

CONNECTICUT FEDERAL LOCAL BRIDGE PROGRAM

Fiscal Year 2018

PRELIMINARY APPLICATION

Hungary Road Bridge

Hungary Brook

Granby, CT

ConnDOT Bridge No. 05010new

Prepared for the
Connecticut Department of Transportation
Federal Local Bridge Program
Newington, Connecticut

August 2018

Table of Contents

1. Application
2. Existing Conditions
3. Proposed Description
4. Cost Opinion
5. Inspection Report



CONNECTICUT DEPARTMENT OF TRANSPORTATION



LOCAL BRIDGE PROGRAM

PRELIMINARY APPLICATION

Preliminary application is hereby made by the Town/City/Borough of Granby for possible inclusion in the Local Bridge Program for Fiscal Year **2019** for the following structure:

Bridge Location: 0.8 MILES North of Notch Road

Bridge Number: 055002 Structure Length: 27.2 feet Curb-to-Curb Width: 21.0 feet

Sufficiency Rating: 37.19 % Priority Rating: 35.19 %

Evaluation & Rating Performed by: State Forces Others

If Others, Name of Professional Engineer: Jay A. Costello

Connecticut Professional Engineers License Number: 13202

Engineering Firm: WMC Consulting Engineers

Engineer's Address: 87 Holmes Road, Newington, CT 06111

Engineer's E-mail Address: jcostello@wmcengineers.com

Description of Existing Condition of Structure: *(attach description)*

Description of Project Scope: A *(note Bridge Repair Code as per Figure 5-1 of the current Local Bridge Program Manual; attach narrative/preliminary plans & specifications).*

Name of Municipal Official to Contact: John Ward

Title: Town Manager Telephone: (860) 844-5300 Ext: Fax:

Mailing Address: 15 North Granby Road, Granby, CT 06035

E-mail: jward@granby-ct.gov

Anticipated Schedule:

(MM/DD/YYYY)

Public Meeting Conducted: 06/01/2019

Design Completion: 10/01/2019

Property Acquisition Completion: 11/01/2019

Utilities Coordination Completion: 10/01/2019

Construction Advertising: 12/01/2019

Supplemental Application Submission: 02/01/2019

Start of Construction: 04/01/2020

Completion of Construction: 11/30/2020

Local Bridge Program – FY 2019 Preliminary Application

Bridge Number 055002, Town/City/Borough of Granby

Preliminary Cost Figures:

Preliminary Engineering Fees (Include Breakdown of Fees)	\$ <u>175,000.00</u>
Rights-of-Way Cost (If applicable)	\$ _____
Municipally Owned Utility Relocation Cost	\$ _____
Estimated Construction Costs (Include Detailed Estimate)	\$ <u>1,614,000.00</u>
Construction Engineering (Inspection, Materials Testing)	\$ <u>242,100.00</u>
Contingencies (10% of Construction Costs Only)	\$ <u>161,400.00</u>
Total Estimated Project Cost	\$ <u>2,192,500.00</u>

Financial Aid Data:

NOTE: funding limited to Eligible Bridges as published at www.ct.gov/dot/localbridge or those found to be eligible in accordance with Section 2.3 – Priority Lists of the current Local Bridge Program Manual.

Federal Reimbursement:
Total Estimated Project Cost multiplied by 80%:
Federal Aid Request \$ _____

State Local Bridge Project Grant: (Cannot be combined with Federal reimbursement)
Total Estimated Project Cost multiplied by 50%:
Project Grant Request: \$ 1,096,250.00

Other Source of State or Federal funding received/applied for: \$ _____, State/Federal _____
Funding program: _____

I hereby certify that the above is accurate and true, to the best of my knowledge and belief. I also certify that this form has not been modified in any way from that distributed by the Department of Transportation for FY 2019.

Signature:  Date: 8/15/18

Name: John Ward Title: Town Manager
(Must be signed by Chief Elected Official, Town Manager, or other Officer Duly Authorized)

Return **original signed applications** to: Mr. Francisco T. Fadul, P.E.
Project Engineer for the Local Bridge Program
Connecticut Department of Transportation
2800 Berlin Turnpike, P.O. Box 317546
Newington, Connecticut 06131-7546

2. Existing Conditions

Inspection Report Summary Table

Item No.	Item	Rating	
58	Deck	N	Not Applicable
59	Superstructure	N	Not Applicable
60	Substructure	N	Not Applicable
61	Channel & Ch. Protection	7	Bank protection needs minor repairs. River control devices and embankment protection have little minor deficiency.
62	Culverts	3	Serious Condition
67	Structure Evaluation	4	Poor Condition, meets minimum tolerable limits to be left in place as is.
68	Deck Geometry	5	Fair Condition, somewhat better than minimum adequacy to tolerate being left in place as is.
	Sufficiency Rating	37.19%	
	Priority Rating	35.19%	

*See attached I.R. for reference.

3. Proposed Condition

According to the bridge rating on the ConnDOT Eligible Bridge List, the **Structure Evaluation** rating is 4 with a Sufficiency Rating of **37.19%** indicate that the bridge would likely warrant full replacement. Replacement would involve the following:

- Removal of existing bridge.
- M&P –Detour traffic.
- Install Precast Box Culvert, Parapets, Approach walls.
- Install new Bridge Rail, New Bearing Pads, MBR Guide Rail and end anchorages
- Reconstruct approximately 100 feet of roadway (50 feet each side of bridge)

Estimated construction cost for the work is \$ 1,614,000 a detailed estimate is provided on the following page.

Town of Granby
 Replacement of Hungary Bridge
 Over Hungary Brook
 WMC Reference No.:

Federal Project No.: -
 State Project No.: 055-New
 Date: August 3, 2018
 Prepared By: Edward Scoville

Preliminary Cost Opinion

ITEM NO.	ROADWAY ITEMS	UNIT	QUANT.	UNIT PRICE	TOTAL COST
0201214	A Clearing and Grubbing	L.S.	1	\$ 10,000.00	\$ 10,000.00
0202000	Earth Excavation	C.Y.	1105	\$ 26.00	\$ 28,730.00
0202529	Cut Bituminous Concrete Pavement	L.F.	95	\$ 6.25	\$ 593.75
0209001	Formation of Subgrade	S.Y.	1045	\$ 5.00	\$ 5,225.00
0212000	Subbase	C.Y.	290	\$ 60.00	\$ 17,400.00
0219001	Sedimentation Control System	L.F.	420	\$ 7.80	\$ 3,276.00
0304002	Processed Aggregate Base	C.Y.	225	\$ 60.00	\$ 13,500.00
0406002	Temporary Pavement	S.Y.	330	\$ 140.00	\$ 46,200.00
0406171	HMA S0.5	Ton	285	\$ 140.00	\$ 39,900.00
0406236	Material for Tack Coat	Gal.	295	\$ 10.00	\$ 2,950.00
0406275	A Fine Milling Of Bituminous Concrete (0" to 4")	S.Y.	80	\$ 7.00	\$ 560.00
0703010	A STANDARD RIPRAP	C.Y.	165	\$ 75.00	\$ 12,375.00
0751821	6" structure Underdrain	L.F.	65	\$ 35.40	\$ 2,301.00
0755013	GEOTEXTILE EROSION CONTROL CLASS A	S.Y.	245	\$ 6.20	\$ 1,519.00
0822001	Temporary Precast Concrete Barrier Curb	L.F.	200	\$ 34.80	\$ 6,960.00
0910170	Metal Beam Rail (Type R-B 350)	L.F.	210	\$ 23.40	\$ 4,914.00
0910173	R-B 350 Bridge Attachment - Vertical Shaped Parapet	Ea.	1	\$ 2,940.00	\$ 2,940.00
0910174	R-B 350 Bridge Attachment - Jersey Shaped Parapet	Ea.	2	\$ 2,852.00	\$ 5,704.00
0911923	R-B End Anchorage-Type I	Ea.	2	\$ 1,426.80	\$ 2,853.60
0912503	Remove Metal Beam Rail	L.F.	480	\$ 5.20	\$ 2,496.00
0925201	Pavement For Railing	S.Y.	90	\$ 51.00	\$ 4,590.00
0944001	Furnishing and placing Topsoil	S.Y.	1590	\$ 7.00	\$ 11,130.00
0950005	A Turf Establishment	S.Y.	1590	\$ 2.00	\$ 3,180.00
0959943	A Wetland Grass Establishment	S.F.	220	\$ 5.40	\$ 1,188.00
0969062	A Construction Field Office (Medium)	Mo.	4	\$ 2,500.00	\$ 10,000.00
0970006	A Trafficperson (Municipal Police Officer)(Estimated Cost)	Est.	1	\$ 10,000.00	\$ 10,000.00
0970007	A Trafficperson (Uniformed Flagger)	Hr	80	\$ 50.00	\$ 4,000.00
0976002	Barricade Warning Light-High Intensity	Day	1440	\$ 1.00	\$ 1,440.00
0977001	Traffic Cone	Ea.	24	\$ 20.00	\$ 480.00
0978002	Traffic Drum	Ea.	24	\$ 70.00	\$ 1,680.00
0979003	Construction Barricade Type III	Ea.	12	\$ 130.00	\$ 1,560.00
1E+06	Type DE-7 Delineator	Ea.	24	\$ 22.40	\$ 537.60
1E+06	Removal of Existing Signing	L.S.	1	\$ 25,000.00	\$ 25,000.00
1E+06	Removal and Relocation of Existing Signs	L.S.	1	\$ 2,500.00	\$ 2,500.00
1E+06	Sign Face-Sheet Aluminum (Type IX Retroreflective Sheeting)	S.F.	30	\$ 33.20	\$ 996.00
1E+06	Sign Face-Sheet Aluminum (Type IV Retroreflective Sheeting)	S.F.	10	\$ 34.20	\$ 342.00
1210101	A 4" White Epoxy Resin Pavement Marking	L.F.	1050	\$ 1.00	\$ 1,050.00
1210102	A 4" Yellow Epoxy Resin Pavement Marking	L.F.	905	\$ 1.00	\$ 905.00
1E+06	6" Preformed Black Line Mask Pavement Marking Tape	L.F.	420	\$ 1.40	\$ 588.00
1E+06	Construction Signs	S.F.	435	\$ 19.40	\$ 8,439.00
1E+06	Epoxy Resin Pavement Markings, Symbols and Legends	S.F.	45	\$ 3.40	\$ 153.00
2E+06	Type B Impact Attenuation System (Tangential)	Ea.	4	\$ 4,251.00	\$ 17,004.00
2E+06	A Temporary Impact Attenuation System (ABSORB 350)	Ea.	4	\$ 5,922.60	\$ 23,690.40
2E+06	A Repair of Temporary Impact Attenuation System (ABSORB 350)	Ea.	1	\$ 500.00	\$ 500.00
ROADWAY ITEMS SUBTOTAL \$					331,350.35

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Preliminary Cost Opinion

ITEM NO.	STRUCTURE ITEMS	UNIT	QUANT.	UNIT PRICE	TOTAL COST
0202216	A Excavation and Reuse of Existing Channel Bottom Material.	C.Y.	75	\$ 74.20	\$ 5,565.00
0203202	COFFERDAM	C.Y.	1,360	\$ 25.60	\$ 34,816.00
0204001	Cofferdam And Dewatering	L.F.	385	\$ 299.00	\$ 115,115.00
0204151	A Handling Water	L.S.	1	\$ 25,000.00	\$ 25,000.00
0213100	Granular Fill	C.Y.	210	\$ 47.40	\$ 9,954.00
0216000	Pervious Structure Backfill	C.Y.	400	\$ 58.20	\$ 23,280.00
0406173	HMA S0.25	Ton	15	\$ 170.00	\$ 2,550.00
0406303	A Sawing and Sealing Joints	L.F.	93	\$ 19.60	\$ 1,822.80
0503866	A Removal of Existing Culvert (Site No.1)	L.S.	1	\$ 25,000.00	\$ 25,000.00
0601087	Architrchural Form Liner	S.Y.	150	\$ 213.00	\$ 31,950.00
601109	A Precast Concrete Walls	L.s.	1	\$ 105,000.00	\$ 105,000.00
0601135	A Precast Concrete Box Culvert	L.F.	34	\$ 1,400.00	\$ 47,600.00
0601201	Class "F" Concrete	C.Y.	40	\$ 1,450.00	\$ 58,000.00
0601502	1/2" Preformed Expansion Joint Filler For Bridges	S.F.	210	\$ 8.00	\$ 1,680.00
0601890	Color-Matched stain for concrete	S.F.	1,420	\$ 5.00	\$ 7,100.00
0602011	Deformed Steel Bars-Epoxy Coated	Lbs.	4,470	\$ 1.60	\$ 7,152.00
0602936	A Drilling and Grouting Reinforcing Bars	L.F.	70	\$ 25.00	\$ 1,750.00
0707001	Membrane Waterproofing (Wovem Glass Fabric)	S.Y.	70	\$ 62.80	\$ 4,396.00
0714050	Temporary Earth Retaining System	S.F.	80	\$ 37.80	\$ 3,024.00
0755014	GEOTEXTILE (Separation-High Survivability)	S.Y.	0	\$ 3.00	\$ -
0904487	A Metal Bridge Rail (Handrail)	L.F.	126	\$ 185.60	\$ 23,385.60
0974001	A Removal of Existing Masonry	C.Y.	30	\$ 279.60	\$ 8,388.00
STRUCTURE ITEMS SUBTOTAL					\$ 542,528.40

ROADWAY + STRUCTURE ITEMS SUBTOTAL		\$ 873,878.75
MINOR ITEMS/CONTINGENCY COSTS @ 25%		\$ 218,469.69
ROADWAY + STRUCTURE+ MINOR ITEMS SUBTOTAL		\$ 1,092,348.44

ITEM NO.	LUMP SUM ITEMS	PERCENTAGES	UNIT	QUANT.	UNIT PRICE	TOTAL COST
0201001	Clearing and Grubbing	2.0%	L.S.	1	\$ 22,000.00	\$ 22,000.00
0971001	A Maintenance and Protection of Traffic	4.0%	L.S.	1	\$ 44,000.00	\$ 44,000.00
0975004	Mobilization and Project Closeout	7.5%	L.S.	1	\$ 82,000.00	\$ 82,000.00
0980001	A Construction Staking	1.0%	L.S.	1	\$ 25,000.00	\$ 25,000.00
LUMP SUM ITEMS SUBTOTAL						\$ 148,000.00

TOTAL CONTRACT ITEM		\$ 1,240,348.44
INCIDENTALS @ 25%		\$ 310,087.11
2018 TOTAL		\$ 1,550,435.55
SAY 2018 TOTAL		\$ 1,551,000.00
Projected to year 2021 @ 4% Anually		\$ 1,613,040.00
SAY 2021 TOTAL		\$ 1,614,000.00