



Municipal Small Bridge Program Application

Part A: Basic Information

Date: 8/28/2019

City/Town: Town of Buckland

Road: Nilman Road

Feature under Bridge: Clark Brook

Bridge Number: B-28-017 (5D3)

Reason for Application (Describe the condition of the bridge): The condition of this bridge is very poor and worsening with every storm. The Bridge Evaluation Report is attached for detail. The substructure is severely deteriorated and the concrete crumbles to the touch. Large chunks of concrete have fallen in Clark Brook. Nilman Road is a dead-end and this bridge serves as the only passage for five residences.

Proposed Project Type (New bridge; Bridge Rehabilitation; Bridge Preservation): New bridge

Indicate if the bridge currently closed, posted (include the loading) or restricted (include by how much): Not posted

Contact Person: Heather Butler

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Part B: Applicability

1. Is the span of the bridge greater than 10 feet and less than or equal to 20 feet? Yes No
Comments: The bridge is 9' 6" long, as measured from spring line to spring line.
2. Is the bridge on a public way? Yes No
Comment:
3. Are all municipally-owned bridges in the City/Town with reduced weight-carrying capacity properly posted as previously directed by MassDOT? Yes No
Comment:
4. Can the 25% design be submitted within 6 months of the application approval? Yes No
Comment: Design is at 100% and has been submitted for Chapter 85 review.

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Part C: Proposed Project

1. Description of Work

- a. Has the bridge(s) been inspected? If so, please provide the condition ratings and a copy of the inspection report.

The bridge was inspected on June 30, 2017 by MassDot engineers and by VHB as part of the original application process. Both reports are attached.

- b. Has the bridge(s) been rated? If so, please provide the inventory ratings and copy of the rating report.

The bridge has not been rated.

- c. If neither of the above is applicable, provide a description of the condition of the bridge(s); state the City/Town's concerns regarding the continued unrestricted use of the bridge(s); and what actions are planned by the City/Town to ensure continued safe use of the bridge(s).

See responses to a & b.

- d. Please describe the scope of work for the proposed project.

VHB has recommended replacing the structure with a 3-sided precast concrete structure with asphalt overlay. Based on preliminary hydraulic analysis, the new structure would need to have span length of approximately 20 feet. The structure would be widened to accommodate two lanes of traffic with a shoulder. A crash tested barrier would be installed on both sides. Approach guardrail with proper transitions would be installed at each bridge corner.

- e. Please describe any anticipated design services that will be required for this project, including the length of time required to secure and complete these services.

Design is complete and has been submitted for Chapter 85 review. Design included bridge design, geotechnical exploration, hydraulic analysis and environmental permitting. All design services were complete by VHB in accordance with the MassDOT Bridge Manual and Project Development & Design Guide.

- f. Please provide the estimated cost of the project, including design services.

The replacement estimate is \$738,000, VHB's cost estimate is attached.

- g. Has the community signed the Community Compact?

Buckland signed the Community Compact on Dec.18, 2015.

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2. Description of Demonstrated Public Need

- a. What is the length (in miles) of a suitable detour around the bridge?

There is no detour or alternate route around the bridge.

- b. Please describe the emergency services carried by the bridge. Consider how often the roadway is used as a fire, police, and/or EMT route.

The bridge is used by the police, fire and ambulance services as needed. If the bridge were to fail completely the residents on Nilman route would be completely cut off from all emergency response services. Our Fire Chief has determined it is unsafe to pass over the bridge as our smallest truck is 8000 lbs with just water and our big truck is 20000lbs with just water. Letters from the Buckland Police and Fire Chiefs are attached.

- c. Please describe how the bridge serves the local economy (commercial and industrial). Consider the following: agricultural, tourist/recreational sites, commercial district, major employer, other economic generators, etc.

The bridge services five homes and no commercial property.

- d. Please describe the essential services carried by the bridge. Consider the following: heating oil, propane gas, trash/recycling, septic tank service, school busses, mail, other delivery services, etc. and if a viable detour for these services currently exists.

Commercial vehicles use this bridge to provide heating oil, trash and recycling, septic tank, mail and all other essential home delivery services. There is no detour or alternate route for these trucks to access the residences.

3. Description of Demonstrated Financial Need

- a. Please provide the current annual Chapter 90 apportionment for your municipality and balance of uncommitted funds. Please explain why the limited funds of the Municipal Small Bridge Program are needed to advance the project.

Buckland's annual FY20 Chapter 90 apportionment is 184,999 with an uncommitted balance of \$288,247. The Highway Department's annual budget is \$135,000. Without additional state aid this project is simply unachievable.



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- b. What other sources of funds does the municipality have to repair its bridges? Please explain why these are insufficient or inappropriate for this project.

The town does not have a sepearte budget for bridges and culvert maintenance, repair or replacement. Any improvements are done through the highway department's general funds or Chapter 90, where applicable.