GENERAL NOTES

SUBJECT PROPERTY IS ZONED "PGCC-1" PER THE 10/06/2013 COMPREHENSIVE ZONING PLAN. SKETCH PLAN APPROVAL DATE:

- GROSS AREA OF SITE SUBJECT TO SUBDIVISION = 24.143 AC.±
- AREA OF PROPOSED PUBLIC R/W: 2.10 AC±
- NUMBER OF PROPOSED BUILDABLE LOTS: 72 AREA OF PROPOSED BUILDABLE LOTS: 9.649 AC±
- NUMBER OF PROPOSED BULK PARCELS: 1
- AREA OF PROPOSED BULK PARCEL; 3.74 AC± NUMBER OF OPEN SPACE LOTS: 4
- 9. AREA OF PROPOSED OPEN SPACE LOTS: 8.56 AC±
- 10. OPEN SPACE REQUIRED:

(15% OF GROSS AREA OF SITE SUBJECT TO SUBDIVISION): 24.14 AC. x 15% = 3.62 AC. CREDITED OPEN SPACE PROVIDED: 7.06 AC.±

NON-CREDITED OPEN SPACE PROVIDED: 1.50 AC.± TOTAL OPEN SPACE PROVIDED: 8.56 AC.±

1. OPEN SPACE LOTS 73-75 TO BE OWNED AND MAINTAINED BY THE HOMEOWNERS ASSOCIATION. OPEN SPACE LOT 73 AND 75 WILL

- 13. NON-BUILDABLE BULK PARCEL 'G' TO BE OWNED AND MAINTAINED BY THE HOMEOWNERS ASSOCIATION
- 14. NUMBER OF PROPOSED SINGLE FAMILY DETACHED LOTS: 30
- 15. NUMBER OF PROPOSED SINGLE-FAMILY ATTACHED LOTS: 42
- 17. LOTS WILL BE SERVICED BY PUBLIC WATER AND PUBLIC SEWER. PUBLIC WATER AND PUBLIC SEWER WILL BE EXTENDED FROM
- CONTRACT #24-4671-D, 24-4354-D, AND 20-1890-D. SOILS HAVE BEEN TAKEN FROM THE NRCS WEB SOIL SURVEY WEBSITE.
- 19. EXISTING TOPOGRAPHY IS BASED ON WINGS AERIAL MAPPING CO., INC. WITH 2 FOOT CONTOUR INTERVAL ON OR ABOUT
- 20. BOUNDARY SURVEY PREPARED BY MILDENBERG, BOENDER & ASSOCIATES ON OR ABOUT MARCH, 2006.
- PROFESSIONALS, INC. ON OCTOBER 24, 2007. 100-YEAR FLOODPLAIN LIMITS SHOWN ARE BASED ON A STUDY PREPARED BY BENCHMARK ENGINEERING, INC DATED SEPTEMBER 2016. WETLANDS SHOWN ARE IN ACCORDANCE WITH THOSE SHOWN ON THE FOURTH AMENDMENT TO THE TURF VALLEY COMPREHENSIVE SKETCH PLAN (S-86-13, PB 368); APPROVED JULY, 28, 2006.
- TO MAINTAIN UNINTERRUPTED SERVICE, ANY DAMAGE INCURRED DUE TO THE CONTRACTOR'S OPERATION SHALL BE REPAIRED
- GEOTECHNICAL EXPLORATION AND TESTING HAS BEEN PERFORMED BY HILLIS-CARNES IN APRIL, 2016. IF FUTURE INVESTIGATIONS SHOW UNSATISFACTORY SOIL CONDITIONS FOR ANY OF THE STORMWATER MANAGEMENT TREATMENTS SHOWN, EITHER UNDERDRAINS WILL BE PROVIDED OR A DIFFERENT PRACTICE WILL BE SUBSTITUTED.
- THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL, WHICH IS BASED ON THE

- 33. THE CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITY COMPANIES OR AGENCIES AT LEAST FIVE (5) WORKING DAYS BEFORE

410.531.5533 STATE HIGHWAY ADMINISTRATION 410.850.4620 410.787.9068 BGE(UNDERGROUND DAMAGE CONTROL 1.800.257.7777 410.795.1390 410.313.4900 HOWARD COUNTY, DEPT. OF PUBLIC WORKS, BUREAU OF UTILITIES HOWARD COUNTY HEALTH DEPARTMENT 410.313.2640 1.800.252.1133

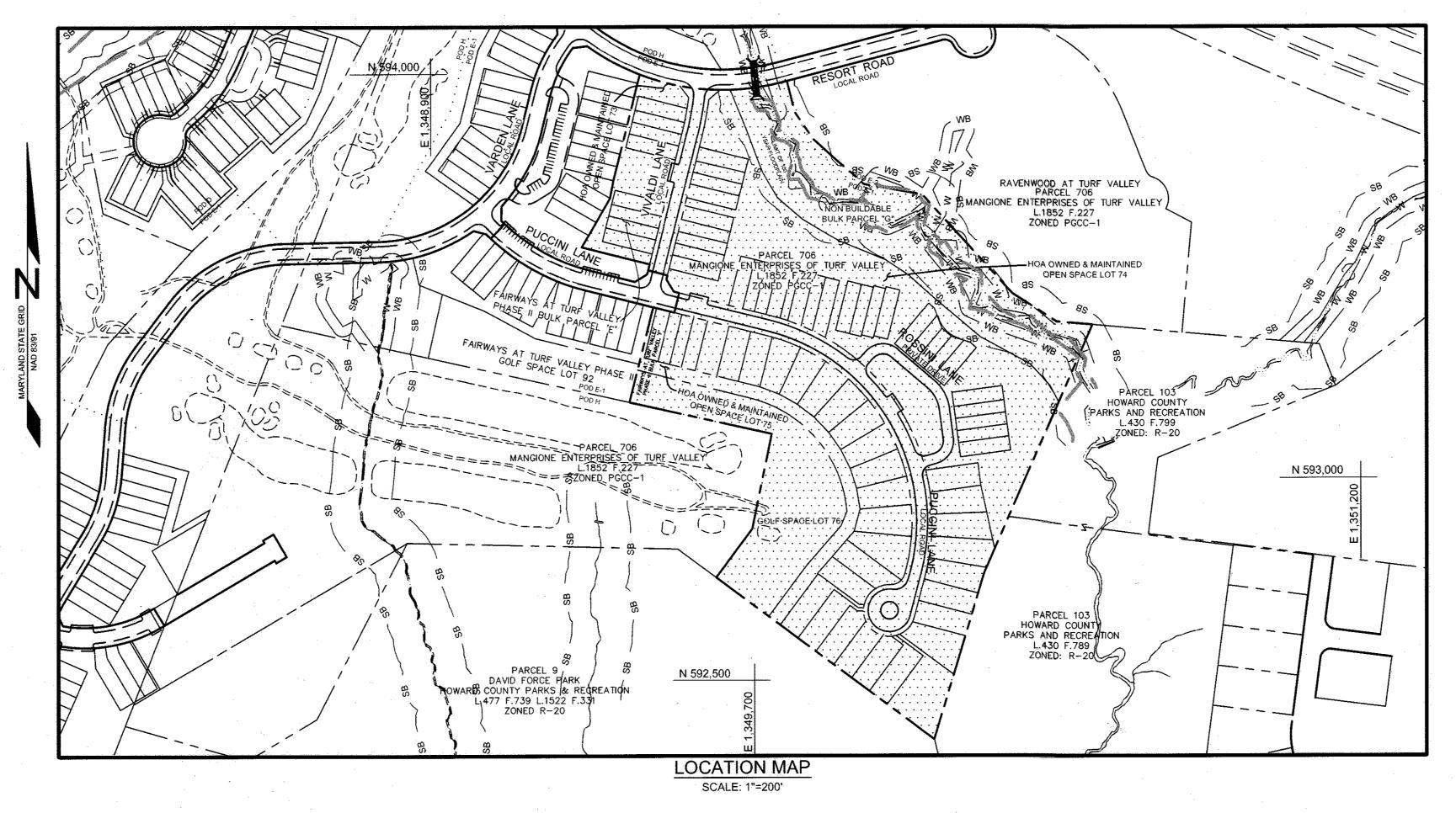
- 34. THE CONTRACTOR SHALL NOTIFY MISS UTILITY AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING
- 35. ANY DAMAGE TO PUBLIC RIGHT-OF WAYS, PAVING OR EXISTING UTILITIES WILL BE CORRECTED AT THE CONTRACTOR'S EXPENSE. 36. THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING CONSTRUCTION INSPECTION DIVISION AT (410) 313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK
- 37. THE LOTS SHOWN HEREON COMPLY WITH THE MINIMUM OWNERSHIP, WIDTH AND LOT AREA AS REQUIRED BY THE MARYLAND
- 38. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY IN
- ADDITION TO MSHA STANDARDS AND SPECIFICATIONS IF APPLICABLE. EXISTING UTILITIES ARE LOCATED BY THE USE OF ANY OR ALL OF THE FOLLOWING: ROAD CONSTRUCTION PLANS, FIELD SURVEYS, PUBLIC WATER AND SEWER PLANS AND OTHER AVAILABLE RECORD DRAWINGS. APPROXIMATE LOCATION OF THE EXISTING UTILITIES ARE SHOWN FOR THE CONTRACTORS INFORMATION. CONTRACTOR SHALL LOCATE EXISTING UTILITIES WELL IN ADVANCE OF CONSTRUCTION ACTIVITIES AND TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND TO MAINTAIN UNINTERRUPTED SERVICE: ANY DAMAGE INCURRED DUE TO THE CONTRACTOR'S OPERATION SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.
- 40. ALL HDPE PIPE SPECIFICATION AND INSTALLATION SHALL MEET AASHTO M-252 TYPE S, M-294 TYPE S AND ASTM D2321,
- SOIL COMPACTION SPECIFICATIONS, REQUIREMENTS, METHODS AND MATERIALS ARE TO BE IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE PROJECT GEOTECHNICAL ENGINEER. DRIVEWAY PAVING TO BE HOWARD COUNTY STANDARD P-1 PAVING SECTION. GEOTECHNICAL ENGINEER TO CONFIRM ACCEPTABILITY OF PROPOSED PAVING SECTION, BASED ON SOIL
- 42. TRAFFIC CONTROL DEVICES: A) THE R1-1 ("STOP") SIGN AND THE STREET NAME SIGN (SNS) ASSEMBLY FOR THIS DEVELOPMENT MUST BE INSTALLED BEFORE
- B) THE TRAFFIC CONTROL DEVICE LOCATIONS SHOWN ON THE PLANS ARE APPROXIMATE AND MUST BE FIELD APPROVED BY HOWARD COUNTY TRAFFIC DIVISION (410-313-2430) PRIOR TO THE INSTALLATION OF ANY OF THE TRAFFIC CONTROL DEVICES. C) ALL TRAFFIC CONTROL DEVICES AND THEIR LOCATIONS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE "MARYLAND MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MDMUTCD).
- D) ALL SIGN POSTS USED FOR TRAFFIC CONTROL SIGNS INSTALLED IN THE COUNTY RIGHT-OF-WAY SHALL BE MOUNTED ON A 2" GALVANIZED STEEL, PERFORATED ("QUICK PUNCH"), SQUARE TUBE POST (14 GAUGE) INSERTED INTO A 2-1/2" GALVANIZED STEEL, PERFORATED, SQUARE TUBE SLEEVE (12 GAUGE) - 3' LONG. THE ANCHOR SHALL NOT EXTEND MORE THAN TWO "QUICK PUNCH" HOLES ABOVE GROUND LEVEL. A GALVANIZED STEEL POLE CAP SHALL BE MOUNTED ON TOP OF EACH POST.
- DRIVEWAY(S) SHALL BE PROVIDED PRIOR TO ISSUANCE OF A USE AND OCCUPANCY PERMIT FOR ANY NEW DWELLINGS TO ENSURE SAFE ACCESS FOR FIRE AND EMERGENCY VEHICLES PER THE FOLLOWING REQUIREMENTS:
- 1) WIDTH 12 FEET (16 FEET SERVING MORE THAN ONE RESIDENCE);
- 2) SURFACE SIX (6") INCHES OF COMPACTED CRUSHER RUN BASE WITH TAR AND CHIP COATING (1-1/2" MINIMUM); 3) GEOMETRY - MAXIMUM 15% GRADE, MAXIMUM 10% GRADE CHANGE AND 45-FOOT TURNING RADIUS;
- 4) STRUCTURES (CULVERTS/BRIDGES) CAPABLE OF SUPPORTING 25 GROSS TONS (H25-LOADING);
- 5) DRAINAGE ELEMENTS CAPABLE OF SAFELY PASSING 100 YEAR FLOOD WITH NO MORE THAN 1 FOOT DEPTH OVER DRIVEWAY SURFACE;
- 6) MAINTENANCE SUFFICIENT TO ENSURE ALL WEATHER USE
- 44. ALL DITCHES AND SWALES WILL HAVE EROSION CONTROL MATTING.
- 45. FINANCIAL SURETY FOR THE REQUIRED PERIMETER LANDSCAPING WILL BE POSTED AS PART OF THE DEVELOPER'S AGREEMENT IN THE AMOUNT OF \$8,700 (14 SHADE TREES @ \$300.00 EACH; 30 EVERGREEN TREES @ \$150.00 EACH). STREET TREES AND INTERNAL LANDSCAPE TREES WILL BE PLANTED AT THE SITE DEVELOPMENT PLAN STAGE. LANDSCAPING FOR LOTS 1 THRU 42 WILL BE PROVIDED FOR AT THE SITE DEVELOPMENT PLAN STAGE IN ACCORDANCE WITH SECTION 16.124 OF THE SUBDIVISION
- A NOISE STUDY IS NOT REQUIRED FOR THIS PROJECT SINCE IT IS MORE THAN FIVE HUNDRED FEET (500') FROM A PRINCIPAL OR INTERMEDIATE ARTERIAL HIGHWAY AND SINCE THE HEAVY TRUCK TRAFFIC ON INTERSTATE ROUTE 70 DOES NOT EXCEED AN ADT
- 47. STREET LIGHT PLACEMENT AND THE TYPE OF FIXTURE AND POLE SHALL BE IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOLUME III (2006), SECTION 5.5.A. A MINIMUM SPACING OF TWENTY FEET (20') SHALL BE MAINTAINED BETWEEN ANY STREET LIGHT AND ANY TREE. SEE STREET LIGHT CHART, THIS SHEET
- 48. THIS PROJECT IS SUBJECT TO THE CRITERIA ESTABLISHED BY THE SECOND AMENDMENT. TO THE TURF VALLEY RESIDENTIAL SUBDISTRICT FINAL DEVELOPMENT PLAN, RECORDED IN THE LAND RECORDS OF HOWARD COUNTY, MARYLAND AS PLAT NUMBER

GENERAL NOTES CONTINUE THIS SHEET...

TENTATIVELY APPROVED DEPARTMENT OF PLANNING AND ZONING HOWARD COUNTY

PRELIMINARY PLAN TURF VALLEY, POD E-1

LOTS 1-72, OPEN SPACE LOTS 73-76 AND NON-BUILDABLE BULK PARCEL 'G' HOWARD COUNTY, MARYLAND



GENERAL NOTES CONTINUED..

- 49. THE HOA SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF PARKING LOTS INCLUDING PAVEMENT, STRIPING, CURB LITTER
- 50. A PRIVATE ROAD STREET NAME SIGN ASSEMBLY OR A PRIVATE RANGE OF ADDRESS SIGN ASSEMBLY SHALL BE FABRICATED AND INSTALLED BY HOWARD COUNTY BUREAU OF HIGHWAYS AT THE DEVELOPERS / OWNERS EXPENSE. CONTACT HOWARD COUNTY TRAFFIC CONTROL DIVISION AT 410-313-5752 FOR DETAILS AND COST ESTIMATES.
- 51. TURF VALLEY, POD E-1 (S-11-004) CONSTITUTED 74 UNITS/LOTS WHICH MET THE SKETCH PLAN MILESTONE DATES OF 12/1/09 THRU 5/3/11 FOR 74 OF THE 127 UNITS/LOTS, SECTION IV, RESIDENTIAL PHASE IV E AS ESTABLISHED BY THE REVISED PHASING PLAN DATED 7/14/08. THIS PLAN PROPOSES 72 UNITS/LOTS. THE 2 REMAINING UNITS FROM S-11-004 ARE BEING TRANSFERRED TO VILLAGES AT TURF VALLEY PHASE 3 (F-08-085) TO REPLACE SOME OF THE 35 UNITS WHICH TRANSFERRED TO VILLAGES AT TURF
- 52. WAIVER PETITION WP-15-111 APPROVED ON APRIL 1, 2015 APPROVING WAIVER TO SUBSECTION 16.144(g)(3)(ii); APPROVAL SUBJECT TO SUBMITTING PRELIMINARY PLANS TO THE DEPARTMENT OF PLANNING & ZONING ON OR BEFORE JUNE 5, 2016
- 53. THE FLOODPLAIN STUDY FOR THIS PROJECT WAS PREPARED BY BENCHMARK ENGINEERING, INC., IN SEPTEMBER 2016. 54. A NOISE STUDY IS NOT REQUIRED FOR THIS PROJECT SINCE IT IS MORE THAN FIVE HUNDRED FEET (500') FROM A PRINCIPAL OR INTERMEDIATE ARTERIAL HIGHWAY AND SINCE THE HEAVY TRUCK TRAFFIC ON INTERSTATE ROUTE 70 DOES NOT EXCEED AN ADT
- 55. HOMEOWNER ASSOCIATION WILL BE RESPONSIBLE FOR THE MAINTENANCE OF ALL THE HEAD-IN PARKING AREAS.
- 56. ALL DRIVEWAYS WILL BE CONSTRUCTED AS PER HO. CO. STD. DETAIL R-6.03.
- 57. THE DEPARTMENT OF PLANNING AND ZONING HAS DETERMINED THAT INSTALLATION OF THE SEWER IN THE STREAM BUFFER BETWEEN LOTS 37 AND 38 IS A NECESSARY DISTURBANCE IN ACCORDANCE WITH SUBSECTION 16.116(c) OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS.

STORMWATER MANAGEMEI	NT SUMMARY
GROSS AREA OF PROPERTY	24.14 ACS
AREA UNDER FLOODPLAIN	3.22 ACS
AREA UNDER WETLAND/WETLAND BUFFER	1.69 ACS
EXISTING WOODED AREA	20.9 ACS
EXISTING OPEN SPACE	3.24 ACS
AREA OF DISTURBANCE	16.61 ACS
EXISTING IMPERVIOUS AREA WITHIN LOD	0 ACS
PROPOSED IMPERVIOUS AREA	7.26 ACS
TARGET Pe FOR TREATMENT	1.6" (COMPOSITE)
ESDV REQUIRED FOR TREATMENT	42,773 CF
ESDv PROVIDED	43,778 CF
Rev REQUIRED FOR TREATMENT	6,951 CF
Rev PROVIDED	15,248 CF
Pe PROVIDED	1.65"
Qp10	N/A
0.400	NUA

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ACS		SIN	GLE FAMIL	Y DETACHE	DLOTS	TOWN
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ACS		LII	NE L	ENGTH	BEAR	ING
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CS		<u> </u>				
OMPOSITE)		CE	NITE	DIINE	ROAD	CHE
CF	<u> </u>			*		
CF	CURVE	LENGTH			TANGENT	1
`F	C1	791.27'	500.00'	90°40'22"	505.88'	S 3
·r		1				

	CENTERLINE ROAD CURVE DATA					
CURVE	LENGTH	RADIUS	DELTA	TANGENT	CHORD BEARING	CHORD LENGTH
C1	791.27'	500.00'	90°40'22"	505.88'	S 30°36'50" E	711.25'
C2	115.45'	163.94'	40°20'58"	60.25'	S 34°53'50" E	113.08'
C3	102.99'	755.00'	07°48'57"	51.60'	S 14°03'00" W	102.91'
C4	69.44'	45.00'	88°24'52"	60.25'	N 86°06'47" E	62.75'
, Ç5	73.69'	100.00'	42°13'06"	38.61'	S 28°34'14" E	72.03
C6-	63.72'	45.00'	81°08'00"	38.52'	\$ 33°06'20" W	58.53'

	RC	AD CLAS	SSIFICATI	ON	
ROAD NAME	CLASSIFICATION	PAVING TYPE	DESIGN SPEED	LIMIT OF CONSTRUCTION	R/W
PUCCINI LANE	ACCESS STREET	P-2	30	STA 5+39.08 TO 16+88.80	50'
VIVALDI LANE	ACCESS STREET	P-2	30	STA 0+25 TO 5+53.06	50'

PARKING TABULATION

PARKING REQUIRED:

42 SINGLE-FAMILY ATTACHED (SFA) UNITS (2.3 SPACES PER UNIT) = 97 30 SINGLE-FAMILY DETACHED (SFD) UNITS (2 SPACES PER UNIT) = 60

TOTAL PARKING SPACES PROVIDED FOR SFA = 99

PARKING PROVIDED:

SPACES WITHIN GARAGES/DRIVEWAYS OF SFA (2 SPACES EACH SFA) = 84 SPACES WITHIN THE PARKING LOTS = 15

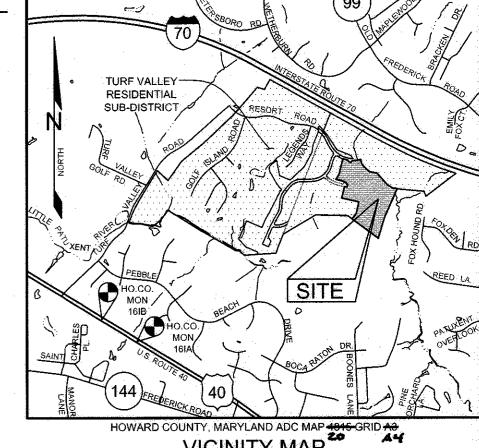
SPACES WITHIN GARAGES/DRIVEWAYS OF SFD (2 SPACES EACH SFD) = 60 TOTAL PARKING SPACES PROVIDED FOR SFD = 60

	ST	REET LIGHT	TABLE	
	FIXTURE TYPE	POLE TYPE	LOCATION	STREET
	LED-100 BLACK COLONIAL POST-TOP	14' BLACK FIBERGLASS	Ç STA. 6+25.88' LEFT	PUCCINI LANE
	LED-100 BLACK COLONIAL POST-TOP	14' BLACK FIBERGLASS	Ç STA. 8+01.17' RIGHT	PUCCINI LANE
	LED-100 BLACK COLONIAL POST-TOP	14' BLACK FIBERGLASS	€ STA. 9+86.17' LEFT	PUCCINI LANE
	LED-100 BLACK COLONIAL POST-TOP	14' BLACK FIBERGLASS	Ç STA. 11+75.12' LEFT	PUCCINI LANE
-	LED-100 BLACK COLONIAL POST-TOP	14' BLACK FIBERGLASS	QSTA. 13+26.17 LEFT	PUCCINI LANE
	LED-100 BLACK COLONIAL POST-TOP	14' BLACK FIBERGLASS	© STA. 15+01.17' RIGHT	PUCCINI LANE
	LED-100 BLACK COLONIAL POST-TOP	14' BLACK FIBERGLASS	G STA. 16+72.17' LEFT	PUCCINI LANE
	LED-100 BLACK COLONIAL POST-TOP	14' BLACK FIBERGLASS	Ç STA. 17+16.50' RIGHT	PUCCINI LANE
	LED-100 BLACK COLONIAL POST-TOP	14' BLACK FIBERGLASS	င့ STA. 0+75.00' RIGHT	VIVALDI LANE
	LED-100 BLACK COLONIAL POST-TOP	14' BLACK FIBERGLASS	Q STA. 2+16.67' RIGHT	VIVALDI LANE
	LED-100 BLACK COLONIAL POST-TOP	14' BLACK FIBERGLASS	Ç STA. 4+65.00' RIGHT	VIVALDI LANE

LEGEND

EXISTING FLOODPLAIN EXISTING STREAM BUFFER

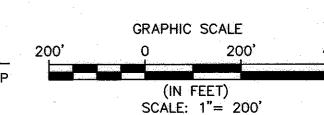
EXISTING WETLANDS



BENCHMARKS					
NUMBER	NORTHING	EASTING	ELEVATION	DESCRIPTION	
16IB	590,475.2538	1,344,753.9350	469.892	11.5' SOUTHWEST OF WBL RT. 40, 20.8' WEST OF PK NAIL IN SHOULDER, 66.4' SOUTH OF LAST POST IN GUARDRAIL	
16IA	589,509.366	1,346,343.63	463.797	RT. 40, 0.35 MI WEST OF RT. 144 JOINT	

: :	SHEET INDEX
SHEET NO.	DESCRIPTION
: 1	COVER SHEET
2	ROAD PLAN
3	ROAD PROFILES
4	GRADING, SEDIMENT AND EROSION CONTROL PLAN - 1
.5	GRADING, SEDIMENT AND EROSION CONTROL PLAN - 2
6	SEDIMENT AND EROSION CONTROL NOTES
7	SEDIMENT AND EROSION CONTROL DETAILS
8	LANDSCAPE PLAN - 1
9	LANDSCAPE PLAN - 2

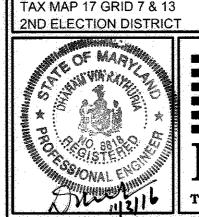
OWNER/DEVELOPER MANGIONE ENTERPRISES OF TURF VALLEY, LP 1205 YORK ROAD, PENTHOUSE LUTHERVILLE, MARYLAND 21093



COVER SHEET TURF VALLEY, POD E-1

LOTS 1-72, OPEN SPACE LOTS 73-76, NON-BUILDABLE BULK PARCEL G POD 'E-1' SECTION IV:RESIDENTIAL PHASE IV E

A SUBDIVISION OF PARCEL 706 & A RESUBDIVISION OF FAIRWAYS AT TURF VALLEY, PHASE I, NON-BUILDABLE BULK PARCEL B, FAIRWAYS AT TURF VALLEY, PHASE II, NON-BUILDABLE BULK PARCELS E & F PART OF PARCEL 706



3300 North Ridge Road ELLICOTT CITY, MD 21043 PHONE: (410) 203-9800 Fax: (410) 203-9228 www.kci.com

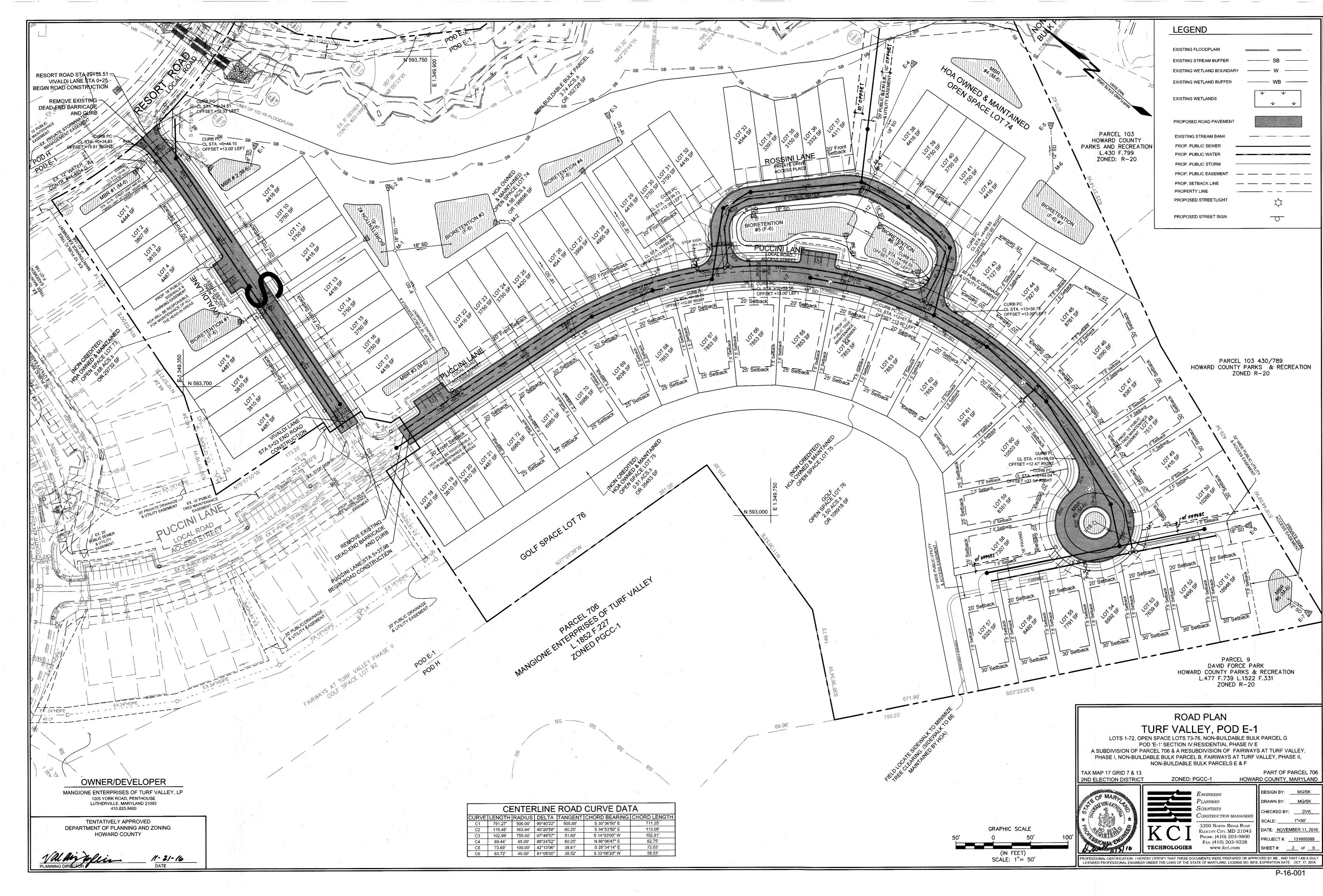
DATE: NOVEMBER 11, 2016 PROJECT#: ___131600389

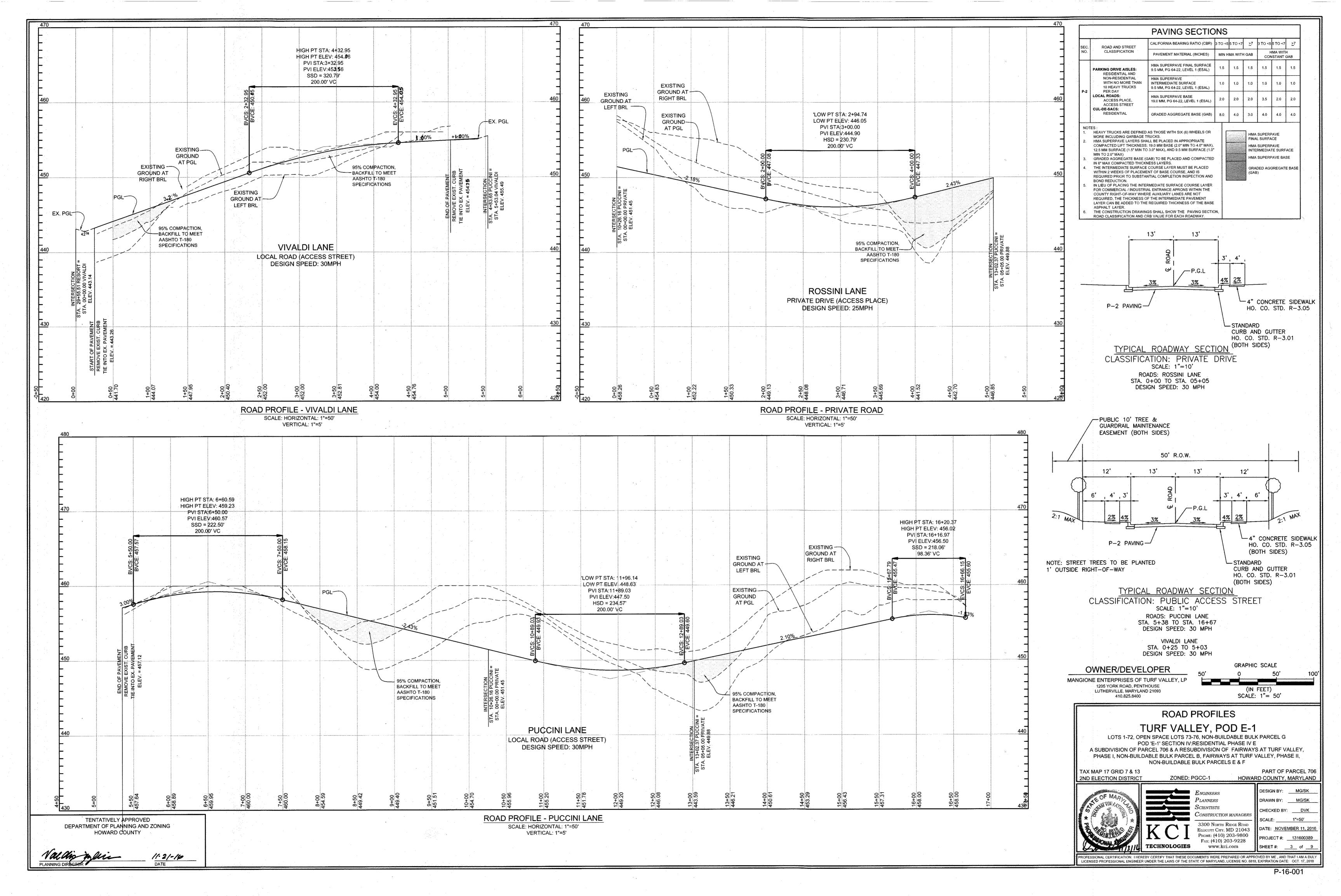
ICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 8818, EXPIRATION DATE: OCT. 17, 2018

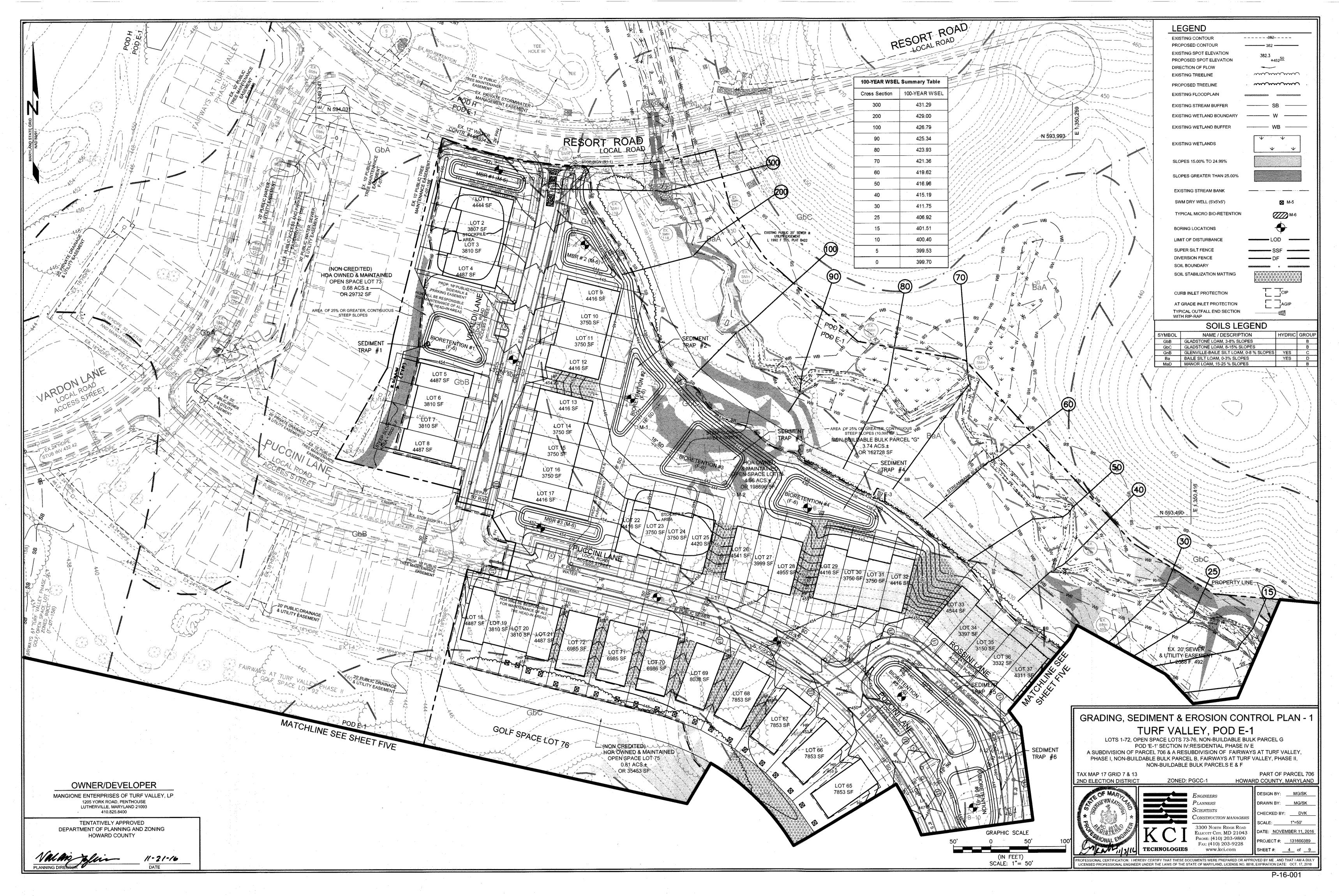
HOWARD COUNTY, MARYLAND

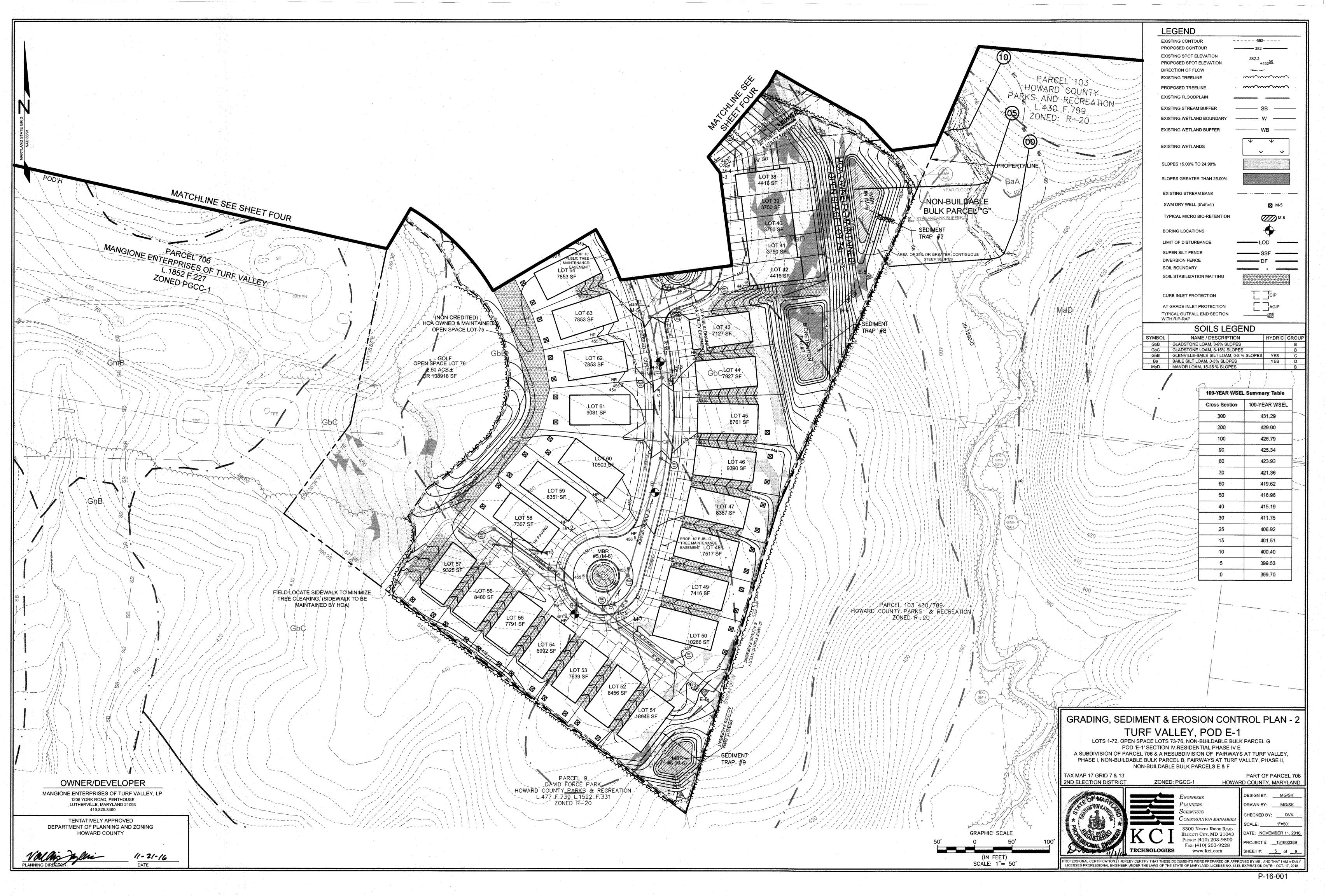
DESIGN BY: MG/SK

DRAWN BY: MG/SK









HOWARD SOIL CONSERVATION DISTRICT (HSCD) STANDARD SEDIMENT CONTROL NOTES

- 1. A pre-construction meeting must occur with the Howard County Department of Public Works, Construction Inspection Division (CID), 410-313-1855 after the future LOD and protected areas are marked clearly in the field. A minimum of 48 hour notice to CID must be given at the following stages:
- a. Prior to the start of earth disturbance. b. Upon completion of the installation of perimeter erosion and sediment controls, but before proceeding with any other earth disturbance or aradina. c. Prior to the start of another phase of construction or opening of another grading
- d. Prior to the removal or modification of sediment control practices. Other building or grading inspection approvals may not be authorized until this initial approval by the inspection agency is made. Other related state and federal permits shall be referenced, to ensure coordination and to avoid conflicts with this plan.
- 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 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, and revisions thereto.
- 3. Following initial soil disturbance or re-disturbance, permanent or temporary stabilization is required within three (3) calendar days as to the surface of all perimeter controls, dikes, swales, ditches, perimeter slopes, and all slopes steeper than 3 horizontal to 1 vertical (3:1); and seven (7) calendar days as to all other disturbed areas on the project site except for those areas under active grading.
- 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 topsoil (Sec. B-4-2), permanent seeding (Sec. B-4-5), temporary seeding (Sec. B-4-4) and mulching (Sec. B-4-3). Temporary stabilization with mulch alone can only be applied between the fall and spring seeding dates if the ground is frozen. Incremental stabilization (Sec. B-4-1) specifications shall be enforced in areas with >15' of cut and/or fill. Stockpiles (Sec. B-4-8) in excess of 20 ft. must be benched with stable outlet. All concentrated flow, steep slope, and highly erodible areas shall receive soil stabilization matting (Sec. B-4-6).
- 5. All sediment control structures are to remain in place, and are to be maintained in operative condition until permission for their removal has been obtained from the CID.
- 6. Site Analysis:
- Total Area of Site: 24.14 +/- Acres
- Area Disturbed: 16.6 + /- Acres
- Area to be roofed or paved: 7.3 + /- Acres Area to be vegetatively stabilized: 9.3 + /- Acres
- Total Cut: balanced on site Cu. Yds.
- Total Fill: balanced on site Cu. Yds.
- Offsite waste/borrow area location: N/A
- 7. Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.
- 8. Additional sediment control must be provided, if deemed necessary by the CID. The site and all controls shall be inspected by the contractor weekly; and the next day after each rain event. A written report by the contractor, made available upon request, is part of every inspection and should include:
- Inspection date
- Inspection type (routine, pre-storm event, during rain event) Name and title of inspector
- · Weather information (current conditions as well as time and amount of last recorded
- •Brief description of project's status (e.g., percent complete) and/or current activities
- Evidence of sediment discharges
- Identification of plan deficiencies ·Identification of sediment controls that require maintenance
- Identification of missing or improperly installed sediment controls
- •Compliance status regarding the sequence of construction and stabilization
- requirements Photographs
- Monitoring/sampling
- Maintenance and/or corrective action performed
- Other inspection items as required by the General Permit for Stormwater Associated with Construction Activities (NPDES, MDE).
- 9. Trenches for the construction of utilities is limited to three pipe lengths or that which can and shall be back-filled and stabilized by the end of each workday. whichever is shorter.
- 10. Any major changes or revisions to the plan or sequence of construction must be reviewed and approved by the HSCD prior to proceeding with construction. Minor revisions may allowed by the CID per the list of HSCD-approved field changes.
- 11. Disturbance shall not occur outside the L.O.D. A project is to be sequenced so that grading activities begin on one grading unit (maximum acreage of 20 ac. per grading unit) at a time. Work may proceed to a subsequent grading unit when at least 50 percent of the disturbed area in the preceding grading unit has been stabilized and approved by the CID. Unless otherwise specified and approved by the CID, no more than 30 acres cumulatively may be disturbed at a given time.
- 12. Wash water from any equipment, vehicles, wheels, pavement, and other sources must be treated in a sediment basin or other approved washout structure.
- 13. Topsoil shall be stockpiled and preserved on-site for redistribution onto final grade.
- 14. All Silt Fence and Super Silt Fence shall be placed on—the—contour, and be imbricated at 25 minimum intervals, with lower ends curled uphill by 2 in elevation.
- 15. Stream channels must not be disturbed during the following restricted time periods (inclusive):
- •Use I and IP March 1 June 15
- •Use III and IIIP October 1 April 30 •Use IV March 1 - May 31
- 16. A copy of this plan, the 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, and associated permits shall be on-site and available when the site is active.

B-4-2 STANDARDS AND SPECIFICATIONS

<u>FOR</u>

SOIL PREPARATION, TOPSOILING, AND SOIL AMENDMENTS

Definition

The process of preparing the soils to sustain adequate vegetative stabilization.

Purpose

Criteria

Conditions Where Practice Applies

Where vegetative stabilization is to be established.

To provide a suitable soil medium for vegetative growth.

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 plows or rippers mounted on construction equipment. After the soil is loosened, it must not be rolled or dragged smooth 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

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 500 parts per million (ppm).
- iii. Soil contains less than 40 percent clay but enough fine grained material (greater than 30 percent silt plus clay) to provide the capacity to hold a moderate amount of moisture. An exception: if lovegrass will be planted, 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
- e. Mix soil amendments into the top 3 to 5 inches of soil by disking or other suitable means. Rake lawn areas to smooth the surface, remove large objects like stones and branches, and ready the area for seed application. Loosen surface soil by dragging with a heavy chain or other equipment to roughen the surface where site conditions 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 1 to 3 inches of soil loose and friable. Seedbed loosening may be unnecessary on newly disturbed areas.

- 1. Topsoil is placed over prepared subsoil prior to establishment of permanent vegetation. The purpose is to provide a suitable soil medium for vegetative growth. 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 found 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/parent 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 continuing supplies of moisture and plant 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.
- 4. Areas having slopes steeper than 2:1 require special consideration and design.
- 5. 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 loamy sand. 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 textured subsoils and must contain less than 5 percent by volume of cinders, stones, slag, coarse fragments, gravel, sticks, roots, trash, or other materials larger than $\frac{1}{2}$ 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 substitutes or 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.

6. Topsoil Application

- a. Erosion and sediment control practices must be maintained when applying topsoil.
- b. Uniformly distribute topsoil in a 5 to 8 inch layer and lightly compact to a minimum thickness of 4 inches. Spreading is to be performed in such a manner that sodding or seeding can proceed with a minimum of additional soil preparation and tillage. Any irregularities in the surface resulting from topsoiling or other operations 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 detrimental to proper grading and seedbed preparation.

Soil Amendments (Fertilizer and Lime Specifications)

- 1. Soil tests must be performed to determine the exact ratios and application rates for both lime and fertilizer on sites having disturbed areas of 5 acres or more. Soil analysis may be performed by a recognized private or commercial laboratory. Soil samples taken for engineering purposes may also be used for chemical analyses.
- 2. Fertilizers must be uniform in composition, free flowing and suitable for accurate application by appropriate equipment. Manure may be substituted for fertilizer with prior approval from the appropriate approval authority. Fertilizers must all 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 must be ground limestone (hydrated or burnt lime may be substituted except when

hydroseeding) which contains at least 50 percent total oxides (calcium oxide plus magnesium

- oxide). Limestone must be ground to such fineness that at least 50 percent will pass through a #100 mesh sieve and 98 to 100 percent will pass through a #20 mesh sieve. 4. Lime and fertilizer 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 ground limestone at the rate of 4 to 8 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoil.

VEGETATIVE ESTABLISHMENT

Following initial soil disturbances or redisturbance, permanent or temporary stabilization shall be completed within three calendar days for the surface of all perimeter controls, dikes, swales, ditches, perimeter slopes, and all slopes greater than 3 horizontal to 1 vertical (3:1) and seven days for all other disturbed or graded areas on the project site.

1. Permanent Seeding:

- A. Soil Tests: Lime and fertilizer will be applied per soil tests results for sites greater than 5 acres. Soil tests will be done at completion of initial rough grading or as recommended by the sediment control inspector. Rates and analyses will be provided to the grading inspector as well as the contractor. Occurrence of acid sulfate soils (gravish black color) will require covering with a minimum of 12 inches of clean soil with 6 inches minimum capping of top soil. No stockpiling of material is allowed. If needed, soil tests should be done before and after a 6-week incubation period to allow oxidation of sulfates.
- The minimum soil conditions required for permanent vegetative establishment are:
- a. Soil pH shall be between 6.0 and 7.0.
- b. Soluble salts shall be less than 500 parts per million (ppm).
- c. The soil shall contain less than 40% clay but enough fine grained material (> 30% silt plus clay) to provide the capacity to hold a moderate amount of moisture. An exception is if lovegrass or serecia lespedeza is to be planted, then a sandy soil (< 30% silt plus clay) would be acceptable.
- d. Soil shall contain 1.5% minimum organic matter by weight.
- e. Soil must contain sufficient pore space to permit adequate root penetration.
- f. If these conditions cannot be met by soils on site, adding topsoil is required in accordance with the Standard and Specification for Soil Preparation, Topsoiling and Soil Amendments from the 2011 Maryland Standards and Specifications for Soil Erosion and Sediment Control or amendments made as recommended by a certified agronomist.
- B. Seedbed Preparation: Area to be seeded shall be loose and friable to a depth of at least 3-5 inches. The top layer shall be loosened by raking, disking or other acceptable means before seeding occurs. For sites less than 5 acres, apply 100 pounds dolomitic limestone and 21 pounds of 10-10-10 fertilizer per 1.000 square feet. Harrow or disk lime and fertilizer into the soil to a depth of at least 3-5 inches on slopes flatter than 3:1.
- C. Seeding: Apply 5-6 pounds per 1,000 square feet of tall fescue between February 1 and April 30 or between August 15 and October 31. Apply seed uniformly on a moist firm seedbed with a cyclone seeder, cultipacker seeder or hydroseeder (slurry includes seeds and fertilizer, recommended on steep slopes only). Maximum seed depth should be 1/4 inch in clayey soils and 1/2 inch in sandy soils when using other than the hydroseeder method. Irrigate where necessary to support adequate growth until vegetation is firmly established. If other seed mixes are to be used, select from Table B3 and B5 of the 2011 Maryland Standards and Specifications for Soil Erosion and Sediment Control.
- D. Mulching: Mulch shall be applied to all seeded areas immediately after seeding. During the time periods when seeding is not permitted, mulch shall be applied immediately after grading. Mulch shall be unrotted, unchapped, small grain straw applied at a rate of 2 tons per acre or 90 pounds per 1,000 square feet (2 bales). If a mulch-anchoring tool is used, apply 2.5 tons per acre. Mulch materials shall be relatively free of all kinds of weeds and shall be completely free of prohibited noxious weeds. Spread mulch uniformly, mechanically or by hand, to a depth of 1-2 inches.
- E. Securing Straw Mulch: Straw mulch shall be secured immediately following mulch application to minimize movement by wind or water. The following methods are permitted:
 - i. Use a mulch-anchoring tool which is designed to punch and anchor mulch into the soil surface to a minimum depth of 2 inches. This is the most effective method for securing mulch, however, it is limited to relatively flat areas where equipment can operate safely.
- ii. Wood cellulose fiber may be used for anchoring straw. Apply the fiber binder at a net dry weight of 750 pounds per acre. If mixed with water, use 50 pounds of wood cellulose fiber per 100 gallons of
- iii. Liquid binders may be used. Apply at higher rates at the edges where wind catches mulch, such as in valleys and on crests of slopes. The remainder of the area should appear uniform after binder application. Binders listed in the 2011 Maryland Standards and Specifications for Soil Erosion and Sediment Control or approved equal shall be applied at rates recommended by the manufacturers.
- iv. Lightweight plastic netting may be used to secure mulch. The netting will be stapled to the ground according to manufacturer's recommendations.

2. Temporary Seeding:

- 100 pounds of dolomitic limestone per 1,000 square feet. Fertilizer:
 - 15 pounds of 10-10-10 per 1,000 square feet. Perennial rye — 0.92 pounds per 1,000 square feet (February 1 through April 30 or August 15
- through October 31). Millet - 0.92 pounds per 1,000 square feet (May 1 through August 15).
- Same as 1 D and E above. Mulch:
- 3. No fills may be placed on frozen ground. All fill is to be placed in approximately horizontal layers, each layer having a loose thickness of not more than 8 inches. All compaction requirements are in accordance to Anne Arundel County Standard Specifications for Construction as well as the AA County Design Manual and Standard Details. Fills for pond embankments shall be compacted as per MD-378 Construction Specifications. All other fills shall be compacted sufficiently so as to be stable and prevent erosion and slippage.

4. Permanent Sod:

Seed:

Installation of sod should follow permanent seeding dates. Seedbed preparation for sod shall be as noted in section (B) above. Permanent sod is to be tall fescue, state approved sod; lime and fertilizer per permanent seeding specifications and lightly irrigate soil prior to laying sod. Sod is to be laid on the contour with all ends tightly abutting. Joints are to be staggered between rows. Water and roll or tamp sod to insure positive root contact with the soil. All slopes steeper than 3:1, as shown, are to be permanently sodded or protected with an approved erosion control netting. Additional watering for establishment may be required. Sod is not to be installed on frozen ground. Sod shall not be transplanted when moisture content (dry or wet) and/or extreme temperature may adversely affect its survival. In the absence of adequate rainfall, irrigation should be performed to ensure establishment of sod.

Sediment control plans for mining operations must include the following seeding dates and mixtures: For seeding dates of February 1 through April 30 and August 15 through October 31, use seed mixture of tall fescue at the rate of 2 pounds per 1,000 square feet and sericea lespedeza at the minimum rate of 0.5 pounds per 1,000 square feet.

6. Topsoil shall be applied as per the Standard and Specifications for Soil Preparation, Topsoiling, and Soil Amendments from the 2011 Maryland Standards and Specifications for Soil Erosion and Sediment Control.

SEQUENCE OF CONSTRUCTION

- 1. Obtain grading permit. 1 day
- 2. Notify Howard County DPW, Construction Inspection Division (CID) (313-1855) at least 24 hours before starting any work. — <u>1 day</u>
- 3. Install stabilized construction entrance, perimeter super silt fence, and inlet protection to existing inlets 1-6, 1-7 on Puccini Lane, and 1-2 on Resort Road. - 1 week
- 4. With Inspector's approvals, clear and grub site to LOD and construct sediment traps. 30 days
- 5. Rough grade site and begin road construction. 1 month
- 6. Construct water, sewer, and storm drain system. Provide inlet protection at all inlets 2 months
- 7. Fine Grade site and complete road construction. 1 month
- 8. Stabilize all disturbed areas with seed and mulch 2 weeks
- 9. Convert sediment traps to bioretention facilities, and stabilize any disturbed area. 3 weeks
- 10. With approval of Inspector, remove super silt fence and stabilize. 1 week

STOCKPILE AREA

TO PROVIDE A DESIGNATED LOCATION FOR THE TEMPORARY STORAGE OF SOIL THAT CONTROLS THE POTENTIAL FOR EROSION, SEDIMENTATION, AND CHANGES TO DRAINAGE PATTERNS.

CRITERIA

- THE STOCKPILE LOCATION AND ALL RELATED SEDIMENT CONTROL PRACTICES MUST BE CLEARLY INDICATED ON
- EROSION AND SEDIMENT CONTROL PLAN. THE FOOTPRINT OF THE STOCKPILE MUST BE SIZED TO ACCOMMODATE THE ANTICIPATED VOLUME OF
- MATERIAL AND BASED ON A SIDE SLOPE RATIO NO STEEPER THAN 2:1. BENCHING MUST BE PROVIDED IN ACCORDANCE
- WITH SECTION B-3 LAND GRADING. RUNOFF FROM THE STOCKPILE AREA MUST DRAIN TO A SUITABLE SEDIMENT CONTROL PRACTICE. ACCESS THE STOCKPILE AREA FROM THE UPGRADE SIDE.
- CLEAR WATER RUNOFF INTO THE STOCKPILE AREA MUST BE MINIMIZED BY USE OF A DIVERSION DEVICE SUCH AN EARTH DIKE, TEMPORARY SWALE OR DIVERSION FENCE, PROVISIONS MUST BE MADE FOR DISCHARGING
- CONCENTRATED FLOW IN A NON-EROSIVE MANNER. WHERE RUNOFF CONCENTRATES ALONG THE TOE OF THE STOCKPILE FILL, AN APPROPRIATE
- EROSION / SEDIMENT CONTROL PRACTICE MUST BE USED TO INTERCEPT THE DISCHARGE. 7. STOCKPILES MUST BE STABILIZED IN ACCORDANCE WITH THE 3/7 DAY STABILIZATION REQUIREMENT AS WELL
- STANDARD B-4-1 INCREMENTAL STABILIZATION AND STANDARD B-4-4 TEMPORARY STABILIZATION. 8. 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.

MAINTENANCE

THE STOCKPILE AREA MUST CONTINUOUSLY MEET THE REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT

ACCORDANCE WITH SECTION B-4 VEGETATIVE STABILIZATION. SIDE SLOPES MUST BE MAINTAINED AT NO STEEPER THAN A 2:1 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.

OWNER/DEVELOPER

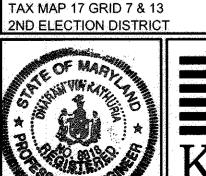
MANGIONE ENTERPRISES OF TURF VALLEY, LP 1205 YORK ROAD, PENTHOUSE **LUTHERVILLE, MARYLAND 21093** 410.825.8400

SEDIMENT AND EROSION CONTROL NOTES TURF VALLEY, POD E-1

LOTS 1-72, OPEN SPACE LOTS 73-76, NON-BUILDABLE BULK PARCEL G

POD 'E-1' SECTION IV:RESIDENTIAL PHASE IV E A SUBDIVISION OF PARCEL 706 & A RESUBDIVISION OF FAIRWAYS AT TURF VALLEY. PHASE I, NON-BUILDABLE BULK PARCEL B, FAIRWAYS AT TURF VALLEY, PHASE II, NON-BUILDABLE BULK PARCELS E & F

ZONED: PGCC-1



TECHNOLOGIES

ONSTRUCTION MANAGERS 3300 NORTH RIDGE ROAD ELLICOTT CITY, MD 21043 PHONE: (410) 203-9800 Fax: (410) 203-9228 www.kci.com

SHEET#: 6 of 9

ROFESSIONAL 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. 8818, EXPIRATION DATE: OCT. 17, 2018

11-21-16 PLANNING DIRECTOR

TENTATIVELY APPROVED

DEPARTMENT OF PLANNING AND ZONING

HOWARD COUNTY

PART OF PARCEL 706

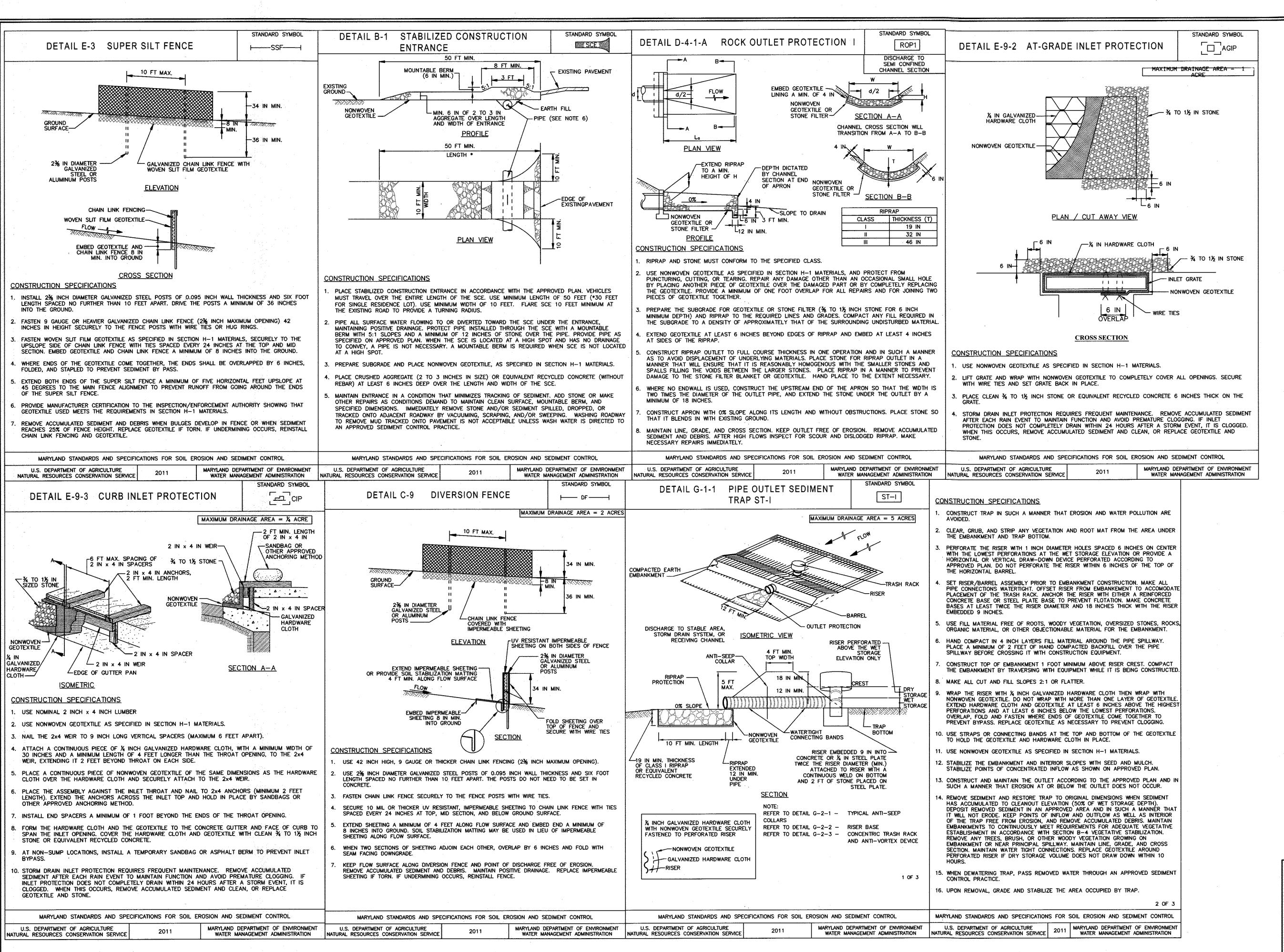
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SCALE: AS SHOWN

DATE: NOVEMBER 11, 2016

PROJECT#: __131600389

HOWARD COUNTY, MARYLAND



TENTATIVELY APPROVED DEPARTMENT OF PLANNING AND ZONING HOWARD COUNTY

OWNER/DEVELOPER

MANGIONE ENTERPRISES OF TURF VALLEY, LP 1205 YORK ROAD, PENTHOUSE LUTHERVILLE, MARYLAND 21093 410.825.8400

SEDIMENT AND EROSION CONTROL DETAILS

TURF VALLEY, POD E-1 LOTS 1-72, OPEN SPACE LOTS 73-76, NON-BUILDABLE BULK PARCEL G

NON-BUILDABLE BULK PARCELS E & F

POD 'E-1' SECTION IV:RESIDENTIAL PHASE IV E A SUBDIVISION OF PARCEL 706 & A RESUBDIVISION OF FAIRWAYS AT TURF VALLEY, PHASE I, NON-BUILDABLE BULK PARCEL B, FAIRWAYS AT TURF VALLEY, PHASE II,

ZONED: PGCC-1

TAX MAP 17 GRID 7 & 13 2ND ELECTION DISTRICT

PECHNOLOGIES

ONSTRUCTION MANAGERS 3300 North Ridge Road ELLICOTT CITY, MD 21043 PHONE: (410) 203-9800 Fax: (410) 203-9228

SHEET#: <u>7</u> of <u>9</u> www.kci.com ROFESSIONAL CERTIFICATION: THEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME. AND THAT LAM A DUL LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 8818, EXPIRATION DATE: OCT. 17, 2018

PART OF PARCEL 706

DESIGN BY: MG/SK DRAWN BY: MG/SK CHECKED BY: ____DVK_

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HOWARD COUNTY, MARYLAND

