



# TOWN OF BROWNINGTON

622 Schoolhouse Road  
Brownington, Vermont 05860

December 1, 2022

Scott Robertson, P.E.  
Municipal Assistance Section – Proj. Mgr.  
Vermont Agency of Transportation  
Barre City Place | 219 North Main Street -4<sup>th</sup> fl.  
Barre, VT 05641

RE: VTrans Fall 2022 Transportation Alternatives (TA) Grant

Dear Mr. Scott Robertson,

The Town of Brownington is applying for this grant to mitigate the enormous amount of sediment flowing into the Willoughby River, in turn saving a vital connector route to our village center, school, town office and town garage. The Brownington Branch runs alongside the Center Road and empties into the Willoughby River which continues to run parallel to the road until it crosses at the town line. The project consists of two locations, hereinafter to be referred to as the North Site and the South Site. The North Site is being affected by the Brownington Branch and the South Site is being affected by the Willoughby River. The Willoughby River and Brownington Branch combine approximately 300 yards upstream of the South Site.

The Town has previously received grants for this project from the 2019, 2020, and 2021 Environmental Mitigation Grant Program (#CA0558). Since that time, we have procured a Municipal Project Manager to assist us with project development, a design consultant to develop the necessary plans and specifications, acquired the necessary permits, ROW acquisitions from landowners, and awarded the construction bid. The construction of the project began in July 2022. We had raised our portion of the project. However, the bids for the total project cost came in much higher than anticipated due to the current costs of fuel, materials, labor and overall inflation. This left us with a significant deficit in funds.

Brownington is a very small town with only 1,040 people, 417 households, a median income of \$49,150, and a small family owned store. The only way to raise money is to raise taxes, which taxpayers cannot afford. We have our match but will have to finance the rest without additional grant funds. Our hope is through the VTrans Fall Transportation Alternatives (TA) Grant , the project can be completed without additional burden to our tax payers.

The Town of Brownington would like to thank you for your consideration and help correcting the issues that face our local fish habitat and the major connector route to the surrounding area.

Sincerely,

Beverly White  
Selectboard Chair  
Town of Brownington

FROM THE DESK OF

# David Templeman

State Representative-Elect Orleans-3

November 11, 2022

Scott Robertson, P.E.  
Municipal Assistance  
Section - Project Mgr.  
Vermont Agency of Transportation  
Barre City Place | 219 N. Main St. -4th floor  
Barre, VT 05641

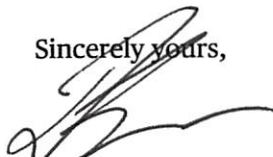
Dear Mr. Robertson,

On behalf of the residents of Brownington, I write you concerning the Brownington Selectboard's efforts to secure the VTrans Fall 2022 Transportation Alternatives (TA) Grant. The township proceeded with the Center Road Project(s), the project for which this Grant is being requested, with the intention of preserving our waterways, as stewards of the land, and did so with a belief that the costs were manageable. No one could have foreseen the cost overruns that Brownington has now been saddled with.

As a resident of Brownington, and representative-elect of our district, I must emphasize the conundrum in which we find ourselves. We simply can not afford these costs overruns as a village, especially if it means an additional interest rate on top of the costs.

Our community is proud of what we have accomplished. We have a strong community, built upon working class people and farmers laboring hard to continue. Already we are deeply burdened by inflationary pressures, the down turn in agriculture, and the opioid crisis. Having to get a loan so we may pay back these overruns, might be enough to break the community. Please give us, Brownington, serious consideration for this grant.

Sincerely yours,



David Templeman



## VTrans Fall 2022 Transportation Alternatives (TA) Grant Application

Thoroughly read the *Vermont Transportation Alternatives Fall 2022 Application Guide* before you begin your application. It includes important program information and step-by-step instructions. Pay particular attention to the application process requirements. **Applications are due in hand or by e-mail by December 14, 2022.** Please e-mail the completed application to:

[Scott.robertson@vermont.gov](mailto:Scott.robertson@vermont.gov)

Brownington Center Road  
(Project Name/Title)

802-754-8401  
(Phone)

Valerie Faust  
(Municipality contact person responsible for the management of this project)

browningtontc@comcast.net  
(e-mail address)

Brownington  
(Town)

\$ 148,348.80  
Amount of **Federal Funds requested** (no more than 80% of the project cost estimate).

05860  
(Zip Code)

\$37,087.20  
Amount of Local Match. Example:  
Federal Award = \$300,000 (80% of total)  
Local Match = \$75,000 (20% of total)  
Total Project Cost = \$375,000 (100% of the total)

622 Schoolhouse Road  
(Mailing Address)

County: Orleans

Town/Village/City: Brownington

Specific location, street, or road: Brownington Center Road

Regional Planning Commission: NVDA

If a linear project, what is the length in feet? 725 feet of roadway, 380 feet of streambank

Is the project on or intersecting to a State maintained highway? Yes  No

- *Note: If yes, be sure to include documentation that you have notified the VTrans District Transportation Administrator of the intent to apply for TA funding and have provided them with a brief (one paragraph) description of the proposed project.*

Project type being applied for:  Scoping  Design/Construction

The municipality understands that a typical construction project utilizing Transportation Alternatives Program funds will take roughly three years (min.) in the Design and ROW phases prior to going to construction (as pointed out in the TA Program Application Guide)? Yes  No

Does this project have a previously completed scoping or feasibility study? Yes  No

**Note:**

Attach a map(s) of the project area and clearly show the limits of the project as well as surrounding benefits from the proposed improvement. If the project is within or adjacent to a designated downtown, village or growth center, clearly indicate the relationship of the proposed project to the boundary of the designated area. Color photos of the area are also recommended.

**Fiscal Information:**

Accounting System Automated  Manual  Combination

SAM Unique Identifier # MSF4VCWJ8AV5

Fiscal Year End Month December

**Property Ownership:**

If the proposed project is on private property that will need to be acquired by the Municipality through purchase, easement, or eminent domain (includes temporary construction rights) in accordance with the "Uniform Act", then the municipality is committed to exercising its right of *eminent domain* to acquire the rights to construct the project if necessary. Yes  No

**Funding:**

Does this project already have existing funding? If so, please describe. Yes  No

- We received NEPA clearance on 3/4/2021 and the ROW clearance on 3/2/2022. We have applied and awarded three Environmental Mitigation Grants. In 2019 we received \$465,696, in 2020 we received \$360,000, in 2021 we received \$147,200 for a total of \$972,896.00. We received the Wetland Permit #2021-179 on 9/23/21. We received ROW from Cooper and Lafoe February 28, 2022. With the Town's match we had enough to complete both projects but the bids came in much higher than originally estimated due to diesel, materials, and inflation. Brownington is a very small town with only 1,040 people, 417 households, a median income of \$49,150, and a small family owned store. The only way to raise money is to raise taxes, which taxpayers cannot afford. We have our match but will have to finance the rest without additional grant funds. Our hope is through the VTrans Fall Transportation Alternatives (TA) Grant, the project can be completed without additional burden to the tax payers.

Will you accept an award less than you applied for? Yes  No

- If yes, please indicate whether local funds will be used to make up the shortfall, or if the project scope will be reduced. If the project scope is to be reduced, describe what part of the project (please be specific) you would accept partial funding.



Construction is substantially complete, but we are short of funds because of the unanticipated cost of the project due to inflation and cost of materials , etc. The bids came in around \$370,000 more than projected. If not awarded further grant funds, then the Town will have to use local funds and borrow the remaining amount needed.

**A support letter from the governing body of the applicant municipality or organization and an acknowledgement and source of the local match and commitment to future maintenance responsibility for construction projects is required (must be dated within 1 year of the application). Is a letter of support attached?**

Yes  No

**Regional Planning Commission Letter of Support:**

In order to apply, the project must have a letter of support from the regional planning commission. Is a letter of support attached?

Yes  No

**Application Scoring Criteria:**

- 1. Please give a brief description of the project (be sure to indicate the primary facility type being applied for and be concise). (10 points max.)**

The project we are applying for consists of two locations, hereinafter to be referred to as North Site or South Site. The North Site is being affected by the Brownington Branch and the South Site is being affected by the Willoughby River. The Willoughby River and Brownington Branch combine approximately 300 yards before the South Site. On the North site we will be armoring the river channel with large stone to minimize the undermining of the river bank. We will then stabilize the bank by benching the bank then adding stone. The benches will be approximately 10 feet deep into the bank then the stone will be added to these benches to slow the surface water from eroding the bank and to stabilize the bank from shifting any further. The South Site is somewhat larger and will require a different process. We will again armor the channel with large stone to minimize the undermining but will not be benching from the bottom. The soils toward the bottom of the slope are very dense clay. We will leave these in place. As you continue up the slope the soil changes to a better draining type, where the two different soil types merge we will make a cut approximately 3 feet into the dense material and add underdrain. At present, the water gets into the better draining soil and sits on top of the dense soil and pushes it down. We feel alleviating the trapped water will mitigate any further erosion. Above the dense soil we will institute the benching method to stabilize the roadway.

- 2. What is the feasibility of this project? Feasibility (or Scoping) study applications will not be scored on this criterion. Also, please describe the extent of project development completed to date. (10 points max.)**

The project was put out to bid and the bid was awarded to J.P. Sicard, Inc. The actual physical construction work started on July 18, 2022. The construction of the North and South Sites are now substantially complete. We are requesting the additional funds to pay for the rest of our contractual obligation.

**3. Does this project address a need identified in a local or regional planning document? If so, please describe. (5 points max.)**

The Town first realized that we had a slope stabilization problem on the South Site in 2006. After consulting with VTrans District 9, they suggested that reinforcing the slope with stone would help solve the problem, assuming it was a surface erosion issue. Subsurface drainage was not considered at that time. The Town’s Road Commissioner constructed an access road part way down the slope, stone was dumped from the road and then spread on the slope with an excavator. It held for some time, slowing the embankment’s movement, but because the foundational problem was not addressed, it continued to move over time. Fine material migrated down the slope with the subsurface water, stormwater washed open surface material, and the stream eroded away at the toe of the slope. All of this adding sediment, and the contaminants that move with it, to the river, affecting the aquatic life and the stabilization of the road.

The last Town Plan was adopted in 2015 before the Center Road became an issue. The Planning Commission is working on a new Town Plan but it isn’t due until September 2023 and the project will be completed before then. The need was identified and conceptualized in 2018. Then the Select Board went through the MAB local project development process to get local support.

**4. Does this project benefit a State Designated Center per the link below (i.e., downtowns, villages, or neighborhood growth centers recognized by the Vermont Department of Economic, Housing and Community Development? (10 Points Max.)**

<http://maps.vermont.gov/ACCD/PlanningAtlas/index.html?viewer=PlanningAtlas>

This project is not connected to a State Designated Center.

**5. Provide a project cost estimate below (project costs below include both federal dollars and local dollars). Projects will be scored based on whether the cost appears realistic for the size and scope of the project. For scoping studies, use PE and Local Project Management lines only.**

**Note: If you are applying for additional funds for an existing project, show the amount being requested for this grant in the PE, ROW, Construction, Construction Engineering, and Municipal Project Management rows below. Also, be clear regarding total project cost and other funding amounts and sources in the additional funding comments box below. (10 points max.)**

Preliminary Engineering (PE) (Engineering, Surveying, Permitting)	\$ 0 _____
Right-of-way / Acquisition (ROW) (appraisals, land acquisition and legal fees)	\$ 0 _____
Construction	

<i>(construction costs with reasonable contingency)</i>	<u>\$ 185,436</u>
<b>Construction Engineering</b> <i>(cost to provide inspection during construction)</i>	<u>\$ 0</u>
<b>Municipal Project Management Costs</b> <i>(minimum of 10% of total PE, ROW and Construction Phases).</i>	<u>\$ 0</u>
<b>Total Project Cost</b>	<u>\$185,436</u>

**Addition Funding Comments: (ex. Total and additional funding for existing projects)**

Total project cost, including Municipal Project Management (\$56,000), Design and Permitting (\$145,600), Right of Way (\$4,956), Construction (\$1,125,000) and Construction Inspection (\$70,000), is \$1,401,556. Previous grants and their 20% local match provided funding for all but \$185,436 of the total cost.

**See category C. Environmental Mitigation Activity Related to Stormwater and Highways on next page:**

**C. Environmental Mitigation Activity Related to Stormwater and Highways**

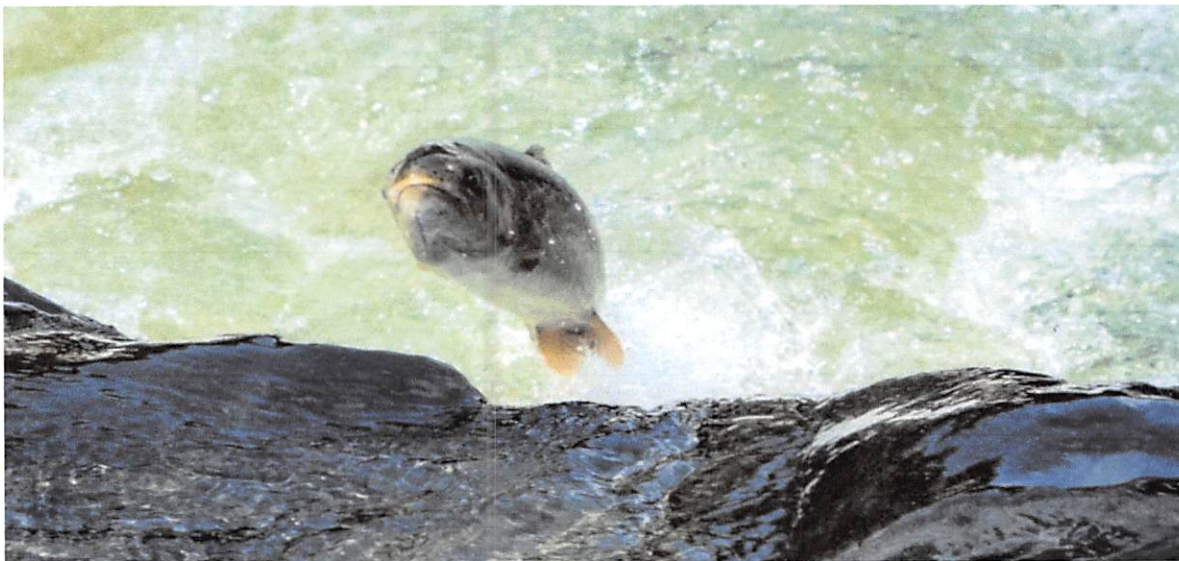
i. Please describe how this application provides environmental mitigation relating to stormwater and highways. **(10 points max.)**

The Center Road is a class-2 road and a main corridor in and out of town. The instability of the bank was evident by sight as the guard rails were hanging in mid-air and there was a dip in the road from undermining. The road was slowly disappearing. With the threat of the eventual loss of the road, coupled with the rise in construction costs due to inflation with no relief in sight, we had to move forward with the project. Had we chose to abandon the project, we would have had to pay back all the federal funds that had been expended on project management, design, permits, easements etc.,(approximately \$150,000), and still have a road that was disappearing. We, as a board, felt that the economy was not going to get any better in the near future and the risk of construction costs continuing to increase were too great, so we moved forward with the construction.

This project also had tremendous effect preventing sediment from polluting the spawning beds downstream and the Willoughby Falls. Here is an excerpt from ANR's website:

Montpelier, Vermont - One of Vermont's premier wildlife watching opportunities is happening right now. The steelhead rainbow trout have started their upstream migration, leaping up waterfalls in a spectacular display of determination on their way to their spawning grounds.

The best place to spot steelhead trout is at the Willoughby Falls just outside of Orleans in Vermont's Northeast Kingdom. Other places to see migrating steelhead trout include the Coventry Falls on the Black River in Coventry and Lewis Creek Falls in North Ferrisburgh, though Willoughby Falls remains the best viewing opportunity.





These projects are located upstream from the Willoughby Falls. With your help we can save the spawning beds for future generations to enjoy! The Willoughby River goes from the stream in Brownington. If we can mitigate a portion of the erosion at the beginning of the Willoughby River, the effects will be felt all the way downstream. By stabilizing the river banks and armoring the channel, we will eliminate sediment from getting to these fish habitats by controlling the erosion along the roadway.

**ii. What information or data is provided to substantiate the current stormwater problem and associated environmental impacts? (10 points max.)**

We have seen the Willoughby River take many shapes and change numerous times over the years. By correcting the issues beginning in Brownington we can take the first step in protecting the spawning beds by reducing the sediment that fills the pools these fish use. As we all know, phosphorus and nitrogen can be deadly for aquatic life and can contribute to an overabundance of aquatic plants and algae production, which typically leads to poor water quality, loss of habitat and unhealthy fish. With farm land adjacent to the road that means that if the riverbanks are not fixed that manure (phosphorus) could run down the streambank and slopes into the river and effect the fish.

**iii. What substantiating data or information is provided to show that the proposed application is an effective and manageable solution to the problem? (10 points max.)**

The town of Brownington met numerous times with Shane Moran of VTrans District 9 and Patrick Ross from ANR to find a reasonable solution. We collaborated and agreed the proposed solution addresses the issues face by the Town of Brownington and the fish in our local rivers and streams.

We have since confirmed the effectiveness of stabilizing the streambank and slopes, halting the continued mitigation of soil into the waterways by using means of stabilization as described in the attached materials.



Beverly White  
Selectboard Chair  
Town of Brownington  
622 Schoolhouse Road  
Brownington, VT 05860

November 18, 2022

Re: Brownington STP MM19(16) - Center Road Slope Stabilization Project  
Project Status and Cost Estimate Update

Dear Beverly,

As requested, below is a brief report on the project's progress and current status, as well as a revised project cost estimate, including Municipal Project Management Services, Design and Permitting Services, Right-of-Way acquisitions, Construction and Construction Inspection.

Project Progress – Milestones

Oct 2018	Project Initiated (initial grant award)
July 2019	Municipal Project Manager contract
Nov 2019	Design Engineering contract
Dec 2019	Project Kickoff Meeting
Mar 2020	Local Concerns Meeting
June 2020	Alternatives Presentation Public Meeting
June 2020	Selected Alternative
Oct 2020	Conceptual Plans and NEPA Documentation submitted
Mar 2021	NEPA (PACE) complete
May 2021	Preliminary Plans complete
July 2021	Draft ROW Plans submitted for VTrans review
July 2021	All permit applications submitted
Aug 2021	Corps of Engineers permit issued
Mar 2022	Construction Stormwater Permit issued
Mar 2022	ROW Clear
Apr 2022	Authorization to Bid
Apr 2022	Bid for Construction
May 2022	Construction Contract Awarded
July 2022	Construction Began
Oct 2022	Construction Substantially Complete

Construction progressed per schedule and was deemed Substantially Complete on October 14, approximately one month prior to the Contract Completion Date of November 15, 2022. Some work remains for the Spring of 2023, primarily related to turf establishment and maintenance of landscape plantings.

Anticipated total project costs are summarized below:

Project Costs

\$56,000	Municipal Project Management
\$145,600	Engineering and Permitting
\$4,956	ROW acquisitions and legal/admin
\$1,125,000	Construction
\$70,000	Construction Engineering
\$1,401,556	Total Project Cost

This overall cost is significantly higher than originally anticipated, primarily due to the higher construction bids being experienced in 2022. We had a good response to the project advertisement, with three bids all relatively close in total, and as you know, the unsafe condition of Center Road in these two locations made it so that the Town could not delay this work any further in the hopes that costs will come down. Thankfully, we made it through construction with no significant surprises, and will complete the project without exceeding the bid amount.

If you have questions regarding any of the above, or require additional information, please let me know.

Sincerely,



Kenneth Robie, PE  
Municipal Project Manager

# CENTER ROAD SLOPE STABILIZATION

## BROWNINGTON STP MM19(16)

### TOWN OF BROWNINGTON

#### COUNTY OF ORLEANS

##### CENTER ROAD (CLASS II TOWN HIGHWAY)

###### PROJECT LOCATION

**SOUTH SITE:** BEGINNING AT A POINT ON CENTER ROAD, APPROXIMATELY 4,100 FEET SOUTH OF THE CENTER ROAD AND SCHOOLHOUSE ROAD INTERSECTION, AND EXTENDING NORTHERLY FOR APPROXIMATELY 375 FEET.

**NORTH SITE:** BEGINNING AT A POINT ON CENTER ROAD, APPROXIMATELY 1,900 FEET SOUTH OF THE CENTER ROAD AND SCHOOLHOUSE ROAD INTERSECTION, AND EXTENDING NORTHERLY FOR APPROXIMATELY 350 FEET.

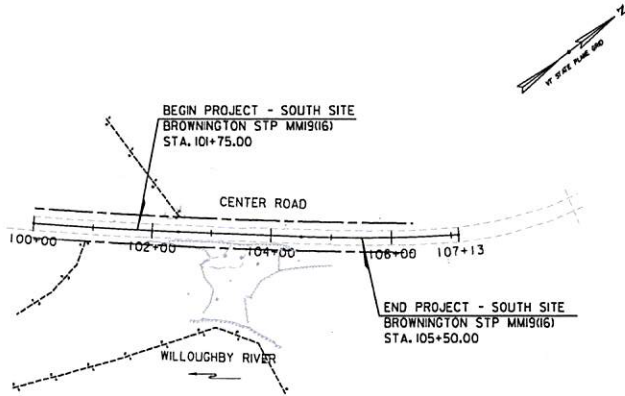
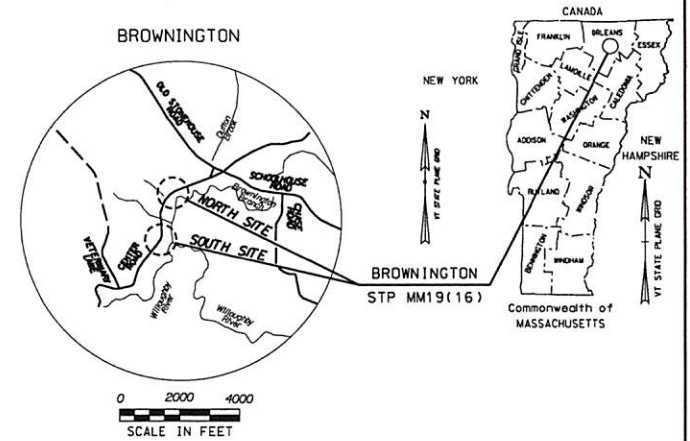
###### PROJECT DESCRIPTION

WORK TO BE PERFORMED UNDER THIS PROJECT INCLUDES SLOPE STABILIZATION, RIVERBANK REINFORCEMENT, UNDERDRAIN INSTALLATION, AND ROADWAY RECONSTRUCTION AT TWO SLOPE FAILURE SITES ALONG CENTER ROAD.

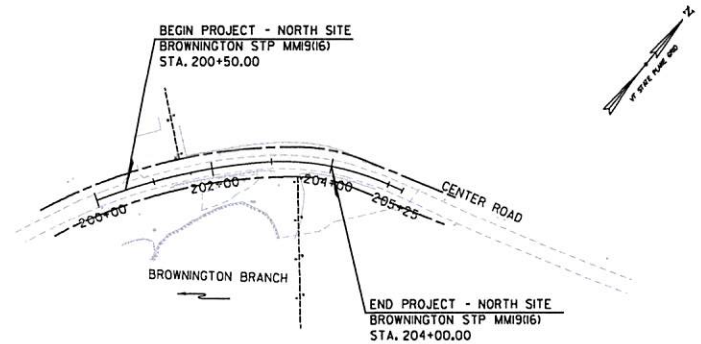
###### PROJECT LENGTH

**SOUTH SITE:** 375 FEET (0.071 MILES)

**NORTH SITE:** 350 FEET (0.066 MILES)



**SOUTH SITE**



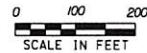
**NORTH SITE**

CONSTRUCTION IS TO BE CARRIED ON IN ACCORDANCE WITH THESE PLANS AND THE STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2008, AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION ON APRIL 13, 2008 FOR USE ON THIS PROJECT, INCLUDING ALL SUBSEQUENT REVISIONS AND SUCH REVISED SPECIFICATIONS AND SPECIAL PROVISIONS AS ARE INCORPORATED IN THESE PLANS.

QUALITY ASSURANCE PROGRAM LEVEL 3

SURVEYED BY : VHB  
SURVEYED DATE : NOVEMBER 2019

DATUM  
VERTICAL : NAVD 1988  
HORIZONTAL : NAD 1983



wsp GOLDER

vhb



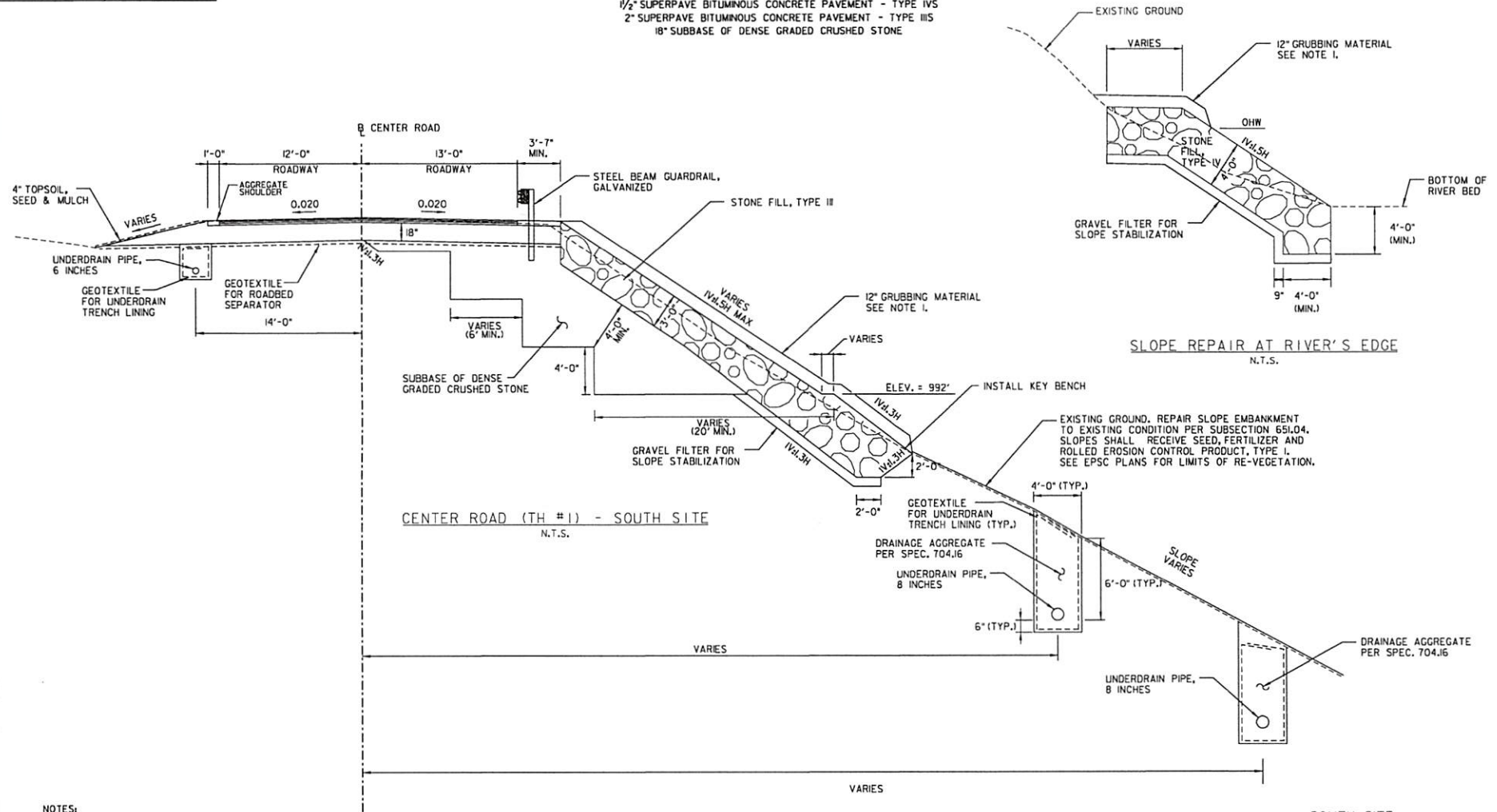
PROJECT MANAGER : D. M. PECK  
PROJECT NAME : BROWNINGTON  
PROJECT NUMBER : STP MM19(16)  
VHB PROJECT NUMBER : 58283.00  
SHEET 1 OF 45 SHEETS



MATERIAL TOLERANCES	
MATERIAL ITEM	THICKNESS TOLERANCE
AGGREGATE SURFACE	± 1/4" (TOTAL THICKNESS)
SUBBASE	± 1"
SAND BORROW	± 1"

# TYPICAL SECTIONS

1 1/2" SUPERPAVE BITUMINOUS CONCRETE PAVEMENT - TYPE IVS  
 1 1/2" SUPERPAVE BITUMINOUS CONCRETE PAVEMENT - TYPE IVS  
 2" SUPERPAVE BITUMINOUS CONCRETE PAVEMENT - TYPE III S  
 18" SUBBASE OF DENSE GRADED CRUSHED STONE



**NOTES:**

- LIMITS OF GRUBBING MATERIAL SHALL EXTEND TO THE ORDINARY HIGH WATER (OHW). THE OHW HAS BEEN PLACED IN THE PLANS AND CROSS SECTIONS FOR REFERENCE. SEED AND ROLLED EROSION CONTROL PRODUCT SHALL BE INSTALLED ALONG WITH GRUBBING MATERIAL.

PROJECT NAME:	BROWNINGTON
PROJECT NUMBER:	STP MM9(16)
FILE NAME:	582831yp.dgn
PROJECT LEADER:	D.M. PECK
DESIGNED BY:	B.M. ROBERTS
TYPICAL SECTIONS SHEET	1 OF 2
PLOT DATE:	3/31/2022
DRAWN BY:	J.S. GINGRAS
CHECKED BY:	D.M. PECK
	SHEET 4 OF 45

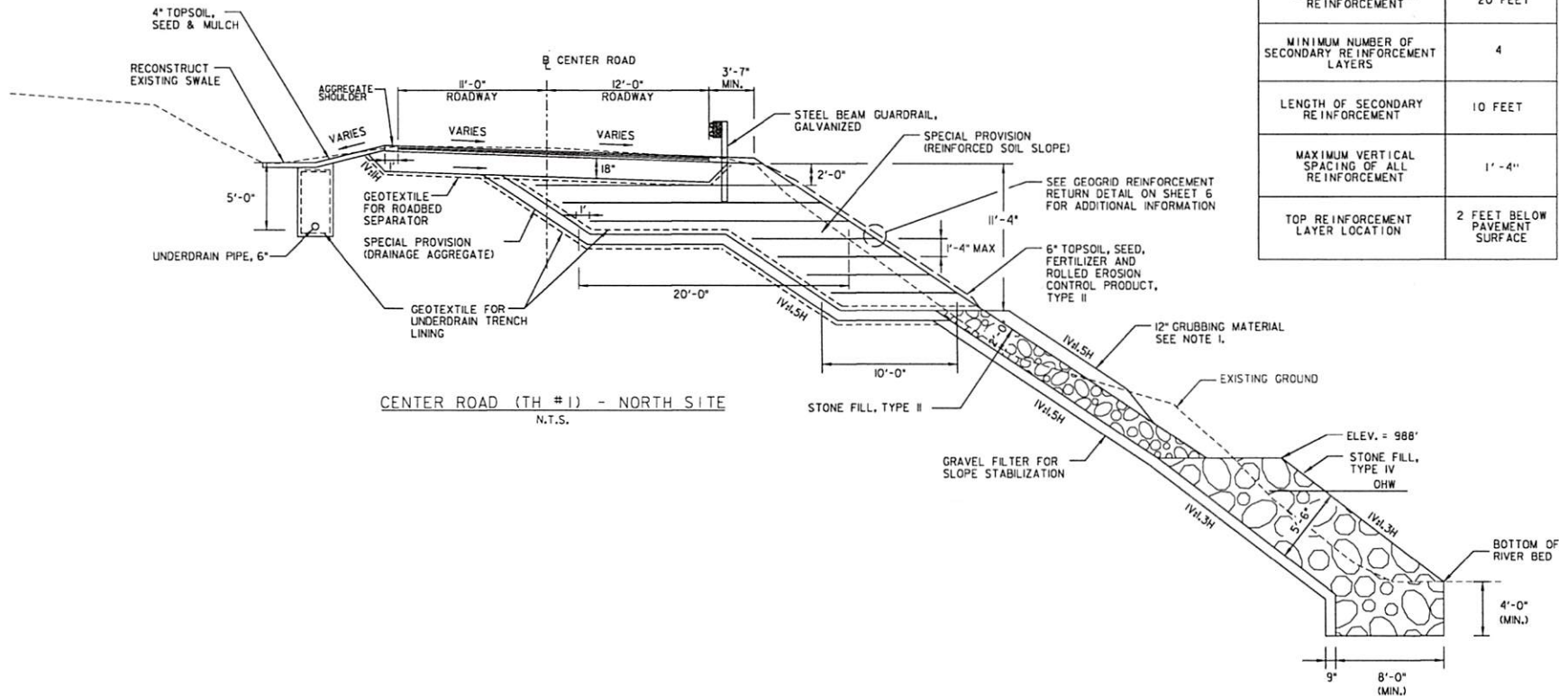


MATERIAL TOLERANCES	
MATERIAL ITEM	THICKNESS TOLERANCE
AGGREGATE SURFACE	± 1/4" (TOTAL THICKNESS)
SUBBASE	± 1"
SAND BORROW	± 1"

# TYPICAL SECTIONS

1 1/2" SUPERPAVE BITUMINOUS CONCRETE PAVEMENT - TYPE IVS  
 1 1/2" SUPERPAVE BITUMINOUS CONCRETE PAVEMENT - TYPE IVS  
 2" SUPERPAVE BITUMINOUS CONCRETE PAVEMENT - TYPE IIS  
 18" SUBBASE OF DENSE GRADED CRUSHED STONE

MINIMUM GEOGRID TENSILE STRENGTH	2500 LB/FT
NUMBER OF PRIMARY REINFORCEMENT LAYERS	3
LENGTH OF PRIMARY REINFORCEMENT	20 FEET
MINIMUM NUMBER OF SECONDARY REINFORCEMENT LAYERS	4
LENGTH OF SECONDARY REINFORCEMENT	10 FEET
MAXIMUM VERTICAL SPACING OF ALL REINFORCEMENT	1' - 4"
TOP REINFORCEMENT LAYER LOCATION	2 FEET BELOW PAVEMENT SURFACE



**NOTES:**

- I. LIMITS OF GRUBBING MATERIAL SHALL EXTEND TO THE ORDINARY HIGH WATER (OHW), THE OHW HAS BEEN PLACED IN THE PLANS AND CROSS SECTIONS FOR REFERENCE, SEED AND ROLLED EROSION CONTROL PRODUCT SHALL BE INSTALLED ALONG WITH GRUBBING MATERIAL

**NORTH SITE**

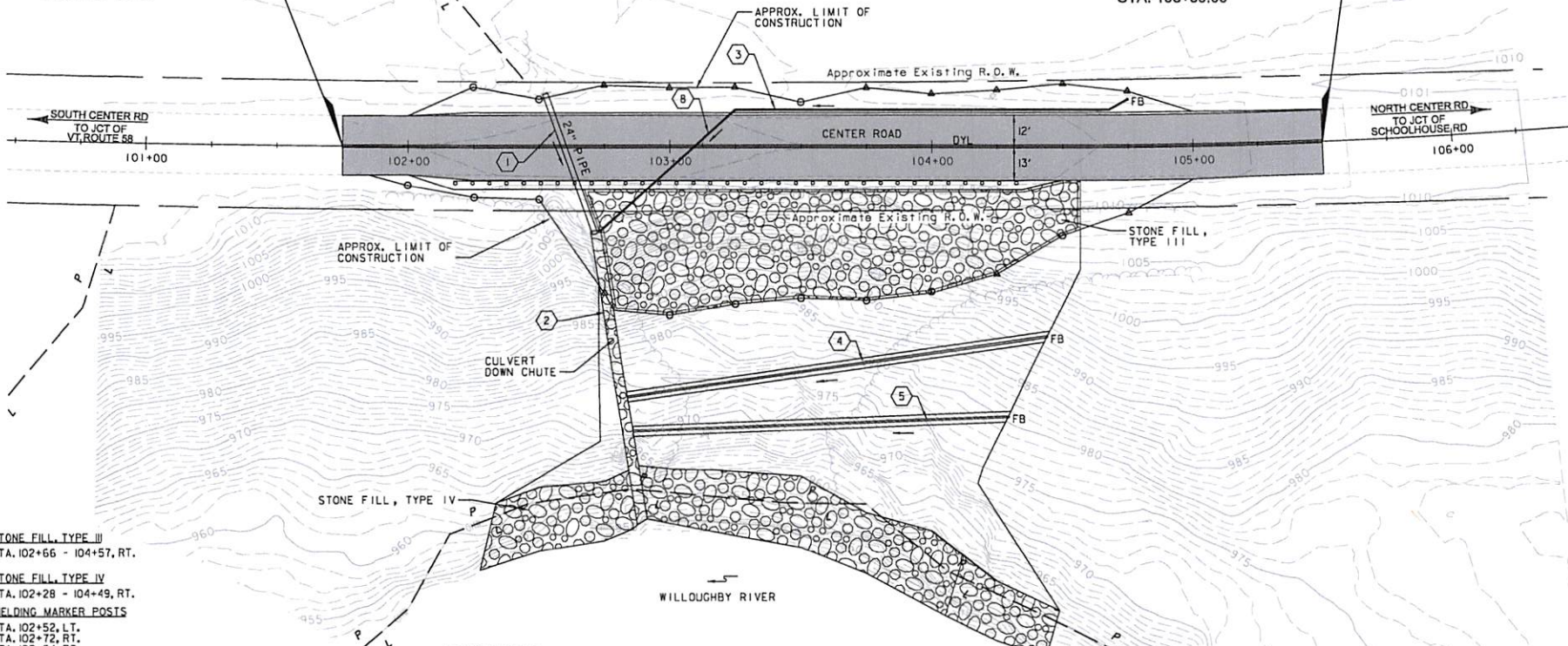
PROJECT NAME:	BROWNINGTON
PROJECT NUMBER:	STP MM19(16)
FILE NAME:	58283.tpd.dgn
PROJECT LEADER:	D.M. PECK
DESIGNED BY:	B.M. ROBERTS
TYPICAL SECTIONS SHEET	2 OF 2
PLOT DATE:	3/31/2022
DRAWN BY:	J.S. GNGRAS
CHECKED BY:	D.M. PECK
SHEET	5 OF 45

wsp GOLDER



BEGIN PROJECT-SOUTH SITE  
BROWNINGTON STP MM19(16)  
STA. 101+75.00

END PROJECT-SOUTH SITE  
BROWNINGTON STP MM19(16)  
STA. 105+50.00



STONE FILL, TYPE III  
STA. 102+66 - 104+57, RT.

STONE FILL, TYPE IV  
STA. 102+28 - 104+49, RT.

YIELDING MARKER POSTS  
STA. 102+52, LT.  
STA. 102+72, RT.  
STA. 102+84, RT.  
STA. 102+86, RT.  
STA. 104+29, RT.  
STA. 104+44, RT.  
STA. 104+75, LT.

4 INCH YELLOW LINE, WATERBORNE PAINT  
STA. 101+75 - 105+50, CL (DYL)

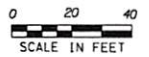
COARSE MILLING, BITUMINOUS PAVEMENT  
STA. 101+75 - 102+25, LT. & RT.  
STA. 105+00 - 105+50, LR. & RT.

STEEL BEAM GUARDRAIL, GALVANIZED  
STA. 102+12.5 - 104+37.5, RT.

ANCHOR FOR STEEL BEAM RAIL  
STA. 102+25, RT. (APPROACH END)  
STA. 104+25, RT. (TRAILING END)

REMOVAL AND DISPOSAL OF GUARDRAIL  
STA. 102+25 - 104+32, RT.

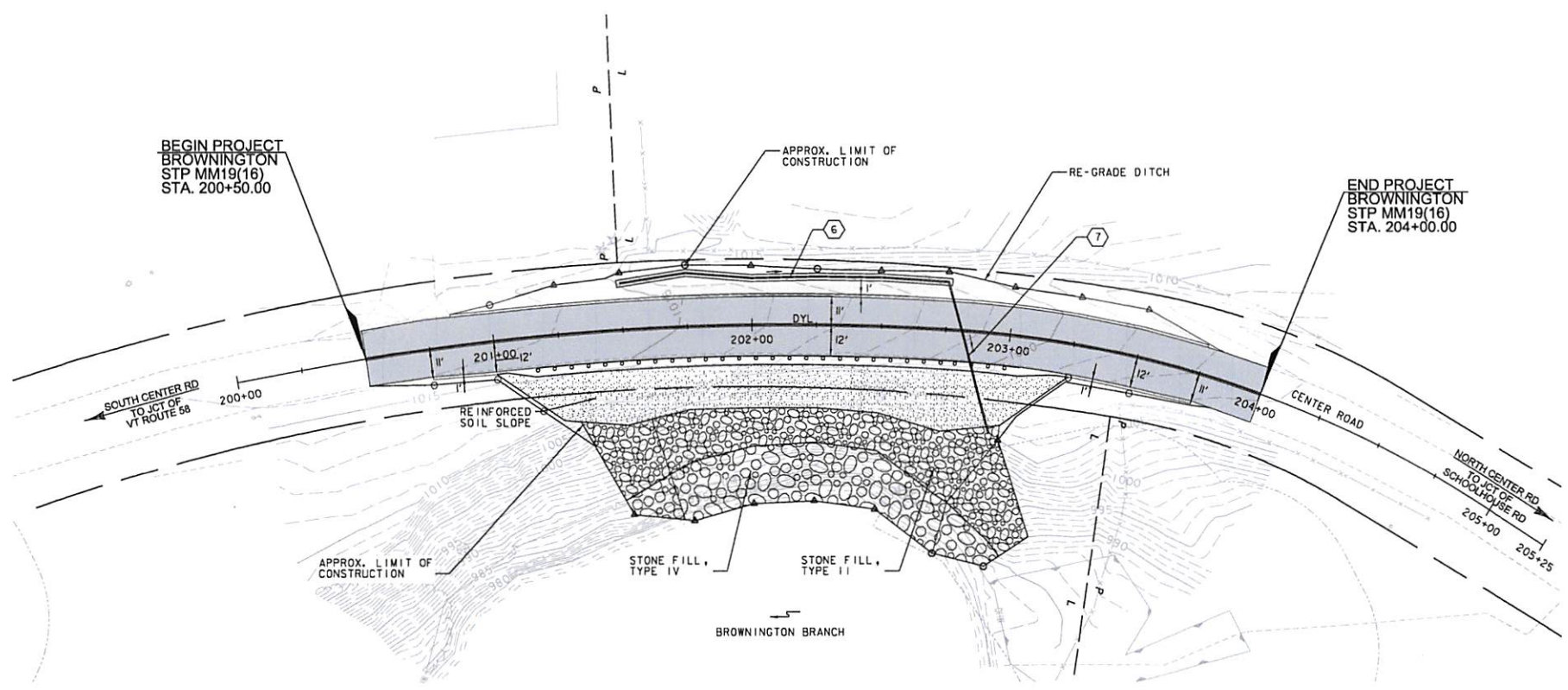
- DRAINAGE NOTES**
- ① STA. 102+52, 20' LT. - 102+72, 33' RT.  
INSTALL 58' LF X 24" CPEP(SL)  
CONST. 24" CPEPS AT INLET, +52, 20' LT.  
24" INV. AT INLET = 1010.00  
CONST. 24" CPEPS AT OUTLET, +72, 33' RT.  
24" INV. AT OUTLET = 1006.15
  - ② STA. 102+72, 32' RT. - 102+88, 143' RT.  
CONST. STONE LINED SWALE  
SEE DETAILS FOR ADD'L INFORMATION
  - ③ STA. 103+25, 14' LT. - 104+75, 18' LT.  
INSTALL 158' LF X 6" UNDERDRAIN  
INSTALL FLUSHING BASIN, +75, 18' LT.  
SEE CROSS SECTIONS FOR ADD'L INFORMATION
  - ④ STA. 102+84, 96' RT. - 104+44, 73' RT.  
INSTALL 162' LF X 8" UNDERDRAIN  
INSTALL FLUSHING BASIN @ INLET, +44, 73' RT.  
8" INV. AT INLET, +84, 96' RT. = 974.50  
8" INV. AT OUTLET, +44, 73' RT. = 986.90
  - ⑤ STA. 102+86, 109' RT. - 104+29, 104' RT.  
INSTALL 80' LF X 8" UNDERDRAIN  
INSTALL FLUSHING BASIN @ INLET, +29, 104' RT.  
8" INV. AT INLET, +86, 09' RT. = 968.40  
8" INV. AT OUTLET, +29, 104' RT. = 974.30
  - ⑥ STA. 102+73, 33' RT. - 103+25, 14' LT.  
INSTALL 70' LF X 6" UNDERDRAIN CARRIER PIPE  
6" INV. AT OUTLET, +73, 33' RT. = 1007.65  
6" INV. AT INLET, +25, 14' LT. = 1008.92



PROJECT NAME:	BROWNINGTON	PLOT DATE:	3/3/2022
PROJECT NUMBER:	STP MM19(16)	DRAWN BY:	B.M. ROBERTS
FILE NAME:	58283bdr_nul.s.dgn	DESIGNED BY:	B.M. ROBERTS
PROJECT LEADER:	D.M. PECK	CHECKED BY:	D.M. PECK
SOUTH SITE LAYOUT SHEET			SHEET 9 OF 45







BEGIN PROJECT  
BROWNINGTON  
STP MM19(16)  
STA. 200+50.00

END PROJECT  
BROWNINGTON  
STP MM19(16)  
STA. 204+00.00

4 INCH YELLOW LINE, WATERBORNE PAINT  
STA. 200+50 - 204+00, CL (DYL)

COARSE MILLING, BITUMINOUS PAVEMENT  
STA. 200+50 - 201+00, LT. & RT.  
STA. 203+50 - 204+00, LR. & RT.

STEEL BEAM GUARDRAIL, GALVANIZED  
STA. 201+10 - 203+10, RT.

ANCHOR FOR STEEL BEAM RAIL  
STA. 201+22.5, RT. (APPROACH END)  
STA. 202+97.5, RT. (TRAILING END)

REMOVAL AND DISPOSAL OF GUARDRAIL  
STA. 201+24 - 203+05, RT.

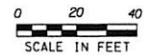
STONE FILL, TYPE II  
STA. 201+30 - 203+19, RT.

STONE FILL, TYPE IV  
STA. 201+47 - 203+07, RT.

YIELDING MARKER POSIS  
STA. 201+50, LT.  
STA. 202+96, RT.

DRAINAGE NOTES

- ⑤ STA. 201+50, 18' LT. - 202+75, 18' LT.  
INSTALL 128 LF OF 6" UNDERDRAIN  
INSTALL FLUSHING BASIN @ INLET, +50, 18' LT.  
6" INV. AT OUTLET, +75, 18' LT. = 1005.38'  
6" INV. AT INLET, +50, 18' LT. = 1009.60'
- ⑦ STA. 202+75, 18' LT. - 202+96, 39' RT.  
INSTALL 66 LF OF 6" CARRIER PIPE  
6" INV. AT INLET, +75, 18' LT. = 1005.38'  
6" INV. AT OUTLET, +96, 39' RT. = 1007.77'



PROJECT NAME:	BROWNINGTON	FILE NAME:	58283bdr_nrl.N.dgn	PLOT DATE:	3/3/2022
PROJECT NUMBER:	STP MM19(16)	PROJECT LEADER:	D.M. PECK	DRAWN BY:	B.M. ROBERTS
		DESIGNED BY:	B.M. ROBERTS	CHECKED BY:	D.M. PECK
			NORTH SITE PLAN LAYOUT SHEET		SHEET 29 OF 45



Hinman-Settler Rd

**DETOUR AHEAD**

**DETOUR 500 FT**

**DETOUR**  
↑

**DETOUR**  
→

**DETOUR**  
←

**CENTER ROAD**

**END DETOUR**

A  
B  
C  
D  
E  
F  
G

A/B SIGNS TO BE PLACED AT 500 FOOT INCREMENTS PRIOR TO INTERSECTION (TYP.)

**ROAD CLOSED**  
LOCAL TRAFFIC ONLY

SCHOOLHOUSE ROAD  
ALT ROUTE 5.7 MILES

NORTH SITE  
CLOSURE PHASE 2  
SEE ADVANCED  
WARNING PLAN FOR  
CLOSURE SIGNS.

SOUTH SITE  
CLOSURE PHASE 1  
SEE ADVANCED  
WARNING PLAN FOR  
CLOSURE SIGNS.

HUNT HILL ROAD  
ALT ROUTE 5.7 MILES

**ROAD CLOSED**  
1 MILE AHEAD  
LOCAL TRAFFIC ONLY

SEE BLOW UP FOR  
VTRANS APPORVALS ON  
VT 58

VT HIGHWAY 58 (2 MILES)  
ALT ROUTE 5.7 MILES

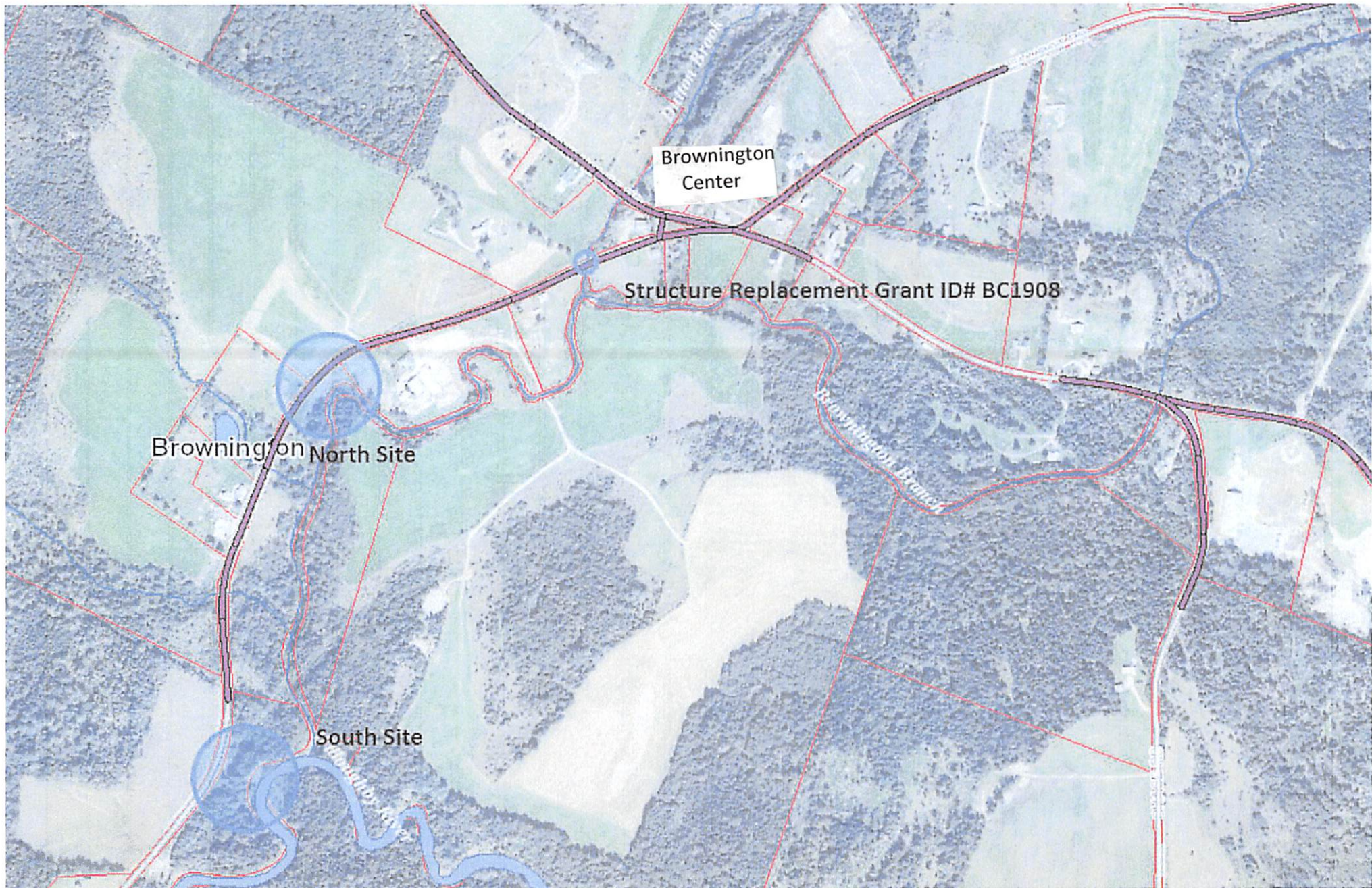
SEE BLOW UP FOR  
VTRANS APPORVALS ON  
VT 58

EVANSVILLE

58









North Site Before Work

Date: 11/10/2010 10:54:50 AM

Position: +044.821602° / -072.152410°

Altitude: 1033ft

Datum: WGS-84

Azimuth/Bearing: 229° S49W 4071mils (True)

Elevation Angle: -28.0°

Horizon Angle: +02.8°

Zoom: 1X

Center Rd North Site







North Site





South Site Before Work

Date & Time: Thu Jul 9 10:29:30 PDT 2010

Position: +044.816071° / -072.155175°

Altitude: 1015ft

Datum: WGS-84

Azimuth/Bearing: 146° S34E 2596mils (True)

Elevation Angle: -35.2°

Horizon Angle: +00.9°

Zoom: 1X

Center Rd South Site







South Site Work in Progress







*South Site Work in Progress*





# South Site September Progress





1 message

Ross, Patrick <Patrick.Ross@vermont.gov>  
To: Brownington Highway Department <browningtonhighway@gmail.com>

Tue, Jul 3, 2018 at 5:05 PM

7/3/18

Dear Steve,

Please consider this email as my letter of support for this important project.

Thanks for reaching out to me on these important local projects. As you know, I have been working on and discussing these projects with the town and AOT District 9 for many years. Brownington is facing two of the most critical roadway infrastructure projects in recent times. Center Road is a vital link for the community, local businesses, the school and town offices providing direct access to Route 58, Orleans village and Interstate 91. Center Road follows the Willoughby River and Brownington Branch and in several locations the river is having significant impacts on the embankment of the roadway due to erosion that has exacerbated the instability at the toe of these slopes. The conceptual design plans by Ruggles Engineering provide a way forward to correcting the slope stability issues. The project will also address upland drainage and groundwater issues affecting the roadway structure and slopes. By stabilizing these two sites, there will be an on-going reduction in bank erosion and sediment into these important Vermont rivers. At both locations there is ample room for the rivers to shift without reducing flood capacity or narrowing the channel width.

In discussions with Tim Ruggles there may be some additional underdrain added to the north site on the west side of Center Road. This would help catch upland groundwater before it migrates to the roadway base or the slope failure area.

I fully support the town's plan to stabilize these two locations on this critical municipal highway.

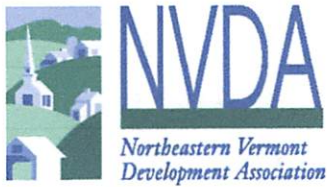
Keep me in the loop as the project progresses. If you need anything else to help with the grant process, let me know.

Respectfully,

Patrick Ross, P.E.

Rivers Program

802.279.1143



December 12, 2022

Scott Robertson, P.E. - Municipal Assistance Section  
Vermont Agency of Transportation  
Barre City Place  
219 North Main St. – 4th flr.  
Barre, VT 05641

RE: Brownington Center Rd Project Financial Assistance Request

Dear Scott,

I am writing in support of a request for funding for the Town of Brownington. The Town has been working for several years to complete a much-needed project to address major stormwater issues on the Willoughby Branch of the Barton River. They have found themselves in the position where their project that was underway and needing to be completed has run significantly over budget. They are requesting Transportation Alternative Grant funds to assist paying for these important water quality work.

NVDA strongly supports the selection of this project for funding.

Sincerely,

--  
Douglas C. Morton  
Senior Transportation Planner  
Northeastern Vermont Development Association  
P.O. Box 630  
36 Eastern Ave  
St Johnsbury VT 05819  
802-748-1221  
[dmorton@nvda.net](mailto:dmorton@nvda.net)