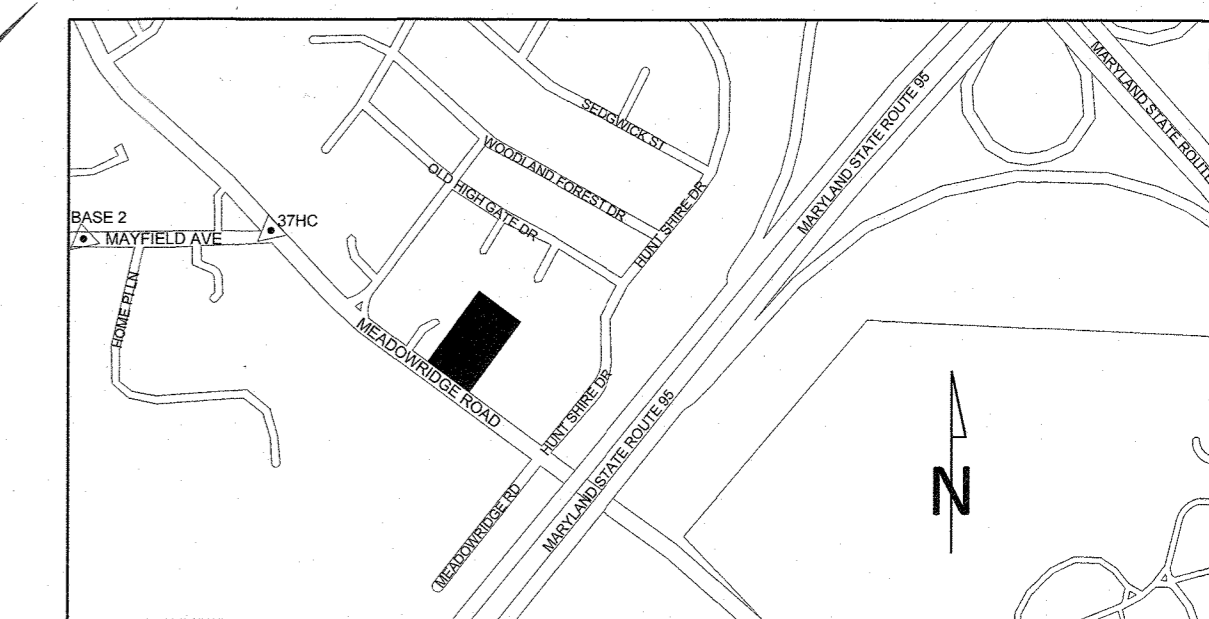


ENVIRONMENTAL CONCEPT PLAN  
(ECP 21-010)

SPARROW'S LANDING  
RESIDENTIAL COMMUNITY  
6479 MEADOWRIDGE ROAD ELKRIDGE, HOWARD COUNTY, MD 21075.



ADC MAP COORDINATES: 4936G10

VICINITY MAP

SCALE: 1"=500'

**LEGEND**

TREE		SPECIMEN TREE	
ST-X		GUY WIRE	
UTILITY POLE		SIGN	
WATER MANHOLE		SEWER MANHOLE	
WATER VALVE / METER		CENTER LINE	
STORM DRAIN MANHOLE		FIRE HYDRANT	
NON-TIDAL WETLANDS		PROPERTY LINE	
CHAIN LINK FENCE		EX. CONTOUR	
OVERHEAD UTILITY LINE		EXISTING TREES LINE	
STREAM BUFFER LINE		WETLAND BUFFER LINE	
FLOOD PLAIN CROSS SECTION			

"APPROVAL OF THIS ECP PLAN DOES NOT CONSTITUTE ANY APPROVALS OF SUBSEQUENT SUBDIVISION PLANS, SITE DEVELOPMENT PLANS OR RED-LINE REVISIONS TO APPROVED SDP PLANS, FOREST CONSERVATION PLANS AND GRADING OR BUILDING PERMITS. THE APPLICANT AND CONSULTANT SHOULD EXPECT ADDITIONAL AND MORE DETAILED COMMENTS THAT MAY ALTER THE SITE DESIGN, HOUSE OR STRUCTURE LOCATION, DRIVEWAY LOCATION, GRADING, TREE CLEARING AND/OR OTHER REQUIREMENTS AS THE DEVELOPMENT PLAN PROGRESSES THROUGH THE PLAN REVIEW AND/OR PERMIT APPLICATION PROCESS IN ACCORDANCE WITH THE SUBDIVISION, LAND DEVELOPMENT AND ZONING REGULATIONS AND THE FOREST CONSERVATION REQUIREMENTS".



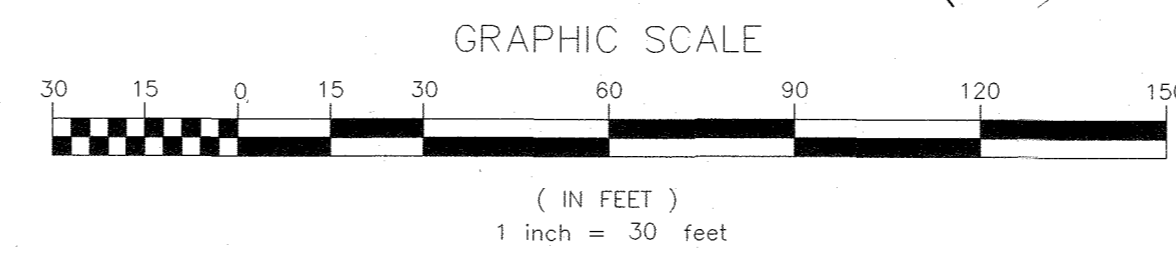
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

*Chad ...*  
CHIEF, DEVELOPMENT ENGINEERING DIVISION  
NY

DATE: 11/18/21  
DATE: 11/18/21

**SHEET INDEX**

NO.	DESCRIPTION
1	ENVIRONMENTAL CONCEPT PLAN-COVER SHEET/EXISTING SITE
2	ENVIRONMENTAL CONCEPT PLAN PROPOSED GRADING, EROSION AND SEDIMENT CONTROL PLAN
3	LOT SIZE ANALYSIS
4	ENVIRONMENTAL CONCEPT PLAN STORMWATER MANAGEMENT
5	ENVIRONMENTAL CONCEPT PLAN-STANDARD DETAILS



**OWNER /DEVELOPER:**  
SPARROWS LANDING LLC.  
AND DESIGN BUILD ALLIANCE, LLC.  
10821 RED RUN BLVD, SUITE 3,  
OWINGS MILLS, MD 21117.  
EMAIL: WGREEN@ACQUESTGROUP.COM  
TEL: 410-419-1937

**ADDRESS CHART**

PARCEL NO.	STREET ADDRESS
0545	6479 MEADOWRIDGE ELKRIDGE

**PERMIT INFORMATION CHART**

SUBDIVISION NAME	SECTION/AREA	PARCEL NO.
SPARROWS LANDING, RESIDENTIAL COMMUNITY		E-4 (P/O 545)

PLAT OMP #	BLOCK NO.	ZONE	TAX MAP NO.	ELECTION DISTRICT
8341	98	R-SC	0037	13

ENVIRONMENTAL CONCEPT PLAN  
COVER SHEET/EXISTING SITE

SPARROW'S LANDING  
6479 MEADOWRIDGE ROAD ELKRIDGE,  
HOWARD COUNTY, MD 21075

TAX MAP 0037 BLOCK 98  
PARCEL 0545  
13 TH ELECTION DISTRICT, HOWARD COUNTY, MD

ZONE: R-SC

**EnviroDesign, Inc.**  
Civil-Environmental Engineering Services  
5228 Pine Bark Ct, Columbia, MD 21045  
Phone 301-509-3803  
www.civil-environmental.com

**PROFESSIONAL CERTIFICATION**

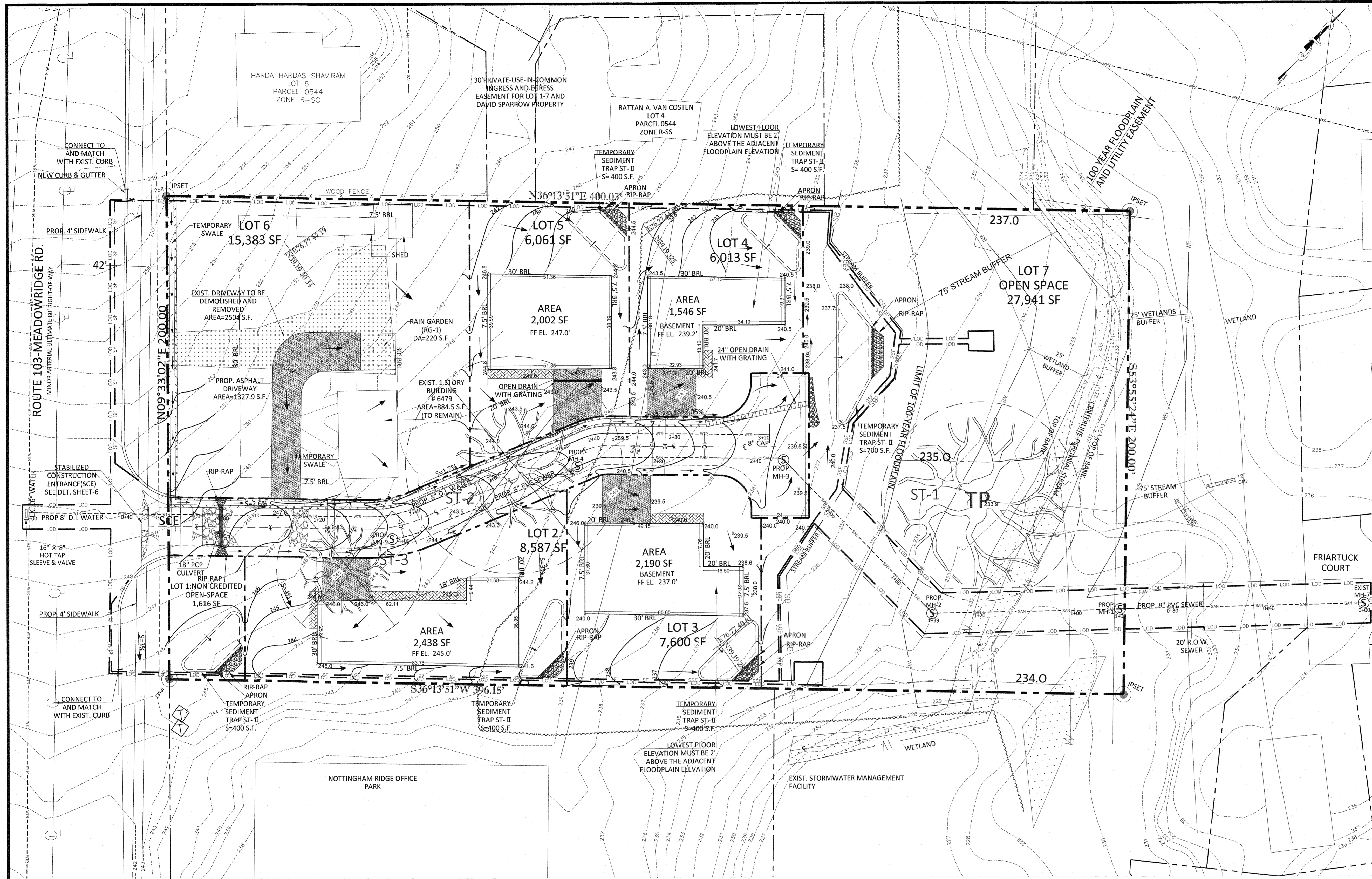
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LICENCE NO. 17356  
EXPIRATION DATE: 05/21/2023

DESIGNED: N.B.  
DRAWN: P.K.H.  
CHECKED: N.B.  
SCALE: 1"=30'

ENGINEER: NADER BAZZAZIEH  
DATE: 11.12.2021  
LIC. NO.: 17356

1 SHEET OF 5





**SEQUENCING OF CONSTRUCTION**

THE SEQUENCE OF CONSTRUCTION, AT A MINIMUM, MUST INCLUDE THE FOLLOWING:

- REQUEST FOR A PRE-CONSTRUCTION MEETING WITH THE APPROPRIATE ENFORCEMENT AUTHORITY;
- CLEARING AND GRUBBING AS NECESSARY FOR THE INSTALLATION OF PERIMETER CONTROLS;
- CONSTRUCTION AND STABILIZATION OF PERIMETER CONTROLS;
- REMAINING CLEARING AND GRUBBING WITHIN INSTALLED PERIMETER CONTROLS;
- ROAD GRADING;
- GRADING FOR THE REMAINDER OF THE SITE;
- UTILITY INSTALLATION AND CONNECTIONS TO EXISTING STRUCTURES;
- CONSTRUCTION OF BUILDINGS, ROADS, AND OTHER CONSTRUCTION;
- FINAL GRADING, LANDSCAPING, AND STABILIZATION;
- INSTALLATION OF STORMWATER MANAGEMENT MEASURES;
- APPROVAL OF THE APPROPRIATE ENFORCEMENT AUTHORITY PRIOR TO
- REMOVAL OF SEDIMENT CONTROLS; AND
- REMOVAL OF CONTROLS AND STABILIZATION OF AREAS THAT ARE DISTURBED
- BY REMOVAL OF SEDIMENT CONTROLS.

NOTE: ANY CHANGES OR REVISIONS TO THE SEQUENCE OF CONSTRUCTION MUST BE REVIEWED AND APPROVED BY THE PLAN APPROVAL AUTHORITY PRIOR TO PROCEEDING WITH CONSTRUCTION.

NEEDED COMPUTATIONS FOR VELOCITY CHECKS  
COMPUTATIONS VERIFYING NON-ERODIBLE VELOCITIES AS SHOWN BELOW ARE REQUIRED TO BE SUBMITTED WITH ALL PLANS SHOWING SWALES, EARTH DIKES OR PERIMETER DIKES SWALES EITHER PERMANENT OR TEMPORARY (PAGE B.36 AND B.37 OF THE 2011 STANDARDS AND SPECIFICATIONS)

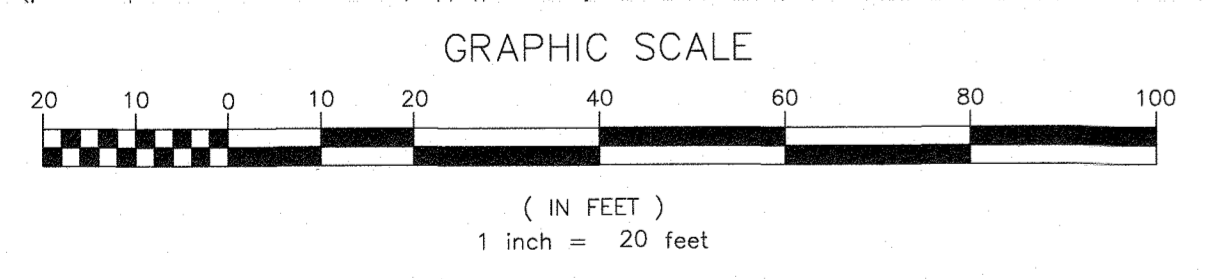
- MATTING IS REQUIRED ON PERMANENT CHANNELS WHERE THE RUNOFF VELOCITY EXCEEDS TWO AND HALF FEET PER SECOND (2.5 FPS) OR THE SHEAR STRESS EXCEEDS TWO POUNDS PER SQUARE FOOT (2 LBS/FT<sup>2</sup>).
- ON TEMPORARY CHANNELS DISCHARGING TO A SEDIMENT TRAPPING PRACTICE, PROVIDE MATTING WHERE THE RUNOFF VELOCITY EXCEEDS FOUR FEET PER SECOND (4 FPS).
- TEMPORARY SOIL STABILIZATION MATTING IS MADE WITH DEGRADABLE (LASTS)
- DRIVEWAY SHALL BE PROVIDED PRIOR TO RESIDENTIAL OCCUPANCY TO ENSURE SAFE ACCESS FOR FIRE AND EMERGENCY VEHICLES PER THE FOLLOWING MINIMUM REQUIREMENTS: STRUCTURE - CLEARANCE - 12 FEET MINIMUM.

LOT	AREA-SF
1	1616(NON-CREDITED OPEN SPACE LOT)
2	8587
3	7600
4	6013
5	6061
6	15383
7	27941

NET SITE AREA= CONSTRUCTION SITE AREA - PIPESTEM AREA  
NET SITE AREA= 4418 S.F.=1.0 ACRE  
NEW LOTS= 4.0 ACRE

**SITE ANALYSIS DATA SHEET (ACRES)**

SITE AREA	1.84
OPEN SPACE ONSITE	0.64
BUILDING COVERAGE	0.25
ZONING	R-SC
WETLANDS AND THEIR BUFFERS	0.10
STREAMBANKS AND THEIR BUFFERS	0.55
FLOODPLAIN	0.45
FOREST	1.03
STEEP SLOPES	0
FALLSINGTON SOIL (FaaA)	0.64
RUSSETT SOIL (RuB)	1.20
TOTAL DISTURBED AREA	1.36
PROPOSED USE	Single Family Development
PROPOSED IMPERVIOUS AREA	0.46



**LEGEND**

- |                     |  |                                  |  |                           |  |
|---------------------|--|----------------------------------|--|---------------------------|--|
| TREE                |  | FIRE HYDRANT                     |  | SUPER SILT FENCE          |  |
| TREE PROTECTION     |  | NON-TIDAL WETLANDS               |  | OVERHEAD UTILITY LINE     |  |
| TREE TO BE REMOVED  |  | RIP RAP                          |  | STORM DRAIN               |  |
| ST-X                |  | STABILIZED CONSTRUCTION ENTRANCE |  | BUILDING RESTRICTION LINE |  |
| GUY WIRE            |  | PROP. SPOT ELEVATION             |  | EXISTING TREES LINE       |  |
| UTILITY POLE        |  | PROPERTY LINE                    |  | STREAM BUFFER LINE        |  |
| SIGN                |  | CHAIN LINK FENCE                 |  | WETLAND BUFFER LINE       |  |
| WATER MANHOLE       |  | EX. CONTOUR                      |  | FLOOD PLAIN CROSS SECTION |  |
| SEWER MANHOLE       |  | PROP. CONTOUR                    |  | FLOW DIRECTION            |  |
| WATER VALVE / METER |  | EX. SAN. SEWER                   |  | TEMPORARY SWALE           |  |
| CENTER LINE         |  | EX. WATER MAIN                   |  |                           |  |
| STORM DRAIN MANHOLE |  | LIMIT OF DISTURBANCE             |  |                           |  |
|                     |  | SILT FENCE                       |  |                           |  |

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

*Chief Engineer*  
CHIEF, DEVELOPMENT ENGINEERING DIVISION  
DATE: 11/27/22

*Chief Engineer*  
CHIEF, DIVISION OF LAND DEVELOPMENT  
DATE: 11/16/22

NO.	REVISION	DATE

**ENVIRONMENTAL CONCEPT PLAN  
PROPOSED GRADING, EROSION  
AND SEDIMENT CONTROL PLAN**

SPARROW'S LANDING  
6479 MEADOWRIDGE ROAD ELKBRIDGE,  
HOWARD COUNTY, MD 21075

TAX MAP 0037 BLOCK 98  
PARCEL 0545  
13 TH ELECTION DISTRICT, HOWARD COUNTY, MD

ZONE: R-SC

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**PROFESSIONAL CERTIFICATION**

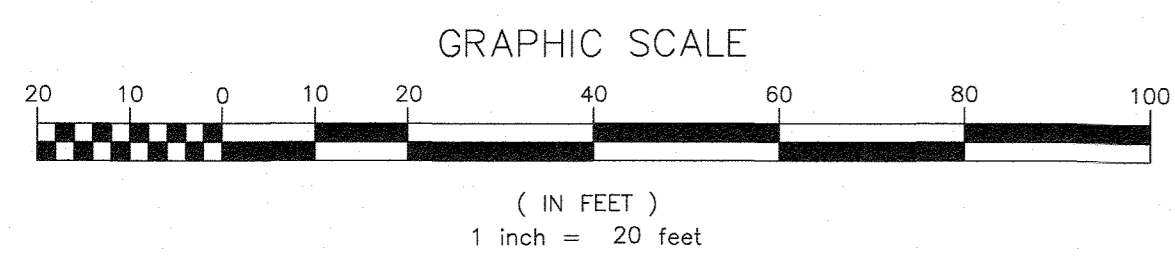
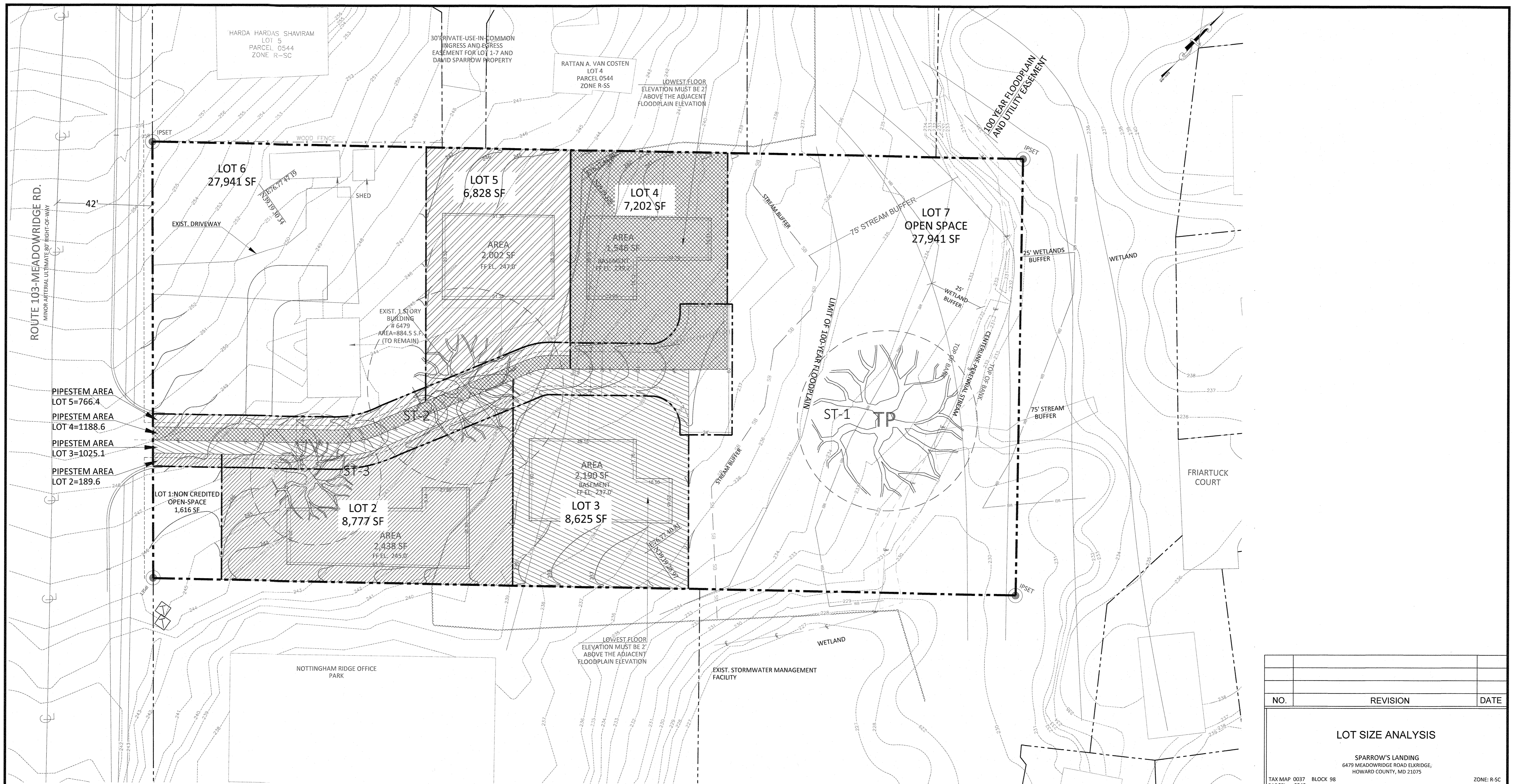
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DESIGNED: N.B.  
DRAWN: P.K.H.  
CHECKED: N.B.  
SCALE: 1"=20'

ENGINEER: NADER BAZZAZIEH  
DATE: 11/12/2021 LIC. NO. 17356

2 SHEET OF 5





**LOT SIZE SUMMARY TABLE**

LOT NO.	GROSS AREA (SF)	PIPESTEM AREA (SF)	NET AREA (SF) <sup>(2)</sup>
1	1617 <sup>(1)</sup>	NA	1617
2	8777	190	8587
3	8625	1025	7600
4	7202	1189	6013
5	6828	766	6061
6	27941 <sup>(1)</sup>	NA	27941
MAIN DRIVEWAY	7489	NA	7489

(1) Open Space  
 (2) Gross Area – Pipestem Area

NO.	REVISION	DATE

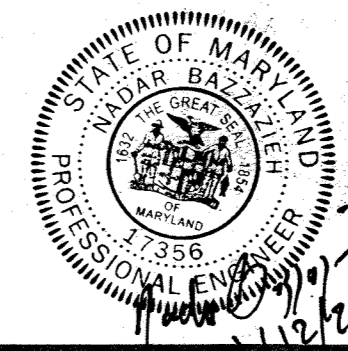
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 SPARROW'S LANDING  
 6479 MEADOWRIDGE ROAD ELKRIDGE,  
 HOWARD COUNTY, MD 21075  
 TAX MAP 0037 BLOCK 98  
 PARCEL 0545  
 15 TH ELECTION DISTRICT, HOWARD COUNTY, MD  
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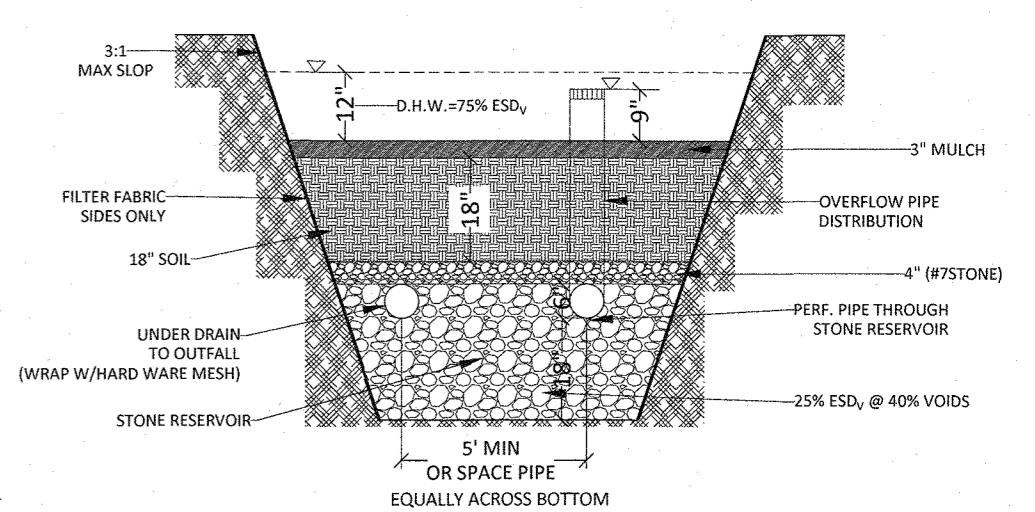
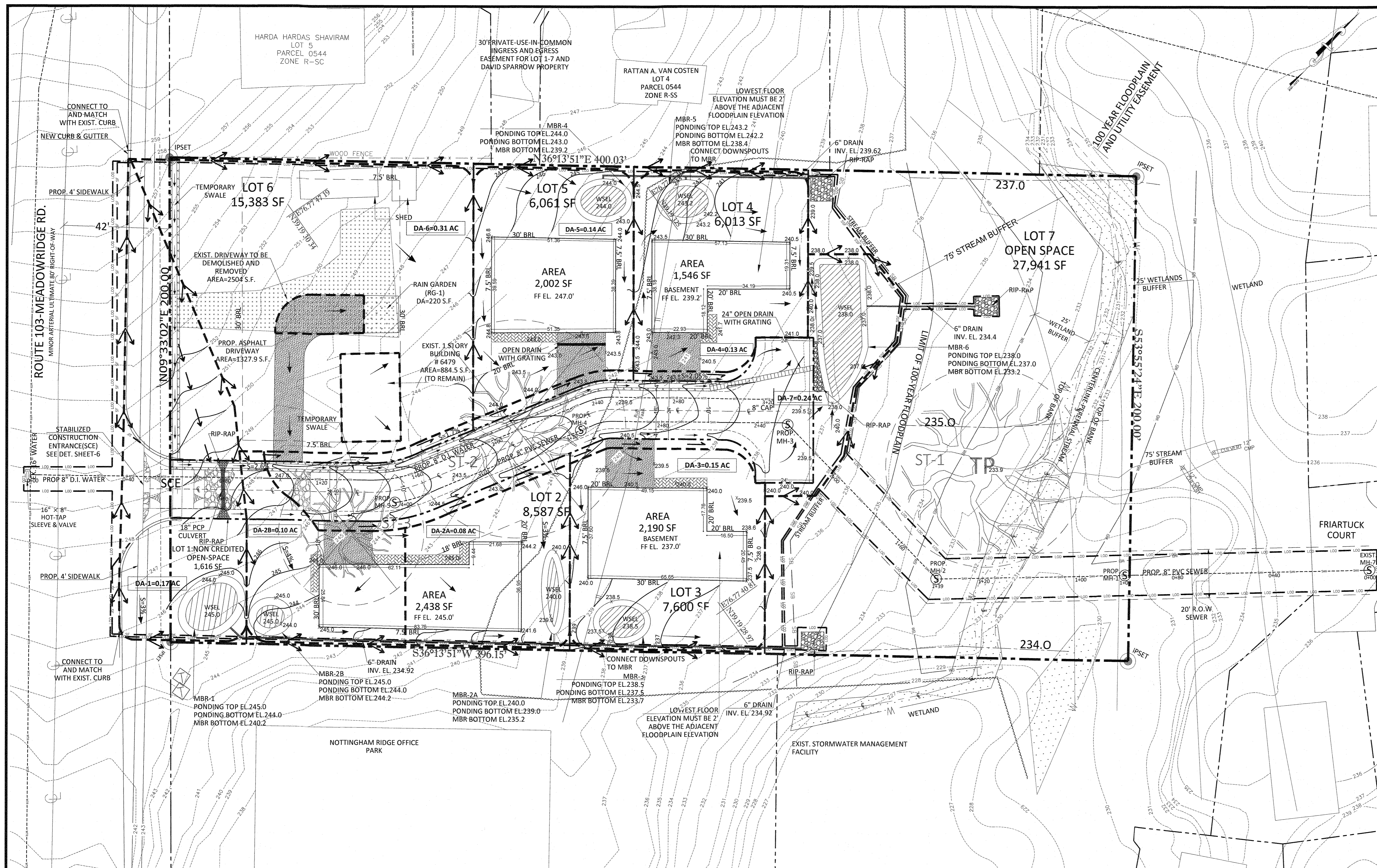
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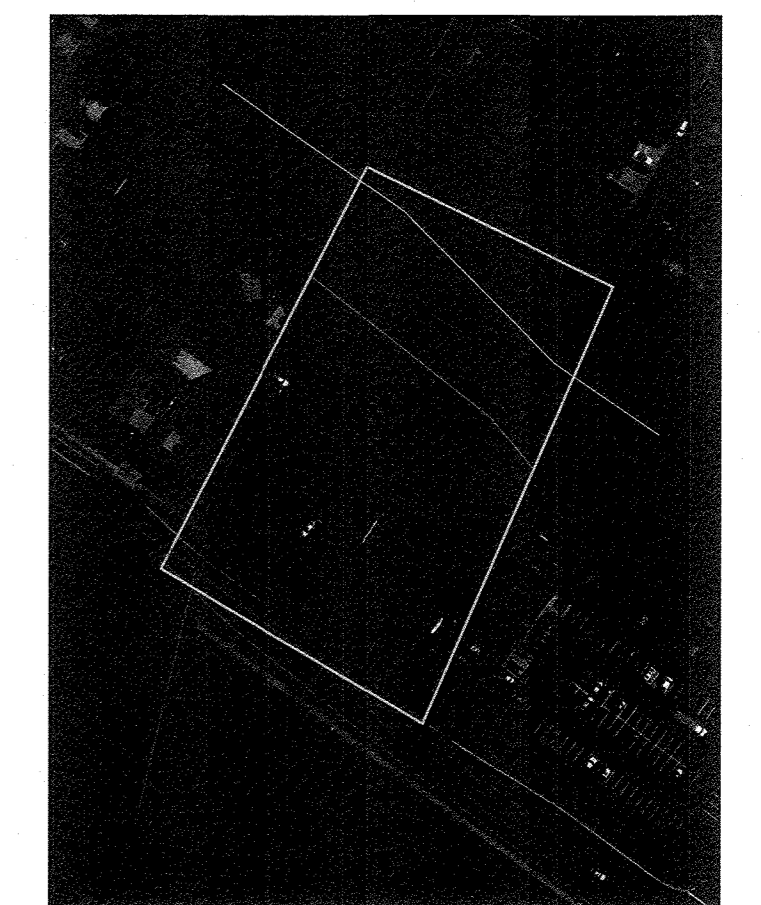
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
 DATE: 11/29/21  
  
 CHIEF, DIVISION OF LAND DEVELOPMENT  
 DATE: 11/29/21







MICROBIORETENTION DETAIL (MBR)

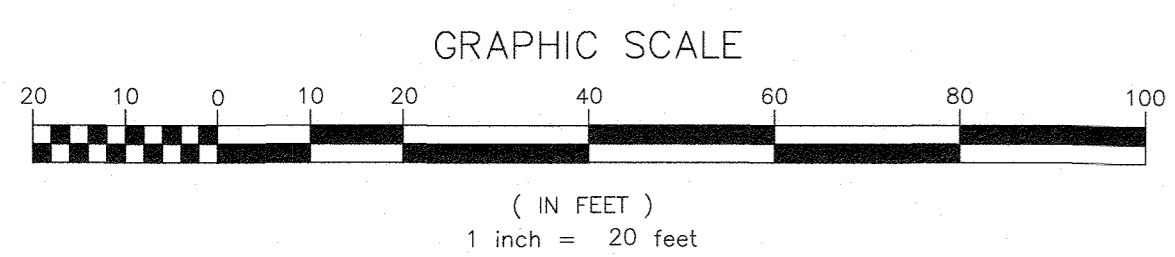


MAP UNIT SYMBOL	MAP UNIT NAME	HYDROLOGIC SOIL GROUP (HSG)	K-FACTOR
SUB	RUSSETT AND BELTSVILLE SOILS, 2 TO 3 PERCENT SLOPES	C	NA
FAAA	FALLSINGTON SANDY LOAMS, 0 TO 2 PERCENT SLOPES, NORTHERN COASTAL PLAIN	C/D	0.28

**STORMWATER CALCULATIONS SUMMARY TABLE**

Entire Project Site: 80154 sq.ft. Total Drainage Area = 49525 cu.ft.; Impervious Area: 20546 sq.ft.; Percent Imperviousness (I): 36%; P<sub>2</sub> = 1.8" (3); R<sub>s</sub> = 0.385(1); ESD<sub>s</sub> = 2749 cu.ft. (4)

Microbio-retention (MBR)	Total Drainage Area (sq.ft.)	Impervious Area (sq.ft.)	Design Bio-retention Surface Area (A <sub>f</sub> ) (sq.ft.)	PE (in/hr)	Treatment Volume, ESD <sub>s</sub> , Required (cu.ft.) (1)	Treatment Volume Achieved (cu.ft.)
MBR-1	7248	3908	450	1.8	416	537
MBR-2A	3485	1550	363	1.8	166	336
MBR-2B	4356	1560	360	1.8	165	345
MBR-3	6525	2601	363	1.8	276	288
MBR-4	5599	1923	220	1.8	205	210
MBR-5	6012	3459	276	1.8	264	275
Rain Garden	220	EXIST 864 x 0.5	Rain Garden: 210	1.8	166	166
MBR-6	16689	7003	884	1.8	674	1099
	49525	21502			2170	3246



**LEGEND**

- TREE
- TREE PROTECTION
- TREE TO BE REMOVED
- ST-X
- GUY WIRE
- UTILITY POLE
- SIGN
- WATER MANHOLE
- SEWER MANHOLE
- WATER VALVE / METER
- CENTER LINE
- STORM DRAIN MANHOLE
- FIRE HYDRANT
- NON-TIDAL WETLANDS
- RIP RAP
- STABILIZED CONSTRUCTION ENTRANCE
- PROP. SPOT ELEVATION
- PROPERTY LINE
- CHAIN LINK FENCE
- EX. CONTOUR
- PROP. CONTOUR
- EX. SAN SEWER
- EX. WATER MAIN
- LIMIT OF DISTURBANCE
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- OVERHEAD UTILITY LINE
- STORM DRAIN
- BUILDING RESTRICTION LINE
- EXISTING TREES LINE
- STREAM BUFFER LINE
- WETLAND BUFFER LINE
- DRAINAGE AREA DIVIDE
- FLOOD PLAIN CROSS SECTION
- FLOW DIRECTION
- TEMPORARY SWALE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

*Chad Clark*  
CHIEF, DEVELOPMENT ENGINEERING DIVISION

DATE: 11/29/21  
DATE: 11/16/21

NO.	REVISION	DATE

**ENVIRONMENTAL CONCEPT PLAN**  
**STORMWATER MANAGEMENT**

SPARROW'S LANDING  
6479 MEADOWRIDGE ROAD ELKBRIDGE,  
HOWARD COUNTY, MD 21075

TAX MAP 0037 BLOCK 98  
PARCEL 0545  
13 TH ELECTION DISTRICT, HOWARD COUNTY, MD

ZONE: R-5C

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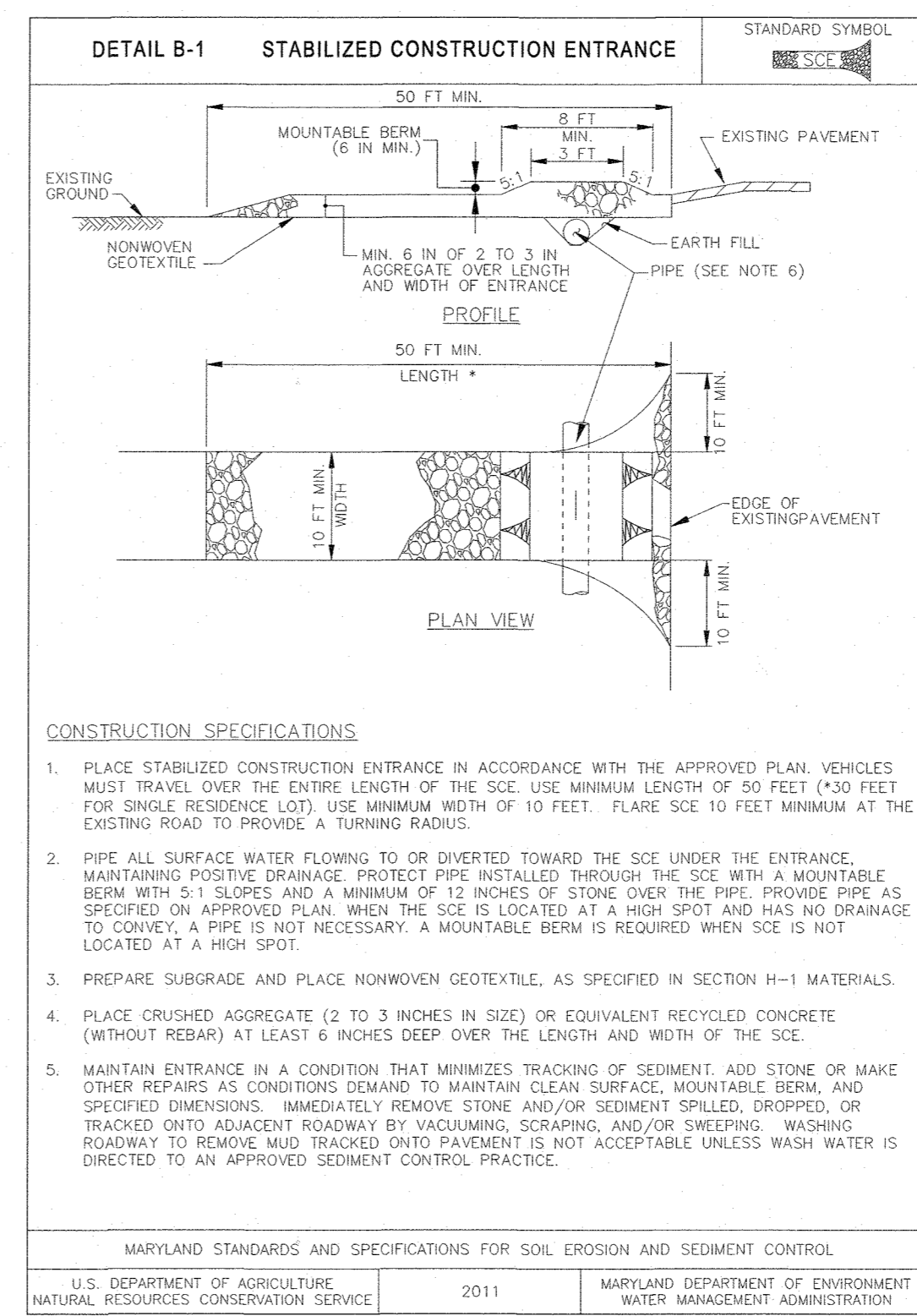
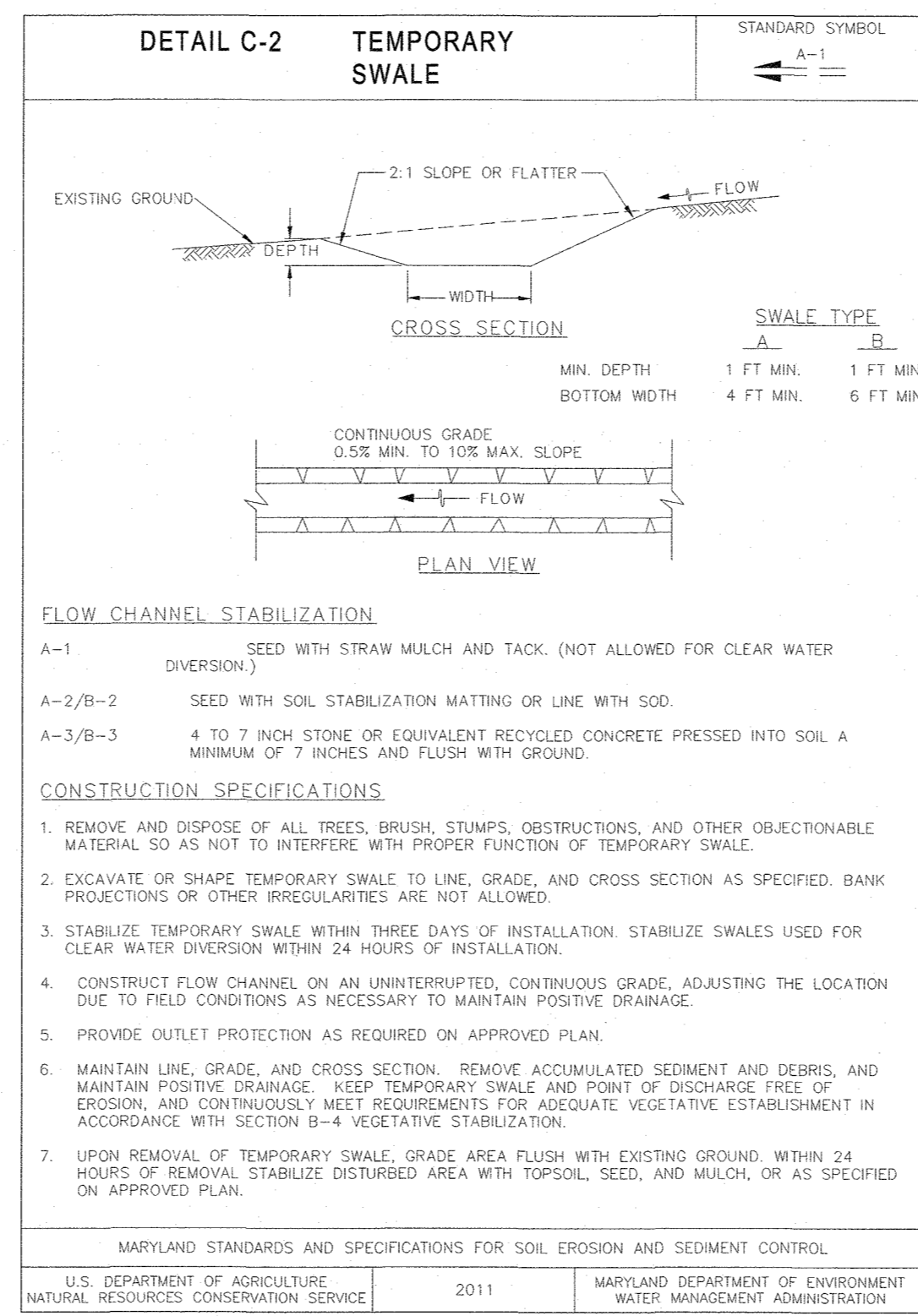
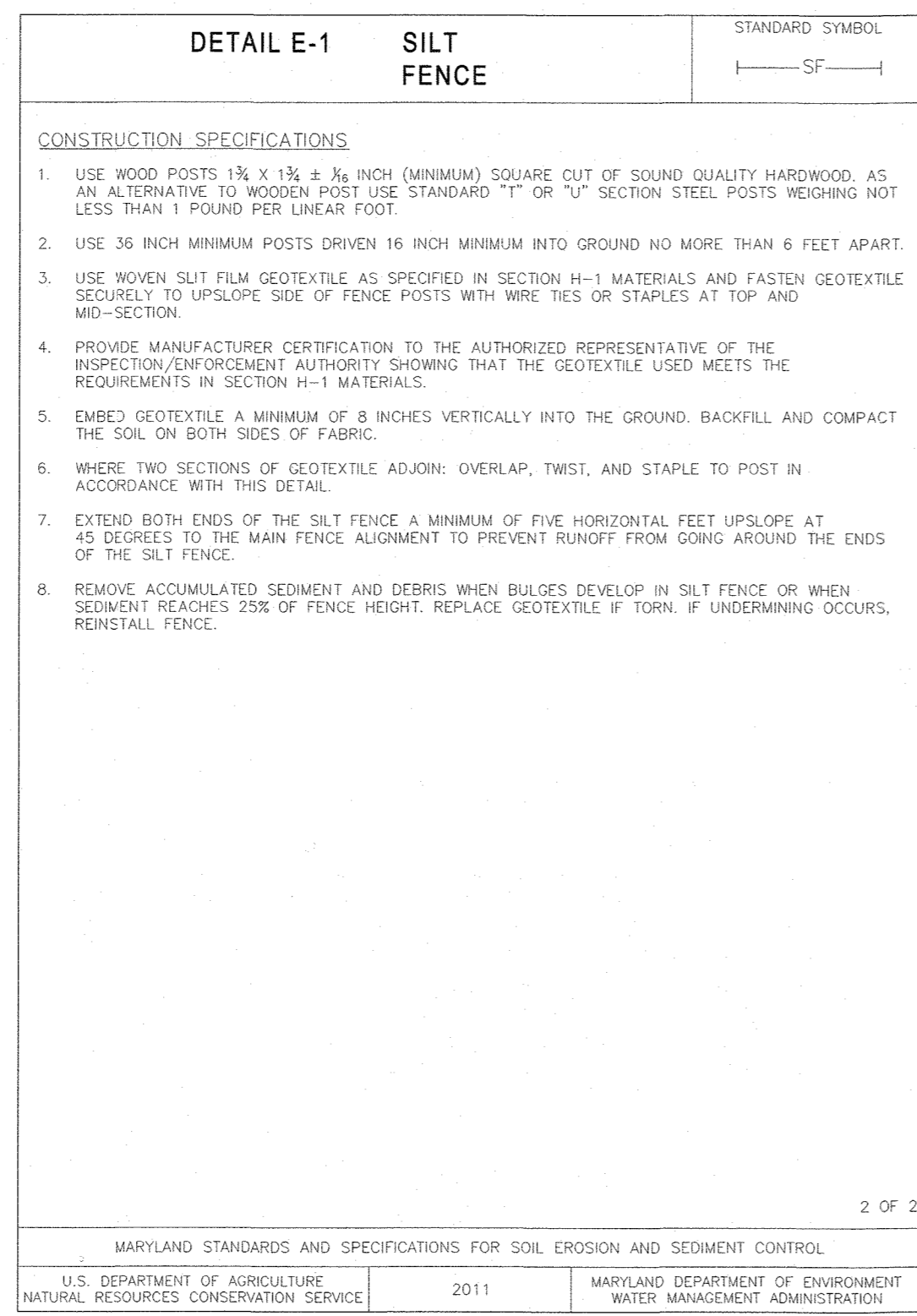
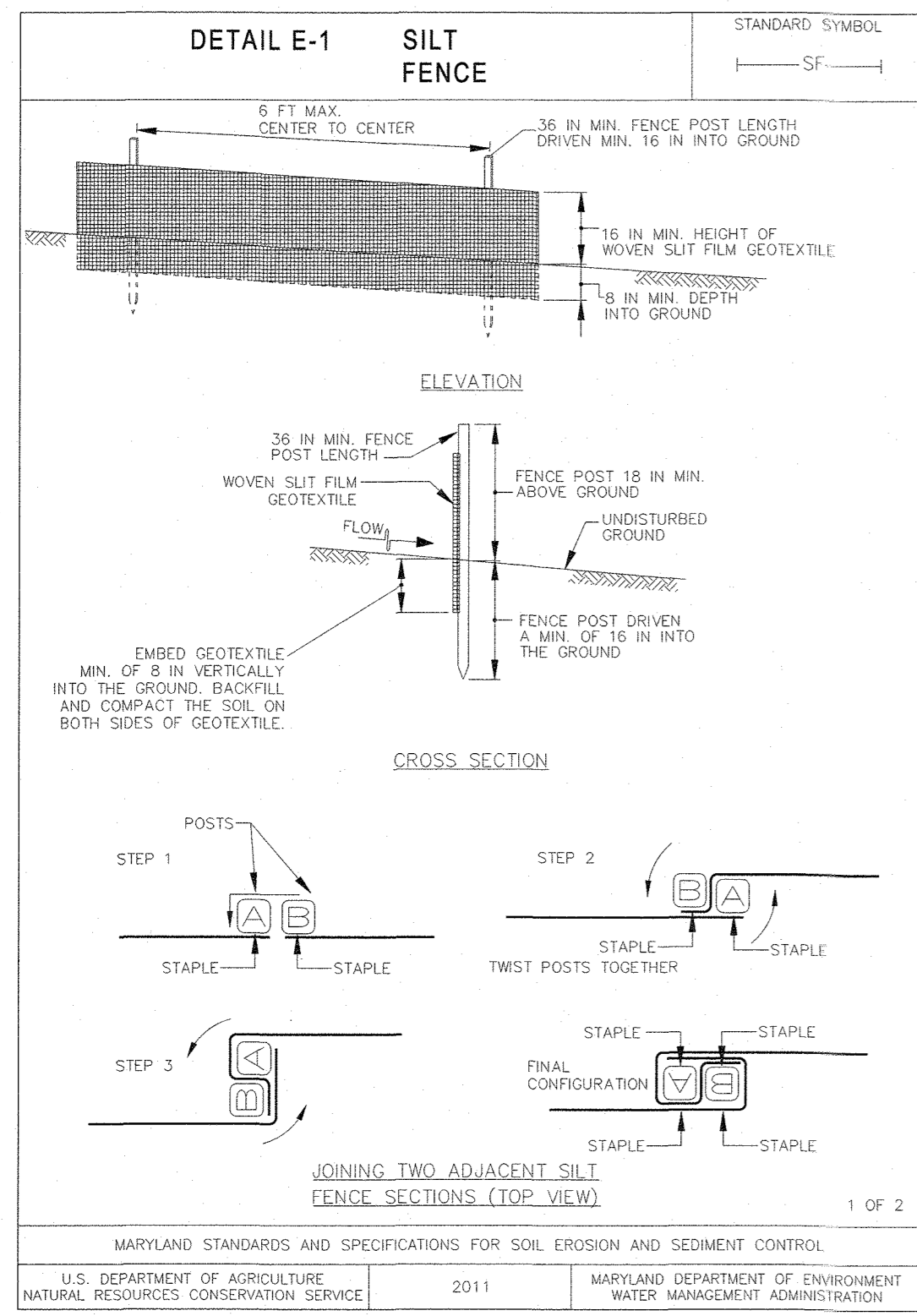
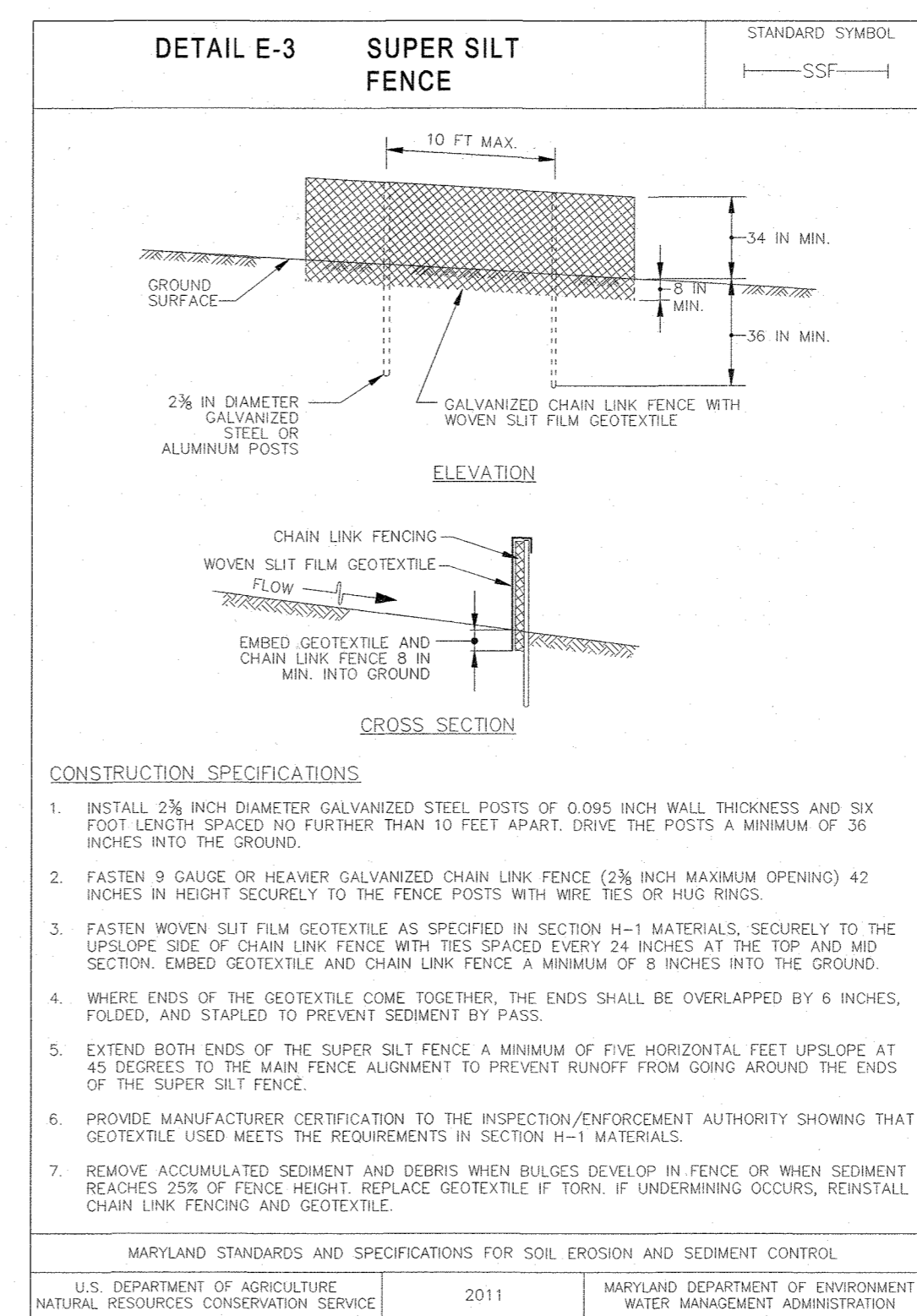
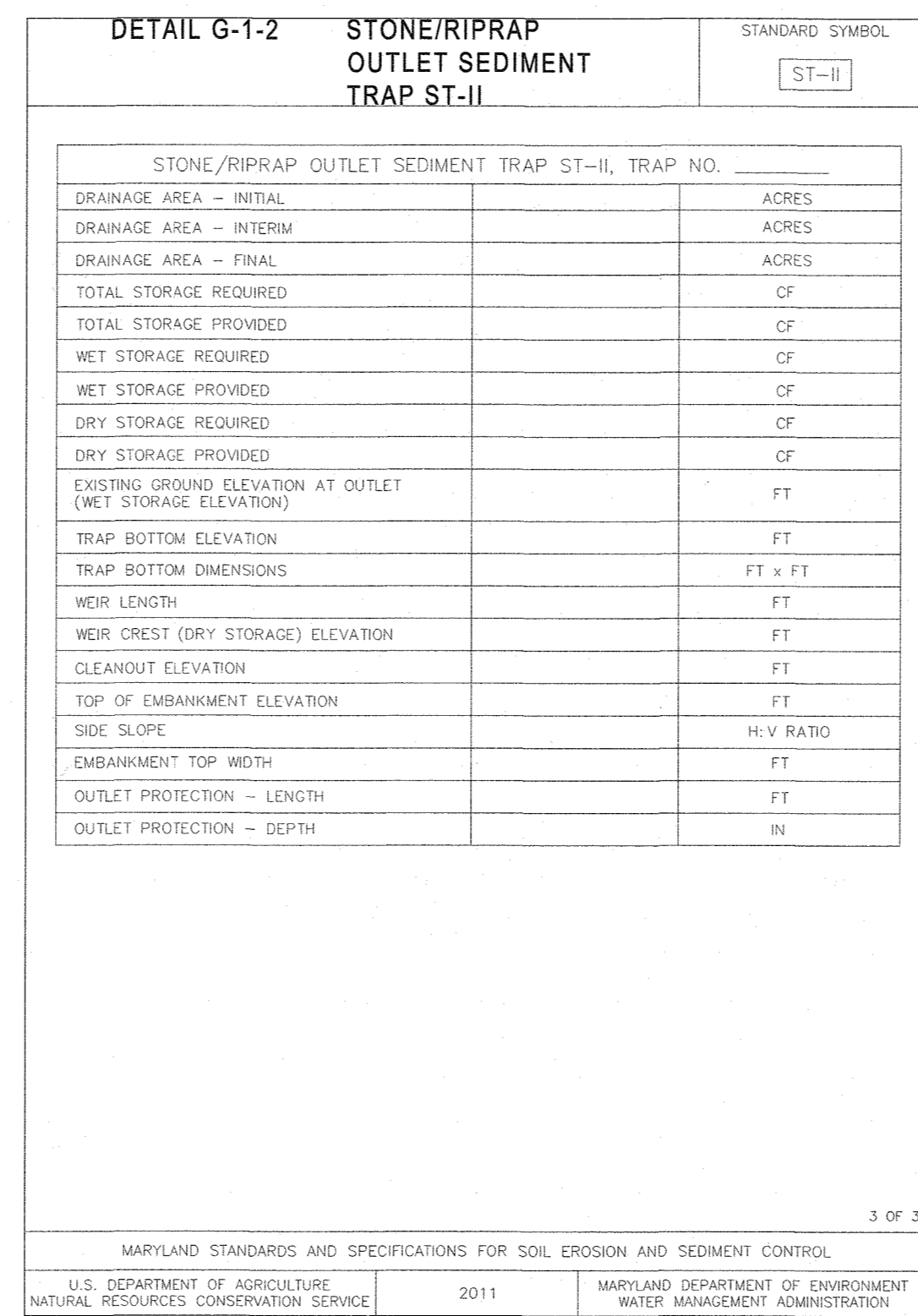
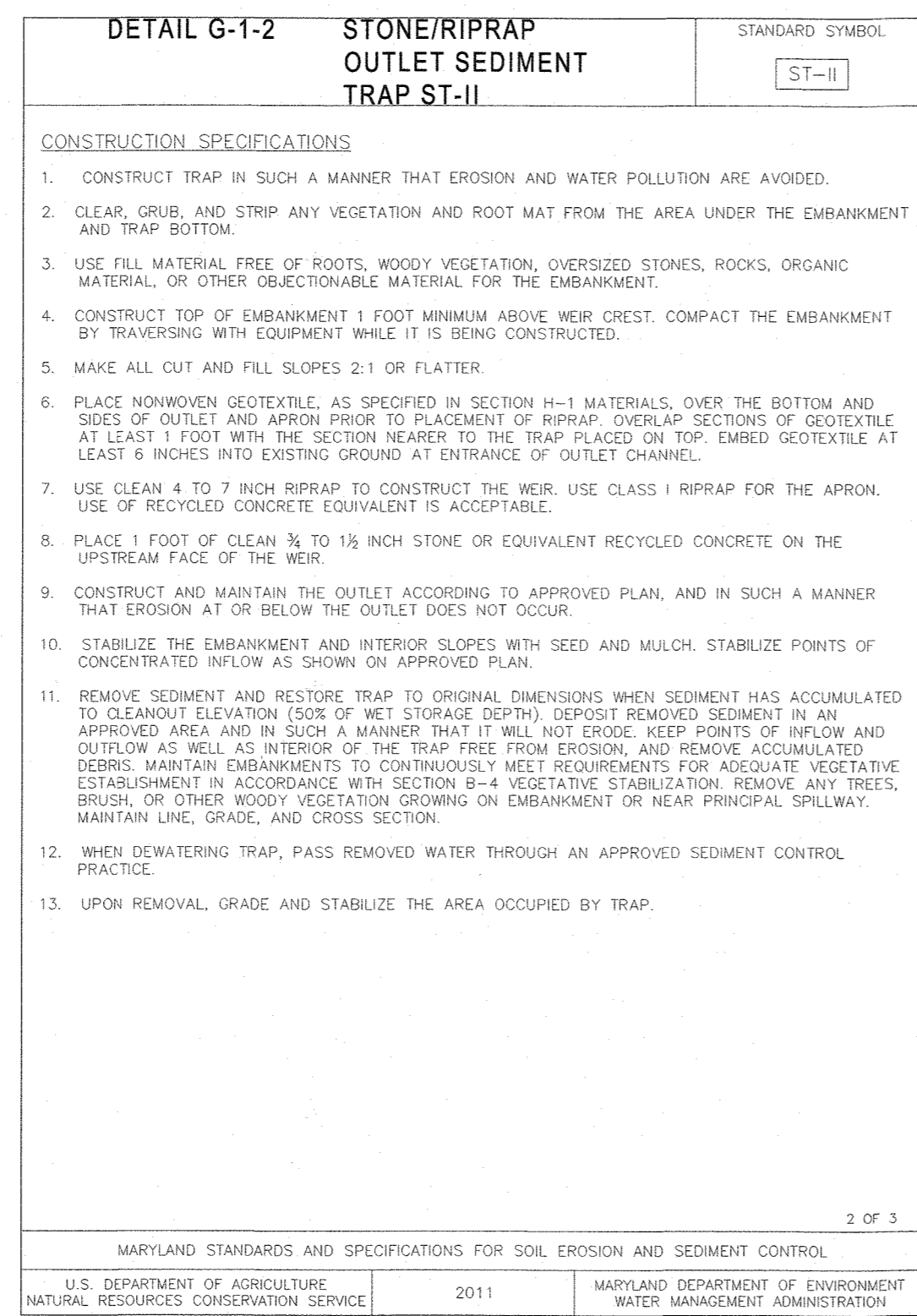
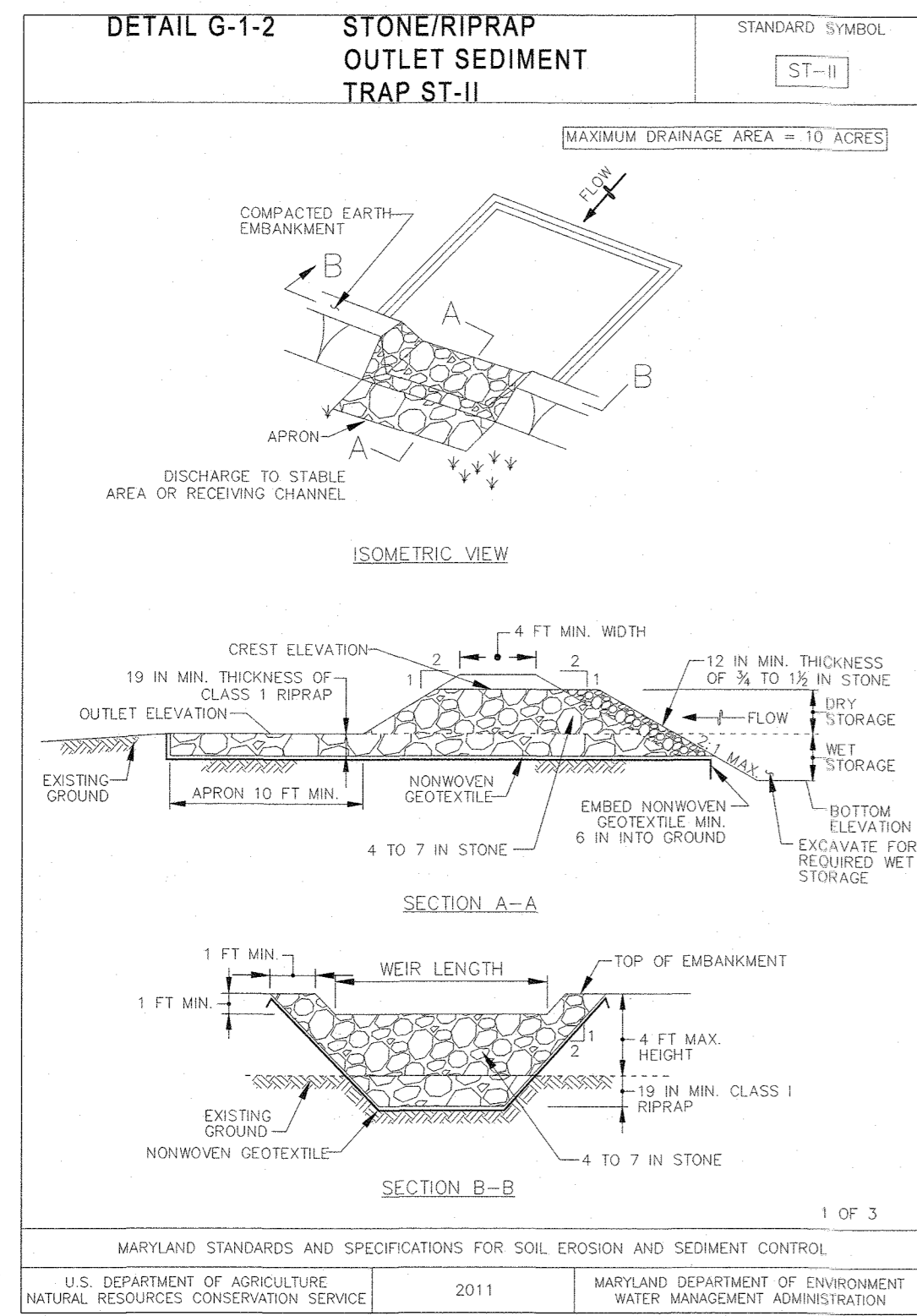
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DATE: 11.12.2021  
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4 SHEET OF 5





NO.	REVISION	DATE

**ENVIRONMENTAL CONCEPT PLAN  
STANDARD DETAILS**

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6479 MEADOWRIDGE ROAD ELKRDGE,  
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TAX MAP 0037 BLOCK 98  
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SCALE: AS SHOWN

ENGINEER: NADER BAZZAZIEH  
DATE: 11.12.2021 LIC. NO.: 17356

5 SHEETS OF 5

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

*[Signature]*  
CHIEF, DEVELOPMENT ENGINEERING DIVISION

*[Signature]*  
CHIEF, DIVISION OF LAND DEVELOPMENT

11/29/21  
DATE

11/18/21  
DATE