

DOWNS PARK SHORELINE IMPROVEMENTS ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS

GENERAL CONSTRUCTION NOTES

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH ANNE ARUNDEL COUNTY STANDARD STEP 1 SPECIFICATIONS AND/OR DETAILS FOR CONSTRUCTION AND THE STATE HIGHWAY ADMINISTRATION'S HIGHWAY DRAINAGE MANUAL STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION UNLESS OTHERWISE NOTED.
- THE EXISTING UTILITIES AND OBSTRUCTIONS SHOWN ARE FROM THE BEST AVAILABLE RECORDS AND SHALL BE VERIFIED BY THE CONTRACTOR TO HIS SATISFACTION PRIOR TO CONSTRUCTION. NECESSARY PRECAUTIONS SHALL BE TAKEN BY THE CONTRACTOR TO PROTECT EXISTING SERVICES AND MAINS AND ANY DAMAGE TO THEM SHALL BE REPAIRED IMMEDIATELY AT HIS OWN EXPENSE.
- THE CONTRACTOR SHALL CONTACT "MISS UTILITY" AT 1-800-257-7777 A MINIMUM OF 48 HOURS IN ADVANCE OF ANY EXCAVATION, BORING, PILE DRIVING AND/OR DIGGING FOR THE LOCATION OF GAS, ELECTRIC, TELEPHONE, WATER AND SEWER LINES. NECESSARY PRECAUTIONS SHALL BE TAKEN BY THE CONTRACTOR TO PROTECT EXISTING SERVICES AND MAINS AND ANY DAMAGE TO THEM SHALL BE REPAIRED IMMEDIATELY AT HIS OWN EXPENSE.
- IT SHALL BE DISTINCTLY UNDERSTOOD THAT FAILURE TO MENTION SPECIFICALLY ANY WORK STEP 3 WHICH WOULD NATURALLY BE REQUIRED TO COMPLETE THE PROJECT SHALL NOT RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITY TO COMPLETE SUCH WORK.
- WORK IS TO BE CONFINED TO WITHIN THE LIMITS SHOWN ON THE SITE PLAN. DEBRIS ALONG THE SHORELINE AND IN THE NEAR SHORE AREA WILL BE REMOVED AND DISPOSED STEP 4 OF OFF-SITE. AFTER SHORELINE CLEANUP, MATERIALS ARE TO BE BROUGHT TO THE SITE BY WATER ACCESS OR LAND ACCESS ROUTES AS SHOWN ON THE PLANS. THE STONE STRUCTURES SHALL BE BUILT IN THE LOCATION SHOWN ON THE SITE PLAN. CONSTRUCTION WILL BE COMPLETED BY CLEANING UP THE WORK AREA, RAKING, FERTILIZING, AND SEEDING AND MULCHING DISTURBED AREAS, AND PLANTING OF THE
- ALL EXCESS MATERIALS SHALL BE REMOVED FROM THE SITE AND DISPOSED OF AT AN
- DISTURBANCES THAT DO NOT DRAIN TO A SEDIMENT CONTROL DEVICE SHALL BE STABILIZED STEP 5 BY THE END OF THE WORKDAY. NO MORE AREA SHALL BE DISTURBED THAN CAN BE STABILIZED BY THE END OF THE WORKDAY. NO DISTURBED AREA SHALL BE LEFT UNSTABILIZED OVERNIGHT UNLESS THE RUNOFF IS DIRECTED TO AN APPROVED SEDIMENT CONTROL DEVICE. SLOPES SHALL BE STABILIZED IMMEDIATELY WITH TOPSOIL, SEED AND EROSION CONTROL MATTING (IF REQUIRED). SEE NOTE 12.
- ALL STONE USED FOR THE BREAKWATERS SHALL BE DURABLE QUARRIED STONE. THE STEP 6 STONE SHALL BE HARD AND ANGULAR, FREE FROM EITHER LAMINATIONS, WEAK CLEAVAGES, OR UNDESIRABLE WEATHERING, AND OF SUCH CHARACTER THAT IT WILL NOT DISINTEGRATE FROM THE ACTION OF AIR, SALT, WATER OR HANDLING. SEDIMENTARY STONE WILL GENERALLY BE UNACCEPTABLE. INDIVIDUAL STONES WILL BE FREE FROM THIN, SLABBY PIECES HAVING A MAXIMUM DIMENSION OF MORE THAN THREE AND ONE-HALF (3.5) TIMES THE LEAST DIMENSION.
- THE WORK INSTALLED AS A PART OF THE PROJECT WILL CONTAIN NO FAULTY MATERIALS, OR ANY CARELESS OR UNSKILLED WORKMANSHIP.
- D. THE CONTRACTOR SHALL CORRECT, REPAIR OR REMOVE AND REPLACE WITH PROPER WORK STEP 8 AT NO COST TO THE COUNTY ANY WORK FOUND NOT TO BE AS PER THE GUARANTEE. THE CONTRACTOR SHALL ALSO MAKE GOOD ALL DAMAGES CAUSED TO OTHER WORK OR MATERIALS IN THE PROCESS OF FULFILLING THE GUARANTEE.
- CONTRACTOR MUST STAY WITHIN THE LIMITS OF DISTURBANCE (LOD) WHEN STOCKPILING MATERIAL OR STORING EQUIPMENT.
- 2. ALL DISTURBED AREAS SHALL HAVE PERMANENT OR TEMPORARY STABILIZATION COMPLETED WITHIN:
- 12.1. END OF THE WORK DAY FOR AREAS WITHIN WATERWAYS. 12.2. THREE CALENDAR DAYS ON SLOPES GREATER THAN 3:1 AND TO THE SURFACE OF ALL PERIMETER SEDIMENT CONTROLS.
- 12.3. SEVEN CALENDAR DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS 13. ALL DISTURBED AREAS WITH SLOPES GREATER THAN 3:1 SHALL BE STABILIZED WITH STEP
- TEMPORARY SOIL STABILIZATION MATTING THAT HAS A SUFFICIENT DESIGN SHEAR STRESS FOR THE APPLICATION OR AS SHOWN ON THE APPROVED SEDIMENT AND EROSION CONTROL STEP 12
- 4. ALL TREES WITH A DIAMETER GREATER THAN 12 INCHES WITHIN THE LIMIT OF DISTURBANCE SHALL NOT BE REMOVED UNLESS PRIOR APPROVAL IS OBTAINED OR EXPLICITLY SHOWN ON THE PLANS TO BE REMOVED. ALL TREES WITHIN THE LIMIT OF DISTURBANCE THAT ARE NOT TO BE REMOVED SHALL BE PROTECTED WITH TREE PROTECTION FENCING OR TREE
- 5. ALL ROADS SHALL BE CLEANED AND CLEARED BY THE END OF EACH WORK DAY. ANY MUD OR ROCKS TRACKED ON THE ROADWAYS SHALL BE SWEPT OFF BEFORE THE END OF EACH
- 16. ALL STAKING, RESTAKING, AND CUT SHEETS SHALL BE PERFORMED BY A REGISTERED LAND SURVEYOR OR PROFESSIONAL ENGINEER AT THE CONTRACTOR'S EXPENSE.
- '. ALL CONSTRUCTION TO BE PERFORMED IN ACCORDANCE WITH STATE OF MARYLAND
- 18. CONTRACTOR MUST ENSURE THAT COPIES OF FEDERAL, STATE, AND COUNTY PERMITS ARE POSTED ON SITE PRIOR TO THE START OF ANY WORK. 19. CONTRACTOR SHALL RESTORE ALL AREAS IMPACTED BY CONSTRUCTION ACTIVITY. THIS SHALL

INCLUDE BUT IS NOT LIMITED TO GRASS AREAS, ROADS AND PAVED AREAS, ETC.

- 20. CONTRACTOR SHALL ACCESS THE SITE BY LAND OR WATER. 21. ALL TREE WITHIN THE LOD TO BE PROTECTED WITH TREE PROTECTION FENCING UNLESS
- OTHERWISE NOTED IN THE PLANS.

GENERAL SITE NOTES

MEAN TIDE RANGE IS APPROXIMATELY 1.0 FEET BASED ON NOAA TIDE STATION 8575512

HORIZONTAL AND VERTICAL CONTROL ESTABLISHED FROM REAL TIME KINEMATIC (RTK) GLOBAL POSITIONING SYSTEM (GPS) CONTROL POINTS. COORDINATES AND BEARINGS SHOWN HEREON REFER TO THE MARYLAND COORDINATE SYSTEM (NAD83/91). ELEVATIONS SHOWN HEREON REFER TO MEAN LOW WATER (MLW). CONTROL POINTS SET BY BAYLAND

CONSULIA	CONSULTANTS & DESIGNENS, INC. ON 11/29/2022.						
POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION			
TPS# 1	527,233.14	1,472,707.82	11.36'	YELLOW PLASTIC CAP (YPC)			
TPS# 3	526,272.77	1,473,132.24	11.85'	YELLOW PLASTIC CAP (YPC)			
TPS# 4	526,481.85	1,473,054.15	10.31'	YELLOW PLASTIC CAP (YPC)			
TPS# 500	527,331.95	1,472,848.11	15.49'	YELLOW PLASTIC CAP (YPC)			
TPS# 501	527,249.96	1,473,035.49	11.34'	YELLOW PLASTIC CAP (YPC)			
TPS# 502	527,039.51	1,473,008.62	4.10'	YELLOW PLASTIC CAP (YPC)			
TPS# 503	527,523.60	1,473,144.47	23.38'	YELLOW PLASTIC CAP (YPC)			
TPS# 504	526,801.51	1,473,040.27	3.58'	YELLOW PLASTIC CAP (YPC)			
TPS# 505	526,690.21	1,473,029.42	7.08'	YELLOW PLASTIC CAP (YPC)			

- TOPOGRAPHIC AND HYDROGRAPHIC SURVEYS WERE PERFORMED BY BAYLAND NOVEMBER 23
- CONTOURS SHOWN OUTSIDE OF LIMIT OF WORK ARE BASED ON ANNE ARUNDEL COUNTY 2020 LIDAR.
- PROPERTY LINES SHOWN ARE BASED ON ANNE ARUNDEL COUNTY CADASTRAL DATA.
- THE PROJECT SITE IS WITHIN FEMA FLOODPLAIN LIMITS (ZONE VE 7 FT NAVD88) SHOWN ON FEMA FIRM 24003C0185F.
- THE PROJECT SITE IS WITHIN RESOURCE CONSERVATION AREA (RCA) OF CHESAPEAKE BAY

3. THE PROJECT SITE IS WITHIN THE 100' CRITICAL AREA BUFFER. MARYLAND WETLAND LICENSE NO. 23-WL-0757. U.S. ARMY CORPS OF ENGINEERS PERMIT

 ESTABLISH ALL PERMITS HAVE BEEN OBTAINED. PERMITS SHALL BE DISPLAYED ON SITE AT ALL TIMES THROUGHOUT THE DURATION OF THE PROJECT. STEP 2 - THE CONTRACTOR SHALL CALL "MISS UTILITY" (1-800-257-7777) A MINIMUM OF TWO WEEKS IN ADVANCE OF ANY EXCAVATION, BORING, PILE DRIVING AND/OR DIGGING FOR THE LOCATION OF GAS, ELECTRIC, TELEPHONE, WATER AND SEWER LINES. NOTIFY THE ANNE ARUNDEL COUNTY DEPARTMENT OF INSPECTIONS AND PERMITS (410-222-7780) AT LEAST 48 HOURS BEFORE COMMENCING WORK, AND M.D.É. INSPECTIONS AND COMPLIANCE (410-537-3510) AT LEAST TEN (10) DAYS PRIOR TO COMMENCING TIDAL WORK. WORK MAY NOT COMMENCE UNTIL THE PERMITTEE OR THE RESPONSIBLE PERSONNEL HAVE MET ON SITE WITH THE SEDIMENT AND EROSION CONTROL INSPECTOR TO REVIEW THE APPROVED PLANS.

HOLD A PRE-CONSTRUCTION MEETING BETWEEN PROJECT REPRESENTATIVES INCLUDING BUT NOT LIMITED TO AACO DPW. DRP REPRESENTATIVES, ENGINEER, CONTRACTORS, UTILITY REPRESENTATIVES, INSPECTOR, ETC.

WORK SHOULD BE COMPLETED FROM THE SOUTH TO NORTH. STEPS 4 - 11 SHOULD FIRST BE COMPLETED FOR THE CONSTRUCTION OF REACH 1. ONCE COMPLETED, REPEAT FOR REACH 2, THEN REACH 3. CLEAR MINIMUM AREA NECESSARY TO INSTALL ANY REQUIRED ACCESS AND EROSION AND SEDIMENT CONTROL MEASURES FOR THE ACTIVE REACH. THIS SHALL INCLUDE BUT NOT BE LIMITED TO STABILIZED CONSTRUCTION ENTRANCE. TURBIDITY CURTAIN, AND ANY OTHER SEDIMENT EROSION CONTROLS AS DIRECTED BY THE SEDIMENT CONTROL INSPECTOR. ONCE THE SEDIMENT CONTROLS HAVE BEEN INSTALLED,

CONTACT THE INSPECTOR FOR APPROVAL OF SEDIMENT CONTROL INSTALLATION PRIOR TO COMMENCING WORK. INSPECTIONS AND PERMITS MAY REQUIRE THAT AN INSPECTION AND CERTIFICATION OF THE INSTALLATION OF SEDIMENT CONTROL ALSO BE PERFORMED BY A DESIGN PROFESSIONAL PRIOR TO CONSTRUCTION COMMENCING. PERFORM NECESSARY BEACH CLEARING. DEMO EXISTING CONCRETE BOAT RAMP AND STAIRS DURING REACH 1

CONSTRUCTION. DEMO GABION BASKETS DURING CONSTRUCTION OF REACH 2. CLEAR PROJECT AREA OF ANY TRASH AND DEBRIS. DISPOSE OFF-SITE TO AN APPROVED UPLAND DISPOSAL SITE.

STEP 7 - INSTALL STONE STRUCTURES AS INDICATED ON THE PLANS.

REACHES 2 & 3 ONLY: PLACE SAND FILL AND GRADE AS SHOWN ON THE PLANS. NO MORE AREA SHALL BE DISTURBED BY GRADING/EXCAVATION THAN CAN BE

PROTECTED BY THE STONE STRUCTURES AND/OR STABILIZED BY THE END OF EACH WORKING DAY. THE INTENTION OF THIS RESTRICTION IS TO ENSURE GRADING OPERATIONS DO NOT OUT-PACE STABILIZATION EFFORTS. STOCKPILE ALL MATERIAL SUITABLE FOR REUSE AND/OR AS DIRECTED BY THE

STEP 9 - REACHES 2 & 3 ONLY: INSTALL MARSH PLANTINGS AND DEER PROTECTION FENCING. HABITAT BALL AREA: INSTALL HABITAT BALLS IN NATURALIZED CONFIGURATION AS SHOWN ON THE PLANS, WORK TO BE

DONE CONCURRENTLY WITH WORK IN REACHES 1 OR 2. REACH 2 ONLY: INSTALL PERMEABLE PAVER ACCESS PATH. REACH 3 ONLY: RESURFACE EXISTING PAVEMENT ONCE THE AREA HAS BEEN 95% STABILIZED AND WITH

SEDIMENT CONTROL DEVICES.

PROJECT INFORMATION

2. OWNER/DEVELOPER INFORMATION:

4. ENGINEER INFORMATION:

PARCEL:

7. DEED REF

9. DISTRICT:

10. ZONING:

12. SUBWATERSHED:

14. GRADING PERMIT:

15. WETLAND LICENSE:

1.00

13. WATERSHED:

11. USE:

STABILIZE ANY DISTURBED AREAS THAT RESULT FROM THE

25 DAYS (REACH 2) 10 DAYS (REACH 3) 1 DAY/REACH PERMISSION OF THE SEDIMENT CONTROL INSPECTOR, REMOVE ALL REMAINING SEDIMENT CONTROL DEVICES. IMMEDIATELY

TOTAL: 264 DAYS

DATUM COMPARISON BASED ON

(LAT) 39°06'47".

NATIONAL OCEANIC AND ATMOSPHERIC

SITE LOCATION (LONG) -76°26'04",

ADMINISTRATION (NOAA) VDATUM FROM

ANNE ARUNDEL COUNTY DPW

2662 RIVA ROAD - 3RD FLOOR

7455 NEW RIDGE ROAD, SUITE T

HANOVER, MARYLAND 21076

BAYLAND CONSULTANTS AND DESIGNERS, INC.

CONTACT: MELISSA HARLINSKI,

ANNAPOLIS, MD 21401

410-694-9401

02979/00812

COUNTY PARK

BODKIN CREEK

G02020008

00 YR FLOOD ELEV. (ZONE AE)

100 YR FLOOD ELEV. (ZONE VE)

PATAPSCO RIVER

1 DAY/REACH

5 DAYS/REACH

45 DAYS (REACH 1)

45 DAYS (REACH 2)

25 DAYS (REACH 3)

25 DAYS (REACH 2)

15 DAYS (REACH 3)

15 DAYS (REACH 2)

PR. CONSTRUCTION BASELINE

Way Land

7455 New Ridge Road, Suite T

Consultants & Designers, Inc.

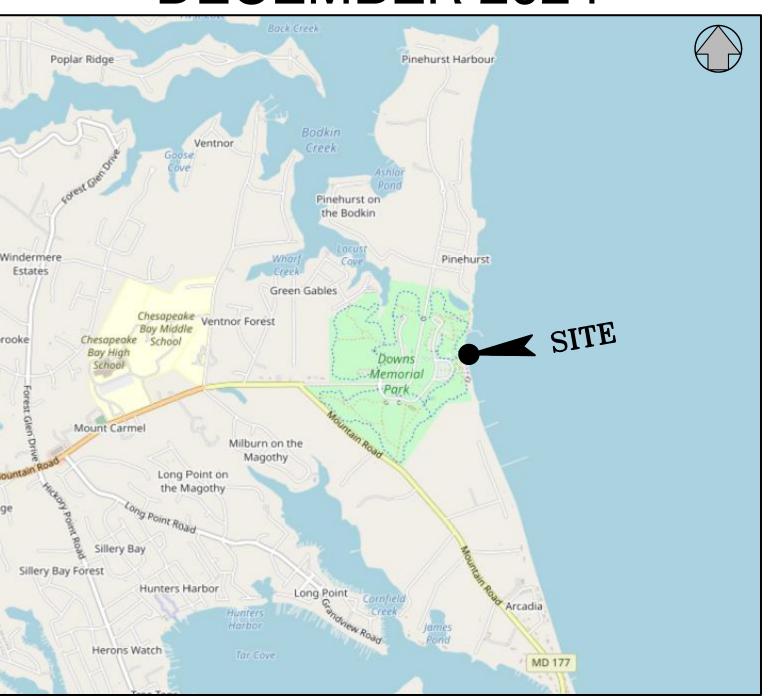
"Integrating Engineering and Environment"

www.baylandinc.com

BAYLAND JOB NO. 5 13802

ANNE ARUNDEL COUNTY, MD

PROJECT NO. P468700 PROPOSAL NO. P468716 DECEMBER 2024



LEGENI

APPROXIMATE PROPERTY LINE PR. STABILIZED CONSTRUCTION ENTRANCE EX. PATH EX. CHAINLINK FENCE PR. CONSTRUCTION ACCESS ROAD EX. WOOD FENCE PR. MOUNTABLE BERM EX. MAJOR CONTOUR PR. MAJOR CONTOUR EX. MINOR CONTOUR PR. MINOR CONTOUR PR. SAND FILL ******** EX. TOP OF BANK PR. HIGH MARSH PLANTINGS ----- TOB -----EX. BOTTOM OF BANK —— вов —— ******* PR. LOW MARSH PLANTINGS CRITICAL AREA BUFFER STREAM BUFFER PR. SHRUB PLANTINGS EX. FEMA FLOODPLAIN (ZONE AE) —— ZONE AE —— PR. ADA ACCESSIBLE PERMEABLE PAVER EX. FEMA FLOODPLAIN (ZONE VE) — ZONE VE — **XXXXXXXXX** EX. 500-YEAR FEMA FLOODPLAIN 500-YR ---PR. RESURFACED PATH د عللد علاد علاد علاد ع PR. RETROFIT REVETMENT PR. COBBLE PILOT CHANNEL EX. STONE REVETMENT PR. LIMIT OF DISTURBANCE ____ LOD ____ EX. TREE PR. REINFORCED SILT FENCE & LIMIT OF DISTURBANCE EX. TREE (TO BE REMOVED) PR. HIGH VISIBILITY FENCE & LIMIT OF DISTURBANCE PR. TURBIDITY CURTAIN PR. TREE PROTECTION FENCING

Phone: (410) 694-9401

Fax: (410) 694-9405

CONSULTANT'S CERTIFICATION

THE DEVELOPER'S PLAN TO CONTROL SILT AND EROSION IS ADEQUATE TO CONTAIN THE SILT AND EROSION ON THE PROPERTY COVERED BY THE PLAN. I CERTIFY THAT THIS PLAN OF EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THIS SITE, AND WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE AASCD PLAN SUBMITTAL GUIDELINES AND THE CURRENT MARYLAND STANDARDS AND SPECIFICATION FOR SOIL EROSION AND SEDIMENT CONTROL. HAVE REVIEWED THIS EROSION AND SEDIMENT CONTROL PLAN WITH THE OWNER ,

MD P.E. LICENSE # 21194 NAME SEPEHR BAHARLOU FIRM NAME BAYLAND CONSULTANTS & DESIGNERS, INC.

ADDRESS 7455 NEW RIDGE ROAD, SUITE T

CITY <u>HANOVER</u> STATE <u>MD</u> ZIP CODE <u>21076</u>

PLANS AND SPECIFICATIONS AS REQUIRED BY COMAR 26.17.01.07B(3)(H).

SUBSTANTIAL CONFORMANCE WITH THE APPROVED PLANS AND SPECIFICATIONS

THESE AS-BUILTS PRINTS.

PROFESSIONAL ENGINEER

1 TOTAL AREA OF PARCEL

TOTAL DISTURBED AREA

2.3 UPLAND AREA

ESTIMATED CUT

ESTIMATED FILL

PPROVED

David C. Braun

SISTANT CHIEF ENGINEER

ENCOUNTERED DURING CONSTRUCTION.

TOTAL AREA TO BE STABILIZED

2.1 BEACH NOURISHMENT AREA

2.4 LANDSIDE IMPROVEMENTS (PERMEABLE PATH)

3.1 SHORELINE RESTORATION & UPLAND AREA

3.1.2 EX. IMPERVIOUS TO BE REMOVED

LANDSIDE IMPROVEMENTS (PERMEABLE PATH)

3.1.6 TOTAL AREA TO BE VEGETATIVELY STABILIZED

3.2.4 TOTAL AREA TO BE VEGETATIVELY STABILIZED

THE EARTHWORK QUANTITIES SHOWN HEREON ARE FOR INFORMATION PURPOSES ONLY.

CONTRACTOR SHALL TAKE FULL RESPONSIBILITY OF ACTUAL EARTHWORK QUANTITIES

BAYLAND MAKES NO GUARANTEES OF ACCURACY OF QUANTITIES OR BALANCE OF SITE. THE

3.1.3 EX. IMPERVIOUS TO REMAIN

3.1.4 PROPOSED IMPERVIOUS

3.1.5 FINAL IMPERVIOUS AREA

3.2.2 PROPOSED IMPERVIOUS

3.2.3 FINAL IMPERVIOUS AREA

3.2.1 EX. IMPERVIOUS

3.1.1 EX. IMPERVIOUS

SEPEHR BAHARLO

PRINTED NAME

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AS-BUILT STORMWATER CERTIFICATION

"ALL GRADING, DRAINAGE, STRUCTURES, AND EROSION AND SEDIMENT CONTROL PRACTICES INCLUDING

FACILITIES AND VEGETATIVE MEASURES HAVE BEEN COMPLETED IN CONFORMANCE WITH THE APPROVED

DEVIATIONS AND DIFFERENCES IN CONSTRUCTED FIELD CONDITIONS ARE SHOWN (REDLINED) ON

STORMWATER MANAGEMENT SYSTEMS INDICATED ON THESE DRAWINGS HAVE BEEN INSTALLED IN

SITE ANALYSIS

MD P.E. REGISTRATION NO.

87.21 ACRES

ACRES

ACRES

ACRES

ACRES

ACRES

ACRES

0.016 ACRES

0.75 ACRES

0.79 ACRES

1.09

1.37

0.77

0.04

I (WE) CERTIFY THAT:

a. ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE IN ACCORDANCE WITH THIS SEDIMENT AND EROSION CONTROL PLAN, AND FURTHER, AUTHORIZE THE RIGHT OF ENTRY FOR PERIODIC ON-SITE EVALUATION BY THE ANNE ARUNDEL SOIL CONSERVATION DISTRICT (AASCD) BOARD OF SUPERVISORS OR THEIR AUTHORIZED AGENTS.

STANDARD RESPONSIBILITY NOTES

SHEET LIST TABLE

SHEET TITLE COVER SHEET SITE ACCESS PLAN KEY SHEET

EXISTING CONDITIONS & DEMOLITION PLAN EXISTING CONDITIONS & DEMOLITION PLAN EXISTING CONDITIONS & DEMOLITION PLAN EXISTING CONDITIONS &

DEMOLITION PLAN EROSION SEDIMENT CONTROL & SITE PLAN

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& SITE PLAN

CROSS SECTIONS

DETAILS

SITE DETAILS

EROSION SEDIMENT CONTROL

NOTES & DETAILS

PLANTING PLAN

PLANTING PLAN

PLANTING PLAN

ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE FROM THE MARYLAND DEPARTMENT OF THE ENVIRONMENT'S APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT.

c. IF APPLICABLE, THE APPROPRIATE ENCLOSURE WILL BE CONSTRUCTED AND MAINTAINED ON SEDIMENT BASIN(S) INCLUDED IN THIS PLAN. SUCH STRUCTURE(S) WILL BE IN COMPLIANCE WITH THE ANNE ARUNDEL COUNTY CODE.

RESPONSIBLE PERSONNEL ON SITE: _

2. THE DEVELOPER IS RESPONSIBLE FOR THE ACQUISITION OF ALL EASEMENTS, RIGHT, AND/OR RIGHTS-OF-WAY THAT MAY BE REQUIRED FOR THE SEDIMENT AND EROSION CONTROL PRACTICES, STORM WATER MANAGEMENT PRACTICES AND THE DISCHARGE OF STORM WATER ONTO OR ACROSS ADJACENT OR DOWNSTREAM PROPERTIES INCLUDED IN THE PLAN.

3. FOR INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT AND/OR TEMPORARY

STABILIZATION PER THE AASCD VEGETATIVE ESTABLISHMENT SHALL BE COMPLETED WITHIN IHREE CALENDAR DAYS FOR THE SURFACE OF ALL CONTROLS, DIKES, SWALES, DITCHES, PERIMETER SLOPES AND ALL SLOPES GREATER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1) AND SEVEN DAYS FOR ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE. 4. THE GRADING AND SEDIMENT CONTROL APPROVAL ON THIS PLAN EXTENDS ONLY TO THOSE

AREAS WITHIN THE LIMITS OF DISTURBANCE.

5. THE APPROVAL OF THIS PLAN FOR SEDIMENT AND EROSION CONTROL DOES NOT RELIEVE THE DEVELOPER/CONSULTANT FROM COMPLYING WITH FEDERAL, STATE OR COUNTY REQUIREMENTS PÉRTAINING TO ENVIRONMENTAL ISSUES. 6. THE DEVELOPER MUST REQUEST THAT THE SEDIMENT AND EROSION CONTROL INSPECTOR

APPROVE WORK COMPLETED IN ACCORDANCE WITH THE APPROVED EROSION AND SEDIMENT CONTROL PLAN, THE GRADING OR BUILDING PERMIT, AND THE ORDINANCE.

7. ALL MATERIAL SHALL BE TAKEN TO A SITE WITH AN APPROVED SEDIMENT AND EROSION

8. FIRST PHASE INSPECTION AND APPROVAL OF THE SEDIMENT AND EROSION CONTRO NSPECTOR SHALL BE REQUIRED UPON COMPLETION OF THE INSTALLATION OF EROSION AND SEDIMENT CONTROLS PRIOR TO PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING. OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THE INITIAL APPROVAL BY THE SEDIMENT AND EROSION CONTROL INSPECTOR IS INSPECTION AND PERMITS MAY ALSO REQUIRE THAT AN INSPECTION AND CERTIFICATION OF THE INSTALLATION OF SEDIMENT CONTROL ALSO BE PERFORMED BY A DESIGN PROFESSIONAL PRIOR TO CONSTRUCTION COMMENCING.

9. APPROVAL FROM THE INSPECTOR MUST BE REQUESTED ON FINAL STABILIZATION OF ALL SITES PRIOR TO REMOVAL OF SEDIMENT AND EROSION CONTROLS.

10. EXISTING TOPOGRAPHY MUST BE FIELD VERIFIED BY RESPONSIBLE PERSONNEL TO THE SATISFACTION OF THE SEDIMENT CONTROL INSPECTOR PRIOR TO COMMENCING WORK.

	Melissa Harlinski	/7/2025 08:3
SIGNATU	RE OF DEVELOPER/OWNER	DATE
PRINT:	NAME: MELISSA HARLINSKI	
	TITLE: PROJECT MANAGER	
	AFFILIATION: ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WOF	RKS
	ADDRESS: 2662 RIVA ROAD, ANNAPOLIS, MARYLAND 21401	
	TELEPHONE NUMBER: 410-222-4126	
	EMAIL ADDRESS: PWHARL45@AACOUNTY.ORG	

order to meet the adopted 2010 ADA minimum requirements and in accordance with the public rights-of-way Accessibility Guidelines (PROWAG) published by the U.S. Access Board in 2011, all public and private lpedestrian access routes, sidewalks, curb and autter, curb ramps, and traffic control devices shall be designed in accordance with the Anne Arundel County Pedestrian facility standards PFI -PF29

ADA COMPLIANCE NOTE

PROFESSIONAL CERTIFICATION

AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 21194, EXPIRATION DATE: 04/20/2026.

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME,

CHIFF RIGHT OF WAY

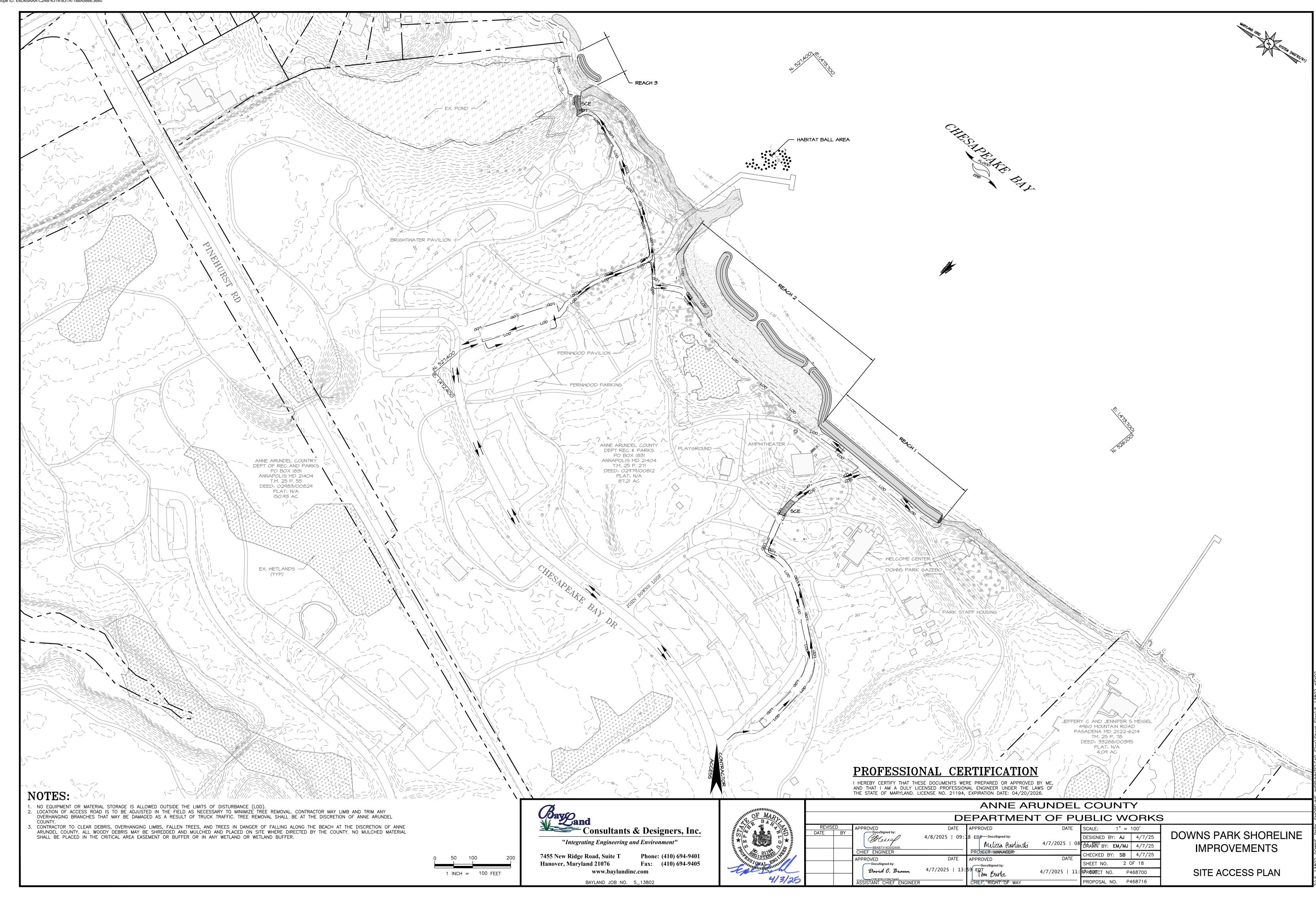
ANNE ARUNDEL COUNTY

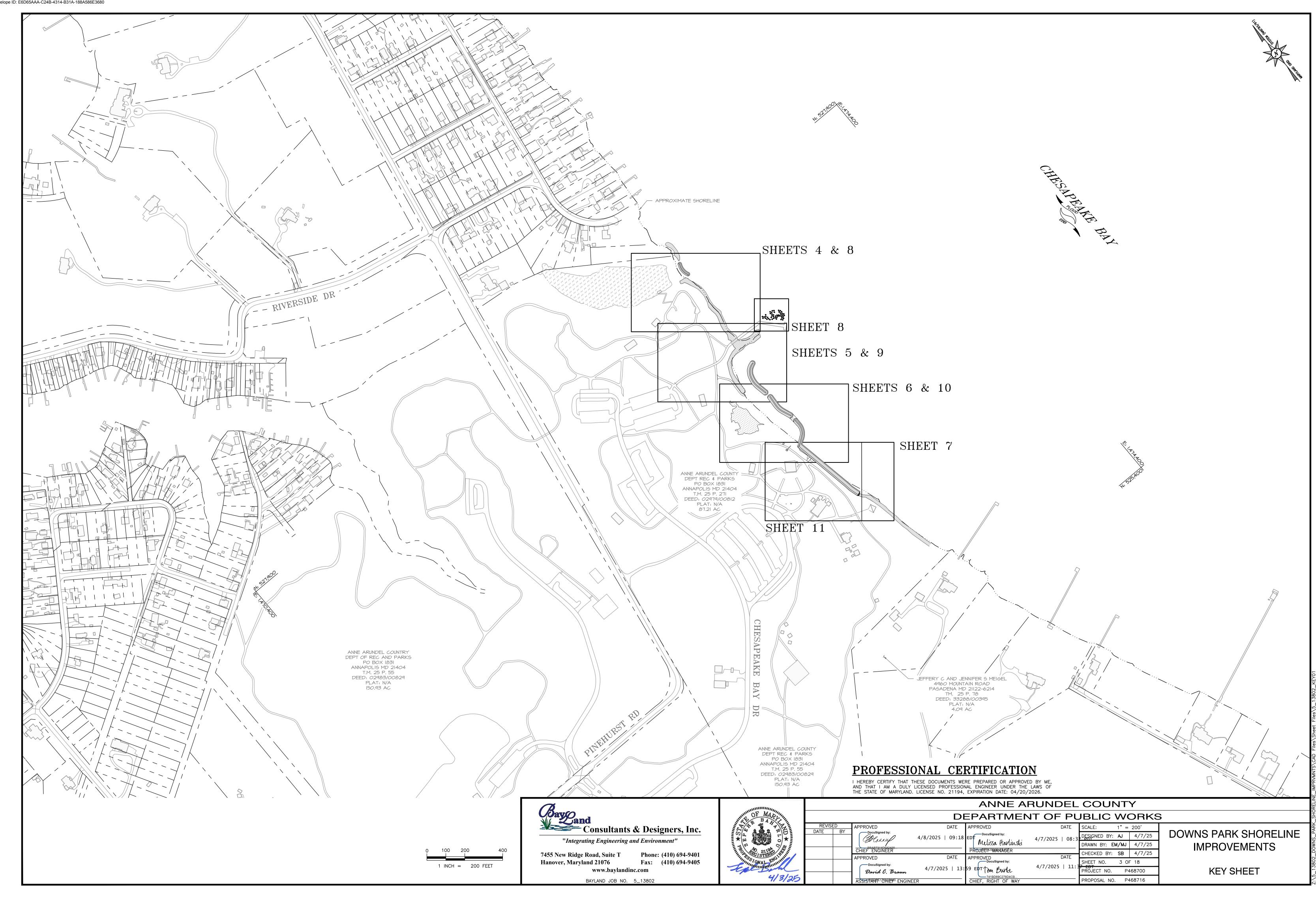
DEPARTMENT OF PUBLIC WORKS

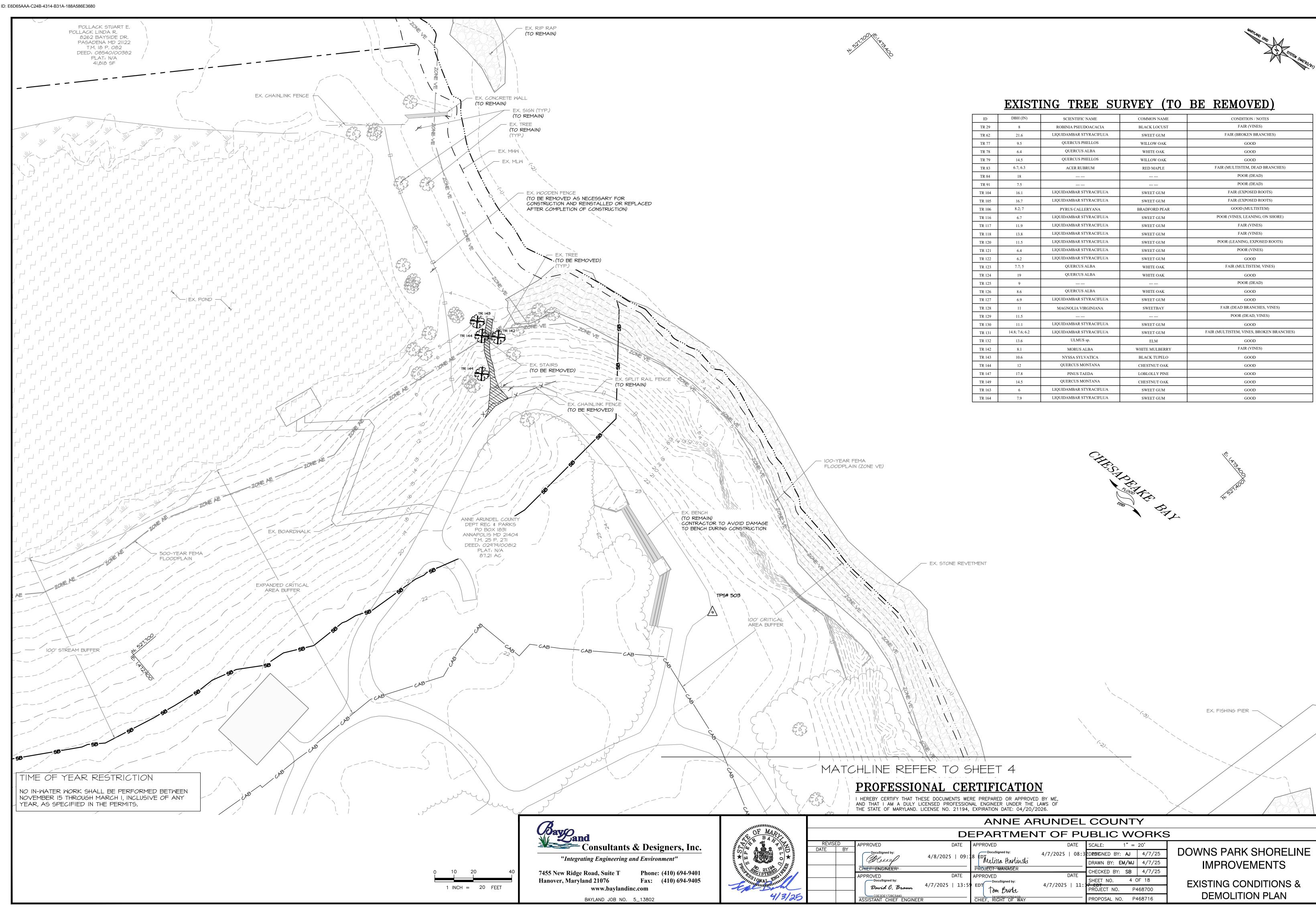
DEGIGNED BY: AJ 4/7/25 4/8/2025 | Melissa Harlinski DRAWN BY: **EM/MJ** | 4/7/25 CHECKED BY: SB | 4/7/25|**APPROVED** SHEET NO. 1 OF 18 4/7/2025 | 11 EPTon Burke FROJECT NO.

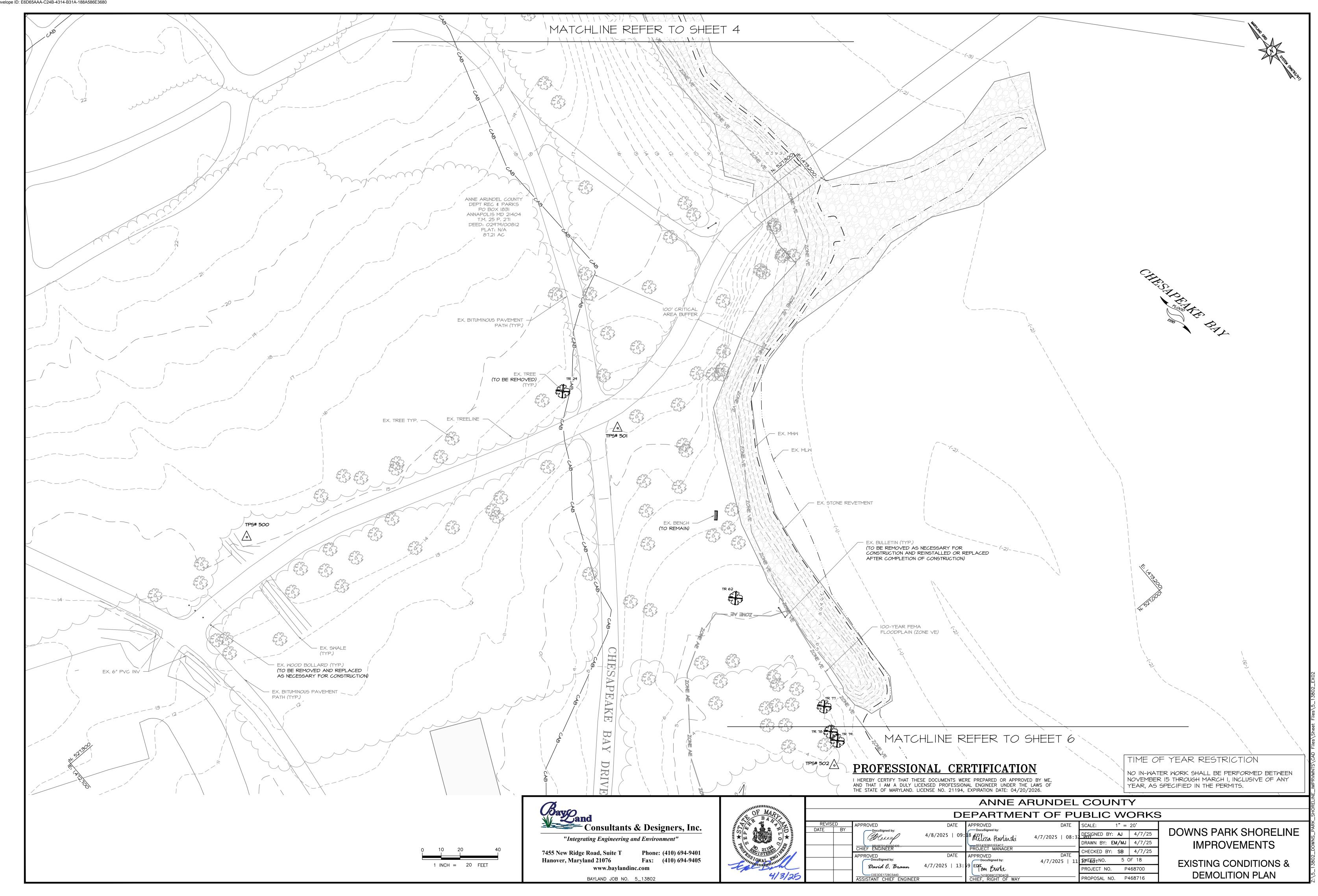
DOWNS PARK SHORELINE IMPROVEMENTS

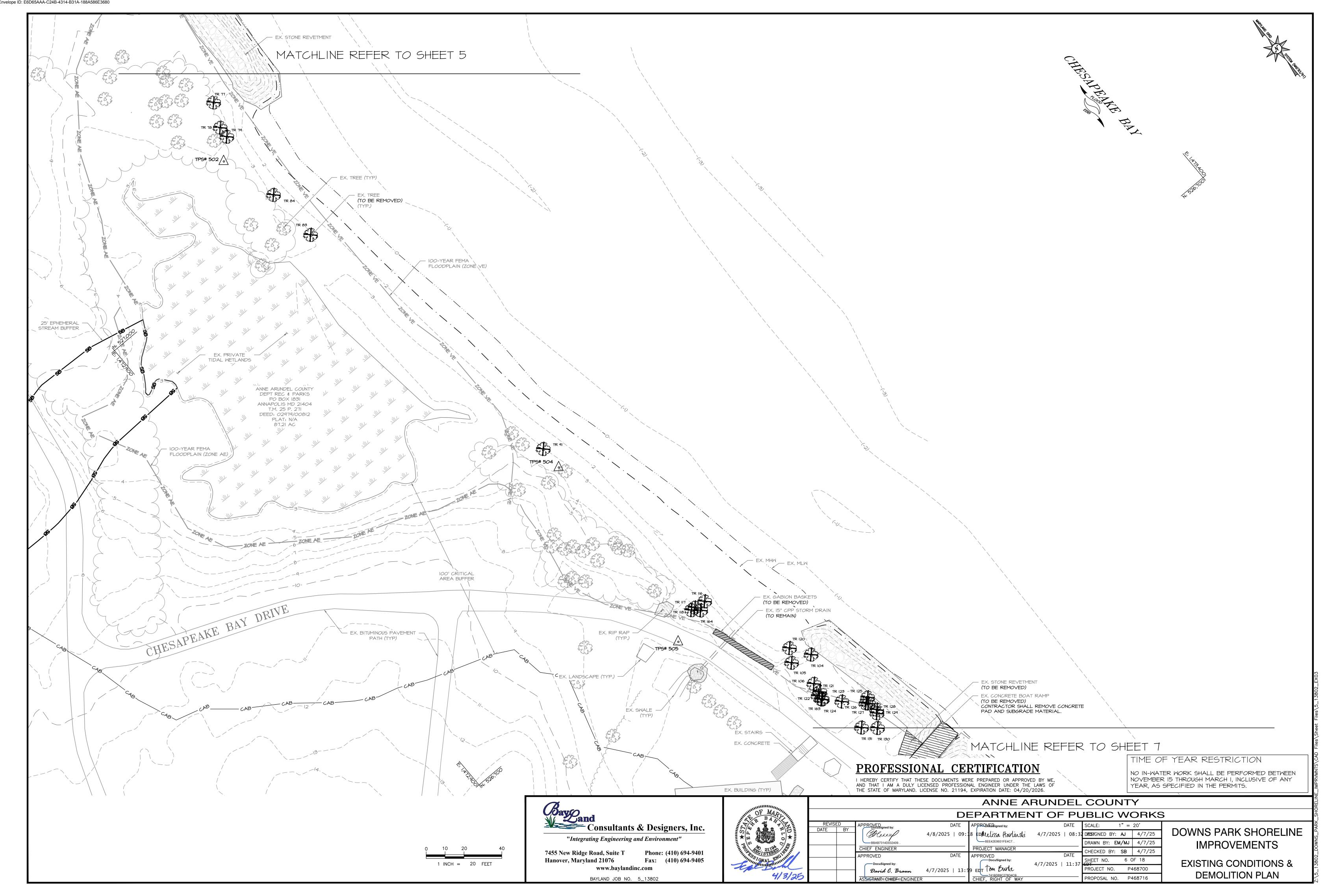
COVER SHEET

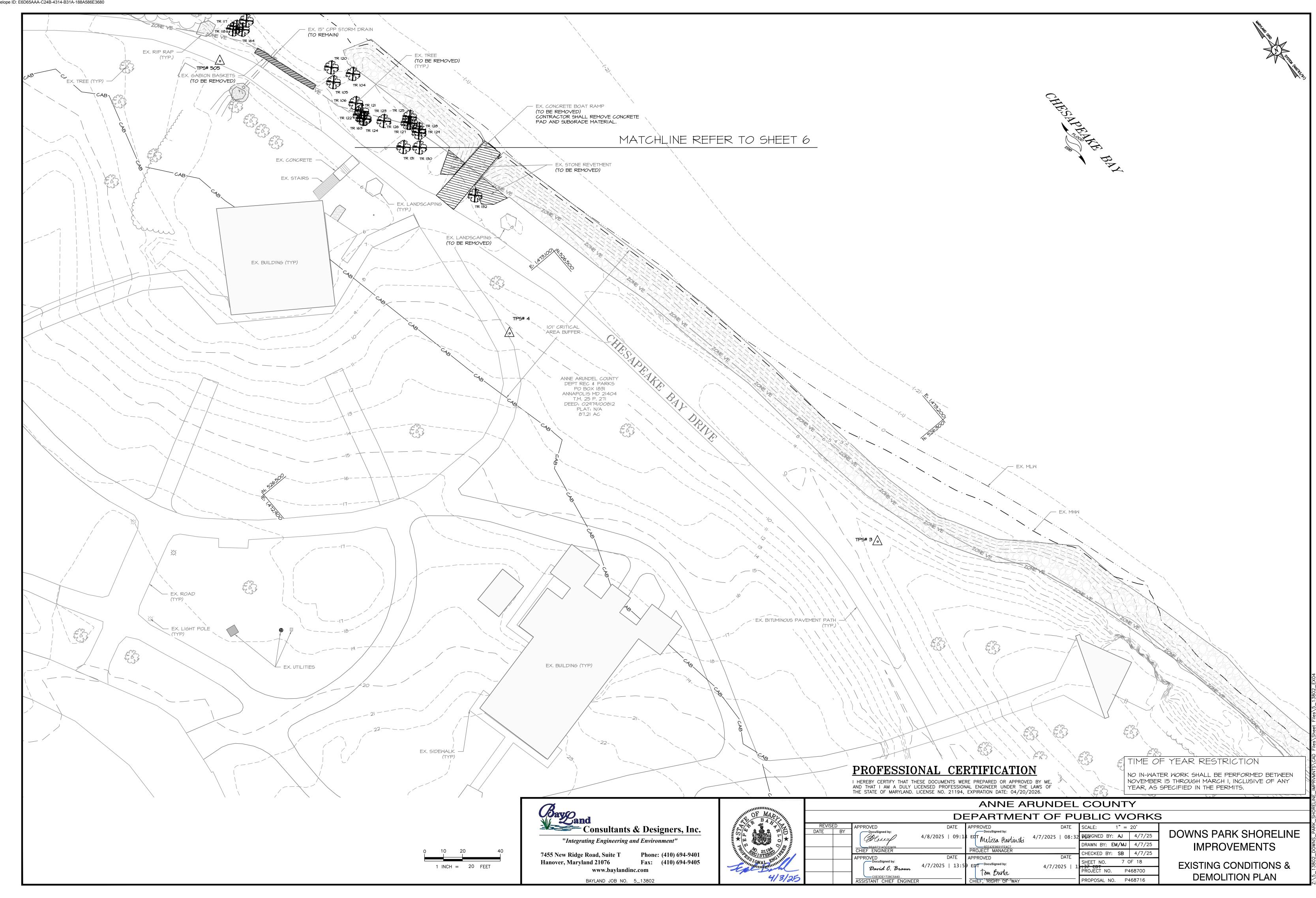


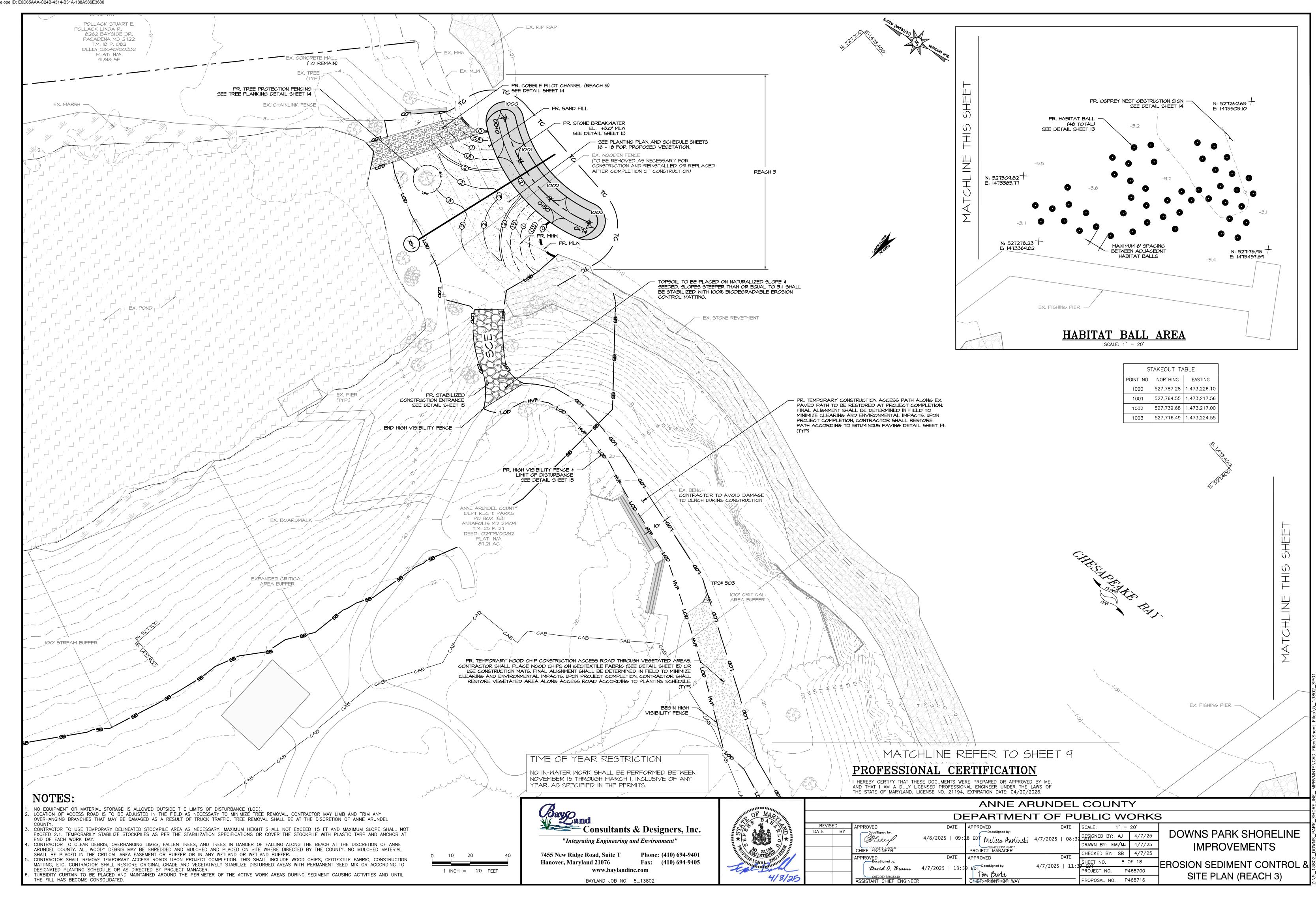


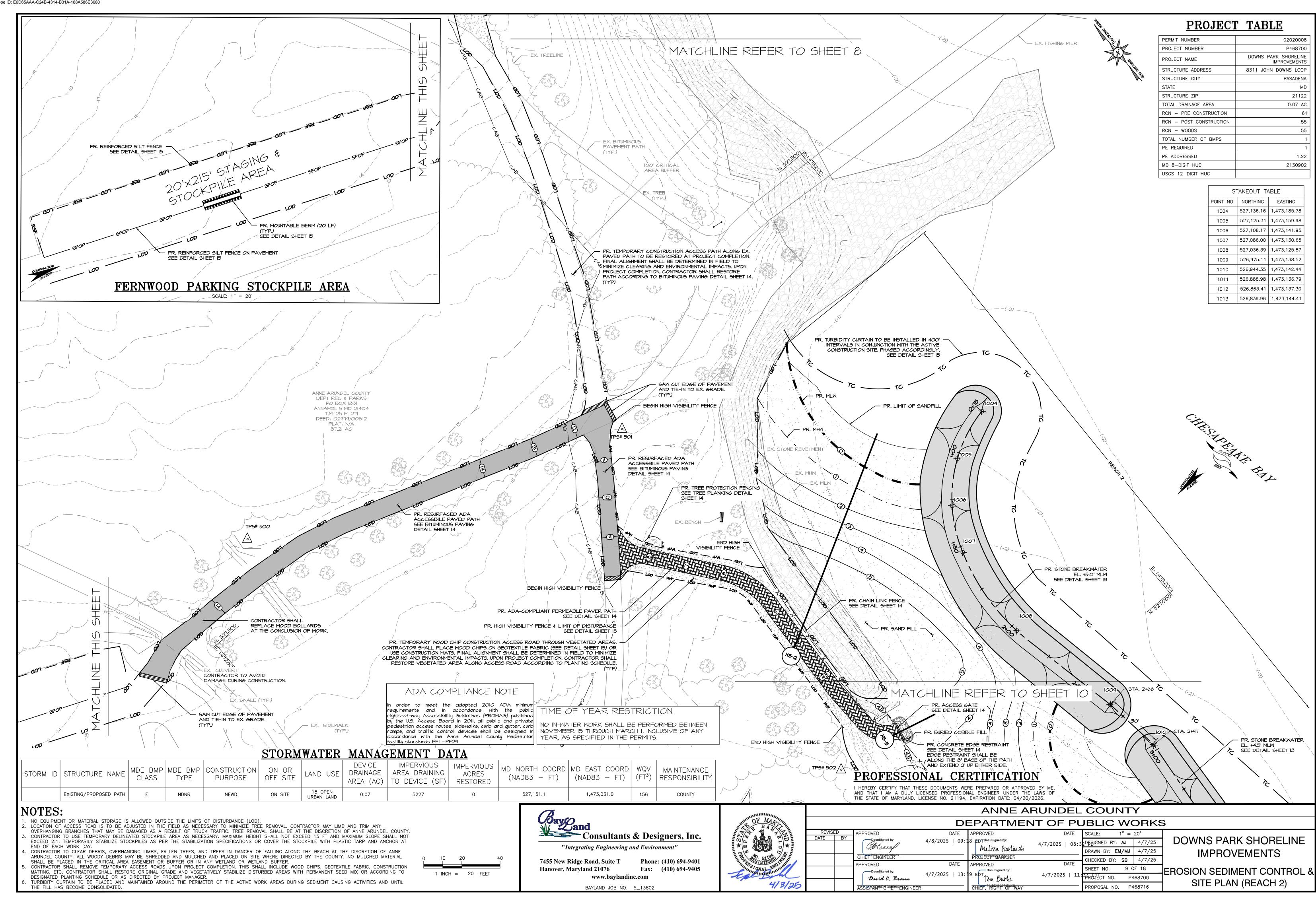


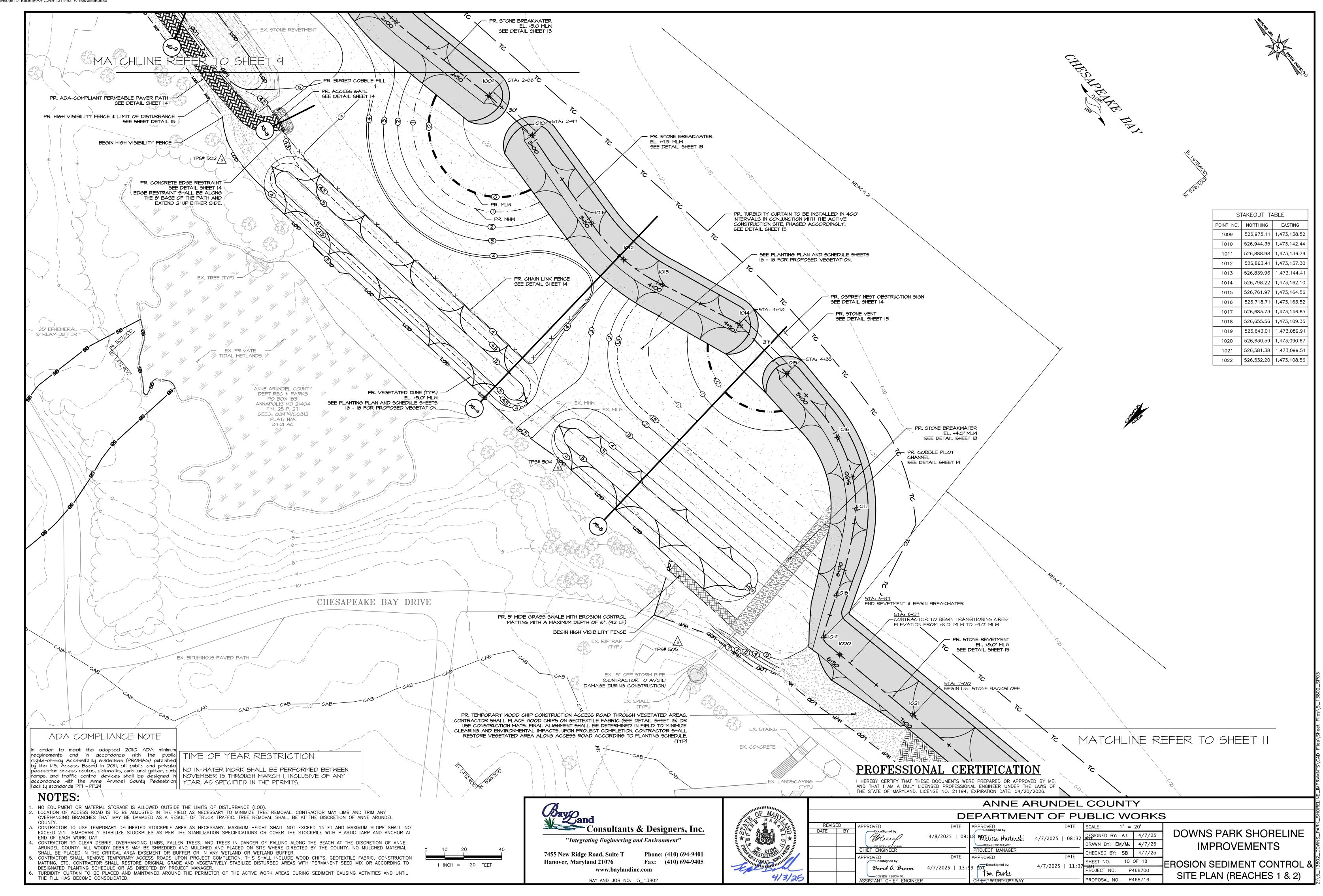


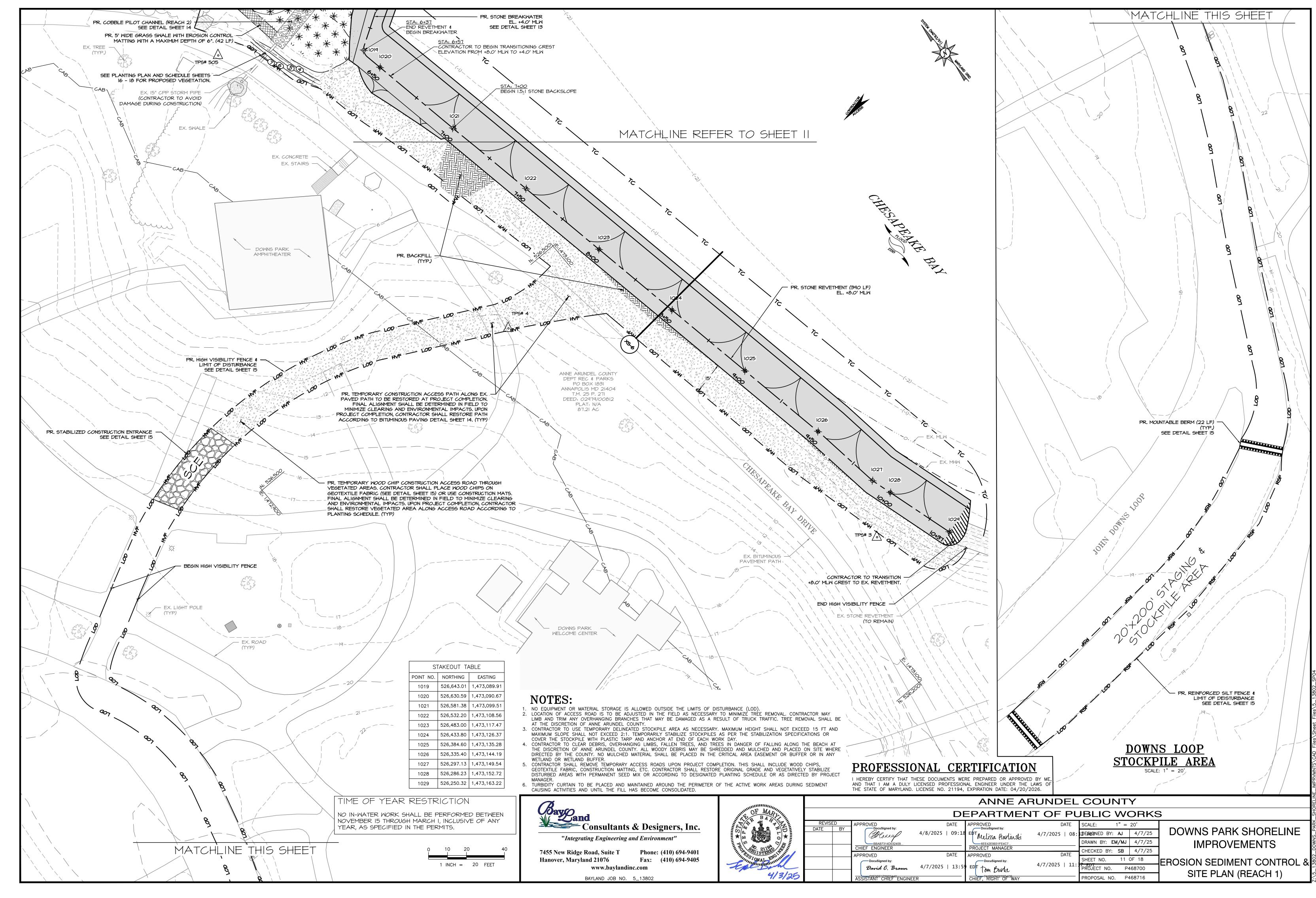


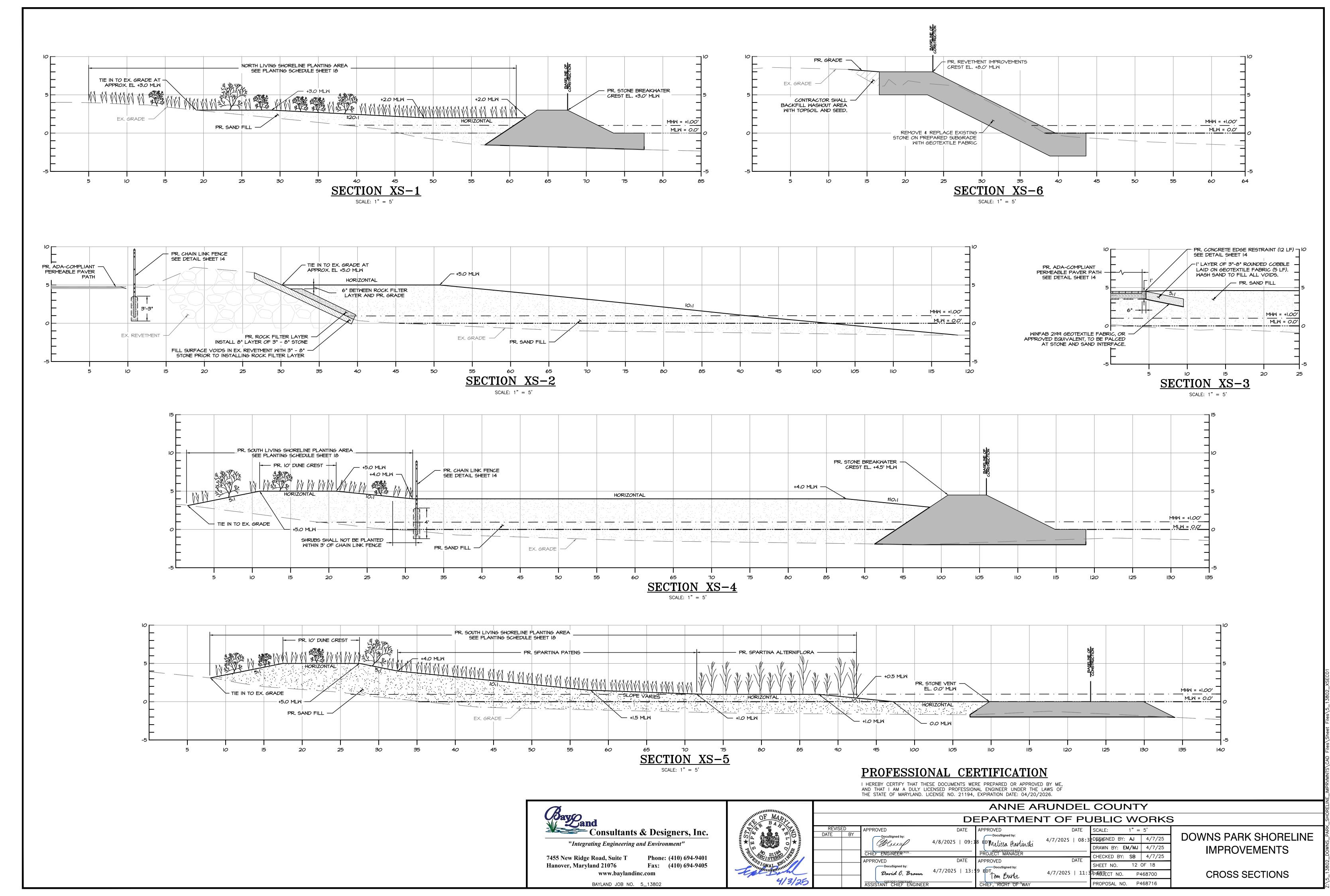


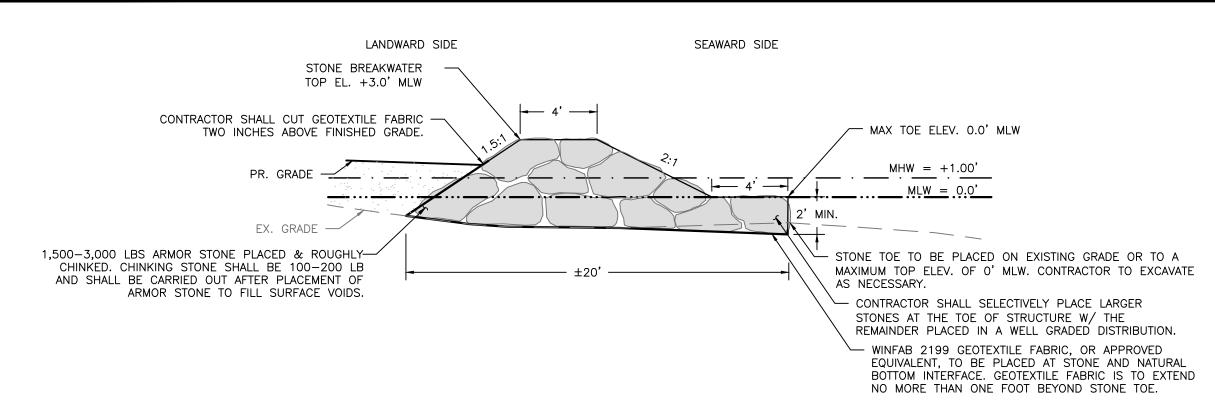






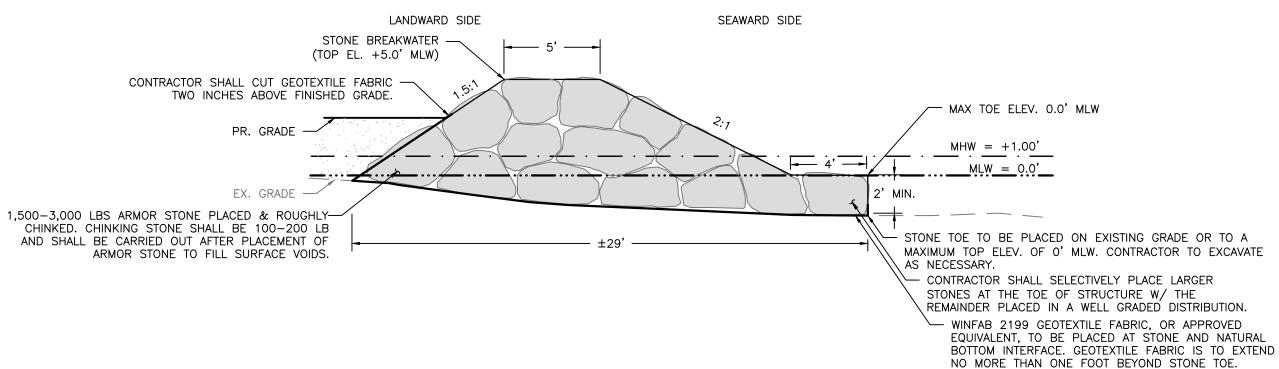






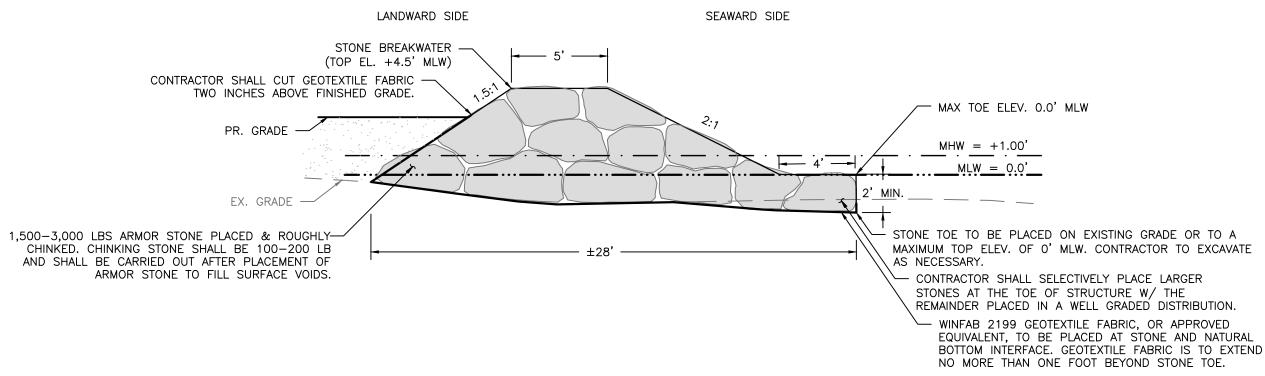
TYPICAL +3.0' MLW STONE BREAKWATER STATION 0+00 TO 0+74

SCALE: 1" = 5

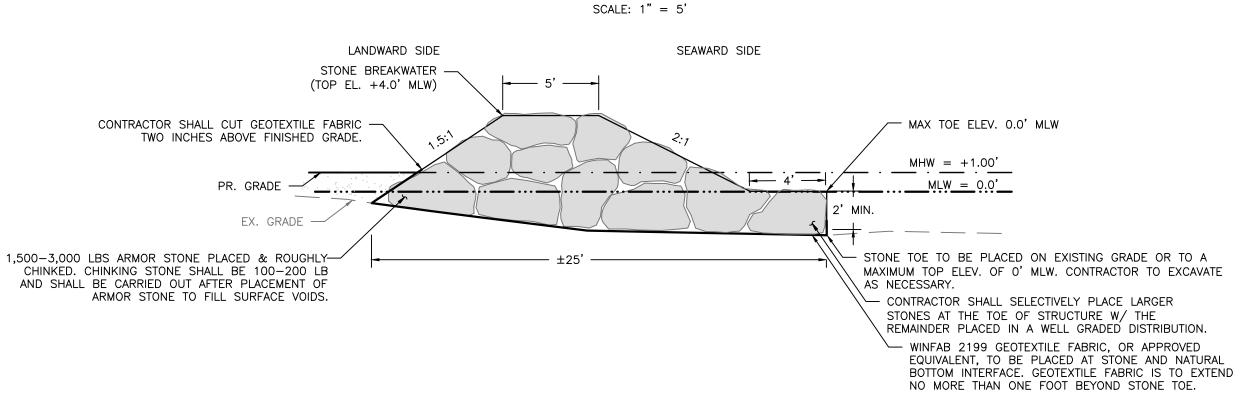


TYPICAL +5.0' MLW STONE BREAKWATER STATION 0+75 TO 2+66

SCALE: 1" = 5'

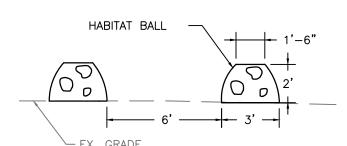


TYPICAL +4.5' MLW STONE BREAKWATER STATION 2+97 TO 4+48



TYPICAL +4.0' MLW STONE BREAKWATER STATION 4+84 TO 6+37

SCALE: 1" = 5



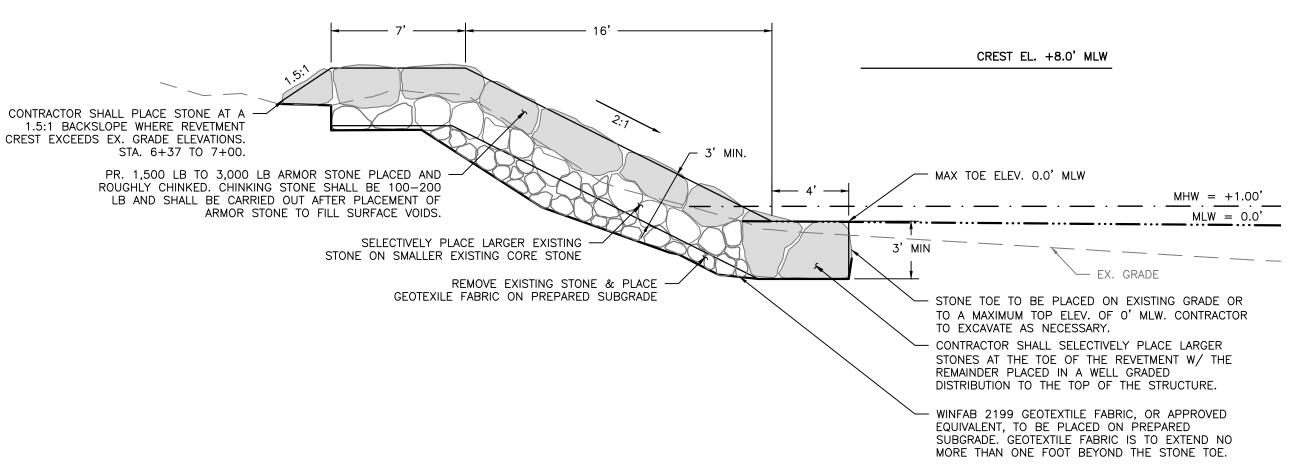
TYPICAL HABITAT BALL CLUSTER

1. HABITAT BALL TO BE BAY REEF BALL OR APPROVED EQUIVALENT. https://reefinnovations.com/products-specs/reef-balls/198-2/ 2. HABITAT BALLS TO BE PLACED IN NATURALIZED CONFIGURATION AS SHOWN ON THE PLANS. EACH HABITAT BALL MUST BE WITHIN 6' OF AT LEAST ONE OTHER HABITAT BALL.

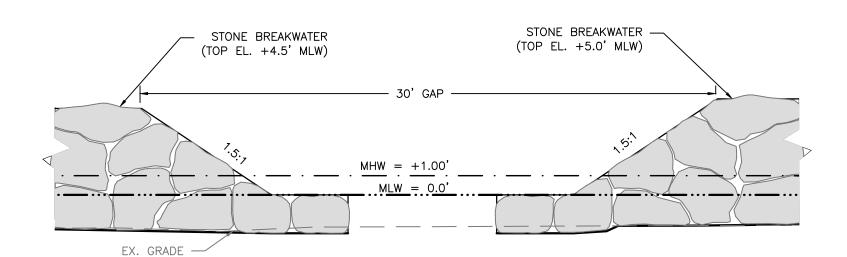


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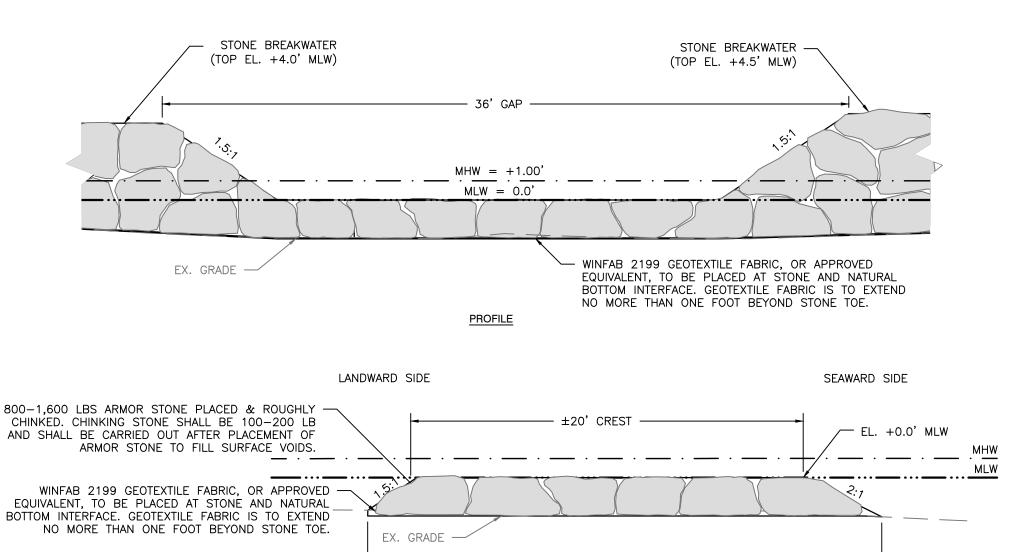
BAYLAND JOB NO. 5 13802



TYPICAL REVETMENT SECTION STATION 6+37 TO 10+37



TYPICAL VENT PROFILE STATION 2+66 TO 2+97



TYPICAL STONE VENT STATION 4+48 TO 4+84 SCALE: 1" = 5'

SECTION

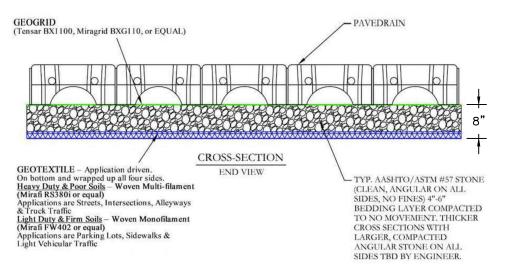
PROFESSIONAL CERTIFICATION

THE STATE OF MARYLAND. LICENSE NO. 21194, EXPIRATION DATE: 04/20/2026.

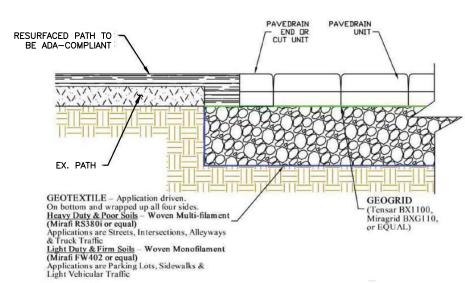
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF

ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS DATE DESIGNED BY: AJ 4/7/25 4/8/2025 | 09: Melissa Harlinski DRAWN BY: $EM/MJ \mid 4/7/25$ PROJECT WANAGER CHIEFABEMADIO 1221 CHECKED BY: SB 4/7/25 PPROVED PPROVED 13 OF 18 SHEET NO. 9 EDT om Burke 741BD69C278D4CB... PROJECT NO. P468700 David C. Braun A SHSTEARNIDE 1/728/05/440. FNGINEER CHIEF, RIGHT OF WAY PROPOSAL NO. P468716

DOWNS PARK SHORELINE IMPROVEMENTS DETAILS



PERMEABLE PATH DETAIL



BITUMINOUS PAVEMENT AND PERMEABLE PAVER GAP DETAIL

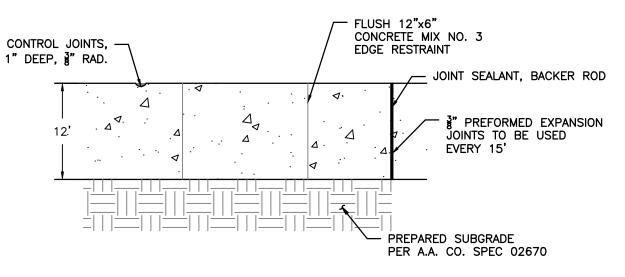
PAVERDRAIN SYSTEM DETAILS SCALE: NOT TO SCALE

MAINTENANCE AND INSPECTION NOTES FOR PERMEABLE PAVEMENT

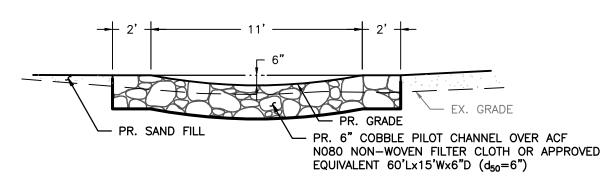
- 1. PAVEMENTS SHOULD BE USED ONLY WHERE REGULAR MAINTENANCE CAN BE PERFORMED. MAINTENANCE AGREEMENTS SHOULD CLEARLY SPECIFY HOW TO CONDUCT ROUTINE TASKS TO ENSURE LONG-TERM PERFORMANCE.
- 2. PAVEMENT SURFACES SHOULD BE SWEPT AND VACUUMED TO REDUCE SEDIMENT ACCUMULATION AND ENSURE CONTINUED SURFACE POROSITY. SWEEPING SHOULD BE PERFORMED AT LEAST TWICE ANNUALLY WITH A COMMERCIAL CLEANING UNIT. WASHING SYSTEMS AND COMPRESSED AIR UNITS SHOULD NOT BE USED TO PERFORM SURFACE CLEANING.
- 3. DRAINAGE PIPES, INLETS, STONE EDGE DRAINS, AND OTHER STRUCTURES WITHIN OR DRAINING TO THE SUBBASE SHOULD BE CLEANED OUT AT REGULAR INTERVALS.
- 4. TRUCKS AND OTHER HEAVY VEHICLES CAN GRIND DIRT AND GRIT INTO THE POROUS SURFACES, LEADING TO CLOGGING AND PREMATURE FAILURE. THESE VEHICLES SHOULD BE PREVENTED FROM TRACKING AND SPILLING MATERIAL ONTO THE PAVEMENT.
- 5. DEICERS SHOULD BE USED IN MODERATION. WHEN USED, DEICERS SHOULD BE NON-TOXIC AND ORGANIC AND CAN BE APPLIED EITHER AS CALCIUM MAGNESIUM ACETATE OR AS PRETREATED SALT. SNOW PLOWING SHOULD BE DONE CAREFULLY WITH BLADES SET ONE-INCH HIGHER THAN NORMAL. PLOWED SNOW PILES AND SNOWMELT SHOULD NOT BE DIRECTED TO PERMEABLE PAVEMENT.

STORMWATER MAINTENANCE SCHEDULE PERMEABLE PAVERS

	ON-GOING	3			
Item	Preventive Maintenance				
Trucks	revent trucks and other heavy vehicles from tracking, spilling, or grinding material onto pavers.				
Deicers	Use only non-toxic and organic deicers in moderated salt.	Jse only non-toxic and organic deicers in moderation and apply as either calcium magnesium acetate or retreated salt.			
Plowing	Plow snow carefully with blades set one-inch higher than normal. Do not direct plowed snow piles or snowmelt to pavers.				
Good Housekeeping	Never place soil piles on pavers.				
Cleaning		nd power wash annually even if there is no visible sh after vacuuming. Do not use compressed air units for			
	MONTHLY INSPE	CTIONS			
Inspection Item	Inspection Requirements	Remedial Action			
Debris and Trash	Check for trash and debris on surface, in conveyance system, and in surrounding area.	Remove all trash and debris and dispose in an acceptable manner. Unclog all openings.			
	SEASONAL INSPECTION AND AI	TTER A MAJOR STORM			
Inspection Item	Inspection Requirements	Remedial Action			
Sediment Accumulation	Check for clogged openings. Check for accumulated sediment on pavers.	Remove sediment from any clogged openings and dispose of in an acceptable location. Sweep and vacuum to reduce sediment accumulation and ensure surface porosity. Do not use compressed air units for surface cleaning.			
Dewatering	Check surface for ponding. Facility must dewater within 48 hours of rainfall. Water on the pavers more than 6 hours after a rainfall is an indication of inadequate dewatering of the facility.	Vacuum and power wash entire surface area. Power wash after vacuuming. Do not use compressed air unit for surface cleaning. Where applicable, replace lost aggregate between pavers. Clear drainage system. Confirm adequate dewatering with follow up inspections. If the facility does not function as intende after the above action, the entire pavement and drain system needs to be removed and replaced.			
Blockages	Check overdrain, underdrain, and distribution piping for blockages.	Clear out any blockages.			
	ANNUAL INSPE	CTION			
Inspection Item	Inspection Requirements	Remedial Action			
Flow Conveyance System	Check overdrain, underdrain, distribution piping, and bypasses for misalignments, breakage, and blockage.	Repair any broken or faulty piping. Clear out any blockages.			
Overall Function of Facility	Check surface for deterioration or spalling.	Repair to good condition according to specifications or the approved plans. If the facility does not function as intended after the above action, the pavers need to be removed and replaced.			



CONCRETE EDGE RESTRAINT DETAIL

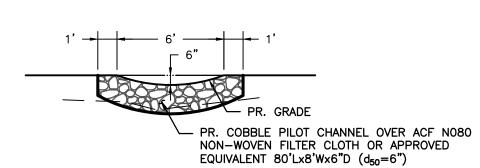


REACH 3 - COBBLE PILOT CHANNEL DETAIL SCALE: 1" = 5'

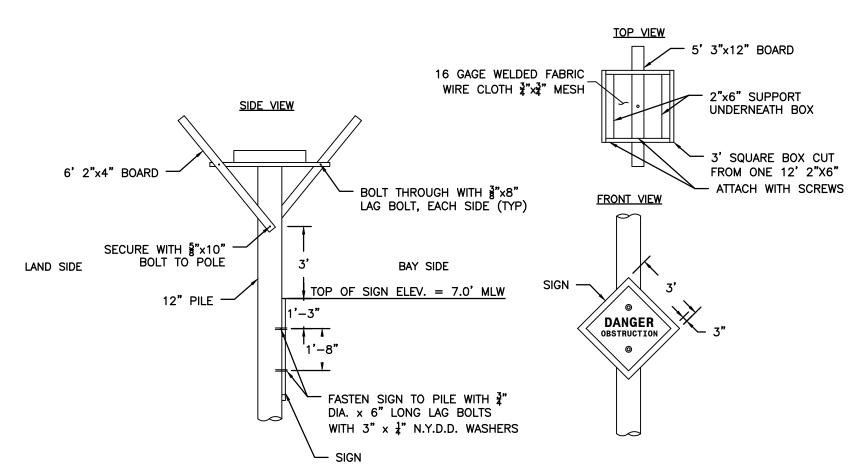
- LIMIT OF PR. OVERLAY ----BITUMINOUS CONCRETE PAVEMENT W/ 3" BC. BFE BASE COURSE (SUPERPAVE 19.0MM, PG64S-22, LEVEL 2) 1.5" SC, SFR, SFV SURFACE COURSE (SUPERPAVE 9.5MM, PG64S-22, LEVEL 2) - EX. BITUMINOUS PAVEMENT TO BE MILLED TO GAB

BITUMINOUS PAVING DETAIL

SCALE: NOT TO SCALE 1. CONTRACTOR SHALL FOLLOW THE ANNE ARUNDEL COUNTY STANDARD SPECIFICATION 02641 FOR RESURFACING



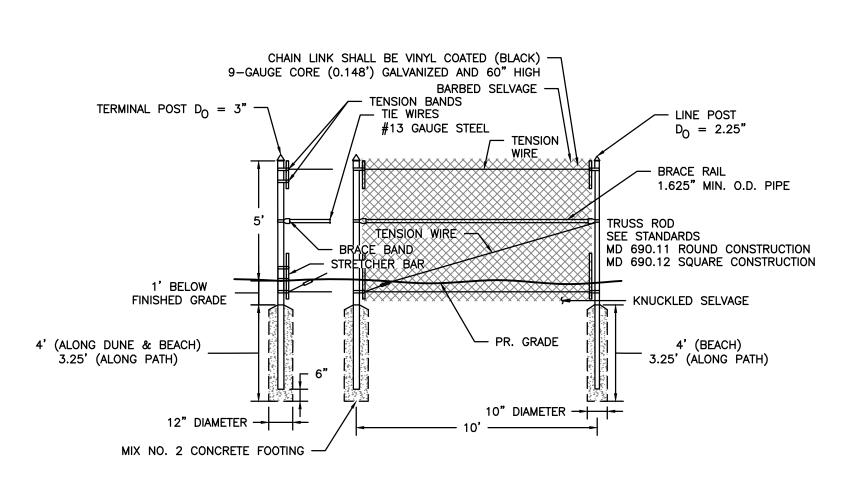
REACH 2 - COBBLE PILOT CHANNEL DETAIL SCALE: 1" = 5'



OSPREY NEST OBSTRUCTION DETAIL

NOTES: 1. USE MARINE GRADE TREATED OR CEDAR LUMBER & GALVANIZED HARDWARE

SCALE: NOT TO SCALE



CHAIN LINK FENCE DETAIL

1. ALL POSTS, RAILS, BRACES AND CHAIN LINK SHALL BE GALVANIZED COATED AND MEET SCHEDULE 40, CLASS A

ADA COMPLIANCE NOTE

n order to meet the adopted 2010 ADA minimum

requirements and in accordance with the public

rights-of-way Accessibility Guidelines (PROWAG) published

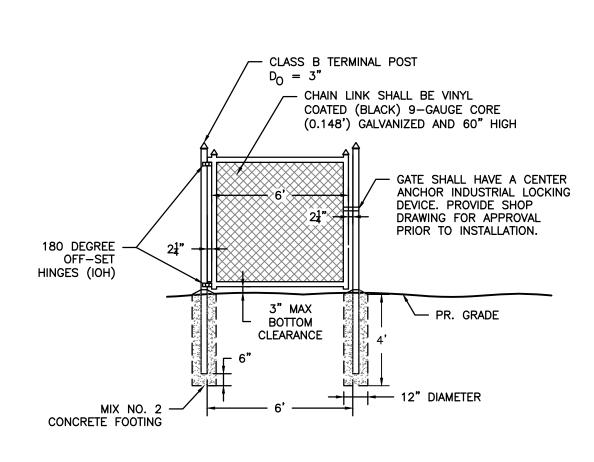
by the U.S. Access Board in 2011, all public and private

pédestrian access routes, sidewalks, curb and gutter, curb

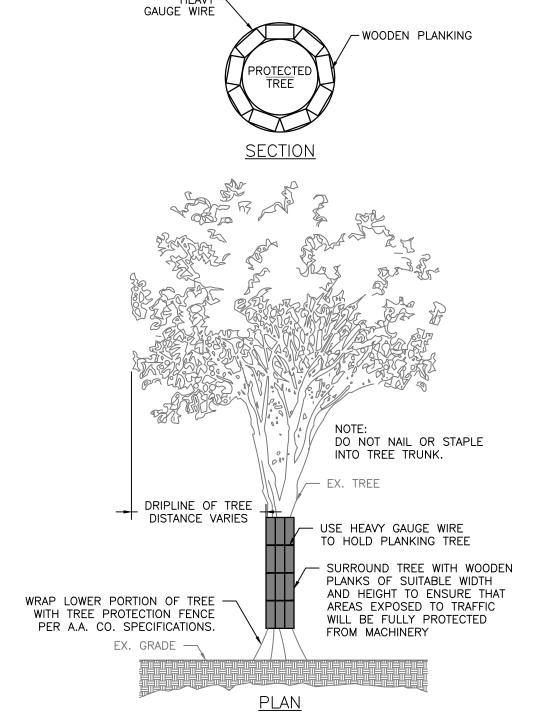
ramps, and traffic control devices shall be designed in

accordance with the Anne Arundel County Pedestrian

facility standards PFI -PF29



ACCESS GATE DETAIL SCALE: 1" = 4'



TREE PLANKING DETAIL

PROPOSAL NO. P468716

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. 21194, EXPIRATION DATE: 04/20/2026.

Cay Cand Consultants & Designers, Inc.

"Integrating Engineering and Environment" 7455 New Ridge Road, Suite T Hanover, Maryland 21076

Phone: (410) 694-9401 Fax: (410) 694-9405 www.baylandinc.com BAYLAND JOB NO. 5_13802



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DATE 4/8/2025 | 7/2025 | 13

DEPARTMENT OF PUBLIC WORKS SCALE: AS SHOWN ESIGNED BY: AJ 4/7/25 09:18 Meetissa Harlinski DRAWN BY: **EM/MJ** 4/7/25 PROJECT MANAGER CHECKED BY: SB 4/7/25 APPROVED SHEET NO. 14 OF 18 EDTOM Burke 4/7/2025 | 11 PA68700

CHIFF RIGHT OF WAY

ANNE ARUNDEL COUNTY

DOWNS PARK SHORELINE **IMPROVEMENTS**

SITE DETAILS

CONSTRUCTION SPECIFICATIONS

ROADWAY

EARTH DIKE -

10 FT MII

CONSTRUCTION SPECIFICATIONS

U.S. DEPARTMENT OF AGRICULTURE

NATURAL RESOURCES CONSERVATION SERVICE

THE LENGTH AND WIDTH OF THE MOUNTABLE BERM.

PRIOR TO PLACING STONE

POSITIVE DRAINAGE.

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.

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.

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 MARYLAND DEPARTMENT OF ENVIRONMENT NATURAL RESOURCES CONSERVATION SERVICE WATER MANAGEMENT ADMINISTRATION

ISOMETRIC VIEW

–25 FT (A DIKE) / 35 FT (B DIKE)—

IN MIN.

SECTION A-A

2. PLACE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS, OVER THE EARTH MOUND

3. PLACE 2 TO 3 INCH STONE OR EQUIVALENT RECYCLED CONCRETE AT LEAST 6 INCHES DEEP OVER

DEMAND TO MAINTAIN SPECIFIED DIMENSIONS. REMOVE ACCUMULATED SEDIMENT AND DEBRIS. MAINTAIN

. MAINTAIN LINE, GRADE, AND CROSS SECTION. ADD STONE OR MAKE OTHER REPAIRS AS CONDITIONS

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

1. USE MINIMUM WIDTH OF 10 FEET TO ALLOW FOR VEHICULAR PASSAGE.

COMPACTED EARTH

18 IN MIN/A DIKE

30 IN MIN/B DIKE

DETAIL C-8 MOUNTABLE BERM

STANDARD SYMBOL

←EARTH DIKE

TO 3 IN STONE

MARYLAND DEPARTMENT OF ENVIRONMENT

WATER MANAGEMENT ADMINISTRATION

ROADWAY

2 IN x 4 IN ACROSS-TOP OF STONE -MASTIC SEAL ISOMETRIC VIEW -LATHE FRAME -WOVEN SLIT FILM GEOTEXTILE SILT FENCE STAPLE JOINING ADJACENT SECTIONS OF GEOTEXTILE -WOVEN SLIT FILM 2 IN x 4 IN— GEOTEXTILE -MASTIC SEAL CONSTRUCTION SPECIFICATIONS SECTION A-A

STANDARD SYMBOL

---SFOP---

USE NOMINAL 2 INCH X 4 INCH LUMBER.

ALONG BOTTOM. REPLACE STONE IF DISPLACED.

. USE WOVEN SLIT FILM GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS.

DETAIL E-2 SILT FENCE ON PAVEMENT

PROVIDE MANUFACTURER CERTIFICATION TO THE AUTHORIZED REPRESENTATIVE OF THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT THE GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS.

4. SPACE UPRIGHT SUPPORTS NO MORE THAN 10 FEET APART

PROVIDE A TWO FOOT OPENING BETWEEN EVERY SET OF SUPPORTS AND PLACE STONE IN THE OPENING OVER GEOTEXTILE

6. KEEP SILT FENCE TAUT AND SECURELY STAPLE TO THE UPSLOPE SIDE OF UPRIGHT SUPPORTS. EXTEND GEOTEXTILE UNDER 2x4. WHERE TWO SECTIONS OF GEOTEXTILE ADJOIN: OVERLAP, FOLD, AND STAPLE TO POST IN

ACCORDANCE WITH THIS DETAIL. ATTACH LATHE. 3. PROVIDE A MASTIC SEAL BETWEEN PAVEMENT, GEOTEXTILE, AND 2x4 TO PREVENT SEDIMENT—LADEN

WATER FROM ESCAPING BENEATH SILT FENCE INSTALLATION.

9. SECURE BOARDS TO PAVEMENT WITH 40D 5 INCH MINIMUM LENGTH NAILS. 10. REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN SILT FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN. MAINTAIN WATER TIGHT SEAL

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

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

- 48" MINIMUM LENGTH FENCE POST. DRIVEN A MINIMUM OF 16" INTO GROUND 8' MAXIMUM SPACING CENTER TO CENTER 16" MINUMUM HEIGHT OF WELDED WIRE FENCING AND GEOTEXTILE ABOVE GROUND 8" MINUMUM DEPTH OF WELDED WIRE FENCING AND GEOTEXTILE BELOW GROUND BACKFILL AND **ELEVATION** COMPACT BOTH SIDES OF FABRIC 48" MINIMUM FENCE -POST LENGTH FILTER CLOTH -FENCE POST SECTION 14 GUAGE WELDED WIRE FENCING MINIMUM 20" ABOVE GROUND WITH 2"x4" MESH OPENINGS FLOW JNDISTURBED GROUND EMBED WELDED FENCING AND GEOTEXTILE FABRIC A MINIMUM OF 8" VERTICALLY INTO THE GROUND-BACKFILL & COMPACT BOTH SIDES FENCE POST DRIVEN A MINIMUM OF 16" INTO THE GROUND CROSS SECTION MIN. 2' FABRIC OVERLAP. MIN. 2'-FASTEN TO FENCING WITH WIRE OR ZIP TIE @ 6" O.C. FILTER FABRIC -"U" OR "T" POST ATTACH - WELDED WIRE FENCE JOINING TWÓ ADJACENT FABRIC SECTIONS

METAL FENCE POST SHALL BE A MINIMUM OF 48 INCHES LONG, DRIVEN 16 INCHES MINIMUM INTO THE GROUND AND NO MORE THAN 8 FEET APART. POST SHALL BE STANDARD T OR U SECTION WEIGHING NOT LESS THAN 1.00 POUND PER LINEAR FOOT. REINFOREMENT SHALL BE 14 GAUGE WELDED WIRE FENCING WITH 2 INCHX4INCH MESH OPENINGS . GEOTEXTILE SHALL BE FASTENED SECURELY TO EACH FENCE POST WITH WIRE TIES OR ZIP TIES AT

TOP AND MID SECTION. WHERE ENDS OF GEOTEXTILE FABRIC COME TOGETHER, THEY SHALL BE

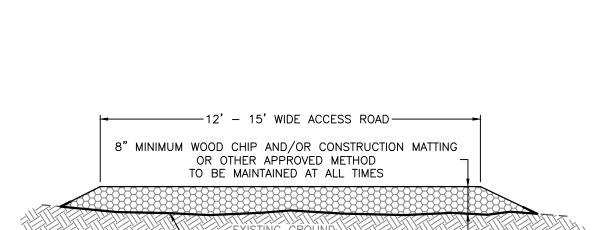
TOP VIEW

OVERLAPPED, FOLDED AND WIRE TIED OR ZIP TIED TO POST TO PREVENT SEDIMENT BYPASS. 3. USE A WOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS, AND FASTENED TO THE UPSLOPE SIDE OF THE FENCE POSTS WITH WIRE OR ZIP TIES AT TOP AND MIDSECTION. THE MANUFACTURER'S CERTIFICATION THAT THE FABRIC MEETS THE REQUIREMENTS IN SECTION H-1

MUST BE MADE AVAILABLE TO THE INSPECTION/ENFORCEMENT AUTHORITY. 4. EXTEND BOTH ENDS OF REINFORCED SILT FENCE A MINIMUM OF FIVE (5) HORIZONTAL FEET UPSLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING

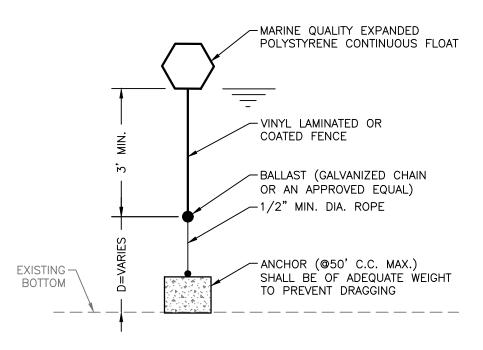
. REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN THE REINFORCED SILT FENCE FABRIC OR WHEN SEDIMENT REACHES 25% OF THE FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN. OF UNDERMINING OCCURS, REINSTALL FENCE.

> REINFORCED SILT FENCING DETAIL SCALE: NOT TO SCALE



TEMPORARY WOOD CHIP CONSTRUCTION ACCESS ROAD

GEOTEXTILE FABRIC



TYPE II - TURBIDITY CURTAIN DETAIL

NOTE: TURBIDITY CURTAIN AS REQUIRED BY THE INSPECTOR TO PROTECT ACTIVE SHORELINE WORK AREA - LIMITED TO 400' AT ANY ONE TIME.

ANNE ARUNDEL SOIL CONSERVATION DISTRICT DETAILS AND SPECIFICATIONS FOR VEGETATIVE ESTABLISHMENT

FOLLOWING INITIAL SOIL DISTURBANCES OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN THREE CALENDAR DAYS FOR THE SURFACE OF ALL PERIMETER CONTROLS, DIKES, SWALES, DITCHES, PERIMETER SLOPES, AND ALL SLOPES GREATER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1) AND SEVEN DAYS FOR ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.

1. PERMANENT SEEDING:

MAXIMUM SILT FENCE

LENGTH

UNLIMITED

1,000 FEET

750 FEET

250 FEET

72" T-POST

— EX. GRADE

MAXIMUM SLOPE

LENGTH

300 FEET*

125 FEET

100 FEET

40 FEET

MAXIMUM SLOPE LENGTH IS UNLIMITED ON THE HYDROLOGIC SOIL GROUP (HSG) "A" SOILS

NOTES:

1. THE USE OF REINFORCED SILT FENCE MUST CONFORM TO THE DESIGN CONSTRAINTS LISTED

2. THE AREA DOWNGRADE OF THE REINFORCED SILT FENCE MUST BE UNDISTURBED GROUND.

4. REINFORCED SILT FENCE SHOULD BE USED WITH CAUTION IN AREAS WHERE ROCKY SOILS MAY

5. EXTEND BOTH ENDS OF REINFORCED SILT FENCE A MINIMUM OF FIVE (5) HORIZONTAL FEET

UPSLOPE AND 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING

———12' MAXIMUM SPACING—

OUTSIDE OF THE DRIP LINE OF THE TREE.

FENCING MUST BE APPROVED.

WHEN PRACTICABLE, INSTALL HIGH VISIBILITY 3 FEET

AVOID ROOT DAMAGE WHEN PLACING THE T-POSTS.

SECURELY TO THE T-POSTS WITH WIRE OR ZIP TIES.

2. T-POST SHALL BE SPACED A MAXIMUM OF 12' O/C

THE HIGH VISIBILITY FENCE SHOULD BE FASTENED

PHASES OF CONSTRUCTION; ANY CHANGE OF THE

HIGH VISIBILITY FENCE DETAIL

4. THE FENCING MUST REMAIN IN PLACE DURING ALL

3. REINFORCED SILT FENCE MUST BE PLACED ALONG THE CONTOUR.

48" HIGH DENSITY

SAFETY FENCE

ORANGE POLYETHELENE

AVERAGE SLOPE STEEPNESS

FLATTER THAN 50:1 (<2%)

50:1 TO 10:1 (2-10%)

10:1 TO 5:1 (10-20&)

5:1 (>20%)

PREVENT TRENCHING.

A. SOIL TESTS: LIME AND FERTILIZER WILL BE APPLIED PER SOIL TESTS RESULTS FOR SITES GREATER THAN 5 ACRES. SOIL TESTS WILL BE DONE AT COMPLETION OF INITIAL ROUGH GRADING OR AS RECOMMENDED BY THE SEDIMENT CONTROL INSPECTOR. RATES AND ANALYSES WILL BE PROVIDED TO THE GRADING INSPECTOR AS WELL AS THE

OCCURRENCE OF ACID SULFATE SOILS (GRAYISH BLACK COLOR) WILL REQUIRE COVERING WITH A MINIMUM OF 12 INCHES OF CLEAN SOIL WITH 6 INCHES MINIMUM CAPPING OF TOP SOIL. NO STOCKPILING OF MATERIAL IS ALLOWED. IF NEEDED, SOIL TESTS SHOULD BE DONE BEFORE AND AFTER A 6-WEEK INCUBATION PERIOD TO ALLOW OXIDATION OF

THE MINIMUM SOIL CONDITIONS REQUIRED FOR PERMANENT VEGETATIVE ESTABLISHMENT

a. SOIL PH SHALL BE BETWEEN 6.0 AND 7.0. b. SOLUBLE SALTS SHALL BE LESS THAN 500 PARTS PER MILLION (PPM). c. THE SOIL SHALL CONTAIN LESS THAN 40% CLAY BUT ENOUGH FINE GRAINED MATERIAL (> 30% SILT PLUS CLAY) TO PROVIDE THE CAPACITY TO HOLD A MODERATE AMOUNT OF MOISTURE. AN EXCEPTION IS IF LOVEGRASS OR SERECIA

LESPEDEZA IS TO BE PLANTED, THEN A SANDY SOIL (< 30% SILT PLUS CLAY) WOULD BE ACCEPTABLE d. SOIL SHALL CONTAIN 1.5% MINIMUM ORGANIC MATTER BY WEIGHT. e. SOIL MUST CONTAIN SUFFICIENT PORE SPACE TO PERMIT ADEQUATE ROOT PENETRATION.

f. IF THESE CONDITIONS CANNOT BE MET BY SOILS ON SITE. ADDING TOPSOIL IS REQUIRED IN ACCORDANCE WITH THE STANDARD AND SPECIFICATION FOR SOIL PREPARATION, TOPSOILING AND SOIL AMENDMENTS FROM THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL OR AMENDMENTS MADE AS RECOMMENDED BY A CERTIFIED AGRONOMIST.

B. SEEDBED PREPARATION: AREA TO BE SEEDED SHALL BE LOOSE AND FRIABLE TO A DEPTH OF AT LEAST 3-5 INCHES. THE TOP LAYER SHALL BE LOOSENED BY RAKING, DISKING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING OCCURS. FOR SITES LESS THAN 5 ACRES, APPLY 100 POUNDS DOLOMITIC LIMESTONE AND 21 POUNDS OF 10-10-10 FERTILIZER PER 1,000 SQUARE FEET. HARROW OR DISK LIME AND FERTILIZER INTO THE SOIL TO A DEPTH OF AT LEAST 3-5 INCHES ON SLOPES FLATTER THAN 3:1.

C. SEEDING: APPLY 5-6 POUNDS PER 1,000 SQUARE FEET OF TALL FESCUE BETWEEN FEBRUARY 1 AND APRIL 30 OR BETWEEN AUGUST 15 AND OCTOBER 31. APPLY SEED UNIFORMLY ON A MOIST FIRM SEEDBED WITH A CYCLONE SEEDER. CULTIPACKER SEEDER. OR HYDROSEEDER (SLURRY INCLUDES SEEDS AND FERTILIZER, RECOMMENDED ON STEEP SLOPES ONLY). MAXIMUM SEED DEPTH SHOULD BE 1/4 INCH IN CLAYEY SOILS AND 1/2 INCH IN SANÓY SOILS WHEN USING OTHER THAN THE HYDROSEEDER METHOD. IRRIGATE WHERE NECESSARY TO SUPPORT ADEQUATE GROWTH UNTIL VEGETATION IS FIRMLY ESTABLISHED. IF OTHER SEED MIXES ARE TO BE USED, SELECT FROM TABLE B3 AND B5 OF THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.

D. MULCHING: MULCH SHALL BE APPLIED TO ALL SEEDED AREAS IMMEDIATELY AFTER SEEDING. DURING THE TIME PERIODS WHEN SEEDING IS NOT PERMITTED, MULCH SHALL BE APPLIED IMMEDIATELY AFTER GRADING. MULCH SHALL BE UNROTTED, UNCHOPPED, SMALL GRAIN STRAW APPLIED AT A RATE OF 2 TONS PER ACRE OR 90 POUNDS PER 1,000 SQUARE FEET (2 BALES). IF A MULCH-ANCHORING TOOL IS USED, APPLY 2.5 TONS PER ACRE. MUÌCH MATÉRIALS SHALL BE RELATIVELY FREE OF ALL KINDS OF WEEDS AND SHALL BE COMPLETELY FREE OF PROHIBITED NOXIOUS WEEDS. SPREAD MULCH UNIFORMLY, MECHANICALLY OR BY HAND, TO A DEPTH OF 1-2 INCHES.

E. SECURING STRAW MULCH: STRAW MULCH SHALL BE SECURED IMMEDIATELY FOLLOWING MULCH APPLICATION TO MINIMIZE MOVEMENT BY WIND OR WATER. THE FOLLOWING METHODS ARE PERMITTED:

i. USE A MULCH-ANCHORING TOOL WHICH IS DESIGNED TO PUNCH AND ANCHOR MULCH INTO THE SOIL SURFACE TO A MINIMUM DEPTH OF 2 INCHES. THIS IS THE MOST EFFECTIVE METHOD FOR SECURING MULCH, HOWEVER, IT IS LIMITED TO RELATIVELY FLAT AREAS WHERE EQUIPMENT CAN OPERATE SAFELY ii. WOOD CELLULOSE FIBER MAY BE USED FOR ANCHORING STRAW. APPLY THE FIBER BINDER AT A NET DRY WEIGHT OF 750 POUNDS PER ACRE. IF MIXED WITH WATER, USE 50 POUNDS OF WOOD CELLULOSE FIBER PER 100 GALLONS OF WATER. iii.LIQUID BINDERS MAY BE USED. APPLY AT HIGHER RATES AT THE EDGES WHERE WIND CATCHES MULCH, SUCH AS IN VALLEYS AND ON CRESTS OF SLOPES. THE REMAINDER OF THE AREA SHOULD APPEAR UNIFORM AFTER BINDER APPLICATION, BINDERS LISTED IN THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL OR APPROVED EQUAL SHALL BE APPLIED AT RATES

IV. LIGHTWEIGHT PLASTIC NETTING MAY BE USED TO SECURE MULCH. THE NETTING WILL

BE STAPLED TO THE GROUND ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.

2. TEMPORARY SEEDING: LIME: 100 POUNDS OF DOLOMITIC LIMESTONE PER 1,000 SQUARE FEET.

RECOMMENDED BY THE MANUFACTURERS.

FERTILIZER: 15 POUNDS OF 10-10-10 PER 1.000 SQUARE FEET. SEED: PERENNIAL RYE - 0.92 POUNDS PER 1,000 SQUARE FEET (FEBRUARY 1 THROUGH APRIL 30 OR AUGUST 15 THROUGH OCTOBER 31). MILLET - 0.92 POUNDS PER 1,000 SQUARE FEET (MAY 1 THROUGH AUGUST 15). MULCH: SAME AS 1 D AND E ABOVE.

3. NO FILLS MAY BE PLACED ON FROZEN GROUND. ALL FILL IS TO BE PLACED IN APPROXIMATELY HORIZONTAL LAYERS, EACH LAYER HAVING A LOOSE THICKNESS OF NOT MORE THAN 8 INCHES. ALL COMPACTION REQUIREMENTS ARE IN ACCORDANCE TO ANNE ARUNDEL COUNTY STANDARD SPECIFICATIONS FOR CONSTRUCTION AS WELL AS THE AA COUNTY DESIGN MANUAL AND STANDARD DETAILS. FILLS FOR POND EMBANKMENTS SHALL BE COMPACTED AS PER MD-378 CONSTRUCTION SPECIFICATIONS. ALL OTHER FILLS SHALL BE COMPACTED SUFFICIENTLY SO AS TO BE STABLE AND PREVENT EROSION AND

4. PERMANENT SOD:

INSTALLATION OF SOD SHOULD FOLLOW PERMANENT SEEDING DATES. SEEDBED PREPARATION FOR SOD SHALL BE AS NOTED IN SECTION (B) ABOVE. PERMANENT SOD IS TO BE TALL FESCUE, STATE APPROVED SOD; LIME AND FERTILIZER PER PERMANENT SEEDING SPECIFICATIONS AND LIGHTLY IRRIGATE SOIL PRIOR TO LAYING SOD, SOD IS TO BE LAID ON THE CONTOUR WITH ALL ENDS TIGHTLY ABUTTING. JOINTS ARE TO BE STAGGERED BETWEEN ROWS. WATER AND ROLL OR TAMP SOD TO INSURE POSITIVE ROOT CONTACT WITH THE SOIL. ALL SLOPES STEEPER THAN 3:1, AS SHOWN, ARE TO BE PERMANENTLY SODDED OR PROTECTED WITH AN APPROVED EROSION CONTROL NETTING. ADDITIONAL WATERING FOR ESTABLISHMENT MAY BE REQUIRED. SOD IS NOT TO BE INSTALLED ON FROZEN GROUND SOD SHALL NOT BE TRANSPLANTED WHEN MOISTURE CONTENT (DRY OR WET) AND/OR EXTREME TEMPERATURE MAY ADVERSELY AFFECT ITS SURVIVAL. IN THE ABSENCE OF ADEQUATE RAINFALL, IRRIGATION SHOULD BE PERFORMED TO ENSURE ESTABLISHMENT OF

5. MINING OPERATIONS:

SEDIMENT CONTROL PLANS FOR MINING OPERATIONS MUST INCLUDE THE FOLLOWING SEEDING DATES AND MIXTURES: FOR SEEDING DATES OF FEBRUARY 1 THROUGH APRIL 30 AND AUGUST 15 THROUGH

OCTOBER 31, USE SEED MIXTURE OF TALL FESCUE AT THE RATE OF 2 POUNDS PER 1,000 SQUARE FEET AND SERICEA LESPEDEZA AT THE MINIMUM RATE OF 0.5 POUNDS PER 1,000

6. TOPSOIL SHALL BE APPLIED AS PER THE STANDARD AND SPECIFICATIONS FOR SOIL PREPARATION, TOPSOILING, AND SOIL AMENDMENTS FROM THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

7. USE OF THESE VEGETATIVE ESTABLISHMENT SPECIFICATIONS DOES NOT PRECLUDE THE PERMITTEE OR CONTRACTOR FROM MEETING ALL OF THE REQUIREMENTS SET FORTH IN THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME,

STANDARDS AND SPECIFICATIONS FOR SOIL PREPARATION, TOPSOILING, AND SOIL AMENDMENTS

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:

THE RESULTS OF A SOIL TEST.

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

d. APPLY SOIL AMENDMENTS AS SPECIFIED ON THE APPROVED PLAN OR AS INDICATED BY

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.

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 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

a. TOPSOIL MUST BE A LOAM, SANDY LOAM, CLAY LOAM, SILT LOAM, SANDY CLAY LOAM, OF 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 11/2 INCHES IN DIAMETER.

D. 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

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.

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

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.

PROFESSIONAL CERTIFICATION

AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 21194, EXPIRATION DATE: 04/20/2026.

Way Land

Consultants & Designers, Inc. "Integrating Engineering and Environment"

7455 New Ridge Road, Suite T Phone: (410) 694-9401 Hanover, Maryland 21076 Fax: (410) 694-9405 www.baylandinc.com

BAYLAND JOB NO. 5_13802



CHIFF FNGINFFR PPROVED David C. Bram

DEPARTMENT OF PUBLIC WORKS DATE APPROVED DATE SCALE: 4/7/2025 | 08:32 PESIGNED BY: AJ | 4/7/25 4/8/2025 | 09:18 Melissa Harlinski PROJECT PANAGER APPROVED SHEET NO. DocuSigned by 4/7/2025 | 13:59 EPT 4/7/2025 | 11: FROJECT NO. Tom Burke PROPOSAL NO. P468716 ASSISTANT CHIFF FNGINFFR CHIFF RIGHT OF WA

ANNE ARUNDEL COUNTY

AS NOTED DRAWN BY: **EM/MJ** | 4/7/25 CHECKED BY: SB 4/7/25 15 OF 18 P468700

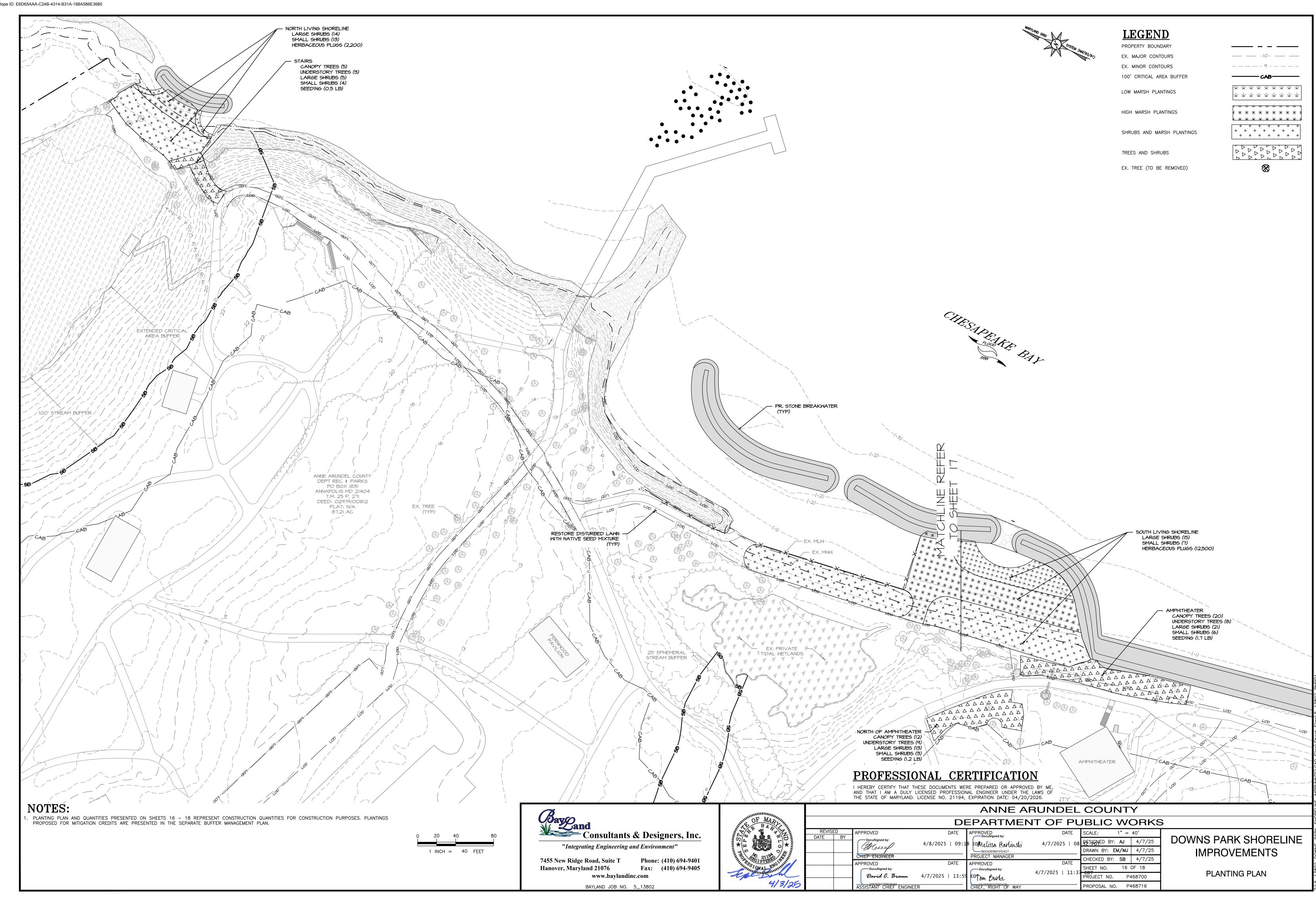
DOWNS PARK SHORELINE **IMPROVEMENTS**

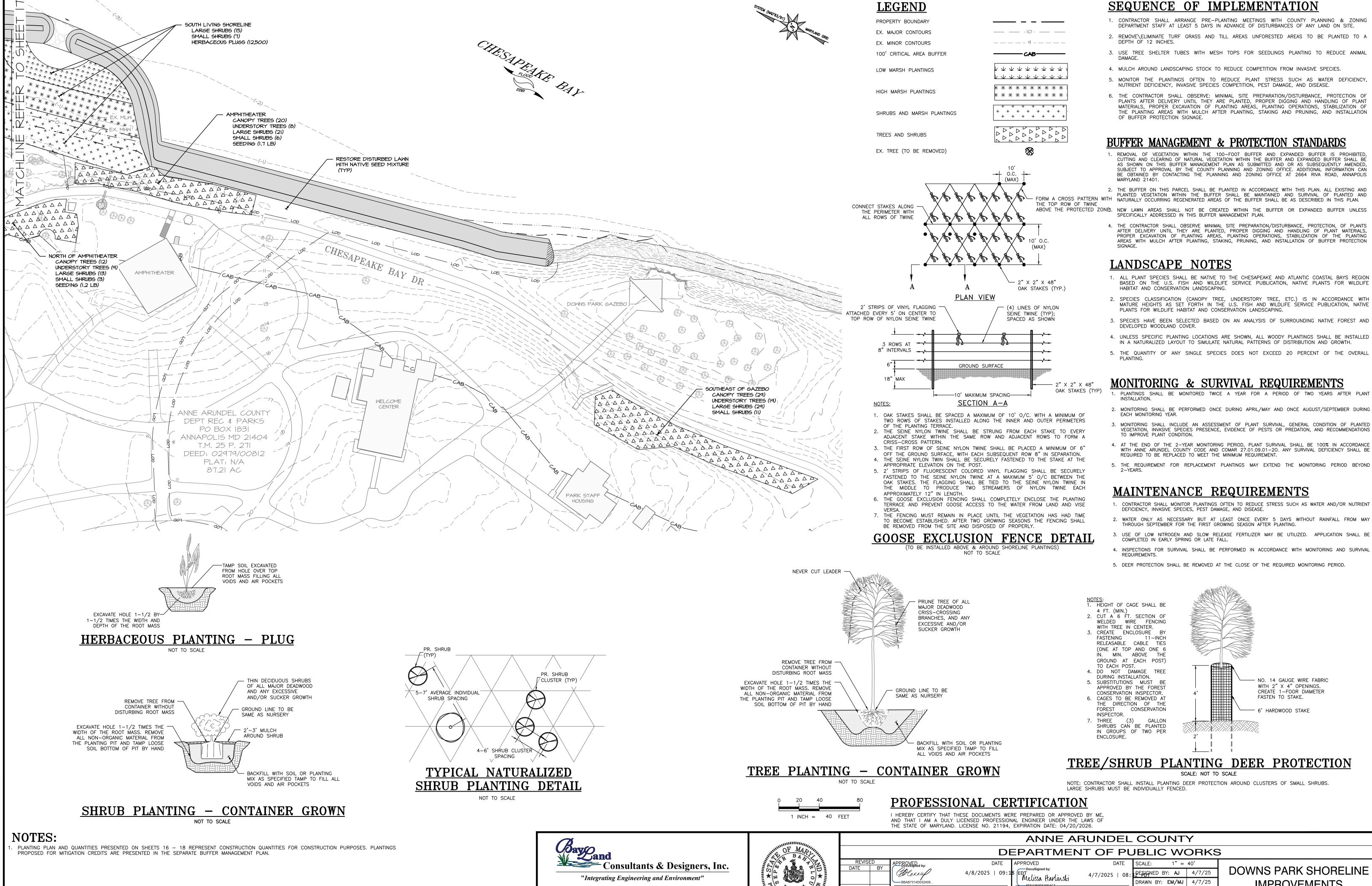
EROSION SEDIMENT CONTROL NOTES & DETAILS

TURBIDITY CURTAIN TO BE INSTALLED IN 400' INTERVALS PRIOR TO AND MAINTAINED DURING SAND PLACEMENT AND ANY OTHER SEDIMENT CAUSING ACTIVITY, PHASED ACCORDINGLY.

NO EQUIPMENT OR MATERIAL STORAGE IS ALLOWED OUTSIDE OF THE LIMIT OF DISTURBANCE (LOD).

NOTES:





- 3. USE TREE SHELTER TUBES WITH MESH TOPS FOR SEEDLINGS PLANTING TO REDUCE ANIMAL
- PLANTS AFTER DELIVERY UNTIL THEY ARE PLANTED, PROPER DIGGING AND HANDLING OF PLANT MATERIALS, PROPER EXCAVATION OF PLANTING AREAS, PLANTING OPERATIONS, STABILIZATION OF THE PLANTING AREAS WITH MULCH AFTER PLANTING, STAKING AND PRUNING, AND INSTALLATION
- CUTTING AND CLEARING OF NATURAL VEGETATION WITHIN THE BUFFER AND EXPANDED BUFFER SHALL BE AS SHOWN ON THIS BUFFER MANAGEMENT PLAN AS SUBMITTED AND OR AS SUBSEQUENTLY AMENDED, SUBJECT TO APPROVAL BY THE COUNTY PLANNING AND ZONING OFFICE. ADDITIONAL INFORMATION CAN BE OBTAINED BY CONTACTING THE PLANNING AND ZONING OFFICE AT 2664 RIVA ROAD, ANNAPOLIS
- 4. THE CONTRACTOR SHALL OBSERVE MINIMAL SITE PREPARATION/DISTURBANCE, PROTECTION, OF PLANTS AFTER DELIVERY UNTIL THEY ARE PLANTED, PROPER DIGGING AND HANDLING OF PLANT MATERIALS, PROPER EXCAVATION OF PLANTING AREAS, PLANTING OPERATIONS, STABILIZATION OF THE PLANTING
- BASED ON THE U.S. FISH AND WILDLIFE SERVICE PUBLICATION, NATIVE PLANTS FOR WILDLIFE
- MATURE HEIGHTS AS SET FORTH IN THE U.S. FISH AND WILDLIFE SERVICE PUBLICATION, NATIVE
- 3. SPECIES HAVE BEEN SELECTED BASED ON AN ANALYSIS OF SURROUNDING NATIVE FOREST AND
- 5. THE QUANTITY OF ANY SINGLE SPECIES DOES NOT EXCEED 20 PERCENT OF THE OVERALL
- . MONITORING SHALL BE PERFORMED ONCE DURING APRIL/MAY AND ONCE AUGUST/SEPTEMBER DURING
- 3. MONITORING SHALL INCLUDE AN ASSESSMENT OF PLANT SURVIVAL. GENERAL CONDITION OF PLANTED VEGETATION, INVASIVE SPECIES PRESENCE, EVIDENCE OF PESTS OR PREDATION, AND RECOMMENDATIONS
- 4. AT THE END OF THE 2-YEAR MONITORING PERIOD, PLANT SURVIVAL SHALL BE 100% IN ACCORDANCE WITH ANNE ARUNDEL COUNTY CODE AND COMAR 27.01.09.01-20. ANY SURVIVAL DEFICIENCY SHALL BE
- 5. THE REQUIREMENT FOR REPLACEMENT PLANTINGS MAY EXTEND THE MONITORING PERIOD BEYOND
- 1. CONTRACTOR SHALL MONITOR PLANTINGS OFTEN TO REDUCE STRESS SUCH AS WATER AND/OR NUTRIENT

Phone: (410) 694-9401

Fax: (410) 694-9405

7455 New Ridge Road, Suite T Hanover, Maryland 21076

www.baylandinc.com

BAYLAND JOB NO. 5_13802

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		David C. Braun	4/7/2025 13:59	EDT Tom Burke	4/7/2025 11:	37ROEUPETCT NO. P4	168700
		ASSISTATHE17@HSE46ENGINEE	īR	CHIEF, RIGHT OF WAY		PROPOSAL NO. P4	168716

DOWNS PARK SHORELINE IMPROVEMENTS

PLANTING PLAN

ZONE: NORTH LIVING SHORELINE - 5,035 SF TOTAL; 3,535 SF ABOVE EX. MHW

BOTANICAL NAME/ TECHNICAL DESCRIPTION	COMMON NAME	INDICATOR STATUS	MAX SPACING/LOCATION	QUANTITY	CREDIT TOTAL,
LARGE SHRUBS - 36" CONTAINE	ERIZED				50
AMORPHA FRUTICOSA	FALSE INDIGO BUSH	FACW	NATURALIZED AT 7' OC	7	350
MORELLA PENNSYLVANICA	NORTHERN BAYBERRY	FAC	NATURALIZED AT 7' OC	7	350
		•	LAR	RGE SHRUB CREDIT	30.2%
SMALL SHRUBS -18" CONTAINER	RIZED		SF CREDIT PER UNIT =		25
PRUNUS MARITIMA	BEACH PLUM	NL	NATURALIZED AT 5' OC	13	325
		,	SMA	ALL SHRUB CREDIT	14.0%
HERBACEOUS					
PLUGS			,	SF CREDIT BASED OF	N AREA COVERE
SPARTINA PATENS**	SALT MEADOW CORDGRASS	FACW1	18" O.C.	1290	1,290
•		•	HERB	ACEOUS CREDIT***	55.7%
			TOTAL:	1290	2,315

* ALL PLANTINGS AREA BELOW EX. MHW AND ARE THERFORE NOT INCLUDED AS CRITICAL AREA MITIGATION

** ONLY AREA PLANTED ABOVE EX. MHW IS INCLUDED AS CRITICAL AREA MITIGATION

1 PLANT IN HIGHER ELEVATIONS OF LIVING SHORELINE

70NE, CTAIDS _ 1 038 SE

BOTANICAL NAME/ TECHNICAL DESCRIPTION	COMMON NAME	INDICATOR STATUS	SPACING	QUANTITY	CREDIT TOTAL, SF
CANOPY TREES - 3/4" CALIPER			SF CR	100	
ACER RUBRUM	RED MAPLE	FAC	NATURALIZED AT 10' OC	1	100
BETULA NIGRA	RIVER BIRCH	FACW	NATURALIZED AT 10' OC	1	100
QUERCUS BICOLOR	SWAMP WHITE OAK	FACW	NATURALIZED AT 10' OC	1	100
QUERCUS PALUSTRIS	PIN OAK	FACW	NATURALIZED AT 10' OC	1	100
QUERCUS PHELLOS	WILLOW OAK	FACW	NATURALIZED AT 10' OC	1	100
			CANC	PY TREE CREDIT	41.8%
JNDERSTORY TREES - 3/4" CALIF	PER		SF CR	EDIT PER UNIT =	75
CORNUS FLORIDA	FLOWERING DOGWOOD	FACU	NATURALIZED AT 8.5' OC	1	75
AMELANCHIER ARBOREA	DOWNY SERVICEBERRY	FACU	NATURALIZED AT 8.5' OC	1	75
MAGNOLIA VIRGINIANA	SWEETBAY MAGNOLIA	FACW	NATURALIZED AT 8.5' OC	1	75
	UNDERSTO	ORY TREE CREDIT	18.8%		
ARGE SHRUBS - 36" CONTAINER	ZED				50
CLETHRA ALNIFOLIA	COASTAL SWEETPEPPERBUSH	FACW	NATURALIZED AT 7' OC	1	50
MORELLA PENNSYLVANICA	NORTHERN BAYBERRY	FAC	NATURALIZED AT 7' OC	1	50
VIBURNUM DENTATUM	SOUTHERN ARROWWOOD	FAC	NATURALIZED AT 7' OC	1	50
VIBURNUM PRUNIFOLIUM	BLACKHAW	FACU	NATURALIZED AT 7' OC	2	100
			LARG	E SHRUB CREDIT	20.9%
SMALL SHRUBS -18" CONTAINERIZ	ED		SF CR	EDIT PER UNIT =	25
ARONIA MELANOCARPA	BLACK CHOKEBERRY	FAC	NATURALIZED AT 5' OC	2	50
ITEA VIRGINICA	VIRGINIA SWEETSPIRE	FACW	NATURALIZED AT 5' OC	2	50
			SMAL	L SHRUB CREDIT	8.4%
SEEDING				SF CREDIT BASI	ED ON AREA COVEREI
HERBACEOUS					
NATIVE SEED MIX	ERNMX 140 OR EQUIVALENT	N/A	N/A	0.5 LB	120
COVER/NURSE CROP, SEE TABLE	FOR RATE & DATES	N/A	N/A	SEED	0
			HER	BACEOUS CREDIT	10.0%
			TOTAL:	17	1,195

ZONE: SOUTH LIVING SHORELINE - 21,471 SF TOTAL; 7,019 ABOVE EX. MHW

BOTANICAL NAME/ TECHNICAL DESCRIPTION	COMMON NAME	INDICATOR STATUS	MAX SPACING/LOCATION	QUANTITY*	CREDIT TOTAL, SF**	
LARGE SHRUBS - 36" CONTA	AINERIZED				50	
AMORPHA FRUTICOSA	FALSE INDIGO BUSH	FACW	RANDOM AT 7' OC ON DUNE	5	250	
MORELLA PENNSYLVANICA	NORTHERN BAYBERRY	FAC	RANDOM AT 7' OC ON DUNE	10	500	
			LAR	GE SHRUB CREDIT	11.3%	
SMALL SHRUBS -18" CONTAIL	NERIZED		SF CI	REDIT PER UNIT =	25	
PRUNUS MARITIMA	BEACH PLUM	NL	RANDOM AT 5' OC ON DUNE	7	175	
SMALL SHRUB CREDIT						
HERBACEOUS						
PLUGS			,	SF CREDIT BASED O	N AREA COVERE	
ONEOTHERA BIENNIS	COMMON EVENING PRIMROSE	FACU	18" O.C.	100	68	
PANICUM VIRGATUM	SWITCHGRASS	FAC	18" O.C.	100	68	
SOLIDAGO SEMPERVIRENS	SEASIDE GOLDENROD	FACW	18" O.C.	100	68	
SPARTINA ALTERNIFLORA*	SMOOTH CORDGRASS	OBL2	18" O.C.	2700	0	
SPARTINA PATENS**	SALT MEADOW CORDGRASS	FACW1	18" O.C.	9500	5,480	
	•	•	HERB,	ACEOUS CREDIT***	86.0%	
			TOTAL:	12522	6,609	

* ALL PLANTINGS AREA BELOW EX. MHW AND ARE THERFORE NOT INCLUDED AS CRITICAL AREA MITIGATION

** ONLY AREA PLANTED ABOVE EX. MHW IS INCLUDED AS CRITICAL AREA MITIGATION

1 PLANT IN HIGHER ELEVATIONS OF LIVING SHORELINE

2 PLANT IN LOWER ELEVATIONS OF LIVING SHORELINE

NOTE: CONTRACTOR SHALL INSTALL TREE/SHRUB PLANTING PROTECTION AROUND PERIMETER OF DUNE WITH GOOSE EXCLUSION FENCE WOVEN OVER THE DUNE.

ZONE: NORTH OF AMPHITHEATER - 2,430 SF

BOTANICAL NAME/ TECHNICAL DESCRIPTION	COMMON NAME	INDICATOR STATUS	SPACING	QUANTITY	CREDIT TOTAL, SF
CANOPY TREES - 3/4" CALI	PER		SF C	REDIT PER UNIT =	100
ACER RUBRUM	RED MAPLE	FAC	NATURALIZED AT 10' OC	4	400
BETULA NIGRA	RIVER BIRCH	FACW	NATURALIZED AT 10' OC	1	100
QUERCUS BICOLOR	SWAMP WHITE OAK	FACW	NATURALIZED AT 10' OC	2	200
QUERCUS PALUSTRIS	PIN OAK	FACW	NATURALIZED AT 10' OC	3	300
QUERCUS PHELLOS	WILLOW OAK	FACW	NATURALIZED AT 10' OC	2	200
			CAI	NOPY TREE CREDIT	41.5%
UNDERSTORY TREES - 3/4"	CALIPER		SF C	REDIT PER UNIT =	75
CORNUS FLORIDA	FLOWERING DOGWOOD	FACU	NATURALIZED AT 8.5' OC	3	225
AMELANCHIER ARBOREA	DOWNY SERVICEBERRY	FACU	NATURALIZED AT 8.5' OC	3	225
MAGNOLIA VIRGINIANA	SWEETBAY MAGNOLIA	FACW	NATURALIZED AT 8.5' OC	3	225
			UNDERS	TORY TREE CREDIT	23.4%
LARGE SHRUBS - 36" CONTAINERIZED					50
ARONIA ARBUTIFOLIA	RED CHOKEBERRY	FACW	NATURALIZED AT 7' OC	2	100
CLETHRA ALNIFOLIA	COASTAL SWEETPEPPERBUSH	FACW	NATURALIZED AT 7' OC	2	100
CORNUS AMOMUM	SILKY DOGWOOD	FACW	NATURALIZED AT 7' OC	2	100
MORELLA PENNSYLVANICA	NORTHERN BAYBERRY	FAC	NATURALIZED AT 7' OC	2	100
VIBURNUM DENTATUM	SOUTHERN ARROWWOOD	FAC	NATURALIZED AT 7' OC	3	150
VIBURNUM PRUNIFOLIUM	BLACKHAW	FACU	NATURALIZED AT 7' OC	2	100
			LAF	RGE SHRUB CREDIT	22.5%
SMALL SHRUBS -18" CONTAI	NERIZED		SF C	REDIT PER UNIT =	25
ARONIA MELANOCARPA	BLACK CHOKEBERRY	FAC	NATURALIZED AT 5' OC	1	25
ITEA VIRGINICA	VIRGINIA SWEETSPIRE	FACW	NATURALIZED AT 5' OC	2	50
			SMA	ALL SHRUB CREDIT	2.6%
SEEDING				SF CREDIT	BASED ON AREA COVERED
HERBACEOUS					
NATIVE SEED MIX	ERNMX 140 OR EQUIVALENT	N/A	N/A	1.2 LB	290
COVER/NURSE CROP, SEE	TABLE FOR RATE & DATES	N/A	N/A	SEED	0
			HE	RBACEOUS CREDIT	10.0%
			TOTAL:	37	2,890

ZONE: AMPHITHEATER - 3,817 SF

BOTANICAL NAME/ TECHNICAL DESCRIPTION	COMMON NAME	INDICATOR STATUS	SPACING	QUANTITY	CREDIT TOTAL, SF
CANOPY TREES - 3/4" CALIP	ER		SF CRI	EDIT PER UNIT =	100
ACER RUBRUM	RED MAPLE	FAC	NATURALIZED AT 10' OC	4	400
BETULA NIGRA	RIVER BIRCH	FACW	NATURALIZED AT 10' OC	4	400
QUERCUS BICOLOR	SWAMP WHITE OAK	FACW	NATURALIZED AT 10' OC	4	400
QUERCUS PALUSTRIS	PIN OAK	FACW	NATURALIZED AT 10' OC	4	400
QUERCUS PHELLOS	WILLOW OAK	FACW	NATURALIZED AT 10' OC	4	400
CANOPY TREE CREDIT					47.4%
UNDERSTORY TREES - 3/4" (CALIPER		SF CRI	EDIT PER UNIT =	75
CORNUS FLORIDA	FLOWERING DOGWOOD	FACU	NATURALIZED AT 8.5' OC	3	225
AMELANCHIER ARBOREA	DOWNY SERVICEBERRY	FACU	NATURALIZED AT 8.5' OC	3	225
MAGNOLIA VIRGINIANA	SWEETBAY MAGNOLIA	FACW	NATURALIZED AT 8.5' OC	2	150
UNDERSTORY TREE CREDIT					14.2%
_ARGE SHRUBS — 36" CONTA		50			
ARONIA ARBUTIFOLIA	RED CHOKEBERRY	FACW	NATURALIZED AT 7' OC	3	150
CLETHRA ALNIFOLIA	COASTAL SWEETPEPPERBUSH	FACW	NATURALIZED AT 7' OC	3	150
CORNUS AMOMUM	SILKY DOGWOOD	FACW	NATURALIZED AT 7' OC	4	200
MORELLA PENNSYLVANICA	NORTHERN BAYBERRY	FAC	NATURALIZED AT 7' OC	4	200
VIBURNUM DENTATUM	SOUTHERN ARROWWOOD	FAC	NATURALIZED AT 7' OC	4	200
VIBURNUM PRUNIFOLIUM	BLACKHAW	FACU	NATURALIZED AT 7' OC	3	150
ARGE SHRUB CREDIT					24.9%
SMALL SHRUBS -18" CONTAIN	IERIZED		SF CRE	EDIT PER UNIT =	25
ARONIA MELANOCARPA	BLACK CHOKEBERRY	FAC	NATURALIZED AT 5' OC	4	100
ITEA VIRGINICA	VIRGINIA SWEETSPIRE	FACW	NATURALIZED AT 5' OC	2	50
SMALL SHRUB CREDIT					3.6%
SEEDING				SF CREDIT BA	SED ON AREA COVERE
HERBACEOUS					
NATIVE SEED MIX	ERNMX 140 OR EQUIVALENT	N/A	N/A	1.7 LB	420
COVER/NURSE CROP, SE	E TABLE FOR RATE & DATES	N/A	N/A	SEED	0
		1	HERI	BACEOUS CREDIT	10.0%
			TOTAL:	55	4,220

ZONE: SOUTHEAST OF GAZEBO - 5,900 SF

BOTANICAL NAME/ TECHNICAL DESCRIPTION	COMMON NAME	INDICATOR STATUS	SPACING	QUANTITY	CREDIT TOTAL, SF
CANOPY TREES - 3/4" CALIPER			SF	CREDIT PER UNIT =	100
ACER RUBRUM	RED MAPLE	FAC	NATURALIZED AT 10' OC	10	1,000
DIOSPYROS VIRGINIANA	AMERICAN PERSIMMON	FAC	NATURALIZED AT 10' OC	10	1,000
QUERCUS BICOLOR*	SWAMP WHITE OAK	FACW	NATURALIZED AT 10' OC	1	100
QUERCUS PALUSTRIS	PIN OAK	FACW	NATURALIZED AT 10' OC	3	300
QUERCUS PHELLOS*	WILLOW OAK	FACW	NATURALIZED AT 10' OC	5	500
		•	CA	NOPY TREE CREDIT	47.9%
JNDERSTORY TREES - 3/4" CALIPER			SF	CREDIT PER UNIT =	75
CORNUS FLORIDA	FLOWERING DOGWOOD	FACU	NATURALIZED AT 8.5' OC	7	525
AMELANCHIER ARBOREA	DOWNY SERVICEBERRY	FACU	NATURALIZED AT 8.5' OC	7	525
MAGNOLIA VIRGINIANA	SWEETBAY MAGNOLIA	FACW	NATURALIZED AT 8.5' OC	5	375
			UNDER	STORY TREE CREDIT	23.6%
ARGE SHRUBS - 36" CONTAINERIZE	D				50
ARONIA ARBUTIFOLIA	RED CHOKEBERRY	FACW	NATURALIZED AT 7' OC	5	250
CORNUS AMOMUM	SILKY DOGWOOD	FACW	NATURALIZED AT 7' OC	5	250
MORELLA PENNSYLVANICA	NORTHERN BAYBERRY	FAC	NATURALIZED AT 7' OC	5	250
VIBURNUM DENTATUM	SOUTHERN ARROWWOOD	FAC	NATURALIZED AT 7' OC	7	350
VIBURNUM PRUNIFOLIUM	BLACKHAW	FACU	NATURALIZED AT 7' OC	7	350
		•	LA	RGE SHRUB CREDIT	24.0%
SMALL SHRUBS -18" CONTAINERIZED			SF	CREDIT PER UNIT =	25
ARONIA MELANOCARPA	BLACK CHOKEBERRY	FAC	NATURALIZED AT 5' OC	11	275
		•	SN	MALL SHRUB CREDIT	4.5%
			TOTAL:	88	6,050

NATIVE SEED MIX COMPOSITION

COMPOSITION	BOTANICAL NAME	COMMON NAME		
49.4%	SCHIZACHYRIUM SCOPARIUM	LITTLE BLUESTEM		
20.5%	ELYMUS VIRGINICUS	VIRGINIA WILDRYE		
9.5%	ECHINACEA PURPUREA	PURPLE CONEFLOWER		
6.5%	ELYMUS HYSTRIX	BOTTLEBRUSH GRASS		
3.0%	RUDBECKIA HIRTA	BLACKEYED SUSAN		
1.8%	HELIOPSIS HELIANTHOIDES	OXEYE SUNFLOWER		
1.3%	ZIZIA AUREA	GOLDEN ALEXANDERS		
1.0%	PENSTEMON DIGITALIS	TALL WHITE BEARDTONGUE		
0.7%	LIATRIS SPICATA	MARSH BLAZING STAR		
0.6%	ASTER MACROPHYLLUS	BIGLEAF ASTER		
0.6%	BAPTISIA AUSTRALIS	BLUE FALSE INDIGO		
0.5%	ANEMONE CANADENSIS	CANADIAN ANEMONE		
0.5%	GAURA BIENNIS	BIENNIAL BEEBLOSSOM		
0.5%	LESPEDEZA CAPITATA	ROUNDHEAD LESPEDEZA		
0.5%	RUDBECKIA TRILOBA	BROWNEYED SUSAN		
0.4%	ASCLEPIAS TUBEROSA	BUTTERFLY MILKWEED		
0.4%	ASTER PILOSUS	HEATH ASTER		
0.3%	ASCLEPIAS SYRIACA	COMMON MILKWEED		
0.3%	MONARDA FISTULOSA	WILD BERGAMOT		
0.3%	PYCNANTHEMUM INCANUM	HOARY MOUNTAINMINT		
0.3%	SOLIDAGO BICOLOR	WHITE GOLDENROD		
0.3%	SOLIDAGO NEMORALIS	GRAY GOLDENROD		
0.2%	AQUILEGIA CANADENSIS	EASTERN COLUMBINE		
0.2%	ASTER PRENANTHOIDES	ZIGZAG ASTER		
0.2%	SOLIDAGO JUNCEA	EARLY GOLDENROD		
0.1%	PENSTEMON HIRSUTUS	HAIRY BEARDTONGUE		
0.1%	PENSTEMON LAEVIGATUS	APPALACHIAN BEARDTONGUE		

COVER/NURSE CROP SEEDING TABLE

SEEDING RATE	BOTANICAL NAME	COMMON NAME	SEEDING DATE	
30 LB/AC	SECALE CEREAL	CEREAL RYE	11/1-2/28 3/1-4/30	
30 LB/AC	AVENA SATIVA	GRAIN OATS		
10 LB/AC	SETARIA ITALICA	FOXTAIL MILLET	5/1-8/31	
70NF:	LOLIUM MULTIFLORUM	ANNUAL RYFGRASS	9/1-10/31	

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. 21194, EXPIRATION DATE: 04/20/2026.

Consultants & Designers, Inc.

"Integrating Engineering and Environment"

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BAYLAND JOB NO. 5_13802



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MARYINI BANKARA			DE	EPARTMEN	IT OF PL	BLIC W	ORKS	
A PE	REVISED DATE BY	APPROVED DocuSigned by:	DATE	APPROVED	DATE	SCALE:	AS SHOWN	
	DAIL BI	GO Corred	4/8/2025 09:	18 EDT Mulissa Harlinski	4/7/2025 08:3	2D時分GNED BY: AJ	4/7/25	
		BBAB7314D032409		Melissa Harlinski		DRAWN BY: EM/MJ	4/7/25	
TERED JEGILIA		CHIEF ENGINEER	DATE	PROJECT MANAGER	DATE	CHECKED BY: SB	4/7/25	
L ENGHILIT		APPROVED DocuSigned by:		APPROVED DocuSigned by:	DAIL	SHEET NO.	18 OF 18	
Diring		David C. Braun	4/7/2025 13:59	tom Burke	4/7/2025 11:37	PERODUECT NO. P	468700	
4/3/25		ASSISTANT 2011EF ENGINE	ER	CHIEF, TRICHT TOP WAY		PROPOSAL NO. P	468716	

DOWNS PARK SHORELINE IMPROVEMENTS

PLANTING PLAN

NOTES:

. PLANTING PLAN AND QUANTITIES PRESENTED ON SHEETS 16 - 18 REPRESENT CONSTRUCTION QUANTITIES FOR CONSTRUCTION PURPOSES. PLANTINGS PROPOSED FOR MITIGATION CREDITS ARE PRESENTED IN THE SEPARATE BUFFER MANAGEMENT PLAN.