

FY17 Vermont Better Roads Grant Application

Please complete this page ONCE and return with your Grant Category Application(s)

Town/Organization: Town of Groton

Contact Person Brent Smith

Address: 1476 Scott Hwy

Groton, VT

05046

Street Address

Town

Zip

Email: grotonhwy@fairpoint.net

Phone: (802) 584-3209

DUNS #: 27809417

Fiscal Year End Month (MM): December

Accounting System: Automated

Manual

Combination

Please use the suggested documentation checklist below to ensure that all of the relevant items regarding your application have been included.

Grant application cover sheet (Only submit one)

Grant application form (One per category/project)

Itemized Cost estimate for labor, equipment, and materials (see enclosed Cost Estimate Worksheet). If applicable, please break down funding by source (i.e. different grant sources)

Project Location Map (please show location of affected water)

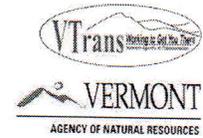
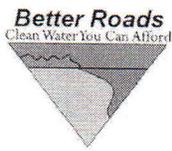
Sketch of proposed erosion control measures or other management practices, including distances in feet

Also show approximate location of town/other right-of-way and/or property lines

Photo(s) of the project area

Letters of Support (RPC, VTrans District Technical Staff, ANR Rivers and Streams Engineers, etc.)

If Category C River/Road Conflict or Category D River/Stream Structure or Culvert, you must attach ANR/ACOE consultation



Vermont Better Roads Grant Program

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 Groton

Project Name: Combined projects Minard Hill Road (Lower), Great Road and Buzzy Road

Road Name: Minard Hill Rd.TH#2 Class 2 Paved,Great Rd TH# 4_TH # Class 3 gravel Buzzy Rd TH#27 Class3: Structure # NA

Road Type: Paved or Unpaved (Both) Curbed or Uncurbed (circle one)

Class 1 Class 2 Class 3 Class 4 (circle one)

Watershed: Wells River

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

Minard Hill;

River-road conflicts have reoccurred at this site on numerous occasions resulting in damage to the town highway road embankment. The road bed is acting as a floodplain encroachment limiting full access to the remaining active floodplain, pinching the brook against the road embankment. A poorly aligned and undersized stream crossing, aggravates the erosion problems. The existing culvert header is beginning to fail and erode.

Great Rd;

This section of Great Road is a steep with inadequate road drainage systems in place causing significant sediment to enter this tributary to the North Branch.

Buzzy Rd;

The road embankment is encroaching on the stream floodplain causing road shoulder erosion. One of the existing turnouts is outletting sediment directly to the stream. The road drainage system needs to be upgraded.



Vermont Better Roads Grant Program

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):

Minard Hill:

Install 25 LF of road embankment riprap, replace 25 LF of failing culvert riprap, and partially restore the floodplain. The landowner will be approached to discontinue mowing up to the stream edge and to establish a woody riparian buffer. (Using riprap typical) We estimate that we will have about 60 Yds of waste on this project.

Great Rd;

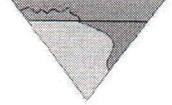
Install 900 LF of stone-lined ditching on both the east and west sides of the road and two stone-lined turnouts. *There is buried wire at this site- that will make work more difficult.* We estimate we will have about 250 Yds of waste on this project.

Buzzys Rd;

Armor 25 LF of the road shoulder with riprap, install 300 LF of stone-lined ditch, relocate turnout so that it does not directly outlet to the stream. We estimate that we will have about 45 Yds of waste on this project.

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

Improved water quality by installing stone lined ditches and stabilization stream banks. These projects will lead to a significant reduction in the amount of sediment that enters the streams and improve our water quality.



Vermont Better Roads Grant Program

Distance from end of project to nearest water (stream, lake, or storm water system that outlets directly to water). Please circle one: 0-50' 50-250' 250'+

Progress to Date:

We have worked with Doug Morton (NVDA), Jim Ryan (VT DEC), and Pat Ross (VT DEC) To come up with cost effective solutions for problem areas.

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: **Town of Groton- Municipal Road Erosion and Stream Crossing Inventory and Capital Budget (2015-2019)**

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.):

Doug Morton (NVDA), Jim Ryan (VT DEC), and Pat Ross (VT DEC)

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

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

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

Minard Hill Rd \$4,025; Great Rd \$10,240; Buzzy Rd \$5,865 Total \$20,130

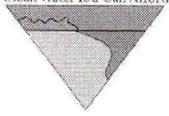
How do you plan to meet the required 20% match on this grant?

Inkind work by town Highway Dept

Requested Grant Amount (\$20,000 max Category B, \$40,000 max Categories C & D): \$16,000

Estimated Total Project Cost (including 20% local match):\$4,130

Estimated Completion Date: 9/15/2016



Vermont Better Roads Grant Program

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.

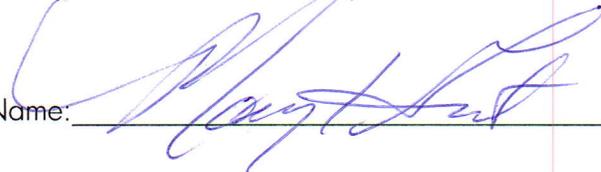
Agreement for Entry and/or Deed of Easement (if project is outside Town ROW).

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)

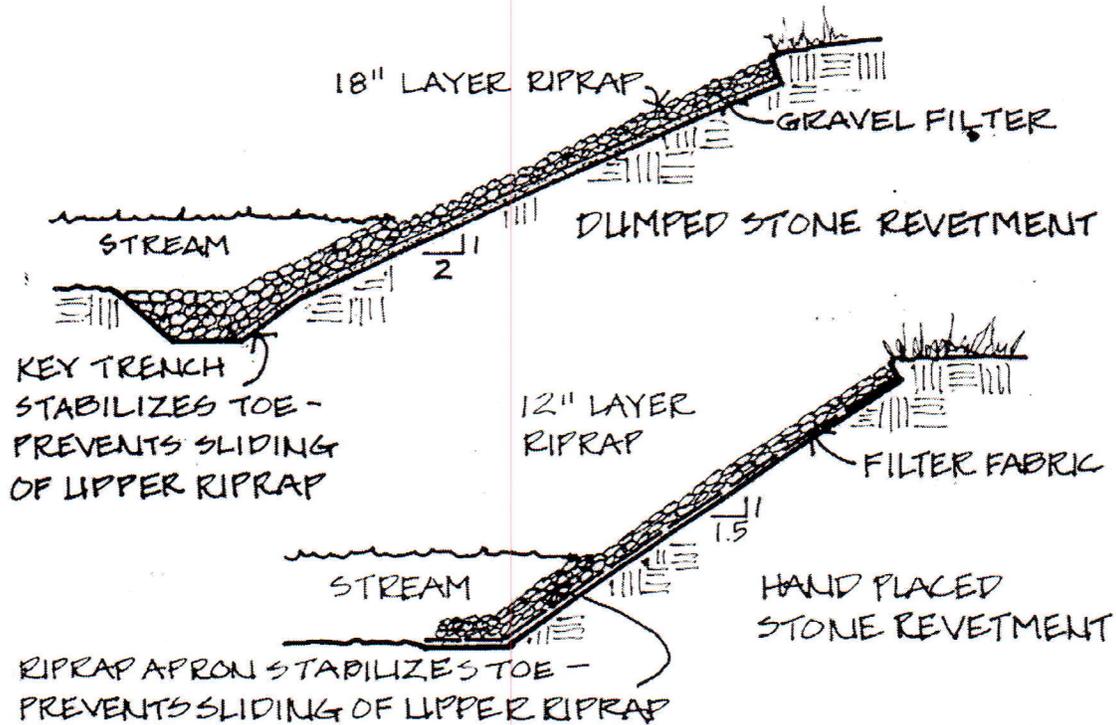
Name: 

Title: Board Chair

Riprap Revetment System:

Riprap can be carefully placed on bank slopes and stream edges where vegetation does not adequately prevent soil loss to reduce erosion and filter sediment.

- Size of riprap is dependent on quantity and velocity of water.
- Used on very steep slopes, at sharp turns in streams and where a bridge or culvert restricts water flow.
- Always contact a Stream Alteration Engineer at the Agency of Natural Resources before installing riprap on a streambank (see page 61).
- Use angular riprap stone. Slate or round stone will slide too easily.
- Install filter fabric under riprap to prevent soil from washing out unless advised otherwise by the Stream Alteration Engineer.
- Consider planting among the riprap to add stability, attractiveness and habitat value to the job (see page 45).
- Consider planting vegetation at the top of the bank- above the high water level- and stabilizing with riprap at the toe of the slope where moving water will flow.

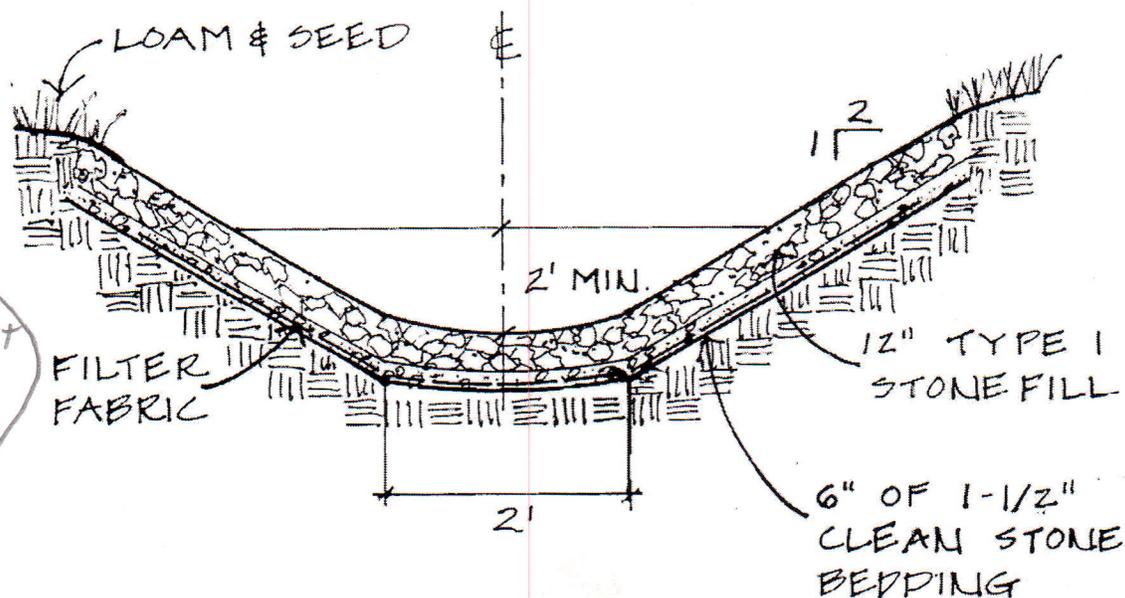


RIPRAP REVETMENT

Final Design will be from Patrick Ross

DITCHES

- Size ditches so they are large enough to handle runoff from the drainage area.
- The preferred equipment for creating ditches is a rubber-tired excavator with an articulated bucket.
- Line ditches which have a less than 5% slope with grass in order to filter sediments. Use mulch or erosion control blankets to hold seed in place and allow it to become established.
- Line ditches which have a greater than 5% slope with riprap.
- Line ditches as soon as possible to prevent erosion and to maintain the ditch profile.
- Ditches should deposit water away from the road and prevent standing water, which can weaken the road.
- Outlet ditches into vegetated areas, where possible.
- Vegetated ditches installed after September 15th should be stabilized with either erosion control blankets or hydroseeding to provide adequate protection for winter.



STONE LINED DITCH

Minard Hill Rd

Materials/Equipment	Quantity	Cost per unit	Total cost
Type 4 riprap	75 CY	\$15/CY	\$1,125
Backhoe	16 hours	\$100/hour	\$1,600
Trucking	16 hours	\$75/hour	\$1,200
Seed and mulch	-	-	\$100
Total			\$4,025

Great Rd

Materials/Equipment	Quantity	Cost per unit	Total Cost
Ditch stone- 8" minus	270 CY	\$12/CY	\$3,240
Backhoe	40 hours	\$100/hour	\$4,000
Trucking	40 hours	\$75/hour	\$3,000
Total			\$10,240

Buzzys Rd

Materials/Equipment	Quantities	Cost per unit	Total Cost
Riprap- Type 4 rock	35 CY	\$15/CY	\$525
8" minus	95 CY	\$12/CY	\$1,140
Backhoe	24 hours	\$100/hour	\$2,400
Trucking	24 hours	\$75/hour	\$1,800
Total			\$5,865

Total for all 3 \$20,130



Groton Highway Highway <grotonhwy@gmail.com>

Better Roads Projects

Ross, Patrick <Patrick.Ross@vermont.gov>
To: Groton Highway <grotonhwy@fairpoint.net>

Wed, Apr 13, 2016 at 7:08 AM

Hi Brent,

Per our conversations and work together on the Groton town highway capital improvement project report. All these projects will be net positive and will qualify for the VT Stream Alteration General Permit. Please use this short note in your Better Roads Grant as confirmation that we have collaborated on these issues and as confirmation of support for funding.

Regards,

Patrick Ross, P.E.

Patrick.Ross@Vermont.Gov

1229 Portland Street

St. Johnsbury, Vermont 05819

802.279.1143

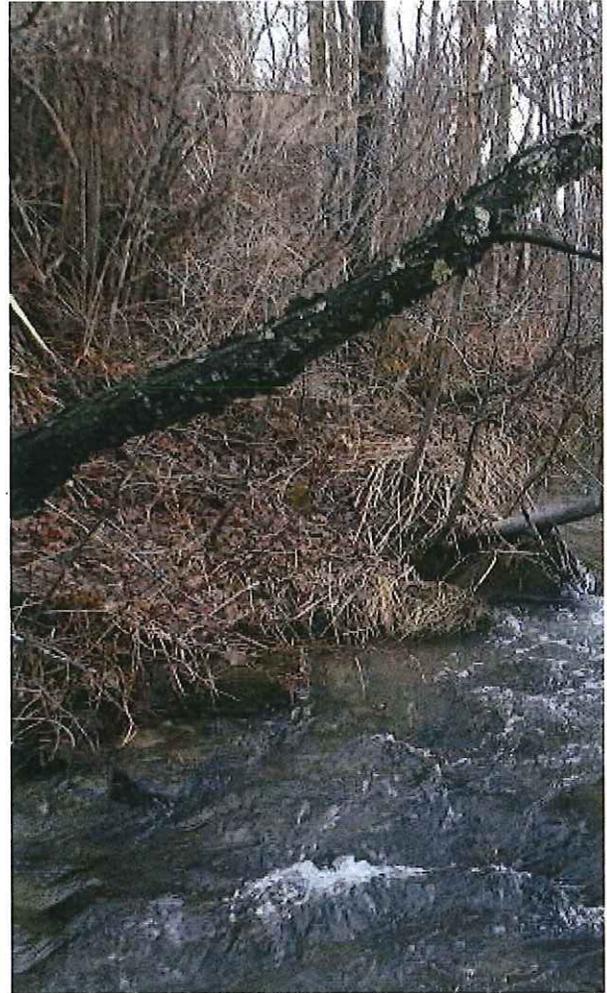
From: grotonhwy@gmail.com [mailto:grotonhwy@gmail.com] **On Behalf Of** Groton Highway

Sent: Wednesday, April 13, 2016 6:44 AM

To: Ross, Patrick <Patrick.Ross@vermont.gov>

Subject: Better Roads Projects

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Add to Gioten
CAT(B)





