REGIONAL SCHOOL DISTRICT NO. 8 BOARD OF EDUCATION

REQUEST FOR PROPOSAL

FOR CONSTRUCTIONSION SERVICES FOR
THE MAINTENANCE AND REPAIR OF DETEION BASIN

AT

RHAM HIGH SCHOOL/MIDDLE SCHOOL CAMPUS
HEBRON, CONNECTICUT

APRIL 28, 2023

INVITATION TO BID

MAINTENANCE AND REPAIRS OF DETENTION BASIN RHAM HIGH SCHOOL/MIDDLE SCHOOL CAMPUS

HEBRON, CONNECTICUT APRIL 28, 2023

Regional School District # 8 Board of Education ("RHAM") is seeking competitive bids for construction services related to MAINTENANCE AND REPAIRS of the DETENTION BASIN, located at RHAM HIGH SCHOOL/MIDDLE SCHOOL CAMPUS" in Hebron, CT. Scope of work for this project generally includes earthwork and grading, installation of bituminous pavement walkways, concrete pads, miscellaneous site work, and site restoration.

Beginning on Friday April 28, 2023, plans and specifications for "DETENTION BASIN MAINTENANCE AND REPAIRS, RHAM HIGH SCHOOL/MIDDLE SCHOOL CAMPUS" will be available to bidders. Plans and specifications may be viewed and purchased on-line at http://www.advancedplanroom.com/public.php, Advanced Reprographics, Plainville, CT. There is a charge for Portable Document Format (.pdf) file sets, paper copies, and shipping. Bidders are responsible for any printing or shipping costs, or pickup at the Advanced Reprographics office and for obtaining all addenda from the Advanced Reprographics website.

Sealed Bids for "DETENTION BASIN MAINTENANCE AND REPAIRS, RHAM HIGH SCHOOL/MIDDLE SCHOOL CAMPUS" may be mailed or delivered in person to: Eva Gallupe, Business Manager, in the Central Office for Regional School District No. 8 at 85 Wall Street, Hebron, CT 06248 until 2:00 pm on Friday May 26, 2023. All bids will be publically opened and will be read aloud. Bid Results will also be posted on the on-line plan service website for review within 24 hours of due date. Emailed or faxed Bids will not be accepted. To obtain or review Bids refer to the bidding instructions.

RHAM reserves the right to reject any or all Bids, in whole or in part. Any or all Bids may be rejected if there is any reason to believe that collusion exists among the bidders. Individual Bids may be rejected for irregularities of any kind, including without limitations, alteration of form, additions not called for, conditional Bids, incomplete Bids and unexplained erasures. RHAM retains the right to waive any formality or procedural irregularities in the Bids received. Nothing should be constructed to limit in anyway the right of RHAM to reject any and all Bids, should RHAM deem it to be in its best interest. No bidder may withdraw his Bid within sixty (60) days after the actual date of the opening thereof.

A NON-MANDATORY pre-bid site walk-through will be held at RHAM High School, 85 Wall Street, Hebron, Connecticut on **Monday May 8, 2023 at 9:00 AM.** All prospective bidders are encouraged attend. The meeting will be held at the location of the detention basin. As a secure school campus Bidders are asked NOT to visit the site unescorted while school is in session. Site visits outside of this day and time shall be requested and will be coordinated by appointment only. No site visits will be allowed without a previously scheduled appointment. Contact the Director of Facilities at 860-228-5311 or michael.schlehofer@rhamschools.org.

Any questions regarding the proposed work should be addressed, in writing, by e-mail to Michael Schlehofer, Director of Facilities at <u>michael.schlehofer@rhamschools.org</u>. Questions will not be considered past 4:00 pm on May 12, 2023 and responses will be posted via addendum no later than 4:00 pm on May 17, 2023.

Eva Gallupe Business Manager Regional School District No. 8 85 Wall Street Hebron, CT 06248 (860) 228-2115 eva.gallupe@rhamschools.org

INSTRUCTIONS TO BIDDERS

DETENTION BASIN MAINTENANCE AND REPAIRS RHAM HIGH SCHOOL/MIDDLE SCHOOL CAMPUS REGIONAL SCHOOL DISTRICT No. 8

INTRODUCTION:

The Regional School District No. 8 Board of Education ("RHAM") is inviting qualified contractors to submit bids for the maintenance and repair of a detention basin located at RHAM HIGH SCHOOL/MIDDLE SCHOOL CAMPUS", 85 Wall Street, Hebron, CT (the "Project"). The Project is described in more detail in Section 4 of these Instructions to Bidders.

This opportunity has been publicly advertised through the Invitation to Bid. The Project will be awarded to the Bidder determined and selected by RHAM in the manner described in Section 7 of these Instructions.

RHAM reserves the right to amend or withdraw this Request for Proposals (RFP) for any reason (including, but not limited to, the failure of RHAM to approve the Project by vote at referendum or the lack of funding for the Project), to accept or reject any or all bids, to waive any informalities or non-material deficiencies in any bid submission, to award or not award a contract in connection with this RFP, and to award a contract to the bidder as deemed by RHAM to be in the best interest of RHAM and the District.

2. SCHEDULE

2.01 A NON-MANDATORY pre-bid site walk-through will be held at RHAM High School, 85 Wall Street, Hebron, Connecticut on **Monday May 8, 2023 at 9:00 AM.** All prospective bidders are encouraged attend. The meeting will be held at the location of the detention basin. As a secure school campus Bidders are asked NOT to visit the site unescorted while school is in session. Site visits outside of this day and time shall be requested and will be coordinated by appointment only. No site visits will be allowed without a previously scheduled appointment. Contact the Director of Facilities at 860-228-5311 or michael.schlehofer@rhamschools.org

- 2.02 All Requests for Information must be received no later than **4 PM on May 12, 2023** emailed to Michael Schlehofer, Director of Facilities at michael.schlehofer@rhamschools.org.
- 2.03 Addenda will be issued no later than 4:00 PM on May 17, 2023.
- 2.04 Bids must be submitted no later than **2:00 PM** on **May 26, 2023** (the "Bid Deadline") at which time RHAM will open the Bids publically.
- 2.05 RHAM intends to award the Contract on or around **June 12, 2023**.
- 2.06 Work is expected to be performed between June 19, 2023 and August 15, 2023, with a substantial completion date of August 15, 2023. Hours of work shall be between 7:00 AM and 5:00 PM weekdays.

Work on weekends must be pre-approved. Deviations from these hours must be previously approved by RHAM in writing.

3. <u>CONTENTS OF BIDS</u>

- 3.01 Bids must include the following:
 - Completed and fully executed <u>Bid Form</u> attached hereto as <u>Exhibit A</u>. The Bid Form must be executed by a duly authorized representative of the Bidder having legal authority to contract on behalf of the Bidder.
 - The information and documents listed on Exhibit B.
- 3.02 Please note the Selection Process described in Section 7 of these Instructions.
- 3.03 RHAM is tax exempt. The sales or use tax on materials or supplies exempted by regulations of the Connecticut Department of Revenue Services shall not be included as part of a bid price proposed by the Bidder for the Project (the "Bid Price").
- 3.04 The term "Bid Documents" shall mean and include these Instructions to Bidders and all exhibits and schedules attached hereto and such other documents and information as may otherwise be incorporated herein by reference.

4. SCOPE OF THE WORK

4.01 The scope of the work for the Project is described in the Specifications and drawings (the "Work"), which can be found at http://www.advancedplanroom.com/public.php,

5. ADDENDA/INTERPRETATIONS/RFIS/SUBSTITUTIONS

5.01 Interpretations/Requests for Information

- Bidders requiring information regarding, clarification or interpretation of the Bid Documents shall make a written request to RHAM by email to Michael Schlehofer, Director of Facilities at michael.schlehofer@rhamschools.org. Responses to such requests shall be provided by RHAM by way of Addenda.

5.0 Addenda

- Addenda will be posted on RHAM's website: at **4:00 PM on May 17, 2023**.
- Interpretations or changes to, or corrections of, the Bid Documents, or substitutions made in any manner other than by way of an Addendum will not be binding, will be of no force and effect and Bidders shall not rely upon them.

6. <u>DELIVERY OF BIDS</u>

- 6.01 Bids must be delivered by hand or by mail in sealed envelopes clearly marked with the name and address of the Bidder and the words "DETENTION BASIN MAINTENANCE AND REPAIRS, RHAM HIGH SCHOOL/MIDDLE SCHOOL CAMPUS" to: Eva Gallupe, Business Manager, in the Central Office for Regional School District No. 8 at 85 Wall Street, Hebron, CT 06248 by the Bid Deadline. RHAM has no responsibility for any delays caused by the delivery process chosen by the Bidder.
- 6.02 Bids must contain the items described in Section 3 of these Instructions.

7. <u>SELECTION PROCESS</u>

- 7.01 Bids will be opened on **May 26, 2023 at 2:00 PM**. No Bidder may withdraw a Bid within 60 days after the date that the bids are opened.
- 7.02 RHAM will be responsible for evaluating the bids and for the selection of the Contract awardee. The evaluation criteria shall include (i) the quality of the Bidder's references, and (ii) the contents of the Bidder's Bid submission. RHAM will award the Contract to the Bidder whose Bid meets the requirements, terms and conditions contained in the bid specifications and is the lowest among those bidders possessing the skill, ability and integrity necessary for the faithful performance of the work based on objective criteria considering past performance and financial responsibility (the "Lowest Responsible Qualified Bidder")
- 7.03 Any Bid not including the attendant submissions required hereunder shall be considered unresponsive and may be rejected by RHAM.
- 7.04 RHAM also reserves the right to negotiate further with one or more of the firms as to any features of their Bids and to accept modifications and clarifications of the Bid when such action will be in the best interests of the District.

RHAM is AN Affirmative Action/Equal Opportunity Employer. Minority/Women Business Enterprises are encouraged to apply.

8. THE CONTRACT

- 8.01 RHAM intends to use, and the successful Bidder will be required to execute and deliver, a contract in a form substantially similar to the contract attached as Exhibit C (the "Contract"), to contract for the Project. Notwithstanding the foregoing, RHAM reserves the right to further modify the Contract prior to its execution. If a Bidder has objections to any of the terms and conditions of the Contract, such objections should be specifically identified and included in the Bid submission.
- 8.02 Please refer to the Contract for important terms and conditions that are applicable to the Project such as markup limitations for changes in the scope of the Work, liquidated damages, indemnification obligations and other important rights and obligations.

9. <u>INSURANCE REQUIREMENTS</u>

9.01 The insurance requirements to be met by the successful Bidder are set forth on <u>Exhibit D</u> to this RFP.

10. FURTHER INFORMATION AND REQUIREMENTS

10.01 NONDISCRIMINATION

RHAM prohibits harassment and discrimination on the basis of race, color, religious creed, age, marital status, military or veteran status, national origin, sex, ancestry, sexual orientation, or past or present physical or mental disability in accordance with Titles VI, VII of the Civil Rights Act of 1964, Title IX of the Education Amendments Act of 1973; Section 504 of the Rehabilitation Act of 1973; the Americans with Disabilities Act of 1991; and applicable state laws.

10.02 PROHIBITED INTEREST

No member, officer or employee of RHAM, or member of a local public agency having jurisdiction within RHAM, during his or her tenure or one year thereafter, shall be permitted to share in, have interest in or benefit from, directly or indirectly, any contract or agreement resulting from this RFP.

EXHIBITS TO THESE INSTRUCTIONS:

Exhibit A: Bid Proposal Form

Exhibit B: Submission Requirements

Exhibit C: Form of Contract

Exhibit D: Insurance Requirements
Exhibit E: Non-collusion Affidavit
Exhibit F: Technical Specifications
Exhibit G: Construction Drawings

Exhibit A

Bid Proposal Form

Regional School District No. 8

Project:	Maintenance and Repairs of Detention Basin RHAM High School/Middle School Campus", Hebron, Ct.					
Bidder:			ame) ontact person) ddress)			
					Tel. No./Email Address)	
including, w	ithout limitations to Bidders	on the Base B	id Items (de	fined below) v	work for the Project within the time stated in ents for the Base Bid	
completion of Instructions installation of and site resto	of the work fo to Bidders wh of bituminous	r the Project a nich shall inclu pavement wal above reference	s described ide, without lkways, con	in Bid Docum limitation, ear crete pads, mis	oment necessary for ents and the rthwork and grading, scellaneous site work, components of the	
Base Bid						
Bid Item 1 -	- Detention B	Sasin Mainten	nance and F	Repairs		
	oposed Lum s) for this Bid		act Price (ex	xclusive of uni	t prices/deduct/add	
(Dollars)	(\$)			_	
Unit Price B	id Items					
Unit Pri	ce 1 – Soil Aı	nalysis for Dis	sposal			

	Dollars) (\$)
Т	The Allowance for this Bid Item is: Three Thousand Dollars (Dollars) (\$3,000).
	This is an allowance only. Contractor will be paid for the cost of laboratory analysis in accordance with Specification Section 01 2020 - Measurement and Payment.
τ	Jnit Price 2 – Surplus Soil Disposal
(1	Dollars) (\$)
T	The Allowance for this Bid Item is: Eight Thousand Dollars (\$8,000)
	This is an allowance only. Contractor will be paid for the cost of surplus soil disposal naccordance with Section 01 2020 - Measurement and Payment.
<u>Nam</u>	es of Subcontractors to be utilized on the Project:
Rece	ript of Addenda Acknowledged:
	Signature
Adde	endum No. 1 dated, 2023
	endum No. 2 dated, 2023
Adde	
	endum No. 3 dated, 2023
Add€	endum No. 3 dated, 2023 es signature below, the undersigned hereby:

3. Certifies that, as _____(Title/Capacity) of the Bidder, all of the information and material included in Bidder's bid submission is complete,

accurate, and true; and

of the Contract.		
Signature	Date	
Name	Title	
Signed this day of	, 2023 by:	
Print Name:	, Title	

4. Understands the terms and conditions of the Bid Documents, and understands that, if any information submitted by or on behalf of the Bidder is found to be

discovered, either during the evaluation or subsequent to any award, the same me may result in the disqualification of the Bidder and/or the immediate termination

incomplete, inaccurate, or false, or if any attempt to mislead RHAM is

Exhibit B

Submission Contents

Bids should include the following information and documents organized and presented as provided and in the form listed below:

- 1. <u>Bidder's History and General Qualifications</u>: Provide a general statement of the Bidder's history and qualifications for the Project. [Use <u>Exhibit B-1</u>]
- 3. <u>References</u>: Provide references and the other information for at least three projects the Bidder has completed or is currently working on for educational institutions (preferably located in Connecticut) which projects are similar in character and scope to the Project. [Use <u>Exhibit B-2</u>] By submission of a proposal in response to the RFP, each Bidder authorizes RHAM to contact the Bidder's disclosed references regarding the services performed by the Bidder in each case.
- 4. <u>Financial Capability</u>: Evidence that the Bidder is financially stable and capable of performing the Work and completing the Project. [Use <u>Exhibit B-3</u>]
- 5. <u>Litigation</u>: Descriptions of all pending and threatened litigation or arbitration in which the Bidder is named as a party as well as any judgments entered against the Bidder during the last five years. [Use Exhibit B-4]
- 6. Along with the information to be provided above, the Bidder shall submit the following:
 - Fully completed Bid Proposal Form [Use Exhibit A]
 - Completed and Executed Non-Collusion Affidavit [Use <u>Exhibit E</u>]
 - A list of the names and addresses of proposed subcontractors that will perform any part of the work for the Project on behalf of the Bidder. RHAM reserves the right to reject any or all proposed subcontractors. In the event RHAM so rejects any or all subcontractors proposed by a Bidder, such Bidder may, notwithstanding anything to the contrary in these Instructions, withdraw its Bid without penalty. RHAM hereby reserves the right to allow a Bidder whose subcontractor or subcontractors are rejected hereunder, to re-submit a Bid with subcontractors acceptable to RHAM.

EXHIBIT B-1

STATEMENT OF QUALIFICATIONS AND EXPERIENCE

1. A Letter of Transmittal signed by a principal of the Bidder, not to exceed two (2) pages, describing in narrative form the company and the company's qualifications for the Project.

2. Company Overview:

- a. Name and location, including the office location that will be serving the Town
- b. Number of years the company has been in the business of providing the services or performing the work upon which they are bidding
- c. Number of employees and how many of them will be dedicated to the Project
- d. Evidence of the company's licensing/authority to do business in the State of Connecticut.

3. Client Base:

- a. Names and contact information for the three references for whom or which the Bidder has provided services or performed work in the last 2 years in connection with projects similar in size and scope to the services and/or work upon which they are bidding. Provide Owner name and telephone number for each Project.
- b. Provide a description of each of the three projects and the contractor's role in each project.

4. Company Information:

- a. Name, email and telephone number of the Bidder's contact person.
- b. A brief history of the company
- c. A list of the Project team members that would be assigned to the Project and their roles and responsibilities
- d. A list of the subcontractors that the Bidder would engage for the Project
- e. A list of projects for which the company has provided services in the last five years which projects have similar challenges to the Project and indicate if any claims, disputes, arbitration or litigation proceedings have occurred on any of these projects. If so, identify if they were between Owner/Contractor or Contractor/Subcontractor and give the status of each.

5. Litigation/Disputes:

Provide information concerning any suits filed, judgments entered or claims made against your company during the last five (5) years with respect to contractual

- services provided by your company, or any declaration of default or termination for cause against your company with respect to such services.
- 5. Additional information, not included above, that the company feels may be useful and applicable to this Project and helpful to the Town's evaluation of the Bidder (limit response to two pages).

Exhibit B-2

REFERENCE CHECK

Please provide three (3) references: 1. Name Contact Person Telephone Number Period of Contract Type of Services Provided to Reference 2. Name **Contact Person** Telephone Number Period of Contract Type of Services Provided to Reference 3. Name

Contact Person				
Telephone Number				
Period of Contract				
Type of Services Provided to Reference				

Exhibit B-3

FINANACIAL CAPABILITY

Submit evidence that the Bidder is financially stable and capable of performing the work and completing the Project.

Exhibit B-4

PENDING OR THREATENED LITIGATION

For	cases	pending.	please	provide the	foll	owing	in	formation	for	each	matter:
	Cases	pomoning,	proase	pro trae tire	1011	· · · · · · · · · · · · · · · · · · ·		101111001011	101		minute of .

- 1. Parties (suing or being sued)
- 2. Docket Number and Court
- 3. Brief Description and Status

JUDGMENTS

Please provide the following information for each matter:

- 1. Parties (suing or being sued)
- 2. Docket Number and Court
- 3. Brief Description and Amount of Judgment

(Attach additional sheets, if necessary.)

EXHIBIT D

INSURANCE REQUIRMENTS

- Contractor shall purchase and maintain without interruption from the date of commencement of the Work until the date of final payment and for the additional periods specified herein, the following insurance and all insurance that may be required under any applicable law, written by insurance companies with a rating of at least an "A-VIII" in the latest addition of A.M. Best. If Contractor fails to obtain and keep in force the insurance required hereunder, Owner may obtain and maintain the required insurance in the name of Contractor and the cost thereof shall be payable by Contractor to Owner on demand. Failure to maintain the insurance coverage required or failure to comply fully with any of the insurance provisions as may be necessary to carry out the terms and provisions of the Contract Documents shall be deemed to be a material breach of the Contract Documents. Insurance requirements are independent of, and in addition to, Contractor's liability under the Contract Documents. Nothing in the Contract Documents shall be deemed to limit Contractor's liability under the Contract Documents to the limits of the insurance coverages required hereunder. Contractor shall be solely responsible for payment of all deductible or retention amounts pertaining to any insurance required hereby. Upon the execution of this Contract, the Contractor shall provide a Certificate of Insurance evidencing that the Contactor has obtained all of the insurance required herein. Throughout the duration of the Project, the Contractor shall provide replace/renewal certificates of insurance at least 60 days prior to the expiration date of any of the policies.
 - 1. Commercial General Liability ("CGL") insurance on an "occurrence" basis for bodily injury and property damage that may arise out of or result from Contractor's operations and completed operations under the Contract Documents, whether such operations be by Contractor or by a subcontractor or by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable. Such insurance shall include, along with other coverages available to the Contractor under the CGL policy, each of the following:
 - (a) At a minimum, the following limits and coverages:
 - (i) \$1,000,000 each occurrence or the full per occurrence limits of the policy, whichever is greater
 - (ii) \$1,000,000 personal and advertising injury or the full personal and advertising injury limits of the policy, whichever is greater
 - (iii) \$2,000,000 general aggregate or the full general aggregate limits of the policy, whichever is greater
 - (iv) \$2,000,000 products-completed operations aggregate or the full products completed operations aggregate limits of the policy, whichever is greater

- (b) Coverage for ongoing operations, independent contractors, and any persons or entities performing work on behalf of Contractor.
- (c) Products and completed operations coverage, which coverage shall be maintained in effect for a period equivalent to the statute of repose tor the state in which the Project is located.
- (d) An appropriate endorsement acceptable to Owner stating that "limits apply per project."
- (e) Contractual liability coverage.
- (f) Contain a severability or separation of insureds clause.
- (g) The insurance maintained by Contractor shall be primary with respect to the interest of Owner, and any other insurance or self-insurance maintained by Owner or the Additional Insureds is in excess and shall not contribute to Contractor's insurance in all instances regardless of any like insurance that Owner or the Additional Insureds may have.
- (h) No exclusion or limitation for residential construction.
- (i) Waiver of Subrogation endorsement in favor of Owner.

Contractor shall not permit any subcontractors of any tier to commence work on or relating to the Work until such subcontractor has complied with the insurance requirements set forth in this Exhibit. Contractor shall be responsible for any subcontractor's failure to comply with the requirements of this Exhibit as they apply to such subcontractor.

- 2. **Commercial Automobile Liability** coverage to include any auto, hired and non-owned automobile liability insurance covering all use of all automobiles, trucks and other motor vehicles utilized by Contractor or its subcontractors, including each of the following:
 - (a) A combined single limit for bodily injury and property damage of \$1,000,000 per accident.
 - (b) Coverage for upset, overturn and collision coverage related to pollution events (applying to the vehicle, trailer or other attachments to vehicle and extend to cargo/waste carried and to Subcontractors or others providing services to Contractor).
 - (c) Waiver of Subrogation endorsement in favor of Owner.
- 3. Follow-fom1 umbrella (excess) liability insurance with a limit of \$5,000,000 each occurrence in excess of the general liability, employer's liability, business automobile liability and Workers' Compensation liability coverages required of Contractor under this Exhibit. Such insurance shall contain a provision that it will not be more restrictive

- than the primary insurance. Aggregate limits of liability shall apply separately with respect to the Project.
- 4. Workers' Compensation insurance, including employer's liability, tor all persons whom Contractor employs (or uses as subcontract labor if the subcontractor is uninsured) in carrying out any Work. Such insurance shall be in strict compliance with the requirements of the most current and applicable workers' compensation insurance laws in effect from time to time in the state(s) where the Work is performed, and shall include the following:
 - (a) Coverage A (Workers' Compensation)- Statutory
 - (b) Coverage B (Employer's Liability)

At a minimum, the following limits and coverages:

- (i) \$1,000,000 for each accident, for bodily injury by accident
- (ii) \$1,000,000 for each employee, for bodily injury by disease
- (iii) \$1,000,000 for each disease policy limit
- (c) Waiver of Subrogation endorsement in favor of Owner
- (d) Contain endorsements that provide:
 - (i) Voluntary Compensation
- 5. Property insurance providing coverage for property in which Contractor retains the risk of loss including their own equipment, (stationary or mobile), tools (including employee tools), supplies, materials, or any other property owned or leased by Contractor. If Contractor chooses to self-insure any of the property described under this Section, it is agreed that Contractor shall hold Owner and its representatives, agents and employees ham1less for any loss sustained by the Contractor of its equipment, tools, supplies, materials and other property of Contractor whether owned or leased.
- 6. Additional Insureds: Additional insured endorsements acceptable to Owner, naming the Additional Insureds (which shall include Owner and the Architect) as additional insureds under the Contractor's CGL policy, the Commercial Automobile Liability policy and the umbrella (excess) liability insurance policy. The limits and coverages set forth in this Exhibit are the minimum requirements under the Contract Documents. The inclusion of these minimum requirements shall not be interpreted to restrict the rights of the Additional Insureds to the stated minimum coverage amounts in the event the Contractor maintains coverage at higher limits.
- B. Subcontractor's Insurance. Contractor shall require that each subcontractor comply with the insurance requirements above with the exception of that set forth in paragraph A.4 of this Exhibit. Before pem1itting any of its subcontractors to pertom1 any Work, Contactor shall obtain a certificate of insurance from each such subcontractor evidencing that such

subcontractor has obtained the required minimum insurance and has added those entities as additional insureds with respect to the Commercial General Liability and Commercial Automobile Liability insurance as required herein.

EXHBIT E

NON-COLLUSION AFFIDAVIT OF PRIME BIDDER

State	of) ss					
Cour	nty of)					
		, being first duly sworn, deposes and says that:					
1	That he/she is a () Partner; () Officer; () Member; () Owner of the firm of:						
	the party making the foregoing pr	oposal or bid;					
2.	He is fully informed respecting t pertinent circumstances respectin	he preparation and contents of the attached bid and of al g such Bid;					
3.	Such Bid is genuine and is not a c	collusive or sham Bid;					
4.	or parties in interest, including the agreed, directly or indirectly with sham bid in connection with the refrain from bidding in connection indirectly, sought agreement or or bidder, firm or person to fix the person to fix any overhead, profit, or cost to secure through any collusion	of its officers, partners, owners, representatives, employees his affiant has in any way colluded, conspired, connived on any other bidder, firm or person to submit a collusive of contract for which the attached bid has been submitted on on with such contract, or has in any manner, directly of collusion or communication or conference with any other price or prices in the attached bid or of any other bidder, on the element of the bid price or the bid price of any bidder, on on, conspiracy, connivance or unlawful agreement any other person interested in the contract; and					
5.	collusion, conspiracy, connivance	attached bid are fair and proper and are not tainted by any e or unlawful agreement on the part of the bidder or any or s, employees, or parties in interest, including this affiant.					
6.	All statement in said Bid are true.						
		(Signed)					
		(Title)					
Swoı	n and subscribed before me						
This	day of	, 2023					
Nota	ry Public	.					
	Commission Expires:						

EXHIBIT F TECHNICAL SPECIFICATIONS

Detention Basin Maintenance and Repairs RHAM High School/Middle School Campus Hebron, Connecticut

Regional School District No. 8 Hebron, CT





Regional School District No. 8 85 Wall Street Hebron, CT 06248

Prepared by:



Loureiro Engineering Associates, Inc.

100 Northwest Drive, Plainville, CT 06062 860-448-0400 • Fax 860-448-0899 • www.Loureiro.com An Employee-Owned Company

Affirmative Action / Equal Opportunity Employer

Regional School District No. 8 is an Affirmative Action/Equal Opportunity Employer.

Minority/Women's business Enterprises are encouraged to apply.

TABLE OF CONTENTS

Detention Basin Maintenance and Repairs RHAM High School/Middle School Campus 85 Wall Street Hebron, Connecticut

SPECIFICATIONS

SECTION

NO. SECTION TITLE

DIVISION 2 – EXISTING CONDITIONS

02 6000 Surplus Soil Material Disposal

DIVISION 31 – EARTHWORK

31 2310 Earthwork

DRAWINGS

Cover Sheet

Sheet 1 of 1 Existing Conditions Plan

C1 Detention Basin Repair & Restoration Plan C2 Soil Erosion & Sedimentation Control Plan

C3 Details

DIVISION 02 EXISTING CONDITIONS

SECTION 02 6000

SURPLUS SOIL MATERIAL DISPOSAL

PART 1 GENERAL

1.1 SUMMARY

- A. Section includes:
 - 1. Stockpiling of surplus soil materials.
 - 2. Sampling and characterization of surplus soil materials for disposal
 - 3. Disposal of surplus soil materials.
- B. Contractor shall coordinate work between all Subcontractors, sections, and trades required for the proper completion of the work.
- C. Contractor is responsible for all health and safety.

1.2 REFERENCES

- A. Reference herein to any technical society, organization, group or regulation are made in accordance with the following abbreviations and, unless otherwise noted or specified, all work under this Section shall conform to the latest edition as applicable.
- B. State of Connecticut Department of Transportation (ConnDOT)
 - 1. Standard Specifications for Roads, Bridges, Facilities and Incidental Construction, Form 817, 2016 and any supplements.
- C. Code of Federal Regulations (CFR)
 - 1. 29 CFR 1926, Safety and Health Regulations for Construction

1.3 SUBMITTALS

- A. Testing Laboratory Submit name and qualifications of commercial testing laboratory for Engineer's approval. Submit applicable documentation of credentials, licenses, etc.
- B. Work Plans Submit copies of any required work plans for Owner, Engineer, and/or regulatory approval.
- C. Certifications Submit copies of all required certifications for Owner, Engineer, and/or regulatory approval.
- D. Submit for record copies of all analytical data results.
- E. Submit for record copies of all disposal facility approvals.
- F. Vehicle log documenting each vehicle that was used to transport surplus soil from the Project Site to the treatment/recycling/disposal facility.

- G. Submit for record copies of all disposal facility receipts that confirm documentation of material disposal, including quantities and disposal fees.
- H. Submit for measurement and payment all laboratory receipts providing an itemized accounting of all analysis performed.
- I. Submit for measurement and payment all treatment/recycling/disposal facility receipts and certified weight tickets providing documentation of all material received.
- J. Disposal certification After material disposal, submit a certification in the form of written letter to Owner, signed by an Authorized Agent of Contractor, that all surplus materials from the project were transported and disposed at the approved treatment/recycling/disposal facility in accordance with project-specific approvals and applicable laws regulations.

1.4 SAFETY

- A. Contractor is responsible for the health and safety of their employees and Subcontractors in all regards. Comply with the requirements of the Remediation Plan and all applicable laws and regulations.
- B. Contractor shall conduct all excavation activities in conformance with applicable regulations, including those relating to warning signs, excavation safety, sheeting, shoring, and stabilization.
- C. Contractor shall provide and maintain barricades, signs, lights, etc., required for the protection of personnel, materials and property. Temporary barricades, etc. shall conform all applicable codes and regulations, and shall be lighted at night with lanterns, flares and reflectorized paint as required for safety. Adapt barricades, signs, lights, etc. to evolving site conditions throughout the progress of the work.
- D. Provide other safety devices as required, including adaptation of such safety devices to changing site conditions, to prevent unauthorized entry to construction areas and open excavations. Provide warning signs and other temporary construction safety devices necessary for proper completion of the work in compliance with applicable safety regulations.
- E. Contractor shall properly design and furnish all labor, materials, equipment, and tools necessary to construct permanent or temporary excavation support systems, including, but not necessarily limited to, sheet piling, trench shields, trench boxes, timber trench shoring, pneumatic/hydraulic shoring, steel sheeting or sheeting using other materials, sloping, and benching.
- F. Any time an excavation is to remain open, at a minimum, provide full enclosure with safety barriers and fencing, warning signs, and additional safety control measures as appropriate for the condition.

1.5 QUALITY ASSURANCE

A. Use adequate numbers of skilled workmen who are trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and methods required for proper performance of the work in this Section. Use equipment of adequate size, capacity and quantity to accomplish the work of this Section in a timely manner.

B. Utility Mark-out

1. Prior to commencing work, comply with utility mark-out requirements of the Call-Before-You-Dig System (1-800-922-4455).

- 2. Verify the location of all subsurface utilities marked through the Call-Before-You-Dig System.
- 3. Not all subsurface facilities or structures will be identified through the Call-Before-You-Dig System. Confirm the location of other subsurface utilities and other subsurface facilities or structures prior to commencing work. Field-mark utilities as required.

1.6 SHEETING, SHORING AND BRACING

A. Provide earth retention systems as required by federal, state and local regulations. Shoring and bracing of trenches and other excavations shall be in accordance with the latest OSHA Standards and Interpretations, and to all other applicable codes, rules and regulations of federal, state and local authorities.

PART 2 PRODUCTS

2.1 GENERAL

- A. Hay Bales: Per applicable details.
- B. Silt Fence: Per applicable details.
- C. Plastic Sheet, underlayment: Polyethylene plastic sheeting for underlayment shall be at least 30 mil thick. Material shall be at least 10 feet wide.
- D. Plastic Sheet, cover: Polyethylene plastic sheeting for covering shall be at least 10 mil thick. Material shall be at least 10 feet wide.
- E. Anchorage: 30-pound (min) sandbags or similar weighted material sufficient to maintain plastic sheet in-place.
- F. Covers for roll-off/storage containers shall be made of polyethylene plastic, or similar watertight material, that is of sufficient size to completely cover top opening and can be securely fastened to the container.

PART 3 EXECUTION

- A. After consolidation of surplus soil materials, stage such material prior to disposal in temporary stockpile area or roll-ff units.
 - 1. Construct temporary stockpile area at a location approved by Engineer to isolate staged material from the environment. Refer to applicable details on the Drawings.
 - 2. Locate roll-off/storage containers at a location approved by Engineer to isolate staged material from the environment.
- B. Place all surplus soil materials within the temporary stockpile area or roll-off/storage containers until such time disposal approvals have been received.
- C. Contractor shall provide all necessary materials, equipment, tools and labor for anticipated activities as required to facilitate staging of soils within the temporary stockpile area or roll-off/storage containers. Such activities include, but are not limited to, handling and management of stockpiles; uncovering and recovering stockpiles or roll-off/storage containers; general

Detention Basin Maintenance and Repairs RHAM High School/Middle School Campus Hebron, Connecticut

housekeeping and maintenance; replacement of damaged components (i.e. sand bags, plastic polyethylene sheeting, etc.); and waste inventory record management.

- D. Contractor shall manage all materials in such a way as to minimize tracking of potential contaminated materials across the site and off-site, and minimize dust generation.
- E. Each stockpile or roll-off/storage container shall be securely covered when not in active use with a cover of sufficient size to prevent generation of dust and infiltration of precipitation. The cover shall be to prevent wind erosion.
- F. Staged stockpiles shall be inspected at least daily by the Contractor to ensure that the cover and containment have not been damaged and that there is no apparent leakage from the pile. If the cover has been damaged, or there is evidence of leakage from the piles, Contractor shall immediately replace the cover or containment as needed to prevent the release of materials to the environment from the piles.

3.2 MATERIAL CHARACTERIZATION FOR DISPOSAL

- A. Contractor shall sample stockpiled soil at a frequency and for the constituents to meet the acceptance criteria of Contractor's approved treatment/recycling/disposal facility. Only collect samples after Engineer's approval has been obtained as to proposed treatment/recycling/disposal facility. Utilize personnel that are qualified and well-versed in the techniques and methods required for proper sample collection and management.
- B. Analyses for material to be taken to an offsite treatment facility must conform to local, state, and federal criteria as well as to the requirements of the treatment/recycling/disposal facility.
- C. Submit samples to approved analytical laboratory for analysis in accordance with approved treatment/recycling/disposal facility requirements. Provide for timeframe required by analytical laboratory to perform testing.
 - 1. Payment for such analytical laboratory analysis will be in accordance with Section 01 2010 Measurement and Payment.
- D. Additional sampling and analyses to the extent required by the approved treatment/recycling/disposal facility is the responsibility of Contractor and must be approval by Owner.
- E. Furnish documentation of all analyses performed to Engineer.
- F. Upon receipt of analytical laboratory results, provide for all required coordination, applications, submittals, and to obtain treatment/recycling/disposal facility approvals to dispose materials.

3.3 MATERIAL DISPOSAL

- A. Provide for the loading of surplus soil materials into over-the-road trucks for transport to treatment/recycling/disposal facility. Transported materials are to be covered prior to leaving the point of generation and are to remain covered until the arrival at the approved treatment/recycling/disposal facility.
- B. Log all vehicles departing the Project Site to record vehicle identification (including license plate and truck number) driver's name, time of departure, destination, and approximate volume and content of materials carried.

Detention Basin Maintenance and Repairs RHAM High School/Middle School Campus Hebron, Connecticut

- C. Documentation must be maintained indicating that all applicable laws have been satisfied and that the materials have been successfully transported and received at the treatment/recycling/disposal facility. Refer to Article 1.3 herein.
 - 1. Payment for material disposal will be in accordance with Section 01 2010 Measurement and Payment.

END OF SECTION

DIVISION 31 EARTHWORK

SECTION 31 2310

EARTHWORK

PART 1 GENERAL

1.1 SUMMARY

A. Section includes:

- 1. Excavating and backfilling for structures, underground utilities and associated appurtenances.
- 2. Earth retention systems.
- B. Contractor shall coordinate work between all Subcontractors, sections, and trades required for the proper completion of the work.
- C. Contractor is responsible for all health and safety.

1.2 GENERAL

- A. Contractor is advised that lines and grades, as shown on the Drawings, are subject to change. Although it is intended to adhere to what is shown on Drawings, Engineer reserves the right to make changes in lines and grades of utilities or other subsurface construction when such changes may be necessary or advantageous.
- B. In open trenching on public roadways, Contractor shall be governed by the conditions, restrictions and regulations made by the local or state authority as applicable. All such regulations shall be in addition to those set down in the Specifications.

1.3 REFERENCES

- A. Reference herein to any technical society, organization, group or regulation are made in accordance with the following abbreviations and, unless otherwise noted or specified, all work under this Section shall conform to the latest edition as applicable.
- B. State of Connecticut Department of Transportation (ConnDOT)
 - 1. Standard Specifications for Roads, Bridges, Facilities and Incidental Construction, Form 818, 2020 and any supplements.
- C. Code of Federal Regulations (CFR)
 - 1. 29 CFR 1926, Safety and Health Regulations for Construction
- D. American Association of State Highway and Transportation Officials (AASHTO)
 - 1. AASHTO Method T 90 Determining the Plastic Limit and Plasticity Index of Soils.
 - 2. AASHTO T104 Standard Method of Test for Soundess of Aggregate by Use of Sodium Sulfate or Magnesium Sulfate.

31 2310-1 Earthwork

- 3. AASHTO Method T146 Standard Method of Test for Wet Preparation of Disturbed Soil Samples for Test.
- E. ASTM International (ASTM).
 - 1. ASTM D422 Standard Test Method for Particle-Size Analysis of Soils.
 - 2. ASTM D1556 Standard Test Method for Density and Unit Weight of Soil in Place by the Sand-Cone Method.
 - 3. ASTM D1557 Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft3(2,700 kN-m/m3)).
 - 4. ASTM D2487 Standard Classification of Soils for Engineering Purposes (Unified Soil Classification System).
 - 5. ASTM D2922 Standard Test Methods for Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth).
 - 6. ASTM D3017 Standard Test Method for Water Content of Soil and Rock in Place by Nuclear Methods (Shallow Depth).
 - 7. ASTM D6938 Standard Test Method for In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth).

1.4 SUBMITTALS

- A. Site Characterization of Off-Site Borrow Sources: The following information shall be submitted to Engineer for review at least two weeks prior to use of an off-site borrow source:
 - 1. Location and name of the borrow source site.
 - 2. Owner and contact information for the borrow source site.
 - 3. Present and past usage of the source site and materials.
 - 4. Any previously existing report(s) associated with an assessment of the source site as relates to the presence of oils, hazardous materials, or other organic and non-organic constituents which may be considered contaminants.
 - 5. Location within the site from which the material will be obtained.
- B. Material Testing Data: Provide results for all proposed bedding, fill, aggregates, and backfill. Submit complete laboratory reports.
 - 1. Gradation analysis.
 - 2. Soil classification and Moisture-Dry Density Curve.
 - 3. Loss on Abrasion.
 - 4. Soundness.
- C. Samples: 50-pound sample of each type of off-site bedding, fill, aggregates, and backfill that are proposed for use at the Project Site in an air-tight container for the testing laboratory, a

31 2310-2 Earthwork

minimum of two weeks prior to delivery of such material to the site. Use of these proposed materials by Contractor prior to testing and approval or rejection shall be at Contractor's risk.

D. Product Data

- 1. Plastic warning tape.
- 2. Separation fabric, filter fabric, geogrids, or similar geotextiles.

E. Field Testing Results

1. Compaction test results keyed to date and specific location of testing. Provide Engineer with copies of testing reports within 24 hours of field test.

1.5 SAFETY

- A. Contractor shall conduct all excavation activities in conformance with applicable regulations, including those relating to warning signs, excavation safety, sheeting, shoring, and stabilization.
- B. Contractor shall provide and maintain barricades, signs, lights, etc., required for the protection of personnel, materials and property. Temporary barricades, etc. shall conform all applicable codes and regulations, and shall be lighted at night with lanterns, flares and reflectorized paint as required for safety. Adapt barricades, signs, lights, etc. to evolving site conditions throughout the progress of the work.
- C. Provide other safety devices as required, including adaptation of such safety devices to changing site conditions, to prevent unauthorized entry to construction areas and open excavations. Provide warning signs and other temporary construction safety devices necessary for proper completion of the work in compliance with applicable safety regulations.
- D. Contractor shall properly design and furnish all labor, materials, equipment, and tools necessary to construct permanent or temporary excavation support systems, including, but not necessarily limited to, sheet piling, trench shields, trench boxes, timber trench shoring, pneumatic/hydraulic shoring, steel sheeting or sheeting using other materials, sloping, and benching.
- E. Any time an excavation is to remain open, at a minimum, provide full enclosure with safety barriers and fencing, warning signs, and additional safety control measures as appropriate for the condition.

1.6 QUALITY ASSURANCE

A. Use adequate numbers of skilled workmen who are trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and methods required for proper performance of the work in this Section. Use equipment of adequate size, capacity and quantity to accomplish the work of this Section in a timely manner.

B. Utility Mark-out

- 1. Prior to commencing work, comply with utility mark-out requirements of the Call-Before-You-Dig System (1-800-922-4455).
- 2. Verify the location of all subsurface utilities marked through the Call-Before-You-Dig System.

31 2310-3 Earthwork

- 3. Not all subsurface facilities or structures will be identified through the Call-Before-You-Dig System. Confirm the location of other subsurface utilities and other subsurface facilities or structures prior to commencing work. Field-mark utilities as required.
- C. Codes and Standards: Perform the work of this Section in accordance with all applicable codes, standards, and the requirements of authorities having jurisdiction.
- D. Engineer reserves the right to perform all in-field testing specified in this Section and reserves the right to determine the suitability of all materials to be used for fills and reject any fill not meeting the specifications.
- E. Field Density testing and subgrade observation shall be performed by the designated entity.

F. Weather Limitations:

- 1. Material excavated when frozen or when air temperature is less than 32 degrees Fahrenheit (32 F) shall not be used as fill or backfill until material completely thaws.
- 2. Material excavated during inclement weather shall not be used as fill or backfill until after material drains and dries sufficiently for proper compaction.

G. Vibration

- 1. Vibration producing activities such as operation of heavy construction equipment, vibratory compaction, etc. may be required. Contractor is advised that structures are located close to the proposed work and that construction activities shall be conducted so as to preclude damage to these structures and undue annoyance to occupants.
- 2. Contractor has liability for, and shall bear all costs associated with, any damage caused to existing structures, buildings and/or services as a result of any construction activity. This extends to responding to any claims of vibration-induced damage. It is Contractor's sole decision how to manage the risk of vibration-induced damage, and what, if any, surveys, monitoring, or other activities are undertaken.

1.7 TESTING

- A. All sampling and testing shall be the responsibility of Contractor via Testing Agency and Testing Laboratory as applicable. Contractor shall retain and pay for the services of such Testing Agency/Testing Laboratory to perform all pre-construction testing and field testing in accordance with applicable standards.
- B. Borrow and Fill: Contractor shall provide testing as defined below.
 - 1. Gradation analysis for each type of borrow and on-site fill materials by ASTM D422.
 - Soil classification (ASTM D2487) and Moisture-Dry Density Curve (Proctor Test-Modified) by ASTM D1557 for all proposed fill and backfill materials at the frequency specified below:
 - a. For suitable soil materials removed during Trench Excavation, perform one test for every 1,000 cubic yards of similar soil type. Similarity of soil types will be as determined by the Engineer.

31 2310-4 Earthwork

- b. For borrow materials, perform tests from each proposed source, at a rate of one test for every 1,000 cubic yards of soil type. Similarity of soil types will be as determined by the Engineer.
- 3. Loss on Abrasion: Where called-for, AASHTO Method T 96.
- 4. Soundness: Where called-for, AASHTO Method T 104.
- C. Compaction Testing: Contractor shall conduct compaction testing (i.e. ASTM D2922 and ASTM D3017 or ASTM D1556) at the frequency indicated below.
 - 1. Trench: 1 test per lift, every 1,000 square feet or 200 feet of trench.
 - 2. Embankment: 1 test per lift, every 1,000 square feet.
 - 3. Additional compaction testing may be required when there is evidence of a change in the quality of moisture control or the effectiveness of compaction.
 - 4. If testing indicates that compacted fills are below specified density, additional compaction and/or replacement of material shall be provided at no expense to Owner.

1.8 EXCAVATED MATERIAL

A. Placement

- 1. Excavated material shall be so placed as not to interfere with travel or movement on existing streets, driveways, sidewalks or other areas designated to remain undisturbed. Excavated material shall not be deposited on private property without the written consent of the property owner(s) and approval of Engineer.
- 2. No excavated material shall be stored on top of installed pipe, other subsurface construction, or within the drip-line of trees.
- 3. Contractor shall consider surcharge loads when stockpiling excavated material adjacent to excavations, and take any measure required to prevent cave-in, including but not limited to, excavation support systems and/or alternative stockpiling locations.
- B. Satisfactory Material excavated at the Project Site may be used for Common Fill or Backfill on other parts of the Work, if specifically approved by Engineer. Engineer or Geotechnical Engineer shall determine what is Satisfactory Material or Unsatisfactory Material where questions arise.
- C. Contractor shall be responsible for the proper disposal of all Unsatisfactory Material. Engineer or Geotechnical Engineer shall determine what is Satisfactory Material or Unsatisfactory Material where questions arise.
- D. Disposal: Manage all surplus soils in accordance with Section 02 6000 Surplus Soil Material Disposal.

1.9 SHEETING, SHORING AND BRACING

A. Provide earth retention systems as required by federal, state and local regulations. Shoring and bracing of trenches and other excavations shall be in accordance with the latest OSHA Standards

31 2310-5 Earthwork

and interpretations, and all other applicable codes, rules and regulations of federal, state and local authorities.

1.10 DRAINAGE

- A. At all times during construction, Contractor shall temporarily provide, place and maintain ample means and devices with which to remove promptly, and dispose of properly, all water entering trenches and other excavations, or water that may flow along or across the site of the Work, and keep said excavations dry until the structures, pipes, and appurtenances to be built therein have been completed to such extent that they will not be damaged. At the conclusion of the work, Contractor shall remove such temporary means and devices.
- B. All groundwater which may be found in the trenches and foundation excavations, and any water which may get into them from any cause whatsoever, shall be pumped or bailed out, so that the trench shall be dry during pipe laying and backfilling and during the placement of concrete.
- C. All water pumped or drained from the Work shall be managed in accordance with applicable discharge permits, without undue interference with other work or damage to pavements, other surfaces, or property.

1.11 COORDINATION

- A. Prior to commencing earthwork operations, meet with representatives of governing authorities, Engineer, testing entity, and other pertinent entities.
 - 1. Review earthwork procedures and responsibilities including Contractor's schedule of operations, scheduling observation and testing procedures and requirements.
 - 2. Notify participants at least three (3) working days prior to convening conference. Record discussions and agreements and furnish copies to each participant.
 - 3. Contractor shall at all times so conduct his work as to insure the least possible inconvenience to the general public and the residents in the vicinity of the work. Fire hydrants on or adjacent to the work shall be kept accessible to firefighting equipment at all times. Temporary provisions shall be made by Contractor to ensure the proper functioning of all gutters, sewer inlets, and drainage ditches, which shall not be obstructed except as approved by Engineer.
- B. Benchmark/Monument Protection: Protect and maintain benchmarks, monuments or other established reference points and property corners. If disturbed or destroyed, replace at no cost to Owner.
- C. Provide five (5) days advance notice to Engineer and testing entity for any proposed earthwork operation requiring observation and/or testing.

PART 2 PRODUCTS

2.1 SOIL MATERIALS

- A. All materials used in the work of this Section shall be Satisfactory Material, and any material that does not meet this classification shall be considered an Unsatisfactory Material and shall not be used.
- B. Unsatisfactory Soils: Soil materials not meeting the requirements for Satisfactory Soils.

31 2310-6 Earthwork

1. Unsatisfactory soils also include satisfactory soils not maintained within two (2) percent of optimum moisture content at time of compaction.

2.2 COMMON FILL/ORDINARY BORROW

- A. Earth materials classified by ASTM D 2487 as GW, GP, GM, GP-GM, GW-GM, GP-GC, SW, SP, and SM that are free of clay and with less than twenty (20) percent of material by weight that passes the No. 4 sieve passing the No. 200 sieve.
- B. Common Fill material is subject to the approval of Engineer and may be either material removed from excavations or borrow from off site. It shall have physical properties such that it can be readily spread and after it has been placed and properly compacted, it will form a dense, stable fill
- C. Common Fill shall not be used at locations where use of a specific earth material is called-for.

2.3 BANK RUN GRAVEL

- A. Granular material, well graded from fine to coarse, obtained from approved natural deposits and unprocessed, except for the removal of unacceptable material and stones larger than the maximum size permitted.
- B. Bank Run Gravel shall be graded as follows:

Gradation of Bank Run Gravel (ConnDOT Grading "C")

Sieve	Percent Passing by Weight
1 ½"	100
3/4"	45-80
1/4	25-60
No. 10	15-45
No. 40	5-25
No. 100	0-10
No. 200	0-5

2.4 GRANULAR FILL

- A. Broken or crushed stone, gravel, or a mixture thereof.
- B. Broken or crushed stone
 - 1. The product resulting from the artificial crushing of rocks, boulders or large cobblestones, substantially all faces of which have resulted from the crushing operation. Broken or crushed stone shall consist of sound, tough, durable stone, reasonably free from soft, thin, elongated, laminated, friable, micaceous or disintegrated pieces.

C. Bank or crushed gravel

1. Sound, tough, durable particles of crushed or uncrushed gravel, free from soft, thin, elongated or laminated pieces and vegetable or other deleterious substances. Crushed gravel shall be the manufactured product resulting from the deliberate mechanical crushing

31 2310-7 Earthwork

of gravel with at least 50% of the gravel retained on the No. 4 sieve having at least one fractured face.

D. Granular Fill shall be graded as follows:

Gradation of Granular Fill (ConnDOT Grading "A")

Sieve	Percent Passing by Weight
3 ½"	100
1 ½"	55-100
1/4"	25-60
No. 10	15-45
No. 40	5-25
No. 100	0-10
No. 200	0-5

E. Reclaimed material shall not be considered acceptable for use as granular fill.

2.5 SCREENED GRAVEL AND CRUSHED STONE

- A. Screened gravel, well graded in size from 3/8 inch to 3/4 inch. The gravel shall consist of clean, hard, and durable particles or fragments. Crushed rock of suitable size and grading may be used instead of screened gravel.
- B. Screened Gravel shall be graded as follows:

Gradation of Screened Gravel (ConnDOT Gradation No. 6)

Sieve	Percent Passing by Weight
1"	100
3/4"	90-100
1/2"	20-55
3/8"	0-15
No. 4	0-5

PART 3 EXECUTION

3.1 PREPARATION

- A. Notify "Call-Before-You-Dig" to request a utility mark-out for the Project Site prior to any earth disturbance. Provide written confirmation to Engineer that such mark-out has been completed.
- B. Verify site conditions before proceeding with demolition work. Field check the accuracy of the Drawings and inspect structures, utilities, and other site features prior to start of work and notify Engineer in writing, of any discrepancies or hazardous conditions.
- C. Take precautions for preventing injuries to persons or damage to property in or about the work. Protect structures, utilities, sidewalks, pavements and other improvements from damage caused by settlement, lateral movement, undermining, washout and other hazards created by earthwork operations.

31 2310-8 Earthwork

- D. Protect sub-grades and foundation soils against freezing temperatures or frost. Provide protective insulating materials as necessary.
- E. Provide erosion-control measures to prevent erosion or displacement of soils and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways.
- F. When excavations are to be made in paved surfaces, the pavement shall be removed so as to provide a clean uniform edge with a minimum disturbance of remaining pavement. Saw cutting the pavement to provide a clean, uniform edge shall unless otherwise indicated.
- G. If pavement is removed in large pieces, it shall not be mixed with other excavated material, but shall be disposed of away from the site of the Work before the remainder of the excavation is made.

3.2 CLEARING AND GRUBBING

A. Clear, grub, remove, and dispose of all vegetation and debris within the limits of construction, as designated on the plans or as required by Engineer. Contractor shall remove only those trees and shrubs absolutely necessary to allow for the construction. The work shall also include the preservation from injury of defacement of all vegetation or object designated to remain.

3.3 PROTECTION OF EXISTING FEATURES

A. General

- 1. Protect all existing improvements from damage unless those improvements are specifically designated for permeant removal, relocation, or temporary removal and replacement.
- 2. As excavation approaches underground structures, digging by machinery shall be discontinued and the excavation shall be done by means of hand tools.
- 3. Pavements: On paved surfaces to remain, do not use or operate tractors, bulldozers, or other power operated equipment, the treads or wheels of which are so shaped as to cut or otherwise damage such surfaces. All surfaces, which have been damaged by Contractor's operations, shall be restored to a condition at least equal to that in which they were found immediately prior to the beginning of operations. Suitable materials and methods shall be used for such restoration.

B. Utilities

- 1. Existing utilities remaining in service, including those remaining in service until after relocation, and relocated utilities shall be protected from damage. Before excavating near any existing utilities, notify the utility owner, coordinate protective work and comply with the utility owners' requirements. Coordinate with respective utility owners/operators as required.
- 2. Safeguard and protect from damage or movement any existing services, utilities, and utility structures uncovered or encountered which are to remain in service.
- 3. All utility services shall be supported by suitable means so that the services shall not fail when tamping and settling occurs.
- 4. Where known utilities are encountered, notify Engineer and document location and type of utility before proceeding with work in such area.

31 2310-9 Earthwork

- 5. When uncharted or incorrectly charted piping or utilities are encountered during excavation, stop work and notify Engineer immediately. Cooperate with the utility owners in maintaining their utilities in operation prior to resuming work.
- C. Retaining Structures: Provide bracing, shoring, sheeting, sheet piling, underpinning or other retaining structures necessary to guard against any movement or settlement of existing or new construction, utility systems, paving, or other improvements. Assume responsibility for the strength and adequacy of retaining structures, and for the safety and support of construction, utilities or paving, and for any movement, settlement or damage thereto. Retain the services of a licensed engineer as required to design bracing, shoring, sheeting, sheet piling, underpinning or other retaining structures.

D. Replacement and Relocation

- 1. In case of damage, Contractor shall notify the appropriate party so that proper steps may be taken to repair any and all damage done. When the Owner does not wish to make the repairs themselves, all damage shall be repaired by Contractor, or, if not promptly done by him, Engineer may have the repairs made at the expense of Contractor.
- 2. If certain existing structures are encountered that in the opinion of Engineer require temporary or permanent relocation or removal, Engineer may order in writing that Contractor undertake all or part of such work or to assist the Owner in performing such work. For such occurrences, Contractor shall be compensated as applicable, as extra work.
- 3. In removing existing structures, Contractor shall use care to avoid damage to the material, and Engineer shall include for payment only those new materials, which, in his judgment, are necessary to replace those unavoidably damaged.
- 4. The structures to which the provisions of the preceding two paragraphs shall apply include structures which (1) are not indicated on the Drawings or otherwise provided for, (2) encroach upon or are encountered near and substantially parallel to the edge of the excavation, and (3) in the opinion of Engineer will impede progress to such an extent that satisfactory construction cannot proceed until they have been changed in location, removed (to be later restored), or replaced. (See Item 3.19, "Sub Surface Obstructions" also).

3.4 DEWATERING

- A. Comply with all applicable permit requirements.
- B. Prevent surface water and ground water from entering excavations, from ponding on prepared subgrade and from flooding Project site and surrounding area.
- C. Protect sub-grades from softening, undermining, washout and damage by rain or water accumulation.
 - 1. Reroute surface water runoff away from excavated areas. Do not allow water to accumulate in excavations. Do not use excavated trenches as temporary drainage ditches.
 - 2. Install de-watering system to keep subgrades dry and convey ground water away from excavations.

3.5 EXCAVATION

- A. Dust Control: During the progress of the Work, Contractor shall conduct his operations and maintain the area of his activities in order to minimize the creation and dispersion of dust. Refer to Section 01 5714- Temporary Dust Control.
- B. Excavate to the exact elevations shown on the plans, or as directed by Engineer. Where no dimensions are indicated, make excavations in such manner, and to such depths, elevations, and dimensions, that will give suitable room for construction of the work indicated on the Drawings. As applicable for utility installations, comply with trench limits shown on the Drawings.
- C. Furnish and place all sheeting, bracing, and supports, and render the bottom of the excavation firm and dry, and in all respects, acceptable for construction of the work.
- D. If Contractor excavates below the elevations specified on the plans, beyond the limits indicated on the plans, or where no dimensions are indicated, beyond depths, elevations, and dimensions reasonably necessary for construction of the work, Contractor shall bring the excavation back to the proper elevation and/or dimension by backfilling with Suitable Material that is approved by Engineer in accordance with the backfilling provisions specified herein. Engineer, or if applicable Geotechnical Engineer, shall have sole authority in determining the specific composition of such Suitable Material.
 - 1. Any increase in cost resulting from Unauthorized Excavation, including but not necessarily limited to backfilling, haul-off, increasing the size of footings or foundations, testing, schedule impact, or administrative impact shall be at Contractor's sole expense.
- E. If utilities are to be laid in new embankments, or other new fill areas which are more than 12 inches deep below the invert of the pipe, the fill material shall be placed and properly compacted to final grade or to a height of at least 3 feet above the top elevation of the pipe, whichever is the lesser, before laying pipe. Particular care shall be taken to ensure maximum consolidation of material under the pipe location. The pipe trench shall then be excavated as though in undisturbed material.

3.6 TRENCH EXCAVATION

- A. In general, trenches shall be excavated to such depth as will provide a cover depth as indicated on the Drawings from finished grade to the top of the pipe barrel. Deeper trenches shall be provided where necessary on account of the conformation of the ground and to permit the alignment of the pipe without undue deflection of joints.
- B. Trenches shall be excavated by hand or machinery to the width and depth indicated on the Drawings and specified herein. Depth shall account for thickness of the pipe and thickness of bedding. All loose materials shall be removed from the bottom of the trench so that the bottom of the trench will be in an undisturbed condition.
- C. If in the opinion of Engineer, the material at or below the depth to which excavation for structures and pipes would normally be carried is unsuitable for foundation, it shall be removed to such widths and depths as directed and replaced with suitable material.
- D. Trench widths shall be 3 feet greater than the nominal inside diameter of pipe for such diameters of 36 inches or less. For diameters greater than 36 inches, the width shall be 4 feet greater than nominal inside diameter. Trench excavation for manholes, catch basins, drop inlets, etc. shall be two (2) feet outside the neat lines of the foundations. These limits may be adjusted for field conditions at the direction of Engineer.

31 2310-11 Earthwork

E. Bedding for pipe and utility structures will be as detailed on the Drawings.

3.7 APPROVAL OF SUBGRADE

- A. Notify Engineer, and Geotechnical Engineer if applicable, when excavations have reached required subgrade elevation.
- B. If Engineer and, if applicable, Geotechnical Engineer determines that Unacceptable Material is present, continue excavation of such Unacceptable Material and replace with approved Satisfactory Materials as directed. The replacement of Unacceptable Material with Satisfactory Materials will be paid for as a change in the work according to applicable provisions of the contract.
- C. Protect subgrade from disturbance at all times. Reconstruct sub-grades damaged by freezing temperatures, frost, rain, accumulated water or construction activities, as directed by Engineer. Excavation and replacement with structural fill of any disturbed or softened materials resulting from inadequate preparation, inadequate dewatering, or inadequate protection, shall be at Contractor's sole expense.

3.8 FILL AND BACKFILL

- A. Fill: Contractor shall remove loam and topsoil, loose vegetable matter, stumps, large roots, etc., from areas upon which embankments will be built or material will be placed as fill to adjust subgrade prior to final grading. The subgrade shall be prepared by forking, furrowing, or plowing such that the first layer of the new material placed thereon, will be well bonded to it.
- B. Backfill: Common Fill material may be used as backfill when indicated on the Drawings or when authorized by Engineer (or as applicable Geotechnical Engineer) if Contractor can achieve required minimum dry density after compaction. Backfilling shall be done as promptly as is consistent with non-injury to pipe or structures, but no backfilling shall be done before Engineer (or as applicable Geotechnical Engineer) gives permission.
- C. Frozen material shall not be placed in any fill or backfill, nor shall any fill or backfill be placed upon frozen material. Previously frozen material shall be removed, or shall be otherwise treated as required, before new fill or backfill is placed.
- D. After the subgrade has been prepared, fill material shall be placed thereon and built up in successive layers not exceeding twelve (12) inches before compaction until it has reached the required elevation.
 - 1. When gravel fill or other material is used for foundation of structures, it shall be spread in layers of uniform thickness not exceeding six (6) inches before compaction.
- E. Upon completion of filling and backfilling, all surplus material shall be removed and surfaces to remain which are affected in any way by the work restored to the condition in which they were before ground was broken. All surplus materials shall become the property of Contractor. If Contractor fails to promptly remove such surplus materials, Engineer may have the same done and charge all associated costs to Contractor, including deduction from payments due.

3.9 BACKFILLING AT STRUCTURES

- A. No backfill shall be deposited against concrete until the concrete has obtained sufficient strength to withstand the earth pressure placed upon it and in no case less than seven days, nor before carrying out and satisfactorily completing the tests for watertight structures specified elsewhere.
- B. Prior to placing backfill, subgrade shall be thoroughly compacted. Soft or loose material evident during compaction shall be removed and replaced with Granular Fill or other approved fill material.
- C. Fill placed around arches, rigid frames, box culverts and piers shall be deposited on both sides of the structure to approximately the same elevation at the same time. Each layer of backfill shall be spread to a thickness not exceeding 6 inches deep after compaction and shall be thoroughly compacted by the use of power rollers or other motorized vehicular equipment, by tamping with mechanical rammers or vibrators, or by pneumatic tampers. Any equipment not principally manufactured for compaction purposes or which is not in proper working order in all respects shall not be used within the area described above.
- D. Bring backfill to sub-grade elevations. Slope backfill at exterior of building to drain water away from building.

3.10 COMPACTION

- A. Each layer of fill or backfill material shall be compacted by the use of compaction equipment consisting of rollers, compactors or a combination thereof. Earth-moving and other equipment not specifically manufactured for compaction purposes will not be considered as compaction equipment. At such points as cannot be reached by mobile mechanical equipment, or where such equipment is not permitted, the materials shall be thoroughly compacted by the use of suitable power- driven tampers.
- B. Previously placed or new materials shall be moistened by sprinkling, if required, to ensure proper bond and compaction. No compacting shall be done when the material is too wet, from either rain or application of water, to compact it properly. At such times the work shall be suspended until the previously placed and new materials have dried out sufficiently to permit proper compaction, or such other precautions shall be taken as may be necessary to obtain proper compaction.
- C. Special attention shall be given to compaction in places close to walls where motorized vehicular compaction equipment cannot reach. Within 3 feet of the back face of walls and within a greater distance at angle points of walls, each layer of backfill shall be compacted by mechanical rammers, vibrators or pneumatic tampers.
- D. Each layer of fill or backfill shall be compacted at optimum moisture content. No subsequent layer shall be placed until the specified compaction is obtained for the previous layer.
- E. Compaction Density: Compaction density shall be expressed as a percentage of maximum dry density at optimum moisture content according to ASTM D 1557 Method C. Density indicated is minimum required.
 - 1. Under structures, building slabs, and steps: 95 %
 - 2. Utilities, below pipe centerline: 95%
 - 3. Utilities below unpaved surface, above pipe centerline: 92%

4. Embankments: 92%

5. Landscaped areas: 90 %.

END OF SECTION

31 2310-14 Earthwork

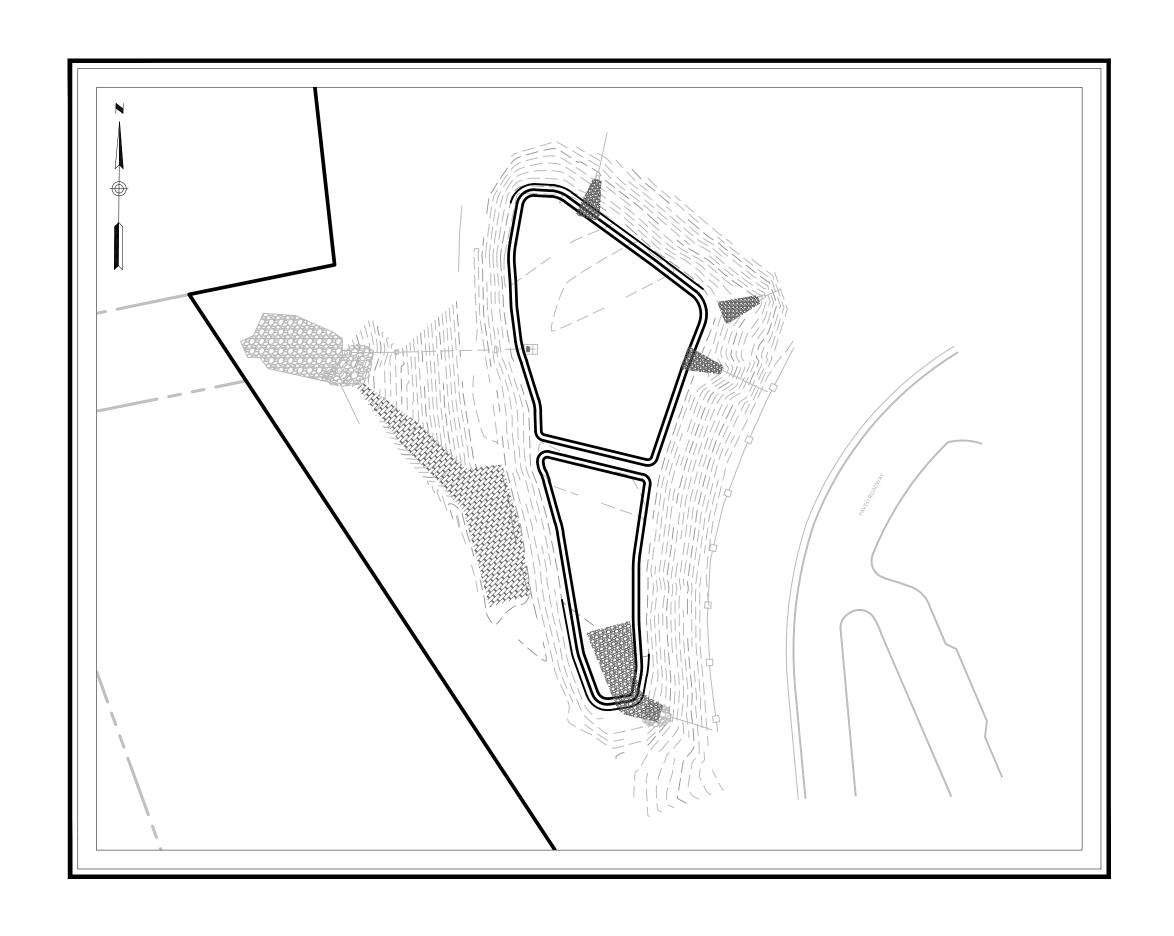
EXHIBIT G CONSTRUCTION DRAWINGS

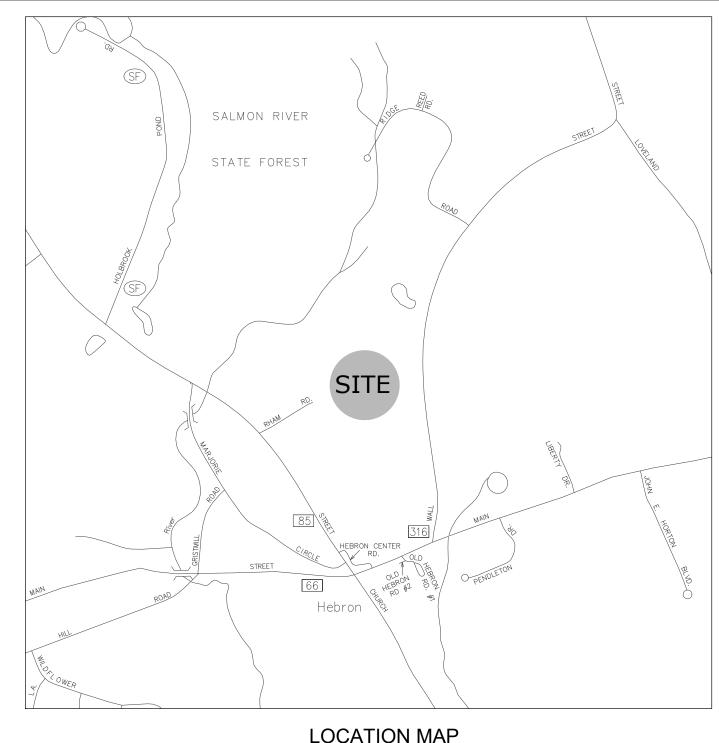
DETENTION BASIN MAINTENANCE AND REPAIRS

RHAM HIGH SCHOOL/MIDDLE SCHOOL CAMPUS

85 WALL ST HEBRON, CT 06248

FEBRUARY 22, 2023





DRAWING INDEX

TITLE	SHEET NO.
COVER SHEET	
EXISTING CONDITIONS PLAN	1 OF 1
DETENTION BASIN REPAIR & RESTORATION PLAN	C1
SOIL EROSION & SEDIMENTATION CONTROL PLAN	C2
DETAILS	C3



Property Owner / Applicant:

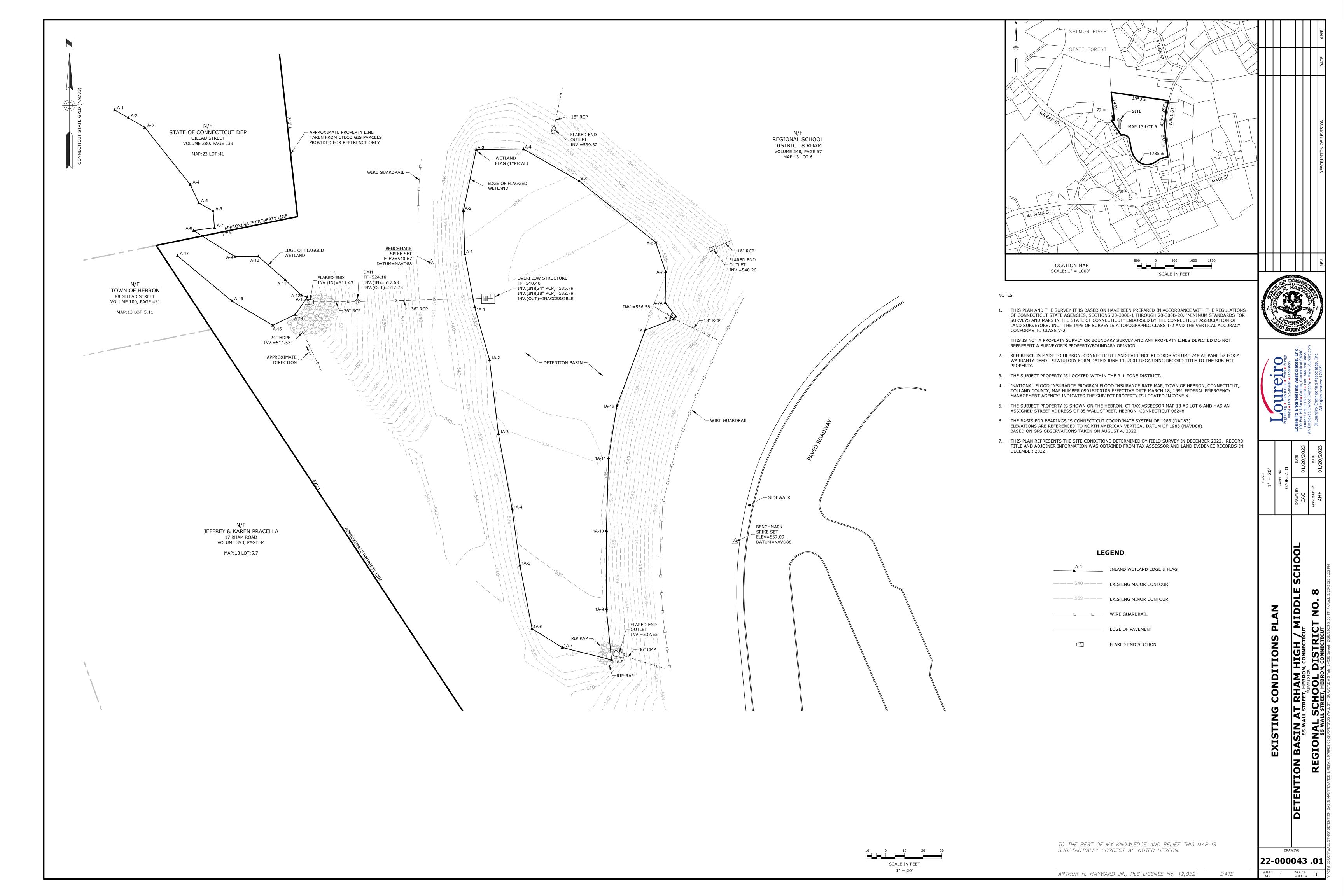
REGIONAL SCHOOL DISTRICT NO. 8 85 WALL ST HEBRON, CT 06248

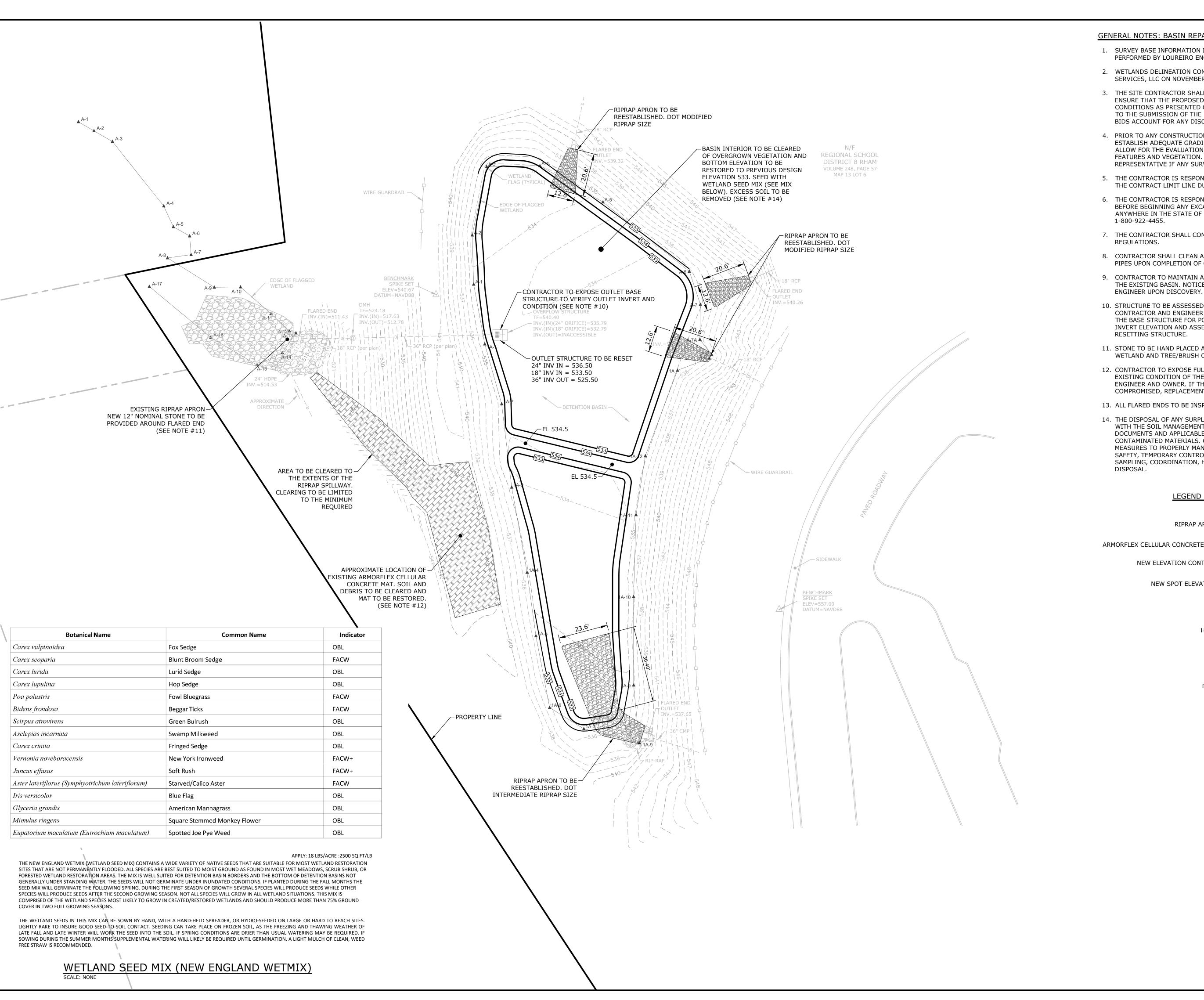
Prepared By:

Engineer:



Loureiro Engineering Associates, Inc. 100 Northwest Drive • Plainville, Connecticut 06062 **reiro** Phone: 860-747-6181 • Fax: 860-747-8822 An Employee Owned Company • www.Loureiro.com
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GENERAL NOTES: BASIN REPAIR & RESTORATION

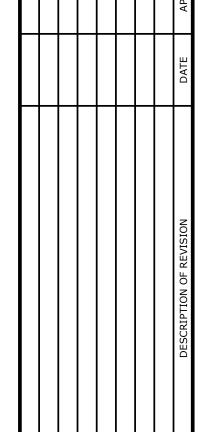
- 1. SURVEY BASE INFORMATION IS BASED ON TOPOGRAPHICAL SURVEY PERFORMED BY LOUREIRO ENGINEERING ASSOCIATES ON JANUARY 20, 2023.
- 2. WETLANDS DELINEATION COMPLETED BY JMM WETLAND CONSULTING SERVICES, LLC ON NOVEMBER 17 AND DECEMBER 20, 2022.
- 3. THE SITE CONTRACTOR SHALL REVIEW THE SITE GRADES AND FEATURES TO ENSURE THAT THE PROPOSED WORK IS CONSISTENT WITH THE EXISTING CONDITIONS AS PRESENTED ON THE PLANS. IT WILL BE ASSUMED THAT PRIOR TO THE SUBMISSION OF THE BIDS THIS WILL HAVE BEEN DONE AND THAT THE BIDS ACCOUNT FOR ANY DISCREPANCIES.
- 4. PRIOR TO ANY CONSTRUCTION OPERATIONS, THE CONTRACTOR SHALL ESTABLISH ADEQUATE GRADING INFORMATION FOR PROPOSED WORK TO ALLOW FOR THE EVALUATION OF ITS RELATIONSHIP TO EXISTING SITE FEATURES AND VEGETATION. THE CONTRACTOR SHALL NOTIFY THE OWNER'S REPRESENTATIVE IF ANY SURVEY INFORMATION IS INCORRECT.
- 5. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE INSIDE AND OUTSIDE THE CONTRACT LIMIT LINE DUE TO CONSTRUCTION OPERATIONS.
- 6. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL UTILITIES IN THE FIELD BEFORE BEGINNING ANY EXCAVATION. CALL 48 HOURS IN ADVANCE FROM ANYWHERE IN THE STATE OF CONNECTICUT, "CALL BEFORE YOU DIG":
- 7. THE CONTRACTOR SHALL COMPLY WITH ALL STATE, LOCAL AND FEDERAL
- 8. CONTRACTOR SHALL CLEAN ALL EXISTING AND PROPOSED STRUCTURES AND PIPES UPON COMPLETION OF CONSTRUCTION.
- 9. CONTRACTOR TO MAINTAIN ANY UNIDENTIFIED STRUCTURES OR PIPES WITHIN THE EXISTING BASIN. NOTICE SHOULD BE GIVEN TO OWNER AND THE
- 10. STRUCTURE TO BE ASSESSED FOR SETTLING, MOVEMENT, OR DAMAGE. CONTRACTOR AND ENGINEER TO VERIFY AND DOCUMENT THE CONDITION OF THE BASE STRUCTURE FOR POTENTIAL RESETTING OR REPLACEMENT. PROVIDE INVERT ELEVATION AND ASSESSMENT TO OWNER AND ENGINEER PRIOR TO
- 11. STONE TO BE HAND PLACED AROUND OUTLET TO AVOID DISTURBANCE TO THE WETLAND AND TREE/BRUSH CLEARING.
- 12. CONTRACTOR TO EXPOSE FULL ARMORFLEX CELLULAR CONCRETE MAT. THE EXISTING CONDITION OF THE MAT IS TO BE VERIFIED AND APPROVED BY THE ENGINEER AND OWNER. IF THE CONDITION OF THE MAT IS PARTIALLY OF FULLY COMPROMISED, REPLACEMENT MAY BE CONSIDERED.
- 13. ALL FLARED ENDS TO BE INSPECTED FOR DAMAGE AND REPLACED AS NEEDED.
- 14. THE DISPOSAL OF ANY SURPLUS SOIL MATERIAL SHALL BE IN ACCORDANCE WITH THE SOIL MANAGEMENT SPECIFICATIONS INCLUDED IN THE CONTRACT DOCUMENTS AND APPLICABLE REGULATIONS FOR THE MANAGEMENT OF CONTAMINATED MATERIALS. CONTRACTOR SHALL TAKE APPROPRIATE MEASURES TO PROPERLY MANAGE SURPLUS SOILS, INCLUDING HEALTH AND SAFETY, TEMPORARY CONTROLS, TEMPORARY STOCKPILE FACILITIES, SAMPLING, COORDINATION, HANDLING, TRANSPORTATION, AND OFF-SITE

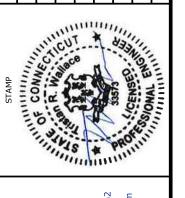
LEGEND & ABBREVIATIONS

	RIPRAP APRON
	ARMORFLEX CELLULAR CONCRETE MAT
60	NEW ELEVATION CONTOUR
60.00	NEW SPOT ELEVATION
REINFORCED CONCRETE PIPE	RCP
TYPICAL	TYP
HIGH DENSITY POLYETHYLEN	HDPE
CORRUGATED METAL PIPE	CMP
INVERT (OF PIPE)	INV
TOP OF FRAME	TF

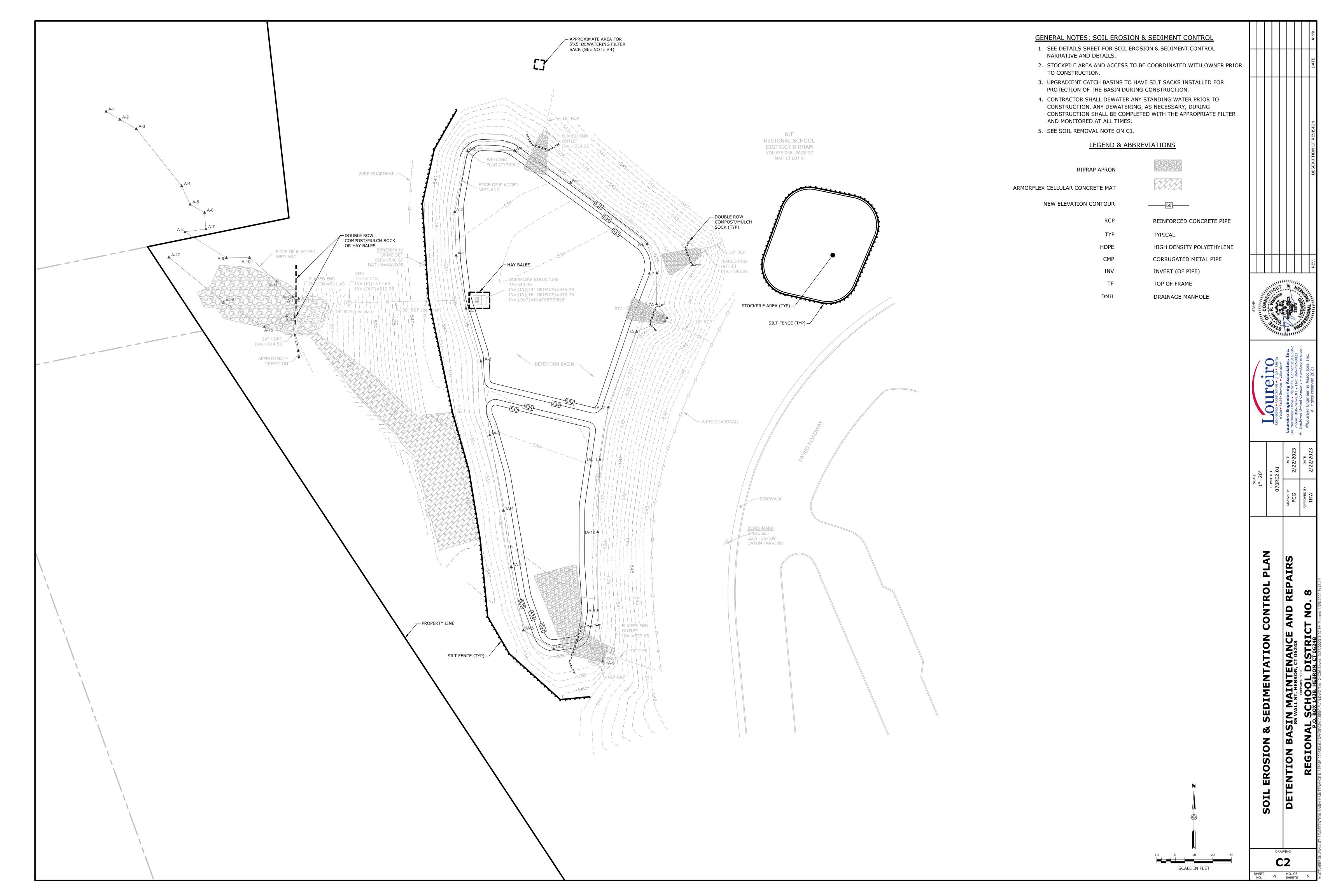


DRAINAGE MANHOLE





DETENTION



SOIL EROSION AND SEDIMENT CONTROL NOTES

ALL APPLICABLE REGULATIONS AND REQUIREMENTS OF THE STATE OF CONNECTICUT DEPARTMENT OF ENERGY & ENVIRONMENTAL PROTECTION (DEEP) AND THE LOCAL LAND USE REQUIREMENTS SHALL BE ADHERED TO INCLUDING THE PLACEMENT OF THE PROPOSED SESS BARRIERS AS SPECIFIED HEREIN. WHEN THE CONSTRUCTION WORK IS COMPLETED. THE CONTRACTOR SHALL CLEAN THE SE&SC BARRIERS AND RESTORE THE NATURAL DRAINAGE AREAS AFFECTED BY THEIR OPERATIONS TO THEIR ORIGINAL CONDITION UNLESS OTHERWISE

PRIOR TO CONSTRUCTION, ALL SE&SC BARRIERS SHALL BE PLACED TO CONFINE SEDIMENT AS SHOWN ON DRAWINGS AND WHERE OTHERWISE REQUIRED BASED ON THE CONTRACTOR'S MEANS/METHODS AND CONSTRUCTION SEQUENCING. ALL SE&SC BARRIERS SHALL BE LEFT IN PLACE AND MAINTAINED UNTIL THE WORK HAS BEEN COMPLETED AND SURFACES STABILIZED. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MONITOR THE CONDITION OF THE SE&SC STRUCTURES. IF THE EFFECTIVENESS OR INTEGRITY OF ANY STRUCTURES IS FOUND TO BE INSUFFICIENT OR IF THE STRUCTURES ARE DAMAGED IN ANY WAY, THE CONTRACTOR SHALL MAKE WHATEVER REPAIRS ARE NECESSARY TO ENSURE THAT PROPER EROSION CONTROL IS MAINTAINED. MONITORING OF THE EROSION CONTROL STRUCTURES IS PARTICULARLY IMPORTANT FOLLOWING PERIODS OF RAINFALL. ALL REPAIRS OF EROSION CONTROL STRUCTURES

SHALL BE MADE BY THE CONTRACTOR AS SOON AS THE DAMAGE IS DISCOVERED. IF ADDITIONAL SE&SC CONTROL STRUCTURES ARE NECESSARY TO MINIMIZE EROSION AND SEDIMENTATION, AS DETERMINED IN THE FIELD, THE CONTRACTOR SHALL INSTALL SAID ADDITIONAL STRUCTURES AS REQUIRED.

IN ADDITION TO THE ABOVE GENERAL PROVISIONS, THE CONTRACTOR SHALL COMPLY WITH THE FOLLOWING SPECIAL REQUIREMENTS:

- 1. LAND DISTURBANCE SHALL BE KEPT TO A MINIMUM; RESTABILIZATION SHALL BE SCHEDULED AS SOON AS PRACTICABLE FOLLOWING CONSTRUCTION. PROJECT SEQUENCING WILL BE NECESSARY TO MINIMIZE SE&SC CONTROL LIABILITIES. THE CONTRACTOR SHALL SEQUENCE HIS OPERATIONS SO AS TO PROVIDE MANAGEABLE WORK AREAS WITH LIMITED OPPORTUNITY FOR SOIL EROSION TO OCCUR.
- 2. ALL GRADED AREAS ARE TO BE COVERED AS SOON AS POSSIBLE AFTER CONSTRUCTION WORK IS COMPLETED. INTERIM SEEDING, MULCHING AND/OR EROSION CONTROL BLANKETS MAY BE REQUIRED THROUGHOUT CONSTRUCTION FOR STABILIZATION OF DISTURBED AREAS. WOODCHIPS AND MULCH MAY BE USED THROUGHOUT THE ENTIRETY OF THE OPERATION.
- 3. ALL OTHER AREAS AFFECTED BY CONSTRUCTION AND NOT TO BE FILLED ARE TO BE RESTORED TO ORIGINAL GRADE AS SHOWN ON THE DRAWINGS. 4. FOR SPECIFIC DETAILS ON THE DESIGN, APPLICATION AND INSTALLATION OF THE EROSION AND SEDIMENTATION CONTROL STRUCTURES THE CONTRACTOR SHALL REFER TO THE
- CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL, DATED MAY 2002, AS AMENDED OR OTHERWISE REPLACED. 5. PERIMETER SE&SC BARRIERS FOR THIS SITE INCLUDE PROVISIONS FOR THE USE OF HAY BALES, STAKED SILT FENCE, FILTER SOCKS AND/OR MULCH BERMS. THE CONTRACTOR SHALL
- INSPECT REGULARLY TO ENSURE THE PLACEMENT IS MAINTAINED. 6. FABRIC FOR SILT FENCE SHALL CONSIST OF WOVEN POLYPROPYLENE, 36" IN WIDTH AND FASTENED TO HARDWOOD POSTS WITH THREE, ONE INCH WIDE CROWN STAPLES. POSTS SHALL BE OF SOUND HARDWOOD, FORTY EIGHT INCHES (48") IN LENGTH WITH A MINIMUM CROSS SECTION OF 1.125 SQUARE INCHES. STAKED HAY BALES OR MULCH SOCKS (12" MIN.) MAY BE SUBSTITUTED FOR SILT FENCE. ALL SE&SC BARRIERS SHALL BE INSTALLED AS SHOWN ON THIS DRAWING AND AT THE TOE OF ALL SLOPES LOCATED DOWN GRADIENT OF THE
- SEDIMENT REMOVED FROM SE&SC BARRIERS AND STRUCTURES SHALL BE DISPOSED OF IN A MANNER WHICH IS CONSISTENT WITH THE INTENT OF THE PLAN.
- 8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTING THE EROSION AND SEDIMENT CONTROL REQUIREMENTS OF THE LOCAL REQUIREMENTS. THEIR RESPONSIBILITY INCLUDES THE INSTALLATION AND MAINTENANCE OF ALL REQUIRED SE&SC CONTROL MEASURES, INFORMING ALL PARTIES ENGAGED ON THE CONSTRUCTION SITE OF THE REQUIREMENTS AND OBJECTIVES OF THE PLAN, AND NOTIFYING THE LOCAL LAND USE OFFICES OF ANY TRANSFERS OF THIS RESPONSIBILITY.
- 9. THE CONTRACTOR IS RESPONSIBLE FOR NOTIFYING THE LOCAL LAND USE AGENCY AND OTHER APPROPRIATE AUTHORITIES AT LEAST 72 HOURS PRIOR TO THE START OF ANY
- 10. THE CONTRACTOR SHALL USE APPROVED METHODS AND MATERIALS FOR PREVENTION OF DISPERSION OF DUST INCLUDING MISTING, CHEMICAL APPLICATION AND/OR MULCH
- 11. THE CONTRACTOR SHALL INSPECT ALL EROSION CONTROL MEASURES DAILY DURING CONSTRUCTION AND AFTER EACH SIGNIFICANT RAIN STORM EVENT. DAMAGE SHALL BE REPAIRED
- 12. ALL DEWATERING SHALL INCORPORATE THE USE OF FILTER BAGS ON DISCHARGE ENDS.

THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR OWNERSHIP OF ALL SOIL EROSION AND SEDIMENT CONTROLS AS NECESSARY TO PROTECT THIS SITE. DURING THE PROGRESS OF CONSTRUCTION, INTERIM EROSION CONTROLS MAY BE NECESSARY BASED ON THE CONTRACTOR'S MEANS, METHODS AND SEQUENCING. THE EROSION CONTROL MEASURES PRESENTED ON THESE PLANS REPRESENT THE MINIMUM CONTROLS DEEMED NECESSARY BASED ON THE EXPECTED FINAL PROJECT GRADES AND FEATURES. INTERIM MEASURES REQUIRED TO STABILIZE THE SITE DURING CONSTRUCTION SHALL BE INSTALLED BY THE CONTRACTOR AS NEEDED BASED UPON HIS ASSESSMENT OF THE SITE THROUGH HIS OWN SITE INSPECTIONS AND OBSERVATIONS. ALL CONTRACTOR PROVIDED SOIL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE DESIGNED AND INSTALLED BY THE CONTRACTOR IN ACCORDANCE WITH THE 2002 CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL AS AMENDED OR OTHERWISE REPLACED.

IN THE EVENT THAT A RAIN EVENT OCCURS AND THE CONTRACTOR PROVIDED SE&SC CONTROLS FAIL TO MAINTAIN THE SITE IN A STABILIZED CONDITION, THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL REMEDIATION, MITIGATION OR OTHER DAMAGE THAT MAY OCCUR.

STABILIZATION PRACTICES TEMPORARY VEGETATIVE COVER

ALL EXPOSED AREAS THAT WILL BE INACTIVE FOR MORE THAN 30 DAYS, BUT LESS THAN ONE YEAR, AND WHICH HAVE NOT YET REACHED FINISHED GRADES SHALL RECEIVE A TEMPORARY VEGETATIVE COVER DURING THE PLANTING SEASON OF MARCH 15 TO OCTOBER 1. NOTE THAT PLANTING BETWEEN JUNE 15 AND AUGUST 1 WILL REQUIRE WATERING AS NECESSARY TO PROMOTE GROWTH. THIS TEMPORARY VEGETATIVE COVER SHALL CONSIST OF PERENNIAL RYE GRASS. THE RYE GRASS SHALL BE PLANTED AT A RATE OF 1 POUND PER 1,000 SQUARE FEET. ALSO, FERTILIZER SHALL BE APPLIED AT A RATE OF 7.5 POUNDS PER 1,000 SQUARE FEET OF 10-10-10 OR EQUIVALENT AND LIMESTONE SHALL BE APPLIED AT A RATE OF 45 POUNDS PER 1,000 SQUARE FEET. SEED BED PREPARATION AND SEEDING SHALL BE CONDUCTED AS OUTLINED IN THE STATE OF CONNECTICUT SOIL EROSION AND SEDIMENT CONTROL GUIDELINES.

2. TEMPORARY MULCHING

TEMPORARY MULCHING SHALL BE USED TO TEMPORARILY STABILIZE AREAS THAT WILL BE INACTIVE FOR 30 DAYS OR MORE, BUT LESS THAN 6 MONTHS, AND CANNOT BE SEEDED WITHIN THE RECOMMENDED PLANTING DATES. IN ADDITION, TEMPORARY MULCHING SHALL BE CONDUCTED IMMEDIATELY FOLLOWING TEMPORARY OR PERMANENT SEEDING IN ORDER TO AID THE GROWTH OF VEGETATION. TEMPORARY MULCH SHALL CONSIST OF STRAW OR HAY OVERLAY APPLIED AT A RATE OF 70 TO 90 POUNDS PER 1,000 SQUARE FEET (1.5 TO 2 TONS PER ACRE), OR OTHER MULCH TYPES AS APPROVED WITHIN THE STATE OF CONNECTICUT SOIL EROSION AND SEDIMENT CONTROL GUIDELINES. THIS MULCH SHALL BE SPREAD UNIFORMLY BY HAND OR MULCH BLOWER AND SHALL BE BONDED WITH A NON-ASPHALT TACKIFIER OR OTHER APPROVED METHOD IMMEDIATELY AFTER SPREADING.

3. PERMANENT VEGETATIVE COVER

ONCE THE PLANTING SEASON BEGINS, TEMPORARY STABILIZATION MEASURES SHALL BE REMOVED AND SLOPES SHALL BE PREPARED AND SEEDED. SEEDING SHALL ONLY OCCUR BETWEEN APRIL 1 AND JUNE 1 AND AUGUST 15 AND OCTOBER 15.

4. VEGETATIVE COVER IRRIGATION

IF NEEDED TO ESTABLISH VEGETATION DURING DRY SUMMER MONTHS, TEMPORARY SEED SHALL BE WATERED AS NECESSARY TO PROMOTE GROWTH. THE CONTRACTOR WILL BE RESPONSIBLE FOR PROVIDING WATER THROUGHOUT THE DURATION OF THE PROJECT.

5. PERMANENT MULCH FOR SEED

STRAW MULCH WILL BE INSTALLED ON ALL DISTURBED SURFACES WITH SLOPES NOT EXCEEDING 10%, AFTER PLACEMENT OF FINAL COVER, TO MINIMIZE EROSION AND ALLOW GROWTH OF PERMANENT VEGETATIVE COVER.

RECOMMENDED PROJECT SEQUENCING

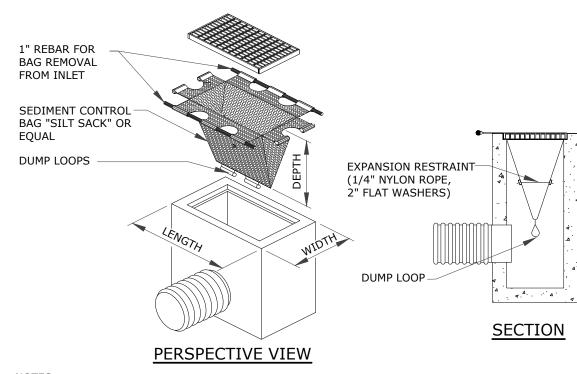
LOW IMPACT CONSTRUCTION PRACTICES SHOULD BE ADOPTED TO FURTHER MITIGATE EROSION AND SEDIMENTATION. INSTALL PERIMETER SE&SC - CLEAR BRUSH UPON THE LAND SURFACE AS NEEDED TO FACILITATE THE CONSTRUCTION ACTIVITIES DEFINED. INSTALL ALL PERIMETER SE&SC AS NOTED ON PLAN. SUBSEQUENT SEQUENCING IS AS FOLLOWS:

- 1. CONTRACTOR SHALL NOTIFY CALL-BEFORE-YOU-DIG (1-800-922-4455 OR 811 OR APPLY ONLINE) PRIOR TO INITIATION OF ANY EXCAVATING ACTIVITIES.
- 2. REMOVE OVERGROWN VEGETATION AND REGRADE DETENTION POND PER THE PLAN. NEW EMBANKMENTS TO BE STABILIZED.
- 3. INSPECT AND RESET OUTLET STRUCTURE AT ESTABLISHED FLEVATIONS.
- 4. REESTABLISH RIPRAP APRONS AND SPILLWAY. FINALIZE STABILIZATION MEASURES ON ALL CONVEYANCE POINTS. 5. REESTABLISH OUTLET RIPRAP AS DESIGNATED ON THE PLAN.
- 6. REMOVE TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES
- PRIMARY CONTRACT FOR SE&SC MATTERS: MICHAEL SCHLEHOFER, (860) 228-5311

POST-CONSTRUCTION MAINTENANCE SCHEDULE:

THE STORMWATER MANAGEMENT AREA IS INCLUSIVE OF DRAINAGE STRUCTURES AND A SUBSURFACE DETENTION SYSTEM. DRAINAGE STRUCTURES AND DETENTION SYSTEM VISUALLY INSPECTED MONTHLY AND DURING OR AFTER SIGNIFICANT RAIN EVENTS IN GENERAL ACCORDANCE WITH THE STATE OF CONNECTICUT DEPARTMENT OF ENERGY & ENVIRONMENTAL PROTECTION (DEEP) GUIDELINES AND REQUIREMENTS.

OBSERVATIONS OF SEDIMENT ACCUMULATION, DEBRIS BUILD-UP, EROSION AT OUTLET LOCATIONS, AND CONDITION OF STRUCTURES SHALL BE INCLUDED IN THESE INSPECTIONS. SHOULD UNSATISFACTORY CONDITIONS BE OBSERVED, APPROPRIATE ACTIONS WILL BE TAKEN TO REMEDY THE UNSATISFACTORY CONDITIONS IN A TIMELY MANNER. STORMWATER MANAGEMENT FEATURES WILL BE CLEANED AS NEEDED. ANY DEBRIS AND SEDIMENTS BUILT UP OVER 2 INCHES SHALL BE REMOVED. ANY DEBRIS BUILT UP IN FRONT OF OUTLETS SHALL BE REMOVED.



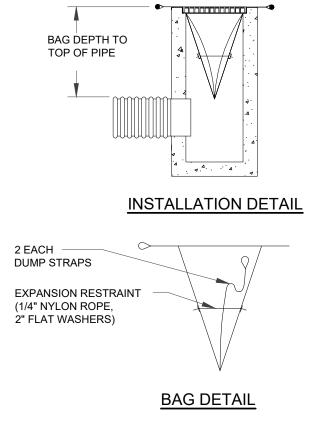
THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING THE CORRECT SIZE DEVICE FOR EACH INLET. FOR NON-STANDARD CATCH BASINS AND INLETS, THE CONTRACTOR SHALL MEASURE DIMENSIONS

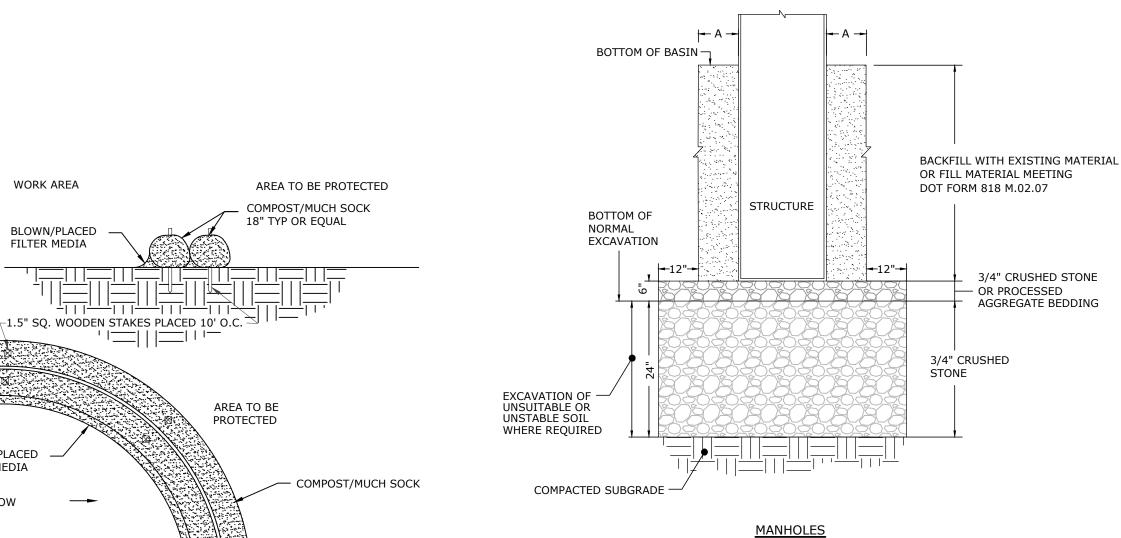
- IN THE FIELD AND ORDER THE APPROPRIATE SIZE(S). 2. THE INLET SEDIMENT CONTROL DEVICE SHALL BE OF HIGH FLOW DESIGN (200 GAL/MIN/FT), AS PER THE MANUFACTURER'S SPECS.
- 3. THE SEDIMENT CONTROL DEVICE SHALL BE INSPECTED DAILY BY THE CONTRACTOR AND CLEANED AND MAINTAINED A MINIMUM ONCE PER MONTH OR WITHIN THE 48 HOURS FOLLOWING A STORM EVENT. THE FILTER SHALL BE REPLACED OR CLEANED WHEN THE BAG BECOMES HALF FULL. THE FILTER SHALL BE CLEANED IN A MANNER WHICH ENSURES THAT ALL SEDIMENT REMAINS ON SITE.

4. SUBSTITUTION OF A SHEET OF FILTER FABRIC PLACED OVER THE OPENING OF THE INLET IS NOT

- APPROVED 5. RECESSED CURB INLET CATCH BASINS MUST BE BLOCKED WHEN USING FILTER FABRIC INLET
- SACKS, SIZE OF FILTER INLET SACK TO BE DETERMINED BY MANUFACTURER. 6. THE FILTER DEVICE SHALL BE MANUFACTURED BY ACF ENVIRONMENTAL OR APPROVED EOUAL.

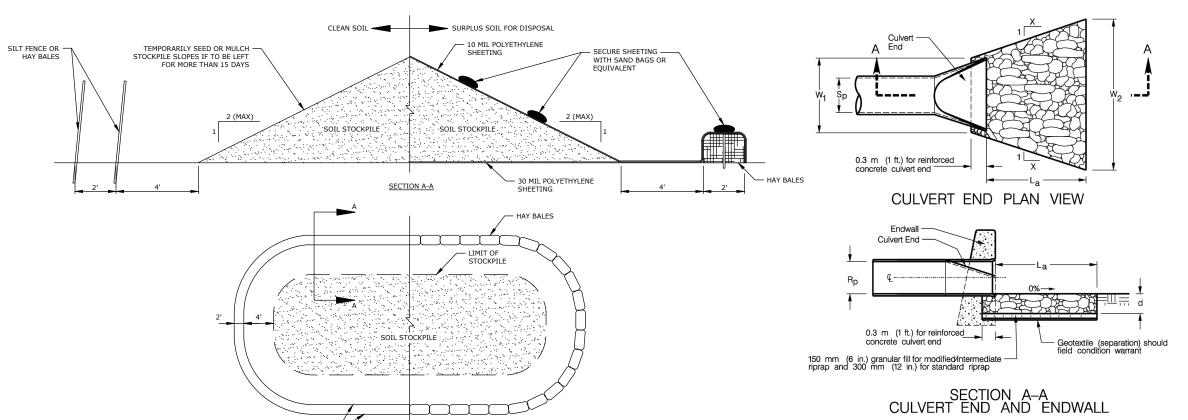
CATCH BASIN FILTER (SILT SACK) DETAIL NOT TO SCALE





- 1. STRUCTURE TO BE RESET OR REPLACED IF BASE IS NOT LEVEL, SHOW SIGNS OF SETTLING, AND/OR
- DAMAGED. ALL COMPACTION VALUES ARE STANDARD ASTM D69. ALL BEDDING SHALL BE COMPACTED TO 95%.
- 4. DIMENSION A SHALL BE 24" MINIMUM WHERE BOTTOM OF EXCAVATION IS 10 FEET OR LESS BELOW GRADE AND 30" MINIMUM FOR GREATER DEPTHS.
- MINIMUM EXCAVATION SHALL BE BASED ON DIMENSION ALL AROUND STRUCTURE 6. INITIAL AND FINAL BACKFILL TO BE COMPACTED.

STRUCTURE INSTALLATION DETAIL



TEMPORARY SOIL STOCKPILE DETAIL

LEGEND $S_p = \begin{cases} \text{Max. inside pipe span (non-circular sections)} \\ \text{Inside pipe diameter (circular sections)} \end{cases}$ Rp = { Max. inside pipe rise (non-circular sections) | Inside pipe diameter (circular sections) La = Length of riprap apron measured from the end of culvert end section or face of endwall $d = \begin{cases} 300 \text{ mm} & (12 \text{ in.}) \text{ Modified Riprap} \\ 450 \text{ mm} & (18 \text{ in.}) \text{ Intermediate Riprap} \\ 900 \text{ mm} & (36 \text{ in.}) \text{ Standard Riprap} \end{cases}$

COMPOST/MULCH SOCK DETAIL

WORK AREA

BLOWN/PLACED

FILTER MEDIA

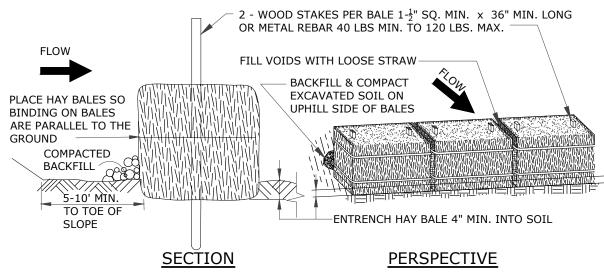
BLOWN/PLACED

FLOW

WORK AREA

FILTER MEDIA

RIPRAP APRON DETAIL

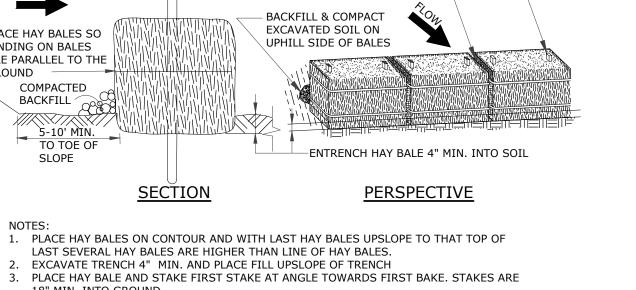


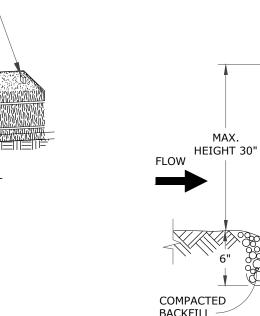
1. PLACE HAY BALES ON CONTOUR AND WITH LAST HAY BALES UPSLOPE TO THAT TOP OF LAST SEVERAL HAY BALES ARE HIGHER THAN LINE OF HAY BALES.

18" MIN. INTO GROUND. 4. WEDGE LOOSE HAY BETWEEN BALES.

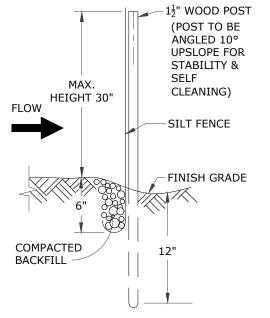
5. BACKFILL & COMPACT EXCAVATED FILL ALONG UPHILL SIDE OF HAY BALE.

TYPICAL HAY BALE SEDIMENT BARRIER DETAIL



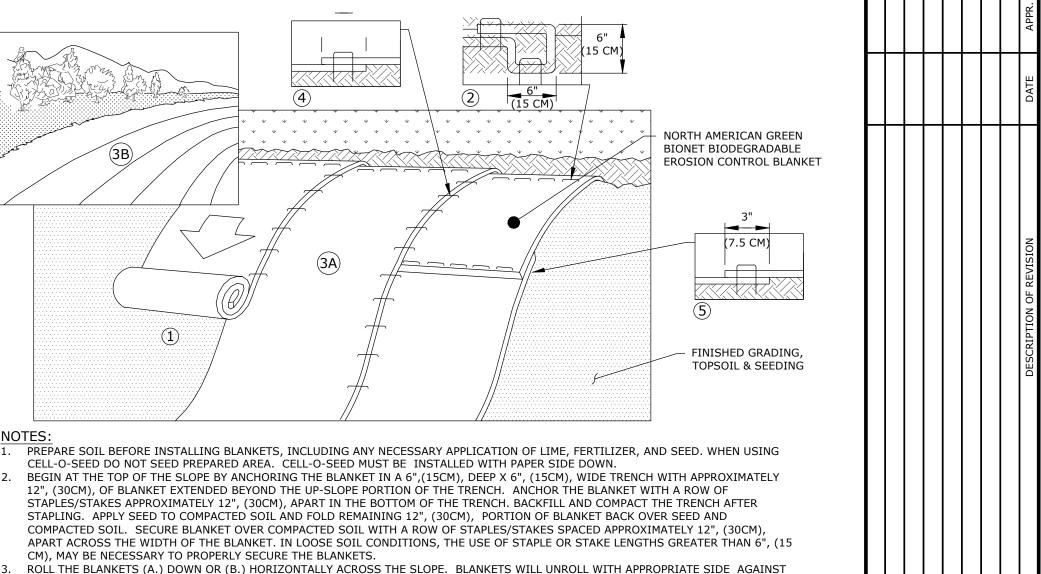


ACF DB55 DIRTBAG DETAIL NOT TO SCALE



ALL SILT FENCING & ALTERNATIVE FILTERS SHALL BE FURNISHED, INSTALLED AND MAINTAINED IN ACCORDANCE WITH 2002 CT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROLS, AS

SILT FENCE DETAIL



LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING OPTIONAL DOT SYSTEM TM, STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN. 4. THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH APPROXIMATELY 2"-5", (5CM-12.5CM), OVERLAP DEPENDING ON BLANKET TYPE. TO ENSURE PROPER SEAM ALIGNMENT, PLACE THE EDGE OF THE OVERLAPPING BLANKET (BLANKET BEING INSTALLED ON TOP) EVEN WITH THE COLORED SEAM STITCH [™] ON THE PREVIOUSLY INSTALLED BLANKET.

5. CONSECUTIVE BLANKETS SPLICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3", (7.5CM), OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12", (30CM), APART ACROSS ENTIRE BLANKET WIDTH.

THE SOIL SURFACE. ALL BLANKETS MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE

EROSION CONTROL BLANKET DETAIL



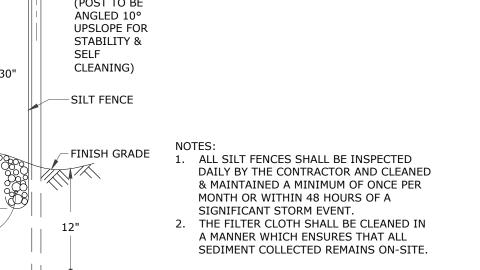
NOTES: 1) DIRTBAG TO BE PLACED ON AGGREGATE OR STRAW 2) SEAMS MUST BE HIGH STRENGTH DOUBLE STITCHED "J" SEAMS 3) SEAM MUST BE TESTED UNDER ASTM D-4884, ACF TEST RESULTS AVAILABLE UPON REQUEST

CROSS SECTION

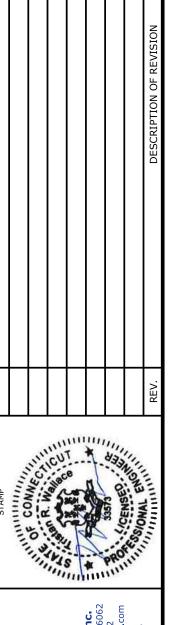


NR55	FABRIC PROPERT.	IF S
PROPERTY	TEST METHOD	MARV
TENSILE STRENGTH	ASTM D-4632	205 LBS
ELONGATION	ASTM D-4632	50%
CBR PUNCTURE	ASTM D-6241	525 LBS
UV RESISTANCE	ASTM D-4355	70%
ADS	ASTM D-4751	80 US SIEVE
PERMITTIVITY	ASTM D-4491	1.4 SEC-1
FLOW RATE	ASTM D-4491	90 GPM/SF
	CORPORATE OFFICE: 2831 CARDWELL ROAD	
ENVIRONMENTAL	RICHMOND, VA 23234 PH: 800-448-3636	
LET'S GET IT DONE	www.acfenvironmental.com	

NOTE: CONTRACTOR TO PROVIDE SUBMITTAL OF APPROVED EQUAL



AMENDED AND PER MANUFACTURERS INSTRUCTIONS.



ш **DETAILS**

IEET 5 NO. OF 10.