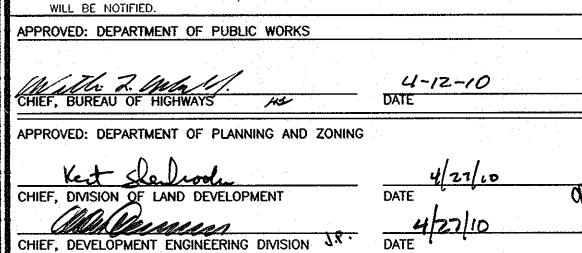
GENERAL NOTES

- 1. THIS PROJECT IS IN CONFORMANCE WITH THE LATEST HOWARD COUNTY STANDARDS UNLESS WAIVERS HAVE BEEN APPROVED.
- DEED REFERENCE: L. 9010/F. 628. . THE PROJECT BOUNDARY IS BASED ON A BOUNDARY SURVEY PREPARED BY ROBERT H. VOGEL
- ENGINEERING, INC., DATED DECEMBER 2004. 4. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS IF APPLICABLE. . 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
- 5. THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR
- 7. TRAFFIC CONTROL DEVICES, MARKINGS AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.
- 8. STREET LIGHT PLACEMENT AND THE TYPE OF FIXTURE AND POLE SHALL BE IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOLUME III, AND AS MODIFIED BY GUIDELINES FOR STREET LIGHTS IN RESIDENTIAL DEVELOPMENTS. A MINIMUM SPACING OF 20' SHALL BE MAINTAINED BETWEEN
- . THE TOPOGRAPHY SHOWN HEREON IS BASED ON A TOPOGRAPHICAL SURVEY PREPARED BY ROBERT H. VOGEL ENGINEERING, INC., DATED DECEMBER 2004.
- 10. WATER AND SEWER FOR THIS PROJECT WILL BE PUBLIC. . STORMWATER MANAGEMENT TO BE PROVIDED FOR THIS DEVELOPMENT. WQV AND Rev ARE PROVIDED BY 2 BIORETENTION FACILITIES AND 2 RAINGARDENS, THE BIORETENTION FACILITIES
- ARE LOCATED ON HOA OPEN SPACE LOT 8 AND ARE TO BE PRIVATELY OWNED. 12. BASED ON A FIELD INVESTIGATION BY ECO-SCIENCE PROFESSIONALS, INC. DATED JANUARY, 2005 THERE ARE NO WETLANDS OR STREAMS ARE LOCATED ON-SITE.
- 13. NO 100-YR FLOODPLAIN IS LOCATED ON-SITE. 14. SIMPLE FOREST STAND DELINEATION PLAN PREPARED BY ECO-SCIENCE PROFESSIONALS, INC., DATED JANUARY 2005. FOREST CONSERVATION REQUIREMENTS ARE COMPLIED WITH PER SECTION 16.1202 OF THE HOWARD COUNTY CODE. THE FOREST CONSERVATION OBLIGATIONS FOR THE REQUIRED 0.47 AC. HAVE BEEN PROVIDED BY ONSITE AFFORESTATION OF 0.47 AC. FINANCIAL SURETY IN THE AMOUNT OF \$10,237.00 (20,473.20 SF x 0.50) WILL BE POSTED WITH THE DEVELOPER'S AGREEMENT.
- 15. APFO TRAFFIC STUDY PREPARED BY THE TRAFFIC GROUP, DATED JANUARY 2005. 16. ALL LANDSCAPING REQUIREMENTS AS SET FORTH IN THE LANDSCAPE MANUAL SHALL BE
- 17. STREET LIGHTING IS REQUIRED AND SHALL BE COMPLIED WITH FOR THIS DEVELOPMENT. . SEDIMENT AND EROSION CONTROL IS PROVIDED FOR THIS SITE. 19. THIS PROPERTY IS WITHIN THE METROPOLITAN DISTRICT.
- 212 THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL
- WHICH ARE BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM. HOWARD COUNTY MONUMENT NOS. 38AA AND 38BA WERE USED FOR THIS PROJECT. OPEN SPACE LOT 8 TO BE PRIVATELY OWNED AND MAINTAINED BY THE HOA 22. A NOISE STUDY IS NOT REQUIRED FOR THIS SITE.
- 23. THIS PLAN IS SUBJECT TO THE AMENDED FIFTH EDITION OF THE SUBDIVISION REGULATIONS AND TO THE FEBRUARY 2, 2004 ZONING REGULATIONS. 24. THIS SITE IS LOCATED WITHIN THE BWI FOUR MILE HEIGHT RESTRICTION ZONE REQUIRING APPROVAL
- FROM THE MARYLAND AVIATION ADMINISTRATION FOR NEW HOUSE CONSTRUCTION AND FOR STORMWATER MANAGEMENT DESIGN. AN APPROVAL LETTER FROM THE MAA WILL BE PROVIDED WITH THE FINAL PLANS AND SITE DEVELOPMENT PLAN. 25. THIS PROPERTY IS LOCATED WITHIN THE OLD WASHINGTON ROAD HISTORIC SURVEY DISTRICT, HO-803.
- 26. THIS SUBDIVISION PLAN WAS PRESENTED TO THE HISTORIC DISTRICT COMMISSION ON APRIL 7, 2005. 27. A TYPE D LANDSCAPE EDGE OR SOLID FENCE IS REQUIRED ALONG THE PIPESTEM AND THE ADJACENT PROPERTY SINCE THE COMMON DRIVEWAY IS LESS THEN 10' FROM THE PROPERTY LINE PER SECTION 16.120(b)(6)(vi) OF THE SUBDIVISION AND LAND REGULATIONS 5' IS PROVIDED
- 26. THIS PROPERTY IS SUBJECT TO WP-05-131 FOR A WAIVER FROM SECTION 16.120(b)(4)(iv) WHICH REQUIRES THAT RESIDENTIAL LOTS NOT BE ENCUMBERED BY ACCESS EASEMENTS STORMWATER MANAGEMENT FACILITIES OR OPEN SPACE, EXCEPT PER SECTION 16.121(e) OF THE SUBDIVISION REGULATIONS TO ALLOW SWM ACCESS FOR OPEN SPACE. LOT 8 BY WAY OF THE PROPOSED USE-IN-COMMON DRIVEWAY EASEMENTS FOR LOTS 1-7.AND.LOT9.
 THE 6/27/05 APPROVAL IS SUBJECT TO THE FOLLOWING CONDITIONS:
- 1. THE DEVELOPER SHALL INSTALL BOLLARD MARKERS OR SOME OTHER FORM OF SIGNS ALONG
 THE USE—IN-COMMON DRIVEWAY ACCESS EASEMENT FOR LOTS 1 THRU 7, 9 AND NON-BUILDABLE PARCEL A, AND PARCEL 889. 'ANY PROPERTY DAMAGE INCURRED BY THE INSPECTION OR MAINTENANCE OF THE OPEN SPACE LOT OR SWMF IS TO BE REPAIRED BY THE HOA.' 2. COMPLIANCE WITH COMMENTS DATED JUNE 23, 2005 FROM THE DEVELOPMENT
- 39. ANY PROPERTY DAMAGE INCURRED BY THE INSPECTION OR MAINTENANCE OF THE OPEN SPACE LOT OR SWMF IS TO BE REPAIRED BY THE HOA.

BETWEEN THE DRIVEWAY AND THE PROPERTY LINE.

ENGINEERING DIVISION.

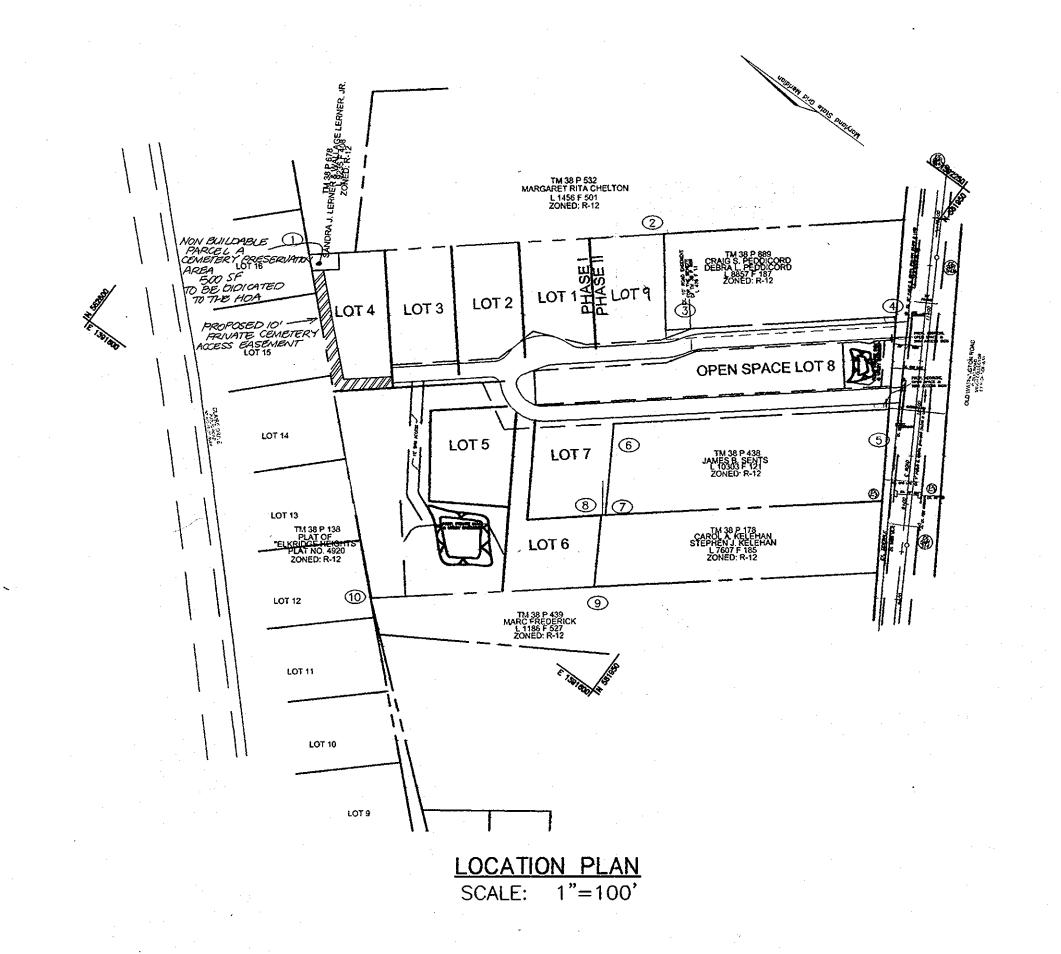
- 30 REFUSE COLLECTION. SNOW REMOVAL AND MAINTENANCE FOR LOTS 1-7, 9 AND PARCEL'SO SHALL BE PROVIDED AT THE JUNCTION OF THE PRIVATE USE-IN-COMMON ACCESS EASEMENT AND THE EXISTING ROAD RIGHT-OF-WAY.
- ALL SIGN POST USED FOR TRAFFIC CONTROL SIGNS INSTALLED IN THE COUNTY RIGHT-OF-WAY INSERTED INTO A 2-1/2" GALVANIZED, PERFORATED, SQUARE TUBE SLEEVE (12 GAUGE-3' LONG). A GALVANIZED STEEL POLE CAP SHALL BE MOUNTED ON THE TOP OF EACH POST.
- THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. LANDSCAPE SURETY IN THE AMOUNT OF \$17,250,00 FOR THE REQUIRED 30 SHADE TREES, 53 EVERGREEN TREES AND 10 SHRUBS WILL BE PROVIDED WITH THE DPW DEVELOPER'S AGREEMENT.
- 33. PREVIOUS COUNTY FILE NUMBERS: S-05-09, WP-05-131, P-10-01 34. THIS PROJECT IS PHASED BASED ON HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING LETTER DATED JULY 6, 2009. PHASE I ALLOCATIONS ARE AVAILABLE FOR 6 UNITS FOR YEAR 2012, ONE ALLOCATION FOR PHASE II YEAR 2013.
- . ALL EXISTING STRUCTURES INCLUDING THE EXISTING DWELLING WILL BE REMOVED PRIOR TO FINAL PLAT RECORDATION OF THIS SUBDIVISION.
- DEVELOPMENT OR CONSTRUCTION ON THIS PARCEL MUST COMPLY WITH SETBACK AND BUFFER REGULATIONS IN EFFECT AT THE TIME OF SUBMISSION OF THE SITE DEVELOPMENT PLAN, WAIVER PETITION, OR BUILDING AND GRADING PERMITS
- 37. A PRIVATE RANGE OF ADDRESS SIGN ASSEMBLY SHALL BE FABRICATED BY HOWARD COUNTY BUREAU OF HIGHWAYS AT EACH DRIVEWAY ACCESS POINT ONTO OLD WASHINGTON ROAD AT THE DEVELOPERS/OWNERS EXPENSE. CONTACT HOWARD COUNTY TRAFFIC DIVISION AT 410-313-5752 FOR DETAILS AND COST ESTIMATES.
- 36. THE SUBJECT PROPERTY IS ZONED R-12 PER THE 02/02/04 COMPREHENSIVE ZONING PLAN AND THE COMP LITE ZONING REGULATION AMENDMENTS EFFECTIVE ON 07/28/06.
- 39 NO GRADING, REMOVAL OF VEGETATIVE COVER OR TREES, OR PLACEMENT AND PAVING OF NEW STRUCTURES IS PERMITTED WITHIN THE LIMITS OF WETLANDS, WETLAND BUFFERS, STREAM, STREAM BUFFERS OR FOREST CONSERVATION EASEMENT AREAS.
- 40... DEVELOPER TO SUBMIT A COPY OF ALL APPROVED DEMOLITION PERMITS AND PHOTOGRAPHS PRIOR TO THE SUBSEQUENT TO DEMOLITION OF SITE, AND PRIOR TO THE SIGNATURE APPROVAL OF THE FINAL PLAT ORIGINALS. A USE-IN-COMMON DRIVEWAY MAINTENANCE AGREEMENT FOR LOTS 1-7,9,7M 38, 12
- PARCEL 869 WILL BE RECORDED IN THE HOWARD COUNTY LAND RECORDS ALONG WITH THE RECORDING OF THIS SUBDIVISION PLAT. 42. ARTICLES OF INCORPORATION BY THE STATE DEPARTMENT OF ASSESSMENTS AND TAXATION FOR THE SOUTH POINT HOMEOWNER'S ASSOCIATION WERE ACCEPTED AND APPROVED. THE
- DOCUMENTS WILL BE RECORDED PRIOR TO THE RECORDATION OF THE PLAT. 43. THE FOREST CONSERVATION EASEMENTS HAVE BEEN ESTABLISHED TO FULFILL THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE AND FOREST ACT. NO CLEARING, GRADING, OR CONSTRUCTION IS PERMITTED WITHIN THE FOREST CONSERVATION EASEMENT; HOWEVER FOREST MANAGEMENT PRACTICES AS DEFINED IN THE
- DEED OF FOREST CONSERVATION EASEMENT ARE ALLOWED. 44. THE EXISTING DWELLING AND ALL STRUCTURES LOCATED ON THIS PLAN WERE REMOVED PRIOR TO THE RECORDATION OF THIS PLAT.
- 45. APPROVAL OF A SITE DEVELOPMENT PLAN IS REQUIRED FOR THE DEVELOPMENT OF ALL RESIDENTIAL LOTS WITHIN THE SUBDIVISION PRIOR TO ISSUANCE OF ANY GRADING OR BUILDING PERMITS FOR NEW HOUSE CONSTRUCTION IN ACCORDANCE WITH SECTION 16.155 OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS.
- 46 A SITE INSPECTION ON THE PROPERTY WAS COMPLETED ON APRIL 12, 2005 BY THE OWNER OF THE PROPERTY AND TO THE BEST OF THEIR KNOWLEDGE THERE IS NO EVIDENCE THAT THE WELL AND SEPTIC EXISTS. IT IS LIKELY THAT THEY WERE PROPERLY ABANDONED AND SEALED AND IF ENCOUNTERED DURING THE DEMOLITION PROCESS, THEY WILL BE PROPERLY ABANDONED/SEALED AND THE HOWARD COUNTY HEALTH DEPARTMENT



17. TWO GRAVE SITES EXIST ON NON-BUILDABLE PARCELA. THE ACCOMODATION OF THE ACCESS TO THE CEMETERY ON PARCEL A WAS APPROVED BY THE PLANNING BOARD ON SEPTEMBER 2, 2010 ASSOCIATED WITH F-10-054 AND SDP-10-092. THE CEMETERY WAS DEDICATED TO THE HOMEOWNERS ASSOCIATION AS L. 12917 F. 280 UNIDER PLAT No. 21390.

FINAL ROAD CONSTRUCTION PLAN SOUTH POINT PHASE I & 2

LOTS 1-7, 9, OPEN SPACE LOT 8 AND NON-BUILDABLE PARCEL A HOWARD COUNTY, MARYLAND



SHEET INDEX			
SHEET NO.	TITLE		
1	COVER SHEET		
2	ROAD CONSTRUCTION PLAN, M.O.T. PLAN AND DETAILS		
3	GRADING, SEDIMENT AND EROSION CONTROL PLAN		
4	SEDIMENT AND EROSION CONTROL DETAILS		
5	STORMWATER MANAGEMENT PROFILES AND NOTES		
6	LANDSCAPE PLAN, FOREST CONSERVATION PLAN AND DETAILS		
7	LANDSCAPE AND FOREST CONSERVATION NOTES AND DETAILS		
8	AASCD/MAA NOTES & DETAILS		

BENCHMARKS

8,689 Ø

8,886 ø

9,292 ø

9,664 ø

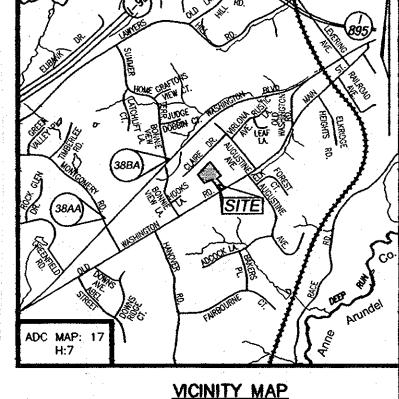
10,108 ø

8,622 ø

9,338 ø

38AA- N. 561158.817, E. 1389726.33 ELEV.= 220.084 CONC. MON. W/ STAMPED DISC SET 38BA- N. 562553.314, E. 1390967.86 ELFV.= 166.184

CONC. MON. W/ STAMPED DISC SET



SCALE 1"=2000'

APFO PHASING SCHEDULE				
BDIVISION	PHASE	NUMBER OF HOUSING UNITS/LOTS	ALLOCATION	YEAR
PHASE	1	7 LOTS (6 GRANTED ALLOCATIONS + 1 CREDIT FOR EXISTING HOUSE	2012	
PHASE	2	1 LOT	2013	
TOTAL		8 LOTS		

MINIMUM LOT SIZE CHART EAST NO. NORTH 562456.63 1391791.11 562171.85 1392027.19 9,959 ø 1,270 ø 3 562111.07 1391947.61 10.394 ø 1,508 ø 4 561926.36 1392100.83 11,155 ø 1,863 ø 5 5618875.13 1392018.34 6 562096.54 1391836.75 12,138 \$ 2,530 ø 7 562047.39 1391754.87 3,119 ø 11,741 ø 8 562050.75 1391752.13 12,296 ø 2,958 ø 9 562012.62 1391687.47 10,734 ø 2,296 ø 10 562193.07 1391540.27

SITE DATA LOCATION: TAX MAP 38, BLOCK 3, PARCEL 437 EXISTING ZONING: R-12 GROSS AREA OF PARCEL: 3.09 AC. AREA OF PROPOSED RIGHT-OF-WAY: N/A AREA OF 100-YR FLOODPLAIN: N/A

AREA OF STEEP SLOPES: N/A NET AREA OF PROJECT: 3.09 AC. NUMBER OF PROPOSED RESIDENTIAL LOTS: 8 (W/ 1 NON-BUILDABLE BULK PARCEL)

AREA OF PROPOSED RESIDENTIAL LOTS: 2.07 AC AREA OF NON-BUILDABLE PARCEL: O.O.AC AREA OF SMALLEST BUILDABLE LOT PROPOSED

(WITHOUT AREA OF PIPESTEM): 8,438 SQUARE FEET - LOT 7 NUMBER OF PROPOSED OPEN SPACE LOTS: 1 (LOT 8) AREA OF OPEN SPACE REQUIRED: 0.93 AC. (3.0952 x 30%) AREA OF CREDITED OPEN SPACE PROVIDED: 0.945 AC.

AREA OF NON-CREDITED OPEN SPACE: 0.07 AC. TOTAL AREA OF OPEN SPACE PROVIDED: 1.0125 AC. area disturbed: 2.8**2** ac.

> AS-BUILT CERTIPICATION I HEREBY CERTIFY THAT THE PACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND MEETS THE APPROVED PLANS & SPECIFICATIONS.

> > OWNER/DEVELOPER TRINITY QUALITY HOMES

3675 PARK AVE., STE. 301 ELLICOTT CITY, MARYLAND 21043

(410) 480-0023

TAX MAP 38 BLOCK 3 1ST ELECTION DISTRICT OF MARY

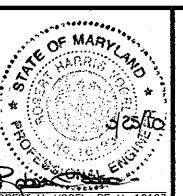
TO ADD GRAVE LOCATION, CEMETERY ACCESS AND PHASE II UNIT 10/12/10 REVISION FINAL ROAD CONSTRUCTION PLAN

COVER SHEET SOUTH POINT PHASE I & 2

LOTS 1 - 7,LOT 9, OPEN SPACE LOT 8 AND NON-BUILDABLE PARCELA

COUNTY REF.: S-05-09, WP-05-131, P-10-01 HOWARD COUNTY, MARYLAND

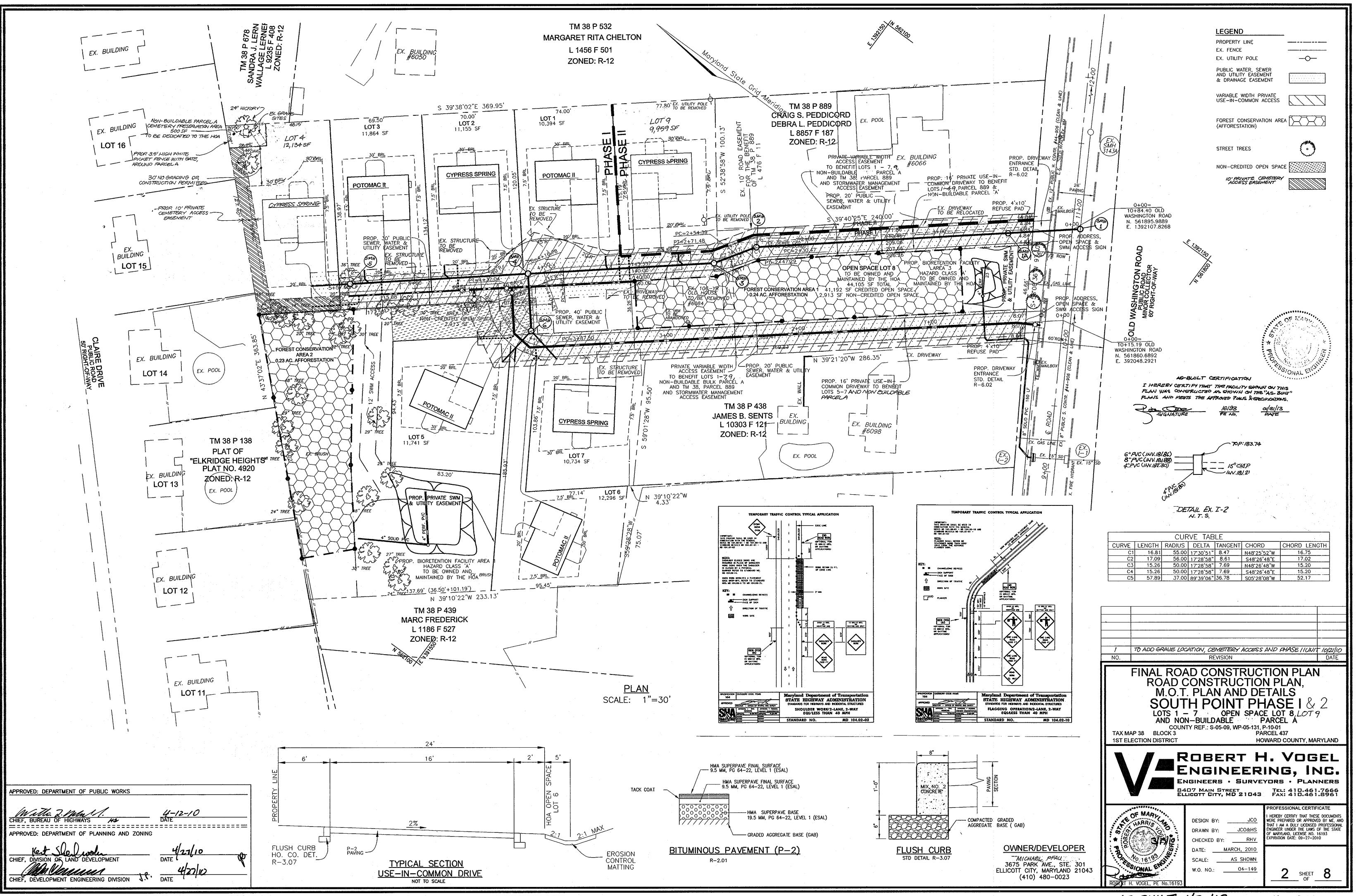
ROBERT H. VOGEL Engineering, Inc. Engineers • Surveyors • Planners 8407 Main Street Tel: 410.461.7666 ELLICOTT CITY, MD 21043 FAX: 410.461.8961

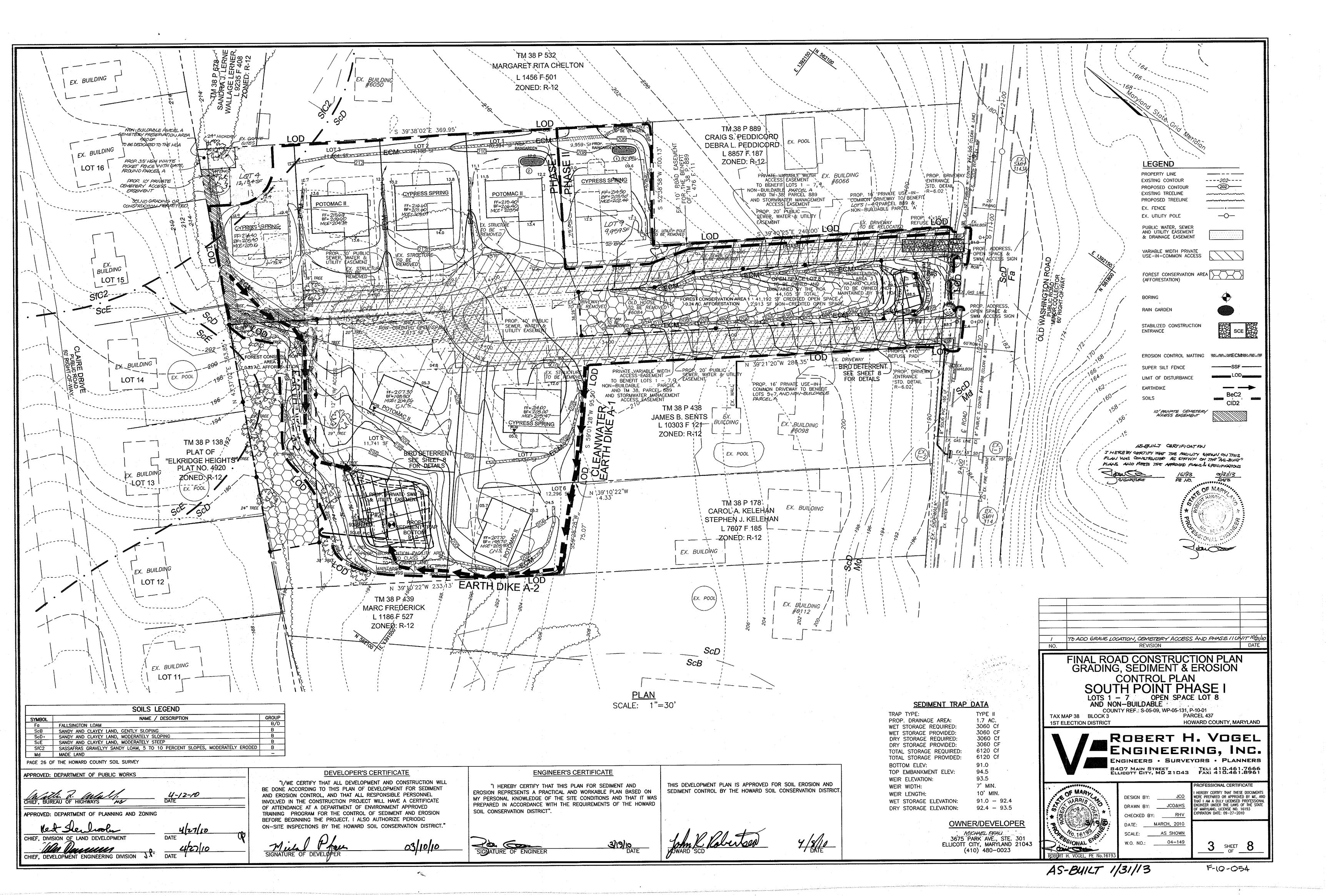


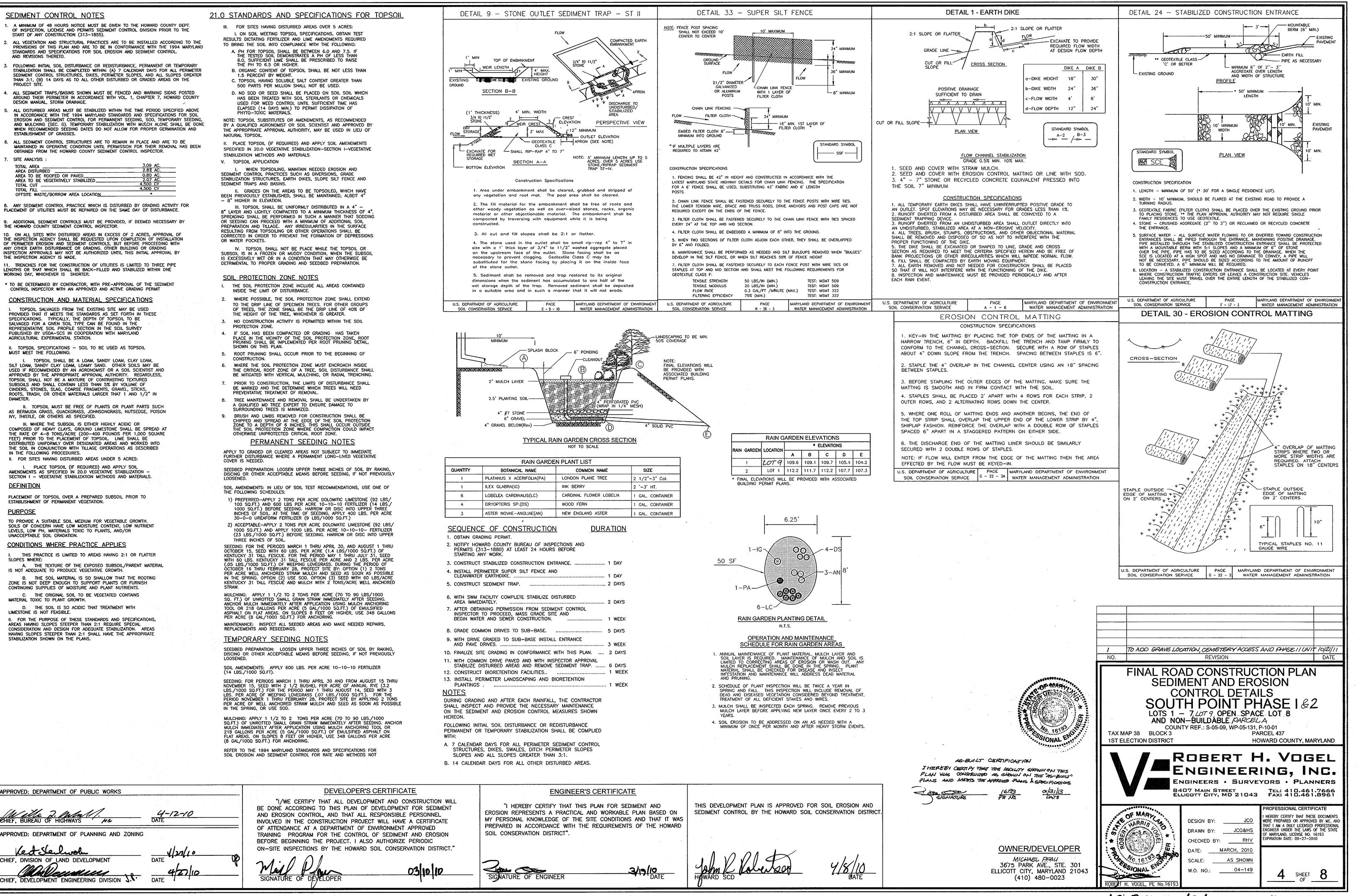
W.O. NO.:

WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE XPIRATION DATE: 09-27-2010

F-10-054

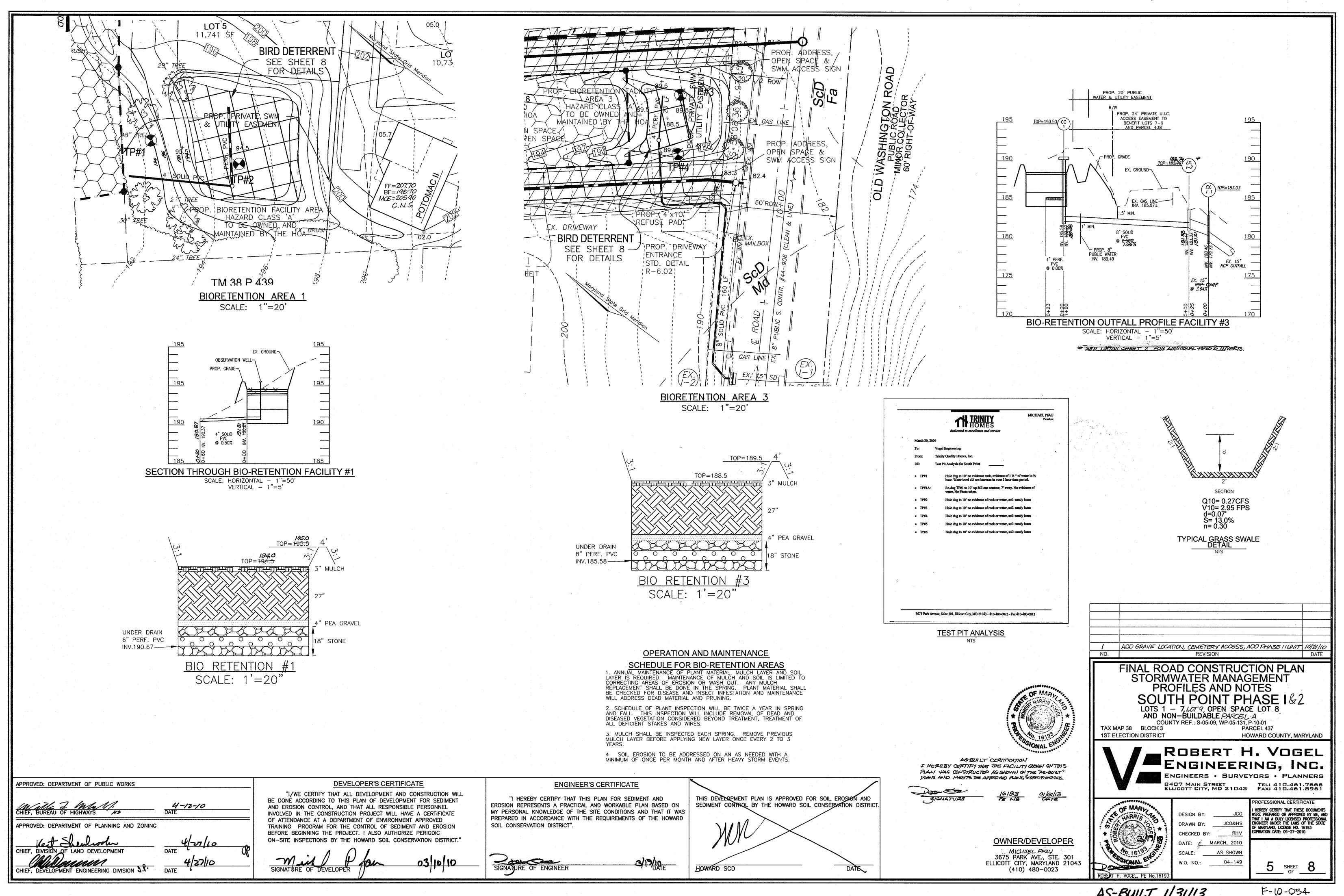


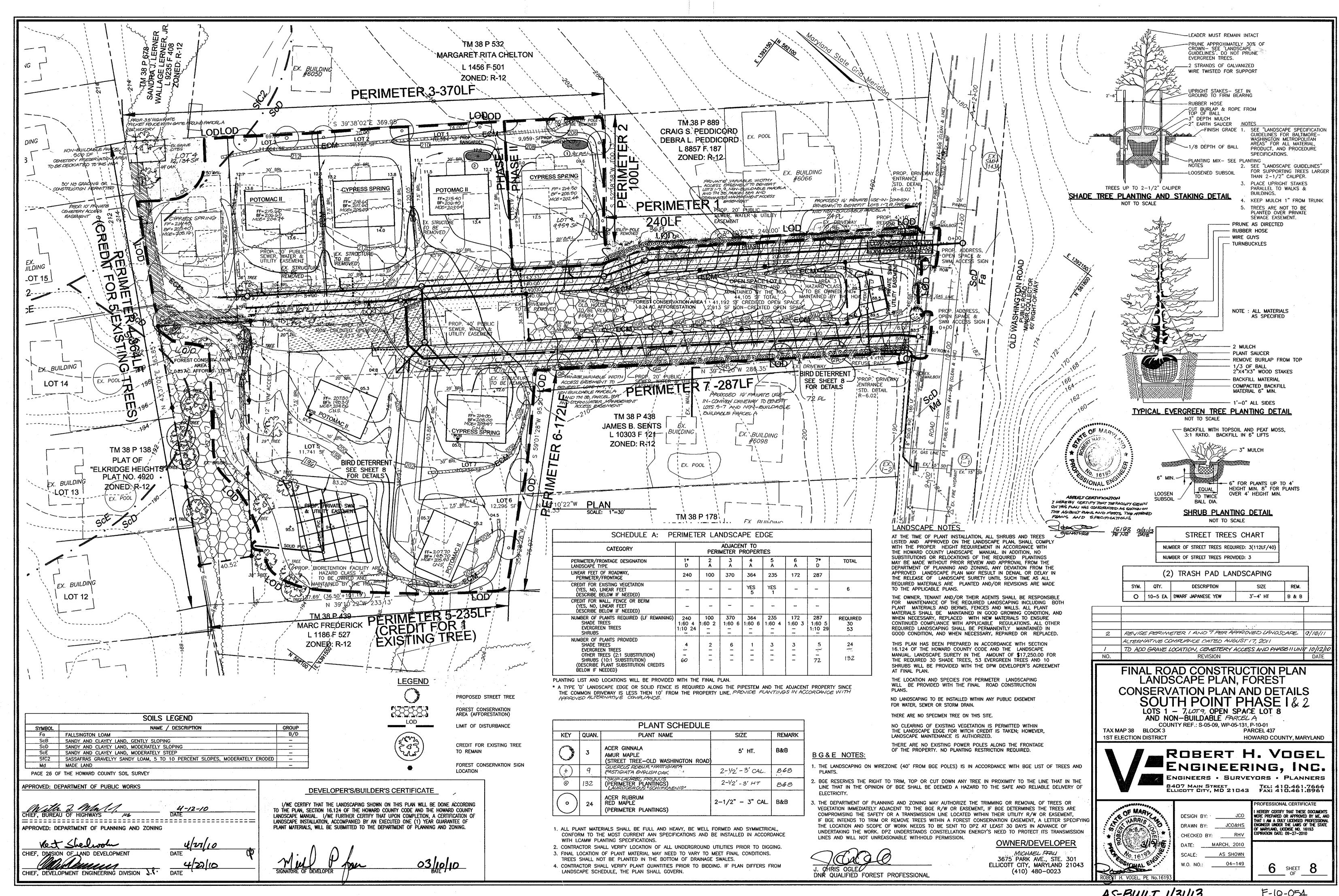


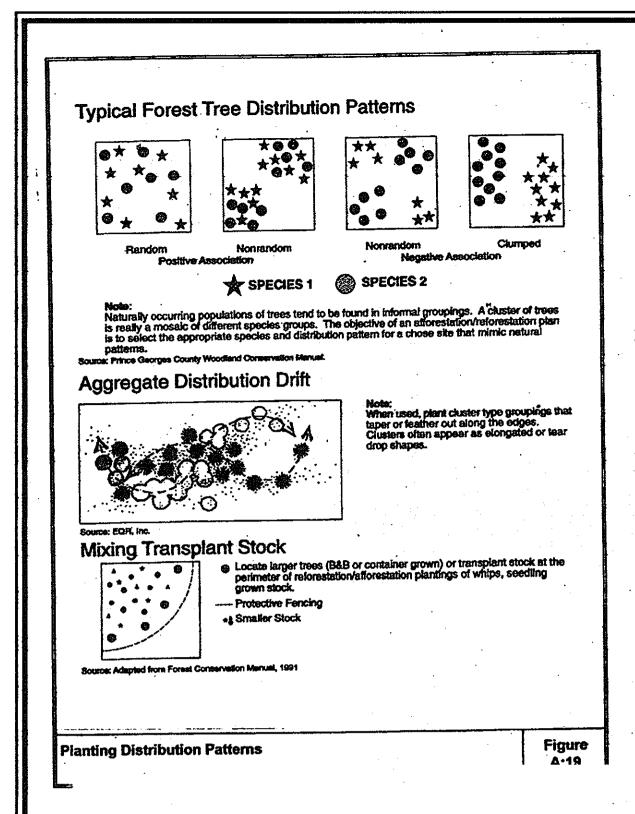


AS-BUILT 1/31/13

F-10-054





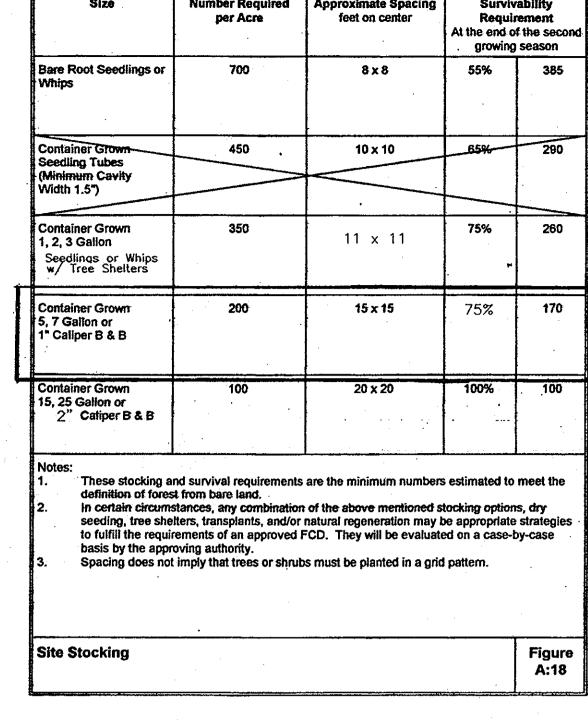


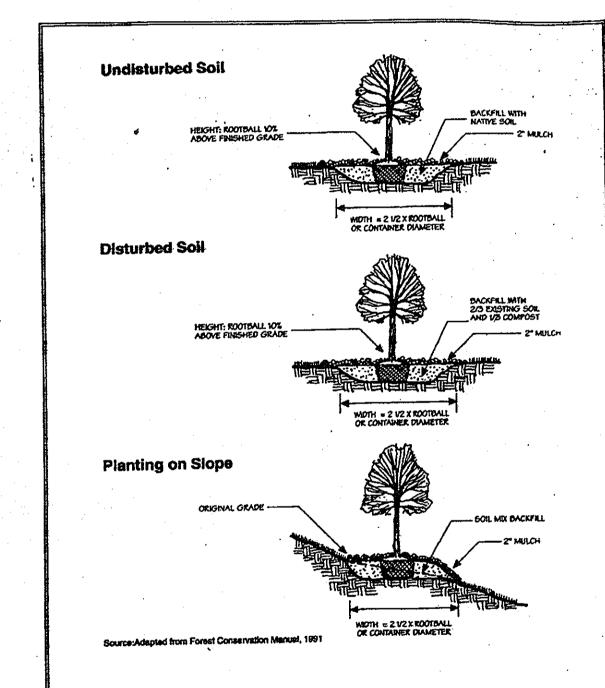
CONTAINER PLANTING

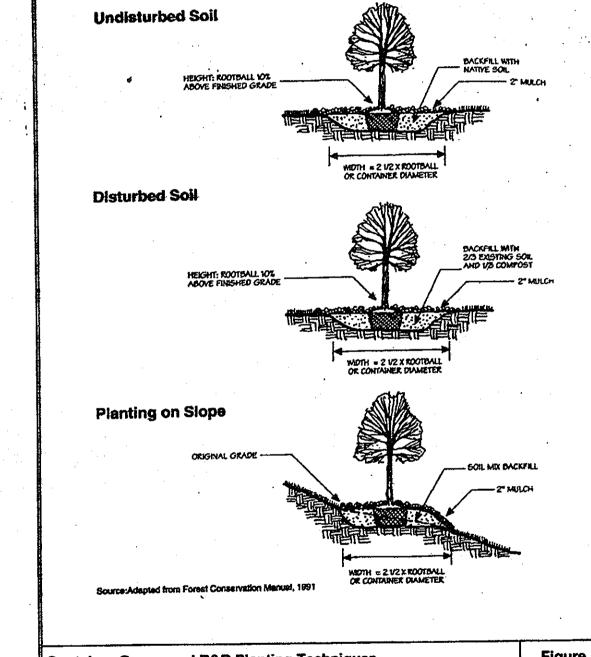
NOT TO SCALE

PLANTING PROCEDURE FOR CONTAINER GROWN PLANTS

1. REMOVE THE PLANT EITHER BY CUTTING OR INVERTING THE CONTAINER
2. USE A KNIFE TO CUT THROUGH BOTTOM HALF OF THE ROOT BALL.
3. PLANT SHRUBS 4" ABOVE THE EXISTING GRADE WHEN HIGH WATER TABLE CONDITIONS EXIST, OTHERWISE PLANT FLUSH WITH EXISTING GRADE.
4. PLANTING HOLE TO BE THREE TIMES THE DIAMETER OF THE CONTAINER.



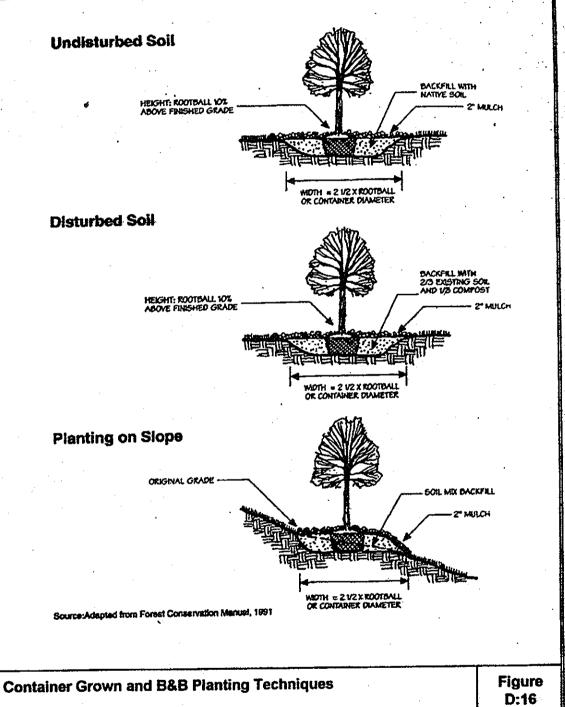


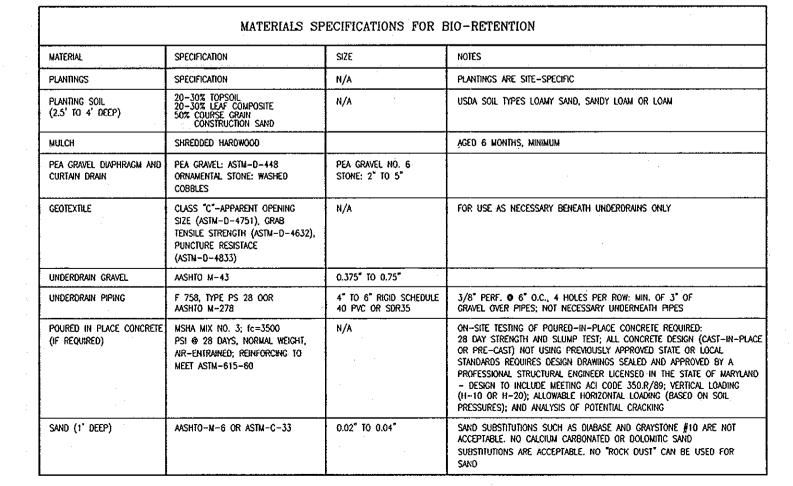




AS-BUILT CERTIFICATION I HEREBY CARTIPY THAT THE FACILITY SHOWNON THIS PLAN WAS CONSTRUCTED ASSHOWN ON THE AS-BUILT PLANS AND MEETS THE APPROVED PLANS ANDSPECIFICATIONS.

APPROVED: DEPARTMENT OF PUBLIC WORKS	DEVELOPER'S/BUILDER'S CERTIFICATE
	DEVELOR ENGINORIES CENTILIDATE
CHIEF, BUREAU OF HIGHWAYS HO DATE	I/WE 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/WE FURTHER CERTIFY THAT UPON COMPLETION, A CERTIFICATION OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE (1) YEAR GUARANTEE OF
APPROVED: DEPARTMENT OF PLANNING AND ZONING	PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.
CHIEF, DIVISION OF LAND DEVELOPMENT CHIEF, DEVELOPMENT ENGINEERING DIVISION 18. DATE DATE	SIGNATURE OF DEVELOPER DATE





BIORETENTION PLANTING PLAN-AREA

SCALE: 1"=20'

150

CHANNELS SPECIFICATIONS FOR BIORETENTION

COMPACT LOADER OR A DOZER/LOADER WITH MARSH TRACKS.

MUST BE PROVIDED (ONE MINIMUM PER EVERY 1000 SQUARE FEET OF SURFACE AREA).

MARYLAND STORMWATER DESIGN MANUAL

NITROGEN PER 1000 SQUARE FEET.

BIORETENTION PLANTING SCHEDULE

SIZE

1" - 1-1/2" CAL

5' - 6' HT.

3 GALLON

3 GALLON

NO. 1 NO. 3 BOTANICAL NAME/COMMON NAME

EASTERN RED CEDAR

CLETHRA ALNIFOLIA

LINDERA BENZOIN SPICE BUSH

NDROPOGOU VIRGINIOUS

BROOM SEDGE

APPENDIX B.3. CONSTRUCTION SPECIFICATIONS FOR SAND FILTERS, BIORETENTION AND OPEN

2. 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 BIORETENTION AREA 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: PH RANGE 5.2 - 7.0 ORGANIC MATTER 1.5 - 4 % (BY WEIGHT)

SOLUBLE SALTS - NIT TO EXCEED 500 PPM ALL BIORETENTION AREAS SHALL HAVE A MINIMUM OF ONE TEST. EACH TEST SHALL CONSIST OF BOTH THE STANDARD SOIL TEST FOR PH, PHOSPHORUS, AND POTASSIUM AND ADDITIONAL TEST OF ORGANIC MATTER, AND SOLUBLE

SALTS. A TEXTURAL ANALYSIS SHALL BE PERFORMED FOR EACH LOCATION WHERE THE TOP SOIL WAS EXCAVATED. SINCE DIFFERENT LAB CALIBRATE THEIR TESTING EQUIPMENT DIFFERENTLY, ALL TESTING RESULTS SHALL COME FROM THE SAME TESTING FACILITY. SHOULD THE PH

CONTRACTOR SHOULD USE WIDE TRACK OR MARSH TRACK EQUIPMENT, OR LIGHT EQUIPMENT WITH TURF TYPE TIRE. USE OF EQUIPMENT WITH NARROW TRACKS OR NARROW TIRES, RUBBER TIRES WITH LARGE LUGS, OR HIGH PRESSURE TIRES WILL CAUSE EXCESSIVE COMPACTION

RESULTING IN REDUCED INFILTRATION RATES AND IS NOT ACCEPTABLE. COMPACTION WILL SIGNIFICANTLY CONTRIBUTE TO DESIGN FAILURE.

COMPACTION CAN BE ALLEVIATED AT THE BASE OF THE BIORETENTION FACILITY BY USING A PRIMARY TILLING OPERATION SUCH AS CHISEL

PLOW, RIPPER, OR SUBSOILER. THESE TILLING OPERATIONS ARE TO REFRACTURE THE SOIL PROFILE THROUGH THE 12 INCH COMPACTION

ZONE. SUBSTITUTE METHODS MUST BE APPROVED BY THE ENGINEER, ROTOTILLERS TYPICALLY DO NOT TILL DEEP ENOUGH TO REDUCE THE EFFECTS OF COMPACTION FROM HEAVY EQUIPMENT, ROTOTILL 2 TO 3 INCHES OF SAND INTO THE BASE OF THE BIORETENION FACILITY

BEFORE BACKFILLING THE REQUIRED 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. EQUIPMENT SUCH AS A

4. PLANT MATERIAL RECOMMENDED PLANT MATERIAL FOR BIORETENTION AREAS CAN BE FOUND IN APPENDIX A, SECTION A.2.3. OF THE 2000

5. PLANT INSTALLATION MULCH SHOULD BE PLACED TO A UNIFORM THICKNESS OF 2" TO 3". SHREDDED HARDWOOD MUCH 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 ARE NOT ACCEPTABLE. SHREDDED MULCH MUST BE WELL AGED (6 TO 12 MONTHS) FOR ACCEPTANCE. ROOT STOCK OF THE

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. 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 TREE BALL. GRASSES AND LEGUME SEED SHOULD BE DRILLED INTO THE SOIL TO A DEPTH OF AT LEAST ONE INCH.

SPECIFICATIONS PROVIDE ENOUGH ORGANIC MATERIAL TO ADEQUATELY SUPPLY NUTRIENTS FROM NATURAL CYCLING. THE PRIMARY FUNCTION

ONLY ADD FERTILIZER IF WOOD CHIPS OR MULCH ARE USED TO AMEND THE SOIL. ROTOTILL UREA FERTILIZER AT A RATE OF 2 POUNDS OF

GRAVEL BEDDING. THE ENDS OF UNDERDRAIN PIPES NOT TERMINATING IN AN OBSERVATION WELL SHALL BE CAPPED. THE MAIN COLLECTOR PIPE FOR UNDERDRAIN SYSTEMS SHALL BE CONSTRUCTED AT A MINIMUM SLOPE OF 0.5%. OBSERVATION WELL AND/OR CLEAN-OUT PIPES

OF THE BIORETENTION STRUCTURE IS TO IMPROVE WATER QUALITY. ADDING FERTILIZERS DEFEATS, OR AT A MINIMUM, IMPEDES THIS GOAL.

.6. UNDERDRAINS UNDERDRAINS ARE TO BE PLACED ON A 3'-0" WIDE SECTION FILTER CLOTH. PIPE IS PLACED NEXT, FOLLOWED BY THE

7. MISCELLANEOUS THE BIORETENTION FACILITY MAY NOT BE CONSTRUCTED UNTIL ALL CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED.

PLANT MATERIAL SHALL BE KEPT MOIST DURING TRANSPORT AND ON-SITE STORAGE. THE PLANT ROOT BALL SHOULD BE PLANTED SO

GRASS AND LEGUME PLUGS SHALL BE PLANTED FOLLOWING THE NON-GRASS GROUND COVER PLNTING SPECIFICATIONS. THE TOPSOIL

MAGNESIUM 35 LB./AC PHOSPHORUS (PHOSPHATE - P) 75 LB./AC 2 0 5 POTASSIUM (POTASH - K 0) 85 LB./AC 2

FALL OUT OF THE ACCEPTABLE RANGE, IT MAY BE MODIFIED (HIGHER) WITH LIME OR (LOWER) WITH IRON SULFATE PLUS SULFUR-3. COMPACTION IT IS VERY IMPORTANT TO MINIMIZE COMPACTION OF BOTH THE BASE OF THE BIORETENTION AREA AND THE REQUIRED

BACKFILL. WHEN POSSIBLE, USE HOES TO REMOVE ORIGINAL SOIL. IF BIORETENTION AREAS ARE EXCAVATED USING LOADER, THE

I. MATERIAL SPECIFICATIONS THE ALLOWABLE MATERIALS TO BE USED IN BIORETENTION AREA ARE DETAILED IN TABLE B.3.2.

SWEET PEPPERBUSH

<u>AFFORESTATION PLANTING NOTES</u>

SCALE: 1"=20'

B & B

B & B

CONT

CONT

1' O.C.

- 1. AFFORESTATION AREAS MAY BE PLANTED AS SOON AS REASONABLE TO DO SO. LATE WINTER-EARLY SPRING PLANTINGS ARE PREFERRED EARLIEST PLANTING DATES WILL VARY FROM YEAR TO YEAR BUT PLANTING MAY GENERALLY BEGIN AS SOON AS THE GROUND IS NO LONGER FROZEN. ALTERNATE PLANTING DATES MAY BE CONSIDERED AS CONDITION
- 2. SOIL AMENDMENTS AND FERTILIZATION RECOMMENDATIONS WILL BE MADE BASED UPON THE RESULTS OF SOIL ANALYSIS FOR NITROGEN, PHOSPHORUS, POTASSIUM, ORGANIC MATTER CONTENT AND pH. REQUIRED, FERTILIZER WILL BE PROVIDED USING A SLOW RELEASE, SOLUBLE 16-8-16 ANALYSIS DESIGNED TO LAST 5-8 YEARS CONTAINED IN POLYETHYLENE PERFORATED BAGS SUCH AS MANUFACTURED BY ADCO WORKS, P.O. BOX 310 HOLLINS, N.Y. 11423 OR APPROVED EQUAL.
- 3. PLANT MATERIALS WILL BE PLANTED IN ACCORDANCE WITH THE PLANTING DETAILS AND PLANT SCHEDULE.
- 4. PLANT MATERIAL SHALL BE NURSERY GROWN AND INSPECTED PRIOR TO PLANTING. PLANTS NOT CONFORMING TO THE AMERICAN STANDARD FOR NURSERY STOCK SPECIFICATIONS FOR SIZE, FORM, VIGOR, OR ROOTS, OR DUE TO TRUNK WOUNDS, BREAKAGE, DESICCATION, INSECT OR DISEASE MUST BE REPLACED.
- 5. PLANTING STOCK MUST BE PROTECTED FROM DESICCATION AT ALL TIMES PRIOR TO PLANTING. MATERIALS HELD FOR PLANTING SHALL BE MOISTENED AND PLACED IN COOL SHADED AREAS UNTIL READY FOR 6. NEWLY PLANTED TREES MAY REQUIRE WATERING AT LEAST ONCE PER
- WEEK DURING THE FIRST GROWING SEASON DEPENDING ON RAINFALL IN ORDER TO GET ESTABLISHED. THE INITIAL PLANTING OPERATION SHOULD ALLOW FOR WATERING DURING INSTALLATION TO COMPLETELY SOAK BACKFILL MATERIAL
- 7. MULCH SHALL BE APPLIED IN ACCORDANCE WITH THE DIAGRAM PROVIDED AND SHALL CONSIST OF COMPOSTED, SHREDDED HARDWOOD BARK MULCH, FREE OF WOOD ALCOHOL.
- 8. ALL NURSERY STOCK TO BE SPRAYED WITH DEER REPELLENT CONTAINING BITREX, SUCH AS REPELLEX. ALL NURSERY STOCK TO BE GROWN WITH DEER REPELLENT TABLETS IN GROWING MEDIUM, SUCH AS REPELLEX TABLETS.

AFFORESTATION AREA MONITORING NOTES

- 1. MONTHLY VISITS DURING THE FIRST GROWING SEASON ARE TO ASSESS THE SUCCESS OF THE PLANTINGS AND TO DETERMINE IF SUPPLEMENTAL WATERING, PEST CONTROL OR OTHER ACTIONS ARE NECESSARY. EARLY SPRING VISITS WILL DOCUMENT WINTER KILL AND AUTUMN VISITS WILL DOCUMENT SUMMER KILL.
- 2. THE MINIMUM SURVIVAL RATE SHALL BE 75% OF THE TOTAL NUMBER OF TREES PLANTED PER ACRE AT THE END OF THE TWO YEAR MAINTENANCE PERIOD. WILD TREE SEEDLINGS FROM NATURAL REGENERATION ON THE PLANTING SITE MAY BE COUNTED UP TO 50% TOWARD THE TOTAL SURVIVAL NUMBER IF THE ARE HEALTHY NATIVE SPECIES AT LEAST 12 INCHES TALL.
- 3. SURVIVAL WILL BE DETERMINED BY A STRATIFIED RANDOM SAMPLING OF THE PLANTINGS. THE SPECIES COMPOSITION OF THE SAMPLE POPULATION SHOULD BE PROPORTIONATE TO THE AMOUNT OF EACH SPECIES IN THE ENTIRE PLANTING TO BE SAMPLED.
- 4. EFFECTIVE MONITORING WILL ASSESS PLANT SURVIVABILITY DURING THE FIRST GROWING SEASON AND MAKE RECOMMENDATIONS FOR REINFORCEMENT PLANTINGS IF REQUIRED AT THAT TIME.

SEQUENCE OF CONSTRUCTION-FOREST CONSERVATION

- PRECONSTRUCTION MEETING /SITE WALK WITH CONTRACTORS AND OTHER RESPONSIBLE PARTIES TO DEFINE PROTECTION MEASURES TO BE UTILIZED AND TO POINT OUT PARTICULAR TREES TO BE SAVED.
- 2. STAKE OUT LIMITS OF DISTURBANCE AND TREE PROTECTION FENCING LOCATIONS.
- INSTALL TREE PROTECTION FENCING: FENCING TO BE INSPECTED BY THE PROJECT ENGINEER OR THE PROJECT ECOLOGIST AND HOWARD COUNTY PLANNING AND ZONING.
- 4. PROCEED WITH TREE REMOVAL AND SITE IMPROVEMENTS AS PER APPROVED SEDIMENT CONTROL PLAN - TO BE INSPECTED BY HOWARD COUNTY PLANNING AND ZONING.
- 5. TEMPORARY TREE PROTECTION DEVICES SHALL BE REMOVED AFTER ALL FINISHED GRADING AND UTILITY CONSTRUCTION HAS OCCURRED AND WITH APPROVAL FROM THE HOWARD COUNTY OFFICE OF PLANNING AND ZONING.

FOREST PROTECTION NOTES PRE-CONSTRUCTION ACTIVITIES

BEFORE CONSTRUCTION BEGINS.

- 1. FOR RETENTION AREAS, INSTALL BLAZE ORANGE FENCE AND RETENTION SIGNS
- FENCING SHALL BE MAINTAINED IN GOOD CONDITION AND PROMPTLY REPAIRED OR RESTORED AS THE SITUATION WARRANTS.
- 3. A QUALIFIED TREE CARE EXPERT SHALL DETERMINE IF ROOT PRUNING IS REQUIRED ALONG THE LIMIT OF DISTURBANCE. ROOT PRUNE TREES AS REQUIRED. WATER ANY ROOT-PRUNED TREES IMMEDIATELY AFTER ROOT-PRUNING AND MONITOR FOR SIGNS OF STRESS DURING CONSTRUCTION.

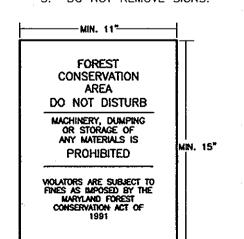
CONSTRUCTION PHASE

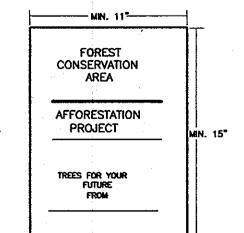
RETENTION AREA.

- NO DISTURBANCE OR DUMPING IS ALLOWED INSIDE THE TREE
- 2. NO EQUIPMENT SHALL BE OPERATED INSIDE THE TREE RETENTION AREA INCLUDING TREE CANOPIES.
- 3. IN THE EVENT OF DROUGHT, THE PROTECTED TREES SHALL BE MONITORED FOR SIGNS OF STRESS AND WATERED AS NEEDED.

POST-CONSTRUCTION ACTIVITIES

- 1. AT THE DIRECTION OF A QUALIFIED TREE CARE EXPERT, DAMAGES TO RETAINED TREES SHALL BE REPAIRED BY THE CONTRACTOR.
- 2. FENCE REMOVAL AND STABILIZATION SHALL BE AS PER THE SEDIMENT AND EROSION CONTROL PLAN.
- 3. DO NOT REMOVE SIGNS.





1. BOTTOM OF SIGNS TO BE HIGHER THAN TOP OF TREE PROTECTION FENCE. 2. SIGNS TO BE PLACED AT A MAXIMUM SPACING OF 50-100 FEET. CONDITIONS ON-SITE AFFECTING VISIBILITY MAY WARRANT PLACING SIGNS CLOSER OR FARTHER APART.

3. ATTACHMENT OF SIGNS TO TREES IS PROHIBITED. 4. SIGN LOCATION SYMBOL.

SIGNAGE DETAIL

NOT TO SCALE

OWNER/DEVELOPER - MICHAEL PFAU. 3675 PARK AVE., STE. 301 ELLICOTT CITY, MARYLAND 21043 (410) 480-0023

ENDECT CONCEDIATION WORKSHEE

ZONED R-12 NET TRACT AREA:		
A. TOTAL TRACT AREA	3.10	AC
B. AREA WITHIN 100 YEAR FLOODPLAIN	0.00	AC
C. NET TRACT AREA	3.10	AC

LAND USE CATEGORY INPUT THE NUMBER "1" UNDER THE APPROPRIATE LAND USE ZONING, AND LIMIT TO ONLY ONE ENTRY. ZONED R-12. ARA MDR IDA HDR MPD

E. AFFOREST THRESHOLD $15\% \times D = 0.47 \text{ AC}.$ F. CONSERVATION THRESHOLD 20% X D = 0.62 AC.**EXISTING FOREST COVER:** G. EXISTING FOREST COVER 0.00 AC. H. AREA OF FOREST ABOVE REFORESTATION THRESHOLD 0.00 AC . AREA OF FOREST ABOVE CONSERVATION THRESHOLD 0.00 AC. BREAK EVEN POINT: J. BREAK EVEN POINT 0.00 AC. K. CLEARING PERMITTED WITHOUT MITIGATION 0.00 AC. PROPOSED FOREST CLEARING: L. TOTAL AREA OF FOREST TO BE CLEARED M. TOTAL AREA OF FOREST TO BE RETAINED PLANTING REQUIREMENTS: N. AFFORESTATION FOR CLEARING ABOVE CONSERVATION THRESHOLD P. AFFORESTATION FOR CLEARING BELOW CONSERVATION THRESHOLD 0.00 AC Q. CREDIT FOR RETENTION ABOVE CONSERVATION THRESHOLD 0.00 AC R. TOTAL REFORESTATION REQUIRED (N+P-Q)

FOREST CONSERVATION EASEMENT HAVE BEEN ESTABLISHED TO FULFILL THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY FOREST CONSERVATION MANUAL, NO CLEARING, GRADING OR CONSTRUCTION IS PERMITTED WITHIN THE FOREST CONSERVATION EASEMENT, HOWEVER, FOREST MANAGEMENT PRACTICES AS DEFINED IN THE DEED OF FOREST CONSERVATION EASEMENT ARE

0.00 AC

0.47 AC

0.47 AC

TOTAL FOREST CONSERVATION OBLIGATION OF THIS PROJECT TO BE FULFILLED BY ONSITE AFFORESTATION OF 0.47 AC.

S. TOTAL AFFORESTATION REQUIRED

T. TOTAL AFFORESTATION AND AFFORESTATION REQUIRED

FINANCIAL SURETY IN THE AMOUNT OF \$10,237.00 (20,473.20 x 0.50) WILL BE POSTED WITH THE FC MAINTENANCE AGREEMENT FUTURE FINAL PLANS.

PLANT SCHEDULE				
QUANTITIES FOR AFFORESTATION AREAS				
BOTANICAL NAME	AREA 1	AREA 2	SIZE	SPACING (FT)
Acer rubrum Red Maple(Seedless)	11	10	1" Cal.	15 X 15
Liquidambar straciflua American Sweetgum	8	8	1" Cal.	15 X 15
Platanus occidentalis Sycamore	8	8	1" Cal.	15 X 15
Prunus spp. Flowering Cherry	11	10	1" Cal.	15 X 15
Liriodendron tulipfera Yellow Poplar	10	10	1" Cal.	15 X 15

AFFORESTATION PROVIDED - AREA-1

0.24 ACRES 1" CALIPER TREES 48 TREES @ 200 TREES PER ACRE

AFFORESTATION PROVIDED - AREA-2

0.23 ACRES 1" CALIPER TREES 46 TREES @ 200 TREES PER ACRE

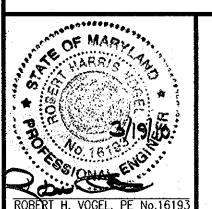
1	TO ADD GRAVE LOCATION, CEMETERY ACCESS AND PHASE II UNIT	10/21/10
NO.	REVISION	DATE

LANDSCAPE AND FOREST CONSERVATION **NOTES AND DETAILS** SOUTH POINT PHASE 1&2 LOTS 1 - 7,LOT 9, OPEN SPACE LOT 8

AND NON-BUILDABLE PARCEL A COUNTY REF.: S-05-09, WP-05-131, P-10-01 TAX MAP 38 BLOCK 3 PARCEL 437

W.O. NO.:





1ST ELECTION DISTRICT

WERE PREPARED OR APPROVED BY ME, AND DESIGN BY: THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE JCO&HS DRAWN BY: RHV CHECKED BY: MARCH, 2010 DATE: AS SHOWN SCALE:

04-149

OF MARYLAND, LICENSE NO. 16193 EXPIRATION DATE: 09-27-2010

HOWARD COUNTY, MARYLAND

SHEET 8

AASCD/MAA VEGETATIVE ESTABLISHMENT DETAILS AND SPECIFICATIONS FOR THE PROJECT WITHIN 4 MILES OF BWI AIRPORT

AASCD / MAA

VEGETATIVE ESTABLISHMENT

DETAILS AND SPECIFICATIONS FOR PROJECTS WITHIN MILES OF THE BWI AIRPORT

References to ITEM #s noted below are found in Maryland Aviation Activities for the Maryland Aviation Administration dated May 2001 SOIL TESTS

Following initial soil disturbances or re-disturbance, permanent or temporary stabilization shall be completed within seven 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 fourteen days for all other disturbed or graded areas on the project site. graduates of acid sulfate soils (grayish 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

3. The minimum soil conditions required for permanent vegetative

a. Soil pH shall be between 6.0 and 7.0. b. Soluble saits shall be less than 500 parts per million (ppm). c. The soil shall contain less than 40% clay but enough fan grained material (> 30% silt plus clay) to provide the capacity to hold a moderate amount of moisture.

 Soil must contain sufficient pore space to permit adequate roo If these conditions cannot be met by soils on site, adding topsoil is required in accordance ITEM 901 or amendments made a

d. Soil shall contain 1.5% minimum organic matter by weight.

ecommended by a certified agronomist

983-3.1 GENERAL. This section provides approved methods for the application of and includes standards for seedbed preparation, methods of application, and equipment to be used during the process. Lime and fertilizer shall be applied to seeded areas before the seed is spread. The mixture of seed will be determined for sites based on environ

903-3.2 ADVANCE PREPARATION. Areas designated for seeding shall be properly cation of time and fertilizer, and the surface area shall be cleared of any stones larger than I inch in diameter, sticks, stumps, and other debris that might interfere with sowing epeired prior to the application of fertilizer and lime. The Contractor will repair such damage, which may include filling gullies, smoothing irregularities, and repairing other incidental damage before beginning the application of fertilizer and ground limestone.

soil then scarified or otherwise loosened to a depth not less than 5 inches (125 mm). Clods shall be broken and the top 3 inches (75 mm) of soil shall be worked into a satisfactory condition by discing or by use of cultipackers, rollers, drags, harrows, or

An area to be seeded shall be considered a satisfactory seedbed (without requiring additional treatment) if it has recently been thoroughly loosened and worked to a depth of not less than 5 inches; the top 3 inches of soil is loose, friable, and is reasonably free from large clods, rocks, large roots, or other undesirable matter; appropriate amounts of mmediately prior to seeding. For slope areas steeper than 3:1 (three horizontal to one

After completion of tilling and grading, time and fertilizer shall be applied within 40 hours according to the specified rate (Paragraphs 903-2.2 and 2.3) and methods

item 903 seeding

DESCRIPTION

903-1.1 GENERAL. This item provides specifications for seeding of areas as designated on plans or as directed by the MAA Engineer. The species, mixtures, and methods of application provided in this item have been designed to reduce the structiveness of airport grounds to wildlife. Only MAA-approved species, mixtures, and rates of application provided in this item may be used to establish vegetation. All ctivities associated with seeding including soil preparation, seed application

903-2.1 SEED. All seed shall comply with the Maryland Seed Law (Agricultural Article of the Annotated Code of Maryland): Only MAA-anoroyed species, mixtures. and rates of application provided in this item may be used to establish vegetation. Se will be sampled and tested by an inspector from the Turf and Seed Section, Maryland Department of Agriculture (MDA), Annapolis, Maryland. All lawn and turf seed and

mixtures shall be free from the following state-listed restricted noxious weeds:

bentgrass (Agrostis spp.), wild garlic (Allium vineale), ndwood (Calstegia spp.), dodder (Cuscuta spp.), Bermuda grass (Cynodon daetyla orchardgrass (Dactylis glomera tall fescue (Festuca arundinace meadow fescue (Festuca pratensis annual bluegrass (Poa annua rough bluegrass (Poa trivialis) timothy (Phleum pratense), and

Restricted noxious-weed seed may not exceed 0.5 percent by weight of any seed mixture n addition, all seeds sold in Maryland shall be free from the following I

These species may be included as a labeled component of a mixture when each is present in excess of five

Seed shall be furnished in standard containers with the seed name, lot number, net weight, percentages of purity, germination rate and hard seed, and percentage of maximum weed seed content clearly marked. All seed containers shall be tagged with a

MDA supervised mix program seed tag. 903-2.1.3 MEXTURES AND APPLICATION RATES. Only seed mixtures and application rates described in this item may be used unless otherwise approved by the MAA Engineer. Seed mixtures shall meet criteria detailed in Paragraph 903-2.1.2. Seed mixtures have been formulated to minimize the attractiveness of areas to wildlife of common landscape scenarios. The appropriate seed mixture for application will be lesignated based on environmental conditions and may vary from site to site. All planting rates listed are in pounds of Pure Live Seed (PLS) per acre.

Seed mixtures, application scenarios, and rates for permanent cool-season grasses are as

a. Seed Mixture No. 1 - relatively flat areas (grade less than 4:1) subject to conditions and regular mowing (Application rate = 234 lbs PLS/acre);
b. Seed Mixture No. 2 - sloped areas (grade greater than 4:1) not subject to

mowing (Application rate = 115 lbs PLS/acre); and c. Seed Mixture No. 3 - wetlands and their associated buffer zones (Application 131 lbs PLS/acre).

Seed Mixture No. 1: Relatively flat areas regularly mowed and exposed to normal conditions (Application rate = 234 lbs PLS/acre)

Application (lbs of LS/acre) 85% Certified Turf-Type Tall Fescus 10% Certified Kentucky Bluegras 5% Perennial Ryegrass

noxious weeds: balloonvine (Cardiospermum halicacabum), quackgrass (Elytrigia repens), sicklepod (Senna obtustfolia), sorghum (Sorghum spp.), Canada thistle (Cirstum arvense), plumeless thistle (Cardius spp.-includes musk thistle and curled thistle), and

903-2.1.1 APPROVED SPECIES. The following table contains species that are approved by MAA for use in seed mixtures. Purity requirements and germination requirements are also provided.

	Purity* Not Less than %	Minimum % Germination	Pure Live Seco Factor
Certified Turf-Type Tell Fescue (Festuca anundinacea)	98	90	1.13
Certified Kentucky Bluegrass (Poa pratensis)	90	80	1.39
Hard Fescus (Festuca longifolia)	98	90	1.13
Chewings Red Fescue (Festuca rubra commutata)	98	90	1.13
Annual Ryograss (Lolium multiflorum)	95	85	1.24
Perennial Ryegrass (Lolium perenne)	90	80	1.39
Fowl Meadow Grass (Poa palastris)	90	80	1.39
Little Bluestem (Andropogon scoparius)	62	94	1.71

903-2.1.2 PURITY. All seed shall be free of all state-designated noxious weeds listed in Paragraph 2.1.1 and conform to MAA specifications. To ensure compliance, MAA requires sampling and testing of seed by the Turf and Seed Section, Maryland Department of Agriculture (MDA). The Contractor shall furnish the MAA Envineer with duplicate signed copies of a statement by the Turf and Seed Section certifying that each lot of seed has been laboratory tested within six months of date of delivery. This

name and address of laboratory,

the results of tests as to name, percentages of purity and of germination, percentage of weed content for the seed furnished, and, in the case of a mixture, the proportions of each kind of seed.

Seed Mixture No. 2: Sloped areas not subject to regular mowing (Application rate = 115 lbs PLS/acre)

(lbs of PLS/acre) 75% Hard Fescu

Seed Mixture No. 3 - Wetland areas and their associated buffer zones (Application rate = 131 lbs PLS/acre) (lbs of PLS/acre)

60% Fowl Meadow Grass

963-2.1.4 SEEDING SEASONS. Application of seed and seed mixtures shall occur within a specified seeding season unless otherwise approved by the MAA Engineer. No seed or seed mixtures are to be applied on frozen ground or when the temperature is at or below 35 degrees Farenheit (7.2 degrees Centigrade). Under these conditions, a layer of mulch should be applied in accordance with Item 905, Mulching, to stabilize the site, and permanent seeding should occur in the subsequent seeding season. Seed application may occur during the seeding season dates listed below. Seeding performed after October 20 should be a temporary cover of annual ryegrass and followed by overseeding of the anorogriate seed mixture during the spring seeding season.

March 1 to April 20 and August 1 to October 20, inclusive Temporary Cover of Annual Rye/Redtop | March 1 to April 30 and August 1 to November 30, inclusive May 1 to July 31, inclusive. Rate of application should be 13.6 lbs. Temporary Cover of Warm-Season

Seeding seasons are based on typical years and can be subject to variation, which may be

If the time required to complete any of the operations necessary under this item, within the specified planting season or any authorized extensions thereof, extends beyond the Contract period, then such time will be charged against the Contract time, and liquidated damages will be enforced with respect to this portion of work

903-2.2 LIME. Lime shall consist of ground limestone and contain at least 85 percent total carbonates. Lime shall be ground to a fineness so that at least 90 percent will pass through a No. 20 mesh sieve and 50 percent will pass through a No. 100 mesh sieve. Dolomitic lime or a high magnesium lime shall contain at least 10 percent magnesium oxide. Lime shall be applied by approved methods detailed in Section 903-3.3 of this item. The rate of application will be based on results of soil tests.

903-2.3 FERTILIZER. Fertilizer shall be standard commercial fertilizer (supplied separately or in mixtures) and meet the requirements of applicable state and federal laws. (O-F-241) as well as standards of the Association of Official Agricultural Chemists. Nitropen-Phosphorus-Potassium (N-P-K) concentrations shall be determined from analysis of soil samples (Approved fertilizer rate: 21 pounds of 10-10-10 per 1.000 square feet.) Methods of fertilizer application shall conform to standards described in Section 903-3.3 of this item. Fertilizer shall be furnished in standard containers that are clearly labeled with name, weight, and guaranteed analysis of the contents (percentage of total nitrogen, available phosphoric acid, and water-soluble potash). Mixed fertilizers shall not contain any hydrated lime or cyanamide compounds. Fertilizers failing to meet the specified analysis may be approved by the MAA Engineer, providing sufficient materials are applied to conform with the specified nutrients per unit of measure without

The fertilizers may be supplied in the following forms:

a. A dry, free-flowing fertilizer suitable for application by a common fertilizer

b. A finely ground fertilizer soluble in water, suitable for application by power SDIBYCIS: Or

MINING OPERATIONS

minimum rate of 0.5 pounds per 1,000 square feet.

ent control plans for mining operations must include the following seeding dates

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 red top at the

NOTE: Use of this information does not preclude meeting all of the requirements of the

current Maryland Standards and Specifications for Soil Erosion and Sediment Control.

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July 1, 2004

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A granular or pellet form suitable for application by blower equipment

The rate of application will be based on results of soil tests performed by the University of Maryland Soil Testing Laboratory. By law, persons applying fertilizer to State-owned land shall follow the recommendations of the University of Maryland as set forth in the "Plant Nutrient Recommendations Based on Soil Tests for Turf Maintenance" and the "Plant Nutrient Recommendations Based on Soil Tests for Sod Production" (see Appendix B). Application of the fertilizer shall be in a manner that is consistent with the

prepared in advance of seed application. The area shall be tilled and graded prior to of seed, growth of grasses, or subsequent maintenance of grass-covered areas. Damage caused by erosion or other forces that occur after the completion of grading shall be

If an area to be seeded is snarsely sodded, weedy, barren and unworked, or packed and hard, all grass and weeds shall first be cut or otherwise satisfactorily disposed of, and the

(Paragraphs 903-3.3.1 and 903-3.3.2) approved by MAA. The seeding mixture shall be applied within 48 hours after application of lime and fertilizer. To firm the seeded areas, cultipacking shall occur immediately after seeding.

903-3.3 METHODS OF APPLICATION. Lime, fertilizer, and seed mixes shall be applied by either the dry or wet application methods that have been approved by MAA

983-3.3.1 DRY APPLICATION METHOD a. Liming. If soil test results indicate that lime is needed, the following procedures will be used: following advance preparation of the seedbed, lime shall be applied prior to the application of any fertilizer or seed and only on seedbeds that have been prepared as described in paragraph 903-3.2. The lime shall be uniformly spread and worked into the top 2 inches of soil, after which the seedbed shall be properly graded again.

b. Fertilizing. Following advance preparations (and liming if necessary), fertilizer shall be spread uniformly at the specified rate to provide no less than

c. Seeding. Seed mixtures shall be sown immediately after fertilization of the seedbed. The fertilizer and seed shall be lightly raked to a depth of 1 inch for

d. Relling. After the seed has been properly covered, the seedbed shall be

immediately compacted using a cultipacker or an approved lawsroller. 903-3-2-2 WET APPLICATION METHOD/HYDROSEEDING a. General. The Contractor may elect to apply seed and fertilizer as per

over the previously prepared seedbed using methods and equipment approved by MAA. The rates of application shall be as specified in Paragraphs 903-2.1 b. Spraying Equipment. The spraying equipment shall have a container or water tank equipped with a liquid level gauge capable of reading increments of 50 gallons or less over the entire range of the tank capacity. The liquid level gauge shall be mounted so as to be visible to the nozzle operator at all times.

Paragraphs c and d of this section in the form of an aqueous mixture by spraying

The spraying equipment shall also include a pressure pump capable of delivering

agitator capable of keeping all the solids in the mixture in complete suspension

pressure pump assemblage shall be configured to allow the mixture to flow through the tank when not being sprayed from the nozzle. All pump passages and pipelines shall be capable of providing clearance for 5/8-inch solids. The power unit for the pump and agitator shall have controls mounted so as to be accessible to the nozzle operator. A pressure gauge shall be connected to and mounted immediately behind the nozzle.

The nozzle pipe shall be mounted on an elevated supporting stand in such a manner that it can be rotated through 360 degrees horizontally and inclined vertically from at least 20 degrees below to at least 60 degrees above the horizontal. There shall be a quick-acting, three-way control valve connecting the recirculating line to the nozzle pipe and mounted so that the nozzle operato can control and regulate the amount of flow of mixture to be supplied so that mixtures may be properly sprayed over a distance varying from 20 feet to 100 feet. One shall be a close-range ribbon nozzle, one a medium-range ribbon nozzle, and one a long-range jet nozzle. For ease of removal and cleaning, all nozzles shall be connected to the nozzle pipe by means of quick-release couplings. In order to reach areas inaccessible to the regular equipment, an extension hose at least 50 feet in length shall be provided to which the nozzle

c. Mixtures. Lime shall be applied separately in the quantity specified, prior to the fertilizing and seeding operations. Lime should be added to and mixed with water at a concentration not to exceed 220 pounds of lime for every 100 gallons of water. After lime has been applied, the tank should be emptied and rinsed with fresh water. Seed and fertilizer shall be mixed together in the relative proportions specified, but the resulting concentration should not exceed 220 pounds of mixture per 100 gallons of water and should be applied within 30

All water used shall be obtained from fresh water sources and shall be free from injurious chemicals and other toxic substances harmful to plant life. Brackish water shall not be used at any time. The Contractor shall identify all sources of water to the MAA Engineer at least two weeks prior to use. The Engineer may take samples of the water at the source or from the tank at any time and have a laboratory test the samples for chemical and saline content. The Contractor shall not use any water from any source that is disapproved by the Engineer following

All mixtures shall be constantly agritated from the time they are mixed until the minutes from the time they were mixed or they shall be wasted and disposed of

d. Spraying. Lime shall be sprayed upon previously prepared seedbeds on

shall be applied using a high-pressure spray which shall always be directed upward into the air so that the mixtures will fall to the ground in a uniform spray. Nozzles or sprays shall never be directed toward the ground in such a manner that might produce crosion or runoff. Particular care shall be exercised to ensure that the application is made uniformly, at the prescribed rate, and to guard against misses and overlapped areas. Predetermined quantities of the mixture shall be used in accordance with specifications to cover specified sections of known areas. To checks the rate and uniformity of application, the applicator will observe the degree of wetting of the ground or distribute test sheets of paper or pans over the area at intervals and observe the quantity of

On surfaces that are to be mulched as indicated by the plans or designated by the MAA Engineer, seed and fertilizer applied by the spray method need not be raked into the soil or rolled. However, on surfaces on which mulch is not to be used, the raking and rolling operations will be required after the soil has drie

983-3.4 MAINTENANCE OF SEEDED AREAS. The contractor shall protect seeded areas against traffic or other use by warning signs or barricades, as approved by the Engineer. Surfaces gullied or otherwise damaged following seeding shall be repaired by regrading and reseeding as directed. The Contractor shall mow, water as directed, and otherwise maintain seeded areas in a satisfactory condition until final inspection and

When either the dry or wet application method outlined above is used for work performed out of season, the Contractor will be required to establish a good stand of grass of uniform color and density to the satisfaction of the Engineer. If at the time when the contract has been otherwise completed it is not possible to make an adequate determination of the color, density, and uniformity of such stand of grass, payment for the unaccepted portions of the areas seeded out of season will be withheld until such time as these requirements have been met.

Mulch shall be applied as per ITEM 905

Mulch shall be applied to all seeded areas immediately after seeding. During the time

TEMPORARY SEEDING

100 pounds of dolomitic limestone per 1,000 square feet 15 pounds of 10-10-10 per 1,000 square feet.

Mulch shall be applied as per ITEM 905.

Per ITEM 903

No fills may be placed on frozen ground. All fill to be placed in approximately horizontal layers, each layer having a loose thickness of not more than 8 inches. All fill in roadways and parking areas is to be classified Type 2 as per Anne Arundel County Code - Article 21, Section 2-308, and compacted to 90% density; compaction to be determined by ASTM D-1557-66T (Modified Proctor). Any fill within the building area is to be compacted to a minimum of 95% density as determined by methods previously mentioned. Fills for pond embankments shall be compacted as per MD-378 Construction Specifications. All other fills shall be compacted sufficiently so

Install sod as per ITEM 904

Installation of sod should follow permanent seeding dates. Seedbed preparation for sod shall be as noted above. Lime and fertilizer per permanent seeding specifications at 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 emperature may adversely affect its survival. In the absence of adec irrigation should be performed to ensure establishment of sod.



WATERFOWL DETERRENT SYSTEM There is a need to discourage ducks and other waterfowl from being attracted to ducks' landing pattern by installing a grid using lightweight who above the surface of the trap. As they approach a water-filled trap, ducks, goose and other waterford will see the grid wires and not attempt to land. A perimeter fence consisting of two wire

initial grid spacing will be five feet for short spans and len feet for long spans. See the attached detail for a typical layout. After monitoring the effectiveness of this system, MAA may require installation of additional long spans to decrease spacing to five feet. The ends of the grid wires will be strung from hooks placed on posts hree feet above the ground. It is expected that the wires will sag two feet and will Grid wire will be high-strength, lightweight synthetic material made from aramid fiber

Prosts will be nine-foot long gulvanized sleed U-channel signposts, driven five and

one half feet into the ground. The height above ground shall be no more than three and one half feet. Three holes will be attached to each post to faster one 2-1/2 inch An access gate will be installed on the short and opposite the outlet to facilitate trap deanout. Each gate consists of a twenty feet long, 1-1/2" diameter horizontal pipe placed three feel above ground and spanning two posts spaced twenty feet apart.

When sectment is to be cleaned out from the trap, the long pipe is removed. An trap. Each pipe will have a hook placed in the middle to strach grid wire.

After each sediment trap is constructed, posts are placed five feet outside of the too in center on the short sides, leaving one twenty foot gap for the gate. After monitoring for effectiveness, installation of additional long spens may be ordered by AAA. Attach hooks to posts. Attach beams to posts straddling outlet weir and access gate. Grid wires will then be sized and loops assembled according to manufacturer's directions. Grid wires are then attached to posts starting with the engths should be sized to allow them to be pulled tight with two feet sag in the

When sediment needs to be cleaned out, disconnect and store the grid wires. This can be done with a two-man craw, one on either end of the wire. Each person shall connect the wire from the hook at the same time, walk beyond the trap, holding the wire taut, and place the wire on the ground. The crew then moves to the ner wire and repeats the procedure until all the wires have been removed. Next, the crow shall remove the perimeter fence strands at the access gates as well as the wenty-one foot long horizontal beam. Contractor's equipment can then enter through the remove sediment. After sediment removal, the crew shall re-install grid

APPROVED: DEPARTMENT OF PUBLIC WORKS

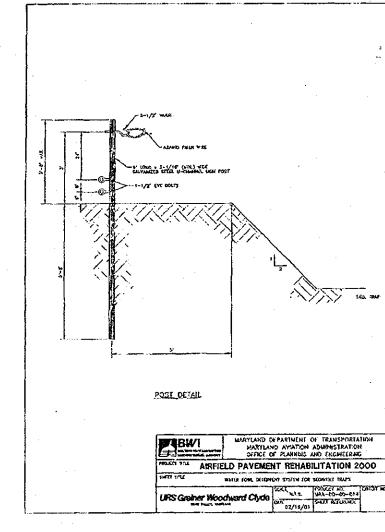
CHIEF, DIVISION OF LAND DEVELOPMENT

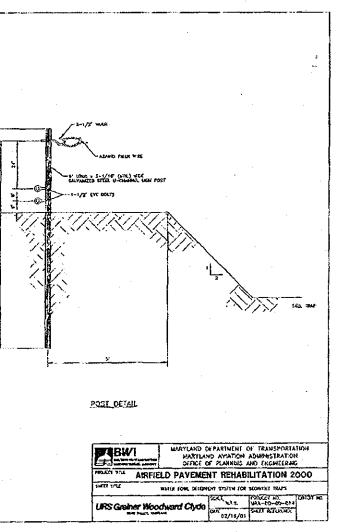
APPROVED: DEPARTMENT OF PLANNING AND ZONING

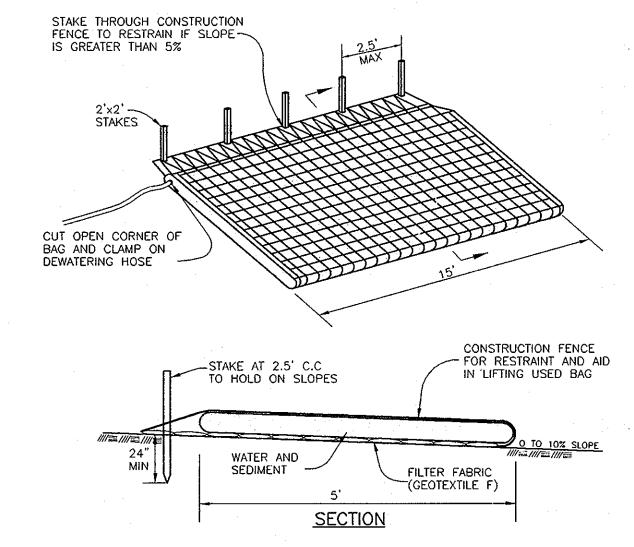
ENGINEERING DIVISION

WATER FOWE, DETERRENT SYSTEM FOR SECONENT TRAP BIRD DETERRENT SYSTEM TO BE USED FOR THE BIORETENTION FACILITIES. SEE SHEET 3 FOR LOCATION

4-12-10







FILTER BAG DETAIL (NOT TO SCALE)

AASCD/MAA NOTES

THE PROPOSED PROJECT IS LOCATED IN HOWARD COUNTY. MARYLAND ON TAX MAP 38, BLOCK 3, PARCEL 437. THE PROPOSED PROJECT IS LOCATED NEAR THE BALTIMORE WASHINTON INTERNATIONAL THURGOOD MARSHALL AIRPORT (BWI), APPROXIMATELY 14,000 FEET NORTH OF RUNWAY 15R-33L

SEDIMENT BASINS AND TRAPS ARE PROPOSED FOR SEDIMENT AND EROSION CONTROL DURING CONSTRUCTION.

SEDIMENT TRAPS AND BASINS MUST BE DRAINED COMPLETELY THROUGH A FILTERING DEVICE TO A CLEAN WATER OUTFALL WITHIN 24 HOURS FOLLOWING ANY RAINFALL EVENT.

LANDSCAPING & STORM WATER POND LANDSCAPING ON SITE:

ANY DEVIATION TO PLANT SPECIES AND VEGETATION USED ON THESE PLANS NEED APPROVAL FROM AASCD/MAA. THE PLANT SPECIES USED ON THIS SITE ARE TO AVOID ITS POTENTIAL TO ATTRACT WILDLIFE THAT COULD POSE STRIKE HAZARD TO AIRCRAFT.

BWI AIRPORT NOISE ZONE:

THE SITE FOR THIS PROJECT IS LOCATED OUTSIDE THE BOUNDARIES OF THE AIRPORT NOISE ZONE.

THE ALLOWABLE HEIGHT FOR ANY PERMANENT OR TEMPORARY STRUCTURES TALLER THAN 277 FEET ABOVE MEAN SEA LEVEL NEED OBSTRUCTION ANALYSIS REVIEW AND PERMIT FOR THE AIRPORT ZONE.

THE STORM WATER MANAGEMENT FACILITIES WITHIN 10,000 FEET OF ACTIVE RUNWAYS OR WITHIN 5 MILES OF AN APPROACH SURFACE MUST DRAIN WITHIN 24 HOURS FOLLOWING . THE 1 OR 2 YEAR STORM EVENTS AND WITHIN 48 HOURS FOLLOWING. THE 10 OR 100 YEAR STORM

> OWNER/DEVELOPER MICHAEL PFAU 3675 PARK AVE., STE. 301 ELLICOTT CITY, MARYLAND 21043

(410) 480-0023

AS-BUILT CERTIFICATION

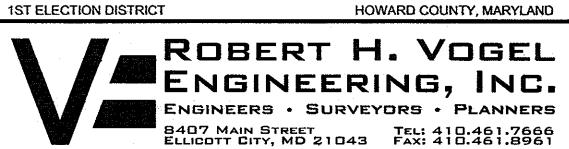
I HEREBY CERTIPY THAT THE PROJUTY SHAWN ON THIS PLAN WHIS CONSTRUCTED AS SHOWN ON THE AS-BUILT PLANS AND MESTS THE MPROVED PLANS AND SPECIFICATIONS.

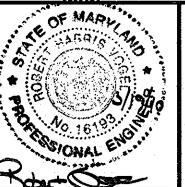
TO ADD GRAVE LOCATION, CEMETERY ACCESS AND PHASE I I UNIT VOIZI I O

FINAL ROAD CONSTRUCTION PLAN

AASCD/MAA NOTES & DETAILS **SOUTH POINT PHASE I & 2**

LOTS 1 - 7, LOT9, OPEN SPACE LOT 8 AND NON-BUILDABLE PARCELA COUNTY REF.: S-05-09, WP-05-131, P-10-01 TAX MAP 38 PARCEL 437





DESIGN BY: DRAWN BY: CHECKED BY: SCALE: W.O. NO.:

WERE PREPARED OR APPROVED BY ME. AND JCO&HS

8 SHEET 8

THAT I AM A DULY LICENSED PROFESSIONAL

OF MARYLAND, LICENSE NO. 16193 EXPIRATION DATE: 09-27-2010