

TOWN OF JAFFREY
Jaffrey, New Hampshire
Select Board Meeting Minutes
July 13, 2020

Chairman: Franklin W. Sterling, Jr.

Selectmen: Kevin Chamberlain, John E. Belletete

Town Manager: Jon Frederick- **Excused**

Staff: Administrative Assistant Judy Zola, Planning & Economic Development Director Jo Anne Carr, Fire Chief David Chamberlain, DPW Director Todd Croteau

Guests: Jim Bouchard, Anna Giraldi, Quantum Engineering

Residents: In person: Joanne & Bruce Buck, Peter Lambert, Richard & Ann Scorzelli

Via Zoom: Dennis & Tuesday Wright, Eunice J., Lyn Lambert, Larry Jadlocki

A. Call to Order: 6:01 pm

B. Non-Public – None

C. Appointments - None

D. Public Hearings – 6:00pm

1. Amending the Town Code, sections 185-17 Stop Intersections, by adding the south/east bound leg of Proctor Road at Harkness Road

The Public Hearing was opened by Chairman Sterling at 6:05pm

Chairman Sterling explained that there will be a small subdivision going in and since the speed limit cannot be changed, a stop sign added at the intersection of Proctor Road and Harkness Road would slow down traffic in the area. Todd Croteau, Highway Director, explained that the geometry of the intersection cannot be changed, so a stop sign would make it safer with reduced speeds. Selectmen Belletete and Chamberlain both agree with the stop sign proposal. Joanne Buck mentioned that that section is busy due to being a shortcut to avoid Route 202 and the center of town. Robert Scorzelli felt that a stop sign may not be the best idea in winter due to that part of the road being slippery because of tree covering shading the sun. Rick Lambert stated that plowing is difficult on Harkness due to the steep drop off. Year round the visibility is horrible at that intersection. He thought a yield sign may be more helpful. Dennis Wright commented that vehicles would most likely drive right through the stop sign. A nearby neighbor would need to cut back some brush to reveal sight lines better.

Chairman Sterling suggested to Todd Croteau to look into cutting the brush back, possibly reduce the banking and look into an estimate for a guardrail. Joanne Buck also mentioned adding a “Stop Ahead” sign to help reduce speed before the actual stop sign.

Public Hearing Closed by Chairman Sterling at 6:30pm

2. Presentation and discussion of the NHDOT Nutting Road Bridge Repair Proposal

Public Hearing was opened by Chairman Sterling at 6:31pm

Jim Bouchard and Anna Giraldi were here to present the plan for repairing the Nutting Road bridge, which is red-listed with the State and needs repair. 80 % of the funding is available from the State through the gas taxes and the Town will pay 20%. Reimbursement from the State hasn't been an issue in recent years. Rich Lambert, who was a former Selectmen said reimbursement from the State had been a problem in the past. The road will be worked on for about 4-6 months, but there are 2 viable detour routes. Since it's a historic bridge, only the top layer will be replaced and the arch work will be re-grouted and restored. The utilities will be re-routed while the work is done, so resident's services won't be disrupted. The bridge won't be widened, only repaired. They presented a PowerPoint explaining the procedure along with photos, which will be attached to these minutes. The design work will be done in 2020 and bidding and construction will be done in 2021. There were no further questions/concerns from the public attending.

The Public Hearing was closed by Chairman Sterling at 6:56pm

E. Approval of Meeting Minutes

On a motion by Belletete, seconded by Chamberlain, the Public Minutes of 6/22/2020 were approved (3-0).

On a motion by Belletete, seconded by Chamberlain, the Non-Public Minutes of 6/22/2020 were approved and sealed (3-0).

On a motion by Belletete, seconded by Chamberlains, the Public Minutes of 6/25/2020 were approved (3-0).

On a motion by Chamberlain, seconded by Sterling, the Public Minutes of 7/9/2020 were approved (2-0). Belletete abstained due to not attending this meeting.

F. Consent Agenda

1. Payroll and Vendor Manifests
2. Abatements
 - a) #2020-34 – Daniel Fougere – Mountain Road - \$850.00 – Refund of Connection Fee
3. Acceptance of Donation – Monadnock Monthly Meeting - \$400.00
4. Cemetery Deed
 - a) Sarah & Richard Emberley- Cutter Hill Ext. – Double Lot - \$700.00
5. Tax Collector's 2020 First Issue Tax Bill Supplemental Warrant

- a) DJF Properties – 6 Darcie Drive - \$717.00
- 6. Tax Collector's 2020 First Issue Tax Bill Supplemental Warrant
 - a) Plantation Realty, LLC – 20 Plantation Drive - \$38,262.00
- 7. Tax Collector's June 2020 Supplemental Water & Sewer Warrant
 - a) \$161.59
- 8. Appointments
 - a) ZBA Alternate Member -Erlene Brayall– Term Expires 2023
 - b) Trustees of the Trust Fund – Bruce Edwards – Term Expires 2021

On a motion by Chamberlain, seconded by Sterling, the Consent Agenda was approved as presented (3-0).

G. Old Business -None

H. New Business

Amend Town Code to add stop intersection on Proctor Road- There was some more discussion with Todd Croteau, DPW regarding guardrails, additional signage and tree trimming. Todd will do a site visit to evaluate and report back to the BOS.

The vote was tabled pending more information.

Gary Arceci – Trustees of the Trust Fund Resignation- Gary is stepping down due to health reasons. Chairman Sterling read a proclamation thanking Gary for his many years of service.

St. Patrick's School Tax Exempt Status- In reviewing St. Patrick's tax-exempt paperwork, Mike Pelletier from MRI noted that the school building may not be considered exempt since it is more vacant than being used. Discussion followed and it was decided that a letter should be sent to the Parrish and the Diocese stating a time frame for the property to be either sold or revitalized. A letter will be drafted and sent. Chief Chamberlain added that the school building does have full fire detection in it.

Resolution #2020-10- Special Event Permit – Pig Roast Fundraiser – 8/22/2020- VFW – The Jaffrey Ice Racing is sponsoring this fundraiser at the Jaffrey VFW. They have complied and addressed all of the Fire Chief's concerns.

On a motion from Belletete, seconded by Chamberlain, Resolution #2020-10 was approved (3-0).

Resolution #2020-13 – Authorize use of \$7,175.00 from the Municipal Building Maintenance CRF for Humiston Field Light Pole removal project. Chairman Sterling reviewed the invoices and there were no questions/concerns.

On a motion from Belletete, seconded by Chamberlain, Resolution #2020-13 was approved (3-0).

I. Reports to the Select Board

Selectmen's Reports

Sterling – No meetings. Budcom starts back up in September. Meetinghouse meetings are done until Fall.

Belletete – No meetings.

Chamberlain- Has Conservation and Cemetery meeting this week.

Town Manager's Report - None

J. Other Business – None

K. Non-Public – In Accordance with RSA 91-A:3, II (D) (J) on a motion by Belletete, seconded by Chamberlain, Roll Call Vote to Enter Non-public at 7:17pm (Sterling-yay, Belletete-yay, Chamberlain-yay) (3-0)

On a motion by Belletete, seconded by Chamberlain to exit non-public session at 7:36pm.

L. Adjournment

The meeting adjourned at 7:37pm on a motion by Belletete, seconded by Chamberlain (3-0).

Submitted:

Attest:

Judith A. Zola
Administrative Assistant

Franklin W. Sterling, Jr.
Chairman

The Town of Jaffrey prohibits discrimination on the basis of race, color, national origin, sex, sexual orientation, religion, age, disability, marital or family status.

The Town of Jaffrey is an equal opportunity employer.



Nutting Road over Contoocook River
NHDOT Bridge No. 159/094
NHDOT Project No. 41401
Jaffrey, New Hampshire



QUANTUM CONSTRUCTION CONSULTANTS, LLC

Public Presentation
July 13, 2020



QUANTUM CONSTRUCTION CONSULTANTS, LLC

- Civil and Structural Engineering Firm Located in Concord, NH
- Specializing in Municipal Bridge and Roadway Design
- Experienced with NHDOT Bridge Aid Process
- Success With Similar Bridge Rehabilitation Projects

Presented by:

Anna Giraldi, PE

James Bouchard



Municipal Bridges – State Funding

NHDOT Bureau of Community Planning & Assistance

- Program averages \$6.8 million per year at an average project cost of \$900K
- Funding Source: 80% NHDOT / 20% Town of Jaffrey
- New Projects are currently programming in FY 2030
- ✓ Nutting Road is programmed in FY 2021





Municipally Managed Bridge Aid Process

Funding Approval & QBS Selection of Consultant

Engineering Study

Preliminary Plans Specifications & Estimate (PPS&E)

Final Plans Specifications & Estimate (PS&E)

Reimbursement of Design Costs (80%)

Bid Phase (FY 2021)

Advancement of Construction Cost (40%)

Construction Contract

Final Reimbursement (Balance of 80% of Total Project Cost)



Municipally Managed Bridge Aid Process

Engineering Study

- **Scoping Session**

- Establish Project Purpose & Need



- ✓ **Purpose:** The purpose of this project is to correct structural deficiencies of the historic structure and provide safe, year-round, vehicular travel on Nutting Road over Contoocook River
- ✓ **Need:** This project is needed because the existing overlying concrete deck and curb structure exhibit severe deterioration and the southwest wingwall is in poor condition and is being undermined by scour.



Municipally Managed Bridge Aid Process

Engineering Study

- Scoping Session
- **Design Criteria**
 - ✓ NHDOT Bridge Design Manual
 - ✓ NHDOT Highway Design Manual
 - ✓ NHDOT Standard Specifications for Road & Bridge Construction
 - ✓ AASHTO LRFD Bridge Design Specifications
 - ✓ Manual on Uniform Traffic Control Devices
 - ✓ AASHTO Geometric Design of Highways and Streets





Municipally Managed Bridge Aid Process

Engineering Study

- Scoping Session
- Design Criteria
- **Existing Conditions**
 - ✓ Stone Masonry Arch Bridge, 29-foot span and an overall width of 27.5 feet
 - ✓ Significant efflorescence throughout the joints in the arch indicating that water intrusion is prevalent in the roadway gravels above
 - ✓ 21.5-foot wide roadway over bridge
 - ✓ Topographic survey of project area including wetland delineation, invasive species identification & vernal pools
 - ✓ Utilities – aerial utilities on downstream east side

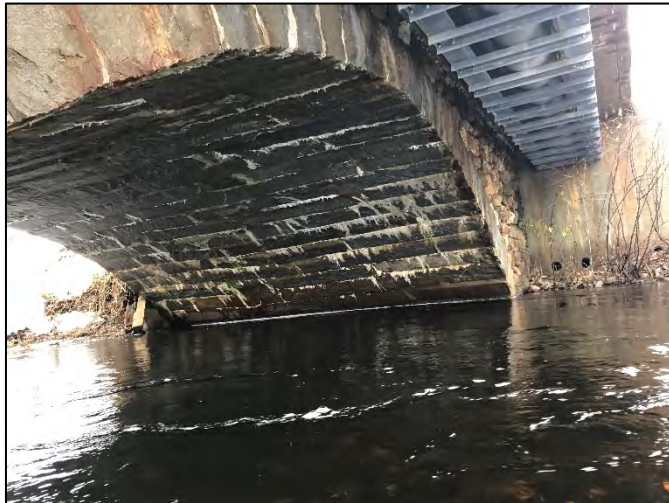




Municipally Managed Bridge Aid Process

Engineering Study

- Scoping Session
- Design Criteria
- **Existing Conditions**
 - ✓ Stone Masonry Arch Bridge, 29-foot span and an overall width of 27.5 feet





Municipally Managed Bridge Aid Process

- **Existing Conditions**
 - ✓ Existing concrete deck and curb structure exhibit severe deterioration with efflorescence
 - ✓ The spandrel walls have mortar spalls between the fieldstone and cut arch stones





Municipally Managed Bridge Aid Process

- **Existing Conditions**
 - ✓ Existing concrete deck and curb deteriorated
 - ✓ Southwest wingwall is in poor condition and being undermined by scour
 - ✓ Sinkholes

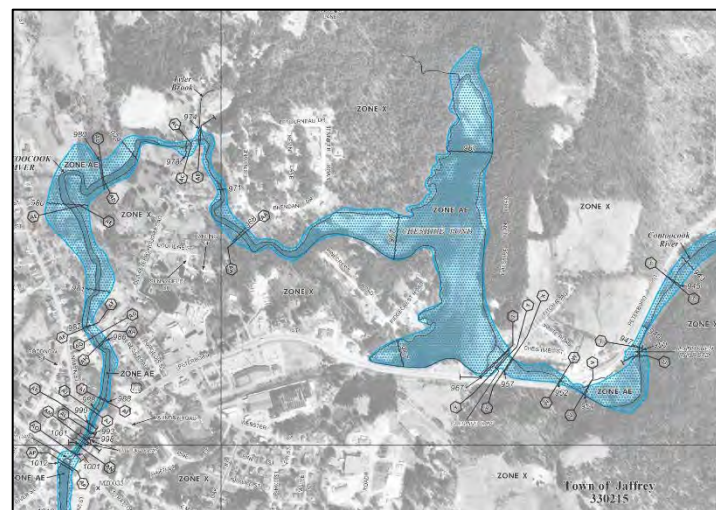




Municipally Managed Bridge Aid Process

Engineering Study

- Scoping Session
- Design Criteria
- Existing Conditions
- **Hydrologic & Hydraulic Analyses**
 - ✓ Determine flows for various flood events
 - ✓ Determine water surface elevations at flood events
 - ✓ Determine stream velocities





Municipally Managed Bridge Aid Process

Engineering Study

- Scoping Session
- Design Criteria
- Existing Conditions
- Hydrologic & Hydraulic Analyses → Bridge Geometry
 - **Bridge Hydraulic Design Criteria**
 - ✓ 1 foot hydraulic clearance to underside of superstructure during 50-year flood event
 - ✓ Check clearance at 100-year flood event
 - ✓ Nutting Road Bridge does not meet the NHDOT hydraulic criteria but the bridge is historic (has 0.5 feet clearance)





Municipally Managed Bridge Aid Process

Engineering Study

- Scoping Session
- Design Criteria
- Existing Conditions
- Hydrologic & Hydraulic Analyses → Bridge Geometry
- **Soil Borings**

B1 – Medium dense sand (fill) to five feet. Below fill native granular deposits consisting of loose to very dense sand and weathered bedrock at 24 feet

B2 – Native, granular deposits consisting of loose to dense sand to 15 feet, overlying glacial till and bedrock at 23 feet





Municipally Managed Bridge Aid Process

Engineering Study

- Scoping Session
- Design Criteria
- Existing Conditions
- Hydrologic & Hydraulic Analyses → Bridge Geometry
- Soil Borings
- **Bridge Rehabilitation and Replacement Study**



Alternative I
Rehabilitation with Cast-in-Place
Concrete Deck Replacement
over Arch



Alternative II
Rehabilitation with
Prestressed Precast Concrete
Deck Beams over Arch



Alternative III
Replacement with Precast
Prestressed Concrete Deck
Beam Bridge



Bridge Alternatives

- **Do-Nothing or No-Build Alternative** – This would not preserve the existing historic stone masonry arch and would also pose a public safety issue as the bridge would continue to deteriorate.
- **Alternative I – Rehabilitation with Cast-In-Place Concrete Deck over Arch – (Recommended Alternative)**. Cast-in-place concrete deck with curbs to support crash tested rail post assemblies. Geosynthetic reinforced soil (GRS) will provide support for the deck at the approaches to reduce vehicle loading to the existing stone arch structure; construction cost - \$541,000.
- **Alternative II – Rehabilitation with Prestressed Precast Concrete Deck Beams over Arch** – Prestressed precast concrete deck beams with curbs to support crash tested rail post assemblies. This structure would also be founded on geosynthetic reinforced soil (GRS) foundations; construction cost - \$633,000.
- **Alternative III – Replacement with a Precast Prestressed Concrete Deck Beam Bridge founded on cast-in-place concrete abutments on spread footings** – A 40-foot span would allow all the flood flows to pass, however this alternative would require removal of a historic structure that is eligible for the National Register of Historic Places; construction cost - \$975,000.



Recommended Bridge Rehabilitation Cast-In-Place Concrete Deck Over Arch



Municipally Managed Bridge Aid Process

Engineering Study

- Scoping Session
- Design Criteria
- Existing Conditions
- Hydrologic & Hydraulic Analyses → Bridge Geometry
- Soil Borings
- Bridge Type Study
- **Traffic Control – Road Closed with Temporary Detour Road**
There are two viable roadway detour routes available during the road closure.
First, over North Street, Amos Fortune Road and Nutting Road for a distance of 2.3 miles, 5-minute travel time.
Second, over Nutting Road, Route 202, Main Street, North Street and Nutting Road for a distance of 3.6 miles, 7-minute travel time.



Municipally Managed Bridge Aid Process

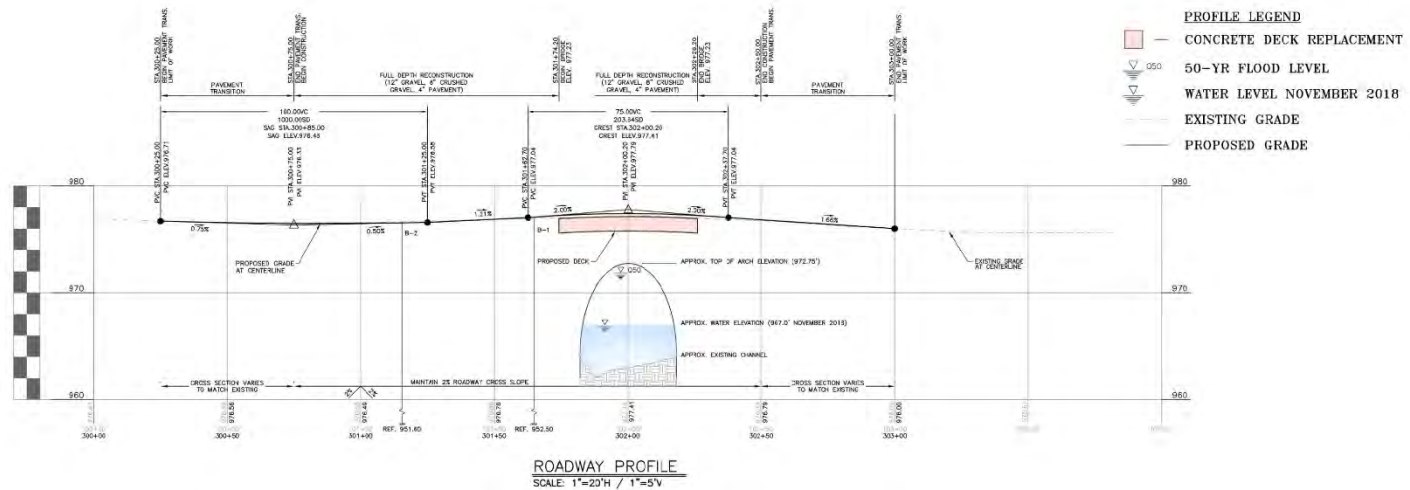
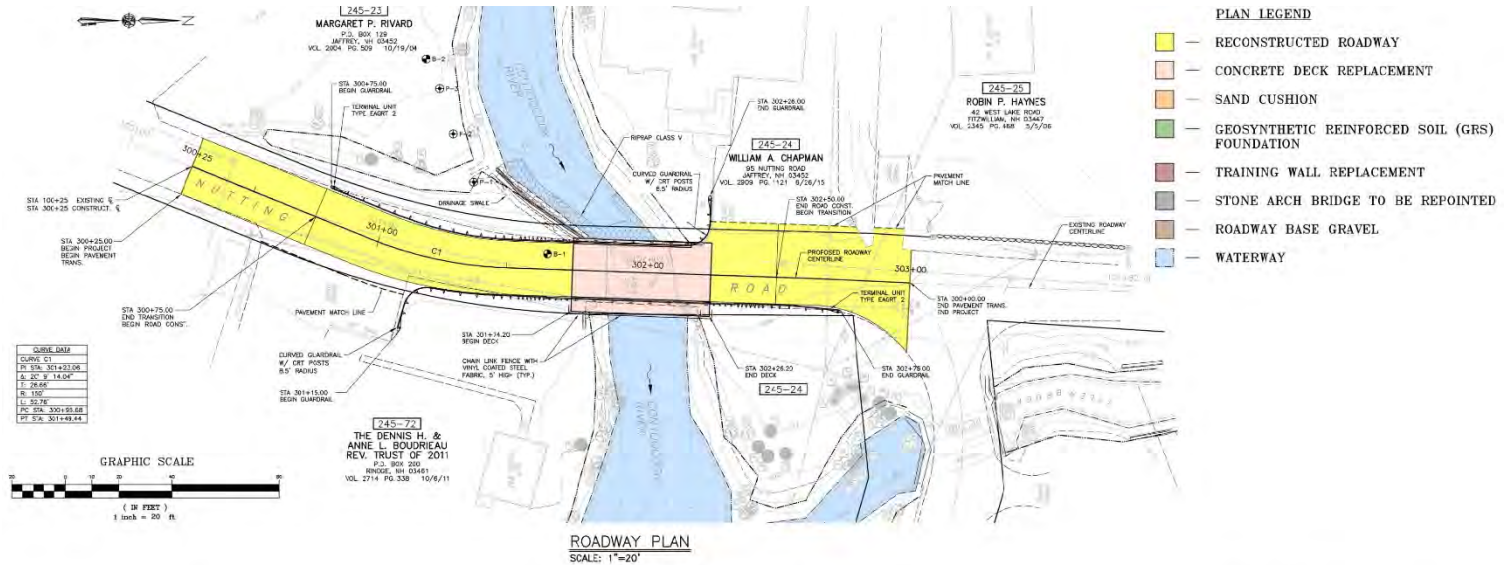
Engineering Study

- Scoping Session
- Design Criteria
- Existing Conditions
- Hydrologic & Hydraulic Analyses → Bridge Geometry
- Soil Borings
- Bridge Type Study
- Traffic Control, Road Closed, Detour Plan
- **Roadway Alignment**





Roadway Plan & Profile

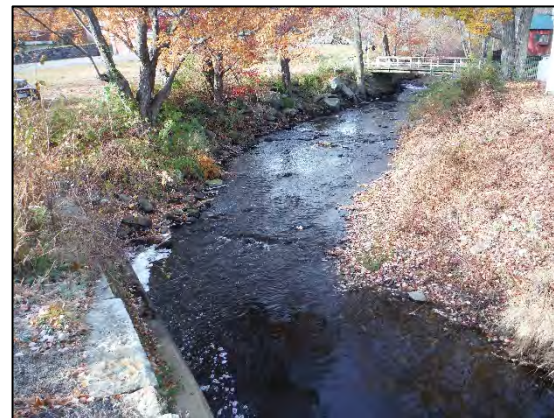




Municipally Managed Bridge Aid Process

Engineering Study

- Scoping Session
- Design Criteria
- Existing Conditions
- Hydrologic & Hydraulic Analyses → Bridge Geometry
- Soil Borings
- Bridge Type Study
- Traffic Control, Road Closed, Detour Plan
- Roadway Alignment
- **Environmental & Cultural Resources Considerations**
 - NHDES Standard Dredge and Fill Permit and Shoreland Permit Required
 - Drainage Treatment Behind Wingwall
 - No Known Endangered or Threatened Species





Municipally Managed Bridge Aid Process

Engineering Study

- Scoping Session
- Design Criteria
- Existing Conditions
- Hydrologic & Hydraulic Analyses → Bridge Geometry
- Soil Borings
- Bridge Type Study
- Traffic Control, Road Closed, Detour Plan
- Roadway Alignment
- Environmental & Cultural Resources Considerations
- Right of Way / Easements



Municipally Managed Bridge Aid Process

Engineering Study

- Scoping Session
- Design Criteria
- Existing Conditions
- Hydrologic & Hydraulic Analyses → Bridge Geometry
- Soil Borings
- Bridge Type Study
- Traffic Control, Road Closed, Detour Plan
- Roadway Alignment
- Environmental & Cultural Resources Considerations
- Right of Way / Easements
- **Construction Cost Estimate - \$541,000 Alternative I**



Municipally Managed Bridge Aid Process

Engineering Study

- Scoping Session
- Design Criteria
- Existing Conditions
- Hydrologic & Hydraulic Analyses → Bridge Geometry
- Soil Borings
- Bridge Type Study
- Traffic Control, Road Closed, Detour Plan
- Roadway Alignment
- Environmental & Cultural Resources Considerations
- Right of Way / Easements
- Construction Cost Estimate - \$541,000 Alternative I
- **Public Information Meeting**



Municipally Managed Bridge Aid Process

Engineering Study

- Scoping Session
- Design Criteria
- Existing Conditions
- Hydrologic & Hydraulic Analyses → Bridge Geometry
- Soil Borings
- Bridge Type Study
- Traffic Control, Road Closed, Detour Plan
- Roadway Alignment
- Environmental & Cultural Resources Considerations
- Right of Way / Easements
- Construction Cost Estimate - \$541,000 Alternative I
- Public Information Meeting
- **Engineering Study Report**



Preferred Alternative & Recommendations

Alternative I – Rehabilitation with 52-foot Cast-In-Place Concrete Deck Replacement Over Arch

Will also replace the southwest, upstream wingwall. Cleaning, chinking and repointing of the existing stone arch bridge is also included

- Small footprint of impact area
- Lowest cost
- Preserves the existing historic stone masonry arch

Recommendations:

- ☐ Complete final design and permitting of project
- ☐ Request NHDOT reimbursement for 80% of engineering cost
- ☐ Warrant Article for rehabilitation in 2021



Municipally Managed Bridge Aid Process

Schedule

- Complete design in 2020
- Bidding and Construction in 2021
- Funded by the Town of Jaffrey and the NHDOT through the Municipally Managed Bridge Aid Program and is authorized for construction in fiscal year 2021



Bridge Project Similar to Alternative I





Bridge Project Similar to Alternative I





Bridge Project Similar to Alternative I





Bridge Project Similar to Alternative I





Bridge Project Similar to Alternative I





Bridge Project Similar to Alternative I





Bridge Project Similar to Alternative I





Bridge Project Similar to Alternative I





Bridge Project Similar to Alternative I





Questions

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