Mason	27 Main Street Rear Lot
Wednesday, February 5, 2025	34	1:46:58 PM	Shuttle Bus	MEVA Transit	Brook Street
Wednesday, February 5, 2025	35	3:00:14 PM	Shuttle Bus	MEVA Transit	Brook Street
Wednesday, February 5, 2025	36	3:21:27 PM	Garbage Truck	Republic Services	Brook Street
Wednesday, February 5, 2025	37	4:10:16 PM	Shuttle Bus	MEVA Transit	Central Street NB

NEW Alternative #2 – Truck Movements



NEW Alt #2 – Advantages & Disadvantages



Advantages

- Alt #1 & Alt #2 have negligible vehicular traffic operation differences.
- Creates a one-stage pedestrian crossing for **ALL** crossing locations.
- Introduces diagonal crosswalk at key desire line from Oyster Co. ↔ Library
- Improves or maintains truck turning right from Elm St to North Main St
 - SU-30 | SU-40 | Fire – **No encroachment**
 - WB-50 - **minimal encroachment**
- Exclusive Pedestrian Time increases only **8 secs** [Elm Street 70' crosswalk controls]
29 sec total pedestrian phase needed

Disadvantages

- Constricts ability for WB-50 to navigate Central St to Main St – **Purposefully**
- Traffic Level of Service (LOS) degrades slightly to LOS E [*just above D/E now*]
 - AM - Main St northbound lane reduction increases Main St delay
 - AM - Main St southbound delay increase due to increase ped time per cycle
 - PM – Central St delay increase due to increase ped time per cycle [not slip lane related]

Where Are We Going



April 10, 2025

Elm Square
Safety Forum #4

Late Spring 2025

Town Conceptual
Approval

Spring to Fall 2025

TEC Plans, Specs,
& Estimate w/
MassDOT Review
& Traffic Control
Agreement

Winter 2025-2026

Project
Advertisement &
Bidding

Spring/Summer 2026

Construction



Thank you!

TheEngineeringCorp.com

Email Questions & Comments To:
Elmsquaresafety@andoverma.us

