

**SOILS TABLE**

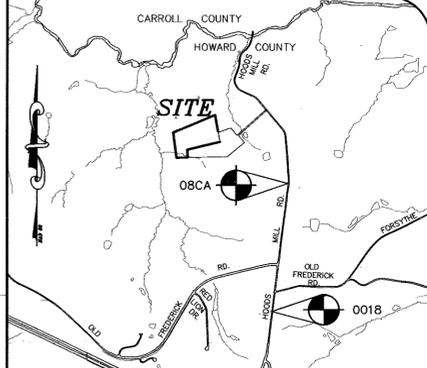
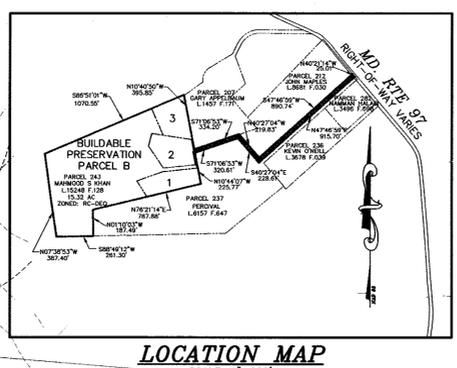
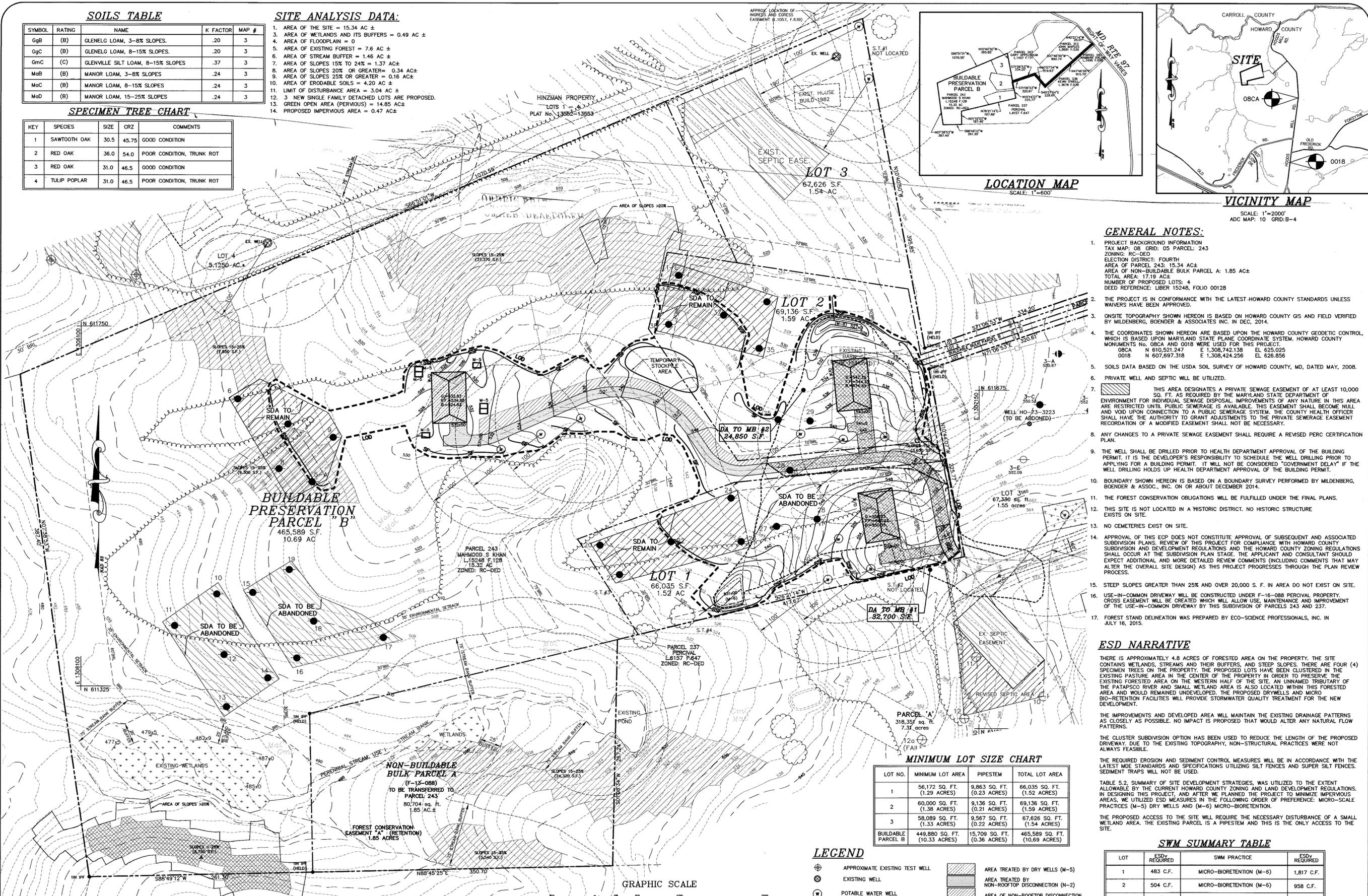
SYMBOL	RATING	NAME	K FACTOR	MAP #
GgB	(B)	GLENELG LOAM, 3-8% SLOPES.	.20	3
GgC	(B)	GLENELG LOAM, 8-15% SLOPES.	.20	3
GmC	(C)	GLENVILLE SILT LOAM, 8-15% SLOPES	.37	3
MoB	(B)	MANOR LOAM, 3-8% SLOPES	.24	3
MoC	(B)	MANOR LOAM, 8-15% SLOPES	.24	3
MoD	(B)	MANOR LOAM, 15-25% SLOPES	.24	3

**SITE ANALYSIS DATA:**

1. AREA OF THE SITE = 15.34 AC ±
2. AREA OF WETLANDS AND ITS BUFFERS = 0.49 AC ±
3. AREA OF FLOODPLAIN = 0
4. AREA OF EXISTING FOREST = 7.6 AC ±
5. AREA OF STREAM BUFFER = 1.46 AC ±
6. AREA OF SLOPES 15% TO 24% = 1.37 AC ±
7. AREA OF SLOPES 20% OR GREATER = 0.34 AC ±
8. AREA OF SLOPES 25% OR GREATER = 0.16 AC ±
9. AREA OF ERODABLE SOILS = 4.20 AC ±
10. LIMIT OF DISTURBANCE AREA = 3.04 AC ±
11. 3 NEW SINGLE FAMILY DETACHED LOTS ARE PROPOSED.
12. GREEN OPEN AREA (PERVIOUS) = 14.85 AC ±
13. PROPOSED IMPERVIOUS AREA = 0.47 AC ±

**SPECIMEN TREE CHART**

KEY	SPECIES	SIZE	CRZ	COMMENTS
1	SAWTOOTH OAK	30.5	45.75	GOOD CONDITION
2	RED OAK	36.0	54.0	POOR CONDITION, TRUNK ROT
3	RED OAK	31.0	46.5	GOOD CONDITION
4	TULIP POPLAR	31.0	46.5	POOR CONDITION, TRUNK ROT



**GENERAL NOTES:**

1. PROJECT BACKGROUND INFORMATION  
TAX MAP: 08 GRID: 05 PARCEL: 243  
ZONING: RC-DEO  
ELECTION DISTRICT: FOURTH  
AREA OF PARCEL 243: 15.34 AC ±  
TOTAL AREA: 17.19 AC ±  
DEED REFERENCE: LIBER 15248, FOLIO 00128
2. THE PROJECT IS IN CONFORMANCE WITH THE LATEST-HOWARD COUNTY STANDARDS UNLESS WAIVERS HAVE BEEN APPROVED.
3. ONSITE TOPOGRAPHY SHOWN HEREON IS BASED ON HOWARD COUNTY GIS AND FIELD VERIFIED BY MILDENBERG, BOENDER & ASSOCIATES INC. IN DEC. 2014.
4. THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL, WHICH IS BASED UPON MARYLAND STATE PLANE COORDINATE SYSTEM. HOWARD COUNTY MONUMENTS NO. 08CA AND 0018 WERE USED FOR THIS PROJECT.  
08CA N 610,521.247' E 1,308,742.136' EL 625.025  
0018 N 607,697.318' E 1,308,424.256' EL 626.856
5. SOILS DATA BASED ON THE USDA SOIL SURVEY OF HOWARD COUNTY, MD, DATED MAY, 2008.
6. PRIVATE WELL AND SEPTIC WILL BE UTILIZED.
7. THIS AREA DESIGNATES A PRIVATE SEWAGE EASEMENT OF AT LEAST 10,000 SQ. FT. AS REQUIRED BY THE MARYLAND STATE DEPARTMENT OF ENVIRONMENT FOR INDIVIDUAL SEWAGE DISPOSAL. IMPROVEMENTS OF ANY NATURE IN THIS AREA ARE RESTRICTED UNTIL PUBLIC SEWERAGE IS AVAILABLE. THIS EASEMENT 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 EASEMENT SHALL NOT BE NECESSARY.
8. ANY CHANGES TO A PRIVATE SEWAGE EASEMENT SHALL REQUIRE A REVISED PERC CERTIFICATION PLAN.
9. THE WELL SHALL BE DRILLED PRIOR TO HEALTH DEPARTMENT APPROVAL OF THE BUILDING PERMIT. IT IS THE DEVELOPER'S RESPONSIBILITY TO SCHEDULE THE WELL DRILLING PRIOR TO APPLYING FOR A BUILDING PERMIT. IT WILL NOT BE CONSIDERED "GOVERNMENT DELAY" IF THE WELL DRILLING HOLDS UP HEALTH DEPARTMENT APPROVAL OF THE BUILDING PERMIT.
10. BOUNDARY SHOWN HEREON IS BASED ON A BOUNDARY SURVEY PERFORMED BY MILDENBERG, BOENDER & ASSOC., INC. ON OR ABOUT DECEMBER 2014.
11. THE FOREST CONSERVATION OBLIGATIONS WILL BE FULFILLED UNDER THE FINAL PLANS.
12. THIS SITE IS NOT LOCATED IN A HISTORIC DISTRICT. NO HISTORIC STRUCTURE EXISTS ON SITE.
13. NO CEMETERIES EXIST ON SITE.
14. APPROVAL OF THIS ECP DOES NOT CONSTITUTE APPROVAL OF SUBSEQUENT AND ASSOCIATED SUBDIVISION PLANS. REVIEW OF THIS PROJECT FOR COMPLIANCE WITH HOWARD COUNTY SUBDIVISION AND DEVELOPMENT REGULATIONS AND THE HOWARD COUNTY ZONING REGULATIONS SHALL OCCUR AT THE SUBDIVISION PLAN STAGE. 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.
15. STEEP SLOPES GREATER THAN 25% AND OVER 20,000 S. F. IN AREA DO NOT EXIST ON SITE.
16. USE-IN-COMMON DRIVEWAY WILL BE CONSTRUCTED UNDER F-16-088 PERCVIAL PROPERTY. CROSS EASEMENT WILL BE CREATED WHICH WILL ALLOW USE, MAINTENANCE AND IMPROVEMENT OF THE USE-IN-COMMON DRIVEWAY BY THIS SUBDIVISION OF PARCELS 243 AND 237.
17. FOREST STAND DELINEATION WAS PREPARED BY ECO-SCIENCE PROFESSIONALS, INC. IN JULY 16, 2015.

**ESD NARRATIVE**

THERE IS APPROXIMATELY 4.8 ACRES OF FORESTED AREA ON THE PROPERTY. THE SITE CONTAINS WETLANDS, STREAMS AND THEIR BUFFERS, AND STEEP SLOPES. THERE ARE FOUR (4) SPECIMEN TREES ON THE PROPERTY. THE PROPOSED LOTS HAVE BEEN CLUSTERED IN THE EXISTING PASTURE AREA IN THE CENTER OF THE PROPERTY IN ORDER TO PRESERVE THE EXISTING FORESTED AREA ON THE WESTERN HALF OF THE SITE, AN UNNAMED TRIBUTARY OF THE PATAPSCO RIVER AND SMALL WETLAND AREA IS ALSO LOCATED WITHIN THIS FORESTED AREA AND WOULD REMAINED UNDEVELOPED. THE PROPOSED DRYWELLS AND MICRO BIO-RETENTION FACILITIES WILL PROVIDE STORMWATER QUALITY TREATMENT FOR THE NEW DEVELOPMENT.

THE IMPROVEMENTS AND DEVELOPED AREA WILL MAINTAIN THE EXISTING DRAINAGE PATTERNS AS CLOSELY AS POSSIBLE. NO IMPACT IS PROPOSED THAT WOULD ALTER ANY NATURAL FLOW PATTERNS.

THE CLUSTER SUBDIVISION OPTION HAS BEEN USED TO REDUCE THE LENGTH OF THE PROPOSED DRIVEWAY. DUE TO THE EXISTING TOPOGRAPHY, NON-STRUCTURAL PRACTICES WERE NOT ALWAYS FEASIBLE.

THE REQUIRED EROSION AND SEDIMENT CONTROL MEASURES WILL BE IN ACCORDANCE WITH THE LATEST MDE STANDARDS AND SPECIFICATIONS UTILIZING SILT FENCES AND SUPER SILT FENCES. SEDIMENT TRAPS WILL NOT BE USED.

TABLE 5.2, SUMMARY OF SITE DEVELOPMENT STRATEGIES, WAS UTILIZED TO THE EXTENT ALLOWABLE BY THE CURRENT HOWARD COUNTY ZONING AND LAND DEVELOPMENT REGULATIONS. IN DESIGNING THIS PROJECT, AND AFTER WE PLANNED THE PROJECT TO MINIMIZE IMPERVIOUS AREAS, WE UTILIZED ESD MEASURES IN THE FOLLOWING ORDER OF PREFERENCE: MICRO-SCALE PRACTICES (M-5) DRY WELLS AND (M-6) MICRO-BIORETENTION.

THE PROPOSED ACCESS TO THE SITE WILL REQUIRE THE NECESSARY DISTURBANCE OF A SMALL WETLAND AREA. THE EXISTING PARCEL IS A PIPESTEM AND THIS IS THE ONLY ACCESS TO THE SITE.

**MINIMUM LOT SIZE CHART**

LOT NO.	MINIMUM LOT AREA	PIPESTEM	TOTAL LOT AREA
1	56,172 SQ. FT. (1.29 ACRES)	9,863 SQ. FT. (0.23 ACRES)	66,035 SQ. FT. (1.52 ACRES)
2	60,000 SQ. FT. (1.38 ACRES)	9,136 SQ. FT. (0.21 ACRES)	69,136 SQ. FT. (1.59 ACRES)
3	58,089 SQ. FT. (1.33 ACRES)	9,567 SQ. FT. (0.22 ACRES)	67,626 SQ. FT. (1.54 ACRES)
BUILDABLE PARCEL B	449,880 SQ. FT. (10.33 ACRES)	15,709 SQ. FT. (0.36 ACRES)	465,589 SQ. FT. (10.69 ACRES)

**LEGEND**

- ⊕ APPROXIMATE EXISTING TEST WELL
- ⊙ EXISTING WELL
- ⊕ POTABLE WATER WELL
- ⊕ POTABLE WATER WELL ZONES
- ▨ SLOPES 15%-24.9%
- ▨ SLOPES 25% OR GREATER
- ▨ WETLANDS
- ⊙ SPECIMEN TREE
- ▨ AREA TREATED BY DRY WELLS (M-5)
- ▨ AREA TREATED BY NON-ROOFTOP DISCONNECTION (N-2)
- ▨ AREA OF NON-ROOFTOP DISCONNECTION
- ▨ AREA TREATED BY MICRO-BIO. (M-6)
- ⊕ DRYWELL
- ▨ STABILIZED CONSTRUCTION ENTRANCE
- ▨ PROPOSED SILT FENCE
- ▨ PROPOSED SUPER SILT FENCE
- ⊕ LIMITS OF DISTURBANCE

**SWM SUMMARY TABLE**

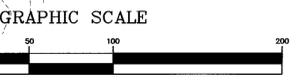
LOT	ESD REQUIRED	SWM PRACTICE	ESD REQUIRED
1	483 C.F.	MICRO-BIORETENTION (M-6)	1,817 C.F.
2	504 C.F.	MICRO-BIORETENTION (M-6)	958 C.F.
3	N/A	N/A	N/A
NON-BUILD. PRESERVATION PARCEL A	625 C.F.	NON-ROOFTOP DISCONNECTIONS (N-2) MOD. DRY WELLS (M-5)	660 C.F.
TOTAL	1,621 C.F.		3,435 C.F.

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
 [Signature] 7/27/16  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

[Signature] 7/21/16  
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

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. 17942, EXPIRATION DATE: 09/03/2016  
 [Signature] 7/19/16  
 R. JACOB HRMAT, PE DATE

**OWNER/DEVELOPER**  
 MAHMOOD S. KHAN  
 C/O MILDENBERG, BOENDER & ASSOC., INC.  
 7350-B GRACE DRIVE  
 COLUMBIA, MARYLAND 21044  
 410-997-0296



Project	date	approval
15-006	JULY 2016	MMK
illustration	scale	1"=60'
MMK	revisors	

no.	description	date

**KHAN PROPERTY LOTS 1 THRU 3**  
 828 HOODS MILL ROAD, COOKSVILLE, MD 21723  
 TAX MAP 08, GRID 05, PARCEL 243, ZONED: RC-DEO  
 FOURTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
 ENVIRONMENTAL CONCEPT PLAN (ECP)

**MILDENBERG, BOENDER & ASSOC., INC.**  
 Engineers Planners Surveyors  
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 (410) 997-0296 Tel. (410) 997-0296 Fax.