

ADDENDUM NO. 2 July 17, 2019 225346

RE: TOWN OF ROCHESTER, VERMONT

BETHEL MOUNTAIN ROAD REPAIR ER 0176(11)

FROM: DuBOIS & KING, INC.

28 North Main Street

P.O. Box 339

Randolph, Vermont 05060

(802) 728-3376

TO: **Prospective Bidders**

This Addendum forms part of the Contract Documents and modifies the original Bidding Documents issued by the Town of Rochester for the Bethel Mountain Road Repair ER 0176(11) project dated July 8, 2019. Acknowledge receipt of this Addendum in the space provided on Page 1 of the Bid Form. Failure to do so will subject the Bidder to disqualification.

I. <u>Pre-Bid Meeting</u>

A Pre-Bid meeting was held at the Project Site on July 11, 2019 at 10:00 a.m. Attendees are listed on the attached Pre-Bid Meeting Attendance Log (Attachment 1). Brian Breslend, P.E., of DuBois & King, Inc. described key elements of the project. The following addresses questions received at the pre-bid meeting, as well as other questions from prospective bidders.

II. Contract Documents (Plan) Changes

REVISED attached Sheets 5, 10, 26, 27, 28, 33, 35, 45, 47, 59, 61, 67, 70, 71, and 72 are included as Attachment 2 of this Addendum and replace the corresponding original Sheets in the Bid Documents.

III. Contract Documents (Specification) Changes

REVISION to the Bid Form. A new Bid Form with updated quantities is included as **Attachment 3** and replaces the original Document.

REVISION of the following to PROJECT SPECIAL PROVISIONS: REMOVE AND RESET CONCRETE WALL. **DELETE** in its entirety and **REPLACE** with the following:

<u>SECTION 900.645 – SPECIAL PROVISION</u> (REMOVE AND RESET CONCRETE WALL)

900.645.01. DESCRIPTION. This work shall consist of removing, storing, and resetting the existing concrete wall and installation of new geogrid.

The work under this Section shall be performed in accordance with these provisions and the Plans.

<u>900.645.02. MATERIALS</u>. All existing hardware is intended to be re-installed, defective hardware and attachment materials shall be replaced. Existing geogrid to be cut and replaced with new geogrid, Tencate Miragrid 5XT or equal.

<u>900.645.03. GENERAL CONSTRUCTION REQUIREMENTS</u>. The existing concrete wall shall be removed, temporarily stored at the Contractor's staging area, and then reinstalled in the original location.

<u>**900.645.04. METHOD OF MEASUREMENT.**</u> The quantity of Special Provision (Remove and Reset Concrete Wall) to be measured for payment will be on a lump sum basis in the complete and accepted work.

<u>900.645.05. BASIS OF PAYMENT</u>. The accepted quantity of Special Provision (Remove and Reset Concrete Wall) will be paid for at the Contract lump sum price. Payment will be full compensation for removing, relocating, storing, and resetting the existing wall in its entirety, as specified; furnishing any new materials required, including but not limited to geogrid and hardware; performing any necessary repairs to damage resulting from the relocation; and for furnishing all labor, tools, equipment, and incidentals necessary to complete the work.

Payment will be made under:

Pay Item Pay Unit

900.645 Special Provision (Remove and Reset Concrete Wall)

Lump Sum



ADDITION of the following to PROJECT SPECIAL PROVISIONS:

<u>SECTION 406 – BITUMINOUS CONCRETE PAVEMENT</u>

INDEX PRICE FOR ASPHALT PRICE ADJUSTMENT. Asphalt Price Adjustment will be paid under Contract Item 406.50 according to the requirements of Subsection 406.18 of the Standard Specifications. All asphalt cement and emulsified asphalt produced under any Contract Item (including Special Provision Items) will be included for adjustment.

The Index Price for asphalt cement for this Contract is \$582.00 per ton.

ADDITION of the following to PROJECT SPECIAL PROVISIONS:

SECTION 690 – FUEL PRICE ADJUSTMENT

<u>SECTION 690 – FUEL PRICE ADJUSTMENT</u>, is hereby made a new Section of the Specifications as follows:

690.01 GENERAL REQUIREMENTS AND CONDITIONS.

- (a) This specification contains price adjustment provisions for fuel used on Vermont Agency of Transportation (Agency) construction projects. This price adjustment clause is being inserted in this Contract to provide for either additional compensation to the Contractor or a payment to the Agency, depending upon an increase or decrease in the average price of diesel fuel or gasoline during the construction of this project.
- (b) These provisions apply to this Contract only for the Pay Items specified herein. No other fuel price adjustments will be allowed under this Contract.
- (c) It is understood by the Contractor that a price adjustment increase may cause the Agency to decrease the quantities of the Contract pay items subject to adjustment under these provisions. Provisions providing for decreased quantities and item cancellation in this paragraph are separate and take precedence, notwithstanding any other provisions of this Contract.
- (d) No price adjustment will be paid for work performed after the Contract Completion Date, as modified by Change Order, if applicable.
- (e) Price Adjustment, Fuel will be determined for a pay item if each of the following criteria is met:
 - (1) the pay item is included in the original awarded Contract;



- (2) the original awarded Contract bid quantity for the pay item equals or exceeds the quantity threshold indicated in Table 1.
- (f) Any increase in the total Contract amount due to fuel price adjustment will not be justification for an extension of time under Subsection 108.11.

In such cases that estimated quantities are used to determine estimated fuel price adjustments throughout the duration of the Contract, reconciliation of those estimated adjustments will be made upon the determination of actual final quantities and final adjustments to the total final quantity made by prorating those estimated adjustments over the applicable fuel price adjustment periods previously paid. Reconciliation of any fuel price adjustment will only be performed in those instances where the actual final quantity differs by more than five percent from the total estimated quantity. Payments owed to either the Contractor or VTrans will not be subject to any applicable interest claims.

690.02 PRICE ADJUSTMENT PROCEDURES.

(a) Prior to advertising for bids, Index Prices for both a gallon of diesel fuel and a gallon of gasoline will be established by the Agency using retail prices reported by the Energy Information Administration (EIA) for the New England Region. The Index Prices will be set monthly using the first EIA posting falling either on or after the 1st calendar day of that month. The Contract Index Prices will be the most recent Index Prices set by the Agency at the time of advertising for bids. These prices are included below and will be the base from which price adjustments are computed.

The Index Price (retail) for gasoline is \$2.69 per gallon. The Index Price (retail) for diesel fuel is \$3.14 per gallon.

- (b) For the duration of the Contract, Posted Prices for both a gallon of diesel fuel and a gallon of gasoline will be established monthly by the Agency. The Posted Prices will be established in the same manner as the Index Prices.
- (c) A Price Adjustment will be paid or credited for diesel fuel and/or gasoline only when the Posted Price of diesel fuel and/or gasoline increases or decreases 5 percent or more over its respective Index Price.
- (d) Payment for Price Adjustment, Fuel will be based upon the quantity of fuel incorporated in the work as determined by the fuel usage factors in Table 1 of this specification for both diesel fuel and gasoline, multiplied by the algebraic difference between the Posted Price and the Index Price for either diesel fuel or gasoline, respectively.



(e) Payment for Price Adjustment, Fuel shall be computed as follows:

PA = Price Adjustment (LU in \$)

IPD = Index Price, Diesel Fuel (\$/gallon)

IPG = Index Price, Gasoline (\$/gallon)

PPD = Posted Price, Diesel Fuel (\$/gallon)

PPG = Posted Price, Gasoline (\$/gallon)

FUFD = Fuel Usage Factor, Diesel Fuel (gallon/unit)

FUFG = Fuel Usage Factor, Gasoline (gallon/unit)

For PPD/IPD ≤ 0.95 or ≥ 1.05 and PPG/IPG > 0.95 and < 1.05:

PA = FUFD X Pay Item Quantity X (PPD - IPD)

For PPD/IPD > 0.95 and < 1.05 and PPG/IPG ≤ 0.95 or ≥ 1.05 :

 $PA = FUFG \times Pay \text{ Item Quantity } \times (PPG - IPG)$

For PPD/IPD and PPG/IPG \leq 0.95 or \geq 1.05:

PA = [FUFD X (PPD – IPD) + FUFG X (PPG – IPG)] X Pay Item Quantity

- (f) The Contract bid prices for the applicable pay items will be paid under the Contract. The price adjustment, when such adjustment is required as specified in part (c) of this Subsection, will be made subsequent to the month in which the applicable Contract work was performed and will be entered on the next bi-weekly estimate.
- (g) Payment for Price Adjustment, Fuel shall be debited or credited against the Contract price (lump unit) bid for Price Adjustment, Fuel.

Payment will be made under:

Pay Item Pay Unit

690.50 Price Adjustment, Fuel (N.A.B.I.) Lump Unit



TABLE 1 - PAY ITEM FUEL USAGE FACTORS AND QUANTITY THRESHOLDS

Work Category	Pay Item No.	Usage Factor Units	Diesel Fuel (FUFD)	Gasoline (FUFG)	Quantity Threshold
	203.15	GAL/CY	0.29	0.15	3,000
	203.16	GAL/CY	0.39	0.18	2,500
Excavation	204.25	GAL/CY	0.35	0.16	2,500
	208.30	GAL/CY	0.35	0.16	2,000
	208.35	GAL/CY	0.39	0.18	2,000
	203.30	GAL/CY	0.29	0.15	3,000
Borrow	203.31	GAL/CY	0.29	0.15	3,000
	203.32	GAL/CY	0.29	0.15	3,000
Granular Backfill for Structures	204.30	GAL/CY	1	0.16	1,500
willia	210.10	GAL/SY	0.12	0	15,000
Milling	210.12	GAL/SY	0.12	0	15,000
Oukh	301.25	GAL/CY	0.85	0.56	1,000
Subbase	301.35	GAL/CY	0.85	0.56	1,000
Full Depth Reclamation	310.20	GAL/SY	0.04	0	35,000
	406.25	GAL/TON	3.06	0.86	500
	406.27	GAL/TON	3.06	0.86	500
Pavement ¹	406.35	GAL/TON	3.06	0.86	500
	406.36	GAL/TON	3.06	0.86	500
	406.38	GAL/TON	3.06	0.86	500
Bonded Wearing Course ¹	407.15	GAL/TON	3.06	0.86	500
Cold Mix. Rec. Bit. Pave., Port. Cement	900.675	GAL/SY	0.96	0.75	1
Bit. Concrete Pavement, Small Quantity	900.680	GAL/TON	3.06	0.86	500
Mahanial Musuafan Yahiala	410.10	GAL/TON	0.10	0	1
Material Transfer Vehicle	410.11	GAL/TON	0.10	0	1
	501.37	GAL/CY	0.75	0.25	1,000
Concrete	501.38	GAL/CY	0.75	0.25	1,000
	501.39	GAL/CY	0.75	0.25	1,000
	613.10	GAL/CY	0.39	0.18	2,000
	613.11	GAL/CY	0.39	0.18	2,000
Stone Fill	613.12	GAL/CY	0.39	0.18	2,000
	613.13	GAL/CY	0.39	0.18	2,000
	621.20	GAL/LF	0.18	0.05	5,000
	621.205	GAL/LF	0.18	0.05	5,000
Guardrail	621.21	GAL/LF	0.18	0.05	5,000
	621.215	GAL/LF	0.18	0.05	5,000
Note that the pay unit for 406.38 and 40	7.15 is square	yards, but the	adjustment is h	oased on tons	placed.



IV. Questions & Answers

Question 1: Are there Liquidated Damages after the final completion date, October 11, 2019?

Answer 1: Yes; they are a VTrans requirement.

Question 2: When is the earliest the Contractors can start?

Answer 2: Once the Contract is signed.

Question 3: What is the anticipated turn-around for pending permits? (Construction General and Army Corps)

<u>Answer 3</u>: Both permits are currently pending and D&K is communicating with the Agency of Natural Resources and Army Corps to obtain updates on the permit status.

Question 4: Does access need to be provided through the project site to accommodate the work being done for Site 2?

Answer 4: No, there is access to Bethel Mountain Road from both sides.

Question 5: Are there any underground utilities the Contractor will have to work around?

Answer 5: No, there are no known underground utilities that have been encountered in this project area.

Question 6: Is the final completion date for Site 2 also October 11, 2019?

Answer 6: Yes.



Question 7: In Reviewing the concrete and rebar quantities on the Drainage Detail Sheet for the culvert headwalls, the rebar and concrete amounts do not seem to match the quantities shown on D-33. Nor do they seem to be consistent on this Drainage Detail Sheet. For example, Culverts 19 and 20 are both 18" dia, but the headwall concrete varies from 9.61cy to 2.85cy. Culvert 18 is a 42" dia culvert and only has 2.05cy of concrete. According to D33, an 18" culvert should be about 2.05cy and the 42" should be about 8.2cy. Can you please clarify?

Answer 7: See attached revised **Sheet 28**.

Question 8: There appears to be an existing drop inlet at Road Station 13+50. Is this drop inlet to remain or be removed?

<u>Answer 8</u>: All pipes and drop inlets are to be removed. There are 13 existing culverts being removed and 20 proposed culverts for this project.

Question 9: What loads are permitted on the Town roads?

<u>Answer 9</u>: The Town roads are permitted for standard 24,000 pound loads. The Town is willing to work with the Contractor to obtain a VTrans Overload Permit that will apply to all vehicles throughout construction of this project.

Question 10: Is there a local place to send the asphalt?

Answer 10: The Contractor will have to coordinate with the property owners.

Question 11: Is it the Contractor's responsibility to remove asphalt or is it the Town's?

<u>Answer 11</u>: It is the Contractor's responsibility. The asphalt can be coordinated with landowners for temporary storage and then be trucked to a permitted site.

Question 12: Is the Contractor required to submit a Traffic Control Plan? Does it need to be stamped by a P.E.?

<u>Answer 12</u>: VTrans has already provided a Traffic Control Plan. The Contractor shall provide a submittal outlining their plan for traffic control and D&K will review. The Contractor's submittal does not need to be stamped by a P.E.



Question 13: Is the Contractor required to submit an EPSC Plan?

<u>Answer 13</u>: The Contractor can use the EPSC plan provided in the Issued for Construction documents with a submittal outlining their plan. D&K will review the plan.

Question 14: There is a note on the drawings that no permanent seeding can occur after September 1. However, the specifications are very clear that construction cannot extend beyond October 11, 2019. How would you suggest we handle permanent seeding after September 1 (i.e. Winter Rye)?

Answer 14: See the addition of Item 651.17 Seed, Winter Rye, in the attached Bid Form.

Question 15: Do the Contractors need to get on the prequalification list for the MOCR?

Answer 15: No. The Contractor needs to be on the prequalified list for roads.

Question 16: Is the Contractor responsible for project layout?

Answer 16: Yes. D&K will provide the Contractor with the CADD file for layout.

Question 17: Who will be the resident engineer, D&K? Will the RE be surveying quantities for payment, or will the Contractor be required to perform this work?

Answer 17: D&K will have full time RPRs tracking quantities. If surveying is required for quantity measurement, the surveying is the Contractor's responsibility.

Question 18: If the work requires bracing of the existing utility poles, what Item does this get paid under?

Answer 18: If the Contractor is excavating in the vicinity, contact the pole provider for bracing, payment for this shall be included under Item Number 635.11 Mobilization/Demobilization.

Question 19: Are the trees called out for the top of slope on the plans?

Answer 19: No.



Question 20: Is there a Pay Item for Clearing and Grubbing?

Answer 20: Yes, it is a Lump Sum Item.

Question 21: Is there any indication of how far back to cut the trees? There are no Clearing and Grubbing limits provided on the plans.

<u>Answer 21</u>: The Right-of-Way (ROW) plans show the allowed area for the project. It is up to the Contractor to come up with the means and methods of how the area is cleared and grubbed to complete the work within the ROW limits shown.

Question 22: Are there but trees that the Contractor has to work around?

Answer 22: Yes. These trees are called out on the plans and must be protected.

Question 23: Are the borings marked on the plans?

Answer 23: Yes. The borings are marked on the plans.

Question 24: Would the Liquidated Damages continue through the winter, as paving may be likely ended by November 1, or, a winter shut down to finish in the spring?

Answer 24: The liquidated damages would carry through the winter. There is no winter shut down specified for this project.

Question 25: Is the Town anticipating the existing Catch Basins being removed to be salvaged?

Answer 25: Yes, if they are salvageable.

Question 26: Are all concrete blocks for the concrete wall anticipated to be salvaged?

Answer 26: Yes, if they are salvageable.

Question 27: How deep is the concrete wall into the ground?

Answer 27: The depth of the wall into the ground is unknown.



Question 28: What is the Engineer's Opinion of Probable Cost?

Answer 28: Between \$2,100,000.00 and \$2,500,000.00.

Question 29: Is all of the concrete wall being reset?

Answer 29: The concrete wall is being reset as shown on the plans.

Question 30: What are the specifications for the Geogrid for the concrete wall?

<u>Answer 30</u>: The concrete block wall is to be removed and reset as shown on the plans, to include new geogrid. The Contractor is to provide a submittal for D&Ks acceptance of the product. The geogrid used in the existing concrete wall is Tencate Miragrid 5XT.

Question 31: What is the material for the foundation of the concrete wall? Does it need to match the as-built of the original?

Answer 31: The existing concrete block wall must be removed and reset as shown on the plans. The material called out on the typical detail is granular backfill for structures.

Question 32: Why is there one birch tree left by the existing access road?

Answer 32: This tree, approximately STA 20+00.00 +/-, was previously identified as a bat habitat tree.

Question 33: Will the Town take the guardrail and posts that are removed from the project?

<u>Answer 33</u>: Yes, the Town will take used guardrail. The Town will specify a location for disposal when the time comes.

Question 34: Where is the grubbing to be placed?

Answer 34: Anywhere upslope that is higher than the existing roadway grade. Anywhere downslope that is more than 6 feet in length.



Question 35: What are the blue ribbons on the trees marking?

Answer 35: D&K's survey.

Question 36: What is the reason for not using geogrid for the slope at the top of the project?

Answer 36: The geogrid can cause a slip plane.

Question 37: Have you thought about giving an incentive to the Contractor to get this done by the October 11, 2019 final completion date?

<u>Answer 37</u>: Yes, D&K considered an incentive program; however, it was not eligible for this Contract.

Question 38: Are the barriers blocking the road the Town's? Does the Contractor have to move them?

Answer 38: The barriers belong to the Town. The Town will pick them up.

Question 39: What is the specified number of gyrations?

Answer 39: 65 gyrations.

Question 40: Index price for asphalt?

Answer 40: The Index Price for asphalt for July 2019 is \$582/TON.

Question 41: Is any of the guardrail to be reused?

Answer 41: No. All of the guardrail must be replaced.

Questions 42: There are several notes with regards to night work. Is any night work anticipated or allowed?

Answer 42: Work is allowed 24 hours a day, 7 days a week.



Question 43: Given the tight timeline, would precast concrete head walls be accepted? If so, would it be payable by the concrete and rebar quantities (per headwall) listed on the Drainage Detail sheet?

<u>Answer 43:</u> Precast headwalls that conform with the plans are acceptable. The Pay Item would be under the appropriate concrete and rebar Item Numbers 507.12 and 541.25. Rebar is subject to Buy American Provisions.

Question 44: What is the purpose of Attachment 5 in the bid documents? It shows locations for several PCMSs in the region, however there appear to only be 2 required on the plans. Can you please clarify?

<u>Answer 44</u>: The Traffic Plan requires 6 PCMSs, the Town has already obtained 4 and placed them in their designated places; therefore, the Contractor shall provide 2 per the plan.

Question 45: You have specified 406.35 Superpave in the Bid which requires 70-28 asphalt. This grade of asphalt comes at a premium. Would you consider switching to 58-28 for this road?

Answer 45: No, the specified performance grade must comply with the VTrans 2018 Standards.

Question 46: If there are quantity overruns on the designer's part, would there be additional days granted for the Contract?

Answer 46: Contract extensions will be evaluated based on the Specifications.



V. Additional Information/Clarifications

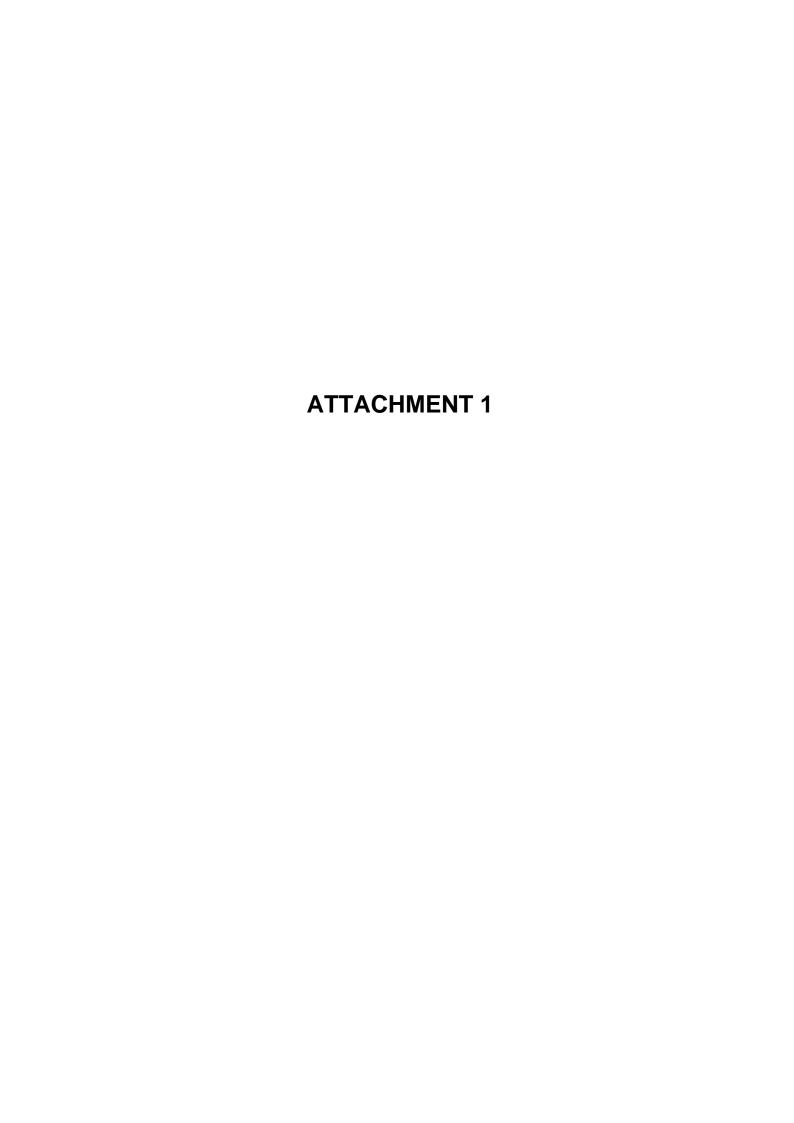
- 1. This project is FHWA funded.
- 2. The Contractor will not be getting paid for temporary measure unless explicitly specified in the Contract Documents.
- 3. Forms to be submitted with the Bid include:
 - a. Bid Proposal Form
 - b. Certified Check or Bid Bond (5% of bid amount)
 - c. EEO Certification
 - d. Debarment and Non-Collusion Affidavit
 - e. Worker Classification Compliance Requirement Form
- 4. Buy America Provisions, Davis Bacon Wage Rates, and VTrans' DBE Policy apply to this contract.
 - a. The steel for the concrete headwalls will be subject to "Buy America Provisions"
- 5. Municipal/ private staging areas
 - a. If Contractor uses private staging areas, the off-site activity process needs to be followed. There is up to a 21-day review process involved once the Contractor submits the plans
 - b. The use of municipal property would have a quicker review process
 - c. The use of the pit on Route 73 would have a quicker review process because this area is often used for VTrans projects
- 6. There is a second, separate project with this area: Rochester ER 0176(11) Site 2 (Bethel Mountain Road, above STA. 38+85.02, outside this projects limits).
 - a. October 11, 2019 final completion date
 - b. This site work does not depend upon completion of Site 1
 - c. There is no Engineer's estimate for this site, it is still in design phase
 - d. The scope of work includes:
 - i. Stone lining ditch with Stone Fill, Type 1 or 2
 - ii. Pavement repairs: partial or full width
 - iii. Pipe replacements
 - iv. Installation of waste block or stone headwalls
 - v. Shoulder repairs with Stone Fill, Type 1



- 7. ROW acquisitions/ Easements shown on the Plans are still being obtained by the Town.
 - a. Contractor is responsible for obtaining/ paying for all other lands/ access required for temporary facilities, equipment, material storage, etc.
- 8. This site can be accessed from Lower Bethel Mountain Road, from North Hollow to Middle Hollow Road, or from Camp Brook Road. See **Attachment 4** for a map showing the North Hollow alternate routes.
- 9. The cut and fill excel sheet is included as **Attachment 5**.
- 10. The plans and quantities for geotechnical areas 2 and 6 have been revised.
- 11. Loggers can be used for clearing trees. They do not need to be on the VTrans prequalified list.
- 12. See Attachment 6 for Materials Certification Package.

This document constitutes Addendum 2 for this project.





PRE-BID MEETING

BETHEL MOUNTAIN ROAD REPAIR ER 0176(11) ROCHESTER, VERMONT 225346

JULY 11, 2019

10:00 AM

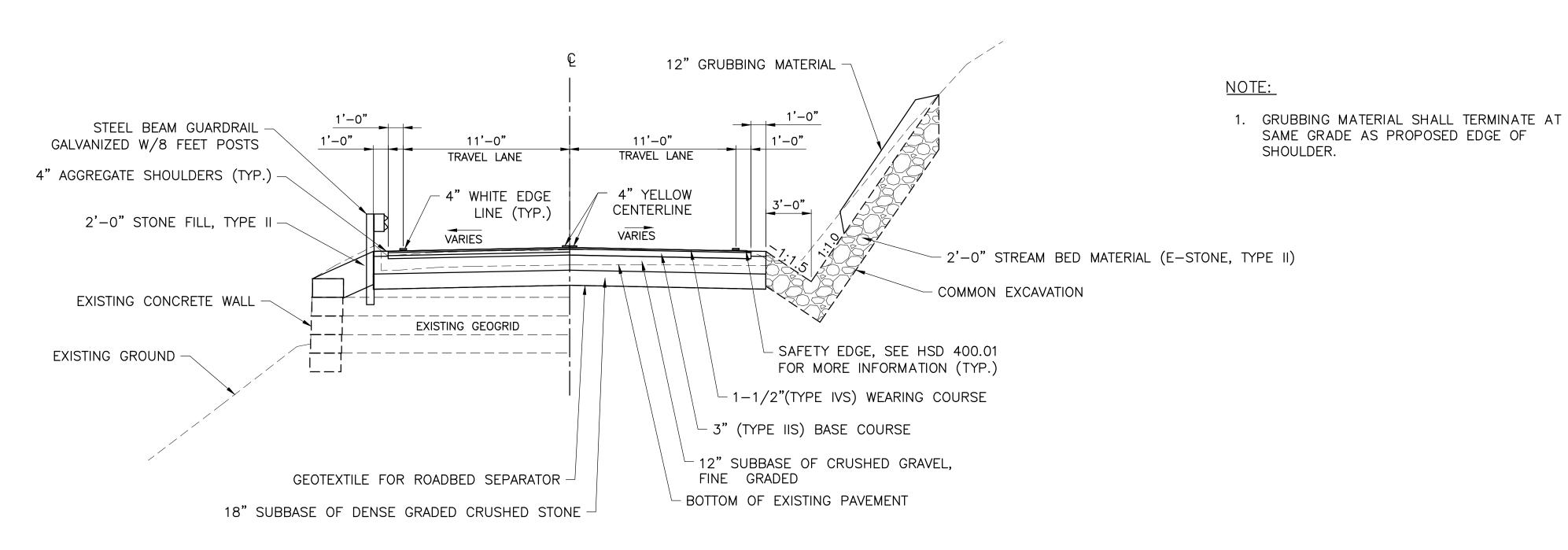
ATTENDANCE LOG

(Please Print)

NAME Vale Filler	AFFILIATION & TITLE	PHONE #	E-MAIL ADDRESS
Brian Broslend Jon Adales	DuBois & King, Inc. (DK)	802-878-7661	bbrestend@dubois-king.com
Broth Farran	Farrow Enterprise	803 673 8186	YFOND WAR REPORT. Net
Mike Nollin	Pofe Industries	702 353 6097	mollina p. Keindustries. com
Coly Marsh	GW Tatro Construction Inc	802-644-8875	Cmarsha gwtatro.com
MARK PELOQUIN	J. HUTCHINS, INC	802 - 434 - 3500	
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John Champion	TO. Rochester	802-969-0195	cooler champion & 6 mail . com
DAY ROBUSON	(hamp his Construction	808-295-8734	Nottexcushing Q comeist Net nid Columptanians truetion. Com
NIALL BUXTON	(hang his longtout ion	802 388 7657	nidle chaptain construction. Com
Kricket McCusker	T.R. Fellows Engineering	802-318-7853	Kricket Emapleridge vt. com

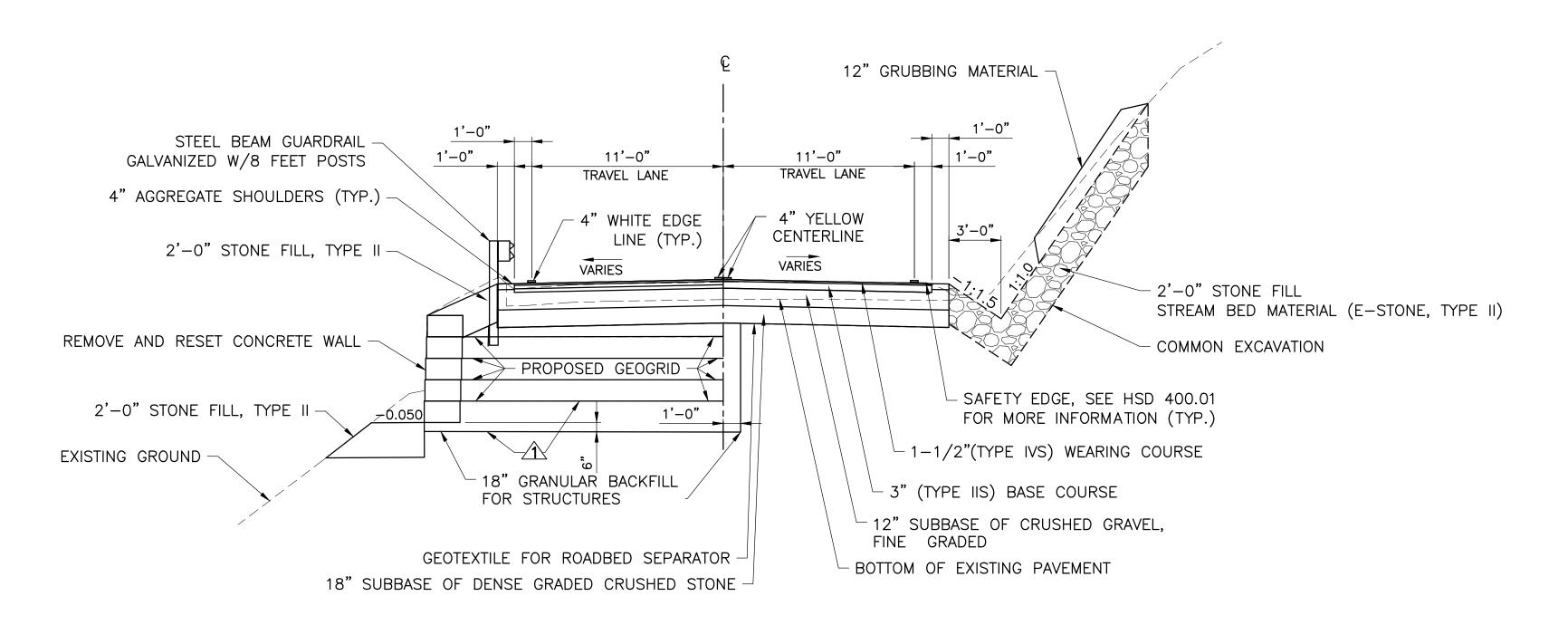
NAME	AFFILIATION & TITLE	PHONE #	E-MAIL ADDRESS
Pat Harvey	Select board member. WILLEY EXETHNORMS CORP.	807.767.3280	select board harvey @ qmail. com
ZEBULON DENKS DEST WELLEY	WILLEY EARTHMOVENG CORP.	D- 802-291-0105	Select board harvey @ gmail. con while Given com ZEB @ WILLEY EARTH. bom
DAVIO MARKOWSI,i	MARKOWSKi Exc Inc.	802.483.6469	100 mg/s
Kyla Correcc	CASECCIO CONSTRUCTION	802.773.0052	Hylle. CONVECC & CASRICAING. COM





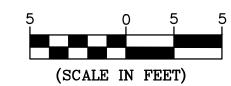
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TYPICAL WALL REPAIR SECTION

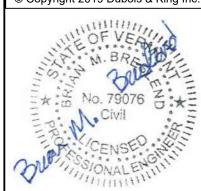
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BMB						Α
7/16/2019 CONC. WALL PAY LIMIT MODIFICATION BMB JBA						NOITGIACORIDA
7/16/2019						JT A C
1						ON

TOWN OF ROCHESTER, VT 67 SCHOOL STREET ROCHESTER, VT

> ROCHESTER ER 0176(II)

SHEET TITLE

TYPICAL SECTIONS

DRAWN BY	DATE
OID	JULY 2019
CHECKED BY	D&K PROJECT#
CDL	225346
PROJ. ENG.	D&K ARCHIVE #
BMB	

SHEET NUMBER

5

SHEET 5 OF 77

PROVIDE APPROPRIATE

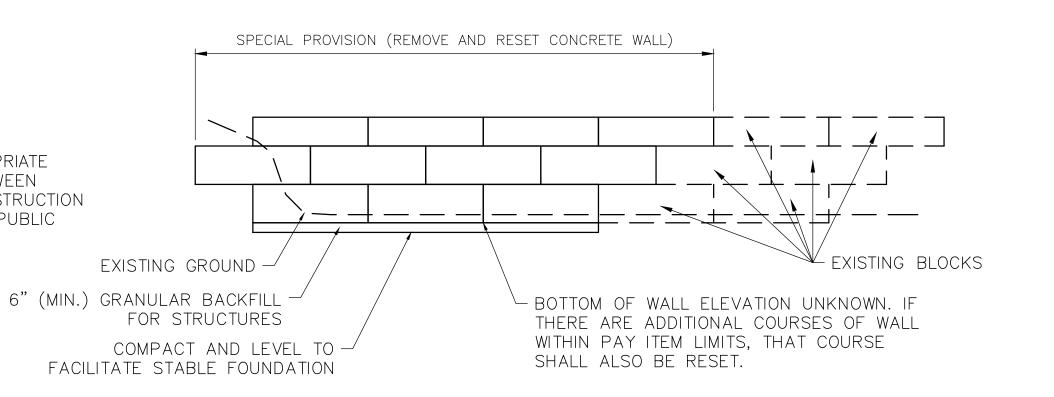
TRANSITION BETWEEN

RIGHT-OF-WAY

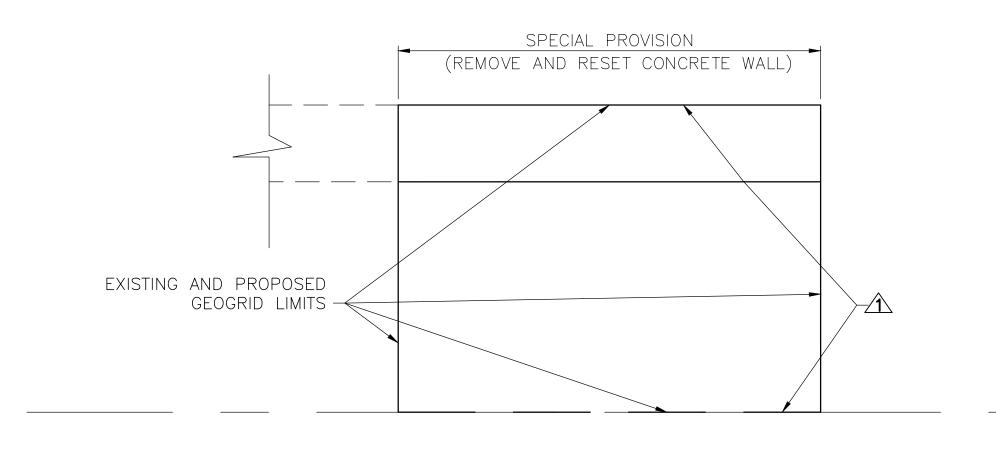
STABILIZED CONSTRUCTION ENTRANCE AND PUBLIC

- 1. STONE SIZE SHALL BE 3 TO 4 INCHES.
- 2. LENGTH SHALL NOT BE LESS THAN 50 FEET.
- 3. THICKNESS SHALL NOT BE LESS THAN 8 INCHES.
- 4. WIDTH SHALL NOT BE LESS THAN 10' WIDER THAN THE LARGEST VEHICLE ENTERING OR EXITING THE SITE.
- 5. WASHING. WHEN NECESSARY, WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE, WHICH DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH, OR WATERCOURSE THROUGH USE OF SAND BAGS, GRAVEL, BOARDS, OR OTHER APPROVED METHODS.
- 6. MAINTENANCE. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.

STABILIZED CONSTRUCTION ENTRANCE



REMOVE AND RESET CONCRETE WALL DETAIL - ELEVATION



SUPERELEVATION TABLE

Station	Left Outside Lane	Right Outside Lane
12+50.00'	-2.20%	-1.10%
12+75.00'	-2.20%	2.20%
16+26.00'	-2.20%	2.20%
16+96.00'	2.00%	-2.00%
18+92.00'	2.00%	-2.00%
19+19.00'	3.60%	-3.60%
20+08.00'	3.60%	-3.60%
20+46.00'	5.90%	-5.90%
21+55.00'	5.90%	-5.90%
22+20.00'	2.00%	-2.00%
23+56.00'	2.00%	-2.00%
24+52.00'	-3.80%	3.80%
25+22.00'	-3.80%	3.80%
26+35.00'	3.00%	-3.02%
26+76.00'	3.00%	-5.50%
27+18.00'	3.00%	-5.50%
27+71.00'	0.00%	-5.50%
29+00.00'	-8.00%	2.30%
31+85.02'	0.00%	0.00%

ROAD CENTERLINE

REMOVE AND RESET CONCRETE WALL DETAIL - PLAN

CENTERLINE ROADWAY ALIGNMENT CURVE TABLE								
CURVE # START STATION CURVE RADIUS CURVE LENGTH DELTA ANGLE START NORTHING/EASTING END NORTHING/EASTING PI NORTHING/EASTING END ST							END STATION	
1	3+24.00	2850.00	277.47	5*34'41.37"	501514.68, 1560346.11	501682.01, 1560567.31	501592.96, 1560460.79	6+01.47
2	6+01.47	600.00	38.27	3*39'17.22"	501682.01, 1560567.31	501707.47, 1560595.88	501694.28, 1560582.00	6+39.74
3	6+39.74	1900.00	152.26	4°35'29.70"	501707.47, 1560595.88	501816.69, 1560701.91	501759.95, 1560651.08	7+92.00
4	7+92.00	625.00	164.84	15'06'39.77"	501816.69, 1560701.91	501952.46, 1560794.54	501878.43, 1560757.23	9+56.84
5	9+56.84	2000.00	77.89	2*13'52.78"	501952.46, 1560794.54	502021.31, 1560830.94	501987.24, 1560812.07	10+34.73
6	10+34.73	334.00	215.03	36°53'11.33"	502021.31, 1560830.94	502164.30, 1560986.56	502118.75, 1560884.91	12+49.75
7	12+49.75	2300.00	111.85	2*47'11.11"	502164.30, 1560986.56	502207.53, 1561089.71	502187.17, 1561037.61	13+61.61
8	13+61.61	2150.00	301.44	8*01'59.11"	502207.53, 1561089.71	502336.55, 1561361.87	502262.49, 1561230.32	16+63.05
9	16+63.05	2900.00	242.43	4*47'23.34"	502336.55, 1561361.87	502446.53, 1561577.84	502396.06, 1561467.55	19+05.48
10	19+05.48	1200.00	121.40	5*47'47.75"	502446.53, 1561577.84	502491.39, 1561690.60	502471.81, 1561633.08	20+26.88
11	20+26.88	530.00	158.04	17'05'04.62"	502491.39, 1561690.60	502519.41, 1561845.54	502517.03, 1561765.96	21+84.92
12	23+10.88	600.00	78.24	7*28'15.95"	502523.17, 1561971.44	502520.40, 1562049.57	502524.34, 1562010.59	23+89.12
13	23+89.12	1100.00	159.71	8*19'08.33"	502520.40, 1562049.57	502515.94, 1562209.08	502512.37, 1562129.16	25+48.83
14	25+48.83	4100.00	101.00	1°24'41.38"	502515.94, 1562209.08	502519.21, 1562310.03	502518.20, 1562259.53	26+49.83
15	26+49.83	609.02	187.56	17°38'42.70"	502519.21, 1562310.03	502494.25, 1562495.17	502521.10, 1562404.54	28+37.39
16	28+37.39	910.00	347.63	21°53'15.60"	502494.25, 1562495.17	502460.81, 1562839.07	502444.28, 1562663.89	31+85.02

	— EXISTING GUARDRAIL TO BE REMOVED
REMOVE SHOULDER MATERIAL -	EXISTING DEFICIENT TREATED TIMBER CURB
TO BASE OF CURB BOARD	CURB AND BITUMINOUS CONCRETE FILLET TO BE
EXISTING SLOPE -	REMOVED
	EXISTING SHOULDER PAVEMENT
	SAWCUT PAVEMENT

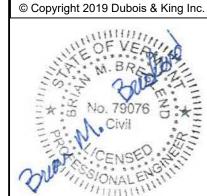
TREATED TIMBER CURB REMOVAL

NOT TO SCALE

NOTE:

THE REMOVAL OF TREATED TIMBER CURBING, INCLUDING THE BITUMINOUS CONCRETE FILLET, AND ANY SAWCUTTING, FROM INSTALLATIONS WHERE EXISTING GUARDRAIL IS REMOVED WILL NOT BE PAID FOR DIRECTLY, BUT WILL BE CONSIDERED INCIDENTAL TO REMOVAL AND DISPOSAL OF GUARDRAIL.

6 GREEN TREE DRIVE SOUTH BURLINGTON, VT 05403-6025 TEL: (802) 878-7661 FAX: (866) 783-7101 www.dubois-king.com



JBA				BY CK'D
BMB JBA				ВУ
GEOGRID MODIFICATION				DESCRIPTION
7/16/2019				DATE
_				NO.

TOWN OF ROCHESTER, VT 67 SCHOOL STREET ROCHESTER, VT

> ROCHESTER ER 0176(II)

SHEET TITLE

DETAILS

JULY 2019 PROJ. ENG. SHEET NUMBER

SHEET 10 OF 77

DuBois EKing Inc.

1					
	\bigvee	7/15/2019	QUANTITY UPDATE	MYL	
	$\sqrt{2}$	7/15/2019	7/15/2019 ITEM 203.30 EARTH BORROW REMOVED	TAM	
	NO.	DATE	DESCRIPTION	ВУ	S

TOWN OF
TOWN OF
ROCHESTER, VT
7 SCHOOL STREET
ROCHESTER, VT

RAWN BY	DATE
TAM	JULY 2019
HECKED BY	D&K PROJECT#
BMB	225346
ROJ. ENG.	D&K ARCHIVE #
BMB	

SHEET	26	OF 77	

SUMMARY OF ESTIMATED QUANTITIES				DESCRIPTIONS	DESCRIPTIONS					TEL: (802 ——— FAX: (866
	ROADWAY EROSION CONTROL	FULL C.E. ITEMS	GRAND TOTAL FINAL	UNIT	ITEM NUMBER	ROUND	QUANTITIES	UNIT	ITEMS	www.duboi
			1	LS CLEARING AND GRUBBING, INCLUDING INDIVIDUAL TREES AND STUMPS	201.10			E	EARTHWORKS SUMMARY	© Copyright 2019
	11200		11200	CY COMMON EXCAVATION	203.15	85	500		FILL REQUIRED	W. AYI
	560		560	CY SOLID ROCK EXCAVATION	203.16		536		SUBTOTAL EARTHWORKS (466 CY * 1.15)	W BR
	1200		1200 /1	CY GRAVEL FILTER FOR SLOPE STABILIZATION	203.35	60	7781		FILL AVAILABLE COMMON EXCAVATION (11115 CY * 0.7)	= P. W.
	900		900	CY TRENCH EXCAVATION OF EARTH	204.20	53			FILL AVAILABLE	And Solo
	180		180	CY TRENCH EXCAVATION OF ROCK	204.21	EST.		CY F	FILL REQUIRED WASTE	
			1	CY TRENCH EXCAVATION OF EARTH, EXPLORATORY (N.A.B.I.)	204.22	_		S	SUPERPAVE BITUMINOUS CONCRETE PAVEMENT	\neg
	700		700	CY GRANULAR BACKFILL FOR STRUCTURES	204.30	41		V	WEARING COURSE	TAM
	2800		2800	SY COARSE-MILLING, BITUMINOUS PAVEMENT	210.10	64	618		1 1/2" TYPE IVS	
	1700		1700	CY SUBBASE OF CRUSHED GRAVEL, FINE GRADED	301.26	35	65		LEVELING COURSE 1/2" LEVEL- TYPE IVS	NON
							00			
	2500		2500	CY SUBBASE OF DENSE GRADED CRUSHED STONE	301.35	52	4		INTERMEDIATE COURSE TYPE IIS (CP & OVERLAY TRENCH BOX SECTIONS)	DATE
	140		140	TON AGGREGATE SHOULDERS, RAP	402.13	3		В	BASE COURSES	N UPI
	50		50	CWT EMULSIFIED ASPHALT	404.65	9			TYPE IIS TYPE IIS (CP & OVERLAY TRENCH BOX SECTIONS)	NTITY EART
			1	LU AIR VOIDS PAY ADJUSTMENT (N.A.B.I.)	406.28	_			SUBTOTAL	QUA 3.30
	1		1	LU MAT DENSITY PAY ADJUSTMENT (N.A.B.I.)	406.29	-	81		ROUNDING	203
	1600		1600	TON SUPERPAVE BITUMINOUS CONCRETE PAVEMENT	406.35	81	1000		TOTAL	LEW
	20		20	TON BITUMINOUS CONCRETE PAVEMENT SURFACE PREPARATION	406.45					6 6
	1		1	LU PRICE ADJUSTMENT, ASPHALT CEMENT (N.A.B.I.)	406.50	_				5/20
	11000		11000	LB REINFORCING STEEL, LEVEL II	507.12	415				7/15
	80		80	CY CONCRETE, CLASS B	541.25	10.6				
	530		530	LF 18" CPEP(SL)	601.2615	1				
	170		170	LF 24" CPEP(SL)	601.2620	9				
	140		140	LF 42" CPEP(SL)	601.2635	4				TOW
	60		60	LF 48" CPEP(SL)	601.2640	3				ROCHES 67 SCHOO
	20		20	HR POWER BROOM RENTAL, TYPE I	608.30	EST.				ROCHES
	1900		1900	CY STONE FILL, STREAM BED MATERIAL (E-STONE, TYPE II)	613.06	70				
	2300		2300	CY STONE FILL, STREAM BED MATERIAL (E-STONE, TYPE III)	613.06	80				
	400		400	CY STONE FILL, TYPE I	613.10	59				
	2800		2800	CY STONE FILL, TYPE II	613.11	40				ROCH
	7500		7500	CY STONE FILL, TYPE IV	613.13	82				ER 01
	40		40	EACH YIELDING MARKER POSTS	619.17	_				
	2800		2800	LF STEEL BEAM GUARDRAIL, GALVANIZED W/8 FEET POSTS	621.205	36				
	1		1	EACH ANCHOR FOR STEEL BEAM RAIL	621.60	_				SHEET
	2550		2550	LF REMOVAL AND DISPOSAL OF GUARDRAIL	621.80	5				
		1	1	LS TESTING EQUIPMENT, CONCRETE	631.16	-				QUAN
		1	1	LS TESTING EQUIPMENT, BITUMINOUS	631.17					QUAN
			1	LS MOBILIZATION/DEMOBILIZATION	635.11	_				
			1	LS TRAFFIC CONTROL, ALL-INCLUSIVE	641.11					DRAWN BY
						_				TAM
			2	EACH PORTABLE CHANGEABLE MESSAGE SIGN	641.15					CHECKED BY BMB
	5400		5400	LF DURABLE 4 INCH WHITE LINE, POLYUREA	646.404	98				PROJ. ENG.

Duj	Bois
EKI	ng ^{inc.}

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QUANTITY UPDATE	ITEM 651.17 SEED, WINTER RYE ADDED				DESCRIPTION
7/15/2019	7/15/2019				DATE
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TAM	JULY 2019
CHECKED BY	D&K PROJECT#
BMB	225346
PROJ. ENG.	D&K ARCHIVE #
BMB	

SHFFT	27	OF 77	

05403-6025 TEL: (802) 878-7661 FAX: (866) 783-7101		DETAILED SUMMARY OF QUANTITIES		ı			<u>, </u>	NTITIES	SUMMARY OF ESTIMATED QUANTITIES						
www.dubois-king.com		QUANTITIES UNIT ITEMS	MBER ROUND	ITEM NUMBER	ITEMS	UNIT	GRAND TOTAL FINAL	FULL C.E. ITEMS	EROSION CONTROL	ROADWAY					
Copyright 2019 Dubois & King Inc.		ROLLED EROSION CONTROL PRODUCT, TYPE I	14 98	646.414	DURABLE 4 INCH YELLOW LINE, POLYUREA	LF	5400			5400					
M.BR.		9445 SY GRUBBING MATERIAL AREA	6 EST.	646.76	LINE STRIPING TARGETS	EACH	1080			1080					
* 8 No. 79076 5 *=		25 SY GUARDRAIL END SECTION AREA	1 42	649.11	GEOTEXTILE FOR ROADBED SEPARATOR	SY	5500		5500						
P. N. CENSED		9470 SY SUBTOTAL 30 SY ROUNDING	5 8	651.15	SEED	LB	1770		1770						
* & No. 79076 & * Civil	2	9500 SY TOTAL	7 8	651.17	SEED, WINTER RYE 2	LB	1770		1770						
, X			5	651.18	FERTILIZER	LB	3530		3530						
≥			0.9	651.20	AGRICULTURAL LIMESTONE	TON	15		15						
<u> </u>	——— F		5 0.9	651.35	TOPSOIL	CY	15		15						
ODED			5	651.40	GRUBBING MATERIAL (12")	SY	9450		9450						
(F AL			0.9	653.10	HAYMULCH	TON	15		15						
자 %	 		30	653.20	ROLLED EROSION CONTROL PRODUCT, TYPE I	SY	9500 1		9500						
ALIVINAL NOILS	UPDAT		5 0.4	653.25	CHECK DAM, TYPE I	CY	5		5						
			5 20	653.35	STABILIZED CONSTRUCTION ENTRANCE	CY	100		100						
7 SE	UANT		2 3	653.42	INLET PROTECTION DEVICE, TYPE III	СҮ	210		210						
651.1			76 14	653.476	SILT FENCE, TYPE II		1500		1500						
				653.50	BARRIER FENCE		6500 1		6500						
0	0			656.85	TREE PROTECTION		1		1						
/20	/20			675.341	SQUARE TUBE SIGN POST AND ANCHOR		30			30					
7/15,	7/15/			675.50	REMOVING SIGNS		2			2					
				675.60	RESETTING SIGNS		2			2					
							2			2					
				676.10	DELINEATOR WITH STEEL POST		1								
TOWN OF				690.50	PRICE ADJUSTMENT, FUEL (N.A.B.I.)		1			1					
ROCHESTER, VT ' SCHOOL STREET				900.645	SPECIAL PROVISION (ACCESS ROAD AND STAGING AREA)		1			1					
ROCHESTER, VT			45 -	900.645	SPECIAL PROVISION (REMOVE AND RESET CONCRETE WALL)	LS	1			1					
ROCHESTER															
ER 0176(II)															
SHEET TITLE															
QUANTITIES															
WN BY DATE TAM JULY 2019	DR/														
CKED BY D&K PROJECT #	CH														
BMB 225346 J. ENG. D&K ARCHIVE #	PR														
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ITEM DETAIL AND DRAINAGE SHEET

										IVI	DEIAIL	HIVL) Dr	1	41 1	IN		GE SHEET				
STATION	STATION	POS	INLET/OUTLET TYPE	PIPE	ALLOW	/ABLE OPTIONS	PIPE ELBOW	ES	СВ	P R	DEPTH CONC CLASS B STEEL GRATE CHAN ELEV	CRM EXCAVATION EARTH ROCK	GRAN BKFILL STRUCT EROS MATT	STON	IE FILL	MARKE	R POSTS	REMARKS			GUARDRAIL	
o in the late	<u> </u>		INLET OUTLET		L PCCSP	CAAF CFEF				C D				\triangle		LT	RT	KLWANKO	BEGIN STATION	END STATION	POSITION	END TREATMENT
0+51	11+50	LT	NO. DEG.	IIN I	FI IH	TH SL I	NO. DEG.	. EA	EA		FT CY LBS TYPE EA	CY CY CY	CY SY	CY 315	TYPE	EA	EA	STONE FILL, TYPE I		<u>/2\</u>	LEFT RIGHT FT T	LEFT RIGHT FT FT
3+24	29+75	RT			_								2125	I	E-II			E-STONE, TYPE II	0+51	8+75	824	
3+68	3+54	RT-L1	Γ 22.5 PIPE PIPE	18 3	39	X					2.05 376	30	25 71	59	E-III	1	1	CULVERT 20	8+75	9+25	65	
5+01	4+87		Γ 22.5 PIPE PIPE			х					2.05 376	28	24 71	59	E-III	1	1	STONE FILL OUTLET PAD CULVERT 19	9+25	11+50	225	
6+36	6+18		T 22.5 PIPE PIPE			X					8.20 990	77	53 162	144			1	STONE FILL OUTLET PAD CULVERT 18	11+50	12+00	65	
																		INLET & OUTLET STONE FILL CULVERT 17	12+00	13+63	163	
6+89	6+74		7 22.5 PIPE PIPE			X					2.05 376	27	22 183	153		·····	1	STONE FILL OUTLET PAD	13+63	14+13	65	
7+94	7+78		7 22.5 PIPE PIPE			X					2.85 516	33	26 185			····	1	CULVERT 16 INLET & OUTLET STONE FILL	14+13	16+75	263	
8+61	8+46	RT-L	7 22.5 PIPE PIPE	18 4	40	X					2.05 376	26	22 71	59	E-III	1	1	CULVERT 15 STONE FILL OUTLET PAD	16+75	17+25	70	
9+21	9+04	RT-L1	7 22.5 PIPE PIPE	42 4	45	X					8.20 990	70	46 240	206	E-III	1	1	CULVERT 14 STONE FILL OUTLET PAD	17+25	17+75	75	
10+95	10+80	RT-L1	PIPE PIPE	24 4	46	X					2.85 516	45	37 214	178	E-III	1	1	CULVERT 13 STONE FILL OUTLET PAD	17+75		70	
12+93	12+78	RT-L1	T 22.5 PIPE PIPE	18 3	39	X					2.05 376	27	25 71	59	E-III	1	1	CULVERT 12 STONE FILL OUTLET PAD	18+25		200	
11+50	16+50	LT												1039	II			STONE FILL, TYPE II			200	
14+89	14+74	RT-L	T 22.5 PIPE PIPE	18 4	40	X					2.05 376	32	30 71	59	E-III	1	1	CULVERT 11 STONE FILL OUTLET PAD	21+13		65	
16+00	17+25	LT											1778	2556	IV			STONE FILL OUTLET PAD STONE FILL, TYPE IV	21+63		200	
17+25	17+94	LT												127	II			STONE FILL, TYPE II	23+63	24+13	65	
16+72	16+56	RT-L1	Γ 22.5 PIPE PIPE	18 4	41	X					2.05 376	30	26 71	59	E-III	1	1	CULVERT 10	24+13	26+50	238	
17+94	24+25	LT												1290	II			STONE FILL OUTLET PAD STONE FILL, TYPE II	26+50	26+75		25
18+21	18+05	RT-L1	T 22.5 PIPE PIPE	18 4	42	X					2.05 376	33	28 71	59	E-III	1	1	CULVERT 9				
19+46	19+31		T 22.5 PIPE PIPE		43	X					2.05 376	34	29 71	59	E-III	1	1	STONE FILL OUTLET PAD CULVERT 8				
20+86	20+70		Γ 22.5 PIPE PIPE		43	X					2.05 376	38	33 71	59	E-III	1	1	STONE FILL OUTLET PAD CULVERT 7				
												***************************************					<u>'</u>	STONE FILL OUTLET PAD				
22+23	22+08		7 22.5 PIPE PIPE		42	X						32	27 71	59	E-III			CULVERT 6 STONE FILL OUTLET PAD				
23+60	23+45	RI-L	PIPE PIPE	18 2	43	X					2.05 376	30	26 71	59		1	1	CULVERT 5 STONE FILL OUTLET PAD	ROU	NDING	36	
24+25	25+75	LT											2123					STONE FILL, TYPE IV		TALS	2775	25
24+98	24+82		7 22.5 PIPE PIPE		44	X					8.20 990	62	39 309	271	E-III	1	1	CULVERT 4 INLET & OUTLET STONE FILL	UNDERDRAIN			
25+49	25+34	RT-L ¹	7 22.5 PIPE PIPE	18 3	39	X	***************************************	•			2.05 376	27	23 71	59	E-III	1	1	CULVERT 3 STONE FILL OUTLET PAD BEGIN STATION END STATION POSITION	DIA LENGTH	TRE		FB MRK. POST
25+75	29+00	LT												304	II			STONE FILL, TYPE II	IN. FT	EARTH CY.	ROCK CY. CF	EA EA
26+50	27+44	LT					***************************************	•	••••••				795	1230	IV			STONE FILL, TYPE IV		•		
26+50	26+75	LT											25					GUARDRAIL END TREATMENT				
26+81	26+55	RT-L1	T 22.5 PIPE PIPE	24 7	75	X					2.85 516	67	55 116	97	E-III	1	1	CULVERT 2 STONE FILL OUTLET PAD				
28+80	28+58	RT-L	T 22.5 PIPE PIPE	48 5	57	X					9.61 1179	99	63 363	306	E-III	1	1	CULVERT 1 INLET & OUTLET STONE FILL				
29+00	29+75	LT												26	l			STONE FILL, TYPE I				
₩ ₩ ₩																						
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<u> </u>																						
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Mt Ro																						
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ROUN	IDING										10.59 415	53	41 30	331								

900

700 9500 14900

80.00 11000

TOTALS

20

20

TOTALS



6 GREEN TREE DRIVE SOUTH BURLINGTON, V 05403-6025 TEL: (802) 878-7661 FAX: (866) 783-7101 www.dubois-king.com

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	QUANTITY UPDATE	ADDITIONAL STATION RANGES	PIPE LENGTHS UPDATED				DESCRIPTION
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	/2	/2	/2				DATE
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	7/12/2019	7/12/2019	7/12/2019				
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	\bigsqcup^{7}						

TOWN OF ROCHESTER, VT 67 SCHOOL STREET ROCHESTER, VT

> ROCHESTER ER 0176(II)

SHEET TITLE

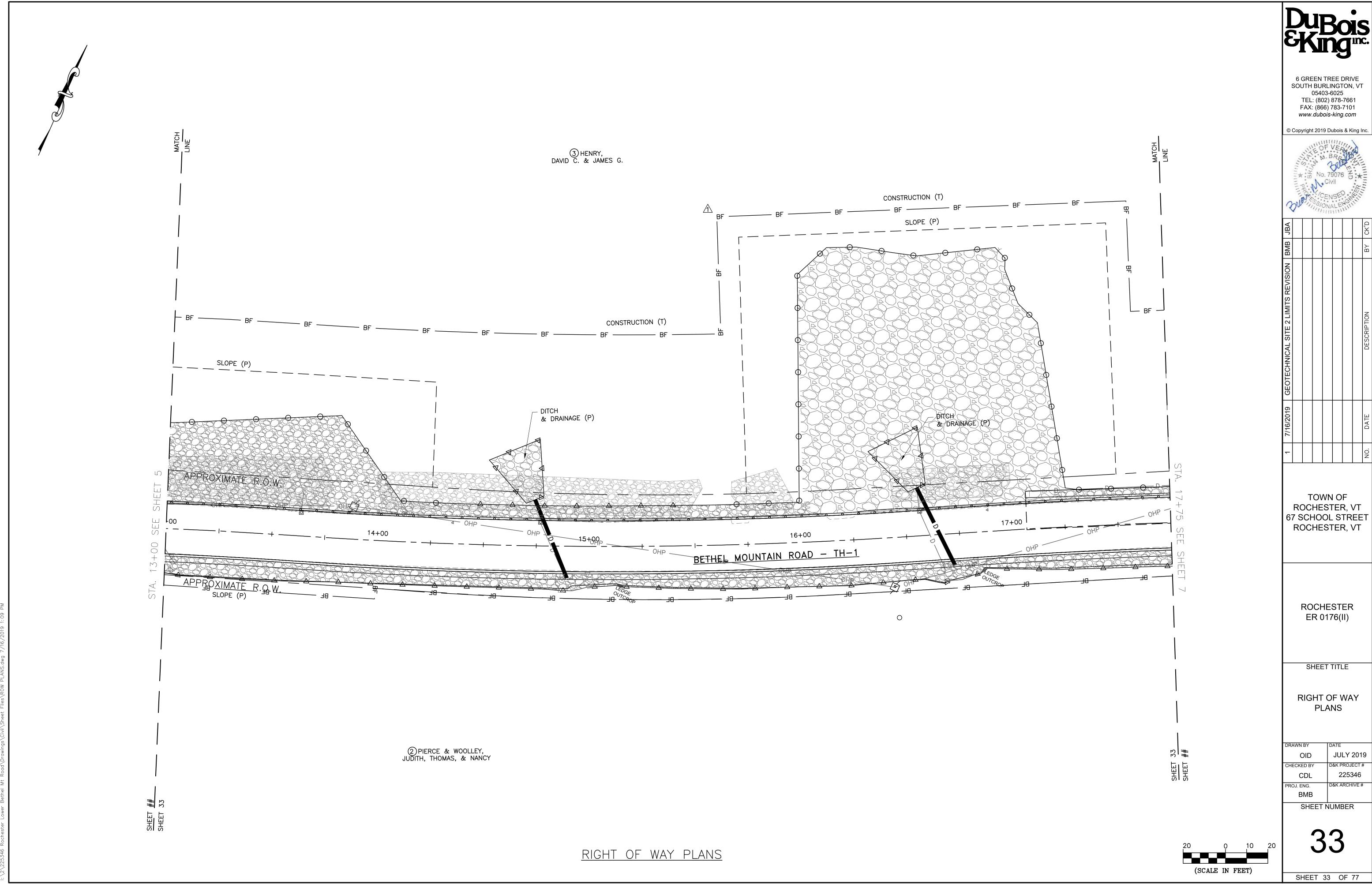
ITEM DETAIL & DRAINAGE

RAWN BY	DATE
TAM	JULY 2019
HECKED BY	D&K PROJECT #
BMB	225346
ROJ. ENG.	D&K ARCHIVE #
BMB	

SHEET NUMBER

28

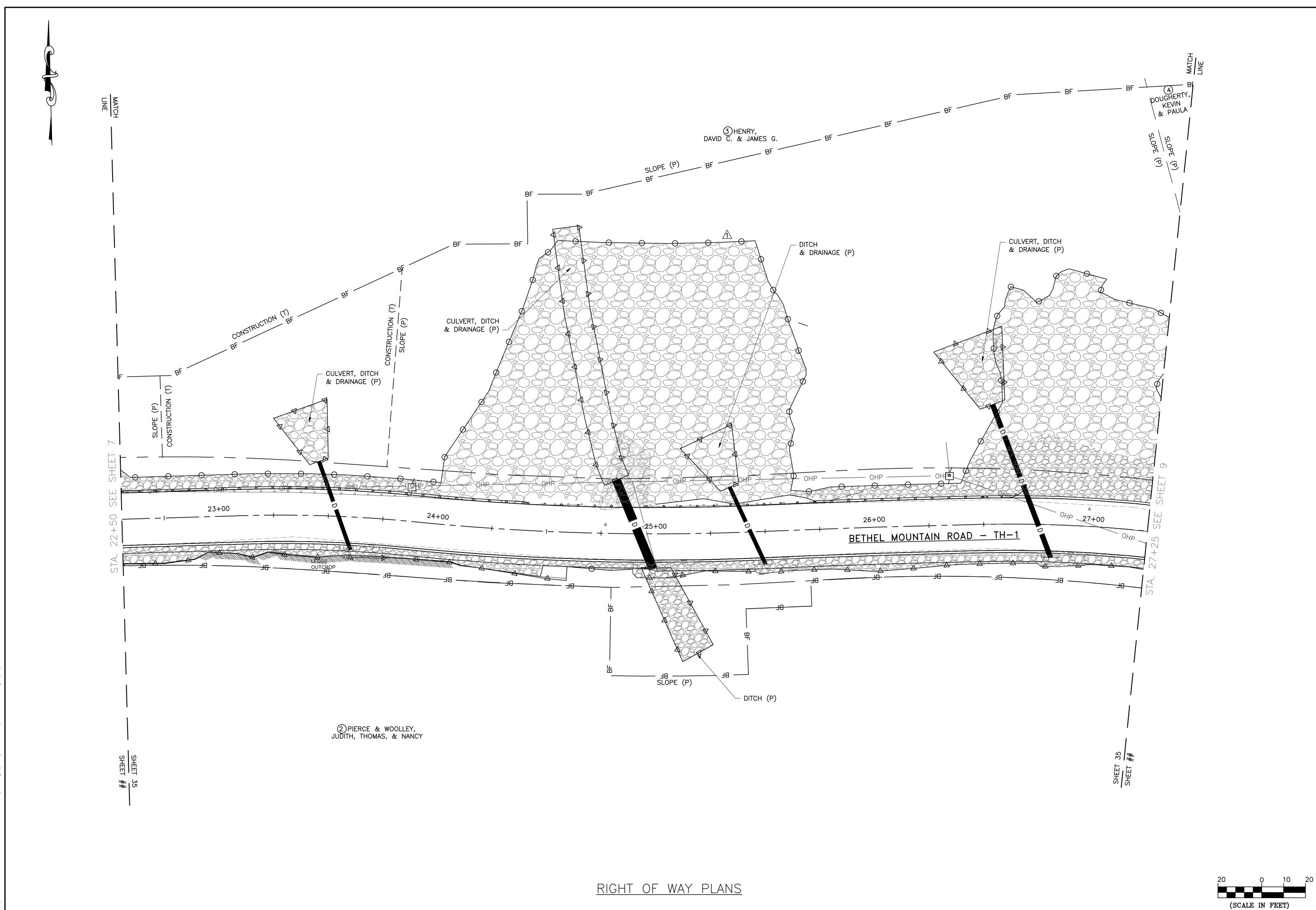
SHEET 28 OF 77





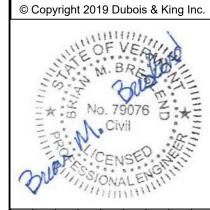
JBA				BY CK'D
BMB				λЯ
7/16/2019 GEOTECHNICAL SITE 2 LIMITS REVISION BMB JBA				DESCRIPTION
7/16/2019				DATE
1				ON.

DRAWN BY	DATE
OID	JULY 2019
CHECKED BY	D&K PROJECT#
CDL	225346
PROJ. ENG.	D&K ARCHIVE #



6 GREEN TREE DRIVE SOUTH BURLINGTON, VT 05403-6025 TEL: (802) 878-7661 FAX: (866) 783-7101

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TOWN OF ROCHESTER, VT 67 SCHOOL STREET ROCHESTER, VT

> ROCHESTER ER 0176(II)

SHEET TITLE

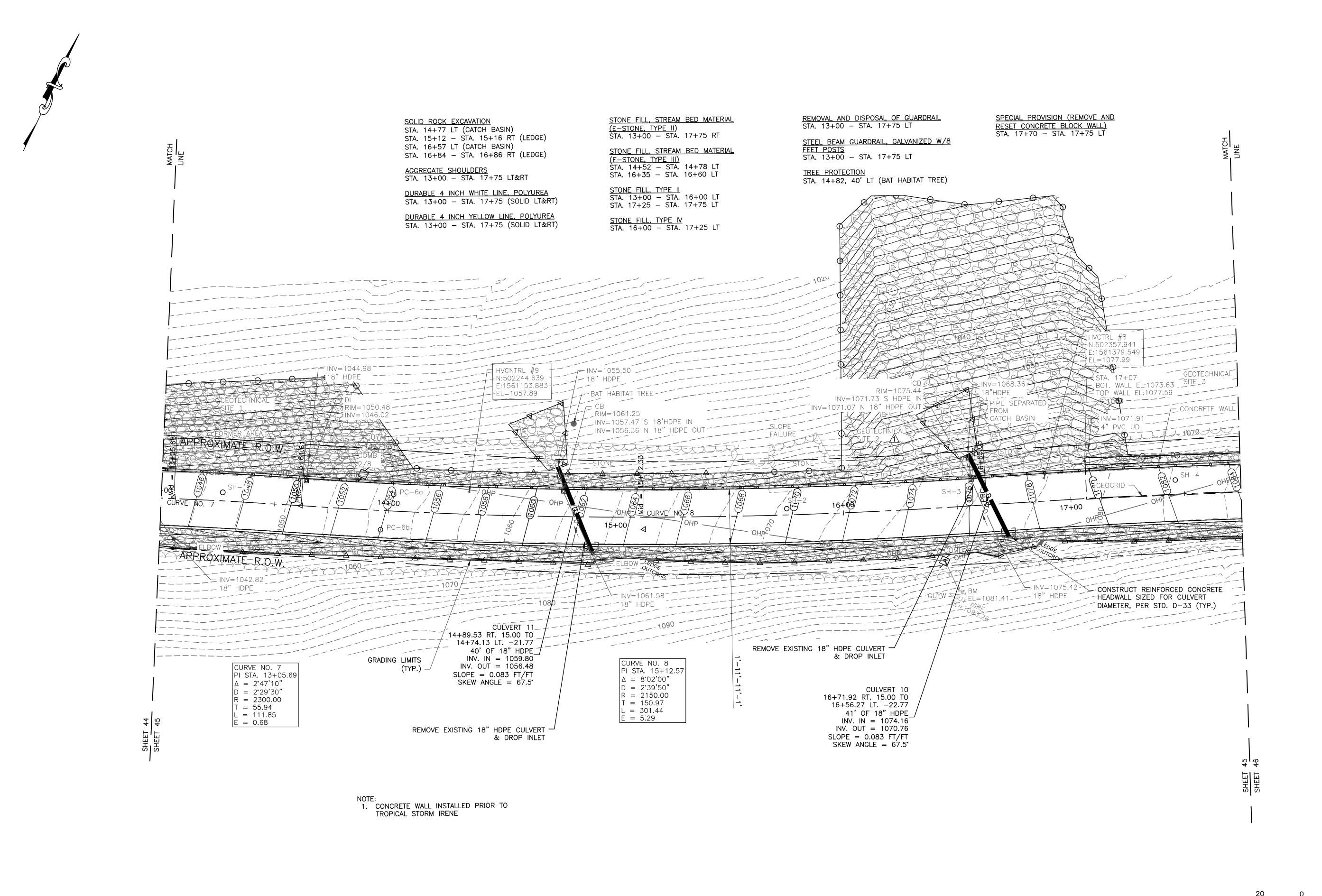
RIGHT OF WAY **PLANS**

DRAWN BY	DATE				
OID	JULY 2019				
CHECKED BY	D&K PROJECT#				
CDL	225346				
PROJ. ENG.	D&K ARCHIVE #				

SHEET NUMBER

35

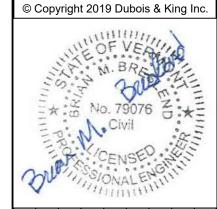
SHEET 35 OF 77





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TOWN OF ROCHESTER, VT 67 SCHOOL STREET ROCHESTER, VT

> ROCHESTER ER 0176(II)

> > SHEET TITLE

ROADWAY PLANS

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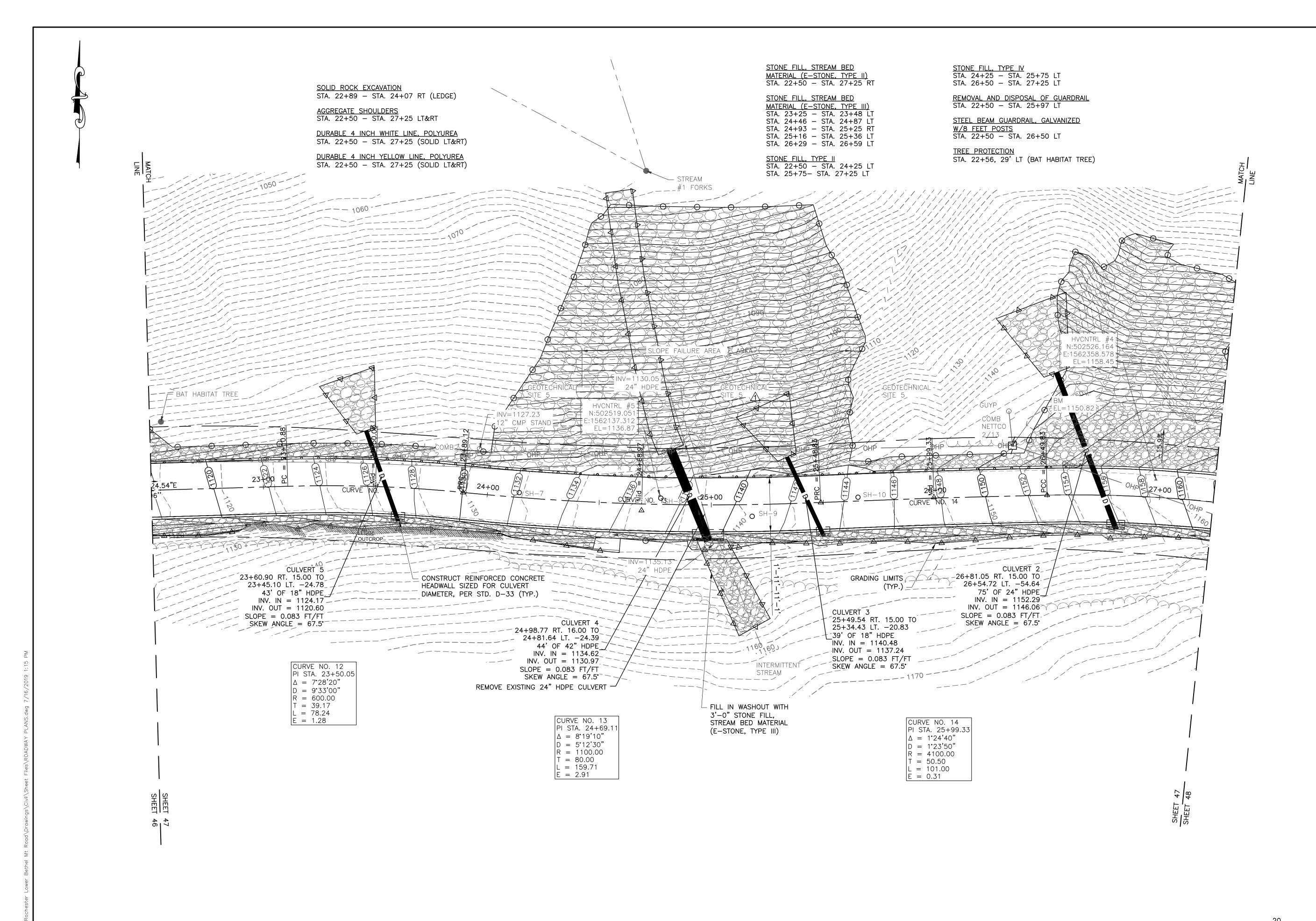
PROJ. ENG. D&K ARCHIVE #

SHEET NUMBER

45

(SCALE IN FEET)
SHEET 45 OF 77

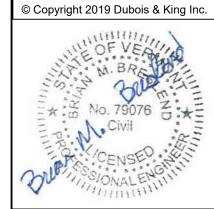
ROADWAY PLANS





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TOWN OF ROCHESTER, VT 67 SCHOOL STREET ROCHESTER, VT

> ROCHESTER ER 0176(II)

> > SHEET TITLE

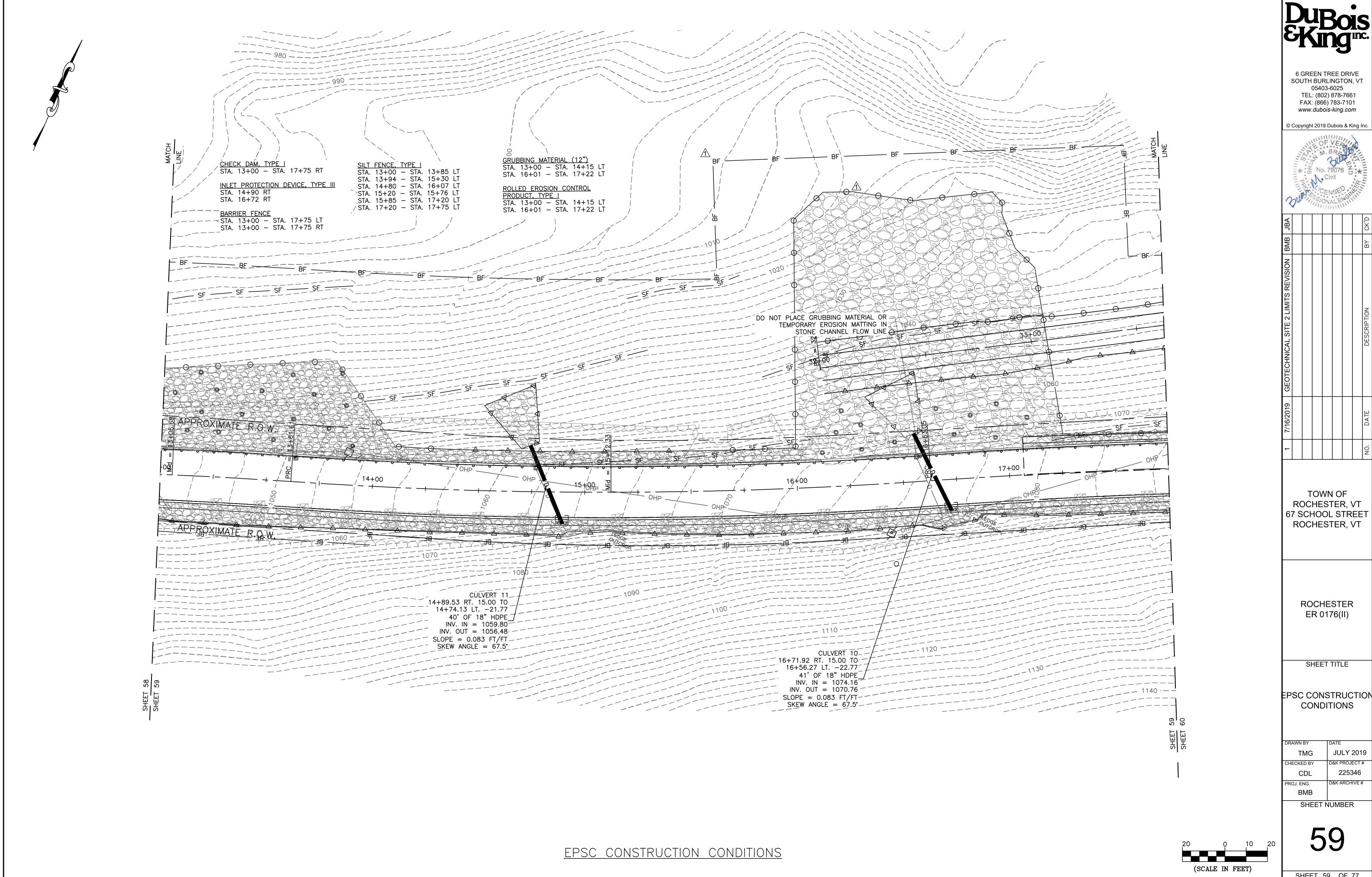
ROADWAY PLANS

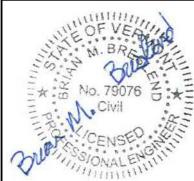
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TMG	JULY 2019
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SHEET 47 OF 77

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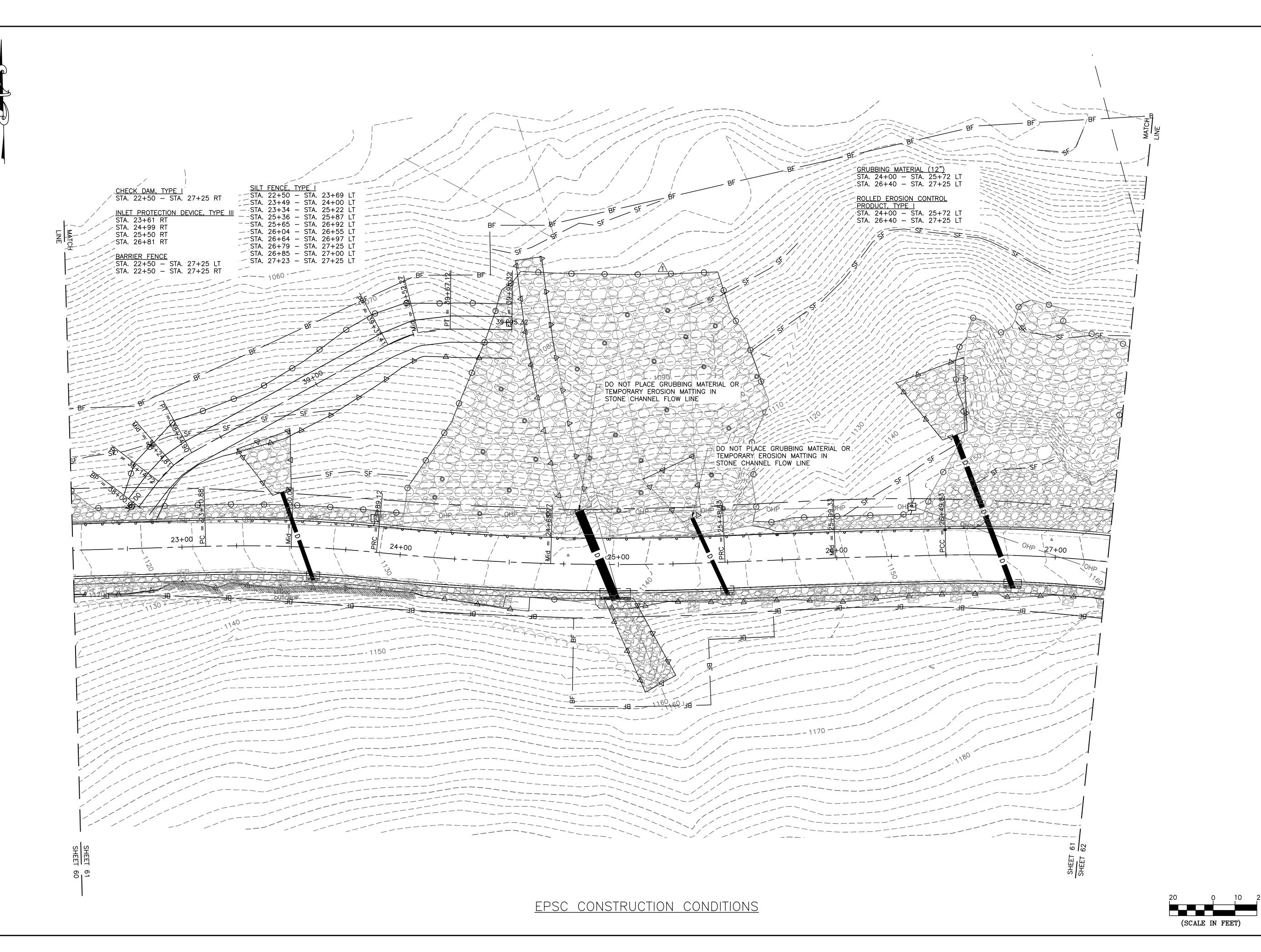




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7/16/2019 GEOTECHNICAL SITE 2 LIMITS REVISION BMB JBA				DESCRIPTION
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TMG	JULY 2019
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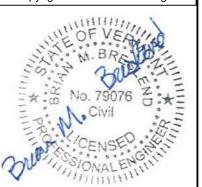
SHEET 59 OF 77





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TOWN OF ROCHESTER, VT 67 SCHOOL STREET ROCHESTER, VT

> ROCHESTER ER 0176(II)

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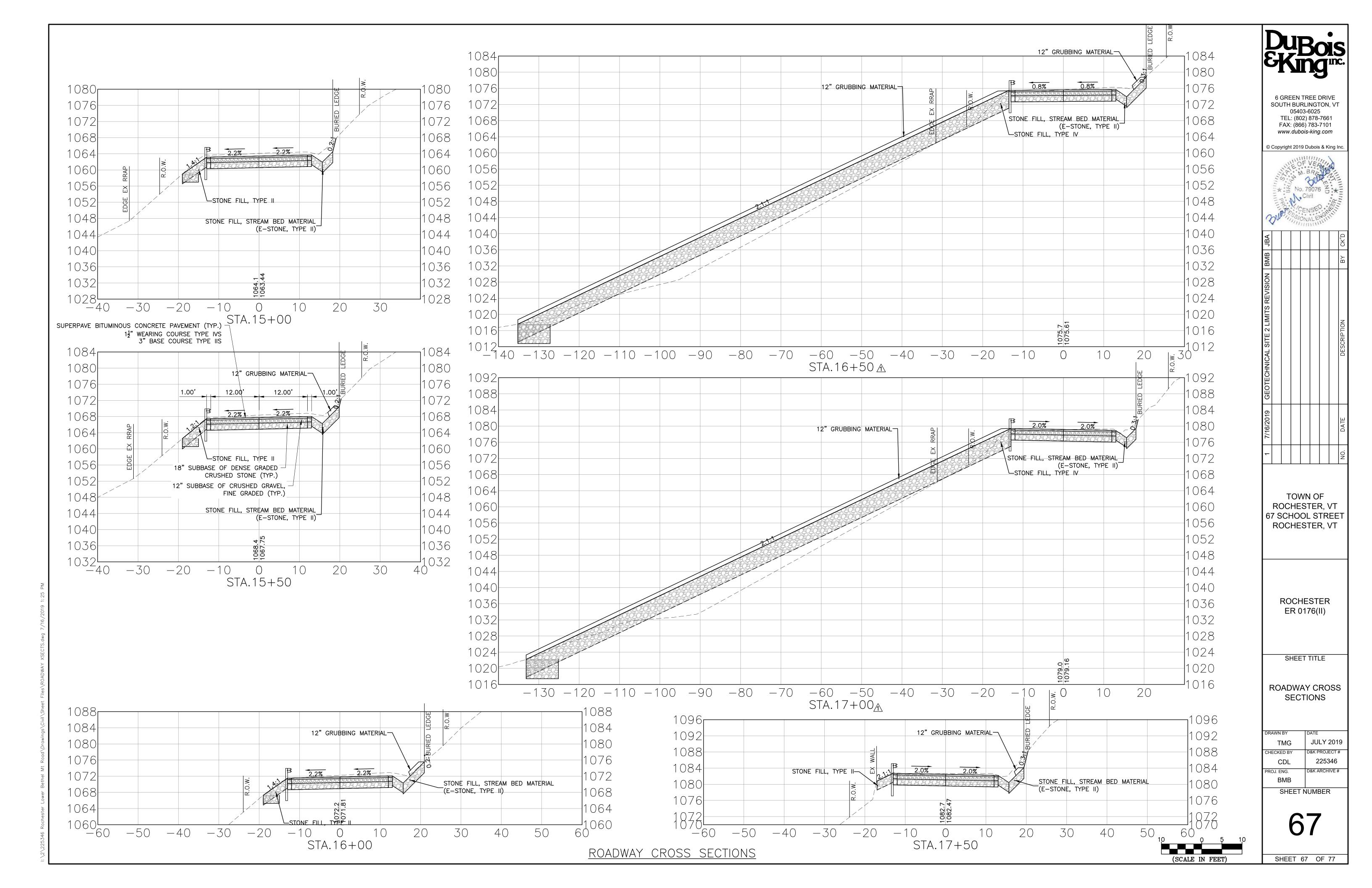
EPSC CONSTRUCTION CONDITIONS

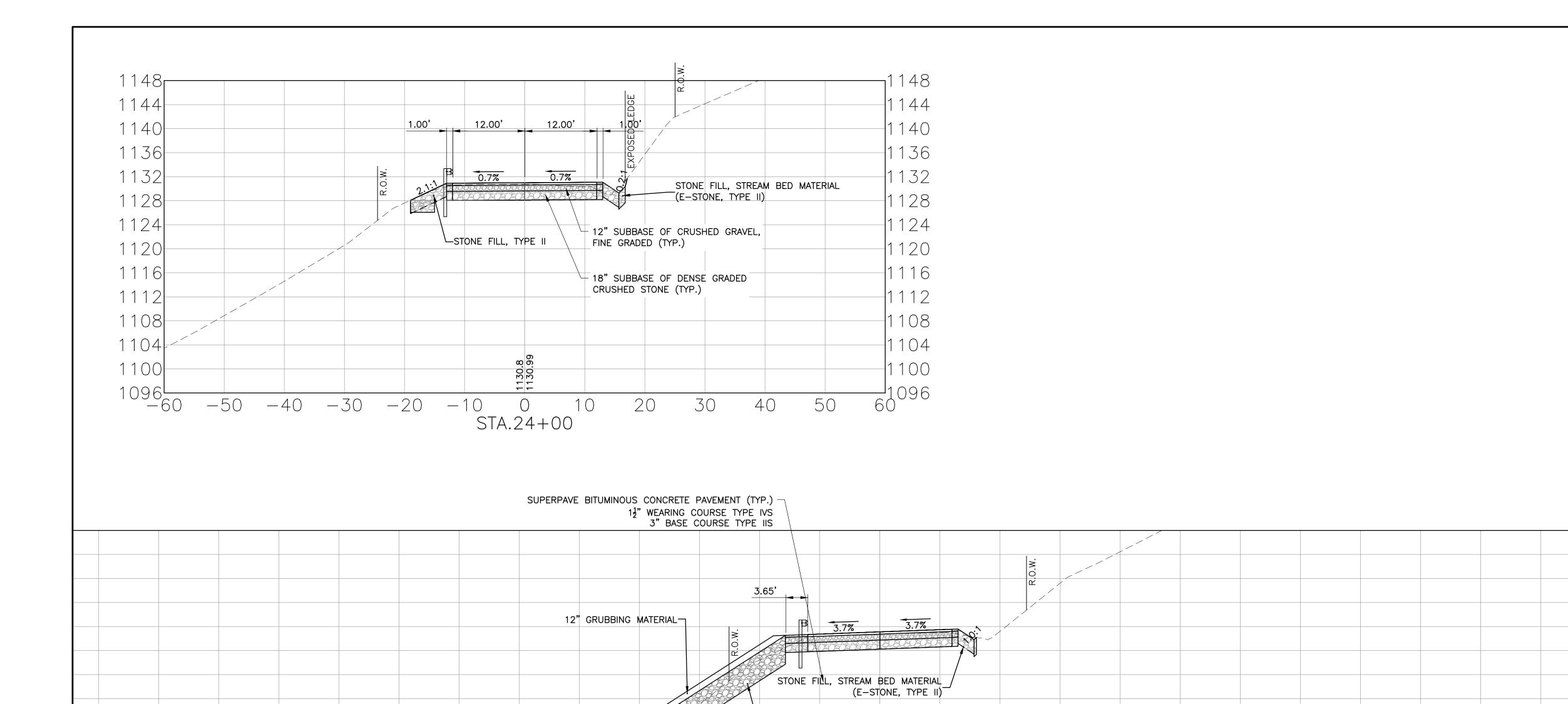
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TMG	JULY 2019
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CDL	225346
PROJ. ENG.	D&K ARCHIVE #

SHEET NUMBER

61

SHEET 61 OF 77



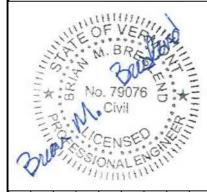


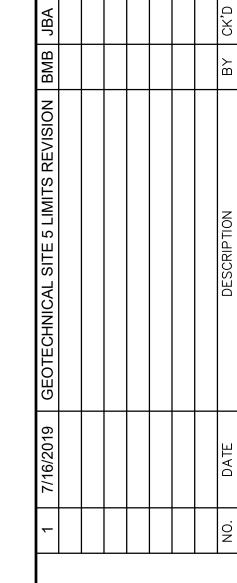
STONE FILL, TYPE IV

-130 -120 -110 -100 -90 -80 -70 -60 -50 -40 -30 -20 -10 0 STA.24+50∧

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TOWN OF ROCHESTER, VT 67 SCHOOL STREET ROCHESTER, VT

> ROCHESTER ER 0176(II)

SHEET TITLE

ROADWAY CROSS SECTIONS

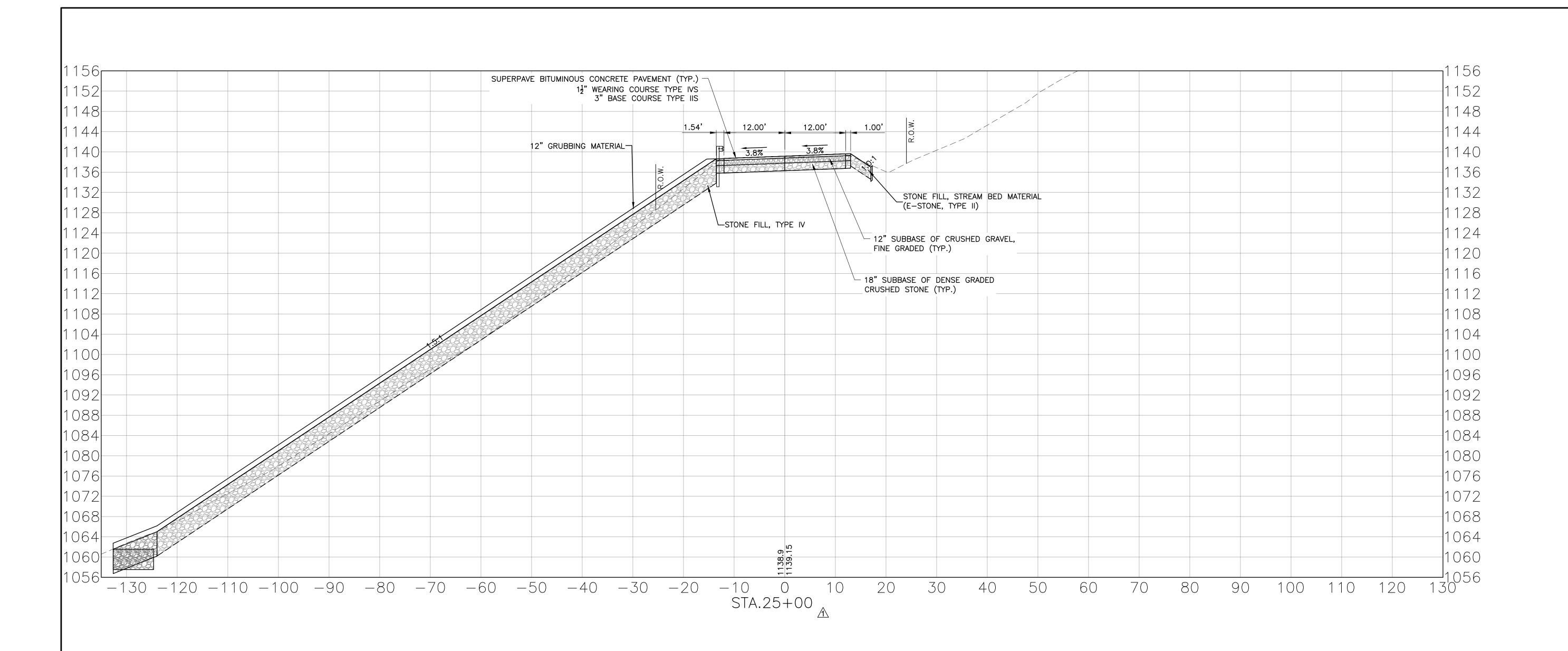
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TMG	JULY 2019
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SHEET NUMBER

SHEET 70 OF 77

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7/16/2019 GEOTECHNICAL SITE 5 LIMITS REVISION BMB JBA					DESCRIPTION
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TOWN OF ROCHESTER, VT 67 SCHOOL STREET ROCHESTER, VT

> ROCHESTER ER 0176(II)

SHEET TITLE

ROADWAY CROSS SECTIONS

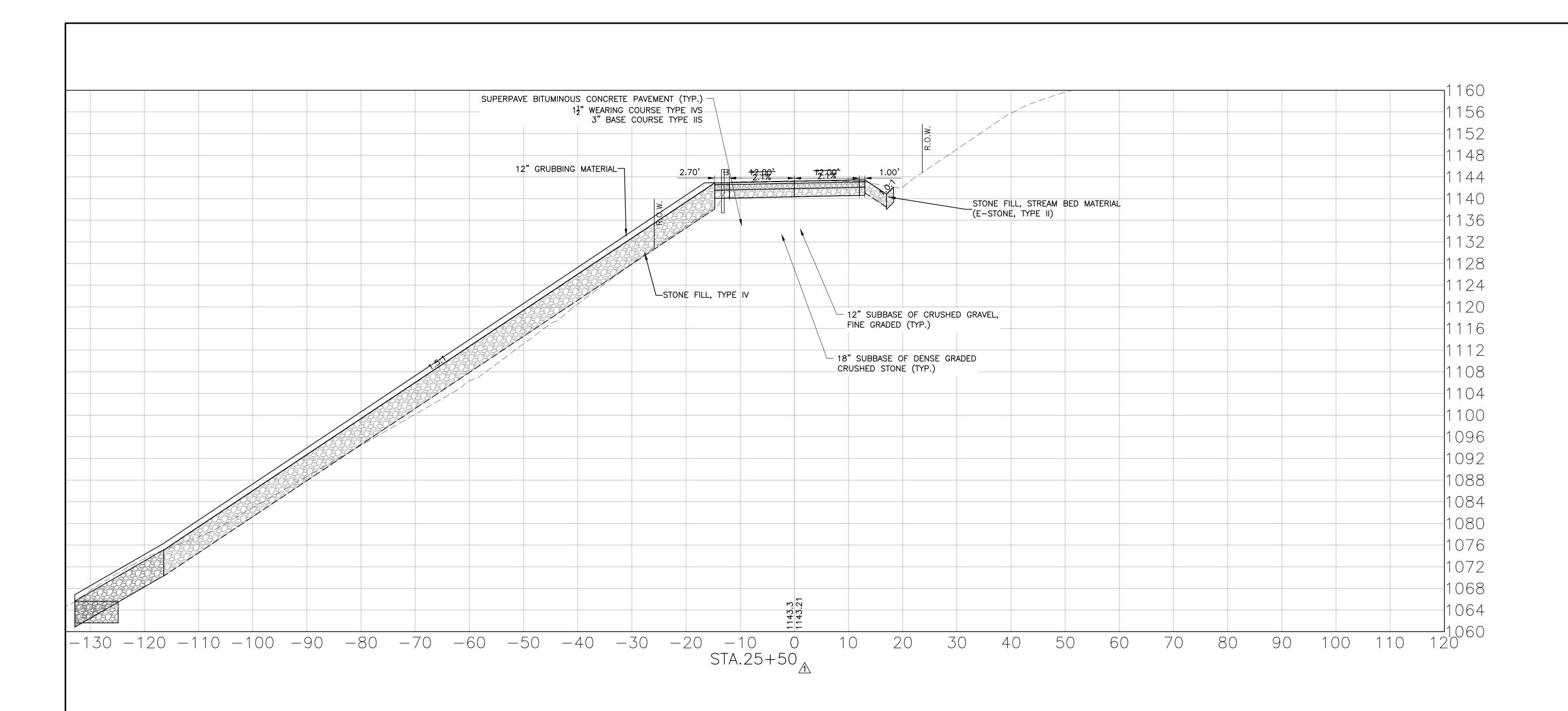
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TMG	JULY 2019
CHECKED BY	D&K PROJECT #
CDL	225346
PROJ. ENG.	D&K ARCHIVE #

SHEET NUMBER

71

SHEET 71 OF 77

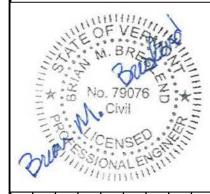
10 0 5 10 (SCALE IN FEET)





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7/16/2019 GEOTECHNICAL SITE 5 LIMITS REVISION BMB JBA				DESCRIPTION
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TOWN OF ROCHESTER, VT 67 SCHOOL STREET ROCHESTER, VT

> ROCHESTER ER 0176(II)

SHEET TITLE

ROADWAY CROSS SECTIONS

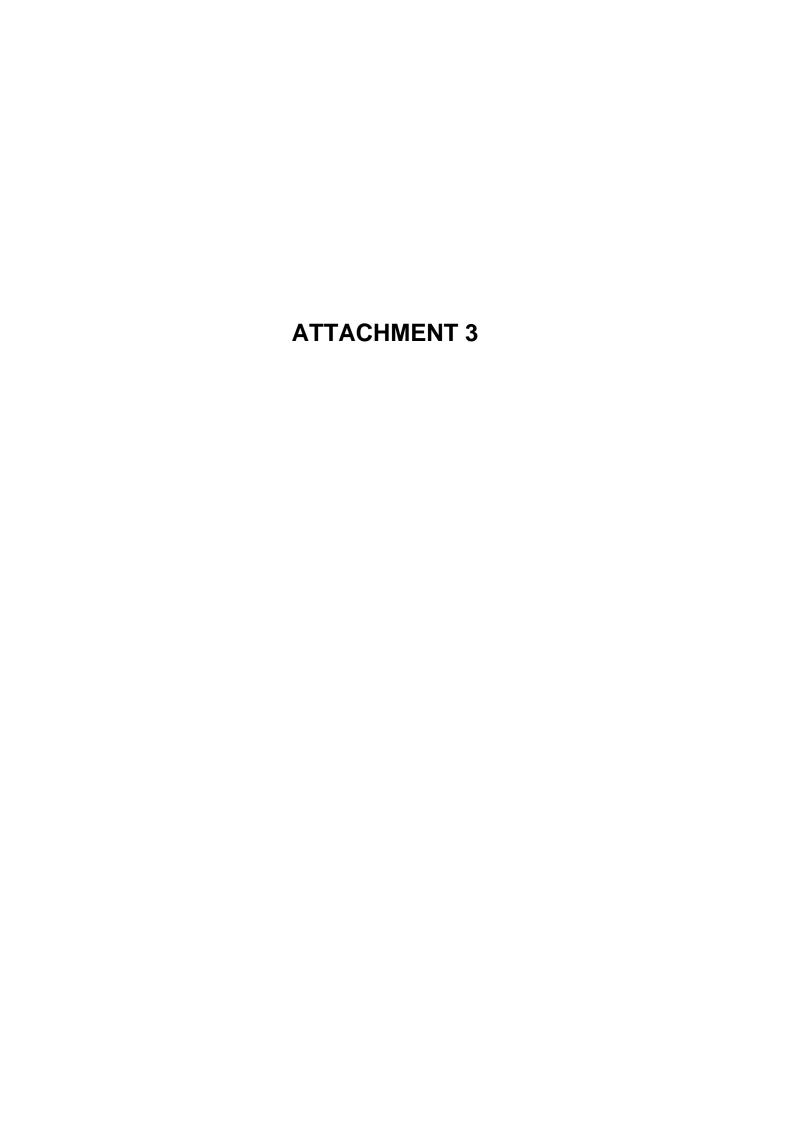
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TMG	JULY 2019
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CDL	225346
PROJ. ENG.	D&K ARCHIVE #

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SHEET NUMBER

SHEET 72 OF 77

ROADWAY CROSS SECTIONS



Bethel Mountain Road Repair ER 0176(11) July 8, 2019 Bid Form

UPDATED VIA ADDENDUM 2 7/17/2019

BID FORM Bethel Mountain Road Repair ER 0176(11)

Proposal of	
(hereinafter called Bidder), organized and existing under the la	ws of the State of
	doing business as
(a corporation, a partnership, of an individual)	

To the Town of Rochester, Vermont (hereinafter called Owner)

The Bidder represents that this bid is genuine and not made in the interest of or on behalf of any undisclosed person, firm or corporation and is not submitted in conformity with any agreement or rules of any group, association, organization or corporation. The bidder has not directly or indirectly induced or solicited any other bidder to submit a false bid. Bidder has not solicited or induced any person, firm or corporation to refrain from bidding and the bidder has not sought by collusion to obtain for himself any advantage over any other bidder or Owner.

It is essential that all forms that require signature as part of the final Bid Submission be filled out and signed or the Bid itself will be invalid:

- Contractors EEO Certification Form CA-109 Appendix A
- Debarment & Non-Collusion Affidavit CA-91 Appendix B
- Worker Classification Compliance Requirement (Prime Contractor) – Appendix C

The undersigned bidder proposed and agrees, if this bid is accepted, to enter into an agreement with Owner to furnish all materials and to complete all work as specified or indicated in the Contract Documents for the contract price and within the contract time indicated in this bid and in accordance with the Contract Documents.

The undersigned bidder, by submission of this bid, certifies that the total base bid does not exceed their total Maximum Dollar Capacity Rating (MDCR) as determined by the Vermont Agency of Transportation on an annual basis.

Bidder hereby agrees to commence Work under this contract on the date of issuance of the Notice to Proceed and that the Final Completion date for this contract is October 11, 2019.

Bidder acknowledges receipt of the following Addenda:

Bid Form UPDATED VIA ADDENDUM 2 7/17/2019

Bidder agrees to perform all the Work described in the Contract Documents for the following schedule of prices. Unqualified bids will not be accepted.

VTrans ITEM #	ITEM	UNIT	QUANTITY	UNIT PRICE	TOTAL PRICE
201.10	Clearing and Grubbing	Includi	ng Individual	Trees and St	tumps
		LS	1	\$	\$
	Unit Price in Words				
203.15	Common Excavation				
		CY	11,200	\$	\$
	Unit Price in Words				
203.16	Solid Rock Excavation				
					\$
	Unit Price in Words				
203.35	Gravel Filter for Slope S				
					\$
	Unit Price in Words				
204.20	Trench Excavation of E				
		CY			\$
	Unit Price in Words				
204.21	Trench Excavation of R				
					\$
	Unit Price in Words				

VTrans ITEM #	ITEM	UNIT	QUANTITY	UNIT PRICE	PRICE
204.22	Trench Excavation of E	Earth, E	xploratory (N	.A.B.I.)	
		CY	1	\$ 75.00	\$ <u>75.00</u>
	Unit Price in Words sev	venty-fi	ve dollars and	d zero cents.	
204.30	Granular Backfill for St	ructure	S		
		CY	700	\$	\$
	Unit Price in Words				
210.10	Coarse-Milling, Bitumir	ous Pa	vement		
		SY	2,800	\$	\$
	Unit Price in Words				
204.00	Cult because of Consolered C		:: O:ll		
301.26	Subbase of Crushed G			Φ.	Φ.
	Lieft Balancia Manda				\$
	Unit Price in Words				
004.05					
301.35	Subbase of Dense Gra			Φ.	Φ
	Lieft Balancia Manda				\$
	Unit Price in Words				
100.10					
402.13	Aggregate Shoulders,		4.40	Φ.	Φ.
	11 '' B ' ' ' W ' I		140	\$	
	Unit Price in Words				
404.65	Emulsified Asphalt				
	 	CWT	50	\$	\$
	Unit Price in Words				•

VTrans ITEM #	ITEM	UNIT	QUANTITY	UNIT PRICE	TOTAL PRICE
406.28	Air Voids Pay Adjustm	ent (N.A	A.B.I.)		
		LU	1	\$ <u>1.00</u>	\$ <u>1.00</u>
	Unit Price in Words	One do	ollar and zero	cents.	
406.29	Mat Density Pay Adjus	•	N.A.B.I.)		
		LU	1	\$ <u>1.00</u>	\$ <u>1.00</u>
	Unit Price in Words	One do	ollar and zero	cents.	
406.35	Superpave Bituminous	: Concre	ete Pavemen	t	
				-	\$
	Unit Price in Words				
406.45	Bituminous Concrete F	Paveme	nt, Surface P	reparation	
		TON	20	\$	\$
	Unit Price in Words				
406.50	Asphalt Price Adjustme				
		LU	1	\$ <u>1.00</u>	\$ <u>1.00</u>
	Unit Price in Words	one dolla	ar and zero c	ents.	
507.12	Reinforcing Steel, Leve	el II			
		LB	11,000	\$	\$
	Unit Price in Words				
541.25	Concrete, Class B				
		CY	80		\$
	Unit Price in Words				

VTrans ITEM #	ITEM	UNIT	QUANTITY	UNIT PRICE	TOTAL PRICE
601.2615	18" CPEP (SL)				
		LF	530	\$	\$
	Unit Price in Words				
601.2620	24" CPEP (SL)				
		LF	170	\$	\$
	Unit Price in Words				
601.2635	42" CPEP (SL)				
		LF	140	\$	\$
	Unit Price in Words				
601.2640	48" CPEP (SL)				
	, ,	LF	60	\$	\$
	Unit Price in Words				
608.30	Power Broom Rental, T	ype I			
	,		20	\$	\$
	Unit Price in Words				
613.06	Stone Fill, Stream Bed	Materia	al (E-Stone, T	ype II)	
		CY	1,900	\$	\$
	Unit Price in Words				
613.06	Stone Fill, Stream Bed	Materia	al (E-Stone, T	ype III)	
		CY	2,300	\$	\$
	Unit Price in Words				

VTrans ITEM #	ITEM	UNIT C	UANTITY	UNIT PRICE	TOTAL PRICE
613.10	Stone Fill, Type I				
		CY			\$
	Unit Price in Words				
613.11	Stone Fill, Type II				
			·		\$
	Unit Price in Words				
613.13	Stone Fill, Type IV				
		CY	7,500	\$	\$
	Unit Price in Words				
619.17	Yielding Marker Posts				
		EA	40	\$	\$
	Unit Price in Words				
621 205	Steel Beam Guardrail,	Galvaniz	ed w/ 8 Fe	at Poets	
021.200	Otool Beam Guararan,				\$
	Unit Price in Words				
624.60	Anchor for Steel Beam	Poil			
	Anchor for Steer Beam		1	\$	\$
	Unit Price in Words				
621.80	Removal and Disposal				
	Hatt Date 1 AV 1				\$
	Unit Price in Words				

VTrans ITEM #	ITEM	UNIT	QUANTITY	UNIT PRICE	TOTAL PRICE
631.16	Testing Equipment, Co	oncrete			
		LS	1	\$	\$
	Unit Price in Words				
631.17	Testing Equipment, Bi	tuminou	ıs		
		LS	1	\$	\$
	Unit Price in Words				_
635.11	Mobilization/Demobiliz	ation			
		LS	1	\$	\$
	Unit Price in Words				
641.11	Traffic Control, All Incl	usive			
		LS	1	\$	\$
	Unit Price in Words				
641.15	Portable Changeable I	Messag	je Sign		
		EA	2	\$	\$
	Unit Price in Words				
646.404	Durable 4 Inch White I	_ine (Po	olyurea)		
		LF	5,400	\$	\$
	Unit Price in Words				
646.414	Durable 4 Inch Yellow	Line (P	olyurea)		
		LF	5,400	\$	\$
	Unit Price in Words				

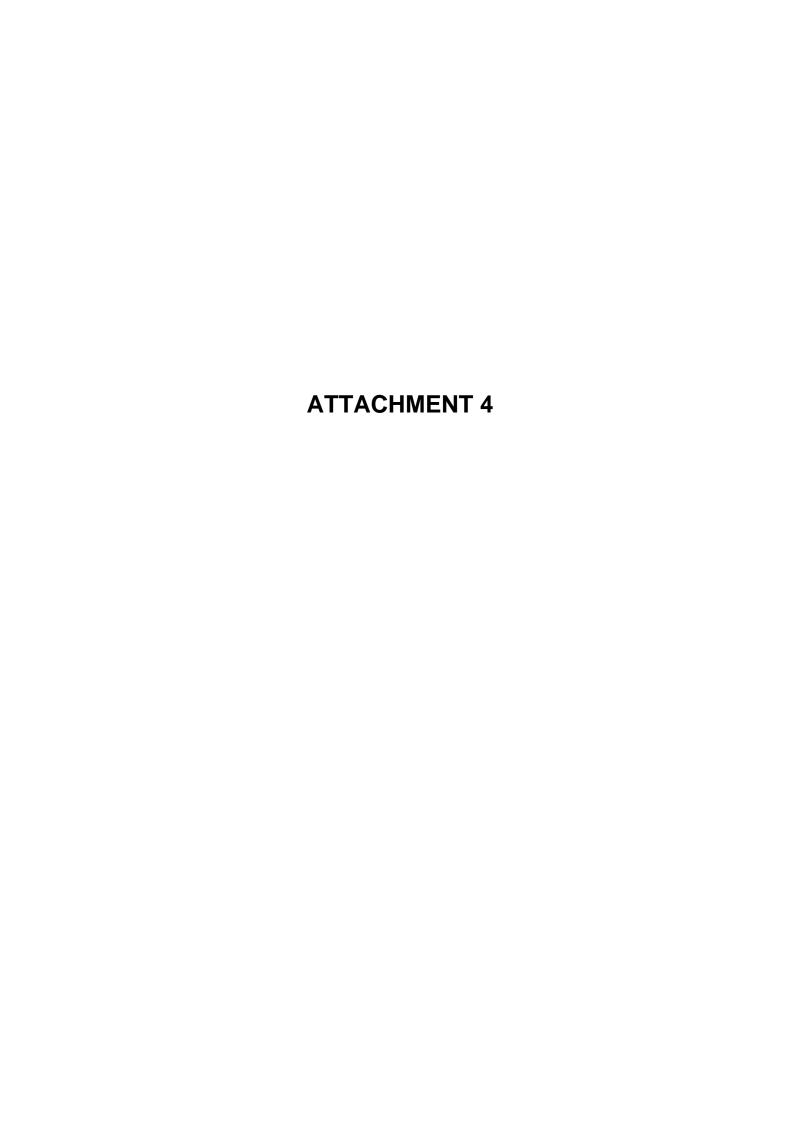
ITEM	UNIT	QUANTITY	UNIT PRICE	TOTAL PRICE
Line Striping Targets	EA	1,080	\$	\$
Unit Price in Words				
Geotextile for Roadbec	-		\$	\$
Unit Price in Words			<u> </u>	
Seed	I D	1 770	c	¢
Unit Price in Words				
Seed, Winter Rye	. 5	4.770		•
Unit Price in Words				
Fertilizer				
Unit Price in Words				
Agricultural Limestone				
Unit Price in Words			-	_ \$
Top Soil				
Unit Price in Words	CY	15	<u></u>	\$
	Line Striping Targets Unit Price in Words Geotextile for Roadbed Unit Price in Words Seed Unit Price in Words Seed, Winter Rye Unit Price in Words Fertilizer Unit Price in Words Top Soil	Line Striping Targets EA Unit Price in Words Geotextile for Roadbed Separative SY Unit Price in Words Seed LB Unit Price in Words Seed, Winter Rye LB Unit Price in Words Fertilizer LB Unit Price in Words TON Unit Price in Words TOP Soil CY	EA	ITEM UNIT QUANTITY PRICE Line Striping Targets EA 1,080 \$

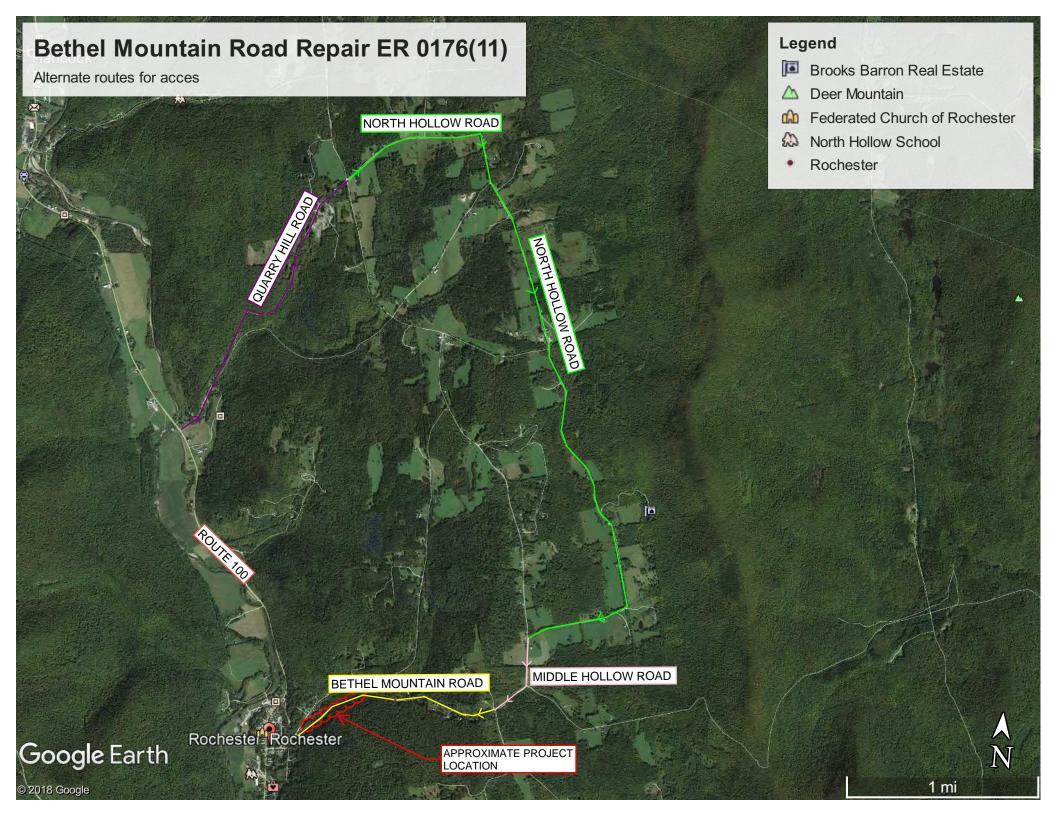
VTrans ITEM #	ITEM	UNIT	QUANTITY	UNIT PRICE	TOTAL PRICE
651.40	Grubbing Material (12"	,			
	Unit Price in Words				\$
653.10	Hay Mulch				
	Unit Price in Words				\$
653.20	Rolled Erosion Control		• •	\$	\$
	Unit Price in Words				
653.25	Check Dam, Type I				
	Unit Price in Words				\$
653.35	Stabilized Construction	n Entrar	nce		
					\$
	Unit Price in Words				
653.42	Inlet Protection Device	, Type	III		
	Unit Price in Words	CY	210	\$	\$
653.476	Silt Fence, Type II	LF	1,500	\$	\$
	Unit Price in Words			_	

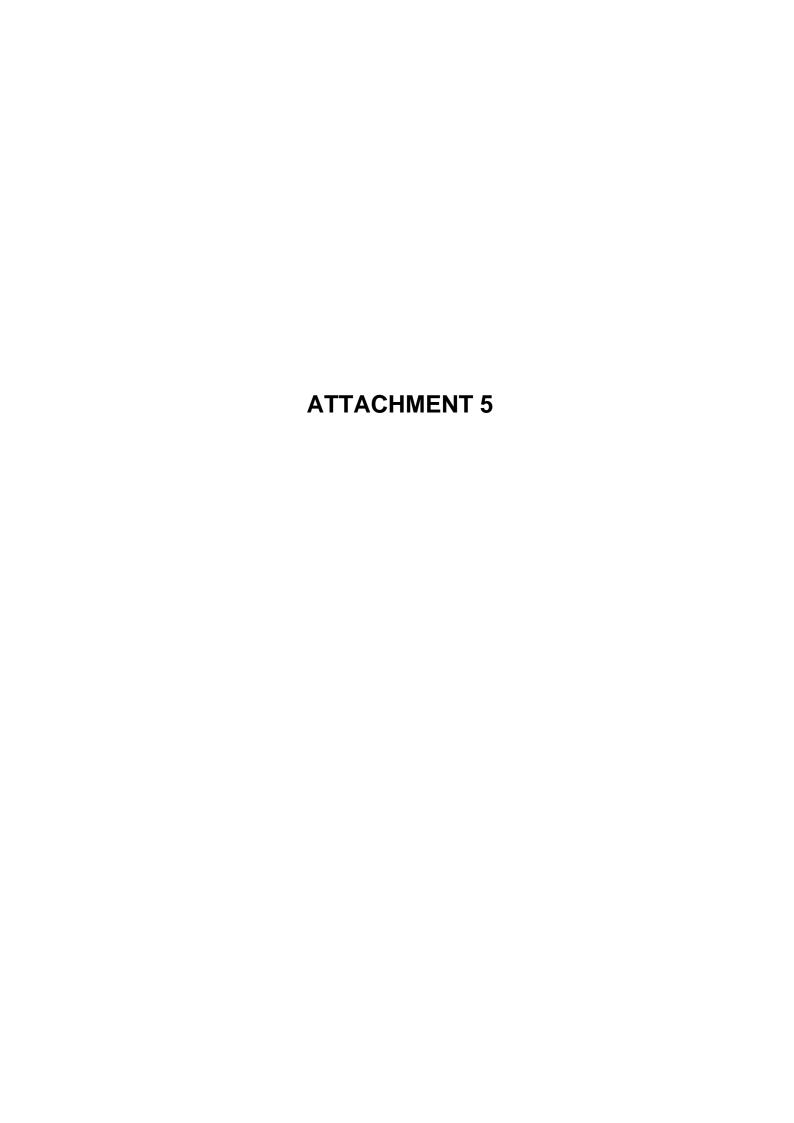
VTrans ITEM #	ITEM	UNIT	QUANTITY	UNIT PRICE	TOTAL PRICE
653.50	Barrier Fence	IE	6 500	¢	_ \$
	Unit Price in Words				
656.85	Tree Protection				
		LS	1	\$	_ \$
	Unit Price in Words				
675.341	Square Tube Sign Pos	t and A	nchor		
		LF	30	\$	_ \$
	Unit Price in Words				
675.50	Removing Signs				
		EA	2	\$	_ \$
	Unit Price in Words				
675.60	Resetting Signs				
		EA	2	\$	_ \$
	Unit Price in Words				
676.10	Delineators with Steel	Posts			
		EA	1	\$	_ \$
	Unit Price in Words				
690.50	Price Adjustment, Fuel	(N.A.P	3.1)		
20.00	rajasamona raoi	LU	1	\$ <u>1.00</u>	\$ <u>1.00</u>
Unit Price	e in Words One dolla	r and z	ero cents.		

VTrans ITEM #	ITEM	UNIT	QUANTITY	UNIT PRICE	TOTAL PRICE
900.645	Special Provision (Acc	ess Ro	ad and Stagir	ng Area)	
		LS	1	\$	_ \$
	Unit Price in Words				
900.645	Special Provision (Ren	nove ar	nd Reset Con	crete Wall)	
		LS	1	\$	_ \$
	Unit Price in Words				
			Total Bas	e Bid \$	
Total Bas	e Bid Written				
-					
Base Bid The abov	e unit prices shall inclue e, etc. to cover the fi	de all la	abor, material	s, removal, o	verhead, profit,
municipal	tting this bid, a bidder colity any errors or inconsi ions, or proposal docun	istency	discovered in	the plans, pr	oposal,
THE ABO	OVE PROPOSAL IS HE	REBY I	RESPECTFU	LLY SUBMIT	TED BY:
Contracto	Dr.				
Ву					
Title					

Business Address	
City	State
Date	
ATTEST	
LS = lump sum EA = each SY = square yard SF = square feet CWT = hundredweight GAL = gallon HR = hour	LU = lump unit CY = cubic yard LF = linear foot TON = ton MGAL = thousand gallons LB = pound







DuBois EKing	☐ Bedford, NH 03110 ☐ Randolph, VT 05060 ❤ S. Burlingt., VT 05403 ☐ Springfield, VT 05156	(603) 883-0463 (802) 728-3376 (802) 878-7661 (802) 591-4326
Engineering • F	Planning • Developme	nt • Management

ITEM NO. 201.10 CLEARING AND GRUBBING, INCLUDING INDIVIDUAL TREES AND STUMPS

1.0 LS

AREA OF DISTURBANCE = 307000.00 SF

= 7.05 AC

TOTALS 1 LS



W.	

 □
 Bedford, NH 03110
 (603) 883-0463

 □
 Randolph, VT 05060
 (802) 728-3376

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 S. Burlingt., VT 05403
 (802) 878-7661

 □
 Springfield, VT 05156
 (802) 591-4326
 Bedford, NH 03110

(603) 883-0463

SCALE:

Engineering • Planning • Development • Management

JOB z225346 Rochester Lower Bethel Mt. Road SHEET NO. ______ OF _____ CALCULATED BY: TAM DATE: 7/12/19 _____DATE: ____ CHECKED BY:

ITEM NO. 203.15 COMMON EXCAVATION

SEE X-SEC IN QTY-CALC.DWG

Station	Area (ft^2)	Avg Area (ft^2)	Volume (CY)	
3+24	8.0			
3+50	9.4	8.7	8.0	
3+30		14.3	26.0	
4+00	19.2	19.5	36.0	
4+50	19.9			
5+00	22.9	21.4	40.0	
	25.4	24.0	44.0	
5+50	25.1	25.6	47.0	
6+00	26.1	23.5	43.0	
6+50	20.8			
7+00	12.5	16.7	31.0	
7.00		15.8	29.0	
7+50	19.1	17.9	33.0	
8+00	16.8	40.0	25.0	
8+50	20.5	18.6	35.0	
0.00	19.1	19.8	37.0	
9+00	10.1	22.1	41.0	
9+50	25.2	75.5	140.0	
10+00	125.8	. 5.5		



19+00

221.1

Bedford, NH 03110 Randolph, VT 05060 S. Burlingt., VT 05403 Springfield, VT 05156 (603) 883-0463 (802) 728-3376 (802) 878-7661 (802) 591-4326

SCALE:

ITEM NO.	203.15	COMMON EX			
		104.1	193.0		
10+50	82.4				
		60.4	112.0		
11+00	38.5				
		37.4	69.0		
11+50	36.3				
		54.5	101.0		
12+00	72.7				
		137.4	254.0		
12+50	202.1				
		169.6	314.0		
13+00	137.1				
		139.4	258.0		
13+50	141.7				
		154.4	286.0		
14+00	167.0				
		152.4	282.0		
14+50	137.8				
		138.0	256.0		
15+00	138.2				
		138.7	257.0		
15+50	139.1				
		135.6	251.0		
16+00	132.0				
		187.0	346.0		
16+50	241.9				
		248.0	459.0		
17+00	254.0				
		185.7	344.0		
17+50	117.5				
		129.0	239.0		
18+00	140.4				
		177.6	329.0		
18+50	214.8				
		218.0	404.0		



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(603) 883-0463 (802) 728-3376 (802) 878-7661 (802) 591-4326

SCALE:

 JOB
 z225346 Rochester Lower Bethel Mt. Road

 SHEET NO.
 OF

 CALCULATED BY:
 TAM
 DATE:
 7/12/19

 CHECKED BY:
 DATE:
 DATE:

ITEM NO.	203.15	COMMON EX	CAVATION		
TILIW NO.	200.10	198.2	367.0		
19+50	175.2	190.2	307.0		
15130	175.2	143.9	266.0		
20+00	112.6	143.9	200.0		
20.00	112.0	110.1	204.0		
20+50	107.6	110.1	204.0		
20 00	107.0	118.3	219.0		
21+00	129.0	110.0	210.0		
		122.3	226.0		
21+50	115.5				
		124.8	231.0		
22+00	134.0				
		116.4	215.0		
22+50	98.7				
		93.9	174.0		
23+00	89.0				
		89.0	165.0		
23+50	88.9				
		88.3	164.0		
24+00	87.7				
		178.3	330.0		
24+50	268.8				
		344.0	637.0		
25+00	419.2				
		365.9	678.0		
25+50	312.6				
		214.5	397.0		
26+00	116.4				
		111.0	206.0		
26+50	105.6				
		199.5	369.0		
27+00	293.4				
07		194.1	359.0		
27+50	94.8				
00.00	00.0	92.8	172.0		
28+00	90.8				



V	

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JOB	z225346 Rochester Lower Bethel Mt. Road							
SHEET	NO			OF				
CALCULATED BY:			TAM	DATE:	7/12/19			
CHECK	ED BY:			DATE:				

Engine	ering 🏚 Planning	g • Development •	CHECK				
				SCALE	i:		
ITEM NO.	203.15	COMMON EXCA	VATION				
HEWING.	203.15						
		90.6	168.0				
28+50	90.4						
		76.7	142.0				
29+00	63.0						
		40.1	74.0				
29+50	17.1						
		8.6	16.0				
30+00	0.0						
		0.0	0.0				
30+50	0.0						
	0.0	0.0	0.0				
31+00	0.0						
		0.0	0.0				
31+50	0.0						
		0.0	0.0				
32+00	0.0						
		Subtotal =	11115.0				
		Rounding =	85.0	0.76%			
		Total =	11200.0				
TO	OTALS				11200		CY
						Print Date =	16-Jul-19

DuBois King	□ Bedford, NH 03110 □ Randolph, VT 05060 □ S. Burlingt., VT 05403 □ Springfield, VT 05156	(603) 883-0463 (802) 728-3376 (802) 878-7661 (802) 591-4326
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	JOB <u>z225346 Rochester Lower Bethel Mt. Road</u>								
	SHEET N	O		OF					
	CALCULA	ATED I	BY: _	B. BRESLE	ND DATE:	5-23-19			
	CHECKE	D BY:		BEG	DATE:	6-11-19			
_	SCALE:								

ITEM NO. 203.16 SOLID ROCK EXCAVATION

COMMON EXCAVATION TOTAL = 11200 CY % OF ROCK = 5%

Subtotal = 560.0

Rounding = 0

Total = 560.0

TOTALS 560 CY



26+00

0.0

□ Bedford, NH 03110
□ Randolph, VT 05060
✓ S. Burlingt., VT 05403
□ Springfield, VT 05156

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 JOB
 z225346 Rochester Lower Bethel Mt. Road

 SHEET NO.
 1
 OF

 CALCULATED BY:
 TAM
 DATE:
 7/12/19

 CHECKED BY:
 DATE:
 SCALE:

				SCALE:					
ITEM NO	203.350	0 GRAVEL FILTE	ER FOR SLOPE STABIL	ZATION					
	ASSUME IT IS USED AT GEOTECHNICAL SITES 2 AND 5 SEE X-SEC IN QTY-CALC.DWG								
Station	Area (ft^2)	Avg Area (ft^2)	Volume (CY)						
GEOTECHN	ICAL SITE 2								
15+00	0.0	0.0	0.0						
15+50	0.0								
16+00	0.0	0.0	0.0						
16+50	92.0	46.0	85.0						
17+00	90.9	91.5	169.0						
17+50	0.0	45.4	84.0						
OFOTFOLIN	IOAL OITE 5								
GEOTECHN	ICAL SITE 5								
23+50	0.0	0.0	0.0						
24+00	0.0								
24+50	89.2	44.6	83.0						
25+00	89.5	89.4	166.0						
25+50	88.8	89.2	165.0						
20.100	0.0	44.4	82.0						



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JOB	z225346 Rochester Lower Bethel Mt. Road					
SHEET N	IO	1	OF			
CALCUL	ATED BY:	TAM	DATE:	7/12/19		
CHECKE	D BY:		DATE:			
SCALE:						

ITEM NO.	203.350	GRAVEL FILTER		STABILIZATION				
		27.5	51.0					
26+50	55.0							
		55.0	102.0					
27+00	55.0							
		55.0	102.0					
27+50	55.0							
		27.5	51.0					
28+00	0.0		01.0	4440.00				
20.00	0.0			1140.00				
		Subtotal =	1140.0 C	V				
		Rounding =	60.0 C					
		Total =	1200.0 C	Y				
TOT	ALS				1200			CY
						Print Date	=	16-Jul-19



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 JOB
 z225346 Rochester Lower Bethel Mt. Road

 SHEET NO.
 1
 OF
 1

 CALCULATED BY:
 TAM
 DATE:
 6-17-19

 CHECKED BY:
 DATE:
 SCALE:
 SCALE:

ITEM NO.	204.20	TRENCH EXCAVATION OF EARTH

Mainline culverts

SEE CULVERT

CULVERT NO. 1

Pipe: Length: 55 FT

Trench width: 7.0 ft
X SECTION AREA 100% 323.2 SF
X SECTION AREA 150% 0.0 SF

Volume: 84.0 cy

CULVERT NO. 2 Length: 74 FT

Pipe:

Trench width: 5.0 ft

X SECTION AREA 100% 334.0 SF

X SECTION AREA 150% 0.0 SF

Volume: 62.0 cy

CULVERT NO. 3 Length: 38 FT

Pipe:

Trench width: 4.5 ft

X SECTION AREA 100% 138.0 SF

X SECTION AREA 150% 0.0 SF

Volume: 23.0 cy

CULVERT NO. 4 Length: 42 FT

Pipe:

Trench width: 6.5 ft X SECTION AREA 100% 202.0 SF



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 JOB
 z225346 Rochester Lower Bethel Mt. Road

 SHEET NO.
 1
 OF
 1

 CALCULATED BY:
 TAM
 DATE:
 6-17-19

 CHECKED BY:
 DATE:
 SCALE:
 SCALE:

ITEM NO.	204.20	TRENCH EXCAVATION OF EARTH

X SECTION AREA 150% 0.0 SF

Volume: 49.0 cy

CULVERT NO. 5 Length: 42 FT

Pipe:

Trench width: 4.5 ft

X SECTION AREA 100% 158.0 SF

X SECTION AREA 150% 0.0 SF

Volume: 26.0 cy

CULVERT NO. 6 Length: 41 FT

Pipe:

Trench width: 4.5 ft

X SECTION AREA 100% 168.0 SF

X SECTION AREA 150% 0.0 SF

Volume: 28.0 cy

CULVERT NO. 7 Length: 42 FT

Pipe:

Trench width: 4.5 ft

X SECTION AREA 100% 205.0 SF

X SECTION AREA 150% 0.0 SF

Volume: 34.0 cy

CULVERT NO. 8 Length: 42 FT

Pipe:

Trench width: 4.5 ft

X SECTION AREA 100% 179.0 SF

X SECTION AREA 150% 0.0 SF



Volume:

Engineering • Planning • Development • Management

z225346 Rochester Lower Bethel Mt. Road JOB _____1 OF ____1 SHEET NO. CALCULATED BY: TAM DATE: 6-17-19 _____DATE: CHECKED BY:

				SCAL	
ITEM NO. 204.20 TRENCH I	EXCAVA	TION O	F EARTH		
Volume :			30.0	су	
CULVERT NO. 9					Length: 41 FT
Pipe :					
Trench width:	4.5	ft			
X SECTION AREA 100%	175.0	SF			
X SECTION AREA 150%	0.0	SF			
Volume :			29.0	су	
CULVERT NO. 10					Length: 40 FT
Pipe :					
Trench width:	4.5	ft			
X SECTION AREA 100%	158.0	SF			
X SECTION AREA 150%	0.0	SF			
Volume :			26.0	су	
CULVERT NO. 11					Length: 39 FT
Pipe :					
Trench width:	4.5	ft			
X SECTION AREA 100%	168.0	SF			
X SECTION AREA 150%	0.0	SF			
Volume :			28.0	су	
CULVERT NO. 12					Length: 38 FT
Pipe :					
Trench width :	4.5	ft			
X SECTION AREA 100%	137.0	SF			
X SECTION AREA 150%	0.0	SF			

23.0 cy



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Engineering • Planning • Development • Management

ITEM NO. 204.20 TRENCH EXCAVATION OF EARTH

CULVERT NO. 13 Length: 45 FT

Pipe:

Trench width: 5.0 ft

X SECTION AREA 100% 217.0 SF

X SECTION AREA 150% 0.0 SF

Volume: 40.0 cy

CULVERT NO. 14 Length: 43 FT

Pipe:

Trench width: 6.5 ft

X SECTION AREA 100% 235.0 SF

X SECTION AREA 150% 0.0 SF

Volume: 57.0 cy

CULVERT NO. 15 Length: 39 FT

Pipe:

Trench width: 4.5 ft

X SECTION AREA 100% 133.0 SF

X SECTION AREA 150% 0.0 SF

Volume: 22.0 cy

CULVERT NO. 16 Length: 39 FT

Pipe:

Trench width: 5.0 ft

X SECTION AREA 100% 153.0 SF

X SECTION AREA 150% 0.0 SF

Volume: 28.0 cy

CULVERT NO. 17 Length: 39 FT

Pipe:



Engineering • Planning • Development • Management

JOB z225346 Rochester Lower Bethel Mt. Road _____1 OF ____1 SHEET NO. CALCULATED BY: TAM DATE: 6-17-19 _____DATE: CHECKED BY:

Trench width:	4.5	ft			
X SECTION AREA 100%	135.0	SF			
X SECTION AREA 150%	0.0	SF			
Volume :			23.0	су	
CULVERT NO. 18					Length: 45 FT
Pipe :					
Trench width:	6.5	ft			
X SECTION AREA 100%	266.0	SF			
X SECTION AREA 150%	0.0	SF			
Volume :			64.0	су	
CULVERT NO. 19					Length: 37 FT
Pipe :					
Trench width:	4.5	ft			
X SECTION AREA 100%	144.0	SF			
X SECTION AREA 150%	0.0	SF			
Volume :			24.0	су	
CULVERT NO. 20					Length: 38 FT
Pipe :					
Trench width:	4.5	ft			
X SECTION AREA 100%	153.0	SF			
X SECTION AREA 150%	0.0	SF			
Volume :			26.0	су	
			26.0	су	



Bedford, NH 03110

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z225346 Rochester Lower Bethel Mt. Road JOB _____1 OF ____1 SHEET NO. CALCULATED BY: TAM DATE: 6-17-19 _____DATE: CHECKED BY: SCALE:

ITEM NO.	204.20	TRENCH	EXCAVATION OF I	EARTH			
1	48	48	24	15.41	CY	99.41	CY
2	24	36	18	5.48	CY	67.48	CY
3	18	36	18	3.89	CY	26.89	CY
4	42	48	24	12.96	CY	61.96	CY
5	18	36	18	3.89	CY	29.89	CY
6	18	36	18	3.89	CY	31.89	CY
7	18	36	18	3.89	CY	37.89	CY
8	18	36	18	3.89	CY	33.89	CY
9	18	36	18	3.89	CY	32.89	CY
10	18	36	18	3.89	CY	29.89	CY
11	18	36	18	3.89	CY	31.89	CY
12	18	36	18	3.89	CY	26.89	CY
13	24	36	18	5.48	CY	45.48	CY
14	42	48	24	12.96	CY	69.96	CY
15	18	36	18	3.89	CY	25.89	CY
16	24	36	18	5.48	CY	33.48	CY
17	18	36	18	3.89	CY	26.89	CY
18	42	48	24	12.96	CY	76.96	CY
19	18	36	18	3.89	CY	27.89	CY
20	18	36	18	3.89	CY	29.89	CY
			SUBTOTAL =	847.0	CY		
			ROUNDING =	53.0	CY		
			TOTAL =	900.0	CY		

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JOB	z22534	6 Rochester Low	er Bethe	l Mt. Road
SHEET N	IO	1	OF	1
CALCUL	ATED BY:	B. BRESLEND	DATE:	5-30-19
CHECKE	D BY:		DATE:	
SCALE:				

ITEM NO. 204.21 TRENCH EXCAVATION OF ROCK

ITEM 204.20 "TRENCH EXCAVATION OF EARTH" QUANTITY = 900 CY

ASSUMED PERCENTAGE OF TRENCH THAT ENCOUNTERS ROCK = 20%

SUBTOTAL = 180.00 CY

ROUNDING = EST. CY

TOTAL = 180.00 CY

TOTALS 180.00 CY

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JOB	z22534	16 Rochester Low	er Bethe	Mt. Road
SHEET	NO	1	OF	1
CALCUL	ATED BY	B. BRESLEND	DATE:	6-5-19
CHECKE	ED BY:		DATE:	
SCALE:				

ITEM NO. 204.22 TRENCH EXCAVATION OF EARTH, EXPLORITORY (N.A.B.I.)

ASSUME 1 CY

TOTALS

1

CY



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JOB	z2253	46 Rochester	Lower Beth	nel Mt. Road	
SHEET	NO.	1	OF _	1	
CALCUL	- ATED BY	: TAN	1 DATE	E: 6-12-19	
CHECKI	ED BY:		DATE	<u> </u>	
SCALE:					

ITEM NO. 204.30 GRANULAR BACKFILL FOR STRUCTURES

Mainline culverts

CULVERT NO. 1

Pipe: 48 " CPEP Length: 55 FT

Trench width: 7.0 ft
X SECTION AREA 100% 323.2 SF
X SECTION AREA 150% 0.0 SF

Volume: 58.0 cy

CULVERT NO. 2 Length: 74 FT

Pipe: 24 " CPEP

Trench width: 5.0 ft

X SECTION AREA 100% 334.0 SF

X SECTION AREA 150% 0.0 SF

Volume: 53.0 cy

CULVERT NO. 3 Length: 38 FT

Pipe: 18 " CPEP

Trench width: 4.5 ft

X SECTION AREA 100% 138.0 SF

X SECTION AREA 150% 0.0 SF

Volume: 21.0 cy

CULVERT NO. 4 Length: 42 FT

Pipe: 42 " CPEP

Trench width: 6.5 ft X SECTION AREA 100% 202.0 SF



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 JOB
 z225346 Rochester Lower Bethel Mt. Road

 SHEET NO.
 1
 OF
 1

 CALCULATED BY:
 TAM
 DATE:
 6-12-19

 CHECKED BY:
 DATE:
 SCALE:
 SCALE:

ITEM NO.	204.30	GRANULAR BACKFILL	FOR STRUCTURES
II EIVI NO.	204.30	GRANULAR DACKFILL	FUR STRUCTURES

X SECTION AREA 150% 0.0 SF

Volume: 34.0 cy

CULVERT NO. 5 Length: 42 FT

Pipe: 18 " CPEP

Trench width: 4.5 ft

X SECTION AREA 100% 158.0 SF

X SECTION AREA 150% 0.0 SF

Volume: 24.0 cy

CULVERT NO. 6 Length: 41 FT

Pipe: 18 " CPEP

Trench width: 4.5 ft

X SECTION AREA 100% 168.0 SF

X SECTION AREA 150% 0.0 SF

Volume: 25.0 cy

CULVERT NO. 7 Length: 42 FT

Pipe: 18 " CPEP

Trench width: 4.5 ft

X SECTION AREA 100% 205.0 SF

X SECTION AREA 150% 0.0 SF

Volume: 31.0 cy

CULVERT NO. 8 Length: 42 FT

Pipe: 18 " CPEP

Trench width: 4.5 ft

X SECTION AREA 100% 179.0 SF

X SECTION AREA 150% 0.0 SF



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 JOB
 z225346 Rochester Lower Bethel Mt. Road

 SHEET NO.
 1
 OF
 1

 CALCULATED BY:
 TAM
 DATE:
 6-12-19

 CHECKED BY:
 DATE:
 SCALE:

ITEM NO. 204.30 GRANULAR BACKFILL FOR STRUCTURES

Volume: 27.0 cy

CULVERT NO. 9 Length: 41 FT

Pipe: 18 " CPEP

Trench width: 4.5 ft

X SECTION AREA 100% 175.0 SF

X SECTION AREA 150% 0.0 SF

Volume: 26.0 cy

CULVERT NO. 10 Length: 40 FT

Pipe: 18 " CPEP

Trench width: 4.5 ft

X SECTION AREA 100% 158.0 SF

X SECTION AREA 150% 0.0 SF

Volume: 24.0 cy

CULVERT NO. 11 Length: 39 FT

Pipe: 18 " CPEP

Trench width: 4.5 ft

X SECTION AREA 100% 168.0 SF

X SECTION AREA 150% 0.0 SF

Volume: 28.0 cy

CULVERT NO. 12 Length: 38 FT

Pipe: 18 " CPEP

Trench width: 4.5 ft

X SECTION AREA 100% 137.0 SF

X SECTION AREA 150% 0.0 SF

Volume: 23.0 cy



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Engineering Planning Development Management

 JOB
 z225346 Rochester Lower Bethel Mt. Road

 SHEET NO.
 1
 OF
 1

 CALCULATED BY:
 TAM
 DATE:
 6-12-19

 CHECKED BY:
 DATE:
 SCALE:
 SCALE:

ITEM NO. 204.30 GRANULAR BACKFILL FOR STRUCTURES

CULVERT NO. 13 Length: 45 FT

Pipe: 24 " CPEP

Trench width: 5.0 ft

X SECTION AREA 100% 217.0 SF

X SECTION AREA 150% 0.0 SF

Volume: 35.0 cy

CULVERT NO. 14 Length: 43 FT

Pipe: 42 " CPEP

Trench width: 6.5 ft

X SECTION AREA 100% 235.0 SF

X SECTION AREA 150% 0.0 SF

Volume: 41.0 cy

CULVERT NO. 15 Length: 39 FT

Pipe: 18 "CPEP

Trench width: 4.5 ft

X SECTION AREA 100% 133.0 SF

X SECTION AREA 150% 0.0 SF

Volume: 20.0 cy

CULVERT NO. 16 Length: 39 FT

Pipe: 24 " CPEP

Trench width: 5.0 ft

X SECTION AREA 100% 153.0 SF

X SECTION AREA 150% 0.0 SF

Volume: 24.0 cy

CULVERT NO. 17 Length: 39 FT

Pipe: 18 " CPEP



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z225346 Rochester Lower Bethel Mt. Road JOB SHEET NO. ____ OF ___ DATE: TAM 6-12-19 CALCULATED BY: CHECKED BY: _____DATE: SCALE: _

204.30 GRANULAR BACKFILL FOR STRUCTURES ITEM NO.

> Trench width: 4.5 ft X SECTION AREA 100% 135.0 SF

X SECTION AREA 150%

Volume: 20.0 cy

CULVERT NO. 18 Length: 45 FT

0.0 SF

Pipe: 42 " CPEP

Trench width: 6.5 ft X SECTION AREA 100% 266.0 SF X SECTION AREA 150% 0.0 SF

Volume: 48.0 су

CULVERT NO. 19 Length: 37 FT

Pipe: 18 "CPEP

Trench width: 4.5 ft X SECTION AREA 100% 144.0 SF X SECTION AREA 150% 0.0 SF

22.0 cy Volume:

CULVERT NO. 20 Length: 38 FT

Pipe: 18 " CPEP

Trench width: 4.5 ft X SECTION AREA 100% 153.0 SF X SECTION AREA 150% 0.0 SF

23.0 cy Volume:

HEADWALLS: (SUBTRACT HEADWALL VOLUME FROM TRENCH EX VOLUME)

TRENCH CULVERT DIAMETE HEADWALL GRAN EX VOL R VOLUME BACK VOL 1 48 15.41

63.80 CY 9.61 5.80



Bedford, NH 03110

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JOB z225346 Rochester Lower Bethel Mt. Road _____1 OF ____1 SHEET NO. CALCULATED BY: TAM DATE: 6-12-19 _____DATE: CHECKED BY: SCALE:

ITEM NO.	204.30	GRANULAR B	ACKFILL FO	R STRUCTURES		
2	24	2.85	5.48	2.63	55.63	CY
3	18	2.05	3.89	1.84	22.84	CY
4	42	8.2	12.96	4.76	38.76	CY
5	18	2.05	3.89	1.84	25.84	CY
6	18	2.05	3.89	1.84	26.84	CY
7	18	2.05	3.89	1.84	32.84	CY
8	18	2.05	3.89	1.84	28.84	CY
9	18	2.05	3.89	1.84	27.84	CY
10	18	2.05	3.89	1.84	25.84	CY
11	18	2.05	3.89	1.84	29.84	CY
12	18	2.05	3.89	1.84	24.84	CY
13	24	2.85	5.48	2.63	37.63	CY
14	42	8.2	12.96	4.76	45.76	CY
15	18	2.05	3.89	1.84	21.84	CY
16	24	2.85	5.48	2.63	26.63	CY
17	18	2.05	3.89	1.84	21.84	CY
18	42	8.2	12.96	4.76	52.76	CY
19	18	2.05	3.89	1.84	23.84	CY
20	18	2.05	3.89	1.84	24.84	CY

SUBTOTAL = 659.0 CY

ROUNDING = 41.0 CY

TOTAL = 700.0 CY

TOTALS

700

CY



□ **√**1 □

Bedford, NH 03110 Randolph, VT 05060 S. Burlingt., VT 05403 Springfield, VT 05156 (603) 883-0463 (802) 728-3376 (802) 878-7661 (802) 591-4326

JOB	z225346 Rochester Lower Bethel Mt. Road							
SHEET	NO.	OF						
CALCULATED BY:		TAM	DATE:	6-17-19				
CHECKI	ED BY:		DATE:					
SCALE.								

ITEM NO.	613.00	6 STONE FILL	, STREAM BED MAT	TERIAL (E-STONE, TYPE	II)	
Station	Area (ft^2)	Avg Area (ft^2)	Volume (CY)			
3+24	0.0		0			
3+60	11.2		0			
4+00	11.2	11.2	17			
4+50	8.5	9.9	18			
5+00	12.0	10.3	19			
5+50	13.0	12.5	23			
6+00	12.1	12.6	23			
6+50	13.3	12.7	24			
	8.5	10.9	20			
7+00		9.6	18			
7+50	10.8	9.5	18			
8+00	8.3	9.1	17			
8+50	9.8	10.1	19			
9+00	10.3	11.8	22			
9+50	13.2	40.0	74			
10+00	66.8	62.2	115			



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JOB	z225346 Rochester Lower Bethel Mt. Road								
SHEET	NO		OF						
CALCULATED BY:		TAM	DATE:	6-17-19					
CHECKE	ED BY:		DATE:						
SCALE:									

ITEM NO	613.06	STONE EU I	STDEAM DE	D MATERIAL (E-STONE, TYPE II)
ITEM NO.		STONE FILE	L, STREAM BEI	D MATERIAL (E-STONE, TYPE II)
10+50	57.7			
		38.1	71	
11+00	18.5			
		17.7	33	
11+50	16.9			
		19.8	37	
12+00	22.6			
		19.6	36	
12+50	16.6			
		18.9	35	
13+00	21.1			
		14.9	28	
13+50	8.8			
		13.8	25	
14+00	18.7			
		17.9	33	
14+50	17.1			
00		15.3	28	
15+00	13.4			
10.00		15.6	29	
15+50	17.7			
13.30		19.1	35	
16+00	20.5			
10100		20.0	37	
16+50	19.5			GEOTECHNICAL SITE 2
10+30		16.1	30	GEOTEGRINICAL SITE 2
17+00	12.7			CEOTECHNICAL SITE 2
••	12.1	14.6	27	GEOTECHNICAL SITE 2
17+50	16.5		~ 1	CEOTECHNICAL CITE 2
77.00	10.0	17.8	33	GEOTECHNICAL SITE 2
18+00	19.2	17.0	55	
10.00	13.2	39.0	72	
18+50	E0 0	J J .U	12	
10+50	58.8			



_ **√**

Bedford, NH 03110 Randolph, VT 05060 S. Burlingt., VT 05403 Springfield, VT 05156 (603) 883-0463 (802) 728-3376 (802) 878-7661 (802) 591-4326

JOB	z225346 Rochester Lower Bethel Mt. Road							
SHEET	NO.	OF						
CALCULATED BY:		TAM	DATE:	6-17-19				
CHECKI	ED BY:		DATE:					
SCALE.								

TEM NO.	613.06	STONE FILI	_, STREAM BED	MATERIAL (E-STONE, TYPE II)
		52.5	97	
19+00	46.3			
		29.5	55	
19+50	12.8			
20+00	17.0	14.9	28	
20+00	17.0	12.3	23	
20+50	7.6			
		11.1	21	
21+00	14.6			
		16.3	30	
21+50	18.1	45.0	00	
22+00	13.8	15.9	30	
22 - 00	10.0	16.1	30	
22+50	18.4			
		13.7	25	
23+00	9.0			
00.50	444	11.5	21	
23+50	14.1	11.7	22	
24+00	9.3	1 1.1	22	GEOTECHNICAL SITE 5
		8.3	15	SESTESTIMONE SITE S
24+50	7.3			GEOTECHNICAL SITE 5
		8.8	16	
25+00	10.3	44.6	22	GEOTECHNICAL SITE 5
25+50	13.3	11.8	22	OFOTFOLINION! OUT 5
20:00	10.0	16.0	30	GEOTECHNICAL SITE 5
26+00	18.7			GEOTECHNICAL SITE 5
		15.6	29	
26+50	12.5			
		11.6	21	



TOTALS

Bedford, NH 03110 Randolph, VT 05060 S. Burlingt., VT 05403 Springfield, VT 05156 (603) 883-0463 (802) 728-3376 (802) 878-7661 (802) 591-4326

Engineering • Planning • Development • Management

JOB	z225346 R	z225346 Rochester Lower Bethel Mt. Road							
SHEET NO.			OF						
CALCULATED BY:		TAM	DATE:	6-17-19					
CHECK	ED BY:		DATE:						
SCALE									

TEM NO.	613.06	STONE FILL,	STREAM BED MATERIAL	(E-STONE, TYPE II)		
27+00	10.6					
		12.1	22			
27+50	13.6					
		12.5	23			
28+00	11.5					
		14.8	27			
28+50	18.1					
		16.0	30			
29+00	13.9					
		13.5	25			
29+50	13.1					
		13.1	12			
29+75	13.1					
			0			
30+50	0.0					
		0.0	0			
31+00	0.0					
		0.0	0			
31+50	0.0					
		0.0	0			
32+00	0.0					
			/ERT INLET MATERIAL			
culvert	area	depth	volume			
	1668.0	2.6	160	Out to	1920.0	
				Subtotal =		2 020/
				Rounding =	70.0 1900.0	3.83%
				Total =	1900.0	

1900

CY

16-Jul-19

Print Date =



☐ Bedford, NH 03110
☐ Randolph, VT 05060
☐ S. Burlingt., VT 05403
☐ Springfield, VT 05156

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Engineering • Planning • Development • Management

JOB	z225346 Rochester Lower Bethel Mt. Road							
SHEET	NO	OF						
CALCU	LATED BY:	TAM	DATE:	7-1-19				
CHECK	ED BY:		DATE:					
SCALE:								

ITEM NO. 613.06 STONE FILL, STREAM BED MATERIAL (E-STONE, TYPE III)

AREA MULTIPLIED BY THIS FACTOR TO ACCOUNT FOR 1.5/1 SIDE SLOPE

AREA MULTIPLIED BY THIS FACTOR TO ACCOUNT FOR 1/1 SIDE SLOPE

ADDITIONAL AREA PER SECTION TO ACCOUNT FOR "KEY"

2 SF

								1	
				·		FACTOR			
					(SF)		(FT)	(CY)	
CI	JLVERT INL	ET	STA	POS.	AREA		DEPTH	VOLUME	
	1		28+75.	RT	173.2	1.2	3.00	23.0	
	4		25+00.	RT	612.7	1.2	3.00	82.0	
	16		7+90.	RT	126.0	1.2	3.00	17.0	
	14		9+25.	RT	257.0	1.2	3.00	34.0	
	18		6+25.	RT	414.4	1.2	3.00	55.0	
						1.2	3.00		
						1.2	3.00		
						1.2	3.00		

STONE FILL OUTLET PADS

NO.	AREA I	REA (MOI	DEPTH	'OLUME (CY
1	2125.0	2550.0	3.00	283.0
2	725.0	870.00	3.00	97.0
3	446.0	535.20	3.00	59.0
4	1416.0	1699.2	3.00	189.0
5	446.0	535.20	3.00	59.0
6	446.0	535.20	3.00	59.0
7	446.0	535.20	3.00	59.0
8	446.0	535.20	3.00	59.0
9	446.0	535.20	3.00	59.0



□ Bedford, NH 03110
□ Randolph, VT 05060
□ S. Burlingt., VT 05403
□ Springfield, VT 05156

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Engineering • Planning • Development • Management

JOB	z225346 R	z225346 Rochester Lower Bethel Mt. Road								
SHEET	NO.	OF								
CALCULATED BY:		TAM	DATE:	7-1-19						
CHECK	ED BY:		DATE:							
SCALE										

,						
ITEM NO.	613.06	6 STO	NE FILL, ST	REAM BED MATER	RIAL (E-STONE, TYPE	III)
10	446.0	535.20	3.00	59.0		
11	446.0	535.20	3.00	59.0		
12	446.0	535.20	3.00	59.0		
13	1338.0	1605.6	3.00	178.0		
14	1287.0	1544.4	3.00	172.0		
15	446.0	535.20	3.00	59.0		
16	1049.0	1258.80	3.00	140.0		
17	1144.0	1372.80	3.00	153.0		
18	670.0	804.00	3.00	89.0		
19	446.0	535.20	3.00	59.0		
20	446.0	535.20	3.00	59.0		
I						
1						

Subtotal = 2220.0

Rounding = 80.0 3.60%

Total = 2300.0

TOTALS 2300 CY



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JOB	z225346	Rochester Lowe	er Bethel	Mt. Road
SHEET	NO		OF	
CALCUL	ATED BY:	TAM	DATE:	7-3-19
CHECKE	ED BY:		DATE:	

				SCALE:	
ITEM NO.	613.10	STONE FILL, T	YPE I		
Station	Area (ft^2)	Avg Area (ft^2)	Volume (CY)		
+51	8.2	8.2	83.0		
3+24	8.2	8.7	8.0		
3+50	9.2	8.3	15.0		
4+00	7.4	7.5	14.0		
4+50	7.6	8.1	15.0		
5+00	8.6	8.3	15.0		
5+50	8.1	7.5	14.0		
6+00	6.9	7.0	13.0		
6+50	7.0	7.4	14.0		
7+00	7.7	7.9	15.0		
7+50	8.0	7.8	14.0		
8+00	7.5 7.1	7.3	14.0		
8+50 9+00	7.1	7.2	13.0		
9+00 9+50	6.3	6.8	13.0		
9.30					



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JOB <u>z225346 Rochester Lower Bethe</u>l Mt. Road SHEET NO. ______ OF _____

CALCULATED BY: TAM DATE: 7-3-19 CHECKED BY:

_____DATE: ___

SCALE:

Engineering		Planning		Development	#	Management	
-------------	--	----------	--	-------------	----------	------------	--

ITEM NO.	613.10	STONE FILL, TYPE I	12.0	
10+00	6.3			
10+50	6.6	6.5	12.0	
		6.7	12.0	
11+00	6.9	6.9	13.0	
11+50	6.9			
12+00	0.0	3.5	6.0	
	0.0	0.0	0.0	
12+50	0.0	0.0	0.0	
13+00	0.0	0.0	0.0	
13+50	0.0			
14+00	0.0	0.0	0.0	
14100		0.0	0.0	
14+50	0.0	0.0	0.0	
15+00	0.0		0.0	
15+50	0.0	0.0	0.0	
	0.0	0.0	0.0	
16+00		0.0	0.0	GEOTECHNICAL SITE 2
16+50	0.0	0.0	0.0	GEOTECHNICAL SITE 2
17+00	0.0			GEOTECHNICAL SITE 2
17+50	0.0	0.0	0.0	
18+00	0.0	0.0	0.0	
18+00	0.0	0.0	0.0	
18+50	0.0			



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Engineering • Planning • Development • Management

SCALE:

ITEM NO.	613.10	STONE FILL, TYPE I		
		0.0	0.0	
19+00	0.0			
		0.0	0.0	
19+50	0.0			
		0.0	0.0	
20+00	0.0			
		0.0	0.0	
20+50	0.0		0.0	
21+00	0.0	0.0	0.0	
21+00	0.0	0.0	0.0	
21+50	0.0	0.0	0.0	
21100	0.0	0.0	0.0	
22+00	0.0			
		0.0	0.0	
22+50	0.0			
		0.0	0.0	
23+00	0.0			
		0.0	0.0	
23+50	0.0			
		0.0	0.0	
24+00	0.0			GEOTECHNICAL SITE 5
04:50	0.0	0.0	0.0	
24+50	0.0	0.0	0.0	GEOTECHNICAL SITE 5
25+00	0.0	0.0	0.0	OFOTFOLINIOAL OITE 5
20.00	0.0	0.0	0.0	GEOTECHNICAL SITE 5
25+50	0.0			GEOTECHNICAL SITE 5
		0.0	0.0	SECTEORINIONE SITE S
26+00	0.0			GEOTECHNICAL SITE 5
		0.0	0.0	
26+50	0.0			
		0.0	0.0	
27+00	0.0			
		0.0	0.0	
27+50	0.0			

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JOB	z225346	Rochester Lov	wer Bethel	Mt. Road
SHEET	NO		OF	
CALCU	LATED BY:	TAM	DATE:	7-3-19
CHECK	(ED BY:		DATE.	

Enginee	ering • Planning	g • Development • Man	agement	CHECKE	:D BY:	DATE:	
				SCALE:			
ITEM NO.	613.10	STONE FILL, TYPE I					
		0.0	0.0				
28+00	0.0						
00.50	0.0	0.0	0.0				
28+50	0.0	0.0	0.0				
29+00	0.0	3.0	6.0				
29+00	6.0	6.0	11.0				
29+50	6.0	6.0	11.0				
29130	0.0	6.0	6.0				
29+75	6.0	0.0	0.0				
20170	0.0	3.0	3.0				
30+00	0.0	0.0	0.0				
	0.0	0.0	0.0				
##	0.0						
		0.0	0.0				
##	0.0						
		0.0	0.0				
##	0.0						
		0.0	0.0				
##	0.0						
		Subtotal =	341.0				
		Rounding =	59.0	17.30%			
		Total =	400.0				
TC	DTALS				400		CY
						Print Date =	16-Jul-19



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JOB	z225346	Rochester Lo	wer Bethel	Mt. Road
SHEET N	IO		OF	
CALCULA	ATED BY:	TAM	DATE:	6-17-19
CHECKE	D BY:		DATE:	
SCALE:				

ITEM	242.41	07015 511 5	V/DE II
Station	613.11 Area (ft^2)	STONE FILL, T Avg Area (ft^2)	YPE II Volume (CY)
3+24	0.0	0.0	0.0
3+50	0.0		
4+00	0.0	0.0	0.0
4+00	0.0	0.0	0.0
4+50	0.0	0.0	0.0
5+00	0.0	0.0	0.0
		0.0	0.0
5+50	0.0	0.0	0.0
6+00	0.0		
0.50	0.0	0.0	0.0
6+50	0.0	0.0	0.0
7+00	0.0	0.0	0.0
7+50	0.0	0.0	0.0
		0.0	0.0
8+00	0.0	0.0	0.0
8+50	0.0		
0.00	0.0	0.0	0.0
9+00	0.0	0.0	0.0
9+50	0.0	0.0	0.0
10+00	0.0	0.0	0.0
		0.0	0.0
10+50	0.0	0.0	0.0
11+00	0.0		



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Bedford, NH 03110 Randolph, VT 05060 S. Burlingt., VT 05403 Springfield, VT 05156

(603) 883-0463 (802) 728-3376 (802) 878-7661 (802) 591-4326 JOB <u>z225346 Rochester Lower Bethel Mt. Road</u> SHEET NO. ______ OF _____ CALCULATED BY: TAM DATE: 6-17-19 _____DATE:

Engineering • Planning • Development • Management

SCALE:

CHECKED BY:

ITEM NO.	613.11	STONE FILL, TYPE II		
11+50	7.0			
		69.3	128.0	
12+00	131.5			
		114.1	211.0	
12+50	96.6			
		95.0	176.0	
13+00	93.3			
		98.6	183.0	
13+50	103.9			
10.00		81.0	150.0	
14+00	58.1			
14+00		37.4	69.0	
	16.7	51.4	05.0	
14+50	10.7	17 G	22.0	
		17.6	33.0	
15+00	18.5			
		19.4	36.0	
15+50	20.4			
		19.5	36.0	
16+00	18.6			
		9.3	17.0	
16+50	0.0			GEOTECHNICAL SITE 2
			0.0	
17+25	8.9			GEOTECHNICAL SITE 2
		8.9	8.0	
17+50	8.9			GEOTECHNICAL SITE 2
		64.3	119.0	SESTEMBLISHE SITE 2
18+00	119.6		-	
		120.8	224.0	
18+50	122.0	120.0	<i>_</i> 2_7.0	
10+30	122.U	116.2	215.0	
40.00	440 5	116.3	215.0	
19+00	110.5	400.0		
		109.9	204.0	
19+50	109.3			
		63.0	117.0	
20+00	16.7			
		17.0	31.0	



Bedford, NH 03110 Randolph, VT 05060 S. Burlingt., VT 05403 Springfield, VT 05156 (603) 883-0463 (802) 728-3376 (802) 878-7661 (802) 591-4326 SHEE

JOB <u>z225346 Rochester Lower Bethel Mt. Road</u>

 SHEET NO.
 OF

 CALCULATED BY:
 TAM
 DATE:
 6-17-19

CHECKED BY: _____DATE: ____

SCALE:

Engineering •	Planning	•	Development •	Management
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				OOALL.
ITEM NO.	613.11	STONE FILL, TYPE	II	
20+50	17.3	07.4	50.0	
21+00	36.8	27.1	50.0	
21+50	79.6	58.2	108.0	
22+00	76.3	78.0	144.0	
22+50	18.1	47.2	87.0	
23+00	17.0	17.6	33.0	
23+50	16.9	17.0	31.0	
24+00	16.3	16.6	31.0	GEOTECHNICAL SITE 5
24+50	0.0	8.2	15.0	GEOTECHNICAL SITE 5
25+00	0.0	0.0	0.0	
25+50	0.0	0.0	0.0	GEOTECHNICAL SITE 5
26+00		10.3	19.0	GEOTECHNICAL SITE 5
	20.7	22.3	41.0	GEOTECHNICAL SITE 5
26+50	23.9	34.5	64.0	
27+00	45.0	33.5	55.0	
27+44	21.9	21.9	45.0	
28+00	21.9	21.1	39.0	
28+50	20.2	16.2	30.0	
29+00	12.1	6.1	11.0	

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EK	nginc.

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JOB <u>z22</u>	25346 Rc	chester Low	er Bethe	l Mt. Road
SHEET NO.			OF	
CALCULATED) BY:	TAM	DATE:	6-17-19
CHECKED BY	′: <u> </u>		DATE:	

Enginee	ring • Planning	g • Development • I	Management		CHECKED			DATE:	
					SCALE:				
ITEM NO.	613.11	STONE FILL, TYF	PE II						
29+50	0.0								
		0.0	0.0						
30+00	0.0								
		0.0	0.0						
30+50	0.0								
		0.0	0.0						
31+00	0.0								
		0.0	0.0						
31+50	0.0								
		0.0	0.0						
32+00	0.0								
		Subtotal =	2760.0	CY					
		Rounding =	40.0	CY	1.45%				
		Total =	2800.0	CY					
TC	TALS					2800		CY	
							Print Da	te = 16-J	ul-19



Bedford, NH 03110 Randolph, VT 05060 S. Burlingt., VT 05403 Springfield, VT 05156 (603) 883-0463 (802) 728-3376 (802) 878-7661 (802) 591-4326

JOB	z225346	Rochester Low	er Bethel	Mt. Road
SHEET N	O		OF	
CALCULA	ATED BY:	TAM	DATE:	7/12/19
CHECKEI	D BY:		— DATE:	
SCALE:				

ITEM NO.	613.13	STONE FILL, T	PE IV
Station	Area (ft^2)	Avg Area (ft^2)	Volume (CY)
3+24			• •
0.50		0.0	0.0
3+50		0.0	0.0
4+00			
		0.0	0.0
4+50		0.0	0.0
E : 00		0.0	0.0
5+00		0.0	0.0
5+50			
		0.0	0.0
6+00		0.0	0.0
6+50		0.0	0.0
0+30		0.0	0.0
7+00			
		0.0	0.0
7+50		0.0	0.0
8+00		0.0	0.0
3.00		0.0	0.0
8+50			
		0.0	0.0
9+00		0.0	0.0
9+50		0.0	0.0
3+30		0.0	0.0
10+00			
		0.0	0.0
10+50		0.0	0.0
11+00		0.0	0.0
11100		0.0	0.0



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SCALE:

ITEM NO.	613.13	STONE FILL, TYPE	: IV	
11+50				
		0.0	0.0	
12+00		0.0	0.0	
12+50				
		0.0	0.0	
13+00			0.0	
42.50		0.0	0.0	
13+50		0.0	0.0	
14+00				
		0.0	0.0	
14+50		0.0	0.0	
15+00		0.0	0.0	
15+00		0.0	0.0	
15+50				GEOTECHNICAL SITE 2
16+00	553.8	553.8	1026.0	GEOTECHNICAL SITE 2
16+50	553.8	555.6	1020.0	GEOTECHNICAL SITE 2
10130		551.6	1021.0	GEOTEOTIVICAE SITE 2
17+00	549.4			GEOTECHNICAL SITE 2
47.05		549.4	509.0	
17+25	549.4		0.0	GEOTECHNICAL SITE 2
18+00			0.0	
		0.0	0.0	
18+50				
40.00		0.0	0.0	
19+00		0.0	0.0	
19+50		0.0	3.0	
		0.0	0.0	
20+00				
		0.0	0.0	



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JOB z225346 Rochester Lower Bethel Mt. Road

SHEET NO. ______ OF _____ CALCULATED BY: TAM DATE: 7/12/19

CHECKED BY:

_____DATE:

SCALE:

ITEM NO. 20+50	613.13	STONE FILL, T	YPE IV	
		0.0	0.0	
21+00				
		0.0	0.0	
21+50		0.0	0.0	
22+00		0.0	0.0	
		0.0	0.0	
22+50				
		0.0	0.0	
23+00		0.0	0.0	
23+50		0.0	0.0	
			0.0	
24+00	577.6			GEOTECHNICAL SITE 5
24 - 50	5 77 0	577.6	1070.0	
24+50	577.6	576.6	1068.0	GEOTECHNICAL SITE 5
25+00	575.5	07 0.0	1000.0	GEOTECHNICAL SITE 5
		576.3	1067.0	
25+50	577.0			GEOTECHNICAL SITE 5
25+70	F77.0	577.0	427.0	
25+70	577.0		0.0	GEOTECHNICAL SITE 5
26+50	353.4			
		353.4	654.0	
27+00	353.4			
27+44	252 4	353.4	576.0	
21 * 44	353.4		0.0	
28+00				
		0.0	0.0	
28+50				
29+00		0.0	0.0	
23 100		0.0	0.0	

DUR	C
EKing	nc.

Bedford, NH 03110 Randolph, VT 05060 S. Burlingt., VT 05403 Springfield, VT 05156 (603) 883-0463 (802) 728-3376 (802) 878-7661 (802) 591-4326

Engineering • Planning • Development • Management

ITEM NO.	613.13	STONE FILL,	TYPE IV
29+50		0.0	0.0
30+00		0.0	0.0
		0.0	0.0
30+50			
		0.0	0.0
31+00			
04.50		0.0	0.0
31+50		0.0	0.0
32+00		0.0	0.0

SCALE:

STONE FILL OUTLET PADS

 NO.
 AREA
 AREA (MOD)
 DEPTH
 VOLUME NOTE:

 1
 2331.0
 3496.50
 4.00
 518.0
 CULVERT 1

*NO LONGER BEING USED. USING E-STONE, TYPE III INSTEAD

Subtotal = 7418.0 CY

Rounding = 82.0 _{CY} 1.11%

Total = 7500.0 CY

TOTALS 7500 CY

Print Date = 16-Jul-19

DuBois EKing Inc.	□ Bedford, NH 03110 □ Randolph, VT 05060 ❤ S. Burlingt., VT 05403 □ Springfield, VT 05156	(603) 883-0463 (802) 728-3376 (802) 878-7661 (802) 591-4326
Engineering • Pl	anning • Developmen	t e Managemen

JOB	z225346	225346 Rochester Lower Bethel Mt. Road				
SHEET NO.		1	OF	1		
CALCULATED BY:		TAM	DATE:	6/18/19		
CHECKED BY:			DATE:			
SCALE:						

ITEM NO. 651.15 SEED

SEE "CLEARING AND GRUBBING, 201.10" HATCH IN QTYCALCS.DWG

Area to be seeded

SF	239830	CLEARING GRUBBING LEFT
SF	67261	CLEARING GRUBBING RIGHT
1		
1		
1		
1		
1		
1		

Area to be Seeded = 307091 SF Area to be Seeded = 7.05 Α Application Rate = 250 lb/A Subtotal = 1762.0 lb 8.0 Rounding = lb 1770.0 Total =

TOTALS 1770 LB

DuBois EKing	☐ Bedford, NH 03110 ☐ Randolph, VT 05060 ❤ S. Burlingt., VT 05403 ☐ Springfield, VT 05156	(603) 883-0463 (802) 728-3376 (802) 878-7661 (802) 591-4326
Engineering • P	anning • Developmen	t a Managemen

JOB <u>z225346</u>	16 Rochester Lower Bethel Mt. Road				
SHEET NO.	1	OF	1		
CALCULATED BY:	TAM	DATE:	7/12/19		
CHECKED BY:		DATE:			
SCALE:					

ITEM NO. 651.17 SEED, WINTER RYE

TO BE USED AS ALTERNATIVE TO 651.15 SEED QUANTITY IF CONSTRUCTION AFTER SEPTEMBER 1ST

Area to be seeded

SF	239830	CLEARING GRUBBING LEFT
SF	67261	CLEARING GRUBBING RIGHT
1		
1		
1		
1		
1		

Area to be Seeded = 307091 SF Area to be Seeded = 7.05 Α Application Rate = 250 lb/A Subtotal = 1762.0 lb 8.0 Rounding = lb Total = 1770.0

TOTALS 1770 LB

JOB	z225346 Rochester Lower Bethel Mt. Road				
SHEET NO.		1	OF	1	
CALCULATED BY:		TAM	DATE:	6/18/19	
CHECKED BY:			DATE:		
SCALE:					

ITEM NO. 651.18 FERTILIZER

BASED OFF ITEM 651.15 SEED

ACREAGE = 7.05 AC.

##

 $\begin{array}{ccccc} \text{Application Rate} = & 500 & \text{Ib/A} \\ & & & & & & & & \\ \text{Subtotal} = & & & & & & \\ \text{Rounding} = & & 5 & & \text{Ib} \\ & & & & & & & \\ \text{Total} = & & & & & \\ \text{Ib} & & & & & \\ \end{array}$

TOTALS 3530 LB

□ Bedford, NH 03110 (603) □ Randolph, VT 05060 (802) □ Springfield, VT 05156 (802)
--

JOB	z225346	225346 Rochester Lower Bethel Mt. Road				
SHEET NO.		1	OF	1		
CALCULATED BY:		TAM	DATE:	6/18/19		
CHECKED BY:			DATE:			
SCALE:						

ITEM NO. 651.20 AGRICULTURAL LIMESTONE

BASED OFF ITEM 651.15 SEED

ACREAGE = 7.05 AC.

##

Application Rate = 2.0 ton/A Subtotal = 14.1 ton

Rounding = 0.9 ton

Total = 15.0 ton

TOTALS 15.00 TON



JOB	z225346 Rochester Lower Bethel Mt. Road				
SHEET	NO.	1	OF	1	
CALCULATED BY:		TAM	DATE:	6/18/19	
CHECKED BY:			DATE:		
SCALE:					

ITEM NO. 651.35 TOP SOIL

BASED OFF ITEM 651.15 SEED

ACREAGE = 7.05 AC.

Application Rate = 2.0 ton/A

Subtotal = 14.1 ton

Rounding = 0.9 ton

Total = 15.0 ton

TOTALS 15.00 TON



JOB	z225346	Rochester Lower Bethel Mt. Road							
SHEET	NO.	1	OF	1					
CALCUL	ATED BY:	TAM	DATE:	7/12/19					
CHECKE	ED BY:		DATE:						
SCALE:			_						

ITEM NO. 651.40 GRUBBING MATERIAL (12")

AREA MULTIPLIED BY THIS FACTOR TO ACCOUNT FOR 1.5/1 SIDE SLOPE

1.2

AREA MULTIPLIED BY THIS FACTOR TO ACCOUNT FOR 1/1 SIDE SLOPE

1.41

ON E-STONE, TYPE II (REFERENCE PAY ITEM 613.06, TYPE II)

								(SF)	(SY)
					(CF)	(FT)			TOTAL
STATION RANGE POS.		VOLUME	DEPTH		AREA	AREA			
					FROM E-STONE II ITEM				
		-		LT	49410.0	2.6		19126.45	2125.0

ON E-STONE, TYPE III (REFERENCE PAY ITEM 613.06, TYPE III)

							光	(SF)	(SY)
					(FT)	(SF)	FACTOR	ADJUSTED	TOTAL
STATIO	ON F	RAN	GE	POS.	LENGTH	AREA	4	AREA	AREA
+.	-		28+75.	RT		173.2	1.20	207.78	23.0
+.	-		25+00.	RT		612.7	1.20	735.24	82.0
+.	-		7+90.	RT		126.0	1.20	151.22	17.0
+.	-		9+25.	RT		257.0	1.20	308.40	34.0
+.	-		6+25.	RT		414.4	1.20	497.26	55.0
OUTLET	-		+1.	LT		2550.0	1.20	3060.00	340.0
OUTLET	-		+2.	LT		870.0	1.20	1044.00	116.0
OUTLET	-		+3.	LT		535.2	1.20	642.24	71.0
OUTLET	-		+4.	LT		1699.2	1.20	2039.04	227.0
OUTLET	-		+5.	LT		535.2	1.20	642.24	71.0
OUTLET	-		+6.	LT		535.2	1.20	642.24	71.0
OUTLET	-		+7.	LT		535.2	1.20	642.24	71.0
OUTLET	-		+8.	LT		535.2	1.20	642.24	71.0
OUTLET	-		+9.	LT		535.2	1.20	642.24	71.0
OUTLET	-		+10.	LT		535.2	1.20	642.24	71.0
OUTLET	-		+11.	LT		535.2	1.20	642.24	71.0
OUTLET	-		+12.	LT		535.2	1.20	642.24	71.0
OUTLET	-		+13.	LT		1605.6	1.20	1926.72	214.0
OUTLET	-		+14.	LT		1544.4	1.20	1853.28	206.0



JOB	z225346	Rochester Lower Bethel Mt. Road							
SHEET	NO.	1	OF	1					
CALCUL	ATED BY:	TAM	DATE:	7/12/19					
CHECKE	ED BY:		DATE:						
SCALE:			_						

ITEM NO. 651.40 GRUBBING MATERIAL (1	12"))
--------------------------------------	------	---

OUTLET	-	+15.	LT	535.2	1.20	642.24	71.0
OUTLET	-	+16.	LT	1258.8	1.20	1510.56	168.0
OUTLET	-	+17.	LT	1372.8	1.20	1647.36	183.0
OUTLET	-	+18.	LT	804.0	1.20	964.80	107.0
OUTLET	-	+19.	LT	535.2	1.20	642.24	71.0
OUTLET	-	+20.	LT	535.2	1.20	642.24	71.0

ON STONE FILL, TYPE I (NOT REQUIRED IN TYP-SECTIONS)

ON STONE FILL, TYPE II (NOT REQUIRED IN TYP-SECTIONS)

				•	•		,			
								JR.	(SF)	(SY)
						(FT)	(SF)	FACTOR	ADJUSTED	TOTAL
	STATIO	ON F	RAN	GE	POS.	LENGTH	AREA	∀∃	AREA	AREA
	11+50.	-		15+75.	LT		12745.0	1.20	15294.00	
	16+50.	-		17+07.	LT		428.0	1.20	513.60	
	17+94.	-		24+25.	LT		12867.0	1.20	15440.40	
	25+75.	-		29+00.	LT	325.0	3250.0	1.20	3900.00	
	+.	-		+.	LT		0.0	1.20	0.00	0.0
	+.	-		+.	LT	0.0	0.0	1.20	0.00	0.0
	+.	-		+.	LT	0.0	0.0	1.20	0.00	0.0
	+.	-		+.	LT	0.0	0.0	1.20	0.00	0.0
	+.	-		+.	LT	0.0	0.0	1.20	0.00	0.0
	+.	-		+.	LT	0.0	0.0	1.20	0.00	0.0
	+.	-		+.	LT	0.0	0.0	1.20	0.00	0.0

ON STONE FILL, TYPE IV (AREAS TAKEN FROM PSTORM.DWG)

						R.	(SF)	(SY)
				(FT)	(SF)	CTC	ADJUSTED	TOTAL
STATION	RAN	GE	POS.	LENGTH	AREA	VЫ	AREA	AREA



TOTALS

Engineering • Planning • Development • Management

JOB <u>z22534</u>	6 Rochester Low	Rochester Lower Bethel Mt. Road							
SHEET NO.	1	OF	1						
CALCULATED BY:	TAM	DATE:	7/12/19						
CHECKED BY:		DATE:							
SCALE:		_							

ITEM NO. 651.40 GRUBBING MATERIAL (12")

16+00.	-	17+25.	LT		13313.0	1.20	15975.60	1778.0
24+25.	-	25+75.	LT		15904.0	1.20	19084.80	2123.0
26+50.	-	27+50.	LT		5945.0	1.20	7134.00	795.0
+.	-	+.	LT	0.0	0.0	1.20	0.00	0.0
+.	-	+.	LT	0.0	0.0	1.20	0.00	0.0
+.	-	+.	LT	0.0	0.0	1.20	0.00	0.0
+.	-	+.	LT	0.0	0.0	1.20	0.00	0.0
+.	-	+.	LT	0.0	0.0	1.20	0.00	0.0
+.	-	+.	LT	0.0	0.0	1.20	0.00	0.0
+.	-	+.	LT	0.0	0.0	1.20	0.00	0.0
+.	-	+.	LT	0.0	0.0	1.20	0.00	0.0

12 INCH = 9445.0 SY

SUBTOTAL = 9445.0 SY

ROUNDING = 5.0 SY

TOTAL = 9450.0 SY

9450

Print Date = 16-Jul-19

SY



JOB <u>z225346 l</u>	Rochester Lower Bethel Mt. Road						
SHEET NO.	1	OF	1				
CALCULATED BY:	TAM	DATE:	6/18/19				
CHECKED BY:		DATE:					
SCALE:							

ITEM NO. 653.10 HAY MULCH

BASED OFF ITEM 651.15 SEED

ACREAGE = 7.05 AC.

Application Rate = 2.0 ton/A

Subtotal = 14.1 ton

Rounding = 0.9 ton

Total = 15.0 ton

TOTALS 15.00 TON

DuBois EKing	□ Bedford, NH 03110 □ Randolph, VT 05060 ✓ S. Burlingt., VT 05403 □ Springfield, VT 05156	(603) 883-0463 (802) 728-3376 (802) 878-7661 (802) 591-4326
Engineering •	Planning • Developmen	nt • Management

JOB	z225346	Rochester Lo	wer Bethel	Mt. Road
SHEET	NO.	1	OF	1
CALCU	JLATED BY:	TAM	DATE:	7/12/19
CHECK	KED BY:		DATE:	
SCALE	i			

ITEM NO. 653.20 ROLLED EROSION CONTROL PRODUCT, TYPE I

TO BE USED ON GRUBBING MATERIAL

GRUBBING MAT'L AREA = 9445 SY
GUARDRAIL END SECTION AREA = 25 SY

SUBTOTAL = 9470.0 SY ROUNDING = 30.0 SY

TOTAL = 9500.0 SY

TOTALS 9500 SY

Print Date = 16-Jul-19



JOB	z225346	Rochester Lowe	er Bethel	Mt. Road
SHEET N	Ю.	1	OF	1
CALCULA	ATED BY:	TAM	DATE:	6/18/19
CHECKE	D BY:		DATE:	
SCALE:				

ITEM NO. 653.25 CHECK DAM, TYPE I

LENGTH OF DITCH = 2861.00 LF

SLOPE OF DITCH = 0.005 FT/FT

CENTERLINE CREST HEIGHT = 0.50 FT

DAM SPACING = 100.00 FT

OF DAMS = 93.00 EA

AVG WIDTH OF TRENCH AT DAM CREST = 4.00 FT

AVG VOLUME OF EACH DAM = 1.33 CF

TOTAL VOLUME = 4.60 CY

 $\begin{array}{ccc} \text{SUBTOTAL} = & 4.60 & \text{CY} \\ \text{ROUNDING} = & 0.40 & \text{CY} \\ \text{TOTAL} = & 5.00 & \text{CY} \end{array}$

TOTALS 5 CY



 JOB
 z225346 Rochester Lower Bethel Mt. Road

 SHEET NO.
 1
 OF
 1

 CALCULATED BY:
 TAM
 DATE:
 6/13/19

 CHECKED BY:
 DATE:
 SCALE:

ITEM NO. 653.35 stabilized construction entrance

STATION	POS.	WIDTH (FT)	LENGTH (FT)	DEPTH (FT)	VOLUME (CY)
3+24.00	LT	30.00	50.00	0.67	40.00
31+85.00	LT	30.00	50.00	0.67	40.00
+.00	LT	0.00	0.00	0.00	0.00
+.00	LT	0.00	0.00	0.00	0.00
+.00	LT	0.00	0.00	0.00	0.00
+.00	RT	0.00	0.00	0.00	0.00
+.00	RT	0.00	0.00	0.00	0.00
+.00	RT	0.00	0.00	0.00	0.00
+.00	RT	0.00	0.00	0.00	0.00

SUBTOTAL = 80.00 CY ROUNDING = 20.00 CY TOTAL = 100.00 CY

TOTALS 100 CY

DuBois EKing	□ Bedford, NH 03110 □ Randolph, VT 05060 ✓ S. Burlingt., VT 05403 □ Springfield, VT 05156	(603) 883-0463 (802) 728-3376 (802) 878-7661 (802) 591-4326
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JOB <u>z225346</u>	Rochester Lowe	er Bethel	Mt. Road
SHEET NO.	1	OF	1
CALCULATED BY:	TAM	DATE:	6/13/19
CHECKED BY:		DATE:	
SCALE:		=	

ITEM NO. 653.42 INLET PROTECTION DEVICE, TYPE III

VALUES TAKEN FROM VTRANS EPSC 2009

CULVERT NO.	DIAMETER (IN)	VOLUME (CF)
1	48	339.29
2	24	263.89
3	18	263.89
4	42	339.29
5	18	263.89
6	18	263.89
7	18	263.89
8	18	263.89
9	18	263.89
10	18	263.89
11	18	263.89
12	18	263.89
13	24	263.89
14	42	339.29
15	18	263.89
16	24	263.89
17	18	263.89
18	42	339.29
19	18	263.89
20	18	263.89
TO	TAL VOLUME =	207.00

DIAMETER (IN) VOLUME (SF)

18 263.89

24 263.89

42 339.29

48 339.29

SUBTOTAL = 207.00 CY
ROUNDING = 3.00 CY
TOTAL = 210.00 CY

TOTALS

210

CY

CY

Dubois Randolph, VT S. Burlingt., V Springfield, V	T 05060 (802) 728-3376 /T 05403 (802) 878-7661
--	---

JOB	z225346	Rochester Lov	ver Bethel	Mt. Road
SHEET	10.	1	OF	
CALCUL	ATED BY:	TAM	DATE:	7/3/19
CHECKE	D BY:		DATE:	
SCALE:				

ITEM NO. 653.48 SILT FENCE, TYPE II

MEASURED FROM PEROSION.DWG

		Stat	ion Limits		Length, ft	HEIGHT	AREA (SY)
SITE 1							
+.	-		+.	LT	3343	4.00	1486
	-					4.00	0
	-					4.00	0
	-					4.00	0
	-					4.00	0
	-					4.00	0
	-					4.00	0
	-					4.00	0
	-					4.00	0
	-					4.00	0
	-					4.00	0

SUBTOTAL = 1486.0 SY
ROUNDING = 14.0 SY
TOTAL = 1500.0 SY

TOTALS 1500 SY

EKinding.	Bedford, NH 03110 Randolph, VT 05060 S. Burlingt., VT 05403 Springfield, VT 05156	

JOB	z225346	Rochester Low	ver Bethel	Mt. Road
SHEET	NO.	1	OF	1
CALCU	LATED BY:	TAM	DATE:	7/15/19
CHECK	ED BY:		DATE:	
SCALE				

MEASURED	FROM PE	EROSION.D	WG					
01711011101102		Length						
3+24	-	28+50	RT	2683.0	LF			
28+50	-	29+75	RT	380.0	LF			
3+24	-	29+25	LT	3375.0	LF			
29+50	-	29+75	LT	17.0	LF			
+	-	+		0.0	LF			
+	-	+		0.0	LF			
+	-	+		0.0	LF			
+	-	+		0.0	LF			
+	-	+		0.0	LF			
+	-	+		0.0	LF			
+	-	+		0.0	LF			
+	-	+		0.0	LF			
+	-	+		0.0	LF			
+	-	+		0.0	LF			
+	-	+		0.0	LF			
+	-	+		0.0	LF			
+	-	+		0.0	LF			
+	-	+		0.0	LF			
+	-	+		0.0	LF			
+	-	+		0.0	LF			
+	-	+		0.0	LF			
+	-	+		0.0	LF			
+	-	+		0.0	LF			
+	-	+		0.0	LF			
+	-	+		0.0	LF			
+	-	+		0.0	LF			
+	-	+		0.0	LF			
+	-	+		0.0	LF			
+	-	+		0.0	LF			
+	-	+		0.0	LF			
+	-	+		0.0	LF	SUBTOTAL =	6455.0	L
						ROUNDING =	45.0	L
						TOTAL =	6500	L

DuBois EKing	□ Bedford, NH 03110 □ Randolph, VT 05060 ☑ S. Burling., VT 05403 □ Springfield, VT 05156	(603) 883-0463 (802) 728-3376 (802) 878-7661 (802) 591-4326
Engineering • Pla	anning • Development	Management

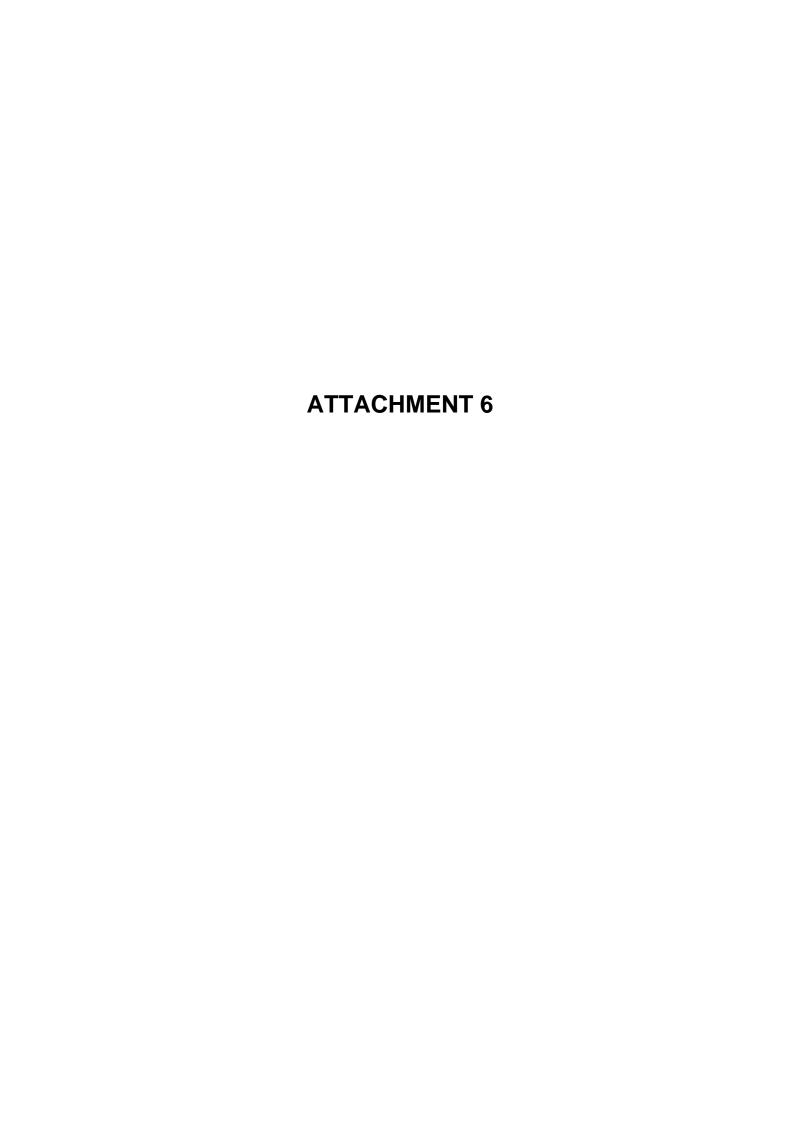
JOB	z225346	Rochester L	ower Bethel	Mt. Road
SHEET	NO.	1	OF	1
CALCUI	_ATED BY:	TAM	DATE:	6/13/19
CHECK	ED BY:		DATE:	
SCALE:				

ITEM NO. 656.85 TREE PROTECTION

Each ASSUMING BAT HABITAT TREES INCLUDED

	Luon	
Layout Sheet #43	0	
Layout Sheet #44	3	
Layout Sheet #45	1	
Layout Sheet #46	3	
Layout Sheet #47	1	
Layout Sheet #48	0	
	0	
	0	
	0	
	0	
	0	
	0	
	0	
TOTAL	8	
Project Quantity	1	LS

TOTALS 1 LS





demand.

EACH FIELD MUST BE COMPLETED PRIOR TO SUBMISSION

vtrans.vermont.gov

Certification Type: Type D Type A or Type	Type D Certifications must be accompanied by a Certificate of Analysis (COA) as well as a Certificate of Compliance (COC) "Backup Documentation"
Contract: Rochester ER 0176(11)	
Material Code & Name: 702.04,	$ie. 16821027 \; {\it Philadelphia STP } \; 1682(1)$ Emulsified Asphalt
Project Pin:	ie. 728.03(d) Hardware for Box Beam Rail Required "Title" for DocExpress Submission
ie. 16C001 Line Item Number: ie. 0100	Required 'Types' for DocExpress Submission, select the following: 1) 16821027; 16C001; 0100; 621.20 STEEL BEAM GUARD, GALVANIZED 2) Certification
Pay Item: 404.65, Emulsified Aspha	ılt
Manufacturer:	ie. 621.20 STEEL BEAM GUARD, GALVANIZED
Numerical Identifier(s):	ie. Independent Bolt Works in Valley Forge, PA
	ie.Lot, Batch, Heat #, Appendix Title or other Unique Identifier
Quantity & Units of Material: _	
Quantity & Units of Pay Item:	<i>ie.</i> 40 EA of 728.03(d)
Buy America	Contractor Use Only ie. 100 LF of 621.20 (Representative of 40 EA of 728.03(d))
Not Applicable	
[] Applicable (if DOES NOT M	EET, a Buy America Waiver must be included with submission)
[] Meets Buy America 23	CFR § 635.410 [] Does Not Meet Buy America 23 CFR § 635.410
Vermont Agency of Transportation Star	der the Pay Item and Material Code identified above conforms to the requirements of the adard Specifications for Construction, General Special Provisions, Plans and Project Special ocument does not alleviate the signee of providing evidence of such a request.
not discriminate or retaliate against any	employees or agents for disclosing information concerning a violation of law, fraud, waste, alth or safety, including but not limited to allegations concering the False Claims Act.
Signature:	Print:
Company:	
Representing (Manufacturer, Supplier of	or Contractor):
Phone Number:	Email:
	may certify materials with the understanding that those certifying the material assume full are subject to providing documentation verifying the material meets all requirements upon



demand.

EACH FIELD MUST BE COMPLETED PRIOR TO SUBMISSION

vtrans.vermont.gov

Certification Type: Type D Type A or Type I	Type D Certifications must be accompanied by a Certificate of Analysis (COA) as well as a Certificate of Compliance (COC) "Backup Documentation"
Contract: Rochester ER 0176(11)	
Material Code & Name: 702.04, Er	ie.16821027 Philadelphia STP 1682(1) nulsified Asphalt
Project Pin: ie.	728.03(d) Hardware for Box Beam Rail Required "Title" for DocExpress Submission
ie. 16C001 Line Item Number: ie. 0100	Required 'Types' for DocExpress Submission, select the following: 1) 16821027; 16C001; 0100; 621.20 STEEL BEAM GUARD, GALVANIZED 2) Certification
Pay Item: 406.35, Superpave Bitumino	us Concrete Pavement
Manufacturer:	ie. 621.20 STEEL BEAM GUARD, GALVANIZED
Numerical Identifier(s):	ie. Independent Bolt Works in Valley Forge, PA
	ie.Lot, Batch, Heat #, Appendix Title or other Unique Identifier
Quantity & Units of Material:	
Quantity & Units of Pay Item:	ie. 40 EA of 728.03(d)
Buy America Con	ntractor Use Only <i>ie.</i> 100 LF of 621.20 (Representative of 40 EA of 728.03(d))
Not Applicable	
[] Applicable (if DOES NOT MEE	T, a Buy America Waiver must be included with submission)
[] Meets Buy America 23 Cl	FR § 635.410 [] Does Not Meet Buy America 23 CFR § 635.410
Vermont Agency of Transportation Standa	r the Pay Item and Material Code identified above conforms to the requirements of the <i>ird Specifications for Construction</i> , General Special Provisions, Plans and Project Special ament does not alleviate the signee of providing evidence of such a request.
not discriminate or retaliate against any em	et to the Vermont False Claims Act set forth in 32 V.S.A. § 630 et seq., and that we shall aployees or agents for disclosing information concerning a violation of law, fraud, waste, or safety, including but not limited to allegations concering the False Claims Act.
Signature:	Print:
Company:	
Representing (Manufacturer, Supplier or C	Contractor):
Phone Number:	Email:
Manufacturers, suppliers or contractors ma legal responsibility of the material and are	y certify materials with the understanding that those certifying the material assume full subject to providing documentation verifying the material meets all requirements upon



demand.

EACH FIELD MUST BE COMPLETED PRIOR TO SUBMISSION

Type D Certifications must be accompanied by a Certificate of Analysis (COA)

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Certification Type: $\frac{\text{Type D}}{\text{Type A or T}}$	Type D Certifications must be accompanied by a Certificate of Analysis (COA) as well as a Certificate of Compliance (COC) "Backup Documentation"
Contract: Rochester ER 0176(11)	
Material Code & Name: 713.0	<i>ie</i> .16821027 Philadelphia STP 1682(1) O1, Bar Reinforcement
Project Pin:	ie. 728.03(d) Hardware for Box Beam Rail Required "Title" for DocExpress Submission
<i>ie.</i> 16C001 Line Item Number: <i>ie.</i> 0100	Required 'Types' for DocExpress Submission, select the following: 1) 16821027; 16C001; 0100; 621.20 STEEL BEAM GUARD, GALVANIZED 2) Certification
Pay Item: 507.12, Reinforcing Ste	eel, Level I
Manufacturer:	ie. 621.20 STEEL BEAM GUARD, GALVANIZED
Numerical Identifier(s):	ie. Independent Bolt Works in Valley Forge, PA
	ie.Lot, Batch, Heat #, Appendix Title or other Unique Identifier
Quantity & Units of Material:	
Quantity & Units of Pay Item:	<i>ie.</i> 40 EA of 728.03(d)
Buy America	Contractor Use Only <i>ie.</i> 100 LF of 621.20 (Representative of 40 EA of 728.03(d))
[] Not Applicable	
	MEET, a Buy America Waiver must be included with submission)
[] Meets Buy America	•
Vermont Agency of Transportation S	under the Pay Item and Material Code identified above conforms to the requirements of the <i>Standard Specifications for Construction</i> , General Special Provisions, Plans and Project Special s document does not alleviate the signee of providing evidence of such a request.
not discriminate or retaliate against a	subject to the Vermont False Claims Act set forth in 32 V.S.A. § 630 et seq., and that we shall ny employees or agents for disclosing information concerning a violation of law, fraud, waste, health or safety, including but not limited to allegations concering the False Claims Act.
Signature:	Print:
Company:	
Representing (Manufacturer, Supplie	er or Contractor):
Phone Number:	Email:
Manufacturers, suppliers or contracto	rs may certify materials with the understanding that those certifying the material assume full

Certifications shall be submitted to Project Manager

legal responsibility of the material and are subject to providing documentation verifying the material meets all requirements upon



demand.

EACH FIELD MUST BE COMPLETED PRIOR TO SUBMISSION

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Certification Type: Type D Type A or Type	Type D Certifications must be accompanied by a Certificate of Analysis (COA) as well as a Certificate of Compliance (COC) "Backup Documentation"
Contract: Rochester ER 0176(11)	
Material Code & Name: 751.01(a	<i>ie</i> .16821027 Philadelphia STP 1682(1) a), Steel Posts and Anchors
Project Pin:	ie. 728.03(d) Hardware for Box Beam Rail Required "Title" for DocExpress Submission
ie. 16C001 Line Item Number: ie. 0100	Required 'Types' for DocExpress Submission, select the following: 1) 16821027; 16C001; 0100; 621.20 STEEL BEAM GUARD, GALVANIZED 2) Certification
Pay Item: 619.17, Yielding Marker P	osts
Manufacturer:	ie. 621.20 STEEL BEAM GUARD, GALVANIZED
Numerical Identifier(s):	ie. Independent Bolt Works in Valley Forge, PA
	ie.Lot, Batch, Heat #, Appendix Title or other Unique Identifier
Quantity & Units of Material:	
Quantity & Units of Pay Item :	<i>ie.</i> 40 EA of 728.03(d)
Buy America	Contractor Use Only <i>ie.</i> 100 LF of 621.20 (Representative of 40 EA of 728.03(d))
[] Not Applicable	
[X] Applicable (if DOES NOT ME	EET, a Buy America Waiver must be included with submission)
[] Meets Buy America 23	CFR § 635.410 [] Does Not Meet Buy America 23 CFR § 635.410
Vermont Agency of Transportation Stan	der the Pay Item and Material Code identified above conforms to the requirements of the dard Specifications for Construction, General Special Provisions, Plans and Project Special ocument does not alleviate the signee of providing evidence of such a request.
not discriminate or retaliate against any	ject to the Vermont False Claims Act set forth in 32 V.S.A. § 630 et seq., and that we shall employees or agents for disclosing information concerning a violation of law, fraud, waste, lth or safety, including but not limited to allegations concering the False Claims Act.
Signature:	Print:
Company:	
Representing (Manufacturer, Supplier or	r Contractor):
Phone Number:	Email:
	may certify materials with the understanding that those certifying the material assume full re subject to providing documentation verifying the material meets all requirements upon



demand.

EACH FIELD MUST BE COMPLETED PRIOR TO SUBMISSION

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Certification Type: Type D Type A or Type D	Type D Certifications must be accompanied by a Certificate of Analysis (COA) as well as a Certificate of Compliance (COC) "Backup Documentation"
Contract: Rochester ER 0176(11)	
Material Code & Name: 728.01(b), S	<i>ie.</i> 16821027 Philadelphia STP 1682(1) Steel Posts and Post Accessories
Project Pin: ie.	728.03(d) Hardware for Box Beam Rail Required "Title" for DocExpress Submission
ie. 16C001 Line Item Number: ie. 0100	Required 'Types' for DocExpress Submission, select the following: 1) 16821027; 16C001; 0100; 621.20 STEEL BEAM GUARD, GALVANIZED 2) Certification
Pay Item: 621.205, Steel Beam Guardra	ail, Galvanized W/ 8 Feet Posts
Manufacturer:	ie. 621.20 STEEL BEAM GUARD, GALVANIZED
Numerical Identifier(s):	ie. Independent Bolt Works in Valley Forge, PA
	ie.Lot, Batch, Heat #, Appendix Title or other Unique Identifier
Quantity & Units of Material:	
Quantity & Units of Pay Item:	<i>ie.</i> 40 EA of 728.03(d)
Buy America Cont	tractor Use Only <i>ie.</i> 100 LF of 621.20 (Representative of 40 EA of 728.03(d))
[] Not Applicable	
Applicable (if DOES NOT MEET	, a Buy America Waiver must be included with submission)
[] Meets Buy America 23 CF	R § 635.410 [] Does Not Meet Buy America 23 CFR § 635.410
Vermont Agency of Transportation Standar	the Pay Item and Material Code identified above conforms to the requirements of the descriptions for Construction, General Special Provisions, Plans and Project Special ment does not alleviate the signee of providing evidence of such a request.
not discriminate or retaliate against any emp	to the Vermont False Claims Act set forth in 32 V.S.A. § 630 et seq., and that we shall ployees or agents for disclosing information concerning a violation of law, fraud, waste, or safety, including but not limited to allegations concering the False Claims Act.
Signature:	Print:
Company:	
Representing (Manufacturer, Supplier or Co	ontractor):
Phone Number:	Email:
	certify materials with the understanding that those certifying the material assume full ubject to providing documentation verifying the material meets all requirements upon



demand.

EACH FIELD MUST BE COMPLETED PRIOR TO SUBMISSION

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Certification Type: Type D Type A or Type D	Type D Certifications must be accompanied by a Certificate of Analysis (COA) as well as a Certificate of Compliance (COC) "Backup Documentation"
Contract: Rochester ER 0176(11)	
Material Code & Name: 728.02(b),	<i>ie.</i> 16821027 Philadelphia STP 1682(1) Steel Beam and Thrie Beam Rail
Project Pin:	728.03(d) Hardware for Box Beam Rail Required "Title" for DocExpress Submission
ie. 16C001 Line Item Number: ie. 0100	Required 'Types' for DocExpress Submission, select the following: 1) 16821027; 16C001; 0100; 621.20 STEEL BEAM GUARD, GALVANIZED 2) Certification
Pay Item: 621.205, Steel Beam Guardr	ail, Galvanized W/ 8 Feet Posts
Manufacturer:	ie. 621.20 STEEL BEAM GUARD, GALVANIZED
Numerical Identifier(s):	ie. Independent Bolt Works in Valley Forge, PA
	ie.Lot, Batch, Heat #, Appendix Title or other Unique Identifier
Quantity & Units of Material:	
Quantity & Units of Pay Item:	<i>ie.</i> 40 EA of 728.03(d)
Buy America Con	tractor Use Only <i>ie.</i> 100 LF of 621.20 (Representative of 40 EA of 728.03(d))
[] Not Applicable	
[X Applicable (if DOES NOT MEET	T, a Buy America Waiver must be included with submission)
[] Meets Buy America 23 CF	FR § 635.410 [] Does Not Meet Buy America 23 CFR § 635.410
Vermont Agency of Transportation Standar	the Pay Item and Material Code identified above conforms to the requirements of the rd Specifications for Construction, General Special Provisions, Plans and Project Special ment does not alleviate the signee of providing evidence of such a request.
not discriminate or retaliate against any emp	to the Vermont False Claims Act set forth in 32 V.S.A. § 630 et seq., and that we shall ployees or agents for disclosing information concerning a violation of law, fraud, waste, or safety, including but not limited to allegations concering the False Claims Act.
Signature:	Print:
Company:	
Representing (Manufacturer, Supplier or Co	ontractor):
Phone Number:	Email:
	certify materials with the understanding that those certifying the material assume full ubject to providing documentation verifying the material meets all requirements upon



demand.

EACH FIELD MUST BE COMPLETED PRIOR TO SUBMISSION

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Certification Type: Type D Type A or Type D	as well as a Certificate of Compliance (COC) "Backup Documentation"
Contract: Rochester ER 0176(11)	
Material Code & Name: 728.03(a), Ha	<i>ie.</i> 16821027 Philadelphia STP 1682(1) rdware for Steel, Cable and Thrie Rail
Project Pin: ie. 72	28.03(d) Hardware for Box Beam Rail Required "Title" for DocExpress Submission
ie. 16C001 Line Item Number: ie. 0100	Required 'Types' for DocExpress Submission, select the following: 1) 16821027; 16C001; 0100; 621.20 STEEL BEAM GUARD, GALVANIZED 2) Certification
Pay Item: 621.205, Steel Beam Guardrail,	Galvanized W/ 8 Feet Posts
Manufacturer:	ie. 621.20 STEEL BEAM GUARD, GALVANIZED
Numerical Identifier(s):	ie. Independent Bolt Works in Valley Forge, PA
-	ie.Lot, Batch, Heat #, Appendix Title or other Unique Identifier
Quantity & Units of Material:	
Quantity & Units of Pay Item:	<i>ie.</i> 40 EA of 728.03(d)
Buy America Contra	ctor Use Only <i>ie.</i> 100 LF of 621.20 (Representative of 40 EA of 728.03(d))
[X Applicable (if DOES NOT MEET, a	Buy America Waiver must be included with submission)
[] Meets Buy America 23 CFR	§ 635.410 [] Does Not Meet Buy America 23 CFR § 635.410
Vermont Agency of Transportation Standard	e Pay Item and Material Code identified above conforms to the requirements of the <i>Specifications for Construction</i> , General Special Provisions, Plans and Project Special ent does not alleviate the signee of providing evidence of such a request.
not discriminate or retaliate against any emplo	the Vermont False Claims Act set forth in 32 V.S.A. § 630 et seq., and that we shall byees or agents for disclosing information concerning a violation of law, fraud, waste, safety, including but not limited to allegations concering the False Claims Act.
Signature:	Print:
Company:	
Representing (Manufacturer, Supplier or Cont	ractor):
Phone Number:	Email:
	ertify materials with the understanding that those certifying the material assume full ject to providing documentation verifying the material meets all requirements upon



Buy America Material Declaration Form

Agency of Transportation

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Contract: Rochester ER 0176(11)	<i>ie.</i> 16821027 Philadelphia STP 1682(1)
Material Code & Name: 728.05, Concrete Ar	
ie. 728.030	(d) Hardware for Box Beam Rail Required 'Title' for DocExpress Submission
Project Pin:	Required 'Types' for DocExpress Submission, select the following:
<i>ie.</i> 16C001 Line Item Number:	1) 16821027; 16C001; 0100; 621.20 STEEL BEAM GUARD., GALVANIZED 2) Buy America
Pay Item: 621.6, Anchor for Steel Beam Rail	
	ie. 621.20 STEEL BEAM GUARD., GALVANIZED
Manufacturer:	
	ie. Independent Bolt Works in Valley Forge, PA
Quantity & Units of Material:	
Quantity & Units of Day Itam. N/A	<i>ie.</i> 40 EA of 728.03(d)
Contracto	r use only ie. 100 LF of 621.20 (Representative of 40 EA of 728.03(d))
that all related processes including melting, rollin the United States of America. Signing this docum I understand that this certification is subject to the discriminate or retaliate against any employees of authority or act threatening health or safety, in	tion that the material conforms to the Buy America Provisions of 23 CFR § 635.410, ag, cutting, welding, fabrication, and the process of applying a coating occurred within nent does not alleviate the signee of providing evidence of such a request. e Vermont False Claims Act set forth in 32 V.S.A. § 630 et seq., and that we shall not a ragents for disclosing information concerning a violation of law, fraud, waste, abuse cluding but not limited to allegations concerning the False Claims Act.
Signature:	
Company:	
Representing (Manufacturer, Supplier or	Contractor):
Phone Number:	Email:
	fy materials with the understanding that those certifying the material assume full legal roviding documentation verifying the material meets all requirements upon demand.



demand.

EACH FIELD MUST BE COMPLETED PRIOR TO SUBMISSION

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Certification Type: Type A Type A or Type D	Type D Certifications must be accompanied by a Certificate of Analysis (COA) as well as a Certificate of Compliance (COC) "Backup Documentation"
Contract: Rochester ER 0176(11)	
Material Code & Name: 708.09(a), Glass	ie.16821027 Philadelphia STP 1682(1) s Beads
Project Pin: ie. 728	.03(d) Hardware for Box Beam Rail Required "Title" for DocExpress Submission
ie. 16C001 Line Item Number: ie. 0100	Required 'Types' for DocExpress Submission, select the following: 1) 16821027; 16C001; 0100; 621.20 STEEL BEAM GUARD, GALVANIZED 2) Certification
Pay Item: 646.404, Durable 4 Inch White Lir	ne, Polyurea
Manufacturer:	ie. 621.20 STEEL BEAM GUARD, GALVANIZED
Numerical Identifier(s):	ie. Independent Bolt Works in Valley Forge, PA
	ie.Lot, Batch, Heat #, Appendix Title or other Unique Identifier
Quantity & Units of Material:	
Quantity & Units of Pay Item:	<i>ie.</i> 40 EA of 728.03(d)
Buy America Contract	or Use Only ie. 100 LF of 621.20 (Representative of 40 EA of 728.03(d))
Not Applicable	
[] Applicable (if DOES NOT MEET, a F	Buy America Waiver must be included with submission)
[] Meets Buy America 23 CFR §	635.410 [] Does Not Meet Buy America 23 CFR § 635.410
Vermont Agency of Transportation Standard Sp	Pay Item and Material Code identified above conforms to the requirements of the <i>necifications for Construction</i> , General Special Provisions, Plans and Project Special todes not alleviate the signee of providing evidence of such a request.
not discriminate or retaliate against any employe	ne Vermont False Claims Act set forth in 32 V.S.A. § 630 et seq., and that we shall ees or agents for disclosing information concerning a violation of law, fraud, waste, after, including but not limited to allegations concering the False Claims Act.
Signature:	Print:
Company:	
Representing (Manufacturer, Supplier or Contra	ctor):
Phone Number:	Email:
	tify materials with the understanding that those certifying the material assume full ct to providing documentation verifying the material meets all requirements upon



demand.

EACH FIELD MUST BE COMPLETED PRIOR TO SUBMISSION

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Certification Type: Type A Type A or Type I	Type D Certifications must be accompanied by a Certificate of Analysis (COA) as well as a Certificate of Compliance (COC) "Backup Documentation"	
Contract: Rochester ER 0176(11)		
Material Code & Name: 708.09(a),	$ie. 16821027 \ {\it Philadelphia STP 1682} (1)$ Glass Beads	
Project Pin:	. 728.03(d) Hardware for Box Beam Rail Required "Title" for DocExpress Submission	
ie. 16C001 Line Item Number: ie. 0100	Required 'Types' for DocExpress Submission, select the following: 1) 16821027; 16C001; 0100; 621.20 STEEL BEAM GUARD, GALVANIZED 2) Certification	
Pay Item: 646.414, Durable 4 Inch Yel	low Line, Polyurea	
Manufacturer:	ie. 621.20 STEEL BEAM GUARD, GALVANIZED	
Numerical Identifier(s):	ie. Independent Bolt Works in Valley Forge, PA	
	ie.Lot, Batch, Heat #, Appendix Title or other Unique Identifier	
Quantity & Units of Material:		
Quantity & Units of Pay Item:	<i>ie.</i> 40 EA of 728.03(d)	
Buy America Co	ntractor Use Only <i>ie.</i> 100 LF of 621.20 (Representative of 40 EA of 728.03(d))	
Not Applicable		
[] Applicable (if DOES NOT MEET, a Buy America Waiver must be included with submission)		
[] Meets Buy America 23 CFR § 635.410 [] Does Not Meet Buy America 23 CFR § 635.410		
I hereby certify the material installed under the Pay Item and Material Code identified above conforms to the requirements of the Vermont Agency of Transportation <i>Standard Specifications for Construction</i> , General Special Provisions, Plans and Project Special Provisions as applicable. Signing this document does not alleviate the signee of providing evidence of such a request.		
not discriminate or retaliate against any en	ct to the Vermont False Claims Act set forth in 32 V.S.A. § 630 et seq., and that we shall apployees or agents for disclosing information concerning a violation of law, fraud, waste, a or safety, including but not limited to allegations concering the False Claims Act.	
Signature:	Print:	
Company:		
Representing (Manufacturer, Supplier or C	Contractor):	
Phone Number:	Email:	
Manufacturers, suppliers or contractors malegal responsibility of the material and are	by certify materials with the understanding that those certifying the material assume full subject to providing documentation verifying the material meets all requirements upon	



demand.

EACH FIELD MUST BE COMPLETED PRIOR TO SUBMISSION

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Certification Type: Type D Type A or Type I	Type D Certifications must be accompanied by a Certificate of Analysis (COA) as well as a Certificate of Compliance (COC) "Backup Documentation"	
Contract: Rochester ER 0176(11)		
Material Code & Name: 755.11(a)	ie.16821027 Philadelphia STP 1682(1) , Rolled Erosion control Product, Type I	
Project Pin:	. 728.03(d) Hardware for Box Beam Rail Required "Title" for DocExpress Submission	
ie. 16C001 Line Item Number: ie. 0100	Required 'Types' for DocExpress Submission, select the following: 1) 16821027; 16C001; 0100; 621.20 STEEL BEAM GUARD, GALVANIZED 2) Certification	
Pay Item: 653.2, Rolled Erosion Contr	ol Product, Type I	
Manufacturer:	ie. 621.20 STEEL BEAM GUARD, GALVANIZED	
Numerical Identifier(s):	ie. Independent Bolt Works in Valley Forge, PA	
	ie.Lot, Batch, Heat #, Appendix Title or other Unique Identifier	
Quantity & Units of Material:		
Quantity & Units of Pay Item:	<i>ie.</i> 40 EA of 728.03(d)	
Buy America Co.	ntractor Use Only <i>ie.</i> 100 LF of 621.20 (Representative of 40 EA of 728.03(d))	
Not Applicable		
[] Applicable (if DOES NOT MEE	T, a Buy America Waiver must be included with submission)	
[] Meets Buy America 23 CFR § 635.410 [] Does Not Meet Buy America 23 CFR § 635.410		
I hereby certify the material installed under the Pay Item and Material Code identified above conforms to the requirements of the Vermont Agency of Transportation <i>Standard Specifications for Construction</i> , General Special Provisions, Plans and Project Special Provisions as applicable. Signing this document does not alleviate the signee of providing evidence of such a request.		
not discriminate or retaliate against any en	ct to the Vermont False Claims Act set forth in 32 V.S.A. § 630 et seq., and that we shall aployees or agents for disclosing information concerning a violation of law, fraud, waste, a or safety, including but not limited to allegations concering the False Claims Act.	
Signature:	Print:	
Company:		
Representing (Manufacturer, Supplier or C	Contractor):	
Phone Number:	Email:	
	ay certify materials with the understanding that those certifying the material assume full subject to providing documentation verifying the material meets all requirements upon	



Buy America Material Declaration Form

Agency of Transportation

EACH FIELD MUST BE COMPLETED PRIOR TO SUBMISSION

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Contract: Rochester ER 0176(11)	<i>ie.</i> 16821027 Philadelphia STP 1682(1)
Material Code & Name: 751.01(a), Steel Po-	
ie. 728.03	8(d) Hardware for Box Beam Rail Required 'Title' for DocExpress Submission
Project Pin:	Required 'Types' for DocExpress Submission, select the following:
Line Item Number:	1) 16821027; 16C001; 0100; 621.20 STEEL BEAM GUARD., GALVANIZED 2) Buy America
Pay Item: 676.10, Delineator with Steel Post	
Tay Item. overve, Demicates mas electrical	ie. 621,20 STEEL BEAM GUARD., GALVANIZED
Manufacturer:	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
	ie. Independent Bolt Works in Valley Forge, PA
Quantity & Units of Material:	
O 4'4 O II '4 CD I4 NI/A	ie. 40 EA of 728.03(d)
Quantity & Units of Pay Item: N/A	or use only ie. 100 LF of 621.20 (Representative of 40 EA of 728.03(d))
	(a))
the United States of America. Signing this docur I understand that this certification is subject to the discriminate or retaliate against any employees	ng, cutting, welding, fabrication, and the process of applying a coating occurred within ment does not alleviate the signee of providing evidence of such a request. ne Vermont False Claims Act set forth in 32 V.S.A. § 630 et seq., and that we shall not or agents for disclosing information concerning a violation of law, fraud, waste, abuse including but not limited to allegations concerning the False Claims Act.
Authorized Representative (Print):	
Signature:	
Company:	
Representing (Manufacturer, Supplier or	· Contractor):
Phone Number:	Email:
	rify materials with the understanding that those certifying the material assume full legal providing documentation verifying the material meets all requirements upon demand.