HARFORD COUNTY PUBLIC SCHOOLS
102 South Hickory Avenue
Bel Air, Maryland 21014

BID ANNOUNCEMENT

BID TITLE:	**Stormwater Repairs at Forest Lakes Elementary and North Harford Middle Schools**
BID NUMBER:	**27-JHP-004**
BID OPENING DATE AND TIME:	**November 17, 2026**, 2:30 pm local time
BID OPENING / BID EMAIL SUBMITTAL ADDRESS:	Bid Opening will be online via Teams at the following: **Microsoft Teams meeting** **Join:** https://teams.microsoft.com/meet/283215277239427?p=pO0TivpiwX3pljiw5x Meeting ID: 283 215 277 239 427 Passcode: JC9SQ6mb Need help? | System reference **Dial in by phone** +1 240-600-1475,,747766652# United States, Bethesda Find a local number Phone conference ID: 747 766 652# For organizers: Meeting options | Reset dial-in PIN Submit your bid via electronically to bids@hcps.org.
PROCUREMENT AGENT:	Jennifer Horner, CPPB 410.809.6044 Jennifer.Horner@hcps.org
QUESTIONS DUE DATE AND TIME:	Questions must be emailed to Jennifer.Horner@hcps.org no later than 2:30 pm on **November 4, 2026.**
ADDENDUM ISSUED:	No later than **November 6, 2026.**
PRE-BID CONFERENCE:	**October 28, 2026 at 2:30 pm local time:** Hickory Annex College 2209 Conowingo Road Bel Air, MD 21015
BONDING REQUIRED:	Bid Bond – Certified Performance Bond Payment Bond
MBE DOCUMENTS:	MBE Documents Are Not Required.
TIMELY DELIVERY OF BID DOCUMENTS:	Bids must be received in the Procurement e-mail box, bids@hcps.org, on or before the bid opening day and time. (PDF format Only) **It is the Bidder(s) responsibility to verify that the Bid has been received at bids@hcps.org, prior to the Bid Opening. 'Read Receipts' are not sufficient. Bidders may contact the Buyer listed within the solicitation, by email or phone, to confirm receipt of bids.**
INCLEMENT WEATHER:	If Harford County Public Schools Administrative Offices are closed on the day a proposal is DUE, that proposal will be due at the same time the next day the Administrative Offices are open.

Bidders may obtain the Solicitation Documents by downloading the information at our website: www.hcps.org/departments/BusinessServices/purchasing.aspx. Bidders shall continue to check the HCPS website for possible addenda to the bid(s) prior to the bid opening date.

The Contract Award will be posted on eMaryland Marketplace and our website at: https://www.hcps.org/departments/BusinessServices/procurement.aspx (Solicitation Results) after evaluation and approval by the Board of Education of Harford County, if required.

LATE BIDS WILL BE REJECTED AND RETURNED UNOPENED

Bid #27-JHP-004
Stormwater Repairs at Forest Lakes Elementary
and North Harford Middle Schools

Harford County Public Schools Nondiscrimination Statement

The Board of Education of Harford County is committed to providing an inclusive and welcoming environment for all students, employees, and members of the school community. In accordance with Title IX of the Education Amendments of 1972, Title VI of the Civil Rights Act of 1964, and Title VII of the Civil Rights Act of 1964, the Board of Education of Harford County prohibits discrimination based on sex, race, color, national origin, religion, or any other protected characteristic in any program or activity it operates.
Inquiries or concerns about your rights related to Title IX, Title VI or Title VII can be directed to our Coordinator of Investigations, Dr. Renee McGlothlin, at 410-809-6087 or Renee.McGlothlin@hcps.org. Harford County Public Schools' non-discrimination policy can be accessed here: NON-DISCRIMINATION POLICY: (hcps.org) and found on the HCPS website under Board of Education Policies and Procedures. Harford County Public Schools' non-discrimination statement can be accessed here: NON-DISCRIMINATION STATEMENT: (hcps.org) and found on HCPS' homepage.

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Board of Education of Harford County, Maryland
Procurement Department
102 South Hickory Avenue, Third Floor, Suite 310
Bel Air, Maryland 21014

INSTRUCTION TO BIDDERS

The following provisions, where applicable, will become part of any contractual relationship developed as a result of the solicitation.

1.0 AN INVITATION TO BID SUBMISSION

1.1 The Board of Education of Harford County hereinafter referred to as Harford County Public Schools or HCPS, invites all interested and qualified Contractors/Bidders to submit a bid. These specifications and requirements are intended to cover the procurement of services and/or commodities requested and include, but are not limited to, providing labor, materials, equipment and supervision of labor and subcontractors to complete requirements as identified by HCPS.

1.2 In accordance with State law and HCPS policies, solicitations shall be published a minimum of fourteen (14) calendar days in advance of due date for any bid having a potential award value of $50,000 or more.

1.3 Unless otherwise indicated, HCPS shall receive sealed bids until the date and time indicated on bid or as modified by addenda. Bids must be e-mailed to bids@hcps.org, Bids must be clearly marked on the subject line: Name of Bidder, Bid Number and Solicitation Title. **Late bids will be rejected.**

1.4 Brand name and model numbers are offered as a reference for bidders as to the style, size, weight, and other characteristics of the item(s) in the Brand name and model numbers are offered as a reference for bidders as to the style, size, weight, and other characteristics of the item(s) in the Specifications. The use of such brand names should not be interpreted as the exclusive brand desired unless so stated. The determination of the acceptability and/or the criteria for acceptability of an alternate is solely the responsibility of HCPS.

1.5 The Bidder or their authorized representatives are expected to fully inform themselves as to the conditions, requirements, circumstances, prerequisites, qualifications and/or specifications before submitting their bid. A bidder's failure to become fully informed is at the Bidder's sole and complete risk of loss. The Bidder shall have no right to any damages, cost and/or any other remedy at law or equity against HCPS for any miscalculation, misunderstanding, error (either omissions or commissions), mistake, misinterpretation, and/or the failure by the Bidder to obtain an award of bid, award of contract and/or profits, fees or money from HCPS when the Bidder failed to fully inform themselves. In the case of error in extension of prices in the Bid, the unit price shall govern, or the entire bid may be declared non-responsive.

1.6 Where provision is made on the Bid Form for bidding items on an individual, group or aggregate basis, the award will be made on whichever basis is in the best interest of HCPS. When an aggregate bid is requested, the unit prices for each item shall be identified on the Bid Form for accounting purposes. The unit prices in an aggregate bid should be consistent with the total quoted price for an aggregate bid.

1.7 The product offered by Bidder shall be new, not used, and the latest version unless otherwise requested by HCPS. Should a product be discontinued and/or upgraded during the Contract, the Awarded Bidder shall offer to HCPS a new alternate product meeting and/or exceeding the established specifications, under the same terms, conditions and prices as the originally offered item.

1.8 The Awarded Bidder, after award and before manufacture and/or shipment, may be required to submit working drawings or detailed descriptive data identified as acceptable to HCPS, which provide sufficient data to enable HCPS to judge the Bidder's compliance with specifications.

2.0 BID PREPARATION, PROPOSAL SHEET, AND BID OPENING

2.1 Bidder must submit one (1) original with original signatures of the Bid using HCPS bid forms. The Bidder should make and retain one (1) copy of the Bid for their files. Bids must be signed and submitted by an authorized representative of the Bidder. Each bidder may attach a letter of explanation to the Bid, if so desired, to provide an explanation of any detail(s) in the Bid.

2.2 Signed bids must be returned electronically via e-mail to bids@hcps.org, ONLY. HCPS will not accept any facsimile transmission or electronic submissions to HCPS Procurement Agents, representatives, or

employees. It is the Bidder(s) responsibility to verify that the Bid has been received at bids@hcps.org, prior to the Bid Opening. 'Read Receipts' are not sufficient. Bidders may contact the Buyer listed within the solicitation, by email or phone, to confirm receipt of bids.

2.3 All bids must be submitted strictly in Portable Document Format (.pdf). Emails received with bids in editable formats (e.g., .doc, .xlsx, .pptx) or image formats (e.g., .jpg, .png) may be deemed non-responsive. Links to external websites, cloud storage folders or hosted PDF documents **will not be accepted** or accessed by HCPS. Please note that our system accepts files up to 150 MB. If your file exceeds this size, please send it in multiple emails.

2.4 Each bid must show the full business address, telephone number, fax number, email address, and federal tax identification number of the Bidder and be signed by the person or persons legally authorized to sign contracts. All correspondence concerning the Bid and Contract, including Letter of Intent, copy of Contract, and Purchase Order, will be mailed or delivered to the contact information shown on the Bid in the absence of written instructions from the Bidder to the contrary.

2.5 All bidders shall be required to complete the certificates and/or affidavits, and/or acknowledgements that are incorporated into the proposal pages of this specification. Such documents are required by Local, State or Federal funding agencies of HCPS as part of the bidding process. The documents may include but are not limited to: Anti-Bribery Affidavit, Debarment Certificate, Employment of Sex Offenders and Other Criminal Offenders Affidavit, Sales Tax Certification, Minority Bidder Status, and when applicable, Asbestos Free Certification and any others that may be required.

2.6 Bid Opening

2.6.1 At the public opening of the Bid, the Bidder's names and their pricing will be read and recorded. All bids submitted by the required time will be accepted for further evaluation. Following complete evaluation of the Bids following opening, bids may be rejected due to major irregularities or omissions and will be rendered as non-responsive.

2.6.2 Complete evaluations of the Bids will not take place at the bid opening, and no indication of award will be made. HCPS reserves the right to review all responses and analyze the results of the procurement process. Any tabulation provided at this time is draft status only.

2.6.3 A final recommendation(s) for contract award may be prepared for review and when required, approval by the Board of Education of Harford County.

2.6.4 The Board of Education of Harford County must approve contract awards of $100,000 or more. Formal contract award is contingent upon the required Board approval.

2.6.5 Bidders may correct a minor irregularity, and minor irregularities may be waived. A minor irregularity is one that is merely a matter of form and not of substance or pertains to an immaterial or inconsequential defect or variation in a bid, the correction or waiver of which would not be prejudicial to other bidders. When so noted, minor irregularities may be corrected within forty-eight (48) hours following notification. The Procurement Supervisor will be the final determinate of what is a minor irregularity.

2.6.6 HCPS also reserves the right to reject any or all bids and/or waive technical defects and minor irregularities at the discretion of the Supervisor of Procurement, HCPS or designee if, in its judgment, the interests of HCPS shall so require. Bids may be withdrawn before the scheduled time of opening. Withdrawal is not permitted after the scheduled time of opening.

2.6.7 Any omissions, errors, conflicts, or discrepancies in this document shall be called to the attention of HCPS IN WRITING within five (5) working days prior to the bid opening.

2.6.8 Omission of any specification or details of any specification which would normally apply to the supplies and/or equipment described herein, shall not relieve the Bidder from fulfilling those required specifications needed to provide a product or service best suited to the intended purpose of this contract as determined by the Supervisor of Procurement.

2.6.9 Up to and including the time for bid opening, a bidder may correct a defect or variation with respect to the Bid Bond, acknowledgement or addenda or MBE submission material.

2.7 At the time of the bid opening each bidder will be presumed to have read and to be thoroughly familiar with the specifications and related documents (including all Addenda). The failure or omission of any bidder to receive

or examine any form, instrument, or document, shall in no way relieve them from any obligation in respect of its bid.

3.0 AWARD OR REJECTION OF BIDS

3.1 Bids will be awarded to the lowest responsive and responsible bidder whose bid meets the requirements and evaluation criteria set forth in the invitation for bid and is in the best interest of HCPS.

3.2 HCPS reserves the right to reject any bid submitted pursuant to Section 5-112 of the Education Article of the Annotated Code of Maryland.

3.3 Bidder SHALL NOT offer more than one price on each item even though they may feel that they have two or more types or styles that will meet specifications. If Bidder submits more than one price per item specified, Bidder may be deemed non-responsive. Bidders are allowed to also offer incentives, discounts, and promotional pricing, however; if conditions are attached to pricing, the pricing may be rejected.

3.4 Each bidder cannot offer more than one (1) bid submittal.

3.5 HCPS also reserves the right to reject a bid of firms who have demonstrated performance deficiencies or who have previously failed to perform properly or complete on time other Board contracts.

3.6 HCPS reserves the right to reject any or all bids.

3.7 HCPS reserves the right to re-advertise for other bids for the identical requirement if it is in the best interest of HCPS.

3.8 For Information Technology (IT), Operational Technology (OT), and Software solicitations **ONLY**. Should HCPS receive responses that offer products of similar cost and functionality, HCPS reserves the right to award a contract to the more secure offering and/or supplier to meet cybersecurity requirements as outlined by the National Institute of Standards and Technology.

4.0 ANNULMENTS AND RESERVATIONS

4.1 Conditional proposals will not be considered.

4.2 HCPS reserves the right to waive technical defects within submittals.

4.3 HCPS may conduct any necessary investigation to determine the ability of the Bidder to perform the work, and the Bidder shall furnish to HCPS all such information and data requested. HCPS reserves the right to reject any proposal if the evidence submitted by the Bidder or investigation of such bidder fails to satisfy HCPS that such bidder is properly qualified to carry out the obligations of the Contract and to complete all stipulated requirements.

4.4 HCPS reserves the right to annul any contract, if in its opinion there shall be a failure, at any time, to perform faithfully any of its stipulations, or in case of any willful attempt to impose upon HCPS, materials, products and/or workmanship inferior to that required by the Awarded Bidder, and any action taken in pursuance of this latter stipulation shall not affect or impair any rights or claims of HCPS to damages for the breach of any covenant of the Contract by the Awarded Bidder.

4.5 Unbalanced proposals will not be accepted.

4.6 HCPS shall have the right to reject any or all bids, reject a bid not accompanied by a required bid security or by other data required by the bidding documents, or reject a bid which is incomplete or irregular.

5.0 MULTI-AGENCY PROCUREMENT

5.1 HCPS reserves the right to extend the terms and conditions of this solicitation to any and all other government agencies. All purchase and payment transactions will be made directly between the Contractor and the requesting public agency.

5.2 Each participating jurisdiction or agency shall enter into its own contract, if necessary, with the Awarded Bidder(s). HCPS assumes no obligation on behalf of any other entity.

6.0 TIE BIDS

In the event of tie bids, the award(s) shall be made as per the procedure specified in the Harford County Public Schools Procurement Manual.

7.0 WAIVER OF TECHNICALITIES

Minor differences in the specifications or other minor technicalities may be waived at the discretion of the Supervisor of Procurement.

8.0 BID PRICES

8.1 All pricing must remain firm for sixty (60) days from date of bid opening unless otherwise specified.

8.2 Unit Prices must be rounded off to no more than two (2) decimal places, unless otherwise specified.

8.3 HCPS reserves the right to accept price reductions from the Awarded Bidder during the term of this contract.

8.4 HCPS will not accept any bid responses with bidder escalator clauses, unless specifically stated in the solicitation specifications.

9.0 ADDENDA

9.1 All changes to the Bid Specifications will be made through appropriate Addenda issued by the Procurement Department.

9.2 Addenda notices will be posted on the Procurement Department web site at www.hcps.org, as well as eMaryland Marketplace.

9.3 No Addenda will be issued later than five (5) days prior to the date for receipt of bids except an Addendum withdrawing the request for bids or one which postpones the date for receipt of bids.

9.4 Each bidder shall ascertain prior to submitting a Bid that they have received all Addenda issued and the Bidder shall acknowledge their receipt on the Addenda Form. The Addenda Form shall be completed and returned with the Bid response. Failure to return the signed Addenda Form may be reason for rejection of the Bid.

10.0 eMARYLAND MARKETPLACE REGISTRATION ADVANTAGE (eMMA)

Contractors are **required** to register on eMaryland Marketplace Advantage at https://procurement.maryland.gov within five (5) days following notice of award. Maryland law requires local and state agencies to post award notices on eMaryland Marketplace Advantage. This cannot be done without the contractor's self-registration in the system. Registration is free. Failure to comply with this requirement may be considered grounds for default. It is recommended that any interested bidder register with eMaryland Marketplace Advantage regardless of the award outcome for this procurement as it is a valuable resource for bid notification for municipalities throughout Maryland.

11.0 RIGHT OF SELECTION

HCPS reserves the right to accept this bid by items or as a whole or lump sum. HCPS also reserves the right to increase or decrease the estimated quantities. HCPS reserves the right to reject any and all bids which comply with these specifications or to accept a higher bid which complies, provided that, in the judgment of HCPS, the bid offered under the higher bid is in the best interest of HCPS and the additional price can be justified.

12.0 DISSEMINATION OF INFORMATION

This section intentionally omitted.

Board of Education of Harford County, Maryland
Procurement Department
102 South Hickory Avenue, Third Floor, Suite 310
Bel Air, Maryland 21014

GENERAL TERMS AND CONDITIONS
Construction

1.0 TERMINATIONS FOR CAUSE OR CONVENIENCE

1.1 HCPS reserves the right to terminate any contract, if in its opinion there shall be a failure at any time to perform faithfully any of its stipulations, or in case of any willful attempt to impose upon HCPS, materials, products and/or workmanship inferior to that required by the Awarded Bidder, and any action taken in pursuance of this latter stipulation shall not affect or impair any rights or claims of HCPS to damages for the breach of any covenant of the Contract by the Awarded Bidder.

1.2 Any cost and/or expense incurred under this section above shall be deducted from and paid by the Board of Education of Harford County out of such monies as may be due or become due to the Contract, if the same had been completed by the Contractor, it or its surety shall pay the amount of any excess to the Board of Education of Harford County.

1.3 The performance of work under this contract may be terminated for convenience by the Board of Education of Harford County in accordance with this clause in whole or part, whenever the Supervisor of Procurement shall determine that such termination is in the best interest of HCPS. Any such termination shall be affected by mailing to the Contractor a Notice of Termination specifying the extent to and conditions under which performance of work under the Contract is terminated and the date upon which such termination becomes effective. Upon termination of this contract in accordance with this section, the Contractor may be entitled to an equitable adjustment.

1.4 Termination for Non-Appropriation. HCPS reserves the right to terminate this contract, in whole or part, due to non-appropriation of funds or funds that are otherwise made unavailable to support continuation in any fiscal year succeeding the first fiscal year. Notification of contract termination will be given to the Contractor thirty (30) days in advance and will be in effect at the beginning of the fiscal year for which funds are not available. The Contractor may not recover anticipatory profits or costs incurred after termination.

2.0 DRUG, TOBACCO, AND ALCOHOL

All HCPS properties are "drug, tobacco, and alcohol-free zones" as designated by Local and State laws. Neither the Consultant or their employees (or sub-Consultants) are permitted to have any tobacco products, vaporizers, e-cigarettes, illegal or prescription drugs, or alcohol products on HCPS property. Use or possession of such items on HCPS property will result in immediate termination of the Agreement.

3.0 PROTEST AND APPEAL PROCESS

Any bidder objecting to the recommendation for award or the award of a contract may appeal the action to the Supervisor of Procurement by formal notification in writing within seven (7) calendar days of award notification. A protest must include: the name, address, and contact information of the protestor; signature of the protestor or an authorized representative of the protestor; identification of the solicitation or proposal number; detailed statement of reasons for the protest; supporting documentation to substantiate the claim; and the remedy sought. A formal written response to the appeal shall be issued within ten (10) calendar days following receipt of the formal protest. The decision of the Supervisor of Procurement may be appealed to the Superintendent of Schools within five (5) business days following receipt of decision from the Supervisor of Procurement. The decision of the Superintendent is final and conclusive.

4.0 NON-DISCRIMINATION

4.1 The Contractor shall comply with all Federal and State anti-discrimination laws in the performance of this contract.

4.2 The Board of Education of Harford County is committed to providing an inclusive and welcoming environment for all students, employees, and members of the school community. In accordance with Title IX of the Education Amendments of 1972, Title VI of the Civil Rights Act of 1964, and Title VII of the Civil Rights Act of 1964, the Board of Education of Harford County prohibits discrimination based on sex, race, color, national

origin, religion, or any other protected characteristic in any program or activity it operates.

4.3 Inquiries or concerns about your rights related to Title IX, Title VI or Title VII can be directed to our Coordinator of Investigations, Dr. Renee McGlothlin, at 410-809-6087 or Renee.McGlothlin@hcps.org. Harford County Public Schools' non-discrimination policy can be accessed here: NON-DISCRIMINATION POLICY: (hcps.org) and found on the HCPS website under Board of Education Policies and Procedures. Harford County Public Schools' non-discrimination statement can be accessed here: NON-DISCRIMINATION STATEMENT: (hcps.org) and found on HCPS' homepage.

4.4 The Awarded Bidder shall furnish, if requested by HCPS, a compliance report concerning their employment practices and policies in order for HCPS to ascertain compliance with the special provisions of this contract concerning discrimination in employment.

4.5 In the event the Awarded Bidder is deemed noncompliant with the nondiscrimination clause of this contract, this contract may be canceled, terminated, or suspended in whole or in part and the Awarded Bidder may be declared ineligible for further/future HCPS' work.

5.0 NON-HIRING OF EMPLOYEES BY AWARDED BIDDER OR HCPS

5.1 No employee of the HCPS or any unit thereof, whose duties as such employee include matters relating to or affecting the subject matter of this contract, shall, while so employed, become or be an employee of the party or parties hereby contracting with the HCPS or any unit thereof.

5.2 No employee of the Awarded Bidder or any unit thereof, whose duties as such employee include matters relating to or affecting the subject matter of this contract, shall, while employed, become or be an employee of the party or parties hereby contracting with the Awarded Bidder or any unit thereof.

6.0 FINANCIAL DISCLOSURE

The Awarded Bidder shall comply with the provisions of Section 14-103.1 of the Election Law Article, Annotated Code of Maryland, which requires that every business that enters into contracts, leases or other agreements with the State of Maryland or its agencies, including school districts, during a calendar year under which the business is to receive in the aggregate $200,000 or more, shall within fifteen (15) business days after the award of any contract, lease, or other agreement that causes the cumulative value to reach $200,000 or more, file with the State Board of Elections certain specified information to include disclosure of beneficial ownership of the business.

7.0 POLITICAL CONTRIBUTION DISCLOSURE

Awarded Bidder shall comply with the provisions of Section 14-101 et seq. of the Election Law Article, Annotated Code of Maryland, which require that every person that enters into contracts, leases, or other agreements with the State of Maryland, including its agencies or a political subdivision of the State, including school districts, during a calendar year under which the person receives in the aggregate $200,000 or more, shall file with the State Board of Elections certain specified information to include disclosure of political contributions of $500 or more to a candidate for elective office in any primary or general election.

8.0 RETENTION OF RECORDS

The Awarded Bidder shall retain and maintain all records and documents relating to this contract for three (3) years after final payment by HCPS hereunder or any applicable statute of limitations, whichever is longer, and shall make them available for inspection and audit by authorized representatives of HCPS or designee, at all reasonable times.

9.0 LANGUAGE/GENDER

9.1 Bidder, proposer, offeror, vendor, and contractor all have the same meaning and may be used interchangeably.

9.2 The Board of Education of Harford County is also referred to as HCPS, Harford County Public Schools, and Board of Education which may be used interchangeably.

9.3 Bid, proposal and offer all have the same meaning and can be used interchangeably.

10.0 COMPLIANCE WITH THE LAW

The Bidder hereby represents and warrants:

10.1 That it is qualified to do business in the State of Maryland and that it will take such action as, from time-to-time hereafter, may be necessary to remain so qualified.

10.2 That it shall comply with all Federal, State and Local law ordinances and legally enforceable rules and regulations applicable to its activities and obligations under this agreement.

10.3 That it shall procure, at its expense, all licenses, permits, insurance and governmental approval, if any are necessary to the performance of its obligations under this agreement.

11.0 INSURANCE

Please review in detail the insurance requirements contained in the attached document. These requirements are recommended by the Maryland Association of Boards of Education Group Insurance Pool. Please have your insurance agent/company receive these insurance requirements prior to submitting a response. Failure to comply with these insurance requirements may render your submittal as non-responsive.

A Certificate of Insurance verifying coverage and limits as specified in “Insurance Requirements” or a letter committing to obtain the required coverage and limits as specified, **must be submitted** with your response. **Failure to provide this information may deem your submittal as non-responsive.**

12.0 SAFETY AND CODE REQUIREMENTS

12.1 Contractor shall comply with all Federal, State, and Local laws, ordinances and regulations pertaining to work under their charge, including but not limited to Maryland Occupational Safety and Health Act (MOSH). These laws and regulations shall be construed as the minimum requirements of these specifications.

12.2 All equipment and machinery furnished or delivered to HCPS must comply with safety regulations as required by the U.S. Occupational Safety and Health Administration (OSHA), including 29 CFR Part 1910 for general industry and 29 CFR Part 1926 for construction. Equipment must also meet applicable Maryland State Safety & Health Act (MOSHA) standards and equipment operators must meet applicable Maryland-specific regulations such as heat street prevention (COMAR 09.12.32), Maryland crane safety, fall protection, and any other standards unique to MOSH that supplement federal OSHA requirements.

12.3 Safety Data Sheets (SDS) shall be submitted for all supplies, materials, equipment, or any other substances furnished and/or installed under this proposal in accordance with the OSHA Hazardous Communication Standard 29 CFR 1910.101, 29 CFR 1910.1200 and 20 CFR 1926.58 or any other applicable State, Federal or Local regulation. The Contractor, when required, must submit SDS sheets to each school or facility that receives any such supplies, materials, equipment, or any other substances furnished and/or installed by the Contractor. Contractors are further responsible for maintaining hazardous chemical lists and container labels, providing appropriate employee training, and complying with any additional Maryland requirements for access to information about hazardous and toxic substances.

13.0 CONTRACTOR’S OBLIGATION

13.1 The Awarded Bidder shall abide by and comply with the true intent of the specifications and not take advantage of any unintentional error or omission but shall fully complete every part as the true intent and meaning of the specifications, as decided by HCPS, and as described herein. Deviations, exceptions, alternates, etc., may render the bid as non-responsive.

13.2 The Awarded Bidder, after award and prior to starting work, may be required to submit working drawings or detailed descriptive data identified as acceptable to HCPS, which provide sufficient data to enable HCPS to judge the Awarded Bidder's compliance with the specifications.

13.3 In case of any apparent conflict between the specifications and such laws, ordinances, etc., the Awarded Bidder shall call the attention of the applicable HCPS designee(s) to such conflict for a decision before proceeding with any work.

13.4 Any deviation(s) from the specifications or scope of work must be clearly noted in detail by the Bidder, in writing, at the time of submitting the formal bid. The absence of a written list of deviation(s) at the time of submittal will hold the Bidder accountable to HCPS to the specifications or scope of work as written by HCPS. Any deviation(s) from the specifications or statement of work without prior documented approval will be grounds for rejection of any material, equipment, and/or services when delivered and/or performed.

13.5 The Awarded Bidder shall and will, in good professional manner, do and perform all work and furnish all

supplies and materials, machinery, equipment, facilities and means, except as herein otherwise expressly specified, necessary or proper to perform and complete all the work required by this contract, within the time herein specified, in accordance with the provisions of this contract and said specifications and in accordance with the plans and drawings covered by this contract and any and all supplemental plans and drawings, and in accordance with the directions of the Board of Education as given from time to time during the progress of the work. The Contractor shall observe, comply with and be subject to all terms and conditions, requirements and limitations of the Contract and Specifications and shall do, carry on and complete the entire work to the complete satisfaction of the Board of Education.

13.6 Awarded Bidder may be required pursuant to the Business Regulation Article of the Maryland Code, to provide proof of Certificate of Registry.

13.7 Awarded Bidder is responsible for protecting all existing and newly installed supplies and/or equipment. Any HCPS property damaged shall be replaced or repaired to the satisfaction of HCPS.

13.8 Awarded Bidder and any of its subcontractors shall advise HCPS of its intention to use any employees, which are hired or obtained from any penal, pre-release or work release program. In the event that such employees are used, notification to HCPS shall include the name and violation for each individual. The reasonable precautions, when selecting such individuals and provide strict supervision and proper safeguards. Awarded Bidder's employees are not permitted inside school buildings when the nature of the Contract is for outside work.

14.0 PROTECTION OF WORK AND PROPERTY

14.1 The Awarded Bidder will be held responsible for any and all damage to Harford County Public Schools property done or caused by the Awarded Bidder or other personnel engaged in the execution of this contract, except and unless damage, loss, injury or illness is caused by the negligence or tortious misconduct of HCPS employees. The Awarded Bidder shall be similarly responsible for all injury to any person that occurs as a result of the actions or negligence of the Awarded Bidder or Awarded Bidder's agents or employees. They shall take proper safety and health precautions to protect the work, the workers, the public and the property of others. The Awarded Bidder shall also be responsible for any and all damage to adjacent property incurred in the performance of the Awarded Bidder and hold Harford County Public Schools free from any and all claims for damages arising from the execution of the work.

14.2 The Awarded Bidder shall limit use of premises to work in areas indicated; confine operations to areas within contract limits indicated; ensure not to disturb portions of the site beyond the areas in which the Work is indicated.

14.3 The Awarded Bidder shall keep driveways and entrances serving the premises clear and available to HCPS, HCPS's employees and emergency vehicles at all times. The Awarded Bidder shall not use these areas for parking or storage of materials.

14.4 The Awarded Bidder shall always keep the premises free from accumulation of waste materials or rubbish caused by its employees or work, and at the completion of the work, all trash will be removed from and about the work site and all tools, scaffolding and surplus materials shall leave the area clean and neat unless more exactly specified. In case of disputes, HPCS may remove trash, rubbish, etc. and charge the cost of such removal to the Awarded Bidder.

14.5 The Awarded Bidder shall protect all HCPS property, materials, equipment, improvements, utilities, structures, and vegetation always. Any property or incidental damage during the shall be repaired or replaced by the Awarded Bidder to the satisfaction of HCPS.

14.6 HCPS will occupy the site and existing building during the entire work period. The Awarded Bidder shall cooperate with HCPS during the work to minimize conflicts and facilitate HCPS usage. To the satisfaction of the school, the Awarded Bidder is to move and/or protect all school equipment, furnishings and occupied areas from work-related debris and noise. The Awarded Bidder shall perform the work so as not to interfere with HCPS operations. The Awarded Bidder is aware that this work shall be performed on school grounds, where students, staff and parents will be present and is responsible for maintaining a safe clean worksite.

14.7 Deliveries of equipment and other materials must be made with the Awarded Bidder present and stored on site as indicated by the HCPS.

15.0 DIRECT DAMAGES

HCPS reserves the right to pursue any and all damages against the Awarded Bidder or against any bond or surety relating to the contract in the event of a breach of the Contract by the Awarded Bidder.

16.0 PERMITS & LICENSE

The Contractor awarded this contract must, at its expense, obtain any and all permits required by Local, State and Federal authorities. The Contractor at the time of bid opening must be fully licensed in all trades or special areas that require a license by Local, State, Federal authorities. It is the Contractor's responsibility to notify HCPS of lapses in, suspension of or termination of special permits and licenses required under the Contract.

17.0 SUBSTITUTIONS

Bids shall be based upon the materials, systems, and equipment required by the bidding documents without exception.

18.0 GUARANTEE AND WARRANTY

18.1 The Awarded Bidder shall unconditionally guarantee the supplies and equipment furnished by the Awarded Bidder for a period of at least one (1) year from the date of acceptance of the installation by HCPS or as specified in the bid document. If the manufacturer warrants equipment for a period longer than one (1) year, the Awarded Bidder shall pass through this extended warranty to HCPS.

18.2 In the event the Awarded Bidder fails to repair, replace, adjust, rectify, remedy, correct or complete the items, defects, deterioration, and/or installation, then HCPS may have the right to secure the services of another vendor to correct the work or complete the performance required by the award of this bid. The Awarded Bidder shall be solely responsible for any and all costs, expenses and monies due to the new vendor.

18.3 The Awarded Bidder must act as the manufacturer's agent for all warranty claims.

19.0 AWARDED BIDDER'S RESPONSIBILITY

19.1 Awarded Bidders may be required pursuant to the Business Regulation Article of the Maryland Code, to provide proof of Certificate of Registry.

19.2 Awarded Bidders are responsible to protect all existing and newly installed work, materials, equipment and landscaping. Any HCPS property damaged shall be replaced or repaired to the satisfaction of HCPS.

19.3 Awarded Bidders are responsible for having all employees sign-in and sign-out at the work site. Use the appropriate form provided by the school office.

19.4 Awarded Bidders are responsible for daily removal of all debris from the work site and to keep the work site tidy as work progresses. Under no circumstance shall Awarded Bidders use HCPS garbage and/or recycling dumpsters to dispose of debris.

19.5 Unless otherwise stipulated, HCPS shall provide and pay for water, heat, telephone and utilities used or consumed by the Awarded Bidder during the performance of the work or services hereunder if they are currently available at the work site. However, the Awarded Bidder shall install and pay for the costs of any temporary facilities that are not already in existence, which will be required during construction for accessing such water, heat and utilities.

19.6 Awarded Bidders are responsible for coordinating planned interruptions of utility service with HCPS.

19.7 Awarded Bidders are responsible for notifying HCPS of any occurrence of pre-existing condition that would prevent the completion of work as specified. Any changes in the scope of work and any resulting changes in cost shall be agreed to in writing by HCPS. HCPS assumes no responsibility for verbal changes in the Scope of Work or cost. Contract/Scope changes must be reflected in an authorized change order approved by the Supervisor of Procurement.

19.8 Awarded Bidders may be responsible at the discretion of HCPS to complete the American Institute of Architects (AIA) Abbreviated Form of Agreement between HCPS and Awarded Bidder.

19.9 Awarded Bidders are responsible for providing their own materials, tools and equipment. HCPS assumes no responsibility for vandalism or theft of Awarded Bidder's property.

19.10 At the time of the opening of bids, each bidder will be presumed to have inspected the site and to have read and to be thoroughly familiar with the Solicitation, Specifications, Plans and Contract Documents (including all Addenda). The failure or omission of any bidder to receive or examine any form, instrument, or document, shall in no way relieve any bidder from any obligation in respect of his bid.

19.11 Awarded Bidder shall be responsible for ensuring that employees assigned to HCPS sites, either employed by Awarded Bidder or their subcontractor(s), have successfully passed a criminal background check, to the satisfaction of Harford County Public Schools. The Awarded Bidder shall not use any employees, including subcontractor employees that are hired or obtained from any penal pre-release or work-release programs.

20.0 SAFETY AND CODE REQUIREMENTS

All materials and labor shall comply with the following requirements:

20.1 Awarded Bidder shall comply with all Federal, State, and Local laws, ordinances and regulations pertaining to work under their charge and these shall be construed as the minimum requirements of these specifications.

20.2 Awarded Bidder shall provide all equipment and machinery furnished and delivered to HCPS complying with the safety regulations as required by OSHA and the Maryland State Safety Health Act known as MOSHA meeting the CFR-1910 MOSH Standard.

20.3 Awarded Bidder shall submit Safety Data Sheets (SDS) for all supplies, materials, equipment or any other substances furnished and/or installed under this proposal in accordance with OSHA Hazardous Communication Standard 29 CFR 1910.101, 29 CFR 1910.1200 and 29 CFR 1926.58 or any other applicable state, federal, or local regulation. The Awarded Bidder must submit SDS sheets to each school or facility that receives any such supplies, materials, equipment or any other substances furnished and/or installed by the Awarded Bidder. Failure on the part of the Awarded Bidder to furnish the necessary SDS sheets will result in the withholding of final payment.

20.4 Standards are as defined in the latest issue from the following:

AABC	Associated Air Balance Council
ADC	Air Diffusion Council
AGA	American Gas Association
ADA	American's with Disabilities Act
AMCA	Air Moving and Conditioning Association
ANSI	American National Standards Institute
ARI	Air Conditioning and Refrigeration
ASHRAE	American Society of Heating, Refrigerating and Air Conditioning Engineers
ASME	American Society of Mechanical Engineers
ASTM	American Society of Testing and Materials
AWS	American Welding Society
AWWA	American Water Works Association
BOCA	Building Officials and Code Administrators
COBA	Council of American Building Officials
CPSC	Consumer Product Safety Commission
CS	Commercial Standard
FM	Factory Mutual
IBR	Institute of Boiler and Radiator Manufacturers
IEEE	Institute of Electrical and Electronics Engineers
MSSP	Manufacturers Standards Society of the Valve and Fittings Industry
NEC	National Electrical Code
NEMA	National Electrical Manufacturers Association
NFPA	National Fire Protection Association
SMACNA	Sheet Metal and Air Conditioning Contractors National Association
TEMA	Tubular Exchanger Manufacturers Association
TIMA	Thermal Insulation Manufacturers Association
UL	Underwriters Laboratories

20.5 No new, replacement or restoration materials shall contain asbestos or asbestiform minerals in an amount greater than 0.0% as determined by Polarized Light Microscopy (PLM) as prescribed in Federal Regulation 40 CFR 763.87. For materials that are tightly bound (e.g. floor tile, roofing asphalt and felts, adhesive/mastic, caulk, glaze, etc.) and for which PLM analysis is not conclusive, transmission electron microscopy must be used for analysis. If no commercially available material meets this criterion, written authorization for use of the

material shall be obtained from the HCPS Project Manager. All materials delivered to or used on HCPS property must be accompanied by a manufacturer's certification to be asbestos free, based upon criterion above. The Material Safety Data Sheet may not be used for this purpose.

20.6 No new, replacement or restoration materials shall contain lead in an amount greater than 0.00 milligrams per liter or 0.00 milligrams per kilogram. If no commercially available material meets either criterion, written authorization for use of the material shall be obtained from the HCPS Project Manager.

20.7 All Harford County codes and regulations, including the latest edition of The International Building Code, are relevant.

20.8 Awarded Bidder shall ensure that all modifications address the provisions of the ADA.

21.0 CONCEALED OR UNKNOWN CONDITIONS

In the performance of any work or services, if the Awarded Bidder encounters conditions at the Facilities that are (1) subsurface if otherwise concealed physical conditions that differ materially from those indicated on the drawings furnished by HCPS or (2) unknown physical conditions of an unusual nature that differ materially from those conditions normally found to exist and generally recognized as inherent in the construction activities if the type and character as that which is described, then the Awarded Bidder shall notify HCPS of such conditions promptly, prior to significantly disturbing the same, and in no event later than 2 days after the first observation the conditions. If such conditions differ materially and cause an increase or decrease in the Awarded Bidder's cost of, or time required for, performance of any part of the work or services, the Awarded Bidder shall be entitled to, and HCPS shall consent in writing to, an equitable adjustment in the amounts paid to the Awarded Bidder pursuant to this Agreement, the times for performance or both.

22.0 INDEMNIFICATION

22.1 To the fullest extent permitted by law, the Contractor (Indemnitor) shall indemnify, defend and hold HCPS (the Indemnitee) and its employees, agents, officials or volunteers harmless from and against any and all claims, losses, damages, expenses, causes of action and liabilities including without limitations, attorney's fees arising out of or related to the Indemnitor's occupancy or use of the Indemnitee's premises or operations incidental thereto, provided that any such claim, loss, damage, expense, cause of action or liability is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property, including loss of use resulting there from. Indemnitor expressly indemnifies indemnitee for the consequences of any negligent act or omission of the Indemnitor or any of the Indemnitor's employees, agents, officials or volunteers or anyone for whose acts the Indemnitor may be liable, unless such act or omission constitutes gross negligence or willful misconduct.

22.2 In claims against any person or entity indemnified within this indemnification by an employee of the Awarded Bidder, a subcontractor, anyone directly or indirectly employed by them or anyone for whose acts they may be liable, the indemnification obligation shall not be limited by a limitation on amount or type of damages, compensation or benefits payable by or for the Awarded Bidder or a subcontractor under Workers' Compensation Acts, Disability Benefit Acts, or other employee benefit acts.

22.3 The obligations of the Awarded Bidder within this indemnification shall not extend to the liability of the Construction Manager, Architect, their consultants and agents and employees of any of them arising out of (1) the preparation or approval of maps, drawings, opinions, reports, surveys, Change Orders, designs, or specifications, or (2) the giving of or the failure to give directions or instructions by the Construction Manager, Architect, their consultants, and agents and employees of any of them provided such giving or failure to give is the primary cause of the injury or damage.

23.0 INTELLECTUAL PROPERTY

The Bidder represents and warrants that all goods and services that it will furnish under this Contract do not and will not infringe on any valid copyright, patent, service mark or trademark. The Bidder shall pay all royalties and license fees which may be due on the inclusion of any patented or copyrighted materials, methods or systems selected by the Bidder or used by the Bidder in the performance of its services. The Bidder shall defend, hold harmless and indemnify HCPS from all suits or claims for infringement of any patent rights or copyrights arising out of such selection.

24.0 ACCESS TO FACILITIES FOR PERFORMANCE

From the date hereof and throughout the term of this agreement, the Awarded Bidder shall have reasonable access to the Facilities and relevant personnel of HCPS to fulfil its obligations and to investigate performance of the equipment, systems and operations of the Facilities.

25.0 SUSPENSION OF WORK

25.1 HCPS may unilaterally order the Awarded Bidder in writing to suspend, delay, or interrupt all or any part of the work for such period of time as may be appropriate for the convenience of the HCPS. Such suspensions, delays or interruptions should be for less than sixty (60) days unless there are extenuating circumstances.

25.2 The times required, and the completion of work shall be equitably adjusted to take into account the period of such suspensions, delay or interruption.

25.3 HCPS will compensate the Awarded Bidder only for the cost(s) to re-mobilize to the Facilities any equipment that had to be leased or rented for the suspension period that was critical to the operation of the Facility and any offsite storage cost(s) besides the Awarded Bidder's facility that had to be used to store materials related to the work. The Awarded Bidder shall, at the suspension of work, notify the HCPS of any such charges stating the monetary damages that will incur and shall document weekly in writing to the HCPS the cumulative costs during the delay period. In no way will any approved delay affect the warranty period regarding any accepted completion by the HCPS relating to equipment installed by the Awarded Bidder, its subcontractors and suppliers.

26.0 DELAYS, EXTENSIONS OF TIME

26.1 The Bidder agrees to perform all work and provide all supplies or materials, in accordance with all the sections of this bid in a timely, continuous and diligent manner in order to comply with the time requirements set forth in this bid and/or the Contract. The Bidder acknowledges and agrees that the only party that may grant a legally binding time extension or agree to a substitution of products, materials, equipment and/or supplies is the Supervisor of Procurement. Any and all time extensions and/or changes/substitutions of products, materials, equipment and/or supplies must be requested in writing by the Bidder before the extension and/or change takes place and approved in writing by HCPS.

26.2 Any delays by the Awarded Bidder to commence work will not change the Completion Date or relinquish the Awarded Bidder from the responsibility of meeting the established completion requirements by the Completion Date unless written permission has been granted from the Supervisor of Procurement.

27.0 HAZARDOUS MATERIALS

27.1 The Awarded Bidder's work and other services pursuant to or in connection with this Agreement include work connected and associated with asbestos, lead, polychlorinated biphenyl ("PCB"), fluorescent light bulbs, or other hazardous materials (hereinafter, collectively, "Hazardous Materials"). The Awarded Bidder shall be required to perform identification, abatement, cleanup, control, and removal of Hazardous Materials. HCPS warrants and represents that, except as set forth in the Technical Proposal, there are no Hazardous Materials on the Facilities that will in any way affect the Awarded Bidder's work or any other services and HCPS has disclosed to the Awarded Bidder the existence and location of any Hazardous Materials in all areas within which the Awarded Bidder will be performing any part of the work or other services. The existence or location of any Hazardous Materials that have been disclosed by HCPS to the Awarded Bidder prior to the execution hereof, or that were otherwise identified in the Technical Specifications, shall be the exclusive responsibility of the Awarded Bidder.

27.2 Should the Awarded Bidder become aware of or suspect the presence of Hazardous Materials, other than already disclosed by HCPS within the Technical Specifications, the Awarded Bidder shall immediately stop work in the affected area and notify HCPS. HCPS will be responsible for taking any and all actions necessary to correct the condition in accordance with all applicable laws and regulations. The Awarded Bidder shall be required to resume performance of the work or any HCPS requested work in the affected areas only in the absence of Hazardous Materials or when the affected area has been rendered harmless. Except as set forth in the Technical Specifications, the Awarded Bidder shall not be obligated to transport or handle Hazardous Material, to provide any notices to any governmental authority or agency, or to inspect or examine the Facilities for the presence of Hazardous Material.

28.0 LEGISLATED BID REQUIREMENTS

Award of contracts over $100,000 shall be awarded to the lowest responsive and responsible bidder who provides the best value and conforms to the Specifications with consideration given to: (1) the quantities involved, (2) the time required for delivery, (3) the purpose for which it is required, (4) the competency and responsibility of the Bidder, (5) the ability of the Bidder to perform satisfactory service, (6) the Bidder’s demonstrated good faith efforts and plan for utilization of Minority Business Enterprises (MBE) as certified by the Maryland Department of Transportation (MdDOT), and (7) the price offered by the Bidder. [REF: Section 5-112 of the Education Article, Annotated Code of Maryland,

effective 7-1-24]

29.0 PREVAILING WAGE-SCHOOL CONSTRUCTION

If the estimated cost of the Contract is $250,000 or more and if State funds will be 25% or more, the Contract shall meet the prevailing wage requirements contained in Chapter 57, 2020 Md. Laws, effective October 1, 2021. Prevailing wage rates are required for the appropriate trades included in the project and must be reflected in the Bids submitted. HCPS is required to include a notation in the Bid Announcement and advertisement that, "PREVAILING WAGE RATES ARE APPLICABLE TO THIS PROJECT". Questions regarding the prevailing wage rate process or procedure may be directed to the Administrator of the Prevailing Wage Program, State of Maryland.

30.0 ROYALTIES AND PATENTS

The Awarded Bidder shall pay all royalties and license fees. The Awarded Bidder shall defend suits or claims for infringement of patent rights and shall hold HCPS, Construction Manager, and/or the Architect/Engineer/Designer harmless from loss on account thereof but shall not be responsible for such defense or loss when a particular design process or product of a particular manufacturer or manufacturers is required by the Contract Documents. However, if the Awarded Bidder has reason to believe that the required design process or product is an infringement of a patent, the Awarded Bidder shall be responsible for such loss unless such information is promptly furnished to HCPS and/or the Architect/Engineer/Designer.

31.0 ILLEGAL IMMIGRANT LABOR

The use of illegal immigrant labor to fulfill contracts solicited by HCPS is in violation of the law and is strictly prohibited. Contractors and subcontractors must verify employment eligibility of workers in order to ensure that they are not violating Federal/State/Local laws regarding illegal immigration. A compliance audit may be conducted.

32.0 FOREIGN LANGUAGE TRANSLATOR REQUIREMENT

32.1 HCPS requires an awarded bidder to have on site, a full-time interpreter that is fluent in speaking and understanding an employee's native language if the Contractor has on site an employee that does not speak English.

32.2 Failure of an awarded bidder to have on site, full time, an interpreter that is fluent in speaking and understanding an employee's native language for those employees that do not speak English is reason for immediate Termination for Cause.

33.0 EMPLOYMENT OF CHILD SEX OFFENDERS AND OTHER CRIMINAL OFFENDERS

33.1 **If a child sex offender, as determined by the definitions contained in the Criminal Law Article of the Annotated Code of Maryland, is employed by the Awarded Bidder, the Awarded Bidder is prohibited from assigning that employee to perform management, delivery, installation, repair, construction or any other type of services on any HCPS property, including the project property. Violation of this provision may result in Termination for Cause.**

33.2 Contractor acknowledges and agrees that, pursuant to Section §6-113 of the Education Article of the Maryland Code, Contractor is prohibited from knowingly assigning or permitting its Subcontractors from knowingly assigning any of the Contractor's or Subcontractor's employees to work in, on or about school premises if such employee may or would have direct, unsupervised and uncontrolled access to children if the employee has been convicted of, pled guilty or *nolo contendere*, to any of the following crimes.

33.2.1 A sexual offense in the third or fourth degree under §3-307 or §3-308 of the Criminal Law Article of the Maryland Code or an offense under the laws of another state that would constitute an offense under §3-307 or §3-308 of the Criminal Law Article if committed in Maryland;

33.2.2 Child sexual abuse under §3-602 of the Criminal Law Article, or an offense under the laws of another state that would constitute child sexual abuse under §3-602 of the Criminal Law Article if committed in Maryland; or

33.2.3 A crime of violence as defined in §14-101 of the Criminal Law Article, or an offense under the laws of another state that would be violation of §14-101 of the Criminal Law Article if committed in Maryland, including: (1) abduction; (2) arson in the first degree; (3) kidnapping; (4) manslaughter, except involuntary manslaughter; (5) mayhem; (6) maiming; (7) murder; (8)

rape; (9) robbery; (10) carjacking; (11) armed carjacking; (12) sexual offense in the first degree; (13) sexual offense in the second degree; (14) use of a handgun in the commission of a felony or other crime of violence; (15) child abuse in the first degree; (16) sexual abuse of a minor; (17) home invasion; (18) a felony offense under Title 3, Subtitle 11 of this article; (19) an attempt to commit any of the crimes described in items (1) through (18) of this list; (20) continuing course of conduct with a child under §3-315 of the Criminal Law Article; (21) assault in the first degree; (22) assault with intent to murder; (23) assault with intent to rape; (24) assault with intent to rob; (25) assault with intent to commit a sexual offense in the first degree; and (26) assault with intent to commit a sexual offense in the second degree.

33.3 Direct unsupervised and uncontrolled access to students is prohibited for any person convicted of any crime identified in Section 32.2 above. If you, as the Contractor/Site Supervisor, witness or suspect any such employee(s) entering into a student area, action must be taken immediately to rectify the situation.

33.4 Section §11-722 of the Criminal Procedure Article of the Maryland Code prohibits any person with a contract with a local Maryland school system from knowingly employing an individual to work at the school if the individual is registered as a sex offender pursuant to Section §11-704 of the Criminal Procedure Article. Violation of this paragraph may result in termination of the agreement at HCPS's discretion.

34.0 CRIMINAL HISTORY RECORDS CHECKS FOR CONTRACTORS

Section §5-551 of the Family Law Article of the Maryland Annotated Code effective October 1, 2023, require each employee with a local school system undergo a criminal history records check and fingerprinting if such individual will work in, on or about school premises and if the individual will care for or supervise children in the facility or have access to children who are cared for or supervised in the facility.

Contractor shall cause any employee, if such employee may or will work in, on, or about school premises and may, or will have direct, unsupervised and uncontrolled access to children, to undergo a criminal history records check, including fingerprinting. Such criminal history records check and fingerprinting shall meet the requirements of Section §5-550 to §5-559 of the Family Law Article of the Maryland Annotated Code.

The cost of such criminal history records check and fingerprinting shall be paid by Contractor.

HCPS shall have the right, in its sole discretion, to prohibit any individual from performing any work at, or in or about school premises based on such individual's criminal history records check.

35.0 MINORITY BUSINESS ENTERPRISE PARTICIPATION

Minority participation is encouraged on all contracts and non-minority prime contractors are encouraged to use minority subcontractors. Specific requirements may apply to certain bids when State of Maryland School Construction Program funds are utilized.

When applicable, a special section in the bid documents will be included as "Minority Business Enterprise Procedures." When this requirement is included in the bid documents the required certificate, waiver forms, schedule for participation forms must be submitted. Failure to submit said documents may result in a determination that the Bid is non-responsive. If the Contractor is deemed the apparent low bidder, the Minority Business Enterprise documentation described in the bid documents must be submitted within ten (10) working days of receiving notification of potential award.

For projects estimated to be over $50,000, "The Bidder or Offeror is required to submit with its bid or proposal a completed Attachment 1A - MBE Utilization and Fair Solicitation Affidavit and MBE Participation Schedule, as described in the solicitation documents. If Attachment 1A, MBE Utilization and Fair Solicitation Affidavit and MBE Participation Schedule, are not submitted with the Bid at the time of opening, the Bid will be deemed non-responsive and not considered. The Bidder or Offeror recognizes that their efforts made to initiate contact to solicit and to include MBE firms in this project will be reviewed carefully and evaluated based upon the actions taken by them prior to and up to 10 days before the Bid or Proposal opening.

The Contractor shall perform the Contract in accordance with the representations made in Attachment 1A – Minority Business Enterprise Utilization and Fair Solicitation Affidavit and MBE Participation Schedule submitted as part of the Bid or Proposal. Failure to perform the Contract as specified and presented in the Bid or Proposal submission without prior written consent of the Owner shall constitute a violation of a material term of the Contract.

36.0 BID SECURITY – WHEN REQUIRED

36.1 If so, stipulated in the Advertisement, Bid Announcement, or supplementary instructions to bidders, each Proposal/Bid shall be accompanied by a Bid Bond in the dollar amount of five Percent (5%) of the Base Bid. This Bid Bond pledges that the Bidder will enter into a Contract with HCPS on the terms stated in the Solicitation and will, if required, furnish bonds covering the faithful performance of the Contract and payment of all obligations arising hereunder. Should the Bidder refuse to enter into such Contract or fail to furnish such bonds, where required, the amount of the Bid Security/Bid Bond/Surety Bond shall be forfeited to HCPS as liquidated damages, not as a penalty. **This bond must be provided with the Proposal/Bid submission and failure to do so may be cause for rejection of the Bid as being non-responsive. The cost of the Bid Bond will be borne by the Bidder(s) in all instances.**

36.2 If a surety bond is required, it shall be written on the appropriate AIA Document, Bid Bond, unless otherwise provided in the Bidding Documents and the attorney-in-fact who executes the Bond on behalf of the surety shall affix to the Bond a certified and current copy of the power of attorney. *Individual surety bonds as detailed in State of Maryland COMAR 21.06.07.01 are also acceptable through an authorized individual surety agent.*

36.3 HCPS will have the right to retain the Bid Security of Bidders to whom an award is being considered until either (a) the Contract has been executed and bonds, if required, have been furnished or (b) the specified time has elapsed so that bids may be withdrawn or (c) all proposals/bids have been rejected.

36.4 All bonds must be approved by surety companies, which are in the most current Circular 570 "Surety Companies Acceptable on Federal Bonds" as issued by the U.S. Treasury, Bureau of Government Finance Operations, Division of Banking and Cash Management, Washington, D.C. 20011. If a bonding company is used that is not on this list, the Contract will be *Terminated for Default* or if the required bond is a bid bond, this is just cause for rejection of the Bid as being non-responsive.

36.5 Performance Bonds and/or Payment Bonds may be required for proposals/bids meeting the following conditions. The Award Bidder(s) of this contract may be required to submit either one or both of these bonds within ten (10) days of receipt of the Notice of Intent to Award and in accordance with the terms stated below. The cost of the Performance Bond and/or Payment Bond will be borne by the Bidder(s) in all instances.

36.5.1 Performance Bond may be required for contracts and/or awards of contracts in excess of $100,000.00 for the amount of 100% of the contract price to cover faithful performance of the Contract. Simultaneously with their delivery of the executed contract, the Award Bidder must deliver to HCPS an executed bond in the amount of one hundred percent (100%) of the accepted bid as security for the faithful performance of their contract and for the payment of all persons performing labor or furnishing materials in connection therewith, prepared on the Standard Bond Form A-311 as approved and issued by the American Institute of Architects and having as surety thereon such surety company or companies as are acceptable on bonds given to the United States Government and approved by the Harford County Public Schools and are authorized to transact business in this State. **Performance Bonds shall be made out in the name of the "Board of Education of Harford County".**

36.5.2 Payment Bonds may be required for contracts and/or awards of construction contracts in excess of $100,000.00 for the amount of 100% of the contract price as security for the payment of all persons performing labor and furnishing materials in connection therewith when required by HCPS. Payment Bonds shall be made out in the name of the "**Board of Education of Harford County**".

37.0 LABOR AND RATES OF PAY

37.1 The Awarded Bidder agrees that it shall abide by all applicable provisions of Federal and State laws and regulations pertaining to workplace conditions, child labor and that all employees will be treated with dignity and respect.

37.2 The Awarded Bidder agrees to comply with all applicable Federal and State law and regulation relating to payment of wages.

38.0 PROCUREMENT-INVESTMENT ACTIVITIES IN IRAN

The Awarded Bidder agrees that it shall abide by and comply with Section 17-701 et seq. of the State Finance and Procurement Article of the Maryland Code, regarding business in Iran.

39.0 CONTRACT

The Bid with respect to all items accepted, addenda, agreements and all papers and documents accompanying the same, including these general and special conditions shall constitute the Formal Contract between Bidder and HCPS.

40.0 TAXES

40.1 Materials, which are incorporated into work under formal or informal contracts, are not exempt from the Maryland State Sales or Use Tax. Awarded Bidders shall be responsible for paying such taxes when purchasing materials. HCPS tax-exempt certificates cannot be used by contract awardees.

40.2 No charge will be allowed for Federal, State or municipal sales and excise taxes from which HCPS is exempt. The price bid shall be net and shall not include any tax. Exemption certificates, if required, will be furnished on forms provided by the Bidder. HCPS is specifically exempt from retail sales tax under Maryland Certificate 3000120-1. Harford County Public Schools, Maryland is a public local education agency and an instrumentality of the State of Maryland, and as such is exempt from federal income tax under Internal Revenue Code Section 115. The Federal Tax ID number for Harford County Public Schools is #52-6000955.

41.0 DELIVERIES

All supplies and/or materials must be held by the Awarded Bidder until needed at the site unless they can be stored in the area in which the work is to be done and that area has been closed to occupant usage. The Awarded Bidder shall obtain the permission of the HCPS representative regarding any needed storage of materials and equipment. Such storage shall be done in such a manner as not to interfere with the building schedule. The Awarded Bidder shall be responsible for any and all accidents caused by negligence from this source. HCPS does not accept responsibility for losses of material or equipment, regardless of approval to store, in any institution's facilities or grounds.

42.0 INSPECTIONS/CORRECTION OF WORK

All work and materials, all processes of manufacturer, and all methods of construction shall be at all times and places subject to the inspection of HCPS who shall be the final judge of the quality and suitability of the work, materials, process of manufacturer and methods of construction for the purposes for which they are contracted and used. Should they fail to meet the necessary approval, they shall be corrected, made good or replaced at the Contractor’s expense, and to the complete satisfaction of HCPS. Rejected material shall be immediately removed from the site. Failure to correct the work shall be grounds for immediate termination of the Contract.

43.0 COMPLIANCE WITH SPECIFICATIONS

43.1 The Awarded Bidder shall abide by and comply with the true intent of the specifications and not take advantage of any unintentional error or omission but shall fully complete every part as the true intent and meaning of the drawings and specifications as described.

43.2 The Awarded Bidder, after award and prior to starting work, may be required to submit working drawings or detailed descriptive data identified as acceptable to HCPS, which provide sufficient data to enable HCPS to judge the Awarded Bidder's compliance with the specifications.

43.3 Where the requirements of the specifications call for higher grade and are not in conflict with the laws, ordinances, etc., the specifications shall govern.

43.4 Where the requirements of the laws, ordinances, etc., are mandatory, they shall govern.

43.5 In case of any apparent conflict between the specifications and such laws, ordinances, etc., the Awarded Bidder shall call the attention of the applicable HCPS designee(s) to such conflict for a decision before proceeding with any work.

43.6 Any deviations to the Specifications or Statement of Work must be clearly noted in detail by the Bidder/Offeror, in writing, at the time of submitting the formal proposal. Any deviations, alternations or changes to the bid document or from the specifications as written may result in rejection of the Bidder’s/Offeror’s proposal or materials delivered.

44.0 BILLING AND PAYMENT

44.1 Each invoice shall list the purchase order number or contract number of HCPS and the items on the invoice

shall be listed in the same order as on the purchase order. The original invoice shall be submitted to the Accounts Payable email address at APInvoice@hcps.org, unless otherwise specified.

44.2 Payment in full will only be made upon final acceptance of items as shown on the Purchase Order. Partial payments may be paid if partial shipments have been made and received.

44.3 Standard HCPS payment terms are net thirty (30) days.

44.4 HCPS will not pay freight bills, unless stated otherwise. Delivery shall be F.O.B., to the destination(s) as noted on Purchase Order.

45.0 CHANGE ORDERS

When applicable, change orders shall be handled accordingly:

Value of Work	Combined Overhead & Profit
$0 - $1,000	20%
$1,001 - $5,000	15%
$5,001 - $10,000	10%
$10,001 - $25,000	7%
Over $25,000	Negotiated but not more than 5%

46.0 GOVERNING LAW AND DISPUTE RESOLUTION

46.1 The Bid shall be construed in accordance with, and interpreted under, the laws of the State of Maryland. Any lawsuits arising out of such bid shall be filed in the appropriate State Court located in Harford County, Maryland.

46.2 Alternative Dispute Resolution (ADR) may be used at HCPS's sole discretion, but HCPS is not obligated to utilize ADR.

47.0 CONFLICTS OF INTEREST

No employee of Harford County Public Schools shall engage in or have a financial interest in any Contract that conflicts or raises a reasonable question of conflict with their duties and responsibilities. Further, Harford County Public Schools may, by written notice of default to the supplier, terminate in whole or in part the Contract if a determination is made that obtaining the Contract was influenced by an employee of Harford County Public Schools having received a gratuity, or promise thereof, in any way or form.

48.0 ORDER OF PRECEDENCE

In the event of an inconsistency among provisions of this solicitation, the inconsistency shall be resolved by the following order of precedence:

- Specifications
- Terms and Conditions
- General Provisions

49.0 IT ACCESSIBILITY PROGRAM

49.1 Section 508 of the Rehabilitation Act of 1973 (29 U.S.C. 794d), as amended, is a federal law that requires agencies to provide individuals with disabilities equal access to electronic information and data comparable to those who do not have disabilities, unless an undue burden would be imposed on the agency. The Section 508 standards, which are periodically updated, are the technical requirements and criteria that are used to measure conformance within this law. More information on Section 508 and the technical standards can be found at www.section508.gov.

49.2 Section 508 requires agencies, during the procurement, development, maintenance, or use of Information and Communication Technology (ICT), to ensure that individuals with disabilities have access to and use of ICT information and data comparable to that afforded to individuals without disabilities (i.e., "ICT accessibility"), unless an undue burden would be imposed on the agency. Section 508 incorporates the Web Content Accessibility Guidelines (WCAG) 2.0 Levels A and AA as the baseline technical standards for web and digital accessibility. In Maryland, state law establishes a higher standard, requiring all public schools and state

agencies to ensure that new or updated digital content, software, and web applications conform to WCAG 2.1 Level AA.

50.0 TECHNOLOGY-BASED INSTRUCTIONAL PRODUCTS

50.1 HCPS is committed to ensuring that digital technology (hardware, instructional software, online resources, and computer-based equipment) is accessible to individuals with disabilities. The Vendor guarantees that all digital tools supplied under this contract meet the accessibility requirements of the Web Content Accessibility Guidelines ("WCAG") 2.1 Level AA and conform to the most recent Section 508 standards for information technology accessibility under the federal Rehabilitation Act of 1973, unless undue burden is demonstrated and documented. "Digital tool" is defined pursuant to Md. Code Ann., Educ., § 7-910.

50.2 All online platforms must conform to the guidelines for accessibility as set forth in WCAG version 2.1 (minimum Level AA conformance). HCPS will only consider vendors whose products conform to these standards. Conformance to the specified standards can be documented through the submission of an up-to-date, complete, and accurate Accessibility Conformance Report (ACR). The ACR must address the leading ICT accessibility standards: Section 508 (U.S.), EN 301 549 (EU), and W3C/WAI WCAG. The ACR must include the latest version of the Voluntary Product Accessibility Template (VPAT®), which can be obtained from the Information Technology Industry Council (ITI) website (https://www.itic.org/).

50.3 For digital tools, vendors are required to submit an accessibility conformance report at the time of proposal or bid that includes a Voluntary Product Accessibility Template for any invitation for bids, requests for proposals, procurement contracts, grants, or modifications to contracts or grants. The accessibility conformance report must explain how information and communication technology products, including software, electronic content, and support documentation, conform to the most recent ICT accessibility standards: Section 508 (U.S.), EN 301 549 (EU), and W3C/WAI WCAG. The instructions and the required forms can be found at the General Services Administration (GSA) Section 508 website at https://www.section508.gov/sell/how-to-create-acr-with-vpat/.

50.4 **Vendor Notice of Equivalent Access Standards**

In accordance with Md. Code Ann., Educ., § 7-910, "equivalent access" includes the ability to receive, use, and manipulate information and operate controls necessary to access and use information technology, including by nonvisual means, so that a student with disabilities can access the same services as a student without disabilities with substantially equivalent ease of use.

"Equivalent access" includes:

1. Keyboard controls used for input and synthesized speech;
2. Braille; and
3. Other audible or tactile means used for output.

"Nonvisual access" means the ability to receive, use, and manipulate information and operate controls necessary to access information and communications technology through keyboard controls, synthesized speech, braille, or other methods not requiring sight.

50.5 **Accessibility Indemnification and Guarantees**

50.5.1 The Vendor agrees to indemnify and hold harmless HCPS from any costs, expenses, liabilities, or obligations arising from accessibility-related issues involving the digital tools provided under this contract. This indemnification includes the defense of any legal action or proceedings alleging non-compliance with federal or State of Maryland accessibility laws and regulations and payment of any resulting liabilities. This clause will survive the termination of the contract.

50.5.2 Vendors failing to meet the equivalent access standards established under Subsection (a)(2) of Section 508 of the federal Rehabilitation Act of 1973 or WCAG 2.1 Level AA may face civil penalties set forth in Md. Code Ann., Educ., § 7-910.

50.5.3 For all technology based instructional products, online platforms, and digital tools, Vendors must maintain and improve their digital accessibility in compliance with evolving standards and best practices. Vendors will provide a listing of timelines for expected improvements to the programs. Vendors will establish a mechanism for users to report accessibility issues and ensure prompt resolution of reported problems.

50.6 **Third-Party Technology**

The Vendor acknowledges that supplying third-party technology does not exempt the Vendor from ensuring product compliance with this clause. The Vendor bears sole responsibility for determining the accessibility of such technology and must ensure that it can be edited or remediated as necessary to comply with accessibility standards.

51.0 FORCE MAJEURE

51.1 A party shall not be liable for any failure of or delay in the performance of this agreement for the period that such failure or delay is beyond the reasonable control of a party, materially affects the performance of any of its obligations under this agreement, and could not reasonably have been foreseen or provided against, but will not be excused for failure or delay resulting from only general economic conditions or other general market effects.

51.2 The list of events to be included is a matter of negotiation between the parties. Such causes may include, but are not limited to, acts of God, nature or the public enemy, terrorism, invasion, insurrection, order of court, judge, or civil authority, strike, stoppage of labor, riot, and unusually severe weather, significant fires, floods, earthquakes, storms, epidemics, pandemics, quarantine restrictions, strikes, freight embargos, government regulation, or governmental authorities, and delays which are not caused by any act or omission.

51.3 If either party is delayed by force majeure, the time of contract completion may be extended by contract modification, for a period of time equal to that delay caused under this condition. HCPS may also consider requests for price increase for raw materials that are directly attributable to the cause of delay. HCPS reserves the right to cancel the contract and/or purchase materials, equipment or services from the best available source during the time of force majeure, and Contractor shall have no recourse against HCPS. Further, except for payment of sums due, neither party shall be liable to the other or deemed in default under this contract, if and to the extent that such party's performance of this contract is prevented by reason of force majeure as defined herein.

Board of Education of Harford County, Maryland
Procurement Department
102 South Hickory Avenue, Third Floor, Suite 310
Bel Air, Maryland 21014

INSURANCE REQUIREMENTS
Construction General

1. **General Insurance Requirements**

1.1 The Vendor shall not commence any supply, delivery or installation of any products or materials purchased by the Board of Education of Harford County (the Board) under this Contract until the Vendor has obtained at the Vendor's own expense all of the insurance as required hereunder and such insurance has been approved by the Board; nor shall the Vendor allow any Subcontractor to commence work on any subcontract until all insurance required of the Subcontractor has been so obtained and approved by the Vendor. Approval of insurance required of the Vendor will be granted only after submission to the Board of original certificates of insurance signed by authorized representatives of the insurers or, at the Board's request, certified copies of the required insurance policies.

1.2 Insurance as required hereunder shall be in force throughout the term of the Contract and, in accordance with 2.1.1.iii., for two years after final payment by the Board under this Contract. Original certificates signed by authorized representatives of the insurers or, at the Board's request, certified copies of insurance policies, evidencing that the required insurance is in effect, shall be maintained with the Board throughout the term of the Contract and for two years after final payment by the Board under this Contract.

1.3 The Vendor shall require all Subcontractors to maintain during the term of the Contract commercial general liability insurance, business auto liability insurance, and workers compensation and employers liability insurance to the same extent required of the Vendor in 2.1.1, 2.1.2 and 2.1.3 unless any such requirement is expressly waived or amended by the Board in writing. If any Subcontractor is storing, transporting, and/or delivering the products or materials purchased by the Board under this Contract, the Vendor shall require such Subcontractor(s) to maintain during the term of the Contract transportation (cargo) insurance and employee dishonesty insurance to the same extent required of the Vendor in 3.1 and 3.2. The Vendor shall furnish Subcontractors' certificates of insurance to the Board immediately upon request.

1.4 All insurance policies required hereunder shall be endorsed to provide that the policy is not subject to cancellation, non-renewal or material reduction in cooh noverage until sixty (60) days prior written notice has been given to the Board.

1.5 No acceptance and/or approval of any insurance by the Board shall be construed as relieving or excusing the Vendor from any liability or obligation imposed upon the Vendor by the provisions of this Contract.

1.6 If the Vendor does not meet the insurance requirements of this Contract, the Vendor shall forward a written request to the Board for a waiver in writing of the insurance requirement(s) not met or approval in writing of alternate insurance coverage, self-insurance, or group self-insurance arrangements. If the Board denies the request, the Vendor must comply with the insurance requirements as specified in this Contract.

1.7 All required insurance coverages must be underwritten by insurers allowed to do business in the State of Maryland and acceptable to the Board. The insurers must also have a policyholders' rating of "A-" or better, and a financial size of "Class VII" or better in the latest evaluation by A. M. Best Company, unless Board grants specific approval for an exception. The Board hereby grants specific approval for the acquisition of workers compensation and employers liability insurance from the Injured Workers Insurance Fund of Maryland.

1.8 Any deductibles or retentions in excess of $10,000 shall be disclosed by the Vendor, and are subject to Board's written approval. Any deductible or retention amounts elected by the Vendor or imposed by the Vendor's insurer(s) shall be the sole responsibility of the Vendor.

1.9 Any and all return premiums and/or dividends for insurance or coverage directly charged to the Board by the Vendor in connection with this Contract shall belong to and be payable to the Board.

1.10 If the Board is damaged by the failure or neglect of the Vendor to purchase and maintain insurance as described and required herein, without so notifying the Board, then the Vendor shall bear all reasonable costs properly attributable thereto.

2. **Vendor's Liability Insurance**

2.1 The Vendor shall purchase and maintain the following insurance coverages at not less than the limits specified below or required by law, whichever is greater:

2.1.1 Commercial general liability insurance or its equivalent for bodily injury, personal injury and property damage including loss of use, with minimum limits of:

$1,000,000	Each Occurrence;
$1,000,000	Personal and Adv Injury;
$2,000,000	General Aggregate; and
$2,000,000	Products/Completed Operations Aggregate

This insurance shall include coverage for all of the following:

i. Liability arising from premises and operations;
ii. Liability arising from the actions of independent contractors;
iii. Liability arising from products and completed operations with such coverage to be maintained for two years after final payment by the Board under this Contract; and
iv. Contractual liability protection for the Vendor from bodily injury and property damage claims arising out of liability assumed under this Contract.

2.1.2 Business auto liability insurance or its equivalent with a minimum limit of **$1,000,000** per accident and including coverage for all of the following:

i. Liability arising out of the ownership, maintenance or use of any auto (if no owned autos, then hired and non-owned autos only); and
ii. Automobile contractual liability.

2.1.3 Workers compensation insurance or its equivalent with statutory benefits as required by any state or Federal law, including standard "other states" coverage; employers liability insurance or its equivalent with minimum limits of:

$100,000	Each accident for bodily injury by accident;
$100,000	Each employee for bodily injury by disease; and
$500,000	Policy limit for bodily injury by disease.

2.1.4 Umbrella excess liability or excess liability insurance or its equivalent with minimum limits of:

$5,000,000	Per occurrence;
$5,000,000	Aggregate for other than products/completed operations and auto liability; and
$5,000,000	Products/completed operations aggregate.

And including all of the following coverages on the applicable schedule of underlying insurance:

i. Commercial general liability;
ii. Business auto liability; and
iii. Employers liability

2.1.5 Contractors pollution liability insurance or its equivalent for bodily injury, property damage, including loss of use, and clean -up costs on and off the Project site, with minimum limits of:

$ 1,000,000	Each Pollution Incident; and
$ 2,000,000	Annual Aggregate.

2.1.6 The Board of Education of Harford County and its elected and appointed officials, officers, employees and authorized volunteers shall be named as additional insureds on the Vendor's commercial general liability insurance and umbrella excess or excess liability insurance policies, if any, with respect to liability arising out of the products and/or materials, their installation or delivery, or related services provided under this Contract by Vendor. Such coverage shall extend to cover the additional insured(s) for liability arising out of the following:

i. On-going operations;

ii. Board's general supervision of installation, delivery and/or other services as provided by the Vendor under this Contract; and
iii. Products and completed operations.

The commercial general liability policy and the umbrella excess liability or excess liability policies, if required herein, must include additional insured language, which shall afford liability coverage for all of the exposures listed above in i., ii. and iii., as follows:

"The Board of Education of Harford County and its elected and appointed officials, officers, employees and authorized volunteers are named as additional insureds on this commercial general liability insurance with respect to liability arising out of the services provided by the Named Insured under Contract: _____(Enter specific identifying information such as project name, Board's contract number and/or date of contract)."

<u>Special Notes:</u> ISO form CG 2026 12/19 or its Equivalent, entitled "Additional Insured – Owners, Lessees or Contractors – Scheduled Person or Organization" (previously Forms A and B respectively) are <u>NOT ACCEPTABLE</u>. ISO form CG 2026 entitled "Additional Insured – Designated Person or Organization" <u>or</u> a manuscript endorsement with the above wording is required.

2.1.7 Insurance or self-insurance provided to the Board of Education of Harford County and its elected and appointed officials, officers, employees and authorized volunteers under any Vendor's liability insurance of self-insurance required herein, including, but not limited to, umbrella and excess liability or excess liability policies, shall apply separately to each insured against whom claim is made or suit is brought, except with respect to the limits of insurance or self-insurance. (Any cross suits or cross liability exclusion shall be deleted from Vendor's liability insurance policies required herein.)

2.1.8 Insurance or self-insurance provided to the Board of Education of Harford County and its elected and appointed officials, officers, employees and authorized volunteers as specified herein shall be primary, and any other insurance, self-insurance, coverage or indemnity available to the Board and its elected and appointed officials, officers, employees and authorized volunteers shall be excess of and non-contributory with insurance of self-insurance provided to the Board and its elected and appointed officials, officers, employees and authorized volunteers as specified herein.

2.2 If any liability insurance purchased by the Vendor has been issued on a "claims made" basis, the Vendor must comply with the following additional conditions:

i. The Vendor shall agree to provide certificates of insurance evidencing the above coverages for a period of two years after final payment by the Board under this Contract. Such certificates shall evidence a retroactive date no later than the inception date of this Contract; or
ii. The Vendor shall purchase an extended (minimum two years) reporting period endorsement for each such "claims made" policy in force as of the expiration or termination date of this Contract and evidence the purchase of this extended reporting period endorsement by means of a certificate of insurance or a copy of the endorsement itself. Such certificate or copy of the endorsement shall evidence a retroactive date no later than the inception date of this Contract.

3. **<u>Vendor's Property Insurance</u>**

3.1 The Vendor (or Subcontractor) storing, transporting and/or delivering the products or materials purchase by the Board under this Contract shall purchase and maintain transportation (cargo) insurance on incoming goods in its care, custody or control, while such property is being loaded, is in transit, is being unloaded and until such time property is set at its final destination.

Such insurance shall value incoming goods in transit at the amount of the selling invoice plus prepaid or advanced freight charges. Property not under invoice shall be valued at the cost to repair or replace the lost or damaged incoming goods. Such insurance shall be written at per conveyance and per occurrence limits equal to or in excess of the total selling price value of the largest shipment of incoming goods purchased under this Contract or at other limits acceptable to the Board.

3.2 The Vendor (or Subcontractor) storing, transporting and/or delivering the products or materials purchased by the Board under this Contract shall purchase and maintain blanket employee dishonesty insurance, which

shall pay for loss of the products or materials purchased by the Board under this Contract when caused by the dishonest acts of the Vendor's (or subcontractor's) employees, at a limit equal to or in excess of the total selling price value of the largest shipment of incoming goods purchased under this Contract or at another limit acceptable to the Board.

3.3 The Vendor (or Subcontractor) storing, transporting and/or delivering the products or materials purchased by the Board under this Contract shall be responsible for payment of any deductibles applicable under this transportation insurance, employee dishonesty insurance or other property insurance applicable to the incoming goods.

4. **Indemnification**

To the fullest extent permitted by law, Vendor agrees to defend, indemnify, pay on behalf of and save harmless the Board of Education of Harford County, its elected and appointed officials, agents, employees and authorized volunteers against any and all claims, liability, demands, suits or loss, including attorneys' fees and all other costs connected therewith, arising out of or connected to the supply, delivery or installation of any products or materials provided by Vendor under this Contract.

5. **Waiver of Subrogation**

To the fullest extent permitted by law, the Vendor and its invitees, employees, officials, volunteers, agents and representatives waive any right of recovery against the Board of Education of Harford County for any and all claims, liability, loss, damage, costs or expense (including attorneys' fees) arising out of the supply, delivery or installation of any products or materials provided by Vendor under this Contract. Vendor specifically waives any right of recovery against the Board and its elected and appointed officials, officers, volunteers, agents and employees for personal injury (and any resulting loss of income) suffered while working on behalf of the Board as an independent contractor. Such waiver shall apply regardless of the cause of origin of the injury, loss or damage, including the negligence of the Board and its elected and appointed officials, officers, volunteers, agents and employees. The Vendor shall advise its insurers of the foregoing.

6. **Acknowledgment of Vendor's Independent Contractor Status and no Coverage For Vendor Under Board's Workers Compensation Coverage**

Vendor hereby acknowledges its status as an independent contractor while supplying, delivering or installing products or materials on behalf of the Board and that the Board's workers compensation coverage or self-insurance is not intended to and will not respond to cover any medical or indemnity loss arising out of injury to the Vendor or its employees during the Vendor's provision of goods or services to the Board. To the fullest extent permitted by law, the Vendor specifically waives any right of recovery against the Board and its elected and appointed officials, officers, volunteers, agents and employees for personal injury (and any resulting loss of income) suffered during the Vendor's provision of goods or services as an independent contractor for the Board. Such waiver shall apply regardless of the cause of original of the injury, loss or damage, including the negligence of the Board and its elected and appointed officials, officers, volunteers, agents and employees. The Vendor shall advise its insurers of the foregoing.

7. **Damage To Property of The Vendor And Its Invitees**

To the fullest extent permitted by law, the Vendor shall be solely responsible for any loss or damage to property of the Vendor or its invitees, employees, officials, volunteers, agents and representatives while such property is on, at or adjacent to the premises of the Board.

HARFORD COUNTY PUBLIC SCHOOLS
102 South Hickory Avenue
Bel Air, MD 21014

BID SPECIFICATIONS

BID #27-JHP-004

Stormwater Repairs at Forest Lakes Elementary
and North Harford Middle Schools

1. **INTENT**

1.1 These specifications in addition to and/or in place of similar paragraphs in the Board of Education of Harford County (hereafter referred to as Harford County Public Schools or HCPS), Instruction to Bidders, are intended to furnish all necessary permits, plant, labor, equipment, materials, supervision, tools, insurance, services, and all related incidentals required to perform stormwater repairs at the following locations:

1.1.1 Forest Lakes Elementary
100 Osborne Parkway
Forest Hill, MD 21050

1.1.2 North Harford Middle
122 Pylesville Road
Pylesville, MD 21132

1.2 It is the intent of these specifications to provide prospective bidders with complete information relative to the total performance of any resulting Contract. Bidders are obligated to read and understand all parts of this Invitation for Bid and to obtain clarification of any part not thoroughly understood.

1.3 The contract resulting from this solicitation will be coordinated through the Facilities Department.

2. **SCOPE OF WORK**

2.1 This solicitation and the specifications that follow are being offered to qualify and select a contractor to furnish all permits, plant, labor, equipment, materials, supervision, tools, insurance, services, and all related incidentals required to perform all work necessary to provide stormwater repairs at Forest Lakes and North Harford Middle Schools. The requirements outlined herein are intended as an aid to acquaint Bidders with what could be required to execute the work on this contract. These specifications will serve as the source documents for services for the Contract.

2.2 All work shall be approved by HCPS Facilities Department. HCPS reserves the right of final approval for any work at the time of job completion. If the work is not acceptable, the Awarded Bidder will be called in to review and correct all problem areas without additional cost to HCPS. Any work necessary will be performed in accordance with a schedule jointly agreed upon. Failure of the Awarded Bidder to correct deficiencies, in a timely manner, may result in HCPS contracting with another vendor to correct deficiencies. The Awarded Bidder may then be responsible for the associated cost(s).

3. **TECHNICAL SPECIFICATIONS**

Please find attached the following:

3.1 Engineer Specifications & Drawings – Forest Lakes Elementary

3.1.1 Title Page
3.1.2 Site and Sediment Control Plan
3.1.3 Stormwater Management Details
3.1.4 SWM Pond Notes
3.1.5 Sediment Control Notes and Details

3.2 Engineer Specifications & Drawings – North Harford Middle

3.2.1 Title Page
3.2.2 SWM and Sediment Control Plan
3.2.3 Stormwater Management Details
3.2.4 Stormwater Management Details
3.2.5 Pond Notes and Details
3.2.6 Sediment Control Notes and Details

4. PRE-BID CONFERENCE

4.1 A pre-bid conference is scheduled to begin at **2:30 pm local time on Wednesday, October 28, 2026**, at Hickory Annex College located at 2209 Conowingo Road, Bel Air, MD 21015. Prospective bidders are required to sign in as visitors at the Main Office. **Potential bidders are strongly encouraged to attend.**

4.2 Bidders are responsible for site visitation and confirmation of existing conditions.

4.3 Failure to become familiar with the site will not relieve a successful bidder of his obligation to furnish all materials, labor, and services necessary to carry out the provisions of the specifications herein.

4.4 The Awarded Bidder shall be responsible for total requirements and must submit their bid based on a completed installation ready for its intended use.

4.5 If needed, an additional site inspection may be made and can be scheduled through the Plant Chief – Operations Trades of the HCPS Facilities Department, Paul Kline at 410-638-4088 or Paul.Kline@hcps.org. Any site inspection shall not impact student instruction.

4.6 If Harford County Public Schools and Administrative Offices are closed due to weather or emergency, the pre-bid conference will be rescheduled and posted on the HCPS website at www.hcps.org.

5. GENERAL INFORMATION

5.1 It may be necessary for part of the work to be done during the regular school year. Proper identification is a necessity at all times. Safety and security for students and staff is a priority. Contractors and visitors must report to the main office, present photo identification and sign in when entering the building. School-assigned visitor badges must be worn at all times.

5.2 It will be necessary for the Contractor to coordinate with the Plant Chief – Operations Trades of the HCPS Facilities Department to set up a schedule of work during the entire course of the job, so as not to interfere with the normal operation of the school.

5.3 All passageways and means of egress must be kept open during school hours except where special permission is granted.

5.4 Normal work hours are from 7:00 am until 4:00 pm, local time, Monday through Friday, except holidays. To alter the working hours, contact the Project Manager to make any adjustments.

6. SPECIFIC CONDITIONS

6.1 It is the sole responsibility of the Bidder to call to the attention of Jennifer Horner at Jennifer.Horner@hcps.org, of any discrepancies in specifications, **IN WRITING**, at least **FIVE (5)** working days **PRIOR TO THE OPENING OF THE BID.** Any errors, omissions or incompatibilities noted after the bid opening shall be the Bidder's responsibility and shall in no way release them from performing all work in accordance with good practices and in accordance with the true meaning and intent of the Scope of Work and the Specifications for this project.

6.2 No bid will be considered from any person, firm or corporation who has defaulted in the performance of any contract or agreement made with Harford County Public Schools, or conclusively shown to have failed to perform, or complete on time, a contract(s) or project(s) of similar nature. HCPS will consider past performance, i.e. the quality of services of bidders who have previously contracted with HCPS for similar services.

6.3 The Awarded Bidder shall, without additional cost to Harford County Public Schools, be responsible for obtaining all necessary licenses and permits. The Awarded Bidder shall comply with all FEDERAL, STATE, AND LOCAL LAWS, CODES AND REGULATIONS in connection with the performance of the work. Licenses and permits shall apply to the Contract throughout and shall be deemed to be included in the Contract the same as through herein written out in full.

6.4 All work is to be handled in complete compliance with OSHA and MOSHA requirements. Every effort is to be made to ensure the safety of all individuals during work, as well as, during operation.

6.5 Awarded Bidder(s) shall assume full responsibility and liability for protection of workers and persons occupying areas adjacent to the delivery and pick-up sites, except and unless damage, loss, injury or illness is caused by the negligence or tortious misconduct of HCPS employees.

6.6 Awarded Bidder(s) shall have available, copies of all applicable codes, regulations, standards, documents and this specification.

6.7 Where conflicts among the requirements of the codes, regulations, standards, documents and this specification exist, the most stringent requirement shall be utilized by the Awarded Bidder(s).

6.8 All work shall be performed in a neat, workmanlike manner in full compliance with standards acceptable to the trade. Adequate precautions shall be taken for the safety of personnel and for prevention of damage or defacing of any portion of the building or property.

6.9 The Contractor shall be responsible for their work until its completion and final acceptance.

6.10 Storage of any tools, equipment or materials incidental to the performance of the Contract must be coordinated with the Plant Chief – Operations Trades of the HCPS Facilities Department and will be at the Contractor's risk. NO TOOLS, EQUIPMENT OR MATERIALS MAY BE STORED IN THE SCHOOL. The Contractor shall repair or replace any of the same, which may be damaged, lost or stolen without additional cost to HCPS.

6.11 All materials furnished in carrying out this contract shall be of the quality required by the specifications. Any unsatisfactory or damaged materials furnished shall be removed and satisfactorily replaced by the Contractor when notified in writing to do so by Harford County Public Schools. If the Contractor shall neglect or refuse to remove such unsatisfactory or damaged materials within a reasonable amount of time after the serving of the above-mentioned notice, Harford County Public Schools may remove said materials, or cause the same to be removed. And satisfactorily replaced by contract, or otherwise, as may be considered expedient, and the expense thereof shall be charged to the Contractor and such expense so charged shall be deducted from any money due or to become due under the Contract. No such rejected material shall be again offered for use on any contract with Harford County Public Schools.

6.12 All hazardous waste will be identified as defined by Federal, State and Local laws, regulations and guidelines currently in effect. Additionally, all hazardous waste resulting from work at this site under these specifications must be removed and properly disposed of in accordance with all applicable Federal, State and Local laws, guidelines and regulations.

6.13 The documents contained within this Invitation for Bid constitute the only terms and conditions agreed upon between HCPS and the Awarded Bidder. Modifications, alterations, changes or amendments must be agreed upon in writing and signed by both parties.

6.14 Any and all exceptions to the bid documents must be clearly noted at the time of bid submission and included under a separate submission labeled “Exceptions”. Exceptions may deem the bid non-responsive.

6.15 Bidders providing incomplete or inaccurate information to HCPS are subject to immediate termination of the contract or rejection of their bid as non-responsive.

6.16 Bidders are solely responsible for their expenses, if any, in preparing a response to this Invitation for Bid.

7. FORM OF PROPOSAL

7.1 All pricing must be submitted on the Bid Form; all blank spaces shall be filled in and properly signed.

7.2 Bidders do not need to bid on both projects. It is at their discretion whether they choose to bid on Forest Lakes Elementary, North Harford Middle, or both projects. Note the bonding documentation must be submitted for **EACH project**. **Failure to provide this documentation with your proposal will deem your bid as non-responsive.**

7.3 Due to possible changes and/or additions to the solicitation package, HCPS requests that bidders delay submission of their bid package until after the date that questions are due, to allow time for the possible issuance of an addendum. All changes will be processed through appropriate addenda.

8. AWARD

8.1 Harford County Public Schools intends to award to the lowest responsive and responsible bidder(s) for **each project**.

8.2 HCPS reserves the right to award by line item or in total or make no award. HCPS is not obligated, but reserves the right, to award to one or more responsive and responsible bidder(s) offering the lowest pricing and is deemed to be in the best interest of HCPS.

8.3 HCPS may reject any bid which contains omissions, altered forms, additions, or imposes conditions or offers alternate items. HCPS may make any award which is deemed in the best interest of Harford County Public Schools or make no award at all, at its sole discretion.

8.4 Harford County Public Schools reserves the right to accept or reject any or all bids and to waive any informalities in bids received whenever such rejection or waiver is in the best interest of HCPS.

8.5 Conditional or unbalanced bids will not be accepted and may be deemed non-responsive.

8.6 HCPS reserves the right to reject any bid if the evidence submitted by a bidder, or from the investigation of such bidder, fails to satisfy HCPS that such bidder is qualified to perform the obligations of the contract.

8.7 HCPS does not guarantee that all or any work will be done and reserves the right to reject all bids

and to re-bid at its sole discretion.

8.8 Submission of a bid, in response to this request, shall mean that the Bidder can complete all work "as specified" within the specified time frame.

8.9 HCPS reserves the right to add similar or related services to the Contract during its term. Any additional services, associated pricing, and other applicable terms shall be mutually agreed upon by HCPS and the Contractor. All additions to the Contract shall be documented through a written Contract Amendment executed by both parties.

8.10 HCPS reserves the right to add awarded bidder(s) to this contract, within one (1) year of contract award, if the initial awarded bidder(s) cannot fulfill all of the requirements.

8.11 HCPS reserves the right to utilize the services of the next favorably priced responsive and responsible bidder, if for any reason the preceding Awarded Bidder is unable to fulfill their contractual obligations within one (1) year of contract award.

8.12 In the event the Awarded Bidder(s) cannot deliver the services of the Contract in accordance with the specifications, HCPS reserves the right to purchase the services on the open market to assure the continued operation of HCPS. The difference in the open market cost and bid price will be at the expense of the Awarded Bidder.

9. PROJECT TIMELINE

Project shall start upon issuance of the Notice of Award and **must** be completed by **May 28, 2027.**

10. DISCOUNTS

It shall be the responsibility of the Awarded Bidder to provide notification of any promotional allowances, volume incentives, and/or rebates. The Awarded Bidder(s) shall also provide any necessary forms and documentation needed to redeem such discounts.

11. BILLING AND PAYMENT

11.1 Harford County Public Schools will issue a Purchase Order for work to be completed listed on the Bid Form.

11.2 Invoices must be submitted to the Accounts Payable Department via email to APInvoice@hcps.org, referencing the Contract and/or Purchase Order number.

11.3 A copy of all invoices are to be sent to the Facilities Department, Attention: Plant Chief – Operations Trades of the HCPS Facilities Department, 2209 Conowingo Road, Bel Air, MD 21015, referencing the contract number and/or Purchase Order number.

11.4 Invoice must reflect amount provided on the Purchase Order.

11.5 Awarded Bidder must accept payment by PCard, conventional check, or other electronic means at HCPS' option.

11.6 Standard HCPS payment terms are net thirty (30) days, after receipt of an approved invoice.

12. GUARANTEE/WARRANTY

12.1 From the date of acceptance of the items delivered, the Contractor shall unconditionally guarantee the materials of all equipment furnished by them, for a minimum period of one (1) year or throughout the manufacturer's warranty period, whichever is longer.

12.2 If within the guarantee period, any defects or signs of deterioration are noted, which, in the opinion of Harford County Public Schools are due to faulty design, upon notification, the Contractor, at his expense, shall repair and/or adjust the equipment or parts to correct the conditions, or he shall replace the part or entire unit to the complete satisfaction of HCPS. These repairs, replacements, or adjustments shall be made only at such times as designated by the authorized representative of HCPS and least detrimental to the school's program.

12.3 All warranties, expressed or implied, shall survive delivery, inspection, acceptance, and payment.

13. TAXES AND PERMITS

13.1 Sales to the State of Maryland or any of its political subdivisions are exempt from retail sales tax. However, contractors or builders purchasing tangible personal property in the performance of their contract for the construction, repair or alteration of real property for the State of Maryland or any of its political subdivisions are not tax exempt.

13.2 Awarded Bidder(s) shall obtain and pay for any permits required and provide a copy to HCPS as well as post a copy on site.

14. PROFESSIONALISM

14.1 HCPS requires all work to be completed utilizing "Professional Workmanship". HCPS shall monitor and examine the services provided and shall only accept "Professional Workmanship". The following shall be considered some reasons for immediate termination of a company.

14.1.1 Failure of the Awarded Bidder to have the required materials and equipment with them to execute a project without undue delay to leave the project and pick-up supplies or equipment. HCPS reserves the right to bring in any other contractor in order to complete work that is not complete in a timely fashion.

14.1.2 Failure of the Awarded Bidder to utilize qualified personnel to do the work for HCPS. The individuals doing the work at HCPS shall:

14.1.2.1 be properly trained and experienced to perform services as specified.

14.1.2.2 refrain from any comments or gestures to the students and/or staff; and refrain from making any comments and/or gestures to fellow workers that could be interpreted as inappropriate and/or obscene.

14.1.2.3 be dressed appropriately to work in a "school environment" with student, teacher, staff, and parents present. The employee shall prominently display the name of their company on a shirt or hat.

14.1.2.4 abide by the HCPS no smoking policy. HCPS maintains a Tobacco-Free environment. Furthermore, HCPS policy prohibits gambling, alcohol, drugs and obscene or abusive language.

14.2 Immediate termination of a company for not providing "Professional Workmanship" as determined by HCPS, using criteria determined by HCPS and not necessarily industry standards, shall result in:

14.2.1 Awarded Bidder being paid for all work completed to date. Any monies required to complete the repairs or installations in progress shall be deducted from those owed, prior to final payment. In the event the monies due exceed the amount HCPS owes that Awarded Bidder, the monies required to complete services in progress shall be owed HCPS by that Awarded Bidder.

15. SUBCONTRACTORS

15.1 All subcontractors, prior to their use by the Awarded Bidder in any HCPS facility, must be approved by HCPS. **Awarded Bidder shall submit with their bid a list of subcontractors that they will employ and utilize for HCPS work**. The responsibility for updating this list is the Awarded Bidder and utilization of a HCPS non-approved subcontractor is grounds for suspension or termination. This is in addition to any special provisions, which may apply as a result of MBE/WBE requirements, which may become part of this solicitation.

15.2 The Awarded Bidder shall give their constant personal attention to the faithful execution of this contract, shall keep the same under their own control, and shall not assign by power of attorney or otherwise, the work or any part thereof. The Awarded Bidder shall provide the name of the Subcontractor(s) they intend employing, the portion of the materials/labor to be furnished, their place of business, and such other information as requested by the Bid Specifications and/or HCPS. The information may be used in considering the potential performance capabilities of the Subcontractor(s).

16. BOND REQUIREMENTS

16.1 Bid Bond – The standard Form of "Bid Bond", Document No. A-310 issued by the American Institute of Architects shall be used by the Bidder. The amount of the bond shall be 5% of the Base Bid Sum without regard to any alternates. The original document should be mailed to 102 S. Hickory Avenue, Attn: Jennifer Horner - Procurement Department, Bel Air, MD 21014. **A copy of the Bid Bond shall be submitted with your electronic bid submittal, or your bid will be deemed non-responsive.**

16.2 Performance Bond and Payment Bond – The Contractor shall furnish a Performance Bond and Labor and Materials Payment Bond covering the faithful performance of the Contract and the payment of all obligations arising there under and complying with the requirements of Maryland law. Both bonds shall be in the amount of one hundred percent (100%) of the Contract amount and shall name the "Board of Education of Harford County" as obligee. **The Performance Bond and the Payment Bond shall be submitted in the format displayed in the attached documents. No other bond forms will be accepted.** Firms issuing bonds must be licensed to write bonds in the State of Maryland. The Contractor shall pay premiums for required bonds. Obtaining of bonds by Contractor shall be a condition precedent to effectuation of the Contract between the Owner and Contractor. If additional work is authorized, the amount of the bonds shall be increased to cover the value of the increased Contract sum. All bonds shall conform to the requirements of the Maryland Little Miller Act.

16.3 Upon the request of any person or entity appearing to be a potential beneficiary of bonds covering payment of obligations arising under the Contract, the Contractor shall promptly furnish a copy of the bonds or shall permit a copy to be made.

17. QUALIFICATION OF BIDDER

17.1 Bidder must have a minimum of five (5) years of experience related to stormwater and drainage improvements. Failure to provide this information on your Bid Form may deem your bid non-responsive.

17.2 All bidders must be registered and considered in "Good Standing" with the State Department of Assessment and Taxation (SDAT) (all fees, taxes, and penalties owed to Maryland are paid). Any respondent not considered in "Good Standing" may be deemed non-responsible. Visit the following website to ensure compliance or to register: https://egov.maryland.gov/businessexpress. (HCPS bears no responsibility for the accuracy, legality or content of the external site or for that of subsequent links. Contact the external site for answers to questions regarding its content.)

17.3 All bidders must not have any "Exclusions" (bidder cannot be debarred or suspended). If the indicator box is "green" and states "Entity" this vendor is not suspended or debarred. If a bidder's name does not appear after searching, the bidder does not have an "Exclusion". Visit the following website to ensure compliance: https://sam.gov/SAM/pages/public/index.jsf (HCPS bears no responsibility for accuracy, legality or content of the external site or for that of subsequent links. Contact the external site for answers to questions regarding its content). If the indicator box is "purple" and states "Exclusion" the bidder may be deemed non-responsible.

17.4 Bidders shall furnish to HCPS any requested information and data/documentation. HCPS reserves the right to reject any bid if the information or documentation submitted by the bidder or investigation of such bidder fails to satisfy HCPS that such bidder is properly qualified to carry out the obligations of the Contract and to complete all requirements contemplated therein.

17.5 Bidders shall complete and return with their bid the "Reference Form" included in this solicitation (see Bid Form – Reference Form). Bidders shall have a minimum of three (3) references completed from clients of similar size and needs, within the past three (3) years. Business Name, contact name, type of work performed, e-mail addresses and phone numbers are required. Failure to submit relevant references may deem bidder as non-responsible.

17.5.1 The references listed will be checked by HCPS. All references must include a contact person who can comment on your organization's ability to provide this service and their impression of how well your organization fulfilled its obligations under the contract. It is imperative that contact names and information be accurate. HCPS reserves the right to request additional references.

17.5.2 HCPS will not be responsible for errors, non-working phone numbers, inaccurate email addresses or persons no longer employed with the firm or do not respond.

18. CONTRACTOR RESPONSIBILITY

18.1 Contractors are **required** to register on eMaryland Marketplace Advantage (eMMA) at https://procurement.maryland.gov within five (5) days following notice of award. Maryland law requires local and state agencies to post award notices on eMaryland Marketplace Advantage. This cannot be done without the contractor's self-registration in the system. Registration is free. Failure to comply with this requirement may be considered grounds for default. It is recommended that any interested bidder register with eMaryland Marketplace Advantage regardless of the award outcome for this procurement as it is a valuable resource for bid notification for municipalities throughout Maryland.

18.2 The plans and specifications are intended to cover a complete project. It shall be distinctly understood that failure to mention any work which normally would be required to complete the project shall not relieve the Awarded Bidder of their responsibility to perform such work without extra payment.

18.3 The Awarded Bidder shall perform site visits to verify scope of the work with the Owner before ordering any materials or doing any work. No extra charge or compensation will be considered for any construction performed prior to this verification.

18.4 Note that the Awarded Bidder is responsible for all measurements. Errors and omissions will be the Awarded Bidder's responsibility.

18.5 The Owner has the right to inspect the site and perform testing of work and construction materials. The Awarded Bidder shall assist the Owner in performing such inspections.

18.6 Submit shop drawings and submittals as per the Technical Specifications.

19. PROCUREMENT ADMINISTRATOR

Jennifer Horner, CPPB, Procurement Supervisor, will administer the solicitation process. The Procurement Administrator will be the sole point of contact for purposes of this bid. Questions and inquiries should be e-mailed to the Procurement Administrator: Jennifer Horner, at Jennifer.Horner@hcps.org.

All questions must be e-mailed and received no later than 2:30 pm local time **November 4, 2026.** Questions will not be accepted by phone.

Questions that are deemed to be substantive in nature will be answered in writing, with both the question(s) and answer(s) being addressed in the form of an Addendum and posted on our website on or before **November 6, 2026** at www.hcps.org as well as eMaryland Marketplace Advantage.

HARFORD COUNTY PUBLIC SCHOOLS
102 South Hickory Avenue
Bel Air, MD 21014

CONTRACT SAMPLE

BID #27-JHP-004
Stormwater Repairs at Forest Lakes Elementary and North Harford High Schools

THIS AGREEMENT, made this _____ day of _____, 2026, by and between the Board of Education of Harford County, acting herein through its Superintendent, hereafter called "Owner" and _____, a corporation located at _____, hereinafter called "Contractor".

WITNESSETH: That for and in consideration of the payments and agreements hereinafter mentioned, to be made and performed by the OWNER, the CONTRACTOR, hereby agrees with the OWNER to commence and to furnish and deliver in accordance with the accompanying specifications, for the prices listed on the Bid Form.

Project shall start upon issuance of the Notice of Award and **must** be completed by **May 28, 2027.**

Hereinafter called the contract, in the amount of _____ provided, and all related work in connection therewith, under the terms as stated in the General and Special Conditions of the Bid Document and all related documents; and at their own proper cost and expense to furnish all the materials, supplies, machinery, equipment, tools, superintendence, labor, insurance and other accessories and services necessary to complete the said project in accordance with the conditions and prices stated in **Bid #27-JHP-004**, and printed or written explanatory matter thereof, the specifications and contract documents therefore as prepared by the Board of Education of Harford County, and as enumerated in the General Conditions, all of which are made a part hereof and collectively evidence and constitute the Contract.

I/WE certify that this bid is made without any previous understanding, agreement, or connection with any other person, firm, or corporation making a bid for the same supplies, and, in all respects, is fair and without collusion or fraud.

In compliance with the above and subject to all terms and conditions thereof, the undersigned offers and agrees, if the bid be awarded, to furnish items at the prices indicated within the time specified.

IN WITNESS WHEREOF, the parties to these presents have executed this Contract in two (2) counterparts, each of which shall be deemed an original.

Seal in Signature

_____
Board of Education of Harford County
Witness

_____
Date

Board of Education of Harford County

_____
Dyann R. Mack, Ed.D., Superintendent of Schools

_____
Board of Education of Harford County – Board President
(if over $100k)

Seal in Signature

_____
Authorized Contractor Signature

_____
Contractor Witness

_____
Company Name

_____
Street Address

_____
City, State, Zip

_____
Company Name

HARFORD COUNTY PUBLIC SCHOOLS
102 SOUTH HICKORY AVENUE
BEL AIR, MD 21014

CHECK LIST

BID #27-JHP-004

Stormwater Repairs at Forest Lakes Elementary and North Harford Middle Schools

- ☐ Signed and included all Addenda (if applicable)
- ☐ Reviewed and provided a sample Certificate of Insurance (Proving coverages and limits as specified in "Insurance Requirements" **or** a letter committing to obtain the required coverages and limits as specified)
- ☐ Provided a list of subcontractors (Section 15.1)
- ☐ Register on eMaryland Marketplace Advantage at https://procurement.maryland.gov (Section 18.1)
- ☐ **Included a copy of the Bid Bond and mailed the original document to 102 S. Hickory Avenue, Attn: BUYER NAME - Procurement Department, Bel Air, MD 21014** (Section 16.1)* (if applicable)
- ☐ Completed and Submitted Bid Form
- ☐ Completed and Submitted Reference Form
- ☐ Signed and included State of Maryland Anti-Bribery
- ☐ Signed and included Debarment, Suspension, Ineligibility, and Voluntary Exclusion
- ☐ Signed and included Employment of Sex Offenders and Other Criminal Offenders Affidavit

Items that are in bold and indicated with an (*) above <u>must</u> be submitted in proper form and content at the time of bid opening or the bid may be deemed non-responsive.

Acknowledgement of Addenda (if applicable)
I/We acknowledge receipt of the following Addenda:

No. _____, Dated _____

No. _____, Dated _____

No. _____, Dated _____

No. _____, Dated _____

_____
Company Name

HARFORD COUNTY PUBLIC SCHOOLS
102 SOUTH HICKORY AVENUE
BEL AIR, MD 21014

BID FORM

BID #27-JHP-004

Stormwater Repairs at Forest Lakes Elementary and North Harford Middle Schools

In compliance with the Invitation for Bid, and subject to all terms and conditions thereof, the undersigned offers and agrees to furnish all necessary permits, labor, equipment, materials, supervision, tools, insurance, services, and all related incidentals required to provide stormwater repairs at Forest Lakes Elementary and North Harford Middle Schools, in full compliance with the accompanying specifications in accordance with the price listed below.

Project	Description	Amount
1	**Total Price for Stormwater Repairs at Forest Lakes Elementary School**	**$**
Estimated Lead Time for Completion of Scope of Work		

2	**Total Price for Stormwater Repairs at North Harford Middle School**	**$**
Estimated Lead Time for Completion of Scope of Work		

ADDITIONAL INFORMATION:

Contract Contact/Sales Rep Name:	
Phone Number:	
E-Mail Address:	

FORM OF PAYMENT (mark those you will accept)*:

	Do you accept credit card?	
	Is there a fee for using a credit card?	
	If yes, what is the fee amount?	
	ACH Payment	
	Conventional Check	

***NOTE**: Must request changes to payment method or bank information in writing.

_____
Company Name

ANY EXCEPTIONS TO THE SPECIFICATIONS MUST BE CLEARLY INDICATED.

ANY ALTERATIONS ON THE PROPOSED COST DATA ON THE BID FORM MUST BE INITIALED IN SCRIPT, IN INK, BY THE PERSON SIGNING THE BID.

COMPANY	NAME (TYPE OR PRINT)
ADDRESS	TITLE
CITY, STATE and ZIP	AUTHORIZED REPRESENTATIVE SIGNATURE
TELEPHONE	DATE
FEDERAL TAX ID NUMBER	E-MAIL ADDRESS

_____
Company Name

HARFORD COUNTY PUBLIC SCHOOLS
102 SOUTH HICKORY AVENUE
BEL AIR, MD 21014

REFERENCE FORM

BID #27-JHP-004

Stormwater Repairs at Forest Lakes Elementary and North Harford Middle Schools

List at least three (3) projects/contracts of similar size and scope within the past three (3) years. Attach additional pages if necessary. **Please type or print clearly.**

	Reference 1	**Reference 2**	**Reference 3**
Name of Organization			
Address			
Description of Project or Services Provided			
Dollar Amount			
Contact Person			
Phone Number			
Email Address			

HARFORD COUNTY PUBLIC SCHOOLS

Dyann R. Mack, Ed.D., Superintendent 102 S. Hickory Ave, Bel Air, Maryland 21014

STATE OF MARYLAND ANTI-BRIBERY AFFIDAVIT

I HEREBY CERTIFY that:

1. I am the _____ and the duly authorized representative of the firm of _____ whose address is _____ and that I possess the legal authority to make this affidavit on behalf of myself and the firm for which I am acting.

2. Except as described in Paragraph 3 below, neither I, nor to the best of my knowledge, the above firm, nor any of its officers, directors, partners, or any of its employees directly involved in obtaining contracts with the State or any county, bi-county, or multi-county agency, or subdivision of the State have been convicted of, or have pleaded nolo contendre to a charge of, or have during the course of an official investigation or other proceeding admitted, in writing or under oath, acts or omissions committed, which constitute bribery, attempted bribery, or conspiracy to bribe, or any other offense enumerated in Section 16-203 of the State Finance and Procurement Article (S.F.) of the Maryland Code, or civil antitrust violations under the laws of any state or federal government.

3. (On the line below and using additional attachments as necessary, state *"none"* or, as appropriate, list any conviction, plea, or admission described in Paragraph 2 above, with the date; court, official, or administrative body; and the sentence or disposition, if any.)

   _____

4. I affirm that neither I, the above firm, nor any person or entity who has an ownership or beneficial interest in the firm, nor any of its officers, directors, partners, employees, or subcontractors, is currently suspended or debarred from participation in any public contract in the State of Maryland or federally.

5. I further affirm that neither I nor the above firm will knowingly enter into a contract or subcontract with a person or entity that is suspended or debarred from public contracting under State or federal law.

I acknowledge that, if the representations set forth in this affidavit are not true and correct, Harford County Public Schools may terminate any contract awarded and take any other appropriate action.

I do solemnly declare and affirm under the penalties of perjury that the contents of this affidavit are true and correct.

_____ _____
Signature Witness

_____
Date

HARFORD COUNTY PUBLIC SCHOOLS

Dyann R. Mack, Ed.D., Superintendent 102 S. Hickory Ave, Bel Air, Maryland 21014

CERTIFICATION REGARDING U.S. GOVERNMENT DEBARMENT, SUSPENSION, INELIGIBILITY, AND VOLUNTARY EXCLUSION

This certification is required by the regulations implementing Executive Order 12549, Debarment and Suspension, 34 CFR, part 85, Section 85.510, and the Maryland State Finance and Procurement Code, Title 16, Subtitle 3.

(1) The prospective participant certifies, by submission of this proposal, that neither it nor its principals are presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal, State, or local public department or agency.

(2) Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

(3) False certification may subject the participant to contract termination, suspension, debarment, and other remedies available under Maryland State law and school system policies.

_____

Name and Title of Authorized Agency/Organization Representative

_____ _____

Signature Date

_____

Agency/Organization

*Above certification instituted by the U. S. Department of Education for all grantees and subgrantees as of fiscal year 1990.

HARFORD COUNTY PUBLIC SCHOOLS

EMPLOYMENT OF SEX OFFENDERS AND OTHER CRIMINAL OFFENDERS AFFIDAVIT

The following pages summarize criminal offender legislation applicable to Maryland Public Schools. The Affidavit below affirms your understanding of the requirements related to these Laws.

I AFFIRM THAT:

I am aware of, and the business listed below will comply with, the following requirements of Section 11-722 of the Criminal Procedure Article, and Section 6-113 of the Education Article, Annotated Code of Maryland:

A. Maryland Law requires sex offenders to register with the State and with the local law enforcement agency in the county in which they will reside, work, or attend school. An HCPS contractor agrees and acknowledges that it/he/she is prohibited from knowingly employing an individual to work at a school if the individual is registered as a sex offender pursuant to Section 11-704 of the Criminal Procedures Article of Maryland Code.

B. An HCPS contractor or subcontractor may not knowingly assign an employee to work on school premises with direct, unsupervised, and uncontrolled access to children, if the employee has been convicted of:

1) Section 3-307 of the Criminal Law Article, Maryland Annotated Code, *Sexual Offense in the Third Degree*;
2) Section 3-308 of the Criminal Law Article, Maryland Annotated Code, *Sexual Offense in the Fourth Degree*;
3) An offense under the laws of another state that would constitute a violation of Sections 3-307 or 3-308 of the Criminal Law Article if committed in Maryland;
4) Child sexual abuse under Section 3-602 of the Criminal Law Article, Annotated Code of Maryland;
5) An offense under the laws of another state that would constitute child sexual abuse under Section 3-602 of the Criminal Law Article if committed in Maryland;
6) A crime of violence as defined in Section 14-101 of the Criminal Law Article, Annotated Code of Maryland; or
7) An offense under the laws of another state that would constitute a crime of violence under Section 14-101 of the Criminal Law Article if committed in Maryland.
8) Contractors shall comply with the requirements of Section 6-113.2 of the Education Article, Annotated Code of Maryland, , regarding screening of applicants for employment.

Violations of any of these provisions may result in Termination for Cause.

I AFFIRM UNDER THE PENALTIES OF PERJURY THAT THE CONTENTS OF THIS AFFIDAVIT ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE, INFORMATION, AND BELIEF.

Date: _____

By: _____ (printed name of Authorized Representative and affiant)

_____ (signature of Authorized Representative and affiant)

_____ (Company Name)

PERFORMANCE BOND

Principal	Business Address of Principal
Surety A corporation of the State of _____ And authorized to do business in the State of Maryland	Obligee Board of Education of Harford County
Penal Sum of Bond (express in words And figures)	Date of Contract _____, 20___
Description of Contract Contract Number:	Date of Bond Executed _____, 20___

KNOW ALL MEN BY THESE PRESENTS, That we, the Principal named above and Surety named above, are held and firmly bound unto the Obligee named above in the Penal Sum of this Performance Bond stated above, for the payment of which Penal Sum we bind ourselves, our heirs, executors, administrators, personal representatives, successors, and assigns, jointly and severally, firmly by these presents. However, where Surety is composed of corporations acting as co-sureties, we, the co-sureties, bind ourselves, our successors, and assigns, in such Penal Sum jointly and severally as well as severally only for the purpose of allowing a joint action or actions against any or all of us, and for all other purposes each co-surety binds itself, jointly and severally with the Principal, for the payment of such sum as appears above its name below, but if no limit of liability is indicated, the limit of such liability shall be the full amount of the Penal Sum.

WHEREAS, Principal has entered into or will enter into a contract with the Board of Education for Harford County, Maryland ("Board"), which contract is described and dated as shown above, and incorporated herein by reference. The contract and all items incorporated into the contract, together with any and all changes, extensions of time, alterations, modifications, or additions to the contract or to the work to be performed thereunder or to the Plans, Specifications, and Special Provisions, or any of them, or to any other items incorporated into the contract shall hereinafter be referred to as "the Contract."

WHEREAS, it is one of the conditions precedent to the final award of the Contract that these presents be executed.

NOW, THEREFORE, during the original term of said Contract, during any extensions thereto that may be granted by the Board, and during the guarantee and warranty period, if any, required under the contract, unless otherwise stated therein, this, Performance Bond shall remain in full force and effect unless and until the following terms and conditions are met:

1. Principal shall well and truly perform the Contract; and

2. Principal and Surety shall comply with the terms and conditions in this Performance Bond.

Whenever Principal shall be declared by the Board to be in default under the Contract, the Surety may, within 15 days after notice of default from the Board, notify the Board of its election to either promptly proceed to remedy the default or promptly proceed to complete the contract in accordance with and subject to its terms and conditions. In event the Surety does not elect to exercise either of the above stated options, then the Board thereupon shall have the remaining contract work completed, Surety to remain liable hereunder for all expenses of completion up to but not exceeding the penal sum stated above.

The Surety hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Contract or to the work to be performed thereunder or the Specifications accompanying the same shall in any way affect its obligations on this Performance Bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the Contract, or to the work or to the Specifications.

This Performance Bond shall be governed by and construed in accordance with Maryland's Little Miller Act (Md. State Fin. & Proc. Code Ann. Sec. 17-101 et seq.), and the laws of the State of Maryland and any reference herein to Principal or Surety in the singular shall include all entities in the plural who or which are signatories under the Principal or Surety heading below.

IN WITNESS WHEREOF, Principal and Surety have set their hands and seals to this Performance Bond. If any individual is a signatory under the Principal heading below, then each such individual has signed below on his or her own behalf, has set forth below the name of the firm, if any, in whose name he or she is doing business, and has set forth below his or her title as a sole proprietor. If any partnership or joint venture is a signatory under the Principal heading below, then all members of each such partnership or Joint venture have signed below, each member has set forth below his or her title as a general partner, limited partner, or member of joint venture, whichever is applicable. If any corporation is a signatory under the Principal or Surety heading below, then each such corporation has caused the following: the corporation's name to be set forth below, a duly authorized representative of the corporation to affix below the corporation's seal and to attach hereto a notarized corporate resolution or power of attorney authorizing such action, and each such duly authorized representative to sign below and to set forth below his or her title as a representative of the corporation. If any individual acts as a witness to any signature below, then each such individual has signed below and has set forth below his or her title as witness. All of the above has been done as of the Date of Bond shown above.

In Presence of: Witness	Individual Principal
_____ as to	_____(SEAL)
In Presence of:	Co-Partnership Principal
	_____(SEAL) (Name of Co-Partnership)

_____ as to By: _____(SEAL)

_____ as to By: _____(SEAL)

_____ as to By: _____(SEAL)

_____

Corporate Principal

_____

Attest: (Name of Corporation)

AFFIX

_____ as to By:_____CORPORATE

Corporate Secretary President SEAL

_____

_____

(Surety)

AFFIX

Attest: (SEAL) By: _____

CORPORATE

SEAL

_____ Title: _____

Signature

Bonding Agent's Name:_____ _____

(Business Address of Surety)

Agent's Address:_____

End of Performance Bond

PAYMENT BOND

Principal	Business Address of Principal
Surety A corporation of the State of _____ And authorized to do business in the State of Maryland	Obligee Board of Education of Harford County
Penal Sum of Bond (express in words And figures)	Date of Contract _____, 20___
Description of Contract Contract Number:	Date of Bond Executed _____, 20___

KNOW ALL MEN BY THESE PRESENTS, That we, the Principal named above and Surety named above, being authorized to do business in Maryland, and having business addresses as shown above, are held and firmly bound unto the Obligee named above, for the use and benefit of claimants as hereinafter defined, in the Penal Sum of this Payment Bond stated above, for the payment of which Penal Sum we bind ourselves, our heirs, executors, administrators, personal representatives, successors, and assigns, jointly and severally, firmly by these co-sureties, bind ourselves, our successors, and assigns, in such Penal Sum jointly and severally as well as severally only for the purpose of allowing a joint action or actions against any or all of us, and for all other purposes each co-surety binds itself, jointly and severally with the Principal, for the payment of such sum as appears above its name below, but if no limit of liability is indicated, the limit of such liability shall be the full amount of the Penal Sum.

WHEREAS, Principal has entered into or will enter into a contract with the Board of Education for Harford County, Maryland ("Board"), which contract is described and dated as shown above, and incorporated herein by reference. The contract and all items incorporated into the contract, together with any and all changes, extensions of time, alterations, modifications, or additions to the contract or to the work to be performed thereunder or to the Plans, Specifications, and Special Provisions, or any of them, or to any other items incorporated into the contract shall hereinafter be referred to as "the Contract."

WHEREAS, it is one of the conditions precedent to the final award of the Contract that these presents be executed.

NOW, THEREFORE, the condition of this obligation is such that if the Principal shall promptly make payment to all claimants as hereinafter defined, for all labor and materials furnished, supplied and reasonably required for use in the performance of the Contract, then this obligation shall be null and void; otherwise it shall remain in full force and effect, subject to the following conditions:

1. A claimant is defined to be any and all of those persons supplying labor and materials

(including lessors of the equipment to the extent of the fair market value thereof) to the Principal or its subcontractors and subcontractors in the prosecution of the work provided for in the Contract, entitled to the protection provided under Maryland's Little Miller Act (presently contained in MD. State Fin. & Proc. Code Ann. Sec. 17-101 et seq.), as from time to time amended.

2. The above named Principal and Surety hereby jointly and severally agree with the Obligee that every claimant as herein defined, who has not been paid in full may, pursuant to and when in compliance with the provisions of the aforesaid Little Miller Act, sue on this Bond for the use of such claimant, prosecute, the suit to final judgment for such sum or sums as may be justly due claimant and have execution thereon. The Obligee shall not be liable for the payment of any costs or expenses of any such suit.

The Surety hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Contract or to the work to be performed thereunder or the Specifications accompanying the same shall in any way affect its obligations on this Payment Bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the Contract, or to the work or to the Specifications.

This Payment Bond shall be governed by and construed in accordance with the laws of the State of Maryland and any reference herein to Principal or Surety in the singular shall include all entities in the plural who or which are signatories under the Principal or Surety heading below.

IN WITNESS WHEREOF, Principal and Surety have set their hands and seals to this Payment Bond. If any individual is a signatory under the Principal heading below, then each such individual has signed below on his or her own behalf, has set forth below the name of the firm, if any, in whose name he or she is doing business, and has set forth below his or her title as a sole proprietor. If any partnership or joint venture is a signatory under the Principal heading below, then all members of each such partnership or Joint venture have signed below, each member has set forth below his or her title as a general partner, limited partner, or member of joint venture, whichever is applicable. If any corporation is a signatory under the Principal or Surety heading below, then each such corporation has caused the following: the corporation's name to be set forth below, a duly authorized representative of the corporation to affix below the corporation's seal and to attach hereto a notarized corporate resolution or power of attorney authorizing such action, and each such duly authorized representative to sign below and to set forth below his or her title as a representative of the corporation. If any individual acts as a witness to any signature below, then each such individual has signed below and has set forth below his or her title as witness. All of the above has been done as of the Date of Bond shown above.

In Presence of: Witness	Individual Principal
_____ as to	_____(SEAL)
In Presence of:	Co-Partnership Principal
	_____(SEAL)

(Name of Co-Partnership)

_____ as to By: _____(SEAL)

_____ as to By: _____(SEAL)

_____ as to By: _____(SEAL)

_____

Corporate Principal

_____

(Name of Corporation)

AFFIX

Attest: (SEAL) By: _____

CORPORATE

SEAL

_____ Title: _____

Signature

Bonding Agent's Name:_____ _____

(Business Address of Surety)

Agent's Address:_____

_____

End of Payment Bond

HARFORD COUNTY PUBLIC SCHOOLS, MARYLAND

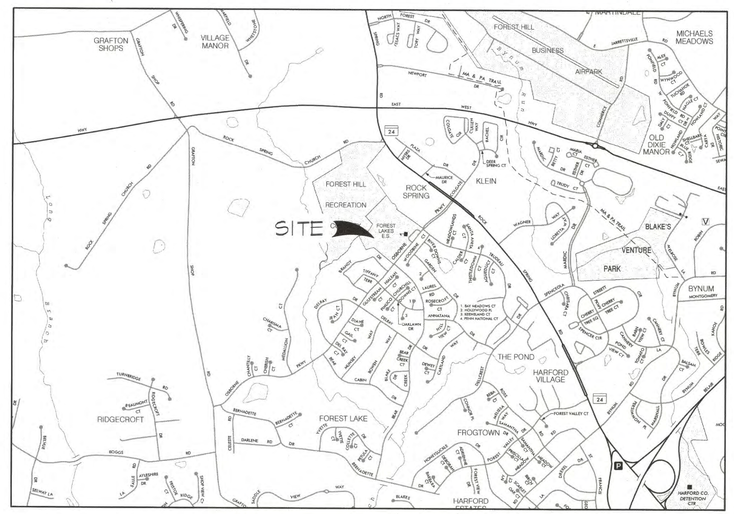
FOREST LAKES ELEMENTARY SCHOOL

ELECTION DISTRICT NO. 1

STORMWATER MANAGEMENT POND REPAIR

100 OSBORNE PKWY, FOREST HILL, MD 21050

SHEET INDEX	
SHEET TITLE	SHEET NUMBER
TITLE SHEET	1 OF 5
SITE & SEDIMENT CONTROL PLAN	2 OF 5
STORMWATER MANAGEMENT DETAILS	3 OF 5
POND NOTES & DETAILS	4 OF 5
SEDIMENT CONTROL NOTES & DETAILS	5 OF 5



LOCATION MAP

SCALE : 1" = 2000'

LEGEND

- PROPERTY LINE
- EX TOPO
- PROP TOPO
- EX EASEMENT
- EX ROAD
- EX SOIL
- EX STORM
- EX SANITARY
- PROP TREE LINE
- SCE — STABILIZED CONSTRUCTION ENTRANCE
- LOW — LIMIT OF WORK
- SSF — PROP SUPER SILT FENCE
- SD — EX STORM MH
- SS — EX SAN MH
- EX RIP RAP
- EX BUILDING

BENCH MARKS:

FWA #9001	FWA #9002
N:693,149.69	N:693,388.14
E:1,485,208.30	E:1,485,228.29
ELEV:429.91'	ELEV:427.54'

SEE SHEET SC1 FOR LOCATION

GENERAL NOTE – TESTING AND AS-BUILT REQUIREMENTS:
The contractor shall perform all required tests and inspections associated with the slip-lining installation, including but not limited to deflection, mandrel, pressure, leakage, and video inspection tests.

All testing shall be completed and results submitted at the As-Built stage for review and acceptance.

It is the contractor's responsibility to ensure that all test results are properly documented and available for verification prior to final approval.

ENGINEER'S CERTIFICATION

I hereby certify that this plan has been prepared by me, or under my supervision, and meets the minimum standards of the Harford County Department of Public Works and/or the United States Department of Agriculture, Soil Conservation Service, and/or the Maryland Department of the Environment, Water Management Administration.

Signed: Veronika Hedrington
Print Name: VERONIKA HEDRINGTON
Date: 09/10/2025
P.E. No.: 50926

STATE OF MARYLAND — VERONIKA HEDRINGTON — 50926 — PROFESSIONAL ENGINEER — 09/10/2025

Veronika Hedrington

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.

LICENSE NO.: 50926 EXPIRATION DATE: 06/07/2027

FIELD VERIFICATION CERTIFICATION

I CERTIFY THAT I COMPLETED A FIELD VERIFCATION TO THE INFORMATION SHOWN ON 8/9/2024 AND THAT THE INFORMATION SHOWN ON THE PLANS IS IN AGREEMENT WITH THE ACTUAL FIELD CONDITIONS.

VERONIKA HEDRINGTON
PRINTED NAME
Veronika Hedrington 4/16/2025
SIGNED DATE

OWNER/DEVELOPER: HARFORD COUNTY PUBLIC SCHOOLS
102 S HICKORY AVE
BEL AIR, MD 21014
PHONE: (410) 838-7300

Paul Vice 9/10/2025
NAME DATE

261197

ENGINEER: FREDERICK WARD ASSOCIATES
P.O. Box 727, 5 South Main Street
Bel Air Maryland 21014-0727
410-838-7900 410-893-1243 fax
ARCHITECTS | ENGINEERS | PLANNERS | SURVEYORS
www.frederickward.com

AS-BUILT CERTIFICATION

I hereby certify that the facility shown on this plan was constructed as shown on the "As-Built" plans and meets the approved plans and specifications.

Signed:
Print Name:
Date:
P.E. No.:

Certify means to state or declare a professional opinion based upon on-site inspections and material tests which are conducted during construction. The on-site inspections and material tests are those inspections and tests deemed sufficient and appropriate by commonly accepted engineering standards. Certify does not mean or imply a guarantee by the engineer nor does an engineer's certification relieve any other party from meeting requirements imposed by contract, employment, or other means, including meeting commonly accepted industry practices.

EROSION AND SEDIMENT CONTROL PLAN #:
TECHNICAL REVIEW BY:
HARFORD SOIL CONSERVATION DISTRICT
APPROVED BY:
HARFORD SOIL CONSERVATION DISTRICT

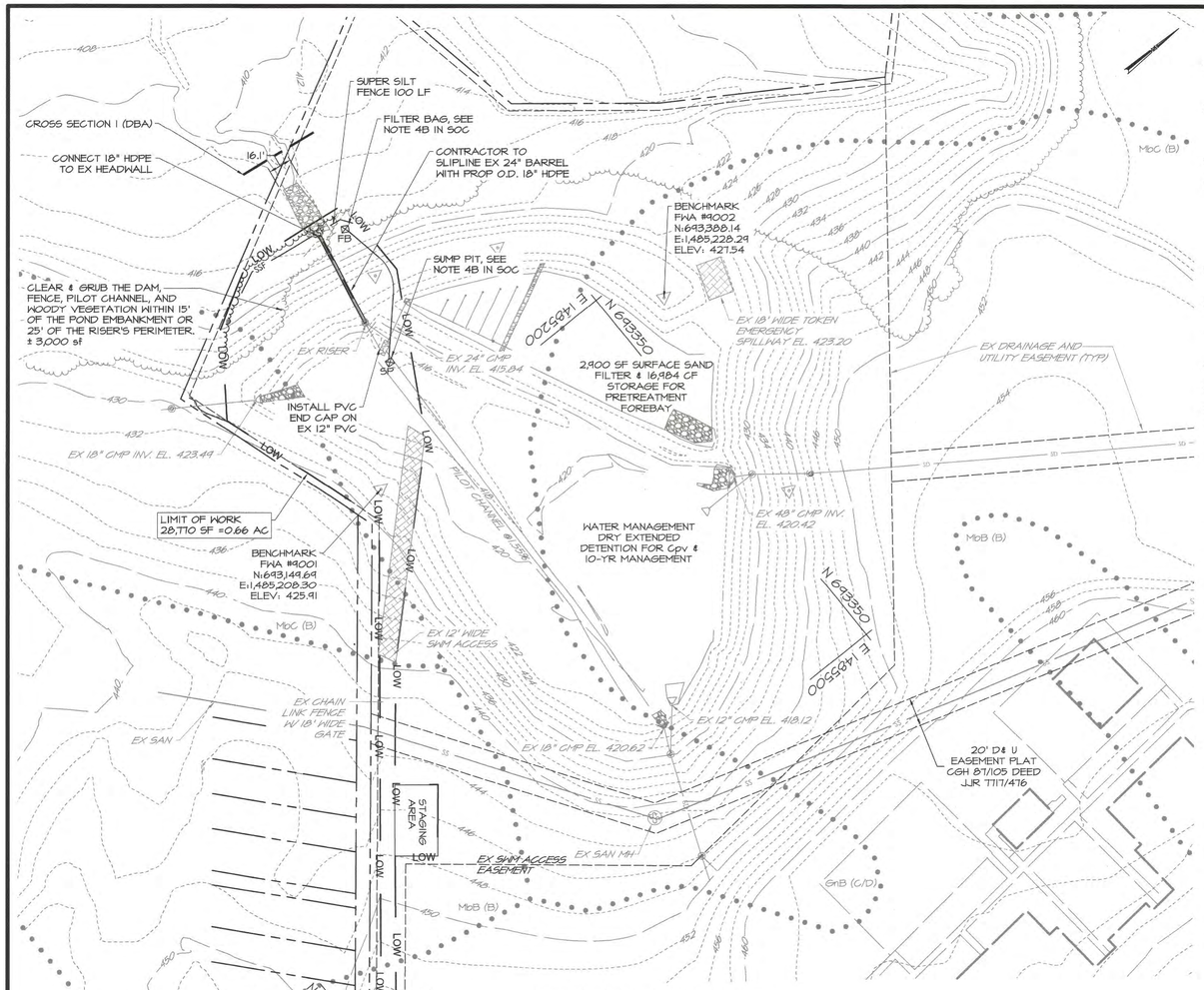
HARFORD COUNTY SOIL CONSERVATION DISTRICT
SMALL POND APPROVAL BY: 7/22/26
HARFORD SOIL CONSERVATION DISTRICT OFFICIAL
TECHNICAL REVIEW FOR DISTRICT BY: 7/13/2026
HARFORD COUNTY DEPARTMENT OF PUBLIC WORKS

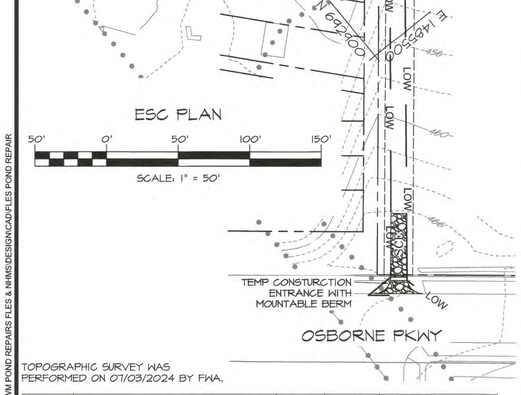
97178
HARFORD COUNTY BILLING No. ~~97151~~
THESE PLANS HAVE BEEN REVIEWED BY HARFORD COUNTY AND MEET THE TECHNICAL REQUIREMENTS FOR STORMWATER MANAGEMENT ONLY.
REVIEWED & APPROVAL RECOMMENDED: 7/29/2026
WATER RESOURCES ENGINEERING
APPROVAL RECOMMENDED: 8-3-26
CHIEF ENGINEER
APPROVAL RECOMMENDED: 8/4/26
DEPUTY DIRECTOR OF PUBLIC WORKS
APPROVAL: 8-4-2026
DIRECTOR OF PUBLIC WORKS

S/C PLAN NO. _____ GRA PERMIT NO.: ____-____ HARCO PROJECT CONTRACT # 97178 SWMENG-000058-2025

ADC MAP: 16 - K3
TAX MAP: 40
HCG BILLING ID NO:
HCG DWG ID NO:
SCALE: 1"=20'

M:\PROJECTS\2241039.00 HCPS SWM POND REPAIRS FILES & NI\MSDESIGN\CAD\FILES POND REPAIR





TOPOGRAPHIC SURVEY WAS PERFORMED ON 07/03/2024 BY FWA.

SYMBOL	UNIT NAME	HYDRIC	K-VALUE	HYDROLOGIC GROUP
GnB	GLENVILLE SILT LOAM, 3-8% SLOPES	-	.37	C/D
MoB	MANOR LOAM, 3-8% SLOPES	-	.24	B
MoC	MANOR LOAM, 8-15% SLOPES	-	.28	B
MoD	MANOR LOAM, 15-25% SLOPES	-	.28	B

SEQUENCE OF CONSTRUCTION

PRELIMINARY

1. NOTIFY THE HARFORD COUNTY DPW SEDIMENT CONTROL INSPECTION DIVISION (410) 638-3127 EXT. 2434 OR 1268 AT LEAST 48 HOURS PRIOR TO START OF OPERATION. A PRE-CONSTRUCTION MEETING IS REQUIRED PRIOR TO BEGINNING ANY LAND DISTURBANCE ON SITE.
2. ALL EROSION AND SEDIMENT CONTROL MEASURES AND NOTES SHOWN ON THESE PLANS OR REFERRED TO SHALL BE CONSTRUCTED, INSTALLED, AND/OR CARRIED OUT IN ACCORDANCE WITH THE MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, LATEST EDITION, UNLESS OTHERWISE NOTED.
3. ANY AREAS OUTSIDE OF LON SHALL BE PROTECTED DURING THE CONSTRUCTION.
4. CONSTRUCTION PHASE:
   A. INSTALL THE FOLLOWING EROSION AND SEDIMENT CONTROLS. SEDIMENT CONTROL DEVICES IN THE ORDER OUTLINED BELOW -
      a. INSTALL STABILIZED CONSTRUCTION ENTRANCE W/ STONE MOUNTABLE BERM (SEE DETAIL B-1)
      b. INSTALL SUPER SILT FENCE AS SHOWN ON PLANS
      c. INSTALL CONSTRUCTION STAGING AREA
5. CLEAR & GRUB THE DAM, FENCE, PILOT CHANNEL, AND WOODY VEGETATION WITHIN 15' OF THE POND EMBANKMENT OR 25' OF THE RISER'S PERIMETER.
6. DRAIN POND WITH PUMP & FILTER BAG, IF NECCESSARY. SEE DETAILS F-2 & F-4 IN THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL AND EROSION AND SEDIMENT CONTROL.
7. INSTALL NEW 18" HDPE PIPE LINING AND CONNECT INTO EXISTING HEADWALL. THE MACHINERY SHALL BE STAGED AT THE TOP OF THE EMBANKMENT AND PERFORM SLIP LINING FROM THE OUTFALL END.
8. INSTALL GALVANIZED END CAP ON EX 12" RCP
9. TEMPORARY STABILIZE POND AND EMBANKMENTS.
10. UPON THE APPROVAL OF THE SEDIMENT CONTROL INSPECTOR, REMOVE ALL SEDIMENT CONTROL MEASURES AND PERMANENTLY STABILIZE ALL AREAS DISTURBED BY THE REMOVAL OF SEDIMENT CONTROLS.

ALL VEGETATIVE STABILIZATION INCLUDING PERMANENT AND TEMPORARY SEEDING SHOULD BE DONE IN ACCORDANCE WITH SECTION B-4 OF THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.

TEMPORARY SEEDING SUMMARY

SEED MIXTURE (HARDINESS ZONE 7B) FROM TABLE B1					FERTILIZER RATE (10-10-10)	LIME RATE
NO.	SPECIES	APPLICATION RATE (LB/AC)	SEEDING DATES	SEEDING DEPTHS		
	BARLEY	96	2/15 - 4/30 8/15 - 11/30	1"	600 LB/AC (15 LB/ 1000 SF)	2 TONS/AC (100 LB/ 1000 SF)
	OATS	72	2/15 - 4/30 8/15 - 11/30	1"		
	RYE	112	2/15 - 4/30 8/15 - 11/30	1"		
	RYE PLUS FOXTAIL MILLET	142	5/1 - 8/14	1"		

PERMANENT SEEDING SUMMARY

SEED MIXTURE (HARDINESS ZONE 7B) FROM TABLE 25					FERTILIZER RATE (10-20-20)			LIME RATE
NO.	SPECIES	APPLICATION RATE (LB/AC)	SEEDING DATES	SEEDING DEPTHS	N	P205	K20	
7	TALL FESCUE (83%)	110	3/1 - 5/15 8/1 - 10/15	¼" - ½"	45 LB/AC (1 LB/ 1000 SF)	90 LB/AC (2 LB/ 1000 SF)	90 LB/AC (2 LB/ 1000 SF)	2 TONS/AC (90 LB/ 1000 SF)
	WEEPING LOVEGRASS (2%)	3		¼" - ½"				
	SERECIA LESPEDEZA (15%)	20		¼" - ½"				

TEMPORARY VEGETATIVE STABILIZATION

ALL DISTURBED AREAS, WHERE GROUND COVER IS NEEDED FOR A PERIOD OF 6 MONTHS OR LESS, SHALL BE TEMPORARILY STABILIZED AS FOLLOWS:

A) SEEDBED PREPARATION:
LOOSEN UPPER THREE TO FIVE INCHES OF SOIL BY RAKING, DISKING, PLOWING, OR OTHER ACCEPTABLE MEANS. AFTER SOIL IS LOOSENED IT SHALL BE LEFT IN THE ROUGHENED CONDITION AND NOT ROLLED OR DRAGGED SMOOTH. SLOPES 3:1 OR FLATTER ARE TO BE TRACKED WITH RIDGES RUNNING PARALLEL TO THE CONTOUR SLOPE.

B) SOIL AMENDMENTS:
APPLY 600 LBS PER ACRE OF 10-10-10 FERTILIZER AND TWO TONS PER ACRE OF LIME. INCORPORATE LIME AND FERTILIZER INTO THE TOP THREE TO FIVE INCHES BY DISKING OR OTHER ACCEPTABLE MEANS.

C) SEEDING: *
FOR THE PERIODS OF FEBRUARY 15 TO APRIL 30 AND AUGUST 15 TO NOVEMBER 30, SEED WITH 96 LBS PER ACRE OF BARLEY, 72 LBS PER ACRE OF OATS, AND 112 LBS PER ACRE OF RYE.

FOR THE PERIOD OF MAY 1 TO AUGUST 14, SEED WITH 142 LBS PER ACRE OF RYE PLUS FOXTAIL MILLET.

FOR THE PERIODS OF NOVEMBER 16 TO FEBRUARY 28, PROTECT SITE BY APPLYING 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING OR USE SOD.

D) MULCHING SPECIFICATIONS:
MULCH SHALL BE APPLIED TO ALL SEEDED AREAS IMMEDIATELY AFTER SEEDING.

APPLY 2 TONS PER ACRE OF STRAW OVER ALL SEEDED AREAS. IF A MULCH ANCHORING TOOL IS TO BE USED, THE RATE SHALL BE INCREASED TO 2.5 TONS PER ACRE. **

MULCH ANCHORING SHALL BE PERFORMED IMMEDIATELY FOLLOWING MULCH APPLICATION TO MINIMIZE LOSS BY WIND AND WATER. THE TYPE OF MULCH ANCHORING USED MUST COMPLY WITH THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS.

* IF OTHER SEED MIXES ARE TO BE SUBSTITUTED, THEY MUST COMPLY WITH 2011 MARYLAND STANDARDS AND SPECIFICATIONS.

** IF A DIFFERENT TYPE OF MULCH IS TO BE USED, IT MUST COMPLY WITH THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS.

PERMANENT VEGETATIVE STABILIZATION

ALL DISTURBED AREAS, WHICH ARE NOT PAVED, SHALL BE PERMANENTLY STABILIZED AS FOLLOWS:

A) SEEDBED PREPERATION:
LOOSEN UPPER THREE INCHES BY RAKING, DISKING, OR OTHER ACCEPTABLE MEANS AFTER SPREADING FOUR INCHES OF TOPSOIL.

B) SOIL AMENDMENTS:
APPLY 500 LBS PER ACRE OF 10-10-10 FERTILIZER AND TWO TONS PER ACRE OF LIME.

C) SEEDING: *
FOR THE PERIODS OF MARCH 1 TO MAY 15 AND AUGUST 1 TO OCTOBER 15, SEED WITH 110 LBS PER ACRE OF TALL FESCUE, 3 LBS PER ACRE OF WEEPING LOVEGRASS, AND 20 LBS PER ACRE OF SERECIA LESPEDEZA.

FOR THE PERIODS OF OCTOBER 16 TO FEBRUARY 28, PROTECT SITE BY: OPTIONS-1) 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING, 2) USE SOD, OR 3) SEED WITH 60 LBS PER ACRE OF TALL FESCUE AND MULCH WITH 2 TONS PER ACRE OF WELL ANCHORED STRAW. NOTE: FOR QUICK COVER WITH TALL FESUE, ADD 2 LBS OF SMALL GRAIN PER 1,000 SQ. FT.

D) MULCHING SPECIFICATIONS:
MULCH SHALL BE APPLIED TO ALL SEEDED AREAS IMMEDIATELY AFTER SEEDING.

APPLY 2 TONS PER ACRE OF STRAW OVER ALL SEEDED AREAS. IF A MULCH ANCHORING TOOL IS TO BE USED, THE RATE SHALL BE INCREASED TO 2.5 TONS PER ACRE. **

MULCH ANCHORING SHALL BE PERFORMED IMMEDIATELY FOLLOWING MULCH APPLICATION TO MINIMIZE LOSS BY WIND AND WATER. THE TYPE OF MULCH ANCHORING USED MUST COMPLY WITH THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS.

* IF OTHER SEED MIXES ARE TO BE SUBSTITUTED, THEY MUST COMPLY WITH 2011 MARYLAND STANDARDS AND SPECIFICATIONS

** IF A DIFFERENT TYPE OF MULCH IS TO BE USED, IT MUST COMPLY WITH THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS

SEDIMENT CONTROL NOTES

1. THE CONTRACTOR/OWNER IS RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS. FURTHER, NO CONSTRUCTION ACTIVITY SHALL TAKE PLACE UNTIL ALL REQUIRED PERMITS HAVE BEEN OBTAINED.
2. THE LIMITS OF DISTURBANCE SHALL BE CLEARLY DELINEATED IN THE FIELD PRIOR TO GRADING OF THE SITE TO ENSURE COMPLIANCE WITH APPROVED PLANS. ALL FOREST RETENTION AREAS WILL BE DELINEATED WITH BLAZE ORANGE FENCE AS WELL AS ANY SWM INFILTRATION PRACTICE PRIOR TO ANY CLEARING. WORK BEYOND THE LIMITS OF DISTURBANCE AND IN ANY AREA INSIDE THE FOREST RETENTION AND SWM INFILTRATION AREA IS CONSIDERED TO BE A VIOLATION OF THIS PLAN.
3. ALL SEDIMENT CONTROL PRACTICES MUST BE INSTALLED PRIOR TO ANY CONSTRUCTION ACTIVITY. UPON COMPLETION OF THE INSTALLATION OF PERIMETER SEDIMENT CONTROL PRACTICES THE SITE MUST BE INSPECTED BY THE DEPARTMENT OF PUBLIC WORKS (DPW). NO ADDITIONAL CONSTRUCTION ACTIVITY WILL BE AUTHORIZED WITHOUT THE APPROVAL FROM DPW.
4. ALL POINTS OF INGRESS AND EGRESS SHALL BE PROTECTED TO PREVENT TRACKING OF MUD INTO PUBLIC WAYS. DURING CONSTRUCTION, EVERY MEANS WILL BE TAKEN TO CONTROL SOIL EROSION AND SILTATION. IF NECESSARY A WASH RACK MAY NEED TO BE ESTABLISHED.
5. SILT FENCES, DIVERSION FENCES, ETC. WILL BE LOCATED AS SHOWN ON THESE DRAWINGS. FIELD CHANGES AND MINOR ADJUSTMENTS ARE PERMISSIBLE AS LONG AS THE INSTALLATION FUNCTIONS AND CONFORMS TO SPECIFICATIONS. THE SITE INSPECTOR PRIOR TO INSTALLATION MUST APPROVE ALL SUCH CHANGES. MAJOR CHANGES TO THE APPROVED PLAN WILL REQUIRE RE-APPROVAL BY THE HARFORD SOIL CONSERVATION DISTRICT.
6. FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN:
   A. THREE CALENDAR DAYS ON SLOPES GREATER THAN 3:1, ALL WATERWAYS AND TO THE SURFACE OF ALL PERIMETER CONTROLS.
   B. SEVEN CALENDAR DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS OF THE PROJECT SITE.
7. DUST CONTROL MUST BE MANAGED AS PART OF ALL SEDIMENT CONTROL PLANS. FAILURE TO DO SO IS A VIOLATION OF THIS PLAN.
8. TEMPORARY FENCING SHALL BE PLACED AROUND POND DURING SITE GRADING.
9. AT THE END OF EACH WORKING DAY ALL SEDIMENT CONTROL PRACTICES WILL BE INSPECTED AND LEFT OPERATIONAL. A WEEKLY LOG WILL BE KEPT IN ACCORDANCE WITH NOI/NPDES REGULATIONS. A COPY OF THE APPROVED SEDIMENT CONTROL PLANS SHALL BE AVAILABLE AT THE SITE AT ALL TIMES.
10. CUT AND/OR FILL SHALL BE DONE IN CONFORMANCE WITH 2011 EROSION AND SEDIMENT CONTROL STANDARDS AND SPECIFICATIONS FOR LAND GRADING.
11. SURFACE FLOWS OVER CUT AND FILL SLOPES SHALL BE CONTROLLED BY REDIRECTING FLOWS FROM TRAVERSING THE SLOPES OR BY INSTALLING MECHANICAL DEVICES TO SAFELY CONVEY WATER DOWN SLOPES WITHOUT CAUSING EROSION.
12. EXCESS CUT TO BE HAULED OFF IMMEDIATELY TO OFF SITE LOCATION WITH AN APPROVED SEDIMENT AND CONTROL PLAN.
13. OFF-SITE WASTE OR BORROW AREAS SHALL HAVE AN APPROVED EROSION AND SEDIMENT CONTROL PLAN PRIOR TO THE IMPORT OR EXPORT OF MATERIAL TO/FROM THE PROJECT SITE.
14. ALL MATERIAL ORIGINATING FROM THE DEVELOPMENT OF THE PROPERTY AND DEPOSITED ON THE PUBLIC RIGHT-OF-WAY SHALL BE IMMEDIATELY REMOVED.
15. STORM DRAIN INLETS AND OUTLETS SHALL BE PROTECTED PER 2011 EROSION AND SEDIMENT CONTROL STANDARDS AND SPECIFICATIONS.
16. TOPSOIL, LIMING, FERTILIZING, SEEDING, MULCHING, SOD, ETC. ARE ALL ESSENTIAL PARTS OF THE SEDIMENT CONTROL PLAN AND MUST BE COMPLETED ALONG WITH ALL OTHER PRACTICES.
17. SEDIMENT CONTROL PRACTICES WILL BE MAINTAINED UNTIL ALL DISTURBED AREAS FOR WHICH THE PRACTICES WERE INSTALLED HAVE BEEN STABILIZED. SEDIMENT CONTROL PRACTICES MAY BE REMOVED ONLY WITH THE AUTHORIZATION OF THE DPW INSPECTOR. ALL DISTURBED AREAS RESULTING FROM THE REMOVAL OF SEDIMENT CONTROL DEVICES SHALL BE STABILIZED IMMEDIATELY. REMOVAL PRIOR TO INSPECTOR'S APPROVAL CONSTITUTES A VIOLATION.

SWM POND SUMMARY

TYPE	EMBANKMENT
HAZARD CLASSIFICATION	A
STRUCTURE TYPE	DRY POND
TOP WIDTH	10 FT
SIDE SLOPES	3:1
FREEBOARD (OVER 100 YR WSE)	1.41 FT
STORAGE HEIGHT PRODUCT	109.17 ac-ft^2
WATERSHED AREA	31.16 AC
MANAGEMENT PROVIDED	10 YEAR
HIGH WSE 100 YR	424.59 FT
HIGH WSE 10 YR	422.43 FT
STORAGE AT TOP OF DAM	9.73 AC-FT
EMBANKMENT HEIGHT	11.22 Ft
WATERSHED NAME	ATKISSON RESERVOIR
STREAM CLASSIFICATION	IV-P

WORK SHALL BE LIMITED TO THE FOLLOWING:

1. INSTALL STABILIZED CONSTRUCTION ENTRANCE AND SUPER SILT FENCE.
3. SLIPLINE THE EXISTING 24" BCCMP WITH 18" HDPE.
4. INSTALL GALVANIZED END CAP ON EX 12" RCP
5. DEWATER POND AS NECESSARY.
6. ENSURE ALL INFLOWS ARE CLEANED OUT.
7. CLEAR & GRUB THE DAM, FENCE, PILOT CHANNEL, AND WOODY VEGETATION WITHIN 15' OF THE POND EMBANKMENT OR 25' OF THE RISER'S PERIMETER.
8. UPON COMPLETION AND APPROVAL OF INSPECTOR, REMOVE EROSION AND SEDIMENT CONTROL MEASURES, SEED AND STABILIZE DISTURBED AREAS.

HARCO PROJECT CONTRACT # 97178 SWMENG-000058-2025 261198

REVISIONS

SEAL: STATE OF MARYLAND VERONICA HEDRICK FOREST 50926 PROFESSIONAL ENGINEER 06/16/2025
PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND
LICENSE NO.: 50926 EXPIRATION DATE: 06/07/2027

ENGINEER:
FREDERICK WARD ASSOCIATES
ARCHITECTS | ENGINEERS | PLANNERS | SURVEYORS
www.frederickward.com
P.O. Box 727, 5 South Main Street
Bel Air Maryland 21014-0727
410-838-7900 410-893-1243 fax

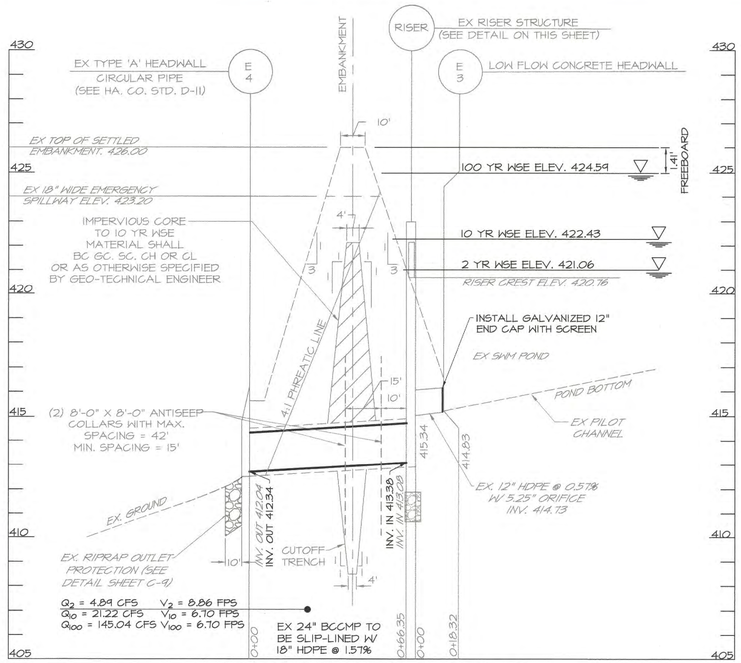
HARFORD COUNTY, MARYLAND

SITE AND SEDIMENT CONTROL PLAN
FOREST LAKES ELEMENTARY SCHOOL POND REPAIR

Drawn By: REH
Designed By: BKS
Checked By: VH
Contract No.:
Scale: 1" = 50'
Sheet 2 of 5
Date 09/10/2025

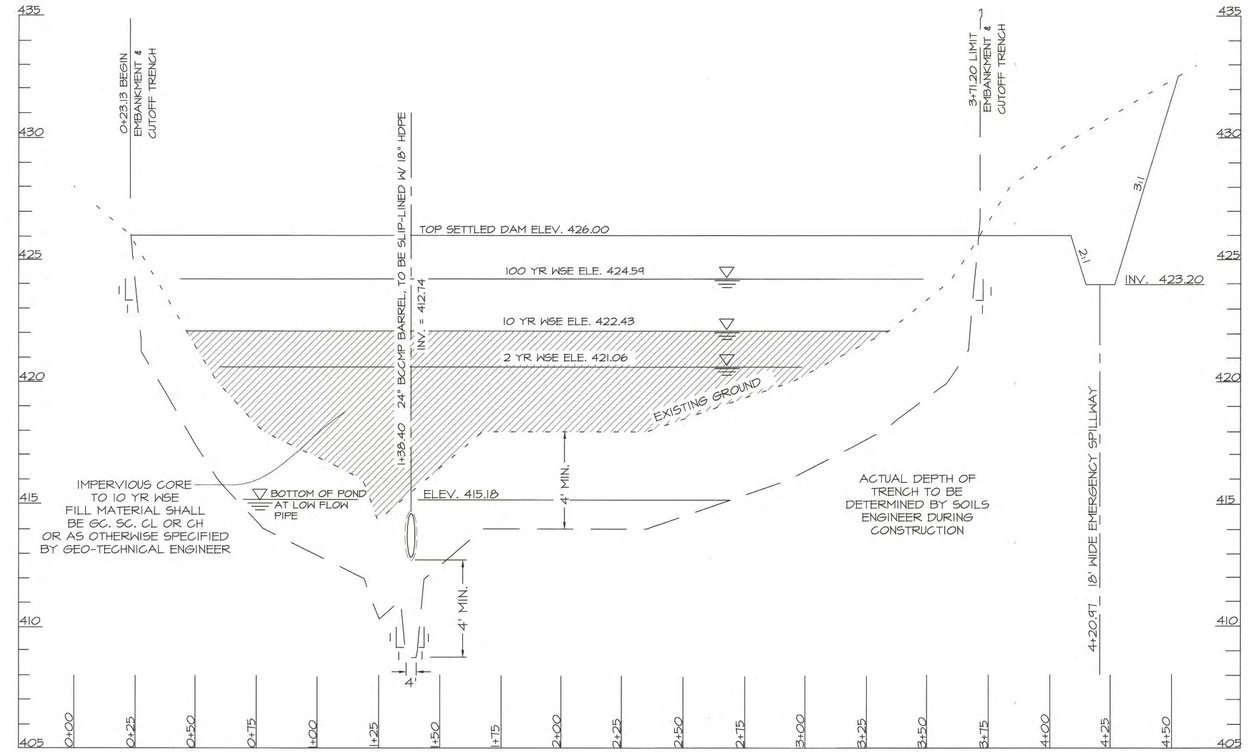
ADC MAP: 16 - K3
TAX MAP: 40
HCG BILLING ID NO:
HCG DWG ID NO:
SCALE 1 INCH

M:\PROJECTS\22410\9.00 HCPS SWM POND REPAIRS FILES & MINS\DESIGN\CAD\FILES POND REPAIR



PRINCIPAL SPILLWAY PROFILE

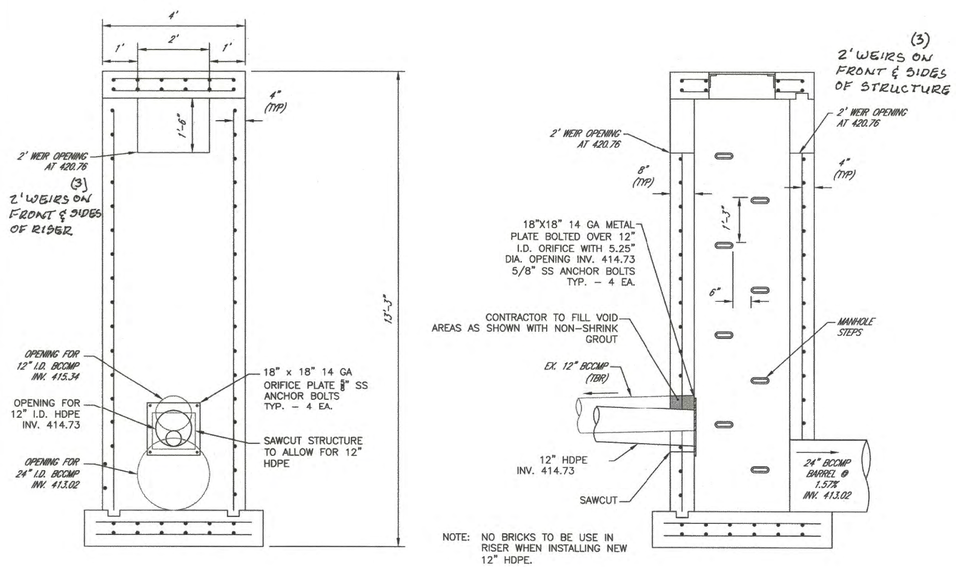
SCALE: HORZ. 1" = 30', VERT. 1" = 3'



EMBANKMENT PROFILE

SCALE: HORZ. 1" = 30', VERT. 1" = 3'

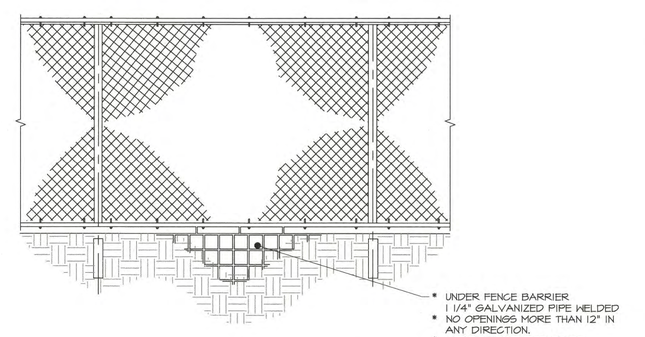
FOR REFERENCE ONLY, NOT FOR CONSTRUCTION



EX RISER CONTROL STRUCTURE DETAIL

FOR REFERENCE ONLY, NOT FOR CONSTRUCTION

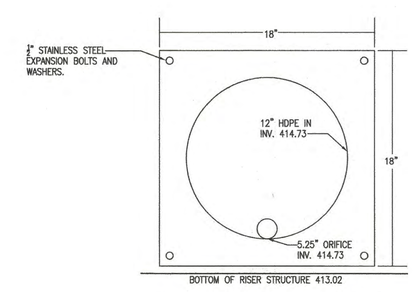
N.T.S.



* UNDER FENCE BARRIER
* 1 1/4" GALVANIZED PIPE WELDED
* NO OPENINGS MORE THAN 12" IN ANY DIRECTION.
* VERTICAL MEMBER TO BE EMBEDDED 12" INTO SOIL.
* ATTACH TO BOTTOM RAIL OF FENCE.

UNDER FENCE BARRIER DETAIL

N.T.S.



EX. ORIFICE PLATE DETAIL

FOR REFERENCE ONLY, NOT FOR CONSTRUCTION

N.T.S.

HARCO PROJECT CONTRACT # 97178 SWMENG-000058-2025 261199

REVISIONS

HARFORD COUNTY, MARYLAND

STORMWATER MANAGEMENT DETAILS
FOREST LAKES ELEMENTARY SCHOOL POND REPAIR

Drawn By: REH
Designed By: BKS
Checked By: VH

Contract No.:
Scale: AS SHOWN
Sheet 3 of 5
Date 09/10/2025

SEAL: STATE OF MARYLAND VERONICA HEDRICK TOY 50925 PROFESSIONAL ENGINEER 07/10/2026

PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.

LICENSE NO.: 50925 EXPIRATION DATE: 06/07/2027

ENGINEER:

FREDERICK WARD ASSOCIATES
ARCHITECTS | ENGINEERS | PLANNERS | SURVEYORS
www.frederickward.com
P.O. Box 727, 5 South Main Street
Bel Air Maryland 21014-0727
410-838-7900 410-893-1243 fax

ADC MAP: 16 - K3

TAX MAP: 40

HCG BILLING ID NO:

HCG DWG ID NO:

SCALE 1 INCH

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POND CONSTRUCTION SPECIFICATIONS

THESE SPECIFICATIONS ARE APPROPRIATE TO ALL PONDS WITH THE SCOPE OF THE STANDARD FOR PRACTICE MD-378. ALL REFERENCES TO ASTM AND AASHTO SPECIFICATIONS APPLY TO THE MOST RECENT VERSION.

SITE PREPARATION

AREAS DESIGNATED FOR BORROW AREAS, EMBANKMENT, AND STRUCTURAL WORKS SHALL BE CLEARED, GRUBBED AND STRIPPED OF TOPSOIL. ALL TREES, VEGETATION, ROOTS AND OTHER OBJECTIONABLE MATERIAL SHALL BE REMOVED. CHANNEL BANKS AND SHARP BREAKS SHALL BE SLOPED TO NO STEEPER THAN 1:1. ALL TREES SHALL BE CLEARED AND GRUBBED WITHIN 15 FEET OF THE TOE OF THE EMBANKMENT.

AREAS TO BE COVERED BY THE RESERVOIR WILL BE CLEARED OF ALL TREES, BRUSH, LOGS, FENCES, RUBBISH AND OTHER OBJECTIONABLE MATERIAL UNLESS OTHERWISE DESIGNATED ON THE PLANS. TREES, BRUSH, AND STUMPS SHALL BE CUT APPROXIMATELY LEVEL WITH THE GROUND SURFACE. FOR DRY STORMWATER MANAGEMENT PONDS, A MINIMUM OF A 25-FOOT RADIUS AROUND THE INLET STRUCTURE SHALL BE CLEARED.

ALL CLEARED AND GRUBBED MATERIAL SHALL BE DISPOSED OF OUTSIDE AND BELOW THE LIMITS OF THE DAM AND RESERVOIR AS DIRECTED BY THE OWNER OR HIS REPRESENTATIVE. WHEN SPECIFIED, A SUFFICIENT QUANTITY OF TOPSOIL WILL BE STOCKPILED IN A SUITABLE LOCATION FOR USE ON THE EMBANKMENT AND OTHER DESIGNATED AREAS.

EARTH FILL

MATERIAL - THE FILL MATERIAL SHALL BE TAKEN FROM APPROVED DESIGNATED BORROW AREAS. IT SHALL BE FREE OF ROOTS, STUMPS, WOOD RUBBISH, STONES GREATER THAN 6-A, FROZEN OR OTHER OBJECTIONABLE MATERIALS. FILL MATERIAL FOR THE CENTER OF THE EMBANKMENT AND CUT OFF TRENCH SHALL CONFORM TO UNIFIED SOIL CLASSIFICATION GC, SC, CH, OR CL AND MUST HAVE AT LEAST 30% PASSING THE #200 SIEVE. CONSIDERATION MAY BE GIVEN TO THE USE OF OTHER MATERIALS IN THE EMBANKMENT IF DESIGNED BY A GEOTECHNICAL ENGINEER. SUCH SPECIAL DESIGNS MUST HAVE CONSTRUCTION SUPERVISED BY A GEOTECHNICAL ENGINEER.

MATERIALS USED IN THE OUTER SHELL OF THE EMBANKMENT MUST HAVE THE CAPABILITY TO SUPPORT VEGETATION OF THE QUALITY REQUIRED TO PREVENT EROSION OF THE EMBANKMENT.

PLACEMENT - AREAS ON WHICH FILL IS TO BE PLACED SHALL BE SCARIFIED PRIOR TO A PLACEMENT OF FILL. FILL MATERIALS SHALL BE PLACED IN MAXIMUM 8-INCH THICK (BEFORE COMPACTION) LAYERS WHICH ARE TO BE CONTINUOUS OVER THE ENTIRE LENGTH OF THE FILL. THE MOST PERMEABLE BORROW MATERIAL SHALL BE PLACED IN THE DOWNSTREAM PORTIONS OF THE EMBANKMENT. THE PRINCIPAL SPILLWAY MUST BE INSTALLED CONCURRENTLY WITH FILL PLACEMENT AND NOT EXCAVATED INTO THE EMBANKMENT.

COMPACTION - THE MOVEMENT OF THE HAULING AND SPREADING EQUIPMENT OVER THE FILL SHALL BE CONTROLLED SO THAT THE ENTIRE SURFACE OF EACH LIFT SHALL BE TRAVERSED BY NOT LESS THAN ONE TREAD TRACK OF THE EQUIPMENT OR COMPACTION SHALL BE ACHIEVED BY A MINIMUM OF FOUR COMPLETE PASSES OF A SHEEPSFOOT, RUBBER TIRED OR VIBRATORY ROLLER. FILL MATERIAL SHALL CONTAIN SUFFICIENT MOISTURE SUCH THAT THE REQUIRED DEGREE OF COMPACTION WILL BE OBTAINED WITH THE EQUIPMENT USED. THE FILL MATERIAL SHALL CONTAIN SUFFICIENT MOISTURE SO THAT IF FORMED INTO A BALL, IT WILL NOT CRUMBLE, YET NOT BE SO WET THAT WATER CAN BE SQUEEZED OUT.

WHEN REQUIRED BY THE REVIEWING AGENCY, THE MINIMUM REQUIRED DENSITY SHALL NOT BE LESS THAN 95% OF MAXIMUM DRY DENSITY WITH A MOISTURE CONTENT WITHIN +/- 2% OF THE OPTIMUM. EACH LAYER OF FILL SHALL BE COMPACTED AS NECESSARY TO OBTAIN THAT DENSITY, AND IS TO BE CERTIFIED BY THE ENGINEER AT THE TIME OF CONSTRUCTION. ALL COMPACTION IS TO BE DETERMINED BY AASHTO METHOD T-99 (STANDARD PROCTOR).

CUT OFF TRENCH - THE CUTOFF TRENCH SHALL BE EXCAVATED INTO IMPERVIOUS MATERIAL ALONG OR PARALLEL TO THE CENTERLINE OF THE EMBANKMENT AS SHOWN ON THE PLANS. THE BOTTOM WIDTH OF THE TRENCH SHALL BE GOVERNED BY THE EQUIPMENT USED FOR EXCAVATION WITH THE MINIMUM WIDTH BEING FOUR FEET. THE DEPTH SHALL BE AT LEAST FOUR FEET BELOW EXISTING GRADE OR AS SHOWN ON THE PLANS. THE SIDE SLOPES OF THE TRENCH SHALL BE 1 TO 1 OR FLATTER. THE BACKFILL SHALL BE COMPACTED WITH CONSTRUCTION EQUIPMENT, ROLLERS, OR HAND TAMPERS TO ASSURE MAXIMUM DENSITY AND MINIMUM PERMEABILITY.

EMBANKMENT CORE - THE CORE SHALL BE PARALLEL TO THE CENTERLINE OF THE EMBANKMENT AS SHOWN ON THE PLANS. THE TOP WIDTH OF THE CORE SHALL BE A MINIMUM OF FOUR FEET. THE HEIGHT SHALL EXTEND UP TO AT LEAST THE 10 YEAR WATER ELEVATION OR AS SHOWN ON THE PLANS. THE SIDE SLOPES SHALL BE 1 TO 1 OR FLATTER. THE CORE SHALL BE COMPACTED WITH CONSTRUCTION EQUIPMENT, ROLLERS, OR HAND TAMPERS TO ASSURE MAXIMUM DENSITY AND MINIMUM PERMEABILITY. IN ADDITION, THE CORE SHALL BE PLACED CONCURRENTLY WITH THE OUTER SHELL OF THE EMBANKMENT.

STRUCTURE BACKFILL

BACKFILL ADJACENT TO PIPES OR STRUCTURES SHALL BE OF THE TYPE AND QUALITY CONFORMING TO THAT SPECIFIED FOR THE ADJOINING FILL MATERIAL. THE FILL SHALL BE PLACED IN HORIZONTAL LAYERS NOT TO EXCEED FOUR INCHES IN THICKNESS AND COMPACTED BY HAND TAMPERS OR OTHER MANUALLY DIRECTED COMPACTION EQUIPMENT. THE MATERIAL NEEDS TO FILL COMPLETELY ALL SPACES UNDER AND ADJACENT TO THE PIPE. AT NO TIME DURING THE BACKFILLING OPERATION SHALL DRIVEN EQUIPMENT BE ALLOWED TO OPERATE CLOSER THAN FOUR FEET, MEASURED HORIZONTALLY, TO ANY PART OF A STRUCTURE. UNDER NO CIRCUMSTANCES SHALL EQUIPMENT BE DRIVEN OVER ANY PART OF A CONCRETE STRUCTURE OR PIPE UNLESS THERE IS A COMPACTED FILL OF 24" OR GREATER OVER THE STRUCTURE OR PIPE.

STRUCTURAL BACKFILL MAY BE FLOWABLE FILL MEETING THE REQUIREMENTS OF THE MARYLAND DEPARTMENT OF TRANSPORTATION. STATE HIGHWAY ADMINISTRATION STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, SECTION 313 AS MODIFIED. THE MIXTURE SHALL HAVE A 100-200 PSI, 28 DAY UNCONFINED COMPRESSIVE STRENGTH. THE FLOWABLE FILL SHALL HAVE A MINIMUM PH OF 4.0 AND A MINIMUM RESISTIVITY OF 2,000 OHM-CM. MATERIAL SHALL BE PLACED SUCH THAT A MINIMUM OF 6-A (MEASURED PERPENDICULAR TO THE OUTSIDE OF THE PIPE) OF FLOWABLE FILL SHALL BE UNDER (BEDDING), OVER AND ON THE SIDES OF THE PIPE. IT ONLY NEEDS TO EXTEND UP TO THE SPRING LINE FOR RIGID CONDUITS. AVERAGE SLUMP OF THE FILL SHALL BE 7-A TO ASSURE FLOWABILITY OF THE MATERIAL. ADEQUATE MEASURES SHALL BE TAKEN (SAND BAGS, ETC.) TO PREVENT FLOATING THE PIPE. WHEN USING FLOWABLE FILL, ALL METAL PIPE SHALL BE BITUMINOUS COATED. ANY ADJOIN SOIL FILL SHALL BE PLACED IN HORIZONTAL LAYERS NOT TO EXCEED FOUR INCHES IN THICKNESS AND COMPACTED BY HAND TAMPERS OR OTHER MANUALLY DIRECTED COMPACTION EQUIPMENT. THE MATERIAL SHALL COMPLETELY FILL ALL VOIDS ADJACENT TO THE FLOWABLE FILL ZONE. AT NO TIME DURING THE BACKFILLING OPERATION SHALL DRIVEN EQUIPMENT BE ALLOWED TO OPERATE CLOSER THAN FOUR FEET, MEASURED HORIZONTALLY, TO ANY PART OF A STRUCTURE OR PIPE UNLESS THERE IS A COMPACTED FILL OF 24" OR GREATER OVER THE STRUCTURE OR PIPE. BACKFILL MATERIAL OUTSIDE THE STRUCTURAL BACKFILL (FLOWABLE FILL) ZONE SHALL BE OF THE TYPE AND QUALITY CONFORMING TO THAT SPECIFIED FOR THE CORE OF THE EMBANKMENT OR OTHER EMBANKMENT MATERIALS.

PIPE CONDUIT

ALL PIPES SHALL BE CIRCULAR IN THE CROSS SECTION.

REINFORCED CONCRETE PIPE - ALL OF THE FOLLOWING CRITERIA SHALL APPLY FOR REINFORCED CONCRETE PIPE:

1. MATERIALS - REINFORCED PIPES SHALL HAVE BELL AND SPIGOT JOINTS WITH RUBBER GASKETS AND SHALL EQUAL OR EXCEED ASTM C-361.
2. BEDDING - ALL REINFORCED CONCRETE PIPE CONDUITS SHALL BE LAID IN A CONCRETE BEDDING / CRADLE FOR THEIR ENTIRE LENGTH. THIS BEDDING / CRADLE SHALL CONSIST OF HIGH SLUMP CONCRETE PLACED UNDER THE PIPE AND UP THE SIDES OF THE PIPE AT LEAST 50% OF ITS OUTSIDE DIAMETER WITH A MINIMUM THICKNESS OF 6 INCHES. WHERE A CONCRETE CRADLE IS NOT NEEDED FOR STRUCTURAL REASONS, FLOWABLE FILL MAY BE USED AS DESCRIBED IN THE #STRUCTURE BACKFILL# SECTION OF THIS STANDARD. GRAVEL BEDDING IS NOT PERMITTED.
3. LAYING PIPE - BELL AND SPIGOT PIPE SHALL BE PLACED WITH THE BELL END UPSTREAM. JOINTS SHALL BE MADE IN ACCORDANCE WITH RECOMMENDATIONS OF THE MANUFACTURER OF THE MATERIAL. AFTER THE JOINTS ARE SEALED FOR THE ENTIRE LINE, THE BEDDING SHALL BE PLACED SO THAT ALL SPACES UNDER THE PIPE ARE FILLED. CORE SHALL BE EXERCISED TO PREVENT ANY DEVIATION FROM THE ORIGINAL LINE AND GRADE OF THE PIPE. THE FIRST JOINT MUST BE LOCATED WITHIN 4 FEET FROM THE RISER.
4. BACKFILLING SHALL CONFORM TO "STRUCTURE BACKFILL".
5. OTHER DETAILS (ANTI-SEEP COLLARS, VALVES, ETC.) SHALL BE SHOWN AS ON THE DRAWINGS.

CONCRETE

CONCRETE SHALL MEET THE REQUIREMENTS OF MARYLAND DEPARTMENT OF TRANSPORTATION, STATE HIGHWAY ADMINISTRATION STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, SECTION 414, MIX NO. 3.

ROCK RIPRAP

ROCK RIPRAP SHALL MEET THE REQUIREMENTS OF MARYLAND DEPARTMENT OF TRANSPORTATION, STATE HIGHWAY ADMINISTRATION STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, SECTION 311.

GEOTEXTILE SHALL BE PLACED UNDER ALL RIPRAP AND SHALL MEET THE REQUIREMENTS OF MARYLAND DEPARTMENT OF TRANSPORTATION, STATE HIGHWAY ADMINISTRATION STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, SECTION 921.09. CLASS C.

CARE OF WATER DURING CONSTRUCTION

ALL WORK ON PERMANENT STRUCTURES SHALL BE CARRIED OUT IN AREAS FREE FROM WATER. THE CONTRACTOR SHALL CONSTRUCT AND MAINTAIN ALL TEMPORARY DIKES, LEVEES, COFFERDAMS, DRAINAGE CHANNELS, AND STREAM DIVERSIONS NECESSARY TO PROTECT THE AREAS TO BE OCCUPIED BY THE PERMANENT WORKS. THE CONTRACTOR SHALL ALSO FURNISH, INSTALL, OPERATE, AND MAINTAIN ALL NECESSARY PUMPING AND OTHER EQUIPMENT REQUIRED FOR REMOVAL OF WATER FROM VARIOUS PARTS OF THE WORK AND FOR MAINTAINING THE EXCAVATIONS, FOUNDATION, AND OTHER PARTS OF THE WORK FREE FROM WATER AS REQUIRED OR DIRECTED BY THE ENGINEER FOR CONSTRUCTING EACH PART OF THE WORK. AFTER HAVING SERVED THEIR PURPOSE, ALL TEMPORARY PROTECTIVE WORKS SHALL BE REMOVED OR LEVELED AND GRADED TO THE EXTENT REQUIRED TO PREVENT OBSTRUCTION IN ANY DEGREE WHATSOEVER OF THE FLOW OF WATER TO THE SPILLWAY OR OUTLET WORKS AND SO AS NOT TO INTERFERE IN ANY WAY WITH THE OPERATION OR MAINTENANCE OF THE STRUCTURE. STREAM DIVERSIONS SHALL BE MAINTAINED UNTIL THE FULL FLOW CAN BE PASSED THROUGH THE PERMANENT WORKS. THE REMOVAL OF WATER FROM THE REQUIRED EXCAVATION AND THE FOUNDATION SHALL BE ACCOMPLISHED IN A MANNER AND TO THE EXTENT THAT WILL MAINTAIN STABILITY OF THE EXCAVATED SLOPES AND BOTTOM REQUIRED EXCAVATIONS AND WILL ALLOW SATISFACTORY PERFORMANCE OF ALL CONSTRUCTION OPERATIONS. DURING THE PLACING AND COMPACTING OF MATERIAL IN REQUIRED EXCAVATIONS, THE WATER LEVEL AT THE LOCATION BEING REFILLED SHALL BE MAINTAINED BELOW THE BOTTOM OF THE EXCAVATION AT SUCH LOCATIONS WHICH MAY REQUIRE DRAINING THE WATER SUMPS FROM WHICH THE WATER SHALL BE PUMPED.

STABILIZATION

ALL BORROW AREAS SHALL BE GRADED TO PROVIDE PROPER DRAINAGE AND LEFT IN A SLIGHTLY CONDITION. ALL EXPOSED SURFACES OF THE EMBANKMENT, SPILLWAY, SPOIL AND BORROW AREAS, AND BERMS SHALL BE STABILIZED BY SEEDING, LIMING, FERTILIZING AND MULCHING IN ACCORDANCE WITH THE MARYLAND NATURAL RESOURCES CONSERVATION SERVICE STANDARDS AND SPECIFICATIONS FOR CRITICAL AREA PLANTING (MD-342) OR AS SHOWN ON THE ACCOMPANYING DRAWINGS.

EROSION AND SEDIMENT CONTROL

CONSTRUCTION OPERATIONS WILL BE CARRIED OUT IN SUCH A MANNER THAT EROSION WILL BE CONTROLLED AND WATER AND AIR POLLUTION MINIMIZED. STATE AND LOCAL LAWS CONCERNING POLLUTION ABATEMENT WILL BE FOLLOWED. CONSTRUCTION PLANS SHALL DETAIL EROSION AND SEDIMENT CONTROL MEASURES.

1. CONCRETE CONSTRUCTION SHALL BE DESIGNED, REINFORCED AND CONSTRUCTED IN ACCORDANCE WITH ACI 318 "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE."
2. CONCRETE SHOWN ON THIS DRAWING SHALL BE 3000 PSI MINIMUM 28 DAY COMPRESSIVE STRENGTH.
3. REINFORCING STEEL SHALL BE DEFORMED STEEL BARS CONFORMING TO ASTM A615, GRADE 60.
4. CONCRETE EXPOSED TO WEATHER SHALL HAVE 5% MINIMUM ENTRAINED AIR.
5. CONTRACTOR MAY (AT HIS OPTION) FURNISH THE RISER STRUCTURE AS A PRECAST UNIT, PROVIDED THAT SHOP DRAWINGS OF THE PRECAST STRUCTURE ARE SUBMITTED TO, AND APPROVED BY FREDERICK WARD ASSOCIATES PRIOR TO CONSTRUCTION.
6. CHAMFER ALL EXPOSED CONCRETE EDGES 3/4-INCH.
7. TRASH RACK & WEIR GRATING ASSEMBLIES SHALL BE HOT DIPPED GALVANIZED AFTER FABRICATION.
8. IF RISER IS PRECAST, PROVIDE A 1'x1' CONCRETE WATERTIGHT COLLAR AT BARREL PIPE CONNECTION TO RISER. IF RISER IS CAST IN PLACE, CAST WALL DIRECTLY AROUND BARREL PIPE TO FORM WATERTIGHT SEAL.
9. STRUCTURAL SUBGRADE SHALL BE COMPACTED PER MD-378 SPECIFIGATIONS.
10. SEAL ALL JOINTS IN RISER WITH HYDROPHILIC NON-SHRINK GROUT OR APPROVED EQUAL.
11. PRE-CAST RISER MUST BE MADE OF A SINGLE POUR, NO JOINTS.
12. NO BRICK TO BE USED IN RISER STRUCTURE.

OPERATION

OPERATION PLAN GUIDELINES

THE FOLLOWING ARE ITEMS TO BE CONSIDERED IN THE PREPARATION OF AN OPERATION AND MAINTENANCE PLAN (O&M). BY CHECKING APPLICABLE ITEMS, THESE GUIDELINES MAY BE USED AS A STANDARD O&M PLAN IF DEEMED APPROPRIATE BY THE DESIGN ENGINEER, OR MAY BE USED IN THE PREPARATION OF A CUSTOM O&M PLAN (COMPLETE SIGNATURE SECTION REQUIRED). O&M IS TO BE DESIGNED TO ENSURE THAT THE FACILITY CONTINUES TO OPERATE IN A SAFE AND EFFECTIVE MANNER AND THAT PROBLEMS ARE PREVENTED OR QUICKLY IDENTIFIED AND CORRECTED. THE O&M IS TO BE IN CONFORMANCE WITH THIS DOCUMENT, SCS MD378, AND THE MARYLAND DAM SAFETY MANUAL PUBLISHED BY THE MARYLAND DEPARTMENT OF THE ENVIRONMENT WATER MANAGEMENT ADMINISTRATION.

IN GENERAL, OPERATION ITEMS ARE REQUIRED FOR THE FOLLOWING MAJOR AREAS: SUPPORT DATA, INSPECTIONS, AND EMERGENCY PROCEDURES. THE MAINTENANCE ITEMS REQUIRED COVER THE FOLLOWING MAJOR AREAS: EMBANKMENT, RESERVOIR, SPILLWAY AND OUTLET WORKS.

OPERATIONS

I. SUPPORT DATA

A.A. BACKGROUND INFORMATION - THE OWNER SHOULD MAINTAIN A COMPLETE UP-TO-DATE "AS-BUILT" PLAN AND DESIGN SPECIFICATIONS FOR THE DAM. A COPY OF THE COMPLETED SMALL POND SUMMARY SHEET (MD-14) SHOULD BE AVAILABLE.

A.B. RECORD KEEPING - WRITTEN RECORDS OF MAINTENANCE AND OBSERVATIONS SHOULD BE KEPT. PHOTOGRAPHS ARE VALUABLE FOR RECORDING OBSERVATIONS AND CHANGES.

II. INSPECTIONS

A.A. INSPECTION GUIDELINES - OWNERS ARE TO MAKE A VISUAL INSPECTION AT LEAST TWICE A YEAR. ONCE IN THE SUMMER AFTER MOWING, AND ONCE IN THE WINTER WHEN THE VEGETATIVE COVER IS DORMANT. INSPECTIONS ARE TO BE MADE AFTER EXTREME RAINFALL EVENTS. OWNERS ARE ENCOURAGED TO HAVE AN INSPECTION BY A REGISTERED PROFESSIONAL ENGINEER AT LEAST ONCE EVERY 5 YEARS.

A.B. DAM INSPECTION CHECKLIST - SHALL BE INCLUDED AS PART OF THE OPERATION AND MAINTENANCE PLAN AND COMPLETED AT LEAST ANNUALLY. SEE APPENDIX OF SCS MD STANDARDS AND SPECIFICATIONS POND (CODE 378I) FOR THE CHECKLIST.

III. EMERGENCY PROCEDURES

A.A. NOTIFICATION - TIME PERMITTING, CONSULT A PROFESSIONAL ENGINEER EXPERIENCED IN DAM DESIGN AND OPERATION TO DETERMINE THE EXTENT OF DAMAGE AND NECESSARY REPAIRS. BEFORE MAJOR REPAIRS, CONTACT MARYLAND DEPARTMENT OF THE ENVIRONMENT WATER MANAGEMENT ADMINISTRATION OR MARYLAND DAM SAFETY DIVISION FOR APPROVAL. IN THE CASE OF ANTICIPATED DAM FAILURE, THE LOCAL FIRE AND RESCUE OR POLICE DEPARTMENT SHOULD BE NOTIFIED REGARDING THE POTENTIAL EMERGENCY. THE ULTIMATE RESPONSIBILITY FOR IMPLEMENTATION OF A WARNING PLAN, THAT INCLUDES THE DANGER REACH, RESTS WITH THE DAM OWNER.

POND INSPECTION SCHEDULE

INSPECTION SCHEDULE

PRIOR NOTIFICATION SHALL BE GIVEN TO THE HARFORD COUNTY DPW (410-638-3545) EXT. 2434 SO THAT INSPECTIONS MAY BE MADE AT THE FOLLOWING STAGES:

(1) UPON COMPLETION OF EXCAVATION TO SUB-FOUNDATION AND WHERE REQUIRED. INSTALLATION OF STRUCTURAL SUPPORTS OR REINFORCEMENT FOR STRUCTURES, INCLUDING BUT NOT LIMITED TO:

(I) INLET-OUTLET STRUCTURES AND WATERTIGHT CONNECTORS ON PIPES AND SUBDRAINS

(II) FABRIC IF REQUIRED

(III) TRENCHES FOR ENCLOSED STORM DRAINAGE FACILITIES

(2) DURING PLACEMENT OF STRUCTURAL FILL, CONCRETE, AND INSTALLATION OF PIPING AND CATCH BASINS;

(3) DURING BACKFILL OF FOUNDATIONS AND TRENCHES;

(4) DURING EMBANKMENT CONSTRUCTION; AND

(5) UPON COMPLETION OF FINAL GRADING AND ESTABLISHMENT OF PERMANENT STABILIZATION.

NO WORK SHALL PROCEED UNTIL DPW AND THE ENGINEER IN CHARGE INSPECTS AND APPROVES THE WORK PREVIOUSLY COMPLETED. THIS FACILITY IS BEING CONSTRUCTED AS A SEDIMENT BASIN DURING THE SITE CONSTRUCTION AND WILL BE CONVERTED TO A STORMWATER MANAGEMENT FACILITY UPON COMPLETION OF ALL SITE WORK. ONCE THE FACILITY HAS BEEN CONVERTED TO A STORMWATER MANAGEMENT POND, AN AS-BUILT SURVEY SHALL BE PERFORMED.

POND MAINTENANCE SCHEDULE

1. THE FACILITIES SHALL BE INSPECTED TWICE ANNUALLY BY THE OWNER (MARCH & SEPTEMBER) FOR THE FOLLOWING:
A. VISUAL INSPECTION OF ALL COMPONENTS
B. PHYSICAL INSPECTION OF ANY MOVABLE PARTS, DRAIN, VALVES, ETC.

2. VEGETATED COVER SHALL BE MAINTAINED BY MOWING, LIMING, AND FERTILIZING. AS A MINIMUM REQUIREMENT, LIME AND FERTILIZATION SHALL BE APPLIED ONE (1) TIME EVERY TWO (2) YEARS. NO TREES OR WOODY VEGETATION SHALL BE PLANTED ON NOR ALLOWED TO GROW WITHIN 15 FEET OF THE TOE OF THE EMBANKMENT.

3. GRASS ON THE DAM AND NON-WETLAND PORTIONS OF THE POND SHALL BE MOWED ANYTIME THE GRASS IS OVER TWELVE (12) INCHES TALL.

4. ALL STORM DRAIN INFLOW POINTS TO BE KEPT FREE OF SEDIMENT, VEGETATION OR DEBRIS THAT CAN FORM OBSTRUCTIONS; FROM INFLOW POINT TO CONTROL RELEASE STRUCTURE.

5. AS SHOWN ON THE SWM LANDSCAPE PLAN, PLANTINGS SHALL BE INSPECTED AND MAINTAINED OR REPLACED AS NECESSARY DURING FACILITY MAINTENANCE.

6. FENCES AND GATES SHALL BE KEPT IN GOOD REPAIR; REMOVE VEGETATION COLLECTION/GROWTH.

7. ALL REQUIRED MAINTENANCE SHALL BE PERFORMED BY THE OWNER, THE OWNER'S REPRESENTATIVE, OR BENEFICIAL USERS AT THE OWNER'S OR BENEFICIAL USER'S EXPENSE.

8. RILLS ON THE SLOPES OF THE DAM AND WASHES IN THE EARTH SPILLWAY SHALL BE FILLED WITH SUITABLE MATERIAL AND THOROUGHLY COMPACTED. THESE AREAS SHALL BE RESEEDED OR RESODDED, LIMED, AND FERTILIZED AS NEEDED.

9. ALL APPURTENANCES SHALL BE KEPT FREE OF TRASH.

10. CONTACT DPW-STORMWATER MANAGEMENT (410) 638-3509, EXT. 2440 AS SOON AS DISCOVERED, BEFORE ANY REPAIR OF THE STRUCTURE, PIPE, OR EMBANKMENT.

SEQUENCE OF CONSTRUCTION: SNAP-TITE SLIP-LINING INSTALLATION

1. CLEANING AND INSPECTION OF 24" BCCMP
MECHANICAL OR HYDRAULIC CLEANING METHODS SHALL BE USED TO THOROUGHLY REMOVE SEDIMENT, DEBRIS, AND OTHER OBSTRUCTIONS FROM THE INTERIOR OF THE HOST PIPE. ONCE CLEANING IS COMPLETE, A CLOSED-CIRCUIT TELEVISION (CCTV) INSPECTION IS CONDUCTED TO CONFIRM INTERNAL CONDITIONS, CLEARANCE, AND OVERALL READINESS FOR LINER INSERTION.

2. INSTALLATION OF LINER SPACERS/SKIDS
TO MAINTAIN CONCENTRIC POSITIONING OF THE LINER AND ENSURE A UNIFORM ANNULAR SPACE, SPACERS OR SKIDS MADE FROM HDPE, POLYMER COMPOSITE, OR STAINLESS STEEL ARE AFFIXED TO THE LINER AT INTERVALS OF 1.5 TO 3 METERS. THESE SUPPORTS HELP REDUCE INSERTION FRICTION AND FACILITATE EFFECTIVE GROUT FLOW AROUND THE LINER ONCE IN PLACE.

3. INSERTION OF HDPE SNAP-TITE LINER
SNAP-TITE HDPE LINER SECTIONS ARE JOINED ON-SITE USING THEIR INTEGRAL BELL-AND-SPIGOT, GASKETED JOINTS, FORMING A CONTINUOUS, LEAK-RESISTANT PIPELINE. THE ASSEMBLED LINER IS PUSHED INTO THE HOST PIPE USING MECHANICAL EQUIPMENT SUCH AS WINCHES OR HYDRAULIC JACKS, ENSURING PROPER ALIGNMENT, CONSISTENT GRADE, AND MINIMAL RESISTANCE DURING ADVANCEMENT.

4. ANNULAR SPACE GROUTING
WITH THE LINER IN POSITION, ITS ENDS ARE SEALED TEMPORARILY, AND GROUTING OPERATIONS BEGIN. A LOW-DENSITY, NON-SHRINK CEMENTITIOUS OR CELLULAR GROUT IS INJECTED INTO THE ANNULAR SPACE USING BOTTOM-UP TECHNIQUES. GROUTING IS PERFORMED FROM BOTH ENDS AND THROUGH INTERMEDIATE GROUT PORTS AT 10-15 METER INTERVALS. PRESSURE IS CAREFULLY MONITORED, AND AIR IS VENTED FROM HIGH POINTS TO PREVENT LINER DEFORMATION AND ENSURE COMPLETE ANNULAR FILL.

5. CONNECTION TO EXISTING RISER STRUCTURE
AFTER TRIMMING THE LINER TO THE REQUIRED LENGTH, IT IS CONNECTED TO THE EXISTING RISER USING APPROPRIATE METHODS SUCH AS BELL/SPIGOT JOINTS, MECHANICAL COUPLINGS, OR BUTT-FUSION WELDING. THE JOINT IS SEALED WITH FLEXIBLE RUBBER BOOTS SECURED BY GALVANIZED STEEL BANDS OR MECHANICAL SEALS TO ACHIEVE A WATERTIGHT CONNECTION.

6. INSTALLATION OF TRANSITION COLLAR AT RISER
A TRANSITION COLLAR IS INSTALLED AT THE LINER-TO-RISER INTERFACE TO REINFORCE THE CONNECTION AND ENHANCE WATERTIGHTNESS. DEPENDING ON SITE CONDITIONS, THE COLLAR MAY BE A GALVANIZED STEEL CLAMP, A CAST-IN-PLACE CONCRETE COLLAR, OR A PREFABRICATED HDPE-TO-CONCRETE ADAPTER. MATING SURFACES ARE CLEANED AND PREPARED, AND SEALING ELEMENTS SUCH AS HYDROPHILIC WATERSTOPS OR GASKETS ARE INCORPORATED TO PREVENT LEAKAGE.

7. FINAL INSPECTION AND TESTING
UPON COMPLETION, THE ENTIRE INSTALLATION UNDERGOES AN INSPECTION. CCTV SHALL BE USED TO CONFIRM PROPER ALIGNMENT, JOINT INTEGRITY, AND ABSENCE OF OBSTRUCTIONS. ALL SEALS AND CONNECTIONS ARE VISUALLY AND MECHANICALLY INSPECTED, AND LEAK TESTING—EITHER HYDROSTATIC OR LOW-PRESSURE AIR—IS PERFORMED. ALL QUALITY ASSURANCE MEASURES ARE DOCUMENTED FOR PROJECT CLOSE-OUT AND COMPLIANCE RECORDS.

HARCO PROJECT CONTRACT # 97178 SWMENG-000058-2025 261200

SEAL:

STATE OF MARYLAND VERONIKA HEDRICK 50925 PROFESSIONAL ENGINEER 09/10/2025

PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.

LICENSE NO.: 50925 EXPIRATION DATE: 06/07/2027

ENGINEER:

FREDERICK WARD ASSOCIATES
ARCHITECTS | ENGINEERS | PLANNERS | SURVEYORS
P.O. Box 727, 5 South Main Street
Bel Air Maryland 21014-0727
410-838-7900 410-893-1243 fax
www.frederickward.com

REVISIONS

HARFORD COUNTY, MARYLAND

SWM POND NOTES
FOREST LAKES ELEMENTARY SCHOOL POND REPAIR

Drawn By: REH
Designed By: BKS
Checked By: VH
Contract No.:
Scale: NTS
Sheet 4 of 5
Date 09/10/2025

SCALE: 1 INCH

M:\PROJECTS\241039.00 HCPS SWM POND REPAIRS FILES & NHMS\DESIGN\CAD\FLES POND REPAIR

ADC MAP: 16 - K3

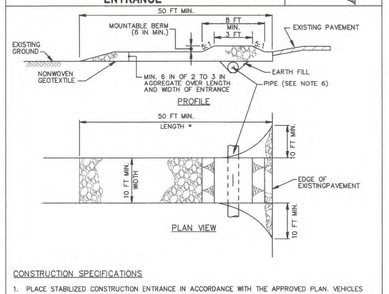
TAX MAP: 40

HCG BILLING ID NO:

HCG DWG ID NO:

DETAIL B-1 STABILIZED CONSTRUCTION ENTRANCE

STANDARD SYMBOL SCE



CONSTRUCTION SPECIFICATIONS

1. PLACE STABILIZED CONSTRUCTION ENTRANCE IN ACCORDANCE WITH THE APPROVED PLAN. VEHICLES MUST TRAVEL OVER THE ENTIRE LENGTH OF THE SCE. USE MINIMUM LENGTH OF 50 FEET (*30 FEET FOR SINGLE RESIDENCE LOT). USE MINIMUM WIDTH OF 10 FEET. FLARE SCE 10 FEET MINIMUM AT THE EXISTING ROAD TO PROVIDE A TURNING RADIUS.
2. PIPE ALL SURFACE WATER FLOWING TO OR DIVERTED TOWARD THE SCE UNDER THE ENTRANCE, MAINTAINING POSITIVE DRAINAGE. PROTECT PIPE INSTALLED THROUGH THE SCE WITH A MOUNTABLE BERM WITH 5:1 SLOPES AND A MINIMUM OF 12 INCHES OF STONE OVER THE PIPE. PROVIDE PIPE AS SPECIFIED ON APPROVED PLAN. WHEN THE SCE IS LOCATED AT A HIGH SPOT AND HAS NO DRAINAGE TO CONVEY, A PIPE IS NOT NECESSARY. A MOUNTABLE BERM IS REQUIRED WHEN SCE IS NOT LOCATED AT A HIGH SPOT.
3. PREPARE SUBGRADE AND PLACE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS.
4. PLACE CRUSHED AGGREGATE (2 TO 3 INCHES IN SIZE) OR EQUIVALENT RECYCLED CONCRETE (WITHOUT REBAR) AT LEAST 6 INCHES DEEP OVER THE LENGTH AND WIDTH OF THE SCE.
5. MAINTAIN ENTRANCE IN A CONDITION THAT MINIMIZES TRACKING OF SEDIMENT. ADD STONE OR MAKE OTHER REPAIRS AS CONDITIONS DEMAND TO MAINTAIN CLEAN SURFACE, MOUNTABLE BERM, AND SPECIFIED DIMENSIONS. IMMEDIATELY REMOVE STONE AND/OR SEDIMENT SPILLED, DROPPED, OR TRACKED ONTO ADJACENT ROADWAY BY VACUUMING, SCRAPING, AND/OR SWEEPING. WASHING ROADWAY TO REMOVE MUD TRACKED ONTO PAVEMENT IS NOT ACCEPTABLE UNLESS WASH WATER IS DIRECTED TO AN APPROVED SEDIMENT CONTROL PRACTICE.

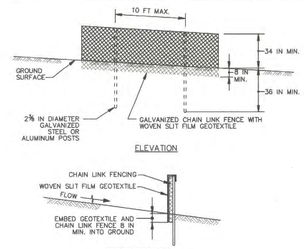
MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

B.2

DETAIL E-3 SUPER SILT FENCE

STANDARD SYMBOL SSF



CONSTRUCTION SPECIFICATIONS

1. INSTALL 2⅜ INCH DIAMETER GALVANIZED STEEL POSTS OF 0.095 INCH WALL THICKNESS AND SIX FOOT LENGTH SPACED NO FURTHER THAN 10 FEET APART. DRIVE THE POSTS A MINIMUM OF 36 INCHES INTO THE GROUND.
2. FASTEN 9 GAUGE OR HEAVIER GALVANIZED CHAIN LINK FENCE (2⅜ INCH MAXIMUM OPENING) 42 INCHES IN HEIGHT SECURELY TO THE FENCE POSTS WITH WIRE TIES OR HUG RINGS.
3. FASTEN WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS, SECURELY TO THE UPSLOPE SIDE OF CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE AND CHAIN LINK FENCE A MINIMUM OF 8 INCHES INTO THE GROUND.
4. WHERE ENDS OF THE GEOTEXTILE COME TOGETHER, THE ENDS SHALL BE OVERLAPPED BY 6 INCHES, FOLDED, AND STAPLED TO PREVENT SEDIMENT BY PASS.
5. EXTEND BOTH ENDS OF THE SUPER SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SUPER SILT FENCE.
6. PROVIDE MANUFACTURER CERTIFICATION TO THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS.
7. REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN. IF UNDERMINING OCCURS, REINSTALL CHAIN LINK FENCING AND GEOTEXTILE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

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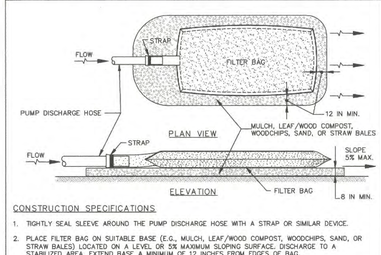
E.7

DETAIL F-4 FILTER BAG

STANDARD SYMBOL FB



CONSTRUCTION SPECIFICATIONS

1. TIGHTLY SEAL SLEEVE AROUND THE PUMP DISCHARGE HOSE WITH A STRAP OR SIMILAR DEVICE.
2. PLACE FILTER BAG ON SUITABLE BASE (E.G., MULCH, LEAF/WOOD COMPOST, WOODCHIPS, SAND, OR STRAW BALES) LOCATED ON A LEVEL OR 5% MAXIMUM SLOPING SURFACE. DISCHARGE TO A STABILIZED AREA. EXTEND BASE A MINIMUM OF 12 INCHES FROM EDGES OF BAG.
3. CONTROL PUMPING RATE TO PREVENT EXCESSIVE PRESSURE WITHIN THE FILTER BAG IN ACCORDANCE WITH THE MANUFACTURER RECOMMENDATIONS. AS THE BAG FILLS WITH SEDIMENT, REDUCE PUMPING RATE.
4. REMOVE AND PROPERLY DISPOSE OF FILTER BAG UPON COMPLETION OF PUMPING OPERATIONS OR AFTER BAG HAS REACHED CAPACITY, WHICHEVER OCCURS FIRST. SPREAD THE DEWATERED SEDIMENT FROM THE BAG IN AN APPROVED UPLAND AREA AND STABILIZE WITH SEED AND MULCH BY THE END OF THE WORK DAY. RESTORE THE SURFACE AREA BENEATH THE BAG TO ORIGINAL CONDITION UPON REMOVAL OF THE DEVICE.
5. USE NONWOVEN GEOTEXTILE WITH DOUBLE STITCHED SEAMS USING HIGH STRENGTH THREAD. SIZE SLEEVE TO ACCOMMODATE A MAXIMUM 4 INCH DIAMETER PUMP DISCHARGE HOSE. THE BAG MUST BE MANUFACTURED FROM A NONWOVEN GEOTEXTILE THAT MEETS OR EXCEEDS MINIMUM AVERAGE ROLL VALUES (MARV) FOR THE FOLLOWING.

GRAB TENSILE	250 LB	ASTM D-4632
PUNCTURE	150 LB	ASTM D-4833
FLOW RATE	70 GAL/MIN/FT²	ASTM D-4491
PERMITTIVITY (SEC⁻¹)	1.2 SEC⁻¹	ASTM D-4491
UV RESISTANCE	70% STRENGTH @ 500 HOURS	ASTM D-4355
APPARENT OPENING SIZE (AOS)	0.15–0.18 MM	ASTM D-4751
SEAM STRENGTH	90%	ASTM D-4632

6. REPLACE FILTER BAG IF BAG CLOGS OR HAS RIPS, TEARS, OR PUNCTURES. DURING OPERATION KEEP CONNECTION BETWEEN PUMP HOSE AND FILTER BAG WATER TIGHT. REPLACE BEDDING IF IT BECOMES DISPLACED.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

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F.9

SAMPLE SPECIFICATIONS FOR SNAP-TITE CULVERT LINERS OR EQUIVALENT

1. Description — This Item shall govern for furnishing, installing, grouting and providing all labor, material and equipment necessary to rehabilitate existing culvert pipe by sliplining an existing culvert pipe with high density polyethylene (HDPE) pipe. The pipes shall be sizes, types, designs and dimensions shown on the plans and shall include all connections, joints and other appurtenances as required to complete the work.
The sliplining process will require the contractor to completely grout the annular void between the host and insert pipe. The grouting process shall be considered subsidiary to this item.

2. Materials — Unless otherwise specified on the plans or herein, culvert pipe renewal shall conform to the following:
Snap-Tite® Culvert Liner as provided by ISCO Industries or approved equal.

A. Liner Material – High Density Polyethylene (HDPE) Pipe

1. High density polyethylene pipe and fittings shall meet the requirements in the AASHTO M326-08 Specification.
2. Raw Materials. The pipes and the fittings shall be manufactured from PE resin compounds, which have a minimum cell class 345464C as defined and described in ASTM D3350.
3. HDPE Resin Specifications.

Property	Specifications	Unit	Nominal Value
Material Designation	PPI/ASTM		PE3408/PE3608
Cell Classification	ASTM D3350		345464C
1. Density (3)	ASTM D1505	Gm/cm³	0.955
2. Melt Index (4)	ASTM D1238	gm/10 min.	0.11
3. Flexural Modulus (5)	ASTM D790	psi	135,000
4. Tensile Strength (4)	ASTM D638	psi	3,200
5. Slow Crack Growth			
a. ESCR	ASTM D1693	hours in 100% igepal	>5,000
b. PENT (6)	ASTM F1473	hours	>100
6. HDB @ 73 deg. F (4)	ASTM D2837	psi	1,600
7. UV Stabilizer (C)	ASTM D1603	%C	2.5%

B. Designation of Type

1. The HDPE pipes used for liners in gravity flow culverts shall be solid-wall construction with mechanical end connectors, male and female, consisting of 2 machined-groove landing points, to prevent the pipe from pulling apart during installation.
2. Individual liner section lengths shall be a minimum of 6 ft. but shall not exceed 50 ft. unless pre-approved.

C. Pipe joints shall comply with ASTM D3212 Standard Specification for joint tightness.

1. Extrusion welded joints shall not be allowed to join the liner pipe together to keep grout from leaking out during the grouting stage.
2. Neoprene Cement shall not be allowed to create a seal at the joint to prevent grout from leaking out during the grouting stage.

D. Hydraulic flow characteristics for the liner pipe shall provide a Manning's coefficient of n = 0.00914. Pipe Manufacturer shall submit 3rd party test data verifying the Manning's coefficient has been achieved.

E. Liner Pipe material must be pre-approved by the governing state agency's materials testing department before bid and have a minimum of 1,000' of said liner installed in said state.

F. Oval Pipe

1. The liner shall be furnished in an oval shape to match the existing CMP elliptical pipe, with horizontal and vertical wood struts inserted through the liner by the manufacturer before delivery to the jobsite, as to keep the liner in an oval shape before grouting into place. After the liner has been grouted fully in place, the struts shall be removed. The Contractor is responsible for ascertaining actual measurements prior to ordering the liner.

G. Other pipe liners that do not meet this specification must be submitted for approval prior to bid date.

H. Liner Pipe must be manufactured in the United States under the 'Buy American Products' program

I. Grouting Material – Contractor shall utilize material specifications for solidification of the annular void between host and the inserted liner with low-density flowable fill or cellular grout. The cellular grout with a density between 40 and 80 lbs. per cubic foot may be used. Reduced-density flowable fill grout with a density between 100 and 120 lbs. per cubic foot may be used.

J. End Treatment – The upstream/inlet end of the new liner pipe shall be fitted with a flow enhancement device to reduce inlet control effects. The device shall be HDPE material, same as the liner pipe, and have a connector included for connection to the liner pipe. The opening at the end of the device shall be larger than the ID of the host pipe. 3rd Party Test data shall be provided to show improvement of flow by at least 30% at 2 feet of headwater depth or an entrance loss coefficient (K) of approximately 0.2 for outlet control conditions. The device shall be the Hydro-Bell or approved equal.

3. Cleaning — The existing culvert pipe shall be cleaned by whatever means necessary to remove all obstructions which may be encountered that would prevent insertion of the pipe liner into the host pipe as approved by the engineer. This work will not be paid for directly, but shall be considered subsidiary to this item.

4. Construction

A. Installation

a. Contractor must be pre-approved by the pipe manufacturer and a letter of this pre-approval must be submitted from the manufacturer to the contractor at the time of bid.
b. Contractor personnel shall have a minimum of 5,000' of slipline material installation experience and submit three previous slipline project references similar in size and scope of bid in writing.
c. Manufacturer's Rep must be on site at critical stages of the liner installation and grouting application.

B. Liner Pipe – Liner pipe shall be inserted and installed in accordance with manufacturer's recommendations. Grade of liner pipe shall be maintained parallel to grade of host pipe.

C. Grouting

a. Upon completion or partial completion of the sliplining process, grouting will be required to be placed in the annular void between the insertion pipe and the host pipe. Cellular grout with a density between 40 and 80 lbs. per cubic foot may be used. Reduced-density flowable fill grout with a density between 80 and 120 lbs. per cubic foot may be used. Project engineer shall state density of grout to be used on drawings or in specifications.
b. A detailed plan on holding the liner pipe on the invert of the host pipe shall be submitted to the engineer for approval.
c. The annular void shall be completely grout filled without deflecting the insertion pipe greater than 1.5 percent.
d. The contractor shall provide end seals at the open points of each run of pipe to be grouted.
e. Penetration of the host pipe shall be permitted for host pipe constructed with Corrugated Metal Pipe (CMP) to facilitate grouting of the annular void. Multiple fill pipes will be required.
f. The annular void shall be grouted solid by injecting grout from one end of the pipe run and allowing it to flow toward the other end. Venting of the annular void shall be performed to assure uniform filling of the void space during the grouting process.
g. An open-ended, high-point tap or equivalent vent must be provided and monitored at the bulkhead opposite to the point of grouting.
h. Pressure on the annular void shall not exceed 2 PSI to avoid damage to the liner pipe. Regardless of the pressure, the contractor shall be solely responsible for any damage or distortion to the insertion pipe due to the grouting process.
i. The grout shall be made using the preformed foam process using foam-generating equipment calibrated daily by the foam manufacturer to produce a precise and predictable volume of foam. The foam concentrate shall be certified by the customer to have specific liquid/foam expansion ratio at a constant dilution ratio with water.
j. The specific job mix shall be submitted to the customer by either the foam concentrate supplier or the certified /licensed contractor for approval prior to use on this project. The mix shall have a minimum 28 day compressive strength of 300 psi.
k. Grout mixed off-site shall be delivered to the jobsite in a truck mixer filled to half its capacity. The foam concentrate shall then be added to the cement mix in the truck and mixed to a uniform consistency and pumped into the annular space.
l. Contractor must have a written erosion control plan with a method for waste grout recovery submitted to county with attached bid proposal.
m. Customer will verify that post-construction conditions are acceptable after installation and ensure that proper seeding and general cleanup has been completed.

D. Pipe Stockpiling and Handling – Pipe and fittings shall be stockpiled in a safe manner at each contractor staging area or pit location. The stockpiling shall be arranged to cause a minimum of interference to pedestrian and stored outside the safety clear zone of vehicular traffic. When handling sliplining pipe, the contractor shall take all precautions necessary to avoid damaging the pipe. For pipe with cuts greater than 10% of the wall thickness, repair or replacement will be at the entire expense of the contractor.

5. Clean-up and Restoration — Upon acceptance of the installation work and testing, the contractor shall clean-up and restore the project area affected by operations as approved by the engineer.

6. Measurement — This item shall be measured by the foot. Such measurement shall be made along the flowline of the liner pipe, complete in place.

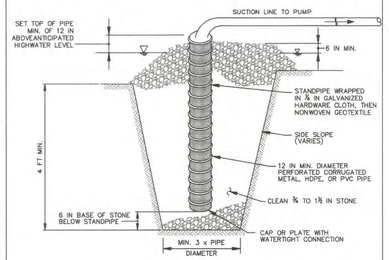
For multiple culverts to be lined, the measurement length shall be the sum of the lengths of each barrel, measured as prescribed above.

The accepted quantities of pipe liner will be paid for at the contract unit price per linear foot for the size of the existing pipe in which the liner is installed, complete in place.

7. Payment — The work performed and the materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for as the unit bid for "Sliplining Culvert Pipe" of the type, design (if required), and size specified. This price shall be full compensation for cleaning existing pipe; for furnishing, hauling, installing liner pipe and placing grout; for all connections; and for all labor, tools equipment, materials, clean-up and incidentals.

DETAIL F-2 SUMP PIT

STANDARD SYMBOL SP



CONSTRUCTION SPECIFICATIONS

1. USE 12 INCH OR LARGER DIAMETER CORRUGATED METAL, HDPE, OR PVC PIPE WITH 1 INCH DIAMETER PERFORATIONS, 6 INCHES ON CENTER. BOTTOM OF PIPE MUST BE CAPPED WITH WATERTIGHT SEAL.
2. WRAP PIPE WITH ¼ INCH GALVANIZED HARDWARE CLOTH AND WRAP NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS, OVER THE HARDWARE CLOTH.
3. EXCAVATE PIT TO THREE TIMES THE PIPE DIAMETER AND FOUR FEET IN DEPTH. PLACE ¾ TO 1½ INCH STONE OR EQUIVALENT RECYCLED CONCRETE, 6 INCHES IN DEPTH PRIOR TO PIPE PLACEMENT.
4. SET TOP OF PIPE MINIMUM 12 INCHES ABOVE ANTICIPATED WATER SURFACE ELEVATION.
5. BACKFILL PIT AROUND THE PIPE WITH ¾ TO 1½ INCH CLEAN STONE OR EQUIVALENT RECYCLED CONCRETE AND EXTEND STONE A MINIMUM OF 6 INCHES ABOVE ANTICIPATED WATER SURFACE ELEVATION.
6. DISCHARGE TO A STABLE AREA AT A NONEROSIVE RATE.
7. A SUMP PIT REQUIRES FREQUENT MAINTENANCE. IF SYSTEM CLOGS, REMOVE PERFORATED PIPE AND REPLACE GEOTEXTILE AND STONE. KEEP POINT OF DISCHARGE FREE OF EROSION.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

E.4

SMARTFENCE 42" SEDIMENT & PERIMETER CONTROL INSTALLATION INSTRUCTIONS

STEP 1: EXCAVATE TRENCH
Excavate trench a maximum of 4" wide and 6" deep. The trench shall be hand-cleaned following excavation to remove bulky debris such as rocks, sticks, and soil clods.

STEP 2: PREPARE FENCE
Lay SMARTfence 42 out on the ground along the proposed fence line and next to the anchor trench. Reference NOTE ONE prior to beginning.

STEP 3: INSTALL INITIAL POST
3A) For the initial post, place the end of SMARTfence 42 along the post height and rotate the post 360 degrees, maintaining tension on the fabric. Secure the fence to the post at all four (4) orange-colored band locations with steel wire or nylon ties as per NOTE TWO.

3B) Drive the initial post (72" metal t-post) with the attached fence to a depth of 36" below surface.

STEP 4: INSTALL INTERIOR POSTS
Using spacing no greater than 6' on center, drive interior posts to 36" depth below surface and attach the fencing as you go (see NOTE ONE and SMARTfence detail on page 2).

To attach fencing, position SMARTfence 42 in front of the adjacent t-post, pulling the fencing tight and fasten it to the post at all four (4) orange-colored band locations (as per NOTE TWO). It is critical that SMARTfence 42 is pulled tight prior to attaching it to each interior post.

STEP 5: INSTALL FINAL POST
After the interior posts have been fastened, secure the fence to the final post by pulling the final section of fencing taut, and then rotating the post 360 degrees while maintaining tension on the fence system. Secure the fence to the post at all four (4) orange-colored band locations with the steel wire or nylon ties as per NOTE TWO. Drive the final post into the ground to a 36" depth below the surface.

STEP 6: BACKFILL TRENCH
Ensure bottom 8" of fabric has been placed in trench. Backfill trench (overfill) with soil placed around fabric. Compact soil backfill manually or via mechanical equipment such as the front wheel of a tractor, skid steer, roller, or other device (per Note 5 of ASTM D 6462 Standard Practice for Silt Fence Installation).

****Be careful not to damage the fabric during compaction (damaged fabric will not be replaced).**

NOTE ONE - INSTALL SPECIFICATIONS:
SMARTfence 42 shall be installed using a 6' (72") metal t-post, 1.25 lbs per foot with a kick plate embedded 3' (36") deep on no more than 6' (72") centers (see detail on page 2.)

NOTE TWO - SUPPLIES FOR ATTACHING FENCING:
To fasten SMARTfence 42 to studded, metal T-posts, use one of following methods:

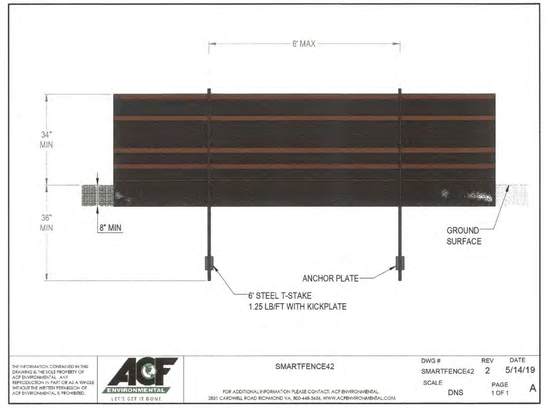
- Steel wire: Wire-attach SMARTfence 42 to metal T-posts using 16-gage 304 SS wire with mitered ends, securing with safety pliers.

- Nylon ties: Puncture two 0.25" openings, spaced at a width apart that is roughly equivalent to the post width, and secure the fence to the post using 8" nylon heavy-duty cable ties (zip-ties) that are UV resistant and have a minimum 120-lb tensile strength.

Please contact our team at 800-448-3636 or info@acfenv.com with any questions regarding the installation process.

SMARTfence

For more information, contact our Inside Sales team at 800.448.3636 email at info@acfenv.com



INSTALLATION

People

Highway departments can use their own crews to install Snap-Tite® - no special training is necessary. Using minimal equipment, a team of four can easily rehabilitate a culvert. Purchase the Snap-Tite® Culvert Lining Systems today, keep it in your yard until you have some down time and install it that day. What would be lost payroll time becomes a money-saving project.

Product

Snap-Tite® Culvert liner is a tough, flexible liner made from solid-wall HDPE pipe. The ends are machined to make a mechanical connection which provides tensile and compression strength.

Equipment

Snap-Tite® is so easy to install that most jobs can be completed with a backhoe, shovels, two come-a-longs, and chains. If a culvert requires cleaning, a water truck or jet cleaner may be needed.

Chains and come-a-longs are part of the equipment needed to install Snap-Tite® Culvert Liner. Standard chain come-a-longs are available with load ratings of 1,000 to 5,000 lbs. of force. Verify the amount of force that the come-a-longs are capable of applying before using them. For safety reasons, the chains normally are able to handle twice the load applied by each come-a-long.

Chains are sold based on working load. The working load is the normal rating for typical lifting applications. The strength at failure is usually four times the working load. When a chain is wrapped around a Snap-Tite® liner and tightened with a chain binder, it is under tensile loading.

After a come-a-long is attached to a chain link, the link is subject to cross loading. A cross load occurs because the chain must wrap around the pipe to transfer the forces. As the cross load is increased, the angle of the chain around the liner changes. See drawing 1.

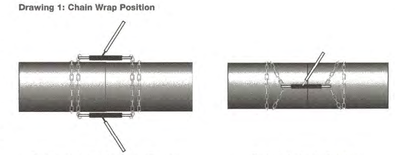
Chain manufacturers reduce the working load by 25% for cross loading. A chain with a standard rating of 6,000 lbs. is only rated for 4,500 lbs. in this application. If you have determined that you need 6,000 lbs. working load on the chain for a Snap-Tite® Installation, then an 8,000 lbs. working load rated chain is needed.

Full load is applied when the male and female joints come together straight on and part of the flat surface on both sides "catches." The best joining procedure is to watch the joining process and make corrections based on observations. When pipe movement requires more force than expected, look for a reason. If the joints do "catch," rotation of the two liner sections or alignment with a pry bar may solve the problem.

If the male end is at a slight angle to the female and partially inserted, lower force is required to make the joints mate. Apply force from one come-a-long until liner bends slightly. Apply force slowly, this allows the female joint to expand. Be cautious when tightening a chain or cable!

Joining forces changes with temperature, type of lubrication, male-female joint alignment, presence of debris, slope and time. Forces are estimated for slow application of force with flat slope and lubricated joint. A slow application of force allows materials to stretch. Fast joining requires more force and energy because material does not immediately increase in size. More force will be required below 73 degrees Fahrenheit. Forces are estimated only!

Drawing 1: Chain Wrap Position



Position of chain before load – Top View

Chain under load – Side View

Table 5-1
Estimated Force to Join Snap-Tite® Liner

Liner Size OD (Inches)	Weight per foot (lbs.)	Weight of 24 feet (lbs.)	Estimated Joining Force (lbs.)	Total Force (lbs.)	Min. Load Rating for Each Come-along
10.75	4.75	114	500	614	1,000 lb.
12.75	6.67	160	1,000	1,160	1,000 lb.
14	8.05	193	1,000	1,193	1,000 lb.
16	10.50	252	1,000	1,252	1,000 lb.
18	13.30	319	1,000	1,319	1,000 lb.
20	20.34	488	1,000	1,419	1,000 lb.
22	19.86	477	1,000	1,477	1,000 lb.
24	23.62	566	1,500	2,066	2,000 lb.
28	32.19	773	1,500	2,273	2,000 lb.
30	36.93	886	1,500	2,386	2,000 lb.
32	42.04	1,009	2,000	3,009	3,000 lb.
36	53.20	1,255	2,000	3,255	3,000 lb.
39.37	63.69	1,529	3,000	4,529	3,000 lb.
42	72.37	1,737	3,000	4,737	3,000 lb.
48	94.96	2,279	3,000	5,279	3,000 lb.
54	119.7	2,873	3,000	5,873	3,000 lb.
63	162.98	3,912	4,000	7,912	4,000 lb.

MATERIAL REQUIREMENT

THESE SPECIFICATIONS COVER THE PURCHASE OF HIGH DENSITY POLYETHYLENE (HDPE) PIPE LINERS FOR LINING EXISTING CULVERT PIPES. PIPE LINERS FURNISHED TO THIS SPECIFICATIONS SHALL MEET OR EXCEED ALL REQUIREMENTS.

BIDDERS ARE CAUTIONED TO READ THE SPECIFICATIONS CAREFULLY, AS THERE MAY BE SPECIAL REQUIREMENTS NOT COMMONLY OFFERED BY THE PIPE LINER MANUFACTURER.

PIPE LINER SHALL MEET THE FOLLOWING REQUIREMENTS AND CONFORM TO THE REFERENCE SPECIFICATIONS; THE LINER PIPE SHALL BE MADE OF HIGH DENSITY POLYETHYLENE RESINS IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM D3350. THE CELL CLASSIFICATION WILL BE A MINIMUM 345464C AND SHALL HAVE THE PLASTIC PIPE INSTITUTE DESIGNATION OF PE3608.

PIPE LINER SHALL BE A DIMENSION RATIO (DR) OF 32.5. THE INSTALLED PIPE SHALL HAVE A SMOOTH, NON-CORRUGATED INTERIOR AND EXTERIOR SURFACE.

THE LINER SHALL BE CAPABLE OF BEING JOINED INTO A CONTINUOUS LENGTH BY AN INTERLOCKING METHOD. THE JOINTS SHALL NOT CREATE AN INCREASE IN THE OUTSIDE DIAMETER OF THE LINER PIPE TO ELIMINATE ANY COUPLING DIFFICULTIES.
THE JOINTS MUST BE WATER-TIGHT WITH GASKETS THAT ARE CAPABLE OF HANDLING PRESSURES UP TO 25 FEET OF HEAD PER ASTM D3212. EACH HDPE SHALL HAVE A MALE AND A FEMALE END. THE SUPPLIER SHALL FURNISH A MANUFACTURER'S CERTIFICATION STATING THAT THE MATERIAL IN THE PIPE MEETS THE REQUIREMENTS OF ASTM D3350 WITH A MINIMUM CELL SPECIFICATIONS OF PE345464 C WITH THE PHYSICAL PROPERTIES INDICATED ABOVE.

THE SUPPLIER SHALL CERTIFY THE DIMENSIONS MEET THE REQUIREMENTS OF ASTM F714.

BEFORE INSERTING THE LINER PIPE, THE EXISTING PIPE MUST BE CLEANED IF NEEDED. ALL DEBRIS OR OTHER MATERIALS MUST BE REMOVED FROM THE HOST PIPE.

AFTER THE LINER IS IN PLACE, THE AREA BETWEEN THE ORIGINAL PIPE AND THE LINER SHALL BE COMPLETELY FILLED WITH LOW DENSITY FLOWABLE FILL OR CELLULAR GROUT.

SITE ANALYSIS

TOTAL AREA OF SITE:	20.67 AC
TOTAL AREA OF DISTURBANCE:	0 AC
AREA TO BE VEGETATIVELY STABILIZED:	0 AC
AREA TO BE PAVED:	0 AC
WATERSHED	ATKISSON RESERVOIR

EARTHWORK QUANTITIES:
APPROX. CUT = 0 CY
APPROX. FILL = 0 CY

*NOTE: CONTRACTOR SHALL DETERMINE EARTHWORK QUANTITIES. QUANTITIES SHOWN ARE FOR SEDIMENT CONTROL USE ONLY.

NPDES POINT:	NORTHING	693214.3610
	EASTING	1485110.8030

STABILIZATION NOTE

1. CONTRACTOR SHALL ONLY GRADE AND STRIP TOPSOIL FOR DISTANCE THAT CAN BE STABILIZED AT THE END OF THE WORK DAY.
2. CONTRACTOR SHALL PROVIDE FILTER LOG IN AREAS WHERE SAME DAY STABILIZATION CANNOT BE ACHIEVED PRIOR TO A RAINFALL EVENT IN ORDER TO PREVENT SEDIMENT LADEN RUNOFF FROM LEAVING THE SITE.

ESTIMATE OF SEDIMENT CONTROL DEVICES

STABILIZED CONSTRUCTION ENTRANCE = 1 EA
SUPER SILT FENCE = 100 LF±
SUMP PIT = 1 EA
FILTER BAG = 1 EA

HARCO PROJECT CONTRACT # 97178 SWMENG-000058-2025 261201

REVISIONS

HARFORD COUNTY, MARYLAND

SEDIMENT CONTROL NOTES AND DETAILS
FOREST LAKES ELEMENTARY SCHOOL POND REPAIR

SEAL: STATE OF MARYLAND FREDERICK HEDDINGS JR. 30925 PROFESSIONAL ENGINEER 09/10/2025 Version 1 Submission
PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
LICENSE NO.: 30925 EXPIRATION DATE: 06/07/2027

ENGINEER:
FWA
FREDERICK WARD ASSOCIATES
ARCHITECTS | ENGINEERS | PLANNERS | SURVEYORS
www.frederickward.com
P.O. Box 727, 5 South Main Street
Bel Air Maryland 21014-0727
410-838-7900 410-893-1243 fax

Drawn By:	REH	Contract No.:	
Designed By:	BKS	Scale:	NTS
Checked By:	VH	Sheet	5 of 5
		Date	09/10/25

ADC MAP: 16 - K3
TAX MAP: 40
HCG BILLING ID NO:
HCG DWG ID NO:
SHEET 1 OF 1

M:\PROJECTS\2241039.00 HCPS SWM POND REPAIRS FILES & INMS\DESIGN\CAD\FLES POND REPAIR

HARFORD COUNTY PUBLIC SCHOOLS, MARYLAND

NORTH HARFORD MIDDLE SCHOOL

ELECTION DISTRICT NO. 1

ADC MAP: 3 - G9

TAX MAP: 17

HCG BILLING ID NO:

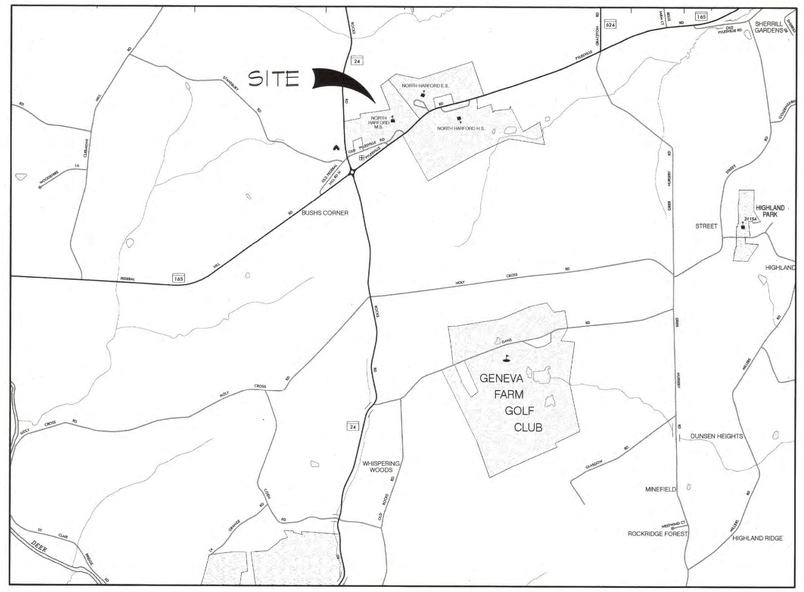
HCG DWG ID NO:

SHEET INDEX	
SHEET TITLE	SHEET NUMBER
TITLE SHEET	1 OF 6
SWM & ESC PLAN	2 OF 6
SWM PROFILES & DETAILS	3 OF 6
SWM DETAILS	4 OF 6
POND NOTES & DETAILS	5 OF 6
SEDIMENT CONTROL NOTES & DETAILS	6 OF 6

LEGEND

- PROPERTY LINE
- 440 — EX TOPO
- 440 — PROP TOPO
- EX ROAD
- EX SOIL
- LOD — LIMIT OF DISTURBANCE
- SF — PROP SILT FENCE
- SSF — PROP SUPER SILT FENCE
- SCE — STABILIZED CONSTRUCTION ENTRANCE
- SD — EX STORM MH
- EX RIP RAP
- EX BUILDING

TOTAL SITE AREA	:	60 ACRES
DISTURBED AREA	:	0.44 ACRES
NEW IMPERVIOUS AREA (SITE)	:	0.0 ACRES
TOTAL IMPERVIOUS AREA (SITE)	:	0.0 ACRES
WATERSHED	:	BROAD CREEK



LOCATION MAP

SCALE : 1" = 2000'

SYMBOL	UNIT NAME	HYDRIC	K-VALUE	HYDROLOGIC GROUP
CcB2	CHESTER SILT LOAM, 3-8%	-	.32	B
CcC2	CHESTER SILT LOAM, 8-15%	-	.32	B
GcC	GLENELG LOAM, 8-15%	-	.24	B
GcD	GLENELG LOAM, 15-25%	-	.24	B
GgB2	GLENELG CHANNERY LOAM, 3-8%	-	.20	B
GnB	GLENVILLE SILT LOAM, 3-8%	-	.37	C/D
MfE	MANOR SOILS, 25-45%	-	.17	B

AS-BUILT CERTIFICATION

I hereby certify that the facility shown on this plan was constructed as shown on the "As-Built" plans and meets the approved plans and specifications.

Signed: _____
Print Name: _____
Date: _____
P.E. No.: _____

Certify means to state or declare a professional opinion based upon on-site inspections and material tests which are conducted during construction. The on-site inspections and material tests are those inspections and tests deemed sufficient and appropriate by commonly accepted engineering standards. Certify does not mean or imply a guarantee by the engineer nor does an engineer's certification relieve any other party from meeting requirements imposed by contract, employment, or other means, including meeting commonly accepted industry practices.

HARFORD SOIL CONSERVATION DISTRICT
APPROVED FOR SEDIMENT CONTROL ONLY
3/24/26

DISTRICT OFFICE DATE
TECHNICAL CONCURRENCE
3/31/26
HARFORD SOIL CONSERVATION DISTRICT DATE

EROSION AND SEDIMENT CONTROL
PLAN #: 59917

TECHNICAL REVIEW BY:
HARFORD SOIL CONSERVATION DISTRICT

APPROVED BY:
3/10/2026
HARFORD SOIL CONSERVATION DISTRICT
County Dept. OF Public Works

HARFORD COUNTY SOIL CONSERVATION DISTRICT

SMALL POND APPROVAL BY:
3/10/26
HARFORD SOIL CONSERVATION DISTRICT OFFICIAL

TECHNICAL REVIEW BY:
3/24/26
HARFORD COUNTY SOIL CONSERVATION DISTRICT

ENGINEER'S CERTIFICATION

I hereby certify that this plan has been prepared by me, or under my supervision, and meets the minimum standards of the Harford County Department of Public Works and/or the United States Department of Agriculture, Soil Conservation Service, and/or the Maryland Department of the Environment, Water Management Administration.

Signed: Veronika Hedrington
Print Name: VERONIKA HEDRINGTON
Date: 06/24/2025
P.E. No.: 50926

STATE OF MARYLAND — VERONIKA HEDRINGTON — 50926 — PROFESSIONAL ENGINEER
06/24/2025
Veronika Hedrington

PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
LICENSE NO.: 50926 EXPIRATION DATE: 06/07/2027

260462

HARFORD COUNTY BILLING No. 97151
THESE PLANS HAVE BEEN REVIEWED BY HARFORD COUNTY AND MEET THE TECHNICAL REQUIREMENTS FOR STORMWATER MANAGEMENT ONLY.

REVIEWED & APPROVAL RECOMMENDED:
3/24/2026
WATER RESOURCES ENGINEERING

APPROVAL RECOMMENDED:
3-25-26
CHIEF ENGINEER

APPROVAL RECOMMENDED:
4/1/26
DEPUTY DIRECTOR OF PUBLIC WORKS

APPROVAL:
4-1-26
DIRECTOR OF PUBLIC WORKS

OWNER/DEVELOPER: HARFORD COUNTY PUBLIC SCHOOLS
102 S HICKORY AVE
BEL AIR, MD 21014
PHONE: (410) 838-7300

NAME — DATE 06/24/2025

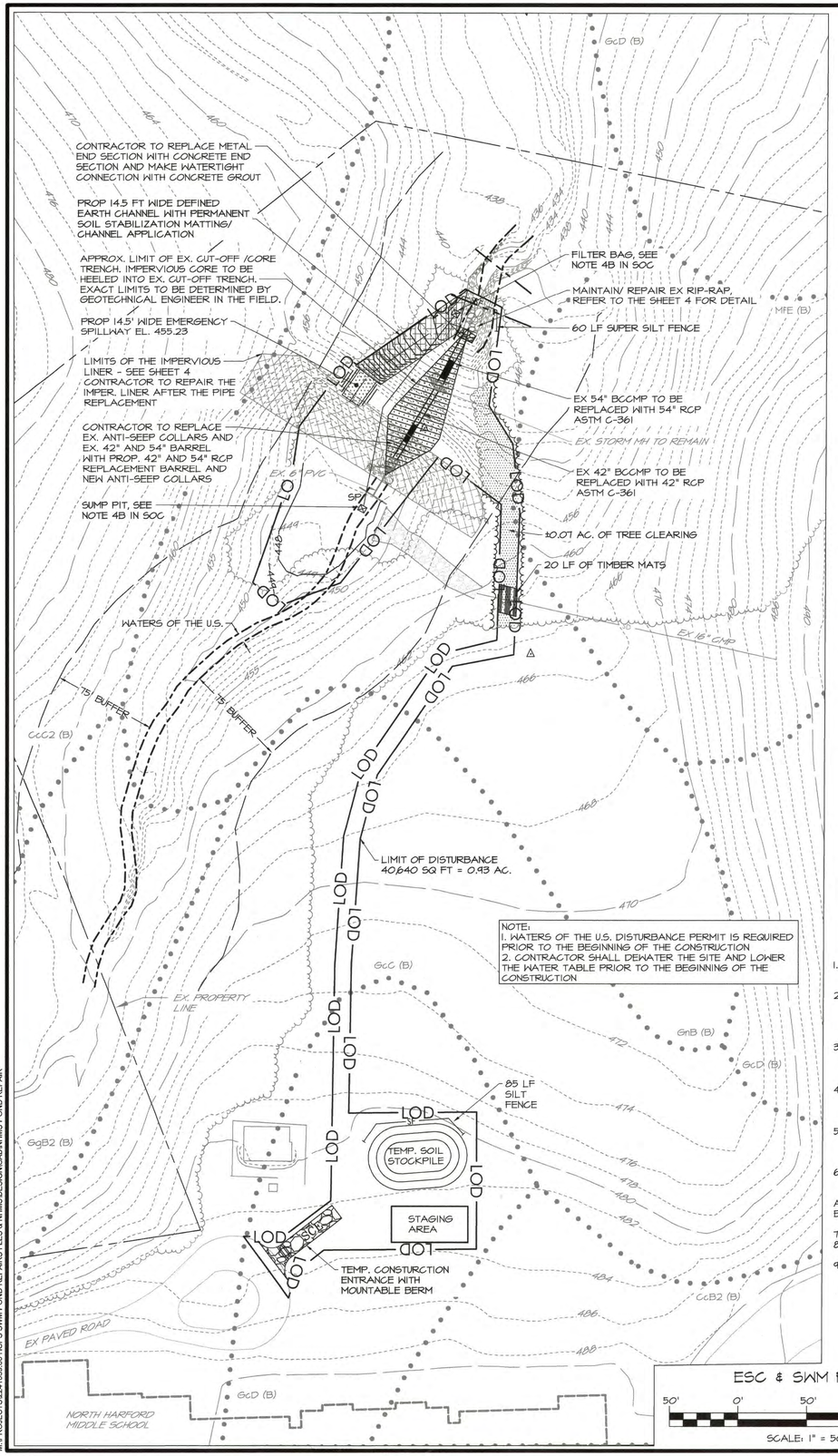
ENGINEER: FWA
P.O. Box 727, 5 South Main Street
Bel Air Maryland 21014-0727
410-838-7900 410-893-1243 fax
FREDERICK WARD ASSOCIATES
ARCHITECTS | ENGINEERS | PLANNERS | SURVEYORS
www.frederickward.com

S/C PLAN NO. 59917 GRA-011981-2025 HARCO PROJECT CONTRACT # 97179 SWMENG-000077-2025

SHEET 1 OF 5

FWA JOB #:2241039.00

M:\PROJECTS\2241039.00 HCPS SWM POND REPAIRS FILES & NHMS\DESIGN\CAD\NHMS POND REPAIR



ESC & SWM PLAN

50' 0' 50' 100' 150'

SCALE: 1" = 50'

SEQUENCE OF CONSTRUCTION

PRELIMINARY

1. NOTIFY THE HARFORD COUNTY DPW SEDIMENT CONTROL INSPECTION DIVISION (410) 638-3127 EXT. 2434 OR 1268 AT LEAST 48 HOURS PRIOR TO START OF OPERATION. A PRE-CONSTRUCTION MEETING IS REQUIRED PRIOR TO BEGINNING ANY LAND DISTURBANCE ON SITE.
2. ALL EROSION AND SEDIMENT CONTROL MEASURES AND NOTES SHOWN ON THESE PLANS OR REFERRED TO SHALL BE CONSTRUCTED, INSTALLED, AND/OR CARRIED OUT IN ACCORDANCE WITH THE MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, LATEST EDITION, UNLESS OTHERWISE NOTED.
3. THE CONTRACTOR AND/OR HIS REPRESENTATIVES MUST FOLLOW THE GEO-TECHNICAL ENGINEER'S FINDINGS AND RECOMMENDATIONS FOR EXCAVATION AND PLACEMENT OF MATERIAL PERTAINING TO THE CUTOFF/CORE TRENCH.
4. CONSTRUCTION PHASE:

A. INSTALL THE FOLLOWING EROSION AND SEDIMENT CONTROLS. SEDIMENT CONTROL DEVICES IN THE ORDER OUTLINED BELOW -

a. INSTALL STABILIZED CONSTRUCTION ENTRANCE W/ STONE MOUNTABLE BERM (SEE DETAIL B-1)
b. INSTALL SILT AND SUPER SILT FENCE AS SHOWN ON PLANS
c. INSTALL CONSTRUCTION STAGING AREA AND TIMBER MATS

B. CLEAR AND GRUB THE SITE WITHIN THE LIMITS OF THE DISTURBANCE AS SHOWN ON PLAN.

C. DRAIN CHANNEL AS NECESSARY WITH PUMP & FILTER BAG. SEE DETAILS F-2 & F-4 IN THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL AND EROSION AND SEDIMENT CONTROL.

D. REMOVE EXISTING DAMAGED 42" AND 54" OUTFALL PIPES AND METAL END SECTION. FOLLOW GEO-TECHNICAL ENGINEER'S RECOMMENDATIONS FOR REPAIR OF CUTOFF/CORE TRENCH.

E. INSTALL NEW 42" AND 54" RCP OUTFALL PIPES AND CONCRETE METAL SECTION. CONNECT INTO EXISTING RISER AND MANHOLE. CONTRACTOR SHALL MAKE PROVISIONS TO ENSURE THAT THE PIPES ARE SECURE AND CAN NOT FLOAT DURING THE PLACEMENT OF THE FLOWABLE FILL MATERIALS. CONTRACTOR SHALL PROVIDE A 2:1 MINIMUM SLOPE FOR EXCAVATION AS REQUIRED BY HARFORD COUNTY DPW. THE SLOPE WILL REQUIRE PERIODIC BENCHING AS DIRECTED BY THE GEOTECHNICAL ENGINEER IN THE FIELD TO ENSURE THAT NEW FILLS ARE INTEGRATED INTO THE SOILS OF THE EXISTING EMBANKMENT.

F. INSTALL ANTI SEEP COLLAR FOR NEW 42" RCP OUTFALL PIPE.

G. INSTALL 20 FT WIDE EMERGENCY SPILLWAY AT THE ELEVATION 455.25 AS SHOWN ON PLANS AND DETAIL.

H. PERMANENTLY STABILIZE AND GRASS SEED THE DISTURBED AREAS PER THE VEGETATION SEEDING NOTES.

I. UPON THE APPROVAL OF THE SEDIMENT CONTROL INSPECTOR, REMOVE ALL SEDIMENT CONTROL MEASURES AND PERMANENTLY STABILIZE ALL AREAS DISTURBED BY THE REMOVAL OF SEDIMENT CONTROLS.

TEMPORARY VEGETATIVE STABILIZATION

ALL DISTURBED AREAS, WHERE GROUND COVER IS NEEDED FOR A PERIOD OF 6 MONTHS OR LESS, SHALL BE TEMPORARILY STABILIZED AS FOLLOWS:

A) SEEDBED PREPARATION:
LOOSEN UPPER THREE TO FIVE INCHES OF SOIL BY RAKING, DISKING, PLOWING, OR OTHER ACCEPTABLE MEANS. AFTER SOIL IS LOOSENED IT SHALL BE LEFT IN THE ROUGHENED CONDITION AND NOT ROLLED OR DRAGGED SMOOTH. SLOPES 3:1 OR FLATTER ARE TO BE TRACKED WITH RIDGES RUNNING PARALLEL TO THE CONTOUR SLOPE.

B) SOIL AMENDMENTS:
APPLY 600 LBS PER ACRE OF 10-10-10 FERTILIZER AND TWO TONS PER ACRE OF LIME. INCORPORATE LIME AND FERTILIZER INTO THE TOP THREE TO FIVE INCHES BY DISKING OR OTHER ACCEPTABLE MEANS.

C) SEEDING: *
FOR THE PERIODS OF FEBRUARY 15 TO APRIL 30 AND AUGUST 15 TO NOVEMBER 30, SEED WITH 48 LBS PER ACRE OF BARLEY, 72 LBS PER ACRE OF OATS, AND 112 LBS PER ACRE OF RYE.

FOR THE PERIOD OF MAY 1 TO AUGUST 14, SEED WITH 142 LBS PER ACRE OF RYE PLUS FOXTAIL MILLET.

FOR THE PERIODS OF NOVEMBER 16 TO FEBRUARY 28, PROTECT SITE BY APPLYING 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING OR USE SOD.

D) MULCHING SPECIFICATIONS:
MULCH SHALL BE APPLIED TO ALL SEEDED AREAS IMMEDIATELY AFTER SEEDING.

APPLY 2 TONS PER ACRE OF STRAW OVER ALL SEEDED AREAS. IF A MULCH ANCHORING TOOL IS TO BE USED, THE RATE SHALL BE INCREASED TO 2.5 TONS PER ACRE. **

MULCH ANCHORING SHALL BE PERFORMED IMMEDIATELY FOLLOWING MULCH APPLICATION TO MINIMIZE LOSS BY WIND AND WATER. THE TYPE OF MULCH ANCHORING USED MUST COMPLY WITH THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS.

* IF OTHER SEED MIXES ARE TO BE SUBSTITUTED, THEY MUST COMPLY WITH 2011 MARYLAND STANDARDS AND SPECIFICATIONS.

** IF A DIFFERENT TYPE OF MULCH IS TO BE USED, IT MUST COMPLY WITH THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS.

TEMPORARY SEEDING SUMMARY

SEED MIXTURE (HARDINESS ZONE 7A) FROM TABLE B1					FERTILIZER RATE (10-10-10)	LIME RATE
NO.	SPECIES	APPLICATION RATE (LB/AC)	SEEDING DATES	SEEDING DEPTHS		
	BARLEY	96	2/15 - 4/30 8/15 - 11/30	1"	600 LB/AC (15 LB/ 1000 SF)	2 TONS/AC (100 LB/ 1000 SF)
	OATS	72	2/15 - 4/30 8/15 - 11/30	1"		
	RYE	112	2/15 - 4/30 8/15 - 11/30	1"		
	RYE PLUS FOXTAIL MILLET	142	5/1 - 8/14	1"		

ALL VEGETATIVE STABILIZATION INCLUDING PERMANENT AND TEMPORARY SEEDING SHOULD BE DONE IN ACCORDANCE WITH SECTION B-4 OF THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.

PERMANENT SEEDING SUMMARY

SEED MIXTURE (HARDINESS ZONE 7A) FROM TABLE 25					FERTILIZER RATE (10-20-20)			LIME RATE
NO.	SPECIES	APPLICATION RATE (LB/AC)	SEEDING DATES	SEEDING DEPTHS	N	P205	K20	
7	TALL FESCUE (83%)	110	3/1 - 5/15 8/1 - 10/15	¼" - ½"	45 LB/AC (1 LB/ 1000 SF)	90 LB/AC (2 LB/ 1000 SF)	90 LB/AC (2 LB/ 1000 SF)	2 TONS/AC (90 LB/ 1000 SF)
	WEEPING LOVEGRASS (2%)	3		¼" - ½"				
	SERECIA LESPEDEZA (15%)	20		¼" - ½"				

PERMANENT VEGETATIVE STABILIZATION

ALL DISTURBED AREAS, WHICH ARE NOT PAVED, SHALL BE PERMANENTLY STABILIZED AS FOLLOWS:

A) SEEDBED PREPERATION:
LOOSEN UPPER THREE INCHES BY RAKING, DISKING, OR OTHER ACCEPTABLE MEANS AFTER SPREADING FOUR INCHES OF TOPSOIL.

B) SOIL AMENDMENTS:
APPLY 500 LBS PER ACRE OF 10-10-10 FERTILIZER AND TWO TONS PER ACRE OF LIME.

C) SEEDING: *
FOR THE PERIODS OF MARCH 1 TO MAY 15 AND AUGUST 1 TO OCTOBER 15, SEED WITH 110 LBS PER ACRE OF TALL FESCUE, 3 LBS PER ACRE OF WEEPING LOVEGRASS, AND 20 LBS PER ACRE OF SERECIA LESPEDEZA.

FOR THE PERIODS OF OCTOBER 16 TO FEBRUARY 28, PROTECT SITE BY: OPTIONS
1) 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING,
2) USE SOD, OR
3) SEED WITH 60 LBS PER ACRE OF TALL FESCUE AND MULCH WITH 2 TONS PER ACRE OF WELL ANCHORED STRAW.

NOTE: FOR QUICK COVER WITH TALL FESUE, ADD 2 LBS OF SMALL GRAIN PER 1,000 SQ. FT.

D) MULCHING SPECIFICATIONS: MULCH SHALL BE APPLIED TO ALL SEEDED AREAS IMMEDIATELY AFTER SEEDING.

APPLY 2 TONS PER ACRE OF STRAW OVER ALL SEEDED AREAS. IF A MULCH ANCHORING TOOL IS TO BE USED, THE RATE SHALL BE INCREASED TO 2.5 TONS PER ACRE. **

MULCH ANCHORING SHALL BE PERFORMED IMMEDIATELY FOLLOWING MULCH APPLICATION TO MINIMIZE LOSS BY WIND AND WATER. THE TYPE OF MULCH ANCHORING USED MUST COMPLY WITH THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS.

* IF OTHER SEED MIXES ARE TO BE SUBSTITUTED, THEY MUST COMPLY WITH 2011 MARYLAND STANDARDS AND SPECIFICATIONS

** IF A DIFFERENT TYPE OF MULCH IS TO BE USED, IT MUST COMPLY WITH THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS

WORK SHALL BE LIMITED TO THE FOLLOWING:

1. INSTALL STABILIZED CONSTRUCTION ENTRANCE, SILT FENCE, AND SUPER SILT FENCE.
2. REMOVE EXISTING 42" AND 54" OUTFALL PIPES AND END SECTION AND REPLACE WITH 42" AND 54" RCP OUTFALL PIPES AND CONCRETE END SECTION, DEWATERING POND AS NECESSARY.
3. CLEAR AND GRUB THE BOTTOM OF THE POND AS SHOWN ON THE PLANS.
4. REPAIR THE EROSION AROUND THE 6" PVC PIPE AND STABILIZE THE AREA. INSTALL #57 STONE LAYER PER DETAIL.
5. INSTALL 14.5' WIDE EMERGENCY SPILLWAY.
6. ENSURE ALL INFLOWS RIP-RAPS ARE CLEANED OUT.
7. UPON COMPLETION AND APPROVAL OF INSPECTOR, REMOVE EROSION AND SEDIMENT CONTROL MEASURES, SEED AND STABILIZE DISTURBED AREAS.

SEDIMENT CONTROL NOTES

1. THE CONTRACTOR/OWNER IS RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS. FURTHER, NO CONSTRUCTION ACTIVITY SHALL TAKE PLACE UNTIL ALL REQUIRED PERMITS HAVE BEEN OBTAINED.
2. THE LIMITS OF DISTURBANCE SHALL BE CLEARLY DELINEATED IN THE FIELD PRIOR TO GRADING OF THE SITE TO ENSURE COMPLIANCE WITH APPROVED PLANS. ALL FOREST RETENTION AREAS WILL BE DELINEATED WITH BLAZE ORANGE FENCE AS WELL AS ANY SWM INFILTRATION PRACTICE PRIOR TO ANY CLEARING. WORK BEYOND THE LIMITS OF DISTURBANCE AND IN ANY AREA INSIDE THE FOREST RETENTION AND SWM INFILTRATION AREA IS CONSIDERED TO BE A VIOLATION OF THIS PLAN.
3. ALL SEDIMENT CONTROL PRACTICES MUST BE INSTALLED PRIOR TO ANY CONSTRUCTION ACTIVITY. UPON COMPLETION OF THE INSTALLATION OF PERIMETER SEDIMENT CONTROL PRACTICES THE SITE MUST BE INSPECTED BY THE DEPARTMENT OF PUBLIC WORKS (DPW). NO ADDITIONAL CONSTRUCTION ACTIVITY WILL BE AUTHORIZED WITHOUT THE APPROVAL FROM DPW.
4. ALL POINTS OF INGRESS AND EGRESS SHALL BE PROTECTED TO PREVENT TRACKING OF MUD INTO PUBLIC WAYS. DURING CONSTRUCTION, EVERY MEANS WILL BE TAKEN TO CONTROL SOIL EROSION AND SILTATION. IF NECESSARY A WASH RACK MAY NEED TO BE ESTABLISHED.
5. SILT FENCES, DIVERSION FENCES, ETC. WILL BE LOCATED AS SHOWN ON THESE DRAWINGS. FIELD CHANGES AND MINOR ADJUSTMENTS ARE PERMISSIBLE AS LONG AS THE INSTALLATION FUNCTIONS AND CONFORMS TO SPECIFICATIONS. THE SITE INSPECTOR PRIOR TO INSTALLATION MUST APPROVE ALL SUCH CHANGES. MAJOR CHANGES TO THE APPROVED PLAN WILL REQUIRE RE-APPROVAL BY THE HARFORD SOIL CONSERVATION DISTRICT.
6. FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN:

A. THREE CALENDAR DAYS ON SLOPES GREATER THAN 3:1, ALL WATERWAYS AND TO THE SURFACE OF ALL PERIMETER CONTROLS
B. SEVEN CALENDAR DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS OF THE PROJECT SITE

7. DUST CONTROL MUST BE MANAGED AS PART OF ALL SEDIMENT CONTROL PLANS. FAILURE TO DO SO IS A VIOLATION OF THIS PLAN.
8. TEMPORARY FENCING SHALL BE PLACED AROUND POND DURING SITE GRADING.
9. AT THE END OF EACH WORKING DAY ALL SEDIMENT CONTROL PRACTICES WILL BE INSPECTED AND LEFT OPERATIONAL. A WEEKLY LOG WILL BE KEPT IN ACCORDANCE WITH NOI/NPDES REGULATIONS. A COPY OF THE APPROVED SEDIMENT CONTROL PLANS SHALL BE AVAILABLE AT THE SITE AT ALL TIMES.
10. ENSURE POSITIVE DRAINAGE TO ALL INLETS DURING ALL PHASES OF PARKING LOT CONSTRUCTION.
11. CUT AND/OR FILL SHALL BE DONE IN CONFORMANCE WITH 2011 EROSION AND SEDIMENT CONTROL STANDARDS AND SPECIFICATIONS FOR LAND GRADING.
12. SURFACE FLOWS OVER CUT AND FILL SLOPES SHALL BE CONTROLLED BY EITHER REDIRECTING FLOWS FROM TRAVERSING THE SLOPES OR BY INSTALLING MECHANICAL DEVICES TO SAFELY CONVEY WATER DOWN SLOPES WITHOUT CAUSING EROSION.
13. OFF-SITE WASTE OR BORROW AREAS SHALL HAVE AN APPROVED EROSION AND SEDIMENT CONTROL PLAN PRIOR TO THE IMPORT OR EXPORT OF MATERIAL TO/FROM THE PROJECT SITE
14. ALL MATERIAL ORIGINATING FROM THE DEVELOPMENT OF THE PROPERTY AND DEPOSITED ON THE PUBLIC RIGHT-OF-WAY SHALL BE IMMEDIATELY REMOVED.
15. STORM DRAIN INLETS AND OUTLETS SHALL BE PROTECTED PER 2011 EROSION AND SEDIMENT CONTROL STANDARDS AND SPECIFICATIONS.
16. TOPSOIL, LIMING, FERTILIZING, SEEDING, MULCHING, SOD, ETC. ARE ALL ESSENTIAL PARTS OF THE SEDIMENT CONTROL PLAN AND MUST BE COMPLETED ALONG WITH ALL OTHER PRACTICES.
17. SEDIMENT CONTROL PRACTICES WILL BE MAINTAINED UNTIL ALL DISTURBED AREAS FOR WHICH THE PRACTICES WERE INSTALLED HAVE BEEN STABILIZED.SEDIMENT CONTROL PRACTICES MAY BE REMOVED ONLY WITH THE AUTHORIZATION OF THE DPW INSPECTOR. ALL DISTURBED AREAS RESULTINGFROM THE REMOVAL OF SEDIMENT CONTROL DEVICES SHALL BE STABILIZED IMMEDIATELY. REMOVAL PRIOR TO INSPECTOR'S APPROVAL CONSTITUTES A VIOLATION.

GRA-011981-2025

260463

SEAL: STATE OF MARYLAND — VERONICA HEDINGER — 30925 — PROFESSIONAL ENGINEER — 01/29/2026

Veronica Hedinger

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
LICENSE NO.: 30925 EXPIRATION DATE: 06/07/2027

ENGINEER:

FREDERICK WARD ASSOCIATES
ARCHITECTS | ENGINEERS | PLANNERS | SURVEYORS
www.frederickward.com

P.O. Box 727, 5 South Main Street
Bel Air Maryland 21014-0727
410-838-7900 410-893-1243 fax

REVISIONS

HARFORD COUNTY, MARYLAND

SWM AND SEDIMENT CONTROL PLAN
NORTH HARFORD COMPLEX POND REPAIR

Drawn By:	REH	Contract No.:	
Designed By:	BKS	Scale:	1" = 50'
Checked By:	VH	Sheet	2 of 6
		Date	6/23/2025

ADC MAP: 3 - G9

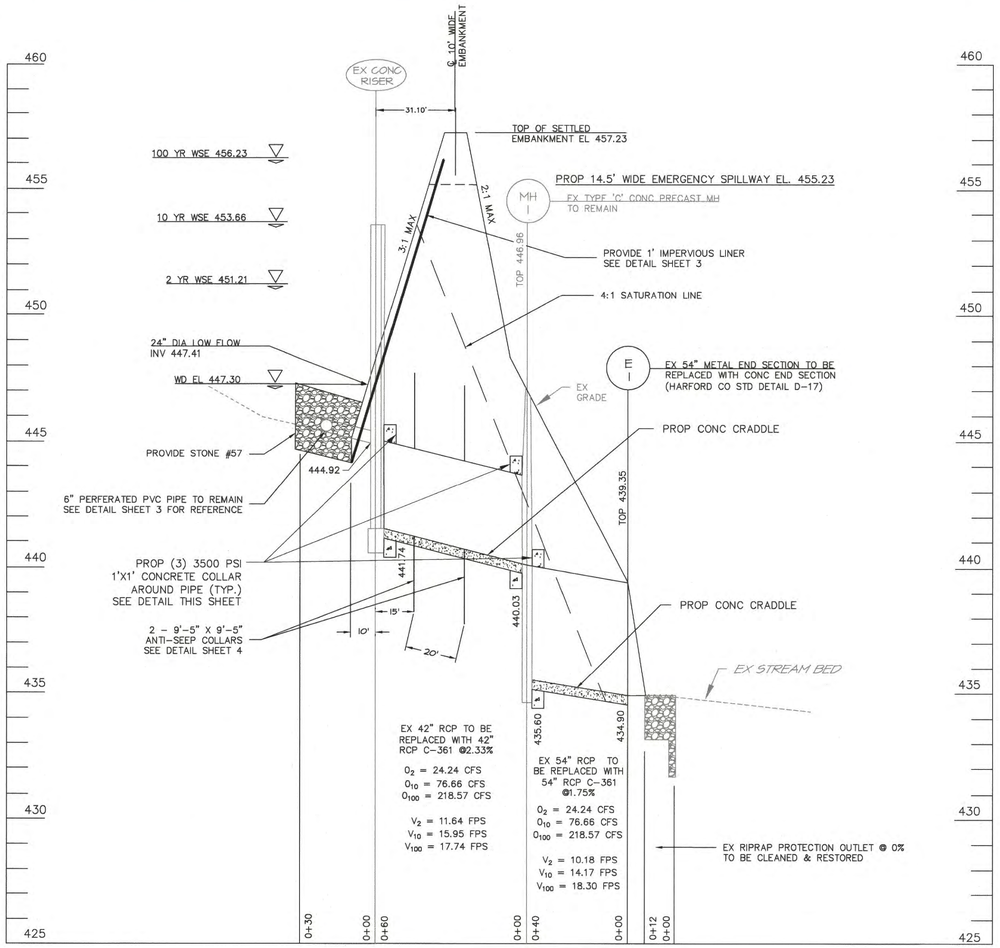
TAX MAP: 17

HCG BILLING ID NO:

HCG DWG ID NO:

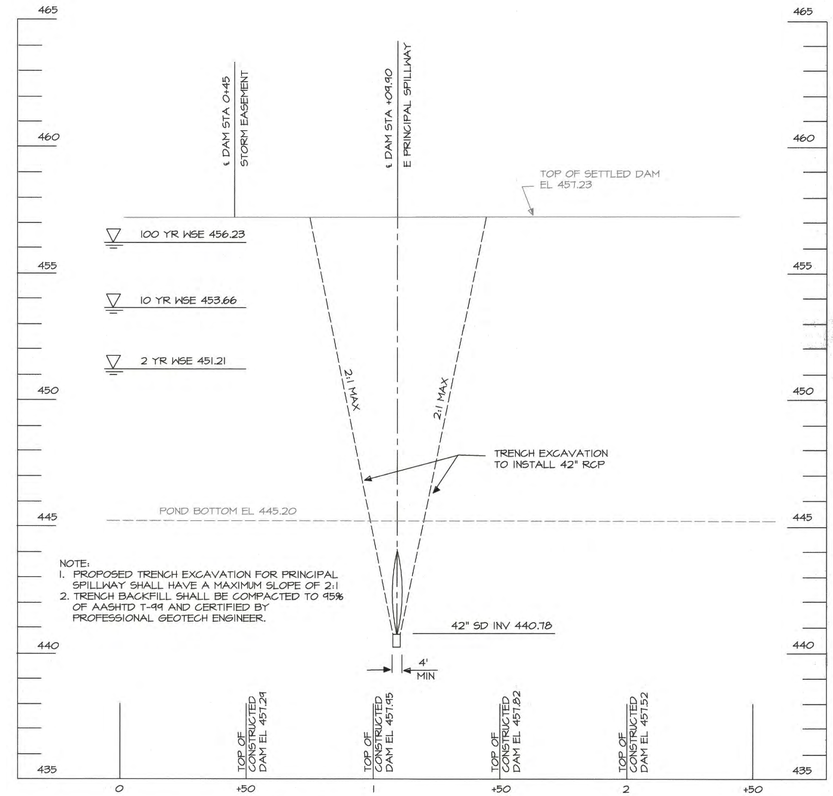
SCALE: 1 INCH

M:\PROJECTS\2241039.00 HCPS SWM POND REPAIRS FILES & NHMS\DESIGN\CAD\NHMS POND REPAIR



SWM PRINCIPAL SPILLWAY PROFILE

SCALE: 1"=30' HORIZ.
1"=3' VERT.

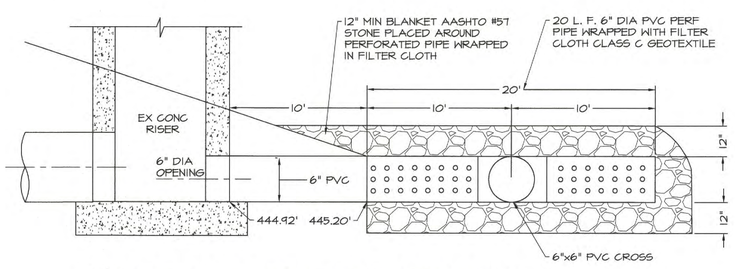


NOTE:
1. PROPOSED TRENCH EXCAVATION FOR PRINCIPAL SPILLWAY SHALL HAVE A MAXIMUM SLOPE OF 2:1
2. TRENCH BACKFILL SHALL BE COMPACTED TO 95% OF AASHTD T-99 AND CERTIFIED BY PROFESSIONAL GEOTECH ENGINEER.

DAM PROFILE

SCALE: 1"=30' HORIZ.
1"=3' VERT.

NOTE: CONTRACTOR SHALL ASSESS THE IMPACT OF ENLARGING THE OPENINGS IN THE EXISTING MANHOLE MH-1 ON THE EXISTING REINFORCEMENT. IF THE REBAR IS COMPROMISED OR STRUCTURAL INTEGRITY IS AT RISK, ALTERNATIVES LIKE CORE DRILLING WITH REINFORCEMENT REPAIR, CUSTOM PRECAST SECTIONS, OR MANHOLE REPLACEMENT SHALL BE CONSIDERED.



PERMANENT 6" WATER QUALITY UNDERDRAIN DETAIL

DETAIL FOR REFERENCE
NOT TO SCALE

SEAL: STATE OF MARYLAND — VERONICA HEDINGER — 50925 — PROFESSIONAL ENGINEER — 06/24/2025

Veronica Hedinger

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LICENSE NO.: 50925 EXPIRATION DATE: 06/07/2027

ENGINEER:

FREDERICK WARD ASSOCIATES
ARCHITECTS | ENGINEERS | PLANNERS | SURVEYORS
www.frederickward.com

P.O. Box 727, 5 South Main Street
Bel Air Maryland 21014-0727
410-838-7900 410-893-1243 fax

REVISIONS

260464

HARFORD COUNTY, MARYLAND

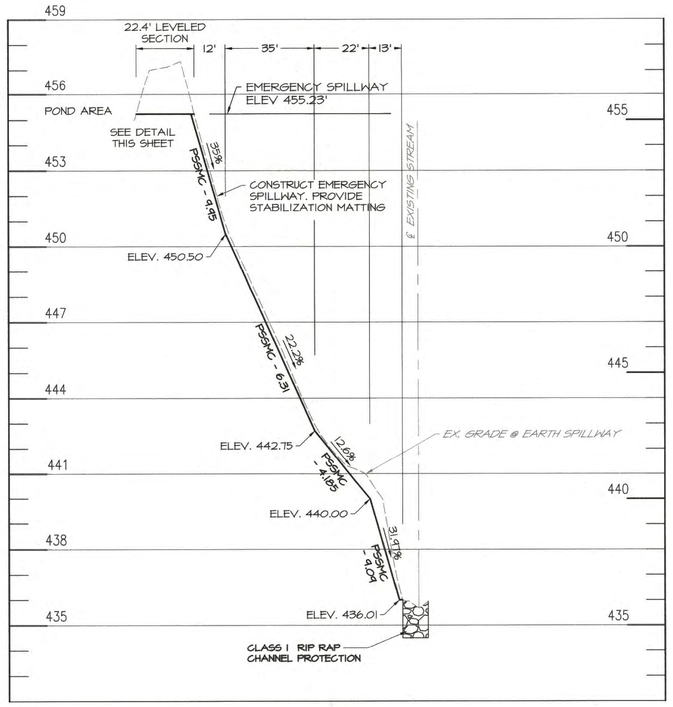
STORMWATER MANAGEMENT DETAILS
NORTH HARFORD COMPLEX POND REPAIR

Drawn By: REH
Designed By: BKS
Checked By: VH

Contract No.:
Scale: AS SHOWN
Sheet 3 of 6
Date 6/23/2025

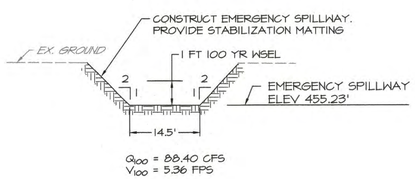
ADC MAP: 3 - G9
TAX MAP: 17
HCG BILLING ID NO:
HCG DWG ID NO:
SCALE: 1 INCH

M:\PROJECTS\2241039.00 HCPS SWM POND REPAIRS FILES & NHMS\DESIGN\CAD\NHMS POND REPAIR



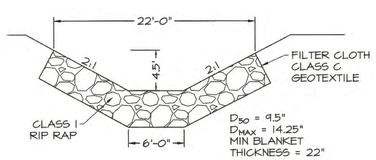
EMERGENCY SPILLWAY PROFILE

SCALE: 1"=30' HORIZ.
1"=3' VERT.



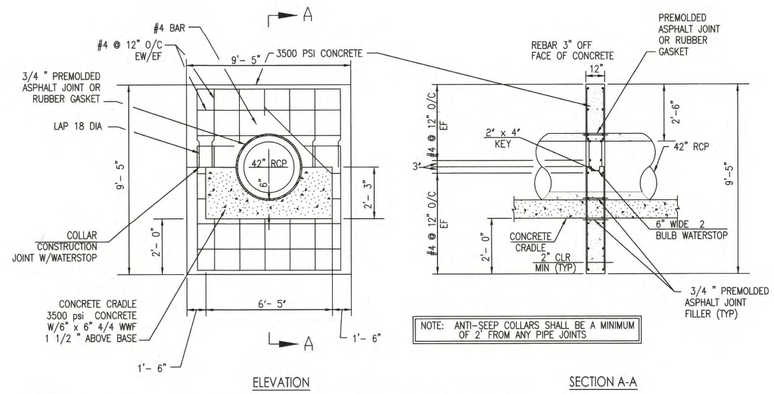
EMERGENCY SPILLWAY DETAIL

NOT TO SCALE



RIP RAP OUTLET PROTECTION

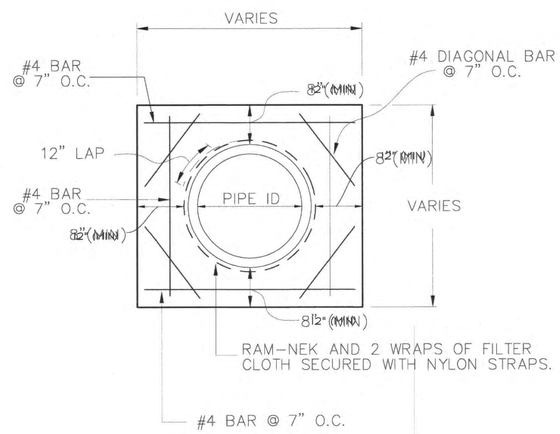
DETAIL FOR REFERENCE
NOT TO SCALE



NOTES:
1. BACKFILL EVENLY ON BOTH SIDES OF COLLAR.
2. CAST COLLAR IN TWO POURS WITH PIPE IN PLACE. USE CONCRETE MIX #3, 3500 PSI WITH REDUCED AGGREGATE TO ACHIEVE A FLOWABLE FILL FOR THE CONCRETE CRADLE.

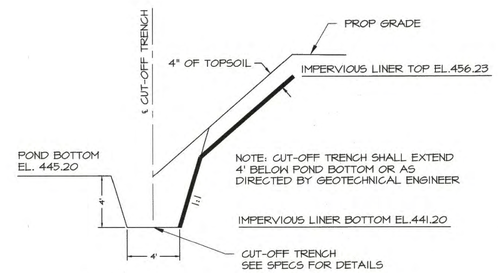
ANTI-SEEP COLLAR AND CONCRETE CRADLE DETAIL

NOT TO SCALE



CONCRETE COLLAR DETAIL

NOT TO SCALE



IMPERVIOUS LINER AND CUT-OFF TRENCH

NOT TO SCALE

IMPERVIOUS LINER SPECIFICATIONS:

THE GEOTECHNICAL ENGINEER SHALL TEST AND CONFIRM ACCEPTABLE OPTIONS:

1. 6 TO 12 INCHES OF CLAY SOIL (MINIMUM 15% PASSING THE #200 SIEVE AND A MAXIMUM PERMEABILITY OF 1 X 10-5 CM/SEC),
2. A 30 MIL POLY-LINER,
3. BENTONITE,
4. USE OF CHEMICAL ADDITIVES (SEE NRCS AGRICULTURAL HANDBOOK NO. 387, DATED 1971, ENGINEERING FIELD MANUAL)
5. OTHER SUITABLE MATERIALS APPROVED BY THE MDE.

GEOTECHNICAL ENGINEER APPROVAL OF LINER TYPE SHALL BE SUBMITTED TO HARFORD COUNTY.

MATERIAL PROPERTY DATA SHEET

WESTERN GREEN

TMAX™

Permanent • 3-D Woven • UV Stable •
High Performance Turf Reinforcement Mat

DESCRIPTION

TMAX is a High-Performance Turf Reinforcement Mat (HP-TRM) produced by weaving 100% UV-stabilized, high denier synthetic mono-filament yarns woven into permanent, high-strength, three-dimensional structure. The optimized properties of the material provide immediate erosion control with excellent vegetation establishment and class-leading long-term turf reinforcement. Additionally, the high strength at low elongation is ideal for slope stability applications (when paired with deep-seated, high strength anchors) and is unique compared to other HPTRMs. The design life of TMAX is rated at fifty years in typical installations, however, can vary based on conditions. TMAX is made in the USA and monitored by quality assurance testing at a GAI-LAP accredited laboratory.

Material Content	
Woven , Single Layer	Green or Tan

Standard Roll Sizes				
Width	11.5 ft	(3.5 m)	11.5 ft	(3.5 m)
Length	78 ft	(24.0 m)	156 ft	(47.5 m)
Weight ± 10%	75 lb	(35.0 kg)	150 lb	(70.0 kg)
Area	100 sy	(83.6 m²)	200 SY	(167.0 m²)

Material available in custom roll sizes

Approvals & Classification	
Classification	FHWA: Type 5.C / ECTC: 5.F
TTI Approvals	N/A
NTPEP Number	N/A

Index Property	Test Method	MARV	
Thickness	ASTM D6525	0.4 in.	(9 mm)
Mass/Unit Area	ASTM D6566	10.0 oz/sy	(350 g/sm)
Tensile Strength – MD	ASTM D6818	4,400 lbs/ft	(64.2 kN/m)
Tensile Strength – TD	ASTM D6818	3,300 lbs/ft	(48.2 kN/m)
Elongation - MD	ASTM D6818	35%	
Elongation – TD	ASTM D6818	30%	
UV Stability	ASTM D4355	90% @6000 hr	
UV Stability	ASTM D7238	90% @6000 hr	
Resiliency	ASTM D6524	75%	
Light Penetration	ASTM D6567	25%	
Biomass Improvement	ASTM D7322	300%	
Specific Gravity	ASTM D792	57.4 lb/ft³	(0.92 g/cm³)
Porosity	ECTC	96%	
Carbon Footprint	GHG*	1.9 kg CO_2 e/m²	

Design Parameters		
Property	**Unvegetated**	**Vegetated[3]**
RUSLE C Factor[2]	N/A	N/A
Slope Maximum Gradient[1]	0.5H:1V	0.5H:1V
Permissible Shear Stress[2]	2.3 psf	16.0 psf (765 Pa)
Permissible Velocity[2]	8.0 fps	25.0 fps (7.6 m/s)
τ_{max} / τ_{MAX} (HEC-15)	N/A	0.47

Manning's n Roughness (HEC-15)		
τ_{lower}	τ_{mid}	τ_{upper}
0.041	0.031	0.027

1 Maximum Gradient a recomendation for typical installations.
2 Hydraulic thresholds compliant with ASTM D6459/D6460 but generalized for typical applications.
3 Vegetated values dependent on established stand of vegetation
*WRI/WBCSD Greenhouse Gas Protocol: Product Life Cycle Accounting and Reporting Standard, 2013.

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Rev. 4.2023
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NORTH AMERICAN GREEN

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Evansville, IN 47725 • (800) 772-2040
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260465

GRA-011981-2025

REVISIONS

SEAL: STATE OF MARYLAND — VERONIKA HEDRICKSON — 50926 — PROFESSIONAL ENGINEER — 01/29/2026

Veronika Hedrickson

PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
LICENSE NO.: 50926 EXPIRATION DATE: 06/07/2027

ENGINEER:
FREDERICK WARD ASSOCIATES
ARCHITECTS | ENGINEERS | PLANNERS | SURVEYORS
www.frederickward.com
P.O. Box 727, 5 South Main Street
Bel Air Maryland 21014-0727
410-838-7900 410-893-1243 fax

HARFORD COUNTY, MARYLAND

STORMWATER MANAGEMENT DETAILS
NORTH HARFORD COMPLEX POND REPAIR

Drawn By: REH
Designed By: BKS
Checked By: VH

Contract No.:
Scale: AS SHOWN
Sheet 4 of 6
Date 6/23/2025

ADC MAP: 3 - G9
TAX MAP: 17
HCG BILLING ID NO:
HCG DWG ID NO:
SCALE 1 INCH

M:\PROJECTS\2241039.00 HCPS SWM POND REPAIRS FILES & NHMS\DESIGN\CAD\NHMS POND REPAIR

CONSTRUCTION SPECIFICATIONS

These specifications are appropriate to all ponds within the scope of the Standard for practice MD-378. All references to ASTM and AASHTO specifications apply to the most recent version.

Site Preparation

Areas designated for borrow areas, embankment, and structural works shall be cleared, grubbed and stripped of topsoil. All trees, vegetation, roots and other objectionable material shall be removed. Channel banks and sharp breaks shall be sloped to no steeper than 1:1. All trees shall be cleared and grubbed within 15 feet of the toe of the embankment.

Areas to be covered by the reservoir will be cleared of all trees, brush, logs, fences, rubbish and other objectionable material unless otherwise designated on the plans. Trees, brush, and stumps shall be cut approximately level with the ground surface. For dry stormwater management ponds, a minimum of a 25-foot radius around the inlet structure shall be cleared.

All cleared and grubbed material shall be disposed of outside and below the limits of the dam and reservoir as directed by the owner or his representative. When specified, a sufficient quantity of topsoil will be stockpiled in a suitable location for use on the embankment and other designated areas.

Earth Fill

Material - The fill material shall be taken from approved designated borrow areas. It shall be free of roots, stumps, wood, rubbish, stones greater than 6", frozen or other objectionable materials. Fill material for the center of the embankment, and cut off trench shall conform to Unified Soil Classification GC, SC, CH, or CL and must have at least 30% passing the #200 sieve. Consideration may be given to the use of other materials in the embankment if designed by a geotechnical engineer. Such special designs must have construction supervised by a geotechnical engineer.

Materials used in the outer shell of the embankment must have the capability to support vegetation of the quality required to prevent erosion of the embankment.

Placement - Areas on which fill is to be placed shall be scarified prior to placement of fill. Fill materials shall be placed in maximum 8 inch thick (before compaction) layers which are to be continuous over the entire length of the fill. The most permeable borrow material shall be placed in the downstream portions of the embankment. The principal spillway must be installed concurrently with fill placement and not excavated into the embankment.

Compaction - The movement of the hauling and spreading equipment over the fill shall be controlled so that the entire surface of each lift shall be traversed by not less than one tread track of heavy equipment or compaction shall be achieved by a minimum of four complete passes of a sheepsfoot, rubber tired or vibratory roller. Fill material shall contain sufficient moisture such that the required degree of compaction will be obtained with the equipment used. The fill material shall contain sufficient moisture so that if formed into a ball it will not crumble, yet not be so wet that water can be squeezed out.

When required by the reviewing agency the minimum required density shall not be less than 95% of maximum dry density with a moisture content within ±2% of the optimum. Each layer of fill shall be compacted as necessary to obtain that density, and is to be certified by the Engineer at the time of construction. All compaction is to be determined by AASHTO Method T-99 (Standard Proctor).

Cut Off Trench - The cutoff trench shall be excavated into impervious material along or parallel to the centerline of the embankment as shown on the plans. The bottom width of the trench shall be governed by the equipment used for excavation, with the minimum width being four feet. The depth shall be at least four feet below existing grade or as shown on the plans. The side slopes of the trench shall be 1 to 1 or flatter. The backfill shall be compacted with construction equipment, roll-

ers, or hand tampers to assure maximum density and minimum permeability.

Embankment Core - The core shall be parallel to the centerline of the embankment as shown on the plans. The top width of the core shall be a minimum of four feet. The height shall extend up to at least the 10 year water elevation or as shown on the plans. The side slopes shall be 1 to 1 or flatter. The core shall be compacted with construction equipment, rollers, or hand tampers to assure maximum density and minimum permeability. In addition, the core shall be placed concurrently with the outer shell of the embankment.

Structure Backfill

Backfill adjacent to pipes or structures shall be of the type and quality conforming to that specified for the adjoining fill material. The fill shall be placed in horizontal layers not to exceed four inches in thickness and compacted by hand tampers or other manually directed compaction equipment. The material needs to fill completely all spaces under and adjacent to the pipe. At no time during the backfilling operation shall driven equipment be allowed to operate closer than four feet, measured horizontally, to any part of a structure. Under no circumstances shall equipment be driven over any part of a concrete structure or pipe, unless there is a compacted fill of 24" or greater over the structure or pipe.

Structure backfill may be flowable fill meeting the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 313 as modified. The mixture shall have a 100-200 psi; 28 day unconfined compressive strength. The flowable fill shall have a minimum pH of 4.0 and a minimum resistivity of 2,000 ohm-cm. Material shall be placed such that a minimum of 6" (measured perpendicular to the outside of the pipe) of flowable fill shall be under (bedding), over and, on the sides of the pipe. It only needs to extend up to the spring line for rigid conduits. Average slump of the fill shall be 7" to assure flowability of the material. Adequate measures shall be taken (sand bags, etc.) to prevent floating the pipe. When using flowable fill, all metal pipe shall be bituminous coated. Any adjoining soil fill shall be placed in horizontal layers not to exceed four inches in thickness and compacted by hand tampers or other manually directed compaction equipment. The material shall completely fill all voids adjacent to the flowable fill zone. At no time during the backfilling operation shall driven equipment be allowed to operate closer than four feet, measured horizontally, to any part of a structure. Under no circumstances shall equipment be driven over any part of a structure or pipe unless there is a compacted fill of 24" or greater over the structure or pipe. Backfill material outside the structural backfill (flowable fill) zone shall be of the type and quality conforming to that specified for the core of the embankment or other embankment materials.

Pipe Conduits

All pipes shall be circular in cross section.

Corrugated Metal Pipe - All of the following criteria shall apply for corrugated metal pipe:

1. Materials - (Polymer Coated steel pipe) - Steel pipes with polymeric coatings shall have a minimum coating thickness of 0.01 inch (10 mil) on both sides of the pipe. This pipe and its appurtenances shall conform to the requirements of AASHTO Specifications M-245 & M-246 with watertight coupling bands or flanges.

   Materials - (Aluminum Coated Steel Pipe) - This pipe and its appurtenances shall conform to the requirements of AASHTO Specification M-274 with watertight coupling bands or flanges. Aluminum Coated Steel Pipe, when used with flowable fill or when soil and/or water conditions warrant the need for increased durability, shall be fully bituminous coated per requirements of AASHTO Specification M-190 Type A. Any aluminum coating damaged or otherwise removed shall be replaced with cold applied bituminous coating compound. Aluminum surfaces that are to be in contact with concrete shall be painted with one coat of zinc chromate primer or two coats of asphalt.

   Materials - (Aluminum Pipe) - This pipe and its appurtenances shall conform to the requirements of AASHTO Specification M-196 or M-211 with watertight coupling bands or flanges. Aluminum Pipe, when used with flowable fill or when soil and/or water conditions warrant for increased durability, shall be fully bituminous coated per requirements of AASHTO Specification M-190 Type A. Aluminum surfaces that are to be in contact with concrete shall be painted with one coat of zinc chromate primer or two coats of asphalt. Hot dip galvanized bolts may be used for connections. The pH of the surrounding soils shall be between 4 and 9.

2. Coupling bands, anti-seep collars, end sections, etc., must be composed of the same material and coatings as the pipe. Metals must be insulated from dissimilar materials with use of rubber or plastic insulating materials at least 24 mils in thickness.

3. Connections - All connections with pipes must be completely watertight. The drain pipe or barrel connection to the riser shall be welded all around when the pipe and riser are metal. Anti-seep collars shall be connected to the pipe in such a manner as to be completely watertight. Dimple bands are not considered to be watertight.

   All connections shall use a rubber or neoprene gasket when joining pipe sections. The end of each pipe shall be re-rolled an adequate number of corrugations to accommodate the bandwidth. The following type connections are acceptable for pipes less than 24 inches in diameter: flanges on both ends of the pipe with a circular 3/8 inch closed cell neoprene gasket, pre-punched to the flange bolt circle, sandwiched between adjacent flanges; a 12-inch wide standard lap type band with 12-inch wide by 3/8-inch thick closed cell circular neoprene gasket; and a 12-inch wide hugger type band with o-ring gaskets having a minimum diameter of 1/2 inch greater than the corrugation depth. Pipes 24 inches in diameter and larger shall be connected by a 24 inch long annular corrugated band using a minimum of 4 (four) rods and lugs, 2 on each connecting pipe end. A 24-inch wide by 3/8-inch thick closed cell circular neoprene gasket will be installed with 12 inches on the end of each pipe. Flanged joints with 3/8 inch closed cell gaskets the full width of the flange is also acceptable.

   Helically corrugated pipe shall have either continuously welded seams or have lock seams with internal caulking or a neoprene bead.

4. Bedding - The pipe shall be firmly and uniformly bedded throughout its entire length. Where rock or soft, spongy or other unstable soil is encountered, all such material shall be removed and replaced with suitable earth compacted to provide adequate support.

5. Backfilling shall conform to "**Structure Backfill**".

6. Other details (anti-seep collars, valves, etc.) shall be as shown on the drawings.

Reinforced Concrete Pipe - All of the following criteria shall apply for reinforced concrete pipe:

1. Materials - Reinforced concrete pipe shall have bell and spigot joints with rubber gaskets and shall equal or exceed ASTM C-361.

2. Bedding - Reinforced concrete pipe conduits shall be laid in a concrete bedding / cradle for their entire length. This bedding / cradle shall consist of high slump concrete placed under the pipe and up the sides of the pipe at least 50% of its outside diameter with a minimum thickness of 6 inches. Where a concrete cradle is not needed for structural reasons, flowable fill may be used as described in the "Structure Backfill" section of this standard. Gravel bedding is not permitted.

3. Laying pipe - Bell and spigot pipe shall be placed with the bell end upstream. Joints shall be made in accordance with recommendations of the manufacturer of the material. After the joints are sealed for the entire line, the bedding shall be placed so that all spaces under the pipe are filled. Care shall be exercised to prevent any deviation from the original line and grade of the pipe. The first joint must be located within 4 feet from the riser.

4. Backfilling shall conform to "**Structure Backfill**".

5. Other details (anti-seep collars, valves, etc.) shall be as shown on the drawings.

Plastic Pipe - The following criteria shall apply for plastic pipe:

1. Materials - PVC pipe shall be PVC-1120 or PVC-1220 conforming to ASTM D-1785 or ASTM D-2241. Corrugated High Density Polyethylene (HDPE) pipe, couplings and fittings shall conform to the following: 4" – 10" inch pipe shall meet the requirements of AASHTO M252 Type S, and 12" through 24" inch shall meet the requirements of AASHTO M294 Type S.

2. Joints and connections to anti-seep collars shall be completely watertight.

3. Bedding -The pipe shall be firmly and uniformly bedded throughout its entire length. Where rock or soft, spongy or other unstable soil is encountered, all such material shall be removed and replaced with suitable earth compacted to provide adequate support.

4. Backfilling shall conform to "**Structure Backfill**".

5. Other details (anti-seep collars, valves, etc.) shall be as shown on the drawings.

Drainage Diaphragms - When a drainage diaphragm is used, a registered professional engineer will supervise the design and construction inspection.

Concrete

Concrete shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 414, Mix No. 3.

Rock Riprap

Rock riprap shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 311.

Geotextile shall be placed under all riprap and shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 921.09, Class C.

Care of Water during Construction

All work on permanent structures shall be carried out in areas free from water. The Contractor shall construct and maintain all temporary dikes, levees, cofferdams, drainage channels, and stream diversions necessary to protect the areas to be occupied by the permanent works. The contractor shall also furnish, install, operate, and maintain all necessary pumping and other equipment required for removal of water from various parts of the work and for maintaining the excavations, foundation, and other parts of the work free from water as required or directed by the engineer for constructing each part of the work. After having served their purpose, all temporary protective works shall be removed or leveled and graded to the extent required to prevent obstruction in any degree whatsoever of the flow of water to the spillway or outlet works and so as not to interfere in any way with the operation or maintenance of the structure. Stream diversions shall be maintained until the full flow can be passed through the permanent works. The removal of water from the required excavation and the foundation shall be accomplished in a manner and to the extent that will maintain stability of the excavated slopes and bottom required excavations and will allow satisfactory performance of all construction operations. During the placing and compacting of material in required excavations, the water level at the locations being refilled shall be maintained below the bottom of the excavation at such locations which may require draining the water sumps from which the water shall be pumped.

Stabilization

All borrow areas shall be graded to provide proper drainage and left in a sightly condition. All exposed surfaces of the embankment, spillway, spoil and borrow areas, and berms shall be stabilized by seeding, liming, fertilizing and mulching in accordance with the Natural Resources Conservation Service Standards and Specifications for Critical Area Planting (MD-342) or as shown on the accompanying drawings.

Erosion and Sediment Control

Construction operations will be carried out in such a manner that erosion will be controlled and water and air pollution minimized. State and local laws concerning pollution abatement will be followed. Construction plans shall detail erosion and sediment control measures.

BEST MANAGEMENT PRACTICES FOR WORKING IN NONTIDAL WETLANDS, WETLAND BUFFERS, WATERWAYS, AND 100-YEAR FLOODPLAINS

1. NO EXCESS FILL, CONSTRUCTION MATERIAL, OR DEBRIS SHALL BE STOCKPILED OR STORED IN NONTIDAL WETLANDS, NONTIDAL WETLAND BUFFERS, WATERWAYS, OR THE 100-YEAR FLOODPLAIN.
2. PLACE MATERIALS IN A LOCATION AND MANNER WHICH DOES NOT ADVERSELY IMPACT SURFACE OR SUBSURFACE WATER FLOW INTO OR OUT OF NONTIDAL WETLANDS, NONTIDAL WETLAND BUFFERS, WATERWAYS, OR THE 100-YEAR FLOODPLAIN.
3. DO NOT USE THE EXCAVATED MATERIAL AS BACKFILL IF IT CONTAINS WASTE METAL PRODUCTS, UNSIGHTLY DEBRIS, TOXIC MATERIAL, OR ANY OTHER DELETERIOUS SUBSTANCE. IF ADDITIONAL BACKFILL IS REQUIRED, USE CLEAN MATERIALS FREE OF WASTE METAL PRODUCTS, UNSIGHTLY DEBRIS, TOXIC MATERIAL, OR ANY OTHER DELETERIOUS SUBSTANCE.
4. PLACE HEAVY EQUIPMENT ON MATS OR SUITABLY OPERATE THE EQUIPMENT TO PREVENT DAMAGE TO NONTIDAL WETLANDS, NONTIDAL WETLAND BUFFERS, WATERWAYS, OR THE 100-YEAR FLOODPLAIN.
5. REPAIR AND MAINTAIN ANY SERVICEABLE STRUCTURE OR FILL SO THERE IS NO PERMANENT LOSS OF NONTIDAL WETLANDS, NONTIDAL WETLAND BUFFERS, OR WATERWAYS, OR PERMANENT MODIFICATION OF THE 100-YEAR FLOODPLAIN IN EXCESS OF THAT LOST UNDER THE ORIGINALLY AUTHORIZED STRUCTURE OR FILL.
6. RECTIFY ANY NONTIDAL WETLANDS, WETLAND BUFFERS, WATERWAYS, OR 100-YEAR FLOODPLAIN TEMPORARILY IMPACTED BY ANY CONSTRUCTION.
7. ALL STABILIZATION IN THE NONTIDAL WETLAND AND NONTIDAL WETLAND BUFFER SHALL CONSIST OF THE FOLLOWING SPECIES:ANNUAL RYEGRASS (LOLIUM MULTIFLORUM), MILLET (SETARIA ITALICA), BARLEY (HORDEUM SP.), OATS (UNIOLA SP.)AND/OR RYE (SECALE CEREALE). THESE SPECIES WILL ALLOW FOR THE STABILIZATION OF THE SITE WHILE ALSO ALLOWING FOR THE VOLUNTARY REVEGETATION OF NATURAL WETLAND SPECIES. OTHER NON-PERSISTENT VEGETATION MAY BE ACCEPTABLE, BUT MUST BE APPROVED BY THE NONTIDAL WETLANDS AND WATERWAYS DIVISION. KENTUCKY 31 FESCUE SHALL NOT BE UTILIZED IN WETLAND OR BUFFER AREAS. THE AREA SHOULD BE SEEDED AND MULCHED TO REDUCE EROSION AFTER CONSTRUCTION ACTIVITIES HAVE BEEN COMPLETED.
8. AFTER INSTALLATION HAS BEEN COMPLETED, MAKE POST CONSTRUCTION GRADES AND ELEVATIONS THE SAME AS THE ORIGINAL GRADES AND ELEVATIONS IN TEMPORARILY IMPACTED AREAS.
9. TO PROTECT AQUATIC SPECIES, IN-STREAM WORK IS PROHIBITED AS DETERMINED BY THE CLASSIFICATION OF THE STREAM:
   A. USE I WATERS (WITHOUT YELLOW PERCH): IN-STREAM WORK SHALL NOT BE CONDUCTED DURING THE PERIOD MARCH 1 THROUGH JUNE 15, INCLUSIVE DURING ANY YEAR.
   B. USE I WATERS (WITH YELLOW PERCH): IN-STREAM WORK SHALL NOT BE CONDUCTED DURING THE PERIOD FEBRUARY 15 THROUGH JUNE 15, INCLUSIVE DURING ANY YEAR.
   C. USE III WATERS: IN-STREAM WORK SHALL NOT BE CONDUCTED DURING THE PERIOD OCTOBER 1 THORUGH APRIL 30, INCLUSIVE, DURING ANY YEAR.
   D. USE IV WATERS: IN-STREAM WORK SHALL NOT BE CONDUCTED DURING THE PERIOD MARCH 1 THROUGH MAY 31, INCLUSIVE, DURING ANY YEAR.
10. STORMWATER RUNOFF FROM IMPERVIOUS SURFACES SHALL BE CONTROLLED TO PREVENT THE WASHING OF DEBRIS INTO THE WATERWAY.
11. CULVERTS SHALL BE CONSTRUCTED AND ANY RIPRAP PLACED SO AS NOT TO OBSTRUCT THE MOVEMENT OF AQUATIC SPECIES, UNLESS THE PURPOSE OF THE ACTIVITY IS TO IMPOUND WATER.

ADC MAP: 3 - G9

TAX MAP: 17

HCG BILLING ID NO:

HCG DWG ID NO:

SCALE: 1 INCH

260466

SEAL:

STATE OF MARYLAND · VERONICA HEDRINGTON · 50925 · PROFESSIONAL ENGINEER · 06/24/2025

Veronica Hedrington

PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.

LICENSE NO.: 50925 EXPIRATION DATE: 06/17/2027

ENGINEER:

FWA

FREDERICK WARD ASSOCIATES

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P.O. Box 727, 5 South Main Street
Bel Air Maryland 21014-0727
410-838-7900 410-893-1243 fax

REVISIONS

HARFORD COUNTY, MARYLAND

POND NOTES AND DETAILS
NORTH HARFORD COMPLEX POND REPAIR

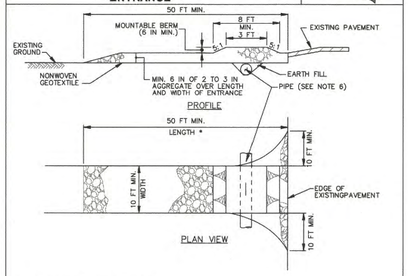
Drawn By: REH
Designed By: BKS
Checked By: VH

Contract No.:
Scale:
Sheet 5 of 6
Date 6/23/2025

M:\PROJECTS\2241039.00 HCPS SWM POND REPAIRS FILES & NHMS\DESIGN\CAD\NHMS POND REPAIR

DETAIL B-1 STABILIZED CONSTRUCTION ENTRANCE

STANDARD SYMBOL SCE



CONSTRUCTION SPECIFICATIONS

1. PLACE STABILIZED CONSTRUCTION ENTRANCE IN ACCORDANCE WITH THE APPROVED PLAN. VEHICLES MUST TRAVEL OVER THE ENTIRE LENGTH OF THE SCE. USE MINIMUM LENGTH OF 50 FEET (*30 FEET FOR SINGLE RESIDENCE LOT). USE MINIMUM WIDTH OF 10 FEET. FLARE SCE 10 FEET MINIMUM AT THE EXISTING ROAD TO PROVIDE A TURNING RADIUS.
2. PIPE ALL SURFACE WATER FLOWING TO OR DIVERTED TOWARD THE SCE UNDER THE ENTRANCE, MAINTAINING POSITIVE DRAINAGE. PROTECT PIPE INSTALLED THROUGH THE SCE WITH A MOUNTABLE BERM WITH 5:1 SLOPES AND A MINIMUM OF 12 INCHES OF STONE OVER THE PIPE. PROVIDE PIPE AS SPECIFIED ON APPROVED PLAN. WHEN THE SCE IS LOCATED AT A HIGH SPOT AND HAS NO DRAINAGE TO CONVEY, A PIPE IS NOT NECESSARY. A MOUNTABLE BERM IS REQUIRED WHEN SCE IS NOT LOCATED AT A HIGH SPOT.
3. PREPARE SUBGRADE AND PLACE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS.
4. PLACE CRUSHED AGGREGATE (2 TO 3 INCHES IN SIZE) OR EQUIVALENT RECYCLED CONCRETE (WITHOUT REBAR) AT LEAST 6 INCHES DEEP OVER THE LENGTH AND WIDTH OF THE SCE.
5. MAINTAIN ENTRANCE IN A CONDITION THAT MINIMIZES TRACKING OF SEDIMENT. ADD STONE OR MAKE OTHER REPAIRS AS CONDITIONS DEMAND TO MAINTAIN CLEAN SURFACE, MOUNTABLE BERM, AND SPECIFIED DIMENSIONS. IMMEDIATELY REMOVE STONE AND/OR SEDIMENT SPILLED, DROPPED, OR TRACKED ONTO ADJACENT ROADWAY BY VACUUMING, SCRAPING, AND/OR SWEEPING. WASHING ROADWAY TO REMOVE MUD TRACKED ONTO PAVEMENT IS NOT ACCEPTABLE UNLESS WASH WATER IS DIRECTED TO AN APPROVED SEDIMENT CONTROL PRACTICE.

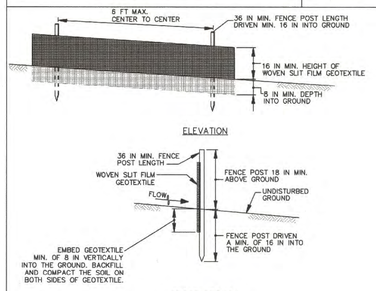
MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

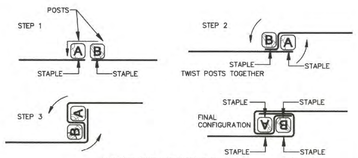
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

B.2

DETAIL E-1 SILT FENCE

STANDARD SYMBOL —SF—





JOINING TWO ADJACENT SILT FENCE SECTIONS (TOP VIEW)

1 OF 2

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

E.2

DETAIL E-1 SILT FENCE

STANDARD SYMBOL —SF—

CONSTRUCTION SPECIFICATIONS

1. USE WOOD POSTS 1¾ x 1¾ ± ⅜ INCH (MINIMUM) SQUARE CUT OF SOUND QUALITY HARDWOOD. AS AN ALTERNATIVE TO WOODEN POST USE STANDARD "T" OR "U" SECTION STEEL POSTS WEIGHING NOT LESS THAN 1 POUND PER LINEAR FOOT.
2. USE 36 INCH MINIMUM POSTS DRIVEN 16 INCH MINIMUM INTO GROUND NO MORE THAN 6 FEET APART.
3. USE WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS AND FASTEN GEOTEXTILE SECURELY TO UPSLOPE SIDE OF FENCE POSTS WITH WIRE TIES OR STAPLES AT TOP AND MID-SECTION.
4. PROVIDE MANUFACTURER CERTIFICATION TO THE AUTHORIZED REPRESENTATIVE OF THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT THE GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS.
5. EMBED GEOTEXTILE A MINIMUM OF 8 INCHES VERTICALLY INTO THE GROUND. BACKFILL AND COMPACT THE SOIL ON BOTH SIDES OF FABRIC.
6. WHERE TWO SECTIONS OF GEOTEXTILE ADJOIN: OVERLAP, TWIST, AND STAPLE TO POST IN ACCORDANCE WITH THIS DETAIL.
7. EXTEND BOTH ENDS OF THE SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SILT FENCE.
8. REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN SILT FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN. IF UNDERMINING OCCURS, REINSTALL FENCE.

2 OF 2

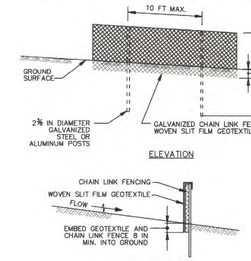
MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

E.3

DETAIL E-3 SUPER SILT FENCE

STANDARD SYMBOL —SSF—



CONSTRUCTION SPECIFICATIONS

1. INSTALL 2⅜ INCH DIAMETER GALVANIZED STEEL POSTS OF 0.095 INCH WALL THICKNESS AND SIX FOOT LENGTH SPACED NO FURTHER THAN 10 FEET APART. DRIVE THE POSTS A MINIMUM OF 36 INCHES INTO THE GROUND.
2. FASTEN 9 GAUGE OR HEAVIER GALVANIZED CHAIN LINK FENCE (2⅜ INCH MAXIMUM OPENING) 42 INCHES IN HEIGHT SECURELY TO THE FENCE POSTS WITH WIRE TIES OR HUG RINGS.
3. FASTEN WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS, SECURELY TO THE UPSLOPE SIDE OF CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE AND CHAIN LINK FENCE A MINIMUM OF 8 INCHES INTO THE GROUND.
4. WHERE ENDS OF THE GEOTEXTILE COME TOGETHER, THE ENDS SHALL BE OVERLAPPED BY 6 INCHES, FOLDED, AND STAPLED TO PREVENT SEDIMENT BY PASS.
5. EXTEND BOTH ENDS OF THE SUPER SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SUPER SILT FENCE.
6. PROVIDE MANUFACTURER CERTIFICATION TO THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS.
7. REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN. IF UNDERMINING OCCURS, REINSTALL CHAIN LINK FENCING AND GEOTEXTILE.

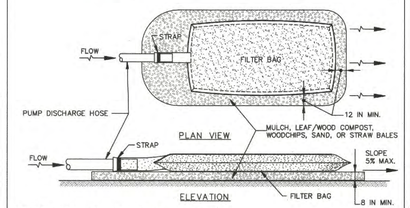
MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

E.7

DETAIL F-4 FILTER BAG

STANDARD SYMBOL ⊠FB



CONSTRUCTION SPECIFICATIONS

1. TIGHTLY SEAL SLEEVE AROUND THE PUMP DISCHARGE HOSE WITH A STRAP OR SIMILAR DEVICE.
2. PLACE FILTER BAG ON SUITABLE BASE (E.G., MULCH, LEAF/WOOD COMPOST, WOODCHIPS, SAND, OR STRAW BALES) LOCATED ON A LEVEL OR 5% MAXIMUM SLOPING SURFACE. DISCHARGE TO A STABILIZED AREA. EXTEND BASE A MINIMUM OF 12 INCHES FROM EDGES OF BAG.
3. CONTROL PUMPING RATE TO PREVENT EXCESSIVE PRESSURE WITHIN THE FILTER BAG IN ACCORDANCE WITH THE MANUFACTURER RECOMMENDATIONS. AS THE BAG FILLS WITH SEDIMENT, REDUCE PUMPING RATE.
4. REMOVE AND PROPERLY DISPOSE OF FILTER BAG UPON COMPLETION OF PUMPING OPERATIONS OR AFTER BAG HAS REACHED CAPACITY, WHICHEVER OCCURS FIRST. SPREAD THE DEWATERED SEDIMENT FROM THE BAG IN AN APPROVED UPLAND AREA AND STABILIZE WITH SEED AND MULCH BY THE END OF THE WORK DAY. RESTORE THE SURFACE AREA BENEATH THE BAG TO ORIGINAL CONDITION UPON REMOVAL OF THE DEVICE.
5. USE NONWOVEN GEOTEXTILE WITH DOUBLE STITCHED SEAMS USING HIGH STRENGTH THREAD. SIZE SLEEVE TO ACCOMMODATE A MAXIMUM 4 INCH DIAMETER PUMP DISCHARGE HOSE. THE BAG MUST BE MANUFACTURED FROM A NONWOVEN GEOTEXTILE THAT MEETS OR EXCEEDS MINIMUM AVERAGE ROLL VALUES (MARV) FOR THE FOLLOWING:

GRAB TENSILE	250 LB	ASTM D-4632
PUNCTURE	150 LB	ASTM D-4833
FLOW RATE	70 GAL/MIN/FT²	ASTM D-4491
PERMITTIVITY (SEC^{-1})	1.2 SEC^{-1}	ASTM D-4491
UV RESISTANCE	70% STRENGTH @ 500 HOURS	ASTM D-4355
APPARENT OPENING SIZE (AOS)	0.15-0.18 MM	ASTM D-4751
SEAM STRENGTH	90%	ASTM D-4632

6. REPLACE FILTER BAG IF BAG CLOGS OR HAS RIPS, TEARS, OR PUNCTURES. DURING OPERATION KEEP CONNECTION BETWEEN PUMP HOSE AND FILTER BAG WATER TIGHT. REPLACE BEDDING IF IT BECOMES DISPLACED.

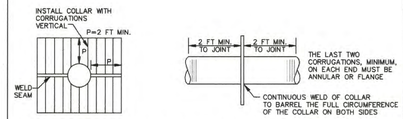
MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

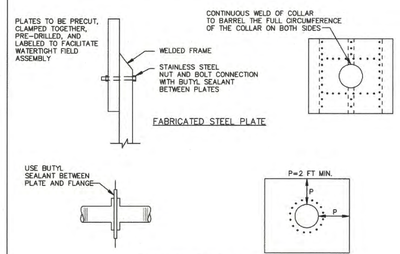
F.9

DETAIL G-2-1 TYPICAL ANTI-SEEP COLLARS

STANDARD SYMBOL



CORRUGATED COLLAR WELDED IN PLACE ON BARREL SECTION



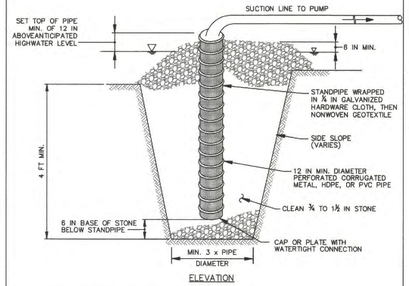
COLLAR FOR FLANGE JOINT PIPE

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL F-2 SUMP PIT

STANDARD SYMBOL ⊠SP



CONSTRUCTION SPECIFICATIONS

1. USE 12 INCH OR LARGER DIAMETER CORRUGATED METAL, HDPE, OR PVC PIPE WITH 1 INCH DIAMETER PERFORATIONS, 6 INCHES ON CENTER. BOTTOM OF PIPE MUST BE CAPPED WITH WATERTIGHT SEAL.
2. WRAP PIPE WITH ¼ INCH GALVANIZED HARDWARE CLOTH AND WRAP NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS, OVER THE HARDWARE CLOTH.
3. EXCAVATE PIT TO THREE TIMES THE PIPE DIAMETER AND FOUR FEET IN DEPTH. PLACE ¾ TO 1½ INCH STONE OR EQUIVALENT RECYCLED CONCRETE, 6 INCHES IN DEPTH PRIOR TO PIPE PLACEMENT.
4. SET TOP OF PIPE MINIMUM 12 INCHES ABOVE ANTICIPATED WATER SURFACE ELEVATION.
5. BACKFILL PIT AROUND THE PIPE WITH ¾ TO 1½ INCH CLEAN STONE OR EQUIVALENT RECYCLED CONCRETE AND EXTEND STONE A MINIMUM OF 6 INCHES ABOVE ANTICIPATED WATER SURFACE ELEVATION.
6. DISCHARGE TO A STABLE AREA AT A NONEROSIVE RATE.
7. A SUMP PIT REQUIRES FREQUENT MAINTENANCE. IF SYSTEM CLOGS, REMOVE PERFORATED PIPE AND REPLACE GEOTEXTILE AND STONE. KEEP POINT OF DISCHARGE FREE OF EROSION.

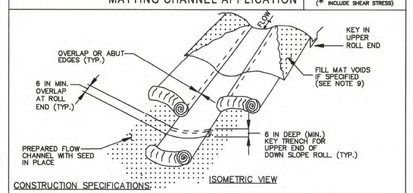
MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

F.5

DETAIL B-4-6-C PERMANENT SOIL STABILIZATION MATTING CHANNEL APPLICATION

STANDARD SYMBOL PSSMC – * lb/ft² (* INCLUDE SHEAR STRESS)



CONSTRUCTION SPECIFICATIONS:

1. USE MATTING THAT HAS A DESIGN VALUE FOR SHEAR STRESS EQUAL TO OR HIGHER THAN THE SHEAR STRESS DESIGNATED ON APPROVED PLANS.
2. USE PERMANENT SOIL STABILIZATION MATTING MADE OF OPEN WEAVE SYNTHETIC, NON-DEGRADABLE FIBERS OR ELEMENTS OF UNIFORM THICKNESS AND DISTRIBUTION THROUGHOUT. CHEMICALS USED IN THE MAT MUST BE NON-LEACHING AND NON-TOXIC TO VEGETATION AND SEED GERMINATION AND NON-INJURIOUS TO THE SKIN. IF PRESENT, NETTING MUST BE EXTRUDED PLASTIC WITH A MAXIMUM MESH OPENING OF 2x2 INCHES AND SUFFICIENTLY BONDED OR SEWN ON 2 INCH CENTERS ALONG LONGITUDINAL AXIS OF THE MATERIAL TO PREVENT SEPARATION OF THE NET FROM THE PARENT MATERIAL.
3. SECURE MATTING USING STEEL STAPLES OR WOOD STAKES. STAPLES MUST BE "U" OR "T" SHAPED STEEL WIRE HAVING A MINIMUM GAUGE OF NO. 11 AND NO. 8 RESPECTIVELY. "U" SHAPED STAPLES MUST AVERAGE 1 TO 1 ½ INCHES WIDE AND BE A MINIMUM OF 6 INCHES LONG. "T" SHAPED STAPLES MUST HAVE A MINIMUM 8 INCH MAIN LEG, A MINIMUM 1 INCH SECONDARY LEG, AND MINIMUM 4 INCH HEAD. WOOD STAKES MUST BE ROUGH-SAWN HARDWOOD, 12 TO 24 INCHES IN LENGTH, 1x3 INCH IN CROSS SECTION, AND WEDGE SHAPE AT THE BOTTOM.
4. PERFORM FINAL GRADING, TOPSOIL APPLICATION, SEEDBED PREPARATION, AND PERMANENT SEEDING IN ACCORDANCE WITH SPECIFICATIONS. PLACE MATTING WITHIN 48 HOURS OF COMPLETING SEEDING OPERATIONS, UNLESS END OF WORKDAY STABILIZATION IS SPECIFIED ON THE APPROVED EROSION AND SEDIMENT CONTROL PLAN.
5. UNROLL MATTING IN DIRECTION OF WATER FLOW, CENTERING THE FIRST ROLL ON THE CHANNEL CENTER LINE. WORK FROM CENTER OF CHANNEL OUTWARD WHEN PLACING ROLLS. LAY MATTING SMOOTHLY AND FIRMLY UPON THE SEEDED SURFACE. AVOID STRETCHING THE MATTING.
6. OVERLAP OR ABUT EDGES OF MATTING ROLLS PER MANUFACTURER RECOMMENDATIONS. OVERLAP ROLL ENDS BY 6 INCHES (MINIMUM), WITH THE UPSTREAM MAT OVERLAPPING ON TOP OF THE NEXT DOWNSTREAM MAT.
7. KEY IN THE TOP OF SLOPE END OF MAT 6 INCHES (MINIMUM) BY DIGGING A TRENCH, PLACING THE MATTING ROLL END IN THE TRENCH, STAPLING THE MAT IN PLACE, REPLACING THE EXCAVATED MATERIAL, AND TAMPING TO SECURE THE MAT END IN THE KEY.
8. STAPLE/STAKE MAT IN A STAGGERED PATTERN ON 4 FOOT (MAXIMUM) CENTERS THROUGHOUT AND 2 FOOT (MAXIMUM) CENTERS ALONG SEAMS, JOINTS, AND ROLL ENDS.
9. IF SPECIFIED BY THE DESIGNER OR MANUFACTURER AND DEPENDING ON THE TYPE OF MAT BEING INSTALLED, ONCE THE MATTING IS KEYED AND STAPLED IN PLACE, FILL THE MAT VOIDS WITH TOP SOIL OR GRANULAR MATERIAL AND LIGHTLY COMPACT OR ROLL TO MAXIMIZE SOIL/MAT CONTACT WITHOUT CRUSHING MAT.
10. ESTABLISH AND MAINTAIN VEGETATION SO THAT REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT ARE CONTINUOUSLY MET IN ACCORDANCE WITH SECTION B-4 VEGETATIVE STABILIZATION.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

SMARTFENCE 42" INSTALLATION INSTRUCTIONS

SEDIMENT & PERIMETER CONTROL

STEP 1: EXCAVATE TRENCH
Excavate trench a maximum of 4" wide and 6" deep. The trench shall be hand-cleaned following excavation to remove bulky debris such as rocks, sticks, and soil clods.

STEP 2: PREPARE FENCE
Lay SMARTfence 42 out on the ground along the proposed fence line and next to the anchor trench. Reference NOTE ONE prior to beginning.

STEP 3: INSTALL INITIAL POST
3A) For the initial post, place the end of SMARTfence 42 along the post height and rotate the post 360 degrees, maintaining tension on the fabric. Secure the fence to the post at all four (4) orange-colored band locations with steel wire or nylon ties as per NOTE TWO.

3B) Drive the initial post (72" metal t-post) with the attached fence to a depth of 36" below surface.

STEP 4: INSTALL INTERIOR POSTS
Using spacing no greater than 6' on center, drive interior posts to 36" depth below surface and attach the fencing as you go (see NOTE ONE and SMARTfence detail on page 2).

To attach fencing, position SMARTfence 42 in front of the adjacent t-post, pulling the fencing tight and fasten it to the post at all four (4) orange-colored band locations (as per NOTE TWO). It is critical that SMARTfence 42 is pulled tight prior to attaching it to each interior post.

STEP 5: INSTALL FINAL POST
After the interior posts have been fastened, secure the fence to the final post by pulling the final section of fencing taut, and then rotating the post 360 degrees while maintaining tension on the fence system. Secure the fence to the post at all four (4) orange-colored band locations with the steel wire or nylon ties as per NOTE TWO. Drive the final post into the ground to a 36" depth below the surface.

STEP 6: BACKFILL TRENCH
Ensure bottom 8" of fabric has been placed in trench. Backfill trench (overfill) with soil placed around fabric. Compact soil backfill manually or via mechanical equipment such as the front wheel of a tractor, skid steer, roller, or other device (per Note 5 of ASTM D 6462 Standard Practice for Silt Fence Installation).

**Be careful not to damage the fabric during compaction (damaged fabric will not be replaced).

NOTE ONE - INSTALL SPECIFICATIONS:
SMARTfence 42 shall be installed using a 6' (72") metal t-post, 1.25 lbs per foot with a kick plate embedded 3' (36") deep on no more than 6' (72") centers (see detail on page 2.)

NOTE TWO - SUPPLIES FOR ATTACHING FENCING:
To fasten SMARTfence 42 to studded, metal T-posts, use one of following methods:

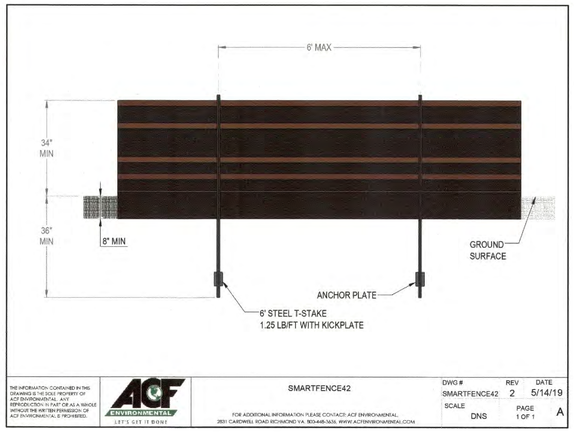
- Steel wire: Wire-attach SMARTfence 42 to metal T-posts using 16-gage 304 SS wire with mitered ends, securing with safety pliers.

- Nylon ties: Puncture two 0.25" openings, spaced at a width apart that is roughly equivalent to the post width, and secure the fence to the post using 8" nylon heavy-duty cable ties (zip-ties) that are UV resistant and have a minimum 120-lb tensile strength.

Please contact our team at 800-448-3636 or info@acfenv.com with any questions regarding the installation process.

SMARTfence

For more information, contact our inside Sales team at 800.448.3636 email at info@acfenv.com



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SMARTFENCE42

FOR ADDITIONAL INFORMATION PLEASE CONTACT ACF ENVIRONMENTAL
2831 CARDWELL ROAD RICHMOND VA. 800-448-3636, WWW.ACFENVIRONMENTAL.COM

DWG #	REV	DATE
SMARTFENCE42	2	5/14/19
SCALE DNS	PAGE 1 OF 1	A

SITE ANALYSIS

TOTAL AREA OF SITE:	60 AC
TOTAL AREA OF DISTURBANCE:	0.93 AC
AREA TO BE VEGETATIVELY STABILIZED:	0.93 AC
AREA TO BE PAVED:	0.00 AC

EARTHWORK QUANTITIES:
APPROX. CUT = 1,000 CY
APPROX. FILL = 800 CY
*ASSUME 15% SHRINKAGE
*NOTE: CONTRACTOR SHALL DETERMINE EARTHWORK QUANTITIES. QUANTITIES SHOWN ARE FOR SEDIMENT CONTROL USE ONLY.

NPDES POINT: NORTHING 732,956.00
EASTING 1,479,629.07

STABILIZATION NOTE

1. CONTRACTOR SHALL ONLY GRADE AND STRIP TOPSOIL FOR DISTANCE THAT CAN BE STABILIZED AT THE END OF THE WORK DAY.
2. CONTRACTOR SHALL PROVIDE FILTER LOG IN AREAS WHERE SAME DAY STABILIZATION CANNOT BE ACHIEVED PRIOR TO A RAINFALL EVENT IN ORDER TO PREVENT SEDIMENT LADEN RUNOFF FROM LEAVING THE SITE.

ESTIMATE OF SEDIMENT CONTROL DEVICES

STABILIZED CONSTRUCTION ENTRANCE = 1 EA
SILT FENCE = 85 LF±
SUPER SILT FENCE = 60 LF±
SUMP PIT = 1 EA
FILTER BAG = 1 EA

SEAL: STATE OF MARYLAND VERONIKA HEDRINGER 50926 PROFESSIONAL ENGINEER 06/24/2025
Veronika Hedringer
PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
LICENSE NO.: 50926 EXPIRATION DATE: 06/07/2027

ENGINEER:
FREDERICK WARD ASSOCIATES
ARCHITECTS | ENGINEERS | PLANNERS | SURVEYORS
www.frederickward.com
P.O. Box 727, 5 South Main Street
Bel Air Maryland 21014-0727
410-838-7900 410-893-1243 fax

REVISIONS

260467

HARFORD COUNTY, MARYLAND

SEDIMENT CONTROL NOTES AND DETAILS
NORTH HARFORD COMPLEX POND REPAIR

Drawn By: REH
Designed By: BKS
Checked By: VH
Contract No.:
Scale: NTS
Sheet 6 of 6
Date 6/23/2025

ADC MAP: 3 - G9
TAX MAP: 17
HCG BILLING ID NO:
HCG DWG ID NO:
SCALE 1 INCH

M:\PROJECTS\2241039.00 HCFS SWM POND REPAIRS FILES & NHMS\DESIGN\CAD\NHMS POND REPAIR