

GENERAL NOTES

- SUBJECT PROPERTY ZONED RC-DEO PER 10/09/13 COMPREHENSIVE ZONING PLAN.
- PROPERTY ADDRESS: CHAMBLIS DRIVE, CLARKSVILLE 21029
- TOTAL AREA OF PROPERTY = 21.21 AC.±
- PROPOSED NUMBER OF LOTS = 8
- PROPOSED AREA OF LOTS = 36 AC.±
- PROPOSED NUMBER OF BUILDABLE PRESERVATION PARCEL = 1
- PROPOSED NUMBER OF NON-BUILDABLE PRESERVATION PARCEL = 2
- PROPOSED AREA OF NON-BUILDABLE PRESERVATION PARCEL = 5.6211 AC.±
- PRIVATE WATER AND PRIVATE SEWER WILL BE USED WITHIN THIS SITE.
- THIS AREA DESIGNATES A PRIVATE SEWAGE EASEMENT, OF AT LEAST 10,000 SF AS REQUIRED BY THE MARYLAND STATE DEPARTMENT OF THE ENVIRONMENT FOR INDIVIDUAL SEWAGE DISPOSAL, COMAK 26.03. IMPROVEMENTS OF ANY NATURE IN THIS AREA ARE RESTRICTED UNTIL PUBLIC SEWERAGE IS AVAILABLE. THESE EASEMENTS SHALL BECOME NULL AND VOID UPON CONNECTION TO A PUBLIC SEWERAGE SYSTEM. THE COUNTY HEALTH OFFICER SHALL HAVE THE AUTHORITY TO GRANT ADJUSTMENTS TO THE PRIVATE SEWAGE EASEMENT. RECORDATION OF A MODIFIED SEWAGE EASEMENT SHALL NOT BE NECESSARY.
- THE BOUNDARY SHOWN HEREON IS BASED ON A FIELD RUN BOUNDARY SURVEY PREPARED BY ADCOCK & ASSOCIATES, LLC ON SEPTEMBER 16, 2014.
- THE TOPOGRAPHY SHOWN HEREON HAS BEEN FIELD RUN BY ADCOCK & ASSOCIATES, LLC. ON SEPTEMBER 16, 2014. THE EXISTING TOPOGRAPHY SHOWN OUTSIDE THE SITE IS BASED ON HOWARD COUNTY AERIAL TOPOGRAPHY FLOWN IN 2004.
- REFERENCE: LIBER 01703, FOLIO 00688
- PREVIOUS HOWARD COUNTY FILE NUMBERS: RECORD PLAT NO. 5471
- THE SOILS SHOWN HAVE BEEN TAKEN FROM THE US DEPARTMENT OF AGRICULTURE, NATURAL RESOURCES CONSERVATION SERVICE, WEB SOIL SURVEY WEBSITE: HOWARD COUNTY SOILS GRID 12, SUB-GRID 205
- A WETLAND AND STREAM STUDY HAS BEEN PREPARED BY ECO SCIENCE PROFESSIONALS INC. ON NOVEMBER 2014.
- THE LOTS SHOWN HEREON COMPLY WITH THE MINIMUM OWNERSHIP, WIDTH AND LOT AREA AS REQUIRED BY THE MARYLAND DEPARTMENT OF THE ENVIRONMENT.
- ALL EXISTING WELLS, SEPTIC SYSTEMS AND SEWAGE DISPOSAL EASEMENTS WITHIN 100 FEET OF THE PROPERTY BOUNDARIES AND ALL EXISTING AND PROPOSED WELLS THAT ARE LOCATED WITHIN 200 FEET DOWN GRADIENT OF EXISTING OR PROPOSED SEPTIC SYSTEMS AND SEWAGE DISPOSAL EASEMENTS HAVE BEEN FIELD LOCATED.
- EXISTING UTILITIES ARE LOCATED BY THE USE OF ANY OR ALL OF THE FOLLOWING: ROAD CONSTRUCTION PLANS, FIELD SURVEYS, PUBLIC WATER AND SEWER PLANS AND OTHER AVAILABLE RECORD DRAWINGS. APPROXIMATE LOCATION OF THE EXISTING UTILITIES ARE SHOWN FOR THE CONTRACTORS INFORMATION. CONTRACTOR SHALL LOCATE EXISTING UTILITIES WELL IN ADVANCE OF CONSTRUCTION ACTIVITIES AND TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND TO MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED DUE TO THE CONTRACTOR'S OPERATION SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.
- PRELIMINARY GEOTECHNICAL INFORMATION HAS BEEN TAKEN FROM THE US DEPARTMENT OF AGRICULTURE, NATURAL RESOURCES CONSERVATION SERVICE, WEB SOIL SURVEY WEBSITE AND FIELD INVESTIGATIONS. IF FUTURE INVESTIGATIONS SHOW UNSATISFACTORY SOIL CONDITIONS FOR ANY OF THE STORMWATER MANAGEMENT TREATMENTS SHOWN, EITHER UNDERDRAINS WILL BE PROVIDED OR A DIFFERENT PRACTICE WILL BE SUBSTITUTED.
- THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL, WHICH IS BASED ON THE MARYLAND STATE PLANE COORDINATE SYSTEM. HOWARD COUNTY NUMBERS 28HC AND 34BA WERE USED FOR THIS PROJECT.
- NO GRADING, REMOVAL OF VEGETATIVE COVER OR TREES, PAVING AND NEW STRUCTURES SHALL BE PERMITTED WITHIN THE LIMITS OF WETLANDS, STREAMS, OR THEIR REQUIRED BUFFERS, FLOODPLAIN AND FOREST CONSERVATION AREAS, UNLESS WAIVERS HAVE BEEN APPROVED OR ACTIVITIES HAVE BEEN DETERMINED ESSENTIAL BY THE DEPARTMENT OF PLANNING AND ZONING.
- THE STORMWATER MANAGEMENT SYSTEM SHOWN ON THESE PLANS IS AN APPROXIMATION OF THE SIZE, SHAPE, AND LOCATION. IT IS UNDERSTOOD THAT THIS SYSTEM HAS NOT BEEN DESIGNED AND THE ACTUAL DESIGN MAY CHANGE, ALTERING THE NUMBER OF UNITS ALLOCATED FOR THIS DEVELOPMENT.
- FOREST CONSERVATION OBLIGATIONS WILL BE MET FOR THIS PROJECT WITH THE RETENTION OF FOREST ON-SITE OR PAYMENT OF A FEE-IN-LIEU.
- ALL SWALES TO HAVE EROSION CONTROL MATTING.
- APPROVAL OF THIS ECP DOES NOT CONSTITUTE APPROVAL OF SUBSEQUENT AND ASSOCIATED SUBDIVISION PLANS, SITE DEVELOPMENT PLANS OR RED-LINE REVISIONS. REVIEW OF THIS PROJECT FOR COMPLIANCE WITH THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS AND THE HOWARD COUNTY ZONING REGULATIONS SHALL OCCUR AT THE SUBDIVISION OR SITE DEVELOPMENT PLAN STAGES OR RED-LINE REVISION PROCESS. THE APPLICANT AND CONSULTANT SHOULD EXPECT ADDITIONAL AND MORE DETAILED REVIEW COMMENTS (INCLUDING COMMENTS THAT MAY ALTER THE OVERALL SITE DESIGN) AS THIS PROJECT PROGRESSES THROUGH THE PLAN REVIEW PROCESS.
- THIS MAJOR SUBDIVISION IS GRANDFATHERED TO SB-236, "THE MARYLAND SUSTAINABLE GROWTH AND AGRICULTURAL PRESERVATION ACT OF 2012" AND IS LOCATED IN THE GROWTH TIER AREA III.

STORMWATER MANAGEMENT NOTES & DESIGN NARRATIVE

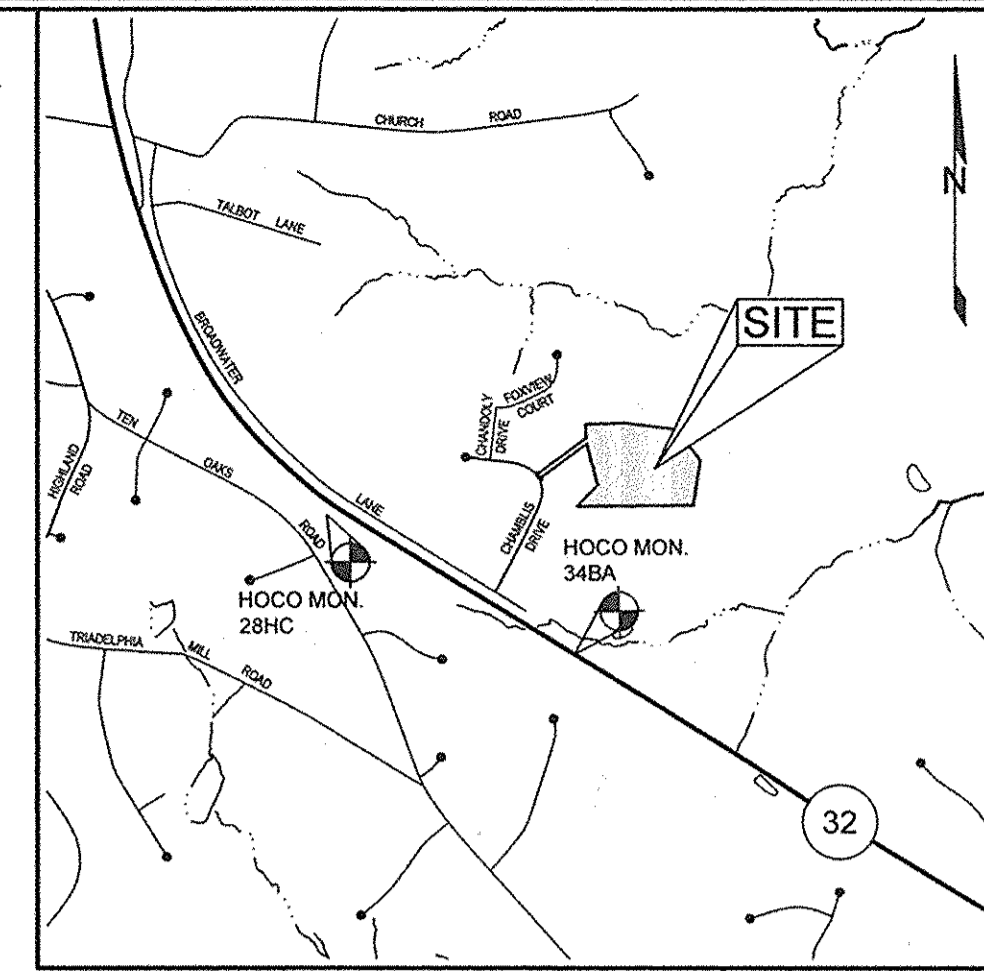
- ENVIRONMENTALLY SENSITIVE AREAS (STREAMS AND STEEP SLOPES) EXIST ON-SITE IN THE AREA OF DEVELOPMENT. IF NECESSARY, A WAIVER WILL BE SUBMITTED FOR THESE FEATURES TO REMAIN ON THE PROPOSED LOTS AND/OR BE DISTURBED.
- STORMWATER MANAGEMENT OBLIGATIONS WILL BE TREATED BY UTILIZING TWO MICRO-BIORETENTION FACILITIES AND A BIORETENTION FACILITY FOR THE PROPOSED ROAD AND NON-ROOFTOP DISCONNECTS FOR THE USE-IN-COMMON DRIVEWAYS WHERE FEASIBLE. THE PROPOSED HOUSES WILL BE TREATED USING MICRO-BIORETENTION FACILITIES. PROPOSED PRIVATE DRIVEWAYS WILL BE TREATED BY NON-ROOFTOP DISCONNECTS.
- THE SITE'S NATURAL RESOURCES ARE PROTECTED AND ENHANCED BY FOREST CONSERVATION EASEMENTS BEING PLACED OVER THEM WHERE FEASIBLE AND STREAM BUFFERS BEING ADDED WHERE APPROPRIATE.
- TO THE GREATEST EXTENT PRACTICABLE THE NATURAL FLOW PATTERNS OF THE SITE HAVE BEEN MAINTAINED BY DIRECTING STORM DRAIN, BIORETENTION AND SHEET FLOW RUNOFF TO LOCATIONS WITHIN THE NATURAL DRAINAGE DIVIDES.
- IMPERVIOUS AREAS HAVE BEEN REDUCED BY THE USE OF THE SMALLEST ROAD SECTION ALLOWABLE AND BY UTILIZING PERVIOUS AREAS FOR TREATMENT.
- THERE ARE MULTIPLE PROPOSED "ON-SITE" FOREST CONSERVATION/AFFORESTATION AREAS CREATED TO SATISFY THE FOREST CONSERVATION REQUIREMENTS FOR THIS DEVELOPMENT.
- THE REQUIRED P_r FOR THE SITE (1.6) HAS BEEN TREATED THROUGH THE USE OF BIORETENTION, MICRO-BIORETENTION AND NON-ROOFTOP DISCONNECTS. SEDIMENT CONTROL WILL BE PROVIDED BY SILT FENCE, SUPER SILT FENCE, INLET PROTECTION AND CLEAN WATER EARTH-DIKE A-1. NO STRUCTURAL BMP'S OR SEDIMENT BASINS ARE REQUIRED.

ENVIRONMENTAL CONCEPT PLAN THE WOODLANDS

LOTS 1 THRU 8, BUILDABLE PRESERVATION PARCEL A AND NON-BUILDABLE PRESERVATION PARCELS B & C (RE-SUBDIVISION OF LOT 2 OF GLEN MARY ESTATES) HOWARD COUNTY, MARYLAND

LEGEND

- EXISTING CONTOUR
- PROPOSED CONTOUR
- EXISTING SPOT ELEVATION
- PROPOSED SPOT ELEVATION
- DIRECTION OF FLOW
- EXISTING TREETLINE
- SOIL BOUNDARY
- EXISTING STREAM
- 100' STREAM BUFFER
- PROPOSED WELL AREA



VICINITY MAP

SCALE: 1"=2000'

BENCHMARKS

NUMBER	NORTHING	EASTING	ELEVATION	DESCRIPTION
28HC	565,351.762	1,332,102.463	552.207	S SIDE OF ROUTE 32, 0.2 MILES W OF 3201' E OF GUARD RAIL
34BA	563,852.491	1,324,872.167	450.048	2.5' N OF EDGE OF PAVEMENT OF ROUTE 32, 13.3' SE OF EXIT 20 SIGN

STORMWATER MANAGEMENT DESIGN DATA

DA #	DESCRIPTION	REQ'D	PROV'D	CODE	BMP TREATMENT TYPE
A	PID OF PUBLIC ROAD	2,414 CF	2,446 CF	F-6	BIORETENTION FACILITY 1
B	PID OF PUBLIC ROAD	827 CF	855 CF	M-6	MICRO-BIORETENTION FACILITY 2
C	USE-IN-COMMON DRIVEWAY	1,448 CF	1,543 CF	M-6	MICRO-BIORETENTION FACILITY 3
D	HOUSE - LOT 1	167 CF	191 CF	M-6	MICRO-BIORETENTION FACILITY 4
E	HOUSE - LOT 1	167 CF	191 CF	M-6	MICRO-BIORETENTION FACILITY 5
F	HOUSE - LOT 2	167 CF	191 CF	M-6	MICRO-BIORETENTION FACILITY 6
G	HOUSE - LOT 2	203 CF	279 CF	M-6	MICRO-BIORETENTION FACILITY 7
H	HOUSE - LOT 3	200 CF	203 CF	M-6	MICRO-BIORETENTION FACILITY 8
I	HOUSE - LOT 3	167 CF	192 CF	M-6	MICRO-BIORETENTION FACILITY 9
J	HOUSE - LOT 4	373 CF	387 CF	M-6	MICRO-BIORETENTION FACILITY 10
K	HOUSE - LOT 5	373 CF	387 CF	M-6	MICRO-BIORETENTION FACILITY 11
L	HOUSE - LOT 6	373 CF	387 CF	M-6	MICRO-BIORETENTION FACILITY 12
M	YARD - LOT 7	209 CF	220 CF	M-6	MICRO-BIORETENTION FACILITY 13
N	HOUSE - LOT 7	373 CF	387 CF	M-6	MICRO-BIORETENTION FACILITY 14
O	HOUSE - LOT 8	373 CF	387 CF	M-6	MICRO-BIORETENTION FACILITY 15
P	HOUSE - PARCEL A	373 CF	387 CF	M-6	MICRO-BIORETENTION FACILITY 16

- NOTES:
- HOUSE SIZE IS BASED ON A 3,750 SF FOOTPRINT.
 - DRIVEWAYS WILL BE TREATED BY NON-ROOFTOP DISCONNECTS WHERE POSSIBLE.

DENSITY TABULATION CHART

TOTAL PARCEL COMPUTED ACREAGE	21.21 AC.
TOTAL DEO UNITS ON SITE	21.21 AC./4.25 = 4 UNITS
TOTAL BUILDABLE LOTS/PARCELS	9
TOTAL DEO SENDING UNITS REQUIRED	5 UNITS
SENDING PARCEL INFORMATION	TO BE DETERMINED AT A LATER PLAN STAGE

SHEET INDEX

SHEET NO.	DESCRIPTION
1	COVER SHEET
2	LAYOUT AND CONCEPTUAL GRADING & SEDIMENT CONTROL PLAN
3	LAYOUT AND CONCEPTUAL GRADING & SEDIMENT CONTROL PLAN
4	ENVIRONMENTAL SITE DESIGN DRAINAGE AREA MAP
5	ENVIRONMENTAL SITE DESIGN DRAINAGE AREA MAP
6	FOREST STAND AND WETLAND DELINEATION PLAN

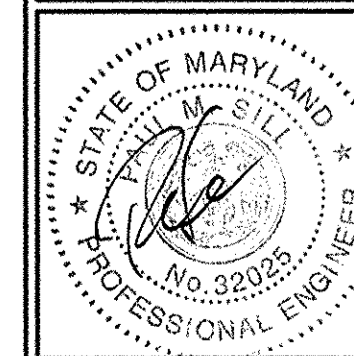
OWNER/DEVELOPER

DOSA CLARKSVILLE LLC
20308 WILEY COURT
LAYTONVILLE MD, 20882
301.370.8866

COVER SHEET

THE WOODLANDS
LOTS 1 THRU 8, BUILDABLE PRESERVATION PARCEL A AND NON-BUILDABLE PRESERVATION PARCELS B & C (RE-SUBDIVISION OF LOT 2 OF GLEN MARY ESTATES)

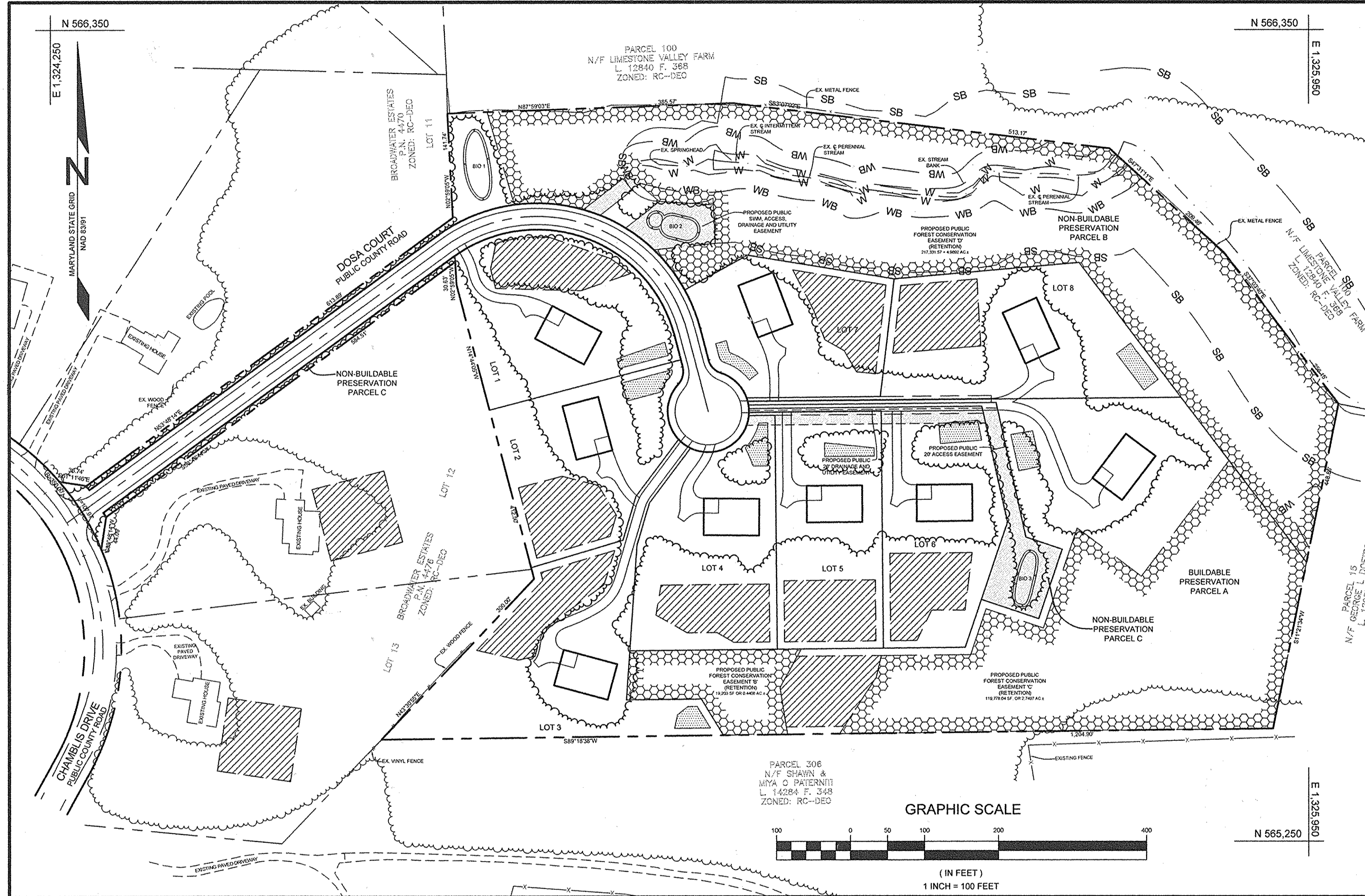
TAX MAP 28 GRID 23 5TH ELECTION DISTRICT PARCEL 15 HOWARD COUNTY, MARYLAND



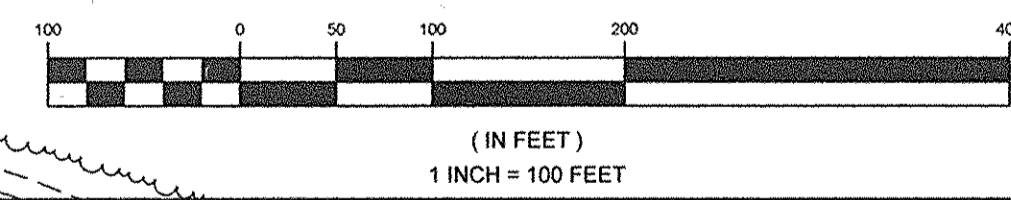
SILL ENGINEERING GROUP, LLC
11130 Dovelock Court, Suite 200
Marriottsville, Maryland 21104
Phone: 443.325.5076
Fax: 410.696.2022
Email: info@sillengineering.com
Civil Engineering for Land Development

DESIGN BY: PS
DRAWN BY: KSZ/AEA
CHECKED BY: PS
SCALE: AS SHOWN
DATE: FEBRUARY 12, 2016
PROJECT #: 14-029
SHEET #: 1 of 6

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. 32025, EXPIRATION DATE: JUNE 29, 2017



GRAPHIC SCALE



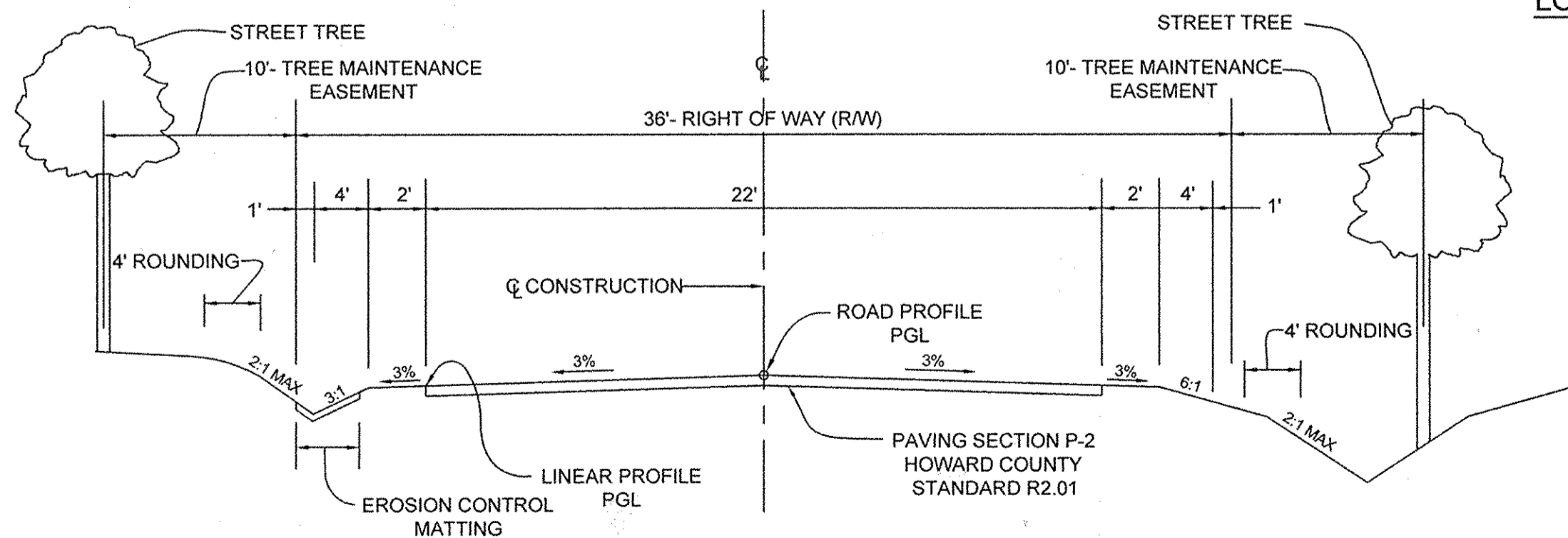
LOCATION MAP

SCALE: 1"=100'

SITE ANALYSIS DATA SHEET

ENVIRONMENTAL AREA	SIZE OR USE
TOTAL PROJECT AREA	21.21 ACRES±
LIMIT OF DISTURBANCE	7.70 ACRES±
GREEN OPEN AREA (LAWN)	5.25 ACRES±
IMPERVIOUS AREA	2.45 ACRES±
PROPOSED SITE USES	RESIDENTIAL
WETLANDS	0.29 ACRES±
WETLAND BUFFERS	1.16 ACRES±
FLOODPLAINS	0.00 ACRES±
FLOODPLAIN BUFFERS	0.00 ACRES±
EXISTING FOREST	17.90 ACRES±
SLOPES GREATER THAN 15%*	4.76 ACRES± (1)
HIGHLY ERODIBLE SOILS	5.70 ACRES± (1)

- *NOTES:
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 - HIGHLY ERODIBLE SOILS ARE THOSE SOILS WITH A SLOPE GREATER THAN 15 PERCENT OR THOSE SOILS WITH A SOIL ERODIBILITY FACTOR 'K' GREATER THAN 0.35 AND WITH A SLOPE GREATER THAN 5 PERCENT.



TYPICAL ROADWAY SECTION CLASSIFICATION: ACCESS PLACE

ROAD: DOSA COURT
DESIGN SPEED: 25 MPH
NOT TO SCALE

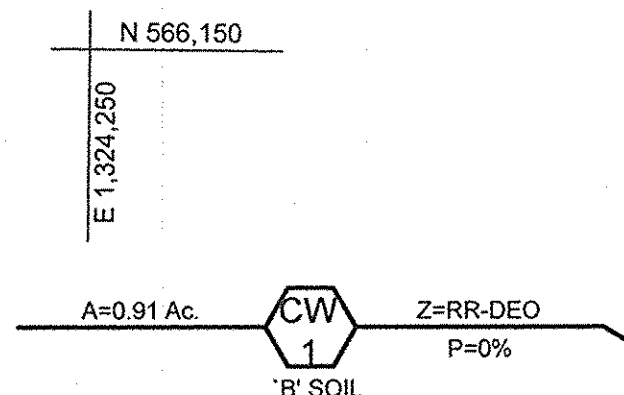
NOTE: SEE HOWARD COUNTY STANDARD DETAIL R-1.01 FOR MORE INFORMATION

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

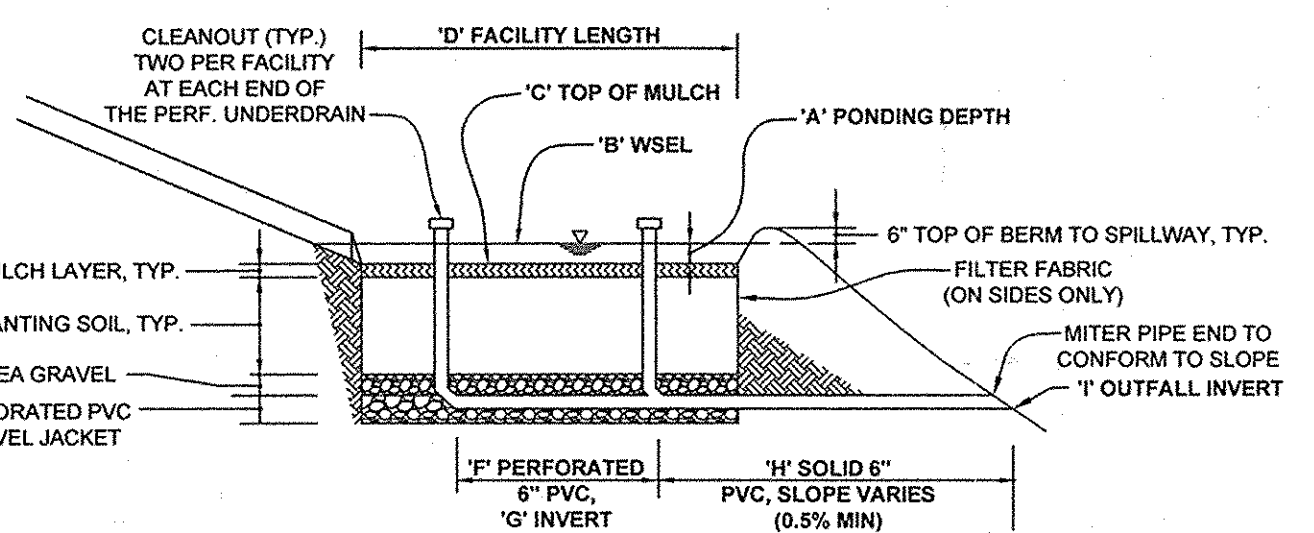
Chief, Development Engineering Division
Chief, Division of Land Development

SOILS LEGEND			
SYMBOL	NAME / DESCRIPTION	GROUP	'K' FACTOR
GaC	GAILA LOAM, 8 TO 15 PERCENT SLOPES	B	0.24
GgB	GLENELG LOAM, 3 TO 8 PERCENT SLOPES	B	0.20
GmB	GLENVILLE SILT LOAM, 3 TO 8 PERCENT SLOPES	C	0.37
MaC	MANOR LOAM, 8 TO 15 PERCENT SLOPES	B	0.24
MaD	MANOR LOAM, 15 TO 25 PERCENT SLOPES	B	0.24
WmB	WILTSHIRE SILT LOAM, 3 TO 8 PERCENT SLOPES	C	0.24

NOTES:
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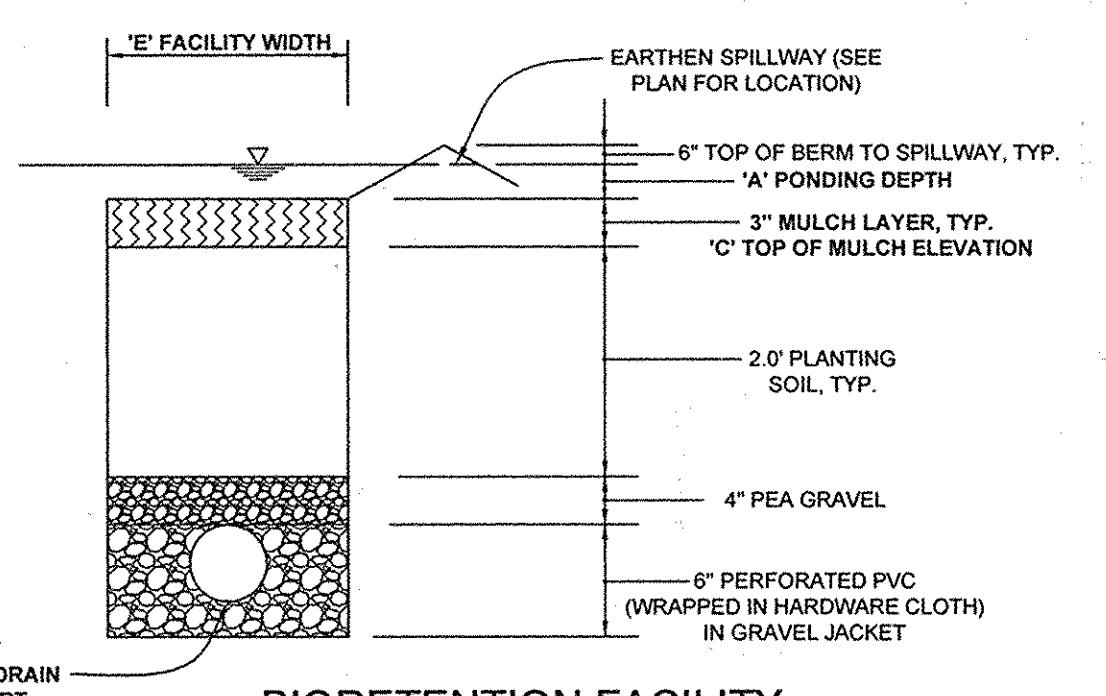


LEGEND	
EXISTING CONTOUR	---
PROPOSED CONTOUR	---
EXISTING SPOT ELEVATION	+
PROPOSED SPOT ELEVATION	+
DIRECTION OF FLOW	→
EXISTING SPECIMEN TREE	ST#6
EXISTING TREELINE	---
PROPOSED TREELINE	---
STABILIZED CONSTRUCTION ENTRANCE	---
SILT FENCE	--- SF --- SF ---
SUPER SILT FENCE	--- SSF --- SSF ---
LIMIT OF DISTURBANCE	--- LCD ---
WETLAND BUFFER	--- WB --- WB ---
STREAM BUFFER	--- SB --- SB ---
TREE PROTECTION FENCE	--- TPF --- TPF ---
SOIL BOUNDARY	---
STANDARD INLET PROTECTION	SIP
PROPOSED MICRO-BIORETENTION FACILITY (M-6)	BIO 2
ROOF LEADERS	---
CLEAN WATER EARTH DIKE A-1	---
PERCOLATION TEST HOLE, PASSED	⊕ 602
PERCOLATION TEST HOLE, FAILED	⊕ 600
PERCOLATION TEST HOLE, NOT TESTED	⊕ 601
HYDROLOGIC SOIL GROUP 'C'	▨
STEEP SLOPES 15% TO 25%	▨
STEEP SLOPES >25%	▨



BIORETENTION FACILITY
 TYPICAL PROFILE
 NOT TO SCALE

NOTES:
 * FOR ADDITIONAL INFORMATION, SEE THE 2000 MARYLAND STORMWATER DESIGN MANUAL, VOLUMES I AND II.
 * SEE CHART, THIS SHEET, FOR ELEVATIONS AND DISTANCES.



BIORETENTION FACILITY
 TYPICAL SECTION
 NOT TO SCALE

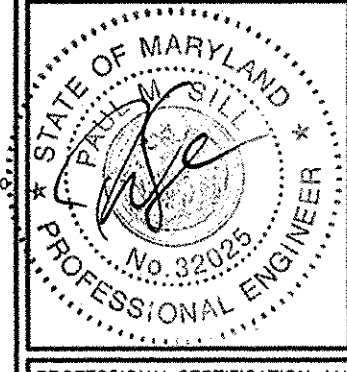
NOTE: AT PRELIMINARY PLAN STAGE, DISCONNECTION PRACTICES TO BE DIVERTED AROUND ANY DOWNSTREAM ENVIRONMENTAL SITE DESIGN PRACTICES, AS FEASIBLE.

OWNER/DEVELOPER

DOSA CLARKSVILLE LLC
 20038 WILEY COURT
 LAYTONVILLE MD, 20882
 301.370.8866

LAYOUT AND CONCEPTUAL GRADING
 AND SEDIMENT CONTROL PLAN
 THE WOODLANDS
 LOTS 1 THRU 8, BUILDABLE PRESERVATION PARCEL A
 AND NON-BUILDABLE PRESERVATION PARCELS B & C
 (RE-SUBDIVISION OF LOT 2 OF GLEN MARY ESTATES)

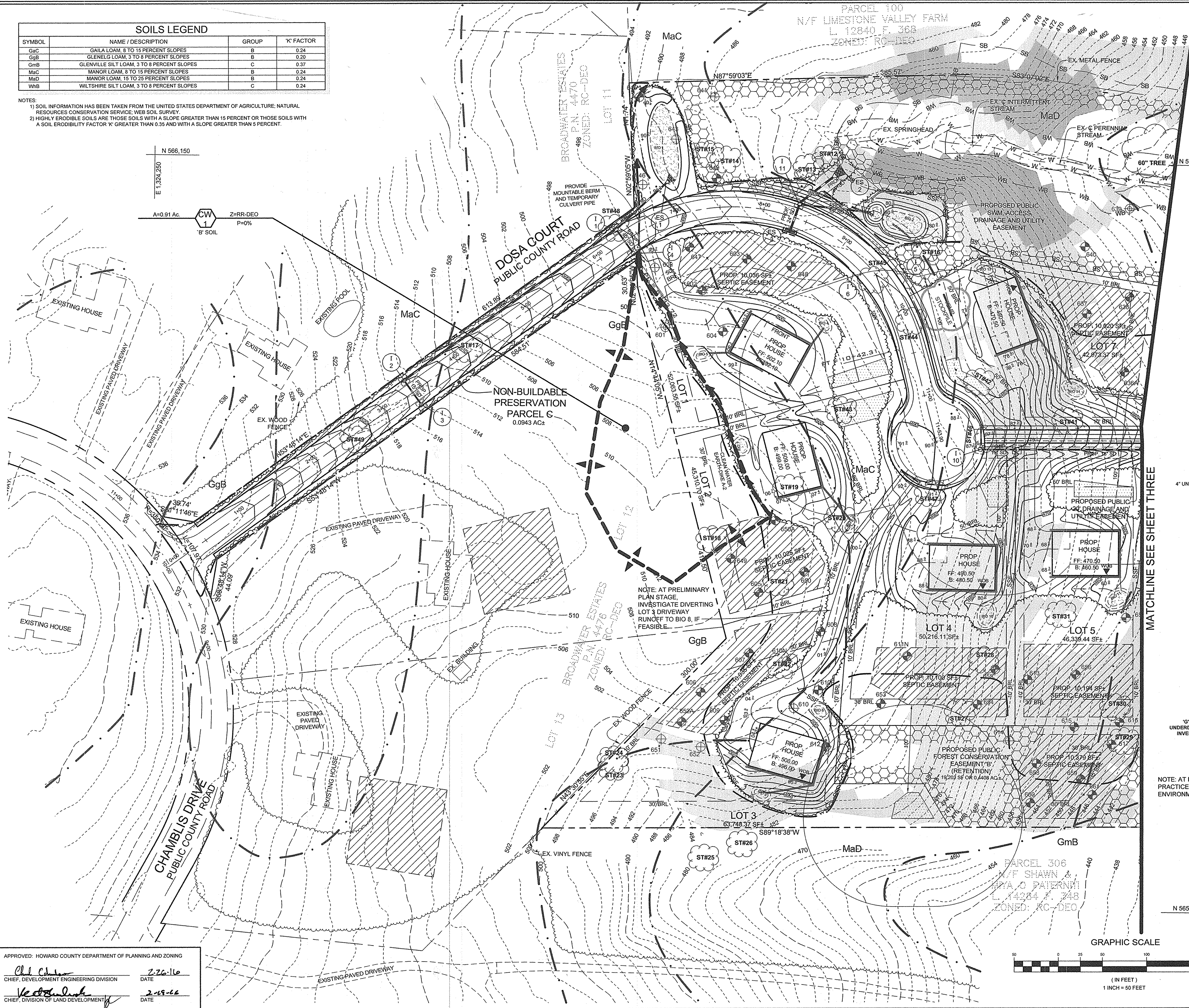
TAX MAP 28 GRID 23 PARCEL 15
 5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND



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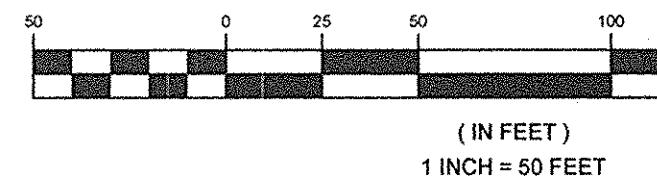
DESIGN BY: PS
 DRAWN BY: KSZ/AEA
 CHECKED BY: PS
 SCALE: 1" = 50'
 DATE: FEBRUARY 12, 2016
 PROJECT #: 14-029
 SHEET #: 2 of 6

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. 32023, EXPIRATION DATE: JUNE 20, 2017.



MATCHLINE SEE SHEET THREE

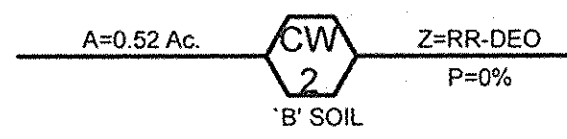
GRAPHIC SCALE



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 [Signature] 2-26-16
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE
 [Signature] 2-19-16
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

SOILS LEGEND			
SYMBOL	NAME / DESCRIPTION	GROUP	'K' FACTOR
GaC	GAILA LOAM, 8 TO 15 PERCENT SLOPES	B	0.24
GaB	GLENELG LOAM, 3 TO 8 PERCENT SLOPES	B	0.20
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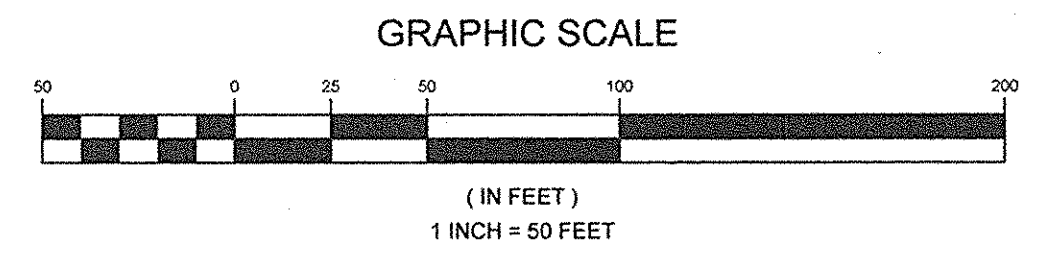


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OWNER/DEVELOPER
 DOSA CLARKSVILLE LLC
 20308 WILEY COURT
 LAYTONSVILLE MD, 20882
 301.370.6895

LAYOUT AND CONCEPTUAL GRADING AND SEDIMENT CONTROL PLAN THE WOODLANDS
 LOTS 1 THRU 8, BUILDABLE PRESERVATION PARCEL A AND NON-BUILDABLE PRESERVATION PARCELS B & C (RE-SUBDIVISION OF LOT 2 OF GLEN MARY ESTATES)
 TAX MAP 28 GRID 23 5TH ELECTION DISTRICT PARCEL 15 HOWARD COUNTY, MARYLAND

	SILL ENGINEERING GROUP, LLC 11130 Dovedale Court, Suite 200 Marriottsville, Maryland 21104 Phone: 443.325.5076 Fax: 410.696.3022 Email: info@sillengineering.com Civil Engineering for Land Development	DESIGN BY: PS
		DRAWN BY: KSZ/IAEA
		CHECKED BY: PS
		SCALE: 1" = 50'
		DATE: FEBRUARY 12, 2016
		PROJECT #: 14-029
		SHEET #: 3 of 6

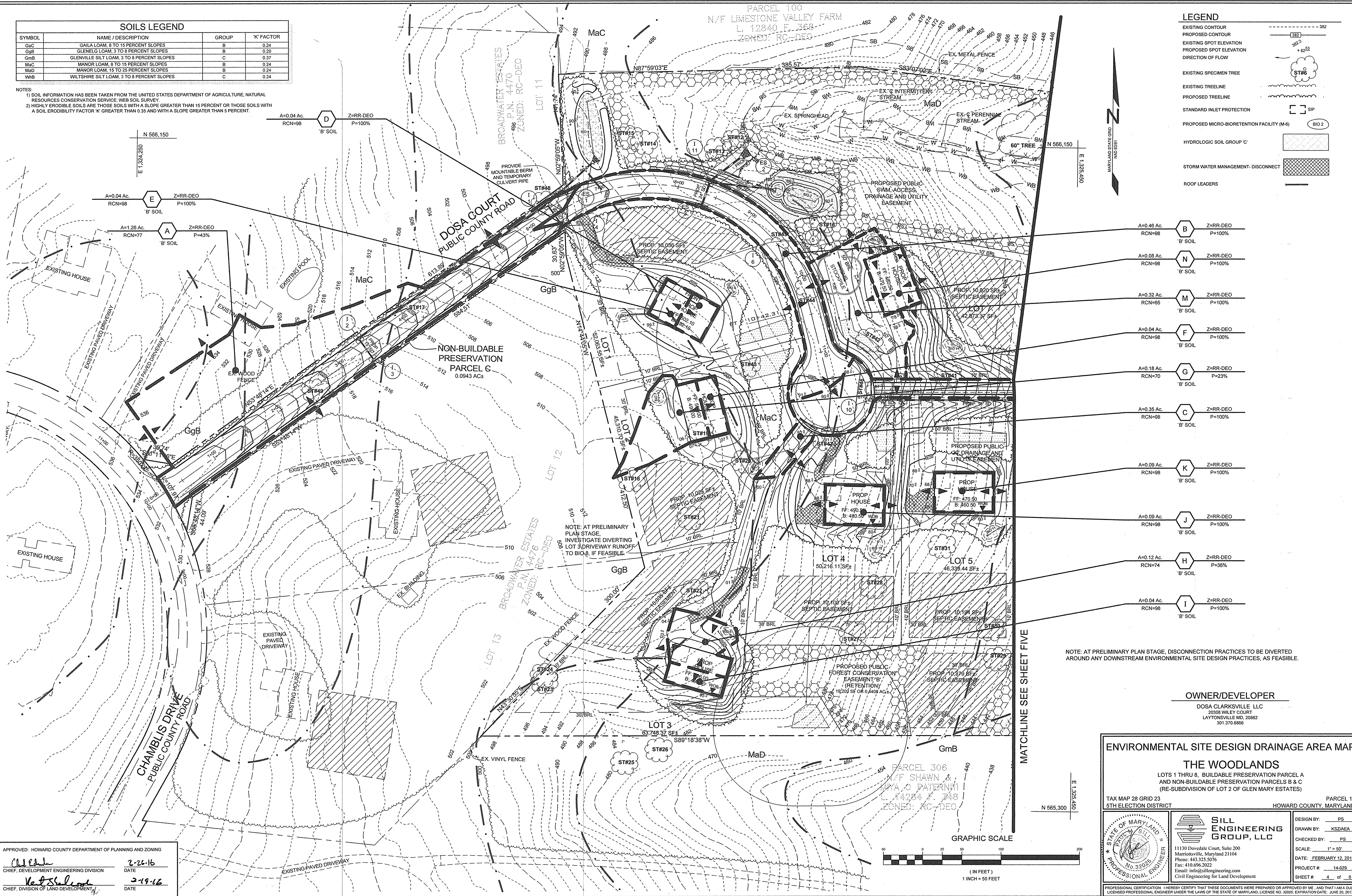


APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 [Signature] 2-26-16
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE
 [Signature] 2-15-16
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

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LEGEND	
EXISTING CONTOUR	---
PROPOSED CONTOUR	---
EXISTING SPOT ELEVATION	+
PROPOSED SPOT ELEVATION	+
DIRECTION OF FLOW	→
EXISTING SPECIMEN TREE	ST#
EXISTING TREELINE	---
PROPOSED TREELINE	---
STANDARD INLET PROTECTION	SIP
PROPOSED MICRO-BIORETENTION FACILITY (M-B)	BIO 2
HYDROLOGIC SOIL GROUP 'C'	▨
STORM WATER MANAGEMENT-DISCONNECT	▨
ROOF LEADERS	---



A=0.04 Ac. Z=RR-DEO P=100%
 RCN=98 'B' SOIL

A=0.04 Ac. Z=RR-DEO P=100%
 RCN=98 'B' SOIL

A=1.26 Ac. Z=RR-DEO P=43%
 RCN=77 'B' SOIL

A=0.32 Ac. Z=RR-DEO P=100%
 RCN=65 'B' SOIL

A=0.04 Ac. Z=RR-DEO P=100%
 RCN=98 'B' SOIL

A=0.18 Ac. Z=RR-DEO P=23%
 RCN=70 'B' SOIL

A=0.35 Ac. Z=RR-DEO P=100%
 RCN=98 'B' SOIL

A=0.09 Ac. Z=RR-DEO P=100%
 RCN=98 'B' SOIL

A=0.09 Ac. Z=RR-DEO P=100%
 RCN=98 'B' SOIL

A=0.09 Ac. Z=RR-DEO P=100%
 RCN=98 'B' SOIL

A=0.12 Ac. Z=RR-DEO P=36%
 RCN=74 'B' SOIL

A=0.04 Ac. Z=RR-DEO P=100%
 RCN=98 'B' SOIL

A=0.04 Ac. Z=RR-DEO P=100%
 RCN=98 'B' SOIL

A=0.04 Ac. Z=RR-DEO P=100%
 RCN=98 'B' SOIL

A=0.04 Ac. Z=RR-DEO P=100%
 RCN=98 'B' SOIL

A=0.04 Ac. Z=RR-DEO P=100%
 RCN=98 'B' SOIL

A=0.04 Ac. Z=RR-DEO P=100%
 RCN=98 'B' SOIL

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 RCN=98 'B' SOIL

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 RCN=98 'B' SOIL

A=0.04 Ac. Z=RR-DEO P=100%
 RCN=98 'B' SOIL

A=0.04 Ac. Z=RR-DEO P=100%
 RCN=98 'B' SOIL

NOTE: AT PRELIMINARY PLAN STAGE, DISCONNECTION PRACTICES TO BE DIVERTED AROUND ANY DOWNSTREAM ENVIRONMENTAL SITE DESIGN PRACTICES, AS FEASIBLE.

OWNER/DEVELOPER
 DOSA CLARKSVILLE, LLC
 20308 WILEY COURT
 LAYTONSVILLE MD, 20882
 301.370.8866

ENVIRONMENTAL SITE DESIGN DRAINAGE AREA MAP

THE WOODLANDS
 LOTS 1 THRU 5, BUILDABLE PRESERVATION PARCEL A AND NON-BUILDABLE PRESERVATION PARCELS B & C (RE-SUBDIVISION OF LOT 2 OF GLEN MARY ESTATES)





TAX MAP 28 GRID 23 PARCEL 15
 5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

	SILL ENGINEERING GROUP, LLC 11130 Dovedale Court, Suite 200 Marriottsville, Maryland 21104 Phone: 443.325.5076 Fax: 410.696.2022 Email: info@sillengineering.com Civil Engineering for Land Development	DESIGN BY: PS DRAWN BY: KSZ/AEA CHECKED BY: PS SCALE: 1" = 50' DATE: FEBRUARY 12, 2016 PROJECT #: 14-029 SHEET #: 4 of 6
	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. 32025, EXPIRATION DATE: JUNE 20, 2017	

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 [Signature] 2-20-16
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE
 [Signature] 2-19-16
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

SOILS LEGEND			
SYMBOL	NAME / DESCRIPTION	GROUP	'K' FACTOR
GaC	GAILA LOAM, 8 TO 15 PERCENT SLOPES	B	0.24
GaB	GLENELG LOAM, 3 TO 8 PERCENT SLOPES	B	0.20
GmB	GLENVILLE SILT LOAM, 3 TO 8 PERCENT SLOPES	C	0.37
MaC	MANOR LOAM, 8 TO 15 PERCENT SLOPES	B	0.24
MaD	MANOR LOAM, 15 TO 25 PERCENT SLOPES	B	0.24
WhB	WILTSHIRE SILT LOAM, 3 TO 8 PERCENT SLOPES	C	0.24

NOTES:
 1) SOIL INFORMATION HAS BEEN TAKEN FROM THE UNITED STATES DEPARTMENT OF AGRICULTURE, NATURAL RESOURCES CONSERVATION SERVICE, WEB SOIL SURVEY.
 2) HIGHLY ERODIBLE SOILS ARE THOSE SOILS WITH A SLOPE GREATER THAN 15 PERCENT OR THOSE SOILS WITH A SOIL ERODIBILITY FACTOR 'K' GREATER THAN 0.35 AND WITH A SLOPE GREATER THAN 5 PERCENT.

- A=0.09 Ac. RCN=98  Z=RR-DEO P=100%
'B' SOIL
- A=0.35 Ac. RCN=98  Z=RR-DEO P=100%
'B' SOIL
- A=0.09 Ac. RCN=98  Z=RR-DEO P=100%
'B' SOIL
- A=0.09 Ac. RCN=98  Z=RR-DEO P=100%
'B' SOIL



NOTE: AT PRELIMINARY PLAN STAGE, DISCONNECTION PRACTICES TO BE DIVERTED AROUND ANY DOWNSTREAM ENVIRONMENTAL SITE DESIGN PRACTICES, AS FEASIBLE.

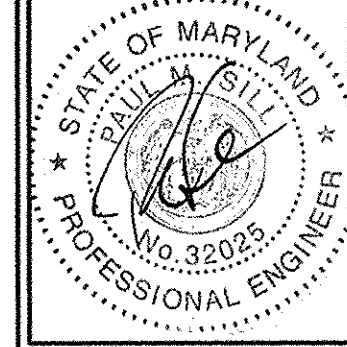
OWNER/DEVELOPER
 DOSA CLARKSVILLE LLC
 20308 WILEY COURT
 LAYTONSVILLE, MD, 20882
 301-370-6866

ENVIRONMENTAL SITE DESIGN DRAINAGE AREA MAP

THE WOODLANDS

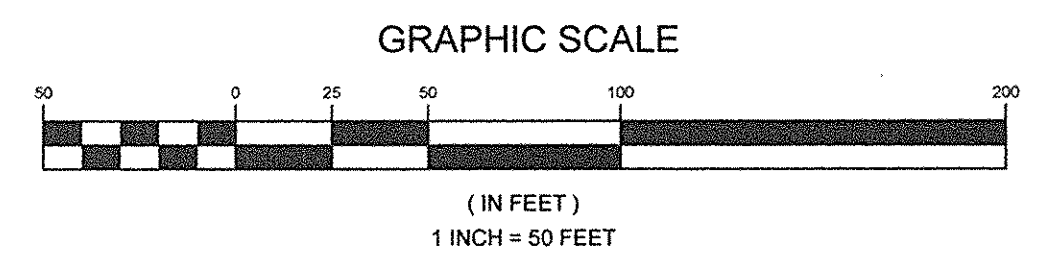
LOTS 1 THRU 8, BUILDABLE PRESERVATION PARCEL A AND NON-BUILDABLE PRESERVATION PARCELS B & C (RE-SUBDIVISION OF LOT 2 OF GLEN MARY ESTATES)



TAX MAP 28 GRID 23 5TH ELECTION DISTRICT PARCEL 15 HOWARD COUNTY, MARYLAND



SILL ENGINEERING GROUP, LLC
 11130 Dovedale Court, Suite 200
 Marriottsville, Maryland 21104
 Phone: 443.325.5076
 Fax: 410.696.2022
 Email: info@sillengineering.com
 Civil Engineering for Land Development

DESIGN BY: PS
 DRAWN BY: KSZ/AEA
 CHECKED BY: PS
 SCALE: 1" = 50'
 DATE: FEBRUARY 12, 2016
 PROJECT #: 14-029
 SHEET #: 5 of 6



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 2-26-16
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE
 2-19-16
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

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. 30923, EXPIRATION DATE, JUNE 30, 2017

FOREST CONSERVATION WORKSHEET		
NET TRACT AREA		
A	TOTAL TRACT AREA	22.1 AC
B	AREA WITHIN 100 YEAR FLOODPLAIN & UTILITY EASEMENT	0.0 AC
C	AREA TO REMAIN IN AGRICULTURAL PRODUCTION	0.0 AC
D	NET TRACT AREA	22.1 AC
LAND USE CATEGORY (FROM TABLE 3.2.1 PAGE 40, MANUAL)		
ARA	MDR	IDA
X		
E	AFFORESTATION THRESHOLD (NET TRACT AREA x 20%)	4.4 AC
F	CONSERVATION THRESHOLD (NET TRACT AREA x 25%)	5.5 AC
EXISTING FOREST COVER		
G	EXISTING FOREST COVER (EXCLUDING FLOODPLAIN)	22.1 AC
H	AREA OF FOREST ABOVE AFFORESTATION THRESHOLD	17.7 AC
I	AREA OF FOREST ABOVE CONSERVATION THRESHOLD	16.6 AC
BREAK EVEN POINT		
J	FOREST RETENTION ABOVE THRESHOLD WITH NO MITIGATION	3.3 AC
	BREAK-EVEN POINT	8.8 AC
K	CLEARING PERMITTED WITHOUT MITIGATION	13.3 AC

WETLAND DATA		
WETLAND SYSTEM	COWARDIN CLASSIFICATION	DOMINANT VEGETATION
A	PFO1A-C RUB1	Acer rubrum, Liriodendron benzoin, Symplocarpus foetidus, Boehmeria cylindrica, Impatiens capensis
B	PFO1A	Acer rubrum, Nyssa sylvatica, Liriodendron benzoin, Viburnum dentatum, Boehmeria cylindrica, Impatiens capensis

FSD NOTES

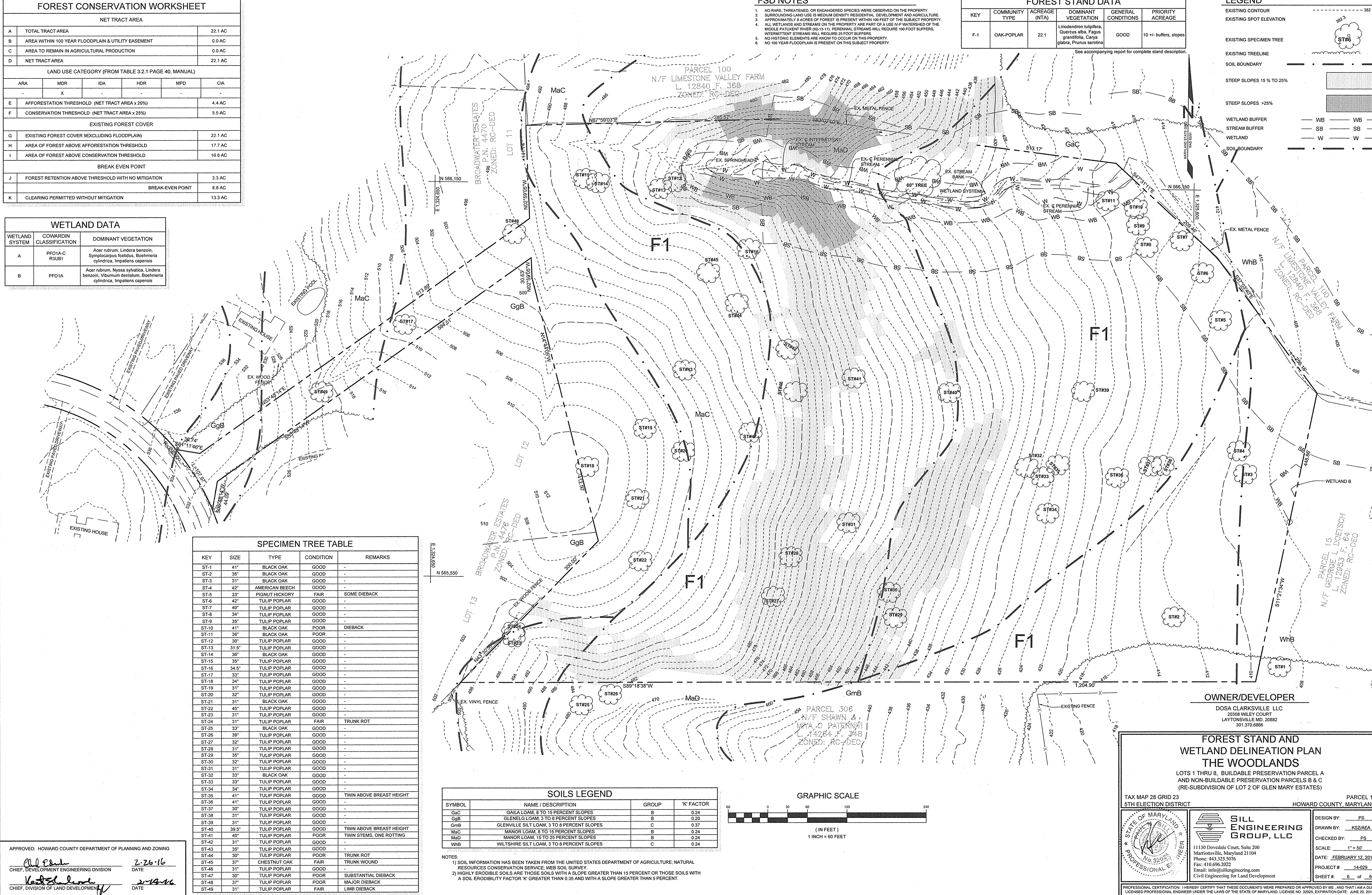
- NO RARE, THREATENED, OR ENDANGERED SPECIES WERE OBSERVED ON THE PROPERTY.
- SURROUNDING LAND USE IS MEDIUM DENSITY RESIDENTIAL DEVELOPMENT AND AGRICULTURE.
- APPROXIMATELY 8 ACRES OF FOREST IS PRESENT WITHIN 100 FEET OF THE SUBJECT PROPERTY.
- ALL WETLANDS AND STREAMS ON THE PROPERTY ARE PART OF A USE IVP WATERSHED OF THE MIDDLE PATUXENT RIVER (00-18-11). PERENNIAL STREAMS WILL REQUIRE 100 FOOT BUFFERS. INTERMITTENT STREAMS WILL REQUIRE 50 FOOT BUFFERS.
- NO HISTORIC ELEMENTS ARE KNOWN TO OCCUR ON THIS PROPERTY.
- NO 100 YEAR FLOODPLAIN IS PRESENT ON THIS SUBJECT PROPERTY.

FOREST STAND DATA

KEY	COMMUNITY TYPE	ACREAGE (NTA)	DOMINANT VEGETATION	GENERAL CONDITIONS	PRIORITY	ACREAGE
F-1	OAK-POPLAR	22.1	Liriodendron tulipifera, Quercus alba, Fagus grandifolia, Carya glabra, Prunus serotina	GOOD	10 +/- buffers, slopes	

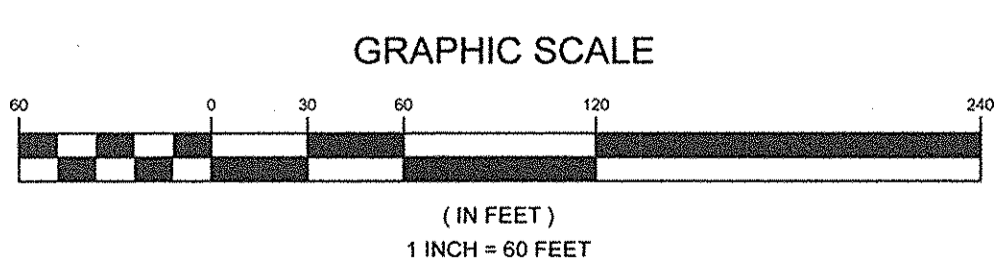
LEGEND

- EXISTING CONTOUR
- EXISTING SPOT ELEVATION
- EXISTING SPECIMEN TREE
- EXISTING TREELINE
- SOIL BOUNDARY
- STEEP SLOPES 15% TO 25%
- STEEP SLOPES >25%
- WETLAND BUFFER
- STREAM BUFFER
- WETLAND
- SOIL BOUNDARY



KEY	SIZE	TYPE	CONDITION	REMARKS
ST-1	41"	BLACK OAK	GOOD	
ST-2	35"	BLACK OAK	GOOD	
ST-3	31"	BLACK OAK	GOOD	
ST-4	42"	AMERICAN BEECH	GOOD	
ST-5	33"	PIGNUT HICKORY	FAIR	SOME DIEBACK
ST-6	42"	TULIP POPLAR	GOOD	
ST-7	40"	TULIP POPLAR	GOOD	
ST-8	34"	TULIP POPLAR	GOOD	
ST-9	35"	TULIP POPLAR	GOOD	
ST-10	41"	BLACK OAK	POOR	DIEBACK
ST-11	36"	BLACK OAK	POOR	
ST-12	30"	TULIP POPLAR	GOOD	
ST-13	31.5"	TULIP POPLAR	GOOD	
ST-14	36"	BLACK OAK	GOOD	
ST-15	35"	TULIP POPLAR	GOOD	
ST-16	34.5"	TULIP POPLAR	GOOD	
ST-17	33"	TULIP POPLAR	GOOD	
ST-18	34"	TULIP POPLAR	GOOD	
ST-19	31"	TULIP POPLAR	GOOD	
ST-20	32"	TULIP POPLAR	GOOD	
ST-21	31"	BLACK OAK	GOOD	
ST-22	45"	TULIP POPLAR	GOOD	
ST-23	31"	TULIP POPLAR	GOOD	
ST-24	31"	TULIP POPLAR	FAIR	TRUNK ROT
ST-25	33"	BLACK OAK	GOOD	
ST-26	36"	TULIP POPLAR	GOOD	
ST-27	32"	TULIP POPLAR	GOOD	
ST-28	31"	TULIP POPLAR	GOOD	
ST-29	35"	TULIP POPLAR	GOOD	
ST-30	32"	TULIP POPLAR	GOOD	
ST-31	31"	TULIP POPLAR	GOOD	
ST-32	33"	BLACK OAK	GOOD	
ST-33	33"	TULIP POPLAR	GOOD	
ST-34	34"	TULIP POPLAR	GOOD	
ST-35	41"	TULIP POPLAR	GOOD	TWIN ABOVE BREAST HEIGHT
ST-36	41"	TULIP POPLAR	GOOD	
ST-37	30"	TULIP POPLAR	GOOD	
ST-38	31"	TULIP POPLAR	GOOD	
ST-39	31"	TULIP POPLAR	GOOD	
ST-40	39.5"	TULIP POPLAR	GOOD	TWIN ABOVE BREAST HEIGHT
ST-41	40"	TULIP POPLAR	GOOD	TWIN STEMS, ONE ROTTING
ST-42	31"	TULIP POPLAR	GOOD	
ST-43	35"	TULIP POPLAR	GOOD	
ST-44	30"	TULIP POPLAR	POOR	TRUNK ROT
ST-45	37"	CHESTNUT OAK	FAIR	TRUNK WOUND
ST-46	31"	TULIP POPLAR	GOOD	
ST-47	30"	TULIP POPLAR	POOR	SUBSTANTIAL DIEBACK
ST-48	37"	TULIP POPLAR	POOR	MAJOR DIEBACK
ST-49	31"	TULIP POPLAR	FAIR	LIMB DIEBACK

SOILS LEGEND			
SYMBOL	NAME / DESCRIPTION	GROUP	'K' FACTOR
GaC	GAILA LOAM, 8 TO 15 PERCENT SLOPES	B	0.24
GgB	GLENELG LOAM, 3 TO 8 PERCENT SLOPES	B	0.20
GmB	GLENEVILLE SILT LOAM, 3 TO 8 PERCENT SLOPES	C	0.37
MaC	MANOR LOAM, 8 TO 15 PERCENT SLOPES	B	0.24
MaD	MANOR LOAM, 15 TO 25 PERCENT SLOPES	B	0.24
WnB	WILTSHIRE SILT LOAM, 3 TO 8 PERCENT SLOPES	C	0.24



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 Chief, Development Engineering Division
 Chief, Division of Land Development
 DATE: 2-26-16
 DATE: 2-19-16

NOTES:
 1) SOIL INFORMATION HAS BEEN TAKEN FROM THE UNITED STATES DEPARTMENT OF AGRICULTURE, NATURAL RESOURCES CONSERVATION SERVICE, WEB SOIL SURVEY.
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OWNER/DEVELOPER
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 20308 WILEY COURT
 LAYTONSVILLE MD, 20882
 301.370.6886

FOREST STAND AND WETLAND DELINEATION PLAN THE WOODLANDS
 LOTS 1 THRU 8, BUILDABLE PRESERVATION PARCEL A AND NON-BUILDABLE PRESERVATION PARCELS B & C (RE-SUBDIVISION OF LOT 2 OF GLEN MARY ESTATES)

TAX MAP 28 GRID 23
 5TH ELECTION DISTRICT
 PARCEL 15
 HOWARD COUNTY, MARYLAND

SILL ENGINEERING GROUP, LLC
 11130 Dovelville Court, Suite 200
 Marriottsville, Maryland 21104
 Phone: 443.325.5076
 Fax: 410.696.2022
 Email: info@sillengineering.com
 Civil Engineering for Land Development

DESIGN BY: PS
 DRAWN BY: KSZ/AEA
 CHECKED BY: PS
 SCALE: 1" = 50'
 DATE: FEBRUARY 12, 2016
 PROJECT #: 14-029
 SHEET #: 6 of 6

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. 30225, EXPIRATION DATE: JUNE 20, 2017