FY17 Vermont Better Roads Grant Application

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

Town/Organization: Town of Baltimore Contact Person(s): Walter Rich

Address: 1902 Baltimore Road, Baltimore, VT 05143

Street Address *Town* *Zip*

Email: wsrich1@gmail.com Phone: (802) 263 - 5274

DUNS #: 80040562 Fiscal Year End Month (MM): 12

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 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:

- [x] 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 Baltimore

Project Name: Austin and Thomas

Road Name: Baltimore Road TH #: 1 Structure # (if applicable): _____

Road Type: Unpaved Uncurbed

Class 2

Watershed: Black River

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

Austin Site - This Baltimore Road section has had drainage issues for many years, particularly due to to ledge near the surface and trees close to ROW making any solutions expensive to fix. A new driveway is being installed on this section of roadway which will increase the issues by increasing water flowing towards the ROW.
Thomas Site - Header is failing on a 15 inch culvert, with the side of the road eroding.

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):

Austin Site - Upgrade existing old cement culvert from 14 inches to 24 inches, and replace headers. Remove some ledge to improve ditching.
Thomas Site - Replace 15 inch culvert with 24 inch culvert. Keep current depth of approximately 6ft. Repair header.

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

Austin Site - Roadway drainage will be improved so there will be less erosion.
Thomas Site - Roadway erosion will be significantly reduced by greater capacity culvert with new header.

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

Progress to Date:

None

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

None

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: High Priority in 2016 Town Road Erosion Inventory ( ) 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.):

Field visit from Alan May (Better Roads Program) in January 2016
Katharine Otto, Southern Windsor County Regional Planning Commission - Letter of Support attached.
Two contractors for cost estimates

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

Nearly all project work is in the Right of Way. The Thomas Site requires some site monitoring for insurance purposes of neighboring house during blasting - permission will be obtained from owner once funding is obtained for the project.

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

No. All work would be completed by a contractor since the town has no Highway Crew and only has a grader for equipment (just over 7 miles of roadway and just under 250 residents).

Better Roads
Clean Water You Can Afford

VTrans
VERMONT
AGENCY OF NATURAL RESOURCES

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

Project Budget attached. Would like to complete this work at the same time as the "Upham, Basso and Loomis" Project so can save on contractor costs, particularly with blasting. If only one project this year, "Austin and Thomas" is higher priority for the town.

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

Cash match. All work would be completed by a contractor since the town has no Highway Crew and only has a grader for equipment

Requested Grant Amount ($20,000 max Category B, $40,000 max Categories C & D): $ 13,243.00

Estimated Total Project Cost (including 20% local match): $ 16,553.75

Estimated Completion Date: 11/30/2017

REQUIRED ATTACHMENTS:

- [x] Itemized Cost Estimate (labor, equipment, materials)
  (For assistance, call Better Backroads at 802-828-4585)
- [x] Project Location Map
  (Please show location of affected water; 1:12,000 USGS map, if possible)
- [x] Sketch of proposed erosion control measures, including:
  - [x] Distances (ft.)
  - N/A [ ] Estimate of waste & borrow quantities
  - [x] Approx. location of town/other right-of-way and/or property lines
- [x] Photo(s) of the project area.
- N/A [ ] Agreement for Entry and/or Deed of Easement (if project is outside Town ROW).
- N/A [ ] If project involves stream or river/road conflict, include documentation of consultation with a River Management Engineer. Alan May visited sites in January 2016 and determined that since the culverts are cross culverts they did not need a permit.
- [x] 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: Walter S Rich Title: Select Board chair.

Cost Estimate Worksheet

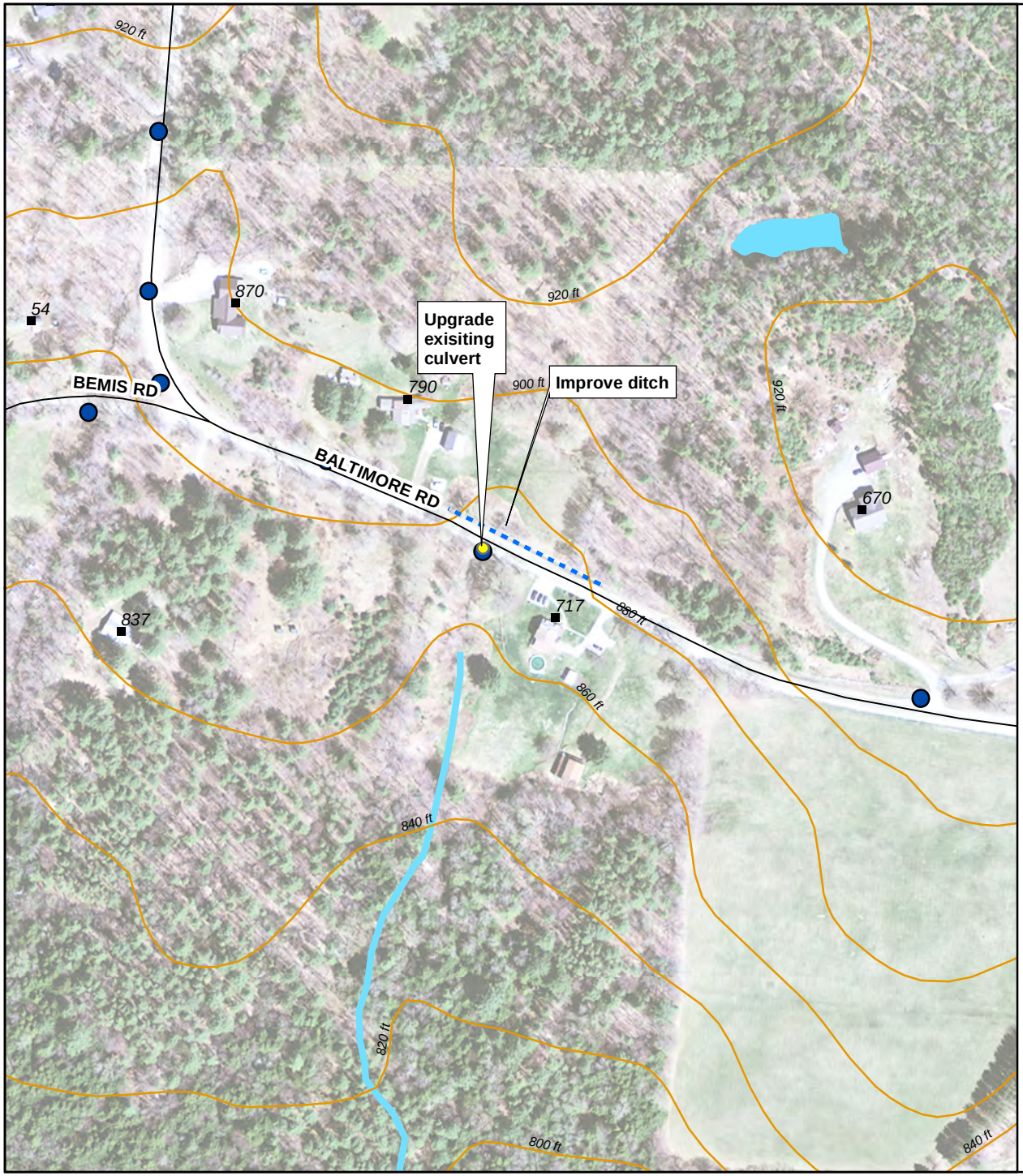
Town and Road Name: Baltimore - Baltimore Road **Project Name: Austin and Thomas**

Labor	**Rate**	**# Hours**	**Total (Rate x Hours)**
Hand Labor	$45.00	8	$360.00
Hand Labor	$75.00	8	$600.00
			$0.00
		Labor Total	**$960.00**

Equipment	**Rate**	**# Hours**	**Total (Rate x Hours)**
912 Excavator with operator	$100.00	22	$2,200.00
Bale chopper			$75.00
Truck 18 with operator	$75.00	7.5	$562.50
			$0.00
		Equipment Total	**$2,837.50**

Materials	**Rate**	**Amount**	**Total (Rate x Amount)**
24 inch culverts ($21.66 per foot. 40ft length)	$866.40	2	$1,732.80
Crushed gravel (yards)	$12.50	72	$900.00
Bales of hay with 20#seed	$7.50	10	$75.00
			$0.00
			$0.00
			$0.00
		Materials Total	**$2,707.80**

Miscellaneous	**Rate**	**Amount**	**Total (Rate x Amount)**
Drill, Pre-Blast and siesmograph			$8,500.00
Contingency Fund for unknowns/ cost changes (Approx 10% of contractor's estimate)			$1,548.45
			$0.00
		Miscellaneous Total	**$10,048.45**
		Project Total	**$16,553.75**
		Grant funds requested	**$13,243.00**
		Cash Match	**$3,310.75**



Austin Site
Austin and Thomas Project
Town of Baltimore
Better Roads Application - April 2016

N

0 120 240 360 480 Feet

- Existing Culvert
- esite point
- Interstate Highway
- State or US Highway
- Town Highway
- Other
- 20ft Contours
- Rivers and Streams
- Lakes and Ponds
- Town Boundary

Data Sources: Roads (Vermont Agency of Transportation 2015),
20ft Contour Lines (United States Geological Survey 2012),
Rivers and waterbodies (Vermont Hydrographic Dataset 2008),
Town Boundaries (Vermont Center for Geographic Information 2012),
Culverts (vtculverts.org inventory updated 2013 by Town and RPC),
Buildings (VT E911 Esite July 2015),
Aerial (National Agricultural Imagery Program 2011)

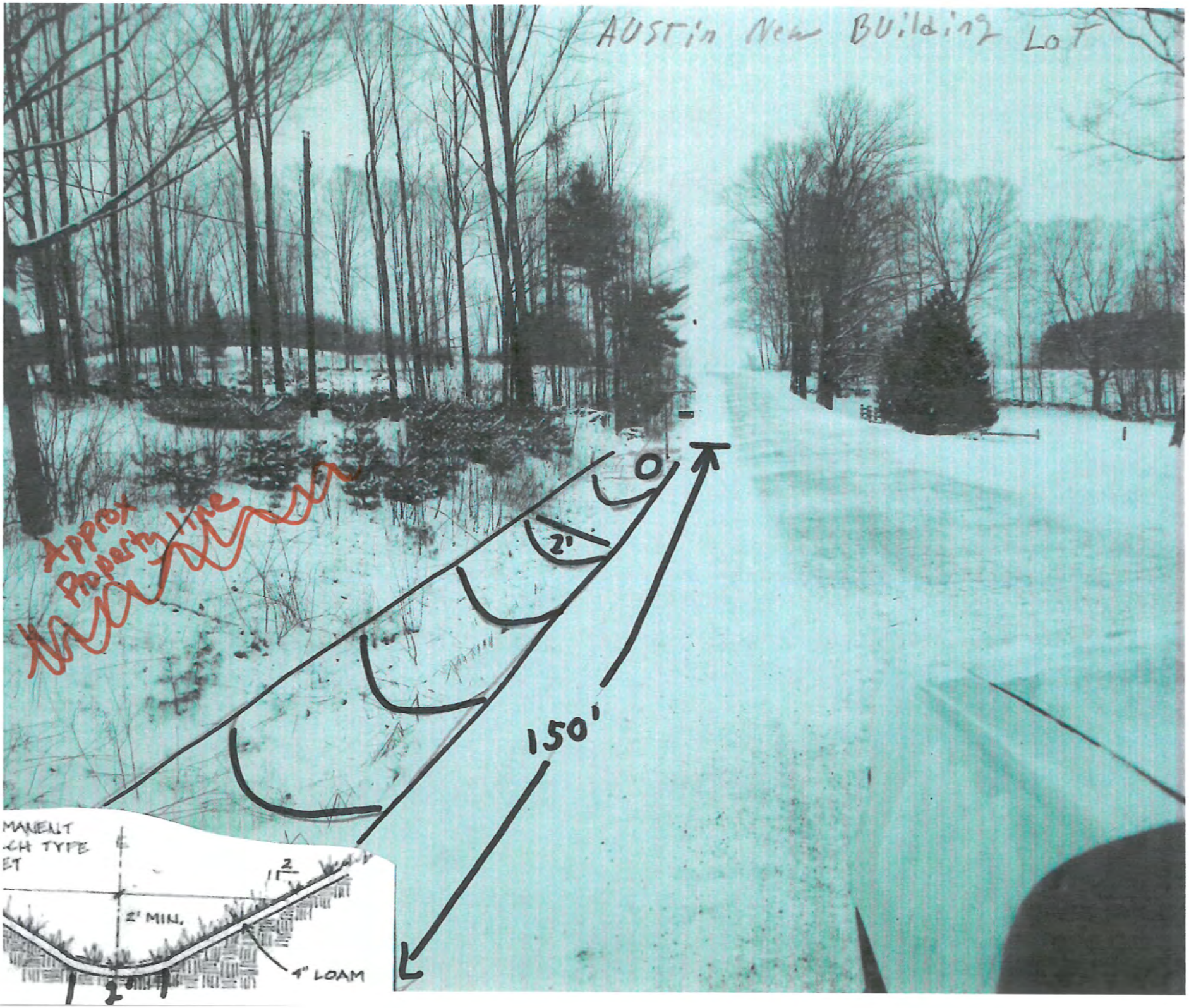
Digital parcel data not available for the town.

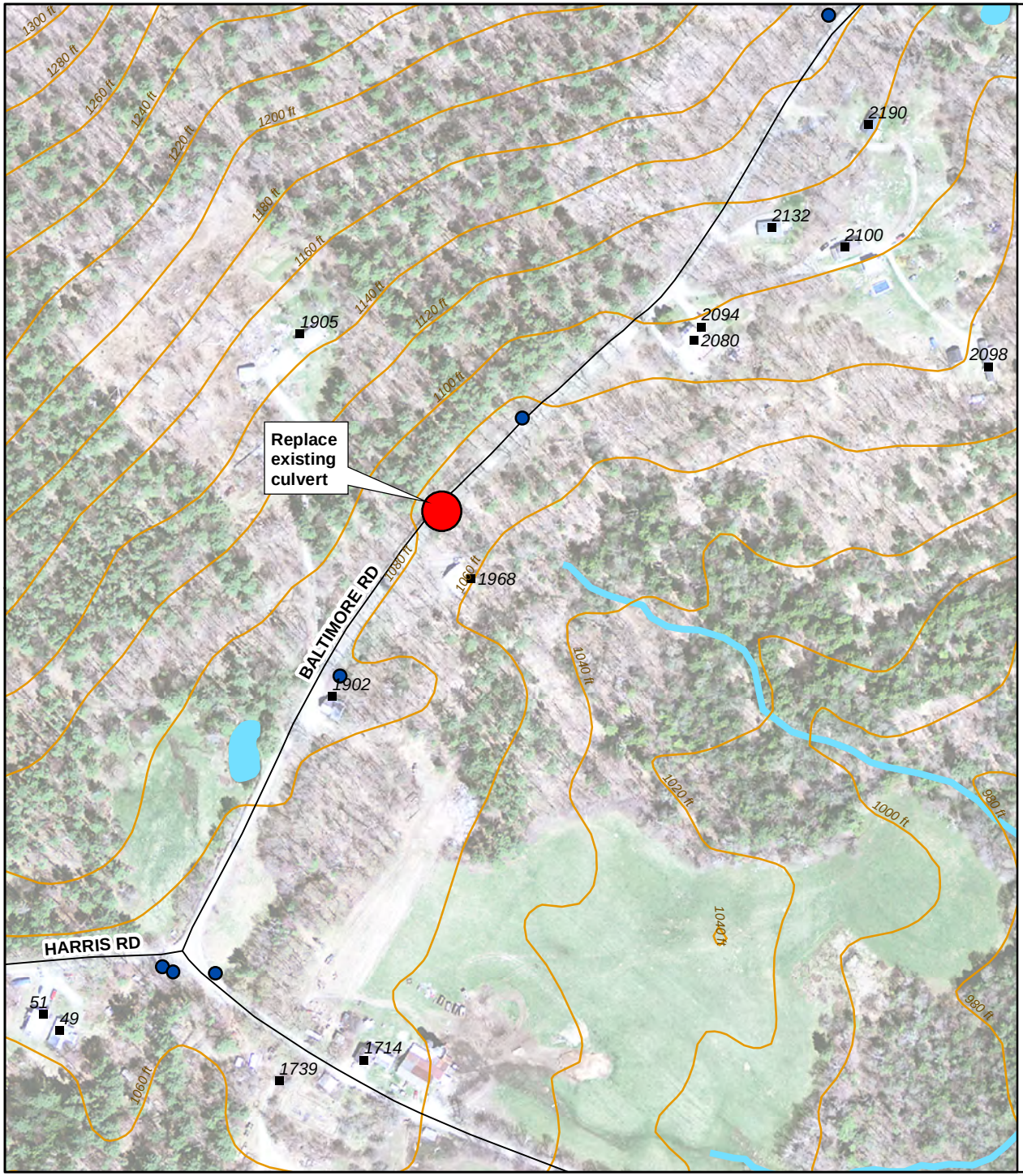
VT State Plane Meters, NAD 83

Map for planning purposes only.
Not for regulatory interpretation.

Map drawn April 11, 2016

SWCRPC
SOUTHERN WINDSOR COUNTY
REGIONAL PLANNING COMMISSION
PO Box 320, Ascutney, VT 05030
www.swcrpc.org


Austin New Building Lot
Approx Property line
0
2'
150'
MANENT
CH TYPE
ET
2' MIN.
4" LOAM



Thomas Site
Austin and Thomas Project
Town of Baltimore
Better Roads Application - April 2016

N

0 125 250 375 500 Feet

- Existing culvert
- Building
- Interstate Highway
- State or US Highway
- Town Highway
- Other
- 20ft Contours
- Rivers and Streams
- Lakes and Ponds
- Town Boundary

Data Sources: Roads (Vermont Agency of Transportation 2015),
20ft Contour Lines (United States Geological Survey 2012),
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Map drawn April 6, 2016

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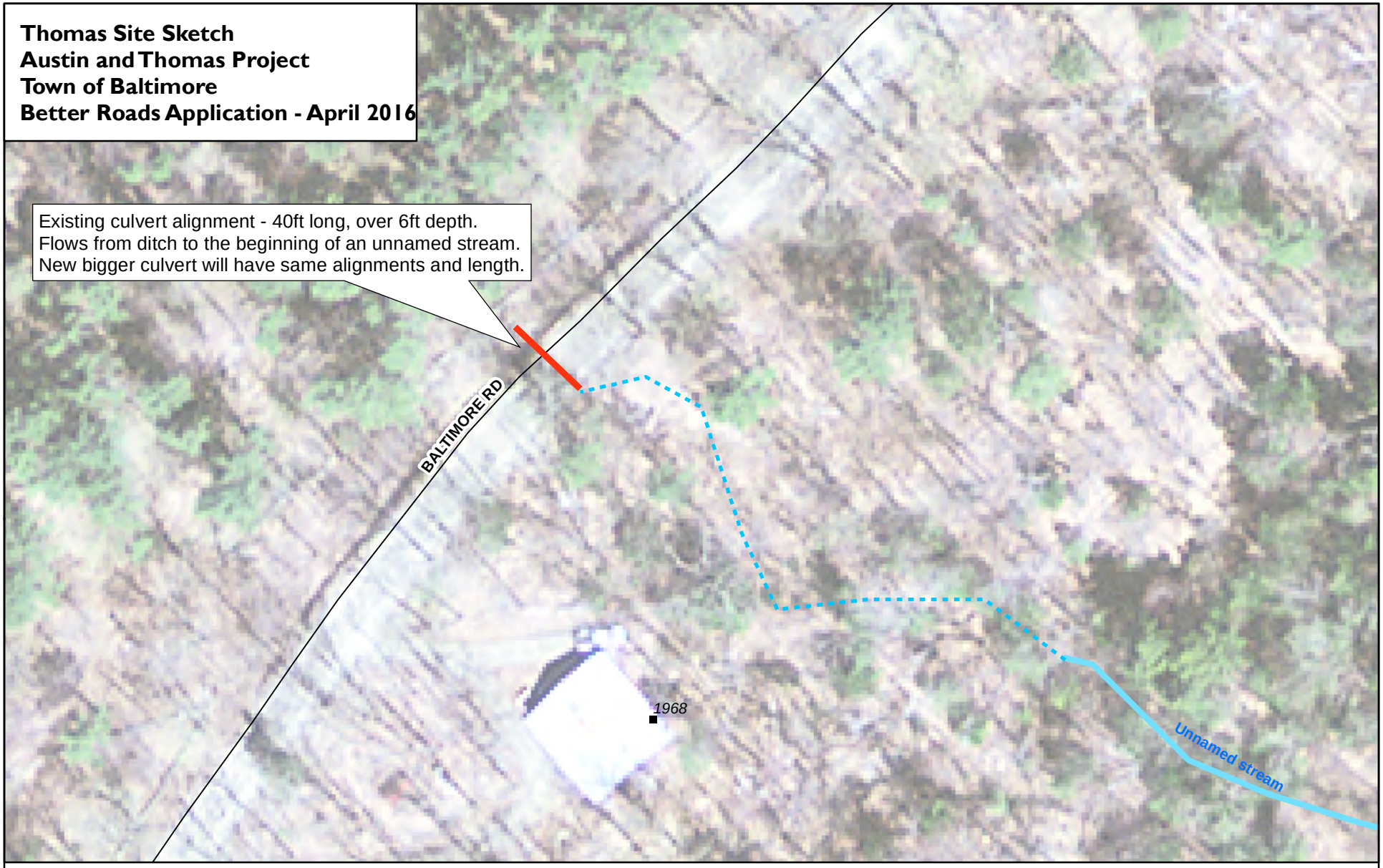

Building
Town Highway
Rivers and Streams
Lakes and Ponds
Small stream not marked in other data (clearly visible on site visit)

Data Sources: Roads (Vermont Agency of Transportation 2015), Rivers and waterbodies (Vermont Hydrographic Dataset 2008), Culverts (vtculverts.org inventory updated 2013 by Town and RPC), Buildings (VT E911 Esite July 2015), Aerial (National Agricultural Imagery Program 2011) Digital parcel data not available for the town.

N

0 20 40 Feet

VT State Plane Meters, NAD 83

Map for planning purposes only. Not for regulatory interpretation.

Map drawn April 6, 2016

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SOUTHERN WINDSOR COUNTY REGIONAL PLANNING COMMISSION
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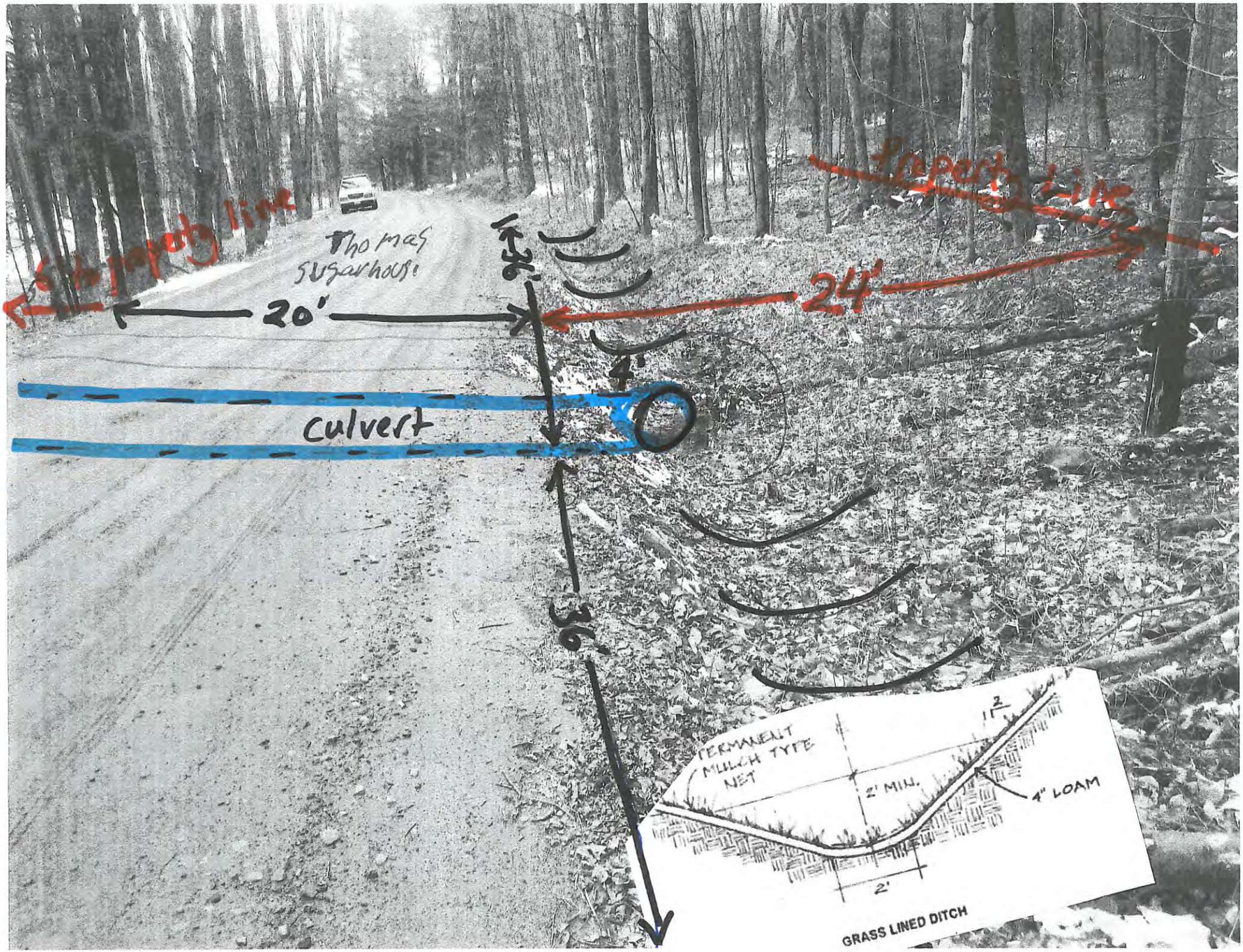
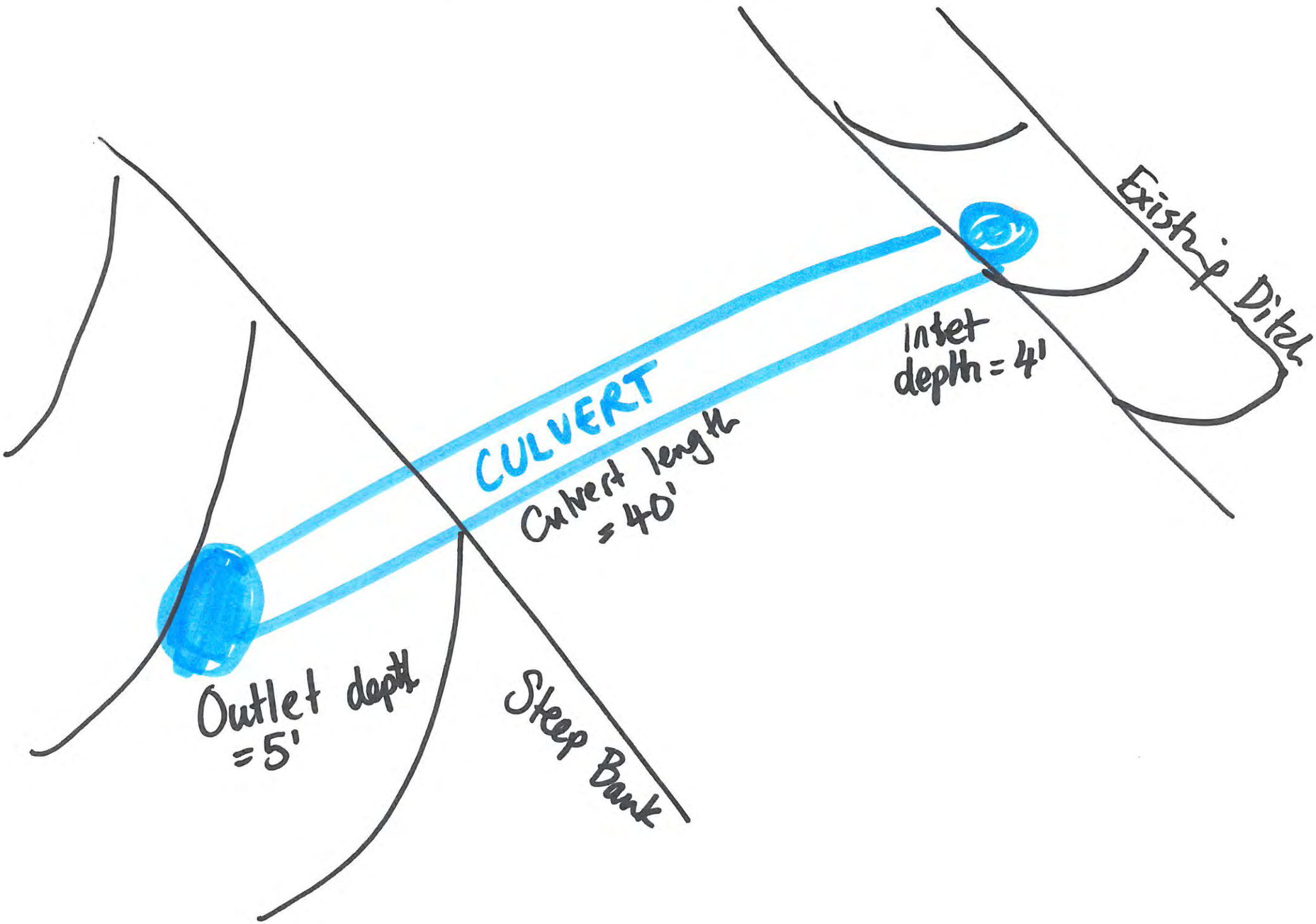


property line
Thomas
Sugarhouse
20'
36'
24'
4'
culvert
36'
property line
PERMANENT
MULCH TYPE
NET
2' MIN.
4" LOAM
2'
GRASS LINED DITCH

Thomas


CULVERT
Culvert length = 40'
Inlet depth = 4'
Existing Ditch
Outlet depth = 5'
Steep Bank

Photographs
Austin and Thomas Project – Baltimore
Better Roads Application 2016

Top: Austin Site – New driveway and cleared lot where new culvert would be installed.
Bottom: Looking downhill from new driveway. Austin ditch work would be on the right side of the road.

Top left: Austin Site – existing ditch to be stone lined
Top right: Austin Site – Small stream flowing from site that needs culvert upgrade
Bottom: Austin Site – Outlet end of culver that needs culvert upgrade

Top: Thomas Site - Culvert header failing causing road erosion. Culvert location works well for drainage.

Bottom: Thomas Site - Culvert outlet is over 6ft deep

Top: Small stream flowing downstream of Thomas culvert.

Bottom: Thomas culvert outlet

SWCRPC
SOUTHERN WINDSOR COUNTY
REGIONAL PLANNING COMMISSION
Ascutney Professional Building, Route 5
Post Office Box 320, Ascutney, VT 05030
802 674-9201 www.swcrpc.org

April 11, 2016

Alan May
Vermont Agency of Transportation Municipal Assistance Bureau
1 National Life Drive
Montpelier, VT 05633

Subject: Austin and Thomas Project in Baltimore - 2016 Better Roads Application

Dear Alan,

We are writing in support of Baltimore's application for the Austin and Thomas project. Katharine Otto from our office visited the area in January 2016 with Alan May and town representatives. The proposed work should significantly improve drainage and reduce water quality issues along these sections of Baltimore Road. This area was identified as two different high priority sites in the Town's 2016 Road Erosion Inventory which was completed by SWCRPC and the Town.

This project also supports the following goals and policies of the 2014 Southern Windsor County Regional Transportation Plan:

- Goal 6 - Strive to provide transportation infrastructures that are resilient to changing weather patterns and that efficiently and safely handle traffic during natural hazard events and other emergency situations.
- Policy 11 - Maintenance of the existing transportation system shall minimize water pollution, in accordance with the current Vermont Town Highway Codes and Standards, State stormwater rules and other best management practices.

Thank you for your consideration of this important project.

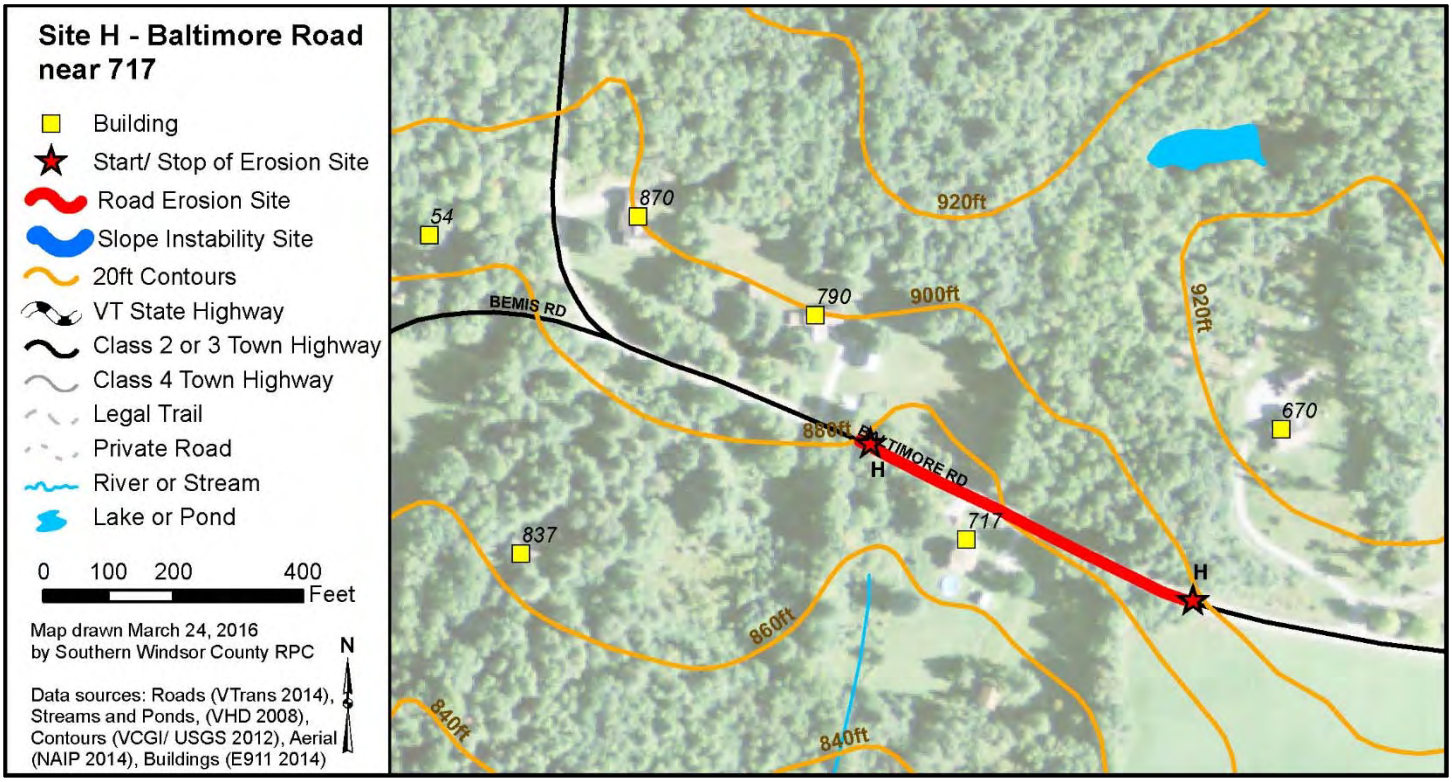
Sincerely,

Thomas Kennedy
Executive Director

SITE H – BALTIMORE ROAD NEAR 717 ("AUSTIN")

Road Name: Baltimore Road **TH Number:** TH-1 **TH Class:** 2 **Priority Rank:** High
From (west): Near Culvert 9 (N 43.35026 W 72.55938)
To (east): Flatter part at top of hill on curve (N 43.3496 W 72.5575)
Abutting property owners and addresses: May be needed for blasting (insurance reasons only)

Site Map



Site visits

- January 2016 – Alan May (Better Road Program), Orson Kendall and Wayne Wheelock (Town) and Katharine Otto (SWCRPC)

Description of problem

This Baltimore Road section has had drainage issues for many years, particularly due to to ledge near the surface and trees close to ROW making any solutions expensive to fix. A new driveway is being installed on this section of roadway which will increase the issues by increasing water flowing towards the ROW.

Water quality problem?	X	Yes	X	No	
Waterbody affected?	X	Yes		No	Stream starts from one of the culverts
Site identified in ANR Road Erosion Risk map?		Yes	X	No	Only low or no risk

Proposed solution

- Upgrade existing old cement culvert from 14 inches to 24 inches, and replace headers.
- Use a compressor and hammer to remove some ledge to improve ditching.

Further Engineering needed?		Yes	X	No	
Need cost estimates?	X	Yes		No	No recent costs available for estimates
VTrans Hydraulics Study needed?		Yes	X	No	
ANR Stream Alteration Permit needed?		Yes	X	No	Stream crossings drain less than 0.5 square miles
Army Corp permission needed?		Yes		No	Unknown

Site Photos

Top: New driveway and cleared lot on north side of road

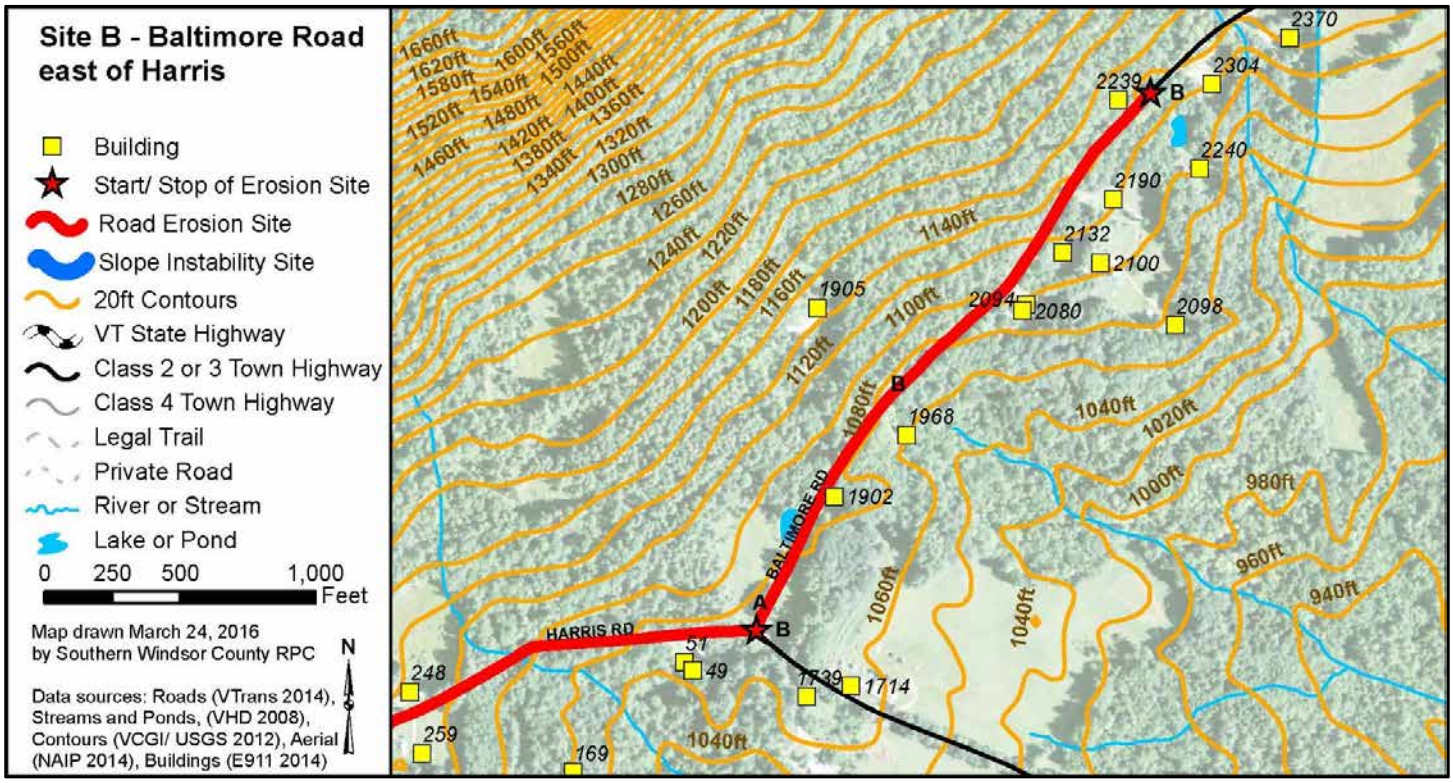
Bottom: Looking from new driveway downhill (westward)

Left: Stream that flows out of culvert
Right: Looking uphill (eastward) from culvert towards new driveway

SITE B – BALTIMORE ROAD EAST OF HARRIS

Road Name: Baltimore Road **TH Number:** TH-1 **TH Class:** 2 **Priority Rank:** High
From (West): Harris Road (N 43.36033 W 72.57247)
To (east): Near to driveway of 2239 Baltimore Road (N 43.36578 W 72.56699)
Abutting property owners and addresses: Not needed since ROW only

Site Map



Site visits

- July 2015 – Wayne Wheelock (Town) and Katharine Otto (SWCRPC)
- January 2016 – Alan May (Better Road Program), Orson Kendall and Wayne Wheelock (Town) and Katharine Otto (SWCRPC)

Description of problem

- North side of road needs ditching to improve drainage.
- Some culverts also need replacement and/or upsizing.
- South side of road is draining well into adjacent wooded and vegetated land.

Water quality problem?	X	Yes		No	
Waterbody affected?		Yes	X	No	
Site identified in ANR Road Erosion Risk map?		Yes	X	No	Only low or no risk

Proposed solution

- Ditch north side of road
- Replace culverts in poor condition, including the culvert near Thomas's Sugarhouse

Further Engineering needed?		Yes	X	No	
Need cost estimates?	X	Yes		No	No recent costs available for estimates
VTrans Hydraulics Study needed?	X	Yes		No	

ANR Stream Alteration Permit needed?		Yes	X	No	Stream crossings drain less than 0.5 square miles
Army Corp permission needed?		Yes		No	Unknown

Site Photos

Left: Baltimore Road looking west. North side of road needs ditching.
Right: Baltimore Road looking east. South side of road has good access to adjacent land for water drainage.

Top: Baltimore Road north side, looking west. Steep slope down to the road.

Bottom left: Looking directly up the hill on the north side of Baltimore Road. Small intermittent stream between trees coming down mountain.

Bottom right: Baltimore Road north side, looking east. Ditching stops.

Top: Baltimore Road. Looking down the bank on south side. Stream outflow from culvert.

Bottom: Header failing on one of the culverts near Thomas' Sugarhouse