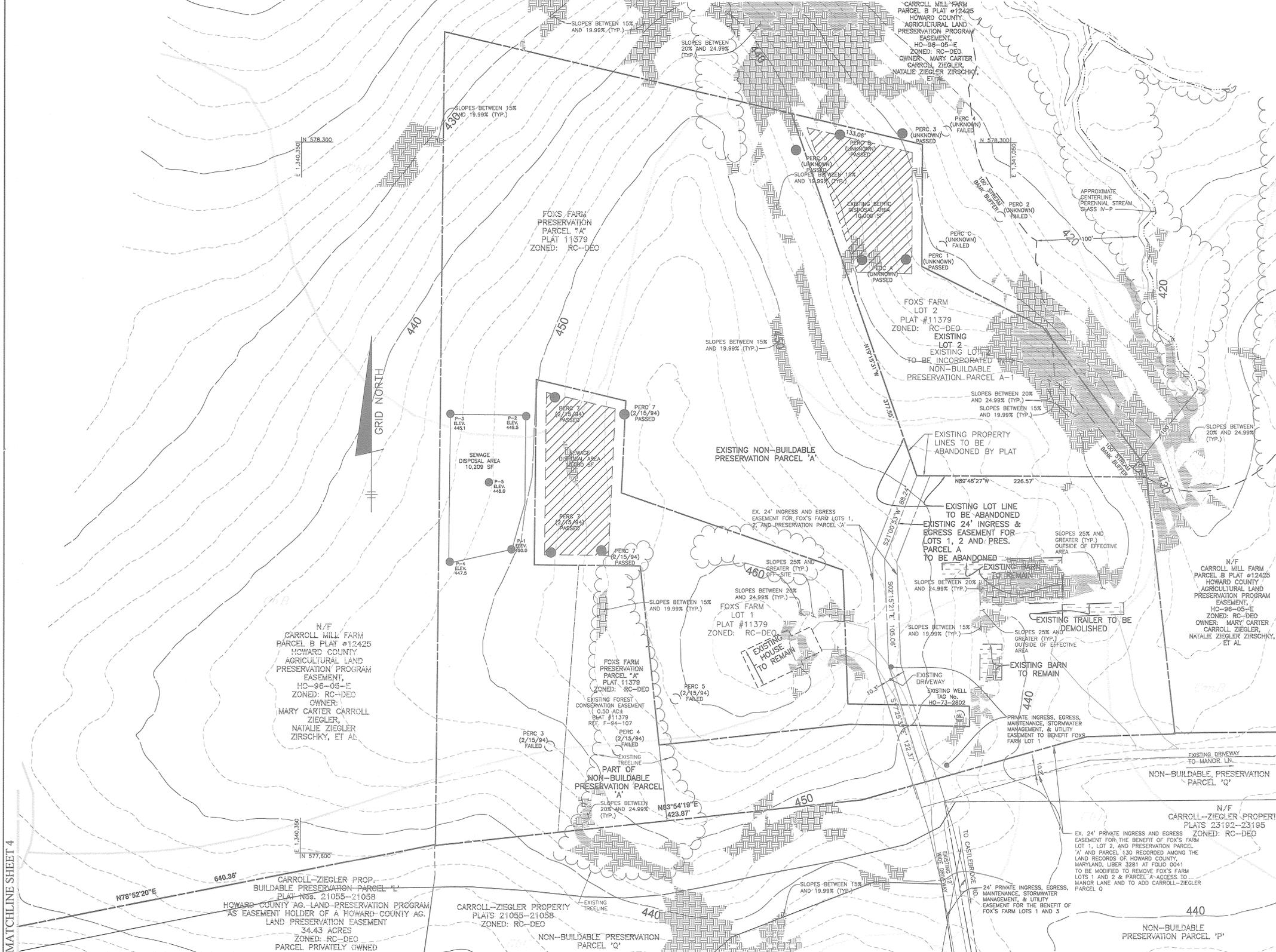


SYMBOL	HYDRIC	HYDROLOGIC GROUP	ALTERNATE GROUP	NAME	K-VALUE
BaA*	YES	D		BAILE SILT LOAM, 0 TO 3 PERCENT SLOPES	0.32
GdA		B		GLADSTONE LOAM, 0 TO 3 PERCENT SLOPES	0.20
GdP		B		GLADSTONE LOAM, 3 TO 8 PERCENT SLOPES	0.20
GdC		B		GLADSTONE LOAM, 8 TO 15 PERCENT SLOPES	0.20
GmB*	YES	C		GLENVILLE SILT LOAM, 3 TO 8 PERCENT SLOPES	0.37
GmP*	YES	C	D	GLENVILLE-BAILE SILT LOAM, 0 TO 8 PERCENT SLOPES	0.37/0.32
MdD		B		MANOR LOAM, 15 TO 25 PERCENT SLOPES	0.24

\* INDICATES HYDRIC SOILS  
 \*\* HIGHLY ERODIBLE, K>0.35 OR 15% OR GREATER SLOPES  
 TAKEN FROM THE NRCS WEB SOIL SURVEY, JUNE 2018, MAP 12.

# ENVIRONMENTAL CONCEPT PLAN FOX'S FARM

## TAX MAP 23, P/O PARCELS 130 AND 131, GRID 10



### SWM DESIGN NARRATIVE

NATURAL RESOURCES SHALL BE PRESERVED. THERE ARE NO ENVIRONMENTALLY SENSITIVE AREAS (STEEP SLOPES, SPECIMEN TREES, WETLANDS, STREAMS AND THEIR BUFFERS) WITHIN THE AFFECTED AREA. THE IMPERVIOUS AREA OF THE SITE IS MINIMIZED. SITING THE SWM PRACTICE NEAR THE DRIVEWAY, SHOWING A MINIMUM SIZE HOUSE BOX, UTILIZING A SHARED DRIVEWAY, AND KEEPING THE DRIVEWAY LENGTH AS MINIMAL AS POSSIBLE ARE ALL ARE CONDITIONS THAT REDUCE THE IMPERVIOUS AREAS.

EXISTING FLOW PATTERNS SHALL BE MAINTAINED. UNDER ULTIMATE CONDITIONS MOST DRAINAGE FLOW SHALL EXIT THE PROPERTY AT THE SAME GENERAL LOCATION AS IT DOES UNDER EXISTING CONDITIONS. THERE ARE NO EXISTING POINT DISCHARGE LOCATIONS FOR THESE DRAINAGE AREAS.

IMPERVIOUS AREA IS BEING HELD TO A MINIMUM BY LOCATING THE PROPOSED LOT CLOSE TO PUBLIC ROAD ACCESS POINT AND UTILIZING THE MINIMUM WIDTH FOR DRIVEWAY.

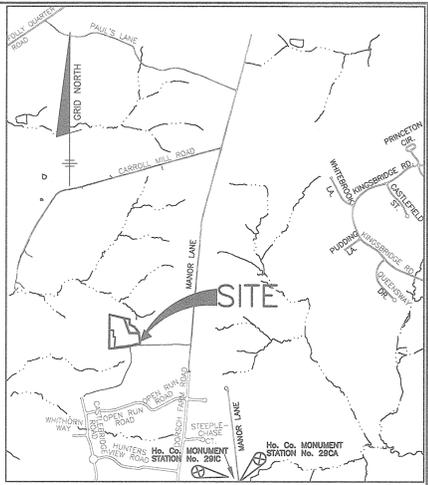
THE TARGET P<sub>6</sub> IS 1.0". THE TARGET ESDV IS 1,505 CF; THE PROVIDED ESDV IS 1,308 CF.

SOME AREAS OF SLOPES BETWEEN 15% AND 24.99% ARE BEING DISTURBED. THESE AREAS ARE ALONG THE UN-STABILIZED FARM TRAIL. THESE AREAS WILL BE REPLACED WITH DRIVEWAY, 5% OR FLATTER DISCONNECTION, AND SHORT 3:1 SLOPES. THE USE OF 3:1 SLOPES MINIMIZES THE FOOTPRINT OF THE DISTURBANCE AND THE USE OF PAVEMENT AND SWM DISCONNECT WILL STABILIZE THE FLAT AREAS. THE LOT RELOCATION ALSO MOVES THE HOUSE FROM AN AREA OF 15% TO 24.99% SLOPES TO AN AREA WITHOUT THOSE SLOPES.

THE FOREST CONSERVATION EASEMENTS WERE ESTABLISHED UNDER F-08-140 (CARROLL-ZIEGLER PROPERTY) AND UNDER F-94-107 (FOX'S FARM) TO FULFILL THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE AND FOREST CONSERVATION ACT. ADDITIONAL EASEMENT AREA WAS CREATED UNDER F-11-060 (MARY CARTER CARROLL ET AL TO HOWARD COUNTY, MARYLAND) UNDER CAPITAL PROJECT NO. N-3071-S. ONE FOREST CONSERVATION EASEMENT IS BEING CREATED UNDER THE PLAN FOR THIS PLAN TO ADDRESS A SMALL AREA OF ABANDONMENT PER A REDLINE REVISION TO CARROLL-ZIEGLER PROPERTY, F-08-140. THE FOREST EASEMENT REMOVAL AND THE FOREST EASEMENT CREATION ARE TO BE SHOWN ON A REDLINE REVISION TO F-08-140 FINAL CONSTRUCTION PLANS. NO CLEARING, GRADING OR CONSTRUCTION IS PERMITTED WITHIN THE FOREST CONSERVATION EASEMENTS; HOWEVER, FOREST MANAGEMENT PRACTICES, AS DEFINED IN THE DEED OF FOREST CONSERVATION EASEMENT, ARE ALLOWED. FOX'S FARM RESUBDIVISION IS A RESUBDIVISION THAT DOES NOT CREATE ADDITIONAL LOTS; THEREFORE, IT IS EXEMPT FOR THE FOREST CONSERVATION ACT, SECTION 16.1202(b)(1)(v) THE FOREST CONSERVATION ACT REQUIREMENTS ARE MET FOR THIS PROJECT. FOX'S FARM SUBDIVISION, PLAT NUMBER 11379, PROVIDED 21,614 SF OF FOREST CONSERVATION TO SUPPORT THE ORIGINAL DEVELOPMENT. NONE OF THAT FOREST CONSERVATION IS BEING REMOVED UNDER THIS PROPOSED PROPERTY LINE REVISION. CARROLL-ZIEGLER PROPERTY, PLAT NUMBERS 19354-19356, PROVIDED 6.42 ACRES OF FOREST CONSERVATION TO SUPPORT THE FUTURE DEVELOPMENT OF BULK PARCEL CARROLL-ZIEGLER PROPERTY, PLAT NUMBER 21055-21059, PROVIDED 8.15 ACRES OF FOREST CONSERVATION TO SUPPORT THE DEVELOPMENT OF BULK PARCEL "A" INTO LOTS 2-7 AND PRESERVATION PARCELS. THE FOREST EASEMENT ON FOXES FARM IS NOT BEING DISTURBED. THE FOREST CONSERVATION EASEMENT ON CARROLL-ZIEGLER PROPERTY CREATED BY PLAT NUMBERS 21055-21059 IS BEING DISTURBED. AN AREA OF 0.02 ACRES OF THE AREA DESIGNATED AS FOREST CONSERVATION EASEMENT ON THE CONSTRUCTION PLAN, F-08-140, IS BEING DISTURBED AND IS TO BE ABANDONED. MITIGATION WILL BE PROPOSED BY A REDLINE REVISION TO THOSE CONSTRUCTION PLANS. AN AREA OF 0.12 ACRES ON CARROLL-ZIEGLER PROPERTY IS TO BE CLEARED. THIS AREA WAS DESIGNATED AS "CLEARED" UNDER THE CONSTRUCTION PLAN FOR CARROLL-ZIEGLER PROPERTY, F-08-140, AND IS TO BE DISTURBED WITH THE FINAL CONSTRUCTION PLANS FOR THIS SINGLE LOT. THE DISTURBANCE TO THIS AREA CAN NOT BE AVOIDED DUE TO THE GRADING, DISCONNECTION CREDIT, DRIVEWAY WIDTH, SITE TOPOGRAPHY AND EASEMENT AREA FOR THESE IMPROVEMENTS.

SEDIMENT AND EROSION CONTROL SHALL BE PROVIDED. A SCHEMATIC CONCEPT IS SHOWN WITHIN THIS PLAN SET. IT IS ANTICIPATED THAT IT WILL CONSIST MAINLY OF SILT FENCE AND SUPER SILT FENCE ALONG THE PERIMETER. EROSION CONTROL MATING SHALL BE USED FOR SWALES. THERE ARE NO IMPACTS TO SWM DESIGN BASED ON SEDIMENT AND EROSION CONTROL.

THE PROPOSED MICRO-BIORETENTION FACILITY (M-6), THE DRY WELLS (M-5) AND NON-ROOFTOP DISCONNECTION (N-2) SHALL ADEQUATELY TREAT THE PROPOSED IMPERVIOUS AREAS. THE PRACTICES SHALL DISCHARGE AT LOCATIONS THAT ARE NOT DETRIMENTAL TO THE ADJACENT PROPERTIES. THE FACILITY SHALL BE PLACED IN THE MICRO-BIORETENTION FACILITY SO HIGHER STORMS WILL FLOW TO THE UNDERDRAIN PIPE. FULL TREATMENT IS BEING PROVIDED THEREFORE THIS PROJECT CAN BE CONSIDERED TO BE TREATED TO THE MAXIMUM EXTENT PRACTICAL.



ADC MAP 26, GRID B2  
 VICINITY MAP  
 SCALE: 1" = 2000'

- ### NOTES:
- EXISTING ZONING: RR-DEO
  - DEED REFERENCE: 3376/00496
  - SITE ANALYSIS DATA:
    - A. TOTAL AREA OF SITE (LOT 2 AND PARCEL A): 8.69 AC.
    - B. EXISTING IMPERVIOUS AREA: 0.32 AC.
    - C. EXISTING GREEN AREA: 8.69 AC.
    - D. EXISTING FORESTED AREA: 0.41 AC.
    - E. EXISTING SITE USE: FARM FIELD
  - AREA OF PLAN SUBMISSION: 8.69 AC.
  - LIMIT OF DISTURBANCE: 1.35 AC. CONSTRUCTION, 2.5 ACCESS AND CONSTRUCTION
  - IMPERVIOUS AREA: 0.25 AC.
  - REVEGETATED AREA: 1.10 AC.
  - REVEGETATION USE: 1 SINGLE FAMILY DETACHED RESIDENCE
  - PREVIOUS SUBMITTAL: F-94-107, F-07-185, F-06-228, F-08-140, F-15-061, F-08-109, SP-07-005, SP-06-019, F-07-022, F-11-050, WP-17-125
  - THIS LOT WILL UTILIZE A CUSTOM SEDIMENT AND EROSION PLAN SINCE THE LIMIT OF DISTURBANCE EXCEEDS THE 30,000 SQUARE FEET THRESHOLD.
  - STORMWATER MANAGEMENT FOR THIS PROPOSAL IS PROVIDED WITH THE APPROVAL OF THE ENVIRONMENTAL CONCEPT PLAN AND MAY BE REVISED WITH THE FINAL PLANS & BUILDING PERMIT.
  - THERE ARE NO EXISTING DWELLINGS ON SITE. THERE ARE TWO BARN ON PARCEL A TO REMAIN. THERE IS ONE TRAILER ON PARCEL A THAT IS TO BE REMOVED.
  - TO THE BEST OF OUR KNOWLEDGE AND BELIEF THERE ARE NO CEMETERIES OR HISTORIC STRUCTURES ON SITE.
  - ON JUNE 15, 2017 THE DIRECTOR OF THE DEPARTMENT OF PLANNING AND ZONING REVIEWED A REQUEST FOR AN ALTERNATIVE COMPLIANCE (WP-17-125) OF SECTION 16.120(b)(4)(i) AND SECTION 16.120(c)(2) AND REQUESTED ADDITIONAL INFORMATION.
  - FOREST CONSERVATION IS NOT REQUIRED SINCE THIS IS A RE-SUBDIVISION THAT CREATES NO ADDITIONAL LOTS. SEE SECTION 16.1202(b)(1)(vi).
  - FOREST CONSERVATION ADDRESSED PREVIOUSLY UNDER F-94-107 AND F-08-140.
  - APPROVAL OF THIS ECP DOES NOT CONSTITUTE AN APPROVAL OF ANY SUBSEQUENT AND ASSOCIATED SUBDIVISION PLAN/PLAT AND/OR SITE DEVELOPMENT PLAN AND/OR RED-LINE REVISION PLAN. REVIEW OF THIS PROJECT FOR COMPLIANCE WITH THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS SHALL OCCUR AT THE SUBDIVISION PLAN/PLAT AND/OR SITE DEVELOPMENT PLAN STAGES AND/OR RED-LINE REVISION PROCESS. THE APPLICANT AND CONSULTANT SHOULD EXPECT ADDITION AND MORE DETAILED REVIEW COMMENTS (INCLUDING COMMENTS THAT MAY ALTER THE OVERALL SITE DESIGN) AS THIS PROJECT PROGRESSES THROUGH THE PLAN REVIEW PROCESS.
  - FOX'S FARM PRESERVATION PARCEL A IS ENCUMBERED WITH A PRESERVATION EASEMENT HELD BY HOWARD COUNTY, MARYLAND, AND HOWARD COUNTY CONSERVANCY. THE RESTRICTIONS AND PERMITTED USES ASSOCIATED WITH THIS EASEMENT ARE SPECIFIED WITHIN THE DEED OF PRESERVATION EASEMENT RECORDED AT LIBER 3379 AT FOLIO 591, DATED JULY 14, 1994. THE PRESERVATION EASEMENT IS SUBJECT TO TITLE 15, SUBTITLE 5 OF THE HOWARD COUNTY CODE, AND SECTION 106.0 OF THE HOWARD COUNTY ZONING REGULATIONS. THE DEVELOPER INTENDS TO REVISE THE EASEMENT LIMITS BY INCLUDING THE AREA THAT IS CURRENTLY LOT 2. THE AREA CLOSEST TO THE STREAM THAT INCLUDES STEEP SLOPES, AND BY REMOVING THE AREA JUST WEST OF DEVELOPED LOT 1. THE REVISION WILL BE IN ACCORDANCE WITH THE REQUIREMENTS OF ZONING REGULATIONS SECTIONS 104.0.G(1), 104.0.G(4) AND 106.1. THE CHANGE IN EASEMENT AREA WILL NOT RESULT IN ADDITIONAL UNITS OR USES THAT ARE NOT PERMITTED. IT WILL RESULT IN A BETTER EASEMENT CONFIGURATION AND BETTER PROTECTION FOR THE SLOPES AND STREAM AREAS.
  - THE HOLDER OF THE EASEMENT, HOWARD COUNTY CONSERVANCY, INC., HAS PREVIOUSLY OFFERED A LETTER OF SUPPORT FOR RECONFIGURATION TO MOVE THE LOT AWAY FROM THE BARN AND CLOSER TO EXISTING HOMES.

### Site Analysis Data Sheet

Gross Area	8.69 ac
100yr Floodplain	0.00 ac
Steep Slopes 15% or greater	0.49 ac
Steep Slopes 25% or greater	0.20 ac
Wetlands (outside of floodplain)	0.00 ac
Wetlands Buffer (outside of floodplain)	0.00 ac
Stream Buffer (outside floodplain)	0.00 ac
Stream Buffer (inside floodplain)	2.43 ac
Forested Area	0.41 ac
Erodible Soils	0.68 ac
Limit of Disturbance	1.35 ac
Impervious Area	0.25 ac

MATCHLINE SHEET 3

NO.	DATE	REVISION

**BENCHMARK ENGINEERING, INC.**  
 8450 BALTIMORE NATIONAL PIKE A SUITE 315 A ELICOTT CITY, MARYLAND 21043  
 (P) 410-465-8105 (F) 410-465-6644  
 WWW.BE-CVLENGINEERING.COM

Professional Certification: I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 45577 Expiration Date: 06-08-2020

*[Signature]*  
2/2/19

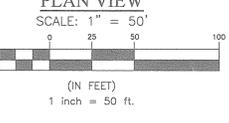
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

*[Signature]* 3-1-19 DATE  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

*[Signature]* 2/23/19 DATE  
 CHIEF, DIVISION OF LAND DEVELOPMENT

### LEGEND

EXISTING WOODS LINE	EXISTING CONTOURS	EXISTING STRUCTURE	LIMITS OF DISTURBANCE (EFFECTIVE AREA)
PROPOSED WOODS LINE	PROPOSED CONTOURS	PERCOLATION TEST PASSED	PROPOSED STRUCTURE
SOILS CLASSIFICATION	STREAM	EXISTING SEPTIC FIELD	DRAINAGE DIVIDE
SOILS DELINEATION	SLOPES 15% TO 19.99%	EXISTING WELL	NON ROOFTOP DISCONNECT (FILTER AREA)
FOREST CONSERVATION	SLOPES 20% TO 24.99%	EXISTING WELL	NON ROOFTOP DISCONNECT (IMPERVIOUS)
PROPOSED ACCESS EASEMENT	SLOPES 25% AND GREATER	WELL BOX	



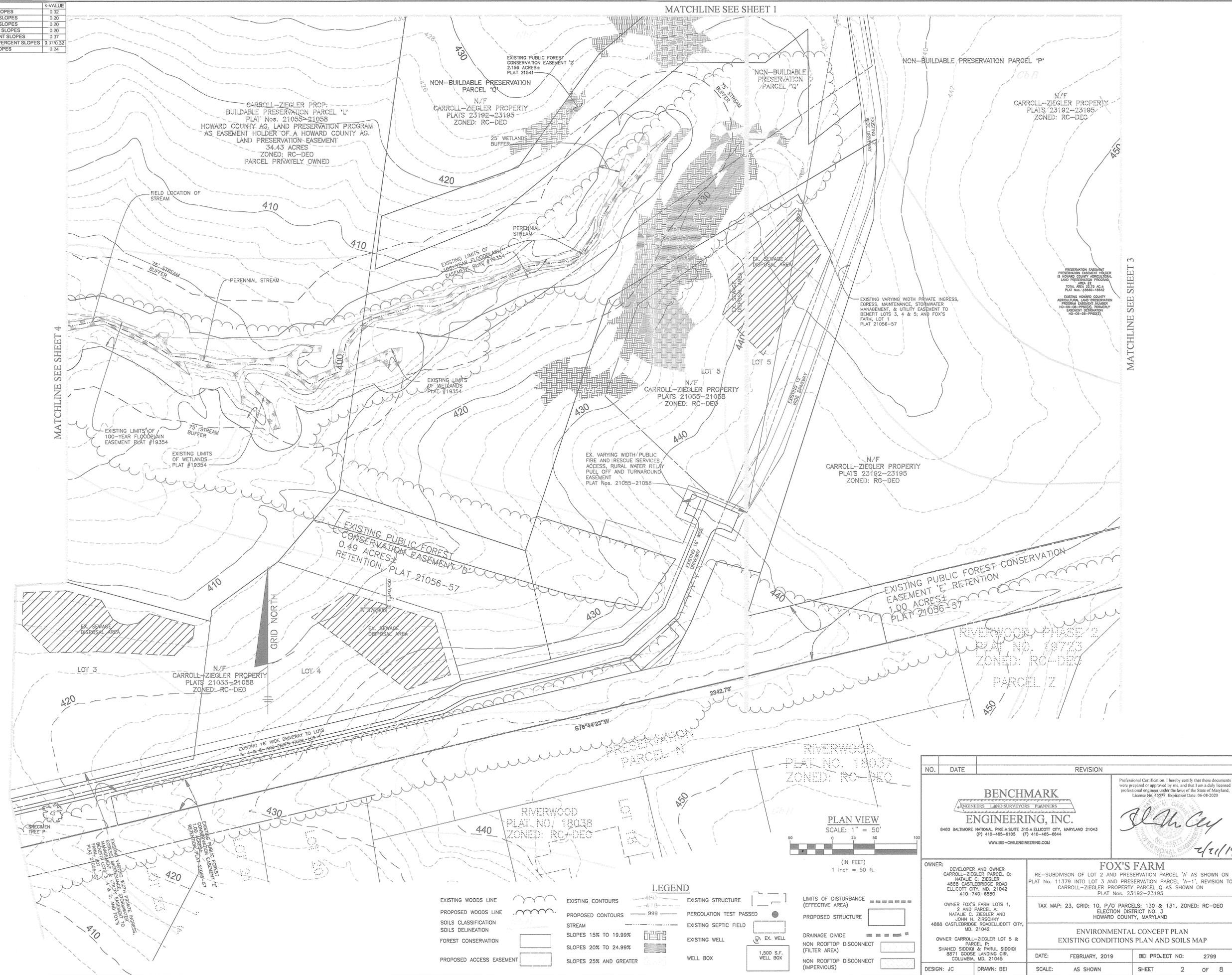
### SHEET INDEX

No.	DESCRIPTION
1	ENVIRONMENTAL CONCEPT PLAN COVER SHEET, EXISTING CONDITIONS PLAN AND SOILS MAP
2	ENVIRONMENTAL CONCEPT PLAN, EXISTING CONDITIONS PLAN AND SOILS MAP
3-4	ENVIRONMENTAL CONCEPT PLAN GRADING & STORMWATER MANAGEMENT PLAN, DRAINAGE AREA MAP, NOTES AND DETAILS
5	ENVIRONMENTAL CONCEPT PLAN SEDIMENT & EROSION CONTROL PLAN,

OWNER: DEVELOPER AND OWNER CARROLL-ZIEGLER PARCEL Q: NATALIE C. ZIEGLER 4888 CASTLEBRIDGE ROAD ELICOTT CITY, MD 21042	OWNER FOX'S FARM LOTS 1, 2 AND PARCEL A: NATALIE C. ZIEGLER AND JOHN H. ZIRSCHKY 4888 CASTLEBRIDGE ROAD/ELICOTT CITY, MD 21042	OWNER CARROLL-ZIEGLER LOT 5 & PARCEL: SHAHED SIDDIQI & PARUL SIDDIQI 8871 GODDE LANDING CIR. COLLEMBIA, MD 21045	DESIGN: JC DRAWN: BEI
RE-SUBDIVISION OF LOT 2 AND PRESERVATION PARCEL 'A' AS SHOWN ON PLAT NO. 11379 ALIEN ORIGIN AND PRESERVATION PARCEL 'A'-1, REVISION TO CARROLL-ZIEGLER PROPERTY PARCEL Q AS SHOWN ON PLAT NOS. 23192-23195		TAX MAP: 23, GRID: 10, P/O PARCELS: 130 & 131, ZONED: RC-DEO ELECTION DISTRICT NO. 3 HOWARD COUNTY, MARYLAND	
ENVIRONMENTAL CONCEPT PLAN COVER SHEET, EXISTING CONDITIONS PLAN AND SOILS MAP		DATE: FEBRUARY, 2019	BEI PROJECT NO.: 2799
		SCALE: AS SHOWN	SHEET 1 OF 8

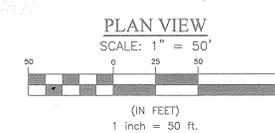
SYMBOL	HYDRIC	HYDROLOGIC GROUP	ALTERNATE GROUP	NAME	K-VALUE
BaA*	YES	D		BAILE SILT LOAM, 0 TO 3 PERCENT SLOPES	0.32
GbA		B		GLADSTONE LOAM, 0 TO 3 PERCENT SLOPES	0.20
GbB		B		GLADSTONE LOAM, 3 TO 8 PERCENT SLOPES	0.20
GbC		B		GLADSTONE LOAM, 8 TO 15 PERCENT SLOPES	0.20
GbD*	YES	C		GLENVILLE SILT LOAM, 3 TO 8 PERCENT SLOPES	0.37
GbE*	YES	C	D	GLENVILLE-BAILE SILT LOAM, 0 TO 8 PERCENT SLOPES	0.37/0.32
MaD		B		MANOR LOAM, 15 TO 25 PERCENT SLOPES	0.24

\* INDICATES HYDRIC SOILS  
 \*\* HIGHLY ERODIBLE, K>0.35 OR 15% OR GREATER SLOPES  
 TAKEN FROM THE NRCS WEB SOIL SURVEY, JUNE 2018, MAP 12.



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
 Chief, Development Engineering Division *3/1/19* DATE  
 Chief, Division of Land Development *2/28/19* DATE

LEGEND	
EXISTING WOODS LINE	EXISTING CONTOURS
PROPOSED WOODS LINE	PROPOSED CONTOURS
SOILS CLASSIFICATION	STREAM
SOILS DELINEATION	SLOPES 15% TO 19.99%
FOREST CONSERVATION	SLOPES 20% TO 24.99%
PROPOSED ACCESS EASEMENT	SLOPES 25% AND GREATER
EXISTING STRUCTURE	PERCOLATION TEST PASSED
EXISTING SEPTIC FIELD	EXISTING WELL
EXISTING WELL	WELL BOX
LIMITS OF DISTURBANCE (EFFECTIVE AREA)	PROPOSED STRUCTURE
PROPOSED STRUCTURE	DRAINAGE DIVIDE
NON ROOFTOP DISCONNECT (FILTER AREA)	NON ROOFTOP DISCONNECT (IMPERVIOUS)
1,500 S.F. WELL BOX	



NO.	DATE	REVISION
<b>BENCHMARK ENGINEERING, INC.</b> 8480 BALTIMORE NATIONAL PIKE & SUITE 315 A ELLICOTT CITY, MARYLAND 21043 (P) 410-465-8108 (F) 410-465-8844 WWW.BE-CIVILENGINEERING.COM		
<b>OWNER:</b> DEVELOPER AND OWNER CARROLL-ZIEGLER PARCEL Q: NATALIE C. ZIEGLER, 4888 CASTLEBRIDGE ROAD ELLICOTT CITY, MD, 21042 410-740-6880 OWNER FOX'S FARM LOTS 1, 2 AND PARCEL A: NATALIE C. ZIEGLER AND JOHN H. ZIEGLER, 4888 CASTLEBRIDGE ROAD ELLICOTT CITY, MD, 21042 OWNER CARROLL-ZIEGLER LOT 5 & PARCEL P: SHAHEED SIDDIQI & PARUL SIDDIQI, 8871 GOOSE LANDING CIR. COLUMBIA, MD, 21045		
<b>RE-SUBDIVISION OF LOT 2 AND PRESERVATION PARCEL 'A' AS SHOWN ON PLAT NO. 11379 INTO LOT 3 AND PRESERVATION PARCEL 'A-1'; REVISION TO CARROLL-ZIEGLER PROPERTY PARCEL Q AS SHOWN ON PLAT NOS. 23192-23195</b>		
<b>TAX MAP: 23, GRID: 10, P/O PARCELS: 130 &amp; 131, ZONED: RC-DEO ELECTION DISTRICT NO. 3 HOWARD COUNTY, MARYLAND</b>		
<b>ENVIRONMENTAL CONCEPT PLAN</b> <b>EXISTING CONDITIONS PLAN AND SOILS MAP</b>		
DATE: FEBRUARY, 2019	BEI PROJECT NO: 2799	
DESIGN: JC	DRAWN: BEI	SCALE: AS SHOWN
		SHEET 2 OF 8

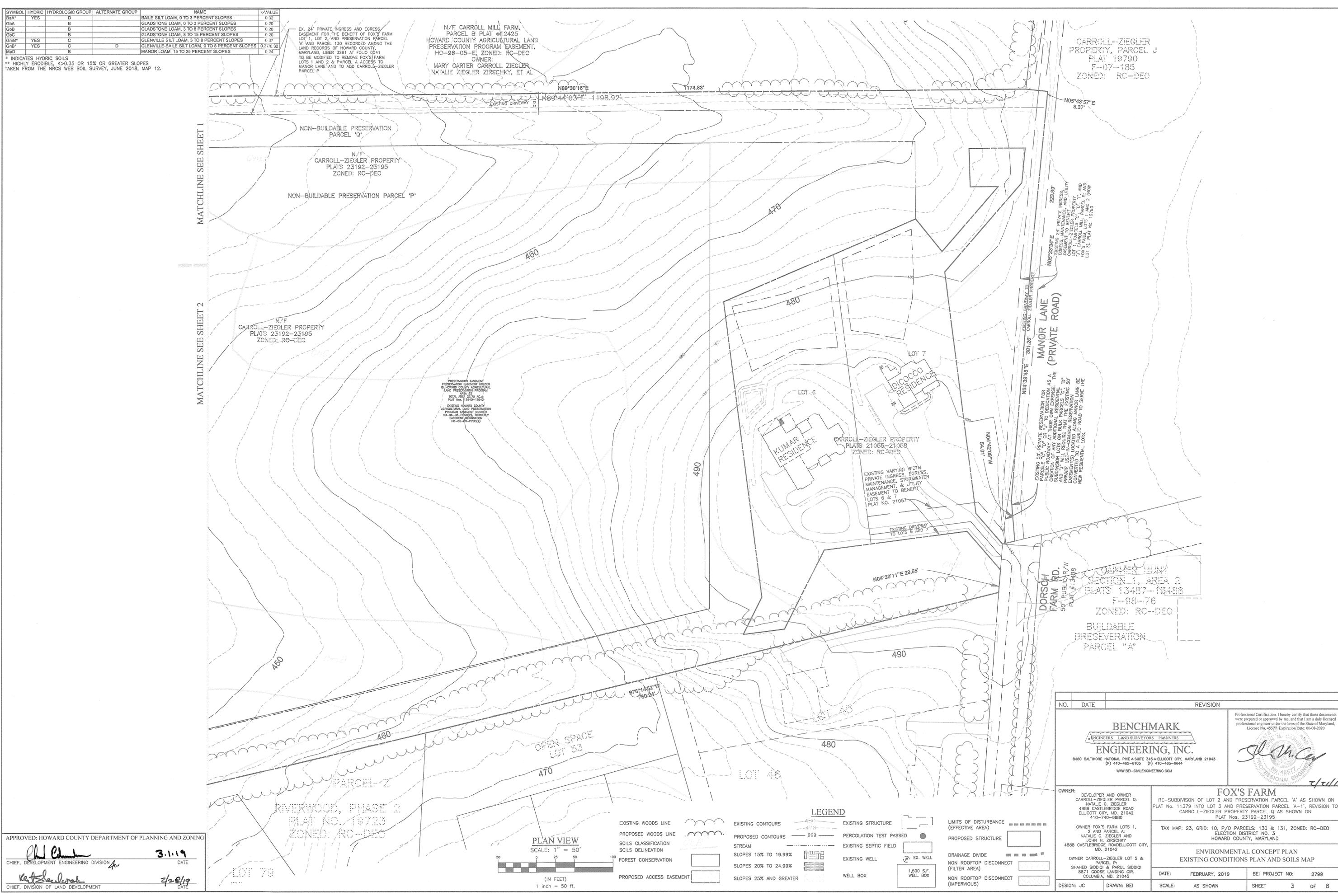
SYMBOL	HYDRIC	HYDROLOGIC GROUP	ALTERNATE GROUP	NAME	K-VALUE
Ba*	YES	D		BAILE SILT LOAM, 0 TO 3 PERCENT SLOPES	0.32
Gba		B		GLADSTONE LOAM, 0 TO 3 PERCENT SLOPES	0.20
Gbb		B		GLADSTONE LOAM, 3 TO 8 PERCENT SLOPES	0.20
Gbc		B		GLADSTONE LOAM, 8 TO 15 PERCENT SLOPES	0.20
Gmb*	YES	C		GLENVILLE SILT LOAM, 3 TO 8 PERCENT SLOPES	0.37
Gmb*	YES	C	D	GLENVILLE-SAILE SILT LOAM, 0 TO 8 PERCENT SLOPES	0.37/0.32
Mbd		B		MANOR LOAM, 15 TO 25 PERCENT SLOPES	0.24

\* INDICATES HYDRIC SOILS  
 \*\* HIGHLY ERODIBLE, K<0.35 OR 15% OR GREATER SLOPES  
 TAKEN FROM THE NRCS WEB SOIL SURVEY, JUNE 2018, MAP 12.

EX. 24' PRIVATE INGRESS AND EGRESS EASEMENT FOR THE BENEFIT OF FOX'S FARM LOT 1, LOT 2, AND PRESERVATION PARCEL 'A' AND PARCEL 130 RECORDED AMONG THE LAND RECORDS OF HOWARD COUNTY, MARYLAND, LIBER 3281 AT FOLIO 0041 TO BE MODIFIED TO REMOVE FOX'S FARM LOTS 1 AND 2 & PARCEL A ACCESS TO MANOR LANE AND TO ADD CARROLL-ZIEGLER PARCEL P.

N/F CARROLL MILL FARM, PARCEL B PLAT #12425  
 HOWARD COUNTY AGRICULTURAL LAND PRESERVATION PROGRAM EASEMENT, HC-96-05-E, ZONED: RC-DEO  
 OWNER:  
 MARY CARTER CARROLL ZIEGLER, NATALIE ZIEGLER ZIRSCHKY, ET AL

CARROLL-ZIEGLER PROPERTY, PARCEL J  
 PLAT 18730  
 F-07-185  
 ZONED: RC-DEO



MATCHLINE SEE SHEET 1

MATCHLINE SEE SHEET 2

NON-BUILDABLE PRESERVATION PARCEL 'Q'

N/F CARROLL-ZIEGLER PROPERTY  
 PLATS 23192-23195  
 ZONED: RC-DEO

NON-BUILDABLE PRESERVATION PARCEL 'P'

N/F CARROLL-ZIEGLER PROPERTY  
 PLATS 23192-23195  
 ZONED: RC-DEO

PRESERVATION EASEMENT HOLDER IS HOWARD COUNTY AGRICULTURAL LAND PRESERVATION PROGRAM AND ZONED RC-DEO  
 TOTAL AREA 23.25 AC.  
 PLAT NO. 18730-18732

EXISTING HOWARD COUNTY AGRICULTURAL LAND PRESERVATION PROGRAM EASEMENT NUMBER HC-96-05-E (FORMERLY EASEMENT) (SUBDIVISION NO. 05-05-00000)

EXISTING VARYING WIDTH PRIVATE INGRESS, EGRESS, MAINTENANCE, STORMWATER MANAGEMENT, & UTILITY EASEMENT TO BENEFIT LOTS 6 & 7 PLAT NO. 21057

EXISTING 24' PRIVATE INGRESS EASEMENT TO BENEFIT AND UTILITY LOTS 6 & 7, CARROLL-ZIEGLER PROPERTY, LOT 7, CARROLL MILL FARM, LOT 3, PLAT NO. 19730

EXISTING 50' PRIVATE PRESERVATION FOR PARCELS 'C', 'D' OR 'E' RESERVATION SUBDIVISION LOTS ON BLVD. THE PRIVATE USE REQUIRE THAT THE EXISTING 50' CASSEMENTS LOCATED ALONG MANOR LANE BE A PUBLIC ROAD TO SERVE THE NEW RESIDENTIAL LOTS.

DORSOH FARM RD.  
 50' PUBLIC HWY  
 PLAT # 13488

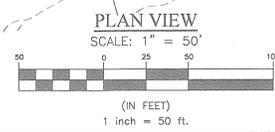
COOPER HUNT SECTION 1, AREA 2  
 PLATS 13487-13488  
 F-98-76  
 ZONED: RC-DEO

BUILDABLE PRESERVATION PARCEL 'A'

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

*Chad E. ...* 3.1.19  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

*Kate ...* 2/28/19  
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE



LEGEND	
EXISTING WOODS LINE	EXISTING CONTOURS
PROPOSED WOODS LINE	PROPOSED CONTOURS
SOILS CLASSIFICATION	STREAM
SOILS DELINEATION	SLOPES 15% TO 19.99%
FOREST CONSERVATION	SLOPES 20% TO 24.99%
PROPOSED ACCESS EASEMENT	SLOPES 25% AND GREATER
EXISTING STRUCTURE	EXISTING SEPTIC FIELD
PERCOLATION TEST PASSED	EXISTING WELL
EXISTING WELL	WELL BOX
LIMITS OF DISTURBANCE (EFFECTIVE AREA)	DRAINAGE DIVIDE
PROPOSED STRUCTURE	NON ROOFTOP DISCONNECT (FILTER AREA)
NON ROOFTOP DISCONNECT (IMPERVIOUS)	

NO.	DATE	REVISION
<b>BENCHMARK ENGINEERING, INC.</b> 8480 BALTIMORE NATIONAL PIKE SUITE 315 A ELLICOTT CITY, MARYLAND 21043 (P) 410-465-8105 (F) 410-465-8844 WWW.BE-CIVILENGINEERING.COM		
Professional Certification I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 45577, Expiration Date: 06-08-2020.		
<b>OWNER:</b> DEVELOPER AND OWNER CARROLL-ZIEGLER PARCEL Q: NATALIE C. ZIEGLER 4888 CASTLEBRIDGE ROAD ELLICOTT CITY, MD 21042 410-740-6880		
<b>OWNER FOX'S FARM LOTS 1, 2 AND PARCEL A:</b> NATALIE C. ZIEGLER AND JOHN H. ZIRSCHKY 4888 CASTLEBRIDGE ROAD ELLICOTT CITY, MD 21042		
<b>OWNER CARROLL-ZIEGLER LOT 5 &amp; PARCEL B:</b> SHAHEED SIDDIQI & PARUL SIDDIQI 8871 GOOSE LANDING CIR. COLUMBIA, MD 21045		
<b>DESIGN:</b> JC <b>DRAWN:</b> BEI		
<b>ENVIRONMENTAL CONCEPT PLAN EXISTING CONDITIONS PLAN AND SOILS MAP</b>		<b>DATE:</b> FEBRUARY, 2019 <b>SCALE:</b> AS SHOWN
<b>TAX MAP:</b> 23, GRID: 10, P/O PARCELS: 130 & 131, ZONED: RC-DEO ELECTION DISTRICT NO. 3 HOWARD COUNTY, MARYLAND		<b>BEI PROJECT NO:</b> 2799 <b>SHEET:</b> 3 OF 8



SYMBOL	HYDRIC	HYDROLOGIC GROUP	ALTERNATE GROUP	NAME	K-VALUE
Ba*	YES	D		BAILE SILT LOAM, 0 TO 3 PERCENT SLOPES	0.32
GSA	B			GLADSTONE LOAM, 0 TO 3 PERCENT SLOPES	0.20
Gsb	B			GLADSTONE LOAM, 3 TO 8 PERCENT SLOPES	0.20
Gsc	B			GLADSTONE LOAM, 8 TO 15 PERCENT SLOPES	0.20
Gmb*	YES	C		GLENVILLE SILT LOAM, 3 TO 8 PERCENT SLOPES	0.37
Gsb*	YES	C	D	GLENVILLE-BAILE SILT LOAM, 0 TO 8 PERCENT SLOPES	0.37/0.32
MaD	B			MANOR LOAM, 15 TO 25 PERCENT SLOPES	0.24

\* INDICATES HYDRIC SOILS  
 \*\* HIGHLY ERODIBLE, K>0.35 OR 15% OR GREATER SLOPES  
 TAKEN FROM THE NRCS WEB SOIL SURVEY, JUNE 2018, MAP 12.



ESD STORMWATER MANAGEMENT SUMMARY TABLE													
Practice	DA	Imp Area (sf)	%	Rv	Required	Provided	2% DA?	ESDv	Provided	Pe	Required	Provided	Ownership
(M-6) Micro Bio-Retention	5986	11,802	2.47%	0.24	120	209	FAIL	211	429	1.83	Required	0.0029	Private
(M-5) Drywell	#1	938	938	100%	0.95	NA	NA	74	160	2.15	Overall Site Obligation	0.0037	Private
(M-5) Drywell	#2	938	938	100%	0.95	NA	NA	74	160	2.15		0.0037	Private
Non-Rooftop Discon	NR-1	11,802	5,986	51%	0.51	NA	NA	498	498	1.00		0.0114	Private
Non-Rooftop Discon	NR-2	1,482	732	49%	0.49	NA	NA	61	61	1.00		0.0014	Private
Totals per individual Drainage Areas		26,962	11,070	41%	0.42	120	209	918	1308	1.39	0.0061	0.0225	
Totals per Whole Site		108,963	11,070	10%		221		1505	1508				

**OPERATION AND MAINTENANCE SCHEDULE FOR MICRO-BIORETENTION (M-6)**

- THE OWNER SHALL MAINTAIN THE PLANT MATERIAL, MULCH LAYER AND SOIL LAYER ANNUALLY. MAINTENANCE OF MULCH AND SOIL IS LIMITED TO CORRECTING AREAS OF EROSION OR WASH OUT. ANY MULCH REPLACEMENT SHALL BE DONE IN THE SPRING. PLANT MATERIAL SHALL BE CHECKED FOR DISEASE AND INSECT INFESTATION AND MAINTENANCE WILL ADDRESS DEAD MATERIAL AND PRUNING. ACCEPTABLE REPLACEMENT PLANT MATERIAL IS LIMITED TO THE FOLLOWING: 2000 MARYLAND STORMWATER DESIGN MANUAL, VOLUME II, TABLE A.4.1 AND 2.
- THE OWNER SHALL PERFORM A PLANT IN THE SPRING AND IN THE FALL OF EACH YEAR. DURING THE INSPECTION, THE OWNER SHALL REMOVE DEAD AND DISEASED VEGETATION CONSIDERED BEYOND TREATMENT, REPLACE DEAD PLANT MATERIAL WITH ACCEPTABLE REPLACEMENT PLANT MATERIAL, TREAT DISEASED TREES AND SHRUBS, AND REPLACE ALL DEFICIENT STAKES AND WIRES.
- THE OWNER SHALL INSPECT THE MULCH EACH SPRING. THE MULCH SHALL BE REPLACED EVERY TWO TO THREE YEARS. THE PREVIOUS MULCH LAYER SHALL BE REMOVED BEFORE THE NEW LAYER IS APPLIED.
- THE OWNER SHALL CORRECT SOIL EROSION ON AN AS NEEDED BASIS, WITH A MINIMUM OF ONCE PER MONTH AND AFTER EACH HEAVY STORM.

**OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED STORMWATER DRY WELLS (M-5)**

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

**OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED DISCONNECTION OF ROOFTOP RUNOFF (N-1), DISCONNECTION OF NON-ROOFTOP RUNOFF (N-2)**

- MAINTENANCE OF AREAS RECEIVING DISCONNECTED RUNOFF IS GENERALLY NO DIFFERENT THAN THAT REQUIRED FOR OTHER LAWN OR LANDSCAPED AREAS. THE OWNER SHALL ENSURE THE AREAS RECEIVING RUNOFF ARE PROTECTED FROM COMPACTION OR DEVELOPMENT OF IMPERVIOUS AREA IN COMMERCIAL AREAS. FOOT TRAFFIC SHOULD BE DISCOURAGED AS WELL.

ESD - SWM PRACTICES				
LOT NUMBER	ADDRESS	MICRO-BIORETENTION (M-6) QUANTITY	DRY WELLS (M-5) QUANTITY	NON-ROOFTOP DISC. (N-2) QUANTITY
3	CASTLEBRIDGE ROAD ELLICOTT CITY MD, 21042	1	2	2

ESD Site Data Summary			
Name of Development:	Watershed:	Class:	Watershed Designation:
Fox's Farm (2799) SWM	Fox's Farm	IV-P	2-13-11-06
Area of Site:	108,963	5986	11802
Impervious Cover:	14,124 square feet	Percent:	13%
Area of A soils:	0 square feet	Percent:	0%
Area of B soils:	108,963 square feet	Percent:	100%
Area of C soils:	0 square feet	Percent:	0%
Area of D soils:	0 square feet	Percent:	0%
Target RCN:	55		
Target Pe:	1.00 inches		
Achieved Pe:	1.39 inches	pass	139%
Target ESDv:	1505 cubic feet		
Achieved ESDv:	1508 cubic feet		87%
Target Rev:	0.0061 ac-ft		
Achieved Rev:	0.0225 ac-ft	pass	371%
Required Qf:	0 cubic feet		
Provided Qf:	0 cubic feet	N/A	N/A

**Total Site**

**Step 1: Determine ESD Implementation Goals**

**A. Determine Pre-Developed Conditions**

Soil Conditions for "Woods in Good Condition"			
HSG	RCN	Area (ft <sup>2</sup> )	Percent
A	38	0	0%
B	55	108963	100%
C	70	0	0%
D	77	0	0%
Target RCN	55	108963	

**B. Determine Initial Target Pe Using Table S.3**

Soil Conditions Developed Condition				
HSG	Area (ft <sup>2</sup> )	Impervious	Percent**	Target Pe
A				
B	108963	14,124	15%	1.0
C				
D				
Weighted Pe	108963	14124	15%	1.0

\* Percent Impervious is rounded to the next higher increment of 5%

**D. Compute Qe**

Qe = Runoff depth used to size ESD practices  
 Qe = Pe \* Rv

Pe = 1 inches  
 I = 13%  
 Rv = 0.05 + (0.009\*I)  
 Rv = 0.17  
 Qe = 0.17 inches

Target Pe = 1 inches  
 Qe = 0.17 inches  
 ESDv = 1505 cubic feet

**Total Site Recharge Volume Calculations**

Recharge Volume  
 Drainage Area = main site  
 A = 2.45 Area in Acres

I = 13% Impervious  
 S = 17.53 %  
 Rv = 0.17

Recharge Using Percent Volume Method  
 Rev = 0.0061 ac-ft OR 264 cf

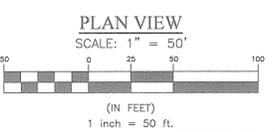
Recharge Using Percent Area Method  
 Rev = 0.06 acres

Requirement may be met by either  
 a) treating 264 cf using structural methods,  
 b) treating 0.06 acres using non-structural methods, or  
 c) a combination of both

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

*Chad Edwards* 3.1.19  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

*Kent Shalovich* 2/23/19  
 CHIEF, DIVISION OF LAND DEVELOPMENT



**LEGEND**

EXISTING WOODS LINE	EXISTING CONTOURS	EXISTING STRUCTURE	LIMITS OF DISTURBANCE (EFFECTIVE AREA)
PROPOSED WOODS LINE	PROPOSED CONTOURS	PERCOLATION TEST PASSED	PROPOSED STRUCTURE
SOILS CLASSIFICATION	STREAM	EXISTING SEPTIC FIELD	DRAINAGE DIVIDE
SOILS DELINEATION	SLOPES 15% TO 19.99%	EXISTING WELL	NON ROOFTOP DISCONNECT (FILTER AREA)
FOREST CONSERVATION	SLOPES 20% TO 24.99%	EX. WELL	NON ROOFTOP DISCONNECT (IMPERVIOUS)
PROPOSED ACCESS EASEMENT	SLOPES 25% AND GREATER	WELL BOX	

NO.	DATE	REVISION

**BENCHMARK ENGINEERING, INC.**  
 8480 BALTIMORE NATIONAL PIKE & SUITE 315 A ELLICOTT CITY, MARYLAND 21043  
 (P) 410-465-8105 (F) 410-465-8644  
 WWW.BE-ENGINEERING.COM

Professional Certification I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland. License No. 45377. Expiration Date: 06-08-2020

*John H. Zierschky*  
 4/2/19

**OWNER:** DEVELOPER AND OWNER CARROLL-ZIEGLER PARCEL Q: NATALIE C. ZIEGLER, 4888 CASTLEBRIDGE ROAD ELLICOTT CITY, MD, 21042 410-740-6880

**OWNER FOX'S FARM LOTS 1, 2 AND PARCEL A:** NATALIE C. ZIEGLER AND JOHN H. ZIERSCHKY, 4888 CASTLEBRIDGE ROAD ELLICOTT CITY, MD, 21042

**OWNER CARROLL-ZIEGLER LOT 5 & SHAHED SIDDIQI & PARUL SIDDIQI:** 8871 GOOSE LANDING CIR. COLUMBIA, MD, 21045

**FOX'S FARM**  
 RE-SUBDIVISION OF LOT 2 AND PRESERVATION PARCEL 'A' AS SHOWN ON PLAT No. 11379 INTO LOT 3 AND PRESERVATION PARCEL 'A-1'. REVISION TO CARROLL-ZIEGLER PROPERTY PARCEL Q AS SHOWN ON PLAT Nos. 23192-23195

TAX MAP: 23, GRID: 10, P/O PARCELS: 130 & 131, ZONED: RC-DEO ELECTION DISTRICT NO. 3 HOWARD COUNTY, MARYLAND

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

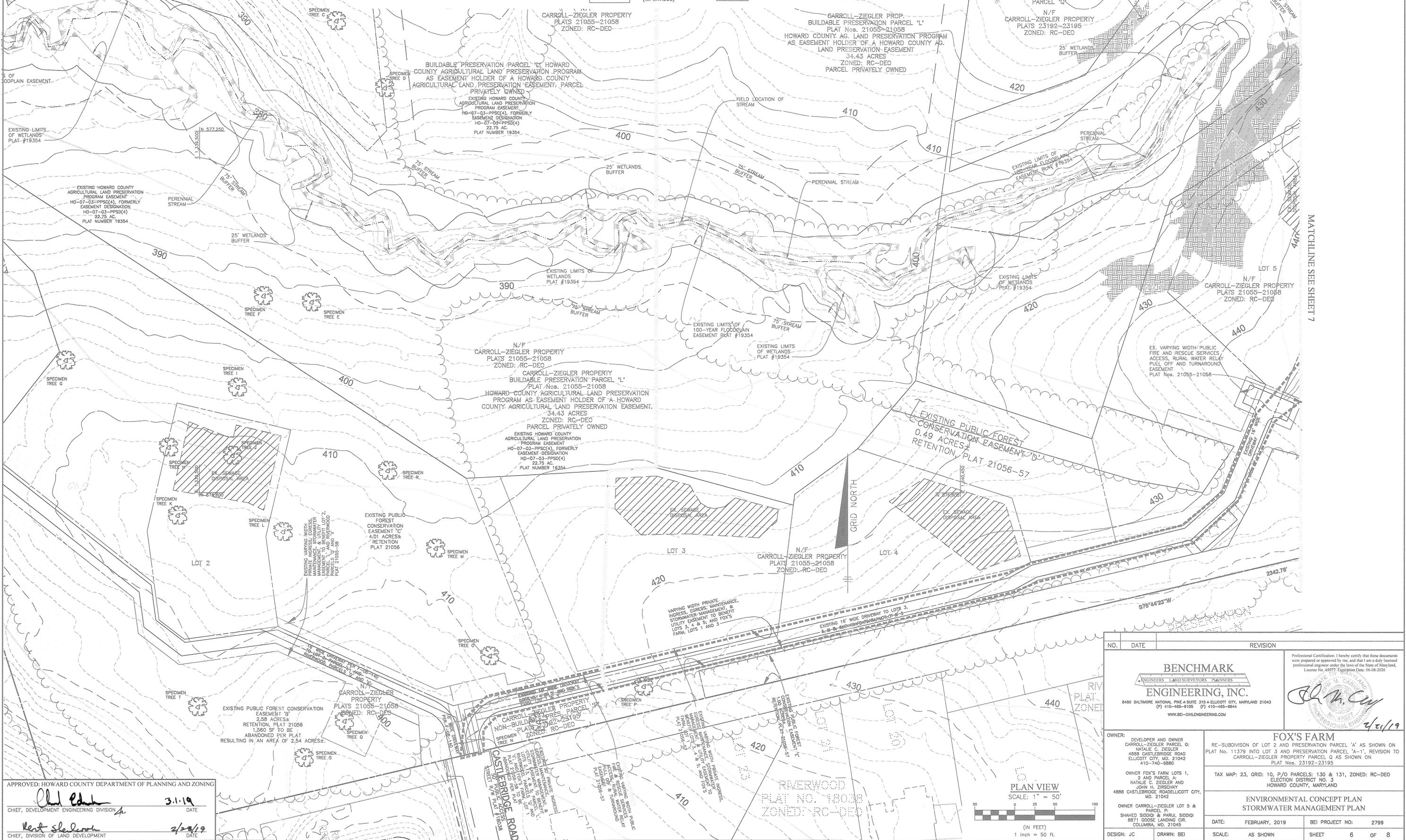
DATE: FEBRUARY, 2019 BEI PROJECT NO: 2799  
 DESIGN: JC DRAWN: BEI SCALE: AS SHOWN SHEET 5 OF 8

SYMBOL	HYDRO	HYDROLOGIC GROUP	ALTERNATE GROUP	NAME	K-VALUE
BaA*	YES	D		BAILE SILT LOAM, 0 TO 3 PERCENT SLOPES	0.32
GdA		B		GLADSTONE LOAM, 0 TO 3 PERCENT SLOPES	0.20
GdB		B		GLADSTONE LOAM, 3 TO 8 PERCENT SLOPES	0.20
GdC*		B		GLADSTONE LOAM, 8 TO 15 PERCENT SLOPES	0.20
GdH*	YES	C		GLENVILLE SILT LOAM, 3 TO 8 PERCENT SLOPES	0.37
GdI*	YES	C	D	GLENVILLE-BAILE SILT LOAM, 0 TO 8 PERCENT SLOPES	0.37/0.32
MdD		B		MANOR LOAM, 15 TO 25 PERCENT SLOPES	0.24

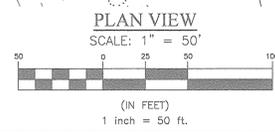
\* INDICATES HYDRIC SOILS  
 \*\* HIGHLY ERODIBLE, K>0.35 OR 15% OR GREATER SLOPES  
 TAKEN FROM THE NRCS WEB SOIL SURVEY, JUNE 2018, MAP 12.

### LEGEND

EXISTING WOODS LINE	EXISTING CONTOURS	EXISTING STRUCTURE	LIMITS OF DISTURBANCE (EFFECTIVE AREA)
PROPOSED WOODS LINE	PROPOSED CONTOURS	PERCOLATION TEST PASSED	PROPOSED STRUCTURE
SOILS CLASSIFICATION	STREAM	EXISTING SEPTIC FIELD	NON ROOFTOP DISCONNECT (FILTER AREA)
SOILS DELINEATION	SLOPES 15% TO 19.99%	EXISTING WELL	NON ROOFTOP DISCONNECT (IMPERVIOUS)
FOREST CONSERVATION	SLOPES 20% TO 24.99%	WELL BOX	
PROPOSED ACCESS EASEMENT	SLOPES 25% AND GREATER		



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
 Chief, Development Engineering Division  
 Chief, Division of Land Development  
 DATE: 3.1.19  
 DATE: 2/28/19



NO.	DATE	REVISION

**BENCHMARK ENGINEERING, INC.**  
 8480 BALTIMORE NATIONAL PIKE & SUITE 315 A ELLICOTT CITY, MARYLAND 21043  
 (P) 410-465-8108 (F) 410-465-8844  
 WWW.BE-CIVILENGINEERING.COM

Professional Certification: I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 45577 Expiration Date: 06-08-2020

**OWNER:** DEVELOPER AND OWNER CARROLL-ZIEGLER PARCEL Q: NATALE C. ZIEGLER AND JOHN H. ZIEGLER 4888 CASTLEBRIDGE ROAD ELLICOTT CITY, MD. 21042

**OWNER FOX'S FARM LOTS 1, 2 AND PARCEL A:** NATALE C. ZIEGLER AND JOHN H. ZIEGLER 4888 CASTLEBRIDGE ROAD ELLICOTT CITY, MD. 21042

**OWNER CARROLL-ZIEGLER LOT 5 & PARCEL P:** SHAHED SIDDIQI & PARUL SIDDIQI 8871 GOOSE LANDING CIR. COLUMBIA, MD. 21045

**DESIGN:** JC **DRAWN:** BEI

**RE-SUBDIVISION OF LOT 2 AND PRESERVATION PARCEL 'A' AS SHOWN ON PLAT NO. 511379 INTO LOT 3 AND PRESERVATION PARCEL 'A-1', REVISION TO CARROLL-ZIEGLER PROPERTY PARCEL Q AS SHOWN ON PLAT NOS. 23192-23195**

**TAX MAP:** 23, GRID: 10, P/O PARCELS: 130 & 131, ZONED: RC-DEO ELECTION DISTRICT NO. 3 HOWARD COUNTY, MARYLAND

**ENVIRONMENTAL CONCEPT PLAN STORMWATER MANAGEMENT PLAN**

DATE: FEBRUARY, 2019 BEI PROJECT NO: 2799  
 SCALE: AS SHOWN SHEET 6 OF 8

SYMBOL	HYDRIC	HYDROLOGIC GROUP	ALTERNATE GROUP	NAME	K-VALUE
BbA*	YES	D		BAILE SILT LOAM, 0 TO 3 PERCENT SLOPES	0.32
GbA		B		GLADSTONE LOAM, 0 TO 3 PERCENT SLOPES	0.20
GbB		B		GLADSTONE LOAM, 3 TO 8 PERCENT SLOPES	0.20
GbC		C		GLADSTONE LOAM, 8 TO 15 PERCENT SLOPES	0.20
GbB*	YES	C		GLENVILLE SILT LOAM, 3 TO 8 PERCENT SLOPES	0.37
GbB*	YES	C	D	GLENVILLE-BAILE SILT LOAM, 0 TO 8 PERCENT SLOPES	0.37/0.32
MbD		B		MANOR LOAM, 15 TO 25 PERCENT SLOPES	0.24

\* INDICATES HYDRIC SOILS  
 \*\* HIGHLY ERODIBLE, K=0.35 OR 15% OR GREATER SLOPES  
 TAKEN FROM THE NRCS WEB SOIL SURVEY, JUNE 2018, MAP 12.

**LEGEND**

EXISTING CONTOURS	480	EXISTING STRUCTURE	[Symbol]
PROPOSED CONTOURS	999	PERCOLATION TEST PASSED	[Symbol]
STREAM	[Symbol]	EXISTING SEPTIC FIELD	[Symbol]
SLOPES 15% TO 19.99%	[Symbol]	EXISTING WELL	[Symbol]
SLOPES 20% TO 24.99%	[Symbol]	EX. WELL	[Symbol]
SLOPES 25% AND GREATER	[Symbol]	WELL BOX	[Symbol]
EXISTING WOODS LINE	[Symbol]	LIMITS OF DISTURBANCE (EFFECTIVE AREA)	[Symbol]
PROPOSED WOODS LINE	[Symbol]	PROPOSED STRUCTURE	[Symbol]
SOILS CLASSIFICATION	[Symbol]	DRAINAGE DIVIDE	[Symbol]
SOILS DELINEATION	[Symbol]	NON ROOFTOP DISCONNECT (FILTER AREA)	[Symbol]
FOREST CONSERVATION	[Symbol]	NON ROOFTOP DISCONNECT (IMPERVIOUS)	[Symbol]
PROPOSED ACCESS EASEMENT	[Symbol]		

MATCHLINE SEE SHEET 5

MATCHLINE SEE SHEET 6

4' WIDE STRIP OF NEW PAVING, NO TREATMENT POSSIBLE 1,345 SF

4' WIDE STRIP OF NEW PAVING, NO TREATMENT POSSIBLE 1,708 SF

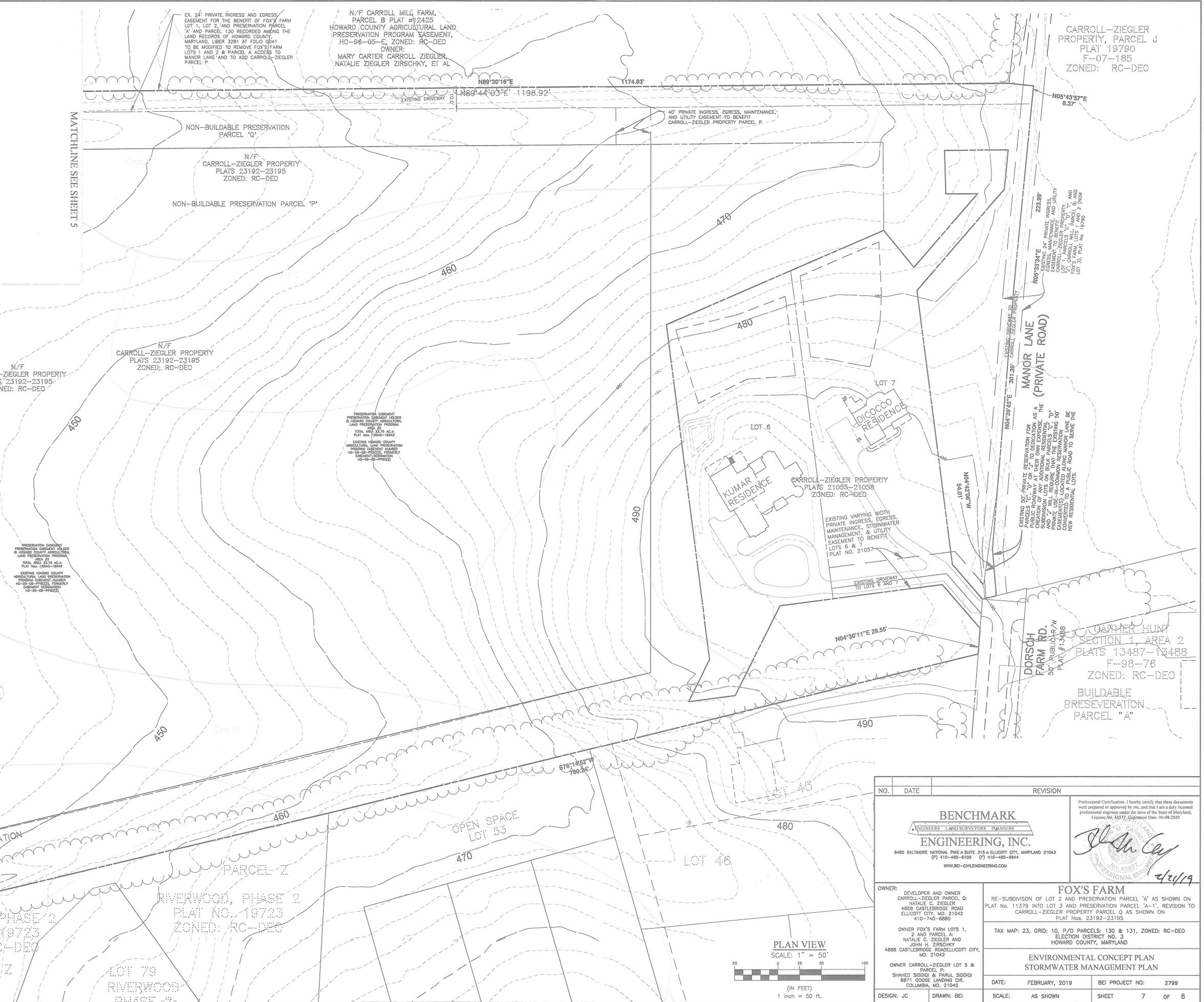
EXISTING VARYING WIDTH PRIVATE INGRESS, EGRESS, MAINTENANCE, STORMWATER MANAGEMENT, & UTILITY EASEMENT TO BENEFIT LOTS 3, 4 & 5, AND FOX'S FARM, LOT 1 PLAT 21056-57

EXISTING PUBLIC FOREST CONSERVATION EASEMENT 'E' RETENTION 1.00 ACRES± PLAT 21036-57

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION *[Signature]* 3.1.19 DATE

CHIEF, DIVISION OF LAND DEVELOPMENT *[Signature]* 7/22/19 DATE



CARROLL-ZIEGLER PROPERTY, PARCEL J  
 PLAT 18780  
 F-07-185  
 ZONED: RC-DEO

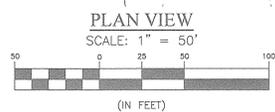
EXISTING 24' PRIVATE INGRESS, EGRESS, MAINTENANCE, STORMWATER MANAGEMENT, & UTILITY EASEMENT TO BENEFIT CARROLL-ZIEGLER PROPERTY PARCEL P.  
 U.S. CARROLL-ZIEGLER PROPERTY PARCELS C, D, E, F, AND G'S FARM, LOTS 1 AND 2 (NOW LOT 3), PLAT NO. 18780

EXISTING 85' PRIVATE RESERVATION FOR PUBLIC ROADWAY AT THEIR DEDICATION AS A SUBDIVISION OF ADDITIONAL RESIDENTIAL PARCELS 'C' AND 'D'. WILL REQUIRE THAT THE 50' EASEMENT(S) LOC. ALONG MANOR LANE BE CONVERTED TO A PUBLIC ROAD TO SERVE THE RESIDENTIAL LOTS.

DORSOH FARM RD.  
 50' PUBLIC R/W  
 PLAT #13488

BUILDABLE PRESERVATION PARCEL "A"

NO.	DATE	REVISION
<b>BENCHMARK ENGINEERING, INC.</b> 8480 BALTIMORE NATIONAL PIKE SUITE 315 A ELICOTT CITY, MARYLAND 21043 (P) 410-685-8105 (F) 410-685-8844 WWW.BE-CIVILENGINEERING.COM		
<b>OWNER:</b> DEVELOPER AND OWNER CARROLL-ZIEGLER PARCEL Q: NATALIE C. ZIEGLER 4888 CASTLEBRIDGE ROAD ELICOTT CITY, MD 21042 410-740-6880 OWNER FOX'S FARM LOTS 1, 2 AND PARCEL A: NATALIE C. ZIEGLER AND JOHN H. ZIRSCHKY 4888 CASTLEBRIDGE ROAD ELICOTT CITY, MD 21042 OWNER CARROLL-ZIEGLER LOT 5 & PARCEL P: SHAHED SIDDIQI & PARUL SIDDIQI 8871 GOOSE LANDING CIR. COLUMBIA, MD. 21046		<b>RE-SUBDIVISION OF LOT 2 AND PRESERVATION PARCEL 'A' AS SHOWN ON PLAT NO. 11379 INTO LOT 3 AND PRESERVATION PARCEL 'A-1'. REVISION TO CARROLL-ZIEGLER PROPERTY PARCEL Q AS SHOWN ON PLAT NOS. 23192-23195</b>  <b>TAX MAP: 23, GRID: 10, P/O PARCELS: 130 &amp; 131, ZONED: RC-DEO ELECTION DISTRICT NO. 3 HOWARD COUNTY, MARYLAND</b>
<b>ENVIRONMENTAL CONCEPT PLAN            STORMWATER MANAGEMENT PLAN</b>		
DESIGN: JC	DRAWN: BEI	DATE: FEBRUARY, 2019 SCALE: AS SHOWN
		BEI PROJECT NO: 2799 SHEET 7 OF 8





\* INDICATES HYDRIC SOILS  
 \*\* HIGHLY ERODIBLE, K>0.35 OR 15% OR GREATER SLOPES  
 TAKEN FROM THE NRCS WEB SOIL SURVEY, JUNE 2018, MAP 12.

**SEQUENCE OF CONSTRUCTION**

1. NOTIFY SEDIMENT CONTROL DIVISION 48 HOURS PRIOR TO START OF WORK
2. OBTAIN GRADING PERMIT. (DAY 1)
3. HOLD ON-SITE PRE-CONSTRUCTION MEETING. (DAY 2)
4. CLEAR AND GRUB AS NECESSARY TO INSTALL STABILIZED CONSTRUCTION ENTRANCE AND PERIMETER CONTROLS (I.E. EARTH DIKES, TEMP. PIPE, SALT FENCE, SUPER SILT FENCES, ETC.) (DAY 3-4)
5. UPON APPROVAL FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR, PROCEED TO CLEAR AND GRUB WITHIN THE PERIMETER. (DAY 5-6)
6. EXCAVATE FOR HOUSE FOUNDATION, POUR AND BACKFILL. (DAY 7-14)
7. BRING DRIVEWAY TO SUBGRADE. DO NOT INSTALL SWALES AT THIS TIME. (DAY 15)
8. FINISH HOUSE CONSTRUCTION. (DAY 16-90)
9. CONSTRUCT MICRO-BIORETENTION #1 & DRY WELLS #1 AND #2. DO NOT INSTALL MULCH OR PLANTINGS AT THIS TIME. INSTALL SILT FENCE AROUND PERIMETER OF MICRO-BIORETENTION FACILITY. ONCE THE ROOF OF THE HOUSE IS COMPLETED, INSTALL THE ROOF DRAINS. (DAY 91-95)
10. PAVE THE DRIVEWAY. (DAY 96-100)
11. INSTALL SEPTIC LINE, SEPTIC TANK AND TRENCHES. (DAY 101-108)
12. FINAL GRADE THE LOT AND STABILIZE IN ACCORDANCE WITH THE PERMANENT SEEDBED NOTES INCLUDING EROSION CONTROL MATTING WITHIN ALL SWALES, IF APPLICABLE, AS SHOWN ON THE PLAN AT THIS TIME. PROCEED TO INSTALL MULCH AND PLANTINGS OF MICRO-BIORETENTION #1. (DAY 109-110)
13. UPON APPROVAL FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR, REMOVE SEDIMENT CONTROL DEVICES AND STABILIZE ANY REMAINING DISTURBED AREAS WITH THE PERMANENT SEEDBED NOTES. (DAY 111)

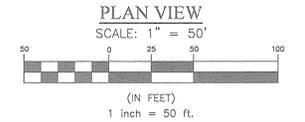
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

*Chief, Development Engineering Division* 3/1/19 DATE

*Chief, Division of Land Development* 2/28/19 DATE

**LEGEND**

EXISTING WOODS LINE	EXISTING CONTOURS	EXISTING STRUCTURE	LIMITS OF DISTURBANCE (EFFECTIVE AREA)	STABILIZED CONSTRUCTION ENTRANCE
PROPOSED WOODS LINE	PROPOSED CONTOURS	PERCOLATION TEST PASSED	PROPOSED STRUCTURE	SILT FENCE
SOILS CLASSIFICATION	STREAM	EXISTING SEPTIC FIELD	EXISTING WELL	SUPER SILT FENCE
SOILS DELINEATION	SLOPES 15% TO 19.99%	EXISTING WELL	EX. WELL	EROSION CONTROL MATTING
FOREST CONSERVATION	SLOPES 20% TO 24.99%	WELL BOX	1,500 S.F. WELL BOX	EARTH DIKE
PROPOSED ACCESS EASEMENT	SLOPES 25% AND GREATER			



NO.	DATE	REVISION

**BENCHMARK ENGINEERING, INC.**

8480 BALTIMORE NATIONAL PIKE A SUITE 315 A ELICOTT CITY, MARYLAND 21043  
 (P) 410-465-8105 (F) 410-465-8544  
 WWW.BEI-CIVILENGINEERING.COM

Professional Certification: I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland. License No. 45877, Expiration Date: 06-08-2020

<p><b>OWNER:</b>          DEVELOPER AND OWNER          CARROLL-ZIEGLER PARCEL Q:          NATALIE C. ZIEGLER          4888 CASTLEBRIDGE ROAD          ELICOTT CITY, MD 21042          410-740-6880</p>	<p><b>FOX'S FARM</b>          RE-SUBDIVISION OF LOT 2 AND PRESERVATION PARCEL 'A' AS SHOWN ON PLAT NO. 11379 INTO LOT 3 AND PRESERVATION PARCEL 'A-1', REVISION TO CARROLL-ZIEGLER PROPERTY PARCEL Q AS SHOWN ON PLAT NOS. 23192-23195</p>
<p><b>OWNER FOX'S FARM LOTS 1, 2 AND PARCEL A:</b>          NATALIE C. ZIEGLER AND JOHN H. ZIRSCHKY          4888 CASTLEBRIDGE ROAD/ELICOTT CITY, MD 21042</p>	<p>TAX MAP: 23, GRID: 10, P/O PARCELS: 130 &amp; 131, ZONED: RC-DEO ELECTION DISTRICT NO. 3 HOWARD COUNTY, MARYLAND</p>
<p><b>OWNER CARROLL-ZIEGLER LOT 5 &amp; PARCEL Q:</b>          SHAHEED SIDDIQI &amp; PARUL SIDDIQI          8871 GOOSE LANDING CIR.          COLUMBIA, MD 21045</p>	<p><b>ENVIRONMENTAL CONCEPT PLAN          SEDIMENT AND EROSION CONTROL PLAN</b></p>
<p>DESIGN: JC          DRAWN: BEI</p>	<p>DATE: FEBRUARY, 2019          BEI PROJECT NO: 2799          SCALE: AS SHOWN          SHEET 8 OF 8</p>