

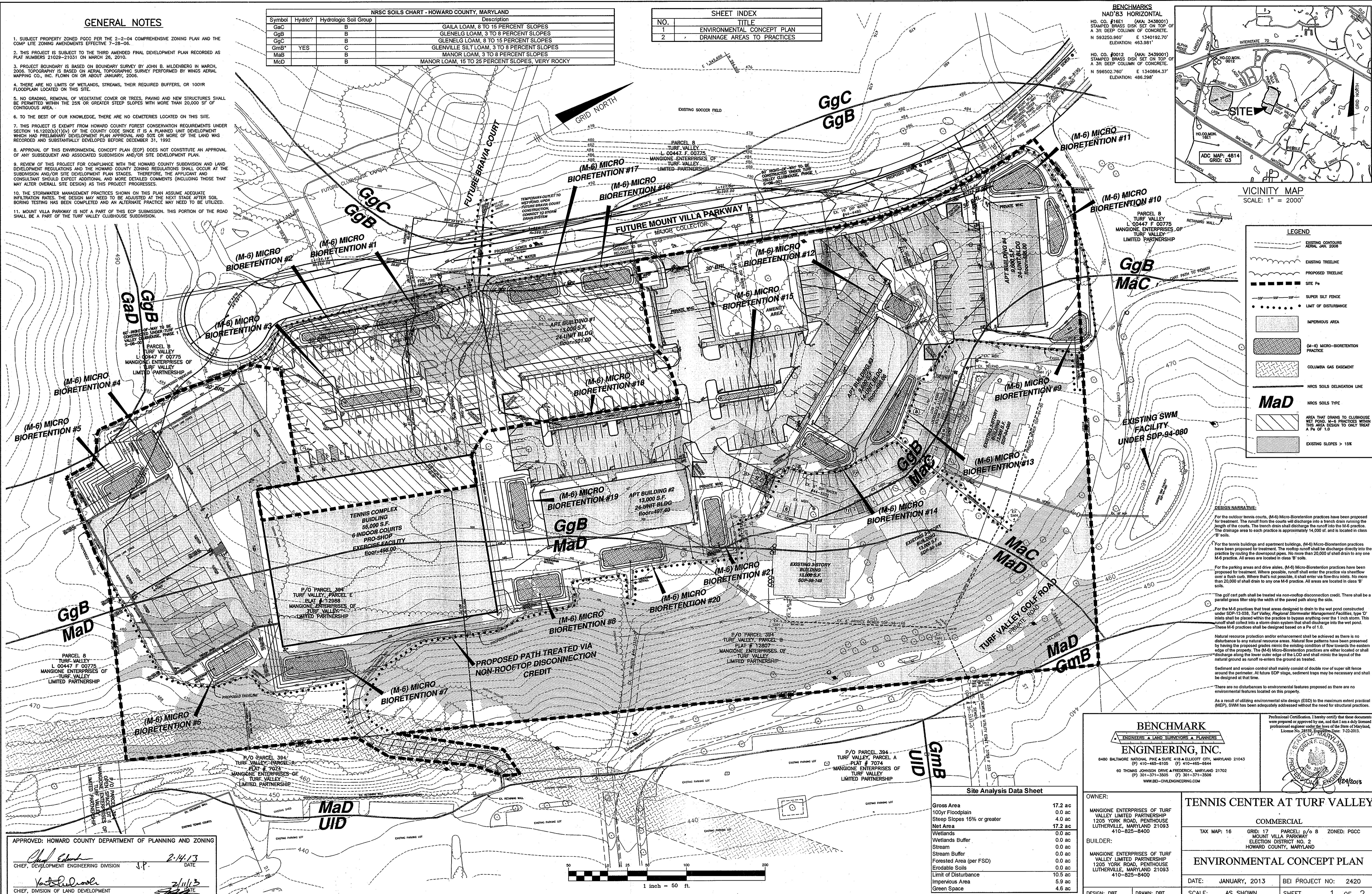
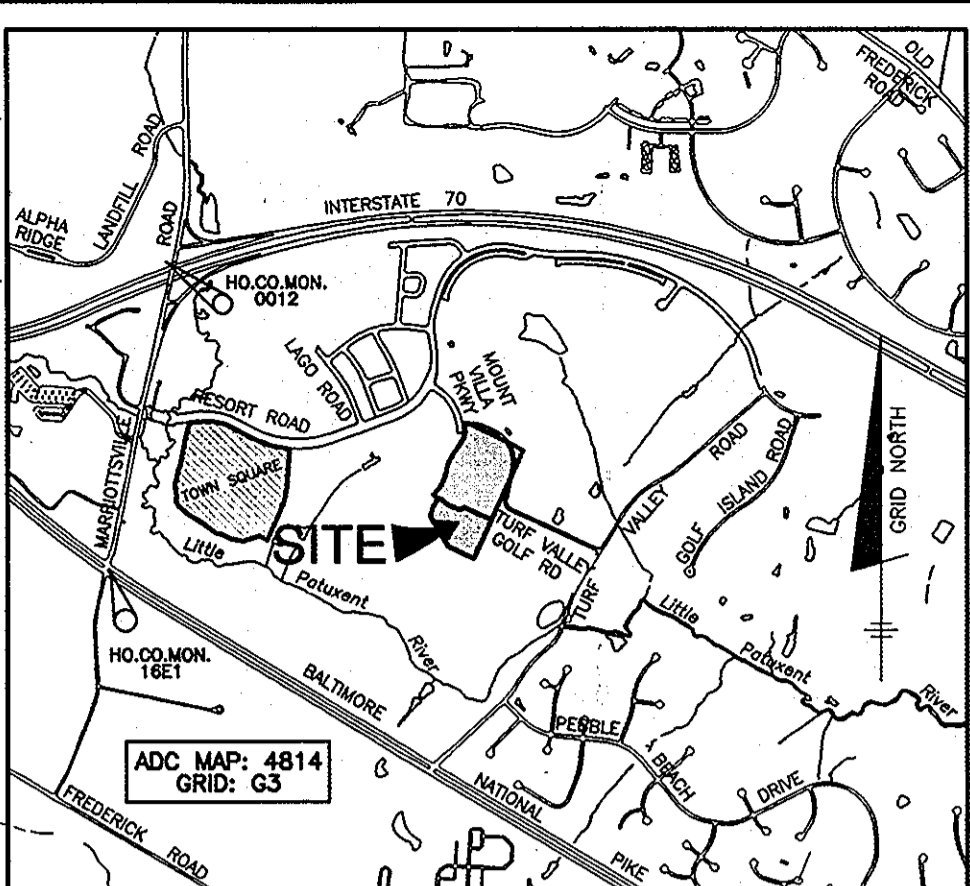
GENERAL NOTES

- SUBJECT PROPERTY ZONED PGCC PER THE 2-2-04 COMPREHENSIVE ZONING PLAN AND THE COMP LITE ZONING AMENDMENTS EFFECTIVE 7-28-06.
- THIS PROJECT IS SUBJECT TO THE THIRD AMENDED FINAL DEVELOPMENT PLAN RECORDED AS PLAT NUMBERS 21029-21031 ON MARCH 26, 2010.
- PROJECT BOUNDARY IS BASED ON BOUNDARY SURVEY BY JOHN B. MILDBERG IN MARCH, 2006. TOPOGRAPHY IS BASED ON AERIAL TOPOGRAPHIC SURVEY PERFORMED BY WINGS AERIAL MAPPING CO., INC. FLOWN ON OR ABOUT JANUARY, 2006.
- THERE ARE NO LIMITS OF WETLANDS, STREAMS, THEIR REQUIRED BUFFERS, OR 100YR FLOODPLAIN LOCATED ON THIS SITE.
- NO GRADING, REMOVAL OF VEGETATIVE COVER OR TREES, PAVING AND NEW STRUCTURES SHALL BE PERMITTED WITHIN THE 25% OR GREATER STEEP SLOPES WITH MORE THAN 20,000 SF OF CONTIGUOUS AREA.
- 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 INFILTRATION RATES. 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.
- MOUNT VILLA PARKWAY IS NOT A PART OF THIS ECP SUBMISSION. THIS PORTION OF THE ROAD SHALL BE A PART OF THE TURF VALLEY CLUBHOUSE SUBDIVISION.

NRSC SOILS CHART - HOWARD COUNTY, MARYLAND			
Symbol	Hydric?	Hydrologic Soil Group	Description
GgC		B	GAILA LOAM, 8 TO 15 PERCENT SLOPES
GgB		B	GLENELG LOAM, 3 TO 8 PERCENT SLOPES
GgC		B	GLENELG LOAM, 8 TO 15 PERCENT SLOPES
GmB*	YES	C	GLENVILLE SILT LOAM, 3 TO 8 PERCENT SLOPES
MaB		B	MANOR LOAM, 3 TO 8 PERCENT SLOPES
McD		B	MANOR LOAM, 15 TO 25 PERCENT SLOPES, VERY ROCKY

SHEET INDEX	
NO.	TITLE
1	ENVIRONMENTAL CONCEPT PLAN
2	DRAINAGE AREAS TO PRACTICES

BENCHMARKS
NAD'83 HORIZONTAL
 HO. CO. #16E1 (AKA: 3438001)
 STAMPED BRASS DISK SET ON TOP OF A 3" DEEP COLUMN OF CONCRETE.
 N 593250.960' E 1340192.70'
 ELEVATION: 463.981'
 HO. CO. #0012 (AKA: 3439001)
 STAMPED BRASS DISK SET ON TOP OF A 3" DEEP COLUMN OF CONCRETE.
 N 596502.740' E 1340864.37'
 ELEVATION: 468.298'



LEGEND

- EXISTING CONTOURS AERIAL JAN. 2006
- EXISTING TREELINE
- PROPOSED TREELINE
- SITE P_e
- SUPER SILT FENCE
- LIMIT OF DISTURBANCE
- IMPERVIOUS AREA
- (M-6) MICRO-BIORETENEMENT PRACTICE
- COLUMBIA GAS EMBANKMENT
- NRSC SOILS DELINEATION LINE
- MaD** NRSC SOILS TYPE
- AREA THAT DRAINS TO CLUBHOUSE WET POND. M-6 PRACTICES WITHIN THIS AREA DESIGN TO ONLY TREAT A P_e OF 1.0
- EXISTING SLOPES > 15%

DESIGN NARRATIVE:

For the outdoor tennis courts, (M-6) Micro-Bioretenement practices have been proposed for treatment. The runoff from the courts will discharge into a trench drain running the length of the courts. The trench drain shall discharge the runoff into the M-6 practice. The drainage area to each practice is approximately 14,000 sf, and is located in class 'B' soils.

For the tennis buildings and apartment buildings, (M-6) Micro-Bioretenement practices have been proposed for treatment. The rooftop runoff shall be discharged directly into the practice by routing the downspout pipes. No more than 20,000 sf of shall drain to any one M-6 practice. All areas are located in class 'B' soils.

For the parking areas and drive aisles, (M-6) Micro-Bioretenement practices have been proposed for treatment. Where possible, runoff shall enter the practice via sheetflow over a curb cut. Where that's not possible, it shall enter via flow-through inlets. No more than 20,000 sf of shall drain to any one M-6 practice. All areas are located in class 'B' soils.

The golf cart path shall be treated via non-rooftop disconnection credit. There shall be a parallel grass filter strip the width of the paved path along the side.

For the M-6 practices that treat areas designed to drain to the wet pond constructed under SDP-13-038, Turf Valley, Regional Stormwater Management Facilities, type 'D' inlets shall be placed within the practice to bypass anything over the 1 inch storm. This runoff shall collect into a storm drain system that shall discharge into the wet pond. These M-6 practices shall be designed based on a P_e of 1.0.

Natural resource protection and/or enhancement shall be achieved as there is no disturbance to any natural resource areas. Natural flow patterns have been preserved by having the proposed grades mimic the existing condition of flow towards the eastern side of the property. The (M-6) Micro-Bioretenement practices are either located on or adjacent to the lower outer edge of the LOD and shall mimic the layout of the natural ground as runoff re-enters the ground as treated.

Sediment and erosion control shall mainly consist of double row of super silt fence around the perimeter. At future SDP stage, sediment traps may be necessary and shall be designed at that time.

There are no disturbances to environmental features proposed as there are no environmental features located on this property.

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.

Site Analysis Data Sheet

Gross Area	17.2 ac
100yr Floodplain	0.0 ac
Steep Slopes 15% or greater	4.0 ac
Net Area	17.2 ac
Wetlands	0.0 ac
Wetlands Buffer	0.0 ac
Stream	0.0 ac
Stream Buffer	0.0 ac
Forested Area (per FSD)	0.0 ac
Erodible Soils	0.0 ac
Limit of Disturbance	10.5 ac
Impervious Area	5.9 ac
Green Space	4.6 ac

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 6480 BALTIMORE NATIONAL PIKE & SUITE 418 & ELLICOTT CITY, MARYLAND 21043
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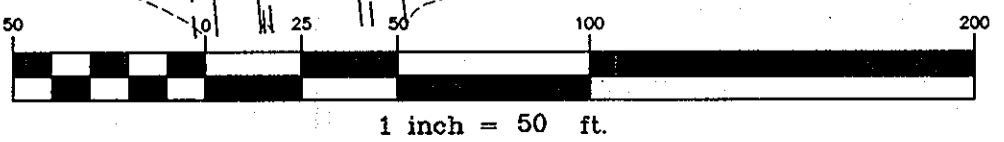
TENNIS CENTER AT TURF VALLEY
 COMMERCIAL
 TAX MAP: 16 GRID: 17 PARCEL: P/G 8 ZONED: PGCC
 1205 YORK ROAD, PENTHOUSE ELECTION DISTRICT NO. 2 HOWARD COUNTY, MARYLAND

ENVIRONMENTAL CONCEPT PLAN
 DATE: JANUARY, 2013 BEI PROJECT NO: 2420
 SCALE: AS SHOWN SHEET 1 OF 2

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chad Edwards 2/14/13
 CHIEF, DEVELOPMENT ENGINEERING DIVISION J.P. DATE

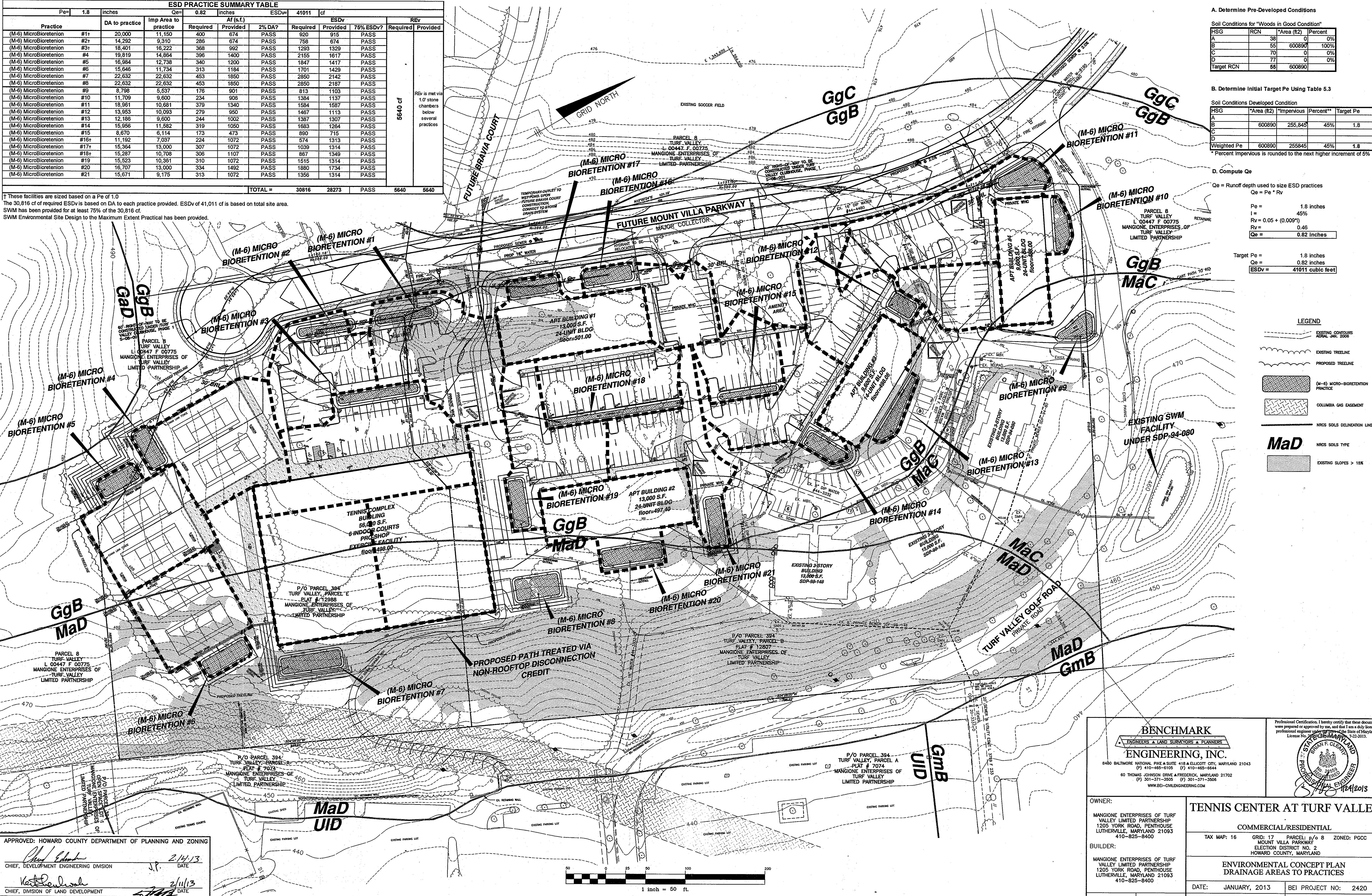
Kate Dulovich 2/14/13
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE



ESD PRACTICE SUMMARY TABLE

Practice	#	DA to practice	Imp Area to practice	Required	Provided	2% DA?	Required	Provided	75% ESDv?	Required	Provided	REV
(M-6) MicroBioretention	#1†	20,000	11,150	400	674	PASS	920	915	PASS	5640	5640	
(M-6) MicroBioretention	#2†	14,292	9,310	286	674	PASS	758	674	PASS			
(M-6) MicroBioretention	#3†	18,401	16,222	368	992	PASS	1293	1329	PASS			
(M-6) MicroBioretention	#4	19,819	14,864	396	1400	PASS	2155	1617	PASS			
(M-6) MicroBioretention	#5	16,984	12,738	340	1200	PASS	1847	1417	PASS			
(M-6) MicroBioretention	#6	15,646	11,734	313	1184	PASS	1701	1429	PASS			
(M-6) MicroBioretention	#7	22,632	22,632	453	1850	PASS	2850	2142	PASS			
(M-6) MicroBioretention	#8	22,632	22,632	453	1850	PASS	2850	2187	PASS			
(M-6) MicroBioretention	#9	8,798	5,537	176	901	PASS	813	1103	PASS			
(M-6) MicroBioretention	#10	11,709	9,600	234	906	PASS	1384	1137	PASS			
(M-6) MicroBioretention	#11	18,961	10,681	379	1340	PASS	1584	1587	PASS			
(M-6) MicroBioretention	#12	13,953	10,093	279	950	PASS	1467	1113	PASS			
(M-6) MicroBioretention	#13	12,186	9,300	244	1032	PASS	1387	1307	PASS			
(M-6) MicroBioretention	#14	15,956	11,582	319	1050	PASS	1693	1284	PASS			
(M-6) MicroBioretention	#15	8,670	6,114	173	473	PASS	890	715	PASS			
(M-6) MicroBioretention	#16†	11,192	7,037	224	1072	PASS	574	1313	PASS			
(M-6) MicroBioretention	#17†	15,364	13,000	307	1072	PASS	1039	1314	PASS			
(M-6) MicroBioretention	#18†	15,287	10,708	306	1107	PASS	867	1349	PASS			
(M-6) MicroBioretention	#19	15,523	10,361	310	1072	PASS	1515	1314	PASS			
(M-6) MicroBioretention	#20	16,707	13,000	334	1492	PASS	1800	1734	PASS			
(M-6) MicroBioretention	#21	15,671	9,175	313	1072	PASS	1356	1314	PASS			
TOTAL =							30816	28273	PASS	5640	5640	

† These facilities are sized based on a Pe of 1.0
 The 30,816 cf of required ESDv is based on DA to each practice provided. ESDv of 41,011 cf is based on total site area.
 SWM has been provided for at least 75% of the 30,816 cf.
 SWM Environmental Site Design to the Maximum Extent Practical has been provided.



A. Determine Pre-Developed Conditions

Soil Conditions for "Woods in Good Condition"			
HSG	RCN	*Area (ft ²)	Percent
A	38	0	0%
B	55	600890	100%
C	70	0	0%
D	77	0	0%
Target RCN	55	600890	

B. Determine Initial Target Pe Using Table 5.3

Soil Conditions Developed Condition				
HSG	*Area (ft ²)	*Impervious	Percent**	Target Pe
A				
B	600890	255,845	45%	1.8
C				
D				
Weighted Pe	600890	255845	45%	1.8

* 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 = 1.8 inches
 I = 45%
 Rv = 0.05 + (0.009*I)
 Rv = 0.46
 Qe = 0.82 inches

Target Pe = 1.8 inches
 Qe = 0.82 inches
 ESDv = 41011 cubic feet

LEGEND

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- MRS SOILS DELINEATION LINE
- MaD MRS SOILS TYPE
- EXISTING SLOPES > 15%

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division 2/14/13
 J.P. DATE

Chief, Division of Land Development 2/11/13
 DATE

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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. 2012013.

TENNIS CENTER AT TURF VALLEY

COMMERCIAL/RESIDENTIAL
 TAX MAP: 16 GRID: 17 PARCEL: 8 ZONED: PGCC
 ELECTION DISTRICT NO. 2
 HOWARD COUNTY, MARYLAND

ENVIRONMENTAL CONCEPT PLAN DRAINAGE AREAS TO PRACTICES

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

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

DATE: JANUARY, 2013 BEI PROJECT NO: 2420
 SCALE: AS SHOWN SHEET 2 OF 2

DESIGN: DBT DRAWN: DBT