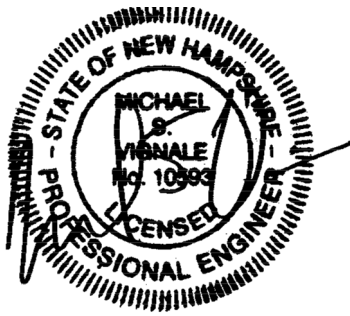


DOCUMENTS AND SPECIFICATIONS
FOR CONSTRUCTION OF
PLUMMER HILL ROAD CULVERT PROJECT

FOR THE
TOWN OF HENNIKER, NEW HAMPSHIRE

MARCH 24, 2024



KVPartners LLC
P.O. Box 432
New Boston, New Hampshire 03070

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INVITATION TO BID

The Town of Henniker invites sealed bids for the installation of culverts on Plummer Hill Road until noon on April 18, 2024, at the office of the Town Administrator, Town of Henniker, 18 Depot Hill Road, Henniker, NH 03242 at which time and place all Bids will be publicly opened and read. Bids submitted after this time or those that do not comply with the bid requirements will not be accepted.

The work includes the construction of a 30" and 24" HDPE culvert with precast headwalls and associated work located in Henniker, New Hampshire. The Town has already purchased and will furnish the headwalls and pipe.

A pre-bid conference will not be held for this project.

Plans have been prepared by KV Partners, LLC, P.O. Box 432, New Boston, NH 03070, Ph. (603) 731-1562, email MVignale@KVPLLC.com. Contract Documents may be examined at the Town Hall, 18 Depot Hill Road, Henniker, NH 03242; Construction Summary of NH, 734 Chestnut Street, Manchester, NH 03104 and Associated General Contractors of NH, 48 Grandview Road, Bow, NH 03304. Contract Documents may be obtained only from KV Partners (contact information above) at no cost in PDF form and paper copies of the plans and specifications can be provided, if required, at non-refundable cost of \$50.

The Town reserves the right to reject any or all Bids, should the Owner deem it to be in the public interest to do so. All questions concerning the plans and specifications shall be directed to KV Partners, LLC.

BID FORM

PART 1 - GENERAL

1.1 BID INFORMATION

- A. Project Identification: Plummer Hill Road Culverts, Henniker, NH
- B. Proposal of: _____ (hereinafter referred to as Bidder) organized and existing under the laws of the State of _____ doing business as a _____ (specify corporation; partnership; or individual).
- C. This Bid is Submitted To: Town of Henniker
- D. Bidder proposes and agrees, if this Bid is accepted, to enter into an agreement with the Owner in the form included in the Contract Documents to perform and furnish all Work as specified or indicated in the Contract Documents for the bid price and within the contract times stated and in accordance with all other terms and conditions of the Contract Documents.
- E. Bidder accepts all of the terms and conditions in the Bid Forms and Specifications.
- F. Bidder hereby agrees that this Bid will remain subject to acceptance for sixty (60) days, excluding weekends and legal holidays, after the actual date of the opening of the Bid.
- G. Bidder hereby agrees to sign and deliver the required number of copies of the Agreement with the other documents required within five (5) calendar days after the date of Owner’s Notice of Award.
- H. In submitting this Bid, Bidder represents and declares the following:
 - 1. Bidder has examined and carefully studied the Bid Documents.
 - 2. Bidder acknowledges receipt of the following Addenda (List Addenda by Addendum Number and Date):

Number	Date

- 3. Bidder has visited and carefully examined the site of the proposed Work and has become thoroughly familiar with and is fully satisfied as to the conditions that exist at the site; the character, requirements and extent of the proposed Work, and the difficulties in executing the work that may affect cost, progress, performance and furnishing of the Work.
- 4. Bidder is familiar with and is satisfied as to all federal, state and local Laws and Regulations and may affect cost, progress, performance and furnishing of the Work.
- 5. Bidder has obtained and carefully studied (or assumes responsibility for having done so) all such additional or supplementary examinations, investigations, explorations, tests, studies and data

concerning conditions (surface, subsurface and underground facilities) at or contiguous to the site or otherwise which may affect cost progress, performance or furnishing of the Work or which relate to any aspect of the means, methods, techniques, sequences and procedures of construction to be employed by Bidder and safety precautions and programs incident thereto. Bidder does not consider that any additional examinations, investigations, explorations, tests, studies or data are necessary for the determination of this Bid for performance and furnishing of the Work in accordance with the times, price and other terms and conditions of the Contract Documents.

6. Bidder acknowledges that Owner and Engineer do not assume responsibility for the accuracy or completeness of information and data shown or indicated in the Bid Documents with respect to underground facilities at or contiguous to the site.
7. Bidder is aware of the general nature of Work to be performed by Owner and others at the site that relates to Work for which this Bid is submitted as indicated in the Contract Documents.
8. Bidder agrees to provide Performance and Payment Bonds equal to the contract value **IF** the bid exceeds \$125,000.
9. The Owner reserves the right to award the contract to a Bidder that is not the lowest responsible and responsive Bidder. Although the Bid price will be a substantial factor in the Owner's award, the final award will be based on the Owner's determination, in its sole discretion, of which Bid will be in the best interest of the Owner.
10. The contract completion date is September 30, 2024.

1.2 BID

- A. Prices shall be stated in words and figures. In case of discrepancy between price in words and price in figures; the words shall govern.
- B. Prices shall be typewritten or written by hand in ink.
- C. The subdivision of the proposed contract price is indicated on the following Bid Schedule. Bidder shall use the Bid Schedule when submitting Bid.
- D. This Bid must bear the written signature of the Bidder or an authorized agent of the Bidder. If the Bidder is a corporation or a partnership, the Bid must be signed by a duly authorized officer of such corporation or by a partner and the title of such office must be stated.

Respectfully submitted:

Date _____

By _____
(Signature and Title of Person Authorized to Sign Bid)

(Name of Bidder)

(Business Street Address)

_____ () _____
(City and State) (Business Telephone Number)

(SEAL – if Bid is by a corporation)

BID SCHEDULE

Item No.	Estimated Quantity	Brief Description, Unit or Lump Sum Price in Both Words	Unit Price in Figures	Total Price in Figures
1	1	Construct Culvert Project (LUMP SUM)		
		_____ dollars	\$ _____	\$ _____
		and _____ cents.		

TOTAL BID

_____ dollars \$ _____
(WRITTEN) (FIGURES)

AGREEMENT

This Agreement is made between the Town of Henniker (Town) and _____ (Contractor), with a principal place of business at _____.

1. Services to Be Performed

Contractor agrees to perform the services described in the Bid Documents and Plans referenced below:

2. Payment

In consideration for the services to be performed by Contractor, Town agrees to pay Contractor the following total amount: _____. Contractor shall be paid within a reasonable time after Contractor submits an invoice to Town. The invoice should include the following: an invoice number, the dates covered by the invoice, and a summary of the work performed.

3. Expenses

Contractor shall be responsible for all expenses incurred while performing services under this Agreement. This includes automobile, truck, and other travel expenses; vehicle maintenance and repair costs; vehicle and other license fees and permits; insurance premiums; road, fuel, and other taxes; fines; radio, pager, or cell phone expenses; meals; and all salary, expenses, and other compensation paid to employees or contract personnel the Contractor hires to complete the work under this Agreement.

4. Vehicles and Equipment

Contractor will furnish all vehicles, equipment, tools, and materials used to provide the services required by this Agreement. Town will not require Contractor to rent or purchase any equipment, product, or service as a condition of entering into this Agreement.

5. Independent Contractor Status

Contractor is an independent contractor, and neither Contractor nor Contractor's employees or contract personnel are, or shall be deemed, Town's employees. In its capacity as an independent contractor, Contractor agrees and represents, and Town agrees, as follows

- Contractor has the right to perform services for others during the term of this Agreement.
- Contractor has the right to hire assistants as subcontractors or to use employees to provide the services required by this Agreement.
- Neither Contractor nor Contractor's employees or contract personnel shall be required to wear any uniforms provided by Town.

- Neither Contractor nor Contractor's employees or contract personnel shall receive any training from Town in the professional skills necessary to perform the services required by this Agreement.
- Neither Contractor nor Contractor's employees or contract personnel shall be required by Town to devote full time to the performance of the services required by this Agreement.

6. Business Licenses, Permits, and Certificates

Contractor represents and warrants that Contractor and Contractor's employees and contract personnel will comply with all federal, state, and local laws requiring drivers and other licenses, business permits, and certificates required to carry out the services to be performed under this Agreement.

Contractor shall pay all taxes incurred while performing services under this Agreement—including all applicable income taxes and, if Contractor is not a corporation, self-employment (Social Security) taxes. Upon demand, Contractor shall provide Town with proof that such payments have been made.

7. Insurance

Town shall not provide insurance coverage of any kind for Contractor or Contractor's employees or contract personnel. Contractor shall obtain the following insurance coverage and maintain it during the entire term of this Agreement:

- Automobile liability insurance for each vehicle used in the performance of this Agreement -- including owned, non-owned (for example, owned by Contractor's employees), leased, or hired vehicles -- in the minimum amount of \$300,000 combined single limit per occurrence for bodily injury and property damage.
- Comprehensive or commercial general liability insurance coverage in the minimum amount of \$1,000,000 combined single limit, including coverage for bodily injury, personal injury, broad form property damage, contractual liability, and cross-liability.
- Before commencing any work, Contractor shall provide Town with proof of this insurance and with proof that Town has been made an additional insured under the policies.

8. Indemnification

Contractor shall indemnify and hold Town harmless from any loss or liability arising from performing services under this Agreement.

9. Correction Period

If within one year after the date of Substantial Completion (or such longer period of time as may be prescribed by the terms of any applicable special guarantee required by the Contract Documents) any Work is found to be defective, Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions:

1. repair such defective land or areas; or

2. correct such defective Work; or
3. if the defective Work has been rejected by Owner, remove it from the Project and replace it with Work that is not defective, and
4. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others or other land or areas resulting therefrom.

10. Term of Agreement

This agreement will become effective when signed by both parties and will terminate at the end of the Correction Period as described below. The Contractor agrees to complete the services required by September 30, 2024.

11. Terminating the Agreement

With reasonable cause, either Town or Contractor may terminate this Agreement, effective immediately upon giving written notice.

Reasonable cause includes:

- a material violation of this Agreement, or
- any act exposing the other party to liability to others for personal injury or property damage.
- Either party may terminate this Agreement at any time by giving 30 days' written notice to the other party of the intent to terminate.

12. Exclusive Agreement

This is the entire Agreement between Contractor and Town.

13. Modifying the Agreement

This Agreement may be modified only by a writing signed by both parties.

14. Resolving Disputes

If a dispute arises under this Agreement, the parties agree to first try to resolve the dispute with the help of a mutually agreed-upon mediator in New Hampshire. Any costs and fees other than attorney fees associated with the mediation shall be shared equally by the parties. If it proves impossible to arrive at a mutually satisfactory solution through mediation, the parties agree to submit the dispute to a mutually agreed-upon arbitrator in New Hampshire. Judgment upon the award rendered by the arbitrator may be entered in any court having jurisdiction to do so. Costs of arbitration, including attorney fees, will be allocated by the arbitrator.

15. Assignment and Delegation

Contractor may not assign or subcontract any rights or delegate any of its duties under this Agreement without Town's prior written approval.

16. Applicable Law

This Agreement will be governed by New Hampshire law, without giving effect to conflict of laws principles.

Signatures

Town of Henniker, NH

Signature

Date

Contractor:

Printed Name

Signature

Date

Taxpayer ID Number

Included by reference: Bid Documents dated March 24, 2024.

SUMMARY OF WORK

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes description of work to be performed, schedule of alternates, Town furnished products, work by the Town, work by others, work schedule, work sequence, use of premises and other special conditions and provisions to be performed under the Contract.

1.2 PROJECT WORK IDENTIFICATION

- A. Project location:

- 1. The 30" pipe improvement is located about 150 feet south of transformer ZYT1 on Plummer Hill Road.
- 2. The 24" pipe improvement is located just south of the driveway to #22 Plummer Hill Road.

- B. Work includes installation of a 30" and 24" HDPE pipes and headwalls to replace the existing corrugated metal pipes in the same locations. The 30" pipe and the 24" pipe are each about 80' long. The Town will furnish the pipes and precast concrete headwalls. Installation will include up to 15' of Class C stone fill at each end of the culverts. There are underground utilities (electric cable, telephone) that must be accommodated when installing the culverts (no relocation is anticipated). There is no other traffic outlet to the residences on this road so any road closures must be brief (several hours only and coordinated with the Town so residents can be notified).
- C. Site preparation includes removal of existing signs, trees, vegetation, fences, stone walls; utility accommodations; and all other work required to fully construct the project.
- D. Excavating and disposing of any and all materials required including, but not limited to, topsoil, rock, fences, stone fill, pipes, conduits, and any other materials to fully construct the project.
- E. Construction of the pipes, headwalls, stone fill, and all other work required to complete the project.
- F. Furnishing, installing and testing all materials associated with the proposed construction.
- G. Securing the construction site as required for safety.
- H. Disposal of excess excavated material not required for the project.
- I. Loaming, seeding, and completion of all clean-up.

- J. The work shall also conform to such additional drawings and addenda to these Specifications and Drawings as may be published or exhibited prior to the opening of the bids and to such drawings in explanation of details, or as may be furnished by the Engineer from time to time during the construction.
- K. Work and materials which are necessary in the construction but which are not specifically referred to in the Specification, or shown on the Drawings, but implied by the Contract shall be furnished by the Contractor at his own cost and expense and shall be such as will correspond with the general character of the work as may be determined by the Engineer, whose decisions as to the necessity for and character of such work and materials shall be final and conclusive. It is the intent of these Specifications and Drawings to produce a complete, finished job whether shown in every detail or not.

1.3 WORK SCHEDULE

- A. The Contractor shall promptly start and continue the work under this Contract with the necessary labor, equipment and materials to properly execute and complete the work within the time specified in the Contract. No cessation of Contractor's operations will be allowed without the approval of the Town.
- B. The Contractor shall furnish required crews and equipment necessary to install the work. Prior to utilizing additional crews in other locations of the work, the Contractor shall request permission from the Engineer and the allowed actual on-site working time will be adjusted accordingly.
- C. Should the prosecution of the work for any reason be discontinued, the Contractor shall notify the Town at least 48 hours in advance of resuming operations.
- D. Normal construction activity shall be limited to normal business hours of 7:00 AM to 5:30 PM, Monday through Friday (except holidays) unless otherwise approved by the Engineer.
- E. Work in streets, roadways, and areas adjacent to them shall cease at noon on days before legal holidays and at noon on Fridays prior to Monday holidays.
- F. The rate of progress shall be satisfactory to the Town and the Engineer. The Town and Engineer reserve the right to modify any schedule as required to meet the prevailing conditions.
- G. The work of placing the newly constructed facilities into operation as well as the necessary modifications and renovations to existing facilities shall be thoroughly planned and fully coordinated with the requirements of the Town, and every effort shall be made to insure smooth transitions.

1.4 CONTRACTOR'S USE OF PREMISES

- A. Contractor shall assume full responsibility for security of all his and his subcontractors' materials and equipment stored on the site.

- B. If directed by the Town, Contractor shall move stored items which interfere with operations of Town.
- C. Obtain and pay for additional storage or work areas if needed to perform the Work.

END OF SECTION

MEASUREMENT AND PAYMENT

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes description of payment items, work requirements per payment item and measurement requirements per payment item.

1.2 SUBMITTALS

- A. Application for Payment: The Application for Payment shall be submitted on a form acceptable to the Town. Refer to General Conditions for additional requirements.
- B. Schedule of Values: The Contractor shall submit a breakdown of the cost of all lump sum items in the Bid in a manner that may be used as the basis for estimating the value of the work completed to the end of any month. The basis and detail of the breakdown shall meet with the Engineer's approval. The schedule of values of all lump sum items in the Bid shall be submitted within seven (7) calendar days from the date of the Notice to Award.

1.3 PROCEDURES

- A. The Contractor shall furnish all materials, equipment, labor and plant, and do all operations necessary to complete all work specified or shown. All supervision, overhead items, protection and precautions and all other costs, incidental to the construction work, complete, and as specified, are included.
- B. A complete working job shall be produced whether or not any particular wording or direction is omitted or not clearly stated.
- C. Measurement for payment shall be by the Engineer, except where noted elsewhere in this Specification.
- D. Each price stated in the Bid shall constitute full compensation for each item of work completed.
- E. The Contractor shall be paid in accordance with the progress schedule and schedule of values on the basis of the percentage of the actual work accepted during the period of construction. After the work for the respective lump sum items is completed, 100% of the lump sum price may be paid, less retained amounts, unless otherwise specified.
- F. The Owner reserves the right to delete any item of work from the Contract without penalty.

PART 2 - PRODUCTS

Not Used

PART 3 - EXECUTION

3.1 CONSTRUCT CULVERT PROJECT

1. The lump sum price under this Item shall constitute full compensation for furnishing all labor, equipment, and materials necessary to complete the project as shown on the Drawings, as directed by the Engineer and as herein specified. Item shall include, but not be limited to: clearing, grubbing, stripping, excavation, pavement removal, ledge excavation (up to 5 cubic yards), backfill, shoring, dewatering, flow diversion, disposal of the existing pipe and headwalls, construction of the new culvert and headwalls (pipe and headwalls provided by the Town), stone bedding for the headwalls and pipe; filter fabric; stone fill at inlets and outlets; aggregate materials for culvert backfill, gravel, crushed gravel, gravel, bituminous paving; traffic control, restoration of disturbed areas, erosion control, silt fences, compliance with applicable permits; disposal of any materials not wanted by the Owner; delivering materials wanted by the Owner to a location in the Town, all loaming and seeding; maintenance of traffic, incidental work required to complete the installation as detailed on the drawings and/or approved through the shop drawing process.
2. Measurement for payment shall be based on the percent complete as determined by the Engineer.

END OF SECTION

SECTION 02630

STORM DRAINAGE SYSTEM

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes furnishing all labor, equipment, and materials and performing all operations in connection with the construction of drain pipe, drain manholes, catch basins, headwalls, and guardrail in accordance with the Drawings and Specifications and as directed by the Engineer.

1.2 RELATED DOCUMENTS

- A. Drawings, general provisions of the Contract, General Conditions, Supplemental Conditions and Division 1 Specification Sections apply to this Section.
- B. The State of New Hampshire Department of Transportation (NHDOT) Standard Specifications for Road and Bridge Construction (hereinafter referred to as NHDOT Standard Specifications) and NHDOT Standard Plans for Road and Bridge Construction (hereinafter referred to as NHDOT Standard Plans), latest edition.
 - 1. All references to Method of Measurement, Basis of Payment and Payment Items in the NHDOT Standard Specifications are hereby deleted. References made to particular sections or paragraphs in the NHDOT Standard Specifications shall include all related articles mentioned therein.

1.3 SUBMITTALS

- A. Submit in accordance with Conditions of Contract and Division 1 Specification Sections.
- B. Submit manufacturer's technical product data and installation instructions for materials and products.
- C. Submit shop drawings, descriptive literature and manufacturer's data showing pipe dimensions and joint system for each type and class of pipe.
- D. Submit manufacturer's certificates of compliance with these Specifications on all products and materials.

1.4 QUALITY ASSURANCE

- A. The quality of all new materials, the process of manufacture, and the finished product shall be subject to the review of the Engineer. Such review may be made at the place of manufacturer, or on the site after delivery, or at both places and the pipe shall be subject to rejection at any time on account of failure to meet any of the specification

requirements even though sample product may have been accepted as satisfactory. The Engineer reserves the right to apply such tests as he may from time to time deem necessary to check on compliance with the Specifications.

PART 2 - PRODUCTS

2.1 CULVERTS AND STORM DRAINS

B. Reinforced Concrete Pipe:

1. Reinforced concrete pipe shall be manufactured by an established manufacturer of good reputation in the industry. Manufacturer shall have a minimum of 5 years experience.
2. Reinforced concrete pipe shall be manufactured in a permanent plant adapted to meet all the design requirements of the pipe.
3. Reinforced concrete pipe shall have an interior surface that is smooth and even, free from roughness, projections, indentations, offsets, or irregularities of any kind.
4. Reinforced concrete pipe shall be Class IV unless structural loading requirements require Class V.
5. Reinforced concrete pipe shall be as specified in NHDOT Standard Specifications, Section 603.

B. High Density Polyethylene (HDPE) Pipe:

1. HDPE pipe shall be manufactured by an established manufacturer of good reputation in the industry. Manufacturer shall have a minimum of 5 years experience.
2. HDPE pipe shall be manufactured in a permanent plant adapted to meet all the design requirements of the pipe.
3. HDPE pipe shall have corrugated exterior surface and an interior surface that is smooth and even, free from roughness, projections, indentations, offsets, or irregularities of any kind.
4. HDPE pipe shall be HI-Q Sure-Lok ST pipe as manufactured by Hancor or approved equal. Pipe shall meet the requirements of AASHTO M294 Type S.
5. Fittings shall be suitable for the intended application and match the pipe materials. Fittings shall meet the requirements of AASHTO M294.
6. Pipe and fittings shall meet ASTM D3350 Cell Classification 324420C.

2.2 UNDERDRAINS

- A. Underdrain pipe shall be HDPE corrugated exterior surface and an interior surface that is smooth and even, free from roughness, projections, indentations, offsets, or irregularities

of any kind or PVC (SDR 35 or 26). Coiled slotted house underdrain pipe corrugated metal pipe will not be permitted.

2.3 CATCH BASINS AND DRAIN MANHOLES

- A. Drainage structures (catch basins and manholes) will be of precast concrete construction. Precast concrete barrel sections and precast manhole bases shall conform to ASTM Designation C478. The wall thickness shall not be less than 5 inches for 48 inch inside diameter structures, or 6-inches for 60-inch and 7-inches for 72-inch inside diameter barrel sections. Lift holes and other openings are to be sealed with Portland cement mortar flush to the outside structure wall prior to backfilling.
- B. Any structure less than 6' deep (rim to invert) shall be a flat top H20 loading. All other manholes shall be provided with eccentric cone.
- C. Manholes and catch basins shall not be less than four feet inside diameter. The minimum distance between pipe openings in the manhole or catch basin wall will be 12 inches. If the minimum clearance between pipes can not be accomplished with a four foot diameter manhole or catch basin a larger structure is required.
- D. Precast concrete bases shall be manufactured to contain wall openings of the minimum size to receive the ends of the pipes. Openings shall be accurately set to conform to line and grade of the adjoining pipes. Subsequent cutting or tampering in the field, for the purpose of creating new openings or altering existing openings will not be permitted.

2.4 CASTINGS

- A. Castings shall be cast iron of uniform quality, free from blowholes, shrinkage, distortion or other defects. They shall be smooth and well cleaned by shotblasting. All castings shall be manufactured true to pattern; component parts shall fit together in satisfactory manner. Castings shall have continuously machined bearing surfaces to prevent rocking and rattling. Covers and grates shall be machined to fit securely and evenly on the frame. Covers shall have a diamond surface design.
- B. Castings shall be Class 30 minimum and shall conform to ASTM A48 for Gray Iron Castings.
- C. Covers for all drain manholes shall have the word "DRAIN" cast into the top surface in 3" letters.
- D. Standard drain manhole frames and covers shall be in conformance with NHDOT Standards, or approved equal.
- E. Manhole frames and cover shall have a minimum clear opening of 30". All manholes greater than 60 inch diameter and 14 feet deep shall have a clear opening of 36". All castings must be American made.

- F. Catch basin frames and grates shall be NHDOT Type B, or approved equal for roadway slopes less than or equal to 4%. For roadway slopes greater than 4% NHDOT Type F (Bicycle safe) frames and grates shall be used. Double grates will be used when hydraulic conditions as determined by the Town. All castings must be American made and as specified in NHDOT Standard Specifications, Section 604.

2.5 BRICK AND MORTAR

- A. Brick and mortar for inverts, tables, and raising castings to grade shall be as specified in NHDOT Standard Specifications, Section 604.

2.6 HEADWALL

- A. Refer to Drawings, Construction Details and Technical Specifications for headwall type, size and configuration. Materials shall be as specified in NHDOT Standard Plans and Specifications.

2.7 FLARED ENDS

- A. Flared ends will be provided and installed for HDPE or RCP pipe in accordance with the manufacturer's recommendations, in accordance with NHDOT Standard Plans and Specifications and to the satisfaction of the Town.

2.8 BEDDING, BACKFILL AND FILTER FABRIC

- A. Refer to Drawings, Construction Details and Technical Specifications for bedding, backfill and filter fabric requirements. Materials shall be as specified in Section 02300.

PART 3 - EXECUTION

3.1 GENERAL

- A. Excavation and backfill shall conform to the provisions of Section 02300

3.2 RECONSTRUCTION

- A. The Contractor shall reconstruct existing drainage structures, ditches and swales in close conformity with the existing lines, grades, slopes, dimensions and materials unless otherwise indicated on the Drawings or directed by the Engineer.
- B. The Contractor shall reuse the existing material if, in the opinion of the Engineer, the material is suitable. If, in the opinion of the Engineer, and if, due to the Contractor's operations, the material is not suitable, the Contractor shall replace existing structures with new structures of the same material at no additional cost to the Owner.
- C. Upon excavation, if it is determined that the existing drainage pipe or structures are inadequate, the Owner may direct the Contractor to remove and replace such materials. Work shall be performed in accordance with the Contract Documents and Owner regulations. Payment for extra work and materials shall be in accordance with General

Conditions. Items for extra work and materials for which unit prices are provided for in the Bid, shall have precedence in any extra work change orders.

3.3 PIPE INSTALLATION

- A. All new pipe will be inspected upon delivery, prior to and after installation of the pipelines, and pipe which has been damaged or which does not meet the requirements of these Specifications shall be rejected and shall be immediately removed from the site and replaced by the Contractor with sound pipe meeting Specification requirements, at no additional expense to the Owner. The Contractor shall furnish such labor and assistance to the Owner as he may require for inspection purposes.
- B. Provide for temporary diversion of water to permit the installation of pipe in the dry.
- C. Except where a concrete cradle or envelope is required, the pipe shall be laid in a cradle as indicated on the Drawings. The pipe shall be in contact with the shaped bedding throughout its full length. In trenches, no blocking or supporting of the pipe by concrete, stones, bricks, wooden wedges, or method of other than bedding the pipe as indicated on the Drawings will be permitted. Each length of pipe shall be shoved home against the pipe previously laid and held securely in position. Joints shall not be "pulled" or "cramped". Pipe shall be jointed in accordance with manufacturer's instructions.
- D. Allow time for observation of the work by the Engineer and Owner before any backfill is placed. Relay any pipe out of alignment and remove any pipe that is damaged.
- E. The ends of pipe shall be suitably closed at any time the work is not in progress to prevent entry of animals, material, debris, etc.
- F. Jointing:
 - 1. High Density Polyethylene Pipe: Pipe shall be joined with the Sure-Lok (bell and spigot) joint and shall provide a minimum pull apart strength of 400 pounds. The bell shall be an integral part of the pipe. The joint shall use a gasket to form a silt-tight connection. Gaskets shall be installed in the bell by the pipe manufacturer. Joints shall remain silt-tight when subject to a 1.5 degree axial misalignment.
- G. Refer to NHDOT Standard Specifications, Section 603 and Section 605 for additional requirements.

END OF SECTION



REGISTRATION FOR ROUTINE ROADWAY MAINTENANCE ACTIVITIES

RR-1: CULVERT REPLACEMENT OR REPAIR

Water Division/Land Resources Management

Wetlands Bureau

[Check the Status of your Registration](#)



RSA/Rule: RSA 482-A:11, VII/ Env-Wt 309

1-a. APPLICANT INFORMATION (Choose one, then complete section 1-b.)					
<input type="checkbox"/> NHDOT MAINTENANCE DISTRICT (specify):	<input type="checkbox"/> OWNER OF PRIVATE DRIVEWAY/ROADWAY				
<input type="checkbox"/> OTHER STATE AGENCY (specify):	<input type="checkbox"/> OWNER OF PRIVATE RAILWAY				
<input checked="" type="checkbox"/> MUNICIPALITY (specify): Henniker	<input type="checkbox"/> OTHER (specify):				
1-b. AUTHORIZED REPRESENTATIVE / OWNER					
LAST NAME: Town of Henniker		FIRST NAME:		MAILING ADDRESS: 18 Depot Street	
TOWN/CITY: Henniker					
STATE: NH	ZIP CODE: 03242	PHONE: 603-428-7200	EMAIL: roadagent@henniker.org	WEBSITE URL:	

2. CULVERT INFORMATION		PIPE DIMENSIONS (diameter/length)		INLET WORK (Linear Feet - LF)	CHANNEL WIDTH (Ft)	OUTLET WORK (LF)	CHANNEL WIDTH (Ft)	CULVERT TYPE	PHOTO #s
ROAD NAME:	WATERBODY:	EXISTING (Feet - Ft)	PROPOSED (Ft)						
Plummer Hill Road	Unnamed stream	2.0/80	2.5/80	5	4	8	4	HDPE	1-4
TOWN: Henniker									
LATITUDE (D.ddddd): 43.158311									
LONGITUDE (D.ddddd): 71.745209		GENERAL CRITERIA (In addition to criteria listed in Env-Wt 309.03.)							
RECOMMENDED BMPs		<ul style="list-style-type: none"> The project shall meet all applicable criteria listed in pages 19 and 20 of the Best Management Practices for Routine Roadway Maintenance in New Hampshire (Routine Roadway BMPs), published by the department of transportation. An activity will not qualify for the registration process if it impacts a Priority Resource Area (PRA) other than a documented occurrence of protected species or habitat. A project that is classified as a major project based solely on the documented occurrence of protected species or habitat and would otherwise qualify for this registration can be processed as a minimum impact project only if the applicant provides written documentation committing to the implementation of recommendations from the New Hampshire Natural Heritage Bureau (NHB) or New Hampshire Fish and Game Department (NHF&G), or both, as applicable, regarding the protected species or habitat (Env-Wt 407.02(c)). 							
<ul style="list-style-type: none"> BMP 1: Silt Fence BMP 2: Erosion Control Mix Berm BMP 3: Staked Filter Sock/Straw Wattle BMP 4: Temporary Storm Drain Inlet Protection BMP 6: Temporary Cofferdam BMP 7: Sediment Filter Bag BMP 8: Sediment Retention Basin BMP 9: Outlet protection (Stone Rip-Rap) BMP 11: Temporary Erosion Control Blanket (Matting) BMP 12: Surface Roughening and Slope Tracking BMP 13: Temporary or Permanent Mulching BMP 14: Temporary & Permanent Seeding 		ACTIVITY-SPECIFIC CRITERIA							
		<ul style="list-style-type: none"> The culvert or culverts have a combined opening up to 48 inches in diameter (or 12.5 square feet). Work shall be done with the equipment located outside of surface waters or wetlands. There is no change in the location, configuration or length of the pre-existing culvert in single-culvert crossings. There is no change in the location or length of a multi-culvert crossing. However, if it is practicable, any multi-culvert crossings shall be replaced as single-culvert crossings with an equal or greater functional hydraulic opening up to a single 48-inch culvert (or 12.5 square feet). The opening of the replacement culvert may be increased 50% up to the equivalent of a single 48-inch diameter culvert or the functional equivalent hydraulic opening (12.5 square feet). 							

irm@des.nh.gov or (603) 271-2147

NHDES Wetlands Bureau, 29 Hazen Drive, PO Box 95, Concord, NH 03302-0095

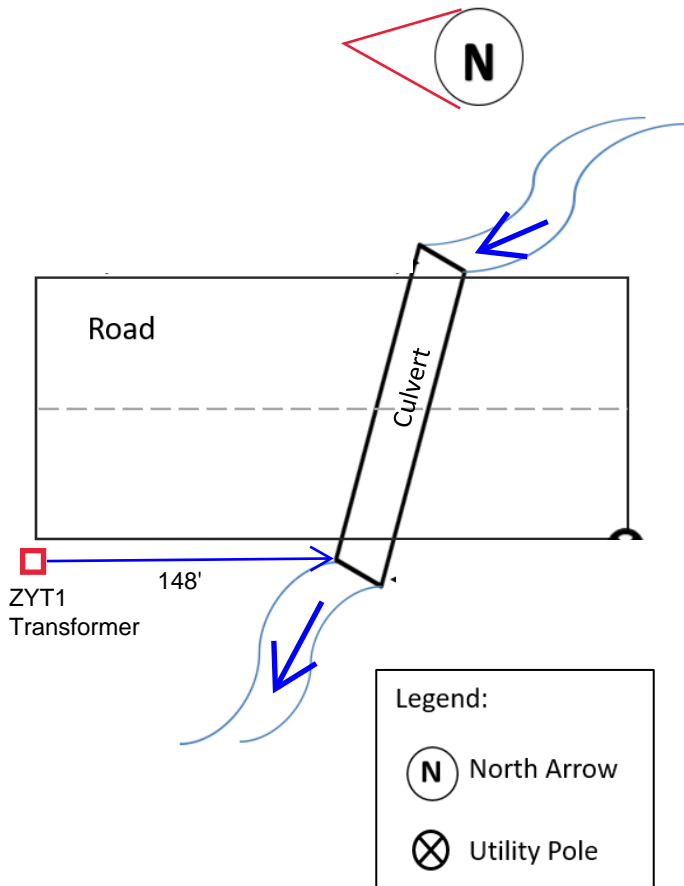
www.des.nh.gov

ACTIVITY-SPECIFIC CONDITIONS (In addition to general conditions 1-9 listed in the routine roadway BMPs.)

- There is no change in the location, configuration or length of the pre-existing culvert.
- The replacement culvert shall preserve watercourse connectivity where it currently exists.
- The replacement culvert shall restore watercourse connectivity where connectivity was previously disrupted as a result of human activity(ies). Restoration of connectivity will benefit aquatic life upstream or downstream of the crossing or both.

3. ACTIVITY SKETCH

You are not required to use this pre-developed sketch but you must provide a sketch with this form indicating stream flow and cardinal directions, as well as the distance to and number of the nearest utility pole or intersection.



DISTANCE TO NEAREST POLE (Ft): 148	-OR-	DISTANCE TO NEAREST INTERSECTION (Ft):
POLE NUMBER: ZYT1		ROAD NAME:

4. TIMELINE

ESTIMATED START DATE: 9-15-2023
ANTICIPATED LENGTH OF TIME THE ACTIVITY WILL TAKE TO COMPLETE: 2 weeks

5. NHB DATACHECK

Provide the DataCheck* identification number and written documentation committing to the implementation of recommendations from NHB or NHF&G, or both, as applicable, regarding the protected species or habitat (Env-Wt 407.02 (c)).

Natural Heritage Bureau Identification Number: NHB 23 - 2485

**Questions related to completing this process should be directed to the NHB.*

6. LOCAL RIVER MANAGEMENT ADVISORY COMMITTEE (LAC) SIGNATURE, IF APPLICABLE

Please refer to the "Additional Instructions" to determine if LAC signature is required.

The signature below certifies that the LAC waives its right to intervene per RSA 482-A:11.

N/A This project is *not* within LAC jurisdiction.

AUTHORIZED LAC REPRESENTATIVE SIGNATURE:	PRINT NAME LEGIBLY:	DATE:

7. REQUIRED CERTIFICATIONS (Env-Wt 309.04(a); Env-Wt 311.11)

By initialing each item and signing this application, the person responsible for the activity certifies that:

Initials: LA	To the best of the signer’s knowledge and belief, all required notifications have been provided.
Initials: LA	The information submitted on or within this notification is true, complete, and not misleading to the best of the signer’s knowledge and belief.
Initials: LA	<p>The signer understands that:</p> <ul style="list-style-type: none"> • The submission of false, incomplete, or misleading information constitutes grounds for NHDES to: <ol style="list-style-type: none"> 1. Deny the application. 2. Revoke any approval that is granted based on the information. 3. If the signer is a certified wetland scientist, licensed surveyor, or professional engineer licensed to practice in New Hampshire, refer the matter to the joint board of licensure and certification established by RSA 310-A:1. • The signer is subject to the penalties specified in New Hampshire law for falsification in official matters, currently RSA 641. • The signature shall constitute authorization for the municipal conservation commission and the department to inspect the site of the proposed project, except for minimum impact trail projects, where the signature shall authorize only the department to inspect the site pursuant to RSA 482-A:6, II.
Initials: LA	If the applicant is not the owner of the property, each property owner signature shall constitute certification by the signer that he or she is aware of the application being filed and does not object to the filing.

8. REQUIRED SIGNATURE (Env-Wt 309.04(a); Env-Wt 311.11)

SIGNATURE (OWNER): _____	PRINT NAME LEGIBLY: _____	DATE: _____
SIGNATURE (APPLICANT): _____	PRINT NAME LEGIBLY: _____	DATE: _____
SIGNATURE (AGENT, IF APPLICABLE): _____	PRINT NAME LEGIBLY: _____	DATE: _____

Administrative Use Only	File No.:
	Initials:

irm@des.nh.gov or (603) 271-2147

NHDES Wetlands Bureau, 29 Hazen Drive, PO Box 95, Concord, NH 03302-0095

www.des.nh.gov

SEQUENCE OF CONSTRUCTION

- CUT AND CLEAR ALL TREES WITHIN THE DISTURBANCE AREA UNLESS OTHERWISE DIRECTED BY THE ENGINEER. ALL VEGETATION CLEARED WILL BE REMOVED FROM THE SITE BY THE CONTRACTOR.
- CONSTRUCT TEMPORARY AND PERMANENT EROSION CONTROL DEVICES INCLUDING SILT FENCES SEDIMENTATION PONDS, DEWATERING FACILITIES, PONDS AND ANY OTHER DEVICES SPECIFIED.
- COMPLETE GRUBBING OPERATIONS. REMOVE ALL PEAT, MUCK, ORGANIC MATERIALS FROM THE ROADWAY FOUNDATION AREA. ALL STUMPS, DEBRIS AND TOPSOIL, ORGANIC MATERIALS, PEAT MUCK, ETC. AND WILL BE DISPOSED OF OFF SITE BY THE CONTRACTOR.
- NATIVE MATERIAL REMOVED FROM THE STREAMBED SHOULD BE STOCKPILED SEPARATELY AND REUSED TO EMULATE A NATURAL CHANNEL BOTTOM AND ANY NEW MATERIALS USED MUST BE AS SIMILAR TO THE NATURAL STREAM SUBSTRATE AS PRACTICABLE. MATERIALS USED TO EMULATE A NATURAL CHANNEL BOTTOM MUST BE WELL-GRADED AND WASHED-IN, SO AS TO PREVENT DISRUPTED CONNECTIVITY DURING PERIODS OF LOW FLOW.
- EXCAVATE FOR CULVERT, DEWATER EXCAVATION AS REQUIRED, PLACE HEADWALLS, CULVERT AND BACKFILL.
- INSTALL STOCKPILED STREAMBED MATERIALS AND SHAPE A STREAMBED TO REPLICATE THE NATURAL STREAMBED UPSTREAM AND DOWNSTREAM OF THE WORK AREA.
- STABILIZE THE SITE IN ACCORDANCE WITH THE EROSION CONTROL REQUIREMENTS AS INDICATED ON THE PLANS INCLUDING LOAMING AND SEEDING ALL SLOPES EXCEPT THOSE DIRECTLY ADJACENT TO THE ROADWAY WHERE GRAVELS WILL BE PLACED.
- GRADE AND COMPACT THE GRAVEL AND CRUSHED GRAVEL BASE COURSES.
- COMPLETE PERMANENT SEEDING AND LANDSCAPING.
- CLEAN THE SITE, DRAINAGE STRUCTURES, PIPES, SWALES, PONDS, LEVEL SPREADERS AND SILT FENCES, OF ANY ACCUMULATED SEDIMENT.
- AFTER THE SITE IS FULLY STABILIZED, REMOVE ALL TEMPORARY EROSION CONTROL DEVICES AND RESTORE DISTURBED AREAS AS REQUIRED.
- NOTIFY PERMITTING AGENCIES THAT CONSTRUCTION HAS BEEN COMPLETED.

GENERAL NOTES

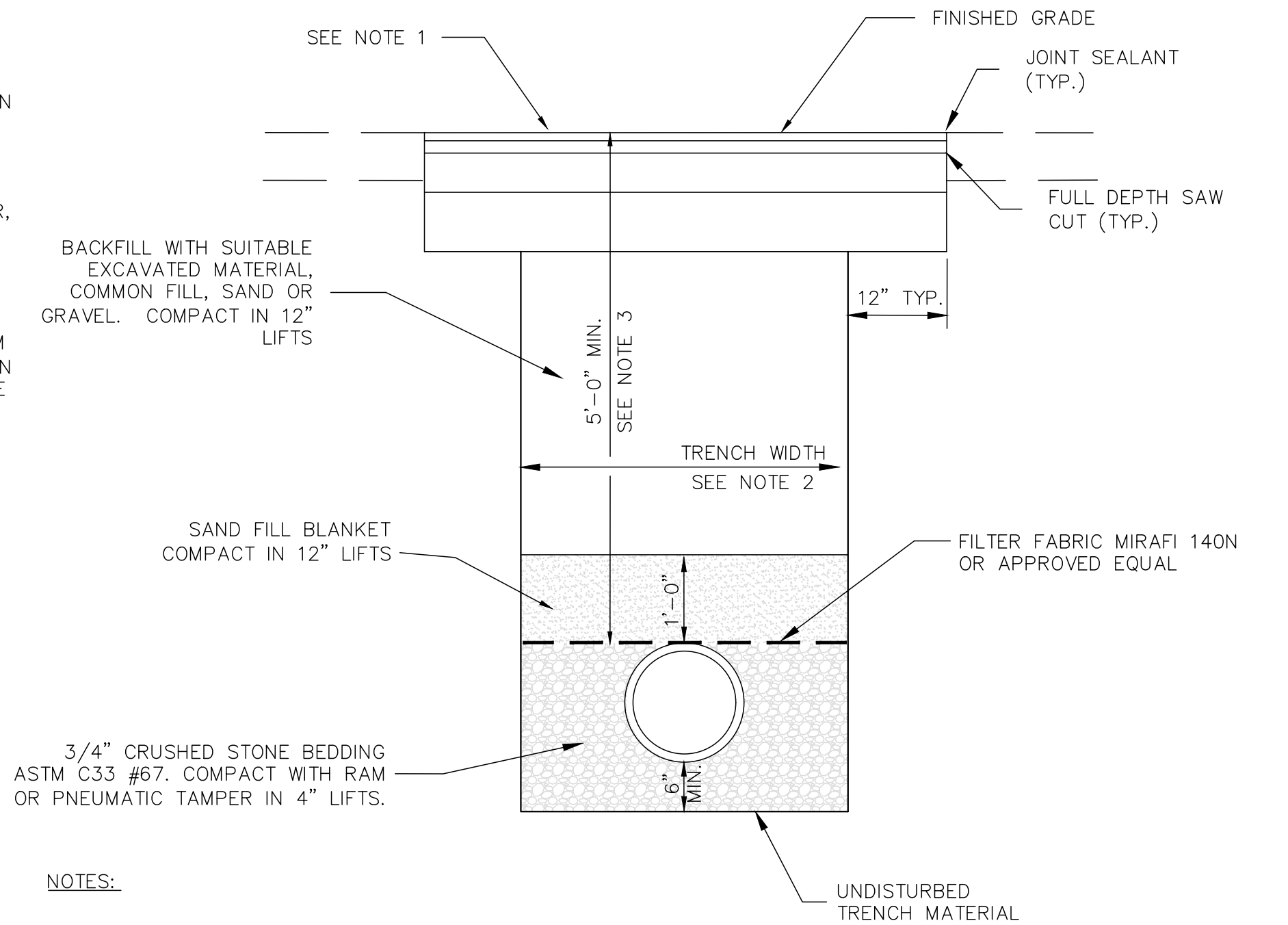
- THE CONTRACTOR SHALL VERIFY ALL RELEVANT ANGLES, LENGTHS, ELEVATIONS, AND INVERTS PRIOR TO CONSTRUCTION.
- THE LOCATION OF EXISTING UTILITIES AND SUBSURFACE STRUCTURES AS SHOWN ON THE DRAWINGS ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL NOTIFY THE ENGINEER AND APPROPRIATE UTILITY AUTHORITY OF ANY DISCREPANCY WITH THE DRAWINGS. NEITHER THE ENGINEER NOR THE OWNER WARRANTS OR GUARANTEES THE CONDITIONS SHOWN ON THE DRAWINGS.
- THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL SUBSURFACE STRUCTURES AND UTILITIES THROUGH THE APPROPRIATE AGENCY. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL EXISTING UTILITIES PRIOR TO ANY EXCAVATION. THE CONTRACTOR SHALL CALL THE DIG-SAFE CENTER (1-888-344-7233) AT LEAST 72 BUSINESS HOURS PRIOR TO ANY EXCAVATION.
- THE CONTRACTOR SHALL COORDINATE ALL CONSTRUCTION ACTIVITIES WITH THE VARIOUS AFFECTED UTILITY AUTHORITIES TO PREVENT UNNECESSARY DELAY OF WORK OR INTERRUPTION OF SERVICES.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING AND SUPPORTING ALL UTILITIES DURING CONSTRUCTION AND FOR COORDINATING SUCH ACTIVITY WITH THE APPROPRIATE UTILITY AUTHORITIES. ANY UTILITY DESTROYED OR DAMAGED BY THE CONTRACTOR SHALL BE IMMEDIATELY REPAIRED OR REPLACED AS DIRECTED BY THE UTILITY AUTHORITY AT NO ADDITIONAL COST TO THE OWNER.
- THE CONTRACTOR SHALL MAINTAIN TRAFFIC IN A SAFE MANNER AT ALL TIMES DURING CONSTRUCTION AND IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND AS REQUIRED BY THE TOWN POLICE DEPARTMENT OR THE ENGINEER. IT IS UNDERSTOOD THAT NO ROADWAYS WILL BE CLOSED AND NO DETOURS WILL BE PERMITTED TO ACCOMMODATE CONSTRUCTION AND THE CONTRACTOR SHALL PLAN THE CONSTRUCTION ACTIVITIES ACCORDINGLY.
- THE CONTRACTOR SHALL INSTALL AND MAINTAIN ACCESS TO ALL ABUTTING PROPERTIES WITHIN THE PROJECT AREA AT ALL TIMES, UNLESS OTHERWISE APPROVED BY THE OWNER.
- THE CONTRACTOR SHALL CONFINE ALL OPERATIONS AND ACTIVITIES FOR CONSTRUCTION PURPOSES TO THE TOWN'S RIGHT-OF-WAY, OR IN STAGING/STOCKPILE AREAS APPROVED BY THE TOWN. THE CONTRACTOR SHALL LOCATE STAGING AREAS THROUGH AGREEMENTS WITH AFFECTED PROPERTY OWNERS, OR PROVIDE ALTERNATE MEANS TO STORE MATERIAL AT THE WORK AREA AS REQUIRED.
- DURING NON-WORKING HOURS, THE CONTRACTOR SHALL SECURE ALL EQUIPMENT AND MATERIALS WITHIN THE LIMITS OF WORK.
- THE CONTRACTOR SHALL TAKE PHOTOGRAPHS OR A VIDEO OF THE ENTIRE PROJECT THAT PRIOR TO THE BEGINNING OF ANY WORK AT NO COST TO THE TOWN. THE PHOTOGRAPHS OR VIDEO SHALL FULLY DOCUMENT EXISTING CONDITIONS IN AND NEAR THE PROJECT AREA AND BE ARCHIVED IN THE TOWN OFFICES AND REMAIN THE PROPERTY OF THE TOWN. DIGITAL IMAGES ARE ACCEPTABLE IF IN A FORMAT THAT CAN BE VIEWED BY THE TOWN.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO EXISTING PAVEMENT, ROADWAYS, SIGNS, CURBS, SIDEWALKS, DRIVEWAYS, MAILBOXES, FENCES, PLANTINGS OR OTHER PHYSICAL FEATURES CAUSED BY THE CONTRACTOR'S ACTIVITIES AND SHALL REPAIR THEM AT NO ADDITIONAL COST TO THE OWNER. ALL AREAS BEYOND THE LIMITS OF CONSTRUCTION WHICH ARE DISTURBED BY THE CONTRACTOR SHALL BE RESTORED TO THEIR ORIGINAL CONDITION AT NO ADDITIONAL COST TO THE OWNER.
- THE CONTRACTOR SHALL TAKE PRECAUTIONS DURING CONSTRUCTION TO MINIMIZE THE AMOUNT OF DEBRIS THAT COLLECTS IN CATCH BASINS, CULVERTS AND MANHOLES. THE CONTRACTOR SHALL CLEAN ALL CATCH BASINS, CULVERTS AND MANHOLES AFFECTED BY CONSTRUCTION IN ORDER TO MAINTAIN AN OPERATING SYSTEM.
- ALL EXISTING CURB, SIGNS, DRAINAGE STRUCTURES, UTILITIES AND ANY OTHER MATERIALS WITHIN THE RIGHT OF WAY THAT ARE REMOVED BY THE CONTRACTOR MAY BE INSPECTED BY THE OWNER. THE OWNER RESERVES THE RIGHT TO RETAIN OWNERSHIP AND MAY DIRECT THE CONTRACTOR TO SALVAGE AND STOCKPILE ANY SUCH EXISTING MATERIALS AT NO ADDITIONAL COST TO THE OWNER. ANY EXISTING MATERIALS THE OWNER CHOOSES NOT TO SALVAGE AND STOCKPILE SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
- ALL WORK SHALL BE DONE IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL CODES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL REQUIRED PERMITS FROM APPLICABLE GOVERNMENTAL AGENCIES, INCLUDING THE OWNER, PRIOR TO THE START OF ANY CONSTRUCTION.
- THE CONTRACTOR IS REQUIRED TO PROVIDE ADEQUATE SHORING FOR THE SOIL CONDITIONS AND DEPTHS ENCOUNTERED DURING CONSTRUCTION.
- IN THE EVENT THE CONTRACTOR ENCOUNTERS EXISTING MATERIAL REASONABLY BELIEVED TO BE HAZARDOUS WHICH HAS NOT BEEN RENDERED HARMLESS, THE CONTRACTOR SHALL IMMEDIATELY STOP WORK IN THE AFFECTED AREA AND REPORT THE CONDITION TO THE OWNER AND ENGINEER. WORK IN THE AFFECTED AREA SHALL NOT RESUME UNTIL WRITTEN VERIFICATION BY THE OWNER THAT THE MATERIAL HAS BEEN REMOVED OR OTHERWISE BEEN RENDERED HARMLESS.
- THE CONTRACTOR AND ALL SUBCONSULTANTS SHALL FAMILIARIZE THEMSELVES WITH THE CONTRACT DOCUMENTS. ALL DRAWINGS OF ANY PARTICULAR TRADE SHALL BE USED IN CONJUNCTION WITH DRAWINGS OF ALL OTHER TRADES TO COORDINATE THE CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE PROCEEDING WITH THE AFFECTED WORK. ANY PROPOSED CHANGES, VARIATIONS, OR SUBSTITUTIONS MUST BE REVIEWED AND ACCEPTED BY THE ENGINEER PRIOR TO IMPLEMENTATION.
- ALL PROPOSED WORK WILL BE COMPLETED IN ACCORDANCE WITH NHDOT STANDARD SPECIFICATIONS AND DETAILS (LATEST VERSION AND ALL AMENDMENTS) UNLESS OTHERWISE NOTED ON THESE PLANS OR SPECIFIED IN THE CONTRACT DOCUMENTS.

EROSION CONTROL NOTES

- THE SMALLEST PRACTICAL AREA SHALL BE DISTURBED DURING CONSTRUCTION AT ANY ONE TIME AND IN NO CASE SHALL THE AREA OF DISTURBANCE EXCEED FIVE ACRES.
- DISTURBED AREAS SHALL NOT REMAIN EXPOSED FOR LONGER THAN 60 DAYS. ALL DISTURBED AREAS SHALL BE PERMANENTLY STABILIZED WITHIN 72 HOURS OF FINAL GRADING.
- TEMPORARY SEEDING SHALL BE APPLIED TO ALL DISTURBED AREAS (TO BE VEGETATED) IN ACCORDANCE WITH THE REQUIREMENTS OF PAGE 7-247 THROUGH 7-249 OF THE "STORMWATER MANAGEMENT AND SEDIMENTATION CONTROL HANDBOOK FOR URBAN AND DEVELOPING AREAS IN NEW HAMPSHIRE".
- INSTALLATION OF SILT FENCES AND/OR HAY BALE SEDIMENTATION BARRIERS SHALL BE COMPLETED PRIOR TO THE START OF ANY CONSTRUCTION IN ACCORDANCE WITH THE DETAILS HEREIN, WITH THE MANUFACTURER'S RECOMMENDATIONS AND IN ACCORDANCE WITH NHDES PERMIT REQUIREMENTS.
- ALL DITCHES, PONDS AND DRAINAGE INFRASTRUCTURE SHALL BE STABILIZED PRIOR TO DIRECTING FLOW TO THEM.
- ALL SLOPES IN STEEPER THAN 2:1 SHALL HAVE EROSION CONTROL MATTING PLACED UNLESS OTHERWISE PERMITTED BY THE ENGINEER. SLOPES THAT ARE 2:1 OR FLATTER SHALL HAVE EROSION CONTROL MATTING PLACED AS DIRECTED BY THE ENGINEER AND AS REQUIRED TO STABILIZE THE SLOPE.
- STONE CHECK DAMS SHALL BE INSTALLED AT 50 FOOT INTERVALS OR AS SHOWN ON THE DETAIL ALONG THE CENTERLINE OF THE PROPOSED DRAINAGE DITCHES, OR AS DIRECTED BY THE ENGINEER, UNTIL PERMANENT SURFACE TREATMENTS ARE INSTALLED AND FULLY STABILIZED.
- SEDIMENTATION BARRIERS SHALL BE KEPT CLEAN OF ACCUMULATED SEDIMENTS DURING CONSTRUCTION AS REQUIRED TO PROTECT ALL RESOURCE AREAS.
- EROSION CONTROL MEASURES SHALL BE INSPECTED ON A WEEKLY BASIS AND AFTER EVERY STORM EVENT IN EXCESS OF 0.5". EROSION CONTROL MEASURES SHALL BE MAINTAINED FOR THE DURATION OF THE CONSTRUCTION OR UNTIL ALL DISTURBED AREAS ARE FULLY STABILIZED WITH APPROPRIATE SURFACE TREATMENTS (GRASSES, STONE, PAVEMENT, ETC.).
- EXISTING VEGETATION SHALL REMAIN UNDISTURBED WHEREVER POSSIBLE AND ANY DISTURBED AREAS SHALL BE STABILIZED AS SOON AS POSSIBLE FOLLOWING REGRADING.
- UNLESS OTHERWISE NOTED, ALL DISTURBED AREAS SHALL HAVE A MINIMUM OF 4" OF LOAM, BE PROPERLY FERTILIZED AND SEEDING IN ACCORDANCE WITH THE NOTES HEREIN AND THE SPECIFICATIONS.
- ALL EROSION CONTROL MEASURES SHALL BE CLEANED OF ANY ACCUMULATED DEBRIS AND REMOVED UPON STABILIZATION OF ALL DISTURBED AREAS.
- AN AREA SHALL BE CONSIDERED STABLE IF ONE OF THE FOLLOWING HAS OCCURRED:
 - BASE COURSE GRAVELS HAVE BEEN INSTALLED IN AREAS TO BE PAVED;
 - A MINIMUM OF 85% VEGETATED GROWTH HAS BEEN ESTABLISHED;
 - A MINIMUM OF 3" OF NON-EROSIVE MATERIAL SUCH AS STONE OR RIPRAP HAS BEEN INSTALLED; OR
 - EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED.

PROJECT LOCATION

- THE 30" PIPE IMPROVEMENT IS LOCATED ABOUT 150' SOUTH OF TRANSFORMER ZYT1 (HEADWALLS ARE ON SITE) ON PLUMMER HILL ROAD.
- THE 24" PIPE IMPROVEMENT IS LOCATED JUST SOUTH OF THE DRIVEWAY TO #22 PLUMMER HILL ROAD.



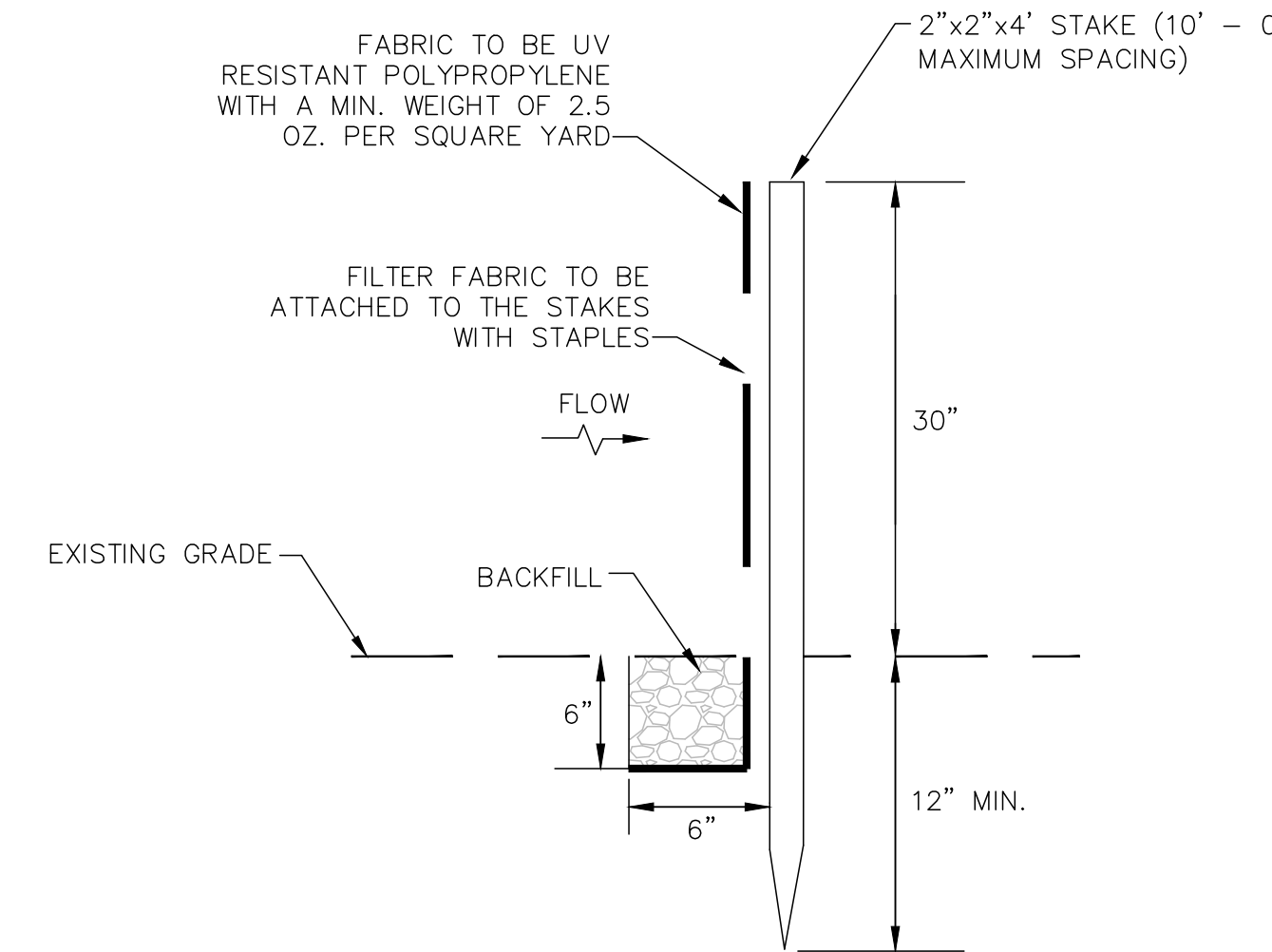
NOTES:

- PROVIDE 6" CRUSHED GRAVEL AND 12" BANK RUN GRAVEL.
- ALLOWABLE TRENCH WIDTH:
 - FOR PIPES LESS THAN OR EQUAL TO 12 INCHES IN DIAMETER, THE ALLOWABLE TRENCH WIDTH AT PLANE 12 INCHES ABOVE PIPE SHALL BE NO MORE THAN 36 INCHES.
 - FOR PIPES GREATER THAN 12 INCHES IN DIAMETER THE ALLOWABLE TRENCH WIDTH SHALL BE EQUAL TO THE OUTSIDE PIPE DIAMETER PLUS 24 INCHES.
- MINIMUM PIPE COVER SHALL BE 2'-0".

TYPICAL DRAIN PIPE TRENCH DETAIL
NOT TO SCALE

PAVEMENT STRUCTURE NOTES

PROPOSED PAVEMENT WILL CONSIST OF THE FOLLOWING:
 ROADWAY PAVEMENT STRUCTURE
 1 1/2" BIT. CONC. SURFACE COURSE
 2 1/2" BIT. CONC. BINDER COURSE
 6" CRUSHED GRAVEL BASE COURSE
 12" GRAVEL BASE COURSE

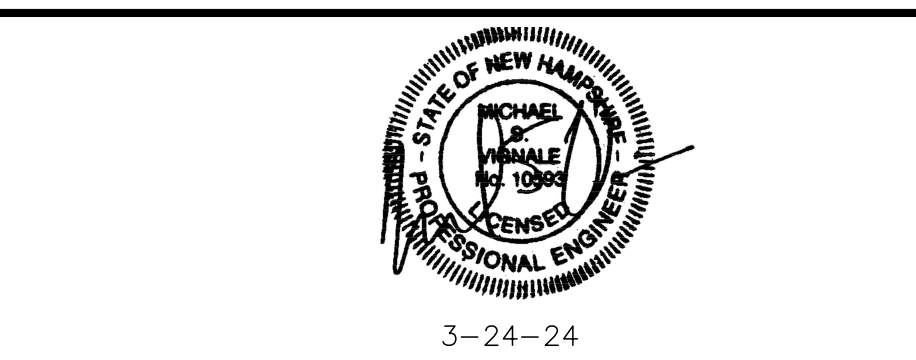


NOTES:

- INSTALL SILT FENCES AT THE LOCATIONS SHOWN ON THE PLANS AND AS DIRECTED BY THE ENGINEER.

SEDIMENTATION BARRIER DETAIL
NOT TO SCALE

REVISIONS			
NUMBER	DATE	BY	DESCRIPTION



KVPartners LLC
 P.O. Box 432
 New Boston, NH 03070
 (603) 413-6650

NOT TO SCALE

CULVERT REPLACEMENT PROJECT
PLUMMER HILL ROAD
 HENNIKER, NEW HAMPSHIRE
 CONSTRUCTION DETAILS

SHEET NO.
1 of 1
 MARCH 24, 2024