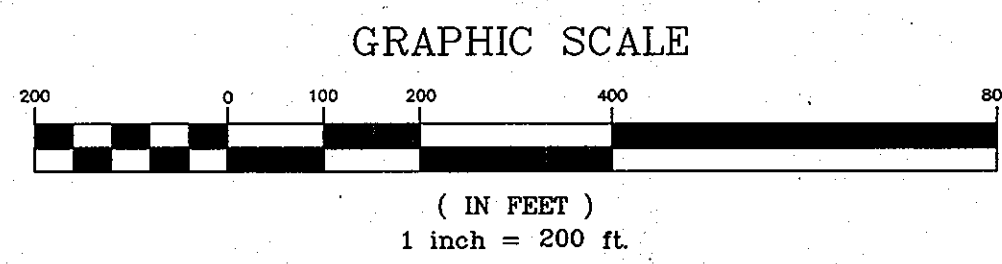
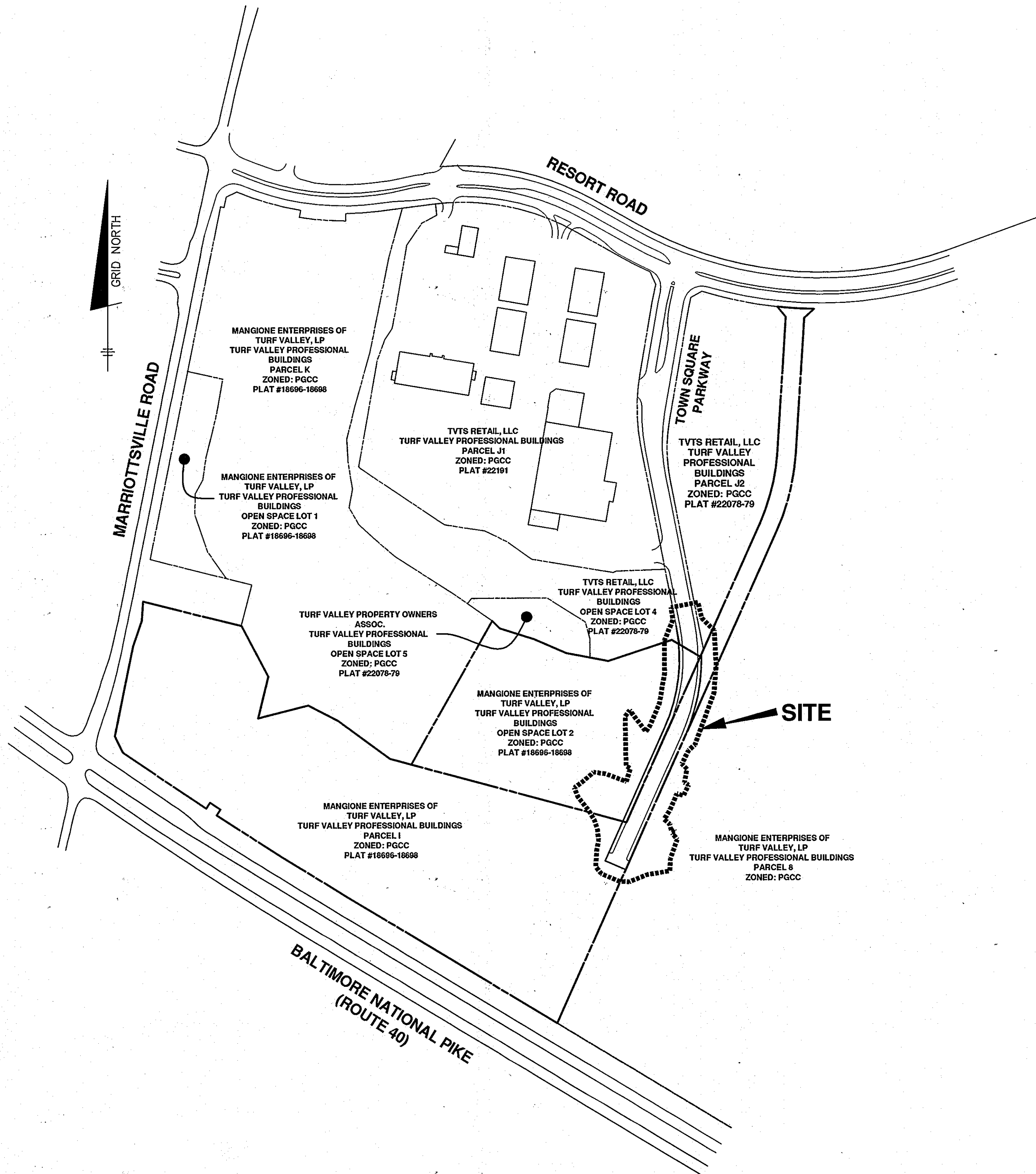
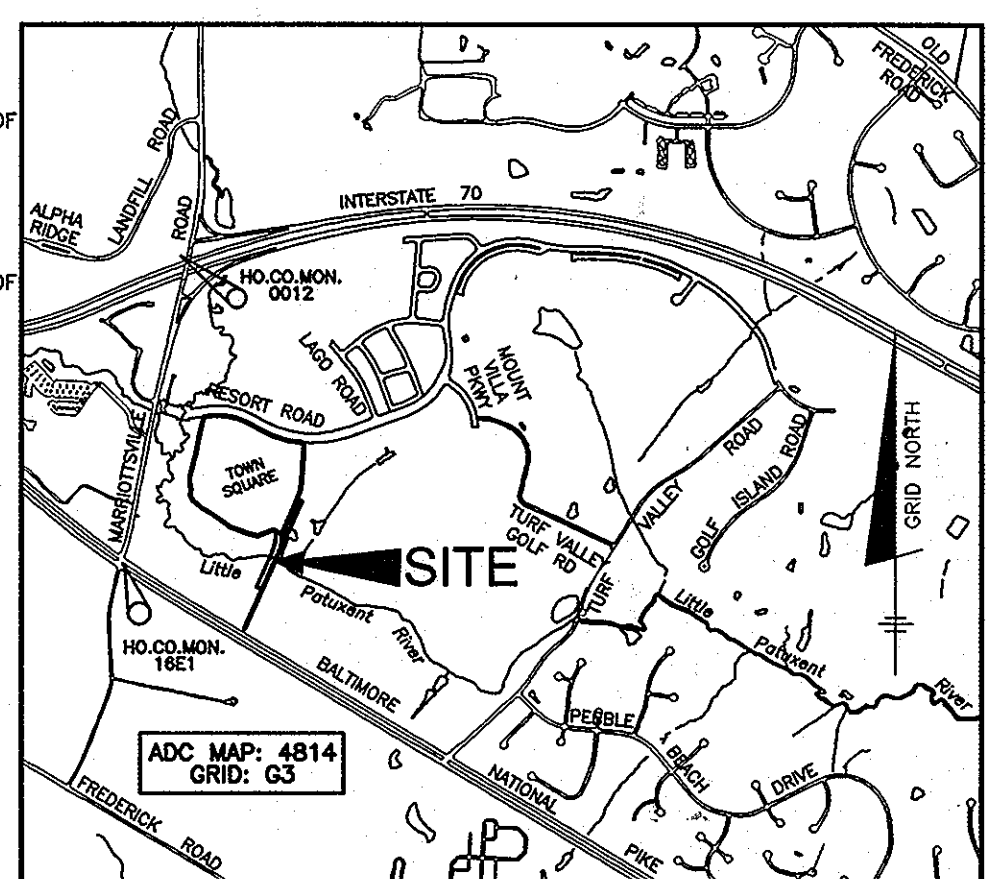


GENERAL NOTES

1. SUBJECT PROPERTY ZONED PGCC PER THE OCTOBER 6, 2013 COMPREHENSIVE ZONING PLAN.
2. THIS PROJECT IS SUBJECT TO THE THIRD AMENDED FINAL DEVELOPMENT PLAN RECORDED AS PLAT NUMBERS 21029-21031 ON MARCH 26, 2010.
3. 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.
4. 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 UNLESS CONSIDERED NECESSARY BY THE DEPARTMENT OF PLANNING AND ZONING OR IF WAIVERS HAVE BEEN APPROVED.
5. TO THE BEST OF OUR KNOWLEDGE, THERE ARE NO CEMETERIES LOCATED ON THIS SITE.
6. THIS PROJECT IS EXEMPT FROM HOWARD COUNTY FOREST CONSERVATION REQUIREMENTS UNDER SECTION 16.1202(b)(1)(v) 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.
7. APPROVAL OF THIS ENVIRONMENTAL CONCEPT PLAN (ECP) DOES NOT CONSTITUTE AN APPROVAL OF ANY SUBSEQUENT AND ASSOCIATED SUBDIVISION AND/OR SITE DEVELOPMENT PLAN.
8. 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.
9. 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.



BENCHMARKS
NAD'83 HORIZONTAL
 NO. CO. #18E1 (AKA: 3439001)
 STAMPED BRASS DISK SET ON TOP OF
 A 3/4" DEEP COLUMN OF CONCRETE.
 N 593250.960' E 1340192.707'
 ELEVATION: 463.981'
 NO. CO. #0012 (AKA: 3439001)
 STAMPED BRASS DISK SET ON TOP OF
 A 3/4" DEEP COLUMN OF CONCRETE.
 N 596502.760' E 1340864.37'
 ELEVATION: 486.298'



DESIGN NARRATIVE:

For the impervious areas of the road extension, three (M-6) Micro-Bioretenation practices have been proposed for treatment. The runoff from the impervious pavement and sidewalk will discharge into a storm drain system which shall discharge the runoff into the M-6 practices. The drainage area to each practice is approximately less than 20,000 sf. and is located in mostly class 'C' soils. The last 100 feet of the road and a portion of MB #3 will be within class 'B' soils.

Natural resource protection and/or enhancement shall be achieved as best possible given that the proposed improvements need to cross a stream, wetlands and floodplain. Natural flow patterns have been preserved by spanning the stream with a bottomless arch culvert. This shall mimic the existing condition of flow towards the eastern side of the road. The (M-6) Micro-Bioretenation practices shall be located outside any of the environmental areas and the underdrain discharge pipes shall be outside these areas as well.

Sediment and erosion control shall mainly consist of double row of super silt fence around the perimeter of the road grading. Clean water diversion dikes shall be utilized to divert runoff around the site on the southern edge.

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	2.93 ac
100yr Floodplain	1.32 ac
Steep Slopes 15% or greater	0.39 ac
Net Area	1.61 ac
Wetlands	0.22 ac
Wetlands Buffer	0.39 ac
Stream	0.03 ac
Stream Buffer	0.76 ac
Forested Area (per FSD)	NA
Erodable Soils	NA
Limit of Disturbance	2.93 ac
Impervious Area	0.81 ac
Green Space	2.12 ac

STORMWATER MANAGEMENT PRACTICE SUMMARY TABLE										
ESD Practice	DA to practice (sf)	Imp Area to practice (sf)	AF			ESDv			REV	
			Required (sf)	Provided (sf)	2% DA?	Required (cf)	Provided (cf)	75% ESDv?	Required	Provided
(M-6) Micro-Bioretenation #1	16,822	14,029	336	2300	PASS	1796	2575	PASS		0
(M-6) Micro-Bioretenation #2	11,520	8,867	230	1388	PASS	1141	1602	PASS		0
(M-6) Micro-Bioretenation #3	17,392	12,174	348	2125	PASS	1577	2392	PASS		570
TOTALS	45734	35070	914	5813	PASS	4513	6569	PASS	531	570

The TOTAL ESDv Required listed in chart (4513 cf) is based on DA to each individual practice
 The TOTAL ESDv Required based on entire site calculation is 5446 cf.
 The TOTAL ESDv Provided exceeds both of the above ESDv requirement calculations

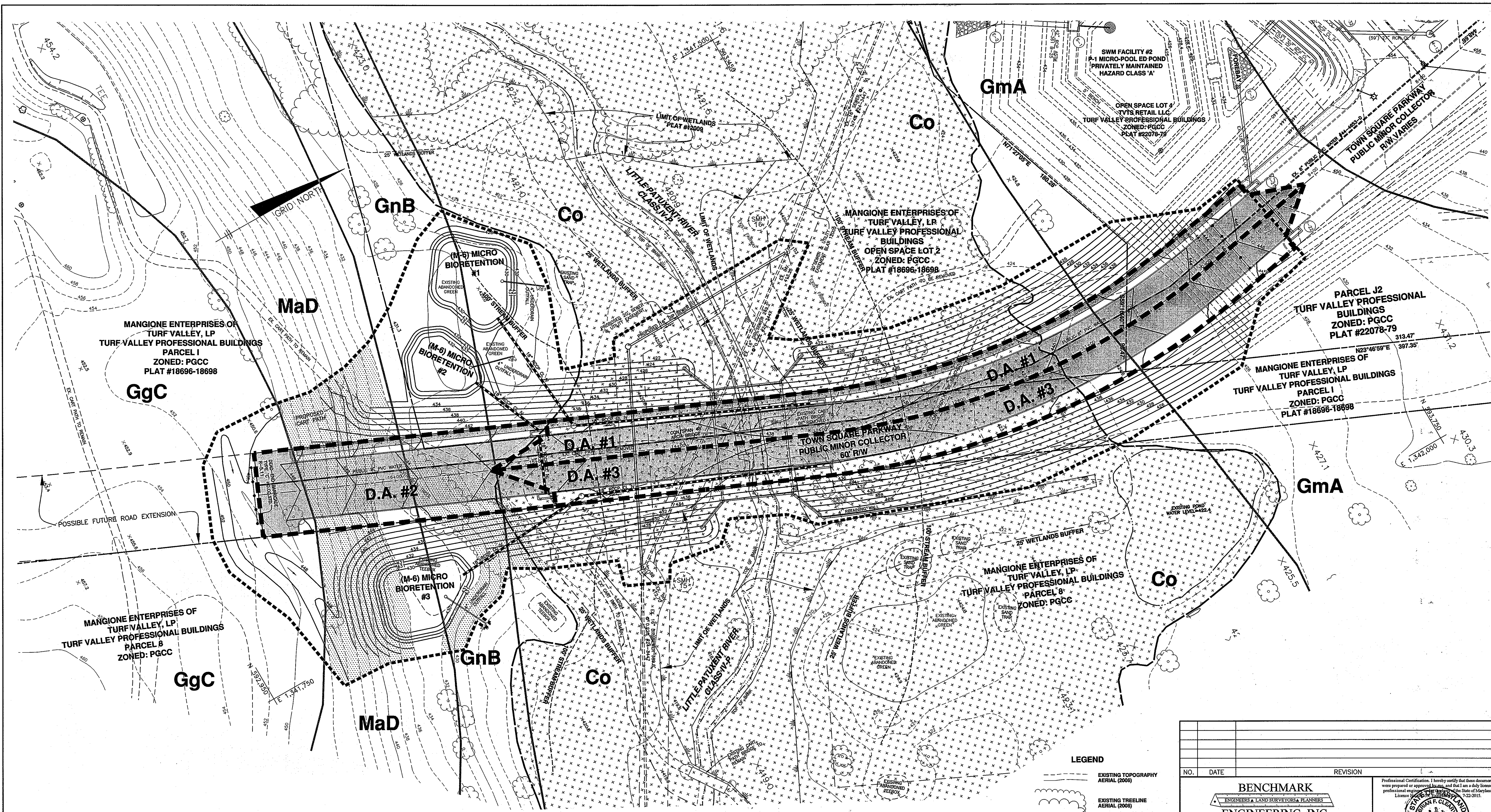
SHEET INDEX	
NO.	TITLE
1	TITLE SHEET
2	ENVIRONMENTAL CONCEPT PLAN
3	SEDIMENT & EROSION CONTROL PLAN

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 DATE: 1-9-14

 CHIEF, DIVISION OF LAND DEVELOPMENT
 DATE: 1/9/14

NO. DATE REVISION	
<p>BENCHMARK ENGINEERS & LAND SURVEYORS & PLANNERS ENGINEERING, INC. 8400 BALTIMORE NATIONAL PIKE SUITE 315 A ELICOTT CITY, MARYLAND 21043 (P) 410-465-8105 (F) 410-465-6644 75 THOMAS JOHNSON DRIVE SUITE E A FREDERICK, MARYLAND 21702 301-710-5688 WWW.BE-CMLENGINEERING.COM</p>	
<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. 28529</p>	
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
TOWN SQUARE PARKWAY	
TAX MAP: 16 - GRID: 10 - PARCEL: P/O 8 & 50 ZONED: PGCC (MULTI-USE SUBDISTRICT) ELECTION DISTRICT NO. 3 - HOWARD COUNTY, MARYLAND	
ENVIRONMENTAL CONCEPT PLAN	
DATE:	JANUARY, 2014
SCALE:	AS SHOWN
BEI PROJECT NO.	2585
SHEET	1 OF 3



GRAPHIC SCALE

(IN FEET)
1 inch = 30 ft.

LEGEND

- EXISTING TOPOGRAPHY AERIAL (2009)
- EXISTING TREELINE AERIAL (2009)
- EXISTING STREAM (BOTTOM OF BANK)
- LIMIT OF WETLANDS
- EXISTING FLOODPLAIN DFRM 2013
- SOILS DESCRIPTION **MaD**
- SOILS DELINEATION
- LIMIT OF DISTURBANCE LIMIT OF SITE FOR P_o
- DRAINAGE AREA DELINEATION
- PROPOSED IMPERVIOUS AREA

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

[Signature] 1-9-14
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

[Signature] 1/9/14
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

NO.	DATE	REVISION

BENCHMARK
ENGINEERS & LAND SURVEYORS & PLANNERS
ENGINEERING, INC.

9480 BALTIMORE NATIONAL PIKE SUITE 315-4 ELICOTT CITY, MARYLAND 21093
(P) 410-465-6105 (F) 410-465-6844
75 THOMAS JOHNSON DRIVE SUITE E FREDERICK, MARYLAND 21702
301-710-5686
WWW.BE-CM-ENGINEERING.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. 16204.

OWNER:
MANGIONE ENTERPRISES OF TURF VALLEY LIMITED PARTNERSHIP
1205 YORK ROAD, PENTHOUSE LUTHERVILLE, MARYLAND 21093 410-625-8400

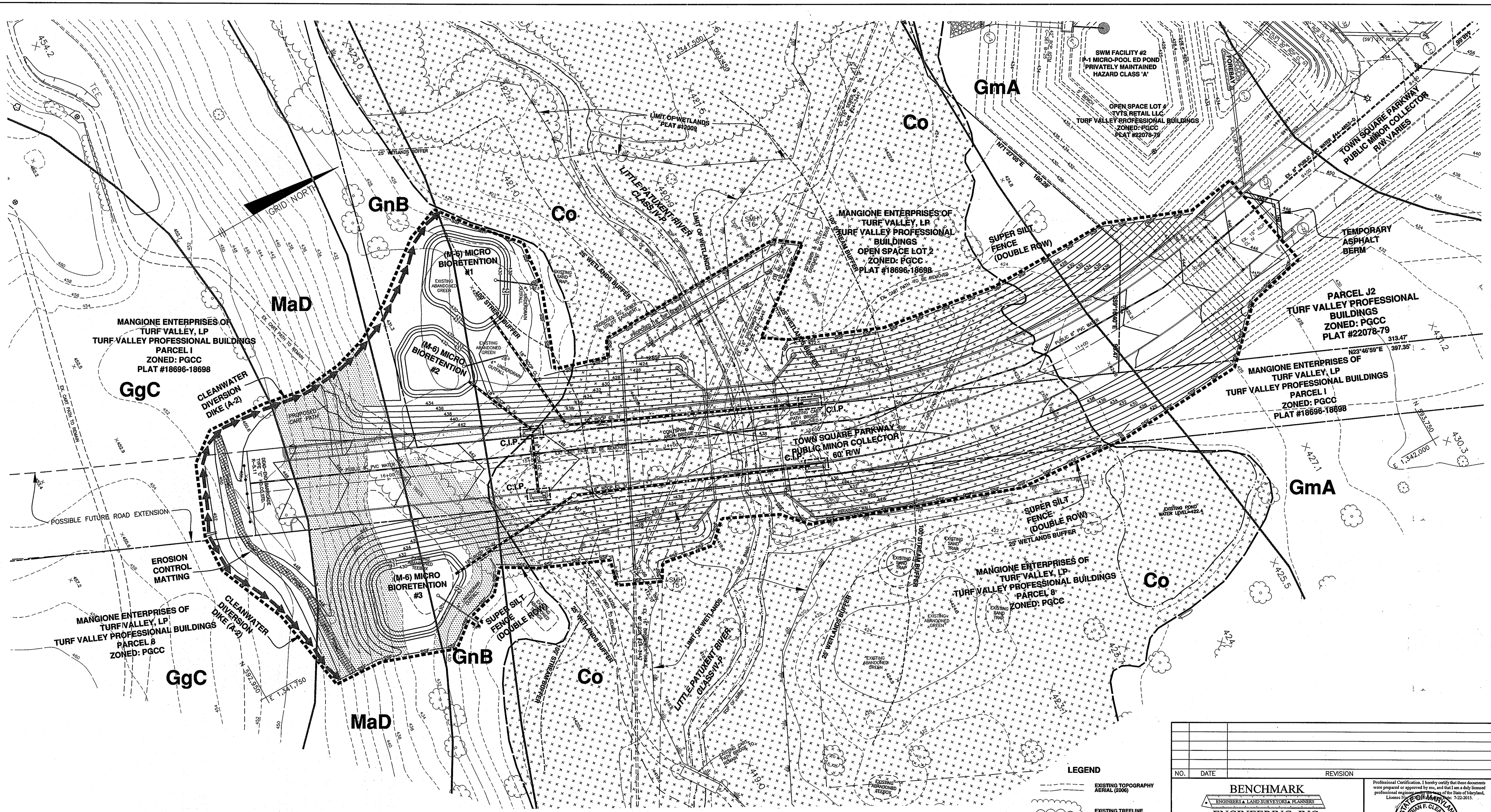
TOWN SQUARE PARKWAY

TAX MAP: 16 - GRID: 10 - PARCELS: P/O B & 50
ZONED: PGCC (MULTI-USE SUBDISTRICT)
ELECTION DISTRICT NO. 3 - HOWARD COUNTY, MARYLAND

ENVIRONMENTAL CONCEPT PLAN

DEVELOPER:
MANGIONE ENTERPRISES OF TURF VALLEY LIMITED PARTNERSHIP
1205 YORK ROAD, PENTHOUSE LUTHERVILLE, MARYLAND 21093 410-625-8400

DATE: JANUARY, 2014 BEI PROJECT NO. 2585
SCALE: AS SHOWN SHEET 2 OF 3



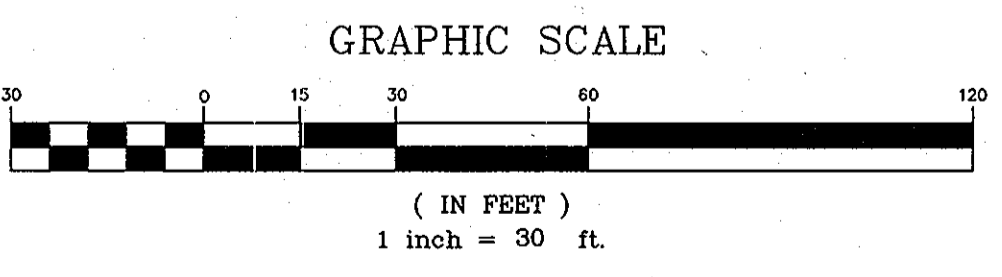
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

[Signature] 1/9/14
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

[Signature] 1/21/14
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

NRCS SOILS CHART - Howard County Soils Map No. 12

SYMBOL	HYDRIC	HYDROLOGIC GROUP	ALTERNATE GROUP	NAME
Co*		C	D	CODORUS AND HATBORO SILT LOAMS, 0 TO 3 PERCENT
GgC		B		GLENELG LOAM, 8 TO 16 PERCENT SLOPES
GmA*	YES	C		GLENVILLE SILT LOAM, 0 TO 3 PERCENT SLOPES
GnB*	YES	C	D	GLENVILLE-BAILE SILT LOAM, 0 TO 8 PERCENT SLOPES
MaD		B		MANOR LOAM, 15 TO 25 PERCENT SLOPES



NOTE:
 STREAM DISTURBANCE/CROSSING DETAILS FOR THE SEWER SHALL BE PROVIDED AT THE F-PLAN STAGE.

LEGEND

- EXISTING TOPOGRAPHY AERIAL (2006)
- EXISTING TREELINE AERIAL (2006)
- EXISTING STREAM
- LIMIT OF WETLANDS
- EXISTING FLOODPLAIN DFRM 2013
- MaD** SOILS DESCRIPTION
- SOILS DELINEATION
- LIMIT OF DISTURBANCE LIMIT OF SITE FOR P6
- SUPER SILT FENCE
- EROSION CONTROL MATTING
- EARTH DIKE

NO. DATE REVISION	
BENCHMARK ENGINEERS & LAND SURVEYORS & PLANNERS ENGINEERING, INC. 8480 BALTIMORE NATIONAL PIKE & SUITE 315 A ELICOTT CITY, MARYLAND 21043 (P) 410-465-9108 (F) 410-465-6944 75 THOMAS JOHNSON DRIVE & SUITE E FREDERICK, MARYLAND 21702 301-710-5688 WWW.BEI-CMLEENGINEERING.COM	
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TOWN SQUARE PARKWAY TAX MAP: 16 - GRID: 10 - PARCEL: P/O 8 & 50 ZONED: PGCC (MULTI-USE SUBDISTRICT) ELECTION DISTRICT NO. 3 - HOWARD COUNTY, MARYLAND	
SEDIMENT & EROSION CONTROL PLAN	
DATE: JANUARY, 2014	BEI PROJECT NO. 2585
SCALE: AS SHOWN	SHEET 3 OF 3