GENERAL NOTES

- THE PROJECT IS IN CONFORMANCE WITH THE LATEST HOWARD COUNTY STANDARDS UNLESS WAIVERS HAVE THE EXISTING TOPOGRAPHY SHOWN HEREON IS BASED ON A TOPOGRAPHIC SURVEY PREPARED BY ROBERT H. VOGEL ENGINEERING, INC., DATED JUNE 27, 2014. OFFSITE TOPOGRAPHY FROM HOWARD COUNTY GIS
- AND DRAWINGS OF RECORD THE PROJECT BOUNDARY IS BASED ON A BOUNDARY SURVEY PREPARED BY ROBERT H. VOGEL ENGINEERING, INC., DATED NOVEMBER 16, 2013.
- THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM. HOWARD COUNTY MONUMENT NOS. 30CC AND 31AC WERE USED FOR THIS PROJECT
- THE SUBJECT PROPERTY IS ZONED "R-APT" IN ACCORDANCE WITH THE 10/6/2013 COMPREHENSIVE ZONING PLAN AND IS SUBJECT TO THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS EFFECTIVE
- 10/2/03 PER COUNCIL BILL 75-2003. MINOR DISTURBANCES TO THE STREAM BUFFER AND WETLAND BUFFER ARE REQUIRED FOR STORM DRAIN / STORMWATER MANAGMENT OUTFALL, AND SHOULD BE CONSIDERED ESSENTIAL DISTURBANCES. NO OTHER DISTURBANCES WITHIN THE ONSITE ENVIRONMENTAL FEATURES: STREAM AND STREAM BUFFER, WETLANDS AND WETLAND BUFFER ARE PROPOSED, NO OTHER GRADING, REMOVAL OF VEGETATIVE COVER OR TREES, PAVING AND NEW STRUCTURES SHALL BE PERMITTED WITHIN THE REQUIRED WETLANDS, STREAM(S) OR THEIR BUFFERS, FOREST CONSERVATION EASEMENT AREAS AND 100-YEAR FLOODPLAIN. THIS PROPERTY IS LOCATED WITHIN THE METROPOLITAN DISTRICT.
- SEWER FOR THIS PROJECT IS TO BE PUBLIC EXTENSIONS OF CONTRACT NO. 223-W/S AND 14-1374. EXISTING UTILITIES LOCATED FROM TOPOGRAPHIC SURVEY AND AS-BUILT DRAWINGS. CONTRACTOR SHALL LOCATE EXISTING UTILITIES WELL IN ADVANCE OF CONSTRUCTION ACTIVITIES AND TAKE ALL NECESSARY

WATER FOR THIS PROJECT IS TO BE PUBLIC EXTENSIONS OF CONTRACT NO. 223-W/S.

- PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND TO MAINTAIN UNINTERRUPTED SERVICE. NO STEEP SLOPES OVER 20,000 SF CONTIGUOUS ARE LOCATED ONSITE. FOREST CONSERVATION OBLIGATIONS FOR THIS PROJECT SHALL BE ADDRESSED BY A FOREST
- WETLANDS AND STREAMS SHOWN ONSITE ARE BASED ON ECO-SCIENCE PROFESSIONALS, INC. C/O MR. JOHN CANOLES, AUGUST 2014 GEOTECHNICAL INVESTIGATIONS WERE COMPLETED BY HILLIS CARNES, INC., DATED MARCH 2018.

CONSERVATION PLAN SUBMITTED WITH A SUBDIVISION OR SITE DEVELOPMENT PLAN.

- A NOISE STUDY SHALL BE PREPARED BY ROBERT H. VOGEL ENGINEERING AS PART OF THE SITE
- FOREST STAND DELINEATION PLAN PREPARED BY ECO-SCIENCE PROFESSIONALS, INC. C/O MR. JOHN
- 18. OLD ROUTE 108 IS CLASSIFIED AS A LOCAL ROAD TO REMAIN AND SHALL BE IMPROVED. A PORTION OF OLD ROUTE 108 SHALL BE ACQUIRED FROM HOWARD COUNTY AND RE-CLASSIFIED AS PRIVATE ROADWAY, ROUTE 108 IS CLASSIFIED AS A MINOR ARTERIAL. COLUMBIA ROAD IS A MAJOR COLLECTOR
- THE PROPOSED INTERNAL STREETS AND DRIVEWAYS ARE TO BE CLASSIFIED AS PRIVATE. TO THE BEST OF THE OWNERS KNOWLEDGE, THERE ARE NO BURIAL GROUNDS, CEMETERIES, OR HISTORIC
- STRUCTURES LOCATED ON THIS PROPERTY. THE PROPOSED UNITS SHALL HAVE AN AUTOMATIC FIRE PROTECTION SPRINKLER SYSTEM. STORMWATER MANAGEMENT FOR THE PROJECT IS PROVIDED BY THE USE OF ALTERNATIVE SURFACES AND MICRO-SCALE PRACTICÉS IN ACCORDANCE WITH ENVIRONMENTAL SITE DESIGN CRITERIA. MICRO-SCALE PRACTICES INCLUDE MICRO-BIORETENTION, BIOSWALES AND FILTERRA SYSTEMS. ALTERNATIVE SURFACES
- INCLUDE PERMEABLE PAVING, THESE FACILITIES WILL BE PRIVATELY OWNED AND MAINTAINED. APPROVAL OF THIS ENVIRONMENTAL CONCEPT PLAN (ECP) DOES NOT CONSTITUTE AN APPROVAL OF ANY SUBSEQUENT AND ASSOCIATED SUBDIVISION PLAN/PLAT AND/OR SITE DEVELOPMENT PLAN AND/OR RED-LINE REVISION PLAN, REVIEW OF THIS PROJECT FOR COMPLIANCE WITH THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS AND THE HOWARD COUNTY ZONING REGULATIONS SHALL OCCUR AT THE SUBDIVISION PLAN/PLAT AND/OR SITE DEVELOPMENT PLAN AND/OR RED-LINE REVISION PROCESS, THE APPLICANT AND CONSULTANT SHOULD EXPECT ADDITIONAL AND MORE DETAILED REVIEW COMMENTS (INCLUDING COMMENTS THAT MAY ALTER THE OVERALL SITE DESIGN) AS THIS PROJECT PROGRESSES THROUGH THE PLAN REVIEW PROCESS.
- 23. THE LIMITS OF DISTURBANCE (LOD) SHOWN ON THE PLAN EXTENDS OFFSITE INTO THE PUBLIC RIGHT OF WAY FOR OLD ROUTE 108. LETTERS OF PERMISSION AND/OR LAND ACQUISITIONS SHALL BE OBTAINED FROM HOWARD COUNTY AND PROVIDED AS PART OF THE FINAL PLAN/SITE DEVELOPMENT PLAN SUBMISSION. APPROVAL OF THIS ENVIRONMENTAL CONCEPT PLAN (ECP) BY THE HOWARD SOIL CONSERVATION DISTRICT DOES NOT GRANT APPROVAL OF THE PROPOSED SEDIMENT CONTROL SCHEME. THE FINAL PLAN SHALL
- INCLUDE A SEQUENCE OF CONSTRUCTION WHICH SHALL DETAIL SEDIMENT & EROSION CONTROLS AND PHASING AND ADDRESS THE PROJECT TEMPORARY STORMWATER MANAGEMENT REQUIREMENTS. 25. IN ACCORDANCE WITH SECTION 16.121(A)(4) OF THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT
- REGULATIONS, THERE IS NO OVERALL OPEN SPACE REQUIREMENT FOR THIS R-APT PROJECT. THE 10% NET AREA AMENITY OPEN SPACE REQUIREMENT IS BEING MET BY 0.40 ACRES OF AMENITY AREA CONSISTING OF A DOG WALKING AREA, SEATING AREAS, AND CREDITS FOR ADDITIONAL PATHWAYS, SEATING AND A GAZEBO TOTALING 0.58 AC. OF AMENITY OPEN SPACE. (SEE AMENITY TABULATION, THIS SHEET.)
- IN ACCORDANCE WITH SECTION 112.1.F OF THE 10/06/13 COMPREHENSIVE ZONING REGULATIONS, THIS SUBDIVISION IS SUBJECT TO MODERATE INCOME HOUSING UNITS. A MIHU AGREEMENT AND MIHU COVENANTS WILL BE REQUIRED IN ACCORDANCE WITH SECTION 13,402 OF THE HOWARD COUNTY CODE. THE MIHU REQUIREMENTS FOR THIS SUBDIMISION WILL BE 20 UNITS (15% OF 133 UNITS). REFERENCE VARIANCE PETITION BA CASE NO. 18-004V APPROVED MAY 7, 2018.
- REDUCE THE 30' USE SETBACK FROM AN ARTERIAL PUBLIC STREET ROW, IMPOSED BY 112.0.1.D.4.o(2) TO 11.25' FOR A PRIVATE ROAD USE. THIS SETBACK CONCERNS THE CONVERSION OF THE NOW-PUBLIC OLD ROUTE 108 TO A PRIVATE ROAD, HOWARD COUNTRY HAS REQUESTED THE CLOSING OF THIS SECTION OF
- 2. REDUCE THE 50' PROJECT BOUNDARY SETBACK IMPOSED BY 112.0.1.D.4.C(2)(A) TO 20.0' FOR AN APARTMENT BUILDING. THIS SETBACK APPLIES TO THE 20' SETBACK ALONG THE EAST SIDE BOUNDARY.

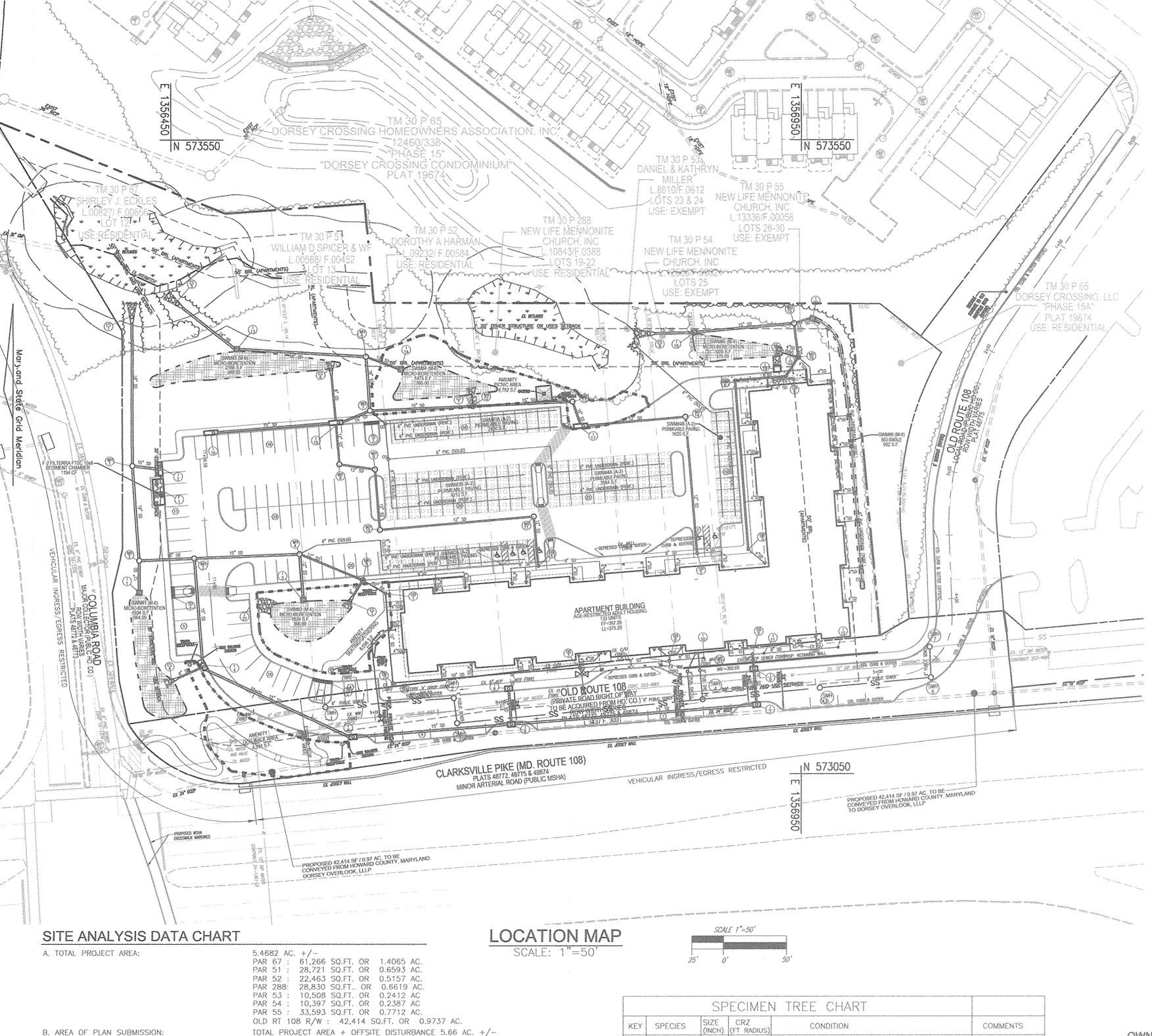
ENVIRONMENTAL SITE DESIGN NARRATIVE:

- IN ACCORDANCE WITH CHECKLIST ITEM III.K.
- THE NATURAL AREAS ON THE DORSEY OVERLOOK PROJECT SITE ARE LOCATED ON THE NORTHERNMOST PORTION OF THE SITE.
- MINOR DISTURBANCES TO THE STREAM BUFFER AND WETLAND BUFFER ARE REQUIRED FOR STORM DRAIN / STORMWATER MANAGMENT OUTFALL, AND SHOULD BE CONSIDERED ESSENTIAL DISTURBANCES. NO OTHER DISTURBANCES WITHIN THE ONSITE ENVIRONMENTAL FEATURES: STREAM AND STREAM BUFFER, WETLANDS AND WETLAND BUFFER ARE PROPOSED.
- NO DRAMATIC DISTURBANCE TO THE NATURAL DRAINAGE PATTERNS ARE PROPOSED, PLEASE REFER TO THE PROPOSED GRADING.
- THE CONCEPTUAL REDUCTION IN IMPERVIOUS AREA THROUGH BETTER SITE DESIGN IS ACHIEVED THROUGH THE ENVIRONMENTAL SITE DESIGN (ESD) FOR THE PROJECT. THE ESD CONCEPT INCLUDES THE USE OF MICRO-SCALE PRACTICES TO INCLUDE MICRO-BIORETENTION AND BIOSWALES AS WELL AS PERMEABLE SURFACES AND FILTERRAS.
- SEDIMENT CONTROL FOR THIS SPECIFIC SITE PLAN WILL BE PROVIDED THROUGH THE USE OF PROPOSED SEDIMENT TRAPS, EARTH DIKES, AND SUPER SILT FENCE PERIMETER CONTROLS. SEDIMENT CONTROL SHALL BE IN ACCORDANCE WITH CURRENT REQUIREMENTS AND SHALL BE APPROVED BY THE HOWARD SOIL CONSERVATION DISTRICT.
- STORMWATER MANAGEMENT FOR THE PROJECT SHALL BE MET THROUGH THE USE OF: A. MICRO-SCALE PRACTICES
 - (M-6) MICRO-BIORETENTION
- (M-8) BIOSWALES B. ALTERNATIVE SURFACE
- (A-2) PERMEABLE SURFACES. C. FILTERRA SYSTEM
- 6. THESE FACILITIES WILL BE PRIVATELY OWNED AND MAINTAINED.
- TARGET PE = 1.96"
- PROVIDED PE = 1.96" TARGET ESDV = 20,732 CUFT PROVIDED = 21,269 CUFT
- THE RESULTS OF THE ENVIRONMENTAL SITE DESIGN FOR THIS PROJECT WILL REFLECT "WOODS IN GOOD
- 6. AT THIS CONCEPT STAGE OF DEVELOPMENT, NO DESIGN MANUAL WAIVERS AND/OR WAIVER PETITIONS FOR ENVIRONMENTAL AND STORMWATER MANAGEMENT DESIGN ARE REQUIRED.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

ENVIRONMENTAL CONCEPT PLAN DORSEY OVERLOOK

AGE RESTRICTED APARTMENTS HOWARD COUNTY, MARYLAND



FAR 31 , 20,721 3Q.F1. OR 0.0033 AC.
PAR 52 : 22,463 SQ.FT. OR 0.5157 AC.
PAR 288: 28,830 SQ.FT OR 0.6619 AC.
PAR 53: 10,508 SQ.FT. OR 0.2412 AC
PAR 54: 10,397 SQ.FT. OR 0.2387 AC
PAR 55 : 33,593 SQ.FT. OR 0.7712 AC.
OLD RT 108 R/W: 42,414 SQ.FT. OR 0.9737 AC.
TOTAL PROJECT AREA + OFFSITE DISTURBANCE 5.66 AC. +/-
8432 SQ. FT (OFFSITE)+195,778 S.F. (ONSITE)+42,414 S.F. (ROW A
22,450 S.F. OR 0.51 AC.
0 S.F. OR 0.00 AC.
0.5 AC. (REFER TO FSD)
0 S.F. OR 0,00 AC.
N/A
205,390 S.F. OR 4.72 AC.

I. PROPOSED USES FOR SITE AND STRUCTURES: RESIDENTIAL - AGE RESTRICTED APARTMENTS 75,873 S.F. = 1.74 AC.+/- (WITHIN LIMIT OF DISTURBANCE) 129,517 S.F. OR 2.97 AC +/-M. OPEN SPACE REQUIRED (AMENITY OPEN SPACE): 10% x 5.46 = 0.55 AC (23,784 S.F.) AREAS RESERVED AS AMENITY OPEN SPACE: 0.40 AC (17,271 S.F.)

25 UNITS PER ACRE = (25 x 5.66 AC.) = 141 UNITS

WP-16-112, S-16-004, SDP-18-031, BA-18-004V

CONT. #223-W&S, CONT. 14-1374, ECP-15-12

4.,665 S.F.

0.58 AC (25,170 S.F.)

CONCRETE PATH (933 SF X 5)= CONCRETE PATH/SEATING AREA= TOTAL AMENITY OPEN SPACE AND CREDITS: N. TOTAL NUMBER OF UNITS ALLOWED: O. TOTAL NUMBER OF UNITS PROPOSED: P. DPZ FILE REFERENCES:

C. AREA OF WETLANDS AND BUFFERS:

F. AREA OF STEEP SLOPES (15% & GREATER):

D. AREA OF FLOODPLAIN:

H. LIMIT OF DISTURBED AREA:

K. PROPOSED IMPERVIOUS AREA:

L. PRESENT ZONING DESIGNATION:

2 BENCHES (2X200)=

E. AREA OF FOREST:

G. ERODIBLE SOILS:

J. GREEN OPEN AREA:

KEY SPECIES SIZE CRZ NORWAY MAPLE 41 61.5 NOT NATIVE, GOOD CONDITION ACQUISTION) NOT NATIVE, POOR CONDITION RED MAPLE 48 GOOD CONDITION 42 63 INOT NATIVE, POOR CONDITION, STORM DAMAGE 57 NOT NATIVE, POOR CONDITION, SUCKER GROWTH EVIDENT TO BE REMOVED 49:5 NOT NATIVE, POOR CONDITION, TRUNK DAMAGE GOOD CONDITION NORWAY MAPLE 38 35 52.5 GOOD CONDITION 10 TULIP POPLAR 33 49.5 GOOD CONDITION, IN BUFFER

TO REMAIN PERMIT INFORMATION CHART SECTION/ AREA SUBDIVISION NAME LOT/ PARCEL PARCELS 51, 53, 54, 55, 65 PLAT REF. BLOCK NO ZONE TAX MAP ELECT DIST. CENSUS TR 9 | R-APT | 30 | 2ND

DANIEL L./KATHRYN A. MILLER

TO BE REMOVED

TO BE REMOVED

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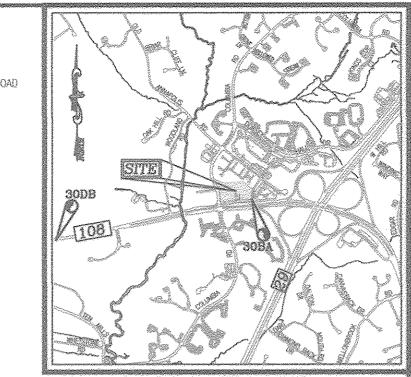
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DEVELOPER DORSEY OVERLOOK, LLLP C/O J. KIRBY DEVELOPMENT, LLC 5670 B FURNACE AVENUE ELKRIDGE, MARYLAND 21075 PHONE: (410) 788-0027

BENCHWARKS

HOWARD COUNTY BENCHMARK - 30BA (CONC. MONUMENT) N 573149.04 E 1357083.21 ELEV. 397.20 LOCATION: OLD ROUTE 108, 480' SOUTH OF OLD ANNAPOLIS ROAD HOWARD COUNTY BENCHMARK - 300B (CONC. MONUMENT) N 572298.12 E 1353001.79 ELEV. 409.16 LOCATION: SOUTH SIDE OF ROUTE 108, 700' EAST ENTRANCE TO CENTENNIAL PARK



ADC MAP COORDINATE: 15/J,K 1

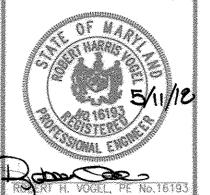
SHEET INDEX								
DESCRIPTION	SHEET NO.							
accompany and the contract of	1 OF 3							
LAYOUT, GRADING, SOIL EROSION AND SEDIMENT CONTROL PLAN	2 OF 3							
STORM WATER MANAGEMENT DRAMAGE AREA MAP, NOTES AND DETAILS	3 OF 3							

LEGEND management of the second of th announcemental ANACERE PROPERTY LINE CENTERLINE OF EXISTING STREAM STREAM BUFFER TO AND SOUTHER PROPOSED CURB AND GUTTER EXISTING UTILITY POLE EXISTING LIGHT POLE EXISTING SIGN EX. WETLANDS EXISTING SANTARY SEVER AND THE PROPERTY OF THE PROPER PROPOSED STORM DRAIN BIORETENTION AREA (M-6) FIRE HYDRANI

ENVIRONMENTAL CONCEPT PLAN COVER SHEET

DORSEY OVERLOOK AGE RESTRICTED APARTMENTS

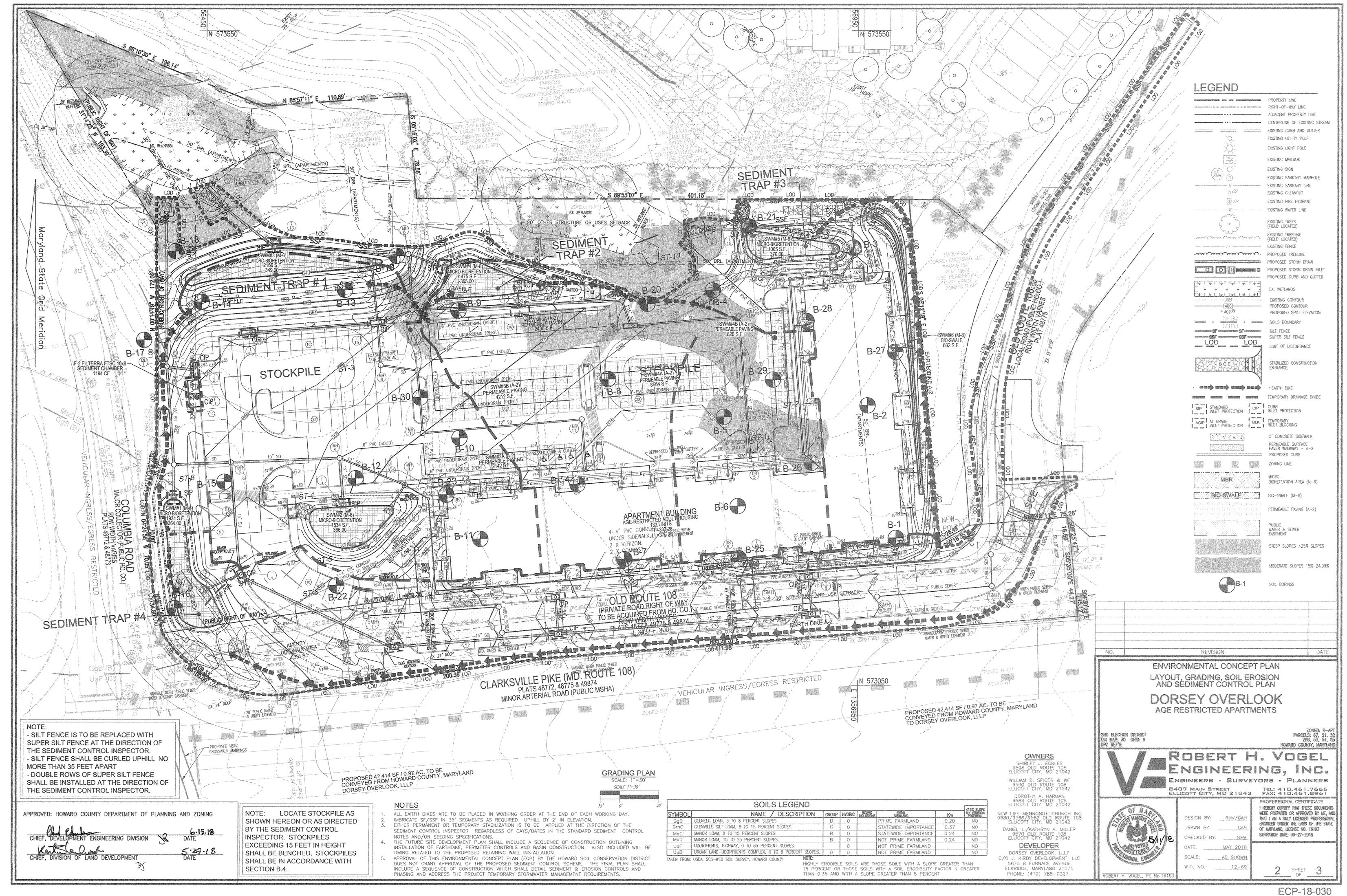
TAX NAP: 30 GRID: 9 ROBERT H. VOGEL ENGINEERING, ING. ENGINEERS . SURVEYORS . PLANNERS 8407 Main STREET TEL: 410.461.7666 ELLICOTT CITY, MD 21043 FAX: 410.461.8961

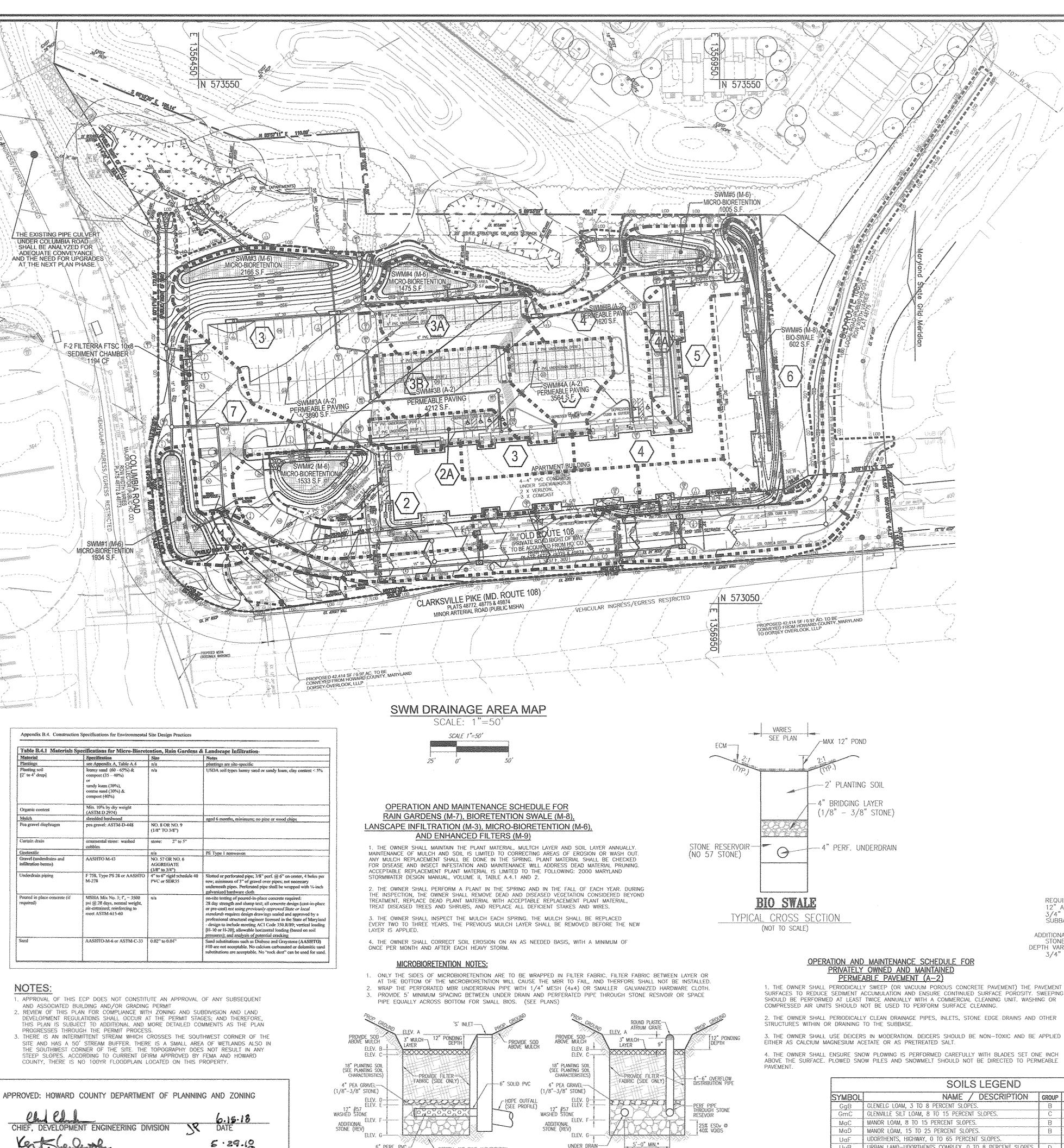


DRAWN BY: CHECKED BY: SCALE: ___AS_SHOWN W.O. NO.: 12-69

PROFESSIONAL CERTIFICATE I KEREBY CERTEY THAT THESE DOCUMENTS NETE PREPARED OR APPROVED BY ME. AND THAT I AM A PREV HYCNOCTA DEVICTORIAL FROM THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 18193 EARWANDA DATE: 09-27-2018

HOMARO COUNTY, MARYLAN





MICRO-BIORETENTION (UNDERDRAIN)

MICRO-BIORETENTION (OVERFLOW)

PPENDIX B.4.C SPECIFICATIONS FOR MICRO-BIORETENTION. RAIN GARDEN, LANDSCAPE INFILTRATION & INFILTRATION BERMS. MATERIAL SPECIFICATIONS ALLOWABLE MATERIALS TO BE USED IN THESE PRACTICES ARE DETAILED IN TABLE 8.4.1.

2. FILTERING MEDIA OR PLANTING SOIL
THE SOIL SHALL BE A UNIFORM MIX, FREE OF STONES, STUMPS, ROOTS OR OTHER SIMILAR OBJECTS LARGER THAN TWO INCHES. NO OTHER MATERIALS OR SUBSTANCES SHALL BE MIXED OR DUMPED WITHIN THE MICRO-BIORETENTION PRACTICE THAT MAY BE HARMFUL TO PLANT GROWTH, OR PROVE A HINDRANCE TO THE PLANTING OR MAINTENANCE OPERATIONS. THE PLANTING SOIL SHALL BE FREE OF BERMUDA GRASS, QUACKGRASS, JOHNSON GRASS, OR OTHER NOXIOUS WEEDS AS SPECIFIED UNDER COMAR 15.08.01.05. THE PLANTING SOIL SHALL BE TESTED AND SHALL MEET THE FOLLOWING CRITERIA:

* SOIL COMPONENT - LOAMY SAND OR SANDY LOAM (USDA SOIL TEXTURAL CLASSIFICATION).

* ORGANIC CONTEN - MINIMUM 10% BY DRY WEIGHT (ASTM D 2974). IN GENERAL, THIS CAN BE MET WITH A MIXTURE OF LOAMY SAND (60%-65%) AND COMPOST (35% TO 40%) OR SANDY LOAM (30%), COARSE SAND (30%), AND COMPOST (40%).

* CLAY CONTENT - MEDIA SHALL HAVE A CLAY CONTENT OF LESS THAN 5%.

* PH RANCE - SHOULD BE BETWEEN 5.5 - 7.0. AMENDMENTS (E.G., LIME, IRON SULFATE PLUS SULFUR) MAY BE MIXED IN TO THE SOIL TO INCREASE OR DECREASE PH.

THERE SHALL BE AT LEAST ONE SOIL TEST PER PROJECT. EACH TEST SHALL CONSIST OF BOTH THE STANDARD SOIL TEST FOR PH, AND ADDITIONAL TESTS OF ORGANIC MATTER, AND SOLUBLE SALTS. A TEXTURAL ANALYSIS IS REQUIRED FROM THE SITE STOCKFILED TOPSOIL. IF TOPSOIL IS IMPORTED, THEN A TEXTURE ANALYSIS SHALL BE PERFORMED FOR EACH LOCATION WHERE THE TOPSOIL WAS EXCAVATED.

ROTOTILL 2 TO 3 INCHES OF SAND INTO THE BASE OF THE BIORETENION FACILITY BEFORE BACKFILLING THE OPTIONAL SAND LAYER. PUMP ANY PONDED WATER BEFORE PREPARING (ROTOTILLING) BASE, WHEN BACKFILLING THE TOPSOIL OVER THE SAND LAYER, FIRST PLACE 3 TO 4 INCHES OF TOPSOIL OVER THE SAND, THEN ROTOTILL THE SAND/TOPSOIL TO CREATE A GRADATION ZONE. BACKFILL THE REMAINDER OF THE TOPSOIL TO FINAL GRADE. WHEN BACKFILLING THE BIORETENTION FACILITY, PLACE SOIL IN LIFTS 12" TO 18". DO NOT USE HEAVY EQUIPMENT WITHIN THE BIORETENTION BASIN. HEAVY EQUIPMENT CAN BE USED AROUND THE PERIMETER OF THE BASIN TO SUPPLY SOILS AND SAND. GRADE BIORETENTION MATERIALS WITH LIGHT EQUIPMENTSUCH AS A COMPACT LOADER OR A DOZER/LOADER WITH MARSH TRACKS.

4. PLANT MATERIAL RECOMMENDED PLANT MATERIAL FOR MICRO-BIORETENTION PRACTICES CAN BE FOUND IN APPENDIX A, SECTION A.2.3,

5. PLANT INSTALLATION
COMPOST IS A BETTER ORGANIC MATERIAL SOURCE, IS LESS LIKELY TO FLOAT, AND SHOULD BE PLACED IN THE INVERT AND OTHER LOW AREAS. MULCH
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COMPOST IS A BETTER ORGANIC MATERIAL SOURCE, IS LESS LIKELY TO FLOAT, AND SHOULD BE PLACED IN THE INVERT AND OTHER LOW AREAS. SHOULD BE PLACED IN SURROUNDING TO A UNIFORM THICKNESS OF 2" TO 3", SHREDGED OR CHIPPED HARDWOOD MULCH IS THE ONLY ACCEPTED. MULCH. PINE MULCH AND WOOD CHIPS WILL FLOAT AND MOVE TO THE PERIMETER OF THE BIORETENTION AREA. DURING A STORM EVENT AND AREA. MULCH. PINE MULCH AND WOOD CHIPS WILL FLOAT AND MOVE TO THE PERIMETER OF THE BIORETENTION AREA DURING A STORM EVENT AND ARE NOT ACCEPTABLE. SHREDDED MULCH MUST BE WELL AGED (6 TO 12 MONTHS) FOR ACCEPTANCE, ROOTSTOCK OF THE PLANT MATERIAL, SHALL BE KEPT MOIST DURING TRANSPORT AND ON—SITE STORAGE, THE PLANT ROOT BALL, SHOULD BE PLANTED SO 1/8TH OF THE BALL IS ABOVE FINAL GRADE SURFACE. THE DIAMETER OF THE PLANTING PIT SHALL BE AT LEAST SIX INCHES LARGER THAN THE DIAMETER OF THE PLANTING BALL. SET AND MAINTAIN THE PLANT STRAIGHT DURING THE ENTIRE PLANTING PROCESS. THOROUGHLY WATER GROUND BED COVER AFTER INSTALLATION. TREES SHALL BE BRACED USING 2" BY 2" STAKES ONLY AS NECESSARY AND FOR THE FIRST GROWING SEASON ONLY, STAKES ARE TO BE EQUALLY SPACED ON THE OUTSIDE OF THE TIRE BALL GRASSES AND LEGUME SEED SHOULD BE DRILLED INTO THE SOIL, TO A DEPTH OF AT LEAST ONE INCH. GRASS AND LEGUME PLUGS SHALL BE PLANTED FOLLOWING THE NON—GRASS GROUND COVER PLANTING SPECIFICATIONS. THE TOPSOIL SPECIFICATIONS PROVIDE ENDUGH ORGANIC MATERIAL TO ADEQUATELY SUPPLY NUTRIENTS FROM NATURAL CYCLING. THE PRIMARY FUNCTION OF THE BIORETENTION STRUCTURE IS TO IMPROVE WATER QUALITY. ADDING FERTILIZERS DEFEATS, OR AT A MINIMUM, IMPEDES THIS GOAL ONLY ADD FERTILIZER IF WOOD CHIPS OR MULCH ARE USED TO AMEND THE SOIL. ROTOTILL UREA FERTILIZER AT A RATE OF 2 POUNDS PER 1000 SQUARE FEET.

6. UNDERDRAINS
UNDERDRAINS
UNDERDRAINS SHOULD MEET THE FOLLOWING CRITERIA:

* PIPE - SHOULD BE 4" TO 6" DIAMETER, SLOTTED OR PERFORATED RIGID PLASTIC PIPE (ASTMF 758, TYPE PS 28, OR AASHTO-M-278) IN A GRAVEL LAYER. THE PREFERRED MATERIAL IS SLOTTED, 4" RIGID PIPE (E.G., PVC OF HDPE),

* PERFORATIONS - IF PERFORATED PIPE IS USED, PERFORATIONS SHOULD BE 3/8" DIAMETER LOCATED 6" ON CENTER WITH A MINIMUM OF FOUR HOLES PER ROW. PIPE SHALL BE WRAPPED WITH A 1/4" (NO. 4 OR 4x4) GALVANIZED HARDWARE CLOTH.

* GRAVEL - THE GRAVEL LAYER (NO. 57 STONE PREFERRED) SHALL BE AT LEAST 3" THICK ABOVE AND BELOW THE UNDERDRAIN.

* THE MAIN COLLECTOR PIPE SHALL BE AT A MINIMUM 0.5% SLOPE.

* A RIGID, NON-PERFORATED OBSERVATION WELL MUST BE PROVIDED (ONE PER EVERY 1,0000 SQUARE FEET) TO PROVIDE A CLEAN-OUT PORT AND MONITOR PERFORMANCE OF THE FILTER.

* A 4" LAYER OF PEA GRAVEL (1/8" TO 3/8" STONE) SHALL BE LOCATED BETWEEN THE FILTER MEDIA AND UNDERDRAIN TO PREVENT MIGRATION OF FINES IN TO THE UNDERDRAIN. THIS LAYER MAY BE CONSIDERED PART OF THE FILTER BED WHEN BED THICKNESS EXCEEDS 24".

THIS MAIN COLLECTOR PIPE FOR UNDERDRAIN SYSTEMS SHALL BE CONSTRUCTED AT A MINIMUM SLOPE OF 0.5%. OBSERVATION WELLS AND/OR CLEAN-OUT PIPES MUST BE PROVIDED (ONE MINIMUM PER EVERY 1000 SQUARE FEET OF SURFACE AREA).

7. MISCELLANEOUS
THESE PRACTICES MAY NOT BE CONSTRUCTED UNTIL ALL CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED.

B.4.8 SPECIFICATIONS FOR PERMEABLE PAVEMENTS & REINFORCED TURF THESE SPECIFICATIONS INCLUDE INFORMATION ON ACCEPTABLE MATERIALS FOR TYPICAL APPLICATIONS AND ARE NOT

EXCLUSIVE OR LIMITING. THE DESIGNER IS RESPONSIBLE FOR DEVELOPING SPECIFICATIONS FOR INDIVIDUAL PROJECTS

1. PERVIOUS CONCRETE SPECIFICATIONS DESIGN THICKNESS - PERVIOUS CONCRETE APPLICATIONS SHALL BE DESIGNED SO THAT THE THICKNESS OF THE CONCRETE SLAB SHALL SUPPORT THE TRAFFIC AND VEHICLE TYPES THAT WILL BE CARRIED. APPLICATIONS MAY BE DESIGNED USING EITHER STANDARD PAVEMENT PROCEDURES (E.G., AASHTO, ACI 325.9R, ACI 330R) OR USING STRUCTURAL VALUES DERIVED FROM FLEXIBLE PAVEMENT DESIGN PROCEDURES. MIX & INSTALLATION - TRADITIONAL PORTLAND CEMENTS (ASTM C 150, C 1157) MAY BE USED IN PERVIOUS CONCRETE APPLICATIONS. PHOSPHORUS ADMIXTURES MAY ALSO BE USED. MATERIALS SHOULD BE TESTED (E.G., TRIAL BATCHING) PRIOR TO CONSTRUCTION SO THAT CRITICAL PROPERTIES (E.G., SETTLING TIME, RATE OF STRENGTH DEVELOPMENT, POROSITY. PERMEABILITY) CAN BÉ DETERMINED. AGGREGATE - PERVIOUS CONCRETE CONTAINS À LIMITED FINE AGGREGATE CONTENT. COMMONLY USED GRADATIONS INCLUDE ASTM C 33 NO. 67 (3/4 IN. TO NO. 4), NO. 8 (3/8 IN. TO NO.16) AND NO. 89 (3/8 IN. TO NO.50) SIEVES. SINGLE-SIZED AGGREGATE (UP TO 1 INCH) MAY ALSO BE USED. WATER CONTENT - WATER-TO-CEMENT RATIOS BETWEEN 0.27 AND 0.30 ARE USED ROUTINGLY WITH PROPER INCLUSION OF CHEMICAL ADMIXTURES, WATER QUALITY SHOULD MEET ACI 30A, AS A GENERAL RULE, POTABLE WATER SHOULD BE USED ALTHOUGH RECYCLED CONCRETE PRODUCTION WATER MEETING ASTM C 94 OR AASHTO M 157 MAY ALSO BE USED. ADMIXTURES - CHEMICAL ADMIXTURES (E.G., RETARDERS OR HYDRATION-STABILIZERS) ARE USED TO OBTAIN SPECIAL PROPERTIES IN PERVIOUS CONCRETE, USE OF ADMIXTURES SHOULD MEET ASTM C 494 (CHEMICAL ADMIXTURES) AND ASTM C

3 OR 4 COURSE AGGREGATE WITH AN ASSUMED OPEN PORE SPACE OF 30% (n=0.30). 2. PERMEABLE INTERLOCKING CONCRETE PAVEMENTS (PICP) PAVER BLOCKS -- BLOCKS SHOULD BE EITHER 3? IN, OR 4 IN. THICK, AND MEET ASTM C 936 OR CSA A231.2 REQUIREMENTS. APPLICATIONS SHOULD HAVE 20% OR MORE (40% PREFERRED) OF THE SURFACE AREA OPEN, INSTALLATION SHOULD FOLLOW MANUFACTURER'S INSTRUCTIONS, EXCEPT THAT INFILL AND BASE COURSE MATERIALS AND DIMENSIONS SPECIFIED IN THIS APPENDIX SHALL BE FOLLOWED. INFILL MATERIALS AND LEVELING COURSE - OPENINGS SHALL BE FILLED WITH ASTM C-33 GRADED SAND OR SANDY LOAM. PICP BLOCKS SHALL BE PLACED ON A ONE-INCH THICK LEVELING COURSE OF ASTM C-33

SAND. BASE COURSE -- THE BASE COURSE SHALL BE AASHTO NO. 3 OR 4 COURSE AGGREGATE WITH AN ASSUMED OPEN PORE SPACE OF 30% (n≈0.30).

260 (AIR ENTRAINING ADMIXTURES) AND CLOSELY FOLLOW MANUFACTURER'S RECOMMENDATIONS. BASE COURSE - THE BASE COURSE SHALL BE AASHTO NO.

REINFORCED GRASS PAVEMENT (RGP) - WHETHER USED WITH GRASS OR GRAVEL, THE RGP THICKNESS SHALL BE AT LEAST 1-3/4" THICK WITH A LOAD CAPACITY CAPABLE OF SUPPORTING THE TRAFFIC AND VEHICLE TYPES THAT WILL BE CARRIED.

	AREA	FACILITY NUMBER	ENVIRONMENTAL SITE DESIGN PRACTICE									
DRAINAGE AREA#			1	ADD UNDER		FILTERRA	GRAVEL TRENCH	GREEN	ASCRO ELO REJENTION	ADD UNDER	Recharge Volume (Rev)	ESDv VOLUME
1	32324	MBR #1	0	0	0	0	0	0	7579	870	645	3449
2	35500	MBR #2	643	321	0	0	0	0	2735	0	511	3699
3	53550	M8R #3	3062	1532	0	0	0	0	7888	325	722	7807
4	20648	MBR #4	486	243	0	0	0	0	1967	Ø	492	2696
5	11806	MBR #5	0	0	0	0	0	0	1340	o o	335	1340
6	19851	MBR #6	0	0	0	0	0	0	885	199	221	1084
7	10485	MBR #7	0	0	0	1194	0	0	0.0	0	28	1194
		SUBTOTAL 1	4191	2096	0	1194	0	0	12394	1394	2954	21269
		TOTALS:	4191	2096	0	1194	0	Q.	12394	1394	2954	21269
Dv REQUIR	ED.		·	20732	CF				***************************************	TOTAL ESD	v PROVIDED:	21269

DA	% IMPERV	Rv	DA	ESDv	MINIMUM	MAXIMUM	VOLUME	AREA SF	PERV AREA	IMP ARE
				REQ	VOLUME	VOLUME	PROVIDED *			yelevoyee.
1	62.32	0.61	0.74	3225	1646	4278	3449	32324	12179	20145
2	73.02	0.71	0.81	4100	2092	5439	3639	35500	9578	25922
3	75.85	0.73	1.23	3270	3270	8501	78.07	53550	12930	40620
4	65.50	0.64	0.47	2157	1100	2861	ንደማና	20548	7123	13525
5	59.33	0.58	0.27	1126	575	1494	1340	11806	4801	7005
6	26.81	0.29	0.46	482	482	1253	1094	19851	14528	5323
7	91.04	0.87	0.24	1489	760	1975		10485	939	9546
TOTAL ESDV BY SUBAREA					9924	25802	21269	184164	62078	122086

STD HOWARD COUNTY STD HOWARD COUNTY P-1 PAVING LENGTH VARIES P-1 PAVING -PERMEABLE CONCRETE ÖVERORAIN PIPE REQUIRED 12" ASTM C 33 OVERDRAIN 2" MIN. —PERFORATED OR SLOTTED 3/4" TO 2" STONE-SUBBASE WITHIN SUBBASE ADDITIONAL ESDV STORAGE UNDERDRAIN 3°MIN, SLOPED TO OUTLET PERFORATED OR STONE RESERVOIR-DEPTH VARIES ASTM C 33 SLOTTED WITHIN SUBBASE 3/4" TO 2" STONE FABRIC SIDES ONLY

1. PAVEMENT CROSS SECTION TO BE CONFIRMED BY GEOTECHNICAL ENGINEER 2. UNDERDRAIN SHALL BE LOCATED SUCH THAT IT CAN DAYLIGHT TO THE CURB INTO A BIO-RETENTION FACILITY OR TO THE REAR OF THE LOT 3. OVERDRAIN SHALL COMBINE WITH UNDERDRAIN OR DAYLIGHT AS DETAILED FOR UNDERDRAIN, SEE NOTE 2.

DETAIL - PERMEABLE CONCRETE PAVING - 5% OR LESS NOT TO SCALE ALL PERMEABLE CONCRETE THICKNESS, MIX AND SUB-BASE TO BE DETERMINED BY GEOTECHNICAL ENGINEER ONSITE.

	SOILS LEGEND									
SYMBOL	NAME / DESCRIPTION	GROUP	HYDRIC	HIDIGC NO USONS	PAIK.	Kw	- <15% S10 W D108			
GgB	GLENELG LOAM, 3 TO 8 PERCENT SLOPES.	8	0		PRIME FARMLAND	0.20	NO			
GmC	GLENVILLE SILT LOAM, 8 TO 15 PERCENT SLOPES.	C	0		STATEWIDE IMPORTANCE	0.37	NO			
MaC	MANOR LOAM, 8 TO 15 PERCENT SLOPES.	В	0		STATEWIDE IMPORTANCE	0.24	NO			
MaD	MANOR LOAM, 15 TO 25 PERCENT SLOPES.	В	0		NOT PRIME FARMLAND	0.24	NO			
UaF	UDORTHENTS, HIGHWAY, O TO 65 PERCENT SLOPES.		0		NOT PRIME FARMLAND	Stanford St	NO			
Uu8	URBAN LAND-UDORTHENTS COMPLEX, O TO 8 PERCENT SLOPES.	D	0		NOT PRIME FARMLAND		NO			
TAKEN FROM:	USDA, SCS-WEB SOIL SURVEY, HOWARD COUNTY NOTE:	~	******							

HIGHLY ERODIBLE SOILS ARE THOSE SOILS WITH A SLOPE GREATER THAN 15 PERCENT OR THOSE SOILS WITH A SOIL ERODIBILITY FACTOR K GREATER THAN 0.35 AND WITH A SLOPE GREATER THAN 5 PERCENT

OWNERS DANIEL L./KATHRYN A. MILLER DEVELOPER DORSEY OVERLOOK, LLLP C/O J. KIRBY DEVELOPMENT, LLC

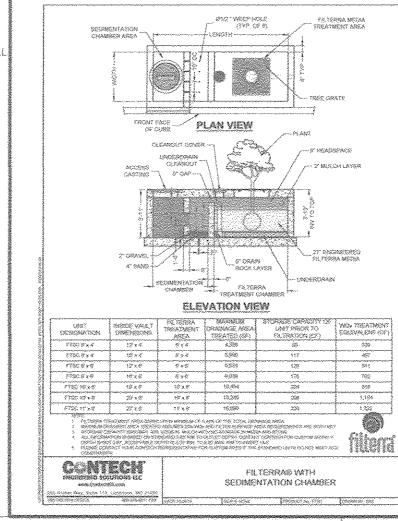
5670 8 FURNACE AVENUE

ELKRIDGE, MARYLAND 21075

PHONE: (410) 788-0027

EXISTING CURB AND GUTTER EXISTING UTILITY POLE EXISTING LIGHT POLE EXISTING MAILBOX EXISTING SIGN EXISTING SANITARY MANHOLE EXISTING SANITARY LINE EXISTING CLEANOUT EXISTING FIRE HYDRAMT EXISTING FENCE EXISTING TO COMIDUR ---- 328---- Existing 2' Contour CENTERENE OF EXISTING STREAM PROPOSED DRAMAGE AREA DINDE SQLS . AND THE LINE · · · · · EXISTING WETLANDS T* 1*1 * 1 * 1 * 1 * 1 * 1 PROPOSED STORMORAIN . PROPOSED TREELINE - PROPOSED 10' CONTOUR RECEOSED 2' CONTOUR (1) (1) (1) (1) 5' CONCRETE SIDEWALK the contribution of the co MICRO-BIORETENTION (M-6) [[/ZBIOSWALE]/] 840-SWALE (M-8) PERMEABLE PAVING (A-2)

LEGEND:



NO. REVISION DATE

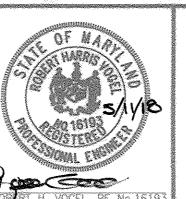
ENVIRONMENTAL CONCEPT PLAN

STORMWATER MANAGEMENT DRAINAGE AREA MAP

DORSEY OVERLOOK AGE RESTRICTED APARTMENTS

2ND ELECTION DISTRICT TAX WAP: 30 GRID: 9 DPZ REF'S:

ROBERT H. VOGEL ENGINEERING, INC. ENGINEERS . SURVEYORS . PLANNERS 8407 MAIN STREET TEL: 410.461.7666 ELLICOTT CITY, MD 21043 FAX: 410.461.8961



DESIGN BY: ___RHV/GAH CHECKED BY: SCALE: W.O. NO.: 12-69

PROFESSIONAL CERTIFICATE I HEREBY CENTRY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND I THAT I AM A DATEY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 16193 EXPRAIRON DATE: 09-27-2018

PARCELS: 67, 51, 57, 52, 54, 55

HOWARD COUNTY, MARYLAND