

## Background & Status of Creek Road Temporary Closure September 7, 2018

(Supporting documents can be found following pg. 4 of this summary)

For safety reasons, Creek Road was closed in spring 2015 due to significant road erosion along the banks of the Otter Creek.

The Public Works Committee discussed the matter at its meeting on June 11, 2015 and Chair Susan Shashok reported on the discussion at the June 23, 2015 Selectboard meeting:

*Susan Shashok also reported that the Public Works Committee received an update on the status of Creek Road, which was recently closed to the public due to deterioration of the road edge into Otter Creek. According to Road Foreman Dale Hazzard, the cost to permanently stabilize the banks along the areas of deterioration is estimated at \$1.2 million (photos attached). Following discussion with residents in attendance, it was agreed to install gates while continuing to allow access to farmers, and in the meantime, schedule a meeting next week with the State Agency of Natural Resources and the Army Corps of Engineers to determine jurisdiction and what is permitted in going forward.*

In the summer of 2015, the Town applied for and received funding from the Addison County Regional Planning Commission (ACRPC) Transportation Advisory Committee to evaluate alternatives for reducing flooding and erosion along Otter Creek, repairing Creek Road, protecting adjacent properties, and providing long-term stability for Otter Creek and the road. In February of 2016, on behalf of the Town, the ACRPC contracted with Pathways Consulting, LLC, to complete the study.

Pathways presented its initial report at a public meeting on Wednesday, September 7, 2016. Reporting on the meeting at the Infrastructure Committee meeting the following day:

*Susan Shashok said that about 25 people attended the Creek Road Erosion Study meeting last night. Although the study of the river was well presented and seemed thorough, questions remain about how public input will be incorporated into recommendations for consideration by the Selectboard and what next steps are.*

Although there was no funding remaining in the original ACRPC allocation for the Creek Road study to address outstanding concerns and complete a final report and recommendations for the next steps, in the fall of 2016 ACRPC secured additional funding for Phase 2 of the study. The purpose and objective for Phase 2 was concisely outlined in Pathways Consulting's proposal:

*We also understand that the issues related to Creek Road may represent a fairly daunting challenge for the ACRPC and the Town in determining a future direction. In line with this challenge, we have formulated this additional work scope in the interest of providing a clear and comprehensive analysis and recommendations on the available alternatives that will assist the project team more effectively with determining the next steps for the project.*

At the November 29, 2016 Selectboard meeting, under Citizens Comments,

*Dean Rheume, a resident of Blake Roy Road, spoke on the status of Creek Road, which has been closed for over a year, and how he feels the condition has been blown out of proportion. He read a statement by others in the neighborhood, citing 19 VSA 971, Defective Roads and Bridges, giving the Town 72 hours to repair the road or give notice why not.*

In response on behalf of the Town, on December 2, 2016, Town Manager Kathleen Ramsay wrote to the petitioners with a background on the issues and steps being taken by the Town, including the Pathways study, to find a feasible, financially-viable and sustainable solution, noting that,

*[T]he Town is working in good faith and with reasonable dispatch to determine the extent of erosion of the banks of Otter Creek running along Creek Road, develop a series of options for the road, and identify potential funding sources for those options. Physical construction cannot begin until a feasible long-term solution has been identified.*

In its May 26, 2017 (Revised June 16, 2017) report, Pathways Consulting outlined four recommendations for Creek Road:

- **Design Recommendation 1: Shift 8,320LF of existing Creek Road** to east within or near existing right-of-way **to restore 25' riparian buffer** between Creek Road and Otter Creek. Estimated construction cost: \$1.15M.
- **Design Recommendation 2: Complete full bank stabilization measures** on 2,200 LF (critical areas) of Creek Road/Otter Creek and complete **minimum roadway improvements** on 12,400 LF of Creek Road including roadway resurfacing, fabric stabilization, new and existing drainage improvements, and ditching. Estimated construction cost: \$1.469M.
- **Design Recommendation 3: Construct new 2,000 LF road connection from Creek Road to Meadow Glen Drive;** shift 4,210 of existing Creek Road to east within or near existing right-of-way **to restore 25' riparian buffer** between Creek Road and Otter Creek; and **abandon 4,800 LF segment of north Creek Road.** Estimated construction cost \$1.388M.
- **Design Recommendation 4: Implement minimum maintenance measures** on 12,400 LF of Creek Road including roadway resurfacing, fabric stabilization, and new and existing drainage improvements, and ditching. Estimated construction cost: **\$530,000.**

After a presentation and discussion of the Pathways report at the June 22, 2017 meeting of the Infrastructure Committee,

*Seeley moved to recommend to the Selectboard to fix the section of Creek Road that needs to be fixed to open it as soon as possible, and as soon as we can afford it, by the method outlined in the Study so we can evaluate how this method holds up while we are in the*

*process of phasing, and exploring grant funding to do the remainder of the work recommended in Design #1. Fiske seconded the motion. It was approved unanimously.*

After discussion of the Infrastructure Committee's recommendation at the June 27, 2017 Selectboard meeting,

*Asermily moved to look at what the cost to reopen the road would be by making a relatively small repair, while exploring the option of phasing the project and what grant opportunities were available to help with the cost. Shashok seconded the motion. The motion carried with 6 in favor, 1 absent.*

At the Infrastructure Committee meeting of October 12, 2017, in response to inquiries about the status of the repair of the road, Bill Kernan said that,

*Creek Road has further damage north of Perrin's driveway and it isn't as simple as just making simple repairs to the road.\* Shashok said that's where the Selectboard left it, so she wonders if staff is now recommending to repair the entire road since she sees the money in the draft Capital Improvement Budget.\*\* Werner said the plan was to try and relocate that road eventually, so some money needs to be set aside for it or another financial path to do that.*

The discussion at the meeting concluded with Kathleen Ramsay indicating that staff would seek assistance from a consultant to seek-out funding and advice on phasing of the Creek Road.

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\* In August 2017, staff estimated the cost of the repair of the areas of Creek Road with active bank movement/destabilization, based on a total of 675' LF. At Pathway's cost per LF of bank stabilization of \$514.18, the estimated cost of repair was \$370,021, an amount well beyond funding available in either the operating or capital budgets.

\*\* In order to address funding for the repair, staff included an amount of \$1.2M in the first draft of the FY19 Capital Budget toward the cost of implementing Pathway's Design Recommendation 1: Relocation of Creek Road in areas closer than 25' to the Creek.

After following-up on the Infrastructure Committee's October 12, 2017 discussion about seeking assistance from a consultant on funding options, at the Committee's meeting on October 26, 2017, Ramsay reported that Dan Werner and she had met with Amy Sheldon, a natural resource planner, and noted that,

*Sheldon's preliminary conclusion is the best grant for this project is the Municipal Highway and Stormwater Mitigation Grant, which comes up in the summer of 2018. Shashok asked if there was enough time to get everything together to apply for this, and she also thought we needed to decide if we want to start setting aside the \$230,000\* in matching funds. Ramsay said her thinking was if they got the grant next summer, construction most likely would not begin until 2019, so she is suggesting putting \$30,000 in the FY19 Capital budget and the balance of \$200,000 in the FY20 Capital budget. There was further discussion around these grant funds and Shashok said if they were comfortable with this, then the \$30,000 could be added to this budget.*

At its meeting on November 8, 2017, the Infrastructure Committee approved a FY19 Capital Budget of \$1,005,902, including \$40,000 for Creek Road realignment in FY19 and \$190,000 forecasted for FY20, totaling the \$230,000 grant matching fund discussed at the October 26, 2017 meeting.

On June 7, 2018, Dan Werner, Bill Kernan and Amy Sheldon met with representatives of the potential grant sources and state regulators on site. Mike Kline, Vermont River Management Program Director

*Expressed concerns over how long a 25' riparian buffer would last. He also said that if the buffer were wider – 200' – it might rise up to a good investment of public dollars but that 25' made him nervous. He did say that if the Town wanted to continue to maintain the road, the state would issue permits for continued hard armoring.*

State representatives of the Town's leading funding source advised the Town that an application for funding would not be competitive.

After discussing Dan Werner's report on the lack of availability of grant funding for the project at its meeting on August 30, 2018, the Infrastructure Committee

*... made the motion to update the Selectboard on the status of the grant funding for Creek Road and propose minor fixes within the \$[40,000.00]\*\* budgeted in the capital budget. The motion passed with 6 in favor.*

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\* \$230,000 is 20% match of the Pathway's estimated \$1.15M project cost for the relocation of the road in areas needed to create a 25' buffer from the Creek.

\*\* \$40,000 is the amount for the realignment of Creek Road in the FY19 Budget, not \$20,000.

TOWN OF MIDDLEBURY VERMONT  
DEPARTMENT OF PUBLIC WORKS  
94 MAIN ST, MIDDLEBURY, VT. 05753  
Phone 1-802-388-4045 Fax 1-802-388-4046

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Creek Road Post ANR, VAOT, ACE meeting summary

On Thursday June 25<sup>th</sup> I met with Jaron Borg, River Management Engineer Watershed Management Division, Rivers Program Vermont Department of Environmental Conservation. We viewed the existing damage, areas that are displaying early signs of failure and the other areas along the length of the road that are in the less than 10-foot separation areas.

On Wednesday July 1<sup>st</sup> Dan and I met with Mike Adams – ACE (Army Corps of Engineers) and Dick Hosking - VAOT District 5. We viewed the same previously mentioned areas.

Research into what is causing the problem is capillary wicking. Both ANR & ACE agree that there is significant evidence to prove this theory. The heavier and more frequent rain events that we are experiencing are causing the sudden rise of the river, creating a subsurface hydraulic loading of the adjacent areas. This loading causes subsurface water to be retained in the wetland areas during high water. Then when the creek drops in water level the retention areas drain subsurface between the subsoil/gravel layer and the impermeable clay that is under them. This is evident by the capillary tunnels exposed during our attempts at the various subsurface stabilization techniques we have been trying. This wicking action causes the fines that hold the layer together on top of the clay to be eroded and lost. Once the fines are gone the weight of the surface growth (native growth in the area is mostly shallow root vegetation, trees included) causes a shearing action and the entire area slides into the river leaving just the exposed clay.

ANR, AOT, ACE all have the same consensus, this being, all agencies will work with the Town to permit the needed repairs. However this will be a multi-year project; each phase needing its own permitting; each phase will be required to meet the same requirements and restrictions and at a large cost to the Town. All agree the only stabilization technique is the original Type IV keyed that was done in 08/09. It is showing re-growth of natural fauna (scrub and maple trees) as well as no signs of failure. However should this be the type of repair pursued we would need to add tree planting areas due to amount of area to be done and the current loss of seed stock. All agree permitting would be the last preferred method. They would rather the Town seek alternative action if

possible as they believe this will continue to be an ongoing issue. In the future the areas with greater separation may become themselves areas of little or no separation. They also believe once the east side banks of the creek are stabilized it may force a further and sped up degradation of the west bank. As of now both banks appear to be equally affected at a current rate with loss of banking and fauna on both sides. In the area just south of the Bingham Farm, Otter Creek, Creek Rd on the East and VT Railway on the West share the corridor. Should the repair work force the river to the west we may inadvertently put the rail corridor and other private land in danger.

In short again, there are many things to consider when looking at Creek Rd. From talking with the agencies involved, Creek Rd can be repaired and opened up to traffic again. However this may become a continuing issue until repairs are fully achieved. As with any other project, the more times you have to mobilize the greater the cost in both monetary funds and time spent. The questions that need to be asked and answered are this;

1. What are the other options if any?
2. Where will the funds come from for this project?
3. Does the expenditure justify the return?
4. Will the solution solve the problem or will it potentially create another problem?

Dale Hazzard  
Highway Supervisor

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**Special Selectboard Meeting**  
**Large Conference Room – Town Offices**  
**Tuesday, November 29, 2016**  
**Meeting Minutes**

Members Present: Brian Carpenter, Victor Nuovo, Donna Donahue, Laura Asermily and Heather Seeley. (Absent: Susan Shashok and Nick Artim).

Staff Present: Town Manager Kathleen Ramsay, Ilsley Library Director Kevin Unrath and Director of Parks and Recreation Terri Arnold. Also present were representatives of several Non-Profit Agencies and members of the community. The meeting was televised on MCTV by Dick Thodal.

**1. Call to Order**

Chair Brian Carpenter called the meeting to order at 7:00 p.m.

**2. Approval of Minutes of November 15, 2016 Special Selectboard Meeting**

Asermily moved to approve the minutes of November 15, 2016 with the following corrections, and Nuovo seconded the motion.

Line 298 – change to delete “from ICE” and add “from a resident”.

The motion carried with 5 in favor, 2 absent. **MOTION PASSED.**

**3. Approval of Agenda**

Donahue moved to approve the agenda as presented, seconded by Nuovo. The motion carried with 5 in favor, 2 absent. **MOTION PASSED.**

**4. Citizens Comments**

Dean Rheaume, a resident of Blake Roy Road, spoke on the status of Creek Road, which has been closed for over a year, and how he feels the condition has been blown out of proportion. He read a statement signed by others in the neighborhood, citing 19 VSA 971, Defective Roads and Bridges, giving the Town 72 hours to repair the road or to give notice why not.

Ross Conrad asked the Board to consider placing an item on the Warning for Town Meeting to increase the annual Selectboard stipend. The last stipend increase was established 22 years ago, and he feels it is outdated and doesn't keep up with the costs associated with volunteering to be on the Board. He suggested raising the stipend to \$2,500 for Board members and \$3,200 for the Chair.

**5. Nomination to Fill Vacancy on Energy Committee**

Date: \_\_\_\_\_

To the Town Of Middlebury Selectboard:

Town Officials have deemed the southern end of Creek Road unsafe for travel between the north gate at the Perrin farm and the south gate at 3 Mile Bridge, due to a small section of road shoulder failure located on the western side of the road. The result has been closure and gating of said road for more than a years time.

We the undersigned hereby give notice to the selectboard of the above insufficiencies under State Statute Title 19: Highways.  
Specifically (Statute 19 V.S.A. & 971) Defective Roads and Bridges; Proceedings.

Your prompt attention to this matter will be appreciated.

DEAN RHEAUME

MARRICE RHEAUME

Douglas MURRAY

Sarah C. Larocque

Judson Larocque

Angela Rheaume  
Michelle Rheaume

Kathleen G. Hubbard

Peter S. Hubbard

Rapanael Huydler

Jane Smith

MICHELLE SMITH

Received by: \_\_\_\_\_

Dean Rheaume

Marrice Rheaume

Douglas Murray

Sarah Larocque

Judson Larocque

Nicole Rheaume

Kathleen G. Hubbard

Peter S. Hubbard

Jane Smith  
MICHELLE SMITH

Date: \_\_\_\_\_



## VERMONT GENERAL ASSEMBLY

**The Vermont Statutes Online****Title 19 : Highways****Chapter 009 : Repairs, Maintenance, And Improvements****Subchapter 007 : Enforcing Repairs****§ 971. Defective roads and bridges; proceedings**

When a highway or bridge is out of repair or unsafe for travel, any three citizens or taxpayers in the State may give written and signed notice of the insufficiency to the selectmen of the town in which the highway or bridge is situated, setting forth in general terms the location of the highway or bridge and the nature of the insufficiency. If the town neglects for seventy-two hours to respond by either denying the allegation or to commence work upon the highway or bridge, or fails to continue the work in good faith and with reasonable dispatch until the highway or bridge is put in good and sufficient repair, the citizens may file with one of the County Road Commissioners or the Superior Court for the county in which the highway or bridge is situated, a written complaint signed and sworn to, setting forth in general terms the location of the highway or bridge and the nature of the insufficiency. The complainants shall also give the Commissioners security by deposit or otherwise for the costs of proceedings under the complaint. (Added 1985, No. 269 (Adj. Sess.), § 1.)



**TOWN of MIDDLEBURY**

77 Main Street  
Middlebury, Vermont 05753

December 2, 2016

Creek Road Petitioners  
c/o Dean Rheaume  
393 Blake Roy Road  
Middlebury, Vermont 05753

Dear Petitioners,

On behalf of the Town of Middlebury, I am writing in response to your November 29, 2016 letter regarding Creek Road sent under the provisions of 19 VSA § 971, Defective Roads and Bridges, Proceedings.

As outlined in the attached document, *Background & Status of Creek Road Temporary Closure*, the Town is working in good faith and with reasonable dispatch to determine the extent of erosion of the banks of Otter Creek running along Creek Road, develop a series of options for the road, and identify potential funding sources for those options. Physical construction cannot begin until a feasible long-term solution has been identified.

As you know, we are expecting a draft of the final report on the Creek Road Erosion Stability Study in early January. The report will include an analysis of the feasibility, viability and permitting requirements of alternatives for repair and/or rerouting the road and identification of potential funding sources, which is information the Selectboard needs to prudently determine next steps regarding the repair of Creek Road to make it safe for travel by the public.

We will share a copy of the draft report with you and welcome your constructive input as we work in the best interest of the community to address this important issue. Thank you for your concern and your participation in this process.

Sincerely,

Kathleen Swington Ramsay  
Town Manager

## Background & Status of Creek Road Temporary Closure

November 28, 2016

For safety reasons, Creek Road was closed in spring 2015 due to significant road erosion along the banks of the Otter Creek.

The Public Works Committee discussed the matter at its meeting on June 11, 2015 and Chair Susan Shashok reported on the discussion at the June 23, 2015 Selectboard meeting:

*Susan Shashok also reported that the Public Works Committee received an update on the status of Creek Road, which was recently closed to the public due to deterioration of the road edge into Otter Creek. According to Road Foreman Dale Hazzard, the cost to permanently stabilize the banks along the areas of deterioration is estimated at \$1.2 million (photos attached). Following discussion with residents in attendance, it was agreed to install gates while continuing to allow access to farmers, and in the meantime, schedule a meeting next week with the State Agency of Natural Resources and the Army Corps of Engineers to determine jurisdiction and what is permitted in going forward.*

June 23, 2015 Selectboard Packet includes supporting information on the closure of Creek Road closure, including the meeting minutes from the June 11, 2015 Public Works Committee Meeting on the issue:

[http://www.townofmiddlebury.org/index.asp?Type=B\\_BASIC&SEC={FB376F03-9F1E-42D9-AE0D-64967253A963}&DE={0CDB4E43-8524-4684-B208-BD56C867A1C5}](http://www.townofmiddlebury.org/index.asp?Type=B_BASIC&SEC={FB376F03-9F1E-42D9-AE0D-64967253A963}&DE={0CDB4E43-8524-4684-B208-BD56C867A1C5})

In the summer of 2015, the Town applied for and received funding from the Addison County Regional Planning Transportation Advisory Committee to complete an assessment of flooding, erosion and other issues associated with high flood levels in Otter Creek that have resulted in damage to Creek Road, Otter Creek and abutting property.

In February of 2016, The Addison County Regional Planning Commission, on behalf of the Town of Middlebury, contracted with Pathways Consulting, LLC to complete the "Middlebury Creek Road Erosion Stability Study" to:

- Conduct an assessment of the extent, frequency, and causes of flooding on Otter Creek;
- Review the extent of damage to Otter Creek, Creek Road, and adjacent properties as a result of flooding;
- Review alternatives for reducing flooding and erosion along Otter Creek, repairing Creek Road, protecting adjacent properties, and providing long-term stability for Otter Creek and the road;
- Determine range of costs and potential funding sources for addressing Creek Road issues; and

- Involve adjacent property owners, other affected parties, and community in the study process.

Pathways presented its initial report at a public meeting on Wednesday, September 7, 2016. Reporting on the meeting at the Infrastructure Committee meeting the following day:

*Susan Shashok said that about 25 people attended the Creek Road Erosion Study meeting last night. Although the study of the river was well presented and seemed thorough, questions remain about how public input will be incorporated into recommendations for consideration by the Selectboard and what next steps are.*

In following-up with Pathways and the Addison County Regional Planning Commission, we learned that there was no funding remaining to address outstanding concerns and complete a final report and recommendations for the next steps. Working with Regional Planning Commission staff, we were able to obtain additional funding for the project to:

- address outstanding questions on the study findings;
- explore new conceptual design alternatives;
- complete additional analysis on the feasibility and viability of alternatives;
- address public and regulatory perspectives;
- identify funding sources;
- summarize the study; and
- present the study to various Town groups.

In its proposal for Phase 2 of the study, Pathways said:

*We also understand that the issues related to Creek Road may represent a fairly daunting challenge for the ACRPC and the Town in determining a future direction. In line with this challenge, we have formulated this additional work scope in the interest of providing a clear and comprehensive analysis and recommendations on the available alternatives that will assist the project team more effectively with determining the next steps for the project.*

A preliminary draft of the summary report is anticipated in early December 2016\* with public presentations to follow.

*\*Editor's Note: On December 1, 2016, the Town was informed that delivery of the draft summary report is anticipated in early January, 2017.*

# **EXECUTIVE SUMMARY**

## **Creek Road Erosion Stability Study Report**

### **Middlebury, Vermont**



**Study Area**



**Creek Road (north) & Otter Creek**



**Creek Road (south) & Otter Creek**



**Three Mile Bridge Road & Middlebury River**

#### **Prepared for:**

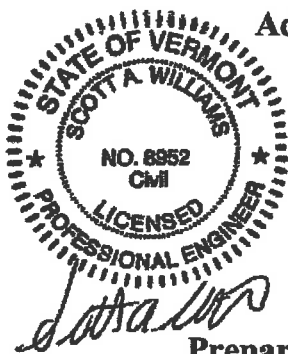
**Addison County Regional Planning Commission**

14 Seminary Street  
Middlebury, Vermont 05753

and

**Town of Middlebury**

77 Main Street  
Middlebury, Vermont 05753



**Preparation Date: May 26, 2017 (Revised June 16, 2017)**  
(Pathways Project No. 12688)

#### **Prepared By:**

**PATHWAYS CONSULTING, LLC**

Planning • Civil & Environmental Engineering • Landscape Architecture • Surveying • Construction Assistance  
2060 Hartford Avenue • Post Office Box 1942  
Wilders, Vermont 05088  
(802) 295-5101

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240 Mechanic Street, Suite 100  
Lebanon, New Hampshire 03766  
(603) 448-2200

## **1.0 EXECUTIVE SUMMARY**

Creek Road has been closed to vehicular traffic beginning at a point approximately 2.2 miles south of Route 7 to Three Mile Bridge Road since the spring of 2015 due to safety concerns posed by significant bank erosion and damage to the road in several areas. The road experiences periodic flooding from Otter Creek and the Middlebury River. These significant flood events often overtop the road surface and result in significant flooding of the neighboring fields and residential properties. These flood conditions result in damage to the road, impact the use of the road, and limit access to neighboring properties and emergency vehicles.

The Addison County Regional Planning Commission (ACRPC), on behalf of the Town of Middlebury (Town), issued a Request for Proposals on November 11, 2015 entitled "Middlebury Creek Road Erosion Stability Study," to retain an engineering consultant to review flooding and bank erosion along Creek Road and Otter Creek. On February 25, 2016, ACRPC and the Town hired Pathways Consulting, LLC, and its sub-consultant, Headwaters Hydrology, PLLC, to complete the study.

The goal of the study was to assess the nature of flooding and bank erosion along Otter Creek, explore strategies for stabilizing the banks on Creek Road, identify lower cost, sustainable alternatives for re-opening the road, and provide alternative designs with cost estimates. The study area included Creek Road beginning 1,500 feet south of Route 7, and extending to the southern end of Creek Road, and 400 feet east on Three Mile Bridge Road. The study area encompassed Otter Creek, a portion of the Middlebury River, and the surrounding floodplains along these roads. The study included: site review and limited surveying within the study area; generating an existing conditions plan showing relevant properties and natural resources; a Stream Geomorphic Assessment (SGA) focused on Otter Creek and the Middlebury River bank erosion and flooding; an alternative design review process with ACRPC, Town staff, and a public representative; a public consensus process including a questionnaire and public meeting (September 7, 2016); and summarizing the findings and recommendations in a final study report.

The SGA and site review concluded that Otter Creek was generally stable, but the bank erosion was symptomatic of the close proximity of Creek Road to Otter Creek, and the lack of an adequately vegetated riparian buffer between the road and banks. The short segment of the Middlebury River was not as stable, and the bank erosion along Three Mile Bridge Road has resulted from an on-going channel adjustment process that will likely continue, suggesting that the road should be moved in this area. The study considered the following alternative designs to address the road deficiencies: relocating a large portion of the road to the east; abandoning sections of the road; shifting the road east to restore a 25-foot buffer between the road and stream banks; stabilizing the banks in-place; converting portions of the road to a multi-use path; implementing minimum road improvements to re-open the road; and closing the road.

After careful consideration with the project team, the design recommendation #1 (shifting the road to restore a 25-foot buffer) seemed to be the most cost-effective and feasible approach that balances cost with the need to move the road away from the streams, restoring a riparian buffer, and minimizing the impacts to natural resources and adjacent properties. See below for a Design Recommendation #1-4 Comparison Table prepared

for the final recommendations, and a plan and typical cross sections for Design Recommendation #1 (also included in Appendices J, K, and L).

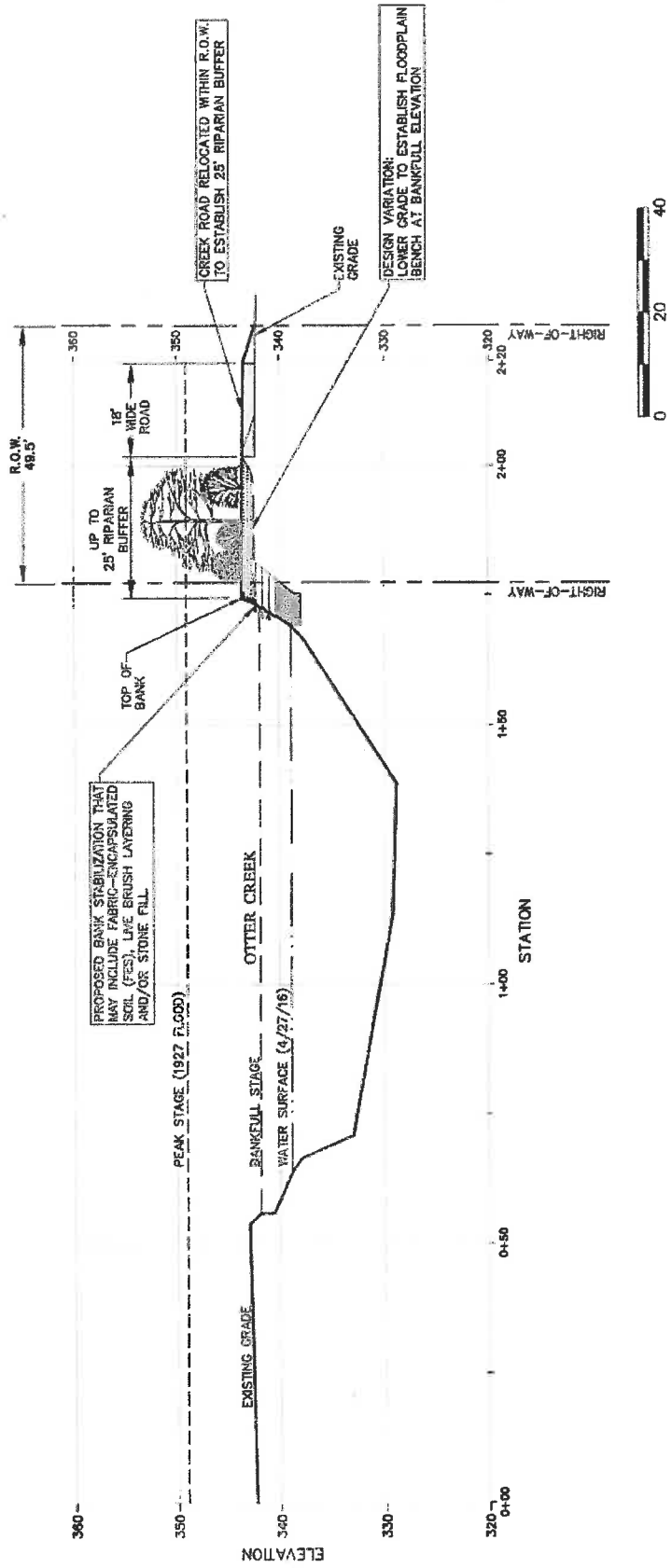


**DESIGN RECOMMENDATIONS #1-4 COMPARISON TABLE**  
**FOR**  
**ADDISON COUNTY REGIONAL PLANNING COMMISSION - MIDDLEBURY CREEK ROAD EROSION STABILITY STUDY**  
**CREEK ROAD, MIDDLEBURY, VERMONT**  
**PREPARED BY PATHWAYS CONSULTING, LLC (Project No. 11926)**  
**PATHWAYS PROJECT NO. 12688**  
**DATED: MAY 23, 2017**

	DESIGN ALTERNATIVES				
	NO BUILD	DESIGN RECOMMENDATION #1	DESIGN RECOMMENDATION #2	DESIGN RECOMMENDATION #3	DESIGN RECOMMENDATION #4
<b>CRITERIA</b>	Existing Creek Road	Shift 8,320 LF of existing Creek Road to east within or near existing right-of-way to restore 25 foot riparian buffer between Creek Road and Otter Creek	Complete full bank stabilization measures on 2,300 LF (critical areas) of Creek Road/Otter Creek  <b>AND</b>  Complete minimum roadway improvements on 12,400 LF of Creek Road including roadway resurfacing, fabric stabilization, new and existing drainage improvements, and ditching	Construct new 2,000 LF road connection from Creek Road to Meadow Glen Drive  <b>AND</b>  Shift 4,210 LF of existing Creek Road to east within or near existing right-of-way to restore 25 foot riparian buffer between Creek Road and Otter Creek  <b>AND</b>  Abandon 4,800 LF segment of north Creek Road	Implement minimum maintenance measures on 12,400 LF of Creek Road including roadway resurfacing, fabric stabilization, new and existing drainage improvements, and ditching
<b>DESIGN AND CONSTRUCTION IMPACT</b>					
New Road Alignment Required	None	8,320 LF (partial)	None	2,000 LF	None
Right-of-Way (ROW) or Easement Acquisition Required	None	7,400 LF of ROW (average 16-15 foot width) on 7 private properties	None	2,000 LF of 60-foot ROW on two private properties; and 3,970 LF (average 10-15 foot wide) on 6 private properties	None
Change to Private Property Access	None	None	None	One new driveway may be needed; 2 properties impacted	None
Construction Cost (including Engineering/Permitting)	None	\$1,150,000	\$1,469,000.00	\$1,385,000	\$530,000
Level of Future Maintenance/Cost (High/Moderate/Low/None)	High	Low	Medium	Low	High
Construction Duration (assuming single phase)	None	12 months (two construction seasons)	6 months (one construction season)	12 months (two construction seasons)	6 months (one construction season)
Level of Regulatory Review (High/Moderate/Low/None)	None	Low	Moderate	Moderate	Low
Permitting Duration (High/Moderate/Low/None)	None	Moderate	High	Moderate	Low
Potential for Grant Funding	None	Yes	Possible	Possible	No
Require Private Land Owner Approval	None	Yes	No	Yes	No
Drainage Improvements Along Creek Road (Significant/Limited/None)	None	Significant	Significant	Limited	Significant
<b>RESOURCE IMPACT</b>					
Impact on River Corridor	None - 12,000 LF of Creek Road remains in River Corridor	None	None - 12,000 LF of Creek Road remains in River Corridor	Removes 4,800 LF of Creek Road from River Corridor	None - 12,000 LF of Creek Road remains in River Corridor
Water Quality Improvements in Otter Creek & Middlebury River (Significant/Limited/None)	None	Significant	Limited	Significant	Limited
Reduce Erosion Along Otter Creek & Middlebury River (High/Moderate/Low/None)	None	High	High	High	Low
Wetland Impacts	None	1.1 acres	2.0 acres	1.1 acres	1.5 acres
Floodplain Impacts (Significant/Limited/None)	None	Limited	Limited	Significant	Limited
Conservation Easement Impacts (Significant, Limited, None - Property Identify)	None	Limited - MALT (Candidate & Seelye), Ducks Unlimited Mitigation Site	None	Significant - MALT (Candidate & Seelye), Ducks Unlimited Mitigation Site	None
Enhancement of Public Amenities/Access	None	No Change	No Change	Yes	No Change
Creek Road Remain Open to Vehicular Traffic	No	Yes	Yes	Yes	Yes
Impact to Current Traffic Patterns	No	No	No	Yes	No







2 TYPICAL CROSS-SECTION - ROAD SHIFT WITHIN R.O.W. WITH BANK STABILIZATION (DESIGN RECOMMENDATION #1)

SCALE AS SHOWN



41 Creek Road Study

42  
43 Shashok gave a brief history of how the Creek Road Study came to be. She said in the  
44 spring of 2015, the Selectboard closed Creek Road due to significant road erosion  
45 along the banks of Otter Creek. Gates were installed to allow access to farmers, and  
46 the Board began to look at what to do to reopen the road. In the summer of 2015 the  
47 Town received funding from the Addison County Regional Planning Commission's  
48 Transportation Advisory Committee to complete an assessment of the flooding, erosion  
49 and other factors involved in the damage to Creek Road, Otter Creek and the abutting  
50 properties. She went on to say that in February of 2016, ACRPC contracted, on the  
51 Town's behalf, with Pathways Consulting for the Middlebury Creek Road Erosion  
52 Stability Study to look at the nature of flooding and bank erosion along the Otter Creek,  
53 explore strategies for stabilizing the banks, explore lower cost alternatives for reopening  
54 the road and provide alternative designs with cost estimates.

55  
56 Shashok requested that the Committee be allowed to ask all their technical questions so  
57 they fully understood the project, and they she would open it up for comments.

58  
59 Keeler said he was bothered that there were no cost estimates included for acquiring  
60 rights-of-way, and he thought that makes it hard to choose options without knowing all  
61 the costs involved. Shashok agreed, but that was not part of the charge and the  
62 Committee now needs to know what else is needed to move forward. Ramsay said that  
63 some of the property owners have indicated the willingness to contribute the land as  
64 their share of the project.

65  
66 With no further technical questions, Shashok opened the floor to comments.

67  
68 Mark Perrin, who resides at 1637 Creek Road, said he appreciates the challenge of this  
69 project. He said this property was acquired in 1967, and he has lived there since  
70 1990. As a property owner, he said they just want to be able to get to the end of their  
71 driveway. As a taxpayer, he said the challenge is the cost of the project and he  
72 wondered if they would be looking at other alternatives, such as a road out through to  
73 the South Ridge development off Middle Road, which might be a less costly option.  
74 Hesuggested a study of that possibility might also be done so all alternative cost options  
75 are looked at. Shashok said that Alternative #3 in the Study is the road Perrin is  
76 describing.

77  
78 Perrin said he has observed how the pedestrian and bike traffic has increased on Creek  
79 Road since it's been closed, and cars still come down to enjoy the scenery and the river  
80 and then turn around, so he strongly encourages them to look at coming from the

81 South Ridge development. He says this is not going to be an easy decision, because  
82 there are a lot of emotions out there.

83  
84 They took a closer look at Alternate #3 and Perrin had been suggesting a private  
85 driveway to his property, and not public road to Creek Road. Perrin said in that case,  
86 he was suggesting an Alternate #4, which would be to provide a private drive for his  
87 property.

88  
89 Mr. Nop, who owns farm land on Creek Road, said that if the Town had listened to the  
90 landowners 5 years ago about the trees along the Creek, we wouldn't have this problem  
91 and the money spent on the study could have been used to fix the road. He said this is  
92 a lot of money for a short piece of road. Keeler asked Nop if he had access to his land,  
93 and Nop said he did, but it wasn't very convenient. Tenny said he agreed with Nop,  
94 that vegetation along the edge of the road would help and saw where a lot of trees had  
95 been cut in that area.

96  
97 Maurice and Dean Rheame asked how much it had cost to do the work on the 1,500  
98 feet of Creek Road to Court St, and Werner said around \$800,000.

99  
100 Wiger-Grohs said she thought landowners were required by the State to have a riparian  
101 zone along the river, and wondered if that was circumvented because this is the Town.  
102 Tenny thought that only applied to new roads, so Creek Road is grandfathered.  
103 Shashok agreed, and said if the road was changed then there would be requirements to  
104 meet.

105  
106 Peter Hubbard, a long-time resident who lives on Three Mile Bridge Road, said that one  
107 critical thing that keeps getting overlooked is the importance of allowing the river to  
108 overflow its banks or we will end up with another Flood of 1927. He gave a brief history  
109 of the flooding and how the river hasn't changed much, except for one area where the  
110 Town did some riprap work a few years ago on Three Mile Bridge Road. He felt there  
111 was one area of Creek Road that could be repaired, and that both the Goodrich's and  
112 Nop's have agreed to the road moving 25' feet onto their property to give the riparian  
113 area a chance to recover and some vegetation to grow. He also suggests closing the  
114 road off each winter and spring until the road dries out so as not to damage to road,  
115 then open it up for the summer and fall. He thought the Town would be making a huge  
116 mistake to belief they need to put in a whole new roadbed. He also urged to be  
117 cautious when making any changes to the river, as it impacts the flow and direction in  
118 other areas.

Seeley commented on past repair work and agreed it does impact the river. She also agreed that the area in question should be repaired and the road reopened. She thought it should be done in phases like other high-cost projects, and grants should be applied for to help with the cost.

Maurice Rheame, who grew up on Three Mile Bridge Road and has lived in the area his entire life, agrees that the road hasn't changed in 100 years. He also agreed that if the Town had listened to residents and used the money spent for the study, they could have repaired the spot and opened it to traffic. He said the Selectboard is statutorily responsible to repair and keep the road open unless it is officially closed, and the residents can legally require them to do so. He says to just fix what needs to be fixed, open the road and maintain it.

Robbins said considerable money had been spent on putting riprap in the river and part of the need for doing this road project is to avoid having to keep doing that. Rheame said if it was going to be done, it should be done right. He said the spot where the Town put riprap just off the paved portion of Creek Road, has rocks in the middle of the river, and they shouldn't be there. Werner said part of the problem is the river bed is so soft in that location, that even though the riprap is installed correctly, it eventually slides into the river.

Shashok said she appreciated hearing the history of the problems, but there is really not much that can be done about that now and we have to move forward. She said the Town was spending so much money fixing all these different areas when problems arose, they thought it was time to look at the road as a whole.

Josh Donabedian, Transportation Planner for Addison County Regional Planning, who said what's very important to keep in mind is the State's forthcoming Municipal Roads General Permit Program which begins in 2018. He said all municipalities will be required to do an inventory of all 1,000 foot road segments in the town that are hydrologically connected, and he believes that will apply to most or all of Creek Road, and every 100 foot section that is either eroding or does not meet State standards will be required by State law to be fixed.

Tenny agreed with many of the comments having lived on the river and survived two floods, and said that riprap is the knee-jerk reaction to an emergency. He said engineers give great detail on how the work is done, and he believes if the areas of riprap and the areas eroding are done properly with the detail provided, then the road could be opened. He thinks it's a strong option that should be considered, and use the study as a Master Plan that you implement over time.

Seeley disagreed, and thought the engineers don't always give the right information or have the right answers. She said the engineers said to clean out the river in the 80's and that wasn't right, and the recent information on the work done on the river wasn't right either. She feels that the people that work on the edge of the river and have fixed and repaired these areas, may sometimes know more than the engineers.

Baker said in the 80's the farmers in the area wanted the river cleaned out, so they went in and cleaned the trees out. Keeler said the problem in the north end began when they put the dry hydrant in and a box culvert right next to it, and we have to stop doing these things to the river.

Perrin said he's traveled this road for 27 years and there are some sections that have been repaired that haven't budged, and we need to know what they did to those sections, because that's what needs to be duplicated.

Hubbard said when they do the work they need to layer it and follow the curve, because if they deviate even a little they'll cause a back eddy or erosion on the other side. He said trees along the river that are leaning need to be cut and the stump and roots left in place, otherwise if the tree tips over it will take the bank with it.

Robbins asked for clarification on what happened when the river was "cleaned out" and did that mean cleaning out the trees on the banks. Seeley said the river was actually dredged, and Keeler said old trees that had fallen in the river were taken out.

Shashok asked for final comments, and then said the Committee needed to decide what to take back to the Selectboard.

Keeler asked Dan Werner if there was anyone at Public Works with the expertise to put some stone in and fix it. Werner said no and a permit from the Army Corp of Engineers was needed first. Dean Rheume said he thought the permit for the Creek was good for any work done on that road for 5 years. Werner said no, it's "per spot" and the work done last year had to have a start and end date and was issued for only 140 feet. Werner said when the work was done by Perrin's house, he stood close to the work area and he couldn't even feel vibration from the machine, but when they did the work last year on the north end, he stood 200' away and the ground was like jello. He said it's just a different area. He said he knows some areas that have been repaired have held up better, but he thinks it's just the area of the river and not necessarily because of the way it was installed.



199 Shashok said the Committee had completed their charge, but she wonders if they now  
200 need to ask the Board if they should continue to explore phasing the project, or explore  
201 fixing the worst spot and open the road, and explore the right-of-way costs. Keeler  
202 asked where the money was coming from, since there's no money in the budget for this.  
203 Shashok said if they explore these things over the next couple of months, we'd be in  
204 another capital budgeting phase. Werner said different techniques to fix this are going  
205 to have different costs, so that still needs to be looked at.

206  
207 Shashok said Dale Hazzard (former Town Highway Division Chief) had estimated the  
208 cost to repair all the areas that needed repairs, to be \$1.2 million, which is not much  
209 less than the estimate to put in buffer zones and armor the different areas, which is  
210 long-term and more sustainable. Keeler asked about looking into FEMA funds.

211 Shashok said East Middlebury River Project is dealing with FEMA funding and they are  
212 now in year 6 and only in Phase II. Werner said this wouldn't qualify for FEMA funding.  
213 Seeley said the Study indicated Alternative #1 of the study had potential for grant  
214 funding. Shashok said there are a couple of other projects that we want to apply for, so  
215 those would be competing for funds as well.

216  
217 Seeley moved to recommend to the Selectboard to find a way to fix and open Creek  
218 Road as soon as possible, and to develop a plan for phasing in and exploring grant  
219 funding for recommended Alternative #1 of the Study. Fiske seconded the motion.

220  
221 Keeler asked how this was going to be paid for since there is no money. Seeley said  
222 that the Selectboard is required to maintain the road, as Mr. Rheume pointed out, so  
223 she would like to see the Board do what they're supposed to do. Shashok felt by  
224 exploring these options to do the necessary repairs, that they were fulfilling their  
225 requirements, and not at any point has she been forgetting her duties.

226  
227 Robbins asked if the repair could be done as recommended in the study. Seeley said  
228 she was okay with amending her motion to include that, but said when looking at the  
229 slope in the design, she questions whether it actually goes the way they've shown and  
230 believes the slope is long-gone. Shashok said Seeley and Hubbard have made some  
231 great points, so having recommendations from them would be very helpful in the  
232 process going forward. Seeley said she'd like to see what's recommended in the  
233 design done in a high-slope area and see how it holds up after a couple of years before  
234 doing the whole road.

235  
236 Tenny wanted to know what the Town could do to restore some vegetation along the  
237 bank. He said for every one tree lost, we should be replacing with 2 or 3 smaller ones.  
238 Seeley said in some areas there isn't enough room to replace the trees. Hubbard said



if they moved the road just a little in that area, there would be room to replace some trees.

The motion was called, but there was confusion over the wording of the motion and the changes made, so Seeley restated the motion with the amendments.

Seeley moved to recommend to the Selectboard to fix the section of Creek Road that needs to be fixed to open it as soon as possible, and as soon as we can afford it, by the method outlined in the Study so we can evaluate how this method holds up while we are in the process of phasing, and exploring grant funding to do the remainder of work recommended in Design #1. Fiske seconded the motion. It was approved unanimously.

#### Aldrich and Elliot Engineering Proposal – Pump Stations #3 & #9 Force Main

Werner said this is a proposal for design services to look at the force main from Pump Station #9 and #3. He said those two force mains come together at the intersection of Weybridge Street and Jayne Court, and then into the Sag Pipe that goes under Otter Creek. They are looking to see if there is another way to design how those two mains enter the main pipe that goes under the river.

Keeler said it had been this way since they were installed, so why do we have to do this now. Werner said the EPA says we need to do something with the Combined Sewer Overflows that happen at Pump #9, so this is to see if there is a better way to design it to make Pump #9 work better. Werner said part of this is exploratory to see what we have, but Pump #3 affects the efficiencies of #9 and #9 overflows. Tenny asked if these Pumps were able to communicate with each other, and Werner said he didn't know, but that was not part of this study. Dean Rheaume, who works at the Wastewater Dept, said he thought that had been looked at in the past and it was determined that wasn't a good idea.

Keeler asked where this \$9,800 was coming from, and Werner said the sewer capital fund.

Seeley moved to recommend the Selectboard approve the proposal by Aldrich and Elliot for design improvements for Pump Stations #3 and #9 force mains at a cost of \$9,800. Tenny seconded the motion.

Keeler said this money is just for an engineering study, they don't know what's there and how could they give us a proposal without knowing how to fix the problem. Werner

498 already is trying to catch up with sidewalk maintenance by adding \$5,000 each year and  
499 we still aren't able to catch up, so where is this \$20,000 matching amount coming from.  
500

501 Shashok said in order to do this project, something on the priority list would have to  
502 move down and that's hard to do. Seeley and Shashok both wished that the  
503 Infrastructure Committee had been notified as soon as this grant was known of and to  
504 work with them to see where this money would come from.  
505

506 There was additional discussion over the timeline of the project and the potential to  
507 phase in the Town's funding portion over several years. Shashok said she was okay  
508 applying for it, since the Town didn't have to accept it, and as long as these grants  
509 come to the Infrastructure Committee first in the future.  
510

511 Shashok moved to authorize the submission of a 2017 Bicycle-Pedestrian Program  
512 grant application to seek funding for a project to design and construct 900-ft. of sidewalk  
513 on Court Street between Creek Road and Middle Road and commit the Town to the  
514 required 20% local match on total cost. The motion was seconded by Seeley. The  
515 motion carried with 6 in favor, 1 absent. **MOTION PASSED.**  
516

517 Shashok further moved to approve the Selectboard letter of support for the project.  
518 Khan seconded the motion. The motion carried with 6 in favor, 1 absent. **MOTION**  
519 **PASSED.**  
520

## 521 9. Infrastructure Committee Meeting of June 22, 2017

### 522 9.a. Creek Road Erosion Stability Study Report

523  
524  
525 Shashok reported on the June 22<sup>nd</sup> Infrastructure Committee when they reviewed the  
526 Creek Road Erosion Stability Study Report. She said in the spring of 2015, the Board  
527 closed Creek Road due to significant road erosion along the banks of Otter Creek.  
528 Gates were installed to allow access for farmers, and the Board asked the Committee to  
529 look at what to do to reopen the road without relying on the traditional expensive repairs  
530 done in the past. The Town hired Pathways Consulting and they put together the Creek  
531 Road Erosion Stability Study to look at the nature of flooding and bank erosion along  
532 the Otter Creek, explore strategies for stabilizing the banks, investigate lower cost  
533 alternatives for reopening the road and provide alternative designs with cost estimates.  
534

535 Shashok said they looked at the top 3 options, since #4 was implementing the minimum  
536 of maintenance as we've been doing. She said the #1 option was to shift the road  
537 8,320 feet to the east within or near the existing right-of-way, and restore the 25'  
538 riparian buffer between Creek Road and Otter Creek. This was the option that was  
539 sustainable in the future and would solve the problems in a different way and restore the  
540 buffer to prevent the need to keep fixing the road with the rocks.  
541

542 Shashok said the Committee met with members of the community and there is a lot of  
543 interest in reopening the road, while everyone was conscious of the cost. She said

544 unfortunately, there appears to be no inexpensive way to fix this road and keep it open.  
545 She said in the end, after much debate, their recommendation is to fix the section of  
546 Creek Road that needs to be fixed to open it as soon as possible and as soon as we  
547 can afford it, by the method outlined in the Study, so we can evaluate how this method  
548 holds up while we are in the process of exploring phasing the work over the course of  
549 possibly many years. Shashok said we do want to reopen the road and she thought it  
550 would be interesting to take on one phase to see if it would work.

551  
552 Seeley said it was really clear from public comments that they want the road back open.  
553 Carpenter asked how many people were present at the meeting, and Seeley and  
554 Shashok were unsure of the exact number, but there were 2 property owners and  
555 maybe 10 people. Shashok said she'd given this road a lot of thought over the last 2  
556 years and has been torn about what to do, since it's a lot of money for a road that  
557 doesn't have many residents on it, but it's also a road that's close to town that is used  
558 and enjoyed by bikers and runners and she's afraid if it's closed we would lose that.  
559 She said initially she had thought they should just keep it as a bike/pedestrian route to  
560 East Middlebury, but she doesn't feel she can bring forward that recommendation. She  
561 does feel they should spend the money to keep it open for the residents, farmers,  
562 fishermen and residents who want to use it as a connection.

563  
564 There was discussion around the possibility of downgrading the road classification,  
565 rights-of-way and the fact the new State Municipal Roads General Permit Program will  
566 require us to fix any hydrologically connected roads where there is erosion; however,  
567 grant money will be available to help fix these areas.

568  
569 Seeley said even though this road doesn't have a lot of residents, it does have a lot of  
570 agricultural property the farmers need to get to. She felt if we could repair North Branch  
571 Road, that doesn't have a lot of residents and is used mostly by people from Ripton, we  
572 shouldn't treat this road any differently. She said it's a Town road and it's the Town's  
573 responsibility to repair and maintain it and get it open. Carpenter felt the Town had  
574 tried in the past and what if we spend \$1.2 million now only to have to do the same thing  
575 in 10 years as the river shifts, and do we really need that as a two-lane road. He said  
576 it's functioning very well as a farm road the way it is now. Seeley said she disagrees  
577 with the engineers, and she would like the Selectboard to take a site visit and see where  
578 she believes the Town has made "good money repairs" and where we haven't, and see  
579 the difference. She would like to repair a portion of the road to see how the method as  
580 designed holds up, before moving ahead with the entire \$1.2 million repair.

581  
582 Ramsay read the motion approved by the Infrastructure Committee that said "to  
583 recommend to the Selectboard to fix the section of Creek Road that needs to be fixed to  
584 open it as soon as possible, and as soon as we can afford it, by the method outlined in  
585 the Study so we can evaluate how this method holds up while we are in the process of  
586 phasing, and exploring grant funding to do the remainder of work recommended in  
587 Design #1." Fiske seconded the motion. It was approved unanimously. She said the  
588 Infrastructure Committee is now looking for the Board to charge them with exploring  
589 grant funding.

Asermily moved to look at what the cost to reopen the road would be by making a relatively small repair, while exploring the option of phasing the project and what grant opportunities were available to help with cost. Shashok seconded the motion. The motion carried with 6 in favor, 1 absent. **MOTION PASSED.**

Shashok commented that the Board will need to look at where this project fits in to the list of priorities agreed to at the Board retreat, and will things on that list need to be shifted around.

#### **9.b. Engineering Proposal on Pump Stations #3 & #9 Force Main**

Dan Werner said this was a quote from Aldrich and Elliot, who is also doing a lot of the Combined Sewer Overflow (CSO) work for the Town. He said Pump Station #3 and Pump Station #9, both on Weybridge Street, pump towards each other to a T right around Jayne Court, where it then goes to a Sag Pipe that goes under Otter Creek to the main pump station on the east side of Creek. He said this proposal is to look at the hydraulics these two pump stations have to see if we can make them function more efficiently, because in heavy rain events they are both pumping at the same time and can't get through the Sag Pipe, so Pump Station #9 overflows. This work is to design a better functioning junction of those two force mains.

Shashok moved to award the contract to Aldrich & Elliott for engineering services to design improvements for the Pump Station #3 and Pump Station #9 force mains, for a lump sum cost of \$9,800. Asermily seconded the motion. The motion carried with 6 in favor, 1 absent. **MOTION PASSED.**

#### **9.c. Municipal Roads Grants-In-Aid Pilot Project Funding**

Werner said the first step in the process of this Grants-In-Aid Pilot Project Funding is for the Town to sign a Letter of Intent saying we want to participate in the Program. Werner explained that anytime there is a road around a storm sewer structure, drainage basin, or creek, or other similar area, the Department of Environmental Conservation (DEC) has identified these as areas the Town will need to inventory and come up with a best-management practice to deal with that situation. Werner said the DEC has identified 35 to 45 miles of hydrologically connected roads in Middlebury, and they have a \$12,500 grant through the Addison County Regional Planning Commission for us to come up with some solutions. The Town would need to contribute \$2,500, which could be in-kind or simply by the highway crew regarding ditches or installing stone check dams. He said this is a way for the Town to get initiated into this Program, which we'll see more of in the next year to 18 months.

Asermily moved to approve the Town of Middlebury's participation in the Municipal Roads Grants-in-Aid Pilot Project and to sign the Letter of Intent. The motion was seconded by Seeley. The motion carried with 6 in favor, 1 absent. **MOTION PASSED.**

## Kathleen Ramsay

---

**From:** Bill Kernan  
**Sent:** Friday, August 18, 2017 3:15 PM  
**To:** Kathleen Ramsay; Dan Werner  
**Subject:** RE: Creek Road

I am uncomfortable opening up the road up without addressing the critical areas noted in the Pathway Consulting report. I drove the road yesterday and measured all of the areas with active bank movement/destabilization. The total lineal footage I came up with was 675'. Pathway's cost per LF for bank stabilization was \$548.18. That's a total of \$370,021. I do not have that kind of money in the highway operating budget. We paid for a professional study, which resulted in multiple recommendations, none of which were to temporarily open up the road to through traffic with one-way lane restrictions at impaired areas (that just seems dangerous to me). Below are excerpts from the June 22<sup>nd</sup> Infrastructure Committee meeting...

187 Keeler asked Dan Werner if there was anyone at Public Works with the expertise to put  
188 some stone in and fix it. Werner said no and a permit from the Army Corp of Engineers  
189 was needed first.

245 Seeley moved to recommend to the Selectboard to fix the section of Creek Road that  
246 needs to be fixed to open it as soon as possible, and as soon as we can afford it, by the  
247 method outlined in the Study so we can evaluate how this method holds up while we are  
248 in the process of phasing, and exploring grant funding to do the remainder of work  
249 recommended in Design #1. Fiske seconded the motion. It was approved  
250 unanimously.

Are we being asked to change course from what was recommended to the Selectboard?

Bill Kernan  
Dept. of Public Works  
Director of Operations  
Town of Middlebury  
1020 Route 7 South  
Middlebury, VT 05753  
[bkernan@townofmiddlebury.org](mailto:bkernan@townofmiddlebury.org)  
802-388-8100 ext. 298

**From:** Kathleen Ramsay  
**Sent:** Thursday, August 10, 2017 5:05 PM  
**To:** Bill Kernan <BKernan@TownOfMiddlebury.org>; Dan Werner <DWerner@TownOfMiddlebury.org>  
**Subject:** Creek Road

Hi Bill and Dan,

Susan just mentioned to me this morning after the meeting that she would like to see Creek Road on the agenda for the meeting on the 14<sup>th</sup>, including an estimate of what the cost/effort/feasibility for opening it up to through traffic, with one-way traffic in the constricted areas.

Remember, I'm just the messenger. We can discuss further if you'd like.

Thanks,  
Kathleen

Kathleen Swinington Ramsay  
Town Manager  
Town of Middlebury  
77 Main Street  
Middlebury, VT 05753  
[kramsay@townofmiddlebury.org](mailto:kramsay@townofmiddlebury.org)  
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1 TOWN OF MIDDLEBURY  
2 Infrastructure Committee  
3 Town Offices Large Conference Room  
4 Thursday, October 12, 2017  
5 DRAFT Meeting Minutes  
6

7 Committee Members Present: Susan Shashok, Kirk Fiske, Gary Baker, Chris Robbins, Heather Seeley  
8 and Luther Tenny. Also present was Alternate Judith Wiger-Grohs who would be voting for Don Keeler,  
9 Jr., who was absent.  
10

11 Town Staff: Town Manager Kathleen Ramsay, Director of Public Works Planning Dan Werner, Director  
12 of Public Works Operations Bill Kernan, Fire Chief David Shaw and Treasurer/Accounting Services  
13 Manager Jackie Sullivan.  
14

15 The meeting was called to order by Chair Susan Shashok at 8:15 a.m.  
16

17 Approval of Agenda  
18

19 Robbins asked to include discussion on some possible grant opportunities she had found that might  
20 work for the Creek Road Project. Shashok said they would include it under Project Updates.  
21

22 The agenda was approved upon motion by Baker, seconded by Seeley. The vote was 7 in favor.  
23

24 Approval of Meeting Minutes for September 14, 2017  
25

26 The minutes of September 14, 2017 were approved as presented upon motion by Seeley, seconded by  
27 Baker. The vote was 7 in favor.  
28

29 Citizen Comments – None  
30

31 Project Updates  
32

33 Chris Robbins informed the Committee of a grant through the Lake Champlain Basin Program Local  
34 Implementation Grant Program called "Pollution Prevention and Habitat Conservation", which can  
35 include riparian plantings, which is what we're proposing to do along Creek Road. Werner and Shashok  
36 both said there are no plans prepared yet for this project that could be used to apply for this grant.  
37 Shashok recalled that the engineers would be looking for opportunities for funding, but Werner  
38 recalled that any repair of the road would require it be moved and there would need to be budgeting



for that. Tenny remembered there was to be immediate repair to the road to get it opened and then further evaluation. Werner said no engineering contracts had been pursued at this time.

Robbins suggested the Middlebury River Project might be eligible as well, since this grant is also for flood resiliency projects. Werner said he had read through this grant and he remembered it saying they plan to concentrate on projects in the Winooski River, St. Albans Bay and the South Lake tributaries, and any other applications would most likely not be considered.

Bill Kernan said Creek Road has further damage north of Perrin's driveway and it isn't as simple as just making simple repairs to the road. Shashok said that's where the Selectboard left it, so she wonders if staff is now recommending to repair the entire road since she sees the money in the draft Capital Improvement Budget. Werner said the plan was to try and relocate that road eventually, so some money needs to be set aside for it or another financial path found to do that.

There was discussion over how the project was to be broken out into segments to be worked on and how some money had been set aside already, and there was \$1.2 million in the Capital Improvements Budget. Ramsay said it was up to this Committee to decide how to divide that money up to phase in the repairs.

Robbins said there is also an Army Corp of Engineers grant that has no timeline and is to be used for implementation of large projects, so she said we might want to look at that after the design and engineering phases are complete. Shashok suggested Werner look at this further and come back at the next meeting. Ramsay asked if this was a good time to step back and hire Pathways or another consultant to help move this forward. She said if that's the Committee's direction, they can investigate the funds and advise us on what to apply for and what the funding strategies might be.

The Committee had some confusion on what work was to be done and the money budgeted in the Capital Improvements Budget. Ramsay said the \$1.2 million in the budget was based on everything that needs to be done on that road, so she wanted them to keep the end in mind.

Fiske asked Werner if he was talking a total realignment of Creek Road, and Werner said that's what the study said, that portions of that road need to be moved and these budget numbers came from the study. Werner said there needs to be a discussion of how we're going to get it done. Baker said he's concerned the road will deteriorate faster than we can get the work done.

Ramsay asked if she was understanding correctly, that the Committee would like staff to obtain proposals from consultants to help seek out funding and to advise on phasing. Shashok said yes, and setting money aside this year for consulting on putting this all together is very wise.

*end creek  
road discussion*



77  
78 Keeler said he was on the DRB when this development came in for approval, he does not  
79 believe it was ever considered to be a Town road, because it would have had to meet Town  
80 Standards and Snyder didn't want to meet those standards.

81  
82 Shashok told Hietzker that in order to become a Town road, there was a whole list of criteria  
83 that would need to be met, so he would need to ask his group if they wanted to pursue this list  
84 or not, because it would take considerable staff time to prepare.

85  
86 Keeler suggested going back to the DRB approval to see what it said. He said a lot of developers  
87 don't want to build to Town standards for roads and sidewalks and curbs, because it drives the  
88 cost of the lots up. Werner said this was designed to be low to moderate housing, so they  
89 chose to design the infrastructure to keep the costs down. Baker said when he read the DRB  
90 approval it was very clear what the Town would do and accept, and he thought it was by the  
91 absence of mention of these other roads that it was intended they not be Town roads.

92  
93 Robbins asked Hietzker if the Association did the maintenance of the road and a budget for  
94 keeping it up, and did they have a schedule and plans for repaving in the future. Hietzker said  
95 they have a budget for plowing and electricity, but he is not sure about any repaving plans.

96  
97 Shashok summarized that there were a number of things the Association would need to do to  
98 bring the road up to a standard the Town would consider, and said they may need to hire  
99 someone to help them with this. Keeler questioned the ability to ever bring the road up to  
100 Town standards and Tenny said even if they did, this opens up a "can of worms" that other  
101 subdivisions would follow. Shashok said even if all the work was done by the Association,  
102 there just isn't that much interest in taking the road over.

103  
104 Hietzker asked for the construction standards that he can share with the Association, and  
105 Werner said he would send them to him.

106  
107 Creek Road Grant Possibilities

108  
109 Ramsay said she and Werner had met with Amy Sheldon last week, and Sheldon was going to  
110 immediately explore grant opportunities for the Creek Road Project, as she knew some of them  
111 had deadlines coming up. She said Sheldon's preliminary conclusion is the best grant for this  
112 project is the Municipal Highway and Stormwater Mitigation Grant, which comes up in the  
113 summer of 2018. Shashok asked if there was enough time to get everything together to apply  
114 for this, and she also thought we need to decide if we want to start setting aside the \$230,000

115 matching funds. Ramsay said her thinking was if they got the grant next summer, construction  
116 most likely would not begin until 2019, so she is suggesting putting \$30,000 in the FY19 Capital  
117 budget and the balance of \$200,000 in the FY20 Capital budget. There was further discussion  
118 around these grant funds and Shashok said if they were comfortable with this, then the \$30,000  
119 could be added to this budget.

120  
121 Bill Kernan said they have included the new area of Creek Road into the FEMA claim where  
122 they've seen new degradation. He said he'd met with the FEMA inspector on the 11<sup>th</sup> of  
123 October and went over the area and measured and documented it, and he recommended  
124 Kernan met with the FEMA mitigation professional, which he did on October 23<sup>rd</sup>. He said they  
125 inspected the area and made some recommendations. He said there are the other things going  
126 on behind the scenes with Creek Road, so Shashok suggested he speak with Sheldon as it  
127 would be helpful for her to know all these things. Seeley asked if this new area was included in  
128 the original cost. Shashok said it was within the scope of the work area, but Kernan said it  
129 would be an additional cost. Ramsay said that was a good reason to work with Sheldon to  
130 review the scope of the project and how it may have changed. Shashok said we have a good  
131 deal of time before they need to apply for the grant to adjust the scope of the project.

#### 132 133 Capital Improvement Budget Planning

134  
135 Keeler asked Werner when the Town was going to start paving the dirt roads to save all the  
136 money spent on maintenance year after year. Werner said he agreed and the new State grants  
137 for roads want roads to be paved to cut down on stormwater runoff, so maybe we should be  
138 looking at doing more paving. Keeler specifically asked about Happy Valley Road that is a  
139 heavily used dirt road used as a short-cut to Route 7. Werner said they had looked at Happy  
140 Valley Road and the reasons for the delay of any paving on that road was due to ledges and a  
141 possible water line project in the future. Shashok said Werner had a whole year to look at  
142 which roads might be paved to be included in the next Capital Improvements budget. Tenny  
143 said it is cheaper to maintain a paved road, but you have to look at cash flow, because to  
144 convert a dirt road to paved would probably be \$1 – 1.5 million for a 2 mile road. He said  
145 there's a lot more to it than just putting asphalt on a dirt road, and it's very expensive. Shashok  
146 said if we were going to do it, it would have to be a slow process, such as maybe 2 roads over  
147 10 years.

#### 148 149 Parks & Recreation

150  
151 Bill Kernan and Terri Arnold joined the Committee to go over the Parks and Recreation Capital  
152 Budget. Kernan said that when he first came to the job he thought it was great we had all these

266

267 Ramsay gave a summary on the changes made so far in the meeting:

268

269 Remove the awning from Recreation \$ -15,000

270 Remove Creek Rd to Highway Construction -50,000

271 Remove Harrow Way/Swanage Ct Storm Sewer -2,500

272 Remove Court St/Monroe Street Intersection -30,000

273 Remove Stormwater Grant Match -22,000

274 \$ -142,000

275

276 Add back in Police furniture less Impound

277 Lot paving + 2,000

278 Add to Facilities to include Impound Lot + 5,000

279

280 Net decrease -135,000

281

282 Ramsay said she'd checked the cost of the chairs we had purchased for the Town Offices and  
283 thought she could get the Police Department chairs for around \$5,000, so could budget \$3,000  
284 for this year and \$2,000 next year if needed. She also recommended leave Highway  
285 Construction where it is already. The final number was \$1,005,902. Seeley just wanted to be  
286 sure that Creek Road be kept separate in Highway Construction to allow us to take advantage of  
287 any funding opportunities.

288

289 There was still confusion over the Creek Road money and what to do with it. Seeley would  
290 really like to see it added back in.

291

292 Seeley moved to approve the Capital Improvements Budget as amended, and Tenny seconded  
293 the motion. The motion passed with 7 in favor.

294

295 Keeler asked to put a question to the voters at Town Meeting on whether or not they want to  
296 keep Creek Road open.

297

#### 298 Granite Curbing

299

300 Seeley said she had walked Mill Street before the meeting and saw just as much damage to the  
301 sidewalk with concrete curbing as she did the granite, and she didn't think there was any  
302 difference aesthetically either, so was fine with whatever cost less.

303

## **Creek Road Site Visit Notes June 7, 2018**

**Present:** Mike Kline, Vermont River Management Program Director, Jaron Borg, RMP Regional Engineer, Allen May, VTRANS Better Roads Program, Dan Werner and Bill, Town of Middlebury, and Amy Sheldon, Landslide Natural Resource Planning.

The group convened across from the VTRANS garage and drove the length of the Creek Road, stopping at the major eroding sites. Jaron Borg described the erosion as 'rotational' meaning that the differential between saturated soils and dry soils creates a surface for the layers to erode (rotate) away from one another.

It was noted that there has not been geotechnical analysis done by VTRANS. This is a longitudinal study monitoring well casings bending over time. There is a study like this on the Lemon Fair at 125 in Cornwall and on the Otter Creek at Gooseneck Bend in Weybridge.

Mike Kline expressed concerns over how long a 25' riparian buffer would last. He also said that if the buffer were wider – 200' – it might rise up to be a good investment of public dollars but that 25' made him nervous. He did say that if the Town wanted to continue to maintain the road the state would issue permits for continued hard armoring.

Allen May said there is money for bike and ped and Dan noted the Town is already working on two grants from that source.

Overall this group was not enthusiastic about using the Municipal Highway Stormwater Mitigation funding for a project this close to the Otter Creek that will likely continue to erode.

Creek Road – Discussion of next steps

Werner said that they sent out an executive summary that was done a year ago from Pathways Consulting and there are several options. He said that the grant money will not be available for this project. Ramsay said that one option presented in the report was relocating portions of the road closest to the creek to about 25 feet away from the creek. She said that when they met with the State, the State was not in favor of such a minor relocation project. Ramsay thought that the state would be more interested in a major project, like moving the road out 150 to 200 feet.

Seeley thinks that there are multiple issues. The first is the closed South section of the road. She said that we are in violation of State statute of not fixing and opening the road. She is wondering how we can address fixing it and opening the road so we are not in violation. Seeley also said that the second issue is that the road north of the gate needs some more work. She suggests breaking it into two parts. The first is to open the South section and the second is to maintain access to driveways on the North section. She suggested reopening the Creek Road subcommittee to come up with possible recommendations for the Infrastructure Committee.

Keeler said that because we don't receive any state funds for this we should know what this project is going to cost before we move further. Werner said that moving the road out further probably won't give us any grant money from the State.

Seeley suggested that Public Works could put on the gravel and move the road slightly to open it back up so that we are not in violation of State statute and that would buy us a little more time. She said that she thinks we should talk to the landowners to see if they are open to granting easements to move the road. She said she would like to get an estimate from Public Works.

Kernan is opposed to opening traffic back up without repairing all of the areas on the road.

Peter Hubbard, Middlebury resident, said that we need to fix the bank first. He said that the water is now cutting into the bank and changing the course into a more natural curve. He said that you have to take the pressure off of the bank and he said that he thinks if you restore the river to its natural flow, it will take the pressure off the bank. Hubbard said that he thinks that if nothing is done there will be more of a problem. Seeley said that the biggest issue with that is the cost. She said that we should figure out the funding for repairing the bank once we know what we are doing with the road.

Brad Smith, Middlebury resident, travels the road quite a bit and he thinks that the issue is with the North end. He said that he was wondering if the road can be moved further to the East. Seeley said that Public Works has some plans for repairs there. Smith is wondering if it was possible for the Town to give the road back to the farmers but hopes that they don't do that. He said that he thinks the right of way is important even if we can't afford to fix it. He said that maybe the road can be made into trail status if we can't fix it.

374 Tenny said that Hubbard was concerned about the overhanging trees on the bank and he thinks that the  
375 low cost of cutting those trees and planting some saplings would go a long way.

376

377 Werner said that there is rotational failure on the bank and that the soil underneath is not strong  
378 enough and would be washed away eventually.

379

380 Ramsay said that she thinks the next step is to recommend to the Selectboard that we look at costs of  
381 moving forward. She asked the committee if they would like the staff to come back with basic costs  
382 estimates of doing the work to fix the five sections of the road. Seeley said that would be good.

383

384 Seeley thinks we should look at the legal cost of changing the road status if we aren't going to pay to fix  
385 the road. Ramsay said that the Selectboard needs to hold a Public Hearing and there are some legal  
386 documents that would be needed. She said that she doesn't think a subcommittee would be needed.

387

388 Keeler thinks that the Selectboard should be responsible for this now. Tenny said that we need to do a  
389 band-aid fix soon so we should put some numbers in front of the Selectboard.

390

391 Seeley asked if the staff had time to put some band-aid fix numbers together for the Selectboard.

392 Werner said the he does not have the time to put towards this right now unless other projects can be  
393 put aside.

394

395 Fiske said that he was concerned about the town's legal obligation to Creek Road.

396

397 Ramsay said that \$20,000.00 was set aside for Creek Road in the capital budget. She said that the last  
398 time this was left with the Selectboard was that the price tag would be \$1,300,000.00 for the road  
399 relocation but that we would pursue grant funding. She said that the Selectboard has not heard the  
400 update on the grant money not being available for the project.

401

402 Seeley said that this should go on the agenda of the Selectboard meeting to update them on the  
403 options.

404

405 Baker made the motion to update the Selectboard on the status of the grant funding for Creek Road and  
406 propose minor fixes within the \$20,000.00 budgeted in the capital budget. The motion passed with 6 in  
407 favor.

408

409 Keeler motioned to adjourn the meeting at 10:27 a.m. and it was seconded by Baker. Motion approved  
410 with 6 in favor.

411

412 The next meeting is September 13, 2018 at 8:15 a.m. in the Large Conference Room at 77 Main Street.

413

414 Respectfully submitted,

415 Casey McDonough

\*\$40,000 for realignment of Creek Rd is included  
in the FY19 Budget