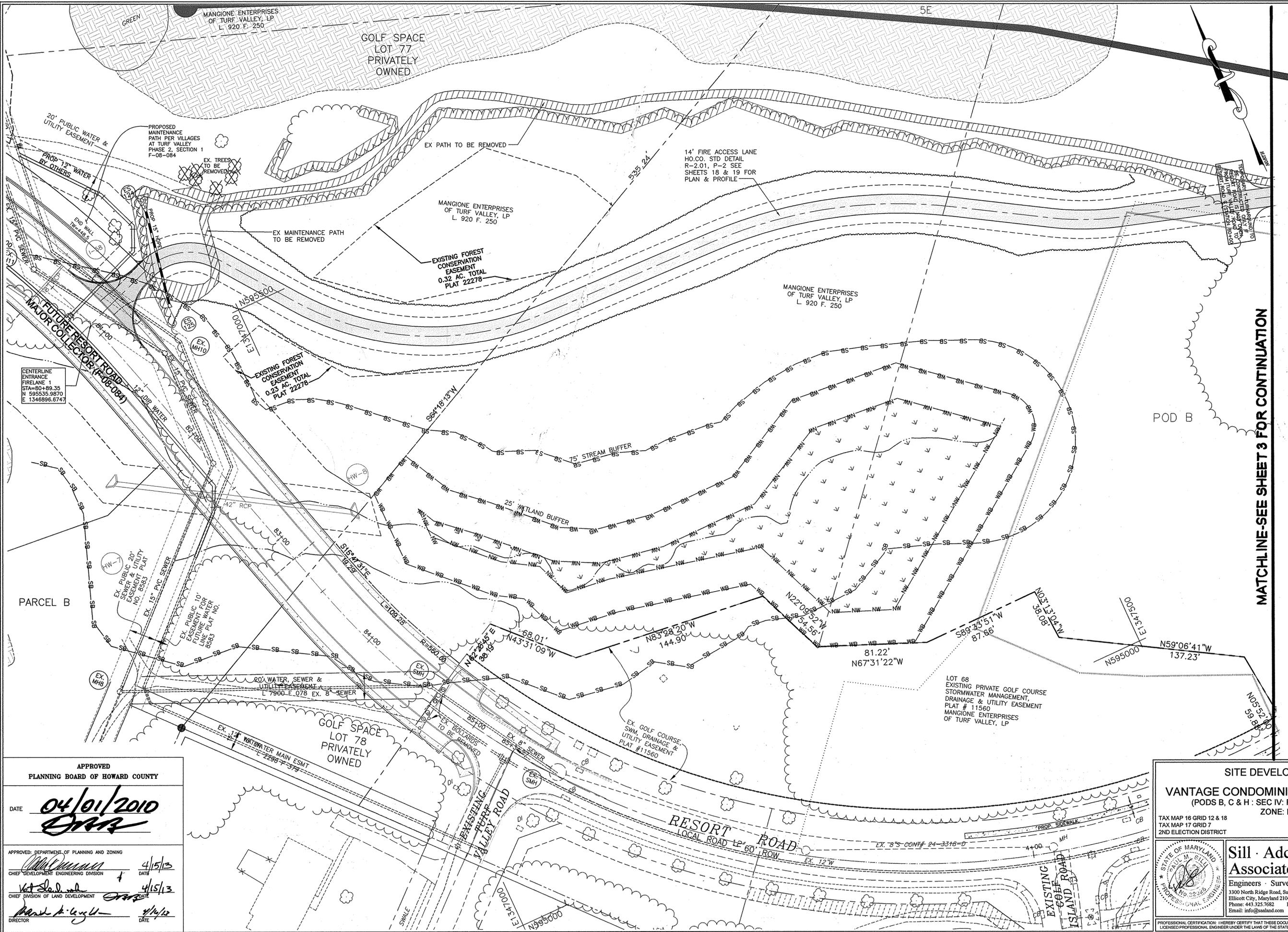


NO.	DESCRIPTION	DATE
1	REVISED PER NEW LAYOUT	7/11/14



MATCHLINE-SEE SHEET 3 FOR CONTINUATION

NOTE: THE PURPOSE OF THIS REVISED SITE DEVELOPMENT PLAN IS TO RECONFIGURE THE LAYOUT OF THE DEVELOPMENT IN THE AREA OF THE PROPOSED BUILDINGS.

APPROVED
PLANNING BOARD OF HOWARD COUNTY

DATE: **04/01/2010**
[Signature]

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 Chief Development Engineering Division: *[Signature]* 4/15/13
 Chief Division of Land Development: *[Signature]* 4/15/13
 Director: *[Signature]* 4/16/13

SITE DEVELOPMENT PLAN
VANTAGE CONDOMINIUMS AT TURF VALLEY
 (PODS B, C & H: SEC IV: RESIDENTIAL PHASE IVE)
 ZONE: PGCC-1

TAX MAP 16 GRID 12 & 18
 TAX MAP 17 GRID 7
 2ND ELECTION DISTRICT

PARCELS 8 & 706
 HOWARD COUNTY, MARYLAND

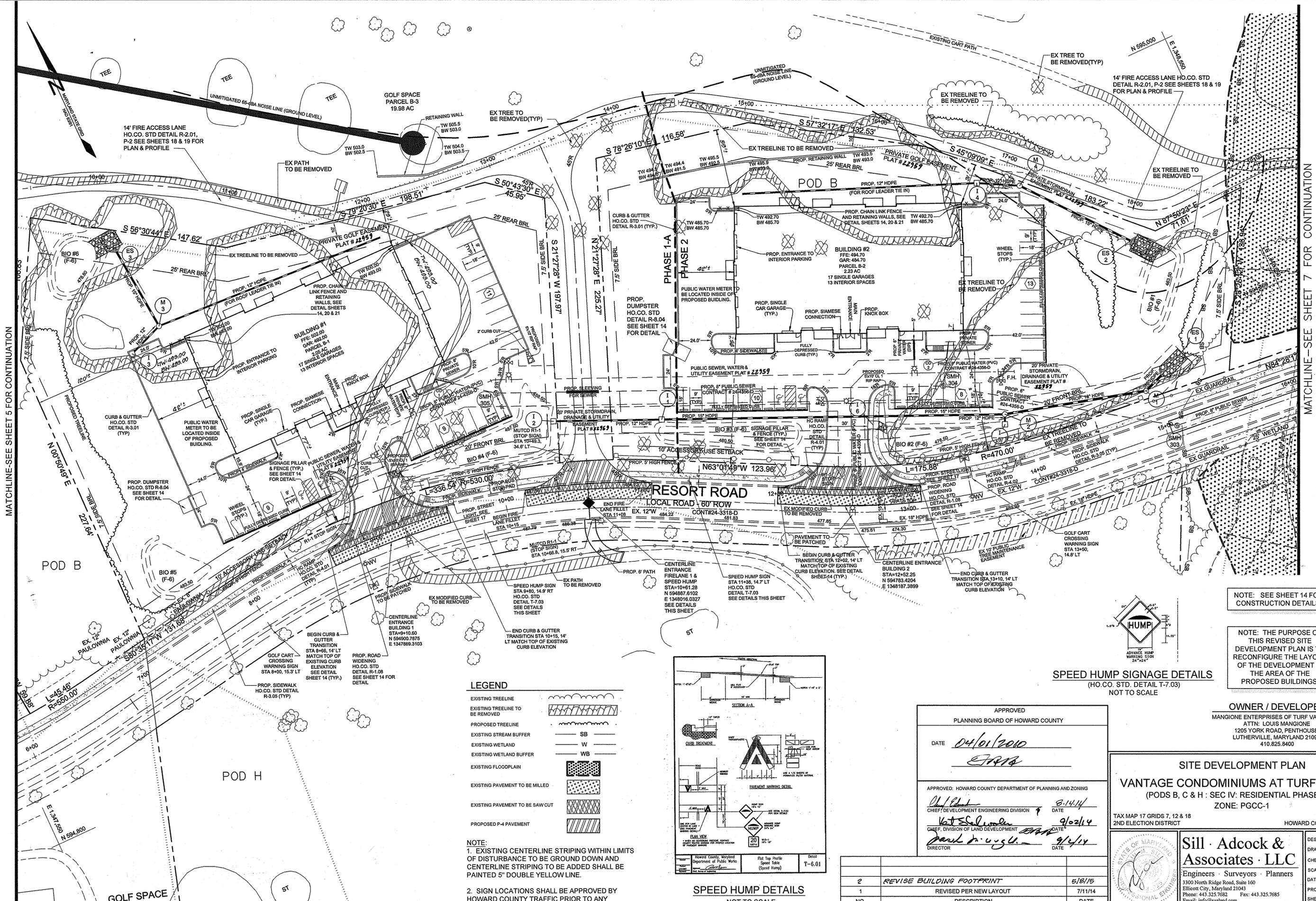
Sill · Adcock & Associates · LLC
 Engineers · Surveyors · Planners
 3300 North Ridge Road, Suite 160
 Ellicott City, Maryland 21043
 Phone: 443.325.7682 Fax: 443.325.7685
 Email: info@silladcock.com

DESIGN BY: SJT
 DRAWN BY: SJT
 CHECKED BY: PS
 SCALE:
 DATE: APRIL 1, 2013
 PROJECT #: 09-060
 SHEET #: 2 of 24

PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 33025, EXPIRATION DATE: JUNE 20, 2013

MATCHLINE-SEE SHEET 5 FOR CONTINUATION

MATCHLINE-SEE SHEET 7 FOR CONTINUATION



NOTE: SEE SHEET 14 FOR CONSTRUCTION DETAILS.

NOTE: THE PURPOSE OF THIS REVISED SITE DEVELOPMENT PLAN IS TO RECONFIGURE THE LAYOUT OF THE DEVELOPMENT IN THE AREA OF THE PROPOSED BUILDINGS.

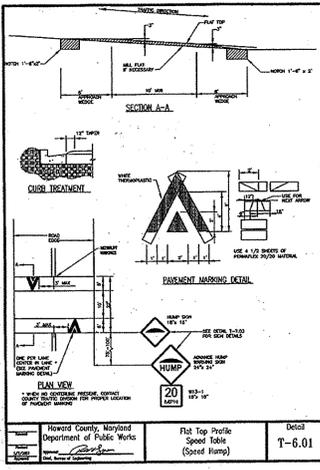
SPEED HUMP SIGNAGE DETAILS
(HO. CO. STD. DETAIL T-7.03)
NOT TO SCALE



LEGEND

EXISTING TREELINE	
EXISTING TREELINE TO BE REMOVED	
PROPOSED TREELINE	
EXISTING STREAM BUFFER	SB
EXISTING WETLAND	W
EXISTING WETLAND BUFFER	WB
EXISTING FLOODPLAIN	
EXISTING PAVEMENT TO BE MILLED	
EXISTING PAVEMENT TO BE SAW CUT	
PROPOSED P-4 PAVEMENT	

NOTE:
1. EXISTING CENTERLINE STRIPING WITHIN LIMITS OF DISTURBANCE TO BE GROUND DOWN AND CENTERLINE STRIPING TO BE ADDED SHALL BE PAINTED 5" DOUBLE YELLOW LINE.
2. SIGN LOCATIONS SHALL BE APPROVED BY HOWARD COUNTY TRAFFIC PRIOR TO ANY INSTALLATIONS (410-313-5752).



SPEED HUMP DETAILS
NOT TO SCALE
NOTE: SPEED HUMPS TO BE CONSTRUCTED WITH ASPHALT PAVING.

APPROVED
PLANNING BOARD OF HOWARD COUNTY

DATE: 04/01/2010
[Signature]

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
[Signature] 8/14/14
[Signature] 9/02/14
[Signature] 9/2/14

NO.	DESCRIPTION	DATE
2	REVISE BUILDING FOOTPRINT	5/8/15
1	REVISED PER NEW LAYOUT	7/11/14
NO.	DESCRIPTION	DATE

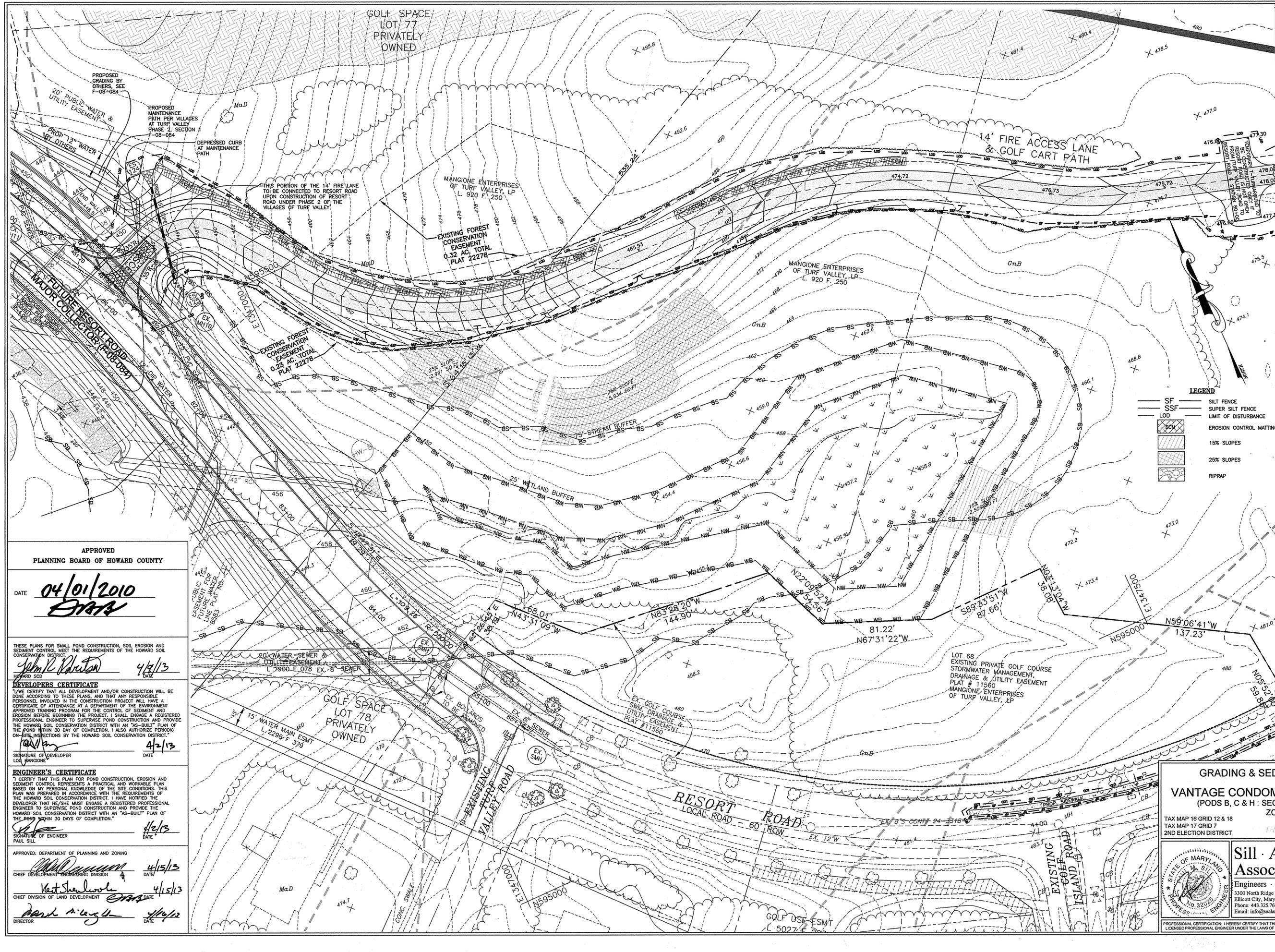
OWNER / DEVELOPER
MANGIONE ENTERPRISES OF TURF VALLEY, LP
ATTN: LOUIS MANGIONE
1205 YORK ROAD, PENTHOUSE
LUTHERVILLE, MARYLAND 21093
410.825.8400

SITE DEVELOPMENT PLAN
VANTAGE CONDOMINIUMS AT TURF VALLEY
(PODS B, C & H - SEC IV: RESIDENTIAL PHASE IV)
ZONE: PGCC-1
TAX MAP 17 GRIDS 7, 12 & 18
2ND ELECTION DISTRICT
PARCELS 8 & 706
HOWARD COUNTY, MARYLAND

Sill · Adcock & Associates · LLC
Engineers · Surveyors · Planners
3300 North Ridge Road, Suite 160
Ellicott City, Maryland 21043
Phone: 443.325.7682 Fax: 443.325.7685
Email: info@saa.com

DESIGN BY: PS_BK
DRAWN BY: JT_BK
CHECKED BY: PS
SCALE: 1" = 30'
DATE: JULY 11, 2014
PROJECT NO.: 09-090
SHEET #: 3 of 21

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. 32025, EXPIRATION DATE: JUNE 20, 2015



MATCHLINE-SEE SHEET 6 FOR CONTINUATION

NO.	DESCRIPTION	DATE
1	REVISED PER NEW LAYOUT	7/11/14

APPROVED
PLANNING BOARD OF HOWARD COUNTY

DATE 04/01/2010
EMR

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

John R. Paxton 4/1/13
HOWARD SCD

DEVELOPER'S CERTIFICATE

I HEREBY CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

LOJ Mangione 4/2/13
SIGNATURE OF DEVELOPER
LOJ MANGIONE

ENGINEER'S CERTIFICATE

I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

Paul Sill 4/6/13
SIGNATURE OF ENGINEER
PAUL SILL

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Mark A. Long 4/15/13
CHIEF DEVELOPMENT ENGINEERING DIVISION

Mark A. Long 4/15/13
CHIEF DIVISION OF LAND DEVELOPMENT

Mark A. Long 4/15/13
DIRECTOR

LEGEND

	SILT FENCE
	SUPER SILT FENCE
	LIMIT OF DISTURBANCE
	EROSION CONTROL MATTING
	15% SLOPES
	25% SLOPES
	RIPRAP

NOTE: THE PURPOSE OF THIS REVISED SITE DEVELOPMENT PLAN IS TO RECONFIGURE THE LAYOUT OF THE DEVELOPMENT IN THE AREA OF THE PROPOSED BUILDINGS.

OWNER / DEVELOPER
MANGIONE ENTERPRISES OF TURF VALLEY, LP
ATTN: LOUIS MANGIONE
1205 YORK ROAD, PENTHOUSE
LUTHERVILLE, MARYLAND 21093
410.825.8400

GRADING & SEDIMENT CONTROL PLAN
VANTAGE CONDOMINIUMS AT TURF VALLEY
(PODS B, C & H - SEC IV: RESIDENTIAL PHASE IVE)
ZONE: PGCC-1

TAX MAP 16 GRID 12 & 18
TAX MAP 17 GRID 7
2ND ELECTION DISTRICT

PARCELS 8 & 706
HOWARD COUNTY, MARYLAND

Sill · Adcock & Associates · LLC
Engineers · Surveyors · Planners

3300 North Ridge Road, Suite 160
Ellicott City, Maryland 21043
Phone: 443.325.7682 Fax: 443.325.7685
Email: info@silladcock.com

DESIGN BY: SJT
DRAWN BY: SJT
CHECKED BY: PS
SCALE: 1" = 30'
DATE: APRIL 1, 2013
PROJECT #: 09-060
SHEET #: 5 of 21

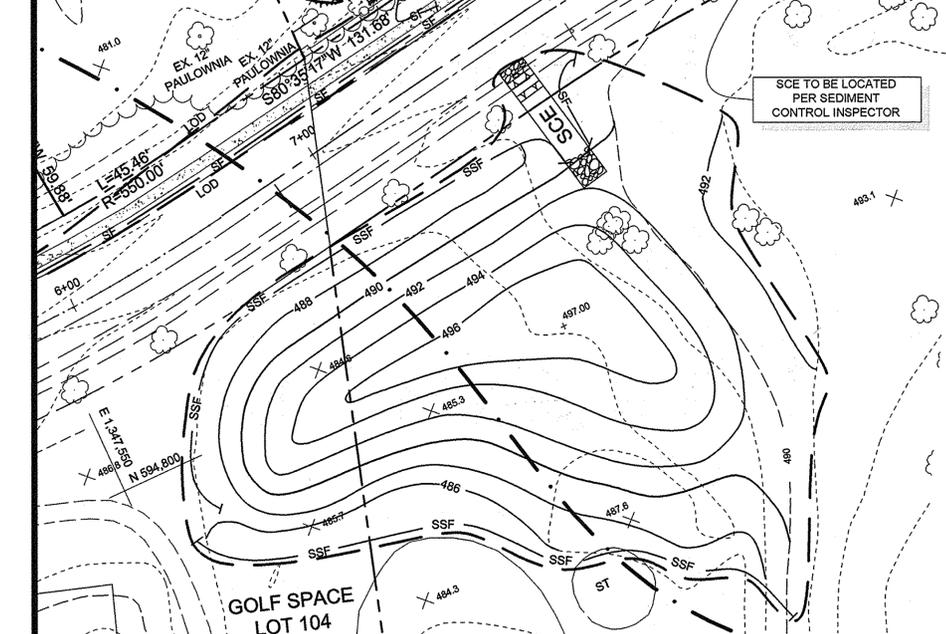
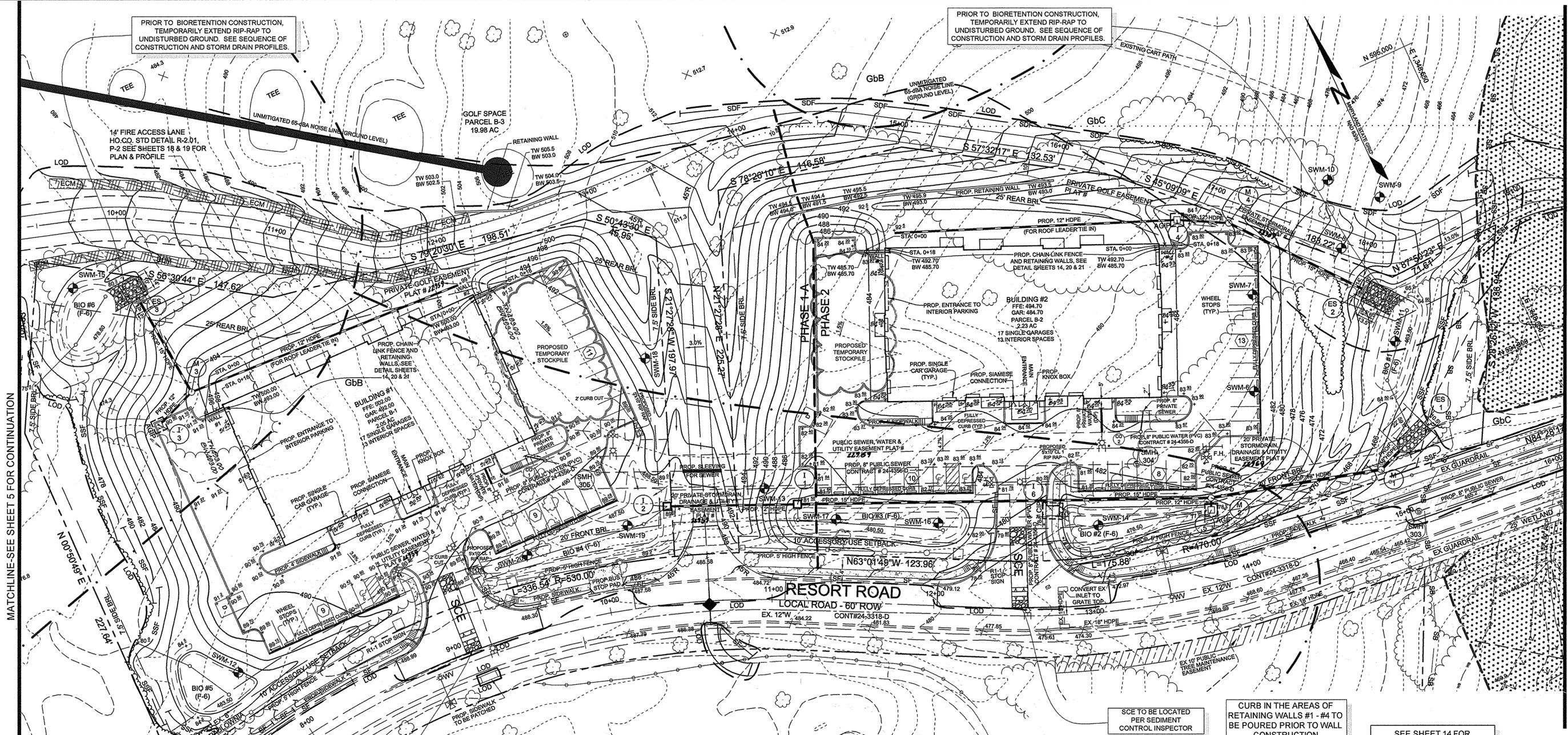
PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 32025, EXPIRATION DATE: JUNE 20, 2015.

PRIOR TO BIORETENTION CONSTRUCTION, TEMPORARILY EXTEND RIP-RAP TO UNDISTURBED GROUND. SEE SEQUENCE OF CONSTRUCTION AND STORM DRAIN PROFILES.

PRIOR TO BIORETENTION CONSTRUCTION, TEMPORARILY EXTEND RIP-RAP TO UNDISTURBED GROUND. SEE SEQUENCE OF CONSTRUCTION AND STORM DRAIN PROFILES.

MATCHLINE-SEE SHEET 5 FOR CONTINUATION

MATCHLINE-SEE SHEET 7 FOR CONTINUATION



LEGEND

EXISTING CONTOUR	— 382 —	SILT FENCE	— SF —
PROPOSED CONTOUR	— 382 —	SUPER SILT FENCE	— SSF —
PROPOSED SPOT ELEVATION	+ 56.1	SUPER DIVERSION FENCE	— SDF —
DIRECTION OF FLOW	→	LIMIT OF DISTURBANCE	— LOD —
EXISTING TREELINE	—	EXISTING SWM SOIL BORINGS	— SWM-1 —
PROPOSED TREELINE	—	EROSION CONTROL MATTING	— ECE —
SOIL BOUNDARY	—	STABILIZED CONSTRUCTION ENTRANCE	— SCE —
EXISTING STREAM BUFFER	— SB —	AT GRADE INLET PROTECTION	— AGIP —
EXISTING WETLAND	— W —	CURB INLET PROTECTION	— CIP —
EXISTING WETLAND BUFFER	— WB —		
EXISTING FLOODPLAIN	—		

NOTE: DOUBLE ROW SSF TO BE INSTALLED at the direction of Inspector

- INLETS I-3, I-4 & I-5 TO HAVE AT GRADE INLET PROTECTION (AGIP)
- INLET I-6 TO HAVE CURB INLET PROTECTION (CIP)
- INLETS I-1 & I-2 TO BE BLOCKED

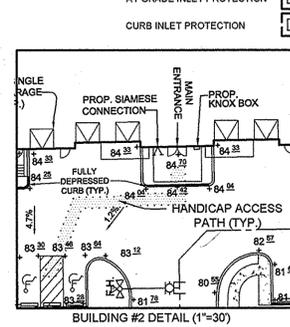
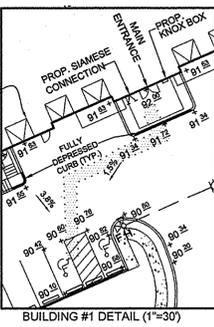
SCE TO BE LOCATED PER SEDIMENT CONTROL INSPECTOR

CURB IN THE AREAS OF RETAINING WALLS #1 - #4 TO BE POURED PRIOR TO WALL CONSTRUCTION

SEE SHEET 14 FOR CONSTRUCTION DETAILS

FOR BIO-RETENTION FACILITY DETAILS SEE SHEETS 11, 12 & 13

NOTE: THE PURPOSE OF THIS REVISED SITE DEVELOPMENT PLAN IS TO RECONFIGURE THE LAYOUT OF THE DEVELOPMENT IN THE AREA OF THE PROPOSED BUILDINGS.



APPROVED PLANNING BOARD OF HOWARD COUNTY		DATE 04/01/2010	
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING		DATE 8-14-14	
DATE 8/14/14		DATE 9-02-14	
DATE 8/14/14		DATE 7/27/14	
NO. 2		REVISIONS	
1		REVISE BUILDING FOOTPRINT	
NO.		DESCRIPTION	
		REVISED PER NEW LAYOUT	
		DATE	
		5/8/15	
		7/11/14	

APPROVED
PLANNING BOARD OF HOWARD COUNTY
DATE
04/01/2010

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
DATE
8-14-14

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
DATE
9-02-14

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
DATE
7/27/14

OWNER / DEVELOPER
MANGIONE ENTERPRISES OF TURF VALLEY, LP
ATTN: LOUIS MANGIONE
1205 YORK ROAD, PENTHOUSE
LUTHERVILLE, MARYLAND 21093
410.825.8400

GRADING & SEDIMENT CONTROL PLAN
VANTAGE CONDOMINIUMS AT TURF VALLEY
(PODS B, C & H - SEC IV: RESIDENTIAL PHASE IV)
ZONE: PGCC-1
TAX MAP 17 GRIDS 7, 12 & 18
2ND ELECTION DISTRICT
PARCELS 8 & 706
HOWARD COUNTY, MARYLAND

Sill · Adcock & Associates · LLC
Engineers · Surveyors · Planners
3300 North Ridge Road, Suite 160
Ellicott City, Maryland 21043
Phone: 443.325.7682 Fax: 443.325.7685
Email: info@sasall.com

STANDARDS AND SPECIFICATIONS FOR PERMANENT STABILIZATION

TO STABILIZE DISTURBED SOILS WITH PERMANENT VEGETATION.

- PURPOSE**
- TO USE LONG-LIVED PERENNIAL GRASSES AND LEGUMES TO ESTABLISH PERMANENT GROUND COVER ON DISTURBED SOILS.

CONDITIONS WHERE PRACTICE APPLIES

- EXPOSED SOILS WHERE GROUND COVER IS NEEDED FOR 6 MONTHS OR MORE.

CRITERIA

- A. SEED MIXTURES**
- GENERAL USE**
1. SELECT ONE OR MORE OF THE SPECIES OR MIXTURES LISTED IN TABLE B.3 FOR THE APPROPRIATE PLANT HARDINESS ZONE (FROM FIGURE B.3) AND BASED ON THE SITE CONDITIONS OR PURPOSE FOUND ON TABLE B.2. ENTER SELECTED MIXTURE(S), APPLICATION RATES, AND SEEDING DATES IN THE PERMANENT SEEDING SUMMARY. THE SUMMARY IS TO BE PLACED ON THE PLAN.
 2. ADDITIONAL PLANTING SPECIFICATIONS SUCH AS SHOULDERING, STREAM BANKS, OR DUNES OR FOR SPECIAL PURPOSES SUCH AS WILDLIFE OR AESTHETIC TREATMENT MAY BE FOUND IN USDA-NRCS TECHNICAL FIELD OFFICE GUIDE, SECTION 342 - CRITICAL AREA PLANTING.
 3. FOR SITES HAVING DISTURBED AREA OVER 5 ACRES, USE AND SHOW THE RATES RECOMMENDED BY THE SOIL TESTING AGENCY.
 4. FOR AREAS RECEIVING LOW MAINTENANCE, APPLY LIME FORM FERTILIZER (46-0-43) AT 3 1/2 POUNDS PER 1000 SQUARE FEET (150 POUNDS PER ACRE) AT THE TIME OF SEEDING IN ADDITION TO THE SOIL AMENDMENTS SHOWN IN THE PERMANENT SEEDING SUMMARY.
- TURFGRASS MIXTURES**
2. AREAS WHERE TURFGRASS MAY BE DESIRED INCLUDE LAWNS, PARKS, PLAYGROUNDS, AND COMMERCIAL SITES WHICH WILL RECEIVE A MEDIUM TO HIGH LEVEL OF MAINTENANCE.
 3. SELECT ONE OR MORE OF THE SPECIES OR MIXTURES LISTED BELOW ON THE SITE CONDITIONS OR PURPOSE. ENTER SELECTED MIXTURE(S), APPLICATION RATES, AND SEEDING DATES IN THE PERMANENT SEEDING SUMMARY. THE SUMMARY IS TO BE PLACED ON THE PLAN.
 - I. KENTUCKY BLUEGRASS: FULL SUN/SHADE: TURF GRASSES THAT RECEIVE INTENSIVE MANAGEMENT, IRRIGATION REQUIRED IN THE AREAS OF CENTRAL MARYLAND AND EASTERN SHORE. RECOMMENDED KENTUCKY BLUEGRASS SEEDING RATE: 15 TO 2.0 POUNDS PER 1000 SQUARE FEET. CHOOSE A MINIMUM OF THREE KENTUCKY BLUEGRASS CULTIVARS WITH EACH RANGING FROM 10 TO 35 PERCENT OF THE TOTAL MIXTURE BY WEIGHT.
 - II. KENTUCKY BLUEGRASS/PREMIER PLYE FULL SUN MIXTURE: FOR USE IN FULL SUN AREAS WHERE 8:2 RAPID ESTABLISHMENT IS NECESSARY AND WHEN TURF WILL RECEIVE MEDIUM TO INTENSIVE MANAGEMENT. CERTIFIED PERENNIAL RYEGRASS/CERTIFIED KENTUCKY BLUEGRASS SEEDING RATE: 2 POUNDS MIXTURE PER 1000 SQUARE FEET. CHOOSE A MINIMUM OF THREE KENTUCKY BLUEGRASS CULTIVARS WITH EACH RANGING FROM 10 TO 35 PERCENT OF THE TOTAL MIXTURE BY WEIGHT.
 - III. TALL FESCUE MIXTURE: FOR USE IN DROUGHT-TOLERANT PRONE AREAS AND/OR AREAS RECEIVING LOW TO MEDIUM MAINTENANCE IN FULL SUN TO MEDIUM SHADE. RECOMMENDED MIXTURE INCLUDES: CERTIFIED TALL FESCUE CULTIVARS 95 TO 100 PERCENT, CERTIFIED KENTUCKY BLUEGRASS 5 TO 5 PERCENT, SEEDING RATE: 15 TO 2.0 POUNDS PER 1000 SQUARE FEET. ONE OR MORE CULTIVARS MAY BE BLENDED.
 - IV. KENTUCKY BLUEGRASS/FINE FESCUE: SHADE MIXTURE. FOR USE IN AREAS WITH SHADE IN BLUEGRASS LAWNS. FOR ESTABLISHMENT IN HIGH QUALITY, INTENSIVELY MANAGED TURF AREA. MIXTURE INCLUDES: CERTIFIED KENTUCKY BLUEGRASS CULTIVARS 30 TO 40 PERCENT AND CERTIFIED FINE FESCUE AND 60 TO 70 PERCENT. SEEDING RATE: 15 TO 2 POUNDS PER 1000 SQUARE FEET.

NOTES:

1. SELECT TURFGRASS VARIETIES FROM THOSE LISTED IN THE MOST CURRENT UNIVERSITY OF MARYLAND PUBLICATION, AGRONOMY MEMO #77, "TURFGRASS CULTIVAR RECOMMENDATIONS FOR MARYLAND" CHOOSE CERTIFIED MATERIAL. CERTIFIED MATERIAL IS THE BEST GUARANTEE OF CULTIVAR PURITY. THE CERTIFICATION PROGRAM OF THE MARYLAND DEPARTMENT OF AGRICULTURE, TURF AND SEED SECTION, PROVIDES A RELIABLE MEANS OF CONSUMER PROTECTION AND ASSURES A PURE GENETIC LINE.
2. IDEAL TIMES OF SEEDING FOR TURF GRASS MIXTURES: WESTERN MD. MARCH 15 TO JUNE 1, AUGUST 1 TO OCTOBER 1 (HARDINESS ZONES: 6B, 6A) CENTRAL MD. MARCH 10 TO MAY 15, AUGUST 15 TO OCTOBER 15 (HARDINESS ZONES: 6B) SOUTHERN MD. EASTERN SHORE: MARCH 10 TO MAY 15, AUGUST 15 TO OCTOBER 15 (HARDINESS ZONES: 7A, 7B)
3. TILL AREAS TO RECEIVE OTHER TURFGRASS CULTIVARS SHOULD BE PREPARED TO THE SAME LEVEL AND RAKE THE AREAS TO PREPARE A PROPER SEEDBED. REMOVE STONES AND DEBRIS OVER 1/4 INCHES IN DIAMETER. THE RESULTING SEEDBED MUST BE IN SUCH CONDITION THAT FUTURE MOVING OF GRASSES WILL POSE NO DIFFICULTY.
4. IF SOIL MOISTURE IS DEFICIENT, SUPPLY NEW SEEDINGS WITH ADEQUATE WATER FOR PLANT GROWTH (1/2 TO 1 INCH EVERY 3 TO 4 DAYS) DEPENDING ON SOIL TEXTURE UNTIL THEY ARE FIRMLY ESTABLISHED. THIS IS ESPECIALLY TRUE WHEN SEEDINGS ARE MADE LATE IN THE PLANTING SEASON. IN ABNORMALLY DRY CONDITIONS, SOAK OR ON ABERGIVE SITES.

B. SOD: TO PROVIDE QUICK COVER ON DISTURBED AREAS (2:1 GRADE OR FLATTER).

1. GENERAL SPECIFICATIONS
 - A. CLASS OF TURFGRASS SOD MUST BE MARYLAND STATE CERTIFIED. SOD LABELS MUST BE MADE AVAILABLE TO THE JOB FOREMAN AND INSPECTOR.
 - B. SOD MUST BE MACHINE CUT AT A UNIFORM SOIL THICKNESS OF 1/4 INCH, PLUS OR MINUS 1/16 INCH. AT THE TIME OF CUTTING, MEASUREMENT FOR THICKNESS MUST EXCLUDE TOP GROWTH AND THAT BROKEN PADS OR TORN OR UNEVEN ENDS WILL NOT BE ACCEPTABLE.
 - C. STANDARD SIZE SECTIONS OF SOD MUST BE STRONG ENOUGH TO SUPPORT THEIR OWN WEIGHT AND RETAIN THEIR SIZE AND SHAPE WHEN SUSPENDED VERTICALLY WITH A FIRM GRASP ON THE UPPER 10 PERCENT OF THE SECTION.
 - D. SOD MUST NOT BE HARVESTED OR TRANSPORTED WHEN MOISTURE CONTENT (EXCESSIVELY DRY OR WET) MAY ADVERSELY AFFECT ITS SURVIVAL.
 - E. SOD MUST BE HARVESTED, DELIVERED, AND INSTALLED WITHIN A PERIOD OF 36 HOURS. SOD NOT TRANSPORTED WITHIN THIS PERIOD MUST BE APPROVED BY AN AGRONOMIST OR SOIL SCIENTIST PRIOR TO ITS INSTALLATION.
2. SOD INSTALLATION
 - A. DURING PERIODS OF EXCESSIVELY HIGH TEMPERATURE OR IN AREAS HAVING DRY SUBSOIL, LIGHTLY IRRIGATE THE SUBSOIL IMMEDIATELY PRIOR TO LAYING THE SOD.
 - B. LAY THE FIRST ROW OF SOD IN A STRAIGHT LINE WITH SUBSEQUENT ROWS PLACED PARALLEL, 1/16 TO 1/8 THIRTYLY WEDGED AGAINST EACH OTHER. STAGGER JOINTS TO PROMOTE MORE UNIFORM GROWTH AND STRENGTH.
 - C. ENSURE THAT SOD IS NOT STRETCHED OR OVERLAPPED AND THAT ALL JOINTS ARE BUTTED TIGHT IN ORDER TO PREVENT VOIDS WHICH WOULD CAUSE AIR DRYING OF THE ROOTS.
 - D. WHEREVER POSSIBLE, LAY SOD SECTIONS PARALLEL TO THE CONTOUR AND WITH STAGGERING JOINTS. REMOVE SOIL CONTACT OR OTHERWISE SECURE THE SOD TO PREVENT SLIPPAGE ON SLOPES. ENSURE SOIL CONTACT BETWEEN SOD ROOTS AND THE UNDERLYING SOIL SURFACE.
 - E. WATER THE SOD IMMEDIATELY FOLLOWING ROLLING TO MOISTEN UNTIL THE UNDERSIDE OF THE NEW SOD PAD AND SOIL SURFACE BELOW THE SOD ARE THOROUGHLY WET. COMPLETE THE OPERATIONS OF LAYING, TAMPING AND IRRIGATING FOR ANY PIECE OF SOD WITHIN EIGHT HOURS.
3. SOD MAINTENANCE
 - A. IN THE ABSENCE OF ADEQUATE RAINFALL, WATER DAILY DURING THE FIRST WEEK OR AS OFTEN AND SUFFICIENTLY AS NECESSARY TO MAINTAIN MOIST SOIL TO A DEPTH OF 4 INCHES. WATER SOIL DURING THE HEAT OF THE DAY TO PREVENT WILTING.
 - B. AFTER THE FIRST WEEK, SOD WATERING IS REQUIRED AS NECESSARY TO MAINTAIN ADEQUATE MOISTURE CONTENT. DO NOT MOW UNTIL THE SOD IS FIRMLY ROOTED. REMOVE WEEDS UNTIL THE REMOVAL OF THE INITIAL CUTTING OR SUBSEQUENT CUTTINGS. MAINTAIN A GRASS HEIGHT OF AT LEAST 3 INCHES UNLESS OTHERWISE SPECIFIED.

STANDARDS AND SPECIFICATIONS FOR TEMPORARY STABILIZATION

TO STABILIZE DISTURBED SOILS WITH VEGETATION FOR UP TO 6 MONTHS.

- PURPOSE**
- TO USE FAST GROWING VEGETATION THAT PROVIDES COVER ON DISTURBED SOILS.

CONDITIONS WHERE PRACTICE APPLIES

- EXPOSED SOILS WHERE GROUND COVER IS NEEDED FOR A PERIOD OF 6 MONTHS OR LESS. FOR LONGER DURATION OF TIME, PERMANENT STABILIZATION PRACTICES ARE REQUIRED.

CRITERIA

1. SELECT ONE OR MORE OF THE SPECIES OR SEED MIXTURES LISTED IN TABLE B.1 FOR THE APPROPRIATE PLANT HARDINESS ZONE (FROM FIGURE B.3), AND ENTER THEM IN THE TEMPORARY SEEDING SUMMARY BELOW ALONG WITH SEEDING DATES AND SEEDING RATES. SEEDING RATES ARE TO BE PLACED ON THE PLAN AND COMPLETED, THEN TABLE B.1 FULL FERTILIZER AND LIME RATES MUST BE PUT ON THE PLAN.
2. FOR SITES HAVING SOIL TESTS PERFORMED, USE AND SHOW THE RECOMMENDED RATES BY THE TESTING AGENCY. SOIL TESTS ARE NOT REQUIRED FOR TEMPORARY SEEDING.
3. WHEN STABILIZATION IS REQUIRED OUTSIDE OF A SEEDING SEASON, APPLY SEED AND MULCH OR STRAW MULCH ALONG AS PRESCRIBED IN SECTION B-4.3.1.8 AND MAINTAIN UNTIL THE NEXT SEEDING SEASON.

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT

John P. Sauer
HOWARD SCD
DATE: 8/13/14

ENGINEERS CERTIFICATE

I CERTIFY THAT THIS PLAN FOR SEDIMENT AND EROSION CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

Paul M. Sill, P.E.
SIGNATURE OF ENGINEER
DATE: 7/22/14

DEVELOPER'S CERTIFICATE

I HEREBY CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN FOR SEDIMENT AND EROSION CONTROL. THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF EROSION AND SEDIMENT BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.

Paul M. Sill, P.E.
SIGNATURE OF DEVELOPER
DATE: 7/22/14

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Paul M. Sill, P.E.
CHIEF, DEVELOPMENT ENGINEERING DIVISION
DATE: 8-14-14

Paul M. Sill, P.E.
CHIEF, DIVISION OF LAND DEVELOPMENT
DATE: 9/26/14

APPROVED: PLANNING BOARD OF HOWARD COUNTY

Paul M. Sill, P.E.
DATE: 04/01/2010

Paul M. Sill, P.E.
DATE: 9/2/14

STANDARDS AND SPECIFICATIONS FOR SOIL PREPARATION, TOPSOILING, AND SOIL AMENDMENTS

DEFINITION

- THE PROCESS OF PREPARING THE SOILS TO SUSTAIN ADEQUATE VEGETATIVE STABILIZATION.

- PURPOSE**
- TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH.

CONDITIONS WHERE PRACTICE APPLIES

- WHERE VEGETATIVE STABILIZATION IS TO BE ESTABLISHED.

CRITERIA

- A. SOIL PREPARATION**
1. TEMPORARY STABILIZATION
 - a. SEEDBED 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 DISC HARROWS MOUNTED ON CONSTRUCTION EQUIPMENT. AFTER THE SOIL IS LOOSENED, IT MUST NOT BE ROLLER OR DRAGGED SOOTH BUT LEFT IN THE ROUGHENED CONDITION. SLOPES 3:1 OR FLATTER ARE TO BE TRACKED WITH RIDGES RUNNING PARALLEL TO THE CONTOUR OF THE SLOPE.
 - b. APPLY FERTILIZER AND LIME AS PRESCRIBED ON THE PLANS.
 - c. INCORPORATE LIME AND FERTILIZER INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS.
 2. PERMANENT STABILIZATION
 - a. A SOIL TEST IS REQUIRED FOR ANY EARTH DISTURBANCE OF 5 ACRES OR MORE. THE MINIMUM SOIL CONDITIONS REQUIRED FOR PERMANENT VEGETATIVE ESTABLISHMENT ARE:
 - I. SOIL PH BETWEEN 6.0 AND 7.0.
 - II. SOLUBLE SALTS LESS THAN 600 PARTS PER MILLION (PPM).
 - III. SOIL CONTAINS LESS THAN 40 PERCENT FINE BUT ENOUGH FINE GRAINED MATERIAL (GREATER THAN 30 PERCENT SILT PLUS CLAY) TO PROVIDE THE CAPACITY TO HOLD A MODERATE AMOUNT OF MOISTURE. IN EXCEPT CASES, SUCH AS SANDY SOILS, THEN A SANDY SOIL (LESS THAN 30 PERCENT SILT PLUS CLAY) WOULD BE ACCEPTABLE.
 - IV. SOIL CONTAINS 1.5 PERCENT MINIMUM ORGANIC MATTER BY WEIGHT.
 - V. SOIL CONTAINS SUFFICIENT PORE SPACE TO PERMIT ADEQUATE ROOT PENETRATION.
 - b. APPLICATION OF AMENDMENTS OR TOPSOIL IS REQUIRED IF ON-SITE SOILS DO NOT MEET THE ABOVE CONDITIONS.
 - c. 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.
 - d. APPLY SOIL AMENDMENTS AS SPECIFIED ON THE APPROVED PLAN OR AS INDICATED BY THE RESULTS OF A SOIL TEST.
 - e. MIX SOIL AMENDMENTS TO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS. MAKE LAWN AREAS TO SMOOTH THE SURFACE, REMOVE LARGE OBJECTS LIKE STONES AND BRANCHES, AND READY THE AREA FOR SEED APPLICATION. LOOSEN SURFACE SOIL BY BRACING WITH A HEAVY CHAIN OR OTHER EQUIPMENT TO RELIEVE THE SURFACE WHERE SETTLING WILL NOT PERMIT NORMAL SEEDBED PREPARATION. TRACK SLOPES 3:1 OR FLATTER WITH TRACKED EQUIPMENT LEAVING THE SOIL IN AN IRREGULAR CONDITION WITH RIDGES RUNNING PARALLEL TO THE CONTOUR OF THE SLOPE. LEAVE THE TOP 3 TO 5 INCHES OF SOIL LOOSE AND FRAEABLE. SEEDBED LOOSENING MAY BE UNNECESSARY ON NEWLY DISTURBED AREAS.

B. TOPSOILING

1. TOPSOIL IS PLACED OVER PREPARED SUBSOIL PRIOR TO ESTABLISHMENT OF PERMANENT VEGETATION. THE SUBSOIL SHOULD BE LIGHTLY AND LOOSELY COMPACT TO A MINIMUM THICKNESS OF 4 INCHES. SOILS OF CONCERN HAVE LOW MOISTURE CONTENT, LOW NUTRIENT LEVELS, LOW PH, MATERIALS TOXIC TO PLANTS, AND/OR UNACCEPTABLE SOIL GRADATION.
2. TOPSOIL SALVAGED FROM AN EXISTING SITE MAY BE USED PROVIDED IT MEETS THE STANDARDS AS SET FORTH IN THESE SPECIFICATIONS. TYPICALLY, THE DEPTH OF TOPSOIL TO BE SALVAGED FOR A GIVEN SOIL TYPE CAN BE DETERMINED IN THE REPRESENTATIVE SOIL PROFILE SECTION IN THE SOIL SURVEY PUBLISHED BY USDA-NRCS.
3. TOPSOILING IS LIMITED TO AREAS HAVING 2:1 OR FLATTER SLOPES WHERE:
 - a. THE TEXTURE OF THE EXPOSED SUBSOIL MATERIAL IS NOT ADEQUATE TO PRODUCE VEGETATIVE GROWTH.
 - b. THE SOIL MATERIAL IS SO SHALLOW THAT THE ROOTING ZONE IS NOT DEEP ENOUGH TO SUPPORT PLANTS OR FURNISH CONTINUOUS SUPPLY OF MOISTURE AND NUTRIENTS.
 - c. THE ORIGINAL SOIL TO BE VEGETATED CONTAINS MATERIAL TOXIC TO PLANT GROWTH.
 - d. THE SOIL IS SO ACIDIC THAT TREATMENT WITH LIMESTONE IS NOT FEASIBLE.
 - e. AREAS HAVING SLOPES STEEPER THAN 2:1 REQUIRE SPECIAL CONSIDERATION AND DESIGN.
4. TOPSOIL SPECIFICATIONS: SOIL TO BE USED AS TOPSOIL MUST MEET THE FOLLOWING CRITERIA:
 - a. TOPSOIL MUST BE A LOAM, SANDY LOAM, CLAY LOAM, SILT LOAM, SANDY CLAY LOAM, OR CLAY LOAM. OTHER SOILS MAY BE USED IF RECOMMENDED BY AN AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY. TOPSOIL MUST NOT BE A MIXTURE OF CONTRASTING TEXTURES SUBSOLS MUST CONTAIN LESS THAN 5 PERCENT BY VOLUME OF CHISELS, STONES, SLAG, COARSE FRAGMENTS OF BRICK, STICKS, RODS, TRASH, OR OTHER MATERIALS LARGER THAN 1 1/2 INCHES IN DIAMETER.
 - b. TOPSOIL MUST BE FREE OF NOXIOUS PLANTS OR PLANT PARTS SUCH AS BERMUDA GRASS, QUACK GRASS, JOHNSON GRASS, NUT SEDGE, POISON IVY, THISTLE, OR OTHERS AS SPECIFIED.
 - c. TOPSOIL, SUBSTITUTED SOIL AMENDMENTS, AS RECOMMENDED BY A QUALIFIED AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY, MAY BE USED IN LIEU OF NATURAL TOPSOIL.

- a. EROSION AND SEDIMENT CONTROL PRACTICES MUST BE MAINTAINED WHEN APPLYING TOPSOIL.
- b. UNIFORMLY DISTRIBUTE TOPSOIL IN A 5 TO 12 INCH LAYER AND LIGHTLY COMPACT TO A MINIMUM THICKNESS OF 4 INCHES. SPREADING IS TO BE PERFORMED IN SUCH A MANNER THAT SOILING OR SEEDING CAN PROCEED WITH A MINIMUM OF ADDITIONAL SOIL PREPARATION AND TILLAGE. ANY IRREGULARITIES IN THE SURFACE RESULTING FROM TOPSOILING OR OTHER TREATMENTS MUST BE CORRECTED IN ORDER TO PREVENT THE FORMATION OF DEPRESSIONS OR WATER POCKETS.
- c. TOPSOIL MUST NOT BE PLACED IF THE TOPSOIL OR SUBSOIL IS IN A FROZEN OR MUDDY CONDITION, WHEN THE SUBSOIL IS EXCESSIVELY WET OR IN A CONDITION THAT MAY OTHERWISE BE DETERMINED TO PROPER GRADING AND SEEDING PREPARATION.

- c. SOIL AMENDMENTS (FERTILIZER AND LIME SPECIFICATIONS)
 1. SOIL TESTS MUST BE PERFORMED TO DETERMINE THE EXACT RATIOS AND APPLICATION RATES FOR STEEP SLOPES AND OTHER DISTURBED AREAS OF 5 ACRES OR MORE. SOIL TESTS MUST BE ANALYZED AND PERFORMED BY A RECOGNIZED PRIVATE OR COMMERCIAL LABORATORY. SOIL SAMPLES TAKEN FOR ENGINEERING PURPOSES MAY ALSO BE USED FOR CHEMICAL ANALYSES.
 2. FERTILIZER AND LIME FORM IN COMPOSITION, BRAND, AND SOURCE FOR ACCURATE APPLICATION BY APPROPRIATE EQUIPMENT. MANURE MAY BE SUBSTITUTED FOR FERTILIZER WITH PRIOR APPROVAL FROM THE AUTHORITY. FERTILIZER AND LIME APPLICATIONS MUST BE DELIVERED TO THE SITE FULLY LABELED ACCORDING TO THE APPLICABLE LAWS AND MUST BEAR THE NAME, TRADE NAME OR TRADEMARK AND WARRANTY OF THE PRODUCER.
 3. LIME MATERIALS (HYDRATED LIME) AND GYPSUM MUST BE SUBSTITUTED EXCEPT WHEN HYDROXYDISED WHICH CONTAINS AT LEAST 50 PERCENT TITANIUM DIOXIDE (CALCIUM OXIDE PLUS MAGNESIUM OXIDE). LIMESTONE MUST BE GRIND TO SUCH FINENESS THAT AT LEAST 50 PERCENT WILL PASS THROUGH A #100 MESH SIEVE AND 85 TO 100 PERCENT WILL PASS THROUGH A #20 MESH SIEVE.
 4. LIME AND FERTILIZERS ARE TO BE EVENLY DISTRIBUTED AND INCORPORATED INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS.
 5. WHERE THE SUBSOIL IS EITHER HIGHLY ACIDIC OR COMPOSED OF HEAVY CLAYS, SPREAD ORGANIC LIMESTONE AT THE RATE OF 4 TO 5 TONS/ACRE (200-400 POUNDS PER 1,000 SQUARE FEET) PRIOR TO THE PLACEMENT OF TOPSOIL.

STANDARD STABILIZATION NOTE

FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION MUST BE COMPLETED WITHIN:

- a. THREE (3) CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER DIKES, SWALES, DITCHES, PERIMETER SLOPES AND ALL SLOPES STEEPER THAN A HORIZONTAL TO VERTICAL (3:1).
- b. SEVEN (7) CALENDAR DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE UNDER ACTIVE GRADING.

DURING GRADING AND AFTER EACH RAINFALL, CONTRACTOR WILL INSPECT AND PROVIDE NECESSARY MAINTENANCE TO THE SEDIMENT CONTROL MEASURES ON THIS PLAN.

HOWARD SOIL CONSERVATION DISTRICT STANDARD SEDIMENT CONTROL NOTES

1. A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION (313-1855).
2. ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE MOST CURRENT MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL AND RESIONS THEREO.
3. FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN A) CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES AND ALL SLOPES GREATER THAN 3:1, B) 7 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
4. ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDING (SEC. B-4.4), TEMPORARY SEEDING (SEC. B-4.4) AND MULCHING (SEC. B-4.3). TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.
5. ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION DURING GRADING AND AFTER EACH RAINFALL. CONTRACTOR SHALL MAINTAIN PERMITS FOR ALL SEDIMENT CONTROL STRUCTURES.
6. SITE ANALYSIS:

TOTAL AREA OF SITE	24.28 ACRES +/-
AREA TO BE ROOFED OR PAVED	3.6 ACRES +/-
AREA TO BE VEGETATIVELY STABILIZED	5.90 ACRES +/-
TOTAL CUT	39,991 CU. YDS +/-
TOTAL FILL	22,646 CU. YDS +/-

WHERE RUNOFF CONCENTRATES ALONG THE TOE OF THE STOCKPILE FILL, AN APPROPRIATE EROSION/SEDIMENT CONTROL PRACTICE MUST BE USED TO INTERCEPT THE DISCHARGE.

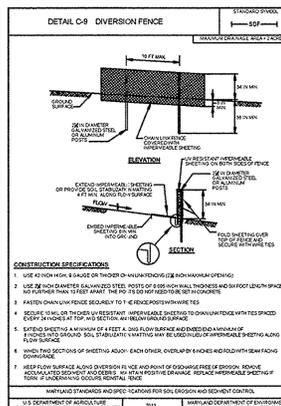
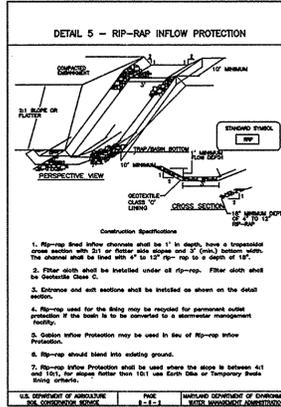
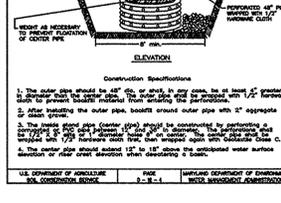
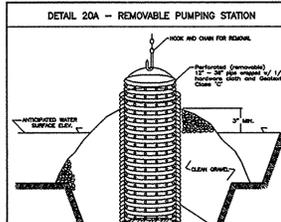
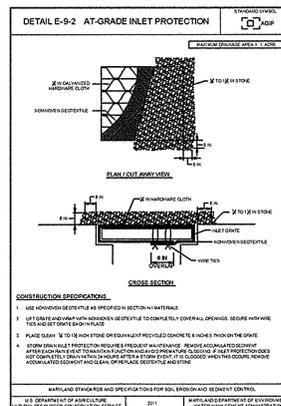
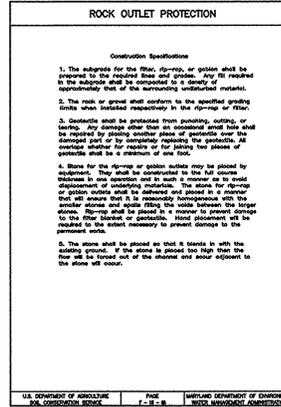
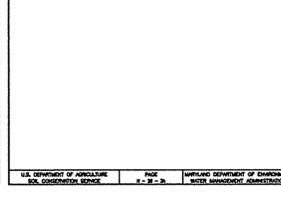
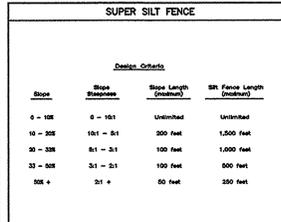
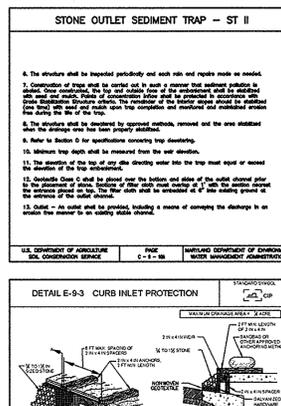
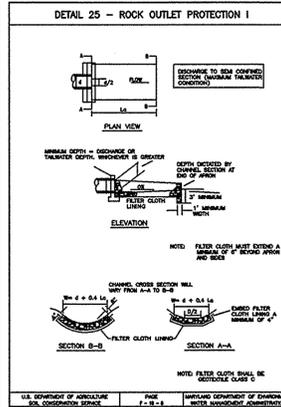
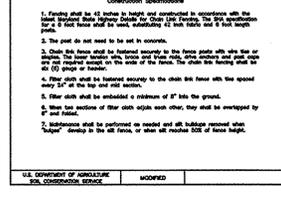
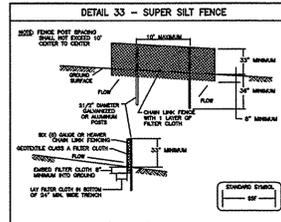
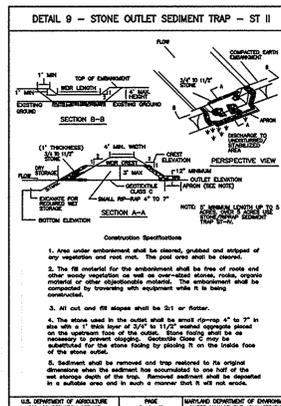
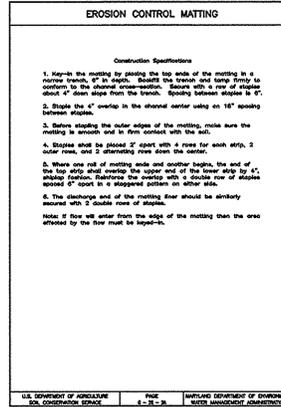
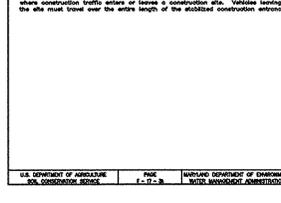
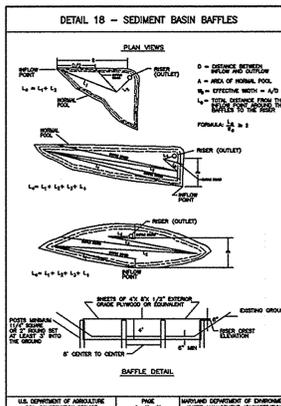
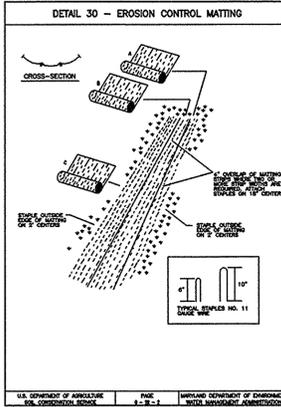
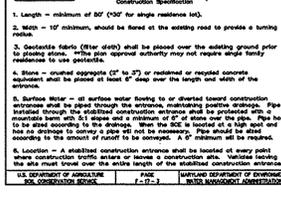
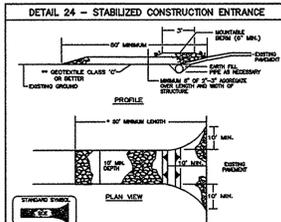
STOCKPILES MUST BE STABILIZED IN ACCORDANCE WITH THE 37 DAY STABILIZATION REQUIREMENT AS WELL AS STANDARD B-4.1 INCREMENTAL STABILIZATION AND STANDARD B-4.2 TEMPORARY STABILIZATION.

IF THE STOCKPILE IS LOCATED ON AN IMPERVIOUS SURFACE, A LINER SHOULD BE PROVIDED BELOW THE STOCKPILE TO FACILITATE CLEANUP. STOCKPILES CONTAINING CONTAMINATED MATERIAL MUST BE COVERED WITH IMPERMEABLE SHEETING.

THE STOCKPILE AREA MUST CONTINUOUSLY MEET THE REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT IN ACCORDANCE WITH SECTION B-4 VEGETATIVE STABILIZATION. SIDE SLOPES MUST BE MAINTAINED AT A HORIZONTAL TO VERTICAL RATIO. THE STOCKPILE AREA MUST BE KEPT FREE OF EROSION. IF THE VERTICAL HEIGHT OF A STOCKPILE EXCEEDS 20 FEET FOR 2:1 SLOPES, 30 FEET FOR 3:1 SLOPES, OR 40 FEET FOR 4:1 SLOPES, BENCHING MUST BE PROVIDED IN ACCORDANCE WITH SECTION B-3 LAND GRADING.

*EARTHWORK QUANTITIES ARE SOLELY FOR THE PURPOSE OF CALCULATING FEES. CONTRACTOR TO VERIFY ALL QUANTITIES PRIOR TO THE START OF CONSTRUCTION.

PERMITS FOR ALL SEDIMENT CONTROL STRUCTURES ARE TO BE OBTAINED BY CONTRACTOR. WITH THE APPROVAL OF THE SEDIMENT CONTROL INSPECTOR WITH AN APPROVED AND ACTIVE GRADING PERMIT.



SEQUENCE OF CONSTRUCTION

- PHASE 1A**
1. OBTAIN GRADING PERMIT. CONTRACTOR TO CONFORM TO CONDITIONS OF MARYLAND DEPARTMENT OF THE ENVIRONMENT, NATURAL RESOURCES AND WATERWAYS PERMIT 02-0900200004 AND U.S. ARMY CORPS OF ENGINEERS PERMIT 02-1454-16. (1 DAY)
 2. CONTRACTOR SHALL NOTIFY MISS UTILITY, 1-800-257-7777 (A MINIMUM OF 3 WORKING DAYS)
 3. NOTIFY THE HOWARD COUNTY INSPECTIONS OFFICE AT 410-313-1523 TO SCHEDULE A PRE-CONSTRUCTION MEETING.
 4. CONDUCT PRE-CONSTRUCTION MEETINGS, RECEIVE APPROVAL TO BEGIN INSTALLATION OF EROSION AND SEDIMENT CONTROL.
 5. INSTALL PERIMETER SEDIMENT CONTROL S IN WITHIN PHASE 1 AS SHOWN ON PLANS. CLEAR AS NECESSARY TO COMPLETE THIS WORK. CONTACT SEDIMENT CONTROL INSPECTOR BEFORE PROCEEDING WITH PHASE 1A.
 6. WITH APPROVAL, SEDIMENT CONTROL INSPECTOR, CLEAR AND MASS GRADE PHASE 1A. (35 DAYS)
 7. INSTALL GRADE AND SLOPE IN PHASE 1A. (1 WEEK)
 8. INSTALL THE STORM DRAIN RUN FROM I-1 TO I-2 AND BLOCK INLETS. (1 WEEK)
 9. INSTALL SLEEVING FOR SEWER CONSTRUCTION IN THE AREA OF THE FIRE LANE. (1 WEEK)
 10. FINE GRADE AND PAVE FIRE LANE IN PHASE 1A. (2 WEEKS)
 11. AFTER COMPLETION OF GRADING, STABILIZE ALL UN-STABILIZED AREAS IN PHASE 1A. (5 DAYS)
- PHASE 2**
12. WITH APPROVAL OF SEDIMENT CONTROL INSPECTOR AND PERMISSION TO PROCEED, INSTALL SEDIMENT CONTROL S IN PHASE 2, INCLUDING SEDIMENT TRAP #1. (2 WEEKS)
 13. WITH APPROVAL OF SEDIMENT CONTROL INSPECTOR, CLEAR AND MASS GRADE PHASE 2. (35 DAYS)
 14. BEING BUILDING CONSTRUCTION. (2 MONTHS)
 15. INSTALL PERIMETER SEDIMENT CONTROL S WITHIN PHASE 2 AS SHOWN ON PLANS. CLEAR AS NECESSARY TO COMPLETE THIS WORK. CONTACT SEDIMENT CONTROL INSPECTOR BEFORE PROCEEDING WITH PHASE 2.
 16. BEGIN CONSTRUCTION OF THE REMAINING STORM DRAIN SYSTEMS (INSTALLING TEMPORARY RIP-RAP TO UNDISTURBED GROUND) AT THE LOCATION OF BORTERATION FACILITIES #1 & #2. INSTALL THE REQUIRED INLET PROTECTION AT I-3, I-4, I-5 AND I-6. (30 DAYS)
 17. ROUGH GRADE BIDS (DO NOT CONSTRUCT BIG AT THIS TIME). (2 WEEKS)
 18. CONSTRUCT CURBS AND GUTTER (CURB IN THE AREAS OF RETAINING WALLS #1-#4 TO BE POURED PRIOR TO WALL CONSTRUCTION) AND PAVE SITE (BASE COURSE ONLY). (30 DAYS)
 19. INSTALL SIDEWALKS, SURFACE PAVEMENT AND STRIPE PAINTING. (2 WEEKS)
 20. INSTALL LANDSCAPING, BEEF & MULCH. (1 WEEK)
 21. PERMANENTLY STABILIZE ALL UN-STABILIZED AREAS. REQUEST PERMISSION TO REMOVE TEMPORARY TRAP. (1 WEEK)
 22. FINAL CONSTRUCT ALL DISCRETIONARY FACILITIES INCLUDING FOREBAYS AT ES-2 AND ES-3. (2 MONTHS)
 23. COMPLETE FINAL GRADING. (30 DAYS)
 24. NOTIFY INSPECTOR AND REQUEST PERMISSION TO REMOVE ALL REMAINING SEDIMENT CONTROL DEVICES.
 25. AS-BUILT SITE AND PREPARE AS-BUILT DRAWINGS AS NECESSARY. (14 DAYS)

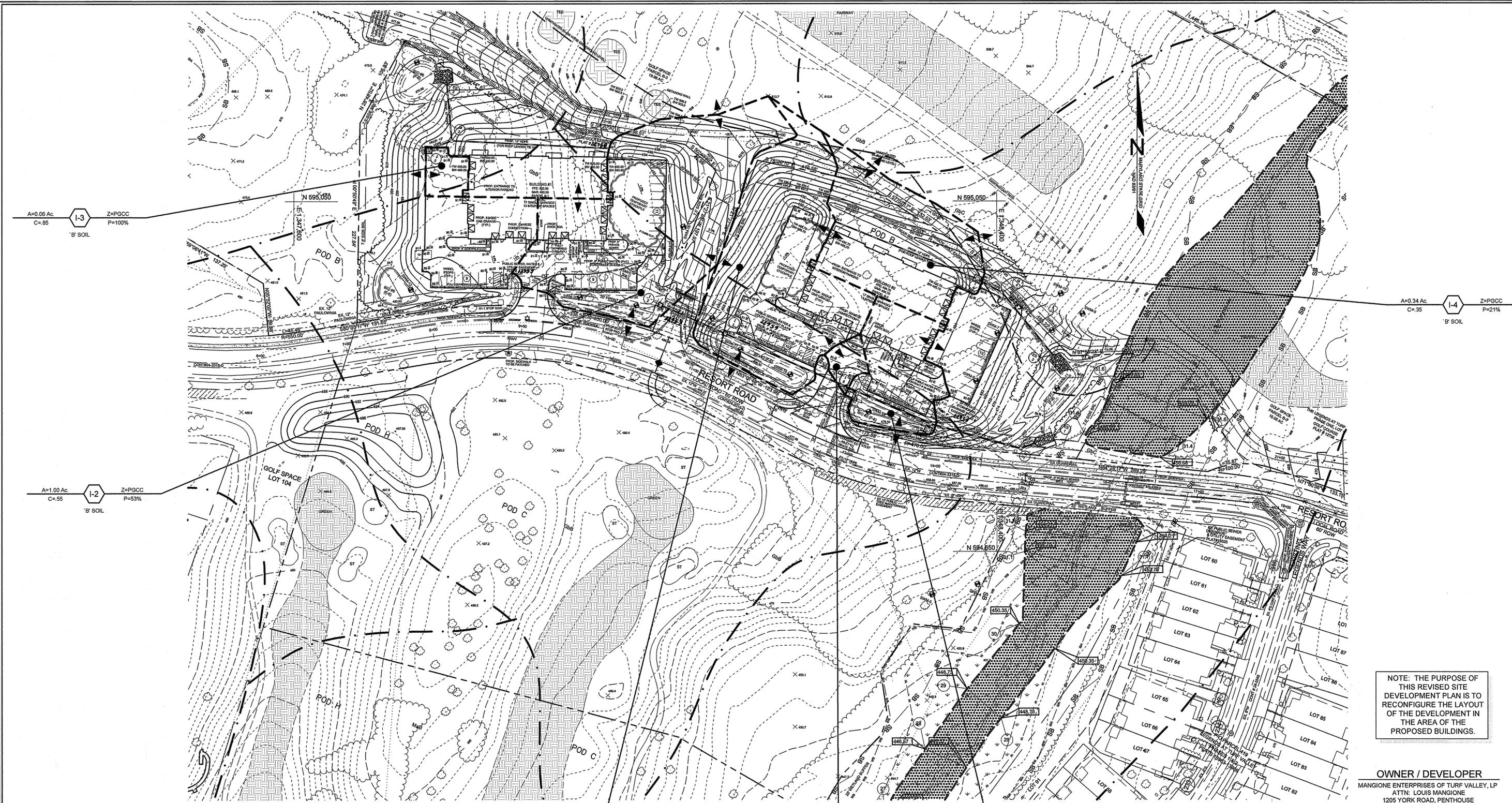
NO.	DESCRIPTION	DATE
1.	REVISED PER NEW LAYOUT	7/11/14
	REVISIONS	

- INLETS I-3, I-4 & I-5 TO HAVE AT GRADE INLET PROTECTION (AIP)
- INLET I-6 TO HAVE CURB INLET PROTECTION (CIP)
- INLETS I-1 & I-2 TO BE BLOCKED

OWNER / DEVELOPER
MANGIONE ENTERPRISES OF TURF VALLEY, LP
ATTN: LOUIS MANGIONE
1205 YORK ROAD, PENTHOUSE
LUTHERVILLE, MARYLAND 21093
410.825.8400

SEDIMENT CONTROL NOTES & DETAILS
VANTAGE CONDOMINIUMS AT TURF VALLEY
(PODS B, C & H : SEC IV: RESIDENTIAL PHASE IV)
ZONE: PGCC-1

TAX MAP 17 GRIDS 7, 12 & 18
2ND ELECTION DISTRICT
PARCELS 8 &



A=0.06 Ac.
C=85
Z=PGCC
P=100%
1-3
'B' SOIL

A=0.34 Ac.
C=95
Z=PGCC
P=21%
1-4
'B' SOIL

A=1.00 Ac.
C=55
Z=PGCC
P=53%
1-2
'B' SOIL

A=0.82 Ac.
C=49
Z=PGCC
P=43%
1-1
'B' SOIL

A=0.04 Ac.
C=85
Z=PGCC
P=100%
1-6
'B' SOIL

A=0.32 Ac.
C=73
Z=PGCC
P=82%
1-5
'B' SOIL

NOTE: THE PURPOSE OF THIS REVISED SITE DEVELOPMENT PLAN IS TO RECONFIGURE THE LAYOUT OF THE DEVELOPMENT IN THE AREA OF THE PROPOSED BUILDINGS.

OWNER / DEVELOPER
MANGIONE ENTERPRISES OF TURF VALLEY, LP
ATTN: LOUIS MANGIONE
1205 YORK ROAD, PENTHOUSE
LUTHERVILLE, MARYLAND 21093
410.825.8400

APPROVED
PLANNING BOARD OF HOWARD COUNTY

DATE 04/01/2010
[Signature]

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
[Signature] 8-14-14
CHIEF, DEVELOPMENT ENGINEERING DIVISION & DATE
[Signature] 9/02/14
CHIEF, DIVISION OF LAND DEVELOPMENT & DATE
[Signature] 9/14/14
DIRECTOR DATE

INLET DRAINAGE AREA MAP

VANTAGE CONDOMINIUMS AT TURF VALLEY
(PODS B, C & H : SEC IV: RESIDENTIAL PHASE IVE)
ZONE: PGCC-1

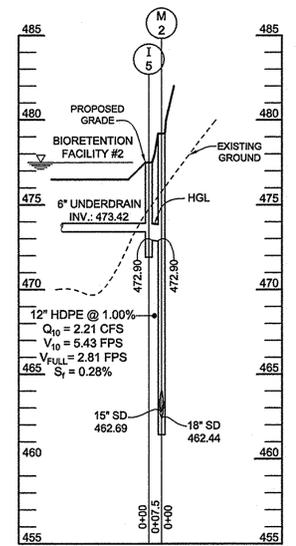
TAX MAP 17 GRIDS 7, 12 & 18 PARCELS 8 & 706
2ND ELECTION DISTRICT HOWARD COUNTY, MARYLAND

Sill · Adcock & Associates · LLC
Engineers · Surveyors · Planners
3300 North Ridge Road, Suite 160
Ellicott City, Maryland 21043
Phone: 443.325.7682 Fax: 443.325.7685
Email: info@silladcock.com

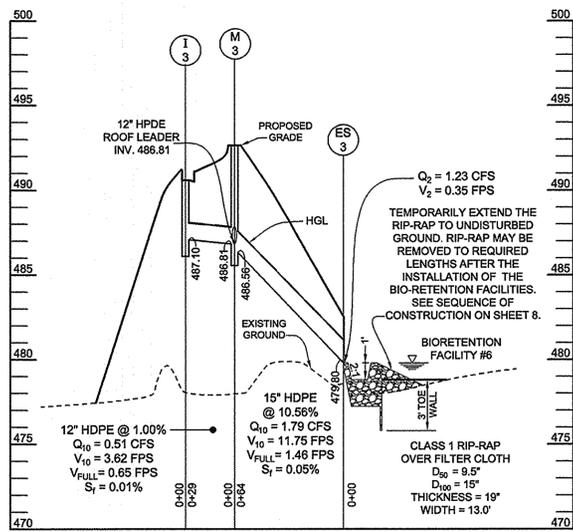
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DRAWN BY: JT_BK
CHECKED BY: PS
SCALE: 1" = 50'
DATE: JULY 11, 2014
PROJECT #: 08-060
SHEET #: 9 of 21

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. 32023, EXPIRATION DATE: JUNE 30, 2015.

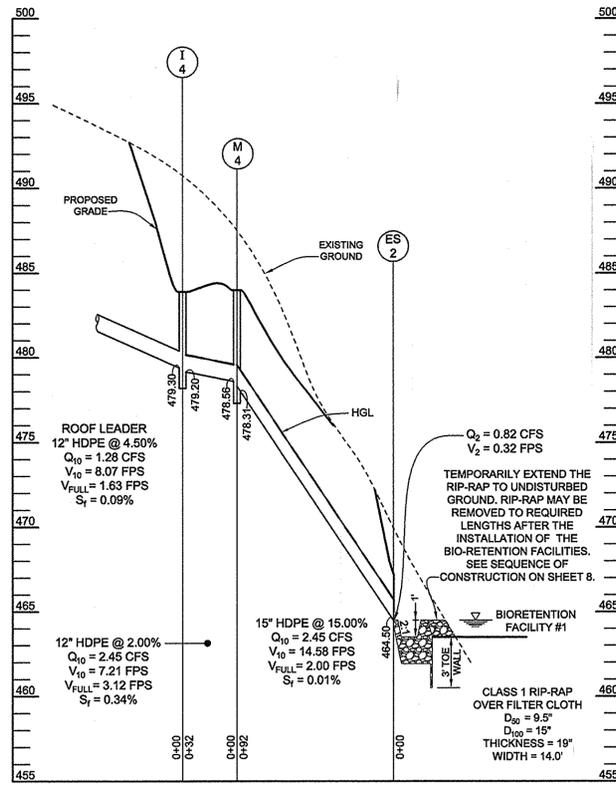
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	REVISIONS	



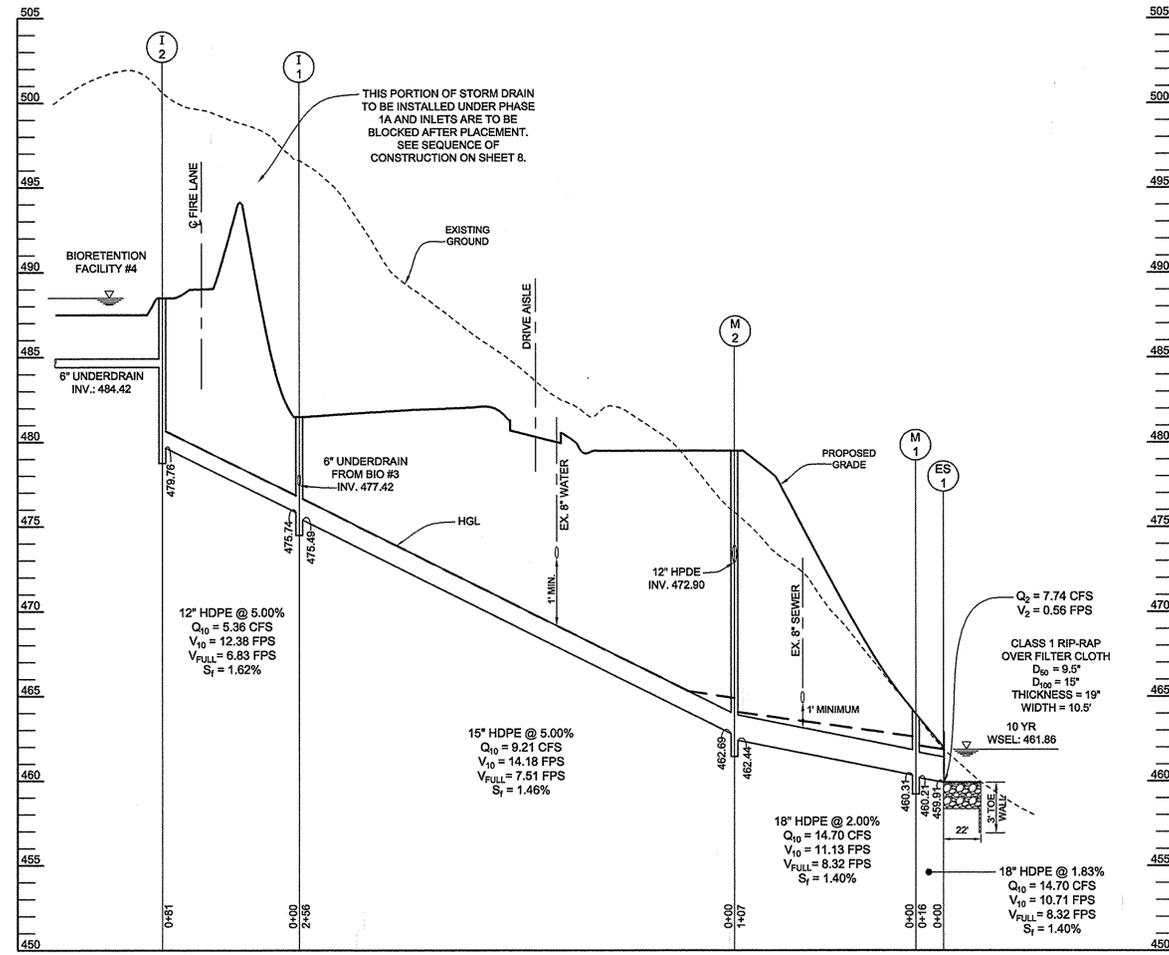
STORMDRAIN PROFILE I-5 TO M-2
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'



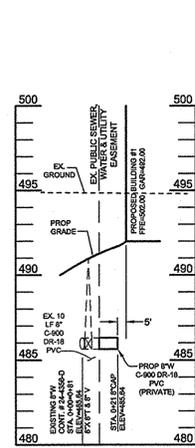
STORMDRAIN PROFILE I-3 TO ES-3
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'



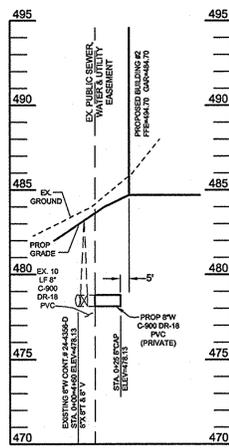
STORMDRAIN PROFILE I-4 TO ES-2
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'



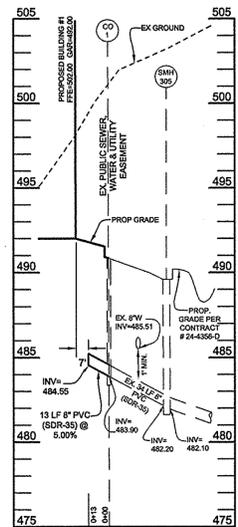
STORMDRAIN PROFILE I-2 TO ES-1
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'



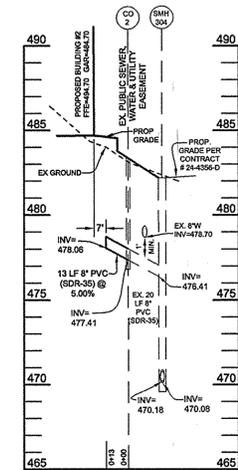
8" WHC-BLDG#1
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'



8" WHC-BLDG#2
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'



8" PRIVATE SEWER -BLDG 1
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'



8" PRIVATE SEWER -BLDG 2
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'

STRUCTURE SCHEDULE					
STR #	COORDINATES	TOP ELEV.	TYPE	INV. IN	INV. OUT
ES-1	N 594773.36 E 1348442.34	462.91	TYPE "A" HEADWALL HO CO STD. D-5.11	-	459.91
ES-2	N 594874.21 E 1348463.59	467.25	TYPE "A" HEADWALL HO CO STD. D-5.11	-	464.50
ES-3	N 595183.54 E 1347774.08	482.55	TYPE "A" HEADWALL HO CO STD. D-5.11	-	479.80
I-1	N 594899.29 E 1348090.46	481.50	TYPE "S" INLET STD. D-4.22	477.42 475.74	475.49
I-2	N 594931.92 E 1348016.72	488.50	TYPE "S" INLET STD. D-4.22	484.42	479.76
I-3	N 595109.34 E 1347752.81	490.60	TYPE "S" INLET STD. D-4.22	-	487.10
I-4	N 594945.96 E 1348405.78	483.90	TYPE "S" INLET STD. D-4.22	479.30	479.20
I-5	N 594788.84 E 1348321.30	477.50	TYPE "S" INLET STD. D-4.22	473.42	472.90
I-6	N 594829.55 E 1348231.92	478.38*	CHUTE INLET STD. SHA MD-374.65	478.53	478.38
M-1	N 594767.54 E 1348427.06	464.00	48" DIA. MH HO CO STD. G-5.12	460.31	460.21
M-2	N 594795.66 E 1348324.33	479.20	48" DIA. MH HO CO STD. G-5.12	472.90	462.69
M-3	N 595119.67 E 1347779.61	492.64	48" DIA. MH HO CO STD. G-5.12	486.81	486.56
M-4	N 594945.96 E 1348405.78	484.00	48" DIA. MH HO CO STD. G-5.12	478.56	478.31

NOTE: COORDINATES FOR CURB INLETS ARE AT CENTER FACE OF CURB, FOR MANHOLES AND GRATE INLETS, COORDINATES ARE AT CENTER OF STRUCTURE. FOR END SECTIONS, COORDINATES ARE AT CONNECTION WITH STORM DRAIN PIPE.

*ELEVATION IS TAKEN FROM THE TOP OF CURB AT THE LOW SIDE OF THE FLOWLINE.

STORM DRAIN PIPE SCHEDULE		
SIZE	TYPE	LENGTH
6"	PVC (SOLID)	131 L.F.
6"	PVC (PERFORATED)	372 L.F.
12"	HDPE	150 L.F. *
15"	HDPE	412 L.F.
18"	HDPE	123 L.F.

* EXCLUDING ROOF LEADERS

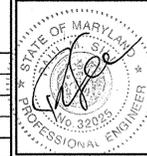
NOTE: THE PURPOSE OF THIS REVISED SITE DEVELOPMENT PLAN IS TO RECONFIGURE THE LAYOUT OF THE DEVELOPMENT IN THE AREA OF THE PROPOSED BUILDINGS.

OWNER / DEVELOPER
MANGIONE ENTERPRISES OF TURF VALLEY, LP
ATTN: LOUIS MANGIONE
1205 YORK ROAD, PENTHOUSE
LUTHERVILLE, MARYLAND 21093
410.825.8400

STORM DRAIN, WATER & SEWER PROFILES
VANTAGE CONDOMINIUMS AT TURF VALLEY
(PODS B, C & H : SEC IV: RESIDENTIAL PHASE IVE)
ZONE: PGCC-1

TAX MAP 17 GRIDS 7, 12 & 18
2ND ELECTION DISTRICT

PARCELS 8 & 706
HOWARD COUNTY, MARYLAND



Sill Adcock & Associates · LLC
Engineers · Surveyors · Planners
3300 North Ridge Road, Suite 160
Ellicott City, Maryland 21043
Phone: 443.325.7682 Fax: 443.325.7685
Email: info@silladcock.com

DESIGN BY: PS_BK
DRAWN BY: JT_BK
CHECKED BY: PS
SCALE: AS SHOWN
DATE: JULY 11, 2014
PROJECT #: 09-080
SHEET #: 10 of 21

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. 33023, EXPIRATION DATE: JUNE 30, 2015.

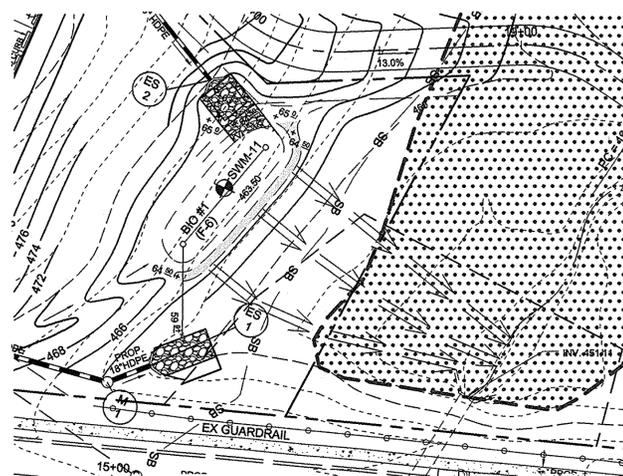
APPROVED
PLANNING BOARD OF HOWARD COUNTY

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

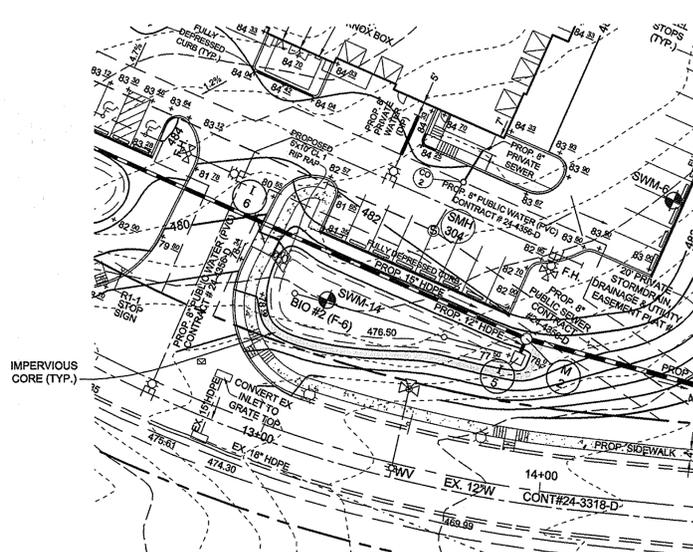
DATE: 04/01/2010

8.14.14
9/2/14
9/2/14

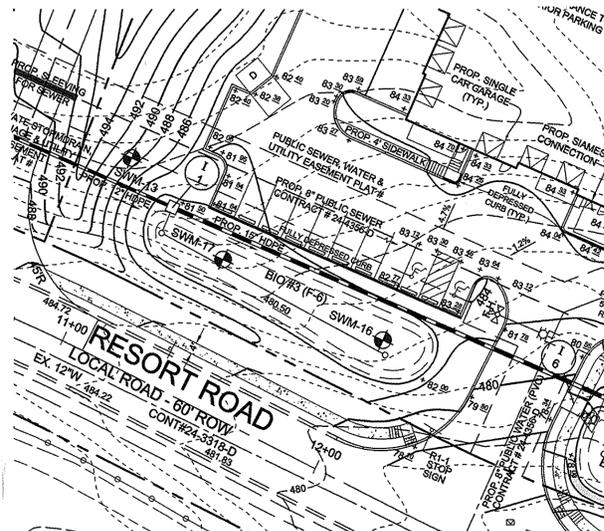
NO.	DESCRIPTION	DATE
1	REVISED PER NEW LAYOUT	7/11/14



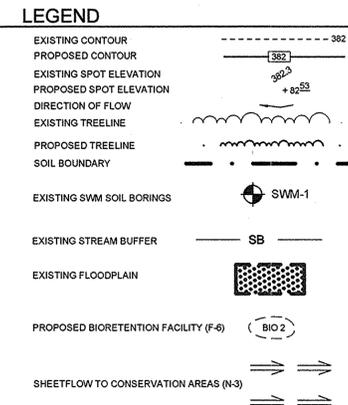
PLAN VIEW
SCALE: 1"=30'



PLAN VIEW
SCALE: 1"=30'

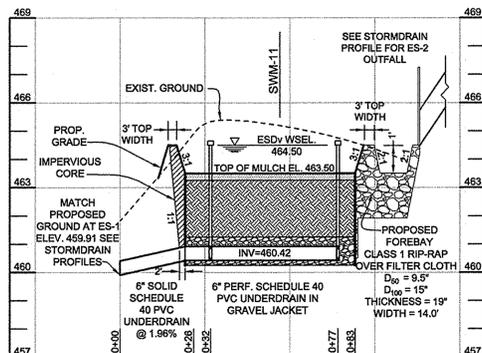


PLAN VIEW
SCALE: 1"=30'

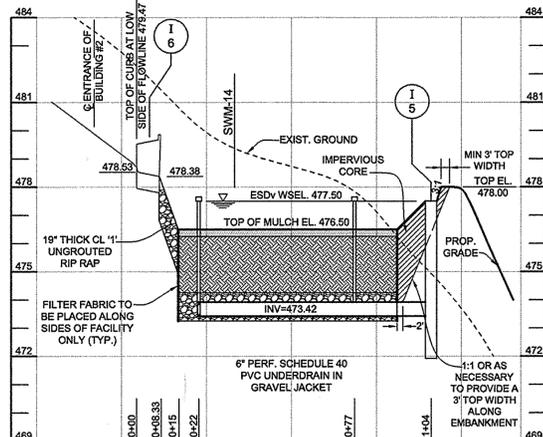


NOTE: FOR STORMDRAIN PROFILES SEE SHEET 10.

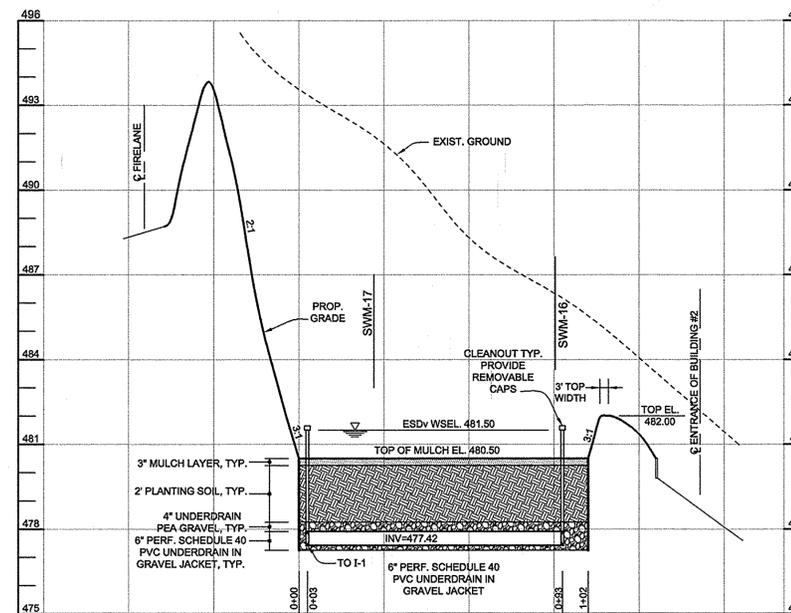
NOTE: FOR BIORETENTION SPECIFICATIONS AND SWM BORING LOGS SEE SHEET 13.



BIORETENTION (F-6) FACILITY 1 PROFILE
HORIZONTAL SCALE: 1" = 30'
VERTICAL SCALE: 1" = 3'



BIORETENTION (F-6) FACILITY 2 PROFILE
HORIZONTAL SCALE: 1" = 30'
VERTICAL SCALE: 1" = 3'



BIORETENTION (F-6) FACILITY 3 PROFILE
HORIZONTAL SCALE: 1" = 30'
VERTICAL SCALE: 1" = 3'

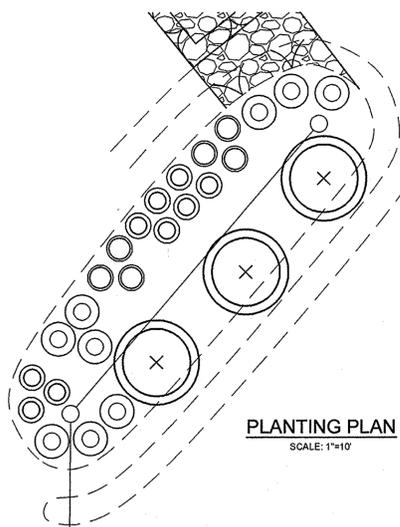
STORMWATER MANAGEMENT SUMMARY TABLE					
D.A.	Pe		ESDV		
	REQUIRED	PROVIDED	REQUIRED	PROVIDED	
1	1.7"	1.7"	2,923 CF	2,923 CF	
2	1.7"	1.7"	1,503 CF	1,503 CF	
3	1.7"	1.7"	2,228 CF	2,228 CF	
4	1.7"	1.7"	3,271 CF	3,271 CF	
5	1.7"	1.7"	1,655 CF	1,655 CF	
6	1.7"	1.7"	1,424 CF	1,424 CF	

- NOTES:
- TREATMENT FOR THE ENVIRONMENTAL SITE DESIGN VOLUMES (ESDV) WILL BE PROVIDED FOR AS FOLLOWS:
 - DRAINAGE AREA 1: BIORETENTION FACILITY (F-6) & SHEETFLOW TO CONSERVATION AREA (N-3)
 - DRAINAGE AREAS 2-6: BIORETENTION FACILITIES (F-6)
 - FIRE LANE: NON-ROOFTOP DISCONNECTS (N-2)
 - CHANNEL PROTECTION IS NOT REQUIRED SINCE ALL ESDV HAVE BEEN TREATED FULLY.
 - OVERBANK FLOOD PROTECTION VOLUME, QP, IS NOT REQUIRED FOR THIS SITE.
 - EXTREME FLOOD VOLUME, QF, IS NOT REQUIRED FOR THIS SITE.

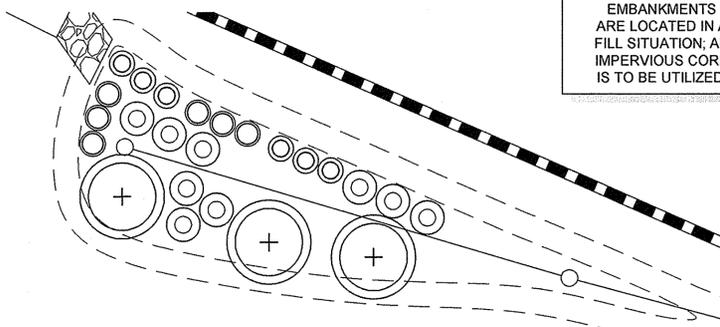
NOTE: WHERE EMBANKMENTS ARE LOCATED IN A FILL SITUATION, AN IMPERVIOUS CORE IS TO BE UTILIZED.

NOTE: THE PURPOSE OF THIS REVISED SITE DEVELOPMENT PLAN IS TO RECONFIGURE THE LAYOUT OF THE DEVELOPMENT IN THE AREA OF THE PROPOSED BUILDINGS.

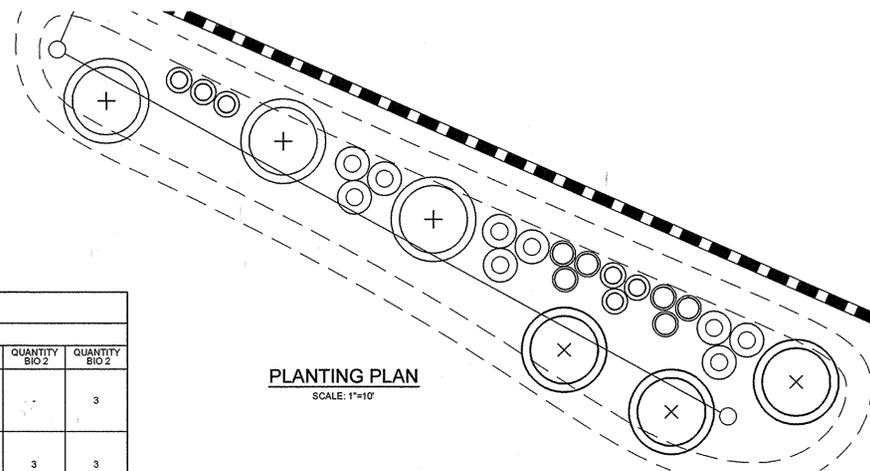
OWNER / DEVELOPER
MANGIONE ENTERPRISES OF TURF VALLEY, LP
ATTN: LOUIS MANGIONE
1205 YORK ROAD, PENTHOUSE
LUTHERVILLE, MARYLAND 21093
410.825.8400



PLANTING PLAN
SCALE: 1"=10'



PLANTING PLAN
SCALE: 1"=10'



PLANTING PLAN
SCALE: 1"=10'

BIORETENTION PLANT LIST									
LEGEND									
SHRUBS									
KEY	BOTANICAL NAME	COMMON NAME	SPACING	SIZE	REMARKS	QUANTITY BIO 1	QUANTITY BIO 2	QUANTITY BIO 3	
X	CAM	CORNUS AMOMUM	SILKY DOGWOOD	AS SHOWN (MIN. 10' O.C.)	18"-24" HT.	CONT.	3		3
+	VDE	VIBURNUM DENTATUM	ARROWWOOD	AS SHOWN (MIN. 10' O.C.)	18"-24" HT.	CONT.		3	3
HERBACEOUS SPECIES									
○	EFM	EUPATORIUM FISTULOSUM	JOE-PYE WEED	AS SHOWN (MIN. 4' O.C.)	1 QT./12" HT.	CONT. (3' O.C.)	9	9	9
○	MDI	MONARDA DIDYMA	BEEBALM	AS SHOWN (MIN. 3' O.C.)	1 QT.	CONT.	9	6	6
○	RLA	RUDEBECKIA LACINIATA	TALL CONEFLOWER	AS SHOWN (MIN. 3' O.C.)	1 QT.	CONT.	6	6	6

NOTE: PLANT MATERIAL MUST COVER 50% OF THE MULCH AREA AT MATURE GROWTH.
*INTERPERSE PLANTINGS THROUGHOUT BIORETENTION FILTER/MULCH AREA

NO.	DESCRIPTION	DATE
1	REVISED PER NEW LAYOUT	7/11/14

APPROVED
PLANNING BOARD OF HOWARD COUNTY

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 Chief, Development Engineering Division: *Charles Edmund* 8-14-14
 Chief, Division of Land Development: *Robert J. ...* 9/26/14
 Director: *Mark A. ...* 9/1/14

DATE: 04/01/2010

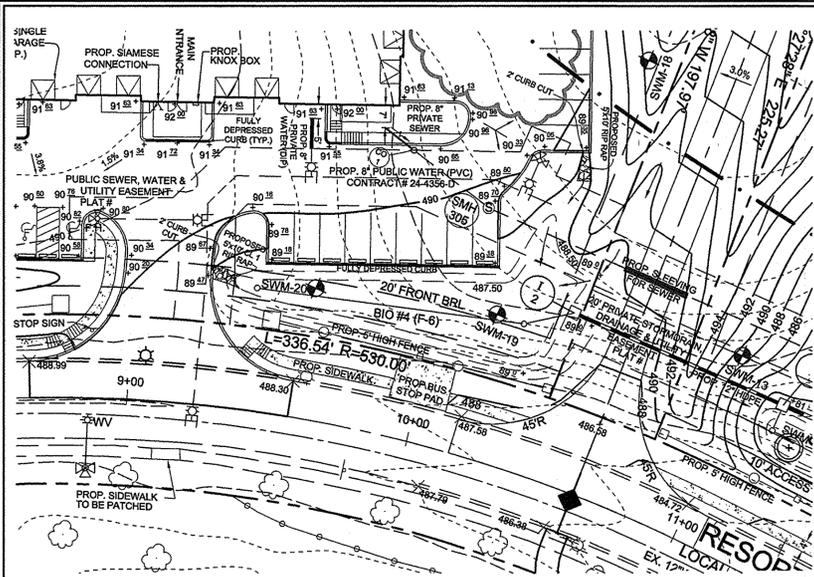
STORMWATER MANAGEMENT DETAILS
VANTAGE CONDOMINIUMS AT TURF VALLEY
(PODS B, C & H : SEC IV: RESIDENTIAL PHASE IVE)
ZONE: PGCC-1

TAX MAP 17 GRIDS 7, 12 & 18 PARCELS 8 & 706
2ND ELECTION DISTRICT HOWARD COUNTY, MARYLAND

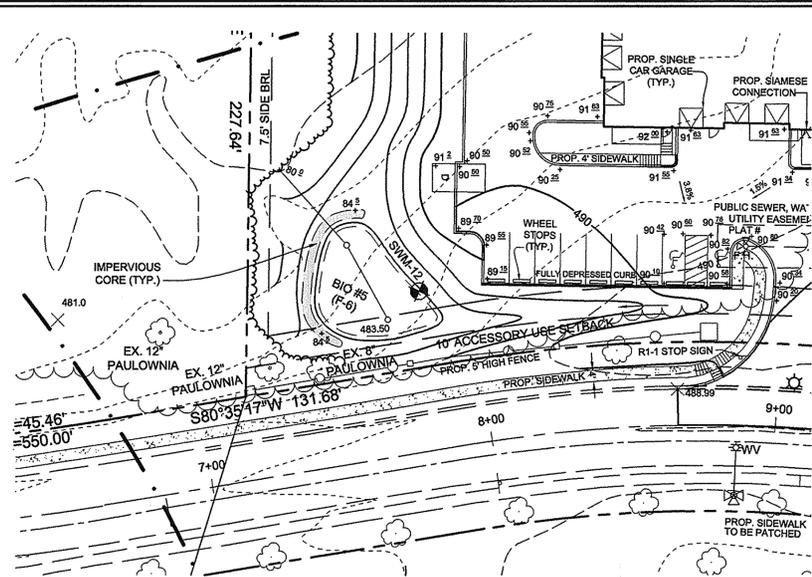
Sill · Adcock & Associates · LLC
Engineers · Surveyors · Planners
3300 North Ridge Road, Suite 160
Ellicott City, Maryland 21043
Phone: 443.325.7682 Fax: 443.325.7685
Email: info@salland.com

DESIGN BY: PS, BK
DRAWN BY: JT, BK
CHECKED BY: PS
SCALE: AS SHOWN
DATE: JULY 11, 2014
PROJECT #: 09-080
SHEET #: 11 of 21

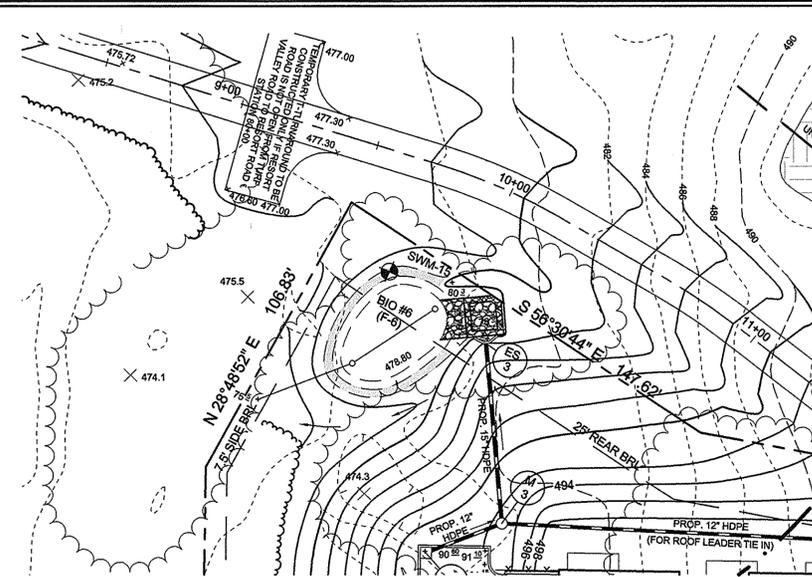
PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 32025, EXPIRATION DATE: JUNE 30, 2015



PLAN VIEW
SCALE: 1"=30'



PLAN VIEW
SCALE: 1"=30'



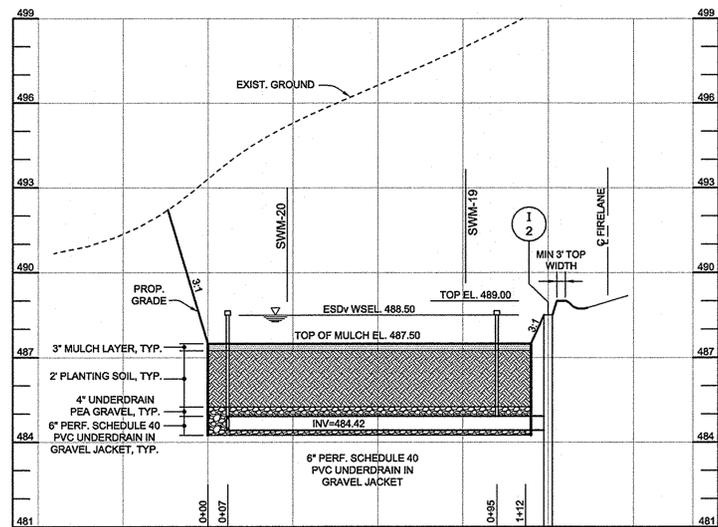
PLAN VIEW
SCALE: 1"=30'

LEGEND

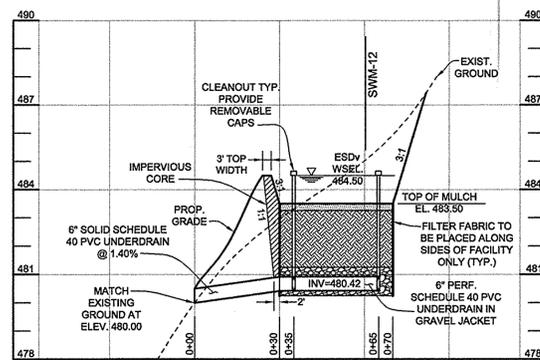
- EXISTING CONTOUR
- PROPOSED CONTOUR
- EXISTING SPOT ELEVATION
- PROPOSED SPOT ELEVATION
- DIRECTION OF FLOW
- EXISTING TREELINE
- PROPOSED TREELINE
- SOIL BOUNDARY
- EXISTING SWM SOIL BORINGS
- PROPOSED BIORETENTION FACILITY (F-6)

NOTE: FOR STORMDRAIN PROFILES SEE SHEET 10.

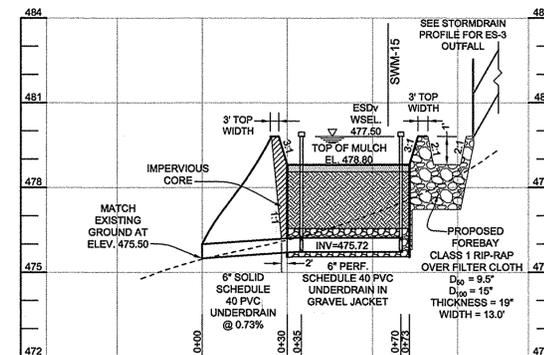
NOTE: FOR BIORETENTION SPECIFICATIONS AND SWM BORING LOGS SEE SHEET 13.



BIORETENTION (F-6) FACILITY 4 PROFILE
HORIZONTAL SCALE: 1" = 30'
VERTICAL SCALE: 1" = 3'

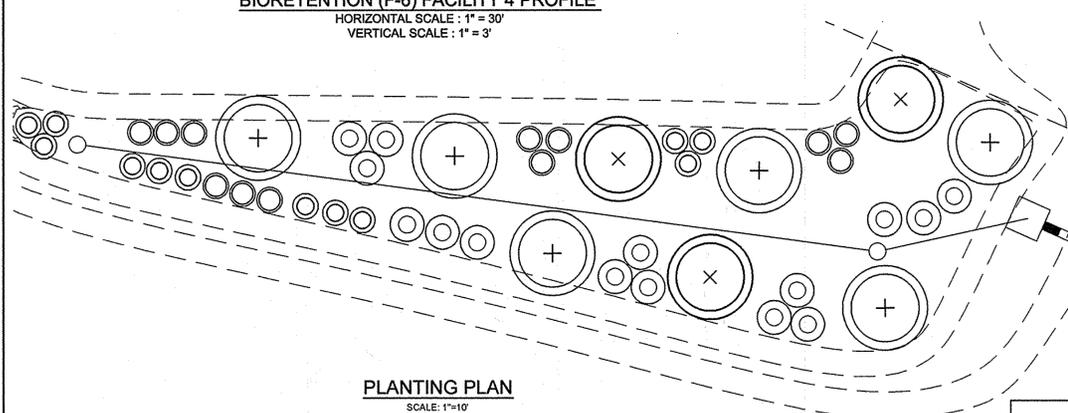


BIORETENTION (F-6) FACILITY 5 PROFILE
HORIZONTAL SCALE: 1" = 30'
VERTICAL SCALE: 1" = 3'

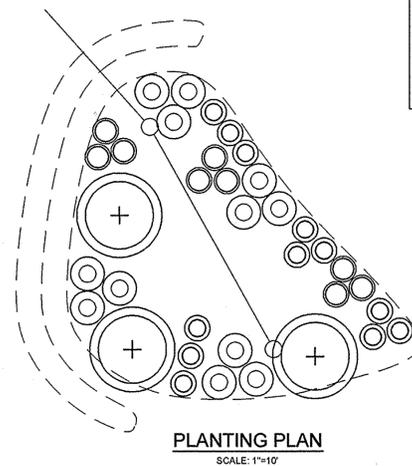


BIORETENTION (F-6) FACILITY 6 PROFILE
HORIZONTAL SCALE: 1" = 30'
VERTICAL SCALE: 1" = 3'

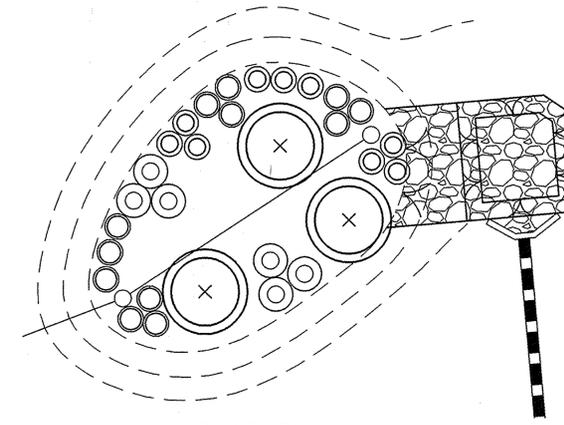
NOTE: WHERE EMBANKMENTS ARE LOCATED IN A FILL SITUATION, AN IMPERVIOUS CORE IS TO BE UTILIZED.



PLANTING PLAN
SCALE: 1"=10'



PLANTING PLAN
SCALE: 1"=10'



PLANTING PLAN
SCALE: 1"=10'

NOTE: THE PURPOSE OF THIS REVISED SITE DEVELOPMENT PLAN IS TO RECONFIGURE THE LAYOUT OF THE DEVELOPMENT IN THE AREA OF THE PROPOSED BUILDINGS.

OWNER / DEVELOPER
MANGIONE ENTERPRISES OF TURF VALLEY, LP
ATTN: LOUIS MANGIONE
1205 YORK ROAD, PENTHOUSE
LUTHERVILLE, MARYLAND 21093
410.825.8400

BIORETENTION PLANT LIST

LEGEND		SHRUBS					HERBACEOUS SPECIES		
KEY	BOTANICAL NAME	COMMON NAME	SPACING	SIZE	REMARKS	QUANTITY BIO 3	QUANTITY BIO 4	QUANTITY BIO 5	
(X)	CAM	CORNUS AMOMUM	SILKY DOGWOOD	AS SHOWN (MIN. 10' O.C.)	15'-24" HT.	CONT.	3	3	3
(+)	VDE	VIBURNUM DENTATUM	ARROWWOOD	AS SHOWN (MIN. 10' O.C.)	15'-24" HT.	CONT.	6	3	3
(O)	EPM	EUPATORIUM FISTULOSUM	JOE-PYE WEED	AS SHOWN (MIN. 4' O.C.)	1 QT./12" HT.	CONT. (3' O.C.)	15	12	6
(O)	MDI	MONARDA DIDYMA	BEEBALM	AS SHOWN (MIN. 3' O.C.)	1 QT.	CONT.	12	9	6
(O)	RLA	RUDEBECKIA LACINIATA	TALL CONEFLOWER	AS SHOWN (MIN. 3' O.C.)	1 QT.	CONT.	12	9	9

NOTE: PLANT MATERIAL MUST COVER 50% OF THE MULCH AREA AT MATURE GROWTH.
*INTERPERSE PLANTINGS THROUGHOUT BIORETENTION FILTER/MULCH AREA

STORMWATER MANAGEMENT DETAILS
VANTAGE CONDOMINIUMS AT TURF VALLEY
(PODS B, C & H : SEC IV: RESIDENTIAL PHASE IVE)
ZONE: PGCC-1

TAX MAP 17 GRIDS 7, 12 & 18
2ND ELECTION DISTRICT

PARCELS 8 & 706
HOWARD COUNTY, MARYLAND

Sill · Adcock & Associates · LLC
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3300 North Ridge Road, Suite 160
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Phone: 443.325.7682 Fax: 443.325.7685
Email: info@silladcock.com

DESIGN BY: PS_BK
DRAWN BY: JT_BK
CHECKED BY: PS
SCALE: AS SHOWN
DATE: JULY 11, 2014
PROJECT #: 09-080
SHEET #: 12 OF 21

PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 32025, EXPIRATION DATE: JUNE 30, 2015

APPROVED
PLANNING BOARD OF HOWARD COUNTY

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
DATE: 04/01/2010

DATE: 04/01/2010

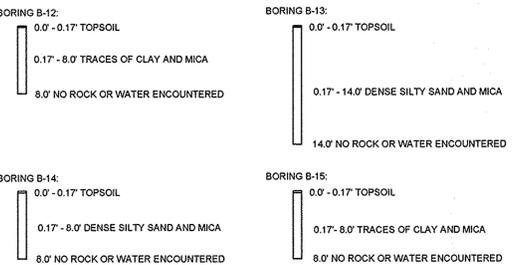
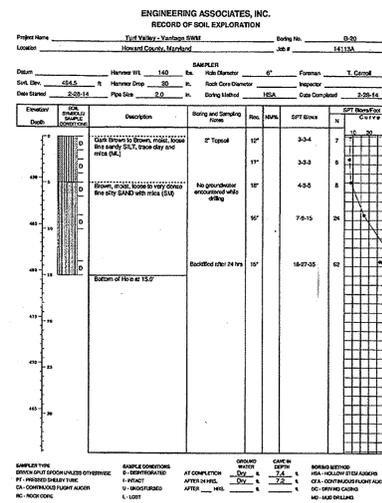
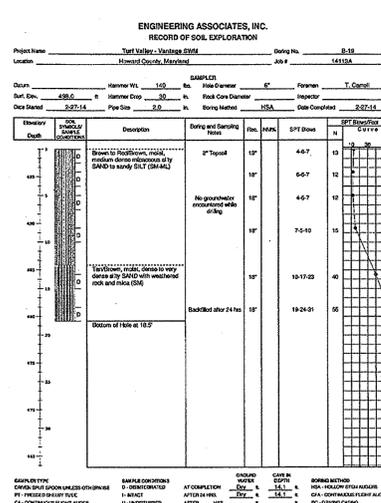
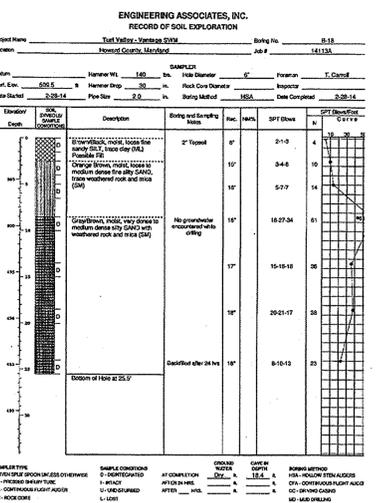
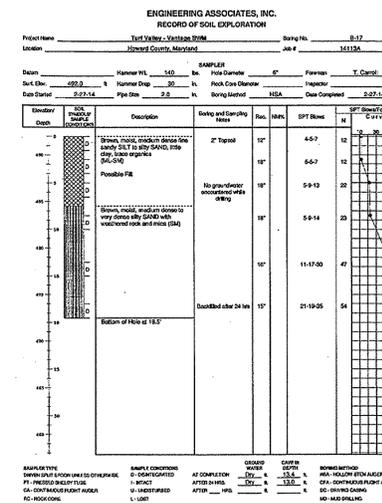
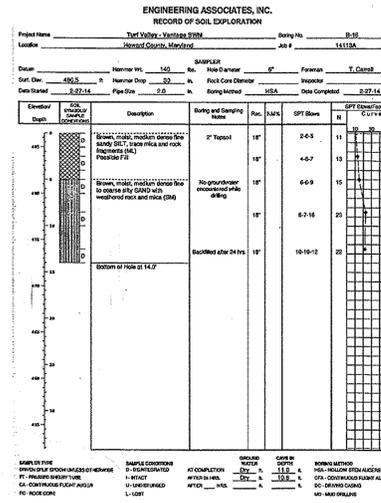
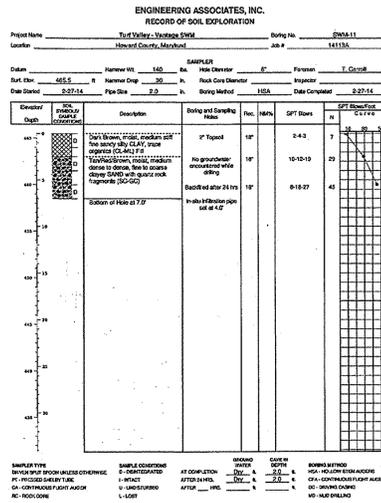
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
DATE: 8-14-14

DATE: 9/02/14

DATE: 9/14/14

REVISIONS

NO.	DESCRIPTION	DATE
1	REVISED PER NEW LAYOUT	7/11/14



ON NOVEMBER 21, 2013, SOIL TEST BORINGS WERE PERFORMED AT FOUR LOCATIONS (BORINGS B-12 THRU B-15) AS SHOWN ON THE PLANS. THESE TESTS WERE PERFORMED BY JFC UTILIZING A BACKHOE. TEST PITS WERE DUG TO A DEPTH RANGING FROM EIGHT FEET TO FOURTEEN FEET. THE RESULTS ARE BASED ON THE UNITED STATES DEPARTMENT OF AGRICULTURE (USDA) SOIL TEXTURAL CLASSIFICATION (THESE RESULTS ARE BASED ON FIELD OBSERVATIONS).

OUR CONCLUSION FROM THESE SOIL TEST BORINGS IS THAT ALL AREAS SHOWN ON THE ATTACHED PLANS ARE SUITABLE FOR BIORETENTION FACILITIES AS LONG AS UNDERDRAINS ARE PROVIDED.

BIORETENTION PLANT LIST

SHRUBS												
KEY	BOTANICAL NAME	COMMON NAME	SPACING	SIZE	REMARKS	QUANTITY BIO 1	QUANTITY BIO 2	QUANTITY BIO 3	QUANTITY BIO 4	QUANTITY BIO 5	QUANTITY BIO 6	TOTAL
CAM	CORNUS AMOMUM	SILKY DOGWOOD	MIN. 10' O.C.*	18"-24" HT.	CONT.	3	-	3	3	3	3	15
VDE	VIBURNUM DENTATUM	ARROWWOOD	MIN. 10' O.C.*	18"-24" HT.	CONT.	-	3	3	6	3	3	18
HERBACEOUS SPECIES												
EPM	EUPATORIUM FISTULOSUM	JOE-PYE WEED	MIN. 4' O.C.*	1 QT./12" HT.	CONT. (3' O.C.)	9	9	9	15	12	6	60
MDI	MONARDA DIDYMA	BEEBALM	MIN. 3' O.C.*	1 QT.	CONT.	9	6	6	12	9	6	48
RLA	RUDEBECKIA LACINIATA	TALL CONEFLOWER	MIN. 3' O.C.*	1 QT.	CONT.	6	6	6	12	9	9	48

NOTES: *INTERPERSE PLANTINGS THROUGHOUT BIORETENTION FILTERMULCH AREA. PLANT MATERIAL MUST COVER 50% OF THE MULCH AREA AT MATURE GROWTH.

SEE SHEETS 11 & 12 FOR PLANTING PLANS

MATERIALS SPECIFICATIONS FOR BIORETENTION FACILITIES

MATERIAL	SPECIFICATION	SIZE	NOTES
PLANTINGS	SEE PLANT LIST THIS SHEET	N/A	PLANTINGS ARE SITE-SPECIFIC. SEE PLANT LIST THIS SHEET.
PLANTING SOIL (2.0' DEEP)	SAND 35% - 60% SILT 0% - 25% GROUND COMPOST 40%-50%	N/A	EXISTING SOIL, SUITABLE TO MEET PLANTING SOIL SPECIFICATIONS TO BE STOCKPILED IN DESIGNATED AREA & SUPPLEMENTED WITH COMPOST AS NECESSARY.
MULCH	SHREDDED HARDWOOD		AGED 6 MONTHS, MINIMUM
PEA GRAVEL DIAPHRAGM AND CURTAIN DRAIN, IF REQUIRED	PEA GRAVEL: ASTM-D-449		
HARDWARE CLOTH	0.035" THICK - 1/4" MESH OR SMALLER GALVANIZED WIRE HARDWARE CLOTH	PEA GRAVEL: NO. 6 STONE: 2" TO 5"	FOR USE AS A WRAP AROUND PERFORATED UNDERDRAIN PIPING
UNDERDRAIN PEA GRAVEL	# 7 OR # 8 STONE	0.25" TO 0.50"	CLEAN WASHED STONE
UNDERDRAIN GRAVEL	AASHTO M-43	0.375" TO 0.75"	CLEAN WASHED STONE
UNDERDRAIN PIPING	F 758, TYPE PS 28 OR AASHTO M-278	4" TO 6" RIGID SCHEDULE 40 PVC OR SDR35	- 3/8" PERF. @ 6" ON CENTER, 4 HOLES PER ROW. - SLOTTED PIPE MAY BE USED IN LIEU OF PERFORATED PIPE (HARDWARE CLOTH WRAP NOT REQUIRED) - MINIMUM OF 3" OF GRAVEL OVER PIPES; NOT NECESSARY UNDERNEATH PIPES

OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED BIORETENTION FACILITIES (F-6)

- THE OWNER SHALL MAINTAIN THE PLANT MATERIAL, MULCH LAYER AND SOIL LAYER ANNUALLY. MAINTENANCE OF MULCH AND SOIL IS LIMITED TO CORRECTING AREAS OF EROSION OR WASH OUT. ANY MULCH REPLACEMENT SHALL BE DONE IN THE SPRING. PLANT MATERIAL SHALL BE CHECKED FOR DISEASE AND INSECT INFESTATION AND MAINTENANCE WILL ADDRESS DEAD MATERIAL AND PRUNING. ACCEPTABLE REPLACEMENT PLANT MATERIAL IS LIMITED TO THE FOLLOWING: 2000 MARYLAND STORMWATER DESIGN MANUAL, VOLUME II, TABLE A.4.1 AND 2.
- THE OWNER SHALL PERFORM A PLANT INSPECTION IN THE SPRING AND IN THE FALL OF EACH YEAR. DURING THE INSPECTION, THE OWNER SHALL REMOVE DEAD OR DISEASED VEGETATION CONSIDERED BEYOND TREATMENT, REPLACE DEAD PLANT MATERIAL WITH ACCEPTABLE REPLACEMENT PLANT MATERIAL, TREAT DISEASED TREES AND SHRUBS, AND REPLACE ALL DEFICIENT STAKES AND WIRES.
- THE OWNER SHALL INSPECT THE MULCH EACH SPRING. THE MULCH SHALL BE REPLACED EVERY TWO TO THREE YEARS. THE PREVIOUS MULCH LAYER SHALL BE REMOVED BEFORE THE NEW LAYER IS APPLIED.
- THE OWNER SHALL CORRECT SOIL EROSION ON AN AS NEEDED BASIS, WITH A MINIMUM OF ONCE PER MONTH AND AFTER EACH HEAVY STORM.

STORMWATER MANAGEMENT SUMMARY TABLE

D.A.	Pe		ESDV	
	REQUIRED	PROVIDED	REQUIRED	PROVIDED
1	1.7"	1.7"	2,923 CF	2,923 CF
2	1.7"	1.7"	1,503 CF	1,503 CF
3	1.7"	1.7"	2,226 CF	2,226 CF
4	1.7"	1.7"	3,271 CF	3,271 CF
5	1.7"	1.7"	1,655 CF	1,655 CF
6	1.7"	1.7"	1,424 CF	1,424 CF

- NOTES:
- TREATMENT FOR THE ENVIRONMENTAL SITE DESIGN VOLUMES (ESDV) WILL BE PROVIDED FOR AS FOLLOWS:
 - DRAINAGE AREA 1: BIORETENTION FACILITY (F-6) & SHEETFLOW TO CONSERVATION AREA (N-3)
 - DRAINAGE AREAS 2-6: BIORETENTION FACILITIES (F-6)
 - FIRE LANE: NON-ROOF TOP DISCONNECTS (N-2)
 - CHANNEL PROTECTION IS NOT REQUIRED SINCE ALL ESDV HAVE BEEN TREATED FULLY.
 - OVERBANK FLOOD PROTECTION VOLUME, QP, IS NOT REQUIRED FOR THIS SITE.
 - EXTREME FLOOD VOLUME, QF, IS NOT REQUIRED FOR THIS SITE.

NOTE: THE PURPOSE OF THIS REVISED SITE DEVELOPMENT PLAN IS TO RECONFIGURE THE LAYOUT OF THE DEVELOPMENT IN THE AREA OF THE PROPOSED BUILDINGS.

OWNER / DEVELOPER
MANGIONE ENTERPRISES OF TURF VALLEY, LP
ATTN: LOUIS MANGIONE
1205 YORK ROAD, PENTHOUSE
LUTHERVILLE, MARYLAND 21093
410.825.8400

STORMWATER MANAGEMENT DETAILS

VANTAGE CONDOMINIUMS AT TURF VALLEY

(PODS B, C & H : SEC IV: RESIDENTIAL PHASE IV)
ZONE: PGCC-1

TAX MAP 17 GRIDS 7, 12 & 18 PARCELS 8 & 706
2ND ELECTION DISTRICT HOWARD COUNTY, MARYLAND

Sill · Adcock & Associates · LLC
Engineers · Surveyors · Planners
3300 North Ridge Road, Suite 160
Ellicott City, Maryland 21043
Phone: 443.325.7682 Fax: 443.325.7685
Email: info@silladcock.com

DESIGN BY: PS_BK
DRAWN BY: JT_BK
CHECKED BY: PS
SCALE: AS SHOWN
DATE: JULY 11, 2014
PROJECT #: 09-060
SHEET #: 13 OF 21

APPROVED
PLANNING BOARD OF HOWARD COUNTY

DATE: 04/01/2010

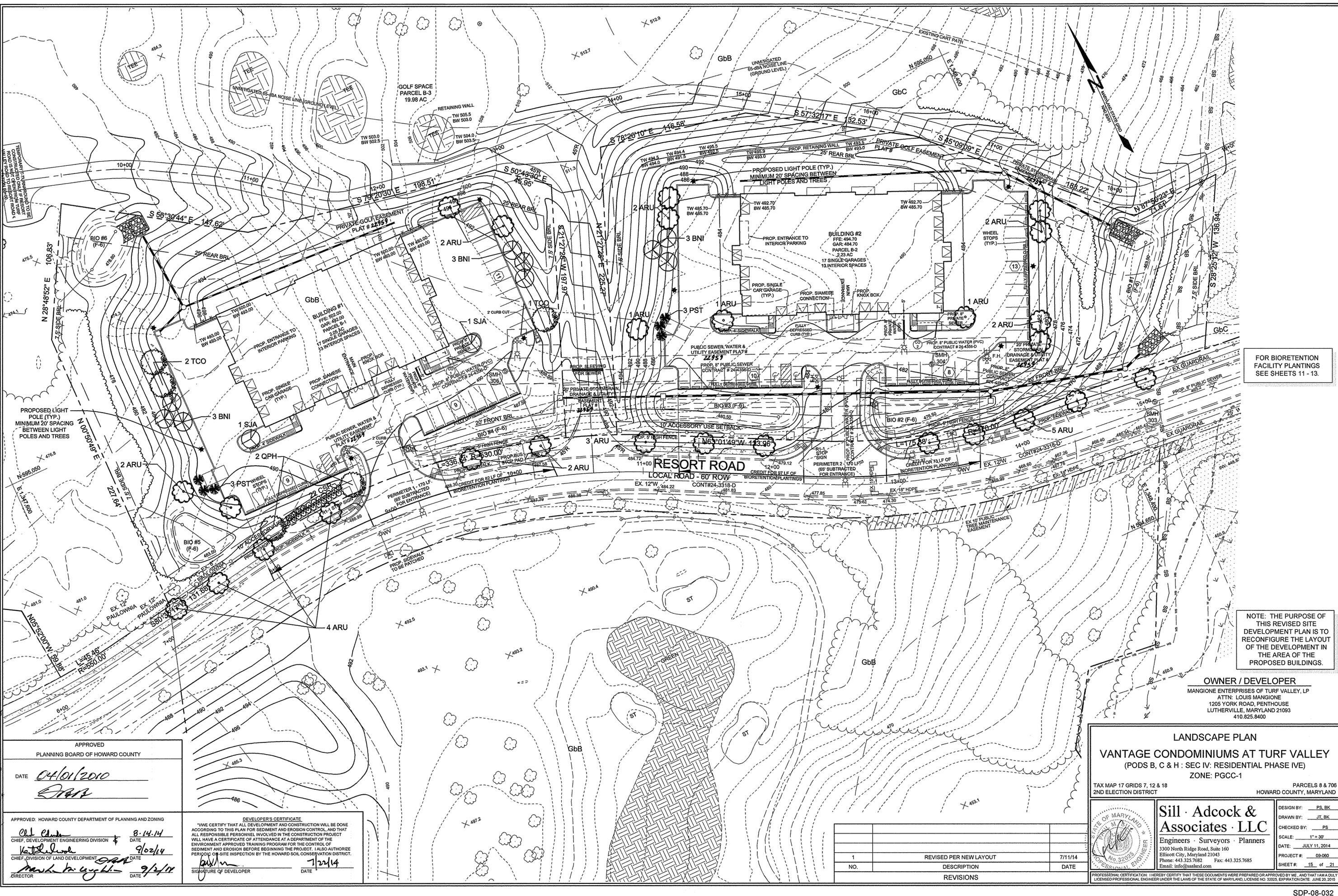
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Clara Edwards 8/14/14
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Kathleen Deane 9/02/14
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

Diana A. Coughlin 9/6/14
DIRECTOR DATE

NO.	DESCRIPTION	DATE
1	REVISED PER NEW LAYOUT	7/11/14
	DESCRIPTION	DATE
	REVISIONS	



FOR BIORETENTION FACILITY PLANTINGS SEE SHEETS 11 - 13.

NOTE: THE PURPOSE OF THIS REVISED SITE DEVELOPMENT PLAN IS TO RECONFIGURE THE LAYOUT OF THE DEVELOPMENT IN THE AREA OF THE PROPOSED BUILDINGS.

OWNER / DEVELOPER
 MANGIONE ENTERPRISES OF TURF VALLEY, LP
 ATTN: LOUIS MANGIONE
 1205 YORK ROAD, PENTHOUSE
 LUTHERVILLE, MARYLAND 21093
 410.825.8400

LANDSCAPE PLAN
VANTAGE CONDOMINIUMS AT TURF VALLEY
 (PODS B, C & H : SEC IV: RESIDENTIAL PHASE IVE)
 ZONE: PGCC-1

TAX MAP 17 GRIDS 7, 12 & 18 PARCELS 8 & 706
 2ND ELECTION DISTRICT HOWARD COUNTY, MARYLAND



Sill · Adcock & Associates · LLC
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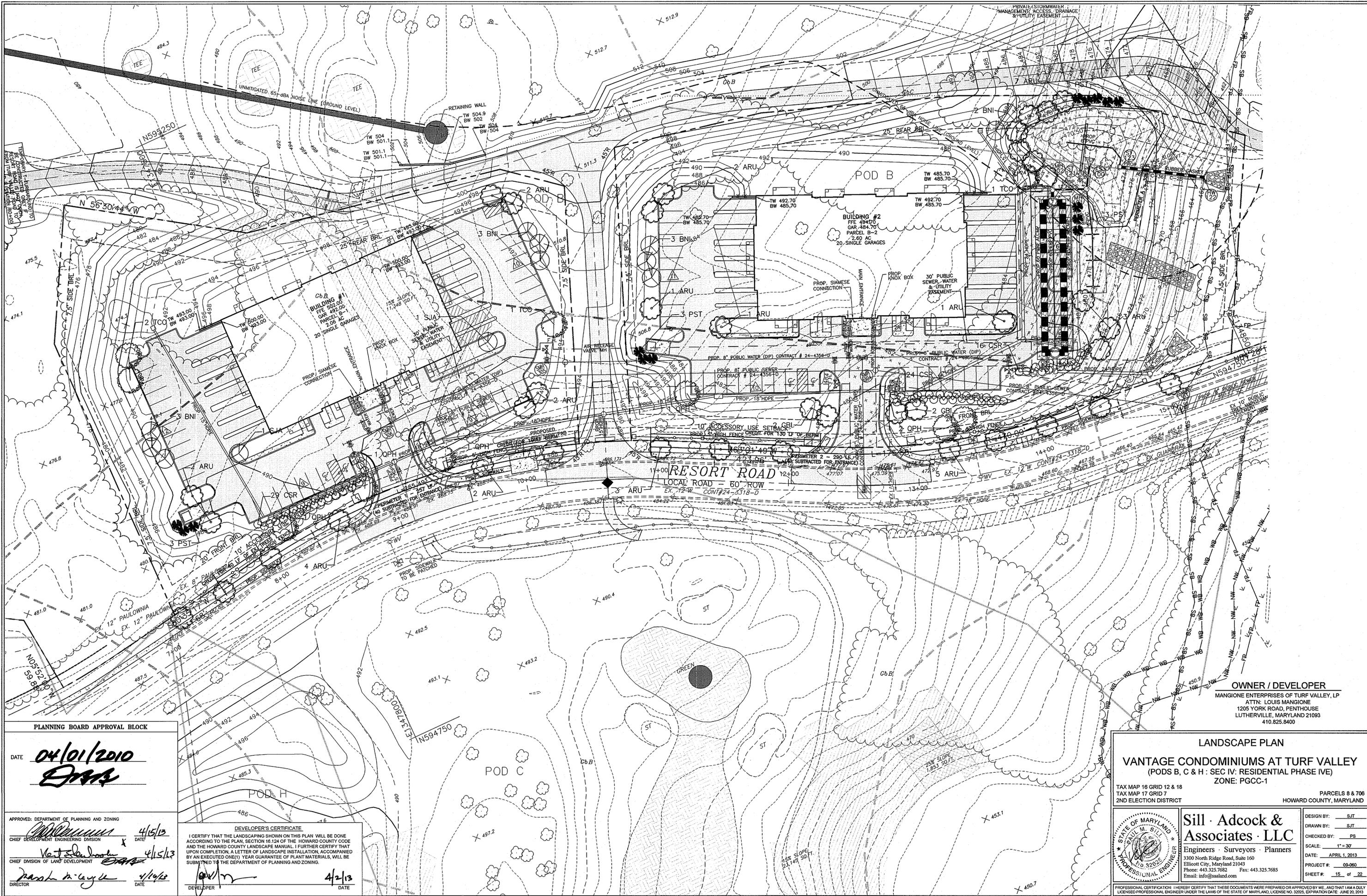
DESIGN BY: PS_BK
 DRAWN BY: JT_BK
 CHECKED BY: PS
 SCALE: 1" = 30'
 DATE: JULY 11, 2014
 PROJECT #: 09-090
 SHEET #: 15 OF 21

NO.	DESCRIPTION	DATE
1	REVISED PER NEW LAYOUT	7/11/14

APPROVED
 PLANNING BOARD OF HOWARD COUNTY
 DATE 04/01/2010
[Signature]

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
[Signature] 8-14-14
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE
[Signature] 9/24/14
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE
[Signature] 9/2/14
 DIRECTOR

DEVELOPER'S CERTIFICATE
 "I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN FOR SEDIMENT AND EROSION CONTROL, AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT."
 SIGNATURE OF DEVELOPER *[Signature]* DATE 7/22/14



PLANNING BOARD APPROVAL BLOCK

DATE 04/01/2010
[Signature]

APPROVED: DEPARTMENT OF PLANNING AND ZONING

[Signature] 4/15/13
CHIEF DEVELOPMENT ENGINEERING DIVISION

[Signature] 4/15/13
CHIEF DIVISION OF LAND DEVELOPMENT

[Signature] 4/16/13
DIRECTOR

DEVELOPER'S CERTIFICATE

I CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL. I FURTHER CERTIFY THAT UPON COMPLETION, A LETTER OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE(1) YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

[Signature] 4/2/13
DEVELOPER

OWNER / DEVELOPER
MANGIONE ENTERPRISES OF TURF VALLEY, LP
ATTN: LOUIS MANGIONE
1205 YORK ROAD, PENTHOUSE
LUTHERVILLE, MARYLAND 21093
410.825.8400

LANDSCAPE PLAN

VANTAGE CONDOMINIUMS AT TURF VALLEY
(PODS B, C & H : SEC IV: RESIDENTIAL PHASE IVE)
ZONE: PGCC-1

TAX MAP 16 GRID 12 & 18
TAX MAP 17 GRID 7
2ND ELECTION DISTRICT

PARCELS 8 & 706
HOWARD COUNTY, MARYLAND

Sill · Adcock & Associates · LLC
Engineers · Surveyors · Planners
3300 North Ridge Road, Suite 160
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Phone: 443.325.7682 Fax: 443.325.7685
Email: info@sasland.com

DESIGN BY: SJT
DRAWN BY: SJT
CHECKED BY: PS
SCALE: 1" = 30'
DATE: APRIL 1, 2013
PROJECT #: 09-060
SHEET #: 15 OF 22

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. 32025, EXPIRATION DATE: JUNE 20, 2013

LANDSCAPING GENERAL NOTES

THE LANDSCAPE CONTRACTOR WILL BE RESPONSIBLE FOR AND REQUIRED TO COMPLETE THE FOLLOWING CONDITIONS.

- VERIFY THE NUMBER OF PLANTS ON THE PLANS. IF DIFFERS FROM THE PLANT SCHEDULE, NOTIFY THE LANDSCAPE ARCHITECT BEFORE BID DATE. THE PLAN SHALL GOVERN.
- IF A PLANT OR SPECIES IS FOUND NOT TO BE SUITABLE OR AVAILABLE, NOTIFY THE LANDSCAPE ARCHITECT.
- PROVIDE PROTECTIONS NECESSARY, IF NOT ALREADY IN PLACE, TO PREVENT DAMAGE TO EXISTING IMPROVEMENTS OR ELEMENTS INDICATED TO REMAIN IN PLACE.
- RESTORE DAMAGE TO IMPROVEMENTS OR EXISTING ELEMENTS IDENTIFIED TO REMAIN CAUSED BY THEM OR PERSONS UNDER THEIR DIRECTION TO THEIR ORIGINAL CONDITION, AS ACCEPTABLE TO PARTIES HAVING JURISDICTION.
- PROVIDE ALL LABOR, MATERIALS, EQUIPMENT AND SUPPLIES IN PERFORMING ALL OPERATIONS AS IDENTIFIED HEREON.
- IT SHALL BE DISTINCTLY UNDERSTOOD THAT THE FAILURE TO MENTION SPECIFICALLY ANY WORK WHICH WOULD NATURALLY BE REQUIRED TO COMPLETE THE PROJECT SHALL NOT RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITY TO PERFORM SUCH WORK.
- VERIFY ALL UTILITIES, GRADES, DIMENSIONS AND EXISTING CONDITIONS. ALL DISCREPANCIES SHALL BE REPORTED PRIOR TO COMMENCEMENT OF WORK. COORDINATE WITH THE GENERAL CONTRACTOR FOR REPLACEMENT OF SLEEVES AND TIMELY INSTALLATION OF THE LANDSCAPING.
- ENSURE WORK DOES NOT INTERFERE WITH PROPOSED DRAINAGE PATTERNS AND ENSURE POSITIVE DRAINAGE AWAY FROM BUILDING.
- PROVIDE GEO-FABRIC UNDERLAYMENT UNDER ALL AREAS TO RECEIVE MULCH, RIVER ROCK OR GRAVEL TO PREVENT WEEDS, ETC. FROM GROWING IN THESE AREAS.
- PROVIDE MAINTENANCE FOR A PERIOD OF THREE MONTHS AFTER FINAL ACCEPTANCE. THIS WILL INCLUDE BUT NOT BE LIMITED TO MOWING, WATERING, FERTILIZING, WEEDING AND MULCHING TO ENSURE HEALTHY VIGOROUS PLANT GROWTH. PROVIDE CONTINUOUS MAINTENANCE, IF REQUESTED BY THE OWNER. NO CONTRACTOR SHALL BID ON THIS PROJECT UNLESS THEY CAN PROVIDE CONTINUOUS MAINTENANCE. CONTRACTOR SHALL BE RESPONSIBLE FOR WINTERIZATION OF THE IRRIGATION SYSTEM FOR THE FIRST WINTER AFTER FINAL ACCEPTANCE.
- THE CONTRACTOR SHALL WARRANT ALL WORK AND MATERIALS, INCLUDING PLANTS, UNDER THIS CONTRACT FOR A PERIOD OF ONE YEAR FROM FINAL ACCEPTANCE IN ACCORDANCE WITH LANDSCAPE GUIDELINES. CONTRACTOR'S ATTENTION IS DIRECTED TO THE MAINTENANCE REQUIREMENTS FOUND WITHIN THE SPECIFICATIONS INCLUDING WATERING AND REPLACEMENT OF SPECIFIED PLANT MATERIAL. WHEN CONTACTED BY THE OWNER OR REPRESENTATIVE, IMMEDIATELY REPLACE ANY PLANT MATERIAL IN UNSATISFACTORY CONDITION. IN EVERY INSTANCE, ANY OF SUCH WARRANTED WORK AND TO MAKE GOOD ALL DAMAGE TO THE BUILDING AND GROUNDS, ARE WITHOUT COST TO OWNER.
- CONTRACTOR IS SUBJECT TO ALL OTHER GENERAL NOTES, STATED ON THIS SET OF PLANS OF WHICH THIS SHEET IS A PART, AS THEY APPLY TO HIM.
- ALL ON-SITE PLANTINGS AND TREES TO BE OWNED AND MAINTAINED BY PROPERTY OWNER.
- AVOID ALL CONFLICTS. THERE SHALL BE A MINIMUM TEN (10) FOOT SEPARATION MAINTAINED BETWEEN THE CENTER OF ALL TREES AND ANY PRIVATE AND PUBLIC UTILITY LINES AND STRUCTURES (UNDERGROUND AND ABOVE GROUND).
- THE LANDSCAPE PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING (29 SHADE TREES, 6 EVERGREENS, AND 22 SHRUBS) WILL BE POSTED AS PART OF THE DPW DEVELOPERS AGREEMENT IN THE AMOUNT OF \$ 10,260.00

PLANTING NOTES

- CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING UTILITY COMPANIES, UTILITY CONTRACTORS AND "MISS UTILITY" A MINIMUM OF 72 HOURS PRIOR TO BEGINNING WORK. CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE TO UTILITIES DUE TO NON-COORDINATED WORK. CONTRACTOR MAY MAKE MINOR ADJUSTMENTS IN SPACING AND LOCATION OF PLANT MATERIAL TO AVOID CONFLICTS WITH UTILITIES.
- PLANTS, RELATED MATERIAL, AND OPERATIONS SHALL MEET THE DETAILED DESCRIPTION AS GIVEN ON THE PLANS AND AS DESCRIBED HEREIN.
- PLANT MATERIAL, UNLESS OTHERWISE SPECIFIED, SHALL BE NURSERY GROWN, UNIFORMLY BRANCHED AND HAVE A VIGOROUS ROOT SYSTEM. PLANT MATERIAL SHALL BE HEALTHY, VIGOROUS PLANTS FREE FROM DEFECTS, DECAY, DISFIGURING ROOTS, SUNSCALD INJURIES, ABRASIONS OF THE BARK, PLANT DISEASE, INSECT PEST EGGS, BOXERS, INFESTATIONS OR OBJECTIONABLE DISFIGUREMENTS. PLANT MATERIAL THAT IS WEAK OR WHICH HAS BEEN CUT BACK FROM LARGER GRADES TO MEET SPECIFIED REQUIREMENTS WILL BE REJECTED. TREES WITH FORKED LEADERS WILL NOT BE ACCEPTED. PLANTS SHALL BE FRESHLY DUG; NO HEELED-IN PLANTS OR PLANTS FROM COLD STORAGE WILL BE ACCEPTED.
- UNLESS OTHERWISE SPECIFIED, PLANT MATERIAL SHALL CONFORM TO "AMERICAN STANDARD FOR NURSERY STOCK" ANSI Z60.1-1990, PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN, INCLUDING ALL ADDENDA.
- UNLESS OTHERWISE SPECIFIED, GENERAL CONDITIONS, PLANTING OPERATIONS, DETAILS AND PLANTING SPECIFICATIONS SHALL CONFORM TO "LANDSCAPE SPECIFICATION GUIDELINES", (HEREINAFTER "LANDSCAPE GUIDELINES") APPROVED BY THE LANDSCAPE CONTRACTORS ASSOCIATION OF METROPOLITAN WASHINGTON AND THE POTOMAC CHAPTER OF THE AMERICAN SOCIETY OF LANDSCAPE ARCHITECTS, LATEST EDITION, INCLUDING ALL ADDENDA.
- PLANTING BEDS SHALL BE MULCHED AS SPECIFIED TO THE LIMITS OF THE PLANTING BEDS AS SHOWN ON THE PLAN AND TO THE DEPTH AS SHOWN ON THE DETAILS.
- PROTECTION OF EXISTING VEGETATION TO REMAIN SHALL BE ACCOMPLISHED BY THE TEMPORARY INSTALLATION OF 4' STANDARD CONSTRUCTION FENCE OR OTHER APPROVED FENCING SUCH AS TURKEY WIRE MESH FENCE FOR THE AFFORESTATION AREAS, IN LOCATIONS SHOWN ON THE PLAN, AT THE DRIP LINE.
- CONTRACTOR IS RESPONSIBLE FOR INSTALLING PLANT MATERIAL IN THE PROPER PLANTING SEASON FOR EACH PLANT TYPE.
- PLANTING MIX SHALL BE AS FOLLOWS:
 DECIDUOUS PLANTS - TWO PARTS TOPSOIL, ONE PART WELL-ROTTED COW MANURE. ADD 3 LBS. OF STANDARD FERTILIZER PER CUBIC YARD OF PLANTING MIX. EVERGREEN PLANTS - TWO PARTS TOPSOIL, ONE PART HUMUS OR OTHER APPROVED ORGANIC MATERIAL. ADD 3 LBS. OF EVERGREEN (ACIDIC) FERTILIZER PER CUBIC YARD OF PLANTING MIX.
 TOPSOIL SHALL CONFORM TO THE LANDSCAPE GUIDELINES.
- THIS PLAN IS INTENDED FOR LANDSCAPE USE ONLY. SEE OTHER PLAN SHEETS FOR MORE INFORMATION ON GRADING, SEDIMENT CONTROL, UTILITIES, LAYOUT, ETC.

SCHEDULE A : PERIMETER LANDSCAPED EDGE

CATEGORY	ADJACENT TO ROADWAY	ADJACENT TO ROADWAY	TOTAL
LANDSCAPE TYPE	PERIMETER 1- TYPE E	PERIMETER 2- TYPE E	
LINEAR FEET OF PERIMETER	170 LF	170 LF	
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET)	NO	NO	
CREDIT FOR BIORETENTION PLANTINGS (YES, NO, LINEAR FEET)	YES, 82 LF (88 LF REMAINING)	YES, 170 LF (0 LF REMAINING)	
NUMBER OF PLANTS REQUIRED	3 SHADE TREES 0 EVERGREEN TREES 22 SHRUBS	0 SHADE TREES 0 EVERGREEN TREES 0 SHRUBS	3 SHADE TREES 0 EVERGREEN TREES 22 SHRUBS
NUMBER OF PLANTS PROVIDED	3 SHADE TREES 0 EVERGREEN TREES 0 SUBSTITUTION TREES 22 SHRUBS (10:1 SUBSTITUTION)	0 SHADE TREES 0 EVERGREEN TREES 0 SUBSTITUTION TREES 0 SHRUBS	3 SHADE TREES 0 EVERGREEN TREES 0 SUBSTITUTION TREES 22 SHRUBS

SCHEDULE B: PARKING LOT INTERNAL LANDSCAPING

NUMBER OF PARKING SPACES	60
NUMBER OF TREES REQUIRED	6
NUMBER OF TREES PROVIDED	6 SHADE TREES 0 OTHER TREES

SCHEDULE C: RESIDENTIAL DEVELOPMENT INTERNAL LANDSCAPING

NUMBER OF DWELLING UNITS	60
NUMBER OF TREES REQUIRED (1:DU SFA; 1:3 DU APTS)	20 SHADE TREES
NUMBER OF TREES PROVIDED	20 SHADE TREES 0 OTHER TREES

SCREEN CALCULATIONS

SCREEN BUILDING #1 DUMPSTER - 30 LF - TYPE D SCREEN 3 EVERGREENS PROVIDED
SCREEN BUILDING #2 DUMPSTER - 30 LF - TYPE D SCREEN 3 EVERGREENS PROVIDED

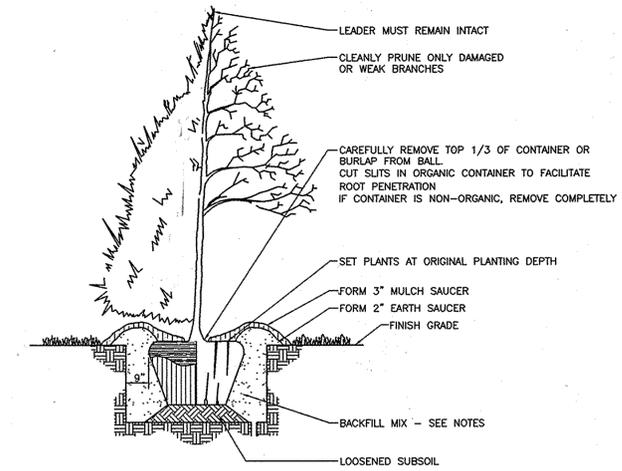
STREET TREES

RESORT ROAD 1 TREE PER 40 LF X 547 LF = 14 STREET TREES REQUIRED 14 STREET TREES PROVIDED

PLANT LIST

KEY	BOTANICAL NAME	COMMON NAME	SPACING	SIZE	REMARKS	QUANTITY	SYMBOL
ARU	ACER RUBRUM "OCTOBER GLORY"	"OCTOBER GLORY" RED MAPLE	AS SHOWN	2.5"-3" CAL.	BB/LOW BRANCHED	27	☉
BNI	BETULA NIGRA "HERITAGE"	"HERITAGE" RIVER BIRCH	AS SHOWN	10"-12' HT.	MULTI-STEM/BB	9	☉
CSR	COTONEASTER SALICIFOLIUS 'REPENS'	WILLOWLEAF COTONEASTER	AS SHOWN	18"-24" SP.	CONTAINER	22	○
						0	
PST	PINUS STROBUS	EASTERN WHITE PINE	AS SHOWN	6'-8' HT.	BB/UNSHEARED	6	☉
QPH	QUERCUS PHELLOS	WILLOW OAK	AS SHOWN	2.5"-3" CAL.	BB	2	☉
SJA	SOPHORA JAPONICA	JAPANESE PAGODA TREE	AS SHOWN	2.5"-3" CAL.	BB	2	☉
TCO	TILIA CORDATA "GREENSPIRE"	"GREENSPIRE" LINDEN	AS SHOWN	2.5"-3" CAL.	BB/LIMB TO 7'	3	☉

TOTAL 29 SHADE TREES, STREET TREES, 6 EVERGREENS, 22 SHRUBS



TREE PLANTING DETAIL
NOT TO SCALE

FOR BIORETENTION PLANTINGS SEE SHEET 13

NOTE: THE PURPOSE OF THIS REVISED SITE DEVELOPMENT PLAN IS TO RECONFIGURE THE LAYOUT OF THE DEVELOPMENT IN THE AREA OF THE PROPOSED BUILDINGS.

OWNER / DEVELOPER
MANGIONE ENTERPRISES OF TURF VALLEY, LP
ATTN: LOUIS MANGIONE
1205 YORK ROAD, PENTHOUSE
LUTHERVILLE, MARYLAND 21093
410.825.8400

PLANNING BOARD APPROVAL BLOCK

DATE 04/01/2010
[Signature]

APPROVED: DEPARTMENT OF PLANNING AND ZONING
CHIEF DEVELOPMENT ENGINEERING DIVISION 4/15/13
CHIEF DIVISION OF LAND DEVELOPMENT 4/15/13
DIRECTOR 4/16/13

DEVELOPER'S CERTIFICATE
I CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL. I FURTHER CERTIFY THAT UPON COMPLETION, A LETTER OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE(1) YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.
4/2/13
DEVELOPER

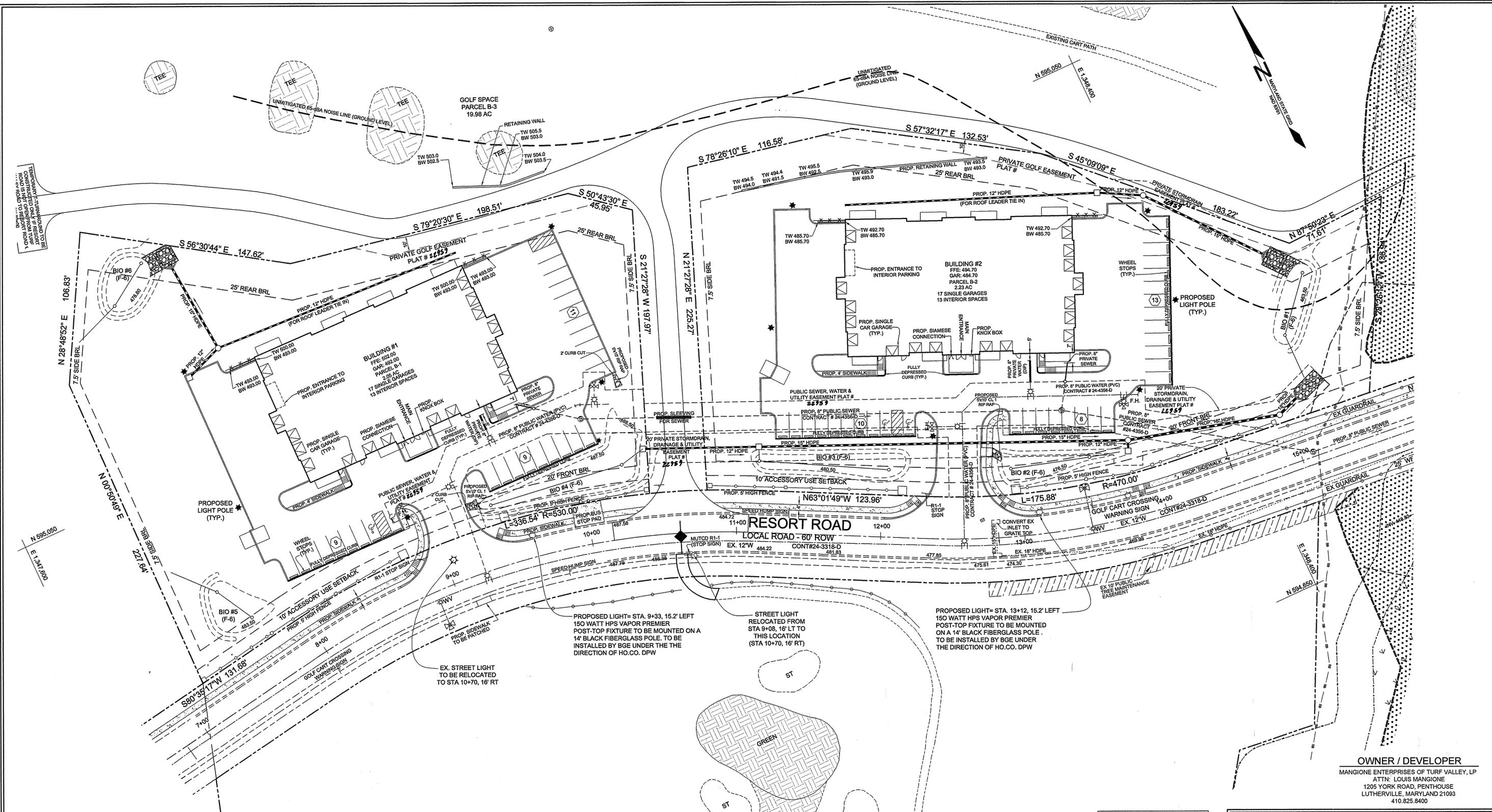
NO.	DESCRIPTION	DATE
1	REVISED PER NEW LAYOUT	7/11/14
	REVISIONS	

LANDSCAPE PLAN
VANTAGE CONDOMINIUMS AT TURF VALLEY
(PODS B, C & H : SEC IV: RESIDENTIAL PHASE IVE)
ZONE: PGCC-1
TAX MAP 16 GRID 12 & 18
TAX MAP 17 GRID 7
2ND ELECTION DISTRICT
PARCELS 8 & 706
HOWARD COUNTY, MARYLAND

Sill · Adcock & Associates · LLC
Engineers · Surveyors · Planners
3300 North Ridge Road, Suite 160
Ellicott City, Maryland 21043
Phone: 443.325.7682 Fax: 443.325.7685
Email: info@silladcock.com

DESIGN BY: SJT
DRAWN BY: SJT
CHECKED BY: PS
SCALE: NOT TO SCALE
DATE: APRIL 1, 2013
PROJECT #: 09-050
SHEET #: 16 of 21

PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 32025, EXPIRATION DATE: JUNE 20, 2013



OWNER / DEVELOPER
 MANGIONE ENTERPRISES OF TURF VALLEY, LP
 ATTN: LOUIS MANGIONE
 1205 YORK ROAD, PENTHOUSE
 LUTHERVILLE, MARYLAND 21093
 410.825.8400

SITE LIGHTING PLAN
VANTAGE CONDOMINIUMS AT TURF VALLEY
 (PODS B, C & H - SEC IV: RESIDENTIAL PHASE IVE)
 ZONE: PGCC-1

TAX MAP 17 GRIDS 7, 12 & 18 PARCELS 8 & 706
 2ND ELECTION DISTRICT HOWARD COUNTY, MARYLAND

Sill · Adcock & Associates · LLC
 Engineers · Surveyors · Planners
 3300 North Ridge Road, Suite 160
 Ellicott City, Maryland 21043
 Phone: 443.325.7682 Fax: 443.325.7685
 Email: info@sasland.com

DESIGN BY: PS, BK
 DRAWN BY: JT, BK
 CHECKED BY: PS
 SCALE: 1" = 30'
 DATE: JULY 11, 2014
 PROJECT #: 09-060
 SHEET #: 17 of 21

NOTE: THE PURPOSE OF THIS REVISED SITE DEVELOPMENT PLAN IS TO RECONFIGURE THE LAYOUT OF THE DEVELOPMENT IN THE AREA OF THE PROPOSED BUILDINGS.

NO.	DESCRIPTION	DATE
1	REVISED PER NEW LAYOUT	7/11/14

APPROVED
 PLANNING BOARD OF HOWARD COUNTY

DATE: 04/01/2010
[Signature]

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chad Edman 8-14-14
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

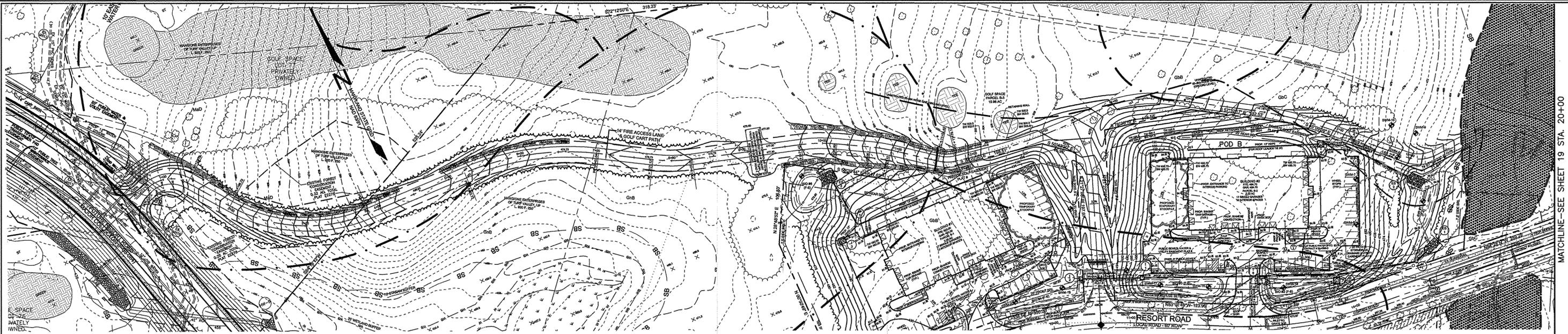
Kate E. Decker 9/02/14
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

Paul A. Gygis 9/14/14
 DIRECTOR DATE

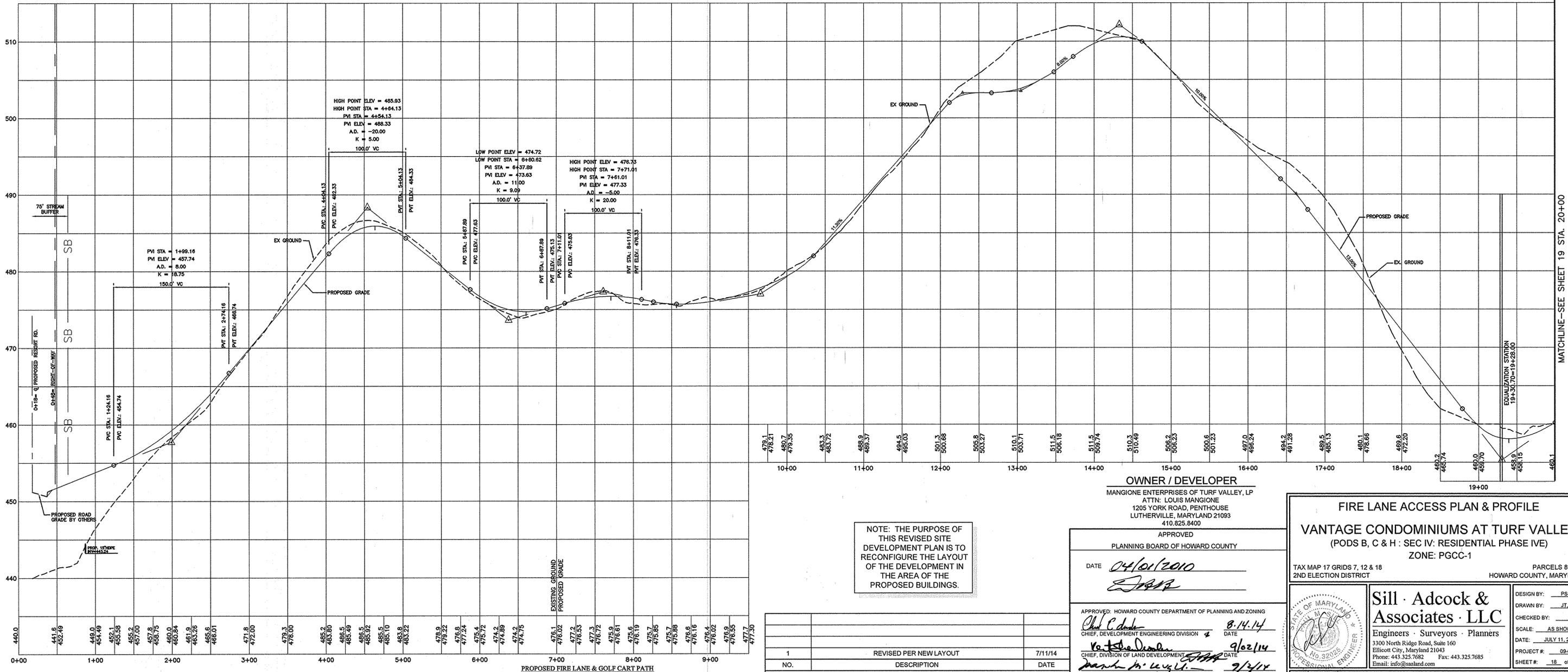
PROPOSED LIGHT= STA. 9+33, 15.2' LEFT
 150 WATT HPS VAPOR PREMIER
 POST-TOP FIXTURE TO BE MOUNTED ON A
 14' BLACK FIBERGLASS POLE. TO BE
 INSTALLED BY BGE UNDER THE
 DIRECTION OF HO.CO. DPW

STREET LIGHT
 RELOCATED FROM
 STA 9+08, 16' LT
 TO THIS LOCATION
 (STA 10+70, 16' RT)

PROPOSED LIGHT= STA. 13+12, 15.2' LEFT
 150 WATT HPS VAPOR PREMIER
 POST-TOP FIXTURE TO BE MOUNTED
 ON A 14' BLACK FIBERGLASS POLE.
 TO BE INSTALLED BY BGE UNDER
 THE DIRECTION OF HO.CO. DPW



PLAN VIEW - FIRE LANE
SCALE: 1"=60'



PROPOSED FIRE LANE & GOLF CART PATH
SCALE: 1"=60'

NOTE: THE PURPOSE OF THIS REVISED SITE DEVELOPMENT PLAN IS TO RECONFIGURE THE LAYOUT OF THE DEVELOPMENT IN THE AREA OF THE PROPOSED BUILDINGS.

NO.	DESCRIPTION	DATE
1	REVISED PER NEW LAYOUT	7/11/14

OWNER / DEVELOPER
MANGIONE ENTERPRISES OF TURF VALLEY, LP
ATTN: LOUIS MANGIONE
1205 YORK ROAD, PENTHOUSE
LUTHERVILLE, MARYLAND 21093
410.825.8400

APPROVED
PLANNING BOARD OF HOWARD COUNTY

DATE: 04/01/2010
[Signature]

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
[Signature] 8/14/14
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE
[Signature] 9/02/14
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE
[Signature] 9/2/14
 DIRECTOR DATE

FIRE LANE ACCESS PLAN & PROFILE

VANTAGE CONDOMINIUMS AT TURF VALLEY
(PODS B, C & H : SEC IV: RESIDENTIAL PHASE IVE)
ZONE: PGCC-1

TAX MAP 17 GRIDS 7, 12 & 18
2ND ELECTION DISTRICT

PARCELS 8 & 706
HOWARD COUNTY, MARYLAND

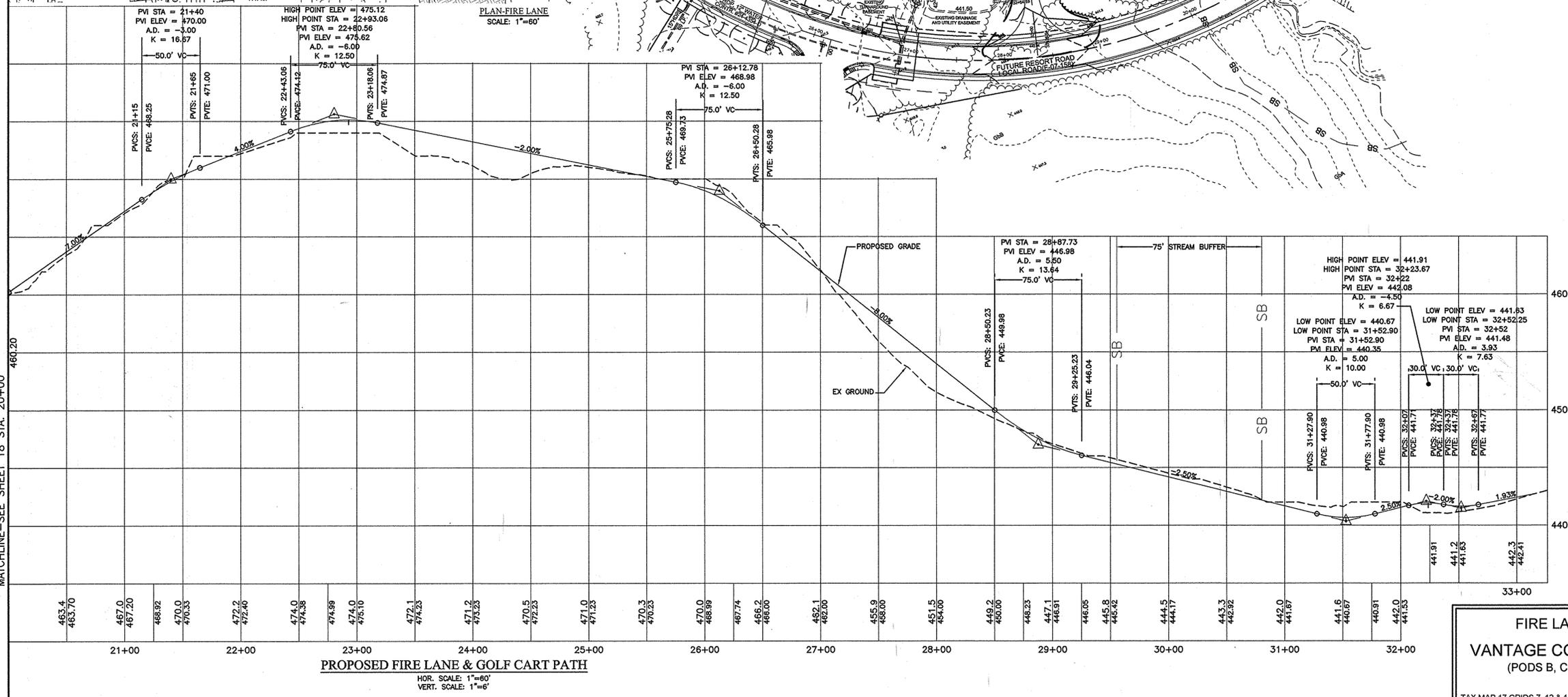
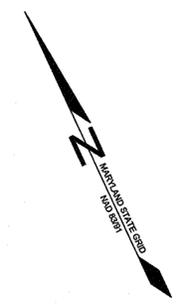
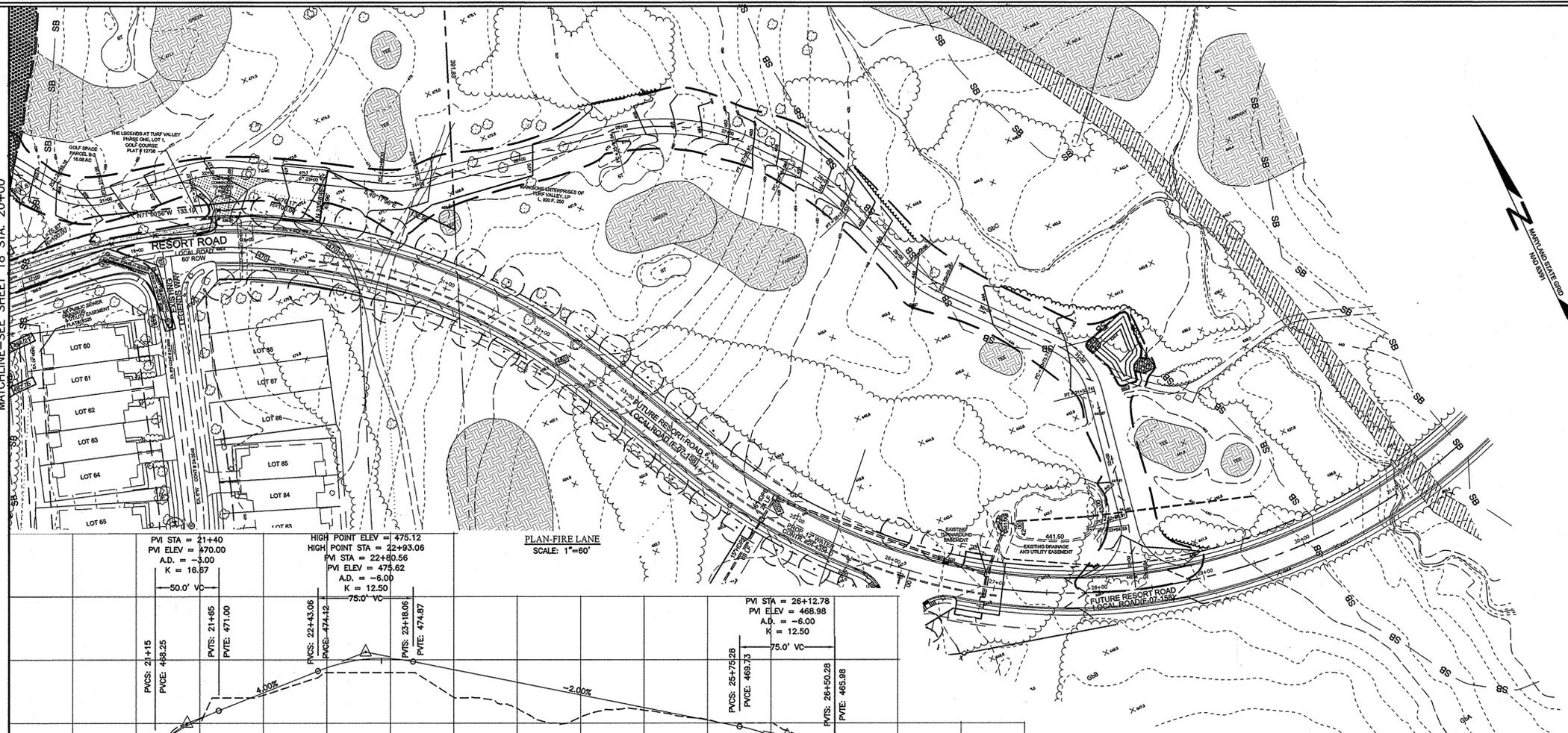
Sill · Adcock & Associates · LLC
Engineers · Surveyors · Planners
3300 North Ridge Road, Suite 160
Ellicott City, Maryland 21043
Phone: 443.325.7682 Fax: 443.325.7685
Email: info@silladcock.com

DESIGN BY: PS_BK
DRAWN BY: JT_BK
CHECKED BY: PS
SCALE: AS SHOWN
DATE: JULY 11, 2014
PROJECT #: 09-080
SHEET #: 18 OF 21

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. 32025, EXPIRATION DATE: JUNE 30, 2015.

MATCHLINE-SEE SHEET 18 STA. 20+00

MATCHLINE-SEE SHEET 18 STA. 20+00



NOTE: THE PURPOSE OF THIS REVISED SITE DEVELOPMENT PLAN IS TO RECONFIGURE THE LAYOUT OF THE DEVELOPMENT IN THE AREA OF THE PROPOSED BUILDINGS.

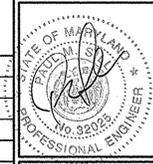
OWNER / DEVELOPER
 MANGIONE ENTERPRISES OF TURF VALLEY, LP
 ATTN: LOUIS MANGIONE
 1205 YORK ROAD, PENTHOUSE
 LUTHERVILLE, MARYLAND 21093
 410.825.8400

FIRE LANE ACCESS PLAN & PROFILE
VANTAGE CONDOMINIUMS AT TURF VALLEY
 (PODS B, C & H : SEC IV: RESIDENTIAL PHASE IVE)
 ZONE: PGCC-1
 TAX MAP 17 GRIDS 7, 12 & 18 PARCELS 8 & 706
 2ND ELECTION DISTRICT HOWARD COUNTY, MARYLAND

APPROVED
 PLANNING BOARD OF HOWARD COUNTY
 DATE 04/01/2010

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
Chris Edler 8-14-14
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
Robert DiAngelo 9/2/14
 CHIEF, DIVISION OF LAND DEVELOPMENT
 DIRECTOR

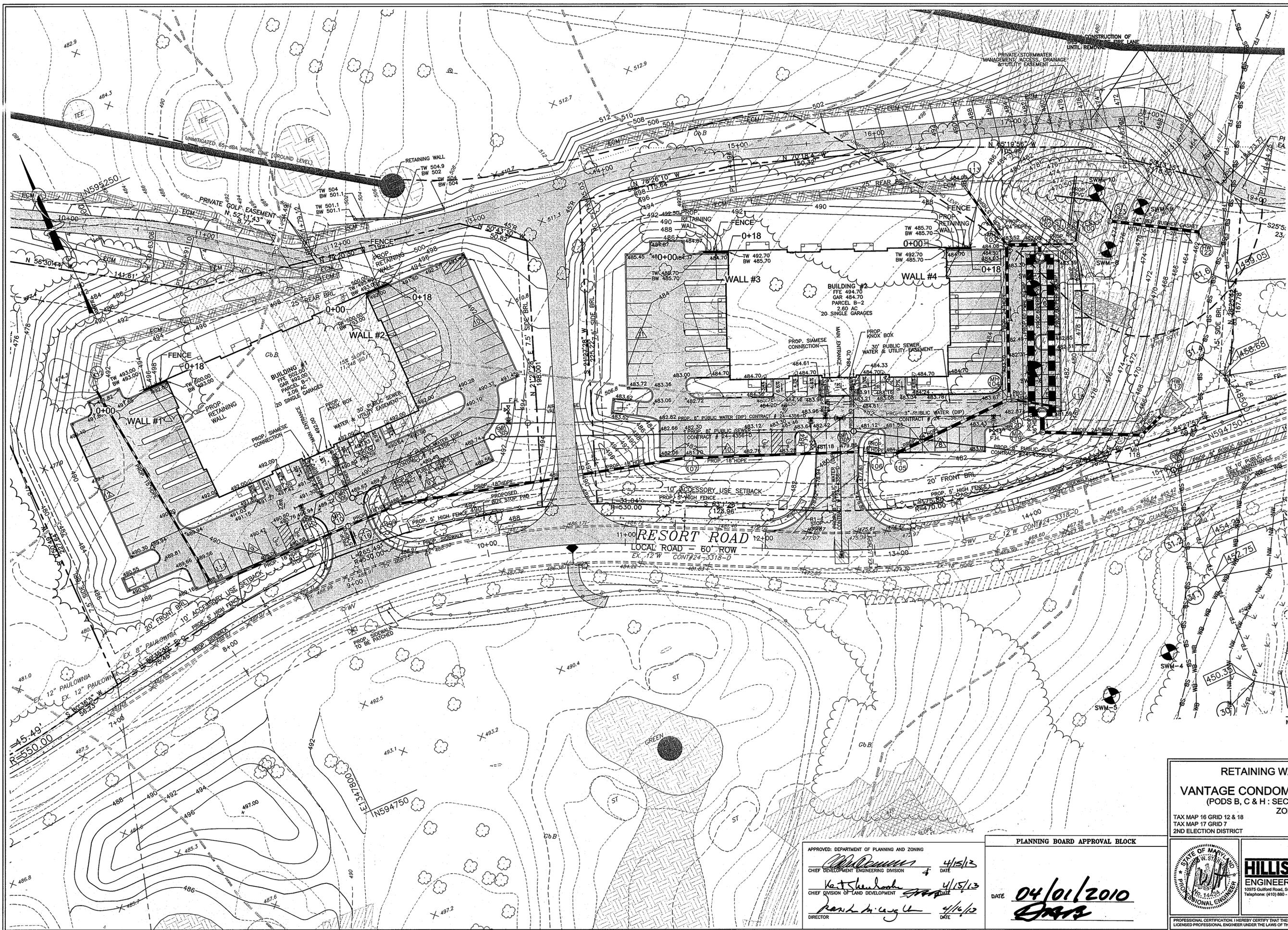
NO.	DESCRIPTION	DATE
1	REVISED PER NEW LAYOUT	7/11/14



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DESIGN BY: PS_BK
 DRAWN BY: JT_BK
 CHECKED BY: PS
 SCALE: AS SHOWN
 DATE: JULY 11, 2014
 PROJECT #: 08-060
 SHEET #: 19 of 21

PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 92225, EXPIRATION DATE: JUNE 30, 2015.



OWNER / DEVELOPER
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 ATTN: LOUIS MANGIONE
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RETAINING WALL LOCATION PLAN
VANTAGE CONDOMINIUMS AT TURF VALLEY
 (PODS B, C & H : SEC IV: RESIDENTIAL PHASE IVE)
 ZONE: PGCC-1

TAX MAP 16 GRID 12 & 18
 TAX MAP 17 GRID 7
 2ND ELECTION DISTRICT

PARCEL 8
 HOWARD COUNTY, MARYLAND

APPROVED: DEPARTMENT OF PLANNING AND ZONING

[Signature] 4/15/13
 CHIEF DEVELOPMENT ENGINEERING DIVISION DATE

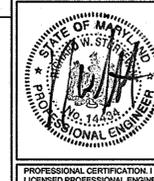
[Signature] 4/15/13
 CHIEF DIVISION OF LAND DEVELOPMENT DATE

[Signature] 4/16/12
 DIRECTOR DATE

PLANNING BOARD APPROVAL BLOCK

DATE **04/01/2010**

[Signature]

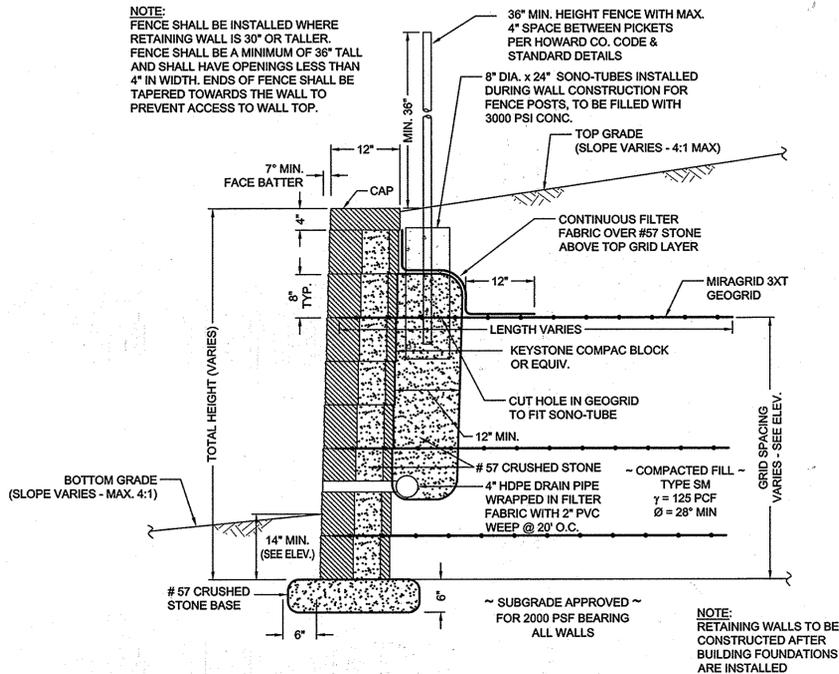


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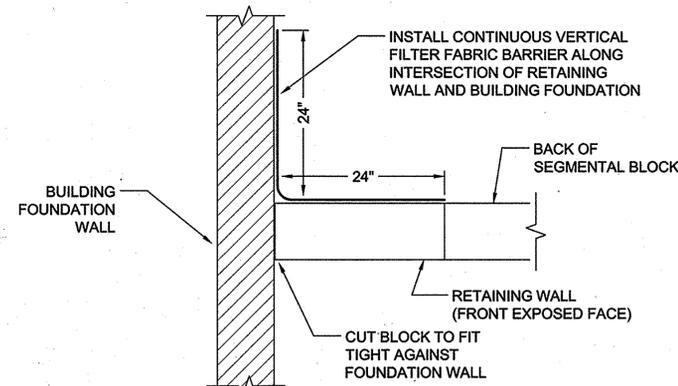
DESIGN BY: AM
 DRAWN BY: AM
 CHECKED BY: RWS
 SCALE: 1"=30'
 DATE: FEBRUARY, 2013
 PROJECT #: 05171-B
 SHEET #: 20 of 22

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. 14434, EXPIRATION DATE: 05-13-13

NOTE: FENCE SHALL BE INSTALLED WHERE RETAINING WALL IS 30" OR TALLER. FENCE SHALL BE A MINIMUM OF 36" TALL AND SHALL HAVE OPENINGS LESS THAN 4" IN WIDTH. ENDS OF FENCE SHALL BE TAPERED TOWARDS THE WALL TO PREVENT ACCESS TO WALL TOP.



TYPICAL WALL SECTION
N.T.S.



BUILDING / WALL INTERFACE
PLAN VIEW
NTS

SPECIFICATIONS

MODULAR CONCRETE BLOCK RETAINING WALL

PART 1: GENERAL

- 1.01 Description
 - A. Work shall consist of furnishing and construction of a Modular Retaining Wall System in accordance with these specifications and in reasonably close conformity with the lines, grades, design, and dimensions shown on the plans.
 - B. Work includes preparing foundation fill, furnishing and installing leveling pad, unit drainage fill and backfill to the lines and grades shown on the construction drawings.
 - C. Work includes furnishing and installing geogrid soil reinforcement of the type, size, location, and lengths designated on the construction drawings.

1.02 Delivery, Storage and Handling

- A. Contractor shall check all materials upon delivery to assure that the proper type, grade, color, and certification has been received.
- B. Contractor shall protect all materials from damage due to job site conditions and in accordance with manufacturer's recommendations. Damaged materials shall not be incorporated into the work.

PART 2: PRODUCTS

2.01 Modular Concrete Retaining Wall Units

- A. Modular concrete units shall conform to the following architectural requirements:
 - face color - tan - standard manufacturers' color may be specified by the Owner.
 - face finish - sculptured rock face in angular tri-planer or flat configuration. Other face finishes will not be allowed without written approval of Owner.
 - bond configuration - running with bonds nominally located at midpoint vertically adjacent units, in both straight and curved alignments.
 - exposed surfaces of units shall be free of chips, cracks or other imperfections when viewed from a distance of 10 feet under diffused lighting.
- B. Modular concrete materials shall conform to the requirements of ASTM C1372 - Standard Specifications for Segmental Retaining Wall Units.
- C. Modular concrete units shall conform to the following structural and geometric requirements measured in accordance with appropriate references:
 - compressive strength = 3000 psi minimum;
 - absorption = 8 % maximum (8% in northern states) for standard weight aggregates;
 - dimensional tolerances = ± 1/8" from nominal unit dimensions not including rough split face, ±1/16" unit height - top and bottom planes;
 - unit size - 8" (H) x 18" (W) x 12" (D) minimum;
 - unit weight - 75 lbs/unit minimum for standard weight

- aggregates; inter-unit shear strength - 1000 pif minimum at 2 psi normal pressure; geogrid/unit peak connection strength - 1000 pif minimum at 2 psi normal force.
- D. Modular concrete units shall conform to the following constructability requirements: (if applicable)
 - vertical setback = 1/8" per course (near vertical) or 1/4" per course per the design;
 - alignment and grid positioning mechanism - fiberglass pins, two per unit minimum;
 - maximum horizontal gap between erected units shall be 1/2 inch.

2.02 Shear Connectors (if applicable)

- A. Shear connectors shall be 1/2 inch diameter thermoset isophthalic polyester resin-protuded fiberglass reinforcement rods or equivalent to provide connection between vertically and horizontally adjacent units. Strength of shear connectors between vertical adjacent units shall be applicable over a design temperature of 10 degrees F to + 100 degrees F.
- B. Shear connectors shall be capable of holding the geogrid in the proper design position during grid pre-tensioning and backfilling.

2.03 Base Leveling Pad Material

- A. Material shall consist of a compacted #57 crushed stone base as shown on the construction drawings.

2.04 Unit Drainage Fill

- A. Unit drainage fill shall consist of #57 crushed stone

2.05 Reinforced Backfill

- A. Reinforced backfill shall type SM, be free of debris and meet the following gradation tested in accordance with ASTM D-422 and meet other properties shown on the plan:

Sieve Size	Percent Passing
2 inch	100-75
3/4 inch	100-75
No. 40	0-60
No. 200	0-40

 Plasticity Index (PI) <10 and Liquid Limit <35 per ASTM D-4318.
- B. Material can be site excavated soils where the above requirements can be met. Unsuitable soils for backfill (high plastic clays or organic soils) shall not be used in the reinforced soil mass.

2.06 Geogrid Soil Reinforcement

- A. Geosynthetic reinforcement shall consist of geogrids manufactured specifically for soil reinforcement applications and shall be manufactured from high tenacity polyester yarn.

2.07 Drainage Pipe

- A. The drainage pipe shall be perforated corrugated HDPE pipe manufactured in accordance with ASTM D-1248.

PART 3 EXECUTION

3.01 Excavation

- A. Contractor shall excavate to the lines and grades shown on the construction drawings. Owner's representative shall be responsible for inspecting and approving the excavation prior to placement of leveling material or fill soils.

3.02 Base Leveling Pad

- A. Leveling pad material shall be placed to the lines and grades shown on the construction drawings, to a minimum thickness of 6 inches and extend laterally a minimum of 6" in front and behind the modular wall unit.
- B. Leveling pad shall be prepared to insure full contact to the base surface of the concrete units.

3.03 Modular Unit Installation

- A. First course of units shall be placed on the leveling pad at the appropriate line and grade. Alignment and level shall be checked in all directions and insure that all units are in full contact with the base and properly seated.
- B. Place the front of units side-by-side. Do not leave gaps between adjacent units. Layout of corners and curves shall be in accordance with manufacturer's recommendations.
- C. Install shear/connecting devices per manufacturer's recommendations.
- D. Place and compact drainage fill within and behind wall units. Place and compact backfill soil behind drainage fill. Follow wall erection and drainage fill closely with structure backfill.
- E. Maximum stacked vertical height of wall units, prior to unit drainage fill and backfill placement and compaction, shall not exceed three courses.

3.04 Structural Geogrid Installation

- A. Geogrid shall be oriented with the highest strength axis perpendicular to the wall alignment.
- B. Geogrid reinforcement shall be placed at the strengths, lengths, and elevations shown on the construction design drawings or as directed by the Engineer.
- C. The geogrid shall be laid horizontally on compacted backfill and attached to the modular wall units. Place the next course of modular concrete units over the geogrid. The geogrid shall be pulled taut, and anchored prior to

- backfill placement on the geogrid.
- D. Geogrid reinforcements shall be continuous throughout their embedment lengths and placed side-by-side to provide 100% coverage at each level. Spliced connections between shorter pieces of geogrid or gaps between adjacent pieces of geogrid are not permitted.

3.05 Reinforced Backfill Placement

- A. Reinforced backfill shall be placed, spread, and compacted in such a manner that minimizes the development of slack in the geogrid and installation damage.
- B. Reinforced backfill shall be placed and compacted in lifts not to exceed 6 inches where hand compaction is used, or 8 - 10 inches where heavy compaction equipment is used. Lift thickness shall be decreased to achieve the required density as required.
- C. Reinforced backfill shall be compacted to 95% of the maximum density as determined by ASTM D998. The moisture content of the backfill material prior to and during compaction shall be uniformly distributed throughout each layer and shall be + 3% to - 3% of optimum.
- D. Only lightweight hand-operated equipment shall be allowed within 3 feet from the tail of the modular concrete unit.
- E. Tracked construction equipment shall not be operated directly upon the geogrid reinforcement. A minimum fill thickness of 6 inches is required prior to operation of tracked vehicles over the geogrid. Tracked vehicle turning should be kept to a minimum to prevent tracks from displacing the fill and damaging the geogrid.
- F. Rubber tired equipment may pass over geogrid reinforcement at slow speeds, less than 10 MPH. Sudden braking and sharp turning shall be avoided.
- G. At the end of each day's operation, the Contractor shall slope the last lift of reinforced backfill away from the wall units to direct runoff away from wall face. The Contractor shall not allow surface runoff from adjacent areas to enter the wall construction site.

3.06 Cap Installation

- A. Cap units shall be glued to underlying units with an all-weather adhesive recommended by the manufacturer.

3.07 Field Quality Control

- A. The Owner shall engage inspection and testing services, including independent laboratories, to provide quality assurance and testing services during construction.
- B. As a minimum, quality assurance testing should include foundation soil inspection, soil and backfill testing, verification of design parameters, and observation of construction for general compliance with design drawings and specifications.

NOTES:

- No trees shall be planted within 10 feet of the top of the retaining wall.
- Retaining walls shall only be constructed under the observation of a registered professional engineer and a (NICET, WACEL, or equiv.) certified soils technician.
- One soil boring shall be required every one hundred feet along the entire length of the wall. Copies of all boring reports shall be provided to the Howard County Inspector Prior to the start of construction.
- The required bearing pressure beneath the wall system shall be verified in the field by a certified soils technician. Testing documentation must be provided to the Howard County Inspector prior to start of construction. The required bearing test shall be the Dynamic Cone Penetrometer test ASTM STP-399.
- The suitability of fill material shall be confirmed by the on-site soils technician. Each 8" lift must be compacted to a minimum 95% standard proctor density and the testing report shall be made available to the Howard County Inspector upon completion of construction.
- Walls shall not be constructed on uncertified fill materials.
- Walls shall not be constructed within a Howard Co. right-of-way or easement.

NOTE: THE PURPOSE OF THIS REVISED SITE DEVELOPMENT PLAN IS TO RECONFIGURE THE LAYOUT OF THE AREA OF THE PROPOSED BUILDINGS.

OWNER / DEVELOPER
MANGIONE ENTERPRISES OF TURF VALLEY, LP
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LUTHERVILLE, MARYLAND 21093
410.825.8400

WALL ELEVATIONS & DETAILS
VANTAGE CONDOMINIUMS AT TURF VALLEY
(PODS B, C & H : SEC IV: RESIDENTIAL PHASE IVE)
ZONE: PGCC-1

TAX MAP 16 GRID 12 & 18
TAX MAP 17 GRID 7
2ND ELECTION DISTRICT

PARCEL 8
HOWARD COUNTY, MARYLAND

DESIGN BY: AM
DRAWN BY: AM
CHECKED BY: RWS
SCALE: AS SHOWN
DATE: FEBRUARY 2013
PROJECT #: 05171-B
SHEET #: 20 of 21

HILLIS-CARNES ENGINEERING ASSOCIATES
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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. 14434, EXPIRATION DATE: 05-13-13

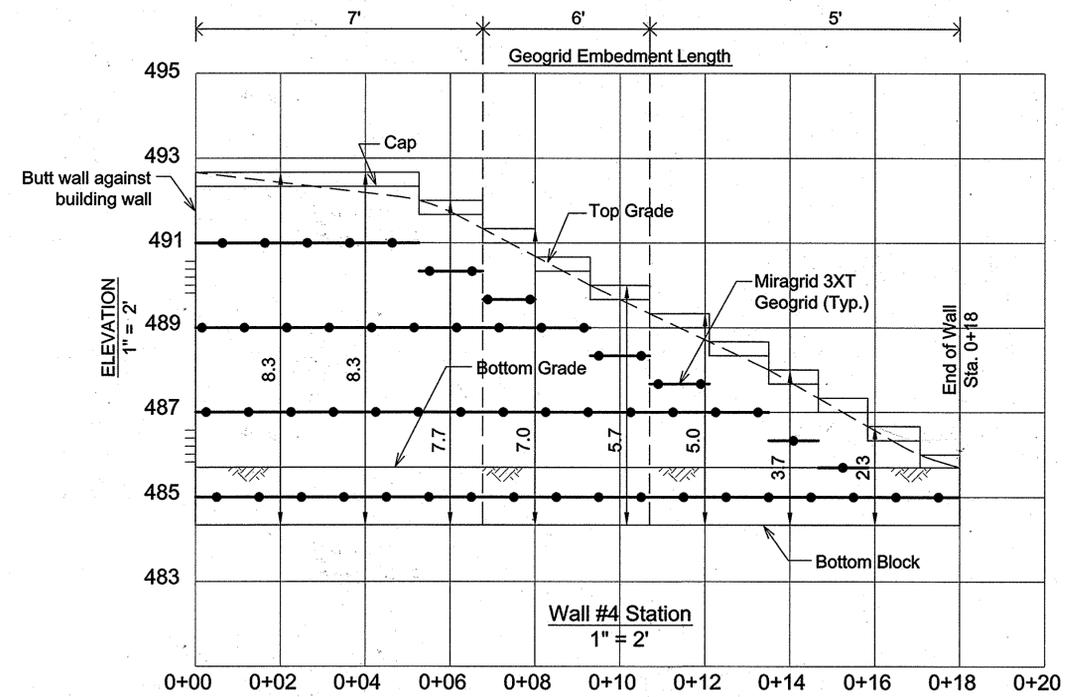
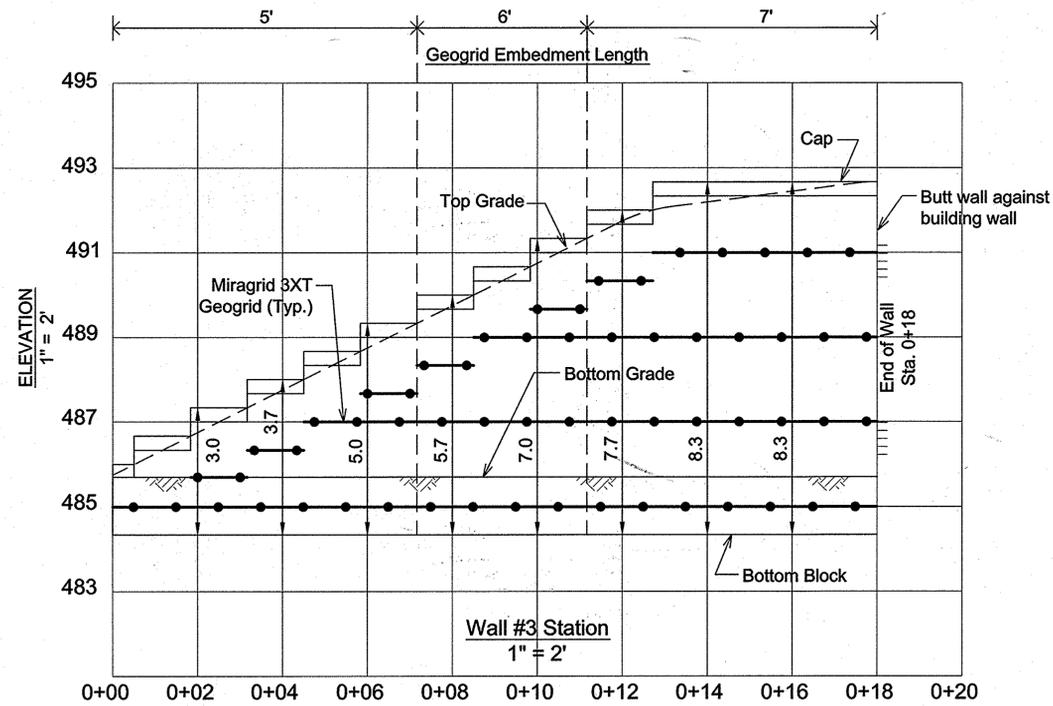
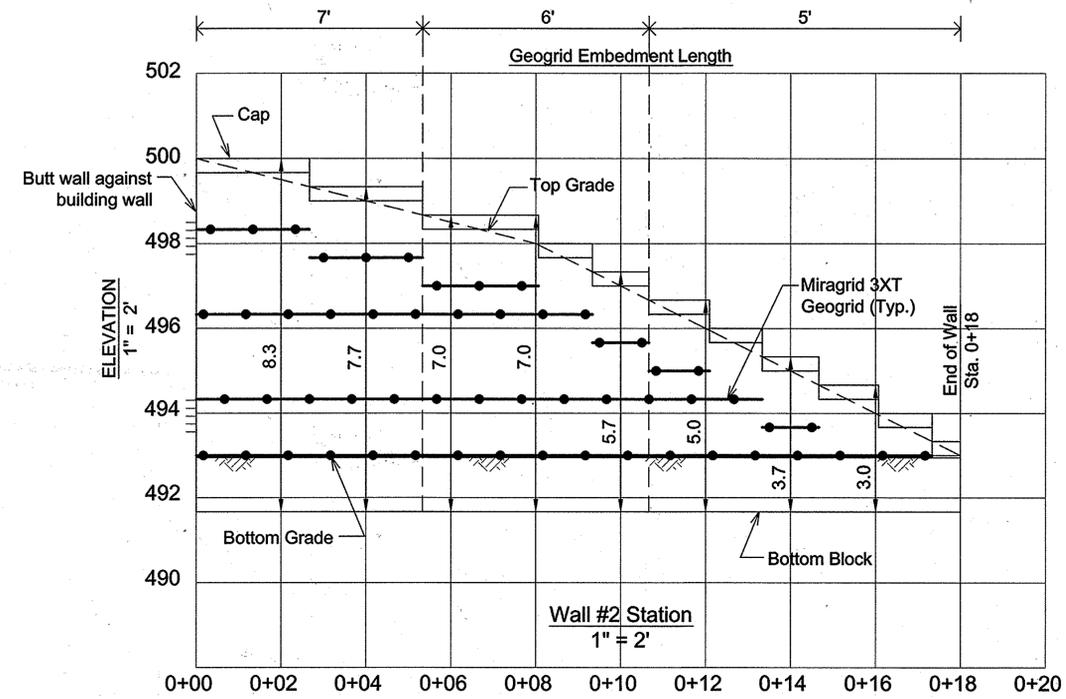
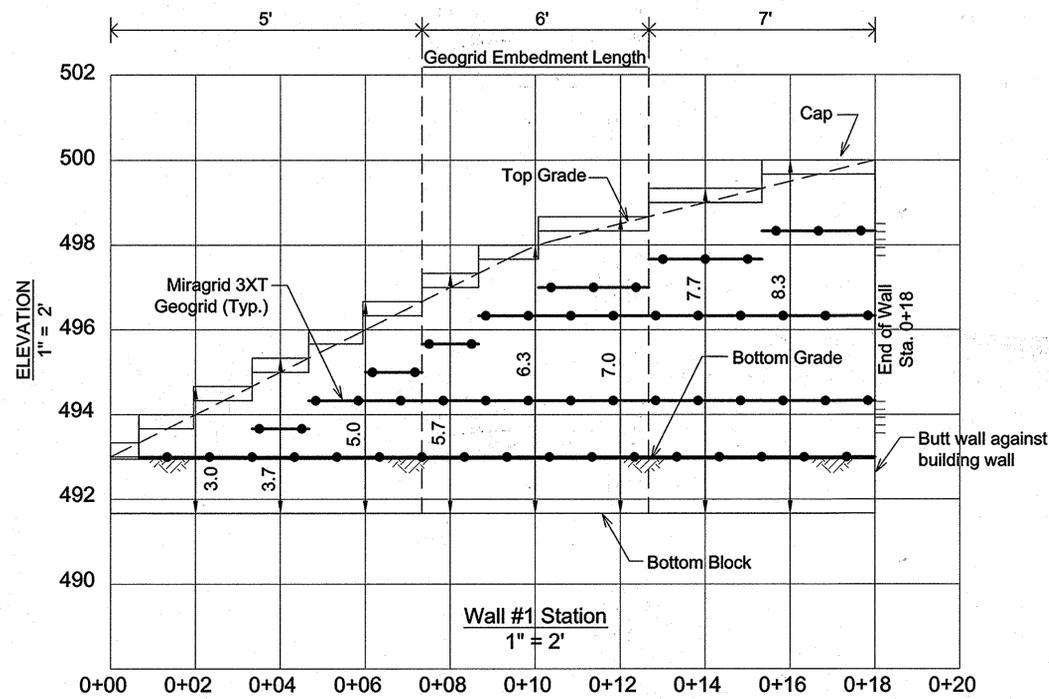
APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF DEVELOPMENT ENGINEERING DIVISION *[Signature]* 4/15/10
CHIEF DIVISION OF LAND DEVELOPMENT *[Signature]* 4/15/10
DIRECTOR *[Signature]* 4/16/10

PLANNING BOARD APPROVAL BLOCK

DATE: 04/01/2010
[Signature]

NO.	DESCRIPTION	DATE
1	REVISED PER NEW LAYOUT	7/14/14
	REVISIONS	



NOTE: THE PURPOSE OF THIS REVISD SITE DEVELOPMENT PLAN IS TO RECONFIGURE THE LAYOUT OF THE DEVELOPMENT IN THE AREA OF THE PROPOSED BUILDINGS.

OWNER / DEVELOPER
MANGIONE ENTERPRISES OF TURF VALLEY, LP
ATTN: LOUIS MANGIONE
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WALL ELEVATIONS
VANTAGE CONDOMINIUMS AT TURF VALLEY
(PODS B, C & H : SEC IV: RESIDENTIAL PHASE IVE)
ZONE: PGCC-1

TAX MAP 16 GRID 12 & 18
TAX MAP 17 GRID 7
2ND ELECTION DISTRICT

PARCEL 8
HOWARD COUNTY, MARYLAND

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF DEVELOPMENT ENGINEERING DIVISION
DATE 4/15/13
CHIEF DIVISION OF LAND DEVELOPMENT
DATE 4/15/13
DIRECTOR
DATE 4/16/10

PLANNING BOARD APPROVAL BLOCK

DATE 04/01/2010
[Signature]

NO.	REVISIONS	DATE
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CHECKED BY: RWS
SCALE: AS SHOWN
DATE: FEBRUARY, 2013
PROJECT #: 05171-B
SHEET #: 21 of 21

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. 14433, EXPIRATION DATE: 05-13-13