#### SHEET INDEX DESCRIPTION **DESCRIPTION** COVER SHEET 9 PRELIMINARY LANDSCAPE NOTES AND DETAILS 10 PRELIMINARY FOREST CONSERVATION PLAN OVERALL PLAN PRELIMINARY EQUIVALENT SKETCH PLAN 11 PRELIMINARY FOREST CONSERVATION NOTES, AND DETAILS / GENERAL NOTES PRELIMINARY GRADING, SEDIMENT CONTROL, AND SOILS PLAN 13 PRELIMINARY ROAD PROFILES PRELIMINARY STORMWATER MANAGEMENT PLAN 14 BORING LOGS I STORMWATER MANAGEMENT DRAINAGE AREA MAR PRELIMINARY STORMWATER MANAGEMENT DETAILS 15 BORING LOGS PRELIMINARY LANDSCAPE PLAN

#### GENERAL NOTES

I. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOL, IV "STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION" 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 FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK.

3. THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AY LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.

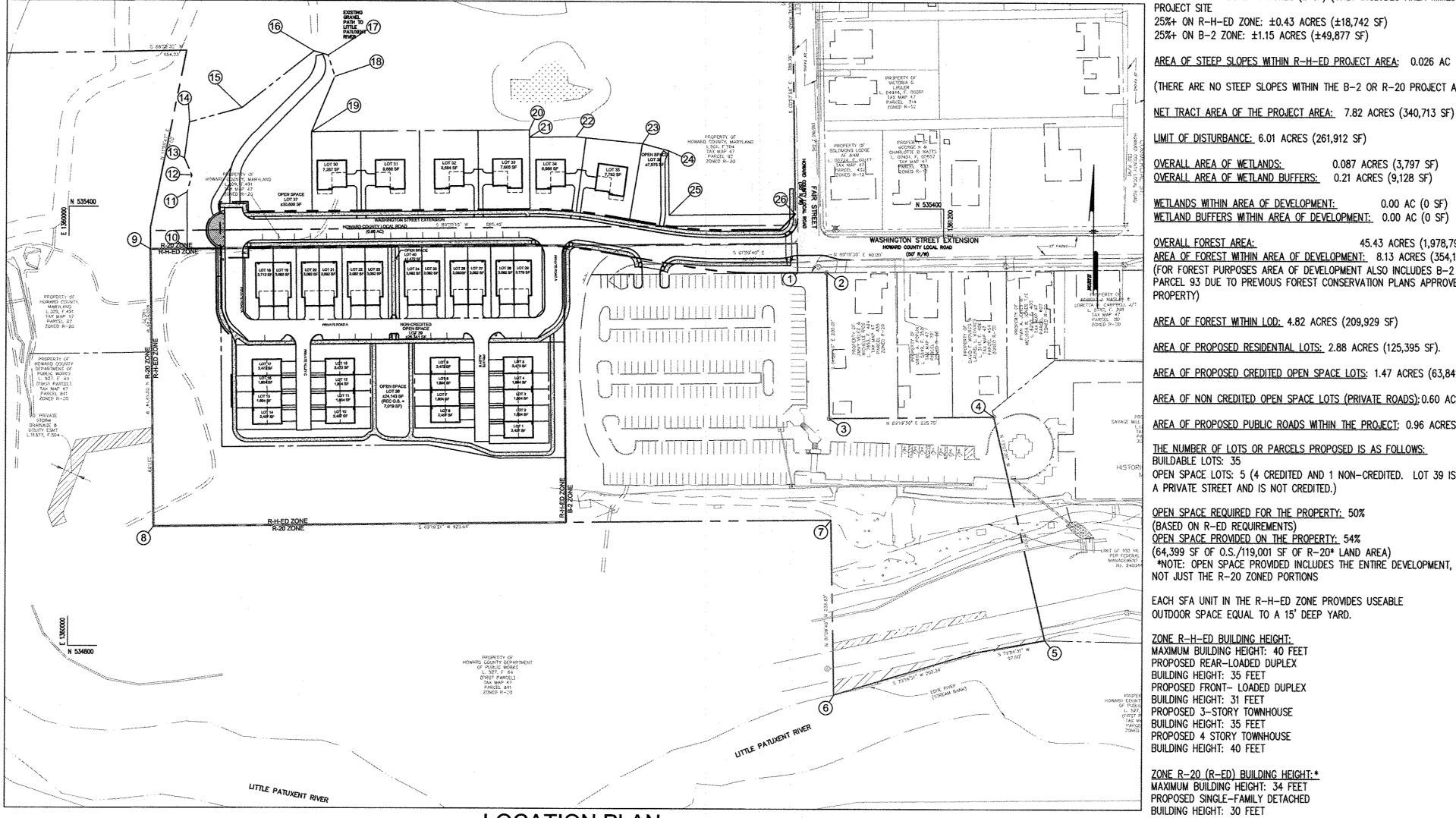
- THE R1-1 ("STOP") SIGN AND THE STREET NAME SIGN (SNS) ASSEMBLY FOR THIS DEVELOPMENT MUST E INSTALLED BEFORE THE BASE PAVING IS COMPLETED.
- THE TRAFFIC CONTROL DEVICE LOCATIONS SHOWN ON THE PLANS ARE APPROXIMATE AND MUST BE FIELD APPROVED BY HOWARD COUNTY TRAFFIC DIVISION (410-313-2430) PRIOR TO THE INSTALLATION OF ANY
- ALL TRAFFIC CONTROL DEVICES AND THEIR LOCATIONS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF HE "MARYLAND MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MDMUTCD)
- 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.
- 5. STREET LIGHT PLACEMENT AND THE TYPE OF FIXTURES AND POLES SHALL BE IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOLUME III (2006), SECTION 5.5.A. A MINIMUM OF 20' SHALL BE MAINTAINED BETWEEN ANY STREET LIGHT AND ANY TREE. STREET LIGHTS SHALL BE LED-100 COLONIAL POST-TOP FIXTURE MOUNTED ON A 14' BLACK FIBERGLASS POLE.
- . THE EXISTING TOPOGRAPHY IS PROVIDED BY PENNONI ASSOCIATES, INC., DATED NOVEMBER 28, 2006, AND APRIL 2015, AND HAS BEEN SUPPLEMENTED BY COUNTY GIS INFORMATION.
- THE BOUNDARY SURVEY IS PROVIDED BY PENNONI ASSOCIATES, INC., DATED DECEMBER 5, 2006, AND MARCH 2015. AND HAS BEEN SUPPLEMENTED BY COUNTY GIS INFORMATION.
- 3. 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. 47EC AND 47FB WERE USED FOR THIS PROJECT.
- 9. WATER IS PUBLIC. CONTRACT 24-4968-D.
- O. SEWER IS PUBLIC. CONTRACT 24-4968-D.
- 1. Stormwater management for this project is provided by Micro-Bioretention facilities, a BIORETENTION FACILITY AND PERVIOUS PAVEMENT, ALL STORMWATER MANAGEMENT FACILITIES ARE PRIVATELY OWNED AND MAINTAINED BY THE DEVELOPER UNTIL THE HOA ASSUMES RESPONSIBILITY.
- 2. APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED DUE TO CONTRACTOR'S OPERATION SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE. EXISTING UTILITIES ARE SHOWN BASED ON THE BEST AVAILABLE INFORMATION.
- 3. ACCORDING TO THE WETLAND DELINEATION REPORT DATED JUNE 2015, WETLANDS ARE FOUND ON PARCEL 92 AT THE NORTHERN LIMITS OF THE LIMIT OF DISTURBANCE. A REVIEW OF EXISTING RECORDS DID NOT INDICATE ANY WETLANDS FOR THE REMAINDER OF THE PROPERTY. NONE OF THE WETLANDS SHOWN ARE LOCATED WITHIN THE LIMITS OF DISTURBANCE FOR THIS PROJECT.
- 14. THE TRAFFIC STUDY FOR THIS PROJECT WAS PREPARED BY PENNONI, DATED MARCH 3, 2016, AND WAS APPROVED ON MAY 25, 2016.
- 15. NO NOISE STUDY IS REQUIRED FOR THIS PROJECT,
- 6. SUBJECT PROPERTY ZONED R-H-ED, R-20, AND B-2 PER THE OCTOBER 6, 2013 COMPREHENSIVE ZONING PLAN.
- 7. ALL ELEVATIONS SHOWN ARE BASED ON THE U.S.C. AND G.S. MEAN SEA LEVEL DATUM. 1929.
- 8. APPLICABLE HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING FILE REFERENCES ARE: SDP-85-146, SDP-80-155, SDP-85-31, SDP-85-51, SDP-90-191, WP-02-16, WP-07-105. BA-07-01, BA-07-17V, AA-07-05, SDP-07-076, ECP-14-029, ECP-15-053, WP-17-002, AND PB 424.
- 9. THE CONTRACTOR SHALL TEST PIT EXISTING UTILITIES AT LEAST (5) DAYS BEFORE STARTING WORK SHOWN ON THESE DRAWINGS.
- 20. CONTRACTOR IS SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, PROCEDURES, AND SAFETY PRECAUTIONS AND PROGRAMS.
- 21. NO PIPE SHALL BE LAID UNTIL LINES OF EXCAVATION HAVE BEEN BROUGHT WITHIN 6" OF FINISHED GRADE.
- 22. DESIGNED TRAFFIC SPEED IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL VOL. III. ALL 40' AND 50' RIGHT OF WAYS 25 M.P.H.
- 23. ALL STREET CURB RETURNS SHALL HAVE 25' RADII UNLESS OTHERWISE NOTED. 24. THERE ARE NO EXISTING STRUCTURES LOCATED ON THE PROPERTY.
- 25. NO CLEARING, GRADING, REMOVAL OF VEGETATIVE COVER TREES, PAVING, OR NEW STRUCTURES SHALL BE PERMITTED WITHIN THE LIMITS OF WETLANDS, STREAMS, THEIR REQUIRED BUFFERS, FLOODPLAIN OR FOREST CONSERVATION EASEMENT AREAS.
- 26. BASED ON AVAILABLE COUNTY MAPS AND RECORDS, THERE ARE NO HISTORIC STRUCTURES OR KNOWN CEMETERIES LOCATED ON THE SUBJECT PROPERTY.
- 27. THIS PROJECT COMPLIES WITH THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE FOR FOREST CONSERVATION WITH AN OBLIGATION OF 1.16 ACRES PROVIDED BY 2.54 ACRES OF ON-SITE RETENTION. 0.95 ACRES OF ON AND OFFSITE PLANTING AND 0.23 ACRES OF OFF-SITE RETENTION. THE LOCATION FOR OFFSITE PLANTING IS IN THE ADJACENT SAVAGE PARK, IMMEDIATELY ABUTTING THIS PROJECT AND ITS LIMITS OF DISTURBANCE.
- 28. THE GEOTECHNICAL REPORT FOR THIS PROJECT WAS PREPARED BY ECS, LLC MID-ATLANTIC, DATED APRIL 16, 2007, AND WAS SUPPLEMENTED BY A REPORT PREPARED BY PENNONI ON AUGUST 27, 2015.
- 29. LANDSCAPING AND STREET TREES FOR THIS SUBDIVISION WILL BE PROVIDED ON THE FINAL PLANS IN ACCORDANCE WITH SECTION 16.124 OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS AND THE HOWARD COUNTY LANDSCAPE MANUAL.
- 30. This project is subject to the amended fifth edition of the subdivision and land development REGULATIONS PER COUNCIL BILL NO. 45-2003 AND THE AMENDED ZONING REGULATIONS PER COUNCIL BILL NO. 75-2003. DEVELOPMENT OR CONSTRUCTION ON THESE LOTS/PARCELS MUST COMPLY WITH SETBACK AND BUFFER REGULATIONS IN EFFECT AT THE TIME OF SUBMISSION OF THE BUILDING/GRADING PERMIT APPLICATIONS.

#### SEE SHEET 9 FOR ADDITIONAL NOTES

## PRELIMINARY EQUIVALENT SKETCH PLAN

# THE SETTLEMENT AT SAVAGE MILL

LOTS 1-35 **OPEN SPACE LOTS 36-40** 



**LOCATION PLAN** SCALE: 1" = 100'

PARKING REQUIRED: 2 SPACES PER DWELLING UNIT 35 X 2.0 = 70 SPACES REQUIRED 70 SPACES PROVIDED IN UNIT GARAGES

VISITOR PARKING REQUIRED 0.50 SPACES PER DWELLING UNIT  $35 \times 0.50 = 17.5 = 18 \text{ SPACES REQUIRED}$ 

TOTAL REQUIRED PARKING: 88 SPACES

TOTAL PROPOSED PARKING: 70 GARAGE SPACES + 12 PRIVATE STREET SPACES + 16 PUBLIC STREET SPACES + 6 SFD DRIVEWAY SPACES + 58 SFA/DUPLEX SPACES = 162 SPACES. (NOTE: THE EXISTING SAVAGE MILL PARKING LOT WILL NOT BE USED FOR RESIDENTIAL PARKING PURPOSES.)

R-H-ED BUILDING TO BUILDING SETBACKS

FACE TO FACE PROVIDED: 104' FACE OR REAR TO SIDE REQUIRED: 30'

FACE TO FACE REQUIRED: 30'

FACE OR REAR TO SIDE PROVIDED: 72' SIDE TO SIDE REQUIRED: 15'

SIDE TO SIDE PROVIDED: 15' REAR TO REAR REQUIRED: 60' REAR TO REAR PROVIDED. 60'

REAR TO FACE REQUIRED: 100' REAR TO FACE PROVIDED: N/A

MAXIMUM BUILDING LENGTH: PERMITTED: 120'

PROVIDED: 111'

PERMITTED: 8

PROVIDED: 5

MAXIMUM UNITS PER STRUCTURE (SFA):

RECREATIONAL OPEN SPACE REQUIREMENTS REQUIRED:

R/20/R-ED ZONE: 300 SF/UNIT: 1,800 SF (6 UNITS X 300 SF = 1,800 SF)R-H-ED: USEABLE OUTDOOR SPACE EQUAL

A) 29 UNITS WITH 20'+ FRONT YARDS

C) WALKWAYS AND TRAILS THROUGHOUT DEVELOPMENT

D) TRAILHEAD FOR SAVAGE PARK

APPROVED PLANNING BOARD

TO A 15 DEEP YARD FOR 29 ATTACHED UNITS PROVIDED:

B) 7,019 SF OF OPEN LAWN AND LANDSCAPE AREA (WITHIN OPEN SPACE LOT 36)

of HOWARD COUNTY

	<del></del>	·		<u> </u>				
LOT	GROSS	PIPESTEM	MINIMUM	LOT	LOT	GROSS	PIPESTEM	MINIMUM
NO.	AREA (SF)	AREA (SF)	LOT SIZE (SF)	COVERAGE(%)	NO.	AREA (SF)	AREA (SF)	LOT SIZE (SF)
1	2,457	-	2,457	37%	34	6,986	<b></b>	6,986
2	1,804	•	1,804	50%	35	7,782	-	7,782
3	1,804	-	1,804	50%	36	30,809	-	30,809
4	1,804	-	1,804	50%	37	24,143	. =	24,143
5	3,472		3,472	26%	38	7,975	-	7,975
6	2,457	-	2,457	37%	39	26,341	+	26,341
7	1,804	-	1,804	50%	40	1,472	-	1,472
8	1,804	-	1,804	50%				*
9	3,472	<del></del>	3,472	26%	1			
10	2,457	-	2,457	37%	<b>1</b> .			
11	1,804	-	1,804	50%				
12	1,804	<b>-</b>	1,804	50%				
13	3,472		3,472	26%				
14	2,457	-	2,457	37%	<b>.</b>			
15	1,804	₩ .	1,804	50%				
16	1,804	- :	1,804	50%				
17	3,472	<del>-</del>	3,472	26%	ľ			
18	3,712	-	3,712	38%		LOT SIZE:		
19	3,092	<b></b>	3,092	46%	1	R-H-ED:		
20	3,092		3,092	46%		MINIMUM SF	D LOT SIZE A	LLOWED: 6,000
21	3,092	<b>-</b>	3,092	46%		MAXIMUM S	FD LOT SIZE I	PROPOSED: N/A
22	3,092	-	3,092	46%		R-20(R-ED		1101 0020. 11711
23	3,092	-	3,092	46%	ŀ			ED. C 000 CE
24	3,092		3,092	46%				/ED: 6,000 SF
25	3,092	<b>=</b> :	3,092	46%		MAXIMUM L	JI SIZE PROP	OSED: 8,688 SF
26	3,092	<b>u</b> . :	3,092	46%				
27	3,092	*	3,092	46%		* R-ED RE	GULATIONS AR	re used in this
28	3,092	+	3,092	46%		TO PROPOS	ed density t	RANSFER.
29	3,779	- :	3,779	37%		£	~=	
30	7,287	-	7,287	23%		SEE ST	EET O CENEE	RAL NOTE #35 F
31	8 688		0 600	200/		SEE SE	LLI J. ULIVER	INC NOIE #30 F

LOT LOT SIZE (SF) COVERAGE (%)

MINIMUM LOT SIZE CHART

ALLOWED: 6,000 SF PROPOSED: N/A

POSED: 8,688 SF ARE USED IN THIS AREA DUE TRANSFER.

RAL NOTE #35 FOR INFORMATION ON THE LAND SWAP.

SITE ANALYSIS DATA EXISTING ZONING:

R-H-ED (RESIDENTIAL) 4.95 ACRES (215,863 SF) R-20 (RESIDENTIAL: SINGLE) 2.73 ACRES (119,001 SF) B-2 (BUSINESS GENERAL)

5.11 ACRES (222,736 SF)

GROSS AREA OF SITE:

COUNTY R/W: 0.51 ACRES (22,069 SF) 63.68 ACRES (2,773,900.8 SF) 10.06 ACRES (438,214 SF) TOTAL AREA: 74.25 ACRES (3,234,183.8 SF)

AREA OF DEVELOPMENT (PROJECT AREA = B-2, R-20, AND R-H-ED ZONING): 7.85 ACRES (341,852 SF)

(5.12 AC OF PARCEL 93 + 2.73 AC OF PARCEL 92)

GROSS TRACT AREA OF DEVELOPMENT: 7.85 AC (341,852 SF)

OVERALL AREA OF FLOODPLAIN (WITHIN GROSS AREA OF SITE): 5.26 ACRES (229,165 SF) (THERE IS NO FLOODPLAIN LOCATED WITHIN PROJECT AREA)

AREA OF STEEP SLOPES WITHIN GROSS AREA OF SITE: 15%-25% ±0.55 ACRES (±23,866 SF) 25%+: ±1.58 ACRES (±68,619 SF)

25%+ ON R-20 ZONE: O ACRES (O SF) (ONLY INCLUDES AREA IMMEDIATELY ADJACENT TO

25%+ ON R-H-ED ZONE: ±0.43 ACRES (±18,742 SF) 25%+ ON B-2 ZONE: ±1.15 ACRES (±49,877 SF)

AREA OF STEEP SLOPES WITHIN R-H-ED PROJECT AREA: 0.026 AC (1,139 SF)

(THERE ARE NO STEEP SLOPES WITHIN THE B-2 OR R-20 PROJECT AREA)

LIMIT OF DISTURBANCE: 6.01 ACRES (261,912 SF)

OVERALL AREA OF WETLANDS: 0.087 ACRES (3,797 SF) OVERALL AREA OF WETLAND BUFFERS: 0.21 ACRES (9,128 SF)

WETLANDS WITHIN AREA OF DEVELOPMENT: 0.00 AC (0 SF) WETLAND BUFFERS WITHIN AREA OF DEVELOPMENT: 0.00 AC (0 SF)

45.43 ACRES (1,978,795 SF) AREA OF FOREST WITHIN AREA OF DEVELOPMENT: 8.13 ACRES (354,132 SF) (FOR FOREST PURPOSES AREA OF DEVELOPMENT ALSO INCLUDES B-2 ZONED PORTION OF PARCEL 93 DUE TO PREVIOUS FOREST CONSERVATION PLANS APPROVED FOR THIS PROPERTY)

AREA OF FOREST WITHIN LOD: 4.82 ACRES (209,929 SF)

AREA OF PROPOSED RESIDENTIAL LOTS: 2.88 ACRES (125,395 SF).

AREA OF PROPOSED CREDITED OPEN SPACE LOTS: 1.47 ACRES (63,841 SF)

AREA OF NON CREDITED OPEN SPACE LOTS (PRIVATE ROADS): 0.60 ACRES (26,341 SF)

AREA OF PROPOSED PUBLIC ROADS WITHIN THE PROJECT: 0.96 ACRES (41,996 SF). THE NUMBER OF LOTS OR PARCELS PROPOSED IS AS FOLLOWS:

OPEN SPACE LOTS: 5 (4 CREDITED AND 1 NON-CREDITED. LOT 39 IS A PRIVATE STREET AND IS NOT CREDITED.) OPEN SPACE REQUIRED FOR THE PROPERTY: 50% (BASED ON R-ED REQUIREMENTS) OPEN SPACE PROVIDED ON THE PROPERTY: 54%

(64,399 SF OF O.S./119.001 SF OF R-20\* LAND AREA) \*NOTE: OPEN SPACE PROVIDED INCLUDES THE ENTIRE DEVELOPMENT. NOT JUST THE R-20 ZONED PORTIONS

EACH SFA UNIT IN THE R-H-ED ZONE PROVIDES USEABLE OUTDOOR SPACE EQUAL TO A 15' DEEP YARD.

ZONE R-H-ED BUILDING HEIGHT: MAXIMUM BUILDING HEIGHT: 40 FEET PROPOSED REAR-LOADED DUPLEX BUILDING HEIGHT: 35 FEET PROPOSED FRONT- LOADED DUPLEX BUILDING HEIGHT: 31 FEET PROPOSED 3-STORY TOWNHOUSE BUILDING HEIGHT: 35 FEET PROPOSED 4 STORY TOWNHOUSE BUILDING HEIGHT: 40 FEET

ZONE R-20 (R-ED) BUILDING HEIGHT: \* MAXIMUM BUILDING HEIGHT: 34 FEET PROPOSED SINGLE-FAMILY DETACHED BUILDING HEIGHT: 30 FEET

ZONE B-2 SETBACKS: PUBLIC RIGHT-OF-WAY: 30 FEET RESIDENTIAL DISTRICT: 30 FEET PARKING USES: 10 FEET

ZONE R-H-ED SETBACKS: SFA FRONT OR SIDE: 20 FEET SFA FRONT OR SIDE W/DETACHED GARAGE: 20 FEET - SFA FRONT OR SIDE W/OUT DETACHED GARAGE: 15 FEET REAR TO PUBLIC STREET: 40 FEET REAR TO PRIVATE STREET: 20 FEET REAR TO INTERNAL ALLEY: 5 FEET

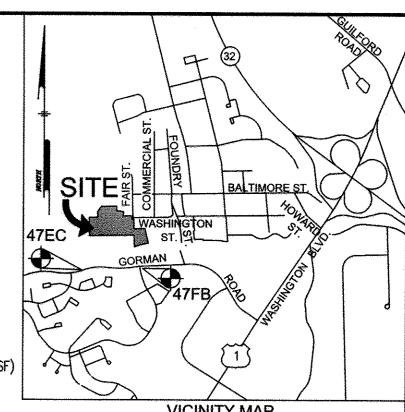
<u>ZONE R-20 (R-ED) SETBACKS (FROM LOT LINES):\*</u> SIDE: 7.5 FEET PROJECT BOUNDARY SETBACK FOR SINGLE FAMILY DETACHED: 30 FEET

PROPOSED WATER AND SEWER: PUBLIC WATER AND SEWER

0 AC FLOODPLAIN = 4.52 NET AC)

TOTAL NUMBER OF LOTS ALLOWED PER ZONING REGULATIONS: WITHOUT LAND SWAP: R-H-ED: 45 DU (4.52 NET AC/10 DU PER NET ACRE) (NET ACREAGE = 4.95 GROSS AC - 0.43 AC STEEP SLOPES -

WITH LAND SWAP: R-H-ED: 29 DU (2.98 NET AC/10 DU PER NET ACRE ) NET ACREAGE = 3.006 GROSS AC - 0.026 AC STEEP SLOPES -0 AC FLOODPLAIN = 2.98 NET ACR-20 (R-ED)\*: 6 DU (2.73\*2 DU PER ACRE = 5.46 DU +DENSITY BONUS OF 0.546 FOR NEIGHBORHOOD DEO TRANSFER = 6.006 DU)

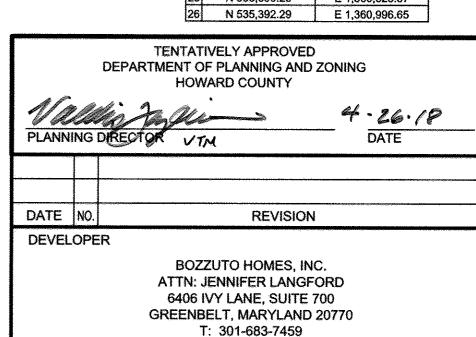


**VICINITY MAP** HOWARD COUNTY ADC MAP 40 GRIDS E4 ADC MAP USE LICENSE #3652

BENCHMARKS HOWARD COUNTY SURVEY CONTROL: 47EC ELEVATION 233.691 N 534,261.232 E 1,359,948.1162 LOCATION IS 12' FROM FACE OF CURB ALONG

HOWARD COUNTY SURVEY CONTROL: 47FB **ELEVATION 207.423** N 534,295.4111 E 1,361228.6517 LOCATION IS 2' FROM EDGE OF GORMAN ROAD AT INTERSECTION WITH KNIGHTS BRIDGE ROAD

	COORDIN	ATE LIST
1	N 535,312.33	E 1,361,000.11
2	N 535,312.81	E 1,361,040.13
3	N 535,112.84	E 1,361,044.19
4	N 535,115.50	E 1,361,269.92
5	N 535,810.58	E 1,361,341.02
6	N 534,735.41	E 1,361,051.83
7	N 534,974.19	E 1,361,046.98
8	N 534,963.19	E 1,360,117.40
9	N 535,341.86	E 1,360,111.83
10	N 535,342.45	E 1,360,162.05
11	N 535,419.96	E 1,360,161.85
12	N 535,442.77	E 1,360,168.19
13	N 535,466.35	E 1,360,157.97
14	N 535,515.12	E 1,360,164.61
15	N 535,535.21	E 1,360,236.62
16	N 535,612.95	E 1,360,335.27
17	N 535,607.53	E 1,360,354.60
18	N 535,578.32	E 1,360,364.03
19	N 535,502.44	E 1,360,332.31
20	N 535,505.89	E 1,360,631.22
21	N 535,495,89	E 1,360,631.34
22	N 535,496.63	E 1,360,695.38
23	N 535,487.71	E 1,360,786.45
24	N 535,478.25	E 1,360,822.34
25	N 535,390.25	E 1,360,823.37



OWNERS SAVAGE MILL REMAINDER, LLC ATTN: JAY WINER 8373 PINEY ORCHARD PARKWAY SUITE 102

PROJECT

OF RECREATION AND PARKS 7120 OAKLAND MILLS ROAD COLUMBIA, MD 21046 ODENTON, MARYLAND 21113-1580 T: 410-313-4700 T: 410-551-9116

HOWARD COUNTY DEPARTMENT

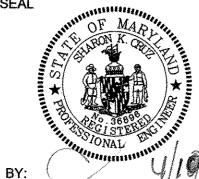
THE SETTLEMENT AT SAVAGE MILL

TAX MAP 47, PARCEL 92 & 93, GRID 11 ZONED B-2. R-H-ED, & R-20 6TH ELECTION DISTRICT 8400, 8550, & 8554 FAIR STREET HOWARD COUNTY, MARYLAND

**COVER SHEET** 

Pennoni

Pennoni Associates Inc. Consulting Engineers 8818 Centre Park Drive Suite 200 Columbia, MD 21045 T 410.997.8900 F 410.997.9282

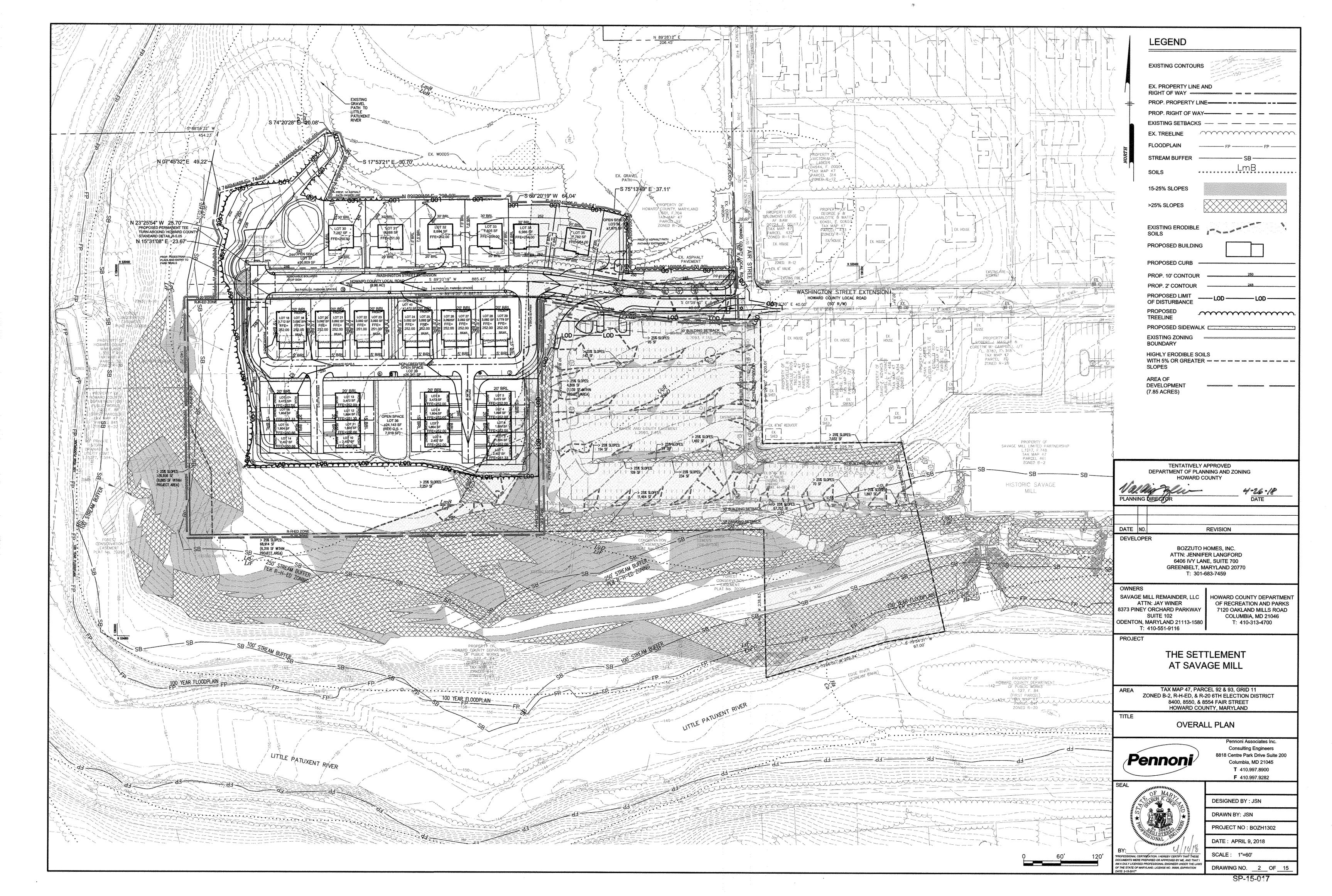


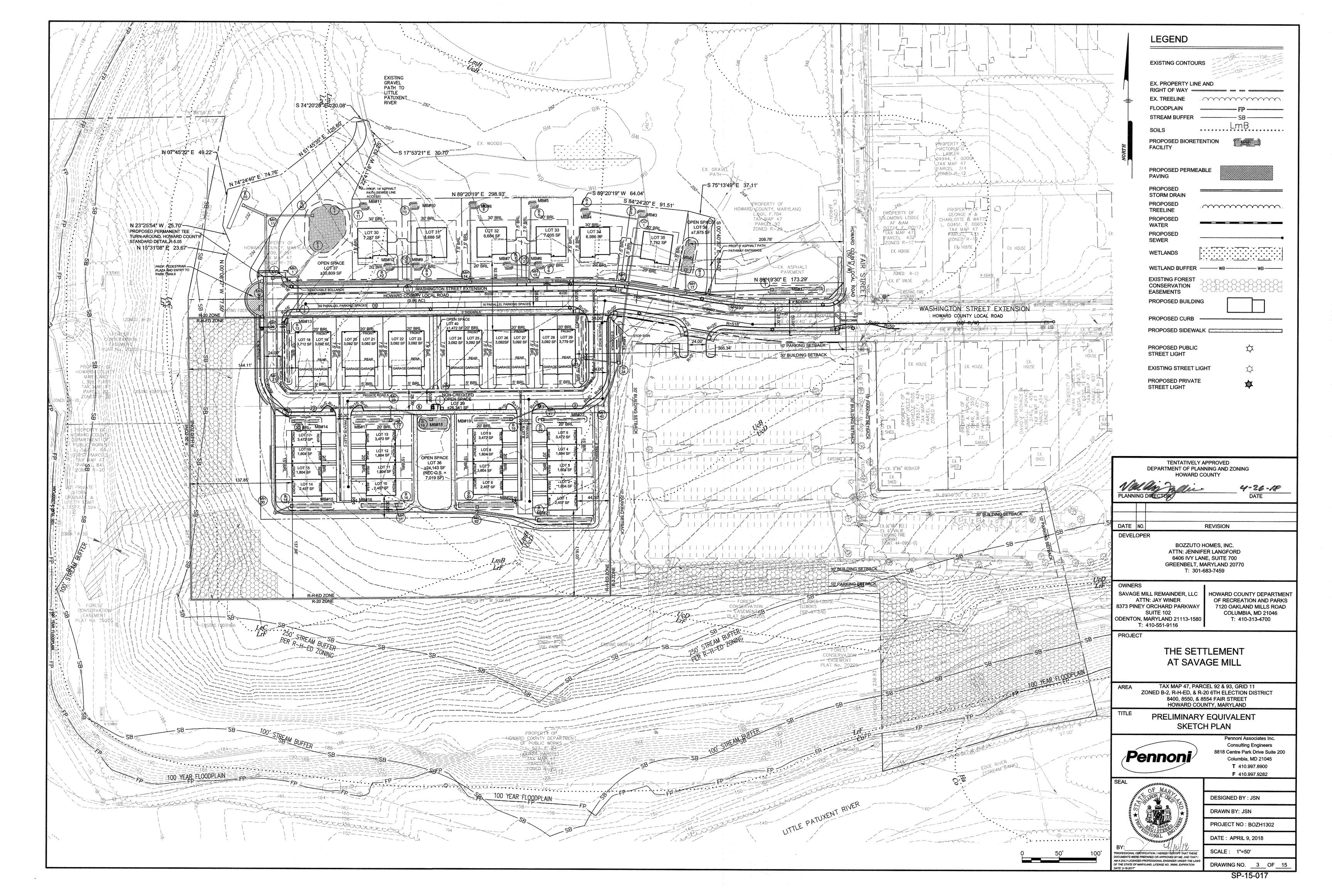
**DESIGNED BY: JSN** DRAWN BY: JSN

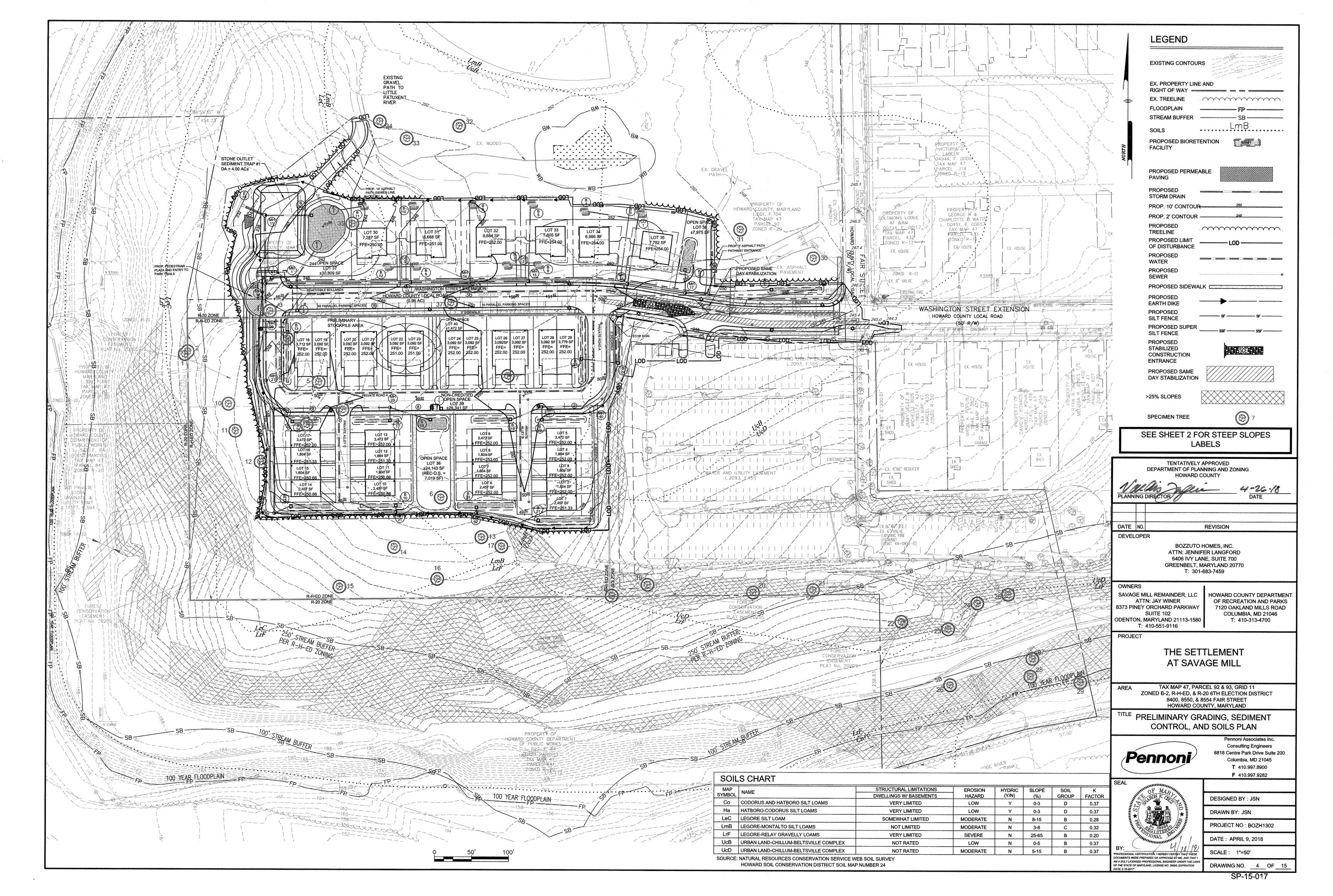
PROJECT NO: BOZH1302 **DATE: APRIL 9, 2018** SCALE: 1"=100'

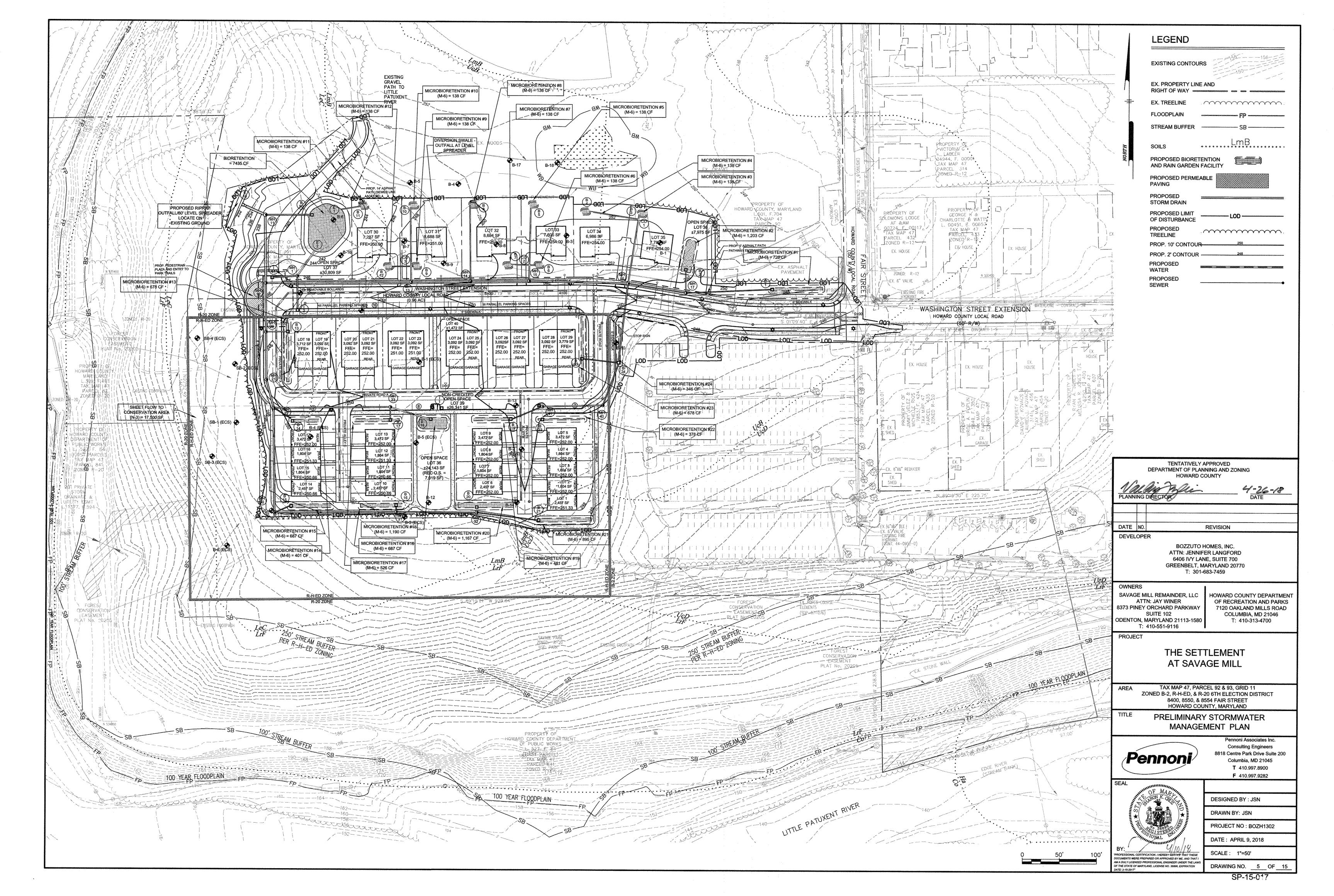
OCUMENTS WERE PREPARED OR APPROVED BY ME. AND THA DRAWING NO. 1 OF 15 OF THE STATE OF MARYLAND, LICENSE NO. 36898, EXPIRATION

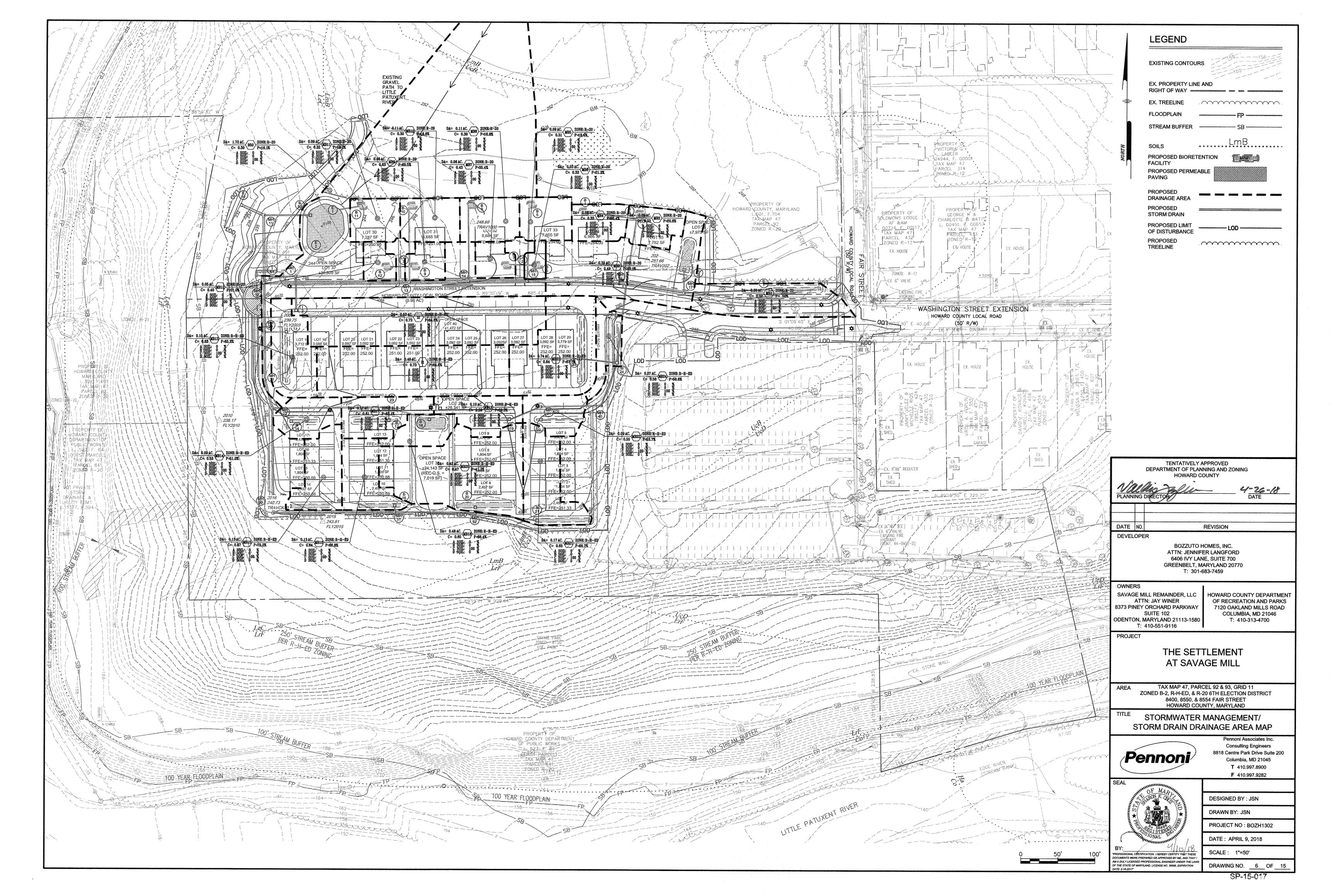
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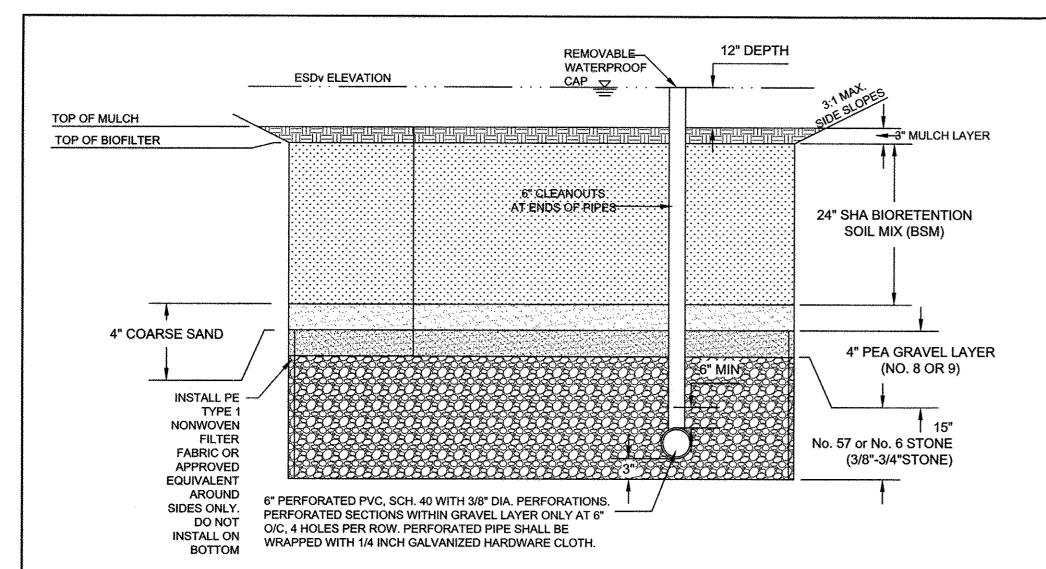




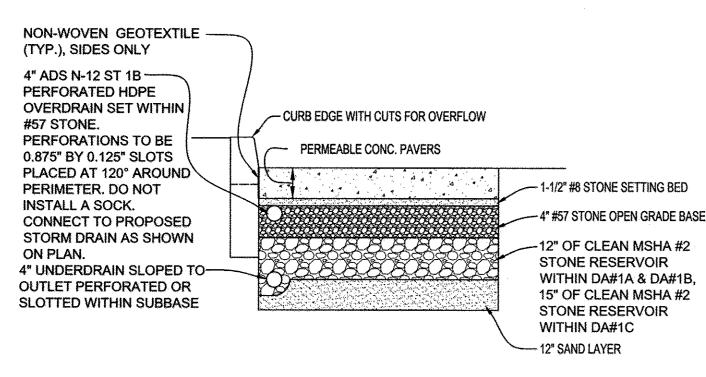








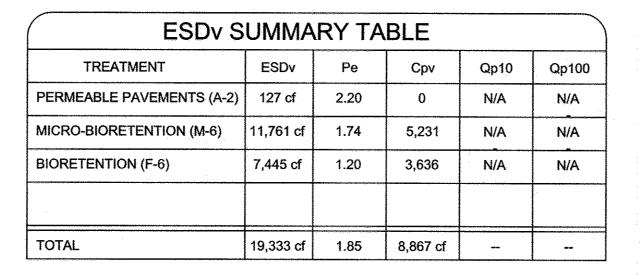


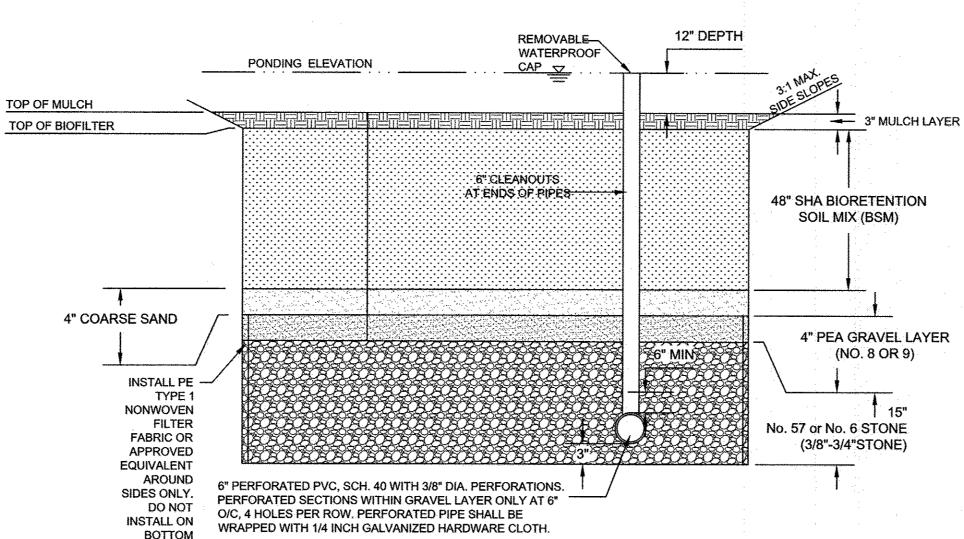


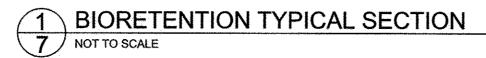
#### NOTES:

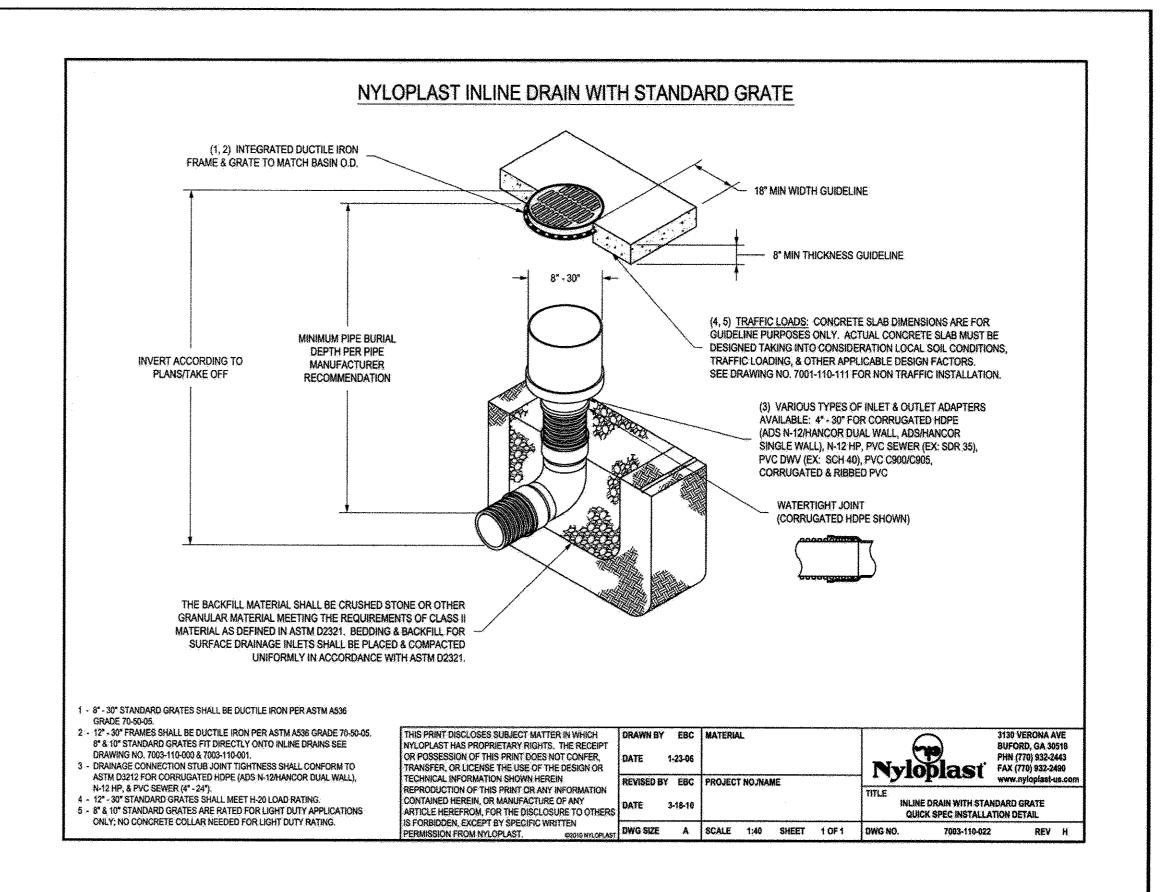
- 1. ALL PERMEABLE PAVEMENT SHALL BE INSTALLED BY A CERTIFIED INSTALLER.
- 2. PERMEABLE PAVEMENT SHALL HAVE A PERMEABILITY RATE OF 8 INCHES PER HOUR OR GREATER. SHOP DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER PRIOR TO PLACEMENT OF ANY PERMEABLE PAVEMENT.
- 3. THE BOTTOM OF THE SUB-BASE SHALL BE LEVEL WITH ADJUSTMENTS ACCOMPLISHED BY STEPPING SUBGRADE LEVELS AT 1-FOOT CONTOUR INTERVALS PER THE GEOTECHNICAL REPORT AND ENGINEER'S DIRECTIVE.
- 4. ALL ADJUSTMENT TO EXISTING GRADE SHALL BE ACCOMPLISHED USING SUB-BASE MATERIAL.
- 5. SOILS SHALL NOT BE COMPACTED. CONSTRUCTION SHOULD BE PERFORMED WITH LIGHTWEIGHT, WIDE TRACKED EQUIPMENT TO MINIMIZE COMPACTION. EXCAVATED MATERIALS SHALL BE PLACED IN A CONTAINED AREA. LOADED DUMP TRUCKS DELIVERING THE INITIAL SAND MATERIAL SHALL ENTER EACH STEPPED AREA FROM BOTH ENDS AND SHALL LIMIT TRAVEL TO THE MINIMUM WIDTH POSSIBLE TO LIMIT SOIL COMPACTION TO THE MINIMUM AREA POSSIBLE.
- 6. SUB-BASE SHALL BE CLEAR AND FREE OF FINES. THE SUB-BASE SHALL BE PLACED IN LIFTS AND LIGHTLY ROLLED.

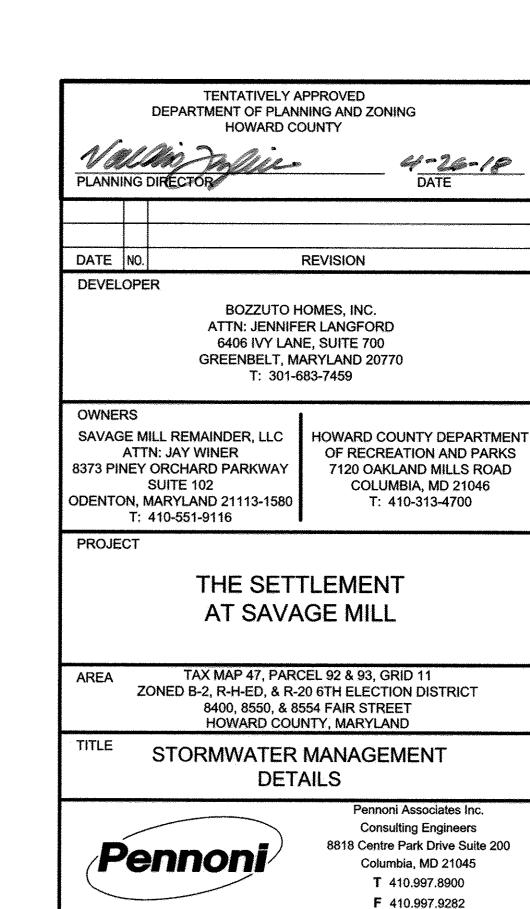












PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAW OF THE STATE OF MARYLAND, LICENSE NO. 38886, EXPIRATION

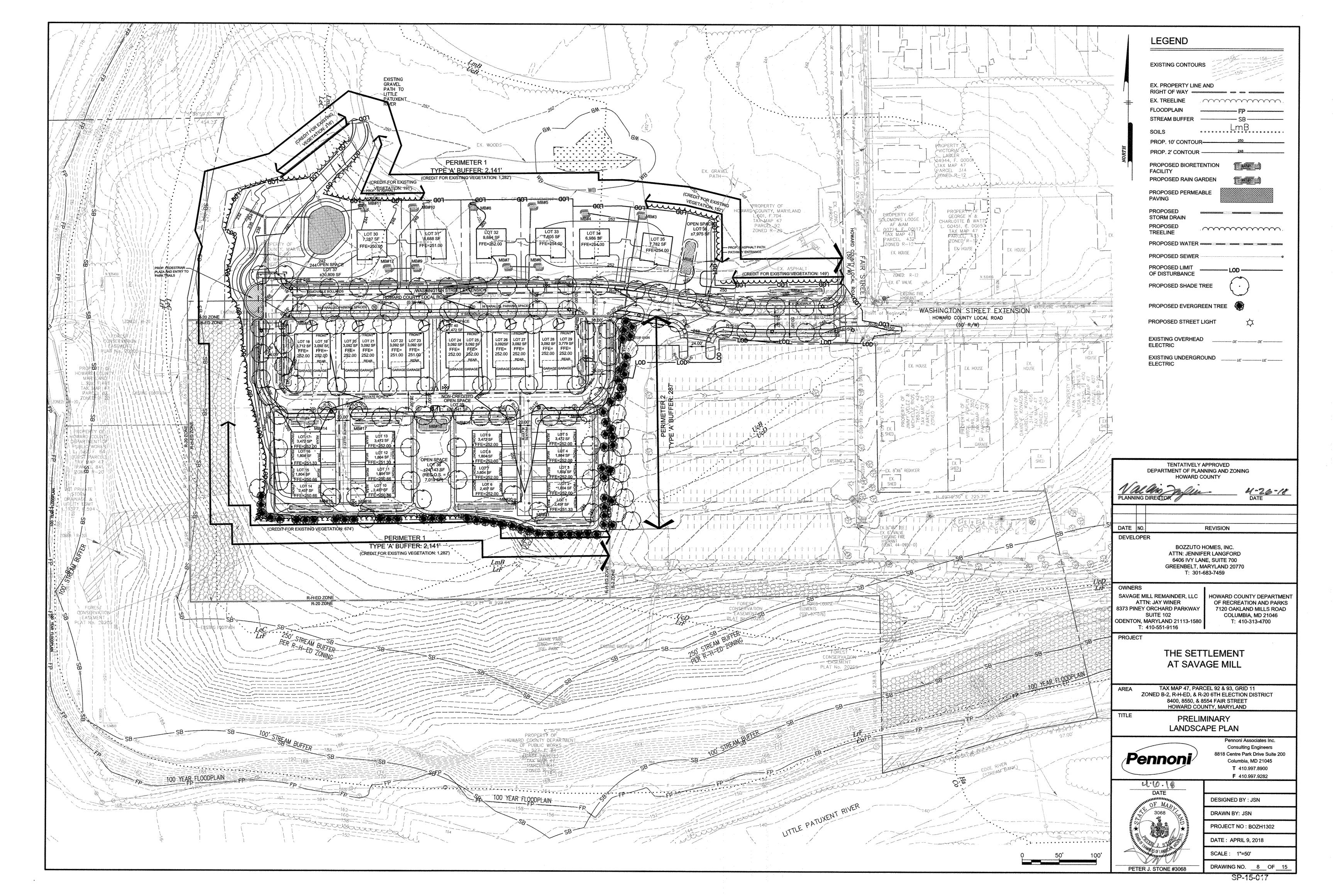
**DESIGNED BY: JSN** 

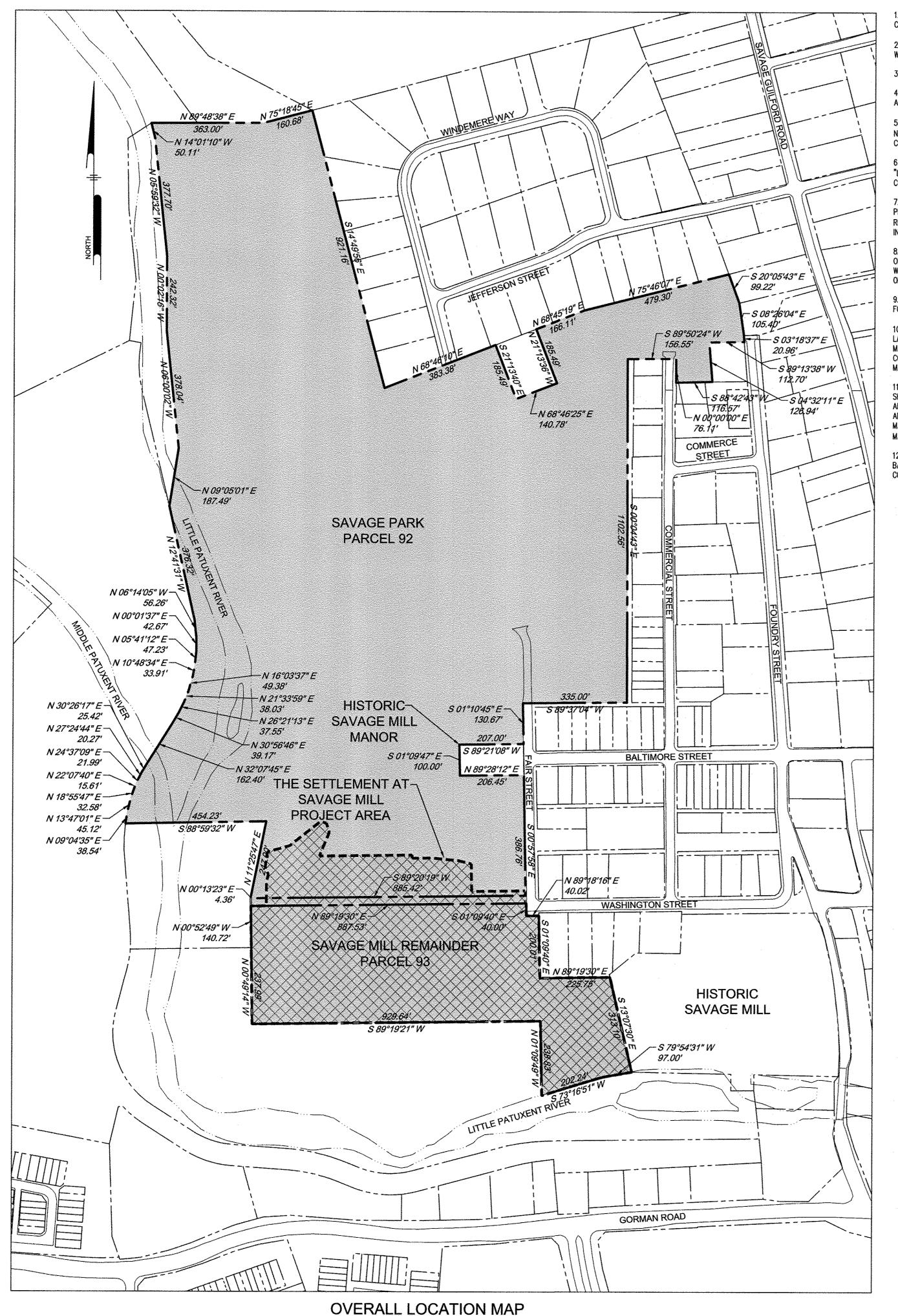
PROJECT NO: BOZH1302

DATE: APRIL 9, 2018

SCALE: AS SHOWN

DRAWN BY: JSN





SCALE: 1"=200'

LANDSCAPE PLAN GENERAL NOTES:

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 LANDSCAPING MUST BE POSTED AS PART OF THE DEVELOPER'S AGREEMENT WITH THE FINAL PLAN SUBMISSION.

3. THIS PLAN IS FOR LANDSCAPING PURPOSES ONLY.

4. CONTRACTOR IS SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, PROCEDURES, AND SAFETY PRECAUTIONS AND PROGRAMS.

5. ALL MATERIAL SELECTED SHALL BE EQUAL TO OR BETTER THAN THE REQUIREMENTS OF THE "USA STANDARD FOR NURSERY STOCK", LATEST EDITION, AS PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN AND THE HOWARD

3. ALL MATERIAL SHALL BE PLANTED IN ACCORDANCE WITH THE MINIMUM STANDARDS CITED IN THE LATEST EDITION OF "LANDSCAPE SPECIFICATION GUIDELINES" PUBLISHED BY THE LANDSCAPE CONTRACTORS ASSOCIATION AND THE HOWARD

7. NO SUBSTITUTIONS OR RELOCATION OF PLANTS MAY BE MADE WITHOUT PRIOR APPROVAL FROM THE DEPARTMENT OF PLANNING AND ZONING OF HOWARD COUNTY. ANY DEVIATION FROM THIS LANDSCAPE PLAN MAY RESULT IN A REQUIREMENT FOR SUBMITTAL OF AN OFFICIAL "REDLINE REVISION" TO THE SITE DEVELOPMENT PLAN(S) AND/OR DENIAL IN THE RELEASE OF LANDSCAPE SURETY.

8. SHOULD ANY TREE DESIGNATED FOR PRESERVATION FOR WHICH LANDSCAPING CREDIT IS GIVEN, DIE PRIOR TO RELEASE OF BONDS, THE OWNER 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 3 INCHES IN CALIPER AND INSTALLED AS REQUIRED IN THE HOWARD COUNTY LANDSCAPE MANUAL.

9. POSTING OF SURETY FOR REQUIRED LANDSCAPING IN ACCORDANCE WITH SECTION 16.124 OF THE LANDSCAPE MANUAL FOR SHADE TREES, EVERGREENS, AND SHRUBS MUST BE POSTED AS PART OF THE GRADING PERMIT.

10. THE OWNER, TENANT AND/OR THEIR AGENTS SHALL BE RESPONSIBLE FOR MAINTENANCE OF THE REQUIRED 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 OTHER REQUIRED LANDSCAPING SHALL BE PERMANENTLY MAINTAINED IN GOOD CONDITION AND WHEN NECESSARY, REPAIRED OR REPLACED.

11. AT THE TIME OF INSTALLATION, ALL SHRUBS AND OTHER PLANTINGS HEREWITH LISTED AND APPROVED FOR THIS SITE. SHALL BE OF THE PROPER HEIGHT REQUIREMENTS IN ACCORDANCE WITH THE HOWARD COUNTY LANDSCAPING MANUAL. IN ADDITION, NO SUBSTITUTIONS OR RELOCATION OF REQUIRED PLANTINGS MAY BE MADE WITHOUT PRIOR REVIEW AND APPROVAL FROM THE DEPARTMENT OF PLANNING AND ZONING. ANY DEVIATION FROM THIS 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 APPLICABLE PLANS AND CERTIFICATES.

12. ADDITIONAL LANDSCAPING HAS BEEN PROVIDED ALONG THE EASTERN AND SOUTHERN BOUNDARIES OF THE PROJECTS BASED ON COMMENTS MADE BY THE DESIGN ADVISORY PANEL, THE HISTORIC PRESERVATION COMMISSION AND THE

WASHINGTON STREET EXTENSION	1,604'/40	40 LARGE TREES
PRIVATE ROAD A	1,294'/40	32 LARGE TREES
TOTAL TREES REQUIRED		72 LARGE TREES
TOTAL TREES PROVIDED		73 LARGE TREES

SCHEDULE A - PERIMETER LANDSCAPE EDGE					
	ADJACENT TO PERIMETER PROPE				
PERIMETER	1	2			
LANDSCAPE TYPE	Α	Α			
LINEAR FEET OF ROADWAY FRONTAGE/ PERIMETER	2,141'	287'			
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	YES 1,282'	NO -			
CREDIT FOR WALL, FENCE, BERM OR DRIVE AISLE (YES/NO/LINEAR FEET)	NO -	NO -			
LINEAR FEET REMAINING	347'	287'			
NUMBER OF PLANTS REQUIRED: SHADE TREES EVERGREEN TREES FLOWERING TREES SHRUBS	6 0 0 0	5 0 0			

SCHEDULE C - RESIDENTIAL DEVELOPMENT INTE	RNAL LANDSCAPING
NUMBER OF DWELLING UNITS	29
NUMBER OF SHADE TREES REQUIRED (1/1 SFA; 1/3 APTS)	29
NUMBER OF TREES PROVIDED SHADE TREES OTHER TREES (2:1 SUBSTITUTION)	13 32

NOTE: INTERNAL LANDSCAPING FOR RESIDENTIAL DEVELOPMENT WILL BE ADDRESSED BY ON-LOT LANDSCAPING AND BY LANDSCAPING PROVIDED IN RESPONSE TO DESIGN ADVISORY PANEL RECOMMENDATIONS.

GENERAL NOTES (CONTINUED FROM SHEET 1)

31. A 100 YEAR FLOODPLAIN IS LOCATED IN THE SOUTHEAST CORNER OF THE PROPERTY, ALONG THE LITTLE PATUXENT RIVER.

32. A PRESUBMISSION COMMUNITY MEETING OCCURRED ON MARCH 11, 2014 AT 7:00 PM AT CARROLL BALDWN HALL, 9035 BALTIMORE STREET, SAVAGE, MD 20763. ADDITIONAL PRESUBMISSION COMMUNITY MEETINGS WERE HELD ON JULY 1, 2015, AND JANUARY 27, 2016, AT 6:30 PM AND 7 PM RESPECTIVELY AT CARROLL BALDWN HALL, 9035 BALTIMORE STREET. SAVAGE, MD 20763.

33. LAND CONDOMINIUM PLAT TITLED "SAVAGE MILL LAND CONDOMINIUM" WAS RECORDED ON JUNE 30, 2008. THIS PLAT SHOWS LAND UNITS A, B, AND C, WHICH ARE REFLECTED ON THIS PLAN. THESE CONDOMINIUM PARCELS WILL BE VACATED IN THE FUTURE WITH THE PROPOSED SUBDIVISION.

34. FOREST INTERIOR DWELLING SPECIES (FIDS) PROTECTIVE MEASURES AS OUTLINED IN CORRESPONDENCE WITH MD-DNR HAVE BEEN ADDRESSED WITH THIS SKETCH PRELIMINARY PLAN. THESE MEASURES WILL BE IMPLEMENTED WITH THE FINAL SUBDIVISION AND SITE DEVELOPMENT PLANS. IN GENERAL THE STRATEGIES OUTLINED IN THE JULY 25, 2014 LETTER FOR PROTECTION OF THESE SPECIES AND THEIR HABITATS WILL INCLUDE ENVIRONMENTAL SITE DESIGN MEASURES FOR STORMWATER MANAGEMENT, LIMITATION ON CLEARING TO THE MINIMUM NEEDED. AND SOIL STABILIZATION MEASURES. STORMWATER MANAGEMENT FOR THIS SITE IS BEING PROVIDED BY MICROSCALE PRACTICES INCLUDING MICROBIORETENTION FACILITIES AND RAIN GARDENS. A LARGE BIORETENTION AREA IS ALSO PROVIDED WITHIN THE PROJECT.

35. A LAND SWAP WITH THE HOWARD COUNTY DEPARTMENT OF RECREATION AND PARKS IS BEING PROPOSED AS PART OF THIS PROJECT. THE DEVELOPER WILL RECEIVE APPROXIMATELY 2.73 ACRES OF R-20 ZONED LAND FROM RECREATION AND PARKS IN EXCHANGE FOR APPROXIMATELY 2.76 ACRES OF R-H-ED/B-2 ZONED LAND THAT WILL BE DEDICATED TO HOWARD COUNTY. IN ADDITION, OTHER OPEN SPACE FROM THE PROJECT WILL LIKELY BE DEDICATED TO THE COUNTY THROUGH THE SUBDIVISION PROCESS, THIS LAND SWAP HAS BEEN AGREED TO IN PRINCIPLE BETWEEN THE DEVELOPER AND THE COUNTY AND IS BEING COORDINATED WITH THE STATE DEPARTMENT OF NATURAL RESOURCES. SHOULD THE LAND SWAP NOT COME TO FRUITION, THE DEVELOPER WOULD UTILIZE THE CONCEPT PLAN APPROVED UNDER ECP-14-029, AND THIS SP WOULD BE REDESIGNED ACCORDINGLY.

36. ALL LOTS/RESIDENTIAL UNITS IN THIS SUBDIVISION ARE SUBJECT TO MIHU FEE-IN-LIEU REQUIREMENTS THAT ARE TO BE CALCULATED AND PAID TO THE DEPARTMENT OF INSPECTIONS LICENSES AND PERMITS AT THE TIME OF BUILDING PERMIT ISSUANCE BY THE PERMIT APPLICANT.

37. SECTION 111.1.F.4.(A-H) OF THE HOWARD COUNTY ZONING REGULATIONS HAVE BEEN ADDRESSED AS FOLLOWS:

a. THE AREA OF DEVELOPMENT FOR THIS PROJECT INCLUDES 7.85 ACRES. THIS AREA'S EXISTING ENVIRONMENTAL RESOURCES INCLUDE FORESTED AREAS AND SPECIMEN TREES. THESE RESOURCES HAVE BEEN SHOWN ON THE PRELIMINARY EQUIVALENT SKETCH PLANS. THERE ARE NO WETLANDS. STREAMS. BUFFER. FLOODPLAINS, OR STEEP SLOPES ON THE AREA OF DEVELOPMENT. THERE ARE NO STRUCTURES ON THE AREA OF DEVELOPMENT. THERE ARE HISTORIC STRUCTURES, STREAMS, WETLANDS, BUFFERS FLOODPLAINS, AND STEEP SLOPES ADJACENT TO THE AREA OF DEVELOPMENT. THESE RESOURCES HAVE BEEN PROTECTED. PRESERVED, AND BUFFERED WITH THIS DEVELOPMENT. THE AREA OF GREATEST IMPACT WILL BE THE REMOVAL OF FORESTED AREAS, WHICH IS UNAVOIDABLE IN ORDER TO DEVELOP THIS FULLY WOODED SITE. EXISTING VEGETATION WILL BE RETAINED TO THE MAXIMUM EXTENT POSSIBLE.

b. THE PROPOSED SITE IMPROVEMENTS WILL BE BUFFERED FROM THE EXISTING RESOURCES. THIS PLAN PROPOSES NO IMPACTS TO COUNTY REGULATED STEEP SLOPES, STREAMS, STREAM BUFFERS, WETLANDS, OR FLOODPLAINS, AND WITH THE PROPOSED LAND SWAP. THE PROPOSED DEVELOPMENT HAS BEEN SHIFTED FURTHER AWAY FROM THESE RESOURCES.

c. NO SENSITIVE AREAS ARE BEING DISTURBED BY THE PROPOSED DEVELOPMENT. TREE CLEARING (4.82 ACRES) WILL BE MINIMIZED TO THE MAXIMUM EXTENT POSSIBLE USING PRUNING AND ROOT PRUNING PRACTICES DURING CONSTRUCTION. MINIMIZING GRADE CHANGES ACROSS THE SITE, AND BY LIMITING THE DEVELOPMENT FOOTPRINT. THESE MEASURES ARE OUTLINED ON SHEET 12 OF THE PRELIMINARY EQUIVALENT SKETCH PLANS.

d. THE PROPOSED DEVELOPMENT INCLUDES THE CLEARING OF 4.82 ACRES OF FOREST AND THE DISTURBANCE OF APPROXIMATELY 6.01 ACRES. THE CLEARING AND GRADING HAS BEEN LIMITED TO THE NORTHERN PORTION OF THE DEVELOPMENT AREA. WHERE THE SITE IS MORE GENTLY SLOPED.

e. THE EARTHMOVING ASSOCIATED WITH THE PROJECT IS LIMITED TO THE MORE LEVEL AREAS OF THE SITE WHERE MINIMAL EARTH MOVING WILL BE REQUIRED TO TIE OUT TO EXISTING GRADES AND DEVELOP THE PROJECT. THE SITE PROVIDES A LARGE

BUFFER ALONG THE SOUTH AND WEST SLOPES ADJACENT TO THE LITTLE PATUXENT RIVER. MAINTAINING THE EXISTING CHARACTER OF THIS STREAM VALLEY. THE USE OF NATIVE PLANT MATERIAL WILL BE A PART OF THE LANDSCAPE PLAN FOR THIS

f. THIS PROJECT COMPLIES WITH THE COUNTY FOREST CONSERVATION PROGRAM BY 2.54 ACRES OF ON-SITE RETENTION, 0.95 ACRES OF ON AND OFFSITE PLANTING, AND 0.23 ACRES OF OFF-SITE RETENTION. THE OFFSITE PLANTING AREAS INCLUDE THE RESTORATION OF PREVIOUSLY DISTURBED AREAS WITHIN SAVAGE PARK, IMMEDIATELY ADJACENT TO THIS SITE.

q. CONSTRUCTION PRACTICES FOR THIS SITE MAY INCLUDE ROOT PRUNING. TREE PRUNING, AND OTHER MEASURES RECOMMENDED BY QUALIFIED PROFESSIONALS TO MAINTAIN THE EXISTING VEGETATION ABUTTING THE SITE, AND TO PRESERVE EXISTING TREES ON SITE. STANDARD, COUNTY REGULATED SEDIMENT CONTROL PRACTICES WILL BE FOLLOWED DURING CONSTRUCTION. PLANTING AREAS WILL REQUIRE LONG TERM MAINTENANCE TO ENSURE THAT THEY SURVIVE AND THRIVE, ENHANCING THE EXISTING RESOURCES ON THE SITE. PRECONSTRUCTION AND POST CONSTRUCTION PRACTICES AS OUTLINED ON THE FOREST CONSERVATION PLAN

(SHEET 12) WILL BE IMPLEMENTED FOR THIS PROJECT. h. FOREST CONSERVATION EASEMENTS WILL BE PUT IN PLACE WITH THIS PLAN PROVIDING PROTECTION FOR THE ENVIRONMENTAL BUFFERS AND SENSITIVE AREAS OF THE SITE. THE DEVELOPMENT AREA OF THIS PROJECT DOES NOT INCLUDE THE PRESENCE OF ANY HISTORIC STRUCTURES OR SETTINGS.

38. DESIGN ADVISORY PANEL MEETINGS FOR THIS PROJECT WERE HELD ON OCTOBER 14, 2015 AND FEBRUARY 10, 2016. BOTH MEETINGS WERE HELD AT 3430 COURTHOUSE DRIVE. ELLICOTT CITY, MD, 21043, AT 7:30 PM. A DIRECTOR'S ENDORSEMENT FOR THE PROJECT WAS OBTAINED ON MARCH 4, 2016.

39. HISTORIC PRESERVATION COMMISSION (HPC) MEETINGS FOR ADVISORY COMMENTS FOR THIS PROJECT WERE HELD ON JULY 2, 2015, AND OCTOBER 1, 2015. BOTH MEETINGS WERE HELD AT 3430 COURTHOUSE DRIVE, ELLICOTT CITY, MD, 21043, AT 7:00 PM. ADVISORY COMMENTS WERE PROVIDED AT BOTH MEETINGS. ADVISORY COMMENTS INCLUDED THE FOLLOWING:

a) PROVIDE A LANDSCAPE BUFFER ALONG THE EASTERN PROJECT BOUNDARY. b) PROVIDE A FINAL COLOR PALETTE AT TIME OF FINAL SUBMISSION HPC. c) PROVIDE ADDITIONAL DETAIL TO THE EAST-WEST SITE CROSS SECTION AT TIME OF FINAL

e) REVIEW APPEARANCE OF PROJECT FROM MULTIPLE PERSPECTIVES.

BE DEFERRED UNTIL THE PROPOSED LAND SWAP IS COMPLETED.

SUBMISSION TO THE HPC. d) MAKE THE PROJECT COMPATIBLE WITH THE AREA, NOT A COPY OF ANY OF THE EXISTING BUILDINGS.

40. AN ALTERNATIVE COMPLIANCE REQUEST FOR THIS PROJECT (WP-17-002) FROM SECTION 16.120(c)(4) AND SECTION 16.1205(a)(7) WAS REQUESTED. A DECISION ON THIS REQUEST WILL

41. THIS SP WAS APPROVED BY THE PLANNING BOARD ON MARCH 1, 2018, PLANNING BOARD CASE # PB 424.

42. THIS PROJECT IS NOT LOCATED ON A SCENIC ROAD.

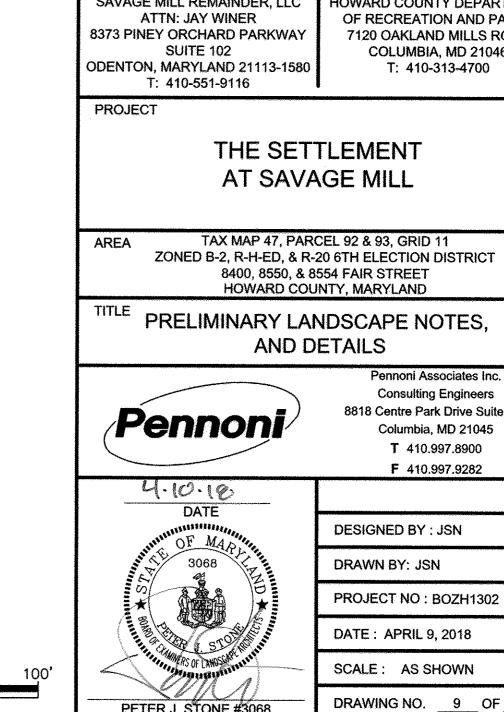
43. RECREATIONAL OPEN SPACE FOR THIS PROJECT IS PROVIDED BY 20'+ DEEP FRONT YARDS ON THE 29 ATTACHED UNITS, 7,600 SF OF OPEN LAWN AND LANDSCAPE AREA (OPEN SPACE LOT 36), WALKWAYS AND TRAILS THROUGHOUT DEVELOPMENT, AND A TRAILHEAD FOR SAVAGE PARK.

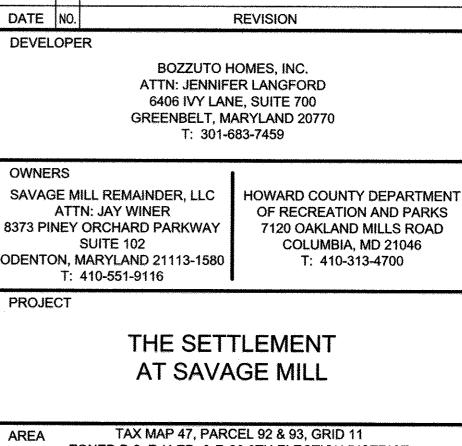
44. ONE DENSITY UNIT MUST BE IMPORTED FOR THIS PROJECT TO ALLOW THE USE OF THE R-ED ZONING REGULATIONS FOR THE R-20 ZONED PORTION OF THE PROPERTY. THIS UNIT IS BEING IMPORTED THROUGH THE NEIGHBORHOOD PRESERVATION PROGRAM, AND WILL BE IMPORTED AT THE FINAL PLAN STAGE FROM A PARCEL ALSO DETERMINED AT THE FINAL PLAN

45. IN ACCORDANCE WITH SECTION 118.0.A.11, "IN A DEVELOPMENT WITH A PLAN SHOWING AN INTEGRATED DESIGN THAT INCORPORATES MORE THAN ONE ZONING DISTRICT, THERE IS NO REQUIRED SETBACK FROM AN INTERNAL ZONING DISTRICT BOUNDARY."

46. ALL UNITS LOCATED ON AND ACCESSED FROM PRIVATE STREETS (29 DUPLEX AND TOWNHOUSE UNITS) WILL BE REQUIRED TO HAVE PRIVATE TRASH AND RECYCLING COLLECTION.

47. THE APPLICANT WILL STUDY MATERIALS FROM OLD SAVAGE IN AN EFFORT TO HARMONIZE THIS DEVELOPMENT WITH THE EXISTING CONDITIONS TO THE EXTENT THAT THE MATERIALS ARE PRACTICAL AND MARKETABLE.





AND DETAILS

TENTATIVELY APPROVED

**DEPARTMENT OF PLANNING AND ZONING** 

HOWARD COUNTY

PLANNING DIRECTOR

4-26-18

**DESIGNED BY: JSN** DRAWN BY: JSN PROJECT NO: BOZH1302 DATE: APRIL 9, 2018 SCALE: AS SHOWN DRAWING NO. 9 OF 15 PETER J. STONE #3068

SP-15-017

Pennoni Associates Inc.

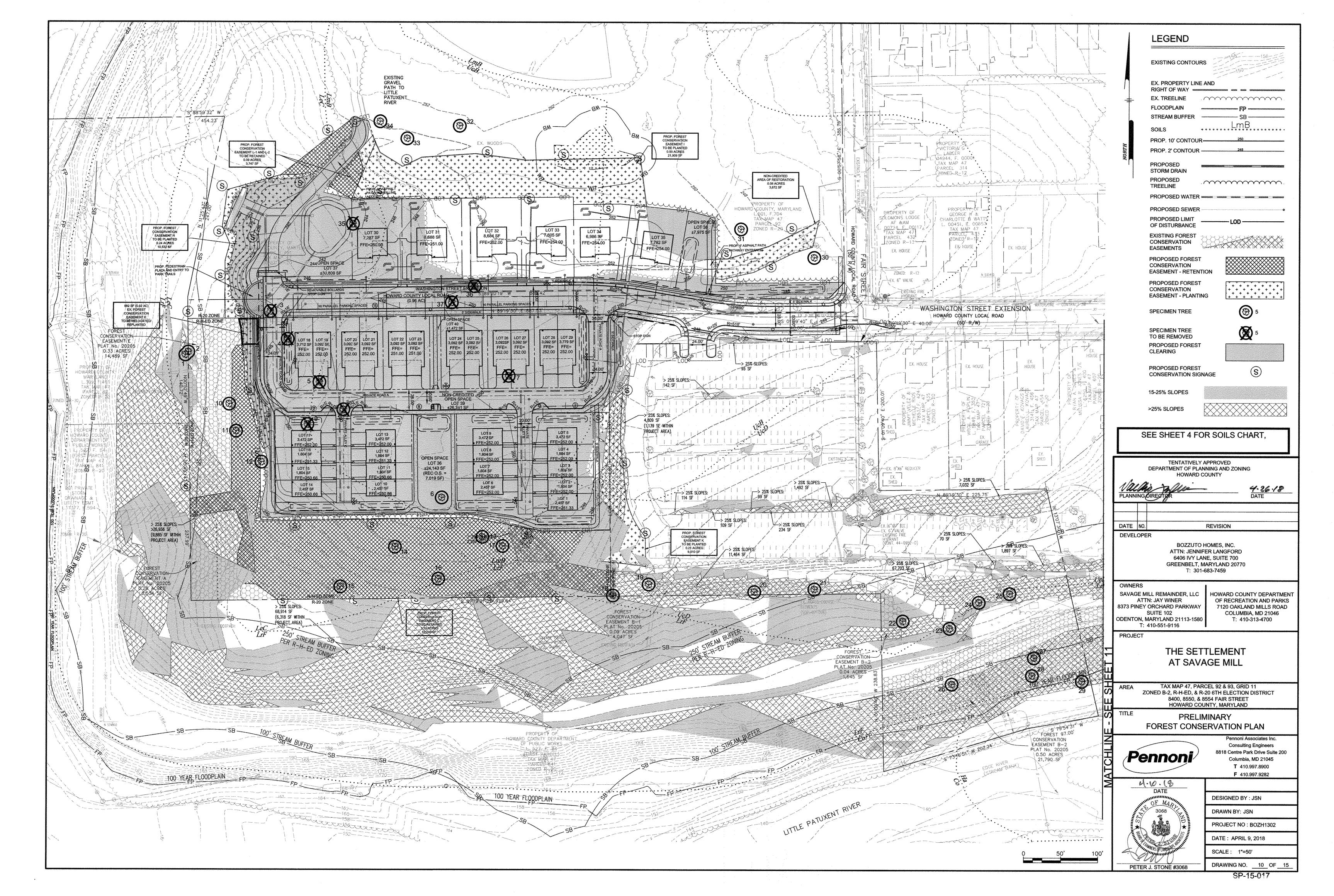
Consulting Engineers

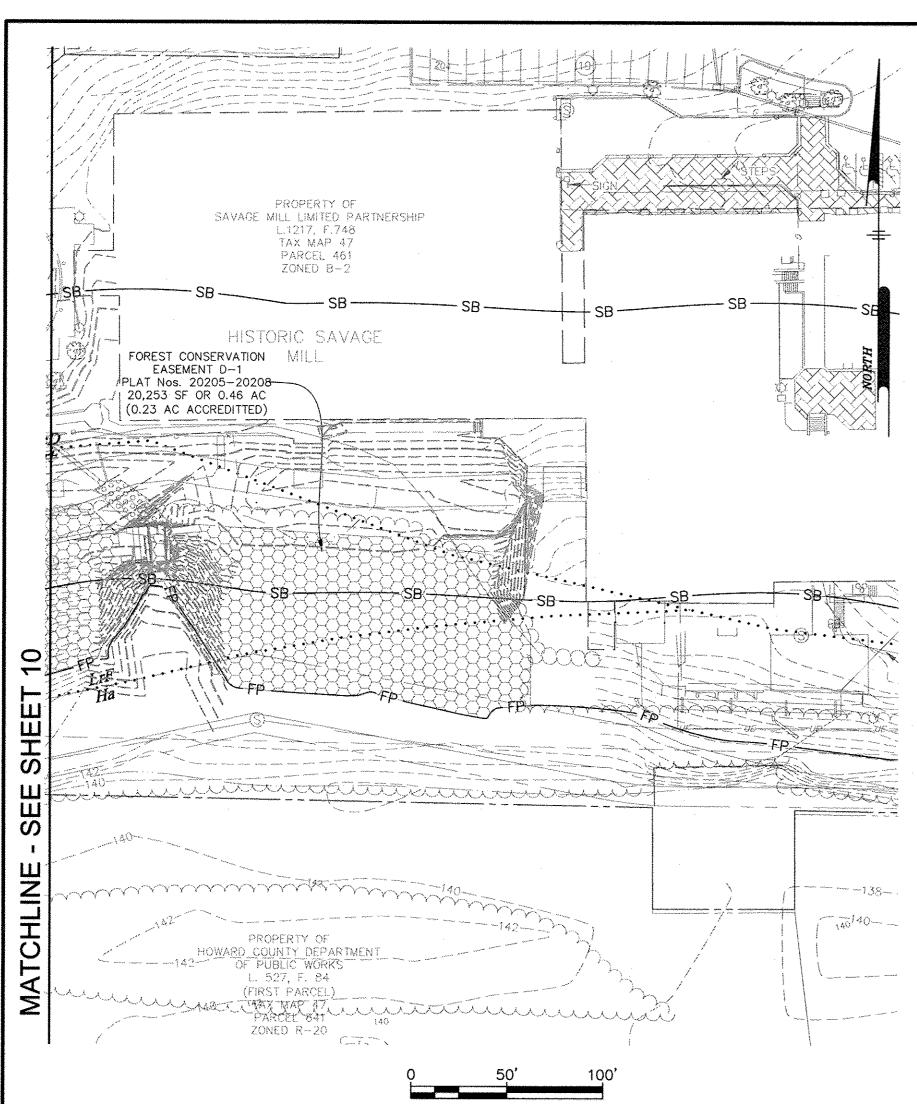
8818 Centre Park Drive Suite 200

Columbia, MD 21045

T 410.997.8900

F 410.997.9282





#### **Howard County Forest Conservation Worksheet**

Project Name:

County File #:

**Proposed Forest Clearing** 

Report	Date: September 15, 2016		
Net Trac	et Area	£	cres
A.	Total Tract Area	A =	12.79
B.	Other Deductions	B =	0.31
C.	Net Tract Area Net Tract Area = (A-B-C)	C =	12.48
Land Us	e Category:	F - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	
D.	Afforestation Threshold (Net Tract Area X _ 15%	D =	1.87
E.	Reforestation Threshold (Net Tract Area X _ 20%	E =	2.50
Existing	Forest Cover	€- <u>1</u> -1-1-1-2	
F.	Existing Forest Cover within the Net Tract Area	F =	7.36
G.	Area of Forest Above Conservation Threshold	G =	4.86
	If the Existing Forest Cover (F) is greater than Conservation Threshold (G), then	<del></del>	
	G = Existing Forest Cover (F) - Conservation Threshold (E); Otherwise G = 0		
Break E	ven Point		
H.	Break Even (Amount of forest that must be retained so that no mitigation is required)	H =	3.47
	(1) If the area of forest above the Conservation Threshold (G) is greater than zero, then		
	H = (0.2 X the area of forest above Conservation Threshold (G)) + the Conservation		
	Threshold (E)		
	(2) If the area of forest above the Conservation Threshold (G) is equal to zero, then		
	H = Existing Forest Cover (F)		
l.	Forest Clearing Permitted Without Mitigation	l =	3.89

The Settlement at Savage Mill

SP-15-017

#### Total Area of Forest to be Cleared Total Area of Forest to be Retained K = Existing Forest Cover (F) - forest to be cleared (J) Planting Requirements If the Total Area of Forest to be Cleared (K) is at or above the Breakeven Point (H), no planting is required and no

further calculations are necessary (L=0, M=0, N=0, P=0); If not, calculate the planting requirement below: Reforestation for Clearing Above the Conservation Threshold

I = Existing Forest Cover (F) - Break Even Point (H)

SUCH AS AREAS UNDER AND WITHIN THE EXISTING ROPES COURSE

(1) if the total area of forest to be retained (K) is greater than the Conservation Threshold (E), then L = the area of forest to be cleared (J) X 0.25: or (2) If the forest to be retained (K) is less than or equal to the Conservation Threshold (E), then L = area of forest above Conservation Threshold (G) X 0.25

Reforestation for Clearing Below the Conservation Threshold M = 0.00(1) if Existing Forest Cover (F) is greater than Conservation Threshold (E) and the forest to be retained (K) is less than or equal to the Conservation Threshold (E), then M = 2.0 X (the Conservation Threshold (E) - the forest to be retained (K)) (2) If Existing Forest (F) is less than or equal to the Conservation Threshold (E), then M = 2.0 X Forest to be cleared (J).

Credit for Retention Above the Conservation Threshold If the area of forest to be retained (K) is greater than the Conservation Threshold (E), then N = K - E Total Reforestation Required P = L + M - N Q = 0.00Total Afforestation Required (1) If Existing Forest Cover (F) is less than the Afforestation Threshold (D) then Q = the Afforestation Threshold (D) - the Existing Forest Cover (F) Total Planting Requirement R = P + Q

\* THE TOTAL TRACT AREA IS COMPRISED OF THE 10.06 ACRES ACCOUNTED FOR IN SDP-07-076 PLUS THE 2.73 ACRES THAT HAS BEEN RECEIVED FROM THE PARK IN THE LAND SWAP AGREEMENT. THE 0.31 AC OF FLOODPLAIN IS PART OF THE 10.06 ACRES. \*\* THESE AREAS INCLUDE FOREST CONSERVATION EASEMENTS THAT WERE RECORDED WITH SDP-07-076. \*\*\*THESE AREAS ALSO INCLUDE WOODED AREAS NOT UNDER EASEMENT AND NOT PROTECTED WITH THIS PLAN,

FOREST CONSERVATION PLAN GENERAL NOTES:

- THE SITE IS LOCATED AT 8400, 8550, & 8554 FAIR STREET, SAVAGE, MD 20763 (TAX MAP 47, PARCEL 92 AND PARCEL 93) AND IS PART OF THE HISTORIC SAVAGE MILL PROPERTY AND HOWARD COUNTY PARKLAND. THE DEVELOPMENT AREA CONSISTS OF 7.68 ACRES.
- BOUNDARY INFORMATION PROVIDED BY PENNONI ASSOCIATES, INC., DATED DECEMBER 5, 2006. TOPOGRAPHIC INFORMATION PROVIDED BY PENNONI ASSOCIATES, INC., DATED NOVEMBER 28, 2006 AND JUNE 2015.
- THE EXISTING TOPOGRAPHY IS PROVIDED BY PENNONI ASSOCIATES, INC., DATED NOVEMBER 28, 2006, AND APRIL 2015, AND HAS BEEN SUPPLEMENTED BY COUNTY GIS INFORMATION.
- THE SOILS ON SITE ARE CODORUS AND HATBORO SILT LOAMS (0-3% SLOPES) CO, HATBORO-CODORUS SILT LOAMS (0-3% SLOPES) - HA, LEGORE SILT LOAM (8-15% SLOPES) - LEC, LEGORE-MONTALTO SILT LOAMS (3-8% SLOPES) - LMB, LEGORE-RELAY GRAVELLY LOAMS (25-65% SLOPES) - LRF, URBAN LAND-CHILLUM-BELTSVILLE COMPLEX (0-5% SLOPES) -UCB, AND URBAN LAND-CHILLUM-BELTSVILLE COMPLEX (5-15% SLOPES) - UCD ACCORDING TO THE NATURAL RESOURCES CONSERVATION SERVICE WEB SOIL SURVEY.
- SUBJECT PROPERTY IS ZONED B-2, R-H-ED, AND R-20 PER THE OCTOBER 6, 2013 COMPREHENSIVE ZONING PLAN. CURRENTLY, THE SITE IS PARTIALLY USED AS A PARKING LOT, A COUNTY PARK, AND IS PARTIALLY UNDEVELOPED WITH 8.13 ACRES OF FOREST, PART OF THE FORESTED PORTION OF THE PROPERTY IS CURRENTLY BEING USED AS AN OUTDOOR LASER TAG COURSE.
- THIS SITE IS LOCATED IN THE LITTLE PATUXENT RIVER WATERSHED.
- THERE ARE NO STREAMS, WETLANDS, OR WETLAND BUFFERS LOCATED EITHER WITHIN THE PROJECT SITE (12.79 AC), THE AREA OF DEVELOPMENT (7.85 AC), OR WITHIN THE LIMITS OF DISTURBANCE (6.01 AC). HOWEVER, THERE IS A 100 YEAR FLOODPLAIN, A STREAM BUFFER, WETLANDS, AND STEEP SLOPES LOCATED WITHIN THE OVERALL PROPERTY (74.25± AC).
- 8. THERE IS ONE EXISTING FOREST STAND LOCATED ON SITE, AS SHOWN ON THE PLAN. IT IS A HIGH PRIORITY FOREST STAND DUE TO PROTECTED ENVIRONMENTAL SYSTEMS, SUCH AS STREAMS AND WETLANDS. THIS STAND IS A MID SUCCESSION STAND PRIMARILY COMPRISED OF A DECIDUOUS CANOPY, AND IS IN GOOD CONDITION. THE STAND CONTAINS PRIMARILY TULIP POPLAR, SYCAMORE, PIGNUT HICKORY, AMERICAN BEECH, BLACK LOCUST, AND BLACK
- 9. THERE ARE 37 SPECIMEN AND SIGNIFICANT TREES LOCATED ON SITE, AS SHOWN ON THE PLAN. THE SIGNIFICANT TREES. NOTED BELOW, ARE LESS THAN 30" IN DIAMETER. NO STATE CHAMPION TREES OR TREES 75% THE SIZE OF CHAMPION TREES ARE FOUND ON THE SITE. SEVEN OF THE SPECIMEN TREES ARE PROPOSED TO BE REMOVED.
- 10. FIELD WORK FOR THE FOREST STAND DELINEATION WAS CONDUCTED ON DECEMBER 12, 2006, OCTOBER 16, 2013, AND FEBRUARY 13, 2015 BY JONATHAN NORMAN, PLANNER OF PENNONI ASSOCIATES, INC. UNDER THE SUPERVISION OF PETER J. STONE. RLA OF PENNONI ASSOCIATES, INC.
- 11. THE SITE HAS A FOREST CONSERVATION THRESHOLD OF 20% AND AN AFFORESTATION THRESHOLD OF 15%.
- 12. NO TREES, SHRUBS, OR PLANTS IDENTIFIED AS RARE, THREATENED OR ENDANGERED SPECIES WERE OBSERVED. CORRESPONDENCE RECEIVED FROM THE MARYLAND DEPARTMENT OF NATURAL RESOURCES INDICATES THAT THE FOLLOWING RARE, THREATENED, AND ENDANGERED SPECIES ARE LOCATED IN PROXIMITY TO THE SITE:

#### **GLASSY DARTER** LAURA'S FLAGTAIL

ADDITIONALLY, CORRESPONDENCE RECEIVED FROM THE MARYLAND DEPARTMENT OF NATURAL RESOURCES STATED THE FOLLOWING: "OUR ANALYSIS OF THE INFORMATION PROVIDED ALSO SUGGESTS THAT THE FOREST AREA ON THE PROJECT SITE CONTAINS FOREST INTERIOR DWELLING BIRD HABITAT."

THERE ARE NO KNOWN CEMETERIES, BURIAL PLOTS, OR HISTORIC STRUCTURES LOCATED ON THE SITE, ACCORDING TO THE HOWARD COUNTY CEMETERIES INVENTORY AND COUNTY HISTORIC RECORDS.

SPECIMEN TREE CHART						
KEY	SPECIES	SIZE	CONDITION	REMAIN/REMOVE		
. 1	TULIP POPLAR (Liriodendron tulipifera)	38"	GOOD	REMAIN		
2	TULIP POPLAR (Liriodendron tulipifera)	31"	GOOD	REMAIN		
3	TULIP POPLAR (Liriodendron tulipifera)	34"	GOOD	REMOVE		
4	TULIP POPLAR (Liriodendron tulipifera)	33"	GOOD	REMOVE		
5	TULIP POPLAR (Liriodendron tulipifera)	35"	GOOD	REMOVE		
6	TULIP POPLAR (Liriodendron tulipifera)	30"	GOOD	REMAIN		
7	BLACK CHERRY (Prunus serrotina)	38"	POOR	REMOVE		
8	TULIP POPLAR (Liriodendron tulipifera)	32"	FAIR	REMOVE		
9	TULIP POPLAR (Liriodendron tulipifera)	34"	GOOD	REMOVE		
10	TULIP POPLAR (Liriodendron tulipifera)	32"	GOOD	REMAIN		
11	TULIP POPLAR (Liriodendron tulipifera)	32"	GOOD	REMAIN		
12	TULIP POPLAR (Liriodendron tulipifera)	31"	POOR	REMAIN		
13	TULIP POPLAR (Liriodendron tulipifera)	34"	GOOD	REMAIN		
14	TULIP POPLAR (Liriodendron tulipifera)	35"	GOOD	REMAIN		
15	TULIP POPLAR (Liriodendron tulipifera)	30"	GOOD	REMAIN		
16	BITTERNUT HICKORY (Carya cordiformis)	32"	GOOD	REMAIN		
17	TULIP POPLAR (Liriodendron tulipifera)	30"	GOOD	REMAIN		
18*	TULIP POPLAR (Liriodendron tulipifera)	27"	GOOD	REMAIN		
19	TULIP POPLAR (Liriodendron tulipifera)	30"	GOOD	REMAIN		
20	SYCAMORE (Platanus occidentalis)	30"	GOOD	REMAIN		
21*	TULIP POPLAR (Liriodendron tulipifera)	25"	GOOD	REMAIN		
22*	TULIP POPLAR (Liriodendron tulipifera)	27"	GOOD	REMAIN		
23	SYCAMORE (Platanus occidentalis)	30"	GOOD	REMAIN		
24	SYCAMORE (Platanus occidentalis)	38"	GOOD	REMAIN		
25	SYCAMORE (Platanus occidentalis)	30"	GOOD	REMAIN		
26	SYCAMORE (Platanus occidentalis)	30"	GOOD	REMAIN		
27	TULIP POPLAR (Liriodendron tulipifera)	30"	GOOD	REMAIN		
28*	TULIP POPLAR (Liriodendron tulipifera)	28"	GOOD	REMAIN		
29	TULIP POPLAR (Liriodendron tulipifera)	30"	GOOD	REMAIN		
30*	BLACK LOCUST (Robinia pseudoacacia)	27"	GOOD	REMAIN		
31	SILVER MAPLE (Acer saccharinum)	32*	GOOD	REMAIN		
32	BITTERNUT HICKORY (Carya cordiformis)	40"	GOOD	REMAIN		
33	GREEN ASH (Fraxinus pennsylvanica)	37"	GOOD	REMAIN		
34*	GREEN ASH (Fraxinus pennsylvanica)	28"	GOOD	REMAIN		
35	TULIP POPLAR (Liriodendron tulipifera)	34"	FAIR	REMOVE		
36*	SYCAMORE (Platanus occidentalis)	28"	GOOD	REMOVE		

POOR

REMOVE

37\* | BITTERNUT HICKORY (Carya cordiformis)

\* SIGNIFICANT TREE, NOT A SPECIMEN TREES DUE TO SIZE <30" IN DIAMETER.

14. BASED ON AVAILABLE COUNTY MAPS AND RECORDS, THERE ARE NO EXISTING BUILDINGS, HISTORIC OR OTHERWISE,

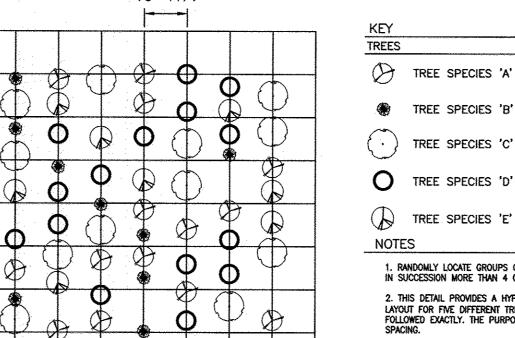
- 15. THE FOLLOWING SOILS ARE PRESENT ON THE SITE: CODORUS AND HATBORO SILT LOAMS (0-3% SLOPES) CO, HATBORO-CODORUS SILT LOAMS (0-3% SLOPES) - HA, LEGORE SILT LOAM (8-15% SLOPES) - LEC, LEGORE-MONTALTO SILT LOAMS (3-8% SLOPES) - LMB, LEGORE-RELAY GRAVELLY LOAMS (25-65% SLOPES) - LRF, URBAN LAND-CHILLUM-BELTSVILLE COMPLEX (0-5% SLOPES) - UCB, AND URBAN LAND-CHILLUM-BELTSVILLE COMPLEX (5-15% SLOPES) - UCD ACCORDING TO THE NATURAL RESOURCES CONSERVATION SERVICE WEB SOIL SURVEY.
- 16. THE HOWARD COUNTY FOREST CONSERVATION MANUAL SUPERCEDES ANY DISCREPANCIES BETWEEN THE MANUAL AND
- 17. THIS PROJECT COMPLIES WITH THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE FOR FOREST CONSERVATION WITH AN OBLIGATION OF 1.16 ACRES PROVIDED BY 2.54 ACRES OF ON-SITE RETENTION, 0.95 ACRES OF ON AND OFFSITE PLANTING AND 0.23 ACRES OF OFF-SITE RETENTION. THE LOCATION FOR OFFSITE PLANTING IS IN THE ADJACENT SAVAGE PARK, IMMEDIATELY ABUTTING THIS PROJECT AND ITS LIMITS OF DISTURBANCE.
- 18. A FOREST CONSERVATION EASEMENT WILL BE ESTABLISHED TO FULFILL THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE AND THE FOREST CONSERVATION MANUAL. NO CLEARING, GRADING, OR CONSTRUCTION IS PERMITTED WITHIN THE FOREST CONSERVATION EASEMENT, HOWEVER, FOREST MANAGEMENT PRACTICES AS DEFINED IN THE DEED OF FOREST CONSERVATION EASEMENT ARE ALLOWED.

#### PRELIMINARY FOREST CONSERVATION NARRATIVE

THE CLEARING ASSOCIATED WITH THIS PROJECT HAS BEEN LIMITED TO THE MORE LEVEL CENTRAL PORTION OF THIS SITE, AND TO AREAS THAT ARE ADJACENT TO EXISTING DEVELOPMENT. CLEARING FOR THIS PROJECT IS REQUIRED FOR THE CONSTRUCTION OF THE PUBLIC UTILITY AND ROAD INFRASTRUCTURE, THE REQUIRED SEDIMENT CONTROLS, STORMWATER MANAGEMENT AND STORM DRAIN SYSTEMS, AND FOR THE DWELLING

PLANTING AREAS FOR THIS PROJECT HAVE BEEN SELECTED TO ENHANCE EXISTING ENVIRONMENTAL AND LANDSCAPE BUFFERS. PLANTING AREAS HAVE ALSO BEEN SELECTED TO RESTORE PREVIOUSLY DISTURBED AREAS. PLANTING FOR THIS PROJECT WILL INCLUDE 2" CALIPER DECIDUOUS SHADE TREES COMPRISED OF NATIVE SPECIES. TO COMPLEMENT THE EXISTING FORESTED AREAS ON THE SITE. PLANTING AREAS LESS THAN 10,000 SF IN AREA HAVE BEEN PROPOSED WITH THIS PLAN WHERE THE PLANTED AREAS ABUT EXISTING FORESTED AREAS, AND CAN SUPPLEMENT THE EXISTING FOREST COVER.

RETENTION AREAS FOR THIS PROJECT HAVE BEEN SELECTED TO ENHANCE EXISTING ENVIRONMENTAL BUFFERS. THE RETENTION AREAS PROVIDE A WIDER PROTECTED STREAM BUFFER, PROTECT STEEP SLOPES, AND PROVIDE PROTECTED HABITAT AREA. RETENTION WILL INCLUDE AT LEAST ONE OF THE SPECIMEN TREES LOCATED ON



IN SUCCESSION MORE THAN 4 OF THE SAME SPECIES. 2. THIS DETAIL PROVIDES A HYPOTHETICAL, GRAPHIC DEPICTION OF A PROPOSED LAYOUT FOR FIVE DIFFERENT TREE SPECIES (A-E). IT IS NOT MEANT TO BE FOLLOWED EXACTLY. THE PURPOSE IS TO ACHIEVE THE APPEARANCE OF RANDOM

3. SEE PLANT LIST FOR ACTUAL NUMBER OF PLANT SPECIES. SEE PLANT LIST FOR ON-CENTER SPACING REQUIREMENTS. 4. PLANTS SHALL NOT BE PLANTED IN A GRID PATTERN IN BOTH DIRECTIONS. IN ONE DIRECTION, 10' ROWS SHALL BE LAID OUT. IN THE OTHER DIRECTION, DISTANCES SHALL VARY. CONTRACTOR TO PROVIDE A LAYOUT PLAN PRIOR TO

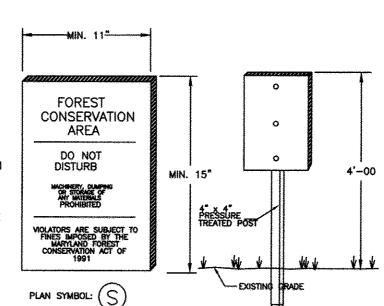
5. CONTRACTOR SHALL LEAVE 12' AT THE EDGE OF EACH PLANTING AREA FO. MAINTENANCE AND CIRCULATION.

6. CONTRACTOR SHALL ADJUST SPECIES IN FIELD BASED ON MICROCLIMATE



FOREST	CONSERVATION	EASEMFNT	TABLE
CONSERVATION TYPE	DESCRIPTION	ACRES	SF
EX. RETENTION ESMTS (A)	EX. EASEMENT A (PLAT NO. 20205)	0.20	8,534
	EX. EASEMENT B-1 (PLAT NO. 20205)	0.09	4,047
	EX. EASEMENT B-2 (PLAT NO. 20205)	0.04	1,645
	EX. EASEMENT B-2 (PLAT NO. 20205)	0.50	21,790
	EX. EASEMENT E (PLAT NO. 20205)	0.33	14,489
CLEARING OF EXISTING ON-SITE EASEMENT	EX. EASEMENT E (PLAT NO. 20205)	(0.02)*	(882)*
TOTAL EXISTING EASEMENTS (A)		1.14	49,623
PROPOSED RETENTION (B)	PROP. EASEMENT C	1.32	57,295
	PROP. EASEMENT L-1 & L-2	0.09	3,747
TOTAL PROPOSED RETENTION (B)		1.40	61,042
TOTAL RETENTION ( $C = A+B$ )		2.54	110,665
TOTAL PLANTING REQUIREMENT		1.16	
			The state of the s
PROP. PLANTING	PROPOSED EASEMENT H	0.24	10,532
	PROPOSED EASEMENT I	0.50	21,909
	PROPOSED EASEMENT K	0.21	9,010
TOTAL PLANTING		0.95	41,541
EXISTING OFF-SITE EASEMENT	EX. EASEMENT D-1 (PLAT NO. 20205)	0.23	10,127
TOTAL PLANTING AND OFFSITE FOREST CONSERVATION PROVIDED		1.18	51,578

\* AREAS CLEARED FROM EXISTING EASEMENT E ARE TO BE REPLANTED OR RELOCATED TO PROPOSED EASEMENT C.



- 1. SIGNAGE SHALL BE LOCATED ON FOREST CONSERVATION / REFORESTATION / AFFORESTATION EASEMENT BORDER. SEE PLAN FOR SPACING,
- FOREST CONSERVATION & REFORESTATION SIGN DETAIL

**PROPOSED** .**TREELINE EXISTING FOREST** CONSERVATION EASEMENTS PROPOSED FOREST CONSERVATION SIGNAGE SHALL REMAIN IN PLACE IN PERPETUITY. **EASEMENT - RETENTION** PROPOSED FOREST CONSERVATION NOT TO SCALE EASEMENT - PLANTING

SPECIMEN TREE

SPECIMEN TREE TO BE REMOVED

**LEGEND** 

RIGHT OF WAY

EX. TREELINE

**FLOODPLAIN** 

STREAM BUFFER

**EXISTING CONTOURS** 

EX. PROPERTY LINE AND

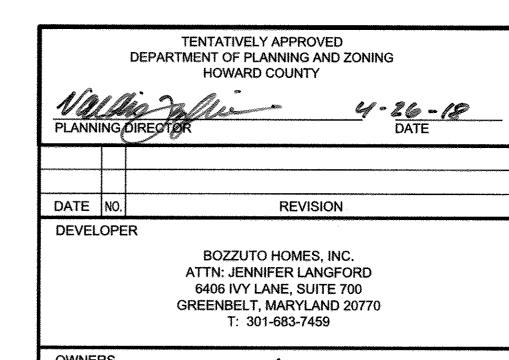
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#### REFORESTATION PLANTING LISTS

LIRIODENDRON TULIPIFERA / TULIP TREE			<u> </u>
HOUSE HIDED OTHER AUTHOR / OHETT OUR	1 0* 0 E* 0 AL		
LIQUIDAMBAR STYRACIFLUA / SWEET GUN			FULL CROWN 10'
ACER RUBRUM / RED MAPLE			± SPACING SEE RANDOM
QUERCUS PALUSTRIS / PIN OAK	3-3.5" CAL FOR SPECIMEN		PLANTING DETAIL
NYSSA SYLVATICA BLACK GUM	TREE		
	QUERCUS PALUSTRIS / PIN OAK	QUERCUS PALUSTRIS / PIN OAK OAKS SHALL BE 3-3.5" CAL FOR SPECIMEN	QUERCUS PALUSTRIS / PIN OAK  NYSSA SYLVATICA BLACK GUM  TREE

1. EASEMENT AREAS AND 0.08 AC NON CREDITED RESTORATION AREA WILL HAVE 103 TREES PLANTED (100  $TREE/AC \times 1.03 AC = 103 TREES)$ 

2. FOR EACH SPECIMEN TREE REMOVED, A TOTAL OF SEVEN SPECIMEN TREES, TWO 3-3.5" CALIPER TREES SHALL BE PLANTED AS PART OF THE REFORESTATION/AFFORESTATION.



SAVAGE MILL REMAINDER, LLC HOWARD COUNTY DEPARTMENT ATTN: JAY WINER 8373 PINEY ORCHARD PARKWAY SUITE 102 ODENTON, MARYLAND 21113-1580

T: 410-551-9116 PROJECT

#### THE SETTLEMENT AT SAVAGE MILL

TAX MAP 47, PARCEL 92 & 93, GRID 11 ZONED B-2, R-H-ED, & R-20 6TH ELECTION DISTRICT 8400, 8550, & 8554 FAIR STREET HOWARD COUNTY, MARYLAND

PRELIMINARY FOREST CONSERVATION PLAN, NOTES, AND DETAILS



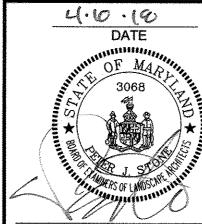
Consulting Engineers 8818 Centre Park Drive Suite 200 Columbia, MD 21045 T 410.997.8900 F 410.997.9282

OF RECREATION AND PARKS

7120 OAKLAND MILLS ROAD

COLUMBIA, MD 21046

T: 410-313-4700



PETER J. STONE #3068

DESIGNED BY: JSN DRAWN BY: JSN

PROJECT NO: BOZH1302 DATE: APRIL 9, 2018

SCALE: 1"=50"

DRAWING NO. \_\_\_11\_\_ OF \_\_\_15\_ SP-15-017

AREA CHART	
AREA	ACRES
TOTAL TRACT AREA	77.74
EXISTING FOREST WITHIN TRACT AREA	45.43
AREA OF DEVELOPMENT	7.85
EXISTING FOREST WITHIN AREA OF SUBDIVISION	8.13**
STREAM BUFFERS WITHIN AREA OF SUBDIVISION	0.65
FLOODPLAIN WITHIN AREA OF SUBDIVISION	0.31
WETLANDS & WETLAND BUFFERS WITHIN AREA OF SUBDIVISION	0.00
FORESTED STREAM BUFFERS WITHIN AREA OF SUBDIVISION	0.65
FORESTED FLOODPLAIN WITHIN AREA OF SUBDIVISION	0.31
FORESTED WETLANDS & WETLAND BUFFERS WITHIN AREA OF SUBDIVISION	0.00

\*\* THESE AREAS INCLUDE FOREST CONSERVATION EASEMENTS THAT WERE RECORDED WITH SDP-07-076. THESE AREAS ALSO INCLUDE WOODED AREAS NOT UNDER EASEMENT AND NOT PROTECTED WITH THIS PLAN, SUCH AS AREAS UNDER AND WITHIN THE EXISTING ROPES COURSE

PLANT COMMUNITY SUMMARY						
SYMBOL	COMMUNITY	AREA	PRIORITY RETENTION			
F1	FOREST	8.13 Ac.±	HIGH			

#### SEQUENCE OF OPERATIONS

#### PRE-CONSTRUCTION SITE PREPARATION

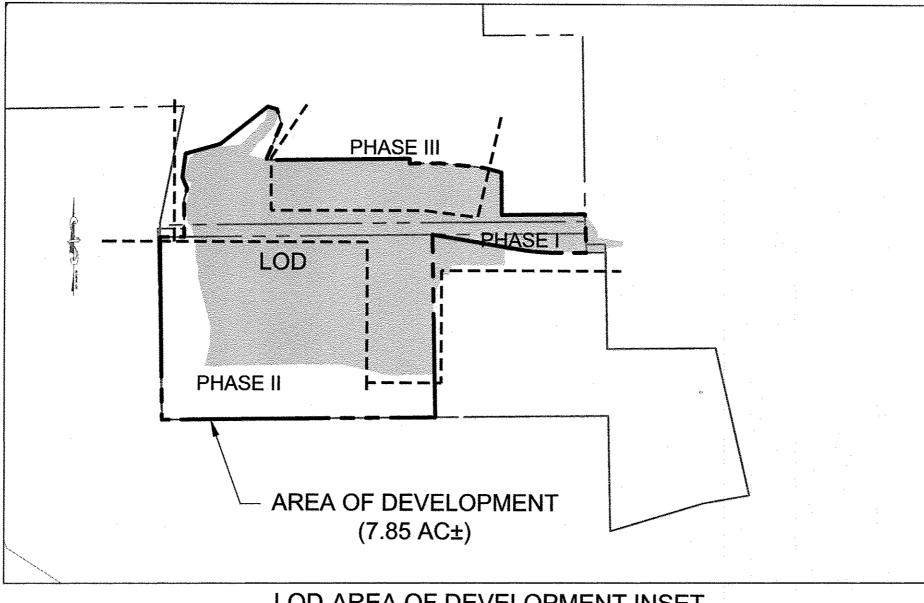
- 1. FIELD STAKE LIMITS OF DISTURBANCE (L.O.D.) AT 25' INTERVALS.
- 2. REVIEW L.O.D. IN FIELD AND ADJUST IF PRACTICAL.
- 3. INSTALL TREE PROTECTION FENCE AT THE L.O.D. AND IMPLEMENT TREE PROTECTION METHODS AS SHOWN.
- 4. CLEAR AND GRUB AS NECESSARY TO FACILITATE ROOT PRUNING TO A DEPTH OF 2-3 FEET WITHIN THE LIMITS OF THE DISTURBED AREA. CLEAR REMAINING TREES IN A WAY THAT "SAVE TREES' ARE NOT DISTURBED. FLUSH CUT OR GRIND STUMPS 12" IN DIAMETER AND LARGER THAT ARE WITHIN 25' OF THE L.O.D.
- 5. DO NOT ATTEMPT TO SAVE TREES WITHIN 25' FROM THE L.O.D. UNLESS, IN THE OPINION OF THE CONSULTING ARBORIST. THEY HAVE A 75% CHANCE OR BETTER OF SURVIVAL.
- 6. PRUNE AND FERTILIZE DESIRABLE 'EDGE TREES' AS PER CONSULTING ARBORIST'S RECOMMENDATIONS.
- 7. REMOVE OR TREAT WITH AN ACCEPTABLE METHOD, NOXIOUS PLANT MATERIAL SUCH AS MULTIFLORA ROSE, TEARTHUMB, AND JOHNSON GRASS BEFORE INSTALLING REFORESTATION PLANTS.
- 8. INSTALL TREE PROTECTION SIGNAGE. ATTACHMENT OF SIGNS OR ANY OTHER OBJECTS TO TREES WITHIN THE PROTECTED
- 9. STABILIZE ANY DISTURBED AREAS USING THE SPECIFIED STABILIZATION MIXTURE WHICH ALLOWS FOR NATURAL REVEGETATION OF FOREST COMMUNITIES.

#### FOREST CONSERVATION SEQUENCE OF OPERATIONS

- PRIOR TO BEGINNING ANY GRADING OPERATIONS ON THIS SITE OR ON A RESPECTIVE LOT. THERE SHALL BE A PRECONSTRUCTION MEETING HELD AT THE SITE WHICH IS TO INCLUDE THE CONTRACTOR AND REPRESENTATIVES FROM PENNONI, AND A REPRESENTATIVE FROM HOWARD COUNTY. THE PURPOSE OF THIS MEETING WILL BE TO REVIEW THE APPROVED FCP AND TO FIELD VERIFY THE CORRECT LIMITS OF DISTURBANCE (LOD).
- 2. GRADING OPERATIONS OR OTHER CONSTRUCTION OPERATIONS WHICH COULD DISLODGE OR OTHERWISE DAMAGE THE PROTECTIVE DEVICES SHALL BE AVOIDED ALONG THE EDGES OF THE LOD LINES IF POSSIBLE, ANY PROTECTIVE DEVICES WHICH ARE DAMAGED DURING SITE CONSTRUCTION OPERATIONS SHALL BE PROPERLY REPAIRED IMMEDIATELY BY THE
- 3. AFTER SITE GRADING, ROAD, AND UTILITY CONSTRUCTION HAVE BEEN COMPLETED, ALL TREES ADJACENT TO THE LOD LINE SHALL BE INSPECTED FOR INDICATIONS OF CROWN DIE-BACK (SUMMER INDICATOR), DAMAGE WITHIN RESPECTIVE CRITICAL ROOT ZONES OR ANY DEAD WOOD OR OTHER CONDITIONS WHICH MIGHT BE HAZARDOUS TO PEDESTRIANS, BUILDINGS, UTILITY LINES, VEHICULAR ACCESS WAYS OR PARKED VEHICLES.
- 4. SHOULD THERE BE EVIDENCE OF ANY DAMAGE TO TREE TRUNKS, BRANCHES OR THE CRITICAL ROOT ZONE OF TREES WITHIN THE PROTECTED AREAS, OR TO ISOLATED SPECIMEN TREES TO BE PRESERVED, THE DAMAGE SHALL BE EXAMINED WITHIN A PERIOD OF TWO (2) DAYS FROM THE DATE OF OBSERVANCE BY AN ARBORIST. EXPOSED ROOTS SHOULD BE COVERED IMMEDIATELY TO A DEPTH OF 6 - 8 INCHES WITH SOIL, PREFERABLY MIXED WITH 50% PEAT MOSS OR LEAF MOLD.
- REMOVE DAMAGED, DEAD OR DYING TREES OR LIMBS ONLY IF THE TREES OR LIMBS POSE AN IMMEDIATE SAFETY HAZARD TO BUILDINGS, UTILITY LINES, VEHICLES, OR ACCESS AND EGRESS DRIVES OR PEDESTRIAN AREAS. TREES DESIGNATED FOR PRUNING OR REMOVAL SHALL BE PRUNED OR REMOVED USING EQUIPMENT AND METHODS WHICH WILL NOT DAMAGE OR DESTROY ADJACENT LARGE TREES OR UNDERSTORY TREES OR SHRUBS DESIGNATED FOR RETENTION.
- 6. ALL TEMPORARY FOREST PROTECTION DEVICES WILL BE CAREFULLY REMOVED AFTER ALL GENERAL CONSTRUCTION. NECESSARY TREE SURGERY, REMOVAL OF DEBRIS, ETC. REGRADING AND RESEEDING OF SEDIMENT AND EROSION CONTROL DISTURBANCE HAVE BEEN COMPLETED AND ACCEPTANCE AND APPROVAL OF THE WORK AND SITE CONDITIONS HAVE BEEN GIVEN BY THE PROJECT INSPECTOR.

#### AFFORESTATION/REFORESTATION PLANTING SEQUENCE OF OPERATIONS

- THE CONTRACTOR(S) SHALL INFORM THE LANDSCAPE ARCHITECT AND THE PROJECT MANAGER WHEN PLANTING OPERATIONS ARE TO BEGIN.
- 2. DETERMINE STORAGE AREAS FOR MATERIALS AND EQUIPMENT. OBTAIN APPROVAL OF LOCATION FROM THE LANDSCAPE ARCHITECT AND PROJECT INSPECTOR.
- 3. PRIOR TO BEGINNING ANY PLANTING, THE SOILS WITHIN THE AREA(S) DESIGNATED FOR AFFORESTATION OR REFORESTATION SHALL BE ANALYZED BY A QUALIFIED SOIL LABORATORY REGARDING THE FOLLOWING FEATURES: NUTRIENT CONTENT, ORGANIC MATTER, STRUCTURE, PH AND CATION EXCHANGE CAPACITY. SOILS THAT HAVE BEEN ACTIVELY FARMED MAY REQUIRE EVALUATION FOR PESTICIDE OR HERBICIDE CONTAMINATION. SUCH ANALYSIS MAY BE PERFORMED BY THE LOCAL SOIL CONSERVATION SERVICE OR AGRICULTURAL EXTENSION SERVICE. A MINIMUM OF THREE RANDOM SAMPLES SHOULD BE COLLECTED FOR THE ANALYSIS. AN ASSESSMENT OF SOIL MOISTURE SHOULD ALSO BE MADE AT THIS TIME. CORRECTIVE MEASURES SHALL BE MADE IN ACCORDANCE WITH ANALYSIS RESULTS AND RECOMMENDATIONS. STEP 3 IS TO BE PERFORMED BY THE CONTRACTOR AND ALL COSTS INVOLVED IN TESTING OR CORRECTIVE MEASURES SHALL BE THE CONTRACTOR'S RESPONSIBILITY.
- 4. THE CONTRACTOR SHALL STAKE (OR WIRE-FLAG) PLANTING AREA LIMITS AND PLANT LOCATIONS IN ACCORDANCE WITH THE PLAN AND DETAILS. PLANTING AREA LIMITS SHALL BE INSPECTED BY PROJECT LANDSCAPE ARCHITECT PRIOR TO PLANTING.
- 5. PROVIDE AND PLANT ALL TREES OF THE SPECIES AND SIZES SPECIFIED AND IN ACCORDANCE WITH THE DETAIL(S) SHOWN ON THE FOREST CONSERVATION PLANS.
- 6. AT THE COMPLETION OF PLANTING, REMOVE ALL EXCESS MATERIALS AND MISCELLANEOUS DEBRIS FROM THE RESPECTIVE AREA(S) OF WORK.
- 7. PROTECTION DEVICES TO PREVENT DAMAGE WITHIN PLANTED AREAS, ALL REFORESTATION AND/OR AFFORESTATION SITES MUST BE POSTED WITH APPROPRIATE SIGNS AND THE AREA(S) DELINEATED WITH APPROPRIATE PROTECTIVE FENCING. NO CONSTRUCTION EQUIPMENT NOR STORAGE OF MATERIALS SHALL BE PERMITTED WITHIN THE PLANTED AREAS. DETAILS ARE SHOWN ON THE FOREST CONSERVATION PLANS REGARDING TYPICAL SIGN SIZE AND WORDING. NO PEDESTRIAN TRAFFIC SHALL BE ALLOWED WITHIN THE PROTECTED AREAS.
- 8. ATTACHMENT OF SIGNS OR ANY OTHER OBJECTS TO TREES WITHIN THE PROTECTED AREAS IS PROHIBITED.



#### LOD-AREA OF DEVELOPMENT INSET

#### SCALE: 1"=200'

#### PRELIMINARY SEQUENCE OF CONSTRUCTION

- 1. CONDUCT A PRE-CONSTRUCTION MEETING WITH COUNTY INSPECTOR. (1 DAY)
- 2. OBTAIN GRADING PERMIT. (1 DAY)
- 3. STAKEOUT LIMITS OF DISTURBANCE. (5 DAYS)
- 4. INSTALL STABILIZED CONSTRUCTION ENTRANCE. CLEAR AND GRUB AS NECESSARY TO INSTALL PERIMETER SEDIMENT CONTROLS AND SEDIMENT TRAP (4 WEEKS)

#### PHASE I (PERIMETER SEDIMENT CONTROLS SHALL BE INSPECTED ON A DAILY BASIS)

- 5. CONCURRENT WITH INSTALLATION OF PERIMETER CONTROLS, ROOT PRUNE AT LIMITS OF DISTURBANCE AND AROUND SPECIMEN TREE TO AS SHOWN ON FOREST CONSERVATION PLAN. MULCH ALONG "SAVE" SIDE OF ROOT PRUNE LINE AND CONDUCT ANY TREE PRESERVATION MEASURES IN ACCORDANCE WITH ARBORIST RECOMMENDATIONS. (1 WEEK).
- 6. AT COMPLETION OF SEDIMENT CONTROL AND ROOT PRUNING ACTIVITIES, BEGIN GRADING AND INSTALLATION OF WATER AND SEWER EXTENSION FROM WASHINGTON STREET/FAIR STREET INTERSECTION. (3 WEEKS)
- MODIFICATIONS TO SAVAGE MILL PARKING LOT, AND CONSTRUCTION OF WASHINGTON STREET EXTENSION FROM INTERSECTION TO LOCATION OF STABILIZED CONSTRUCTION ENTRANCE SHALL BE CONDUCTED USING SAME DAY STABILIZATION MEASURES. CONTRACTOR SHALL ONLY INSTALL AS MUCH CURB, PIPE, AND PAVEMENT AS CAN BE STABILIZED IN A SINGLE DAY. (6 WEEKS)
- 8. CONTINUE SITE GRADING AND UTILITY INSTALLATION OF AREA 1. (2 MONTHS)
- 9. BEGIN CONSTRUCTION OF DUPLEX AND TOWNHOME UNITS IN AREA 1 (8 MONTHS)
- 10. COMPLETE SITE AREA 1 LANDSCAPING AND SITE STABILIZATION UPON AREA 1 HOME COMPLETION. (2 WEEKS)

### 11.AT COMPLETION OF AREA 1 UTILITIES PROCEED WITH SITE CLEARING OF AREA 2 (3 WEEKS)

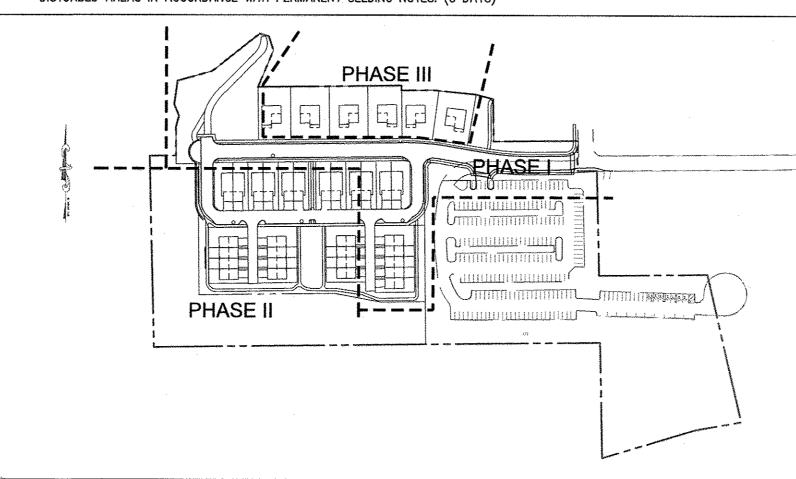
- 12. BEGIN SITE GRADING AND UTILITY INSTALLATION OF AREA 2. AS SITE GRADING PROCEEDS CONSTRUCT RETAINING WALLS AT WESTERN EDGE OF PROJECT. (2 MONTHS)
- 13. WITH COMPLETION OF SITE UTILITIES IN AREA 2, BEGIN ROAD CONSTRUCTION. PLACE INLET PROTECTION AT ALL INLETS AS THEY ARE INSTALLED. AFTER ROAD CONSTRUCTION REESTABLISH INLET PROTECTION IN ALL PAVED AREAS. STORM DRAIN CONSTRUCTION SHALL END AT SEDIMENT TRAP, DEFER CONSTRUCTION OF STORM DRAIN OUTFALL UNTIL SITE IS STABILIZED AND TRAP REMOVED. (2 MONTHS).
- 14. WITH COMPLETION OF AREA 2 INFRASTRUCTURE, BEGIN AREA 2 DUPLEX AND TOWNHOME CONSTRUCTION. (10 MONTHS)
- 15. CONCURRENT WITH HOUSE CONSTRUCTION, AS LOTS ARE STABILIZED, CONSTRUCT STORMWATER MANAGEMENT FEATURES ON LOTS. DO NOT BEGIN THE CONSTRUCTION OF STORMWATER MANAGEMENT FACILITIES UNTIL AREA DRAINING TO FACILITY IS STABILIZED. (1 MONTH)
- 16. COMPLETE SITE AREA 2 LANDSCAPING AND SITE STABILIZATION UPON AREA 1 HOME COMPLETION. (2 WEEKS)

#### PHASE III 17. UPON COMPLETION OF AREA 2 INFRASTRUCTURE BEGIN AREA 3 SITE CLEARING AND GRADING (2 WEEKS)

- 18. BEGIN SINGLE FAMILY HOME CONSTRUCTION ON AREA 3 (8 MONTHS)
- 19. CONCURRENT WITH HOUSE CONSTRUCTION, AS LOTS ARE STABILIZED, CONSTRUCT STORMWATER MANAGEMENT FEATURES ON LOTS. DO NOT BEGIN THE CONSTRUCTION OF STORMWATER MANAGEMENT FACILITIES UNTIL AREA DRAINING TO FACILITY IS STABILIZED. (1 MONTH)
- 20. COMPLETE SITE AREA 1 LANDSCAPING AND SITE STABILIZATION UPON AREA 3 HOME COMPLETION. (2 WEEKS)

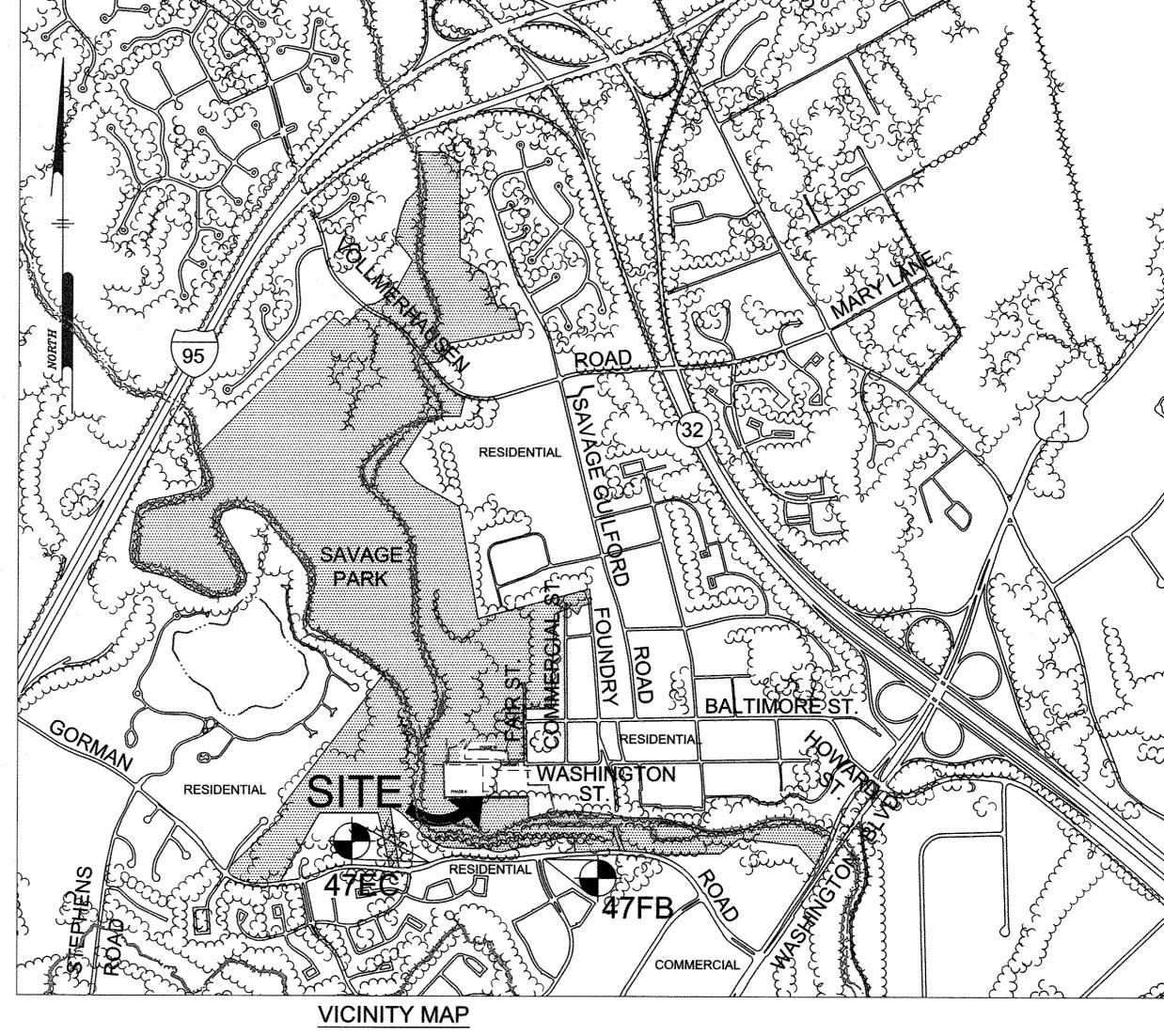
#### PHASE IV

- 21. UPON COMPLETE STABILIZATION OF SITE, REMOVE SEDIMENT TRAP, CONSTRUCT STORM DRAIN OUTFALL, COMPLETE STORM DRAIN CONSTRUCTION, CONSTRUCT TRAIL, AND CONSTRUCT BIORETENTION FACILITY. (2 MONTHS)
- 22. UPON PERMISSION OF COUNTY SEDIMENT CONTROL INSPECTOR, REMOVE ALL REMAINING SEDIMENT CONTROL DEVICES AND STABILIZE DISTURBED AREAS IN ACCORDANCE WITH PERMANENT SEEDING NOTES. (5 DAYS)

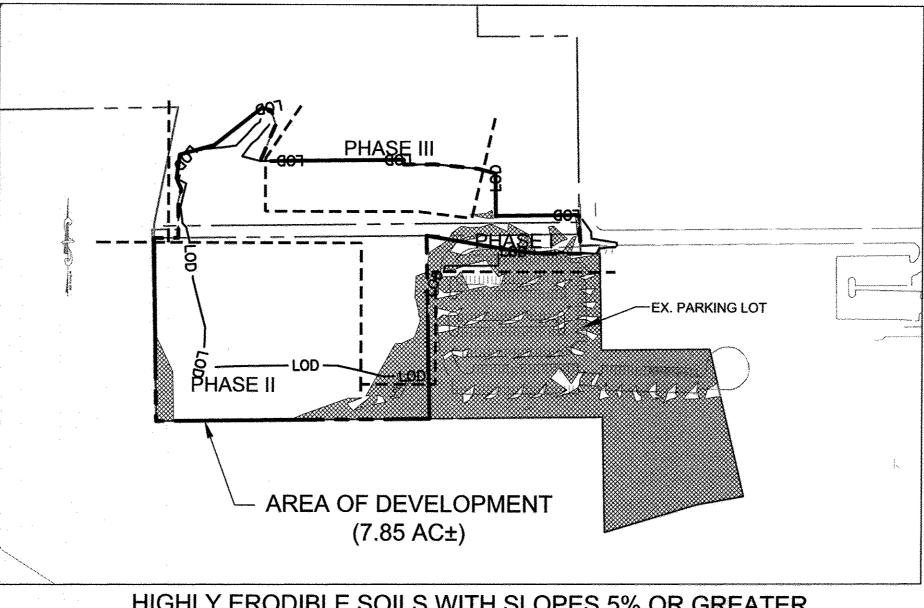


SEDIMENT CONTROL PHASING PLAN

SCALE: 1"=200'



SCALE: 1"=2,000" HOWARD COUNTY ADC MAP 40 GRIDS E4 ADC MAP USE LICENSE #3652



HIGHLY ERODIBLE SOILS WITH SLOPES 5% OR GREATER

SCALE: 1"=200'

**TENTATIVELY APPROVED** DEPARTMENT OF PLANNING AND ZONING HOWARD COUNTY DATE NO. REVISION DEVELOPER BOZZUTO HOMES, INC. ATTN: JENNIFER LANGFORD 6406 IVY LANE, SUITE 700 GREENBELT, MARYLAND 20770 T: 301-683-7459

**OWNERS** 

SAVAGE MILL REMAINDER, LLC ATTN: JAY WINER 8373 PINEY ORCHARD PARKWAY SUITE 102 ODENTON, MARYLAND 21113-1580 T: 410-551-9116

HOWARD COUNTY DEPARTMENT OF RECREATION AND PARKS 7120 OAKLAND MILLS ROAD COLUMBIA, MD 21046 T: 410-313-4700

**PROJECT** 

#### THE SETTLEMENT AT SAVAGE MILL

TAX MAP 47, PARCEL 92 & 93, GRID 11 ZONED B-2, R-H-ED, & R-20 6TH ELECTION DISTRICT 8400, 8550, & 8554 FAIR STREET HOWARD COUNTY, MARYLAND

> FOREST CONSERVATION PLAN **NOTES & TABULATIONS**



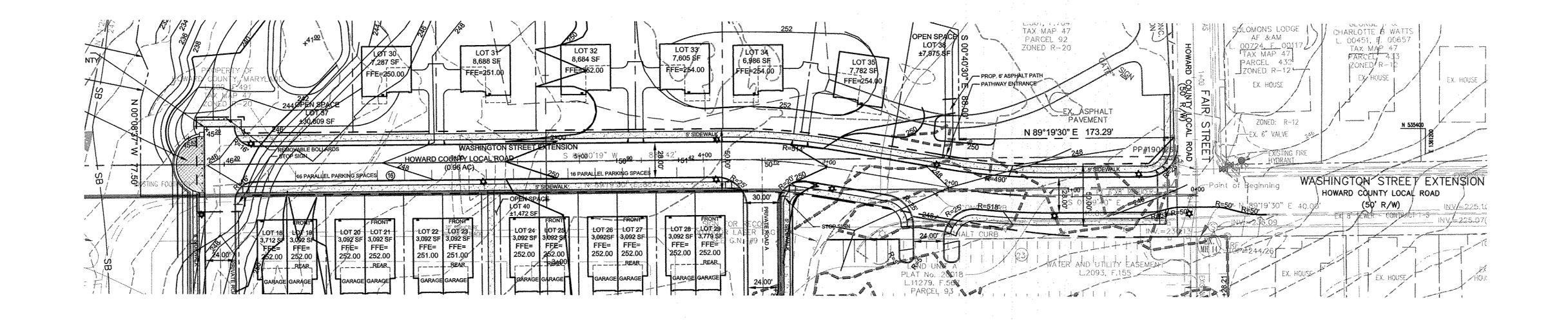
Pennoni Associates Inc. Consulting Engineers 8818 Centre Park Drive Suite 200 Columbia, MD 21045 **T** 410.997.8900 F 410.997.9282

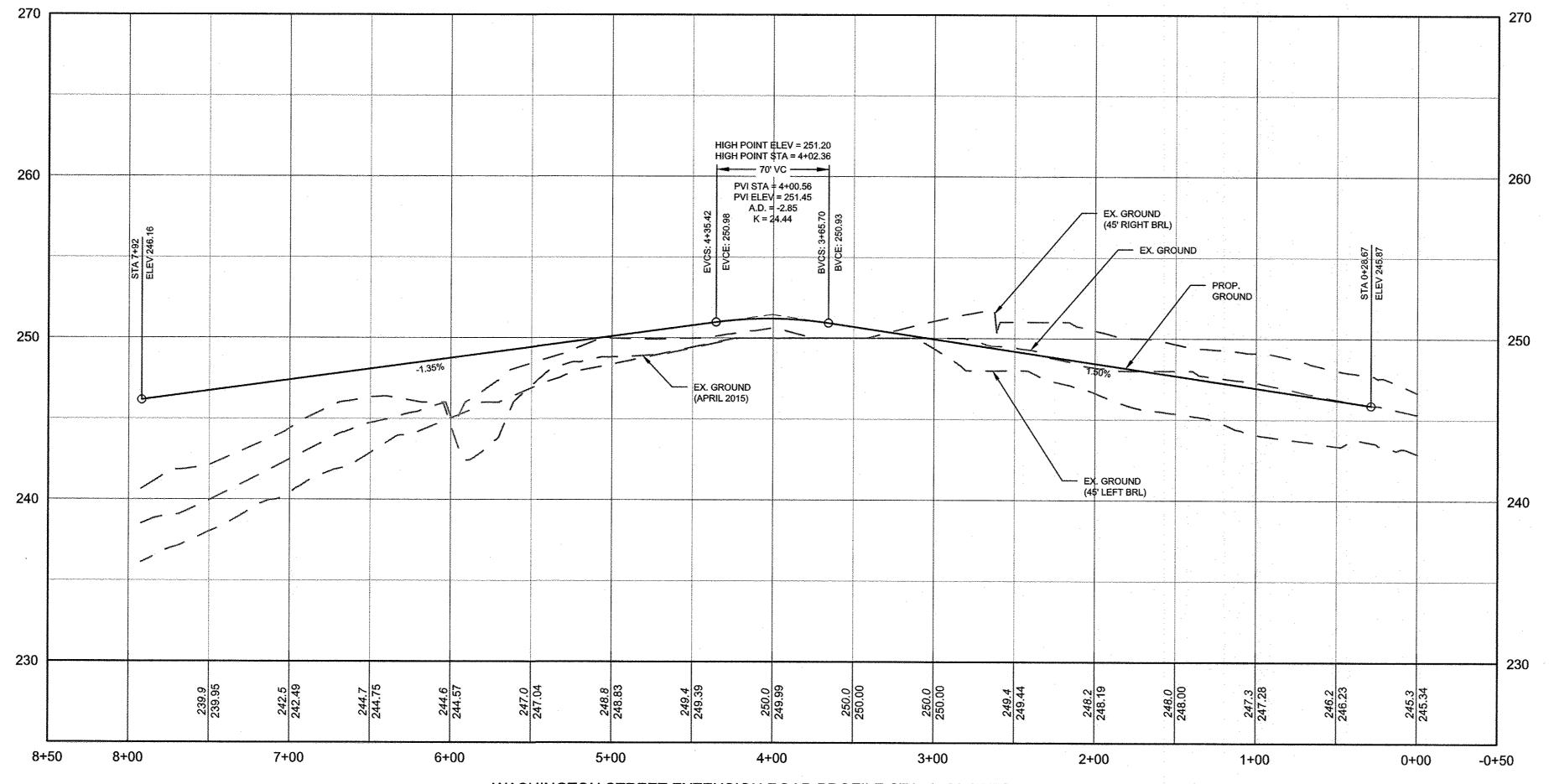


**DESIGNED BY: JSN** 

DRAWN BY: JSN PROJECT NO: BOZH1302 DATE: APRIL 9, 2018 SCALE: AS SHOWN

DRAWING NO. **120**f 15 SP-15-017





WASHINGTON STREET EXTENSION ROAD PROFILE STA. 0+28.67 TO 7+92

HORIZONTAL SCALE: 1" = 50'

VERTICAL SCALE: 1" = 5'

HOWARD COUNTY LOCAL ROAD

DESIGN SPEED = 40 MPH

> BOZZUTO HOMES, INC. ATTN: JENNIFER LANGFORD 6406 IVY LANE, SUITE 700 GREENBELT, MARYLAND 20770 T: 301-683-7459

OWNERS SAVAGE M

SAVAGE MILL REMAINDER, LLC ATTN: JAY WINER 8373 PINEY ORCHARD PARKWAY SUITE 102 ODENTON, MARYLAND 21113-1580 T: 410-551-9116

HOWARD COUNTY DEPARTMENT OF RECREATION AND PARKS 7120 OAKLAND MILLS ROAD COLUMBIA, MD 21046 T: 410-313-4700

PROJECT

## THE SETTLEMENT AT SAVAGE MILL

REA TAX MAP 47, PARCEL 92 & 93, GRID 11
ZONED B-2, R-H-ED, & R-20 6TH ELECTION DISTRICT
8400, 8550, & 8554 FAIR STREET

HOWARD COUNTY, MARYLAND

PRELIMINARY ROAD PROFILES



Pennoni Associates Inc.
Consulting Engineers
8818 Centre Park Drive Suite 200
Columbia, MD 21045
T 410.997.8900
F 410.997.9282



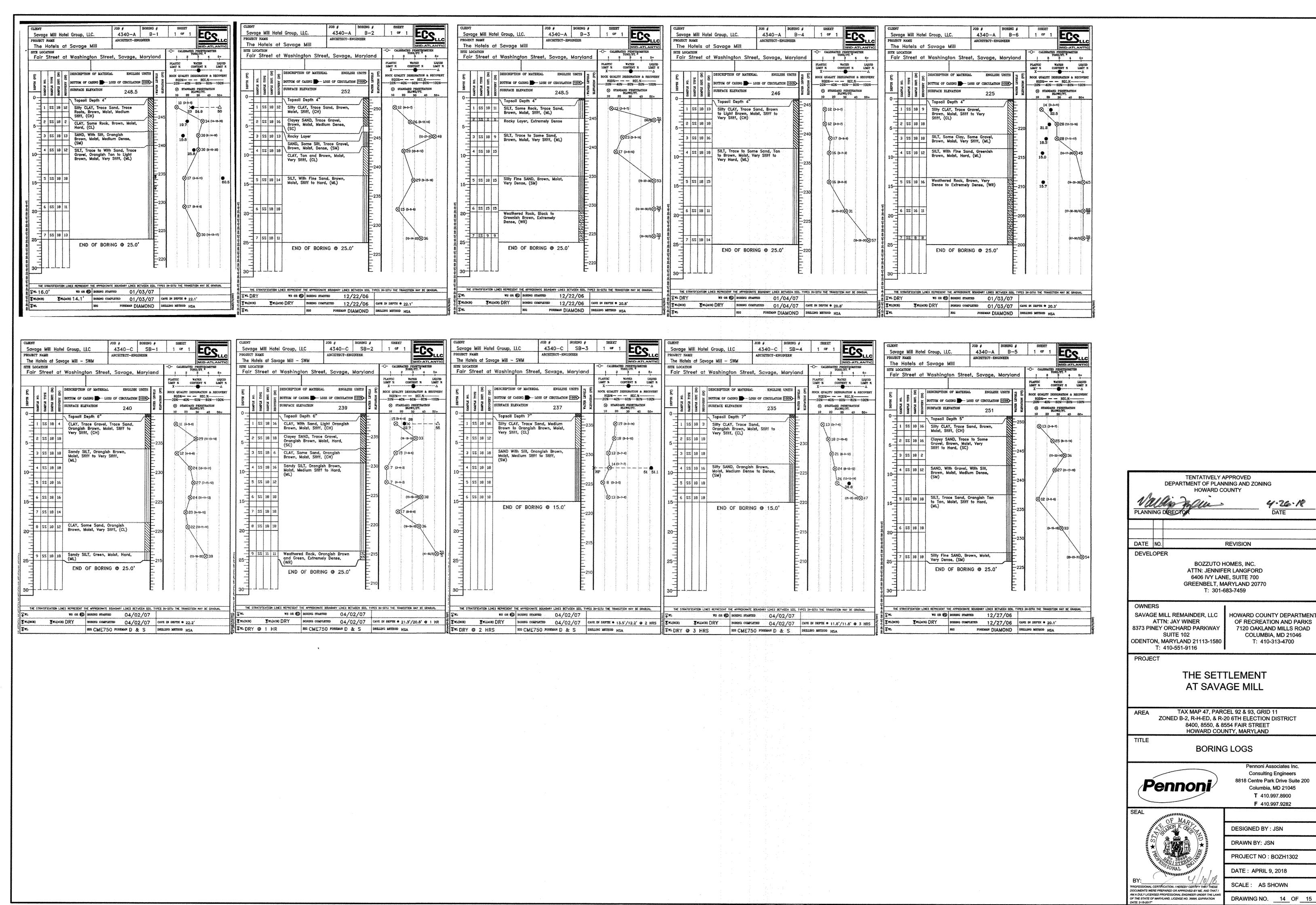
AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAY OF THE STATE OF MARYLAND, LICENSE NO. 36896, EXPIRATION DESIGNED BY : JSN

DRAWN BY: JSN
PROJECT NO : BOZH1302

DATE: APRIL 9, 2018

SCALE: AS SHOWN

DRAWING NO. \_\_13\_ OF \_\_15\_ SP-15-017



SP-15-017

DATE

TEST BORING LOG  CLERT BOZZAD Homes  PROJECT NAME Brasse MR Residensial Subdivision.  PROJECT LOCATION Services In Market Brasse MR Residensial Subdivision.  PROJECT LOCATION Services In Market Brasse MR Residensial Subdivision.  PROJECT LOCATION Services In Market Brasse MR Residensial Subdivision.  PROJECT LOCATION Services In Market Brasse MR Residensial Subdivision.  PROJECT LOCATION Services In Market Brasse MR Residensial Subdivision.  PROJECT LOCATION Services In Market Brasse MR Residensial Subdivision.  PROJECT LOCATION Services In Market Brasse MR Residensial Subdivision.  PROJECT LOCATION Services In Market Brasse MR Residensial Subdivision.  PROJECT LOCATION Services In Market Brasse MR Residensial Subdivision.  PROJECT LOCATION Services In Market Brasse MR Residensial Subdivision.  PROJECT LOCATION Services In Market Brasse MR Residensial Subdivision.  PROJECT LOCATION Services In Market Brasse MR Residensial Subdivision.  PROJECT LOCATION Services In Market Brasse MR Residensial Subdivision.  PROJECT LOCATION Services In Market Brasse MR Residensial Subdivision.  PROJECT LOCATION Services In Market Brasse MR Residensial Subdivision.  PROJECT LOCATION Services In Market Brasse MR Residensial Subdivision.  PROJECT LOCATION Services In Market Brasse MR Residensial Subdivision.  PROJECT LOCATION Services In Market Brasse MR Residensial Subdivision.  PROJECT LOCATION Services In Market Brasse MR Residensial Subdivision.  PROJECT LOCATION Services In Market Brasse MR Residensial Subdivision.  PROJECT LOCATION Services In Market Brasse MR Residensial Subdivision.  PROJECT LOCATION Services In Market Brasse MR Residensial Subdivision.  PROJECT LOCATION Services In Market Brasse MR Residensial Subdivision.  PROJECT LOCATION Services In Market Brasse MR Residensial Subdivision.  PROJECT LOCATION Services In Market Brasse MR Residensial Subdivision.  PROJECT LOCATION Services In Market Brasse MR Residensial Subdivision.  PROJECT LOCATION Services In Market Brasse MR Residensial Subdivision.  PROJECT LOCATION	TEST BORING LOG  CLIENT Security Florage Marked Subdivision PROJECT NAME Senge Marked Subdivision PROJECT NA	TEST BORING LOS  PROJECT NAME Rende MR Rendentida Subdivision PROJECT NAME ROZATION  CLENT 802246 (Forme PROJECT NAME Senore MR Rendentida Subdivision PROJECT NAME ROZATION  DATE STARTED 80271302  DATE STARTED 80271302  DRILLIANG GONTRACTOR Conneits & Association Deling DRILLIANG GONTRACTOR Conneits & Association Deling DRILLIANG HETHOR ASTM D1888  DRILLIANG HETHOR ASTM D1888  DRILLIANG HETHOR ASTM D1888  DRILLIANG HETHOR T. Rendent  CHECKED BY S. DONBHUR  AT END OF DRILLIANG—NM  MATERIAL DESCRIPTION  REMARKS  SS 5 5 5 50 50 50 9 9 1 10° Graved  SS 7 5 44-74  SS 7 7 (12)  Brown fine SAND, some alt (molet)  Light brown fine SAND, some alt (molet)  Bottom of boreholds at 7.0 feet.	TEST BORING LOG  CLIENT BORING LOG  CLIENT BORING NUMBER B-4 PAGE 1 OF 1  PROJECT NUMBER BOZH1302  COMPLETED 88915  BRILLING CONTRACTOR Commbit & Associator Deling  BRILLING CONTRACTOR Commbit & Associator Deling  BRILLING METHOD ASTITUDISS8  DRILLING METHOD ASTITUDISS METH	TEST BORING LOG  CLIENT Secretor Homes PROJECT NAME Servings Mill Residential Subdivision PROJECT NAME Resid	TEST BORING LOG  CLIENT BOZZADO Homes  PROJECT NAME, Sirringo Mill Residential Subdivision.  PROJECT COATION, Servingo, Mill Residential Subdivision.  PROJECT NAME, Sirringo Mill Residential Subdivision.  PROJE	
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						Pennoni Associates Inc. Consulting Engineers 8818 Centre Park Drive Suite 200 Columbia, MD 21045 T 410.997.8900 F 410.997.9282  SEAL  DESIGNED BY: JSN  DRAWN BY: JSN  PROJECT NO: BOZH1302  DATE: APRIL 9, 2018  BY:  PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY WE. AND THAT I HESE DOCUM