MONTAGUE CAPITAL IMPROVEMENTS COMMITTEE

MEETING AGENDA

Meeting Accessible via Zoom Only

https://us02web.zoom.us/j/7415198772 or Phone: (646) 558-8656

Meeting ID: 741 519 8772 PassCode: 1754

Wednesday, March 29, 2023 from 3:15 to 4:45 pm

Votes May Be Taken

1. Call to Order and Approve any outstanding meeting minutes: 3/1/23, 3/8/23

2. Review and Consider Recommendation of Capital Requests for FY24 Annual Town Meeting:

   - Department of Public Works request for $100,000 for 11th Street Bridge Repairs

3. Consider amending Annual Town Meeting Report to reflect 11th Street Bridge Repair Project

4. Capital Plan:
   1. Initial review of 6 year capital needs schedule
   2. Approach and schedule for stakeholder engagement

5. Consider identification of potential ARPA funded capital projects from the Capital needs schedule

6. Topics not anticipated in the 48 hour posting requirements

7. Establish next meeting date(s)

8. Adjournment

The Town of Montague is an equal opportunity provider and employer

Annual Town Meeting

SPECIAL ARTICLE REQUEST – CAPITAL EXPENSE

Budget Year
FY 24

This form is intended for use with capital article submissions ≥ $25,000 with a lifespan of 5+ years. *For major building projects, please consult the Town Administrator.*

Please complete this form in its entirety! Initial Submission due November 1

Department:	MONTAGUE DPW	Submitted by:	Tom Bergeron
Item/Project Cost:	$100,000	Date Prepared:	March 15, 2023
Item/Project Title:	11th Street Bridge Repairs		

Proposed Article Wording:

To see if the Town will vote to raise and appropriate, transfer from available funds, borrow, or otherwise provide the sum of **$100,000** or any other amount, for the purpose of making repairs to the 11th Street Bridge, including any and all incidental and related costs, or pass any vote or votes in relation thereto.

Detailed Description for Background Materials: (*Provide a full description of the item or service. Use attachments as needed.)*

The 11th Street Bridge is a town-owned bridge over the Turners Falls Power Canal that connects the Patch Neighborhood to Avenue A. In October of 2022, MassDOT, as part of their routine inspection cycle identified a structural deficiency in the bridge relating to the bearings under the floor beams of the bridge. The report rates the finding as 'as soon as possible' urgency. In response, the town hired the engineering firm Weston and Sampson to evaluate the condition and identify a course of action for the town. The engineer recommends a schedule of short-term repairs which include the following:

- replacing damaged bolts at the connection between the floor beam and stringer connection plate
- repairs to sheared anchor bolts at the West Pier's floor beam
- Concrete repair at bridge piers and sidewalk
- Welding repairs to hand rail system
- Replace bolts at handrail land truss systems

The Special Article request will cover the cost to engineer the repairs and secure a qualified bridge construction firm to execute the short term repairs identified in the Weston and Samson report dated 2/24/23. The work will be fast tracked to be completed in the summer 2023 construction season.

	Enter response
Have you received an estimate as a basis for cost? (yes/no)	**Yes, Engineer's OPCC 2/24/2023**

- *If yes, please attach estimate*

Are grant or other funds available to offset cost? (yes/no)	No
Is there a lease option for this expense? (yes/no)	No
Will this item or project replace old equipment? (yes/no)	NO
If replacement, estimate surplus value:	**$**
Will it create other ongoing costs or savings? (yes/no)	No

Why is it essential that the Town makes this investment now?

MassDOT has directed the town to address the structural deficiency "As Soon as Possible". Failure to act within the budget cycle risks the imposition of weight restrictions or closure of the bridge. Approval at Annual Town Meeting is timely because certain concrete repairs need to be accomplished during the annual canal drawdown in September. The work will have to be carefully timed with that annual window. Further, MassDOT has programmed $60M to replace 3 nearby bridges in FY26 including a replacement of the 6th Street Bridge to the Patch neighborhood. Strategically, it is important to shore up the reliability of the 11th Street Bridge prior to the reconstruction of the 6th Street Bridge.

The Weston and Sampson bridge evaluation recommends some long term repairs to be made to the bridge which are not being advanced under the current special article request. The Town anticipates engaging in conversations with MassDOT about having the state program funds to address those long term repairs, of which the most significant need is to re-paint the bridge.

Relative Priority

Your assessment of the how important this is to the Town at the present time.

Critical Importance	Highly Important	Moderately Important
X	O	O

If submitting more than one request, where does this stand as a priority relative to the others you are submitting?

First	Second	Third	Fourth or Lower
O	O	O	O

Comments:

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Final recommendation of Capital Improvements Committee: O Support O Not Support

Comments on Recommendation:

712 Brook Street, Suite 103, Rocky Hill, CT 06067
Tel: 860.513.1473

February 24,2023

Mr. Walter Ramsey
Assistant Town Administrator
Town of Montague, MA.
1 Avenue A
Turners Falls MA. 01376

For Review
02/24/2023 2:49:10 PM

Re: Eleventh Street Bridge over Utility Canal – Town of Montague, MA

Dear Mr. Ramsey:

Weston & Sampson (WSE) has been contracted to perform a limited visual inspection, along with a review of existing documents, MassDOT inspection reports to provide the Town of Montague an engineering evaluation of the condition of Bridge M-28-017 of Montague, MA; which is a Multi-thru Truss Bridge caring Eleventh Street over Utility Canal.

Project Description

The bridge is a three-span continuous superstructure consisting of four (4) thru-trusses, ten (10) floor beams, eight (8) stringers at the sidewalks (4 supporting each sidewalk) and six (6) stringers supporting the roadway. The overall width of each sidewalk is 7'-6", while the roadway width is 28'-6" for two lanes of travel and two shoulders. The overall bridge length is 194'-6". The trusses are supported by elastomeric bearings while the stringers and floor beams at the piers are pinned to the concrete with anchor bolts. All stringer ends in the last bays are encapsulated in concrete at the abutment face. The bridge deck is cast-in-place (CIP) concrete with stay-in-place (SIP) Forms. The substructure consists of the West and East Abutments that are CIP concrete along with two sets of Pier Columns. Each set of pier columns support the last corresponding floor beam along with the stringers from the sidewalk and the elastomeric bearing of the Truss. There is a utility gas main cantilevered off the north side of the structure that runs the entire bridge length and overhead communication utilities that are supported on the south side of the structure.

Existing Condition

The 2020 Inspection Report, 2008 Load Rating, and 2023 WSE review provided information of current structural and safety deficiencies. Throughout the structure, there are missing and loose bolts in the handrail system, truss connection plates and connection plates between floor beams and stringers. In addition, there are several locations of steel cracks at the handrail system and concrete spalls at the concrete deck and piers. At the west pier, both anchor bolt connections at the floor beam have sheared and no longer have a positive connection to the structural member. There are several locations that have documented pack rust in the truss system. Underneath the bridge deck, the SIP forms are rusted, and some are starting to fall out of their original position. Stringers at the Pier show minor section loss on the top and bottom flanges at floor beam connection locations. The paint system on the trusses and handrail system is in fair condition; even though per previous documentation the structure was last painted in 1996. Due to the structural cracks in the handrails, the existing pedestrian handrail system is not completely structurally sound. There is an over 1/2" difference in elevation between the sidewalks on the bridge and the sidewalk approaches. The vehicular approach has several patches and raveled asphalt.

Recommendations

Weston & Sampson has reviewed the MassDOT inspection reports and have performed a limited visual inspection of the bridge structure to determine short and long term repairs to the existing thru-truss bridge structure.

Short term repairs should include steel repairs to address existing damages at the handrails system, concrete patches to address spalls throughout the superstructure sidewalks and the concrete piers, replacement of missing and damaged bolts along the handrail system, replace sheared or damaged bolt within the Truss system, replace

damaged bolts at the connection between floor beam and stringer connection plate and repairs to sheared anchor bolts at West Pier's Floor beam.

Long term repairs should occur within the next five years to assure longevity of the bridge which includes sandblast and painting of the superstructure; milling and paving of the vehicle approaches, bridge roadway and the sidewalk approaches. Resetting sidewalk curbs as required to ensure no difference in elevation for safety concerns. Sounding of the bridge roadway and sidewalk deck should be performed to determine if there is no hollow areas or other concrete issues on the underside of deck. Additional superstructure steel repairs will be required during the sandblasting and painting process due to advanced section losses that can be found and were documented in the MassDOT inspection report.

Opinion of Probable Construction Costs

The approximated probability of construction costs for the rehabilitation of the Multi-thru Truss Eleventh Street Bridge are as follows:

The short term grand total cost is $105,700.00.

The long term grand total cost is $2,469,000.00.

Sincerely,

WESTON & SAMPSON ENGINEERS, INC.

Peter Grandy
Technical Structural Lead Engineer

APPENDIX A

Pictures

Weston & Sampson	PHOTOGRAPHIC LOG	
Client Name: **Town of Montague**	**Site Location:** **Eleventh Street Bridge over Utility Canal** **Town of Montague, MA**	**Project No.** **ENG23-0132**

Photo 1	**Date: 2/06/23**

Description:
East Approach of Bridge (looking East)

Note: Overhead utilities on South side of bridge, cantilevered utility gas main on North side of bridge, Raveling and cracks at asphalt approach with vegetation growth along approach curbing

Photo 2	**Date: 2/6/23**

Description:
North Truss (outer) (east end) upper rail (looking North)

Note: Cutout of top rail around truss diagonal, crack at top rail, peeling paint, surface rust

Weston & Sampson	PHOTOGRAPHIC LOG	
Client Name: **Town of Montague**	**Site Location:** **Eleventh Street Bridge over Utility Canal** **Town of Montague, MA**	**Project No.** **ENG23-0132**

Photo 3	**Date: 2/6/23**

Description:
South Truss (outer) west end handrail upper rail.

Note: missing bolts at top rail, peeling paint, surface rust

Photo 4	**Date: 2/6/23**

Description:
Outer North Truss Mid Bracing of diagonals @ diagonal flange angle

Note: Section Loss and pack rust at angle at mid-connection at diagonal, peeling paint

Weston & Sampson	PHOTOGRAPHIC LOG	
Client Name: **Town of Montague**	**Site Location:** **Eleventh Street Bridge over Utility Canal** **Town of Montague, MA**	**Project No.** **ENG23-0132**

Photo 5	**Date: 2/6/23**

Description:
North sidewalk approach (west side)

Note: Up to ½" difference in elevation between bituminous approach walkway and bridge sidewalk, cracking and patching of existing asphalt

Photo 6	**Date: 2/6/23**

Description:
West Pier North side spall at Interior Stringer 3 and 4

Note: spalled concrete, exposed and rusted rebar, deformed anchor bolts

Weston & Sampson	PHOTOGRAPHIC LOG	
Client Name: **Town of Montague**	**Site Location:** **Eleventh Street Bridge over Utility Canal** **Town of Montague, MA**	**Project No.** **ENG23-0132**

Photo 7	**Date: 2/6/23**

Description:
West Pier North side at Floor beam seat

Note: Anchor bolt is sheared and there is no positive connection between floor beam and substructure

Photo 8	**Date: 2/6/23**

Description:
West Pier South side of column

Note: concrete spalls, concrete patch to substructure corner and existing riprap

Weston & Sampson	PHOTOGRAPHIC LOG	
Client Name: **Town of Montague**	**Site Location:** **Eleventh Street Bridge over Utility Canal** **Town of Montague, MA**	**Project No.** **ENG23-0132**

Photo 9	**Date: 2/6/23**

Description:
West Pier Southside of Column Exterior Truss at Elastomeric Bearing

Note: concrete spall, rust and peeling paint on the superstructure and stringers, rusting SIP forms.

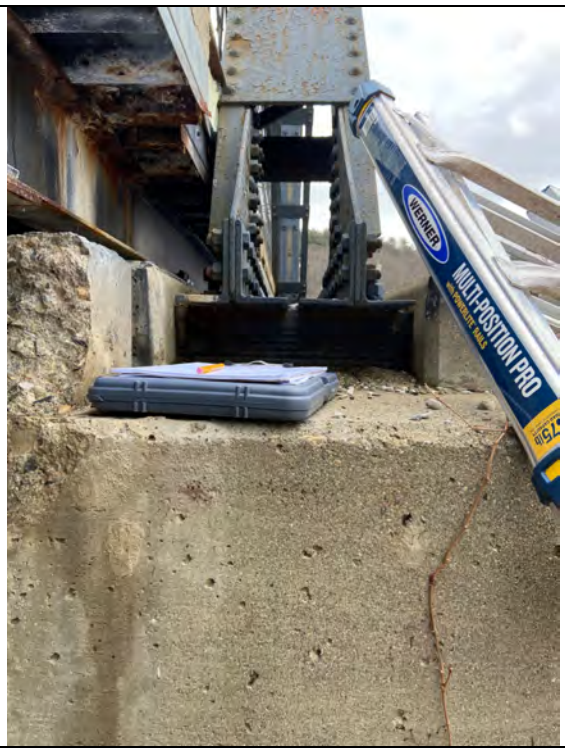

Photo 10	**Date: 2/6/23**

Description:
South Truss (outer) handrail (upper rail) (looking South) (East Side)

Note: crack at rail at cutout around truss, rust and peeling paint

APPENDIX B

Opinion of Probable Construction Costs

OPINION OF PROBABLE CONSTRUCTION COSTS

Eleventh Street Bridge Rehabilitation

Town of Montague, Massachusetts

Requested

Short Term Repairs					
Repair Description	Amount		Unit Cost		Repair Cost
Steel Repairs - Short Term	550	LBS	$50	\LBS	$27,500
Bolt Replacements (Handrail)	14	EA	$25	\EA	$350
Bolt Replacements (Truss System)	4	EA	$250	\EA	$1,000
Concrete Repairs	25	CF	$350	\CF	$8,750
Anchor Bolt Repairs	4	EA	$2,500	\EA	$10,000
Maintenance and Protection of Traffic	1	LS	$25,000	\LS	$25,000
Subtotal					$72,600.00
Continencies (20%)					$14,520.00
Engineering Fees					$18,580.00
Grand Total Cost					$105,700.00

To Be done in Future

Long Term Repairs					
Repair Description	Amount		Unit Cost		Repair Cost
ABS & Class 1 Containment	1	LS	$250,000	LS	$250,000
Paint	1	LS	$1,500,000	LS	$1,500,000
Reset Curbing	436	LF	$25	\LF	$10,900
Mill & Pave Sidewalk & Vehicle Approaches	2	Tons	$375	\Ton	$750
Bolt Replacements (Truss System)	200	EA	$250	\EA	$50,000
Steel Repair	2500	LBS	$40	\LBS	$100,000
Maintenance and Protection of Traffic	1	LS	$200,000	\LS	$200,000
Subtotal					$1,911,650.00
Continencies (20%)					$382,330.00
Engineering Fees					$175,020.00
Grand Total Cost					$2,469,000.00