

NRCS SOILS CHART - HoCo Soils Map No. 25			
SYMBOL	HYDRIC	GROUP	MAP UNIT NAME
R _s C		C	RUSSETT FINE SANDY LOAM, 5 TO 10 PERCENT SLOPES
U _s B		D	URBAN LAND-SASSAFRAS- BELTSVILLE COMPLEX 0 TO 5 PERCENT SLOPE

SWM DESIGN NARRATIVE:

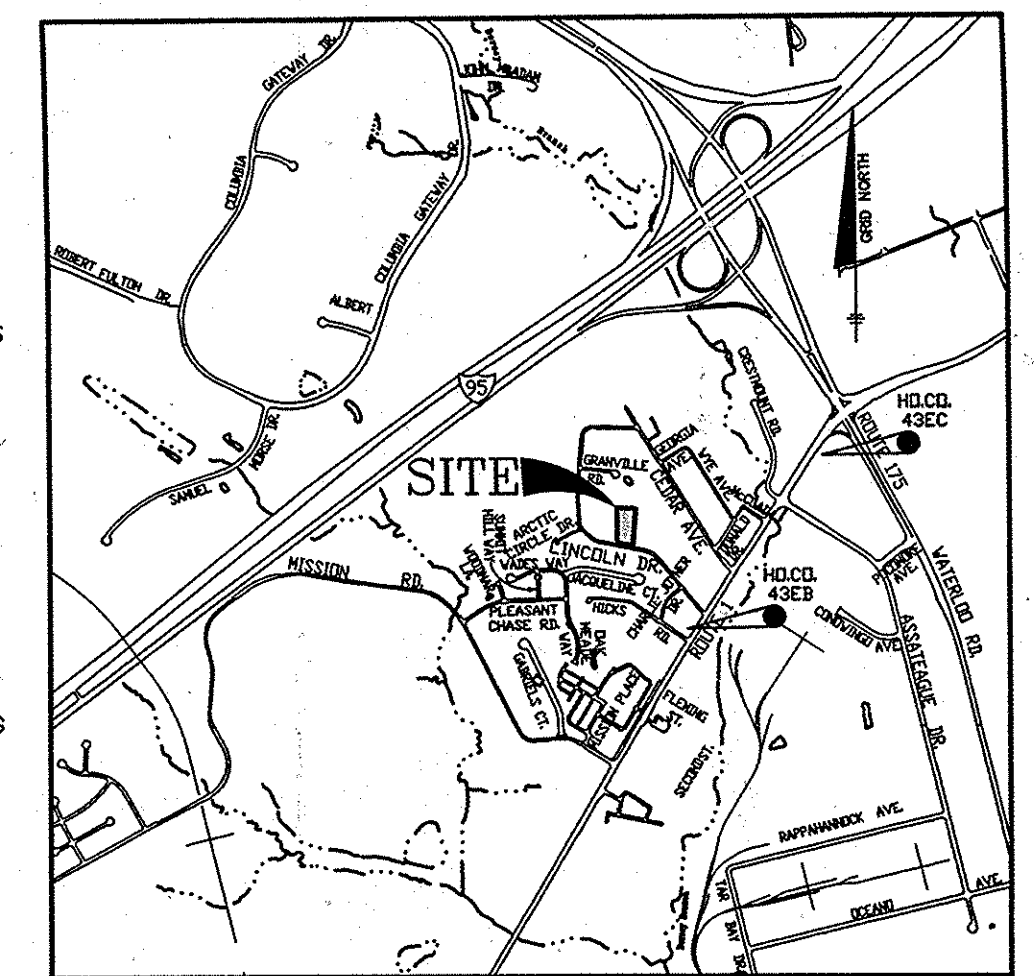
NATURAL RESOURCES SHALL BE PRESERVED AS THERE ARE NO ENVIRONMENTALLY SENSITIVE AREAS ON-SITE OR BEING DISTURBED. EXISTING FOREST ALONG THE EASTERN EDGE OF THE PROPERTY SHALL BE PRESERVED WITHIN A FOREST CONSERVATION EASEMENT.

EXISTING FLOW PATTERNS SHALL BE MAINTAINED. UNDER ULTIMATE CONDITIONS ALL DRAINAGE FLOW SHALL EXIT THE PROPERTY IN THE SAME LOCATION AS IT DOES UNDER EXISTING CONDITIONS.

IMPERVIOUS ARE IS BEING HELD TO A MINIMUM BY PUSHING THE PROPOSED HOUSES AS FAR FORWARD AS POSSIBLE TO THE USE-IN-COMMON DRIVE. THE USE-IN-COMMON DRIVE IS THE NARROWEST WIDTH ALLOWED BY COUNTY REGULATIONS (16 FEET).

SEDIMENT AND EROSION CONTROL SHALL BE PROVIDED. A SCHEMATIC CONCEPT IS SHOWN ON SHEET 2. IT IS ANTICIPATED THAT IT WILL CONSIST MAINLY OF SUPER SILT FENCE AND CLEANWATER DIVERSION DIKES. SINCE THIS IS A RELATIVELY SMALL DRAINAGE AREA, NO SEDIMENT TRAPS OR BASINS SHOULD BE NEEDED. THERE ARE NO IMPACTS TO SWM DESIGN BASED ON SEDIMENT AND EROSION CONTROL.

THE PROPOSED FOUR (M-6) MICRO BIO-RETENTION PRACTICES AND ONE (F-6) BIO-RETENTION PRACTICE SHALL ADEQUATELY TREAT THE PROPOSED IMPERVIOUS AREAS. THE PRACTICES SHALL ALL DISCHARGE AT A LOCATION THAT IS NOT DETRIMENTAL TO THE ADJACENT PROPERTIES. INLETS SHALL BE PLACED IN THE MB'S WHERE HIGHER STORMS MIGHT CREATE OVERFLOW ISSUES. FULL TREATMENT IS BEING PROVIDED THEREFORE THIS PROJECT CAN BE CONSIDERED TO BE TREATED TO THE MAXIMUM EXTENT PRACTICAL.



VICINITY MAP
1" = 2000'
ADC MAP 34, GRID C8

GENERAL NOTES

- SUBJECT PROPERTY ZONED R-SC PER THE OCTOBER 6, 2013 COMPREHENSIVE ZONING PLAN.
- THIS PROJECT IS SUBJECT TO THE AMENDED FIFTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS.
- PROJECT BOUNDARY IS BASED ON BOUNDARY SURVEY BY BENCHMARK ENGINEERING, INC PERFORMED IN AUGUST, 2015. TOPOGRAPHY IS BASED ON HOWARD COUNTY GIS.
- FOREST STAND AND WETLAND DELINEATION WAS PERFORMED BY ECO-SCIENCE, PROFESSIONALS, INC. IN AUGUST, 2015. THERE ARE NO WETLANDS, WETLANDS BUFFER, STREAMS, STREAM BUFFERS, 100-YR FLOODPLAIN OR 2% OR GREATER STEEP SLOPES WITH MORE THAN 20,000 SF OF CONTIGUOUS AREA LOCATED WITHIN THE PROJECT SITE.
- TO THE BEST OF OUR KNOWLEDGE, THERE ARE NO CEMETERIES LOCATED ON THIS SITE.
- THIS PROJECT IS SUBJECT TO THE FOREST CONSERVATION REQUIREMENTS. IT IS ANTICIPATED THAT IT SHALL BE HANDLED PARTIALLY BY ON-SITE RETENTION WITH THE REMAINING OBLIGATION OFFSITE WITHIN THE MITIGATION BANK OF THE PHELPS PROPERTY, SDP-14-026.
- APPROVAL OF THIS ENVIRONMENTAL CONCEPT PLAN (ECP) DOES NOT CONSTITUTE AN APPROVAL OF ANY SUBSEQUENT AND ASSOCIATED SUBDIVISION AND/OR SITE DEVELOPMENT PLAN.
- 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 AND/OR SITE DEVELOPMENT PLAN STAGES. THEREFORE, THE APPLICANT AND CONSULTANT SHOULD EXPECT ADDITIONAL AND MORE DETAILED COMMENTS (INCLUDING THOSE THAT MAY ALTER OVERALL SITE DESIGN) AS THIS PROJECT PROGRESSES.
- THE STORMWATER MANAGEMENT PRACTICES SHOWN ON THIS PLAN ASSUME ADEQUATE SOIL BORING TEST RESULTS. THE DESIGN MAY NEED TO BE ADJUSTED AT THE NEXT STAGE AFTER SOIL BORING TESTING HAS BEEN COMPLETED AND AN ALTERNATE PRACTICE MAY NEED TO BE UTILIZED.
- APPLICABLE DPZ FILE REFERENCES: S-16-002
- THE SEDIMENT AND EROSION CONTROL SHOWN ON SHEET 2 IS A SCHEMATIC CONCEPTUAL DESIGN. A MORE DETAILED DESIGN COMPLETE WITH SEQUENCE OF CONSTRUCTION, NOTES AND DETAILS SHALL BE PROVIDED AT THE NEXT PLAN STAGE.
- THERE ARE NO EXISTING STRUCTURES LOCATED ON THIS SITE.
- (F-6) BIO-RETENTION FACILITY #1 SHALL BE LOCATED WITHIN HOA OWNED OPEN SPACE LOT 7.



LEGEND

- EXISTING CONTOURS
- EXISTING TREELINE
- PROPOSED TREELINE
- PROJECT BOUNDARY
- LIMIT OF DISTURBANCE
- PROPOSED IMPERVIOUS
- DRAINAGE DIVIDE
- MICRO-BIORETENTION SURFACE AREA
- SOILS DELINEATION
- SOILS CLASSIFICATION
- FOREST CONSERVATION ESMT

Site Analysis Data Sheet	
Gross Area	1.62 ac
100yr Floodplain	0.00 ac
Steep Slopes 15% or greater	0.00 ac
Wetlands	0.00 ac
Wetlands Buffer	0.00 ac
Stream	0.00 ac
Stream Buffer	0.00 ac
Forested Area	0.00 ac
Erodable Soils	0.00 ac
Limit of Disturbance	1.38 ac
Impervious Area	0.43 ac
Green Space	0.95 ac

ESD STORMWATER MANAGEMENT SUMMARY TABLE												
Practice	DA to practice (sf)	Imp Area to practice (sf)	P _e	A _f (s.f.)			ESD _v			REV		Ownership
				Required	Provided	2% DA?	Required	Provided	P _e Provided	Required	Provided	
(M-6) Micro Bio-Retention #1	2,630	1,696	1.6	53	162	PASS	221	330	1.6			Private
(M-6) Micro Bio-Retention #2	5,378	1,696	1.6	108	162	PASS	239	330	1.6			Private
(M-6) Micro Bio-Retention #3	1,605	752	1.6	32	60	PASS	101	139	1.6			Private
(M-6) Micro Bio-Retention #4	1,424	752	1.6	28	50	PASS	100	139	1.6			Private
(F-6) Bio-Retention #1	28,113	11,951	1.6	562	1355	PASS	1622	2197	1.6	224 of 0.06 acres	248 of	Private
Total Treated	39,150	16,847		783	1779		2283	3134				
Total New Impervious												

Notes:

- Rev is provided in (F-6) Bio-Retention Facility #1 via 6-inch deep stone chamber below outflow pipes.
- The 1,708 sf of impervious area not treated via ESD is the individual driveways for Lot 1 and 2 and the beginning portion of the use-in-common driveway. These areas will drain into Lincoln Drive. There is not sufficient room between the garage and public right-of-way for ESD practice. Overcompensation has been provided within (F-6) Bio-Retention Facility #1 to address this issue.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division 11.9.15
DATE

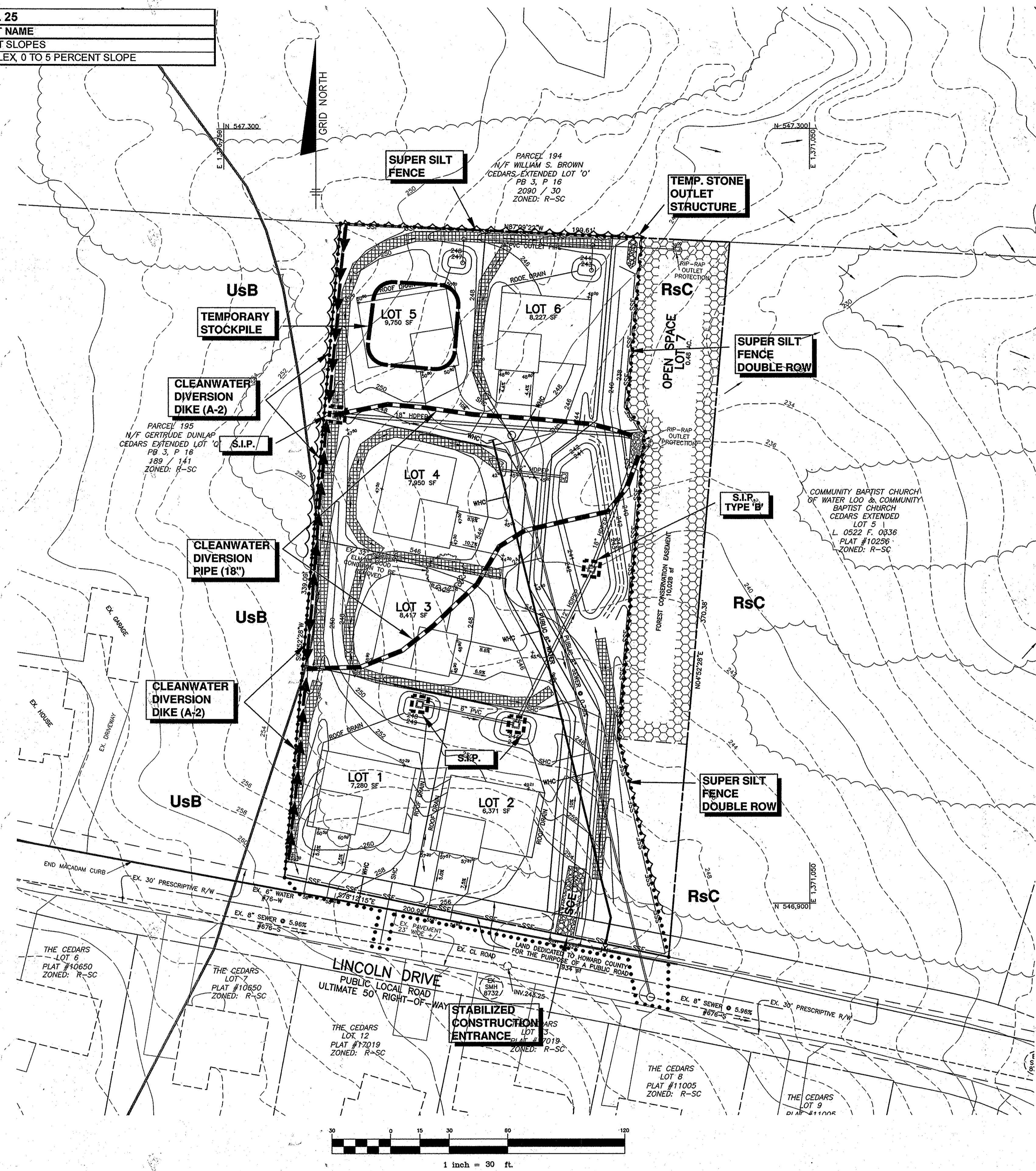
Chief, Division of Land Development 10.30.15
DATE

SHEET INDEX	
SHEET	TITLE
1	ENVIRONMENTAL CONCEPT PLAN
2	SEDIMENT AND EROSION CONTROL PLAN

NO. DATE REVISION		<p>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, Exp. Date: 06-08-2016.</p>
<p>BENCHMARK ENGINEERING, INC. 8480 BALTIMORE NATIONAL PIKE A SUITE 315 ELLICOTT CITY, MARYLAND 21043 (P) 410-465-6105 (F) 410-465-6644 WWW.BE-CVLENGINEERING.COM</p>		
OWNER:	<p>THE CEDARS EXTENDED LOTS 1 thru 6 AND OPEN SPACE LOT 7 (A RESUBDIVISION OF LOT 'R' OF THE CEDARS EXTENDED PB 3 P 16)</p> <p>TAX MAP: 43 - GRID: 8 - PARCEL: 451 ZONED: R-SC ELECTION DISTRICT NO. 6 - HOWARD COUNTY, MARYLAND</p>	
DEVELOPER:	<p>CEDARS EXTENDED LOT 'R' LLC 8359 OLD FREDERICK ROAD ELLICOTT CITY, MARYLAND 21043 443-812-4806</p>	
DATE:	OCTOBER, 2015	BEI PROJECT NO. 2717
SCALE:	AS SHOWN	SHEET 1 OF 2
DESIGN:	JMC/DBT	DRAFT: DBT

NRCS SOILS CHART - HoCo Soils Map No. 25

SYMBOL	HYDRIC	GROUP	Kw	MAP UNIT NAME
RsC		C	0.27	RUSSETT FINE SANDY LOAM, 5 TO 10 PERCENT SLOPES
UsB		D	0.49	URBAN LAND-SASSAFRAS-BELTSVILLE COMPLEX, 0 TO 5 PERCENT SLOPE



SEQUENCE OF CONSTRUCTION

NOTIFY SEDIMENT CONTROL DIVISION 48 HOURS PRIOR TO START OF WORK

PHASE 1 - SITE CONSTRUCTION

1. Obtain grading permit. (day 1)
2. Hold on-site pre-construction meeting. (day 2)
3. Clear and Grub as necessary to install stabilized construction entrance and perimeter controls (super silt fences, diversion dikes/pipes, etc.) (day 3-6)
4. Upon approval from the Howard County sediment control inspector, proceed to clear, grub and grade within the perimeter. (day 7-10)
5. Install new water and sewer lines and house connections up to the easement line. (day 11-18)
6. Construct the storm drain system and grade in the swales along the western edge of the property to divert runoff to storm drains. Utilize inlet protection on all inlets and permanent stabilization matting within the swales. Once swales are completed the diversion dikes and pipes can be removed. (day 19-26)
7. Construct the use-in-common driveway. (day 27-28)
8. Construct (F-6) Bio-Retention #1 but do not install plantings at this time*. Wrap outer perimeter with silt fence. Utilize inlet protection. (day 29-33)

PHASE 2 - PER LOT HOUSE CONSTRUCTION

1. Obtain building permit. (day 1)
2. Hold on-site preconstruction meeting. (day 2)
3. Install perimeter lot controls (i.e. silt fence). (day 3)
4. Excavate for foundation, rough grade and stabilize in accordance with the temporary seeded notes. (day 4-10)
5. Construct house, install water and sewer house connections from easement up to house, backfill and construct driveway. (day 11-30)
6. Construct on-lot SWM practices (i.e. micro bio-retentions) complete with underdrains and plantings. Construct roof leader underdrains to the facilities. Final grade lot and stabilize in accordance with the PERMANENT seeded notes. (day 31-9)
7. Upon approval from the Howard County Sediment Control Inspector, remove all sediment control devices and stabilize any remaining disturbed areas in accordance with the permanent seeded notes. (day 95-100)

*Once the houses on Lots 3 thru 6 have been constructed and the lots permanently stabilized, (F-6) Bio-Retention #1 can be planted and inlet protection removed.

LEGEND

- EXISTING CONTOURS
- EXISTING TREELINE
- PROPOSED TREELINE
- PROJECT BOUNDARY
- LIMIT OF DISTURBANCE
- SUPER SILT FENCE
- SUPER SILT FENCE
- STABILIZED CONSTRUCTION ENTRANCE
- EROSION CONTROL MATTING
- CLEAN WATER DIVERSION DIKE
- CLEAN WATER DIVERSION PIPE
- STD INLET PROTECTION
- SOILS DELINEATION
- SOILS CLASSIFICATION

NO.	DATE	REVISION

BENCHMARK
ENGINEERS & LAND SURVEYORS & PLANNERS
ENGINEERING, INC.
8490 BALTIMORE NATIONAL PIKE SUITE 315 ELLICOTT CITY, MARYLAND 21043
(P) 410-465-6105 (F) 410-465-6644
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. 15577, Expiration Date: 06-08-2016.

10/15/15

<p>OWNER: CEDARS EXTENDED LOT 'R' LLC 8369 OLD FREDERICK ROAD ELLICOTT CITY, MARYLAND 21043 443-812-4806</p>	<p>THE CEDARS EXTENDED LOTS 1 thru 6 AND OPEN SPACE LOT 7 (A RESUBDIVISION OF LOT 'R' OF THE CEDARS EXTENDED PB 3 P 16)</p> <p>TAX MAP: 43 - GRID: 8 - PARCEL: 451 ZONED: R-SC ELECTION DISTRICT NO. 6 - HOWARD COUNTY, MARYLAND</p>
<p>DEVELOPER: CEDARS EXTENDED LOT 'R' LLC 8369 OLD FREDERICK ROAD ELLICOTT CITY, MARYLAND 21043 443-812-4806</p>	<p>ENVIRONMENTAL CONCEPT PLAN SEDIMENT AND EROSION CONTROL PLAN</p>
<p>DATE: OCTOBER, 2015 BEI PROJECT NO. 2717</p>	
<p>DESIGN: JMC/DBT DRAFT: DBT SCALE: AS SHOWN SHEET 2 OF 2</p>	

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

11-9-15
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

10-20-15
CHIEF, DIVISION OF LAND DEVELOPMENT DATE