EXHIBIT A

HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
3430 Court House Drive ■ Ellicott City, Maryland 21043 ■ 410-313-2350
Voice/Relay

Brian Shepter, Acting Director
FAX 410-313-3467

April 20, 2023

Lacey Property Revocable Trust
c/o Mr. Vincent P. Lacey, co-trustee
1235 Wild Rose Court
Marriottsville MD 21104

RE: F-21-015 Lacey Property, Lots 1-13 and Open Space Lots 14-17

Dear Mr. Lacey:

**** Please note, Howard County Department of Planning and Zoning will now be accepting electronic original submissions for digital signatures and will no longer be accepting original mylar submissions for Final Road Construction Drawings. Please read through the information below as some items have changed. ****

The Subdivision Review Committee has determined the Final Subdivision Plans for the Lacey Property consisting of 13 residential lots and 4 open space lots on 8.551 ± acres of land located on Church Road in the 2nd Election District of Howard County, Maryland, to be **technically complete**, subject to the plan markups and comments in ProjectDox. If, in responding to those comments, design changes are made which could affect another SRC agency, you are advised to consult with the appropriate agency prior to submission of the electronic originals to DPZ for signature approval and following the 3-step process indicated below. Do not submit the electronic originals to DPZ until all of the agencies have issued approval comments and the items listed below have been complied with.

STEP 1: SUBMISSION OF ELECTRONIC FINAL CONSTRUCTION DRAWINGS

Submission of the original road, grading and storm drainage construction plans for signature approval within **60*** days of the date of this letter (**on or before June 19, 2023**).

1. Payment to the *Director of Finance* for additional originals added to construction plan set.
   Fee per sheet **Fee** **$40.00**

2. Payment to the *Director of Finance of Howard County* for distribution copies of the approved road and storm drainage construction plans.
   Fee per sheet **Fee** **$ 3.00**

3. Print fee for final signed mylar road construction originals.
   Fee per sheet **Fee** **$5.00** (24 x 36)

Submission of the original public water and sewer system construction plans to the Development Engineering Division, for signature approval within **60*** days of the date of this letter (**on or before June 19, 2023**).

Submission of one draft copy of the **Homeowners Association's** "Declaration of Covenants" with the appropriate information clipped and highlighted per the final plat application checklist, and all required supplemental language added.

The electronic road construction drawings must be submitted and receive signature approval, and the public water and sewer allocation must be approved for this project, prior to the completion of the developer's agreement, payment of fees, posting of financial obligations, and acceptance of the final plat originals for recordation. Once you have submitted electronic construction plans, you are advised to contact Real Estate Services concerning the requirements for the Developer's Agreement.

Compliance with all conditions and/or corrections is required before the electronic original will be accepted for signature approval. **Payments can be mailed to the Howard County Planning and Zoning, 3430 Court House Drive, Ellicott City, MD 21043 or dropped in the bin labeled 'DLD' at the Department of Planning and Zoning Public Service Counter located on the first floor of the George Howard Building. Checks can also be dropped off in the metal drop box located outside the George Howard Building. Please secure them in an envelope and send them attention to Department of Planning and Zoning. Please submit a copy of this letter with your payment submission as it will serve as the submission checklist. DPZ staff will contact you once payment is received to review your PDox submission for completion prior to initiating the electronic signatures process. Electronic originals and supporting documentations addressing outstanding comments should be uploaded to the 'Final PDFs for Signature' and the nested support document folder prior to this meeting.**

You will be notified by letter when the construction drawings have been signed, and sewer and water allocations have been granted. That letter will grant formal approval of final plans and authorize you to proceed to Steps 2 and 3.

STEP 2: COMPLETION OF DEVELOPER'S AGREEMENTS AND PAYMENT OF FEES

Submission of a **Developer's Agreement** to the Department of Public Works, Real Estate Services Division, and posting of financial surety for construction of a road, stormwater management, storm drainage, and retaining walls within **120*** days of the date of this letter (**on or before August 18, 2023**). (Bond estimate may be obtained from the Department of Public Works). Real Estate Services requires a minimum of three (3) weeks to execute the agreement(s). This should be anticipated by the developer in scheduling submittal of the plat originals.

Submission of a Declaration of Covenants and Maintenance, and Right of Entry Agreement for Private Stormwater Management Facilities – Rain Gardens (Bio-Retention Facilities) to the Department of Public Works, Real Estate Services Division within **120** days of the date of this letter (**on or before August 18, 2023**). Contact the Real Estate Services Division directly at 410-313-2330 regarding this requirement. Real Estate Services requires a minimum of three (3) weeks to execute this agreement. This should be anticipated by the developer in scheduling submittal of the plat originals.

Submission of a **Developer's Agreement** to the Department of Public Works, Real Estate Services Division, for the installation of public water and public sewerage and posting of financial surety for construction within **120*** days of the date of this letter (**on or before August 18, 2023**). (Bond estimate may be obtained from the Department of Public Works). Real Estate Services requires a minimum of three (3) weeks to execute the agreement(s). This should be anticipated by the developer in scheduling submittal of the plat originals.

Landscape surety must be included in the Developer's Agreement executed with the Department of Public Works, Real Estate Services Division.

Although this project will not require that the developer post surety for the forest conservation retention easements, it will be necessary for the developer to execute a **Deed of Forest Conservation Easement**. Contact the Real Estate Services Division of the Department of Public Works (410-313-2330) regarding this requirement. Real Estate Services requires a minimum of 3 weeks to prepare the deed. This should be anticipated by the developer in scheduling submittal of the plat originals.

Contact the Real Estate Services Division of the DPW concerning the preparation and execution of a deed for the dedication of public road right-of-way for road widening. This deed must be executed prior to the submission of the plat originals.

If applicable, payment to the Department of Public Works, Real Estate Services Division, of the balance of the Department of Public Works, Engineering Review Fee. The fee is based on the final construction cost estimate approved by DPW. It must be paid within **120*** days of the date of this letter (**on or before August 18, 2023).** * Please contact Mrs, Heather Akers at 410-313-4375 to discuss this payment.

Submission of the final plat digital information shall be submitted to DPZ for the purpose of early assignment of new street addresses at the same time as submission of your DPW, Developer's Agreement documents or a minimum of 3 weeks prior to submission of the final plat original. Please see the digital information requirements contained under Step 3 of this letter.

The above conditions must be complied with prior to submission of final plat originals and within **120*** days of the date of this letter (**on or before August 18, 2023**). The Department of Public Works will provide a written receipt indicating the above conditions have been met. The receipt from Real Estate Services Division **must** accompany the submission of the record plat originals.

STEP 3: SUBMISSION OF FINAL PLAT ORIGINAL

Once the requirements in Steps 1 and 2 have been completed, the original plat may be submitted for signature with the following:

1. Payment to *Director of Finance of Howard County* of the following fees, concurrent with the submission of the original plat for signature approval. Provide this letter and fees to the Department of Planning and Zoning to obtain the required receipts.

Storm Drainage Construction, Section 16.133	**Fee**	**$975.00**
SAP Acct #4040090003-1300-1300000000-PWPW000000000000-431900		
Distribution copies of recorded plat:		
Original Plat (per sheet)	**Fee**	**$15.00**
If applicable, payment to the *Director of Finance* for additional originals added to plat set		
Fee per sheet	**Fee**	**$300.00**

2. You will be required to execute a Developer's Agreement which will include **$8,760.00** of surety to ensure the completion of your landscaping obligations for this project. This Department will perform an inspection to verify installation of the required plant materials. The inspection fee required for this project is **$131.40.**

In no event may the fee be less than $100. This fee must be paid to **SAP acct number 1000000000-3000000000-PWPZ000000000000-432105** at the time the plat originals are submitted for signatures and recordation (check payable to the Director of Finance).

You will be required to execute a Forest Conservation Agreement which will include $0.00 of surety (forest retention) to ensure the completion of your Forest Conservation obligation for this project. This Department will perform an inspection to verify compliance with the approved Forest Conservation Plan. The inspection fee required for this project is **$400**. This fee must be paid to **SAP acct number 10000000000-5000000000-RPRP000000000000-439990** at the time the plat originals are submitted for signatures and recordation (check payable to the 'Director of Finance').

3. A check made payable to the *Clerk of the Court* for the cost of recording plats.
Recording fee for plat (per sheet) **Fee $5.00**

4. A properly prepared and completed maintenance agreement for each of the shared driveways must be submitted with the correct recording fee (**$60.00** for a document with up to 9 sheets, or **$115.00** for a document with 10 or more sheets) with the submission of the plat original. Checks should be made payable to the Clerk of the Court. These documents shall be recorded by our staff concurrent with the recording of the plat original.

The finalized and fully executed "Declaration of Covenants" for the HOA must be submitted with the correct recording fee ($60.00 for a document with up to 9 sheets, or $115.00 for a document with 10 sheets or more) at the time the plat originals are accepted for signature approval and recordation. Checks should be made payable to the Clerk of the Court. This document shall be recorded by our staff concurrent with the recording of the plat original.

5. The finalized and fully executed deed(s) conveying open space lots 14 thru 17 to the Homeowner's Association and one paper copy must be submitted with the correct recording fee (**$60.00** for a document with up to 9 sheets, or **$115.00** for a document with 10 sheets or more) at the time the plat originals are accepted for signature approval and recordation. Checks should be made payable to the *Clerk of the Court*. At the time it is submitted, this document, which will be recorded by DPZ staff with the plat original, must bear all required approval stamps from the Department of Finance.

The developer must contact the State Department of Assessments and Taxation to obtain a "State of Maryland Land Instrument Intake Sheet" and the Howard County Department of Finance to obtain an "Application for Lien Certification" for each of the lots/parcels being conveyed to (i.e., owned by) the Homeowners' Association. These completed forms, all associated processing/recordation fees and deed copies must be submitted to this Division concurrently with the original deed conveying the property to the Homeowners' Association. **Please bring a copy of this letter with you when you visit the Department of Finance. Obtaining the completed State of Maryland Land Instrument Intake Sheet and the Application for Lien Certification is the developer's responsibility.**

6. The applicant is advised that any associated documents submitted to DPZ for recording with the final plat original which includes the word, "EASEMENT" in the document title heading must be submitted directly to the Howard County Department of Finance for validation processing for recordation taxes prior to submission to DPZ. At the time any "EASEMENT" documents are submitted, this document, which will be recorded by DPZ staff with the plat original, must bear all required approval stamps from the Department of Finance. This step will be the responsibility of the applicant to complete before the DPZ submission appointment.

7. ***Concurrently with the submission of the plat originals for signature approvals and recordation, submit the original Moderate Income Housing Unit (MIHU) Agreement and MIHU Covenants as required in accordance with Section 13.402 of the County Code. Coordinate the preparation of these documents with the Department of Housing and Community Development (DHCD) at (410) 313-6318. Prior to their submission, the Agreement must be signed by the DHCD and the Covenants must be signed by both the DHCD and the County's Office of Law.***

PLEASE BE ADVISED THAT ALL FEES PAYABLE TO THE CLERK OF THE COURT MUST BE INCLUDED ON A SINGLE CHECK. MULTIPLE CHECKS AND/OR CASH CANNOT BE ACCEPTED.

8. **THE FOLLOWING INFORMATION SHALL BE SUBMITTED TO DPZ FOR THE PURPOSE OF EARLY ASSIGNMENT OF NEW STREET ADDRESSES AT THE SAME TIME AS SUBMISSION OF YOUR DPW, DEVELOPER'S AGREEMENT DOCUMENTS TO DPW, REAL ESTATE SERVICES DIVISION OR A MINIMUM OF 3 WEEKS PRIOR TO SUBMISSION OF THE FINAL PLAT ORIGINAL.**

This information is required prior to submission of the final plat original to allow early assignment of new street addresses for entry in the County's GIS system to assist the Department of Inspections, Licenses and Permits for permit purposes. However, please note that if any of the digital file information changes between the time of this early submission and when the final plat original is submitted, a second updated version must be resubmitted at the time of the final plat original submission.

Submission of parcel and right-of-way boundaries in a digital format meeting the following County standards:

Digital Plat Submissions

- AutoCAD **version 2013** is the required format for submissions.
- Use **NAD 83 feet** as coordinate system.
- Please provide at least two North-East coordinate reference points.
- Do not rotate drawing. North should be straight up.
- All nodes should snap together. No overshoots or undershoots. No circles at property corners.
- All lines must be entered using coordinate geometry, not digitized.
- Please do not send elements other than those outlined below. (No north arrow, notes, vicinity map, etc.)
- Set up layers as described in the following table:

AutoCAD Format					
No.	Layer's Name	Description	Color	Line Type	Text Style
1	Lot Line	Lot Lines	Red	Solid	No text
2	Parcelrow	Parcel Outline and Right Of Way	Yellow	Solid	No text

Note: Font = Simplex, Height = 16.0, Width Factor = 1

This information is to be emailed to Carrie Vogel at cvogel@howardcountymd.gov and Mike Saunders at msaunders@howardcountymd.gov. The file should be named with the subdivision title and the DPZ file number.

If you have any questions, please contact Carrie Vogel of the Department of Planning and Zoning at (410) 313-4420 or email cvogel@howardcountymd.gov

9. **THE FOLLOWING INFORMATION SHALL BE SUBMITTED TO DPW FOR THE PURPOSE OF INCORPORATION INTO THE COUNTY'S GIS ASSET MANAGEMENT SYSTEM AT THE SAME TIME AS SUBMISSION OF YOUR DPW DEVELOPER'S AGREEMENT DOCUMENTS TO DPW, REAL ESTATE SERVICES DIVISION OR A MINIMUM OF 3 WEEKS PRIOR TO SUBMISSION OF THE FINAL PLAT ORIGINAL.** This information is required prior to submission of the final plat original to allow early incorporation of new storm drain system and stormwater management infrastructure in the County's GIS system for asset management and State reporting purposes. However, please note that if any of the digital file information changes between the time of this early submission and when the final plat original is submitted, a second updated version must be resubmitted at the time of the final plat original submission.

Digital Storm Drain System and Stormwater Management Data Submissions

- PDF of the final plans
- GIS geodatabase, GIS shapefiles, or AutoCAD dxf with associated completed Excel file are the required formats for submissions. **See** www.howardcountymd.gov/SWM **for templates.**
- Use NAD 83 feet as coordinate system.
- Do not rotate drawing. North should be straight up.
- All nodes should snap together. No overshoots or undershoots.
- All lines must be entered using coordinate geometry, not digitized.
- Please do not send elements other than those outlined below. (No north arrow, notes, vicinity map, etc.).
- If using AutoCAD, set up layers as described in the following table (geometry colors are the developer's choice:

AutoCAD Format			
No.	Layer's Name	Description	Geometry Type
1	BMP	BMP Point Locations	Point
2	BMP Labels	BMP Unique ID Labels	Text
3	BMP Drainage Area	BMP Drainage Area Polygons	Polygon
4	Outfall	Outfall Point Locations	Point
5	Outfall Labels	Outfall Unique ID Labels	Text
6	Outfall Drainage Area	Outfall Drainage Area Polygons	Polygon
7	Manholes	Manhole Point Locations	Point
8	Manhole Labels	Manhole Unique ID Labels	Text
9	Inlets	Inlet Point Locations	Point
10	Inlet Labels	Inlet Unique ID Labels	Text
11	Pipes	Pipe Lines	Line
12	Pipe Labels	Pipe Unique ID Labels	Text
13	Easements	Easement Polygons	Polygon

Note: Font = Simplex, Height = 16.0, Width Factor = 1

This information is to be emailed to Christine Lowe at cslowe@howardcountymd.gov. The file should be named with the subdivision and DPZ file number. If you have any questions, please contact Christine Lowe of the Department of Public Works at 410-313-0522 or cslowe@howardcountymd.gov.

10. Submission of a completed Forest Conservation Data Summary **[attached].**

11. Submission of a receipt from the Department of Public Works, Real Estate Services Division, verifying the payment of all fees/sureties as identified in Step 2 of this letter.

12. Submission of a receipt from the Department of Public Works, Real Estate Services Division verifying that the required deed for the dedication of public road right-of-way for road widening has been completed.

13. Submission of a receipt from the DPW, Real Estate Services Division, verifying that the required Developer's Agreement/Declaration of Covenants and Maintenance, and Right of Entry Agreement for Private SWM Facilities – Rain Gardens (Bio-Retention Facilities) has been executed.

Submission of the final plat for signature and recordation is required within 180* days of the date of this letter (on or before October 17, 2023).

***In accordance with adopted Council Bill No. 51-2016, effective on 10/5/16, if the deadline date is a Saturday, Sunday, or holiday or if the County offices are not open, the deadline shall be extended to the end of the next open County office business day.**

Please be advised that the finalized and fully executed Declaration of Covenants and Maintenance, and Right of Entry Agreement for Private SWM Facilities – Rain Gardens (Bio-Retention Facilities) must be submitted by the DPW, Real Estate Services Division, to DPZ prior to the signature approval of the plats by the Planning Director. You should contact that agency directly concerning the preparation and execution of the necessary document(s).

The above conditions must be complied with within the mandated 60 day, 120 day, and 180 day deadlines. If any submission deadline is missed, the plan becomes null and void, all previous approvals will be rescinded and your project will lose its tentative allocations in accordance with Section 16.144 of the Howard County Subdivision and Land Development Regulations. If the plan is voided, resubmission of this project may be at the preliminary equivalent sketch plan stage.

Submissions can be mailed to Howard County Planning and Zoning, 3430 Court House Drive, Ellicott City, MD 20143 or dropped in the bin labeled 'DLD' at the Department of Planning and Zoning Public Service Counter located on the first floor of the George Howard Building. Submission materials can also be emailed to planning@howardcountymd.gov for processing.

When recorded, the signed original plat will be retained on file in this Department (DPZ). The tentative allocations assigned to this project will become permanent upon recordation of the final subdivision plat. Although the allocations are assigned to a specific year, once the plats are recorded you may apply for site development plan approval and/or building permits at any time.

If you have any questions, please contact Derrick Jones at (410) 313-2350 or email at djones@howardcountymd.gov.

Sincerely,

DocuSigned by:
1EB75478A22B49A...

Anthony Cataldo, AICP, Chief
Division of Land Development

cc:
Research
F.C.C. – Aldo Vitucci
Gary Segal
Land Holdings Inc.
Real Estate Services, DPW
F. Todd Taylor
Stephanie Thompson
Denis Cortis
Landscaping and Forest Coordinator
Elizabeth Walsh
Heather Gaetano
Attorney Bill Erskine

Routing for ES Originals Review Email:

DLD – Anthony Cataldo, (Derrick Jones)
DED – Chad Edmondson, (Heather Akers)
SCD – (Alexander Bratchie)
Highways – Mark Kovach

FOREST CONSERVATION DATA SUMMARIES

Forest Conservation Data Summary charts are available on the DPZ website at: http://www.howardcountymd.gov/DPZ/DPZDocs/FOCODATA.pdf

OPTION 1: FEE-IN-LIEU	**FOREST CONSERVATION DATA SUMMARY**	
File Number:	Project/Subdivision Name:	
Fee-In-Lieu Amount:	Net Tract Area:	Cash Receipt No. *:
12-digit Watershed Number:		
Comment: Fee-In-Lieu for _____ acres of Reforestation or Afforestation (specify which is applicable)		

* To be completed by DPZ staff

OPTION 2: EXEMPT/DOI	**FOREST CONSERVATION DATA SUMMARY**
File Number:	Project/Subdivision Name:
12-digit Watershed Number:	
Regulation Section: _____ (provide Regulation reference and a brief description of the applicable exemption or DOI)	

OPTION 3: PREVIOUSLY ADDRESSED (including use of a FC Bank)	**FOREST CONSERVATION DATA SUMMARY**
File Number:	Project/Subdivision Name:
12-digit Watershed Number:	
Comment: Addressed by _____ (provide file number and project/subdivision name)	

OPTION 4: ON-SITE/OFF-SITE PLANTING AND RETENTION	**FOREST CONSERVATION DATA SUMMARY**		
File Number:	Project/Subdivision Name:		
Net Tract Area *Net tract area under review*	**Area of Floodplain** **unforested forested** **total**	**Existing Forest** *Forest in net tract area minus floodplain*	**Cleared Forest** All forest cleared including floodplain
Retained Forest *Retained forest minus floodplain* **onsite offsite** **total**	**Planted Forest** **onsite offsite** **total**	**Long Term Protection** *Total amount of forest planed into LTP*	**Surety Amount Posted** *Total amount of surety posted*
In-Lieu Fees Amount Collected	**Forested Stream Buffers** Linear Length Acreage	**Planted Stream Buffers** Linear Length Acreage	**Amount of Forest Retained but not within an Easement**
12-digit Watershed Number:			

HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
3430 Court House Drive ■ Ellicott City, Maryland 21043 ■ 410-313-2350
Lynda D. Eisenberg, AICP, Director FAX 410-313-3467

September 13, 2023

Lacey Family Revocable Trust
attn: Mr. Vincent Lacey
1235 Wild Rose Court
Marriottsville MD 21104

RE: F-21-015 Lacey Property, Lots 1-13 and Open Space Lots 14-17
Road Construction, Grading and Stormwater Management Plans

Dear Mr. Lacey:

The Department of Planning and Zoning hereby grants **approval** of the Final Subdivision Plans for the Lacey Property consisting of 13 residential lots and 4 open space lots on 8.55± acres of land located on Church Road in the Second Election District of Howard County, Maryland. Signature of the electronic original construction drawings is complete. Compliance with the following conditions, and the conditions previously transmitted in our letter of April 20, 2023 is required.

This project is subject to the submission deadlines established by the Adequate Public Facilities Ordinance (APFO) as outlined in our previous letter of April 20, 2023 as well as the 60-day extension to the APFO deadline granted by DPZ via email dated August 8, 2023 due to governmental delay.

Filing of agreements, payment of fees and posting of financial obligations must be accomplished **on or before October 17, 2023***. The plat originals must be submitted **on or before December 16, 2023 ***. If these deadlines are not met, your plan will be considered null and void, all previous approvals will be rescinded. This Department cannot entertain any extensions of time under the provisions of the APFO legislation.

***In accordance with adopted Council Bill No. 51-2016, effective on 10/5/16, if the deadline date is a Saturday, Sunday, or holiday or if the County offices are not open, the deadline shall be extended to the end of the next open County office business day.**

If you have any questions, please contact Derrick Jones at (410) 313-2350 or email at djones@howardcountymd.gov.

Sincerely,

DocuSigned by:
Julia Saver
29266B221B8841E...

for
Anthony Cataldo, AICP, Chief
Division of Land Development

AC/dj

cc: Research, Gary Segal, Denis Cortis; DPW, Real Estate Services, Stephanie Thompson, Attorney Bill Erkskine; FCC, Heather Gaetano; F. Todd Taylor; Liz Walsh, Land Holdings

DocuSign Envelope ID: 79E9DBFB-CDDB-4FF4-A258-614B911C4A9B

FINAL ROAD CONSTRUCTION, GRADING AND STORMWATER MANAGEMENT PLANS

LACEY PROPERTY

LOTS 1 THRU 13 AND OPEN SPACE LOTS 14 THRU 17

SHEET INDEX

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	DEMOLITION PLAN
3	MILL CREEK WAY PLAN, PROFILE AND DETAILS
4	PRIVATE USE-IN-COMMON DRIVEWAY PROFILES AND DETAILS
5	GRADING & SEDIMENT CONTROL PLAN
6	SEDIMENT AND EROSION CONTROL NOTES & DETAILS
7	SEDIMENT AND EROSION CONTROL NOTES, DETAILS AND BORING LOGS
8	STORMWATER MANAGEMENT NOTES & DETAILS
9	STORMWATER MANAGEMENT PLAN VIEWS, PROFILES & DETAILS - MICRO BIO-RETENTION #1
10	STORMWATER MANAGEMENT PLAN VIEWS, PROFILES & DETAILS - MICRO BIO-RETENTION #2
11	STORMWATER MANAGEMENT PLAN & PROFILES - POND #1
12	STREET TREE & LANDSCAPE PLAN
13	MICRO BIO-RETENTION PLANTING PLANS, LANDSCAPING NOTES, DETAILS & SPECIFICATIONS
14	STORM DRAIN PROFILES
15	STORM DRAIN DRAINAGE AREA & SOILS MAP
16	PARTIAL PLAN
17	NORTH WALL ELEVATIONS
18	NORTH WALL SECTIONS
19	NORTH WALL SECTIONS
20	NORTH WALL SECTIONS
21	TYPICAL DETAILS
22	GENERAL NOTES & TYPICAL DETAILS
23	FOREST CONSERVATION PLAN
24	TSWM - BASIN #1 PROFILES AND DETAILS

TRAFFIC CONTROL SIGNS

ROAD NAME	CENTERLINE STA.	OFFSET	POSTED SIGN	SIGN CODE
MILL CREEK WAY	0+22	21.3'R	STREET SIGN & NO OUTLET SIGN	SNS & W14-2a
	0+25	18'L	STOP	R1-1
	0+75	14'R	SPEED LIMIT 25 M.P.H.	R2-1
	1+72.3	38.8'L&R	RANGE OF ADDRESS SIGNS	-

STREET LIGHT CHART

STREET NAME	STATION	OFFSET	FIXTURE/POLE TYPE
MILL CREEK WAY	0+18	22'R	100 watt LED-150 COLONIAL POST-TOP FIXTURE MOUNTED ON A 14' BLACK FIBERGLASS POLE
	1+91.34	2' BEHIND CURB	

ROADWAY INFORMATION CHART

ROAD NAME	CLASSIFICATION	DESIGN SPEED	POSTED SPEED LIMIT	R/W WIDTH
MILL CREEK WAY	PUBLIC ACCESS PLACE	25 M.P.H.	25 M.P.H.	50'

STORMWATER MANAGEMENT PRACTICES

LOT No.	MICRO BIO-RETENTION M-6 (NUMBER)	SAND FILTER F-1 (NUMBER)	DRY WELLS M-5 (NUMBER)
O.S. 14	YES - (2)	YES - (1)	NO
1	NO	NO	YES - (3)
2	NO	NO	YES - (4)
3	NO	NO	YES - (3)
4	NO	NO	YES - (3)
5	NO	NO	YES - (3)
6	NO	NO	YES - (3)
7	NO	NO	YES - (3)
8	NO	NO	YES - (3)
9	NO	NO	YES - (2)
10	NO	NO	YES - (2)
11	NO	NO	YES - (2)
12	NO	NO	YES - (3)
13	NO	NO	YES - (3)

SWM NOTE: SINCE THE SP-15-013 PLAN WAS APPROVED PRIOR TO THE APPROVAL OF C.B. No. 80-2016, THIS PROJECT IS EXEMPT FROM THE REQUIREMENTS OF THAT BILL TO PROVIDE ADDITIONAL REDUCTION IN PEAK RUNOFF. CONSERVATIVE DESIGN HAS PROVIDED A 16.5% REDUCTION AND 8.50% REDUCTION AS A BONUS CREDIT.

SWM DRAINAGE AREA SUMMARY TABLE (Proposed Conditions)

Drainage Area	Area (ac.+/-)	RCN	T/C (hrs.)	100-Year Peak Q	E.C. Peak Q	Remarks
A	1.81	61	0.22	5.82	9.18	Bypass Area
A-1	4.32	70	0.18	23.29 in/13.67 out @340.78	31.63 in/23.87 out @341.39	Pocket Sand Filter
A-2	0.76	77	0.12	4.36 in/4.33 out @356.41	7.32 in/7.28 out @356.49	Bio #1
B	0.92	69	0.11	4.57	7.24	Bypass Area
B-1	0.37	77	0.18	1.90 in/1.31 out @361.64	3.26 in/2.91 out @361.82	Bio #2
D.P.#1 Total				* 22.00	* 37.72	Total @ D.P.#1 (EC watershed)
C	1.03	70	0.12	5.13	8.19	Total @ D.P.#2 (Sucker Branch)

SWM DRAINAGE AREA SUMMARY TABLE (Existing Conditions)

Drainage Area	Area (ac.+/-)	RCN	T/C (hrs.)	100-Year Peak Q	E.C. Peak Q	Remarks
A	6.58	61	0.21	21.6	34.04	
B	1.33	60	0.1	5.25	7.7	
D.P.#1 Total				* 25.64	* 40.91	Total @ D.P.#1
C	0.8	60	0.1	3.16	4.63	Total @ D.P.#2
				16.50%	8.50%	% Decrease @ D.P.#1

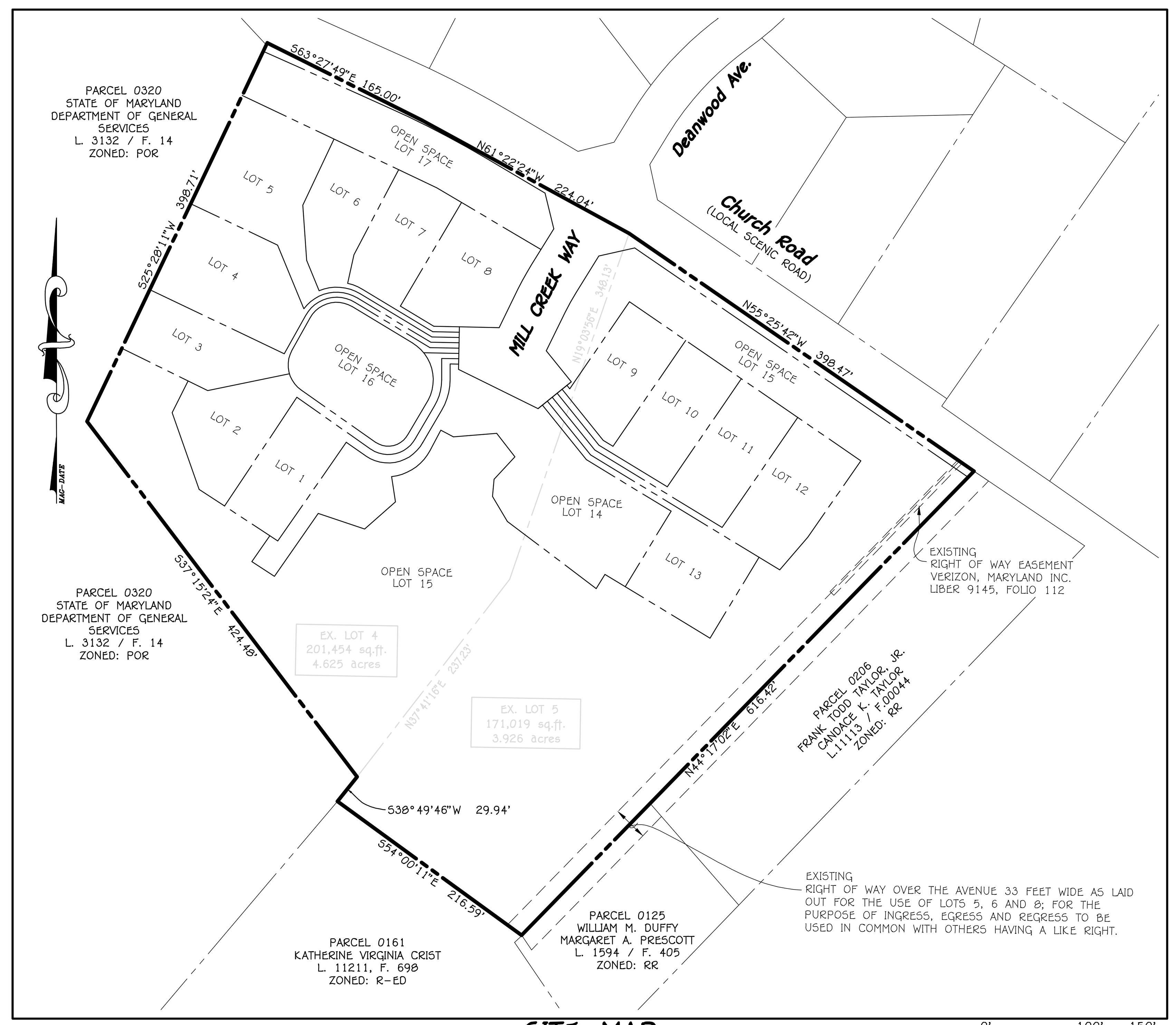
* THESE PEAK FLOW VALUES ARE REFLECTIVE OF THE TR-20 PROGRAM OUTPUT. THE PROGRAM ADDS VARIOUS HYDROGRAPHS TOGETHER TO PRODUCE A VALUE WHICH IS NOT THE SAME AS THE MATH ADDITION OF EACH AREAS PEAK VALUE.

COMMUNITY MEETINGS

NO.	DATE	LOCATION	PRESUBMISSION COMMUNITY MEETING (Y/N)
1	APRIL 30, 2013	MILLER BRANCH LIBRARY	YES
2	JUNE 11, 2014	HOWARD COUNTY GEORGE HOWARD BLDG	YES
3 *	JULY 28, 2014	HOWARD COUNTY GEORGE HOWARD BLDG	NO, CHARRETTE
4 *	AUGUST 26, 2014	HOWARD COUNTY GEORGE HOWARD BLDG	NO, GENERAL MEETING
5 **	SEPTEMBER 2, 2014	DW TAYLOR ASSOCIATES, INC.	NO, MEETING WITH A COMMUNITY REPRESENTATIVE
6 *	SEPTEMBER 22, 2014	HOWARD COUNTY GEORGE HOWARD BLDG	NO, GENERAL MEETING
7 **	NOVEMBER 13, 2014	DW TAYLOR ASSOCIATES, INC.	NO, MEETING WITH TWO COMMUNITY REPRESENTATIVES
8	JULY 13, 2015	HOWARD COUNTY GEORGE HOWARD BLDG	YES

* CHARRETTE AND GENERAL COMMUNITY MEETINGS WERE HELD WITH THE COMMUNITY AS A MEANS OF INFORMING THE COMMUNITY OF DESIGN PROGRESS AS WELL AS TO SOLICIT IDEAS / REQUEST CHANGES TO DESIGN CONCEPTS.

** MEETINGS WERE HELD WITH COMMUNITY REPRESENTATIVES SELECTED BY THE COMMUNITY DURING THE CHARETTE / GENERAL COMMUNITY MEETINGS TO FURTHER THE COMMUNITY INPUT AT A MORE FINITE DESIGN LEVEL. THE COMMUNITY REPRESENTATIVES WERE A RETIRED LAND PLANNER AND LANDSCAPE ARCHITECT FROM ELLICOTT CITY.



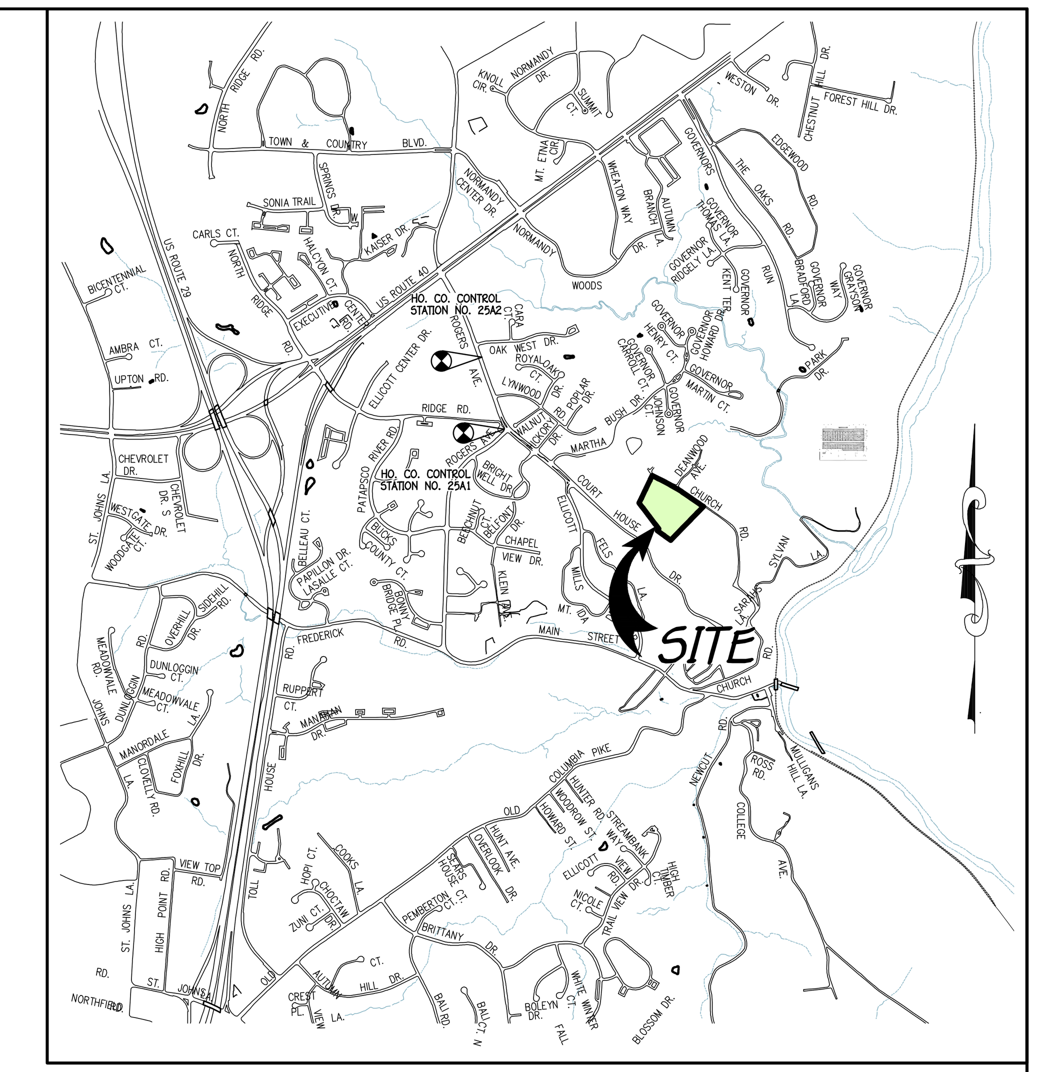
SITE MAP

SCALE: 1" = 100'

0' 100' 150' 200'
Scale: 1" = 100'

LEGEND

SYMBOL	DESCRIPTION
--- 352 ---	EXISTING CONTOUR 2' INTERVAL
--- 350 ---	EXISTING CONTOUR 10' INTERVAL
--- S ---	EXISTING SAN. SEWER LINE
--- D ---	EXISTING STORM DRAIN LINE
- - - - -	EXISTING WATER LINE
--- OHE ---	EXISTING OVERHEAD ELECTRIC LINE
--- X ---	EXISTING FENCE
--- 352 ---	PROPOSED CONTOUR 2' INTERVAL
--- 350 ---	PROPOSED CONTOUR 10' INTERVAL
+ 344.29	PROPOSED SPOT ELEVATION
	PROPOSED CONCRETE WALK
	PROPOSED MACADAM PAVING
	EXISTING TREES
	EXISTING TREELINE
	PROPOSED TREELINE
8" W	PROPOSED PUBLIC WATER
18" RCCP	PROPOSED STORMDRAIN
8" S	PROPOSED PUBLIC SEWER
	SOILS DELINEATION
--- SSF ---	SUPER SILT FENCE
	FOREST CONSERVATION AREA
	RIPRAP OUTLET PROTECTION
	DEMOLITION
	STEEP SLOPE TO BE REMOVED
	STEEP SLOPES 15% - 24.9%
	STEEP SLOPES 25.0% OR GREATER



VICINITY MAP

SCALE: 1" = 2000'

HO. CO. MD. ADC MAP 21, GRID B7

GENERAL NOTES

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS IF APPLICABLE.
2. THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS / BUREAU OF ENGINEERING / CONSTRUCTION INSPECTION DIVISION AT 410-313-1880 AT LEAST (5) WORKING DAYS PRIOR TO THE START OF WORK.
3. THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.
4. THIS SUBDIVISION PLAN IS SUBJECT TO THE AMENDED FIFTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS AND THE 10-06-13 ZONING REGULATIONS PER COUNCIL BILL NO. 32-2013. DEVELOPMENT OR CONSTRUCTION ON THESE LOTS OR PARCELS MUST COMPLY WITH SETBACKS AND BUFFER REGULATIONS IN EFFECT AT THE TIME OF SUBMISSION OF A BUILDING OR GRADING PERMIT APPLICATION.
5. COORDINATES BASED ON NAD'83 MARYLAND COORDINATE SYSTEM AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS NO. 25A1 AND NO. 25A2
   HO. CO. CONTROL STATION #25A1 - HORIZONTAL - NAD '83) N 586,557.549 E 1,366,847.099 ELEVATION = 396.343 (NAVD '88)
   HO. CO. CONTROL STATION #25A2 - HORIZONTAL - (NAD '83) N 587,502.730 E 1,366,556.378 ELEVATION = 348.145 (NAVD '88)
6. SUBJECT PROPERTY IS ZONED R-ED PER 10/06/2013 COMPREHENSIVE ZONING PLAN.
7. BACKGROUND INFORMATION:
   a. SUBDIVISION NAME: LACEY PROPERTY
   b. TAX MAP NO.: 25
   c. PARCEL NO.: 13
   d. ZONING: R-ED
   e. ELECTION DISTRICT: SECOND
   f. GROSS AREA OF THIS SUBMISSION = 8.551 AC.±
   g. NUMBER OF BUILDABLE LOTS: 13
   h. NUMBER OF OPEN SPACE LOTS: 4
   i. AREA OF BUILDABLE LOTS: 2.876 AC.±
   j. AREA OF OPEN SPACE LOTS: 5.277 AC.±
   k. AREA OF PUBLIC ROADWAY TO BE DEDICATED: 0.398 AC.±
   l. PREVIOUS FILE NUMBERS: ECP-15-044, WP-16-022, SP-15-013, PB CASE 418, HPC-15-78, HPC-16-06 (a), HPC-16-06 (b) & HPC-18-061 (SEE G.N. #35).
   m. AREA OF FLOODPLAIN = 0.00 AC.
   n. AREA OF 25% OR GREATER SLOPES = 1.35 AC.±
   o. NET AREA OF SUBMISSION = 7.201 AC.±
8. OPEN SPACE REQUIRED: 8.551 AC. X 0.50% = 4.276 AC.±
   OPEN SPACE PROVIDED: 5.277 AC.±
   RECREATIONAL OPEN SPACE REQUIRED FOR PROJECT TOTAL = (300 SQ.FT. PER UNIT) = 3,900 SQ.FT.
   PROVIDED RECREATIONAL OPEN SPACE (LOT 16) = 3,900 SQ.FT.
9. ALL FILL AREAS WITHIN ROADWAYS AND UNDER STRUCTURES SHALL BE COMPACTED TO A MINIMUM OF 95% COMPACTION OF AASHTO T-180.
10. NO NOISE STUDY IS REQUIRED FOR THIS PROJECT.
11. PROPERTY IS LOCATED WITHIN THE METROPOLITAN DISTRICT. WATER AND SEWER IS PUBLIC, CONTRACT NO. 14-4913-D. EXISTING SEPTIC SYSTEM TO BE ABANDONED IN ACCORDANCE WITH HEALTH DEPARTMENT REQUIREMENTS. EXISTING UTILITIES ARE BASED ON FIELD LOCATION OF MISS UTILITY MARKINGS AS A PART OF THE TOPOGRAPHIC SURVEY.
12. SOILS ARE BASED ON THE NRCS WEBSOIL SURVEY AND HOWARD COUNTY SOIL MAP 12.
13. BOUNDARY SHOWN HEREON IS BASED ON A FIELD RUN MONUMENTED BOUNDARY SURVEY DATED AUGUST, 2014. THE EXISTING TOPOGRAPHY IS TAKEN FROM FIELD RUN SURVEY WITH MAXIMUM TWO FOOT CONTOUR INTERVALS PREPARED BY FISHER, COLLINS & CARTER, INC. DATED SEPTEMBER 2013 AND SUPPLEMENTED BY HOWARD COUNTY GIS TOPOGRAPHY.
14. EXISTING STRUCTURES ON-SITE, OUT BUILDINGS AND SWIMMING POOL HAVE ALL BEEN REMOVED UNDER DEMOLITION PERMIT NUMBER B-18003545 DATED FEBRUARY 7, 2019.
15. THERE ARE NO WETLANDS ON THIS SITE PER INVESTIGATION BY ECO-SCIENCE PROFESSIONALS, INC. DATED SEPTEMBER, 2014.
16. A WETLAND DELINEATION & FOREST STAND DELINEATION REPORT FOR THIS PROJECT DATED SEPTEMBER 2014 PREPARED BY ECO-SCIENCE PROFESSIONALS AND APPROVED UNDER SP-15-013.
17. STEEP SLOPES, STREAM AND ITS BUFFERS EXIST ON-SITE.
18. NO 100 YEAR FLOODPLAIN, CEMETERIES, NOR GRAVESITES EXIST ON THE PROPERTY.
19. NO CLEARING, GRADING, REMOVAL OF VEGETATIVE COVER OR TREES, PAVING AND NEW STRUCTURES SHALL BE PERMITTED WITHIN THE LIMITS OF STREAM BUFFERS AND FOREST CONSERVATION EASEMENT AREAS.
20. THE TRAFFIC STUDY FOR THIS PROJECT WAS PREPARED BY MARS GROUP IN JUNE 2015, AND WAS APPROVED ON DECEMBER 21, 2015.
21. SITE HAS FRONTAGE ON CHURCH ROAD, A COUNTY, LOCAL, SCENIC ROAD.
22. EXCAVATIONS TO VERIFY DEPTH TO ROCK AND WATER WERE CONDUCTED ON JUNE 8, 2015.
23. DESIGN MANUAL WAIVER TO ALLOW 9 LOTS (8 BUILDABLE AND 1 OPEN SPACE) ON A USE-IN-COMMON DRIVEWAY WAS APPROVED ON OCTOBER 5, 2015 AND IS SUBJECT TO THE FOLLOWING CONDITIONS:
   1. THE MINIMUM WIDTH OF THE USE-IN-COMMON DRIVEWAY SHOULD INCREASE TO 20 FEET DUE TO ITS CURVATURE.
   2. PROVIDE FLUSH CURB AND GUTTER ALONG THE USE-IN-COMMON DRIVEWAY.
24. STORM WATER MANAGEMENT IS IN ACCORDANCE WITH THE M.D.E. STORM WATER DESIGN MANUAL, VOLUMES I & II, REVISED 2009. NON-STRUCTURAL PRACTICES (MICRO BIO-RETENTION FACILITIES (M-6) AND DRYWELLS (M-5)) IN ACCORDANCE WITH CHAPTER 5 ARE BEING UTILIZED. 100 YEAR MANAGEMENT AND THE 3.55 HR / 6.6 IN STORM EVENT ARE BEING PROVIDED IN THE PROPOSED POCKET SAND FILTER.
25. THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. FINANCIAL SURETY FOR THE REQUIRED 26 SHADE, 5 EVERGREEN TREES & 7 SHRUBS (PROVIDED 19 SHADE, 6 ORNAMENTAL, 11 EVERGREEN & 7 SHRUBS) HAS BEEN POSTED AS PART OF THE DEVELOPER'S AGREEMENT IN THE AMOUNT OF $8,460.00.
26. THE FOREST CONSERVATION REQUIREMENTS PER SECTION 16.1200 OF THE HOWARD COUNTY CODE AND THE FOREST CONSERVATION MANUAL FOR THIS SUBDIVISION HAS BEEN FULFILLED BY PROVIDING 2.916 AC.± OF ON-SITE FOREST RETENTION. NO SURETY IS REQUIRED FOR RETENTION. A DEED OF FOREST CONSERVATION EASEMENT AND AGREEMENT WILL BE EXECUTED SIMULTANEOUSLY WITH THE DPW DEVELOPER AGREEMENT.
27. WAIVER PETITION, WP-16-022, REQUESTING A WAIVER FROM HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS SPECIFICALLY SECTION 16.1205(A)(7) FOREST RETENTION PRIORITIES - RETENTION OF SPECIMEN TREES, SECTION 16.116(B)(1) STATING THAT GRADING, REMOVAL OF VEGETATIVE COVER AND TREES, NEW STRUCTURES, AND PAVING SHALL NOT BE PERMITTED ON LAND WITH EXISTING STEEP SLOPES IN AREAS GREATER THAN 20,000 SQ.FT. IS SIZE, SECTION 16.134(A)(1)(I) SIDEWALKS ARE REQUIRED ON ONLY ONE SIDE OF CUL-DE-SACS AND LOCAL STREETS OF SINGLE-FAMILY DETACHED SUBDIVISIONS, AND SECTION 16.125(B)(1)(II)&(2) REQUIRING MINIMIZATION OF TREE AND VEGETATION REMOVAL ALONG A SCENIC ROAD AND REQUIRING RETENTION OF FOREST OR WOODED AREAS OF 35-FOOT IN WIDTH, HAS BEEN APPROVED ON DEC. 5, 2016. APPROVAL OF WP-16-022 IS SUBJECT TO THE FOLLOWING CONDITIONS:
   a. COMPLIANCE WITH SRC COMMENTS FOR SP-15-013 AND PLANNING BOARD APPROVAL OF THE PROPOSED SUBDIVISION PLAN DESIGN, LAYOUT AND LOCATION OF LOTS, ROADS AND SHARED DRIVEWAYS.
   b. NO ADDITIONAL DISTURBANCE OR GRADING SHALL OCCUR BEYOND THE LIMIT OF DISTURBANCE (L.O.D.) OF THE 25% STEEP SLOPES THAT ARE DETAILED ON THE PRELIMINARY GRADING PLAN AND AS APPROVED BY THE PLANNING BOARD, UNLESS IT CAN BE SUFFICIENTLY DEMONSTRATED TO BE WARRANTED OR JUSTIFIED BY THE APPLICANT.
   c. THE AFFECTED STEEP SLOPE AREAS WHERE THE BUILDING LOTS ARE PLANNED MUST BE SUFFICIENTLY STABILIZED WITH RETAINING WALL AND/OR SOIL STABILIZATION DEVICES/METHODS THAT SHALL LESSEN THE ERODIBILITY OF SOILS AND RUNOFF. THE IMPACTED STEEP SLOPE AREAS MUST BE REVEGETATED OR STABILIZED WITH SUITABLE NATIVE SPECIES THAT WILL BIND THE SURFACE TIGHTLY. THESE STABILIZATION TECHNIQUES MUST BE CLEARLY DEMONSTRATED ON BOTH THE ROAD CONSTRUCTION DRAWINGS (WITH THE FINAL PLAT) AND THE SITE DEVELOPMENT PLAN.
   d. THE REMOVAL OF THE EIGHT (8) SPECIMEN TREES WILL REQUIRE MITIGATION WITH THE PLANTING OF 2:1 REPLACEMENT TREES (16 TOTAL) WITH A MINIMUM 3" CALIPER NATIVE PLANT SPECIES. THE REPLACEMENT TREES SHALL BE BONDED AND SHOWN ON THE LANDSCAPE PLAN WITH THE FORTHCOMING FINAL PLAN.
   e. THE REMAINING 35 SPECIMEN TREES SHALL BE SAVED AND PROTECTED DURING CONSTRUCTION ACTIVITY. ANY ADDITIONAL REMOVAL OF SPECIMEN TREES SHALL REQUIRE THE SUBMITTAL OF A NEW ALTERNATIVE COMPLIANCE PETITION APPLICATION.
   f. PROVIDE TREE PROTECTION FENCING AT THE TREES DRIP LINE, OR FARTHER OUT, TO PREVENT TREE DAMAGES FROM EXCAVATION, SOIL COMPACTION OF SOIL OVER ROOTS. THESE PROTECTION TECHNIQUES MUST BE DEMONSTRATED ON BOTH THE ROAD CONSTRUCTION DRAWINGS (WITH THE FINAL PLAT) AND THE SITE DEVELOPMENT PLAN.
   g. COMPLIANCE WITH THE CERTIFICATE OF APPROVAL ISSUED BY THE HISTORIC PRESERVATION COMMISSION FOR DEVELOPMENT OF THIS PROPERTY.
   h. THE CONSTRUCTION OF THE NEW HOUSES FACING TOWARDS CHURCH ROAD SHALL BE ADEQUATELY SCREENED USING BERMS, ENHANCED LANDSCAPING AND HOUSE SITING TO MINIMIZE IMPACTING THE NATURAL SETTING ALONG THE SCENIC ROAD. THIS CONDITION WILL BE EVALUATED FURTHER AT THE SITE DEVELOPMENT PLAN STAGE.
   i. PROVIDE A NOTE ON THE SP PLAN, THE FINAL PLAT AND THE SITE DEVELOPMENT PLAN REGARDING THIS ALTERNATIVE COMPLIANCE PETITION APPROVAL. THIS NOTE SHALL INCLUDE THOSE SUBDIVISION REGULATION SECTIONS PETITIONED, THE DATE OF THE ALTERNATIVE COMPLIANCE APPROVAL, AND THE CONDITIONS OF APPROVAL.
28. TRASH AND RECYCLABLES COLLECTION WILL BE AT MILL CREEK WAY WITHIN 5' OF THE COUNTY ROADWAY.
29. TWO PRIVATE RANGE OF ADDRESS SIGN ASSEMBLIES SHALL BE FABRICATED AND INSTALLED BY HOWARD COUNTY BUREAU OF HIGHWAYS AT THE DEVELOPERS/OWNERS EXPENSE. CONTACT HOWARD COUNTY TRAFFIC DIVISION AT 410-313-5752 FOR DETAILS AND COST ESTIMATE.
30. SUBDIVISION IS REQUIRED TO PROVIDE M.I.H.U. (MODERATE INCOME HOUSING UNIT). IT IS ANTICIPATED AT THIS TIME THAT A FEE-IN-LIEU WILL BE PAID. MIHU AGREEMENT WILL BE SUBMITTED WITH THIS FINAL PLAN OUTLINING HOW THE MIHU REQUIREMENT WILL BE MET.
   A. M.I.H.U. REQUIRED = 1.2 M.I.H.U.
   (12 LOTS X 10% M.I.H.U./LOT)
   B. ONE UNIT IS EXEMPT FROM MIHU REQUIREMENTS. (ONE EXISTING LOT)
31. STREET LIGHTS WILL BE REQUIRED IN THIS DEVELOPMENT IN ACCORDANCE WITH THE DESIGN MANUAL STREET LIGHT PLACEMENT AND THE TYPE OF FIXTURE AND POLE SELECTED SHALL BE IN ACCORDANCE WITH THE LATEST HOWARD COUNTY DESIGN MANUAL, VOLUME III (1993) AND AS MODIFIED BY "GUIDELINES FOR STREET LIGHTS IN RESIDENTIAL DEVELOPMENTS (JUNE 1993)." THE JUNE 1993 POLICY INCLUDES GUIDELINES FOR LATERAL AND LONGITUDINAL PLACEMENT. A MINIMUM SPACING OF 20' SHALL BE MAINTAINED BETWEEN ANY STREET LIGHT AND ANY TREE.
32. PLAN IS SUBJECT TO PLANNING BOARD APPROVAL ON NOVEMBER 17, 2016 AND SIGNED DECISION & ORDER ON MARCH 2, 2017, IN ACCORDANCE WITH SECTION 107.0 OF THE ZONING REGULATIONS.
33. THIS SUBDIVISION IS SUBJECT TO THE PROTECTION OF SCENIC ROADS, PER SECTION 16.125 OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS.

GENERAL NOTES continued

34. TRAFFIC CONTROL DEVICES:
   (a) THE R1-1 ("STOP") SIGN, R2-1 ("SPEED LIMIT 25"), W14-2a (NO OUTLET), AND THE STREET NAME SIGN (SNS) ASSEMBLY FOR THIS DEVELOPMENT MUST BE INSTALLED BEFORE THE BASE PAVING IS COMPLETED.
   (b) THE TRAFFIC CONTROL DEVICE LOCATIONS SHOWN ON THE PLANS ARE APPROXIMATE AND MUST BE FIELD APPROVED BY HOWARD COUNTY TRAFFIC DIVISION (410-313-2430) PRIOR TO THE INSTALLATION OF ANY OF THE TRAFFIC CONTROL DEVICES.
   (c) ALL TRAFFIC CONTROL DEVICES AND THEIR LOCATIONS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE "MARYLAND MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MDMUTCD).
   (d) ALL SIGN POSTS USED FOR TRAFFIC CONTROL SIGNS INSTALLED IN THE COUNTY RIGHT-OF-WAY SHALL BE MOUNTED ON A 2" GALVANIZED STEEL, PERFORATED ("QUICK PUNCH"), SQUARE TUBE POST (14 GAUGE) INSERTED INTO A 2-1/2" GALVANIZED STEEL, PERFORATED, SQUARE TUBE SLEEVE (12 GAUGE) -3' LONG. THE ANCHOR SHALL NOT EXTEND MORE THAN TWO "QUICK PUNCH" HOLES ABOVE GROUND LEVEL. A GALVANIZED STEEL POLE CAP SHALL BE MOUNTED ON TOP OF EACH POST.
35. ON APRIL 4, 2013 AND NOVEMBER 6, 2014, THE HISTORIC PRESERVATION COMMISSION (HPC) PROVIDED ADVISORY COMMENTS ON THE PROPOSED SUBDIVISION/SITE DEVELOPMENT PLAN IN CASES HDC-13-17 AND HPC-14-82. ON DECEMBER 3, 2015, THE HPC APPROVED THE DEMOLITION OF THE EXISTING STRUCTURES IN CASE HPC-15-78. THE REQUEST FOR TREE REMOVAL AND RETAINING WALL CONSTRUCTION WAS RESUBMITTED FOR APPROVAL AND THE CONSTRUCTION OF THE RETAINING WALLS WAS APPROVED WITH CONDITIONS ON FEBRUARY 4, 2016 IN CASE HPC-16-06a. THE REQUEST FOR TREE REMOVAL AND RETAINING WALL CONSTRUCTION WAS CONTINUED TO MARCH 3, 2016 AND APPROVED WITH AMENDMENTS IN CASE HPC-16-06b. ON DECEMBER 6, 2018, CASE No. HPC-18-61 WAS HELD TO REINSTATE THE PREVIOUS CASE No. HPC-15-078 AND HPC-16-06 (a) & (b). HOWEVER, SINCE THE APPROVED PROJECT (SP-15-013) HAD BEEN ON HOLD DUE TO COUNTY APFO REGULATIONS, IT HAS BEEN DETERMINED THAT THE REINSTATEMENT CASE HPC-18-61 IS NOT REQUIRED IF THE PROJECT CONTINUES WITHIN THE PLAN REVIEW PROCESS POST SP-15-013 AND THIS PLAN.
36. IN ACCORDANCE WITH SECTION 16.128 OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS, PRE-SUBMISSION COMMUNITY MEETINGS WERE HELD ON APRIL 3, 2013, JUNE 11, 2014, AND JULY 13, 2015 FOR THE DEVELOPER TO PROVIDE INFORMATION TO THE COMMUNITY REGARDING THE PROPOSED INITIAL PLAN SUBMITTAL AND TO ALLOW COMMUNITY RESIDENTS TO ASK QUESTIONS AND TO MAKE COMMENTS.
37. THE HOWARD COUNTY PLANNING BOARD SIGNED THE DECISION & ORDER GRANTING APPROVAL OF THE SP PLAN ON MARCH 2, 2017. BASED UPON THAT APPROVAL, DPZ HEREBY GRANTS TENTATIVE ALLOCATIONS FOR 12 HOUSING UNITS FOR THIS SUBDIVISION YEAR 2019.
38. THIS PROPERTY IS LOCATED WITHIN THE ELLICOTT CITY HISTORIC DISTRICT.
39. DRIVEWAYS SHALL BE PROVIDED PRIOR TO RESIDENTIAL OCCUPANCY TO ENSURE SAFE ACCESS FOR FIRE AND EMERGENCY VEHICLES PER THE FOLLOWING (MINIMUM) REQUIREMENTS:
   a. WIDTH - 12 FEET (16 FEET SERVING MORE THAN ONE RESIDENCE)
   b. SURFACE - SIX (6") INCHES OF COMPACTED CRUSHER RUN BASE WITH TAR AND CHIP COATING.
   c. GEOMETRY - MAXIMUM 15% GRADE, MAXIMUM 10% GRADE CHANGE AND MINIMUM OF 45 TURNING RADIUS.
   d. STRUCTURES (CULVERTS/BRIDGES) CAPABLE OF SUPPORTING 25 GROSS TONS (H 25 LOADING).
   e. DRAINAGE ELEMENTS - CAPABLE OF SAFELY PASSING 100 YEAR FLOOD WITH NO MORE THAN 1 FOOT DEPTH OVER DRIVEWAY SURFACE.
   f. STRUCTURE CLEARANCES - MINIMUM 12 FEET.
   g. MAINTENANCE - SUFFICIENT TO INSURE ALL WEATHER USE.
40. AN EXISTING (EASEMENT) "RIGHT OF WAY OVER THE AVENUE 33 FEET IN WIDTH, 16.5 FEET OF WHICH IS LOCATED ON THIS PROPERTY, WAS LAID OUT FOR THE USE OF LOTS 5, 6 AND 8; SAID RIGHT OF WAY TO BE FOR THE PURPOSE OF INGRESS, EGRESS AND REGRESS TO BE USED IN COMMON WITH OTHERS HAVING A LIKE RIGHT UNDER THE EXISTING PROPERTY DEED." THIS EASEMENT IS FOR THE BENEFIT OF LYNWOOD FARM, LOT 5 WHICH IS THE SECOND PARCEL IN DEED FOR THIS SUBDIVISION, LOT 6 WHICH IS MADE UP OF CURRENT PARCELS 206 & 125, AND LOT 8 WHICH IS PARCEL 161. EASEMENT IS REFERENCE IN CURRENT DEED FOR THE PROPERTY UNDER LIBER 8317, FOLIO 657.
41. THIS SUBDIVISION IS NOT SUBJECT TO COUNCIL BILL 76-2018 (ELECTRIC VEHICLE CHARGING STATIONS) BECAUSE THE PRELIMINARY EQUIVALENT SKETCH PLAN FOR THIS SUBDIVISION WAS SIGNED PRIOR TO THE BILL'S EFFECTIVE DATE OF JAN. 11, 2019.
42. THIS FINAL PLAN IS NOT SUBJECT TO COUNCIL BILLS 61-2019, 62-2019 AND 63-2019 BECAUSE THE PRELIMINARY SKETCH PLAN (SP-15-013) WAS SIGNED ON APRIL 11, 2017 WHICH IS PRIOR TO THE FEBRUARY 5, 2020 ENACTMENT DATE OF THESE BILLS, PER SECTION 16.102(h)(1) OF THE SUBDIVISION REGULATIONS.
43. WATERSHEDS: 0.95 AC TO THE SUCKER BRANCH TO THE PATAPSCO RIVER LOWER NORTH BRANCH (02130906) AND 7.60 AC TO UNNAMED TRIBUTARY OF THE HUDSON BRANCH TO THE PATAPSCO RIVER LOWER NORTH BRANCH (02130906).
44. THIS PLAN PROVIDES 16 REPLACEMENT TREES FOR THE REMOVAL OF 8 SPECIMEN TREES PER WP-16-022.
45. PUBLIC STREET TREES ARE PROVIDED IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. FINANCIAL SURETY FOR THE REQUIRED 30 STREET TREES IN THE AMOUNT OF $9,000.00 SHALL BE COLLECTED WITH THE DEPARTMENT OF PUBLIC WORKS COST ESTIMATE.

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

Approved: Howard County Department of Public Works

Chief, Bureau Of Highways — 9/11/2023 — Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

DocuSigned by: CHAD Edmondson — 9/11/2023
Chief, Development Engineering Division — Date

DocuSigned by: — 9/13/2023
Chief, Division of Land Development — Date

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT.

DocuSigned by: Michael J. Davis — 9/12/2023
COUNTY HEALTH OFFICER — DATE

DATE	DESCRIPTION

REVISIONS

"PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY 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. 20748, EXPIRATION DATE: 2-22-25."

STATE OF MARYLAND — ALDO MICHAEL VITUCCI — No. 20748 — PROFESSIONAL ENGINEER

Aldo M. Vitucci, P.E.

ALDO M. VITUCCI, P.E.

OWNERS
LACEY FAMILY REVOCABLE TRUST
1235 WILD ROSE COURT
MARRIOTTSVILLE, MD 21104
ATTN: MR. VINCENT LACEY

DEVELOPER
LAND HOLDINGS LLC
C\O B. JAMES GREENFIELD
6420 AUTUMN SKY WAY
COLUMBIA, MD 21044
443-324-4732

PROJECT			SECTION/AREA		PARCEL	
LACEY PROPERTY			N/A		13	
PLAT NOS.	BLOCK NO.	ZONE	TAX MAP	ELEC. DIST.	CENSUS TR.	
-	1	R-ED	25	SECOND	602900	

TITLE SHEET

LACEY PROPERTY
LOTS 1 THRU 13 AND
OPEN SPACE LOTS 14 THRU 17

ZONED: R-ED
PARCEL No.: 13
TAX MAP No.: 25 GRID No.: 1
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: JULY 10, 2023
SHEET 1 OF 24

F-21-015

DocuSign Envelope ID: 79E9DBFB-CDDB-4FF4-A258-614B911C4A9B

SPECIMEN TREE TABLE

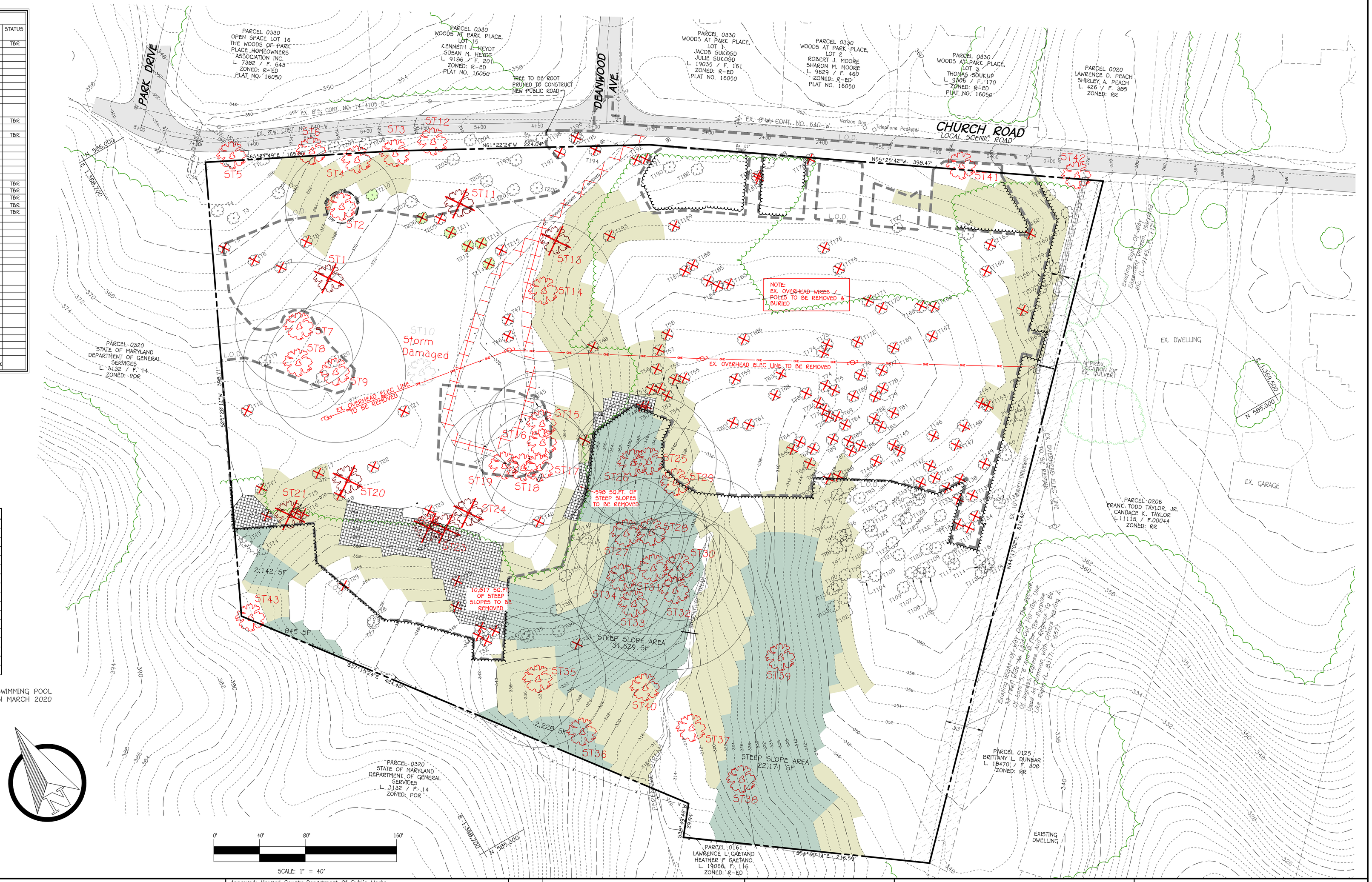
KEY	SPECIES	SIZE (DBH)	CRZ (FT RADIUS)	COMMENTS	STATUS
1	HEMLOCK	35"	52.5		TBR
2	NORWAY SPRUCE	33"	49.5		
3	WHITE PINE	37"	55.5		
4	WHITE PINE	38.5"	57.75		
5	SILVER MAPLE	49.5"	89.25		
6	SILVER MAPLE	36.5"	54.75		
7	BLACK WALNUT	37.5"	56.25		
8	BLACK WALNUT	32"	48		
9	BLACK WALNUT	41"	61.5		
11	SILVER MAPLE	42"	63	VERY POOR, TRUNK ROT	TBR
12	SILVER MAPLE	45.5"	68.25	POOR, TRUNK ROT	
13	SILVER MAPLE	52"	78	POOR, TRUNK ROT	TBR
14	ENGLISH WALNUT	41"	61.5		
15	SILVER MAPLE	31"	46.5	FAIR, LIMITED CROWN SPREAD	
16	SILVER MAPLE	39"	58.5		
17	SILVER MAPLE	33"	49.5	FAIR, LEANING	
18	SILVER MAPLE	40.5"	60.75	FAIR, NARROW CROWN	
19	SILVER MAPLE	37"	55.5	FAIR, LIMITED CROWN SPREAD	
20	SILVER MAPLE	45"	67.5	FAIR, LIMITED CROWN SPREAD	TBR
21	SILVER MAPLE	41"	61.5	FAIR, MAJOR LIMB BROKEN	TBR
22	SILVER MAPLE	32"	48		TBR
23	SILVER MAPLE	34"	51	FAIR, LIMITED CROWN SPREAD	TBR
24	SILVER MAPLE	35"	52.5	POOR, TRUNK ROT	TBR
25	TULIP POPLAR	39.5"	59.25		
26	TULIP POPLAR	35"	52.5	TWIN STEMS	
27	TULIP POPLAR	33.5"	50.25		
28	TULIP POPLAR	32"	48		
29	TULIP POPLAR	32"	48	TWIN STEMS	
30	TULIP POPLAR	31"	46.5		
31	TULIP POPLAR	39"	58.5		
32	TULIP POPLAR	46"	69		
33	TULIP POPLAR	33"	49.5	2 ADDITIONAL NEAR SPECIMEN SIZE TRUNKS	
34	TULIP POPLAR	32.5"	48.75		
35	TULIP POPLAR	39.5"	59.25		
36	TULIP POPLAR	40"	60		
37	TULIP POPLAR	55"	82.5		
38	TULIP POPLAR	61"	91.5	SPLITS INTO 2 TRUNKS ABOVE DBH	
39	TULIP POPLAR	41"	61.5		
40	SYCAMORE	31"	46.5		
41	SILVER MAPLE	31.5"	47.25	POOR, VERY LIMITED CROWN	
42	SILVER MAPLE	39.5"	59.25	POOR, CROWN REDUCED	
43	SILVER MAPLE	39"/32"	58.5	POOR, SPLIT TRUNK ABOVE BREAST HEIGHT, TRUNK ROT, AND LIMB DIEBACK	

NOTE: "TBR" REFERS TO EXISTING SPECIMEN TREES TO BE REMOVED.

LEGEND

SYMBOL	DESCRIPTION
352	EXISTING CONTOUR 2' INTERVAL
350	EXISTING CONTOUR 10' INTERVAL
	EXISTING SAN. SEWER LINE
	EXISTING STORM DRAIN LINE
	EXISTING WATER LINE
	EX. OVERHEAD ELECTRIC LINE & POWER POLE
	EXISTING FENCE
	EXISTING PAVING
	EXISTING TREES
	EXISTING TREES TO BE REMOVED
T19	SPECIMEN TREES
	EXISTING TREELINE
	SLOPES 15% - 24.9%
	SLOPES 25% OR GREATER
	EX. DRIVEWAY DEMOLITION
	STEEP SLOPE TO BE REMOVED

NOTE: EXISTING STRUCTURES, OUT BUILDINGS AND SWIMMING POOL HAVE BEEN RAZED AND REMOVED FROM THE SITE IN MARCH 2020 UNDER DEMOLITION PERMIT NUMBER B-18003545.



FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

Approved: Howard County Department Of Public Works
Chief, Bureau Of Highways — 9/11/2023 Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
Chief, Development Engineering Division — 9/11/2023 Date
Chief, Division of Land Development — 9/13/2023 Date

DATE	DESCRIPTION
	REVISIONS

"PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY 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. 20748, EXPIRATION DATE: 2-22-25."

STATE OF MARYLAND — ALDO MICHAEL VITUCCI — No. 20748 — PROFESSIONAL ENGINEER

Aldo M. Vitucci, P.E.

ALDO M. VITUCCI, P.E.

OWNERS
LACEY FAMILY REVOCABLE TRUST
1235 WILD ROSE COURT
MARRIOTTSVILLE, MD 21104
ATTN: MR. VINCENT LACEY

DEVELOPER
LAND HOLDINGS LLC
C\O B. JAMES GREENFIELD
6420 AUTUMN SKY WAY
COLUMBIA, MD 21044
443-324-4732

PROJECT			SECTION/AREA		PARCEL
LACEY PROPERTY			N/A		13
PLAT NOS.	BLOCK NO.	ZONE	TAX MAP	ELEC. DIST.	CENSUS TR.
-	1	R-ED	25	SECOND	602900

DEMOLITION PLAN

LACEY PROPERTY
LOTS 1 THRU 13 AND OPEN SPACE LOTS 14 THRU 17

ZONED: R-ED
PARCEL No.: 13
TAX MAP No.: 25 GRID No.: 1
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: APRIL 4, 2023
SHEET 2 OF 24

F-21-015

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FINAL ROAD CONSTRUCTION, GRADING AND STORMWATER MANAGEMENT PLANS

LACEY PROPERTY

LOTS 1 THRU 13 AND OPEN SPACE LOTS 14 THRU 17

SHEET INDEX

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	DEMOLITION PLAN
3	MILL CREEK WAY PLAN, PROFILE AND DETAILS
4	PRIVATE USE-IN-COMMON DRIVEWAY PROFILES AND DETAILS
5	GRADING & SEDIMENT CONTROL PLAN
6	SEDIMENT AND EROSION CONTROL NOTES & DETAILS
7	SEDIMENT AND EROSION CONTROL NOTES, DETAILS AND BORING LOGS
8	STORMWATER MANAGEMENT NOTES & DETAILS
9	STORMWATER MANAGEMENT PLAN VIEWS, PROFILES & DETAILS - MICRO BIO-RETENTION #1
10	STORMWATER MANAGEMENT PLAN VIEWS, PROFILES & DETAILS - MICRO BIO-RETENTION #2
11	STORMWATER MANAGEMENT PLAN & PROFILES - POND #1
12	STREET TREE & LANDSCAPE PLAN
13	MICRO BIO-RETENTION PLANTING PLANS, LANDSCAPING NOTES, DETAILS & SPECIFICATIONS
14	STORM DRAIN PROFILES
15	STORM DRAIN DRAINAGE AREA & SOILS MAP
16	PARTIAL PLAN
17	NORTH WALL ELEVATIONS
18	NORTH WALL SECTIONS
19	NORTH WALL SECTIONS
20	NORTH WALL SECTIONS
21	TYPICAL DETAILS
22	GENERAL NOTES & TYPICAL DETAILS
23	FOREST CONSERVATION PLAN
24	TSWM - BASIN #1 PROFILES AND DETAILS

TRAFFIC CONTROL SIGNS

ROAD NAME	CENTERLINE STA.	OFFSET	POSTED SIGN	SIGN CODE
MILL CREEK WAY	0+22	21.3'R	STREET SIGN & NO OUTLET SIGN	SNS & W14-2a
	0+25	18'L	STOP	R1-1
	0+75	14'R	SPEED LIMIT 25 M.P.H.	R2-1
	1+72.3	38.8'L&R	RANGE OF ADDRESS SIGNS	-

STREET LIGHT CHART

STREET NAME	STATION	OFFSET	FIXTURE/POLE TYPE
MILL CREEK WAY	0+18	22'R	100 watt LED-150 COLONIAL POST-TOP FIXTURE MOUNTED ON A 14' BLACK FIBERGLASS POLE
	1+91.34	2' BEHIND CURB	

ROADWAY INFORMATION CHART

ROAD NAME	CLASSIFICATION	DESIGN SPEED	POSTED SPEED LIMIT	R/W WIDTH
MILL CREEK WAY	PUBLIC ACCESS PLACE	25 M.P.H.	25 M.P.H.	50'

STORMWATER MANAGEMENT PRACTICES

LOT No.	MICRO BIO-RETENTION M-6 (NUMBER)	SAND FILTER F-1 (NUMBER)	DRY WELLS M-5 (NUMBER)
O.S. 14	YES - (2)	YES - (1)	NO
1	NO	NO	YES - (3)
2	NO	NO	YES - (4)
3	NO	NO	YES - (3)
4	NO	NO	YES - (3)
5	NO	NO	YES - (3)
6	NO	NO	YES - (3)
7	NO	NO	YES - (3)
8	NO	NO	YES - (3)
9	NO	NO	YES - (2)
10	NO	NO	YES - (2)
11	NO	NO	YES - (2)
12	NO	NO	YES - (3)
13	NO	NO	YES - (3)

SWM NOTE: SINCE THE SP-15-013 PLAN WAS APPROVED PRIOR TO THE APPROVAL OF C.B. No. 80-2016, THIS PROJECT IS EXEMPT FROM THE REQUIREMENTS OF THAT BILL TO PROVIDE ADDITIONAL REDUCTION IN PEAK RUNOFF. CONSERVATIVE DESIGN HAS PROVIDED A 16.5% REDUCTION AND 8.50% REDUCTION AS A BONUS CREDIT.

SWM DRAINAGE AREA SUMMARY TABLE (Proposed Conditions)

Drainage Area	Area (ac.+/-)	RCN	T/C (hrs.)	100-Year Peak Q	E.C. Peak Q	Remarks
A	1.81	61	0.22	5.82	9.18	Bypass Area
A-1	4.32	70	0.18	23.29 in/13.67 out @340.78	31.63 in/23.87 out @341.39	Pocket Sand Filter
A-2	0.76	77	0.12	4.36 in/4.33 out @356.41	7.32 in/7.28 out @356.49	Bio #1
B	0.92	69	0.11	4.57	7.24	Bypass Area
B-1	0.37	77	0.18	1.90 in/1.31 out @361.64	3.26 in/2.91 out @361.82	Bio #2
D.P.#1 Total				* 22.00	* 37.72	Total @ D.P.#1 (EC watershed)
C	1.03	70	0.12	5.13	8.19	Total @ D.P.#2 (Sucker Branch)

SWM DRAINAGE AREA SUMMARY TABLE (Existing Conditions)

Drainage Area	Area (ac.+/-)	RCN	T/C (hrs.)	100-Year Peak Q	E.C. Peak Q	Remarks
A	6.58	61	0.21	21.6	34.04	
B	1.33	60	0.1	5.25	7.7	
D.P.#1 Total				* 25.64	* 40.91	Total @ D.P.#1
C	0.8	60	0.1	3.16	4.63	Total @ D.P.#2
				16.50%	8.50%	% Decrease @ D.P.#1

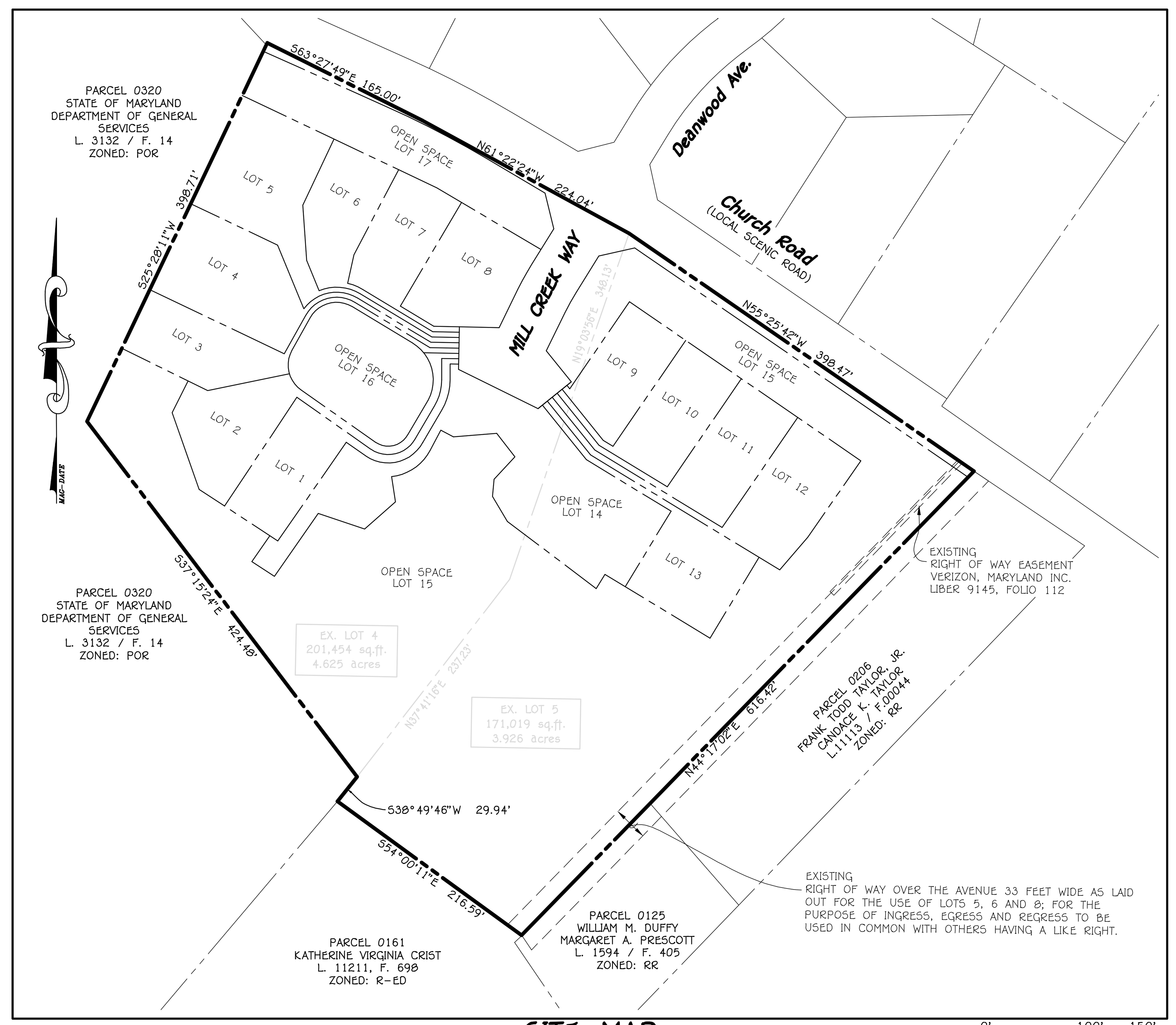
* THESE PEAK FLOW VALUES ARE REFLECTIVE OF THE TR-20 PROGRAM OUTPUT. THE PROGRAM ADDS VARIOUS HYDROGRAPHS TOGETHER TO PRODUCE A VALUE WHICH IS NOT THE SAME AS THE MATH ADDITION OF EACH AREAS PEAK VALUE.

COMMUNITY MEETINGS

NO.	DATE	LOCATION	PRESUBMISSION COMMUNITY MEETING (Y/N)
1	APRIL 30, 2013	MILLER BRANCH LIBRARY	YES
2	JUNE 11, 2014	HOWARD COUNTY GEORGE HOWARD BLDG	YES
3 *	JULY 28, 2014	HOWARD COUNTY GEORGE HOWARD BLDG	NO, CHARRETTE
4 *	AUGUST 26, 2014	HOWARD COUNTY GEORGE HOWARD BLDG	NO, GENERAL MEETING
5 **	SEPTEMBER 2, 2014	DW TAYLOR ASSOCIATES, INC.	NO, MEETING WITH A COMMUNITY REPRESENTATIVE
6 *	SEPTEMBER 22, 2014	HOWARD COUNTY GEORGE HOWARD BLDG	NO, GENERAL MEETING
7 **	NOVEMBER 13, 2014	DW TAYLOR ASSOCIATES, INC.	NO, MEETING WITH TWO COMMUNITY REPRESENTATIVES
8	JULY 13, 2015	HOWARD COUNTY GEORGE HOWARD BLDG	YES

* CHARRETTE AND GENERAL COMMUNITY MEETINGS WERE HELD WITH THE COMMUNITY AS A MEANS OF INFORMING THE COMMUNITY OF DESIGN PROGRESS AS WELL AS TO SOLICIT IDEAS / REQUEST CHANGES TO DESIGN CONCEPTS.

** MEETINGS WERE HELD WITH COMMUNITY REPRESENTATIVES SELECTED BY THE COMMUNITY DURING THE CHARETTE / GENERAL COMMUNITY MEETINGS TO FURTHER THE COMMUNITY INPUT AT A MORE FINITE DESIGN LEVEL. THE COMMUNITY REPRESENTATIVES WERE A RETIRED LAND PLANNER AND LANDSCAPE ARCHITECT FROM ELLICOTT CITY.

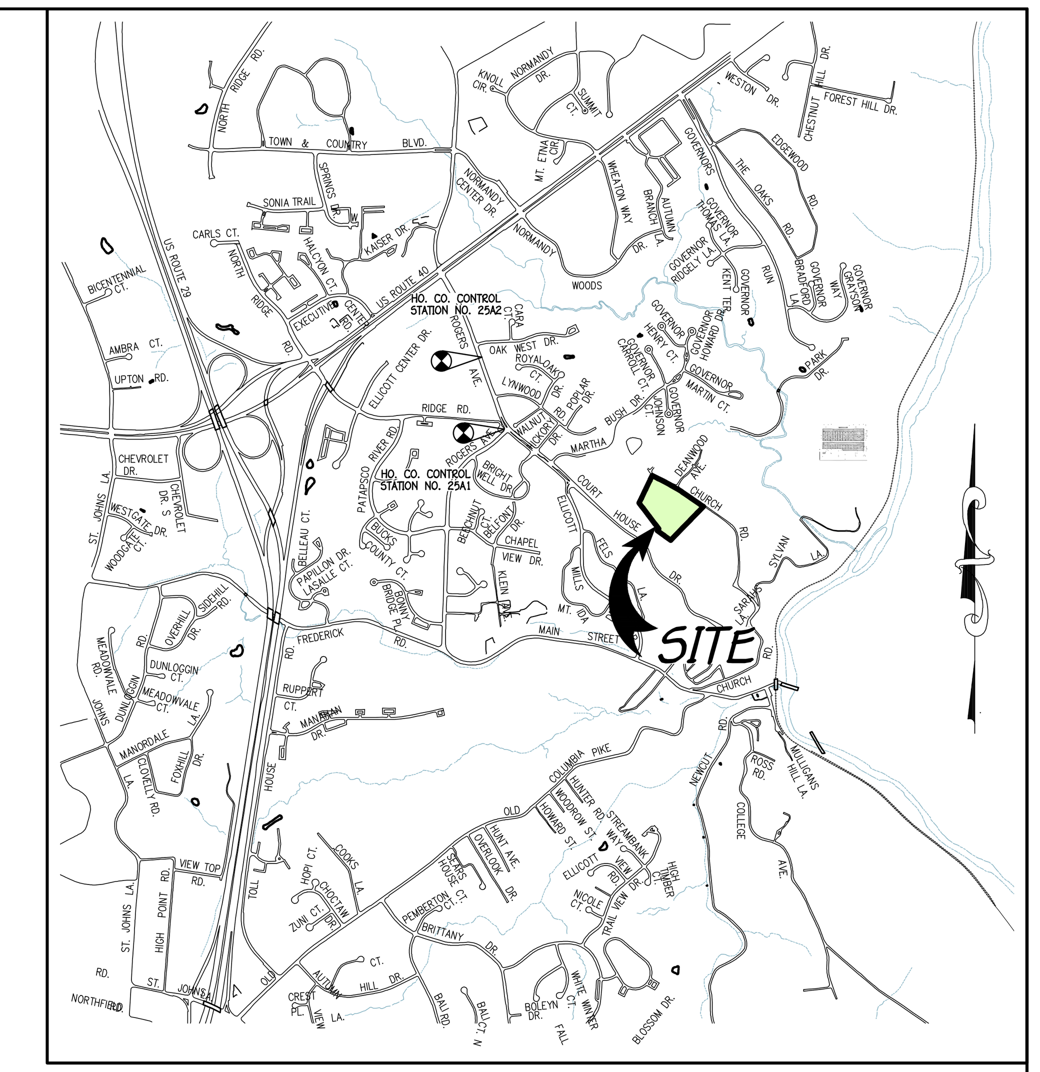


SITE MAP

SCALE: 1" = 100'

LEGEND

SYMBOL	DESCRIPTION
--- 352 ---	EXISTING CONTOUR 2' INTERVAL
--- 350 ---	EXISTING CONTOUR 10' INTERVAL
--- S ---	EXISTING SAN. SEWER LINE
--- D ---	EXISTING STORM DRAIN LINE
--- ---	EXISTING WATER LINE
--- OHE ---	EXISTING OVERHEAD ELECTRIC LINE
--- X ---	EXISTING FENCE
--- 352 ---	PROPOSED CONTOUR 2' INTERVAL
--- 350 ---	PROPOSED CONTOUR 10' INTERVAL
+ 344.29	PROPOSED SPOT ELEVATION
	PROPOSED CONCRETE WALK
	PROPOSED MACADAM PAVING
	EXISTING TREES
	EXISTING TREELINE
	PROPOSED TREELINE
8" W	PROPOSED PUBLIC WATER
18" RCCP	PROPOSED STORMDRAIN
8" S	PROPOSED PUBLIC SEWER
	SOILS DELINEATION
--- SSF ---	SUPER SILT FENCE
	FOREST CONSERVATION AREA
	RIPRAP OUTLET PROTECTION
	DEMOLITION
	STEEP SLOPE TO BE REMOVED
	STEEP SLOPES 15% - 24.9%
	STEEP SLOPES 25.0% OR GREATER



VICINITY MAP

SCALE: 1" = 2000'

HO. CO. MD. ADC MAP 21, GRID B7

GENERAL NOTES

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS IF APPLICABLE.
2. THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS / BUREAU OF ENGINEERING / CONSTRUCTION INSPECTION DIVISION AT 410-313-1880 AT LEAST (5) WORKING DAYS PRIOR TO THE START OF WORK.
3. THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.
4. THIS SUBDIVISION PLAN IS SUBJECT TO THE AMENDED FIFTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS AND THE 10-06-13 ZONING REGULATIONS PER COUNCIL BILL NO. 32-2013. DEVELOPMENT OR CONSTRUCTION ON THESE LOTS OR PARCELS MUST COMPLY WITH SETBACKS AND BUFFER REGULATIONS IN EFFECT AT THE TIME OF SUBMISSION OF A BUILDING OR GRADING PERMIT APPLICATION.
5. COORDINATES BASED ON NAD'83 MARYLAND COORDINATE SYSTEM AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS NO. 25A1 AND NO. 25A2
   HO. CO. CONTROL STATION #25A1 - HORIZONTAL - NAD '83) N 586,557.549 E 1,366,847.099 ELEVATION = 396.343 (NAVD '88)
   HO. CO. CONTROL STATION #25A2 - HORIZONTAL - (NAD '83) N 587,502.730 E 1,366,556.378 ELEVATION = 348.145 (NAVD '88)
6. SUBJECT PROPERTY IS ZONED R-ED PER 10/06/2013 COMPREHENSIVE ZONING PLAN.
7. BACKGROUND INFORMATION:
   a. SUBDIVISION NAME: LACEY PROPERTY
   b. TAX MAP NO.: 25
   c. PARCEL NO.: 13
   d. ZONING: R-ED
   e. ELECTION DISTRICT: SECOND
   f. GROSS AREA OF THIS SUBMISSION = 8.551 AC.±
   g. NUMBER OF BUILDABLE LOTS: 13
   h. NUMBER OF OPEN SPACE LOTS: 4
   i. AREA OF BUILDABLE LOTS: 2.876 AC.±
   j. AREA OF OPEN SPACE LOTS: 5.277 AC.±
   k. AREA OF PUBLIC ROADWAY TO BE DEDICATED: 0.398 AC.±
   l. PREVIOUS FILE NUMBERS: ECP-15-044, WP-16-022, SP-15-013, PB CASE 418, HPC-15-78, HPC-16-06 (a), HPC-16-06 (b) & HPC-18-061 (SEE G.N. #35).
   m. AREA OF FLOODPLAIN = 0.00 AC.
   n. AREA OF 25% OR GREATER SLOPES = 1.35 AC.±
   o. NET AREA OF SUBMISSION = 7.201 AC.±
8. OPEN SPACE REQUIRED: 8.551 AC. X 0.50% = 4.276 AC.±
   OPEN SPACE PROVIDED: 5.277 AC.±
   RECREATIONAL OPEN SPACE REQUIRED FOR PROJECT TOTAL = (300 SQ.FT. PER UNIT) = 3,900 SQ.FT.
   PROVIDED RECREATIONAL OPEN SPACE (LOT 16) = 3,900 SQ.FT.
9. ALL FILL AREAS WITHIN ROADWAYS AND UNDER STRUCTURES SHALL BE COMPACTED TO A MINIMUM OF 95% COMPACTION OF AASHTO T-180.
10. NO NOISE STUDY IS REQUIRED FOR THIS PROJECT.
11. PROPERTY IS LOCATED WITHIN THE METROPOLITAN DISTRICT. WATER AND SEWER IS PUBLIC, CONTRACT NO. 14-4913-D. EXISTING SEPTIC SYSTEM TO BE ABANDONED IN ACCORDANCE WITH HEALTH DEPARTMENT REQUIREMENTS. EXISTING UTILITIES ARE BASED ON FIELD LOCATION OF MISS UTILITY MARKINGS AS A PART OF THE TOPOGRAPHIC SURVEY.
12. SOILS ARE BASED ON THE NRCS WEBSOIL SURVEY AND HOWARD COUNTY SOIL MAP 12.
13. BOUNDARY SHOWN HEREON IS BASED ON A FIELD RUN MONUMENTED BOUNDARY SURVEY DATED AUGUST, 2014. THE EXISTING TOPOGRAPHY IS TAKEN FROM FIELD RUN SURVEY WITH MAXIMUM TWO FOOT CONTOUR INTERVALS PREPARED BY FISHER, COLLINS & CARTER, INC. DATED SEPTEMBER 2013 AND SUPPLEMENTED BY HOWARD COUNTY GIS TOPOGRAPHY.
14. EXISTING STRUCTURES ON-SITE, OUT BUILDINGS AND SWIMMING POOL HAVE ALL BEEN REMOVED UNDER DEMOLITION PERMIT NUMBER B-18003545 DATED FEBRUARY 7, 2019.
15. THERE ARE NO WETLANDS ON THIS SITE PER INVESTIGATION BY ECO-SCIENCE PROFESSIONALS, INC. DATED SEPTEMBER, 2014.
16. A WETLAND DELINEATION & FOREST STAND DELINEATION REPORT FOR THIS PROJECT DATED SEPTEMBER 2014 PREPARED BY ECO-SCIENCE PROFESSIONALS AND APPROVED UNDER SP-15-013.
17. STEEP SLOPES, STREAM AND ITS BUFFERS EXIST ON-SITE.
18. NO 100 YEAR FLOODPLAIN, CEMETERIES, NOR GRAVESITES EXIST ON THE PROPERTY.
19. NO CLEARING, GRADING, REMOVAL OF VEGETATIVE COVER OR TREES, PAVING AND NEW STRUCTURES SHALL BE PERMITTED WITHIN THE LIMITS OF STREAM BUFFERS AND FOREST CONSERVATION EASEMENT AREAS.
20. THE TRAFFIC STUDY FOR THIS PROJECT WAS PREPARED BY MARS GROUP IN JUNE 2015, AND WAS APPROVED ON DECEMBER 21, 2015.
21. SITE HAS FRONTAGE ON CHURCH ROAD, A COUNTY, LOCAL, SCENIC ROAD.
22. EXCAVATIONS TO VERIFY DEPTH TO ROCK AND WATER WERE CONDUCTED ON JUNE 8, 2015.
23. DESIGN MANUAL WAIVER TO ALLOW 9 LOTS (8 BUILDABLE AND 1 OPEN SPACE) ON A USE-IN-COMMON DRIVEWAY WAS APPROVED ON OCTOBER 5, 2015 AND IS SUBJECT TO THE FOLLOWING CONDITIONS:
   1. THE MINIMUM WIDTH OF THE USE-IN-COMMON DRIVEWAY SHOULD INCREASE TO 20 FEET DUE TO ITS CURVATURE.
   2. PROVIDE FLUSH CURB AND GUTTER ALONG THE USE-IN-COMMON DRIVEWAY.
24. STORM WATER MANAGEMENT IS IN ACCORDANCE WITH THE M.D.E. STORM WATER DESIGN MANUAL, VOLUMES I & II, REVISED 2009. NON-STRUCTURAL PRACTICES (MICRO BIO-RETENTION FACILITIES (M-6) AND DRYWELLS (M-5)) IN ACCORDANCE WITH CHAPTER 5 ARE BEING UTILIZED. 100 YEAR MANAGEMENT AND THE 3.55 HR / 6.6 IN STORM EVENT ARE BEING PROVIDED IN THE PROPOSED POCKET SAND FILTER.
25. THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL". FINANCIAL SURETY FOR THE REQUIRED 26 SHADE, 5 EVERGREEN TREES & 7 SHRUBS (PROVIDED 19 SHADE, 6 ORNAMENTAL, 11 EVERGREEN & 7 SHRUBS) HAS BEEN POSTED AS PART OF THE DEVELOPER'S AGREEMENT IN THE AMOUNT OF $8,460.00.
26. THE FOREST CONSERVATION REQUIREMENTS PER SECTION 16.1200 OF THE HOWARD COUNTY CODE AND THE FOREST CONSERVATION MANUAL FOR THIS SUBDIVISION HAS BEEN FULFILLED BY PROVIDING 2.916 AC.± OF ON-SITE FOREST RETENTION. NO SURETY IS REQUIRED FOR RETENTION. A DEED OF FOREST CONSERVATION EASEMENT AND AGREEMENT WILL BE EXECUTED SIMULTANEOUSLY WITH THE DPW DEVELOPER AGREEMENT.
27. WAIVER PETITION, WP-16-022, REQUESTING A WAIVER FROM HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS SPECIFICALLY SECTION 16.1205(A)(7) FOREST RETENTION PRIORITIES - RETENTION OF SPECIMEN TREES, SECTION 16.116(B)(1) STATING THAT GRADING, REMOVAL OF VEGETATIVE COVER AND TREES, NEW STRUCTURES, AND PAVING SHALL NOT BE PERMITTED ON LAND WITH EXISTING STEEP SLOPES IN AREAS GREATER THAN 20,000 SQ.FT. IS SIZE, SECTION 16.134(A)(1)(I) SIDEWALKS ARE REQUIRED ON ONLY ONE SIDE OF CUL-DE-SACS AND LOCAL STREETS OF SINGLE-FAMILY DETACHED SUBDIVISIONS, AND SECTION 16.125(B)(1)(II)&(2) REQUIRING MINIMIZATION OF TREE AND VEGETATION REMOVAL ALONG A SCENIC ROAD AND REQUIRING RETENTION OF FOREST OR WOODED AREAS OF 35-FOOT IN WIDTH, HAS BEEN APPROVED ON DEC. 5, 2016. APPROVAL OF WP-16-022 IS SUBJECT TO THE FOLLOWING CONDTIONS:
   a. COMPLIANCE WITH SRC COMMENTS FOR SP-15-013 AND PLANNING BOARD APPROVAL OF THE PROPOSED SUBDIVISION PLAN DESIGN, LAYOUT AND LOCATION OF LOTS, ROADS AND SHARED DRIVEWAYS.
   b. NO ADDITIONAL DISTUBANCE OR GRADING SHALL OCCUR BEYOND THE LIMIT OF DISTURBANCE (L.O.D.) OF THE 25% STEEP SLOPES THAT ARE DETAILED ON THE PRELIMINARY GRADING PLAN AND AS APPROVED BY THE PLANNING BOARD, UNLESS IT CAN BE SUFFICIENTLY DEMONSTRATED TO BE WARRANTED OR JUSTIFIED BY THE APPLICANT.
   c. THE AFFECTED STEEP SLOPE AREAS WHERE THE BUILDING LOTS ARE PLANNED MUST BE SUFFICIENTLY STABILIZED WITH RETAINING WALL AND/OR SOIL STABILIZATION DEVICES/METHODS THAT SHALL LESSEN THE ERODIBILITY OF SOILS AND RUNOFF. THE IMPACTED STEEP SLOPE AREAS MUST BE REVEGETATED OR STABILIZED WITH SUITABLE NATIVE SPECIES THAT WILL BIND THE SURFACE TIGHTLY. THESE STABILIZATION TECHNIQUES MUST BE CLEARLY DEMONSTRATED ON BOTH THE ROAD CONSTRUCTION DRAWINGS (WITH THE FINAL PLAT) AND THE SITE DEVELOPMENT PLAN.
   d. THE REMOVAL OF THE EIGHT (8) SPECIMEN TREES WILL REQUIRE MITIGATION WITH THE PLANTING OF 2:1 REPLACEMENT TREES (16 TOTAL) WITH A MINIMUM 3" CALIPER NATIVE PLANT SPECIES. THE REPLACEMENT TREES SHALL BE BONDED AND SHOWN ON THE LANDSCAPE PLAN WITH THE FORTHCOMING FINAL PLAN.
   e. THE REMAINING 35 SPECIMEN TREES SHALL BE SAVED AND PROTECTED DURING CONSTRUCTION ACTIVITY. ANY ADDITIONAL REMOVAL OF SPECIMEN TREES SHALL REQUIRE THE SUBMITTAL OF A NEW ALTERNATIVE COMPLIANCE PETITION APPLICATION.
   f. PROVIDE TREE PROTECTION FENCING AT THE TREES DRIP LINE, OR FARTHER OUT, TO PREVENT TREE DAMAGES FROM EXCAVATION, SOIL COMPACTION OF SOIL OVER ROOTS. THESE PROTECTION TECHNIQUES MUST BE DEMONSTRATED ON BOTH THE ROAD CONSTRUCTION DRAWINGS (WITH THE FINAL PLAT) AND THE SITE DEVELOPMENT PLAN.
   g. COMPLIANCE WITH THE CERTIFICATE OF APPROVAL ISSUED BY THE HISTORIC PRESERVATION COMMISSION FOR DEVELOPMENT OF THIS PROPERTY.
   h. THE CONSTRUCTION OF THE NEW HOUSES FACING TOWARDS CHURCH ROAD SHALL BE ADEQUATELY SCREENED USING BERMS, ENHANCED LANDSCAPING AND HOUSE SITING TO MINIMIZE IMPACTING THE NATURAL SETTING ALONG THE SCENIC ROAD. THIS CONDITION WILL BE EVALUATED FURTHER AT THE SITE DEVELOPMENT PLAN STAGE.
   i. PROVIDE A NOTE ON THE SP PLAN, THE FINAL PLAT AND THE SITE DEVELOPMENT PLAN REGARDING THIS ALTERNATIVE COMPLIANCE PETITION APPROVAL. THIS NOTE SHALL INCLUDE THOSE SUBDIVISION REGULATION SECTIONS PETITIONED, THE DATE OF THE ALTERNATIVE COMPLIANCE APPROVAL, AND THE CONDITIONS OF APPROVAL.
28. TRASH AND RECYCLABLES COLLECTION WILL BE AT MILL CREEK WAY WITHIN 5' OF THE COUNTY ROADWAY.
29. TWO PRIVATE RANGE OF ADDRESS SIGN ASSEMBLIES SHALL BE FABRICATED AND INSTALLED BY HOWARD COUNTY BUREAU OF HIGHWAYS AT THE DEVELOPERS/OWNERS EXPENSE. CONTACT HOWARD COUNTY TRAFFIC DIVISION AT 410-313-5752 FOR DETAILS AND COST ESTIMATE.
30. SUBDIVISION IS REQUIRED TO PROVIDE M.I.H.U. (MODERATE INCOME HOUSING UNIT). IT IS ANTICIPATED AT THIS TIME THAT A FEE-IN-LIEU WILL BE PAID. MIHU AGREEMENT WILL BE SUBMITTED WITH THIS FINAL PLAN OUTLINING HOW THE MIHU REQUIREMENT WILL BE MET.
   A. M.I.H.U. REQUIRED = 1.2 M.I.H.U.
      (12 LOTS X 10% M.I.H.U./LOT)
   B. ONE UNIT IS EXEMPT FROM MIHU REQUIREMENTS. (ONE EXISTING LOT)
31. STREET LIGHTS WILL BE REQUIRED IN THIS DEVELOPMENT IN ACCORDANCE WITH THE DESIGN MANUAL STREET LIGHT PLACEMENT AND THE TYPE OF FIXTURE AND POLE SELECTED SHALL BE IN ACCORDANCE WITH THE LATEST HOWARD COUNTY DESIGN MANUAL, VOLUME III (1993) AND AS MODIFIED BY "GUIDELINES FOR STREET LIGHTS IN RESIDENTIAL DEVELOPMENTS (JUNE 1993)." THE JUNE 1993 POLICY INCLUDES GUIDELINES FOR LATERAL AND LONGITUDINAL PLACEMENT. A MINIMUM SPACING OF 20' SHALL BE MAINTAINED BETWEEN ANY STREET LIGHT AND ANY TREE.
32. PLAN IS SUBJECT TO PLANNING BOARD APPROVAL ON NOVEMBER 17, 2016 AND SIGNED DECISION & ORDER ON MARCH 2, 2017, IN ACCORDANCE WITH SECTION 107.0 OF THE ZONING REGULATIONS.
33. THIS SUBDIVISION IS SUBJECT TO THE PROTECTION OF SCENIC ROADS, PER SECTION 16.125 OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS.

GENERAL NOTES continued

34. TRAFFIC CONTROL DEVICES:
   (a) THE R1-1 ("STOP") SIGN, R2-1 ("SPEED LIMIT 25"), W14-2a (NO OUTLET), AND THE STREET NAME SIGN (SNS) ASSEMBLY FOR THIS DEVELOPMENT MUST BE INSTALLED BEFORE THE BASE PAVING IS COMPLETED.
   (b) THE TRAFFIC CONTROL DEVICE LOCATIONS SHOWN ON THE PLANS ARE APPROXIMATE AND MUST BE FIELD APPROVED BY HOWARD COUNTY TRAFFIC DIVISION (410-313-2430) PRIOR TO THE INSTALLATION OF ANY OF THE TRAFFIC CONTROL DEVICES.
   (c) ALL TRAFFIC CONTROL DEVICES AND THEIR LOCATIONS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE "MARYLAND MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MDMUTCD).
   (d) ALL SIGN POSTS USED FOR TRAFFIC CONTROL SIGNS INSTALLED IN THE COUNTY RIGHT-OF-WAY SHALL BE MOUNTED ON A 2" GALVANIZED STEEL, PERFORATED ("QUICK PUNCH"), SQUARE TUBE POST (14 GAUGE) INSERTED INTO A 2-1/2" GALVANIZED STEEL, PERFORATED, SQUARE TUBE SLEEVE (12 GAUGE) -3' LONG. THE ANCHOR SHALL NOT EXTEND MORE THAN TWO "QUICK PUNCH" HOLES ABOVE GROUND LEVEL. A GALVANIZED STEEL POLE CAP SHALL BE MOUNTED ON TOP OF EACH POST.
35. ON APRIL 4, 2013 AND NOVEMBER 6, 2014, THE HISTORIC PRESERVATION COMMISSION (HPC) PROVIDED ADVISORY COMMENTS ON THE PROPOSED SUBDIVISION/SITE DEVELOPMENT PLAN IN CASES HDC-13-17 AND HPC-14-82. ON DECEMBER 3, 2015, THE HPC APPROVED THE DEMOLITION OF THE EXISTING STRUCTURES IN CASE HPC-15-78. THE REQUEST FOR TREE REMOVAL AND RETAINING WALL CONSTRUCTION WAS WITHDRAWN FROM THE HPC-15-78 APPLICATION. THE TREE REMOVAL AND RETAINING WALL CONSTRUCTION WAS RESUBMITTED FOR APPROVAL AND THE CONSTRUCTION OF THE RETAINING WALLS WAS APPROVED WITH CONDITIONS ON FEBRUARY 4, 2016 IN CASE HPC-16-06a. THE REQUEST FOR TREE REMOVAL WAS CONTINUED TO MARCH 3, 2016 AND APPROVED WITH AMENDMENTS IN CASE HPC-16-06b. ON DECEMBER 6, 2018, CASE No. HPC-18-61 WAS HELD TO REINSTATE THE PREVIOUS CASE No. HPC-15-078 AND HPC-16-06 (a) & (b). HOWEVER, SINCE THE APPROVED PROJECT (SP-15-013) HAD BEEN ON HOLD DUE TO COUNTY APFO REGULATIONS, IT HAS BEEN DETERMINED THAT THE REINSTATEMENT CASE HPC-18-61 IS NOT REQUIRED IF THE PROJECT CONTINUES WITHIN THE PLAN REVIEW PROCESS POST SP-15-013 AND THIS PLAN.
36. IN ACCORDANCE WITH SECTION 16.128 OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS, PRE-SUBMISSION COMMUNITY MEETINGS WERE HELD ON APRIL 3, 2013, JUNE 11, 2014, AND JULY 13, 2015 FOR THE DEVELOPER TO PROVIDE INFORMATION TO THE COMMUNITY REGARDING THE PROPOSED INITIAL PLAN SUBMITTAL AND TO ALLOW COMMUNITY RESIDENTS TO ASK QUESTIONS AND TO MAKE COMMENTS.
37. THE HOWARD COUNTY PLANNING BOARD SIGNED THE DECISION & ORDER GRANTING APPROVAL OF THE SP PLAN ON MARCH 2, 2017. BASED UPON THAT APPROVAL, DPZ HEREBY GRANTS TENTATIVE ALLOCATIONS FOR 12 HOUSING UNITS FOR THIS SUBDIVISION YEAR 2019.
38. THIS PROPERTY IS LOCATED WITHIN THE ELLICOTT CITY HISTORIC DISTRICT.
39. DRIVEWAYS SHALL BE PROVIDED PRIOR TO RESIDENTIAL OCCUPANCY TO ENSURE SAFE ACCESS FOR FIRE AND EMERGENCY VEHICLES PER THE FOLLOWING (MINIMUM) REQUIREMENTS:
   a. WIDTH - 12 FEET (16 FEET SERVING MORE THAN ONE RESIDENCE)
   b. SURFACE - SIX (6") INCHES OF COMPACTED CRUSHER RUN BASE WITH TAR AND CHIP COATING.
   c. GEOMETRY - MAXIMUM 15% GRADE, MAXIMUM 10% GRADE CHANGE AND MINIMUM OF 45 TURNING RADIUS.
   d. STRUCTURES (CULVERTS/BRIDGES) CAPABLE OF SUPPORTING 25 GROSS TONS (H 25 LOADING).
   e. DRAINAGE ELEMENTS - CAPABLE OF SAFELY PASSING 100 YEAR FLOOD WITH NO MORE THAN 1 FOOT DEPTH OVER DRIVEWAY SURFACE.
   f. STRUCTURE CLEARANCES - MINIMUM 12 FEET.
   g. MAINTENANCE - SUFFICIENT TO INSURE ALL WEATHER USE.
40. AN EXISTING (EASEMENT) "RIGHT OF WAY OVER THE AVENUE 33 FEET IN WIDTH, 16.5 FEET OF WHICH IS LOCATED ON THIS PROPERTY, WAS LAID OUT FOR THE USE OF LOTS 5, 6 AND 8; SAID RIGHT OF WAY TO BE FOR THE PURPOSE OF INGRESS, EGRESS AND REGRESS TO BE USED IN COMMON WITH OTHERS HAVING A LIKE RIGHT UNDER THE EXISTING PROPERTY DEED." THIS EASEMENT IS FOR THE BENEFIT OF LYNWOOD FARM, LOT 5 WHICH IS THE SECOND PARCEL IN DEED FOR THIS SUBDIVISION, LOT 6 WHICH IS MADE UP OF CURRENT PARCELS 206 & 125, AND LOT 8 WHICH IS PARCEL 161. EASEMENT IS REFERENCE IN CURRENT DEED FOR THE PROPERTY UNDER LIBER 8317, FOLIO 657.
41. THIS SUBDIVISION IS NOT SUBJECT TO COUNCIL BILL 76-2018 (ELECTRIC VEHICLE CHARGING STATIONS) BECAUSE THE PRELIMINARY EQUIVALENT SKETCH PLAN FOR THIS SUBDIVISION WAS SIGNED PRIOR TO THE BILL'S EFFECTIVE DATE OF JAN. 11, 2019.
42. THIS FINAL PLAN IS NOT SUBJECT TO COUNCIL BILLS 61-2019, 62-2019 AND 63-2019 BECAUSE THE PRELIMINARY SKETCH PLAN (SP-15-013) WAS SIGNED ON APRIL 11, 2017 WHICH IS PRIOR TO THE FEBRUARY 5, 2020 ENACTMENT DATE OF THESE BILLS, PER SECTION 16.102(h)(1) OF THE SUBDIVISION REGULATIONS.
43. WATERSHEDS: 0.95 AC TO THE SUCKER BRANCH TO THE PATAPSCO RIVER LOWER NORTH BRANCH (02130906) AND 7.60 AC TO UNNAMED TRIBUTARY OF THE HUDSON BRANCH TO THE PATAPSCO RIVER LOWER NORTH BRANCH (02130906) .
44. THIS PLAN PROVIDES 16 REPLACEMENT TREES FOR THE REMOVAL OF 8 SPECIMEN TREES PER WP-16-022.
45. PUBLIC STREET TREES ARE PROVIDED IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. FINANCIAL SURETY FOR THE REQUIRED 30 STREET TREES IN THE AMOUNT OF $9,000.00 SHALL BE COLLECTED WITH THE DEPARTMENT OF PUBLIC WORKS COST ESTIMATE.

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

Approved: Howard County Department Of Public Works
DocuSigned by: 2465821AE4DA4C2...
Chief, Bureau Of Highways — 9/11/2023 — Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
DocuSigned by: CHAD Edmondson 7063E75AEF41499...
Chief, Development Engineering Division — 9/11/2023 — Date
DocuSigned by: 1E5B7647BA22840A...
Chief, Division of Land Development — 9/13/2023 — Date

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT.
DocuSigned by: Michael J. Davis A0997730SAB5423...
COUNTY HEALTH OFFICER — 9/12/2023 — DATE

DATE	DESCRIPTION

REVISIONS

"PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY 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. 20748, EXPIRATION DATE: 2-22-25."

STATE OF MARYLAND — ALDO MICHAEL VITUCCI — No. 20748 — PROFESSIONAL ENGINEER

Aldo M. Vitucci, P.E.

ALDO M. VITUCCI, P.E.

OWNERS
LACEY FAMILY REVOCABLE TRUST
1235 WILD ROSE COURT
MARRIOTTSVILLE, MD 21104
ATTN: MR. VINCENT LACEY

DEVELOPER
LAND HOLDINGS LLC
C\O B. JAMES GREENFIELD
6420 AUTUMN SKY WAY
COLUMBIA, MD 21044
443-324-4732

PROJECT			SECTION/AREA		PARCEL	
LACEY PROPERTY			N/A		13	
PLAT NOS.	BLOCK NO.	ZONE	TAX MAP	ELEC. DIST.	CENSUS TR.	
-	1	R-ED	25	SECOND	602900	

TITLE SHEET

LACEY PROPERTY
LOTS 1 THRU 13 AND
OPEN SPACE LOTS 14 THRU 17

ZONED: R-ED
PARCEL No.: 13
TAX MAP No.: 25 GRID No.: 1
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: JULY 10, 2023
SHEET 1 OF 24

F-21-015

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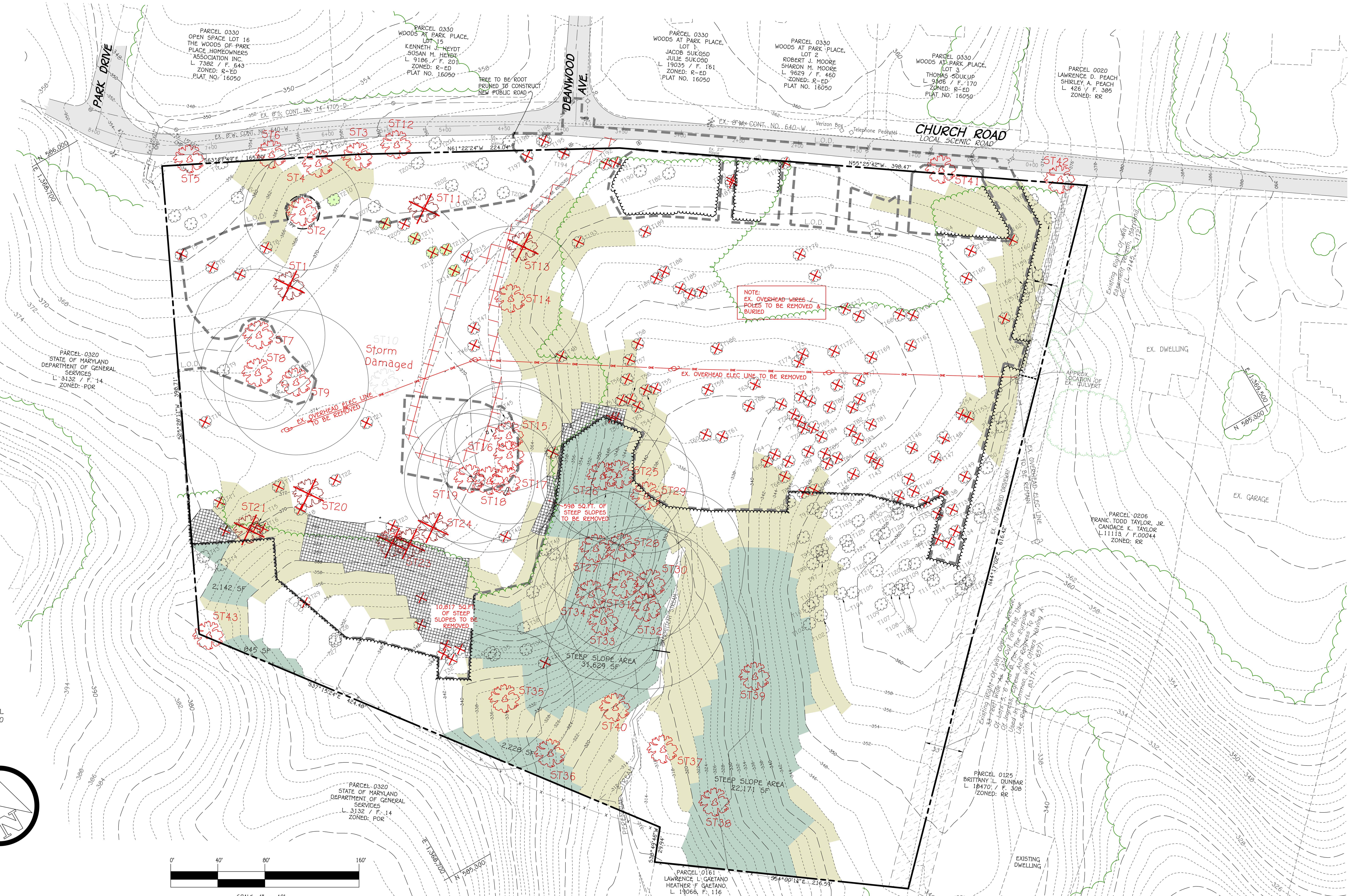
SPECIMEN TREE TABLE

KEY	SPECIES	SIZE (DBH)	CRZ (FT RADIUS)	COMMENTS	STATUS
1	HEMLOCK	35"	52.5		TBR
2	NORWAY SPRUCE	33"	49.5		
3	WHITE PINE	37"	55.5		
4	WHITE PINE	38.5"	57.75		
5	SILVER MAPLE	49.5"	89.25		
6	SILVER MAPLE	36.5"	54.75		
7	BLACK WALNUT	37.5"	56.25		
8	BLACK WALNUT	32"	48		
9	BLACK WALNUT	41"	61.5		
11	SILVER MAPLE	42"	63	VERY POOR, TRUNK ROT	TBR
12	SILVER MAPLE	45.5"	68.25	POOR, TRUNK ROT	
13	SILVER MAPLE	52"	78	POOR, TRUNK ROT	TBR
14	ENGLISH WALNUT	41"	61.5		
15	SILVER MAPLE	31"	46.5	FAIR, LIMITED CROWN SPREAD	
16	SILVER MAPLE	39"	58.5		
17	SILVER MAPLE	33"	49.5	FAIR, LEANING	
18	SILVER MAPLE	40.5"	60.75	FAIR, NARROW CROWN	
19	SILVER MAPLE	37"	55.5	FAIR, LIMITED CROWN SPREAD	
20	SILVER MAPLE	45"	67.5	FAIR, LIMITED CROWN SPREAD	TBR
21	SILVER MAPLE	41"	61.5	FAIR, MAJOR LIMB BROKEN	TBR
22	SILVER MAPLE	32"	48		TBR
23	SILVER MAPLE	34"	51	FAIR, LIMITED CROWN SPREAD	TBR
24	SILVER MAPLE	35"	52.5	POOR, TRUNK ROT	TBR
25	TULIP POPLAR	39.5"	59.25		
26	TULIP POPLAR	35"	52.5	TWIN STEMS	
27	TULIP POPLAR	33.5"	50.25		
28	TULIP POPLAR	32"	48		
29	TULIP POPLAR	32"	48	TWIN STEMS	
30	TULIP POPLAR	31"	46.5		
31	TULIP POPLAR	39"	58.5		
32	TULIP POPLAR	46"	69		
33	TULIP POPLAR	33"	49.5	2 ADDITIONAL NEAR SPECIMEN SIZE TRUNKS	
34	TULIP POPLAR	32.5"	48.75		
35	TULIP POPLAR	39.5"	59.25		
36	TULIP POPLAR	40"	60		
37	TULIP POPLAR	55"	82.5		
38	TULIP POPLAR	61"	91.5	SPLITS INTO 2 TRUNKS ABOVE DBH	
39	TULIP POPLAR	41"	61.5		
40	SYCAMORE	31"	46.5		
41	SILVER MAPLE	31.5"	47.25	POOR, VERY LIMITED CROWN	
42	SILVER MAPLE	39.5"	59.25	POOR, CROWN REDUCED	
43	SILVER MAPLE	39"/32"	58.5	POOR, SPLIT TRUNK ABOVE BREAST HEIGHT, TRUNK ROT, AND LIMB DIEBACK	

NOTE: "TBR" REFERS TO EXISTING SPECIMEN TREES TO BE REMOVED.



LEGEND

SYMBOL	DESCRIPTION
------352------	EXISTING CONTOUR 2' INTERVAL
——350——	EXISTING CONTOUR 10' INTERVAL
——s——	EXISTING SAN. SEWER LINE
——D——D——	EXISTING STORM DRAIN LINE
------------	EXISTING WATER LINE
——OHE——	EX. OVERHEAD ELECTRIC LINE & POWER POLE
——x——x——	EXISTING FENCE
	EXISTING PAVING
	EXISTING TREES
	EXISTING TREES TO BE REMOVED
T19	SPECIMEN TREES
	EXISTING TREELINE
	SLOPES 15% - 24.9%
	SLOPES 25% OR GREATER
	EX. DRIVEWAY DEMOLITION
	STEEP SLOPE TO BE REMOVED

NOTE: EXISTING STRUCTURES, OUT BUILDINGS AND SWIMMING POOL HAVE BEEN RAZED AND REMOVED FROM THE SITE IN MARCH 2020 UNDER DEMOLITION PERMIT NUMBER B-18003545.

FISHER, COLLINS & CARTER, INC.
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(410) 461 - 2855

Approved: Howard County Department Of Public Works
Chief, Bureau Of Highways — 9/11/2023 — Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
Chief, Development Engineering Division — 9/11/2023 — Date
Chief, Division of Land Development — 9/13/2023 — Date

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LACEY PROPERTY			N/A		13
PLAT NOS.	BLOCK NO.	ZONE	TAX MAP	ELEC. DIST.	CENSUS TR.
-	1	R-ED	25	SECOND	602900

DEMOLITION PLAN

LACEY PROPERTY
LOTS 1 THRU 13 AND
OPEN SPACE LOTS 14 THRU 17

ZONED: R-ED
PARCEL No.: 13
TAX MAP No.: 25 GRID No.: 1
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: APRIL 4, 2023
SHEET 2 OF 24

F-21-015

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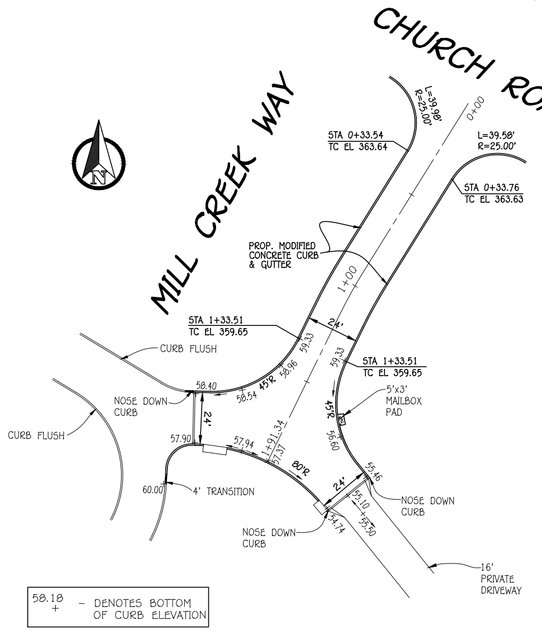
LEGEND	
SYMBOL	DESCRIPTION
——— S ———	EXISTING SAN. SEWER LINE
——— SD ———	EXISTING STORM DRAIN LINE
----------	EXISTING WATER LINE
+ 344.29	PROPOSED SPOT ELEVATION
	PROPOSED CONCRETE WALK
	PROPOSED MACADAM PAVING
8" W	PROPOSED PUBLIC WATER
18" RCCP	PROPOSED STORMDRAIN
8" S	PROPOSED PUBLIC SEWER
	FOREST CONSERVATION AREA

CURVE TABLE						
CURVE #	LENGTH	RADIUS	TANGENT	DELTA	CHORD BEARING	CHORD LENGTH
C1	24.14'	230.00'	12.08'	05° 48' 40"	S29° 00' 46"W	24.14'
C2	21.45	41.00'	10.74'	029° 22' 00"	S73° 36' 14"E	20.79'
C3	62.58'	39.00'	40.34'	091° 56' 19"	S75° 06' 37"W	56.08'
C4	57.41'	39.00'	35.33'	084° 20' 55"	S13° 01' 59"E	52.37'
C5	59.17'	35.00'	39.47'	096° 51' 54"	N76° 21' 36"E	52.37'
C6	22.79'	53.00'	11.57'	024° 38' 17"	N15° 36' 31"E	22.62'
C7	31.86'	92.00'	16.09'	019° 50' 19"	S48° 48' 44"E	31.70'

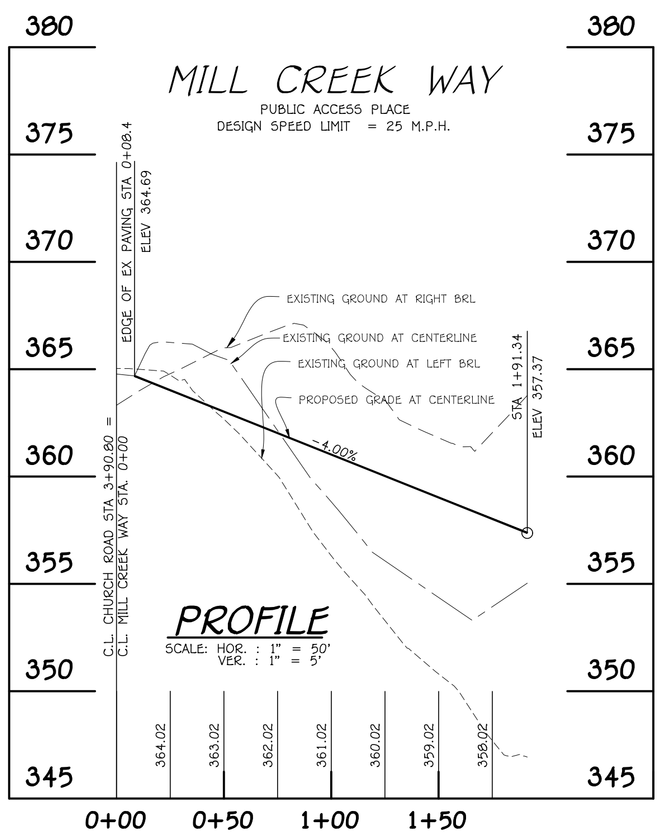


TURN AROUND DETAIL

Y-TURNAROUND HO.CO. DETAIL R-5.07

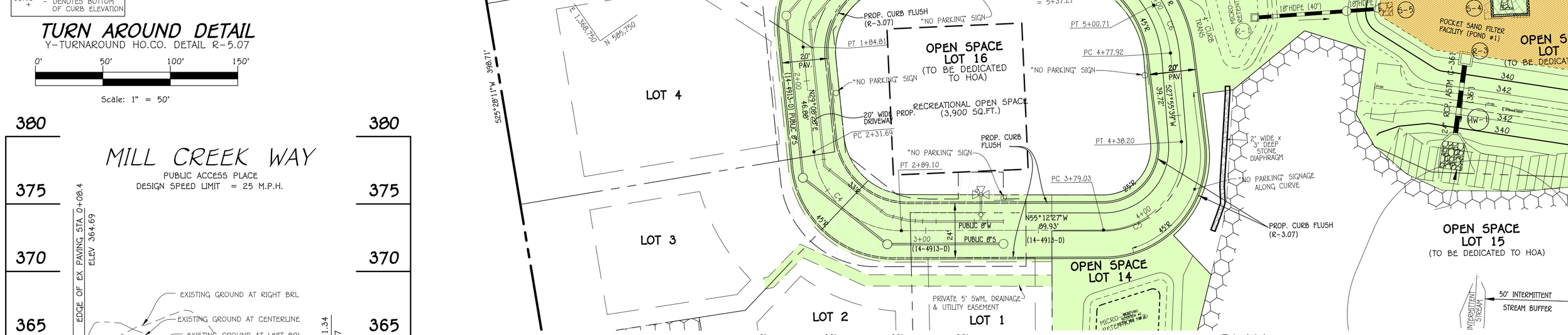
0' 50' 100' 150'

Scale: 1" = 50'

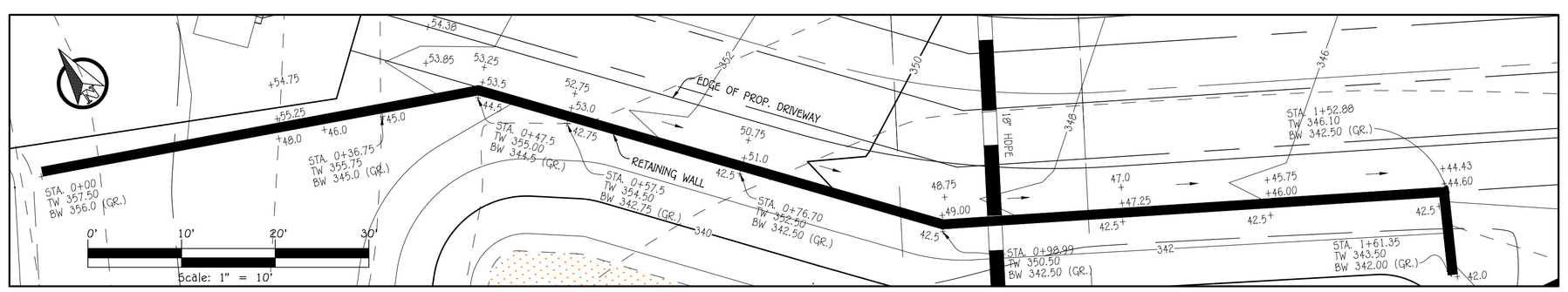


PROFILE

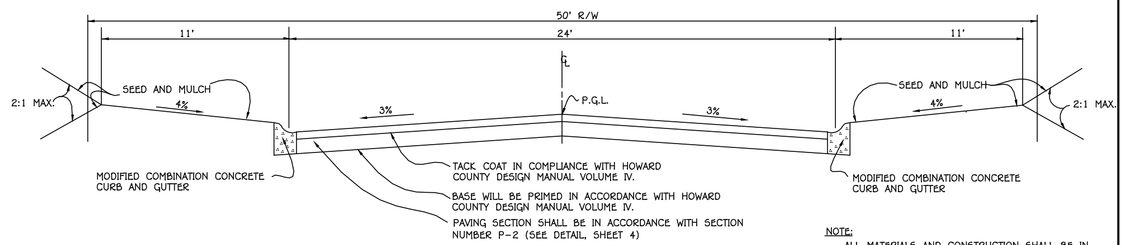
SCALE: HOR. : 1" = 50'
VER. : 1" = 5'



PLAN



RETAINING WALL PLAN



(MILL CREEK WAY)
TYPICAL ROADWAY SECTION (PUBLIC ACCESS PLACE)

NO SCALE

NOTE: ALL MATERIALS AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH HOWARD COUNTY DESIGN MANUAL VOLUME IV, STANDARD SPECIFICATION AND DETAILS FOR CONSTRUCTION.

ROADWAY INFORMATION CHART

ROAD NAME	CLASSIFICATION	DESIGN SPEED	ZONING	℄ STATION LIMITS	PAVING SECTION
MILL CREEK WAY	PUBLIC ACCESS PLACE	25 M.P.H.	R-ED	0+00 TO 1+91.34	P-2

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(410) 461 - 2855

Approved: Howard County Department Of Public Works

DocuSigned by: [signature] 9/11/2023
Chief, Bureau Of Highways — Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

DocuSigned by: (Chad) Edmondson 9/11/2023
Chief, Development Engineering Division — Date

DocuSigned by: [signature] 9/13/2023
Chief, Division of Land Development — Date

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PROJECT			SECTION/AREA		PARCEL
LACEY PROPERTY			N/A		13
PLAT NOS.	BLOCK NO.	ZONE	TAX MAP	ELEC. DIST.	CENSUS TR.
-	1	R-ED	25	SECOND	602900

MILL CREEK WAY PLAN, PROFILE AND DETAILS

LACEY PROPERTY
LOTS 1 THRU 13 AND OPEN SPACE LOTS 14 THRU 17

ZONED: R-ED
PARCEL No.: 13
TAX MAP No.: 25 GRID No.: 1
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: JULY 10, 2023
SHEET 3 OF 24

F-21-015

015

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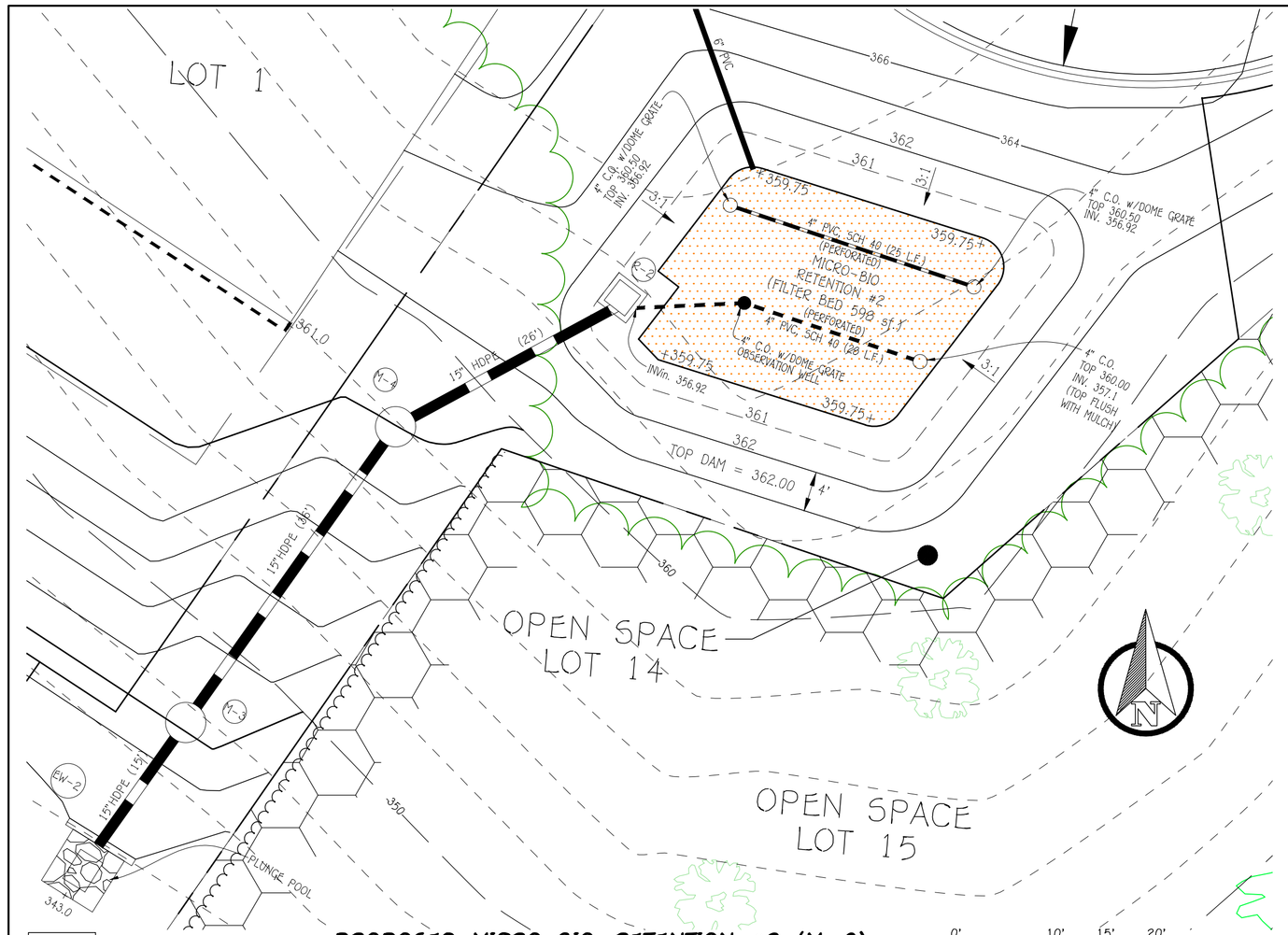


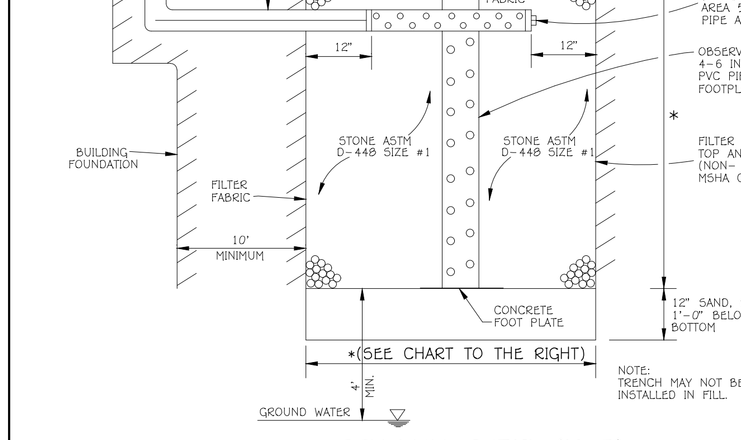
– DENOTES FILTER MEDIA AREA

PROPOSED MICRO BIO-RETENTION #2 (M-6) PLAN VIEW

SCALE: 1" = 10'

0' 10' 15' 20'
Scale: 1" = 10'

IN ADDITION TO THE ESD VOLUME MANAGEMENT, THIS POND PROVIDES 100-YEAR, AND QUANTITY MANAGEMENT FOR 3.55 HR/6.6 IN STORM EVENT.



* THE EXACT NUMBER OF DRYWELLS REQUIRED AND THE LENGTH AND WIDTH WILL BE DETERMINED ONCE DOWNSPOUT DRAINAGE PATTERNS ARE DETERMINED.

NOTE: TRENCH MAY NOT BE INSTALLED IN FILL.

DRY WELL DETAIL (M-5)

NOT TO SCALE

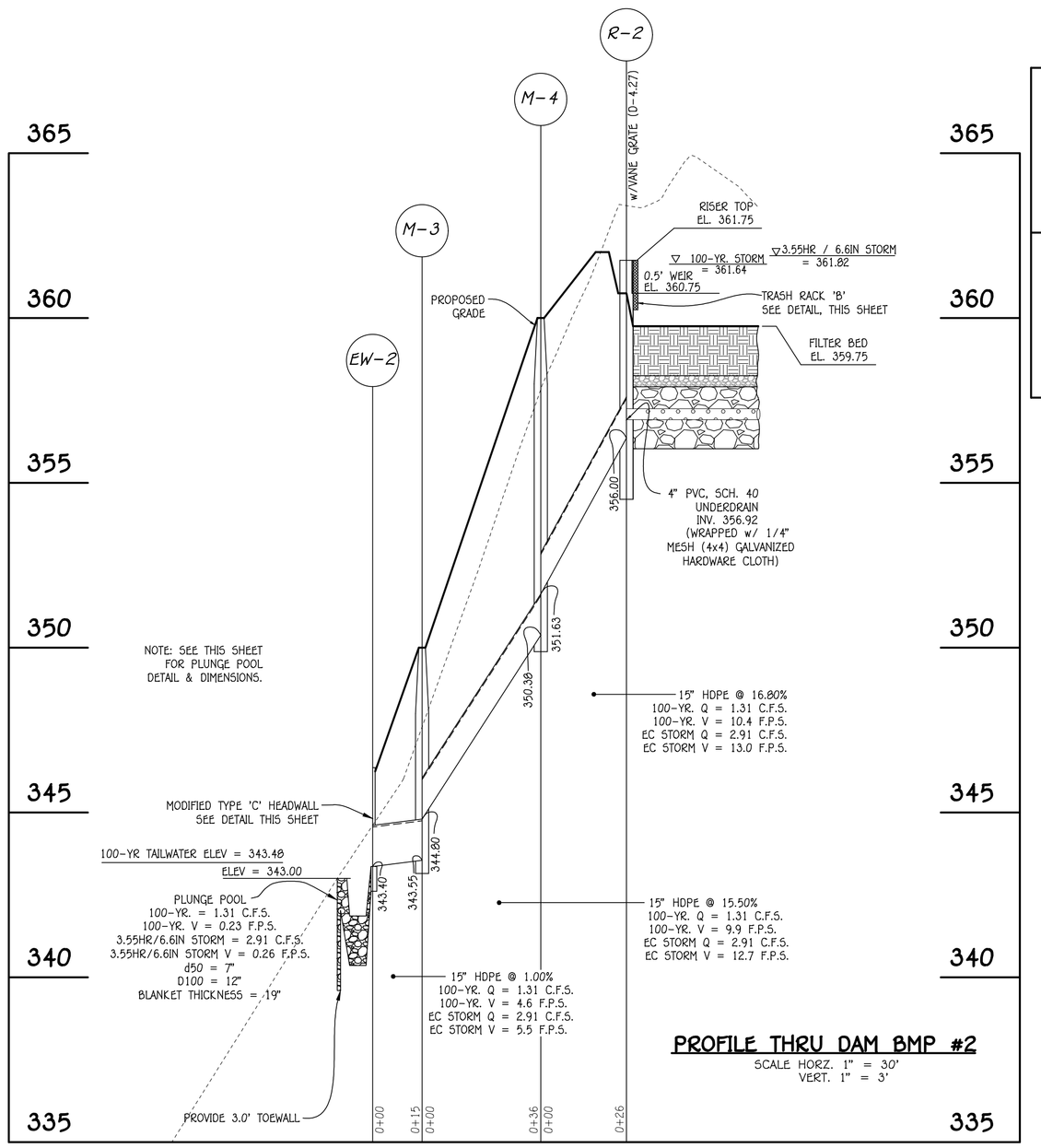
NOTE: ALL DRY WELLS WILL BE INSTALLED AT SDP STAGE WITH THE CONSTRUCTION OF HOUSES.

DRY WELL CHART

LOT NO.	ROOF AREA SQ.FT	ESD REQUIRED (CUBIC FEET)	ESD PROVIDED (CUBIC FEET)	NO. OF DRYWELLS	*D x L x W
LOT 1A	900	114 CU.FT.	130 CU.FT.	1	4' x 9' x 9'
LOT 2A	900	114 CU.FT.	130 CU.FT.	1	4' x 9' x 9'
LOT 3A	900	114 CU.FT.	130 CU.FT.	1	4' x 9' x 9'
LOT 4A	900	114 CU.FT.	220 CU.FT.	1	5' x 11' x 10'
LOT 4B	900	114 CU.FT.	200 CU.FT.	1	5' x 9' x 9'
LOT 5A	900	114 CU.FT.	200 CU.FT.	1	5' x 10' x 10'
LOT 5B	900	114 CU.FT.	200 CU.FT.	1	5' x 10' x 10'
LOT 6A	900	114 CU.FT.	200 CU.FT.	1	5' x 11' x 10'
LOT 6B	900	114 CU.FT.	200 CU.FT.	1	5' x 10' x 10'
LOT 7A	900	114 CU.FT.	220 CU.FT.	1	5' x 11' x 10'
LOT 7B	900	114 CU.FT.	220 CU.FT.	1	5' x 11' x 10'
LOT 8A	964	123 CU.FT.	220 CU.FT.	1	5' x 11' x 10'
LOT 8B	964	123 CU.FT.	220 CU.FT.	1	5' x 11' x 10'
LOT 9A	1125	143 CU.FT.	220 CU.FT.	1	5' x 11' x 10'
LOT 9B	1125	143 CU.FT.	220 CU.FT.	1	5' x 11' x 10'
LOT 10A	1125	143 CU.FT.	220 CU.FT.	1	5' x 11' x 10'
LOT 10B	1125	143 CU.FT.	220 CU.FT.	1	5' x 11' x 10'
LOT 11A	1125	143 CU.FT.	220 CU.FT.	1	5' x 11' x 10'
LOT 11B	1125	143 CU.FT.	220 CU.FT.	1	5' x 11' x 10'
LOT 12A	1125	143 CU.FT.	220 CU.FT.	1	5' x 11' x 10'
LOT 12B	1125	143 CU.FT.	220 CU.FT.	1	5' x 11' x 10'
LOT 13A	790	143 CU.FT.	220 CU.FT.	1	5' x 11' x 10'
LOT 13B	790	143 CU.FT.	220 CU.FT.	1	5' x 11' x 10'

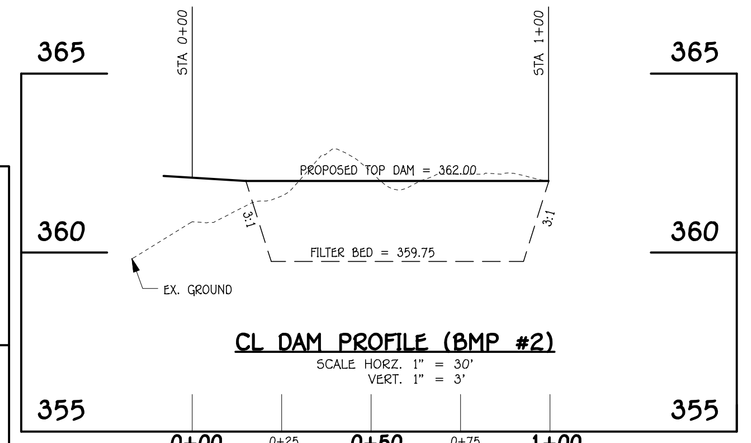
OPERATION AND MAINTENANCE SCHEDULE FOR DRYWELLS (M-5)

1. THE OWNER SHALL INSPECT THE MONITORING WELLS AND STRUCTURES ON A QUARTERLY BASIS AND AFTER EVERY HEAVY STORM EVENT.
2. THE OWNER SHALL RECORD THE WATER LEVELS AND SEDIMENT BUILD UP IN THE MONITORING WELLS OVER A PERIOD OF SEVERAL DAYS TO INSURE TRENCH DRAINAGE.
3. THE OWNER SHALL MAINTAIN A LOG BOOK TO DETERMINE THE RATE AT WHICH THE FACILITY DRAINS.
4. WHEN THE FACILITY BECOMES CLOGGED SO THAT IT DOES NOT DRAIN DOWN WITHIN A SEVENTY TWO (72) HOUR TIME PERIOD, CORRECTIVE ACTION SHALL BE TAKEN.
5. THE MAINTENANCE LOG BOOK SHALL BE AVAILABLE TO HOWARD COUNTY FOR INSPECTION TO INSURE COMPLIANCE WITH OPERATION AND MAINTENANCE CRITERIA.
6. ONCE THE PERFORMANCE CHARACTERISTICS OF THE INFILTRATION FACILITY HAVE BEEN VERIFIED, THE MONITORING SCHEDULE CAN BE REDUCED TO AN ANNUAL BASIS UNLESS THE PERFORMANCE DATA INDICATES THAT A MORE FREQUENT SCHEDULE IS REQUIRED.



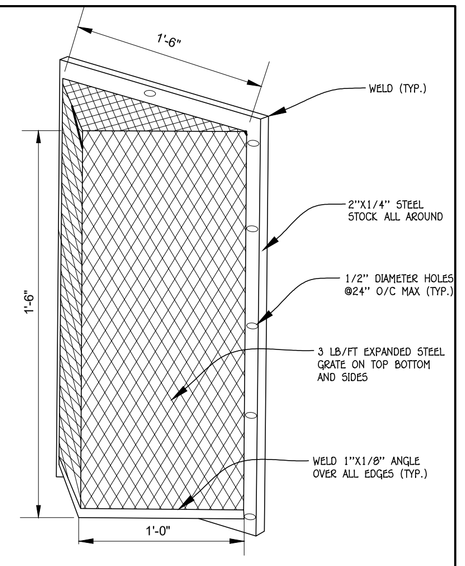
PROFILE THRU DAM BMP #2

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



CL DAM PROFILE (BMP #2)

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



TRASH RACK 'B' DETAIL FOR 6" WEIR OPENING

(NTS)

NOTES:

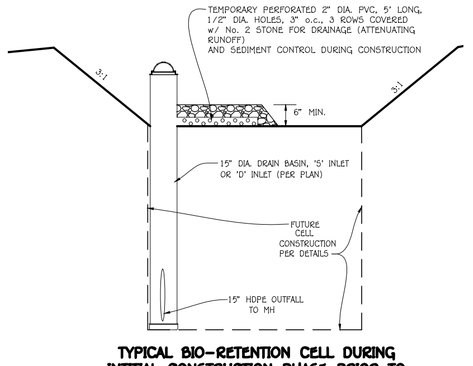
1. TRASH RACK TO BE CENTERED OVER WEIR OPENING .
2. STEEL TO CONFORM TO ASTM A-36.
3. ALL SURFACES TO BE COATED WITH ZRC COLD GALVANIZING COMPOUND AFTER WELDING.
4. TRASH RACK TO BE FASTENED TO THE WALL WITH 1/2" MASONRY ANCHORS. TRASH RACK TO BE REMOVABLE.

REINFORCING: DEFORMED STEEL BARS (1/2" DIA.)
CHAMFER: ALL EXPOSED EDGES 1"x 1" OR AS DIRECTED.
CONC. SHALL BE S.H.A. A. MIX No. 2.

OPENINGS	DIMENSIONS							VOLUME	STEEL
D IN.	AREA SQ.FT	A	B	C	E	F	H	L	CONC C.Y.	LBS.
15"	1.23	9"	6"	6"	1'-9"	9"	3'-0"	7'-9"	2.33	47

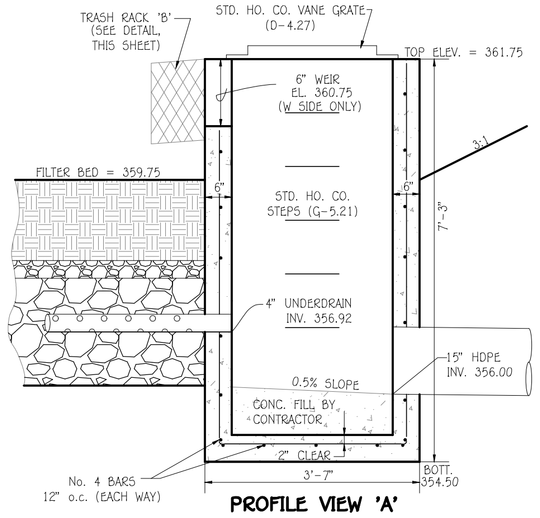
MODIFIED TYPE 'C' ENDWALL

NO SCALE



TYPICAL BIO-RETENTION CELL DURING INITIAL CONSTRUCTION PHASE PRIOR TO DRAINAGE AREA BEING STABILIZED

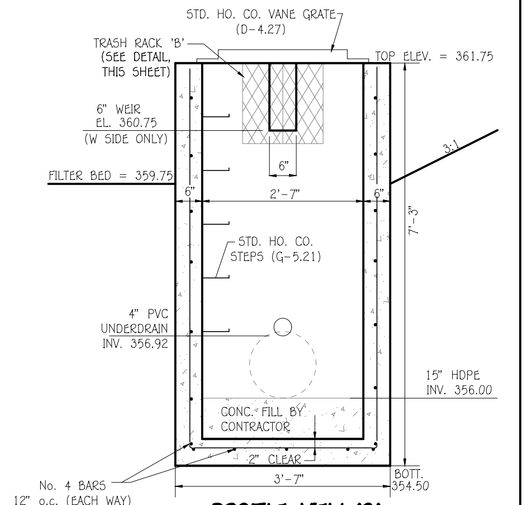
NO SCALE



PROFILE VIEW 'A' (MODIFIED '5' INLET) CONCRETE RISER DETAIL

R2

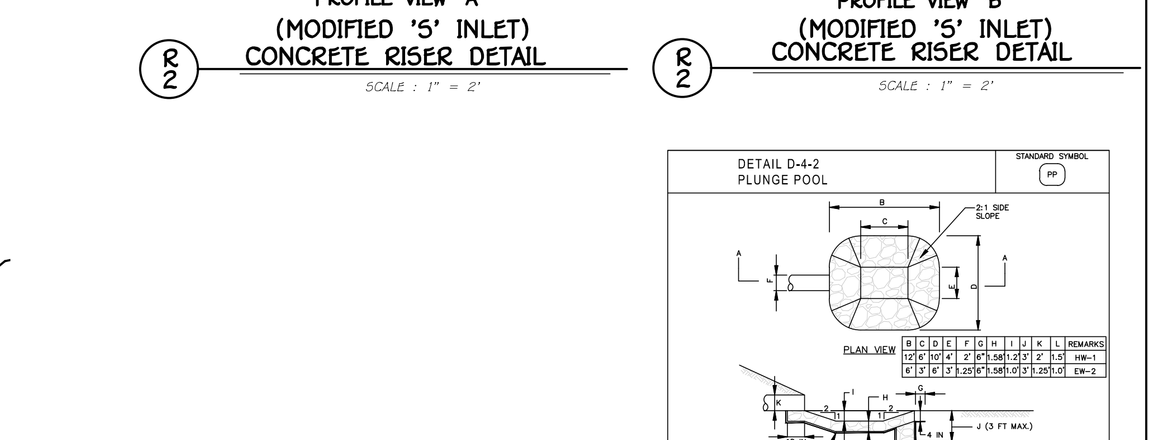
SCALE : 1" = 2'



PROFILE VIEW 'B' (MODIFIED '5' INLET) CONCRETE RISER DETAIL

R2

SCALE : 1" = 2'



B	C	D	E	F	G	H	I	J	K	L	REMARKS
12'-6"	10'	2'	3'	2'	6"	5.58'	1.67'	2'	3.5'		MH-1
6'	3'	4'	3'	3.25'	6"	5.58'	1.0'	3'	3.25'	1.0'	EW-2

CONSTRUCTION SPECIFICATIONS

1. USE SPECIFIED CLASS OF RIPRAP.
2. USE NONWOVEN GEOTEXTILE AS SPECIFIED IN SECTION M-1 MATERIALS, AND PROTECT FROM PUNCHING, CUTTING, OR TEARING. REPAIR ANY DAMAGE EITHER THAN AN OCCASIONAL SMALL HOLE BY PLACING ANOTHER PIECE OF GEOTEXTILE OVER THE DAMAGED PART OR BY COMPLETELY REPLACING THE GEOTEXTILE. PROVIDE A MINIMUM OF ONE FOOT OVERLAP FOR ALL REPAIRS AND FOR JOINING TWO PIECES OF GEOTEXTILE.
3. PREPARE THE SUBGRADE FOR THE PLUNGE POOL TO THE REQUIRED LINES AND GRADES. COMPACT ANY FILL REQUIRED IN THE SUBGRADE TO A DENSITY OF APPROXIMATELY THAT OF THE SURROUNDING UNDISTURBED MATERIAL.
4. EMBED THE GEOTEXTILE A MINIMUM OF 4 INCHES AND EXTEND THE GEOTEXTILE A MINIMUM OF 6 INCHES BEYOND THE EDGE OF THE SCOUR HOLE.
5. STONE FOR THE PLUNGE POOL MAY BE PLACED BY EQUIPMENT. CONSTRUCT TO THE FULL COURSE THICKNESS IN ONE OPERATION AND IN SUCH A MANNER AS TO AVOID DISPLACEMENT OF THE UNDERLYING MATERIAL. PLACE THE LARGER STONES IN THE OUTER PART OF THE POOL IN A MANNER THAT WILL ENSURE THAT IT IS REASONABLY HOMOGENEOUS WITH THE SMALLER STONES AND SPALLS FILLING THE VOIDS BETWEEN THE LARGER STONES. PLACE STONE FOR THE PLUNGE POOL IN A MANNER TO PREVENT DAMAGE TO THE GEOTEXTILE. HAND PLACE TO THE EXTENT NECESSARY.
6. AT THE PLUNGE POOL OUTLET, PLACE THE STONE SO THAT IT MEETS THE EXISTING GRADE.
7. MAINTAIN LINE, GRADE, AND CROSS SECTION. KEEP OUTLET FREE OF EROSION. REMOVE ACCUMULATED SEDIMENT AND DEBRIS. AFTER HIGH FLOWS INSPECT FOR SCOUR AND DISLODGED RIPRAP. MAKE NECESSARY REPAIRS IMMEDIATELY.

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

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK – 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 – 2855

Approved: Howard County Department Of Public Works

DocuSigned by: 2455B71AE1DA4C2...

Chief, Bureau Of Highways — 9/11/2023 Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

DocuSigned by: Chad Edmondson 7D0F1B8F8B8F4B8...

Chief, Development Engineering Division — 9/11/2023 Date

DocuSigned by: 7E0F0567A8209A9A...

Chief, Division of Land Development — 9/13/2023 Date

DATE	DESCRIPTION
	REVISIONS

"PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY 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. 20748, EXPIRATION DATE: 2-22-25."

STATE OF MARYLAND — KLDO MICHAEL VITUCCI — No. 20748 — PROFESSIONAL ENGINEER

Aldo M. Vitucci, P.E.

ALDO M. VITUCCI, P.E.

OWNERS
LACEY FAMILY REVOCABLE TRUST
1235 WILD ROSE COURT
MARRIOTTSVILLE, MD 21104
ATTN: MR. VINCENT LACEY

DEVELOPER
LAND HOLDINGS LLC
C\O B. JAMES GREENFIELD
6420 AUTUMN SKY WAY
COLUMBIA, MD 21044
443-324-4732

PROJECT			SECTION/AREA		PARCEL
LACEY PROPERTY			N/A		13
PLAT NOS.	BLOCK NO.	ZONE	TAX MAP	ELEC. DIST.	CENSUS TR.
-	1	R-ED	25	SECOND	602900

STORMWATER MANAGEMENT PLAN VIEW, PROFILES & DETAILS-MICRO BIO-RETENTION #2

LACEY PROPERTY

LOTS 1 THRU 13 AND OPEN SPACE LOTS 14 THRU 17

ZONED: R-ED
PARCEL No.: 13
TAX MAP No.: 25 GRID No.: 1
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: JULY 10, 2023
SHEET 10 OF 24

F-21-015

DocuSign Envelope ID: 79E9DBFB-CDDB-4FF4-A258-614B911C4A9B

LEGEND	
SYMBOL	DESCRIPTION
——— S ———	EXISTING SAN. SEWER LINE
——— D ———	EXISTING STORM DRAIN LINE
----------	EXISTING WATER LINE
+ 344.29	PROPOSED SPOT ELEVATION
	PROPOSED CONCRETE WALK
	PROPOSED MACADAM PAVING
8" W	PROPOSED PUBLIC WATER
18" RCCP	PROPOSED STORMDRAIN
8" S	PROPOSED PUBLIC SEWER
	FOREST CONSERVATION AREA

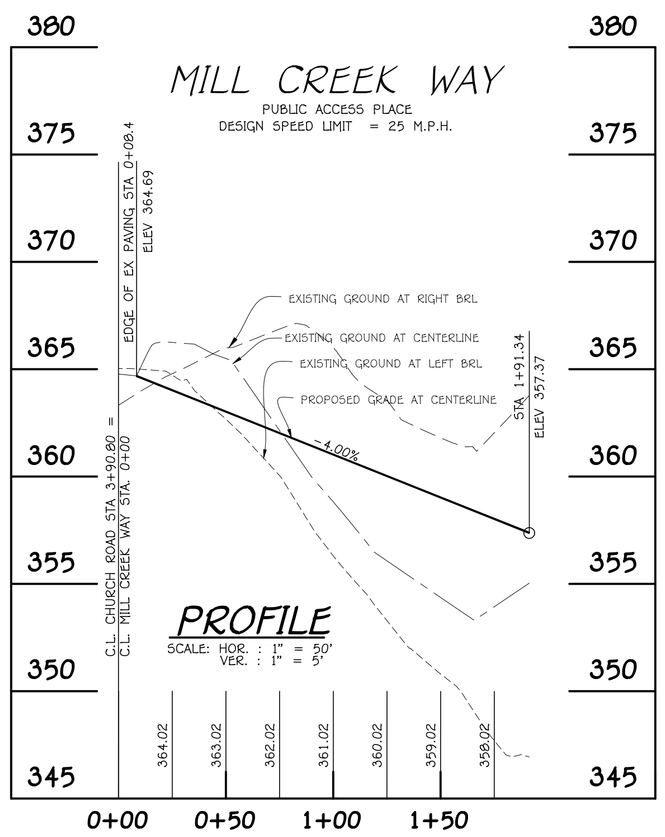
CURVE TABLE						
CURVE #	LENGTH	RADIUS	TANGENT	DELTA	CHORD BEARING	CHORD LENGTH
C1	24.14'	238.00'	12.08'	05° 48' 40"	S29° 00' 46"W	24.14'
C2	21.45	41.00'	10.74'	029° 22' 00"	S73° 36' 14"E	20.79'
C3	62.58'	39.00'	40.34'	091° 56' 19"	S75° 06' 37"W	56.08'
C4	57.41'	39.00'	35.33'	084° 20' 55"	S13° 01' 59"E	52.37'
C5	59.17'	35.00'	39.47'	096° 51' 54"	N76° 21' 36"E	52.37'
C6	22.79'	53.00'	11.57'	024° 38' 17"	N15° 36' 31"E	22.62'
C7	31.86'	92.00'	16.09'	019° 50' 19"	S48° 48' 44"E	31.70'

TURN AROUND DETAIL

Y-TURNAROUND HO.CO. DETAIL R-5.07

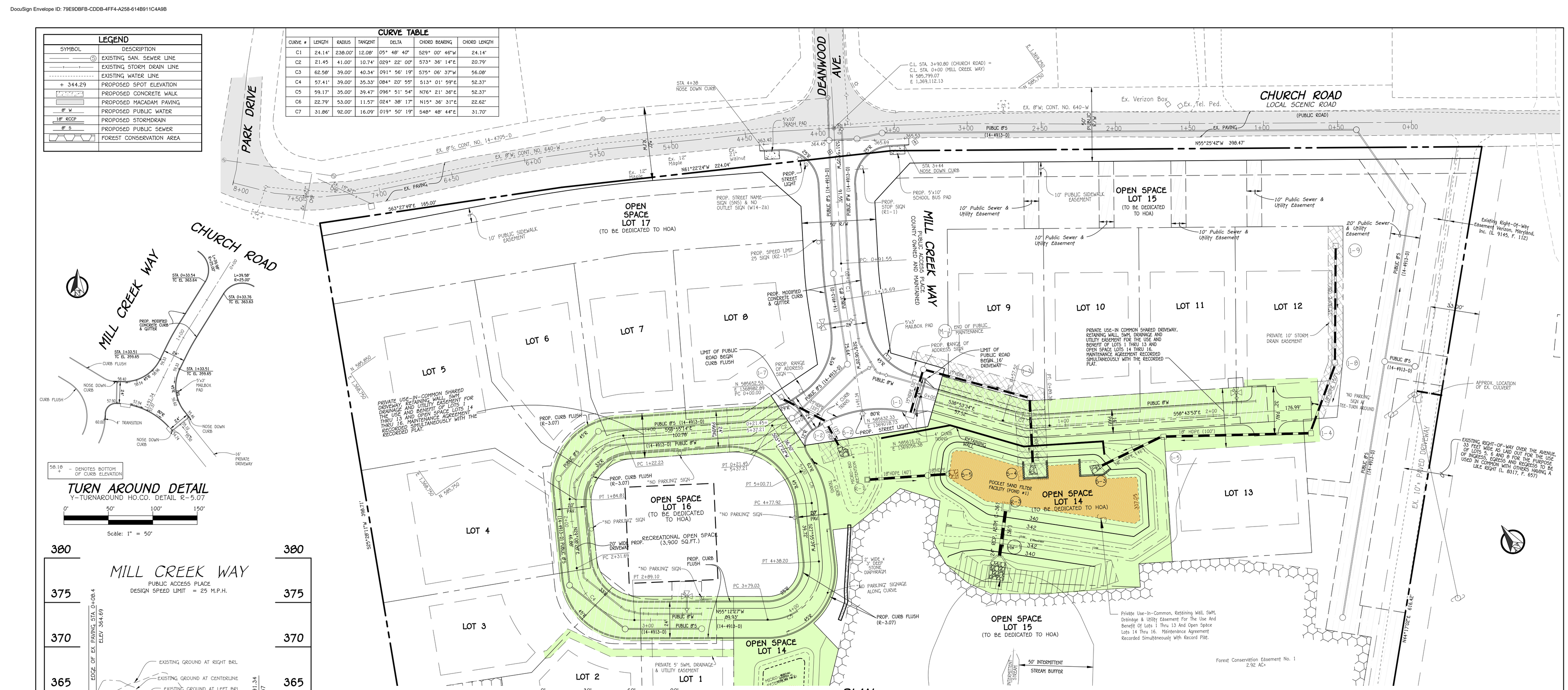
0' 50' 100' 150'

Scale: 1" = 50'



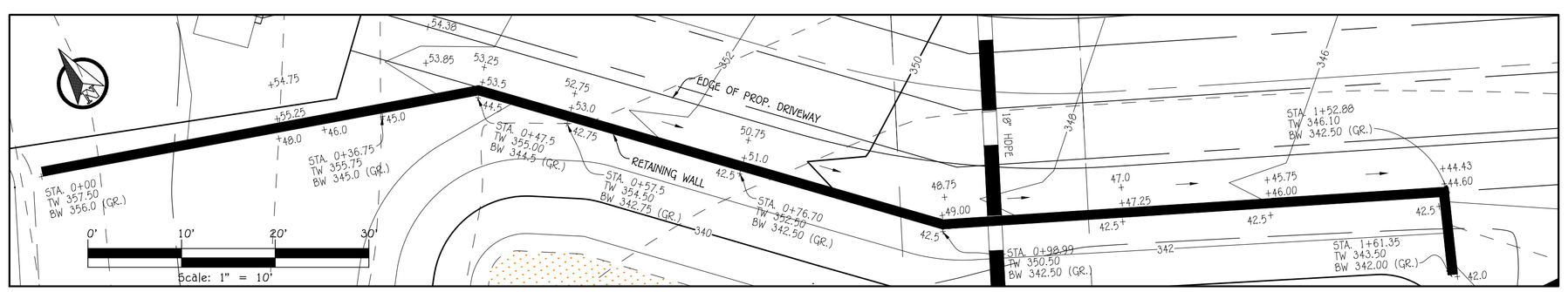
PROFILE

SCALE: HOR. : 1" = 50'
VER. : 1" = 5'



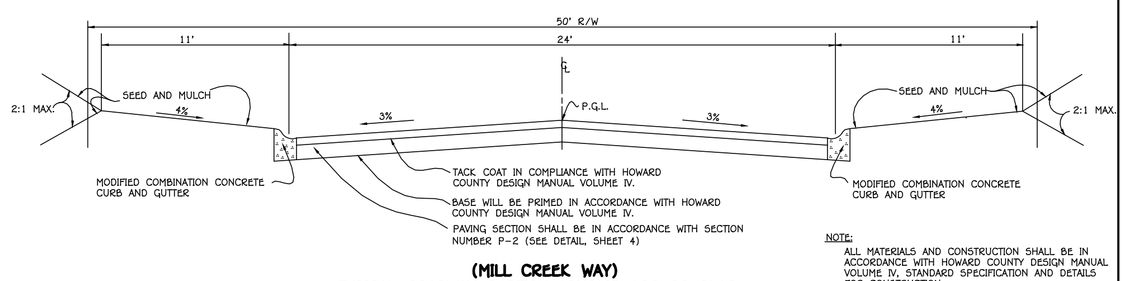
PLAN

Scale: 1" = 30'



RETAINING WALL PLAN

Scale: 1" = 10'



(MILL CREEK WAY)
TYPICAL ROADWAY SECTION (PUBLIC ACCESS PLACE)

NO SCALE

NOTE: ALL MATERIALS AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH HOWARD COUNTY DESIGN MANUAL VOLUME IV, STANDARD SPECIFICATION AND DETAILS FOR CONSTRUCTION.

ROADWAY INFORMATION CHART

ROAD NAME	CLASSIFICATION	DESIGN SPEED	ZONING	℄ STATION LIMITS	PAVING SECTION
MILL CREEK WAY	PUBLIC ACCESS PLACE	25 M.P.H.	R-ED	0+00 TO 1+91.34	P-2

FISHER, COLLINS & CARTER, INC.
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(410) 461 - 2855

Approved: Howard County Department Of Public Works
DocuSigned by: [signature] 0A9B0B1AE4EDAA02
Chief, Bureau Of Highways — 9/11/2023 Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
DocuSigned by: (Chad) Edmondson 2A4E0F2A5AE24B9...
Chief, Development Engineering Division — 9/11/2023 Date
DocuSigned by: [signature] 5F4F7B5B5B5A4E8...
Chief, Division of Land Development — 9/13/2023 Date

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MARRIOTTSVILLE, MD 21104
ATTN: MR. VINCENT LACEY

DEVELOPER
LAND HOLDINGS LLC
C\O B. JAMES GREENFIELD
6420 AUTUMN SKY WAY
COLUMBIA, MD 21044
443-324-4732

PROJECT			SECTION/AREA		PARCEL
LACEY PROPERTY			N/A		13
PLAT NOS.	BLOCK NO.	ZONE	TAX MAP	ELEC. DIST.	CENSUS TR.
-	1	R-ED	25	SECOND	602900

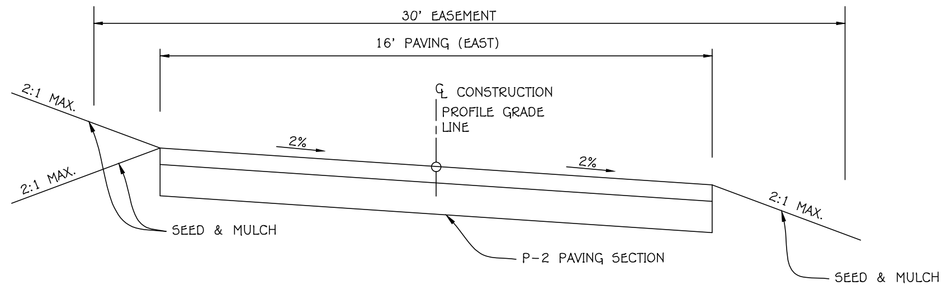
MILL CREEK WAY PLAN, PROFILE AND DETAILS

LACEY PROPERTY
LOTS 1 THRU 13 AND OPEN SPACE LOTS 14 THRU 17

ZONED: R-ED
PARCEL No.: 13
TAX MAP No.: 25 GRID No.: 1
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: JULY 10, 2023
SHEET 3 OF 24

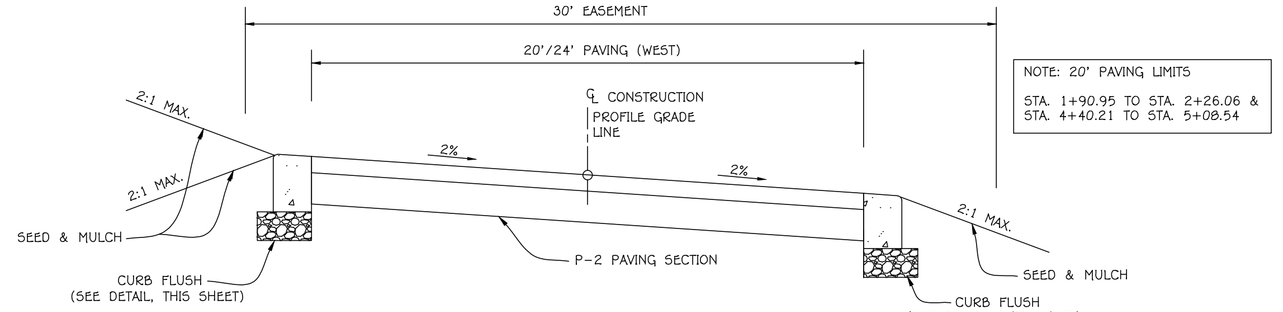
F-21-015

DocuSign Envelope ID: 79E9DBFB-CDDB-4FF4-A258-614B911C4A9B



TYPICAL PRIVATE USE-IN-COMMON DRIVEWAY SECTION (EAST)

NO SCALE



NOTE: 20' PAVING LIMITS

STA. 1+90.95 TO STA. 2+26.06 &
STA. 4+40.21 TO STA. 5+08.54

TYPICAL PRIVATE USE-IN-COMMON DRIVEWAY SECTION (WEST)

NO SCALE

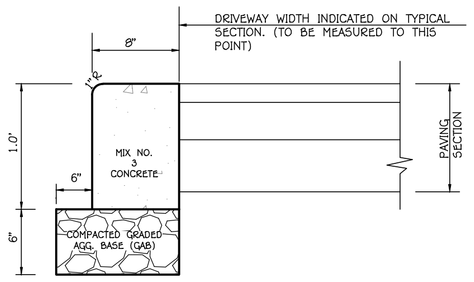
USE-IN-COMMON DRIVEWAY INFORMATION CHART

ROAD NAME	CLASSIFICATION	DESIGN SPEED	ZONING	℄ STATION LIMITS	PAVING SECTION
PRIVATE DRIVEWAY (EAST)	USE-IN-COMMON DRIVEWAY	15 M.P.H.	R-ED	0+00 TO 2+66.37	P-2

USE-IN-COMMON DRIVEWAY INFORMATION CHART

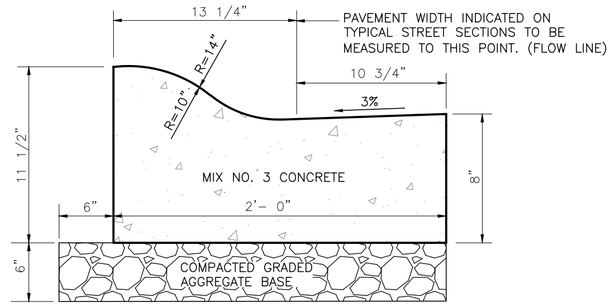
ROAD NAME	CLASSIFICATION	DESIGN SPEED	ZONING	℄ STATION LIMITS	PAVING SECTION
PRIVATE DRIVEWAY (WEST)	USE-IN-COMMON DRIVEWAY	15 M.P.H.	R-ED	0+00 TO 5+31.07	P-2

SECTION NUMBER	ROAD AND STREET CLASSIFICATION	CALIFORNIA BEARING RATIO (CBR)	3 TO <5	5 TO <7	≥7	3 TO <5	5 TO <7	≥7
		PAVEMENT MATERIAL (INCHES)	MIN HMA WITH GAB			HMA WITH CONSTANT GAB		
P-2	PARKING DRIVE AISLES: RESIDENTIAL AND NON-RESIDENTIAL WITH NO MORE THAN 10 HEAVY TRUCKS PER DAY LOCAL ROADS: ACCESS PLACE, ACCESS STREET CUL-DE-SACS: RESIDENTIAL	SUPERPAVE ASPHALT MIX FINAL SURFACE 9.5 MM, PG 64-22, LEVEL 1 (ESAL)	1.5	1.5	1.5	1.5	1.5	1.5
		SUPERPAVE ASPHALT MIX INTERMEDIATE SURFACE 9.5 MM, PG 64-22S; LEVEL 1 (ESAL)	1.5	1.5	1.5	1.5	1.5	1.5
		SUPERPAVE ASPHALT MIX BASE 19.0 MM, PG 64-22S, LEVEL 1 (ESAL)	2.0	2.0	2.0	3.5	2.0	2.0
		GRADED AGGREGATE BASE (GAB)	8.0	4.0	3.0	4.0	4.0	4.0



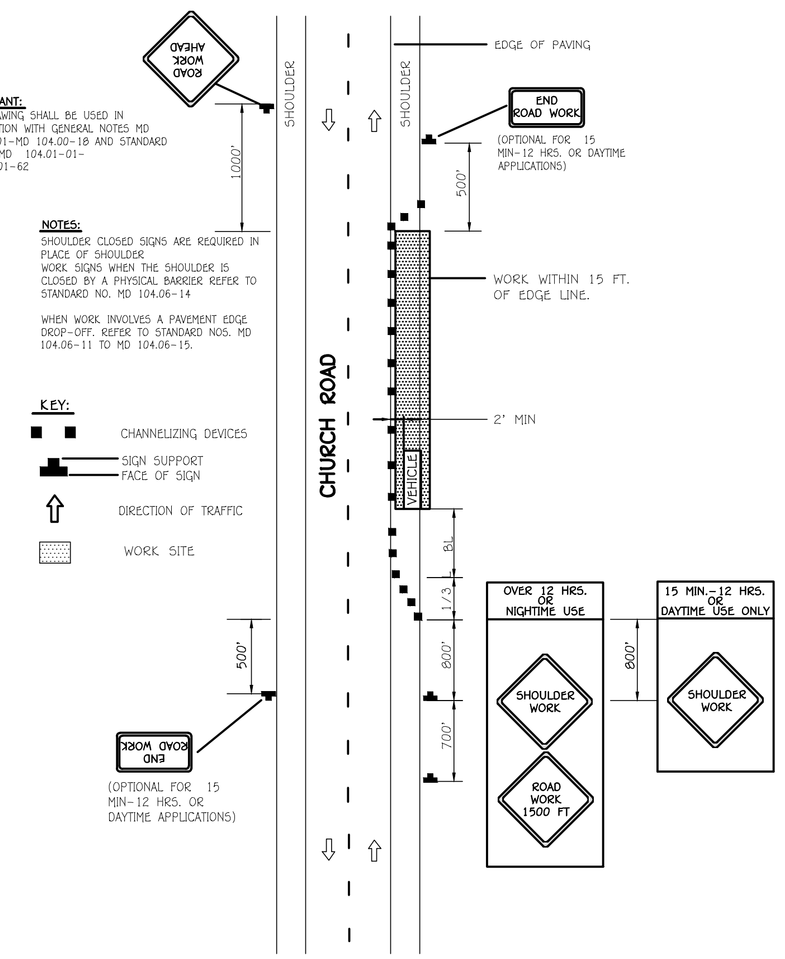
CURB FLUSH DETAIL (R-3.07)

NO SCALE



MODIFIED COMBINATION CURB AND GUTTER DETAIL (R-3.01)

NO SCALE



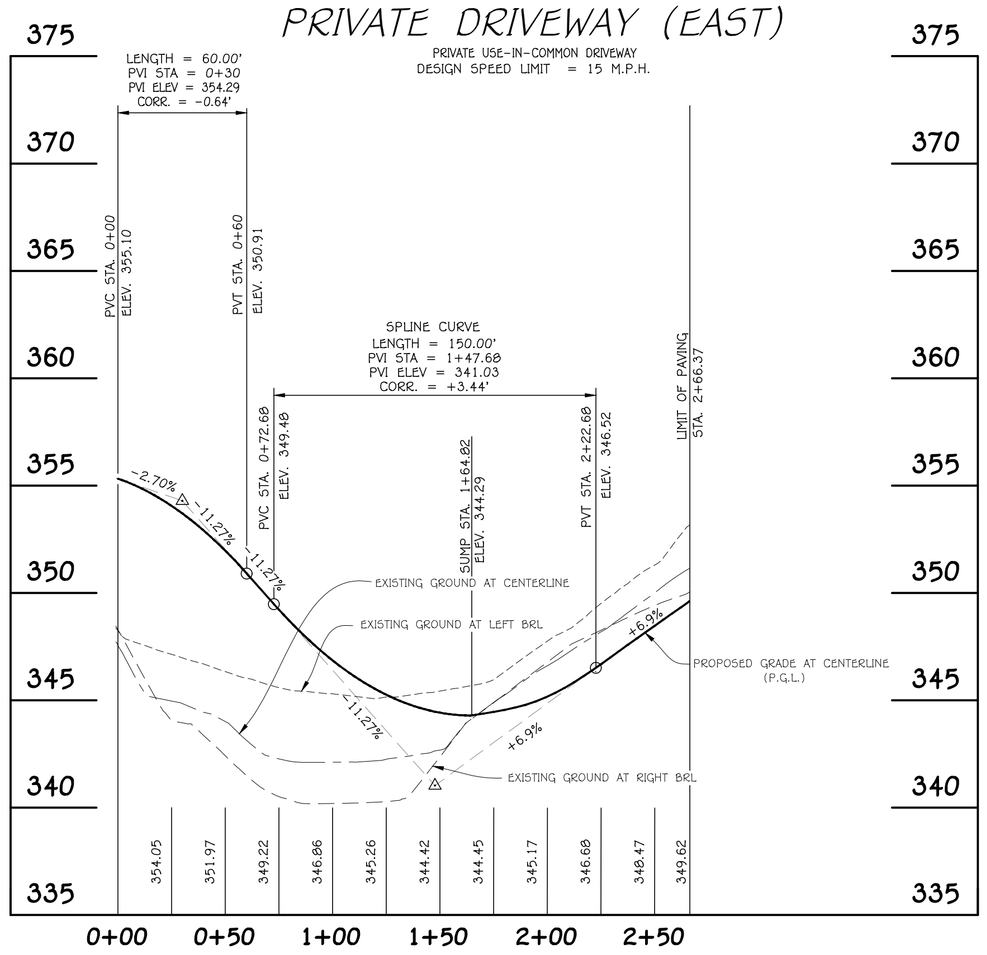
SHOULDER WORK/2-LANE, 2-WAY EQL/LESS THAN 40 MPH

NO SCALE

NOTE:
SEE SHEET 6 FOR "FLAGGING OPERATION 1/-LANE, 2-WAY EQUAL/LESS THAN 40 MPH" DETAIL.

PRIVATE DRIVEWAY (EAST)

PRIVATE USE-IN-COMMON DRIVEWAY
DESIGN SPEED LIMIT = 15 M.P.H.



PROFILE

SCALE: HOR. : 1" = 50'
VER. : 1" = 5'

PRIVATE DRIVEWAY (WEST)

PRIVATE USE-IN-COMMON DRIVEWAY
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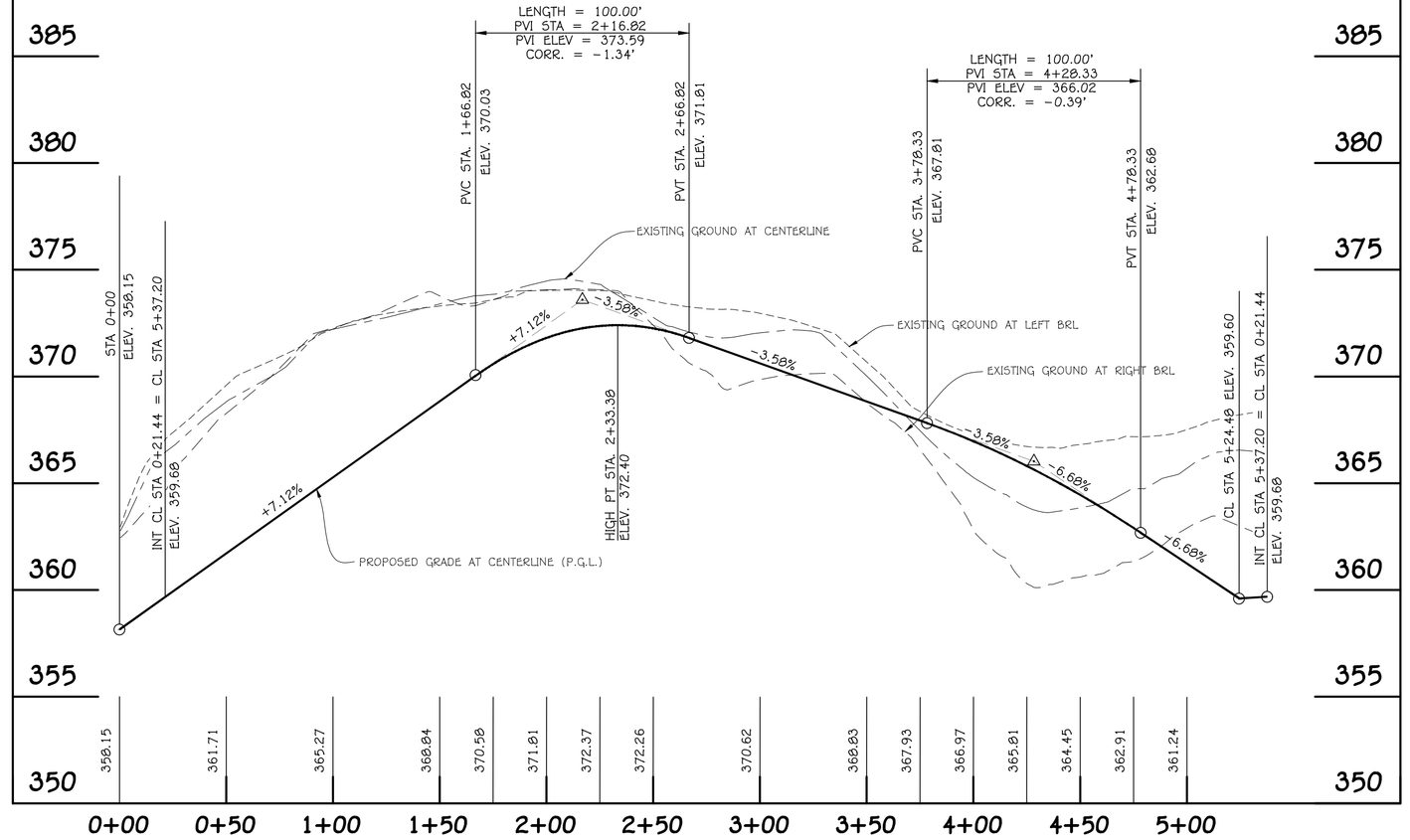

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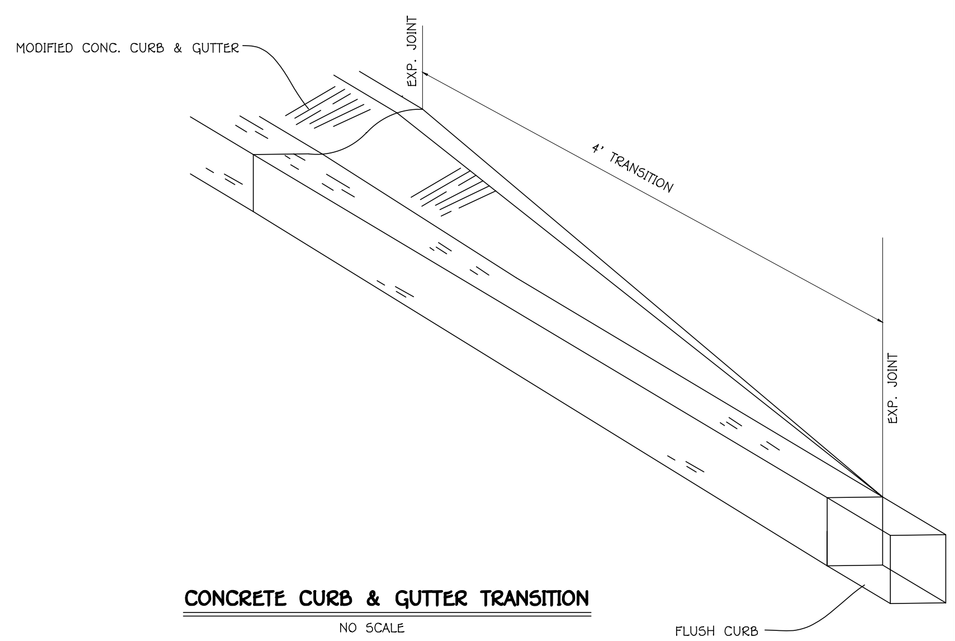

CONCRETE CURB & GUTTER TRANSITION

NO SCALE

FISHER, COLLINS & CARTER, INC.
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CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

Approved: Howard County Department Of Public Works

DocuSigned by: [signature] 5F2B5821AE4D4AC...

Chief, Bureau Of Highways — 9/11/2023 Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

DocuSigned by: Child Edmondson 70B3E754EE41469...

Chief, Development Engineering Division — 9/11/2023 Date

DocuSigned by: [signature] 4D7B4F8A0D9D4A4...

Chief, Division of Land Development — 9/13/2023 Date

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LEGEND	
SYMBOL	DESCRIPTION
352	EXISTING CONTOUR 2' INTERVAL
350	EXISTING CONTOUR 10' INTERVAL
	EXISTING SAN. SEWER LINE
	EXISTING STORM DRAIN LINE
	EXISTING WATER LINE
	EXISTING OVERHEAD ELECTRIC LINE
	EXISTING FENCE
352	PROPOSED CONTOUR 2' INTERVAL
350	PROPOSED CONTOUR 10' INTERVAL
+ 344.29	PROPOSED SPOT ELEVATION
	PROPOSED CONCRETE WALK
	EXISTING MACADAM PAVING
	EXISTING TREES
	EXISTING TREELINE
	PROPOSED TREELINE
8" W	PROPOSED PUBLIC WATER
18" RCCP	PROPOSED STORMDRAIN
8" S	PROPOSED PUBLIC SEWER
	SOILS DELINEATION
SSF	SUPER SILT FENCE
	FOREST CONSERVATION AREA
	RIPRAP OUTLET PROTECTION
	STEEP SLOPES 15% - 24.9%
	STEEP SLOPES 25.0% OR GREATER
TPF	TREE PROTECTION FENCE
SSF	DOUBLE ROW SUPER SILT FENCE
L.O.D.	LIMIT OF DISTURBANCE (L.O.D.)

NOTES:

1. FOR DRYWELL DETAIL SEE SHEET 10.
2. FOR TGOS SEE DETAIL SEE SHEET 10.

NOTE: SEE SHEET 24 FOR SEDIMENT BASIN #1 PROFILES & DETAILS

NOTE: SEE SHEET 11 FOR FINAL SWM CONVERSION

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.

Signature _____ P.E. No. _____

Date: _____

Certify Means To State Or Declare A Professional Opinion Based Upon Onsite Inspections And Material Tests Which Are Conducted During Construction. The Onsite Inspections And Material Tests Are Those Inspections And Tests Deemed Sufficient And Appropriate 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.

By The Developer:
"I/we Certify That All Development And/Or Construction Will Be Done According To These Plans, Registered Professional Engineer To Supervise Pond Construction And Provide The Howard Soil And That Any Responsible Personnel Involved In The Construction Project Will Have A Certificate Of Attendance At A Department Of The Environment Approved Training Program For The Control Of Sediment And Erosion Before Beginning The Project. I Shall Engage A Conservation District With An "As-Built" Plan Of The Pond Within 30 Days Of Completion. I Also Authorize Periodic On-Site Inspections By The Howard Soil Conservation District."

Jim Greenfield — 9/1/2023

Signature Of Developer — Date

Jim Greenfield

Printed Name Of Developer

By The Engineer:
"I Certify That This Plan For Pond Construction, Erosion And Sediment Control Represents A Practical And Workable Plan Based On My Personal Knowledge Of The Site Conditions. This Plan Was Prepared In Accordance With The Requirements Of The Howard Soil Conservation District. "As-Built" Plan Of The Pond Within 30 Days Of Completion." I Have Notified The Developer That He/She Must Engage A Registered Professional Engineer To Supervise Pond Construction And Provide The Howard Soil Conservation District With An

Aldo M. Vitucci, P.E. — 9/5/2023

Signature Of Engineer — Date

Aldo M. Vitucci, P.E.

Printed Name Of Engineer

These Plans For Small Pond Construction, Soil Erosion And Sediment Control Meet The Requirements Of The Howard Soil Conservation District.

DocuSigned by: Alexander Bratchie — 9/11/2023

Howard Soil Conservation District — Date

DESIGN CERTIFICATE

"I hereby certify that this plan has been designed in accordance with current Maryland erosion and sediment control laws, regulations, and standards, that it represents a practical and workable plan based on my personal knowledge of the site, and that it was prepared in accordance with the requirements of the Howard Soil Conservation District."

Aldo M. Vitucci, P.E. — 3/20/23

Designer's Signature — Date

ALDO MICHAEL VITUCCI — MD Registration No. 20748 (P.E.) R.L.S., or R.L.A. (circle one)

Printed Name

OWNER'S/DEVELOPER CERTIFICATE

"I/We hereby certify that any clearing, grading, construction, or development will be done pursuant to this approved erosion and sediment control plan, including inspecting and maintaining controls, and that the responsible personnel involved in the construction project will have a Certificate of Training at a Maryland Department of the Environment (MDE) approved training program for the control on erosion and sediment prior to beginning the project. I certify right-of-entry for periodic on-site evaluation by Howard County, the Howard Soil Conservation District and/or MDE."

Jim Greenfield — 9/5/2023

Owner's/Developer's Signature — Date

Jim Greenfield

Printed Name & Title

Approved: Howard County Department Of Public Works

DocuSigned by: [signature] — 9/11/2023

Chief, Bureau Of Highways — Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

DocuSigned by: Chad Edmondson — 9/11/2023

Chief, Development Engineering Division — Date

DocuSigned by: [signature] — 9/13/2023

Chief, Division of Land Development — Date

This development plan is approved for soil erosion and sediment control by the HOWARD SOIL CONSERVATION DISTRICT.

DocuSigned by: Alexander Bratchie — 9/11/2023

Howard Soil Conservation District. — Date

DATE	DESCRIPTION
	REVISIONS

"PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY 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. 20748, EXPIRATION DATE: 2-22-25."

STATE OF MARYLAND — ALDO MICHAEL VITUCCI — No. 20748 — PROFESSIONAL ENGINEER

Aldo M. Vitucci, P.E.

ALDO M. VITUCCI, P.E.

OWNERS
LACEY FAMILY REVOCABLE TRUST
1235 WILD ROSE COURT
MARRIOTTSVILLE, MD 21104
ATTN: MR. VINCENT LACEY

DEVELOPER
LAND HOLDINGS LLC
C\O B. JAMES GREENFIELD
6420 AUTUMN SKY WAY
COLUMBIA, MD 21044
443-324-4732

PROJECT			SECTION/AREA		PARCEL
LACEY PROPERTY			N/A		13
PLAT NOS.	BLOCK NO.	ZONE	TAX MAP	ELEC. DIST.	CENSUS TR.
-	1	R-ED	25	SECOND	602900

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

GRADING & SEDIMENT CONTROL PLAN

LACEY PROPERTY
LOTS 1 THRU 13 AND OPEN SPACE LOTS 14 THRU 17

ZONED: R-ED
PARCEL No.: 13
TAX MAP No.: 25 GRID No.: 1
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: JULY 10, 2023
SHEET 5 OF 24

F-21-015

SCALE: 1" = 30'

DocuSign Envelope ID: 79E9DBFB-CDDB-4FF4-A258-614B911C4A9B

FINAL ROAD CONSTRUCTION, GRADING AND STORMWATER MANAGEMENT PLANS

LACEY PROPERTY

LOTS 1 THRU 13 AND OPEN SPACE LOTS 14 THRU 17

SHEET INDEX

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	DEMOLITION PLAN
3	MILL CREEK WAY PLAN, PROFILE AND DETAILS
4	PRIVATE USE-IN-COMMON DRIVEWAY PROFILES AND DETAILS
5	GRADING & SEDIMENT CONTROL PLAN
6	SEDIMENT AND EROSION CONTROL NOTES & DETAILS
7	SEDIMENT AND EROSION CONTROL NOTES, DETAILS AND BORING LOGS
8	STORMWATER MANAGEMENT NOTES & DETAILS
9	STORMWATER MANAGEMENT PLAN VIEWS, PROFILES & DETAILS – MICRO BIO-RETENTION #1
10	STORMWATER MANAGEMENT PLAN VIEWS, PROFILES & DETAILS – MICRO BIO-RETENTION #2
11	STORMWATER MANAGEMENT PLAN & PROFILES – POND #1
12	STREET TREE & LANDSCAPE PLAN
13	MICRO BIO-RETENTION PLANTING PLANS, LANDSCAPING NOTES, DETAILS & SPECIFICATIONS
14	STORM DRAIN PROFILES
15	STORM DRAIN DRAINAGE AREA & SOILS MAP
16	PARTIAL PLAN
17	NORTH WALL ELEVATIONS
18	NORTH WALL SECTIONS
19	NORTH WALL SECTIONS
20	NORTH WALL SECTIONS
21	TYPICAL DETAILS
22	GENERAL NOTES & TYPICAL DETAILS
23	FOREST CONSERVATION PLAN
24	TSWM – BASIN #1 PROFILES AND DETAILS

TRAFFIC CONTROL SIGNS

ROAD NAME	CENTERLINE STA.	OFFSET	POSTED SIGN	SIGN CODE
MILL CREEK WAY	0+22	21.3'R	STREET SIGN & NO OUTLET SIGN	SNS & W14-2a
	0+25	18'L	STOP	R1-1
	0+75	14'R	SPEED LIMIT 25 M.P.H.	R2-1
	1+72.3	38.8'L&R	RANGE OF ADDRESS SIGNS	–

STREET LIGHT CHART

STREET NAME	STATION	OFFSET	FIXTURE/POLE TYPE
MILL CREEK WAY	0+18	22'R	100 watt LED-150 COLONIAL POST-TOP FIXTURE MOUNTED ON A 14' BLACK FIBERGLASS POLE
	1+91.34	2' BEHIND CURB	

ROADWAY INFORMATION CHART

ROAD NAME	CLASSIFICATION	DESIGN SPEED	POSTED SPEED LIMIT	R/W WIDTH
MILL CREEK WAY	PUBLIC ACCESS PLACE	25 M.P.H.	25 M.P.H.	50'

STORMWATER MANAGEMENT PRACTICES

LOT No.	MICRO BIO-RETENTION M-6 (NUMBER)	SAND FILTER F-1 (NUMBER)	DRY WELLS M-5 (NUMBER)
O.S. 14	YES – (2)	YES – (1)	NO
1	NO	NO	YES – (3)
2	NO	NO	YES – (4)
3	NO	NO	YES – (3)
4	NO	NO	YES – (3)
5	NO	NO	YES – (3)
6	NO	NO	YES – (3)
7	NO	NO	YES – (3)
8	NO	NO	YES – (3)
9	NO	NO	YES – (2)
10	NO	NO	YES – (2)
11	NO	NO	YES – (2)
12	NO	NO	YES – (3)
13	NO	NO	YES – (3)

SWM NOTE: SINCE THE SP-15-013 PLAN WAS APPROVED PRIOR TO THE APPROVAL OF C.B. No. 80-2016, THIS PROJECT IS EXEMPT FROM THE REQUIREMENTS OF THAT BILL TO PROVIDE ADDITIONAL REDUCTION IN PEAK RUNOFF. CONSERVATIVE DESIGN HAS PROVIDED A 16.5% REDUCTION AND 8.50% REDUCTION AS A BONUS CREDIT.

SWM DRAINAGE AREA SUMMARY TABLE (Proposed Conditions)

Drainage Area	Area (ac+/-)	RCN	T/C (hrs.)	100-Year Peak Q	E.C. Peak Q	Remarks
A	1.81	61	0.22	5.82	9.18	Bypass Area
A-1	4.32	70	0.18	23.29 in/13.67 out @340.78	31.63 in/23.87 out @341.39	Pocket Sand Filter
A-2	0.76	77	0.12	4.36 in/4.33 out @356.41	7.32 in/7.28 out @356.49	Bio #1
B	0.92	69	0.11	4.57	7.24	Bypass Area
B-1	0.37	77	0.18	1.90 in/1.31 out @361.64	3.26 in/2.91 out @361.82	Bio #2
D.P.#1 Total				* 22.00	* 37.72	Total @ D.P.#1 (EC watershed)
C	1.03	70	0.12	5.13	8.19	Total @ D.P.#2 (Sucker Branch)

SWM DRAINAGE AREA SUMMARY TABLE (Existing Conditions)

Drainage Area	Area (ac+/-)	RCN	T/C (hrs.)	100-Year Peak Q	E.C. Peak Q	Remarks
A	6.58	61	0.21	21.6	34.04	
B	1.33	60	0.1	5.25	7.7	
D.P.#1 Total				* 25.64	* 40.91	Total @ D.P.#1
C	0.8	60	0.1	3.16	4.63	Total @ D.P.#2
				16.50%	8.50%	% Decrease @ D.P.#1

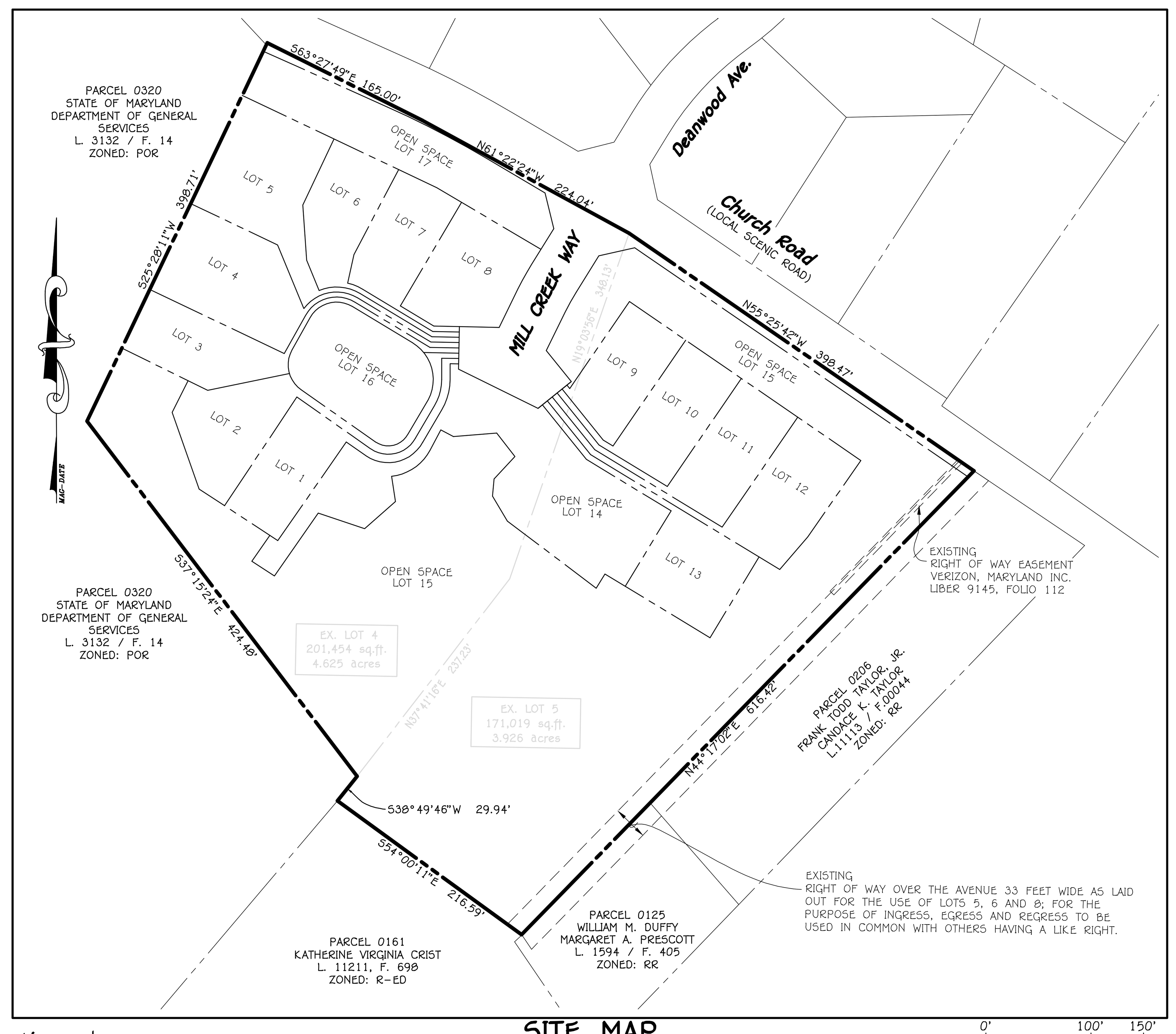
* THESE PEAK FLOW VALUES ARE REFLECTIVE OF THE TR-20 PROGRAM OUTPUT. THE PROGRAM ADDS VARIOUS HYDROGRAPHS TOGETHER TO PRODUCE A VALUE WHICH IS NOT THE SAME AS THE MATH ADDITION OF EACH AREAS PEAK VALUE.

COMMUNITY MEETINGS

NO.	DATE	LOCATION	PRESUBMISSION COMMUNITY MEETING (Y/N)
1	APRIL 30, 2013	MILLER BRANCH LIBRARY	YES
2	JUNE 11, 2014	HOWARD COUNTY GEORGE HOWARD BLDG	YES
3 *	JULY 28, 2014	HOWARD COUNTY GEORGE HOWARD BLDG	NO, CHARRETTE
4 *	AUGUST 26, 2014	HOWARD COUNTY GEORGE HOWARD BLDG	NO, GENERAL MEETING
5 **	SEPTEMBER 2, 2014	DW TAYLOR ASSOCIATES, INC.	NO, MEETING WITH A COMMUNITY REPRESENTATIVE
6 *	SEPTEMBER 22, 2014	HOWARD COUNTY GEORGE HOWARD BLDG	NO, GENERAL MEETING
7 **	NOVEMBER 13, 2014	DW TAYLOR ASSOCIATES, INC.	NO, MEETING WITH TWO COMMUNITY REPRESENTATIVES
8	JULY 13, 2015	HOWARD COUNTY GEORGE HOWARD BLDG	YES

* CHARRETTE AND GENERAL COMMUNITY MEETINGS WERE HELD WITH THE COMMUNITY AS A MEANS OF INFORMING THE COMMUNITY OF DESIGN PROGRESS AS WELL AS TO SOLICIT IDEAS / REQUEST CHANGES TO DESIGN CONCEPTS.

** MEETINGS WERE HELD WITH COMMUNITY REPRESENTATIVES SELECTED BY THE COMMUNITY DURING THE CHARETTE / GENERAL COMMUNITY MEETINGS TO FURTHER THE COMMUNITY INPUT AT A MORE FINITE DESIGN LEVEL. THE COMMUNITY REPRESENTATIVES WERE A RETIRED LAND PLANNER AND LANDSCAPE ARCHITECT FROM ELLICOTT CITY.



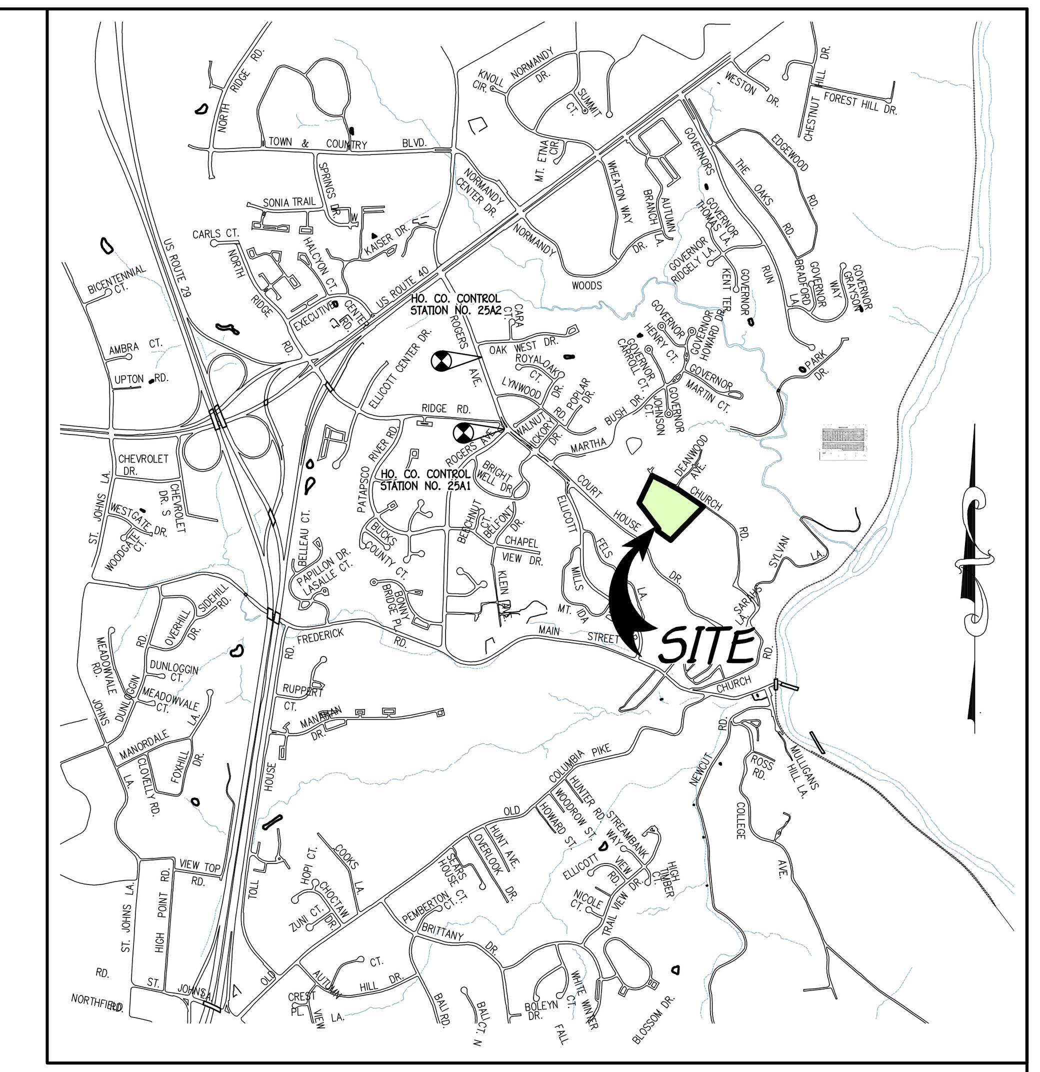
SITE MAP

SCALE: 1" = 100'

0' 100' 150' 200'
Scale: 1" = 100'

LEGEND

SYMBOL	DESCRIPTION
--- 352 ---	EXISTING CONTOUR 2' INTERVAL
— 350 —	EXISTING CONTOUR 10' INTERVAL
— s —	EXISTING SAN. SEWER LINE
— D —	EXISTING STORM DRAIN LINE
- - - -	EXISTING WATER LINE
— OHE —	EXISTING OVERHEAD ELECTRIC LINE
— X —	EXISTING FENCE
— 352 —	PROPOSED CONTOUR 2' INTERVAL
— 350 —	PROPOSED CONTOUR 10' INTERVAL
+ 344.29	PROPOSED SPOT ELEVATION
	PROPOSED CONCRETE WALK
	PROPOSED MACADAM PAVING
	EXISTING TREES
	EXISTING TREELINE
	PROPOSED TREELINE
8" W	PROPOSED PUBLIC WATER
18" RCCP	PROPOSED STORMDRAIN
8" S	PROPOSED PUBLIC SEWER
	SOILS DELINEATION
— SSF —	SUPER SILT FENCE
	FOREST CONSERVATION AREA
	RIPRAP OUTLET PROTECTION
	DEMOLITION
	STEEP SLOPE TO BE REMOVED
	STEEP SLOPES 15% – 24.9%
	STEEP SLOPES 25.0% OR GREATER



VICINITY MAP

SCALE: 1" = 2000'

HO. CO. MD. ADC MAP 21, GRID B7

GENERAL NOTES

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS IF APPLICABLE.
2. THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS / BUREAU OF ENGINEERING / CONSTRUCTION INSPECTION DIVISION AT 410-313-1880 AT LEAST (5) WORKING DAYS PRIOR TO THE START OF WORK.
3. THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.
4. THIS SUBDIVISION PLAN IS SUBJECT TO THE AMENDED FIFTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS AND THE 10-06-13 ZONING REGULATIONS PER COUNCIL BILL NO. 32-2013. DEVELOPMENT OR CONSTRUCTION ON THESE LOTS OR PARCELS MUST COMPLY WITH SETBACKS AND BUFFER REGULATIONS IN EFFECT AT THE TIME OF SUBMISSION OF A BUILDING OR GRADING PERMIT APPLICATION.
5. COORDINATES BASED ON NAD'83 MARYLAND COORDINATE SYSTEM AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS NO. 25A1 AND NO. 25A2
   HO. CO. CONTROL STATION #25A1 – HORIZONTAL – NAD '83) N 586,557.549 E 1,366,847.099 ELEVATION = 396.343 (NAVD '88)
   HO. CO. CONTROL STATION #25A2 – HORIZONTAL – (NAD '83) N 587,502.730 E 1,366,556.378 ELEVATION = 348.145 (NAVD '88)
6. SUBJECT PROPERTY IS ZONED R-ED PER 10/06/2013 COMPREHENSIVE ZONING PLAN.
7. BACKGROUND INFORMATION:
   a. SUBDIVISION NAME: LACEY PROPERTY
   b. TAX MAP NO.: 25
   c. PARCEL NO.: 13
   d. ZONING: R-ED
   e. ELECTION DISTRICT: SECOND
   f. GROSS AREA OF THIS SUBMISSION = 8.551 AC.±
   g. NUMBER OF BUILDABLE LOTS: 13
   h. NUMBER OF OPEN SPACE LOTS: 4
   i. AREA OF BUILDABLE LOTS: 2.876 AC.±
   j. AREA OF OPEN SPACE LOTS: 5.277 AC.±
   k. AREA OF PUBLIC ROADWAY TO BE DEDICATED: 0.398 AC.±
   l. PREVIOUS FILE NUMBERS: ECP-15-044, WP-16-022, SP-15-013, PB CASE 418, HPC-15-78, HPC-16-06 (a), HPC-16-06 (b) & HPC-18-061 (SEE G.N. #35).
   m. AREA OF FLOODPLAIN = 0.00 AC.
   n. AREA OF 25% OR GREATER SLOPES = 1.35 AC.±
   o. NET AREA OF SUBMISSION = 7.201 AC.±
8. OPEN SPACE REQUIRED: 8.551 AC. X 0.50% = 4.276 AC.±
   OPEN SPACE PROVIDED: 5.277 AC.±
   RECREATIONAL OPEN SPACE REQUIRED FOR PROJECT TOTAL = (300 SQ.FT. PER UNIT) = 3,900 SQ.FT.
   PROVIDED RECREATIONAL OPEN SPACE (LOT 16) = 3,900 SQ.FT.
9. ALL FILL AREAS WITHIN ROADWAYS AND UNDER STRUCTURES SHALL BE COMPACTED TO A MINIMUM OF 95% COMPACTION OF AASHTO T-180.
10. NO NOISE STUDY IS REQUIRED FOR THIS PROJECT.
11. PROPERTY IS LOCATED WITHIN THE METROPOLITAN DISTRICT. WATER AND SEWER IS PUBLIC, CONTRACT NO. 14-4913-D. EXISTING SEPTIC SYSTEM TO BE ABANDONED IN ACCORDANCE WITH HEALTH DEPARTMENT REQUIREMENTS. EXISTING UTILITIES ARE BASED ON FIELD LOCATION OF MISS UTILITY MARKINGS AS A PART OF THE TOPOGRAPHIC SURVEY.
12. SOILS ARE BASED ON THE NRCS WEBSOIL SURVEY AND HOWARD COUNTY SOIL MAP 12.
13. BOUNDARY SHOWN HEREON IS BASED ON A FIELD RUN MONUMENTED BOUNDARY SURVEY DATED AUGUST, 2014. THE EXISTING TOPOGRAPHY IS TAKEN FROM FIELD RUN SURVEY WITH MAXIMUM TWO FOOT CONTOUR INTERVALS PREPARED BY FISHER, COLLINS & CARTER, INC. DATED SEPTEMBER 2013 AND SUPPLEMENTED BY HOWARD COUNTY GIS TOPOGRAPHY.
14. EXISTING STRUCTURES ON-SITE, OUT BUILDINGS AND SWIMMING POOL HAVE ALL BEEN REMOVED UNDER DEMOLITION PERMIT NUMBER B-18003545 DATED FEBRUARY 7, 2019.
15. THERE ARE NO WETLANDS ON THIS SITE PER INVESTIGATION BY ECO-SCIENCE PROFESSIONALS, INC. DATED SEPTEMBER, 2014.
16. A WETLAND DELINEATION & FOREST STAND DELINEATION REPORT FOR THIS PROJECT DATED SEPTEMBER 2014 PREPARED BY ECO-SCIENCE PROFESSIONALS AND APPROVED UNDER SP-15-013.
17. STEEP SLOPES, STREAM AND ITS BUFFERS EXIST ON-SITE.
18. NO 100 YEAR FLOODPLAIN, CEMETERIES, NOR GRAVESITES EXIST ON THE PROPERTY.
19. NO CLEARING, GRADING, REMOVAL OF VEGETATIVE COVER OR TREES, PAVING AND NEW STRUCTURES SHALL BE PERMITTED WITHIN THE LIMITS OF STREAM BUFFERS AND FOREST CONSERVATION EASEMENT AREAS.
20. THE TRAFFIC STUDY FOR THIS PROJECT WAS PREPARED BY MARS GROUP IN JUNE 2015, AND WAS APPROVED ON DECEMBER 21, 2015.
21. SITE HAS FRONTAGE ON CHURCH ROAD, A COUNTY, LOCAL, SCENIC ROAD.
22. EXCAVATIONS TO VERIFY DEPTH TO ROCK AND WATER WERE CONDUCTED ON JUNE 8, 2015.
23. DESIGN MANUAL WAIVER TO ALLOW 9 LOTS (8 BUILDABLE AND 1 OPEN SPACE) ON A USE-IN-COMMON DRIVEWAY WAS APPROVED ON OCTOBER 5, 2015 AND IS SUBJECT TO THE FOLLOWING CONDITIONS:
    1. THE MINIMUM WIDTH OF THE USE-IN-COMMON DRIVEWAY SHOULD INCREASE TO 20 FEET DUE TO ITS CURVATURE.
    2. PROVIDE FLUSH CURB AND GUTTER ALONG THE USE-IN-COMMON DRIVEWAY.
24. STORM WATER MANAGEMENT IS IN ACCORDANCE WITH THE M.D.E. STORM WATER DESIGN MANUAL, VOLUMES I & II, REVISED 2009. NON-STRUCTURAL PRACTICES (MICRO BIO-RETENTION FACILITIES (M-6) AND DRYWELLS (M-5)) IN ACCORDANCE WITH CHAPTER 5 ARE BEING UTILIZED. 100 YEAR MANAGEMENT AND THE 3.55 HR / 6.6 IN STORM EVENT ARE BEING PROVIDED IN THE PROPOSED POCKET SAND FILTER.
25. THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. FINANCIAL SURETY FOR THE REQUIRED 26 SHADE, 5 EVERGREEN TREES & 7 SHRUBS (PROVIDED 19 SHADE, 6 ORNAMENTAL, 11 EVERGREEN & 7 SHRUBS) HAS BEEN POSTED AS PART OF THE DEVELOPER'S AGREEMENT IN THE AMOUNT OF $8,460.00.
26. THE FOREST CONSERVATION REQUIREMENTS PER SECTION 16.1200 OF THE HOWARD COUNTY CODE AND THE FOREST CONSERVATION MANUAL FOR THIS SUBDIVISION HAS BEEN FULFILLED BY PROVIDING 2.916 AC.± OF ON-SITE FOREST RETENTION. NO SURETY IS REQUIRED FOR RETENTION. A DEED OF FOREST CONSERVATION EASEMENT AND AGREEMENT WILL BE EXECUTED SIMULTANEOUSLY WITH THE DPW DEVELOPER AGREEMENT.
27. WAIVER PETITION, WP-16-022, REQUESTING A WAIVER FROM HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS SPECIFICALLY SECTION 16.1205(A)(7) FOREST RETENTION PRIORITIES – RETENTION OF SPECIMEN TREES, SECTION 16.116(B)(1) STATING THAT GRADING, REMOVAL OF VEGETATIVE COVER AND TREES, NEW STRUCTURES, AND PAVING SHALL NOT BE PERMITTED ON LAND WITH EXISTING STEEP SLOPES IN AREAS GREATER THAN 20,000 SQ.FT. IS SIZE, SECTION 16.134(A)(1)(I) SIDEWALKS ARE REQUIRED ON ONLY ONE SIDE OF CUL-DE-SACS AND LOCAL STREETS OF SINGLE-FAMILY DETACHED SUBDIVISIONS, AND SECTION 16.125(B)(1)(II)&(2) REQUIRING MINIMIZATION OF TREE AND VEGETATION REMOVAL ALONG A SCENIC ROAD AND REQUIRING RETENTION OF FOREST OR WOODED AREAS OF 35-FOOT IN WIDTH, HAS BEEN APPROVED ON DEC. 5, 2016. APPROVAL OF WP-16-022 IS SUBJECT TO THE FOLLOWING CONDITIONS:
    a. COMPLIANCE WITH SRC COMMENTS FOR SP-15-013 AND PLANNING BOARD APPROVAL OF THE PROPOSED SUBDIVISION PLAN DESIGN, LAYOUT AND LOCATION OF LOTS, ROADS AND SHARED DRIVEWAYS.
    b. NO ADDITIONAL DISTURBANCE OR GRADING SHALL OCCUR BEYOND THE LIMIT OF DISTURBANCE (L.O.D.) OF THE 25% STEEP SLOPES THAT ARE DETAILED ON THE PRELIMINARY GRADING PLAN AND AS APPROVED BY THE PLANNING BOARD, UNLESS IT CAN BE SUFFICIENTLY DEMONSTRATED TO BE WARRANTED OR JUSTIFIED BY THE APPLICANT.
    c. THE AFFECTED STEEP SLOPE AREAS WHERE THE BUILDING LOTS ARE PLANNED MUST BE SUFFICIENTLY STABILIZED WITH RETAINING WALL AND/OR SOIL STABILIZATION DEVICES/METHODS THAT SHALL LESSEN THE ERODIBILITY OF SOILS AND RUNOFF. THE IMPACTED STEEP SLOPE AREAS MUST BE REVEGETATED OR STABILIZED WITH SUITABLE NATIVE SPECIES THAT WILL BIND THE SURFACE TIGHTLY. THESE STABILIZATION TECHNIQUES MUST BE CLEARLY DEMONSTRATED ON BOTH THE ROAD CONSTRUCTION DRAWINGS (WITH THE FINAL PLAT) AND THE SITE DEVELOPMENT PLAN.
    d. THE REMOVAL OF THE EIGHT (8) SPECIMEN TREES WILL REQUIRE MITIGATION WITH THE PLANTING OF 2:1 REPLACEMENT TREES (16 TOTAL) WITH A MINIMUM 3" CALIPER NATIVE PLANT SPECIES. THE REPLACEMENT TREES SHALL BE BONDED AND SHOWN ON THE LANDSCAPE PLAN WITH THE FORTHCOMING FINAL PLAN.
    e. THE REMAINING 35 SPECIMEN TREES SHALL BE SAVED AND PROTECTED DURING CONSTRUCTION ACTIVITY. ANY ADDITIONAL REMOVAL OF SPECIMEN TREES SHALL REQUIRE THE SUBMITTAL OF A NEW ALTERNATIVE COMPLIANCE PETITION APPLICATION.
    f. PROVIDE TREE PROTECTION FENCING AT THE TREES DRIP LINE, OR FARTHER OUT, TO PREVENT TREE DAMAGES FROM EXCAVATION, SOIL COMPACTION OF SOIL OVER ROOTS. THESE PROTECTION TECHNIQUES MUST BE DEMONSTRATED ON BOTH THE ROAD CONSTRUCTION DRAWINGS (WITH THE FINAL PLAT) AND THE SITE DEVELOPMENT PLAN.
    g. COMPLIANCE WITH THE CERTIFICATE OF APPROVAL ISSUED BY THE HISTORIC PRESERVATION COMMISSION FOR DEVELOPMENT OF THIS PROPERTY.
    h. THE CONSTRUCTION OF THE NEW HOUSES FACING TOWARDS CHURCH ROAD SHALL BE ADEQUATELY SCREENED USING BERMS, ENHANCED LANDSCAPING AND HOUSE SITING TO MINIMIZE IMPACTING THE NATURAL SETTING ALONG THE SCENIC ROAD. THIS CONDITION WILL BE EVALUATED FURTHER AT THE SITE DEVELOPMENT PLAN STAGE.
    i. PROVIDE A NOTE ON THE SP PLAN, THE FINAL PLAT AND THE SITE DEVELOPMENT PLAN REGARDING THIS ALTERNATIVE COMPLIANCE PETITION APPROVAL. THIS NOTE SHALL INCLUDE THOSE SUBDIVISION REGULATION SECTIONS PETITIONED, THE DATE OF THE ALTERNATIVE COMPLIANCE APPROVAL, AND THE CONDITIONS OF APPROVAL.
28. TRASH AND RECYCLABLES COLLECTION WILL BE AT MILL CREEK WAY WITHIN 5' OF THE COUNTY ROADWAY.
29. TWO PRIVATE RANGE OF ADDRESS SIGN ASSEMBLIES SHALL BE FABRICATED AND INSTALLED BY HOWARD COUNTY BUREAU OF HIGHWAYS AT THE DEVELOPERS/OWNERS EXPENSE. CONTACT HOWARD COUNTY TRAFFIC DIVISION AT 410-313-5752 FOR DETAILS AND COST ESTIMATE.
30. SUBDIVISION IS REQUIRED TO PROVIDE M.I.H.U. (MODERATE INCOME HOUSING UNIT). IT IS ANTICIPATED AT THIS TIME THAT A FEE-IN-LIEU WILL BE PAID. MIHU AGREEMENT WILL BE SUBMITTED WITH THIS FINAL PLAN OUTLINING HOW THE MIHU REQUIREMENT WILL BE MET.
    A. M.I.H.U. REQUIRED = 1.2 M.I.H.U.
       (12 LOTS X 10% M.I.H.U./LOT)
    B. ONE UNIT IS EXEMPT FROM MIHU REQUIREMENTS. (ONE EXISTING LOT)
31. STREET LIGHTS WILL BE REQUIRED IN THIS DEVELOPMENT IN ACCORDANCE WITH THE DESIGN MANUAL STREET LIGHT PLACEMENT AND THE TYPE OF FIXTURE AND POLE SELECTED SHALL BE IN ACCORDANCE WITH THE LATEST HOWARD COUNTY DESIGN MANUAL, VOLUME III (1993) AND AS MODIFIED BY "GUIDELINES FOR STREET LIGHTS IN RESIDENTIAL DEVELOPMENTS (JUNE 1993)." THE JUNE 1993 POLICY INCLUDES GUIDELINES FOR LATERAL AND LONGITUDINAL PLACEMENT. A MINIMUM SPACING OF 20' SHALL BE MAINTAINED BETWEEN ANY STREET LIGHT AND ANY TREE.
32. PLAN IS SUBJECT TO PLANNING BOARD APPROVAL ON NOVEMBER 17, 2016 AND SIGNED DECISION & ORDER ON MARCH 2, 2017, IN ACCORDANCE WITH SECTION 107.0 OF THE ZONING REGULATIONS.
33. THIS SUBDIVISION IS SUBJECT TO THE PROTECTION OF SCENIC ROADS, PER SECTION 16.125 OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS.

GENERAL NOTES continued

34. TRAFFIC CONTROL DEVICES:
    (a) THE R1-1 ("STOP") SIGN, R2-1 ("SPEED LIMIT 25"), W14-2A (NO OUTLET), AND THE STREET NAME SIGN (SNS) ASSEMBLY FOR THIS DEVELOPMENT MUST BE INSTALLED BEFORE THE BASE PAVING IS COMPLETED.
    (b) THE TRAFFIC CONTROL DEVICE LOCATIONS SHOWN ON THE PLANS ARE APPROXIMATE AND MUST BE FIELD APPROVED BY HOWARD COUNTY TRAFFIC DIVISION (410-313-2430) PRIOR TO THE INSTALLATION OF ANY OF THE TRAFFIC CONTROL DEVICES.
    (c) ALL TRAFFIC CONTROL DEVICES AND THEIR LOCATIONS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE "MARYLAND MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MDMUTCD).
    (d) ALL SIGN POSTS USED FOR TRAFFIC CONTROL SIGNS INSTALLED IN THE COUNTY RIGHT-OF-WAY SHALL BE MOUNTED ON A 2" GALVANIZED STEEL, PERFORATED ("QUICK PUNCH"), SQUARE TUBE POST (14 GAUGE) INSERTED INTO A 2-1/2" GALVANIZED STEEL, PERFORATED, SQUARE TUBE SLEEVE (12 GAUGE) -3' LONG. THE ANCHOR SHALL NOT EXTEND MORE THAN TWO "QUICK PUNCH" HOLES ABOVE GROUND LEVEL. A GALVANIZED STEEL POLE CAP SHALL BE MOUNTED ON TOP OF EACH POST.
35. ON APRIL 4, 2013 AND NOVEMBER 6, 2014, THE HISTORIC PRESERVATION COMMISSION (HPC) PROVIDED ADVISORY COMMENTS ON THE PROPOSED SUBDIVISION/SITE DEVELOPMENT PLAN IN CASES HDC-13-17 AND HPC-14-82. ON DECEMBER 3, 2015, THE HPC APPROVED THE DEMOLITION OF THE EXISTING STRUCTURES IN CASE HPC-15-78. THE REQUEST FOR TREE REMOVAL AND RETAINING WALL CONSTRUCTION WAS WITHDRAWN FROM THE HPC-15-78 APPLICATION. THE TREE REMOVAL AND RETAINING WALL CONSTRUCTION WAS RESUBMITTED FOR APPROVAL AND THE CONSTRUCTION OF THE RETAINING WALLS WAS APPROVED WITH CONDITIONS ON FEBRUARY 4, 2016 IN CASE HPC-16-06a. THE REQUEST FOR TREE REMOVAL WAS CONTINUED TO MARCH 3, 2016 AND APPROVED WITH AMENDMENTS IN CASE HPC-16-06b. ON DECEMBER 6, 2018, CASE No. HPC-18-61 WAS HELD TO REINSTATE THE PREVIOUS CASE No. HPC-15-078 AND HPC-16-06 (a) & (b). HOWEVER, SINCE THE APPROVED PROJECT (SP-15-013) HAD BEEN ON HOLD DUE TO COUNTY APFO REGULATIONS, IT HAS BEEN DETERMINED THAT THE REINSTATEMENT CASE HPC-18-61 IS NOT REQUIRED IF THE PROJECT CONTINUES WITHIN THE PLAN REVIEW PROCESS POST SP-15-013 AND THIS PLAN.
36. IN ACCORDANCE WITH SECTION 16.128 OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS, PRE-SUBMISSION COMMUNITY MEETINGS WERE HELD ON APRIL 3, 2013, JUNE 11, 2014, AND JULY 13, 2015 FOR THE DEVELOPER TO PROVIDE INFORMATION TO THE COMMUNITY REGARDING THE PROPOSED INITIAL PLAN SUBMITTAL AND TO ALLOW COMMUNITY RESIDENTS TO ASK QUESTIONS AND TO MAKE COMMENTS.
37. THE HOWARD COUNTY PLANNING BOARD SIGNED THE DECISION & ORDER GRANTING APPROVAL OF THE SP PLAN ON MARCH 2, 2017. BASED UPON THAT APPROVAL, DPZ HEREBY GRANTS TENTATIVE ALLOCATIONS FOR 12 HOUSING UNITS FOR THIS SUBDIVISION YEAR 2019.
38. THIS PROPERTY IS LOCATED WITHIN THE ELLICOTT CITY HISTORIC DISTRICT.
39. DRIVEWAYS SHALL BE PROVIDED PRIOR TO RESIDENTIAL OCCUPANCY TO ENSURE SAFE ACCESS FOR FIRE AND EMERGENCY VEHICLES PER THE FOLLOWING (MINIMUM) REQUIREMENTS:
    a. WIDTH – 12 FEET (16 FEET SERVING MORE THAN ONE RESIDENCE)
    b. SURFACE – SIX (6") INCHES OF COMPACTED CRUSHER RUN BASE WITH TAR AND CHIP COATING.
    c. GEOMETRY – MAXIMUM 15% GRADE, MAXIMUM 10% GRADE CHANGE AND MINIMUM OF 45 TURNING RADIUS.
    d. STRUCTURES (CULVERTS/BRIDGES) CAPABLE OF SUPPORTING 25 GROSS TONS (H 25 LOADING).
    e. DRAINAGE ELEMENTS – CAPABLE OF SAFELY PASSING 100 YEAR FLOOD WITH NO MORE THAN 1 FOOT DEPTH OVER DRIVEWAY SURFACE.
    f. STRUCTURE CLEARANCES – MINIMUM 12 FEET.
    g. MAINTENANCE – SUFFICIENT TO INSURE ALL WEATHER USE.
40. AN EXISTING (EASEMENT) "RIGHT OF WAY OVER THE AVENUE 33 FEET IN WIDTH, 16.5 FEET OF WHICH IS LOCATED ON THIS PROPERTY, WAS LAID OUT FOR THE USE OF LOTS 5, 6 AND 8; SAID RIGHT OF WAY TO BE FOR THE PURPOSE OF INGRESS, EGRESS AND REGRESS TO BE USED IN COMMON WITH OTHERS HAVING A LIKE RIGHT UNDER THE EXISTING PROPERTY DEED." THIS EASEMENT IS FOR THE BENEFIT OF LYNWOOD FARM, LOT 5 WHICH IS THE SECOND PARCEL IN DEED FOR THIS SUBDIVISION, LOT 6 WHICH IS MADE UP OF CURRENT PARCELS 206 & 125, AND LOT 8 WHICH IS PARCEL 161. EASEMENT IS REFERENCE IN CURRENT DEED FOR THE PROPERTY UNDER LIBER 8317, FOLIO 657.
41. THIS SUBDIVISION IS NOT SUBJECT TO COUNCIL BILL 76-2018 (ELECTRIC VEHICLE CHARGING STATIONS) BECAUSE THE PRELIMINARY EQUIVALENT SKETCH PLAN FOR THIS SUBDIVISION WAS SIGNED PRIOR TO THE BILL'S EFFECTIVE DATE OF JAN. 11, 2019.
42. THIS FINAL PLAN IS NOT SUBJECT TO COUNCIL BILLS 61-2019, 62-2019 AND 63-2019 BECAUSE THE PRELIMINARY SKETCH PLAN (SP-15-013) WAS SIGNED ON APRIL 11, 2017 WHICH IS PRIOR TO THE FEBRUARY 5, 2020 ENACTMENT DATE OF THESE BILLS, PER SECTION 16.102(h)(1) OF THE SUBDIVISION REGULATIONS.
43. WATERSHEDS: 0.95 AC TO THE SUCKER BRANCH TO THE PATAPSCO RIVER LOWER NORTH BRANCH (02130906) AND 7.60 AC TO UNNAMED TRIBUTARY OF THE HUDSON BRANCH TO THE PATAPSCO RIVER LOWER NORTH BRANCH (02130906).
44. THIS PLAN PROVIDES 16 REPLACEMENT TREES FOR THE REMOVAL OF 8 SPECIMEN TREES PER WP-16-022.
45. PUBLIC STREET TREES ARE PROVIDED IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. FINANCIAL SURETY FOR THE REQUIRED 30 STREET TREES IN THE AMOUNT OF $9,000.00 SHALL BE COLLECTED WITH THE DEPARTMENT OF PUBLIC WORKS COST ESTIMATE.

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK – 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 – 2855

Approved: Howard County Department of Public Works — 9/11/2023
Chief, Bureau Of Highways — Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
DocuSigned by: CHAD Edmondson — 9/11/2023
Chief, Development Engineering Division — Date
DocuSigned by: — 9/13/2023
Chief, Division of Land Development — Date

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT.
DocuSigned by: Michael J. Davis — 9/12/2023
COUNTY HEALTH OFFICER — DATE

DATE	DESCRIPTION
	REVISIONS

"PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY 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. 20748, EXPIRATION DATE: 2-22-25."

STATE OF MARYLAND – ALDO MICHAEL VITUCCI – No. 20748 – PROFESSIONAL ENGINEER

Aldo M. Vitucci, P.E.
ALDO M. VITUCCI, P.E.

OWNERS
LACEY FAMILY REVOCABLE TRUST
1235 WILD ROSE COURT
MARRIOTTSVILLE, MD 21104
ATTN: MR. VINCENT LACEY

DEVELOPER
LAND HOLDINGS LLC
C\O B. JAMES GREENFIELD
6420 AUTUMN SKY WAY
COLUMBIA, MD 21044
443-324-4732

PROJECT			SECTION/AREA		PARCEL	
LACEY PROPERTY			N/A		13	
PLAT NOS.	BLOCK NO.	ZONE	TAX MAP	ELEC. DIST.	CENSUS TR.	
–	1	R-ED	25	SECOND	602900	

TITLE SHEET

LACEY PROPERTY
LOTS 1 THRU 13 AND
OPEN SPACE LOTS 14 THRU 17

ZONED: R-ED
PARCEL No.: 13
TAX MAP No.: 25 GRID No.: 1
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: JULY 10, 2023
SHEET 1 OF 24

F-21-015

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SPECIMEN TREE TABLE

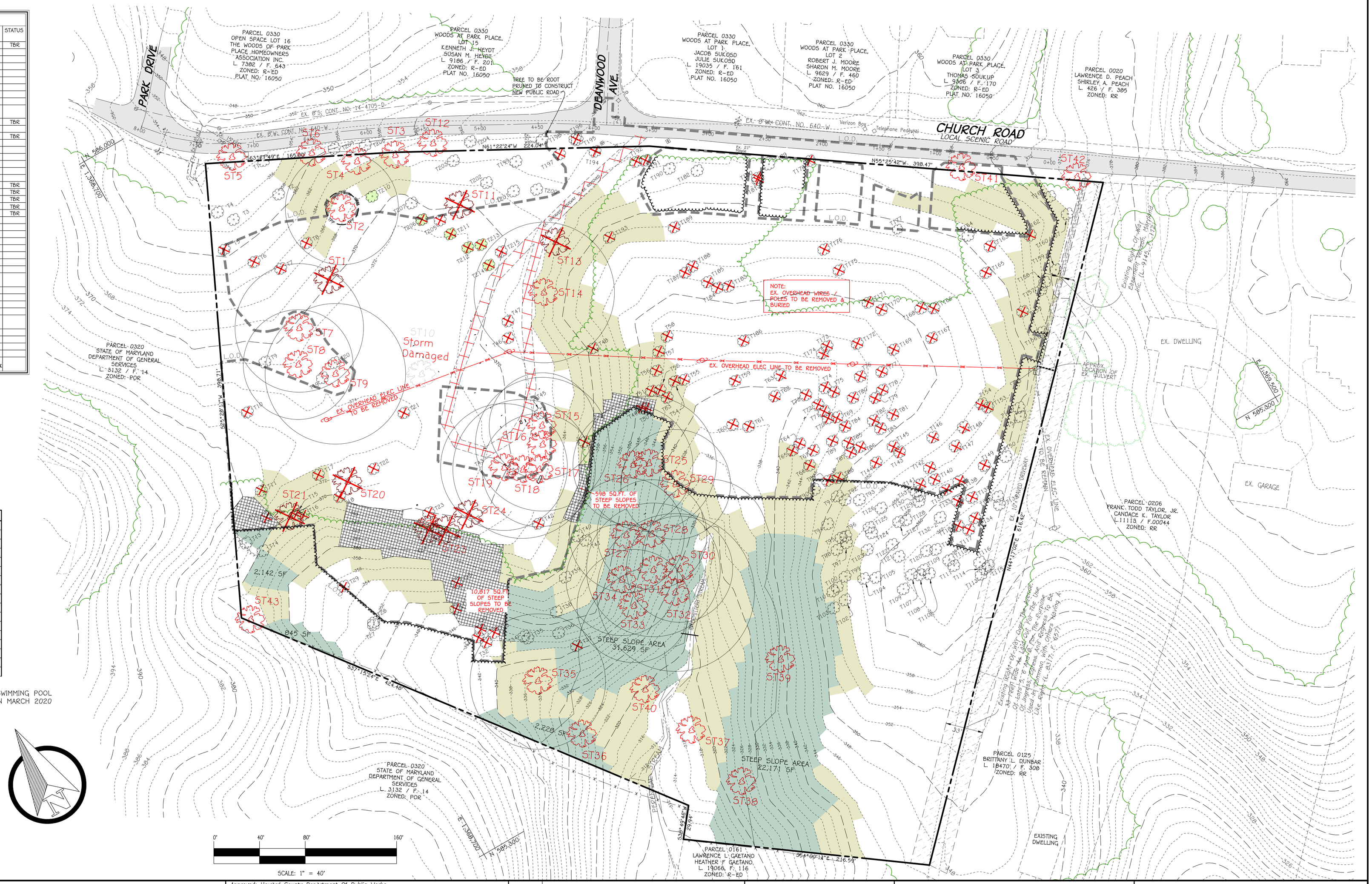
KEY	SPECIES	SIZE (DBH)	CRZ (FT RADIUS)	COMMENTS	STATUS
1	HEMLOCK	35"	52.5		TBR
2	NORWAY SPRUCE	33"	49.5		
3	WHITE PINE	37"	55.5		
4	WHITE PINE	38.5"	57.75		
5	SILVER MAPLE	49.5"	89.25		
6	SILVER MAPLE	36.5"	54.75		
7	BLACK WALNUT	37.5"	56.25		
8	BLACK WALNUT	32"	48		
9	BLACK WALNUT	41"	61.5		
11	SILVER MAPLE	42"	63	VERY POOR, TRUNK ROT	TBR
12	SILVER MAPLE	45.5"	68.25	POOR, TRUNK ROT	
13	SILVER MAPLE	52"	78	POOR, TRUNK ROT	TBR
14	ENGLISH WALNUT	41"	61.5		
15	SILVER MAPLE	31"	46.5	FAIR, LIMITED CROWN SPREAD	
16	SILVER MAPLE	39"	58.5		
17	SILVER MAPLE	33"	49.5	FAIR, LEANING	
18	SILVER MAPLE	40.5"	60.75	FAIR, NARROW CROWN	
19	SILVER MAPLE	37"	55.5	FAIR, LIMITED CROWN SPREAD	
20	SILVER MAPLE	45"	67.5	FAIR, LIMITED CROWN SPREAD	TBR
21	SILVER MAPLE	41"	61.5	FAIR, MAJOR LIMB BROKEN	TBR
22	SILVER MAPLE	32"	48		TBR
23	SILVER MAPLE	34"	51	FAIR, LIMITED CROWN SPREAD	TBR
24	SILVER MAPLE	35"	52.5	POOR, TRUNK ROT	TBR
25	TULIP POPLAR	39.5"	59.25		
26	TULIP POPLAR	35"	52.5	TWIN STEMS	
27	TULIP POPLAR	33.5"	50.25		
28	TULIP POPLAR	32"	48		
29	TULIP POPLAR	32"	48	TWIN STEMS	
30	TULIP POPLAR	31"	46.5		
31	TULIP POPLAR	39"	58.5		
32	TULIP POPLAR	46"	69		
33	TULIP POPLAR	33"	49.5	2 ADDITIONAL NEAR SPECIMEN SIZE TRUNKS	
34	TULIP POPLAR	32.5"	48.75		
35	TULIP POPLAR	39.5"	59.25		
36	TULIP POPLAR	40"	60		
37	TULIP POPLAR	55"	82.5		
38	TULIP POPLAR	61"	91.5	SPLITS INTO 2 TRUNKS ABOVE DBH	
39	TULIP POPLAR	41"	61.5		
40	SYCAMORE	31"	46.5		
41	SILVER MAPLE	31.5"	47.25	POOR, VERY LIMITED CROWN	
42	SILVER MAPLE	39.5"	59.25	POOR, CROWN REDUCED	
43	SILVER MAPLE	39"/32"	58.5	POOR, SPLIT TRUNK ABOVE BREAST HEIGHT, TRUNK ROT, AND LIMB DIEBACK	

NOTE: "TBR" REFERS TO EXISTING SPECIMEN TREES TO BE REMOVED.

LEGEND

SYMBOL	DESCRIPTION
352	EXISTING CONTOUR 2' INTERVAL
350	EXISTING CONTOUR 10' INTERVAL
	EXISTING SAN. SEWER LINE
	EXISTING STORM DRAIN LINE
	EXISTING WATER LINE
	EX. OVERHEAD ELECTRIC LINE & POWER POLE
	EXISTING FENCE
	EXISTING PAVING
	EXISTING TREES
	EXISTING TREES TO BE REMOVED
T19	SPECIMEN TREES
	EXISTING TREELINE
	SLOPES 15% - 24.9%
	SLOPES 25% OR GREATER
	EX. DRIVEWAY DEMOLITION
	STEEP SLOPE TO BE REMOVED

NOTE: EXISTING STRUCTURES, OUT BUILDINGS AND SWIMMING POOL HAVE BEEN RAZED AND REMOVED FROM THE SITE IN MARCH 2020 UNDER DEMOLITION PERMIT NUMBER B-18003545.



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Approved: Howard County Department Of Public Works
DocuSigned by: [signature]
Chief, Bureau Of Highways — 9/11/2023 Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
DocuSigned by: Chad Edmondson
Chief, Development Engineering Division — 9/11/2023 Date
DocuSigned by: [signature]
Chief, Division of Land Development — 9/13/2023 Date

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PROJECT			SECTION/AREA		PARCEL
LACEY PROPERTY			N/A		13
PLAT NOS.	BLOCK NO.	ZONE	TAX MAP	ELEC. DIST.	CENSUS TR.
-	1	R-ED	25	SECOND	602900

DEMOLITION PLAN

LACEY PROPERTY
LOTS 1 THRU 13 AND OPEN SPACE LOTS 14 THRU 17

ZONED: R-ED
PARCEL No.: 13
TAX MAP No.: 25 GRID No.: 1
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: APRIL 4, 2023
SHEET 2 OF 24

F-21-015

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FINAL ROAD CONSTRUCTION, GRADING AND STORMWATER MANAGEMENT PLANS

LACEY PROPERTY

LOTS 1 THRU 13 AND OPEN SPACE LOTS 14 THRU 17

SHEET INDEX

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	DEMOLITION PLAN
3	MILL CREEK WAY PLAN, PROFILE AND DETAILS
4	PRIVATE USE-IN-COMMON DRIVEWAY PROFILES AND DETAILS
5	GRADING & SEDIMENT CONTROL PLAN
6	SEDIMENT AND EROSION CONTROL NOTES & DETAILS
7	SEDIMENT AND EROSION CONTROL NOTES, DETAILS AND BORING LOGS
8	STORMWATER MANAGEMENT NOTES & DETAILS
9	STORMWATER MANAGEMENT PLAN VIEWS, PROFILES & DETAILS – MICRO BIO-RETENTION #1
10	STORMWATER MANAGEMENT PLAN VIEWS, PROFILES & DETAILS – MICRO BIO-RETENTION #2
11	STORMWATER MANAGEMENT PLAN & PROFILES – POND #1
12	STREET TREE & LANDSCAPE PLAN
13	MICRO BIO-RETENTION PLANTING PLANS, LANDSCAPING NOTES, DETAILS & SPECIFICATIONS
14	STORM DRAIN PROFILES
15	STORM DRAIN DRAINAGE AREA & SOILS MAP
16	PARTIAL PLAN
17	NORTH WALL ELEVATIONS
18	NORTH WALL SECTIONS
19	NORTH WALL SECTIONS
20	NORTH WALL SECTIONS
21	TYPICAL DETAILS
22	GENERAL NOTES & TYPICAL DETAILS
23	FOREST CONSERVATION PLAN
24	TSWM – BASIN #1 PROFILES AND DETAILS

TRAFFIC CONTROL SIGNS

ROAD NAME	CENTERLINE STA.	OFFSET	POSTED SIGN	SIGN CODE
MILL CREEK WAY	0+22	21.3'R	STREET SIGN & NO OUTLET SIGN	SNS & W14-2a
	0+25	18'L	STOP	R1-1
	0+75	14'R	SPEED LIMIT 25 M.P.H.	R2-1
	1+72.3	38.8'L&R	RANGE OF ADDRESS SIGNS	–

STREET LIGHT CHART

STREET NAME	STATION	OFFSET	FIXTURE/POLE TYPE
MILL CREEK WAY	0+18	22'R	100 watt LED-150 COLONIAL POST-TOP FIXTURE MOUNTED ON A 14' BLACK FIBERGLASS POLE
	1+91.34	2' BEHIND CURB	

ROADWAY INFORMATION CHART

ROAD NAME	CLASSIFICATION	DESIGN SPEED	POSTED SPEED LIMIT	R/W WIDTH
MILL CREEK WAY	PUBLIC ACCESS PLACE	25 M.P.H.	25 M.P.H.	50'

STORMWATER MANAGEMENT PRACTICES

LOT No.	MICRO BIO-RETENTION M-6 (NUMBER)	SAND FILTER F-1 (NUMBER)	DRY WELLS M-5 (NUMBER)
O.S. 14	YES – (2)	YES – (1)	NO
1	NO	NO	YES – (3)
2	NO	NO	YES – (4)
3	NO	NO	YES – (3)
4	NO	NO	YES – (3)
5	NO	NO	YES – (3)
6	NO	NO	YES – (3)
7	NO	NO	YES – (3)
8	NO	NO	YES – (3)
9	NO	NO	YES – (2)
10	NO	NO	YES – (2)
11	NO	NO	YES – (2)
12	NO	NO	YES – (3)
13	NO	NO	YES – (3)

SWM NOTE: SINCE THE SP-15-013 PLAN WAS APPROVED PRIOR TO THE APPROVAL OF C.B. No. 80-2016, THIS PROJECT IS EXEMPT FROM THE REQUIREMENTS OF THAT BILL TO PROVIDE ADDITIONAL REDUCTION IN PEAK RUNOFF. CONSERVATIVE DESIGN HAS PROVIDED A 16.5% REDUCTION AND 8.50% REDUCTION AS A BONUS CREDIT.

SWM DRAINAGE AREA SUMMARY TABLE (Proposed Conditions)

Drainage Area	Area (ac.+/-)	RCN	T/C (hrs.)	100-Year Peak Q	E.C. Peak Q	Remarks
A	1.81	61	0.22	5.82	9.18	Bypass Area
A-1	4.32	70	0.18	23.29 in/13.67 out @340.78	31.63 in/23.87 out @341.39	Pocket Sand Filter
A-2	0.76	77	0.12	4.36 in/4.33 out @356.41	7.32 in/7.28 out @356.49	Bio #1
B	0.92	69	0.11	4.57	7.24	Bypass Area
B-1	0.37	77	0.18	1.90 in/1.31 out @361.64	3.26 in/2.91 out @361.82	Bio #2
D.P.#1 Total				* 22.00	* 37.72	Total @ D.P.#1 (EC watershed)
C	1.03	70	0.12	5.13	8.19	Total @ D.P.#2 (Sucker Branch)

SWM DRAINAGE AREA SUMMARY TABLE (Existing Conditions)

Drainage Area	Area (ac.+/-)	RCN	T/C (hrs.)	100-Year Peak Q	E.C. Peak Q	Remarks
A	6.58	61	0.21	21.6	34.04	
B	1.33	60	0.1	5.25	7.7	
D.P.#1 Total				* 25.64	* 40.91	Total @ D.P.#1
C	0.8	60	0.1	3.16	4.63	Total @ D.P.#2
				16.50%	8.50%	% Decrease @ D.P.#1

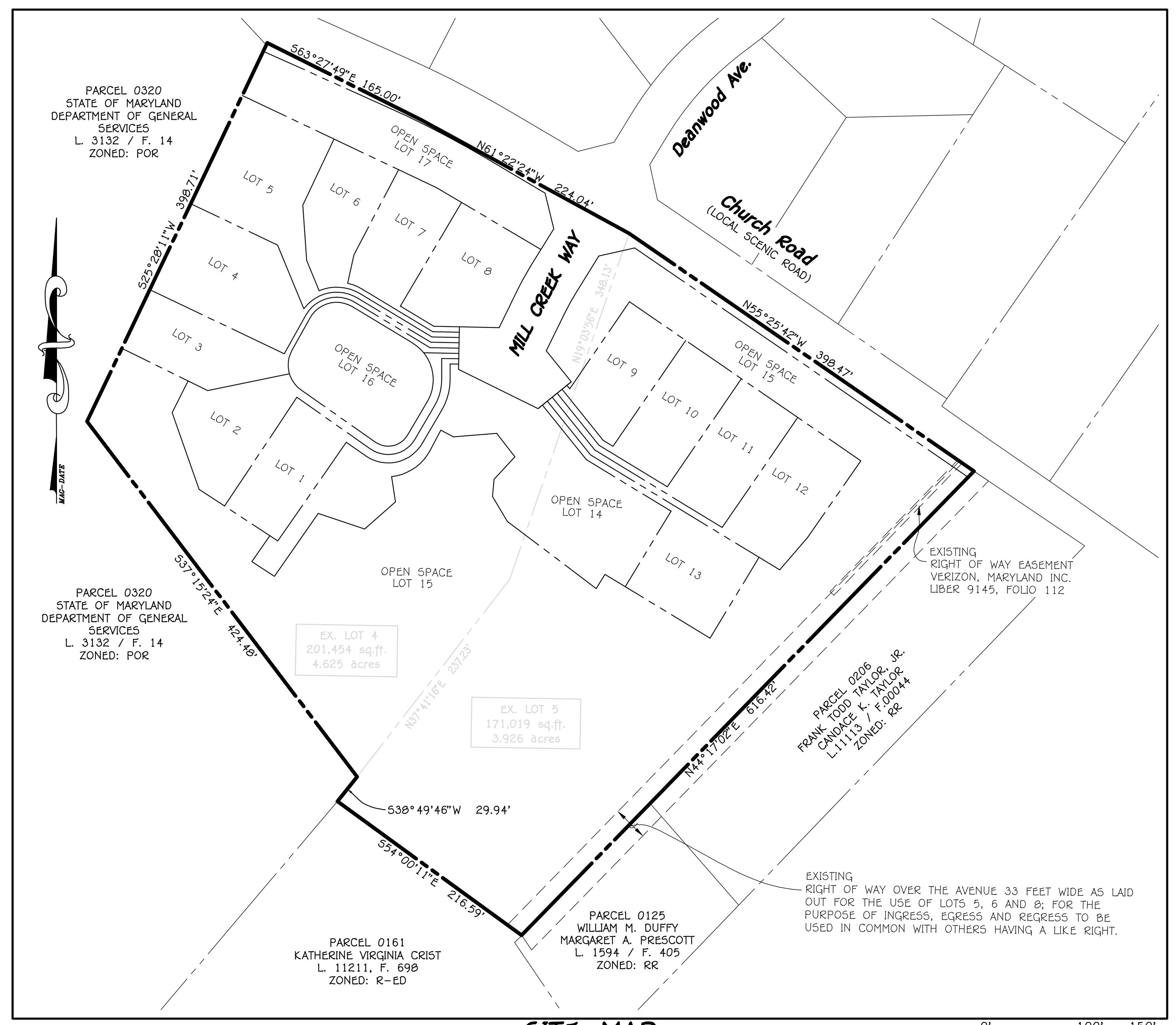
* THESE PEAK FLOW VALUES ARE REFLECTIVE OF THE TR-20 PROGRAM OUTPUT. THE PROGRAM ADDS VARIOUS HYDROGRAPHS TOGETHER TO PRODUCE A VALUE WHICH IS NOT THE SAME AS THE MATH ADDITION OF EACH AREAS PEAK VALUE.

COMMUNITY MEETINGS

NO.	DATE	LOCATION	PRESUBMISSION COMMUNITY MEETING (Y/N)
1	APRIL 30, 2013	MILLER BRANCH LIBRARY	YES
2	JUNE 11, 2014	HOWARD COUNTY GEORGE HOWARD BLDG	YES
3 *	JULY 28, 2014	HOWARD COUNTY GEORGE HOWARD BLDG	NO, CHARRETTE
4 *	AUGUST 26, 2014	HOWARD COUNTY GEORGE HOWARD BLDG	NO, GENERAL MEETING
5 **	SEPTEMBER 2, 2014	DW TAYLOR ASSOCIATES, INC.	NO, MEETING WITH A COMMUNITY REPRESENTATIVE
6 *	SEPTEMBER 22, 2014	HOWARD COUNTY GEORGE HOWARD BLDG	NO, GENERAL MEETING
7 **	NOVEMBER 13, 2014	DW TAYLOR ASSOCIATES, INC.	NO, MEETING WITH TWO COMMUNITY REPRESENTATIVES
8	JULY 13, 2015	HOWARD COUNTY GEORGE HOWARD BLDG	YES

* CHARRETTE AND GENERAL COMMUNITY MEETINGS WERE HELD WITH THE COMMUNITY AS A MEANS OF INFORMING THE COMMUNITY OF DESIGN PROGRESS AS WELL AS TO SOLICIT IDEAS / REQUEST CHANGES TO DESIGN CONCEPTS.

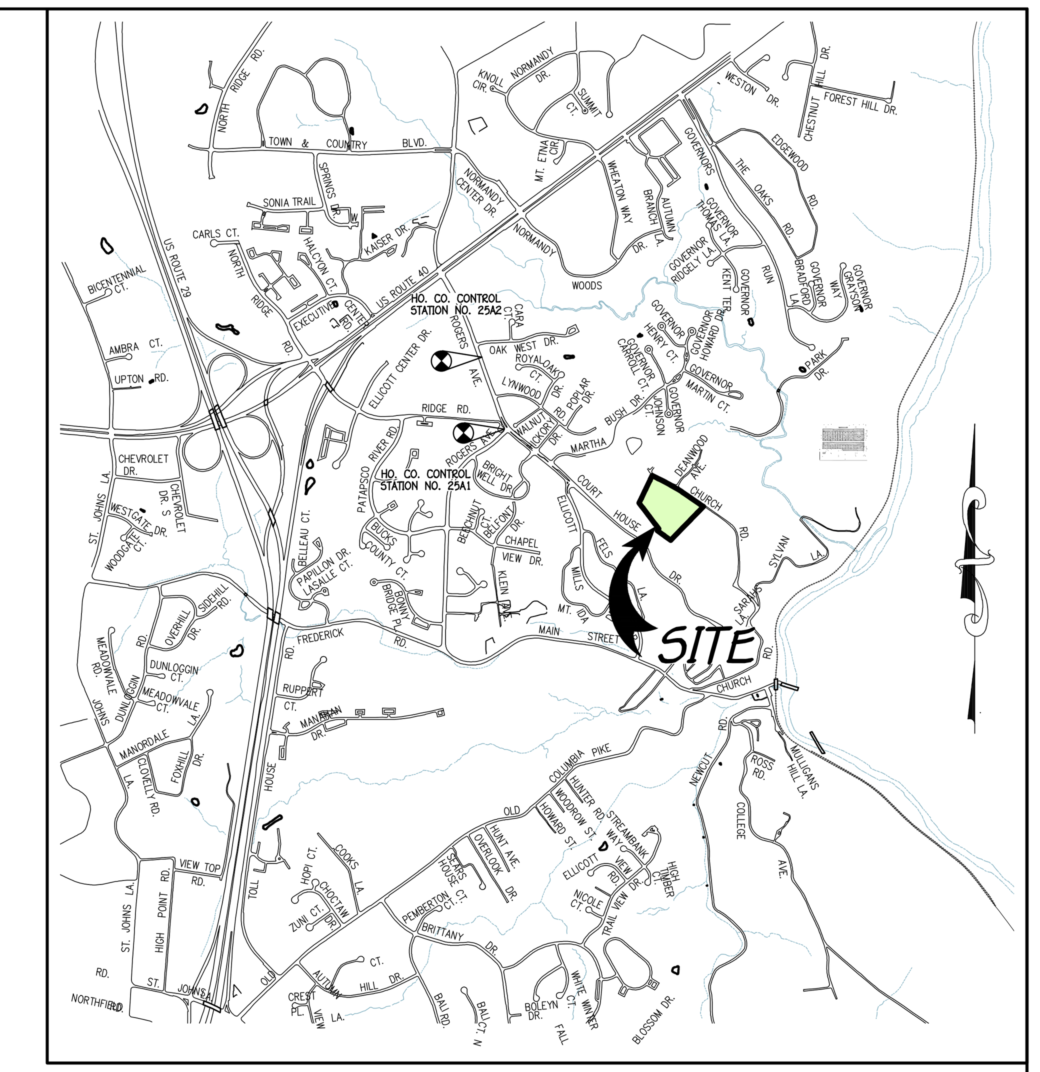
** MEETINGS WERE HELD WITH COMMUNITY REPRESENTATIVES SELECTED BY THE COMMUNITY DURING THE CHARETTE / GENERAL COMMUNITY MEETINGS TO FURTHER THE COMMUNITY INPUT AT A MORE FINITE DESIGN LEVEL. THE COMMUNITY REPRESENTATIVES WERE A RETIRED LAND PLANNER AND LANDSCAPE ARCHITECT FROM ELLICOTT CITY.



SITE MAP
SCALE: 1" = 100'

LEGEND

SYMBOL	DESCRIPTION
- - - 352 - - -	EXISTING CONTOUR 2' INTERVAL
—— 350 ——	EXISTING CONTOUR 10' INTERVAL
—— S ——	EXISTING SAN. SEWER LINE
—— D ——	EXISTING STORM DRAIN LINE
- - - - - -	EXISTING WATER LINE
—— OHE ——	EXISTING OVERHEAD ELECTRIC LINE
—— X ——	EXISTING FENCE
—— 352 ——	PROPOSED CONTOUR 2' INTERVAL
—— 350 ——	PROPOSED CONTOUR 10' INTERVAL
+ 344.29	PROPOSED SPOT ELEVATION
	PROPOSED CONCRETE WALK
	PROPOSED MACADAM PAVING
	EXISTING TREES
	EXISTING TREELINE
	PROPOSED TREELINE
8" W	PROPOSED PUBLIC WATER
18" RCCP	PROPOSED STORMDRAIN
8" S	PROPOSED PUBLIC SEWER
	SOILS DELINEATION
—— SSF ——	SUPER SILT FENCE
	FOREST CONSERVATION AREA
	RIPRAP OUTLET PROTECTION
	DEMOLITION
	STEEP SLOPE TO BE REMOVED
	STEEP SLOPES 15% – 24.9%
	STEEP SLOPES 25.0% OR GREATER



VICINITY MAP
SCALE: 1" = 2000'
HO. CO. MD. ADC MAP 21, GRID B7

GENERAL NOTES

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS IF APPLICABLE.
2. THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS / BUREAU OF ENGINEERING / CONSTRUCTION INSPECTION DIVISION AT 410-313-1880 AT LEAST (5) WORKING DAYS PRIOR TO THE START OF WORK.
3. THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.
4. THIS SUBDIVISION PLAN IS SUBJECT TO THE AMENDED FIFTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS AND THE 10-06-13 ZONING REGULATIONS PER COUNCIL BILL NO. 32-2013. DEVELOPMENT OR CONSTRUCTION ON THESE LOTS OR PARCELS MUST COMPLY WITH SETBACKS AND BUFFER REGULATIONS IN EFFECT AT THE TIME OF SUBMISSION OF A BUILDING OR GRADING PERMIT APPLICATION.
5. COORDINATES BASED ON NAD'83 MARYLAND COORDINATE SYSTEM AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS NO. 25A1 AND NO. 25A2
   HO. CO. CONTROL STATION #25A1 – HORIZONTAL – NAD '83) N 586,557.549 E 1,366,847.099 ELEVATION = 396.343 (NAVD '88)
   HO. CO. CONTROL STATION #25A2 – HORIZONTAL – (NAD '83) N 587,502.730 E 1,366,556.378 ELEVATION = 348.145 (NAVD '88)
6. SUBJECT PROPERTY IS ZONED R-ED PER 10/06/2013 COMPREHENSIVE ZONING PLAN.
7. BACKGROUND INFORMATION:
   a. SUBDIVISION NAME: LACEY PROPERTY
   b. TAX MAP NO.: 25
   c. PARCEL NO.: 13
   d. ZONING: R-ED
   e. ELECTION DISTRICT: SECOND
   f. GROSS AREA OF THIS SUBMISSION = 8.551 AC.±
   g. NUMBER OF BUILDABLE LOTS: 13
   h. NUMBER OF OPEN SPACE LOTS: 4
   i. AREA OF BUILDABLE LOTS: 2.876 AC.±
   j. AREA OF OPEN SPACE LOTS: 5.277 AC.±
   k. AREA OF PUBLIC ROADWAY TO BE DEDICATED: 0.398 AC.±
   l. PREVIOUS FILE NUMBERS: ECP-15-044, WP-16-022, SP-15-013, PB CASE 418, HPC-15-78, HPC-16-06 (a), HPC-16-06 (b) & HPC-18-061 (SEE G.N. #35).
   m. AREA OF FLOODPLAIN = 0.00 AC.
   n. AREA OF 25% OR GREATER SLOPES = 1.35 AC.±
   o. NET AREA OF SUBMISSION = 7.201 AC.±
8. OPEN SPACE REQUIRED: 8.551 AC. X 0.50% = 4.276 AC.±
   OPEN SPACE PROVIDED: 5.277 AC.±
   RECREATIONAL OPEN SPACE REQUIRED FOR PROJECT TOTAL = (300 SQ.FT. PER UNIT) = 3,900 SQ.FT.
   PROVIDED RECREATIONAL OPEN SPACE (LOT 16) = 3,900 SQ.FT.
9. ALL FILL AREAS WITHIN ROADWAYS AND UNDER STRUCTURES SHALL BE COMPACTED TO A MINIMUM OF 95% COMPACTION OF AASHTO T-180.
10. NO NOISE STUDY IS REQUIRED FOR THIS PROJECT.
11. PROPERTY IS LOCATED WITHIN THE METROPOLITAN DISTRICT. WATER AND SEWER IS PUBLIC, CONTRACT NO. 14-4913-D. EXISTING SEPTIC SYSTEM TO BE ABANDONED IN ACCORDANCE WITH HEALTH DEPARTMENT REQUIREMENTS. EXISTING UTILITIES ARE BASED ON FIELD LOCATION OF MISS UTILITY MARKINGS AS A PART OF THE TOPOGRAPHIC SURVEY.
12. SOILS ARE BASED ON THE NRCS WEBSOIL SURVEY AND HOWARD COUNTY SOIL MAP 12.
13. BOUNDARY SHOWN HEREON IS BASED ON A FIELD RUN MONUMENTED BOUNDARY SURVEY DATED AUGUST, 2014. THE EXISTING TOPOGRAPHY IS TAKEN FROM FIELD RUN SURVEY WITH MAXIMUM TWO FOOT CONTOUR INTERVALS PREPARED BY FISHER, COLLINS & CARTER, INC. DATED SEPTEMBER 2013 AND SUPPLEMENTED BY HOWARD COUNTY GIS TOPOGRAPHY.
14. EXISTING STRUCTURES ON-SITE, OUT BUILDINGS AND SWIMMING POOL HAVE ALL BEEN REMOVED UNDER DEMOLITION PERMIT NUMBER B-18003545 DATED FEBRUARY 7, 2019.
15. THERE ARE NO WETLANDS ON THIS SITE PER INVESTIGATION BY ECO-SCIENCE PROFESSIONALS, INC. DATED SEPTEMBER, 2014.
16. A WETLAND DELINEATION & FOREST STAND DELINEATION REPORT FOR THIS PROJECT DATED SEPTEMBER 2014 PREPARED BY ECO-SCIENCE PROFESSIONALS AND APPROVED UNDER SP-15-013.
17. STEEP SLOPES, STREAM AND ITS BUFFERS EXIST ON-SITE.
18. NO 100 YEAR FLOODPLAIN, CEMETERIES, NOR GRAVESITES EXIST ON THE PROPERTY.
19. NO CLEARING, GRADING, REMOVAL OF VEGETATIVE COVER OR TREES, PAVING AND NEW STRUCTURES SHALL BE PERMITTED WITHIN THE LIMITS OF STREAM BUFFERS AND FOREST CONSERVATION EASEMENT AREAS.
20. THE TRAFFIC STUDY FOR THIS PROJECT WAS PREPARED BY MARS GROUP IN JUNE 2015, AND WAS APPROVED ON DECEMBER 21, 2015.
21. SITE HAS FRONTAGE ON CHURCH ROAD, A COUNTY, LOCAL, SCENIC ROAD.
22. EXCAVATIONS TO VERIFY DEPTH TO ROCK AND WATER WERE CONDUCTED ON JUNE 8, 2015.
23. DESIGN MANUAL WAIVER TO ALLOW 9 LOTS (8 BUILDABLE AND 1 OPEN SPACE) ON A USE-IN-COMMON DRIVEWAY WAS APPROVED ON OCTOBER 5, 2015 AND IS SUBJECT TO THE FOLLOWING CONDITIONS:
    1. THE MINIMUM WIDTH OF THE USE-IN-COMMON DRIVEWAY SHOULD INCREASE TO 20 FEET DUE TO ITS CURVATURE.
    2. PROVIDE FLUSH CURB AND GUTTER ALONG THE USE-IN-COMMON DRIVEWAY.
24. STORM WATER MANAGEMENT IS IN ACCORDANCE WITH THE M.D.E. STORM WATER DESIGN MANUAL, VOLUMES I & II, REVISED 2009. NON-STRUCTURAL PRACTICES (MICRO BIO-RETENTION FACILITIES (M-6) AND DRYWELLS (M-5)) IN ACCORDANCE WITH CHAPTER 5 ARE BEING UTILIZED. 100 YEAR MANAGEMENT AND THE 3.55 HR / 6.6 IN STORM EVENT ARE BEING PROVIDED IN THE PROPOSED POCKET SAND FILTER.
25. THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL". FINANCIAL SURETY FOR THE REQUIRED 26 SHADE, 5 EVERGREEN TREES & 7 SHRUBS (PROVIDED 19 SHADE, 6 ORNAMENTAL, 11 EVERGREEN & 7 SHRUBS) HAS BEEN POSTED AS PART OF THE DEVELOPER'S AGREEMENT IN THE AMOUNT OF $8,460.00.
26. THE FOREST CONSERVATION REQUIREMENTS PER SECTION 16.1200 OF THE HOWARD COUNTY CODE AND THE FOREST CONSERVATION MANUAL FOR THIS SUBDIVISION HAS BEEN FULFILLED BY PROVIDING 2.916 AC.± OF ON-SITE FOREST RETENTION. NO SURETY IS REQUIRED FOR RETENTION. A DEED OF FOREST CONSERVATION EASEMENT AND AGREEMENT WILL BE EXECUTED SIMULTANEOUSLY WITH THE DPW DEVELOPER AGREEMENT.
27. WAIVER PETITION, WP-16-022, REQUESTING A WAIVER FROM HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS SPECIFICALLY SECTION 16.1205(A)(7) FOREST RETENTION PRIORITIES – RETENTION OF SPECIMEN TREES, SECTION 16.116(B)(1) STATING THAT GRADING, REMOVAL OF VEGETATIVE COVER AND TREES, NEW STRUCTURES, AND PAVING SHALL NOT BE PERMITTED ON LAND WITH EXISTING STEEP SLOPES IN AREAS GREATER THAN 20,000 SQ.FT. IS SIZE, SECTION 16.134(A)(1)(I) SIDEWALKS ARE REQUIRED ON ONLY ONE SIDE OF CUL-DE-SACS AND LOCAL STREETS OF SINGLE-FAMILY DETACHED SUBDIVISIONS, AND SECTION 16.125(B)(1)(II)&(2) REQUIRING MINIMIZATION OF TREE AND VEGETATION REMOVAL ALONG A SCENIC ROAD AND REQUIRING RETENTION OF FOREST OR WOODED AREAS OF 35-FOOT IN WIDTH, HAS BEEN APPROVED ON DEC. 5, 2016. APPROVAL OF WP-16-022 IS SUBJECT TO THE FOLLOWING CONDITIONS:
    a. COMPLIANCE WITH SRC COMMENTS FOR SP-15-013 AND PLANNING BOARD APPROVAL OF THE PROPOSED SUBDIVISION PLAN DESIGN, LAYOUT AND LOCATION OF LOTS, ROADS AND SHARED DRIVEWAYS.
    b. NO ADDITIONAL DISTURBANCE OR GRADING SHALL OCCUR BEYOND THE LIMIT OF DISTURBANCE (L.O.D.) OF THE 25% STEEP SLOPES THAT ARE DETAILED ON THE PRELIMINARY GRADING PLAN AND AS APPROVED BY THE PLANNING BOARD, UNLESS IT CAN BE SUFFICIENTLY DEMONSTRATED TO BE WARRANTED OR JUSTIFIED BY THE APPLICANT.
    c. THE AFFECTED STEEP SLOPE AREAS WHERE THE BUILDING LOTS ARE PLANNED MUST BE SUFFICIENTLY STABILIZED WITH RETAINING WALL AND/OR SOIL STABILIZATION DEVICES/METHODS THAT SHALL LESSEN THE ERODIBILITY OF SOILS AND RUNOFF. THE IMPACTED STEEP SLOPE AREAS MUST BE REVEGETATED OR STABILIZED WITH SUITABLE NATIVE SPECIES THAT WILL BIND THE SURFACE TIGHTLY. THESE STABILIZATION TECHNIQUES MUST BE CLEARLY DEMONSTRATED ON BOTH THE ROAD CONSTRUCTION DRAWINGS (WITH THE FINAL PLAT) AND THE SITE DEVELOPMENT PLAN.
    d. THE REMOVAL OF THE EIGHT (8) SPECIMEN TREES WILL REQUIRE MITIGATION WITH THE PLANTING OF 2:1 REPLACEMENT TREES (16 TOTAL) WITH A MINIMUM 3" CALIPER NATIVE PLANT SPECIES. THE REPLACEMENT TREES SHALL BE BONDED AND SHOWN ON THE LANDSCAPE PLAN WITH THE FORTHCOMING FINAL PLAN.
    e. THE REMAINING 35 SPECIMEN TREES SHALL BE SAVED AND PROTECTED DURING CONSTRUCTION ACTIVITY. ANY ADDITIONAL REMOVAL OF SPECIMEN TREES SHALL REQUIRE THE SUBMITTAL OF A NEW ALTERNATIVE COMPLIANCE PETITION APPLICATION.
    f. PROVIDE TREE PROTECTION FENCING AT THE TREES DRIP LINE, OR FARTHER OUT, TO PREVENT TREE DAMAGES FROM EXCAVATION, SOIL COMPACTION OF SOIL OVER ROOTS. THESE PROTECTION TECHNIQUES MUST BE DEMONSTRATED ON BOTH THE ROAD CONSTRUCTION DRAWINGS (WITH THE FINAL PLAT) AND THE SITE DEVELOPMENT PLAN.
    g. COMPLIANCE WITH THE CERTIFICATE OF APPROVAL ISSUED BY THE HISTORIC PRESERVATION COMMISSION FOR DEVELOPMENT OF THIS PROPERTY.
    h. THE CONSTRUCTION OF THE NEW HOUSES FACING TOWARDS CHURCH ROAD SHALL BE ADEQUATELY SCREENED USING BERMS, ENHANCED LANDSCAPING AND HOUSE SITING TO MINIMIZE IMPACTING THE NATURAL SETTING ALONG THE SCENIC ROAD. THIS CONDITION WILL BE EVALUATED FURTHER AT THE SITE DEVELOPMENT PLAN STAGE.
    i. PROVIDE A NOTE ON THE SP PLAN, THE FINAL PLAT AND THE SITE DEVELOPMENT PLAN REGARDING THIS ALTERNATIVE COMPLIANCE PETITION APPROVAL. THIS NOTE SHALL INCLUDE THOSE SUBDIVISION REGULATION SECTIONS PETITIONED, THE DATE OF THE ALTERNATIVE COMPLIANCE APPROVAL, AND THE CONDITIONS OF APPROVAL.
28. TRASH AND RECYCLABLES COLLECTION WILL BE AT MILL CREEK WAY WITHIN 5' OF THE COUNTY ROADWAY.
29. TWO PRIVATE RANGE OF ADDRESS SIGN ASSEMBLIES SHALL BE FABRICATED AND INSTALLED BY HOWARD COUNTY BUREAU OF HIGHWAYS AT THE DEVELOPERS/OWNERS EXPENSE. CONTACT HOWARD COUNTY TRAFFIC DIVISION AT 410-313-5752 FOR DETAILS AND COST ESTIMATE.
30. SUBDIVISION IS REQUIRED TO PROVIDE M.I.H.U. (MODERATE INCOME HOUSING UNIT). IT IS ANTICIPATED AT THIS TIME THAT A FEE-IN-LIEU WILL BE PAID. MIHU AGREEMENT WILL BE SUBMITTED WITH THIS FINAL PLAN OUTLINING HOW THE MIHU REQUIREMENT WILL BE MET.
    A. M.I.H.U. REQUIRED = 1.2 M.I.H.U.
       (12 LOTS X 10% M.I.H.U./LOT)
    B. ONE UNIT IS EXEMPT FROM MIHU REQUIREMENTS. (ONE EXISTING LOT)
31. STREET LIGHTS WILL BE REQUIRED IN THIS DEVELOPMENT IN ACCORDANCE WITH THE DESIGN MANUAL STREET LIGHT PLACEMENT AND THE TYPE OF FIXTURE AND POLE SELECTED SHALL BE IN ACCORDANCE WITH THE LATEST HOWARD COUNTY DESIGN MANUAL, VOLUME III (1993) AND AS MODIFIED BY "GUIDELINES FOR STREET LIGHTS IN RESIDENTIAL DEVELOPMENTS (JUNE 1993)." THE JUNE 1993 POLICY INCLUDES GUIDELINES FOR LATERAL AND LONGITUDINAL PLACEMENT. A MINIMUM SPACING OF 20' SHALL BE MAINTAINED BETWEEN ANY STREET LIGHT AND ANY TREE.
32. PLAN IS SUBJECT TO PLANNING BOARD APPROVAL ON NOVEMBER 17, 2016 AND SIGNED DECISION & ORDER ON MARCH 2, 2017, IN ACCORDANCE WITH SECTION 107.0 OF THE ZONING REGULATIONS.
33. THIS SUBDIVISION IS SUBJECT TO THE PROTECTION OF SCENIC ROADS, PER SECTION 16.125 OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS.

GENERAL NOTES continued

34. TRAFFIC CONTROL DEVICES:
    (a) THE R1-1 ("STOP") SIGN, R2-1 ("SPEED LIMIT 25"), W14-2a (NO OUTLET), AND THE STREET NAME SIGN (SNS) ASSEMBLY FOR THIS DEVELOPMENT MUST BE INSTALLED BEFORE THE BASE PAVING IS COMPLETED.
    (b) THE TRAFFIC CONTROL DEVICE LOCATIONS SHOWN ON THE PLANS ARE APPROXIMATE AND MUST BE FIELD APPROVED BY HOWARD COUNTY TRAFFIC DIVISION (410-313-2430) PRIOR TO THE INSTALLATION OF ANY OF THE TRAFFIC CONTROL DEVICES.
    (c) ALL TRAFFIC CONTROL DEVICES AND THEIR LOCATIONS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE "MARYLAND MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MDMUTCD).
    (d) ALL SIGN POSTS USED FOR TRAFFIC CONTROL SIGNS INSTALLED IN THE COUNTY RIGHT-OF-WAY SHALL BE MOUNTED ON A 2" GALVANIZED STEEL, PERFORATED ("QUICK PUNCH"), SQUARE TUBE POST (14 GAUGE) INSERTED INTO A 2-1/2" GALVANIZED STEEL, PERFORATED, SQUARE TUBE SLEEVE (12 GAUGE) -3' LONG. THE ANCHOR SHALL NOT EXTEND MORE THAN TWO "QUICK PUNCH" HOLES ABOVE GROUND LEVEL. A GALVANIZED STEEL POLE CAP SHALL BE MOUNTED ON TOP OF EACH POST.
35. ON APRIL 4, 2013 AND NOVEMBER 6, 2014, THE HISTORIC PRESERVATION COMMISSION (HPC) PROVIDED ADVISORY COMMENTS ON THE PROPOSED SUBDIVISION/SITE DEVELOPMENT PLAN IN CASES HDC-13-17 AND HPC-14-82. ON DECEMBER 3, 2015, THE HPC APPROVED THE DEMOLITION OF THE EXISTING STRUCTURES IN CASE HPC-15-78. THE REQUEST FOR TREE REMOVAL AND RETAINING WALL CONSTRUCTION WAS WITHDRAWN FROM THE HPC-15-78 APPLICATION. THE TREE REMOVAL AND RETAINING WALL CONSTRUCTION WAS RESUBMITTED FOR APPROVAL AND THE CONSTRUCTION OF THE RETAINING WALLS WAS APPROVED WITH CONDITIONS ON FEBRUARY 4, 2016 IN CASE HPC-16-06a. THE REQUEST FOR TREE REMOVAL WAS CONTINUED TO MARCH 3, 2016 AND APPROVED WITH AMENDMENTS IN CASE HPC-16-06b. ON DECEMBER 6, 2018, CASE No. HPC-18-61 WAS HELD TO REINSTATE THE PREVIOUS CASE No. HPC-15-078 AND HPC-16-06 (a) & (b). HOWEVER, SINCE THE APPROVED PROJECT (SP-15-013) HAD BEEN ON HOLD DUE TO COUNTY APFO REGULATIONS, IT HAS BEEN DETERMINED THAT THE REINSTATEMENT CASE HPC-18-61 IS NOT REQUIRED IF THE PROJECT CONTINUES WITHIN THE PLAN REVIEW PROCESS POST SP-15-013 AND THIS PLAN.
36. IN ACCORDANCE WITH SECTION 16.128 OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS, PRE-SUBMISSION COMMUNITY MEETINGS WERE HELD ON APRIL 3, 2013, JUNE 11, 2014, AND JULY 13, 2015 FOR THE DEVELOPER TO PROVIDE INFORMATION TO THE COMMUNITY REGARDING THE PROPOSED INITIAL PLAN SUBMITTAL AND TO ALLOW COMMUNITY RESIDENTS TO ASK QUESTIONS AND TO MAKE COMMENTS.
37. THE HOWARD COUNTY PLANNING BOARD SIGNED THE DECISION & ORDER GRANTING APPROVAL OF THE SP PLAN ON MARCH 2, 2017. BASED UPON THAT APPROVAL, DPZ HEREBY GRANTS TENTATIVE ALLOCATIONS FOR 12 HOUSING UNITS FOR THIS SUBDIVISION YEAR 2019.
38. THIS PROPERTY IS LOCATED WITHIN THE ELLICOTT CITY HISTORIC DISTRICT.
39. DRIVEWAYS SHALL BE PROVIDED PRIOR TO RESIDENTIAL OCCUPANCY TO ENSURE SAFE ACCESS FOR FIRE AND EMERGENCY VEHICLES PER THE FOLLOWING (MINIMUM) REQUIREMENTS:
    a. WIDTH – 12 FEET (16 FEET SERVING MORE THAN ONE RESIDENCE)
    b. SURFACE – SIX (6") INCHES OF COMPACTED CRUSHER RUN BASE WITH TAR AND CHIP COATING.
    c. GEOMETRY – MAXIMUM 15% GRADE, MAXIMUM 10% GRADE CHANGE AND MINIMUM OF 45 TURNING RADIUS.
    d. STRUCTURES (CULVERTS/BRIDGES) CAPABLE OF SUPPORTING 25 GROSS TONS (H 25 LOADING).
    e. DRAINAGE ELEMENTS – CAPABLE OF SAFELY PASSING 100 YEAR FLOOD WITH NO MORE THAN 1 FOOT DEPTH OVER DRIVEWAY SURFACE.
    f. STRUCTURE CLEARANCES – MINIMUM 12 FEET.
    g. MAINTENANCE – SUFFICIENT TO INSURE ALL WEATHER USE.
40. AN EXISTING (EASEMENT) "RIGHT OF WAY OVER THE AVENUE 33 FEET IN WIDTH, 16.5 FEET OF WHICH IS LOCATED ON THIS PROPERTY, WAS LAID OUT FOR THE USE OF LOTS 5, 6 AND 8; SAID RIGHT OF WAY TO BE FOR THE PURPOSE OF INGRESS, EGRESS AND REGRESS TO BE USED IN COMMON WITH OTHERS HAVING A LIKE RIGHT UNDER THE EXISTING PROPERTY DEED." THIS EASEMENT IS FOR THE BENEFIT OF LYNWOOD FARM, LOT 5 WHICH IS THE SECOND PARCEL IN DEED FOR THIS SUBDIVISION, LOT 6 WHICH IS MADE UP OF CURRENT PARCELS 206 & 125, AND LOT 8 WHICH IS PARCEL 161. EASEMENT IS REFERENCE IN CURRENT DEED FOR THE PROPERTY UNDER LIBER 8317, FOLIO 657.
41. THIS SUBDIVISION IS NOT SUBJECT TO COUNCIL BILL 76-2018 (ELECTRIC VEHICLE CHARGING STATIONS) BECAUSE THE PRELIMINARY EQUIVALENT SKETCH PLAN FOR THIS SUBDIVISION WAS SIGNED PRIOR TO THE BILL'S EFFECTIVE DATE OF JAN. 11, 2019.
42. THIS FINAL PLAN IS NOT SUBJECT TO COUNCIL BILLS 61-2019, 62-2019 AND 63-2019 BECAUSE THE PRELIMINARY SKETCH PLAN (SP-15-013) WAS SIGNED ON APRIL 11, 2017 WHICH IS PRIOR TO THE FEBRUARY 5, 2020 ENACTMENT DATE OF THESE BILLS, PER SECTION 16.102(h)(1) OF THE SUBDIVISION REGULATIONS.
43. WATERSHEDS: 0.95 AC TO THE SUCKER BRANCH TO THE PATAPSCO RIVER LOWER NORTH BRANCH (02130906) AND 7.60 AC TO UNNAMED TRIBUTARY OF THE HUDSON BRANCH TO THE PATAPSCO RIVER LOWER NORTH BRANCH (02130906).
44. THIS PLAN PROVIDES 16 REPLACEMENT TREES FOR THE REMOVAL OF 8 SPECIMEN TREES PER WP-16-022.
45. PUBLIC STREET TREES ARE PROVIDED IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. FINANCIAL SURETY FOR THE REQUIRED 30 STREET TREES IN THE AMOUNT OF $9,000.00 SHALL BE COLLECTED WITH THE DEPARTMENT OF PUBLIC WORKS COST ESTIMATE.

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK – 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 – 2855

Approval	Date
Approved: Howard County Department of Public Works — DocuSigned by: [signature] — Chief, Bureau Of Highways	9/11/2023
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING — DocuSigned by: CHAD Edmondson — Chief, Development Engineering Division	9/11/2023
DocuSigned by: [signature] — Chief, Division of Land Development	9/13/2023
APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT. — DocuSigned by: Michael J. Davis — COUNTY HEALTH OFFICER	9/12/2023

DATE	DESCRIPTION
	REVISIONS

"PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY 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. 20748, EXPIRATION DATE: 2-22-25."

STATE OF MARYLAND ALDO MICHAEL VITUCCI No. 20748 PROFESSIONAL ENGINEER

Aldo M. Vitucci, P.E.
ALDO M. VITUCCI, P.E.

OWNERS
LACEY FAMILY REVOCABLE TRUST
1235 WILD ROSE COURT
MARRIOTTSVILLE, MD 21104
ATTN: MR. VINCENT LACEY

DEVELOPER
LAND HOLDINGS LLC
C\O B. JAMES GREENFIELD
6420 AUTUMN SKY WAY
COLUMBIA, MD 21044
443-324-4732

PROJECT			SECTION/AREA		PARCEL	
LACEY PROPERTY			N/A		13	
PLAT NOS.	BLOCK NO.	ZONE	TAX MAP	ELEC. DIST.	CENSUS TR.	
–	1	R-ED	25	SECOND	602900	

TITLE SHEET

LACEY PROPERTY
LOTS 1 THRU 13 AND OPEN SPACE LOTS 14 THRU 17

ZONED: R-ED
PARCEL No.: 13
TAX MAP No.: 25 GRID No.: 1
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: JULY 10, 2023
SHEET 1 OF 24

F-21-015

DocuSign Envelope ID: 79E9DBFB-CDDB-4FF4-A258-614B911C4A9B

SPECIMEN TREE TABLE

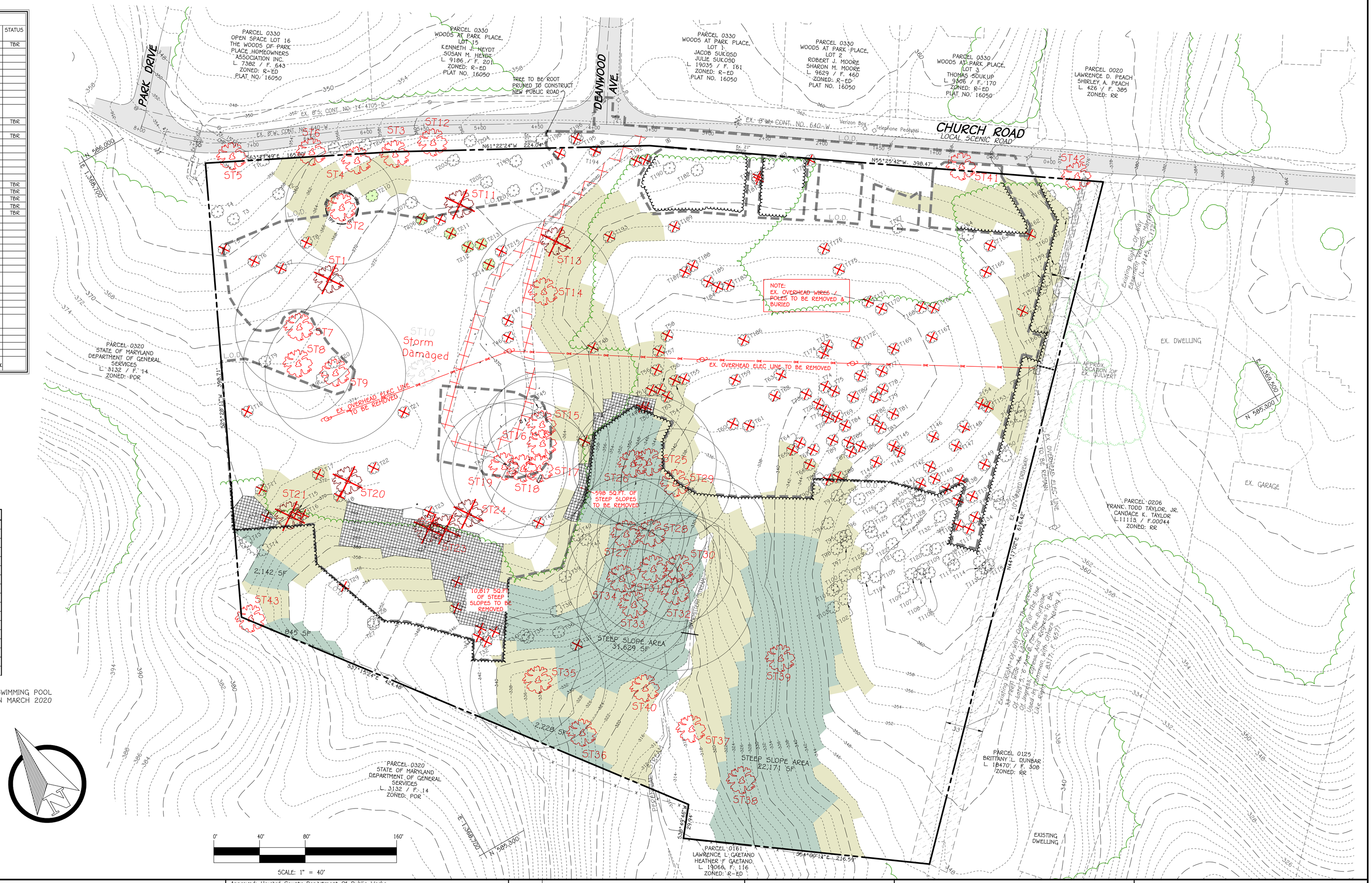
KEY	SPECIES	SIZE (DBH)	CRZ (FT RADIUS)	COMMENTS	STATUS
1	HEMLOCK	35"	52.5		TBR
2	NORWAY SPRUCE	33"	49.5		
3	WHITE PINE	37"	55.5		
4	WHITE PINE	38.5"	57.75		
5	SILVER MAPLE	49.5"	89.25		
6	SILVER MAPLE	36.5"	54.75		
7	BLACK WALNUT	37.5"	56.25		
8	BLACK WALNUT	32"	48		
9	BLACK WALNUT	41"	61.5		
11	SILVER MAPLE	42"	63	VERY POOR, TRUNK ROT	TBR
12	SILVER MAPLE	45.5"	68.25	POOR, TRUNK ROT	
13	SILVER MAPLE	52"	78	POOR, TRUNK ROT	TBR
14	ENGLISH WALNUT	41"	61.5		
15	SILVER MAPLE	31"	46.5	FAIR, LIMITED CROWN SPREAD	
16	SILVER MAPLE	39"	58.5		
17	SILVER MAPLE	33"	49.5	FAIR, LEANING	
18	SILVER MAPLE	40.5"	60.75	FAIR, NARROW CROWN	
19	SILVER MAPLE	37"	55.5	FAIR, LIMITED CROWN SPREAD	
20	SILVER MAPLE	45"	67.5	FAIR, LIMITED CROWN SPREAD	TBR
21	SILVER MAPLE	41"	61.5	FAIR, MAJOR LIMB BROKEN	TBR
22	SILVER MAPLE	32"	48		TBR
23	SILVER MAPLE	34"	51	FAIR, LIMITED CROWN SPREAD	TBR
24	SILVER MAPLE	35"	52.5	POOR, TRUNK ROT	TBR
25	TULIP POPLAR	39.5"	59.25		
26	TULIP POPLAR	35"	52.5	TWIN STEMS	
27	TULIP POPLAR	33.5"	50.25		
28	TULIP POPLAR	32"	48		
29	TULIP POPLAR	32"	48	TWIN STEMS	
30	TULIP POPLAR	31"	46.5		
31	TULIP POPLAR	39"	58.5		
32	TULIP POPLAR	46"	69		
33	TULIP POPLAR	33"	49.5	2 ADDITIONAL NEAR SPECIMEN SIZE TRUNKS	
34	TULIP POPLAR	32.5"	48.75		
35	TULIP POPLAR	39.5"	59.25		
36	TULIP POPLAR	40"	60		
37	TULIP POPLAR	55"	82.5		
38	TULIP POPLAR	61"	91.5	SPLITS INTO 2 TRUNKS ABOVE DBH	
39	TULIP POPLAR	41"	61.5		
40	SYCAMORE	31"	46.5		
41	SILVER MAPLE	31.5"	47.25	POOR, VERY LIMITED CROWN	
42	SILVER MAPLE	39.5"	59.25	POOR, CROWN REDUCED	
43	SILVER MAPLE	39"/32"	58.5	POOR, SPLIT TRUNK ABOVE BREAST HEIGHT, TRUNK ROT, AND LIMB DIEBACK	

NOTE: "TBR" REFERS TO EXISTING SPECIMEN TREES TO BE REMOVED.

LEGEND

SYMBOL	DESCRIPTION
352	EXISTING CONTOUR 2' INTERVAL
350	EXISTING CONTOUR 10' INTERVAL
	EXISTING SAN. SEWER LINE
	EXISTING STORM DRAIN LINE
	EXISTING WATER LINE
	EX. OVERHEAD ELECTRIC LINE & POWER POLE
	EXISTING FENCE
	EXISTING PAVING
	EXISTING TREES
	EXISTING TREES TO BE REMOVED
T19	SPECIMEN TREES
	EXISTING TREELINE
	SLOPES 15% - 24.9%
	SLOPES 25% OR GREATER
	EX. DRIVEWAY DEMOLITION
	STEEP SLOPE TO BE REMOVED

NOTE: EXISTING STRUCTURES, OUT BUILDINGS AND SWIMMING POOL HAVE BEEN RAZED AND REMOVED FROM THE SITE IN MARCH 2020 UNDER DEMOLITION PERMIT NUMBER B-18003545.



SCALE: 1" = 40'

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

Approved: Howard County Department Of Public Works
DocuSigned by: [signature]
Chief, Bureau Of Highways — 9/11/2023 Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
DocuSigned by: Chad Edmondson
Chief, Development Engineering Division — 9/11/2023 Date
DocuSigned by: [signature]
Chief, Division of Land Development — 9/13/2023 Date

DATE	DESCRIPTION
	REVISIONS

"PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY 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. 20748, EXPIRATION DATE: 2-22-25."

STATE OF MARYLAND — ALDO MICHAEL VITUCCI — No. 20748 — PROFESSIONAL ENGINEER

Aldo M. Vitucci, P.E.
ALDO M. VITUCCI, P.E.

OWNERS
LACEY FAMILY REVOCABLE TRUST
1235 WILD ROSE COURT
MARRIOTTSVILLE, MD 21104
ATTN: MR. VINCENT LACEY

DEVELOPER
LAND HOLDINGS LLC
C\O B. JAMES GREENFIELD
6420 AUTUMN SKY WAY
COLUMBIA, MD 21044
443-324-4732

PROJECT			SECTION/AREA		PARCEL
LACEY PROPERTY			N/A		13
PLAT NOS.	BLOCK NO.	ZONE	TAX MAP	ELEC. DIST.	CENSUS TR.
-	1	R-ED	25	SECOND	602900

DEMOLITION PLAN

LACEY PROPERTY
LOTS 1 THRU 13 AND OPEN SPACE LOTS 14 THRU 17

ZONED: R-ED
PARCEL No.: 13
TAX MAP No.: 25 GRID No.: 1
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: APRIL 4, 2023
SHEET 2 OF 24

F-21-015

DocuSign Envelope ID: 79E9DBFB-CDDB-4FF4-A258-614B911C4A9B

LEGEND

SYMBOL	DESCRIPTION
	EXISTING SAN. SEWER LINE
	EXISTING STORM DRAIN LINE
	EXISTING WATER LINE
+ 344.29	PROPOSED SPOT ELEVATION
	PROPOSED CONCRETE WALK
	PROPOSED MACADAM PAVING
8" W	PROPOSED PUBLIC WATER
18" RCCP	PROPOSED STORMDRAIN
8" S	PROPOSED PUBLIC SEWER
	FOREST CONSERVATION AREA

CURVE TABLE

CURVE #	LENGTH	RADIUS	TANGENT	DELTA	CHORD BEARING	CHORD LENGTH
C1	24.14'	238.00'	12.08'	05° 48' 40"	S29° 00' 46"W	24.14'
C2	21.45	41.00'	10.74'	029° 22' 00"	S73° 36' 14"E	20.79'
C3	62.58'	39.00'	40.34'	091° 56' 19"	S75° 06' 37"W	56.08'
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C5	59.17'	35.00'	39.47'	096° 51' 54"	N76° 21' 36"E	52.37'
C6	22.79'	53.00'	11.57'	024° 38' 17"	N15° 36' 31"E	22.62'
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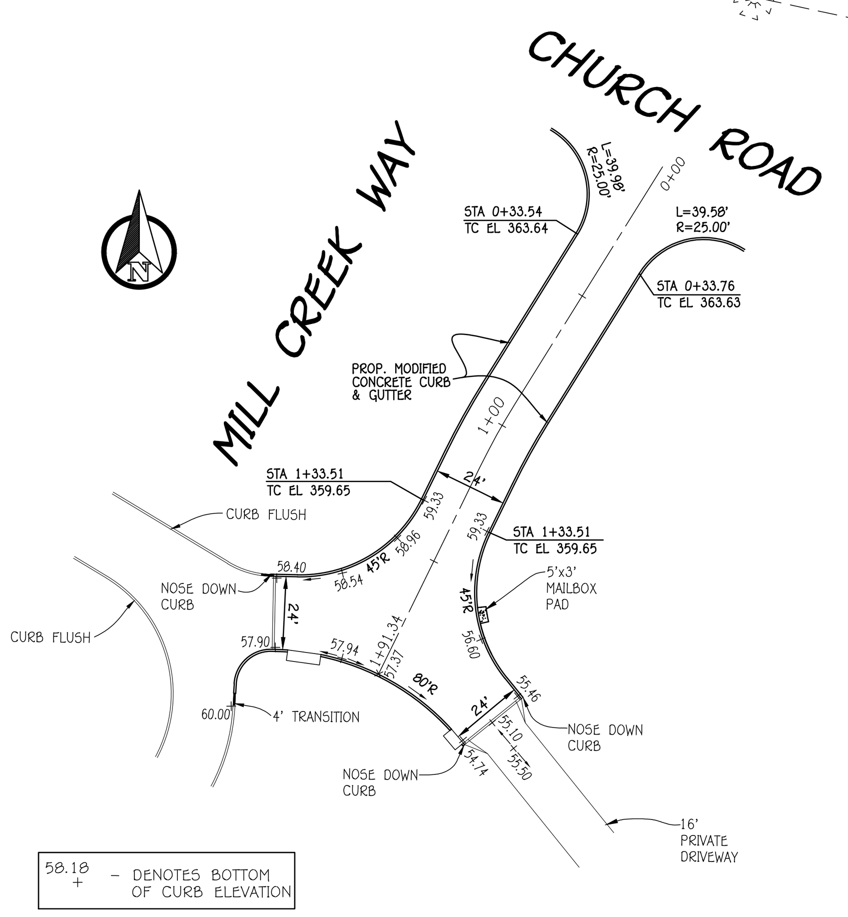
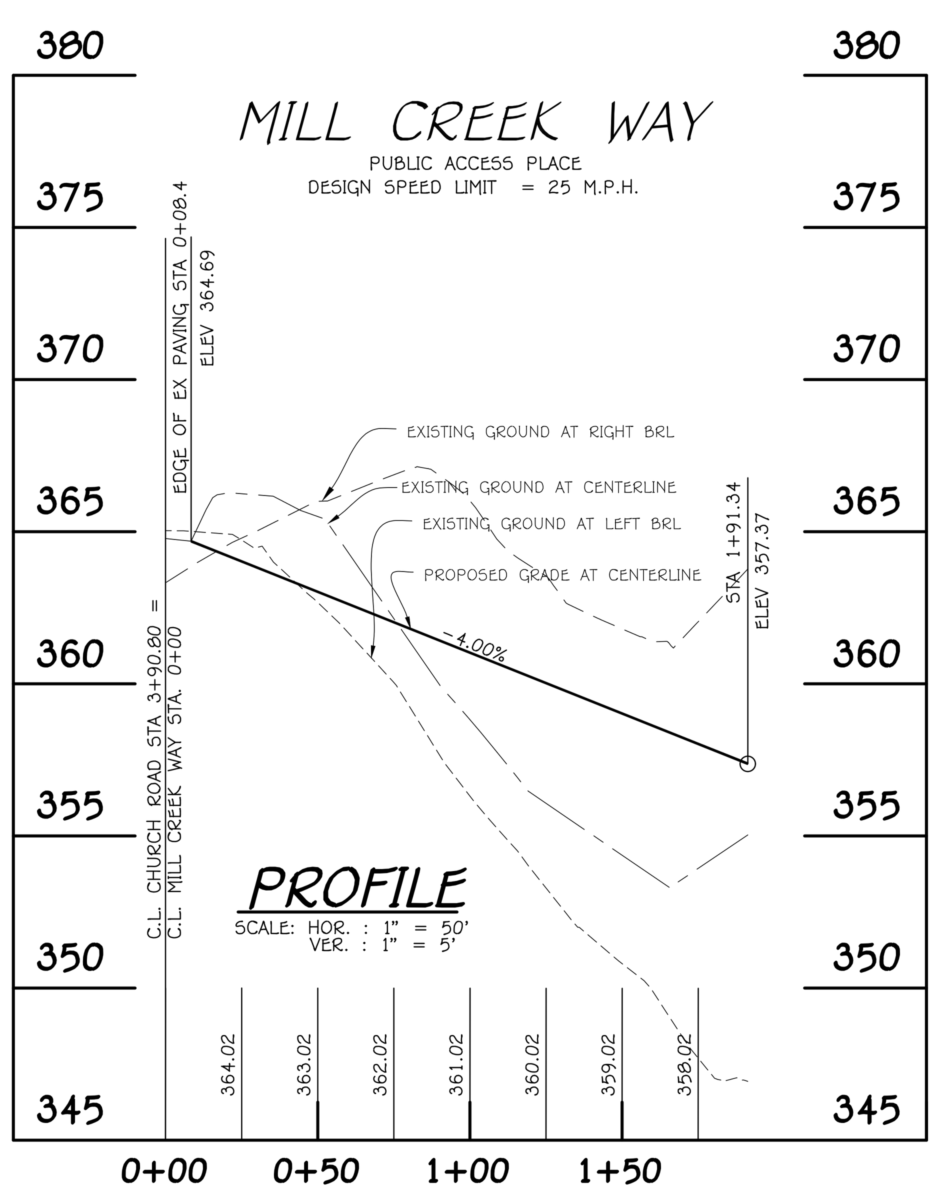


TURN AROUND DETAIL

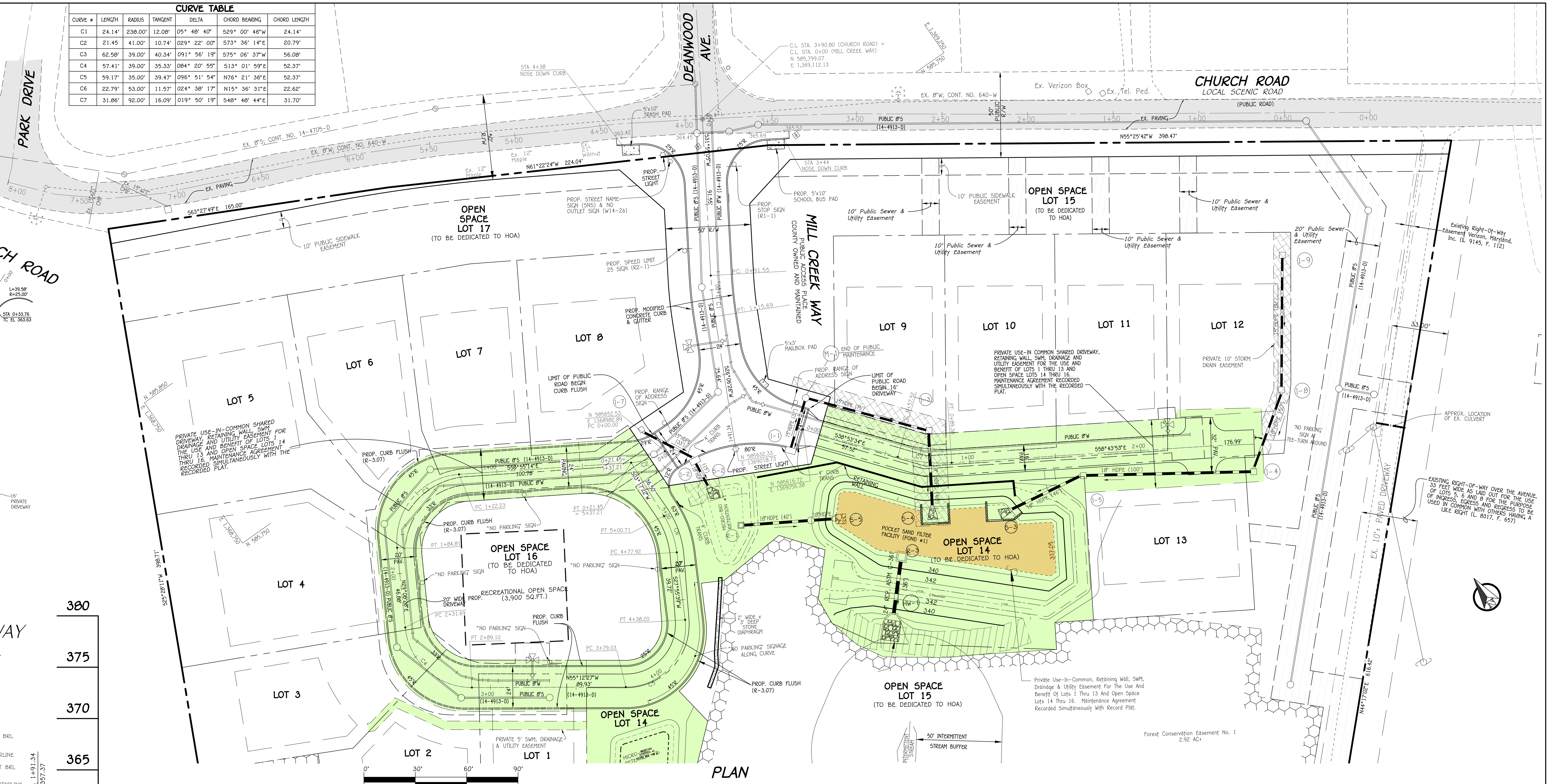
Y-TURNAROUND HO.CO. DETAIL R-5.07

Scale: 1" = 50'

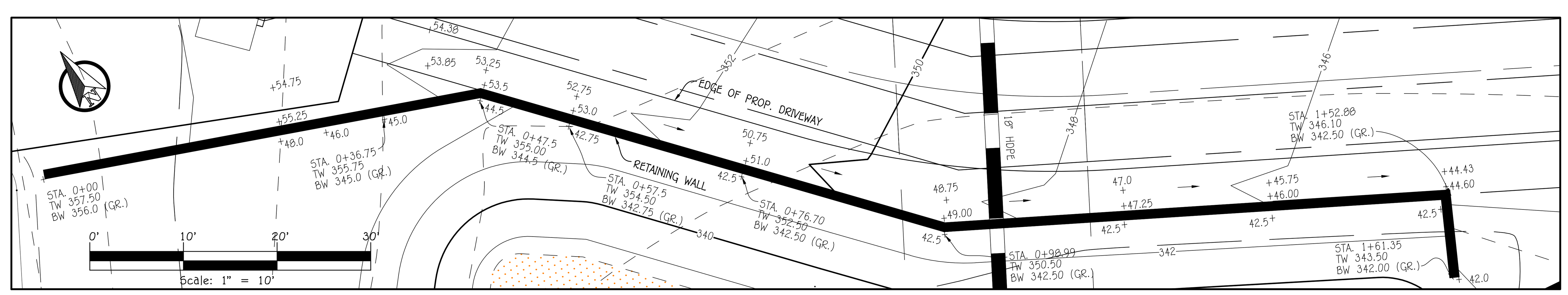


PROFILE

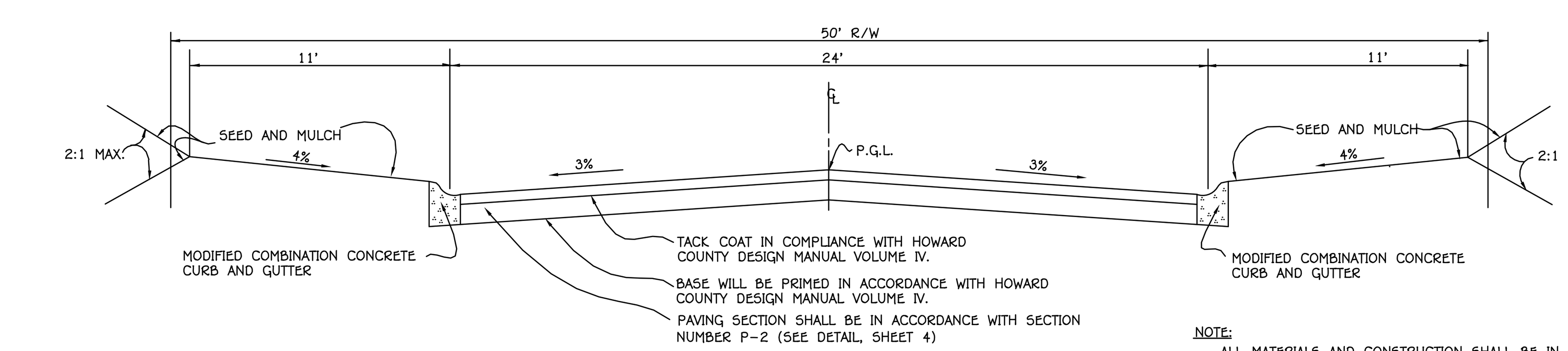
SCALE: HOR. : 1" = 50'
VER. : 1" = 5'



PLAN



RETAINING WALL PLAN



NOTE:
ALL MATERIALS AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH HOWARD COUNTY DESIGN MANUAL VOLUME IV, STANDARD SPECIFICATION AND DETAILS FOR CONSTRUCTION.

(MILL CREEK WAY)
TYPICAL ROADWAY SECTION (PUBLIC ACCESS PLACE)

NO SCALE

ROADWAY INFORMATION CHART

ROAD NAME	CLASSIFICATION	DESIGN SPEED	ZONING	℄ STATION LIMITS	PAVING SECTION
MILL CREEK WAY	PUBLIC ACCESS PLACE	25 M.P.H.	R-ED	0+00 TO 1+91.34	P-2

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CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

Approved: Howard County Department Of Public Works
Chief, Bureau Of Highways — Date 9/11/2023

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
DocuSigned by: CHAD Edmondson
Chief, Development Engineering Division — Date 9/11/2023
DocuSigned by:
Chief, Division of Land Development — Date 9/13/2023

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MILL CREEK WAY PLAN, PROFILE AND DETAILS

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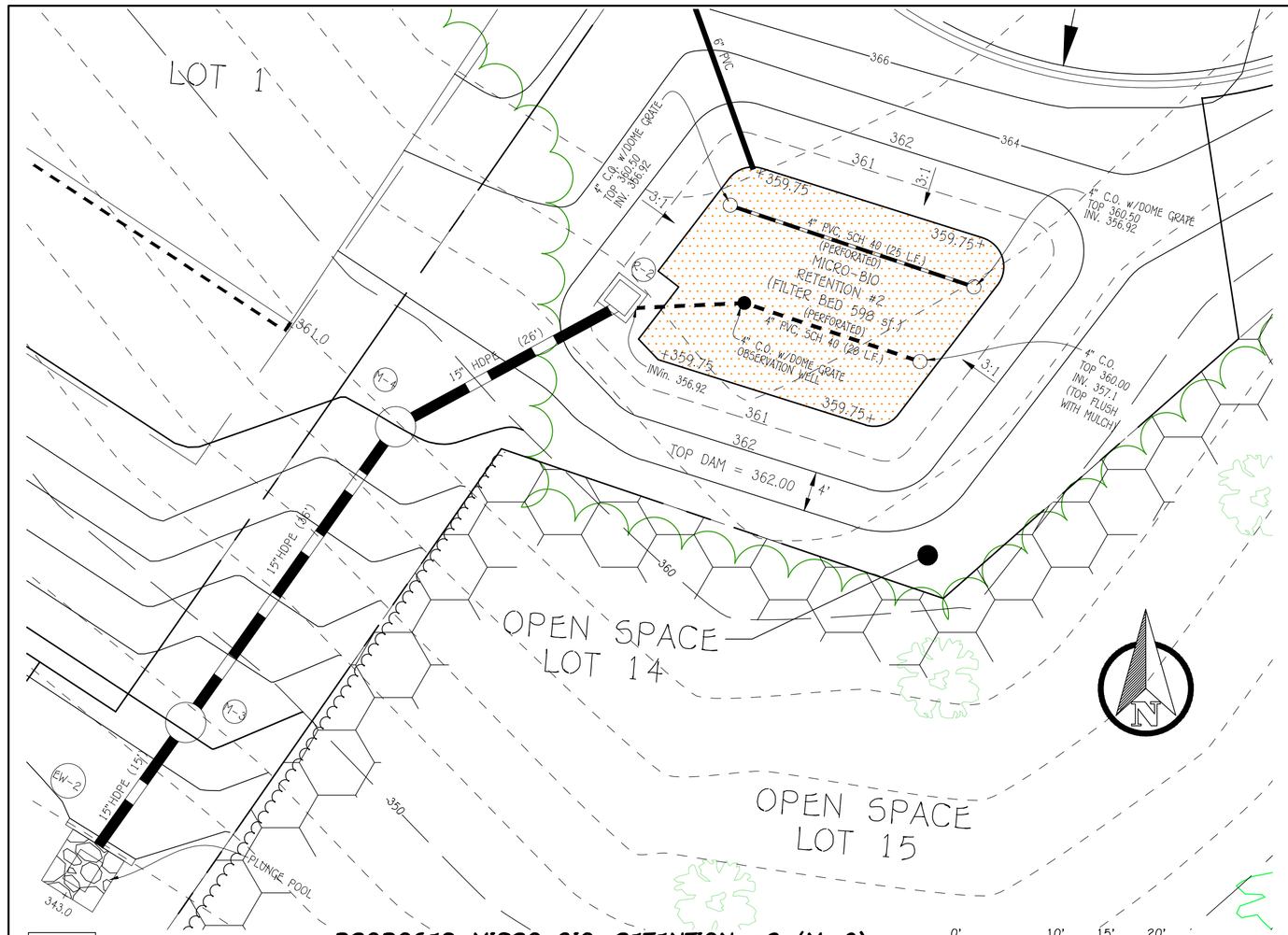
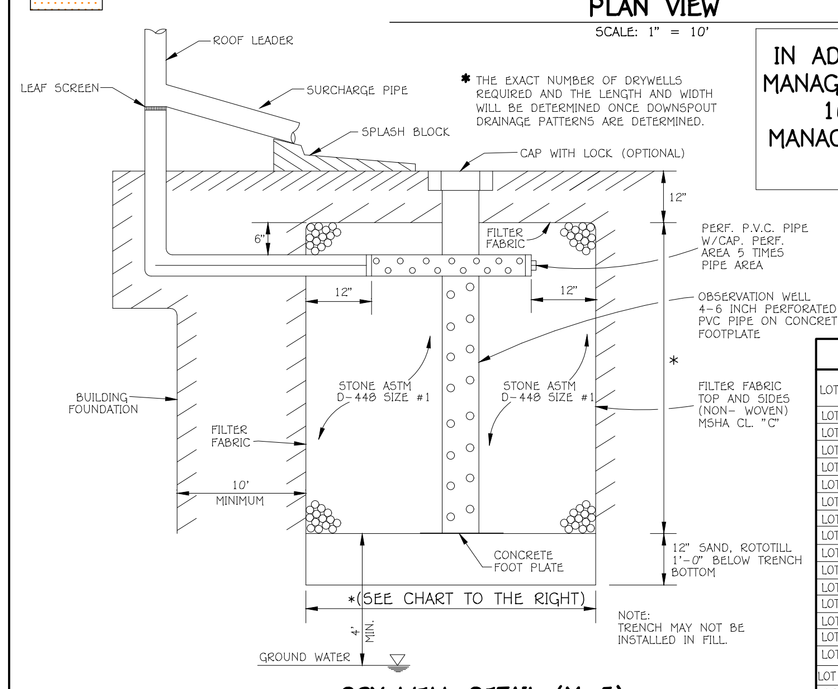


PROPOSED MICRO BIO-RETENTION #2 (M-6) PLAN VIEW

SCALE: 1" = 10'

0' 10' 15' 20'
Scale: 1" = 10'

IN ADDITION TO THE ESD VOLUME MANAGEMENT, THIS POND PROVIDES 100-YEAR, AND QUANTITY MANAGEMENT FOR 3.55 HR/6.6 IN STORM EVENT.



* THE EXACT NUMBER OF DRYWELLS REQUIRED AND THE LENGTH AND WIDTH WILL BE DETERMINED ONCE DOWNSPOUT DRAINAGE PATTERNS ARE DETERMINED.

NOTE: TRENCH MAY NOT BE INSTALLED IN FILL.

DRY WELL DETAIL (M-5)

NOT TO SCALE

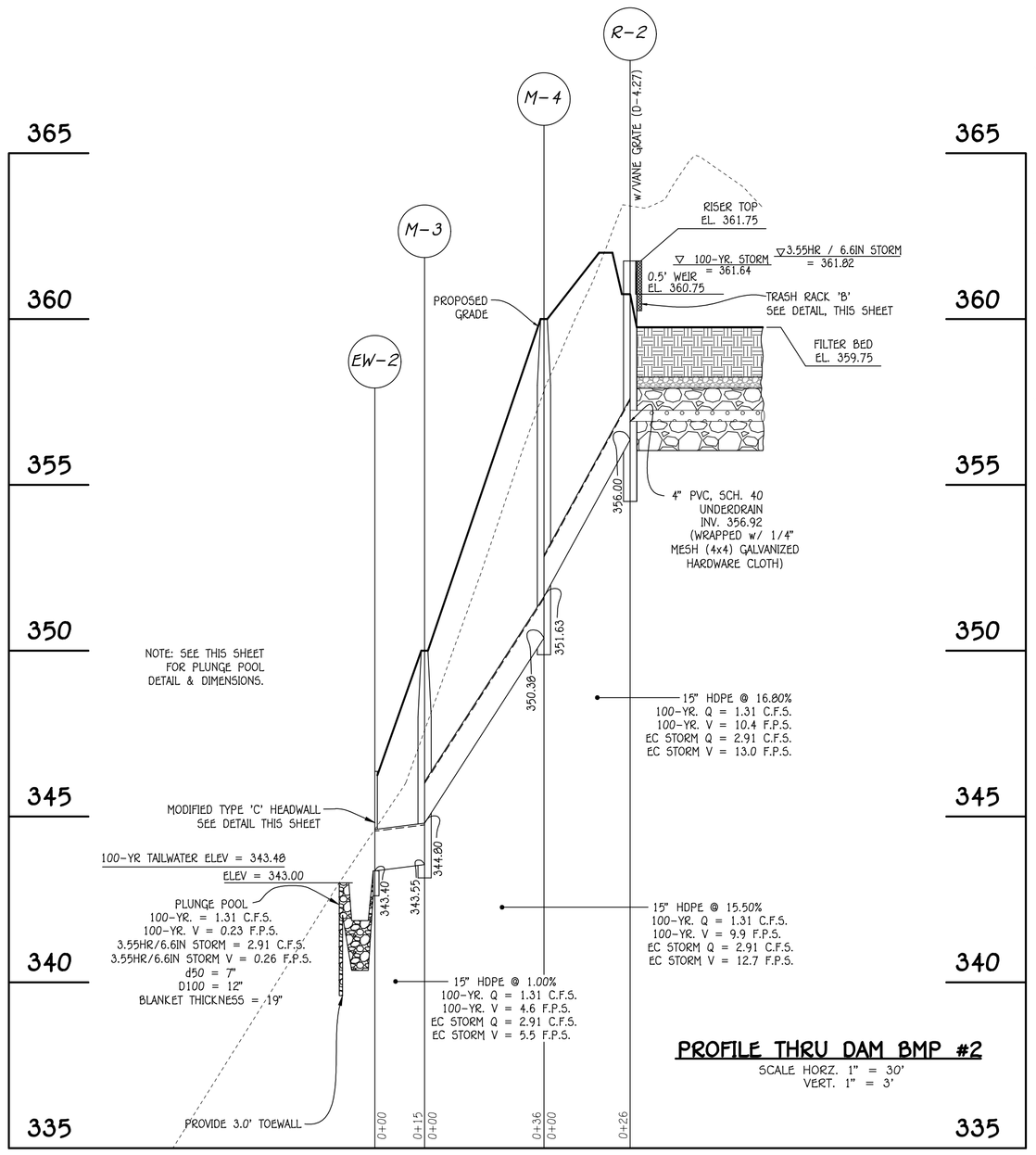
OPERATION AND MAINTENANCE SCHEDULE FOR DRYWELLS (M-5)

1. THE OWNER SHALL INSPECT THE MONITORING WELLS AND STRUCTURES ON A QUARTERLY BASIS AND AFTER EVERY HEAVY STORM EVENT.
2. THE OWNER SHALL RECORD THE WATER LEVELS AND SEDIMENT BUILD UP IN THE MONITORING WELLS OVER A PERIOD OF SEVERAL DAYS TO INSURE TRENCH DRAINAGE.
3. THE OWNER SHALL MAINTAIN A LOG BOOK TO DETERMINE THE RATE AT WHICH THE FACILITY DRAINS.
4. WHEN THE FACILITY BECOMES CLOGGED SO THAT IT DOES NOT DRAIN DOWN WITHIN A SEVENTY TWO (72) HOUR TIME PERIOD, CORRECTIVE ACTION SHALL BE TAKEN.
5. THE MAINTENANCE LOG BOOK SHALL BE AVAILABLE TO HOWARD COUNTY FOR INSPECTION TO INSURE COMPLIANCE WITH OPERATION AND MAINTENANCE CRITERIA.
6. ONCE THE PERFORMANCE CHARACTERISTICS OF THE INFILTRATION FACILITY HAVE BEEN VERIFIED, THE MONITORING SCHEDULE CAN BE REDUCED TO AN ANNUAL BASIS UNLESS THE PERFORMANCE DATA INDICATES THAT A MORE FREQUENT SCHEDULE IS REQUIRED.

NOTE: ALL DRY WELLS WILL BE INSTALLED AT SDP STAGE WITH THE CONSTRUCTION OF HOUSES.

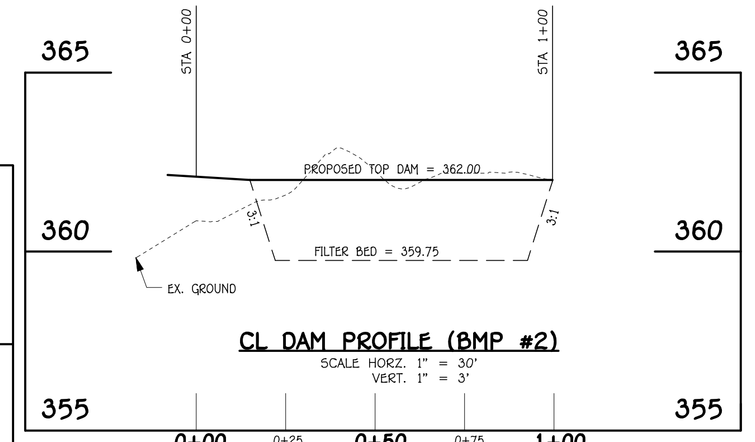
DRY WELL CHART

LOT NO.	ROOF AREA SQ.FT	ESD REQUIRED (CUBIC FEET)	ESD PROVIDED (CUBIC FEET)	NO. OF DRYWELLS	*Ø x L x W
LOT 1A	900	114 CU.FT.	130 CU.FT.	1	4' x 9' x 9'
LOT 2A	900	114 CU.FT.	130 CU.FT.	1	4' x 9' x 9'
LOT 3A	900	114 CU.FT.	130 CU.FT.	1	4' x 9' x 9'
LOT 4A	900	114 CU.FT.	220 CU.FT.	1	5' x 11' x 10'
LOT 4B	900	114 CU.FT.	200 CU.FT.	1	5' x 9' x 9'
LOT 5A	900	114 CU.FT.	200 CU.FT.	1	5' x 10' x 10'
LOT 5B	900	114 CU.FT.	200 CU.FT.	1	5' x 10' x 10'
LOT 6A	900	114 CU.FT.	200 CU.FT.	1	5' x 11' x 10'
LOT 6B	900	114 CU.FT.	200 CU.FT.	1	5' x 10' x 10'
LOT 7A	900	114 CU.FT.	220 CU.FT.	1	5' x 11' x 10'
LOT 7B	900	114 CU.FT.	220 CU.FT.	1	5' x 11' x 10'
LOT 8A	964	123 CU.FT.	220 CU.FT.	1	5' x 11' x 10'
LOT 8B	964	123 CU.FT.	220 CU.FT.	1	5' x 11' x 10'
LOT 9A	1125	143 CU.FT.	220 CU.FT.	1	5' x 11' x 10'
LOT 9B	1125	143 CU.FT.	220 CU.FT.	1	5' x 11' x 10'
LOT 10A	1125	143 CU.FT.	220 CU.FT.	1	5' x 11' x 10'
LOT 10B	1125	143 CU.FT.	220 CU.FT.	1	5' x 11' x 10'
LOT 11A	1125	143 CU.FT.	220 CU.FT.	1	5' x 11' x 10'
LOT 11B	1125	143 CU.FT.	220 CU.FT.	1	5' x 11' x 10'
LOT 12A	1125	143 CU.FT.	220 CU.FT.	1	5' x 11' x 10'
LOT 12B	1125	143 CU.FT.	220 CU.FT.	1	5' x 11' x 10'
LOT 13A	790	143 CU.FT.	220 CU.FT.	1	5' x 11' x 10'
LOT 13B	790	143 CU.FT.	220 CU.FT.	1	5' x 11' x 10'



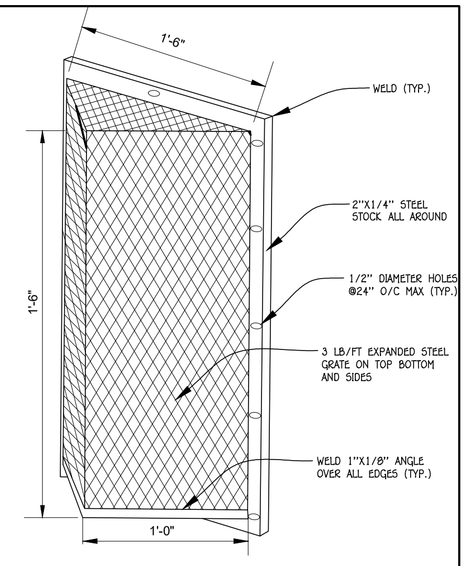
PROFILE THRU DAM BMP #2

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



CL DAM PROFILE (BMP #2)

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

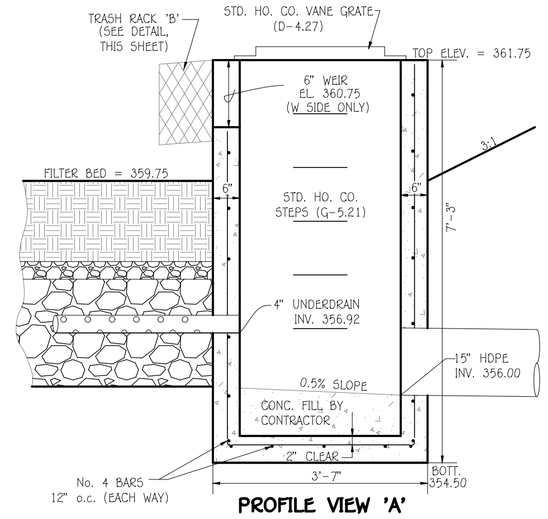


TRASH RACK 'B' DETAIL FOR 6" WEIR OPENING

(NTS)

NOTES:

1. TRASH RACK TO BE CENTERED OVER WEIR OPENING .
2. STEEL TO CONFORM TO ASTM A-36.
3. ALL SURFACES TO BE COATED WITH ZRC COLD GALVANIZING COMPOUND AFTER WELDING.
4. TRASH RACK TO BE FASTENED TO THE WALL WITH 1/2" MASONRY ANCHORS. TRASH RACK TO BE REMOVABLE.

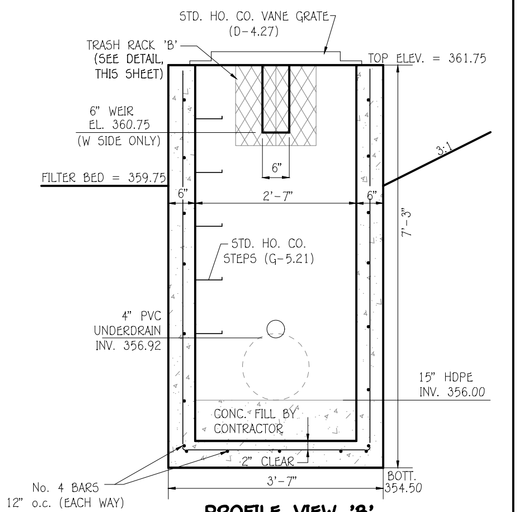


PROFILE VIEW 'A'

(MODIFIED '5' INLET) CONCRETE RISER DETAIL

R2

SCALE : 1" = 2'



PROFILE VIEW 'B'

(MODIFIED '5' INLET) CONCRETE RISER DETAIL

R2

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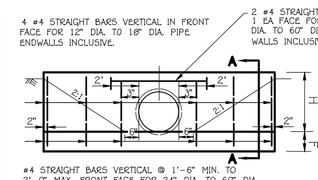
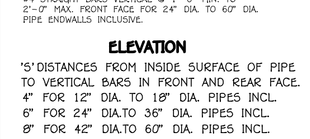
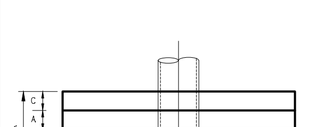


ELEVATION

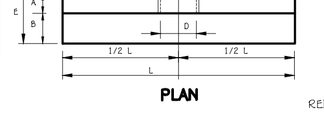
'S' DISTANCES FROM INSIDE SURFACE OF PIPE TO VERTICAL BARS IN FRONT AND REAR FACE.
4" FOR 12" DIA. TO 18" DIA. PIPES INCL.
6" FOR 24" DIA.TO 36" DIA. PIPES INCL.
8" FOR 42" DIA.TO 60" DIA. PIPES INCL.



SECTION A-A



DISPOSITION OF BARS - DETAIL



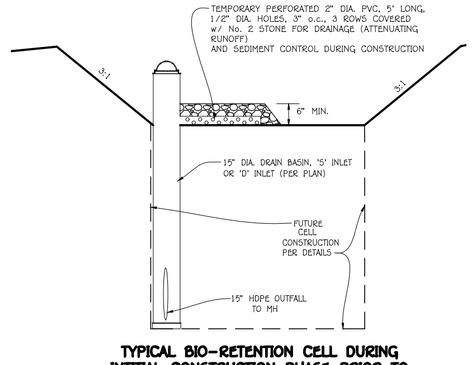
PLAN

REINFORCING: DEFORMED STEEL BARS (1/2" DIA.)
CHAMFER: ALL EXPOSED EDGES 1"x 1" OR AS DIRECTED.
CONC. SHALL BE S.H.A. A. MIX No. 2.

OPENINGS	DIMENSIONS							VOLUME	STEEL
D IN.	AREA SQ.FT	A	B	C	E	F	H	L	CONC C.Y.	LBS.
15"	1.23	9"	6"	6"	1'-9"	9"	3'-0"	7'-9"	2.33	47

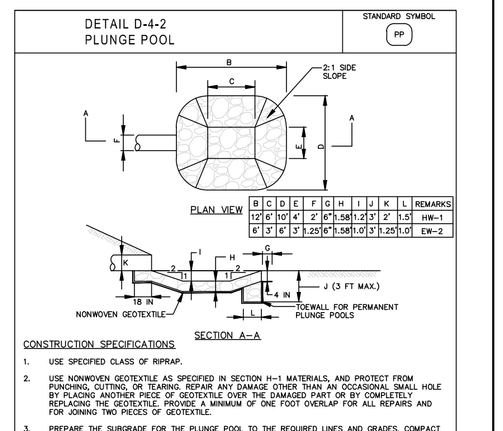
MODIFIED TYPE 'C' ENDWALL

NO SCALE



TYPICAL BIO-RETENTION CELL DURING INITIAL CONSTRUCTION PHASE PRIOR TO DRAINAGE AREA BEING STABILIZED

NO SCALE



B	C	D	E	F	G	H	I	J	K	L	REMARKS
12'-6"	10'	6"	3'	2'	6"	5.58'	1.67'	2'	3.5'		MH-1
6'	3'	6"	3'	3.25'	6"	5.58'	1.67'	3'	3.25'	0'	EW-2

CONSTRUCTION SPECIFICATIONS

1. USE SPECIFIED CLASS OF RIPRAP.
2. USE NONWOVEN GEOTEXTILE AS SPECIFIED IN SECTION M-1 MATERIALS, AND PROTECT FROM PUNCTURING, CUTTING, OR TEARING. REPAIR ANY DAMAGE EITHER THAN AN OCCASIONAL SMALL HOLE BY PLACING ANOTHER PIECE OF GEOTEXTILE OVER THE DAMAGED PART OR BY COMPLETELY REPLACING THE GEOTEXTILE. PROVIDE A MINIMUM OF ONE FOOT OVERLAP FOR ALL REPAIRS AND FOR JOINING TWO PIECES OF GEOTEXTILE.
3. PREPARE THE SUBGRADE FOR THE PLUNGE POOL TO THE REQUIRED LINES AND GRADES. COMPACT ANY FILL REQUIRED IN THE SUBGRADE TO A DENSITY OF APPROXIMATELY THAT OF THE SURROUNDING UNDISTURBED MATERIAL.
4. EMBED THE GEOTEXTILE A MINIMUM OF 4 INCHES AND EXTEND THE GEOTEXTILE A MINIMUM OF 6 INCHES BEYOND THE EDGE OF THE SCOUR HOLE.
5. STONE FOR THE PLUNGE POOL MAY BE PLACED BY EQUIPMENT. CONSTRUCT TO THE FULL COURSE THICKNESS IN ONE OPERATION AND IN SUCH A MANNER AS TO AVOID DISPLACEMENT OF THE UNDERLYING MATERIAL. AVOID DUMPING THE STONE THROUGH CHUTES OR HOPPERS, IN A MANNER THAT WILL ENSURE THAT IT IS REASONABLY HOMOGENEOUS WITH THE SMALLER STONES AND SPALLS FILLING THE VOIDS BETWEEN THE LARGER STONES. PLACE STONE FOR THE PLUNGE POOL IN A MANNER TO PREVENT DAMAGE TO THE GEOTEXTILE. HAND PLACE TO THE EXTENT NECESSARY.
6. AT THE PLUNGE POOL OUTLET, PLACE THE STONE SO THAT IT MEETS THE EXISTING GRADE.
7. MAINTAIN LINE, GRADE, AND CROSS SECTION. KEEP OUTLET FREE OF EROSION. REMOVE ACCUMULATED SEDIMENT AND DEBRIS. AFTER HIGH FLOWS INSPECT FOR SCOUR AND DISLODGED RIPRAP. MAKE NECESSARY REPAIRS IMMEDIATELY.

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

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Approved: Howard County Department Of Public Works

DocuSigned by: 245557AE1D4A4C2...

Chief, Bureau Of Highways — 9/11/2023 Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

DocuSigned by: Chad Edmondson 7D0F1B8F8B8F4B8...

Chief, Development Engineering Division — 9/11/2023 Date

DocuSigned by: 7E0F0567A4209A9A...

Chief, Division of Land Development — 9/13/2023 Date

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STORMWATER MANAGEMENT PLAN VIEW, PROFILES & DETAILS-MICRO BIO-RETENTION #2

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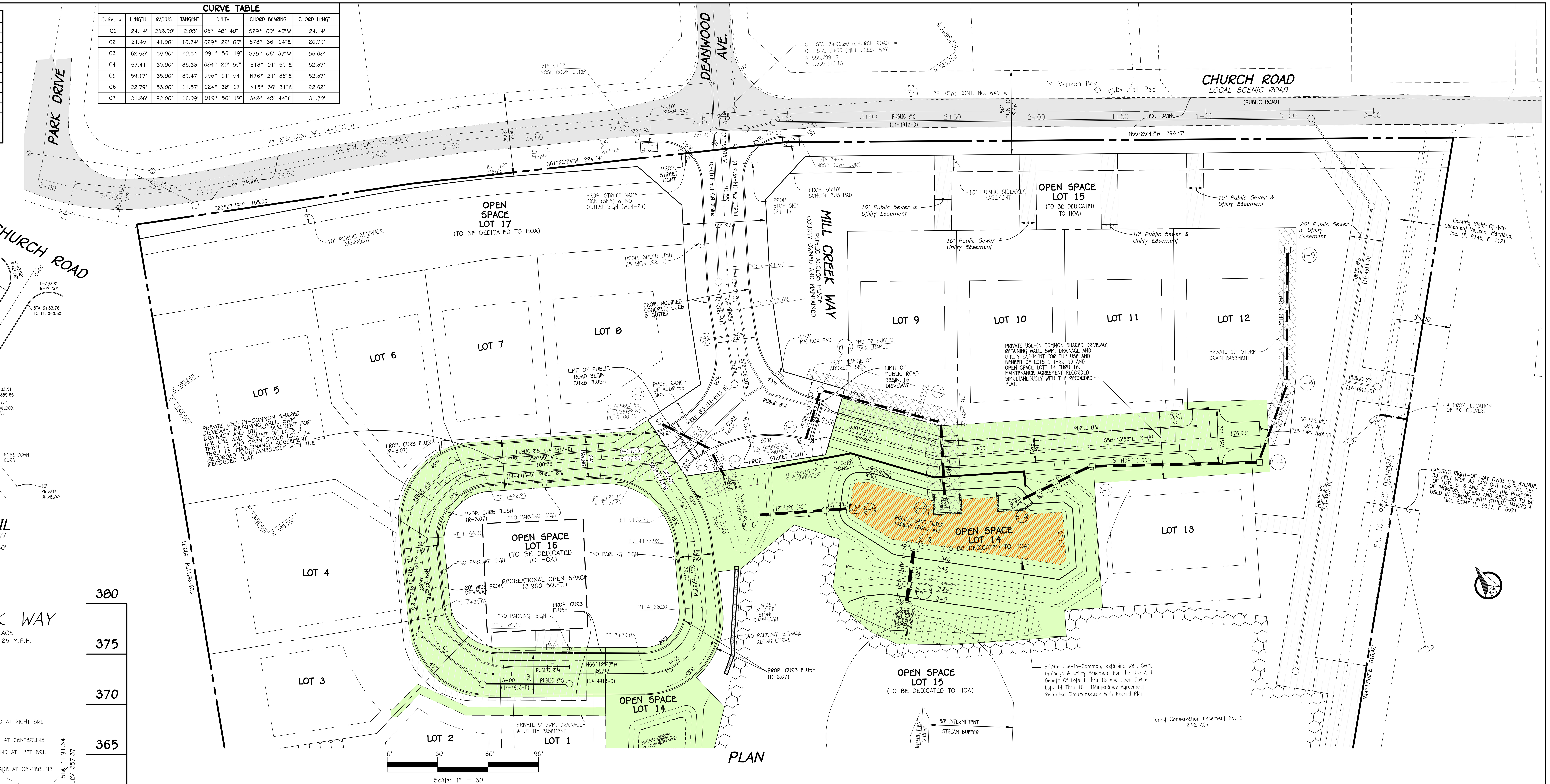
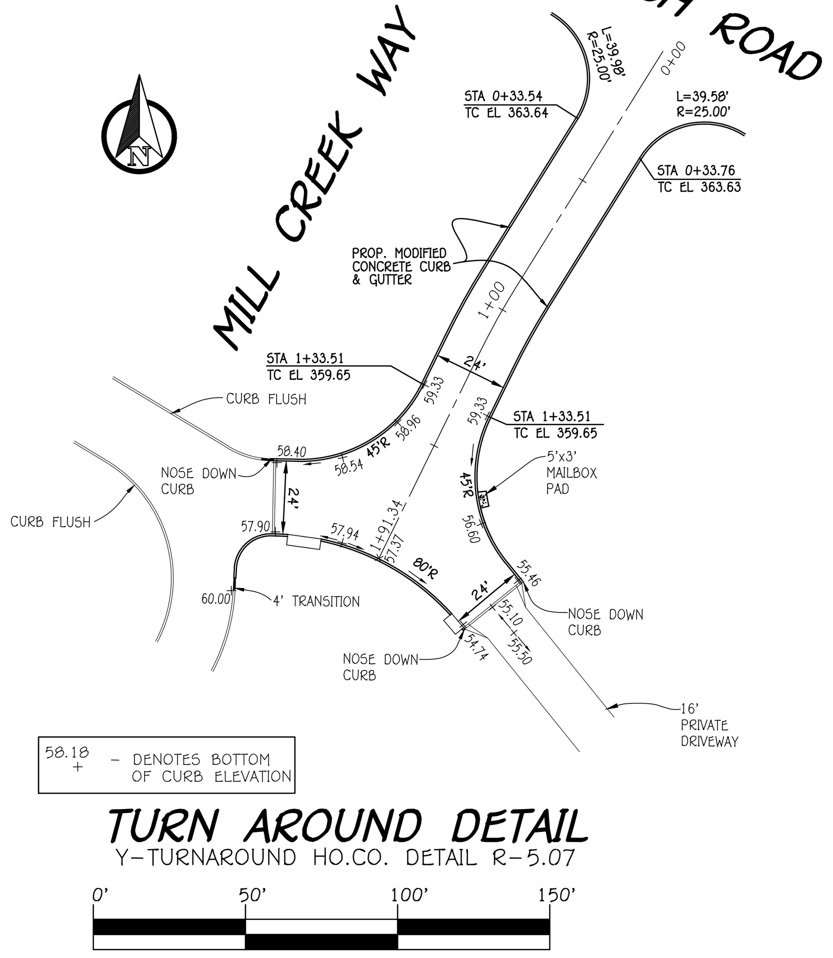
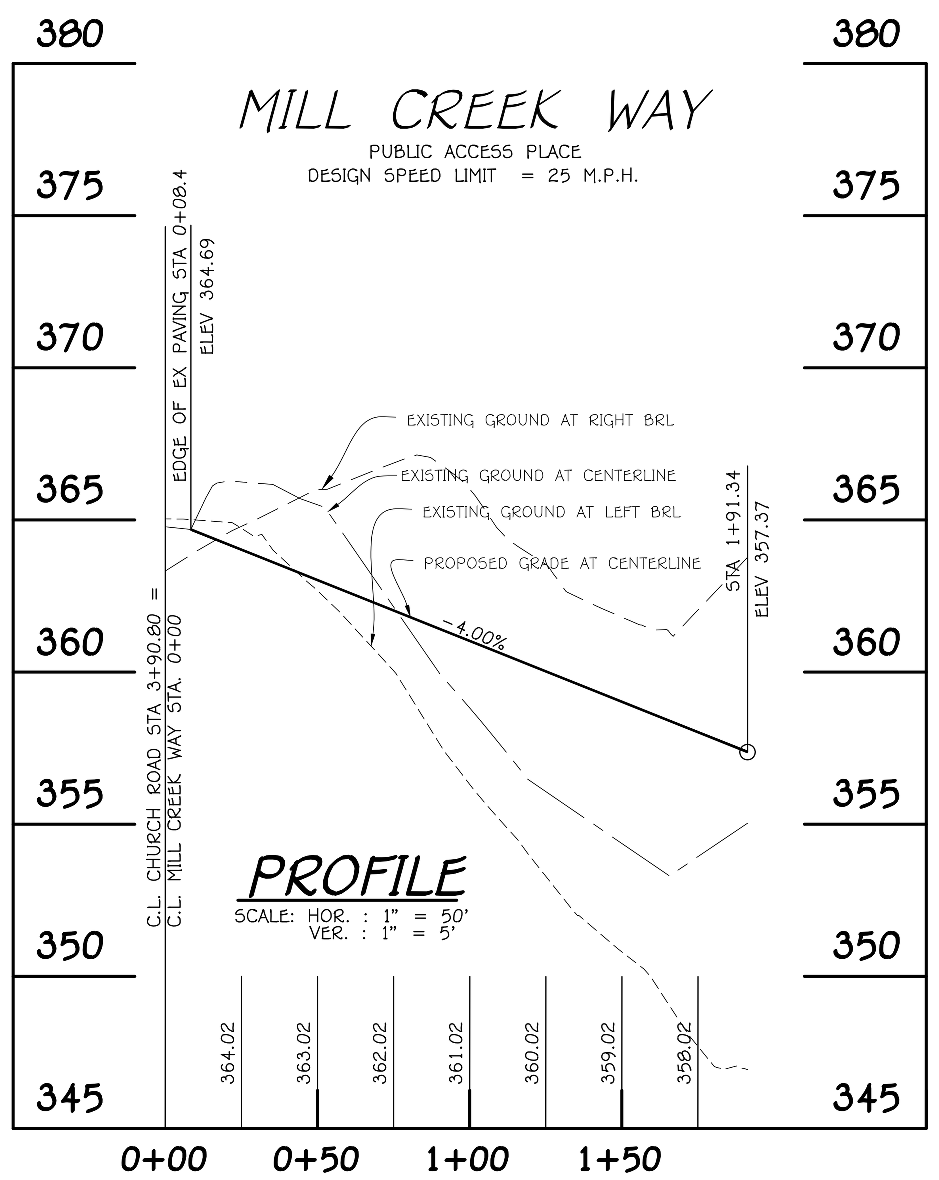
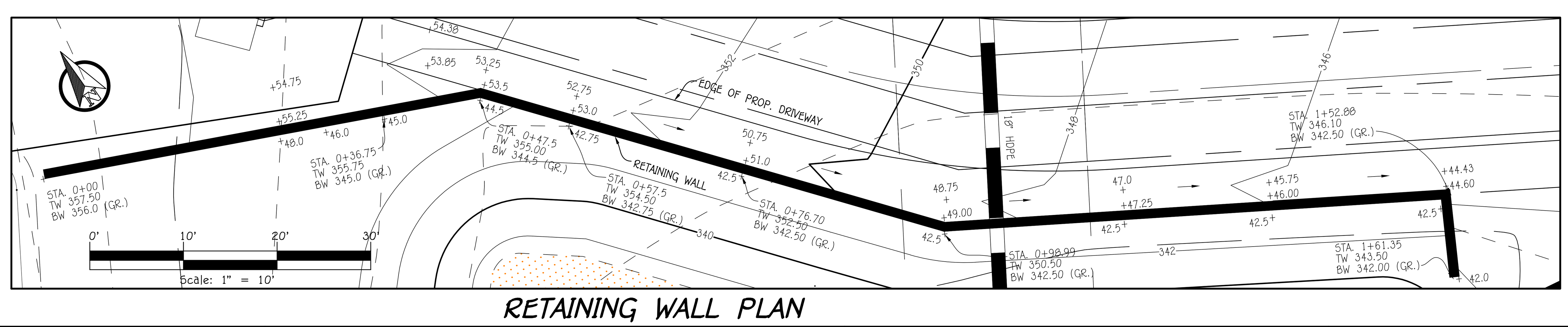
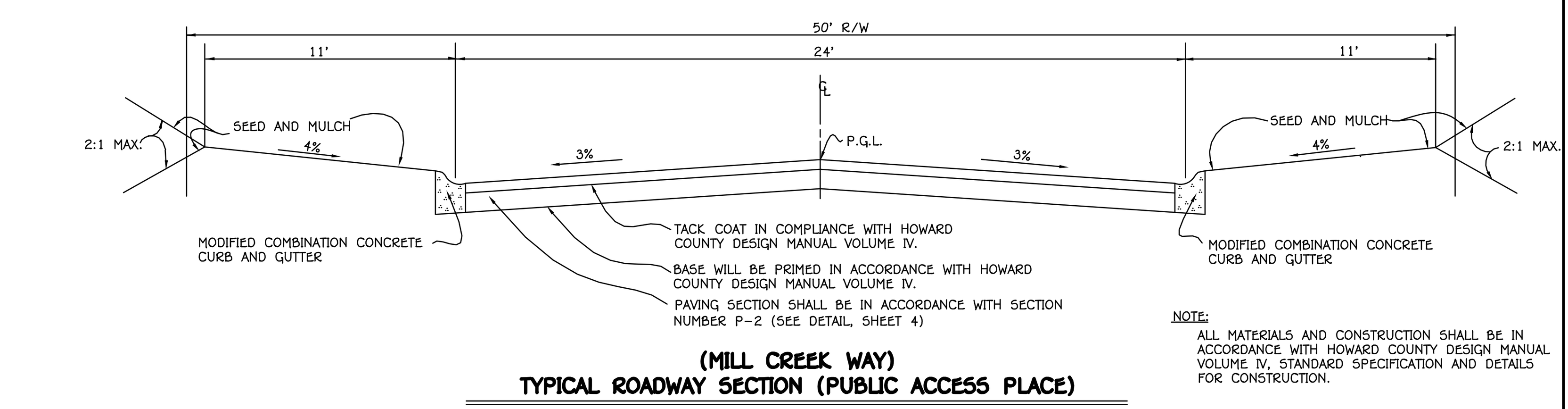
C6	22.79'	53.00'	11.57'	024° 38' 17"	N15° 36' 31"E	22.62'
C7	31.86'	92.00'	16.09'	019° 50' 19"	S48° 48' 44"E	31.70'











NOTE:
ALL MATERIALS AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH HOWARD COUNTY DESIGN MANUAL VOLUME IV, STANDARD SPECIFICATION AND DETAILS FOR CONSTRUCTION.

(MILL CREEK WAY)
TYPICAL ROADWAY SECTION (PUBLIC ACCESS PLACE)
NO SCALE

ROADWAY INFORMATION CHART

ROAD NAME	CLASSIFICATION	DESIGN SPEED	ZONING	℄ STATION LIMITS	PAVING SECTION
MILL CREEK WAY	PUBLIC ACCESS PLACE	25 M.P.H.	R-ED	0+00 TO 1+91.34	P-2

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

Approved: Howard County Department Of Public Works
Chief, Bureau Of Highways — 9/11/2023 Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
Chief, Development Engineering Division — 9/11/2023 Date
Chief, Division of Land Development — 9/13/2023 Date

DATE	DESCRIPTION
	REVISIONS

"PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY 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. 20748, EXPIRATION DATE: 2-22-25."

STATE OF MARYLAND — ALDO MICHAEL VITUCCI — No. 20748 — PROFESSIONAL ENGINEER

ALDO M. VITUCCI, P.E.

OWNERS
LACEY FAMILY REVOCABLE TRUST
1235 WILD ROSE COURT
MARRIOTTSVILLE, MD 21104
ATTN: MR. VINCENT LACEY

DEVELOPER
LAND HOLDINGS LLC
C\O B. JAMES GREENFIELD
6420 AUTUMN SKY WAY
COLUMBIA, MD 21044
443-324-4732

PROJECT			SECTION/AREA		PARCEL
LACEY PROPERTY			N/A		13
PLAT NOS.	BLOCK NO.	ZONE	TAX MAP	ELEC. DIST.	CENSUS TR.
-	1	R-ED	25	SECOND	602900

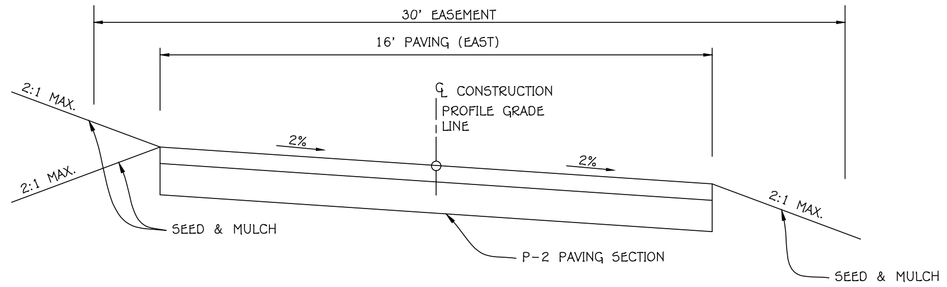
MILL CREEK WAY PLAN, PROFILE AND DETAILS

LACEY PROPERTY
LOTS 1 THRU 13 AND
OPEN SPACE LOTS 14 THRU 17

ZONED: R-ED
PARCEL No.: 13
TAX MAP No.: 25 GRID No.: 1
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: JULY 10, 2023
SHEET 3 OF 24

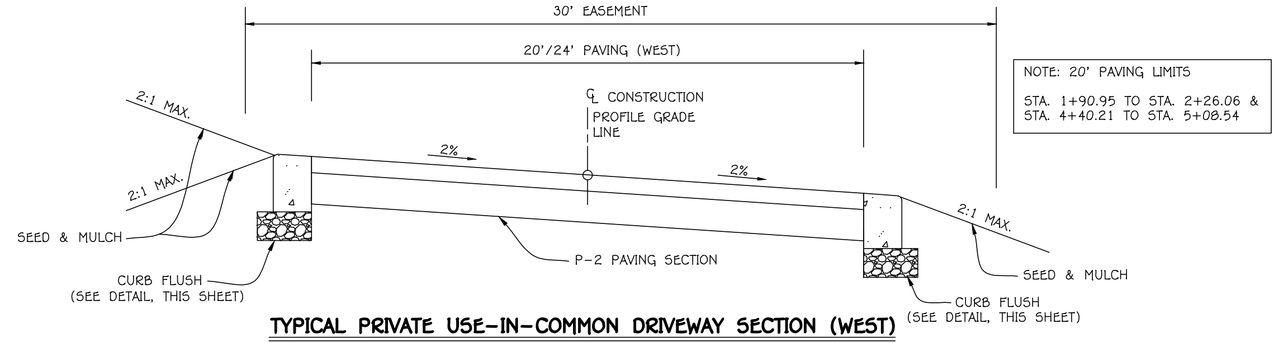
F-21-015

DocuSign Envelope ID: 79E9DBFB-CDDB-4FF4-A258-614B911C4A9B



TYPICAL PRIVATE USE-IN-COMMON DRIVEWAY SECTION (EAST)

NO SCALE



NOTE: 20' PAVING LIMITS

STA. 1+90.95 TO STA. 2+26.06 &
STA. 4+40.21 TO STA. 5+08.54

TYPICAL PRIVATE USE-IN-COMMON DRIVEWAY SECTION (WEST)

NO SCALE

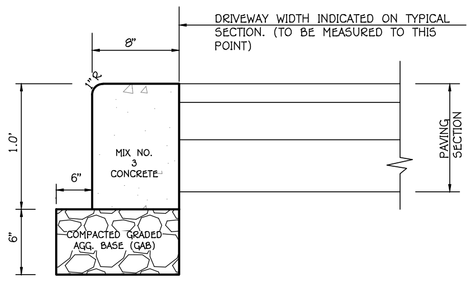
USE-IN-COMMON DRIVEWAY INFORMATION CHART

ROAD NAME	CLASSIFICATION	DESIGN SPEED	ZONING	℄ STATION LIMITS	PAVING SECTION
PRIVATE DRIVEWAY (EAST)	USE-IN-COMMON DRIVEWAY	15 M.P.H.	R-ED	0+00 TO 2+66.37	P-2

USE-IN-COMMON DRIVEWAY INFORMATION CHART

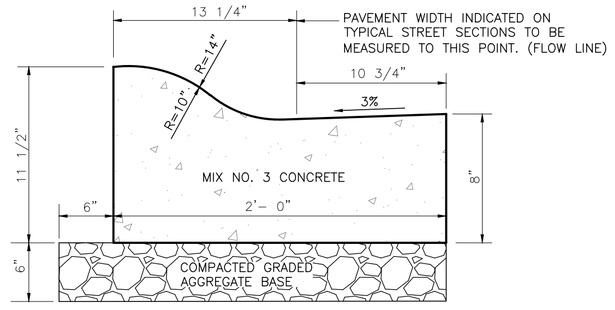
ROAD NAME	CLASSIFICATION	DESIGN SPEED	ZONING	℄ STATION LIMITS	PAVING SECTION
PRIVATE DRIVEWAY (WEST)	USE-IN-COMMON DRIVEWAY	15 M.P.H.	R-ED	0+00 TO 5+31.07	P-2

SECTION NUMBER	ROAD AND STREET CLASSIFICATION	CALIFORNIA BEARING RATIO (CBR)	3 TO <5	5 TO <7	≥7	3 TO <5	5 TO <7	≥7
		PAVEMENT MATERIAL (INCHES)	MIN HMA WITH GAB			HMA WITH CONSTANT GAB		
P-2	PARKING DRIVE AISLES: RESIDENTIAL AND NON-RESIDENTIAL WITH NO MORE THAN 10 HEAVY TRUCKS PER DAY LOCAL ROADS: ACCESS PLACE, ACCESS STREET CUL-DE-SACS: RESIDENTIAL	SUPERPAVE ASPHALT MIX FINAL SURFACE 9.5 MM, PG 64-22, LEVEL 1 (ESAL)	1.5	1.5	1.5	1.5	1.5	1.5
		SUPERPAVE ASPHALT MIX INTERMEDIATE SURFACE 9.5 MM, PG 64-22S; LEVEL 1 (ESAL)	1.5	1.5	1.5	1.5	1.5	1.5
		SUPERPAVE ASPHALT MIX BASE 19.0 MM, PG 64-22S, LEVEL 1 (ESAL)	2.0	2.0	2.0	3.5	2.0	2.0
		GRADED AGGREGATE BASE (GAB)	8.0	4.0	3.0	4.0	4.0	4.0



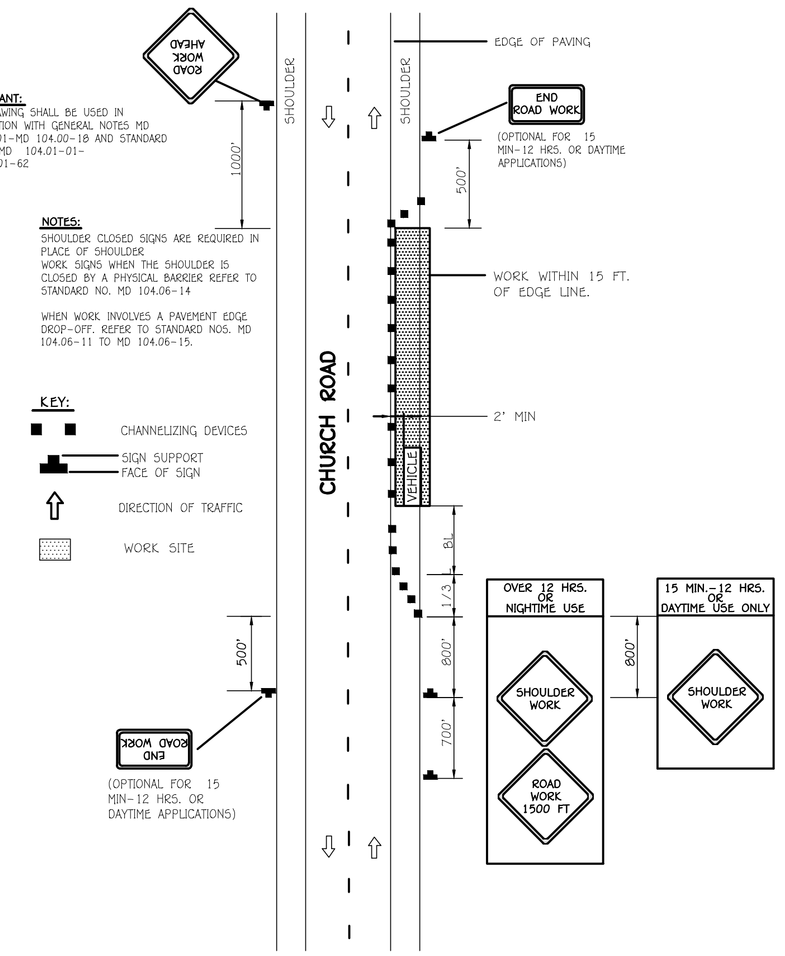
CURB FLUSH DETAIL (R-3.07)

NO SCALE



MODIFIED COMBINATION CURB AND GUTTER DETAIL (R-3.01)

NO SCALE



SHOULDER WORK/2-LANE, 2-WAY EQL/LESS THAN 40 MPH

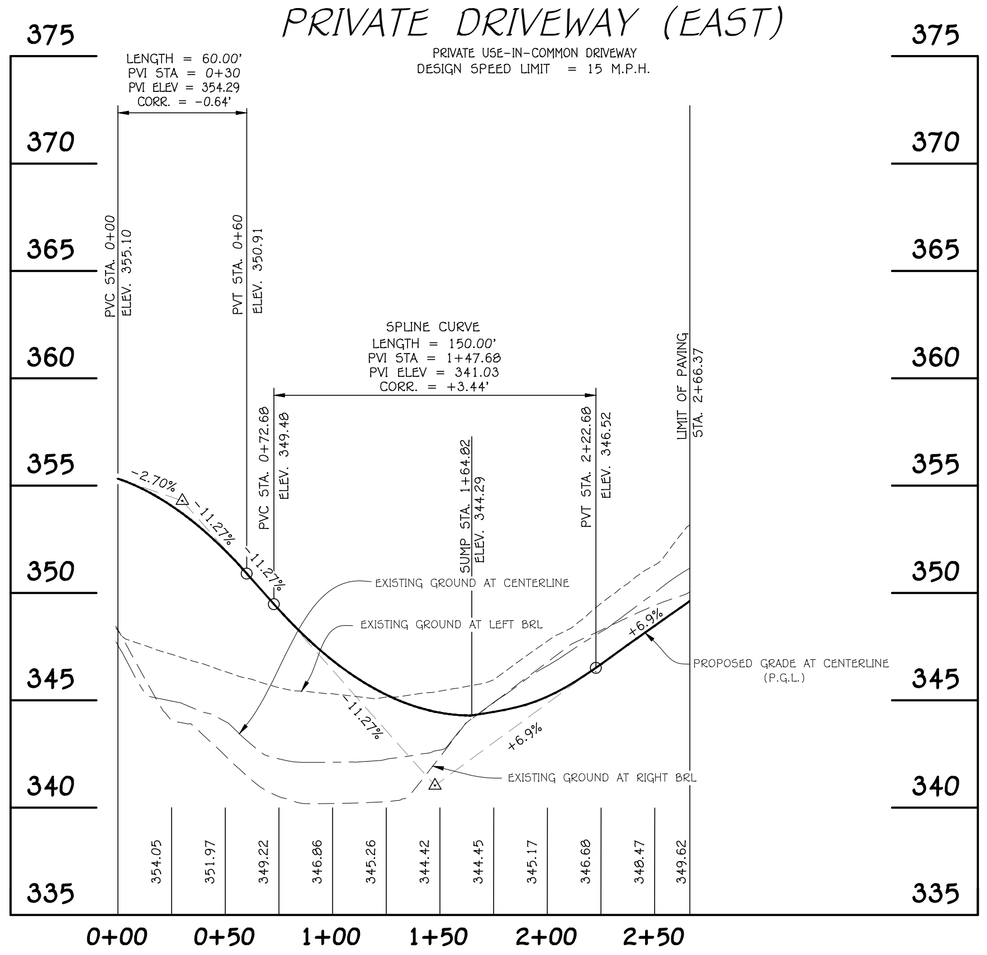
NO SCALE

NOTE:

SEE SHEET 6 FOR "FLAGGING OPERATION 1/-LANE, 2-WAY EQUAL/LESS THAN 40 MPH" DETAIL.

PRIVATE DRIVEWAY (EAST)

PRIVATE USE-IN-COMMON DRIVEWAY
DESIGN SPEED LIMIT = 15 M.P.H.

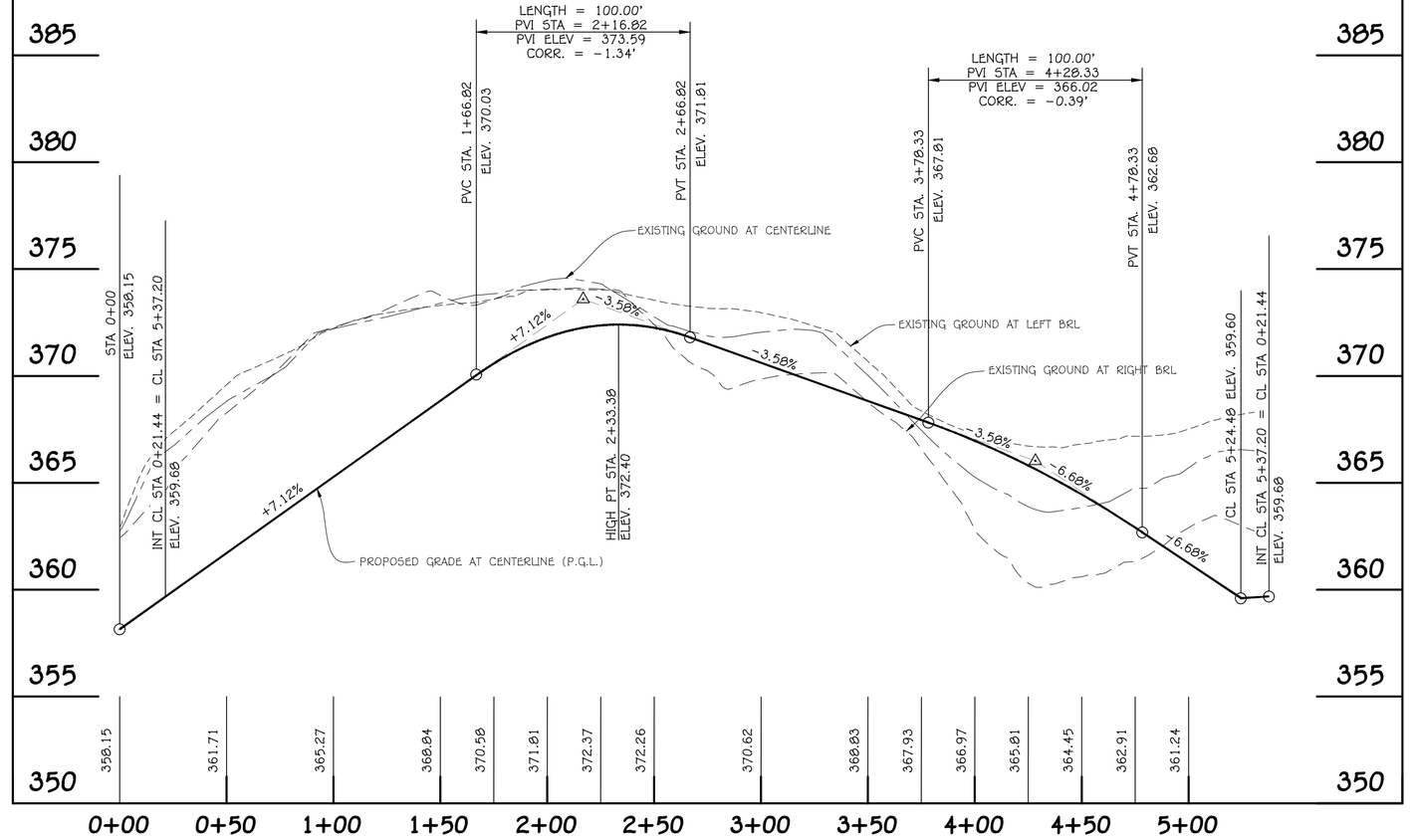


PROFILE

SCALE: HOR. : 1" = 50'
VER. : 1" = 5'

PRIVATE DRIVEWAY (WEST)

PRIVATE USE-IN-COMMON DRIVEWAY
DESIGN SPEED LIMIT = 15 M.P.H.



PROFILE

SCALE: HOR. : 1" = 50'
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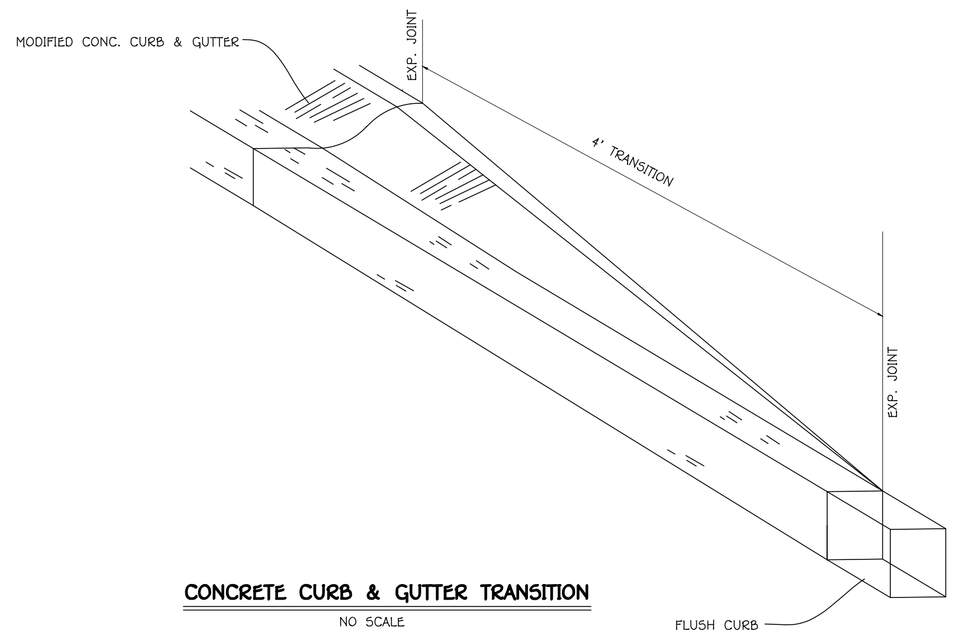

CONCRETE CURB & GUTTER TRANSITION

NO SCALE

FISHER, COLLINS & CARTER, INC.
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CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

Approved: Howard County Department Of Public Works

DocuSigned by: [signature] 2F2B5821AE4D4AC...

Chief, Bureau Of Highways — 9/11/2023 Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

DocuSigned by: Chad Edmondson 7A63E754EE41469...

Chief, Development Engineering Division — 9/11/2023 Date

DocuSigned by: [signature] 4D7B4F8A0D9B4A4...

Chief, Division of Land Development — 9/13/2023 Date

DATE	DESCRIPTION
	REVISIONS

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STATE OF MARYLAND · ALDO MICHAEL VITUCCI · No. 20748 · PROFESSIONAL ENGINEER

Aldo M. Vitucci, P.E.

ALDO M. VITUCCI, P.E.

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ATTN: MR. VINCENT LACEY

DEVELOPER
LAND HOLDINGS LLC
C\O B. JAMES GREENFIELD
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443-324-4732

PROJECT			SECTION/AREA		PARCEL
LACEY PROPERTY			N/A		13
PLAT NOS.	BLOCK NO.	ZONE	TAX MAP	ELEC. DIST.	CENSUS TR.
-	1	R-ED	25	SECOND	602900

PRIVATE USE-IN-COMMON DRIVEWAY PROFILES AND DETAILS

LACEY PROPERTY

LOTS 1 THRU 13 AND OPEN SPACE LOTS 14 THRU 17

ZONED: R-ED
PARCEL No.: 13
TAX MAP No.: 25 GRID No.: 1
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: JULY 10, 2023
SHEET 4 OF 24

F-21-015

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LEGEND

SYMBOL	DESCRIPTION
352	EXISTING CONTOUR 2' INTERVAL
350	EXISTING CONTOUR 10' INTERVAL
	EXISTING SAN. SEWER LINE
	EXISTING STORM DRAIN LINE
	EXISTING WATER LINE
	EXISTING OVERHEAD ELECTRIC LINE
	EXISTING FENCE
352	PROPOSED CONTOUR 2' INTERVAL
350	PROPOSED CONTOUR 10' INTERVAL
+ 344.29	PROPOSED SPOT ELEVATION
	PROPOSED CONCRETE WALK
	EXISTING MACADAM PAVING
	EXISTING TREES
	EXISTING TREELINE
	PROPOSED TREELINE
8" W	PROPOSED PUBLIC WATER
18" RCCP	PROPOSED STORMDRAIN
8" S	PROPOSED PUBLIC SEWER
	SOILS DELINEATION
SSF	SUPER SILT FENCE
	FOREST CONSERVATION AREA
	RIPRAP OUTLET PROTECTION
	STEEP SLOPES 15% - 24.9%
	STEEP SLOPES 25.0% OR GREATER
TPF	TREE PROTECTION FENCE
SSF	DOUBLE ROW SUPER SILT FENCE
	LIMIT OF DISTURBANCE (L.O.D.)

NOTES:

1. FOR DRYWELL DETAIL SEE SHEET 10.
2. FOR TGOS SEE DETAIL SEE SHEET 10.

NOTE: SEE SHEET 24 FOR SEDIMENT BASIN #1 PROFILES & DETAILS

NOTE: SEE SHEET 11 FOR FINAL SWM CONVERSION

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.

Signature _____ P.E. No. _____

Date: _____

Certify Means To State Or Declare A Professional Opinion Based Upon Onsite Inspections And Material Tests Which Are Conducted During Construction. The Onsite Inspections And Material Tests Are Those Inspections And Tests Deemed Sufficient And Appropriate 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.

By The Developer:
"I/we Certify That All Development And/Or Construction Will Be Done According To These Plans, Registered Professional Engineer To Supervise Pond Construction And Provide The Howard Soil And That Any Responsible Personnel Involved In The Construction Project Will Have A Certificate Of Attendance At A Department Of The Environment Approved Training Program For The Control Of Sediment And Erosion Before Beginning The Project. I Shall Engage A Conservation District With An "As-Built" Plan Of The Pond Within 30 Days Of Completion. I Also Authorize Periodic On-Site Inspections By The Howard Soil Conservation District."

Jim Greenfield — 9/1/2023

Signature Of Developer — Date

Jim Greenfield

Printed Name Of Developer

By The Engineer:
"I Certify That This Plan For Pond Construction, Erosion And Sediment Control Represents A Practical And Workable Plan Based On My Personal Knowledge Of The Site Conditions. This Plan Was Prepared In Accordance With The Requirements Of The Howard Soil Conservation District. "As-Built" Plan Of The Pond Within 30 Days Of Completion." I Have Notified The Developer That He/She Must Engage A Registered Professional Engineer To Supervise Pond Construction And Provide The Howard Soil Conservation District With An

Aldo M. Vitucci, P.E. — 9/5/2023

Signature Of Engineer — Date

Aldo M. Vitucci, P.E.

Printed Name Of Engineer

These Plans For Small Pond Construction, Soil Erosion And Sediment Control Meet The Requirements Of The Howard Soil Conservation District.

DocuSigned by: Alexander Bratchie — 9/11/2023

Howard Soil Conservation District — Date

DESIGN CERTIFICATE

"I hereby certify that this plan has been designed in accordance with current Maryland erosion and sediment control laws, regulations, and standards, that it represents a practical and workable plan based on my personal knowledge of the site, and that it was prepared in accordance with the requirements of the Howard Soil Conservation District."

Aldo M. Vitucci, P.E. — 3/20/23

Designer's Signature — Date

ALDO MICHAEL VITUCCI — MD Registration No. 20748 (P.E.) R.L.S., or R.L.A. (circle one)

Printed Name

OWNER'S/DEVELOPER CERTIFICATE

"I/We hereby certify that any clearing, grading, construction, or development will be done pursuant to this approved erosion and sediment control plan, including inspecting and maintaining controls, and that the responsible personnel involved in the construction project will have a Certificate of Training at a Maryland Department of the Environment (MDE) approved training program for the control on erosion and sediment prior to beginning the project. I certify right-of-entry for periodic on-site evaluation by Howard County, the Howard Soil Conservation District and/or MDE."

Jim Greenfield — 9/5/2023

Owner's/Developer's Signature — Date

Jim Greenfield

Printed Name & Title

Approved: Howard County Department Of Public Works

DocuSigned by: [signature] — 9/11/2023

Chief, Bureau Of Highways — Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

DocuSigned by: Chad Edmondson — 9/11/2023

Chief, Development Engineering Division — Date

DocuSigned by: [signature] — 9/13/2023

Chief, Division of Land Development — Date

This development plan is approved for soil erosion and sediment control by the HOWARD SOIL CONSERVATION DISTRICT.

DocuSigned by: Alexander Bratchie — 9/11/2023

Howard Soil Conservation District. — Date

DATE	DESCRIPTION
	REVISIONS

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STATE OF MARYLAND — ALDO MICHAEL VITUCCI — No. 20748 — PROFESSIONAL ENGINEER

Aldo M. Vitucci, P.E.

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PROJECT			SECTION/AREA		PARCEL
LACEY PROPERTY			N/A		13
PLAT NOS.	BLOCK NO.	ZONE	TAX MAP	ELEC. DIST.	CENSUS TR.
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(410) 461 - 2855

GRADING & SEDIMENT CONTROL PLAN

LACEY PROPERTY
LOTS 1 THRU 13 AND OPEN SPACE LOTS 14 THRU 17

ZONED: R-ED
PARCEL No.: 13
TAX MAP No.: 25 GRID No.: 1
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: JULY 10, 2023
SHEET 5 OF 24

F-21-015

SCALE: 1" = 30'

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SOIL PREPARATION, TOPSOILING AND SOIL AMENDMENTS (B-4-2)

A. SOIL PREPARATION

1. TEMPORARY STABILIZATION

A. SEEDBED PREPARATION CONSISTS OF LOOSENING SOIL TO A DEPTH OF 3 TO 5 INCHES BY MEANS OF SUITABLE AGRICULTURAL OR CONSTRUCTION EQUIPMENT, SUCH AS DISC HARROWS OR CHISEL PLOWS OR RIPPERS MOUNTED ON CONSTRUCTION EQUIPMENT. AFTER THE SOIL IS LOOSENED, IT MUST NOT BE ROLLED OR DRAGGED SMOOTH BUT LEFT IN THE ROUGHENED CONDITION. SLOPES 3:1 OR FLATTER ARE TO BE TRACKED WITH RIDGES RUNNING PARALLEL TO THE CONTOUR OF THE SLOPE.

B. APPLY FERTILIZER AND LIME AS PRESCRIBED ON THE PLANS.

C. INCORPORATE LIME AND FERTILIZER INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS.

2. PERMANENT STABILIZATION

A. A SOIL TEST IS REQUIRED FOR ANY EARTH DISTURBANCE OF 5 ACRES OR MORE. THE MINIMUM SOIL CONDITIONS REQUIRED FOR PERMANENT VEGETATIVE ESTABLISHMENT ARE:

I. SOIL PH BETWEEN 6.0 AND 7.0.
II. SOLUBLE SALTS LESS THAN 500 PARTS PER MILLION (PPM).
III. SOIL CONTAINS LESS THAN 40 PERCENT CLAY BUT ENOUGH FINE GRAINED MATERIAL (GREATER THAN 30 PERCENT SILT PLUS CLAY) TO PROVIDE THE CAPACITY TO HOLD A MODERATE AMOUNT OF MOISTURE. AN EXCEPTION: IF LOVEGRASS WILL BE PLANTED, THEN A SANDY SOIL (LESS THAN 30 PERCENT SILT PLUS CLAY) WOULD BE ACCEPTABLE.
IV. SOIL CONTAINS 1.5 PERCENT MINIMUM ORGANIC MATTER BY WEIGHT.
V. SOIL CONTAINS SUFFICIENT PORE SPACE TO PERMIT ADEQUATE ROOT PENETRATION.

B. APPLICATION OF AMENDMENTS OR TOPSOIL IS REQUIRED IF ON-SITE SOILS DO NOT MEET THE ABOVE CONDITIONS.
C. GRADED AREAS MUST BE MAINTAINED IN A TRUE AND EVEN GRADE AS SPECIFIED ON THE APPROVED PLAN, THEN SCARIFIED OR OTHERWISE LOOSENED TO A DEPTH OF 3 TO 5 INCHES.
D. APPLY SOIL AMENDMENTS AS SPECIFIED ON THE APPROVED PLAN OR AS INDICATED BY THE RESULTS OF A SOIL TEST.
E. MIX SOIL AMENDMENTS INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS. RAKE LAWN AREAS TO SMOOTH THE SURFACE, REMOVE LARGE OBJECTS LIKE STONES AND BRANCHES, AND READY THE AREA FOR SEED APPLICATION. LOOSEN SURFACE SOIL BY DRAGGING WITH A HEAVY CHAIN OR OTHER EQUIPMENT TO ROUGHEN THE SURFACE WHERE SITE CONDITIONS WILL NOT PERMIT NORMAL SEEDBED PREPARATION. TRACK SLOPES 3:1 OR FLATTER WITH TRACKED EQUIPMENT LEAVING THE SOIL IN AN IRREGULAR CONDITION WITH RIDGES RUNNING PARALLEL TO THE CONTOUR OF THE SLOPE. LEAVE THE TOP 1 TO 3 INCHES OF SOIL LOOSE AND FRIABLE. SEEDBED LOOSENING MAY BE UNNECESSARY ON NEWLY DISTURBED AREAS.

B. TOPSOILING

1. TOPSOIL IS PLACED OVER PREPARED SUBSOIL PRIOR TO ESTABLISHMENT OF PERMANENT VEGETATION. THE PURPOSE IS TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH. SOILS OF CONCERN HAVE LOW MOISTURE CONTENT, LOW NUTRIENT LEVELS, LOW PH, MATERIALS TOXIC TO PLANTS, AND/OR UNACCEPTABLE SOIL GRADATION.

2. TOPSOIL SALVAGED FROM AN EXISTING SITE MAY BE USED PROVIDED IT MEETS THE STANDARDS AS SET FORTH IN THESE SPECIFICATIONS. TYPICALLY, THE DEPTH OF TOPSOIL TO BE SALVAGED FOR A GIVEN SOIL TYPE CAN BE FOUND IN THE REPRESENTATIVE SOIL PROFILE SECTION IN THE SOIL SURVEY PUBLISHED BY USDA-NRCS.

3. TOPSOILING IS LIMITED TO AREAS HAVING 2:1 OR FLATTER SLOPES WHERE:
A. THE TEXTURE OF THE EXPOSED SUBSOIL/PARENT MATERIAL IS NOT ADEQUATE TO PRODUCE VEGETATIVE GROWTH.
B. THE SOIL MATERIAL IS SO SHALLOW THAT THE ROOTING ZONE IS NOT DEEP ENOUGH TO SUPPORT PLANTS OR FURNISH CONTINUING SUPPLIES OF MOISTURE AND PLANT NUTRIENTS.
C. THE ORIGINAL SOIL TO BE VEGETATED CONTAINS MATERIAL TOXIC TO PLANT GROWTH.
D. THE SOIL IS SO ACIDIC THAT TREATMENT WITH LIMESTONE IS NOT FEASIBLE.

4. AREAS HAVING SLOPES STEEPER THAN 2:1 REQUIRE SPECIAL CONSIDERATION AND DESIGN.

5. TOPSOIL SPECIFICATIONS: SOIL TO BE USED AS TOPSOIL MUST MEET THE FOLLOWING CRITERIA:
A. TOPSOIL MUST BE A LOAM, SANDY LOAM, CLAY LOAM, SILT LOAM, SANDY CLAY LOAM, OR LOAMY SAND. OTHER SOILS MAY BE USED IF RECOMMENDED BY AN AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY. TOPSOIL MUST NOT BE A MIXTURE OF CONTRASTING TEXTURED SUBSOILS AND MUST CONTAIN LESS THAN 5 PERCENT BY VOLUME OF CINDERS, STONES, SLAG, COARSE FRAGMENTS, GRAVEL, STICKS, ROOTS, TRASH, OR OTHER MATERIALS LARGER THAN 1 1/2 INCHES IN DIAMETER.
B. TOPSOIL MUST BE FREE OF NOXIOUS PLANTS OR PLANT PARTS SUCH AS BERMUDA GRASS, QUACK GRASS, JOHNSON GRASS, NUT SEDGE, POISON IVY, THISTLE, OR OTHERS AS SPECIFIED.
C. TOPSOIL SUBSTITUTES OR AMENDMENTS, AS RECOMMENDED BY A QUALIFIED AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY, MAY BE USED IN LIEU OF NATURAL TOPSOIL.

6. TOPSOIL APPLICATION A. EROSION AND SEDIMENT CONTROL PRACTICES MUST BE MAINTAINED WHEN APPLYING TOPSOIL.
B. UNIFORMLY DISTRIBUTE TOPSOIL IN A 5 TO 8 INCH LAYER AND LIGHTLY COMPACT TO A MINIMUM THICKNESS OF 4 INCHES. SPREADING IS TO BE PERFORMED IN SUCH A MANNER THAT SODDING OR SEEDING CAN PROCEED WITH A MINIMUM OF ADDITIONAL SOIL PREPARATION AND TILLAGE. ANY IRREGULARITIES IN THE SURFACE RESULTING FROM TOPSOILING OR OTHER OPERATIONS MUST BE CORRECTED IN ORDER TO PREVENT THE FORMATION OF DEPRESSIONS OR WATER POCKETS.
C. TOPSOIL MUST NOT BE PLACED IF THE TOPSOIL OR SUBSOIL IS IN A FROZEN OR MUDDY CONDITION, WHEN THE SUBSOIL IS EXCESSIVELY WET OR IN A CONDITION THAT MAY OTHERWISE BE DETRIMENTAL TO PROPER GRADING AND SEEDBED PREPARATION.

C. SOIL AMENDMENTS (FERTILIZER AND LIME SPECIFICATIONS)

1. SOIL TESTS MUST BE PERFORMED TO DETERMINE THE EXACT RATIOS AND APPLICATION RATES FOR BOTH LIME AND FERTILIZER ON SITES HAVING DISTURBED AREAS OF 5 ACRES OR MORE. SOIL ANALYSIS MAY BE PERFORMED BY A RECOGNIZED PRIVATE OR COMMERCIAL LABORATORY. SOIL SAMPLES TAKEN FOR ENGINEERING PURPOSES MAY ALSO BE USED FOR CHEMICAL ANALYSES.

2. FERTILIZERS MUST BE UNIFORM IN COMPOSITION, FREE FLOWING AND SUITABLE FOR ACCURATE APPLICATION BY APPROPRIATE EQUIPMENT. MANURE MAY BE SUBSTITUTED FOR FERTILIZER WITH PRIOR APPROVAL FROM THE APPROPRIATE APPROVAL AUTHORITY. FERTILIZERS MUST ALL BE DELIVERED TO THE SITE FULLY LABELED ACCORDING TO THE APPLICABLE LAWS AND MUST BEAR THE NAME, TRADE NAME OR TRADEMARK AND WARRANTY OF THE PRODUCER.

3. LIME MATERIALS MUST BE GROUND LIMESTONE (HYDRATED OR BURNT LIME MAY BE SUBSTITUTED EXCEPT WHEN HYDROSEEDING) WHICH CONTAINS AT LEAST 50 PERCENT TOTAL OXIDES (CALCIUM OXIDE PLUS MAGNESIUM OXIDE). LIMESTONE MUST BE GROUND TO SUCH FINENESS THAT AT LEAST 50 PERCENT WILL PASS THROUGH A #100 MESH SIEVE AND 98 TO 100 PERCENT WILL PASS THROUGH A #20 MESH SIEVE.

4. LIME AND FERTILIZER ARE TO BE EVENLY DISTRIBUTED AND INCORPORATED INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS.

5. WHERE THE SUBSOIL IS EITHER HIGHLY ACIDIC OR COMPOSED OF HEAVY CLAYS, SPREAD GROUND LIMESTONE AT THE RATE OF 4 TO 8 TONS/ACRE (200-400 POUNDS PER 1,000 SQUARE FEET) PRIOR TO THE PLACEMENT OF TOPSOIL.

TEMPORARY SEEDING NOTES (B-4-4)

DEFINITION

TO STABILIZE DISTURBED SOILS WITH VEGETATION FOR UP TO 6 MONTHS.

PURPOSE

TO USE FAST GROWING VEGETATION THAT PROVIDES COVER ON DISTURBED SOILS.

CONDITIONS WHERE PRACTICE APPLIES

EXPOSED SOILS WHERE GROUND COVER IS NEEDED FOR A PERIOD OF 6 MONTHS OR LESS. FOR LONGER DURATION OF TIME, PERMANENT STABILIZATION PRACTICES ARE REQUIRED.

CRITERIA

1. SELECT ONE OR MORE OF THE SPECIES OR SEED MIXTURES LISTED IN TABLE B.1 FOR THE APPROPRIATE PLANT HARDINESS ZONE (FROM FIGURE B.3), AND ENTER THEM IN THE TEMPORARY SEEDING SUMMARY BELOW ALONG WITH APPLICATION RATES, SEEDING DATES AND SEEDING DEPTHS. IF THIS SUMMARY IS NOT PUT ON THE PLAN AND COMPLETED, THEN TABLE B.1 PLUS FERTILIZER AND LIME RATES MUST BE PUT ON THE PLAN.
2. FOR SITES HAVING SOIL TESTS PERFORMED, USE AND SHOW THE RECOMMENDED RATES BY THE TESTING AGENCY. SOIL TESTS ARE NOT REQUIRED FOR TEMPORARY SEEDING.
3. WHEN STABILIZATION IS REQUIRED OUTSIDE OF A SEEDING SEASON, APPLY SEED AND MULCH OR STRAW MULCH ALONE AS PRESCRIBED IN SECTION B-4-3.A.1.B AND MAINTAIN UNTIL THE NEXT SEEDING SEASON.

TEMPORARY SEEDING SUMMARY

HARDINESS ZONE (FROM FIGURE B.3): 6B
SEED MIXTURE (FROM TABLE B.1):

SPECIES	APPLICATION RATE (LB/AC)	SEEDING DATES	SEEDING DEPTHS	FERTILIZER RATE (10-20-20)	LIME RATE
BARLEY	96	3/1 - 5/15, 8/15 - 10/15	1"	436 LB/AC (10 LB/ 1000 SF)	2 TONS/AC (90 LB/ 1000 SF)
OATS	72	3/1 - 5/15, 8/15 - 10/15	1"		
RYE	112	3/1 - 5/15, 8/15 - 10/15	1"		
FOXTAIL MILLET	30	6/1 - 7/31	0.50"		

PERMANENT SEEDING NOTES (B-4-5)

A. SEED MIXTURES

1. GENERAL USE

A. SELECT ONE OR MORE OF THE SPECIES OR MIXTURES LISTED IN TABLE B.3 FOR THE APPROPRIATE PLANT HARDINESS ZONE (FROM FIGURE B.3) AND BASED ON THE SITE CONDITION OR PURPOSE FOUND ON TABLE B.2. ENTER SELECTED MIXTURE(S), APPLICATION RATES, AND SEEDING DATES IN THE PERMANENT SEEDING SUMMARY. THE SUMMARY IS TO BE PLACED ON THE PLAN.

B. ADDITIONAL PLANTING SPECIFICATIONS FOR EXCEPTIONAL SITES SUCH AS SHORELINES, STREAM BANKS, OR DUNES OR FOR SPECIAL PURPOSES SUCH AS WILDLIFE OR AESTHETIC TREATMENT MAY BE FOUND IN USDA-NRCS TECHNICAL FIELD OFFICE GUIDE, SECTION 342 - CRITICAL AREA PLANTING.

C. FOR SITES HAVING DISTURBED AREA OVER 5 ACRES, USE AND SHOW THE RATES RECOMMENDED BY THE SOIL TESTING AGENCY. D. FOR AREAS RECEIVING LOW MAINTENANCE, APPLY UREA FORM FERTILIZER (46-0-0) AT 3 1/2 POUNDS PER 1000 SQUARE FEET (150 POUNDS PER ACRE) AT THE TIME OF SEEDING IN ADDITION TO THE SOIL AMENDMENTS SHOWN IN THE PERMANENT SEEDING SUMMARY.

2. TURFGRASS MIXTURES

A. AREAS WHERE TURFGRASS MAY BE DESIRED INCLUDE LAWNS, PARKS, PLAYGROUNDS, AND COMMERCIAL SITES WHICH WILL RECEIVE A MEDIUM TO HIGH LEVEL OF MAINTENANCE.

B. SELECT ONE OR MORE OF THE SPECIES OR MIXTURES LISTED BELOW BASED ON THE SITE CONDITIONS OR PURPOSE. ENTER SELECTED MIXTURE(S), APPLICATION RATES, AND SEEDING DATES IN THE PERMANENT SEEDING SUMMARY. THE SUMMARY IS TO BE PLACED ON THE PLAN.

I. KENTUCKY BLUEGRASS: FULL SUN MIXTURE: FOR USE IN AREAS THAT RECEIVE INTENSIVE MANAGEMENT. IRRIGATION REQUIRED IN THE AREAS OF CENTRAL MARYLAND AND EASTERN SHORE. RECOMMENDED CERTIFIED KENTUCKY BLUEGRASS CULTIVARS SEEDING RATE: 1.5 TO 2.0 POUNDS PER 1000 SQUARE FEET. CHOOSE A MINIMUM OF THREE KENTUCKY BLUEGRASS CULTIVARS WITH EACH RANGING FROM 10 TO 35 PERCENT OF THE TOTAL MIXTURE BY WEIGHT.

II. KENTUCKY BLUEGRASS/PERENNIAL RYE: FULL SUN MIXTURE: FOR USE IN FULL SUN AREAS WHERE RAPID ESTABLISHMENT IS NECESSARY AND WHEN TURF WILL RECEIVE MEDIUM TO INTENSIVE MANAGEMENT. CERTIFIED PERENNIAL RYEGRASS CULTIVARS/CERTIFIED KENTUCKY BLUEGRASS SEEDING RATE: 2 POUNDS MIXTURE PER 1000 SQUARE FEET. CHOOSE A MINIMUM OF THREE KENTUCKY BLUEGRASS CULTIVARS WITH EACH RANGING FROM 10 TO 35 PERCENT OF THE TOTAL MIXTURE BY WEIGHT.

III. TALL FESCUE/KENTUCKY BLUEGRASS: FULL SUN MIXTURE: FOR USE IN DROUGHT PRONE AREAS AND/OR FOR AREAS RECEIVING LOW TO MEDIUM MANAGEMENT IN FULL SUN TO MEDIUM SHADE. RECOMMENDED MIXTURE INCLUDES; CERTIFIED TALL FESCUE CULTIVARS 95 TO 100 PERCENT, CERTIFIED KENTUCKY BLUEGRASS CULTIVARS 0 TO 5 PERCENT. SEEDING RATE: 5 TO 8 POUNDS PER 1000 SQUARE FEET. ONE OR MORE CULTIVARS MAY BE BLENDED.

IV. KENTUCKY BLUEGRASS/FINE FESCUE: SHADE MIXTURE: FOR USE IN AREAS WITH SHADE IN BLUEGRASS LAWNS. FOR ESTABLISHMENT IN HIGH QUALITY, INTENSIVELY MANAGED TURF AREA. MIXTURE INCLUDES; CERTIFIED KENTUCKY BLUEGRASS CULTIVARS 30 TO 40 PERCENT AND CERTIFIED FINE FESCUE AND 60 TO 70 PERCENT. SEEDING RATE: 1 1/2 TO 3 POUNDS PER 1000 SQUARE FEET.

NOTES:
SELECT TURFGRASS VARIETIES FROM THOSE LISTED IN THE MOST CURRENT UNIVERSITY OF MARYLAND PUBLICATION, AGRONOMY MEMO #77, "TURFGRASS CULTIVAR RECOMMENDATIONS FOR MARYLAND"

CHOOSE CERTIFIED MATERIAL. CERTIFIED MATERIAL IS THE BEST GUARANTEE OF CULTIVAR PURITY. THE CERTIFICATION PROGRAM OF THE MARYLAND DEPARTMENT OF AGRICULTURE, TURF AND SEED SECTION, PROVIDES A RELIABLE MEANS OF CONSUMER PROTECTION AND ASSURES A PURE GENETIC LINE

C. IDEAL TIMES OF SEEDING FOR TURF GRASS MIXTURES WESTERN MD: MARCH 15 TO JUNE 1, AUGUST 1 TO OCTOBER 1 (HARDINESS ZONES: 5B, 6A) CENTRAL MD: MARCH 1 TO MAY 15, AUGUST 15 TO OCTOBER 15 (HARDINESS ZONE: 6B) SOUTHERN MD, EASTERN SHORE: MARCH 1 TO MAY 15, AUGUST 15 TO OCTOBER 15 (HARDINESS ZONES: 7A, 7B)

D. TILL AREAS TO RECEIVE SEED BY DISKING OR OTHER APPROVED METHODS TO A DEPTH OF 2 TO 4 INCHES, LEVEL AND RAKE THE AREAS TO PREPARE A PROPER SEEDBED. REMOVE STONES AND DEBRIS OVER 1 1/2 INCHES IN DIAMETER. THE RESULTING SEEDBED MUST BE IN SUCH CONDITION THAT FUTURE MOWING OF GRASSES WILL POSE NO DIFFICULTY.

E. IF SOIL MOISTURE IS DEFICIENT, SUPPLY NEW SEEDINGS WITH ADEQUATE WATER FOR PLANT GROWTH (1/2 TO 1 INCH EVERY 3 TO 4 DAYS DEPENDING ON SOIL TEXTURE) UNTIL THEY ARE FIRMLY ESTABLISHED. THIS IS ESPECIALLY TRUE WHEN SEEDINGS ARE MADE LATE IN THE PLANTING SEASON, IN ABNORMALLY DRY OR HOT SEASONS, OR ON ADVERSE SITES.

PERMANENT SEEDING SUMMARY

HARDINESS ZONE (FROM FIGURE B.3): 6B
SEED MIXTURE (FROM TABLE B.3): 8

NO.	SPECIES	APPLICATION RATE (LB/AC)	SEEDING DATES	SEEDING DEPTHS	FERTILIZER RATE (10-20-20) N	P_2O_5	K_2O	LIME RATE
8	TALL FESCUE	100	MAR. 1-MAY 15 AUG. 1-OCT. 15	1/4-1/2 IN.	45 LBS. PER ACRE (1.0 LB/ 1000 SF)	90 LB/AC (2 LB/ 1000 SF)	90 LB/AC (2 LB/ 1000 SF)	2 TONS/AC (90 LB/ 1000 SF)
8	MILLET FOXTAIL	50 50	May 15-June15	1/4-1/2 in.				
8	SOD	100	Mar. 15-May 31 May 16-Sept.14 Sept.15-Nov.15	1/4-1/2 in.				
8	SWITCH GRASS BUSH CLOVER (LEGUME)	10 2	June 1-July 31	4-7 in. Max.				

STANDARD STABILIZATION NOTE

FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION MUST BE COMPLETED WITHIN:

A.) THREE (3) CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER DIKES, SWALES, DITCHES, PERIMETER SLOPES AND ALL SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1); AND

B.) SEVEN (7) CALENDAR DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE NOT UNDER ACTIVE GRADING.

STANDARDS AND SPECIFICATIONS FOR STOCKPILE AREA (B-4-8)

DEFINITION

THE MOUND OR PILE OF SOIL PROTECTED BY APPROPRIATELY DESIGNED EROSION AND SEDIMENT CONTROL MEASURES.

PURPOSE

TO PROVIDE A DESIGNATED LOCATION FOR THE TEMPORARY STORAGE OF SOIL THAT CONTROLS THE POTENTIAL FOR EROSION, SEDIMENTATION, AND CHANGES TO DRAINAGE PATTERNS.

CONDITIONS WHERE PRACTICE APPLIES

STOCKPILE AREAS ARE UTILIZED WHEN IT IS NECESSARY TO SALVAGE AND STORE SOIL FOR LATER USE.

CRITERIA

1. THE STOCKPILE LOCATION AND ALL RELATED SEDIMENT CONTROL PRACTICES MUST BE CLEARLY INDICATED ON THE EROSION AND SEDIMENT CONTROL PLAN.
2. THE FOOTPRINT OF THE STOCKPILE MUST BE SIZED TO ACCOMMODATE THE ANTICIPATED VOLUME OF MATERIAL AND BASED ON A SIDE SLOPE RATIO NO STEEPER THA 2:1. BENCHING MUST BE PROVIDED IN ACCORDANCE WITH SECTION B-3 LAND GRADING.
3. RUNOFF FROM THE STOCKPILE AREA MUST DRAIN TO A SUITABLE SEDIMENT CONTROL PRACTICE.
4. ACCESS THE STOCKPILE AREA FROM THE UPGRADE SIDE.
5. CLEAR WATER RUNOFF INTO THE STOCKPILE AREA MUST BE MINIMIZED BY USE OF A DIVERSION DEVICE SUCH AS AN EARTH DIKE, TEMPORARY SWALE OR DIVERSION FENCE. PROVISIONS MUST BE MADE FOR DISCHARGING CONCENTRATED FLOW IN A NON-EROSIVE MANNER.
6. WHERE RUNOFF CONCENTRATES ALONG THE TOE OF THE STOCKPILE FILL, AN APPROPRIATE EROSION/SEDIMENT CONTROL PRACTICE MUST BE USED TO INTERCEPT THE DISCHARGE.
7. STOCKPILES MUST BE STABILIZED IN ACCORDANCE WITH THE 3/7 DAY STABILIZATION REQUIREMENT AS WELL AS STANDARD B-4-1 INCREMENTAL STABILIZATION AND STANDARD B-4-4 TEMPORARY STABILIZATION.
8. IF THE STOCKPILE IS LOCATED ON AN IMPERVIOUS SURFACE, A LINER SHOULD BE PROVIDED BELOW THE STOCKPILE TO FACILITATE CLEANUP. STOCKPILES CONTAINING CONTAMINATED MATERIAL MUST BE COVERED WITH IMPERMEABLE SHEETING.

MAINTENANCE

THE STOCKPILE AREA MUST CONTINUOUSLY MEET THE REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT IN ACCORDANCE WITH SECTION B-4 VEGETATIVE STABILIZATION. SIDE SLOPES MUST BE MAINTAINED AT NO STEEPER THAN A 2:1 RATIO. THE STOCKPILE AREA MUST BE KEPT FREE OF EROSION. IF THE VERTICAL HEIGHT OF A STOCKPILE EXCEEDS 20 FEET FOR 2:1 SLOPES, 30 FEET FOR 3:1 SLOPES, OR 40 FEET FOR 4:1 SLOPES, BENCHING MUST BE PROVIDED IN ACCORDANCE WITH SECTION B-3 LAND GRADING.

STANDARDS AND SPECIFICATIONS FOR SEEDING AND MULCHING (B-4-3)

DEFINITION

THE APPLICATION OF SEED AND MULCH TO ESTABLISH VEGETATIVE COVER.

PURPOSE

TO PROTECT DISTURBED SOILS FROM EROSION DURING AND AT THE END OF CONSTRUCTION.

CONDITIONS WHERE PRACTICE APPLIES

TO THE SURFACE OF ALL PERIMETER CONTROLS, SLOPES, AND ANY DISTURBED AREA NOT UNDER ACTIVE GRADING.

CRITERIA

A. SEEDING
1. SPECIFICATIONS
A. ALL SEED MUST MEET THE REQUIREMENT OF THE MARYLAND STATE SEED LAW. ALL SEED MUST BE SUBJECT TO RE-TESTING BY A RECOGNIZED SEED LABORATORY. ALL SEED USED MUST HAVE BEEN TESTED WITHIN THE 6 MONTHS IMMEDIATELY PRECEEDING THE DATE OF SOWING SUCH MATERIAL ON ANY PROJECT. REFER TO TABLE B.4 REGARDING THE QUALITY OF SEED. SEED TAGS MUST BE AVAILABLE UPON REQUEST TO THE INSPECTOR TO VERIFY TYPE OF SEED AND SEEDING RATE.
B. MULCH ALONE MAY BE APPLIED BETWEEN THE FALL AND SPRING SEEDING DATES ONLY IF THE GROUND IS FROZEN. THE APPROPRIATE SEEDING MIXTURE MUST BE APPLIED WHEN THE GROUND THAWS.
C. INOCULANTS: THE INOCULANT FOR TREATING LEGUME SEED IN THE SEED MIXTURES MUST BE A PURE CULTURE OF NITROGEN FIXING BACTERIA PREPARED SPECIFICALLY FOR THE SPECIES. INOCULANTS MUST NOT BE USED LATER THAN THE DATE INDICATED ON THE CONTAINER. ADD FRESH INOCULANTS AS DIRECTED ON THE PACKAGE. USE FOUR TIMES THE RECOMMENDED RATE WHEN HYDROSEEDING. NOTE: IT IS VERY IMPORTANT TO KEEPT INOCULANT AS COOK AS POSSIBLE UNTIL USED. TEMPERATURES ABOVE 75 TO 80 DEGREES FAHRENHEIT CAN WEAKEN BACTERIA AND MAKE THE INOCULANT LESS EFFECTIVE.
D. SOD OR SEED MUST NOT BE PLACED ON SOIL WHICH HAS BEEN TREATED WITH SOIL STERILANTS OR CHEMICALS USED FOR WEEDCONTROL UNTIL SUFFICIENT TIME HAS ELAPSED (14 DAYS MIN.) TO PERMIT DISSIPATION OF PHYTO-TOXIC MATERIALS.

2. APPLICATION
A. DRY SEEDING: THIS INCLUDES USE OF CONVENTIONAL DROP OR BROADCAST SPREADERS.
1. INCORPORATE SEED INTO THE SUBSOIL AT THE RATES PRESCRIBED ON TEMPORARY SEEDING TABLE B.1, PERMANENT SEEDING TABLE B.3, OR SITE-SPECIFIC SEEDING SUMMARIES.
2. APPLY SEED IN TWO DIRECTIONS, PERPENDICULAR TO EACH OTHER. APPLY HALF THE SEEDING RATE IN EACH DIRECTION. ROLL THE SEEDED AREA WITH WEIGHTED ROLLER TO PROVIDE GOOD SEED TO SOIL CONTACT.
B. DRILL OR CULTIPACKER SEEDING: MECHANIZED SEEDERS THAT APPLY AND COVER SEED WITH SOIL.
1. CULTIPACKING SEEDERS ARE REQUIRED TO BURY THE SEED IN SUCH A FASHION AS TO PROVIDE AT LEAST 1/4 INCH OF SOIL COVERING. SEEDBED MUST BE FIRM AFTER PLANTING.
2.APPLY SEED IN TWO DIRECTIONS, PERPENDICULAR TO EACH OTHER. APPLY HALF THE SEEDING RATE IN EACH DIRECTION.
C. HYDROSEEDING: APPLY SEED UNIFORMLY WITH HYDROSEEDER (SLURRY INCLUDES SEED AND FERTILIZER).
1. IF FERTILIZER IS BEING APPLIED AT THE TIME OF SEEDING, THE APPLICATION RATES SHOULD NOT EXCEED THE FOLLOWING: NITROGEN, 100 POUNDS PER ACRE TOTAL OF SOLUBLE NITROGEN; P O (PHOSPHORUS), 200 POUNDS PER ACRE; K O (POTASSIUM), 200 POUNDS PER ACRE.
2. LIME: USE ONLY GROUND AGRICULTURAL LIMESTONE (UP TO 3 TONS PER ACRE MAY BE APPLIED BY HYDROSEEDING). NORMALLY, NOT MORE THAN 2 TONS ARE APPLIED BY HYDROSEEDING AT ANY ONE TIME. DO NOT USE BURNT OR HYDRATED LIME WHEN HYDROSEEDING.
3. MIX SEED AND FERTILIZER ON SITE AND SEED IMMEDIATELY AND WITHOUT INTERRUPTION.
4. WHEN HYDROSEEDING DO NOT INCORPORATE SEED INTO THE SOIL.

B. MULCHING
1. MULCH MATERIALS (IN ORDER OF PREFERENCE)
A. STRAW CONSISTING OF THOROUGHLY THRESHED WHEAT, RYE, OAT, OR BARLEY AND REASONABLY BRIGHT IN COLOR. STRAW IS TO BE FREE OF NOXIOUS WEED SEEDS AS SPECIFIED IN THE MARYLAND SEED LAW AND NOT MUSTY, MOLDY, CAKED, DECAYED, OR EXCESSIVELY DUSTY. NOTE: USE ONLY STERILE STRAW MULCH IN AREAS WHERE ONE SPECIES OF GRASS IS DESIRED.
B. WOOD CELLULOSE FIBER MULCH (WCFM) CONSISTING OF SPECIALLY PREPARED WOOD CELLULOSE PROCESSED INTO UNIFORM FIBROUS PHYSICAL STATE.
1. WCFM IS TO BE DYED GREEN OR CONTAIN A GREEN DYE IN THE PACKAGE THAT WILL PROVIDE AN APPROPRIATE COLOT TO FACILITATE VISUAL INSPECTION OF THE UNIFORMLY SPREAD SLURRY.
2. WCFM, INCLUDING DYE, MUST CONTAIN NO GERMINATION OR GROWTH INHIBITING FACTORS.
3. WCFM MATERIALS ARE TO BE MANUFACTURED AND PROCESSED IN SUCH A MANNER THAT THE WOOD CELLULOSE FIBER MULCH WILL REMAIN IN UNIFORM SUSPENSION IN WATER UNDER AGITATION AND WILL BLEND WITH SEED, FERTILIZER AND OTHER ADDITIVES TO FORM A HOMOGENEOUS SLURRY. THE MULCH MATERIAL MUST FORM A BLOTTER-LIKE GROUND COVER, ON APPLICATION, HAVING MOISTURE ABSORPTION AND PERCOLATION PROPERTIES AND MUST COVER AND HOLD GRASS SEED IN CONTACT WITH THE SOIL WITHOUT INHIBITING THE GROWTH OF THE GRASS SEEDLINGS.
4. WCFM MATERIAL MUST NOT CONTAIN ELEMENTS OR COMPOUNDS AT CONCENTRATION LEVELS THAT WILL BY PHYTO-TOXIC.
5. WCFM MUST CONFORM TO THE FOLLOWING PHYSICAL REQUIREMENTS: FIBER LENGTH OF APPROXIMATELY 10 MILLIMETERS, DIAMETER APPROXIMATELY 1 MILLIMETER, PH RANGE OF 4.0 TO 8.5, ASH CONTENT OF 1.6 PERCENT MAXIMUM AND WATER HOLDING CAPACITY OF 90 PERCENT MINIMUM.

1. APPLICATION
A. APPLY MULCH TO ALL SEEDED AREAS IMMEDIATELY AFTER SEEDING.
B. WHEN STRAW MULCH IS USED, SPREAD IT OVER ALL SEEDED AREAS AT THE RATE OF 2 TONS PER ACRE TO A UNIFORM LOOSE DEPTH OF 1 TO 2 INCHES. APPLY MULCH TO ACHIEVE A UNIFORM DISTRIBUTION AND DEPTH SO THAT THE SOIL SURFACE IS NOT EXPOSED. WHEN USING A MULCH ANCHORING TOOL, INCREASE THE APPLICATION RATE TO 2.5 TONS PER ACRE.
C. WOOD CELLULOSE FIBER USED AS MULCH MUST BE APPLIED TO A NET DRY WEIGHT OF 1500 POUNDS PER ACRE. MIX THE WOOD CELLULOSE FIBER WITH WATER TO ATTAIN A MIXTURE WITH A MAXIMUM OF 50 POUNDS OF WOOD CELLULOSE FIBER PER 100 GALLONS OF WATER.

2. ANCHORING
A. PERFORM MULCH ANCHORING IMMEDIATELY FOLLOWING APPLICATION OF MULCH TO MINIMIZE LOSS BY WIND OR WATER. THIS MAY BE DONE BY ONE OF THE FOLLOWING METHODS (LISTED BY PREFERENCE), DEPENDING UPON THE SIZE OF THE AREA AND EROSION HAZARD:
1. A MULCH ANCHORING TOOL IS A TRACTOR DRAWN IMPLEMENT DESIGNED TO PUNCH AND ANCHOR MULCH INTO THE SOIL SURFACE A MINIMUM OF 2 INCHES. THIS PRACTICE IS MOST EFFECTIVE ON LARGE AREAS, BUT IS LIMITED TO FLATTER SLOPES WHERE EQUIPMENT CAN OPERATE SAFELY. IF USED ON SLOPING LAND, THIS PRACTICE SHOULD FOLLOW THE CONTOUR.
2. WOOD CELLULOSE FIBER MAY BE USED FOR ANCHORING STRAW. APPLY THE FIBER BINDER AT A NET DRY WEIGHT OF 750 POUNDS PER ACRE. MIX THE WOOD CELLULOSE FIBER WITH WATER AT A MAXIMUM OF 50 POUNDS OF WOOD CELLULOSE FIBER PER 100 GALLONS OF WATER.
3. SYNTHETIC BINDERS SUCH AS ACRYLIC DLR (AGRO-TACK), DCA-70, PETROSET, TERRA TAX II, TERRA TACK AR OR OTHER APPROVED EQUAL MAY BE USED. FOLLOW APPLICATION RATES AS SPECIFIED BY THE MANUFACTURER. APPLICATION OF LIQUID BINDERS NEEDS TO BE HEAVIER AT THE EDGES WHERE WIND CATCHES MULCH, SUCH AS IN VALLEYS AND ON CRESTS OF BANKS. USE OF ASPHALT BINDERS IS STRICTLY PROHIBITED.
4. LIGHTWEIGHT PLASTIC NETTING MAY BE STAPLED OVER THE MULCH ACCORDING TO MANUFACTURER RECOMMENDATIONS. NETTING IS USUALLY AVAILABLE IN ROLLS 4-15 FEET WIDE AND 300 TO 3,000 FEET LONG.

DUST CONTROL

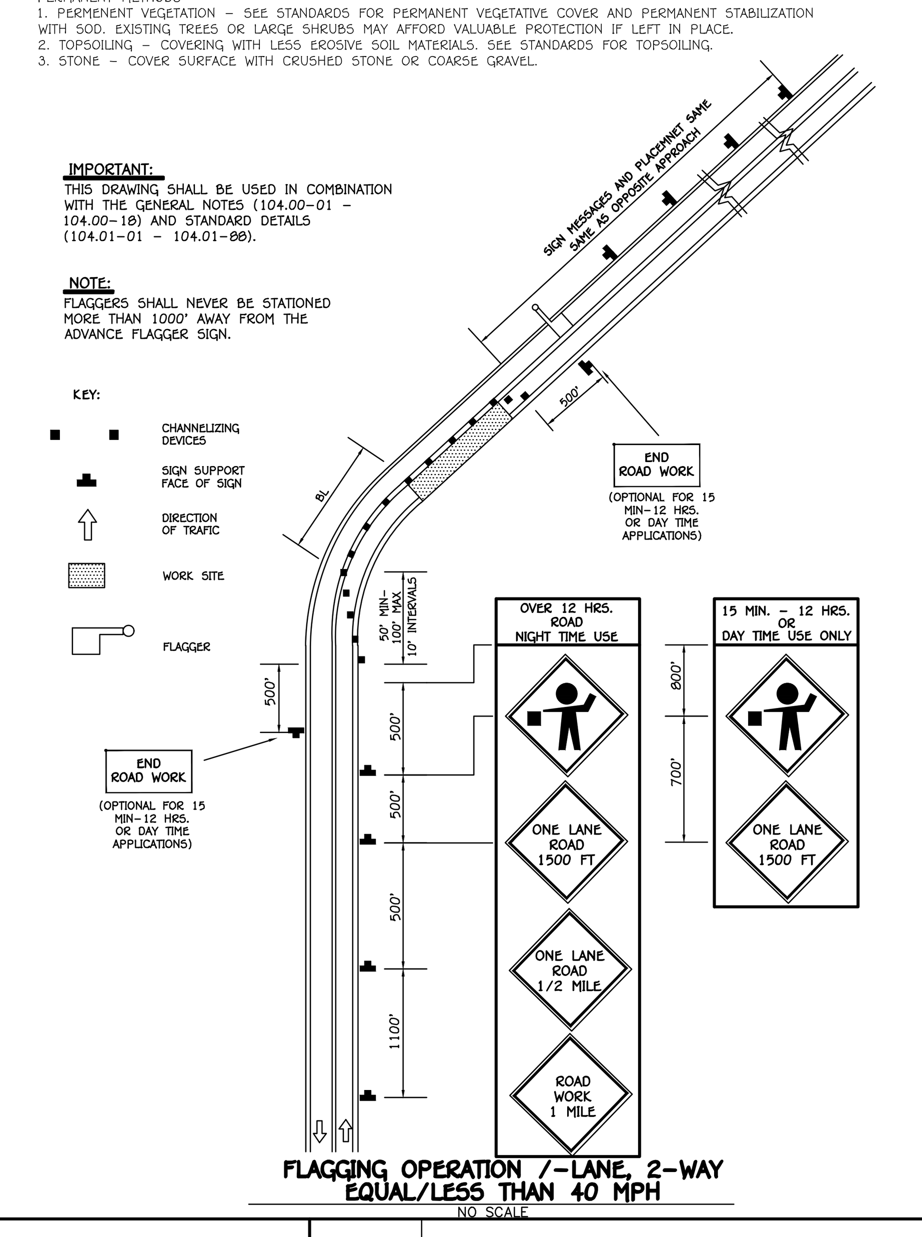
DEFINITION
CONTROLLING DUST BLOWING AND MOVEMENT ON CONSTRUCTION SITES AND ROADS.

PURPOSE
TO PREVENT BLOWING AND MOVEMENT OF DUST FROM EXPOSED SOIL SURFACES, REDUCE ON AND OFF-SITE DAMAGE, HEALTH HAZARDS AND IMPROVE TRAFFIC SAFETY.

CONDITIONS WHERE PRACTICE APPLIES
THIS PRACTICE IS APPLICABLE TO AREAS SUBJECT TO DUST BLOWING AND MOVEMENT WHERE ON AND OFF-SITE DAMAGE IS LIKELY WITHOUT TREATMENT.

SPECIFICATIONS
TEMPORARY METHODS
1. MULCHES - SEE STANDARDS FOR VEGETATIVE STABILIZATION WITH MULCHES ONLY. MULCH SHOULD BE CRIMPED OR TACKED TO PREVENT BLOWING.
2. VEGETATIVE COVER - SEE STANDARDS FOR TEMPORARY VEGETATIVE COVER.
3. TILLAGE - TO ROUGHEN SURFACE AND BRING CLODS TO THE SURFACE. THIS IS AN EMERGENCY MEASURE WHICH SHOULD BE USED BEFORE SOIL BLOWING STARTS. BEGIN PLOWING ON WINDWARD SIDE OF THE SITE. CHISEL-TYPE PLOWS SPACED ABOUT 12" APART, SPRING-TOOTHED HARROWS AND SIMILAR PLOWS ARE EXAMPLES OF EQUIPMENT WHICH MAY PRODUCE THE DESIRED EFFECT.
4. IRRIGATION - THIS IS GENERALLY DONE AS AN EMERGENCY TREATMENT. SITE IS SPRINKLED WITH WATER UNTIL THE SURFACE IS MOIST. REPEAT AS NEEDED. AT NO TIME SHOULD THE SITE BE IRRIGATED TO THE POINT THAT RUNOFF BEGINS TO FLOW.
5. BARRIERS - SOLID BOARD FENCES SILT FENCES, SNOW FENCES, BURLAP FENCES, STRAW BALE DIKES AND SIMILAR MATERIAL CAN BE USED TO CONTROL AIR CURRENTS AND SOIL BLOWING. BARRIERS PLACED AT RIGHT ANGLES TO PREVAILING CURRENTS AT INTERVALS OF ABOUT 10 TIMES THEIR HEIGHT ARE EFFECTIVE IN CONTROLLING SOIL BLOWING.
6. CALCIUM CHLORIDE - APPLY AT RATES THAT WILL KEEP SURFACE MOIST. MAY NEED RETREATMENT.

PERMANENT METHODS
1. PERMENENT VEGETATION - SEE STANDARDS FOR PERMANENT VEGETATIVE COVER AND PERMANENT STABILIZATION WITH SOD. EXISTING TREES OR LARGE SHRUBS MAY AFFORD VALUABLE PROTECTION IF LEFT IN PLACE.
2. TOPSOILING - COVERING WITH LESS EROSIVE SOIL MATERIALS. SEE STANDARDS FOR TOPSOILING.
3. STONE - COVER SURFACE WITH CRUSHED STONE OR COARSE GRAVEL.



FLAGGING OPERATION /-LANE, 2-WAY EQUAL/LESS THAN 40 MPH
NO SCALE

B-4-1 STANDARDS AND SPECIFICATIONS FOR INCREMENTAL STABILIZATION

Definition

Establishment of vegetative cover on cut and fill slopes.

Purpose

To provide timely vegetative cover on cut and fill slopes as work progresses.

Conditions Where Practice Applies

Any cut or fill slope greater than 15 feet in height. This practice also applies to stockpiles.

Criteria

A. Incremental Stabilization - Cut Slopes
1. Excavate and stabilize cut slopes in increments not to exceed 15 feet in height. Prepare seedbed and apply seed and mulch on all cut slopes as the work progresses.
2. Construction sequence example (Refer to Figure B.1):
a. Construct and stabilize all temporary swales or dikes that will be used to convey runoff around the excavation.
b. Perform Phase 1 excavation, prepare seedbed, and stabilize.
c. Perform Phase 2 excavation, prepare seedbed, and stabilize. Overseed Phase 1 areas as necessary.
d. Perform final phase excavation, prepare seedbed, and stabilize. Overseed previously seeded areas as necessary.

Note: Once excavation has begun the operation should be continuous from grubbing through the completion of grading and placement of topsoil (if required) and permanent seed and mulch. Any interruptions in the operation or completing the operation out of the seeding season will necessitate the application of temporary stabilization.

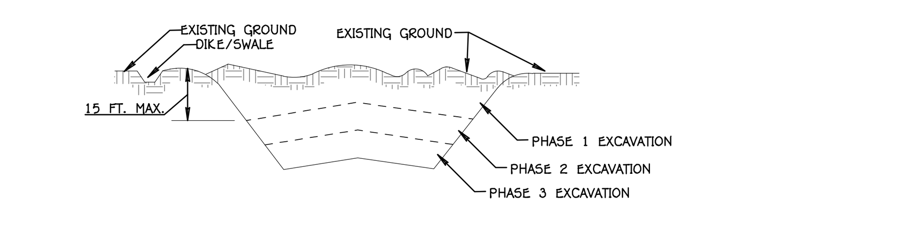


Figure B.1: Incremental Stabilization - Cut

B. Incremental Stabilization - Fill Slopes
1. Construct and stabilize fill slopes in increments not to exceed 15 feet in height. Prepare seedbed and apply seed and mulch on all slopes as the work progresses.
2. Stabilize slopes immediately when the vertical height of a lift reaches 15 feet, or when the grading operation ceases as prescribed in the plans.
3. At the end of each day, install temporary water conveyance practice(s), as necessary, to intercept surface runoff and convey it down the slope in a non-erosive manner.
4. Construction sequence example (Refer to Figure B.2):
a. Construct and stabilize all temporary swales or dikes that will be used to divert runoff around the fill. Construct silt fence on low side of fill unless other methods shown on the plans address this area.
b. At the end of each day, install temporary water conveyance practice(s), as necessary, to intercept surface runoff and convey it down the slope in a non-erosive manner.
c. Place Phase 1 fill, prepare seedbed, and stabilize.
d. Place Phase 2 fill, prepare seedbed, and stabilize.
e. Place final phase fill, prepare seedbed, and stabilize. Overseed previously seeded areas as necessary.

Note: Once the placement of fill has begun the operation should be continuous from grubbing through the completion of grading and placement of topsoil (if required) and permanent seed and mulch. Any interruptions in the operation or completing the operation out of the seeding season will necessitate the application of temporary stabilization.

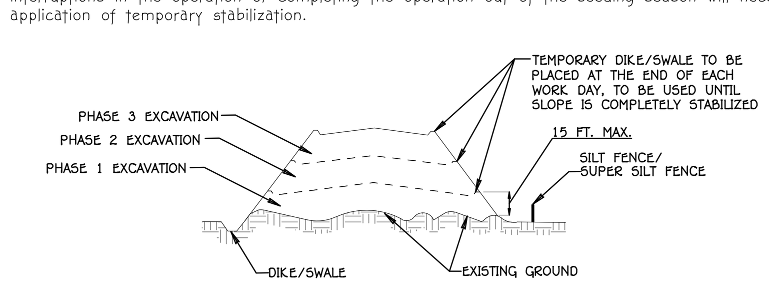
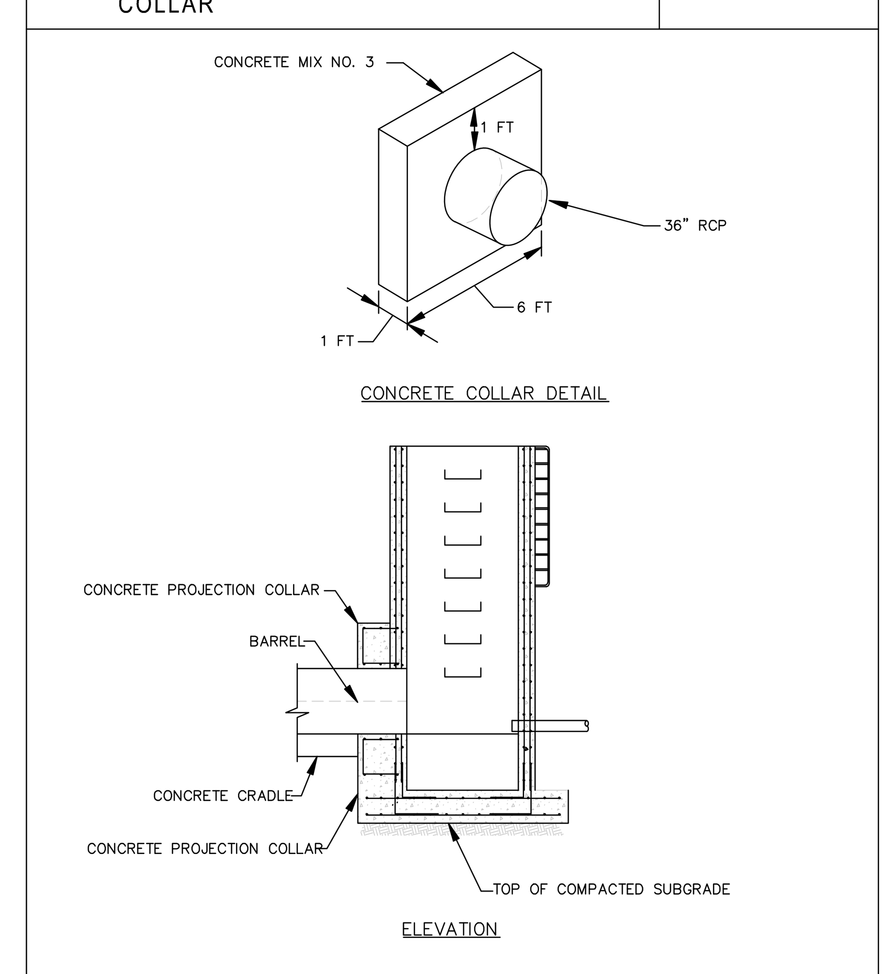


Figure B.2: Incremental Stabilization - Fill

DETAIL G-2-9 PROJECTION COLLAR | STANDARD SYMBOL



CONSTRUCTION SPECIFICATIONS

1. CAST 1 FOOT THICK CONCRETE COLLAR TO OUTLET STRUCTURE WITH FOUR #4 U-SHAPED REBARS.

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

HOWARD SOIL CONSERVATION DISTRICT (HSCD) STANDARD SEDIMENT CONTROL NOTES

1. A PRE-CONSTRUCTION MEETING MUST OCCUR WITH THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS, CONSTRUCTION INSPECTION DIVISION (CID), 410-313-1855 AFTER THE FUTURE LOD AND PROTECTED AREAS ARE MARKED CLEARLY IN THE FIELD. A MINIMUM OF 48 HOUR NOTICE TO CID MUST BE GIVEN AT THE FOLLOWING STAGES: A. PRIOR TO THE START OF EARTH DISTURBANCE,

B. UPON COMPLETION OF THE INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING,

C. PRIOR TO THE START OF ANOTHER PHASE OF CONSTRUCTION OR OPENING OF ANOTHER GRADING UNIT, D. PRIOR TO THE REMOVAL OR MODIFICATION OF SEDIMENT CONTROL PRACTICES.

OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE. OTHER RELATED STATE AND FEDERAL PERMITS SHALL BE REFERENCED, TO ENSURE COORDINATION AND TO AVOID CONFLICTS WITH THIS PLAN.

2. ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, AND REVISIONS THERETO.

3. FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION IS REQUIRED WITHIN THREE (3) CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER CONTROLS, DIKES, SWALES, DITCHES, PERIMETER SLOPES, AND ALL SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1); AND SEVEN (7) CALENDAR DAYS AS TO ALL OTHER DISTURBED AREAS ON THE PROJECT SITE EXCEPT FOR THOSE AREAS UNDER ACTIVE GRADING.

4. ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR TOPSOIL (SEC. B-4-2), PERMANENT SEEDING (SEC. B-4-5), TEMPORARY SEEDING (SEC. B-4-4) AND MULCHING (SEC. B-4-3). TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE APPLIED BETWEEN THE FALL AND SPRING SEEDING DATES IF THE GROUND IS FROZEN. INCREMENTAL STABILIZATION (SEC. B-4-1) SPECIFICATIONS SHALL BE ENFORCED IN AREAS WITH >15' OF CUT AND/OR FILL. STOCKPILES (SEC. B-4-8) IN EXCESS OF 20 FT. MUST BE BENCHED WITH STABLE OUTLET. ALL CONCENTRATED FLOW, STEEP SLOPE, AND HIGHLY ERODIBLE AREAS SHALL RECEIVE SOIL STABILIZATION MATTING (SEC. B-4-6).

5. ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE, AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE CID.

6. SITE ANALYSIS:

TOTAL AREA OF SITE:	8.55 ACRES
AREA DISTURBED:	4.4 ACRES
AREA TO BE ROOFED OR PAVED:	1.4 ACRES
AREA TO BE VEGETATIVELY STABILIZED:	3.0 ACRES
TOTAL CUT:	7386 CU.YDS.
TOTAL FILL:	7926 CU.YDS.
OFF-SITE WASTE/BORROW AREA LOCATION:	N/A

7. ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.

8. ADDITIONAL SEDIMENT CONTROL MUST BE PROVIDED, IF DEEMED NECESSARY BY THE CID. THE SITE AND ALL CONTROLS SHALL BE INSPECTED BY THE CONTRACTOR WEEKLY; AND THE NEXT DAY AFTER EACH RAIN EVENT. A WRITTEN REPORT BY THE CONTRACTOR, MADE AVAILABLE UPON REQUEST, IS PART OF EVERY INSPECTION AND SHOULD INCLUDE:

- INSPECTION DATE
- INSPECTION TYPE (ROUTINE, PRE-STORM EVENT, DURING RAIN EVENT)
- NAME AND TITLE OF INSPECTOR
- WEATHER INFORMATION (CURRENT CONDITIONS AS WELL AS TIME AND AMOUNT OF LAST RECORDED PRECIPITATION)
- BRIEF DESCRIPTION OF PROJECT'S STATUS (E.G., PERCENT COMPLETE) AND/OR CURRENT ACTIVITIES
- EVIDENCE OF SEDIMENT DISCHARGES
- IDENTIFICATION OF PLAN DEFICIENCIES
- IDENTIFICATION OF SEDIMENT CONTROLS THAT REQUIRE MAINTENANCE
- IDENTIFICATION OF MISSING OR IMPROPERLY INSTALLED SEDIMENT CONTROLS
- COMPLIANCE STATUS REGARDING THE SEQUENCE OF CONSTRUCTION AND STABILIZATION REQUIREMENTS
- PHOTOGRAPHS
- MONITORING/SAMPLING
- MAINTENANCE AND/OR CORRECTIVE ACTION PERFORMED

OTHER INSPECTION ITEMS AS REQUIRED BY THE GENERAL PERMIT FOR STORMWATER ASSOCIATED WITH CONSTRUCTION ACTIVITIES (NPDES, MDE).

9. TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH CAN AND SHALL BE BACK-FILLED AND STABILIZED BY THE END OF EACH WORKDAY, WHICHEVER IS SHORTER.

10. ANY MAJOR CHANGES OR REVISIONS TO THE PLAN OR SEQUENCE OF CONSTRUCTION MUST BE REVIEWED AND APPROVED BY THE HSCD PRIOR TO PROCEEDING WITH CONSTRUCTION. MINOR REVISIONS MAY ALLOWED BY THE CID PER THE LIST OF HSCD-APPROVED FIELD CHANGES.

11. DISTURBANCE SHALL NOT OCCUR OUTSIDE THE L.O.D. A PROJECT IS TO BE SEQUENCED SO THAT GRADING ACTIVITIES BEGIN ON ONE GRADING UNIT (MAXIMUM ACREAGE OF 20 AC. PER GRADING UNIT) AT A TIME. WORK MAY PROCEED TO A SUBSEQUENT GRADING UNIT WHEN AT LEAST 50 PERCENT OF THE DISTURBED AREA IN THE PRECEDING GRADING UNIT HAS BEEN STABILIZED AND APPROVED BY THE CID. UNLESS OTHERWISE SPECIFIED AND APPROVED BY THE CID, NO MORE THAN 30 ACRES CUMULATIVELY MAY BE DISTURBED AT A GIVEN TIME.

12. WASH WATER FROM ANY EQUIPMENT, VEHICLES, WHEELS, PAVEMENT, AND OTHER SOURCES MUST BE TREATED IN A SEDIMENT BASIN OR OTHER APPROVED WASHOUT STRUCTURE.

13. TOPSOIL SHALL BE STOCKPILED AND PRESERVED ON-SITE FOR REDISTRIBUTION ONTO FINAL GRADE.

14. ALL SILT FENCE AND SUPER SILT FENCE SHALL BE PLACED ON-THE-CONTOUR, AND BE IMBRICATED AT 25' MINIMUM INTERVALS, WITH LOWER ENDS CURLED UPHILL BY 2' IN ELEVATION.

15. STREAM CHANNELS MUST NOT BE DISTURBED DURING THE FOLLOWING RESTRICTED TIME PERIODS (INCLUSIVE):

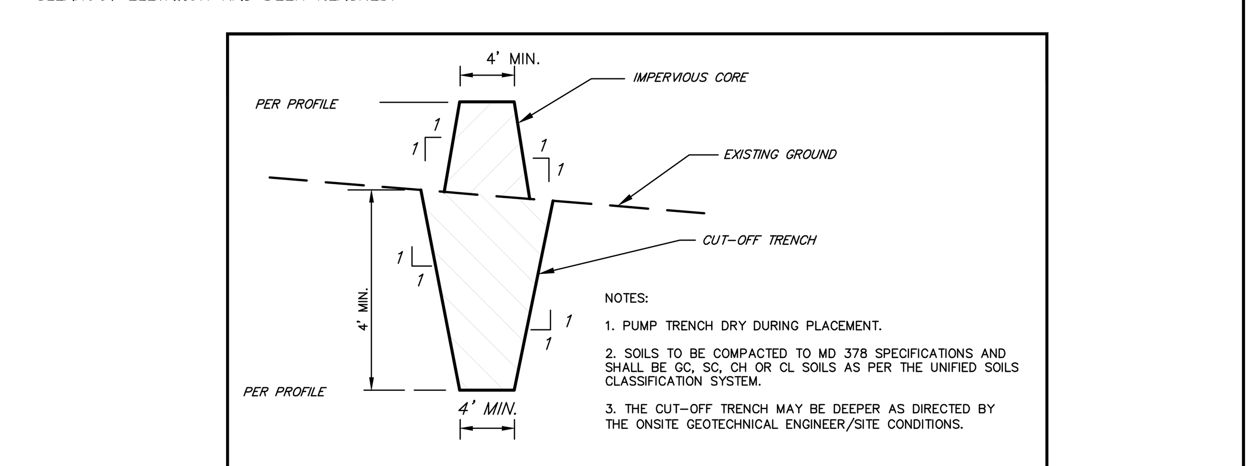
- USE I AND IP MARCH 1 - JUNE 15
- USE III AND IIIP OCTOBER 1 - APRIL 30
- USE IV MARCH 1 - MAY 31

16. A COPY OF THIS PLAN, THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, AND ASSOCIATED PERMITS SHALL BE ON-SITE AND AVAILABLE WHEN THE SITE IS ACTIVE.

SEQUENCE OF CONSTRUCTION

1. OBTAIN GRADING PERMIT. (2 WEEKS)
2. NOTIFY MISS UTILITY (1-800-257-7777) 48 HOURS BEFORE STARTING WORK. NOTIFY THE HOWARD COUNTY CONSTRUCTION INSPECTION DIVISION (410-313-1855) 24 HOURS BEFORE STARTING WORK, AND NOTIFY THE BALTIMORE GAS ELECTRIC CO. (410-291-5739) FIVE (5) WORKING DAYS PRIOR TO STARTING WORK.
3. INSTALL STABILIZED CONSTRUCTION ENTRANCE (SCE), PERIMETER SUPER SILT FENCE (SSF) AND TREE PROTECTION FENCE AT SPECIMEN TREES AND ALONG THE FOREST CONSERVATION EASEMENT AS SHOWN ON SHEET 5. CONSTRUCT DIVERSION FENCE AND ASSOCIATED CLEAN WATER DIVERSION PIPE. CONSTRUCT SEDIMENT BASIN. DO NOT CONSTRUCT BMPs AT THIS TIME. UPON PERMISSION FROM THE SEDIMENT CONTROL INSPECTOR BEGIN CLEARING AND GRUBBING THE SITE. (3 WEEKS)
4. GRADE SITE AND ROADS FOR HOUSE PADS. THE CONTRACTOR SHALL HAVE THE OPTION TO GRADE SOME AREAS PRIOR TO OTHERS TO ALLOW FOR FLEXIBILITY ON WHICH PORTION OF THE PRIVATE ROADS TO BE CONSTRUCTED FIRST. OBTAIN PERMISSION FROM THE SEDIMENT CONTROL INSPECTOR BEFORE PROCEEDING (3 WEEKS)
5. INSTALL STORM DRAINS, WATER, SEWER AND OTHER UTILITIES, IMMEDIATELY PLACE INLET PROTECTION AT ALL NEW INLETS NOT DRAINING TO SEDIMENT BASIN. DELAY CONSTRUCTION OF PIPING FROM SEWER MH360 TO MH365, PIPING FROM MH360 TO MH370, AND MH365 AND MH370. PLACE SUPER SILT FENCE AROUND RISERS WHEN CONSTRUCTED. BLOCK I-8 FROM RECEIVING FLOW UNTIL SILT FENCE DIVERSION AND SLOPE DRAIN ARE REMOVED. INSTALL TEMPORARY PIPE FROM S-2 TO SEDIMENT BASIN
6. INSTALL PAVING. (2 WEEKS)
7. WITH APPROVAL FROM THE SEDIMENT CONTROL INSPECTOR, THOROUGHLY FLUSH CLEAN THE STORM DRAIN PIPES, DRAIN WATER FROM THE BASIN USING REMOVABLE PUMPING STATION. CONVERT SEDIMENT BASIN INTO PERMANENT SWM FACILITY. ALL BMP DRAINAGE AREAS MUST BE STABILIZED PRIOR TO CONVERSION OR INSTALLATION, INCLUDING REGRADING TO DESIGN ELEVATIONS, AFTER INSTALLING FOREBAYS, UNDERDRAINS, STONE AND PLANTING SOIL LAYERS, AND MULCH, THEN INSTALL POND LANDSCAPING. REMOVE PIPE SLOPE DRAIN AND INSTALL REMAINING 18" HDPE TO I-5 THEN REMOVE SILT FENCE DIVERSION, UNBLOCK I-8, INSTALL SF AROUND REMAINING SEWER TO BE INSTALLED, AND INSTALL MH365, MH370, AND ASSOCIATED PIPING. (1 MONTH)
8. OBTAIN PERMISSION FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR TO REMOVE ANY REMAINING SEDIMENT & EROSION CONTROL DEVICES AND THEN STABILIZE THOSE AREAS DISTURBED BY THIS PROCESS WITH PERMANENT SEEDING.

EROSION AND SEDIMENT CONTROL NOTE:
THE CONTRACTOR SHALL INSPECT AND PROVIDE THE NECESSARY MAINTENANCE ON ALL SEDIMENT CONTROL DEVICES/PRACTICES ON A DAILY BASIS, AND IMMEDIATELY AFTER A RAINFALL ALONG WITH REMOVAL OF SEDIMENT FROM THE SEDIMENT BASINS WHEN THE CLEANOUT ELEVATION HAS BEEN REACHED.



CUT-OFF TRENCH & IMPERVIOUS CORE DETAIL

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

DESIGN CERTIFICATE

"I hereby certify that this plan has been designed in accordance with current Maryland erosion and sediment control laws, regulations, and standards, that it represents a practical and workable plan based on my personal knowledge of the site, and that it was prepared in accordance with the requirements of the Howard Soil Conservation District."

Aldo M. Vitucci, P.E. — Designer's Signature — 3/20/23 — Date

ALDO MICHAEL VITUCCI — Printed Name — MD Registration No. 20748 (P.E.) R.L.S., or R.L.A. (circle one)

OWNER'S/DEVELOPER CERTIFICATE

"I/We hereby certify that any clearing, grading, construction, or development will be done pursuant to this approved erosion and sediment control plan, including inspecting and maintaining controls, and that the responsible personnel involved in the construction project will have a Certificate of Training at a Maryland Department of the Environment (MDE) approved training program for the control on erosion and sediment prior to beginning the project. I certify right-of-entry for periodic on-site evaluation by Howard County, the Howard Soil Conservation District and/or MDE."

Jim Greenfield — Owner's/Developer's Signature — 8/11/2023 — Date
Jim Greenfield — Printed Name & Title

Approved: Howard County Department Of Public Works — 9/11/2023
Chief, Bureau Of Highways — Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chad Edmondson — Chief, Development Engineering Division — 9/11/2023 — Date
Chief, Division of Land Development — 9/13/2023 — Date

This development plan is approved for soil erosion and sediment control by the HOWARD SOIL CONSERVATION DISTRICT.
Alexander Bratchie — Howard Soil Conservation District — 9/11/2023 — Date

DATE	DESCRIPTION
	REVISIONS

"PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY 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. 20748, EXPIRATION DATE: 2-22-25."

STATE OF MARYLAND — ALDO MICHAEL VITUCCI — No. 20748 — PROFESSIONAL ENGINEER

Aldo M. Vitucci, P.E.
ALDO M. VITUCCI, P.E.

OWNERS
LACEY FAMILY REVOCABLE TRUST
1235 WILD ROSE COURT
MARRIOTTSVILLE, MD 21104
ATTN: MR. VINCENT LACEY

DEVELOPER
LAND HOLDINGS LLC
C\O B. JAMES GREENFIELD
6420 AUTUMN SKY WAY
COLUMBIA, MD 21044
443-324-4732

PROJECT			SECTION/AREA		PARCEL
LACEY PROPERTY			N/A		13
PLAT NOS.	BLOCK NO.	ZONE	TAX MAP	ELEC. DIST.	CENSUS TR.
-	1	R-ED	25	SECOND	602900

SEDIMENT AND EROSION CONTROL NOTES & DETAILS

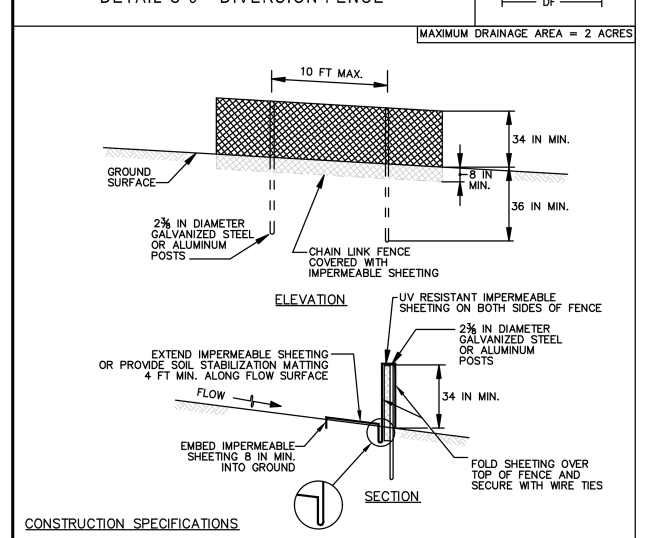
LACEY PROPERTY
LOTS 1 THRU 13 AND
OPEN SPACE LOTS 14 THRU 17

ZONED: R-ED
PARCEL No.: 13
TAX MAP No.: 25 GRID No.: 1
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: JULY 10, 2023
SHEET 6 OF 24

F-21-015

DETAIL C-9 DIVERSION FENCE

STANDARD SYMBOL: — DF — | MAXIMUM DRAINAGE AREA = 2 ACRES



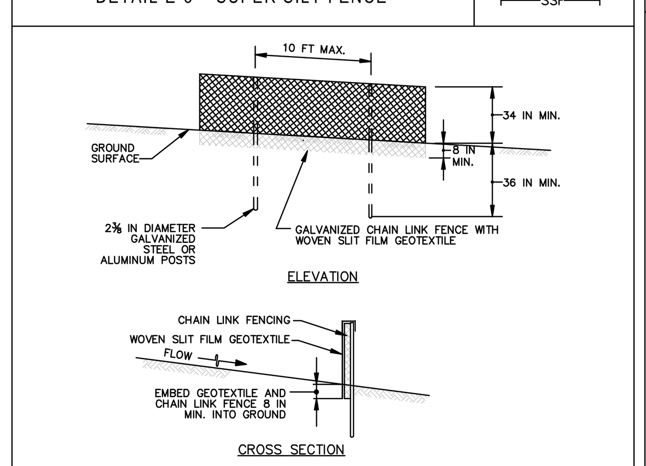
CONSTRUCTION SPECIFICATIONS

1. USE 42 INCH HIGH, 9 GAUGE OR THICKER CHAIN LINK FENCING (2⅜ INCH MAXIMUM OPENING).
2. USE 2⅜ INCH DIAMETER GALVANIZED STEEL POSTS OF 0.095 INCH WALL THICKNESS AND SIX FOOT LENGTH SPACED NO FURTHER THAN 10 FEET APART. THE POSTS DO NOT NEED TO BE SET IN CONCRETE.
3. FASTEN CHAIN LINK FENCE SECURELY TO THE FENCE POSTS WITH WIRE TIES.
4. SECURE 10 MIL OR THICKER UV RESISTANT, IMPERMEABLE SHEETING TO CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT TOP, MID SECTION, AND BELOW GROUND SURFACE.
5. EXTEND SHEETING A MINIMUM OF 4 FEET ALONG FLOW SURFACE AND EMBED END A MINIMUM OF 8 INCHES INTO GROUND. SOIL STABILIZATION MATTING MAY BE USED IN LIEU OF IMPERMEABLE SHEETING ALONG FLOW SURFACE.
6. WHEN TWO SECTIONS OF SHEETING ADJOIN EACH OTHER, OVERLAP BY 6 INCHES AND FOLD WITH SEAM FACING DOWNGRADE.
7. KEEP FLOW SURFACE ALONG DIVERSION FENCE AND POINT OF DISCHARGE FREE OF EROSION. REMOVE ACCUMULATED SEDIMENT AND DEBRIS. MAINTAIN POSITIVE DRAINAGE. REPLACE IMPERMEABLE SHEETING IF TORN. IF UNDERMINING OCCURS, REINSTALL FENCE.

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 E-3 SUPER SILT FENCE

STANDARD SYMBOL: — SSF —



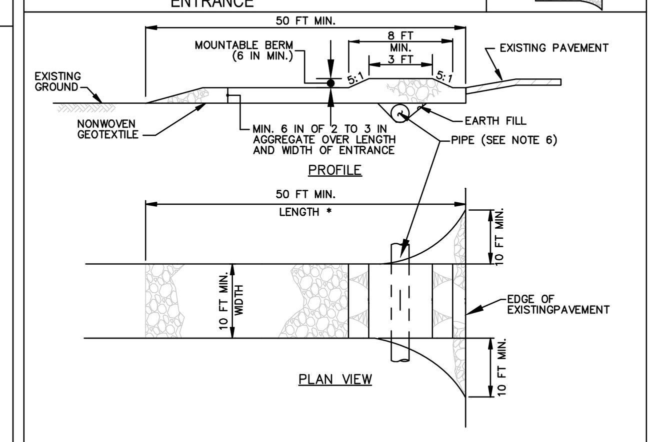
CONSTRUCTION SPECIFICATIONS

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 HOG 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

DETAIL B-1 STABILIZED CONSTRUCTION ENTRANCE

STANDARD SYMBOL: SCE



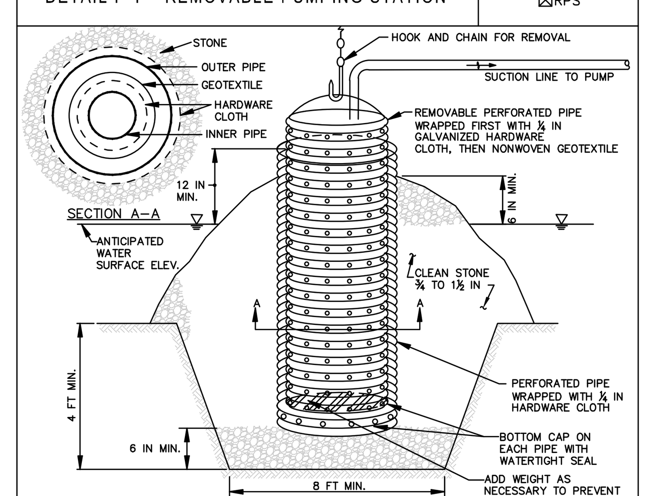
CONSTRUCTION SPECIFICATIONS

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

DETAIL F-1 REMOVABLE PUMPING STATION

STANDARD SYMBOL: ⊠RPS



CONSTRUCTION SPECIFICATIONS

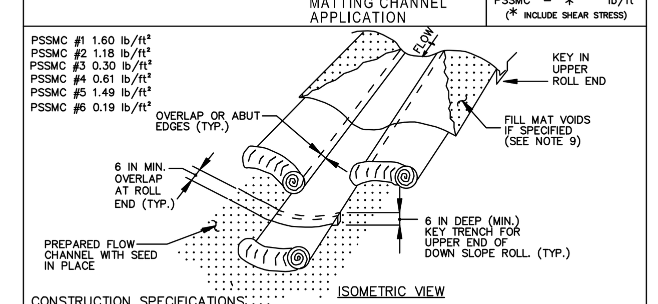
1. USE CORRUGATED METAL OR PLASTIC PIPE WITH 1 INCH DIAMETER PERFORATIONS 6 INCHES ON CENTER.
2. USE A MINIMUM 12 INCH DIAMETER INNER PIPE WITH AN OUTER PIPE A MINIMUM 6 INCHES LARGER IN DIAMETER. BOTTOM OF EACH PIPE MUST BE CAPPED WITH WATERTIGHT SEAL.
3. WRAP EACH PIPE WITH ¼ INCH GALVANIZED HARDWARE CLOTH. ON INNER PIPE WRAP NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS, OVER THE HARDWARE CLOTH.
4. EXCAVATE 8 FEET X 8 FEET X 4 FEET DEEP PIT FOR PIPE PLACEMENT. PLACE CLEAN ¾ TO 1½ INCH STONE OR EQUIVALENT RECYCLED CONCRETE, 6 INCHES IN DEPTH PRIOR TO PIPE PLACEMENT.
5. SET TOP OF INNER AND OUTER PIPES MINIMUM 12 INCHES ABOVE ANTICIPATED WATER SURFACE ELEVATION (OR RISER CREST ELEVATION WHEN DEWATERING A BASIN).
6. BACKFILL PIT AROUND THE OUTER 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.
7. DISCHARGE TO A STABLE AREA AT A NONEROSIVE RATE.
8. A REMOVABLE PUMPING STATION REQUIRES FREQUENT MAINTENANCE. IF SYSTEM CLOGS, PULL OUT INNER PIPE AND REPLACE GEOTEXTILE. 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

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

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

PSSMC #1 1.60 lb/ft²
PSSMC #2 1.18 lb/ft²
PSSMC #3 0.30 lb/ft²
PSSMC #4 0.61 lb/ft²
PSSMC #5 1.49 lb/ft²
PSSMC #6 0.19 lb/ft²



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 1½ 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.

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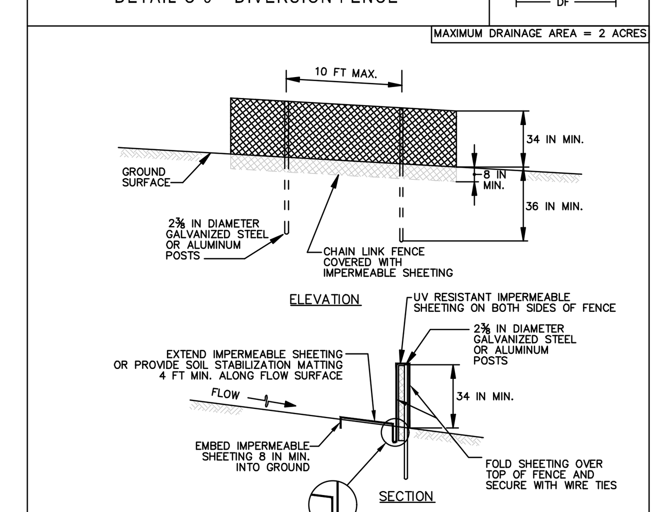
DETAIL C-9 DIVERSION FENCE

STANDARD SYMBOL: — DF — | MAXIMUM DRAINAGE AREA = 2 ACRES



CONSTRUCTION SPECIFICATIONS

1. USE 42 INCH HIGH, 9 GAUGE OR THICKER CHAIN LINK FENCING (2⅜ INCH MAXIMUM OPENING).
2. USE 2⅜ INCH DIAMETER GALVANIZED STEEL POSTS OF 0.095 INCH WALL THICKNESS AND SIX FOOT LENGTH SPACED NO FURTHER THAN 10 FEET APART. THE POSTS DO NOT NEED TO BE SET IN CONCRETE.
3. FASTEN CHAIN LINK FENCE SECURELY TO THE FENCE POSTS WITH WIRE TIES.
4. SECURE 10 MIL OR THICKER UV RESISTANT, IMPERMEABLE SHEETING TO CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT TOP, MID SECTION, AND BELOW GROUND SURFACE.
5. EXTEND SHEETING A MINIMUM OF 4 FEET ALONG FLOW SURFACE AND EMBED END A MINIMUM OF 8 INCHES INTO GROUND. SOIL STABILIZATION MATTING MAY BE USED IN LIEU OF IMPERMEABLE SHEETING ALONG FLOW SURFACE.
6. WHEN TWO SECTIONS OF SHEETING ADJOIN EACH OTHER, OVERLAP BY 6 INCHES AND FOLD WITH SEAM FACING DOWNGRADE.
7. KEEP FLOW SURFACE ALONG DIVERSION FENCE AND POINT OF DISCHARGE FREE OF EROSION. REMOVE ACCUMULATED SEDIMENT AND DEBRIS. MAINTAIN POSITIVE DRAINAGE. REPLACE IMPERMEABLE SHEETING IF TORN. IF UNDERMINING OCCURS, REINSTALL FENCE.

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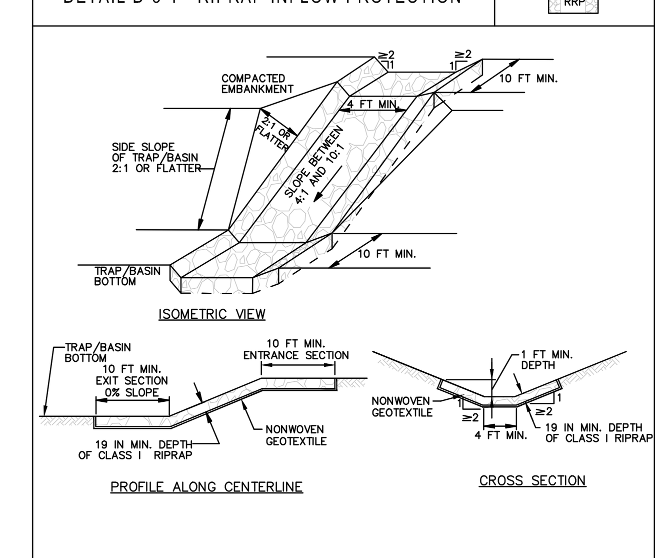
DETAIL D-3-1 RIPRAP INFLOW PROTECTION

STANDARD SYMBOL: RRP



CONSTRUCTION SPECIFICATIONS

1. PROVIDE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS, UNDER THE BOTTOM AND ALONG SIDES OF ALL RIPRAP.
2. CONSTRUCT INFLOW CHANNEL WITH CLASS I RIPRAP OR EQUIVALENT RECYCLED CONCRETE LINING TO A MINIMUM DEPTH OF 19 INCHES (2 x D_{50}) AND A 1 FOOT DEEP FLOW CHANNEL. INFLOW RIPRAP PROTECTION CHANNEL MUST HAVE A TRAPEZOIDAL CROSS SECTION WITH 2:1 OR FLATTER SIDE SLOPES AND A 4 FOOT MINIMUM BOTTOM WIDTH.
3. INSTALL ENTRANCE AND EXIT SECTIONS AS SHOWN ON THE PROFILE.
4. BLEND RIPRAP INTO EXISTING GROUND.
5. MAINTAIN LINE, GRADE, AND CROSS SECTION. REMOVE ACCUMULATED SEDIMENT AND DEBRIS. KEEP POINTS OF INFLOW AND OUTFLOW FREE OF EROSION.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL
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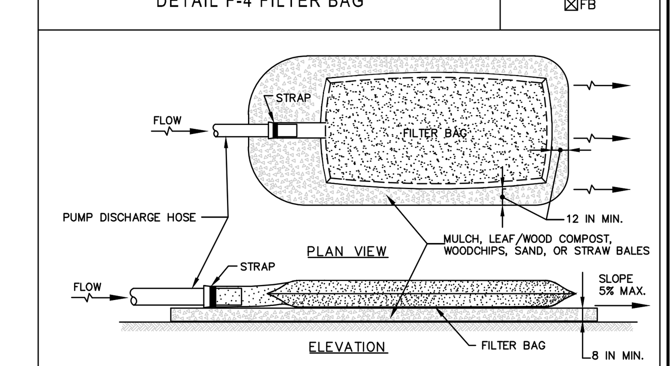
DETAIL F-4 FILTER BAG

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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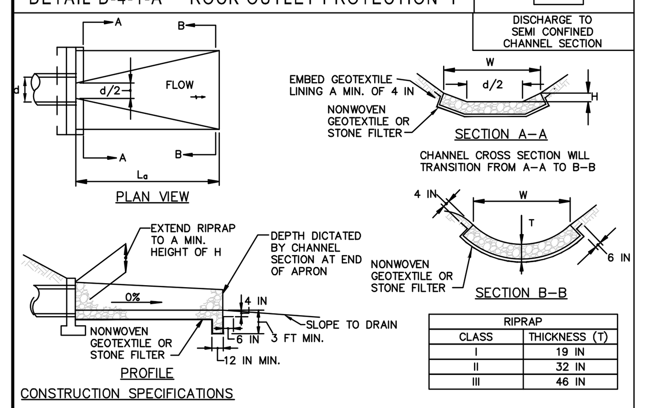
DETAIL D-4-1-A ROCK OUTLET PROTECTION I

STANDARD SYMBOL: ROP1 — DISCHARGE TO SEMI CONFINED CHANNEL SECTION



RIPRAP CLASS	THICKNESS (T)
I	19 IN
II	32 IN
III	46 IN

CONSTRUCTION SPECIFICATIONS

1. RIPRAP AND STONE MUST CONFORM TO THE SPECIFIED CLASS.
2. USE NONWOVEN GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS, AND PROTECT FROM PUNCTURING, CUTTING, OR TEARING. REPAIR ANY DAMAGE OTHER THAN AN OCCASIONAL SMALL HOLE BY PLACING ANOTHER PIECE OF GEOTEXTILE OVER THE DAMAGED PART OR BY COMPLETELY REPLACING THE GEOTEXTILE. PROVIDE A MINIMUM OF ONE FOOT OVERLAP FOR ALL REPAIRS AND FOR JOINING TWO PIECES OF GEOTEXTILE TOGETHER.
3. PREPARE THE SUBGRADE FOR GEOTEXTILE OR STONE FILTER (⅜ TO 1½ INCH STONE FOR 6 INCH MINIMUM DEPTH) AND RIPRAP TO THE REQUIRED LINES AND GRADES. COMPACT ANY FILL REQUIRED IN THE SUBGRADE TO A DENSITY OF APPROXIMATELY THAT OF THE SURROUNDING UNDISTURBED MATERIAL.
4. EXTEND GEOTEXTILE AT LEAST 6 INCHES BEYOND EDGES OF RIPRAP AND EMBED AT LEAST 4 INCHES AT SIDES OF THE RIPRAP.
5. CONSTRUCT RIPRAP OUTLET TO FULL COURSE THICKNESS IN ONE OPERATION AND IN SUCH A MANNER AS TO AVOID DISPLACEMENT OF UNDERLYING MATERIALS. PLACE STONE FOR RIPRAP OUTLET IN A MANNER THAT WILL ENSURE THAT IT IS REASONABLY HOMOGENOUS WITH THE SMALLER STONES AND SPALLS FILLING THE VOIDS BETWEEN THE LARGER STONES. PLACE RIPRAP IN A MANNER TO PREVENT DAMAGE TO THE STONE FILTER BLANKET OR GEOTEXTILE. HAND PLACE TO THE EXTENT NECESSARY.
6. WHERE NO ENDWALL IS USED, CONSTRUCT THE UPSTREAM END OF THE APRON SO THAT THE WIDTH IS TWO TIMES THE DIAMETER OF THE OUTLET PIPE, AND EXTEND THE STONE UNDER THE OUTLET BY A MINIMUM OF 18 INCHES.
7. CONSTRUCT APRON WITH 0% SLOPE ALONG ITS LENGTH AND WITHOUT OBSTRUCTIONS. PLACE STONE SO THAT IT BLENDS IN WITH EXISTING GROUND.
8. MAINTAIN LINE, GRADE, AND CROSS SECTION. KEEP OUTLET FREE OF EROSION. REMOVE ACCUMULATED SEDIMENT AND DEBRIS. AFTER HIGH FLOWS INSPECT FOR SCOUR AND DISLODGED RIPRAP. MAKE NECESSARY REPAIRS IMMEDIATELY.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL
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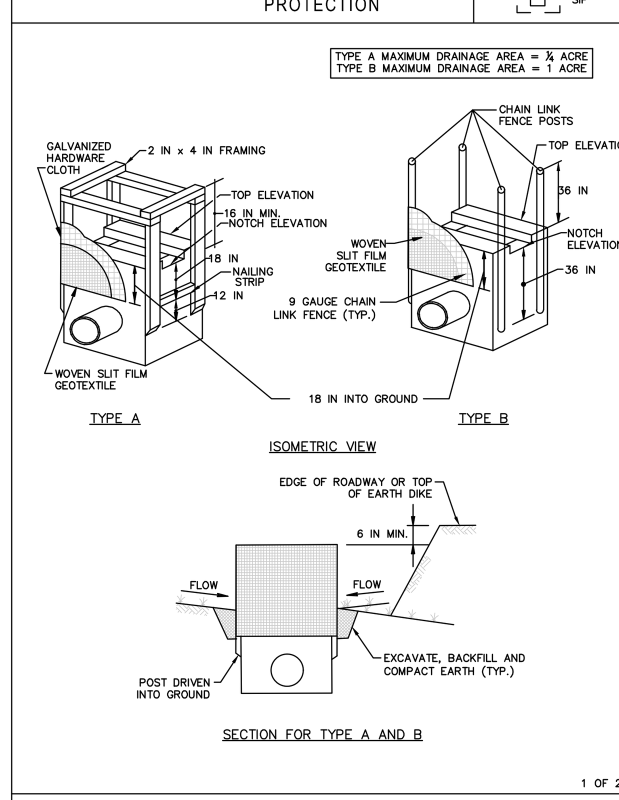
DETAIL E-9-1 STANDARD INLET PROTECTION

STANDARD SYMBOL: SIP

TYPE A MAXIMUM DRAINAGE AREA = ¼ ACRE
TYPE B MAXIMUM DRAINAGE AREA = 1 ACRE



MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL — 1 OF 2
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DETAIL E-9-1 STANDARD INLET PROTECTION

STANDARD SYMBOL: SIP

CONSTRUCTION SPECIFICATIONS

1. USE WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS.
2. EXCAVATE COMPLETELY AROUND THE INLET TO A DEPTH OF 18 INCHES BELOW THE NOTCH ELEVATION.
3. FOR TYPE A, USE NOMINAL 2 INCH X 4 INCH CONSTRUCTION GRADE LUMBER POSTS, DRIVEN 1 FOOT INTO THE GROUND AT EACH CORNER OF THE INLET. PLACE NAIL STRIPS BETWEEN THE POSTS ON THE ENDS OF THE INLET. ASSEMBLE THE TOP PORTION OF THE 2X4 FRAME AS SHOWN. STRETCH ½ INCH GALVANIZED HARDWARE CLOTH TIGHTLY AROUND THE FRAME AND FASTEN SECURELY. FASTEN GEOTEXTILE SECURELY TO THE HARDWARE CLOTH WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE AND HARDWARE CLOTH A MINIMUM OF 18 INCHES BELOW THE WEIR CREST. THE ENDS OF THE GEOTEXTILE MUST MEET AT A POST, BE OVERLAPPED AND FOLDED, THEN FASTENED TO THE POST.

FOR TYPE B, USE 2⅜ INCH DIAMETER GALVANIZED STEEL POSTS OF 0.095 INCH WALL THICKNESS AND 6 FOOT LENGTH, DRIVEN A MINIMUM OF 36 INCHES BELOW THE WEIR CREST AT EACH CORNER OF THE STRUCTURE. FASTEN 9 GAUGE OR HEAVIER CHAIN LINK FENCE, 42 INCHES IN HEIGHT, SECURELY TO THE FENCE POSTS WITH WIRE TIES. FASTEN GEOTEXTILE SECURELY TO THE CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE AND CHAIN LINK FENCE A MINIMUM OF 18 INCHES BELOW THE WEIR CREST.

4. BACKFILL AROUND THE INLET IN LOOSE 4 INCH LIFTS AND COMPACT UNTIL SOIL IS LEVEL WITH THE NOTCH ELEVATION ON THE ENDS AND TOP ELEVATION ON THE SIDES.
5. STORM DRAIN INLET PROTECTION REQUIRES FREQUENT MAINTENANCE. REMOVE ACCUMULATED SEDIMENT AFTER EACH RAIN EVENT TO MAINTAIN FUNCTION AND AVOID PREMATURE CLOGGING. IF INLET PROTECTION DOES NOT COMPLETELY DRAIN WITHIN 24 HOURS AFTER A STORM EVENT, IT IS CLOGGED. WHEN THIS OCCURS, REMOVE ACCUMULATED SEDIMENT AND CLEAN, OR REPLACE GEOTEXTILE AND STONE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL — 2 OF 2
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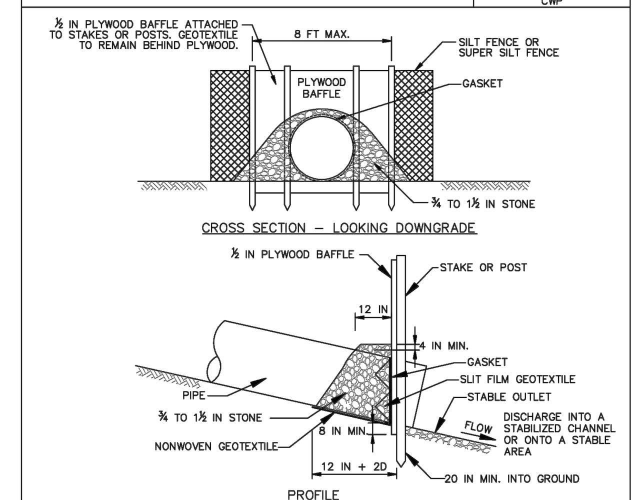
DETAIL E-4 CLEAR WATER PIPE THROUGH SILT FENCE OR SUPER SILT FENCE

STANDARD SYMBOL: CWP



CONSTRUCTION SPECIFICATIONS

1. INSTALL SILT FENCE OR SUPER SILT FENCE IN ACCORDANCE WITH DETAIL E-1 OR DETAIL E-2.
2. AT THE PIPE LOCATION, CUT AND PULL BACK THE WOVEN SLIT FILM GEOTEXTILE AND CHAIN LINK FENCING. SECURE GEOTEXTILE TO PIPE WITH GASKET. INSTALL ADDITIONAL STAKES OR POSTS IF NECESSARY TO ACCOMMODATE THE INSTALLATION OF THE BAFFLE BOARD.
3. ENTRENCH ¾ INCH PLYWOOD BAFFLE A MINIMUM OF 8 INCHES AND SECURE TO THE UPGRADE SIDE OF THE FENCE STAKES OR POSTS. BAFFLE SHOULD BE AT LEAST THE HEIGHT OF THE FENCE.
4. PLACE ¾ TO 1½ INCH STONE OR EQUIVALENT RECYCLED CONCRETE BEHIND THE PLYWOOD BAFFLE ON NONWOVEN GEOTEXTILE AND EXTEND 12 INCH MIN. ALONG TOP OF PIPE AND TO A HEIGHT OF 4 INCHES ABOVE THE TOP OF PIPE.
5. USE NONWOVEN AND WOVEN SLIT FILM GEOTEXTILES AS SPECIFIED IN SECTION H-1 MATERIALS.
6. REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN SEDIMENT REACHES 6 INCHES IN HEIGHT. REPLACE GEOTEXTILE IF TORN. IF UNDERMINING OCCURS, REINSTALL BAFFLE, CHAIN LINK, AND GEOTEXTILE. REPLACE STONE IF DISPLACED. KEEP POINT OF DISCHARGE FREE OF EROSION.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL
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E-4 STANDARDS AND SPECIFICATIONS FOR CLEAR WATER PIPE THROUGH SILT FENCE OR SUPER SILT FENCE

Definition

A pipe extension through silt fence or super silt fence. Use of flexible piping is preferred.

Purpose

To provide a mechanism to extend a clear water pipe through silt fence or super silt fence.

Conditions Where Practice Applies

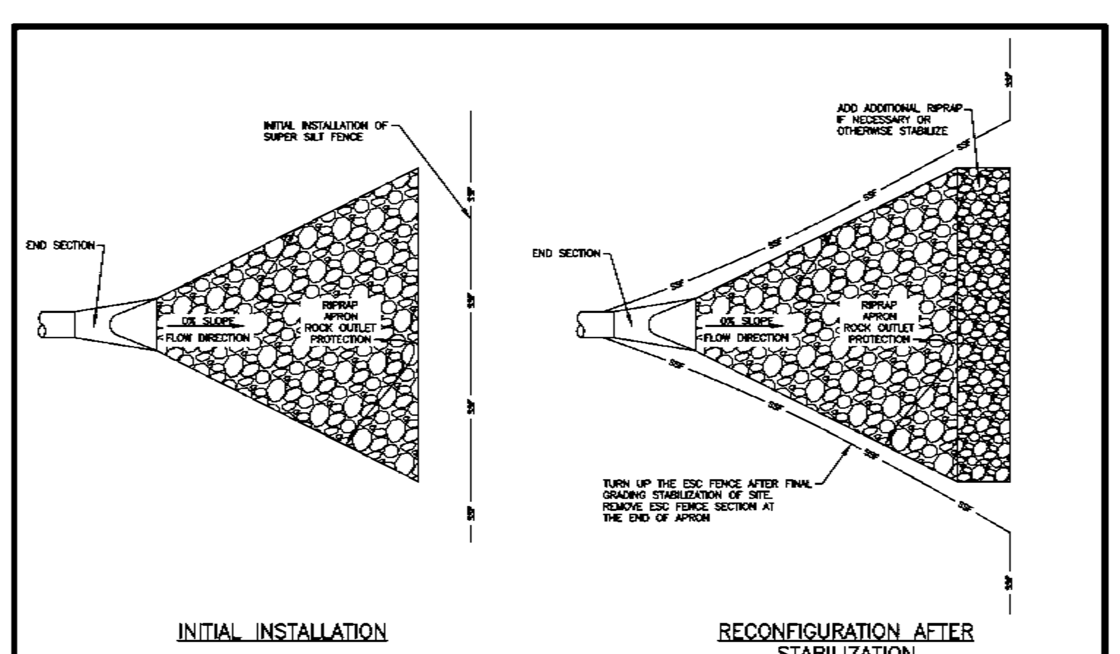
A clear water pipe through silt fence or super silt fence is used when a pipe intersects silt fence or super silt fence.

Design Criteria

1. The pipe and silt fence or super silt fence must conform to the design criteria for the respective practices. The maximum pipe diameter through silt fence is 12 inches and through super silt fence is 24 inches.
2. The plywood baffle is to be placed parallel to the contour.
3. The pipe must outlet onto a stable area at a non-erosive rate.

Maintenance

Accumulated sediment and debris must be removed when sediment reaches 6 inches in height. The geotextile must be replaced if torn. If undermining occurs, reinstall baffle, chain link, and geotextile. The stone must be replaced if displaced. The point of discharge must be kept free of erosion.



INITIAL INSTALLATION — RECONFIGURATION AFTER STABILIZATION

Howard County, Maryland Department of Public Works — Approved [signature] Chief, Bureau of Engineering — 5/26/2017
SEDIMENT CONTROL FENCE RECONFIGURATION After Stabilization — Detail D-5.53

SWM POND #1 FACILITY:

GTA GEO-TECHNICAL RECOMMENDATIONS.

CONCLUSIONS AND RECOMMENDATIONS

Based upon the results of this study, it is GTA's opinion that construction of the proposed retaining walls and SWM sand filter is feasible, given that the geotechnical recommendations are followed, and that the standard level of care is maintained during site development and construction. Design and construction of the proposed sand filter will be impacted by the presence of shallow groundwater. Design and construction of the proposed retaining walls will be impacted by the presence of loose/soft surficial soils. Note that the following recommendations pertain only to the subject retaining walls and sand filters. A discussion of these issues is included in the following paragraphs. Recommendations regarding other site development concerns, such as general site grading, foundation support, subsurface utilities, and pavements, are not addressed.

SWM Facility

The subject SWM facility is planned in the central portion of the site. Based on the available plans and information provided by FCC, the SWM facility is planned as a sand filter with a facility bottom elevation of 337.05 feet above MSL and a top of embankment elevation of 342.0 feet above MSL. Existing grades in the vicinity of the proposed SWM facility range from about 336 to 342 feet above MSL. Therefore, construction of the proposed sand filter will require excavations on the order of 2 to 9 feet below the existing grades and fills on the order of 2 to 6 feet. Based on the results of the borings, the required excavations can likely be performed using standard excavation techniques (i.e. scraping). However, very dense, highly weathered rock was encountered at depths of 8 to 12 feet below existing grades in borings performed for this facility. Such material may be encountered during facility excavation, and will likely require increased excavation effort or alternative excavation techniques, such as ripping or jacking. About 1 to 5 days after completion of drilling, groundwater was observed at depths of 3.9 to 4.9 feet below existing grades in the borings performed for this facility. Therefore, the presence of groundwater will likely impact construction of the proposed facility. The contractor should be prepared to dewater and properly shore excavations. GTA understands that MD 378 will govern the design and construction of the proposed sand filter embankment, which will require a clay core/cutoff trench in the embankment. MD 378 specifies that soils for use in cutoff trench construction meet USCS Classifications of Lean CLAY (CL), Fat CLAY (CH), Clayey SAND (SC), or Clayey GRAVEL (GC), with a minimum of 35% passing the #200 sieve. Furthermore, GTA recommends that similar materials be used for backfill adjacent to the outfall structures. The use of fine-grained or plastic material adjacent to the pipe should decrease potential for 'piping' erosional failures.

Soils meeting the above-referenced requirements were not encountered in the explorations to the depths explored. Therefore, GTA anticipates that borrow materials from off-site sources will be required for use in cutoff trench construction. Borrow materials should meet the above requirements and should be approved by GTA prior to import. A contingency should be established for importing suitable materials for cutoff trench construction. Although not anticipated on a widespread basis based on the result of the explorations, if soils meeting the above requirements are encountered in localized areas during site development activities, they should be segregated during site excavations and stockpiled for use in cutoff trench construction. However, it is likely that these soils, if encountered on site, will be mixed with sandy soils which will not meet the above requirements, and can transition quickly into ML or SM classified soils which also do not meet the above requirements. MD 378 specifies that all of the referenced classifications suitable for cutoff trench construction are suitable for embankment construction as well. GTA recommends that the most plastic materials available be used for embankment construction. Low plasticity silts, clean sandy soils, or highly weathered rock materials may be prone to seepage, and are generally not recommended for use in embankment construction. Fills for cutoff trench and embankment construction should be placed in controlled lifts and compacted in accordance with the project and County requirements. Note that based on the available groundwater data, the soil subgrade at the proposed bottom elevation of the cutoff trench may be soft and saturated. Therefore, it may be necessary to dry and stabilize the subgrade soils such that proper compaction of the cutoff trench materials can be achieved. Prior to placing the required fills, the existing subgrade should be proofrolled to identify any soft, unstable, or otherwise unsuitable soils. Any unstable/unsuitable soils should be removed and replaced with controlled, compacted fill. Based on conversation with FCC, infiltration techniques are being considered for the proposed facility. One infiltration test was performed near the location of Boring SWM-1 to evaluate the feasibility of infiltration techniques for the proposed facility. The infiltration test was performed in native Silty SAND at a depth of about 5 feet below existing grades, and indicated an infiltration rate of 0.32 inches per hour. Maryland Department of the Environment (MDE) specifications state that the minimum acceptable average infiltration rate for stormwater management and water quality applications, as indicated by borehole infiltration testing, is 0.52 inches per hour. The low infiltration rate is likely due to the significant proportions of fine-grained material within the native soils. Also, MDE regulations require a minimum clearance of 4 feet between infiltration elevations and groundwater. Based on the observed groundwater elevations, the facility grades will need to be raised if infiltration techniques are planned. Based on the observed infiltration rate and groundwater depths, infiltration techniques are not considered suitable at the location of the proposed SWM facility.Accordingly, GTA recommends that the sand filter should utilize an underdrain system in lieu of only infiltration techniques.

POCKET SAND FILTER (POND #1) BORING LOGS

LOG OF BORING NO. SWM-1 (Sheet 1 of 1)

PROJECT: Lacey Property — PROJECT NO.: 150945 — PROJECT LOCATION: Howard County, MD
DATE STARTED: 7/2/2015 — DATE COMPLETED: 7/2/2015 — DRILLING CONTRACTOR: Geo-Technology Associates, Inc. — DRILLER: K. Kozak — DRILLING METHOD: HSA — SAMPLING METHOD: Split Spoon with Automatic Hammer
WATER LEVEL (ft): Dry / 4.6 — DATE: 7/2/2015 / 7/6/2015 — CAVED (ft): 13.7 / 8.5
WATER ENCOUNTERED DURING DRILLING (ft): Dry — GROUND SURFACE ELEVATION: 337.8 — DATUM: Survey — EQUIPMENT: CME-45 — LOGGED BY: JPE — CHECKED BY: RPM

SAMPLE NUMBER	SAMPLE DEPTH (ft)	SAMPLE RECOVERY (in.)	SAMPLE BLOWS/6 inches	N (blows/ft)	ELEVATION (ft)	USCS	DESCRIPTION	REMARKS
S-1	0.0	14	WOH/6"-1	2	337.8	ML	Brown, moist, soft, Sandy SILT	Topsoil 6"
S-2	2.5	16	3-3-4	7	335.8	SM	Light Brown with Light Gray, moist, loose, Silty SAND	
S-3	5.0	8	1-2-3	5	332.8 / 331.8	ML / SM	Light Brown with Light Gray, moist, medium stiff, Sandy SILT; Reddish-Brown with Gray, moist, loose, Silty SAND	PP=1.5*
S-4	8.5	1	13-28-20	48	329.8	GP	Tan, dry, dense, Poorly Graded GRAVEL with Sand	
S-5	13.5	4	50/6"	50/6"	325.8 / 322.8	HW	Gray-Brown and Tan, moist, very dense, Highly Weathered Rock; Boring terminated at 15 feet.	

*PP=Undrained compressive strength in tons per square foot based on pocket penetrometer tests performed on split-spoon samples.
Infiltration Test at 6 feet; Average Infiltration Rate = 0.32 in./hr

GEO-TECHNOLOGY ASSOCIATES, INC. 14280 Park Center Drive, Suite A, Laurel, MD 20707 — LOG OF BORING NO. SWM-1 — Sheet 1 of 1

LOG OF BORING NO. SWM-2 (Sheet 1 of 1)

PROJECT: Lacey Property — PROJECT NO.: 150945 — PROJECT LOCATION: Howard County, MD
DATE STARTED: 7/2/2015 — DATE COMPLETED: 7/2/2015 — DRILLING CONTRACTOR: Geo-Technology Associates, Inc. — DRILLER: K. Kozak — DRILLING METHOD: HSA — SAMPLING METHOD: Split Spoon with Automatic Hammer
WATER LEVEL (ft): 7.3 / 4.9 — DATE: 7/2/2015 / 7/9/2015 — CAVED (ft): 10.1 / 7.1
WATER ENCOUNTERED DURING DRILLING (ft): 13.5 — GROUND SURFACE ELEVATION: 336.8 — DATUM: Survey — EQUIPMENT: CME-45 — LOGGED BY: JPE — CHECKED BY: RPM

SAMPLE NUMBER	SAMPLE DEPTH (ft)	SAMPLE RECOVERY (in.)	SAMPLE BLOWS/6 inches	N (blows/ft)	ELEVATION (ft)	USCS	DESCRIPTION	REMARKS
S-1	0.0	16	1-1-2	3	336.8	ML	Brown, moist, soft to medium stiff, Sandy SILT	Topsoil 7"
S-2	2.5	11	3-5-3	8				
S-3	5.0	6	3-3-4	7	330.8	GM	Tan, moist, loose, Silty GRAVEL with Sand	
S-4	8.5	1	10-17-13	30	328.8	GP	Tan and Light Gray, dry, medium dense, Poorly Graded GRAVEL with Sand	
S-5	13.5	2	50/3"	50/3"	324.8 / 321.8	HW	Gray-Brown, moist, very dense, Highly Weathered Rock; Boring terminated at 15 feet.	

GEO-TECHNOLOGY ASSOCIATES, INC. 14280 Park Center Drive, Suite A, Laurel, MD 20707 — LOG OF BORING NO. SWM-2 — Sheet 1 of 1

LOG OF BORING NO. SWM-3 (Sheet 1 of 1)

PROJECT: Lacey Property — PROJECT NO.: 150945 — PROJECT LOCATION: Howard County, MD
DATE STARTED: 7/2/2015 — DATE COMPLETED: 7/2/2015 — DRILLING CONTRACTOR: Geo-Technology Associates, Inc. — DRILLER: K. Kozak — DRILLING METHOD: HSA — SAMPLING METHOD: Split Spoon with Automatic Hammer
WATER LEVEL (ft): 5.7 / 3.9 — DATE: 7/2/2015 / 7/9/2015 — CAVED (ft): 13.0 / 8.3
WATER ENCOUNTERED DURING DRILLING (ft): 8.5 — GROUND SURFACE ELEVATION: 337.8 — DATUM: Survey — EQUIPMENT: CME-45 — LOGGED BY: JPE — CHECKED BY: RPM

SAMPLE NUMBER	SAMPLE DEPTH (ft)	SAMPLE RECOVERY (in.)	SAMPLE BLOWS/6 inches	N (blows/ft)	ELEVATION (ft)	USCS	DESCRIPTION	REMARKS
S-1	0.0	7	WOH/6"-2 2	4	337.8	SM	Dark Brown, moist, very loose, Silty SAND	Topsoil 8"
S-2	2.5	15	4-6-9	15	335.8	SM	Brown, moist, medium dense, Silty SAND with Gravel	
S-3	5.0	8	9-11-11	22				
S-4	8.5	5	50/6"	50/6"	329.8	HW	Gray with Brown to Dark Brown, moist, very dense, Highly Weathered Rock	
S-5	13.5	8	23-50/4"	50/4"	322.8		Boring terminated at 15 feet.	

GEO-TECHNOLOGY ASSOCIATES, INC. 14280 Park Center Drive, Suite A, Laurel, MD 20707 — LOG OF BORING NO. SWM-3 — Sheet 1 of 1

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK – 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 – 2855

DESIGN CERTIFICATE

"I hereby certify that this plan has been designed in accordance with current Maryland erosion and sediment control laws, regulations, and standards, that it represents a practical and workable plan based on my personal knowledge of the site, and that it was prepared in accordance with the requirements of the Howard Soil Conservation District."

Aldo M. Vitucci, P.E. — 3/20/23
Designer's Signature — Date
ALDO MICHAEL VITUCCI — MD Registration No. 20748 (P.E., R.L.S., or R.L.A. (circle one))
Printed Name

OWNER'S/DEVELOPER CERTIFICATE

"I/We hereby certify that any clearing, grading, construction, or development will be done pursuant to this approved erosion and sediment control plan, including inspecting and maintaining controls, and that the responsible personnel involved in the construction project will have a Certificate of Training at a Maryland Department of the Environment (MDE) approved training program for the control on erosion and sediment prior to beginning the project. I certify right-of-entry for periodic on-site evaluation by Howard County, the Howard Soil Conservation District and/or MDE."

Jim Greenfield — 8/11/2023
Owner's/Developer's Signature — Date
Jim Greenfield
Printed Name & Title

Approved: Howard County Department Of Public Works — 9/11/2023
Chief, Bureau Of Highways — Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
CHAD Edmondson — 9/11/2023
Chief, Development Engineering Division — Date
[signature] — 9/13/2023
Chief, Division of Land Development — Date

This development plan is approved for soil erosion and sediment control by the HOWARD SOIL CONSERVATION DISTRICT.
Alexander Bratchie — 9/11/2023
Howard Soil Conservation District — Date

DATE	DESCRIPTION
	REVISIONS

"PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY 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. 20748, EXPIRATION DATE: 2-22-25."

STATE OF MARYLAND — ALDO MICHAEL VITUCCI — No. 20748 — PROFESSIONAL ENGINEER

Aldo M. Vitucci, P.E.
ALDO M. VITUCCI, P.E.

OWNERS
LACEY FAMILY REVOCABLE TRUST
1235 WILD ROSE COURT
MARRIOTTSVILLE, MD 21104
ATTN: MR. VINCENT LACEY

DEVELOPER
LAND HOLDINGS LLC
C\O B. JAMES GREENFIELD
6420 AUTUMN SKY WAY
COLUMBIA, MD 21044
443-324-4732

PROJECT			SECTION/AREA		PARCEL
LACEY PROPERTY			N/A		13
PLAT NOS.	BLOCK NO.	ZONE	TAX MAP	ELEC. DIST.	CENSUS TR.
–	1	R-ED	25	SECOND	602900

SEDIMENT AND EROSION CONTROL NOTES, DETAILS & BORING LOGS

LACEY PROPERTY

LOTS 1 THRU 13 AND OPEN SPACE LOTS 14 THRU 17

ZONED: R-ED
PARCEL No.: 13
TAX MAP No.: 25 GRID No.: 1
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: JULY 10, 2023
SHEET 7 OF 24

F-21-015

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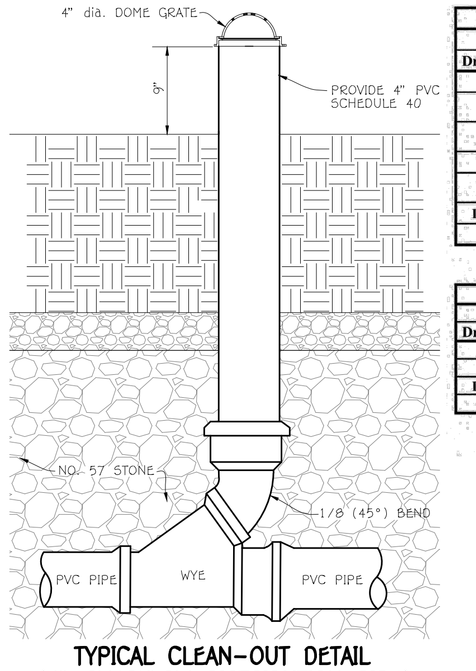
TABLE B.3.1 MATERIAL SPECIFICATIONS FOR SAND FILTERS

MATERIAL	SPECIFICATIONS/TEST METHOD	SIZE	NOTES
SAND	CLEAN AASHTO-M-6 OF ASTM-CCONCRETE SAND	0.02" TO 0.04"	SAND SUBSTITUTIONS SUCH AS DIABASE AND GRAYSTONE #10 ARE NOTE ACCEPTABLE. NO CALCIUM CARBONATED OR DOLOMITIC SAND SUBSTITUTIONS ARE: ACCEPTABLE. NO "ROCK DUST" CAN BE USED FOR SAND:
PEAT	ASH CONTENT: < 15% PH RANGE: 5.2 TO 4.9 LOOSE BULK DENSITY 0.12 TO 0.15 G/CC	N/A	THE MATERIAL MUST BE REED-SEDGE HEMIC PEAT, SHREDDED, UNCOMPACTED, UNIFORM, AND CLEAN.
LEAF COMPOST		N/A	
UNDERDRAIN GRAVEL	AASHTO-M-43	0.375" TO 0.75"	
GEOTEXTILE FABRIC (IF REQUIRED)	ASTM-D-4833 (PUNCTURE STRENGTH LB.) ASTM-D-4632 (TENSILE STRENGTH lb.)	0.08" THICK EQUIVALENT OPENING SIZE OF #80 SIEVE	MUST MAINTAIN 125 GPM PER SQ. FT. FLOW RATE. NOTE: A 4" PEA GRAVEL LAYER MAY BE SUBSTITUTED FOR GEOTEXTILES MEANT TO "SEPARATE" SAND FILTER LAYERS.
IMPERMEABLE LINER (IF REQUIRED)	ASTM-D-4833 (THICKNESS) ASTM-D-412 (TENSILE STRENGTH 1,100 lb., ELONGATION 200%) ASTM-D-624 (TEAR RESISTANCE - 150 LB./IN) ASTM-D-471 (WATER ADSORPTION: +8 TO -2% MASS)	30 MIL THICKNESS	LINER TO BE ULTRAVIOLET RESISTANT. A GEOTEXTILE FABRIC SHOULD BE USED TO PROTECT THE LINER FROM PUNCTURE.
UNDERDRAIN PIPING	F 758, TYPE PS 28 OR AASHTO-M-278	4" - 6" RIGID SCHEDULE 40 PVC OR SDR35	3/8" PERF. @ 6" ON CENTER, 4 HOLES PER ROW; MINIMUM OF 3" OF GRAVEL OVER PIPES; NOT NECESSARY UNDERNEATH PIPES
CONCRETE (CAST-IN-PLACE)	MSHA STANDARDS AND SPECS. SECTION 902, MIX NO. 3, F'C = 3500 PSI, NORMAL WEIGHT, AIR-ENTRAINED; REINFORCING TO MEET ASTM-615-60	N/A	ON-SITE TESTING OF POURED-IN-PLACE CONCRETE REQUIRED: 28 DAY STRENGTH AND SLUMP TEST; ALL CONCRETE DESIGN (CAST-IN-PLACE OR PRECAST) NOT USING PREVIOUSLY APPROVED STATE OR LOCAL STANDARDS REQUIRES DESIGN DRAWINGS SEALED AND APPROVED BY A PROFESSIONAL STRUCTURAL ENGINEER LICENSED IN THE STATE OF MARYLAND
CONCRETE (PRE-CAST)	PER PRE-CAST MANUFACTURER	N/A	SEE ABOVE NOTE
NON-REBAR STEEL	ASTM A-36	N/A	STRUCTURAL STEEL TO BE HOT-DIPPED GALVANIZED ASTM-A-123



TYPICAL CLEAN-OUT DETAIL (4" OVERFLOW DISTRIBUTION PIPE)

NOT TO SCALE

SWM DRAINAGE AREA SUMMARY TABLE (Proposed Conditions)

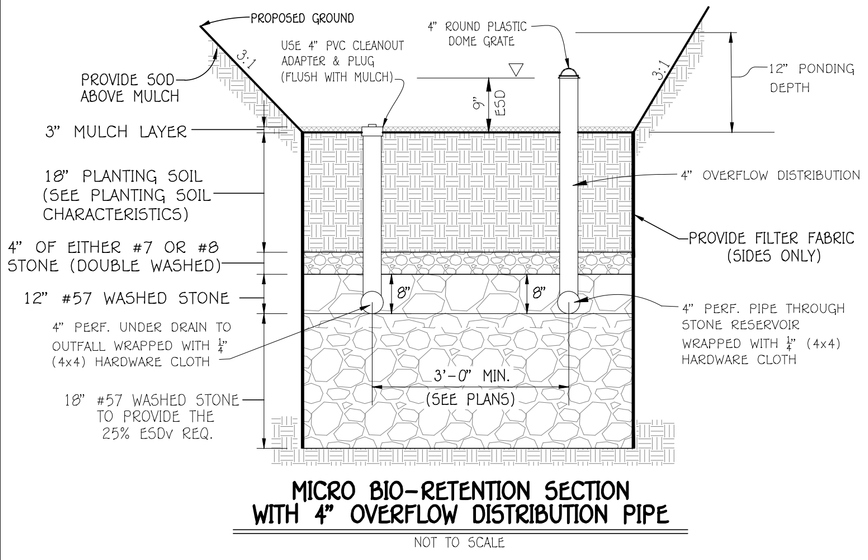
Drainage Area	Area (ac.+/-)	RCN	T/C (hrs.)	100-Year Peak Q	E.C. Peak Q	Remarks
A	1.81	61	0.22	5.82	9.18	Bypass Area
A-1	4.32	70	0.18	23.29 in/13.67 out @340.78	31.63 in/23.87 out @341.39	Pocket Sand Filter
A-2	0.76	77	0.12	4.36 in/4.33 out @356.31	7.32 in/7.28 out @356.49	Bio #1
B	0.92	69	0.11	4.57	7.24	Bypass Area
B-1	0.37	77	0.18	1.90 in/1.31 out @361.64	3.26 in/2.91 out @361.82	Bio #2
D.P.#1 Total				22.00	37.72	Total @ D.P.#1 (EC watershed)
C	1.03	70	0.12	5.13	8.19	Total @ D.P.#2 (Sucker Branch)

SWM DRAINAGE AREA SUMMARY TABLE (Existing Conditions)

Drainage Area	Area (ac.+/-)	RCN	T/C (hrs.)	100-Year Peak Q	E.C. Peak Q	Remarks
A	6.58	61	0.21	21.6	34.04	
B	1.33	60	0.1	5.25	7.7	
D.P.#1 Total				25.64	40.91	Total @ D.P.#1
C	0.8	60	0.1	3.16	4.63	Total @ D.P.#2
				16.50%	8.50%	% Decrease @ D.P.#1

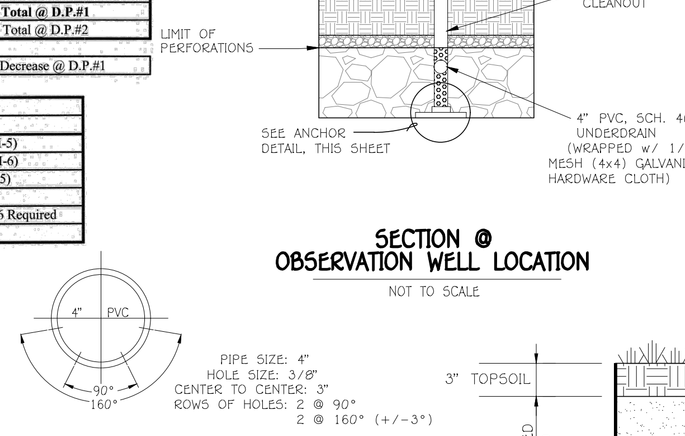
WATER QUALITY SWM SUMMARY TABLE

Area I.D.	ESDvol Required	ESDvol Required	Remarks
Site	5,131 cu. ft.	8,481 cu. ft.	Provided by 23-Drywells (Type M-5)
			Two-Micro Bio-retetnion (Type M-6)
			One-Pocket Sand Filter (Type F-5)
			REv Note: 3,057 cu. ft. Provided vs 1,176 Required
Site Total	5,131 cu. ft.	8,481 cu. ft.	



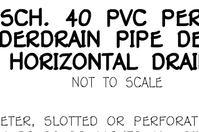
MICRO BIO-RETENTION SECTION WITH 4" OVERFLOW DISTRIBUTION PIPE

NOT TO SCALE



SECTION @ OBSERVATION WELL LOCATION

NOT TO SCALE



PIPE SIZE: 4"
HOLE SIZE: 3/8"
CENTER TO CENTER: 3"
ROWS OF HOLES: 2 @ 90°
2 @ 160° (+/-3°)

4" SCH. 40 PVC PERFORATED UNDERDRAIN PIPE DETAIL FOR HORIZONTAL DRAIN PIPE

NOT TO SCALE

NOTES:
UNDERDRAIN PIPE SHALL BE 4" DIAMETER, SLOTTED OR PERFORATED RIGID PLASTIC PIPE (ASTMF 758, TYPE PS 28 OR AASHTO-M- 278) IN A GRAVEL LAYER. THE PREFERRED MATERIAL IS SLOTTED 4" RIGID PIPE (e.g., PVC OR HDPE).

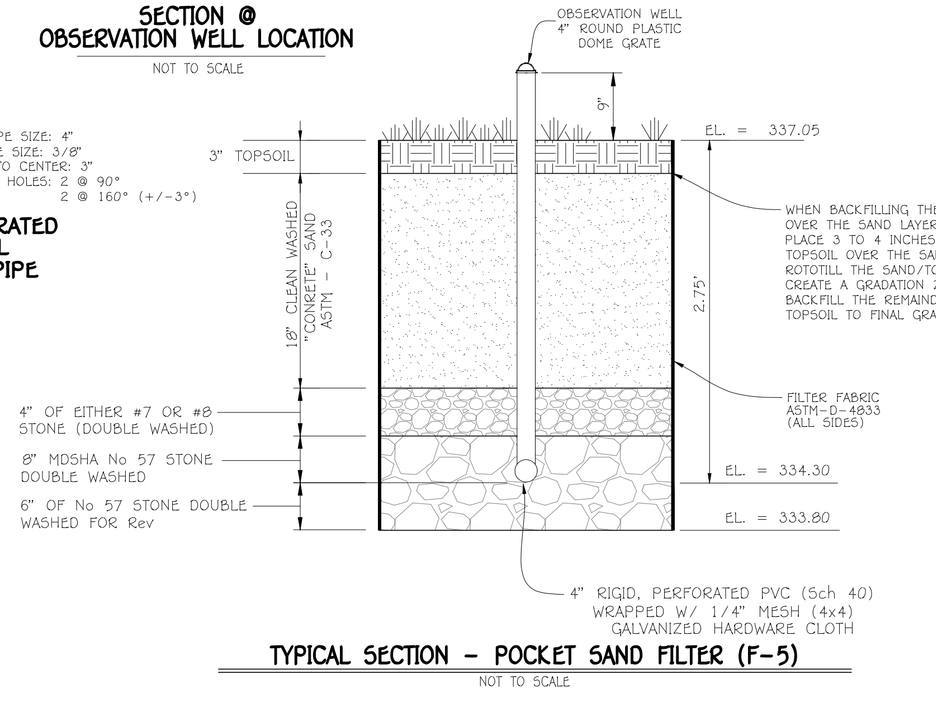
PERFORATIONS SHALL BE 3/8" DIAMETER LOCATED 6" ON CENTER WITH A MINIMUM OF FOUR HOLES PER ROW. PIPE SHALL BE WRAPPED WITH A 1/4" (No. 4 OR 4 x 4) GALVANIZED HARDWARE CLOTH.

GRAVEL LAYER SHALL BE (No. 57 STONE PREFERRED) AT LEAST 3" THICK ABOVE AND BELOW THE UNDERDRAIN.

THE MAIN COLLECTOR PIPE SHALL BE AT A MINIMUM 0.5% SLOPE.

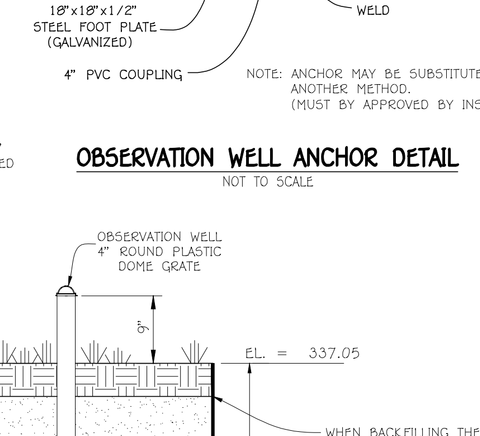
A RIGID, NON PERFORATED OBSESSERVATION WELL MUST BE PROVIDED (ONE PER EVERY 1,000 SQ.FT.) TO PROVIDE A CLEANOUT PORT AND MONITOR PERFORMANCE OF THE FILTER.

A 4" LAYER OF PEA GRAVEL (1/8" TO 3/8" STONE) SHALL BE LOCATED BETWEEN THE FILTER MEDIA AND UNDERDRAIN TO PREVENT MIGRATION OF FINES INTO THE UNDERDRAIN. THIS LAYER MAY BE CONSIDERED PART OF THE FILTER BED WHEN BED THICKNESS EXCEEDS 24".



TYPICAL SECTION - POCKET SAND FILTER (F-5)

NOT TO SCALE



OBSERVATION WELL ANCHOR DETAIL

NOT TO SCALE

OPERATION AND MAINTENANCE SCHEDULE FOR HOMEOWNERS ASSOCIATION OWNED & MAINTAINED POCKET SAND FILTER (F-5)

1. THE STORMWATER WETLAND FACILITY SHALL BE INSPECTED ANNUALLY AND AFTER MAJOR STORMS. INSPECTIONS SHALL BE PERFORMED DURING WET WEATHER TO DETERMINE IF THE FACILITY IS FUNCTIONING PROPERLY.
2. THE TOP AND SIDE SLOPES OF THE EMBANKMENT SHALL BE MOWED A MINIMUM OF ONCE PER YEAR. WHEN VEGETATION REACHES 18" IN HEIGHT OR AS NEEDED.
3. FILTERS THAT HAVE A GRASS COVER SHALL BE MOWED A MINIMUM OF THREE (3) TIMES PER GROWING SEASON TO MAINTAIN A MAXIMUM GRASS HEIGHT OF LESS THAN 12 INCHES.
4. DEBRIS AND LITTER SHALL BE REMOVED DURING REGULAR MOWING OPERATIONS AND AS NEEDED.
5. VISIBLE SIGNS OF EROSION IN THE FACILITY SHALL BE REPAIRED AS SOON AS IT IS NOTICED. REMOVE SILT WHEN IT EXCEEDS FOUR (4) INCHES DEEP IN THE FOREBAY.
7. FILTER MATERIAL MUST BE REPLACED WHEN WATER REMAINS ON THE SURFACE OF THE FILTER BED FOR MORE THAN 24 HOURS FOLLOWING A 1 OR 2 YEAR STORM EVENT OR MORE THAN 48 HOURS AFTER A 10 YEAR STORM EVENT.
8. A LOGBOOK SHALL BE MAINTAINED TO DETERMINE THE RATE AT WHICH THE FACILITY DRAINS.
9. THE MAINTENANCE LOGBOOK SHALL BE AVAILABLE TO HOWARD COUNTY FOR INSPECTION TO INSURE COMPLIANCE WITH OPERATION AND MAINTENANCE CRITERIA.
10. ONCE THE PERFORMANCE CHARACTERISTICS OF THE INFILTRATION SYSTEM HAVE BEEN VERIFIED, THE MONITORING SCHEDULE CAN BE REDUCED TO AN ANNUAL BASIS UNLESS THE PERFORMANCE DATA INDICATES THAT A MORE FREQUENT SCHEDULE IS REQUIRED.

SAND FILTER SPECIFICATIONS

1. MATERIAL SPECIFICATIONS FOR SAND FILTERS THE ALLOWABLE MATERIALS FOR SAND FILTER CONSTRUCTION ARE DETAILED IN TABLE B.3.1.
2. SAND FILTER TESTING SPECIFICATIONS UNDERGROUND SAND FILTERS, FACILITIES WITHIN SENSITIVE GROUNDWATER AQUIFERS, AND FILTERS DESIGNED TO SERVE URBAN HOT SPOTS ARE TO BE TESTED FOR WATER TIGHTNESS PRIOR TO PLACEMENT OF FILTER MEDIA. ENTRANCES AND EXITS SHOULD BE PLUGGED AND THE SYSTEM COMPLETELY FILLED WITH WATER TO DEMONSTRATE WATER TIGHTNESS. WATER TIGHTNESS MEANS NO LEAKAGE FOR A PERIOD OF 8 HOURS. ALL OVERFLOW WEIRS, MULTIPLE ORIFICES AND FLOW DISTRIBUTION SLOTS ARE TO BE FIELD-TESTED TO VERIFY ADEQUATE DISTRIBUTION OF FLOWS.
3. SAND FILTER CONSTRUCTION SPECIFICATIONS PROVIDE SUFFICIENT MAINTENANCE ACCESS (I.E., 12-FOOT-WIDE ROAD WITH LEGALLY RECORDED EASEMENT). VEGETATED ACCESS SLOPES ARE TO BE A MAXIMUM OF 10%; GRAVEL SLOPES TO 15% ; PAVED SLOPES TO 25%. ABSOLUTELY NO RUNOFF IS TO ENTER THE FILTER UNTIL ALL CONTRIBUTING DRAINAGE AREAS HAVE BEEN STABILIZED. SURFACE OF FILTER BED IS TO BE LEVEL. ALL UNDERGROUND SAND FILTERS SHOULD BE CLEARLY DELINEATED WITH SIGNS SO THAT THEY MAY BE LOCATED WHEN MAINTENANCE IS DUE. SURFACE SAND FILTERS MAY BE PLANTED WITH APPROPRIATE GRASSES; SEE MAA APPROVED SPECIES LIST. "POCKET" SANDFILTERS (AND RESIDENTIAL BIO-RETENTION FACILITIES TREATING AREAS LARGER THAN AN ACRE) SHALL BE SIZED WITH A' STONE "WINDOW" THAT COVERS APPROXIMATELY 10% OF THE FILTER AREA. THIS "WINDOW" SHALL BE FILLED PEA GRAVEL (3/4 INCH STONE).

INFILTRATION AND FILTER SYSTEM CONSTRUCTION SPECIFICATIONS

INFILTRATION AND FILTER SYSTEMS EITHER TAKE ADVANTAGE OF EXISTING PERMEABLE SOILS OR CREATE A PERMEABLE MEDIUM SUCH AS SAND FOR WQ1 AND RE V. IN SOME INSTANCES WHERE PERMEABILITY IS GREAT, THESE FACILITIES MAY BE USED FOR QP AS WELL. THE MOST COMMON SYSTEMS INCLUDE INFILTRATION TRENCHES, INFILTRATION BASINS, SAND FILTERS, AND ORGANIC FILTERS.

WHEN PROPERLY PLANTED, VEGETATION WILL THRIVE AND ENHANCE THE FUNCTIONING OF THESE SYSTEMS. FOR EXAMPLE, PRE-TREATMENT BUFFERS WILL TRAP SEDIMENTS THAT OFTEN ARE BOUND WITH PHOSPHOROUS AND METALS. VEGETATION PLANTED IN THE FACILITY WILL AID IN NUTRIENT UPTAKE AND WATER STORAGE. ADDITIONALLY, PLANT ROOTS WILL PROVIDE ARTERIES FOR STORMWATER TO PERMEATE SOIL FOR GROUNDWATER RECHARGE. FINALLY, SUCCESSFUL PLANTINGS PROVIDE AESTHETIC VALUE AND WILDLIFE HABITAT MAKING THESE FACILITIES MORE DESIRABLE TO THE PUBLIC.

DESIGN CONSTRAINTS:

> PLANTING BUFFER STRIPS OF AT LEAST 20 FEET WILL CAUSE SEDIMENTS TO SETTLE OUT BEFORE REACHING THE FACILITY, THEREBY REDUCING THE POSSIBILITY OF CLOGGING.
> DETERMINE AREAS THAT WILL BE SATURATED WITH WATER AND WATER TABLE DEPTH SO THAT APPROPRIATE PLANTS MAY BE SELECTED (HYDROLOGY WILL BE SIMILAR TO BIORETENTION FACILITIES, SEE FIGURE A.5 AND TABLE A.4 FOR PLANTING MATERIAL GUIDANCE).
> PLANTS KNOWN TO SEND DOWN DEEP TAPROOTS SHOULD BE AVOIDED IN SYSTEMS WHERE FILTER FABRIC IS USED AS PART OF FACILITY DESIGN.
> TEST SOIL CONDITIONS TO DETERMINE IF SOIL AMENDMENTS ARE NECESSARY.
> PLANTS SHALL BE LOCATED SO THAT ACCESS IS POSSIBLE FOR STRUCTURE MAINTENANCE.
> STABILIZE HEAVY FLOW AREAS WITH EROSION CONTROL MATS OR SOD.
> TEMPORARILY DIVERT FLOWS FROM SEEDED AREAS UNTIL VEGETATION IS ESTABLISHED.
> SEE TABLE A.5 FOR ADDITIONAL DESIGN CONSIDERATIONS.

BIO-RETENTION

SOIL BED CHARACTERISTICS THE CHARACTERISTICS OF THE SOIL FOR THE BIORETENTION FACILITY ARE PERHAPS AS IMPORTANT AS THE FACILITY LOCATION, SIZE, AND TREATMENT VOLUME. THE SOIL MUST BE PERMEABLE ENOUGH TO ALLOW RUNOFF TO FILTER THROUGH THE MEDIA WHILE HAVING CHARACTERISTICS SUITABLE TO PROMOTE AND SUSTAIN A ROBUST VEGETATIVE COVER CROP. IN ADDITION, MUCH OF THE NUTRIENT POLLUTANT UPTAKE (NITROGEN AND PHOSPHORUS) IS ACCOMPLISHED THROUGH ABSORPTION AND MICROBIAL ACTIVITY WITHIN THE SOIL PROFILE. THEREFORE, SOILS MUST BALANCE THEIR CHEMICAL AND PHYSICAL PROPERTIES TO SUPPORT BIOTIC COMMUNITIES ABOVE AND BELOW GROUND.

THE PLANTING SOIL SHOULD BE A SANDY LOAM, LOAMY SAND, LOAM (USDA), OR A LOAM/SAND MIX (SHOULD CONTAIN A MINIMUM 35 TO 60% SAND, BY VOLUME). THE CLAY CONTENT FOR THESE SOILS SHOULD BE LESS THAN 25% BY VOLUME (ENVIRONMENTAL QUALITY RESOURCES (EQR), 1996; ENGINEERING TECHNOLOGY INC. AND BIOHABITATS, INC. (ETAB), 1993). SOILS SHOULD FALL WITHIN THE SM, ML, SC CLASSIFICATIONS OR THE UNIFIED SOIL CLASSIFICATION SYSTEM (USCS). A PERMEABILITY OF AT LEAST 1.0 FEET PER DAY (0.5"/HR) IS REQUIRED (A CONSERVATIVE VALUE OF 0.5 FEET PER DAY IS USED FOR DESIGN). THE SOIL SHOULD BE FREE OF STONES, STUMPS, ROOTS, OR OTHER WOODY MATERIAL OVER 1" IN DIAMETER. BRUSH OR SEEDS FROM NOXIOUS WEEDS (E.G., JOHNSON GRASS, MUGWORT, NUTSEDGE, AND CANADA THISTLE OR OTHER NOXIOUS WEEDS AS SPECIFIED UNDER COMAR 15.08.01.05.) SHOULD NOT BE PRESENT IN THE SOILS. PLACEMENT OF THE PLANTING SOIL SHOULD BE IN 12 TO 18 LIFTS THAT ARE LOOSELY COMPACTED (TAMPED LIGHTLY WITH A BACKHOE BUCKET OR TRAVERSED BY DOZER TRACKS). THE SPECIFIC CHARACTERISTICS ARE PRESENTED IN TABLE A.3.

Table A.3 Planting Soil Characteristics

Parameter	Value
pH range	5.2 to 7.00
Organic matter	1.5 to 4.0% (by weight)
Magnesium	35 lbs. per acre, minimum
Phosphorus (phosphate - P205)	75 lbs. per acre, minimum
Potassium (potash - (K20)	85 lbs. per acre, minimum
Soluble salts	500 ppm
Clay	0 to 5%
Silt	30 to 55%
Sand	35 to 60%

MULCH LAYER

THE MULCH LAYER PLAYS AN IMPORTANT ROLE IN THE PERFORMANCE OF THE BIORETENTION SYSTEM. THE MULCH LAYER HELPS MAINTAIN SOIL MOISTURE AND AVOIDS SURFACE SEALING, WHICH REDUCES PERMEABILITY. MULCH HELPS PREVENT EROSION, AND PROVIDES A MICROENVIRONMENT SUITABLE FOR SOIL BIOTA AT THE MULCH/SOIL INTERFACE. IT ALSO SERVES AS A PRETREATMENT LAYER, TRAPPING THE FINER SEDIMENTS, WHICH REMAIN SUSPENDED AFTER THE PRIMARY PRETREATMENT.

THE MULCH LAYER SHOULD BE STANDARD LANDSCAPE STYLE, SINGLE OR DOUBLE SHREDDED HARDWOOD MULCH OR CHIPS. THE MULCH LAYER SHOULD BE WELL AGED (STOCKPILED OR STORED FOR AT LEAST 12 MONTHS), UNIFORM IN COLOR, AND FREE OF OTHER MATERIALS, SUCH AS WEED SEEDS, SOIL, ROOTS, ETC. THE MULCH SHOULD BE APPLIED TO A MAXIMUM DEPTH OF THREE INCHES. GRASS CLIPPINGS SHOULD NOT BE USED AS A MULCH MATERIAL.

PLANTING GUIDANCE

PLANT MATERIAL SELECTION SHOULD BE BASED ON THE GOAL OF SIMULATING A TERRESTRIAL FORESTED COMMUNITY OF NATIVE SPECIES. BIORETENTION SIMULATES AN UPLAND-SPECIES ECOSYSTEM. THE COMMUNITY SHOULD BE DOMINATED BY TREES, BUT HAVE A DISTINCT COMMUNITY OF UNDERSTORY TREES, SHRUBS AND HERBACEOUS MATERIALS, BY CREATING A DIVERSE, DENSE PLANT COVER. A BIORETENTION FACILITY WILL BE ABLE TO TREAT STORMWATER RUNOFF AND WITHSTAND URBAN STRESSES FROM INSECTS, DISEASE, DROUGHT, TEMPERATURE, WIND, AND EXPOSURE.

THE PROPER SELECTION AND INSTALLATION OF PLANT MATERIALS IS KEY TO A SUCCESSFUL SYSTEM. THERE ARE ESSENTIALLY THREE ZONES WITHIN A BIORETENTION FACILITY (FIGURE A.5). THE LOWEST ELEVATION SUPPORTS PLANT SPECIES ADAPTED TO STANDING AND FLUCTUATING WATER LEVELS. THE MIDDLE ELEVATION SUPPORTS PLANTS THAT LIKE DRIER SOIL CONDITIONS, BUT CAN STILL TOLERATE OCCASIONAL INUNDATION BY WATER. THE OUTER EDGE IS THE HIGHEST ELEVATION AND GENERALLY SUPPORTS PLANTS ADAPTED TO DRYER CONDITIONS. FOR APPROPRIATE PLANT MATERIALS FOR BIORETENTION FACILITIES, REFER TO MAA APPROVED SPECIES LIST. THE LAYOUT OF PLANT MATERIAL SHOULD BE FLEXIBLE, BUT SHOULD FOLLOW THE GENERAL PRINCIPALS DESCRIBED IN TABLE A.5. THE OBJECTIVE IS TO HAVE A SYSTEM, WHICH RESEMBLES A RANDOM, AND NATURAL PLANT LAYOUT, WHILE MAINTAINING OPTIMAL CONDITIONS FOR PLANT ESTABLISHMENT AND GROWTH. FOR A MORE EXTENSIVE BIORETENTION PLAN, CONSULT ETAB, 1993 OR CLAYTOR AND SCHUELER, 1997.

OPERATION AND MAINTENANCE SCHEDULE FOR BIO-RETENTION AREAS (M-6)

1. THE OWNER SHALL MAINTAIN THE PLANT MATERIAL, MULCH LAYER AND SOIL LAYER ANNUALLY. MAINTENANCE OF MULCH AND SOIL IS LIMITED TO CORRECTING AREAS OF EROSION OR WASH OUT. ANY MULCH REPLACEMENT SHALL BE DONE IN THE SPRING. PLANT MATERIAL SHALL BE CHECKED FOR DISEASE AND INSECT INFESTATION AND MAINTENANCE WILL ADDRESS DEAD MATERIAL AND PRUNING. ACCEPTABLE REPLACEMENT PLANT MATERIAL IS LIMITED TO THE FOLLOWING: 2000 MARYLAND STORMWATER DESIGN MANUAL VOLUME II, TABLE A.4.1 AND 2.
2. THE OWNER SHALL PERFORM A PLANT IN THE SPRING AND IN THE FALL EACH YEAR. DURING THE INSPECTION, THE OWNER SHALL REMOVE DEAD AND DISEASED VEGETATION CONSIDERED BEYOND TREATMENT, REPLACE DEAD PLANT MATERIAL WITH ACCEPTABLE REPLACEMENT PLANT MATERIAL, TREAT DISEASED TREES AND SHRUBS AND REPLACE ALL DEFICIENT STAKES AND WIRES.
3. THE OWNER SHALL INSPECT THE MULCH EACH SPRING. THE MULCH SHALL BE REPLACED EVERY TWO TO THREE YEARS. THE PREVIOUS MULCH LAYER SHALL BE REMOVED BEFORE THE NEW LAYER IS APPLIED.
4. THE OWNER SHALL CORRECT SOIL EROSION ON AN AS NEEDED BASIS, WITH A MINIMUM OF ONCE PER MONTH AND AFTER EACH HEAVY STORM.
5. THE OWNER SHALL MAINTAIN ALL OBSERVATION WELLS, CLEAN-OUTS AND PERFORATED UNDERDRAINS.
6. FILTER MATERIAL MUST BE REPLACED WHEN WATER REMAINS ON THE SURFACE OF THE FILTER BED FOR MORE THAN 24 HOURS FOLLOWING A 1 OR 2 YEAR STORM EVENT OR MORE THAN 48 HOURS FOLLOWING A 10 YEAR STORM EVENT.

B.4.C SPECIFICATIONS FOR MICRO-BIORETENTION. RAIN GARDENS, LANDSCAPE INFILTRATION & INFILTRATION BERMS

1. MATERIAL SPECIFICATIONS

THE ALLOWABLE MATERIALS TO BE USED IN THESE PRACTICES ARE DETAILED IN TABLE B.4.1.

2. FILTERING MEDIA OR PLANTING SOIL

THE SOIL SHALL BE A UNIFORM MIX, FREE OF STONES, STUMPS, ROOTS OR OTHER SIMILAR OBJECTS LARGER THAN TWO INCHES. NO OTHER MATERIALS OR SUBSTANCES SHALL BE MIXED OR DUMPED WITHIN THE MICRO-BIORETENTION PRACTICE THAT MAY BE HARMFUL TO PLANT GROWTH, OR PROVE A HINDRANCE TO THE PLANTING OR MAINTENANCE OPERATIONS. THE PLANTING SOIL SHALL BE FREE OF BERMUDA GRASS, QUACK GRASS, JOHNSON GRASS, OR OTHER NOXIOUS WEEDS AS SPECIFIED UNDER COMAR 15.08.01.05.

THE PLANTING SOIL SHALL BE TESTED AND SHALL MEET THE FOLLOWING CRITERIA:

SOIL COMPONENT - LOAMY SAND OR SANDY LOAM (USDA SOIL TEXTURAL CLASSIFICATION)

ORGANIC CONTENT - MINIMUM 10% BY DRY WEIGHT (ASTM D 2974). IN GENERAL, THIS CAN BE MET WITH A MIXTURE OF LOAMY SAND (60%-65%) AND COMPOST (35% TO 40%) OR SANDY LOAM (30%), COARSE SAND (30%), AND COMPOST (40%).

CLAY CONTENT - MEDIA SHALL HAVE A CLAY CONTENT OF LESS THAN 5%.

PH RANGE - SHOULD BE BETWEEN 5.5 - 7.0. AMENDMENTS (E.G., LIME, IRON SULFATE PLUS SULFUR) MAY BE MIXED INTO THE SOIL TO INCREASE OR DECREASE PH.

THERE SHALL BE AT LEAST ONE SOIL TEST PER PROJECT. EACH TEST SHALL CONSIST OF BOTH THE STANDARD SOIL TEST FOR PH, AND ADDITIONAL TESTS OF ORGANIC MATTER, AND SOLUBLE SALTS. A TEXTURAL ANALYSIS IS REQUIRED FROM THE SITE STOCKPILED TOPSOIL. IF TOPSOIL IS IMPORTED, THEN A TEXTURE ANALYSIS SHALL BE PERFORMED FOR EACH LOCATION WHERE THE TOPSOIL WAS EXCAVATED.

3. COMPACTION

IT IS VERY IMPORTANT TO MINIMIZE COMPACTION OF BOTH THE BASE OF BIORETENTION PRACTICES AND THE REQUIRED BACKFILL. WHEN POSSIBLE, USE EXCAVATION HOES TO REMOVE ORIGINAL SOIL IF PRACTICES ARE EXCAVATED USING A LOADER, THE CONTRACTOR SHOULD USE WIDE TRACK OR MARSH TRACK EQUIPMENT, OR LIGHT EQUIPMENT WITH TURF TYPE TIRES. USE OF EQUIPMENT WITH NARROW TRACKS OR NARROW TIRES, RUBBER TIRES WITH LARGE LUGS, OR HIGH-PRESSURE TIRES WILL CAUSE EXCESSIVE COMPACTION RESULTING IN REDUCED INFILTRATION RATES AND IS NOT ACCEPTABLE. COMPACTION WILL SIGNIFICANTLY CONTRIBUTE TO DESIGN FAILURE.

COMPACTION CAN BE ALLEVIATED AT THE BASE OF THE BIORETENTION FACILITY BY USING A PRIMARY TILLING OPERATION SUCH AS A CHISEL PLOW, RIPPER, OR SUBSOILER. THESE TILLING OPERATIONS ARE TO REFRACTURE THE SOIL PROFILE THROUGH THE 12 INCH COMPACTION ZONE. SUBSTITUTE METHODS MUST BE APPROVED BY THE ENGINEER. ROTOTILLERS TYPICALLY DO NOT TILL DEEP ENOUGH TO REDUCE THE EFFECTS OF COMPACTION FROM HEAVY EQUIPMENT.

ROTOTILL 2 TO 3 INCHES OF SAND INTO THE BASE OF THE BIORETENTION FACILITY BEFORE BACKFILLING. THE OPTIONAL SAND LAYER. PUMP ANY PONDED WATER BEFORE PREPARING (ROTOTILLING) BASE. TABLE A.3.

WHEN BACKFILLING THE TOPSOIL OVER THE SAND LAYER, FIRST PLACE 3 TO 4 INCHES OF TOPSOIL OVER THE SAND, THEN ROTOTILL THE SAND/TOPSOIL TO CREATE A GRADATION ZONE. BACKFILL THE REMAINDER OF THE TOPSOIL TO FINAL GRADE.

WHEN BACKFILLING THE BIORETENTION FACILITY, PLACE SOIL IN LIFTS 12" TO 18". DO NOT USE HEAVY EQUIPMENT WITHIN THE BIORETENTION BASIN. HEAVY EQUIPMENT CAN BE USED AROUND THE PERIMETER OF THE BASIN TO SUPPLY SOILS AND SAND. GRADE BIORETENTION MATERIALS WITH LIGHT EQUIPMENT SUCH AS A COMPACT LOADER OR A DOZER/LOADER WITH MARSH TRACKS.

4. PLANT MATERIAL

RECOMMENDED PLANT MATERIAL FOR MICRO-BIORETENTION PRACTICES CAN BE FOUND IN APPENDIX A, SECTION A.2.3.

5. PLANT INSTALLATION

COMPOST IS A BETTER ORGANIC MATERIAL SOURCE, IS LESS LIKELY TO FLOAT, AND SHOULD BE PLACED IN THE INVERT AND OTHER LOW AREAS. MULCH SHOULD BE PLACED IN SURROUNDING TO A UNIFORM THICKNESS OF 2" TO 3". SHREDDED OR CHIPPED HARDWOOD MULCH IS THE ONLY ACCEPTED MULCH. PINE MULCH AND WOOD CHIPS WILL FLOAT AND MOVE TO THE PERIMETER OF THE BIORETENTION AREA DURING A STORM EVENT AND ARE NOT ACCEPTABLE. SHREDDED MULCH MUST BE WELL AGED (6 TO 12 MONTHS) FOR ACCEPTANCE.

ROOTSTOCK OF THE PLANT MATERIAL SHALL BE KEPT MOIST DURING TRANSPORT AND ON-SITE STORAGE. THE PLANT ROOT BALL SHOULD BE PLANTED SO 1/8 TH OF THE BALL IS ABOVE FINAL GRADE SURFACE. THE DIAMETER OF THE PLANTING PIT SHALL BE AT LEAST SIX INCHES LARGER THAN THE DIAMETER OF THE PLANTING BALL. SET AND MAINTAIN THE PLANT STRAIGHT DURING THE ENTIRE PLANTING PROCESS. THOROUGHLY WATER GROUND BED COVER AFTER INSTALLATION.

TREES SHALL BE BRACED USING 2" BY 2" STAKES ONLY AS NECESSARY AND FOR THE FIRST GROWING SEASON ONLY. STAKES ARE TO BE EQUALLY SPACED ON THE OUTSIDE OF THE TREE BALL.

GRASSES AND LEGUME SEED SHOULD BE DRILLED INTO THE SOIL TO A DEPTH OF AT LEAST ONE INCH. GRASS AND LEGUME PLUGS SHALL BE PLANTED FOLLOWING THE NON-GRASS GROUND COVER PLANTING SPECIFICATIONS.

THE TOPSOIL SPECIFICATIONS PROVIDE ENOUGH ORGANIC MATERIAL TO ADEQUATELY SUPPLY NUTRIENTS FROM NATURAL CYCLING. THE PRIMARY FUNCTION OF THE BIORETENTION STRUCTURE IS TO IMPROVE WATER QUALITY. ADDING FERTILIZERS DEFEATS, OR AT A MINIMUM, IMPEDES THIS GOAL. ONLY ADD FERTILIZER IF WOOD CHIPS OR MULCH ARE USED TO AMEND THE SOIL. ROTOTILL UREA FERTILIZER AT A RATE OF 2 POUNDS PER 1000 SQUARE FEET.

6. UNDERDRAINS

UNDERDRAINS SHOULD MEET THE FOLLOWING CRITERIA:

PIPE- SHOULD BE 4 "

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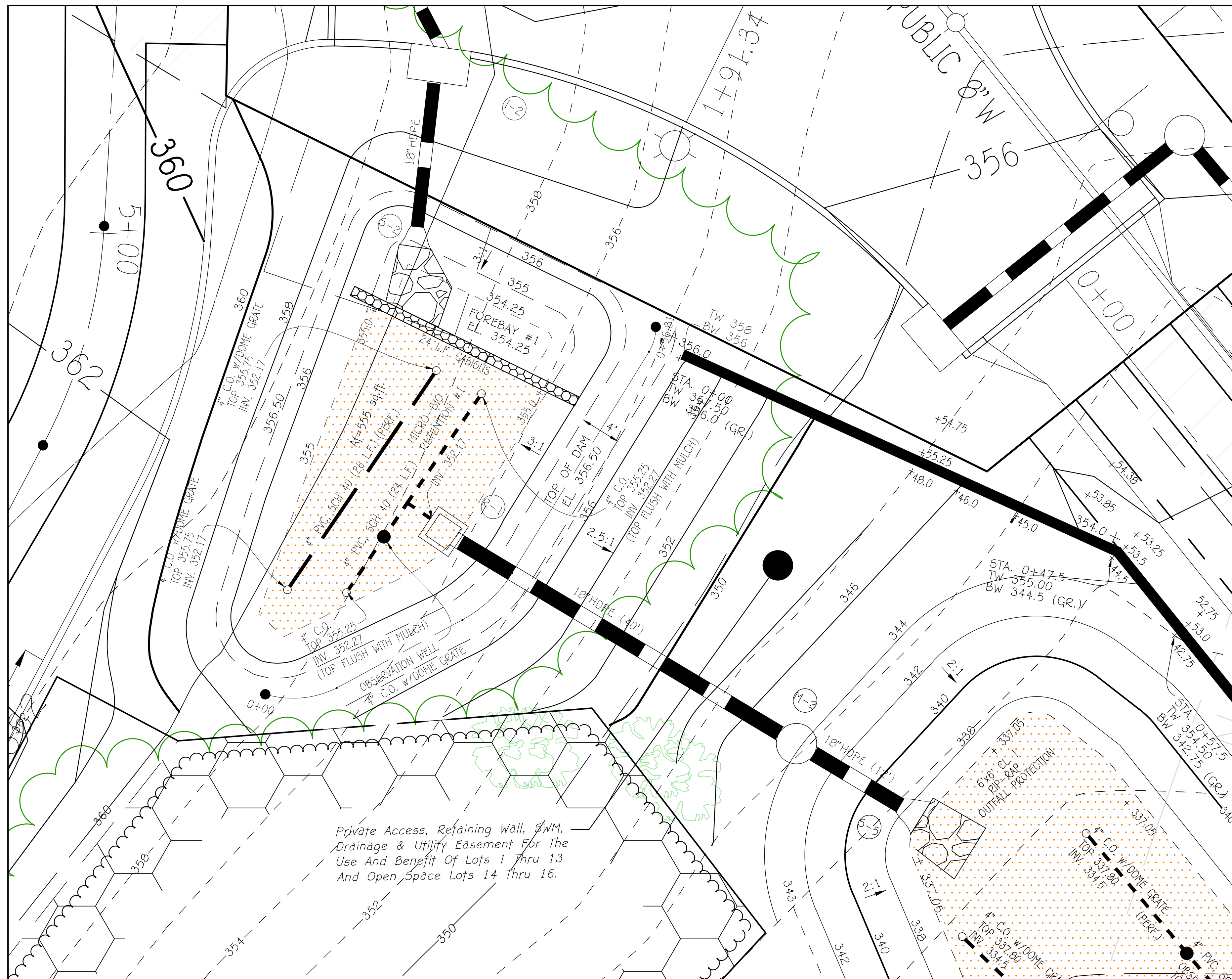
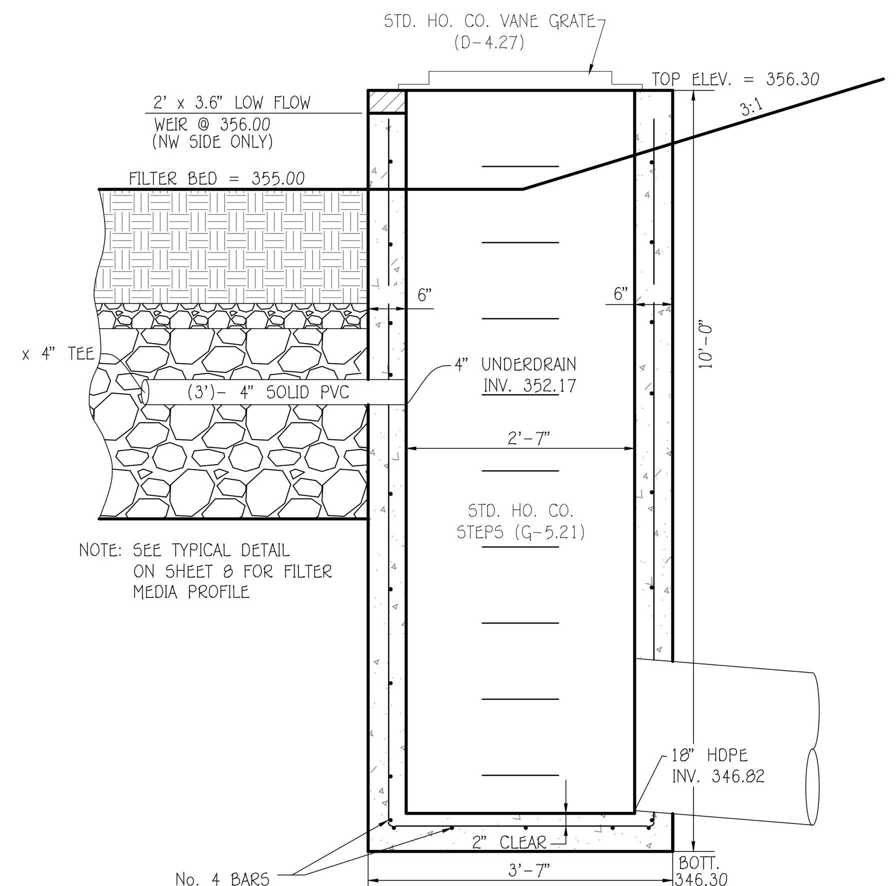
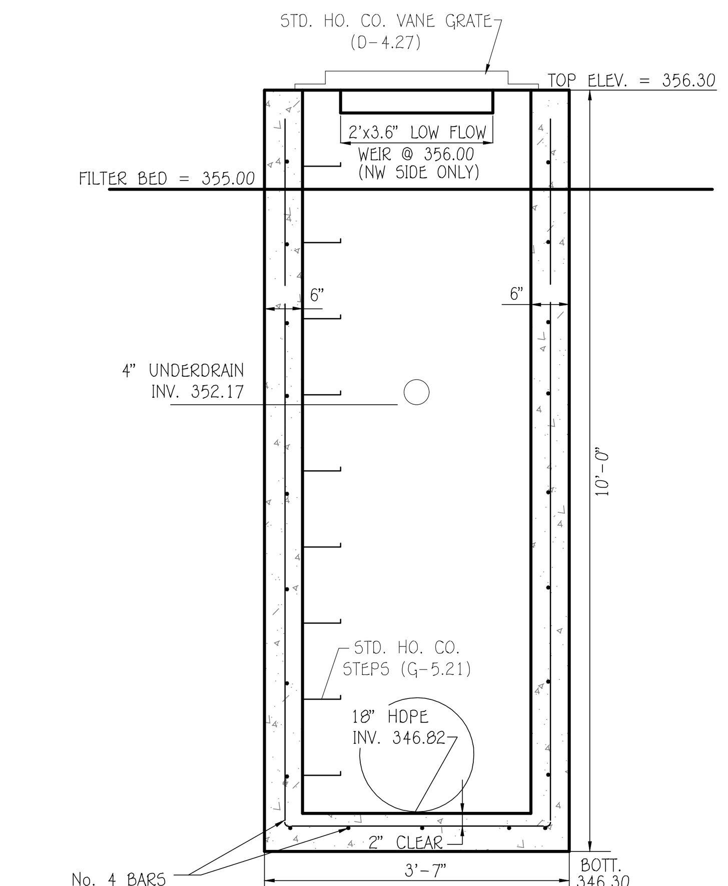


PROPOSED MICRO
BIO-RETENTION #1 (M-6) PLAN VIEW

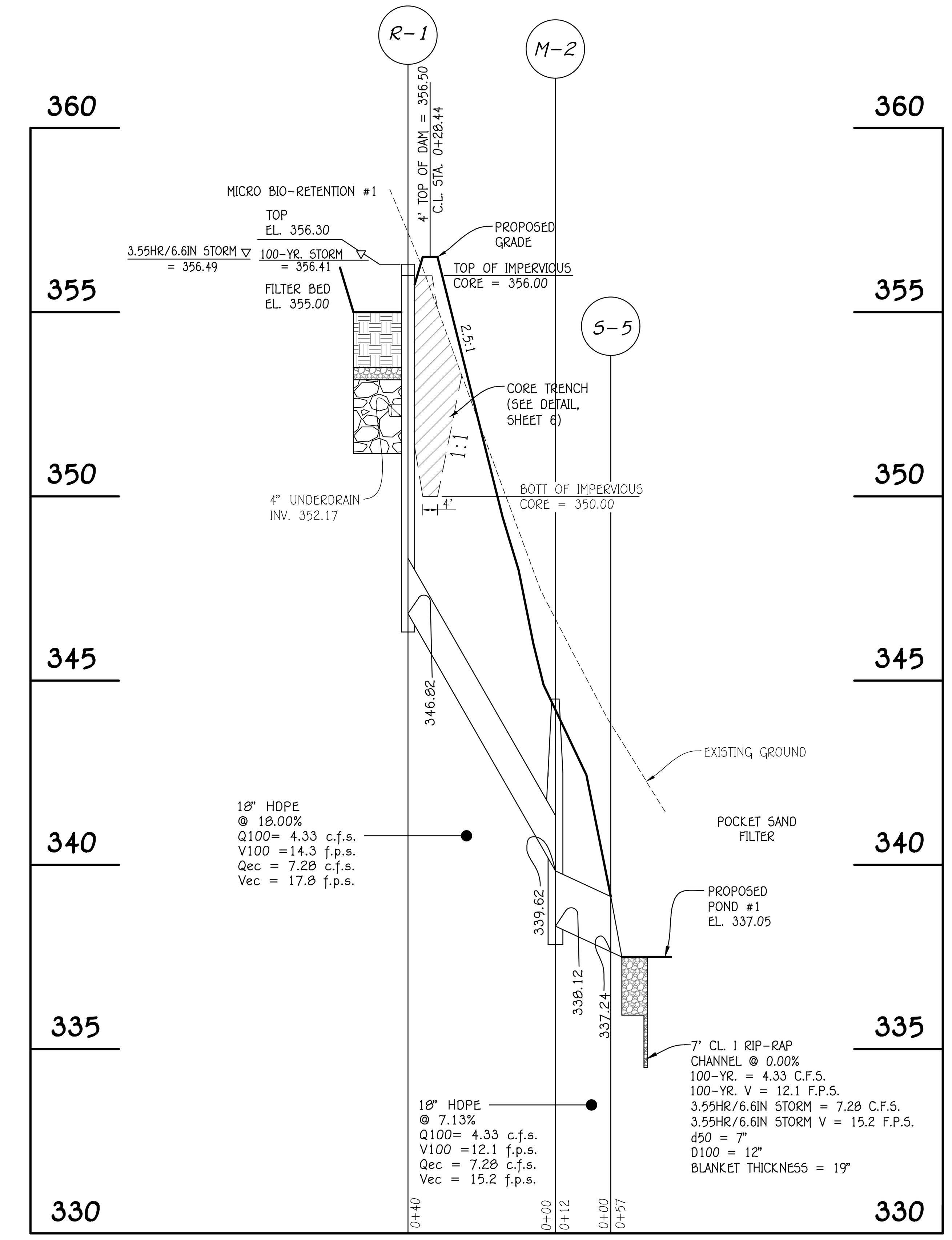
Scale: 1" = 10'



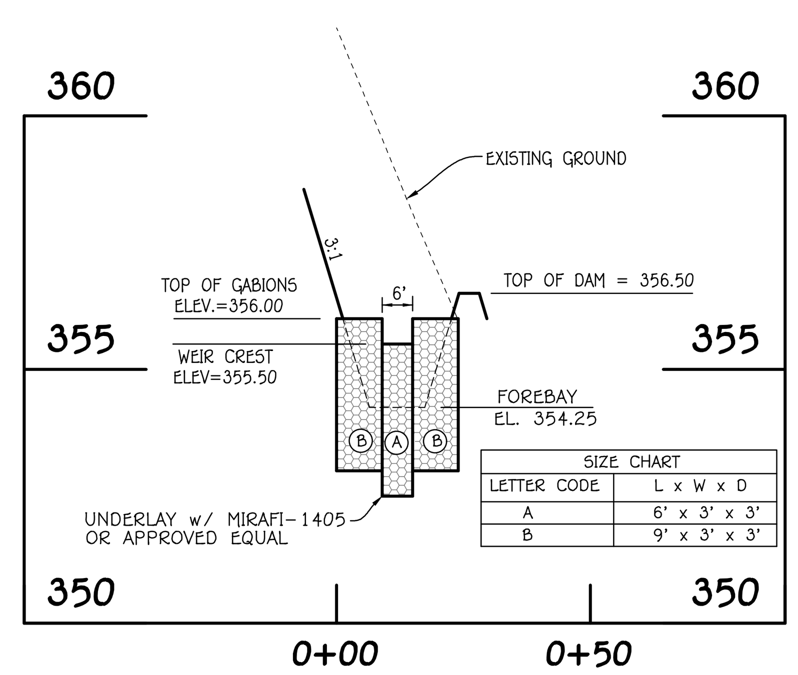
PROFILE VIEW A
(MODIFIED) 'S' INLET
CONCRETE RISER DETAIL
R-1
SCALE : 1" = 2'



PROFILE VIEW B
(MODIFIED) 'S' INLET
CONCRETE RISER DETAIL
R-1
SCALE : 1" = 2'

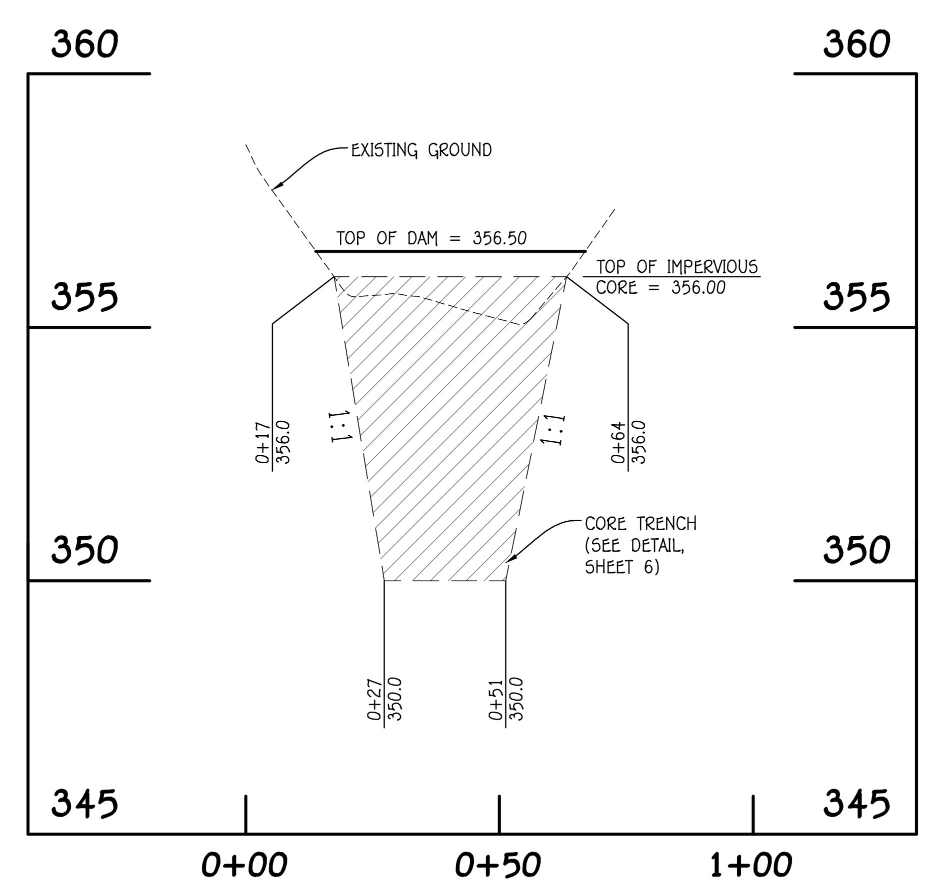


PROFILE THRU PRINCIPLE SPILLWAY (MICRO BIO #1)
SCALE HORZ. 1" = 30'
VERT. 1" = 3'



SIZE CHART	
LETTER CODE	L x W x D
A	6' x 3' x 3'
B	9' x 3' x 3'

PROFILE GABION FOREBAY #1
SCALE HORZ. 1" = 30'
VERT. 1" = 3'



PROFILE CL EMBANKMENT (MICRO BIO #1)
SCALE HORZ. 1" = 30'
VERT. 1" = 3'

IN ADDITION TO THE ESD VOLUME MANAGEMENT, THIS POND PROVIDES 100-YEAR, AND QUANTITY MANAGEMENT FOR 3.55 HR/6.6 IN STORM EVENT.

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

Approved: Howard County Department Of Public Works
DocuSigned by: 2465821AE4DA4C2...
Chief, Bureau Of Highways — Date 9/11/2023

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
DocuSigned by: CHAD Edmondson
Chief, Development Engineering Division — Date 9/11/2023
DocuSigned by:
Chief, Division of Land Development — Date 9/13/2023

DATE	DESCRIPTION
	REVISIONS

"PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY 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. 20748, EXPIRATION DATE: 2-22-25."

STATE OF MARYLAND — ALDO MICHAEL VITUCCI — No. 20748 — PROFESSIONAL ENGINEER

Aldo M. Vitucci, P.E.
ALDO M. VITUCCI, P.E.

OWNERS
LACEY FAMILY REVOCABLE TRUST
1235 WILD ROSE COURT
MARRIOTTSVILLE, MD 21104
ATTN: MR. VINCENT LACEY

DEVELOPER
LAND HOLDINGS LLC
C\O B. JAMES GREENFIELD
6420 AUTUMN SKY WAY
COLUMBIA, MD 21044
443-324-4732

PROJECT			SECTION/AREA		PARCEL
LACEY PROPERTY			N/A		13
PLAT NOS.	BLOCK NO.	ZONE	TAX MAP	ELEC. DIST.	CENSUS TR.
-	1	R-ED	25	SECOND	602900

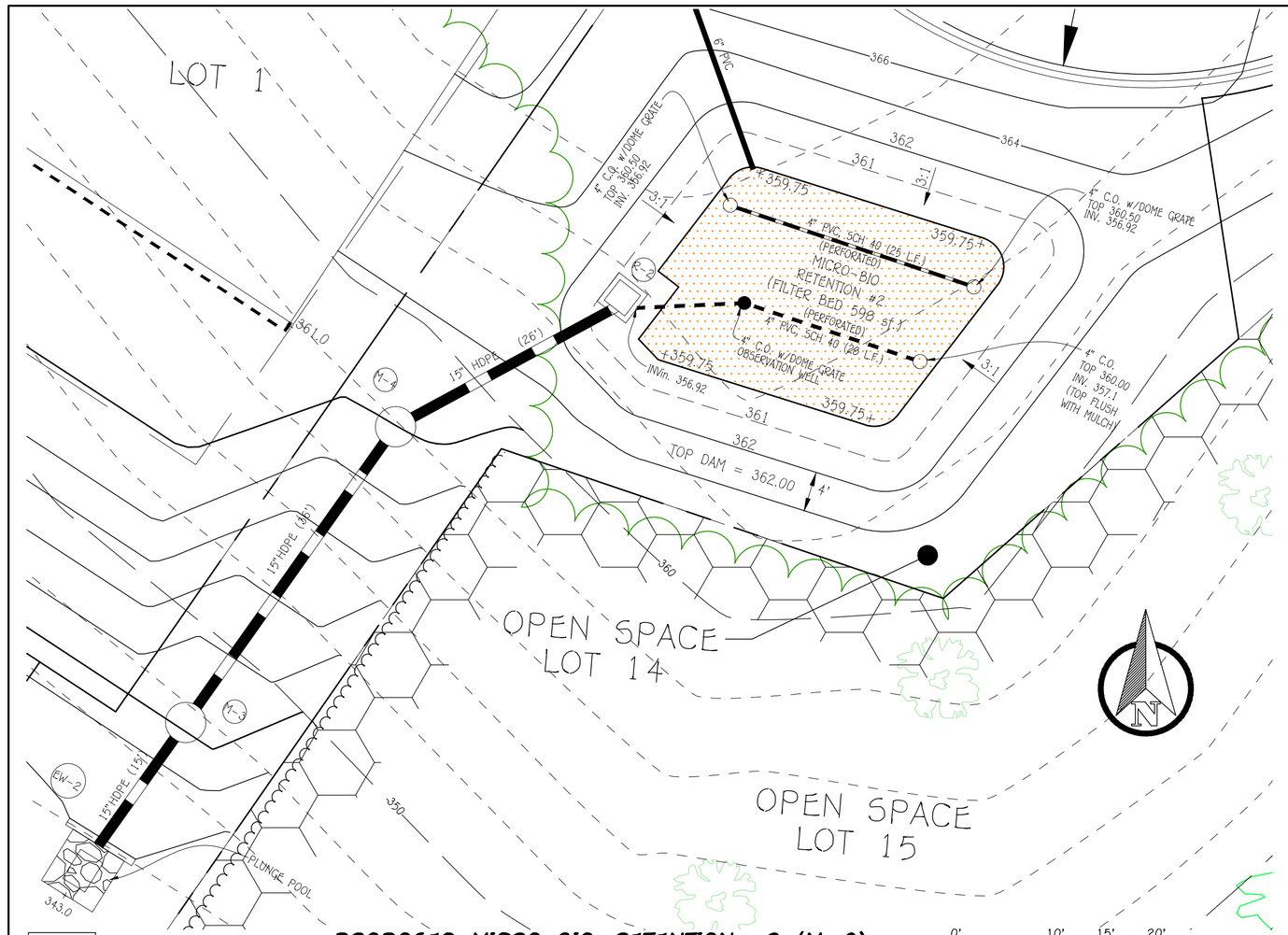
STORMWATER MANAGEMENT PLAN VIEW, PROFILES & DETAILS - MICRO BIO-RETENTION #1

LACEY PROPERTY
LOTS 1 THRU 13 AND
OPEN SPACE LOTS 14 THRU 17

ZONED: R-ED
PARCEL No.: 13
TAX MAP No.: 25 GRID No.: 1
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: JULY 10, 2023
SHEET 9 OF 24

F-21-015

DocuSign Envelope ID: 79E9DBFB-CDDB-4FF4-A258-614B911C4A9B

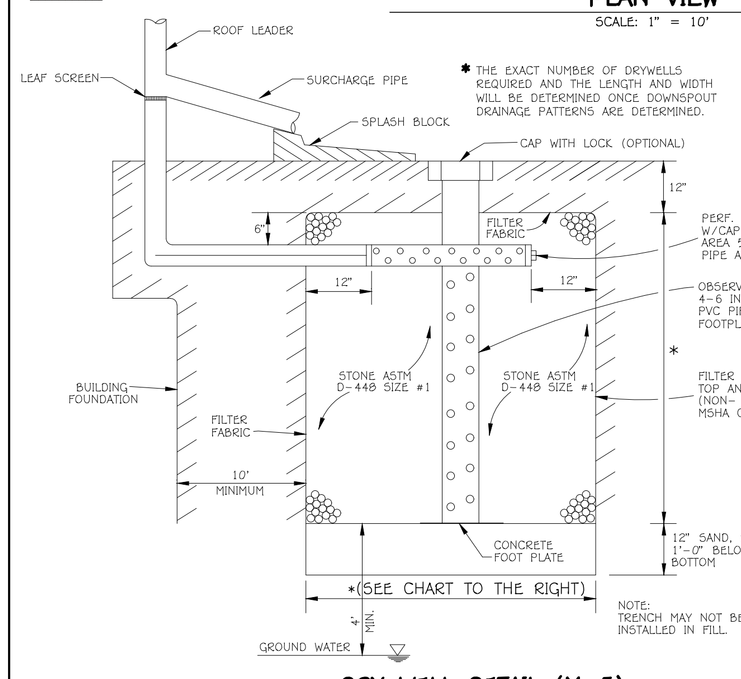


PROPOSED MICRO BIO-RETENTION #2 (M-6) PLAN VIEW

SCALE: 1" = 10'

Scale: 1" = 10'

IN ADDITION TO THE ESD VOLUME MANAGEMENT, THIS POND PROVIDES 100-YEAR, AND QUANTITY MANAGEMENT FOR 3.55 HR/6.6 IN STORM EVENT.



* THE EXACT NUMBER OF DRYWELLS REQUIRED AND THE LENGTH AND WIDTH WILL BE DETERMINED ONCE DOWNSPOUT DRAINAGE PATTERNS ARE DETERMINED.

NOTE: ALL DRY WELLS WILL BE INSTALLED AT SDP STAGE WITH THE CONSTRUCTION OF HOUSES.

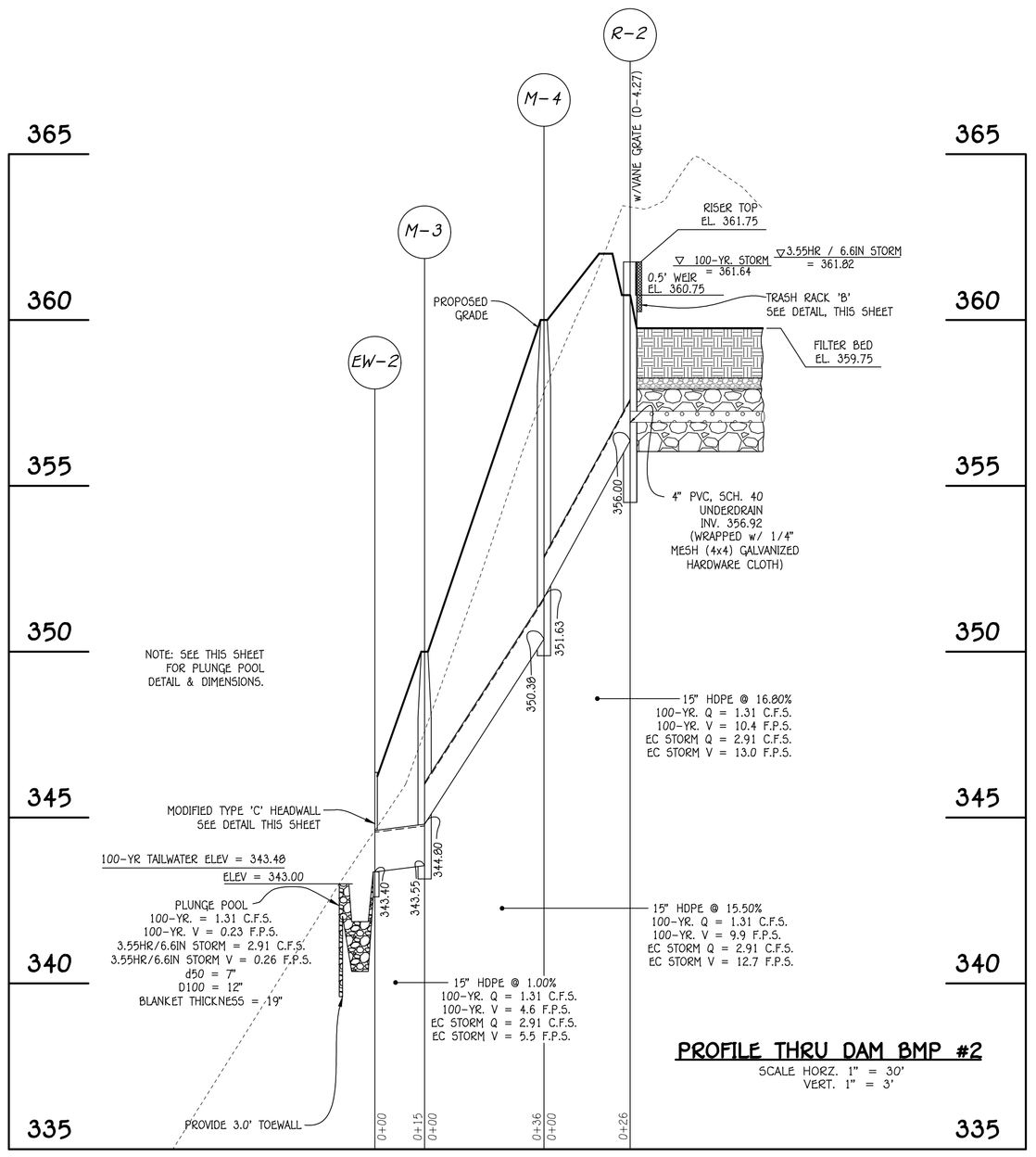
DRY WELL DETAIL (M-5)

NOT TO SCALE

DRY WELL CHART						
LOT NO.	ROOF AREA SQ.FT.	ESD REQUIRED (CUBIC FEET)	ESD PROVIDED (CUBIC FEET)	NO. OF DRYWELLS	*D x L x W
LOT 1A	900	114 CU.FT.	130 CU.FT.	1	4' x 9' x 9'
LOT 2A	900	114 CU.FT.	130 CU.FT.	1	4' x 9' x 9'
LOT 3A	900	114 CU.FT.	130 CU.FT.	1	4' x 9' x 9'
LOT 4A	900	114 CU.FT.	220 CU.FT.	1	5' x 11' x 10'
LOT 4B	900	114 CU.FT.	200 CU.FT.	1	5' x 9' x 9'
LOT 5A	900	114 CU.FT.	200 CU.FT.	1	5' x 10' x 10'
LOT 5B	900	114 CU.FT.	200 CU.FT.	1	5' x 10' x 10'
LOT 6A	900	114 CU.FT.	200 CU.FT.	1	5' x 11' x 10'
LOT 6B	900	114 CU.FT.	200 CU.FT.	1	5' x 10' x 10'
LOT 7A	900	114 CU.FT.	220 CU.FT.	1	5' x 11' x 10'
LOT 7B	900	114 CU.FT.	220 CU.FT.	1	5' x 11' x 10'
LOT 8A	964	123 CU.FT.	220 CU.FT.	1	5' x 11' x 10'
LOT 8B	964	123 CU.FT.	220 CU.FT.	1	5' x 11' x 10'
LOT 9A	1125	143 CU.FT.	220 CU.FT.	1	5' x 11' x 10'
LOT 9B	1125	143 CU.FT.	220 CU.FT.	1	5' x 11' x 10'
LOT 10A	1125	143 CU.FT.	220 CU.FT.	1	5' x 11' x 10'
LOT 10B	1125	143 CU.FT.	220 CU.FT.	1	5' x 11' x 10'
LOT 11A	1125	143 CU.FT.	220 CU.FT.	1	5' x 11' x 10'
LOT 11B	1125	143 CU.FT.	220 CU.FT.	1	5' x 11' x 10'
LOT 12A	1125	143 CU.FT.	220 CU.FT.	1	5' x 11' x 10'
LOT 12B	1125	143 CU.FT.	220 CU.FT.	1	5' x 11' x 10'
LOT 13A	790	143 CU.FT.	220 CU.FT.	1	5' x 11' x 10'
LOT 13B	790	143 CU.FT.	220 CU.FT.	1	5' x 11' x 10'

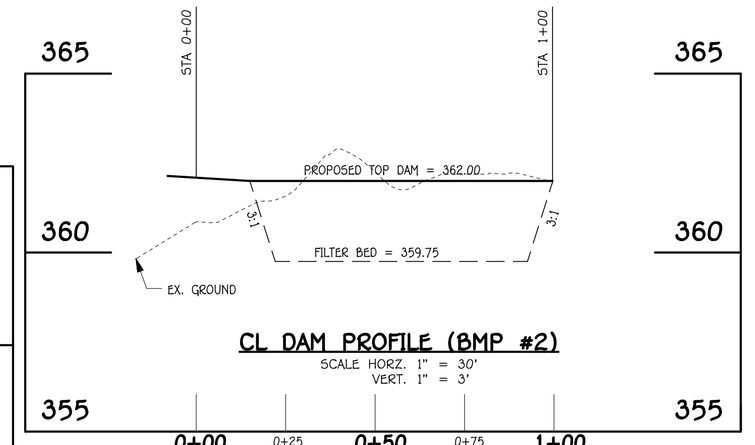
OPERATION AND MAINTENANCE SCHEDULE FOR DRYWELLS (M-5)

1. THE OWNER SHALL INSPECT THE MONITORING WELLS AND STRUCTURES ON A QUARTERLY BASIS AND AFTER EVERY HEAVY STORM EVENT.
2. THE OWNER SHALL RECORD THE WATER LEVELS AND SEDIMENT BUILD UP IN THE MONITORING WELLS OVER A PERIOD OF SEVERAL DAYS TO INSURE TRENCH DRAINAGE.
3. THE OWNER SHALL MAINTAIN A LOG BOOK TO DETERMINE THE RATE AT WHICH THE FACILITY DRAINS.
4. WHEN THE FACILITY BECOMES CLOGGED SO THAT IT DOES NOT DRAIN DOWN WITHIN A SEVENTY TWO (72) HOUR TIME PERIOD, CORRECTIVE ACTION SHALL BE TAKEN.
5. THE MAINTENANCE LOG BOOK SHALL BE AVAILABLE TO HOWARD COUNTY FOR INSPECTION TO INSURE COMPLIANCE WITH OPERATION AND MAINTENANCE CRITERIA.
6. ONCE THE PERFORMANCE CHARACTERISTICS OF THE INFILTRATION FACILITY HAVE BEEN VERIFIED, THE MONITORING SCHEDULE CAN BE REDUCED TO AN ANNUAL BASIS UNLESS THE PERFORMANCE DATA INDICATES THAT A MORE FREQUENT SCHEDULE IS REQUIRED.



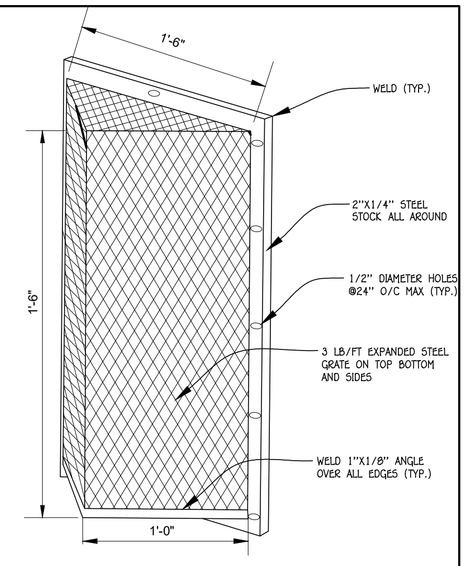
PROFILE THRU DAM BMP #2

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



CL DAM PROFILE (BMP #2)

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

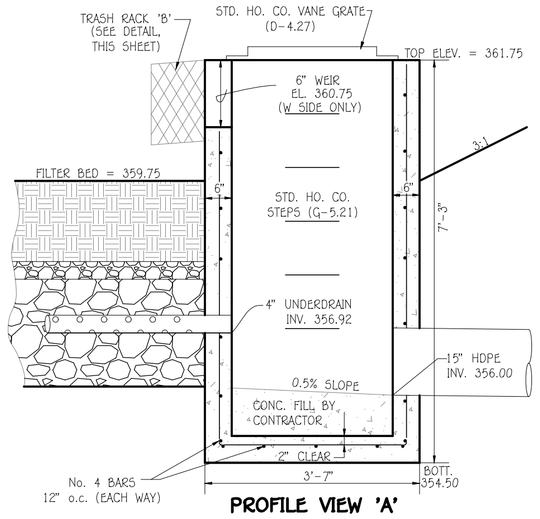


TRASH RACK 'B' DETAIL FOR 6" WEIR OPENING

(NTS)

NOTES:

1. TRASH RACK TO BE CENTERED OVER WEIR OPENING .
2. STEEL TO CONFORM TO ASTM A-36.
3. ALL SURFACES TO BE COATED WITH ZRC COLD GALVANIZING COMPOUND AFTER WELDING.
4. TRASH RACK TO BE FASTENED TO THE WALL WITH 1/2" MASONRY ANCHORS. TRASH RACK TO BE REMOVABLE.

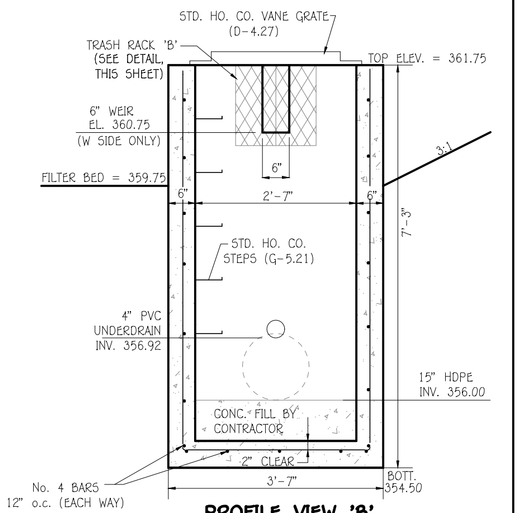


PROFILE VIEW 'A'

(MODIFIED '5' INLET) CONCRETE RISER DETAIL

R2

SCALE : 1" = 2'

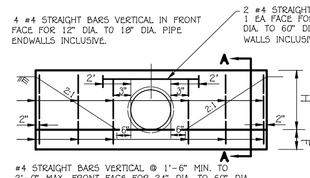


PROFILE VIEW 'B'

(MODIFIED '5' INLET) CONCRETE RISER DETAIL

R2

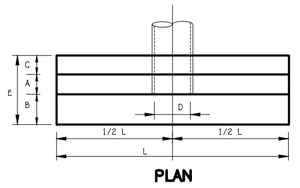
SCALE : 1" = 2'



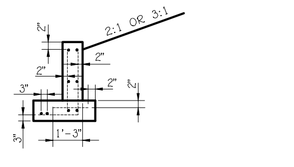
ELEVATION

SECTION A-A

'S' DISTANCES FROM INSIDE SURFACE OF PIPE TO VERTICAL BARS IN FRONT AND REAR FACE.
4" FOR 12" DIA. TO 18" DIA. PIPES INCL.
6" FOR 24" DIA.TO 36" DIA. PIPES INCL.
8" FOR 42" DIA.TO 60" DIA. PIPES INCL.



PLAN



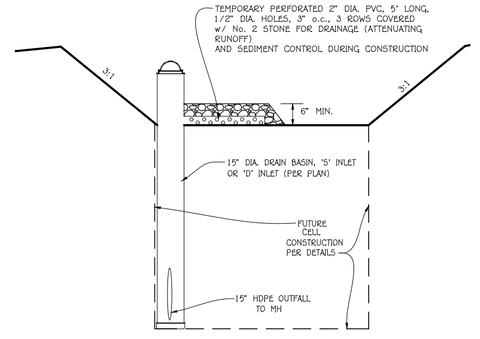
DISPOSITION OF BARS - DETAIL

REINFORCING: DEFORMED STEEL BARS (1/2" DIA.)
CHAMFER: ALL EXPOSED EDGES 1"x 1" OR AS DIRECTED.
CONC. SHALL BE S.H.A. A. MIX No. 2.

OPENINGS	DIMENSIONS							VOLUME	STEEL
D IN.	AREA SQ.FT	A	B	C	E	F	H	L	CONC C.Y.	LBS.
15"	1.23	9"	6"	6"	1'-9"	9"	3'-0"	7'-9"	2.33	47

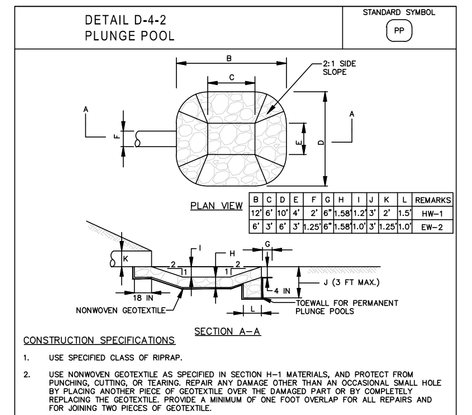
MODIFIED TYPE 'C' ENDWALL

NO SCALE



TYPICAL BIO-RETENTION CELL DURING INITIAL CONSTRUCTION PHASE PRIOR TO DRAINAGE AREA BEING STABILIZED

NO SCALE



B	C	D	E	F	G	H	I	J	K	L	REMARKS
12'-6"	10'	6"	3'	2'	6"	5.58'	1.67'	2'	3.5'		MH-1
6'	3'	6"	3'	3.25'	6"	5.58'	1.67'	3'	3.25'	0.0'	EW-2

CONSTRUCTION SPECIFICATIONS

1. USE SPECIFIED CLASS OF RIPRAP.
2. USE NONWOVEN GEOTEXTILE AS SPECIFIED IN SECTION M-1 MATERIALS, AND PROTECT FROM PUNCTURING, CUTTING, OR TEARING. REPAIR ANY DAMAGE EITHER THAN AN OCCASIONAL SMALL HOLE BY PLACING ANOTHER PIECE OF GEOTEXTILE OVER THE DAMAGED PART OR BY COMPLETELY REPLACING THE GEOTEXTILE. PROVIDE A MINIMUM OF ONE FOOT OVERLAP FOR ALL REPAIRS AND FOR JOINING TWO PIECES OF GEOTEXTILE.
3. PREPARE THE SUBGRADE FOR THE PLUNGE POOL TO THE REQUIRED LINES AND GRADES. COMPACT ANY FILL REQUIRED IN THE SUBGRADE TO A DENSITY OF APPROXIMATELY THAT OF THE SURROUNDING UNDISTURBED MATERIAL.
4. EMBED THE GEOTEXTILE A MINIMUM OF 4 INCHES AND EXTEND THE GEOTEXTILE A MINIMUM OF 6 INCHES BEYOND THE EDGE OF THE SCOUR HOLE.
5. STONE FOR THE PLUNGE POOL MAY BE PLACED BY EQUIPMENT. CONSTRUCT TO THE FULL COURSE THICKNESS IN ONE OPERATION AND IN SUCH A MANNER AS TO AVOID DISPLACEMENT OF THE UNDERLYING MATERIAL. PLACE THE STONE SO AS TO ENSURE THAT IT IS REASONABLY HOMOGENEOUS WITH THE SMALLER STONES AND SPALLS FILLING THE VOIDS BETWEEN THE LARGER STONES. PLACE STONE FOR THE PLUNGE POOL IN A MANNER TO PREVENT DAMAGE TO THE GEOTEXTILE. HAND PLACE TO THE EXTENT NECESSARY.
6. AT THE PLUNGE POOL OUTLET, PLACE THE STONE SO THAT IT MEETS THE EXISTING GRADE.
7. MAINTAIN LINE, GRADE, AND CROSS SECTION. KEEP OUTLET FREE OF EROSION. REMOVE ACCUMULATED SEDIMENT AND DEBRIS. AFTER HIGH FLOWS INSPECT FOR SCOUR AND DISLODGED RIPRAP. MAKE NECESSARY REPAIRS IMMEDIATELY.

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

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

Approved: Howard County Department Of Public Works

DocuSigned by: 245557AE4D4AC2...

Chief, Bureau Of Highways — 9/11/2023 Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

DocuSigned by: Chad Edmondson 7D0F1B8F8B8F4B8...

Chief, Development Engineering Division — 9/11/2023 Date

DocuSigned by: 7E0F0567A4209A9A...

Chief, Division of Land Development — 9/13/2023 Date

DATE	DESCRIPTION
	REVISIONS

"PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY 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. 20748, EXPIRATION DATE: 2-22-25."

STATE OF MARYLAND — KLDO MICHAEL VITUCCI — No. 20748 — PROFESSIONAL ENGINEER

Aldo M. Vitucci, P.E.

ALDO M. VITUCCI, P.E.

OWNERS
LACEY FAMILY REVOCABLE TRUST
1235 WILD ROSE COURT
MARRIOTTSVILLE, MD 21104
ATTN: MR. VINCENT LACEY

DEVELOPER
LAND HOLDINGS LLC
C\O B. JAMES GREENFIELD
6420 AUTUMN SKY WAY
COLUMBIA, MD 21044
443-324-4732

PROJECT			SECTION/AREA		PARCEL
LACEY PROPERTY			N/A		13
PLAT NOS.	BLOCK NO.	ZONE	TAX MAP	ELEC. DIST.	CENSUS TR.
-	1	R-ED	25	SECOND	602900

STORMWATER MANAGEMENT PLAN VIEW, PROFILES & DETAILS-MICRO BIO-RETENTION #2

LACEY PROPERTY

LOTS 1 THRU 13 AND OPEN SPACE LOTS 14 THRU 17

ZONED: R-ED
PARCEL No.: 13
TAX MAP No.: 25 GRID No.: 1
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: JULY 10, 2023
SHEET 10 OF 24

F-21-015

F-21-015

LACEY PROPERTY
LOTS 1 THRU 13 AND
OPEN SPACE LOTS 14 THRU 17

ZONED: R-ED
PARCEL No.: 13
TAX MAP No.: 25 GRID No.: 1
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: JULY 10, 2023
SHEET 11 OF 24

OWNERS
LACEY FAMILY REVOCABLE TRUST
APPROVED BY ME, AND THAT I AM A DULY
LAWS OF THE STATE OF MARYLAND, LICENSE NO.
207946, EXPIRATION DATE: 2-22-25."
ATTN: MR. VINCENT LACEY

DEVELOPER
LAND HOLDINGS LLC
C/O B. JAMES GREENFIELD
6420 ARTUKEN SKY WAY
COLUMBIA, MD 21044
443-324-4732

"PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THESE DOCUMENTS WERE PREPARED OR

Aldo M. Vitucci, P.E.

ALDO M. VITUCCI, P.E.

PROJECT					
LACEY PROPERTY				SECTION/AREA	PARCEL
PLAT NOS.	BLOCK NO.	ZONE	TAX MAP	N/A	13
–	1	R-ED	25	SECOND	602900

DATE	DESCRIPTION
	REVISIONS

Approved: Howard County Department of Public Works

Chief, Bureau of Highways 9/11/2023
Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division 9/13/2023
Date

Chief, Division of Land Development Date

IN ADDITION TO THE ESD VOLUME MANAGEMENT, THIS POND PROVIDES 100-YEAR, AND QUANTITY MANAGEMENT FOR 3.55 HR/6.6 IN STORM EVENT.

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

STORMWATER MANAGEMENT POND #1
PLAN VIEW & PROFILES

POCKET SAND FILTER FACILITY POND #1
F-5 PLAN VIEW

Scale: 1" = 10'

NOTE:
PLACED TO BE PROTECTED DIRECTLY AGAINST EARTH BANKS. IF BOTTOM OF TRENCH IS WIDER THAN THE CRADLE, SLOPING SIDES (PERMITTED) SHALL BE USED.

OPERATION AND MAINTENANCE SCHEDULE FOR HOMEOWNER'S ASSOCIATION OWNED AND JOINTLY MAINTAINED STORMWATER MANAGEMENT FACILITIES

ROUTINE MAINTENANCE

1. The top and side slopes of the embankment shall be mowed a minimum of twice per year, once in June and once in September. Other side slopes and maintenance access shall be mowed as needed.
2. Debris and litter shall be removed during regular mowing operations and as needed.
3. When deemed necessary for aesthetic reasons and upon the approval from the department of public works, sediment shall be removed from the pond.
4. Sediment shall be removed from the pond and forebay, no later than when the capacity of the pond is half full of sediment, or when deemed necessary for aesthetic reasons, upon approval from the Department of Public Works.
5. Structural components of the pond such as the dam, the riser, and the pipes inspected during routine maintenance operations.
6. Trash shall be removed upon the detection of any damage. The components shall be repaired or replaced as needed.

NON-ROUTINE MAINTENANCE

1. Structural components of the pond such as the dam, the riser, and the pipes shall be repaired or replaced as needed.
2. Debris and litter shall be removed during regular mowing operations and as needed.
3. When deemed necessary for aesthetic reasons and upon the approval from the department of public works, sediment shall be removed from the pond.
4. Sediment shall be removed from the pond and forebay, no later than when the capacity of the pond is half full of sediment, or when deemed necessary for aesthetic reasons, upon approval from the Department of Public Works.

A-2 CONC. CRADLE DETAIL
NO SCALE

NSHA MIX NO. 3 (FY > 3500 psi.)

TYPICAL SECTION THROUGH BARREL, CRADLE AND ANTI-SEEP COLLAR
NO SCALE

SECTION 'A-A'

SECTION 'B-B'

ANTI-SEEP COLLAR DETAIL
NO SCALE

PRINCIPLE SPILLWAY POCKET SAND FILTER POND #1

PEAK FLOW DATA
Q100 = 13.79 c.f.s.
Qact = 12.22 c.f.s.
V100 = 7.2 f.p.s.
Vact = 7.5 f.p.s.
(SEE DETAIL, THIS SHEET)

10-YEAR Q = 5.76 C.F.S. (CLOGGED)
2-YEAR Q = 1.04 C.F.S.
1-YEAR Q = 0.61 C.F.S.
2-YEAR V = 3.61 F.P.S.
1-YEAR V = 2.7 F.P.S.
10-YEAR Q = 5.3 F.P.S.
100-YEAR Q = 13.79 C.F.S. (CLOGGED)
1-YEAR Q = 0.98 C.F.S. (CLOGGED)
10-YEAR Q = 9.76 C.F.S. (CLOGGED)
V = 0.42 F.P.S.
3.55HR/6.6IN STORM = 3.55HR/6.6IN STORM =
2.98" CF.S.
Q2 = 1.04 C.F.S
Q10 = 0.26 F.P.S.
Q10 = 391 C.F.S
V100 = 0.36 F.P.S.
Q100 = 13.67 C.F.S.
BLANKET THICKNESS = 19"
Q100 = 15"

NOTE: SEE SHEET 10 FOR PLUNGE POOL DETAIL & DIMENSIONS.

PROFILE CL DAM POCKET SAND FILTER POND #1

SCALE HOR. 1" = 30'
VERT. 1" = 3'

NOTE: FOR TEMP SEDIMENT BASIN PROFILE SEE DETAILS ON SHEET 24.

PROFILE VIEW 'A'
CONCRETE RISER DETAIL
(PERMANENT CONDITION)

SCALE : 1" = 3'

GABION FOREBAY PROFILE FOREBAY #2

SCALE HOR. 1" = 30'
VERT. 1" = 3'

SIZE CHART	
LETTER CODE	L x W x D
A	6' x 1' x 3'
B	9' x 1' x 3'
C	12' x 1' x 3'

GABION FOREBAY PROFILE FOREBAY #3

SCALE HOR. 1" = 30'
VERT. 1" = 3'

SIZE CHART	
LETTER CODE	L x W x D
A	6' x 1' x 3'
B	9' x 1' x 3'
C	12' x 1' x 3'

TRASH RACK 'A' DETAIL
(NO SCALE)

PROFILE VIEW 'B'
CONCRETE RISER DETAIL

SCALE : 1" = 2'

NOTES:
1. FIELD MEASURE THE STRUCTURE DIMENSIONS TO INSURE EXACT FIT OF TRASH RACK.
2. CONTRACTOR FURNISH AND INSTALL ANTIFREEZE FLOATATION.
3. PAINT BATTLESHIP GRAY.

DETAIL G-2-8 PRECAST RISER CONNECTOR — STANDARD SYMBOL

CONSTRUCTION SPECIFICATIONS
1. FABRICATE PLATE CONNECTORS FROM STAINLESS STEEL CONFORMING TO ASTM A666-73, GRADE A OR B.
2. USE TYPE 304 STAINLESS STEEL 5/8 IN DIAM. FOR BOLTS.
3. PROVIDE CONNECTORS AT CENTERLINE OF EACH PRECAST BOX FACE. FOR MANHOLES PROVIDE FOUR PLATES SPACED AT 90°.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL — 2011

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

STORM DRAIN PROFILE

SCALE HOR. 1" = 30'
VERT. 1" = 3'

STORM DRAIN PROFILE

SCALE HOR. 1" = 30'
VERT. 1" = 3'

STORM DRAIN PROFILE

SCALE HOR. 1" = 30'
VERT. 1" = 3'

STORM DRAIN PROFILE

SCALE HOR. 1" = 30'
VERT. 1" = 3'

STORM DRAIN PROFILE

SCALE HOR. 1" = 30'
VERT. 1" = 3'

STORM DRAIN PROFILE

SCALE HOR. 1" = 30'
VERT. 1" = 3'

STORM DRAIN PROFILE

SCALE HOR. 1" = 30'
VERT. 1" = 3'

STORM DRAIN PROFILE

SCALE HOR. 1" = 30'
VERT. 1" = 3'

STORM DRAIN PROFILE

SCALE HOR. 1" = 30'
VERT. 1" = 3'

Owner/Developer Certification
"I/we hereby certify that all Clearing, Grading, Construction, or Development will be done pursuant to This Approved Plan and Sediment Control Plan, including Inspection and Maintenance Agreement, and that the appropriate Personnel involved in the Construction Project will have a Certificate of Training at a Maryland Department of The Environment (MDE) Approved Training Program for the Control of Erosion and Sediment prior to Beginning the Project. I shall provide a Maryland Registered Professional Engineer to Supervise Pond Construction and provide the Howard Soil Conservation District with an "As-Built" Plan of The Pond within 30 Days of Completion. I Certify Sign-off-Entry for Periodic On-Site Evaluation by Howard County. The Howard Soil Conservation District with an "As-Built" Plan of The Pond within 30 Days of Completion. I Certify that all Clearing, Grading, Construction, and Development will be done pursuant to This Approved Sediment Control Plan, including Inspection and Maintenance Agreement, and that the appropriate Personnel involved in the Construction Project will have a Certificate of Training at a Maryland Department of The Environment (MDE) Approved Training Program for the Control of Erosion and Sediment prior to Beginning the Project. I shall provide a Maryland Registered Professional Engineer to Supervise Pond Construction and provide the Howard Soil Conservation District with an "As-Built" Plan of The Pond within 30 Days of Completion. I Certify Sign-off-Entry for Periodic On-Site Evaluation by Howard County. The Howard Soil Conservation District with an "As-Built" Plan of The Pond within 30 Days of Completion."

Jim Greenfield — 8/11/2023
Owner/Developer Certification — Date

Printed Name of Developer

Design Certification
"I hereby Certify that this Plan has been Designed in Accordance with Current Maryland Erosion and Sediment Control Laws, Regulations, and Standards, that I supervised a Portable Water Plan Based on My Personal Knowledge of the Site and that it was Prepared in Accordance with The Requirements of The Howard Soil Conservation District. I have Notified The Developer that he/she must Engage a Registered Professional Engineer to Supervise Pond Construction and Provide the Howard Soil Conservation District with an "As-Built" Plan of The Pond."

Aldo M. Vitucci, P.E. — 8/11/2023
Printed Name of Engineer — Date

ATGB M. Vitucci, P.E. — 20748
Professional Engineer — MD PE Expiration No.

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. 20748 — 2-22-25 — Expiration Date."

This Plan is Approved For Sediment Control Construction. My Soil Erosion and Sediment Control Shall Be Done In Accordance With The Howard Soil Conservation District.

Howard Soil Conservation District — 9/11/2023 — Date

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.

Signature — P.E. No. — Date

I/we Hereby Certify That Any Deviation From This Plan Will Be Reported To The Howard Soil Conservation District Before Any Such Deviation Is Made. I/we Further Certify That All Inspections Will Be Done By Or Under The Direction Of A Professional Engineer Upon Completion Of The Project. The Inspection Will Be Documented And Appropriate Corrective Measures Will Be Taken To Assure That The Facility Meets Or Exceeds The Design Criteria. The Inspection And Material Tests Which Are Conducted During Construction And Those Deficiencies Noted During Such Inspections And Tests Deemed Sufficient To Warrant Certification Of The Facility By The Engineer For Does Not Relieve The Contractor Of His Responsibility To Correct Deficiencies Noted By The Engineer During Inspections. Acceptable Engineering Standards Certify Does Not Mean Or Imply A Guarantee By The Engineer For Any Equipment Proposed By Contractor, Manufacturer, Or Other Means, Including Meeting Commonly Accepted Industry Practices.

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DocuSign Envelope ID: 79E9DBFB-CDDB-4FF4-A258-614B911C4A9B

SPECIMEN TREE TABLE

KEY	SPECIES	SIZE (DBH)	CRZ (FT RADIUS)	COMMENTS	STATUS
T1	HEMLOCK	35"	52.5		TBR
T2	NORWAY SPRUCE	33"	49.5		
T3	WHITE PINE	37"	55.5		
T4	WHITE PINE	38.5"	57.75		
T5	SILVER MAPLE	49.5"	89.25		
T6	SILVER MAPLE	36.5"	54.75		
T7	BLACK WALNUT	37.5"	56.25		TBR
T8	BLACK WALNUT	32"	48		TBR
T9	BLACK WALNUT	41"	61.5		TBR
T11	SILVER MAPLE	42"	63	VERY POOR, TRUNK ROT	TBR
T12	SILVER MAPLE	45.5"	68.25	POOR, TRUNK ROT	TBR
T13	SILVER MAPLE	52"	78	POOR, TRUNK ROT	TBR
T14	ENGLISH WALNUT	41"	61.5		
T15	SILVER MAPLE	31"	46.5	FAIR, LIMITED CROWN SPREAD	
T16	SILVER MAPLE	39"	58.5		
T17	SILVER MAPLE	33"	49.5	FAIR, LEANING	
T18	SILVER MAPLE	40.5"	60.75	FAIR, NARROW CROWN	
T19	SILVER MAPLE	37"	55.5	FAIR, LIMITED CROWN SPREAD	
T20	SILVER MAPLE	45"	67.5	FAIR, LIMITED CROWN SPREAD	TBR
T21	SILVER MAPLE	41"	61.5	FAIR, MAJOR LIMB BROKEN	TBR
T22	SILVER MAPLE	32"	48		TBR
T23	SILVER MAPLE	34"	51	FAIR, LIMITED CROWN SPREAD	TBR
T24	SILVER MAPLE	35"	52.5	POOR, TRUNK ROT	TBR
T25	TULIP POPLAR	39.5"	59.25		
T26	TULIP POPLAR	35"	52.5	TWIN STEMS	
T27	TULIP POPLAR	33.5"	50.25		
T28	TULIP POPLAR	32"	48		
T29	TULIP POPLAR	32"	48	TWIN STEMS	
T30	TULIP POPLAR	31"	46.5		
T31	TULIP POPLAR	39"	58.5		
T32	TULIP POPLAR	46"	69		
T33	TULIP POPLAR	33"	49.5	2 ADDITIONAL NEAR SPECIMEN SIZE TRUNKS	
T34	TULIP POPLAR	32.5"	48.75		
T35	TULIP POPLAR	39.5"	59.25		
T36	TULIP POPLAR	40"	60		
T37	TULIP POPLAR	55"	82.5		
T38	TULIP POPLAR	61"	91.5	SPLITS INTO 2 TRUNKS ABOVE DBH	
T39	TULIP POPLAR	41"	61.5		
T40	SYCAMORE	31"	46.5		
T41	SILVER MAPLE	31.5"	47.25	POOR, VERY LIMITED CROWN	TBR
T42	SILVER MAPLE	39.5"	59.25	POOR, CROWN REDUCED	TBR
T43	SILVER MAPLE	39"/32"	58.5	POOR, SPLIT TRUNK ABOVE BREAST HEIGHT, TRUNK ROT, AND LIMB DIEBACK	

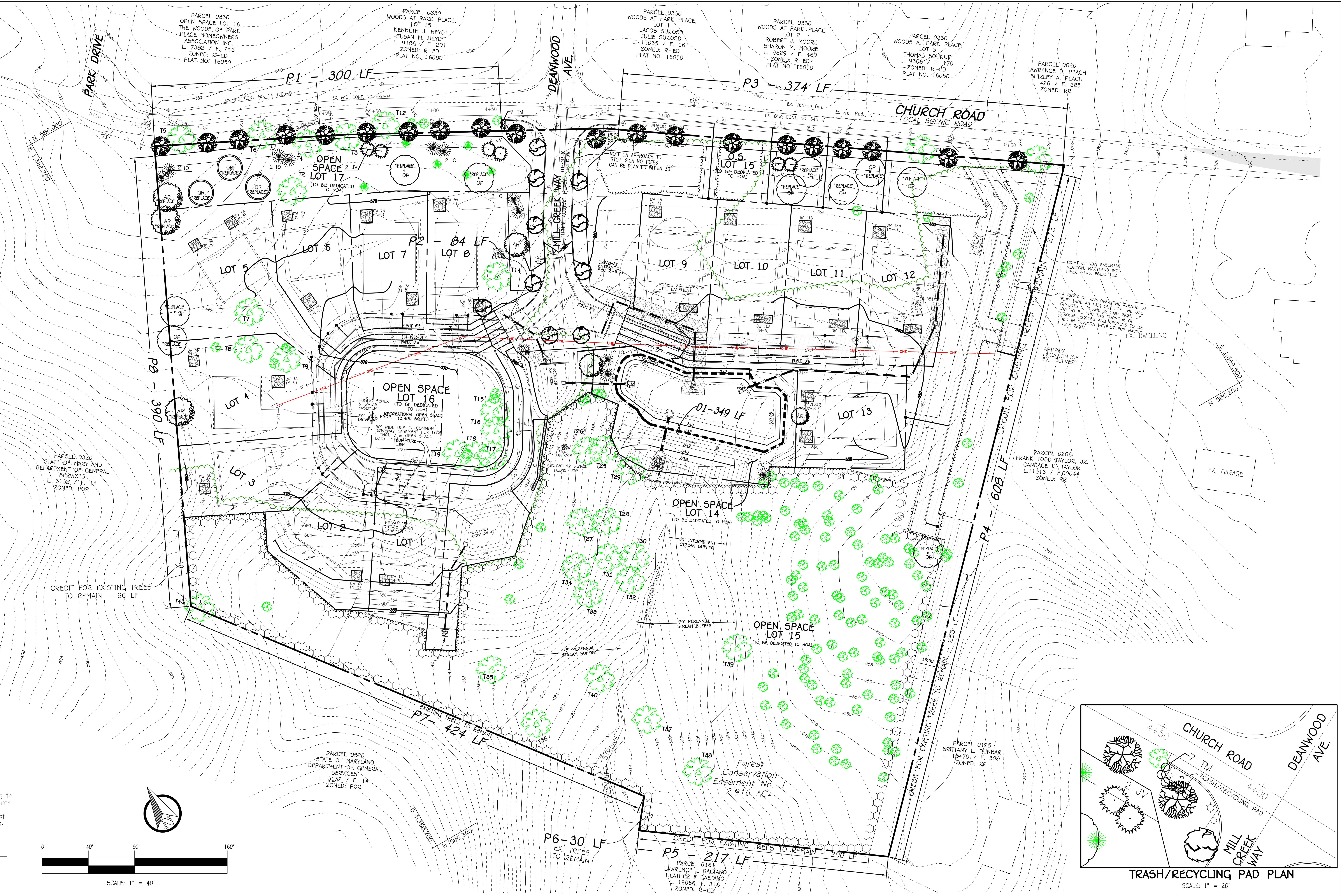
NOTE: "TBR" REFERS TO EXISTING SPECIMEN TREES PROPOSED TO BE REMOVED.

NOTE: IN ACCORDANCE WITH WP-16-022, 16 REPLACEMENT TREES HAVE BEEN ADDED TO THIS PLAN. SEE SCHEDULE 'A' ON SHEET 13.

"REPLACE" REFERS TO PROPOSED TREES PER WP-16-022.

LEGEND

SYMBOL	DESCRIPTION
---352---	EXISTING CONTOUR 2' INTERVAL
---350---	EXISTING CONTOUR 10' INTERVAL
	EXISTING SAN. SEWER LINE
	EXISTING STORM DRAIN LINE
	EXISTING WATER LINE
x	EXISTING FENCE
352	PROPOSED CONTOUR 2' INTERVAL
350	PROPOSED CONTOUR 10' INTERVAL
	PROPOSED CONCRETE WALK
	EXISTING TREES
	EXISTING TREELINE
	PROPOSED TREELINE
8" W	PROPOSED PUBLIC WATER
18" RCCP	PROPOSED STORMDRAIN
8" S	PROPOSED PUBLIC SEWER
	FOREST CONSERVATION AREA
	RIPRAP OUTLET PROTECTION



LANDSCAPE DEVELOPER'S CERTIFICATE

I/We certify that the landscaping shown on this plan will be done according to the plan, Section 16.124 of the Howard County Code and the Howard County Landscape Manual. I/We further certify that upon completion a letter of landscape installation accompanied by an executed one year guarantee of plant materials will be submitted to the Department of Planning and Zoning.

Jim Greenfield — Name
9/1/2023 — Date

SCALE: 1" = 40' (0' 40' 80' 160')

Approved: Howard County Department Of Public Works

Chief, Bureau Of Highways — 9/11/2023 Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division — 9/11/2023 Date

Chief, Division of Land Development — 9/13/2023 Date

DATE	DESCRIPTION
	REVISIONS

"PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY 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. 20748, EXPIRATION DATE: 2-22-25."

ALDO M. VITUCCI, P.E.

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CENTENNIAL SQUARE OFFICE PARK – 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 – 2855

OWNERS
LACEY FAMILY REVOCABLE TRUST
1235 WILD ROSE COURT
MARRIOTTSVILLE, MD 21104
ATTN: MR. VINCENT LACEY

DEVELOPER
LAND HOLDINGS LLC
C\O B. JAMES GREENFIELD
6420 AUTUMN SKY WAY
COLUMBIA, MD 21044
443-324-4732

PROJECT			SECTION/AREA		PARCEL
LACEY PROPERTY			N/A		13
PLAT NOS.	BLOCK NO.	ZONE	TAX MAP	ELEC. DIST.	CENSUS TR.
–	1	R-ED	25	SECOND	602900

STREET TREE & LANDSCAPE PLAN

LACEY PROPERTY
LOTS 1 THRU 13 AND OPEN SPACE LOTS 14 THRU 17

ZONED: R-ED
PARCEL No.: 13
TAX MAP No.: 25 GRID No.: 1
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: JULY 10, 2023
SHEET 12 OF 24

F-21-015

DocuSign Envelope ID: 79E9DBFB-CDDB-4FF4-A258-614B911C4A9B

NOTES:

1. "Should any tree designated for preservation for which landscaping credit is given, die prior to release of bonds, the developer will be required to replace the tree with the equivalent species or with a tree which will obtain the same height, spread and growth characteristics. The replacement tree must be a minimum of 2.5 inches in caliper and installed as required in the Howard County Landscape Manual."

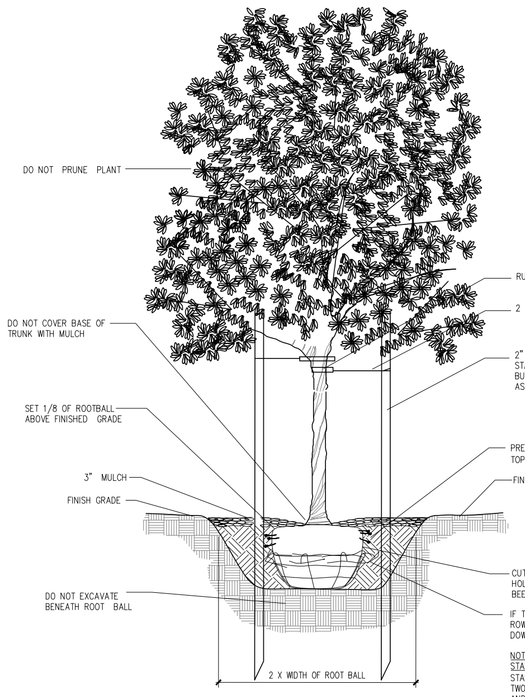
2. "At the time of plant installation, all shrubs and trees listed and approved on the landscape Plan, shall comply with the proper height requirement in accordance with the Howard County Landscape Manual. In addition, no substitutions or relocations of the required plantings may be made without prior review and approval from the Department of Planning and Zoning. Any deviation from the approved Landscape Plan may result in denial or delay in the release of landscape surety until such time as all required materials are planted and/or revisions are made to the applicable plans".

3. "The Owner, tenants and/or their agents shall be responsible for maintenace of the required perimeter landscaping including both plant materials and berms, fences and walls. All plant materials shall be maintained in good growing condition, and when necessary, replaced with new materials to ensure continued compliance with applicable regulations. All the other required landscaping shall be permanently maintained in good condition, and when necessary, repaired or replaced".

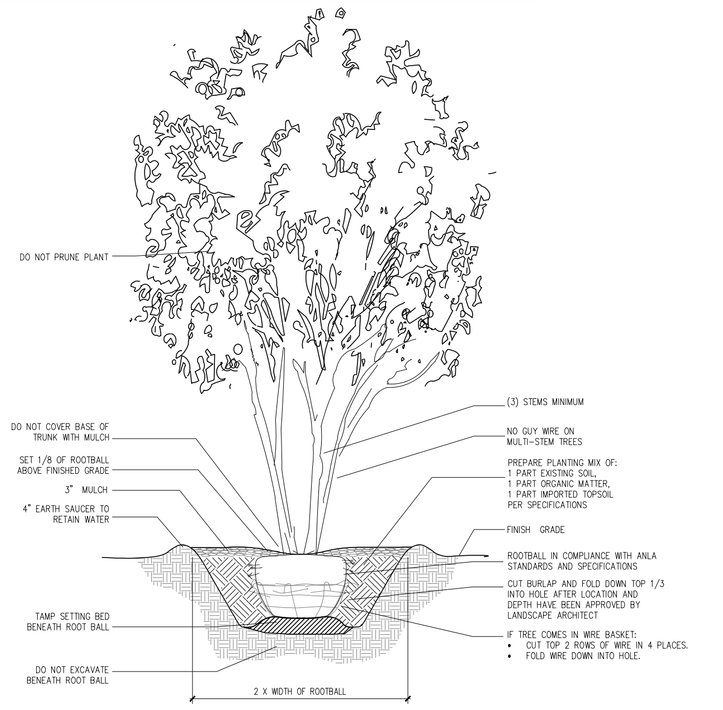
4. This Plan Has Been Prepared In Accordance With The Provisions Of Section 16.124 Of The Howard County Code And The Landscape Manual". Financial Surety For The Required 26 Shade, 5 Evergreen Trees & 7 Shrubs (Provided 19 Shade, 6 Ornamental, 11 Evergreen & 7 Shrubs) Has Been Posted As Part Of The Developer's Agreement In The Amount Of $8,460.00.

5. This Plan Provides 16 Replacement Trees For The Removal Of 8 Specimen Trees Per WP-16-022.

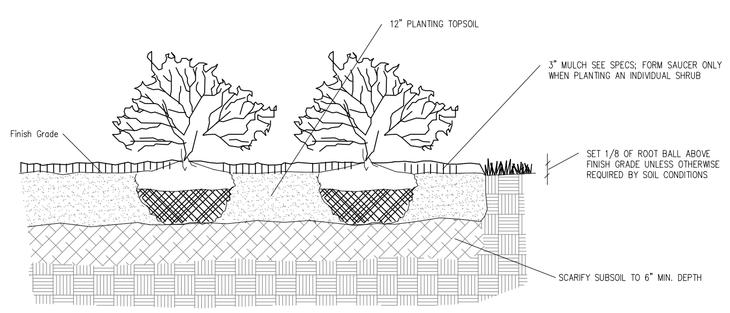
SCHEDULE D STORMWATER MANAGEMENT AREA LANDSCAPING	
LINEAR FEET OF PERIMETER	349'
NUMBER OF TREES REQUIRED/PROVIDED: SHADE TREES (349'-243' = 106'/50) EVERGREEN TREES (349'-243' = 106'/40)	2 3
CREDIT FOR EXISTING VEGETATION (NO, YES AND %)	YES 133' (FCE)
CREDIT FOR OTHER (LANDSCAPE, WALL, ETC.) (NO, YES AND %)	YES, 110' (WALL)



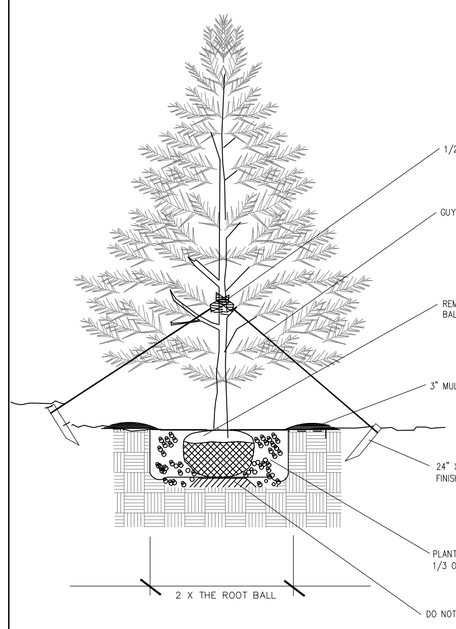
DECIDUOUS TREE - TYPICAL PLANTING DETAIL



MULTISTEM TREE - TYPICAL PLANTING DETAIL



SHRUB AND HEDGEROW - TYPICAL PLANTING DETAIL



EVERGREEN TREE - TYPICAL PLANTING DETAIL

PLANTING SPECIFICATIONS

1. CLEAR & GRUB ALL PLANTING AREAS AS INDICATED ON THE DRAWINGS.
2. PROVIDE PROTECTION FOR TREES, SHRUBS, AND PERENNIALS/GROUND COVERS THAT ARE TO BE PRESERVED.
3. CONTRACTOR SHALL VERIFY THE CORRECT LOCATION OF ALL UNDERGROUND UTILITIES IN THE FIELD PRIOR TO INSTALLATION OF ANY PLANT MATERIALS.
4. ALL PLANTING SHALL BE DONE AS PER PLANTING DETAILS AND SPECIFICATIONS.
5. NO CHANGES SHALL BE MADE WITHOUT WRITTEN CONSENT OF THE OWNER OR LANDSCAPE ARCHITECT.
6. PRIOR TO CONSTRUCTION OF PLANTING BEDS, THE CONTRACTOR SHALL STAKE OUT PLANTING BED LINES IN THE FIELD FOR REVIEW BY THE LANDSCAPE ARCHITECT. LANDSCAPE ARCHITECT SHALL MAKE ADJUSTMENTS IN THE FIELD AS NECESSARY. ALL FINAL PLANTING BED LOCATIONS ARE TO BE APPROVED BY THE LANDSCAPE ARCHITECT. FOR LAYOUT REVIEW, CONTRACTOR SHALL NOTIFY LANDSCAPE ARCHITECT A MINIMUM OF THREE DAYS IN ADVANCE.
7. INSTALL ALL REQUIRED PLANTING AND LAWN SOILS AS PER DETAILS AND SPECIFICATIONS, AND ALL SHRUBS, GROUND COVERS, AND PERENNIALS SHALL BE PLANTED IN PLANTING BEDS PREPARED AS REQUIRED BY THE DETAILS AND SPECIFICATIONS.
8. MAINTAIN POSITIVE DRAINAGE OUT OF PLANTING BEDS AT A MINIMUM 2% SLOPE AND MAINTAIN POSITIVE DRAINAGE OF ALL LAWN AREAS, UNLESS OTHERWISE NOTED ON DRAWINGS. ALL GRADES, DIMENSIONS, AND EXISTING CONDITIONS SHALL BE VERIFIED BY THE CONTRACTOR ON SITE BEFORE CONSTRUCTION BEGINS. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT OR OWNER.
9. ALL PLANT BEDS SHALL BE CONTAINED WITH A SPADED EDGE UNLESS OTHERWISE NOTED ON DRAWINGS.
10. IN THE EVENT OF A DISCREPANCY BETWEEN QUANTITIES SHOWN ON THE DRAWINGS AND QUANTITIES SHOWN ON THE PLANT LIST, THE QUANTITIES ON THE DRAWINGS SHALL APPLY. REPORT DISCREPANCIES TO THE LANDSCAPE ARCHITECT FOR CLARIFICATION PRIOR TO BIDDING.
11. ALL PLANTS SHALL CONFORM TO THE SIZES GIVEN IN THE PLANT LIST AND SHALL BE NURSERY GROWN IN ACCORDANCE WITH THE "AMERICAN STANDARD FOR NURSERY STOCK" (ANSI Z60.1), LATEST EDITION.
12. PLANTS SHALL BE LOCATED AS SHOWN ON THE DRAWINGS. PRIOR TO PLANTING, THE CONTRACTOR SHALL STAKE OUT THE LOCATIONS OF ALL PLANTS IN THE FIELD FOR REVIEW BY THE LANDSCAPE ARCHITECT. LANDSCAPE ARCHITECT SHALL MAKE ADJUSTMENTS IN THE FIELD AS NECESSARY. ALL FINAL PLANT LOCATIONS ARE TO BE APPROVED BY THE LANDSCAPE ARCHITECT. FOR LAYOUT REVIEW, CONTRACTOR SHALL NOTIFY LANDSCAPE ARCHITECT A MINIMUM OF THREE DAYS IN ADVANCE.
13. ALL DISTURBED AREAS SHALL BE FINE GRADED AND SEEDED OR SODDED; SEE PLAN FOR LOCATIONS.
14. CONTRACTOR SHALL BE RESPONSIBLE FOR WATERING AND MAINTAINING ALL PLANTS DURING THE WARRANTY PERIOD; REFER TO SPECIFICATIONS.

SCHEDULE A - PERIMETER LANDSCAPE EDGE											
PERIMETER	1	2	3	4	5	6	7	8	9		TOTAL
CATEGORY	ADJACENT TO ROADWAY	ADJACENT TO ROADWAY	ADJACENT TO ROADWAY	ADJACENT TO PERIMETER PROPERTIES	ADJACENT TO PERIMETER PROPERTIES	ADJACENT TO PERIMETER PROPERTIES	ADJACENT TO PERIMETER PROPERTIES	ADJACENT TO PERIMETER PROPERTIES	TRASH/RECYLING PAD	SPECIMEN TREE REPLACEMENTS	
LANDSCAPE TYPE	N/A (FRONT)	B (SIDE TO ROAD)	N/A (FRONT)	A	A	A	A	A	--		
LINEAR FEET OF PERIMETER	300 L.F.	84 L.F.	374 L.F.	608 L.F.	217 L.F.	30 L.F.	424 L.F.	390 L.F.	20 L.F.		
CREDIT FOR EXISTING TREES (YES/NO, LENGTH)	N/A	N/A	N/A	YES, 526 L.F. (82 L.F. REMAINING)	YES, 200 L.F. (17 L.F. REMAINING)	YES, 30 L.F. (0 L.F. REMAINING)	YES, 424 L.F. (0 L.F. REMAINING)	YES, 66 L.F. (324 L.F. REMAINING)	N/A		
NUMBER OF PLANTS REQUIRED SHADE TREES/EVERGREENS SHRUBS	0	2/2 (84'/50' = 1.7 OR 2) (84'/40' = 2.1 OR 2)	0	1 (82'/60' = 1.4 OR 1)	0 (17'/60' = 0.3 OR 0)	0	0	5 (324'/60' = 5.4 OR 5)	0 7	16 SHADE (WP-16-22)	24 / 2 7
CREDIT FOR EXISTING VEGETATION SHADE TREES SMALL/MEDIUM DECIDUOUS TREES/ EVERGREENS SHRUBS	0 0 0 0	1 (T14) 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	1 0 0 0
NUMBER OF PLANTS PROVIDED SHADE TREES SMALL/MEDIUM DECIDUOUS TREES/ EVERGREENS SHRUBS	0 0 0 0	1 0 2 0	0 0 0 0	1 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	5 0 0 0	0 0 0 7	10 6 6 0	17 6 8 7

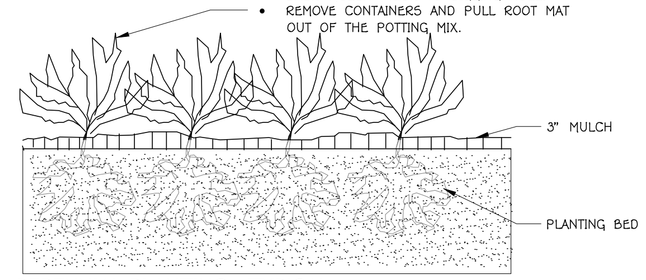
NOTES: 1. THE TRASH/RECYCLE PAD LANDSCAPING WILL BE MAINTAINED BY THE USERS OF THE PRIVATE USE-IN-COMMON MAINTENANCE AGREEMENT.

2. THE LANDSCAPING SHALL BE INSTALLED AROUND THE PERIMETER OF THE PAD EXCLUDING THE SIDE ADJACENT TO THE PUBLIC ROAD RIGHT-OF-WAY.

REQUIRED LANDSCAPING PLANT LIST (SCHEDULE 'A' & 'D')			
QTY.	KEY	NAME	SIZE
6	AR	ACER RUBRUM 'RED SUNSET' (RED SUNSET RED MAPLE)	2.5"-3" CAL. FULL CROWN, B&B
10	QP	QUERCUS PALUSTRIS (PIN OAK)	2.5"-3" CAL. FULL CROWN, B&B
3	de	QUERCUS ROBUR "FASTIGIATA" (COLUMNAR ENGLISH OAK)	2.5"-3" CAL. FULL CROWN, B&B
11	IO	ILEX OPACA (AMERICAN HOLLY)	5' - 6' HT. B&B
6	JV	JUNIPERUS VIRGINIANA (EASTERN RED CEDAR)	5' - 6' HT. B&B
7	TM	TAXUS MEDIA 'HICKSII' (HICKSII YEW)	18"-24" SPREAD

TOTAL: 19 SHADE TREES, 6 ORNAMENTAL, 11 EVERGREENS & 7 SHRUBS.

- REMOVE DORMANT TOPS AS APPROPRIATE TO THE SEASON AND THE SPECIES OF PLANT.
- IF BED IS MULCHED PRIOR TO PLANTING, PULL BACK MULCH PRIOR TO DIGGING HOLE.
- REMOVE CONTAINERS AND PULL ROOT MAT OUT OF THE POTTING MIX.

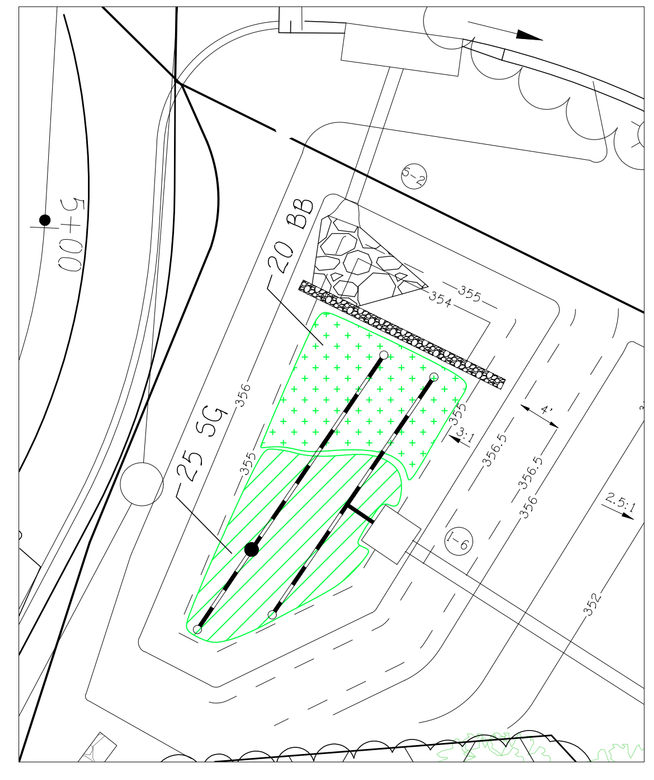


PERENNIAL PLANTING - TYPICAL

STREET TREE SCHEDULE				
QTY. REQ'D.	QTY. PROV'D.	SIZE	BOTANICAL AND COMMON NAME	COMMENTS
ROW LENGTH = 785' 785'/40 = 19.6 20 TREES	20 TREES	2 1/2 - 3" CAL.	CLADRASTIS LUTEA YELLOWWOOD	40' APART ON PUBLIC R/W (CHURCH ROAD)
TOTAL ROW LENGTH = 180' (180'/40) x 2 = 10 10 TREES	10 TREES	2 1/2 - 3" CAL.	PRUNUS SARGENTII SARGENT CHERRY	40' APART ON PUBLIC R/W (MILL CREEK WAY)

NOTE: FINAL PLACEMENT OF STREET TREES WILL OCCUR IN THE FIELD AND BE PLACED A MINIMUM OF 30 FEET FROM ALL SIGNS AND INTERSECTIONS WHEN PLANTED BETWEEN SIDEWALK AND CURB, BE LOCATED WITHIN CONSIDERATION OF UNDERGROUND UTILITIES AND STRUCTURES AND MAINTAIN A MINIMUM 5 FEET DISTANCE ON CENTER FROM A DRAIN INLET STRUCTURE, 5 FEET FROM AN OPEN SPACE ACCESS STRIP AND 10 FEET AWAY FROM A DRIVEWAY.

PUBLIC STREET TREES ARE PROVIDED IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. FINANCIAL SURETY FOR THE REQUIRED 30 STREET TREES IN THE AMOUNT OF $9,000.00 SHALL BE COLLECTED WITH THE DEPARTMENT OF PUBLIC WORKS COST ESTIMATE.



MICRO BIO-RETENTION #1 PLANTING PLAN

0' 10' 15' 20'
Scale: 1" = 10'

BIORETENTION FACILITY (BMP) PLANTING SCHEDULE

KEY	PLANT NAME	MIN. SIZE	MICRO-BIO #1 QUANTITY	MICRO-BIO #2 QUANTITY		NOTES	SYMBOL
SG	SWITCH GRASS *(Panicum virgatum)*	1 qt	25	15		Grass @ 3' c/c min.	
BB	BEEBALM *(Monarda didyma)*	1 qt	20	14		Grass @ 3' c/c min.	
NEA	NEW ENGLAND ASTER *(Aster novae angliae)*	1 qt	0	8		Grass @ 3' c/c min.	
	TOTAL		45	37			

PLANTING SPECIFICATIONS:
1. PLANT INSTALLATION SHALL BE PER MDE SPECIFICATIONS IN THE 2000 STORMWATER DESIGN MANUAL, PER THE PROJECT SPECIFICATIONS, AND AS BELOW.

ADDITIONAL SPECIFICATIONS:
1. PLANT BMP LEVEL SURFACE AS SHOWN IN THE ABOVE TABLE WITH AN EVEN DISTRIBUTION DENSITY. STABILIZE BMP SIDE SLOPES WITH PERMANENT GRASS SEED PER NRCS SPECIFICATIONS. SIDE SLOPE PERMANENT GRASS AREAS SHALL HAVE 3" OF CLEAN TOPSOIL ON TILLED SUB-SOIL AND CURLEX MATTING. WATER AS NECESSARY UNTIL ESTABLISHED VEGETATION.

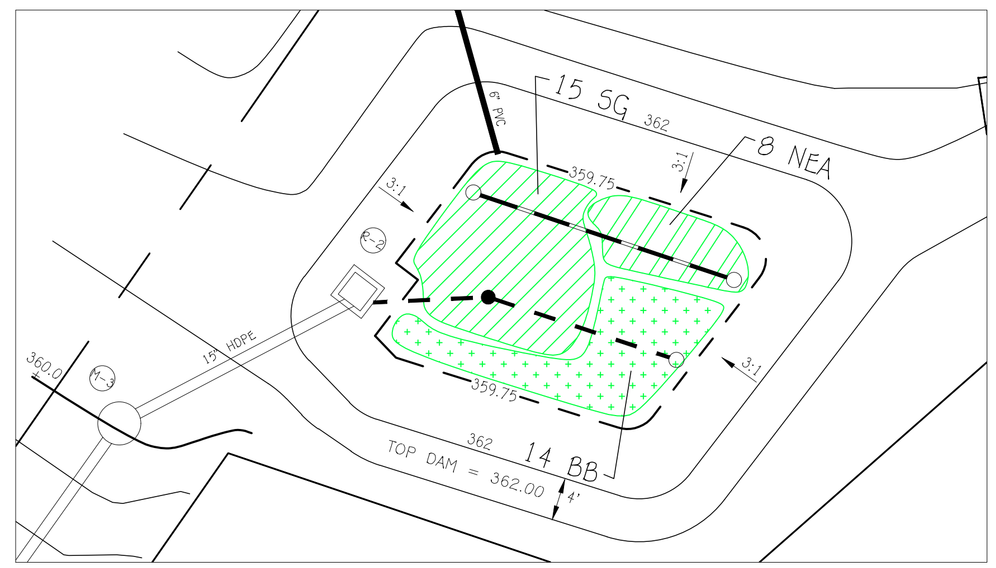
2. THE CONTRACTOR SHALL PROVIDE PLANT MAINTENANCE AND GUARANTEE IN ACCORDANCE WITH THE PROJECT LANDSCAPING SPECIFICATIONS.

3. PLANT MATERIAL SHALL CONFORM TO THE U.S. STANDARD FOR NURSERY STOCK BY THE AMERICAN ASSOCIATION OF NURSERYMEN.

4. PLANTING PERENNIALS & GRASSES: ROOT SYSTEMS SHALL BE SPLIT OR CRUMBLED. POTTED PLANTS SHALL BE SET SO THAT THE TOP OF THE POT IS EVEN WITH EXISTING GRADE. TREAT THE MULCHED AND PLANTED AREA WITH A PRE-EMERGENT HERBICIDE.

5. ALL PLANTS MUST BE THOROUGHLY AND REGULARLY WATERED PRIOR TO ACCEPTANCE.

6. DO NOT PLANT VEGETATION WITHIN 1.5 ft OF THE FOREBAY WEIR SPLASH APRONS AND IN THE NO PLANTING ZONE NEAR THE RISER.



MICRO BIO-RETENTION #2 PLANTING PLAN

0' 10' 15' 20'
Scale: 1" = 10'

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

LANDSCAPE DEVELOPER'S CERTIFICATE

I/We certify that the landscaping shown on this plan will be done according to the plan, Section 16.124 of the Howard County Code and the Howard County Landscape Manual. I/We further certify that upon completion a letter of landscape installation accompanied by an executed one year guarantee of plant materials will be submitted to the Department of Planning and Zoning.

Jim Greenfield — Name
8/11/2023 — Date

Approved: Howard County Department Of Public Works

DocuSigned by: [signature] 2485821AE4D4402...

Chief, Bureau Of Highways — 9/11/2023 — Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

DocuSigned by: Chad Edmondson 4B8F1B4E241E4B9...

Chief, Development Engineering Division — 9/11/2023 — Date

DocuSigned by: [signature] 1F1B1B7F5220494...

Chief, Division of Land Development — 9/13/2023 — Date

DATE	DESCRIPTION
	REVISIONS

"PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY 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. 20748, EXPIRATION DATE: 2-22-25."

STATE OF MARYLAND — ALDO MICHAEL VITUCCI — No. 20748 — PROFESSIONAL ENGINEER

Aldo M. Vitucci, P.E.

ALDO M. VITUCCI, P.E.

OWNERS
LACEY FAMILY REVOCABLE TRUST
1235 WILD ROSE COURT
MARRIOTTSVILLE, MD 21104
ATTN: MR. VINCENT LACEY

DEVELOPER
LAND HOLDINGS LLC
C\O B. JAMES GREENFIELD
6420 AUTUMN SKY WAY
COLUMBIA, MD 21044
443-324-4732

PROJECT			SECTION/AREA		PARCEL
LACEY PROPERTY			N/A		13
PLAT NOS.	BLOCK NO.	ZONE	TAX MAP	ELEC. DIST.	CENSUS TR.
-	1	R-ED	25	SECOND	602900

MICRO BIO-RETENTION PLANTING PLANS, LANDSCAPING NOTES, DETAILS & SPECIFICATIONS

LACEY PROPERTY
LOTS 1 THRU 13 AND OPEN SPACE LOTS 14 THRU 17

ZONED: R-ED
PARCEL No.: 13
TAX MAP No.: 25 GRID No.: 1
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: JULY 10, 2023
SHEET 13 OF 24

F-21-015

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STRUCTURE SCHEDULE

STRUCTURE NO.	OWNERSHIP AND MAINTENANCE	TOP ELEVATION	INV.IN	INV.OUT	COORDINATES	WIDTH	TYPE	REMARKS
I-1	PUBLIC	355.80	–	351.93 (15")	N 585,611.99 E 1,369,044.68	2.50'	A-5 INLET	D-4.02
I-2	PUBLIC	358.57	355.08 (15")	354.83 (18")	N 585,639.70 E 1,368,994.37	2.50'	A-5 INLET	D-4.02
I-3	PRIVATE	348.33 *	343.26 (15")	337.96 (18")	N 585,573.44 E 1,369,115.51	--	D INLET	D-4.11
I-4	PRIVATE	347.75 *	–	344.56 (18")	N 585,449.69 E 1,369,259.11	--	D INLET	D-4.11
I-5	PRIVATE	343.75 *	344.49 (18")	344.39 (18")	N 585,500.79 E 1,369,175.09	--	D INLET	D-4.11
I-7	PUBLIC	359.03 *	–	355.25 (15")	N 585,670.75 E 1,368,978.94	--	D INLET	D-4.11
I-8	PRIVATE	351.83 *	347.46 (15")	347.21 (18")	N 585,475.49 E 1,369,298.62	--	D INLET	D-4.11
I-9	PRIVATE	357.75 *	–	351.08 (15")	N 585,540.55 E 1,369,343.07	--	D INLET	D-4.11
M-1	PUBLIC	356.18	351.61 (15")	351.51 (15")	N 585,630.97 E 1,369,068.25	--	4' STD. MANHOLE	G - 5.12
M-2	PRIVATE	344.50	339.62 (18")	338.12 (18")	N 585,570.56 E 1,369,029.67	--	4' STD. MANHOLE	G - 5.12
M-3	PRIVATE	350.00	344.80 (15")	343.55 (15")	N 585,470.73 E 1,368,808.06	--	4' STD. MANHOLE	G - 5.12
M-4	PRIVATE	360.00	351.63 (15")	350.38 (15")	N 585,500.24 E 1,368,829.00	--	4' STD. MANHOLE	G - 5.12
R-1	PRIVATE	356.30	352.17 (4")	346.82 (18")	N 585,531.04 E 1,369,088.93	--	MODIFIED S INLET	SEE SHEET 9
R-2	PRIVATE	361.75	356.92 (4")	356.00 (15")	N 585,513.16 E 1,368,851.56	--	MODIFIED S INLET	SEE SHEET 10
R-3	PRIVATE	342.00	334.30 (4")	334.23 (24")	N 585,473.52 E 1,369,216.30	--	CONC. RISER	SEE SHEET 11
S-1	PRIVATE	–	335.00 (18")	–	N 585,531.04 E 1,369,088.93	--	18" HDPE END SECTION	ADS NYLOPLAST or EQUAL
S-2	PUBLIC	–	354.75 (18")	–	N 585,622.13 E 1,368,990.52	--	18" HDPE END SECTION	ADS NYLOPLAST or EQUAL
S-3	PRIVATE	–	337.05 (18")	–	N 585,513.90 E 1,369,123.08	--	18" HDPE END SECTION	ADS NYLOPLAST or EQUAL
S-4	PRIVATE	–	337.05 (18")	–	N 585,535.56 E 1,369,091.76	--	18" HDPE END SECTION	ADS NYLOPLAST or EQUAL
S-5	PRIVATE	–	337.24 (18")	–	N 585,409.08 E 1,368,843.71	--	18" HDPE END SECTION	ADS NYLOPLAST or EQUAL
HW-1	PRIVATE	–	333.87 (24")	–	N 585,496.53 E 1,369,035.68	--	# TYPE A HEADWALL	D - 5.11
EW-2	PRIVATE	346.40	343.40 (15")	–	N 585,458.50 E 1,368,799.38	--	MODIFIED TYPE C ENDWALL	SEE DETAIL, SHEET 10

*DENOTES TOP OF 'D' TYPE INLET. (THROAT ELEV = TOP ELEV. - 0.83')
I-4 & I-9 (THROAT ON 4 SIDES)
I-6, I-7 & I-8 (THROAT ON 3 SIDES)
I-5 (THROAT ON 2 SIDES)

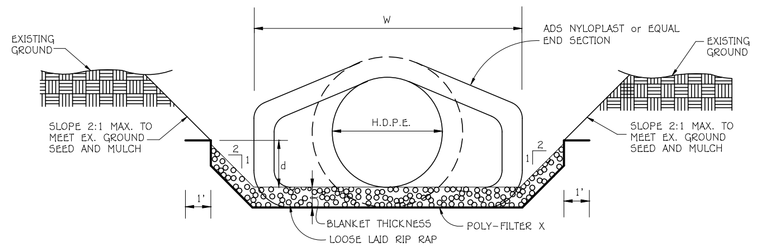
USE A 'TYPE A' HEADWALL w/DIMENSIONS FOR A 36" PIPE

PIPE SCHEDULE (PRIVATE)

SIZE	CLASS	LENGTH
15"	HDPE	176 L.F.
18"	HDPE	310 L.F.
36"	ASTM, C-361	36 L.F.
4"	PERF PVC	132 L.F.
4"	SOLID PVC	3 L.F.

PIPE SCHEDULE (PUBLIC)

SIZE	CLASS	LENGTH
15"	RCCP, CL. IV	65 L.F.
18"	HDPE	15 L.F.



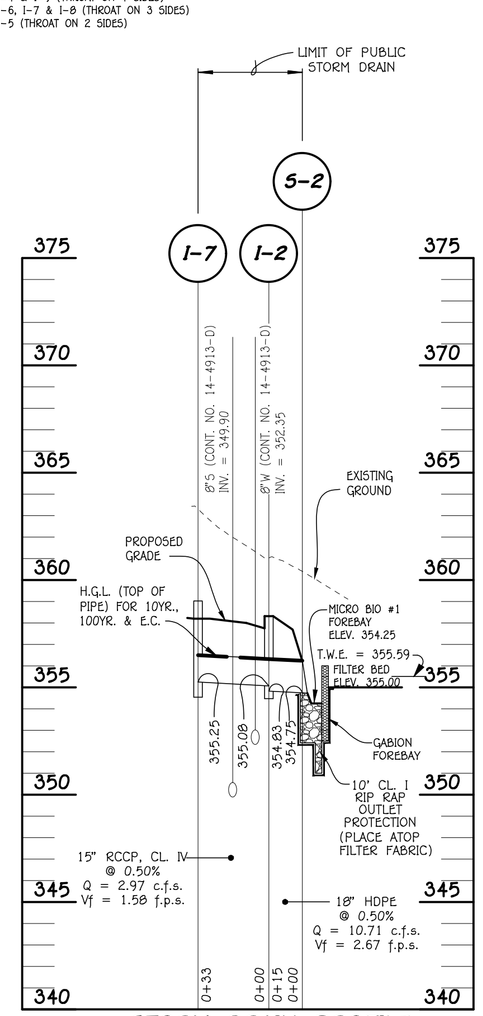
RIP RAP CHANNEL DETAIL
NO SCALE

RIP-RAP CHANNEL DESIGN DATA

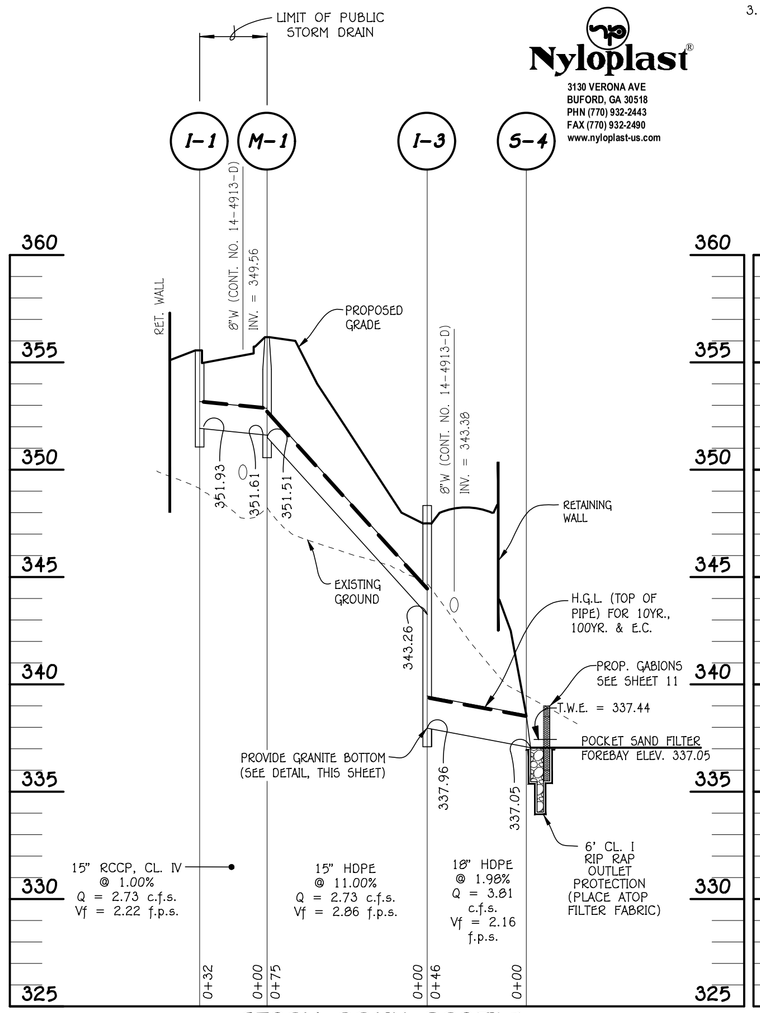
STRUCTURE	AREA	WETTED PERIMETER	R	R 2/3	S	S 1/2	W	d	N	V (f.p.s.)	Q (c.f.s.)	RIP-RAP SIZE D_{50}	RIP-RAP SIZE D_{MAX}	BLANKET THICKNESS
S-2	1.96	5.82	0.3367	0.4822	0.0050	0.0707	5.63	0.41	0.04	1.27	2.48	9.5"	15"	19"
S-3	5.80	8.36	0.6938	0.7827	0.0050	0.0707		0.41	0.04		11.88	9.5"	15"	19"
S-4	2.24	6.04	0.3727	0.5162	0.0050	0.0707		0.41	0.04		2.99	9.5"	15"	19"
S-6	1.05	5.05	0.2079	0.3491	0.0050	0.0707		0.41	0.04		0.96	9.5"	15"	19"

NOTES:

1. SEE SHEET 9 FOR PROFILE R-1 TO S-5.
2. SEE SHEET 10 FOR PROFILE R-2 TO EW-2.
3. SEE SHEET 11 FOR PROFILE R-3 TO HW-1.



STORM DRAIN PROFILE
SCALE: HORIZ. : 1" = 50'
VERT. : 1" = 5'



STORM DRAIN PROFILE
SCALE: HORIZ. : 1" = 50'
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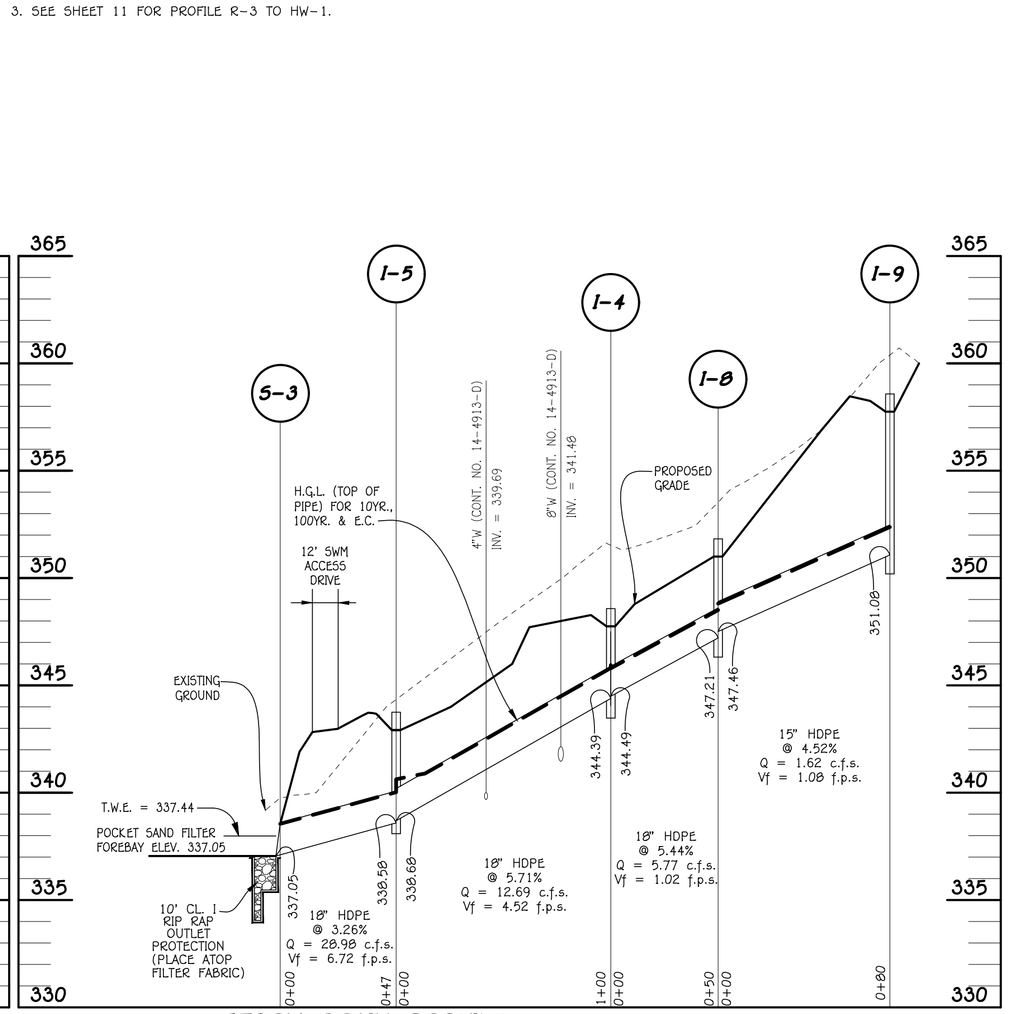
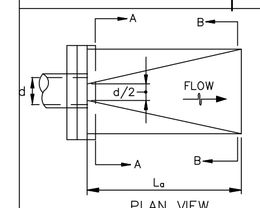


STORM DRAIN PROFILE
SCALE: HORIZ. : 1" = 50'
VERT. : 1" = 5'

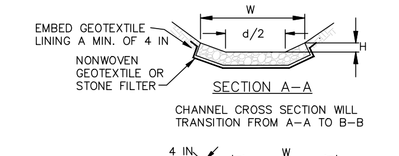
DETAIL D-4-1-A ROCK OUTLET PROTECTION

STANDARD SYMBOL

DISCHARGE TO SEMI CONFINED CHANNEL SECTION

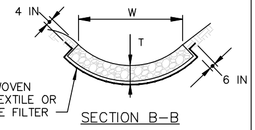


PLAN VIEW

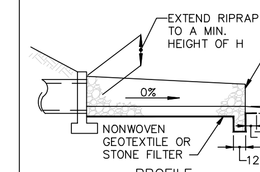


SECTION A-A

CHANNEL CROSS SECTION WILL TRANSITION FROM A-A TO B-B



SECTION B-B



PROFILE

RIPRAP	
CLASS	THICKNESS (T)
I	19 IN
II	32 IN
III	46 IN

CONSTRUCTION SPECIFICATIONS

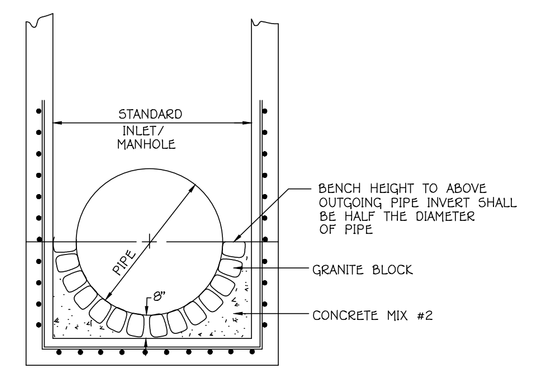
1. RIPRAP AND STONE MUST CONFORM TO THE SPECIFIED CLASS.
2. USE NONWOVEN GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS, AND PROTECT FROM PUNCTURING, CUTTING, OR TEARING. REPAIR ANY DAMAGE OTHER THAN AN OCCASIONAL SMALL HOLE BY PLACING ANOTHER PIECE OF GEOTEXTILE OVER THE DAMAGED PART OR BY COMPLETELY REPLACING THE GEOTEXTILE. PROVIDE A MINIMUM OF ONE FOOT OVERLAP FOR ALL REPAIRS AND FOR JOINING TWO PIECES OF GEOTEXTILE TOGETHER.
3. PREPARE THE SUBGRADE FOR GEOTEXTILE OR STONE FILTER (⅜ TO 1½ INCH STONE FOR 6 INCH MINIMUM DEPTH) AND RIPRAP TO THE REQUIRED LINES AND GRADES. COMPACT ANY FILL REQUIRED IN THE SUBGRADE TO A DENSITY OF APPROXIMATELY THAT OF THE SURROUNDING UNDISTURBED MATERIAL.
4. EXTEND GEOTEXTILE AT LEAST 6 INCHES BEYOND EDGES OF RIPRAP AND EMBED AT LEAST 4 INCHES AT SIDES OF THE RIPRAP.
5. CONSTRUCT RIPRAP OUTLET TO FULL COURSE THICKNESS IN ONE OPERATION AND IN SUCH A MANNER AS TO AVOID DISPLACEMENT OF UNDERLYING MATERIALS. PLACE STONE FOR RIPRAP OUTLET IN A MANNER THAT WILL ENSURE THAT IT IS REASONABLY HOMOGENOUS WITH THE SMALLER STONES AND SPALLS FILLING THE VOIDS BETWEEN THE LARGER STONES. PLACE RIPRAP IN A MANNER TO PREVENT DAMAGE TO THE STONE FILTER BLANKET OR GEOTEXTILE. HAND PLACE TO THE EXTENT NECESSARY.
6. WHERE NO ENDWALL IS USED, CONSTRUCT THE UPSTREAM END OF THE APRON SO THAT THE WIDTH IS TWO TIMES THE DIAMETER OF THE OUTLET PIPE, AND EXTEND THE STONE UNDER THE OUTLET BY A MINIMUM OF 18 INCHES.
7. CONSTRUCT APRON WITH 0% SLOPE ALONG ITS LENGTH AND WITHOUT OBSTRUCTIONS. PLACE STONE SO THAT IT BLENDS IN WITH EXISTING GROUND.
8. MAINTAIN LINE, GRADE, AND CROSS SECTION. KEEP OUTLET FREE OF EROSION. REMOVE ACCUMULATED SEDIMENT AND DEBRIS. AFTER HIGH FLOWS INSPECT FOR SCOUR AND DISLODGED RIPRAP. MAKE NECESSARY REPAIRS IMMEDIATELY.

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

CONSTRUCTION SPECIFICATIONS FOR RIP-RAP OUTFALLS

1. The subgrade for the filter, riprap or gabion shall be prepared to the required lines and grades. Any fill required in the subgrade shall be compacted to a density of approximately that of the surrounding undisturbed material.
2. The rock or gravel shall conform to the specified grading limits when installed respectively in the riprap or filter.
3. Filter cloth shall be protected from punching, cutting or tearing. Any damage other than an occasional shall hole shall be repaired by placing another piece of cloth over the damaged part or by completely replacing the cloth. All overlaps whether for repairs or for joining two pieces of cloth shall be a minimum of one foot.
4. Stone for the riprap or gabion outlets may be placed by equipment. Both shall each be constructed to the full course thickness in one operation and in such a manner as to avoid displacement of underlying materials. The stone for riprap or gabion outlets shall be delivered and placed in a manner that will insure that it is reasonably homogenous with the smaller stones and spalls filling the voids between the larger stones. Riprap shall be placed in a manner to prevent damage to the filter blanket or filter cloth. Hand placement will be required to the extent necessary to prevent damage to the permanent works.



GRANITE BLOCK DETAIL
NOT TO SCALE

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

Approved: Howard County Department Of Public Works
DocuSigned by: 24858218AE4DAAC2...
Chief, Bureau Of Highways — 9/11/2023 Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
DocuSigned by: Chad Edmondson 2B8D75AEF744409...
Chief, Development Engineering Division — 9/11/2023 Date
DocuSigned by: 2B1B1A78A22B49A...
Chief, Division of Land Development — 9/13/2023 Date

DATE	DESCRIPTION
	REVISIONS

"PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY 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. 20748, EXPIRATION DATE: 2-22-25."

STATE OF MARYLAND — ALDO MICHAEL VITUCCI — No. 20748 — PROFESSIONAL ENGINEER

Aldo M. Vitucci, P.E.

ALDO M. VITUCCI, P.E.

OWNERS
LACEY FAMILY REVOCABLE TRUST
12235 WILD ROSE COURT
MARRIOTTSVILLE, MD 21104
ATTN: MR. VINCENT LACEY

DEVELOPER
LAND HOLDINGS LLC
C\O B. JAMES GREENFIELD
6420 AUTUMN SKY WAY
COLUMBIA, MD 21044
443-324-4732

PROJECT			SECTION/AREA		PARCEL
LACEY PROPERTY			N/A		13
PLAT NOS.	BLOCK NO.	ZONE	TAX MAP	ELEC. DIST.	CENSUS TR.
–	1	R-ED	25	SECOND	602900

STORM DRAIN PROFILES

LACEY PROPERTY
LOTS 1 THRU 13 AND OPEN SPACE LOTS 14 THRU 17

ZONED: R-ED
PARCEL No.: 13
TAX MAP No.: 25 GRID No.: 1
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: JULY 10, 2023
SHEET 14 OF 24

F-21-015

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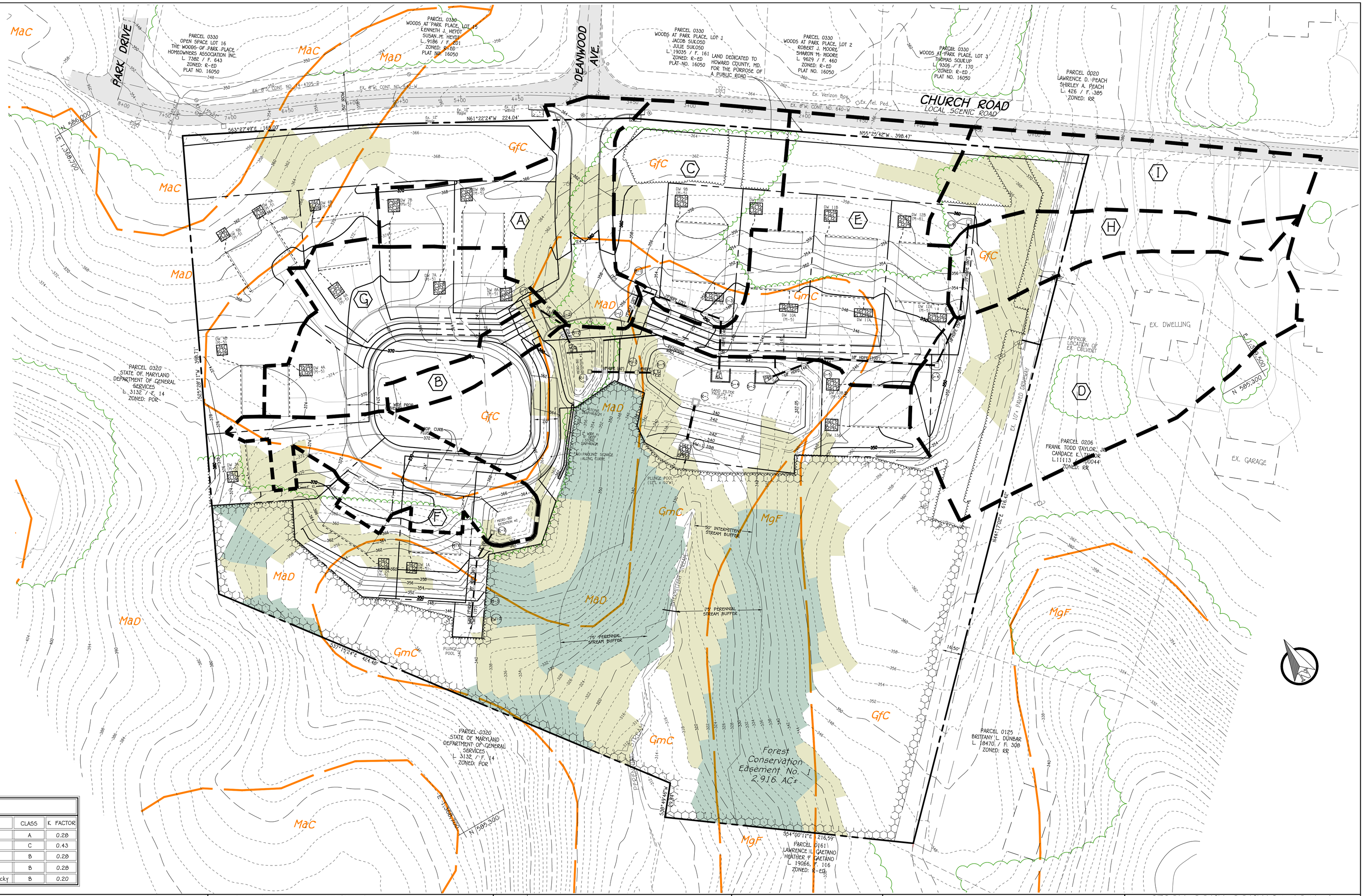
DRAINAGE AREA DATA

STRUCTURE NO.	DRAINAGE AREA	AREA	'C'	ZONED	% IMP.
I-1	A	0.51 AC.	0.54	R-ED	40%
I-2	B	0.11 AC.	0.38	R-ED	31%
I-3	C	0.54 AC.	0.28	R-ED	16%
I-4	D	1.07 AC.	0.50	R-ED	23%
I-5	E	0.85 AC.	0.42	R-ED	39%
I-6	F	0.44 AC.	0.51	R-ED	55%
I-7	G	0.54 AC.	0.52	R-ED	48%
I-8	H	0.31 AC.	0.40	R-ED	10%
I-9	I	0.48 AC.	0.52	R-ED	23%



SOILS LEGEND

SOIL	NAME	CLASS	K FACTOR
GfC	Gladstone-Urban land complex, 8 to 15 percent slopes	A	0.28
GmC	Glenville silt loam, 8 to 15 percent slopes	C	0.43
MaC	Manor loam, 8 to 15 percent slopes	B	0.28
MaD	Manor loam, 15 to 25 percent slopes	B	0.28
MgF	Manor-Bannertown sandy loams, 25 to 65 percent slopes, rocky	B	0.20

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(410) 461 - 2855

Approved: Howard County Department Of Public Works

Chief, Bureau Of Highways — 9/11/2023 — Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division — 9/11/2023 — Date

Chief, Division of Land Development — 9/13/2023 — Date

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Aldo M. Vitucci, P.E.

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443-324-4732

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LACEY PROPERTY			N/A		13
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-	1	R-ED	25	SECOND	602900

STORM DRAIN DRAINAGE AREA & SOILS MAP

LACEY PROPERTY
LOTS 1 THRU 13 AND OPEN SPACE LOTS 14 THRU 17

ZONED: R-ED
PARCEL No.: 13
TAX MAP No.: 25 GRID No.: 1
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: JULY 10, 2023
SHEET 15 OF 24

F-21-015

DocuSign Envelope ID: 79E9DBFB-CDDB-4FF4-A258-614B911C4A9B

RETAINING WALL GENERAL NOTES

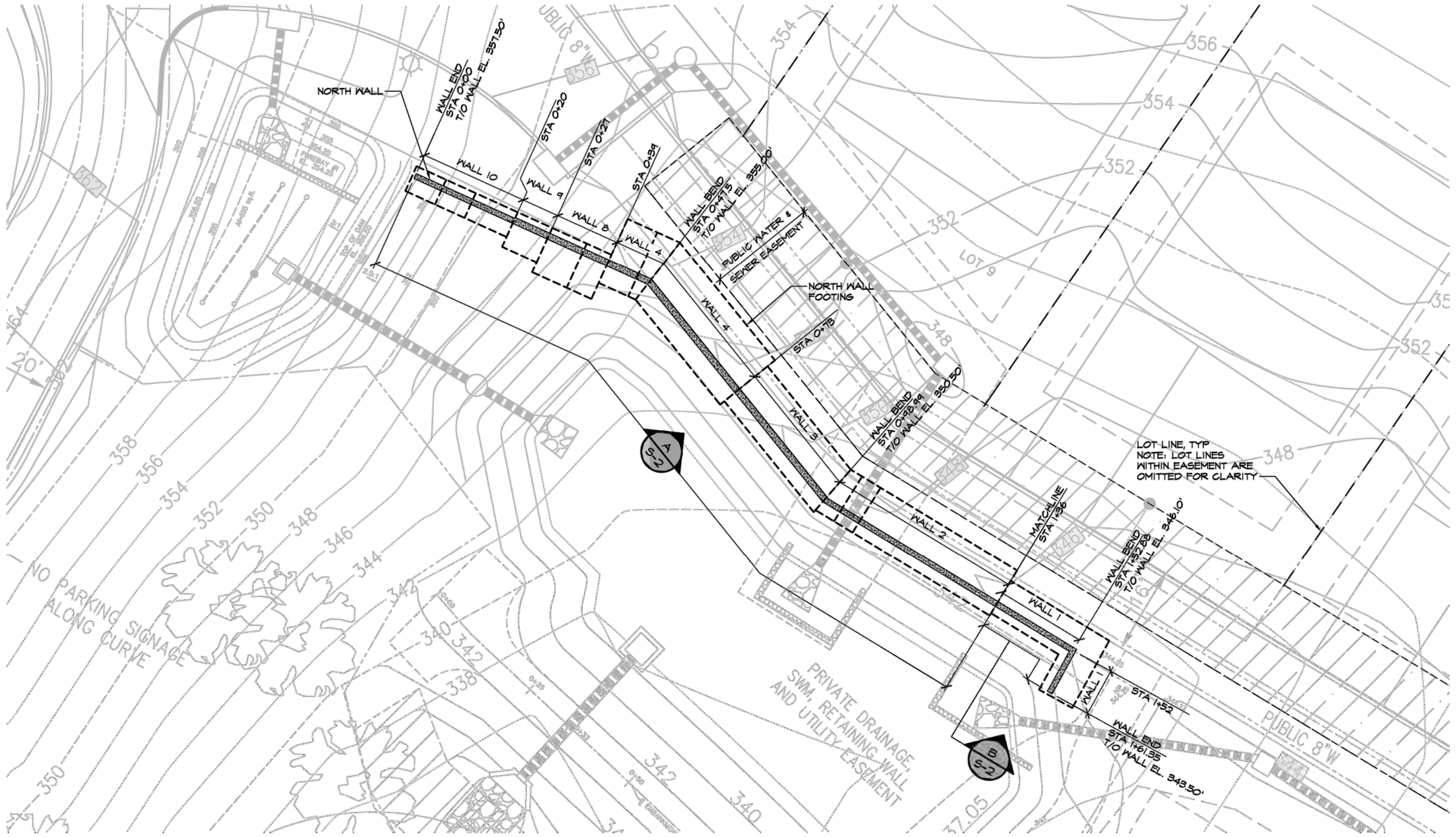
A. RETAINING WALLS SHALL ONLY BE CONSTRUCTED UNDER THE OBSERVATION OF A REGISTERED PROFESSIONAL ENGINEER AND A (NICET, MAGEL, OR EQUIVALENT) CERTIFIED SOILS TECHNICIAN.

B. THE REQUIRED BEARING PRESSURE BENEATH THE FOOTING OF THE WALL SHALL BE VERIFIED IN THE FIELD BY A CERTIFIED SOILS TECHNICIAN. TESTING DOCUMENTATION SHALL BE PROVIDED TO THE HOWARD COUNTY INSPECTOR PRIOR TO THE START OF CONSTRUCTION. THE REQUIRED TEST PROCEDURE SHALL BE THE DYNAMICCONE PENETROMETER TEST ASTM STP-399.

C. THE SUITABILITY OF FILL MATERIAL SHALL BE CONFIRMED BY THE ONSITE SOILS TECHNICIAN. EACH EIGHT (8) INCH LIFT SHALL BE COMPACTED TO A MINIMUM OF 95% STANDARD PROCTER DENSITY AND THE TESTING REPORT SHALL BE MADE AVAILABLE TO THE HOWARD COUNTY INSPECTOR UPON COMPLETION OF THE CONSTRUCTION.

D. FOR "CRITICAL" WALLS, ONE SOIL BORING SHALL BE REQUIRED EVERY 100' ALONG THE ENTIRE LENGTH OF THE WALL. COPIES OF ALL BORING REPORTS SHALL BE PROVIDED TO THE HOWARD COUNTY INSPECTOR PRIOR TO THE START OF CONSTRUCTION.

E. THE RETAINING WALLS SHALL BE PRIVATELY OWNED AND MAINTAINED BY THE HOME OWNER'S ASSOCIATION.



PARTIAL PLAN (NORTH)

SCALE: 1" = 15'-0"

NOTES:

1. LOCATION AND ELEVATION OF WALLS BASED ON CIVIL DRAWINGS PROVIDED BY FISHER, COLLINS & CARTER DATED 12/8/2022.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

DocuSigned by: 9/11/2023
CHIEF, BUREAU OF HIGHWAYS — DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING

DocuSigned by: 9/13/2023
CHIEF, DIVISION OF LAND DEVELOPMENT — DATE

DocuSigned by: 9/11/2023
CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE

OWNERS
CHARLES T LACEY SR (DECEASED) &
KARLOS LACEY CO-TRUSTEES
1235 WILD ROSE COURT
MARRIOTTSVILLE, MD 21104

DEVELOPER
LAND HOLDINGS LLC
C\O B. JAMES GREENFIELD
6420 AUTUMN SKY WAY
COLUMBIA, MD 21044
443-324-4732

PROJECT			SECTION/AREA		PARCEL
LACEY PROPERTY			N/A		13
PLAT NOS.	BLOCK NO.	ZONE	TAX MAP	ELEC. DIST.	CENSUS TR.
-	1	R-ED	25	SECOND	602900

LACEY PROPERTY
PARTIAL PLANS

ZONED: R-ED
PARCEL No.: 13
TAX MAP No.: 25 GRID No.: 1
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: 1" = 15'-0"

County File Reference: F-21-015

MRA
Buildings Group
MORRIS & RITCHIE ASSOCIATES, INC.
Architects, Engineers, Planners, Surveyors, and Landscape Architects
1220-C East Joppa Road
Suite 505
Towson, Maryland 21286
410-821-1690
410-821-1748 Fax

Lacey Property (Retaining Walls)

Ellicott City, Maryland

STATE OF MARYLAND — JAMES S. GREENFIELD — 30729 — REGISTERED PROFESSIONAL ENGINEER

PROFESSIONAL CERTIFICATION
I hear\by 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. 30729, Expiration Date: 07/11/2023.

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NO.	REVISION	DATE

FILE	DRAWN	ISSUED
21040	JAG	03/08/23

SHEET TITLE
Partial Plans

SHEET NUMBER
S-1

039

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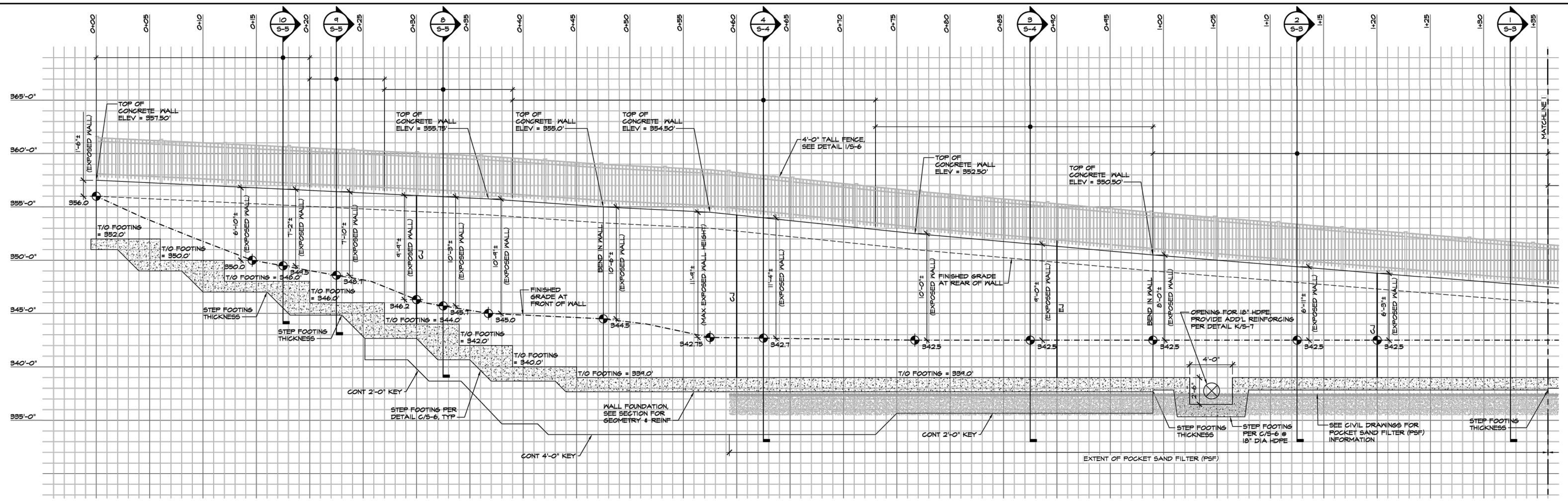
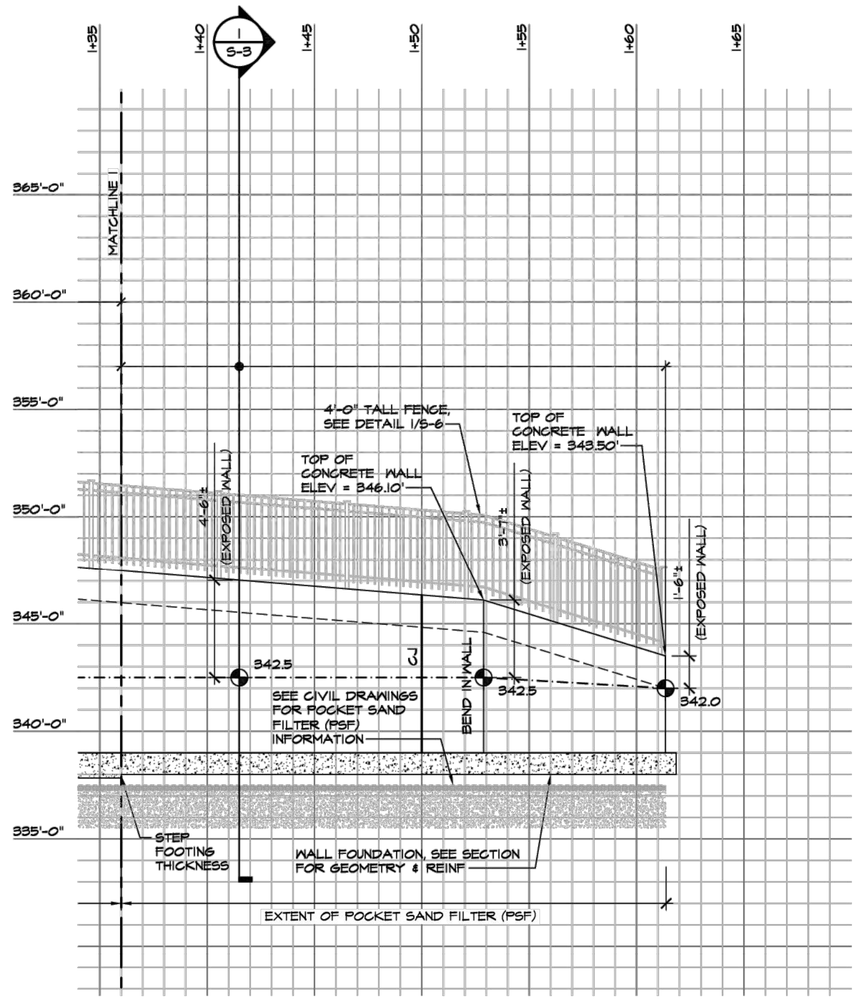


A S-1 NORTH RETAINING WALL ELEVATION 1

SCALE: 1" = 5'-0"

NOTES:

1. SEE CIVIL DRAWINGS FOR ADDITIONAL DETAILS.
2. "CJ" IN ELEVATION INDICATES LOCATION OF WALL CONSTRUCTION JOINT, SEE DETAIL H/S-6 FOR ADD'L INFORMATION.
3. "EJ" IN ELEVATION INDICATES LOCATION OF WALL CONSTRUCTION JOINT, SEE DETAIL G/S-6 FOR ADD'L INFORMATION.
4. "BEND IN WALL" IN ELEVATION INDICATES LOCATIONS OF WALL CORNERS, SEE DETAIL A/S-6 & E/S-6 FOR ADD'L INFORMATION.



B S-1 NORTH RETAINING WALL ELEVATION 2

SCALE: 1" = 5'-0"

NOTES:

1. SEE CIVIL DRAWINGS FOR ADDITIONAL DETAILS.
2. "CJ" IN ELEVATION INDICATES LOCATION OF WALL CONSTRUCTION JOINT, SEE DETAIL H/S-6 FOR ADD'L INFORMATION.
3. "EJ" IN ELEVATION INDICATES LOCATION OF WALL CONSTRUCTION JOINT, SEE DETAIL G/S-6 FOR ADD'L INFORMATION.
4. "BEND IN WALL" IN ELEVATION INDICATES LOCATIONS OF WALL CORNERS, SEE DETAIL A/S-6 & E/S-6 FOR ADD'L INFORMATION.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

DocuSigned by: 9/11/2023
CHIEF, BUREAU OF HIGHWAYS — DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING

DocuSigned by: 9/13/2023
CHIEF, DIVISION OF LAND DEVELOPMENT — DATE

DocuSigned by: 9/11/2023
CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE

OWNERS
CHARLES T LACEY SR (DECEASED) &
KARLOS LACEY CO-TRUSTEES
1235 WILD ROSE COURT
MARRIOTTSVILLE, MD 21104

DEVELOPER
LAND HOLDINGS LLC
C\O B. JAMES GREENFIELD
6420 AUTUMN SKY WAY
COLUMBIA, MD 21044
443-324-4732

PROJECT			SECTION/AREA		PARCEL
LACEY PROPERTY			N/A		13
PLAT NOS.	BLOCK NO.	ZONE	TAX MAP	ELEC. DIST.	CENSUS TR.
-	1	R-ED	25	SECOND	602900

LACEY PROPERTY
NORTH WALL ELEVATIONS

ZONED: R-ED
PARCEL No.: 13
TAX MAP No.: 25 GRID No.: 1
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: 1" = 5'-0"

County File Reference: F-21-015

MRA Buildings Group
MORRIS & RITCHIE ASSOCIATES, INC.
Architects, Engineers, Planners, Surveyors, and Landscape Architects
1220-C East Joppa Road
Suite 505
Towson, Maryland 21286
410-821-1690
410-821-1748 Fax

040

Lacey Property (Retaining Walls)

Ellicott City, Maryland

STATE OF MARYLAND — JAMES R. GREENFIELD — No. 30729 — PROFESSIONAL ENGINEER

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. 30729, Expiration Date: 07/11/2023.

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NO.	REVISION	DATE

FILE	DRAWN	ISSUED
21040	JAG	03/08/23

SHEET TITLE
North Wall Elevations

SHEET NUMBER
S-2

Sheet 17 of 24

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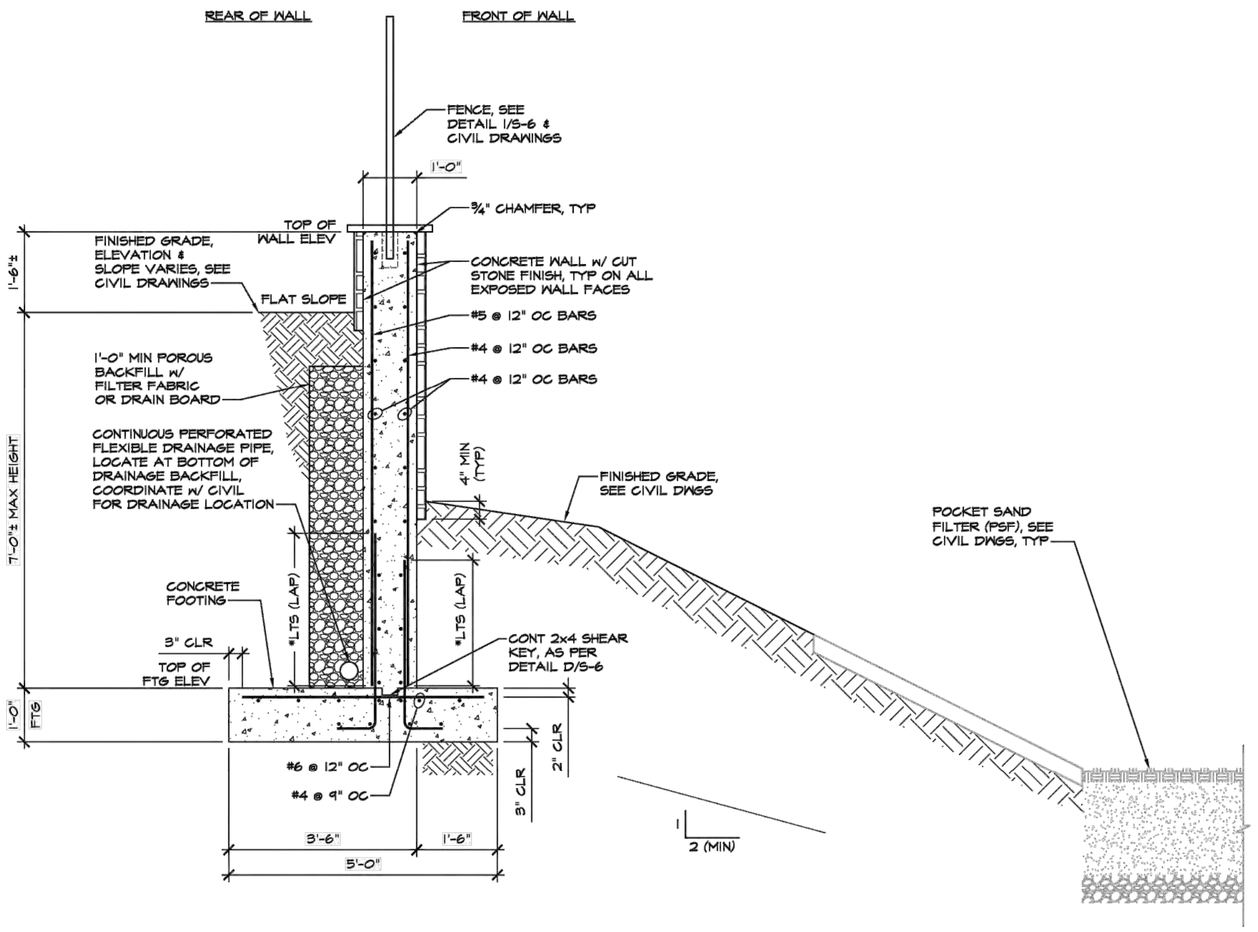
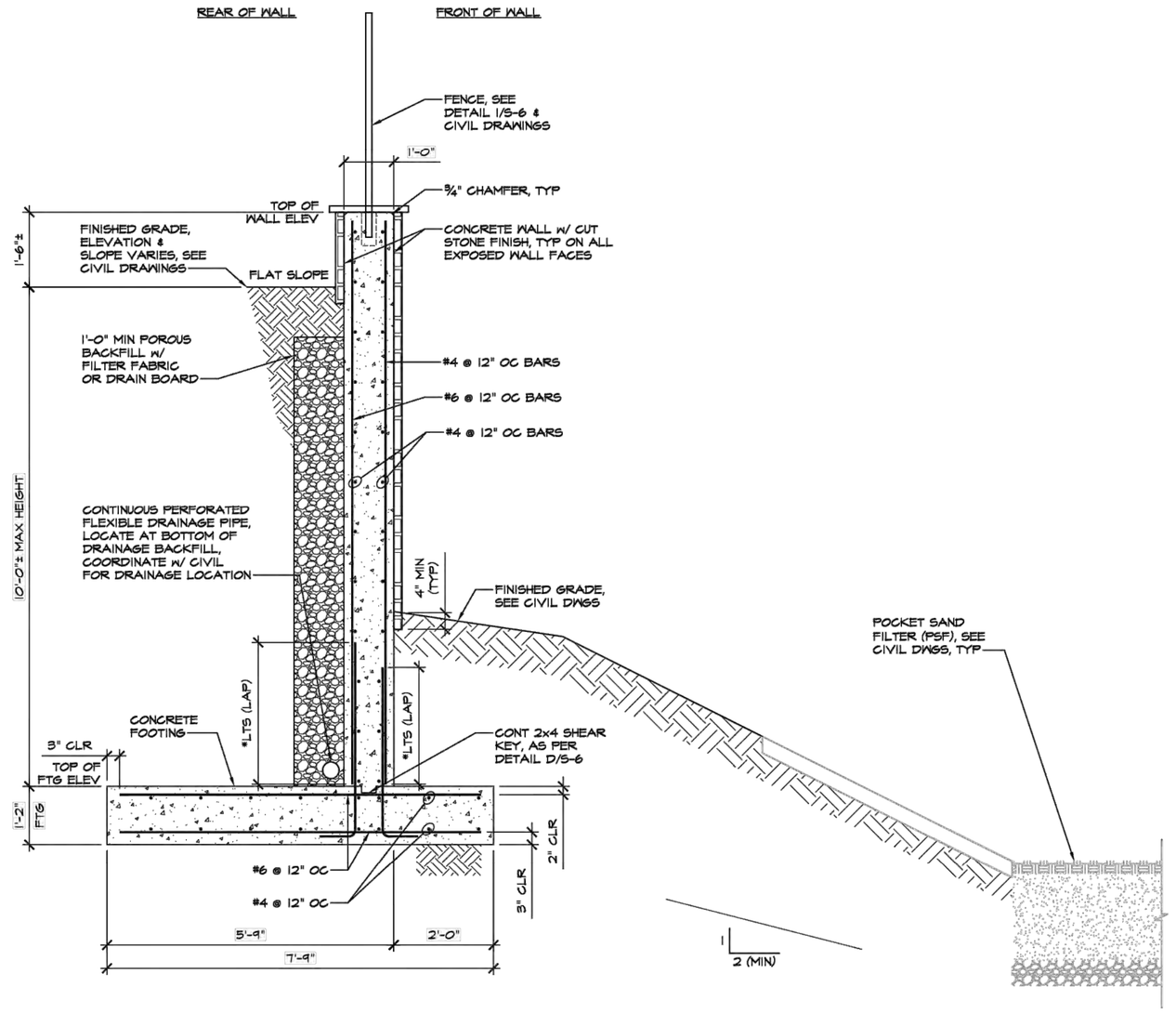


1 S-2 NORTH RETAINING WALL SECTION AT POCKET SAND FILTER - WALL 1

SCALE: ½" = 1'-0"



2 S-2 NORTH RETAINING WALL SECTION AT POCKET SAND FILTER - WALL 2

SCALE: ½" = 1'-0"

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

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CHIEF, BUREAU OF HIGHWAYS — DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING

DocuSigned by: [signature] 9/13/2023

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE

DocuSigned by: [signature] 9/11/2023

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE

OWNERS

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DEVELOPER

LAND HOLDINGS LLC
C\O B. JAMES GREENFIELD
6420 AUTUMN SKY WAY
COLUMBIA, MD 21044
443-324-4732

PROJECT			SECTION/AREA		PARCEL
LACEY PROPERTY			N/A		13
PLAT NOS.	BLOCK NO.	ZONE	TAX MAP	ELEC. DIST.	CENSUS TR.
-	1	R-ED	25	SECOND	602900

LACEY PROPERTY
NORTH WALL SECTIONS

ZONED: R-ED
PARCEL No.: 13
TAX MAP No.: 25 GRID No.: 1
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: 1/2" = 1'-0"

County File Reference: F-21-015

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1220-C East Joppa Road
Suite 505
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041

Lacey Property (Retaining Walls)

Ellicott City, Maryland

STATE OF MARYLAND — JAMES BUCKLEY — 30729 — 07/11/2023 — PROFESSIONAL ENGINEER

PROFESSIONAL CERTIFICATION

I hearby 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. 30729, Expiration Date: 07/11/2023.

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NO.	REVISION	DATE

FILE	DRAWN	ISSUED
21040	JAG	03/08/23

SHEET TITLE

North Wall Sections

SHEET NUMBER

S-3

Sheet 18 of 24

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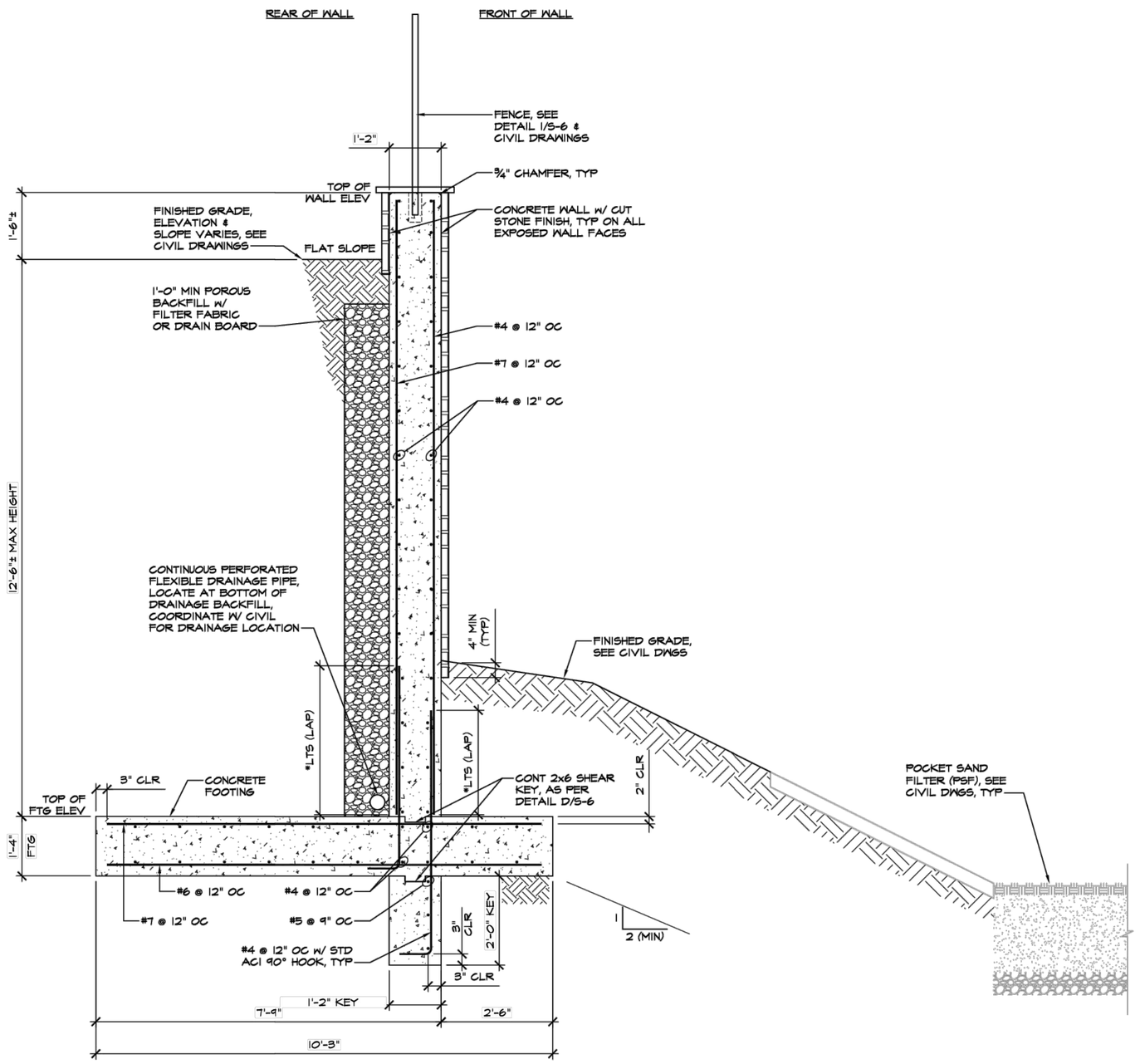
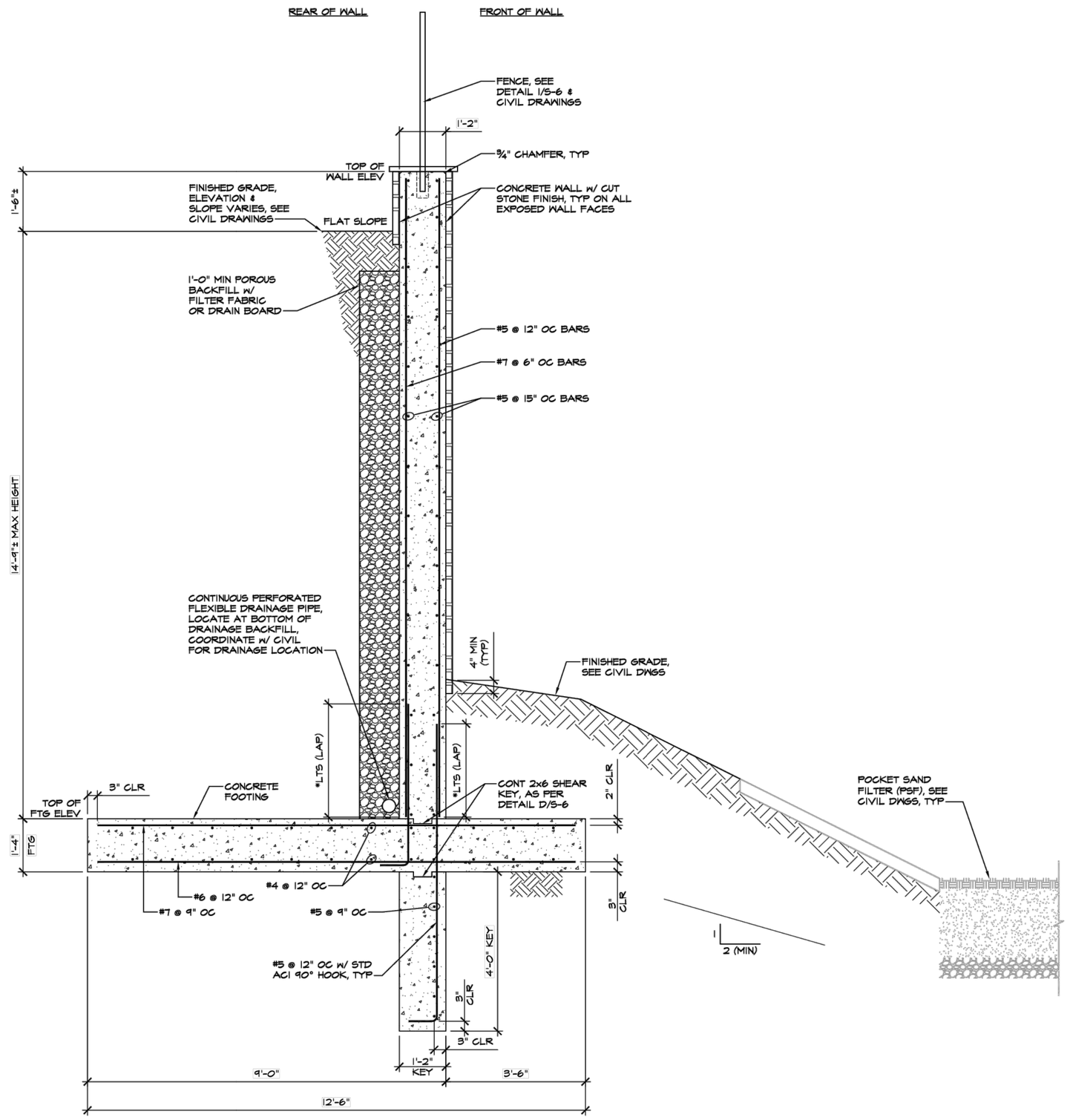


3 S-2 NORTH RETAINING WALL SECTION AT POCKET SAND FILTER - WALL 3

SCALE: ½" = 1'-0"



4 S-2 NORTH RETAINING WALL SECTION AT POCKET SAND FILTER - WALL 4

SCALE: 1/2" = 1'-0"

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

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CHIEF, BUREAU OF HIGHWAYS — DATE 9/11/2023

APPROVED: DEPARTMENT OF PLANNING AND ZONING

DocuSigned by: [signature] 5AE69A4E4DAA402...

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 9/13/2023

DocuSigned by: (Chad) Edmondson

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 9/11/2023

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PROJECT			SECTION/AREA	ELEC. DIST.	PARCEL
LACEY PROPERTY			N/A	SECOND	13
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LACEY PROPERTY
NORTH WALL SECTIONS

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Ellicott City, Maryland

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NO.	REVISION	DATE

FILE	DRAWN	ISSUED
21040	JAG	03/08/23

SHEET TITLE

North Wall Sections

SHEET NUMBER

S-4

Sheet 19 of 24

V:\bg_PROJECTS\21000-21099\21040 - Lacey Property Retaining Wall\300 Structural\306 Construction Documents\Structural Set S-X
3/8/2023

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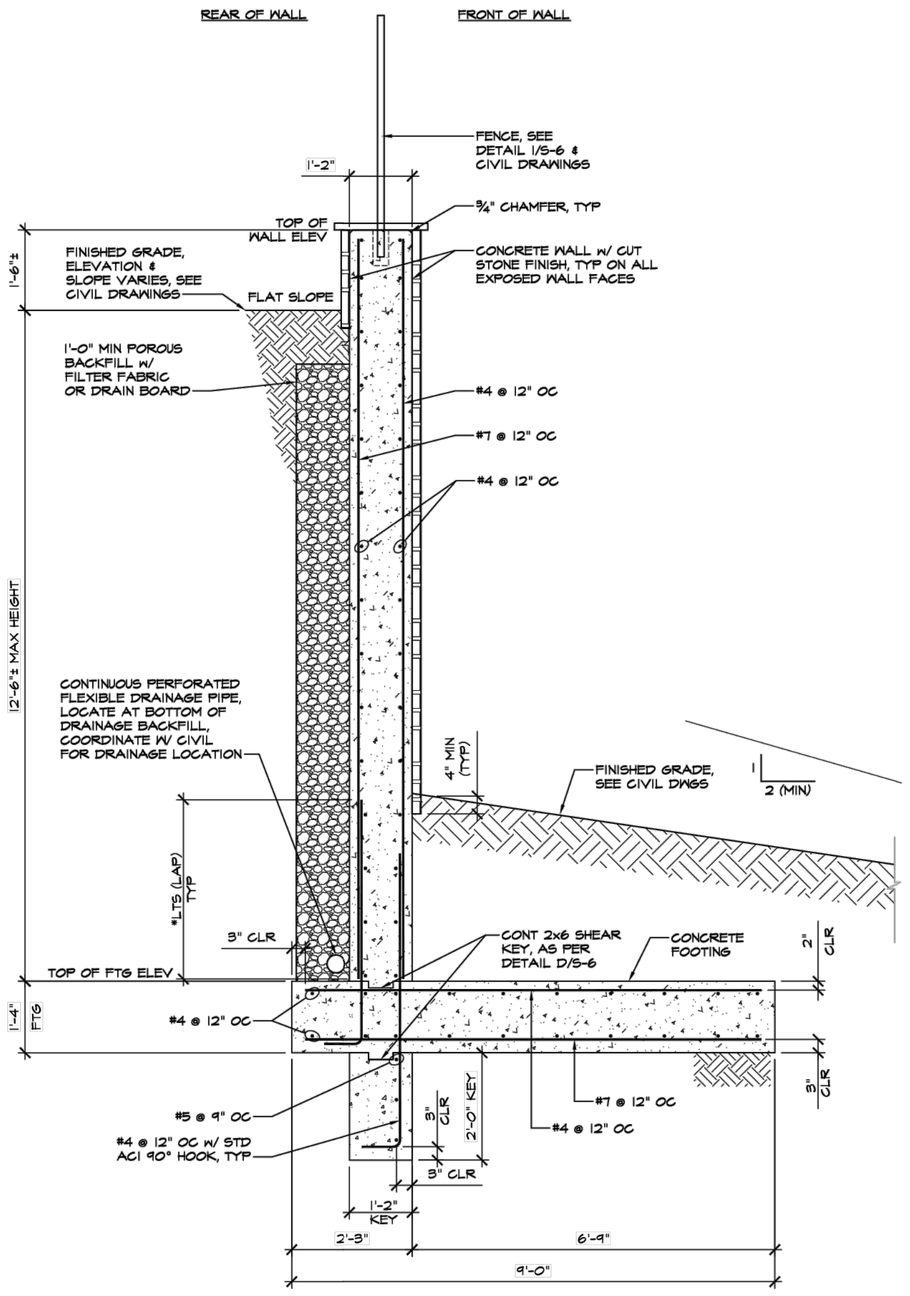
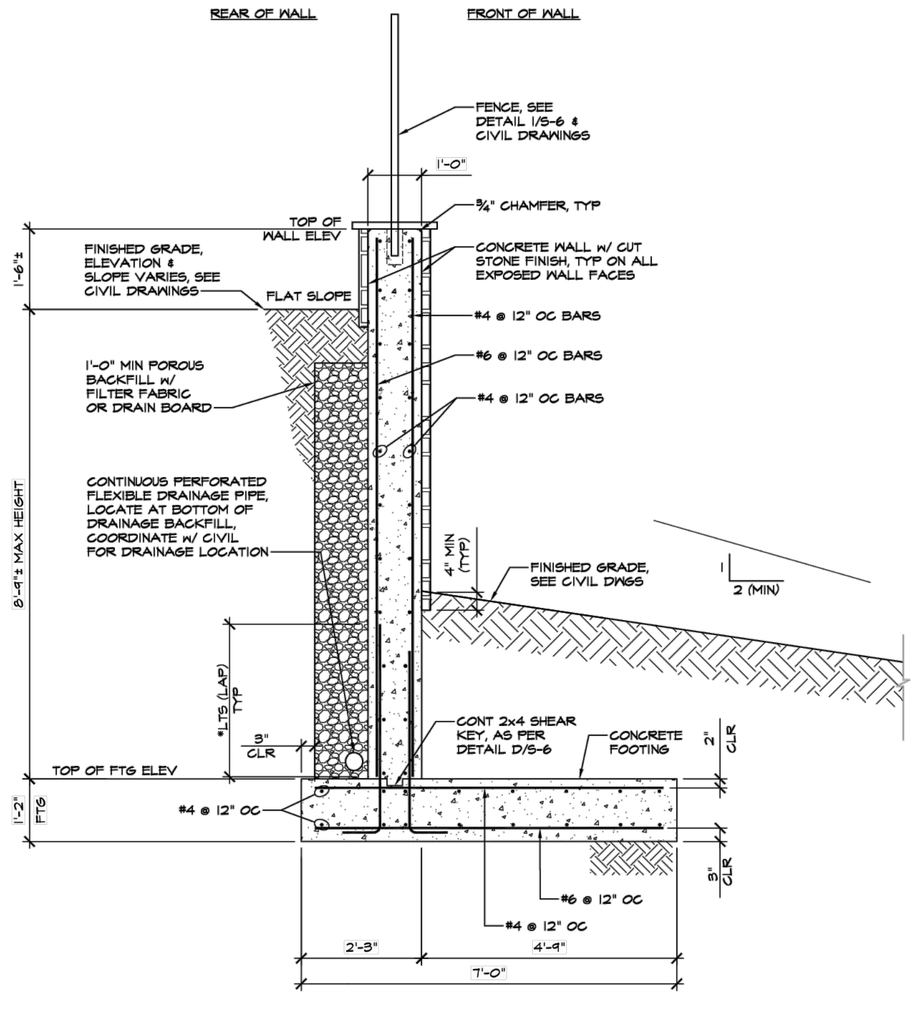


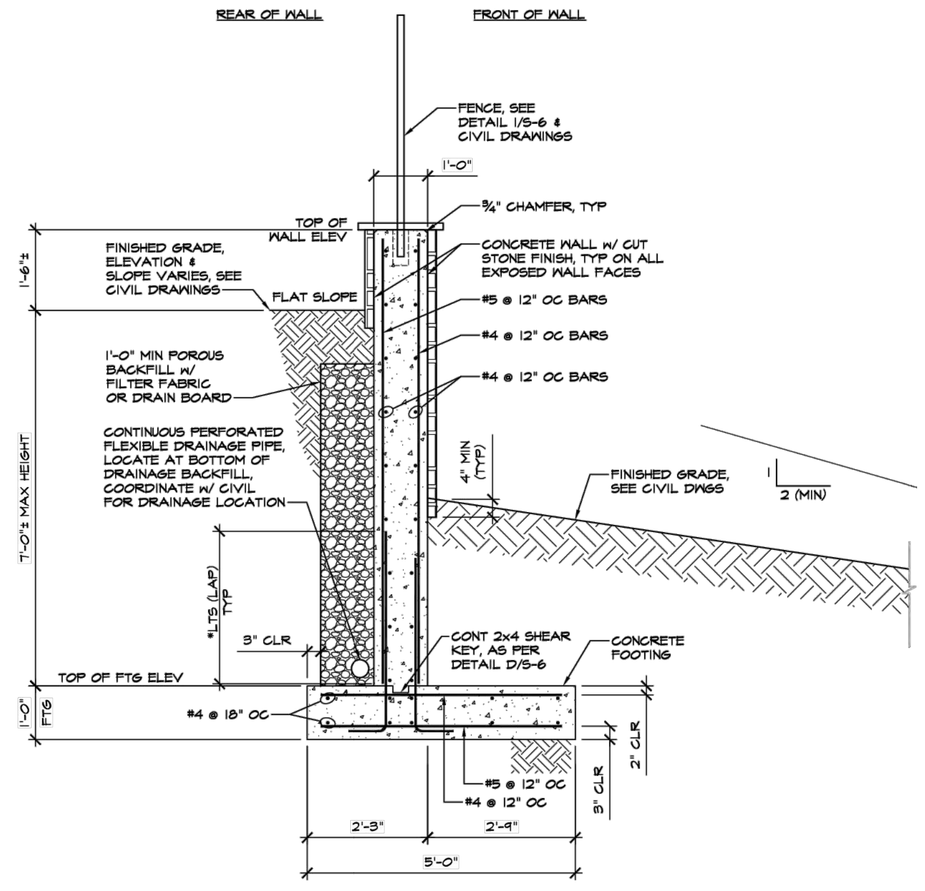
8 S-2 NORTH RETAINING WALL SECTION - WALL 8

SCALE: ½" = 1'-0"



9 S-2 NORTH RETAINING WALL SECTION - WALL 9

SCALE: ½" = 1'-0"



10 S-2 NORTH RETAINING WALL SECTION - WALL 10

SCALE: ½" = 1'-0"

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CHIEF, BUREAU OF HIGHWAYS — DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING

DocuSigned by: 9/13/2023

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE

DocuSigned by: (Hal) Edmondson 9/11/2023

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE

OWNERS

CHARLES T LACEY SR (DECEASED) &
KARLOS LACEY CO-TRUSTEES
1235 WILD ROSE COURT
MARRIOTTSVILLE, MD 21104

DEVELOPER

LAND HOLDINGS LLC
C\O B. JAMES GREENFIELD
6420 AUTUMN SKY WAY
COLUMBIA, MD 21044
443-324-4732

PROJECT			SECTION/AREA		PARCEL
LACEY PROPERTY			N/A		13
PLAT NOS.	BLOCK NO.	ZONE	TAX MAP	ELEC. DIST.	CENSUS TR.
–	1	R-ED	25	SECOND	602900

LACEY PROPERTY
NORTH WALL SECTIONS

ZONED: R-ED
PARCEL No.: 13
TAX MAP No.: 25 GRID No.: 1
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: 1/2" = 1'-0"

County File Reference: F-21-015

MRA Buildings Group
MORRIS & RITCHIE ASSOCIATES, INC.
Architects, Engineers, Planners, Surveyors, and Landscape Architects
1220-C East Joppa Road
Suite 505
Towson, Maryland 21286
410-821-1690
410-821-1748 Fax

Lacey Property (Retaining Walls)

Ellicott City, Maryland

STATE OF MARYLAND — JAMES SUMWALT — No. 30729 — PROFESSIONAL ENGINEER

PROFESSIONAL CERTIFICATION

I hearby 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. 30729, Expiration Date: 07/11/2023.

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MORRIS AND RITCHIE ASSOC., INC.

NO.	REVISION	DATE

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SHEET TITLE

North Wall Sections

SHEET NUMBER

S-5

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3/7/2023

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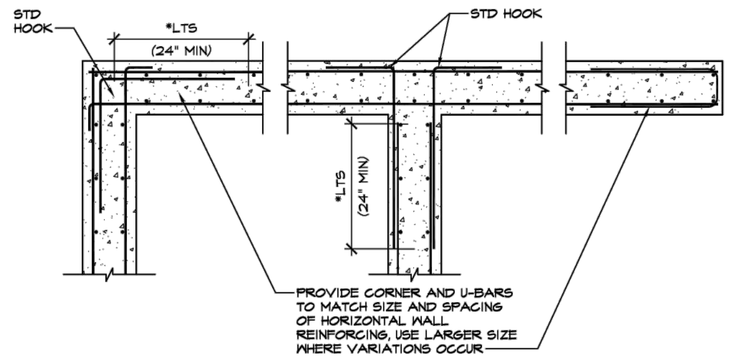
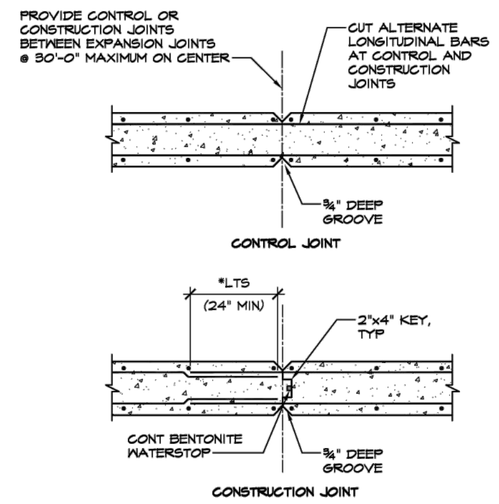
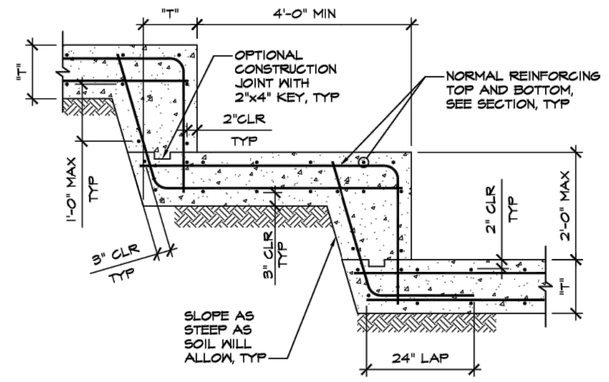


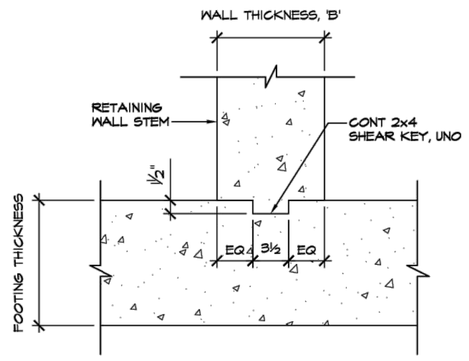
A CONCRETE WALL CORNER REINFORCING
SCALE: NTS



B CONTROL STRUCTURE WALL JOINTS
SCALE: NTS

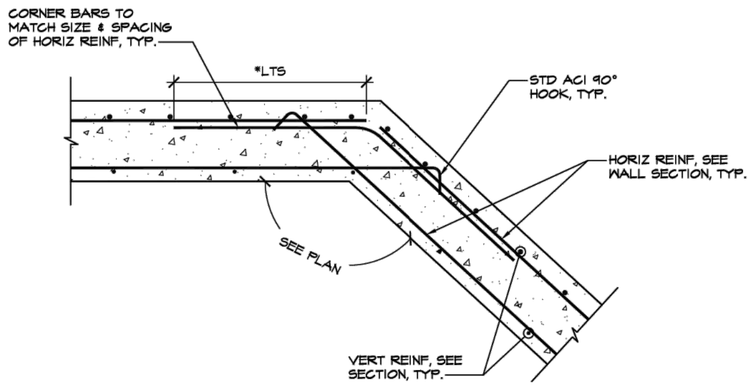


C TYPICAL STEPPED RETAINING WALL FOOTING
SCALE: NTS

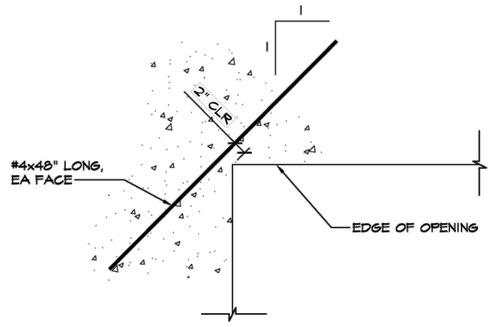


*REINFORCING NOT SHOWN FOR CLARITY

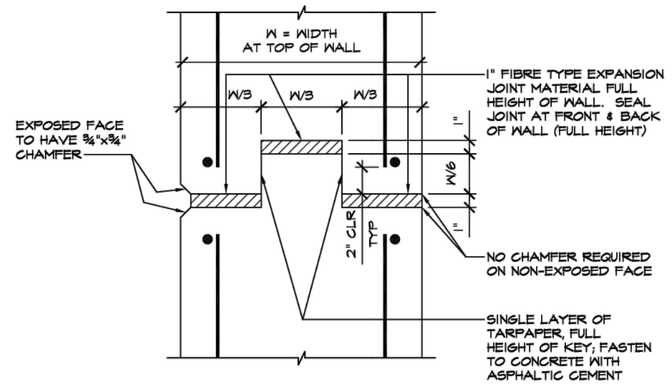
D RETAINING WALL KEY
SCALE: NTS



E REINFORCING @ BEND IN WALL
SCALE: NTS



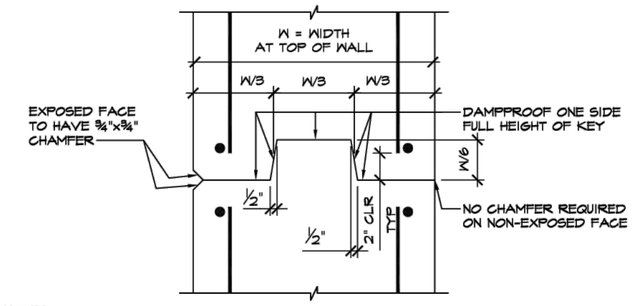
F ADDITIONAL REINFORCING
SCALE: NTS



NOTES:

1. CONCRETE RETAINING WALLS SHALL HAVE EXPANSION JOINTS WITH 1" SPONGE TYPE MATERIAL A MAXIMUM OF EVERY 90'-0".
2. STOP KEY 9" BELOW TOP OF WALL, CHAMFER TO CONTINUE TO TOP OF WALL.
3. REINFORCING STEEL SHALL NOT PASS THROUGH EXPANSION JOINT.
4. ALL KEYS ARE NOMINAL SIZE.
5. ONLY PLACE EXPANSION JOINTS IN STEMS (NO JOINT IN FOOTINGS).

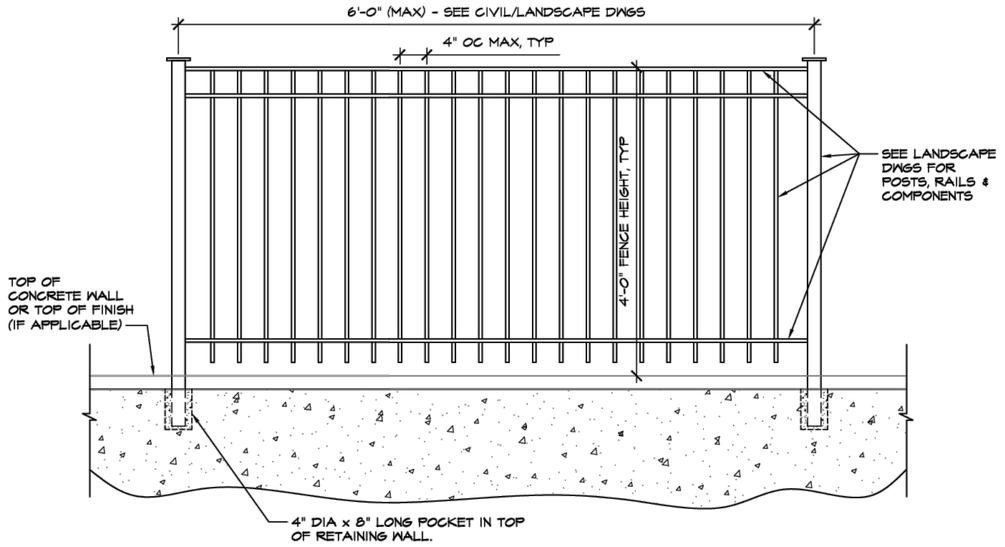
G CONCRETE WALL EXPANSION JOINTS
SCALE: NTS



NOTES:

1. CONCRETE RETAINING WALLS SHALL HAVE CONTROL/CONSTRUCTION JOINTS SPACED ROUGHLY 3 TIMES THE WALL HEIGHT NOT TO EXCEED 30'-0".
2. STOP KEY 9" BELOW TOP OF WALL, CHAMFER TO CONTINUE TO TOP OF WALL.
3. REINFORCING STEEL SHALL NOT PASS THROUGH CONSTRUCTION JOINT.
4. ALL KEYS ARE NOMINAL SIZE.
5. ONLY PLACE CONTROL/CONSTRUCTION JOINTS IN STEMS (NO JOINT IN FOOTINGS).

H CONCRETE WALL CONTROL/CONSTRUCTION JOINTS
SCALE: NTS



HANDRAIL ASSEMBLY SHALL MEET ALL CODE REQUIREMENTS, INCLUDING HAVING CAPACITY TO SUPPORT THE FOLLOWING LOADS (LOADS A & B DO NOT ACT CONCURRENT):

LOAD A = 200 LBS CONCENTRATED LOAD (IN ANY DIRECTION AT ANY POINT ALONG TOP RAIL)

LOAD B = 50 LB/FT (IN ANY DIRECTION APPLIED ALONG TOP RAIL).

PICKETS SHALL BE SPACED A MAXIMUM OF 4" OC, TYP.

I RETAINING WALL WITH HANDRAIL
SCALE: ¾" = 1'-0"

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CHIEF, BUREAU OF HIGHWAYS — DATE

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LACEY PROPERTY
TYPICAL DETAILS

ZONED: R-ED
PARCEL No.: 13
TAX MAP No.: 25 GRID No.: 1
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN

County File Reference: F-21-015

MRA 044
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Lacey Property (Retaining Walls)

Ellicott City, Maryland

STATE OF MARYLAND — JAMES BURNS GREENFIELD — No. 30729 — PROFESSIONAL ENGINEER — 07/11/2023

PROFESSIONAL CERTIFICATION
I hearby 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. 30729, Expiration Date: 07/11/2023.

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NO.	REVISION	DATE

FILE	DRAWN	ISSUED
21040	JAG	03/08/23

SHEET TITLE
Typical Details

SHEET NUMBER
S-6

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9/6/2023

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STRUCTURAL NOTES

BUILDING CODES

A. ALL CONSTRUCTION SHALL CONFORM WITH:
- THE INTERNATIONAL BUILDING CODE (IBC-2015) AND ALL APPLICABLE SUPPLEMENTS.
- MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES (ASCE7-10).

B. IN ADDITION, ALL CONSTRUCTION SHALL CONFORM WITH THE GOVERNING LOCAL BUILDING CODE.

DESIGN LOAD

A. THE DESIGN DEAD LOADING FOR ALL FRAMING IS BASED ON THE CONSTRUCTION MATERIALS SHOWN ON THE DRAWINGS AND INDICATED IN THE SPECIFICATIONS.

B. RISK CATEGORY: I

C. THE CONTRACTOR SHALL NOT STORE ANY CONSTRUCTION MATERIALS OR UNDERTAKE ANY CONSTRUCTION OPERATION WHICH WILL EXCEED THE DESIGN LIVE LOADINGS NOTED.

D. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE DESIGN, INSTALLATION AND REMOVAL OF TEMPORARY BRACING AND CONSTRUCTION SUPPORTS FOR NEW AND EXISTING STRUCTURES, AS REQUIRED TO COMPLETE THE PROJECT. THE STABILITY OF THE STRUCTURE IS DEPENDENT UPON THE DIAPHRAGM ACTION OF THE FLOORS AND ROOF. THE CONTRACTOR IS COMPLETELY RESPONSIBLE FOR THE METHOD OF CONSTRUCTION AND SHALL PROVIDE ALL TEMPORARY BRACING AND SHORING REQUIRED TO MAINTAIN THE STABILITY OF THE STRUCTURE AND TO SUPPORT CONSTRUCTION LOADS DURING CONSTRUCTION. CONTRACTOR SHALL RETAIN STRUCTURAL ENGINEER LICENSED IN THE STATE IN WHICH PROJECT IS LOCATED TO DESIGN TEMPORARY BRACING AND CONSTRUCTION SUPPORTS.

MISCELLANEOUS

A. SHOP DRAWINGS FOR ALL STRUCTURAL ELEMENTS SHOWN ON THE CONTRACT DOCUMENTS MUST BE SUBMITTED BY THE CONTRACTOR OR OWNER FOR REVIEW BY THE ENGINEER. IF THE CONTRACTOR OR OWNER FAILS TO SUBMIT THE SHOP DRAWINGS, THE ENGINEER WILL NOT BE RESPONSIBLE FOR STRUCTURAL CERTIFICATION AND DESIGN OF THE PROJECT. THE SHOP DRAWINGS SHALL INDICATE ANY DEVIATIONS OR OMISSIONS FROM THE CONTRACT DOCUMENTS. THE GENERAL CONTRACTOR SHALL REVIEW ALL SHOP DRAWINGS PRIOR TO SUBMISSION AND MAKE ALL CORRECTIONS DEEMED NECESSARY.

B. SEE CIVIL CONTRACT DOCUMENTS FOR ADDITIONAL INFORMATION RELATING TO THE COORDINATION OF STRUCTURAL COMPONENTS.

C. THE CONTRACTOR SHALL REVIEW THE CIVIL DRAWINGS FOR LOCATION AND DIMENSION OF CHASES, INSERTS, OPENINGS, SLEEVES, DEPRESSIONS AND OTHER PROJECT REQUIREMENTS WHICH IMPACT THE STRUCTURAL COMPONENTS. THE STRUCTURAL CONSTRUCTION DRAWINGS DO NOT SHOW ALL OPENINGS REQUIRED. ADDITIONAL OPENINGS, BLOCKOUTS AND SLEEVES MAY BE REQUIRED BY OTHER DISCIPLINES AND SHALL BE CONSTRUCTED USING THE TYPICAL DETAILS AND/OR CRITERIA INDICATED THE STRUCTURAL DRAWINGS. OPENINGS REQUIRED BUT NOT SHOWN ON THE STRUCTURAL DRAWINGS MUST BE APPROVED BY THE STRUCTURAL ENGINEER.

D. IN CASES OF CONFLICT BETWEEN THE DRAWINGS AND/OR SPECIFICATIONS AND OTHER DISCIPLINES OR EXISTING CONDITIONS, CONTRACTOR SHALL NOTIFY THE DESIGN PROFESSIONALS AND OBTAIN CLARIFICATION PRIOR TO BIDDING AND PROCEEDING WITH WORK.

E. THE CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS SHOWN ON THE CONTRACT DRAWINGS BEFORE PROCEEDING WITH CONSTRUCTION. ALL DISCREPANCIES AND OMISSIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT.

F. THE CONTRACTOR SHALL NOT SUBMIT REPRODUCTIONS OF THE STRUCTURAL CONTRACT DOCUMENTS AS SHOP DRAWINGS.

G. SCALES SHOWN ON THE STRUCTURAL CONTRACT DRAWINGS ARE FOR GENERAL INFORMATION ONLY. DIMENSIONAL INFORMATION SHALL NOT BE OBTAINED BY SCALING THE DRAWINGS.

H. APPLY DETAILS, SECTIONS AND NOTES ON THE DRAWINGS WHERE CONDITIONS ARE SIMILAR TO THOSE INDICATED BY DETAIL, DETAIL TITLE OR NOTE.

I. CENTERLINES OF FOUNDATIONS COINCIDE WITH GRID LINE INTERSECTIONS, UNLESS NOTED OTHERWISE.

J. CENTERLINE OF WALLS COINCIDE WITH CENTERLINES OF FOUNDATIONS, UNLESS OTHERWISE NOTED.

K. THE CONTRACTOR SHALL VERIFY THAT CONSTRUCTION LOADS DO NOT EXCEED THE CAPACITY OF THE STRUCTURE AT THE TIME THE LOAD IS APPLIED.

L. PROVIDE SHORING AND PROTECTION FOR EXCAVATION BANKS AS NECESSARY TO PREVENT CAVINS AND COMPLY WITH ALL APPLICABLE OSHA RULES AND REGULATIONS.

RETAINING WALLS

A. FOOTINGS FOR ALL RETAINING WALLS HAVE BEEN DESIGNED FOR AN ASSUMED NET ALLOWABLE SOIL BEARING PRESSURE OF 2000 PSF. THE ALLOWABLE SOIL BEARING PRESSURE SHALL BE FIELD VERIFIED BY A REGISTERED GEOTECHNICAL ENGINEER AND APPROVED PRIOR TO PLACING FOOTINGS. SHOULD THE ACTUAL SOIL BEARING PRESSURE BE LESS THAN 2000 PSF, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER.

B. RETAINING WALLS HAVE BEEN DESIGNED WITH BACKFILL MATERIAL HAVING THE FOLLOWING CHARACTERISTICS:

γ	=	120 PCF
φ	=	30 DEGREES
Ka	=	0.33 (+EFFECTS DUE TO INCLINED EARTH LOAD)
COEFFICIENT OF FRICTION	=	0.35
COHESION	=	0

IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO INSURE THE BACK FILL MATERIAL MEETS THESE CHARACTERISTICS.

C. THE RETAINING WALLS HAVE BEEN DESIGNED FOR THE FOLLOWING SURCHARGE LOADS IN ADDITION TO THE LATERAL LOADS ASSOCIATED WITH THE BACKFILL MATERIAL ABOVE:

SURCHARGE = 200 PSF

D. RETAINING WALLS HAVE BEEN DESIGNED FOR THE FOLLOWING MINIMUM FACTORS OF SAFETY:

SLIDING	1.5
OVERTURNING	2.0

E. CONSTRUCTION OF ALL RETAINING WALLS SHALL BE PERFORMED UNDER THE SUPERVISION OF A REGISTERED GEOTECHNICAL ENGINEER.

F. ALL RETAINING WALLS SHALL BE BRACED AND SHORED AS REQUIRED DURING BACKFILLING. BOTH SUPPORTING ELEMENTS SHALL BE IN PLACE AND DEVELOPING FULL REQUIRED STRENGTH PRIOR TO BACK FILLING OF WALLS SUPPORTED AT TOP AND BOTTOM.

J. THE CONTRACTOR IS RESPONSIBLE FOR NOTIFYING IMMEDIATELY THE GEOTECHNICAL ENGINEER OF RECORD IF SOIL OR SITE CONDITIONS ARE NOT AS NOTED ON THE APPROVED RETAINING WALL PLANS OR IF GROUND WATER IS ENCOUNTERED DURING CONSTRUCTION.

K. SUBGRADE CONDITIONS NOT MEETING THE REQUIRED STRENGTH (ALLOWABLE SOIL BEARING PRESSURE DESCRIBED ABOVE) SHALL BE REMOVED AND REPLACED IN ACCORDANCE WITH THE RECOMMENDATIONS OF GEOTECHNICAL ENGINEER OF RECORD.

L. CONSTRUCTION JOINT BETWEEN WALL AND FOOTING SHALL BE ROUGH FLOATED SUFFICIENTLY TO THOROUGHLY CONSOLIDATE THE SURFACE AND SHALL BE INTENTIONALLY LEFT IN A ROUGHENED CONDITION. ALL KEYS ARE NOMINAL SIZE.

CAST IN PLACE CONCRETE

A. ALL CONCRETE CONSTRUCTION SHALL CONFORM TO THE "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS (ACI 301)", AND TO THE "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE (ACI 318)".

B. IN ADDITION TO THE ABOVE, ALL CONCRETE WORK SHALL CONFORM TO THE FOLLOWING:

RECOMMENDED PRACTICE FOR HOT WEATHER CONCRETING (ACI 305).
RECOMMENDED PRACTICE FOR COLD WEATHER CONCRETING (ACI 306).
RECOMMENDED PRACTICE FOR CONCRETE FORMWORK (ACI 347).
STANDARD SPECIFICATION FOR TOLERANCES FOR CONCRETE CONSTRUCTION AND MATERIALS (ACI 117).
CHEMICAL ADMIXTURES FOR CONCRETE (ACI 212.3).
STANDARD SPECIFICATION FOR CURING CONCRETE (ACI 308.1).
CODE REQUIREMENTS FOR ENVIRONMENTAL ENGINEERING CONCRETE STRUCTURES AND COMMENTARY (ACI 350).

C. ALL CONCRETE EXPOSED TO PUBLIC VIEW SHALL CONFORM TO THE REQUIREMENTS FOR ARCHITECTURAL CONCRETE CONTAINED IN ACI 301.

D. ALL CONCRETE, UNLESS NOTED OTHERWISE, SHALL BE NORMAL WEIGHT STONE AGGREGATE CONCRETE HAVING THE FOLLOWING MINIMUM 28 DAY COMPRESSIVE STRENGTHS:

	f'c	MAX w/c RATIO	SLUMP	AIR CONTENT
WALLS & FOOTINGS	4000 PSI	0.45	4"	6.0%

ALL CONCRETE EXPOSED TO WEATHER SHALL HAVE AN AIR ENTRAINMENT OF 6% +/- 1%. NO ADMIXTURES CONTAINING CALCIUM CHLORIDE SHALL BE PERMITTED. MAXIMUM AGGREGATE SIZE SHALL BE 1", AND MAXIMUM SLUMP SHALL BE 4", 3" FOR SLABS ON GRADE. ALL CONCRETE, EXCEPT FOOTINGS, SHALL CONTAIN A WATER REDUCING ADMIXTURE. PORTLAND CEMENT SHALL CONFORM TO ASTM C150 AND NORMAL WEIGHT AGGREGATES SHALL CONFORM ASTM C33.

E. ALL CONCRETE MIX DESIGNS, INCLUDING CEMENT CONTENT, WATER CEMENT RATIO, FINE AND COARSE AGGREGATE CONTENT AND ALL ADMIXTURES, SHALL BE REVIEWED BY ENGINEER PRIOR TO PLACING FIRST CONCRETE.

F. ALL CONCRETE SHALL BE SAMPLED AND TESTED BY THE TESTING AGENCY. THE CONTRACTOR SHALL NOTIFY THE TESTING AGENCY 48 HOURS PRIOR TO THE PLACING OF ANY CONCRETE. TESTING SHALL BE IN ACCORDANCE WITH ASTM C172.

G. THE CONCRETE STRUCTURE SHALL NOT SUPPORT THE DESIGN LIVE LOAD FOR A MINIMUM OF 28 DAYS AND ALL SHORING AND RE-SHORING REQUIRED TO SUPPORT THE CONCRETE STRUCTURE DURING CONSTRUCTION SHALL BE DESIGNED AND PROVIDED BY THE CONTRACTOR. SHOP DRAWINGS, SIGNED AND SEALED BY A REGISTERED ENGINEER IN THE STATE OF MARYLAND, SHALL BE SUBMITTED FOR REVIEW. SHOP DRAWINGS SHALL INDICATE THE TYPE, EXTENT, SIZE, AND LOCATION OF ALL SHORING AND RE-SHORING AS WELL AS THE SEQUENCE OF CONSTRUCTION.

H. GROUND BLAST FURNACE SLAG MAY BE USED TO REPLACE UP TO 50 PERCENT OF THE PORTLAND CEMENT IN A CONCRETE MIX, AND FLY ASH OR POZZOLAN MAY BE USED TO REPLACE UP TO 25 PERCENT OF PORTLAND CEMENT, SUBJECT TO THE APPROVAL OF THE STRUCTURAL ENGINEER AND SHALL CONFORM TO ASTM C494.

I. ALL REINFORCING BARS SHALL BE NEW BILLET STEEL CONFORMING TO ASTM A615 GRADE 60 (f_y = 60 KSI).

J. LAP ALL REINFORCING BARS A MINIMUM OF 48 BAR DIAMETERS, UNLESS OTHERWISE INDICATED.

K. ALL REINFORCING SHALL BE DETAILED, FABRICATED AND PLACED IN ACCORDANCE WITH THE CRSI "MANUAL OF STANDARD PRACTICE", ACI 315 "DETAILS AND DETAILING OF CONCRETE REINFORCEMENT", ACI SP 66 "DETAILING MANUAL".

L. DOWELS SHALL MATCH SIZE AND SPACING OF MAIN REINFORCEMENT, UNLESS NOTED OTHERWISE.

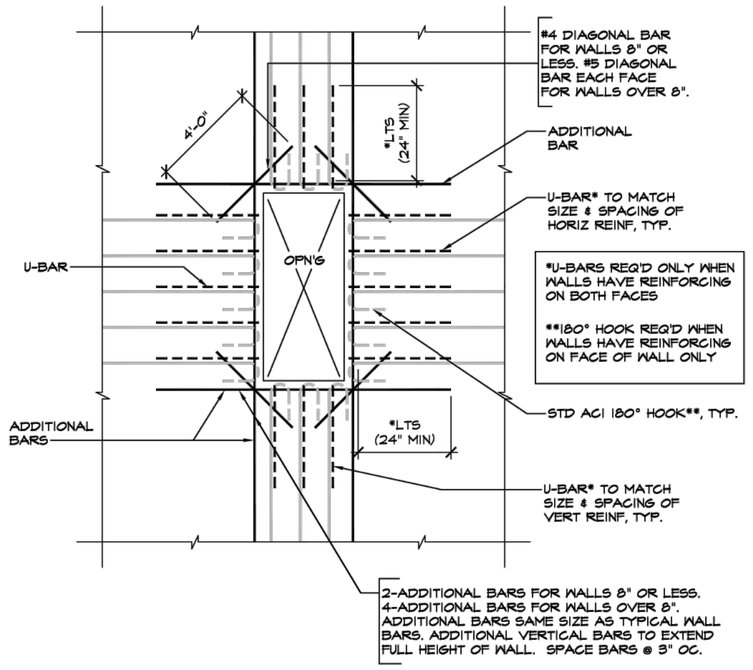
M. WHERE A 90°, 135° OR 180° HOOK IS GRAPHICALLY INDICATED, PROVIDE CORRESPONDING ACI STANDARD HOOKS, UNLESS NOTED OTHERWISE.

N. MINIMUM COVER FOR ALL REINFORCING SHALL BE AS FOLLOWS UNLESS OTHERWISE INDICATED:

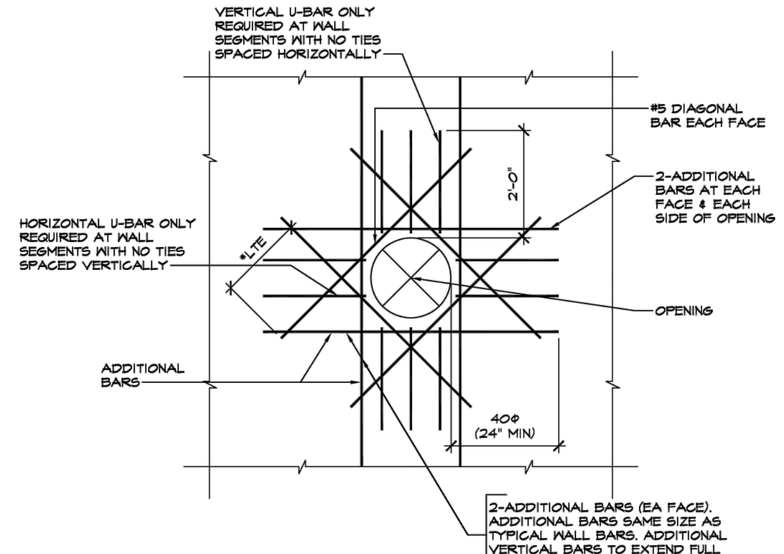
FOOTINGS	3 INCHES (BOTTOM & SIDES), 2 INCHES (TOP)
RETAINING WALLS	2 INCHES
SLABS ON GRADE	2 INCHES (TOP)

O. PROVIDE LAP LOCATIONS AS FOLLOWS, UNLESS NOTED OTHERWISE:
BEAM / WALL (FRONT OF WALL HORIZONTAL REINF): AT SUPPORTS
BEAM / WALL (REAR OF WALL HORIZONTAL REINF): AT CENTER

P. UNLESS NOTED OTHERWISE, TERMINATE BARS AT DISCONTINUOUS ENDS WITH STANDARD HOOKS.



J ADD'L BARS AROUND RECTANGULAR WALL OPENINGS
SCALE: NTS



NOTES:
1. SEE TYP CONCRETE WALL CORNER REINF DETAIL FOR U-BARS
2. IF CONCRETE EDGES NEARBY DO NOT PERMIT THE DEVELOPMENT OF STRAIGHT BAR, BARS SHALL BE BENT PER ACI IN ORDER TO ACHEIVE DEVELOPMENT LENGTH

K ADD'L BARS AROUND CIRCULAR WALL OPENING
SCALE: NTS

SCHEDULE OF EMBEDMENT + SPLICE LENGTH (INCH)

BAR SIZE	COMPRESSION		TENSION (f'c = 4,000 psi)							
	EMBEDMENT LENGTH	LAP SPLICE LENGTH	EMBEDMENT LENGTH				LAP SPLICE LENGTH			
			TOP BARS		OTHER BARS		TOP BARS		OTHER BARS	
			CATEGORY SEE NOTE 1 BELOW		CATEGORY SEE NOTE 1 BELOW		CATEGORY SEE NOTE 1 BELOW		CATEGORY SEE NOTE 1 BELOW	
			I	II	I	II	I	II	I	II
#3	8	12	19	28	14	21	24	36	19	28
#4	11	15	25	37	19	28	33	48	25	37
#5	14	19	31	46	24	36	40	60	31	46
#6	17	23	37	55	28	43	48	72	37	55
#7	19	27	54	81	42	62	70	105	54	81
#8	22	30	62	92	47	71	80	120	62	92
#9	25	34	70	104	54	80	90	136	70	104
#10	28	39	78	117	60	90	102	153	78	117
#11	31	43	87	130	67	100	113	170	87	130
NOTATION USED ON DRAWING	*LCE	*LCS	*LTE				*LTS			

SCHEDULES OF EMBEDMENT & SPLICE LENGTH NOTES

1. THE SCHEDULES ABOVE INCLUDES SPLICE AND EMBEDMENT LENGTHS WHICH SATISFY THE PROJECT REQUIREMENTS AND THE FOLLOWING CRITERIA.

   f_y = 60,000 psi
   CONCRETE WEIGHT = 150 lb/cu.ft.

   TENSION EMBEDMENT AND LAP SPLICE LENGTHS ARE DIVIDED INTO TWO CATEGORIES WHICH SHALL BE APPLIED AS FOLLOWS:

   CATEGORY I: CLEAR SPACING OF BARS BEING DEVELOPED OR SPLICED NOT LESS THAN d_b, CLEAR COVER NOT LESS THAN d_b, AND BEAM STIRRUPS OR COLUMN TIES THROUGHOUT d NOT LESS THAN THE CODE MINIMUM OR CLEAR SPACING OF BARS BEING DEVELOPED OR SPLICED NOT LESS THAN $2d_b$ & CLEAR COVER NOT LESS THAN d_b.

   CATEGORY II: BARS NOT COVERED BY CATEGORY I.

2. THE STANDARD LAP SPLICE (0.0005 X f_y X D) IS USED FOR COMPRESSION SPLICES AND THE CLASS "B" SPLICE IS USED FOR TENSION SPLICES. THE CONTRACTOR MAY SUBMIT LESSER SPLICE LENGTHS FOR REVIEW AND APPROVAL AT THE SAME TIME PROVIDING THE FOLLOWING INFORMATION.
   A. DETAILS PREPARED AND SUBMITTED BY THE CONTRACTOR INDICATING LOCATION AND PROPOSED LAYOUT OF REBAR AND LENGTHS OF SPLICES.
   B. WHERE THE SIZE AND NUMBER OF TIES OR SPIRALS PERMITS THE REDUCTION OF LAP LENGTH, THOSE BARS SHALL BE INDICATED ON THE DETAILS.
   C. WHERE COMPUTED STRESS VALUES PERMIT THE REDUCTION OF LAP LENGTH, COMPUTATIONS SHALL BE SUBMITTED FOR REVIEW.
   D. THE APPLICABLE SECTION OF THE ACI-318 CODE PERMITTING THE LESSER SPLICE LENGTH SHALL BE INDICATED ON THE SUBMITTED MATERIAL.

3. TOP BARS ARE HORIZONTAL BARS PLACED SO THAT MORE THAN 12 INCHES OF CONCRETE IS CAST IN THE MEMBER BELOW THE BAR.

A SCHEDULE OF REINF EMBEDMENT & SPLICE LENGTHS
SCALE: NTS

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
DocuSigned by: [signature] 9/11/2023
CHIEF, BUREAU OF HIGHWAYS — DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING
DocuSigned by: [signature] 9/13/2023
CHIEF, DIVISION OF LAND DEVELOPMENT — DATE
DocuSigned by: Child Edmondson 9/11/2023
CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE

OWNERS
CHARLES T LACEY SR (DECEASED) &
KARLOS LACEY CO-TRUSTEES
1235 WILD ROSE COURT
MARRIOTTSVILLE, MD 21104

DEVELOPER
LAND HOLDINGS LLC
C\O B. JAMES GREENFIELD
6420 AUTUMN SKY WAY
COLUMBIA, MD 21044
443-324-4732

PROJECT			SECTION/AREA	PARCEL
LACEY PROPERTY			N/A	13
PLAT NOS.	BLOCK NO.	ZONE	TAX MAP	ELEC. DIST.	CENSUS TR.
-	1	R-ED	25	SECOND	602900

LACEY PROPERTY
GENERAL NOTES & TYPICAL DETAILS

ZONED: R-ED
PARCEL No.: 13
TAX MAP No.: 25 GRID No.: 1
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN

County File Reference: F-21-015

MRA Buildings Group
MORRIS & RITCHIE ASSOCIATES, INC.
Architects, Engineers, Planners, Surveyors, and Landscape Architects
1220-C East Joppa Road
Suite 505
Towson, Maryland 21286
410-821-1690
410-821-1748 Fax

Lacey Property (Retaining Walls)

Ellicott City, Maryland

STATE OF MARYLAND — JAMES BUCHANAN GREENFIELD — 07/11/2023 — No. 30729 — PROFESSIONAL ENGINEER

PROFESSIONAL CERTIFICATION
I hearby 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. 30729, Expiration Date: 07/11/2023.

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MORRIS AND RITCHIE ASSOC., INC.

NO.	REVISION	DATE

FILE	DRAWN	ISSUED
21040	JAG	03/08/23

SHEET TITLE
General Notes & Typical Details

SHEET NUMBER
S-7

Sheet 22 of 24

V:\bg_PROJECTS\21000-21099\21040 - Lacey Property Retaining Wall\300 Structural\306 Construction Documents\Structural Set S-X
3/8/2023

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NOTES

1. WP-16-022 WAS APPROVED ON PERMITTING REMOVAL OF 8 SPECIMEN TREES.
2. 16 TREES HAVE BEEN PROPOSED AS REPLACEMENTS FOR THE REMOVAL OF THE 8 SPECIMEN TREES.
3. THIS PLAN COMPLIES WITH THE REQUIREMENTS OF SECTION 16.1200 OF THE COUNTY CODE FOR FOREST CONSERVATION BY RETAINING A TOTAL OF 2.916 ACRES OF FOREST. NO SURETY WILL BE REQUIRED. A FOREST CONSERVATION AGREEMENT WILL BE REQUIRED FOR THE FOREST CONSERVATION RETENTION AREA WITH THIS FINAL PLAN.

FOREST PROTECTION GENERAL NOTES

1. ALL FOREST RETENTION AREAS SHALL BE TEMPORARILY PROTECTED BY WELL ANCHORED BLAZE ORANGE PLASTIC MESH FENCING, AS NECESSARY, AND SIGNAGE AS INDICATED ON THE PLANS. THE DEVICES SHALL BE INSTALLED ALONG THE FOREST RETENTION BOUNDARY PRIOR TO ANY LAND CLEARING, GRUBBING, OR GRADING ACTIVITIES.
2. THE FOREST PROTECTION DEVICES SHALL BE INSTALLED SUCH THAT THE CRITICAL ROOT ZONES OF ALL TREES WITHIN THE RETENTION AREA NOT OTHERWISE PROTECTED WILL BE WITHIN FOREST PROTECTION DEVICES, UNLESS ROOT PRUNING IS PROPOSED.
3. ALL PROTECTION DEVICES SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION, INCLUDING SILT FENCE BEING USED AS PROTECTIVE FENCING. ALL DEVICES SHALL REMAIN IN PLACE UNTIL ALL CONSTRUCTION HAS CEASED IN THE IMMEDIATE VICINITY.
4. ATTACHMENT OF SIGNS, OR ANY OTHER OBJECTS TO TREES IS PROHIBITED. NO EQUIPMENT, MACHINERY, VEHICLES, MATERIALS OR EXCESSIVE PEDESTRIAN TRAFFIC SHALL BE ALLOWED WITHIN THESE PROTECTED AREAS.
5. INSTALLATION AND MAINTENANCE OF PROTECTIVE FENCING AND SIGNAGE SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR. THE GENERAL CONTRACTOR SHALL TAKE THE UTMOST CARE TO PROTECT TREE ROOT SYSTEMS DURING ALL CONSTRUCTION ACTIVITIES. TREE ROOT SYSTEMS SHALL BE PROTECTED FROM SMOTHERING, FLOODING, EXCESSIVE WETTING FROM DE-WATERING OPERATIONS, OFF-SITE RUN OFF, SPILLAGE AND DRAINING OF MATERIALS THAT MAY BE HARMFUL TO TREES.
6. THE GENERAL CONTRACTOR SHALL PREVENT PARKING OF CONSTRUCTION VEHICLES AND EQUIPMENT, AND THE STORING OF BUILDING SUPPLIES OR STOCKPILING OF EARTH WITHIN THE FOREST CONSERVATION EASEMENT.
7. REMOVAL OF TOPSOIL OR ROOT MAT WITHIN THE TREE PRESERVATION AREA SHALL BE PROHIBITED.
8. THE GENERAL CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY TREES DAMAGED OR DESTROYED WITHIN THE FOREST CONSERVATION EASEMENTS.
9. ROOT PRUNING SHALL BE USED AT THE LIMIT OF DISTURBANCE OR LIMIT OF GRADING WITHIN AND ADJACENT TO ALL PRESERVATION AREAS, AS NECESSARY.

PRE-CONSTRUCTION MEETING

1. AFTER THE BOUNDARIES OF THE FOREST RETENTION AREAS HAVE BEEN FIELD LOCATED AND MARKED, AND AFTER THE FOREST PROTECTION DEVICES HAVE BEEN INSTALLED, AND BEFORE ANY OTHER DISTURBANCE HAS TAKEN PLACE ON SITE, A PRE-CONSTRUCTION MEETING SHALL TAKE PLACE ON SITE. THE DEVELOPER, CONTRACTOR OR PROJECT MANAGER, AND HOWARD COUNTY INSPECTORS SHALL ATTEND. THE PURPOSE OF THIS MEETING WILL BE:
   A. TO IDENTIFY THE LOCATIONS OF THE FOREST RETENTION AREAS, SPECIMEN TREES WITHIN 50 FEET OF THE LIMIT OF DISTURBANCE, LIMITS OF CONSTRUCTION, EMPLOYEE PARKING AREAS AND EQUIPMENT STAGING AREAS;
   B. INSPECT ALL FLAGGED BOUNDARIES AND PROTECTION DEVICES;
   C. MAKE ALL NECESSARY ADJUSTMENTS;
   D. ASSIGN RESPONSIBILITIES AS APPROPRIATE AND DISCUSS PENALTIES.

CONSTRUCTION MONITORING

1. THE SITE SHALL BE INSPECTED PERIODICALLY DURING THE CONSTRUCTION PHASE OF THE PROJECT. A QUALIFIED PROFESSIONAL SHALL BE RESPONSIBLE FOR IDENTIFYING DAMAGE TO PROTECTED FOREST AREAS OR INDIVIDUAL TREES WHICH MAY HAVE BEEN CAUSED BY CONSTRUCTION ACTIVITIES, SUCH AS SOIL COMPACTION, ROOT INJURY, TRUNK WOUNDS, LIMB INJURY, OR STRESS CAUSED BY FLOODING OR DROUGHT CONDITIONS.
2. ANY SUCH DAMAGE THAT MAY OCCUR SHALL BE REMEDIED IMMEDIATELY USING APPROPRIATE MEASURES. SEVERE PROBLEMS MAY REQUIRE CONSULTATION WITH A PROFESSIONAL ARBORIST.
3. THE CONSTRUCTION PROCEDURE SHALL NOT DAMAGE AREAS OUTSIDE OF THE LIMITS OF DISTURBANCE AS DESIGNATED ON THE PLANS. ANY DAMAGE SHALL BE RESTORED BY THE CONTRACTOR AT HIS EXPENSE AND TO THE SATISFACTION OF THE DESIGN TEAM OR ENGINEER.

MULTIFLORA ROSE CONTROL NOTE:

PRIOR TO PLANTING ALL MULTIFLORA ROSE WITHIN PLANTING AREAS SHALL BE REMOVED. Removal Of The Multiflora Rose May Be Performed With Mowing And Herbicide Treatments. Physical Removal Of All Top Growth Followed By A Periodic Herbicide Treatment Of Stump Sprouts Is Recommended. Native Tree And Shrub Species Occurring Within The Rose Thickets Should Be Retained Wherever Possible. Herbicide Treatments Shall Occur On Two (2) Month Intervals During The First Growing Seaseon And Once In The Spring And Once In the Fall For Subsequent Years. Herbicide Used Shall Be Made Specifically To Address Woody Plant Material And Shall Be Applied As Per Manufacturers Specifications. Care Should Be Taken Not To Spray Planted Trees Or Naturally Occurring Native Tree And Shrub Seedlings. It Is Recommended That Initiation Of Rose Removal Begin At Least Six Months Prior To Planting So That New Growth Of Roses Is Able To Be More Successfully Managed.

FOREST CONSERVATION WORKSHEET
VERSION 1.0

BASIC SITE DATA:

A. TOTAL TRACT AREA	=	8.55 Ac
B. AREA WITHIN 100 YEAR FLOODPLAIN	=	0
AREA TO REMAIN IN AGRICULTURAL PRODUCTION	=	0
C. NET TRACT AREA	=	8.55 Ac

LAND USE CATEGORY: (from table 3.2.1, page40, Manual)

ARA	MDR	IDA	HDR	MPD	CIA
	X				

INFORMATION FOR CALCULATIONS:

D. AFFORESTATION THRESHOLD 0.15% x 8.55 =		1.28 Ac.
E. FOREST CONSERVATION THRESHOLD 0.20% x 8.55 =		1.71 Ac.

EXISTING FOREST COVER:

F. EXISTING FOREST COVER (EXCLUDING FLOODPLAIN)	=	4.40 Ac.
G. AREA OF FOREST ABOVE CONSERVATION THRESHOLD	=	2.69 Ac.

BREAK EVEN POINT:

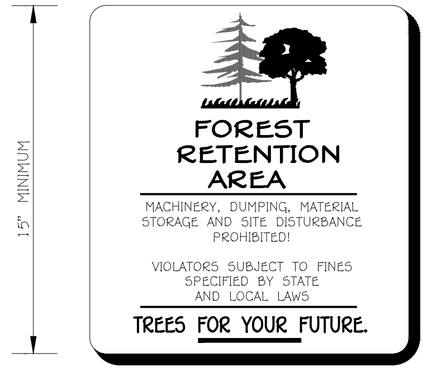
H. BREAK-EVEN POINT	=	2.25 Ac.
I. CLEARING PERMITTED WITHOUT MITIGATION	=	2.15 Ac.

PROPOSED FOREST CLEARING:

J. TOTAL AREA OF FOREST TO BE CLEARED	=	1.48 Ac.
K. TOTAL AREA OF FOREST TO BE RETAINED	=	2.92 Ac.

PLANTING REQUIREMENTS:

L. REFORESTATION FOR CLEARING ABOVE CONSERVATION THRESHOLD	=	0
M. REFORESTATION FOR CLEARING BELOW CONSERVATION THRESHOLD	=	0
N. CREDIT FOR RETENTION ABOVE CONSERVATION THRESHOLD	=	1.21 Ac.
P. TOTAL REFORESTATION REQUIRED	=	0
Q. TOTAL AFFORESTATION REQUIRED	=	0
R. TOTAL REFORESTATION AND AFFORESTATION REQUIRED	=	0
S. EXCESS FOREST CREDIT	=	0.67 Ac.



NOTE: THE PROTECTIVE SIGNAGE SHALL BE IN PLACE FOR PERPETUITY.

FOREST CONSERVATION SIGN DETAIL

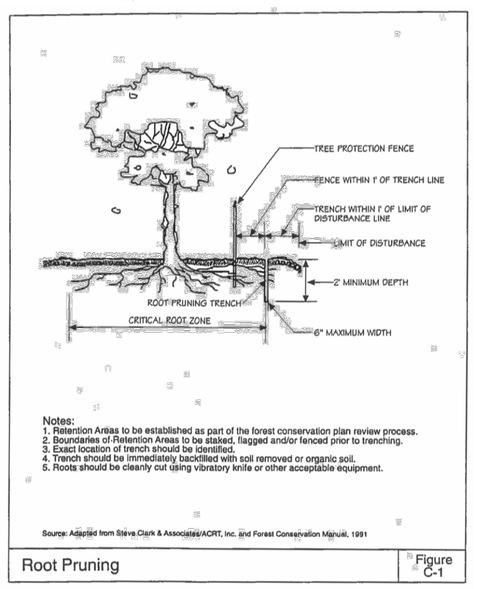
NOT TO SCALE

SPECIMEN TREE TABLE

KEY	SPECIES	SIZE (DBH)	CRZ (FT RADIUS)	COMMENTS	STATUS
T1	HEMLOCK	35"	52.5		TBR
T2	NORWAY SPRUCE	33"	49.5		
T3	WHITE PINE	37"	55.5		
T4	WHITE PINE	38.5"	57.75		
T5	SILVER MAPLE	49.5'	89.25		
T6	SILVER MAPLE	36.5"	54.75		
T7	BLACK WALNUT	37.5"	56.25		
T8	BLACK WALNUT	32"	48		
T9	BLACK WALNUT	41"	61.5		
T11	SILVER MAPLE	42"	63	VERY POOR, TRUNK ROT	TBR
T12	SILVER MAPLE	45.5"	68.25	POOR, TRUNK ROT	
T13	SILVER MAPLE	52"	78	POOR, TRUNK ROT	TBR
T14	ENGLISH WALNUT	41"	61.5		
T15	SILVER MAPLE	31"	46.5	FAIR, LIMITED CROWN SPREAD	
T16	SILVER MAPLE	39"	58.5		
T17	SILVER MAPLE	33"	49.5	FAIR, LEANING	
T18	SILVER MAPLE	40.5"	60.75	FAIR, NARROW CROWN	
T19	SILVER MAPLE	37"	55.5	FAIR, LIMITED CROWN SPREAD	
T20	SILVER MAPLE	45"	67.5	FAIR, LIMITED CROWN SPREAD	TBR
T21	SILVER MAPLE	41"	61.5	FAIR, MAJOR LIMB BROKEN	TBR
T22	SILVER MAPLE	32"	48		TBR
T23	SILVER MAPLE	34"	51	FAIR, LIMITED CROWN SPREAD	TBR
T24	SILVER MAPLE	35"	52.5	POOR, TRUNK ROT	TBR
T25	TULIP POPLAR	39.5"	59.25		
T26	TULIP POPLAR	35"	52.5	TWIN STEMS	
T27	TULIP POPLAR	33.5"	50.25		
T28	TULIP POPLAR	32"	48		
T29	TULIP POPLAR	32"	48	TWIN STEMS	
T30	TULIP POPLAR	31"	46.5		
T31	TULIP POPLAR	39"	58.5		
T32	TULIP POPLAR	46"	69		
T33	TULIP POPLAR	33"	49.5	2 ADDITIONAL NEAR SPECIMEN SIZE TRUNKS	
T34	TULIP POPLAR	32.5"	48.75		
T35	TULIP POPLAR	39.5"	59.25		
T36	TULIP POPLAR	40"	60		
T37	TULIP POPLAR	55"	82.5		
T38	TULIP POPLAR	61"	91.5	SPLITS INTO 2 TRUNKS ABOVE DBH	
T39	TULIP POPLAR	41"	61.5		
T40	SYCAMORE	31"	46.5		
T41	SILVER MAPLE	31.5"	47.25	POOR, VERY LIMITED CROWN	
T42	SILVER MAPLE	39.5"	59.25	POOR, CROWN REDUCED	
T43	SILVER MAPLE	39"/32"	58.5	POOR, SPLIT TRUNK ABOVE BREAST HEIGHT, TRUNK ROT, AND LIMB DIEBACK	

NOTE: "TBR" REFERS TO EXISTING SPECIMEN TREES TO BE REMOVED.

- DENOTES SPECIMEN TREES TO BE REMOVED.

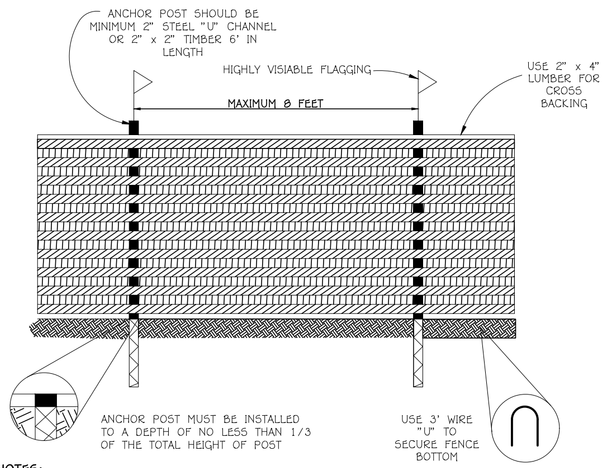


Notes:
1. Retention Areas to be established as part of the forest conservation plan review process.
2. Boundaries of Retention Areas to be staked, flagged and/or fenced prior to trenching.
3. Exact location of trench should be identified.
4. Trench should be immediately backfilled with soil removed or organic soil.
5. Roots should be cleanly cut using vibratory knife or other acceptable equipment.

Source: Adapted from Steve Clark & Associates/ACRT, Inc. and Forest Conservation Manual, 1991

Root Pruning — Figure C-1

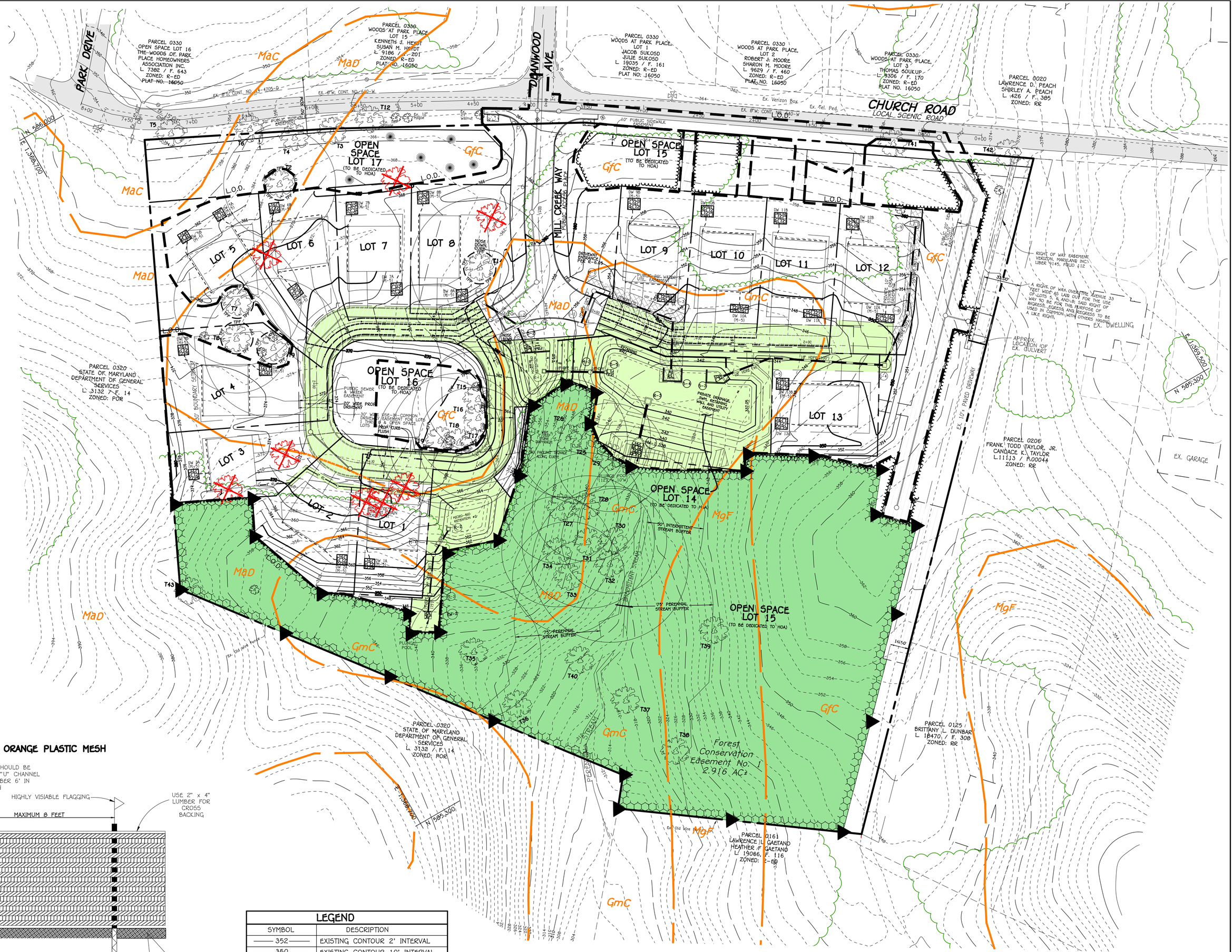
BLAZE ORANGE PLASTIC MESH



NOTES:
1. TREE PROTECTION FENCE TO BE INSTALLED AT FOREST CONSERVATION AREAS AND SPECIMEN TREES, AS SHOWN ON SHEET 5.
2. BOUNDARIES OF RETENTION AREA SHOULD BE STAKED AND FLAGGED PRIOR TO INSTALLING TREE PROTECTION FENCE.
3. ROOT DAMAGE SHOULD BE AVOIDED DURING INSTALLATION.
4. TREE PROTECTION FENCE SHOULD BE MAINTAINED THROUGHOUT CONSTRUCTION.

TREE PROTECTION FENCE DETAIL

NOT TO SCALE



LEGEND

SYMBOL	DESCRIPTION
352	EXISTING CONTOUR 2' INTERVAL
350	EXISTING CONTOUR 10' INTERVAL
352	PROPOSED CONTOUR 2' INTERVAL
350	PROPOSED CONTOUR 10' INTERVAL
	EXISTING PAVING
	EXISTING TREES
T19	SPECIMEN TREES
	EXISTING TREELINE
	FOREST CONSERVATION AREA
	FOREST CONSERVATION SIGN
TPF	TREE PROTECTION FENCE
	SOILS LINE

0' 50' 100' 200'

SCALE: 1" = 50'

SOILS LEGEND

SOIL	NAME	CLASS	K FACTOR
GfC	Gladstone-Urban land complex, 8 to 15 percent slopes	A	0.28
GmC	Glenville silt loam, 8 to 15 percent slopes	C	0.43
MaC	Manor loam, 8 to 15 percent slopes	B	0.28
MaD	Manor loam, 15 to 25 percent slopes	B	0.28
MgF	Manor-Bannertown sandy loams, 25 to 65 percent slopes, rocky	B	0.20

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

Approved: Howard County Department Of Public Works

DocuSigned by: 2465821AE4DA4C2... — 9/11/2023
Chief, Bureau Of Highways — Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

DocuSigned by: Chad Edmondson 7063F754EF54490... — 9/11/2023
Chief, Development Engineering Division — Date

DocuSigned by: 1EB7547A2289A9A... — 9/13/2023
Chief, Division of Land Development — Date

DATE	DESCRIPTION
	REVISIONS

"PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY 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. 20748, EXPIRATION DATE: 2-22-25."

STATE OF MARYLAND — ALDO MICHAEL VITUCCI — No. 20748 — PROFESSIONAL ENGINEER

Aldo M. Vitucci P.E.

ALDO M. VITUCCI, P.E.

OWNERS
LACEY FAMILY REVOCABLE TRUST
1235 WILD ROSE COURT
MARRIOTTSVILLE, MD 21104
ATTN: MR. VINCENT LACEY

DEVELOPER
LAND HOLDINGS LLC
C\O B. JAMES GREENFIELD
6420 AUTUMN SKY WAY
COLUMBIA, MD 21044
443-324-4732

PROJECT			SECTION/AREA		PARCEL
LACEY PROPERTY			N/A		13
PLAT NOS.	BLOCK NO.	ZONE	TAX MAP	ELEC. DIST.	CENSUS TR.
-	1	R-ED	25	SECOND	602900

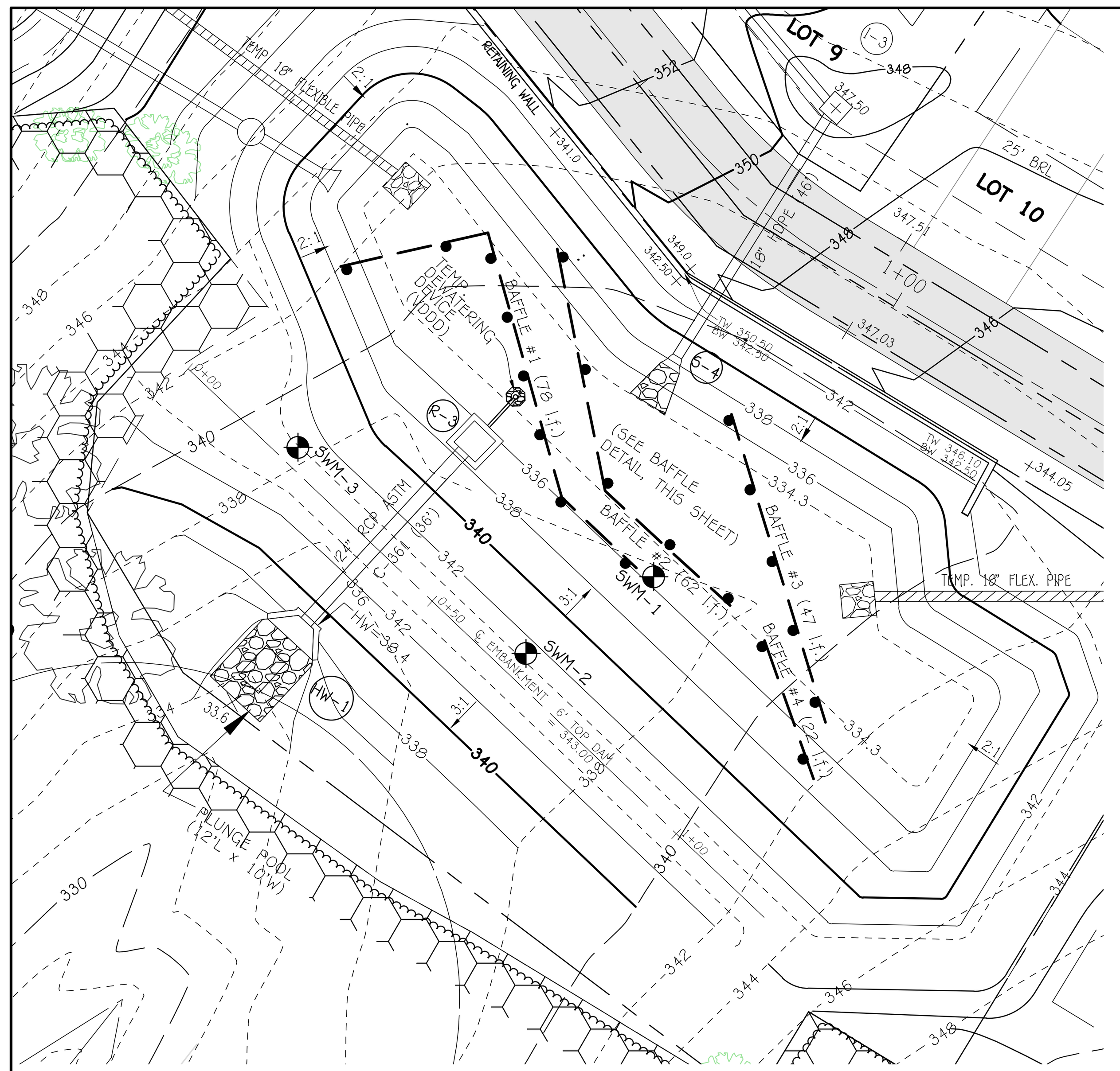
FOREST CONSERVATION PLAN

LACEY PROPERTY
LOTS 1 THRU 13 AND OPEN SPACE LOTS 14 THRU 17

ZONED: R-ED
PARCEL No.: 13
TAX MAP No.: 25 GRID No.: 1
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: JULY 10, 2023
SHEET 23 OF 24

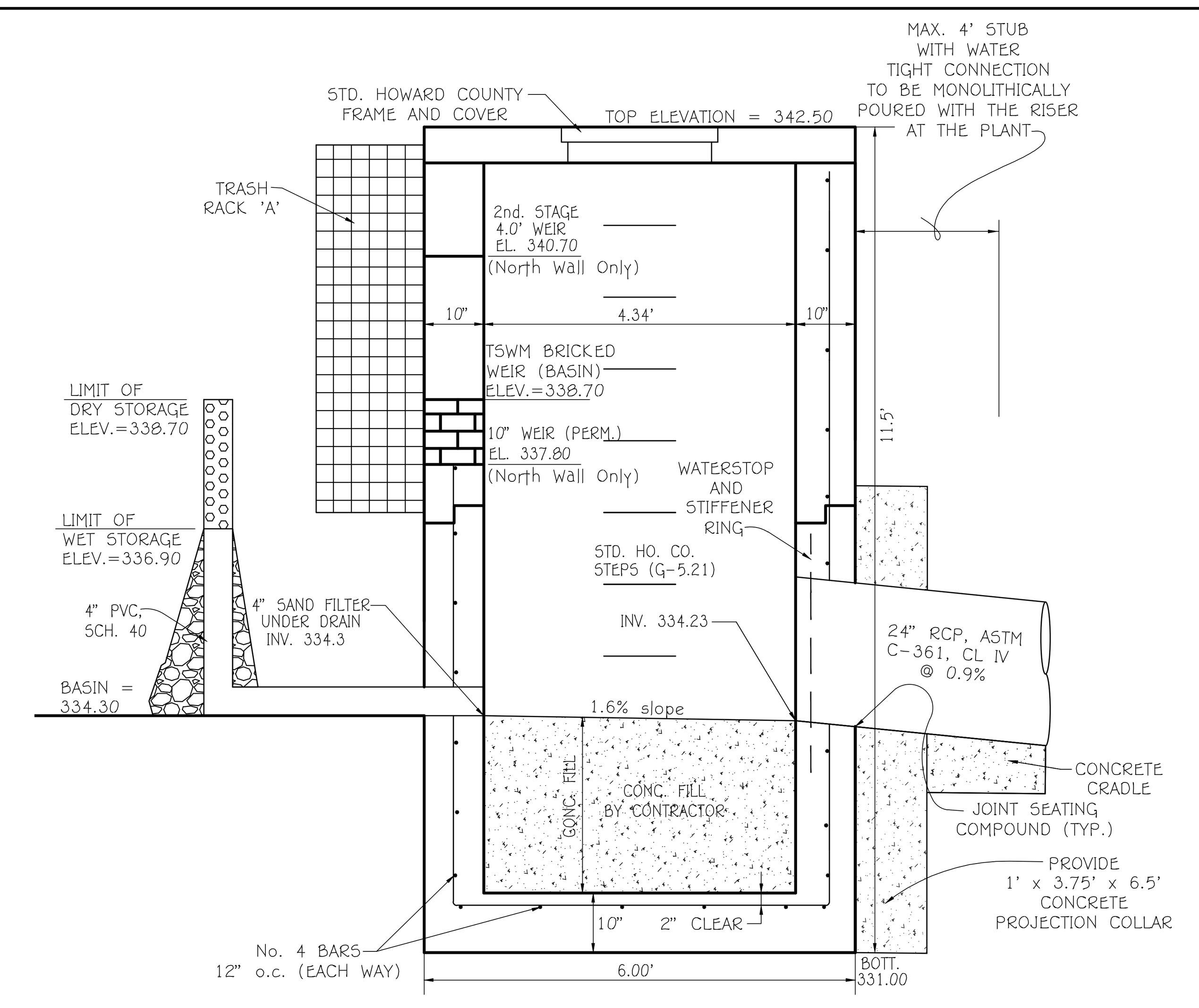
F-21-015

DocuSign Envelope ID: 79E9DBFB-CDDB-4FF4-A258-614B911C4A9B



TSWM-BASIN #1

SCALE: 1" = 20'



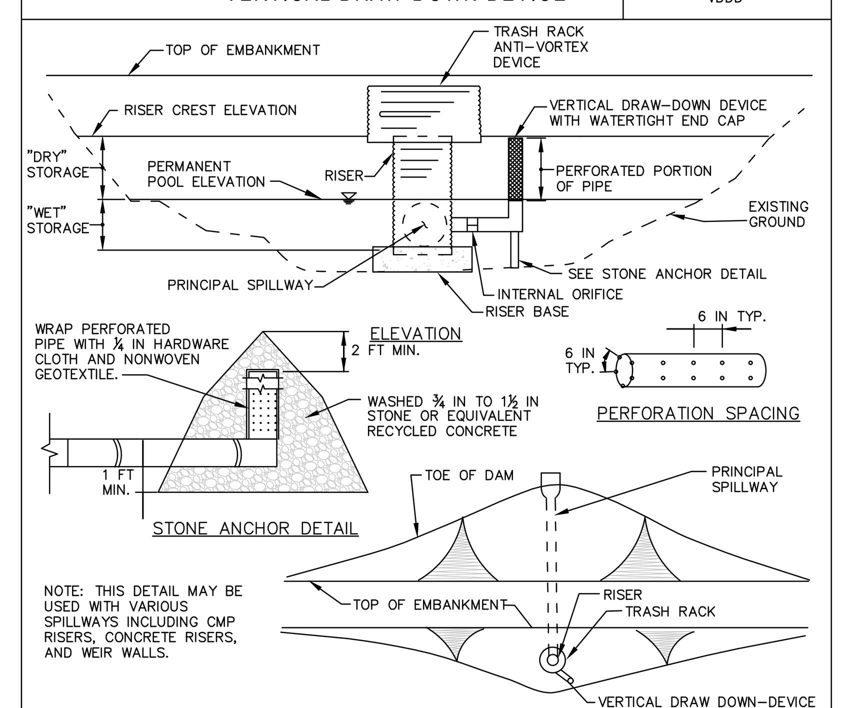
PROFILE VIEW A CONCRETE RISER DETAIL (BASIN USE)

R 3

SCALE : 1" = 2'

DETAIL G-2-7 SEDIMENT BASIN SCHEMATIC VERTICAL DRAW-DOWN DEVICE

STANDARD SYMBOL VDDD



CONSTRUCTION SPECIFICATIONS

1. PERFORATE PIPE WITH 1 INCH DIAMETER PERFORATIONS SPACED 6 INCHES APART LONGITUDINALLY AND RADIALLY OR IN ACCORDANCE WITH APPROVED PLAN.
2. DO NOT EXTEND PERFORATIONS IN THE DRAW-DOWN DEVICE INTO WET STORAGE.
3. WRAP THE PERFORATED PORTION OF THE DRAW-DOWN DEVICE FIRST WITH ¼ INCH GALVANIZED HARDWARE CLOTH, THEN WITH NONWOVEN GEOTEXTILE. USE NONWOVEN GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS. DO NOT WRAP WITH MORE THAN ONE LAYER OF GEOTEXTILE.
4. AS AN ALTERNATE TO STONE ANCHORING, SECURE DRAW-DOWN DEVICE WITH TWO 1 INCH STEEL ANGLES SET 3 FEET MINIMUM INTO THE GROUND ATTACHED TO DRAW-DOWN DEVICE BY A 1 INCH WIDE GALVANIZED STEEL STRAP OR 12 GAUGE OR HEAVIER WIRE.
5. REMOVE SEDIMENT WHEN IT ACCUMULATES TO CLEANOUT ELEVATION (50% OF THE WET STORAGE DEPTH). DEPOSIT REMOVED SEDIMENT IN AN APPROVED AREA IN A SUCH A MANNER THAT IT WILL NOT ERODE. MAINTAIN WATER TIGHT CONNECTIONS. REPLACE GEOTEXTILE AROUND PERFORATED RISER IF DRY STORAGE VOLUME DOES NOT DRAW DOWN WITHIN 10 HOURS.

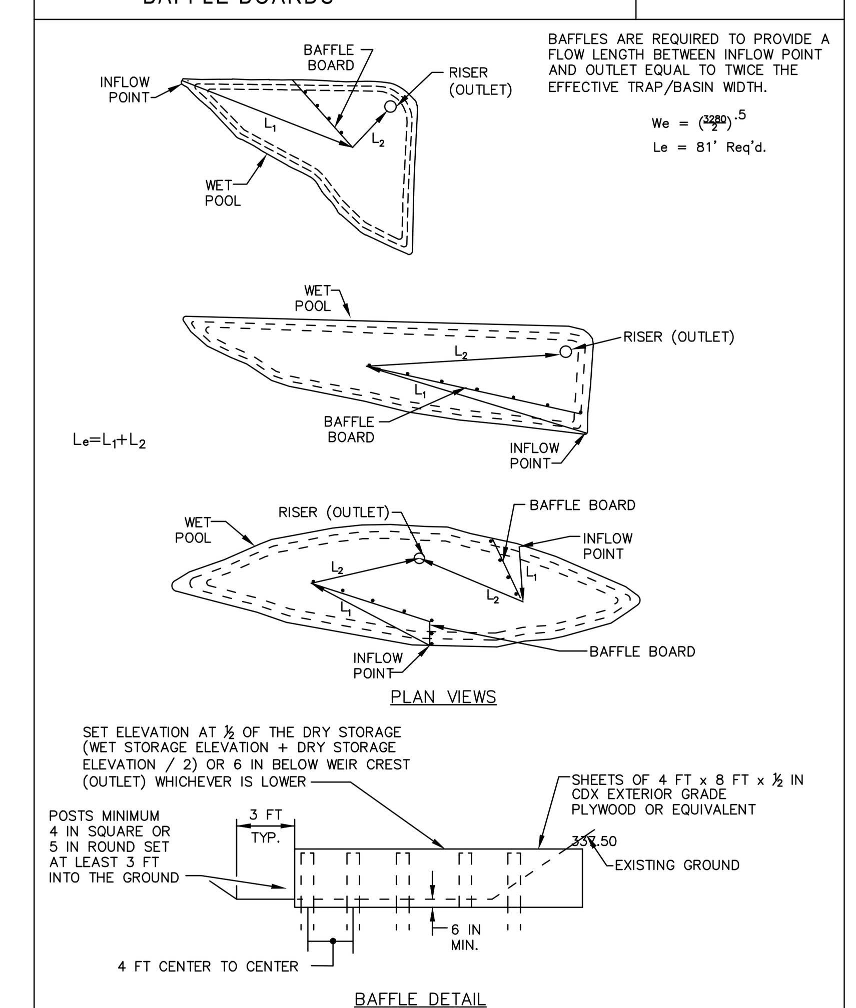
MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL		
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL G-2-4 BAFFLE BOARDS

STANDARD SYMBOL BB

BAFFLES ARE REQUIRED TO PROVIDE A FLOW LENGTH BETWEEN INFLOW POINT AND OUTLET EQUAL TO TWICE THE EFFECTIVE TRAP/BASIN WIDTH.

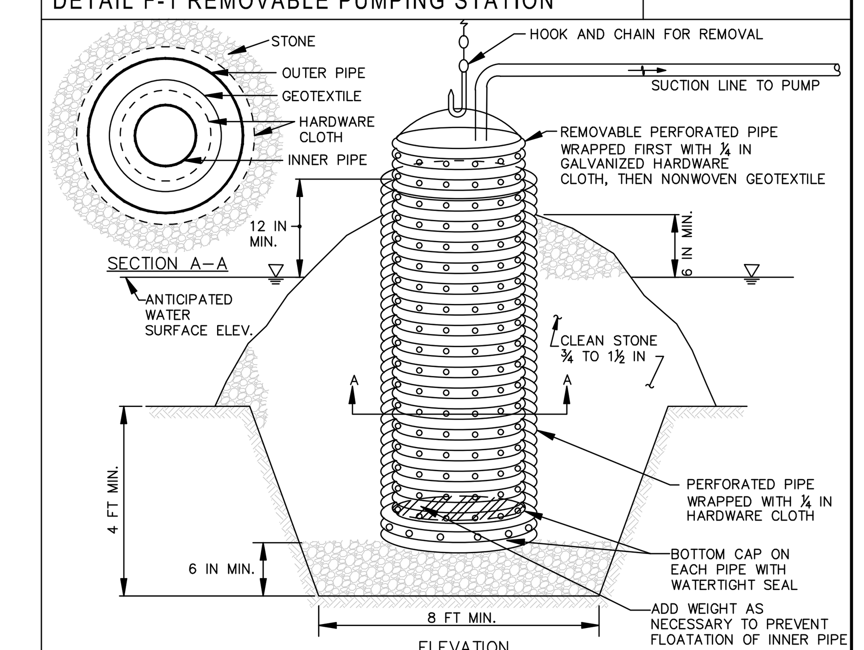
We = (3280).5
Le = 81' Req'd.



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-1 REMOVABLE PUMPING STATION

STANDARD SYMBOL RPS



CONSTRUCTION SPECIFICATIONS

1. USE CORRUGATED METAL OR PLASTIC PIPE WITH 1 INCH DIAMETER PERFORATIONS 6 INCHES ON CENTER.
2. USE A MINIMUM 12 INCH DIAMETER INNER PIPE WITH AN OUTER PIPE A MINIMUM 6 INCHES LARGER IN DIAMETER. BOTTOM OF EACH PIPE MUST BE CAPPED WITH WATERTIGHT SEAL.
3. WRAP EACH PIPE WITH ¼ INCH GALVANIZED HARDWARE CLOTH. ON INNER PIPE WRAP NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS, OVER THE HARDWARE CLOTH.
4. EXCAVATE 8 FEET X 8 FEET X 4 FEET DEEP PIT FOR PIPE PLACEMENT. PLACE CLEAN ¾ TO 1½ INCH STONE OR EQUIVALENT RECYCLED CONCRETE, 6 INCHES IN DEPTH PRIOR TO PIPE PLACEMENT.
5. SET TOP OF INNER AND OUTER PIPES MINIMUM 12 INCHES ABOVE ANTICIPATED WATER SURFACE ELEVATION (OR RISER CREST ELEVATION WHEN DEWATERING A BASIN).
6. BACKFILL PIT AROUND THE OUTER 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.
7. DISCHARGE TO A STABLE AREA AT A NONEROSIVE RATE.
8. A REMOVABLE PUMPING STATION REQUIRES FREQUENT MAINTENANCE. IF SYSTEM CLOGS, PULL OUT INNER PIPE AND REPLACE GEOTEXTILE. 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

SEDIMENT BASIN DESIGN DATA

SEDIMENT BASIN #1
DRAINAGE AREA = 3.66 AC. (PROPOSED CONDITION CONTROLS)
TOTAL STORAGE REQUIRED = 13,176 CU.FT.
TOTAL STORAGE PROVIDED = 15,266 CU.FT.
WET STORAGE REQUIRED = 6,588 CU.FT.
WET STORAGE PROVIDED = 7,488 CU.FT. @ 336.90
DRY STORAGE REQUIRED = 6,588 CU.FT.
DRY STORAGE PROVIDED = 7,778 CU.FT. @ 338.70
BOTTOM OF BASIN ELEV = 334.30
BOTTOM OF BASIN DIMENSIONS = VARIES
RISER CREST (DRY STORAGE ELEV) = 338.70
CLEANOUT ELEV = 335.85 (3,744 CU FT)
TOP OF EMBANKMENT = 343.00
SIDE SLOPES = 3:1
EMBANKMENT WIDTH = 6 FT
EMBANKMENT HEIGHT = 9.1 FT
RISER DIMENSIONS = 6' x 6' (OUTSIDE DIMENSION)
BAFFLES – LENGTH REQUIRED = 2W = 80'

STORM WATER MANAGEMENT POND 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

sloped to no steeper than 1:1. All trees shall be cleared and grubbed within 15 feet 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 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, 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.

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 the 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, prepunched 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 "Stucture 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 requirement of AASHTO M252 Type S, and 12" through 24" inch shall meet the requirement 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

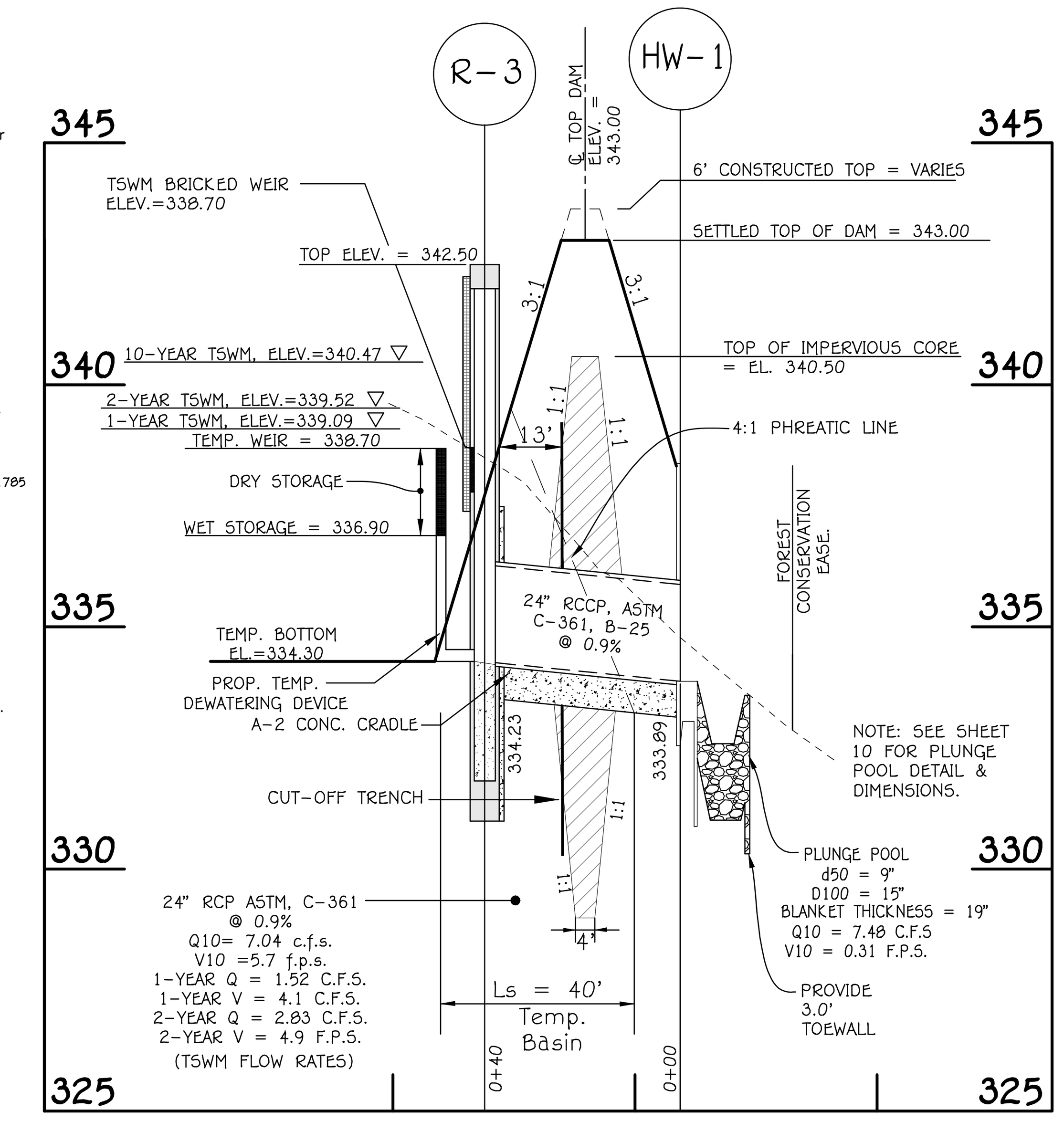
All work on permanent structures shall be carried out in areas free from water. The Contractor shall construct and maintain all temporary dikes, levees, cofferdams, drainage channels, and stream diversions necessary to protect the areas to be occupied by the permanent works. The contractor shall also 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.

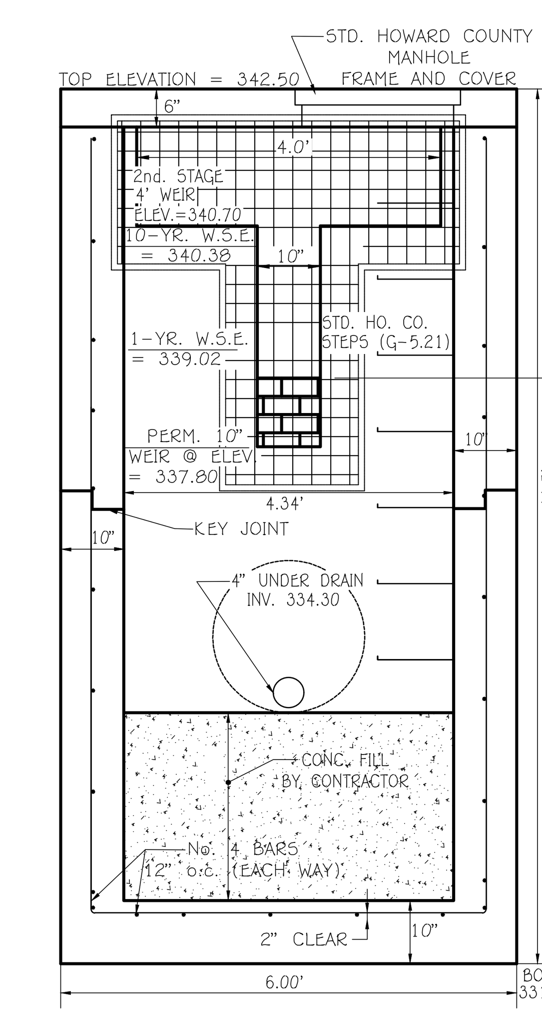
Erosion and Sediment Control

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.



SEDIMENT BASIN #1 PRINCIPLE SPILLWAY PROFILE

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



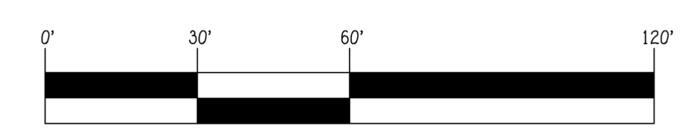
PROFILE VIEW B CONCRETE RISER DETAIL (BASIN)

R 3

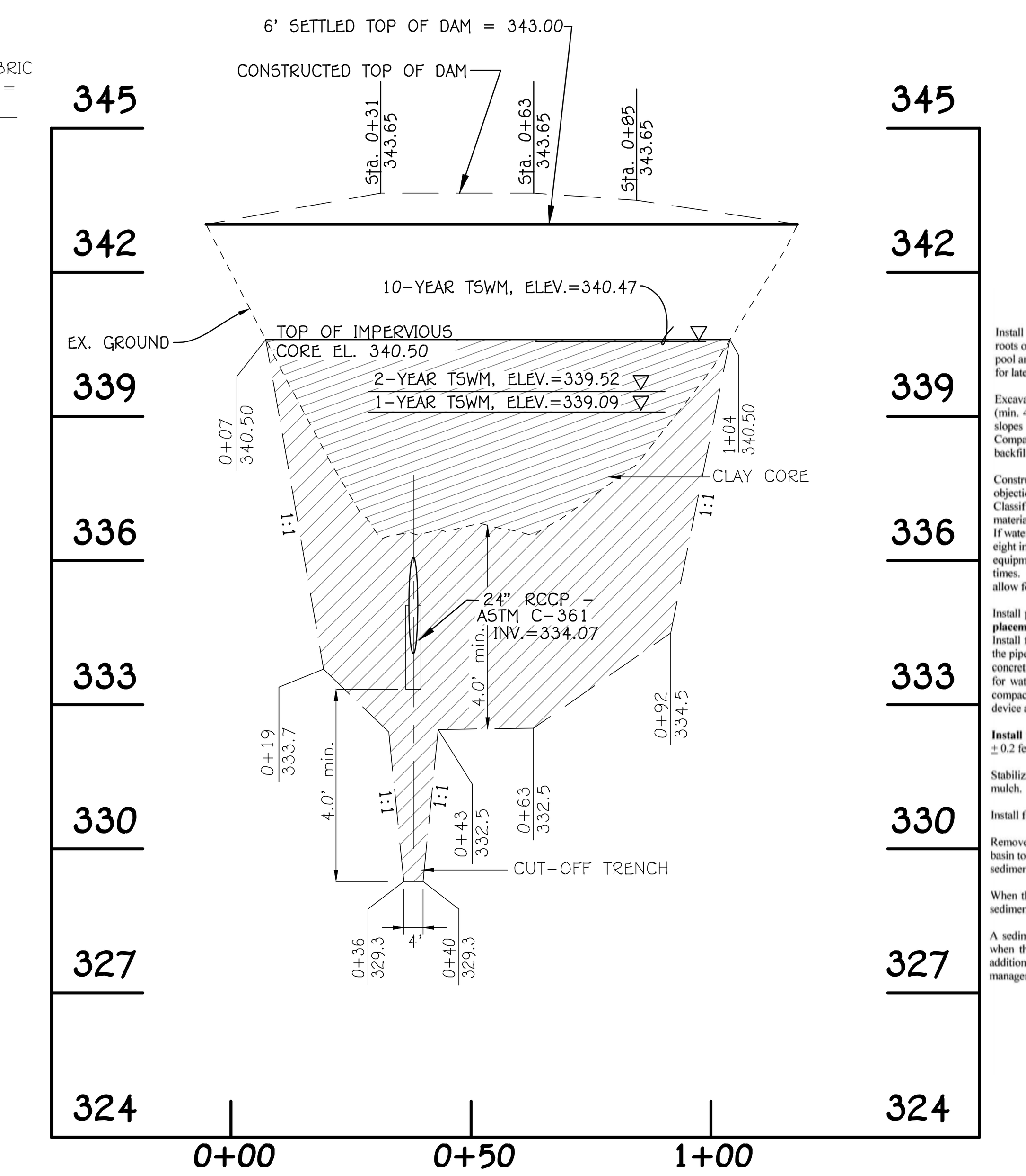
SCALE : 1" = 2'

OPERATION AND MAINTENANCE

An operation and maintenance plan in accordance with Local or State Regulations will be prepared for all ponds. As a minimum, the dam inspection checklist located in Appendix A shall be included as part of the operation and maintenance plan and performed at least annually. Written records of maintenance and major repairs needs to be retained in a file. The issuance of a Maintenance and Repair Permit for any repairs or maintenance that involves the modification of the dam or spillway from its original design and specifications is required. A permit is also required for any repairs or reconstruction that involve a substantial portion of the structure. All indicated repairs are to be made as soon as practical.



SCALE: 1" = 30'



SEDIMENT BASIN #1 PROFILE ALONG C.L. DAM

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

CONSTRUCTION SPECIFICATIONS

Install sediment control practices necessary to construct basin. Clear and grub to remove trees, vegetation, roots or other objectionable material from the areas where the embankment is to be placed. Do not clear the pool area until completion of the embankment; unless the pool area is to be used for borrow. Salvage topsoil for later use.

Excavate cut-off trench along centerline of proposed embankment a minimum depth of 4 feet and a bottom (min. 4 feet) wide enough to permit operation of excavation and compaction equipment. Construct side slopes 1:1 or flatter. Cut-off trench must be continuous and extend the entire length of embankment. Compaction requirements are the same as those for the embankment. Dewater the trench during the backfilling compaction operations, using an approved practice.

Construct embankment of clean soil free of roots, woody vegetation, oversized stones, rocks, or other objectionable material. Fill material for impervious core and cut-off trench must conform to Unified Soil Classification GC, SC, CH, or CL and must have at least 30 percent passing the #200 sieve. Use fill material containing sufficient moisture so that the soil can be formed by hand into a ball without crumbling. If water can be squeezed out of the ball, it is too wet for proper compaction. Place fill material in six-inch to eight inch thick continuous lifts over the entire length of the fill. Obtain compaction by passing construction equipment or compactor over the fill, so that the entire surface of each layer of fill is traversed at least four times. Construct the embankment to an elevation a minimum of 10 percent higher than the design height to allow for settlement.

Install principal spillway prior to, or concurrently with, fill placement. **Do not excavate embankment for placement of spillway.** All pipe connections, including anti-seep collars must be completely watertight. Install filter diaphragm when specified on plan. Barrel connection to riser must be welded all around when the pipe and riser are metal. Attach barrel stub to riser at the same percent (slope) of grade as the barrel. For concrete riser/barrel assembly, pour riser with barrel in place or set pre-cast riser and install projection collar for watertight connection. Place fill material around the pipe spillway in four (4) inch lifts and hand compact around the pipe to a depth of 1.5 times the pipe diameter (minimum). Securely install anti-vortex device and trash rack as shown on plan.

Install the emergency spillway in undisturbed natural ground. Construct spillway within a tolerance of ± 0.2 feet.

Stabilize embankment and associated disturbed areas within three (3) days of completion with seed and mulch. Monitor embankment and maintain erosion free during the life of the basin.

Install fencing and signage in accordance with the approved plan.

Remove sediment when accumulated material has reached 25 percent of the total storage depth. Restore basin to original design volume. Place removed sediments in a controlled area and stabilize. Do not deposit sediment downstream of the embankment, adjacent to a stream or floodplain.

When the contributing drainage area is stable, the basin can be removed in accordance with the approved sediment control plan.

A sediment basin designed, built, and certified as a stormwater management structure, may be converted when the contributing drainage area is stable. Properly dewater basin, modify outlet structure, perform additional grading, and provide required storage volume in accordance with approved stormwater management plans.

G.25

NOTE: SEE SHT.11 FOR PERMANENT POND PROFILE

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK – 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 – 2855

DESIGN CERTIFICATE

"I hereby certify that this plan has been designed in accordance with current Maryland erosion and sediment control laws, regulations, and standards, that it represents a practical and workable plan based on my personal knowledge of the site, and that it was prepared in accordance with the requirements of the Howard Soil Conservation District."

Aldo M. Vitucci, P.E. — 3/20/23
Designer's Signature — Date

ALDO MICHAEL VITUCCI — MD Registration No. 20748 (P.E.) R.L.S., or R.L.A. (circle one)
Printed Name

OWNER'S/DEVELOPER CERTIFICATE

"I/We hereby certify that any clearing, grading, construction, or development will be done pursuant to this approved erosion and sediment control plan, including inspecting and maintaining controls, and that the responsible personnel involved in the construction project will have a Certificate of Training at a Maryland Department of the Environment (MDE) approved training program for the control on erosion and sediment prior to beginning the project. I certify right-of-entry for periodic on-site evaluation by Howard County, the Howard Soil Conservation District and/or MDE."

Jim Greenfield — 8/11/2023
Owner's/Developer's Signature — Date
Jim Greenfield
Printed Name & Title

Approved: Howard County Department Of Public Works	
Chief, Bureau Of Highways (DocuSigned by: 2465821AE4DA4C2...)	9/11/2023 Date
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING	
Chief, Development Engineering Division (DocuSigned by: Chad Edmondson 7063F764EF41409...)	9/11/2023 Date
Chief, Division of Land Development (DocuSigned by: 1EBF5476A22B49A...)	9/13/2023 Date
This development plan is approved for soil erosion and sediment control by the HOWARD SOIL CONSERVATION DISTRICT. Howard Soil Conservation District (DocuSigned by: Alexander Bratchie 66048D5BA9B64C1...)	9/11/2023 Date

DATE	DESCRIPTION
	REVISIONS

"PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY 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. 20748, EXPIRATION DATE: 2-22-25."

STATE OF MARYLAND — ALDO MICHAEL VITUCCI — No. 20748 — PROFESSIONAL ENGINEER

Aldo M. Vitucci, P.E.
ALDO M. VITUCCI, P.E.

OWNERS
LACEY FAMILY REVOCABLE TRUST
1235 WILD ROSE COURT
MARRIOTTSVILLE, MD 21104
ATTN: MR. VINCENT LACEY

DEVELOPER
LAND HOLDINGS LLC
C\O B. JAMES GREENFIELD
6420 AUTUMN SKY WAY
COLUMBIA, MD 21044
443-324-4732

PROJECT		SECTION/AREA		PARCEL	
LACEY PROPERTY		N/A		13	
PLAT NOS.	BLOCK NO.	ZONE	TAX MAP	ELEC. DIST.	CENSUS TR.
–	1	R-ED	25	SECOND	602900

TSWM – BASIN #1 PROFILES AND DETAILS

LACEY PROPERTY
LOTS 1 THRU 13 AND
OPEN SPACE LOTS 14 THRU 17

ZONED: R-ED
PARCEL No.: 13
TAX MAP No.: 25 GRID No.: 1
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: JULY 10, 2023
SHEET 24 OF 24

F-21-015

U.S. Equivalent Coordinate Table			Metric Coordinate Table	
POINT	NORTH (feet)	EAST (feet)	NORTH (meters)	EAST (meters)
207	595071.6096	1368936.6507	181574.023767	417253.335229
208	595538.1677	1369463.4072	181718.390465	417413.281339
401	595764.2731	1369135.3019	181541.307523	417313.274632
402	595945.3261	1368791.0333	181596.492591	417208.341370
403	595585.3643	1368619.5736	181486.775999	417156.080336
404	595247.5044	1368876.5506	181383.796108	417234.407101
408	595224.1786	1368857.7765	181376.686381	417228.681724
448	595096.8777	1369033.2113	181337.885018	417282.096407
500	595937.4082	1368787.8518	181594.079196	417207.191804
501	595864.2483	1368905.5503	181571.876250	417243.246208
502	595835.4125	1368999.7604	181562.990859	417271.961509
503	595802.5173	1369055.3774	181552.963382	417288.913601
504	595768.5702	1369063.6777	181542.617278	417291.443938
505	595734.5744	1369042.5022	181532.255337	417284.989248
506	595711.2580	1369029.5710	181525.148480	417281.047802
507	595674.6384	1369011.6256	181513.986827	417275.578035
508	595675.3701	1368973.7668	181514.209836	417264.038663
509	595634.8961	1368972.9846	181501.873329	417263.800248
510	595597.5791	1369048.5830	181490.499101	417286.842674
511	595623.1641	1369080.2989	181498.297411	417296.509696
512	595652.6359	1369098.5242	181507.280431	417299.263165
513	595689.2554	1369074.4696	181518.442084	417294.732932
514	595708.1390	1369084.9424	181524.197827	417297.925053
515	595742.7500	1369106.5010	181534.747259	417304.496128
516	595750.3295	1369140.6695	181537.057504	417314.910689
517	595778.8914	1369095.3224	181545.763205	417301.088667
518	595551.7564	1369026.5863	181476.532305	417280.130078
519	595530.4326	1369006.8270	181470.032809	417274.115412
520	595514.0607	1369005.3456	181465.042631	417273.663876
521	595490.3391	1369019.5443	181457.812272	417277.991659
522	595744.1380	1369149.7958	181535.170358	417317.692397
523	595532.4424	1369457.8232	181470.695595	417411.579350

The Requirements § 3-108, The Real Property Article, Annotated Code Of Maryland, 1988 Replacement Volume, (As Supplemented) As Far As They Relate To The Making Of This Plat And The Setting Of Markers Have Been Complied With.

Frank J. Manalansan II, L.S. No. 21476 (Land Surveyor) — 5/8/24 Date

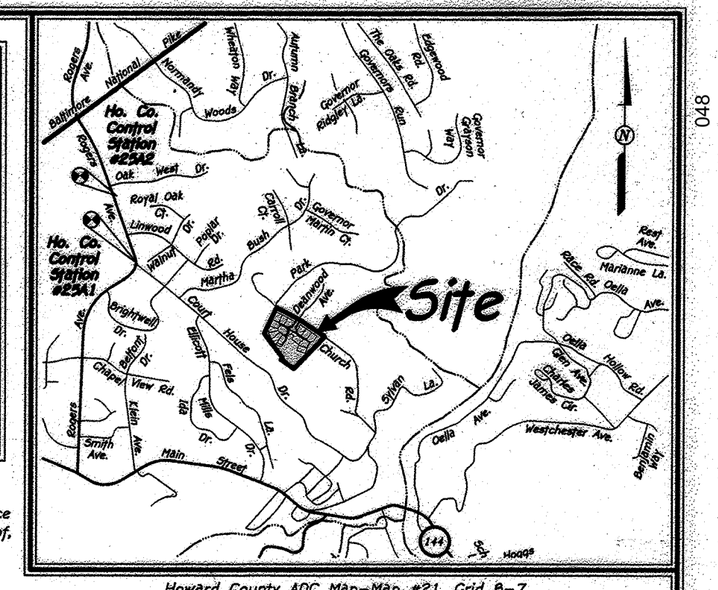
Vincent P. Lacey, Trustee Of The Lacey Family Revocable Trust — 05/05/24 Date

Reservation Of Public Utility And Forest Conservation Easements

"Developer Reserves Unto Itself, Its Successors And Assigns, All Easements Shown On This Plan For Water, Sewer, Storm Drainage, Other Public Utilities And Forest Conservation (Designated As "Forest Conservation Easement"), Located In, On, Over, And Through Buildable Lots 1 Thru 13 And Open Space Lots 14 Thru 17. Any Conveyances Of The Aforesaid Lots Shall Be Subject To The Easements Herein Reserved, Whether Or Not Expressly Stated In The Deed(s) Conveying Said Lots. Developer Shall Execute And Deliver Deeds For The Easements Herein Reserved To Howard County, With A Metes And Bounds Description Of The Forest Conservation Area. Upon Completion Of The Public Utilities And Their Acceptance By Howard County, And, In The Case Of The Forest Conservation Easement(s), Upon Completion Of The Developer's Obligations Under The Forest Conservation Installation And Maintenance Agreement Executed By Developer And The County, And The Release Of Developer's Surety Posted With Said Agreement, The County Shall Accept The Easements And Record The Deed(s) Of Easement In The Land Records Of Howard County."

Minimum Lot Size Chart			
Lot No.	Gross Area	Pipestem Area	Minimum Lot Size
1	8,950 Sq.Ft.±	1,345 Sq.Ft.±	7,613 Sq.Ft.±
2	10,503 Sq.Ft.±	1,867 Sq.Ft.±	8,636 Sq.Ft.±
3	9,080 Sq.Ft.±	1,005 Sq.Ft.±	8,075 Sq.Ft.±
4	12,557 Sq.Ft.±	797 Sq.Ft.±	11,760 Sq.Ft.±
5	13,309 Sq.Ft.±	2,399 Sq.Ft.±	10,910 Sq.Ft.±
6	8,154 Sq.Ft.±	578 Sq.Ft.±	7,576 Sq.Ft.±
7	7,866 Sq.Ft.±	308 Sq.Ft.±	7,558 Sq.Ft.±
9	7,562 Sq.Ft.±	31 Sq.Ft.±	7,531 Sq.Ft.±
10	8,577 Sq.Ft.±	446 Sq.Ft.±	8,131 Sq.Ft.±
11	9,215 Sq.Ft.±	842 Sq.Ft.±	8,373 Sq.Ft.±
12	10,644 Sq.Ft.±	1,244 Sq.Ft.±	9,400 Sq.Ft.±
13	9,450 Sq.Ft.±	959 Sq.Ft.±	8,491 Sq.Ft.±

This Subdivision Is Subject To Section 18.122B Of The Howard County Code. Public Water And Public Sewer Service Has Been Granted Under The Terms And Provisions, Thereof, Effective 2/9/2024 On Which Date Developer Agreement 14-4913-D Was Filed And Accepted.



Vicinity Map

Scale: 1" = 2,000'

Graphic Scale

0' 100' 150' 200'

Scale: 1" = 100'

General Notes:

1. Subject Property Zoned R-ED Per 10/06/13 Comprehensive Zoning Plan.
2. Coordinates Based On Nad '83, Maryland Coordinate System As Projected By Howard County Geodetic Control Stations No. 25A1 And No. 25A2.
   Sta. 25A1 N 536,557.549 E 1,366,847.099 Elev.= 396.343
   Sta. 25A2 N 537,502.730 E 1,366,556.378 Elev.= 340.145
3. This Plat Is Based On Field Run Monumented Boundary Survey Performed On Or About August, 2014 By Fisher, Collins And Carter, Inc.
4. B.R.L. Denotes Building Restriction Line
5. ● Denotes Iron Pin Set Capped "F.C.C. 106".
6. ✓ Denotes Iron Pipe Or Iron Bar Found.
7. ○ Denotes Angular Change In Bearing Of Boundary Or Rights-Of-Way.
8. ■ Denotes Concrete Monument Set With Aluminum Plate "F.C.C. 106".
9. ■ Denotes Concrete Monument Or Stone Found.
10. All Areas Are More Or Less (±).
11. Distances Shown Are Based On Surface Measurement And Not Reduced To Nad '83 Grid Measurement.
12. For Flag Or Pipe Stem Lots, Snow Removal And Road Maintenance Are Provided To The Junction Of Flag Or Pipe Stem And Road Right-Of-Way Line Only And Not Onto The Flag Or Pipe Stem Lot Driveway. Trash And Recyclables Collection Will Be At Mill Creek Way Within 5' Of The County Roadway.
13. Driveways Shall Be Provided Prior To Issuance Of A Use And Occupancy Permit For Any New Dwellings To Ensure Safe Access For Fire And Emergency Vehicles Per The Following (Minimum) Requirements:
    a). Width – 12 Feet (16 Feet Serving More Than One Residence);
    b). Surface – Six (6") Inches Of Compacted Crusher Run Base With Tar And Chip Coating. (1 -1/2" Minimum);
    c). Geometry – Maximum 15% Grade, Maximum 10% Grade Change And 45-Foot Turning Radius;
    d). Structures (Culverts/Bridges) – Capable Of Supporting 25 Gross Tons (H25-Loading);
    e). Drainage Elements – Capable Of Safely Passing 100 Year Flood With No More Than 1 Foot Depth Over Surface;
    f). Structure Clearance – Minimum 12 Feet;
    g). Maintenance – Sufficient To Ensure All Weather Use.
14. Property Subject To Prior Department Of Planning And Zoning File No's: SP-15-013, ECP-15-044, WP-16-022, PB Case 418 And HPC-16-061.
15. No Cemeteries Exist On The Subject Property Based On Visual Observation Or Listed In Available Howard County Cemetery Inventory Map.
16. Existing Structures On-Site, Outbuildings And Swimming Pool Have All Been Removed Under Demolition Permit Number B-18003545 Dated February 7, 2019.
17. Property Is Located Within The Ellicott City Historic District. This Plan Received Advisory Comments From The Historic Preservation Commission (HPC) On April 4, 2013 And November 6, 2014.
18. There Are No Wetlands On This Site Per Investigation By Eco-Science Professionals, Inc. Dated September, 2014. Steep Slopes, Stream And Its Buffers Exist On-Site.
19. A Wetland Delineation And Forest Stand Delineation Report For This Project Dated September, 2014 Was Prepared By Eco-Science Professionals, Inc.
20. No 100 Year Floodplain Exist On This Property.
21. No Clearing, Grading Removal Of Vegetative Cover Or Trees, Paving And New Structures Shall Be Permitted Within The Limits Of Stream Buffers And Forest Conservation Easement Areas.
22. Water And Sewer Is Public, Contract No. 14-4913-D.
23. Public Water And Sewer Allocation Will Be Granted At The Time Of Issuance Of The Building Permit If Capacity Is Available At That Time. Water And Sewer Service To These Lots Will Be Granted Under The Provisions Of Section 18.122B Of The Howard County Code.
24. Stormwater Management Practices Are Required In Accordance With The Design Manuals. Prior To Signature Approval Of The Final Plat, The Developer Will Be Required To Execute The Declaration Of Covenant And/Or A Developers Agreement For The Construction Of The Stormwater Management Practices And A Maintenance Agreement. On Lot Stormwater Management Facilities Are Owned And Maintained By The Individual Lot Owner.
25. This Subdivision Plan Is Subject To The Amended Fifth Edition Of The Subdivision And Land Development Regulations And The 10-06-13 Zoning Regulations Per Council Bill No. 45-2003. Development Or Construction On These Lots Or Parcels Must Comply With Setbacks And Buffer Regulations In Effect At The Time Of Submission Of A Building Or Grading Permit Application.
26. The Traffic Study For This Project Was Prepared By Mars Group In June, 2015, And Was Approved On December 21, 2015.
27. No Noise Study Is Required For This Project.
28. This Plan Is Subject To PB Case 418 That Was Approved By The Planning Board On November 17, 2016 In Accordance With Section 107.0.F. Of The Zoning Regulations. The Planning Board Signed The Decision And Order On March 2, 2017.
29. This Plan Has Been Prepared In Accordance With The Provisions Of Section 16.124 Of The Howard County Code And The Landscape Manual. Financial Surety For The Required 26 Shade Trees, 5 Evergreen Trees And 7 Shrubs Has Been Posted As Part Of The Developers Agreement In The Amount Of $8,750.00.

M.I.H.U. Note: The Subdivision Will Create Thirteen (13) New Lots That Will Be Subject To A Moderate Income Housing Unit (M.I.H.U.) Obligation. Which Is Fulfilled By Payment Of The Fee-In-Lieu At The Time Of Building Permit. See General Note No. 32.

General Notes Continued:

30. This Development Is Designed To Be In Accordance With Section 16.127 – Residential Infill Development Of The Subdivision And Land Development Regulations.
31. Community Meeting Was Conducted April 3, 2013, June 11, 2014 And July 13, 2015 For The Purpose Of The Developer To Provide Information To The Community Regarding The Proposed Residential Development And To Allow The Community To Ask Questions And To Make Comments, Per Section 16.128(d) Of The Subdivision Regulations.
32. Subdivision Is Subject To Section 104.0.F. Of The Zoning Regulations. At Least 10% Of The Dwelling Units Shall Be Moderate Income Housing Units (M.I.H.U.) Or An Alternative Compliance Will Be Provided.The Developer Shall Execute A M.I.H.U. Agreement With The Department Of Housing To Indicate How The M.I.H.U. Requirement Will Be Met. The M.I.H.U. Agreement And Covenants Will Be Recorded Simultaneously With This Plat In The Land Records Office Of Howard County, Maryland. This Development Will Meet M.I.H.U. Alternative Compliance By A Payment Of A Fee-In-Lieu To The Department Of Housing For Each Required Unit. Moderate Income Housing Unit (M.I.H.U.) Tabulation:
    a. M.I.H.U. Required = (13 Lots x 10%) = 1.3 M.I.H.U.
    b. M.I.H.U. Proposed = Developer Will Pursue Alternative Compliance By Paying A Fee-In-Lieu To Howard County Housing Department For The Units Required By The Development.
    c. An Executed M.I.H.U. Agreement With The Howard County Housing Department Has Been Completed And Recorded Simultaneously With This Plat.
33. An M.I.H.U. Agreement Is Recorded Simultaneously With This Plat.
34. The Private Use-In-Common Shared Driveway, Retaining Wall, Stormwater Management, Drainage & Utility Easement For The Use And Benefit Of Lots 1 Thru 13 And Open Space Lots 14 Thru 16 And Maintenance Agreement Are Recorded Simultaneously With This Plat.
35. This Subdivision Is Subject To The Protection Of Scenic Roads, Per Section 16.125 Of The Subdivision And Land Development Regulations. Site Has Frontage On Church Road, A County Local, Scenic Road. An Undisturbed Vegetative Buffer Of At Least 35 Feet In Width Will Remain At The Property's Frontage, Except For Where The Access Road Is Proposed.
36. An Existing Easement "Right-Of-Way Over The Avenue 33 Feet In Width, 16.5 Feet Of Which Is Located On This Property, Was Laid Out For The Use Of Lots 5, 6 And 8; Said Right-Of-Way To Be For The Purpose Of Ingress, Egress And Regress To Be Used In Common With Others Having A Like Right Under The Existing Property Deed." This Easement Is For The Benefit Of Lynwood Farm, Lot 5 Which Is The Second Parcel In Deed For This Subdivision; Lot 6 Which Is Made Up Of Current Parcels 206 And 125, And Lot 8 Which Is Parcel 161. Easement Is Referenced In Current Deed For The Property Under Liber 8317 At Folio 657.
37. Design Manual Waiver To Allow 9 Lots (8 Buildable And 1 Open Space) On A Use-In-Common Driveway Was Approved On October 5, 2015 And Is Subject To The Following Conditions:
    1. The Minimum Width Of The Use-In-Common Driveway Should Increase To 20 Feet Due To Its Curvature.
    2. Provide Flush Curb And Gutter Along The Use-In-Common Driveway.
38. Open Space Lots 14 Thru 17 Are Owned And Maintained By The Lacey Property Homeowners Association Inc.
39. Any Existing Wells And/Or Septic Systems Must Be Properly Abandoned And Notification Of Such Submitted To The Howard County Health Department.
40. Articles Of Incorporation Of The Lacey Property Homeowners Association, Inc. By The State Department Of Assessments And Taxation Was Filed On November 30, 2023 With Receipt No. D24592032.
41. Declaration Of Covenants And Restrictions For The Lacey Property Homeowners Association, Inc. Is Recorded Simultaneously With This Final Plat.
42. Approval Of A Site Development Plan Is Required For The Development Of All Residential Lots Within This Subdivision Prior To Issuance Of Any Grading Or Building Permits For New House Construction In Accordance With Section 16.155 Of The Subdivision And Land Development Regulations.
43. The Lots Created By This Subdivision Plat Are Subject To A Fee Or A Assessment To Cover Or Defray All Or Part Of The Developers Cost Of The Installation Of The Water And Sewer Facilities. Pursuant To The Howard County Code Section 18.112. This Fee Or Assessment, Which Runs With The Land, Is A Contractual Obligation Between The Developer And Each Owner Of This Property And Is Not In Any Way A Fee Or Assessment Of Howard County.

General Notes Continued On Sheet 2:

Area Tabulation This Submission

TOTAL NUMBER OF BUILDABLE LOTS TO BE RECORDED	13
TOTAL NUMBER OF OPEN SPACE LOTS TO BE RECORDED	4
TOTAL NUMBER OF LOTS/PARCELS TO BE RECORDED	17
TOTAL AREA OF BUILDABLE LOTS TO BE RECORDED	2.876 Ac.±
TOTAL AREA OF OPEN SPACE LOTS TO BE RECORDED	5.277 Ac.±
TOTAL AREA OF LOTS/PARCELS TO BE RECORDED	8.153 Ac.±
TOTAL AREA OF ROADWAY TO BE RECORDED	0.398 Ac.±
TOTAL AREA TO BE RECORDED	8.551 Ac.±

Open Space Tabulation

Open Space Lot No.	Credited Area	Non-Credited Area	Total Open Space Area
14	0.589 Ac.±	0.000 Ac.±	0.589 Ac.±
15	4.057 Ac.±	0.000 Ac.±	4.057 Ac.±
16	0.281 Ac.±	0.000 Ac.±	0.281 Ac.±
17	0.350 Ac.±	0.000 Ac.±	0.350 Ac.±
Totals	5.277 Ac.±	0.000 Ac.±	5.277 Ac.±

Owner

Lacey Family Revocable Trust
c/o Mr. Vincent P. Lacey,
Co-Trustee
1235 Wild Rose Court
Marriottsville, Maryland 21104
Ph# 410-707-2639

Developer

SDC Mill Creek, LLC
Attn: Mr. James R. Moxley,III
Suite 415
8480 Baltimore National Pike
Ellicott City, MD 21043
410-465-4244

Legend

- Private Use-In-Common Shared Driveway Easement For The Use And Benefit Of Lots 1 Thru 8
- Existing 33' Private Right-Of-Way For The Purpose Of Ingress, Egress And Regress For Use Of Lots 5, 6 And 8 (L. 8317, F. 657)
- Existing Right-Of-Way Easement Verizon, Maryland (L. 9145, F. 112)
- Public Forest Conservation Area (Retention)
- Private Use-In-Common Shared Driveway, Retaining Wall, SWM, Drainage & Utility Easement For The Use And Benefit Of Lots 1 Thru 13 And Open Space Lots 14 Thru 16
- Public Sewer, Water & Utility Easement
- Recreational Open Space Area
- 20' Public Drainage & Utility Easement
- Private Sewer & Utility Easement
- Public Sewer & Utility Easement
- 10' Public Sidewalk Easement
- 10' Private Storm Drain Easement
- 20' Public Water & Utility Easement
- 5' SWM, Drainage & Utility Easement
- Previously Recorded Parcel Line Removed By Recordation Of This Plat

Fisher, Collins & Carter, Inc.
Civil Engineering Consultants & Land Surveyors
Centennial Square Office Park-10272 Baltimore National Pike
Ellicott City, Maryland 21042
(410) 461-2855

APPROVED: For Public Water And Public Sewerage Systems Howard County Health Department

for Maura J. Rossman — 6/5/24
Howard County Health Officer — Date

APPROVED: Howard County Department Of Planning And Zoning.

Chad Edmondson — 6.7.24
Chief, Development Engineering Division — Date

for Valdis Lazdins — 6/20/24
Director — Date

Owner's Certificate

Vincent P. Lacey, Trustee Of The Lacey Family Revocable Trust, Owner Of The Property Shown And Described Hereon, Hereby Adopt This Plan Of Subdivision, And In Consideration Of The Approval Of This Final Plat By The Department Of Planning And Zoning, Establish The Minimum Building Restriction Lines And Grant Unto Howard County, Maryland, Its Successors And Assigns; (1) The Right To Lay, Construct And Maintain Sewers, Drains, Water Pipes And Other Municipal Utilities And Services In And Under All Roads And Street Rights-Of-Way And The Specific Easement Areas Shown Hereon; (2) The Right To Require Dedication For Public Use The Beds Of The Streets And/Or Roads And Floodplains And Open Space Where Applicable And For Good And Other Valuable Consideration, Hereby Grant The Right And Option To Howard County To Acquire The Fee Simple Title To The Beds Of The Streets And/Or Roads And Floodplains, Storm Drainage Facilities And Open Space Where Applicable; (3) The Right To Require Dedication Of Waterways And Drainage Easements For The Specific Purpose Of Their Construction, Repair And Maintenance; And (4) That No Building Or Similar Structure Of Any Kind Shall Be Erected On Or Over The Said Easements And Rights-Of-Way. Witness My Hand This 5th Day Of May, 2023.

Vincent P. Lacey
Trustee Of The Lacey Family Revocable Trust

Witness
STEVEN K BREEDEN

Surveyor's Certificate

I Hereby Certify To The Best Of My Knowledge That The Final Plat Shown Hereon Is Correct, That It Was Prepared By Me Or Under My Responsible Charge And That I Am A Duly Licensed Land Surveyor Under The Laws Of The State Of Maryland; That It Is All Of The Lands Conveyed By Charles Lacey, (a/k/a Charles T. Lacey, Sr.) And Karlos Lacey, His Wife, Life Tenants, And Charles T. Lacey, Jr., Kimberly Gavin, Elizabeth Lacey Hall, Michael P. Lacey And Vincent P. Lacey (Remainderman) To Charles T. Lacey, Sr., Karlos Lacey And Charles T. Lacey, Jr., Co-Trustees Of The Lacey Family Revocable Trust, Created Pursuant To A Revocable Trust Agreement Dated January 13, 2004, By Deed Dated April 2, 2004 And Recorded Among The Land Records Of Howard County, Maryland In Liber 8317 At Folio 657; All Monuments Are In Place In Accordance With The Annotated Code Of Maryland, As Amended.

STATE OF MARYLAND — FRANK JOHN MANALANSAN II — No. 21476 — PROFESSIONAL LAND SURVEYOR

Frank J. Manalansan II, Land Surveyor No. 21476 — 5/8/24 Date
Expiration Date: July 14, 2025

RECORDED AS PLAT No. 26057 ON 7/15/24
AMONG THE LAND RECORDS OF HOWARD COUNTY, MARYLAND.

Lacey Property

Lots 1 Thru 13 And Open Space Lots 14 Thru 17

(Being A Subdivision Of Tax Map 25, Parcel 13, Liber 8317 At Folio 657)
Lynwood Farm, Lots 4 And 5
Plat Book 17, Page 215

Zoned: R-ED
Tax Map No. 25, Grid No. 1, Parcel No. 13
Second Election District – Howard County, Maryland
Date: April 9, 2024 Scale: As Shown Sheet 1 Of 3

F-21-015

General Notes Continued:

44. The Forest Conservation Requirements Per Section 16.1200 Of The Howard County Code And The Forest Conservation Manual For This Subdivision Has Been Fulfilled By Providing 2.916 Ac.± Of On-Site Forest Retention. No Survey Is Required For On-Site Forest Retention.
48. On April 4, 2013 And November 6, 2014 The Historic Preservation Commission (HPC) Provided Advisory Comments On The Proposed Subdivision/Site Development In Cases HDC-17-13 And HPC-14-82. On December 3, 2015 The HPC Approved The Demolition Of The Existing Structures In Case HPC-15-78. The Request For Tree Removal And Retaining Wall Construction Was Withdrawn From The HPC-15-78 Application. The Tree Removal And Retaining Wall Construction Was Resubmitted For Approval And The Construction Of The Retaining Walls Was Approved With Conditions On February 4, 2016 In Case HPC-16-06A. The Request For Tree Removal Was Continued To March 3, 2016 And Approved With Amendments In Case HPC-16-06B. However, All Approvals Issued Expired At 18 Months And No Work Was Done. The Applicant Resubmitted For HPC Approval For The Demolition Of The Structures, Tree Removal And Retaining Wall Construction On December 6, 2018 In HPC-18-81. The Application Was Approved To Demolish The Buildings And Withdrew The Request For Construction Of Retaining Walls And Tree Removal. The Construction Of The Retaining Walls And Tree Removal Is Not Yet Approved, As The Previous Approvals Expired And No New Applications Have Been Filed Since They Were Withdrawn In December, 2018.
49. The Howard County Planning Board Signed The Decision & Order Granting Approval Of The Preliminary Equivalent Sketch Plan On December 2, 2017. Based Upon That Approval, DPZ Hereby Grants Tentative Allocations For 12 Housing Units For This Subdivision Year 2019.
49. This Subdivision Is Not Subject To Council Bills 61-2019, 62-2019 And 63-2019 Because The Preliminary Sketch Equivalent Plan (SP-15-013) Was Signed On April 11, 2017 Which Is Prior To The February 5, 2020 Enactment Date Of These Bills, Per Section 16.1202(b)(1) Of The Subdivision Regulations.
48. Open Space Tabulation: (Per Howard County Section 16.121.(a))
    a. Open Space Required = 4.276 Acres (8.551 Ac. x 50%)
    b. Total Open Space Provided = 5.232 Acres
    c. Credited Open Space = 5.232 Acres
49. Recreational Open Space Tabulation:
    a. Recreational Open Space Required = 3,900 Sq. Ft. (13 Units x 300 Sq. Ft./Unit)
    b. Recreational Open Space Provided = 3,900 Sq. Ft.
9A. This Subdivision Is Not Subject To Council Bill 75-2018 (Electric Vehicle Charging Stations) Because The Preliminary Equivalent Sketch Plan For This Subdivision Was Signed Prior To The Bill's Effective Date Of January 11, 2019.
51. This Plat Is Subject To WP-16-022 Which On December 5, 2016 The Planning Director Approved A Request To Waive From Howard County Subdivision And Land Development Regulations, Specifically Section 16.1202(a)(7) Forest Retention Priorities - Retention Of Specimen Trees, Section 16.1116(b)(1) Stating That Grading, Removal Of Vegetation, Construction Of Structures, And Paving Shall Not Be Permitted On Land With Existing Steep Slopes To Remove Steep Slopes In Areas Greater Than 20,000 Sq. Ft. In Size; And Section 16.134(A)(1)(i) Sidewalks Are Required On Only One Side Of Cul-De-Sacs And Local Streets Of Single-Family Detached Subdivisions. Approval Is Subject To The Following Nine (9) Conditions:
    1. Compliance With SRC Comments For SP-15-013 And Planning Board Approval Of The Proposed Subdivision Plan, Design, Layout And Location Of Lots, Roads And Shared Driveways.
    2. No Additional Disturbance Or Grading Shall Occur Beyond The Limit Of Disturbance (L.O.D.) Of The 25% Steep Slopes That Are Detailed On The Preliminary Grading Plan And As Approved By The Planning Board, Unless It Can Be Sufficiently Demonstrated To Be Warranted Or Justified By The Applicant.
    3. The Affected Steep Slope Areas Where The Building Lots Are Planned Must Be Sufficiently Stabilized With Retaining Walls And/Or Soil Stabilization Devices/Methods That Shall Lessen The Erodibility Of Soils And Runoff. The Impacted Steep Slope Areas Must Be Revegetated Or Stabilized With Suitable Native Species That Will Bind The Surface Tightly. These Stabilization Techniques Must Be Clearly Demonstrated On Both The Road Construction Drawings (With The Final Plat) And The Site Development Plan.
    4. The Removal Of The Eight (8) Specimen Trees Will Require Mitigation With The Planting Of 2:1 Replacement Trees (16 Total) With A Minimum 3" Caliper Native Plant Species. The Replacement Trees Shall Be Bonded And Shown On The Landscape Plan With The Forthcoming Final Plan.
    5. The Remaining 35 Specimen Trees Shall Be Saved And Protected During Construction Activity. Any Additional Removal Of Specimen Trees Shall Require The Submittal Of A New Alternative Compliance Petition Application.
    6. Provide Tree Protection Fencing At The Trees Drip Line, Or Farther Out, To Prevent Tree Damage From Excavation, Soil Compaction Of Said Roots. These Protection Measures Must Be Demonstrated On Both The Road Construction Drawings (With The Final Plat) And The Site Development Plan.
    7. Compliance With The Certificate Of Approval Issued By The Historic Preservation Commission For Development Of This Property.
    8. The Construction Of The New Houses Facing Towards Church Road Shall Be Adequately Screened Using Berms, Enhanced Landscaping And House Siting To Minimize Impacting The Natural Setting Along The Scenic Road. This Condition Will Be Evaluated Further At The Site Development Plan Stage.
    9. Provide A Note On The SP Plan, The Final Plat And The Site Development Plan Regarding This Alternative Compliance Petition Approval. This Note Shall Include These Subdivision Regulation Sections Petitioned, The Date Of The Alternative Compliance Approval And The Conditions Of The Approval.
9B. Private Use-In-Common Shared Driveway Easement For The Use And Benefit Of Lots 1 Thru 8 And Maintenance Agreement Are Recorded Simultaneously With This Plat.

Curve Data Tabulation

Pnt-Pnt	Radius	Arc Length	Delta	Tangent	Bearing & Distance
501-502	950.08'	106.17'	06°24'10"	53.14'	S 62°35'57" E 106.12'
505-506	263.00'	26.67'	05°48'39"	13.35'	S 29°00'46" W 26.66'
514-513	213.00'	21.60'	05°48'39"	10.81'	S 29°00'46" W 21.59'
517-516	950.00'	53.60'	03°13'58"	26.81'	S 37°47'43" E 53.59'

Reservation Of Public Utility And Forest Conservation Easements

"Developer Reserves Unto Itself, Its Successors And Assigns, All Easements Shown On This Plan For Water, Sewer, Storm Drainage, Other Public Utilities And Forest Conservation (Designated As "Forest Conservation Easement"). Located In, On, Over, And Through Buildable Lots 1 Thru 13 And Open Space Lots 14 Thru 17. Any Conveyances Of The Aforesaid Lots Shall Be Subject To The Easements Herein Reserved, Whether Or Not Expressly Stated In The Deed(s) Conveying Said Lots. Developer Shall Execute And Deliver Deeds For The Easements Herein Reserved To Howard County, With A Metes And Bounds Description Of The Forest Conservation Area. Upon Completion Of The Public Utilities And Their Acceptance By Howard County, And, In The Case Of The Forest Conservation Easement(s), Upon Completion Of The Developer's Obligations Under The Forest Conservation Installation And Maintenance Agreement Executed By Developer And The County, And The Release Of Developer's Surety Posted With Said Agreement, The County Shall Accept The Easements And Record The Deed(s) Of Easement In The Land Records Of Howard County."

Private Use-In-Common Shared Driveway Easement For The Use And Benefit Of Lots 1 Thru 8

Line	Bearing	Length
UIC1	N 55°12'27" W	70.37'
UIC2	R=47.00'	L=69.19'
Chd=S 13°01'59" E, 63.11'		
UIC3	N 29°08'28" E	58.65'
UIC4	R=47.00'	L=75.42'
Chd=S 75°06'37" W, 67.58'		
UIC5	S 58°55'14" E	75.11'
UIC6	S 31°04'46" W	30.00'
UIC7	N 58°55'14" W	86.70'
UIC8	R=29.00'	L=46.53'
Chd=S 75°06'37" W, 41.70'		
UIC9	S 29°08'28" W	35.11'
UIC10	R=29.00'	L=42.69'
Chd=S 13°01'59" E, 38.94'		
UIC11	S 54°56'40" E	63.52'
UIC12	S 34°47'33" W	29.71'

PROPERTY OF STATE OF MARYLAND DEPARTMENT OF GENERAL SERVICES (L. 3132, F. 14) TAX MAP 25, PARCEL 320 ZONED: POR

This Subdivision Is Subject To Section 18.122B Of The Howard County Code. Public Water And Public Sewer Service Has Been Granted Under The Terms And Provisions, Thereof, Effective 04/10/24 On Which Date Developer Agreement 14-4913-D Was Filed And Accepted.

20' Public Drainage & Utility Easement Line Table Chart

Line	Bearing	Length
D1	S 63°54'31" E	20.18'
D2	S 18°43'08" W	11.47'
D3	N 71°16'52" W	20.00'
D4	N 18°43'08" E	14.12'

Private 5' SWM, Drainage & Utility Easement

Line	Bearing	Length
SWM1	N 54°55'27" W	82.23'
SWM2	N 30°25'39" W	32.78'
SWM3	S 79°11'28" W	20.50'
SWM4	N 64°10'16" W	1.84'
SWM5	S 25°49'44" W	5.00'
SWM6	S 64°10'16" E	3.49'
SWM7	N 79°11'28" E	18.63'
SWMB	S 30°25'39" E	30.34'
SWM9	S 54°55'27" E	83.34'
SWM10	N 34°47'33" E	5.00'

Lot Line Line Table Chart

Line	Bearing	Length
PL1	N 88°53'34" W	24.27'
PL2	N 58°55'14" W	37.25'
PL3	N 88°53'34" W	25.10'
PL4	N 58°55'14" W	77.85'
PL5	R=48.20'	L=15.63'
Chd= N 68°12'09" W, 15.56'		
PL6	N 88°53'34" W	25.95'
PL7	N 58°55'14" W	79.66'
PL8	R=43.40'	L=40.57'
Chd= N 85°42'04" W, 39.11'		
PL9	N 88°53'34" W	26.77'
PL10	N 58°55'14" W	81.47'
PL11	R=38.60'	L=57.11'
Chd= S 78°41'43" W, 52.04'		
PL12	N 88°53'34" W	27.60'
PL13	N 58°55'14" W	83.27'
PL14	R=33.80'	L=54.24'
Chd= S 75°06'37" W, 48.60'		
PL15	S 29°08'28" W	41.67'
PL16	N 88°53'34" W	33.45'
PL17	R=41.00'	L=14.38'
Chd= N 48°52'26" W, 14.30'		
PL18	N 58°55'14" W	68.66'
PL19	R=29.00'	L=46.53'
Chd= S 75°06'37" W, 41.70'		
PL20	S 29°08'28" W	35.11'
PL21	R=29.00'	L=42.56'
Chd= S 12°54'06" W, 38.84'		
PL22	N 88°53'34" W	16.16'
PL23	S 00°12'58" W	20.44'
PL24	R=49.00'	L=25.87'
Chd= N 15°20'24" E, 25.57'		
PL25	S 30°27'49" W	36.91'
PL26	R=29.42'	L=46.57'
Chd= N 77°45'35" E, 43.24'		
PL27	N 54°56'40" W	85.51'
PL28	N 88°53'34" W	8.08'
PL29	S 00°12'58" W	15.25'
PL30	R=57.00'	L=30.09'
Chd= N 15°20'24" E, 29.74'		
PL31	S 30°27'49" W	36.91'
PL32	R=37.42'	L=61.78'
Chd= N 77°45'35" E, 55.00'		
PL33	N 54°56'40" W	22.45'
PL34	S 21°55'39" W	22.09'
PL35	R=47.00'	L=45.79'
Chd= N 55°50'24" E, 44.00'		
PL36	R=41.00'	L=49.58'
Chd= N 04°10'54" W, 46.62'		
PL37	N 30°27'49" E	36.84'
PL38	R=21.42'	L=35.36'
Chd= N 77°45'35" E, 31.48'		
PL39	S 54°56'40" E	86.10'

Private Use-In Common Shared Driveway, Retaining Wall, SWM, Drainage & Utility Easement Line Table Chart

Line	Bearing	Length
AE1	N 30°18'04" W	12.50'
AE2	N 14°32'28" W	18.86'
AE3	N 05°10'13" E	16.44'
AE4	N 42°49'09" E	29.07'
AE5	N 37°42'43" W	28.20'
AE6	S 85°28'55" W	41.26'
AE7	N 62°04'21" W	13.61'
AE8	S 27°55'39" W	22.08'
AE9	R=47.00'	L=45.79'
Chd=N 55°50'24" E, 44.00'		
AE10	S 08°41'47" E	24.24'
AE11	S 48°40'33" W	39.24'
AE12	N 71°16'44" W	46.54'
AE13	S 34°47'33" W	72.90'
AE14	N 37°09'58" W	25.69'
AE15	N 34°47'33" E	30.04'
AE16	S 56°44'55" E	9.05'
AE17	N 34°47'33" E	130.22'
AE18	S 54°56'40" E	22.78'
AE19	R=21.24'	L=36.15'
Chd=N 76°13'43" E, 31.94'		
AE20	N 30°27'49" E	37.74'
AE21	R=41.00'	L=62.15'
Chd=N 15°29'47" E, 56.37'		
AE22	N 31°04'46" E	30.00'
AE23	S 58°55'14" E	19.75'
AE24	S 88°53'34" E	12.26'
AE25	S 01°06'26" W	40.48'
AE26	S 63°43'41" E	84.31'

Public Sewer, Water & Utility Easement Line Table Chart

Line	Bearing	Length
SW1	N 00°58'26" E	43.70'
SW2	N 88°53'34" W	11.72'
SW3	N 58°55'14" W	112.44'
SW4	S 31°04'46" W	3.81'
SW5	R=48.68'	L=41.68'
Chd=S 74°41'38" W, 40.42'		
SW6	N 60°51'32" W	5.57'
SW7	S 29°08'28" W	81.90'
SW8	R=42.40'	L=62.42'
Chd=S 13°01'59" E, 56.93'		
SW9	S 55°12'27" E	66.83'
SW10	N 34°47'33" E	30.00'
SW11	N 55°12'27" W	10.00'
SW12	N 34°47'33" E	11.90'
SW13	N 55°12'27" W	20.00'
SW14	S 34°47'33" W	11.90'
SW15	N 55°12'27" W	12.70'
SW16	N 52°12'27" W	8.02'
SW17	N 40°57'27" W	6.88'
SW18	N 16°49'41" W	28.92'
SW19	N 29°08'28" E	55.52'
SW20	N 75°06'37" E	24.60'
SW21	S 58°55'14" E	130.20'

Match Line - See Sheet 3

Graphic Scale 0' 50' 100' 150' Scale: 1" = 50'

Land Dedicated To Howard County, Maryland For The Purpose Of A Public Road (0.202 Ac.±)

Previously Recorded Parcel Line Removed By Recordation Of This Plat

Land Dedicated To Howard County, Maryland For The Purpose Of A Public Road (0.043 Ac.±)

THE WOODS OF PARK LOTS 1 THRU 15 AND OPEN SPACE LOTS 16 & 17 (PLAT NOS. 16049 THRU 16052) ZONED: R-ED

Existing 50' R/W (Plat Nos. 16049 Thru 16052)

Match Line Only-Not A Lot Line

6"x6" Stone Found (Held)

Existing ℄ Road

Part Of Open Space Lot 15
1.298 Ac.± (This Sheet)
Total Area = 4.057 Ac.±
Owned And Maintained By The Lacey Property Homeowners Association, Inc.

Part Of Forest Conservation Area No. 1
55,078 Sq. Ft. Or 1.264 Ac.± (This Sheet) (Retention)
Total Area = 127,011 Sq. Ft. Or 2.916 Ac.±

Part Of Open Space Lot 14
10,763 Sq. Ft. (This Sheet)
Total Area = 25,651 Sq. Ft. Or 0.589 Ac.±

Detail
Scale: 1"=25'

Area Tabulation This Sheet

TOTAL NUMBER OF BUILDABLE LOTS TO BE RECORDED	8
TOTAL NUMBER OF OPEN SPACE LOTS TO BE RECORDED	4
TOTAL NUMBER OF LOTS/PARCELS TO BE RECORDED	12
TOTAL AREA OF BUILDABLE LOTS TO BE RECORDED	1.833 Ac.±
TOTAL AREA OF OPEN SPACE LOTS TO BE RECORDED	2.176 Ac.±
TOTAL AREA OF LOTS/PARCELS TO BE RECORDED	4.009 Ac.±
TOTAL AREA OF ROADWAY TO BE RECORDED	0.325 Ac.±
TOTAL AREA TO BE RECORDED	4.334 Ac.±

The Requirements § 3-108, The Real Property Article, Annotated Code Of Maryland, 1988 Replacement Volume, (As Supplemented) As Far As They Relate To The Making Of This Plat And The Setting Of Markers Have Been Complied With.

Frank J. Manalansan II, L.S. No. 21476 (Land Surveyor) — 5/8/24 Date

Vincent P. Lacey, Trustee Of The Lacey Family Revocable Trust — 05/15/24 Date

N 590400 E 1369050 (Meters) N 179430.2736861 E 417297.274575 (Meters)

Owner
Lacey Family Revocable Trust
c/o Mr. Vincent P. Lacey, Co-Trustee
1235 Wild Rose Court
Marriottsville, Maryland 21104
Ph# 410-707-2639

Developer
SDC Mill Creek, LLC
Attn: Mr. James R. Moxley III
Suite 415
8480 Baltimore National Pike
Ellicott City, MD 21043
410-465-4244

Fisher, Collins & Carter, Inc.
Civil Engineering Consultants & Land Surveyors
Centennial Square Office Park-10272 Baltimore National Pike
Ellicott City, Maryland 21042
(410) 461-2855

APPROVED: For Public Water And Public Sewerage Systems Howard County Health Department

For Michael J. Nitti — 6/5/24
Howard County Health Officer — Date

APPROVED: Howard County Department Of Planning And Zoning.

Chief, Development Engineering Division HSA — 6.7.24 Date

Director DJ — 6/20/24 Date

Owner's Certificate

Vincent P. Lacey, Trustee Of The Lacey Family Revocable Trust, Owner Of The Property Shown And Described Hereon, Hereby Adopt This Plan Of Subdivision, And In Consideration Of The Approval Of This Final Plat By The Department Of Planning And Zoning, Establish The Minimum Building Restriction Lines And Grant Unto Howard County, Maryland, Its Successors And Assigns; (1) The Right To Lay, Construct And Maintain Sewers, Drains, Water Pipes And Other Municipal Utilities And Services In And Under All Roads And Street Rights-Of-Way And The Specific Easement Areas Shown Hereon; (2) The Right To Require Dedication For Public Use The Beds Of The Streets And/Or Roads And Floodplains And Open Space Where Applicable And For Good And Other Valuable Consideration, Hereby Grant The Right And Option To Howard County To Acquire The Fee Simple Title To The Beds Of The Streets And/Or Roads And Floodplains, Storm Drainage Facilities And Open Space Where Applicable; (3) The Right To Require Dedication Of Waterways And Drainage Easements For The Specific Purpose Of Their Construction, Repair And Maintenance; And (4) That No Building Or Similar Structure Of Any Kind Shall Be Erected On Or Over The Said Easements And Rights-Of-Way. Witness My Hand This 5TH Day Of MAY, 2024.

Vincent P. Lacey — Witness Steven K Breeden
Vincent P. Lacey
Trustee Of The Lacey Family Revocable Trust

Surveyor's Certificate

I Hereby Certify To The Best Of My Knowledge That The Final Plat Shown Hereon Is Correct, That It Was Prepared By Me Or Under My Responsible Charge And That I Am A Duly Licensed Land Surveyor Under The Laws Of The State Of Maryland; That It Is All Of The Lands Conveyed By Charles Lacey, (a/k/a Charles T. Lacey, Sr.) And Karlos Lacey, His Wife, Life Tenants, And Charles T. Lacey, Jr., Kimberly Gavin, Elizabeth Lacey Hall, Michael P. Lacey And Vincent P. Lacey (Remainderman) To Charles T. Lacey, Sr., Karlos Lacey And Charles T. Lacey, Jr., Co-Trustees Of The Lacey Family Revocable Trust, Created Pursuant To A Revocable Trust Agreement Dated January 13, 2004, By Deed Dated April 2, 2004 And Recorded Among The Land Records Of Howard County, Maryland In Liber 8317 At Folio 657; All Monuments Are In Place In Accordance With The Annotated Code Of Maryland, As Amended.

STATE OF MARYLAND FRANK JOHN MANALANSAN II PROFESSIONAL LAND SURVEYOR No. 21476

Frank J. Manalansan II, Land Surveyor No. 21476 — 5/8/24 Date
Expiration Date: July 14, 2025

RECORDED AS PLAT No. 26458 ON 7/15/24
AMONG THE LAND RECORDS OF HOWARD COUNTY, MARYLAND.

Lacey Property
Lots 1 Thru 13 And Open Space Lots 14 Thru 17

(Being A Subdivision Of Tax Map 25, Parcel 13, Liber 8317 At Folio 657) Lynwood Farm, Lots 4 And 5 Plat Book 17, Page 215

Zoned: R-ED
Tax Map No. 25, Grid No. 1, Parcel No. 13
Second Election District - Howard County, Maryland
Date: April 9, 2024 Scale: 1" = 50' Sheet 2 Of 3

F-21-015

The Requirements § 3-108, The Real Property Article, Annotated Code Of Maryland, 1988 Replacement Volume, (As Supplemented) As Far As They Relate To The Making Of This Plat And The Setting Of Markers Have Been Complied With.

Frank J. Manalansan II, L.S. No. 21476 (Land Surveyor) — 5/8/24 Date

Vincent P. Lacey, Trustee Of The Lacey Family Revocable Trust — 05/05/24 Date

Reservation Of Public Utility And Forest Conservation Easements

"Developer Reserves Unto Itself, Its Successors And Assigns, All Easements Shown On This Plan For Water, Sewer, Storm Drainage, Other Public Utilities And Forest Conservation (Designated As "Forest Conservation Easement"), Located In, On, Over, And Through Buildable Lots 1 Thru 13 And Open Space Lots 14 Thru 17. Any Conveyances Of The Aforesaid Lots Shall Be Subject To The Easements Herein Reserved, Whether Or Not Expressly Stated In The Deed(s) Conveying Said Lots. Developer Shall Execute And Deliver Deeds For The Easements Herein Reserved To Howard County, With A Metes And Bounds Description Of The Forest Conservation Area. Upon Completion Of The Public Utilities And Their Acceptance By Howard County, And, In The Case Of The Forest Conservation Easement(s), Upon Completion Of The Developer's Obligations Under The Forest Conservation Installation And Maintenance Agreement Executed By Developer And The County, And The Release Of Developer's Surety Posted With Said Agreement, The County Shall Accept The Easements And Record The Deed(s) Of Easement In The Land Records Of Howard County."

Curve Data Tabulation

Pnt-Pnt	Radius	Arc Length	Delta	Tangent	Bearing & Distance	
513-514	213.00'	21.60'	05°48'39"	10.81'	N 29°00'46" E	21.59'
516-522	950.00'	11.03'	00°39'54"	5.51'	S 55°50'46" E	11.03'

Lot Line Line Table Chart

Line	Bearing	Length
PL1	S 38°53'34" E	4.27'
PL2	S 38°53'34" E	62.50'
PL3	S 58°43'53" E	10.83'
PL4	S 38°53'34" E	63.55'
PL5	S 58°43'53" E	75.97'
PL6	S 38°53'34" E	64.60'
PL7	S 58°43'53" E	141.80'
PL8	S 38°53'34" E	65.65'
PL9	S 58°43'53" E	210.46'
PL10	S 38°53'34" E	66.70'
PL11	S 58°43'53" E	94.28'

Private Use-In Common Shared Driveway, Retaining Wall, SWM, Drainage & Utility Easement Line Table Chart

Line	Bearing	Length
AE1	S 38°53'34" E	60.55'
AE2	S 58°43'53" E	146.55'
AE3	N 33°32'48" E	4.89'
AE4	S 56°27'12" E	49.44'
AE5	S 32°41'37" W	43.00'
AE6	N 58°40'45" W	104.66'
AE7	S 31°16'07" W	74.52'
AE8	N 58°43'53" W	22.64'
AE9	S 31°16'07" W	15.88'
AE10	N 58°38'38" W	48.73'
AE11	N 61°09'54" W	15.68'
AE12	N 54°18'30" W	36.77'
AE13	N 30°18'04" W	4.78'
AE14	N 05°10'13" E	16.44'
AE15	N 42°49'09" E	29.07'

Public Water & Utility Easement Line Table Chart

Line	Bearing	Length
W1	S 51°06'26" W	20.00'
W2	S 38°53'34" E	64.05'
W3	S 58°43'53" E	145.20'
W4	S 31°16'07" W	4.43'
W5	S 58°32'51" E	18.92'
W6	N 31°16'07" E	24.49'
W7	N 58°43'53" W	15.35'
W8	N 31°16'07" E	6.44'
W9	N 58°43'53" W	10.00'
W10	S 31°16'07" W	6.44'
W11	N 58°43'53" W	135.27'
W12	N 38°53'34" W	59.98'

Public Sewer, Utility Easement Line Table Chart

Line	Bearing	Length
S1	S 55°30'03" E	24.19'
S2	S 00°15'51" W	36.67'
S3	S 44°17'02" W	99.81'
S4	S 45°42'58" E	31.22'
S5	S 44°17'02" W	20.00'
S6	N 45°42'58" W	31.22'
S7	S 44°17'02" W	155.24'
S8	S 45°42'58" E	1.97'
S9	S 44°17'02" W	20.00'
S10	N 45°42'58" W	21.97'
S11	N 44°17'02" E	90.56'
S12	N 49°03'36" W	26.74'
S13	N 31°16'07" E	10.14'
S14	S 49°03'36" E	29.03'
S15	N 44°17'02" E	186.18'
S16	N 00°15'51" E	42.19'

Private Sewer & Utility Easement Line Table Chart

Line	Bearing	Length
PS1	N 44°17'02" E	20.00'
PS2	S 45°42'58" E	29.26'
PS3	S 44°17'02" W	142.28'
PS4	N 45°42'58" W	20.00'
PS5	N 44°17'02" E	122.28'
PS6	N 45°42'58" W	9.26'

20' Public Drainage & Utility Easement Line Table Chart

Line	Bearing	Length
D1	N 51°28'10" E	5.52'
D2	S 38°53'34" E	91.78'
D3	S 32°07'16" W	61.13'
D4	N 57°52'44" W	20.00'
D5	N 32°07'16" E	46.86'
D6	N 38°53'34" W	53.94'

10' Private Storm Drain Easement Line Table Chart

Line	Bearing	Length
D7	S 55°06'03" E	10.00'
D8	S 34°53'57" W	80.45'
D9	S 40°43'50" W	6.96'
D10	S 55°07'18" W	44.37'
D11	N 32°41'37" E	26.21'
D12	N 58°07'18" E	20.40'
D13	N 34°53'57" E	91.67'

This Subdivision Is Subject To Section 18.122B Of The Howard County Code. Public Water And Public Sewer Service Has Been Granted Under The Terms And Provisions, Thereof, Effective 04/10/24 On Which Date Developer Agreement 14-4913-D Was Filed And Accepted.

Legend

- Private Use-In-Common Shared Driveway Easement For The Use And Benefit Of Lots 1 Thru 8
- Existing 33' Private Right-Of-Way For The Purpose Of Ingress, Egress And Regress For Use Of Lots 5, 6 And 8 (L. 8317, F. 657)
- Existing Right-Of-Way Easement Verizon, Maryland (L. 9145, F. 112)
- Public Forest Conservation Area (Retention)
- Private Use-In-Common Shared Driveway, Retaining Wall, SWM, Drainage & Utility Easement For The Use And Benefit Of Lots 1 Thru 13 And Open Space Lots 14 Thru 16
- Public Sewer, Water & Utility Easement
- Recreational Open Space Area
- 20' Public Drainage & Utility Easement
- Private Sewer & Utility Easement
- Public Sewer & Utility Easement
- 10' Public Sidewalk Easement
- 10' Private Storm Drain Easement
- 20' Public Water & Utility Easement
- 5' SWM, Drainage & Utility Easement
- Previously Recorded Parcel Line Removed By Recordation Of This Plat

Area Tabulation This Sheet

TOTAL NUMBER OF BUILDABLE LOTS TO BE RECORDED	5
TOTAL NUMBER OF OPEN SPACE LOTS TO BE RECORDED	0
TOTAL NUMBER OF LOTS/PARCELS TO BE RECORDED	5
TOTAL AREA OF BUILDABLE LOTS TO BE RECORDED	1.043 Ac.±
TOTAL AREA OF OPEN SPACE LOTS TO BE RECORDED	3.101 Ac.±
TOTAL AREA OF LOTS/PARCELS TO BE RECORDED	4.144 Ac.±
TOTAL AREA OF ROADWAY TO BE RECORDED	0.073 Ac.±
TOTAL AREA TO BE RECORDED	4.217 Ac.±

Graphic Scale

0' 50' 100' 150'

Scale: 1" = 50'

Owners

Lacey Family Revocable Trust
c/o Mr. Vincent P. Lacey,
Co-Trustee
1235 Wild Rose Court
Marriottsville, Maryland 21104
Ph# 410-707-2639

Developer

SDC Mill Creek, LLC
Attn: Mr. James R. Moxley III
Suite 415
8480 Baltimore National Pike
Ellicott City, MD 21043
410-465-4244

Fisher, Collins & Carter, Inc.
Civil Engineering Consultants & Land Surveyors
Centennial Square Office Park-10272 Baltimore National Pike
Ellicott City, Maryland 21042
(410) 461-2855

Detail

Scale: 1"=25'

APPROVED: For Public Water And Public Sewerage Systems Howard County Health Department

Howard County Health Officer — 6/5/24 Date

APPROVED: Howard County Department Of Planning And Zoning.

Chief, Development Engineering Division — 6.7.24 Date

Director — 6/20/2024 Date

Owner's Certificate

Vincent P. Lacey, Trustee Of The Lacey Family Revocable Trust, Owner Of The Property Shown And Described Hereon, Hereby Adopt This Plan Of Subdivision, And In Consideration Of The Approval Of This Final Plat By The Department Of Planning And Zoning, Establish The Minimum Building Restriction Lines And Grant Unto Howard County, Maryland, Its Successors And Assigns; (1) The Right To Lay, Construct And Maintain Sewers, Drains, Water Pipes And Other Municipal Utilities And Services In And Under All Roads And Street Rights-Of-Way And The Specific Easement Areas Shown Hereon; (2) The Right To Require Dedication For Public Use The Beds Of The Streets And/Or Roads And Floodplains And Open Space Where Applicable And For Good And Other Valuable Consideration, Hereby Grant The Right And Option To Howard County To Acquire The Fee Simple Title To The Beds Of The Streets And/Or Roads And Floodplains, Storm Drainage Facilities And Open Space Where Applicable; (3) The Right To Require Dedication Of Waterways And Drainage Easements For The Specific Purpose Of Their Construction, Repair And Maintenance; And (4) That No Building Or Similar Structure Of Any Kind Shall Be Erected On Or Over The Said Easements And Rights-Of-Way. Witness My Hand This 5TH Day Of MAY, 2024.

Vincent P. Lacey
Trustee Of The Lacey Family Revocable Trust

Witness
STEVEN K. BREEDEN

Surveyor's Certificate

I Hereby Certify To The Best Of My Knowledge That The Final Plat Shown Hereon Is Correct, That It Was Prepared By Me Or Under My Responsible Charge And That I Am A Duly Licensed Land Surveyor Under The Laws Of The State Of Maryland; That It Is All Of The Lands Conveyed By Charles Lacey, (a/k/a Charles T. Lacey, Sr.) And Karlos Lacey, His Wife, Life Tenants, And Charles T. Lacey, Jr., Kimberly Gavin, Elizabeth Lacey Hall, Michael P. Lacey And Vincent P. Lacey (Remainderman) To Charles T. Lacey, Sr., Karlos Lacey And Charles T. Lacey, Jr., Co-Trustees Of The Lacey Family Revocable Trust, Created Pursuant To A Revocable Trust Agreement Dated January 13, 2004, By Deed Dated April 2, 2004 And Recorded Among The Land Records Of Howard County, Maryland In Liber 8317 At Folio 657; All Monuments Are In Place In Accordance With The Annotated Code Of Maryland, As Amended.

STATE OF MARYLAND — FRANK JOHN MANALANSAN II — No. 21476 — PROFESSIONAL LAND SURVEYOR

Frank J. Manalansan II, Land Surveyor No. 21476 — 5/8/24 Date

Expiration Date: July 14, 2025

RECORDED AS PLAT No. 26659 ON 7/15/24 AMONG THE LAND RECORDS OF HOWARD COUNTY, MARYLAND.

Lacey Property

Lots 1 Thru 13 And Open Space Lots 14 Thru 17

(Being A Subdivision Of Tax Map 25, Parcel 13, Liber 8317 At Folio 657)
Lynwood Farm, Lots 4 And 5
Plat Book 17, Page 215

Zoned: R-ED
Tax Map No. 25, Grid No. 1, Parcel No. 13
Second Election District - Howard County, Maryland
Date: April 9, 2024 Scale: 1" = 50' Sheet 3 Of 3

F-21-015

S P E E D M E M O
HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
DEVELOPMENT ENGINEERING DIVISION
(410) 313-2420

FINANCE VALIDATION

Date: October 16, 2024

To: Frank Manalansan II
Fisher, Collins and Carter, Inc.
10272 Baltimore National Pike
Ellicott City, Maryland 21042

Reviewer: Heather Akers
# of sheets Revised: 12

Subject: **PROPOSED ROAD CONSTRUCTION PLAN REVISION**

F-21-015-Lacey Property – Redline #1

This division has reviewed the revised plan for the referenced development submitted with a letter dated August 16, 2024, showing the following changes on sheet(s) 1-6,11,12,14,15,23 & 24 of 24.

Redline to revise the sewer alignment and revise lot lines.

THE REVISIONS ARE **APPROVED, SUBJECT TO THE FOLLOWING:**

1. Address all changemark comments.
2. Complete DOCs or DA as applicable.
3. A new seal and signature will be required on all sheets. Please also include revision triangles next to each revision
4. Pay all fees: See Below

	FEE AMOUNT (PER SHEET)	NUMBER OF SHEETS	TOTAL
PRINT FEE	$5.00	12	$60.00
FPLAN DISTRIBUTION FEE	$6.00	12	$72.00
SDP DISTRIBUTION FEE	$3.00	X	$XX.XX
		TOTAL	**$132.00**

Make checks payable to: Director of Finance.
Fees to be deposited to Account No. 1000-3000000000-PWPZ0000000000000-432800

Distribution as follows:
F-plan: 2 - Construction Inspection Division & 2 - Bureau of Highways
SDP: 2 - Construction Inspection Division

Paul DiMarco
Development Engineering Division

HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
3430 Court House Drive ■ Ellicott City, Maryland 21043 ■ 410-313-2350
Lynda D. Eisenberg, AICP, Director FAX 410-313-3467

November 20, 2024

Fisher, Collins and Carter, Inc.
Frank Manalansan
Centennial Square Office Park
10272 Baltimore National Pike
Ellicott City MD 21042

RE: Lacey Property – Original Only Authorization Letter

Dear Mr. Manalansan:

In response to your request to submit an "original only" subdivision plat to revise or correct an existing recorded plat to reconfigure lots lines, to abandon easements and to establish new easements, the Division of Land Development hereby gives authorization to proceed, subject to submission of the following required items:

You are advised that the plat originals will not be accepted by this Division for signature approvals and recordation until written documentation is provided from the Real Estate Services Division, Department of Public Works (410-313-2330) that the public easement documents have been prepared and accepted by that office. Processing of the documents must occur simultaneously with SDP-25-011.

1. An original mylar plat with an original surveyor's seal and signatures, and containing no stick-ons or press-type lettering;

2. A completed and signed Department of Planning and Zoning, Division of Land Development, Final Plat Checklist for Originals Only;

3. A completed and signed DPZ, Development Engineering Division final plat checklist;

4. Payment to the Director of Finance and charged to **SAP account number 1000000000-3000-3000000000-PWPW000000000000-432220** of the DPZ, Development Engineering Division Plat Review Fee: **$200.00** per plat for revision plats]. Verify this requirement with the Development Engineering Division at (410) 313-2350. Should these fees not be required, then a memo from DPZ is required at the time of submission for the plat original;

5. Payment to the Director of Finance of a processing fee of **$300.00** per plat sheet as indicated in the adopted fee schedule, and a distribution fee of **$15.00** per plat sheet;

6. A check made payable to the Clerk of the Court of a recording fee of **$5.00** per plat sheet.

   PLEASE BE ADVISED THAT ALL FEES PAYABLE TO THE CLERK OF THE COURT MUST BE INCLUDED ON A SINGLE CHECK. MULTIPLE CHECKS AND/OR CASH CANNOT BE ACCEPTED.

7. One copy of this letter;

8. Three plat copies with highlighted revisions;

9. If the proposed plat revision involves the addition or extension of a public easement, contact the Real Estate Services Division of the Department of Public Works (410-313-2330) regarding the completion and recordation of required easement documents. With the submission of the plat original, provide a receipt from that agency verifying that all easement documentation has been completed;

10. If the plat proposes the modification or relocation of any property lines, rights-of-way or floodplain, submission of parcel and right-of-way boundaries in a digital format meeting the following County standard is required:

Digital Plat Submissions

- AutoCAD **version 2013** is the required format for submissions.
- Use **NAD 83 feet** as coordinate system.
- Please provide at least two North-East coordinate reference points.
- Do not rotate drawing. North should be straight up.
- All nodes should snap together. No overshoots or undershoots. No circles at property corners.
- All lines must be entered using coordinate geometry, not digitized.
- Please do not send elements other than those outlined below. (No north arrow, notes, vicinity map, etc.)
- Set up layers as described in the following table:

AutoCAD Format					
No.	Layer's Name	Description	Color	Line Type	Text Style
1	Lot Line	Lot Lines	Red	Solid	No text
2	Parcelrow	Parcel Outline and Right of Way	Yellow	Solid	No text

Note: Font = Simplex, Height = 16.0, Width Factor = 1

This information is to be emailed to Carrie Vogel at cvogel@howardcountymd.gov; Sam Margolis at smargolis@howardcountymd.gov; and Adam Litecky at alitecky@howardcountymd.gov. The file should be named with the subdivision title.

If you have any questions or would like a sample digital file, please contact Carrie Vogel of the Department of Planning and Zoning at (410) 313-4420 or email cvogel@howardcountymd.gov

11. Concurrently with the submission of the plat originals for signature approvals and recordation, submit the original Moderate Income Housing Unit (MIHU) Agreement and MIHU Covenants (if the MIHU agreement or covenants requires amending due to the change in the lot numbers), as required in accordance with Section 13.402 of the County Code. Coordinate the preparation of these documents with the Department of Housing and Community Development (DHCD) at (410) 313-6318. Provide documentation to DHCD a minimum of four (4) weeks prior to the plat submission. Prior to their submission, the Agreement must be signed by the DHCD, and the Covenants must be signed by both the DHCD and the County's Office of Law.

12. Submission of a Forest Conservation Data Summary [attached].

13. **The authorization to process this plat as an original is valid for a period of one hundred and twenty (120) days from the date of this letter or until March 20, 2025.**

Before submitting the plat, we require you to revise the plat original to comply with the following and/or attached comments from DPW, Real Estate Services and the Division of Land Development.

Submissions can be mailed to Howard County Planning and Zoning, 3430 Court House Drive, Ellicott City, MD 21043 or dropped into the bin labeled 'DPZ' in the George Howard Building lobby.

If you have any questions, please contact Derrick Jones at 410-313-2350 or email at djones@howardcountymd.gov.

Sincerely,

DocuSigned by:
1EB75478A22B49A...

Anthony Cataldo, Chief
Division of Land Development

AC/dj
cc: RES, DPW
DLD – Julia Sauer
SDC Mill Creek

HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
3430 Court House Drive ■ Ellicott City, Maryland 21043 ■ 410-313-2350
Lynda D. Eisenberg, AICP, Director FAX 410-313-3467

February 11, 2025

Lacey Family Revocable Trust
1235 Wild Rose Court
Marriottsville MD

RE: SDP-25-011 Lacey Property, Lots 2, 18-29

Dear Lacey Family:

The Subdivision Review Committee has determined the above referenced plan to be **technically complete**, subject to the ProjectDox plan markups and attached conditions. Resolution of the concerns of the Division of Land Development directly with that agency within **2** weeks of the date of this letter (**on or before February 25, 2025**) and prior to submission of the electronic originals. You may submit the electronic original drawings to the Department of Planning and Zoning for signature once the comments have been complied with. If you have any questions, please contact the review agency prior to submitting the electronic original site development plan. If, in responding to those comments, design changes are made which could affect another SRC agency, you are advised to consult with the appropriate agency prior to the submission of the electronic originals to the Department of Planning and Zoning for signature.

Howard County Department of Planning and Zoning requires site development plans to be signed electronically. Additional information on the 'Electronic Signature Process' can be found on our website at https://www.howardcountymd.gov/planning-zoning/development-process-and-procedures.

SUBMISSION OF SITE DEVELOPMENT PLAN ELECTRONIC ORIGINAL

The electronic original site development plan and submission materials may be uploaded to ProjectDox with the following:

1. Print fee for final signed mylar Site Development Plan originals:
   (Per print sheet) **Fee** **$5.00** (24 x 36)

2. A distribution fee of **$3.00** per plan sheet must accompany the original drawings. Additional print orders may also be submitted at this time with the electronic originals.

3. Submission of a digital description of the property meeting the following County standards:

   THE FOLLOWING INFORMATION SHALL BE SUBMITTED TO DPZ FOR THE PURPOSE OF EARLY ASSIGNMENT OF NEW STREET ADDRESSES A MINIMUM OF 3 WEEKS PRIOR TO SUBMISSION OF THE SITE DEVELOPMENT PLAN ORIGINAL. This information is required prior to submission of the site development plan original to allow early assignment of new street addresses for entry in the County's GIS system to assist the Department of Inspections, Licenses and Permits for permit purposes. However, please note that if any of the digital file information changes between the time of this early submission and when the site development plan original is submitted, a second updated version must be resubmitted at the time of the site development plan original submission.

Digital SDP Submissions

- A digital file is required for use only to develop maps for the county's 911, fire, police and sheriff agencies.
- **911 REQUIRES THIS FILE AT THE TIME THE SDP IS APPROVED SO THAT THE INFORMATION CAN BE PUT INTO THEIR SYSTEM AS QUICKLY AS POSSIBLE — IN THE EVENT THERE IS AN ON-SITE EMERGENCY DURING CONSTRUCTION.**
- AutoCAD dwg is the required format for submissions.
- Use **NAD 83 feet** as coordinate system.
- Please provide at least two North-East coordinate reference points.
- Do not rotate drawing. North should be straight up.
- All nodes should snap together. No overshoots or undershoots. No circles at property corners.
- All lines must be entered using coordinate geometry, not digitized.
- Please do not send elements other than those outlined below. (No north arrow, notes, vicinity map, etc.)
- Set up layers as described in the following table (geometry colors are the developer's choice):

No.	Description	Geometry Type
1	Building footprints	Polygon
2	Parking lots paved	Polygon
3	Parking lots unpaved	Line
4	Road edge of pavement	Polygon
5	Sidewalks	Line
6	Pathways	Line
7	Fire department / Siamese connection	Point
8	Hydrant locations	Point
9	Fence lines	Line
10	Driveways paved	Line
11	Driveways unpaved	Line
12	Recreational areas (tennis courts, ball fields, tot lots, etc.)	Polygon
13	Swimming Pools	Polygon
14	Road Names	Text
15	Trails	Line
16	Lot Labels	Text
17	Road Centerlines	Line

Note: Recommended Font = Simplex, Height = 16.0, Width Factor = 1

This information is to be emailed to Carrie Vogel at cvogel@howardcountymd.gov; and Sam Margolis at smargolis@howardcountymd.gov. The file should be named with the subdivision title and the DPZ file number.

If you have any questions, please contact Carrie Vogel in Planning and Zoning at (410) 313-4420 or email cvogel@howardcountymd.gov.

4. Submission of digital storm drain system and stormwater management data:

THE FOLLOWING INFORMATION SHALL BE SUBMITTED TO THE DEPARTMENT OF PUBLIC WORKS (DPW) FOR THE PURPOSE OF INCORPORATION INTO THE COUNTY'S GIS ASSET MANAGEMENT SYSTEM. This information is required prior to submission of the site development plan original to allow early incorporation of new storm drain system and stormwater management infrastructure in the County's GIS system for asset management and State reporting purposes. However, please note that if any of the digital file information changes between the time of this early submission and when the site development plan original is submitted, a second updated version must be resubmitted at the time of the site development plan original submission.

Digital Storm Drain System and Stormwater Management Data Submissions

- PDF of the final plans
- GIS geodatabase, GIS shapefiles, or AutoCAD dxf with associated completed Excel file are the required formats for submissions. **See** www.howardcountymd.gov/SWM **for templates.**
- Use NAD 83 feet as coordinate system.
- Do not rotate drawing. North should be straight up.
- All nodes should snap together. No overshoots or undershoots.
- All lines must be entered using coordinate geometry, not digitized.
- Please do not send elements other than those outlined below. (No north arrow, notes, vicinity map, etc.).
- If using AutoCAD, set up layers as described in the following table (geometry colors are the developer's choice:

AutoCAD Format			
No.	Layer's Name	Description	Geometry Type
1	BMP	BMP Point Locations	Point
2	BMP Labels	BMP Unique ID Labels	Text
3	BMP Drainage Area	BMP Drainage Area Polygons	Polygon
4	Outfall	Outfall Point Locations	Point
5	Outfall Labels	Outfall Unique ID Labels	Text
6	Outfall Drainage Area	Outfall Drainage Area Polygons	Polygon
7	Manholes	Manhole Point Locations	Point
8	Manhole Labels	Manhole Unique ID Labels	Text
9	Inlets	Inlet Point Locations	Point
10	Inlet Labels	Inlet Unique ID Labels	Text

11	Pipes	Pipe Lines	Line
12	Pipe Labels	Pipe Unique ID Labels	Text
13	Easements	Easement Polygons	Polygon

Note: Font = Simplex, Height = 16.0, Width Factor = 1

This information is to be emailed to Christine Lowe at cslowe@howardcountymd.gov. The file should be named with the subdivision title and DPZ file number. If you have any questions, please contact Christine Lowe of the Department of Public Works at 410-313-0522 or cslowe@howardcountymd.gov.

5. Submission of a Forest Conservation Data Summary [attached].

6. Payment to the *Director of Finance* for additional originals added to site plan set.
(Fee per sheet) **Fee** **$**400.00 for first 3 sheets of set
$100.00 per sheet after first 3 sheets of set

In accordance with Section 16.156(m) of the Fifth Edition of the Subdivision and Land Development Regulations, SDP originals must be submitted within **180*** days from the date of this letter (**on or before August 10, 2025**).

***In accordance with adopted Council Bill No. 51-2016, effective on 10/5/16, if the deadline date is a Saturday, Sunday, or holiday or if the County offices are not open, the deadline shall be extended to the end of the next open County office business day.**

Compliance with all conditions and/or corrections is required before the electronic original will be accepted for signature approval. Payments can be mailed to the Howard County Planning and Zoning, 3430 Court House Drive, Ellicott City, MD 21043 or dropped into the bin labeled 'DPZ' in the George Howard Building lobby. **Please submit a copy of this letter with your payment submission as it will serve as the submission checklist. DPZ staff will contact you once payment is received to review your PDox submission for completion prior to initiating the electronic signatures process. Electronic originals and supporting documentations addressing outstanding comments should be uploaded to the 'Final PDFs for Signature' and the nested support document folder prior to this meeting.**

If you have any questions, please contact Derrick Jones at (410) 313-2350 or email at djones@howardcountymd.gov.

Sincerely,

DocuSigned by:
1EB75478A22B49A...

Anthony Cataldo, AICP, Chief
Division of Land Development

AC/dj
cc: Research, Benchmark Engineering, Mill Creek LLC, Caruso Homes, Community Contacts

Routing for ES Originals Review Email:

Research – Dave Dell, Carrie Vogel	DLD – Anthony Cataldo, (Derrick Jones)	DED– Phil Thompson(Heather Akers)
SCD – Alex Bratchie	DILP – Jim Hobson	RCD – Beth Burgess or Sam Holmes

FOREST CONSERVATION DATA SUMMARIES

OPTION 1: FEE-IN-LIEU	**FOREST CONSERVATION DATA SUMMARY**	
File Number:	Project/Subdivision Name:	
Fee-In-Lieu Amount:	Net Tract Area:	Cash Receipt No. *:
12-digit Watershed Number:		
Comment: Fee-In-Lieu for _____ acres of Reforestation or Afforestation (specify which is applicable)		

* To be completed by DPZ staff

OPTION 2: EXEMPT/DOI	**FOREST CONSERVATION DATA SUMMARY**
File Number:	Project/Subdivision Name:
12-digit Watershed Number:	
Regulation Section: _____ (provide Regulation reference and a brief description of the applicable exemption or DOI)	

OPTION 3: PREVIOUSLY ADDRESSED (including use of a FC Bank)	**FOREST CONSERVATION DATA SUMMARY**
File Number:	Project/Subdivision Name:
12-digit Watershed Number:	
Comment: Addressed by _____ (provide file number and project/subdivision name)	

OPTION 4: ON-SITE/OFF-SITE PLANTING AND RETENTION	**FOREST CONSERVATION DATA SUMMARY**		
File Number:	Project/Subdivision Name:		
Net Tract Area *Net tract area under review*	**Area of Floodplain** **unforested forested total**	**Existing Forest** *Forest in net tract area minus floodplain*	**Cleared Forest** All forest cleared including floodplain
Retained Forest *Retained forest minus floodplain* **onsite offsite total**	**Planted Forest** **onsite offsite total**	**Long Term Protection** *Total amount of forest planed into LTP*	**Surety Amount Posted** *Total amount of surety posted*
In-Lieu Fees Amount Collected	**Forested Stream Buffers** Linear Length Acreage	**Planted Stream Buffers** Linear Length Acreage	**Amount of Forest Retained but not within an Easement**
12-digit Watershed Number:			

Docusign Envelope ID: 32902D61-E1A0-41FA-A80A-21796BECCAB5

GRADING PERMIT APPLICATION

Howard County Maryland
Department of Inspections, Licenses and Permits
3430 Court House Drive, Ellicott City, MD 21043
Licenses & Permits (410) 313-2455 Inspections (410) 313-1855

Site Address: 3538 Church Road
City: Ellicott City State: MD Zip: 21043
Subdivision: Lacey Property
Tax Map: 25 Acreage: 8.55
Grid: 1 Block: 1
Lot: 1-13 Parcel: 13
Section: n/a Zone: R-ED Area: n/a
Census Tract: 602900 File: F-21-015

Property Owner's Name: SDC Mill Creek, LLC
Address: 8480 Baltimore National Pike Ste. 415
City: Ellicott City State: MD Zip Code: 21043
Phone: 410-465-4244
Email: wpippen@sdcgroup.com

Contractor Company: Security Development
Contact Person: William Pippen
Address: P.O. Box 417
City: Ellicott City State: MD Zip Code: 21043
License No: 13385674 Phone: 410-302-5436
Email: wpippen@sdcgroup.com

Existing Use: Residential
Proposed Use: Residential
Proposed Work: Residential SFD Grading
Total Area Disturbed (Acreage / Sq Ft): 4.2 acres
Total Site Area (Acreage / Sq Ft): 191,664
Cost of Work $: $88,794.00
Plan Number F / SDP / GP: F-21-015
Grading Surety Amount $: $3,859.04
Utility Trenching (Ft): n/a
Watershed Code: 021309061017

******* PRIOR APPROVALS REQUIRED *******
(ATTACH COPIES OF ALL APPLICABLE APPROVALS)

Developer Agreement No. _____ Date Exec. / /
Forest Conservation Agreement No. _____
MDE Waterway Construction Permit No. _____
MDE Non-Tidal Wetland Permit No. _____
MDE Water Quality Certification _____
MDE NPDES Notice of Intent No. _____
US Army Corps of Engineers
Wetland Permit No. _____

I CERTIFY THAT THIS APPLICATION IS CORRECT AND I HAVE THE AUTHORITY TO MAKE SUCH APPLICATION; AND I AGREE TO COMPLY WITH ALL REQUIREMENTS OF TITLE 3, SUBTITLE 4. OF THE HOWARD COUNTY CODE.

William Pippen
Signature – Owner/Authorized Agent (Date)

William Pippen
Print Name

Email Address: wpippen@sdcgroup.com Phone: 410-302-5436
Address: P.O. Box 417 State: MD Zip Code: 21043

FOR OFFICE USE ONLY

DEPT OF PLANNING & ZONING:
LANDSCAPE SURETY REQUIRED (Y/NA) _____ AMOUNT $ _____

DPZ FOREST CONSERVATION, WETLAND, STREAMS, STEEP SLOPE VERIFICATION _____
INITIALS DATE

PROPERTY ID NO: _____ CASH RECEIPT NO. # _____

GRADING PERMIT NO: _____ DPZ APPROVAL: _____
SIGNATURE DATE

DATE RECEIVED: _____

FEE: _____

CHECK# _____ APPROVAL: _____
SIGNATURE DATE

VALIDATION NUMBER: _____

COPIES: WHITE – DILP YELLOW – SEDIMENT CONTROL 060

Disturbed Area: 4.2

Exhibit A-FY24

Surety Amount: $ 3,859.04

*Consistent with Council Resolution No. 74-2023. Grading Plans for lots with 2.0 acres or less of disturbance will be charged a fee of $250.00. Grading Plans (GP) for lots with disturbances greater than 2.0 acres will be charged $250.00, plus $20.00 per each additional acre (or fraction thereof) based on the LOD.

HOWARD COUNTY
Department of Inspections, Licenses and Permits
Grading and Sediment Control Cost Estimate

Project Name: Lacey Property * Plan No.: F-21-015

Work Description: Lacey Property

Item Description	Unit Cost	Quantity	Item Subtotal
Clearing and Grubbing	$4000/ac	4.2	$16,800.00
Excavation	$4.00/cy	7386	$29,544.00
Borrow	$7.00/cy		
Stabilized Const. Entrance	$500 (commercial)$125(residential)	1	$125.00
Dikes / Swales	$3.00/lin. Ft		
Traps / Basins	$750/ac. D.A	3.66	$2,745.00
Silt Fence	$4.50/lin. Ft	280	$1,260.00
Super Silt Fence	$8.00/lin. Ft	1400	$11,200.00
Stabilization	$3000/ac. ($ .63/sy)	2.8	$8,400.00
Inlet Protection	$160.00 each	2	$320.00
Drywell	$800.00 each	23	$18,400.00
		TOTAL:	$88,794.00

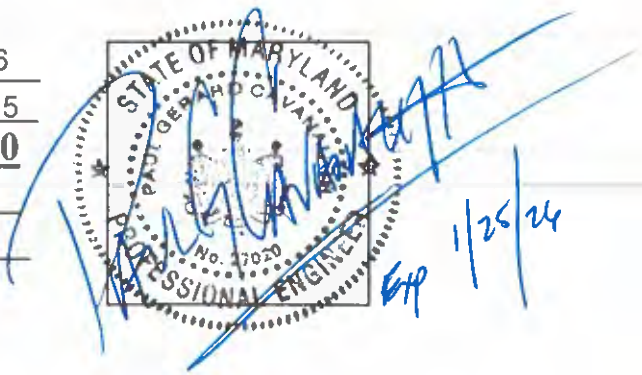
Permit Fee (.09 x TOTAL): $7,991.46

Technology Fee (.10 x Total Permit Fee): $799.15

+ Filing Fee: **$50.00**

***GP Fees (if applicable):**

TOTAL FEES DUE: $8,840.61



1/25/24

(Engineer seal required if **TOTAL** cost exceeds $5,000.00)

T: Operations/DILP Webpage/FY24gradingcostestimate

Docusign Envelope ID: EE465D1F-D94A-4E40-BE96-B05841B9A003

FINAL ROAD CONSTRUCTION, GRADING AND STORMWATER MANAGEMENT PLANS

LACEY PROPERTY

LOTS 2, 18 THRU 29 AND OPEN SPACE LOTS 16, 17, 30 & 31

SHEET INDEX

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	DEMOLITION PLAN
3	MILL CREEK WAY PLAN, PROFILE AND DETAILS
4	PRIVATE USE-IN-COMMON DRIVEWAY PROFILES AND DETAILS
5	GRADING & SEDIMENT CONTROL PLAN
6	SEDIMENT AND EROSION CONTROL NOTES & DETAILS
7	SEDIMENT AND EROSION CONTROL NOTES, DETAILS AND BORING LOGS
8	STORMWATER MANAGEMENT NOTES & DETAILS
9	STORMWATER MANAGEMENT PLAN VIEWS, PROFILES & DETAILS - MICRO BIO-RETENTION #1
10	STORMWATER MANAGEMENT PLAN VIEWS, PROFILES & DETAILS - MICRO BIO-RETENTION #2
11	STORMWATER MANAGEMENT PLAN & PROFILES - POND #1
12	STREET TREE & LANDSCAPE PLAN
13	MICRO BIO-RETENTION PLANTING PLANS, LANDSCAPING NOTES, DETAILS & SPECIFICATIONS
14	STORM DRAIN PROFILES
15	STORM DRAIN DRAINAGE AREA & SOILS MAP
16	PARTIAL PLAN
17	NORTH WALL ELEVATIONS
18	NORTH WALL SECTIONS
19	NORTH WALL SECTIONS
20	NORTH WALL SECTIONS
21	TYPICAL DETAILS
22	GENERAL NOTES & TYPICAL DETAILS
23	FOREST CONSERVATION PLAN
24	TSWM - BASIN #1 PROFILES AND DETAILS

TRAFFIC CONTROL SIGNS

ROAD NAME	CENTERLINE STA.	OFFSET	POSTED SIGN	SIGN CODE
MILL CREEK WAY	0+22	21.3'R	STREET SIGN & NO OUTLET SIGN	SNS & W14-2a
	0+25	18'L	STOP	R1-1
	0+75	14'R	SPEED LIMIT 25 M.P.H.	R2-1
	1+72.3	38.8'L&R	RANGE OF ADDRESS SIGNS	-

STREET LIGHT CHART

STREET NAME	STATION	OFFSET	FIXTURE/POLE TYPE
MILL CREEK WAY	0+18	22'R	100 watt LED-150 COLONIAL POST-TOP FIXTURE MOUNTED ON A 14' BLACK FIBERGLASS POLE
	1+91.34	2' BEHIND CURB	

ROADWAY INFORMATION CHART

ROAD NAME	CLASSIFICATION	DESIGN SPEED	POSTED SPEED LIMIT	R/W WIDTH
MILL CREEK WAY	PUBLIC ACCESS PLACE	25 M.P.H.	25 M.P.H.	50'

STORMWATER MANAGEMENT PRACTICES

LOT No.	MICRO BIO-RETENTION M-6 (NUMBER)	SAND FILTER F-1 (NUMBER)	DRY WELLS M-5 (NUMBER)
O.S. 30	YES - (2)	YES - (1)	NO
18	NO	NO	YES - (3)
2	NO	NO	YES - (4)
19	NO	NO	YES - (3)
20	NO	NO	YES - (3)
21	NO	NO	YES - (3)
22	NO	NO	YES - (3)
23	NO	NO	YES - (3)
24	NO	NO	YES - (3)
25	NO	NO	YES - (2)
26	NO	NO	YES - (2)
27	NO	NO	YES - (3)
28	NO	NO	YES - (2)
29	NO	NO	YES - (3)

SWM NOTE: SINCE THE SP-15-013 PLAN WAS APPROVED PRIOR TO THE APPROVAL OF C.B. No. 80-2016, THIS PROJECT IS EXEMPT FROM THE REQUIREMENTS OF THAT BILL TO PROVIDE ADDITIONAL REDUCTION IN PEAK RUNOFF. CONSERVATIVE DESIGN HAS PROVIDED A 16.5% REDUCTION AND 8.50% REDUCTION AS A BONUS CREDIT.

SWM DRAINAGE AREA SUMMARY TABLE (Proposed Conditions)

Drainage Area	Area (ac+/-)	RCN	T/C (hrs.)	100-Year Peak Q	E.C. Peak Q	Remarks
A	1.81	61	0.22	5.82	9.18	Bypass Area
A-1	4.32	70	0.18	23.29 in/13.67 out @340.78	31.63 in/23.87 out @341.39	Pocket Sand Filter
A-2	0.76	77	0.12	4.36 in/4.33 out @356.41	7.32 in/7.28 out @356.49	Bio #1
B	0.92	69	0.11	4.57	7.24	Bypass Area
B-1	0.37	77	0.18	1.90 in/1.31 out @361.64	3.26 in/2.91 out @361.82	Bio #2
D.P.#1 Total				* 22.00	* 37.72	Total @ D.P.#1 (EC watershed)
C	1.03	70	0.12	5.13	8.19	Total @ D.P.#2 (Sucker Branch)

SWM DRAINAGE AREA SUMMARY TABLE (Existing Conditions)

Drainage Area	Area (ac+/-)	RCN	T/C (hrs.)	100-Year Peak Q	E.C. Peak Q	Remarks
A	6.58	61	0.21	21.6	34.04	
B	1.33	60	0.1	5.25	7.7	
D.P.#1 Total				* 25.64	* 40.91	Total @ D.P.#1
C	0.8	60	0.1	3.16	4.63	Total @ D.P.#2
				16.50%	8.50%	% Decrease @ D.P.#1

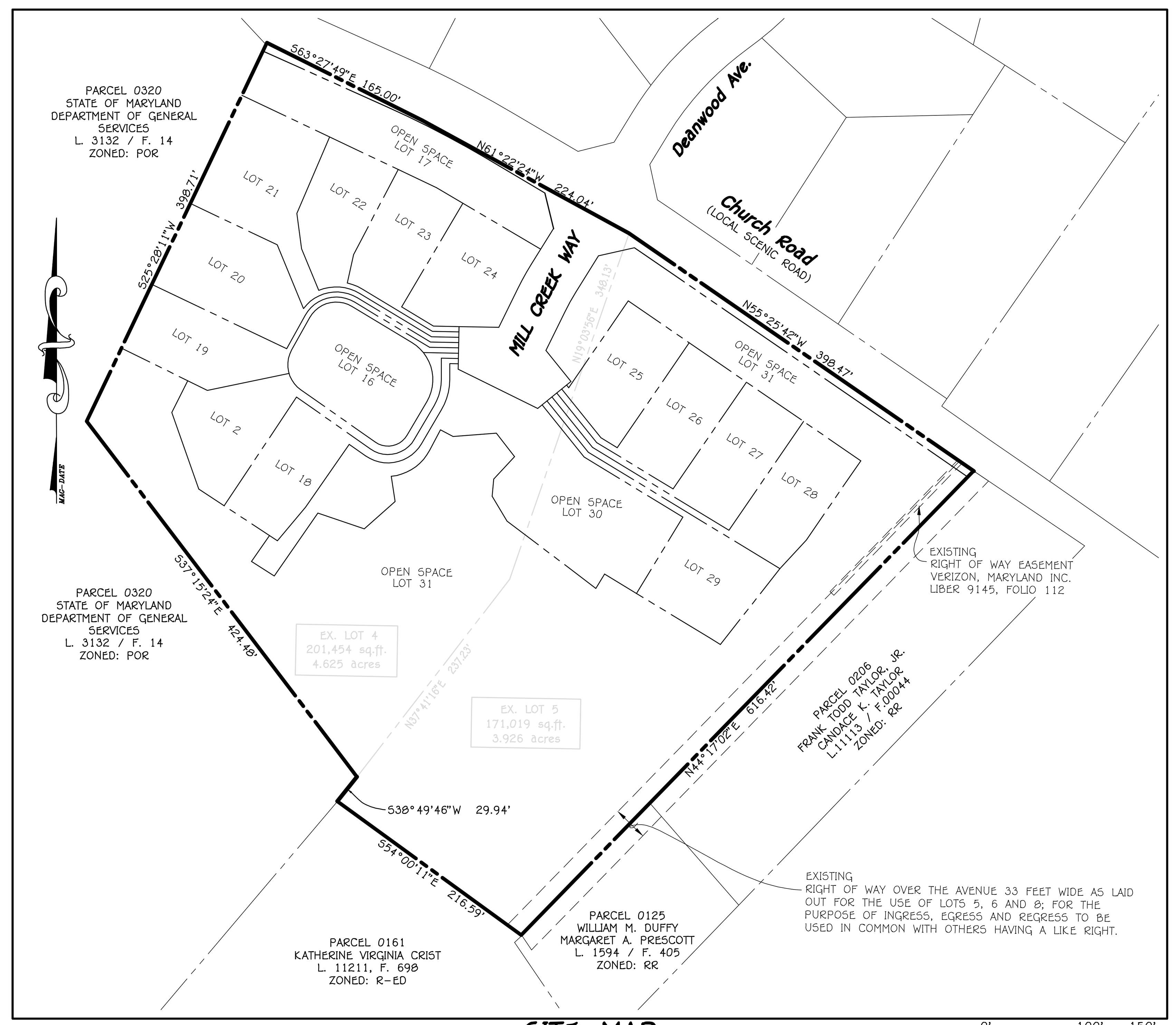
* THESE PEAK FLOW VALUES ARE REFLECTIVE OF THE TR-20 PROGRAM OUTPUT. THE PROGRAM ADDS VARIOUS HYDROGRAPHS TOGETHER TO PRODUCE A VALUE WHICH IS NOT THE SAME AS THE MATH ADDITION OF EACH AREAS PEAK VALUE.

COMMUNITY MEETINGS

NO.	DATE	LOCATION	PRESUBMISSION COMMUNITY MEETING (Y/N)
1	APRIL 30, 2013	MILLER BRANCH LIBRARY	YES
2	JUNE 11, 2014	HOWARD COUNTY GEORGE HOWARD BLDG	YES
3 *	JULY 28, 2014	HOWARD COUNTY GEORGE HOWARD BLDG	NO, CHARRETTE
4 *	AUGUST 26, 2014	HOWARD COUNTY GEORGE HOWARD BLDG	NO, GENERAL MEETING
5 **	SEPTEMBER 2, 2014	DW TAYLOR ASSOCIATES, INC.	NO, MEETING WITH A COMMUNITY REPRESENTATIVE
6 *	SEPTEMBER 22, 2014	HOWARD COUNTY GEORGE HOWARD BLDG	NO, GENERAL MEETING
7 **	NOVEMBER 13, 2014	DW TAYLOR ASSOCIATES, INC.	NO, MEETING WITH TWO COMMUNITY REPRESENTATIVES
8	JULY 13, 2015	HOWARD COUNTY GEORGE HOWARD BLDG	YES

* CHARRETTE AND GENERAL COMMUNITY MEETINGS WERE HELD WITH THE COMMUNITY AS A MEANS OF INFORMING THE COMMUNITY OF DESIGN PROGRESS AS WELL AS TO SOLICIT IDEAS / REQUEST CHANGES TO DESIGN CONCEPTS.

** MEETINGS WERE HELD WITH COMMUNITY REPRESENTATIVES SELECTED BY THE COMMUNITY DURING THE CHARETTE / GENERAL COMMUNITY MEETINGS TO FURTHER THE COMMUNITY INPUT AT A MORE FINITE DESIGN LEVEL. THE COMMUNITY REPRESENTATIVES WERE A RETIRED LAND PLANNER AND LANDSCAPE ARCHITECT FROM ELLICOTT CITY.

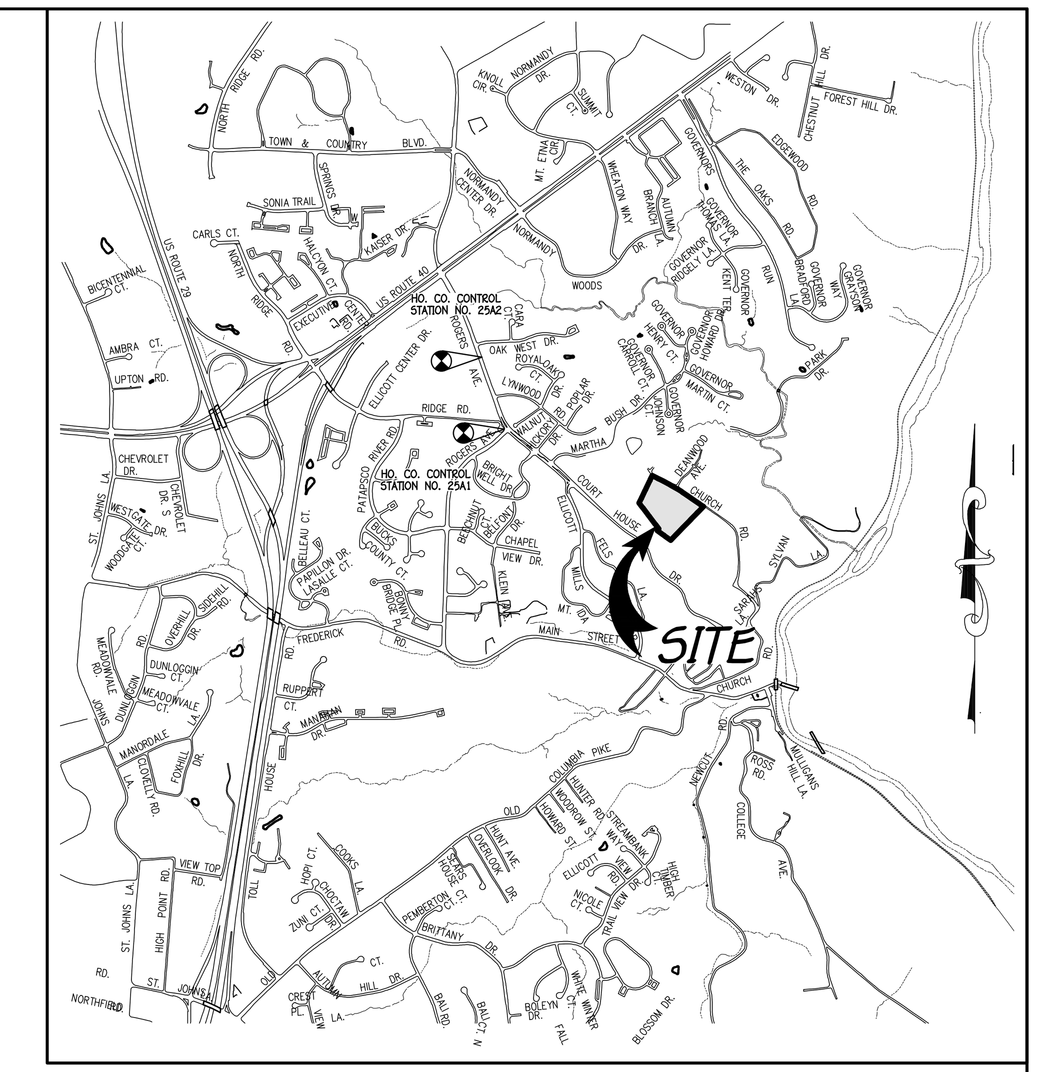


SITE MAP

SCALE: 1" = 100'

LEGEND

SYMBOL	DESCRIPTION
- - 352 - -	EXISTING CONTOUR 2' INTERVAL
—350—	EXISTING CONTOUR 10' INTERVAL
—S—	EXISTING SAN. SEWER LINE
—D—	EXISTING STORM DRAIN LINE
- - - - -	EXISTING WATER LINE
—OE—	EXISTING OVERHEAD ELECTRIC LINE
—X—	EXISTING FENCE
—352—	PROPOSED CONTOUR 2' INTERVAL
—350—	PROPOSED CONTOUR 10' INTERVAL
+ 344.29	PROPOSED SPOT ELEVATION
	PROPOSED CONCRETE WALK
	PROPOSED MACADAM PAVING
	EXISTING TREES
	EXISTING TREELINE
	PROPOSED TREELINE
8" W	PROPOSED PUBLIC WATER
18" RCCP	PROPOSED STORMDRAIN
8" S	PROPOSED PUBLIC SEWER
	SOILS DELINEATION
—SSF—	SUPER SILT FENCE
	FOREST CONSERVATION AREA
	RIPRAP OUTLET PROTECTION
	DEMOLITION
	STEEP SLOPE TO BE REMOVED
	STEEP SLOPES 15% - 24.9%
	STEEP SLOPES 25.0% OR GREATER



VICINITY MAP

SCALE: 1" = 2000'

HO. CO. MD. ADC MAP 21, GRID B7

GENERAL NOTES

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS IF APPLICABLE.
2. THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS / BUREAU OF ENGINEERING / CONSTRUCTION INSPECTION DIVISION AT 410-313-1880 AT LEAST (5) WORKING DAYS PRIOR TO THE START OF WORK.
3. THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.
4. THIS SUBDIVISION PLAN IS SUBJECT TO THE AMENDED FIFTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS AND THE 10-06-13 ZONING REGULATIONS PER COUNCIL BILL NO. 32-2013. DEVELOPMENT OR CONSTRUCTION ON THESE LOTS OR PARCELS MUST COMPLY WITH SETBACKS AND BUFFER REGULATIONS IN EFFECT AT THE TIME OF SUBMISSION OF A BUILDING OR GRADING PERMIT APPLICATION.
5. COORDINATES BASED ON NAD'83 MARYLAND COORDINATE SYSTEM AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS NO. 25A1 AND NO. 25A2
HO. CO. CONTROL STATION #25A1 - HORIZONTAL - NAD '83) N 586,557.549 E 1,366,847.099 ELEVATION = 396.343 (NAVD '88)
HO. CO. CONTROL STATION #25A2 - HORIZONTAL - (NAD '83) N 587,502.730 E 1,366,556.378 ELEVATION = 348.145 (NAVD '88)
6. SUBJECT PROPERTY IS ZONED R-ED PER 10/06/2013 COMPREHENSIVE ZONING PLAN.
7. BACKGROUND INFORMATION:
   a. SUBDIVISION NAME: LACEY PROPERTY
   b. TAX MAP NO.: 25
   c. PARCEL NO.: 13
   d. ZONING: R-ED
   e. ELECTION DISTRICT: SECOND
   f. GROSS AREA OF THIS SUBMISSION = 8.551 AC.±
   g. NUMBER OF BUILDABLE LOTS: 13
   h. NUMBER OF OPEN SPACE LOTS: 4
   i. AREA OF BUILDABLE LOTS: 2.897 AC.±
   j. AREA OF OPEN SPACE LOTS: 5.256 AC.±
   k. AREA OF PUBLIC ROADWAY TO BE DEDICATED: 0.398 AC.±
   l. PREVIOUS FILE NUMBERS: ECP-15-044, WP-16-022, SP-15-013, PB CASE 418, HPC-15-78, HPC-16-06 (a), HPC-16-06 (b) & HPC-18-061 (SEE G.N. #35).
   m. AREA OF FLOODPLAIN = 0.00 AC.
   n. AREA OF 25% OR GREATER SLOPES = 1.35 AC.±
   o. NET AREA OF SUBMISSION = 7.201 AC.±
8. OPEN SPACE REQUIRED: 8.551 AC. X 0.50% = 4.276 AC.±
OPEN SPACE PROVIDED: 5.256 AC.±
RECREATIONAL OPEN SPACE REQUIRED FOR PROJECT TOTAL = (300 SQ.FT. PER UNIT) = 3,900 SQ.FT.
PROVIDED RECREATIONAL OPEN SPACE (LOT 16) = 3,900 SQ.FT.
9. ALL FILL AREAS WITHIN ROADWAYS AND UNDER STRUCTURES SHALL BE COMPACTED TO A MINIMUM OF 95% COMPACTION OF AASHTO T-180.
10. NO NOISE STUDY IS REQUIRED FOR THIS PROJECT.
11. PROPERTY IS LOCATED WITHIN THE METROPOLITAN DISTRICT. WATER AND SEWER IS PUBLIC. CONTRACT NO. 14-4913-D. EXISTING SEPTIC SYSTEM TO BE ABANDONED IN ACCORDANCE WITH HEALTH DEPARTMENT REQUIREMENTS. EXISTING UTILITIES ARE BASED ON FIELD LOCATION OF MISS UTILITY MARKINGS AS A PART OF THE TOPOGRAPHIC SURVEY.
12. SOILS ARE BASED ON THE NRCS WEBSOIL SURVEY AND HOWARD COUNTY SOIL MAP 12.
13. BOUNDARY SHOWN HEREON IS BASED ON A FIELD RUN MONUMENTED BOUNDARY SURVEY DATED AUGUST, 2014. THE EXISTING TOPOGRAPHY IS TAKEN FROM FIELD RUN SURVEY WITH MAXIMUM TWO FOOT CONTOUR INTERVALS PREPARED BY FISHER, COLLINS & CARTER, INC. DATED SEPTEMBER 2013 AND SUPPLEMENTED BY HOWARD COUNTY GIS TOPOGRAPHY.
14. EXISTING STRUCTURES ON-SITE, OUT BUILDINGS AND SWIMMING POOL HAVE ALL BEEN REMOVED UNDER DEMOLITION PERMIT NUMBER B-18003545 DATED FEBRUARY 7, 2019.
15. THERE ARE NO WETLANDS ON THIS SITE PER INVESTIGATION BY ECO-SCIENCE PROFESSIONALS, INC. DATED SEPTEMBER, 2014.
16. A WETLAND DELINEATION & FOREST STAND DELINEATION REPORT FOR THIS PROJECT DATED SEPTEMBER 2014 PREPARED BY ECO-SCIENCE PROFESSIONALS AND APPROVED UNDER SP-15-013.
17. STEEP SLOPES, STREAM AND ITS BUFFERS EXIST ON-SITE.
18. NO 100 YEAR FLOODPLAIN, CEMETERIES, NOR GRAVESITES EXIST ON THE PROPERTY.
19. NO CLEARING, GRADING, REMOVAL OF VEGETATIVE COVER OR TREES, PAVING AND NEW STRUCTURES SHALL BE PERMITTED WITHIN THE LIMITS OF STREAM BUFFERS AND FOREST CONSERVATION EASEMENT AREAS.
20. THE TRAFFIC STUDY FOR THIS PROJECT WAS PREPARED BY MARS GROUP IN JUNE 2015, AND WAS APPROVED ON DECEMBER 21, 2015.
21. SITE HAS FRONTAGE ON CHURCH ROAD, A COUNTY, LOCAL, SCENIC ROAD.
22. EXCAVATIONS TO VERIFY DEPTH TO ROCK AND WATER WERE CONDUCTED ON JUNE 8, 2015.
23. DESIGN MANUAL WAIVER TO ALLOW 9 LOTS (8 BUILDABLE AND 1 OPEN SPACE) ON A USE-IN-COMMON DRIVEWAY WAS APPROVED ON OCTOBER 5, 2015 AND IS SUBJECT TO THE FOLLOWING CONDITIONS:
   1. THE MINIMUM WIDTH OF THE USE-IN-COMMON DRIVEWAY SHOULD INCREASE TO 20 FEET DUE TO ITS CURVATURE.
   2. PROVIDE FLUSH CURB AND GUTTER ALONG THE USE-IN-COMMON DRIVEWAY.
24. STORM WATER MANAGEMENT IS IN ACCORDANCE WITH THE M.D.E. STORM WATER DESIGN MANUAL, VOLUMES I & II, REVISED 2009. NON-STRUCTURAL PRACTICES (MICRO BIO-RETENTION FACILITIES (M-6) AND DRYWELLS (M-5)) IN ACCORDANCE WITH CHAPTER 5 ARE BEING UTILIZED. 100 YEAR MANAGEMENT AND THE 3.55 HR / 6.6 IN STORM EVENT ARE BEING PROVIDED IN THE PROPOSED POCKET SAND FILTER.
25. THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. FINANCIAL SURETY FOR THE REQUIRED 26 SHADE, 5 EVERGREEN TREES & 7 SHRUBS (PROVIDED 19 SHADE, 6 ORNAMENTAL, 11 EVERGREEN & 7 SHRUBS) HAS BEEN POSTED AS PART OF THE DEVELOPER'S AGREEMENT IN THE AMOUNT OF $8,460.00.
26. THE FOREST CONSERVATION REQUIREMENTS PER SECTION 16.1200 OF THE HOWARD COUNTY CODE AND THE FOREST CONSERVATION MANUAL FOR THIS SUBDIVISION HAS BEEN FULFILLED BY PROVIDING 2.916 AC.± OF ON-SITE FOREST RETENTION. NO SURETY IS REQUIRED FOR RETENTION. A DEED OF FOREST CONSERVATION EASEMENT AND AGREEMENT WILL BE EXECUTED SIMULTANEOUSLY WITH THE DPW DEVELOPER AGREEMENT.
27. WAIVER PETITION, WP-16-022, REQUESTING A WAIVER FROM HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS SPECIFICALLY SECTION 16.1205(A)(7) FOREST RETENTION PRIORITIES - RETENTION OF SPECIMEN TREES, SECTION 16.116(B)(1) STATING THAT GRADING, REMOVAL OF VEGETATIVE COVER AND TREES, NEW STRUCTURES, AND PAVING SHALL NOT BE PERMITTED ON LAND WITH EXISTING STEEP SLOPES IN AREAS GREATER THAN 20,000 SQ.FT. IS SIZE, SECTION 16.134(A)(1)(I) SIDEWALKS ARE REQUIRED ON ONLY ONE SIDE OF CUL-DE-SACS AND LOCAL STREETS OF SINGLE-FAMILY DETACHED SUBDIVISIONS, AND SECTION 16.125(B)(1)(I)&(2) REQUIRING MINIMIZATION OF TREE AND VEGETATION REMOVAL ALONG A SCENIC ROAD AND REQUIRING RETENTION OF FOREST OR WOODED AREAS OF 35-FOOT IN WIDTH, HAS BEEN APPROVED ON DEC. 5, 2016. APPROVAL OF WP-16-022 IS SUBJECT TO THE FOLLOWING CONDITIONS:
   a. COMPLIANCE WITH SRC COMMENTS FOR SP-15-013 AND PLANNING BOARD APPROVAL OF THE PROPOSED SUBDIVISION PLAN DESIGN, LAYOUT AND LOCATION OF LOTS, ROADS AND SHARED DRIVEWAYS.
   b. NO ADDITIONAL DISTURBANCE OR GRADING SHALL OCCUR BEYOND THE LIMIT OF DISTURBANCE (L.O.D.) OF THE 25% STEEP SLOPES THAT ARE DETAILED ON THE PRELIMINARY GRADING PLAN AND AS APPROVED BY THE PLANNING BOARD, UNLESS IT CAN BE SUFFICIENTLY DEMONSTRATED TO BE WARRANTED OR JUSTIFIED BY THE APPLICANT.
   c. THE AFFECTED STEEP SLOPE AREAS WHERE THE BUILDING LOTS ARE PLANNED MUST BE SUFFICIENTLY STABILIZED WITH RETAINING WALL AND/OR SOIL STABILIZATION DEVICES/METHODS THAT SHALL LESSEN THE ERODIBILITY OF SOILS AND RUNOFF. THE IMPACTED STEEP SLOPE AREAS MUST BE REVEGETATED OR STABILIZED WITH SUITABLE NATIVE SPECIES THAT WILL BIND THE SURFACE TIGHTLY. THESE STABILIZATION TECHNIQUES MUST BE CLEARLY DEMONSTRATED ON BOTH THE ROAD CONSTRUCTION DRAWINGS (WITH THE FINAL PLAT) AND THE SITE DEVELOPMENT PLAN.
   d. THE REMOVAL OF THE EIGHT (8) SPECIMEN TREES WILL REQUIRE MITIGATION WITH THE PLANTING OF 2:1 REPLACEMENT TREES (16 TOTAL) WITH A MINIMUM 3" CALIPER NATIVE PLANT SPECIES. THE REPLACEMENT TREES SHALL BE BONDED AND SHOWN ON THE LANDSCAPE PLAN WITH THE FORTHCOMING FINAL PLAN.
   e. THE REMAINING 35 SPECIMEN TREES SHALL BE SAVED AND PROTECTED DURING CONSTRUCTION ACTIVITY. ANY ADDITIONAL REMOVAL OF SPECIMEN TREES SHALL REQUIRE THE SUBMITTAL OF A NEW ALTERNATIVE COMPLIANCE PETITION APPLICATION.
   f. PROVIDE TREE PROTECTION FENCING AT THE TREES DRIP LINE, OR FARTHER OUT, TO PREVENT TREE DAMAGES FROM EXCAVATION, SOIL COMPACTION OF SOIL OVER ROOTS. THESE PROTECTION TECHNIQUES MUST BE DEMONSTRATED ON BOTH THE ROAD CONSTRUCTION DRAWINGS (WITH THE FINAL PLAT) AND THE SITE DEVELOPMENT PLAN.
   g. COMPLIANCE WITH THE CERTIFICATE OF APPROVAL ISSUED BY THE HISTORIC PRESERVATION COMMISSION FOR DEVELOPMENT OF THIS PROPERTY.
   h. THE CONSTRUCTION OF THE NEW HOUSES FACING TOWARDS CHURCH ROAD SHALL BE ADEQUATELY SCREENED USING BERMS, ENHANCED LANDSCAPING AND HOUSE SITING TO MINIMIZE IMPACTING THE NATURAL SETTING ALONG THE SCENIC ROAD. THIS CONDITION WILL BE EVALUATED FURTHER AT THE SITE DEVELOPMENT PLAN STAGE.
   i. PROVIDE A NOTE ON THE SP PLAN, THE FINAL PLAT AND THE SITE DEVELOPMENT PLAN REGARDING THIS ALTERNATIVE COMPLIANCE PETITION APPROVAL. THIS NOTE SHALL INCLUDE THOSE SUBDIVISION REGULATION SECTIONS PETITIONED, THE DATE OF THE ALTERNATIVE COMPLIANCE APPROVAL, AND THE CONDITIONS OF APPROVAL.
28. TRASH AND RECYCLABLES COLLECTION WILL BE AT MILL CREEK WAY WITHIN 5' OF THE COUNTY ROADWAY.
29. TWO PRIVATE RANGE OF ADDRESS SIGN ASSEMBLIES SHALL BE FABRICATED AND INSTALLED BY HOWARD COUNTY BUREAU OF HIGHWAYS AT THE DEVELOPERS/OWNERS EXPENSE. CONTACT HOWARD COUNTY TRAFFIC DIVISION AT 410-313-5752 FOR DETAILS AND COST ESTIMATE.
30. SUBDIVISION IS REQUIRED TO PROVIDE M.I.H.U. (MODERATE INCOME HOUSING UNIT). IT IS ANTICIPATED AT THIS TIME THAT A FEE-IN-LIEU WILL BE PAID. MIHU AGREEMENT WILL BE SUBMITTED WITH THIS FINAL PLAN OUTLINING HOW THE MIHU REQUIREMENT WILL BE MET.
   A. M.I.H.U. REQUIRED = 1.2 M.I.H.U.
   (12 LOTS X 10% M.I.H.U./LOT)
   B. ONE UNIT IS EXEMPT FROM MIHU REQUIREMENTS. (ONE EXISTING LOT)
31. STREET LIGHTS WILL BE REQUIRED IN THIS DEVELOPMENT IN ACCORDANCE WITH THE DESIGN MANUAL STREET LIGHT PLACEMENT AND THE TYPE OF FIXTURE AND POLE SELECTED SHALL BE IN ACCORDANCE WITH THE LATEST HOWARD COUNTY DESIGN MANUAL, VOLUME III (1993) AND AS MODIFIED BY "GUIDELINES FOR STREET LIGHTS IN RESIDENTIAL DEVELOPMENTS (JUNE 1993)." THE JUNE 1993 POLICY INCLUDES GUIDELINES FOR LATERAL AND LONGITUDINAL PLACEMENT. A MINIMUM SPACING OF 20' SHALL BE MAINTAINED BETWEEN ANY STREET LIGHT AND ANY TREE.
32. PLAN IS SUBJECT TO PLANNING BOARD APPROVAL ON NOVEMBER 17, 2016 AND SIGNED DECISION & ORDER ON MARCH 2, 2017, IN ACCORDANCE WITH SECTION 107.0 OF THE ZONING REGULATIONS.
33. THIS SUBDIVISION IS SUBJECT TO THE PROTECTION OF SCENIC ROADS, PER SECTION 16.125 OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS.

GENERAL NOTES continued

34. TRAFFIC CONTROL DEVICES:
(a) THE R1-1 ("STOP") SIGN, R2-1 ("SPEED LIMIT 25"), W14-2a (NO OUTLET), AND THE STREET NAME SIGN (SNS) ASSEMBLY FOR THIS DEVELOPMENT MUST BE INSTALLED BEFORE THE BASE PAVING IS COMPLETED.
(b) THE TRAFFIC CONTROL DEVICE LOCATIONS SHOWN ON THE PLANS ARE APPROXIMATE AND MUST BE FIELD APPROVED BY HOWARD COUNTY TRAFFIC DIVISION (410-313-2430) PRIOR TO THE INSTALLATION OF ANY OF THE TRAFFIC CONTROL DEVICES.
(c) ALL TRAFFIC CONTROL DEVICES AND THEIR LOCATIONS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE "MARYLAND MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MDMUTCD).
(d) ALL SIGN POSTS USED FOR TRAFFIC CONTROL SIGNS INSTALLED IN THE COUNTY RIGHT-OF-WAY SHALL BE MOUNTED ON A 2" GALVANIZED STEEL, PERFORATED ("QUICK PUNCH"), SQUARE TUBE POST (14 GAUGE) INSERTED INTO A 2-1/2" GALVANIZED STEEL, PERFORATED, SQUARE TUBE SLEEVE (12 GAUGE) -3' LONG. THE ANCHOR SHALL NOT EXTEND MORE THAN TWO "QUICK PUNCH" HOLES ABOVE GROUND LEVEL. A GALVANIZED STEEL POLE CAP SHALL BE MOUNTED ON TOP OF EACH POST.
35. ON APRIL 4, 2013 AND NOVEMBER 6, 2014, THE HISTORIC PRESERVATION COMMISSION (HPC) PROVIDED ADVISORY COMMENTS ON THE PROPOSED SUBDIVISION/SITE DEVELOPMENT PLAN IN CASES HDC-13-17 AND HPC-14-82. ON DECEMBER 3, 2015, THE HPC APPROVED THE DEMOLITION OF THE EXISTING STRUCTURES IN CASE HPC-15-78. THE REQUEST FOR TREE REMOVAL AND RETAINING WALL CONSTRUCTION WAS WITHDRAWN FROM THE HPC-15-78 APPLICATION. THE TREE REMOVAL AND RETAINING WALL CONSTRUCTION WAS RESUBMITTED FOR APPROVAL AND THE CONSTRUCTION OF THE RETAINING WALLS WAS APPROVED WITH CONDITIONS ON FEBRUARY 4, 2016 IN CASE HPC-16-06a. THE REQUEST FOR TREE REMOVAL WAS CONTINUED TO MARCH 3, 2016 AND APPROVED WITH AMENDMENTS IN CASE HPC-16-06b. ON DECEMBER 6, 2018, CASE No. HPC-18-61 WAS HELD TO REINSTATE THE PREVIOUS CASE No. HPC-15-078 AND HPC-16-06 (a) & (b). HOWEVER, SINCE THE APPROVED PROJECT (SP-15-013) HAD BEEN ON HOLD DUE TO COUNTY APFO REGULATIONS, IT HAS BEEN DETERMINED THAT THE REINSTATEMENT CASE HPC-18-61 IS NOT REQUIRED IF THE PROJECT CONTINUES WITHIN THE PLAN REVIEW PROCESS POST SP-15-013 AND THIS PLAN.
36. IN ACCORDANCE WITH SECTION 16.128 OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS, PRE-SUBMISSION COMMUNITY MEETINGS WERE HELD ON APRIL 3, 2013, JUNE 11, 2014, AND JULY 13, 2015 FOR THE DEVELOPER TO PROVIDE INFORMATION TO THE COMMUNITY REGARDING THE PROPOSED INITIAL PLAN SUBMITTAL AND TO ALLOW COMMUNITY RESIDENTS TO ASK QUESTIONS AND TO MAKE COMMENTS.
37. THE HOWARD COUNTY PLANNING BOARD SIGNED THE DECISION & ORDER GRANTING APPROVAL OF THE SP PLAN ON MARCH 2, 2017. BASED UPON THAT APPROVAL, DPZ HEREBY GRANTS TENTATIVE ALLOCATIONS FOR 12 HOUSING UNITS FOR THIS SUBDIVISION YEAR 2019.
38. THIS PROPERTY IS LOCATED WITHIN THE ELLICOTT CITY HISTORIC DISTRICT.
39. DRIVEWAYS SHALL BE PROVIDED PRIOR TO RESIDENTIAL OCCUPANCY TO ENSURE SAFE ACCESS FOR FIRE AND EMERGENCY VEHICLES PER THE FOLLOWING (MINIMUM) REQUIREMENTS:
   a. WIDTH - 12 FEET (16 FEET SERVING MORE THAN ONE RESIDENCE)
   b. SURFACE - SIX (6") INCHES OF COMPACTED CRUSHER RUN BASE WITH TAR AND CHIP COATING.
   c. GEOMETRY - MAXIMUM 15% GRADE, MAXIMUM 10% GRADE CHANGE AND MINIMUM OF 45 TURNING RADIUS.
   d. STRUCTURES (CULVERTS/BRIDGES) CAPABLE OF SUPPORTING 25 GROSS TONS (H 25 LOADING).
   e. DRAINAGE ELEMENTS - CAPABLE OF SAFELY PASSING 100 YEAR FLOOD WITH NO MORE THAN 1 FOOT DEPTH OVER DRIVEWAY SURFACE.
   f. STRUCTURE CLEARANCES - MINIMUM 12 FEET.
   g. MAINTENANCE - SUFFICIENT TO INSURE ALL WEATHER USE.
40. AN EXISTING (EASEMENT) "RIGHT OF WAY OVER THE AVENUE 33 FEET IN WIDTH, 16.5 FEET OF WHICH IS LOCATED ON THIS PROPERTY, WAS LAID OUT FOR THE USE OF LOTS 5, 6 AND 8; SAID RIGHT OF WAY TO BE FOR THE PURPOSE OF INGRESS, EGRESS AND REGRESS TO BE USED IN COMMON WITH OTHERS HAVING A LIKE RIGHT UNDER THE EXISTING PROPERTY DEED". THIS EASEMENT IS FOR THE BENEFIT OF LYNWOOD FARM, LOT 5 WHICH IS THE SECOND PARCEL IN DEED FOR THIS SUBDIVISION, LOT 6 WHICH IS MADE UP OF CURRENT PARCELS 206 & 125, AND LOT 8 WHICH IS PARCEL 161. EASEMENT IS REFERENCE IN CURRENT DEED FOR THE PROPERTY UNDER LIBER 8317, FOLIO 657.
41. THIS SUBDIVISION IS NOT SUBJECT TO COUNCIL BILL 76-2018 (ELECTRIC VEHICLE CHARGING STATIONS) BECAUSE THE PRELIMINARY EQUIVALENT SKETCH PLAN FOR THIS SUBDIVISION WAS SIGNED PRIOR TO THE BILL'S EFFECTIVE DATE OF JAN. 11, 2019.
42. THIS FINAL PLAN IS NOT SUBJECT TO COUNCIL BILLS 61-2019, 62-2019 AND 63-2019 BECAUSE THE PRELIMINARY SKETCH PLAN (SP-15-013) WAS SIGNED ON APRIL 11, 2017 WHICH IS PRIOR TO THE FEBRUARY 5, 2020 ENACTMENT DATE OF THESE BILLS, PER SECTION 16.102(h)(1) OF THE SUBDIVISION REGULATIONS.
43. WATERSHEDS: 0.95 AC TO THE SUCKER BRANCH TO THE PATAPSCO RIVER LOWER NORTH BRANCH (02130906) AND 7.60 AC TO UNNAMED TRIBUTARY OF THE HUDSON BRANCH TO THE PATAPSCO RIVER LOWER NORTH BRANCH (02130906).
44. THIS PLAN PROVIDES 16 REPLACEMENT TREES FOR THE REMOVAL OF 8 SPECIMEN TREES PER WP-16-022.
45. PUBLIC STREET TREES ARE PROVIDED IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. FINANCIAL SURETY FOR THE REQUIRED 30 STREET TREES IN THE AMOUNT OF $9,000.00 SHALL BE COLLECTED WITH THE DEPARTMENT OF PUBLIC WORKS COST ESTIMATE.

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

Approved: Howard County Department Of Public Works

DocuSigned by: [signature] — Chief, Bureau Of Highways — Date: 12/13/2024

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

DocuSigned by: Chad Edmondson — Chief, Development Engineering Division — Date: 12/13/2024

DocuSigned by: [signature] — Chief, Division of Land Development — Date: 12/16/2024

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS. HOWARD COUNTY HEALTH DEPARTMENT.

DocuSigned by: Michael J. Davis — COUNTY HEALTH OFFICER — DATE: 12/13/2024

DATE	DESCRIPTION
10/22/24	⚠ RESUBDIVIDED LOTS 1, 3-13 & OPEN SPACE LOTS 14 AND 15
10/22/24	⚠ REVISED GRADING, STORM DRAIN, WATER & SEWER ALIGNMENTS

REVISIONS

"PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY 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. 27020, EXPIRATION DATE: 01-25-26."

STATE OF MARYLAND PAUL GERARD CAVANAUGH No. 27020 PROFESSIONAL ENGINEER

Paul G. Cavanaugh
PAUL G. CAVANAUGH, P.E. #27020

Owner
Lacey Family Revocable Trust
c/o Mr. Vincent P. Lacey, Co-Trustee
1235 Wild Rose Court
Marriottsville, Maryland 21104
Ph# 410-707-2639

Owner
Lacey Property Homeowners Association, Inc.
6026 Trotter Road
Clarksville, Maryland 21029

Developer
SDC Mill Creek, LLC
Attn: Mr. Steven K. Breeden
Suite 415
8480 Baltimore National Pike
Ellicott City, Maryland 21043
410-465-4244

PROJECT				SECTION/AREA		PARCEL
LACEY PROPERTY				N/A		13
PLAT NOS.	BLOCK NO.	ZONE	TAX MAP	ELEC. DIST.	CENSUS TR.	
-	1	R-ED	25	SECOND	602900	

REVISED TITLE SHEET

LACEY PROPERTY

LOTS 2, 18 THRU 29 AND OPEN SPACE LOTS 16, 17, 30 & 31

(BEING A RESUBDIVISION OF LOTS 1, 3 THRU 13 AND OPEN SPACE LOTS 14 & 15 AS SHOWN ON PLATS ENTITLED "LACEY PROPERTY, LOTS 1 THRU 13 AND OPEN SPACE LOTS 14 THRU 17", PLAT Nos. 26657 - 26659)

ZONED: R-ED
PARCEL No.: 13
TAX MAP No.: 25 GRID No.: 1
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: OCT. 25, 2024
SHEET 1 OF 24

F-21-015

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SPECIMEN TREE TABLE

KEY	SPECIES	SIZE (DBH)	CRZ (FT RADIUS)	COMMENTS	STATUS
1	HEMLOCK	35"	52.5		TBR
2	NORWAY SPRUCE	33"	49.5		
3	WHITE PINE	37"	55.5		
4	WHITE PINE	38.5"	57.75		
5	SILVER MAPLE	49.5"	89.25		
6	SILVER MAPLE	36.5"	54.75		
7	BLACK WALNUT	37.5"	56.25		
8	BLACK WALNUT	32"	48		
9	BLACK WALNUT	41"	61.5		
11	SILVER MAPLE	42"	63	VERY POOR, TRUNK ROT	TBR
12	SILVER MAPLE	45.5"	68.25	POOR, TRUNK ROT	
13	SILVER MAPLE	52"	78	POOR, TRUNK ROT	TBR
14	ENGLISH WALNUT	41"	61.5		
15	SILVER MAPLE	31"	46.5	FAIR, LIMITED CROWN SPREAD	
16	SILVER MAPLE	39"	58.5		
17	SILVER MAPLE	33"	49.5	FAIR, LEANING	
18	SILVER MAPLE	40.5"	60.75	FAIR, NARROW CROWN	
19	SILVER MAPLE	37"	55.5	FAIR, LIMITED CROWN SPREAD	
20	SILVER MAPLE	45"	67.5	FAIR, LIMITED CROWN SPREAD	TBR
21	SILVER MAPLE	41"	61.5	FAIR, MAJOR LIMB BROKEN	TBR
22	SILVER MAPLE	32"	48		TBR
23	SILVER MAPLE	34"	51	FAIR, LIMITED CROWN SPREAD	TBR
24	SILVER MAPLE	35"	52.5	POOR, TRUNK ROT	TBR
25	TULIP POPLAR	39.5"	59.25		
26	TULIP POPLAR	35"	52.5	TWIN STEMS	
27	TULIP POPLAR	33.5"	50.25		
28	TULIP POPLAR	32"	48		
29	TULIP POPLAR	32"	48	TWIN STEMS	
30	TULIP POPLAR	31"	46.5		
31	TULIP POPLAR	39"	58.5		
32	TULIP POPLAR	46"	69		
33	TULIP POPLAR	33"	49.5	2 ADDITIONAL NEAR SPECIMEN SIZE TRUNKS	
34	TULIP POPLAR	32.5"	48.75		
35	TULIP POPLAR	39.5"	59.25		
36	TULIP POPLAR	40"	60		
37	TULIP POPLAR	55"	82.5		
38	TULIP POPLAR	61"	91.5	SPLITS INTO 2 TRUNKS ABOVE DBH	
39	TULIP POPLAR	41"	61.5		
40	SYCAMORE	31"	46.5		
41	SILVER MAPLE	31.5"	47.25	POOR, VERY LIMITED CROWN	
42	SILVER MAPLE	39.5"	59.25	POOR, CROWN REDUCED	
43	SILVER MAPLE	39"/32"	58.5	POOR, SPLIT TRUNK ABOVE BREAST HEIGHT, TRUNK ROT, AND LIMB DIEBACK	

NOTE: "TBR" REFERS TO EXISTING SPECIMEN TREES TO BE REMOVED.

LEGEND

SYMBOL	DESCRIPTION
352	EXISTING CONTOUR 2' INTERVAL
350	EXISTING CONTOUR 10' INTERVAL
	EXISTING SAN. SEWER LINE
	EXISTING STORM DRAIN LINE
	EXISTING WATER LINE
	EX. OVERHEAD ELECTRIC LINE & POWER POLE
x x	EXISTING FENCE
	EXISTING PAVING
	EXISTING TREES
	EXISTING TREES TO BE REMOVED
T19	SPECIMEN TREES
	EXISTING TREELINE
	SLOPES 15% - 24.9%
	SLOPES 25% OR GREATER
	EX. DRIVEWAY DEMOLITION
	STEEP SLOPE TO BE REMOVED

NOTE: EXISTING STRUCTURES, OUT BUILDINGS AND SWIMMING POOL HAVE BEEN RAZED AND REMOVED FROM THE SITE IN MARCH 2020 UNDER DEMOLITION PERMIT NUMBER B-18003545.

0' 40' 80' 160'

SCALE: 1" = 40'

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

Approved: Howard County Department Of Public Works
Chief, Bureau Of Highways — 12/13/2024 Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
Chief, Development Engineering Division — 12/13/2024 Date
Chief, Division of Land Development — 12/16/2024 Date

DATE	DESCRIPTION
10/22/24	⚠ REVISED L.O.D.

REVISIONS

"PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY 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. 27020, EXPIRATION DATE: 01-25-26."

STATE OF MARYLAND · GERARD CAVANAUGH · 27020 · PROFESSIONAL ENGINEER

Paul G. Cavanaugh

PAUL G. CAVANAUGH, P.E. #27020

Owner
Lacey Family Revocable Trust
c/o Mr. Vincent P. Lacey, Co-Trustee
1235 Wild Rose Court
Marriottsville, Maryland 21104
Ph# 410-707-2639

Owner
Lacey Property Homeowners Association, Inc.
6026 Trotter Road
Clarksville, Maryland 21029

Developer
SDC Mill Creek, LLC
Attn: Mr. Steven K. Breeden
Suite 415
8480 Baltimore National Pike
Ellicott City, Maryland 21043
410-465-4244

PROJECT			SECTION/AREA		PARCEL
LACEY PROPERTY			N/A		13
PLAT NOS.	BLOCK NO.	ZONE	TAX MAP	ELEC. DIST.	CENSUS TR.
-	1	R-ED	25	SECOND	602900

REVISED DEMOLITION PLAN

LACEY PROPERTY

LOTS 2, 18 THRU 29 AND ⚠ OPEN SPACE LOTS 16, 17, 30 & 31

(BEING A RESUBDIVISION OF LOTS 1, 3 THRU 13 AND OPEN SPACE LOTS 14 & 15 AS SHOWN ON PLATS ENTITLED "LACEY PROPERTY, LOTS 1 THRU 13 AND OPEN SPACE LOTS 14 THRU 17", PLAT Nos. 26657 - 26659)

ZONED: R-ED
PARCEL No.: 13
TAX MAP No.: 25 GRID No.: 1
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: OCT. 25, 2024
SHEET 2 OF 24

F-21-015

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LEGEND	
SYMBOL	DESCRIPTION
—S—	EXISTING SAN. SEWER LINE
—·—	EXISTING STORM DRAIN LINE
- - -	EXISTING WATER LINE
+ 344.29	PROPOSED SPOT ELEVATION
	PROPOSED CONCRETE WALK
	PROPOSED MACADAM PAVING
8" W	PROPOSED PUBLIC WATER
18" RCCP	PROPOSED STORMDRAIN
8" S	PROPOSED PUBLIC SEWER
	FOREST CONSERVATION AREA

CURVE TABLE

CURVE #	LENGTH	RADIUS	TANGENT	DELTA	CHORD BEARING	CHORD LENGTH
C1	24.14'	238.00'	12.08'	05° 48' 40"	S29° 00' 46"W	24.14'
C2	21.45	41.00'	10.74'	029° 22' 00"	S73° 36' 14"E	20.79'
C3	62.58'	39.00'	40.34'	091° 56' 19"	S75° 06' 37"W	56.08'
C4	57.41'	39.00'	35.33'	084° 20' 55"	S13° 01' 59"E	52.37'
C5	59.17'	35.00'	39.47'	096° 51' 54"	N76° 21' 36"E	52.37'
C6	22.79'	53.00'	11.57'	024° 38' 17"	N15° 36' 31"E	22.62'
C7	31.86'	92.00'	16.09'	019° 50' 19"	S48° 48' 44"E	31.70'

ROADWAY INFORMATION CHART

ROAD NAME	CLASSIFICATION	DESIGN SPEED	ZONING	℄ STATION LIMITS	PAVING SECTION
MILL CREEK WAY	PUBLIC ACCESS PLACE	25 M.P.H.	R-ED	0+00 TO 1+91.34	P-2

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

Approved: Howard County Department Of Public Works

Chief, Bureau Of Highways — 12/13/2024 — Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division — 12/13/2024 — Date

Chief, Division of Land Development — 12/16/2024 — Date

DATE	DESCRIPTION
10/22/24	△ RESUBDIVIDED LOTS 1, 3-13 & OPEN SPACE LOTS 14 AND 15
10/22/24	△ REVISE LOTS, GRADING, STORM DRAIN, WATER & SEWER ALIGNMENTS
	REVISIONS

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Ph# 410-707-2639

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Developer
SDC Mill Creek, LLC
Attn: Mr. Steven K. Breeden
Suite 415
8480 Baltimore National Pike
Ellicott City, Maryland 21043
410-465-4244

PROJECT			SECTION/AREA		PARCEL
LACEY PROPERTY			N/A		13
PLAT NOS.	BLOCK NO.	ZONE	TAX MAP	ELEC. DIST.	CENSUS TR.
-	1	R-ED	25	SECOND	602900

REVISED MILL CREEK WAY PLAN, PROFILE AND DETAILS

LACEY PROPERTY

LOTS 2, 18 THRU 29 AND OPEN SPACE LOTS 16, 17, 30 & 31

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ZONED: R-ED
PARCEL No.: 13
TAX MAP No.: 25 GRID No.: 1
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: OCT. 25, 2024
SHEET 3 OF 24

F-21-015

I:\2008\08035\dwg\Lacey\FINALS\REVISED F-Plan 2-1-23\Redline 2024\08035 sheet 3-4 NEW MYLAR.dwg, 11/18/2024 9:30:26 AM, AutoCAD PDF (Smallest File).pc3, 1:1

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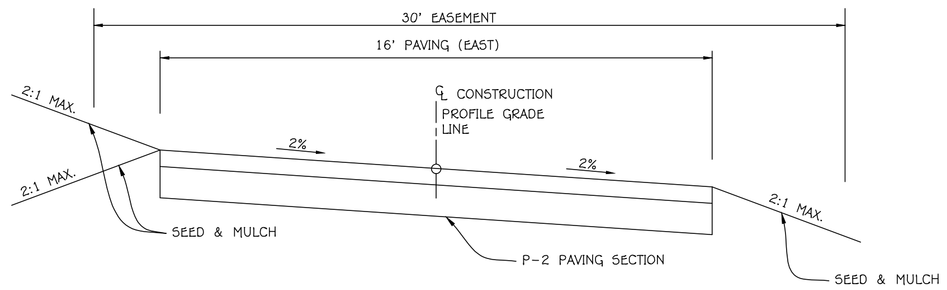
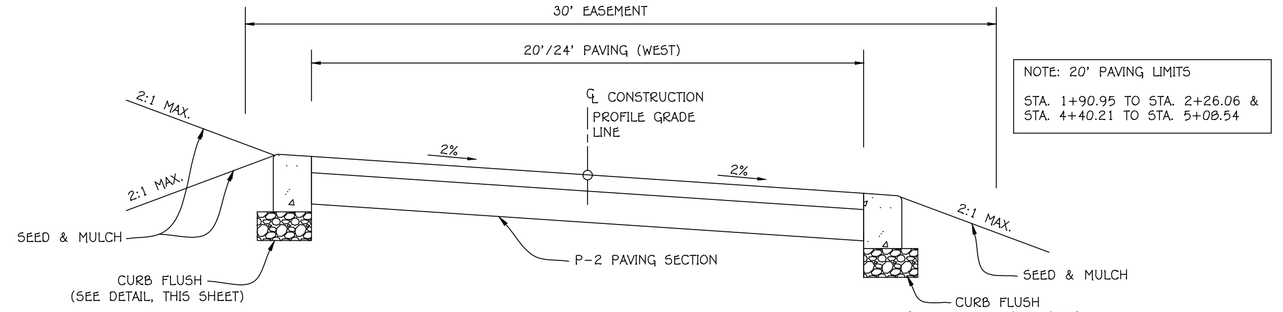


TYPICAL PRIVATE USE-IN-COMMON DRIVEWAY SECTION (EAST)

NO SCALE



NOTE: 20' PAVING LIMITS

STA. 1+90.95 TO STA. 2+26.06 &
STA. 4+40.21 TO STA. 5+08.54

TYPICAL PRIVATE USE-IN-COMMON DRIVEWAY SECTION (WEST)

NO SCALE

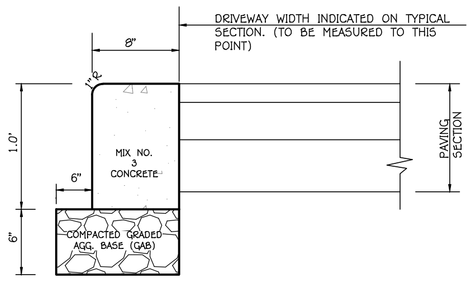
USE-IN-COMMON DRIVEWAY INFORMATION CHART

ROAD NAME	CLASSIFICATION	DESIGN SPEED	ZONING	℄ STATION LIMITS	PAVING SECTION
PRIVATE DRIVEWAY (EAST)	USE-IN-COMMON DRIVEWAY	15 M.P.H.	R-ED	0+00 TO 2+66	P-2

USE-IN-COMMON DRIVEWAY INFORMATION CHART

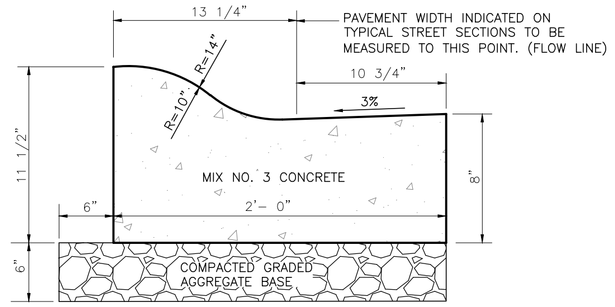
ROAD NAME	CLASSIFICATION	DESIGN SPEED	ZONING	℄ STATION LIMITS	PAVING SECTION
PRIVATE DRIVEWAY (WEST)	USE-IN-COMMON DRIVEWAY	15 M.P.H.	R-ED	0+00 TO 5+31.07	P-2

SECTION NUMBER	ROAD AND STREET CLASSIFICATION	CALIFORNIA BEARING RATIO (CBR)	3 TO <5	5 TO <7	≥7	3 TO <5	5 TO <7	≥7
		PAVEMENT MATERIAL (INCHES)	MIN HMA WITH GAB			HMA WITH CONSTANT GAB		
P-2	PARKING DRIVE AISLES: RESIDENTIAL AND NON-RESIDENTIAL WITH NO MORE THAN 10 HEAVY TRUCKS PER DAY LOCAL ROADS: ACCESS PLACE, ACCESS STREET CUL-DE-SACS: RESIDENTIAL	SUPERPAVE ASPHALT MIX FINAL SURFACE 9.5 MM, PG 64-22, LEVEL 1 (ESAL)	1.5	1.5	1.5	1.5	1.5	1.5
		SUPERPAVE ASPHALT MIX INTERMEDIATE SURFACE 9.5 MM, PG 64-22S; LEVEL 1 (ESAL)	1.5	1.5	1.5	1.5	1.5	1.5
		SUPERPAVE ASPHALT MIX BASE 19.0 MM, PG 64-22S, LEVEL 1 (ESAL)	2.0	2.0	2.0	3.5	2.0	2.0
		GRADED AGGREGATE BASE (GAB)	8.0	4.0	3.0	4.0	4.0	4.0



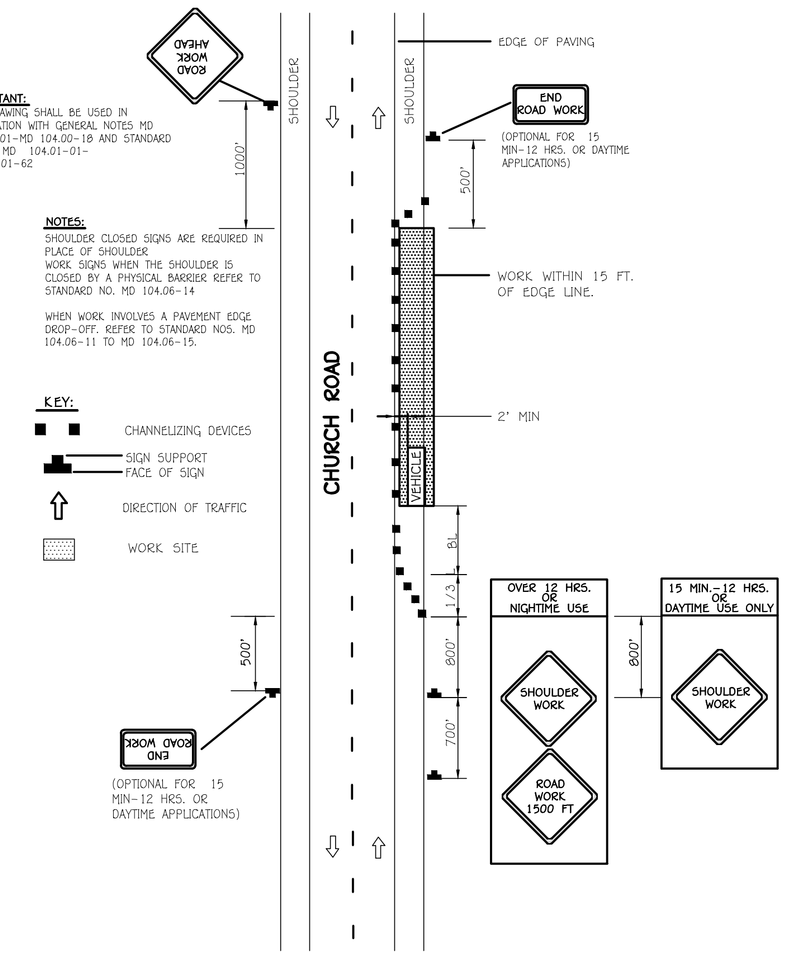
CURB FLUSH DETAIL (R-3.07)

NO SCALE



MODIFIED COMBINATION CURB AND GUTTER DETAIL (R-3.01)

NO SCALE



SHOULDER WORK/2-LANE, 2-WAY EQL/LESS THAN 40 MPH

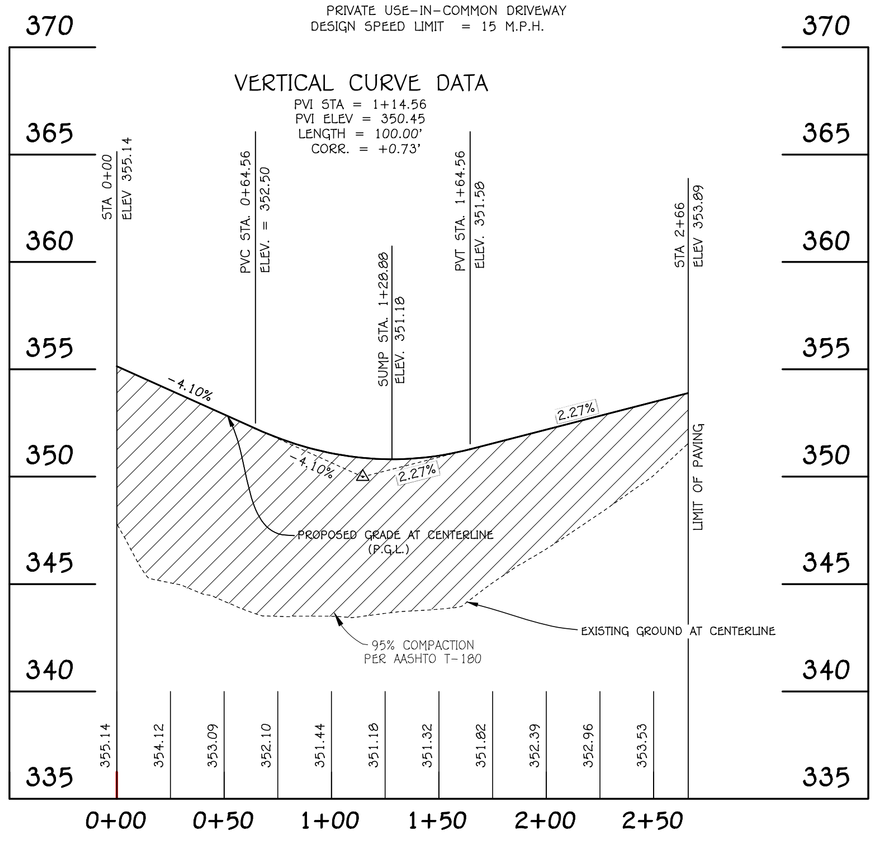
NO SCALE

NOTE:

SEE SHEET 6 FOR "FLAGGING OPERATION /-LANE, 2-WAY EQUAL/LESS THAN 40 MPH" DETAIL.

PRIVATE DRIVEWAY (EAST)

PRIVATE USE-IN-COMMON DRIVEWAY
DESIGN SPEED LIMIT = 15 M.P.H.

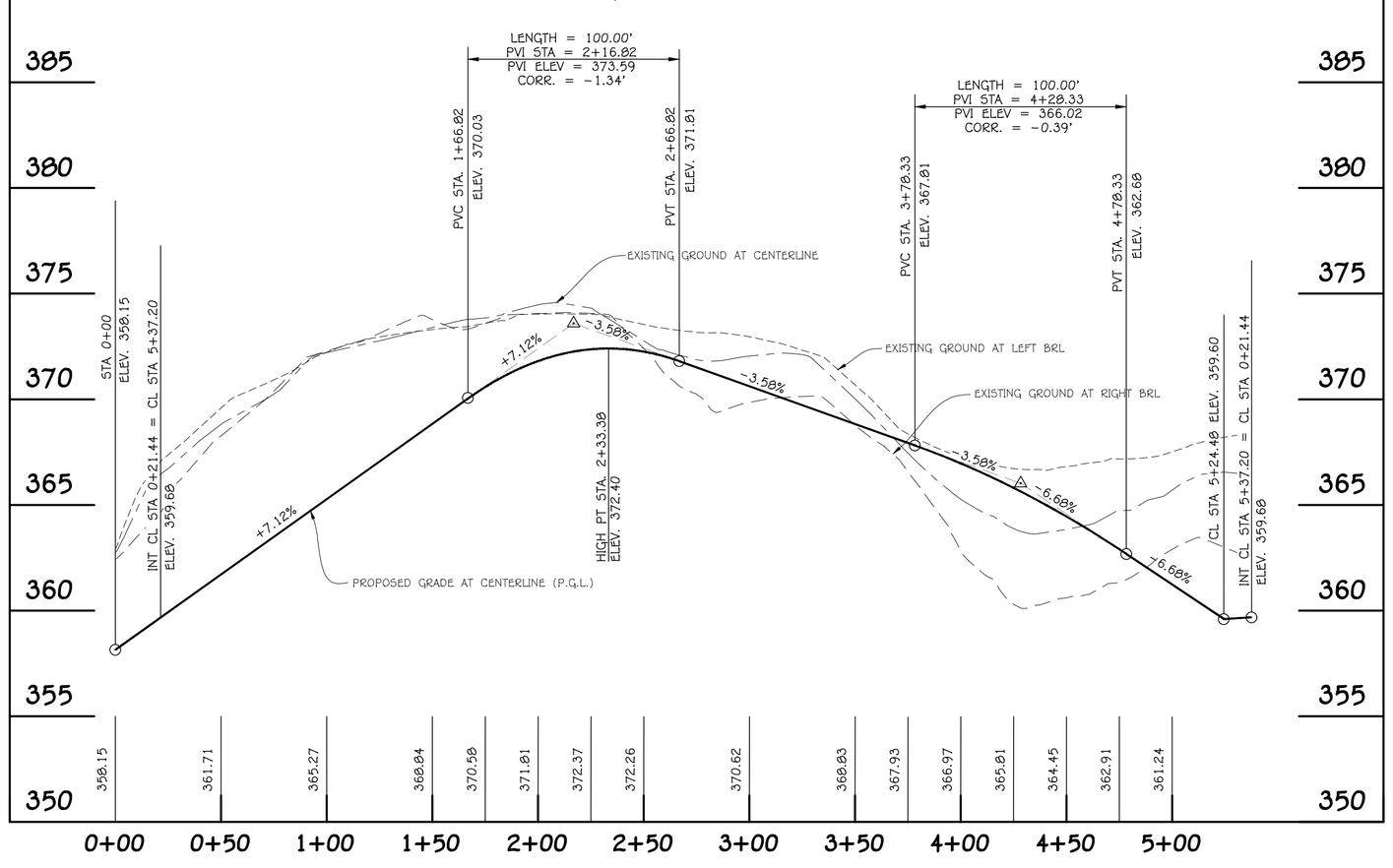


PROFILE

SCALE: HOR. : 1" = 50'
VER. : 1" = 5'

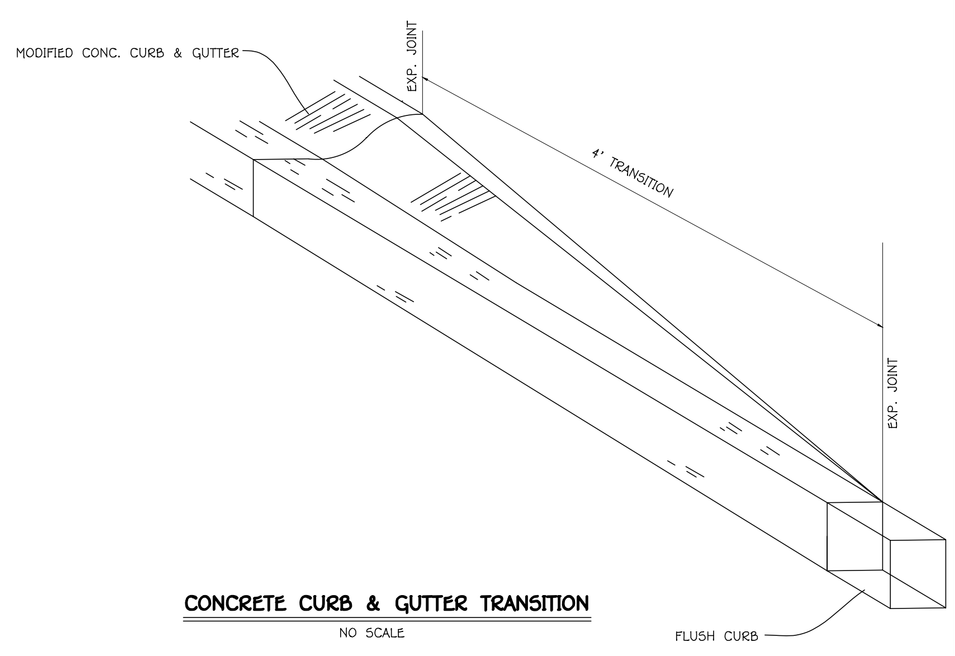
PRIVATE DRIVEWAY (WEST)

PRIVATE USE-IN-COMMON DRIVEWAY
DESIGN SPEED LIMIT = 15 M.P.H.



PROFILE

SCALE: HOR. : 1" = 50'
VER. : 1" = 5'



CONCRETE CURB & GUTTER TRANSITION

NO SCALE

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

Approved: Howard County Department Of Public Works

Chief, Bureau Of Highways — 12/13/2024 Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division — 12/13/2024 Date

Chief, Division of Land Development — 12/16/2024 Date

DATE	DESCRIPTION
10/22/24	⚠ RESUBDIVIDED LOTS 1, 3-13 & OPEN SPACE LOTS 14 AND 15
10/22/24	⚠ REVISED PRIVATE DRIVEWAY (EAST) PROFILE
	REVISIONS

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STATE OF MARYLAND — GERARD P. CAVANAUGH — No. 27020 — PROFESSIONAL ENGINEER

Paul G. Cavanaugh

PAUL G. CAVANAUGH, P.E. #27020

Owner

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Co-Trustee
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Developer

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Ellicott City, Maryland 21043
410-465-4244

PROJECT			SECTION/AREA		PARCEL
LACEY PROPERTY			N/A		13
PLAT NOS.	BLOCK NO.	ZONE	TAX MAP	ELEC. DIST.	CENSUS TR.
-	1	R-ED	25	SECOND	602900

REVISED PRIVATE USE-IN-COMMON DRIVEWAY PROFILES AND DETAILS

LACEY PROPERTY

LOTS 2, 18 THRU 29 AND OPEN SPACE LOTS 16, 17, 30 & 31 ⚠

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ZONED: R-ED
PARCEL No.: 13
TAX MAP No.: 25 GRID No.: 1
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: OCT. 25, 2024
SHEET 4 OF 24

F-21-015

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1:1

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LEGEND	
SYMBOL	DESCRIPTION
352	EXISTING CONTOUR 2' INTERVAL
350	EXISTING CONTOUR 10' INTERVAL
	EXISTING SAN. SEWER LINE
S	EXISTING STORM DRAIN LINE
W	EXISTING WATER LINE
OHE	EXISTING OVERHEAD ELECTRIC LINE
x x	EXISTING FENCE
352	PROPOSED CONTOUR 2' INTERVAL
350	PROPOSED CONTOUR 10' INTERVAL
+ 344.29	PROPOSED SPOT ELEVATION
	PROPOSED CONCRETE WALK
	EXISTING MACADAM PAVING
	EXISTING TREES
	EXISTING TREELINE
	PROPOSED TREELINE
8" W	PROPOSED PUBLIC WATER
18" RCCP	PROPOSED STORMDRAIN
8" S	PROPOSED PUBLIC SEWER
	SOILS DELINEATION
SSF	SUPER SILT FENCE
	FOREST CONSERVATION AREA
	RIPRAP OUTLET PROTECTION
	STEEP SLOPES 15% - 24.9%
	STEEP SLOPES 25.0% OR GREATER
TPF	TREE PROTECTION FENCE
SSF	DOUBLE ROW SUPER SILT FENCE
	LIMIT OF DISTURBANCE (L.O.D.)

NOTES:

1. FOR DRYWELL DETAIL SEE SHEET 10.
2. FOR TGOS SEE DETAIL SEE SHEET 10.

NOTE: SEE SHEET 24 FOR SEDIMENT BASIN #1 PROFILES & DETAILS

NOTE: SEE SHEET 11 FOR FINAL SWM CONVERSION

NOTE:
SEWER MANHOLE (MH 350) HAS BEEN PROVIDED FOR ANY FUTURE SEWER EXTENSIONS FOR ADJACENT PROPERTY OWNERS.

PARK DRIVE

DEANWOOD AVE.

CHURCH ROAD
LOCAL SCENIC ROAD

MILL CREEK WAY
PUBLIC ACCESS PLACE

PARCEL 0330
OPEN SPACE LOT 16
THE WOODS OF PARK PLACE HOMEOWNERS ASSOCIATION INC.
L. 7382 / F. 643
ZONED: R-ED
PLAT NO. 16050

WOODS AT PARK PLACE
LOT 15
KENNETH J. HEYDT
SUSAN M. HEYDT
L. 9186 / F. 201
ZONED: R-ED
PLAT NO. 16050

PARCEL 0330
WOODS AT PARK PLACE, LOT 1
JACOB SUKOSD
JULIE SUKOSD
L. 19035 / F. 16
ZONED: R-ED
PLAT NO. 16050

LAND DEDICATED TO HOWARD COUNTY, MD. FOR THE PURPOSE OF A PUBLIC ROAD

PARCEL 0330
WOODS AT PARK PLACE, LOT 2
ROBERT J. MOORE
SHARON M. MOORE
L. 9629 / F. 460
ZONED: R-ED
PLAT NO. 16050

PARCEL 0330
WOODS AT PARK PLACE, LOT 3
THOMAS SOUKUP
L. 9306 / F. 170
ZONED: R-ED
PLAT NO. 16050

PARCEL 0020
LAWRENCE D. PEACH
SHIRLEY A. PEACH
L. 426 / F. 385
ZONED: RR

PARCEL 0320
STATE OF MARYLAND
DEPARTMENT OF GENERAL SERVICES
L. 3132 / F. 14
ZONED: POR

PARCEL 0206
FRANK TODD TAYLOR, JR.
CANDACE K. TAYLOR
L. 11113 / F. 00044
ZONED: RR

OPEN SPACE LOT 17 (TO BE DEDICATED TO HOA)
OPEN SPACE LOT 31 (TO BE DEDICATED TO HOA)
OPEN SPACE LOT 16 (TO BE DEDICATED TO HOA)
OPEN SPACE LOT 30 (TO BE DEDICATED TO HOA)
OPEN SPACE LOT 31 (TO BE DEDICATED TO HOA)

LOT 18 LOT 19 LOT 20 LOT 21 LOT 22 LOT 23 LOT 24 LOT 25 LOT 26 LOT 27 LOT 28 LOT 29

N 586,000
E 1,368,700

N63°27'49"E 165.00'
N61°22'24"W 224.04'
N55°25'42"W 398.47'
S37°13'24"E 424.48'
N44°41'02"E 616.42'

50' INTERMITTENT STREAM BUFFER
75' PERENNIAL STREAM BUFFER

APPROX. LOCATION OF EX. CULVERT

INV. 15" TEMP. CLEANWATER DIVERSION PIPE 359.0

SCALE: 1" = 30'

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.

Signature _____ P.E. No. _____

Date: _____

Certify Means To State Or Declare A Professional Opinion Based Upon Onsite Inspections And Material Tests Which Are Conducted During Construction. The Onsite Inspections And Material Tests Are Those Inspections And Tests Deemed Sufficient And Appropriate 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.

By The Developer:
"I/we Certify That All Development And/Or Construction Will Be Done According To These Plans, Registered Professional Engineer To Supervise Pond Construction And Provide The Howard Soil And That Any Responsible Personnel Involved In The Construction Project Will Have A Certificate Of Attendance At A Department Of The Environment Approved Training Program For The Control Of Sediment And Erosion Before Beginning The Project. I Shall Engage A Conservation District With An "As-Built" Plan Of The Pond Within 30 Days Of Completion. I Also Authorize Periodic On-Site Inspections By The Howard Soil Conservation District."

Steven K. Breeden — 11/14/2024
Signature Of Developer — Date
Steven K. Breeden
Printed Name Of Developer

By The Engineer:
"I Certify That This Plan For Pond Construction, Erosion And Sediment Control Represents A Practical And Workable Plan Based On My Personal Knowledge Of The Site Conditions. This Plan Was Prepared In Accordance With The Requirements Of The Howard Soil Conservation District. "As-Built" Plan Of The Pond Within 30 Days Of Completion." I Have Notified The Developer That He/She Must Engage A Registered Professional Engineer To Supervise Pond Construction And Provide The Howard Soil Conservation District With An

Paul G. Cavanaugh — 11/14/2024
Signature Of Engineer — Date
Paul G. Cavanaugh
Printed Name Of Engineer

These Plans For Small Pond Construction, Soil Erosion And Sediment Control Meet The Requirements Of The Howard Soil Conservation District.

DocuSigned by: Alexander Bratchie — 12/13/2024
Howard Soil Conservation District — Date

DESIGN CERTIFICATE

"I hereby certify that this plan has been designed in accordance with current Maryland erosion and sediment control laws, regulations, and standards, that it represents a practical and workable plan based on my personal knowledge of the site, and that it was prepared in accordance with the requirements of the Howard Soil Conservation District."

Paul G. Cavanaugh — 10/29/24
Designer's Signature — Date
PAUL G. CAVANAUGH — MD Registration No._ 27020 ___
Printed Name — (P.E.) R.L.S., or R.L.A. (circle one)

OWNER'S/DEVELOPER CERTIFICATE

"I/We hereby certify that any clearing, grading, construction, or development will be done pursuant to this approved erosion and sediment control plan, including inspecting and maintaining controls, and that the responsible personnel involved in the construction project will have a Certificate of Training at a Maryland Department of the Environment (MDE) approved training program for the control on erosion and sediment prior to beginning the project. I certify right-of-entry for periodic on-site evaluation by Howard County, the Howard Soil Conservation District and/or MDE."

Steven K. Breeden — 10/29/24
Owner's/Developer's Signature — Date
Steven. K. Breeden
SDC Mill Creek LLC, Manager for Mill Creek LLC
Printed Name & Title

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

Approved: Howard County Department Of Public Works
DocuSigned by: [signature] — 12/13/2024
Chief, Bureau Of Highways — Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
DocuSigned by: Chad Edmondson — 12/13/2024
Chief, Development Engineering Division — Date
DocuSigned by: [signature] — 12/16/2024
Chief, Division of Land Development — Date

This development plan is approved for soil erosion and sediment control by the HOWARD SOIL CONSERVATION DISTRICT.
DocuSigned by: Alexander Bratchie — 12/13/2024
Howard Soil Conservation District. — Date

DATE	DESCRIPTION
	REVISIONS
10/22/24	⚠ RESUBDIVIDED LOTS 1, 3-13 & OPEN SPACE LOTS 14 AND 15
10/22/24	⚠ REVISED GRADING, STORM DRAIN, WATER, SEWER ALIGNMENTS, WHC's, SHC's & DRYWELL LOCATIONS

"PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY 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. 27020, EXPIRATION DATE: 01-25-26."

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Paul G. Cavanaugh
PAUL G. CAVANAUGH, P.E. #27020

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Developer
SDC Mill Creek, LLC
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410-465-4244

PROJECT			SECTION/AREA		PARCEL
LACEY PROPERTY			N/A		13
PLAT NOS.	BLOCK NO.	ZONE	TAX MAP	ELEC. DIST.	CENSUS TR.
-	1	R-ED	25	SECOND	602900

REVISED
GRADING & SEDIMENT CONTROL PLAN
LACEY PROPERTY

LOTS 2, 18 THRU 29 AND OPEN SPACE LOTS 16, 17, 30 & 31

(BEING A RESUBDIVISION OF LOTS 1, 3 THRU 13 AND OPEN SPACE LOTS 14 & 15 AS SHOWN ON PLATS ENTITLED "LACEY PROPERTY, LOTS 1 THRU 13 AND OPEN SPACE LOTS 14 THRU 17", PLAT Nos. 26657 - 26659)

ZONED: R-ED
PARCEL No.: 13
TAX MAP No.: 25 GRID No.: 1
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: OCT. 25, 2024
SHEET 5 OF 24

F-21-015

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SOIL PREPARATION, TOPSOILING AND SOIL AMENDMENTS (B-4-2)

A. SOIL PREPARATION

1. TEMPORARY STABILIZATION

A. SEEDBED PREPARATION CONSISTS OF LOOSENING SOIL TO A DEPTH OF 3 TO 5 INCHES BY MEANS OF SUITABLE AGRICULTURAL OR CONSTRUCTION EQUIPMENT, SUCH AS DISC HARROWS OR CHISEL PLOWS OR RIPPERS MOUNTED ON CONSTRUCTION EQUIPMENT. AFTER THE SOIL IS LOOSENED, IT MUST NOT BE ROLLED OR DRAGGED SMOOTH BUT LEFT IN THE ROUGHENED CONDITION. SLOPES 3:1 OR FLATTER ARE TO BE TRACKED WITH RIDGES RUNNING PARALLEL TO THE CONTOUR OF THE SLOPE.

B. APPLY FERTILIZER AND LIME AS PRESCRIBED ON THE PLANS.

C. INCORPORATE LIME AND FERTILIZER INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS.

2. PERMANENT STABILIZATION

A. A SOIL TEST IS REQUIRED FOR ANY EARTH DISTURBANCE OF 5 ACRES OR MORE. THE MINIMUM SOIL CONDITIONS REQUIRED FOR PERMANENT VEGETATIVE ESTABLISHMENT ARE:
I. SOIL PH BETWEEN 6.0 AND 7.0.
II. SOLUBLE SALTS LESS THAN 500 PARTS PER MILLION (PPM).
III. SOIL CONTAINS LESS THAN 40 PERCENT CLAY BUT ENOUGH FINE GRAINED MATERIAL (GREATER THAN 30 PERCENT SILT PLUS CLAY) TO PROVIDE THE CAPACITY TO HOLD A MODERATE AMOUNT OF MOISTURE. AN EXCEPTION: IF LOVEGRASS WILL BE PLANTED, THEN A SANDY SOIL (LESS THAN 30 PERCENT SILT PLUS CLAY) WOULD BE ACCEPTABLE.
IV. SOIL CONTAINS 1.5 PERCENT MINIMUM ORGANIC MATTER BY WEIGHT.
V. SOIL CONTAINS SUFFICIENT PORE SPACE TO PERMIT ADEQUATE ROOT PENETRATION.
B. APPLICATION OF AMENDMENTS OR TOPSOIL IS REQUIRED IF ON-SITE SOILS DO NOT MEET THE ABOVE CONDITIONS.
C. GRADED AREAS MUST BE MAINTAINED IN A TRUE AND EVEN GRADE AS SPECIFIED ON THE APPROVED PLAN, THEN SCARIFIED OR OTHERWISE LOOSENED TO A DEPTH OF 3 TO 5 INCHES.
D. APPLY SOIL AMENDMENTS AS SPECIFIED ON THE APPROVED PLAN OR AS INDICATED BY THE RESULTS OF A SOIL TEST.
E. MIX SOIL AMENDMENTS INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS. RAKE LAWN AREAS TO SMOOTH THE SURFACE, REMOVE LARGE OBJECTS LIKE STONES AND BRANCHES, AND READY THE AREA FOR SEED APPLICATION. LOOSEN SURFACE SOIL BY DRAGGING WITH A HEAVY CHAIN OR OTHER EQUIPMENT TO ROUGHEN THE SURFACE WHERE SITE CONDITIONS WILL NOT PERMIT NORMAL SEEDBED PREPARATION. TRACK SLOPES 3:1 OR FLATTER WITH TRACKED EQUIPMENT LEAVING THE SOIL IN AN IRREGULAR CONDITION WITH RIDGES RUNNING PARALLEL TO THE CONTOUR OF THE SLOPE. LEAVE THE TOP 1 TO 3 INCHES OF SOIL LOOSE AND FRIABLE. SEEDBED LOOSENING MAY BE UNNECESSARY ON NEWLY DISTURBED AREAS.

B. TOPSOILING

1. TOPSOIL IS PLACED OVER PREPARED SUBSOIL PRIOR TO ESTABLISHMENT OF PERMANENT VEGETATION. THE PURPOSE IS TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH. SOILS OF CONCERN HAVE LOW MOISTURE CONTENT, LOW NUTRIENT LEVELS, LOW PH, MATERIALS TOXIC TO PLANTS, AND/OR UNACCEPTABLE SOIL GRADATION.

2. TOPSOIL SALVAGED FROM AN EXISTING SITE MAY BE USED PROVIDED IT MEETS THE STANDARDS AS SET FORTH IN THESE SPECIFICATIONS. TYPICALLY, THE DEPTH OF TOPSOIL TO BE SALVAGED FOR A GIVEN SOIL TYPE CAN BE FOUND IN THE REPRESENTATIVE SOIL PROFILE SECTION IN THE SOIL SURVEY PUBLISHED BY USDA-NRCS.

3. TOPSOILING IS LIMITED TO AREAS HAVING 2:1 OR FLATTER SLOPES WHERE:
A. THE TEXTURE OF THE EXPOSED SUBSOIL/PARENT MATERIAL IS NOT ADEQUATE TO PRODUCE VEGETATIVE GROWTH.
B. THE SOIL MATERIAL IS SO SHALLOW THAT THE ROOTING ZONE IS NOT DEEP ENOUGH TO SUPPORT PLANTS OR FURNISH CONTINUING SUPPLIES OF MOISTURE AND PLANT NUTRIENTS.
C. THE ORIGINAL SOIL TO BE VEGETATED CONTAINS MATERIAL TOXIC TO PLANT GROWTH.
D. THE SOIL IS SO ACIDIC THAT TREATMENT WITH LIMESTONE IS NOT FEASIBLE.

4. AREAS HAVING SLOPES STEEPER THAN 2:1 REQUIRE SPECIAL CONSIDERATION AND DESIGN.

5. TOPSOIL SPECIFICATIONS: SOIL TO BE USED AS TOPSOIL MUST MEET THE FOLLOWING CRITERIA:
A. TOPSOIL MUST BE A LOAM, SANDY LOAM, CLAY LOAM, SILT LOAM, SANDY CLAY LOAM, OR LOAMY SAND. OTHER SOILS MAY BE USED IF RECOMMENDED BY AN AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY. TOPSOIL MUST NOT BE A MIXTURE OF CONTRASTING TEXTURED SUBSOILS AND MUST CONTAIN LESS THAN 5 PERCENT BY VOLUME OF CINDERS, STONES, SLAG, COARSE FRAGMENTS, GRAVEL, STICKS, ROOTS, TRASH, OR OTHER MATERIALS LARGER THAN 1 1/2 INCHES IN DIAMETER.
B. TOPSOIL MUST BE FREE OF NOXIOUS PLANTS OR PLANT PARTS SUCH AS BERMUDA GRASS, QUACK GRASS, JOHNSON GRASS, NUT SEDGE, POISON IVY, THISTLE, OR OTHERS AS SPECIFIED.
C. TOPSOIL SUBSTITUTES OR AMENDMENTS, AS RECOMMENDED BY A QUALIFIED AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY, MAY BE USED IN LIEU OF NATURAL TOPSOIL.

6. TOPSOIL APPLICATION A. EROSION AND SEDIMENT CONTROL PRACTICES MUST BE MAINTAINED WHEN APPLYING TOPSOIL.
B. UNIFORMLY DISTRIBUTE TOPSOIL IN A 5 TO 8 INCH LAYER AND LIGHTLY COMPACT TO A MINIMUM THICKNESS OF 4 INCHES. SPREADING IS TO BE PERFORMED IN SUCH A MANNER THAT SODDING OR SEEDING CAN PROCEED WITH A MINIMUM OF ADDITIONAL SOIL PREPARATION AND TILLAGE. ANY IRREGULARITIES IN THE SURFACE RESULTING FROM TOPSOILING OR OTHER OPERATIONS MUST BE CORRECTED IN ORDER TO PREVENT THE FORMATION OF DEPRESSIONS OR WATER POCKETS.
C. TOPSOIL MUST NOT BE PLACED IF THE TOPSOIL OR SUBSOIL IS IN A FROZEN OR MUDDY CONDITION, WHEN THE SUBSOIL IS EXCESSIVELY WET OR IN A CONDITION THAT MAY OTHERWISE BE DETRIMENTAL TO PROPER GRADING AND SEEDBED PREPARATION.

C. SOIL AMENDMENTS (FERTILIZER AND LIME SPECIFICATIONS)

1. SOIL TESTS MUST BE PERFORMED TO DETERMINE THE EXACT RATIOS AND APPLICATION RATES FOR BOTH LIME AND FERTILIZER ON SITES HAVING DISTURBED AREAS OF 5 ACRES OR MORE. SOIL ANALYSIS MAY BE PERFORMED BY A RECOGNIZED PRIVATE OR COMMERCIAL LABORATORY. SOIL SAMPLES TAKEN FOR ENGINEERING PURPOSES MAY ALSO BE USED FOR CHEMICAL ANALYSES.

2. FERTILIZERS MUST BE UNIFORM IN COMPOSITION, FREE FLOWING AND SUITABLE FOR ACCURATE APPLICATION BY APPROPRIATE EQUIPMENT. MANURE MAY BE SUBSTITUTED FOR FERTILIZER WITH PRIOR APPROVAL FROM THE APPROPRIATE APPROVAL AUTHORITY. FERTILIZERS MUST ALL BE DELIVERED TO THE SITE FULLY LABELED ACCORDING TO THE APPLICABLE LAWS AND MUST BEAR THE NAME, TRADE NAME OR TRADEMARK AND WARRANTY OF THE PRODUCER.

3. LIME MATERIALS MUST BE GROUND LIMESTONE (HYDRATED OR BURNT LIME MAY BE SUBSTITUTED EXCEPT WHEN HYDROSEEDING) WHICH CONTAINS AT LEAST 50 PERCENT TOTAL OXIDES (CALCIUM OXIDE PLUS MAGNESIUM OXIDE). LIMESTONE MUST BE GROUND TO SUCH FINENESS THAT AT LEAST 50 PERCENT WILL PASS THROUGH A #100 MESH SIEVE AND 98 TO 100 PERCENT WILL PASS THROUGH A #20 MESH SIEVE.

4. LIME AND FERTILIZER ARE TO BE EVENLY DISTRIBUTED AND INCORPORATED INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS.

5. WHERE THE SUBSOIL IS EITHER HIGHLY ACIDIC OR COMPOSED OF HEAVY CLAYS, SPREAD GROUND LIMESTONE AT THE RATE OF 4 TO 8 TONS/ACRE (200-400 POUNDS PER 1,000 SQUARE FEET) PRIOR TO THE PLACEMENT OF TOPSOIL.

TEMPORARY SEEDING NOTES (B-4-4)

DEFINITION

TO STABILIZE DISTURBED SOILS WITH VEGETATION FOR UP TO 6 MONTHS.

PURPOSE

TO USE FAST GROWING VEGETATION THAT PROVIDES COVER ON DISTURBED SOILS.

CONDITIONS WHERE PRACTICE APPLIES

EXPOSED SOILS WHERE GROUND COVER IS NEEDED FOR A PERIOD OF 6 MONTHS OR LESS. FOR LONGER DURATION OF TIME, PERMANENT STABILIZATION PRACTICES ARE REQUIRED.

CRITERIA

1. SELECT ONE OR MORE OF THE SPECIES OR SEED MIXTURES LISTED IN TABLE B.1 FOR THE APPROPRIATE PLANT HARDINESS ZONE (FROM FIGURE B.3), AND ENTER THEM IN THE TEMPORARY SEEDING SUMMARY BELOW ALONG WITH APPLICATION RATES, SEEDING DATES AND SEEDING DEPTHS. IF THIS SUMMARY IS NOT PUT ON THE PLAN AND COMPLETED, THEN TABLE B.1 PLUS FERTILIZER AND LIME RATES MUST BE PUT ON THE PLAN.
2. FOR SITES HAVING SOIL TESTS PERFORMED, USE AND SHOW THE RECOMMENDED RATES BY THE TESTING AGENCY. SOIL TESTS ARE NOT REQUIRED FOR TEMPORARY SEEDING.
3. WHEN STABILIZATION IS REQUIRED OUTSIDE OF A SEEDING SEASON, APPLY SEED AND MULCH OR STRAW MULCH ALONE AS PRESCRIBED IN SECTION B-4-3.A.1.B AND MAINTAIN UNTIL THE NEXT SEEDING SEASON.

TEMPORARY SEEDING SUMMARY

HARDINESS ZONE (FROM FIGURE B.3): 6B
SEED MIXTURE (FROM TABLE B.1):

SPECIES	APPLICATION RATE (LB/AC)	SEEDING DATES	SEEDING DEPTHS	FERTILIZER RATE (10-20-20)	LIME RATE
BARLEY	96	3/1 - 5/15, 8/15 - 10/15	1"	436 LB/AC (10 LB/ 1000 SF)	2 TONS/AC (90 LB/ 1000 SF)
OATS	72	3/1 - 5/15, 8/15 - 10/15	1"		
RYE	112	3/1 - 5/15, 8/15 - 10/15	1"		
FOXTAIL MILLET	30	6/1 - 7/31	0.50"		

PERMANENT SEEDING NOTES (B-4-5)

A. SEED MIXTURES

1. GENERAL USE

A. SELECT ONE OR MORE OF THE SPECIES OR MIXTURES LISTED IN TABLE B.3 FOR THE APPROPRIATE PLANT HARDINESS ZONE (FROM FIGURE B.3) AND BASED ON THE SITE CONDITION OR PURPOSE FOUND ON TABLE B.2. ENTER SELECTED MIXTURE(S), APPLICATION RATES, AND SEEDING DATES IN THE PERMANENT SEEDING SUMMARY. THE SUMMARY IS TO BE PLACED ON THE PLAN.

B. ADDITIONAL PLANTING SPECIFICATIONS FOR EXCEPTIONAL SITES SUCH AS SHORELINES, STREAM BANKS, OR DUNES OR FOR SPECIAL PURPOSES SUCH AS WILDLIFE OR AESTHETIC TREATMENT MAY BE FOUND IN USDA-NRCS TECHNICAL FIELD OFFICE GUIDE, SECTION 342 - CRITICAL AREA PLANTING.

C. FOR SITES HAVING DISTURBED AREA OVER 5 ACRES, USE AND SHOW THE RATES RECOMMENDED BY THE SOIL TESTING AGENCY. D. FOR AREAS RECEIVING LOW MAINTENANCE, APPLY UREA FORM FERTILIZER (46-0-0) AT 3 1/2 POUNDS PER 1000 SQUARE FEET (150 POUNDS PER ACRE) AT THE TIME OF SEEDING IN ADDITION TO THE SOIL AMENDMENTS SHOWN IN THE PERMANENT SEEDING SUMMARY.

2. TURFGRASS MIXTURES

A. AREAS WHERE TURFGRASS MAY BE DESIRED INCLUDE LAWNS, PARKS, PLAYGROUNDS, AND COMMERCIAL SITES WHICH WILL RECEIVE A MEDIUM TO HIGH LEVEL OF MAINTENANCE.

B. SELECT ONE OR MORE OF THE SPECIES OR MIXTURES LISTED BELOW BASED ON THE SITE CONDITIONS OR PURPOSE. ENTER SELECTED MIXTURE(S), APPLICATION RATES, AND SEEDING DATES IN THE PERMANENT SEEDING SUMMARY. THE SUMMARY IS TO BE PLACED ON THE PLAN.

I. KENTUCKY BLUEGRASS: FULL SUN MIXTURE: FOR USE IN AREAS THAT RECEIVE INTENSIVE MANAGEMENT. IRRIGATION REQUIRED IN THE AREAS OF CENTRAL MARYLAND AND EASTERN SHORE. RECOMMENDED CERTIFIED KENTUCKY BLUEGRASS CULTIVARS SEEDING RATE: 1.5 TO 2.0 POUNDS PER 1000 SQUARE FEET. CHOOSE A MINIMUM OF THREE KENTUCKY BLUEGRASS CULTIVARS WITH EACH RANGING FROM 10 TO 35 PERCENT OF THE TOTAL MIXTURE BY WEIGHT.
II. KENTUCKY BLUEGRASS/PERENNIAL RYE: FULL SUN MIXTURE: FOR USE IN FULL SUN AREAS WHERE RAPID ESTABLISHMENT IS NECESSARY AND WHEN TURF WILL RECEIVE MEDIUM TO INTENSIVE MANAGEMENT. CERTIFIED PERENNIAL RYEGRASS CULTIVARS/CERTIFIED KENTUCKY BLUEGRASS SEEDING RATE: 2 POUNDS MIXTURE PER 1000 SQUARE FEET. CHOOSE A MINIMUM OF THREE KENTUCKY BLUEGRASS CULTIVARS WITH EACH RANGING FROM 10 TO 35 PERCENT OF THE TOTAL MIXTURE BY WEIGHT.
III. TALL FESCUE/KENTUCKY BLUEGRASS: FULL SUN MIXTURE: FOR USE IN DROUGHT PRONE AREAS AND/OR FOR AREAS RECEIVING LOW TO MEDIUM MANAGEMENT IN FULL SUN TO MEDIUM SHADE. RECOMMENDED MIXTURE INCLUDES; CERTIFIED TALL FESCUE CULTIVARS 95 TO 100 PERCENT, CERTIFIED KENTUCKY BLUEGRASS CULTIVARS 0 TO 5 PERCENT. SEEDING RATE: 5 TO 8 POUNDS PER 1000 SQUARE FEET. ONE OR MORE CULTIVARS MAY BE BLENDED.
IV. KENTUCKY BLUEGRASS/FINE FESCUE: SHADE MIXTURE: FOR USE IN AREAS WITH SHADE IN BLUEGRASS LAWNS. FOR ESTABLISHMENT IN HIGH QUALITY, INTENSIVELY MANAGED TURF AREA. MIXTURE INCLUDES; CERTIFIED KENTUCKY BLUEGRASS CULTIVARS 30 TO 40 PERCENT AND CERTIFIED FINE FESCUE AND 60 TO 70 PERCENT. SEEDING RATE: 1 1/2 TO 3 POUNDS PER 1000 SQUARE FEET.

NOTES:
SELECT TURFGRASS VARIETIES FROM THOSE LISTED IN THE MOST CURRENT UNIVERSITY OF MARYLAND PUBLICATION, AGRONOMY MEMO #77, "TURFGRASS CULTIVAR RECOMMENDATIONS FOR MARYLAND"

CHOOSE CERTIFIED MATERIAL. CERTIFIED MATERIAL IS THE BEST GUARANTEE OF CULTIVAR PURITY. THE CERTIFICATION PROGRAM OF THE MARYLAND DEPARTMENT OF AGRICULTURE, TURF AND SEED SECTION, PROVIDES A RELIABLE MEANS OF CONSUMER PROTECTION AND ASSURES A PURE GENETIC LINE

C. IDEAL TIMES OF SEEDING FOR TURF GRASS MIXTURES WESTERN MD: MARCH 15 TO JUNE 1, AUGUST 1 TO OCTOBER 1 (HARDINESS ZONES: 5B, 6A) CENTRAL MD: MARCH 1 TO MAY 15, AUGUST 15 TO OCTOBER 15 (HARDINESS ZONE: 6B) SOUTHERN MD, EASTERN SHORE: MARCH 1 TO MAY 15, AUGUST 15 TO OCTOBER 15 (HARDINESS ZONES: 7A, 7B)

D. TILL AREAS TO RECEIVE SEED BY DISKING OR OTHER APPROVED METHODS TO A DEPTH OF 2 TO 4 INCHES, LEVEL AND RAKE THE AREAS TO PREPARE A PROPER SEEDBED. REMOVE STONES AND DEBRIS OVER 1 1/2 INCHES IN DIAMETER. THE RESULTING SEEDBED MUST BE IN SUCH CONDITION THAT FUTURE MOWING OF GRASSES WILL POSE NO DIFFICULTY.

E. IF SOIL MOISTURE IS DEFICIENT, SUPPLY NEW SEEDINGS WITH ADEQUATE WATER FOR PLANT GROWTH (1/2 TO 1 INCH EVERY 3 TO 4 DAYS DEPENDING ON SOIL TEXTURE) UNTIL THEY ARE FIRMLY ESTABLISHED. THIS IS ESPECIALLY TRUE WHEN SEEDINGS ARE MADE LATE IN THE PLANTING SEASON, IN ABNORMALLY DRY OR HOT SEASONS, OR ON ADVERSE SITES.

PERMANENT SEEDING SUMMARY

HARDINESS ZONE (FROM FIGURE B.3): 6B
SEED MIXTURE (FROM TABLE B.3): 8

NO.	SPECIES	APPLICATION RATE (LB/AC)	SEEDING DATES	SEEDING DEPTHS	FERTILIZER RATE (10-20-20): N	P_2O_5	K_2O	LIME RATE
8	TALL FESCUE	100	MAR. 1-MAY 15 AUG. 1-OCT. 15	1/4-1/2 IN.	45 LBS. PER ACRE (1.0 LB/ 1000 SF)	90 LB/AC (2 LB/ 1000 SF)	90 LB/AC (2 LB/ 1000 SF)	2 TONS/AC (90 LB/ 1000 SF)
8	MILLET FOXTAIL	50 50	May 15-June15	1/4-1/2 in.				
8	SOD	100	Mar. 15-May 31 May 16-Sept.14 Sept.15-Nov.15	1/4-1/2 in.				
8	SWITCH GRASS BUSH CLOVER (LEGUME)	10 2	June 1-July 31	4-7 in. Max.				

STANDARD STABILIZATION NOTE

FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION MUST BE COMPLETED WITHIN:

A.) THREE (3) CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER DIKES, SWALES, DITCHES, PERIMETER SLOPES AND ALL SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1); AND

B.) SEVEN (7) CALENDAR DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE NOT UNDER ACTIVE GRADING.

STANDARDS AND SPECIFICATIONS FOR STOCKPILE AREA (B-4-8)

DEFINITION

THE MOUND OR PILE OF SOIL PROTECTED BY APPROPRIATELY DESIGNED EROSION AND SEDIMENT CONTROL MEASURES.

PURPOSE

TO PROVIDE A DESIGNATED LOCATION FOR THE TEMPORARY STORAGE OF SOIL THAT CONTROLS THE POTENTIAL FOR EROSION, SEDIMENTATION, AND CHANGES TO DRAINAGE PATTERNS.

CONDITIONS WHERE PRACTICE APPLIES

STOCKPILE AREAS ARE UTILIZED WHEN IT IS NECESSARY TO SALVAGE AND STORE SOIL FOR LATER USE.

CRITERIA

1. THE STOCKPILE LOCATION AND ALL RELATED SEDIMENT CONTROL PRACTICES MUST BE CLEARLY INDICATED ON THE EROSION AND SEDIMENT CONTROL PLAN.
2. THE FOOTPRINT OF THE STOCKPILE MUST BE SIZED TO ACCOMMODATE THE ANTICIPATED VOLUME OF MATERIAL AND BASED ON A SIDE SLOPE RATIO NO STEEPER THA 2:1. BENCHING MUST BE PROVIDED IN ACCORDANCE WITH SECTION B-3 LAND GRADING.
3. RUNOFF FROM THE STOCKPILE AREA MUST DRAIN TO A SUITABLE SEDIMENT CONTROL PRACTICE.
4. ACCESS THE STOCKPILE AREA FROM THE UPGRADE SIDE.
5. CLEAR WATER RUNOFF INTO THE STOCKPILE AREA MUST BE MINIMIZED BY USE OF A DIVERSION DEVICE SUCH AS AN EARTH DIKE, TEMPORARY SWALE OR DIVERSION FENCE. PROVISIONS MUST BE MADE FOR DISCHARGING CONCENTRATED FLOW IN A NON-EROSIVE MANNER.
6. WHERE RUNOFF CONCENTRATES ALONG THE TOE OF THE STOCKPILE FILL, AN APPROPRIATE EROSION/SEDIMENT CONTROL PRACTICE MUST BE USED TO INTERCEPT THE DISCHARGE.
7. STOCKPILES MUST BE STABILIZED IN ACCORDANCE WITH THE 3/7 DAY STABILIZATION REQUIREMENT AS WELL AS STANDARD B-4-1 INCREMENTAL STABILIZATION AND STANDARD B-4-4 TEMPORARY STABILIZATION.
8. IF THE STOCKPILE IS LOCATED ON AN IMPERVIOUS SURFACE, A LINER SHOULD BE PROVIDED BELOW THE STOCKPILE TO FACILITATE CLEANUP. STOCKPILES CONTAINING CONTAMINATED MATERIAL MUST BE COVERED WITH IMPERMEABLE SHEETING.

MAINTENANCE

THE STOCKPILE AREA MUST CONTINUOUSLY MEET THE REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT IN ACCORDANCE WITH SECTION B-4 VEGETATIVE STABILIZATION. SIDE SLOPES MUST BE MAINTAINED AT NO STEEPER THAN A 2:1 RATIO. THE STOCKPILE AREA MUST BE KEPT FREE OF EROSION. IF THE VERTICAL HEIGHT OF A STOCKPILE EXCEEDS 20 FEET FOR 2:1 SLOPES, 30 FEET FOR 3:1 SLOPES, OR 40 FEET FOR 4:1 SLOPES, BENCHING MUST BE PROVIDED IN ACCORDANCE WITH SECTION B-3 LAND GRADING.

STANDARDS AND SPECIFICATIONS FOR SEEDING AND MULCHING (B-4-3)

DEFINITION

THE APPLICATION OF SEED AND MULCH TO ESTABLISH VEGETATIVE COVER.

PURPOSE

TO PROTECT DISTURBED SOILS FROM EROSION DURING AND AT THE END OF CONSTRUCTION.

CONDITIONS WHERE PRACTICE APPLIES

TO THE SURFACE OF ALL PERIMETER CONTROLS, SLOPES, AND ANY DISTURBED AREA NOT UNDER ACTIVE GRADING.

CRITERIA

A. SEEDING
1. SPECIFICATIONS
A. ALL SEED MUST MEET THE REQUIREMENT OF THE MARYLAND STATE SEED LAW. ALL SEED MUST BE SUBJECT TO RE-TESTING BY A RECOGNIZED SEED LABORATORY. ALL SEED USED MUST HAVE BEEN TESTED WITHIN THE 6 MONTHS IMMEDIATELY PRECEDING THE DATE OF SOWING SUCH MATERIAL ON ANY PROJECT. REFER TO TABLE B.4 REGARDING THE QUALITY OF SEED. SEED TAGS MUST BE AVAILABLE UPON REQUEST TO THE INSPECTOR TO VERIFY TYPE OF SEED AND SEEDING RATE.
B. MULCH ALONE MAY BE APPLIED BETWEEN THE FALL AND SPRING SEEDING DATES ONLY IF THE GROUND IS FROZEN. THE APPROPRIATE SEEDING MIXTURE MUST BE APPLIED WHEN THE GROUND THAWS.
C. INOCULANTS: THE INOCULANT FOR TREATING LEGUME SEED IN THE SEED MIXTURES MUST BE A PURE CULTURE OF NITROGEN FIXING BACTERIA PREPARED SPECIFICALLY FOR THE SPECIES. INOCULANTS MUST NOT BE USED LATER THAN THE DATE INDICATED ON THE CONTAINER. ADD FRESH INOCULANTS AS DIRECTED ON THE PACKAGE. USE FOUR TIMES THE RECOMMENDED RATE WHEN HYDROSEEDING. NOTE: IT IS VERY IMPORTANT TO KEEPT INOCULANT AS COOK AS POSSIBLE UNTIL USED. TEMPERATURES ABOVE 75 TO 80 DEGREES FAHRENHEIT CAN WEAKEN BACTERIA AND MAKE THE INOCULANT LESS EFFECTIVE.
D. SOD OR SEED MUST NOT BE PLACED ON SOIL WHICH HAS BEEN TREATED WITH SOIL STERILANTS OR CHEMICALS USED FOR WEEDCONTROL UNTIL SUFFICIENT TIME HAS ELAPSED (14 DAYS MIN.) TO PERMIT DISSIPATION OF PHYTO-TOXIC MATERIALS.

2. APPLICATION
A. DRY SEEDING: THIS INCLUDES USE OF CONVENTIONAL DROP OR BROADCAST SPREADERS.
1. INCORPORATE SEED INTO THE SUBSOIL AT THE RATES PRESCRIBED ON TEMPORARY SEEDING TABLE B.1, PERMANENT SEEDING TABLE B.3, OR SITE-SPECIFIC SEEDING SUMMARIES.
2. APPLY SEED IN TWO DIRECTIONS, PERPENDICULAR TO EACH OTHER. APPLY HALF THE SEEDING RATE IN EACH DIRECTION. ROLL THE SEEDED AREA WITH WEIGHTED ROLLER TO PROVIDE GOOD SEED TO SOIL CONTACT.
B. DRILL OR CULTIPACKER SEEDING: MECHANIZED SEEDERS THAT APPLY AND COVER SEED WITH SOIL.
1. CULTIPACKING SEEDERS ARE REQUIRED TO BURY THE SEED IN SUCH A FASHION AS TO PROVIDE AT LEAST 1/4 INCH OF SOIL COVERING. SEEDBED MUST BE FIRM AFTER PLANTING.
2. APPLY SEED IN TWO DIRECTIONS, PERPENDICULAR TO EACH OTHER. APPLY HALF THE SEEDING RATE IN EACH DIRECTION.
C. HYDROSEEDING: APPLY SEED UNIFORMLY WITH HYDROSEEDER (SLURRY INCLUDES SEED AND FERTILIZER).
1. IF FERTILIZER IS BEING APPLIED AT THE TIME OF SEEDING, THE APPLICATION RATES SHOULD NOT EXCEED THE FOLLOWING: NITROGEN, 100 POUNDS PER ACRE TOTAL OF SOLUBLE NITROGEN; P O (PHOSPHOROUS), 200 POUNDS PER ACRE; K O (POTASSIUM), 200 POUNDS PER ACRE.
2. LIME: USE ONLY GROUND AGRICULTURAL LIMESTONE (UP TO 3 TONS PER ACRE MAY BE APPLIED BY HYDROSEEDING). NORMALLY, NOT MORE THAN 2 TONS ARE APPLIED BY HYDROSEEDING AT ANY ONE TIME. DO NOT USE BURNT OR HYDRATED LIME WHEN HYDROSEEDING.
3. MIX SEED AND FERTILIZER ON SITE AND SEED IMMEDIATELY AND WITHOUT INTERRUPTION.
4. WHEN HYDROSEEDING DO NOT INCORPORATE SEED INTO THE SOIL.

B. MULCHING
1. MULCH MATERIALS (IN ORDER OF PREFERENCE)
A. STRAW CONSISTING OF THOROUGHLY THRESHED WHEAT, RYE, OAT, OR BARLEY AND REASONABLY BRIGHT IN COLOR. STRAW IS TO BE FREE OF NOXIOUS WEED SEEDS AS SPECIFIED IN THE MARYLAND SEED LAW AND NOT MUSTY, MOLDY, CAKED, DECAYED, OR EXCESSIVELY DUSTY. NOTE: USE ONLY STERILE STRAW MULCH IN AREAS WHERE ONE SPECIES OF GRASS IS DESIRED.
B. WOOD CELLULOSE FIBER MULCH (WCFM) CONSISTING OF SPECIALLY PREPARED WOOD CELLULOSE PROCESSED INTO UNIFORM FIBROUS PHYSICAL STATE.
1. WCFM IS TO BE DYED GREEN OR CONTAIN A GREEN DYE IN THE PACKAGE THAT WILL PROVIDE AN APPROPRIATE COLOT TO FACILITATE VISUAL INSPECTION OF THE UNIFORMLY SPREAD SLURRY.
2. WCFM, INCLUDING DYE, MUST CONTAIN NO GERMINATION OR GROWTH INHIBITING FACTORS.
3. WCFM MATERIALS ARE TO BE MANUFACTURED AND PROCESSED IN SUCH A MANNER THAT THE WOOD CELLULOSE FIBER MULCH WILL REMAIN IN UNIFORM SUSPENSION IN WATER UNDER AGITATION AND WILL BLEND WITH SEED, FERTILIZER AND OTHER ADDITIVES TO FORM A HOMOGENEOUS SLURRY. THE MULCH MATERIAL MUST FORM A BLOTTER-LIKE GROUND COVER, ON APPLICATION, HAVING MOISTURE ABSORPTION AND PERCOLATION PROPERTIES AND MUST COVER AND HOLD GRASS SEED IN CONTACT WITH THE SOIL WITHOUT INHIBITING THE GROWTH OF THE GRASS SEEDLINGS.
4. WCFM MATERIAL MUST NOT CONTAIN ELEMENTS OR COMPOUNDS AT CONCENTRATION LEVELS THAT WILL BY PHYTO-TOXIC.
5. WCFM MUST CONFORM TO THE FOLLOWING PHYSICAL REQUIREMENTS: FIBER LENGTH OF APPROXIMATELY 10 MILLIMETERS, DIAMETER APPROXIMATELY 1 MILLIMETER, PH RANGE OF 4.0 TO 8.5, ASH CONTENT OF 1.6 PERCENT MAXIMUM AND WATER HOLDING CAPACITY OF 90 PERCENT MINIMUM.
1. APPLICATION
A. APPLY MULCH TO ALL SEEDED AREAS IMMEDIATELY AFTER SEEDING.
B. WHEN STRAW MULCH IS USED, SPREAD IT OVER ALL SEEDED AREAS AT THE RATE OF 2 TONS PER ACRE TO A UNIFORM LOOSE DEPTH OF 1 TO 2 INCHES. APPLY MULCH TO ACHIEVE A UNIFORM DISTRIBUTION AND DEPTH SO THAT THE SOIL SURFACE IS NOT EXPOSED. WHEN USING A MULCH ANCHORING TOOL, INCREASE THE APPLICATION RATE TO 2.5 TONS PER ACRE.
C. WOOD CELLULOSE FIBER USED AS MULCH MUST BE APPLIED TO A NET DRY WEIGHT OF 1500 POUNDS PER ACRE. MIX THE WOOD CELLULOSE FIBER WITH WATER TO ATTAIN A MIXTURE WITH A MAXIMUM OF 50 POUNDS OF WOOD CELLULOSE FIBER PER 100 GALLONS OF WATER.
2. ANCHORING
A. PERFORM MULCH ANCHORING IMMEDIATELY FOLLOWING APPLICATION OF MULCH TO MINIMIZE LOSS BY WIND OR WATER. THIS MAY BE DONE BY ONE OF THE FOLLOWING METHODS (LISTED BY PREFERENCE), DEPENDING UPON THE SIZE OF THE AREA AND EROSION HAZARD:
1. A MULCH ANCHORING TOOL IS A TRACTOR DRAWN IMPLEMENT DESIGNED TO PUNCH AND ANCHOR MULCH INTO THE SOIL SURFACE A MINIMUM OF 2 INCHES. THIS PRACTICE IS MOST EFFECTIVE ON LARGE AREAS, BUT IS LIMITED TO FLATTER SLOPES WHERE EQUIPMENT CAN OPERATE SAFELY. IF USED ON SLOPING LAND, THIS PRACTICE SHOULD FOLLOW THE CONTOUR.
2. WOOD CELLULOSE FIBER MAY BE USED FOR ANCHORING STRAW. APPLY THE FIBER BINDER AT A NET DRY WEIGHT OF 750 POUNDS PER ACRE. MIX THE WOOD CELLULOSE FIBER WITH WATER AT A MAXIMUM OF 50 POUNDS OF WOOD CELLULOSE FIBER PER 100 GALLONS OF WATER.
3. SYNTHETIC BINDERS SUCH AS ACRYLIC DLR (AGRO-TACK), DCA-70, PETROSET, TERRA TAX II, TERRA TACK AR OR OTHER APPROVED EQUAL MAY BE USED. FOLLOW APPLICATION RATES AS SPECIFIED BY THE MANUFACTURER. APPLICATION OF LIQUID BINDERS NEEDS TO BE HEAVIER AT THE EDGES WHERE WIND CATCHES MULCH, SUCH AS IN VALLEYS AND ON CRESTS OF BANKS. USE OF ASPHALT BINDERS IS STRICTLY PROHIBITED.
4. LIGHTWEIGHT PLASTIC NETTING MAY BE STAPLED OVER THE MULCH ACCORDING TO MANUFACTURER RECOMMENDATIONS. NETTING IS USUALLY AVAILABLE IN ROLLS 4-15 FEET WIDE AND 300 TO 3,000 FEET LONG.

DUST CONTROL

DEFINITION

CONTROLLING DUST BLOWING AND MOVEMENT ON CONSTRUCTION SITES AND ROADS.

PURPOSE

TO PREVENT BLOWING AND MOVEMENT OF DUST FROM EXPOSED SOIL SURFACES, REDUCE ON AND OFF-SITE DAMAGE, HEALTH HAZARDS AND IMPROVE TRAFFIC SAFETY.

CONDITIONS WHERE PRACTICE APPLIES

THIS PRACTICE IS APPLICABLE TO AREAS SUBJECT TO DUST BLOWING AND MOVEMENT WHERE ON AND OFF-SITE DAMAGE IS LIKELY WITHOUT TREATMENT.

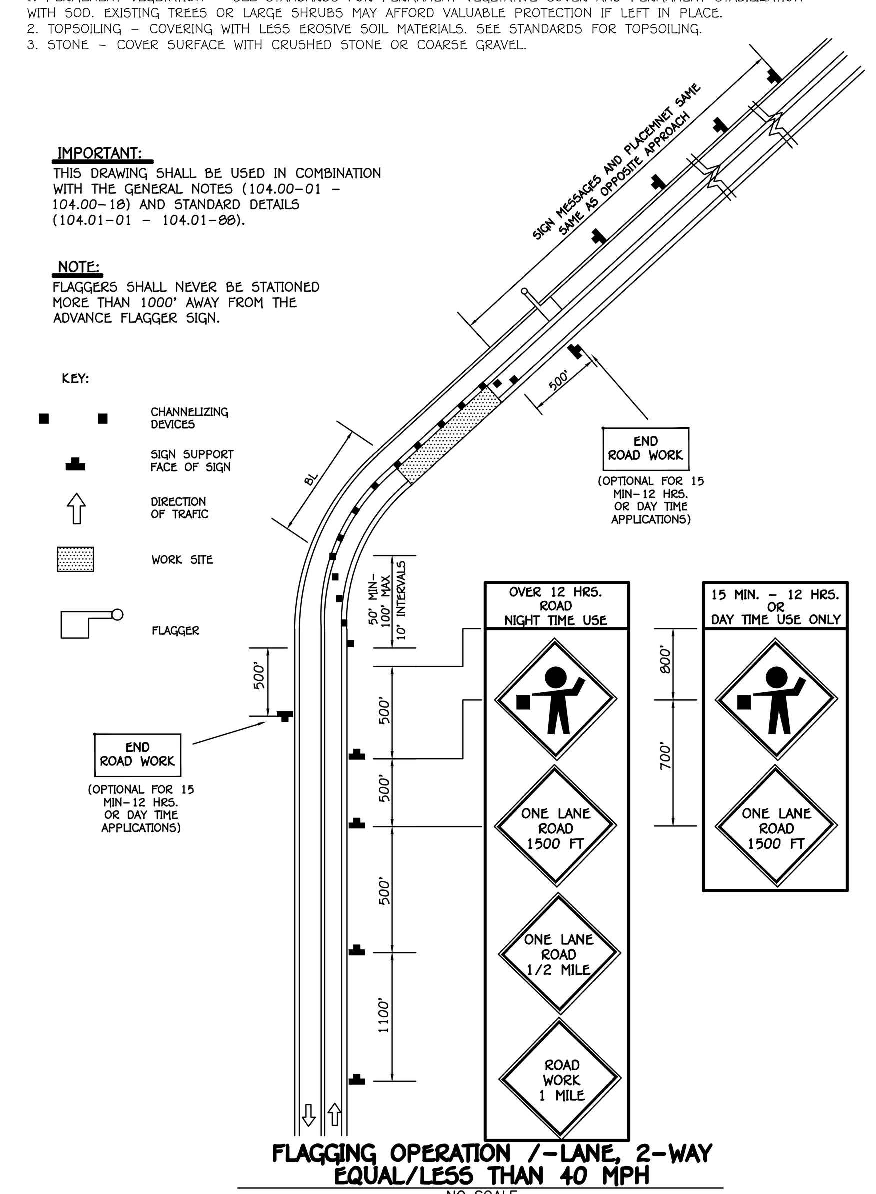
SPECIFICATIONS

TEMPORARY METHODS
1. MULCHES - SEE STANDARDS FOR VEGETATIVE STABILIZATION WITH MULCHES ONLY. MULCH SHOULD BE CRIMPED OR TACKED TO PREVENT BLOWING.
2. VEGETATIVE COVER - SEE STANDARDS FOR TEMPORARY VEGETATIVE COVER.
3. TILLAGE - TO ROUGHEN SURFACE AND BRING CLODS TO THE SURFACE. THIS IS AN EMERGENCY MEASURE WHICH SHOULD BE USED BEFORE SOIL BLOWING STARTS. BEGIN PLOWING ON WINDWARD SIDE OF THE SITE. CHISEL-TYPE PLOWS SPACED ABOUT 12" APART, SPRING-TOOTHED HARROWS AND SIMILAR PLOWS ARE EXAMPLES OF EQUIPMENT WHICH MAY PRODUCE THE DESIRED EFFECT.
4. IRRIGATION - THIS IS GENERALLY DONE AS AN EMERGENCY TREATMENT. SITE IS SPRINKLED WITH WATER UNTIL THE SURFACE IS MOIST. REPEAT AS NEEDED. AT NO TIME SHOULD THE SITE BE IRRIGATED TO THE POINT THAT RUNOFF BEGINS TO FLOW.
5. BARRIERS - SOLID BOARD FENCES SILT FENCES, SNOW FENCES, BURLAP FENCES, STRAW BALE DIKES AND SIMILAR MATERIAL CAN BE USED TO CONTROL AIR CURRENTS AND SOIL BLOWING. BARRIERS PLACED AT RIGHT ANGLES TO PREVAILING CURRENTS AT INTERVALS OF ABOUT 10 TIMES THEIR HEIGHT ARE EFFECTIVE IN CONTROLLING SOIL BLOWING.
6. CALCIUM CHLORIDE - APPLY AT RATES THAT WILL KEEP SURFACE MOIST. MAY NEED RETREATMENT.

PERMANENT METHODS
1. PERMENENT VEGETATION - SEE STANDARDS FOR PERMANENT VEGETATIVE COVER AND PERMANENT STABILIZATION WITH SOD. EXISTING TREES OR LARGE SHRUBS MAY AFFORD VALUABLE PROTECTION IF LEFT IN PLACE.
2. TOPSOILING - COVERING WITH LESS EROSIVE SOIL MATERIALS. SEE STANDARDS FOR TOPSOILING.
3. STONE - COVER SURFACE WITH CRUSHED STONE OR COARSE GRAVEL.

IMPORTANT: THIS DRAWING SHALL BE USED IN COMBINATION WITH THE GENERAL NOTES (104.00-01 - 104.00-18) AND STANDARD DETAILS (104.01-01 - 104.01-08).

NOTE: FLAGGERS SHALL NEVER BE STATIONED MORE THAN 1000' AWAY FROM THE ADVANCE FLAGGER SIGN.



FLAGGING OPERATION /-LANE, 2-WAY EQUAL/LESS THAN 40 MPH
NO SCALE

B-4-1 STANDARDS AND SPECIFICATIONS FOR INCREMENTAL STABILIZATION

Definition

Establishment of vegetative cover on cut and fill slopes.

Purpose

To provide timely vegetative cover on cut and fill slopes as work progresses.

Conditions Where Practice Applies

Any cut or fill slope greater than 15 feet in height. This practice also applies to stockpiles.

Criteria

A. Incremental Stabilization - Cut Slopes
1. Excavate and stabilize cut slopes in increments not to exceed 15 feet in height. Prepare seedbed and apply seed and mulch on all cut slopes as the work progresses.
2. Construction sequence example (Refer to Figure B.1):
a. Construct and stabilize all temporary swales or dikes that will be used to convey runoff around the excavation.
b. Perform Phase 1 excavation, prepare seedbed, and stabilize.
c. Perform Phase 2 excavation, prepare seedbed, and stabilize. Overseed Phase 1 areas as necessary.
d. Perform final phase excavation, prepare seedbed, and stabilize. Overseed previously seeded areas as necessary.

Note: Once excavation has begun the operation should be continuous from grubbing through the completion of grading and placement of topsoil (if required) and permanent seed and mulch. Any interruptions in the operation or completing the operation out of the seeding season will necessitate the application of temporary stabilization.

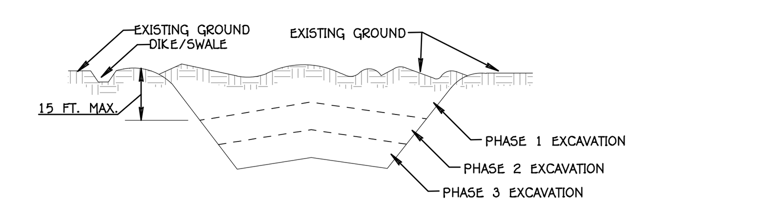


Figure B.1: Incremental Stabilization - Cut

B. Incremental Stabilization - Fill Slopes
1. Construct and stabilize fill slopes in increments not to exceed 15 feet in height. Prepare seedbed and apply seed and mulch on all slopes as the work progresses.
2. Stabilize slopes immediately when the vertical height of a lift reaches 15 feet, or when the grading operation ceases as prescribed in the plans.
3. At the end of each day, install temporary water conveyance practice(s), as necessary, to intercept surface runoff and convey it down the slope in a non-erosive manner.
4. Construction sequence example (Refer to Figure B.2):
a. Construct and stabilize all temporary swales or dikes that will be used to divert runoff around the fill. Construct silt fence on low side of fill unless other methods shown on the plans address this area.
b. At the end of each day, install temporary water conveyance practice(s), as necessary, to intercept surface runoff and convey it down the slope in a non-erosive manner.
c. Place Phase 1 fill, prepare seedbed, and stabilize.
d. Place Phase 2 fill, prepare seedbed, and stabilize.
e. Place final phase fill, prepare seedbed, and stabilize. Overseed previously seeded areas as necessary.

Note: Once the placement of fill has begun the operation should be continuous from grubbing through the completion of grading and placement of topsoil (if required) and permanent seed and mulch. Any interruptions in the operation or completing the operation out of the seeding season will necessitate the application of temporary stabilization.

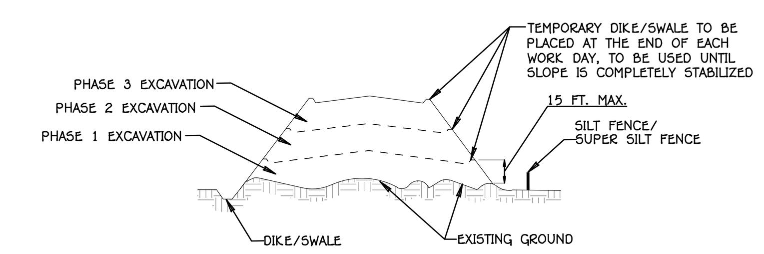
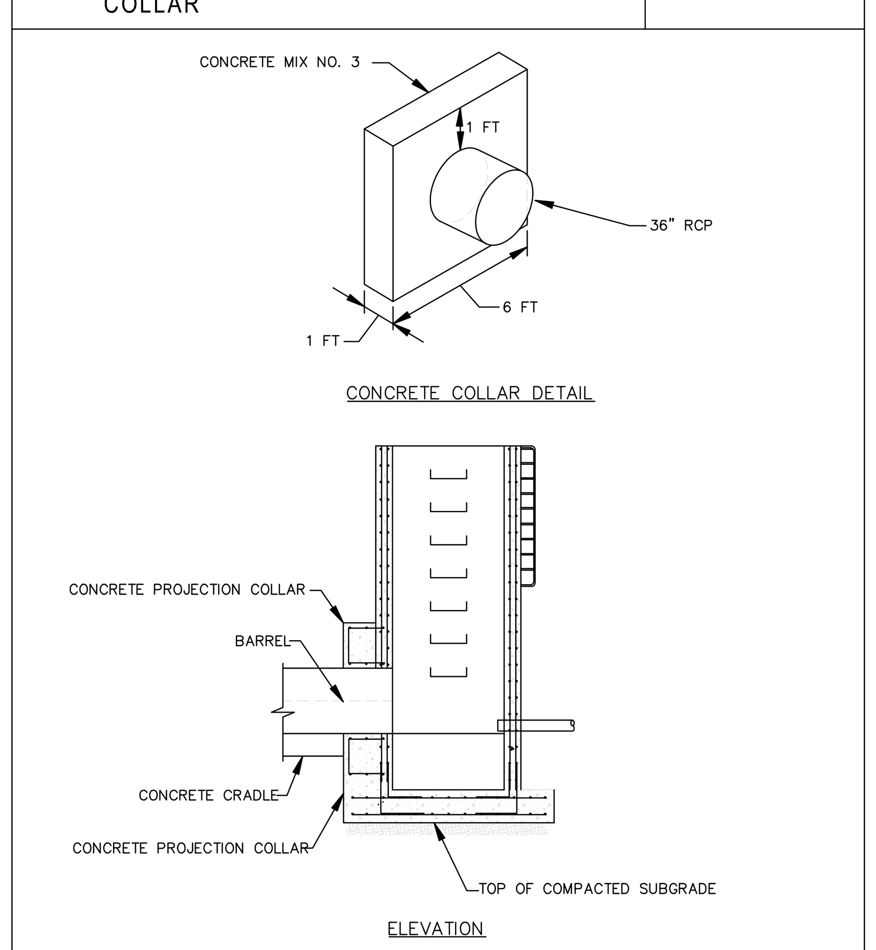


Figure B.2: Incremental Stabilization - Fill

DETAIL G-2-9 PROJECTION COLLAR | STANDARD SYMBOL



CONSTRUCTION SPECIFICATIONS

1. CAST 1 FOOT THICK CONCRETE COLLAR TO OUTLET STRUCTURE WITH FOUR #4 U-SHAPED REBARS.

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

HOWARD SOIL CONSERVATION DISTRICT (HSCD) STANDARD SEDIMENT CONTROL NOTES

1. A PRE-CONSTRUCTION MEETING MUST OCCUR WITH THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS, CONSTRUCTION INSPECTION DIVISION (CID), 410-313-1855 AFTER THE FUTURE LOD AND PROTECTED AREAS ARE MARKED CLEARLY IN THE FIELD. A MINIMUM OF 48 HOUR NOTICE TO CID MUST BE GIVEN AT THE FOLLOWING STAGES: A. PRIOR TO THE START OF EARTH DISTURBANCE,

B. UPON COMPLETION OF THE INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING,

C. PRIOR TO THE START OF ANOTHER PHASE OF CONSTRUCTION OR OPENING OF ANOTHER GRADING UNIT, D. PRIOR TO THE REMOVAL OR MODIFICATION OF SEDIMENT CONTROL PRACTICES.

OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE. OTHER RELATED STATE AND FEDERAL PERMITS SHALL BE REFERENCED, TO ENSURE COORDINATION AND TO AVOID CONFLICTS WITH THIS PLAN.

2. ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, AND REVISIONS THERETO.

3. FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION IS REQUIRED WITHIN THREE (3) CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER CONTROLS, DIKES, SWALES, DITCHES, PERIMETER SLOPES, AND ALL SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1); AND SEVEN (7) CALENDAR DAYS AS TO ALL OTHER DISTURBED AREAS ON THE PROJECT SITE EXCEPT FOR THOSE AREAS UNDER ACTIVE GRADING.

4. ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR TOPSOIL (SEC. B-4-2), PERMANENT SEEDING (SEC. B-4-5), TEMPORARY SEEDING (SEC. B-4-4) AND MULCHING (SEC. B-4-3). TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE APPLIED BETWEEN THE FALL AND SPRING SEEDING DATES IF THE GROUND IS FROZEN. INCREMENTAL STABILIZATION (SEC. B-4-1) SPECIFICATIONS SHALL BE ENFORCED IN AREAS WITH >15' OF CUT AND/OR FILL. STOCKPILES (SEC. B-4-8) IN EXCESS OF 20 FT. MUST BE BENCHED WITH STABLE OUTLET. ALL CONCENTRATED FLOW, STEEP SLOPE, AND HIGHLY ERODIBLE AREAS SHALL RECEIVE SOIL STABILIZATION MATTING (SEC. B-4-6).

5. ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE, AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE CID.

6. SITE ANALYSIS:

TOTAL AREA OF SITE:	8.55 ACRES
AREA DISTURBED:	4.2 ACRES
AREA TO BE ROOFED OR PAVED:	1.4 ACRES
AREA TO BE VEGETATIVELY STABILIZED:	2.8 ACRES
TOTAL CUT:	7386 CU.YDS.
TOTAL FILL:	7926 CU.YDS.
OFF-SITE WASTE/BORROW AREA LOCATION:	N/A

7. ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.

8. ADDITIONAL SEDIMENT CONTROL MUST BE PROVIDED, IF DEEMED NECESSARY BY THE CID. THE SITE AND ALL CONTROLS SHALL BE INSPECTED BY THE CONTRACTOR WEEKLY; AND THE NEXT DAY AFTER EACH RAIN EVENT. A WRITTEN REPORT BY THE CONTRACTOR, MADE AVAILABLE UPON REQUEST, IS PART OF EVERY INSPECTION AND SHOULD INCLUDE:
- INSPECTION DATE
- INSPECTION TYPE (ROUTINE, PRE-STORM EVENT, DURING RAIN EVENT)
- NAME AND TITLE OF INSPECTOR
- WEATHER INFORMATION (CURRENT CONDITIONS AS WELL AS TIME AND AMOUNT OF LAST RECORDED PRECIPITATION)
- BRIEF DESCRIPTION OF PROJECT'S STATUS (E.G., PERCENT COMPLETE) AND/OR CURRENT ACTIVITIES
- EVIDENCE OF SEDIMENT DISCHARGES
- IDENTIFICATION OF PLAN DEFICIENCIES
- IDENTIFICATION OF SEDIMENT CONTROLS THAT REQUIRE MAINTENANCE
- IDENTIFICATION OF MISSING OR IMPROPERLY INSTALLED SEDIMENT CONTROLS
- COMPLIANCE STATUS REGARDING THE SEQUENCE OF CONSTRUCTION AND STABILIZATION REQUIREMENTS
- PHOTOGRAPHS
- MONITORING/SAMPLING
- MAINTENANCE AND/OR CORRECTIVE ACTION PERFORMED

OTHER INSPECTION ITEMS AS REQUIRED BY THE GENERAL PERMIT FOR STORMWATER ASSOCIATED WITH CONSTRUCTION ACTIVITIES (NPDES, MDE).

9. TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH CAN AND SHALL BE BACK-FILLED AND STABILIZED BY THE END OF EACH WORKDAY, WHICHEVER IS SHORTER.

10. ANY MAJOR CHANGES OR REVISIONS TO THE PLAN OR SEQUENCE OF CONSTRUCTION MUST BE REVIEWED AND APPROVED BY THE HSCD PRIOR TO PROCEEDING WITH CONSTRUCTION. MINOR REVISIONS MAY ALLOWED BY THE CID PER THE LIST OF HSCD-APPROVED FIELD CHANGES.

11. DISTURBANCE SHALL NOT OCCUR OUTSIDE THE L.O.D. A PROJECT IS TO BE SEQUENCED SO THAT GRADING ACTIVITIES BEGIN ON ONE GRADING UNIT (MAXIMUM ACREAGE OF 20 AC. PER GRADING UNIT) AT A TIME. WORK MAY PROCEED TO A SUBSEQUENT GRADING UNIT WHEN AT LEAST 50 PERCENT OF THE DISTURBED AREA IN THE PRECEDING GRADING UNIT HAS BEEN STABILIZED AND APPROVED BY THE CID. UNLESS OTHERWISE SPECIFIED AND APPROVED BY THE CID, NO MORE THAN 30 ACRES CUMULATIVELY MAY BE DISTURBED AT A GIVEN TIME.

12. WASH WATER FROM ANY EQUIPMENT, VEHICLES, WHEELS, PAVEMENT, AND OTHER SOURCES MUST BE TREATED IN A SEDIMENT BASIN OR OTHER APPROVED WASHOUT STRUCTURE.

13. TOPSOIL SHALL BE STOCKPILED AND PRESERVED ON-SITE FOR REDISTRIBUTION ONTO FINAL GRADE.

14. ALL SILT FENCE AND SUPER SILT FENCE SHALL BE PLACED ON-THE-CONTOUR, AND BE IMBRICATED AT 25' MINIMUM INTERVALS, WITH LOWER ENDS CURLED UPHILL BY 2' IN ELEVATION.

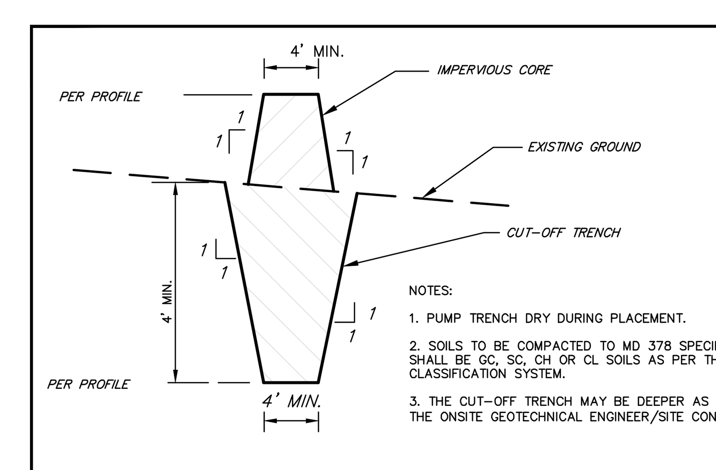
15. STREAM CHANNELS MUST NOT BE DISTURBED DURING THE FOLLOWING RESTRICTED TIME PERIODS (INCLUSIVE):
- USE I AND IP MARCH 1 - JUNE 15
- USE III AND IIIP OCTOBER 1 - APRIL 30
- USE IV MARCH 1 - MAY 31

16. A COPY OF THIS PLAN, THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, AND ASSOCIATED PERMITS SHALL BE ON-SITE AND AVAILABLE WHEN THE SITE IS ACTIVE.

SEQUENCE OF CONSTRUCTION

1. OBTAIN GRADING PERMIT. (2 WEEKS)
2. NOTIFY MISS UTILITY (1-800-257-7777) 48 HOURS BEFORE STARTING WORK. NOTIFY THE HOWARD COUNTY CONSTRUCTION INSPECTION DIVISION (410-313-1855) 24 HOURS BEFORE STARTING WORK, AND NOTIFY THE BALTIMORE GAS ELECTRIC CO. (410-291-5739) FIVE (5) WORKING DAYS PRIOR TO STARTING WORK.
3. INSTALL STABILIZED CONSTRUCTION ENTRANCE (SCE), PERIMETER SUPER SILT FENCE (SSF) AND TREE PROTECTION FENCE AT SPECIMEN TREES AND ALONG THE FOREST CONSERVATION EASEMENT AS SHOWN ON SHEET 5. CONSTRUCT DIVERSION FENCE AND ASSOCIATED CLEAN WATER DIVERSION PIPE. CONSTRUCT SEDIMENT BASIN. DO NOT CONSTRUCT BMPs AT THIS TIME. UPON PERMISSION FROM THE SEDIMENT CONTROL INSPECTOR BEGIN CLEARING AND GRUBBING THE SITE. (3 WEEKS)
4. GRADE SITE AND ROADS FOR HOUSE PADS. THE CONTRACTOR SHALL HAVE THE OPTION TO GRADE SOME AREAS PRIOR TO OTHERS TO ALLOW FOR FLEXIBILITY ON WHICH PORTION OF THE PRIVATE ROADS TO BE CONSTRUCTED FIRST. OBTAIN PERMISSION FROM THE SEDIMENT CONTROL INSPECTOR BEFORE PROCEEDING (3 WEEKS)
5. INSTALL STORM DRAINS, WATER, SEWER AND OTHER UTILITIES, IMMEDIATELY PLACE INLET PROTECTION AT ALL NEW INLETS NOT DRAINING TO SEDIMENT BASIN. DELAY CONSTRUCTION OF PIPING FROM SEWER MH360 TO MH365, PIPING FROM MH360 TO MH370, AND MH365 AND MH370. PLACE SUPER SILT FENCE AROUND RISERS WHEN CONSTRUCTED. BLOCK I-8 FROM RECEIVING FLOW UNTIL SILT FENCE DIVERSION AND SLOPE DRAIN ARE REMOVED. INSTALL TEMPORARY PIPE FROM S-2 TO SEDIMENT BASIN
6. INSTALL PAVING. (2 WEEKS)
7. WITH APPROVAL FROM THE SEDIMENT CONTROL INSPECTOR, THOROUGHLY FLUSH CLEAN THE STORM DRAIN PIPES, DRAIN WATER FROM THE BASIN USING REMOVABLE PUMPING STATION. CONVERT SEDIMENT BASIN INTO PERMANENT SWM FACILITY. ALL BMP DRAINAGE AREAS MUST BE STABILIZED PRIOR TO CONVERSION OR INSTALLATION, INCLUDING REGRADING TO DESIGN ELEVATIONS, AFTER INSTALLING FOREBAYS, UNDERDRAINS, STONE AND PLANTING SOIL LAYERS, AND MULCH, THEN INSTALL POND LANDSCAPING. REMOVE PIPE SLOPE DRAIN AND INSTALL REMAINING 18" HDPE TO I-5 THEN REMOVE SILT FENCE DIVERSION, UNBLOCK I-8, INSTALL SF AROUND REMAINING SEWER TO BE INSTALLED, AND INSTALL MH365, MH370, AND ASSOCIATED PIPING. (1 MONTH)
8. OBTAIN PERMISSION FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR TO REMOVE ANY REMAINING SEDIMENT & EROSION CONTROL DEVICES AND THEN STABILIZE THOSE AREAS DISTURBED BY THIS PROCESS WITH PERMANENT SEEDING.

EROSION AND SEDIMENT CONTROL NOTE:
THE CONTRACTOR SHALL INSPECT AND PROVIDE THE NECESSARY MAINTENANCE ON ALL SEDIMENT CONTROL DEVICES/PRACTICES ON A DAILY BASIS, AND IMMEDIATELY AFTER A RAINFALL ALONG WITH REMOVAL OF SEDIMENT FROM THE SEDIMENT BASINS WHEN THE CLEANOUT ELEVATION HAS BEEN REACHED.



NOTES:
1. PUMP TRENCH DRY DURING PLACEMENT.
2. SOILS TO BE COMPACTED TO MD 378 SPECIFICATIONS AND SHALL BE GC, SC, CH OR CL SOILS AS PER THE UNIFIED SOILS CLASSIFICATION SYSTEM.
3. THE CUT-OFF TRENCH MAY BE DEEPER AS DIRECTED BY THE ONSITE GEOTECHNICAL ENGINEER/SITE CONDITIONS.

CUT-OFF TRENCH & IMPERVIOUS CORE DETAIL

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

DESIGN CERTIFICATE

"I hereby certify that this plan has been designed in accordance with current Maryland erosion and sediment control laws, regulations, and standards, that it represents a practical and workable plan based on my personal knowledge of the site, and that it was prepared in accordance with the requirements of the Howard Soil Conservation District."

Paul G. Cavanaugh — 10/29/24
Designer's Signature — Date

PAUL G. CAVANAUGH — MD Registration No. 27020
Printed Name — (P.E.) R.L.S., or R.L.A. (circle one)

OWNER'S/DEVELOPER CERTIFICATE

"I/We hereby certify that any clearing, grading, construction, or development will be done pursuant to this approved erosion and sediment control plan, including inspecting and maintaining controls, and that the responsible personnel involved in the construction project will have a Certificate of Training at a Maryland Department of the Environment (MDE) approved training program for the control on erosion and sediment prior to beginning the project. I certify right-of-entry for periodic on-site evaluation by Howard County, the Howard Soil Conservation District and/or MDE."

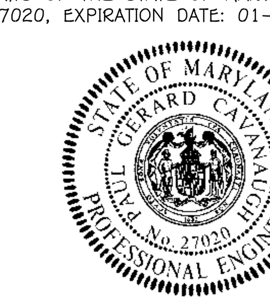
Steven K. Breeden — 10/29/24
Owner's/Developer's Signature — Date
Steven K. Breeden
SDC Mill Creek LLC, Manager for Mill Creek LLC
Printed Name & Title

Approved: Howard County Department Of Public Works	
Chief, Bureau of Highways	12/13/2024 Date
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING	
Chief, Development Engineering Division	12/13/2024 Date
Chief, Division of Land Development	12/16/2024 Date
This development plan is approved for soil erosion and sediment control by the HOWARD SOIL CONSERVATION DISTRICT.	
Howard Soil Conservation District.	12/13/2024 Date

DATE	DESCRIPTION
10/22/24	REVISE AREA DISTURBED/VEGATIZED PER THE GRADING CHANGES

REVISIONS

"PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY 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. 27020, EXPIRATION DATE: 01-25-26."



Paul G. Cavanaugh
PAUL G. CAVANAUGH, P.E. #27020

Owner
Lacey Family Revocable Trust
c/o Mr. Vincent P. Lacey, Co-Trustee
1235 Wild Rose Court
Marriottsville, Maryland 21104
Ph# 410-707-2639

Owner
Lacey Property Homeowners Association, Inc.
6026 Trotter Road
Clarksville, Maryland 21029

Developer
SDC Mill Creek, LLC
Attn: Mr. Steven K. Breeden
Suite 415
8480 Baltimore National Pike
Ellicott City, Maryland 21043
410-465-4244

PROJECT		SECTION/AREA		PARCEL	
LACEY PROPERTY		N/A		13	
PLAT NOS.	BLOCK NO.	ZONE	TAX MAP	ELEC. DIST.	CENSUS TR.
-	1	R-ED	25	SECOND	602900

REVISED SEDIMENT AND EROSION CONTROL NOTES & DETAILS

LACEY PROPERTY

LOTS 2, 18 THRU 29 AND OPEN SPACE LOTS 16, 17, 30 & 31

(BEING A RESUBDIVISION OF LOTS 1, 3 THRU 13 AND OPEN SPACE LOTS 14 & 15 AS SHOWN ON PLATS ENTITLED "LACEY PROPERTY, LOTS 1 THRU 13 AND OPEN SPACE LOTS 14 THRU 17", PLAT Nos. 26657 - 26659)

ZONED: R-ED
PARCEL No.: 13
TAX MAP No.: 25 GRID No.: 1
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: OCT. 25, 2024
SHEET 6 OF 24

F-21-015

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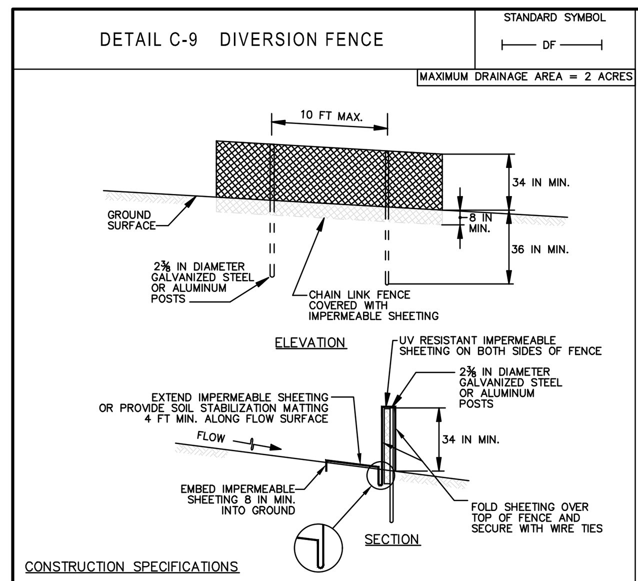
DETAIL C-9 DIVERSION FENCE

STANDARD SYMBOL: DF — MAXIMUM DRAINAGE AREA = 2 ACRES



CONSTRUCTION SPECIFICATIONS

1. USE 42 INCH HIGH, 9 GAUGE OR THICKER CHAIN LINK FENCING (2⅜ INCH MAXIMUM OPENING).
2. USE 2⅜ INCH DIAMETER GALVANIZED STEEL POSTS OF 0.095 INCH WALL THICKNESS AND SIX FOOT LENGTH SPACED NO FURTHER THAN 10 FEET APART. THE POSTS DO NOT NEED TO BE SET IN CONCRETE.
3. FASTEN CHAIN LINK FENCE SECURELY TO THE FENCE POSTS WITH WIRE TIES.
4. SECURE 10 MIL OR THICKER UV RESISTANT, IMPERMEABLE SHEETING TO CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT TOP, MID SECTION, AND BELOW GROUND SURFACE.
5. EXTEND SHEETING A MINIMUM OF 4 FEET ALONG FLOW SURFACE AND EMBED END A MINIMUM OF 8 INCHES INTO GROUND. SOIL STABILIZATION MATTING MAY BE USED IN LIEU OF IMPERMEABLE SHEETING ALONG FLOW SURFACE.
6. WHEN TWO SECTIONS OF SHEETING ADJOIN EACH OTHER, OVERLAP BY 6 INCHES AND FOLD WITH SEAM FACING DOWNGRADE.
7. KEEP FLOW SURFACE ALONG DIVERSION FENCE AND POINT OF DISCHARGE FREE OF EROSION. REMOVE ACCUMULATED SEDIMENT AND DEBRIS. MAINTAIN POSITIVE DRAINAGE. REPLACE IMPERMEABLE SHEETING IF TORN. IF UNDERMINING OCCURS, REINSTALL FENCE.

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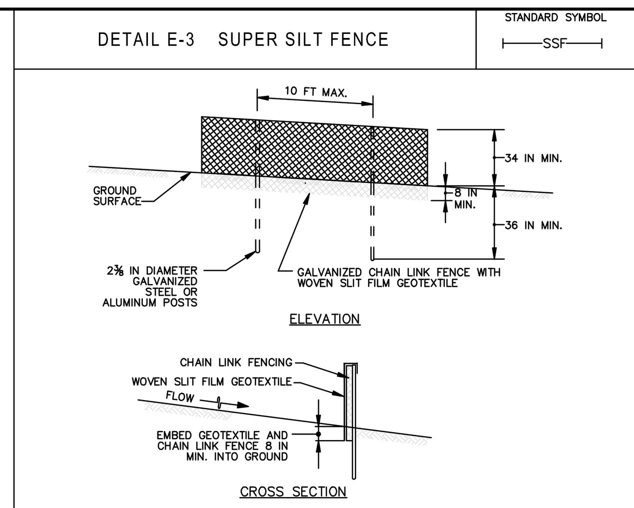
DETAIL E-3 SUPER SILT FENCE

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.

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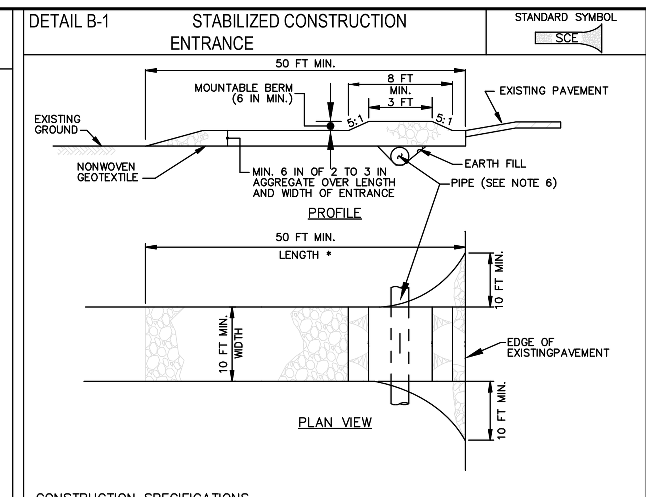
DETAIL B-1 STABILIZED CONSTRUCTION ENTRANCE

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.

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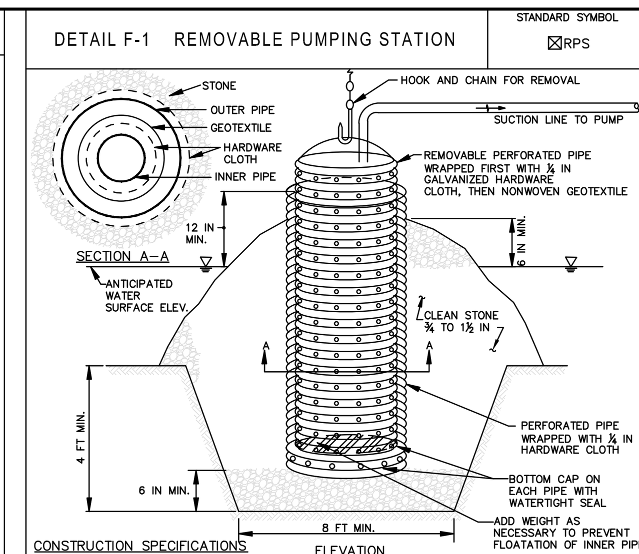
DETAIL F-1 REMOVABLE PUMPING STATION

STANDARD SYMBOL: RPS



CONSTRUCTION SPECIFICATIONS

1. USE CORRUGATED METAL OR PLASTIC PIPE WITH 1 INCH DIAMETER PERFORATIONS 6 INCHES ON CENTER.
2. USE A MINIMUM 12 INCH DIAMETER INNER PIPE WITH AN OUTER PIPE A MINIMUM 6 INCHES LARGER IN DIAMETER. BOTTOM OF EACH PIPE MUST BE CAPPED WITH WATERTIGHT SEAL.
3. WRAP EACH PIPE WITH ¼ INCH GALVANIZED HARDWARE CLOTH. ON INNER PIPE WRAP NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS, OVER THE HARDWARE CLOTH.
4. EXCAVATE 8 FEET X 8 FEET X 4 FEET DEEP PIT FOR PIPE PLACEMENT. PLACE CLEAN ¾ TO 1½ INCH STONE OR EQUIVALENT RECYCLED CONCRETE, 6 INCHES IN DEPTH PRIOR TO PIPE PLACEMENT.
5. SET TOP OF INNER AND OUTER PIPES MINIMUM 12 INCHES ABOVE ANTICIPATED WATER SURFACE ELEVATION (OR RISER CREST ELEVATION WHEN DEWATERING A BASIN).
6. BACKFILL PIT AROUND THE OUTER 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.
7. DISCHARGE TO A STABLE AREA AT A NONEROSIVE RATE.
8. A REMOVABLE PUMPING STATION REQUIRES FREQUENT MAINTENANCE. IF SYSTEM CLOGS, PULL OUT INNER PIPE AND REPLACE GEOTEXTILE. KEEP POINT OF DISCHARGE FREE OF EROSION.

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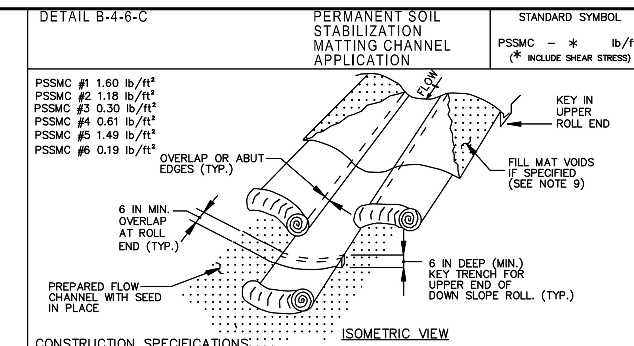
DETAIL B-4-6-C PERMANENT SOIL STABILIZATION MATTING CHANNEL APPLICATION

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

PSSMC #1 1.60 lb/ft²
PSSMC #2 1.18 lb/ft²
PSSMC #3 0.30 lb/ft²
PSSMC #4 0.61 lb/ft²
PSSMC #5 1.49 lb/ft²
PSSMC #6 0.19 lb/ft²



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 1½ 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.

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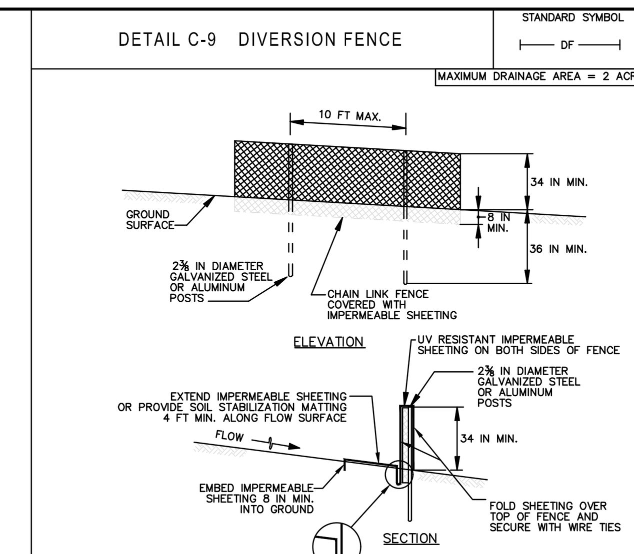
DETAIL C-9 DIVERSION FENCE

STANDARD SYMBOL: DF — MAXIMUM DRAINAGE AREA = 2 ACRES



CONSTRUCTION SPECIFICATIONS

1. USE 42 INCH HIGH, 9 GAUGE OR THICKER CHAIN LINK FENCING (2⅜ INCH MAXIMUM OPENING).
2. USE 2⅜ INCH DIAMETER GALVANIZED STEEL POSTS OF 0.095 INCH WALL THICKNESS AND SIX FOOT LENGTH SPACED NO FURTHER THAN 10 FEET APART. THE POSTS DO NOT NEED TO BE SET IN CONCRETE.
3. FASTEN CHAIN LINK FENCE SECURELY TO THE FENCE POSTS WITH WIRE TIES.
4. SECURE 10 MIL OR THICKER UV RESISTANT, IMPERMEABLE SHEETING TO CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT TOP, MID SECTION, AND BELOW GROUND SURFACE.
5. EXTEND SHEETING A MINIMUM OF 4 FEET ALONG FLOW SURFACE AND EMBED END A MINIMUM OF 8 INCHES INTO GROUND. SOIL STABILIZATION MATTING MAY BE USED IN LIEU OF IMPERMEABLE SHEETING ALONG FLOW SURFACE.
6. WHEN TWO SECTIONS OF SHEETING ADJOIN EACH OTHER, OVERLAP BY 6 INCHES AND FOLD WITH SEAM FACING DOWNGRADE.
7. KEEP FLOW SURFACE ALONG DIVERSION FENCE AND POINT OF DISCHARGE FREE OF EROSION. REMOVE ACCUMULATED SEDIMENT AND DEBRIS. MAINTAIN POSITIVE DRAINAGE. REPLACE IMPERMEABLE SHEETING IF TORN. IF UNDERMINING OCCURS, REINSTALL FENCE.

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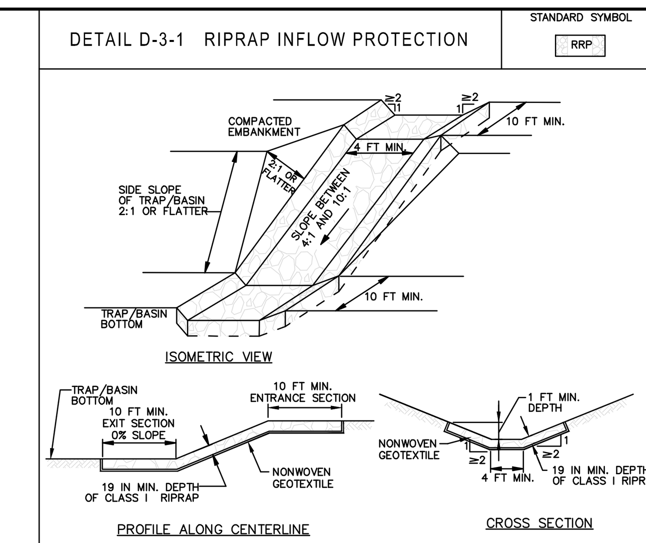
DETAIL D-3-1 RIPRAP INFLOW PROTECTION

STANDARD SYMBOL: RRP



CONSTRUCTION SPECIFICATIONS

1. PROVIDE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS, UNDER THE BOTTOM AND ALONG SIDES OF ALL RIPRAP.
2. CONSTRUCT INFLOW CHANNEL WITH CLASS I RIPRAP OR EQUIVALENT RECYCLED CONCRETE LINING TO A MINIMUM DEPTH OF 19 INCHES (2 x D_{50}) AND A 1 FOOT DEEP FLOW CHANNEL. INFLOW RIPRAP PROTECTION CHANNEL MUST HAVE A TRAPEZOIDAL CROSS SECTION WITH 2:1 OR FLATTER SIDE SLOPES AND A 4 FOOT MINIMUM BOTTOM WIDTH.
3. INSTALL ENTRANCE AND EXIT SECTIONS AS SHOWN ON THE PROFILE.
4. BLEND RIPRAP INTO EXISTING GROUND.
5. MAINTAIN LINE, GRADE, AND CROSS SECTION. REMOVE ACCUMULATED SEDIMENT AND DEBRIS. KEEP POINTS OF INFLOW AND OUTFLOW FREE OF EROSION.

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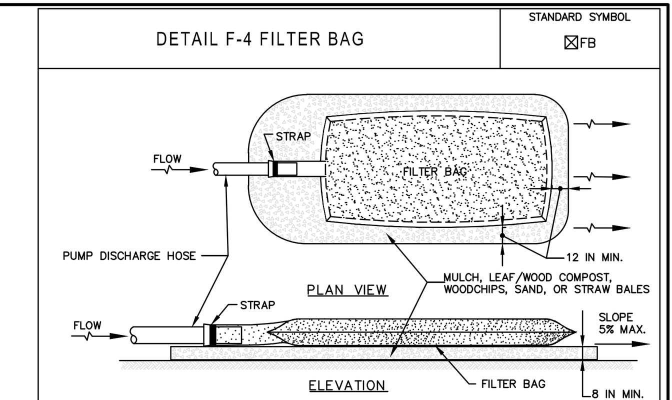
DETAIL F-4 FILTER BAG

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.

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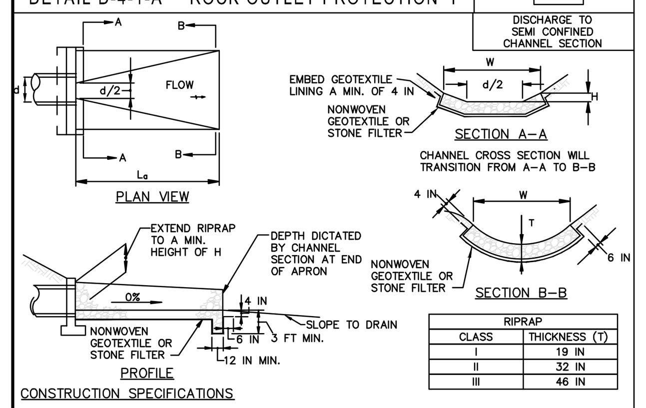
DETAIL D-4-1-A ROCK OUTLET PROTECTION I

STANDARD SYMBOL: ROP1 — DISCHARGE TO SEMI CONFINED CHANNEL SECTION



RIPRAP CLASS	THICKNESS (T)
I	19 IN
II	32 IN
III	46 IN

CONSTRUCTION SPECIFICATIONS

1. RIPRAP AND STONE MUST CONFORM TO THE SPECIFIED CLASS.
2. USE NONWOVEN GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS, AND PROTECT FROM PUNCTURING, CUTTING, OR TEARING. REPAIR ANY DAMAGE OTHER THAN AN OCCASIONAL SMALL HOLE BY PLACING ANOTHER PIECE OF GEOTEXTILE OVER THE DAMAGED PART OR BY COMPLETELY REPLACING THE GEOTEXTILE. PROVIDE A MINIMUM OF ONE FOOT OVERLAP FOR ALL REPAIRS AND FOR JOINING TWO PIECES OF GEOTEXTILE TOGETHER.
3. PREPARE THE SUBGRADE FOR GEOTEXTILE OR STONE FILTER (⅜ TO 1½ INCH STONE FOR 6 INCH MINIMUM DEPTH) AND RIPRAP TO THE REQUIRED LINES AND GRADES. COMPACT ANY FILL REQUIRED IN THE SUBGRADE TO A DENSITY OF APPROXIMATELY THAT OF THE SURROUNDING UNDISTURBED MATERIAL.
4. EXTEND GEOTEXTILE AT LEAST 6 INCHES BEYOND EDGES OF RIPRAP AND EMBED AT LEAST 4 INCHES AT SIDES OF THE RIPRAP.
5. CONSTRUCT RIPRAP OUTLET TO FULL COURSE THICKNESS IN ONE OPERATION AND IN SUCH A MANNER AS TO AVOID DISPLACEMENT OF UNDERLYING MATERIALS. PLACE STONE FOR RIPRAP OUTLET IN A MANNER THAT WILL ENSURE THAT IT IS REASONABLY HOMOGENOUS WITH THE SMALLER STONES AND SPALLS FILLING THE VOIDS BETWEEN THE LARGER STONES. PLACE RIPRAP IN A MANNER TO PREVENT DAMAGE TO THE STONE FILTER BLANKET OR GEOTEXTILE. HAND PLACE TO THE EXTENT NECESSARY.
6. WHERE NO ENDWALL IS USED, CONSTRUCT THE UPSTREAM END OF THE APRON SO THAT THE WIDTH IS TWO TIMES THE DIAMETER OF THE OUTLET PIPE, AND EXTEND THE STONE UNDER THE OUTLET BY A MINIMUM OF 18 INCHES.
7. CONSTRUCT APRON WITH 0% SLOPE ALONG ITS LENGTH AND WITHOUT OBSTRUCTIONS. PLACE STONE SO THAT IT BLENDS IN WITH EXISTING GROUND.
8. MAINTAIN LINE, GRADE, AND CROSS SECTION. KEEP OUTLET FREE OF EROSION. REMOVE ACCUMULATED SEDIMENT AND DEBRIS. AFTER HIGH FLOWS INSPECT FOR SCOUR AND DISLODGED RIPRAP. MAKE NECESSARY REPAIRS IMMEDIATELY.

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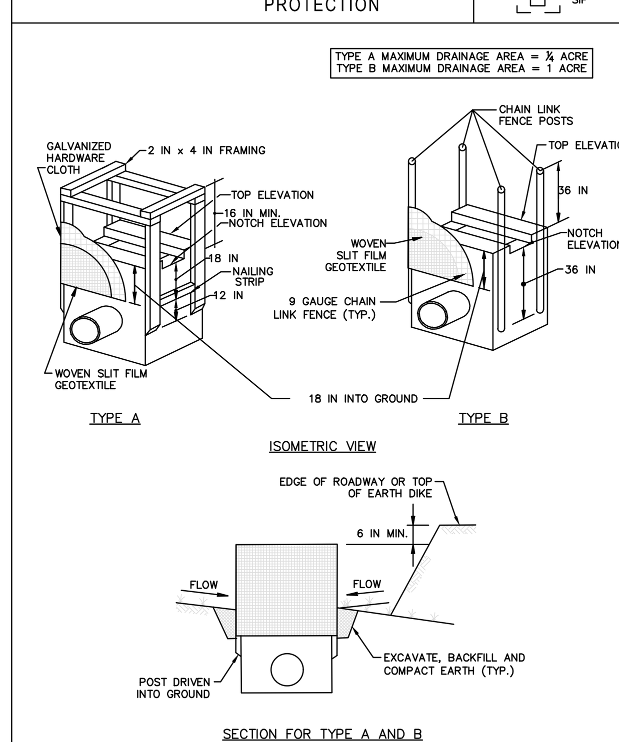
DETAIL E-9-1 STANDARD INLET PROTECTION

STANDARD SYMBOL: SIP

TYPE A MAXIMUM DRAINAGE AREA = ¼ ACRE
TYPE B MAXIMUM DRAINAGE AREA = 1 ACRE



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DETAIL E-9-1 STANDARD INLET PROTECTION

STANDARD SYMBOL: SIP

CONSTRUCTION SPECIFICATIONS

1. USE WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS.
2. EXCAVATE COMPLETELY AROUND THE INLET TO A DEPTH OF 18 INCHES BELOW THE NOTCH ELEVATION.
3. FOR TYPE A, USE NOMINAL 2 INCH X 4 INCH CONSTRUCTION GRADE LUMBER POSTS, DRIVEN 1 FOOT INTO THE GROUND AT EACH CORNER OF THE INLET. PLACE NAIL STRIPS BETWEEN THE POSTS ON THE ENDS OF THE INLET. ASSEMBLE THE TOP PORTION OF THE 2X4 FRAME AS SHOWN. STRETCH ¼ INCH GALVANIZED HARDWARE CLOTH TIGHTLY AROUND THE FRAME AND FASTEN SECURELY. FASTEN GEOTEXTILE SECURELY TO THE HARDWARE CLOTH WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE AND HARDWARE CLOTH A MINIMUM OF 18 INCHES BELOW THE WEIR CREST. THE ENDS OF THE GEOTEXTILE MUST MEET AT A POST, BE OVERLAPPED AND FOLDED, THEN FASTENED TO THE POST.

FOR TYPE B, USE 2⅜ INCH DIAMETER GALVANIZED STEEL POSTS OF 0.095 INCH WALL THICKNESS AND 6 FOOT LENGTH, DRIVEN A MINIMUM OF 36 INCHES BELOW THE WEIR CREST AT EACH CORNER OF THE STRUCTURE. FASTEN 9 GAUGE OR HEAVIER CHAIN LINK FENCE, 42 INCHES IN HEIGHT, SECURELY TO THE FENCE POSTS WITH WIRE TIES. FASTEN GEOTEXTILE SECURELY TO THE CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE AND CHAIN LINK FENCE A MINIMUM OF 18 INCHES BELOW THE WEIR CREST.

4. BACKFILL AROUND THE INLET IN LOOSE 4 INCH LIFTS AND COMPACT UNTIL SOIL IS LEVEL WITH THE NOTCH ELEVATION ON THE ENDS AND TOP ELEVATION ON THE SIDES.
5. STORM DRAIN INLET PROTECTION REQUIRES FREQUENT MAINTENANCE. REMOVE ACCUMULATED SEDIMENT AFTER EACH RAIN EVENT TO MAINTAIN FUNCTION AND AVOID PREMATURE CLOGGING. IF INLET PROTECTION DOES NOT COMPLETELY DRAIN WITHIN 24 HOURS AFTER A STORM EVENT, IT IS CLOGGED. WHEN THIS OCCURS, REMOVE ACCUMULATED SEDIMENT AND CLEAN, OR REPLACE GEOTEXTILE AND STONE.

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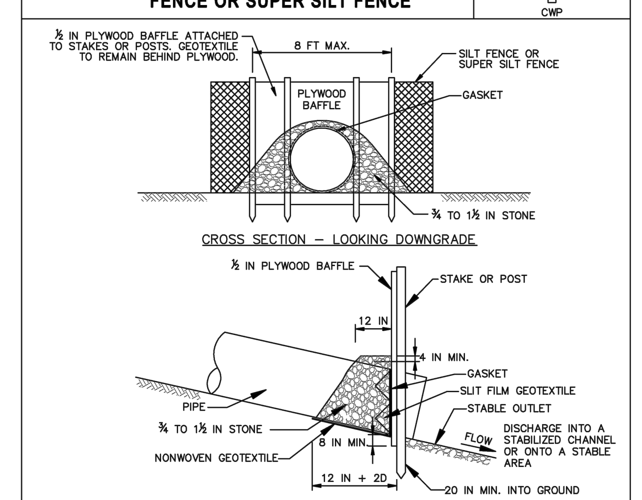
DETAIL E-4 CLEAR WATER PIPE THROUGH SILT FENCE OR SUPER SILT FENCE

STANDARD SYMBOL: CWP



CONSTRUCTION SPECIFICATIONS

1. INSTALL SILT FENCE OR SUPER SILT FENCE IN ACCORDANCE WITH DETAIL E-1 OR DETAIL E-2.
2. AT THE PIPE LOCATION, CUT AND PULL BACK THE WOVEN SLIT FILM GEOTEXTILE AND CHAIN LINK FENCING. SECURE GEOTEXTILE TO PIPE WITH GASKET. INSTALL ADDITIONAL STAKES OR POSTS IF NECESSARY TO ACCOMMODATE THE INSTALLATION OF THE BAFFLE BOARD.
3. ENTRENCH ¾ INCH PLYWOOD BAFFLE A MINIMUM OF 8 INCHES AND SECURE TO THE UPGRADE SIDE OF THE FENCE STAKES OR POSTS. BAFFLE SHOULD BE AT LEAST THE HEIGHT OF THE FENCE.
4. PLACE ¾ TO 1½ INCH STONE OR EQUIVALENT RECYCLED CONCRETE BEHIND THE PLYWOOD BAFFLE ON NONWOVEN GEOTEXTILE AND EXTEND 12 INCH MIN. ALONG TOP OF PIPE AND TO A HEIGHT OF 4 INCHES ABOVE THE TOP OF PIPE.
5. USE NONWOVEN AND WOVEN SLIT FILM GEOTEXTILES AS SPECIFIED IN SECTION H-1 MATERIALS.
6. REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN SEDIMENT REACHES 6 INCHES IN HEIGHT. REPLACE GEOTEXTILE IF TORN. IF UNDERMINING OCCURS, REINSTALL BAFFLE, CHAIN LINK, AND GEOTEXTILE. REPLACE STONE IF DISPLACED. 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 STANDARDS AND SPECIFICATIONS FOR CLEAR WATER PIPE THROUGH SILT FENCE OR SUPER SILT FENCE

Definition

A pipe extension through silt fence or super silt fence. Use of flexible piping is preferred.

Purpose

To provide a mechanism to extend a clear water pipe through silt fence or super silt fence.

Conditions Where Practice Applies

A clear water pipe through silt fence or super silt fence is used when a pipe intersects silt fence or super silt fence.

Design Criteria

1. The pipe and silt fence or super silt fence must conform to the design criteria for the respective practices. The maximum pipe diameter through silt fence is 12 inches and through super silt fence is 24 inches.
2. The plywood baffle is to be placed parallel to the contour.
3. The pipe must outlet onto a stable area at a non-erosive rate.

Maintenance

Accumulated sediment and debris must be removed when sediment reaches 6 inches in height. The geotextile must be replaced if torn. If undermining occurs, reinstall baffle, chain link, and geotextile. The stone must be replaced if displaced. The point of discharge must be kept free of erosion.

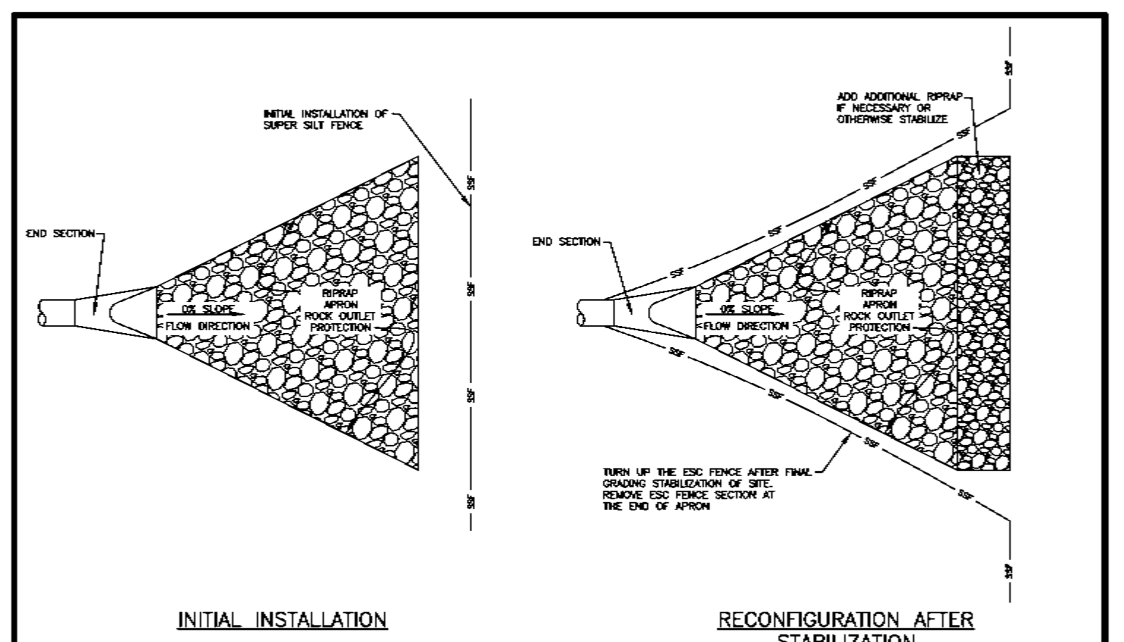
SWM POND #1 FACILITY: GTA GEO-TECHNICAL RECOMMENDATIONS.

CONCLUSIONS AND RECOMMENDATIONS
Based upon the results of this study, it is GTA's opinion that construction of the proposed retaining walls and SWM sand filter is feasible, given that the geotechnical recommendations are followed, and that the standard level of care is maintained during site development and construction. Design and construction of the proposed sand filter will be impacted by the presence of shallow groundwater. Design and construction of the proposed retaining walls will be impacted by the presence of loose/soft surficial soils. Note that the following recommendations pertain only to the subject retaining walls and sand filters. A discussion of these issues is included in the following paragraphs. Recommendations regarding other site development concerns, such as general site grading, foundation support, subsurface utilities, and pavements, are not addressed.

SWM Facility
The subject SWM facility is planned in the central portion of the site. Based on the available plans and information provided by FCC, the SWM facility is planned as a sand filter with a facility bottom elevation of 337.05 feet above MSL and a top of embankment elevation of 342.0 feet above MSL. Existing grades in the vicinity of the proposed SWM facility range from about 336 to 342 feet above MSL. Therefore, construction of the proposed sand filter will require excavations on the order of 2 to 9 feet below the existing grades and fills on the order of 2 to 6 feet. Based on the results of the borings, the required excavations can likely be performed using standard excavation techniques (i.e. scraping). However, very dense, highly weathered rock was encountered at depths of 8 to 12 feet below existing grades in borings performed for this facility. Such material may be encountered during facility excavation, and will likely require increased excavation effort or alternative excavation techniques, such as ripping or jacking. About 1 to 5 days after completion of drilling, groundwater was observed at depths of 3.9 to 4.9 feet below existing grades in the borings performed for this facility. Therefore, the presence of groundwater will likely impact construction of the proposed facility. The contractor should be prepared to dewater and properly shore excavations. GTA understands that MD 378 will govern the design and construction of the proposed sand filter embankment, which will require a clay core/cutoff trench in the embankment. MD 378 specifies that soils for use in cutoff trench construction meet USCS Classifications of Lean CLAY (CL), Fat CLAY (CH), Clayey SAND (SC), or Clayey GRAVEL (GC), with a minimum of 35% passing the #200 sieve. Furthermore, GTA recommends that similar materials be used for backfill adjacent to the outfall structures. The use of fine-grained or plastic material adjacent to the pipe should decrease potential for 'piping' erosional failures.

Soils meeting the above-referenced requirements were not encountered in the explorations to the depths explored. Therefore, GTA anticipates that borrow materials from off-site sources will be required for use in cutoff trench construction. Borrow materials should meet the above requirements and should be approved by GTA prior to import. A contingency should be established for importing suitable materials for cutoff trench construction. Although not anticipated on a widespread basis based on the result of the explorations, if soils meeting the above requirements are encountered in localized areas during site development activities, they should be segregated during site excavations and stockpiled for use in cutoff trench construction. However, it is likely that these soils, if encountered on site, will be mixed with sandy soils which will not meet the above requirements, and can transition quickly into ML or SM classified soils which also do not meet the above requirements. MD 378 specifies that all of the referenced classifications suitable for cutoff trench construction are suitable for embankment construction as well. GTA recommends that the most plastic materials available be used for embankment construction. Low plasticity silts, clean sandy soils, or highly weathered rock materials may be prone to seepage, and are generally not recommended for use in embankment construction. Fills for cutoff trench and embankment construction should be placed in controlled lifts and compacted in accordance with the project and County requirements. Note that based on the available groundwater data, the soil subgrade at the proposed bottom elevation of the cutoff trench may be soft and saturated. Therefore, it may be necessary to dry and stabilize the subgrade soils such that proper compaction of the cutoff trench materials can be achieved. Prior to placing the required fills, the existing subgrade should be proofrolled to identify any soft, unstable, or otherwise unsuitable soils. Any unstable/unsuitable soils should be removed and replaced with controlled, compacted fill. Based on conversation with FCC, infiltration techniques are being considered for the proposed facility. One infiltration test was performed near the location of Boring SWM-1 to evaluate the feasibility of infiltration techniques for the proposed facility. The infiltration test was performed in native Silty SAND at a depth of about 5 feet below existing grades, and indicated an infiltration rate of 0.32 inches per hour. Maryland Department of the Environment (MDE) specifications state that the minimum acceptable average infiltration rate for stormwater management and water quality applications, as indicated by borehole infiltration testing, is 0.52 inches per hour. The low infiltration rate is likely due to the significant proportions of fine-grained material within the native soils. Also, MDE regulations require a minimum clearance of 4 feet between infiltration elevations and groundwater. Based on the observed groundwater elevations, the facility grades will need to be raised if infiltration techniques are planned. Based on the observed infiltration rate and groundwater depths, infiltration techniques are not considered suitable at the location of the proposed SWM facility. Accordingly, GTA recommends that the sand filter should utilize an underdrain system in lieu of only infiltration techniques.

SEDIMENT CONTROL FENCE RECONFIGURATION After Stabilization — Detail D-5.53

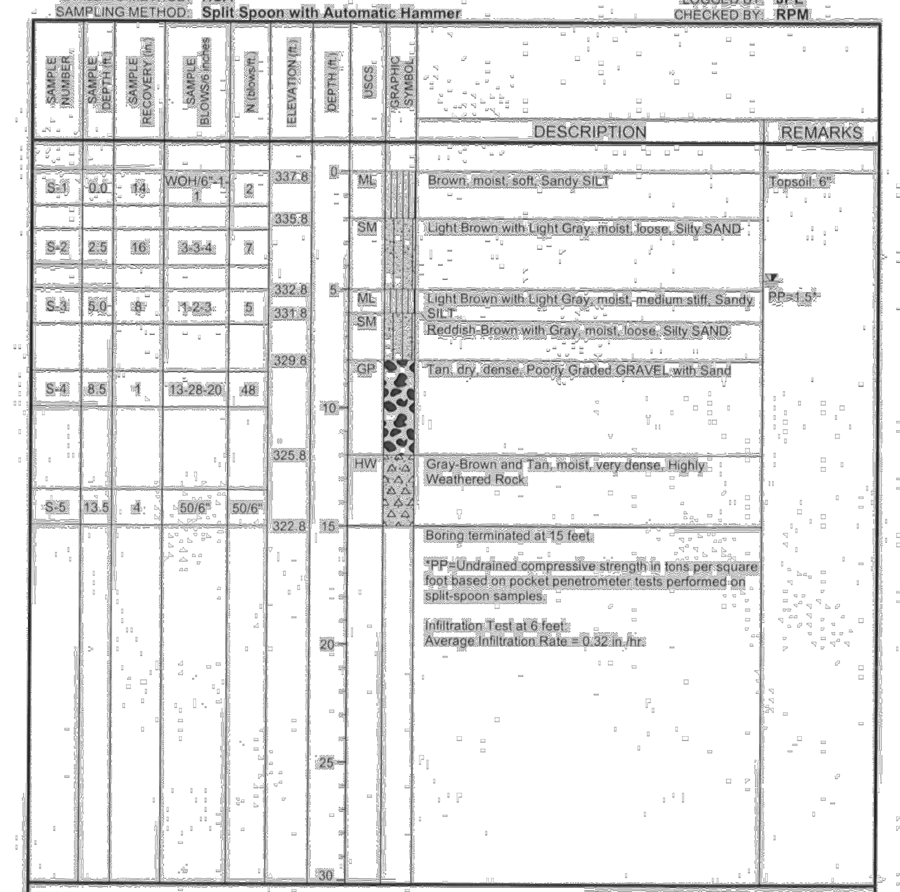


Howard County, Maryland Department of Public Works — Approved — Chief, Bureau of Engineering — Revised 5/30/2017

POCKET SAND FILTER (POND #1) BORING LOGS

LOG OF BORING NO. SWM-1 (Sheet 1 of 1)

PROJECT: Lacey Property; PROJECT NO.: 150945; PROJECT LOCATION: Howard County, MD; WATER LEVEL (ft): Dry / 4.6; DATE: 7/2/2015 / 7/6/2015; CAVED (ft): 13.7 / 8.5
DATE STARTED: 7/2/2015; DATE COMPLETED: 7/2/2015; DRILLING CONTRACTOR: Geo-Technology Associates, Inc.; DRILLER: K. Kozak; DRILLING METHOD: HSA; SAMPLING METHOD: Split Spoon with Automatic Hammer
WATER ENCOUNTERED DURING DRILLING (ft): Dry; GROUND SURFACE ELEVATION: 337.8; DATUM: Survey; EQUIPMENT: CME-45; LOGGED BY: JPE; CHECKED BY: RPM



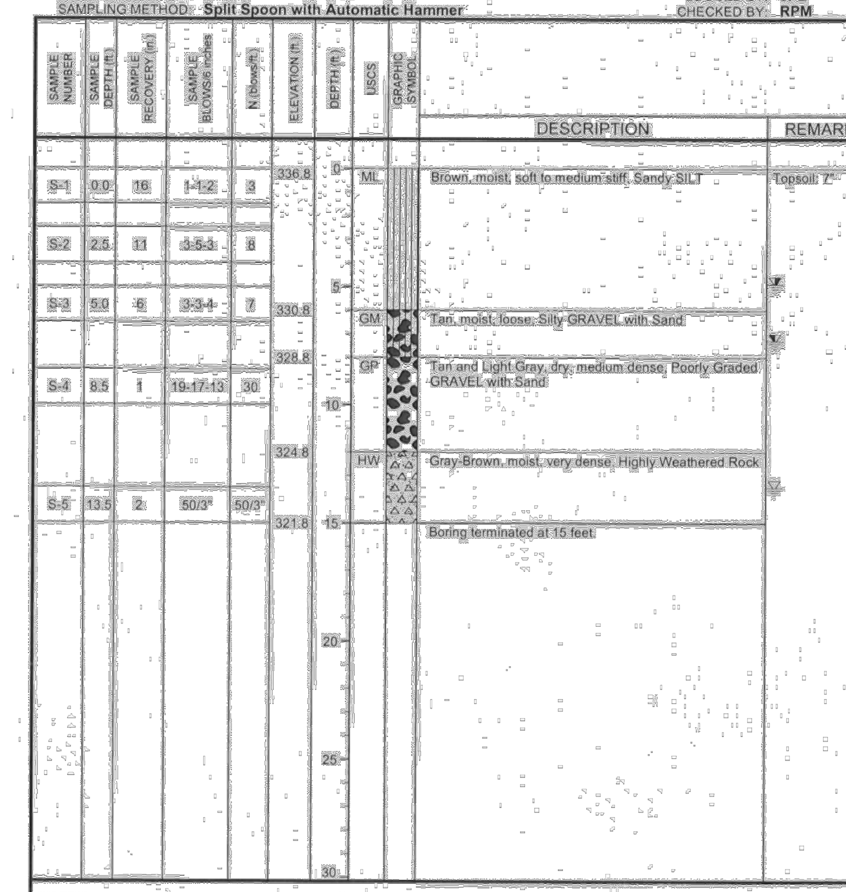
SAMPLE NUMBER	SAMPLE DEPTH (ft)	SAMPLE RECOVERY (in)	SAMPLE BLOWS/6 inches	N (blows/ft)	ELEVATION (ft)	USCS	DESCRIPTION	REMARKS
S-1	0.0	14	WOH/6"-1	2	337.8	ML	Brown, moist, soft, Sandy SILT	Topsoil: 6"
S-2	2.5	16	3-3-4	7	335.8	SM	Light Brown with Light Gray, moist, loose, Silty SAND	
S-3	5.0	8	1-2-3	5	332.8 / 331.8	ML / SM	Light Brown with Light Gray, moist, medium stiff, Sandy SILT; Reddish-Brown with Gray, moist, loose, Silty SAND	PP=1.5*
S-4	8.5	1	13-28-20	48	329.8	GP	Tan, dry, dense, Poorly Graded GRAVEL with Sand	
S-5	13.5	4	50/6"	50/6"	325.8 / 322.8	HW	Gray-Brown and Tan, moist, very dense, Highly Weathered Rock	

Boring terminated at 15 feet.
*PP=Undrained compressive strength in tons per square foot based on pocket penetrometer tests performed on split-spoon samples.
Infiltration Test at 6 feet. Average Infiltration Rate = 0.32 in./hr

GEO-TECHNOLOGY ASSOCIATES, INC. 14280 Park Center Drive, Suite A, Laurel, MD 20707

LOG OF BORING NO. SWM-2 (Sheet 1 of 1)

PROJECT: Lacey Property; PROJECT NO.: 150945; PROJECT LOCATION: Howard County, MD; WATER LEVEL (ft): 7.3 / 4.9; DATE: 7/2/2015 / 7/9/2015; CAVED (ft): 10.1 / 7.1
DATE STARTED: 7/2/2015; DATE COMPLETED: 7/2/2015; DRILLING CONTRACTOR: Geo-Technology Associates, Inc.; DRILLER: K. Kozak; DRILLING METHOD: HSA; SAMPLING METHOD: Split Spoon with Automatic Hammer
WATER ENCOUNTERED DURING DRILLING (ft): 13.5; GROUND SURFACE ELEVATION: 336.8; DATUM: Survey; EQUIPMENT: CME-45; LOGGED BY: JPE; CHECKED BY: RPM



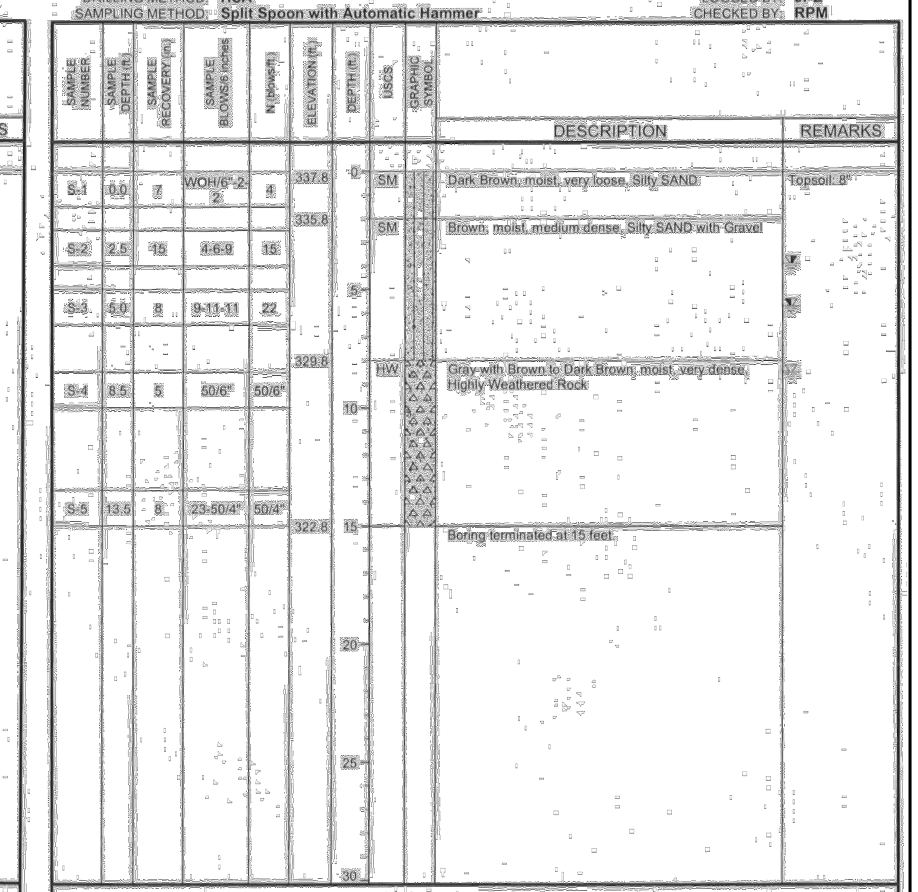
SAMPLE NUMBER	SAMPLE DEPTH (ft)	SAMPLE RECOVERY (in)	SAMPLE BLOWS/6 inches	N (blows/ft)	ELEVATION (ft)	USCS	DESCRIPTION	REMARKS
S-1	0.0	16	1-1-2	3	336.8	ML	Brown, moist, soft to medium stiff, Sandy SILT	Topsoil: 7"
S-2	2.5	11	3-5-3	8				
S-3	5.0	6	3-3-4	7	330.8	GM	Tan, moist, loose, Silty GRAVEL with Sand	
S-4	8.5	1	19-17-13	30	328.8	GP	Tan and Light Gray, dry, medium dense, Poorly Graded GRAVEL with Sand	
S-5	13.5	2	50/3"	50/3"	324.8 / 321.8	HW	Gray-Brown, moist, very dense, Highly Weathered Rock	

Boring terminated at 15 feet.

GEO-TECHNOLOGY ASSOCIATES, INC. 14280 Park Center Drive, Suite A, Laurel, MD 20707

LOG OF BORING NO. SWM-3 (Sheet 1 of 1)

PROJECT: Lacey Property; PROJECT NO.: 150945; PROJECT LOCATION: Howard County, MD; WATER LEVEL (ft): 5.7 / 3.9; DATE: 7/2/2015 / 7/9/2015; CAVED (ft): 13.0 / 8.3
DATE STARTED: 7/2/2015; DATE COMPLETED: 7/2/2015; DRILLING CONTRACTOR: Geo-Technology Associates, Inc.; DRILLER: K. Kozak; DRILLING METHOD: HSA; SAMPLING METHOD: Split Spoon with Automatic Hammer
WATER ENCOUNTERED DURING DRILLING (ft): 8.5; GROUND SURFACE ELEVATION: 337.8; DATUM: Survey; EQUIPMENT: CME-45; LOGGED BY: JPE; CHECKED BY: RPM



SAMPLE NUMBER	SAMPLE DEPTH (ft)	SAMPLE RECOVERY (in)	SAMPLE BLOWS/6 inches	N (blows/ft)	ELEVATION (ft)	USCS	DESCRIPTION	REMARKS
S-1	0.0	7	WOH/6"-2	4	337.8	SM	Dark Brown, moist, very loose, Silty SAND	Topsoil: 8"
S-2	2.5	15	4-6-9	15	335.8	SM	Brown, moist, medium dense, Silty SAND with Gravel	
S-3	5.0	8	9-11-11	22				
S-4	8.5	5	50/6"	50/6"	329.8	HW	Gray with Brown to Dark Brown, moist, very dense, Highly Weathered Rock	
S-5	13.5	8	23-50/4"	50/4"	322.8			

Boring terminated at 15 feet.

GEO-TECHNOLOGY ASSOCIATES, INC. 14280 Park Center Drive, Suite A, Laurel, MD 20707

DESIGN CERTIFICATE

"I hereby certify that this plan has been designed in accordance with current Maryland erosion and sediment control laws, regulations, and standards, that it represents a practical and workable plan based on my personal knowledge of the site, and that it was prepared in accordance with the requirements of the Howard Soil Conservation District."

Paul G. Cavanaugh — 10/29/24
Designer's Signature — Date
PAUL G. CAVANAUGH — MD Registration No. 27020 (P.E., R.L.S., or R.L.A. (circle one))
Printed Name

OWNER'S/DEVELOPER CERTIFICATE

"I/We hereby certify that any clearing, grading, construction, or development will be done pursuant to this approved erosion and sediment control plan, including inspecting and maintaining controls, and that the responsible personnel involved in the construction project will have a Certificate of Training at a Maryland Department of the Environment (MDE) approved training program for the control on erosion and sediment prior to beginning the project. I certify right-of-entry for periodic on-site evaluation by Howard County, the Howard Soil Conservation District and/or MDE."

Steven K. Breeden — 10/29/24
Owner's/Developer's Signature — Date
Steven. K. Breeden
SDC Mill Creek LLC, Manager for Mill Creek LLC
Printed Name & Title

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK – 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 – 2855

Approved: Howard County Department Of Public Works — 12/13/2024
Chief, Bureau Of Highways — Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
Chad Edmondson — 12/13/2024
Chief, Development Engineering Division — Date
12/16/2024
Chief, Division of Land Development — Date

This development plan is approved for soil erosion and sediment control by the HOWARD SOIL CONSERVATION DISTRICT.
Alexander Bratchie — 12/13/2024
Howard Soil Conservation District. — Date

DATE	DESCRIPTION
10/22/24	△ RESUBDIVIDED LOTS 1, 3-13 & OPEN SPACE LOTS 14 AND 15

REVISIONS

"PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY 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. 27020, EXPIRATION DATE: 01-25-26."

Paul G. Cavanaugh
PAUL G. CAVANAUGH, P.E. #27020

Owner: Lacey Family Revocable Trust, c/o Mr. Vincent P. Lacey, Co-Trustee, 1235 Wild Rose Court, Marriottsville, Maryland 21104, Ph# 410-707-2639

Owner: Lacey Property Homeowners Association, Inc., 6026 Trotter Road, Clarksville, Maryland 21029

Developer: SDC Mill Creek, LLC, Attn: Mr. Steven K. Breeden, Suite 415, 8480 Baltimore National Pike, Ellicott City, Maryland 21043, 410-465-4244

PROJECT			SECTION/AREA		PARCEL	
LACEY PROPERTY			N/A		13	
PLAT NOS.	BLOCK NO.	ZONE	TAX MAP	ELEC. DIST.	CENSUS TR.	
–	1	R-ED	25	SECOND	602900	

SEDIMENT AND EROSION CONTROL NOTES, DETAILS & BORING LOGS

LACEY PROPERTY

LOTS 2, 18 THRU 29 AND OPEN SPACE LOTS 16, 17, 30 & 31 △

(BEING A RESUBDIVISION OF LOTS 1, 3 THRU 13 AND OPEN SPACE LOTS 14 & 15 AS SHOWN ON PLATS ENTITLED "LACEY PROPERTY, LOTS 1 THRU 13 AND OPEN SPACE LOTS 14 THRU 17", PLAT Nos. 26657 – 26659)

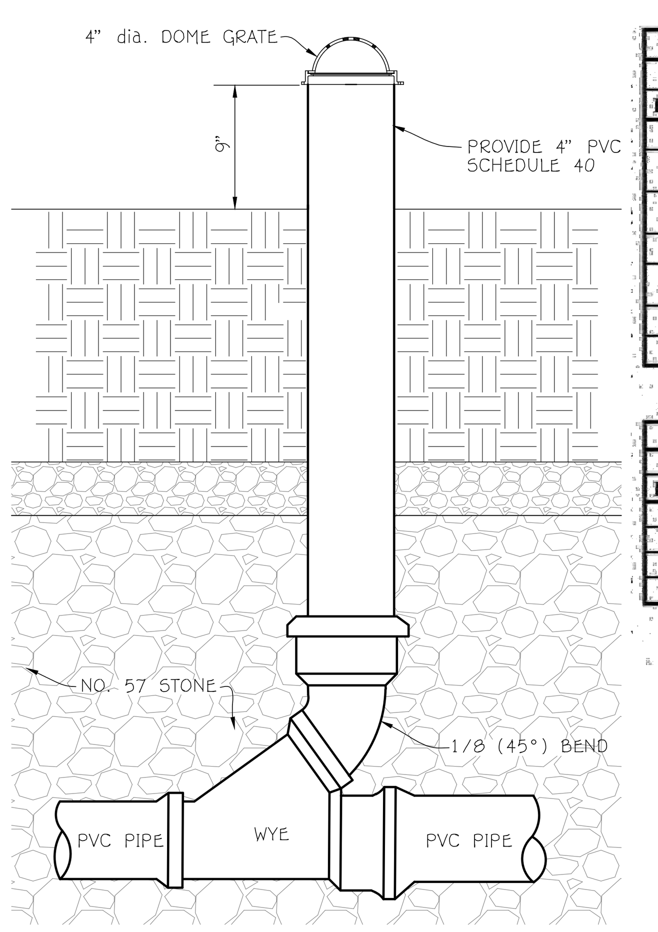
ZONED: R-ED
PARCEL No.: 13
TAX MAP No.: 25 GRID No.: 1
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: OCT. 25, 2024
SHEET 7 OF 24

F-21-015

Docusign Envelope ID: EE465D1F-D94A-4E40-BE96-B05841B9A003

TABLE B.3.1 MATERIAL SPECIFICATIONS FOR SAND FILTERS

MATERIAL	SPECIFICATIONS/TEST METHOD	SIZE	NOTES
SAND	CLEAN AASHTO-M-6 OF ASTM-CCONCRETE SAND	0.02" TO 0.04"	SAND SUBSTITUTIONS SUCH AS DIABASE AND GRAYSTONE #10 ARE NOTE ACCEPTABLE. NO CALCIUM CARBONATED OR DOLOMITIC SAND SUBSTITUTIONS ARE: ACCEPTABLE. NO" "ROCK DUST" CAN BE USED FOR SAND:
PEAT	ASH CONTENT: < 15% PH RANGE: 5.2 TO 4.9 LOOSE BULK DENSITY 0.12 TO 0.15 G/CC	N/A	THE MATERIAL MUST BE REED-SEDGE HEMIC PEAT, SHREDDED, UNCOMPACTED, UNIFORM, AND CLEAN.
LEAF COMPOST		N/A	
UNDERDRAIN GRAVEL	AASHTO-M-43	0.375" TO 0.75"	
GEOTEXTILE FABRIC (IF REQUIRED)	ASTM-D-4833 (PUNCTURE STRENGTH LB.) ASTM-D-4632 (TENSILE STRENGTH IB.)	0.08" THICK EQUIVALENT OPENING SIZE OF #80 SIEVE	MUST MAINTAIN 125 GPM PER SQ. FT. FLOW RATE. NOTE: A 4" PEA GRAVEL LAYER MAY BE SUBSTITUTED FOR GEOTEXTILES MEANT TO "SEPARATE" SAND FILTER LAYERS.
IMPERMEABLE LINER (IF REQUIRED)	ASTM-D-4833 (THICKNESS) ASTM-D-412 (TENSILE STRENGTH 1,100 IB., ELONGATION 200%) ASTM-D-624 (TEAR RESISTANCE - 150 LB./IN) ASTM-D-471 (WATER ADSORPTION: +8 TO -2% MASS)	30 MIL THICKNESS	LINER TO BE ULTRAVIOLET RESISTANT. A GEOTEXTILE FABRIC SHOULD BE USED TO PROTECT THE LINER FROM PUNCTURE.
UNDERDRAIN PIPING	F 758, TYPE PS 28 OR AASHTO-M-278	4" - 6" RIGID SCHEDULE 40 PVC OR SDR35	3/8" PERF. @ 6" ON CENTER, 4 HOLES PER ROW; MINIMUM OF 3" OF GRAVEL OVER PIPES; NOT NECESSARY UNDERNEATH PIPES
CONCRETE (CAST-IN-PLACE)	MSHA STANDARDS AND SPECS. SECTION 902, MIX NO. 3, F'C = 3500 PSI, NORMAL WEIGHT, AIR-ENTRAINED; REINFORCING TO MEET ASTM-615-60	N/A	ON-SITE TESTING OF POURED-IN-PLACE CONCRETE REQUIRED: 28 DAY STRENGTH AND SLUMP TEST; ALL CONCRETE DESIGN (CAST-IN-PLACE OR PRECAST) NOT USING PREVIOUSLY APPROVED STATE OR LOCAL STANDARDS REQUIRES DESIGN DRAWINGS SEALED AND APPROVED BY A PROFESSIONAL STRUCTURAL ENGINEER LICENSED IN THE STATE OF MARYLAND
CONCRETE (PRE-CAST)	PER PRE-CAST MANUFACTURER	N/A	SEE ABOVE NOTE
NON-REBAR STEEL	ASTM A-36	N/A	STRUCTURAL STEEL TO BE HOT-DIPPED GALVANIZED ASTM-A-123



TYPICAL CLEAN-OUT DETAIL (4" OVERFLOW DISTRIBUTION PIPE)
NOT TO SCALE

SWM DRAINAGE AREA SUMMARY TABLE (Proposed Conditions)

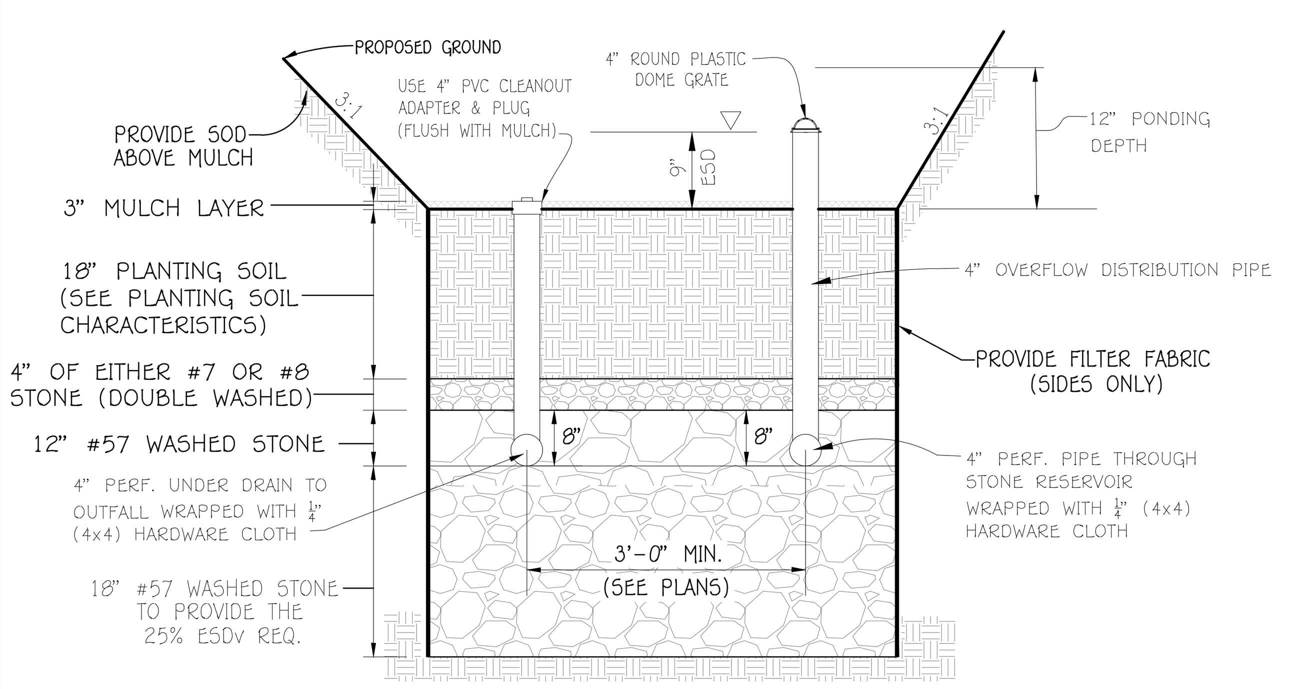
Drainage Area	Area (ac.+/-)	RCN	T/C (hrs.)	100-Year Peak Q	E.C. Peak Q	Remarks
A	1.81	61	0.22	5.82	9.18	Bypass Area
A-1	4.32	70	0.18	23.29 in/13.67 out @340.78	31.63 in/23.87 out @341.39	Pocket Sand Filter
A-2	0.76	77	0.12	4.36 in/4.33 out @356.41	7.32 in/7.28 out @356.49	Bio #1
B	0.92	69	0.11	4.57	7.24	Bypass Area
B-1	0.37	77	0.18	1.90 in/1.31 out @361.64	3.26 in/2.91 out @361.82	Bio #2
D.P.#1 Total				22.00	37.72	Total @ D.P.#1 (EC watershed)
C	1.03	70	0.12	5.13	8.19	Total @ D.P.#2 (Sucker Branch)

SWM DRAINAGE AREA SUMMARY TABLE (Existing Conditions)

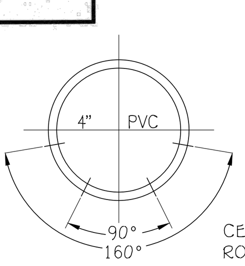
Drainage Area	Area (ac.+/-)	RCN	T/C (hrs.)	100-Year Peak Q	E.C. Peak Q	Remarks
A	6.58	61	0.21	21.6	34.04	
B	1.33	60	0.1	5.25	7.7	
D.P.#1 Total				25.64	40.91	Total @ D.P.#1
C	0.8	60	0.1	3.16	4.63	Total @ D.P.#2
				16.50%	8.50%	% Decrease @ D.P.#1

WATER QUALITY SWM SUMMARY TABLE

Area I.D.	ESDvol Required	ESDvol Required	Remarks
Site	5,131 cu. ft.	8,481 cu. ft.	Provided by 23-Drywells (Type M-5)
			Two-Micro Bio-retetnion (Type M-6)
			One-Pocket Sand Filter (Type F-5)
			REv Note: 3,057 cu. ft. Provided vs 1,176 Required
Site Total	5,131 cu. ft.	8,481 cu. ft.	



MICRO BIO-RETENTION SECTION WITH 4" OVERFLOW DISTRIBUTION PIPE
NOT TO SCALE



PIPE SIZE: 4"
HOLE SIZE: 3/8"
CENTER TO CENTER: 3"
ROWS OF HOLES: 2 @ 90°
2 @ 160° (+/-3°)

4" SCH. 40 PVC PERFORATED UNDERDRAIN PIPE DETAIL FOR HORIZONTAL DRAIN PIPE
NOT TO SCALE

NOTES:
UNDERDRAIN PIPE SHALL BE 4" DIAMETER, SLOTTED OR PERFORATED RIGID PLASTIC PIPE (ASTMF 758, TYPE PS 28 OR AASHTO-M- 278) IN A GRAVEL LAYER. THE PREFERRED MATERIAL IS SLOTTED 4" RIGID PIPE (e.g., PVC OR HDPE).

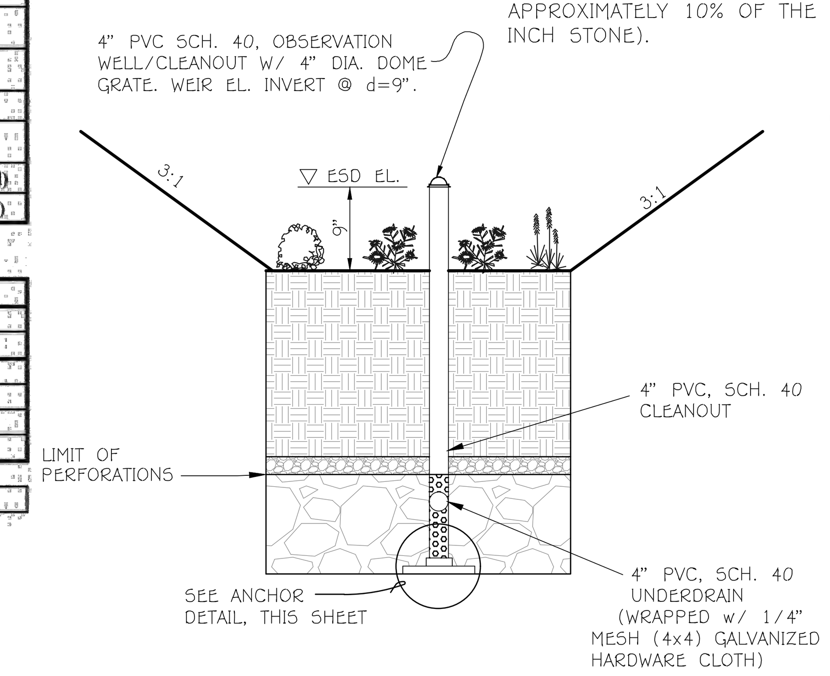
PERFORATIONS SHALL BE 3/8" DIAMETER LOCATED 6" ON CENTER WITH A MINIMUM OF FOUR HOLES PER ROW. PIPE SHALL BE WRAPPED WITH A 1/4" (No. 4 OR 4 x 4) GALVANIZED HARDWARE CLOTH.

GRAVEL LAYER SHALL BE (No. 57 STONE PREFERRED) AT LEAST 3" THICK ABOVE AND BELOW THE UNDERDRAIN.

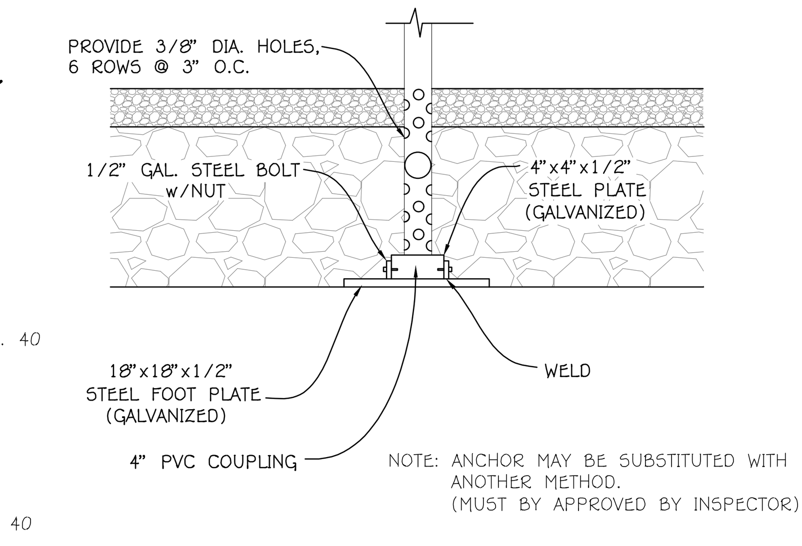
THE MAIN COLLECTOR PIPE SHALL BE AT A MINIMUM 0.5% SLOPE.

A RIGID, NON PERFORATED OBERSERVATION WELL MUST BE PROVIDED (ONE PER EVERY 1,000 SQ.FT.) TO PROVIDE A CLEANOUT PORT AND MONITOR PERFORMANCE OF THE FILTER.

A 4" LAYER OF PEA GRAVEL (1/8" TO 3/8" STONE) SHALL BE LOCATED BETWEEN THE FILTER MEDIA AND UNDERDRAIN TO PREVENT MIGRATION OF FINES INTO THE UNDERDRAIN. THIS LAYER MAY BE CONSIDERED PART OF THE FILTER BED WHEN BED THICKNESS EXCEEDS 24".

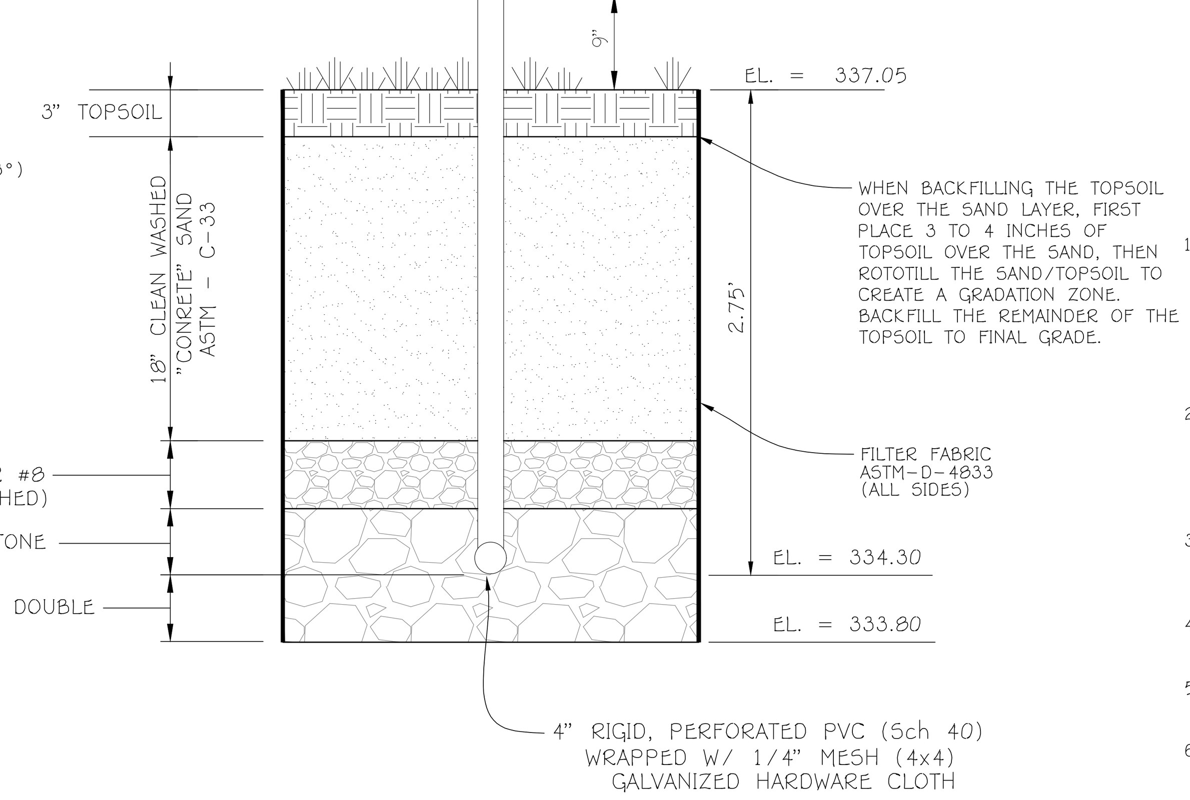


SECTION @ OBSERVATION WELL LOCATION
NOT TO SCALE



NOTE: ANCHOR MAY BE SUBSTITUTED WITH ANOTHER METHOD. (MUST BY APPROVED BY INSPECTOR)

OBSERVATION WELL ANCHOR DETAIL
NOT TO SCALE



TYPICAL SECTION - POCKET SAND FILTER (F-5)
NOT TO SCALE

OPERATION AND MAINTENANCE SCHEDULE FOR HOMEOWNERS ASSOCIATION OWNED & MAINTAINED POCKET SAND FILTER (F-5)

1. THE STORMWATER WETLAND FACILITY SHALL BE INSPECTED ANNUALLY AND AFTER MAJOR STORMS. INSPECTIONS SHALL BE PERFORMED DURING WET WEATHER TO DETERMINE IF THE FACILITY IS FUNCTIONING PROPERLY.
2. THE TOP AND SIDE SLOPES OF THE EMBANKMENT SHALL BE MOWED A MINIMUM OF ONCE PER YEAR, WHEN VEGETATION REACHES 18" IN HEIGHT OR AS NEEDED.
3. FILTERS THAT HAVE A GRASS COVER SHALL BE MOWED A MINIMUM OF THREE (3) TIMES PER GROWING SEASON TO MAINTAIN A MAXIMUM GRASS HEIGHT OF LESS THAN 12 INCHES.
4. DEBRIS AND LITTER SHALL BE REMOVED DURING REGULAR MOWING OPERATIONS AND AS NEEDED.
5. VISIBLE SIGNS OF EROSION IN THE FACILITY SHALL BE REPAIRED AS SOON AS IT IS NOTICED. REMOVE SILT WHEN IT EXCEEDS FOUR (4) INCHES DEEP IN THE FOREBAY.
7. FILTER MATERIAL MUST BE REPLACED WHEN WATER REMAINS ON THE SURFACE OF THE FILTER BED FOR MORE THAN 24 HOURS FOLLOWING A 1 OR 2 YEAR STORM EVENT OR MORE THAN 48 HOURS AFTER A 10 YEAR STORM EVENT.
8. A LOGBOOK SHALL BE MAINTAINED TO DETERMINE THE RATE AT WHICH THE FACILITY DRAINS.
9. THE MAINTENANCE LOGBOOK SHALL BE AVAILABLE TO HOWARD COUNTY FOR INSPECTION TO INSURE COMPLIANCE WITH OPERATION AND MAINTENANCE CRITERIA.
10. ONCE THE PERFORMANCE CHARACTERISTICS OF THE INFILTRATION SYSTEM HAVE BEEN VERIFIED, THE MONITORING SCHEDULE CAN BE REDUCED TO AN ANNUAL BASIS UNLESS THE PERFORMANCE DATA INDICATES THAT A MORE FREQUENT SCHEDULE IS REQUIRED.

SAND FILTER SPECIFICATIONS

1. MATERIAL SPECIFICATIONS FOR SAND FILTERS THE ALLOWABLE MATERIALS FOR SAND FILTER CONSTRUCTION ARE DETAILED IN TABLE B.3.1.
2. SAND FILTER TESTING SPECIFICATIONS UNDERGROUND SAND FILTERS, FACILITIES WITHIN SENSITIVE GROUNDWATER AQUIFERS, AND FILTERS DESIGNED TO SERVE URBAN HOT SPOTS ARE TO BE TESTED FOR WATER TIGHTNESS PRIOR TO PLACEMENT OF FILTER MEDIA. ENTRANCES AND EXITS SHOULD BE PLUGGED AND THE SYSTEM COMPLETELY FILLED WITH WATER TO DEMONSTRATE WATER TIGHTNESS. WATER TIGHTNESS MEANS NO LEAKAGE FOR A PERIOD OF 8 HOURS. ALL OVERFLOW WEIRS, MULTIPLE ORIFICES AND FLOW DISTRIBUTION SLOTS ARE TO BE FIELD-TESTED TO VERIFY ADEQUATE DISTRIBUTION OF FLOWS.
3. SAND FILTER CONSTRUCTION SPECIFICATIONS PROVIDE SUFFICIENT MAINTENANCE ACCESS (I.E., 12-FOOT-WIDE ROAD WITH LEGALLY RECORDED EASEMENT). VEGETATED ACCESS SLOPES ARE TO BE A MAXIMUM OF 10%; GRAVEL SLOPES TO 15% ; PAVED SLOPES TO 25%. ABSOLUTELY NO RUNOFF IS TO ENTER THE FILTER UNTIL ALL CONTRIBUTING DRAINAGE AREAS HAVE BEEN STABILIZED. SURFACE OF FILTER BED IS TO BE LEVEL. ALL UNDERGROUND SAND FILTERS SHOULD BE CLEARLY DELINEATED WITH SIGNS SO THAT THEY MAY BE LOCATED WHEN MAINTENANCE IS DUE. SURFACE SAND FILTERS MAY BE PLANTED WITH APPROPRIATE GRASSES; SEE MAA APPROVED SPECIES LIST. "POCKET" SANDFILTERS (AND RESIDENTIAL BIO-RETENTION FACILITIES TREATING AREAS LARGER THAN AN ACRE) SHALL BE SIZED WITH A' STONE "WINDOW" THAT COVERS APPROXIMATELY 10% OF THE FILTER AREA. THIS "WINDOW" SHALL BE FILLED PEA GRAVEL (3/4 INCH STONE).

INFILTRATION AND FILTER SYSTEM CONSTRUCTION SPECIFICATIONS

INFILTRATION AND FILTER SYSTEMS EITHER TAKE ADVANTAGE OF EXISTING PERMEABLE SOILS OR CREATE A PERMEABLE MEDIUM SUCH AS SAND FOR WC), AND RE V. IN SOME INSTANCES WHERE PERMEABILITY IS GREAT, THESE FACILITIES MAY BE USED FOR QP AS WELL. THE MOST COMMON SYSTEMS INCLUDE INFILTRATION TRENCHES, INFILTRATION BASINS, SAND FILTERS, AND ORGANIC FILTERS.

WHEN PROPERLY PLANTED, VEGETATION WILL THRIVE AND ENHANCE THE FUNCTIONING OF THESE SYSTEMS. FOR EXAMPLE, PRE-TREATMENT BUFFERS WILL TRAP SEDIMENTS THAT OFTEN ARE BOUND WITH PHOSPHOROUS AND METALS. VEGETATION PLANTED IN THE FACILITY WILL AID IN NUTRIENT UPTAKE AND WATER STORAGE. ADDITIONALLY, PLANT ROOTS WILL PROVIDE ARTERIES FOR STORMWATER TO PERMEATE SOIL FOR GROUNDWATER RECHARGE. FINALLY, SUCCESSFUL PLANTINGS PROVIDE AESTHETIC VALUE AND WILDLIFE HABITAT MAKING THESE FACILITIES MORE DESIRABLE TO THE PUBLIC.

DESIGN CONSTRAINTS:
> PLANTING BUFFER STRIPS OF AT LEAST 20 FEET WILL CAUSE SEDIMENTS TO SETTLE OUT BEFORE REACHING THE FACILITY, THEREBY REDUCING THE POSSIBILITY OF CLOGGING.
> DETERMINE AREAS THAT WILL BE SATURATED WITH WATER AND WATER TABLE DEPTH SO THAT APPROPRIATE PLANTS MAY BE SELECTED (HYDROLOGY WILL BE SIMILAR TO BIORETENTION FACILITIES, SEE FIGURE A.5 AND TABLE A.4 FOR PLANTING MATERIAL GUIDANCE).
> PLANTS KNOWN TO SEND DOWN DEEP TAPROOTS SHOULD BE AVOIDED IN SYSTEMS WHERE FILTER FABRIC IS USED AS PART OF FACILITY DESIGN.
> TEST SOIL CONDITIONS TO DETERMINE IF SOIL AMENDMENTS ARE NECESSARY.
> PLANTS SHALL BE LOCATED SO THAT ACCESS IS POSSIBLE FOR STRUCTURE MAINTENANCE.
> STABILIZE HEAVY FLOW AREAS WITH EROSION CONTROL MATS OR SOD.
> TEMPORARILY DIVERT FLOWS FROM SEEDED AREAS UNTIL VEGETATION IS ESTABLISHED.
> SEE TABLE A.5 FOR ADDITIONAL DESIGN CONSIDERATIONS.

BIO-RETENTION
SOIL BED CHARACTERISTICS THE CHARACTERISTICS OF THE SOIL FOR THE BIORETENTION FACILITY ARE PERHAPS AS IMPORTANT AS THE FACILITY LOCATION, SIZE, AND TREATMENT VOLUME. THE SOIL MUST BE PERMEABLE ENOUGH TO ALLOW RUNOFF TO FILTER THROUGH THE MEDIA, WHILE HAVING CHARACTERISTICS SUITABLE TO PROMOTE AND SUSTAIN A ROBUST VEGETATIVE COVER CROP. IN ADDITION, MUCH OF THE NUTRIENT POLLUTANT UPTAKE (NITROGEN AND PHOSPHORUS) IS ACCOMPLISHED THROUGH ABSORPTION AND MICROBIAL ACTIVITY WITHIN THE SOIL PROFILE. THEREFORE, SOILS MUST BALANCE THEIR CHEMICAL AND PHYSICAL PROPERTIES TO SUPPORT BIOTIC COMMUNITIES ABOVE AND BELOW GROUND.

THE PLANTING SOIL SHOULD BE A SANDY LOAM, LOAMY SAND, LOAM (USDA), OR A LOAM/SAND MIX (SHOULD CONTAIN A MINIMUM 35 TO 60% SAND, BY VOLUME). THE CLAY CONTENT FOR THESE SOILS SHOULD BE LESS THAN 25% BY VOLUME ENVIRONMENTAL QUALITY RESOURCES (EQR), 1996; ENGINEERING TECHNOLOGY INC. AND BIOHABITATS, INC. (ETAB), 1993). SOILS SHOULD FALL WITHIN THE SM, ML, SC CLASSIFICATIONS OR THE UNIFIED SOIL CLASSIFICATION SYSTEM (USCS). A PERMEABILITY OF AT LEAST 1.0 FEET PER DAY (0.5"/HR) IS REQUIRED (A CONSERVATIVE VALUE OF 0.5 FEET PER DAY IS USED FOR DESIGN). THE SOIL SHOULD BE FREE OF STONES, STUMPS, ROOTS, OR OTHER WOODY MATERIAL OVER 1" IN DIAMETER. BRUSH OR SEEDS FROM NOXIOUS WEEDS (E.G., JOHNSON GRASS, MUGWORT, NUTSEDGE, AND CANADA THISTLE OR OTHER NOXIOUS WEEDS AS SPECIFIED UNDER COMAR 15.08.01.05.) SHOULD NOT BE PRESENT IN THE SOILS. PLACEMENT OF THE PLANTING SOIL SHOULD BE IN 12 TO 18 LIFTS THAT ARE LOOSELY COMPACTED (TAMPED LIGHTLY WITH A BACKHOE BUCKET OR TRAVERSED BY DOZER TRACKS). THE SPECIFIC CHARACTERISTICS ARE PRESENTED IN TABLE A.3.

Table A.3 Planting Soil Characteristics

Parameter	Value
pH range	5.2 to 7.00
Organic matter	1.5 to 4.0% (by weight)
Magnesium	35 lbs. per acre, minimum
Phosphorus (phosphate - P2O5)	75 lbs. per acre, minimum
Potassium (potash - 1(K2O)	85 lbs. per acre, minimum
Soluble salts	500 ppm
Clay	0 to 5%
Silt	30 to 55%
Sand	35 to 60%

MULCH LAYER
THE MULCH LAYER PLAYS AN IMPORTANT ROLE IN THE PERFORMANCE OF THE BIORETENTION SYSTEM. THE MULCH LAYER HELPS MAINTAIN SOIL MOISTURE AND AVOIDS SURFACE SEALING, WHICH REDUCES PERMEABILITY. MULCH HELPS PREVENT EROSION, AND PROVIDES A MICROENVIRONMENT SUITABLE FOR SOIL BIOTA AT THE MULCH/SOIL INTERFACE. IT ALSO SERVES AS A PRETREATMENT LAYER, TRAPPING THE FINER SEDIMENTS, WHICH REMAIN SUSPENDED AFTER THE PRIMARY PRETREATMENT.

THE MULCH LAYER SHOULD BE STANDARD LANDSCAPE STYLE, SINGLE OR DOUBLE SHREDDED HARDWOOD MULCH OR CHIPS. THE MULCH LAYER SHOULD BE WELL AGED (STOCKPILED OR STORED FOR AT LEAST 12 MONTHS), UNIFORM IN COLOR, AND FREE OF OTHER MATERIALS, SUCH AS WEED SEEDS, SOIL, ROOTS, ETC. THE MULCH SHOULD BE APPLIED TO A MAXIMUM DEPTH OF THREE INCHES. GRASS CLIPPINGS SHOULD NOT BE USED AS A MULCH MATERIAL.

PLANTING GUIDANCE
PLANT MATERIAL SELECTION SHOULD BE BASED ON THE GOAL OF SIMULATING A TERRESTRIAL FORESTED COMMUNITY OF NATIVE SPECIES. BIORETENTION SIMULATES AN UPLAND-SPECIES ECOSYSTEM. THE COMMUNITY SHOULD BE DOMINATED BY TREES, BUT HAVE A DISTINCT COMMUNITY OF UNDERSTORY TREES, SHRUBS AND HERBACEOUS MATERIALS. BY CREATING A DIVERSE, DENSE PLANT COVER, A BIORETENTION FACILITY WILL BE ABLE TO TREAT STORMWATER RUNOFF AND WITHSTAND URBAN STRESSES FROM INSECTS, DISEASE, DROUGHT, TEMPERATURE, WIND, AND EXPOSURE.

THE PROPER SELECTION AND INSTALLATION OF PLANT MATERIALS IS KEY TO A SUCCESSFUL SYSTEM. THERE ARE ESSENTIALLY THREE ZONES WITHIN A BIORETENTION FACILITY (FIGURE A.5). THE LOWEST ELEVATION SUPPORTS PLANT SPECIES ADAPTED TO STANDING AND FLUCTUATING WATER LEVELS. THE MIDDLE ELEVATION SUPPORTS PLANTS THAT LIKE DRIER SOIL CONDITIONS, BUT CAN STILL TOLERATE OCCASIONAL INUNDATION BY WATER. THE OUTER EDGE IS THE HIGHEST ELEVATION AND GENERALLY SUPPORTS PLANTS ADAPTED TO DRYER CONDITIONS. FOR APPROPRIATE PLANT MATERIALS FOR BIORETENTION FACILITIES, REFER TO MAA APPROVED SPECIES LIST. THE LAYOUT OF PLANT MATERIAL SHOULD BE FLEXIBLE, BUT SHOULD FOLLOW THE GENERAL PRINCIPALS DESCRIBED IN TABLE A.5. THE OBJECTIVE IS TO HAVE A SYSTEM, WHICH RESEMBLES A RANDOM, AND NATURAL PLANT LAYOUT, WHILE MAINTAINING OPTIMAL CONDITIONS FOR PLANT ESTABLISHMENT AND GROWTH. FOR A MORE EXTENSIVE BIORETENTION PLAN, CONSULT ETAB, 1993 OR CLAYTOR AND SCHUELER, 1997.

OPERATION AND MAINTENANCE SCHEDULE FOR BIO-RETENTION AREAS (M-6)

1. THE OWNER SHALL MAINTAIN THE PLANT MATERIAL, MULCH LAYER AND SOIL LAYER ANNUALLY. MAINTENANCE OF MULCH AND SOIL IS LIMITED TO CORRECTING AREAS OF EROSION OR WASH OUT. ANY MULCH REPLACEMENT SHALL BE DONE IN THE SPRING. PLANT MATERIAL SHALL BE CHECKED FOR DISEASE AND INSECT INFESTATION AND MAINTENANCE WILL ADDRESS DEAD MATERIAL AND PRUNING. ACCEPTABLE REPLACEMENT PLANT MATERIAL IS LIMITED TO THE FOLLOWING: 2000 MARYLAND STORMWATER DESIGN MANUAL VOLUME II, TABLE A.4.1 AND 2.
2. THE OWNER SHALL PERFORM A PLANT IN THE SPRING AND IN THE FALL EACH YEAR. DURING THE INSPECTION, THE OWNER SHALL REMOVE DEAD AND DISEASED VEGETATION CONSIDERED BEYOND TREATMENT, REPLACE DEAD PLANT MATERIAL WITH ACCEPTABLE REPLACEMENT PLANT MATERIAL, TREAT DISEASED TREES AND SHRUBS AND REPLACE ALL DEFICIENT STAKES AND WIRES.
3. THE OWNER SHALL INSPECT THE MULCH EACH SPRING. THE MULCH SHALL BE REPLACED EVERY TWO TO THREE YEARS. THE PREVIOUS MULCH LAYER SHALL BE REMOVED BEFORE THE NEW LAYER IS APPLIED.
4. THE OWNER SHALL CORRECT SOIL EROSION ON AN AS NEEDED BASIS, WITH A MINIMUM OF ONCE PER MONTH AND AFTER EACH HEAVY STORM.
5. THE OWNER SHALL MAINTAIN ALL OBSERVATION WELLS, CLEAN-OUTS AND PERFORATED UNDERDRAINS.
6. FILTER MATERIAL MUST BE REPLACED WHEN WATER REMAINS ON THE SURFACE OF THE FILTER BED FOR MORE THAN 24 HOURS FOLLOWING A 1 OR 2 YEAR STORM EVENT OR MORE THAN 48 HOURS FOLLOWING A 10 YEAR STORM EVENT.

B.4.C SPECIFICATIONS FOR MICRO-BIORETENTION. RAIN GARDENS, LANDSCAPE INFILTRATION & INFILTRATION BERMS

1. MATERIAL SPECIFICATIONS

THE ALLOWABLE MATERIALS TO BE USED IN THESE PRACTICES ARE DETAILED IN TABLE B.4.1.

2. FILTERING MEDIA OR PLANTING SOIL

THE SOIL SHALL BE A UNIFORM MIX, FREE OF STONES, STUMPS, ROOTS OR OTHER SIMILAR OBJECTS LARGER THAN TWO INCHES. NO OTHER MATERIALS OR SUBSTANCES SHALL BE MIXED OR DUMPED WITHIN THE MICRO-BIORETENTION PRACTICE THAT MAY BE HARMFUL TO PLANT GROWTH, OR PROVE A HINDRANCE TO THE PLANTING OR MAINTENANCE OPERATIONS. THE PLANTING SOIL SHALL BE FREE OF BERMUDA GRASS, QUACKGRASS, JOHNSON GRASS, OR OTHER NOXIOUS WEEDS AS SPECIFIED UNDER COMAR 15.08.01.05.

THE PLANTING SOIL SHALL BE TESTED AND SHALL MEET THE FOLLOWING CRITERIA:

SOIL COMPONENT - LOAMY SAND OR SANDY LOAM (USDA SOIL TEXTURAL CLASSIFICATION)

ORGANIC CONTENT - MINIMUM 10% BY DRY WEIGHT (ASTM D 2974). IN GENERAL, THIS CAN BE MET WITH A MIXTURE OF LOAMY SAND (60%-65%) AND COMPOST (35% TO 40%) OR SANDY LOAM (30%), COARSE SAND (30%), AND COMPOST (40%).

CLAY CONTENT - MEDIA SHALL HAVE A CLAY CONTENT OF LESS THAN 5%.

PH RANGE - SHOULD BE BETWEEN 5.5 - 7.0. AMENDMENTS (E.G., LIME, IRON SULFATE PLUS SULFUR) MAY BE MIXED INTO THE SOIL TO INCREASE OR DECREASE PH.

THERE SHALL BE AT LEAST ONE SOIL TEST PER PROJECT. EACH TEST SHALL CONSIST OF BOTH THE STANDARD SOIL TEST FOR PH, AND ADDITIONAL TESTS OF ORGANIC MATTER, AND SOLUBLE SALTS. A TEXTURAL ANALYSIS IS REQUIRED FROM THE SITE STOCKPILED TOPSOIL. IF TOPSOIL IS IMPORTED, THEN A TEXTURE ANALYSIS SHALL BE PERFORMED FOR EACH LOCATION WHERE THE TOPSOIL WAS EXCAVATED.

3. COMPACTION

IT IS VERY IMPORTANT TO MINIMIZE COMPACTION OF BOTH THE BASE OF BIORETENTION PRACTICES AND THE REQUIRED BACKFILL. WHEN POSSIBLE, USE EXCAVATION HOES TO REMOVE ORIGINAL SOIL IF PRACTICES ARE EXCAVATED USING A LOADER, THE CONTRACTOR SHOULD USE WIDE TRACK OR MARSH TRACK EQUIPMENT, OR LIGHT EQUIPMENT WITH TURF TYPE TIRES. USE OF EQUIPMENT WITH NARROW TRACKS OR NARROW TIRES, RUBBER TIRES WITH LARGE LUGS, OR HIGH-PRESSURE TIRES WILL CAUSE EXCESSIVE COMPACTION RESULTING IN REDUCED INFILTRATION RATES AND IS NOT ACCEPTABLE. COMPACTION WILL SIGNIFICANTLY CONTRIBUTE TO DESIGN FAILURE.

COMPACTION CAN BE ALLEVIATED AT THE BASE OF THE BIORETENTION FACILITY BY USING A PRIMARY TILLING OPERATION SUCH AS A CHISEL PLOW, RIPPER, OR SUBSOILER. THESE TILLING OPERATIONS ARE TO REFRACTURE THE SOIL PROFILE THROUGH THE 12 INCH COMPACTION ZONE SUBSTITUTE METHODS MUST BE APPROVED BY THE ENGINEER. ROTOTILLERS TYPICALLY DO NOT TILL DEEP ENOUGH TO REDUCE THE EFFECTS OF COMPACTION FROM HEAVY EQUIPMENT.

ROTOTILL 2 TO 3 INCHES OF SAND INTO THE BASE OF THE BIORETENTION FACILITY BEFORE BACKFILLING THE OPTIONAL SAND LAYER. PUMP ANY PONDED WATER BEFORE PREPARING (ROTOTILLING) BASE.

WHEN BACKFILLING THE TOPSOIL OVER THE SAND LAYER, FIRST PLACE 3 TO 4 INCHES OF TOPSOIL OVER THE SAND, THEN ROTOTILL THE SAND/TOPSOIL TO CREATE A GRADATION ZONE. BACKFILL THE REMAINDER OF THE TOPSOIL TO FINAL GRADE.

WHEN BACKFILLING THE BIORETENTION FACILITY, PLACE SOIL IN LIFTS 12" TO 18". DO NOT USE HEAVY EQUIPMENT WITHIN THE BIORETENTION BASIN. HEAVY EQUIPMENT CAN BE USED AROUND THE PERIMETER OF THE BASIN TO SUPPLY SOILS AND SAND. GRADE BIORETENTION MATERIALS WITH LIGHT EQUIPMENT SUCH AS A COMPACT LOADER OR A DOZER/LOADER WITH MARSH TRACKS.

4. PLANT MATERIAL

RECOMMENDED PLANT MATERIAL FOR MICRO-BIORETENTION PRACTICES CAN BE FOUND IN APPENDIX A, SECTION A.2.3.

5. PLANT INSTALLATION

COMPOST IS A BETTER ORGANIC MATERIAL SOURCE, IS LESS LIKELY TO FLOAT, AND SHOULD BE PLACED IN THE INVERT AND OTHER LOW AREAS. MULCH SHOULD BE PLACED IN SURROUNDING TO A UNIFORM THICKNESS OF 2" TO 3". SHREDDED OR CHIPPED HARDWOOD MULCH IS THE ONLY ACCEPTED MULCH. PINE MULCH AND WOOD CHIPS WILL FLOAT AND MOVE TO THE PERIMETER OF THE BIORETENTION AREA DURING A STORM EVENT AND ARE NOT ACCEPTABLE. SHREDDED MULCH MUST BE WELL AGED (6 TO 12 MONTHS) FOR ACCEPTANCE.

ROOTSTOCK OF THE PLANT MATERIAL SHALL BE KEPT MOIST DURING TRANSPORT AND ON-SITE STORAGE. THE PLANT ROOT BALL SHOULD BE PLANTED SO 1/8 TH OF THE BALL IS ABOVE FINAL GRADE SURFACE. THE DIAMETER OF THE PLANTING PIT SHALL BE AT LEAST SIX INCHES LARGER THAN THE DIAMETER OF THE PLANTING BALL. SET AND MAINTAIN THE PLANT STRAIGHT DURING THE ENTIRE PLANTING PROCESS. THOROUGHLY WATER GROUND BED COVER AFTER INSTALLATION.

TREES SHALL BE BRACED USING 2" BY 2" STAKES ONLY AS NECESSARY AND FOR THE FIRST GROWING SEASON ONLY. STAKES ARE TO BE EQUALLY SPACED ON THE OUTSIDE OF THE TREE BALL.

GRASSES AND LEGUME SEED SHOULD BE DRILLED INTO THE SOIL TO A DEPTH OF AT LEAST ONE INCH. GRASS AND LEGUME PLUGS SHALL BE PLANTED FOLLOWING THE NON-GRASS GROUND COVER PLANTING SPECIFICATIONS.

THE TOPSOIL SPECIFICATIONS PROVIDE ENOUGH ORGANIC MATERIAL TO ADEQUATELY SUPPLY NUTRIENTS FROM NATURAL CYCLING. THE PRIMARY FUNCTION OF THE BIORETENTION STRUCTURE IS TO IMPROVE WATER QUALITY. ADDING FERTILIZERS DEFEATS, OR AT A MINIMUM, IMPEDES THIS GOAL. ONLY ADD FERTILIZER IF WOOD CHIPS OR MULCH ARE USED TO AMEND THE SOIL. ROTOTILL UREA FERTILIZER AT A RATE OF 2 POUNDS PER 1000 SQUARE FEET.

6. UNDERDRAINS

UNDERDRAINS SHOULD MEET THE FOLLOWING CRITERIA:

PIPE- SHOULD BE 4 "TO 6 "DIAMETER, SLOTTED OR PERFORATED RIGID PLASTIC PIPE (ASTMF 758, " TYPE PS 28, OR AASHTO-M-278) IN A GRAVEL LAYER. THE PREFERRED MATERIAL IS SLOTTED, 4 RIGID PIPE (E.G., PVC OR HDPE).

PERFORATIONS - IF PERFORATED PIPE IS USED, PERFORATIONS SHOULD BE 3/8" CENTER WITH A MINIMUM OF FOUR HOLES PER ROW. PIPE SHALL BE WRAPPED WITH A 1/4" 4X4) GALVANIZED HARDWARE CLOTH.

GRAVEL - THE GRAVEL LAYER (NO. 57 STONE PREFERRED) SHALL BE AT LEAST 3" THICK ABOVE AND BELOW THE UNDERDRAIN.

THE MAIN COLLECTOR PIPE SHALL BE AT A MINIMUM 0.5% SLOPE.

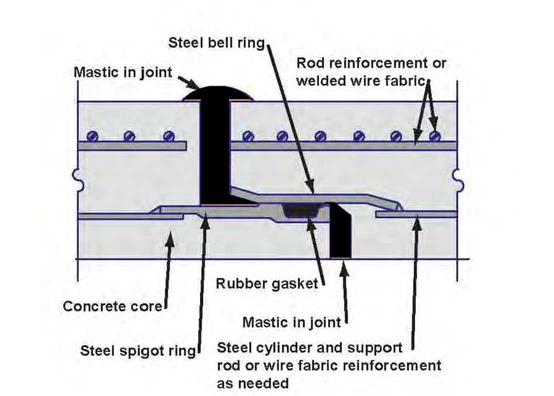
A RIGID, NON-PERFORATED OBSERVATION WELL MUST BE PROVIDED (ONE PER EVERY 1,000 SQUARE FEET) TO PROVIDE A CLEAN-OUT PORT AND MONITOR PERFORMANCE OF THE FILTER.

A 4 " LAYER OF PEA GRAVEL (1/4" TO 3/8" UNDERDRAIN TO PREVENT MIGRATION OF FINES INTO THE UNDERDRAIN. THIS LAYER MAY BE CONSIDERED PART OF THE FILTER BED WHEN BED THICKNESS EXCEEDS 24".

THE MAIN COLLECTOR PIPE FOR UNDERDRAIN SYSTEMS SHALL BE CONSTRUCTED AT A MINIMUM SLOPE OF 0.5%. OBSERVATION WELLS AND/OR CLEAN-OUT PIPES MUST BE PROVIDED (ONE MINIMUM PER EVERY 1000 SQUARE FEET OF SURFACE AREA).

7. MISCELLANEOUS

THESE PRACTICES MAY NOT BE CONSTRUCTED UNTIL ALL CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED



BARREL JOINT DETAIL
NOT TO SCALE

IN ADDITION TO THE ESD VOLUME MANAGEMENT, THIS POND PROVIDES 100-YEAR, AND QUANTITY MANAGEMENT FOR 3.55 HR/6.6 IN STORM EVENT.

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

Approved: Howard County Department Of Public Works	
Chief, Bureau Of Highways	12/13/2024 Date
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING	
Chief, Development Engineering Division	12/13/2024 Date
Chief, Division of Land Development	12/16/2024 Date

DATE	DESCRIPTION
10/22/24	RESUBDIVIDED LOTS 1, 3-13 & OPEN SPACE LOTS 14 AND 15

REVISIONS

"PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY 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. 27020, EXPIRATION DATE: 01-25-26."

Paul G. Cavanaugh
PAUL G. CAVANAUGH, P.E. #27020

Owner
Lacey Family Revocable Trust
c/o Mr. Vincent P. Lacey, Co-Trustee
1235 Wild Rose Court
Marriottsville, Maryland 21104
Ph# 410-707-2639

Owner
Lacey Property Homeowners Association, Inc.
6026 Trotter Road
Clarksville, Maryland 21029

Developer
SDC Mill Creek, LLC
Attn: Mr. Steven K. Breeden
Suite 415
8480 Baltimore National Pike
Ellicott City, Maryland 21043
410-465-4244

PROJECT			SECTION/AREA		PARCEL
LACEY PROPERTY			N/A		13
PLAT NOS.	BLOCK NO.	ZONE	TAX MAP	ELEC. DIST.	CENSUS TR.
-	1	R-ED	25	SECOND	602900

STORMWATER MANAGEMENT NOTES & DETAILS

LACEY PROPERTY
LOTS 2, 18 THRU 29 AND OPEN SPACE LOTS 16, 17, 30 & 31

(BEING A RESUBDIVISION OF LOTS 1, 3 THRU 13 AND OPEN SPACE LOTS 14 & 15 AS SHOWN ON PLATS ENTITLED "LACEY PROPERTY, LOTS 1 THRU 13 AND OPEN SPACE LOTS 14 THRU 17", PLAT Nos. 26657 - 26659)

ZONED: R-ED
PARCEL No.: 13
TAX MAP No.: 25 GRID No.: 1
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: OCT. 25, 2024
SHEET 8 OF 24

F-21-015

I:\2008\08035\dwg\Lacey\FINALS\REVISED F-Plan 2-1-23\Redline 2024\08035 sheet 8-11 swm details.dwg, 11/12/2024 3:10:08 PM, AutoCAD PDF (Smallest File).pc3, 1:1

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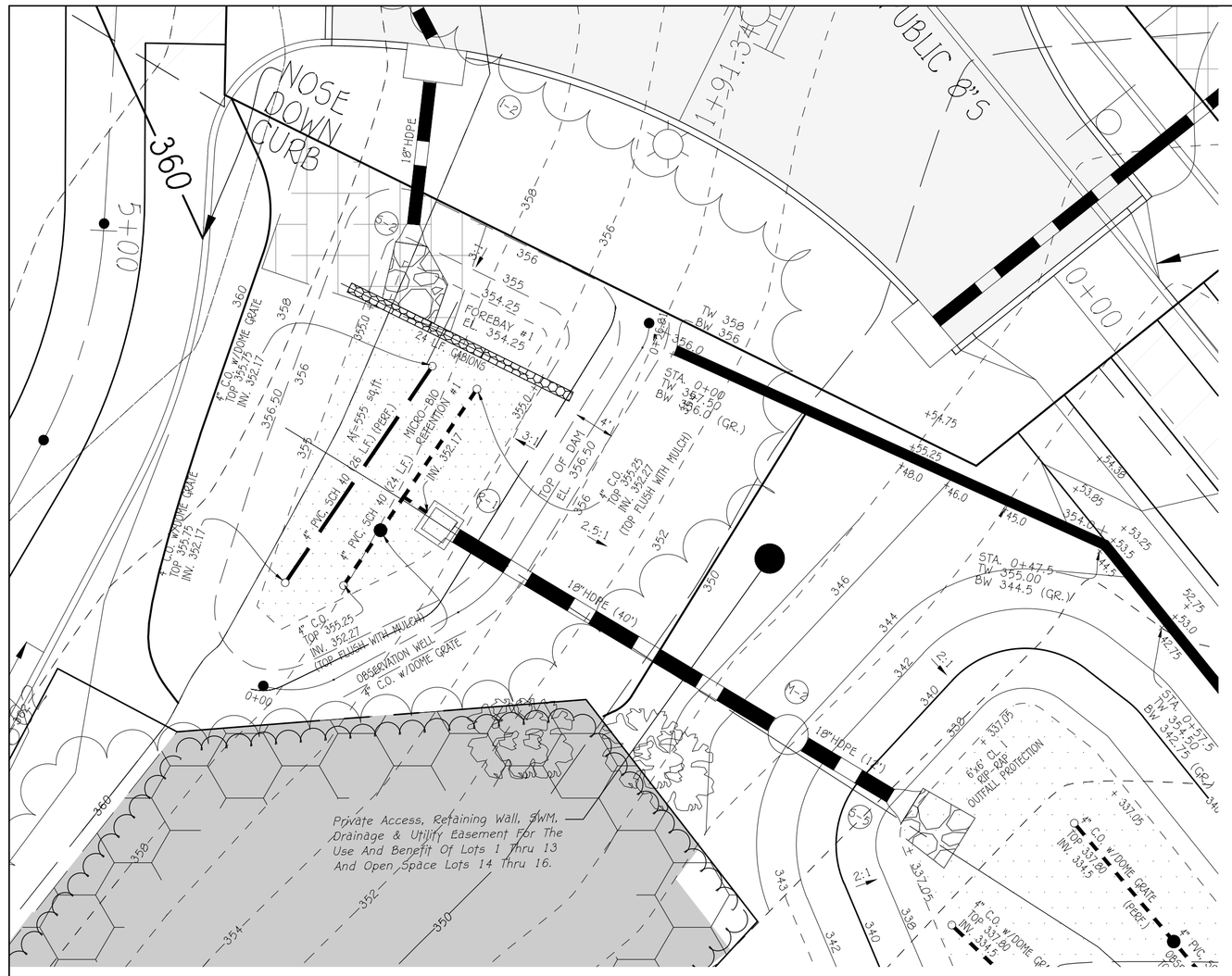
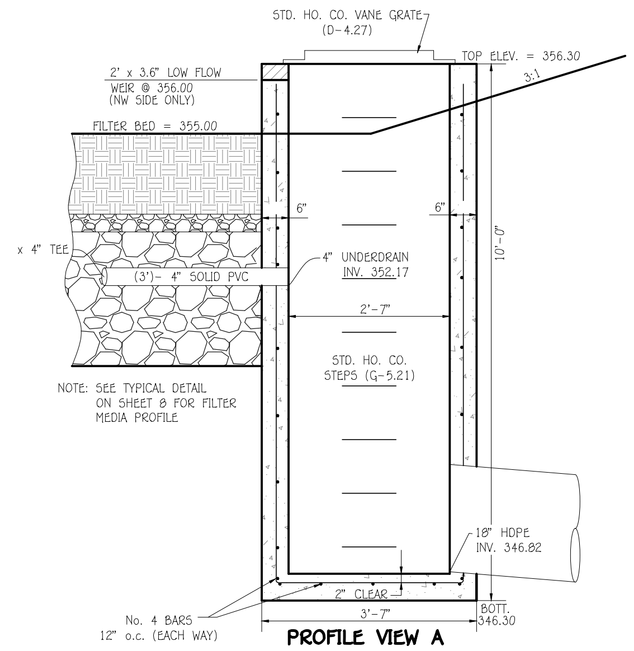


PROPOSED MICRO BIO-RETENTION #1 (M-6) PLAN VIEW

0' 10' 15' 20'
Scale: 1" = 10'

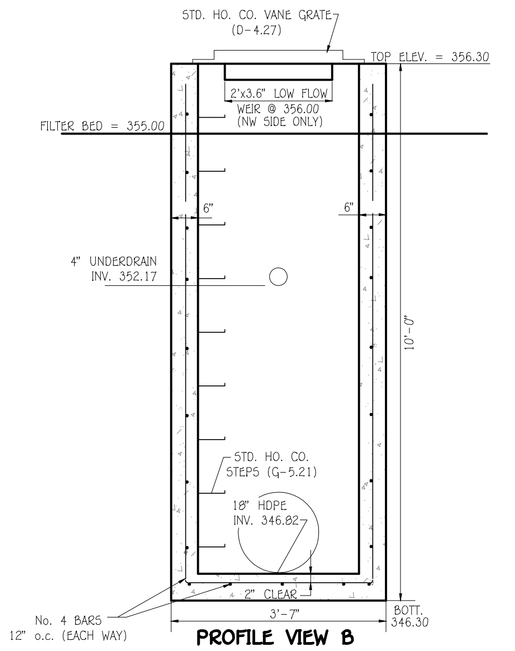


PROFILE VIEW A

(MODIFIED) '5' INLET CONCRETE RISER DETAIL

R 1

SCALE : 1" = 2'

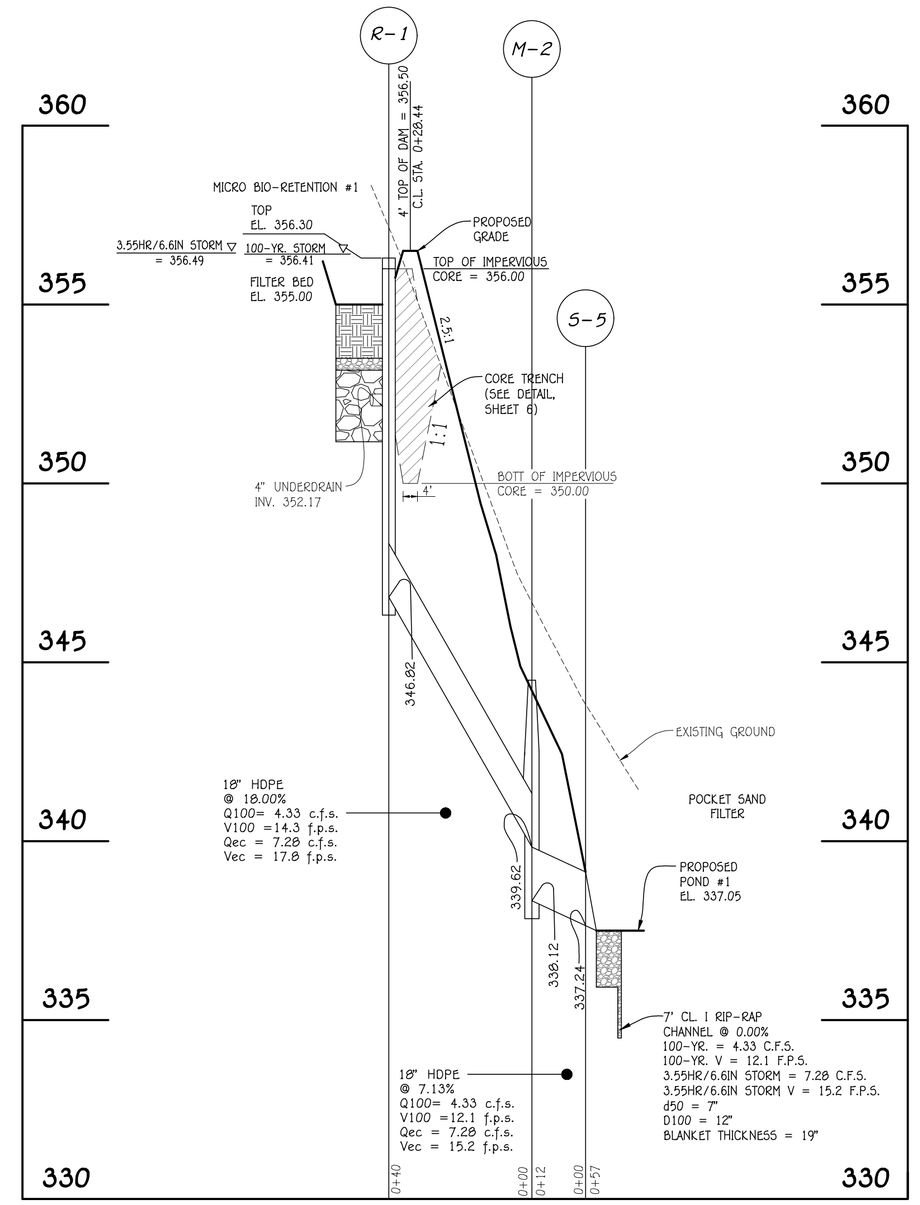


PROFILE VIEW B

(MODIFIED) '5' INLET CONCRETE RISER DETAIL

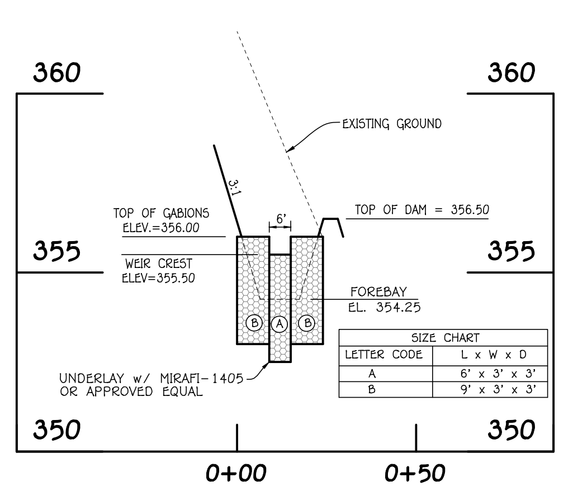
R 1

SCALE : 1" = 2'



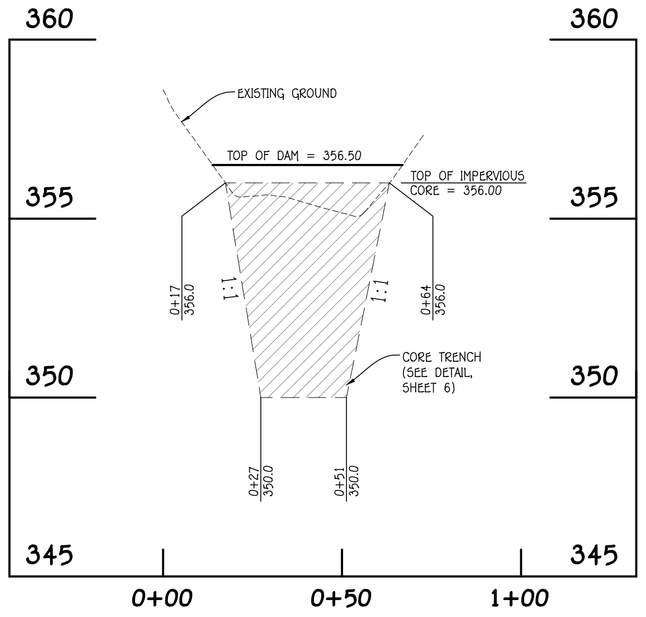
PROFILE THRU PRINCIPLE SPILLWAY (MICRO BIO #1)

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



PROFILE GABION FOREBAY #1

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



PROFILE CL EMBANKMENT (MICRO BIO #1)

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

IN ADDITION TO THE ESD VOLUME MANAGEMENT, THIS POND PROVIDES 100-YEAR, AND QUANTITY MANAGEMENT FOR 3.55 HR/6.6 IN STORM EVENT.

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

Approved: Howard County Department Of Public Works
Chief, Bureau Of Highways — 12/13/2024 Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
Chief, Development Engineering Division — 12/13/2024 Date
Chief, Division of Land Development — 12/16/2024 Date

DATE	DESCRIPTION
10/22/24	⚠ RESUBDIVIDED LOTS 1, 3-13 & OPEN SPACE LOTS 14 AND 15
	REVISIONS

"PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY 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. 27020, EXPIRATION DATE: 01-25-26."

STATE OF MARYLAND · GERARD CAVANAUGH · No. 27020 · PROFESSIONAL ENGINEER

Paul G. Cavanaugh
PAUL G. CAVANAUGH, P.E. #27020

Owner
Lacey Family Revocable Trust
c/o Mr. Vincent P. Lacey,
Co-Trustee
1235 Wild Rose Court
Marriottsville, Maryland 21104
Ph# 410-707-2639

Owner
Lacey Property Homeowners Association, Inc.
6026 Trotter Road
Clarksville, Maryland 21029

Developer
SDC Mill Creek, LLC
Attn: Mr. Steven K. Breeden
Suite 415
8480 Baltimore National Pike
Ellicott City, Maryland 21043
410-465-4244

PROJECT			SECTION/AREA		PARCEL
LACEY PROPERTY			N/A		13
PLAT NOS.	BLOCK NO.	ZONE	TAX MAP	ELEC. DIST.	CENSUS TR.
-	1	R-ED	25	SECOND	602900

STORMWATER MANAGEMENT PLAN VIEW, PROFILES & DETAILS - MICRO BIO-RETENTION #1

LACEY PROPERTY

⚠
LOTS 2, 18 THRU 29 AND OPEN SPACE LOTS 16, 17, 30 & 31

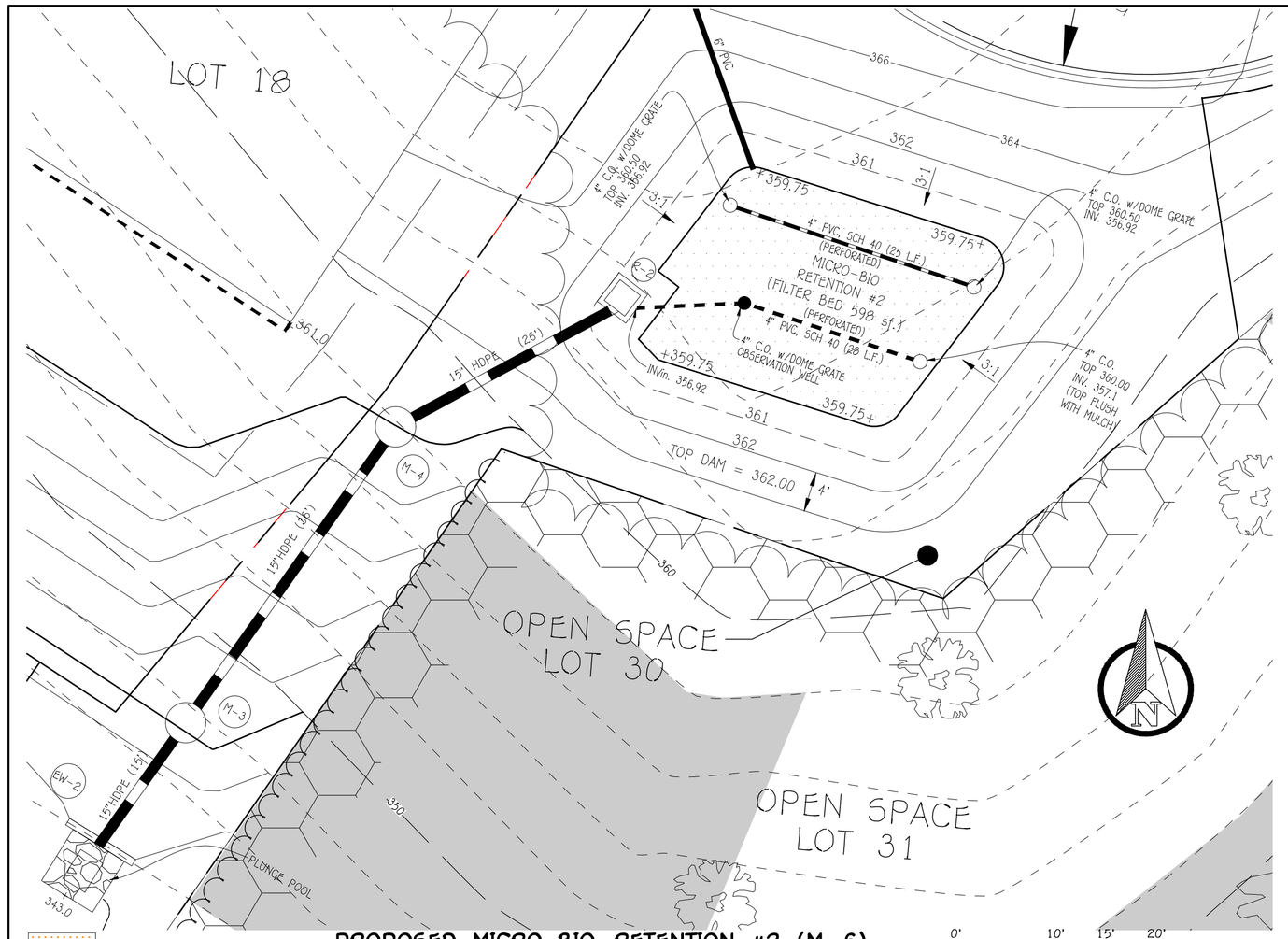
(BEING A RESUBDIVISION OF LOTS 1, 3 THRU 13 AND OPEN SPACE LOTS 14 & 15 AS SHOWN ON PLATS ENTITLED "LACEY PROPERTY, LOTS 1 THRU 13 AND OPEN SPACE LOTS 14 THRU 17", PLAT Nos. 26657 - 26659)

ZONED: R-ED
PARCEL No.: 13
TAX MAP No.: 25 GRID No.: 1
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: OCT. 25, 2024
SHEET 9 OF 24

F-21-015

J:\2008\08035\dwg\Lacey\FINALS\REVISED F-Plan 2-1-23\Redline 2024\08035 sheet 8-11 swm details.dwg, 11/12/2024 3:12:41 PM, AutoCAD PDF (Smallest File).pc3, 1:1

Docusign Envelope ID: EE465D1F-D94A-4E40-BE96-B05841B9A003



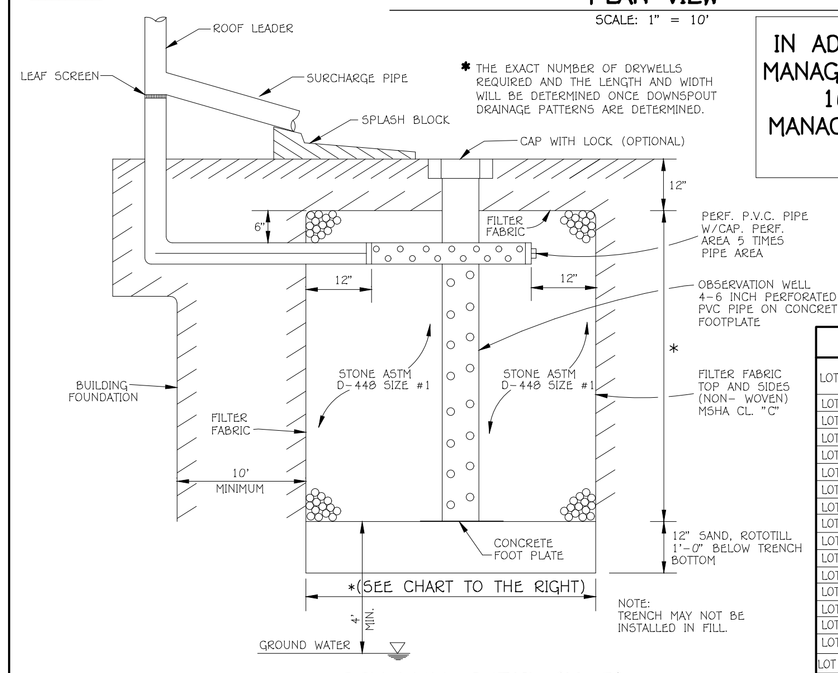
– DENOTES FILTER MEDIA AREA

PROPOSED MICRO BIO-RETENTION #2 (M-6) PLAN VIEW

SCALE: 1" = 10'

0' 10' 15' 20'
Scale: 1" = 10'

IN ADDITION TO THE ESD VOLUME MANAGEMENT, THIS POND PROVIDES 100-YEAR, AND QUANTITY MANAGEMENT FOR 3.55 HR/6.6 IN STORM EVENT.



* THE EXACT NUMBER OF DRYWELLS REQUIRED AND THE LENGTH AND WIDTH WILL BE DETERMINED ONCE DOWNSPOUT DRAINAGE PATTERNS ARE DETERMINED.

NOTE: TRENCH MAY NOT BE INSTALLED IN FILL.

DRY WELL DETAIL (M-5)

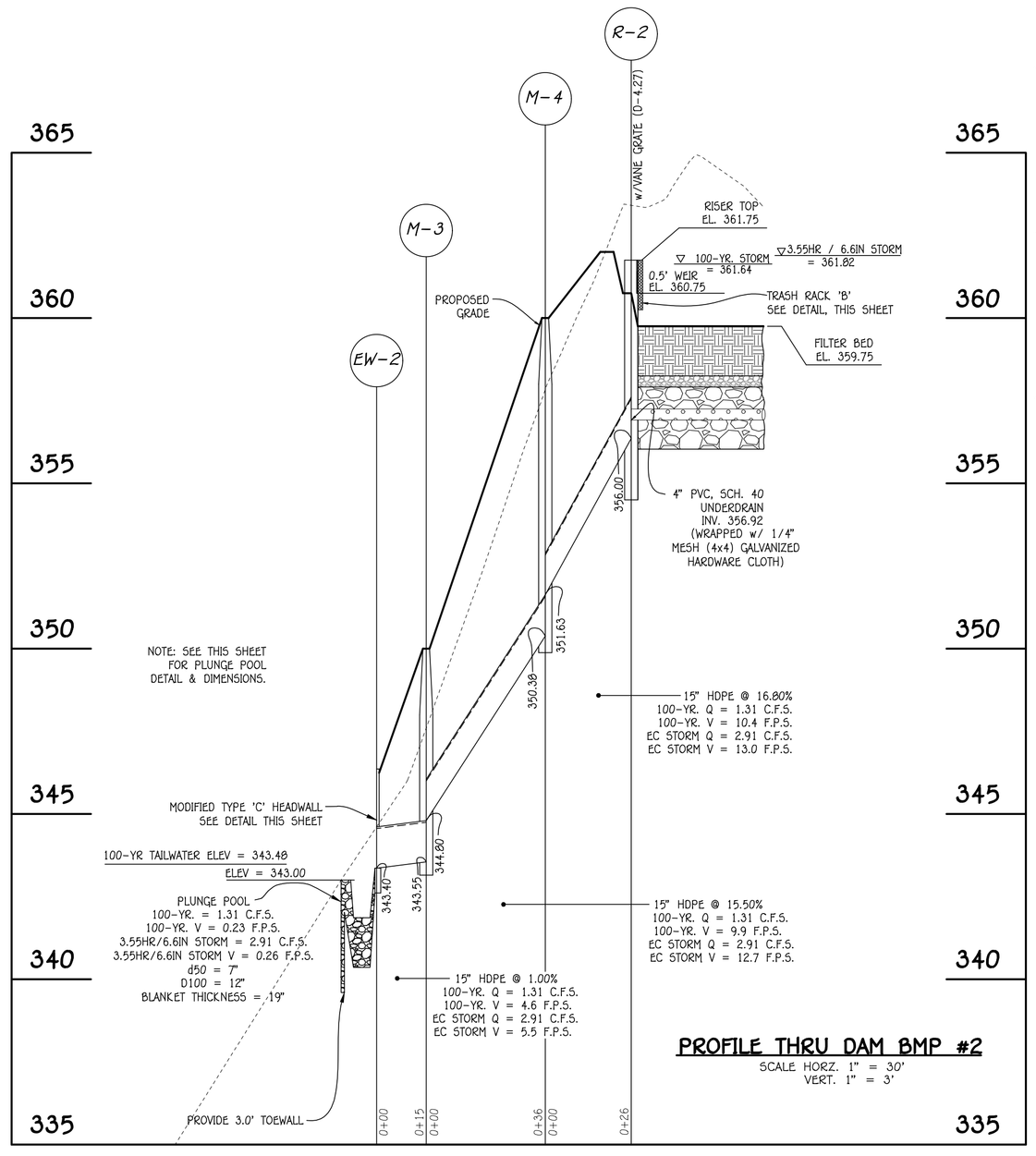
NOT TO SCALE

OPERATION AND MAINTENANCE SCHEDULE FOR DRYWELLS (M-5)

1. THE OWNER SHALL INSPECT THE MONITORING WELLS AND STRUCTURES ON A QUARTERLY BASIS AND AFTER EVERY HEAVY STORM EVENT.
2. THE OWNER SHALL RECORD THE WATER LEVELS AND SEDIMENT BUILD UP IN THE MONITORING WELLS OVER A PERIOD OF SEVERAL DAYS TO INSURE TRENCH DRAINAGE.
3. THE OWNER SHALL MAINTAIN A LOG BOOK TO DETERMINE THE RATE AT WHICH THE FACILITY DRAINS.
4. WHEN THE FACILITY BECOMES CLOGGED SO THAT IT DOES NOT DRAIN DOWN WITHIN A SEVENTY TWO (72) HOUR TIME PERIOD, CORRECTIVE ACTION SHALL BE TAKEN.
5. THE MAINTENANCE LOG BOOK SHALL BE AVAILABLE TO HOWARD COUNTY FOR INSPECTION TO INSURE COMPLIANCE WITH OPERATION AND MAINTENANCE CRITERIA.
6. ONCE THE PERFORMANCE CHARACTERISTICS OF THE INFILTRATION FACILITY HAVE BEEN VERIFIED, THE MONITORING SCHEDULE CAN BE REDUCED TO AN ANNUAL BASIS UNLESS THE PERFORMANCE DATA INDICATES THAT A MORE FREQUENT SCHEDULE IS REQUIRED.

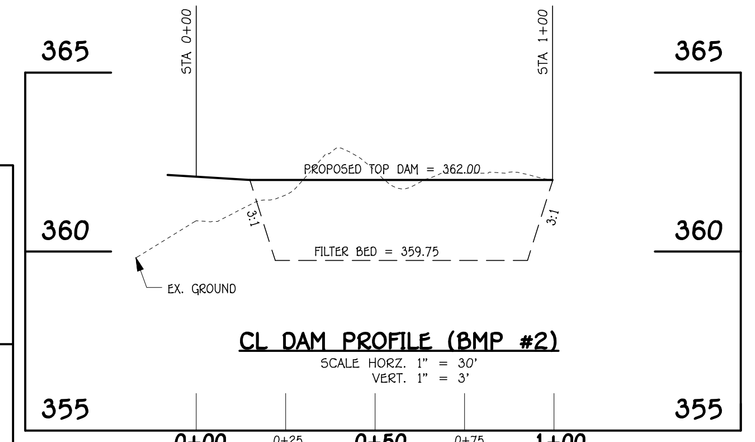
DRY WELL CHART

LOT NO.	ROOF AREA SQ.FT	ESD REQUIRED (CUBIC FEET)	ESD PROVIDED (CUBIC FEET)	NO. OF DRYWELLS	*D x L x W
LOT 1A	900	114 CU.FT.	130 CU.FT.	1	4' x 9' x 9'
LOT 2A	900	114 CU.FT.	130 CU.FT.	1	4' x 9' x 9'
LOT 3A	900	114 CU.FT.	130 CU.FT.	1	4' x 9' x 9'
LOT 4A	900	114 CU.FT.	220 CU.FT.	1	5' x 11' x 10'
LOT 4B	900	114 CU.FT.	200 CU.FT.	1	5' x 9' x 9'
LOT 5A	900	114 CU.FT.	200 CU.FT.	1	5' x 10' x 10'
LOT 5B	900	114 CU.FT.	200 CU.FT.	1	5' x 10' x 10'
LOT 6A	900	114 CU.FT.	220 CU.FT.	1	5' x 11' x 10'
LOT 6B	900	114 CU.FT.	200 CU.FT.	1	5' x 10' x 10'
LOT 7A	900	114 CU.FT.	220 CU.FT.	1	5' x 11' x 10'
LOT 7B	900	114 CU.FT.	220 CU.FT.	1	5' x 11' x 10'
LOT 8A	964	123 CU.FT.	220 CU.FT.	1	5' x 11' x 10'
LOT 8B	964	123 CU.FT.	220 CU.FT.	1	5' x 11' x 10'
LOT 9A	1125	143 CU.FT.	220 CU.FT.	1	5' x 11' x 10'
LOT 9B	1125	143 CU.FT.	220 CU.FT.	1	5' x 11' x 10'
LOT 10A	1125	143 CU.FT.	220 CU.FT.	1	5' x 11' x 10'
LOT 10B	1125	143 CU.FT.	220 CU.FT.	1	5' x 11' x 10'
LOT 11A	1125	143 CU.FT.	220 CU.FT.	1	5' x 11' x 10'
LOT 11B	1125	143 CU.FT.	220 CU.FT.	1	5' x 11' x 10'
LOT 12A	1125	143 CU.FT.	220 CU.FT.	1	5' x 11' x 10'
LOT 12B	1125	143 CU.FT.	220 CU.FT.	1	5' x 11' x 10'
LOT 13A	790	143 CU.FT.	220 CU.FT.	1	5' x 11' x 10'
LOT 13B	790	143 CU.FT.	220 CU.FT.	1	5' x 11' x 10'



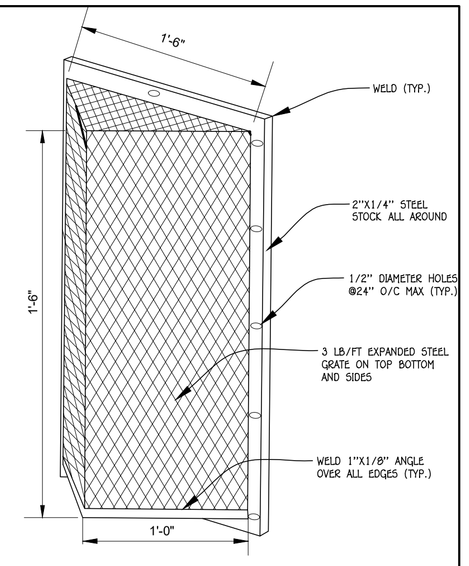
PROFILE THRU DAM BMP #2

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



CL DAM PROFILE (BMP #2)

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

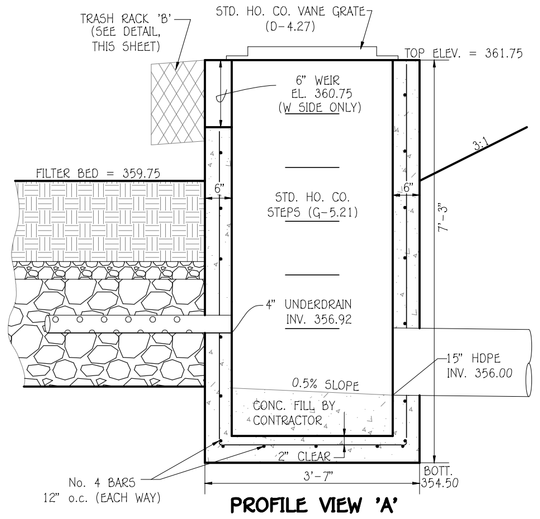


TRASH RACK 'B' DETAIL FOR 6" WEIR OPENING

(NTS)

NOTES:

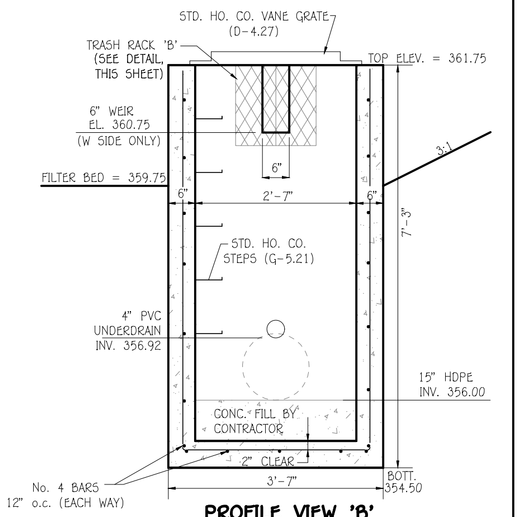
1. TRASH RACK TO BE CENTERED OVER WEIR OPENING .
2. STEEL TO CONFORM TO ASTM A-36.
3. ALL SURFACES TO BE COATED WITH ZRC COLD GALVANIZING COMPOUND AFTER WELDING.
4. TRASH RACK TO BE FASTENED TO THE WALL WITH 1/2" MASONRY ANCHORS. TRASH RACK TO BE REMOVABLE.



PROFILE VIEW 'A' (MODIFIED '5' INLET) CONCRETE RISER DETAIL

R-2

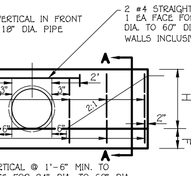
SCALE : 1" = 2'



PROFILE VIEW 'B' (MODIFIED '5' INLET) CONCRETE RISER DETAIL

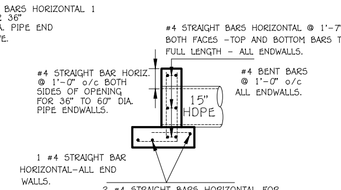
R-2

SCALE : 1" = 2'

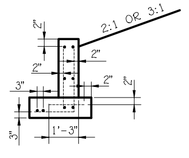


ELEVATION

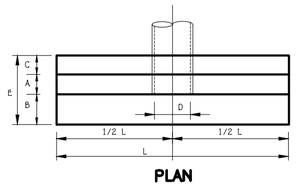
'S' DISTANCES FROM INSIDE SURFACE OF PIPE TO VERTICAL BARS IN FRONT AND REAR FACE.
4" FOR 12" DIA. TO 18" DIA. PIPES INCL.
6" FOR 24" DIA.TO 36" DIA. PIPES INCL.
8" FOR 42" DIA.TO 60" DIA. PIPES INCL.



SECTION A-A



DISPOSITION OF BARS - DETAIL



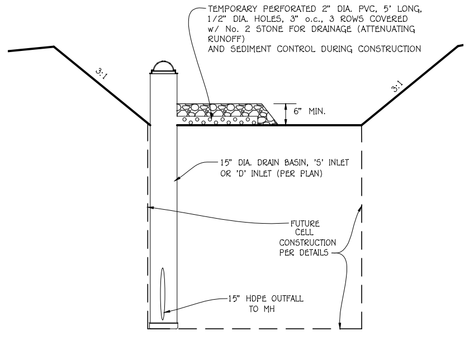
PLAN

REINFORCING: DEFORMED STEEL BARS (1/2" DIA.)
CHAMFER: ALL EXPOSED EDGES 1"x 1" OR AS DIRECTED.
CONC. SHALL BE S.H.A. A. MIX No. 2.

OPENINGS	DIMENSIONS							VOLUME	STEEL
D IN.	AREA SQ.FT	A	B	C	E	F	H	L	CONC C.Y.	LBS.
15"	1.23	9"	6"	6"	1'-9"	9"	3'-0"	7'-9"	2.33	47

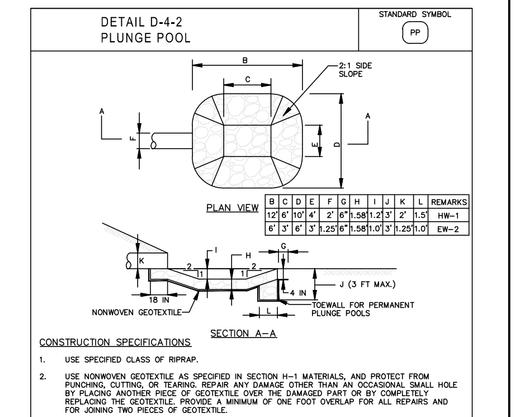
MODIFIED TYPE 'C' ENDWALL

NO SCALE



TYPICAL BIO-RETENTION CELL DURING INITIAL CONSTRUCTION PHASE PRIOR TO DRAINAGE AREA BEING STABILIZED

NO SCALE



PLAN VIEW	B	C	D	E	F	G	H	I	J	K	L	REMARKS
	12'-6"	10'-6"	2'	6"	5.58'	1.0'	3'	3.25'	0'	3.25'	1.0'	EW-1
	6'	3'	4'	3'	3.25'	0'	5.58'	1.0'	3'	3.25'	1.0'	EW-2

CONSTRUCTION SPECIFICATIONS

1. USE SPECIFIED CLASS OF RIPRAP.
2. USE NONWOVEN GEOTEXTILE AS SPECIFIED IN SECTION M-1 MATERIALS, AND PROTECT FROM PUNCTURING, CUTTING, OR TEARING. REPAIR ANY DAMAGE EITHER THAN AN OCCASIONAL SMALL HOLE BY PLACING ANOTHER PIECE OF GEOTEXTILE OVER THE DAMAGED PART OR BY COMPLETELY REPLACING THE GEOTEXTILE. PROVIDE A MINIMUM OF ONE FOOT OVERLAP FOR ALL REPAIRS AND FOR JOINING TWO PIECES OF GEOTEXTILE.
3. PREPARE THE SUBGRADE FOR THE PLUNGE POOL TO THE REQUIRED LINES AND GRADES. COMPACT ANY FILL REQUIRED IN THE SUBGRADE TO A DENSITY OF APPROXIMATELY THAT OF THE SURROUNDING UNDISTURBED MATERIAL.
4. EMBED THE GEOTEXTILE A MINIMUM OF 4 INCHES AND EXTEND THE GEOTEXTILE A MINIMUM OF 6 INCHES BEYOND THE EDGE OF THE SCOUR HOLE.
5. STONE FOR THE PLUNGE POOL MAY BE PLACED BY EQUIPMENT, CONSTRUCT TO THE FULL COURSE THICKNESS IN ONE OPERATION AND IN SUCH A MANNER AS TO AVOID DISPLACEMENT OF UNDERLYING MATERIALS. PLACE THE LARGER STONES IN THE OUTER COURSE OF THE POOL IN A MANNER THAT WILL ENSURE THAT IT IS REASONABLY HOMOGENEOUS WITH THE SMALLER STONES AND SPALLS FILLING THE VOIDS BETWEEN THE LARGER STONES. PLACE STONE FOR THE PLUNGE POOL IN A MANNER TO PREVENT DAMAGE TO THE GEOTEXTILE. HAND PLACE TO THE EXTENT NECESSARY.
6. AT THE PLUNGE POOL OUTLET, PLACE THE STONE SO THAT IT MEETS THE EXISTING GRADE.
7. MAINTAIN LINE, GRADE, AND CROSS SECTION. KEEP OUTLET FREE OF EROSION. REMOVE ACCUMULATED SEDIMENT AND DEBRIS. AFTER HIGH FLOWS INSPECT FOR SCOUR AND DISLODGED RIPRAP. MAKE NECESSARY REPAIRS IMMEDIATELY.

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

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK – 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

Approved: Howard County Department Of Public Works
DocuSigned by: [signature]
Chief, Bureau Of Highways — 12/13/2024 Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
DocuSigned by: Chad Edmondson
Chief, Development Engineering Division — 12/13/2024 Date
DocuSigned by: [signature]
Chief, Division of Land Development — 12/16/2024 Date

DATE	DESCRIPTION
10/22/24	⚠ RESUBDIVIDED LOTS 1, 3-13 & OPEN SPACE LOTS 14 AND 15

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STATE OF MARYLAND · GERARD · CAVANAUGH · No. 27020 · PROFESSIONAL ENGINEER

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Owner	Owner
Lacey Family Revocable Trust c/o Mr. Vincent P. Lacey, Co-Trustee 1235 Wild Rose Court Marriottsville, Maryland 21104 Ph# 410-707-2639	Lacey Property Homeowners Association, Inc. 6026 Trotter Road Clarksville, Maryland 21029

Developer
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Attn: Mr. Steven K. Breeden
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PROJECT			SECTION/AREA		PARCEL
LACEY PROPERTY			N/A		13
PLAT NOS.	BLOCK NO.	ZONE	TAX MAP	ELEC. DIST.	CENSUS TR.
-	1	R-ED	25	SECOND	602900

STORMWATER MANAGEMENT PLAN VIEW, PROFILES & DETAILS-MICRO BIO-RETENTION #2

LACEY PROPERTY

LOTS 2, 18 THRU 29 AND OPEN SPACE LOTS 16, 17, 30 & 31 ⚠

(BEING A RESUBDIVISION OF LOTS 1, 3 THRU 13 AND OPEN SPACE LOTS 14 & 15 AS SHOWN ON PLATS ENTITLED "LACEY PROPERTY, LOTS 1 THRU 13 AND OPEN SPACE LOTS 14 THRU 17", PLAT Nos. 26657 - 26659)

ZONED: R-ED
PARCEL No.: 13
TAX MAP No.: 25 GRID No.: 1
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: OCT. 25, 2024
SHEET 10 OF 24

F-21-015

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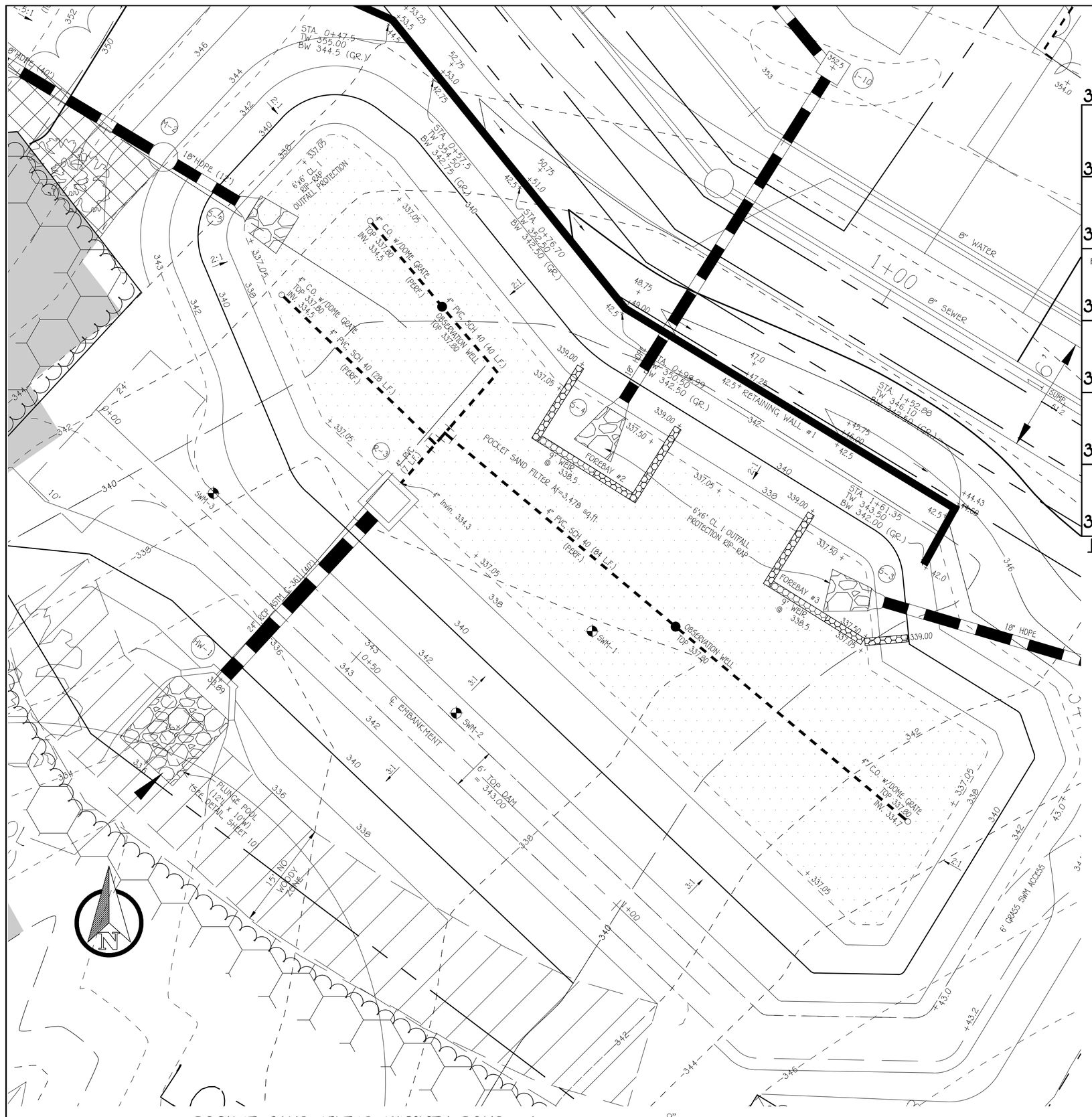


POCKET SAND FILTER FACILITY POND #1
F-5 PLAN VIEW

0' 10' 15' 20'
Scale: 1" = 10'

A-2 CONC. CRADLE DETAIL
NO SCALE

OPERATION AND MAINTENANCE SCHEDULE FOR HOMEOWNER'S ASSOCIATION OWNED AND JOINTLY MAINTAINED STORMWATER MANAGEMENT FACILITIES

ROUTINE MAINTENANCE

1. The top and side slopes of the embankment shall be mowed a minimum of twice per year. Once in june and once in september. Other side slopes and maintenance access shall be mowed as needed.
2. Debris and litter shall be removed during regular mowing operations and as needed.
3. When deemed necessary for aesthetic reasons and upon the approval from the department of Public works, sediment shall be removed from the pond.

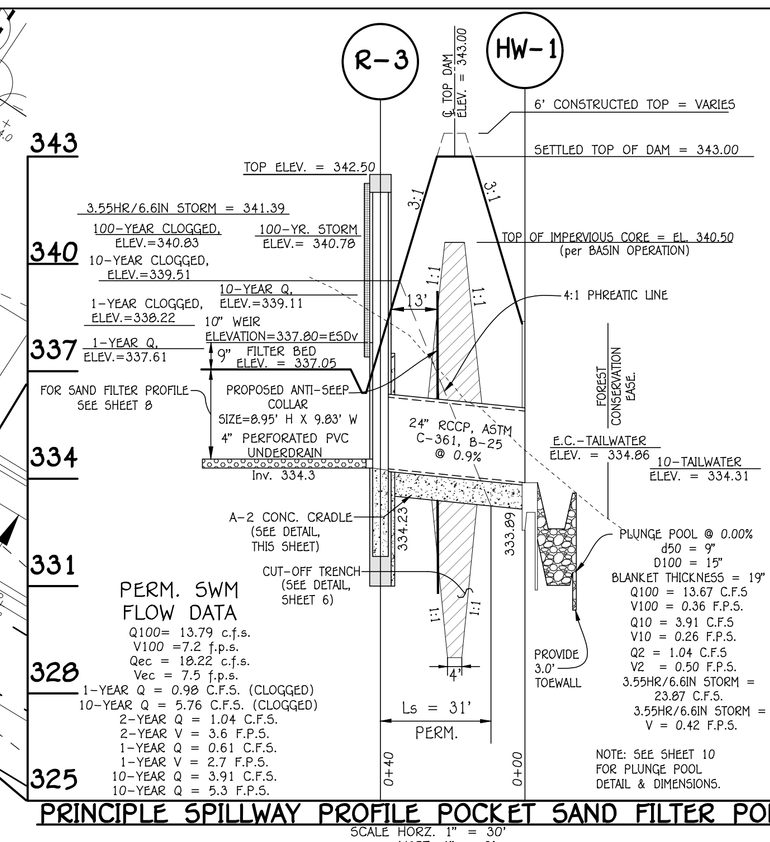
NON-ROUTINE MAINTENANCE

1. Structural components of the pond such as the dam, the riser, and the pipes shall be repaired upon the detection of any damage. The components shall be inspected during routine maintenance operations.
2. Sediment shall be removed from the pond, and forebay, no later than when the capacity of the pond or forebay, is half full of sediment, or, when deemed necessary for aesthetic reasons, upon approval from the Department of Public Works.

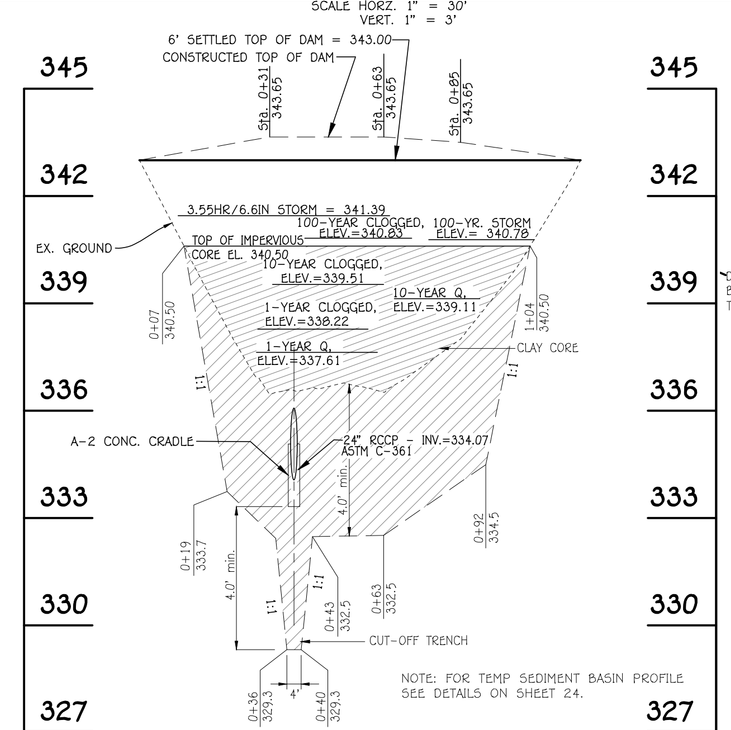
SECTION 'A-A'

SECTION 'B-B'

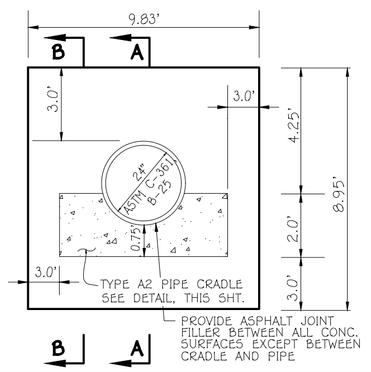
TYPICAL SECTION THROUGH BARREL, CRADLE AND ANTI-SEEP COLLAR
NO SCALE

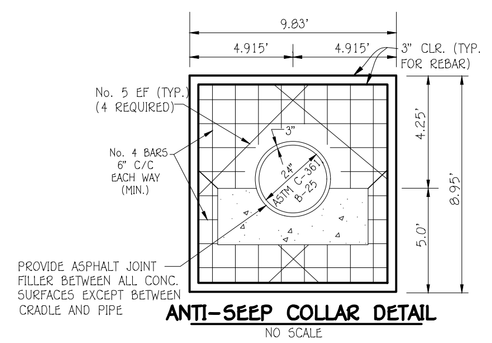


PRINCIPLE SPILLWAY PROFILE POCKET SAND FILTER POND #1
SCALE HORZ. 1" = 30'
VERT. 1" = 3'



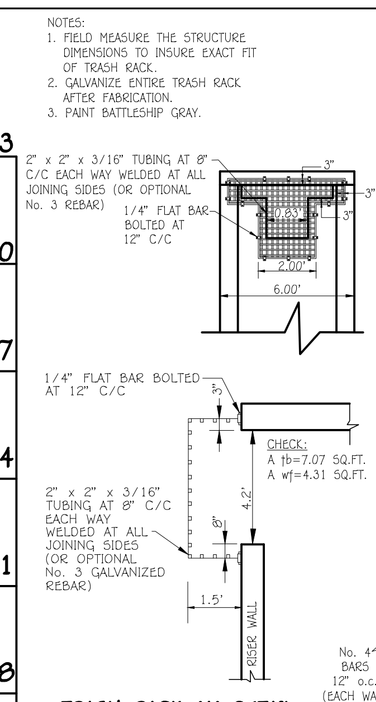
PROFILE CL DAM POCKET SAND FILTER POND #1
SCALE HORZ. 1" = 30'
VERT. 1" = 3'
0+00 0+50 1+00



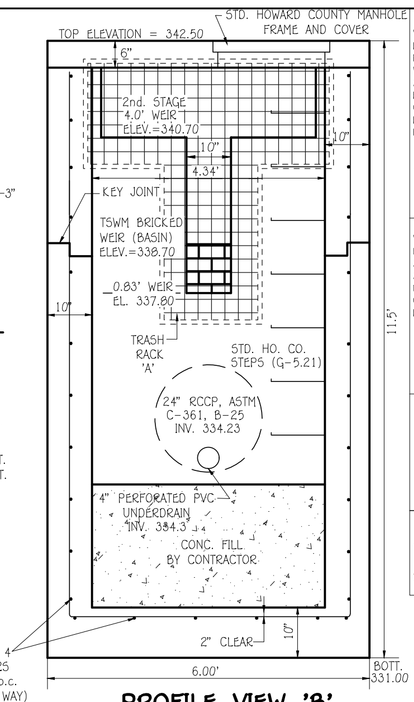


ANTI-SEEP COLLAR DETAIL
NO SCALE

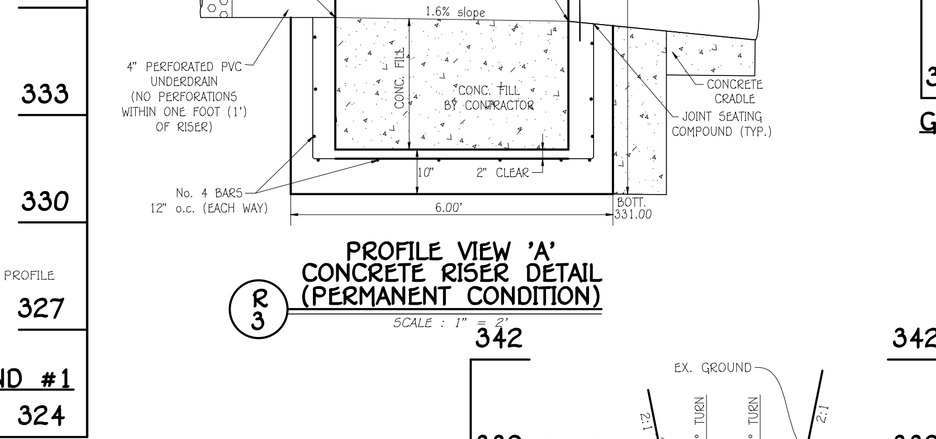
NOTES:
1. FIELD MEASURE THE STRUCTURE DIMENSIONS TO INSURE EXACT FIT OF TRASH RACK.
2. GALVANIZE ENTIRE TRASH RACK AFTER FABRICATION.
3. PAINT BATTLESHIP GRAY.



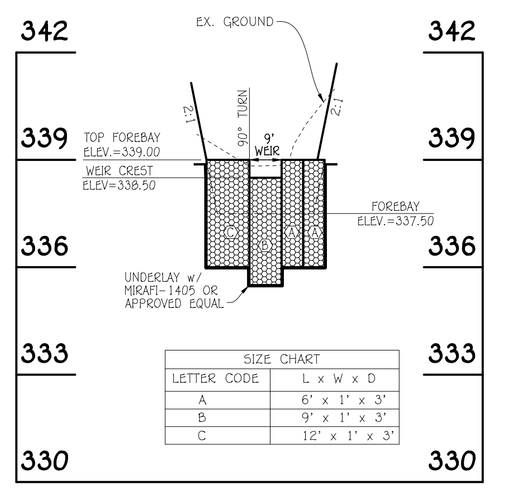
TRASH RACK 'A' DETAIL
(NO SCALE)



PROFILE VIEW 'B'
CONCRETE RISER DETAIL
R 3
SCALE : 1" = 2'

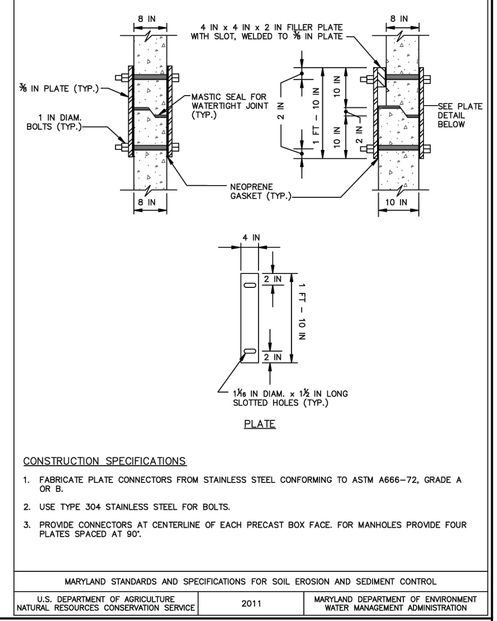


PROFILE VIEW 'A'
CONCRETE RISER DETAIL
(PERMANENT CONDITION)
R 3
SCALE : 1" = 2'



GABION FOREBAY PROFILE FOREBAY #3
SCALE HORZ. 1" = 30'
VERT. 1" = 3'

DETAIL G-2-8 PRECAST RISER CONNECTOR — STANDARD SYMBOL



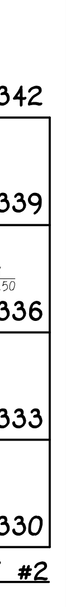
CONSTRUCTION SPECIFICATIONS

1. FABRICATE PLATE CONNECTORS FROM STAINLESS STEEL CONFORMING TO ASTM A666-72, GRADE A OR B.
2. USE TYPE 304 STAINLESS STEEL FOR BOLTS.
3. PROVIDE CONNECTORS AT CENTERLINE OF EACH PRECAST BOX FACE. FOR MANHOLES PROVIDE FOUR PLATES SPACED AT 90°.

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

GABION FOREBAY PROFILE FOREBAY #2
SCALE HORZ. 1" = 30'
VERT. 1" = 3'



Owner/Developer Certification:

"I/We Hereby Certify That Any Clearing, Grading, Construction, Or Development Will Be Done Pursuant To This Approved Erosion And Sediment Control Plan, Including Inspecting And Maintaining Controls, And That The Responsible Personnel Involved In The Construction Project Will Have A Certificate Of Training At A Maryland Department Of The Environment (MDE) Approved Training Program For The Control Of Erosion And Sediment Prior To Beginning The Project. I Shall Engage A Maryland Registered Professional Engineer To Supervise Pond Construction And Provide The Howard Soil Conservation District With An "As-Built" Plan Of The Pond Within 30 Days Of Completion. I Certify Right-Of-Entry For Periodic On-Site Evaluation By Howard County, The Howard Soil Conservation District And/Or MDE."

Steven K. Breeden — 11/14/2024
Signature Of Developer — Date
Steven K. Breeden
Printed Name Of Developer

Design Certification:

"I Hereby Certify That This Plan Has Been Designed In Accordance With Current Maryland Erosion And Sediment Control Laws, Regulations, And Standards, That It Represents A Practical And Workable Plan Based On My Personal Knowledge Of The Site And That It Was Prepared In Accordance With The Requirements Of The Howard Soil Conservation District. I Have Notified The Developer That He/She Must Engage A Registered Professional Engineer To Supervise Pond Construction And Provide The Howard Soil Conservation District With An "As-Built" Plan Of The Pond Upon Completion Of The Project."

Paul G. Cavanaugh — 11/14/2024
Signature Of Engineer — Date
Paul G. Cavanaugh
Printed Name Of Engineer — MD PE Registration No.

Professional Certification:

"I Hereby Certify 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. 27020, Expiration Date: 01-25-2026

This Plan Is Approved For Small Pond Construction, And Soil Erosion And Sediment Control By The Howard Soil Conservation District.

Developed by: Alexander Bratchie — 12/13/2024
Howard Soil Conservation District — Date

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.

Signature — P.E. No. — Date:

Certify Means To State Or Declare A Professional Opinion Based Upon Onsite Inspections And Material Tests Which Are Conducted During Construction. The Onsite Inspections And Material Tests Are Those Inspections And Tests Deemed Sufficient And Appropriate 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.

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

IN ADDITION TO THE ESD VOLUME MANAGEMENT, THIS POND PROVIDES 100-YEAR, AND QUANTITY MANAGEMENT FOR 3.55 HR/6.6 IN STORM EVENT.

Approved: Howard County Department Of Public Works
Docusigned by: [signature]
Chief, Bureau Of Highways — 12/13/2024 — Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
Docusigned by: Chad Edmondson
Chief, Development Engineering Division — 12/13/2024 — Date
Docusigned by: [signature]
Chief, Division of Land Development — 12/16/2024 — Date

DATE	DESCRIPTION
10/22/24	⚠ RESUBDIVIDED LOTS 1, 3-13 & OPEN SPACE LOTS 14 AND 15
10/22/24	⚠ REVISE LOTS, GRADING, STORM DRAIN, WATER & SEWER ALIGNMENTS
	REVISIONS

"PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY 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. 27020, EXPIRATION DATE: 01-25-26."

STATE OF MARYLAND — GERARD CAVANAUGH — LICENSE NO. 27020 — PROFESSIONAL ENGINEER
Paul G. Cavanaugh
PAUL G. CAVANAUGH, P.E. #27020

Owner	Owner
Lacey Family Revocable Trust c/o Mr. Vincent P. Lacey, Co-Trustee 1235 Wild Rose Court Marriottsville, Maryland 21104 Ph# 410-707-2639	Lacey Property Homeowners Association, Inc. 6026 Trotter Road Clarksville, Maryland 21029

Developer
SDC Mill Creek, LLC
Attn: Mr. Steven K. Breeden
Suite 415
8480 Baltimore National Pike
Ellicott City, Maryland 21043
410-465-4244

PROJECT			SECTION/AREA		PARCEL
LACEY PROPERTY			N/A		13
PLAT NOS.	BLOCK NO.	ZONE	TAX MAP	ELEC. DIST.	CENSUS TR.
-	1	R-ED	25	SECOND	602900

REVISED STORMWATER MANAGEMENT POND #1 PLAN VIEW & PROFILES

LACEY PROPERTY

LOTS 2, 18 THRU 29 AND OPEN SPACE LOTS 16, 17, 30 & 31

(BEING A RESUBDIVISION OF LOTS 1, 3 THRU 13 AND OPEN SPACE LOTS 14 & 15 AS SHOWN ON PLATS ENTITLED "LACEY PROPERTY, LOTS 1 THRU 13 AND OPEN SPACE LOTS 14 THRU 17", PLAT Nos. 26657 - 26659)

ZONED: R-ED
PARCEL No.: 13
TAX MAP No.: 25 GRID No.: 1
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: OCT. 25, 2024
SHEET 11 OF 24

F-21-015

072

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1:1

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SPECIMEN TREE TABLE

KEY	SPECIES	SIZE (DBH)	CRZ (FT RADIUS)	COMMENTS	STATUS
T1	HEMLOCK	35"	52.5		TBR
T2	NORWAY SPRUCE	33"	49.5		
T3	WHITE PINE	37"	55.5		
T4	WHITE PINE	38.5"	57.75		
T5	SILVER MAPLE	49.5"	89.25		
T6	SILVER MAPLE	36.5"	54.75		
T7	BLACK WALNUT	37.5"	56.25		TBR
T8	BLACK WALNUT	32"	48		TBR
T9	BLACK WALNUT	41"	61.5		TBR
T11	SILVER MAPLE	42"	63	VERY POOR, TRUNK ROT	TBR
T12	SILVER MAPLE	45.5"	68.25	POOR, TRUNK ROT	TBR
T13	SILVER MAPLE	52"	78	POOR, TRUNK ROT	TBR
T14	ENGLISH WALNUT	41"	61.5		
T15	SILVER MAPLE	31"	46.5	FAIR, LIMITED CROWN SPREAD	
T16	SILVER MAPLE	39"	58.5		
T17	SILVER MAPLE	33"	49.5	FAIR, LEANING	
T18	SILVER MAPLE	40.5"	60.75	FAIR, NARROW CROWN	
T19	SILVER MAPLE	37"	55.5	FAIR, LIMITED CROWN SPREAD	
T20	SILVER MAPLE	45"	67.5	FAIR, LIMITED CROWN SPREAD	TBR
T21	SILVER MAPLE	41"	61.5	FAIR, MAJOR LIMB BROKEN	TBR
T22	SILVER MAPLE	32"	48		TBR
T23	SILVER MAPLE	34"	51	FAIR, LIMITED CROWN SPREAD	TBR
T24	SILVER MAPLE	35"	52.5	POOR, TRUNK ROT	TBR
T25	TULIP POPLAR	39.5"	59.25		
T26	TULIP POPLAR	35"	52.5	TWIN STEMS	
T27	TULIP POPLAR	33.5"	50.25		
T28	TULIP POPLAR	32"	48		
T29	TULIP POPLAR	32"	48	TWIN STEMS	
T30	TULIP POPLAR	31"	46.5		
T31	TULIP POPLAR	39"	58.5		
T32	TULIP POPLAR	46"	69		
T33	TULIP POPLAR	33"	49.5	2 ADDITIONAL NEAR SPECIMEN SIZE TRUNKS	
T34	TULIP POPLAR	32.5"	48.75		
T35	TULIP POPLAR	39.5"	59.25		
T36	TULIP POPLAR	40"	60		
T37	TULIP POPLAR	55"	82.5		
T38	TULIP POPLAR	61"	91.5	SPLITS INTO 2 TRUNKS ABOVE DBH	
T39	TULIP POPLAR	41"	61.5		
T40	SYCAMORE	31"	46.5		
T41	SILVER MAPLE	31.5"	47.25	POOR, VERY LIMITED CROWN	TBR
T42	SILVER MAPLE	39.5"	59.25	POOR, CROWN REDUCED	TBR
T43	SILVER MAPLE	39"/32"	58.5	POOR, SPLIT TRUNK ABOVE BREAST HEIGHT, TRUNK ROT, AND LIMB DIEBACK	

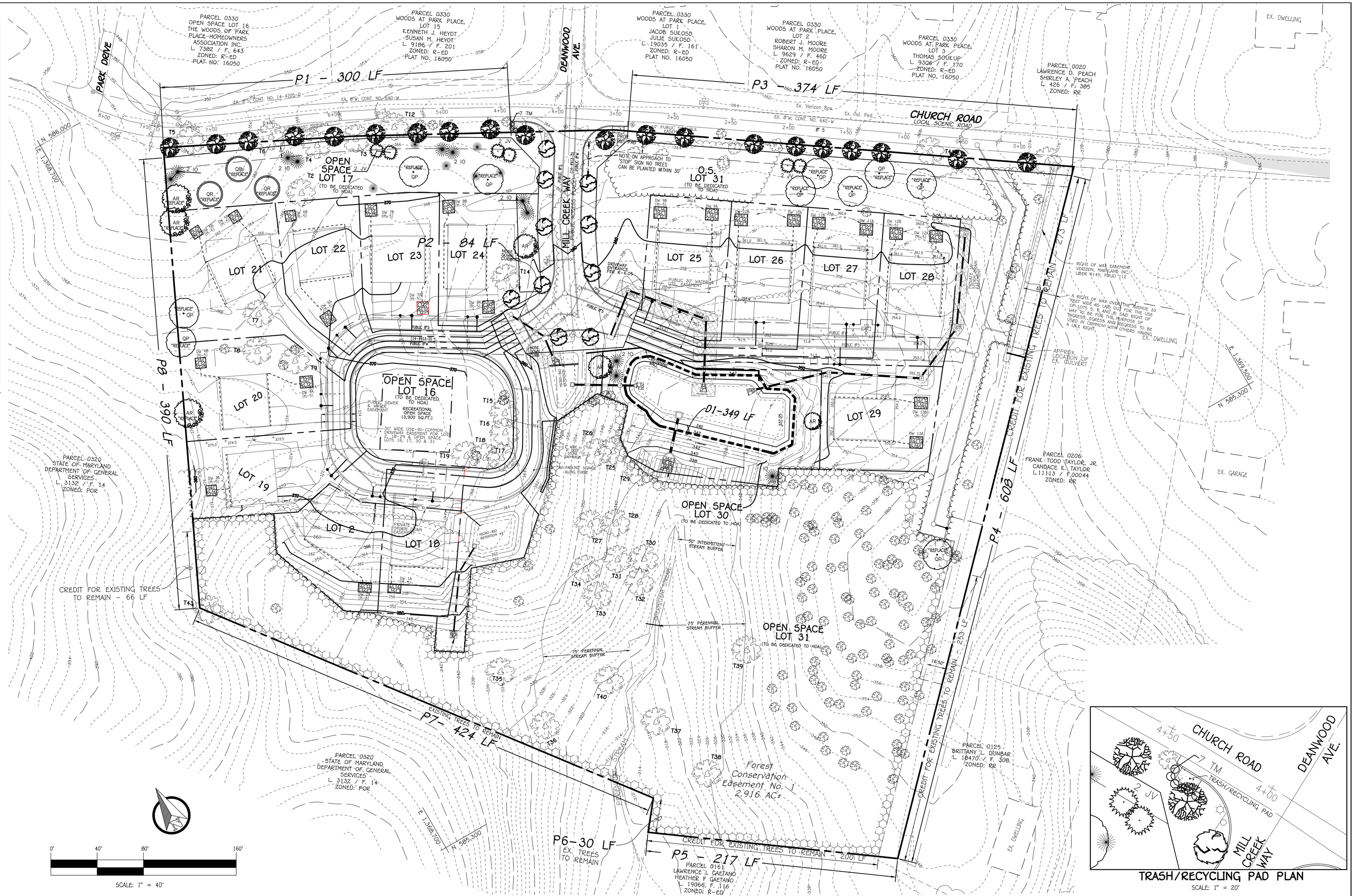
NOTE: "TBR" REFERS TO EXISTING SPECIMEN TREES PROPOSED TO BE REMOVED.

NOTE: IN ACCORDANCE WITH WP-16-022, 16 REPLACEMENT TREES HAVE BEEN ADDED TO THIS PLAN. SEE SCHEDULE 'A' ON SHEET 13.

"REPLACE" REFERS TO PROPOSED TREES PER WP-16-022.

LEGEND

SYMBOL	DESCRIPTION
352	EXISTING CONTOUR 2' INTERVAL
350	EXISTING CONTOUR 10' INTERVAL
	EXISTING SAN. SEWER LINE
	EXISTING STORM DRAIN LINE
	EXISTING WATER LINE
x	EXISTING FENCE
352	PROPOSED CONTOUR 2' INTERVAL
350	PROPOSED CONTOUR 10' INTERVAL
	PROPOSED CONCRETE WALK
	EXISTING TREES
	EXISTING TREELINE
	PROPOSED TREELINE
8" W	PROPOSED PUBLIC WATER
18" RCCP	PROPOSED STORMDRAIN
8" S	PROPOSED PUBLIC SEWER
	FOREST CONSERVATION AREA
	RIPRAP OUTLET PROTECTION



TRASH/RECYCLING PAD PLAN
SCALE: 1" = 20'

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

LANDSCAPE DEVELOPER'S CERTIFICATE

I/We certify that the landscaping shown on this plan will be done according to the plan. Section 16.124 of the Howard County Code and the Howard County Landscape Manual. I/We further certify that upon completion a letter of landscape installation accompanied by an executed one year guarantee of plant materials will be submitted to the Department of Planning and Zoning.

Steven K. Breeden — 11/14/2024
Signature — Date

Steven. K. Breeden
SDC Mill Creek LLC, Manager for Mill Creek LLC
Name & Title

Approved: Howard County Department Of Public Works
DocuSigned by: [signature]
Chief, Bureau Of Highways — 12/13/2024 Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
DocuSigned by: Chad Edmondson
Chief, Development Engineering Division — 12/13/2024 Date
DocuSigned by: [signature]
Chief, Division of Land Development — 12/16/2024 Date

DATE	DESCRIPTION
10/22/24	⚠ RESUBDIVIDED LOTS 1, 3-13 & OPEN SPACE LOTS 14 AND 15
10/22/24	⚠ REVISE LOTS, GRADING, STORM DRAIN, WATER & SEWER ALIGNMENTS

REVISIONS

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STATE OF MARYLAND — GERARD CAVANAUGH — 27020 — PROFESSIONAL ENGINEER

Paul G. Cavanaugh
PAUL G. CAVANAUGH, P.E. #27020

Owner
Lacey Family Revocable Trust
c/o Mr. Vincent P. Lacey,
Co-Trustee
1235 Wild Rose Court
Marriottsville, Maryland 21104
Ph# 410-707-2639

Owner
Lacey Property Homeowners Association, Inc.
6026 Trotter Road
Clarksville, Maryland 21029

Developer
SDC Mill Creek, LLC
Attn: Mr. Steven K. Breeden
Suite 415
8480 Baltimore National Pike
Ellicott City, Maryland 21043
410-465-4244

PROJECT			SECTION/AREA		PARCEL
LACEY PROPERTY			N/A		13
PLAT NOS.	BLOCK NO.	ZONE	TAX MAP	ELEC. DIST.	CENSUS TR.
-	1	R-ED	25	SECOND	602900

REVISED STREET TREE & LANDSCAPE PLAN

LACEY PROPERTY

LOTS 2, 18 THRU 29 AND OPEN SPACE LOTS 16, 17, 30 & 31

(BEING A RESUBDIVISION OF LOTS 1, 3 THRU 13 AND OPEN SPACE LOTS 14 & 15 AS SHOWN ON PLATS ENTITLED "LACEY PROPERTY, LOTS 1 THRU 13 AND OPEN SPACE LOTS 14 THRU 17", PLAT Nos. 26657 - 26659)

ZONED: R-ED
PARCEL No.: 13
TAX MAP No.: 25 GRID No.: 1
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: OCT. 25, 2024
SHEET 12 OF 24

F-21-015

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NOTES:

1. "Should any tree designated for preservation for which landscaping credit is given, die prior to release of bonds, the developer will be required to replace the tree with the equivalent species or with a tree which will obtain the same height, spread and growth characteristics. The replacement tree must be a minimum of 2.5 inches in caliper and installed as required in the Howard County Landscape Manual."

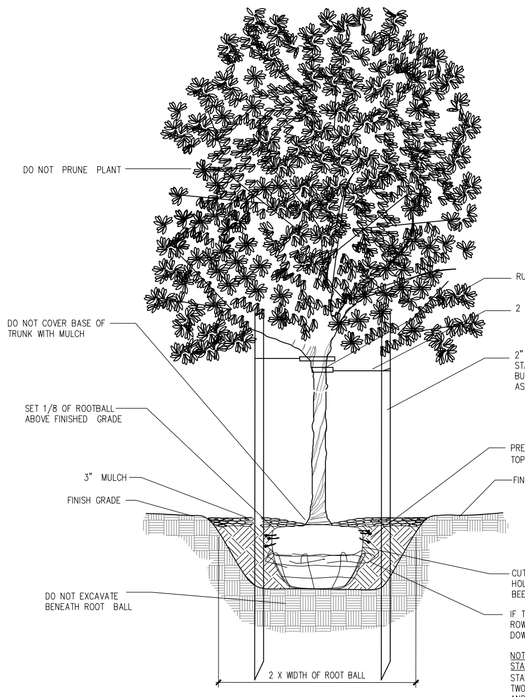
2. "At the time of plant installation, all shrubs and trees listed and approved on the landscape Plan, shall comply with the proper height requirement in accordance with the Howard County Landscape Manual. In addition, no substitutions or relocations of the required plantings may be made without prior review and approval from the Department of Planning and Zoning. Any deviation from the approved Landscape Plan may result in denial or delay in the release of landscape surety until such time as all required materials are planted and/or revisions are made to the applicable plans".

3. "The Owner, tenants and/or their agents shall be responsible for maintenace of the required perimeter landscaping including both plant materials and berms, fences and walls. All plant materials shall be maintained in good growing condition, and when necessary, replaced with new materials to ensure continued compliance with applicable regulations. All the other required landscaping shall be permanently maintained in good condition, and when necessary, repaired or replaced".

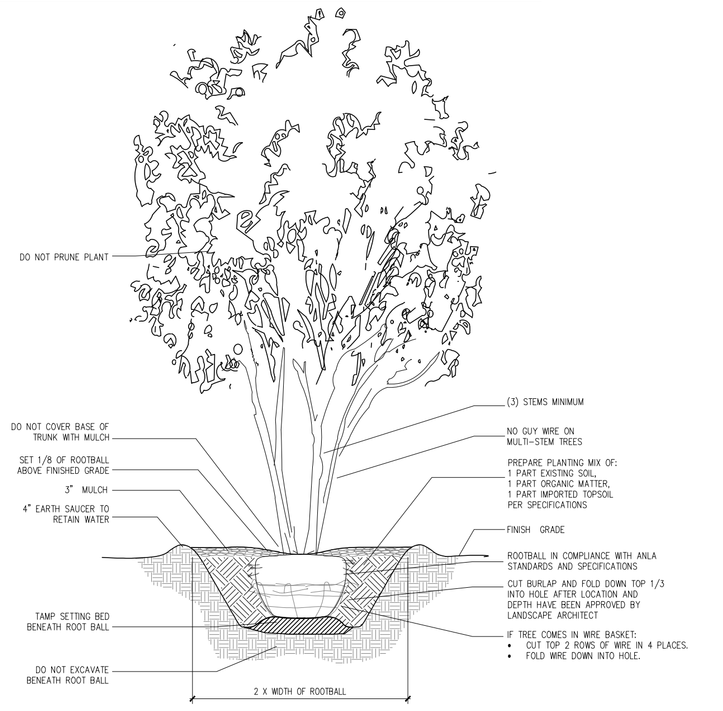
4. This Plan Has Been Prepared In Accordance With The Provisions Of Section 16.124 Of The Howard County Code And The Landscape Manual". Financial Surety For The Required 26 Shade, 5 Evergreen Trees & 7 Shrubs (Provided 19 Shade, 6 Ornamental, 11 Evergreen & 7 Shrubs) Has Been Posted As Part Of The Developer's Agreement In The Amount Of $8,460.00.

5. This Plan Provides 16 Replacement Trees For The Removal Of 8 Specimen Trees Per WP-16-022.

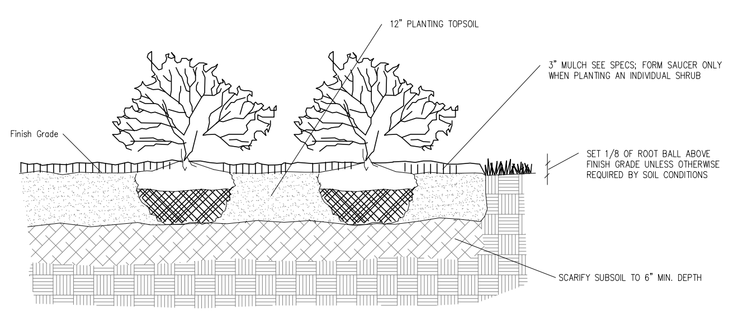
SCHEDULE D STORMWATER MANAGEMENT AREA LANDSCAPING	
LINEAR FEET OF PERIMETER	349'
NUMBER OF TREES REQUIRED/PROVIDED: SHADE TREES (349'-243' = 106'/50) EVERGREEN TREES (349'-243' = 106'/40)	 2 3
CREDIT FOR EXISTING VEGETATION (NO, YES AND %)	YES 133' (FCE)
CREDIT FOR OTHER (LANDSCAPE, WALL, ETC.) (NO, YES AND %)	YES, 110' (WALL)



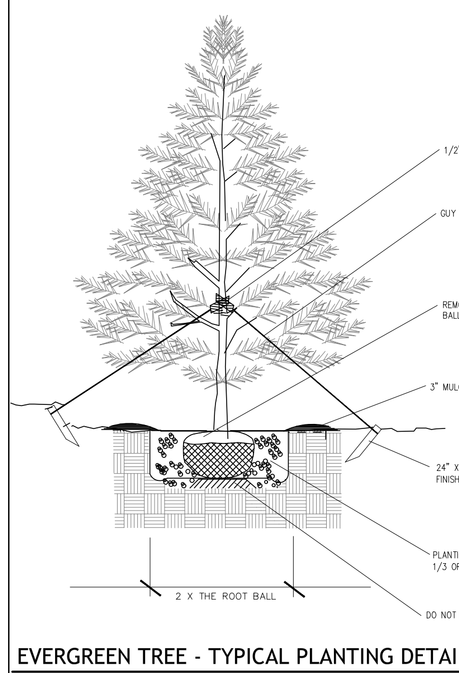
DECIDUOUS TREE - TYPICAL PLANTING DETAIL



MULTISTEM TREE - TYPICAL PLANTING DETAIL



SHRUB AND HEDGEROW - TYPICAL PLANTING DETAIL



EVERGREEN TREE - TYPICAL PLANTING DETAIL

PLANTING SPECIFICATIONS

1. CLEAR & GRUB ALL PLANTING AREAS AS INDICATED ON THE DRAWINGS.
2. PROVIDE PROTECTION FOR TREES, SHRUBS, AND PERENNIALS/GROUND COVERS THAT ARE TO BE PRESERVED.
3. CONTRACTOR SHALL VERIFY THE CORRECT LOCATION OF ALL UNDERGROUND UTILITIES IN THE FIELD PRIOR TO INSTALLATION OF ANY PLANT MATERIALS.
4. ALL PLANTING SHALL BE DONE AS PER PLANTING DETAILS AND SPECIFICATIONS.
5. NO CHANGES SHALL BE MADE WITHOUT WRITTEN CONSENT OF THE OWNER OR LANDSCAPE ARCHITECT.
6. PRIOR TO CONSTRUCTION OF PLANTING BEDS, THE CONTRACTOR SHALL STAKE OUT PLANTING BED LINES IN THE FIELD FOR REVIEW BY THE LANDSCAPE ARCHITECT. LANDSCAPE ARCHITECT SHALL MAKE ADJUSTMENTS IN THE FIELD AS NECESSARY. ALL FINAL PLANTING BED LOCATIONS ARE TO BE APPROVED BY THE LANDSCAPE ARCHITECT. FOR LAYOUT REVIEW, CONTRACTOR SHALL NOTIFY LANDSCAPE ARCHITECT A MINIMUM OF THREE DAYS IN ADVANCE.
7. INSTALL ALL REQUIRED PLANTING AND LAWN SOILS AS PER DETAILS AND SPECIFICATIONS, AND ALL SHRUBS, GROUND COVERS, AND PERENNIALS SHALL BE PLANTED IN PLANTING BEDS PREPARED AS REQUIRED BY THE DETAILS AND SPECIFICATIONS.
8. MAINTAIN POSITIVE DRAINAGE OUT OF PLANTING BEDS AT A MINIMUM 2% SLOPE AND MAINTAIN POSITIVE DRAINAGE OF ALL LAWN AREAS, UNLESS OTHERWISE NOTED ON DRAWINGS. ALL GRADES, DIMENSIONS, AND EXISTING CONDITIONS SHALL BE VERIFIED BY THE CONTRACTOR ON SITE BEFORE CONSTRUCTION BEGINS. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT OR OWNER.
9. ALL PLANT BEDS SHALL BE CONTAINED WITH A SPADED EDGE UNLESS OTHERWISE NOTED ON DRAWINGS.
10. IN THE EVENT OF A DISCREPANCY BETWEEN QUANTITIES SHOWN ON THE DRAWINGS AND QUANTITIES SHOWN ON THE PLANT LIST, THE QUANTITIES ON THE DRAWINGS SHALL APPLY. REPORT DISCREPANCIES TO THE LANDSCAPE ARCHITECT FOR CLARIFICATION PRIOR TO BIDDING.
11. ALL PLANTS SHALL CONFORM TO THE SIZES GIVEN IN THE PLANT LIST AND SHALL BE NURSERY GROWN IN ACCORDANCE WITH THE "AMERICAN STANDARD FOR NURSERY STOCK" (ANSI Z60.1), LATEST EDITION.
12. PLANTS SHALL BE LOCATED AS SHOWN ON THE DRAWINGS. PRIOR TO PLANTING, THE CONTRACTOR SHALL STAKE OUT THE LOCATIONS OF ALL PLANTS IN THE FIELD FOR REVIEW BY THE LANDSCAPE ARCHITECT. LANDSCAPE ARCHITECT SHALL MAKE ADJUSTMENTS IN THE FIELD AS NECESSARY. ALL FINAL PLANT LOCATIONS ARE TO BE APPROVED BY THE LANDSCAPE ARCHITECT. FOR LAYOUT REVIEW, CONTRACTOR SHALL NOTIFY LANDSCAPE ARCHITECT A MINIMUM OF THREE DAYS IN ADVANCE.
13. ALL DISTURBED AREAS SHALL BE FINE GRADED AND SEEDED OR SODDED; SEE PLAN FOR LOCATIONS.
14. CONTRACTOR SHALL BE RESPONSIBLE FOR WATERING AND MAINTAINING ALL PLANTS DURING THE WARRANTY PERIOD; REFER TO SPECIFICATIONS.

SCHEDULE A - PERIMETER LANDSCAPE EDGE										
PERIMETER	1	2	3	4	5	6	7	8	9	TOTAL
CATEGORY	ADJACENT TO ROADWAY	ADJACENT TO ROADWAY	ADJACENT TO ROADWAY	ADJACENT TO PERIMETER PROPERTIES	ADJACENT TO PERIMETER PROPERTIES	ADJACENT TO PERIMETER PROPERTIES	ADJACENT TO PERIMETER PROPERTIES	ADJACENT TO PERIMETER PROPERTIES	TRASH/RECYLING PAD	SPECIMEN TREE REPLACEMENTS	
LANDSCAPE TYPE	N/A (FRONT)	B (SIDE TO ROAD)	N/A (FRONT)	A	A	A	A	A	--		
LINEAR FEET OF PERIMETER	300 L.F.	84 L.F.	374 L.F.	608 L.F.	217 L.F.	30 L.F.	424 L.F.	390 L.F.	20 L.F.		
CREDIT FOR EXISTING TREES (YES/NO, LENGTH)	N/A	N/A	N/A	YES, 526 L.F. (82 L.F. REMAINING)	YES, 200 L.F. (17 L.F. REMAINING)	YES, 30 L.F. (0 L.F. REMAINING)	YES, 424 L.F. (0 L.F. REMAINING)	YES, 66 L.F. (324 L.F. REMAINING)	N/A		
NUMBER OF PLANTS REQUIRED SHADE TREES/EVERGREENS SHRUBS	0	2/2 (84'/50' = 1.7 OR 2) (84'/40' = 2.1 OR 2)	0	1 (82'/60' = 1.4 OR 1)	0 (17'/60' = 0.3 OR 0)	0	0	5 (324'/60' = 5.4 OR 5)	0 7	16 SHADE (WP-16-22)	24 / 2 7
CREDIT FOR EXISTING VEGETATION SHADE TREES SMALL/MEDIUM DECIDUOUS TREES/ EVERGREENS SHRUBS	0 0 0 0	1 (T14) 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	1 0 0 0
NUMBER OF PLANTS PROVIDED SHADE TREES SMALL/MEDIUM DECIDUOUS TREES/ EVERGREENS SHRUBS	0 0 0 0	1 0 2 0	0 0 0 0	1 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	5 0 0 0	0 0 0 7	10 6 6 0	17 6 8 7

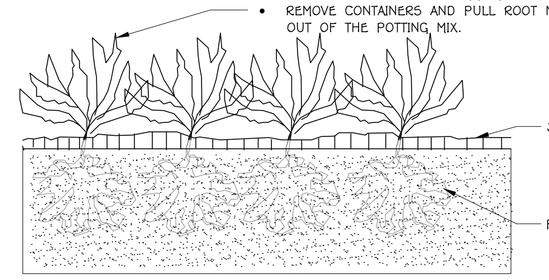
NOTES: 1. THE TRASH/RECYCLE PAD LANDSCAPING WILL BE MAINTAINED BY THE USERS OF THE PRIVATE USE-IN-COMMON MAINTENANCE AGREEMENT.

2. THE LANDSCAPING SHALL BE INSTALLED AROUND THE PERIMETER OF THE PAD EXCLUDING THE SIDE ADJACENT TO THE PUBLIC ROAD RIGHT-OF-WAY.

REQUIRED LANDSCAPING PLANT LIST (SCHEDULE 'A' & 'D')			
QTY.	KEY	NAME	SIZE
6	AR	ACER RUBRUM 'RED SUNSET' (RED SUNSET RED MAPLE)	2.5"-3" CAL. FULL CROWN, B&B
10	QP	QUERCUS PALUSTRIS (PIN OAK)	2.5"-3" CAL. FULL CROWN, B&B
3	QR	QUERCUS ROBUR "FASTIGIATA" (COLUMNAR ENGLISH OAK)	2.5"-3" CAL. FULL CROWN, B&B
11	IO	ILEX OPACA (AMERICAN HOLLY)	5' - 6' HT. B&B
6	JV	JUNIPERUS VIRGINIANA (EASTERN RED CEDAR)	5' - 6' HT. B&B
7	TM	TAXUS MEDIA 'HICKSII' (HICKSII YEW)	18"-24" SPREAD

TOTAL: 19 SHADE TREES, 6 ORNAMENTAL, 11 EVERGREENS & 7 SHRUBS.

- REMOVE DORMANT TOPS AS APPROPRIATE TO THE SEASON AND THE SPECIES OF PLANT.
- IF BED IS MULCHED PRIOR TO PLANTING, PULL BACK MULCH PRIOR TO DIGGING HOLE.
- REMOVE CONTAINERS AND PULL ROOT MAT OUT OF THE POTTING MIX.



PERENNIAL PLANTING - TYPICAL

STREET TREE SCHEDULE				
QTY. REQ'D.	QTY. PROV'D.	SIZE	BOTANICAL AND COMMON NAME	COMMENTS
ROW LENGTH = 785' 785'/40 = 19.6 20 TREES	20 TREES	2 1/2 - 3" CAL.	CLADRASTIS LUTEA YELLOWWOOD	40' APART ON PUBLIC R/W (CHURCH ROAD)
TOTAL ROW LENGTH = 180' (180'/40) x 2 = 10 10 TREES	10 TREES	2 1/2 - 3" CAL.	PRUNUS SARGENTII SARGENT CHERRY	40' APART ON PUBLIC R/W (MILL CREEK WAY)

NOTE: FINAL PLACEMENT OF STREET TREES WILL OCCUR IN THE FIELD AND BE PLACED A MINIMUM OF 30 FEET FROM ALL SIGNS AND INTERSECTIONS WHEN PLANTED BETWEEN SIDEWALK AND CURB, BE LOCATED WITHIN CONSIDERATION OF UNDERGROUND UTILITIES AND STRUCTURES AND MAINTAIN A MINIMUM 5 FEET DISTANCE ON CENTER FROM A DRAIN INLET STRUCTURE, 5 FEET FROM AN OPEN SPACE ACCESS STRIP AND 10 FEET AWAY FROM A DRIVEWAY.

PUBLIC STREET TREES ARE PROVIDED IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. FINANCIAL SURETY FOR THE REQUIRED 30 STREET TREES IN THE AMOUNT OF $9,000.00 SHALL BE COLLECTED WITH THE DEPARTMENT OF PUBLIC WORKS COST ESTIMATE.

MICRO BIO-RETENTION #1 PLANTING PLAN

0' 10' 15' 20'
Scale: 1" = 10'

BIORETENTION FACILITY (BMP) PLANTING SCHEDULE						
KEY	PLANT NAME	MIN. SIZE	MICRO-BIO #1 QUANTITY	MICRO-BIO #2 QUANTITY	NOTES	SYMBOL
SG	SWITCH GRASS *(Panicum virgatum)*	1 qt	25	15	Grass @ 3' c/c min.	
BB	BEEBALM *(Monarda didyma)*	1 qt	20	14	Grass @ 3' c/c min.	
NEA	NEW ENGLAND ASTER *(Aster novae angliae)*	1 qt	0	8	Grass @ 3' c/c min.	
	TOTAL		45	37		

PLANTING SPECIFICATIONS:
1. PLANT INSTALLATION SHALL BE PER MDE SPECIFICATIONS IN THE 2000 STORMWATER DESIGN MANUAL, PER THE PROJECT SPECIFICATIONS, AND AS BELOW.

ADDITIONAL SPECIFICATIONS:
1. PLANT BMP LEVEL SURFACE AS SHOWN IN THE ABOVE TABLE WITH AN EVEN DISTRIBUTION DENSITY. STABILIZE BMP SIDE SLOPES WITH PERMANENT GRASS SEED PER NRCS SPECIFICATIONS. SIDE SLOPE PERMANENT GRASS AREAS SHALL HAVE 3" OF CLEAN TOPSOIL ON TILLED SUB-SOIL AND CURLEX MATTING. WATER AS NECESSARY UNTIL ESTABLISHED VEGETATION.

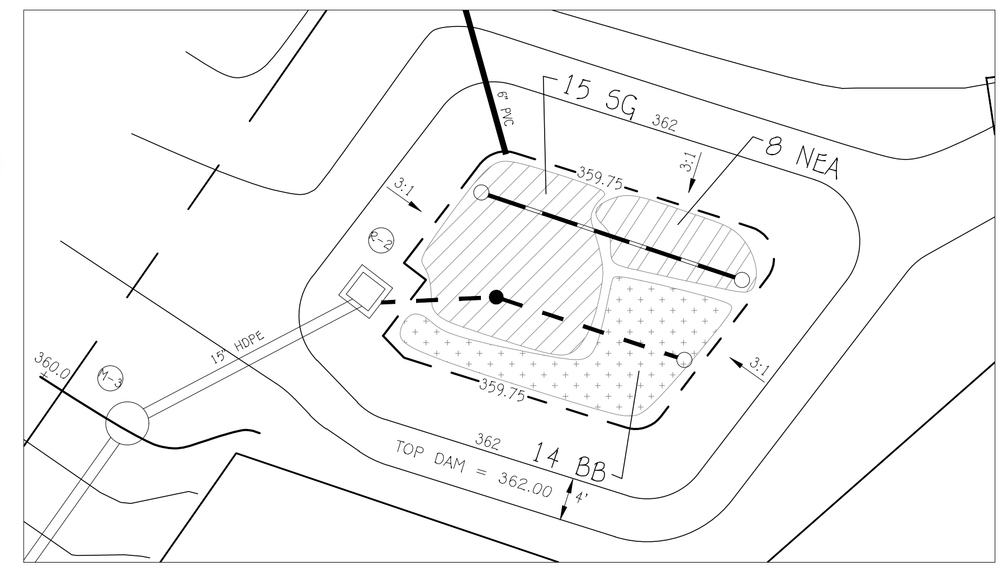
2. THE CONTRACTOR SHALL PROVIDE PLANT MAINTENANCE AND GUARANTEE IN ACCORDANCE WITH THE PROJECT LANDSCAPING SPECIFICATIONS.

3. PLANT MATERIAL SHALL CONFORM TO THE U.S. STANDARD FOR NURSERY STOCK BY THE AMERICAN ASSOCIATION OF NURSERYMEN.

4. PLANTING PERENNIALS & GRASSES: ROOT SYSTEMS SHALL BE SPLIT OR CRUMBLED. POTTED PLANTS SHALL BE SET SO THAT THE TOP OF THE POT IS EVEN WITH EXISTING GRADE. TREAT THE MULCHED AND PLANTED AREA WITH A PRE-EMERGENT HERBICIDE.

5. ALL PLANTS MUST BE THOROUGHLY AND REGULARLY WATERED PRIOR TO ACCEPTANCE.

6. DO NOT PLANT VEGETATION WITHIN 1.5 ft OF THE FOREBAY WEIR SPLASH APRONS AND IN THE NO PLANTING ZONE NEAR THE RISER.



MICRO BIO-RETENTION #2 PLANTING PLAN

0' 10' 15' 20'
Scale: 1" = 10'

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

LANDSCAPE DEVELOPER'S CERTIFICATE

I/We certify that the landscaping shown on this plan will be done according to the plan, Section 16.124 of the Howard County Code and the Howard County Landscape Manual. I/We further certify that upon completion a letter of landscape installation accompanied by an executed one year guarantee of plant materials will be submitted to the Department of Planning and Zoning.

Steven K. Breeden — 11/14/2024
Signature — Date

Steven. K. Breeden
SDC Mill Creek LLC, Manager for Mill Creek LLC
Name & Title

Approved: Howard County Department Of Public Works
DocuSigned by: [signature] — 12/13/2024
Chief, Bureau Of Highways — Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
DocuSigned by: Chad Edmondson — 12/13/2024
Chief, Development Engineering Division — Date
DocuSigned by: [signature] — 12/16/2024
Chief, Division of Land Development — Date

DATE	DESCRIPTION
10/22/24	⚠ RESUBDIVIDED LOTS 1, 3-13 & OPEN SPACE LOTS 14 AND 15
	REVISIONS

"PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY 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. 27020, EXPIRATION DATE: 01-25-26."

STATE OF MARYLAND — GERARD CAVANAUGH — No. 27020 — PROFESSIONAL ENGINEER

Paul G. Cavanaugh

PAUL G. CAVANAUGH, P.E. #27020

Owner
Lacey Family Revocable Trust
c/o Mr. Vincent P. Lacey,
Co-Trustee
1235 Wild Rose Court
Marriottsville, Maryland 21104
Ph# 410-707-2639

Owner
Lacey Property Homeowners Association, Inc.
6026 Trotter Road
Clarksville, Maryland 21029

Developer
SDC Mill Creek, LLC
Attn: Mr. Steven K. Breeden
Suite 415
8480 Baltimore National Pike
Ellicott City, Maryland 21043
410-465-4244

PROJECT				SECTION/AREA		PARCEL
LACEY PROPERTY				N/A		13
PLAT NOS.	BLOCK NO.	ZONE	TAX MAP	ELEC. DIST.	CENSUS TR.	
-	1	R-ED	25	SECOND	602900	

MICRO BIO-RETENTION PLANTING PLANS, LANDSCAPING NOTES, DETAILS & SPECIFICATIONS

LACEY PROPERTY

LOTS 2, 18 THRU 29 AND OPEN SPACE LOTS 16, 17, 30 & 31

(BEING A RESUBDIVISION OF LOTS 1, 3 THRU 13 AND OPEN SPACE LOTS 14 & 15 AS SHOWN ON PLATS ENTITLED "LACEY PROPERTY, LOTS 1 THRU 13 AND OPEN SPACE LOTS 14 THRU 17", PLAT Nos. 26657 - 26659)

ZONED: R-ED
PARCEL No.: 13
TAX MAP No.: 25 GRID No.: 1
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: OCT. 25, 2024
SHEET 13 OF 24

F-21-015

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STRUCTURE SCHEDULE ⚠

STRUCTURE NO.	OWNERSHIP AND MAINTENANCE	TOP ELEVATION	INV.IN	INV.OUT	COORDINATES	WIDTH	TYPE	REMARKS
I-1	PUBLIC	355.80	–	351.93 (15")	N 585,611.99 E 1,369,044.68	2.50'	A-5 INLET	D-4.02
I-2	PUBLIC	358.57	355.08 (15")	354.83 (18")	N 585,639.70 E 1,368,994.37	2.50'	A-5 INLET	D-4.02
I-3	PRIVATE	355.50 *	351.50 (15")	351.25 (18")	N 585,637.83 E 1,369,076.71	--	D INLET	D-4.11
I-4	PRIVATE	352.75 *	348.48 (18")	348.38 (18")	N 585,449.69 E 1,369,259.11	--	D INLET	D-4.11
I-5	PRIVATE	349.50 *	343.09 (18")	339.17 (18")	N 585,489.75 E 1,369,191.74	--	D INLET	D-4.11
I-7	PUBLIC	359.03 *	–	355.25 (15")	N 585,670.75 E 1,368,978.94	--	D INLET	D-4.11
I-8	PRIVATE	354.50 *	350.48 (18")	350.48 (18")	N 585,475.49 E 1,369,238.62	--	D INLET	D-4.11
I-9	PRIVATE	358.50 *	–	354.35 (15")	N 585,540.55 E 1,369,343.07	--	D INLET	D-4.11
I-10	PRIVATE	352.50 *	347.54 (18")	338.14 (18")	N 585,582.91 E 1,369,122.85	--	D INLET	D-4.11
M-1	PUBLIC	356.18	351.61 (15")	351.51 (15")	N 585,630.97 E 1,369,068.25	--	4' STD. MANHOLE	G - 5.12
M-2	PRIVATE	344.50	339.62 (18")	338.12 (18")	N 585,570.56 E 1,369,029.67	--	4' STD. MANHOLE	G - 5.12
M-3	PRIVATE	350.00	344.80 (15")	343.55 (15")	N 585,470.73 E 1,368,808.06	--	4' STD. MANHOLE	G - 5.12
M-4	PRIVATE	360.00	351.63 (15")	350.38 (15")	N 585,500.24 E 1,368,829.00	--	4' STD. MANHOLE	G - 5.12
R-1	PRIVATE	356.30	352.17 (4")	346.82 (18")	N 585,531.04 E 1,369,088.93	--	MODIFIED 5 INLET	SEE SHEET 9
R-2	PRIVATE	361.75	356.92 (4")	356.00 (15")	N 585,513.16 E 1,368,851.56	--	MODIFIED 5 INLET	SEE SHEET 10
R-3	PRIVATE	342.00	334.30 (4")	334.23 (24")	N 585,473.52 E 1,369,216.30	--	CONC. RISER	SEE SHEET 11
S-1	PRIVATE	–	335.00 (18")	–	N 585,531.04 E 1,369,088.93	--	18" HDPE END SECTION	ADS NYLOPLAST or EQUAL
S-2	PUBLIC	–	354.75 (18")	–	N 585,622.13 E 1,368,990.52	--	18" HDPE END SECTION	ADS NYLOPLAST or EQUAL
S-3	PRIVATE	–	337.05 (18")	–	N 585,513.90 E 1,369,123.08	--	18" HDPE END SECTION	ADS NYLOPLAST or EQUAL
S-4	PRIVATE	–	337.05 (18")	–	N 585,536.69 E 1,369,093.73	--	18" HDPE END SECTION	ADS NYLOPLAST or EQUAL
S-5	PRIVATE	–	337.24 (18")	–	N 585,409.08 E 1,368,843.71	--	18" HDPE END SECTION	ADS NYLOPLAST or EQUAL
HW-1	PRIVATE	–	333.87 (24")	–	N 585,496.53 E 1,369,035.68	--	# TYPE A HEADWALL	D - 5.11
EW-2	PRIVATE	346.40	343.40 (15")	–	N 585,458.50 E 1,368,799.38	--	MODIFIED TYPE C ENDWALL	SEE DETAIL, SHEET 10

*DENOTES TOP OF 'D' TYPE INLET. (THROAT ELEV = TOP ELEV. – 0.83')
I-4 & I-9 (THROAT ON 4 SIDES)
I-6, I-7 & I-8 (THROAT ON 3 SIDES)
I-5 (THROAT ON 2 SIDES)

USE A 'TYPE A' HEADWALL w/DIMENSIONS FOR A 36" PIPE

PIPE SCHEDULE (PRIVATE)

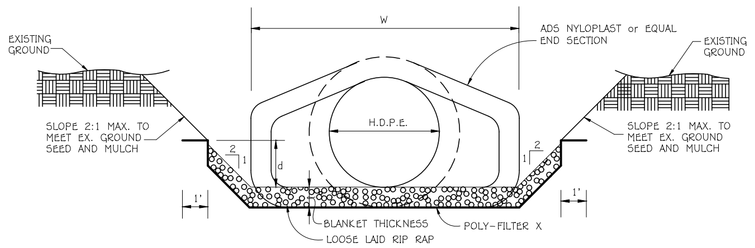
SIZE	CLASS	LENGTH
15"	HDPE	165 L.F.
18"	HDPE	374 L.F.
36"	ASTM, C-361	36 L.F.
4"	PERF PVC	132 L.F.
4"	SOLID PVC	3 L.F.

PIPE SCHEDULE (PUBLIC)

SIZE	CLASS	LENGTH
15"	RCCP, CL. IV	76 L.F.
18"	HDPE	15 L.F.

NOTES:

1. SEE SHEET 9 FOR PROFILE R-1 TO S-5.
2. SEE SHEET 10 FOR PROFILE R-2 TO EW-2.
3. SEE SHEET 11 FOR PROFILE R-3 TO HW-1.



RIP RAP CHANNEL DETAIL
NO SCALE

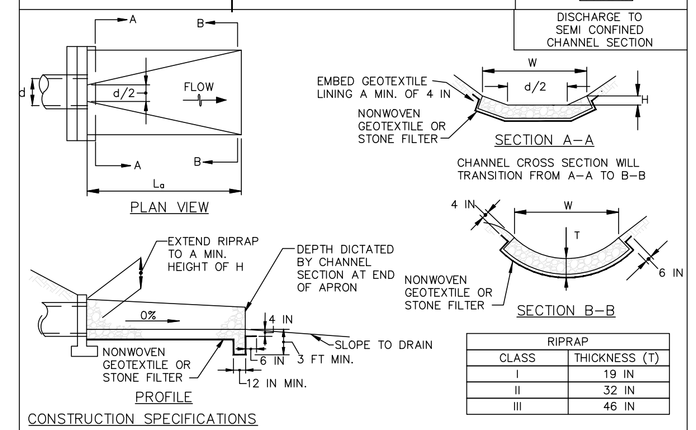
RIP-RAP CHANNEL DESIGN DATA

STRUCTURE	AREA	WETTED PERIMETER	R	R 2/3	S	S 1/2	W	d	N	V (f.p.s.)	Q (c.f.s.)	RIP-RAP SIZE D_{50}	RIP-RAP SIZE T_{MIN}	BLANKET THICKNESS
S-2	1.96	5.82	0.3367	0.4822	0.0050	0.0707	5.63	0.41	0.04	1.27	2.48	9.5"	15"	19"
S-3	5.80	8.36	0.6938	0.7827	0.0050	0.0707		0.41	0.04		11.88	9.5"	15"	19"
S-4	2.24	6.04	0.3727	0.5162	0.0050	0.0707		0.41	0.04		2.99	9.5"	15"	19"
S-6	1.05	5.05	0.2079	0.3491	0.0050	0.0707		0.41	0.04		0.96	9.5"	15"	19"

DETAIL D-4-1-A ROCK OUTLET PROTECTION

STANDARD SYMBOL

DISCHARGE TO SEMI CONFINED CHANNEL SECTION



RIPRAP	
CLASS	THICKNESS (T)
I	19 IN
II	32 IN
III	46 IN

CONSTRUCTION SPECIFICATIONS

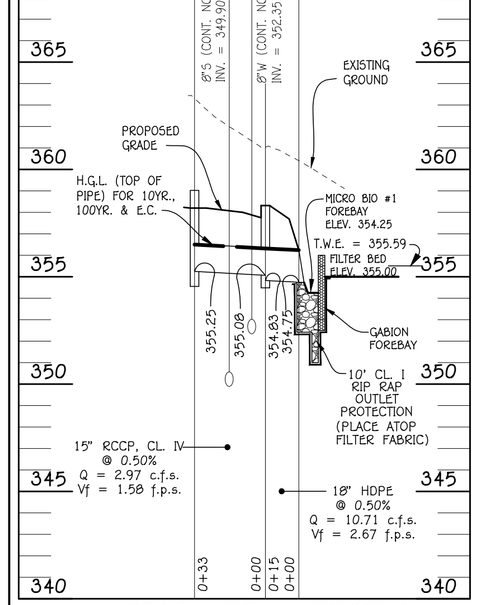
1. RIPRAP AND STONE MUST CONFORM TO THE SPECIFIED CLASS.
2. USE NONWOVEN GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS, AND PROTECT FROM PUNCTURING, CUTTING, OR TEARING. REPAIR ANY DAMAGE OTHER THAN AN OCCASIONAL SMALL HOLE BY PLACING ANOTHER PIECE OF GEOTEXTILE OVER THE DAMAGED PART OR BY COMPLETELY REPLACING THE GEOTEXTILE. PROVIDE A MINIMUM OF ONE FOOT OVERLAP FOR ALL REPAIRS AND FOR JOINING TWO PIECES OF GEOTEXTILE TOGETHER.
3. PREPARE THE SUBGRADE FOR GEOTEXTILE OR STONE FILTER (⅜ TO 1½ INCH STONE FOR 6 INCH MINIMUM DEPTH) AND RIPRAP TO THE REQUIRED LINES AND GRADES. COMPACT ANY FILL REQUIRED IN THE SUBGRADE TO A DENSITY OF APPROXIMATELY THAT OF THE SURROUNDING UNDISTURBED MATERIAL.
4. EXTEND GEOTEXTILE AT LEAST 6 INCHES BEYOND EDGES OF RIPRAP AND EMBED AT LEAST 4 INCHES AT SIDES OF THE RIPRAP.
5. CONSTRUCT RIPRAP OUTLET TO FULL COURSE THICKNESS IN ONE OPERATION AND IN SUCH A MANNER AS TO AVOID DISPLACEMENT OF UNDERLYING MATERIALS. PLACE STONE FOR RIPRAP OUTLET IN A MANNER THAT WILL ENSURE THAT IT IS REASONABLY HOMOGENOUS WITH THE SMALLER STONES AND SPALLS FILLING THE VOIDS BETWEEN THE LARGER STONES. PLACE RIPRAP IN A MANNER TO PREVENT DAMAGE TO THE STONE FILTER BLANKET OR GEOTEXTILE. HAND PLACE TO THE EXTENT NECESSARY.
6. WHERE NO ENDWALL IS USED, CONSTRUCT THE UPSTREAM END OF THE APRON SO THAT THE WIDTH IS TWO TIMES THE DIAMETER OF THE OUTLET PIPE, AND EXTEND THE STONE UNDER THE OUTLET BY A MINIMUM OF 18 INCHES.
7. CONSTRUCT APRON WITH 0% SLOPE ALONG ITS LENGTH AND WITHOUT OBSTRUCTIONS. PLACE STONE SO THAT IT BLENDS IN WITH EXISTING GROUND.
8. MAINTAIN LINE, GRADE, AND CROSS SECTION. KEEP OUTLET FREE OF EROSION. REMOVE ACCUMULATED SEDIMENT AND DEBRIS. AFTER HIGH FLOWS INSPECT FOR SCOUR AND DISLODGED RIPRAP. MAKE NECESSARY REPAIRS IMMEDIATELY.

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

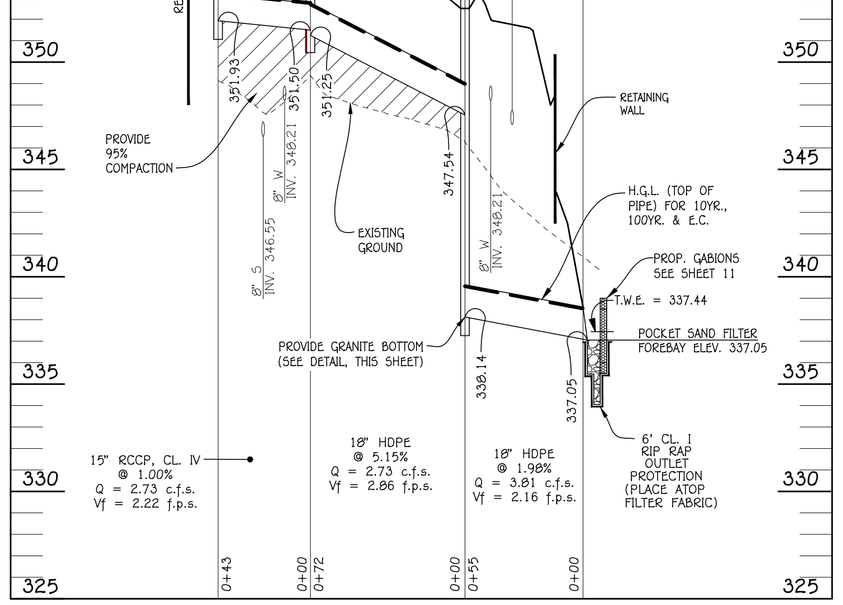
CONSTRUCTION SPECIFICATIONS FOR RIP-RAP OUTFALLS

1. The subgrade for the filter, riprap or gabion shall be prepared to the required lines and grades. Any fill required in the subgrade shall be compacted to a density of approximately that of the surrounding undisturbed material.
2. The rock or gravel shall conform to the specified grading limits when installed respectively in the riprap or filter.
3. Filter cloth shall be protected from punching, cutting or tearing. Any damage other than an occasional shall hole shall be repaired by placing another piece of cloth over the damaged part or by completely replacing the cloth. All overlaps whether for repairs or for joining two pieces of cloth shall be a minimum of one foot.
4. Stone for the riprap or gabion outlets may be placed by equipment. Both shall each be constructed to the full course thickness in one operation and in such a manner as to avoid displacement of underlying materials. The stone for riprap or gabion outlets shall be delivered and placed in a manner that will insure that it is reasonably homogenous with the smaller stones and spalls filling the voids between the larger stones. Riprap shall be placed in a manner to prevent damage to the filter blanket or filter cloth. Hand placement will be required to the extent necessary to prevent damage to the permanent works.



STORM DRAIN PROFILE

SCALE: HORIZ. : 1" = 50'
VERT. : 1" = 5'



STORM DRAIN PROFILE

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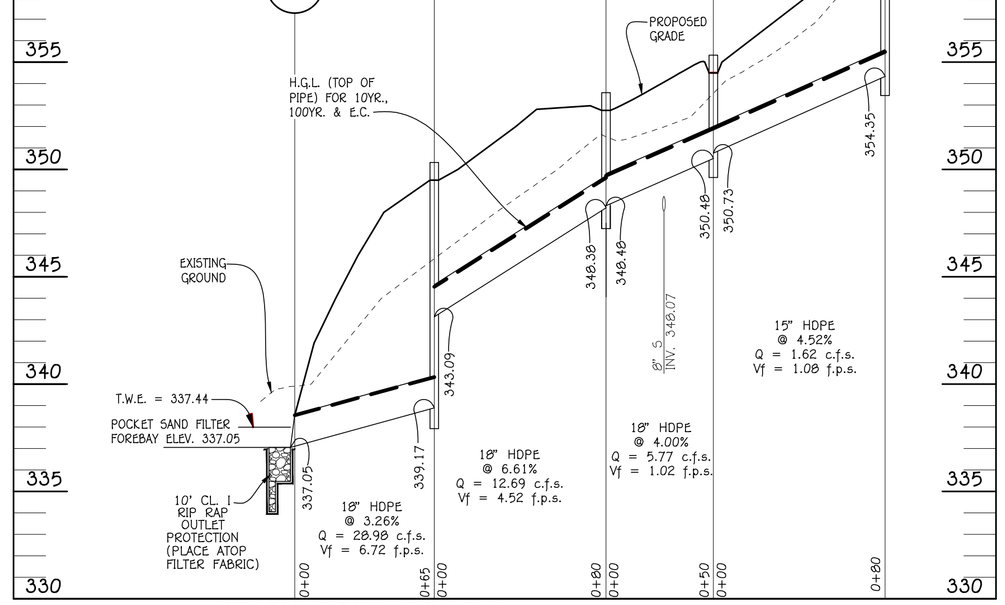
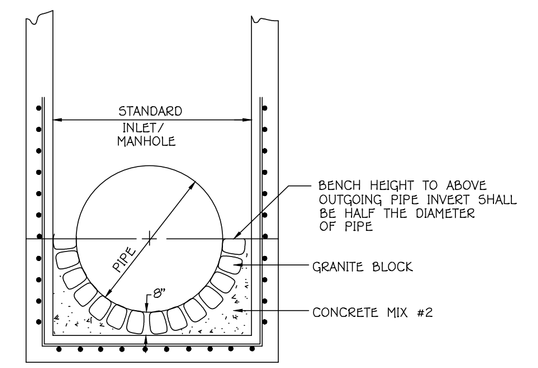


STORM DRAIN PROFILE

SCALE: HORIZ. : 1" = 50'
VERT. : 1" = 5'



GRANITE BLOCK DETAIL
NOT TO SCALE

Nyloplast
3130 VERONA AVE
BUFORD, GA 30518
PHN (770) 932-2443
FAX (770) 932-2490
www.nyloplast-us.com

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

Approved: Howard County Department Of Public Works
Chief, Bureau Of Highways — 12/13/2024 Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
Chief, Development Engineering Division — 12/13/2024 Date
Chief, Division of Land Development — 12/16/2024 Date

DATE	DESCRIPTION
10/22/24	⚠ REVISED STORM DRAIN PROFILES, STRUCTURE & PIPES SCHEDULES
DATE	DESCRIPTION
	REVISIONS

"PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY 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. 27020, EXPIRATION DATE: 01-25-26."

STATE OF MARYLAND · GERARD CAVANAUGH · 27020 · PROFESSIONAL ENGINEER

Paul G. Cavanaugh

PAUL G. CAVANAUGH, P.E. #27020

Owner	Owner
Lacey Family Revocable Trust c/o Mr. Vincent P. Lacey, Co-Trustee 1235 Wild Rose Court Marriottsville, Maryland 21104 Ph# 410-707-2639	Lacey Property Homeowners Association, Inc. 6026 Trotter Road Clarksville, Maryland 21029

Developer
SDC Mill Creek, LLC
Attn: Mr. Steven K. Breeden
Suite 415
8480 Baltimore National Pike
Ellicott City, Maryland 21043
410-465-4244

PROJECT			SECTION/AREA		PARCEL
LACEY PROPERTY			N/A		13
PLAT NOS.	BLOCK NO.	ZONE	TAX MAP	ELEC. DIST.	CENSUS TR.
–	1	R-ED	25	SECOND	602900

REVISED STORM DRAIN PROFILES

LACEY PROPERTY

LOTS 2, 18 THRU 29 AND OPEN SPACE LOTS 16, 17, 30 & 31

(BEING A RESUBDIVISION OF LOTS 1, 3 THRU 13 AND OPEN SPACE LOTS 14 & 15 AS SHOWN ON PLATS ENTITLED "LACEY PROPERTY, LOTS 1 THRU 13 AND OPEN SPACE LOTS 14 THRU 17", PLAT Nos. 26657 - 26659)

ZONED: R-ED
PARCEL No.: 13
TAX MAP No.: 25 GRID No.: 1
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: OCT. 25, 2024
SHEET 14 OF 24

F-21-015

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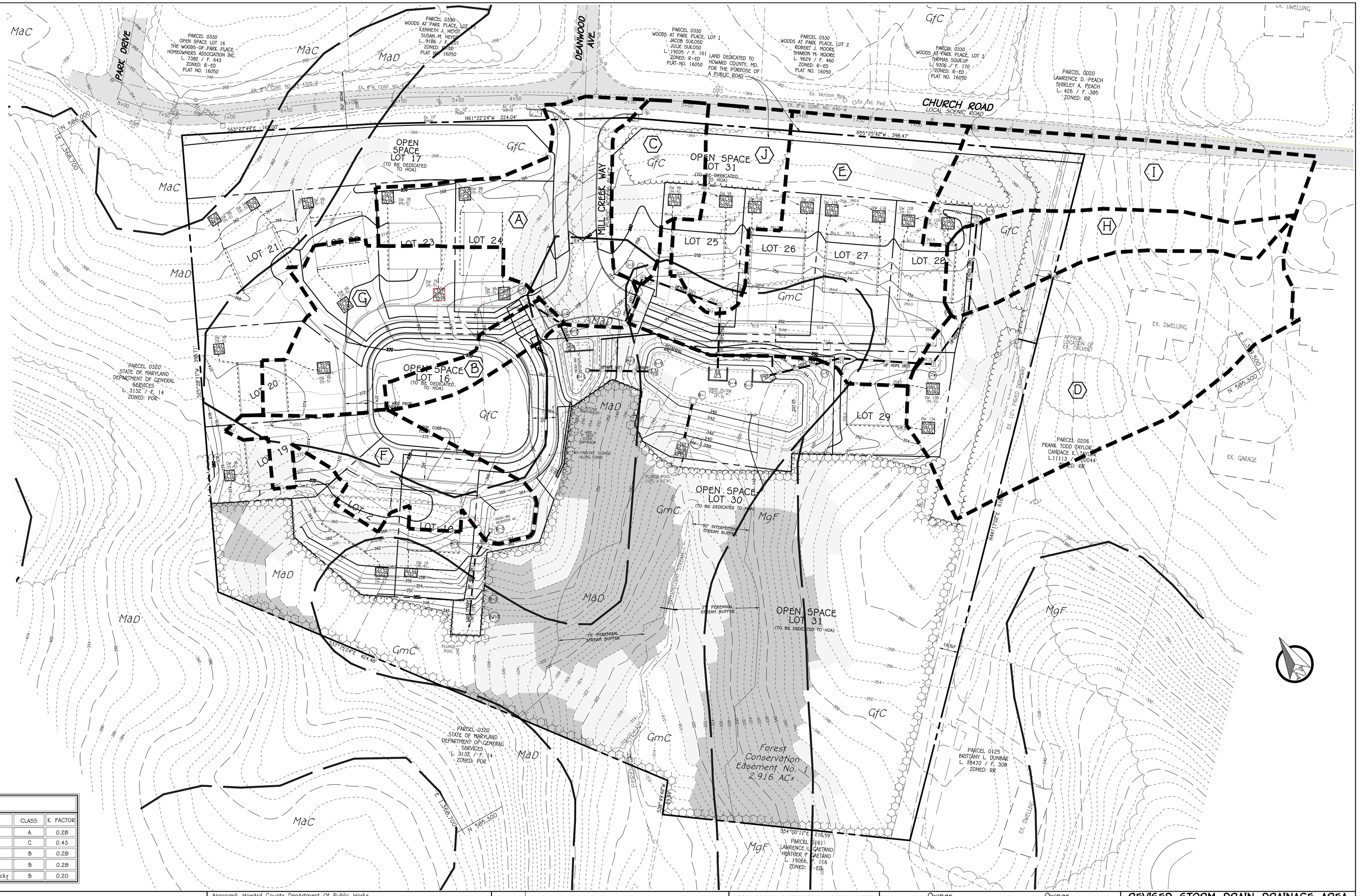
DRAINAGE AREA DATA

STRUCTURE NO.	DRAINAGE AREA	AREA	'C'	ZONED	% IMP.
I-1	A	0.51 AC.	0.54	R-ED	40%
I-2	B	0.11 AC.	0.38	R-ED	31%
I-3	C	0.23 AC.	0.11	R-ED	4%
I-4	D	1.07 AC.	0.50	R-ED	23%
I-5	E	0.85 AC.	0.42	R-ED	39%
I-6	F	0.44 AC.	0.51	R-ED	55%
I-7	G	0.54 AC.	0.52	R-ED	48%
I-8	H	0.31 AC.	0.40	R-ED	10%
I-9	I	0.48 AC.	0.52	R-ED	23%
I-10	J	0.27 AC.	0.22	R-ED	16%



0' 40' 80' 160'

SCALE: 1" = 40'

SOILS LEGEND

SOIL	NAME	CLASS	K FACTOR
GfC	Gladstone-Urban land complex, 8 to 15 percent slopes	A	0.28
GmC	Glenville silt loam, 8 to 15 percent slopes	C	0.43
MaC	Manor loam, 8 to 15 percent slopes	B	0.28
MaD	Manor loam, 15 to 25 percent slopes	B	0.28
MgF	Manor-Bannertown sandy loams, 25 to 65 percent slopes, rocky	B	0.20

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

Approved: Howard County Department Of Public Works

Chief, Bureau Of Highways — 12/13/2024 Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division — 12/13/2024 Date

Chief, Division of Land Development — 12/16/2024 Date

DATE	DESCRIPTION
9/3/24	REVISE LOT LINES, WATER, SEWER, SD ALIGNMENT & GRADING

REVISIONS

"PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY 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. 27020, EXPIRATION DATE: 01-25-26."

STATE OF MARYLAND · GERARD CAVANAUGH · 27020 · PROFESSIONAL ENGINEER

Paul G. Cavanaugh

PAUL G. CAVANAUGH, P.E. #27020

Owner
Lacey Family Revocable Trust
c/o Mr. Vincent P. Lacey,
Co-Trustee
1235 Wild Rose Court
Marriottsville, Maryland 21104
Ph# 410-707-2639

Owner
Lacey Property Homeowners Association, Inc.
6026 Trotter Road
Clarksville, Maryland 21029

Developer
SDC Mill Creek, LLC
Attn: Mr. Steven K. Breeden
Suite 415
8480 Baltimore National Pike
Ellicott City, Maryland 21043
410-465-4244

PROJECT			SECTION/AREA		PARCEL
LACEY PROPERTY			N/A		13
PLAT NOS.	BLOCK NO.	ZONE	TAX MAP	ELEC. DIST.	CENSUS TR.
-	1	R-ED	25	5ECOND	602900

REVISED STORM DRAIN DRAINAGE AREA & SOILS MAP

LACEY PROPERTY

LOTS 2, 18 THRU 29 AND OPEN SPACE LOTS 16, 17, 30 & 31

(BEING A RESUBDIVISION OF LOTS 1, 3 THRU 13 AND OPEN SPACE LOTS 14 & 15 AS SHOWN ON PLATS ENTITLED "LACEY PROPERTY, LOTS 1 THRU 13 AND OPEN SPACE LOTS 14 THRU 17", PLAT Nos. 26657 - 26659)

ZONED: R-ED
PARCEL No.: 13
TAX MAP No.: 25 GRID No.: 1
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: OCT. 25, 2024
SHEET 15 OF 24

F-21-015

E:\2008\08003\Engr\Lacey\FINAL\SUBREVISED F-Plan 2-1-23\Redline 202408035 sheet 15 Drainage Area Mapping, 11/12/2024 3:37:17 PM, AutoCAD PDF (Smallest File).pc3,
1:1

DocuSign Envelope ID: 79E9DBFB-CDDB-4FF4-A258-614B911C4A9B

RETAINING WALL GENERAL NOTES

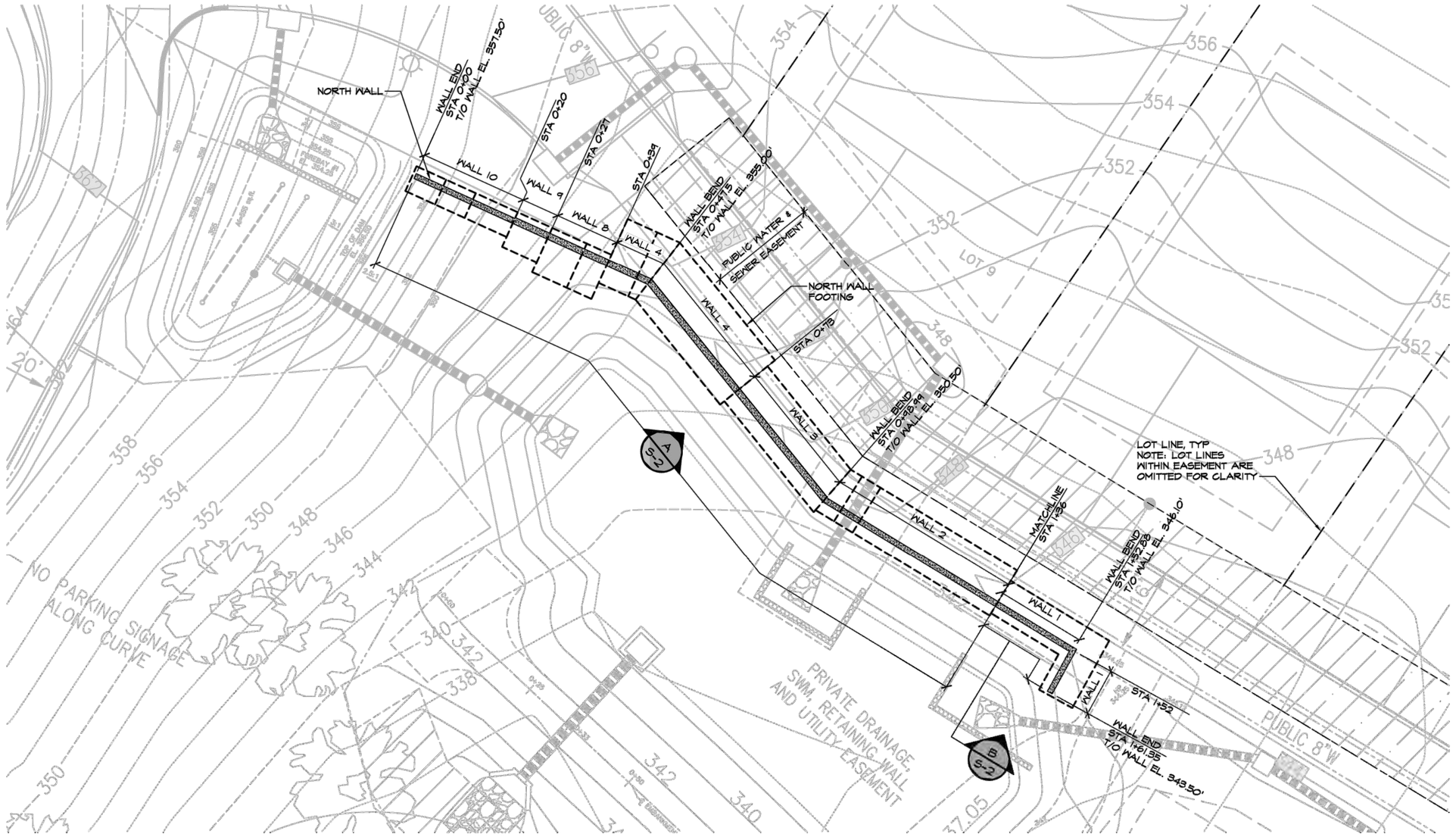
A. RETAINING WALLS SHALL ONLY BE CONSTRUCTED UNDER THE OBSERVATION OF A REGISTERED PROFESSIONAL ENGINEER AND A (NICET, MAGEL, OR EQUIVALENT) CERTIFIED SOILS TECHNICIAN.

B. THE REQUIRED BEARING PRESSURE BENEATH THE FOOTING OF THE WALL SHALL BE VERIFIED IN THE FIELD BY A CERTIFIED SOILS TECHNICIAN. TESTING DOCUMENTATION SHALL BE PROVIDED TO THE HOWARD COUNTY INSPECTOR PRIOR TO THE START OF CONSTRUCTION. THE REQUIRED TEST PROCEDURE SHALL BE THE DYNAMICCONE PENETROMETER TEST ASTM STP-399.

C. THE SUITABILITY OF FILL MATERIAL SHALL BE CONFIRMED BY THE ONSITE SOILS TECHNICIAN. EACH EIGHT (8) INCH LIFT SHALL BE COMPACTED TO A MINIMUM OF 95% STANDARD PROCTER DENSITY AND THE TESTING REPORT SHALL BE MADE AVAILABLE TO THE HOWARD COUNTY INSPECTOR UPON COMPLETION OF THE CONSTRUCTION.

D. FOR "CRITICAL" WALLS, ONE SOIL BORING SHALL BE REQUIRED EVERY 100' ALONG THE ENTIRE LENGTH OF THE WALL. COPIES OF ALL BORING REPORTS SHALL BE PROVIDED TO THE HOWARD COUNTY INSPECTOR PRIOR TO THE START OF CONSTRUCTION.

E. THE RETAINING WALLS SHALL BE PRIVATELY OWNED AND MAINTAINED BY THE HOME OWNER'S ASSOCIATION.



PARTIAL PLAN (NORTH)

SCALE: 1" = 15'-0"

NOTES:

1. LOCATION AND ELEVATION OF WALLS BASED ON CIVIL DRAWINGS PROVIDED BY FISHER, COLLINS & CARTER DATED 12/8/2022.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

DocuSigned by: 9/11/2023
CHIEF, BUREAU OF HIGHWAYS — DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING

DocuSigned by: 9/13/2023
CHIEF, DIVISION OF LAND DEVELOPMENT — DATE

DocuSigned by: 9/11/2023
CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE

OWNERS
CHARLES T LACEY SR (DECEASED) &
KARLOS LACEY CO-TRUSTEES
1235 WILD ROSE COURT
MARRIOTTSVILLE, MD 21104

DEVELOPER
LAND HOLDINGS LLC
C\O B. JAMES GREENFIELD
6420 AUTUMN SKY WAY
COLUMBIA, MD 21044
443-324-4732

PROJECT			SECTION/AREA		PARCEL
LACEY PROPERTY			N/A		13
PLAT NOS.	BLOCK NO.	ZONE	TAX MAP	ELEC. DIST.	CENSUS TR.
–	1	R-ED	25	SECOND	602900

LACEY PROPERTY
PARTIAL PLANS

ZONED: R-ED
PARCEL No.: 13
TAX MAP No.: 25 GRID No.: 1
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: 1" = 15'-0"

County File Reference: F-21-015

MRA
Buildings Group
MORRIS & RITCHIE ASSOCIATES, INC.
Architects, Engineers, Planners, Surveyors, and Landscape Architects
1220-C East Joppa Road
Suite 505
Towson, Maryland 21286
410-821-1690
410-821-1748 Fax

077

Lacey Property (Retaining Walls)

Ellicott City, Maryland

STATE OF MARYLAND — JAMES GREENFIELD — 30729 — REGISTERED PROFESSIONAL ENGINEER

PROFESSIONAL CERTIFICATION
I hear/by 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. 30729, Expiration Date: 07/11/2023.

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MORRIS AND RITCHIE ASSOC., INC.

NO.	REVISION	DATE

FILE	DRAWN	ISSUED
21040	JAG	03/08/23

SHEET TITLE
Partial Plans

SHEET NUMBER
S-1

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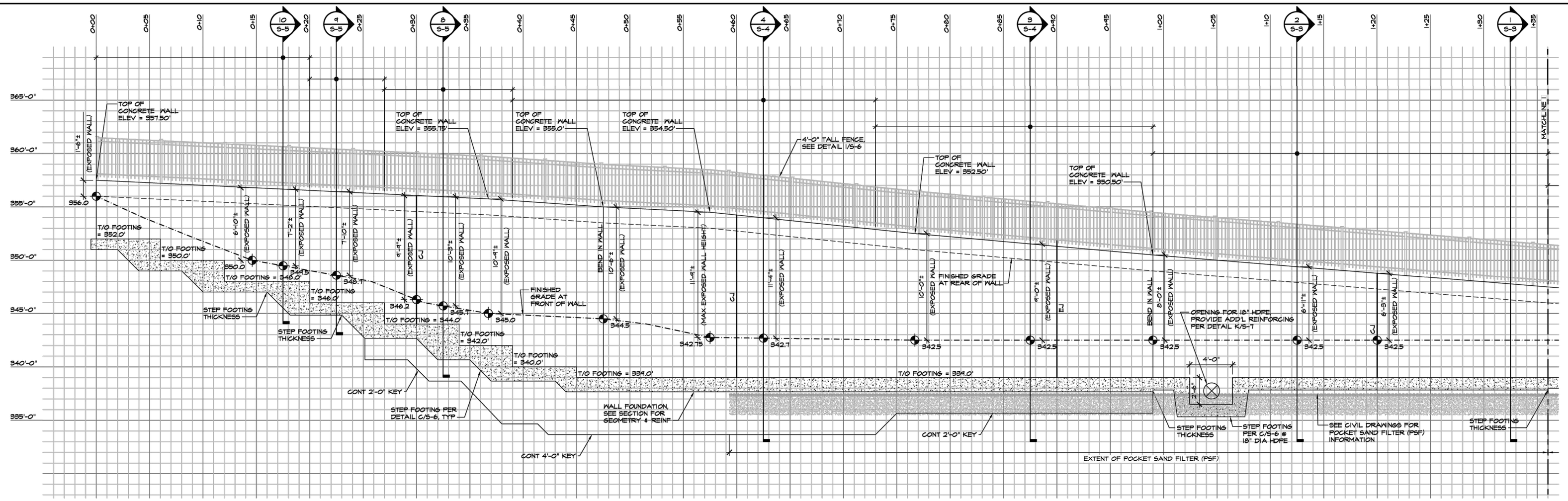
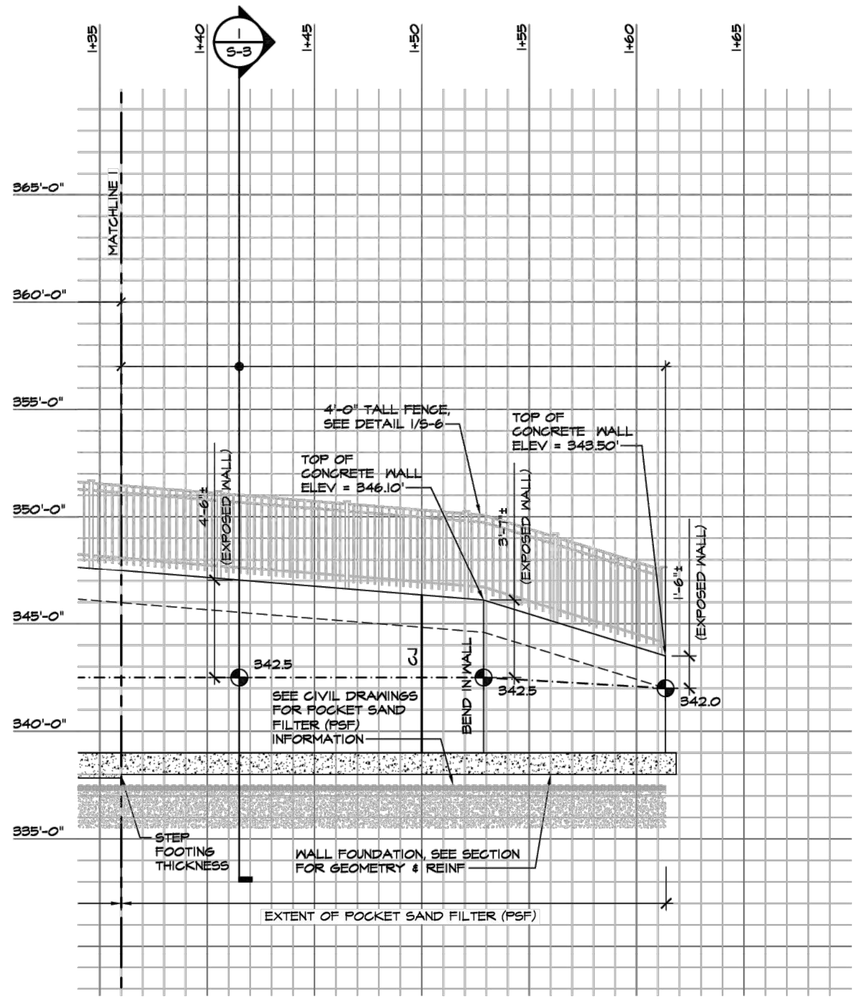


A S-1 NORTH RETAINING WALL ELEVATION 1
SCALE: 1" = 5'-0"

NOTES:

1. SEE CIVIL DRAWINGS FOR ADDITIONAL DETAILS.
2. "CJ" IN ELEVATION INDICATES LOCATION OF WALL CONSTRUCTION JOINT, SEE DETAIL H/S-6 FOR ADD'L INFORMATION.
3. "EJ" IN ELEVATION INDICATES LOCATION OF WALL CONSTRUCTION JOINT, SEE DETAIL G/S-6 FOR ADD'L INFORMATION.
4. "BEND IN WALL" IN ELEVATION INDICATES LOCATIONS OF WALL CORNERS, SEE DETAIL A/S-6 & E/S-6 FOR ADD'L INFORMATION.



B S-1 NORTH RETAINING WALL ELEVATION 2
SCALE: 1" = 5'-0"

NOTES:

1. SEE CIVIL DRAWINGS FOR ADDITIONAL DETAILS.
2. "CJ" IN ELEVATION INDICATES LOCATION OF WALL CONSTRUCTION JOINT, SEE DETAIL H/S-6 FOR ADD'L INFORMATION.
3. "EJ" IN ELEVATION INDICATES LOCATION OF WALL CONSTRUCTION JOINT, SEE DETAIL G/S-6 FOR ADD'L INFORMATION.
4. "BEND IN WALL" IN ELEVATION INDICATES LOCATIONS OF WALL CORNERS, SEE DETAIL A/S-6 & E/S-6 FOR ADD'L INFORMATION.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

DocuSigned by: 9/11/2023
CHIEF, BUREAU OF HIGHWAYS — DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING

DocuSigned by: 9/13/2023
CHIEF, DIVISION OF LAND DEVELOPMENT — DATE

DocuSigned by: 9/11/2023
CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE

OWNERS
CHARLES T LACEY SR (DECEASED) &
KARLOS LACEY CO-TRUSTEES
1235 WILD ROSE COURT
MARRIOTTSVILLE, MD 21104

DEVELOPER
LAND HOLDINGS LLC
C\O B. JAMES GREENFIELD
6420 AUTUMN SKY WAY
COLUMBIA, MD 21044
443-324-4732

PROJECT			SECTION/AREA		PARCEL
LACEY PROPERTY			N/A		13
PLAT NOS.	BLOCK NO.	ZONE	TAX MAP	ELEC. DIST.	CENSUS TR.
-	1	R-ED	25	SECOND	602900

LACEY PROPERTY
NORTH WALL ELEVATIONS

ZONED: R-ED
PARCEL No.: 13
TAX MAP No.: 25 GRID No.: 1
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: 1" = 5'-0"

County File Reference: F-21-015

MRA Buildings Group
MORRIS & RITCHIE ASSOCIATES, INC.
Architects, Engineers, Planners, Surveyors, and Landscape Architects
1220-C East Joppa Road
Suite 505
Towson, Maryland 21286
410-821-1690
410-821-1748 Fax

078

Lacey Property (Retaining Walls)

Ellicott City, Maryland

STATE OF MARYLAND — JAMES B. GREENFIELD — No. 30729 — PROFESSIONAL ENGINEER

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. 30729, Expiration Date: 07/11/2023.

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NO.	REVISION	DATE

FILE	DRAWN	ISSUED
21040	JAG	03/08/23

SHEET TITLE
North Wall Elevations

SHEET NUMBER
S-2

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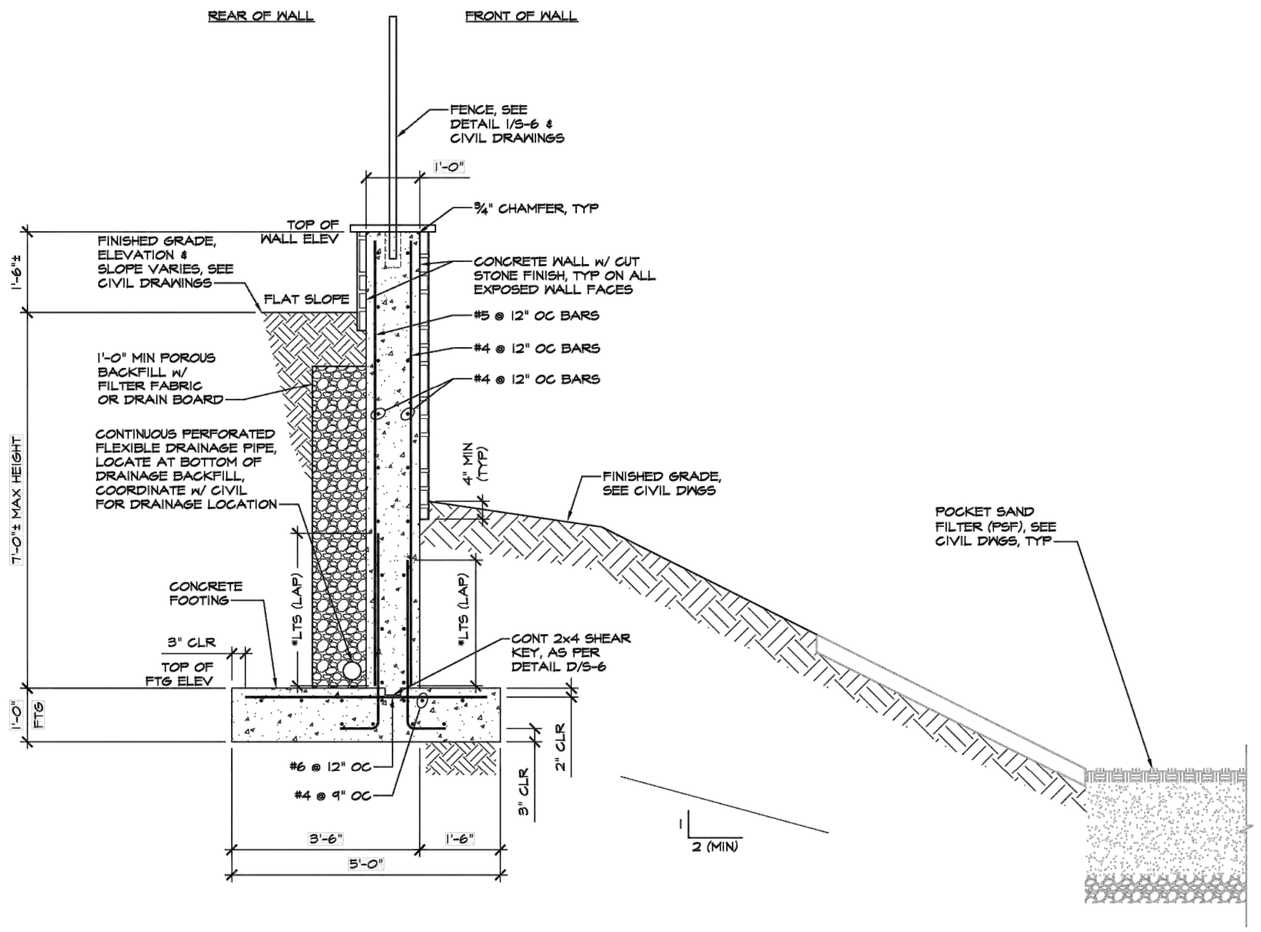
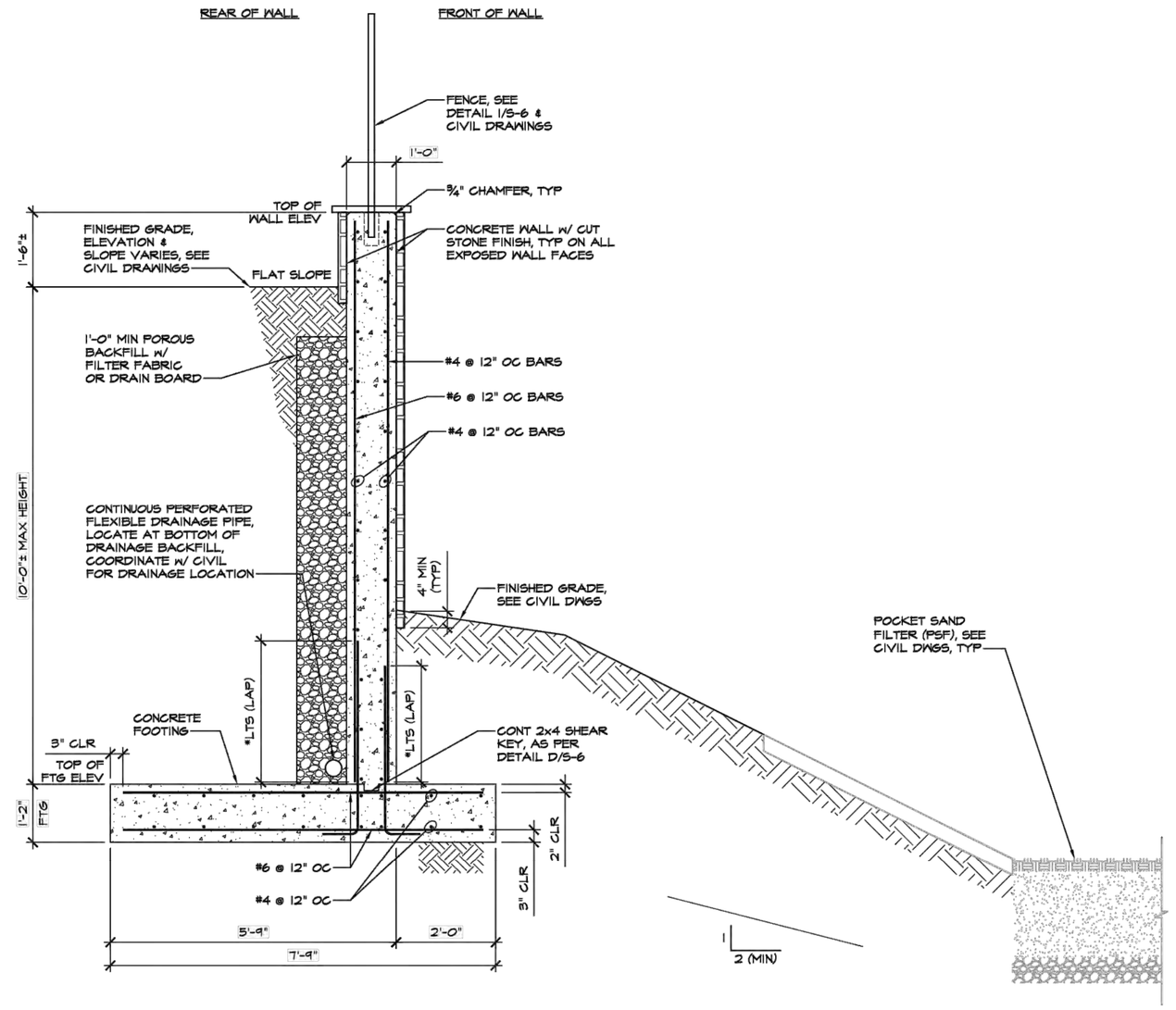


1 S-2 NORTH RETAINING WALL SECTION AT POCKET SAND FILTER - WALL 1

SCALE: ½" = 1'-0"



2 S-2 NORTH RETAINING WALL SECTION AT POCKET SAND FILTER - WALL 2

SCALE: ½" = 1'-0"

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

DocuSigned by: [signature] 9/11/2023

CHIEF, BUREAU OF HIGHWAYS — DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING

DocuSigned by: [signature] 9/13/2023

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE

DocuSigned by: [signature] 9/11/2023

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE

OWNERS

CHARLES T LACEY SR (DECEASED) &
KARLOS LACEY CO-TRUSTEES
1235 WILD ROSE COURT
MARRIOTTSVILLE, MD 21104

DEVELOPER

LAND HOLDINGS LLC
C\O B. JAMES GREENFIELD
6420 AUTUMN SKY WAY
COLUMBIA, MD 21044
443-324-4732

PROJECT			SECTION/AREA		PARCEL
LACEY PROPERTY			N/A		13
PLAT NOS.	BLOCK NO.	ZONE	TAX MAP	ELEC. DIST.	CENSUS TR.
-	1	R-ED	25	SECOND	602900

LACEY PROPERTY
NORTH WALL SECTIONS

ZONED: R-ED
PARCEL No.: 13
TAX MAP No.: 25 GRID No.: 1
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: 1/2" = 1'-0"

County File Reference: F-21-015

MRA Buildings Group
MORRIS & RITCHIE ASSOCIATES, INC.
Architects, Engineers, Planners, Surveyors, and Landscape Architects
1220-C East Joppa Road
Suite 505
Towson, Maryland 21286
410-821-1690
410-821-1748 Fax

079

Lacey Property (Retaining Walls)

Ellicott City, Maryland

STATE OF MARYLAND — JAMES BURNS GREENFIELD — 30729 — PROFESSIONAL ENGINEER

PROFESSIONAL CERTIFICATION

I hearby 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. 30729, Expiration Date: 07/1/2023.

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MORRIS AND RITCHIE ASSOC., INC.

NO.	REVISION	DATE

FILE	DRAWN	ISSUED
21040	JAG	03/08/23

SHEET TITLE

North Wall Sections

SHEET NUMBER

S-3

Sheet 18 of 24

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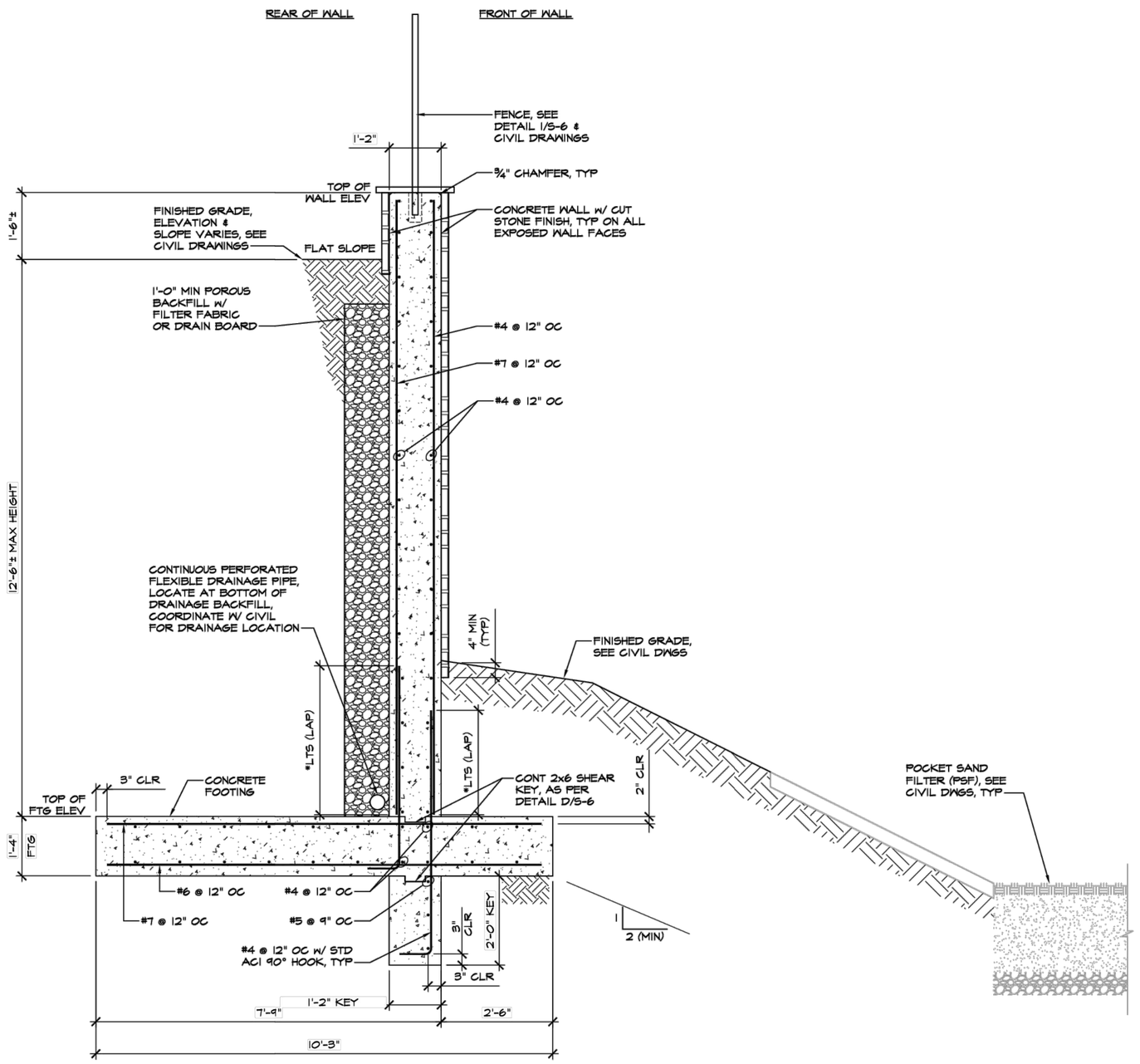
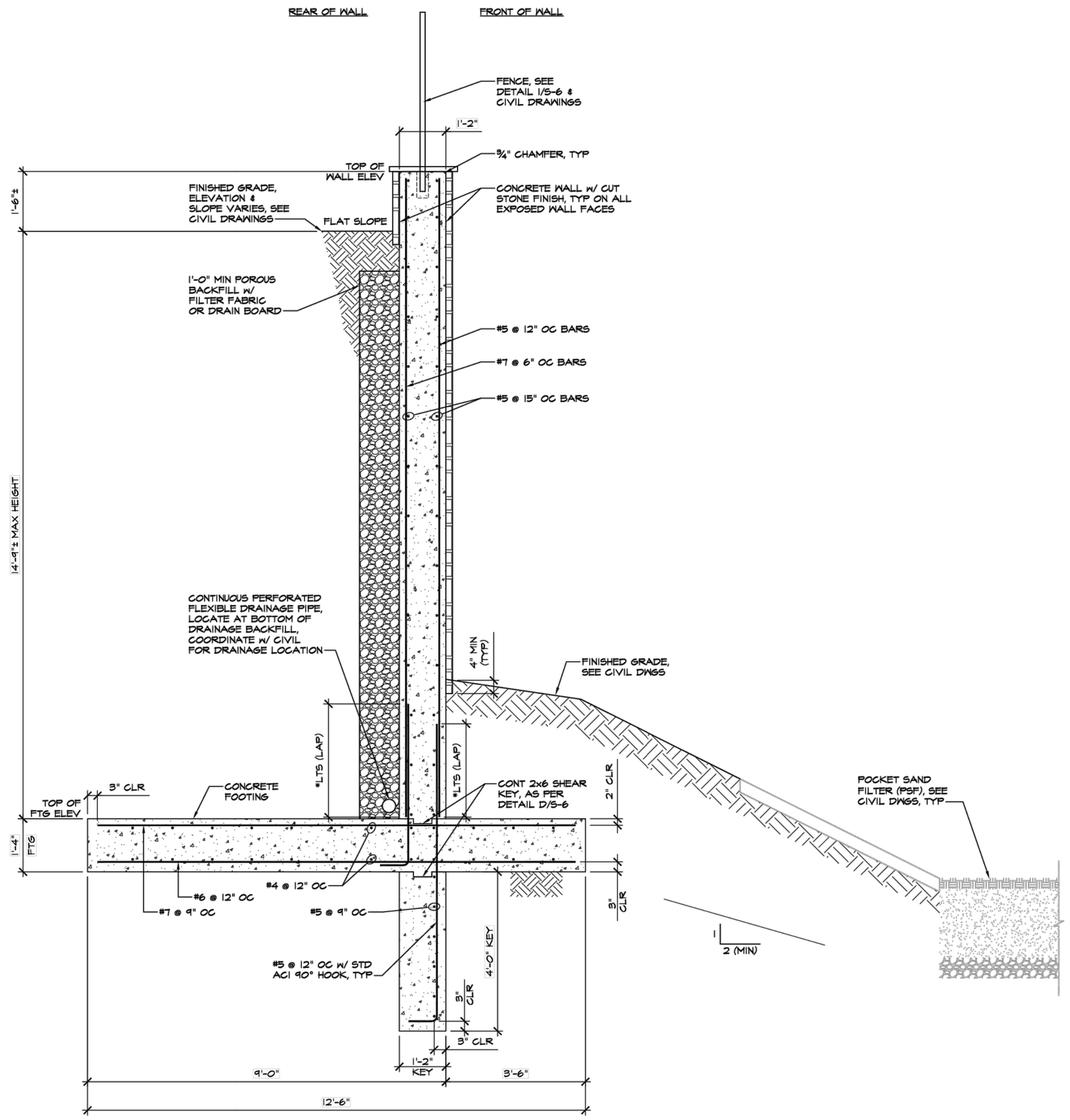


3 S-2 NORTH RETAINING WALL SECTION AT POCKET SAND FILTER - WALL 3

SCALE: ½" = 1'-0"



4 S-2 NORTH RETAINING WALL SECTION AT POCKET SAND FILTER - WALL 4

SCALE: 1/2" = 1'-0"

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

DocuSigned by: [signature] 9/11/2023

CHIEF, BUREAU OF HIGHWAYS — DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING

DocuSigned by: [signature] 9/13/2023

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE

DocuSigned by: (Chad) Edmondson 9/11/2023

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE

OWNERS
CHARLES T LACEY SR (DECEASED) &
KARLOS LACEY CO-TRUSTEES
1235 WILD ROSE COURT
MARRIOTTSVILLE, MD 21104

DEVELOPER
LAND HOLDINGS LLC
C\O B. JAMES GREENFIELD
6420 AUTUMN SKY WAY
COLUMBIA, MD 21044
443-324-4732

PROJECT			SECTION/AREA	ELEC. DIST.	PARCEL
LACEY PROPERTY			N/A		13
PLAT NOS.	BLOCK NO.	ZONE	TAX MAP	ELEC. DIST.	CENSUS TR.
–	1	R-ED	25	SECOND	602900

LACEY PROPERTY
NORTH WALL SECTIONS

ZONED: R-ED
PARCEL No.: 13
TAX MAP No.: 25 GRID No.: 1
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: 1/2" = 1'-0"

County File Reference: F-21-015

MRA 080
Buildings Group
MORRIS & RITCHIE ASSOCIATES, INC.
Architects, Engineers, Planners, Surveyors, and Landscape Architects
1220-C East Joppa Road
Suite 505
Towson, Maryland 21286
410-821-1690
410-821-1748 Fax

Lacey Property (Retaining Walls)

Ellicott City, Maryland

STATE OF MARYLAND · JAMES BUCHANAN GREENFIELD · No. 30729 · PROFESSIONAL ENGINEER

PROFESSIONAL CERTIFICATION
I hearby 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. 30729, Expiration Date: 07/11/2023.

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NO.	REVISION	DATE

FILE	DRAWN	ISSUED
21040	JAG	03/08/23

SHEET TITLE
North Wall Sections

SHEET NUMBER
S-4

Sheet 19 of 24

V:\bg_PROJECTS\21000-21099\21040 - Lacey Property Retaining Wall\300 Structural\306 Construction Documents\Structural Set S-X
3/8/2023

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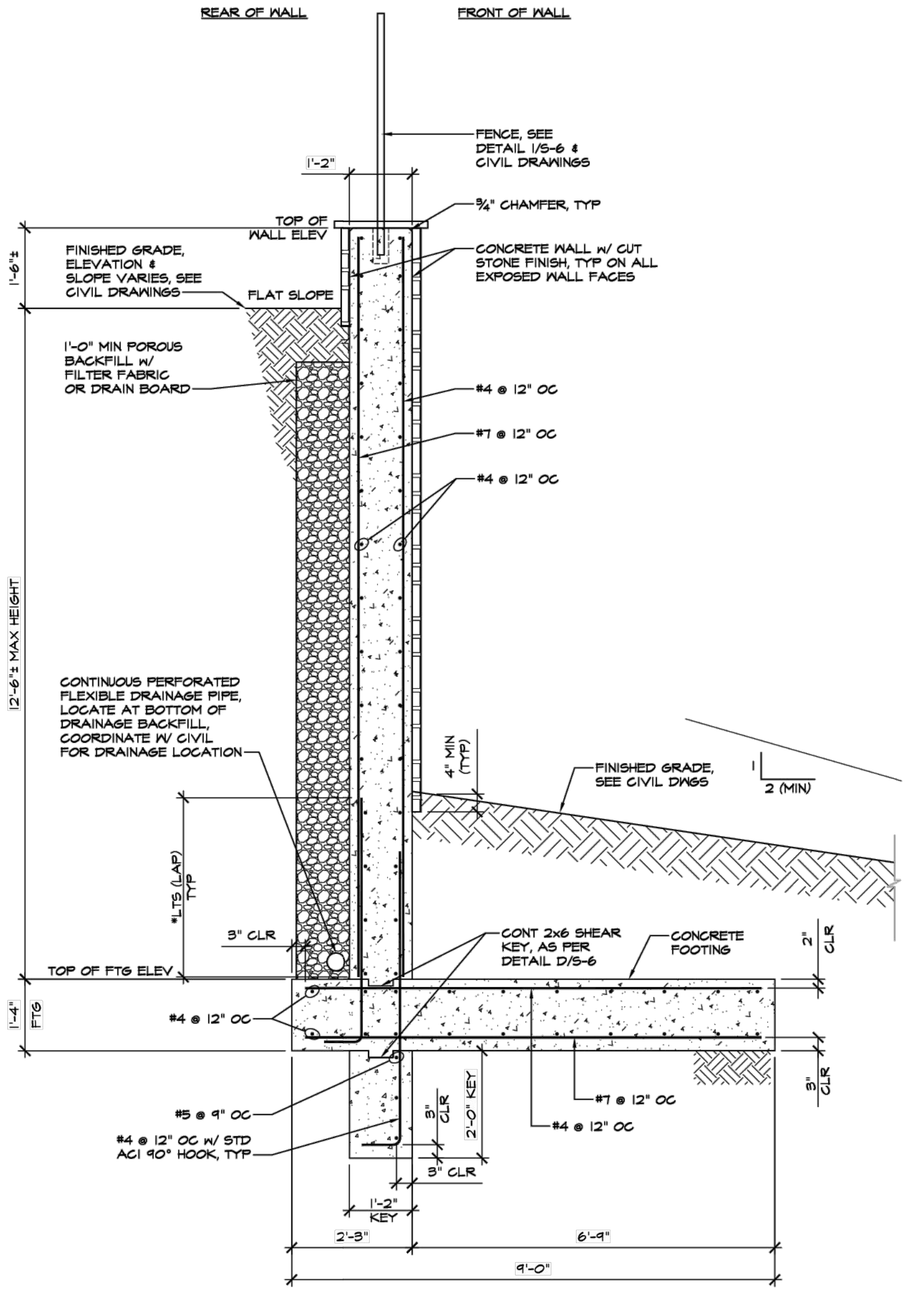
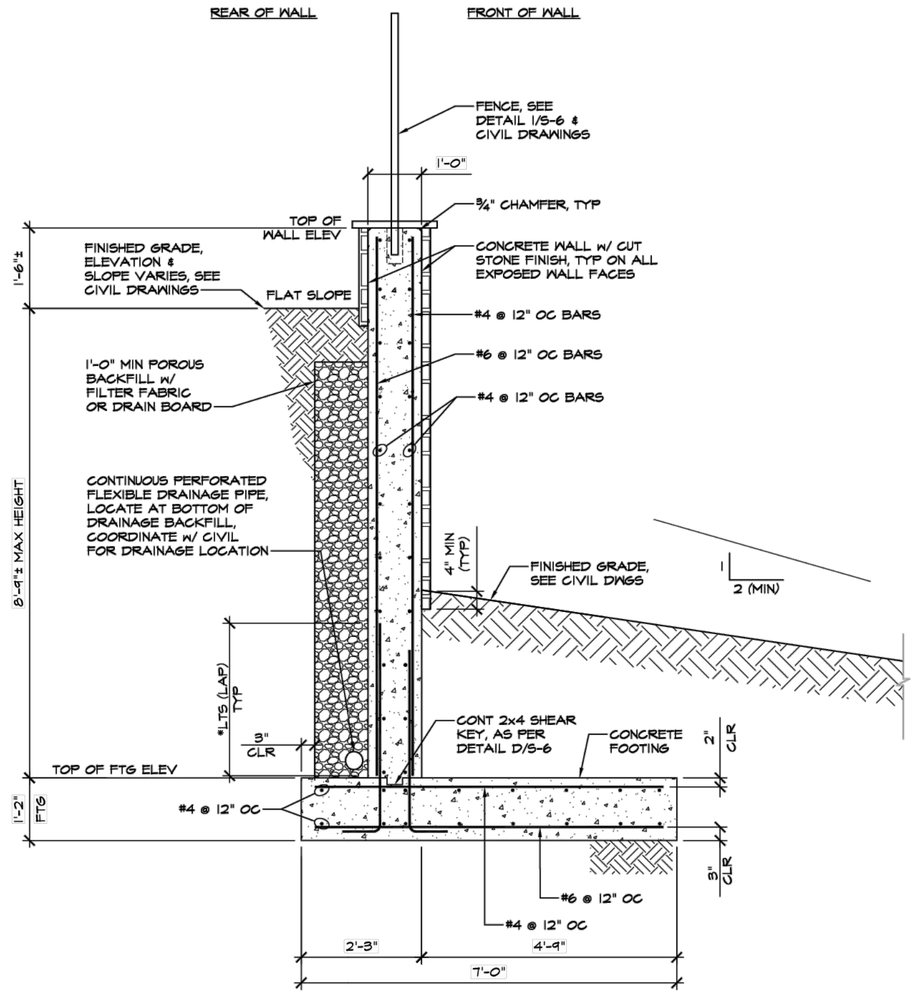


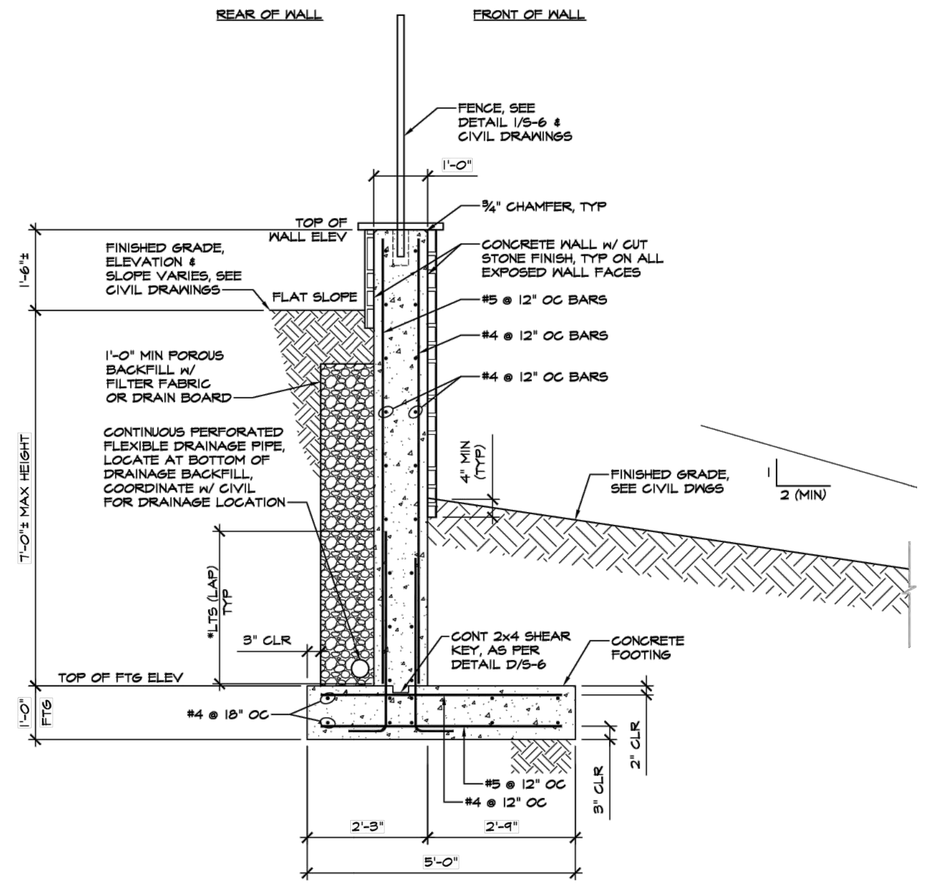
8 S-2 NORTH RETAINING WALL SECTION - WALL 8

SCALE: ½" = 1'-0"



9 S-2 NORTH RETAINING WALL SECTION - WALL 9

SCALE: ½" = 1'-0"



10 S-2 NORTH RETAINING WALL SECTION - WALL 10

SCALE: ½" = 1'-0"

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

DocuSigned by: [signature] 9/11/2023

CHIEF, BUREAU OF HIGHWAYS — DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING

DocuSigned by: [signature] 9/13/2023

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE

DocuSigned by: [signature] 9/11/2023

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE

OWNERS

CHARLES T LACEY SR (DECEASED) &
KARLOS LACEY CO-TRUSTEES
1235 WILD ROSE COURT
MARRIOTTSVILLE, MD 21104

DEVELOPER

LAND HOLDINGS LLC
C\O B. JAMES GREENFIELD
6420 AUTUMN SKY WAY
COLUMBIA, MD 21044
443-324-4732

PROJECT			SECTION/AREA		PARCEL
LACEY PROPERTY			N/A		13
PLAT NOS.	BLOCK NO.	ZONE	TAX MAP	ELEC. DIST.	CENSUS TR.
–	1	R-ED	25	SECOND	602900

LACEY PROPERTY
NORTH WALL SECTIONS

ZONED: R-ED
PARCEL No.: 13
TAX MAP No.: 25 GRID No.: 1
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: 1/2" = 1'-0"

County File Reference: F-21-015

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410-821-1748 Fax

Lacey Property (Retaining Walls)

Ellicott City, Maryland

PROFESSIONAL CERTIFICATION

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NO.	REVISION	DATE

FILE	DRAWN	ISSUED
21040	JAG	03/08/23

SHEET TITLE

North Wall Sections

SHEET NUMBER

S-5

Sheet 20 of 24

V:\Eng_PROJECTS\21000-21099\21040 - Lacey Property Retaining Wall\300 Structural\306 Construction Documents\Structural Set S-X
3/7/2023

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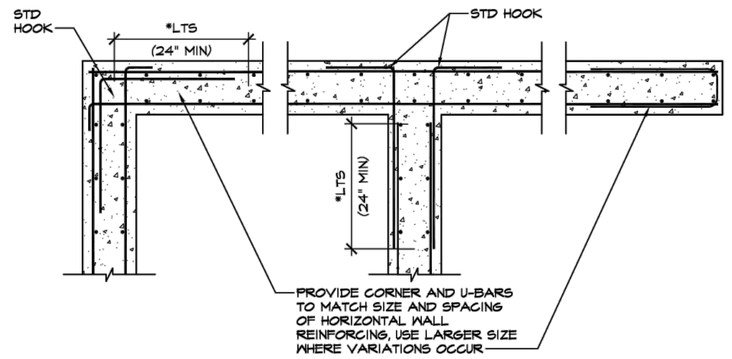
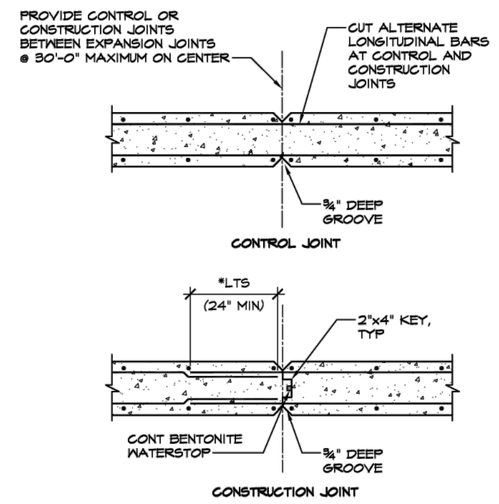


A CONCRETE WALL CORNER REINFORCING
SCALE: NTS



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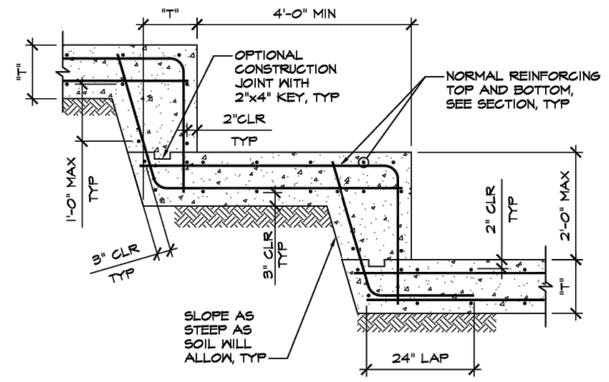
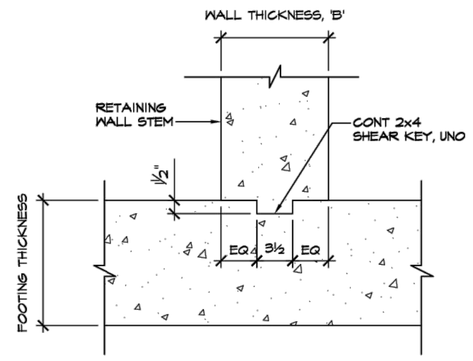
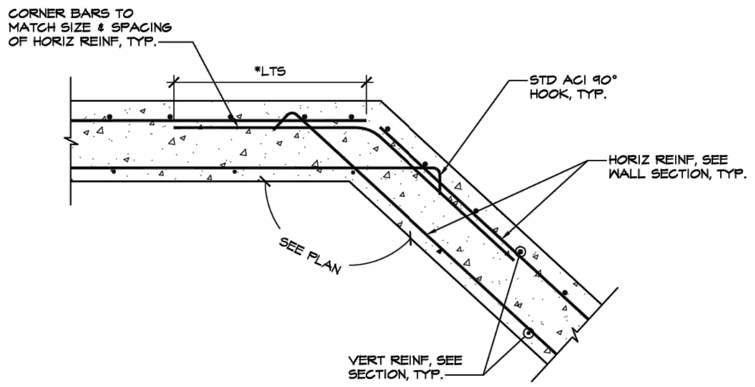


C TYPICAL STEPPED RETAINING WALL FOOTING
SCALE: NTS

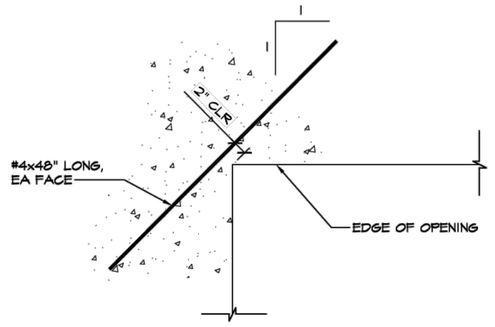


*REINFORCING NOT SHOWN FOR CLARITY

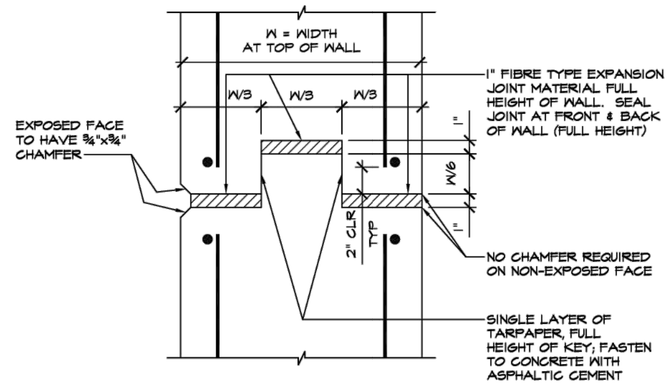
D RETAINING WALL KEY
SCALE: NTS



E REINFORCING @ BEND IN WALL
SCALE: NTS



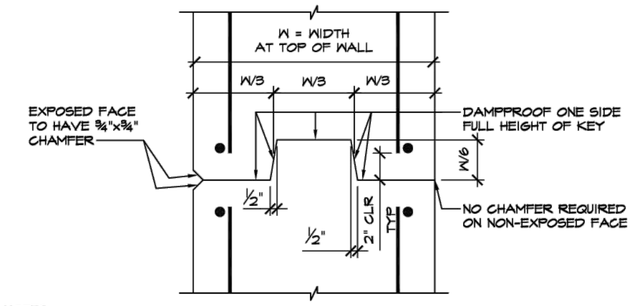
F ADDITIONAL REINFORCING
SCALE: NTS



NOTES:

1. CONCRETE RETAINING WALLS SHALL HAVE EXPANSION JOINTS WITH 1" SPONGE TYPE MATERIAL A MAXIMUM OF EVERY 90'-0".
2. STOP KEY 9" BELOW TOP OF WALL, CHAMFER TO CONTINUE TO TOP OF WALL.
3. REINFORCING STEEL SHALL NOT PASS THROUGH EXPANSION JOINT.
4. ALL KEYS ARE NOMINAL SIZE.
5. ONLY PLACE EXPANSION JOINTS IN STEMS (NO JOINT IN FOOTINGS).

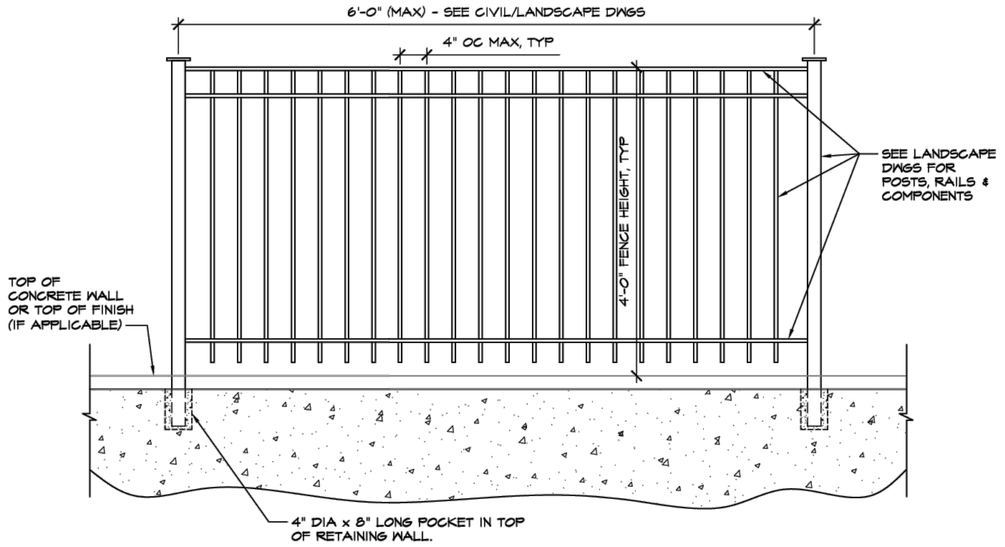
G CONCRETE WALL EXPANSION JOINTS
SCALE: NTS



NOTES:

1. CONCRETE RETAINING WALLS SHALL HAVE CONTROL/CONSTRUCTION JOINTS SPACED ROUGHLY 3 TIMES THE WALL HEIGHT NOT TO EXCEED 30'-0".
2. STOP KEY 9" BELOW TOP OF WALL, CHAMFER TO CONTINUE TO TOP OF WALL.
3. REINFORCING STEEL SHALL NOT PASS THROUGH CONSTRUCTION JOINT.
4. ALL KEYS ARE NOMINAL SIZE.
5. ONLY PLACE CONTROL/CONSTRUCTION JOINTS IN STEMS (NO JOINT IN FOOTINGS).

H CONCRETE WALL CONTROL/CONSTRUCTION JOINTS
SCALE: NTS



HANDRAIL ASSEMBLY SHALL MEET ALL CODE REQUIREMENTS, INCLUDING HAVING CAPACITY TO SUPPORT THE FOLLOWING LOADS (LOADS A & B DO NOT ACT CONCURRENT):

LOAD A = 200 LBS CONCENTRATED LOAD (IN ANY DIRECTION AT ANY POINT ALONG TOP RAIL)

LOAD B = 50 LB/FT (IN ANY DIRECTION APPLIED ALONG TOP RAIL).

PICKETS SHALL BE SPACED A MAXIMUM OF 4" OC, TYP.

I RETAINING WALL WITH HANDRAIL
SCALE: ¾" = 1'-0"

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

DocuSigned by: [signature] 9/11/2023
CHIEF, BUREAU OF HIGHWAYS — DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING

DocuSigned by: [signature] 9/13/2023
CHIEF, DIVISION OF LAND DEVELOPMENT — DATE

DocuSigned by: Chad Edmondson 9/11/2023
CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE

OWNERS
CHARLES T LACEY SR (DECEASED) &
KARLOS LACEY CO-TRUSTEES
1235 WILD ROSE COURT
MARRIOTTSVILLE, MD 21104

DEVELOPER
LAND HOLDINGS LLC
C\O B. JAMES GREENFIELD
6420 AUTUMN SKY WAY
COLUMBIA, MD 21044
443-324-4732

PROJECT			SECTION/AREA	ELEC. DIST.	PARCEL
LACEY PROPERTY			N/A		13
PLAT NOS.	BLOCK NO.	ZONE	TAX MAP		CENSUS TR.
–	1	R-ED	25	SECOND	602900

LACEY PROPERTY
TYPICAL DETAILS

ZONED: R-ED
PARCEL No.: 13
TAX MAP No.: 25 GRID No.: 1
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN

County File Reference: F-21-015

MRA 082
Buildings Group
MORRIS & RITCHIE ASSOCIATES, INC.
Architects, Engineers, Planners, Surveyors, and Landscape Architects
1220-C East Joppa Road
Suite 505
Towson, Maryland 21286
410-821-1690
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Lacey Property (Retaining Walls)

Ellicott City, Maryland

STATE OF MARYLAND — JAMES BURNS GREENFIELD — No. 30729 — PROFESSIONAL ENGINEER — 07/11/2023

PROFESSIONAL CERTIFICATION
I hearby 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. 30729, Expiration Date: 07/11/2023.

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MORRIS AND RITCHIE ASSOC., INC.

NO.	REVISION	DATE

FILE	DRAWN	ISSUED
21040	JAG	03/08/23

SHEET TITLE
Typical Details

SHEET NUMBER
S-6

Sheet 21 of 24

V:\bg_PROJECTS\21000-21099\21040 - Lacey Property Retaining Wall\300 Structural\306 Construction Documents\Structural Set S-X
9/6/2023

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STRUCTURAL NOTES

BUILDING CODES

A. ALL CONSTRUCTION SHALL CONFORM WITH:
- THE INTERNATIONAL BUILDING CODE (IBC-2015) AND ALL APPLICABLE SUPPLEMENTS.
- MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES (ASCE7-10).

B. IN ADDITION, ALL CONSTRUCTION SHALL CONFORM WITH THE GOVERNING LOCAL BUILDING CODE.

DESIGN LOAD

A. THE DESIGN DEAD LOADING FOR ALL FRAMING IS BASED ON THE CONSTRUCTION MATERIALS SHOWN ON THE DRAWINGS AND INDICATED IN THE SPECIFICATIONS.

B. RISK CATEGORY: I

C. THE CONTRACTOR SHALL NOT STORE ANY CONSTRUCTION MATERIALS OR UNDERTAKE ANY CONSTRUCTION OPERATION WHICH WILL EXCEED THE DESIGN LIVE LOADINGS NOTED.

D. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE DESIGN, INSTALLATION AND REMOVAL OF TEMPORARY BRACING AND CONSTRUCTION SUPPORTS FOR NEW AND EXISTING STRUCTURES, AS REQUIRED TO COMPLETE THE PROJECT. THE STABILITY OF THE STRUCTURE IS DEPENDENT UPON THE DIAPHRAGM ACTION OF THE FLOORS AND ROOF. THE CONTRACTOR IS COMPLETELY RESPONSIBLE FOR THE METHOD OF CONSTRUCTION AND SHALL PROVIDE ALL TEMPORARY BRACING AND SHORING REQUIRED TO MAINTAIN THE STABILITY OF THE STRUCTURE AND TO SUPPORT CONSTRUCTION LOADS DURING CONSTRUCTION. CONTRACTOR SHALL RETAIN STRUCTURAL ENGINEER LICENSED IN THE STATE IN WHICH PROJECT IS LOCATED TO DESIGN TEMPORARY BRACING AND CONSTRUCTION SUPPORTS.

MISCELLANEOUS

A. SHOP DRAWINGS FOR ALL STRUCTURAL ELEMENTS SHOWN ON THE CONTRACT DOCUMENTS MUST BE SUBMITTED BY THE CONTRACTOR OR OWNER FOR REVIEW BY THE ENGINEER. IF THE CONTRACTOR OR OWNER FAILS TO SUBMIT THE SHOP DRAWINGS, THE ENGINEER WILL NOT BE RESPONSIBLE FOR STRUCTURAL CERTIFICATION AND DESIGN OF THE PROJECT. THE SHOP DRAWINGS SHALL INDICATE ANY DEVIATIONS OR OMISSIONS FROM THE CONTRACT DOCUMENTS. THE GENERAL CONTRACTOR SHALL REVIEW ALL SHOP DRAWINGS PRIOR TO SUBMISSION AND MAKE ALL CORRECTIONS DEEMED NECESSARY.

B. SEE CIVIL CONTRACT DOCUMENTS FOR ADDITIONAL INFORMATION RELATING TO THE COORDINATION OF STRUCTURAL COMPONENTS.

C. THE CONTRACTOR SHALL REVIEW THE CIVIL DRAWINGS FOR LOCATION AND DIMENSION OF CHASES, INSERTS, OPENINGS, SLEEVES, DEPRESSIONS AND OTHER PROJECT REQUIREMENTS WHICH IMPACT THE STRUCTURAL COMPONENTS. THE STRUCTURAL CONSTRUCTION DRAWINGS DO NOT SHOW ALL OPENINGS REQUIRED. ADDITIONAL OPENINGS, BLOCKOUTS AND SLEEVES MAY BE REQUIRED BY OTHER DISCIPLINES AND SHALL BE CONSTRUCTED USING THE TYPICAL DETAILS AND/OR CRITERIA INDICATED THE STRUCTURAL DRAWINGS. OPENINGS REQUIRED BUT NOT SHOWN ON THE STRUCTURAL DRAWINGS MUST BE APPROVED BY THE STRUCTURAL ENGINEER.

D. IN CASES OF CONFLICT BETWEEN THE DRAWINGS AND/OR SPECIFICATIONS AND OTHER DISCIPLINES OR EXISTING CONDITIONS, CONTRACTOR SHALL NOTIFY THE DESIGN PROFESSIONALS AND OBTAIN CLARIFICATION PRIOR TO BIDDING AND PROCEEDING WITH WORK.

E. THE CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS SHOWN ON THE CONTRACT DRAWINGS BEFORE PROCEEDING WITH CONSTRUCTION. ALL DISCREPANCIES AND OMISSIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT.

F. THE CONTRACTOR SHALL NOT SUBMIT REPRODUCTIONS OF THE STRUCTURAL CONTRACT DOCUMENTS AS SHOP DRAWINGS.

G. SCALES SHOWN ON THE STRUCTURAL CONTRACT DRAWINGS ARE FOR GENERAL INFORMATION ONLY. DIMENSIONAL INFORMATION SHALL NOT BE OBTAINED BY SCALING THE DRAWINGS.

H. APPLY DETAILS, SECTIONS AND NOTES ON THE DRAWINGS WHERE CONDITIONS ARE SIMILAR TO THOSE INDICATED BY DETAIL, DETAIL TITLE OR NOTE.

I. CENTERLINES OF FOUNDATIONS COINCIDE WITH GRID LINE INTERSECTIONS, UNLESS NOTED OTHERWISE.

J. CENTERLINE OF WALLS COINCIDE WITH CENTERLINES OF FOUNDATIONS, UNLESS OTHERWISE NOTED.

K. THE CONTRACTOR SHALL VERIFY THAT CONSTRUCTION LOADS DO NOT EXCEED THE CAPACITY OF THE STRUCTURE AT THE TIME THE LOAD IS APPLIED.

L. PROVIDE SHORING AND PROTECTION FOR EXCAVATION BANKS AS NECESSARY TO PREVENT CAVINS AND COMPLY WITH ALL APPLICABLE OSHA RULES AND REGULATIONS.

RETAINING WALLS

A. FOOTINGS FOR ALL RETAINING WALLS HAVE BEEN DESIGNED FOR AN ASSUMED NET ALLOWABLE SOIL BEARING PRESSURE OF 2000 PSF. THE ALLOWABLE SOIL BEARING PRESSURE SHALL BE FIELD VERIFIED BY A REGISTERED GEOTECHNICAL ENGINEER AND APPROVED PRIOR TO PLACING FOOTINGS. SHOULD THE ACTUAL SOIL BEARING PRESSURE BE LESS THAN 2000 PSF, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER.

B. RETAINING WALLS HAVE BEEN DESIGNED WITH BACKFILL MATERIAL HAVING THE FOLLOWING CHARACTERISTICS:

γ	=	120 PCF
φ	=	30 DEGREES
Ka	=	0.33 (+EFFECTS DUE TO INCLINED EARTH LOAD)
COEFFICIENT OF FRICTION	=	0.35
COHESION	=	0

IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO INSURE THE BACK FILL MATERIAL MEETS THESE CHARACTERISTICS.

C. THE RETAINING WALLS HAVE BEEN DESIGNED FOR THE FOLLOWING SURCHARGE LOADS IN ADDITION TO THE LATERAL LOADS ASSOCIATED WITH THE BACKFILL MATERIAL ABOVE:

SURCHARGE = 200 PSF

D. RETAINING WALLS HAVE BEEN DESIGNED FOR THE FOLLOWING MINIMUM FACTORS OF SAFETY:

SLIDING	1.5
OVERTURNING	2.0

E. CONSTRUCTION OF ALL RETAINING WALLS SHALL BE PERFORMED UNDER THE SUPERVISION OF A REGISTERED GEOTECHNICAL ENGINEER.

F. ALL RETAINING WALLS SHALL BE BRACED AND SHORED AS REQUIRED DURING BACKFILLING. BOTH SUPPORTING ELEMENTS SHALL BE IN PLACE AND DEVELOPING FULL REQUIRED STRENGTH PRIOR TO BACK FILLING OF WALLS SUPPORTED AT TOP AND BOTTOM.

J. THE CONTRACTOR IS RESPONSIBLE FOR NOTIFYING IMMEDIATELY THE GEOTECHNICAL ENGINEER OF RECORD IF SOIL OR SITE CONDITIONS ARE NOT AS NOTED ON THE APPROVED RETAINING WALL PLANS OR IF GROUND WATER IS ENCOUNTERED DURING CONSTRUCTION.

K. SUBGRADE CONDITIONS NOT MEETING THE REQUIRED STRENGTH (ALLOWABLE SOIL BEARING PRESSURE DESCRIBED ABOVE) SHALL BE REMOVED AND REPLACED IN ACCORDANCE WITH THE RECOMMENDATIONS OF GEOTECHNICAL ENGINEER OF RECORD.

L. CONSTRUCTION JOINT BETWEEN WALL AND FOOTING SHALL BE ROUGH FLOATED SUFFICIENTLY TO THOROUGHLY CONSOLIDATE THE SURFACE AND SHALL BE INTENTIONALLY LEFT IN A ROUGHENED CONDITION. ALL KEYS ARE NOMINAL SIZE.

CAST IN PLACE CONCRETE

A. ALL CONCRETE CONSTRUCTION SHALL CONFORM TO THE "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS (ACI 301)", AND TO THE "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE (ACI 318)".

B. IN ADDITION TO THE ABOVE, ALL CONCRETE WORK SHALL CONFORM TO THE FOLLOWING:

RECOMMENDED PRACTICE FOR HOT WEATHER CONCRETING (ACI 305).
RECOMMENDED PRACTICE FOR COLD WEATHER CONCRETING (ACI 306).
RECOMMENDED PRACTICE FOR CONCRETE FORMWORK (ACI 347).
STANDARD SPECIFICATION FOR TOLERANCES FOR CONCRETE CONSTRUCTION AND MATERIALS (ACI 117).
CHEMICAL ADMIXTURES FOR CONCRETE (ACI 212.3).
STANDARD SPECIFICATION FOR CURING CONCRETE (ACI 308.1).
CODE REQUIREMENTS FOR ENVIRONMENTAL ENGINEERING CONCRETE STRUCTURES AND COMMENTARY (ACI 350).

C. ALL CONCRETE EXPOSED TO PUBLIC VIEW SHALL CONFORM TO THE REQUIREMENTS FOR ARCHITECTURAL CONCRETE CONTAINED IN ACI 301.

D. ALL CONCRETE, UNLESS NOTED OTHERWISE, SHALL BE NORMAL WEIGHT STONE AGGREGATE CONCRETE HAVING THE FOLLOWING MINIMUM 28 DAY COMPRESSIVE STRENGTHS:

	F'c	MAX w/c RATIO	SLUMP	AIR CONTENT
WALLS & FOOTINGS	4000 PSI	0.45	4"	6.0%

ALL CONCRETE EXPOSED TO WEATHER SHALL HAVE AN AIR ENTRAINMENT OF 6% +/- 1%. NO ADMIXTURES CONTAINING CALCIUM CHLORIDE SHALL BE PERMITTED. MAXIMUM AGGREGATE SIZE SHALL BE 1", AND MAXIMUM SLUMP SHALL BE 4", 3" FOR SLABS ON GRADE. ALL CONCRETE, EXCEPT FOOTINGS, SHALL CONTAIN A WATER REDUCING ADMIXTURE. PORTLAND CEMENT SHALL CONFORM TO ASTM C150 AND NORMAL WEIGHT AGGREGATES SHALL CONFORM ASTM C33.

E. ALL CONCRETE MIX DESIGNS, INCLUDING CEMENT CONTENT, WATER CEMENT RATIO, FINE AND COARSE AGGREGATE CONTENT AND ALL ADMIXTURES, SHALL BE REVIEWED BY ENGINEER PRIOR TO PLACING FIRST CONCRETE.

F. ALL CONCRETE SHALL BE SAMPLED AND TESTED BY THE TESTING AGENCY. THE CONTRACTOR SHALL NOTIFY THE TESTING AGENCY 48 HOURS PRIOR TO THE PLACING OF ANY CONCRETE. TESTING SHALL BE IN ACCORDANCE WITH ASTM C172.

G. THE CONCRETE STRUCTURE SHALL NOT SUPPORT THE DESIGN LIVE LOAD FOR A MINIMUM OF 28 DAYS AND ALL SHORING AND RE-SHORING REQUIRED TO SUPPORT THE CONCRETE STRUCTURE DURING CONSTRUCTION SHALL BE DESIGNED AND PROVIDED BY THE CONTRACTOR. SHOP DRAWINGS, SIGNED AND SEALED BY A REGISTERED ENGINEER IN THE STATE OF MARYLAND, SHALL BE SUBMITTED FOR REVIEW. SHOP DRAWINGS SHALL INDICATE THE TYPE, EXTENT, SIZE, AND LOCATION OF ALL SHORING AND RE-SHORING AS WELL AS THE SEQUENCE OF CONSTRUCTION.

H. GROUND BLAST FURNACE SLAG MAY BE USED TO REPLACE UP TO 50 PERCENT OF THE PORTLAND CEMENT IN A CONCRETE MIX, AND FLY ASH OR POZZOLAN MAY BE USED TO REPLACE UP TO 25 PERCENT OF PORTLAND CEMENT, SUBJECT TO THE APPROVAL OF THE STRUCTURAL ENGINEER AND SHALL CONFORM TO ASTM C494.

I. ALL REINFORCING BARS SHALL BE NEW BILLET STEEL CONFORMING TO ASTM A615 GRADE 60 (f_y = 60 KSI).

J. LAP ALL REINFORCING BARS A MINIMUM OF 48 BAR DIAMETERS, UNLESS OTHERWISE INDICATED.

K. ALL REINFORCING SHALL BE DETAILED, FABRICATED AND PLACED IN ACCORDANCE WITH THE CRSI "MANUAL OF STANDARD PRACTICE", ACI 315 "DETAILS AND DETAILING OF CONCRETE REINFORCEMENT", ACI SP 66 "DETAILING MANUAL".

L. DOWELS SHALL MATCH SIZE AND SPACING OF MAIN REINFORCEMENT, UNLESS NOTED OTHERWISE.

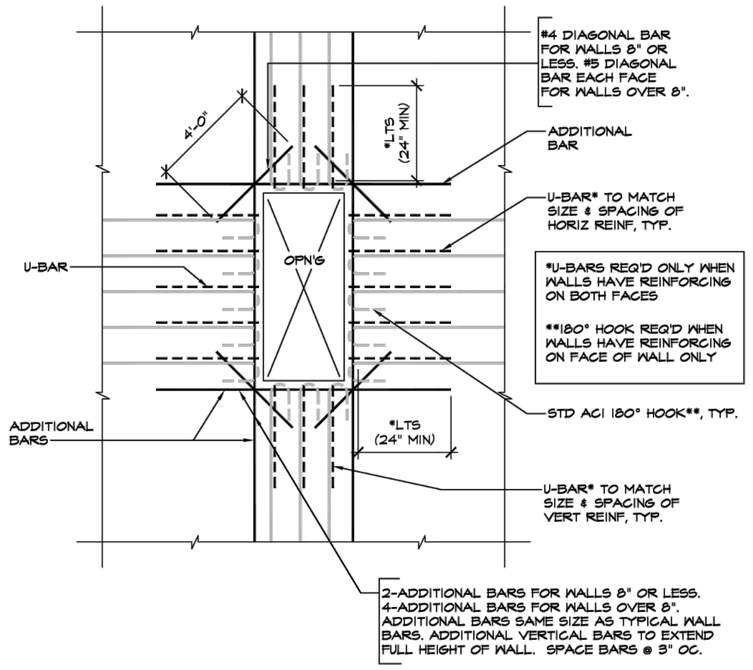
M. WHERE A 90°, 135° OR 180° HOOK IS GRAPHICALLY INDICATED, PROVIDE CORRESPONDING ACI STANDARD HOOKS, UNLESS NOTED OTHERWISE.

N. MINIMUM COVER FOR ALL REINFORCING SHALL BE AS FOLLOWS UNLESS OTHERWISE INDICATED:

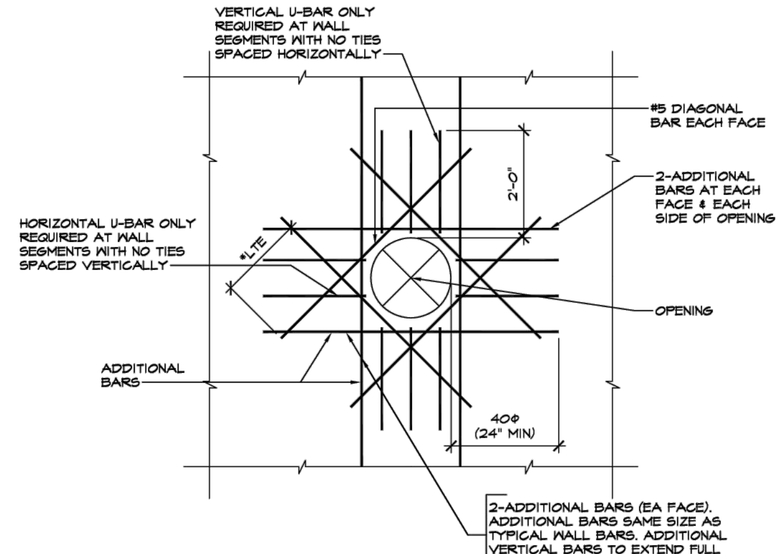
FOOTINGS	3 INCHES (BOTTOM & SIDES), 2 INCHES (TOP)
RETAINING WALLS	2 INCHES
SLABS ON GRADE	2 INCHES (TOP)

O. PROVIDE LAP LOCATIONS AS FOLLOWS, UNLESS NOTED OTHERWISE:
BEAM / WALL (FRONT OF WALL HORIZONTAL REINF): AT SUPPORTS
BEAM / WALL (REAR OF WALL HORIZONTAL REINF): AT CENTER

P. UNLESS NOTED OTHERWISE, TERMINATE BARS AT DISCONTINUOUS ENDS WITH STANDARD HOOKS.



J ADD'L BARS AROUND RECTANGULAR WALL OPENINGS
SCALE: NTS



NOTES:
1. SEE TYP CONCRETE WALL CORNER REINF DETAIL FOR U-BARS
2. IF CONCRETE EDGES NEARBY DO NOT PERMIT THE DEVELOPMENT OF STRAIGHT BAR, BARS SHALL BE BENT PER ACI IN ORDER TO ACHEIVE DEVELOPMENT LENGTH

K ADD'L BARS AROUND CIRCULAR WALL OPENING
SCALE: NTS

SCHEDULE OF EMBEDMENT + SPLICE LENGTH (INCH)

BAR SIZE	COMPRESSION		TENSION (f'_c = 4,000 psi)							
	EMBEDMENT LENGTH		EMBEDMENT LENGTH				LAP SPLICE LENGTH			
			TOP BARS		OTHER BARS		TOP BARS		OTHER BARS	
			CATEGORY SEE NOTE 1 BELOW		CATEGORY SEE NOTE 1 BELOW		CATEGORY SEE NOTE 1 BELOW		CATEGORY SEE NOTE 1 BELOW	
			I	II	I	II	I	II	I	II
#3	8	12	19	28	14	21	24	36	19	28
#4	11	15	25	37	19	28	33	48	25	37
#5	14	19	31	46	24	36	40	60	31	46
#6	17	23	37	55	28	43	48	72	37	55
#7	19	27	54	81	42	62	70	105	54	81
#8	22	30	62	92	47	71	80	120	62	92
#9	25	34	70	104	54	80	90	136	70	104
#10	28	39	78	117	60	90	102	153	78	117
#11	31	43	87	130	67	100	113	170	87	130
NOTATION USED ON DRAWING	*LCE	*LCS	*LTE				*LTS			

SCHEDULES OF EMBEDMENT & SPLICE LENGTH NOTES

1. THE SCHEDULES ABOVE INCLUDES SPLICE AND EMBEDMENT LENGTHS WHICH SATISFY THE PROJECT REQUIREMENTS AND THE FOLLOWING CRITERIA.

   f_y = 60,000 psi
   CONCRETE WEIGHT = 150 lb/cu.ft.

   TENSION EMBEDMENT AND LAP SPLICE LENGTHS ARE DIVIDED INTO TWO CATEGORIES WHICH SHALL BE APPLIED AS FOLLOWS:

   CATEGORY I: CLEAR SPACING OF BARS BEING DEVELOPED OR SPLICED NOT LESS THAN d_b, CLEAR COVER NOT LESS THAN d_b, AND BEAM STIRRUPS OR COLUMN TIES THROUGHOUT d NOT LESS THAN THE CODE MINIMUM OR CLEAR SPACING OF BARS BEING DEVELOPED OR SPLICED NOT LESS THAN $2d_b$ & CLEAR COVER NOT LESS THAN d_b.

   CATEGORY II: BARS NOT COVERED BY CATEGORY I.

2. THE STANDARD LAP SPLICE (0.0005 X f_y X D) IS USED FOR COMPRESSION SPLICES AND THE CLASS "B" SPLICE IS USED FOR TENSION SPLICES. THE CONTRACTOR MAY SUBMIT LESSER SPLICE LENGTHS FOR REVIEW AND APPROVAL AT THE SAME TIME PROVIDING THE FOLLOWING INFORMATION.
   A. DETAILS PREPARED AND SUBMITTED BY THE CONTRACTOR INDICATING LOCATION AND PROPOSED LAYOUT OF REBAR AND LENGTHS OF SPLICES.
   B. WHERE THE SIZE AND NUMBER OF TIES OR SPIRALS PERMITS THE REDUCTION OF LAP LENGTH, THOSE BARS SHALL BE INDICATED ON THE DETAILS.
   C. WHERE COMPUTED STRESS VALUES PERMIT THE REDUCTION OF LAP LENGTH, COMPUTATIONS SHALL BE SUBMITTED FOR REVIEW.
   D. THE APPLICABLE SECTION OF THE ACI-318 CODE PERMITTING THE LESSER SPLICE LENGTH SHALL BE INDICATED ON THE SUBMITTED MATERIAL.

3. TOP BARS ARE HORIZONTAL BARS PLACED SO THAT MORE THAN 12 INCHES OF CONCRETE IS CAST IN THE MEMBER BELOW THE BAR.

A SCHEDULE OF REINF EMBEDMENT & SPLICE LENGTHS
SCALE: NTS

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
DocuSigned by: [signature] 9/11/2023
CHIEF, BUREAU OF HIGHWAYS — DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING
DocuSigned by: [signature] 9/13/2023
CHIEF, DIVISION OF LAND DEVELOPMENT — DATE
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CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE

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DEVELOPER
LAND HOLDINGS LLC
C\O B. JAMES GREENFIELD
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PROJECT			SECTION/AREA	PARCEL
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LACEY PROPERTY
GENERAL NOTES & TYPICAL DETAILS

ZONED: R-ED
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SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN

County File Reference: F-21-015

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410-821-1690
410-821-1748 Fax

Lacey Property (Retaining Walls)

Ellicott City, Maryland

STATE OF MARYLAND — JAMES BUCHANAN GREENFIELD — No. 30729 — PROFESSIONAL ENGINEER — 07/11/2023

PROFESSIONAL CERTIFICATION
I hearby 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. 30729, Expiration Date: 07/11/2023.

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NO.	REVISION	DATE

FILE	DRAWN	ISSUED
21040	JAG	03/08/23

SHEET TITLE
General Notes & Typical Details

SHEET NUMBER
S-7

Sheet 22 of 24

V:\bg_PROJECTS\21000-21099\21040 - Lacey Property Retaining Wall\300 Structural\306 Construction Documents\Structural Set S-X
3/8/2023

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NOTES

1. WP-16-022 WAS APPROVED ON PERMITTING REMOVAL OF 8 SPECIMEN TREES.
2. 16 TREES HAVE BEEN PROPOSED AS REPLACEMENTS FOR THE REMOVAL OF THE 8 SPECIMEN TREES.
3. THIS PLAN COMPLIES WITH THE REQUIREMENTS OF SECTION 16.1200 OF THE COUNTY CODE FOR FOREST CONSERVATION BY RETAINING A TOTAL OF 2.916 ACRES OF FOREST. NO SURETY WILL BE REQUIRED. A FOREST CONSERVATION AGREEMENT WILL BE REQUIRED FOR THE FOREST CONSERVATION RETENTION AREA WITH THIS FINAL PLAN.

FOREST PROTECTION GENERAL NOTES

1. ALL FOREST RETENTION AREAS SHALL BE TEMPORARILY PROTECTED BY WELL ANCHORED BLAZE ORANGE PLASTIC MESH FENCING, AS NECESSARY, AND SIGNAGE AS INDICATED ON THE PLANS. THE DEVICES SHALL BE INSTALLED ALONG THE FOREST RETENTION BOUNDARY PRIOR TO ANY LAND CLEARING, GRUBBING, OR GRADING ACTIVITIES.
2. THE FOREST PROTECTION DEVICES SHALL BE INSTALLED SUCH THAT THE CRITICAL ROOT ZONES OF ALL TREES WITHIN THE RETENTION AREA NOT OTHERWISE PROTECTED WILL BE WITHIN FOREST PROTECTION DEVICES, UNLESS ROOT PRUNING IS PROPOSED.
3. ALL PROTECTION DEVICES SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION, INCLUDING SILT FENCE BEING USED AS PROTECTIVE FENCING. ALL DEVICES SHALL REMAIN IN PLACE UNTIL ALL CONSTRUCTION HAS CEASED IN THE IMMEDIATE VICINITY.
4. ATTACHMENT OF SIGNS, OR ANY OTHER OBJECTS TO TREES IS PROHIBITED. NO EQUIPMENT, MACHINERY, VEHICLES, MATERIALS OR EXCESSIVE PEDESTRIAN TRAFFIC SHALL BE ALLOWED WITHIN THESE PROTECTED AREAS.
5. INSTALLATION AND MAINTENANCE OF PROTECTIVE FENCING AND SIGNAGE SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR. THE GENERAL CONTRACTOR SHALL TAKE THE UTMOST CARE TO PROTECT TREE ROOT SYSTEMS DURING ALL CONSTRUCTION ACTIVITIES. TREE ROOT SYSTEMS SHALL BE PROTECTED FROM SMOTHERING, FLOODING, EXCESSIVE WETTING FROM DE-WATERING OPERATIONS, OFF-SITE RUN OFF, SPILLAGE AND DRAINING OF MATERIALS THAT MAY BE HARMFUL TO TREES.
6. THE GENERAL CONTRACTOR SHALL PREVENT PARKING OF CONSTRUCTION VEHICLES AND EQUIPMENT, AND THE STORING OF BUILDING SUPPLIES OR STOCKPILING OF EARTH WITHIN THE FOREST CONSERVATION EASEMENT.
7. REMOVAL OF TOPSOIL OR ROOT MAT WITHIN THE TREE PRESERVATION AREA SHALL BE PROHIBITED.
8. THE GENERAL CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY TREES DAMAGED OR DESTROYED WITHIN THE FOREST CONSERVATION EASEMENTS.
9. ROOT PRUNING SHALL BE USED AT THE LIMIT OF DISTURBANCE OR LIMIT OF GRADING WITHIN AND ADJACENT TO ALL PRESERVATION AREAS, AS NECESSARY.

PRE-CONSTRUCTION MEETING

1. AFTER THE BOUNDARIES OF THE FOREST RETENTION AREAS HAVE BEEN FIELD LOCATED AND MARKED, AND AFTER THE FOREST PROTECTION DEVICES HAVE BEEN INSTALLED, AND BEFORE ANY OTHER DISTURBANCE HAS TAKEN PLACE ON SITE, A PRE-CONSTRUCTION MEETING SHALL TAKE PLACE ON SITE. THE DEVELOPER, CONTRACTOR OR PROJECT MANAGER, AND HOWARD COUNTY INSPECTORS SHALL ATTEND. THE PURPOSE OF THIS MEETING WILL BE:
   A. TO IDENTIFY THE LOCATIONS OF THE FOREST RETENTION AREAS, SPECIMEN TREES WITHIN 50 FEET OF THE LIMIT OF DISTURBANCE, LIMITS OF CONSTRUCTION, EMPLOYEE PARKING AREAS AND EQUIPMENT STAGING AREAS;
   B. INSPECT ALL FLAGGED BOUNDARIES AND PROTECTION DEVICES;
   C. MAKE ALL NECESSARY ADJUSTMENTS;
   D. ASSIGN RESPONSIBILITIES AS APPROPRIATE AND DISCUSS PENALTIES.

CONSTRUCTION MONITORING

1. THE SITE SHALL BE INSPECTED PERIODICALLY DURING THE CONSTRUCTION PHASE OF THE PROJECT. A QUALIFIED PROFESSIONAL SHALL BE RESPONSIBLE FOR IDENTIFYING DAMAGE TO PROTECTED FOREST AREAS OR INDIVIDUAL TREES WHICH MAY HAVE BEEN CAUSED BY CONSTRUCTION ACTIVITIES, SUCH AS SOIL COMPACTION, ROOT INJURY, TRUNK WOUNDS, LIMB INJURY, OR STRESS CAUSED BY FLOODING OR DROUGHT CONDITIONS.
2. ANY SUCH DAMAGE THAT MAY OCCUR SHALL BE REMEDIED IMMEDIATELY USING APPROPRIATE MEASURES. SEVERE PROBLEMS MAY REQUIRE CONSULTATION WITH A PROFESSIONAL ARBORIST.
3. THE CONSTRUCTION PROCEDURE SHALL NOT DAMAGE AREAS OUTSIDE OF THE LIMITS OF DISTURBANCE AS DESIGNATED ON THE PLANS. ANY DAMAGE SHALL BE RESTORED BY THE CONTRACTOR AT HIS EXPENSE AND TO THE SATISFACTION OF THE DESIGN TEAM OR ENGINEER.

MULTIFLORA ROSE CONTROL NOTE:

PRIOR TO PLANTING ALL MULTIFLORA ROSE WITHIN PLANTING AREAS SHALL BE REMOVED. Removal Of The Multiflora Rose May Be Performed With Mowing And Herbicide Treatments. Physical Removal Of All Top Growth Followed By A Periodic Herbicide Treatment Of Stump Sprouts Is Recommended. Native Tree And Shrub Species Occurring Within The Rose Thickets Should Be Retained Wherever Possible. Herbicide Treatments Shall Occur On Two (2) Month Intervals During The First Growing Seaseon And Once In The Spring And Once In the Fall For Subsequent Years. Herbicide Used Shall Be Made Specifically To Address Woody Plant Material And Shall Be Applied As Per Manufacturers Specifications. Care Should Be Taken Not To Spray Planted Trees Or Naturally Occurring Native Tree And Shrub Seedlings. It Is Recommended That Initiation Of Rose Removal Begin At Least Six Months Prior To Planting So That New Growth OF Roses Is Able To Be More Successfully Managed.

FOREST CONSERVATION WORKSHEET
VERSION 1.0

BASIC SITE DATA:

A. TOTAL TRACT AREA	=	8.55 Ac
B. AREA WITHIN 100 YEAR FLOODPLAIN	=	0
AREA TO REMAIN IN AGRICULTURAL PRODUCTION	=	0
C. NET TRACT AREA	=	8.55 Ac

LAND USE CATEGORY: (from table 3.2.1, page40, Manual)
ARA (x) MDR ( ) IDA ( ) HDR ( ) MPD ( ) CIA ( )

INFORMATION FOR CALCULATIONS:

D. AFFORESTATION THRESHOLD 0.15% x 8.55 =		1.28 Ac.
E. FOREST CONSERVATION THRESHOLD 0.20% x 8.55 =		1.71 Ac.

EXISTING FOREST COVER:

F. EXISTING FOREST COVER (EXCLUDING FLOODPLAIN)	=	4.40 Ac.
G. AREA OF FOREST ABOVE CONSERVATION THRESHOLD	=	2.69 Ac.

BREAK EVEN POINT:

H. BREAK-EVEN POINT	=	2.25 Ac.
I. CLEARING PERMITTED WITHOUT MITIGATION	=	2.15 Ac.

PROPOSED FOREST CLEARING:

J. TOTAL AREA OF FOREST TO BE CLEARED	=	1.48 Ac.
K. TOTAL AREA OF FOREST TO BE RETAINED	=	2.92 Ac.

PLANTING REQUIREMENTS:

L. REFORESTATION FOR CLEARING ABOVE CONSERVATION THRESHOLD	=	0
M. REFORESTATION FOR CLEARING BELOW CONSERVATION THRESHOLD	=	0
N. CREDIT FOR RETENTION ABOVE CONSERVATION THRESHOLD	=	1.21 Ac.
P. TOTAL REFORESTATION REQUIRED	=	0
Q. TOTAL AFFORESTATION REQUIRED	=	0
R. TOTAL REFORESTATION AND AFFORESTATION REQUIRED	=	0
S. EXCESS FOREST CREDIT	=	0.67 Ac.

NOTE: THE PROTECTIVE SIGNAGE SHALL BE IN PLACE FOR PERPETUITY.

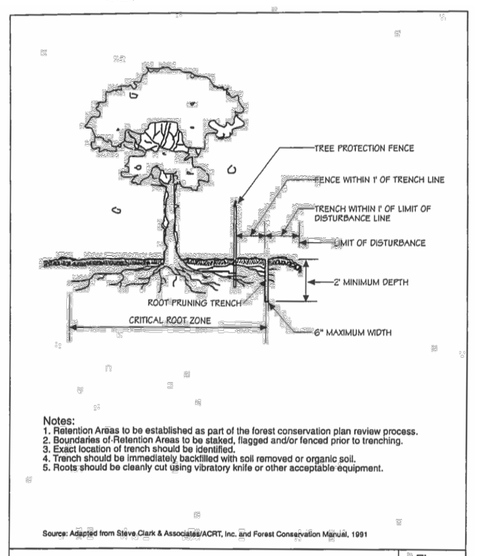
FOREST CONSERVATION SIGN DETAIL
NOT TO SCALE

SPECIMEN TREE TABLE

KEY	SPECIES	SIZE (DBH)	CRZ (FT RADIUS)	COMMENTS	STATUS
T1	HEMLOCK	35"	52.5		TBR
T2	NORWAY SPRUCE	33"	49.5		
T3	WHITE PINE	37"	55.5		
T4	WHITE PINE	38.5"	57.75		
T5	SILVER MAPLE	49.5'	89.25		
T6	SILVER MAPLE	36.5"	54.75		
T7	BLACK WALNUT	37.5"	56.25		
T8	BLACK WALNUT	32"	48		
T9	BLACK WALNUT	41"	61.5		
T11	SILVER MAPLE	42"	63	VERY POOR, TRUNK ROT	TBR
T12	SILVER MAPLE	45.5"	68.25	POOR, TRUNK ROT	
T13	SILVER MAPLE	52"	78	POOR, TRUNK ROT	TBR
T14	ENGLISH WALNUT	41"	61.5		
T15	SILVER MAPLE	31"	46.5	FAIR, LIMITED CROWN SPREAD	
T16	SILVER MAPLE	39"	58.5		
T17	SILVER MAPLE	33"	49.5	FAIR, LEANING	
T18	SILVER MAPLE	40.5"	60.75	FAIR, NARROW CROWN	
T19	SILVER MAPLE	37"	55.5	FAIR, LIMITED CROWN SPREAD	
T20	SILVER MAPLE	45"	67.5	FAIR, LIMITED CROWN SPREAD	TBR
T21	SILVER MAPLE	41"	61.5	FAIR, MAJOR LIMB BROKEN	TBR
T22	SILVER MAPLE	32"	48		TBR
T23	SILVER MAPLE	34"	51	FAIR, LIMITED CROWN SPREAD	TBR
T24	SILVER MAPLE	35"	52.5	POOR, TRUNK ROT	TBR
T25	TULIP POPLAR	39.5"	59.25		
T26	TULIP POPLAR	35"	52.5	TWIN STEMS	
T27	TULIP POPLAR	33.5"	50.25		
T28	TULIP POPLAR	32"	48		
T29	TULIP POPLAR	32"	48	TWIN STEMS	
T30	TULIP POPLAR	31"	46.5		
T31	TULIP POPLAR	39"	58.5		
T32	TULIP POPLAR	46"	69		
T33	TULIP POPLAR	33"	49.5	2 ADDITIONAL NEAR SPECIMEN SIZE TRUNKS	
T34	TULIP POPLAR	32.5"	48.75		
T35	TULIP POPLAR	39.5"	59.25		
T36	TULIP POPLAR	40"	60		
T37	TULIP POPLAR	55"	82.5		
T38	TULIP POPLAR	61"	91.5	SPLITS INTO 2 TRUNKS ABOVE DBH	
T39	TULIP POPLAR	41"	61.5		
T40	SYCAMORE	31"	46.5		
T41	SILVER MAPLE	31.5"	47.25	POOR, VERY LIMITED CROWN	
T42	SILVER MAPLE	39.5"	59.25	POOR, CROWN REDUCED	
T43	SILVER MAPLE	39"/32"	58.5	POOR, SPLIT TRUNK ABOVE BREAST HEIGHT, TRUNK ROT, AND LIMB DIEBACK.	

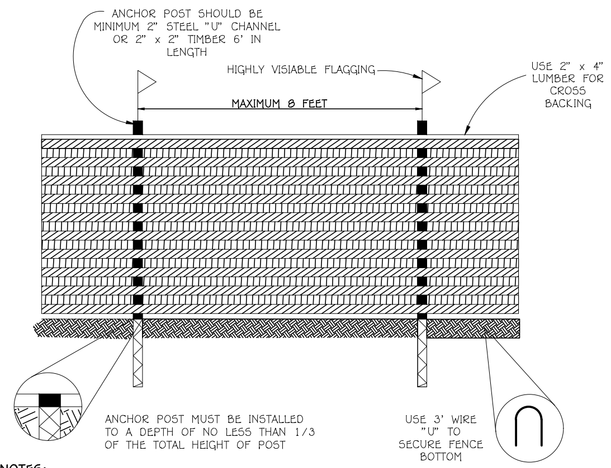
NOTE: "TBR" REFERS TO EXISTING SPECIMEN TREES TO BE REMOVED.

- DENOTES SPECIMEN TREES TO BE REMOVED.



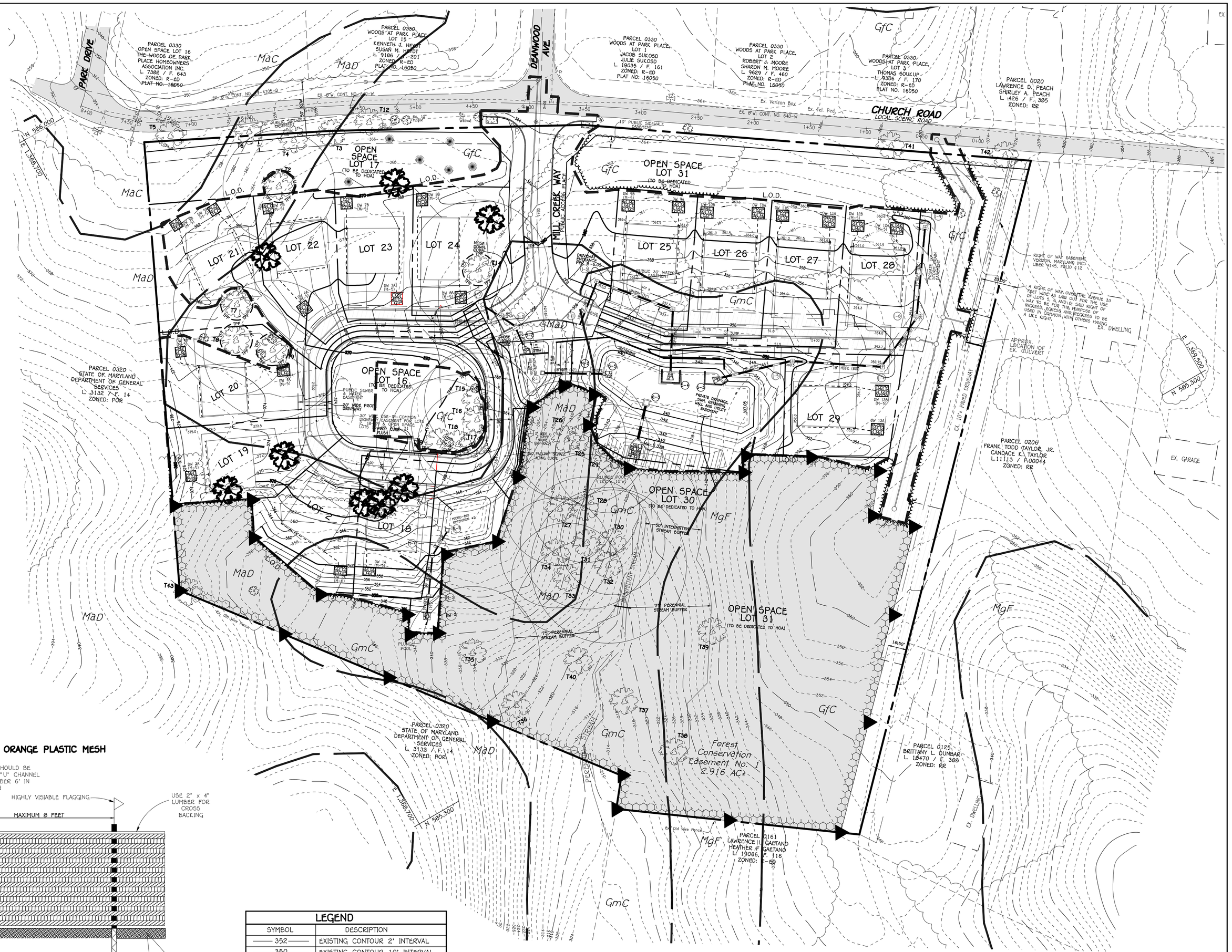
Root Pruning — Figure C-1

BLAZE ORANGE PLASTIC MESH



NOTES:
1. TREE PROTECTION FENCE TO BE INSTALLED AT FOREST CONSERVATION AREAS AND SPECIMEN TREES, AS SHOWN ON SHEET 5.
2. BOUNDARIES OF RETENTION AREA SHOULD BE STAKED AND FLAGGED PRIOR TO INSTALLING TREE PROTECTION FENCE.
3. ROOT DAMAGE SHOULD BE AVOIDED DURING INSTALLATION.
4. TREE PROTECTION FENCE SHOULD BE MAINTAINED THROUGHOUT CONSTRUCTION.

TREE PROTECTION FENCE DETAIL
NOT TO SCALE



LEGEND	
SYMBOL	DESCRIPTION
352	EXISTING CONTOUR 2' INTERVAL
350	EXISTING CONTOUR 10' INTERVAL
352	PROPOSED CONTOUR 2' INTERVAL
350	PROPOSED CONTOUR 10' INTERVAL
	EXISTING PAVING
	EXISTING TREES
T19	SPECIMEN TREES
	EXISTING TREELINE
	FOREST CONSERVATION AREA
	FOREST CONSERVATION SIGN
TPF	TREE PROTECTION FENCE
	SOILS LINE

0' 50' 100' 200'
SCALE: 1" = 50'

SOILS LEGEND

SOIL	NAME	CLASS	K FACTOR
GfC	Gladstone–Urban land complex, 8 to 15 percent slopes	A	0.28
GmC	Glenville silt loam, 8 to 15 percent slopes	C	0.43
MaC	Manor loam, 8 to 15 percent slopes	B	0.28
MaD	Manor loam, 15 to 25 percent slopes	B	0.28
MgF	Manor–Bannertown sandy loams, 25 to 65 percent slopes, rocky	B	0.20

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

Approved: Howard County Department Of Public Works
DocuSigned by: Paul
Chief, Bureau Of Highways — 12/13/2024 Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
DocuSigned by: Chad Edmondson
Chief, Development Engineering Division — 12/13/2024 Date
DocuSigned by:
Chief, Division of Land Development — 12/16/2024 Date

DATE	DESCRIPTION
10/22/24	⚠ RESUBDIVIDED LOTS 1, 3-13 & OPEN SPACE LOTS 14 AND 15
10/22/24	⚠ REVISED GRADING, STORM DRAIN, WATER, SEWER ALIGNMENTS, WHC's, SHC's & DRYWELL LOCATIONS

REVISIONS

"PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY 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. 27020, EXPIRATION DATE: 01-25-26."

STATE OF MARYLAND — GERARD CAVANAUGH — No. 27020 — PROFESSIONAL ENGINEER

Paul G. Cavanaugh
PAUL G. CAVANAUGH, P.E. #27020

Owner
Lacey Family Revocable Trust
c/o Mr. Vincent P. Lacey,
Co-Trustee
1235 Wild Rose Court
Marriottsville, Maryland 21104
Ph.# 410-707-2639

Owner
Lacey Property Homeowners Association, Inc.
6026 Trotter Road
Clarksville, Maryland 21029

Developer
SDC Mill Creek, LLC
Attn: Mr. Steven K. Breeden
Suite 415
8480 Baltimore National Pike
Ellicott City, Maryland 21043
410-465-4244

PROJECT			SECTION/AREA		PARCEL
LACEY PROPERTY			N/A		13
PLAT NOS.	BLOCK NO.	ZONE	TAX MAP	ELEC. DIST.	CENSUS TR.
-	1	R-ED	25	SECOND	602900

REVISED FOREST CONSERVATION PLAN

LACEY PROPERTY

LOTS 2, 10 THRU 29 AND OPEN SPACE LOTS 16, 17, 30 & 31

(BEING A RESUBDIVISION OF LOTS 1, 3 THRU 13 AND OPEN SPACE LOTS 14 & 15 AS SHOWN ON PLATS ENTITLED "LACEY PROPERTY, LOTS 1 THRU 13 AND OPEN SPACE LOTS 14 THRU 17", PLAT Nos. 26657 - 26659)

ZONED: R-ED
PARCEL No.: 13
TAX MAP No.: 25 GRID No.: 1
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: OCT. 25, 2024
SHEET 23 OF 24

F-21-015

I:\2008\08031\dwg\Lacey\FINAL\SUBDIVISED F-Plan 2-1-23\Redline 2024\08035 sheet 23 NEW MYLAR.dwg, 11/12/2024 3:46:01 PM, AutoCAD PDF (Smallest File).pc3,
1:1

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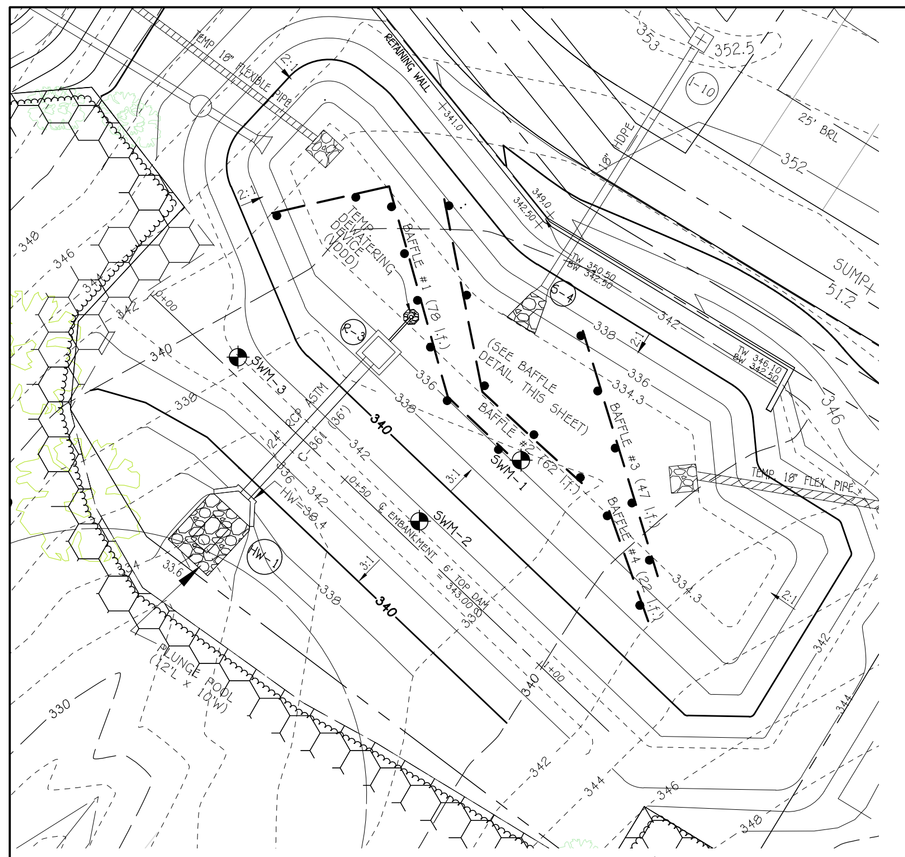
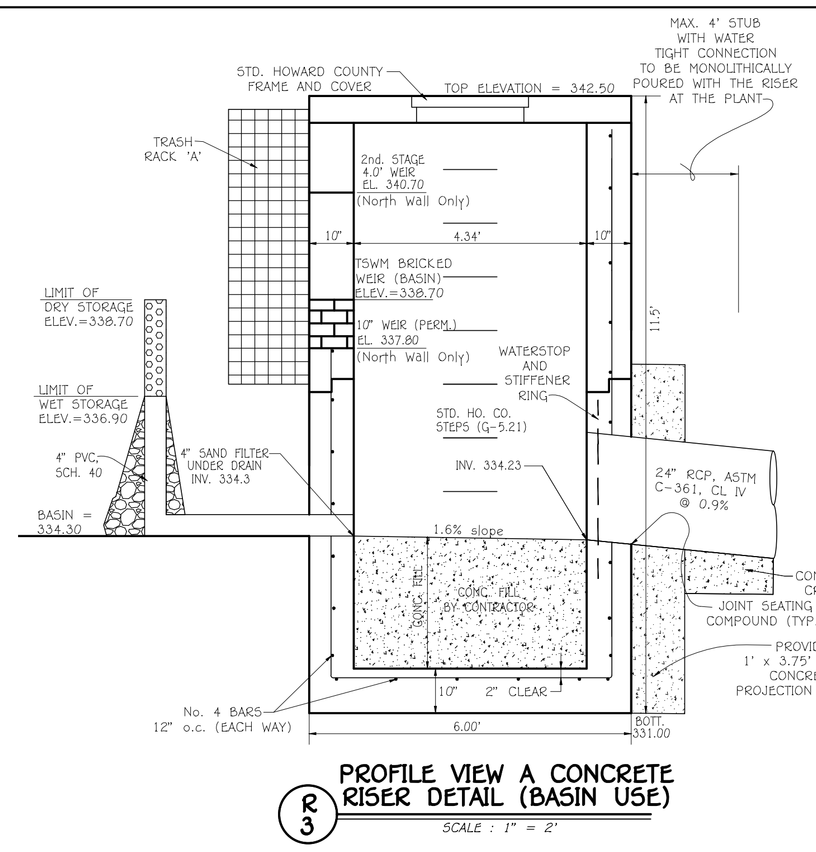


T5WM-BASIN #1

SCALE: 1" = 20'



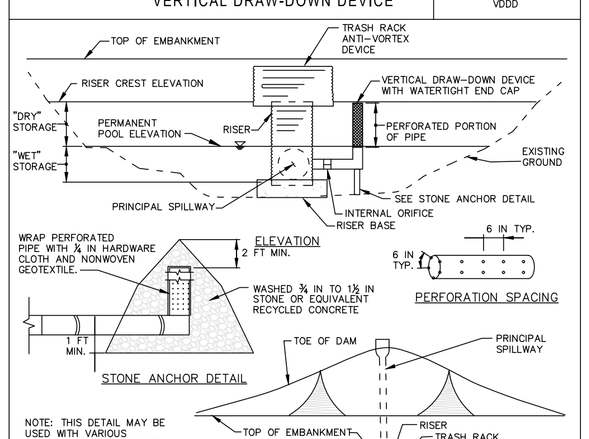
PROFILE VIEW A CONCRETE RISER DETAIL (BASIN USE)

R 3

SCALE : 1" = 2'

DETAIL G-2-7 SEDIMENT BASIN SCHEMATIC VERTICAL DRAW-DOWN DEVICE

STANDARD SYMBOL: VDDD



CONSTRUCTION SPECIFICATIONS

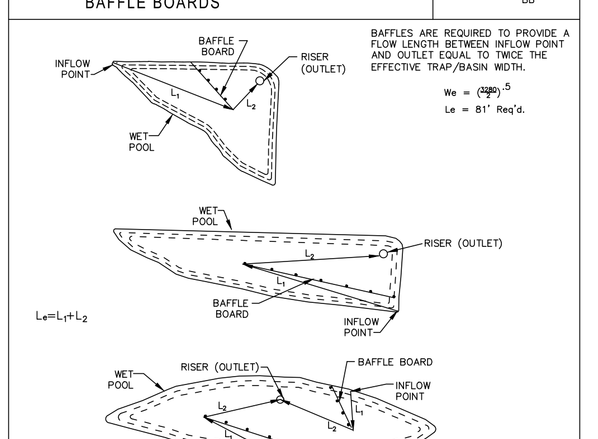
1. PERFORATE PIPE WITH 1 INCH DIAMETER PERFORATIONS SPACED 6 INCHES APART LONGITUDINALLY AND RADIALLY OR IN ACCORDANCE WITH APPROVED PLAN.
2. DO NOT EXTEND PERFORATIONS IN THE DRAW-DOWN DEVICE INTO WET STORAGE.
3. WRAP THE PERFORATED PORTION OF THE DRAW-DOWN DEVICE FIRST WITH ¾ INCH GALVANIZED HARDWARE CLOTH, THEN WITH NONWOVEN GEOTEXTILE. USE NONWOVEN GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS. DO NOT WRAP WITH MORE THAN ONE LAYER OF GEOTEXTILE.
4. AS AN ALTERNATE TO STONE ANCHORING, SECURE DRAW-DOWN DEVICE WITH TWO 1 INCH STEEL ANGLES SET 3 FEET MINIMUM INTO THE GROUND ATTACHED TO DRAW-DOWN DEVICE BY A 1 INCH WIDE GALVANIZED STEEL STRAP OR 12 GAUGE OR HEAVIER WIRE.
5. REMOVE SEDIMENT WHEN IT ACCUMULATES TO CLEANOUT ELEVATION (50% OF THE WET STORAGE DEPTH). DEPOSIT REMOVED SEDIMENT IN AN APPROVED AREA IN A SUCH A MANNER THAT IT WILL NOT ERODE. MAINTAIN WATER TIGHT CONNECTIONS. REPLACE GEOTEXTILE AROUND PERFORATED RISER IF DRY STORAGE VOLUME DOES NOT DRAW DOWN WITHIN 10 HOURS.

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 G-2-4 BAFFLE BOARDS

STANDARD SYMBOL: BB

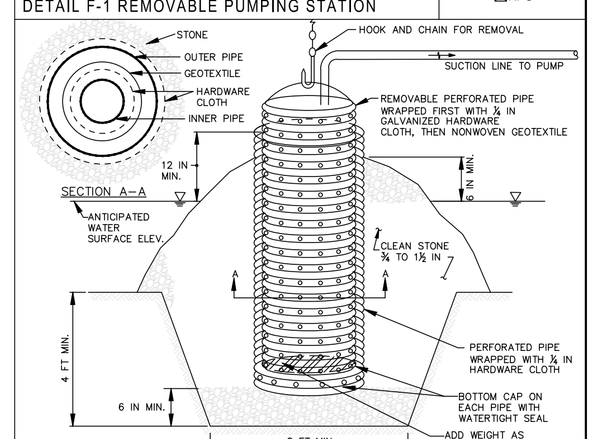


MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

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

DETAIL F-1 REMOVABLE PUMPING STATION

STANDARD SYMBOL: RPS



CONSTRUCTION SPECIFICATIONS

1. USE CORRUGATED METAL OR PLASTIC PIPE WITH 1 INCH DIAMETER PERFORATIONS 6 INCHES ON CENTER.
2. USE A MINIMUM 12 INCH DIAMETER INNER PIPE WITH AN OUTER PIPE A MINIMUM 6 INCHES LARGER IN DIAMETER. BOTTOM OF EACH PIPE MUST BE CAPPED WITH WATERTIGHT SEAL.
3. WRAP EACH PIPE WITH ¼ INCH GALVANIZED HARDWARE CLOTH. ON INNER PIPE WRAP NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS, OVER THE HARDWARE CLOTH.
4. EXCAVATE 8 FEET X 8 FEET X 4 FEET DEEP PIT FOR PIPE PLACEMENT. PLACE CLEAN ¾ TO 1½ INCH STONE OR EQUIVALENT RECYCLED CONCRETE, 6 INCHES IN DEPTH PRIOR TO PIPE PLACEMENT.
5. SET TOP OF INNER AND OUTER PIPES MINIMUM 12 INCHES ABOVE ANTICIPATED WATER SURFACE ELEVATION (OR RISER CREST ELEVATION WHEN DEWATERING A BASIN).
6. BACKFILL PIT AROUND THE OUTER 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.
7. DISCHARGE TO A STABLE AREA AT A NONEROSIVE RATE.
8. A REMOVABLE PUMPING STATION REQUIRES FREQUENT MAINTENANCE. IF SYSTEM CLOGS, PULL OUT INNER PIPE AND REPLACE GEOTEXTILE. 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

085

STORM WATER MANAGEMENT POND 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

sloped to no steeper than 1:1. All trees shall be cleared and grubbed within 15 feet of the toe of the embankment.

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

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 -4% 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 6 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 6 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 the 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 mils) 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. Metallic materials 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, prepunched 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 for pipe diameters 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 least1/4of 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 requirement of AASHTO M252 Type S, and 12" through 24" inch shall meet the requirement 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

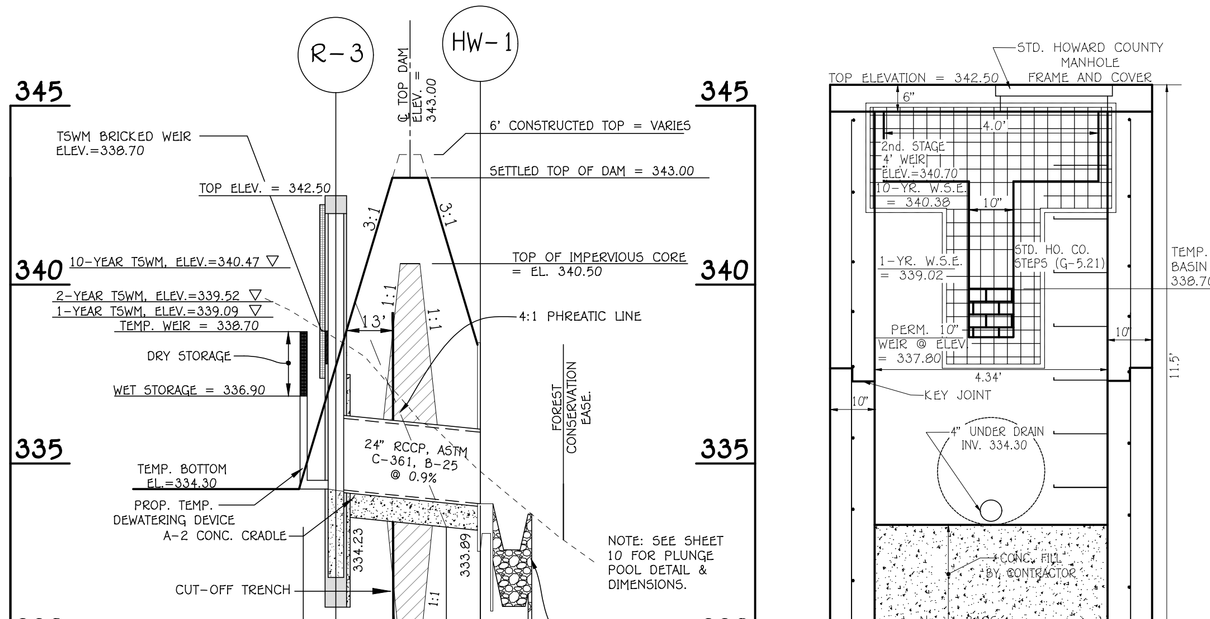
All work on permanent structures shall be carried out in areas free from water. The Contractor shall construct and maintain all temporary dikes, levees, cofferdams, drainage channels, and stream diversions necessary to protect the areas to be occupied by the permanent works. The contractor shall also 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.

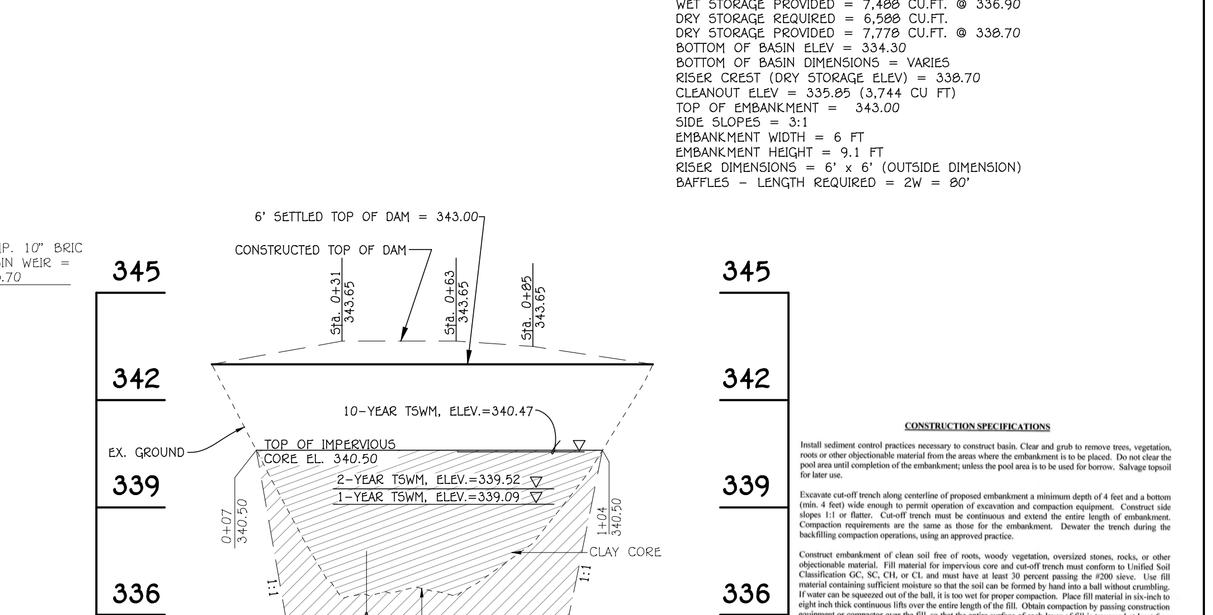
Erosion and Sediment Control

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.



SEDIMENT BASIN #1 PRINCIPLE SPILLWAY PROFILE

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



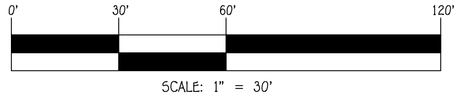
SEDIMENT BASIN #1 PROFILE ALONG C.L. DAM

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

NOTE: SEE SHT.11 FOR PERMANENT POND PROFILE

OPERATION AND MAINTENANCE

An operation and maintenance plan in accordance with Local or State Regulations will be prepared for all ponds. As a minimum, the dam inspection checklist located in Appendix A shall be included as part of the operation and maintenance plan and performed at least annually. Written records of maintenance and major repairs needs to be retained in a file. The issuance of a Maintenance and Repair Permit for any repairs or maintenance that involves the modification of the dam or spillway from its original design and specifications is required. A permit is also required for any repairs or reconstruction that involve a substantial portion of the structure. All indicated repairs are to be made as soon as practical.



SCALE: 1" = 30'

SEDIMENT BASIN DESIGN DATA

SEDIMENT BASIN #1
DRAINAGE AREA = 3.66 AC. (PROPOSED CONDITION CONTROLS)
TOTAL STORAGE REQUIRED = 13,176 CU.FT.
TOTAL STORAGE PROVIDED = 15,266 CU.FT.
WET STORAGE REQUIRED = 6,588 CU.FT.
WET STORAGE PROVIDED = 7,480 CU.FT. @ 336.90
DRY STORAGE REQUIRED = 6,588 CU.FT.
DRY STORAGE PROVIDED = 7,778 CU.FT. @ 338.70
BOTTOM OF BASIN ELEV = 334.30
BOTTOM OF BASIN DIMENSIONS = VARIES
RISER CREST (DRY STORAGE ELEV) = 338.70
CLEANOUT ELEV = 335.85 (3,744 CU FT)
TOP OF EMBANKMENT = 343.00
SIDE SLOPES = 3:1
EMBANKMENT WIDTH = 6 FT
EMBANKMENT HEIGHT = 9.1 FT
RISER DIMENSIONS = 6' x 6' (OUTSIDE DIMENSION)
BAFFLES – LENGTH REQUIRED = 2W = 80'

DESIGN CERTIFICATE

"I hereby certify that this plan has been designed in accordance with current Maryland erosion and sediment control laws, regulations, and standards, that it represents a practical and workable plan based on my personal knowledge of the site, and that it was prepared in accordance with the requirements of the Howard Soil Conservation District."

Paul G. Cavanaugh — 10/29/24
Designer's Signature — Date

PAUL G. CAVANAUGH — MD Registration No.__27020__ (P.E.) R.L.S., or R.L.A. (circle one)
Printed Name

OWNER'S/DEVELOPER CERTIFICATE

"I/We hereby certify that any clearing, grading, construction, or development will be done pursuant to this approved erosion and sediment control plan, including inspecting and maintaining controls, and that the responsible personnel involved in the construction project will have a Certificate of Training at a Maryland Department of the Environment (MDE) approved training program for the control on erosion and sediment prior to beginning the project. I certify right-of-entry for periodic on-site evaluation by Howard County, the Howard Soil Conservation District and/or MDE."

Steven L. Breeden — 10/29/24
Owner's/Developer's Signature — Date

Steven L. Breeden
SDC Mill Creek, LLC, Manager for Mill Creek LLC
Printed Name & Title

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

Approved: Howard County Department Of Public Works
Docusigned by: [signature] — 12/13/2024
Chief, Bureau Of Highways — Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
Docusigned by: Chad Edmondson — 12/13/2024
Chief, Development Engineering Division — Date
Docusigned by: [signature] — 12/16/2024
Chief, Division of Land Development — Date

This development plan is approved for soil erosion and sediment control by the HOWARD SOIL CONSERVATION DISTRICT.
Docusigned by: Alexander Brathrie — 12/13/2024
Howard Soil Conservation District. — Date

DATE	DESCRIPTION
9/3/24	REVISE LOT LINES, WATER, SEWER, SD ALIGNMENTS & DRIVEWAY (EAST)
	REVISIONS

"PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY 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. 27020, EXPIRATION DATE: 01-25-26."

STATE OF MARYLAND — GERARD CAVANAUGH — No. 27020 — PROFESSIONAL ENGINEER

Paul G. Cavanaugh
PAUL G. CAVANAUGH, P.E. #27020

Owner	Owner
Lacey Family Revocable Trust c/o Mr. Vincent P. Lacey, Co-Trustee 1235 Wild Rose Court Marriottsville, Maryland 21104 Ph# 410-707-2639	Lacey Property Homeowners Association, Inc. 6026 Trotter Road Clarksville, Maryland 21029

Developer
SDC Mill Creek, LLC
Attn: Mr. Steven K. Breeden
Suite 415
8480 Baltimore National Pike
Ellicott City, Maryland 21043
410-465-4244

PROJECT			SECTION/AREA		PARCEL
LACEY PROPERTY			N/A		13
PLAT NOS.	BLOCK NO.	ZONE	TAX MAP	ELEC. DIST.	CENSUS TR.
-	1	R-ED	25	SECOND	602900

REVISED
T5WM – BASIN #1 PROFILES AND DETAILS

LACEY PROPERTY

LOTS 2, 18 THRU 29 AND OPEN SPACE LOTS 16, 17, 30 & 31

(BEING A RESUBDIVISION OF LOTS 1, 3 THRU 13 AND OPEN SPACE LOTS 14 & 15 AS SHOWN ON PLATS ENTITLED "LACEY PROPERTY, LOTS 1 THRU 13 AND OPEN SPACE LOTS 14 THRU 17", PLAT Nos. 26657 - 26659)

ZONED: R-ED
PARCEL No.: 13
TAX MAP No.: 25 GRID No.: 1
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: OCT. 25, 2024
SHEET 24 OF 24

F-21-015

I:\2008\08039\dwg\Lacey\FINALS\REVISED F Plan 2-1-23\Redline 2024\08035 sheet 24 Basin Profiles.dwg, 10/31/2024 1:53:17 PM, AutoCAD PDF (Smallest File).pc3, 1:1

S P E E D M E M O
HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
DEVELOPMENT ENGINEERING DIVISION
(410) 313-2420

FINANCE VALIDATION

Date: October 16, 2024

To: Frank Manalansan II
Fisher, Collins and Carter, Inc.
10272 Baltimore National Pike
Ellicott City, Maryland 21042

Reviewer: Heather Akers
# of sheets Revised: 12

Subject: PROPOSED ROAD CONSTRUCTION PLAN REVISION

F-21-015-Lacey Property – Redline #1

This division has reviewed the revised plan for the referenced development submitted with a letter dated August 16, 2024, showing the following changes on sheet(s) 1-6,11,12,14,15,23 & 24 of 24.

Redline to revise the sewer alignment and revise lot lines.

THE REVISIONS ARE **APPROVED, SUBJECT TO THE FOLLOWING:**

1. Address all changemark comments.
2. Complete DOCs or DA as applicable.
3. A new seal and signature will be required on all sheets. Please also include revision triangles next to each revision
4. Pay all fees: See Below

	FEE AMOUNT (PER SHEET)	NUMBER OF SHEETS	TOTAL
PRINT FEE	$5.00	12	$60.00
FPLAN DISTRIBUTION FEE	$6.00	12	$72.00
SDP DISTRIBUTION FEE	$3.00	X	$XX.XX
		TOTAL	**$132.00**

Make checks payable to: Director of Finance.
Fees to be deposited to Account No. 1000-3000000000-PWPZ0000000000000-432800

Distribution as follows:
F-plan: 2 - Construction Inspection Division & 2 - Bureau of Highways
SDP: 2 - Construction Inspection Division

Paul DiMarco

Paul DiMarco
Development Engineering Division

Docusign Envelope ID: 32902D61-E1A0-41FA-A80A-21796BECCAB5

HOWARD COUNTY, MARYLAND
DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS
GRADING SURETY AGREEMENT

THIS AGREEMENT made this _____ day of 12/5/24, 20_____, between SDC Mill Creek, LLC *(Depositor)* party of the first part, hereinafter referred to as the "Owner/Developer"; and Howard County, Maryland, a body corporate politic, party of the second part, hereinafter referred to as the "Obligee";

WHEREAS, the Owner/Developer intends to conduct grading operations on property located at Mill Creek Way, situated in Howard County, Maryland

WHEREAS, the Owner/Developer has received approval of the proposed grading at the said location under Grading Plan number F-21-015 approved by the Department of Planning and Zoning; and

WHEREAS, the Owner/Developer has applied to the Obligee for Grading Permit Number _____ which requires the completion of all grading improvements in accordance with the approved plans, all of which improvements to be in compliance with the requirements of the Obligee; and

WHEREAS, the Obligee requires a surety in accordance with Section 3.405 and Section 16.124 of the Howard County Code to guarantee the completion of all grading improvements; and

WHEREAS, the Owner/Developer has delivered to the Obligee for deposit in a non interest-bearing escrow account a payment to the Howard County Director of Finance in the amount of $ 3,859.04 in accordance with the surety schedule established under Section 3.405(b) of the Howard County Code.

NOW, THEREFORE, THIS AGREEMENT WITNESSETH, that in consideration of the premises hereby acknowledge receipt of the sum of $ 3,859.04 from the Owner/Developer to be held by the Obligee until such time Obligee shall determine that the grading improvements have been completed in accordance with the approved plans.

IT IS ALSO UNDERSTOOD AND AGREED that should the Owner/Developer not complete the grading improvements in accordance with the approved plans the Obligee shall have the right to draw upon the funds on deposit in the non interest-bearing escrow account to be used by the Obligee for the costs and expenses to the obligee arising out of the failure of the Owner/Developer to complete the grading improvements as required by the terms of this agreement. If the Owner/Developer fails to complete the grading improvements in accordance the approved plans the escrowed funds shall be forfeited to the Obligee and the Owner/Developer waives any and all interest in said funds.

AS WITNESS my hands and seal this 5 day of December, 20 24.

William Pippen
Signature *(Owner/Developer)*

William Pippen
Print Name *(Owner/Developer)*

Print Title *(Owner/Developer)*

8480 Baltimore National Pike
Print Street Address *(Owner/Developer)*

Ellicott City MD 21043
Print *(City)* *(State)* *(Zip)*

(410) 465-4244
Phone Number

WPippen@SDCgroup.com
Email Address

Depositor/Refund Information:

SDC Mill Creek, LLC
Depositor's Name *(must match agreement above)*

8480 Baltimore National Pike, Ste. 415
Print Street Address *(where refund should be mailed)*

Ellicott City MD 21043
Print *(City)* *(State)* *(Zip)*

FOR OFFICE USE ONLY

Accepted by: _____ Date: _____ Invoice: _____ Check: _____

Approved for release: _____
Please Print Name (Sediment Control Inspector) / **Signature** (Date)

Approved for release: _____
Please Print Name (Chief, Licenses and Permits Division) / **Signature** (Date)

White - Sediment Control / Pink - Finance
T:\Operations\Updated Forms\GradingSuretyAgreement10.25.2022.pdf

3/6/2025 11:52 AM Csh 0069 Reg 0058

HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
3430 Court House Drive ♦ Ellicott City, Maryland 21043
410-313-2350 ♦ Fax: 410-313-3467 ♦ www.howardcountymd.gov

Validation Number: 0058-020987

DPZ Plan/Petition Fees

VALIDATION BY FINANCE

Date: 3/6/25

File No.: F-25-022 Lacey Prop. OS only

Check No.: 10419 Name: Deer Wood LLC

Received By: Payton

	Fund	Business Area and Cost Center	Functional Area	G/L No.	Dept.	Amount Due
Design Manual Waiver $500 ea.	1000000000	3000000000	PWPZ00000 0000000	432580		
DPW Prelim Inspection Fee (50%)	1000000000	3100000000	PWPW0000 00000000	432220		
DPZ Prelim Engineering Fee (50%)	1000000000	3000000000	PWPZ00000 0000000	432220		
Standard Plan Revisions $200 ea.	1000000000	3000000000	PWPZ00000 0000000	432285		
Storm Drainage Fee-in-Lieu: *(☐4040090001 – Little Patuxent, ☐4040090002 - Main Patuxent, ☐4040090000 - Middle Patuxent, ☐4040090003 - Patapsco)*	See ☒	1300000000	PWPZ00000 0000000	431900		
House Model Revisions	1000000000	3000000000	PWPZ00000 0000000	432280		
Sidewalk Fee-in-Lieu Fees: *(☐4010090001 – Ellicott City, ☐4010090002 – Columbia, ☐4010090003 – Elkridge, ☐ 4010090004 – Southeast Planning Areas)* WBS Element - K0015.0.3100	See ☒	3100000000	PWPW0000 00000000	431900		
Water and Sewer Fee: DPW (50% of 3.5% of prelim construction)	1000000000	3100000000	PWPW0000 00000000	432526	DPW	
DPZ (50% of 3.5% of prelim construction)	1000000000	3000000000	PWPZ00000 0000000		DPZ	
Forest Conservation Fee-in-Lieu	2060000000	3000000000	PWPZ00000 0000000	432521		
Open Space Fee-in-Lieu *(account varies)*		1300000000	PWPZ00000 0000000	431910		
Forest Conservation Inspection Fees	10000000000	5000000000	RPRP00000 0000000	439990		
Landscape Inspection Fees	1000000000	3000000000	PWPZ00000 0000000	432105		
Plan/Petition Processing Fees: *(Land Development Plans/ Engineering Plans/ BA/ZB/AA Petitions; Special Exceptions; Zoning Verification; etc.); SRC Specials; Non-Standard Plan Revisions; 'Originals Only'; ECP*	1000000000	3000000000	PWPZ00000 0000000	432530	DED	200.00
					DLD	1500.00
Soil Conservation District Fees	1000000000	3000000000	PWPZ00000 0000000	432240		
Photo Copies/Publications/Mailing/ GIS Maps/PDox Fees	1000000000	3000000000	PWPZ00000 0000000	432800		
Topographic/Floodplain Maps	1000000000	3100000000	PWPW0000 00000000	432736		
Permanent Public Improvement Contribution	4080000000	3000000000	PWPZ00000 0000000	431960		
Other:						

WHITE PRINT

No. of Sets	No. of Originals	Original Title – Plat No. – Plan No.	Size	Material Type
4-1-1	5	F-25-022	18x24	paper-mylar-film

ACCOUNT NO: ☑ **1000-3000000000-PWPZ0000000000000-432800**
☐ _____

Amount Due $ 75.00

Total Due $1775.00

Distribution: WHITE - Payee; YELLOW – DPZ Receipts; PINK – Land Development; GOLD - Engineering

Revised 11/2017

No. 174668

Building G25000022:
Residential Grading Permit
Record Status: Issued

Record Info Payments Custom Component

Processing Status

Application Acceptance

Assigned to **TBD**
Marked as **Pending** on **02/21/2025** by **MikeMcCannHOCO@fcc-eng.com**

---

*Assigned to **TBD***
*Marked as **Pending** on **02/26/2025** by **Moriah Jayjock***

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*Assigned to **TBD***
*Marked as **Pending Plan Submittal** on **02/26/2025** by **Markus Powell***

Comment: Please submit a copy of the received email notification along with two hard copies of the appropriate plans with a minimum size of 11 x 17, collated, bound, and folded with the title block facing out to the Licenses and Permits Front Counter within three business days to avoid delays in processing.

---

*Assigned to **TBD***
*Marked as **Zoning Review Required** on **03/04/2025** by **Markus Powell***

Comment: PHYSICAL PLANS IN ZONING BASKET UNDER DILP FRONT COUNTER

---

*Assigned to **TBD***
*Marked as **Accepted** on **03/17/2025** by **Lisa Logan-Roussell***

Zoning

Assigned to **TBD**
Marked as **Approved** on **03/11/2025** by **Annette Merson**

DILP Grading Review

Assigned to **TBD**
Marked as **Approved** on **03/26/2025** by **Bob Frances**

Grading Permit Issuance

Assigned to **TBD**
Marked as **Re-Issued** on **03/27/2025** by **Samatha Schmidt**

CID Grading Permit File

Assigned to **TBD**
Marked as **Review In Process** on **TBD** by **TBD**

C of C

U.S. Equivalent Coordinate Table			Metric Coordinate Table	
POINT	NORTH (feet)	EAST (feet)	NORTH (meters)	EAST (meters)
403	585565.3643	1368619.5736	178486.775999	417156.080336
407	585247.5044	1368876.5506	178383.796108	417234.407101
408	585224.1786	1368857.7783	178376.686381	417228.684724
442	585096.8977	1369034.0113	178337.696507	417282.096407
505	585734.5744	1369042.5022	178532.255337	417284.989240
506	585711.2580	1369029.5710	178525.146480	417281.047802
507	585674.6364	1369011.6256	178513.996827	417275.578035
508	585675.3701	1368973.7668	178514.209836	417264.036663
509	585634.8961	1368972.9846	178501.873329	417263.800248
510	585597.5791	1369048.5830	178490.499101	417286.842674
511	585623.1641	1369080.2989	178498.297411	417296.509696
512	585652.6359	1369056.5242	178507.280431	417289.263165
513	585689.2524	1369074.4696	178518.442084	417294.732932
514	585708.1390	1369084.9424	178524.197827	417297.925053
515	585742.7500	1369106.5010	178534.747259	417304.496128
516	585750.3295	1369140.6892	178537.057504	417314.910689
517	585778.8914	1369095.3224	178545.763205	417301.080957
518	585551.7564	1369026.5863	178476.532305	417280.139078
519	585530.4326	1369006.8670	178470.032809	417274.115412
520	585514.0607	1369005.3456	178465.042631	417273.653676
521	585490.3391	1369019.5443	178457.812272	417277.991659
522	585744.1380	1369149.7958	178535.170338	417317.692397
523	585532.4424	1369457.8832	178470.645395	417411.579350
550	585895.3210	1368767.2145	178581.251005	417201.081383
551	585807.5222	1368952.3914	178554.489875	417257.523411
552	585748.9348	1369051.4471	178536.632389	417287.715645

The Requirements §3-108, The Real Property Article, Annotated Code Of Maryland, 1988 Replacement Volume, (As Supplemented) As Far As They Relate To The Making Of This Plat And The Setting Of Markers Have Been Complied With.

Frank John Manalansan II, L.S. No. 21476 (Professional Land Surveyor) Expires 7/14/2025 — 4/4/25 Date

Vincent P. Lacey, Lacey Homeowners Association, Inc. — 4/2/25 Date

James R. Moxley III, Manager, Mill Creek LLC — 4/2/25 Date

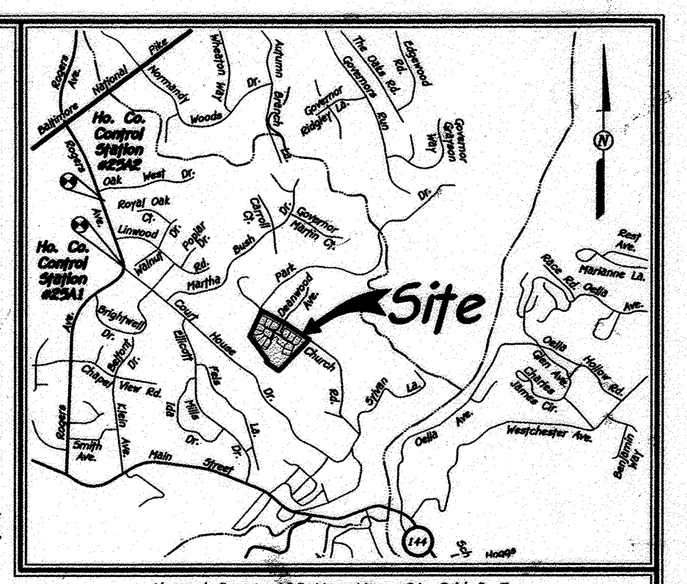
Steven K. Breeden, Manager, Mill Creek LLC — 4/2/25 Date

Reservation Of Public Utility And Forest Conservation Easements

"Developer Reserves Unto Itself, Its Successors And Assigns, All Easements Shown On This Plan For Water, Sewer, Storm Drainage, Other Public Utilities, Located In, On, Over, And Through Buildable Lots 2, 18 Thru 29 And Open Space Lots 30 and 31. Any Conveyances Of The Aforesaid Lots Shall Be Subject To The Easements Herein Reserved, Whether Or Not Expressly Stated In The Deed(s) Conveying Said Lots. Developer Shall Execute And Deliver Deeds For The Easements Herein Reserved To Howard County. Upon Completion Of The Public Utilities And Their Acceptance By Howard County, The County Shall Accept The Easements And Record The Deed(s) Of Easement In The Land Records Of Howard County."

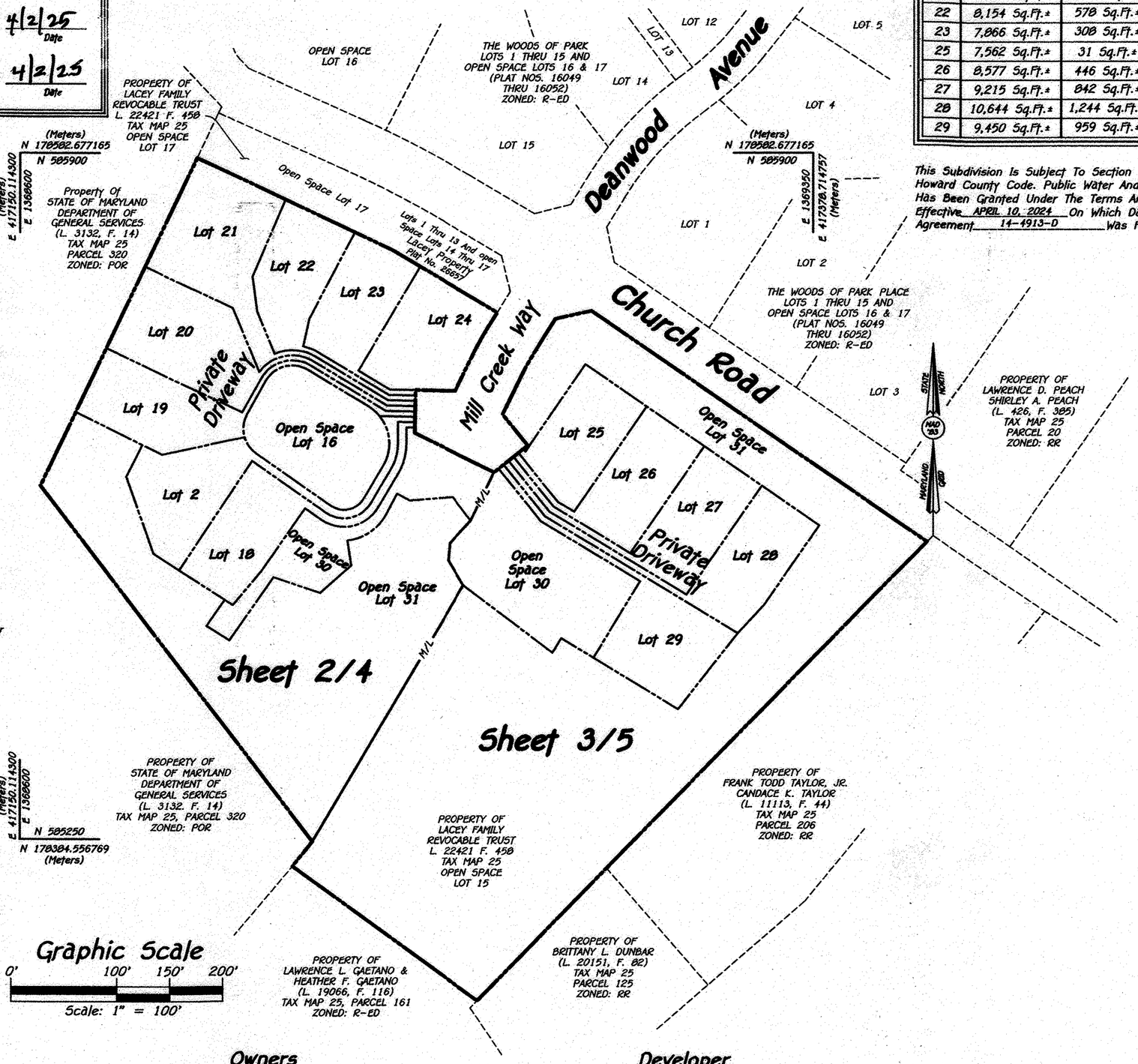
Minimum Lot Size Chart			
Lot No.	Gross Area	Pipestem Area	Minimum Lot Size
18	8,958 Sq.Ft.±	1,345 Sq.Ft.±	7,613 Sq.Ft.±
2	10,503 Sq.Ft.±	1,867 Sq.Ft.±	8,636 Sq.Ft.±
19	9,080 Sq.Ft.±	1,005 Sq.Ft.±	8,075 Sq.Ft.±
20	12,557 Sq.Ft.±	797 Sq.Ft.±	11,760 Sq.Ft.±
21	13,309 Sq.Ft.±	2,399 Sq.Ft.±	10,910 Sq.Ft.±
22	8,154 Sq.Ft.±	578 Sq.Ft.±	7,576 Sq.Ft.±
23	7,866 Sq.Ft.±	308 Sq.Ft.±	7,558 Sq.Ft.±
25	7,562 Sq.Ft.±	31 Sq.Ft.±	7,531 Sq.Ft.±
26	8,577 Sq.Ft.±	446 Sq.Ft.±	8,131 Sq.Ft.±
27	9,215 Sq.Ft.±	842 Sq.Ft.±	8,373 Sq.Ft.±
28	10,644 Sq.Ft.±	1,244 Sq.Ft.±	9,400 Sq.Ft.±
29	9,450 Sq.Ft.±	959 Sq.Ft.±	8,491 Sq.Ft.±

This Subdivision Is Subject To Section 18.122B Of The Howard County Code. Public Water And Public Sewer Service Has Been Granted Under The Terms And Provisions, Thereof, Effective APRIL 10, 2024 On Which Date Developer Agreement 14-4913-D Was Filed And Accepted.



Vicinity Map

Scale: 1" = 2,000'



General Notes:

1. Subject Property Zoned R-ED Per 10/06/13 Comprehensive Zoning Plan.
2. Coordinates Based On Nad '83, Maryland Coordinate System As Projected By Howard County Geodetic Control Stations No. 25A1 And No. 25A2.
   Sta. 25A1 N 586,557.549 E 1,366,847.099 Elev.= 396.343
   Sta. 25A2 N 587,502.730 E 1,366,556.378 Elev.= 348.145
3. This Plat Is Based On Field Run Monumented Boundary Survey Performed On Or About August, 2014 By Fisher, Collins And Carter, Inc.
4. B.R.L. Denotes Building Restriction Line
5. ● Denotes Iron Pin Set Capped "F.C.C. 106".
6. ◤ Denotes Iron Pipe Or Iron Bar Found.
7. O Denotes Angular Change In Bearing Of Boundary Or Rights-Of-Way.
8. ■ Denotes Concrete Monument Set With Aluminum Plate "F.C.C. 106".
9. ◣ Denotes Concrete Monument Or Stone Found.
10. All Areas Are More Or Less (±).
11. Distances Shown Are Based On Surface Measurement And Not Reduced To Nad '83 Grid Measurement.
12. For Flag Or Pipe Stem Lots, Snow Removal And Road Maintenance Are Provided To The Junction Of Flag Or Pipe Stem And Road Right-Of-Way Line Only And Not Onto The Flag Or Pipe Stem Lot Driveway. Trash And Recyclables Collection Will Be At Mill Creek Way Within 5' Of The County Roadway.
13. Driveways Shall Be Provided Prior To Issuance Of A Use And Occupancy Permit For Any New Dwellings To Ensure Safe Access For Fire And Emergency Vehicles Per The Following (Minimum) Requirements:
    a). Width – 12 Feet (16 Feet Serving More Than One Residence);
    b). Surface – Six (6") Inches Of Compacted Crusher Run Base With Tar And Chip Coating. (1 -1/2" Minimum);
    c). Geometry – Maximum 15% Grade, Maximum 10% Grade Change And 45-Foot Turning Radius;
    d). Structures (Culverts/Bridges) – Capable Of Supporting 25 Gross Tons (H25-Loading);
    e). Drainage Elements – Capable Of Safely Passing 100 Year Flood With No More Than 1 Foot Depth Over Surface;
    f). Structure Clearance – Minimum 12 Feet;
    g). Maintenance – Sufficient To Ensure All Weather Use.
14. Property Subject To Prior Department Of Planning And Zoning File No's: SP-15-013, ECP-15-044, WP-16-022, PB Case 418 HPC-16-061, and F-21-015.
15. No Cemeteries Exist On The Subject Property Based On Visual Observation Or Listed In Available Howard County Cemetery Inventory Map.
16. Property Is Located Within The Ellicott City Historic District. This Plan Received Advisory Comments From The Historic Preservation Commission (HPC) On April 4, 2013 And November 6, 2014.
17. There Are No Wetlands On This Site Per Investigation By Eco-Science Professionals, Inc. Dated September, 2014. Steep Slopes, Stream And Its Buffers Exist On-Site.
18. A Wetland Delineation And Forest Stand Delineation Report For This Project Dated September, 2014 Was Prepared By Eco-Science Professionals, Inc.
19. No 100 Year Floodplain Exist On This Property.
20. No Clearing, Grading Removal Of Vegetative Cover Or Trees, Paving And New Structures Shall Be Permitted Within The Limits Of Stream Buffers And Forest Conservation Easement Areas.
21. Water And Sewer Is Public, Contract No. 14-4913-D.
22. Public Water And Sewer Allocation Will Be Granted At The Time Of Issuance Of The Building Permit If Capacity Is Available At That Time. Water And Sewer Service To These Lots Will Be Granted Under The Provisions Of Section 18.122B Of The Howard County Code.
23. Stormwater Management Practices Are Required In Accordance With The Design Manuals. Prior To Signature Approval Of The Final Plat, The Developer Will Be Required To Execute The Declaration Of Covenant And/Or A Developers Agreement For The Construction Of The Stormwater Management Practices And A Maintenance Agreement. On Lot Stormwater Management Facilities Are Owned And Maintained By The Individual Lot Owner.
24. This Subdivision Plan Is Subject To The Amended Fifth Edition Of The Subdivision And Land Development Regulations And The 10-06-13 Zoning Regulations Per Council Bill No. 45-2003. Development Or Construction On These Lots Or Parcels Must Comply With Setbacks And Buffer Regulations In Effect At The Time Of Submission Of A Building Or Grading Permit Application.
25. This Plan Is Subject To PB Case 418 That Was Approved By The Planning Board On November 17, 2016 In Accordance With Section 107.0.F. Of The Zoning Regulations. The Planning Board Signed The Decision And Order On March 2, 2017.
26. Landscape Obligations For This Project Have Been Provided Under F-21-015 in Accordance With Section 16.124 of the Howard County Code and Landscape Manual.

General Notes Continued:

27. This Development Is Designed To Be In Accordance With Section 16.127 – Residential Infill Development Of The Subdivision And Land Development Regulations.
28. The Private Use-In-Common Shared Driveway, Retaining Wall, Stormwater Management, Drainage & Utility Easement For The Use And Benefit Of Lots 2, 18 thru 29 and open space lots 16, 30 and 31 and maintenance Agreement Are Recorded Simultaneously With This Plat.
29. An Existing Easement "Right-Of-Way Over The Avenue 33 Feet In Width, 16.5 Feet Of Which Is Located On This Property, Was Laid Out For The Use Of Lots 5, 6 And 8; Said Right-Of-Way To Be For The Purpose Of Ingress, Egress And Regress To Be Used In Common With Others Having A Like Right Under The Existing\Property Deed." This Easement Is For The Benefit Of Lynwood Farm, Lot 9 Which Is The Second Parcel In Deed For This Subdivision, Lot 6 Which Is Made Up Of Current Parcels 206 And 125, And Lot 8 Which Is Parcel 161. Easement Is Referenced In Current Deed For The Property Under Liber 8317 At Folio 657.
30. Design Manual Waiver To Allow 9 Lots (8 Buildable And 1 Open Space) On A Use-In-Common Driveway Was Approved On October 5, 2015 And Is Subject To The Following Conditions:
    1. The Minimum Width Of The Use-In-Common Driveway Should Increase To 20 Feet Due To Its Curvature.
    2. Provide Flush Curb And Gutter Along The Use-In-Common Driveway.
31. Open Space Lots 16, 17, 30 and 31 Are Owned And Maintained By The Lacey Property Homeowners Association Inc.
32. Articles Of Incorporation Of The Lacey Property Homeowners Association, Inc. By The State Department Of Assessments And Taxation Was Filed On November 30, 2023 With Receipt No. D21592032.
33. Declaration Of Covenants And Restrictions For The Lacey Property Homeowners Association, Inc. Were Recorded With Final Plat F-21-015.
34. Approval Of A Site Development Plan Is Required For The Development Of All Residential Lots Within This Subdivision Prior To Issuance Of Any Grading Or Building Permits For New House Construction In Accordance With Section 16.155 Of The Subdivision And Land Development Regulations.
35. The Forest Conservation Obligations For This Project Have Been Provided Under F-21-015 In Accordance With Requirements Per Section 16.1200 Of The Howard County Code And The Forest Conservation Manual.
36. On April 4, 2013 And November 6, 2014 The Historic Preservation Commission (HPC) Provided Advisory Comments On The Proposed Subdivision/Site Development In Cases HDC-17-13 And HPC-14-82. On December 3, 2015 The HPC Approved The Demolition Of The Existing Structures In Case HPC-15-78. The Request For Tree Removal And Retaining Wall Construction Was Withdrawn From The HPC-15-78 Application. The Tree Removal And Retaining Wall Construction Was Resubmitted For Approval And The Construction Of The Retaining Walls Was Approved With Conditions On February 4, 2016 In Case HPC-16-06a. The Request For Tree Removal Was Continued To March 3, 2016 And Approved With Amendments In Case HPC-16-06b. However, All Approvals Issued Expired At 18 Months And No Work Was Done. The Applicant Resubmitted For HPC Approval For The Demolition Of The Structures, Tree Removal And Retaining Wall Construction On December 6, 2018 In HPC-18-61. The Applicant Was Approved To Demolish The Buildings And Withdrew The Request For Construction Of Retaining Walls And Tree Removal. The Construction Of The Retaining Walls And Tree Removal Is Not Yet Approved, As The Previous Approval Expired And No New Applications Have Been Filed Since They Were Withdrawn In December, 2018.
37. This Subdivision Is Not Subject To Council Bill 76-2018 (Electric Vehicle Charging Stations) Because The Preliminary Equivalent Sketch Plan For This Subdivision Was Signed Prior To The Bill's Effective Date Of January 11, 2019.

General Notes Continued On Sheet 4:

Open Space Tabulation			
Open Space Lot No.	Credited Area	Non-Credited Area	Total Open Space Area
Ex. 16	0.281 Ac.±	0.000 Ac.±	0.281 Ac.±
30	0.589 Ac.±	0.000 Ac.±	0.589 Ac.±
31	4.057 Ac.±	0.000 Ac.±	4.057 Ac.±
Totals	4.927 Ac.±	0.000 Ac.±	4.927 Ac.±

Area Tabulation This Submission

TOTAL NUMBER OF BUILDABLE LOTS TO BE RECORDED	13
TOTAL NUMBER OF OPEN SPACE LOTS TO BE RECORDED	3
TOTAL NUMBER OF LOTS/PARCELS TO BE RECORDED	16
TOTAL AREA OF BUILDABLE LOTS TO BE RECORDED	2.897 Ac.±
TOTAL AREA OF OPEN SPACE LOTS TO BE RECORDED	4.904 Ac.±
TOTAL AREA OF LOTS/PARCELS TO BE RECORDED	7.801 Ac.±
TOTAL AREA OF ROADWAY TO BE RECORDED	0.000 Ac.±
TOTAL AREA TO BE RECORDED	7.801 Ac.±

Owners

Mill Creek, LLC
Suite 415
8480 Baltimore National Pike
Ellicott City, MD 21043
410-465-4244

Lacey Property Homeowners Association, Inc.
c/o Mr. Vincent P. Lacey,
6026 Trotter Road
Clarksville, Maryland 21029
Ph# 410-707-2639

Developer

SDC Mill Creek, LLC
Attn: Mr. James R. Moxley
Suite 415
8480 Baltimore National Pike
Ellicott City, MD 21043
410-465-4244

Fisher, Collins & Carter, Inc.
Civil Engineering Consultants & Land Surveyors
Centennial Square Office Park-10272 Baltimore National Pike
Ellicott City, Maryland 21042
(410) 461-2855

The Purpose Of This Plat Is to Resubdivide Lots 1, 3 Thru 13 and Open Space Lots 14 Thru 15 Revise Lot 2 and Open Space Lot 16, Abandon The Easements Benefiting The Former Lot Configurations and To Establish New Easements For The Benefit Of The Resubdivided Lots As Shown Here On By The Recordation Of This Plat. No New Lots Are To Be Created With This Plat.

M.I.H.U. Note: The Plat is Exempt From M.I.H.U. Requirements as it is a Plat of Resubdivision That Creates No Additional Lots.

APPROVED: For Public Water And Public Sewerage Systems
Howard County Health Department

For Michael J. Nitsch — 3/21/25
Howard County Health Officer — Date

APPROVED: Howard County Department Of Planning And Zoning.

Chief, Development Engineering Division — 4/7/25 Date

For Director — 4/10/25 Date

Owner's Certificate

Mill Creek, LLC and Lacey Property Homeowners Association, Inc., Owners Of The Property Shown And Described Hereon, Hereby Adopt This Plan Of Re-Subdivision, And In Consideration Of The Approval Of This Final Plat By The Department Of Planning And Zoning, Establish The Minimum Building Restriction Lines And Grant Unto Howard County, Maryland, Its Successors And Assigns; (1) The Right To Lay, Construct And Maintain Sewers, Drains, Water Pipes And Other Municipal Utilities And Services In And Under All Roads And Street Rights-Of-Way And The Specific Easement Areas Shown Hereon; (2) The Right To Require Dedication For Public Use Floodplains And Open Space Where Applicable And For Good And Other Valuable Consideration, Hereby Grant The Right And Option To Howard County To Acquire The Fee Simple Title To The Beds Of The Streets And/Or Roads And Floodplains, Storm Drainage Facilities And Open Space Where Applicable; (3) The Right To Require Dedication Of Waterways And Drainage Easements For The Specific Purpose Of Their Construction, Repair And Maintenance; And (4) That No Building Or Similar Structure Of Any Kind Shall Be Erected On Or Over The Said Easements And Rights-Of-Way. Witness My Hand This 2 Day Of April 2025.

Vincent P. Lacey
Lacey Property Homeowners Association, Inc.

James R. Moxley III, Manager
Mill Creek LLC

Steven K. Breeden, Manager
Mill Creek LLC

Witness

Witness

Witness

Surveyor's Certificate

I Hereby Certify To The Best Of My Knowledge That The Final Plat Shown Hereon Is Correct, That It Was Prepared By Me Or Under My Responsible Charge And That I Am A Duly Licensed Professional Land Surveyor Under The Laws Of The State Of Maryland; That It Is Part of the Lands Conveyed By Vincent P. Lacey, Trustee of the Lacey Family Revocable Trust to Lacey Homeowners Association, Inc. By Deed Dated May 3, 2024 And Recorded Among the Land Records Of Howard County, Maryland in Book 22416 At Page 541; And All of the Lands Conveyed By Vincent P. Lacey, Trustee of the Lacey Family Revocable Trust to Mill Creek LLC By Deed Dated March 19, 2025 And Recorded Among the Land Records Of Howard County, Maryland in Book 22894 At Page 280; All Monuments Are In Place In Accordance With The Annotated Code Of Maryland, As Amended.

Frank John Manalansan II, 1/24/25 Date
Professional Land Surveyor No. 21476
Expiration Date: July 14, 2025

STATE OF MARYLAND FRANK JOHN MANALANSAN II No. 21476 PROFESSIONAL LAND SURVEYOR

RECORDED AS PLAT No. 26861 ON 4/17/2025
AMONG THE LAND RECORDS OF HOWARD COUNTY, MARYLAND.

Resubdivision and Revision Plat
Lacey Property
Lots 2, 18 Thru 29 And Open Space Lots 16, 30 & 31

(Being Resubdivision of Lots 1, 3 Thru 13 And Open Space Lots 14 & 15, and a Revision to Lot 2 and 16 As Shown On Plats Entitled "Lacey Property, Lots 1 Thru 13 And Open Space Lots 14 Thru 17" Recorded As Plat Nos. 26657 Thru 26659)

Zoned: R-ED
Tax Map No. 25, Grid No. 1, Parcel No. 13
Second Election District – Howard County, Maryland
Date: October 28, 2024 Scale: 1" = 50' Sheet 1 Of 5

F-25-022

I:\2008\08035\dwg\Lacey\RECORD PLATS\REVISED PLATS 10-09-24\08035 REVISED PLAT 1 (10-09-24).dwg, 1/24/2025 12:54:36 PM, Downstairs T1500 mylar plat.pc3, 1:1

060

Legend

- Existing Public Forest Conservation Area (Retention)(Plat No. 26657-26659)
- Private Use-In-Common Shared Driveway, Retaining Wall, SWM, Drainage & Utility Easement For The Use And Benefit Of Lots 1 Thru 13 And Open Space Lots 14 Thru 16 Removed By The Recordation Of This Plat
- Public Sewer, Water & Utility Easement Removed By The Recordation Of This Plat
- Existing Recreational Open Space Area Plat 26657-26659
- Ex. 20' Public Drainage & Utility Easement
- 5' SWM, Drainage & Utility Easement Removed By The Recordation Of This Plat
- Ex. Private Use-In-Common Easement For The Use And Benefit Of Lots 1 Thru 8 - Removed By The Recordation Of This Plat

Reservation Of Public Utility And Forest Conservation Easements

"Developer Reserves Unto Itself, Its Successors And Assigns, All Easements Shown On This Plan For Water, Sewer, Storm Drainage, Other Public Utilities, Located In, On, Over, And Through Buildable Lots 2, 18 Thru 29 And Open Space Lots 16, 30 and 31. Any Conveyances Of The Aforesaid Lots Shall Be Subject To The Easements Herein Reserved, Whether Or Not Expressly Stated In The Deed(s) Conveying Said Lots. Developer Shall Execute And Deliver Deeds For The Easements Herein Reserved To Howard County. Upon Completion Of The Public Utilities And Their Acceptance By Howard County, The County Shall Accept The Easements And Record The Deed(s) Of Easement In The Land Records Of Howard County."

This Subdivision Is Subject To Section 18.122B Of The Howard County Code. Public Water And Public Sewer Service Has Been Granted Under The Terms And Provisions, Thereof, Effective APRIL 10, 2024 On Which Date Developer Agreement 14-4913-D Was Filed And Accepted.

PROPERTY OF STATE OF MARYLAND DEPARTMENT OF GENERAL SERVICES (L. 3132, F. 14) TAX MAP 25, PARCEL 320 ZONED: POR

PROPERTY OF STATE OF MARYLAND DEPARTMENT OF GENERAL SERVICES (L. 3132, F. 14) TAX MAP 25 PARCEL 320 ZONED: POR

3/4" Iron Pipe Found (Held)

Previously Recorded Lot Line Removed by Recordation of This Plat.

Lot 1 — 9,313 Sq. Ft. — Previously Recorded Lot Line Removed by Recordation of This Plat.

Lot 2 — 10,503 Sq. Ft. — Private 5' Easement Plat 26658 Removed By The Recordation Of This Plat

Lot 3 — 9,830 Sq. Ft.

Lot 4

Lot 5

Lot 18 — 9,313 Sq. Ft. — Previously Recorded Lot Line Removed by Recordation of This Plat.

Lot 19 — 9,830 Sq. Ft.

Lot 20 — 11,807 Sq. Ft.

Lot 21 — 12,891 Sq. Ft. — Previously Recorded Lot Line Removed by Recordation of This Plat.

Lot 22 — 8,590 Sq. Ft. — Previously Recorded Lot Line Removed by Recordation of This Plat.

Lot 23 — 8,132 Sq. Ft.

Lot 24 — 9,137 Sq. Ft.

Private Driveway

Private Use-In-Common Easement For The Use And Benefit Of Lots 1 Thru 8, Plat 26658 Removed By The Recordation Of This Plat

Owned And Maintained By The Lacey Property Homeowners Association, Inc. Ex. Recreational Open Space (3,904 Sq.Ft.)

Open Space Lot 16 — 12,247 Sq. Ft.

Public Sewer, Water & Utility Easement Plat 26658 To Be Abandoned By The Recordation Of This Plat

Part Of Open Space Lot 30 — 10,384 SqFt. (This Sheet) Total Area = 26,465 SqFt. or 0.608 Ac.± Owned And Maintained By The Lacey Property Homeowners Association, Inc.

Part Of Open Space Lot 31 — 1.2972 Ac.± (This Sheet) Total Area = 4.0155 Ac.± Owned And Maintained By The Lacey Property Homeowners Association, Inc.

Open Space Lot 30 Owned And Maintained By The Lacey Family Homeowners Association, Inc.

Private Use-In-Common Shared Driveway, Retaining Wall, SWM, Drainage & Utility Easement For The Use And Benefit Of Lots 1 Thru 13 And Open Space Lots 14 Thru 16. Removed By The Recordation Of This Plat

Ex. Forest Conservation Area No. 1 — Plat 26657-26659

Ex. 20' Public Drainage & Utility Easement Plat 25568 To Be Abandoned By The Recordation Of This Plat

Open Space Lot 31 Owned And Maintained By The Lacey Property Homeowners Association, Inc.

Existing C.O. Intermittent Stream

Bank Buffer

Match Line Only-Not A Lot Line

36" Dead Maple Tree Found (Held)

PROPERTY OF LAWRENCE L. GAETANO & HEATHER F. GAETANO (L. 19066, F. 116) TAX MAP 25, PARCEL 161 ZONED: R-ED

Match Line - See Sheet 3

Graphic Scale 0' 50' 100' 150' — Scale: 1" = 50'

Detail — Scale: 1"=25'

Ex. 20' Public Drainage & Utility Easement Plat 25568

Mill Creek Way (Public Access Place)

See Detail This Sheet

Church Road — County Local Scenic Road (50' Right-Of-Way) — Existing C Road

LACEY PROPERTY OPEN SPACE LOT 17

THE WOODS OF PARK PLACE LOTS 1 THRU 15 AND OPEN SPACE LOTS 16 & 17 (PLAT NOS. 16049 THRU 16052) ZONED: R-ED

Deanwood Avenue — Existing 50' R/W (Plat Nos. 16049 Thru 16052)

6"x6" Stone Found (Held)

Match Line Only-Not A Lot Line

Area Tabulation This Sheet

TOTAL NUMBER OF BUILDABLE LOTS TO BE RECORDED	8
TOTAL NUMBER OF OPEN SPACE LOTS TO BE RECORDED	3
TOTAL NUMBER OF LOTS/PARCELS TO BE RECORDED	11
TOTAL AREA OF BUILDABLE LOTS TO BE RECORDED	1.841 Ac.±
TOTAL AREA OF OPEN SPACE LOTS TO BE RECORDED	1.817 Ac.±
TOTAL AREA OF LOTS/PARCELS TO BE RECORDED	3.658 Ac.±
TOTAL AREA OF ROADWAY TO BE RECORDED	0.000 Ac.±
TOTAL AREA TO BE RECORDED	3.658 Ac.±

Owners

Mill Creek, LLC
Suite 415
8480 Baltimore National Pike
Ellicott City, MD 21043
410-465-4244

Lacey Property Homeowners Association, Inc.
c/o Mr. Vincent P. Lacey,
6026 Trotter Road
Clarksville, Maryland 21029
Ph# 410-707-2639

Developer

SDC Mill Creek, LLC
Attn: Mr. James R. Moxley
Suite 415
8480 Baltimore National Pike
Ellicott City, MD 21043
410-465-4244

Fisher, Collins & Carter, Inc.
Civil Engineering Consultants & Land Surveyors
Centennial Square Office Park-10272 Baltimore National Pike
Ellicott City, Maryland 21042
(410) 461-2855

APPROVED: For Public Water And Public Sewerage Systems Howard County Health Department

Howard County Health Officer — Date 3/21/25

APPROVED: Howard County Department Of Planning And Zoning.

Chief, Development Engineering Division — Date 4/7/25

Director — Date 4/10/25

Owner's Certificate

Mill Creek LLC, and Lacey Property Homeowners Association, Inc., Owners Of The Property Shown And Described Hereon, Hereby Adopt This Plan Of Re-Subdivision, And In Consideration Of The Approval Of This Final Plat By The Department Of Planning And Zoning, Establish The Minimum Building Restriction Lines And Grant Unto Howard County, Maryland, Its Successors And Assigns; (1) The Right To Lay, Construct And Maintain Sewers, Drains, Water Pipes And Other Municipal Utilities And Services In And Under All Roads And Street Rights-Of-Way And The Specific Easement Areas Shown Hereon; (2) The Right To Require Dedication For Public Use Floodplains And Open Space Where Applicable And For Good And Other Valuable Consideration, Hereby Grant The Right And Option To Howard County To Acquire The Fee Simple Title To The Beds Of The Streets And/Or Roads And Floodplains, Storm Drainage Facilities And Open Space Where Applicable; (3) The Right To Require Dedication Of Waterways And Drainage Easements For The Specific Purpose Of Their Construction, Repair And Maintenance; And (4) That No Building Or Similar Structure Of Any Kind Shall Be Erected On Or Over The Said Easements And Rights-Of-Way. Witness My Hand This 2 Day Of April, 2025.

Vincent P. Lacey — Witness
Vincent P. Lacey
Lacey Property Homeowners Association, Inc.

James R. Moxley III — Witness
James R. Moxley III, Manager
Mill Creek LLC

Witness

Steven E. Breeden, Manager
Mill Creek LLC

Witness

Surveyor's Certificate

I Hereby Certify To The Best Of My Knowledge That The Final Plat Shown Hereon Is Correct, That It Was Prepared By Me Or Under My Responsible Charge And That I Am A Duly Licensed Professional Land Surveyor Under The Laws Of The State Of Maryland; That It Is Part of the Lands Conveyed By Vincent P. Lacey, Trustee of the Lacey Family Revocable Trust to Lacey Homeowners Association, Inc. By Deed Dated May 5, 2024 And Recorded Among the Land Records Of Howard County, Maryland in Book 22416 At Page 541; And All of the Lands Conveyed By Vincent P. Lacey, Trustee of the Lacey Family Revocable Trust to Mill Creek LLC By Deed Dated March 19, 2025 And Recorded Among the Land Records Of Howard County, Maryland in Book 22694 At Page 250; All Monuments Are In Place In Accordance With The Annotated Code Of Maryland, As Amended.

Frank John Manalansan II — Date 1/24/25

Frank John Manalansan II,
Professional Land Surveyor No. 21476
Expiration Date: July 14, 2025

STATE OF MARYLAND — FRANK JOHN MANALANSAN II — No. 21476 — PROFESSIONAL LAND SURVEYOR

The Requirements Of 3-108, The Real Property Article, Annotated Code Of Maryland, 1988 Replacement Volume, (As Supplemented) As Far As They Relate To The Making Of This Plat And The Setting Of Markers Have Been Complied With.

Frank John Manalansan II, L.S. No. 21476 (Professional Land Surveyor) Expires 7/14/2025 — 4/4/25 Date

Vincent P. Lacey — 4/2/25 Date
Vincent P. Lacey
Lacey Homeowners Association, Inc.

James R. Moxley III — 4/2/25 Date
James R. Moxley III, Manager
SDC Mill Creek LLC

Steven E. Breeden — 4/2/25 Date
Steven E. Breeden, Manager
Mill Creek LLC

RECORDED AS PLAT No. 26862 ON 4/17/2025 AMONG THE LAND RECORDS OF HOWARD COUNTY, MARYLAND.

Resubdivision and Revision Plat
Lacey Property
Lots 2, 18 Thru 29 And Open Space Lots 16, 30 & 31

(Being Resubdivision of Lots 1, 3 Thru 13 And Open Space Lots 14 & 15, and a Revision to Lot 2 and 16 As Shown On Plats Entitled "Lacey Property, Lots 1 Thru 13 And Open Space Lots 14 Thru 17" Recorded As Plat Nos. 26657 Thru 26659)

Zoned: R-ED
Tax Map No. 25, Grid No. 1, Parcel No. 13
Second Election District - Howard County, Maryland
Date: October 28, 2024 Scale: 1" = 50' Sheet 2 Of 5

F-25-022

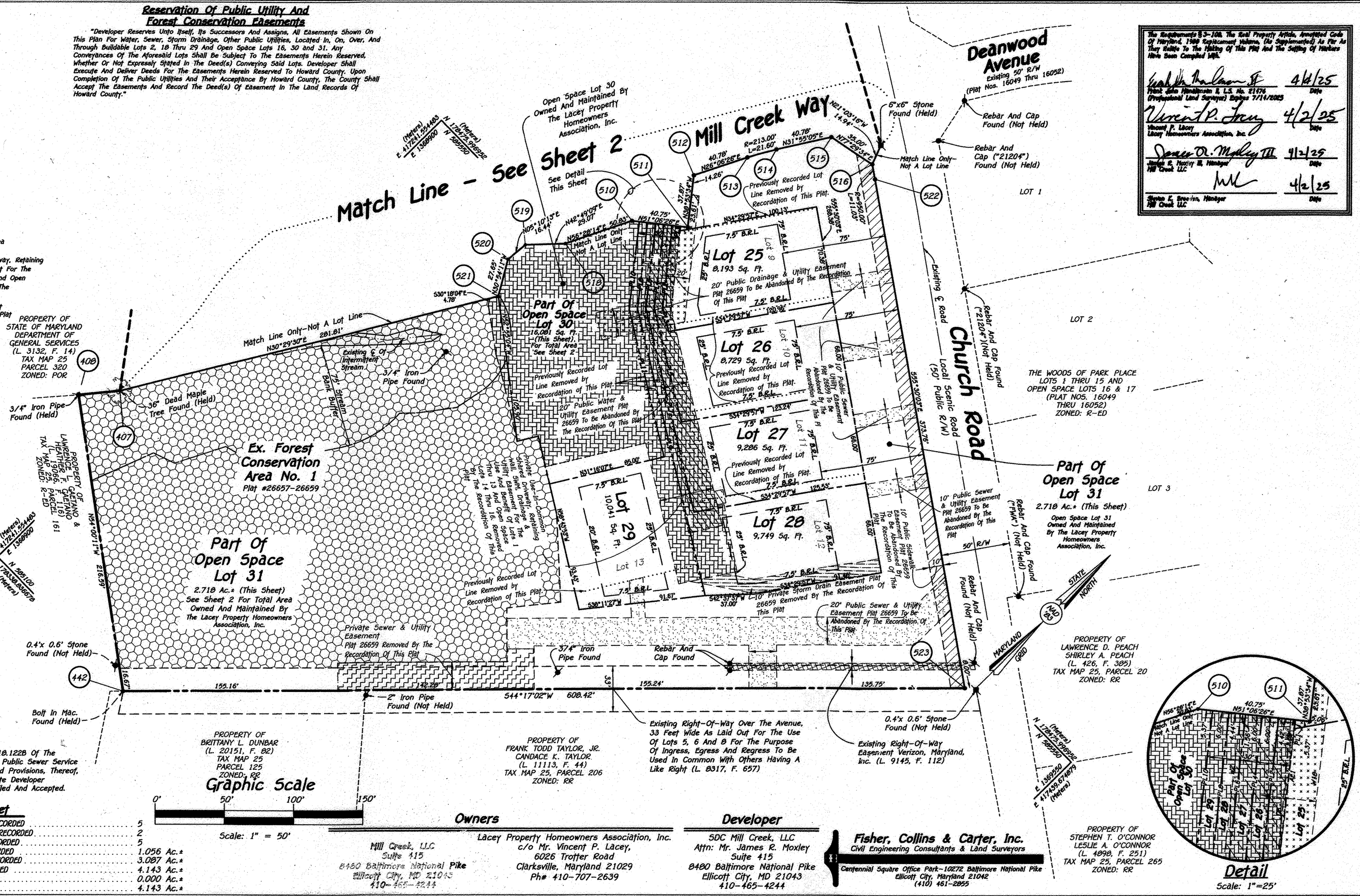
I:\2008\08035\dwg\Lacey\RECORD PLATS\REVISED PLATS 10-09-24\08035 REVISED PLAT 2 (10-09-24).dwg, 1/24/2025 1:03:15 PM, Downstairs T1500 mylar plat.pc3, 1:1

Reservation Of Public Utility And Forest Conservation Easements

"Developer Reserves Unto Itself, Its Successors And Assigns, All Easements Shown On This Plan For Water, Sewer, Storm Drainage, Other Public Utilities, Located In, On, Over, And Through Buildable Lots 2, 18 Thru 29 And Open Space Lots 16, 30 and 31. Any Conveyances Of The Aforesaid Lots Shall Be Subject To The Easements Herein Reserved, Whether Or Not Expressly Stated In The Deed(s) Conveying Said Lots. Developer Shall Execute And Deliver Deeds For The Easements Herein Reserved To Howard County, Upon Completion Of The Public Utilities And Their Acceptance By Howard County. The County Shall Accept The Easements And Record The Deed(s) Of Easement In The Land Records Of Howard County."

Legend

- Existing 33' Private Right-Of-Way For The Purpose Of Ingress, Egress And Regress For Use Of Lots 5, 6 And 8 (L. 8317, F. 657)
- Existing Right-Of-Way Easement Verizon, Maryland (L. 9145, F. 112)
- Existing Public Forest Conservation Area (Retention)(Plat No. 26657-26659)
- Private Use-In-Common Shared Driveway, Retaining Wall, SWM, Drainage & Utility Easement For The Use And Benefit Of Lots 1 Thru 13 And Open Space Lots 14 Thru 16 Removed By The Recordation Of This Plat
- Public Sewer, Water & Utility Easement Removed By The Recordation Of This Plat
- Ex. 20' Public Drainage & Utility Easement
- 10' Private Storm Drain Easement To Be Abandoned
- Existing 10' Public Sidewalk Easement (Plat No. 26657-26659)



This Subdivision Is Subject To Section 18.122B Of The Howard County Code. Public Water And Public Sewer Service Has Been Granted Under The Terms And Provisions, Thereof, Effective APRIL 10, 2024 On Which Date Developer Agreement 14-4913-D Was Filed And Accepted.

Area Tabulation This Sheet

TOTAL NUMBER OF BUILDABLE LOTS TO BE RECORDED	5
TOTAL NUMBER OF OPEN SPACE LOTS TO BE RECORDED	2
TOTAL NUMBER OF LOTS/PARCELS TO BE RECORDED	5
TOTAL AREA OF BUILDABLE LOTS TO BE RECORDED	1.056 Ac.±
TOTAL AREA OF OPEN SPACE LOTS TO BE RECORDED	3.087 Ac.±
TOTAL AREA OF LOTS/PARCELS TO BE RECORDED	4.143 Ac.±
TOTAL AREA OF ROADWAY TO BE RECORDED	0.000 Ac.±
TOTAL AREA TO BE RECORDED	4.143 Ac.±

Owners

Mill Creek, LLC
Suite 415
8480 Baltimore National Pike
Ellicott City, MD 21043
410-465-4244

Lacey Property Homeowners Association, Inc.
c/o Mr. Vincent P. Lacey,
6026 Trotter Road
Clarksville, Maryland 21029
Ph# 410-707-2639

Developer

SDC Mill Creek, LLC
Attn: Mr. James R. Moxley
Suite 415
8480 Baltimore National Pike
Ellicott City, MD 21043
410-465-4244

Fisher, Collins & Carter, Inc.
Civil Engineering Consultants & Land Surveyors
Centennial Square Office Park-10272 Baltimore National Pike
Ellicott City, Maryland 21042
(410) 461-2855

The Requirements Of § 3-108, The Real Property Article, Annotated Code Of Maryland, 1988 Replacement Volume, (As Supplemented) As Far As They Relate To The Making Of This Plat And The Setting Of Markers Have Been Complied With.

Frank John Manalansan II, L.S. No. 21476 (Professional Land Surveyor) Expires 7/14/2025 — 4/1/25 Date

Vincent P. Lacey, Lacey Homeowners Association, Inc. — 4/2/25 Date

James R. Moxley III, Manager, MR Creek LLC — 4/2/25 Date

Steven K. Breeden, Manager, MR Creek LLC — 4/2/25 Date

APPROVED: For Public Water And Public Sewerage Systems Howard County Health Department

For Howard County Health Officer — 3/21/25 Date

APPROVED: Howard County Department Of Planning And Zoning.

Chief, Development Engineering Division — 4/3/25 Date

For Director — 4/10/25 Date

Owner's Certificate

Mill Creek LLC and Lacey Property Homeowners Association, Inc., Owners Of The Property Shown And Described Hereon, Hereby Adopt This Plan Of Re-Subdivision, And In Consideration Of The Approval Of This Final Plat By The Department Of Planning And Zoning, Establish The Minimum Building Restriction Lines And Grant Unto Howard County, Maryland, Its Successors And Assigns; (1) The Right To Lay, Construct And Maintain Sewers, Drains, Water Pipes And Other Municipal Utilities And Services In And Under All Roads And Street Rights-Of-Way And The Specific Easement Areas Shown Hereon; (2) The Right To Require Dedication For Public Use Floodplains And Open Space Where Applicable And For Good And Other Valuable Consideration, Hereby Grant The Right And Option To Howard County To Acquire The Fee Simple Title To The Beds Of The Streets And/Or Roads And Floodplains, Storm Drainage Facilities And Open Space Where Applicable; (3) The Right To Require Dedication Of Waterways And Drainage Easements For The Specific Purpose Of Their Construction, Repair And Maintenance; And (4) That No Building Or Similar Structure Of Any Kind Shall Be Erected On Or Over The Said Easements And Rights-Of-Way. Witness My Hand This 2 Day Of April, 2025.

Vincent P. Lacey
Vincent P. Lacey
Lacey Property Homeowners Association, Inc.

James R. Moxley III
James R. Moxley III, Manager
Mill Creek LLC

Steven K. Breeden, Manager
Mill Creek LLC

Witness

Witness

Witness

Surveyor's Certificate

I Hereby Certify To The Best Of My Knowledge That The Final Plat Shown Hereon Is Correct, That It Was Prepared By Me Or Under My Responsible Charge And That I Am A Duly Licensed Professional Land Surveyor Under The Laws Of The State Of Maryland; That It Is Part of the Lands Conveyed By Vincent P. Lacey, Trustee of the Lacey Family Revocable Trust to Lacey Homeowners Association, Inc. By Deed Dated May 5, 2024 And Recorded Among the Land Records Of Howard County, Maryland in Book 22416 At Page 541; And All of the Lands Conveyed By Vincent P. Lacey, Trustee of the Lacey Family Revocable Trust to Mill Creek LLC By Deed Dated March 19, 2025 And Recorded Among the Land Records Of Howard County, Maryland in Book 22694 At Page 260; All Monuments Are In Place In Accordance With The Annotated Code Of Maryland, As Amended.

Frank John Manalansan II, 1/24/25 Date
Professional Land Surveyor No. 21476
Expiration Date: July 14, 2025

STATE OF MARYLAND — FRANK JOHN MANALANSAN II — No. 21476 — PROFESSIONAL LAND SURVEYOR

RECORDED AS PLAT No. 26865 ON 4/17/2025
AMONG THE LAND RECORDS OF HOWARD COUNTY, MARYLAND.

Resubdivision and Revision Plat
Lacey Property
Lots 2, 18 Thru 29 And Open Space Lots 16, 30 & 31

(Being Resubdivision of Lots 1, 3 Thru 13 And Open Space Lots 14 & 15, and a Revision to Lot 2 and 16 As Shown On Plats Entitled "Lacey Property, Lots 1 Thru 13 And Open Space Lots 14 Thru 17" Recorded As Plat Nos. 26657 Thru 26659)

Zoned: R-ED
Tax Map No. 25, Grid No. 1, Parcel No. 13
Second Election District - Howard County, Maryland
Date: October 28, 2024 Scale: 1" = 50' Sheet 3 Of 5

F-25-022

I:\2008\08035\dwg\Lacey\RECORD PLATS\REVISED PLATS 10-09-24\08035 REVISED PLAT 3 (10-09-24).dwg, 1/24/2025 1:14:25 PM, Downstairs T1500 mylar plat.pc3, 1:1

260

Private Use-In-Common Shared Driveway, Retaining Wall, SWM, Drainage & Utility Easement For The Use And Benefit Of Lots 2, 18 Thru 29 And Open Space Lots 16, 30 & 31.

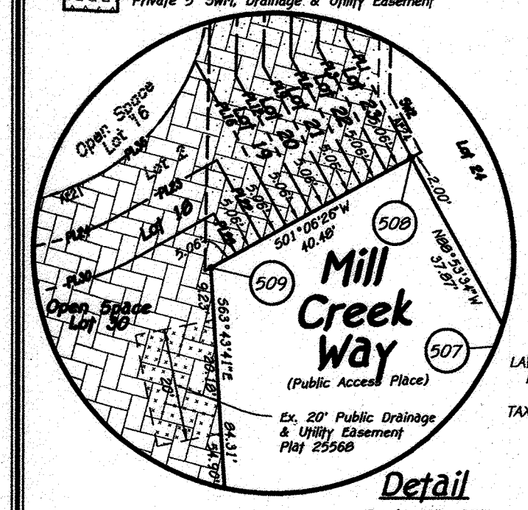
Line #	Direction	Length
L1	N29°08'28"E	58.65'
L3	S58°55'14"E	94.86'
L4	S88°53'34"E	12.26'
L5	S01°06'26"W	40.48'
L6	S63°43'41"E	84.31'
L7	N51°06'26"E	35.37'
L8	S38°53'34"E	59.98'
L9	S58°43'53"E	146.55'
L10	N33°32'48"E	4.89'
L11	S56°27'12"E	49.44'
L12	S32°41'37"W	43.00'
L13	N58°40'45"W	91.78'
L14	S31°16'07"W	74.51'
L15	N58°43'53"W	35.52'
L16	S31°16'07"W	15.88'
L17	N59°15'27"W	64.41'
L18	N54°18'30"W	36.77'
L19	N30°18'08"W	17.29'
L20	N14°32'28"W	18.88'
L21	N05°10'13"E	16.44'

Line #	Direction	Length
L22	N42°49'09"E	29.07'
L23	N57°42'43"W	28.20'
L24	S85°28'55"W	41.26'
L25	N62°04'21"W	13.61'
L26	S27°55'39"W	22.08'
L28	S08°41'47"E	24.24'
L29	S48°40'33"W	39.24'
L30	N71°16'44"W	46.54'
L31	S34°47'33"W	72.90'
L32	N57°09'58"W	25.69'
L33	N34°47'33"E	30.04'
L34	S56°44'55"E	9.05'
L35	N40°01'32"E	41.74'
L36	N34°47'33"E	58.94'
L37	N55°12'27"W	74.18'

CURVE	RADIUS	ARC	DELTA	TANGENT	BEARING	CHORD
C1	47.00'	75.42'	091°56'18"	48.62'	N75°06'37"E	67.58'
C2	47.00'	45.79'	055°49'30"	24.90'	S55°50'24"W	44.00'
C3	47.00'	69.19'	084°20'55"	42.56'	N13°01'59"W	63.11'

Legend

- Existing Public Forest Conservation Area (Retention)(Plat No. 26657-26659)
- Private Use-In-Common Shared Driveway, Retaining Wall, SWM, Drainage & Utility Easement For The Use And Benefit Of Lots 1 Thru 13 And Open Space Lots 14 Thru 16
- Public Sewer, Water & Utility Easement
- Existing Recreational Open Space Area Plat 26657-26659
- 20' Public Drainage & Utility Easement
- Private Sewer & Utility Easement
- Private 5' SWM, Drainage & Utility Easement



Detail

Scale: 1"=25'

Area Tabulation This Sheet

TOTAL NUMBER OF BUILDABLE LOTS TO BE RECORDED	8
TOTAL NUMBER OF OPEN SPACE LOTS TO BE RECORDED	3
TOTAL NUMBER OF LOTS/PARCELS TO BE RECORDED	11
TOTAL AREA OF BUILDABLE LOTS TO BE RECORDED	1.841 Ac.±
TOTAL AREA OF OPEN SPACE LOTS TO BE RECORDED	1.817 Ac.±
TOTAL AREA OF LOTS/PARCELS TO BE RECORDED	3.658 Ac.±
TOTAL AREA OF ROADWAY TO BE RECORDED	0.000 Ac.±
TOTAL AREA TO BE RECORDED	3.658 Ac.±

Curve Data Tabulation

Pnt-Pnt	Radius	Arc Length	Delta	Tangent	Bearing & Distance
501-502	950.08'	106.17'	06°24'10"	53.14'	S 62°35'57" E 106.12'
505-506	263.00'	26.67'	05°48'39"	13.35'	S 29°00'46" W 26.66'
514-513	213.00'	21.60'	05°48'39"	10.81'	S 29°00'46" W 21.59'
517-516	950.00'	53.60'	03°13'58"	26.81'	S 57°47'43" E 53.59'

Reservation Of Public Utility And Forest Conservation Easements

"Developer Reserves Unto Itself, Its Successors And Assigns, All Easements Shown On This Plan For Water, Sewer, Storm Drainage, Other Public Utilities, Located In, On, Over, And Through Buildable Lots 2, 18 Thru 29 And Open Space Lots 16, 30 and 31. Any Conveyances Of The Aforesaid Lots Shall Be Subject To The Easements Herein Reserved, Whether Or Not Expressly Stated In The Deed(s) Conveying Said Lots. Developer Shall Execute And Deliver Deeds For The Easements Herein Reserved To Howard County. Upon Completion Of The Public Utilities And Their Acceptance By Howard County, The County Shall Accept The Easements And Record The Deed(s) Of Easement In The Land Records Of Howard County."

Private 5' SWM, Drainage & Utility Easement		
Line	Bearing	Length
SWM1	N 54°55'27" W	66.04'
SWM2	N 30°25'39" W	32.76'
SWM3	S 79°11'28" W	20.50'
SWM4	N 64°10'16" W	1.84'
SWM5	S 25°49'44" W	5.00'
SWM6	S 64°10'16" E	3.49'
SWM7	N 79°11'28" E	18.53'
SWM8	S 30°25'39" E	30.34'
SWM9	S 54°55'27" E	67.15'
SWM10	N 34°47'33" E	5.00'

PROPERTY OF STATE OF MARYLAND DEPARTMENT OF GENERAL SERVICES (L. 3132, F. 14) TAX MAP 25 PARCEL 320 ZONED: POR

PROPERTY OF STATE OF MARYLAND DEPARTMENT OF GENERAL SERVICES (L. 3132, F. 14) TAX MAP 25 PARCEL 320 ZONED: POR

This Subdivision Is Subject To Section 18.122B Of The Howard County Code. Public Water And Public Sewer Service Has Been Granted Under The Terms And Provisions, Thereof, Effective APRIL 10, 2024 On Which Date Developer Agreement 14-4913-D Was Filed And Accepted.

Part Of Open Space Lot 30

10,384 SqFt. (This Sheet)
Total Area = 26,465 SqFt. or 0.608 Ac.±
Owned And Maintained By The Lacey Property Homeowners Association, Inc.

Part Of Open Space Lot 31

1.2972 Ac.± (This Sheet)
Total Area = 4.0155 Ac.±
Owned And Maintained By The Lacey Property Homeowners Association, Inc.

Ex. Forest Conservation Area No. 1

Plat 26657-26659

Private Driveway

Private Use-In-Common Shared Driveway, Retaining Wall, SWM, Drainage & Utility Easement For The Use And Benefit Of Lots 2, 18 Thru 29 And Open Space Lots 16, 30 & 31. Maintenance Agreement Recorded Simultaneously With This Plat

Open Space Lot 30 Owned And Maintained By The Lacey Family Homeowners Association, Inc.

Open Space Lot 31 Owned And Maintained By The Lacey Property Homeowners Association, Inc.

Owned And Maintained By The Lacey Property Homeowners Association, Inc. Ex. Recreational Open Space (5,702± Sq.Ft.)

Existing Stream Bank Buffer

Existing Wetland Buffer

Match Line Only-Not A Lot Line

3/4" Iron Pipe Found (Held)

36" Dead Maple Tree Found (Held)

PROPERTY OF LAWRENCE L. GAETANO & HEATHER F. GAETANO (L. 19066, F. 116) TAX MAP 25, PARCEL 161 ZONED: R-ED

Match Line - See Sheet 5

Graphic Scale

0' 50' 100' 150'

Scale: 1" = 50'

Owners

Mill Creek, LLC
Suite 415
8480 Baltimore National Pike
Ellicott City, MD 21043
410-465-4244

Lacey Property Homeowners Association, Inc.
c/o Mr. Vincent P. Lacey,
6026 Trotter Road
Clarksville, Maryland 21029
Ph# 410-707-2639

Developer

SDC Mill Creek, LLC
Attn: Mr. James R. Moxley
Suite 415
8480 Baltimore National Pike
Ellicott City, MD 21043
410-465-4244

Fisher, Collins & Carter, Inc.
Civil Engineering Consultants & Land Surveyors
Centennial Square Office Park-10272 Baltimore National Pike
Ellicott City, Maryland 21042
(410) 461-2855

The Requirements Of § 3-108, The Real Property Article, Annotated Code Of Maryland, 1988 Replacement Volume, (As Supplemented) As Far As They Relate To The Making Of This Plat And The Setting Of Markers Have Been Complied With.

Frank John Manalansan II, Professional Land Surveyor & L.S. No. 21476 (Professional Land Surveyor) Expires 7/14/2025 — 4/4/25 Date

Vincent P. Lacey, Lacey Homeowners Association, Inc. — 4/2/25 Date

James R. Moxley III, Mill Creek LLC — 4/2/25 Date

Steven K. Breeden, Manager, Mill Creek LLC — 4/2/25 Date

General Notes Continued:

36. This Plat Is Subject To WP-16-022 Which On December 5, 2016 The Planning Director Approved A Request To Waive From Howard County Subdivision And Land Development Regulations, Specifically Section 16.1205(b)(7) Forest Retention Priorities - Retention Of Specimen Trees, Section 16.116(b)(1) Stating That Grading, Removal Of Vegetative Cover And Trees, New Structures, And Paving Shall Not Be Permitted On Land With Existing Steep Slopes To Remove Steep Slopes In Areas Greater Than 20,000 Sq. Ft. In Size; And Section 16.134(A)(1)(I) Sidewalks Are Required On Only One Side Of Cul-De-Sacs And Local Streets Of Single-Family Detached Subdivisions. Approval Is Subject To The Following Nine (9) Conditions:
    1. Compliance With SRC Comments For SP-15-013 And Planning Board Approval Of The Proposed Subdivision Plan, Design, Layout And Location Of Lots, Roads And Shared Driveways.
    2. No Additional Disturbance Or Grading Shall Occur Beyond The Limit Of Disturbance (L.O.D.) Of The 25% Steep Slopes That Are Detailed On The Preliminary Grading Plan And As Approved By The Planning Board. Unless It Can Be Sufficiently Demonstrated To Be Warranted Or Justified By The Applicant.
    3. The Affected Steep Slope Areas Where The Building Lots Are Planned Must Be Sufficiently Stabilized With Retaining Walls And/Or Soil Stabilization Devices/Methods That Shall Lessen The Erodibility Of Soils And Runoff. The Impacted Steep Slope Areas Must Be Revegetated Or Stabilized With Suitable Native Species That Will Bind The Surface Tightly. These Stabilization Techniques Must Be Clearly Demonstrated On Both The Road Construction Drawings (With The Final Plat) And The Site Development Plan.
    4. The Removal Of The Eight (8) Specimen Trees Will Require Mitigation With The Planting Of 2:1 Replacement Trees (16 Total) With A Minimum 3" Caliper Native Plant Species. The Replacement Trees Shall Be Bonded And Shown On The Landscape Plan With The Forthcoming Final Plan.
    5. The Remaining 35 Specimen Trees Shall Be Saved And Protected During Construction Activity. Any Additional Removal Of Specimen Trees Shall Require The Submittal Of A New Alternative Compliance Petition Application.
    6. Provide Tree Protection Fencing At The Trees Drip Line, Or Farther Out, To Prevent Tree Damage From Excavation, Soil Compaction Of Soil Over Roots. These Protection Techniques Must Be Demonstrated On Both The Road Construction Drawings (With The Final Plat) And The Site Development Plan.
    7. Compliance With The Certificate Of Approval Issued By The Historic Preservation Commission For Development Of This Property.
    8. The Construction Of The New Houses Facing Towards Church Road Shall Be Adequately Screened Using Berms, Enhanced Landscaping And House Siting To Minimize Impacting The Natural Setting Along The Scenic Road. This Condition Will Be Evaluated Further At The Site Development Plan Stage.
    9. Provide A Note On The SP Plan, The Final Plat And The Development Plan Regarding This Alternative Compliance Petition Approval. This Note Shall Include Those Subdivision Regulation Sections Petitioned, The Date Of The Alternative Compliance Approval, And The Conditions Of The Approval.

The Lots Shown On This Plat Are The Ultimate Revised Lot Line Boundaries For Previously Recorded Lots 1, 3 Thru 13 And Open Space Lots 14 And 15 And The New Easements To Be Recorded. No New Lots Were Created With This Plat.

THE WOODS OF PARK PLACE LOTS 1 THRU 15 AND OPEN SPACE LOTS 16 & 17 (PLAT NOS. 16049 THRU 16052) ZONED: R-ED

Existing 50' R/W (Plat Nos. 16049 Thru 16052)

Match Line Only-Not A Lot Line

6"x6" Stone Found (Held)

Lot Line Line Table Chart		
Line	Bearing	Length
PL1	N 88°53'34" W	24.27'
PL2	N 58°55'14" W	34.75'
PL3	N 88°53'34" W	25.10'
PL4	N 58°55'14" W	77.85'
PL5	R=48.20'	L=15.63'
Chd=	N 68°12'39" W,	15.56'
PL6	N 88°53'34" W	25.93'
PL7	N 58°55'14" W	79.66'
PL8	R=43.40'	L=40.57'
Chd=	N 85°42'04" W,	39.11'
PL9	N 88°53'34" W	26.77'
PL10	N 58°55'14" W	81.47'
PL11	R=38.60'	L=57.11'
Chd=	S 78°41'43" W,	52.04'
PL12	N 88°53'34" W	27.60'
PL13	N 58°55'14" W	83.27'
PL14	R=33.80'	L=54.24'
Chd=	S 75°06'37" W,	48.60'
PL15	S 29°08'28" W	36.37'
PL16	N 88°53'34" W	33.43'
PL17	R=41.00'	L=14.38'
Chd=	N 48°52'26" W,	14.30'
PL18	N 58°55'14" W	66.66'
PL19	R=29.00'	L=46.53'
Chd=	S 75°06'37" W,	41.70'
PL20	S 29°08'28" W	35.11'
PL21	R=29.00'	L=42.56'
Chd=	S 12°54'06" W,	38.84'
PL22	N 88°53'34" W	16.16'
PL23	S 00°12'58" W	20.44'
PL24	R=49.00'	L=25.87'
Chd=	N 15°20'24" E,	25.57'
PL25	S 30°27'19" W	37.36'
PL26	R=29.00'	L=47.88'
Chd=	S 77°45'35" W,	42.62'
PL27	N 54°56'40" W	85.51'
PL28	N 88°53'34" W	8.08'
PL29	S 00°12'58" W	15.25'
PL30	R=57.00'	L=30.09'
Chd=	N 15°20'24" E,	29.74'
PL31	S 30°27'19" W	37.36'
PL32	R=37.00'	L=61.08'
Chd=	S 77°45'35" W,	54.38'
PL33	N 54°56'40" W	19.10'
PL34	S 27°55'39" W	22.08'
PL35	R=47.00'	L=45.79'
Chd=	N 55°50'24" E,	44.00'
PL36	R=41.00'	L=49.58'
Chd=	N 04°10'54" W,	46.62'
PL37	N 30°27'19" E	37.29'
PL38	R=21.00'	L=34.67'
Chd=	S 77°45'35" W,	30.86'
PL39	S 54°56'40" E	86.64'

Public Sewer, Water & Utility Easement Line Table Chart		
Line	Bearing	Length
SW1	N 01°06'26" E	43.70'
SW2	N 88°53'34" W	11.72'
SW3	N 58°55'14" W	112.44'
SW4	S 31°04'46" W	3.81'
SW5	R=48.68'	L=41.68'
Chd=S	74°41'36" W,	40.42'
SW6	N 60°51'32" W	5.57'
SW7	S 29°08'28" W	81.90'
SW8	R=42.40'	L=62.42'
Chd=S	13°01'59" E,	56.93'
SW9	S 55°12'27" E	66.83'
SW10	N 34°47'33" E	30.00'
SW11	N 55°12'27" W	10.00'
SW12	N 34°47'33" E	11.90'
SW13	N 55°12'27" W	20.00'
SW14	S 34°47'33" W	11.90'
SW15	N 55°12'27" W	12.70'
SW16	N 52°12'27" W	8.02'
SW17	N 40°57'27" W	6.88'
SW18	N 16°49'41" W	28.92'
SW19	N 29°08'28" E	35.52'
SW20	N 75°06'37" E	24.60'
SW21	S 58°55'14" E	130.20'

Owner's Certificate

Mill Creek LLC and Lacey Property Homeowners Association, Inc., Owners Of The Property Shown And Described Hereon, Hereby Adopt This Plan Of Re-Subdivision, And In Consideration Of The Approval Of This Final Plat By The Department Of Planning And Zoning, Establish The Minimum Building Restriction Lines And Grant Unto Howard County, Maryland, Its Successors And Assigns; (1) The Right To Lay, Construct And Maintain Sewers, Drains, Water Pipes And Other Municipal Utilities And Services In And Under All Roads And Street Rights-Of-Way And The Specific Easement Areas Shown Hereon; (2) The Right To Require Dedication For Public Use Floodplains And Open Space Where Applicable And For Good And Other Valuable Consideration, Hereby Grant The Right And Option To Howard County To Acquire The Fee Simple Title To The Beds Of The Streets And/Or Roads And Floodplains, Storm Drainage Facilities And Open Space Where Applicable; (3) The Right To Require Dedication Of Waterways And Drainage Easements For The Specific Purpose Of Their Construction, Repair And Maintenance; And (4) That No Building Or Similar Structure Of Any Kind Shall Be Erected On Or Over The Said Easements And Rights-Of-Way. Witness My Hand This 2 Day Of April, 2025.

Vincent P. Lacey
Lacey Property Homeowners Association, Inc.

James R. Moxley III, Manager
Mill Creek LLC

Steven K. Breeden, Manager
Mill Creek, LLC.

Witness

Witness

Witness

Surveyor's Certificate

I Hereby Certify To The Best Of My Knowledge That The Final Plat Shown Hereon Is Correct, That It Was Prepared By Me Or Under My Responsible Charge And That I Am A Duly Licensed Professional Land Surveyor Under The Laws Of The State Of Maryland; That It Is Part of the Lands Conveyed By Vincent P. Lacey, Trustee of the Lacey Family Revocable Trust to Lacey Homeowners Association, Inc. By Deed Dated May 5, 2023 And Recorded Among the Land Records Of Howard County, Maryland in Book 22416 At Page 541; And All of the Lands Conveyed By Vincent P. Lacey, Trustee of the Lacey Family Revocable Trust to Mill Creek LLC By Deed Dated March 19, 2025 And Recorded Among the Land Records Of Howard County, Maryland In Book 22694 At Page 260; All Monuments Are In Place In Accordance With The Annotated Code Of Maryland, As Amended.

Frank John Manalansan II,
Professional Land Surveyor No. 21476
Expiration Date: July 14, 2025

11/24/25 Date

STATE OF MARYLAND — FRANK JOHN MANALANSAN II — No. 21476 — PROFESSIONAL LAND SURVEYOR

APPROVED: For Public Water And Public Sewerage Systems Howard County Health Department

Howard County Health Officer — 3/21/25 Date

APPROVED: Howard County Department Of Planning And Zoning.

Chief, Development Engineering Division — 4/3/25 Date

Director — 4/10/25 Date

RECORDED AS PLAT No. 26864 ON 4/17/2025 AMONG THE LAND RECORDS OF HOWARD COUNTY, MARYLAND.

Resubdivision and Revision Plat
Lacey Property
Lots 2, 18 Thru 29 And Open Space Lots 16, 30 & 31

(Being Resubdivision of Lots 1, 3 Thru 13 And Open Space Lots 14 & 15, and a Revision to Lot 2 and 16 As Shown On Plats Entitled "Lacey Property, Lots 1 Thru 13 And Open Space Lots 14 Thru 17" Recorded As Plat Nos. 26657 Thru 26659)

Zoned: R-ED
Tax Map No. 25, Grid No. 1, Parcel No. 13
Second Election District - Howard County, Maryland
Date: October 28, 2024 Scale: 1" = 50' Sheet 4 Of 5

F-25-022

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I:\2008\08035\dwg\Lacey\RECORD PLATS\REVISED PLATS 10-09-24\08035 REVISED PLAT 2 (10-09-24).dwg, 1/24/2025 12:10:34 PM, Downstairs T1500 mylar plat.pc3, 1:1

The Requirements Of § 3-108, The Real Property Article, Annotated Code Of Maryland, 1989 Replacement Volume, (As Supplemented) As For As They Relate To The Filing Of This Plat And The Setting Of Markers Have Been Complied With.

Frank John Manalansan II, Maryland Reg. No. 21476, Professional Land Surveyor, Exp. Date 7/14/2025 — Date 4/4/25

Vincent P. Lacey, Lacey Homeowners Association, Inc. — Date 4/2/25

James R. Moxley III, Manager, Mill Creek, LLC — Date 4/2/25

Shawn K. Breeden, Manager, Mill Creek, LLC — Date 4/2/25

Reservation Of Public Utility And Forest Conservation Easements

"Developer Reserves Unto Itself, Its Successors And Assigns, All Easements Shown On This Plan For Water, Sewer, Storm Drainage, Other Public Utilities, Located In, On, Over, And Through Buildable Lots 2, 18 Thru 29 And Open Space Lots 16, 30 and 31. Any Conveyances Of The Aforesaid Lots Shall Be Subject To The Easements Herein Reserved, Whether Or Not Expressly Stated In The Deed(s) Conveying Said Lots. Developer Shall Execute And Deliver Deeds For The Easements Herein Reserved To Howard County. Upon Completion Of The Public Utilities And Their Acceptance By Howard County, The County Shall Accept The Easements And Record The Deed(s) Of Easement In The Land Records Of Howard County."

The Lots Shown On This Plat Are The Ultimate Revised Lot Line Boundaries For Previously Recorded Lots 1, 3 Thru 13 And Open Space Lots 14 And 15 And The New Easements To Be Recorded. No New Lots Were Created With This Plat.

Curve Data Tabulation

Pnt-Pnt	Radius	Arc Length	Delta	Tangent	Bearing & Distance
513-514	213.00'	21.60'	05°48'39"	10.81'	N 29°00'46" E 21.59'
516-522	950.00'	11.05'	00°39'54"	5.51'	S 55°50'46" E 11.05'

Lot Line Line Table Chart

Line	Bearing	Length
PL1	S 38°53'34" E	3.23'
PL2	S 38°53'34" E	59.55'
PL3	S 58°43'53" E	18.15'
PL4	S 38°53'34" E	60.60'
PL5	S 58°43'53" E	84.97'
PL6	S 38°53'34" E	61.65'
PL7	S 58°43'53" E	151.78'
PL8	S 38°53'34" E	62.70'
PL9	S 58°43'53" E	213.36'
PL10	S 38°53'34" E	63.75'
PL11	S 58°43'53" E	109.93'

Legend

- Existing 33' Private Right-Of-Way For The Purpose Of Ingress, Egress And Regress For Use Of Lots 5, 6 And 8 (L. 8317, F. 657)
- Existing Right-Of-Way Easement Verizon, Maryland (L. 9145, F. 112)
- Existing Public Forest Conservation Area (Retention)(Plat No. 26657-26659)
- Private Use-In-Common Shared Driveway, Retaining Wall, SWM, Drainage & Utility Easement For The Use And Benefit Of Lots 2, And 18 Thru 29 And Open Space Lots 30 Thru 31
- Public Sewer, Water & Utility Easement
- 20' Public Drainage & Utility Easement
- Private Sewer & Utility Easement
- Public Sewer & Utility Easement
- Existing 10' Public Sidewalk Easement (Plat No. 26657-26659)
- 10' Private Storm Drain Easement
- 20' Public Water & Utility Easement

20' Public Drainage & Utility Easement Line Table Chart

Line	Bearing	Length
D1	N 51°28'10" E	12.54'
D2	S 40°08'00" E	89.79'
D3	S 32°07'16" W	70.30'
D4	N 57°52'44" W	20.00'
D5	N 32°07'16" E	55.70'
D6	N 40°08'00" W	52.09'

10' Private Storm Drain Easement Line Table Chart

Line	Bearing	Length
D7	S 55°30'03" E	10.00'
D8	S 34°29'57" W	93.76'
D9	S 66°01'16" W	52.02'
D10	N 32°41'37" E	18.20'
D11	N 66°01'16" E	33.99'
D12	N 34°29'57" E	90.94'

Public Water & Utility Easement Line Table Chart

Line	Bearing	Length
W1	S 51°06'26" W	30.00'
W2	S 39°23'42" E	82.89'
W3	S 58°43'53" E	112.55'
W4	S 31°16'07" W	4.70'
W5	S 58°32'51" E	15.00'
W6	N 31°16'07" E	4.71'
W7	S 58°45'05" E	95.22'
W8	S 45°42'58" E	5.81'
W9	N 44°17'02" E	20.00'
W10	N 45°42'58" W	8.10'
W11	N 58°40'45" W	97.78'
W12	N 31°16'07" E	10.00'
W13	N 58°45'05" W	17.81'
W14	N 31°14'55" E	4.44'
W15	N 58°45'05" W	10.00'
W16	S 31°14'55" W	4.44'
W17	N 58°45'05" W	135.03'
W18	N 39°14'56" W	56.99'

Private Use-In Common Shared Driveway, Retaining Wall, SWM, Drainage & Utility Easement Line Table Chart

Line	Bearing	Length
AE1	S 38°53'34" E	60.55'
AE2	S 58°43'53" E	146.55'
AE3	N 33°32'48" E	4.89'
AE4	S 56°27'12" E	49.44'
AE5	S 32°41'37" W	43.00'
AE6	N 58°40'45" W	97.78'
AE7	S 31°16'07" W	74.51'
AE8	N 58°43'53" W	35.52'
AE9	S 31°16'07" W	15.88'
AE10	N 58°38'38" W	48.73'
AE11	N 61°09'54" W	15.68'
AE12	N 54°18'30" W	36.77'
AE13	N 30°18'04" W	4.78'
AE14	N 05°10'13" E	16.44'
AE15	N 42°49'09" E	29.07'

Public Sewer, Utility Easement Line Table Chart

Line	Bearing	Length
S1	S 55°30'03" E	24.19'
S2	S 00°15'51" W	36.67'
S3	S 44°17'02" W	99.61'
S4	S 45°42'58" E	31.22'
S5	S 44°17'02" W	20.00'
S6	N 45°42'58" W	31.22'
S7	S 44°17'02" W	155.24'
S8	S 45°42'58" E	1.97'
S9	S 44°17'02" W	20.00'
S10	N 45°42'58" W	21.97'
S11	N 44°17'02" E	90.56'
S12	N 49°03'36" W	10.02'
S13	N 38°11'27" E	10.01'
S14	S 49°03'36" E	11.08'
S15	N 44°17'02" E	186.18'
S16	N 00°15'51" E	42.19'

Private Sewer & Utility Easement Line Table Chart

Line	Bearing	Length
PS1	N 44°17'02" E	20.00'
PS2	S 45°42'58" E	29.26'
PS3	S 44°17'02" W	142.28'
PS4	N 45°42'58" W	20.00'
PS5	N 44°17'02" E	122.28'
PS6	N 45°42'58" W	9.26'

Area Tabulation This Sheet

TOTAL NUMBER OF BUILDABLE LOTS TO BE RECORDED	5
TOTAL NUMBER OF OPEN SPACE LOTS TO BE RECORDED	2
TOTAL NUMBER OF LOTS/PARCELS TO BE RECORDED	5
TOTAL AREA OF BUILDABLE LOTS TO BE RECORDED	1.056 Ac.±
TOTAL AREA OF OPEN SPACE LOTS TO BE RECORDED	3.087 Ac.±
TOTAL AREA OF LOTS/PARCELS TO BE RECORDED	4.143 Ac.±
TOTAL AREA OF ROADWAY TO BE RECORDED	0.000 Ac.±
TOTAL AREA TO BE RECORDED	4.143 Ac.±

Graphic Scale: 0' 50' 100' 150' — Scale: 1" = 50'

This Subdivision Is Subject To Section 18.122B Of The Howard County Code. Public Water And Public Sewer Service Has Been Granted Under The Terms And Provisions, Thereof, Effective APRIL 10, 2024 On Which Date Developer Agreement 14-4913-D Was Filed And Accepted.

Owners
Lacey Property Homeowners Association, Inc
6026 Trotter Road
Clarksville, Maryland 21029
Ph# 410-707-2639

Owners
Mill Creek, LLC
Suite 415
8480 Baltimore National Pike
Ellicott City, MD 21043
410-465-4244

Developer
SDC Mill Creek, LLC
Attn: Mr. James R. Moxley
Suite 415
8480 Baltimore National Pike
Ellicott City, MD 21043
410-465-4244

Fisher, Collins & Carter, Inc.
Civil Engineering Consultants & Land Surveyors
Centennial Square Office Park-10272 Baltimore National Pike
Ellicott City, Maryland 21042
(410) 461-2855

APPROVED: For Public Water And Public Sewerage Systems Howard County Health Department

For Michael J. Davis, Howard County Health Officer — Date 3/21/25

APPROVED: Howard County Department Of Planning And Zoning.

Chief, Development Engineering Division — Date 4/7/25

Director — Date 4/10/25

Owner's Certificate

Mill Creek LLC and Lacey Property Homeowners Association, Inc., Owners Of The Property Shown And Described Hereon, Hereby Adopt This Plan Of Re-Subdivision, And In Consideration Of The Approval Of This Final Plat By The Department Of Planning And Zoning, Establish The Minimum Building Restriction Lines And Grant Unto Howard County, Maryland, Its Successors And Assigns; (1) The Right To Lay, Construct And Maintain Sewers, Drains, Water Pipes And Other Municipal Utilities And Services In And Under All Roads And Street Rights-Of-Way And The Specific Easement Areas Shown Hereon; (2) The Right To Require Dedication For Public Use Floodplains And Open Space Where Applicable And For Good And Other Valuable Consideration, Hereby Grant The Right And Option To Howard County To Acquire The Fee Simple Title To The Beds Of The Streets And/Or Roads And Floodplains, Storm Drainage Facilities And Open Space Where Applicable; (3) The Right To Require Dedication Of Waterways And Drainage Easements For The Specific Purpose Of Their Construction, Repair And Maintenance; And (4) That No Building Or Similar Structure Of Any Kind Shall Be Erected On Or Over The Said Easements And Rights-Of-Way. Witness My Hand This 2nd Day Of April, 2025.

Vincent P. Lacey, Lacey Property Homeowners Association, Inc. — Witness

James R. Moxley III, Manager, Mill Creek LLC — Witness

Shawn K. Breeden, Manager, Mill Creek LLC — Witness

Surveyor's Certificate

I Hereby Certify To The Best Of My Knowledge That The Final Plat Shown Hereon Is Correct, That It Was Prepared By Me Or Under My Responsible Charge And That I Am A Duly Licensed Professional Land Surveyor Under The Laws Of The State Of Maryland; That It Is Part of the Lands Conveyed By Vincent P. Lacey, Trustee of the Lacey Family Revocable Trust to Lacey Homeowners Association, Inc. By Deed Dated May 5, 2024 And Recorded Among the Land Records Of Howard County, Maryland in Book 22416 At Page 341; And All of the Lands Conveyed By Vincent P. Lacey, Trustee of the Lacey Family Revocable Trust to Mill Creek LLC By Deed Dated March 19, 2025 And Recorded Among the Land Records Of Howard County, Maryland in Book 22694 At Page 260; All Monuments Are In Place In Accordance With The Annotated Code Of Maryland, As Amended.

Frank John Manalansan II, Professional Land Surveyor No. 21476 — Date 1/24/25
Expiration Date: July 14, 2025

STATE OF MARYLAND · FRANK JOHN MANALANSAN II · No. 21476 · PROFESSIONAL LAND SURVEYOR

RECORDED AS PLAT No. 26865 ON 4/17/2025
AMONG THE LAND RECORDS OF HOWARD COUNTY, MARYLAND.

Resubdivision and Revision Plat
Lacey Property
Lots 2, 18 Thru 29 And Open Space Lots 16, 30 & 31

(Being Resubdivision of Lots 1, 3 Thru 13 And Open Space Lots 14 & 15, and a Revision to Lot 2 and 16 As Shown On Plats Entitled "Lacey Property, Lots 1 Thru 13 And Open Space Lots 14 Thru 17" Recorded As Plat Nos. 26657 Thru 26659)

Zoned: R-ED
Tax Map No. 25, Grid No. 1, Parcel No. 13
Second Election District - Howard County, Maryland
Date: October 20, 2024 Scale: 1" = 50' Sheet 5 Of 5

F-25-022

I:\2008\08035\dwg\Lacey\RECORD PLATS\REVISED PLATS 10-09-24\08035 REVISED PLAT 3 (10-09-24).dwg, 1/24/2025 12:24:29 PM, Downstairs T1500 mylar plat.pc3, 1:1

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RESIDENTIAL SITE DEVELOPMENT PLAN
LACEY PROPERTY
LOTS 2, 18 thru 29

GENERAL NOTES

1.) THE PROJECT IS IN CONFORMANCE WITH THE LATEST HOWARD COUNTY STANDARDS UNLESS WAIVERS HAVE BEEN APPROVED.

2.) THE SUBJECT PROPERTY IS ZONED R-ED PER THE 10-6-2013 COMPREHENSIVE ZONING PLAN.

3.) BOUNDARY IS BASED ON F-21-015 RECORDED PLAT NO. 26657-26659 AND 26861-26865, WHICH IS BASED ON A FIELD RUN MONUMENTED BOUNDARY SURVEY DATED AUGUST, 2014 BY FISHER, COLLINS AND CARTER, INC.

4.) THE EXISTING TOPOGRAPHY SHOWN ON THESE LOTS IS BASED ON THE F-21-015 ROAD CONSTRUCTION PLANS.

5.) THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM. HOWARD COUNTY MONUMENT NOS. 25A1 AND 25A2 WERE USED FOR THIS PROJECT.

6.) WATER IS PUBLIC. THE CONTRACT NUMBER IS 14-4913-D.

7.) SEWER IS PUBLIC. THE CONTRACT NUMBER IS 14-4913-D.

8.) THIS PROJECT IS LOCATED WITHIN THE METROPOLITAN DISTRICT.

9.) EXISTING UTILITIES SHOWN ARE BASED ON APPROVED CONTRACT NO. 14-4913-D AND APPROVED ROAD CONSTRUCTION PLANS F-21-015.

10.) THERE ARE NO WETLANDS, STREAMS, THEIR REQUIRED BUFFERS, 100-YEAR FLOODPLAIN, OR 25% OR GREATER STEEP SLOPES THAT ARE AT LEAST 20,000 S.F. OF CONTIGUOUS AREA LOCATED ON LOTS 2, OR 18-29. THE WETLAND DELINEATION AND FOREST STAND DELINEATION REPORT WAS PREPARED BY ECO-SCIENCE PROFESSIONALS, INC. IN SEPTEMBER, 2014.

11.) TO THE BEST OF OUR KNOWLEDGE, THERE ARE NO BURIAL GROUNDS, CEMETERIES OR HISTORIC STRUCTURES LOCATED ON THESE LOTS.

12.) STORMWATER MANAGEMENT IS IN ACCORDANCE WITH THE MDE STORMWATER DESIGN MANUAL VOLUMES I AND II, REVISED 2009. NON-STRUCTURAL PRACTICES (MICRO BIO-RETENTION FACILITIES (M-6) AND DRY WELLS (M-5)) IN ACCORDANCE WITH CHAPTER 5 ARE BEING UTILIZED. 100-YEAR MANAGEMENT AND THE 3.55 HR / 6.6 IN STORM EVENT ARE BEING PROVIDED IN THE PROPOSED POCKET SAND FILTER. ADDITIONALLY, THE DRYWELLS TREATING THE SINGLE FAMILY DETACHED HOMES WERE INCREASED IN SIZE UNDER THIS SDP TO ACCOMMODATE THE LARGE HOUSE SIZE FROM WHAT IS SHOWN ON F-21-015 TO PROVIDE ADDITIONAL WATER QUALITY. THE DRY WELLS FOR THE HOUSES THAT REQUIRE THEM ARE PROVIDED ON THIS SITE DEVELOPMENT PLAN. ALL DRY WELLS ARE TO BE OWNED AND MAINTAINED BY THE OWNERS OF THE LOTS ON WHICH THEY RESIDE

13.) DRIVEWAYS SHALL BE PROVIDED PRIOR TO ISSUANCE OF A USE AND OCCUPANCY PERMIT FOR ANY NEW DWELLINGS FOR FIRE AND EMERGENCY VEHICLES PER THE FOLLOWINGMINIMUM REQUIREMENTS:

A) WIDTH – 12' (16' SERVING MORE THAN ONE RESIDENCE).
B) SURFACE – 6" OF COMPACT CRUSHER RUN BASE WITH TAR AND CHIP COATING (1-½" MIN.).
C) GEOMETRY – MAX. 15% GRADE, MAX. 10% GRADE CHANGE & MIN. 45' TURNING RADIUS.
D) STRUCTURES(CULVERTS/BRIDGES) – CAPABLE OF SUPPORTING 25 GROSS TONS (H25 LOAD)
E) DRAINAGE ELEMENTS – CAPABLE OF SAFELY PASSING 100 YEAR FLOODPLAIN WITH NO MORE THAN 1 FOOT DEPTH OVER DRIVEWAY.
G) MAINTENANCE – SUFFICIENT TO INSURE ALL WEATHER USE.

14.) THESE LOTS ALL ACCESS FROM A PRIVATE USE-IN-COMMON DRIVE. SINCE THERE IS NO PUBLIC RIGHT-OF-WAY THERE ARE NO CONCRETE APRONS FOR THE DRIVEWAYS.

15.) PERIMETER LANDSCAPING FOR THESE LOTS WAS PREVIOUSLY PROVIDED UNDER F-21-015. FINANCIAL SURETY WAS POSTED AS PART OF THE DEVELOPERS AGREEMENT UNDER THAT PLAN.

16.) THE REQUIREMENT OF SECTION 16.1200 OF THE HOWARD COUNTY CODE FOR FOREST CONSERVATION FOR THESE LOTS WAS PROVIDED UNDER F-21-015. THE EASEMENTS WERE RECORDED AS PART OF RECORD PLAT #26657-59.

17.) THIS SUBDIVISION IS SUBJECT TO SECTION 18.122B OF THE HOWARD COUNTY CODE. PUBLIC WATER AND/OR SEWER SERVICE HAS BEEN GRANTED UNDER THE TERMS AND PROVISIONS, THEREOF, EFFECTIVE APRIL 10, 2024, ON WHICH DATE DEVELOPER AGREEMENT #F-21-015/14-4913-D WAS FILED AND ACCEPTED.

18.) THIS PROJECT IS SUBJECT TO THE AMENDED FIFTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS PER COUNCIL BILL 45-2003 AND THE AMENDED ZONING REGULATIONS EFFECTIVE OCTOBER 6, 2013. DEVELOPMENT AND CONSTRUCTION ON THIS PROPERTY MUST COMPLY WITH BUFFER AND SETBACK REGULATIONS IN EFFECT AT THE TIME OF CONDITIONAL USE PLAN APPROVAL.

19.) ANY DAMAGE TO THE COUNTY'S RIGHT-OF-WAY SHALL BE CORRECTED AT THE DEVELOPER'S EXPENSE.

20.) IN ACCORDANCE WITH SECTION 128 OF THE HOWARD COUNTY ZONING REGULATIONS, BAY WINDOWS, WINDOW WELLS, ORIELS, VESTIBULES, BALCONIES AND CHIMNEYS MAY ENCROACH 4 FEET INTO ANY SETBACK OR REQUIRED DISTANCE BETWEEN BUILDINGS PROVIDED THE FEATURE HAS A MAXIMUM WIDTH OF 16 FEET. EXTERIOR STAIRWAYS OR RAMPS, ABOVE OR BELOW GROUND LEVEL (EXCLUDING THOSE ATTACHED TO A PORCH OR DECK) MAY ENCROACH 10 FEET INTO A FRONT SETBACK OR A SETBACK FROM A PROJECT BOUNDARY, 16 FEET INTO A REAR SETBACK, 4 FEET INTO A SIDE SETBACK OR REQUIRED DISTANCE BETWEEN BUILDINGS. OPEN OR ENCLOSED PORCHES OR DECKS AND THE STAIRWAYS OR RAMPS ATTACHED THERETO MAY ENCROACH 10 FEET INTO A FRONT OR REAR SETBACK, SETBACK FROM A PROJECT BOUNDARY OR A REQUIRED DISTANCE BETWEEN BUILDINGS.

21.) THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING/CONSTRUCTION INSPECTION DIVISION AT 410-313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK.

22.) THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.

23.) THE ARTICLES OF INCORPORATION FOR THE HOMEOWNERS ASSOCIATION WAS ACCEPTED BY THE STATE DEPARTMENT OF ASSESSMENT AND TAXATION ON NOVEMBER 30, 2023 ID# D24592032.

24.) IN ACCORDANCE WITH SECTION 107.0.D.E OF THE ZONING REGULATIONS, AT LEAST 10% OF THE DWELLING UNITS IN EACH R-ED DEVELOPMENT SHALL BE MODERATE INCOME HOUSING UNITS. TWO (2) MODERATE INCOME HOUSING UNITS FOR THE ENTIRE COMMUNITY ARE REQUIRED, THE OBLIGATION SHALL BE MET VIA FEE-IN-LIEU PAYMENT THAT IS TO BE CALCULATED AND PAID AT THE TIME OF BUILDING PERMIT ISSUANCE.

25.) A NOISE STUDY WAS NOT REQUIRED FOR THIS DEVELOPMENT.

26.) THE TRAFFIC STUDY FOR THIS PROJECT WAS PREPARED BY MARS GROUP, INC. IN JUNE, 2015 AND WAS APPROVED ON DECEMBER 21, 2015.

27.) THESE LOTS ARE NOT SUBJECT TO COUNCIL BILL 76-2018 (ELECTRIC VEHICLE CHARGING STATIONS) BECAUSE THE PRELIMINARY EQUIVALENT SKETCH PLAN FOR THIS SUBDIVISION WAS SIGNED PRIOR TO THE BILL'S EFFECTIVE DATE OF JANUARY 11, 2019.

28.) FOR FLAG AND PIPE STEM LOTS, REFUSE COLLECTION, SNOW REMOVAL, AND ROAD MAINTENANCE ARE PROVIDED TO THE JUNCTION OF THE FLAG OR PIPE STEM AND ROAD ROAD-OF-WAY AND NOT ONTO THE PIPE STEM LOT DRIVEWAY.

29.) THIS PROPERTY IS LOCATED WITHIN THE ELLICOTT CITY HISTORIC DISTRICT.

30.) PLAN IS SUBJECT TO PB CASE 418 THAT WAS APPROVED BY THE PLANNING BOARD ON NOVEMBER 17, 2016 IN ACCORDANCE WITH SECTION 107.0.F. OF THE ZONING REGULATIONS. THE DECISION AND ORDER WAS SIGNED BY THE PLANNING BOARD ON MARCH 2, 2017.

31.) THE SUBDIVISION IS SUBJECT TO THE PROTECTION OF SCENIC ROADS, PER SECTION 16.125 OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS. THIS SDP COMPLIES WITH THESE REQUIREMENTS, THE REQUIREMENTS WERE MET UNDER F-21-015 AND THIS SDP COMPLIES WITH F-21-015

32.) ON APRIL 4, 2013, AND NOVEMBER 6,2014, THE HISTORIC PRESERVATION COMMISSION (HPC) PROVIDED ADVISORY COMMENTS ON THE PROPOSED SUBDIVISION/SITE DEVELOPMENT PLAN IN CASES HDC-13-07 AND HPC-14-82. ON DECEMBER 3, 2015, THE HPC APPROVED DEMOLITION OF THE EXISTING STRUCTURES IN CASE HPC-15-78. THE REQUEST FOR TREE REMOVAL AND RETAINING WALL CONSTRUCTION WAS WITHDRAWN FROM THE HPC-15-78 APPLICATION. THE TREE REMOVAL AND RETAINING WALL CONSTRUCTION WAS RESUBMITTED FOR APPROVAL AND THE CONSTRUCTION OF THE RETAINING WALLS WAS APPROVED WITH CONDITIONS ON FEBRUARY 4, 2016 IN CASE HPC-16-06a. THE REQUEST FOR TREE REMOVAL WAS CONTINUED TO MARCH 3, 2016 AND APPROVED WITH AMENDMENTS IN CASE HPC-16-06b. ON DECEMBER 6, 2018, CASE No. HPC-18-61 WAS HELD TO REINSTATE THE PREVIOUS CASE No. HPC-15-078 AND HPC-16-06 (a) & (b). HOWEVER, SINCE THE APPROVED PROJECT (SP-15-013) HAD BEEN ON HOLD DUE TO COUNTY APFO REGULATIONS, IT HAS BEEN DETERMINED THAT THE REINSTATEMENT CASE HPC-18-61 IS NOT REQUIRED IF THE PROJECT CONTINUES WITHIN THE PLAN REVIEW PROCESS POST SP-15-013 AND THIS PLAN F-21-015

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Signed by: Jon Obrecht 78B0DCF8D1014A... 5/22/2025
CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE

DocuSigned by: 1EB7547642B949A... 5/22/2025
CHIEF, DIVISION OF LAND DEVELOPMENT — DATE

DocuSigned by: Lynda Eisenberg E220B65588394ZE... 5/23/2025
DIRECTOR — DATE

LOTS INCLUDED IN THIS SDP

TRACT BOUNDARY

0 50 100 200
1 inch = 100 ft.

33.) SHC ELEVATIONS SHOWN ARE LOCATED AT THE PROPERTY OR EASEMENT LINE.

34.) ON-STREET PARKING SHALL BE MAINTAINED BY THE HOMEOWNERS ASSOCIATION.

35.) DESIGN MANUAL WAIVER TO ALLOW 9 LOTS (8 BUILDABLE AND 1 OPEN SPACE) ON A USE-IN-COMMON DRIVEWAY WAS APPROVED ON OCTOBER 15, 2015 AND IS SUBJECT TO THE FOLLOWING CONDITIONS:

A. THE MINIMUM WIDTH OF THE USE-IN-COMMON DRIVEWAY SHOULD INCREASE TO 20 FEET DUE TO ITS CURVATURE.
B. PROVIDE FLUSH CURB AND GUTTER ALONG THE USE-IN-COMMON DRIVEWAY.

36.) WAIVER PETITION, WP-16-022, REQUESTING A WAIVER FROM HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS, SPECIFICALLY SECTION 13.1205(A)(7) FOREST RETENTION PRIORITIES – RETENTION OF SPECIMEN TREES, SECTION 16.116(B)(1) STATING THAT GRADING, REMOVAL OF VEGETATIVE COVER AND TREES, NEW STRUCTURES, AND PAVING SHALL NOT BE PERMITTED ON LAND WITH EXISTING STEEP SLOPES IN AREA GREATER THAN 20,000 SQ.FT. IN SIZE, SECTION 16.134(A)(1)(I) SIDEWALKS ARE REQUIRED ON ONLY ONE SIDE OF CUL-DE-SACS AND LOCAL STREETS OF SINGLE-FAMILY DETACHED SUBDIVISIONS, AND SECTION 16.125(B)(1)(II) & (2) REQUIRING MINIMIZATION OF TREE AND VEGETATIVE REMOVAL ALONG A SCENIC ROAD AND REQUIRING RETENTION OF FOREST OR WOODED AREAS OF 35-FOOT IN WIDTH, HAS BEEN APPROVED ON DECEMBER 5, 2016. APPROVAL OF WP-16-022 IS SUBJECT TO THE FOLLOWING CONDITIONS::

A. COMPLIANCE WITH SRC COMMENTS FOR SP-15-013 AND PLANNING BOARD APPROVAL OF THE PROPOSED SUBDIVISION PLAN DESIGN, LAYOUT AND LOCATION OF LOTS, ROADS AND SHARED DRIVEWAYS.
B. NO ADDITIONAL DISTURBANCE OR GRADING SHALL OCCUR BEYOND THE LIMIT OF DISTURBANCE (L.O.D.) OF THE 25% STEEP SLOPES THAT ARE DETAILED ON THE PRELIMINARY GRADING PLAN AND AS APPROVED BY THE PLANNING BOARD, UNLESS IT AN BE SUFFICIENTLY DEMONSTRATED TO BE WARRANTED OR JUSTIFIED BY THE APPLICANT.
C. THE AFFECTED STEEP SLOPE AREAS WHERE THE BUILDING LOTS ARE PLANNED MUST BE SUFFICIENTLY STABILIZED WITH RETAINING WALL AND/OR SOIL STABILIZATION DEVICES/METHODS THAT SHALL LESSEN THE ERODIBILITY OF SOILS AND RUNOFF. THE IMPACTED STEEP SLOPE AREAS MUST BE REVEGETATED OR STABILIZED WITH SUITABLE NATIVE SPECIES THAT WILL BIND THE SURFACE TIGHTLY. THESE STABILIZATION TECHNIQUES MUST BE CLEARLY DEMONSTRATED ON BOTH THE ROAD CONSTRUCTION DRAWINGS (WITH THE FINAL PLAT) AND THE SITE DEVELOPMENT PLAN.
D. THE REMOVAL OF THE EIGHT (8) SPECIMEN TREES WILL REQUIRE MITIGATION WITH THE PLANTING OF 2:1 REPLACEMENT TREES (16 TOTAL) WITH A MINIMUM 3" CALIPER NATIVE PLANT SPECIES. THE REPLACEMENT TREES SHALL BE BONDED AND SHOWN ON THE LANDSCAPE PAN WITH THE FORTHCOMING FINAL PLAN.
E. THE REMAINING 35 SPECIMEN TREES SHALL BE SAVED AND PROTECTED DURING CONSTRUCTION ACTIVITY. ANY ADDITIONAL REMOVAL OF SPECIMEN TREES SHALL REQUIRE THE SUBMITTAL OF A NEW ALTERNATIVE COMPLIANCE PETITION APPLICATION.
F. PROVIDE TREE PROTECTION FENCING AT THE TREES DRIP LINE, OR FARTHER OUT, TO PREVENT TREE DAMAGES FROM EXCAVATION, SOIL COMPACTION OF SOIL OVER ROOTS. THESE PROTECTION TECHNIQUES MUST BE DEMONSTRATED ON BOTH THE ROAD CONSTRUCTION DRAWINGS (WITH THE FINAL PLAT) AND THE SITE DEVELOPMENT PLAN.
G. COMPLIANCE WITH THE CERTIFICATE OF APPROVAL ISSUED BY THE HISTORIC PRESERVATION COMMISSION FOR DEVELOPMENT OF THIS PROPERTY.
H. THE CONSTRUCTION OF THE NEW HOUSES FACING TWARDS CHURCH ROAD SHALL BE ADEQUATELY SCREENED USING BERMS, ENHANCED LANDSCAPING AND HOUSE SITTING TO MINIMIZE IMPACTING THE NATURAL SETTING ALONG THE SCENIC ROAD. THIS CONDITION WILL BE EVALUATED FURTHER AT THE SITE DEVELOPMENT PLAN STAGE.
I. PROVIDE A NOTE ON THE SP PLAN, THE FINAL PLAT AND THE SITE DEVELOPMENT PLAN REGARDING THIS ALTERNATIVE COMPLIANCE PETITION APPROVAL. THIS NOTE SHALL INCLUDE THOSE SUBDIVISION REGULATION SECTIONS PETITIONED, THE DATE OF THE ALTERNATIVE COMPLIANCE APPROVAL, AND THE CONDITIONS OF APPROVAL.

37.) NO PARKING IS ALLOWED ALONG THE PUBLIC PORTION OF MILL CREEK WAY.

38.) IN ACCORDANCE WITH SECTION 16.603 OF THE CODE, THE 13 HOME LOTS WERE APPROVED BY THE HISTORIC PRESERVATION COMMISSION ON THE FOLLOWING DATES:

LOT 21, 23: OCTOBER 10, 2024
LOT 2, 18, 19, 22, 24: NOVEMBER 7, 2024
LOT 20, 26, 27, 28, 29: DECEMBER 5, 2024
LOT 25: FEBRUARY 6, 2025

SEE THE SITE ANALYSIS CHART FOR THE INDIVIDUAL HPC CASE NUMBERS.

STORMWATER MANAGEMENT PRACTICES

LOT NUMBER	ADDRESS		DRY WELLS M-5 (NUMBER)
2	3724	Mill Creek Way	1
18	3728	Mill Creek Way	1
19	3720	Mill Creek Way	2
20	3716	Mill Creek Way	3
21	3712	Mill Creek Way	2
22	3708	Mill Creek Way	3
23	3704	Mill Creek Way	3
24	3700	Mill Creek Way	2
25	3701	Mill Creek Way	3
26	3705	Mill Creek Way	3
27	3709	Mill Creek Way	3
28	3713	Mill Creek Way	3
29	3717	Mill Creek Way	3

SEE SHEET 4 FOR FOR DETAILED PRACTICE CHART

ADDRESS CHART

LOT	ADDRESS	
18	3728	MILL CREEK WAY
2	3724	MILL CREEK WAY
19	3720	MILL CREEK WAY
20	3716	MILL CREEK WAY
21	3712	MILL CREEK WAY
22	3708	MILL CREEK WAY
23	3704	MILL CREEK WAY
24	3700	MILL CREEK WAY
25	3701	MILL CREEK WAY
26	3705	MILL CREEK WAY
27	3709	MILL CREEK WAY
28	3713	MILL CREEK WAY
29	3717	MILL CREEK WAY

MODERATE INCOME HOUSING UNIT (MIHU) APPLICATION EXEMPTIONS TRACKING

Total Number of Lots/Units Proposed	12
Total Number of MIHU's Required	2
Number of MIHU's Provided Onsite (Exempt from APFO allocations)	0
Number of APFO Allocations Required (Remaining Lots/Units)	10
MIHU Fee-in-Lieu (Indicate Lot/Unit numbers)	YES

Please note that all lots in this subdivision are subject to the moderate income housing unit (M.I.H.U.) fee-in-lieu requirement that is to be calculated and paid to the Department of Inspections, Licenses, and Permits at the time of building permit issuance by the permit applicant.

PERMIT INFORMATION CHART

SUBDIVISION NAME:			SECTION/AREA:	LOT/PARCEL #	
LACEY PROPERTY			N/A	LOTS 2, 18 thru 29	
PLAT No.	GRID No.	ZONE	TAX MAP No.	ELECTION DISTRICT No.	CENSUS TRACT
26861-26865	01	R-ED	25	2	602900

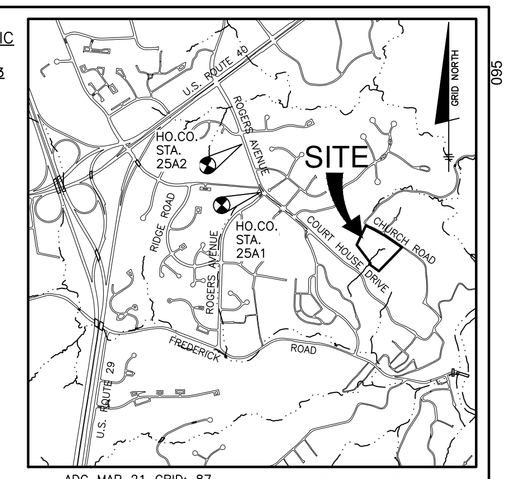
HOWARD COUNTY GEODETIC CONTROL STATIONS
HORIZONTAL: MARYLAND NAD83
VERTICAL: NAVD88

HO.CO. STATION #25A1

N 586557.549
E 1366847.099
ELEV. 396.343

HO.CO. STATION #25A2

N 587502.730
E 1366556.678
ELEV. 348.145



ADC MAP 21 GRID: 87

VICINITY MAP
SCALE: 1" = 2000'

SHEET INDEX

SHEET	TITLE
1	COVER SHEET
2	HOUSE FOOTPRINTS AND ELEVATIONS
3	SITE DEVELOPMENT AND GRADING PLAN
4	SITE DEVELOPMENT AND GRADING PLAN AND SWM DETAILS
5-8	SEDIMENT & EROSION CONTROL PLAN

SITE ANALYSIS DATA CHART

A.) TOTAL PROJECT AREA (AS SHOWN ON F-21-015) — 8.55 ACRES
B.) AREA OF THIS PLAN SUBMISSION (BUILDABLE LOTS ONLY) — 2.90 ACRES
C.) LIMIT OF DISTURBED AREA — 2.54 ACRES
D.) PRESENT ZONING DESIGNATION: — R-ED
E.) PROPOSED USE OF SITE: — RESIDENTIAL SINGLE-FAMILY DETACHED
F.) N/A
G.) TOTAL NUMBER OF UNITS ALLOWED AS SHOWN ON FINAL PLAT(S) — 13
H.) TOTAL NUMBER OF UNITS PROPOSED — 13
I.) N/A
J.) NUMBER OF PARKING SPACES REQUIRED BY HO. CO. ZONING REGS — 13 x 2.5 = 32.5
K.) NUMBER OF PARKING SPACES PROVIDED ONSITE (INCLUDES HANDICAPPED SPACES) — 52 (2 SPACES PER DRIVEWAY + 2 SPACES PER GARAGE X 13 = 52)
L.) OPEN SPACE ON-SITE — OPEN SPACE WAS PROVIDED UNDER F-21-015 AT TIME OF SUBDIVISION
M.) AREA OF RECREATIONAL OPEN SPACE REQUIRED (SECTION 121(a)(4)(vi): 300 SF PER UNIT) — 3,900 SF
AREA OF RECREATIONAL OPEN SPACE PROVIDED — 3,900 sf (OPEN SPACE LOT 16)
N.) N/A
O.) APPLICABLE DPZ FILE REFERENCES: — SP-15-013, ECP-15-044, WP-16-022, PB CASE 418, F-21-015, F-25-022 HPC-13-17, HPC-14-82, HPC-15-78, HPC-16-06a, HPC-16-06b, HPC-18-061
HPC-24-17, HPC-24-039
HPC-24-43 (LOT 21), HPC-24-44 (LOT 22), HPC-24-45 (LOT 23), HPC-24-46 (LOT 24), HPC-24-56 (LOT 18), HPC-24-57 (LOT 2) HPC-24-58 (LOT 19), HPC-24-59 (LOT 20), HPC-24-60 (LOT 29), HPC-24-66 (LOT 28), HPC-24-67 (LOT 27), HPC-24-68 (LOT 26), HPC-24-69 (LOT 25)
P.) N/A
Q.) N/A
R.) NUMBER OF REQUIRED MIHU — 2
NUMBER OF PROVIDED MIHU — 0 (FEE IN LIEU)
S.) N/A

NO.	DATE	REVISION

BENCHMARK ENGINEERING, INC.
ENGINEERS ▲ LAND SURVEYORS ▲ PLANNERS
3300 N. RIDGE ROAD ▲ SUITE 140 ▲ ELLICOTT CITY, MARYLAND 21043
(P) 410-465-6105 (F) 410-465-6644
WWW.BEI-CIVILENGINEERING.COM

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. 21990, Expiration Date: 6-30-2025.

STATE OF MARYLAND — CHRISTOPHER A. CAMPBELL — 21990 — PROFESSIONAL ENGINEER

04/22/2025

OWNER:
LACEY FAMILY REVOCABLE TRUST
1235 WILD ROSE COURT
MARRIOTTSVILLE, MD. 21104
410-707-2639

DEVELOPER:
MILL CREEK, LLC
P.O. BOX 417
ELLICOTT CITY, MD 21041
410-465-4244

BUILDER:
CARUSO HOMES
2120 BALDWIN AVENUE, SUITE 200
CROFTON, MD 21114
667-307-4222

LACEY PROPERTY
LOTS 2, 18 thru 29

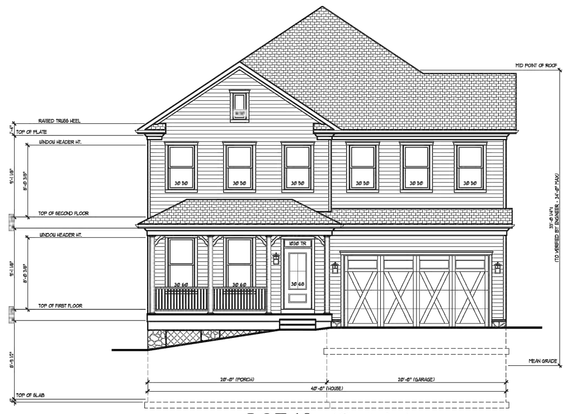
TAX MAP: 25 GRID: 01 PARCEL: 13
ZONED: R-ED
ELECTION DISTRICT NO. 2 HOWARD COUNTY, MARYLAND
COUNCIL DISTRICT: 1

SITE DEVELOPMENT PLAN COVER SHEET

DESIGN: DBT	DRAFT: CAM	DATE: APRIL 21, 2025	BEI PROJECT NO. 3191
		SCALE: AS SHOWN	SHEET 1 OF 8

SDP-25-011

Docusign Envelope ID: 3FDDFA6C-9396-44E1-A056-DC834E8CCD6C



LOT 18 - '**CLARK**'
MILL CREEK WAY ELEVATION (FRONT)

LOT 2 - 'CLARK'
MILL CREEK WAY ELEVATION (FRONT)

LOT 19 - 'ELLICOTT'
MILL CREEK WAY ELEVATION (FRONT)

LOT 20 - 'ELLICOTT'
MILL CREEK WAY ELEVATION (FRONT)

LOT 21 - '**CLARK**'
CHURCH ROAD ELEVATION

LOT 22 - '**ELLICOTT**'
CHURCH ROAD ELEVATION

LOT 23 - '**ELLICOTT**'
CHURCH ROAD ELEVATION

LOT 24 - '**CLARK**'
CHURCH ROAD ELEVATION

LOT 25 - '**BANNEKER**'
CHURCH ROAD ELEVATION

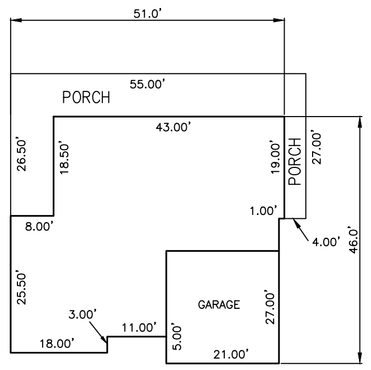
LOT 26 - '**BANNEKER**'
CHURCH ROAD ELEVATION

LOT 27 - '**BANNEKER**'
CHURCH ROAD ELEVATION

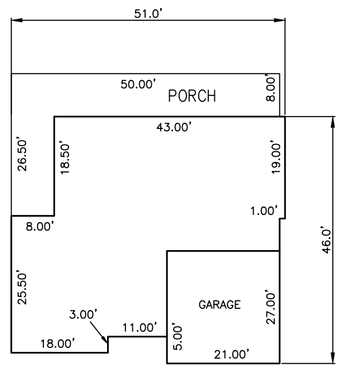
LOT 28 - '**BANNEKER**'
CHURCH ROAD ELEVATION

LOT 29 - '**ELLICOTT**'
MILL CREEK WAY ELEVATION (FRONT)

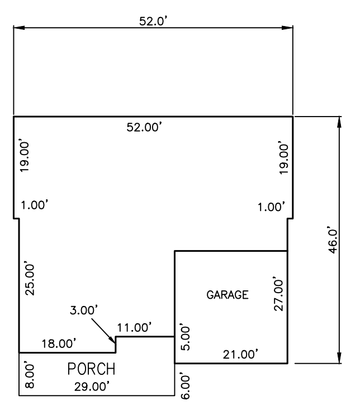
HOUSE ELEVATION VIEW
NOT TO SCALE



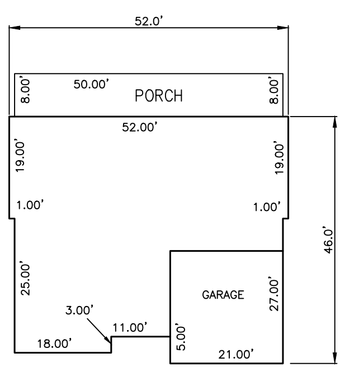
BANNEKER
SCALE: 1" = 30'
LOT 25



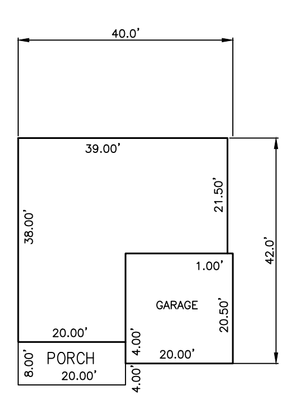
BANNEKER
SCALE: 1" = 30'
LOTS 26, 27, 28



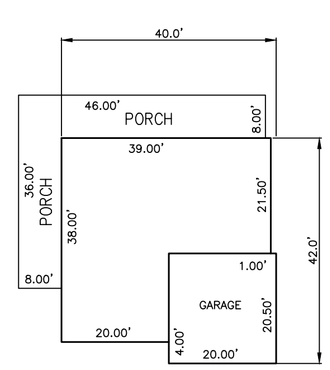
ELLICOTT
SCALE: 1" = 30'
LOTS 19, 20, 29



ELLICOTT
SCALE: 1" = 30'
LOTS 22, 23



CLARK
SCALE: 1" = 30'
LOTS 2, 18



CLARK
SCALE: 1" = 30'
LOTS 21, 24

HOUSE FOOTPRINTS
SCALE: 1" = 30'

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Signed by: Jim Ulttmer 7B8DDCF9D1014A0...	5/22/2025
CHIEF, DEVELOPMENT ENGINEERING DIVISION	DATE
DocuSigned by: 1E87547BA220845A...	5/22/2025
CHIEF, DIVISION OF LAND DEVELOPMENT	DATE
DocuSigned by: Lynda Eisenberg E2D8933585294CE...	5/23/2025
DIRECTOR	DATE

NO.	DATE	REVISION

BENCHMARK
ENGINEERS ▲ LAND SURVEYORS ▲ PLANNERS
ENGINEERING, INC.
3300 N. RIDGE ROAD ▲ SUITE 140 ▲ ELLICOTT CITY, MARYLAND 21043
(P) 410-465-6105 (F) 410-465-6644
WWW.BEI-CIVILENGINEERING.COM

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. 22390, Expiration Date: May, 6-30-2025.

STATE OF MARYLAND — CHRISTOPHER B. MUDD — 22390 — PROFESSIONAL ENGINEER

04/22/2025

OWNER:
LACEY FAMILY REVOCABLE TRUST
1235 WILD ROSE COURT
MARRIOTTSVILLE, MD. 21104
410-707-2639

DEVELOPER:
MILL CREEK, LLC
P.O. BOX 417
ELLICOTT CITY, MD 21041
410-465-4244

BUILDER:
CARUSO HOMES
2120 BALDWIN AVENUE, SUITE 200
CROFTON, MD 21114
667-307-4222

LACEY PROPERTY

LOTS 2, 18 thru 29

TAX MAP: 25 GRID: 01 PARCEL: 13
ZONED: R-ED
ELECTION DISTRICT NO. 2 HOWARD COUNTY, MARYLAND

HOUSE FOOTPRINTS AND ELEVATIONS

DESIGN: DBT	DRAFT: CAM	DATE: APRIL 21, 2025	BEI PROJECT NO. 3191
		SCALE: AS SHOWN	SHEET 2 OF 8

SDP-25-011

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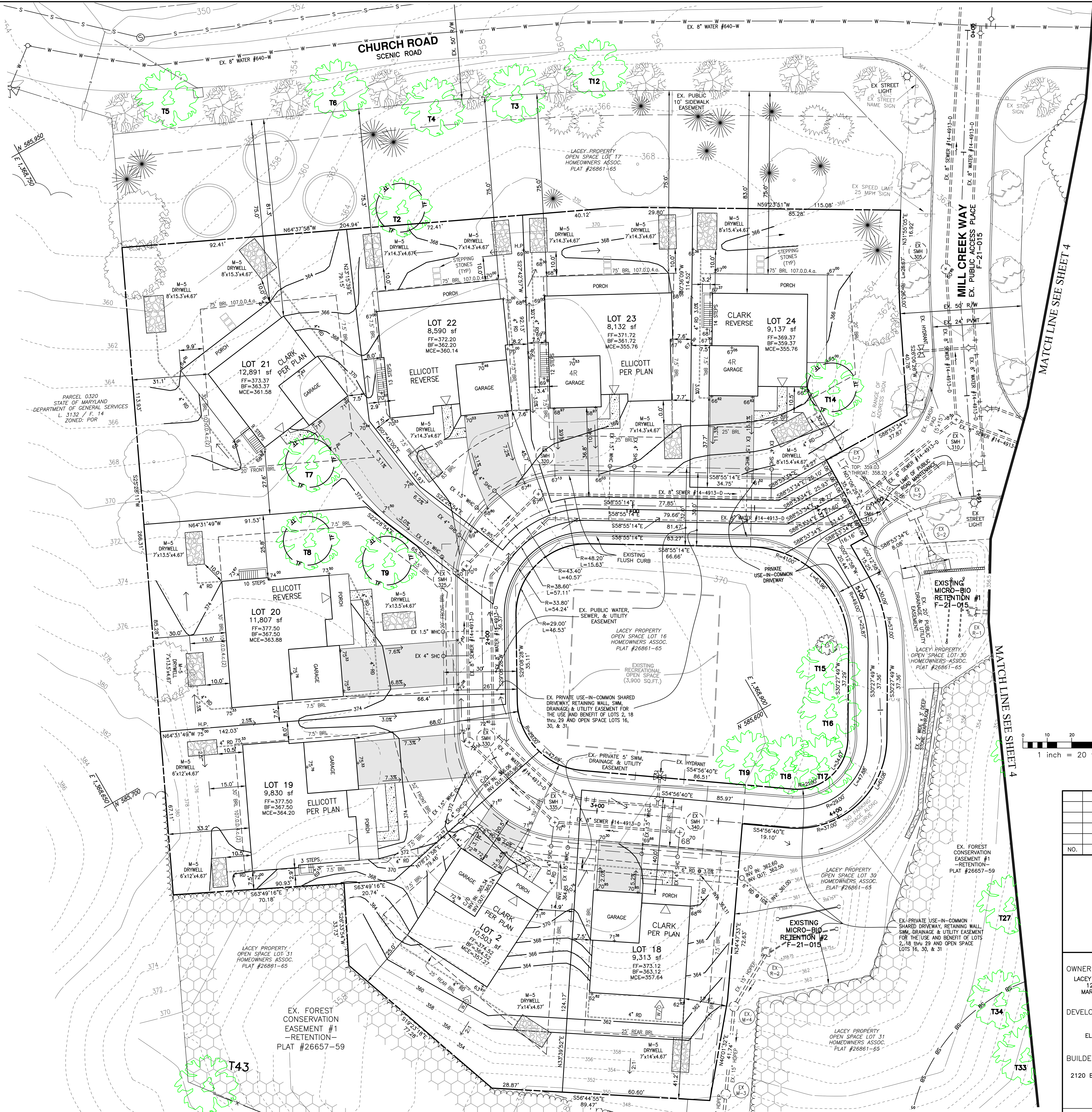

LEGEND OF SYMBOLS

- EXISTING CONTOURS
- LIMIT OF SUBMISSION
- BUILDING RESTRICTION LINE (XX' BRL)
- EXISTING WATER HOUSE CONNECTION (METER)
- EXISTING SEWER HOUSE CONNECTION (C/O)
- EXISTING FIRE HYDRANT
- EXISTING STREET LIGHT
- EXISTING STREAM BUFFER (SB)
- EXISTING RETAINING WALL
- EXISTING SPECIMEN TREE (TXX)
- TREE PROTECTION FENCE (TF)
- PROPOSED CONTOURS (390)
- PROPOSED UNDERGROUND ROOF LEADER
- PROPOSED CONC. LEAD WALK
- PROPOSED DRY WELL
- FIRST FLOOR ELEVATION (FF=000.00)
- BASEMENT FLOOR ELEVATION (BF=000.00)
- MINIMUM CELLAR ELEVATION (MCE=000.00)
- FRONT DOOR LOCATION
- INDICATES WALK OUT BASEMENT (W/O)
- FOREST CONSERVATION EASEMENT
- RESIDENTIAL DRIVEWAY
- LANDSCAPE TREES PLANTED AND BONDED UNDER F-21-015

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Jim Witmer — CHIEF, DEVELOPMENT ENGINEERING DIVISION	5/22/2025 DATE
CHIEF, DIVISION OF LAND DEVELOPMENT	5/22/2025 DATE
Lynda Eisenberg — DIRECTOR	5/23/2025 DATE

NO.	DATE	REVISION

BENCHMARK ENGINEERING, INC.
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(P) 410-465-6105 (F) 410-465-6644
WWW.BEI-CIVILENGINEERING.COM

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. 22930, Expiration Date: 6-30-2025.
04/22/2025

OWNER:
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LACEY PROPERTY

LOTS 2,18 thru 29

TAX MAP: 25 GRID: 01 PARCEL: 13
ZONED: R-ED
ELECTION DISTRICT NO. 2 HOWARD COUNTY, MARYLAND

SITE DEVELOPMENT AND GRADING PLAN

DESIGN: DBT | DRAFT: CAM | DATE: APRIL 21, 2025 | SCALE: AS SHOWN | BEI PROJECT NO. 3191 | SHEET 3 OF 8

SDP-25-011

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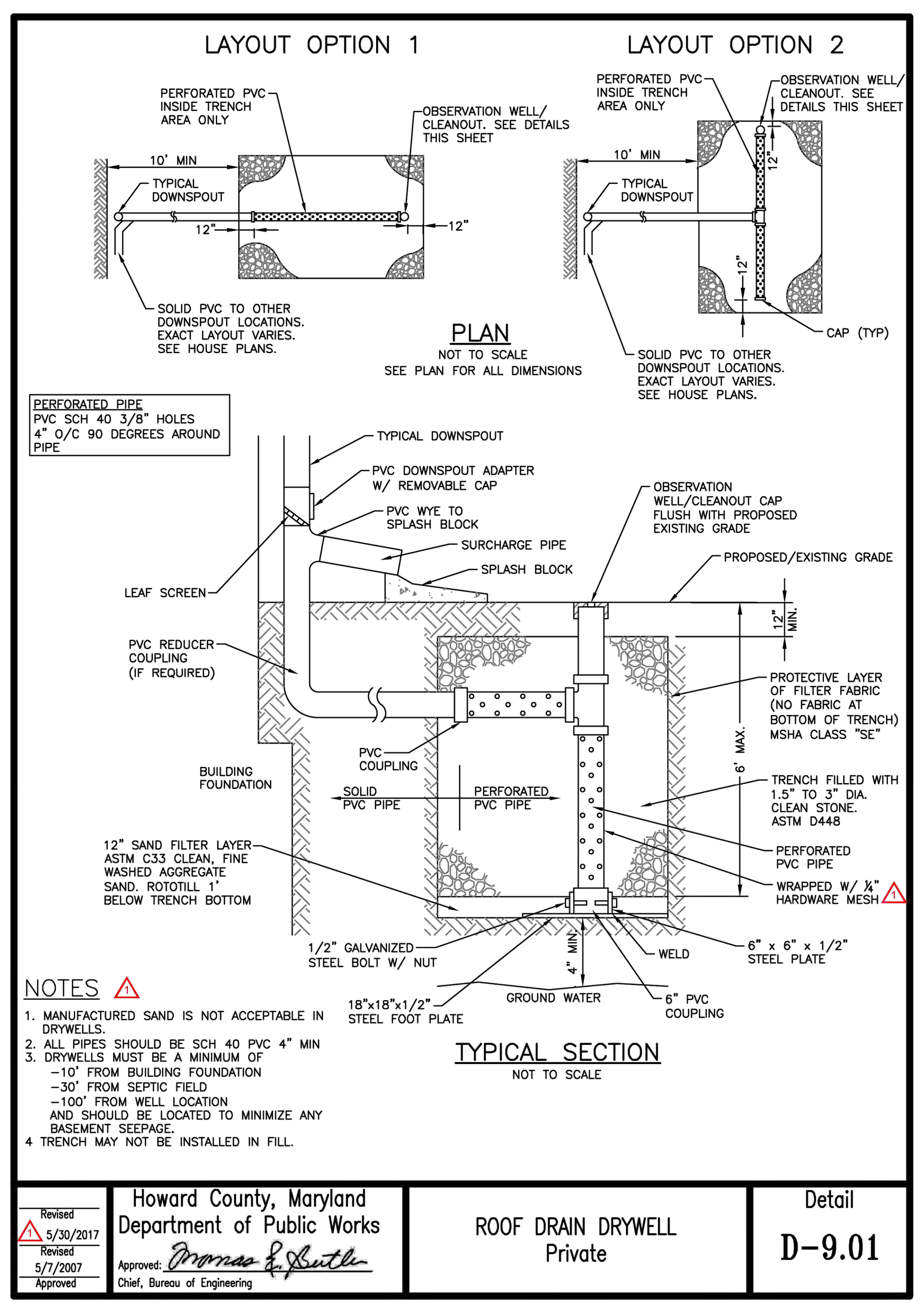
(M-5) DRY WELL COMPUTATIONS

Pe: 2.6 inches 100% impervious

Lot	Designation		Drainage Area (sf)	Impervious Area (sf)	I (%)	Rv	ESDv (cf)	Depth (ft)	Porosity	Width (ft)	Length (ft)	Volume Stored (cf)	Pe Treated
18	DW	#1	869	869	100%	0.950	179	4.67	0.40	7	14	183.1	2.66
2	DW	#1	869	869	100%	0.950	179	4.67	0.40	7	14	183.1	2.66
19	DW	#1	645	645	100%	0.950	133	4.67	0.40	6	12	134.5	2.63
	DW	#2	645	645	100%	0.950	133	4.67	0.40	6	12	134.5	2.63
20	DW	#1	853	853	100%	0.950	176	4.67	0.40	7	13.5	176.5	2.61
	DW	#2	853	853	100%	0.950	176	4.67	0.40	7	13.5	176.5	2.61
	DW	#3	853	853	100%	0.950	176	4.67	0.40	7	13.5	176.5	2.61
21	DW	#1	1106	1106	100%	0.950	228	4.67	0.40	8	15.3	228.6	2.61
	DW	#2	1106	1106	100%	0.950	228	4.67	0.40	8	15.3	228.6	2.61
22	DW	#1	902	902	100%	0.950	186	4.67	0.40	7	14.3	187.0	2.62
	DW	#2	902	902	100%	0.950	186	4.67	0.40	7	14.3	187.0	2.62
	DW	#3	902	902	100%	0.950	186	4.67	0.40	7	14.3	187.0	2.62
23	DW	#1	902	902	100%	0.950	186	4.67	0.40	7	14.3	187.0	2.62
	DW	#2	902	902	100%	0.950	186	4.67	0.40	7	14.3	187.0	2.62
	DW	#3	902	902	100%	0.950	186	4.67	0.40	7	14.3	187.0	2.62
24	DW	#1	1114	1114	100%	0.950	229	4.67	0.40	8	15.4	230.1	2.61
	DW	#2	1114	1114	100%	0.950	229	4.67	0.40	8	15.4	230.1	2.61
25	DW	#1	912	912	100%	0.950	188	4.67	0.40	7	14.5	189.6	2.63
	DW	#2	912	912	100%	0.950	188	4.67	0.40	7	14.5	189.6	2.63
	DW	#3	912	912	100%	0.950	188	4.67	0.40	7	14.5	189.6	2.63
26	DW	#1	876	876	100%	0.950	180	4.67	0.40	7	14	183.1	2.64
	DW	#2	876	876	100%	0.950	180	4.67	0.40	7	14	183.1	2.64
	DW	#3	876	876	100%	0.950	180	4.67	0.40	7	14	183.1	2.64
27	DW	#1	876	876	100%	0.950	180	4.67	0.40	7	14	183.1	2.64
	DW	#2	876	876	100%	0.950	180	4.67	0.40	7	14	183.1	2.64
	DW	#3	876	876	100%	0.950	180	4.67	0.40	7	14	183.1	2.64
28	DW	#1	876	876	100%	0.950	180	4.67	0.40	7	14	183.1	2.64
	DW	#2	876	876	100%	0.950	180	4.67	0.40	7	14	183.1	2.64
	DW	#3	876	876	100%	0.950	180	4.67	0.40	7	14	183.1	2.64
29	DW	#1	852	852	100%	0.950	175	4.67	0.40	7	13.5	176.5	2.62
	DW	#2	852	852	100%	0.950	175	4.67	0.40	7	13.5	176.5	2.62
	DW	#3	852	852	100%	0.950	175	4.67	0.40	7	13.5	176.5	2.62

Lot	House Type	Impervious Area
Lots 2,18	Clark	869 sf
19	Ellicott	1,290 sf
20	Ellicott	2,560 sf
21	Clark	2,212 sf
22,23	Ellicott	2,705 sf
24	Clark	2,229 sf
25	Banneker	2,735 sf
26,27,28	Banneker	2,628 sf
29	Ellicott	2,557 sf



OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED (M-5) DRY WELLS

1. The monitoring wells and structures shall be inspected on a quarterly basis and after every large storm event.
2. Water levels and sediment build up in the monitoring wells shall be recorded over a period of several days to insure trench drainage.
3. A log book shall be maintained to determine the rate at which the facility drains.
4. When the facility becomes clogged so that it does not drain down within the 72 hour time period, corrective action shall be taken.
5. The maintenance log book shall be available to Howard County for inspection to insure compliance with operation and maintenance criteria.
6. Once the performance characteristics of the infiltration facility have been verified, the monitoring schedule can be reduced to an annual basis unless the performance data indicates that a more frequent schedule is required.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 5/22/2025

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 5/22/2025

DIRECTOR — DATE 5/23/2025

NO.	DATE	REVISION

BENCHMARK ENGINEERING, INC.
ENGINEERS ▲ LAND SURVEYORS ▲ PLANNERS
3300 N. RIDGE ROAD ▲ SUITE 140 ▲ ELLICOTT CITY, MARYLAND 21043
(P) 410-465-6105 (F) 410-465-6644
WWW.BEI-CIVILENGINEERING.COM

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. 23190, Expiration Date: 6-30-2025.

04/22/2025

OWNER:
LACEY FAMILY REVOCABLE TRUST
1235 WILD ROSE COURT
MARRIOTTSVILLE, MD. 21104
410-707-2639

DEVELOPER:
MILL CREEK, LLC
P.O. BOX 417
ELLICOTT CITY, MD 21041
410-465-4244

BUILDER:
CARUSO HOMES
2120 BALDWIN AVENUE, SUITE 200
CROFTON, MD 21114
667-307-4222

LACEY PROPERTY

LOTS 1 THRU 13 AND OPEN SPACE LOTS 14 THRU 17

TAX MAP: 25 GRID: 01 PARCEL: 13
ZONED: R-ED
ELECTION DISTRICT NO. 2 HOWARD COUNTY, MARYLAND

SITE DEVELOPMENT AND GRADING PLAN AND SWM DETAILS

DATE: APRIL 21, 2025 | BEI PROJECT NO. 3191
DESIGN: DBT | DRAFT: CAM | SCALE: AS SHOWN | SHEET 4 OF 8

SDP-25-011

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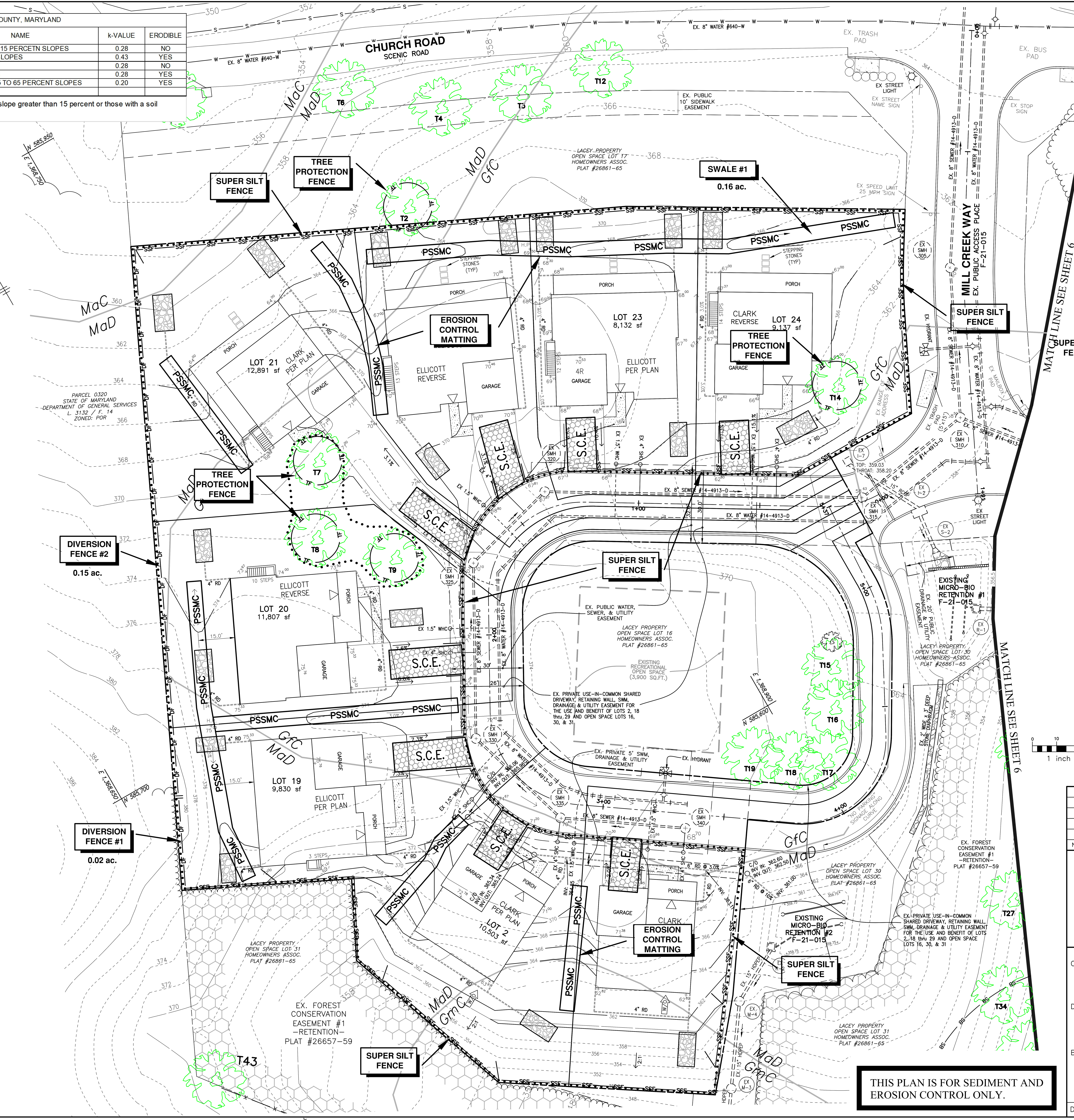
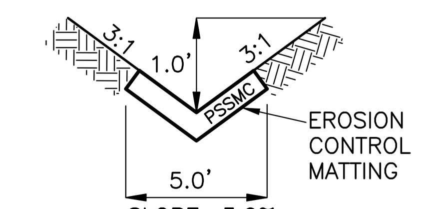
SOILS CHART - SOIL SURVEY HOWARD COUNTY, MARYLAND					
SYMBOL	HYDRIC	HYDROLOGIC GROUP	NAME	k-VALUE	ERODIBLE
GfC	NO	A	GLADSTONE-URBAN LAND COMPLEX, 8 TO 15 PERCETN SLOPES	0.28	NO
GmC	NO	C	GLENVILLE SILT LOAM, 8 TO 15 PERCENT SLOPES	0.43	YES
MaC	NO	B	MANOR LOAN, 8 TO 15 PERCENT SLOPES	0.28	NO
MaD	NO	B	MANOR LOAN, 15 TO 25 PERCENT SLOPES	0.28	YES
MgF	NO	B	MANOR-BANNERTOWN SANDLY LOAMS, 25 TO 65 PERCENT SLOPES	0.20	YES

HSCD Newsletter dated April, 2013 defines erodible soils as those soils with a slope greater than 15 percent or those with a soil erodibility factor K greater than 0.35 and with a slope greater than 5%.



NOTE:
SUPER SILT FENCE TO BE PLACED ALONG PUBLIC ROAD FRONTAGE AND AT THE BOTTOM OF ALL SWALES AS SHOWN ON THIS PLAN.



SLOPE: 3.0%
Q2 = 0.29 cfs
V2 = 2.68 fps
Q10 = 0.63 cfs
V10 = 3.36 fps

SWALE #1
NOT TO SCALE

SEDIMENT CONTROL LEGEND

— TF —	TREE PROTECTION FENCE
—DF— —DF— —DF—	DIVERSION FENCE
—SSF— —SSF— —SSF—	SUPER SILT FENCE
• • • • • • • •	LIMIT OF DISTURBANCE
S.C.E.	STABILIZED CONSTRUCTION ENTRANCE
PSSMC	PERMANENT SOIL STABILIZATION MATTING CHANNEL APPLICATION

THIS PLAN IS FOR SEDIMENT AND EROSION CONTROL ONLY.

DESIGN CERTIFICATION

"I CERTIFY THAT THIS PLAN HAS BEEN DESIGNED IN ACCORDANCE WITH CURRENT MARYLAND EROSION AND SEDIMENT CONTROL LAWS, REGULATIONS, AND STANDARDS, THAT IT REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE, AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."

Christopher A. Malagari 04/22/2025

ENGINEER
CHRISTOPHER A. MALAGARI

DATE
MD REGISTRATION NO. 22390
(P.E.) R.L.S., OR R.L.A. (circle one)

DEVELOPERS CERTIFICATION

"I/WE CERTIFY THAT ANY CLEARING, GRADING, CONSTRUCTION, OR DEVELOPMENT WILL BE DONE PURSUANT TO THIS APPROVED EROSION AND SEDIMENT CONTROL PLAN, INCLUDING INSPECTING AND MAINTAINING CONTROLS, AND THAT THE RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF TRAINING AT A MARYLAND DEPARTMENT OF THE ENVIRONMENT (MDE) APPROVED TRAINING PROGRAM FOR THE CONTROL OF EROSION AND SEDIMENT PRIOR TO BEGINNING THE PROJECT. I CERTIFY RIGHT-OF-ENTRY FOR PERIODIC ON-SITE EVALUATION BY HOWARD COUNTY, THE HOWARD SOIL CONSERVATION DISTRICT AND/OR MDE."

Ed Levendusky 04/21/2025

SIGNATURE
ED LEVENDUSKY

DATE

THIS PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

Alexander Bratchie 5/22/2025

HOWARD SOIL CONSERVATION DISTRICT — DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Jim Witmer 5/22/2025

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE

5/22/2025

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE

Lynda Eisenberg 5/23/2025

DIRECTOR — DATE

NO.	DATE	REVISION

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STATE OF MARYLAND — CHRISTOPHER A. MALAGARI — 22390 — PROFESSIONAL ENGINEER

04/22/2025

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BUILDER:
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667-307-4222

LACEY PROPERTY

LOTS 2,18 thru 29

TAX MAP: 25 GRID: 01 PARCEL: 13
ZONED: R-ED
ELECTION DISTRICT NO. 2 HOWARD COUNTY, MARYLAND

SEDIMENT AND EROSION CONTROL PLAN

DESIGN: DBT	DRAFT: CAM	DATE: APRIL 21, 2025	BEI PROJECT NO. 3191
		SCALE: AS SHOWN	SHEET 5 OF 8

SDP-25-011

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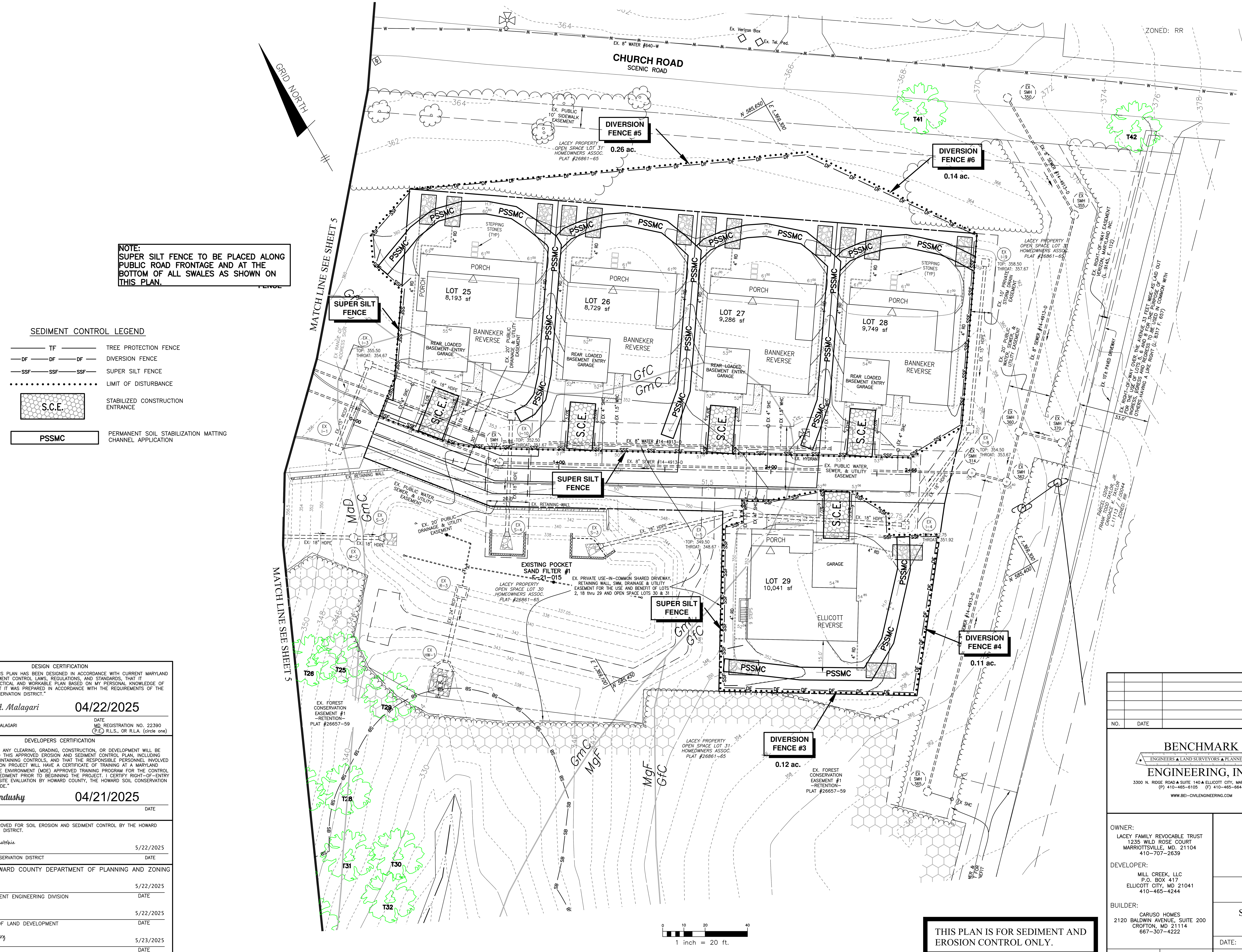

NOTE:
SUPER SILT FENCE TO BE PLACED ALONG PUBLIC ROAD FRONTAGE AND AT THE BOTTOM OF ALL SWALES AS SHOWN ON THIS PLAN.

SEDIMENT CONTROL LEGEND

—TF—	TREE PROTECTION FENCE
—DF—	DIVERSION FENCE
—SSF—	SUPER SILT FENCE
•••••	LIMIT OF DISTURBANCE
S.C.E.	STABILIZED CONSTRUCTION ENTRANCE
PSSMC	PERMANENT SOIL STABILIZATION MATTING CHANNEL APPLICATION

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Christopher A. Malagari 04/22/2025

ENGINEER
CHRISTOPHER A. MALAGARI

DATE
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Ed Levendusky 04/21/2025

SIGNATURE
ED LEVENDUSKY
DATE

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Alexander Bratchie 5/22/2025
HOWARD SOIL CONSERVATION DISTRICT — DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Jim Witmer 5/22/2025
CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE

[signature] 5/22/2025
CHIEF, DIVISION OF LAND DEVELOPMENT — DATE

Lynda Eisenberg 5/23/2025
DIRECTOR — DATE

NO.	DATE	REVISION

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04/22/2025

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SDP-25-011

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Detail – SMARTfence® 42

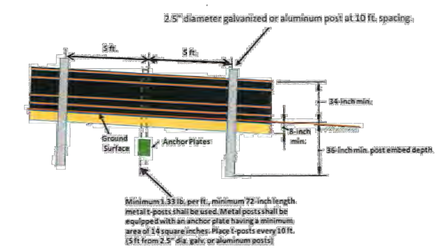


Figure 1 – Elevation

CONSTRUCTION SPECIFICATIONS

Step 1: Excavate trench a maximum of 6 inches wide and 8 inches deep. The trench shall be hand-cleaned following excavation to remove bulky debris such as rocks, sticks, and soil clods from the trench. Drive studded metal T-posts with anchor plates having a minimum weight of 1.33 lb. per ft. and a minimum 72-inch length. Drive post into ground a minimum of **3 ft. depth.** T-Post spacing will be 10 ft. maximum. In addition, drive 2.5" diameter galvanized or aluminum poles set at 10' maximum spacing. Poles should be installed a minimum 36" below the ground surface and extend a minimum of 33" aboveground. Alternate t-posts and poles every 5 ft. of fence length.

Step 2: Layout SMARTfence® 42 along proposed fence line next to anchor trench. Locate one end of the SMARTfence® 42 and position near the initial post. Position SMARTfence® 42 vertically along the initial post.

Step 3: For the initial 2.5"-diameter pole, place the end of SMARTfence® 42 along the pole height and rotate the post 360 degrees, maintaining tension on the fence system. Secure the fence to the post **at all four (4) orange-colored band locations** with minimum 10-inch long nylon ties.

Step 4: For fastening SMARTfence® 42 to metal T-posts and 2.5" poles, use the following method:

Minimum 10-inch nylon heavy-duty, UV-stabilized cable ties (zip-ties) with minimum 120-pound tensile strength. Puncture two 0.25-inch openings, spaced at a width apart that is roughly equivalent to the post width/pole diameter, and secure the fence to the post/pole. Tighten ties against the post/pole.

Step 5: Drive the initial post/pole with the attached fence into the ground to **3 ft. depth.**

Step 6: Drive the all remaining interior posts and poles of the fence system into the ground at least 3 ft., with the exception of the last pole along the fence length.

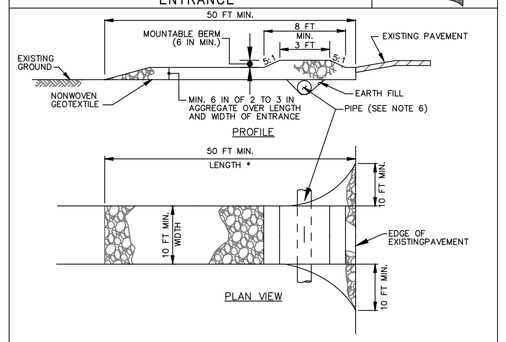
Step 7: Move to the next post/pole location while pulling SMARTfence® 42 **tightly.** Position the SMARTfence® 42 in front of the adjacent post/pole in preparation for fastening the fence to the post/pole. Fasten fence to post/pole **at all four (4) orange-colored band locations** as instructed in Step 4.

Step 8: After the interior posts have been fastened to the SMARTfence® 42, secure the fence to the final 2.5"-diameter pole by **pulling the final section of fencing taut**, then rotating the post 360 degrees, maintaining tension on the fence system. Secure the fence to the post **at all four (4) orange-colored band locations** with the nylon ties per Step 4. Drive the final post into the ground to 3 ft. depth.

Step 9: Place the bottom 8 inches of fabric into the trench. Backfill trench (overfill) with soil placed around fabric. Compact soil backfill with either manual tamping (or other manual means) 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*). Do not damage the fabric during compaction (damaged fabric shall be replaced).

SMARTfence42 MAY BE USED IN LIEU OF SUPER SILT FENCE AT THE DESCRETION OF THE CONTRACTOR

DETAIL B-1 STABILIZED CONSTRUCTION ENTRANCE — STANDARD SYMBOL SCE



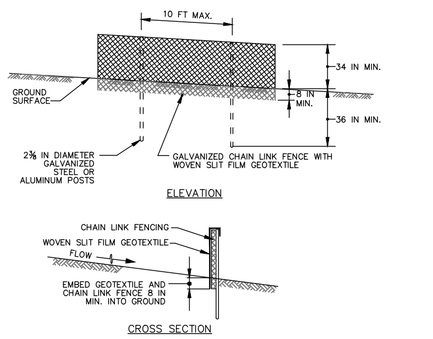
CONSTRUCTION SPECIFICATIONS

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 (*50 FEET FOR SINGLE RESIDENCE LOT). USE MINIMUM WIDTH OF 10 FEET. FLARE SCE TO 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

DETAIL E-3 SUPER SILT FENCE — STANDARD SYMBOL SSF



CONSTRUCTION SPECIFICATIONS

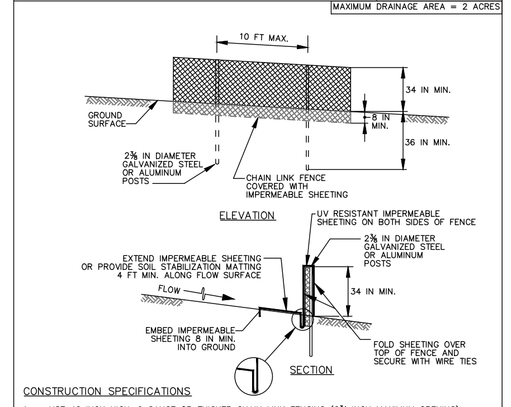
1. INSTALL 2¾ INCH DIAMETER GALVANIZED STEEL POSTS OF 0.095 INCH WALL THICKNESS AND SIX FOOT LENGTH SPACED NO FURTHER THAN 10 FEET APART. DRIVE THE POSTS A MINIMUM OF 36 INCHES INTO THE GROUND.
2. FASTEN 9 GAUGE OR HEAVIER GALVANIZED CHAIN LINK FENCE (2¾ INCH MAXIMUM OPENING) 42 INCHES IN HEIGHT SECURELY TO THE FENCE POSTS WITH WIRE TIES OR HOG 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

DETAIL C-9 DIVERSION FENCE — STANDARD SYMBOL DF

MAXIMUM DRAINAGE AREA = 2 ACRES



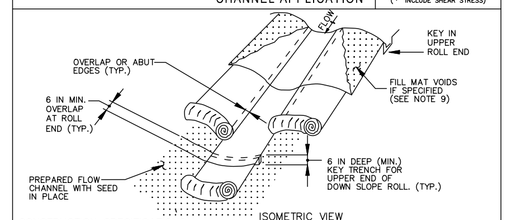
CONSTRUCTION SPECIFICATIONS

1. USE 42 INCH HIGH, 9 GAUGE OR THICKER CHAIN LINK FENCING (2¾ INCH MAXIMUM OPENING).
2. USE 2¾ INCH DIAMETER GALVANIZED STEEL POSTS OF 0.095 INCH WALL THICKNESS AND SIX FOOT LENGTH SPACED NO FURTHER THAN 10 FEET APART. THE POSTS DO NOT NEED TO BE SET IN CONCRETE.
3. FASTEN CHAIN LINK FENCE SECURELY TO THE FENCE POSTS WITH WIRE TIES.
4. SECURE 10 MIL OR THICKER UV RESISTANT, IMPERMEABLE SHEETING TO CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT TOP, MID SECTION, AND BELOW GROUND SURFACE.
5. EXTEND SHEETING A MINIMUM OF 4 FEET ALONG FLOW SURFACE AND EMBED END A MINIMUM OF 8 INCHES INTO GROUND. SOIL STABILIZATION MATTING MAY BE USED IN LIEU OF IMPERMEABLE SHEETING ALONG FLOW SURFACE.
6. WHEN TWO SECTIONS OF SHEETING ADJOIN EACH OTHER, OVERLAP BY 6 INCHES AND FOLD WITH SEAM FACING DOWNGRADE.
7. KEEP FLOW SURFACE ALONG DIVERSION FENCE AND POINT OF DISCHARGE FREE OF EROSION. REMOVE ACCUMULATED SEDIMENT AND DEBRIS. MAINTAIN POSITIVE DRAINAGE. REPLACE IMPERMEABLE SHEETING IF TORN. IF UNDERMINING OCCURS, REINSTALL FENCE.

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 B-4-6-C PERMANENT SOIL STABILIZATION MATTING CHANNEL APPLICATION — STANDARD SYMBOL PSSMC — * 0.47 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 A MINIMUM OF 1 INCH SQUARE 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

SEQUENCE OF CONSTRUCTION

NOTIFY SEDIMENT CONTROL DIVISION 48 HOURS PRIOR TO START OF WORK

SEQUENCE PERTAINS TO EACH INDIVIDUAL HOUSE AS PERMITS ARE ISSUED. NOT ALL HOUSES WILL BE CONSTRUCTED AT THE SAME TIME.

1. Obtain grading/building permit. Notify C.I.D. at 410-313-1880 at least 24 hours before starting any work. (1 day)

2. Hold on-site pre-construction meeting. (day 2)

3. Install individual lot perimeter controls (i.e. SCE, SSF, DF). (day 3)

4. Excavate for foundation, rough grade lot, and stabilize in accordance with the temporary seedbed notes. Add PSSMC as swales are graded. (day 4-10)

5. Construct house, install water and sewer house connections from easement/right-of-way up to house, backfill, and construct driveway. On lots that require them, install on-lot dry wells and connect roof leaders. (day 11-120)

6. Upon approval from the Howard County Sediment Control Inspector, remove all sediment control devices and stabilize any remaining disturbed areas in accordance with the permanent seedbed notes. (day 121-125)

Note: Following initial soil disturbance or any re-disturbances, permanent or temporary stabilization shall be completed within:
- A. 3 calendar days for all perimeter sediment control structures, dikes, swales and all slopes greater than 3:1.
- B. 7 calendar days for all other disturbed areas.

During grading and after each rainfall, contractor will inspect and provide necessary maintenance to the sediment control measures of this plan.

DESIGN CERTIFICATION

"I CERTIFY THAT THIS PLAN HAS BEEN DESIGNED IN ACCORDANCE WITH CURRENT MARYLAND EROSION AND SEDIMENT CONTROL LAWS, REGULATIONS, AND STANDARDS, THAT IT REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE, AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."

Christopher A. Malagari — 04/22/2025

ENGINEER — DATE
CHRISTOPHER A. MALAGARI
MD REGISTRATION NO. 22390
(P.E.) R.L.S., OR R.L.A. (circle one)

DEVELOPERS CERTIFICATION

"I/WE CERTIFY THAT ANY CLEARING, GRADING, CONSTRUCTION, OR DEVELOPMENT WILL BE DONE PURSUANT TO THIS APPROVED EROSION AND SEDIMENT CONTROL PLAN, INCLUDING INSPECTING AND MAINTAINING CONTROLS, AND THAT THE RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF TRAINING AT A MARYLAND DEPARTMENT OF THE ENVIRONMENT (MDE) APPROVED TRAINING PROGRAM FOR THE CONTROL OF EROSION AND SEDIMENT PRIOR TO BEGINNING THE PROJECT. I CERTIFY RIGHT-OF-ENTRY FOR PERIODIC ON-SITE EVALUATION BY HOWARD COUNTY, THE HOWARD SOIL CONSERVATION DISTRICT AND/OR MDE."

Ed Levendusky — 04/21/2025

SIGNATURE — DATE
ED LEVENDUSKY

THIS PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

Signed by: Alexander Bratchie — 5/22/2025

HOWARD SOIL CONSERVATION DISTRICT — DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Signed by: Jim Ulfelder — 5/22/2025

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE

DocuSigned by: — 5/22/2025

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE

DocuSigned by: Lynda Eisenberg — 5/23/2025

DIRECTOR — DATE

THIS PLAN IS FOR SEDIMENT AND EROSION CONTROL ONLY.

NO.	DATE	REVISION

BENCHMARK
ENGINEERS ▲ LAND SURVEYORS ▲ PLANNERS
ENGINEERING, INC.
3300 N. RIDGE ROAD ▲ SUITE 140 ▲ ELLICOTT CITY, MARYLAND 21043
(P) 410-465-6105 (F) 410-465-6644
WWW.BEI-CIVILENGINEERING.COM

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. 22390, Expiration Date: May, 6-30-2025.

STATE OF MARYLAND — CHRISTOPHER A. MALAGARI — 22390 — PROFESSIONAL ENGINEER

04/22/2025

OWNER:
LACEY FAMILY REVOCABLE TRUST
1235 WILD ROSE COURT
MARRIOTTSVILLE, MD. 21104
410-707-2639

DEVELOPER:
MILL CREEK, LLC
P.O. BOX 417
ELLICOTT CITY, MD 210401
410-465-4244

BUILDER:
CARUSO HOMES
2120 BALDWIN AVENUE, SUITE 200
CROFTON, MD 21114
667-307-4222

LACEY PROPERTY

LOTS 2,18 thru 29

TAX MAP: 25 GRID: 01 PARCEL: 13
ZONED: R-ED
ELECTION DISTRICT NO. 2 HOWARD COUNTY, MARYLAND

SEDIMENT AND EROSION CONTROL PLAN

DESIGN: DBT	DRAFT: CAM	DATE: APRIL 21, 2025	BEI PROJECT NO. 3191
		SCALE: AS SHOWN	SHEET 7 OF 8

SDP-25-011

B-4 STANDARDS AND SPECIFICATIONS
FOR
VEGETATIVE STABILIZATION

Definition

Using vegetation as cover to protect exposed soil from erosion.

Purpose

To promote the establishment of vegetation on exposed soil.

Conditions Where Practice Applies

On all disturbed areas not stabilized by other methods. This specification is divided into sections on incremental stabilization; soil preparation, soil amendments and topsoiling; seeding and mulching; temporary stabilization; and permanent stabilization.

Effects on Water Quality and Quantity

Stabilization practices are used to promote the establishment of vegetation on exposed soil. When soil is stabilized with vegetation, the soil is less likely to erode and more likely to allow infiltration of rainfall, thereby reducing sediment loads and runoff to downstream areas.

Planting vegetation in disturbed areas will have an effect on the water budget, especially on volumes and rates of runoff, infiltration, evaporation, transpiration, percolation, and groundwater recharge. Over time, vegetation will increase organic matter content and improve the water holding capacity of the soil and subsequent plant growth.

Vegetation will help reduce the movement of sediment, nutrients, and other chemicals carried by runoff to receiving waters. Plants will also help protect groundwater supplies by assimilating those substances present within the root zone.

Sediment control practices must remain in place during grading, seedbed preparation, seeding, mulching, and vegetative establishment.

Adequate Vegetative Establishment

Inspect seeded areas for vegetative establishment and make necessary repairs, replacements, and reseedings within the planting season.
1. Adequate vegetative stabilization requires 95 percent groundcover.
2. If an area has less than 40 percent groundcover, restabilize following the original recommendations for lime, fertilizer, seedbed preparation, and seeding.
3. If an area has between 40 and 94 percent groundcover, over-seed and fertilize using half of the rates originally specified.
4. Maintenance fertilizer rates for permanent seeding are shown in Table B.6.

B-4-1 STANDARDS AND SPECIFICATIONS
FOR
INCREMENTAL STABILIZATION

Definition

Establishment of vegetative cover on cut and fill slopes.

Purpose

To provide timely vegetative cover on cut and fill slopes as work progresses.

Conditions Where Practice Applies

Any cut or fill slope greater than 15 feet in height. This practice also applies to stockpiles.

Criteria

A. Incremental Stabilization - Cut Slopes
1. Excavate and stabilize cut slopes in increments not to exceed 15 feet in height. Prepare seedbed and apply seed and mulch on all cut slopes as the work progresses.
2. Construction sequence example (Refer to Figure B.1):
   a. Construct and stabilize all temporary swales or dikes that will be used to convey runoff around the excavation.
   b. Perform Phase 1 excavation, prepare seedbed, and stabilize.
   c. Perform Phase 2 excavation, prepare seedbed, and stabilize. Overseed Phase 1 areas as necessary.
   d. Perform final phase excavation, prepare seedbed, and stabilize. Overseed previously seeded areas as necessary.

Note: Once excavation has begun the operation should be continuous from grubbing through the completion of grading and placement of topsoil (if required) and permanent seed and mulch. Any interruptions in the operation or completing the operation out of the seeding season will necessitate the application of temporary stabilization

B. Incremental Stabilization - Fill Slopes
1. Construct and stabilize fill slopes in increments not to exceed 15 feet in height. Prepare seedbed and apply seed and mulch on all slopes as the work progresses.
2. Stabilize slopes immediately when the vertical height of a lift reaches 15 feet, or when the grading operation ceases as prescribed in the plans.
3. At the end of each day, install temporary water conveyance practice(s), as necessary, to intercept surface runoff and convey it down the slope in a non-erosive manner.
4. Construction sequence example (Refer to Figure B.2):
   a. Construct and stabilize all temporary swales or dikes that will be used to divert runoff around the fill. Construct silt fence on low side of fill unless other methods shown on the plans address this area.
   b. At the end of each day, install temporary water conveyance practice(s), as necessary, to intercept surface runoff and convey it down the slope in a non-erosive manner.
   c. Place Phase 1 fill, prepare seedbed, and stabilize.
   d. Place Phase 2 fill, prepare seedbed, and stabilize.
   e. Place final phase fill, prepare seedbed, and stabilize. Overseed previously seeded areas as necessary.

Note: Once the placement of fill has begun the operation should be continuous from grubbing through the completion of grading and placement of topsoil (if required) and permanent seed and mulch. Any interruptions in the operation or completing the operation out of the seeding season will necessitate the application of temporary stabilization.
Figure B.

B-4-2 STANDARDS AND SPECIFICATIONS
FOR
SOIL PREPARATION, TOPSOILING, AND SOIL AMENDMENTS

Definition

The process of preparing the soils to sustain adequate vegetative stabilization.

Purpose

To provide a suitable soil medium for vegetative growth.

Conditions Where Practice Applies

Where vegetative stabilization is to be established.

Criteria

A. Soil Preparation
1. Temporary Stabilization
   a. Seedbed preparation consists of loosening soil to a depth of 3 to 5 inches by means of suitable agricultural or construction equipment, such as disc harrows or chisel plows or rippers mounted on construction equipment. After the soil is loosened, it must not be rolled or dragged smooth but left in the roughened condition. Slopes 3:1 or flatter are to be tracked with ridges running parallel to the contour of the slope.
   b. Apply fertilizer and lime as prescribed on the plans.
   c. Incorporate lime and fertilizer into the top 3 to 5 inches of soil by disking or other suitable means.
2. Permanent Stabilization
   a. A soil test is required for any earth disturbance of 5 acres or more. The minimum soil conditions required for permanent vegetative establishment are:
      i. Soil pH between 6.0 and 7.0.
      ii. Soluble salts less than 500 parts per million (ppm).
      iii. Soil contains less than 40 percent clay but enough fine grained material (greater than 30 percent silt plus clay) to provide the capacity to hold a moderate amount of moisture. An exception: if lovegrass will be planted, then a sandy soil (less than 30 percent silt plus clay) would be acceptable.
      iv. Soil contains 1.5 percent minimum organic matter by weight.
      v. Soil contains sufficient pore space to permit adequate root penetration.
   b. Application of amendments or topsoil is required if on-site soils do not meet the above conditions.
   c. Graded areas must be maintained in a true and even grade as specified on the approved plan, then scarified or otherwise loosened to a depth of 3 to 5 inches.
   d. Apply soil amendments as specified on the approved plan or as indicated by the results of a soil test.
   e. Mix soil amendments into the top 3 to 5 inches of soil by disking or other suitable means. Rake lawn areas to smooth the surface, remove large objects like stones and branches, and ready the area for seed application. Loosen surface soil by dragging with a heavy chain or other equipment to roughen the surface where site conditions will not permit normal seedbed preparation. Track slopes 3:1 or flatter with tracked equipment leaving the soil in an irregular condition with ridges running parallel to the contour of the slope. Leave the top 1 to 3 inches of soil loose and friable. Seedbed loosening may be unnecessary on newly disturbed areas.

B. Topsoiling
1. Topsoil is placed over prepared subsoil prior to establishment of permanent vegetation. The purpose is to provide a suitable soil medium for vegetative growth. Soils of concern have low moisture content, low nutrient levels, low pH, materials toxic to plants, and/or unacceptable soil gradation.
2. Topsoil salvaged from an existing site may be used provided it meets the standards as set forth in these specifications. Typically, the depth of topsoil to be salvaged for a given soil type can be found in the representative soil profile section in the Soil Survey published by USDA-NRCS.
3. Topsoiling is limited to areas having 2:1 or flatter slopes where:
   a. The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth.
   b. The soil material is so shallow that the rooting zone is not deep enough to support plants or furnish continuing supplies of moisture and plant nutrients.
   c. The original soil to be vegetated contains material toxic to plant growth.
   d. The soil is so acidic that treatment with limestone is not feasible.
4. Areas having slopes steeper than 2:1 require special consideration and design.
5. Topsoil Specifications: Soil to be used as topsoil must meet the following criteria:
   a. Topsoil must be a loam, sandy loam, clay loam, silt loam, sandy clay loam, or loamy sand. Other soils may be used if recommended by an agronomist or soil scientist and approved by the appropriate approval authority. Topsoil must not be a mixture of contrasting textured subsoils and must contain less than 5 percent by volume of cinders, stones, slag, coarse fragments, gravel, sticks, roots, trash, or other materials larger than 1½ inches in diameter.
   b. Topsoil must be free of noxious plants or plant parts such as Bermuda grass, quack grass, Johnson grass, nut sedge, poison ivy, thistle, or others as specified.
   c. Topsoil substitutes or amendments, as recommended by a qualified agronomist or soil scientist and approved by the appropriate approval authority, may be used in lieu of natural topsoil.
6. Topsoil Application
   a. Erosion and sediment control practices must be maintained when applying topsoil.
   b. Uniformly distribute topsoil in a 5 to 8 inch layer and lightly compact to a minimum thickness of 4 inches. Spreading is to be performed in such a manner that sodding or seeding can proceed with a minimum of additional soil preparation and tillage. Any irregularities in the surface resulting from topsoiling or other operations must be corrected in order to prevent the formation of depressions or water pockets.
   c. Topsoil must not be placed if the topsoil or subsoil is in a frozen or muddy condition, when the subsoil is excessively wet or in a condition that may otherwise be detrimental to proper grading and seedbed preparation.

C. Soil Amendments (Fertilizer and Lime Specifications)
1. Soil tests must be performed to determine the exact ratios and application rates for both lime and fertilizer on sites having disturbed areas of 5 acres or more. Soil analysis may be performed by a recognized private or commercial laboratory. Soil samples taken for engineering purposes may also be used for chemical analyses.
2. Fertilizers must be uniform in composition, free flowing and suitable for accurate application by appropriate equipment. Manure may be substituted for fertilizer with prior approval from the appropriate approval authority. Fertilizers must all be delivered to the site fully labeled according to the applicable laws and must bear the name, trade name or trademark and warranty of the producer.
3. Lime materials must be ground limestone (hydrated or burnt lime may be substituted except when hydroseeding) which contains at least 50 percent total oxides (calcium oxide plus magnesium oxide). Limestone must be ground to such fineness that at least 50 percent will pass through a #100 mesh sieve and 98 to 100 percent will pass through a #20 mesh sieve.
4. Lime and fertilizer are to be evenly distributed and incorporated into the top 3 to 5 inches of soil by disking or other suitable means.
5. Where the subsoil is either highly acidic or composed of heavy clays, spread ground limestone at the rate of 4 to 8 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoil.

B-4-3 STANDARDS AND SPECIFICATIONS
FOR
SEEDING AND MULCHING

Definition

The application of seed and mulch to establish vegetative cover.

Purpose

To protect disturbed soils from erosion during and at the end of construction.

Conditions Where Practice Applies

To the surface of all perimeter controls, slopes, and any disturbed area not under active grading.

Criteria

A. Seeding
1. Specifications
   a. All seed must meet the requirements of the Maryland State Seed Law. All seed must be subject to re-testing by a recognized seed laboratory. All seed used must have been tested within the 6 months immediately preceding the date of sowing such material on any project. Refer to Table B.4 regarding the quality of seed. Seed tags must be available upon request to the inspector to verify type of seed and seeding rate.
   b. Mulch alone may be applied between the fall and spring seeding dates only if the ground is frozen. The appropriate seeding mixture must be applied when the ground thaws.
   c. Inoculants: The inoculant for treating legume seed in the seed mixtures must be a pure culture of nitrogen fixing bacteria prepared specifically for the species. Inoculants must not be used later than the date indicated on the container. Add fresh inoculants as directed on the package. Use four times the recommended rate when hydroseeding. Note: It is very important to keep inoculant as cool as possible until used. Temperatures above 75 to 80 degrees Fahrenheit can weaken bacteria and make the inoculant less effective.
   d. Sod or seed must not be placed on soil which has been treated with soil sterilants or chemicals used for weed control until sufficient time has elapsed (14 days min.) to permit dissipation of phyto-toxic materials.
2. Application
   a. Dry Seeding: This includes use of conventional drop or broadcast spreaders.
      i. Incorporate seed into the subsoil at the rates prescribed on Temporary Seeding Table B.1, Permanent Seeding Table B.3, or site-specific seeding summaries.
      ii. Apply seed in two directions, perpendicular to each other. Apply half the seeding rate in each direction. Roll the seeded area with a weighted roller to provide good seed to soil contact.
   b. Drill or Cultipacker Seeding: Mechanized seeders that apply and cover seed with soil.
      i. Cultipacking seeders are required to bury the seed in such a fashion as to provide at least 1/4 inch of soil covering. Seedbed must be firm after planting.
      ii. Apply seed in two directions, perpendicular to each other. Apply half the seeding rate in each direction.
   c. Hydroseeding: Apply seed uniformly with hydroseeder (slurry includes seed and fertilizer).
      i. If fertilizer is being applied at the time of seeding, the application rates should not exceed the following: nitrogen, 100 pounds per acre total of soluble nitrogen; P2O5 (phosphorous), 200 pounds per acre; K2O (potassium), 200 pounds per acre.
      ii. Lime: Use only ground agricultural limestone (up to 3 tons per acre may be applied by hydroseeding). Normally, not more than 2 tons are applied by hydroseeding at any one time. Do not use burnt or hydrated lime when hydroseeding.
      iii. Mix seed and fertilizer on site and seed immediately and without interruption.
      iv. When hydroseeding do not incorporate seed into the soil.

B. Mulching
1. Mulch Materials (in order of preference)
   a. Straw consisting of thoroughly threshed wheat, rye, oat, or barley and reasonably bright in color. Straw is to be free of noxious weed seeds as specified in the Maryland Seed Law and not musty, moldy, caked, decayed, or excessively dusty. Note: Use only sterile straw mulch in areas where one species of grass is desired.
   b. Wood Cellulose Fiber Mulch (WCFM) consisting of specially prepared wood cellulose processed into a uniform fibrous physical state.
      i. WCFM is to be dyed green or contain a green dye in the package that will provide an appropriate color to facilitate visual inspection of the uniformly spread slurry.
      ii. WCFM, including dye, must contain no germination or growth inhibiting factors.
      iii. WCFM materials are to be manufactured and processed in such a manner that the wood cellulose fiber mulch will remain in uniform suspension in water under agitation and will blend with seed, fertilizer and other additives to form a homogeneous slurry. The mulch material must form a blotter-like ground cover, on application, having moisture absorption and percolation properties and must cover and hold grass seed in contact with the soil without inhibiting the growth of the grass seedlings.
      iv. WCFM material must not contain elements or compounds at concentration levels that will be phyto-toxic.
      v. WCFM must conform to the following physical requirements: fiber length of approximately 10 millimeters, diameter approximately 1 millimeter, pH range of 4.0 to 8.5, ash content of 1.6 percent maximum and water holding capacity of 90 percent minimum.
2. Application
   a. Apply mulch to all seeded areas immediately after seeding.
   b. When straw mulch is used, spread it over all seeded areas at the rate of 2 tons per acre to a uniform loose depth of 1 to 2 inches. Apply mulch to achieve a uniform distribution and depth so that the soil surface is not exposed. When using a mulch anchoring tool, increase the application rate to 2.5 tons per acre.
   c. Wood cellulose fiber used as mulch must be applied at a net dry weight of 1500 pounds per acre. Mix the wood cellulose fiber with water to attain a mixture with a maximum of 50 pounds of wood cellulose fiber per 100 gallons of water.
3. Anchoring
   a. Perform mulch anchoring immediately following application of mulch to minimize loss by wind or water. This may be done by one of the following methods (listed by preference), depending upon the size of the area and erosion hazard:
      i. A mulch anchoring tool is a tractor drawn implement designed to punch and anchor mulch into the soil surface a minimum of 2 inches. This practice is most effective on large areas, but is limited to flatter slopes where equipment can operate safely. If used on sloping land, this practice should follow the contour.
      ii. Wood cellulose fiber may be used for anchoring straw. Apply the fiber binder at a net dry weight of 750 pounds per acre. Mix the wood cellulose fiber with water at a maximum of 50 pounds of wood cellulose fiber per 100 gallons of water.
      iii. Synthetic binders such as Acrylic DLR (Agro-Tack), DCA-70, Petroset, Terra Tax II, Terra Tack AR or other approved equal may be used. Follow application rates as specified by the manufacturer. Application of liquid binders needs to be heavier at the edges where wind catches mulch, such as in valleys and on crests of banks. Use of asphalt binders is strictly prohibited.
      iv. Lightweight plastic netting may be stapled over the mulch according to manufacturer recommendations. Netting is usually available in rolls 4 to 15 feet wide and 300 to 3,000 feet long.

B-4-5 STANDARDS AND SPECIFICATIONS
FOR
PERMANENT STABILIZATION

Definition

To stabilize disturbed soils with permanent vegetation.

Purpose

To use long-lived perennial grasses and legumes to establish permanent ground cover on disturbed soils.

Conditions Where Practice Applies

Exposed soils where ground cover is needed for 6 months or more.

Criteria

A. Seed Mixtures
1. General Use
   a Select one or more of the species or mixtures listed in Table B.3 for the appropriate Plant Hardiness Zone (from Figure B.3) and based on the site condition or purpose found on Table B.2. Enter selected mixture(s), application rates, and seeding dates in the Permanent Seeding Summary. The Summary is to be placed on the plan.
   b Additional planting specifications for exceptional sites such as shorelines, stream banks, or dunes or for special purposes such as wildlife or aesthetic treatment may be found in USDA-NRCS Technical Field Office Guild, Section 342 - Critical Area Planting.
   c For sites having disturbed areas over 5 acres, use and show the rates recommended by the soil testing agency.
   d For areas receiving low maintenance, apply urea form fertilizer (46-0-0) at 3 ½ pounds per 1000 square feet (150 pounds per acre) at the time of seeding in addition to the soil amendments shown in the Permanent Seeding Summary.
2. Turfgrass Mixtures
   a. Areas where turfgrass may be desired include lawns, parks, playgrounds, and commercial sites which will receive a medium to high level of maintenance.
   b. Select one or more of the species or mixtures listed below based on the site conditions or purpose. Enter selected mixture(s), application rates, and seeding dates in the Permanent Seeding Summary. The summary is to be placed on the plan.
      i. Kentucky Bluegrass: Full Sun Mixture: For use in areas that receive intensive management. Irrigation required in the areas of central Maryland and Eastern Shore. Recommended Certified Kentucky Bluegrass Cultivars Seeding Rate: 1.5 to 2.0 pounds per 1000 square feet. Choose a minimum of three Kentucky Bluegrass Cultivars with each ranging from 10 to 35 percent of the total mixture by weight.
      ii. Kentucky Bluegrass/Perennial Rye: Full Sun Mixture: For use in full sun areas where rapid establishment is necessary and when turf will receive medium to intensive management. Certified Perennial Ryegrass Cultivars/Certified Kentucky Bluegrass Seeding Rate: 2 pounds mixture per 1000 square feet. Choose a minimum of three Kentucky Bluegrass Cultivars with each ranging from 10 to 35 percent of the total mixture by weight.
      iii. Tall Fescue/Kentucky Bluegrass: Full Sun Mixture: For use in drought prone areas and/or for areas receiving low to medium management in full sun to medium shade. Recommended mixture includes; Certified Tall Fescue Cultivars 95 to 100 percent, Certified Kentucky Bluegrass Cultivars 0 to 5 percent. Seeding Rate: 5 to 8 pounds per 1000 square feet. One or more cultivars may be blended.
      iv. Kentucky Bluegrass/Fine Fescue: Shade Mixture: For use in areas with shade in Bluegrass lawns. For establishment in high quality, intensively managed turf area. Mixture includes Certified Kentucky Bluegrass Cultivars 30 to 40 percent and Certified Fine Fescue and 60 to 70 percent. Seeding Rate: 1 ½ to 3 pounds per 1000 square feet.
      Notes: Select turfgrass varieties from those listed in the most current University of Maryland Publication, Agronomy Memo #77, "Turfgrass Cultivar Recommendations for Maryland" Choose certified material. Certified material is the best guarantee of cultivar purity. The certification program of the Maryland Department of Agriculture, Turf and Seed Section, provides a reliable means of consumer protection and assures a pure genetic line.
   c. Ideal Times of Seeding for Turf Grass Mixtures
      Western MD: March 15 to June 1, August 1 to October 1 (Hardiness Zones: 5b, 6a)
      Central MD: March 1 to May 15, August 15 to October 15 (Hardiness Zone: 6b)
      Southern MD, Eastern Shore: March 1 to May 15, August 15 to October 15 (Hardiness Zones: 7a, 7b)
   d. Till areas to receive seed by disking or other approved methods to a depth of 2 to 4 inches, level and rake the areas to prepare a proper seedbed. Remove stones and debris over 1 ½ inches in diameter. The resulting seedbed must be in such condition that future mowing of grasses will pose no difficulty.
   e. If soil moisture is deficient, supply new seedings with adequate water for plant growth (½ to 1 inch every 3 to 4 days depending on soil texture) until they are firmly established. This is not especially true when seedings are made late in the planting season, in abnormally dry or hot seasons, or on adverse sites.

B. Sod: to provide quick cover on disturbed areas (2:1 grade or flatter).
1. General Specifications
   a. Class of turfgrass must be Maryland State Certified. Sod labels must be made available to the job foreman and inspector.
   b. Sod must be machine cut at a uniform soil thickness of ¾ inch, plus or minus ¼ inch, at the time of cutting. Measurement for thickness must exclude top growth and thatch. Broken pads and torn or uneven ends will not be acceptable.
   c. Standard size sections of sod must be strong enough to support their own weight and retain their size and shape when suspended vertically with a firm grasp on the upper 10 percent of the section.
   d. Sod must not be harvested or transplanted when moisture content (excessively dry or wet) may adversely affect its survival.
   e. Sod must be harvested, delivered, and installed within a period of 36 hours. Sod not transplanted within this period must be approved by an agronomist or soil scientist prior to its installation.
2. Sod Installation
   a. During periods of excessively high temperature or in areas having dry subsoil, lightly irrigate the subsoil immediately prior to laying the sod.
   b. Lay the first row of sod in a straight line with subsequent rows placed parallel to it and tightly wedged against each other. Stagger lateral joints to promote more uniform growth and strength. Ensure that sod is not stretched or overlapped and that all joints are butted tight in order to prevent voids which would cause air drying of the roots.
   c. Wherever possible, lay sod with the long edges parallel to the contour and with staggering joints. Roll and tamp, peg or otherwise secure the sod to prevent slippage on slopes. Ensure solid contact exists between sod roots and the underlying soil surface.
   d. Water the sod immediately following rolling and tamping until the underside of the new sod pad and soil surface below the sod are thoroughly wet. Complete the operations of laying, tamping and irrigating for any piece of sod within eight hours.
3. Sod Maintenance
   a. In the absence of adequate rainfall, water daily during the first week or as often and sufficiently as necessary to maintain moist soil to a depth of 4 inches. Water sod during the heat of the day to prevent wilting.
   b. After the first week, sod watering is required as necessary to maintain adequate moisture content.
   c. Do not mow until the sod is firmly rooted. No more than 1/3 of the grass leaf must be removed by the initial cutting or subsequent cuttings. Maintain a grass height of at least 3 inches unless otherwise specified.

B-4-4 STANDARDS AND SPECIFICATIONS
FOR
TEMPORARY STABILIZATION

Definition

To stabilize disturbed soils with vegetation for up to 6 months.

Purpose

To use fast growing vegetation that provides cover on disturbed soils.

Conditions Where Practice Applies

Exposed soils where ground cover is needed for a period of 6 months or less. For longer duration of time, permanent stabilization practices are required.

Criteria

1. Select one or more of the species or seed mixtures listed in Table B.1 for the appropriate Plant Hardiness Zone (from Figure B.3), and enter them in the Temporary Seeding Summary below along with application rates, seeding dates and seeding depths. If this Summary is not put on the plan and completed, then Table B.1 plus fertilizer and lime rates must be put on the plan.
2. For sites having soil tests performed, use and show the recommended rates by the testing agency. Soil tests are not required for Temporary Seeding.
3. When stabilization is required outside of a seeding season, apply seed and mulch or straw mulch alone as prescribed in Section B-4-3.A.1.b and maintain until the next seeding season.

H-5 STANDARDS AND SPECIFICATIONS
FOR
DUST CONTROL

Definition

Controlling the suspension of dust particles from construction activities.

Purpose

To prevent blowing and movement of dust from exposed soil surfaces to reduce on and off-site damage including health and traffic hazards.

Conditions Where Practice Applies

Areas subject to dust blowing and movement where on and off-site damage is likely without treatment.

Specifications

1. Mulches: See Section B-4-2 Soil Preparation, Topsoiling, and Soil Amendments, Section B-4-3 Seeding and Mulching, and Section B-4-4 Temporary Stabilization. Mulch must be anchored to prevent blowing.
2. Vegetative Cover: See Section B-4-4 Temporary Stabilization.
3. Tillage: Till to roughen surface and bring clods to the surface. Begin plowing on windward side of site. Chisel-type plows spaced about 12 inches apart, spring-toothed harrows, and similar plows are examples of equipment that may produce the desired effect.
4. Irrigation: Sprinkle site with water until the surface is moist. Repeat as needed. The site must not be irrigated to the point that runoff occurs.
5. Barriers: Solid board fences, silt fences, snow fences, burlap fences, straw bales, and similar material can be used to control air currents and soil blowing.
6. Chemical Treatment: Use of chemical treatment requires approval by the appropriate plan review authority.

Table B.1: Temporary Seeding for Site Stabilization

Plant Species	Seeding Rate 1/ lb/ac	Seeding Rate 1/ lb/1000 ft2	Seeding Depth 2/ (inches)	Recommended Seeding Dates by Plant Hardiness Zone 3/ 5b and 6a	6b	7a and 7b
Cool-Season Grasses						
Annual Ryegrass (Lolium perenne ssp. Multiflorum)	40	1.0	0.5		Mar 1 to May 15; Aug 1 to Oct 31	
Barley (Hordeum vulgare)	96	2.2	1.0		Mar 1 to May 15; Aug 1 to Oct 31	
Oats (Avena sativa)	72	1.7	1.0		Mar 1 to May 15; Aug 1 to Oct 31	
Wheat (Triticum aestivum)	120	2.8	1.0		Mar 1 to May 15; Aug 1 to Oct 31	
Cereal Rye (Secale cereale)	112	2.8	1.0		Mar 1 to May 15; Aug 1 to Nov 15	
Warm-Season Grasses						
Foxtail Millet (Setaria italica)	30	0.7	0.5		May 16 to Jul 31	
Pearl Millet (Pennisetum glaucum)	20	0.5	0.5		May 16 to Jul 31	

Notes:

1/ Seeding rates for the warm season grasses are in pounds of Pure Live Seed (PLS). Actual planting rates shall be adjusted to reflect percent seed germination and purity as tested. Adjustments are usually not needed for the cool-season grasses.

Seeding rates listed above are for temporary seedings, when planted alone. When planted as a nurse crop with permanent seed mixes, use 1/3 of the seeding rate listed above for barley, oats, and wheat. For smaller-seeded grasses (annual ryegrass, pearl millet, foxtail millet), do not exceed more than 5% (by weight) of the overall permanent seeding mix. Cereal rye generally should not be used as a nurse crop, unless planting will occur very late fall beyond the seeding dates for other temporary seedings. Cereal rye has allelopathic properties that inhibit the germination and growth of other plants. If it must be used as a nurse crop, seed at 1/3 of the rate listed above.

Oats are the recommended nurse crop for warm-season grasses.

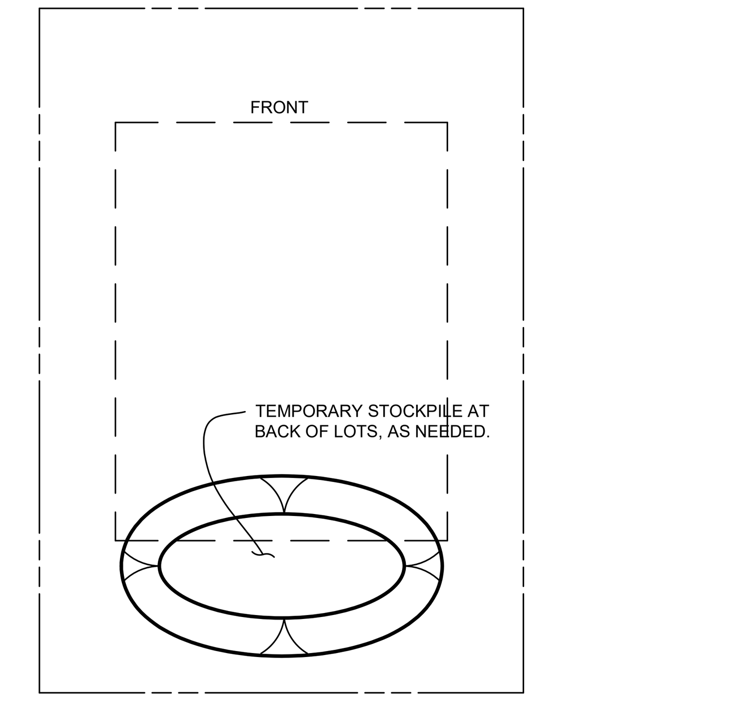
2/ For sandy soils, plant seeds at twice the depth listed above.

3/ The planting dates listed are averages for each Zone and may require adjustment to reflect local conditions, especially near the boundaries of the zone.

Permanent Seeding Summary

Hardiness Zone (from Figure B.3): 6b
Seed Misture (from Table B.3): Tall Fescue/Kentucky Bluegrass

No.	Species	Application Rate (lb/ac.)	Seeding Dates	Seeding Depths	Fertilizer Rate (10-20-20) N	P2O5	K2O	Lime Rate
9	Fescue, Tall	60	Mar 1 to May 15 Aug 1 to Oct 15	1/4 - 1/2 in	45 pounds per acre (1.0 lb/ 100 sf)	90 lb/ac (2 lb/ 1000 sf)	90 lb/ac (2 lb/ 1000 sf)	2 tons/ac (90 lb/ 1000 sf)
	Bluegrass, Kentucky	40	Mar 1 to May 15 Aug 1 to Oct 15	1/4 - 1/2 in				
				1/4 - 1/2 in				



B-4-8 STANDARDS AND SPECIFICATIONS
FOR
STOCKPILE AREA

Definition

A mound or pile of soil protected by appropriately designed erosion and sediment control measures.

Purpose

To provide a designated location for the temporary storage of soil that controls the potential for erosion, sedimentation, and changes to drainage patterns.

Conditions Where Practice Applies

Stockpile areas are utilized when it is necessary to salvage and store soil for later use.

Criteria

1. The stockpile location and all related sediment control practices must be clearly indicated on the erosion and sediment control plan.
2. The footprint of the stockpile must be sized to accommodate the anticipated volume of material and based on a side slope ratio no steeper than 2:1. Benching must be provided in accordance with Section B-3 Land Grading.
3. Runoff from the stockpile area must drain to a suitable sediment control practice.
4. Access the stockpile area from the upgrade side.
5. Clear water runoff into the stockpile area must be minimized by use of a diversion device such as an earth dike, temporary swale or diversion fence. Provisions must be made for discharging concentrated flow in a non-erosive manner.
6. Where runoff concentrates along the toe of the stockpile fill, an appropriate erosion/sediment control practice must be used to intercept the discharge.
7. Stockpiles must be stabilized in accordance with the 3/7 day stabilization requirement as well as Standard B-4-1 Incremental Stabilization and Standard B-4-4 Temporary Stabilization.
8. If the stockpile is located on an impervious surface, a liner should be provided below the stockpile to facilitate cleanup. Stockpiles containing contaminated material must be covered with impermeable sheeting.

Maintenance

The stockpile area must continuously meet the requirements for Adequate Vegetative Establishment in accordance with Section B-4 Vegetative Stabilization. Side slopes must be maintained at no steeper than a 2:1 ratio. The stockpile area must be kept free of erosion. If the vertical height of a stockpile exceeds 20 feet for 2:1 slopes, 30 feet for 3:1 slopes, or 40 feet for 4:1 slopes, benching must be provided in accordance with Section B-3 Land Grading.

HOWARD SOIL CONSERVATION DISTRICT (HSCD) STANDARD SEDIMENT CONTROL NOTES

1. A pre-construction meeting must occur with the Howard County Department of Public Works, Construction Inspection Division (CID), 410-3133-1855 after the future LOD and protected areas are marked clearly in the field. A minimum of 48 hours notice to CID must be given at the following stages:
   a. Prior to the start of earth disturbance,
   b. Upon completion of the installation of perimeter erosion and sediment controls, but before proceeding with any other earth disturbance or grading,
   c. Prior to the start of another phase of construction or opening of another grading unit,
   d. Prior to the removal or modification of sediment control practices.

2. All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL and revisions thereto.

3. Following initial soil disturbance or re-disturbance, permanent or temporary stabilization is required within three (3) calendar days as to the surface of all perimeter controls, dikes, swales, ditches, perimeter slopes, and all slopes steeper than 3 horizontal to 1 vertical (3:1); and seven (7) calendar days as to all other disturbed areas on the project site except for those areas under active grading.

4. All disturbed areas must be stabilized within the time period specified above in accordance with the 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for topsoil (Sec. B-4-2), permanent seeding (Sec. B-4-5), temporary seeding (Sec. B-4-4) and mulching (Sec. B-4-3). Temporary stabilization with mulch alone can only be applied between the fall and spring seeding dates if the ground is frozen. Incremental stabilization (Sec. B-4-1) specifications shall be enforced in areas with >15' of cut and/or fill. Stockpiles (Sec. B-4-8) in excess of 20 feet must be benched with stable outlet. All concentrated flow, steep slope, and highly erodible areas shall receive soil stabilization matting (Sec. B-4-6).

5. All sediment control structures are to remain in place, and are to be maintained in operative condition until permission for their removal has been obtained from the CID.

6. Site Analysis:

Total Area of Site:	2.90	Acres
Area Disturbed:	2.54	Acres
Area to be roofed or paved:	0.90	Acres
Area to be vegetatively stabilized:	1.64	Acres
Total cut:	3,313 *	Cu Yds
Total fill:	3,313 *	Cu Yds
Off-site waste/borrow area location:	SITE WITH AN ACTIVE GRADING PERMIT	

*CUT/FILL NUMBERS ARE ROUGH ESTIMATE FOR SEDIMENT CONTROL PURPOSES ONLY. CONTRACTOR TO VERIFY.

7. Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.

8. Additional sediment control must be provided, if deemed necessary by the CID. The site and all controls shall be inspected by the contractor weekly; and the next day after each rain event. A written report by the contractor, made available upon request, is part of every inspection and should include:

- Inspection date
- Inspection type (routine, pre-storm event, during rain event)
- Name and title of inspector
- Weather information (current conditions as well as time and an=mount of last recorded precipitation
- Brief description of project's status (e.g. percent complete) and/or current activities
- Evidence of sediment discharges
- Identification of plan deficiencies
- Identification of sediment controls that require maintenance
- Identification of missing or improperly installed sediment controls
- Compliance status regarding the sequence of construction and stabilization requirements
- Photographs
- Monitoring/sampling
- Maintenance and/or corrective action performed
- Other inspection items as required by the General Permit for Stormwater Associated with Construction Activities (NPDES, MDE).

9. Trenches for the construction of utilities is limited to three pipe lengths or that which can and shall be back filled and stabilized by the end of each work day, whichever is shorter.

10. Any major changes or revisions to the plan or sequence of construction must be reviewed and approved by the HSCD prior to proceeding with construction. Minor revisions may be allowed by the CID per the list of HSCD-approved field changes.

11. Disturbance shall not occur outside the L.O.D. A project is to be sequenced so that grading activities begin on one grading unit (maximum acreage of 20 ac. per grading unit) at a time. Work may proceed to a subsequent grading unit when at least 50 percent of the disturbed area in the preceding grading unit has been stabilized and approved by the CID. Unless otherwise specified and approved by the HSCD, no more than 20 acres cumulatively may be disturbed at a given time.

12. Wash water from any equipment, vehicles, wheels, pavement, and other sources must be treated in a sediment basin or other approved washout structure.

13. Topsoil shall be stockpiled and preserved on-site for redistribution onto final grade.

14. All silt fence and super silt fence shall be placed on-the-contour, and be imbricated at 25' minimum intervals, with lower ends curled uphill by 2' in elevation.

15. Stream channels must not be disturbed during the following restricted time periods (inclusive):

- Use I and IP March 1 - June 15
- Use III and IIIP October 1 - April 30
- Use IV March 1 - May 31

16. A copy of this plan, the 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL and associated permits shall be on-site and available when the site is active.

DESIGN CERTIFICATION

"I CERTIFY THAT THIS PLAN HAS BEEN DESIGNED IN ACCORDANCE WITH CURRENT MARYLAND EROSION AND SEDIMENT CONTROL LAWS, REGULATIONS, AND STANDARDS, THAT IT REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE, AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."

Christopher A. Malagari 04/22/2025

ENGINEER — CHRISTOPHER A. MALAGARI
DATE — MD REGISTRATION NO. 22390 (P.E.) R.L.S., OR R.L.A. (circle one)

DEVELOPERS CERTIFICATION

"I/WE CERTIFY THAT ANY CLEARING, GRADING, CONSTRUCTION, OR DEVELOPMENT WILL BE DONE PURSUANT TO THIS APPROVED EROSION AND SEDIMENT CONTROL PLAN, INCLUDING INSPECTING AND MAINTAINING CONTROLS, AND THAT THE RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF TRAINING AT A MARYLAND DEPARTMENT OF THE ENVIRONMENT (MDE) APPROVED TRAINING PROGRAM FOR THE CONTROL OF EROSION AND SEDIMENT PRIOR TO BEGINNING THE PROJECT. I CERTIFY RIGHT-OF-ENTRY FOR PERIODIC ON-SITE EVALUATION BY HOWARD COUNTY, THE HOWARD SOIL CONSERVATION DISTRICT AND/OR MDE."

Ed Levendusky 04/21/2025

SIGNATURE — ED LEVENDUSKY — DATE

THIS PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

Alexander Bratchie 5/22/2025
HOWARD SOIL CONSERVATION DISTRICT — DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Jim Witmer 5/22/2025
CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE

[signature] 5/22/2025
CHIEF, DIVISION OF LAND DEVELOPMENT — DATE

Lynda Eisenberg 5/23/2025
DIRECTOR — DATE

NO.	DATE	REVISION

BENCHMARK ENGINEERING, INC.
ENGINEERS ▲ LAND SURVEYORS ▲ PLANNERS
3300 N. RIDGE ROAD ▲ SUITE 140 ▲ ELLICOTT CITY, MARYLAND 21043
(P) 410-465-6105 (F) 410-465-6644
WWW.BEI-CIVILENGINEERING.COM

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. 22390, Expiration Date: 6-30-2025.

04/22/2025

OWNER:
LACEY FAMILY REVOCABLE TRUST
1235 WILD ROSE COURT
MARRIOTTSVILLE, MD. 21104
410-707-2639

DEVELOPER:
MILL CREEK, LLC
P.O. BOX 417
ELLICOTT CITY, MD 21041
410-465-4244

BUILDER:
CARUSO HOMES
2120 BALDWIN AVENUE, SUITE 200
CROFTON, MD 21114
667-307-4222

LACEY PROPERTY

LOTS 2,18 thru 29

TAX MAP: 25 GRID: 01 PARCEL: 13
ZONED: R-ED
ELECTION DISTRICT NO. 2 HOWARD COUNTY, MARYLAND

SEDIMENT AND EROSION CONTROL PLAN

DATE:	APRIL 21, 2025	BEI PROJECT NO.	3191
DESIGN: DBT	DRAFT: CAM	SCALE: AS SHOWN	SHEET 8 OF 8

SDP-25-011

Docusign Envelope ID: F06EE4F1-4BA1-4C42-9D79-70E949B377D2

HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
3430 Court House Drive ■ Ellicott City, Maryland 21043 ■ 410-313-2350
Lynda D. Eisenberg, AICP, Director FAX 410-313-3467

May 23, 2025

Lacey Family Revocable Trust
1235 Wild Rose Court
Marriottsville MD 21104

RE: SDP-25-011 Lacey Property Lots 2, 18-29

Dear Lacey Family:

This is to advise you that your electronic original Site Development Plan was approved on May 23, 2025, and will be kept on file with this Department (DPZ).

Within 1 year of signature approval of the site development plan electronic original (**on or before May 23, 2026**), the developer shall apply to the Department of Inspections, Licenses and Permits for **building permits** to initiate construction on the site.

For Single Family Detached site development plans showing multiple lots, the developer shall apply for building permits for all construction authorized on this plan within 5 years of its signature approval.

You have executed a Developer's Agreement which included $8,760.00 of surety to ensure the completion of your landscaping obligation for this project. This Department will conduct an inspection to verify installation of the required plant materials. This inspection will occur **on or about January 15, 2026**. Should your landscaping be installed prior to that date, you may contact this office in writing to request an earlier inspection date and to forward the required 1 year plant warranty.

You have executed a Forest Conservation Agreement for on-site forest retention to ensure the completion of your Forest Conservation obligation for this project. This Department will perform an inspection to verify compliance with the approved Forest Conservation Plan. This inspection will occur **on or about September 15, 2025**. If this office determines that all appropriate measures have been undertaken to ensure protection of planted areas and retained forests, this office will establish the start of the 2-year post-construction survival period. If your initial Forest Conservation obligations, as summarized in your Forest Conservation Agreement, are completed prior to that date, you may contact this office in writing to request an earlier inspection date.

Please be advised that the Department of Inspections, Licenses and Permits (DILP) cannot formally accept your permit application until you have provided an electronic copy of the signed and approved Site Development Plan. When applying for a permit, please provide the signed and approved Site Development Plan to the Citizen's Access Accela portal. Once, the ProjectDox invitation for the permit has been sent out for the submission of plan sets, please provide the Site Development Plan in ProjectDox as well. Please refer to the DILP "Upload Instructions" on the Howard County website, if you have any further questions (https://www.howardcountymd.gov/inspections-licenses-permits/forms-fees).

Docusign Envelope ID: F06EE4F1-4BA1-4C42-9D79-70E949B377D2

If you have any questions or would like an electronic copy of the plan, please contact Derrick Jones at (410) 313-4330 or email at djones@howardcountymd.gov.

Sincerely,

DocuSigned by:
Jill Manson
1D2E2CF6431548F...

for

Anthony Cataldo, AICP, Chief
Division of Land Development

AC/dj

cc: Research
DILP - Permits
Benchmark Engineering – Dave Thompson
Mil Creek LLC – Will Pippen
Caruso Homes
Community Members