

# Transportation Capital Improvement Plan for the Town of Tunbridge

Two Rivers-Ottawaquechee Regional Commission

Fiscal Years 2018 – 2022

January 12, 2016

## **DRAFT – FOR DISCUSSION PURPOSES ONLY**

### *Definition and Purpose*

The purpose of this Transportation Capital Improvement Plan (CIP) is to estimate the transportation-related capital expenditures for the five fiscal years (FY) following the annual budget currently being developed by the town for FY17. This plan therefore covers FY18 to FY22. It is intended to be a tool that the Selectboard can use during the preparation of their future annual budgets.

Related definitions are below. (Note that this CIP covers only transportation-related capital projects such as town road equipment, buildings, and projects.) Capital budget and program are described in V.S.A Title 24, Chapter 117, Section 4430.

**Capital Budget:** A list of the capital projects to be completed during the fiscal year. This includes estimated costs and methods of financing.

**Capital Improvement Plan:** A plan of the capital improvement projects for the five years following the current Capital Budget year.

**Capital Project:** A project that is non-recurring, has a life expectancy of at least five years, and a cost of at least \$5,000. A capital project also must also be a fixed asset or an improvement to a fixed asset. Common examples include vehicles, buildings, heavy equipment, and utilities.

From V.S.A Title 24, Chapter 117, Section 4430:

A capital project is any one or more of the following:

- (1) Any physical betterment or improvement, including furnishings, machinery, apparatus, or equipment for that physical betterment or improvement when first constructed or acquired.
- (2) Any preliminary studies and surveys relating to any physical betterment or improvement.
- (3) Land or rights in land.
- (4) Any combination of subdivisions (1), (2), and (3) of this subsection.

## Overview

The Town of Tunbridge maintains about 70 miles of class 2 and 3 roads with trucks and equipment owned by the town. The town also has a basic, functional town garage that was built in the 1970's as well as a salt shed. The annual town budget includes an equipment fund to help insure equipment is replaced before maintenance costs or reliability become issues.

## Background

Two Rivers-Ottawquechee Regional Commission (TRORC) is assisting the Town of Tunbridge with the development of this Transportation Capital Improvement Plan. This initiative is funded by the Vermont Agency of Transportation through their Transportation Planning Initiative. This Transportation Capital Improvement Plan is intended to be used in the development of future annual budgets and does not include capital items not directly involved with transportation. Some of the items not included in this report are town offices, fire department funding, and buildings other than the town garage and salt shed.

A 2014 "Better Backroads" study was performed which resulted in a prioritized list of culverts that should be replaced. The study identified 10 high priority replacements totaling about \$15,000. This report also listed about 40 other culverts that were in "poor" or "critical" condition.

In the past the Town of Tunbridge has received state funding to help replace bridges. Generally this funding requires a 20% town match. The most recent of these replacements was the bridge on Recreation road. The road foreman (Rodney Hoyt) has identified a few small bridges and large culverts that are candidates for replacement. Two of these are made entirely of stone and are likely historic in nature.

Vermont's recent Clean Water Act (Act 64) will require towns to implement a storm water management plan. This plan will vary widely between towns but will likely result in the need to make improvements to existing road ditches, culverts, turnouts, and other infrastructure. Developing and implementing this plan will take many years and the scope of work, related funding, and final timeline is not known at this time. See Exhibit G at the end of this report for a basic information pamphlet from the Vermont Department of Transportation.

## Goals of this Transportation Capital Improvement Plan

1. To assist the town in moving toward implementing a comprehensive Capital Improvement Plan that looks at long range capital needs and sources of funds.
2. To aid in the development of each annual capital budget.
3. To limit variations in the amount of annual capital funding needed each year.
4. To establish a rough equipment replacement schedule that will help the town predict if financing will be required to replace equipment or if replacement schedules can be altered to level the amount of capital equipment expenditures in each year.

### Objectives of this Transportation Capital Improvement Plan

1. To maximize the value of transportation related capital projects.
2. To minimize the variation in annual spending on transportation capital projects.
3. To avoid surprises related to unexpected equipment replacement or capital projects

### Prioritization of Transportation Capital Projects

1. Public safety.
2. Maintain current level of services.
3. Improve services to meet needs that are currently not met.
4. To undertake projects to improve services or in anticipation of future needs.

### Methodology, Information Gathered, and Limitations

TRORC staff (Bob Ennis and Rita Seto) met with the Selectboard and treasurer to explain the project and gather any background data. Since there was a limited amount of information available to use for this project a meeting with the road foreman (Rodney Hoyt) was set up to develop a list of equipment, buildings, and possible projects. TRORC added to the equipment list expected replacement dates based on estimates from Mr. Hoyt and replacement cost estimates. It should be emphasized that these are estimates used for planning purposes and will need refinement to determine exactly when equipment should be replaced and exactly how much it will cost.

Five bridges and culverts were identified by the road foreman as possible replacements. These were photographed and are shown in Exhibits A – E near the end of this document. Mr. Hoyt also indicated that there are a few sections of road (probably less than 1/3 of a mile in total) that could be candidates for widening. Mr. Hoyt also expressed concern about the type of work and equipment that may be required to comply with Vermont's Clean Water Act (Act 64). Although the exact nature and scope of that work is not known at this time he did feel that it may be necessary to replace the current backhoe with an excavator since the final storm water management plan will likely involve extensive ditch work.

The town treasurer provided the purchase price of most of the large equipment and this was used to develop estimates on replacement costs for the other capital equipment (all replacement costs and life cycles are estimates and subject to further review and suggestions). From these inputs a table was put together to estimate the cash inflows needed to support this equipment replacement schedule. Trade-in allowances were factored in based on rough estimates as indicated in footnotes.

Mr. Hoyt felt that half of the town garage roof should be replaced (the other half has already been replaced). The portion that has not been replaced can be heard rattling in strong winds. He also said that the salt shed was in good condition and not in need of any immediate repairs.

It should be noted that this Capital Improvement Plan is limited in its scope and should be considered alongside the other capital budget items during annual budget development at the town. This should be viewed as an aid to be used in the development of the annual budget, but since it is limited to transportation-related capital projects it is only one piece of the puzzle. It relies on many assumptions that the town may consider altering (including life cycles of equipment, type of equipment, timing of purchases, types of capital projects to be undertaken, bridges and culverts to be replaced, among others). Importantly, since the requirements of Act 64 are not known, there could be many large improvements to roads that could have a huge impact on the prioritization of capital improvement projects during fiscal years 2018 – 2022.

Despite the limitations of this Transportation Capital Improvement Plan it is a step in the direction of moving toward long-range planning and toward a future where the town adopts a comprehensive Capital Improvement Plan that can provide a framework for the annual budget process.

There have been many contributors to this report including the town treasurer, Selectboard, and Tunbridge Planning Commission. This plan reflects the input of these contributors.

### Transportation Capital Equipment

As of Jan 5, 2016 the town had about \$111,000 in its equipment replacement fund. Since the town is currently working on their FY17 budget (July 1, 2016 – June 30, 2017) this plan is looking at equipment needs for FY18 through FY22. Based on the current replacement schedule, it appears that the 2009 Freightliner is due for replacement prior to FY18. If another \$100,000 goes into the equipment fund in FY17 then there should be a balance that will carry forward to FY18 since a replacement for the 2009 Freightliner will cost well below \$200,000 (probably about \$120,000 - \$140,000 depending on the specifications and whether a single axle or tandem axle is purchased).

In prior years the town has allocated \$100,000 annually to its equipment fund. This funding level has worked well to keep equipment relatively up to date and avoid the need for large equipment loans. In the future \$100,000 per year may not be sufficient to keep equipment up to date due to the increasing cost of equipment (inflation). Also if the town has intentions of increasing the size of equipment or replacing existing equipment with more expensive and capable alternatives (such as replacing the backhoe with an excavator, or a single axle plow truck with a tandem axle truck) the level of funding will likely have to increase.

As shown in Table 1 (below) if we estimate the FY18 replacement cost for transportation capital equipment it totals about \$1,300,000. The weighted average useful life of this equipment is about 9.5 years. This would suggest that by FY18 the town should expect it will take a contribution of about \$135,000 into the equipment fund to keep up with the replacement schedules shown in this table. If we assume that trade-in values average about 15% of replacement cost then this would reduce this number to about \$115,000. (All of these are rough figures and subject to what actually happens to equipment in the real world.) The intent is to show that the \$100,000 per year equipment contribution will have to increase at some point to achieve the equipment replacement cycles and equipment needs of the town.

The challenge that the town faces is that the replacement cycles currently used in this report result in a disproportionate amount of equipment being replaced in FY18 - FY22. For this reason even a contribution of \$135,000 per year would not be nearly enough to keep up with the replacement of equipment needed during FY18-FY22. This is illustrated in Table 2 which shows the amount of funding needed for FY18 - FY22 (note that if a balance in the equipment fund is carried over from FY17 this amount could be subtracted from the FY18 expenditures). In Table 3 we extend that table out to cover then next 5 fiscal years (FY23-FY27) we can see that the equipment replacement costs are much less than FY18-FY22. In short the current replacement cycles result in “waves” of years with high costs followed by periods with low costs. This should not be seen as alarming, it is just a reflection of the current replacement years of equipment. There are many options available to the town to address this issue, a few of which are shown below.

### Equipment Recommendations

1. Review the equipment replacement schedules and assumptions about what equipment is needed with road foreman to ensure that there is agreement or that a compromise can be reached. To help with long-term planning it would be useful to agree on the replacement schedules of equipment and only adjust if absolutely necessary (for example if a particular piece of equipment turns out to be a “lemon,” is severely damaged, or is no longer needed).
2. Determine what infrastructure work will result from Act 64 before making final decisions on what equipment the town will need in the long term. This could affect, for example whether to replace the existing backhoe with an excavator, or what specifications are needed for other equipment.
3. Determine if the town will continue to set a fixed amount aside in the equipment fund and purchase all equipment from that fund OR determine if loans are a better solution to “level” the amount of annual expenditures OR determine if the replacement schedules can be altered enough to avoid the spikes in equipment replacement costs.
4. Consider opportunities to share the cost of more specialized equipment with other town(s). (For example this *might* work for graders or excavators but not likely to work for trucks or loaders that would all be deployed by towns whenever a snow storm hits.)
5. Ensure that a fair, open, and competitive bid process continues to be used to meet the goal that equipment both fits the needs of the town and is a good long-term value.
6. Determine whether it is better to trade in a piece of equipment or to sell/auction.
7. Review accounts for consistency and consider separate accounts for “Road Equipment – Capitalized” and “Road Equipment – Non Capitalized.” Equipment that meets the definition of a Capital Project (over \$5,000 with a 5-year life, etc.) would be funded by one account and other items (such as chain saws, tools, etc.) would be funded by the other account. This would ensure that the funds set aside for capital equipment are used only for capital equipment and not smaller items.

### Transportation Capital Projects

The most important influence on these projects is the outcome of Act 64 (The Vermont Clean Water Act). As discussed earlier, the storm water management plan required under this act has not yet been developed for the town. Even though the final storm water management plan is probably a couple years away it is expected to result in substantial road infrastructure projects that will be implemented over many years following this plan's approval. Financial and technical assistance will likely be available to towns, but the details of these programs and what is specifically available to the Town of Tunbridge is not known at this time.

Culvert replacements are an ongoing priority. About 50 culverts were identified in the 2014 "Better Backroads" study for replacement or improvement and this work will probably continue into the FY18-FY22 period. If the town were to spend \$10,000 - \$15,000 per year on replacing these culverts (barring another major flood event) it should be able to replace all or most of the culverts identified in this report by FY22. This work could certainly get done sooner if the town feels it is a priority.

The current road foreman identified 4 bridges that could potentially be replaced or improved. He also identified one large culvert that might also be replaced with a bridge and guardrails. They are listed below and shown as separate exhibits near the end of this report:

- Small bridge Monarch Road above fire house (Exhibit A)
- Stone bridge at Darrel driveway (Exhibit B)
- Bridge Belnap Brook Road (Exhibit C)
- Large Culvert Frye & Moses Road (Exhibit D)
- Stone bridge at jct. of Strafford, Hoyt, and Tuttle Roads (Exhibit E)

These five possible projects were identified by Mr. Hoyt and he made it clear that in most cases the projects do not pose an immediate threat of structural failure but they should be on the list of possible bridge projects or replacements. Grant funding may be available for some of these projects (either now or in the future) and it is likely that many or all of the projects will not be completed unless grant funding is available, they become clearly less stable, or a failure occurs.

There is approximately 1/3 mile of dirt road that Mr. Hoyt said may be considered too narrow. A separate road widening project for these sections should be considered once the implications of Act 64 on this road widening are considered.

#### Transportation Capital Projects – Recommendations

1. Continue to stay up to date with Act 64 outreach by the Vermont Agency of Transportation and others. Once projects have been identified and prioritized begin to have discussions on equipment needs, annual funding, and other available resources that the town may have to comply with Act 64.
2. Replace culverts based on the prioritization in the 2014 "Better Backroads" study, making any adjustments needed due to the condition of individual culverts or recent culvert failures.
3. Prioritize the five bridge projects identified by Mr. Hoyt and determine if any other bridges should be added to the list for possible replacement or improvement. Bring this list forward every

time the annual capital budget is completed to see if any of these projects should be included in the budget. Consider the historic nature of the stone bridges and the town plan when prioritizing and considering project designs. Since town bridges are often replaced with the help of grant funding, the town should keep up to date on possible funding opportunities including possible grant assistance related to Act 64.

4. Identify, photograph, and list the sections of road that should be widened. It is possible that these same sections of road will need improvements due to Act 64 so it may be advisable to set this project aside until the Act 64 work plan is developed.
5. Keep a list of other potential transportation infrastructure capital projects as they come forward through the road foreman, Selectboard, or others. Incorporate in a 5-year plan or prioritize annually so that all projects are considered against the merits of all other projects and not in isolation. Keep in mind that this list would not include routine road maintenance and would have to meet the definition of a capital project.

#### *Transportation Building Capital Projects (Town Garage and Salt Shed)*

The town garage is in need of a new roof on the half of the building nearest the river. The other side of the roof has already been replaced. The building itself is like many older town garages around the state: purely functional, and no-frills. Mr. Hoyt said that the town should consider an addition but felt that the building itself was structurally sound. The salt shed is a basic structure and appears to be stable and not in need of any immediate repairs.

#### *Transportation Building Capital Projects – Recommendations*

1. The town garage should be inspected to determine if it is in need of any immediate repairs or has any safety issues.
2. Based on the results of this inspection the Selectboard should address any immediate safety issues. Based on road crew needs and the inspection report they should also consider if a replacement is needed (or if the building does not need to be replaced in the near future then when should it be replaced: 5 years, 10 years, 20 years?) Record the results of the inspection and use for long term planning and the annual capital budget process.
3. Also based on the results of the inspection any capital projects should be identified (such as the likely replacement of half of the roof) as well as any ongoing maintenance issues that should be addressed.

#### *Next Steps*

1. Provide this draft Capital Improvement Program to members of the community at a public forum for input.
2. Complete final edits.

Two Rivers-Ottawaquechee Regional Commission  
Town of Tunbridge - Transportation Capital Improvement Plan FY18-FY22  
DRAFT

**TABLE 1: REPLACEMENT COST / USEFUL LIFE OF EQUIPMENT**

The purpose of this table is to estimate the total replacement value of equipment and to calculate the weighted average useful life of equipment.

| Item   | FY15<br>Estimated<br>Replacement<br>Cost | FY18<br>Estimated<br>Replacement<br>Cost | Useful<br>Life<br>(Years) | FY18<br>Replacement<br>Cost / Useful<br>Life |
|--|--|--|---------------------------|--|
| 2015 Freightliner 10 Wheel Dump Truck                | \$ 132,000                               | \$ 144,240                               | 7                         | \$ 20,606                                    |
| 2014 Freightliner 4WD 6 wheel Dump Truck with a Hone | 159,000                                  | 173,744                                  | 7                         | 24,821                                       |
| 2009 Freightliner 2WD 6 wheel Dump Truck             | 120,000                                  | 131,127                                  | 7                         | 18,732                                       |
| 2015 Dodge 5500 One Ton 4WD with a dump body         | 58,000                                   | 63,378                                   | 7                         | 9,054  |
| 1995 Ford L9000 4WD 6 wheel Dump Truck with a Hone   | 130,000                                  |  | na                        | - <sup>1</sup>                               |
| 1998 Case 580 Super L Backhoe with a clam bucket     | 100,000                                  |  | na                        | - <sup>2</sup>                               |
| 2006 Challenger Tractor with roadside mower          | 50,000                                   | 54,636                                   | 12                        | 4,553  |
| 2011 Case Loader 621E                                | 150,000                                  | 163,909                                  | 10                        | 16,391                                       |
| 2005 John Deere Grader 672D                          | 230,000                                  | 251,327                                  | 15                        | 16,755                                       |
| 2006 Diamond mower attachment                        | 10,000                                   | 10,927                                   | 12                        | 911  |
| 2012 Tenco Plow Reversible one way, 11ft             | 13,000                                   | 14,205                                   | 12                        | 1,184  |
| 2015 Everest Vortex plow 11 ft. plow                 | 10,000                                   | 10,927                                   | 12                        | 911  |
| 2009 Tenco plow 11ft one way plow                    | 10,000                                   | 10,927                                   | 12                        | 911  |
| 2008 Housatonic plow 10 foot plow                    | 10,000                                   | 10,927                                   | 12                        | 911  |
| 2000 Champion Plow 11 foot                           | 10,000                                   | 10,927                                   | 15                        | 728  |
| 2005 York Rake                                       | 10,000                                   | 10,927                                   | 20                        | 546  |
| 2010 Steam Cleaner                                   | 5,000                                    | 5,464                                    | 15                        | 364  |
| 2018 Excavator with Trailer                          | 200,000                                  | 218,545                                  | 12                        | 18,212                                       |
| Misc.  | 10,000                                   | 10,000                                   | 10                        | 1,000  |
| <b>Total</b>   | <b>\$ 1,417,000</b>                      | <b>\$ 1,296,140</b>                      |                           | <b>\$ 136,589</b>                            |

Notes/Assumptions

1. Assumes that this backup truck is not replaced.
2. Assumes that this backhoe is replaced with an excavator.

Summary:

- a. The estimated replacement value of equipment in FY18 is about \$1,300,000.
- b. The weighted average useful life of equipment is about 9.5 years (\$1,296,140/ \$136,589). The useful life of trucks is less than 9.5 years and the useful life of all other equipment is more than 9.5 years. When we weight this based on the cost of equipment it is about 9.5 years.



**TABLE 2: ANNUAL EQUIPMENT REPLACEMENT COST FY18-FY22**

The purpose of this table is to estimate the annual funding needed to replace equipment. Assumptions have been made about useful life and replacement costs as noted below. This should be considered a starting point for discussions about when and how much equipment is replaced each year.

| Item   | 2015 Estimated Replacement cost | Useful Life (Years) | FY 2018    | FY 2019   | FY 2020    | FY 2021    | FY 2022    |               |
|--|---------------------------------|---------------------|------------|-----------|------------|------------|------------|---------------|
| 2015 Freightliner 10 Wheel Dump Truck                | \$ 132,000                      | 7                   | \$ -       | \$ -      | \$ -       | \$ -       | \$ 162,343 | <sup>1</sup>  |
| 2014 Freightliner 4WD 6 wheel Dump Truck with a Hone | 159,000                         | 7                   | -          | -         | -          | 189,854    | -          | <sup>2</sup>  |
| 2009 Freightliner 2WD 6 wheel Dump Truck             | 120,000                         | 7                   | -          | -         | -          | -          | -          | <sup>3</sup>  |
| 2015 Dodge 5500 One Ton 4WD with a dump body         | 58,000                          | 7                   | -          | -         | -          | -          | 71,333     | <sup>4</sup>  |
| 1995 Ford L9000 4WD 6 wheel Dump Truck with a Hone   | 130,000                         | 10                  | -          | -         | -          | -          | -          | <sup>5</sup>  |
| 1998 Case 580 Super L Backhoe with a clam bucket     | 100,000                         | 20                  | -          | -         | -          | -          | -          | <sup>6</sup>  |
| 2006 Challenger Tractor with roadside mower          | 50,000                          | 12                  | 54,636     | -         | -          | -          | -          | <sup>7</sup>  |
| 2011 Case Loader 621E                                | 150,000                         | 10                  | -          | -         | -          | 179,108    | -          | <sup>8</sup>  |
| 2005 John Deere Grader 672D                          | 230,000                         | 15                  | -          | -         | 266,633    | -          | -          | <sup>9</sup>  |
| 2006 Diamond mower attachment                        | 10,000                          | 12                  | 10,927     | -         | -          | -          | -          |               |
| 2012 Tenco Plow Reversible one way, 11ft             | 13,000                          | 12                  | -          | -         | -          | -          | -          |               |
| 2015 Everest Vortex plow 11 ft. plow                 | 10,000                          | 12                  | -          | -         | -          | -          | -          |               |
| 2009 Tenco plow 11ft one way plow                    | 10,000                          | 12                  | -          | -         | -          | 11,941     | -          |               |
| 2008 Housatonic plow 10 foot plow                    | 10,000                          | 12                  | -          | -         | 11,593     | -          | -          |               |
| 2000 Champion Plow 11 foot                           | 10,000                          | 15                  | -          | -         | -          | -          | -          |               |
| 2005 York Rake                                       | 10,000                          | 20                  | -          | -         | -          | -          | -          |               |
| 2010 Steam Cleaner                                   | 5,000                           | 15                  | -          | -         | -          | -          | -          |               |
| 2018 Excavator with Trailer                          | 200,000                         | 12                  | 218,545    | -         | -          | -          | -          | <sup>10</sup> |
| Misc.  | 10,000                          | 10                  | 10,000     | 10,000    | 10,000     | 10,000     | 10,000     |               |
| Total Equipment                                      |                                 |                     | \$ 294,109 | \$ 10,000 | \$ 288,226 | \$ 390,903 | \$ 243,676 |               |
| Less Trade-in Allowance/Salvage Value                |                                 |                     | (24,000)   | 0         | (36,000)   | (25,350)   | (51,000)   |               |
| Total Equipment Expenditures                         |                                 |                     | \$ 270,109 | \$ 10,000 | \$ 252,226 | \$ 365,553 | \$ 192,676 |               |

**TABLE 2 Notes/Assumptions**

- Assumes that new equipment is purchased in all cases. Replacement costs are estimates for planning purposes.
- The useful life estimates shown here can be achieved. These are all rough estimates and it is likely that certain equipment will either wear out quicker or last longer than these estimates.
- Trade-in allowances are estimated at 15% of original purchase price. It is recognized that some equipment may be worth very next to nothing at the end of

**TABLE 2 and TABLE 3 Notes/Assumptions**

- a. Assumes that new equipment is purchased in all cases. Replacement costs are estimates for planning purposes.
  - b. The useful life estimates shown here can be achieved. These are all rough estimates and it is likely that certain equipment will either wear out quicker or last longer than these estimates.
  - c. Trade-in allowances are estimated at 15% of original purchase price. It is recognized that some equipment may be worth very next to nothing at the end of its useful life (such as a plow which may be scrapped) and other equipment may be worth more than 15%.
  - d. This assumes that the current backhoe with clam bucket will be replaced with an excavator.
  - e. Assumes annual inflation of 3%.
- 
- 1. Based on actual purchase price of 2015 truck.
  - 2. Based on actual purchase price of 2014 truck.
  - 3. Assumes that this is replaced in FY16 and would not be due for replacement again until FY23.
  - 4. Based on actual purchase price of 2015 truck.
  - 5. Assumes that this backup truck is not replaced.
  - 6. Assumes that this is replaced with 2018 Excavator with Trailer, not another backhoe.
  - 7. Estimated 2015 replacement cost of \$50,000.
  - 8. Estimated 2015 replacement cost of \$150,000.
  - 9. Estimated 2015 replacement cost of \$230,000.
  - 10. Estimated 2015 cost of \$200,000. Town does not currently own an excavator. This is a decision the town will have to make. The cost of the excavator can vary widely and this should be carefully considered to ensure the equipment fits the need (tracks vs. wheels, size, make and model, new vs. used, etc.) The storm water plan that is developed to comply with Act 64 may play a part in this decision.

# EXHIBIT A - MONARCH RD





## EXHIBIT B - DARREL DRIVE





# EXHIBIT C - BELNAP BROOK RD





# EXHIBIT D FRY & MOSES RD

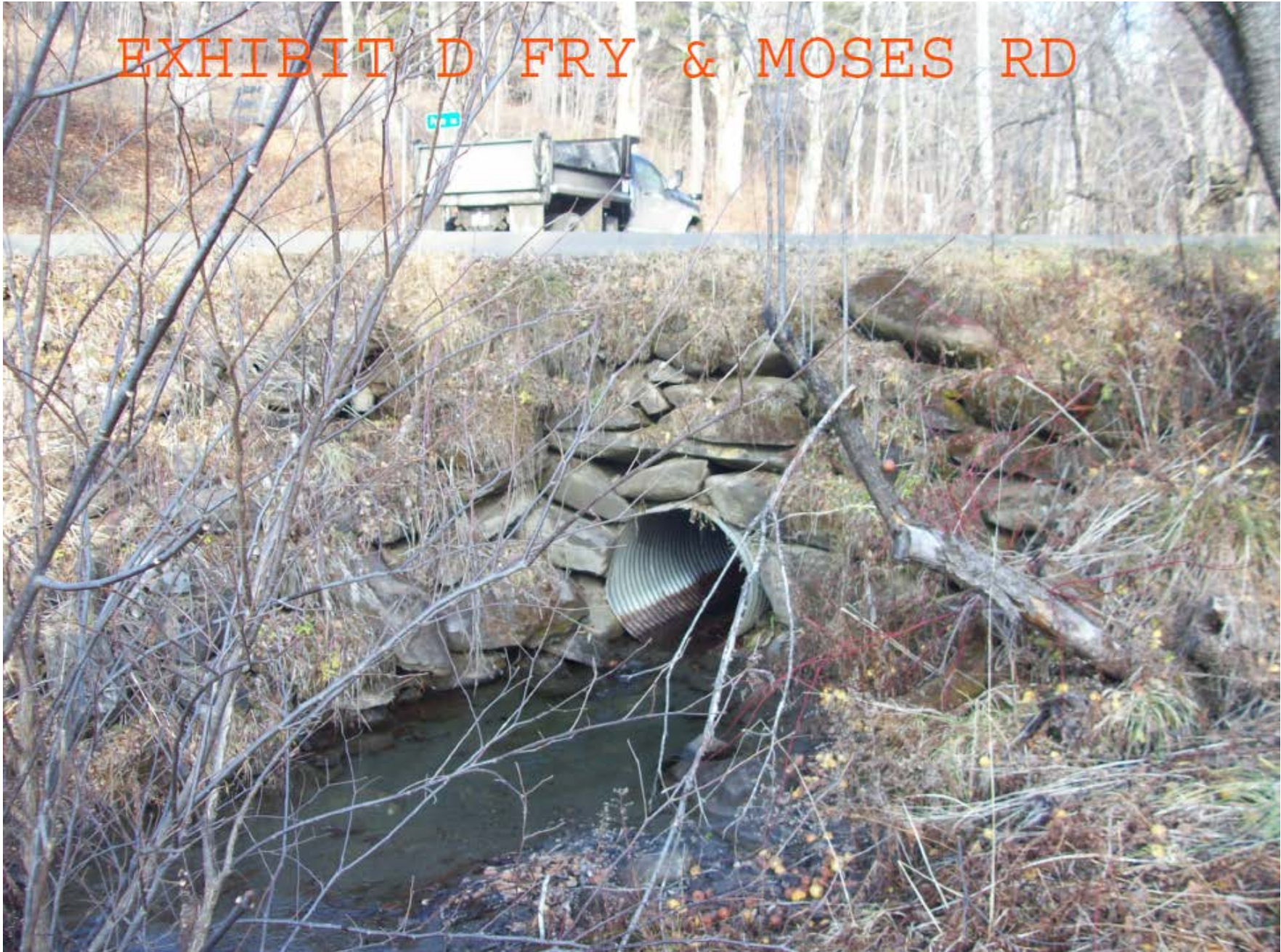




EXHIBIT E - STRAFFORD, HOYT,  
TUTTLE RD





# EXHIBIT F - TOWN GARAGE ROOF





## EXHIBIT G - VTRANS ACT 64 PAMPHLET

### DEC Municipal Roadway General Permit Timeline



## Vermont's Clean Water Act and Municipal Transportation



How Act 64, the 2015 law to improve water quality, will affect municipal roadways

### Contact Information

#### DEC Municipal Roads General Permit

*Regulatory process and requirement questions*

Jim Ryan, DEC, [jim.ryan@vermont.gov](mailto:jim.ryan@vermont.gov), 802-476-0132

#### Vermont Better Back Roads

*General information and application instructions*

Alan May, VTrans Municipal Assistance Bureau, [alan.may@vermont.gov](mailto:alan.may@vermont.gov), 802-828-6502

#### Transportation Alternatives Program

Scott Robertson, VTrans Municipal Assistance Bureau, [scott.robertson@vermont.gov](mailto:scott.robertson@vermont.gov), 802-828-5799

#### VTrans District Garages

[vtransoperations.vermont.gov/maintenance\\_districts](http://vtransoperations.vermont.gov/maintenance_districts)

#### Regional Planning Commissions

<http://www.vapda.org/>



## ACT 64 AND TRANSPORTATION

### Cap on phosphorous levels in Lake Champlain

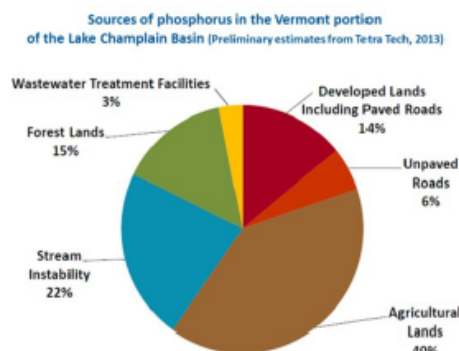
The Environmental Protection Agency has developed a Total Maximum Daily Load (TDML) that sets a cap on the amount of phosphorous that is allowed to enter Lake Champlain. Excess phosphorous is a main contributor to blue-green algae blooms that impair the lake's water quality.

*Pictured: Blue-green algae bloom in Lake Champlain*



### Transportation infrastructure and phosphorous

Developed lands, wastewater treatment facilities, agriculture, unstable stream banks, and forestland all contribute to phosphorous loading. State and municipal roadways and other transportation infrastructure constitute a considerable portion of pollution from developed lands.



### Act 64 and municipal roads

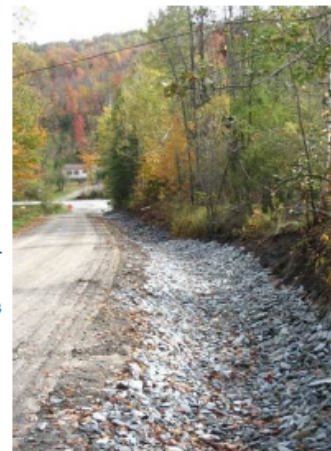
In response to the TDML phosphorous loading allocations, the Vermont legislature passed Act 64, the Vermont Clean Water Initiative, which creates a new permit process for municipalities aimed at addressing stormwater run-off from roadways, both paved and unpaved. The Vermont Department of Conservation (DEC) and VTrans are developing new financial and technical assistance programs to aid municipalities in their efforts to comply with this new mandate.

## VTRANS: LENDING A HAND TO MUNICIPALITIES

### DEC Municipal Roads General Permit

Under the DEC Municipal Roads General Permit (DEC MRGP), municipalities must implement a customized, multi-year municipal stormwater management plan. Strategies may include:

- inventorying roadways and identifying connections to surface waters;
- implementing solutions such as stone-lined and U-shaped ditches, turnouts, check dams, road crowning, and grass-lined drainage ditches;
- upgrading drainage culverts and stabilizing culvert outlets where erosion is present.



*Pictured: Stone-lined ditch*

### Technical and financial assistance from VTrans and DEC

VTrans, DEC scientists and regulators, and regional planning commissions will be available to help municipalities understand the requirements and implement their stormwater management plans.

VTrans will continue to provide funding and technical assistance through the Municipal Mitigation Grant Program, which includes the VT Better Back Roads Program, and the Transportation Alternatives Program—all growing sources of funding for developing and implementing municipal stormwater plans. Managing stormwater protects roadways from deterioration and makes our natural and built environment more resilient to future flood events, thus saving taxpayer dollars.

Once the permit is in effect, municipalities will be given a 20-year implementation schedule that is prioritized based on the greatest water quality benefit and the road stormwater management plan. VTrans Regional Maintenance Districts will be available to help provide direct technical assistance to municipalities. The VT Local Roads Program will provide training and other resources starting in 2016.