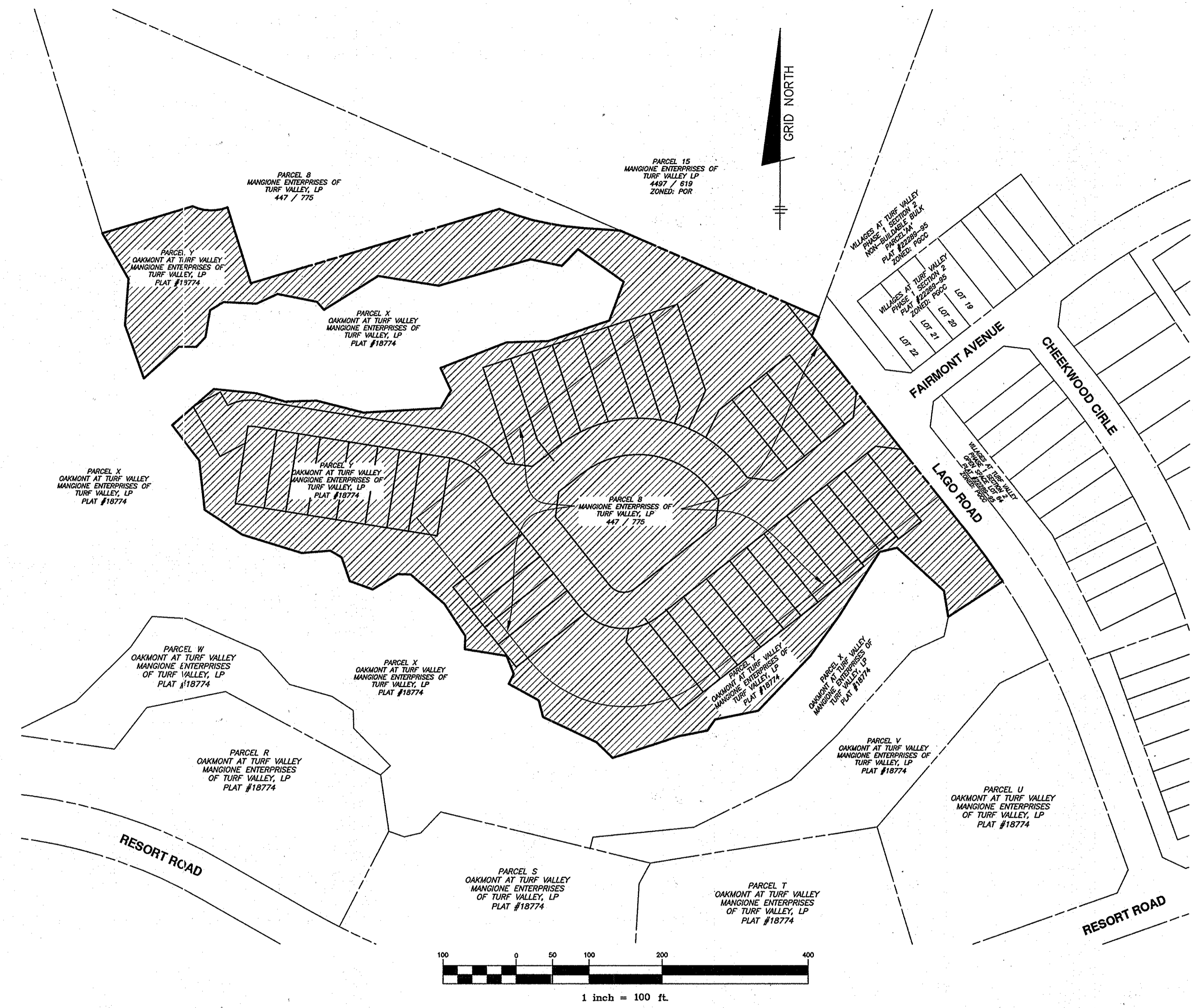


GENERAL NOTES

- SUBJECT PROPERTY ZONED PGCC PER THE OCTOBER 6, 2013 COMPREHENSIVE ZONING PLAN.
- THIS PROJECT IS SUBJECT TO THE THIRD AMENDED TURF VALLEY MULTI-USE SUBDISTRICT FINAL DEVELOPMENT PLAN RECORDED AS PLAT NUMBERS 21029-21031 ON MARCH 26, 2010.
- PROJECT BOUNDARY IS BASED ON BOUNDARY SURVEY BY JOHN B. MILDENBERG IN MARCH, 2006. TOPOGRAPHY IS BASED ON AERIAL TOPOGRAPHIC SURVEY PERFORMED BY WINGS AERIAL MAPPING CO., INC. FLOWN ON OR ABOUT JANUARY, 2006.
- NO GRADING, REMOVAL OF VEGETATIVE COVER OR TREES, PAVING AND NEW STRUCTURES SHALL BE PERMITTED WITHIN THE WETLANDS, STREAMS, THEIR REQUIRED BUFFERS, 100-YR FLOODPLAIN OR 25% OR GREATER STEEP SLOPES WITH MORE THAN 20,000 SF OF CONTIGUOUS AREA EXCEPT THE DISTURBANCES THAT ARE ASSOCIATED WITH THE SEWER CROSSING WHICH WAS DEEMED "NECESSARY" BY THE DEPARTMENT OF PLANNING AND ZONING UNDER THIS ECP.
- TO THE BEST OF OUR KNOWLEDGE, THERE ARE NO CEMETERIES LOCATED ON THIS SITE.
- THIS PROJECT IS EXEMPT FROM HOWARD COUNTY FOREST CONSERVATION REQUIREMENTS UNDER SECTION 16.1202(b)(1)(iv) OF THE COUNTY CODE SINCE IT IS A PLANNED UNIT DEVELOPMENT WHICH HAD PRELIMINARY DEVELOPMENT PLAN APPROVAL AND 50% OR MORE OF THE LAND WAS RECORDED AND SUBSTANTIALLY DEVELOPED BEFORE DECEMBER 31, 1992.
- 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: F-02-082.
- THE SEDIMENT AND EROSION CONTROL SHOWN ON SHEETS 3 IS A SCHEMATIC PRELIMINARY DESIGN. A MORE DETAILED DESIGN COMPLETE WITH SEQUENCE OF CONSTRUCTION, NOTES AND DETAILS SHALL BE PROVIDED AT THE NEXT PLAN STAGE.
- THIS SUBDIVISION IS SUBJECT TO THE PROVISIONS OF SECTION 16.129 OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS.



BENCHMARK
NAD'83 HORIZONTAL
 HO. CO. #16E1 (AKA: 3438001)
 STAMPED BRASS DISK SET ON TOP OF
 A 3/4" DEEP COLUMN OF CONCRETE.
 N 593250.960' E 1340192.70'
 ELEVATION: 463.981'

HO. CO. #0012 (AKA: 3438001)
 STAMPED BRASS DISK SET ON TOP OF
 A 3/4" DEEP COLUMN OF CONCRETE.
 N 596502.780' E 1340864.37'
 ELEVATION: 486.298'

VICINITY MAP
 SCALE: 1" = 2000'

DESIGN NARRATIVE:

For the proposed impervious areas of the subdivision (M-6) Micro-Bioretenion, (F-6) Bioretention and (N-3) Sheet flow to Conservation Area has been proposed for treatment.

Natural resource protection is being achieved as no environmental areas or buffers are being disturbed by this proposed design.

Natural flow patterns have been preserved by placing the ESD practices around the outer perimeter of the site and having them discharge along this perimeter in various locations as opposed to one concentrated area. This shall mimic the existing condition of flow.

Reduction of impervious areas has been achieved by utilizing the narrowest possible roadway, sidewalk and driveway widths as allowed by Howard County design regulations.

Sediment and erosion control shall mainly consist of double row of super silt fence around the perimeter. Clean water diversion dikes shall be utilized to divert runoff around the northeastern portion of the site. Temporary Sediment Traps may be required and if so will be placed in areas of the proposed MB practices.

The small impact for the proposed sewer crossing is needed in order to service the proposed lots. This disturbance is "offsite" on Parcel "X" which is owned by the same entity as the project site. The disturbance for this sewer has been deemed "necessary" by the Department of Planning and Zoning. Jack and Bore shall be utilized to minimize any disturbance.

As a result of utilizing environmental site design (ESD) to the maximum extent practical (MEP), SWM has been adequately addressed without the need for structural practices.

Gross Area	10.49 ac
100yr Floodplain	0.00 ac
Steep Slopes 15% or greater	0.27 ac
Wetlands	0.00 ac
Wetlands Buffer	0.00 ac
Stream	0.00 ac
Stream Buffer	0.00 ac
Forested Area	2.89 ac
Erodable Soils	0.00 ac
Limit of Disturbance	8.94 ac
Impervious Area	3.28 ac
Green Space	5.66 ac

Practice	#	DA to practice	Imp Area to practice	ESD ₁ = 21302 cf			ESD ₂ = 21396 cf			Rev	Ownership
				Required	Provided	2% DA?	Required	Provided	Pe Provided		
(M-6) MicroBioretention	#1	16,431	9,110	329	992	PASS	1203	1611	1.6	Private	
(M-6) MicroBioretention	#2	14,890	9,944	298	1217	PASS	1293	1912	1.6	Private	
(M-6) MicroBioretention	#3	19,267	12,391	385	1084	PASS	1615	1754	1.6	Private	
(F-6) Bioretention	#1	26,094	16,600	522	1316	PASS	2166	2333	1.6	Private	
(F-6) Bioretention	#2	26,574	13,821	531	1300	PASS	1836	2042	1.6	Private	
(F-6) Bioretention	#3	30,338	16,033	607	1500	PASS	2126	2379	1.6	Private	
(F-6) Bioretention	#4	32,742	23,003	655	2000	PASS	2979	2956	1.6	Private	
(F-6) Bioretention	#5	61,126	21,271	1223	2420	PASS	2960	3631	1.6	Private	
(F-6) Bioretention	#6	29,324	16,725	586	1619	PASS	2202	2481	1.6	Private	
(N-3) SheetFlow To Cons Area	Lots 21-24	3,840	3,840					288	1.0	Private	
Total Treated		260,626	142,738	5,136	13,448		21,302	21,396	1.6	2614	
Site Total		389,667	142,738							3231	

NO.	TITLE
1	TITLE SHEET
2	ENVIRONMENTAL CONCEPT PLAN
3	SEDIMENT & EROSION CONTROL PLAN

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

[Signature] 4-23-14
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

[Signature] 4-23-14
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

BENCHMARK
 ENGINEERS & LAND SURVEYORS & PLANNERS
ENGINEERING, INC.
 8480 BALTIMORE NATIONAL PIKE & SUITE 315A ELLSWORTH CITY, MARYLAND 21043
 (P) 410-465-8105 (F) 410-465-8844
 WWW.BE-CMENGINEERING.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. 17-14, Registration Date: 6-30-15

OWNER: MANGIONE ENTERPRISES OF TURF VALLEY LIMITED PARTNERSHIP 1205 YORK ROAD, PENTHOUSE LUTHERVILLE, MARYLAND 21093 410-825-8400

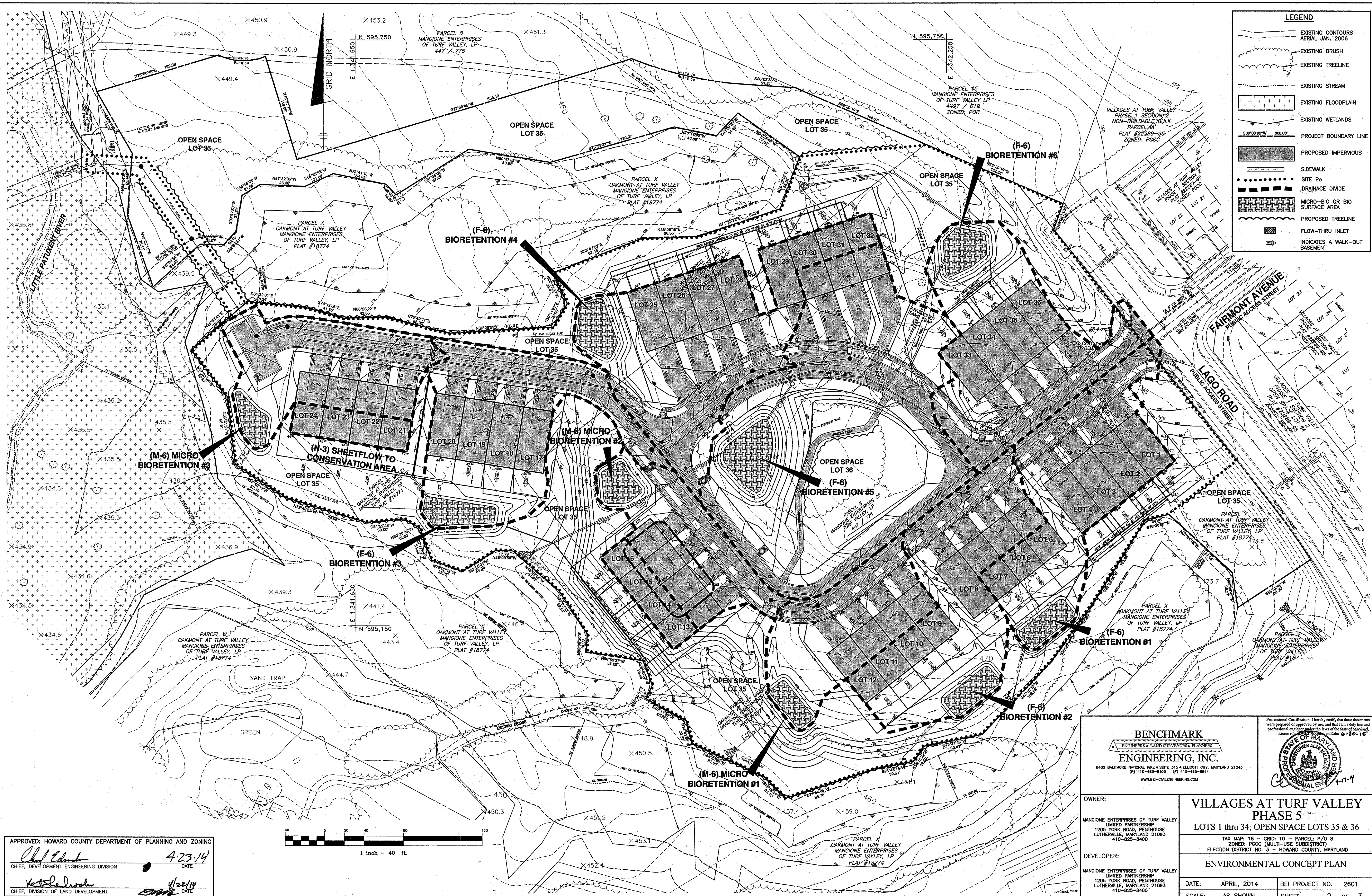
DEVELOPER: MANGIONE ENTERPRISES OF TURF VALLEY LIMITED PARTNERSHIP 1205 YORK ROAD, PENTHOUSE LUTHERVILLE, MARYLAND 21093 410-825-8400

VILLAGES AT TURF VALLEY PHASE 5
 LOTS 1 thru 34; OPEN SPACE LOTS 35 & 36

TAX MAP: 16 - GRID: 10 - PARCEL: P/O 8
 ZONED: PGCC (MULTI-USE SUBDISTRICT)
 ELECTION DISTRICT NO. 3 - HOWARD COUNTY, MARYLAND

ENVIRONMENTAL CONCEPT PLAN TITLE SHEET

DATE: APRIL, 2014 BEI PROJECT NO. 2601
 SCALE: AS SHOWN SHEET 1 OF 3



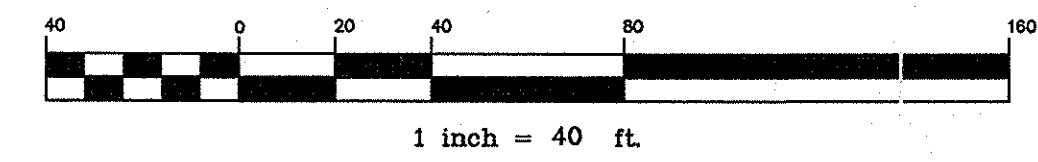
LEGEND

- EXISTING CONTOURS AERIAL JAN. 2006
- EXISTING BRUSH
- EXISTING TREELINE
- EXISTING STREAM
- EXISTING FLOODPLAIN
- EXISTING WETLANDS
- PROJECT BOUNDARY LINE
- PROPOSED IMPERVIOUS
- SIDEWALK
- SITE Pe
- DRAINAGE DIVIDE
- MICRO-BIO OR BIO SURFACE AREA
- PROPOSED TREELINE
- FLOW-THRU INLET
- INDICATES A WALK-OUT BASEMENT

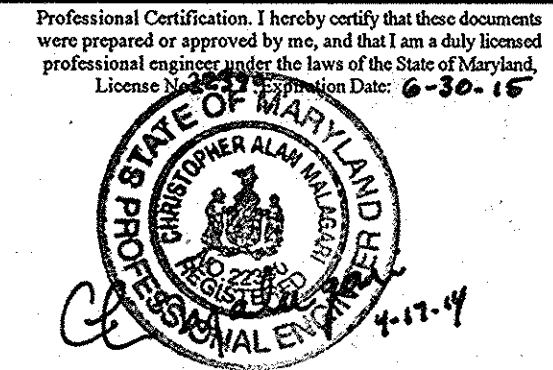
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chad Edmister 4-23-14
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Kristen L. Lusk 4/22/14
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE



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 8480 BALTIMORE NATIONAL PIKE & SUITE 315 • BILLOTT CITY, MARYLAND 21043
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 LIMITED PARTNERSHIP
 1205 YORK ROAD, PENTHOUSE
 LUTHERVILLE, MARYLAND 21093
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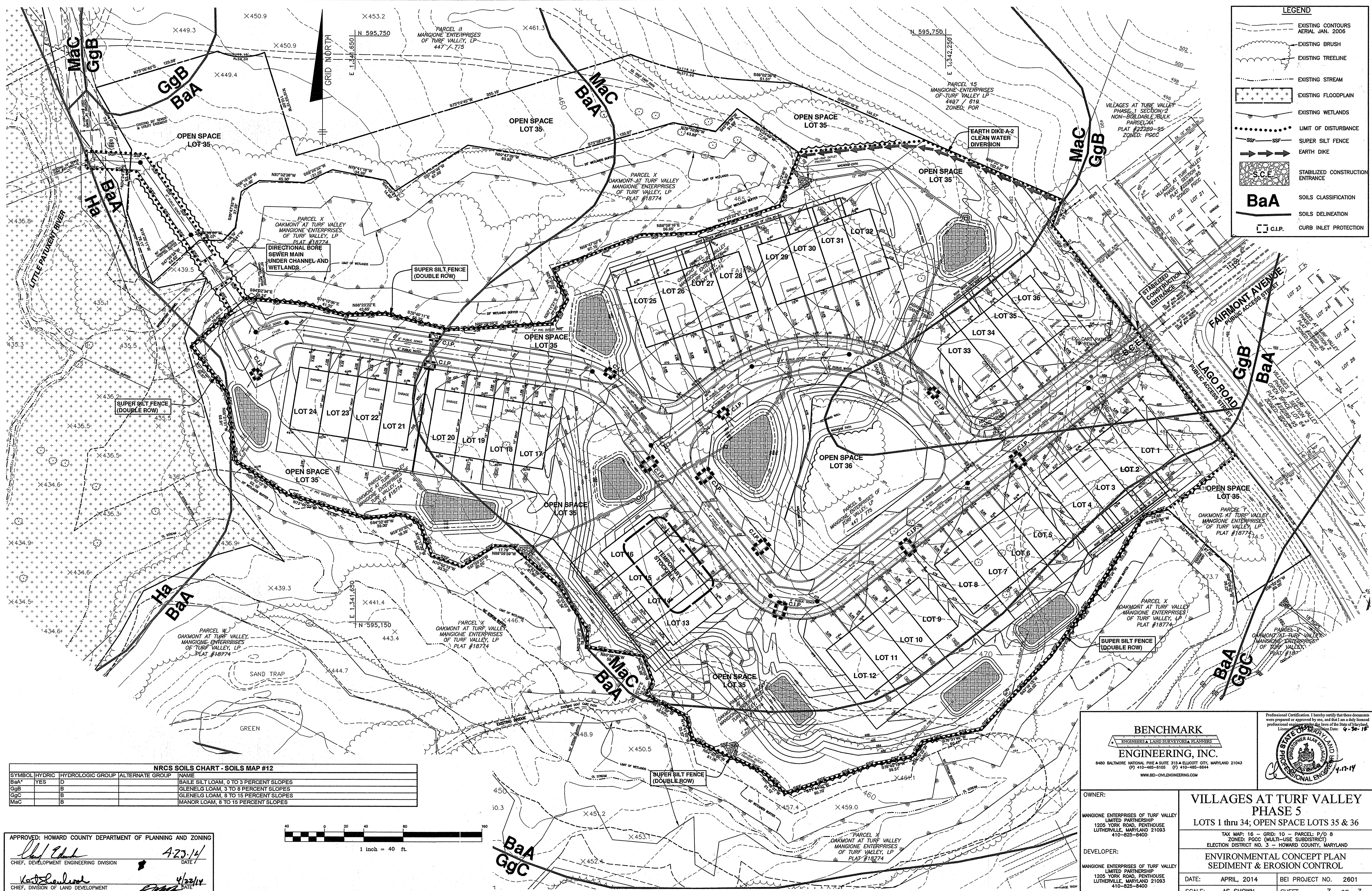
DEVELOPER:
 MANGIONE ENTERPRISES OF TURF VALLEY
 LIMITED PARTNERSHIP
 1205 YORK ROAD, PENTHOUSE
 LUTHERVILLE, MARYLAND 21093
 410-825-8400

**VILLAGES AT TURF VALLEY
 PHASE 5**
 LOTS 1 thru 34; OPEN SPACE LOTS 35 & 36

TAX MAP: 16 - GRID: 10 - PARCEL: P/O 8
 ZONED: PGCC (MULTI-USE SUBDISTRICT)
 ELECTION DISTRICT NO. 3 - HOWARD COUNTY, MARYLAND

ENVIRONMENTAL CONCEPT PLAN

DATE: APRIL, 2014 BEI PROJECT NO. 2601
 SCALE: AS SHOWN SHEET 2 OF 3



LEGEND

- EXISTING CONTOURS AERIAL JAN. 2006
- EXISTING BRUSH
- EXISTING TREELINE
- EXISTING STREAM
- EXISTING FLOODPLAIN
- EXISTING WETLANDS
- LIMIT OF DISTURBANCE
- SSF SUPER SILT FENCE
- SSF EARTH DIKE
- S.C.E. STABILIZED CONSTRUCTION ENTRANCE
- BaA SOILS CLASSIFICATION
- SOILS DELINEATION
- C.I.P. CURB INLET PROTECTION

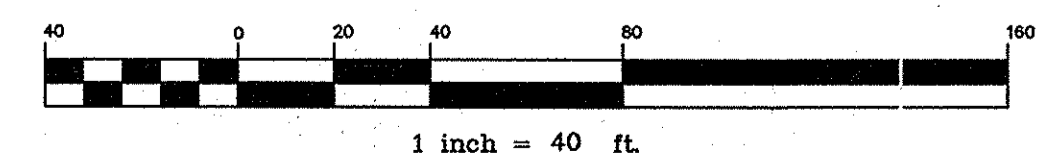
NRCS SOILS CHART - SOILS MAP #12

SYMBOL	HYDRIC	HYDROLOGIC GROUP	ALTERNATE GROUP	NAME
BaA	YES	D		BAILE SILT LOAM, 0 TO 3 PERCENT SLOPES
GgB		B		GLENELG LOAM, 3 TO 8 PERCENT SLOPES
GgC		B		GLENELG LOAM, 8 TO 15 PERCENT SLOPES
MaC		B		MANOR LOAM, 8 TO 15 PERCENT SLOPES

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

[Signature] 4/23/14
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

[Signature] 4/23/14
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE



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 WWW.BE-CMENGINEERING.COM

Professional Certification: I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer in the State of Maryland.
 License No. 17373 Expires Date: 6-30-18

OWNER: MANGIONE ENTERPRISES OF TURF VALLEY LIMITED PARTNERSHIP
 1205 YORK ROAD, PENTHOUSE LUTHERVILLE, MARYLAND 21093 410-525-8400

DEVELOPER: MANGIONE ENTERPRISES OF TURF VALLEY LIMITED PARTNERSHIP
 1205 YORK ROAD, PENTHOUSE LUTHERVILLE, MARYLAND 21093 410-525-8400

VILLAGES AT TURF VALLEY PHASE 5
 LOTS 1 thru 34; OPEN SPACE LOTS 35 & 36

TAX MAP: 16 - GRID: 10 - PARCEL: P/O 8
 ZONED: PGCC (MULTI-USE SUBDISTRICT)
 ELECTION DISTRICT NO. 3 - HOWARD COUNTY, MARYLAND

**ENVIRONMENTAL CONCEPT PLAN
 SEDIMENT & EROSION CONTROL**

DATE: APRIL, 2014 BEI PROJECT NO. 2601
 SCALE: AS SHOWN SHEET 3 OF 3