

## **Conservation Reserve Fund Application**

2020-04-14 *updated* 2020-05-11

### Applicant:

Cross Vermont Trail Association

### Applicant Contact:

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Project: Johnnie Brook Road Trail, and Farr Farm, 10-31-2019 storm impact repair and improvements to be sustainable and accommodate future storms.

### **Updates and comments response to 4/14/20 conservation fund application.**

Thank you to the Conservation Commission for discussing CVTA's 4/14/20 project proposal during two different meetings in April – I'm sorry I was not able to speak with you either of those times, but appreciate the chance to talk with you for the first time on 5/12/20. Based on feedback and questions sent to me, though, I wanted to provide some additional information ahead of the meeting to clarify and focus the project proposal, in hopes of making our 5/12/20 meeting as efficient as possible.

**The bottom line is that the purpose of this project is to complete the "reboot" of Johnnie Brook Trail. The reboot was started in 2016 and can be finished this coming June with your help. Completing the reboot will set up the trail to be open and stable, with routine care and maintenance of course, for the next 10 – 15 years.**

The ongoing reboot has two aspects.

- First, build the next generation of trail structures, as the original structures from the 2000s have simply reached end of useful life (lumber has a 10 – 20 functional life in structures like these, gravel placed on the trail in mid-oughts has over the years dissipated, etc.)
- Second, incorporate in the rebuilt structures lessons learned, from the observed impacts of current level of use, and of large storms most recently 10/31/2019 storm.

### Recapping the work done 2016 – 2019:

The reboot has been underway since 2016, lead by CVTA. The Commission requested a more detailed breakdown of work done and costs contributed.

*(Here are the records I have quick access to, more detailed information especially on in-kind contributions would be more time to unearth records of – I assume this gives you the general sense you are looking for.)*

- **Spring 2016, Johnnie Brook Bridge, all new decking, rails, bench, and north/west approach ramp.** Cash cost of materials: \$1,808. Labor hours: CVTA staff 112, volunteer 437.
- **Summer 2016, reconstruct treadway bench, ditching, french drains, gravel surface, about 1000 feet long, in the area between the "dogleg culvert" and the main Johnnie Brook Bridge.** Cash cost of materials: \$475. Gravel from Richmond Highway: 3 loads. Labor hours: CVTA staff 136, Americorps 40, volunteer (folks helped, I didn't log hours). Machine operating hours (small loader) (estimated, not logged): 40.
- **Spring 2017, reconstruct entrance to trail from portion of road used as driveway, which has been disrupted by driveway reconstruction, and reestablish ditching and gravel surface on about 250 feet of trail.** Gravel from Richmond Highway: 1 load. Labor hours: CVTA staff 32, Americorps 128. Machine operating hours (small loader) (estimated, not logged): 20.
- **Fall 2018, build new 44' ramp approach board walk to south/east side of Johnnie Brook Bridge (which we now know was too short).** Cash cost of materials: \$3,271 (of which \$1000 from Conservation Fund and \$400 from Trail Committee.) Gravel from Richmond Highway: 1 load (to build up to the level of the boardwalk, which we now know is the wrong method, need to just make boardwalk longer.) Labor hours: CVTA staff 120, volunteer 31. Machine operating hours (small loader) (estimated, not logged): 20.
- **Fall 2018, complete rebuild of "turnpiking" north/west of Johnnie Brook bridge, at a location where water drains across the trail from uphill, new ditching, new culverts, gravel surface, about 100 feet long.** Cash cost of materials: \$125. Gravel from Richmond Highway: 1 load. Labor hours: CVTA staff 80. Machine operating hours (small loader) (estimated, not logged): 40.
- **Spring 2019, extend the Johnnie Brook bridge south/east approach ramp an additional 8 feet (still too short).** Cash cost of materials: \$365. Labor hours: CVTA staff 24, Americorps 16.
- **Summer 2019, all new decking and toe rails for the "dog leg boardwalk" (175 feet long) and all new geotextile and gravel surface for trail between boardwalk and the climb up to Huntington Rd (about 300' – we actually ran out of gravel right before the end, there is still more to do.)** Cash cost of materials: \$1,400. Gravel from Richmond Highway: 2 loads. Labor hours: CVTA staff 40, Americorps 16, volunteer 20. Machine operating hours (small loader) (estimated, not logged): 8.

In addition, CVTA is committed to contributing to annual maintenance of the trail, as described in the 4/14/20 submittal. Routine annual maintenance consists of at a minimum two site visits per year, early in the summer and later in the summer, involving a minimum annual total of 2-4 person days of labor. In addition, it is plain that some trail users and neighbors do periodic maintenance on the trail, such as mowing, but those hours are not logged by CVTA.

Looking Forward to finishing the reboot June 2020:

The remaining jobs are:

- Complete the approach ramp boardwalk at Johnnie Brook bridge. It simply isn't long enough. Because it is too short, an earthen ramp is required to match the grade at the end

of the boardwalk, and this earthen ramp washes away during regular highwater. Making boardwalk longer so that there is no "earthen ramp" required is the solution.

- Salvage and reassemble the "dogleg boardwalk". Rebuild with much more robust sills and anchors so that if future flooding (such as in 2011) water can inundate over the low boardwalk and then recede, without lifting and floating away the boardwalk.
- The culvert at the west/north end of the "dogleg" – in the long term the need is to perform annual routine cleaning of debris that may start to build up (this was done in the past, but not in the last few years, obviously a mistake we all regret). CVTA now commits to doing this annual cleaning. The immediate need is to rent machinery to clear the accumulated debris blocking the culvert, and to dig out the sand and gravel that built up in the stream bed behind the blockage, so that the brook may resume flow through the culvert.
- Plant trees along side the trail, in the area of the two boardwalks, on the "upstream" side of the boardwalks facing the oncoming water, with the intention that as they mature, trees will stabilize soil during routine annual highwater, will calm flood waters, and will filter out large debris that may be floating in floodwaters.
- Finish the last of the treadway rebuild – placing gravel in muddy places to promote the use of the trail by users regardless of ability and for longer season.

HOW TO finish the reboot June 2020:

Ultimately, I am looking to have a conversation with all potential project partners to look at ways we can "put together the jig saw puzzle pieces" and get this work done.

More specifically, here is a version of the budget and scope of work that I think addressed the Commission's comments on the 4/14/20 proposal. If this budget and scope is funded, we can do the work in June 2020.

Upshot: request to Conservation Fund = \$8,400

Item	Conservation Fund request	CVTA cost share	TOTAL
Direct costs, listed below.	\$5,900	\$500 (black locust boardwalk sills)	\$6,400
Labor (total need estimated at 430 hours)	\$2,500 (to offset a portion of direct cost for labor)	Remainder of cost of labor, which will be composed of mixture CVTA staff, Americorps crew, volunteers; assume a round number value of \$3,000, at 275 hours, valued at minimum wage.	\$5,500
<b>TOTAL</b>	<b>\$8,400</b>	<b>\$3,500</b>	<b>\$11,900</b>

*(Per one of the questions from the committee, happy to do report actual hours logged and direct costs receipts at the conclusion of the work.)*

Scope of work and line item expenses:

Extending Johnnie Brook Bridge approach ramp another 32 feet, ending flush with ground level.

\* lumber, hardware = \$1,400

- \* half load of stone to stabilize around the piers/posts = \$200
- \* labor = 180 hours
- \* machine to haul in materials, 10 hrs at \$25/hr = \$250

Reinstalling the "dogleg" boardwalk.

- \* lumber for sills and anchors, incidental hardware = \$650
- \* labor = 80 hours

Unblocking the "dogleg" culvert, re-grade and reestablish farm access to hay fields.

- \* excavator rental, one week, flat rate = \$1,350
- \* labor = 80 hours
- \* half load of stone = \$200

Planting trees:

- \* 40 stems = \$200
- \* labor = 10 hours

Completing the surfacing of the remainder of the trail with gravel, to address muddy condition, to increase accessibility for all users.

- \* four loads of 3/4"- gravel = \$1,400
- \* labor = 80 hours
- \* machine to haul gravel, 30 hrs at \$25/hr = \$750

### The elephant in the room:

Looking over the comments from April, it seems to me the elephant in the room can be summarized as "shouldn't there be more study and engineering before we spend any money on the trail" combined with feelings along the lines of "does it really cost anything to build a trail, can't it just be done quickly, without hassle, and for no money?"

Breaking that down:

*1.) Could we just do a quick fix for "no hassle" that doesn't require any funding?*

We could do a quick fix, but the proposal to the Commission is to take this opportunity to complete the longer term upgrade of the trail.

In any case, even the quick fix is still hassle. Everything has a cost, even if you are not the one paying for it – you all know that. I would rather take my limited resources and pool them with yours and do a longer term fix now, rather than do a band aid fix.

*2.) You say that you want to do the longer term fix, but shouldn't we do studies and engineering to be sure that this is really the long term fix?*

Let me change my "long term" phrasing to "medium term". Basically, if you really want to do bigger picture studies and engineering, this is a cheap way to buy time to do that while still having a great trail to enjoy in the meanwhile.

The logic of my proposal is that this work is functional based on the judgment of practical experience and observation of the site. It creates a great value, but at a relatively low cost, and relatively quickly. It is a "bird in the hand". It makes things open and relatively stable, with routine maintenance, for a reasonable time horizon, 10 – 15 years.

But it does not result in any permanent alteration to the land, and it does not result in very long term sunk costs, and so it leaves open and available for the future any future actions people may wish to investigate and pursue. Meaning to say, this buys you the time you would need for larger scale studies if you wish to pursue them. So, for the next 10 – 15 years we have a good trail, made to a good quality specification, and at the end of that time you can be ready to do whatever future action you may desire.

Other questions from April feedback (questions are paraphrased):

Q: Why the Conservation Fund? Why not Trail Committee or Highways paying for this?

A: It seems Richmond citizens have voted to tax themselves to set up the Conservation Fund to be the way to pay for various priorities, including the sorts of things accomplished by this project. The Trail Committee has only a minimal annual appropriation, presumably enough for annual maintenance and operation but not for larger projects. The highway budget does not typically include work on Class IV roads to any significant degree.

Q: Can't CVTA just ask someone else for the money?

A: We are a charity and operate only with charitable contributions. (We levy no tax, we charge no fees, we sell nothing.) We ask for donations from anyone who is interested in and supportive of the work we do, and may have the ability to contribute. So, yes, we are raising money from other sources, and in addition to that, we are asking for your help too.

Q: Any hard numbers of the use of the trail?

A: There can be. CVTA has developed, with the Central Vermont Regional Planning Commission, a statistically accurate method to count sample of trail use, and then extrapolate from that reliable estimates of total annual use. This method is compliant with national standards, and with VTrans bike/ped counting protocols (meaning our counts can be compared apples to apples with counts from other locations.) We lead a workshop on this counting method at the last state wide Walking and Biking Summit sponsored by VTrans. The initial count takes about a week of work. We could do this on Johnnie Brook Trail if the Commission would like.

Q: \$200 doesn't buy very many trees.

A: Per Vt Dept Fish and Wildlife riparian buffer planting guide, required stem density is 400/acre. Acreage to be planted along side boardwalks = 0.1 acre = 40 stems. Spring 2020 Intervale Conservation Nursery catalogue shows average cost of \$5/stem;  $40 * 5 = \$200$ .