

REGAN PROPERTY Project Number 2171

Determine ESD Implementation Goals

HSG	RCN	Area (A2)	Percent
A	38	0	0%
B	55	1,454,991	97%
C	70	21,866	1%
D	77	16,548	1%
Target RCN	55	1,483,406	

Determine Target Pe Using Table 6.3

Soil Conditions Developed Condition	Area (A2)	Impervious	Percent	Target Pe
A	1,454,991	209,364		
B	21,866			
C	16,548	3,564		
Weighted Pe	1,483,406	212,928	14%	1.0

* See graphical determination in SVM report.

HO. CO. #40FA (NAD '83) ELEV. 497.10'
 CONCRETE MONUMENT 0.25' BELOW SURFACE ON
 BROWN BRIDGE ROAD 0.3 MILE NORTH OF ROUTE
 216
 E. 1,328,421.39' N. 548,108.926'

HO. CO. #40FB (NAD '83) ELEV. 504.438'
 MONUMENT BEING 10.5' OFF EDGE OF PAVEMENT
 2.0' BELOW SURFACE AT THE INTERSECTION OF
 HALL SHOP ROAD AND ROUTE 216
 E. 1,326,000.81' N. 548,470.381'

LEGEND

SOILS CLASSIFICATION ChB2

SOILS DELINEATION

EXISTING CONTOURS

LIMIT OF WETLANDS

EXISTING WOODS LINE

PROPOSED WOODS LINE

EXISTING STRUCTURE

PROPOSED STRUCTURE

SEPTIC RESERVE AREA

RAIN GARDENS

NON-ROOFTOP DISCONNECT

FACILITY DRAINAGE AREA

PROPOSED WELL

15% TO 25% SLOPES

25% AND GREATER SLOPES

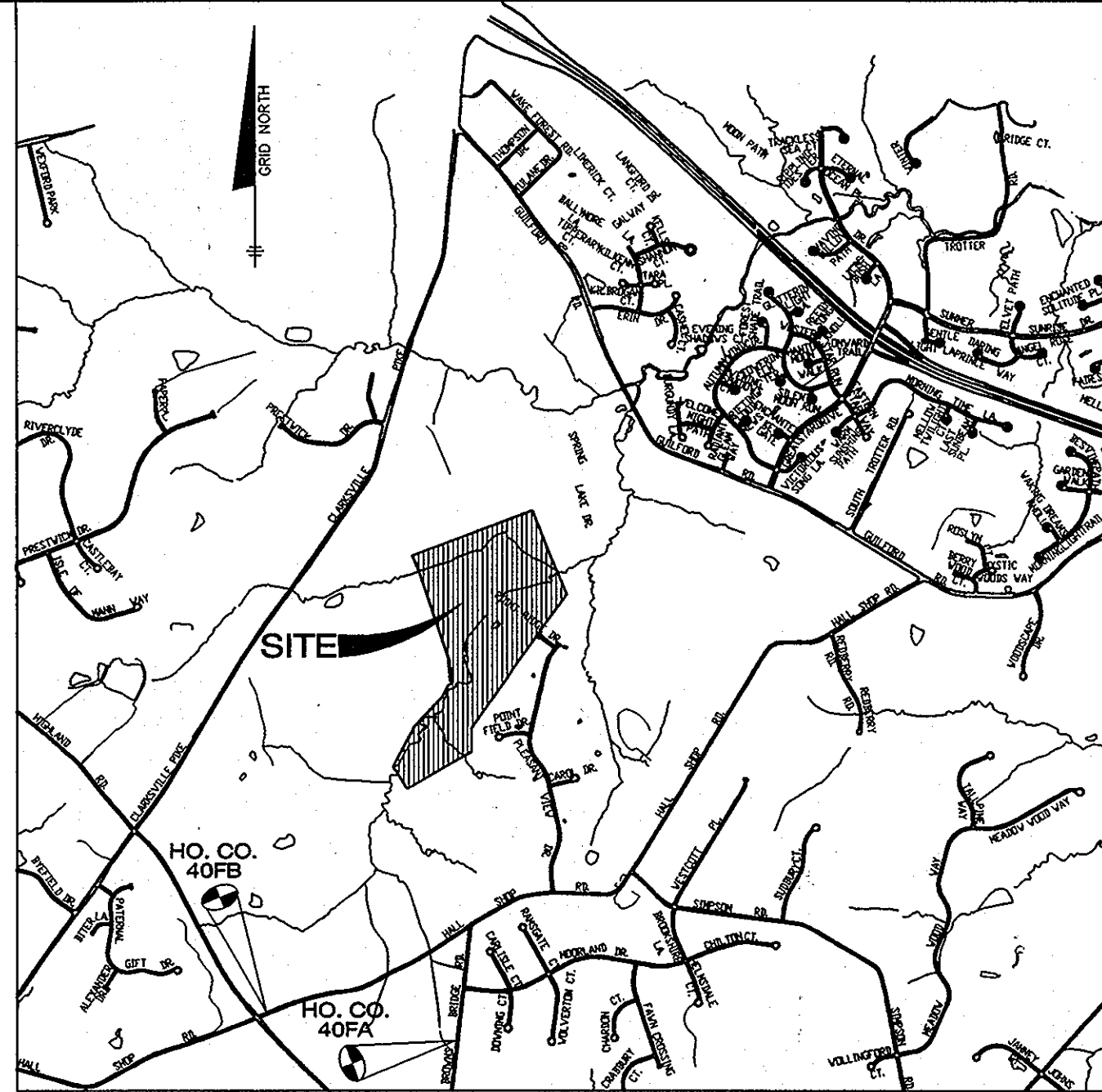
100-YEAR FLOODPLAIN

SUPER SILT FENCE

STABILIZED CONSTRUCTION ENTRANCE

EROSION CONTROL MATTING

LIMIT OF DISTURBANCE



PROJECT: Regan Property PRACTICES AND SIZING DATE: 03/26/12

Lot No.	Impervious Area (sq ft)	Impervious (%)	Ro	ESD	Pe	Notes
1	11656	32%	0.217	330'		
2	1252	41%	0.338	360'		Level Wetland
3	6766	43%	0.339	360'		
4	1778	47%	0.388	390'		
5	1330	57%	0.538	513.4		
6	4913	59%	0.710	566.9		
7	10523	63%	0.847	652.5		Level Wetland
8	3994	74%	1.024	746.4		
9	2997	75%	1.052	765.5		
10	11819	76%	1.059	769.8		
11	867	78%	1.058	769.4		
12	8517	78%	1.048	768.7		
13	1017	78%	1.058	769.4		
14	8255	78%	1.051	768.1		
15	12328	78%	1.058	769.4		
16	14709	78%	1.051	768.1		Level Wetland
17	11205	78%	1.058	769.4		
18	3006	78%	1.058	769.4		
19	4269	78%	1.058	769.4		
20	14753	78%	1.058	769.4		
21	4092	78%	1.058	769.4		
22	14753	78%	1.058	769.4		
23	4092	78%	1.058	769.4		
24	14753	78%	1.058	769.4		
25	4092	78%	1.058	769.4		
26	14753	78%	1.058	769.4		
27	4092	78%	1.058	769.4		
28	14753	78%	1.058	769.4		
29	4092	78%	1.058	769.4		
30	14753	78%	1.058	769.4		

DESIGN NARRATIVE:

The site was analyzed as woods in good condition and a target RCN was determined. A target rainfall depth treatment (Pe) was determined based on the measured impervious area and HSG soil types. The target Pe for this site is 1.0 inches. The target Pe was treated using Environmental Site Design practices as outlined in Chapter 5 of the 2000 Maryland Stormwater Design Manual, as amended by Maryland's Stormwater Management Act of 2007. The selected methods include Non-Rooftop Disconnects and Micro-bioretenation facilities, and grass swales.

This site contains two streams, which converge near the northeast side. These areas have associated wetlands. Only the wetland areas contained within the effective site area are described on this plan. The site has some areas of steep slopes in excess of 25%; however they are all located outside of the effective site area. To protect natural resource areas, it is important to delay release of stormwater runoff from new impervious areas to avoid increasing peak runoff, and to adequately treat the stormwater to avoid damage to sensitive species. The design incorporates large lots with moderately sized houses and minimum width driveways in order to create the least possible stormwater runoff. In addition, steep slope areas are not included on the lots.

Conceptual treatment has been designated based on preliminary grading, the site topography and the house, well and septic locations. The roads treated by Non-Rooftop disconnect, grass swales and micro-bioretenation. Driveway areas may be treated by disconnect, or on-lot micro-bioretenation. Some driveway areas will be treated in open space facilities. Generally rooftop runoff will be piped to on-site micro-bioretenation facilities. Micro-bioretenation facilities may be required to have impervious lining, depending on proximity to well locations. Multiple outfalls are provided to generally release runoff in natural drainage patterns for the site.

Sediment and erosion controls have been designed based on the 1994 Maryland Specifications for Soil Erosion and Sediment Control. Erosion control matting and super silt fence will be used to prevent runoff containing unacceptable levels of TSS from leaving the site and entering the adjacent wetlands during the construction. It will be the obligation of the contractor to install, inspect and maintain these practices.

The target Pe for this site is 1.0 inches. By using Environmental Site Design practices as outlined in Chapter 5 of the 2000 Maryland Stormwater Design Manual as amended by Maryland Stormwater Management Act of 2007, full treatment of the target Pe of 1.0 will be achieved.

A Design Manual waiver may be required for overdrains or shallow underdrains for on-lot facilities where sufficient head cannot be provided to daylight underdrains. A Waiver Petition will be required to allow disturbance of wetlands, streams and their buffers.

APPROVAL OF THIS ESD DOES NOT CONSTITUTE APPROVAL OF SUBSEQUENT OR ASSOCIATED SUBDIVISION PLANS, SITE DEVELOPMENT PLANS OR RED-LINE REVISIONS. REVIEW OF THIS PROJECT FOR COMPLIANCE WITH THE COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS AND THE HOWARD COUNTY ZONING REGULATIONS SHALL OCCUR AT THE SUBDIVISION PLAN, SITE DEVELOPMENT PLAN OR RED-LINE REVISION REVIEW STAGE. THE APPLICANT AND CONSULTANT SHOULD EXPECT ADDITIONAL AND MORE DETAILED REVIEW COMMENTS (INCLUDING COMMENTS THAT MAY ALTER THE ORIGINAL SITE DESIGN) AS THIS PROJECT PROGRESSES THROUGH THE PLAN REVIEW PROCESS.

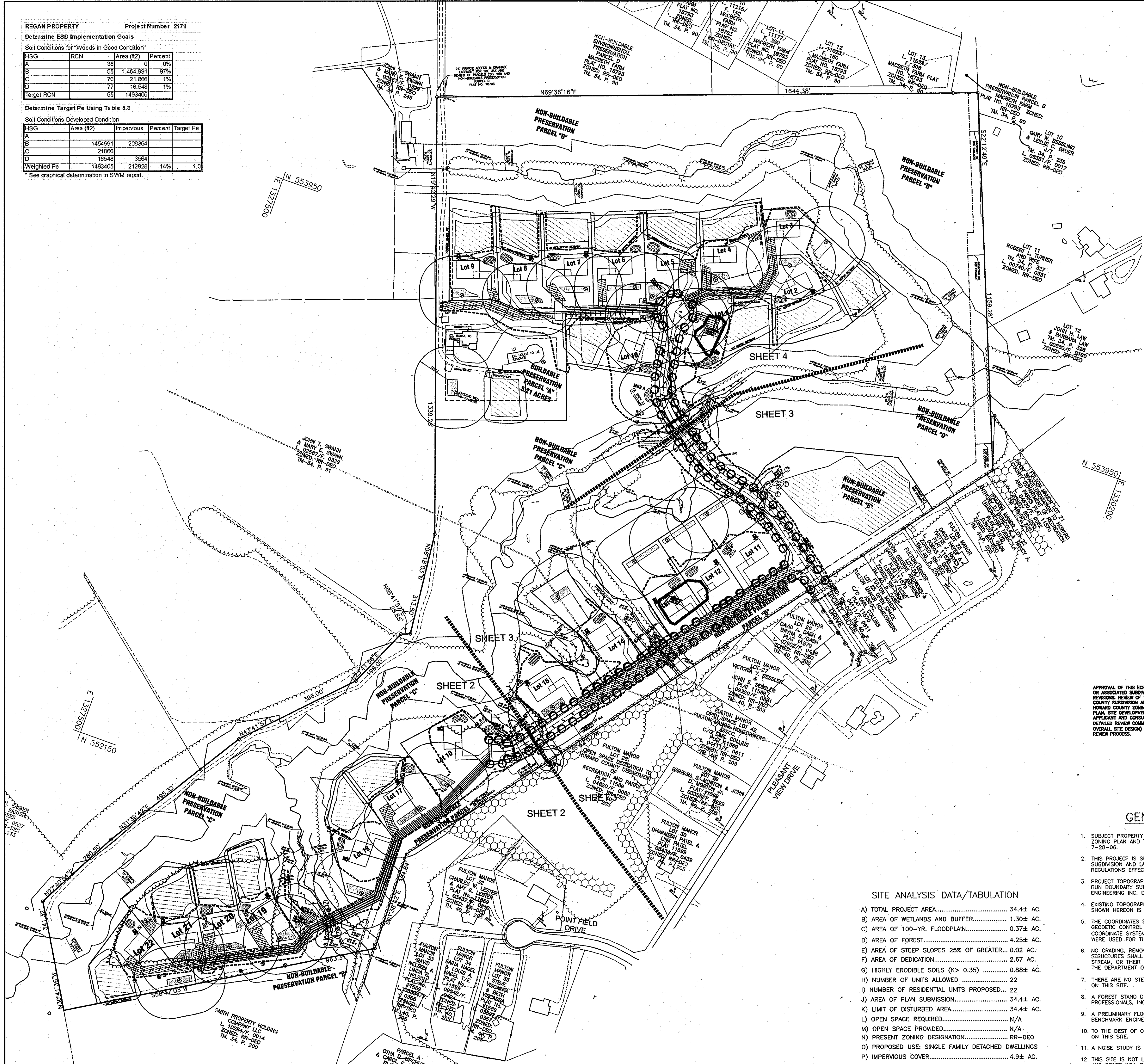
GENERAL NOTES

- SUBJECT PROPERTY ZONED RC-DEO PER THE 2-2-04 COMPREHENSIVE ZONING PLAN AND THE COMP LITE ZONING AMENDMENTS EFFECTIVE 7-28-06.
- THIS PROJECT IS SUBJECT TO THE AMENDED FIFTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS AND THE ZONING REGULATIONS EFFECTIVE APRIL 13, 2004.
- PROJECT TOPOGRAPHY WITHIN THE SUBDIVISION AREA ARE BASED ON FIELD RUN BOUNDARY SURVEY AND TOPO PERFORMED BY BENCHMARK ENGINEERING INC. DATED JANUARY, 2012.
- EXISTING TOPOGRAPHY OUTSIDE OF THE SUBDIVISION AREA AND OFFSITE SHOWN HEREON IS BASED ON HOWARD COUNTY GIS.
- 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. #40FA AND #40FB ON THIS SITE.
- NO GRADING, REMOVAL OF VEGETATIVE COVER OR TREES, PAVING AND NEW STRUCTURES SHALL BE PERMITTED WITHIN THE LIMITS OF WETLANDS, STREAM, OR THEIR REQUIRED BUFFERS UNLESS DEEMED NECESSARY BY THE DEPARTMENT OF PLANNING AND ZONING.
- THERE ARE NO STEEP SLOPES (25% OR GREATER) IN EXCESS 20,000 S.F. ON THIS SITE.
- A FOREST STAND DELINEATION WAS PREPARED BY ECO-SCIENCE PROFESSIONALS, INC., FEBRUARY 2012.
- A PRELIMINARY FLOOD STUDY DATED MARCH, 2012 WAS PERFORMED BY BENCHMARK ENGINEERING, INC.
- TO THE BEST OF OUR KNOWLEDGE THERE ARE NO CEMETERIES LOCATED ON THIS SITE.
- A NOISE STUDY IS NOT REQUIRED FOR THIS DEVELOPMENT.
- THIS SITE IS NOT LOCATED WITHIN THE METROPOLITAN DISTRICT, WATER AND SEWER WILL BE PRIVATE ON-SITE FACILITIES.
- THE FOREST CONSERVATION ACT OBLIGATION FOR THIS PROJECT WILL BE MET BY THE ON-SITE RETENTION OF FOREST.
- THERE ARE NO PREVIOUS DP2 FILES FOR THIS SITE.

SITE ANALYSIS DATA/TABULATION

A) TOTAL PROJECT AREA.....	34.4± AC.
B) AREA OF WETLANDS AND BUFFER.....	1.30± AC.
C) AREA OF 100-YR. FLOODPLAIN.....	0.37± AC.
D) AREA OF FOREST.....	4.25± AC.
E) AREA OF STEEP SLOPES 25% OF GREATER.....	0.02 AC.
F) AREA OF DEDICATION.....	2.67 AC.
G) HIGHLY ERODIBLE SOILS (K > 0.35).....	0.88± AC.
H) NUMBER OF UNITS ALLOWED.....	22
I) NUMBER OF RESIDENTIAL UNITS PROPOSED.....	22
J) AREA OF PLAN SUBMISSION.....	34.4± AC.
K) LIMIT OF DISTURBED AREA.....	34.4± AC.
L) OPEN SPACE REQUIRED.....	N/A
M) OPEN SPACE PROVIDED.....	N/A
N) PRESENT ZONING DESIGNATION.....	RR-DEO
O) PROPOSED USE: SINGLE FAMILY DETACHED DWELLINGS	
P) IMPERVIOUS COVER.....	4.9± AC.

NOTE: THE TOTAL PROPERTY AREA IS 83.81 ACRES. THE ABOVE ENVIRONMENTAL AREAS ARE AS LOCATED WITHIN THE EFFECTIVE SITE AREA AS DEFINED FOR STORMWATER MANAGEMENT. AREAS OUTSIDE OF THE LIMIT OF DISTURBANCE ARE NOT INCLUDED, AS THEY WILL NOT BE IMPACTED.



APPROVED: DEPARTMENT OF PLANNING AND ZONING

[Signature] 4/03/13
 CHIEF, DIVISION OF LAND DEVELOPMENT

[Signature] 4/6/13
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

SHEET INDEX	
NO.	DESCRIPTION
1	ENVIRONMENTAL CONCEPT PLAN
2	ENVIRONMENTAL CONCEPT PLAN
3	ENVIRONMENTAL CONCEPT PLAN AND SEDIMENT CONTROL DETAILS
4	ENVIRONMENTAL CONCEPT PLAN AND SEDIMENT CONTROL NOTES

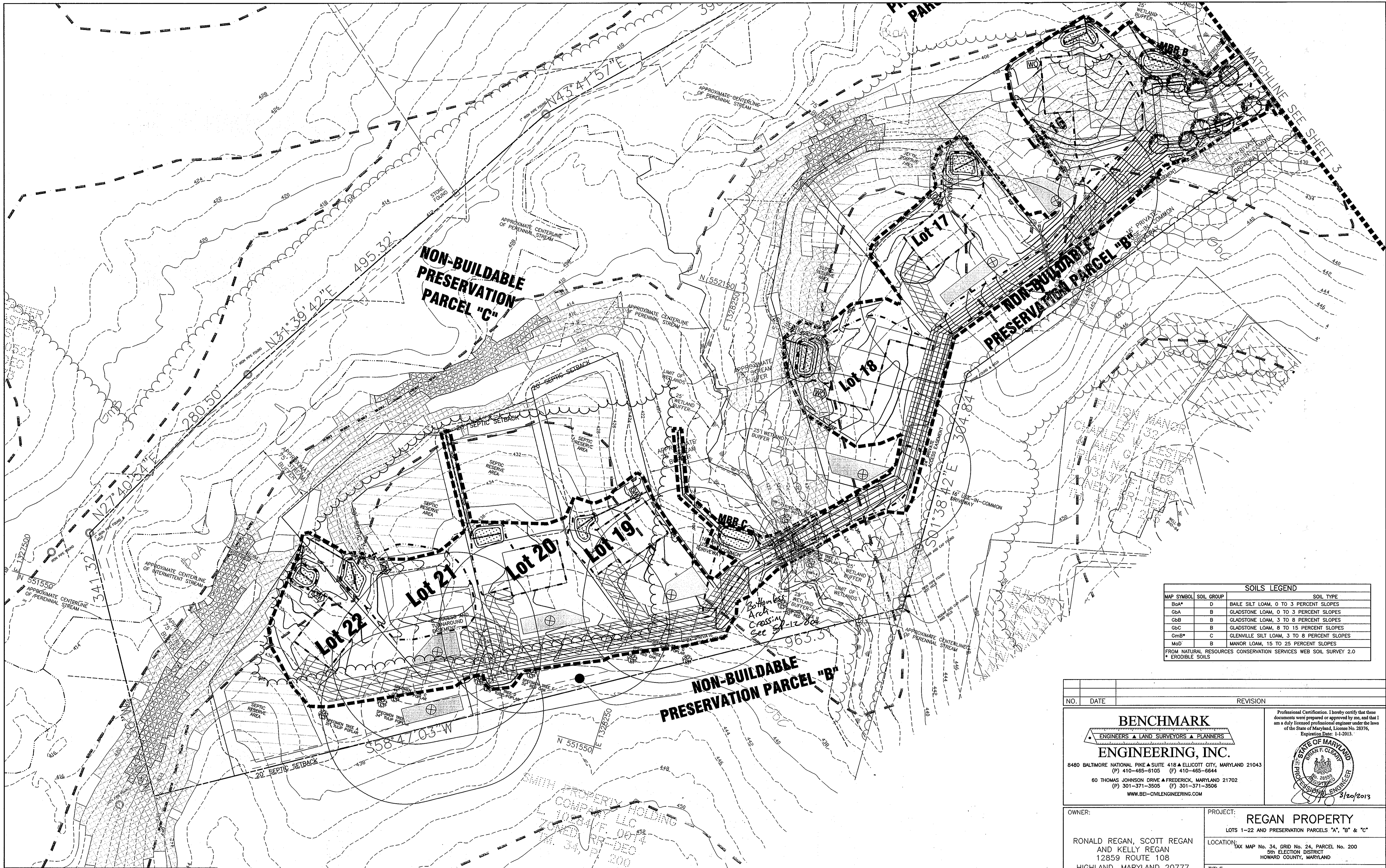
NO.	DATE	REVISION

BENCHMARK ENGINEERING, INC.
 ENGINEERS & LAND SURVEYORS & PLANNERS
 8480 BALTIMORE NATIONAL PIKE & SUITE 418 • ELLICOTT CITY, MARYLAND 21043
 (P) 410-465-6105 (F) 410-465-6644
 60 THOMAS JOHNSON DRIVE • FREDERICK, MARYLAND 21702
 (P) 301-371-3505 (F) 301-371-3506
 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. 28376, Expiration Date: 1-1-2013.

[Signature] 3/20/2013
 PROFESSIONAL ENGINEER

OWNER:	PROJECT:
RONALD REGAN, SCOTT REGAN AND KELLY REGAN 12859 ROUTE 108 HIGHLAND, MARYLAND 20777	REGAN PROPERTY LOTS 1-22 AND PRESERVATION PARCELS "A", "B" & "C"
LOCATION:	TITLE:
TAX MAP No. 34, GRID No. 24, PARCEL No. 200 5th ELECTION DISTRICT HOWARD COUNTY, MARYLAND	ENVIRONMENTAL CONCEPT PLAN
DATE:	PROJECT NO.
MARCH, 2012 FEBRUARY, 2013	2171
DESIGN:	DRAFT:
AAM	AAM
SCALE:	DRAWING
AS SHOWN	1 OF 4



SOILS LEGEND		
MAP SYMBOL	SOIL GROUP	SOIL TYPE
Ba*	D	BAILE SILT LOAM, 0 TO 3 PERCENT SLOPES
Gba	B	GLADSTONE LOAM, 0 TO 3 PERCENT SLOPES
Gbb	B	GLADSTONE LOAM, 3 TO 8 PERCENT SLOPES
Gbc	B	GLADSTONE LOAM, 8 TO 15 PERCENT SLOPES
GmB*	C	GLENVILLE SILT LOAM, 3 TO 8 PERCENT SLOPES
MdD	B	MANOR LOAM, 15 TO 25 PERCENT SLOPES

FROM NATURAL RESOURCES CONSERVATION SERVICES WEB SOIL SURVEY 2.0
* ERODIBLE SOILS

NO.	DATE	REVISION

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ENGINEERING, INC.

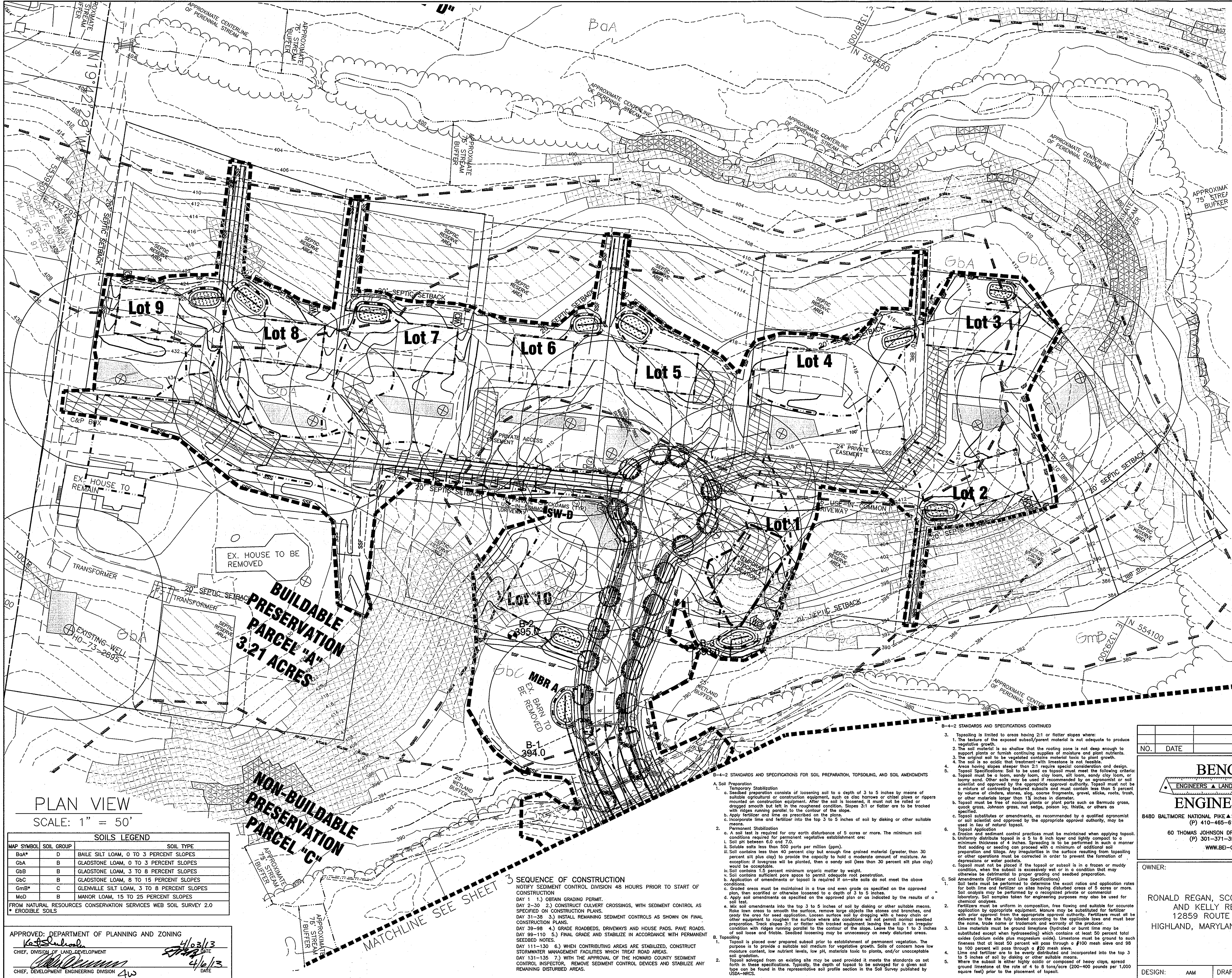
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WWW.BEI-CIVLENGINEERING.COM

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. 28376, Expiration Date: 1-1-2013.

OWNER: RONALD REGAN, SCOTT REGAN AND KELLY REGAN 12859 ROUTE 108 HIGHLAND, MARYLAND 20777	PROJECT: REGAN PROPERTY LOTS 1-22 AND PRESERVATION PARCELS "A", "B" & "C" LOCATION: TAX MAP No. 34, GRID No. 24, PARCEL No. 200 5th ELECTION DISTRICT HOWARD COUNTY, MARYLAND TITLE: ENVIRONMENTAL CONCEPT PLAN DATE: MARCH, 2012 FEBRUARY, 2013 PROJECT NO. 2171 SCALE: AS SHOWN DRAWING 2 OF 4
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APPROVED: DEPARTMENT OF PLANNING AND ZONING
K. Schumacher 4/03/13
 CHIEF, DIVISION OF LAND DEVELOPMENT
A. Johnson 4/03/13
 CHIEF, DEVELOPMENT ENGINEERING DIVISION 4w3
 DATE

PLAN VIEW
 SCALE: 1" = 50'



- ### SEDIMENT CONTROL NOTES
- A MINIMUM OF 24 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTION, LICENSES AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION. (313-1850)
 - ALL EROSION CONTROL STRUCTURES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE MOST CURRENT REGULATIONS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL. REVISIONS THEFTIC.
 - ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1984 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDINGS (SEC. 31) 500 (SEC. 5A) TEMPORARY SEEDING (SEC. 31) 500 AND MULCHING (SEC. 32). TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.
 - ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMITS FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
 - SITE ANALYSIS:

TOTAL AREA OF SITE (THIS SUBMISSION)	34.4	ACRES
AREA TO BE ROOFED OR PAVED	N/A	ACRES
AREA TO BE VEGETATIVELY STABILIZED	N/A	ACRES
TOTAL CUT	N/A	CY
TOTAL FILL	N/A	CY
OFFSITE WASTE/BORROW AREA LOCATION	N/A	

*THE PURPOSE OF THIS ENVIRONMENTAL CONCEPT PLAN IS TO ESTABLISH CONCEPTUAL EROSION CONTROL AND SEDIMENT CONTROL MEASURES PRIOR TO THE PROJECT GRADING AND NOT YET ESTABLISHED. SO DETAILED DISTURBANCE, STABILIZATION, CUT AND FILL INFORMATION NOT YET AVAILABLE, AND WILL BE PROVIDED ON CONSTRUCTION PLANS.

ANY SEDIMENT CONTROL PRACTICES WHICH IS DISTURBED BY ANY ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE. ADDITIONAL SEDIMENT CONTROL MUST BE PROVIDED, IF DEEMED NECESSARY, BY THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.

ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 ACRES, APPROVAL OF THE INSPECTION AGENCY SHALL BE REQUESTED UPON COMPLETION OF INSTALLATION OF PERMANENT SEDIMENT CONTROL STRUCTURES, BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING. OTHER BUILDING OR GRADING INSPECTION APPROVALS ARE REQUIRED UNTIL THIS INITIAL APPROVAL OF THE INSPECTION AGENCY IS MADE.

TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE FEET LENGTHS OR THAT WHICH CAN BE INSTALLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.

B-4-3 STANDARDS AND SPECIFICATIONS FOR SEEDING AND MULCHING

- Seeding
 - All seed must meet the requirements of the Maryland State Seed Law. All seed must be subject to re-testing by a recognized seed laboratory. All seed used must have been tested within the 6 months immediately preceding the date of sowing such material on any project. Refer to Table B-4 regarding the quality of seed. Seed tags must be available upon request to the inspector to verify type of seed and seeding rate.
 - Mulch alone may be applied between the fall and spring seeding dates only if the ground is frozen. The appropriate seed mixture must be applied when the ground is frozen. The mulch must be applied in a uniform layer. The mulch must be applied in a uniform layer. The mulch must be applied in a uniform layer.
 - Inoculants: The inoculant for leguminous seeds in the seed mixture must be a pure culture of nitrogen fixing bacteria prepared specifically for the species. Inoculants must not be used later than the date indicated on the container. Add fresh inoculants as directed on the package. Use four times the recommended rate when hydroseeding. Note: It is very important to keep inoculant as cool as possible until used. Inoculants should be stored above 70 to 80 degrees Fahrenheit can weaken bacteria and make the inoculant less effective.
 - Soil or seed must not be placed on soil which has been treated with soil sterilants or chemicals used for weed control until sufficient time has elapsed (14 days min.) to permit dissipation of phytotoxic materials.
- Application
 - Dry Seeding: This includes use of conventional drop or broadcast seeding.
 - Incorporate seed into the soil at the rates prescribed on Temporary Seeding Table B.1, Permanent Seeding Table B.3, or site-specific seeding summaries.
 - Apply seed in two directions, perpendicular to each other. Apply half the seeding rate in each direction.
 - Use of seed in a weighted roller to provide good seed to soil contact.
 - Drill or Cultipacker Seeding: Mechanized seeders that apply and cover seed with soil.
 - Cultipacker seeders are required to bury the seed in such a fashion as to provide at least 1/4 inch of soil covering. Seeded must be firm after planting.
 - Apply seed in two directions, perpendicular to each other. Apply half the seeding rate in each direction.
 - Hydroseeding: Apply seed uniformly with hydroseeder (slurry includes seed and fertilizer).
 - If fertilizer is being applied at the time of seeding, the application rates must not exceed the following: nitrogen, 100 pounds per acre total of soluble nitrogen; P205 (phosphorus), 200 pounds per acre; K2O (potassium), 200 pounds per acre.
 - Lime: Use only ground agricultural limestone (up to 3 tons per acre may be applied by hydroseeding). Normally not more than 2 tons or applied by hydroseeding at any one time. Do not use burnt or hydrated lime when hydroseeding.
 - Mix seed and fertilizer on site and seed immediately and without interruption.
 - If hydroseeding do not incorporate seed into the soil.

B-4-2 STANDARDS AND SPECIFICATIONS FOR SOIL PREPARATION, TOPSOILING, AND SOIL AMENDMENTS

- Soil Preparation
 - Soil preparation consists of loosening soil to a depth of 3 to 5 inches by means of suitable agricultural or construction equipment, such as disc harrows or chisel plows or rippers mounted on construction equipment. After the soil is loosened, it must not be rolled or dragged smooth but left in the roughened condition. Slopes 3:1 or flatter are to be trenched with ridges running parallel to the contour of the slope.
 - Apply fertilizer and lime as prescribed on the plans.
 - Incorporate lime and fertilizer into the top 3 to 5 inches of soil by disking or other suitable means.
- Permanent Stabilization
 - A soil test is required for any earth disturbance of 5 acres or more. The minimum soil conditions required for permanent vegetative establishment are:
 - Soil pH between 6.0 and 7.0.
 - Soil contains less than 40 percent clay but enough fine grained material (greater than 30 percent silt plus clay) to provide the capacity to hold a moderate amount of moisture. An exception: if livegrasses will be planted, then a sandy soil (less than 30 percent silt plus clay) would be acceptable.
 - Soil contains 1.5 percent minimum organic matter by weight.
 - Soil contains sufficient pore space to permit adequate root penetration.
 - Application of amendments or topsoil is required if on-site soils do not meet the above conditions.
 - Graded areas must be maintained in a true and even grade as specified on the approved plan, then scarified or otherwise loosened to a depth of 3 to 5 inches.
 - Apply soil amendments as specified on the approved plan or as indicated by the results of a soil test.
 - Mix soil amendments into the top 3 to 5 inches of soil by disking or other suitable means. Rake lawn areas to smooth the surface, remove large objects like stones and branches, and with prior approval from the appropriate authority, fertilizer must all be delivered to the site fully labeled according to the applicable laws and must bear the name, trade name or trademark and worst of the producer.
 - Lime materials must be ground limestone (hydrated or burnt lime may be substituted except when hydroseeding) which contains at least 50 percent total oxides (calcium oxide plus magnesium oxide). Limestone must be ground to such fineness that at least 50 percent will pass through a #100 mesh sieve and 98 to 100 percent will pass through a #20 mesh sieve.
 - Lime and fertilizer are to be evenly distributed and incorporated into the top 3 to 5 inches of soil by disking or other suitable means.
 - Where the soil is either highly acidic or composed of heavy clays, spread ground limestone at the rate of 4 to 8 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoil.
- Soil Ammendments (Fertilizer and Lime Specifications)
 - Soil tests must be performed to determine the most rates and application rates for both lime and fertilizer on sites having disturbed areas of 5 acres or more. Soil analysis may be performed by a recognized private or commercial laboratory. Soil samples taken for engineering purposes may also be used for chemical analysis.
 - Fertilizers must be uniform in composition, free flowing and suitable for accurate application by appropriate equipment. Manure may be substituted for fertilizer and prior approval from the appropriate authority. Fertilizers must all be delivered to the site fully labeled according to the applicable laws and must bear the name, trade name or trademark and worst of the producer.
 - Lime materials must be ground limestone (hydrated or burnt lime may be substituted except when hydroseeding) which contains at least 50 percent total oxides (calcium oxide plus magnesium oxide). Limestone must be ground to such fineness that at least 50 percent will pass through a #100 mesh sieve and 98 to 100 percent will pass through a #20 mesh sieve.
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- Erosion control matting shall be placed in swales where deemed necessary until vegetation is established or solid sod should be used.
- ON-LOT STORMWATER MANAGEMENT FACILITIES SHALL BE CONSTRUCTED AS A PART OF THE HOUSE CONSTRUCTION AND LOT DEVELOPMENT.

PLAN VIEW
SCALE: 1" = 50'

MAP SYMBOL	SOIL GROUP	SOIL TYPE
BaA*	D	BAILE SILT LOAM, 0 TO 3 PERCENT SLOPES
GbA	B	GLADSTONE LOAM, 0 TO 3 PERCENT SLOPES
GbB	B	GLADSTONE LOAM, 3 TO 8 PERCENT SLOPES
GbC	B	GLADSTONE LOAM, 8 TO 15 PERCENT SLOPES
GmB*	C	GLENVILLE SILT LOAM, 3 TO 8 PERCENT SLOPES
MaD	B	MANOR LOAM, 15 TO 25 PERCENT SLOPES

FROM NATURAL RESOURCES CONSERVATION SERVICES WEB SOIL SURVEY 2.0
* ERODIBLE SOILS

APPROVED: DEPARTMENT OF PLANNING AND ZONING
K. S. [Signature]
CHIEF, DIVISION OF LAND DEVELOPMENT
4/10/13
DATE

4/10/13
DATE

3 SEQUENCE OF CONSTRUCTION
NOTIFY SEDIMENT CONTROL DIVISION 48 HOURS PRIOR TO START OF CONSTRUCTION.
DAY 1 - 1) OBTAIN GRADING PERMIT.
DAY 2-30 2) CONSTRUCT GULVERT CROSSINGS, WITH SEDIMENT CONTROL AS SPECIFIED ON CONSTRUCTION PLANS.
DAY 31-35 3) INSTALL REMAINING SEDIMENT CONTROLS AS SHOWN ON FINAL CONSTRUCTION PLANS.
DAY 36-98 4) GRADE ROADS, DRIVEWAYS AND HOUSE PADS, PAVE ROADS.
DAY 99-110 5) FINAL GRADE AND STABILIZE IN ACCORDANCE WITH PERMANENT SEEDING NOTES.
DAY 111-130 6) WHEN CONTRIBUTING AREAS ARE STABILIZED, CONSTRUCT STORMWATER MANAGEMENT FACILITIES WHICH TREAT ROAD AREAS.
DAY 131-135 7) WITH THE APPROVAL OF THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR, REMOVE SEDIMENT CONTROL DEVICES AND STABILIZE ANY REMAINING DISTURBED AREAS.

NO.	DATE	REVISION

BENCHMARK ENGINEERS, INC.
ENGINEERS • LAND SURVEYORS • PLANNERS
8480 BALTIMORE NATIONAL PIKE SUITE 418 A ELLICOTT CITY, MARYLAND 21043
(P) 410-465-6105 (F) 410-465-6844
60 THOMAS JOHNSON DRIVE A FREDERICK, MARYLAND 21702
(P) 301-371-3505 (F) 301-371-3506
WWW.BEI-CIVILENGINEERING.COM

OWNER: RONALD REGAN, SCOTT REGAN AND KELLY REGAN
12859 ROUTE 108
HIGHLAND, MARYLAND 20777

PROJECT: REGAN PROPERTY
LOTS 1-22 AND PRESERVATION PARCELS "A", "B" & "C"
LOCATION: TAX MAP No. 34, GRID No. 24, PARCEL No. 200
SAN ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE: ENVIRONMENTAL CONCEPT PLAN AND SEDIMENT CONTROL NOTES

DATE: MARCH, 2012
FEBRUARY, 2013
PROJECT NO. 2171

DESIGN: AAM DRAFT: AAM SCALE: AS SHOWN DRAWING 4 OF 4

