



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 Cambridge

Project Name: Cady Hill Rd.

Road Name: Cady Hill Rd. TH #: 39 Structure # (if applicable): _____

Road Type: Unpaved Uncurbed
Class 3

Watershed: Lamoille River

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

The existing roadside ditch is eroding and undercutting. Project is on a steep grade of 10% - 12% grades.

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):

Project would entail reshaping ditch, applying Type 1&2 Stone Fill over Geo Textile Fabric, with Stone Check Dams.

Note:
If soils allow, Geotextile Fabric may be eliminated.

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

With the proposed ditch treatment, erosion should be reduced significantly or eliminated.



Distance from end of project to nearest water (stream, lake, or stormwater system that outlets directly to water). 50-250'

Progress to Date:

None

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

No emergency now, however should be completed in the near future.

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.):

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).

Yes.



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

How do you plan to meet the required 20% match on this grant?:
Cash and Inkind services.

Requested Grant Amount (\$20,000 max Category B, \$40,000 max Categories C & D): \$ 19,620.46
 Estimated Total Project Cost (including 20% local match): \$ 24,525.58
 Estimated Completion Date: 10/30/2016

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: Dana H. Swart Title: Selectman

COST ESTIMATE WORKSHEET

TOWN & ROAD NAME: Cambridge - Cady Hill Rd. - TH 39 - Class 3

PROJECT NAME: Cady Hill Rd. BR Project 2016

Item	RATE	Unit	# Units	TOTAL (Rate X Hours)		
LABOR						
Foreman	\$ 35.00	Hr.	36	\$ 1,260.00		
Equipment Operator	\$ 30.00	Hr.	36	\$ 1,080.00		
Maintenance Worker	\$ 28.00	Hr.	108	\$ 3,024.00		
					TOTAL LABOR	\$ 5,364.00
EQUIPMENT						
	RATE	Unit	# Units	TOTAL (Rate X Hours)		
Excavator	\$ 56.03	Hrs.	36	\$ 2,017.08		
Loader	\$ 52.72	Hrs.	10	\$ 527.20		
Tandem Truck	\$ 128.55	Hrs.	60	\$ 7,713.00		
Single Axle Truck	\$ 112.13	Hrs.	10	\$ 1,121.30		
Grader	\$ 82.04	Hrs.	4	\$ 328.16		
Pickup - 4-Wheeled Drive	\$ 27.59	Hrs.	16	\$ 441.44		
					TOTAL EQUIPMENT	\$ 11,378.58
MATERIALS						
	RATE	Unit	# Units	TOTAL (Rate X Hours)		
Geotextile Filter Fabric (615x 8:9=546 S.Y.	\$ 1.50	S.Y.	550	\$ 825.00		
Stone Fill - Type I & II (615 X 10X1=6150÷27=227.77X1.25=284.72 C.Y.	\$ 16.00	C.Y.	285	\$ 4,560.00		
Seed	\$ 1.50	Lb.		\$ -		
Mulch	\$ 4.00	Bale	25	\$ 100.00		
Gravel (700X10X0.33=2310÷27=85.5x 1.25=106.94 C.Y.	\$ 14.00	C.Y.	107	\$ 1,498.00		
					TOTAL MATERIALS	\$ 6,983.00
MISCELLANEOUS						
Traffic Control	\$ 300.00	Est.	1	\$ 300.00		
Layout - Inspection - Easements, etc.	\$ 500.00	Est.	1	\$ 500.00		
					TOTAL MISCELLANEOUS	\$ 800.00
					GRAND TOTAL	\$ 24,525.58
					MATCH	\$ 4,905.12

Legend

-  = Highway Right of Way
-  = Culvert
-  = Edge of Road
-  = Stone Lined Ditch
-  = Stone Check Dam
-  = Plunge/Splash Pool
-  = Existing Ditch
-  = 2015 Better Backroads Project

Cady Hill Rd. – TH 39

N 44°.62170 - W 72°.89234

Project Length = 655'

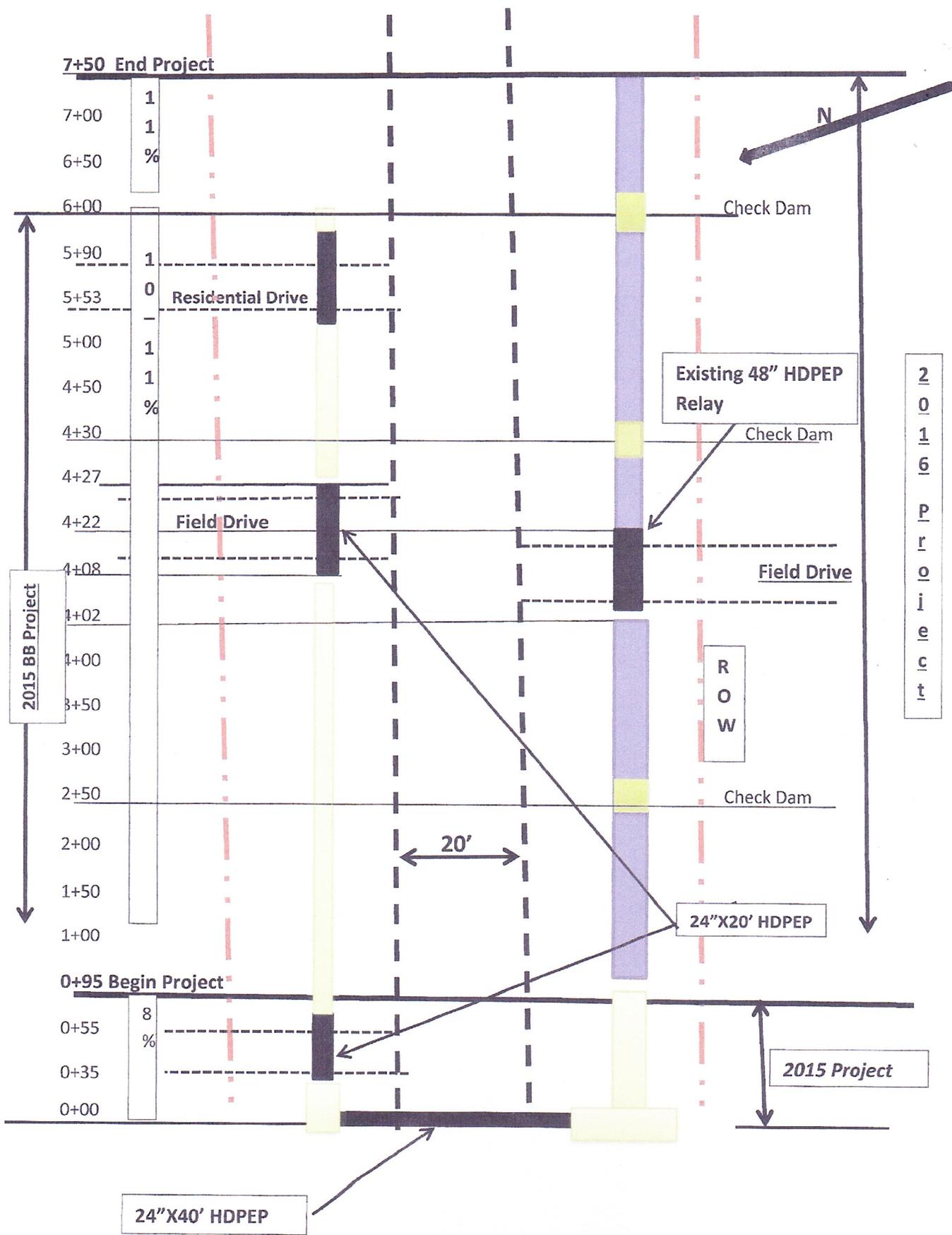
Project will include:

~~585~~ L.F. Stone Lined Ditch

615 3 Stone check Dams

The Town of Cambridge is proposing the following project to reduce erosion on the Cady Hill Road – TH 39. The project’s drainage flows into Seymour River, a tributary of Lamoille River.

The proposed plans are to reconstruct an existing ditch on the westerly side of the road, construct Stone Lined ditches with Stone Check Dams to prevent severe undercutting. The completed project will require adding road gravel to the road to maintain the road crown, width and stability.



7+50 End Project

7+00

6+50

6+00

5+90

5+53

5+00

4+50

4+30

4+27

4+22

4+08

4+02

4+00

3+50

3+00

2+50

2+00

1+50

1+00

0+95 Begin Project

0+55

0+35

0+00

N

Check Dam

Residential Drive

Existing 48" HDPEP Relay

Check Dam

Field Drive

Field Drive

ROW

Check Dam

20'

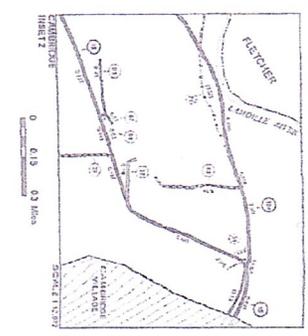
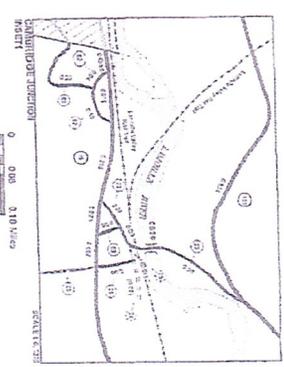
24"X20' HDPEP

2015 Project

24"X40' HDPEP

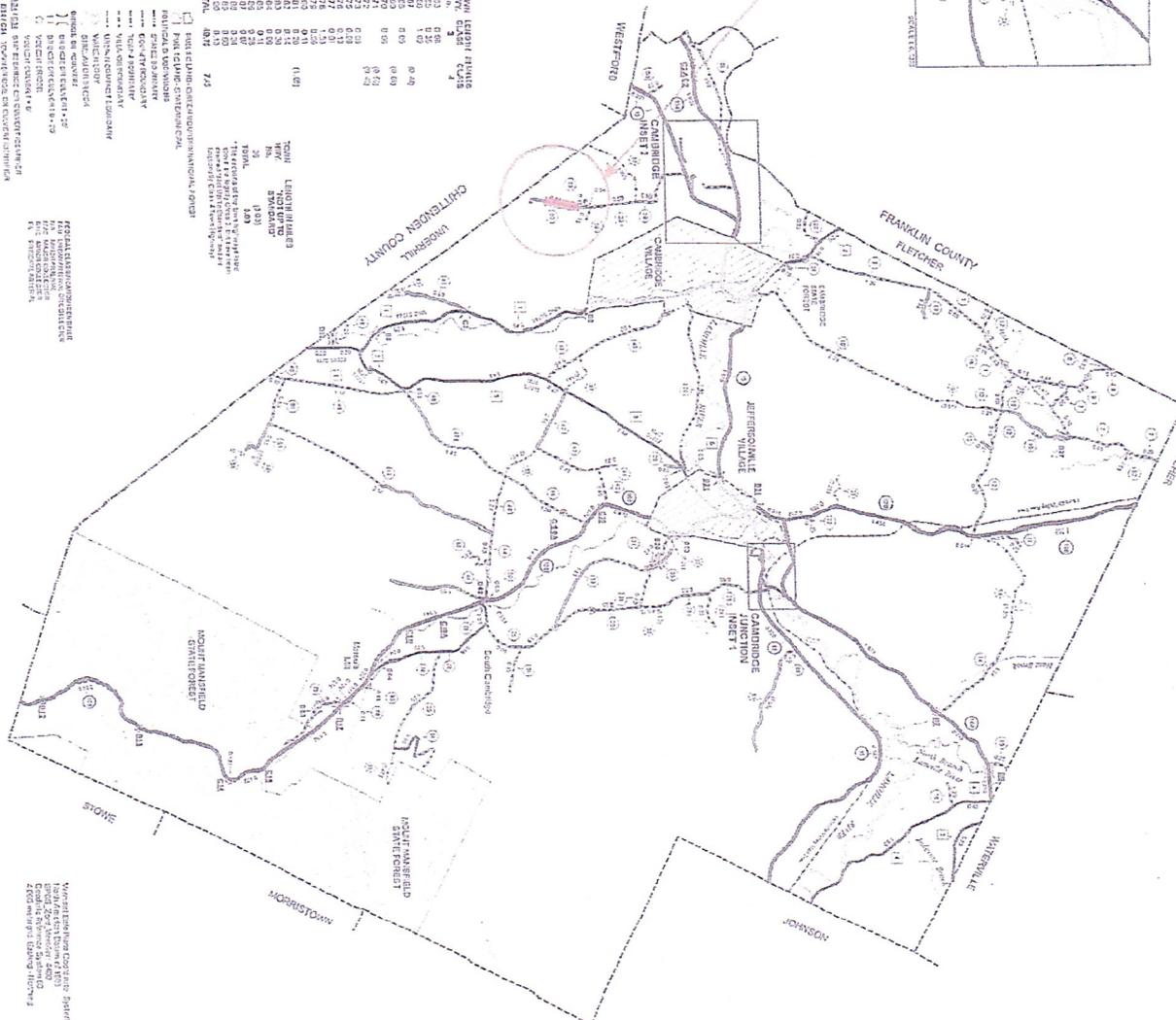
2016 Project

2015 BB Project



Proposed Route

CLASS	LENGTH	AREA	PERCENT
CLASS 1	1.00	1.00	100.00
CLASS 2	1.00	1.00	100.00
CLASS 3	1.00	1.00	100.00
CLASS 4	1.00	1.00	100.00
CLASS 5	1.00	1.00	100.00
CLASS 6	1.00	1.00	100.00
CLASS 7	1.00	1.00	100.00
CLASS 8	1.00	1.00	100.00
CLASS 9	1.00	1.00	100.00
CLASS 10	1.00	1.00	100.00
CLASS 11	1.00	1.00	100.00
CLASS 12	1.00	1.00	100.00
CLASS 13	1.00	1.00	100.00
CLASS 14	1.00	1.00	100.00
CLASS 15	1.00	1.00	100.00
CLASS 16	1.00	1.00	100.00
CLASS 17	1.00	1.00	100.00
CLASS 18	1.00	1.00	100.00
CLASS 19	1.00	1.00	100.00
CLASS 20	1.00	1.00	100.00
CLASS 21	1.00	1.00	100.00
CLASS 22	1.00	1.00	100.00
CLASS 23	1.00	1.00	100.00
CLASS 24	1.00	1.00	100.00
CLASS 25	1.00	1.00	100.00
CLASS 26	1.00	1.00	100.00
CLASS 27	1.00	1.00	100.00
CLASS 28	1.00	1.00	100.00
CLASS 29	1.00	1.00	100.00
CLASS 30	1.00	1.00	100.00
CLASS 31	1.00	1.00	100.00
CLASS 32	1.00	1.00	100.00
CLASS 33	1.00	1.00	100.00
CLASS 34	1.00	1.00	100.00
CLASS 35	1.00	1.00	100.00
CLASS 36	1.00	1.00	100.00
CLASS 37	1.00	1.00	100.00
CLASS 38	1.00	1.00	100.00
CLASS 39	1.00	1.00	100.00
CLASS 40	1.00	1.00	100.00
CLASS 41	1.00	1.00	100.00
CLASS 42	1.00	1.00	100.00
CLASS 43	1.00	1.00	100.00
CLASS 44	1.00	1.00	100.00
CLASS 45	1.00	1.00	100.00
CLASS 46	1.00	1.00	100.00
CLASS 47	1.00	1.00	100.00
CLASS 48	1.00	1.00	100.00
CLASS 49	1.00	1.00	100.00
CLASS 50	1.00	1.00	100.00
CLASS 51	1.00	1.00	100.00
CLASS 52	1.00	1.00	100.00
CLASS 53	1.00	1.00	100.00
CLASS 54	1.00	1.00	100.00
CLASS 55	1.00	1.00	100.00
CLASS 56	1.00	1.00	100.00
CLASS 57	1.00	1.00	100.00
CLASS 58	1.00	1.00	100.00
CLASS 59	1.00	1.00	100.00
CLASS 60	1.00	1.00	100.00
CLASS 61	1.00	1.00	100.00
CLASS 62	1.00	1.00	100.00
CLASS 63	1.00	1.00	100.00
CLASS 64	1.00	1.00	100.00
CLASS 65	1.00	1.00	100.00
CLASS 66	1.00	1.00	100.00
CLASS 67	1.00	1.00	100.00
CLASS 68	1.00	1.00	100.00
CLASS 69	1.00	1.00	100.00
CLASS 70	1.00	1.00	100.00
CLASS 71	1.00	1.00	100.00
CLASS 72	1.00	1.00	100.00
CLASS 73	1.00	1.00	100.00
CLASS 74	1.00	1.00	100.00
CLASS 75	1.00	1.00	100.00
CLASS 76	1.00	1.00	100.00
CLASS 77	1.00	1.00	100.00
CLASS 78	1.00	1.00	100.00
CLASS 79	1.00	1.00	100.00
CLASS 80	1.00	1.00	100.00
CLASS 81	1.00	1.00	100.00
CLASS 82	1.00	1.00	100.00
CLASS 83	1.00	1.00	100.00
CLASS 84	1.00	1.00	100.00
CLASS 85	1.00	1.00	100.00
CLASS 86	1.00	1.00	100.00
CLASS 87	1.00	1.00	100.00
CLASS 88	1.00	1.00	100.00
CLASS 89	1.00	1.00	100.00
CLASS 90	1.00	1.00	100.00
CLASS 91	1.00	1.00	100.00
CLASS 92	1.00	1.00	100.00
CLASS 93	1.00	1.00	100.00
CLASS 94	1.00	1.00	100.00
CLASS 95	1.00	1.00	100.00
CLASS 96	1.00	1.00	100.00
CLASS 97	1.00	1.00	100.00
CLASS 98	1.00	1.00	100.00
CLASS 99	1.00	1.00	100.00
CLASS 100	1.00	1.00	100.00

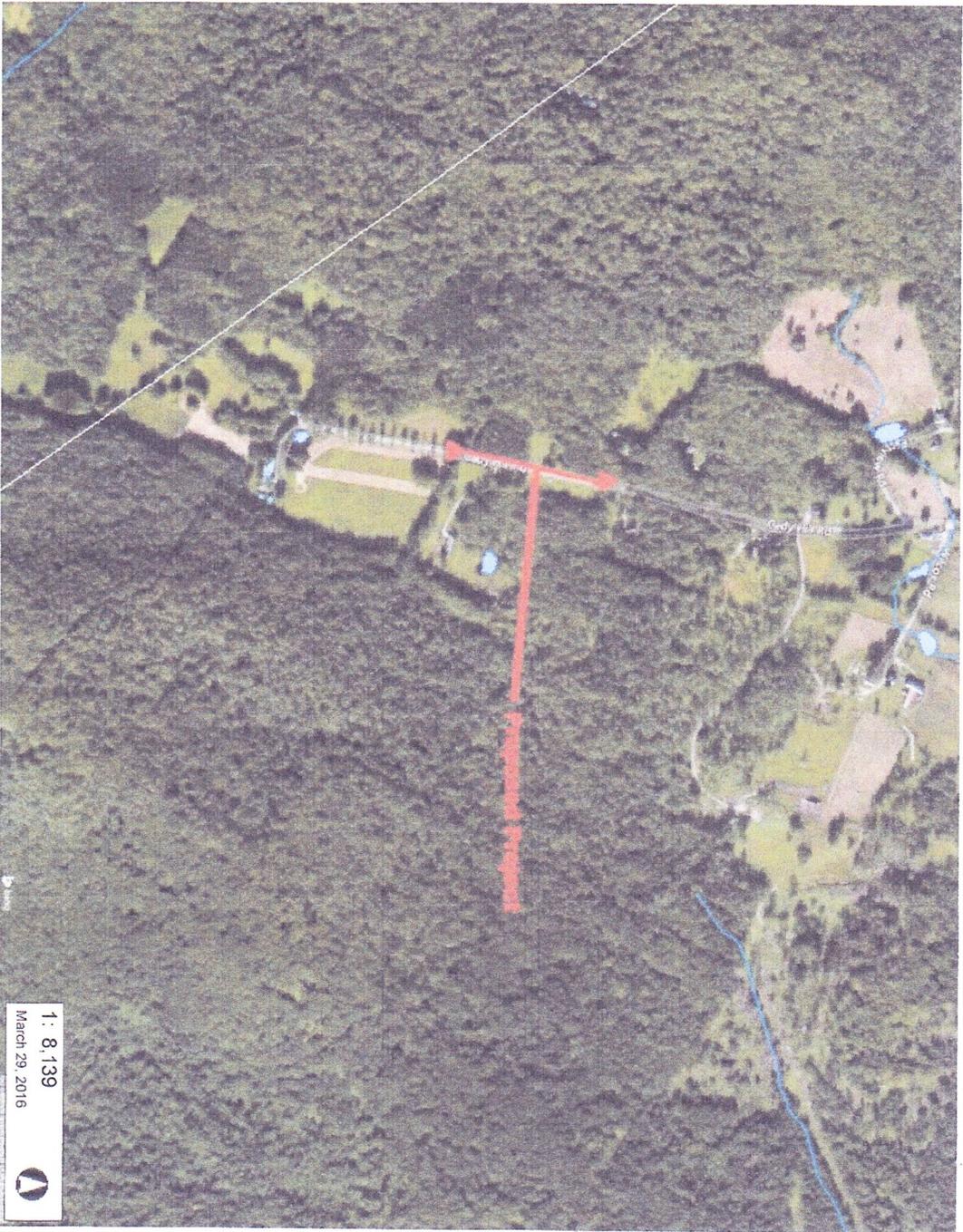


VERMONT GENERAL HIGHWAY MAP
Town of Cambridge
 Lamolle County
 Transportation District #8
 Penningtonville

Vermont Agency of Transportation
 Division of Policy, Planning and Budget Development
 U.S. Department of Transportation
 Federal Highway Administration
 Washington, D.C. 20541
 VTA-100-100-000-000
 SCALE 1:50,000

Vertical Scale: 0 to 1.5 Miles
 Horizontal Scale: 0 to 2 Miles

Legend:
 - Proposed Highway
 - Existing Highway
 - State Route
 - County Route
 - Local Road
 - Water
 - Forest
 - Agriculture
 - Residential
 - Commercial
 - Industrial
 - Public Buildings
 - Schools
 - Churches
 - Cemeteries
 - Parks
 - Open Space
 - Wetlands
 - Flood Hazard Areas
 - Seismic Hazard Areas
 - Landslide Hazard Areas
 - Erosion Hazard Areas
 - Other Hazardous Areas



413.0 0 206.00 413.0 Meters
MGS, 1984, Web_Mercator_Auxiliary_Sphere 1" = 678 Ft. 1cm = 81 Meters
© Vermont Agency of Natural Resources THIS MAP IS NOT TO BE USED FOR NAVIGATION

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.

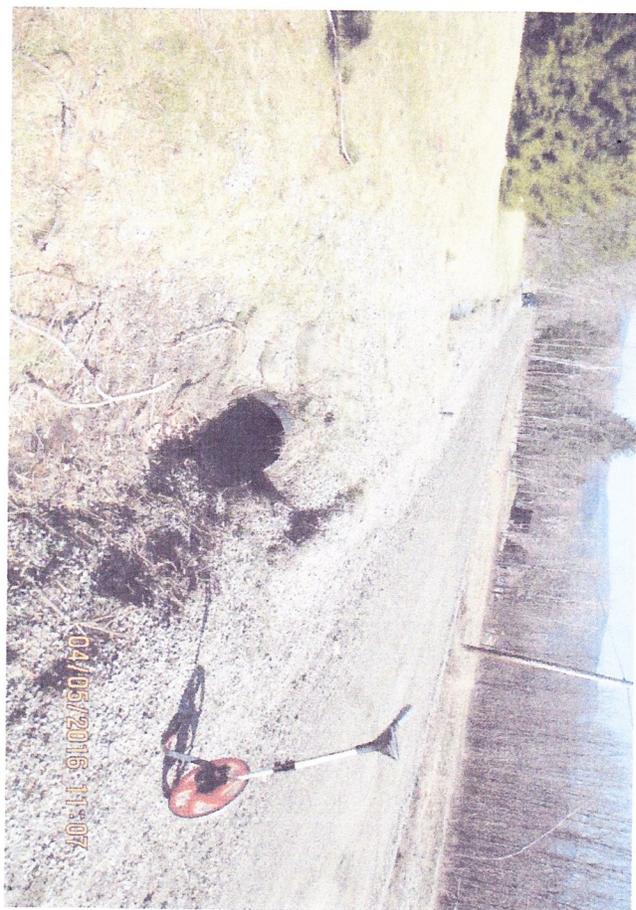
1 : 8,139
March 29, 2016



- LEGEND**
- Waterbody
 - Stream
 - Town Boundary

NOTES
Map created using ANR's Natural Resources Atlas

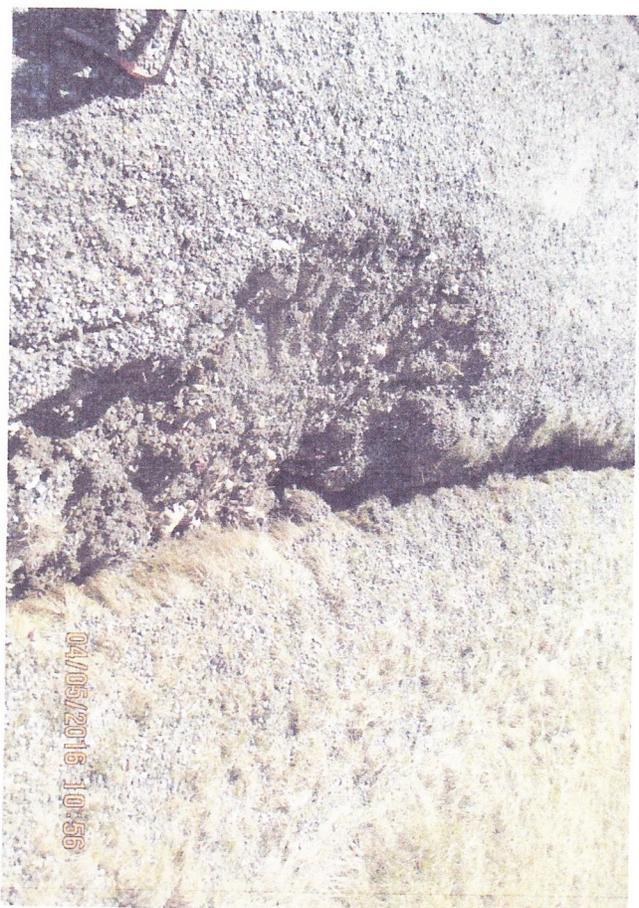
Paradise - Cedar Hill Road



04/05/2016 11:07



04/05/2016 10:59



04/05/2016 10:56



04/05/2016 10:56