



Vermont Better Roads Grant Program Application

Please complete one application per category and/or project you are applying for. You may make copies of the application for multiple applications per category and/or multiple categories.

Please check the Category you are applying for:

- B. Correction of a Road Related Erosion Problem and/or Stormwater Mitigation Retrofit for both gravel and paved roads
- C. Correction of a Stream Bank or Slope Related Problem
- D. Structure/culvert upgrades

Town/Organization: Town of Guilford, Vermont

Project Name: Stage Road Culvert Replacements

Road Name: Stage Road TH #: 1 Structure # (if applicable): n/a

Road Type: Unpaved Uncurbed
Class 2

Watershed: Upper Green River Watershed

Please provide a thorough description of the problem (ex. Roadway has steep slope with no ditch which is causing roadway erosion):

This project, located in the Upper Green River Watershed, involves steep sections of Stage Road. Culverts in these locations are undersized. During significant rain events, large sections of the roadway washout into the roadside stream outletting in Green River and also causing property damage to residents.

Description of Project and how you plan to complete the work (ex. Stone line 500' of ditch by reshaping ditch and stone lining, working from the top of the project down to the bottom):

The Town will contract for:

- Installation of 1,920 feet of stone lined ditches
- Replacement of 6, 12" culverts with 6, 18" culverts
- Replacement of 6, 12" culverts with 6, 24" culverts
- Re-grading of roadway to improve crown and eliminate berms

Expected Effects (+ & -) on water quality (ex. Erosion will be eliminated by placing the stone ditch):

By replacing the twelve (12) culverts with ones that are adequately sized, coupled with the installation of stone lined ditches, will improve the efficiency of water transport and eliminate erosion. The end result of this work will significantly improve the quality of the water entering the roadside brook and ultimately the nearby Green River.



Distance from end of project to nearest water (stream, lake, or stormwater system that outlets directly to water). 0-50'

Progress to Date:

Plan project with the assistance of VTrans D2 Technical Support.

Is there an emergency reason this project must be completed quickly? If yes, please explain:

No.

Has this project been identified through a municipal road inventory, capital budget plan, tactical basin plan, culvert inventory, or other management plan? If yes, please list which.

Yes: _____

No

Please list any professionals you may have contacted for assistance with this project (ANR River

Management Engineer, Army Corps of Engineers, VTrans District Technical staff, Basin Planner etc.):

VTrans District 2 Technical Staff

Is the project located in the town "Right of Way?" Yes, No, Both (if "Both" please explain further).

Yes

Will the town road crew complete this work? Yes, No, Some (if "some" please explain further).

No. The Town is also seeking Better Roads Funding under Category B. If both are successful, this project will be combined to form one larger project and put out to bid.



Describe how the grant funds will be spent and/or attach a project budget:

See attached project cost estimate produced with the assistance of the VTrans District 2 Technical Staff.

How do you plan to meet the required 20% match on this grant?:

The Town will use its own cash reserves on hand to fund its share of the project.

Requested Grant Amount (\$20,000 max Category B, \$40,000 max Categories C & D): \$40,000

Estimated Total Project Cost (including 20% local match): \$95,227.49

Estimated Completion Date: Summer 2016

REQUIRED ATTACHMENTS:

- Itemized Cost Estimate (labor, equipment, materials)
(For assistance, call Better Backroads at 802-828-4585)
- Project Location Map
(Please show location of affected water; 1:12,000 USGS map, if possible)
- Sketch of proposed erosion control measures, including:
 - Distances (ft.)
 - Estimate of waste & borrow quantities
 - Approx. location of town/other right-of-way and/or property lines
- Photo(s) of the project area.
- Agreement for Entry and/or Deed of Easement (if project is outside Town ROW).
- If project involves stream or river/road conflict, include documentation of consultation with a River Management Engineer.
- Other appropriate supporting documents.

By signing this application I certify that all the information provided is accurate to the best of my knowledge. We will comply with all the requirements of the grant including making our books available for audit if required.

SIGNATURE OF APPLICANT: (Must be Town Administrator/Manager or Select Board Chair)

Name: Katie Buckley

Title: Town Administrator

STAGE ROAD - CULVERT REPLACEMENTS & STONE LINED DITCHES
(Cost Codes are for "in-place" cost estimates)

CODE	UOM	Description	LENGTH (FT)	WIDTH (FT)	DEPTH (IN)	Quantity	UNIT PRICE	COST
613.1	CY	Stone Fill, Type 1	1920	6	12	426.7	\$43.80	\$18,688.00
3070	LF	Ditch Cleaning & Shaping	1920			1920.0	\$3.25	\$6,240.00
301.26	CY	Subbase of Crushed Gravel	1920	6	6	213.3	\$34.39	\$7,336.53
649.31	SY	Geotextile Under Stone Fill	1920	6		1280.0	\$2.32	\$2,969.60
601.0915	LF	18" CPEP	50			50	\$58.46	\$2,923.00
613.1	CY	Stone Fill, Type 1	10	3	18	1.7	\$43.80	\$73.00
602.2	CY	Dry Masonry				2	\$597.49	\$1,194.98
601.0915	LF	18" CPEP	50			50	\$58.46	\$2,923.00
613.1	CY	Stone Fill, Type 1	10	3	18	1.7	\$43.80	\$73.00
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602.2	CY	Dry Masonry				2	\$597.49	\$1,194.98
601.262	LF	24" CPEP	60			60	\$75.26	\$4,515.60
613.1	CY	Stone Fill, Type 1	10	4	18	2.2	\$43.80	\$97.33
602.2	CY	Dry Masonry				2	\$597.49	\$1,194.98
601.262	LF	24" CPEP	60			60	\$75.26	\$4,515.60
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TOTAL: \$95,227.49

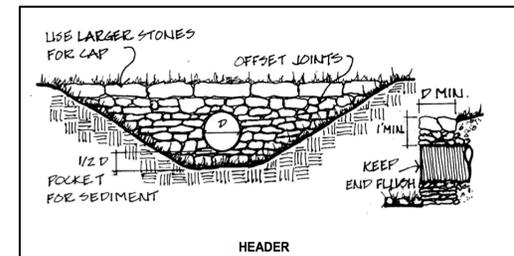
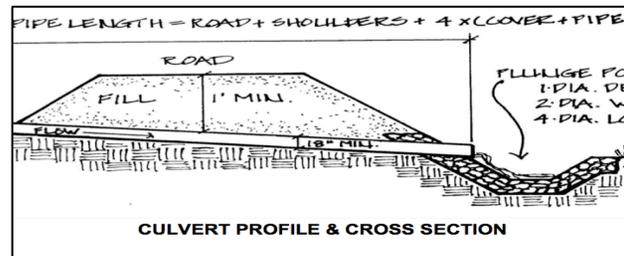
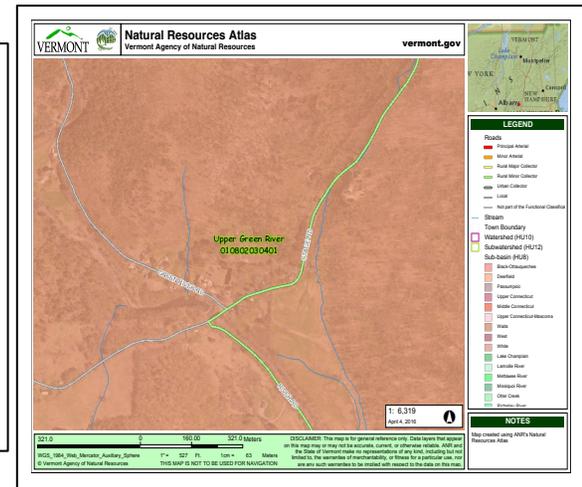
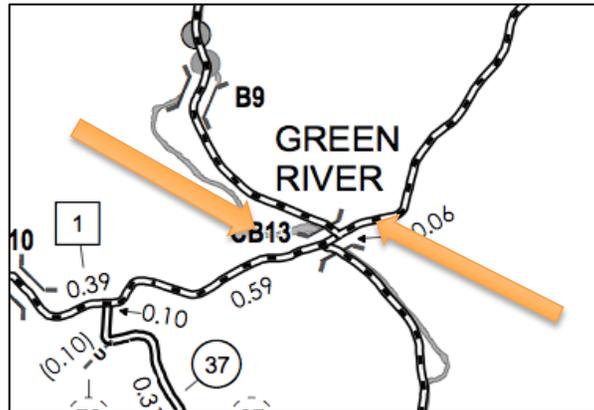
STAGE ROAD – CULVERT UPGRADES – TH 1

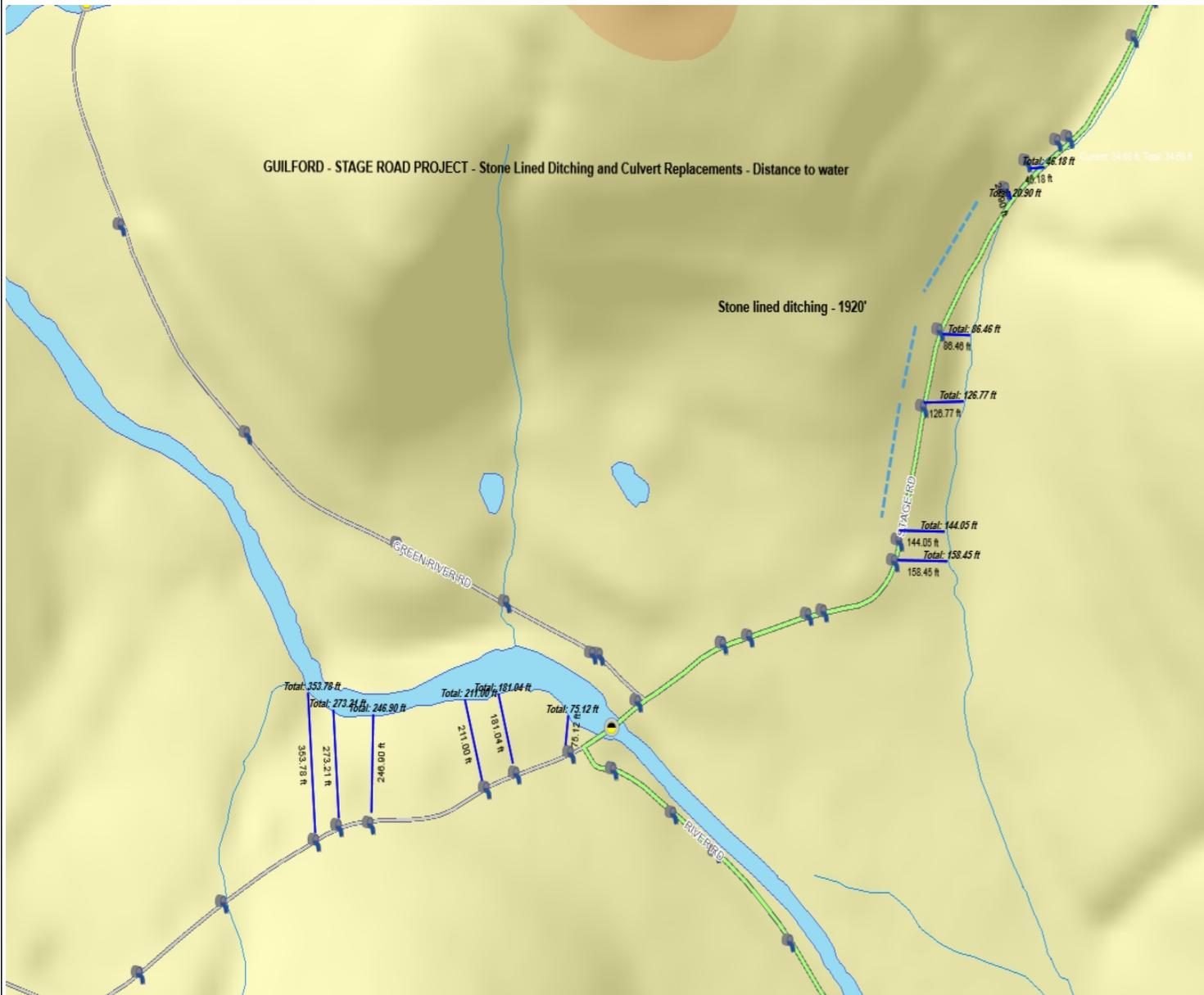
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Scope of work to include:

- Installation of 1,920 feet of stone lined ditches
- Replacement of 6, 12" culverts with 6, 18" culverts
- Replacement of 6, 12" culverts with 6, 24" culverts
- Re-grading of roadway to improve crown and eliminate berms





LEGEND

- VTRANS State and Town Long Structure
- VTRANS State Short Structures
- Town Bridge
- Town Culvert
- Roads**
 - Principal Arterial
 - Minor Arterial
 - Rural Major Collector
 - Rural Minor Collector
 - Urban Collector
 - Local
 - Not part of the Functional Classification System
- Waterbody**
 - Waterbody
 - Stream
- Town Boundary**
 - Town Boundary
- Elevation (FT)**
 - 54 - 500
 - 500.0000001 - 1,000
 - 1,000.0000001 - 1,500
 - 1500 - 2,500
 - 2500 - 4,389

1: 3,159

1in = 263 ft.
1cm = 32 meters



NOTES

Map created using ANR's Natural Resources Atlas

160.0 0 80.00 160.0 Meters

WGS 1984 Web Mercator Auxiliary Sphere

DISCLAIMER: This map is for general reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable. ANR and the State of Vermont make no representations of any kind, including but not limited to, the warranties of merchantability, or fitness for a particular use, nor are any such warranties to be implied with respect to the data on this map.

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Agency of Transportation

Katie Buckley
Town Administrator
Town of Guilford
236 School Road
Guilford, VT 05301

April 15, 2016

To whom it may concern,

I visited proposed Vermont Better Road Grant sites on Sweet Pond Road and Jacksonville Stage Road with Katie Buckley and Dan Zumburski on March 29, 2016. Both of these roads experience severe erosion during significant rain events. The sites are all situated on steep road sections so when it rains the sediments get washed downhill and are deposited directly into streams located below the sites.

On Sweet Pond Road, the Town would like to redefine the ditches and add stone and check dams. This will protect the road because water on the road would then be able to access the ditch instead of washing out the road. The stone lined ditch and check dams will slow down the flow of water and allow sediment to drop out before hitting the stream. I would recommend this project for a Vermont Better Road Grant, Category B.

On Jacksonville Stage Road, the Town would like to replace culverts and reshape and stone line some of the ditches. The upsized culverts will have the capacity to handle the higher flows which will reduce erosion and thus reduce the quantity of sediment reaching the stream. The stone lined ditch will also help slow the rate of water and allow more sediment to drop out. I would recommend this project for a Vermont Better Road Grant, Category D.

Sincerely,

Meghan Brunk
VTrans D2 Tech VI
(802) 251-2004



April 10, 2016

Katie Buckley
Town Administrator
Town of Guilford
236 School Road
Guilford, VT 05301

Dear Katie:

I am pleased to provide a letter of support for the Town of Guilford's application submission for a Category B and D Better Roads grant. The Category B grant will provide needed stone lined ditches, with stone check dams, to sections of Sweet Pond Road that historically wash out during significant rain events resulting in large amounts of sediment to be deposited into the Broad Brook. Regarding Category D, the need exists to upsize a total of 12 culverts on Stage Road, along with incorporating stone lined ditches. All of these improvements will contribute to improved water quality in the Green River. This application conforms to the policies found in the Windham Regional Plan (September 2014):

- 1. Maintain and restore the chemical, biological, and physical quality of the region's surface water per the objective in State water regulations.*
- 2. Improve existing roads and design culverts and bridges to carry a 50-year flood event without damage.*

Please contact me if you have any questions.

Sincerely,

Matt Mann

Matt Mann
Senior Transportation Planner