

## TOWN COUNCIL — AGENDA REQUEST FORM THIS FORM WILL BECOME PART OF THE BACKGROUND INFORMATION USED BY THE COUNCIL AND PUBLIC

Please submit Agenda Request Form, including back up information, 8 days prior to the requested meeting date. Public Hearing requests must be submitted 20

days prior to the requested meeting date to meet publication deadlines (exceptions may be authorized by the Town Manager, Chairman/Vice Chair).

MEETING INFORMATION							
Date Submitted: December 1, 2023		Date of Meeting: December 8, 2023					
Submitted by: Dawn Tuomala	-	Time Required: 20 Minutes					
Department: Public Works		Background Info. Supplied: Yes	No $\square$				
Speakers: Dawn Tuomala		Buckground into. Supplied. 145 🖂	110				
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Appointment:		Recognition/Resignation/Retirement:					
Public Hearing:		Old Business:					
New Business:		Consent Agenda:					
Nonpublic:		Other:					
Nonpaone.		TITLE OF ITEM					
Determination if Traffic Signs			2 Interception				
Determination if Traffic Signa	-	e installed at the Wire Road/US Rte	s intersection				
DESCRIPTION OF ITEM							
Determination as to whether the design should include Traffic Lights at the intersection of Wire Road and US Route 3 Intersection.							
		THE RESERVE TO SERVE THE PARTY OF THE PARTY					
	REF	ERENCE (IF KNOWN)					
RSA:	REF	Warrant Article:	400 300				
RSA: Charter Article:	Ref						
	REF	Warrant Article:	XX				
Charter Article: Other:		Warrant Article: Town Meeting:	XX				
Charter Article: Other:		Warrant Article: Town Meeting: N/A:	XX				
Charter Article: Other:  EQUIPMENT R		Warrant Article: Town Meeting: N/A: (PLEASE PLACE AN "X" IN THE APPROPRIATE BOX)	XX				
Charter Article: Other:  EQUIPMENT R Projector:		Warrant Article: Town Meeting: N/A:  (PLEASE PLACE AN "X" IN THE APPROPRIATE BOX)  Grant Requirements:	XX				
Charter Article: Other:  EQUIPMENT R Projector: Easel:		Warrant Article: Town Meeting: N/A:  (PLEASE PLACE AN "X" IN THE APPROPRIATE BOX) Grant Requirements: Joint Meeting:	XX				
Charter Article: Other:  EQUIPMENT R Projector: Easel: Special Seating:	REQUIRED	Warrant Article: Town Meeting: N/A:  (PLEASE PLACE AN "X" IN THE APPROPRIATE BOX)  Grant Requirements: Joint Meeting: Other:	XX				
Charter Article: Other:  EQUIPMENT R Projector: Easel: Special Seating:	CONT	Warrant Article: Town Meeting: N/A:  (PLEASE PLACE AN "X" IN THE APPROPRIATE BOX) Grant Requirements: Joint Meeting: Other: None:					
Charter Article: Other:  EQUIPMENT R Projector: Easel: Special Seating: Laptop:	CONT	Warrant Article: Town Meeting: N/A:  (PLEASE PLACE AN "X" IN THE APPROPRIATE BOX) Grant Requirements: Joint Meeting: Other: None:  **ACT Information**					
Charter Article: Other:  EQUIPMENT R Projector: Easel: Special Seating: Laptop:  Name: Dawn Tuomal	CONT	Warrant Article: Town Meeting: N/A:  (PLEASE PLACE AN "X" IN THE APPROPRIATE BOX) Grant Requirements: Joint Meeting: Other: None:  **ACT Information** Address: 6 Baboosic Lake					
Charter Article: Other:  EQUIPMENT R Projector: Easel: Special Seating: Laptop:  Name: Dawn Tuomal	CONT	Warrant Article: Town Meeting: N/A:  (PLEASE PLACE AN "X" IN THE APPROPRIATE BOX) Grant Requirements: Joint Meeting: Other: None:  **ACT INFORMATION** Address: Email Address: dtuomala@merr					

07/06





## TOWN OF MERRIMACK INTER-DEPARTMENT COMMUNICATION

**DATE:** December 1, 2023 **AT (OFFICE):** Department of Public Works

To:

Paul Micali,

**Town Manager** 

FROM:

Dawn B. Tuomala, PE, LLS, CWS

**DPW Director** 

**SUBJECT:** 

Wire Road/US Route 3 Intersection Project

Requesting approval for the Design and Installation of Traffic Lights

The project has been given to go ahead by NH Department of Transportation (NH DOT) to proceed with the Design Plans and Specifications of the relocation of Wire Road Intersection with US Route 3 (Daniel Webster Highway). In order to better facilitate the design of the project we are requesting that a formal determination/motion be made by the Town Council recommending that the signalization be designed and installed during the construction of the project. The Options are as follows:

Option 1: Allowing the signalization to occur during the project; the State will pick up 80% of the costs for the lights and the Town's portion will be 20%. If we were to wait until a later time period, then the Town will pick up the entire cost instead of the 20%.

Option 2: Only putting in the underground conduits/pads for a future installation of Traffic Lights. This will result in the Town paying 100% of the lights in the future and also having to construct the entrance into the MYA building. The State will not allow the for the fourth leg of the intersection to be made if the lights are not installed.

The engineer has put together the following technical recommendations:

- Satisfies the requirements of MUTCD 8-Hour and 4-Hour Volume Warrants with unadjusted traffic volumes (not reducing the Wire Road volume to account for the effect of Right Turns on Red under signal control).
- Satisfies the requirements of MUTCD 4-Hour Volume Warrant based on the option that allows
  the major street left turn volume (Route 3 NB left turn) to be considered the minor street
  volume conflicting with the opposing traffic (Route 3 SB through movement).
- Based on expected future traffic volumes, the Wire Road approach will operate at Level of Service (LOS) F conditions during the AM and PM peak hours if left unsignalized. A coordinated signalized system would operate an overall level of service D.
- A new driveway connection to the Merrimack Youth Association (MYA) can be incorporated
  into the intersection to provide safer maneuvers from the driveway. The driveway connection is
  not recommended if the intersection is not signalized.
- Queue lengths reduced overall with a coordinated signal system.

- Overall operations and traffic flow along the corridor between Front Street and the CVS
  driveway will improve with a traffic signal at the Wire Road intersection since the signals can be
  coordinated the overall delay along Route 3 will be reduced (see attached tables 6 and 10 for
  delay comparison). Proper coordination cannot be implemented today since the distance
  between Front Street and Baboosic Road is too great to do so.
- Allows for the implementation of safe pedestrian crossing movements. This is critical because
  the project will provide new sidewalks along both sides of Route 3 and safe connections to MYA
  and Twin Bridge Park.
- Signal coordination can reduce excessive speed through the intersection. 85<sup>th</sup> percentile speed is 42 MPH and posted speed limit is 35 MPH.
- Signal control can accommodate unexpected future traffic conditions such as new nearby development.
- As part of the cost sharing LPA program, DOT would pay for 80% of the cost for signal installation. Signal equipment cost is increasing and will cost more in the future.
- Total 2023 project cost for the option 1 is \$1,660,000 with signal installation. Without signal installation, option 2 is \$1,350,000.

Should you have any	questions please	let me know
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Thank you for your help in this matter.

Dawn

CC: File

