

**GENERAL NOTES**

- THE SUBJECT PROPERTY IS ZONED R-ED PER THE 10/06/2013 COMPREHENSIVE ZONING PLAN.
- THE PROJECT BOUNDARY IS BASED ON A BOUNDARY SURVEY PREPARED BY ROBERT H. VOGEL, ENGINEERING, INC., DATED APRIL 2004.
- THE TOPOGRAPHY SHOWN HEREON IS BASED ON AN AERIAL TOPOGRAPHIC SURVEY PREPARED BY POTOMAC AERIAL SURVEYS, DATED JANUARY 2004.
- THE COORDINATES SHOWN HEREON ARE BASED ON THE HOWARD COUNTY GEODETIC CONTROL, WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM. MONUMENT NOS. 388A AND 388B WERE USED FOR THIS PROJECT.
- THIS PLAN IS SUBJECT TO THE AMENDED 5TH EDITION OF THE SUBDIVISION AND ZONING REGULATIONS (CB-45-2003) AND THE ZONING REGULATIONS, AS AMENDED BY COUNCIL BILL 75-2003. DEVELOPMENT AND CONSTRUCTION OF THESE LOTS 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.
- OPEN SPACE PROVIDED UNDER F-10-028.
- THIS PROPERTY IS LOCATED WITHIN THE LAWYERS HILL NATIONAL REGISTER HISTORIC DISTRICT.
- THE EXISTING STRUCTURE LOCATED ON LOT 47 WAS LISTED ON THE HISTORIC SITES INVENTORY AS #0-449. THE OLD GRACE CHURCH RECTORY WHICH WAS TO REMAIN ON THE PROPERTY AND TO BE LOCATED ON LOT 17 WAS DESTROYED BY FIRE. TO THE BEST OF THE OWNERS KNOWLEDGE, THERE ARE NO CEMETERY OR BURIAL SITES LOCATED ON SUBJECT PROPERTY.
- LAWYERS HILL ROAD IS A SCENIC ROAD. AREAS ADJACENT TO AND PARALLEL TO LAWYERS HILL ROAD WILL REMAIN UNDEVELOPED AND MOSTLY WOODED, THIS MAINTAINING THE EXISTING CHARACTERISTICS OF THE SCENIC ROAD.
- CYPRESS SPRINGS ROAD IS CLASSIFIED AS A PUBLIC ACCESS STREET.
- INGRESS AND EGRESS IS RESTRICTED ALONG WASHINGTON BOULEVARD (U.S. ROUTE 1).
- A TRAFFIC SIGN IS REQUIRED FOR THIS SITE.
- WATER AND SEWER FOR THIS PROJECT WILL BE PUBLIC.
- EXISTING SERVICE CONNECTIONS TO LOT 33 (47) SHALL BE UTILIZED IN ADDITION TO NEW CONNECTIONS.
- WATER SERVICE CONNECTION FOR LOTS 48 & 49 SHALL BE PRIVATE CONNECTION FROM CONTRACT 14-4648-D.
- SEWER SERVICE CONNECTION FOR LOTS 48 & 49 SHALL BE PRIVATE CONNECTION FROM CONTRACT 14-4648-D.
- WATER AND SEWER SERVICE TO LOTS 48 & 49 WILL BE GRANTED UNDER PROVISIONS OF SECTION 18.12.03 OF THE HOWARD COUNTY CODE. PUBLIC WATER AND SEWAGE ALLOCATION WILL BE GRANTED AT THE TIME OF ISSUANCE OF THE BUILDING PERMIT IF CAPACITY IS AVAILABLE AT THAT TIME.
- EXISTING UTILITIES LOCATED FROM ROAD CONSTRUCTION PLANS, TOPOGRAPHIC SURVEY, PUBLIC WATER AND SEWER EXISTENCE PLANS, AND AS-BUILT DRAWINGS, CONTRACTOR SHALL EXPOSE UTILITIES WELL IN ADVANCE OF CONSTRUCTION ACTIVITIES AND MAKE ALL NECESSARY RELOCATIONS, PROVIDE THE EXISTING UTILITIES AND TO MAINTAIN UNINTERRUPTED SERVICE.
- ANY DAMAGE INCURRED TO THE EXISTING UTILITIES, DUE TO CONTRACTOR'S OPERATIONS, SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.
- ANY DAMAGE TO PUBLIC RIGHT-OF-WAY, PAVING, OR EXISTING UTILITIES WILL BE CORRECTED AT THE CONTRACTOR'S EXPENSE.
- THE PROPOSED UNITS SHALL HAVE AN AUTOMATIC FIRE PROTECTION SPRINKLER SYSTEM.
- SOIL TYPES SHOWN HEREON ARE IN ACCORDANCE WITH THE WEB SOIL SURVEY - HOWARD COUNTY, MARYLAND.
- THE OFFICIAL PRE-SUBMISSION MEETING WAS HELD FOR THIS PROJECT ON SEPTEMBER 19, 2013 AT ELKRIE BRANCH LIBRARY.
- AN "OBVIOUSLY NOT CRITICAL" FLOODPLAIN STUDY WAS PERFORMED BY ROBERT H. VOGEL ENGINEERING, INC. DATED JANUARY 2005. STREAMS AND WETLANDS SHOWN HEREON WERE DELINEATED BY JOHN CANOLES, ECO-SCIENCE PROFESSIONALS, INC., DATED SEPTEMBER 2004. A 25' WETLAND BUFFER HAS BEEN ESTABLISHED PER SECTION 16.116(a)(1) OF THE SUBDIVISION REGULATIONS.
- A FOREST STAND DELINEATION PLAN WAS PREPARED BY JOHN CANOLES, ECO-SCIENCE PROFESSIONALS, DATED SEPTEMBER 2004. THE FOREST CONSERVATION MANUAL, SECTION 16.202 OF THE HOWARD COUNTY CODE, THE FOREST CONSERVATION MANUAL AND FOREST CONSERVATION ACT, FOR THE ENTIRE SUBDIVISION (SP 05-06, F10-028 AND SP 09-061) HAVE BEEN FULFILLED THROUGH THE RETENTION OF 10.88 ACRES LOCATED ON OPEN SPACE LOTS 16 AND 17 WHICH IS SUFFICIENT TO MEET THE REQUIRED BREAKDOWN POINT OF 9 ACRES OF RETENTION AS REQUIRED UNDER F-10-028.
- FOREST CONSERVATION EASEMENT NUMBERS 2-1 AND 2-2 CONSISTING OF 0.29 ACRES OF PLANTINGS ON OPEN SPACE LOT 50 OF THIS PLAT, F 14-127, WILL BE PLACED ADDED INTO THE FOREST CONSERVATION BANK OF TRINITY HOMES AT CYPRESS SPRINGS (SDP09-061/FC) BY REPLYING TO THE FOREST CONSERVATION PLAN. A SIGNED SUPPLEMENTAL/FOREST CONSERVATION PLAN FOR F 14-127 IS ON FILE FOR THIS SUBDIVISION.
- FINANCIAL SURETY FOR THE REFORESTATION EASEMENT AREAS 2-1 AND 2-2 CONSISTING OF 0.25 ACRES OF PLANTINGS ON OPEN SPACE LOT 50 = \$ 5,445. (0.25 AC OR 10,890 SF @ \$0.50/SF) SHALL BE POSTED WITH AN AMENDED FOREST AGREEMENT FOR SDP-09-061/FC.
- FOREST CONSERVATION EASEMENT AREAS 2-1 AND 2-2 LOCATED ON OPEN SPACE LOT 50 PROVIDES EXCESS FOREST CONSERVATION EASEMENT TO BE UTILIZED FOR FUTURE DEVELOPMENT. REFER TO SDP 09-061.
- NO GRADING, REMOVAL OF VEGETATIVE COVER OR TREES, PAVING AND NEW STRUCTURES SHALL BE PERMITTED WITHIN THE REQUIRED WETLANDS, STREAMS OR THEIR BUFFERS, FOREST CONSERVATION EASEMENT AREAS AND 100-YEAR FLOODPLAIN.
- NO ENVIRONMENTAL FEATURES ARE LOCATED ON LOTS 48, 49 AND OPEN SPACE LOT 50.
- A NOISE STUDY HAS BEEN PREPARED BY ROBERT H. VOGEL, DATED SEPTEMBER 2004, THE NOISE CONTOUR IS BASED ON THE PROJECTED 2020 TRAFFIC STUDY. THE 65DBA NOISE CONTOUR LINE SHOWN HEREON IS ADVISORY AS REQUIRED BY THE HOWARD COUNTY DESIGN MANUAL, CHAPTER 5, REVISED FEBRUARY 1992, NOISE STUDY REVISION FOR REDEVELOPMENT OF LOT 47, APRIL 2014. THE 65 DBA NOISE CONTOUR LINE DRAWN ON THIS SUBDIVISION PLAN IS ADVISORY AS REQUIRED BY THE HOWARD COUNTY DESIGN MANUAL, CHAPTER 5, REVISED FEBRUARY 1992, NOISE STUDY REVISION FOR REDEVELOPMENT OF LOT 47, APRIL 2014. THE 65 DBA NOISE LINE IS ESTABLISHED BY HOWARD COUNTY TO ALERT DEVELOPERS, BUILDERS, AND FUTURE RESIDENTS THAT AREAS BEYOND THIS THRESHOLD MAY EXCEED GENERALLY ACCEPTED NOISE LEVELS ESTABLISHED BY THE U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT.
- IN ACCORDANCE WITH SECTION 18.03.03 OF THE ZONING REGULATIONS, NOISE WALLS ARE EXEMPT FROM SETBACK REQUIREMENTS. THE NOISE WALL LOCATED ON LOT 49 SHALL BE CONSTRUCTED UNDER THE FUTURE SITE DEVELOPMENT PLAN.
- MAINTENANCE AND UPKEEP OF THE NOISE WALL LOCATED ON LOT 48 SHALL BE THE RESPONSIBILITY OF THE LOT OWNER.
- PERMETER, SWM LANDSCAPING AND STREET TREES IN ACCORDANCE WITH SECTION 16.124 OF THE LANDSCAPE MANUAL. SHALL BE INSTALLED IN ACCORDANCE WITH THE ROAD CONSTRUCTION DRAWINGS FOR F-10-028.
- SURETY IN THE AMOUNT OF \$150,000 WAS PREVIOUSLY PROVIDED FOR THE 5 SHROUS USED TO SCREEN THE CONCRETE TRASH PAD AT THE INTERSECTION OF CYPRESS SPRINGS ROAD AND THE USE-IN-COMMON DRIVEWAY FOR LOTS 44-47 AND POSSIBLE FUTURE REDEVELOPMENT OF THIS LOT 47 UNDER SDP-13-042.
- A GEOTECHNICAL REPORT IS NOT REQUIRED FOR THIS PROJECT.
- A SIMPLIFIED ENVIRONMENTAL CONCEPT PLAN WAS APPROVED ON FEBRUARY 4, 2014.
- STORMWATER MANAGEMENT FOR CYPRESS SPRINGS IS PROVIDED UNDER F-10-028, AND A MICROPOOL POND (P-1) (SWM POND 1) AND A POCKET POND (P-5) (SWM POND 2), TO PROVIDE THE REQUIRED WQ AND QP, AND A BIORETENTION FACILITY (F-6) TO PROVIDE WQ AND REV. SWM F 1 AND 2 ARE TO BE PRIVATELY OWNED BY THE H.O.A., AND JOINTLY MAINTAINED BY THE H.O.A. AND HOWARD COUNTY.
- BIO-RETENTION FACILITY 3 IS TO BE PRIVATELY OWNED AND MAINTAINED BY THE H.O.A.
- THIS REDEVELOPMENT SHALL UTILIZE ENVIRONMENTAL SITE DESIGN IN ACCORDANCE WITH THE APPROVED SIMPLIFIED ENVIRONMENTAL CONCEPT PLAN SUBMISSION.
- A USE-IN-COMMON MAINTENANCE AGREEMENT FOR LOTS 44-47 AND OPEN SPACE LOTS 17 AND 50 WILL BE RECORDED IN THE LAND RECORDS OF HOWARD COUNTY, MD. SIMULTANEOUSLY WITH THE PLAT. HOWARD COUNTY DEPARTMENT OF RECREATION AND PARKS SHALL NOT BE RESPONSIBLE FOR MAINTENANCE OF THE ACCESS EASEMENT OR SHARED DRIVEWAY.
- ROAD FRONTAGE TO OPEN SPACE LOTS 17 AND 50 SHALL BE THROUGH ADJOINING OPEN SPACE LOTS OWNED BY HOWARD COUNTY, MD.
- DRIVEWAY(S) SHALL BE PROVIDED PRIOR TO RESIDENTIAL OCCUPANCY TO INSURE SAFE ACCESS FOR FIRE AND EMERGENCY VEHICLES PER THE FOLLOWING MINIMUM REQUIREMENTS:
  - WIDTH - 12 FEET (16 FEET SERVING MORE THAN ONE RESIDENCE).
  - SURFACE - 6 INCHES OF COMPACTED CRUSHER RUN BASE WITH TAR AND CLIP COATING.
  - GEOMETRY - MAXIMUM 15% GRADE, 45-FOOT MINIMUM TURNING RADIUS.
  - STRUCTURES (CULVERTS/BRIDGES) - CAPABLE OF SUPPORTING 7.5 GROSS TONS (H25 LOADING).
  - DRAINAGE ELEMENTS - CAPABLE OF SAFELY PASSING 100-YEAR FLOOD WITH NO MORE THAN 1 FOOT DEPTH OVER DRIVEWAY SURFACE.
  - STRUCTURE CLEARANCES - MINIMUM 12 FEET.
  - MAINTENANCE - SUFFICIENT TO INSURE ALL WEATHER USE.
- FOR FLAG OR PIPE STEM LOTS, REFUSE COLLECTION, SNOW REMOVAL AND ROAD MAINTENANCE TO BE PROVIDED AT THE JUNCTION OF FLAG OR PIPE STEM AND THE ROAD R/W AND NOT ONTO THE STEM DRIVEWAY.
- TRASH AND RECYCLING COLLECTION WILL BE AT CYPRESS SPRINGS ROAD WITHIN 5' OF THE EDGE OF THE COUNTY ROADWAY.
- OPEN SPACE LOTS 14, 15, AND 16 ARE OWNED AND MAINTAINED BY THE HOMEOWNERS ASSOCIATION.
- OPEN SPACE LOT 17 WAS DEDICATED TO HOWARD COUNTY DEPARTMENT OF RECREATION AND PARKS PER F-10-28. "CYPRESS SPRINGS, PHASE 1". OPEN SPACE LOT 50 IS DEDICATED TO HOWARD COUNTY DEPARTMENT OF RECREATION AND PARKS UNDER THIS FINAL PLAN F 14-127.
- A COMMUNITY MEETING FOR THIS SUBDIVISION WAS HELD ON SEPTEMBER 19, 2013.
- THIS PLAN HAS BEEN REVIEWED AND APPROVED BY THE MARYLAND AVIATION ADMINISTRATION.
- REFERENCE: DESIGN MANUAL W/AVR TO VOLUME IV, DETAIL R-102, TO ALLOW A 40' RIGHT-OF-WAY INSTEAD OF THE REQUIRED 50' RIGHT-OF-WAY WAS APPROVED BY DEVELOPMENT ENGINEERING DIVISION ON JANUARY 4, 2010.
- THIS PROJECT IS SUBJECT TO WP-13-167; ON MAY 28, 2013; THE PLANNING DIRECTOR APPROVED THE REQUEST, TO WAIVE:
  - FROM SECTION 16.120(b)(5)(i) TO ALLOW THE 65 DBA NOISE LINE TO BE LOCATED ALONG THE SOUTHWESTERN PORTION OF LOT 47 WITHOUT NOISE MITIGATION, SUBJECT TO THE FOLLOWING CONDITIONS:
    - LOT 47 SHALL NOT BE FURTHER SUBDIVIDED AT ANY TIME IN THE FUTURE WITHOUT MEETING REQUIRED NOISE MITIGATION AS APPLICABLE.
    - THE PROPOSED HOUSE LOCATED ON LOT 47 SHALL BE CONSTRUCTED AS SHOWN ON SDP-13-042 AND CANNOT BE RELOCATED WITHIN THE 65 DBA UNMITIGATED NOISE LINE.
    - FROM SECTION 16.120(b)(5)(ii) TO ALLOW THE PLACEMENT OF A NOISE WALL/FENCE ALONG THE EASTERN SIDE AND SOUTHERN REAR PROPERTY LINES OF LOT 48 AS SHOWN ON SDP-13-042 RATHER THAN ON AN OPEN SPACE LOT AND TO ALLOW THE RELOCATION OF F-13-037 WITHOUT THE SHOWING OF A NOISE WALL/FENCE MAINTENANCE EASEMENT ON LOT 46, SUBJECT TO THE FOLLOWING CONDITIONS:
      - THE NOISE WALL ON LOT 46 SHALL BE CONSTRUCTED TO ACCEPTABLE DED DESIGN MANUAL STANDARDS AND A RED-LINE REVISION TO THE APPROVED ROAD CONSTRUCTION DRAWINGS FOR F-10-028/CYPRESS SPRINGS SHALL BE REQUIRED PRIOR TO RELOCATION.
    - FROM SECTION 16.144(a) TO ALLOW A 180 DAY EXTENSION OF TIME FROM JUNE 2, 2013 BY WHICH TO SUBMIT THE FINAL PLAT ORIGINALS FOR SIGNATURE PROCESSING AND RECORDED, NEW DEADLINE NOVEMBER 29, 2013.
  - THIS PROJECT IS SUBJECT TO WP-14-055. ON DECEMBER 17, 2013, THE PLANNING DIRECTOR APPROVED THE REQUEST, TO WAIVE: SECTION 16.144(b) THAT REQUIRES THE SUBMISSION OF A PRELIMINARY EQUIVALENT SKETCH PLAN TO ADD ONE ADDITIONAL LOT BEYOND THE INITIAL 43 SINGLE FAMILY LOTS APPROVED BY THE PLANNING BOARD ON 5-11-2006 (PB CASE 374) APPROVAL IS SUBJECT TO THE FOLLOWING CONDITIONS:
    - THE DEVELOPER SHALL SUBMIT A PLANNING BOARD APPLICATION FOR PLANNING BOARD APPROVAL TO RESUBDIVIDE LOT 47 INTO TWO LOTS (LOTS 48 AND 49) AS SHOWN ON A FINAL PLAT.
    - IN ACCORDANCE WITH CONDITIONS OF WP13-167, LOT 47 SHALL NOT BE SUBDIVIDED WITHOUT MEETING REQUIRED NOISE MITIGATION.
    - COMMENTS FROM THE DEVELOPMENT ENGINEERING DIVISION REQUIRING THE CONSTRUCTION OF A 16' WIDE USE-IN-COMMON DRIVEWAY AND PROVIDING A TURN AROUND AREA AT THE END OF THE USE-IN-COMMON DRIVEWAY FOR LOTS 44-49.
    - THE DEVELOPERS PROPOSAL FOR LOTS 48 AND 49 IS BEING DEVELOPED AS A RECREATION PARCEL UNDER NEIGHBORHOOD PRESERVATION DENSITY EXCHANGE OPTION AT A 10% BONUS DENSITY IN ACCORDANCE WITH SECTION 107.01.2 OF THE ZONING REGULATIONS AND RECEIVING DENSITY UNITS PER SECTION 128.01.4 OF THE ZONING REGULATIONS.
    - USING THE NEIGHBORHOOD PRESERVATION DENSITY EXCHANGE OPTION DESCRIBED IN SECTION 128.01.4 OF THE ZONING REGULATIONS, THE DEVELOPER REQUESTS FOR 1 OF THE RESIDENTIAL LOTS SHOWN HEREON HAVE BEEN TRANSFERRED FROM TRINITY HOMES AT CYPRESS SPRINGS, LLC PROPERTIES, TAX MAP 38, PARCEL 46, TO HOWARD COUNTY, MARYLAND, UNDER THE NEIGHBORHOOD PRESERVATION DENSITY EXCHANGE OPTION.
    - SP 05-006 WAS APPROVED BY THE PLANNING BOARD UNDER CASE PB 274 ON MAY 11, 2006. THIS FINAL PLAN F 14-127 WAS APPROVED BY THE PLANNING BOARD UNDER CASE 405 ON JUNE 4, 2015.
    - OPEN SPACE LOT 50 SHALL BE DEDICATED TO HOWARD COUNTY, MARYLAND AND MAINTAINED BY HOWARD COUNTY DEPARTMENT OF RECREATION AND PARKS.
    - LOTS IN THIS SUBDIVISION ARE SUBJECT TO THE MTHU FEE-IN-LIEU REQUIREMENT THAT IS TO BE CALCULATED AND PAID TO THE DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS AT THE TIME OF BUILDING PERMIT ISSUANCE BY THE PERMIT APPLICANT.

# SUPPLEMENTAL INFORMATION PLAN

## CYPRESS SPRINGS - PHASE 3

### LOTS 48, 49 AND OPEN SPACE LOT 50

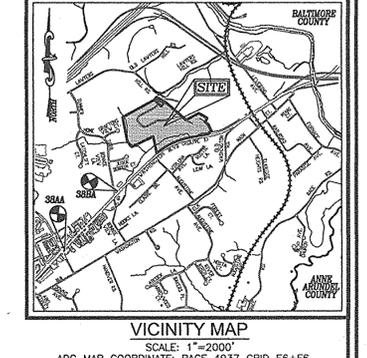
A RESUBDIVISION OF LOT 47, "CYPRESS SPRINGS, PHASE 3", PLATS 22642-22643

**COORDINATE TABLE**

NO.	NORTHING	EASTING
1	564850.602	1392098.446
2	564760.135	1391895.566
3	563610.281	1391293.164
4	563500.766	1391107.952
5	563838.216	1391816.884
6	563440.833	1391900.086
7	563954.456	1391388.934
8	563991.597	1391210.116
9	563927.816	1391315.821
10	563941.564	1391318.697
11	563954.456	1391388.934
12	563982.670	1391377.304
13	564111.639	1391222.913
14	564127.927	1391047.814
15	563810.082	1393041.755
16	563376.074	1391928.082
17	564277.387	1391970.794
18	564694.867	1391844.498
19	564548.931	1392010.381
20	564621.405	1392074.890
21	564220.214	1392598.008
22	563773.025	1391862.874
23	563720.041	1391710.361
24	564287.284	1391928.435
25	563577.703	1392822.538
26	564273.433	1392895.138
27	564271.543	1393086.744

**LEGEND**

- RIGHT-OF-WAY
- BOUNDARY LINE
- ADJACENT BOUNDARY LINE
- EXISTING RECREATIONAL OPEN SPACE
- EX. FOREST CONSERVATION EASEMENT (RETENTION) PLATS 20961-20963
- EX. WETLANDS AND WATER TO BE ABANDONED (L 3240 / F 118)
- EX. PUBLIC SANITARY SEWER EASEMENT #11174
- EX. 15' PRIVATE WALL MAINTENANCE AND ACCESS EASEMENT
- EX. PUBLIC STORMWATER MANAGEMENT EASEMENT
- EX. PUBLIC GRASS AND UTILITY EASEMENT
- EX. PUBLIC GRASS AND UTILITY EASEMENT
- EX. PRIVATE GRASS AND UTILITY EASEMENT
- EX. PRIVATE GRASS AND UTILITY EASEMENT
- EX. NON-CREDITED RECREATIONAL OPEN SPACE
- EX. CREDITED RECREATIONAL OPEN SPACE
- EX. PUBLIC SEWER EASEMENT
- EX. PRIVATE USE-IN-COMMON AND ACCESS EASEMENT



**BENCHMARKS**

NO.	NORTHING	EASTING	ELEVATION
388A	561,158.819	1,389,726.332	220.05'
388B	562,553.315	1,390,967.862	166.18'

388A - CONCRETE MONUMENT LOCATED NORTH OF THE INTERSECTION OF MONMONEY RD. AND U.S. ROUTE 1, 3.2' FROM THE NORTH BOUNDARY LINE OF U.S. ROUTE 1.

388B - CONCRETE MONUMENT LOCATED 0.3 MILES NORTH OF THE INTERSECTION OF MONMONEY RD. AND U.S. ROUTE 1, 9.5' FROM THE SOUTH BOUNDARY LINE OF U.S. ROUTE 1.

**SHEET INDEX**

COVER SHEET	DESCRIPTION	SHEET NO.
LAYOUT AND FOREST CONSERVATION PLAN		2
SOILS MAP, GRADING AND SOIL EROSION AND SEDIMENT CONTROL PLAN		3
STORMWATER MANAGEMENT - NOTES AND DETAILS		4
HCSD/MAM NOTES & DETAILS		5

**DENSITY TABULATION & APFO PHASING CHART**

GROSS AREA OF PROJECT: 33.10 AC  
 AREA OF 100 YEAR FLOODPLAIN, DRAINAGE & UTILITY EASEMENT: 0.73 AC  
 (WITHIN STEEP SLOPES)

AREA OF STEEP SLOPES OUTSIDE THE FLOOD PLANS: 10.85 AC  
 NET AREA OF PROJECT: 21.52 AC

DWELLING UNITS PER NET ACRE ALLOWED: 2 X 21.52 AC = 43 UNITS\*

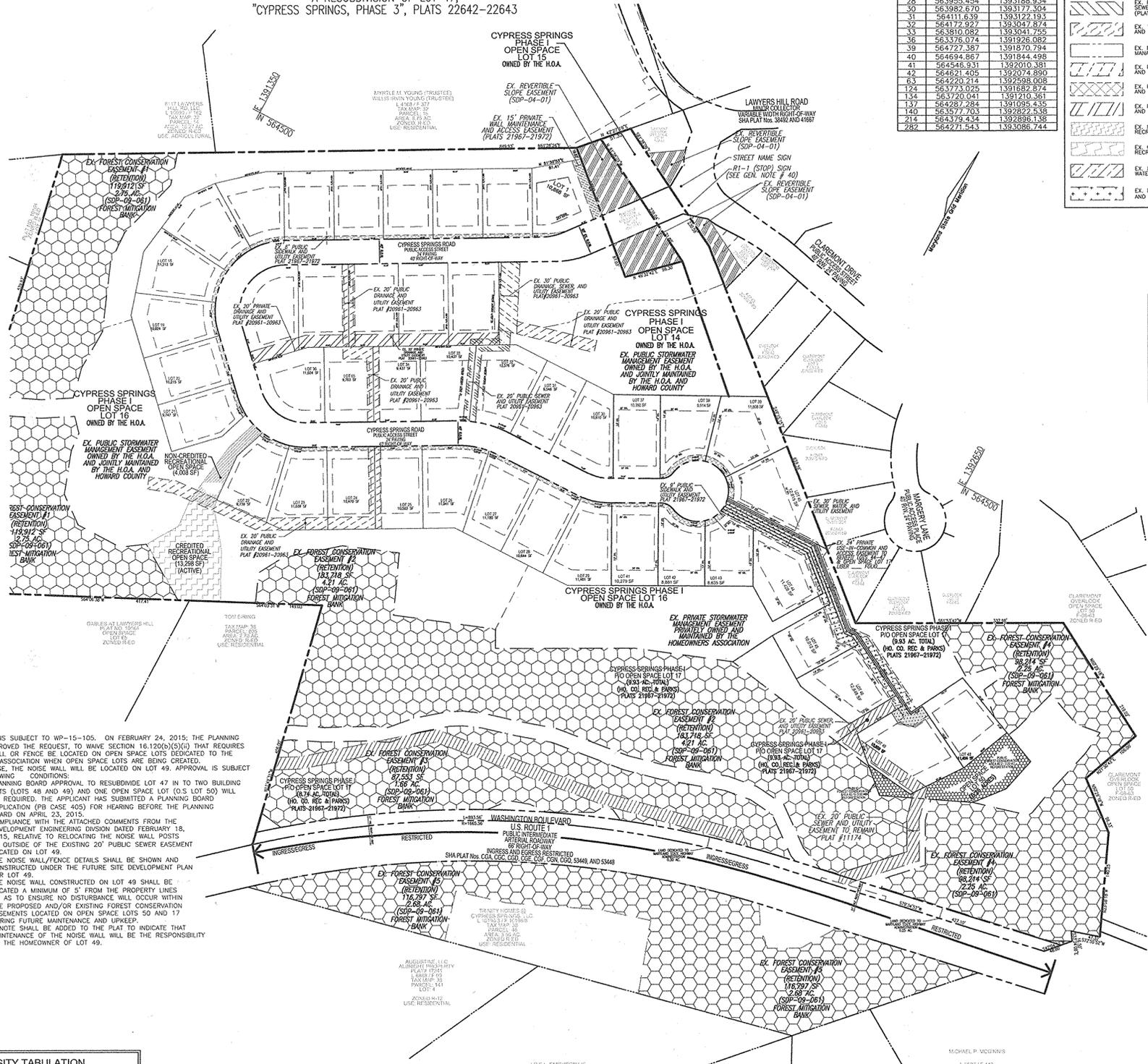
DWELLING UNITS PROPOSED: 13 (PHASE 1 ALLOCATION YEAR 2012) = 9 ALLOCATIONS + 4 EXISTING UNITS  
 DWELLING UNITS PROPOSED: 19 (PHASE 2 ALLOCATION YEAR 2013)  
 DWELLING UNITS PROPOSED: 11 (PHASE 3 ALLOCATION YEAR 2014)

\* LOT 48 DENSITY FOR THE 4TH PROPOSED UNIT SHALL BE TRANSFERRED FROM TRINITY HOMES AT CYPRESS SPRINGS, LLC PROPERTIES, TAX MAP 38 - PARCEL 46 COUNCIL BILL NUMBER 35-2012 (RPH41)

**DENSITY EXCHANGE TABULATION**

SECTION 107.01.2 OF THE ZONING REGULATIONS AND SECTION 128.01.4 OF THE ZONING REGULATIONS

RECEIVING PARCEL INFORMATION	SENDING PARCEL INFORMATION
CYPRESS SPRINGS-PHASE 3 INFORMATION 1 M 38, GRID 3, PAR. 42,44,46 F-14-127	1 DEG UNITS FROM TRINITY HOMES AT CYPRESS SPRINGS, LLC PROPERTIES, TAX MAP 38 - PAR. 46 F-14-127(6)
TOTAL PARCEL AREA: 21.52 ACRES	
NET ACREAGE OF SUBDIVISION: 21.52 ACRES	
MAXIMUM DENSITY UNITS: 21.52 ACRES X 2 = 43 UNITS	
ALLOWED BONUS UNITS: 43 x 10% = 4.3	
PROPOSED DENSITY UNITS: 43 + 1 = 44	
NUMBER OF BONUS UNITS ALLOWED BY NEIGHBORHOOD PRESERVATION DENSITY EXCHANGE OPTION: 1 UNIT REQUIRED	



**CYPRESS SPRINGS - DENSITY TABULATION**

FINAL PLAN #	PHASE	GROSS AREA	FLOODPLAIN	STEEP SLOPES	NET AREA	UNITS ALLOWED	UNITS PROP.	OPEN PROV.	OPEN PROV.	PLAT
F10-028	PHASE 1	33,150 ACRES	0.73 ACRES	10.85 ACRES	21.52 ACRES	43	13	18.58 AC	19,858	21867-21972
F12-081	PHASE 2	4,890 ACRES	-	-	-	19	19	19 SF	-	-
F13-037	PHASE 3	3,350 ACRES	-	-	-	11	11	11 SF	-	22642-22643
F14-127	PHASE 3	0.80 ACRES	-	-	-	1	2	2 SF	0.2559 AC	TRD
TOTAL	-	33,150 ACRES	0.73 ACRES	10.85 ACRES	21.52 ACRES	43	44	18.58 AC	20,117 ACRES	-

**SITE ANALYSIS DATA**

LOCATION: TAX MAP 38, GRID 3, PARCELS 42, 44, 45 & 46  
 1ST ELECTION DISTRICT  
 EXISTING ZONING: R-ED

A. TOTAL PROJECT AREA: 38,507 SF, OR 0.88 AC  
 B. AREA OF PLAN SUBMISSION: 38,507 SF  
 C. AREA OF WETLANDS AND BUFFERS: N/A - LOT 47 (F13-037)  
 D. AREA OF FLOODPLAIN: N/A - LOT 47 (F13-037)  
 E. AREA OF FOREST: N/A - LOT 47 (F13-037)  
 F. AREA OF STEEP SLOPES: N/A - LOT 47 (F13-037)  
 G. LIMIT OF DISTURBED AREA: 0.83 AC  
 H. LIMIT OF DISTURBED AREA: 2 SF  
 I. PROPOSED USES FOR SITE AND STRUCTURES:  
 J. GREEN OPEN AREA: 28,930 SF  
 K. PROPOSED IMPERVIOUS AREA: 7,230 SF  
 L. DPZ FILE REFERENCES: SEE TITLE BLOCK

**LOCATION MAP**

SCALE: 1"=100'

**PURPOSE:**

THE PURPOSE OF THIS PLAN IS TO RESUBDIVIDE LOT 47, CREATE LOTS 48-49 & OPEN SPACE LOT 50, AND CREATE FOREST CONSERVATION EASEMENTS 2-1 & 2-2 (REFORESTATION) WHICH WILL BE ADDED TO THE FOREST CONSERVATION BANK UNDER SDP-09-061.

**OWNER / DEVELOPER /**

MATTHEW PFAU  
 3675 PARK AVENUE, SUITE 301  
 ELLICOTT CITY, MARYLAND 21043  
 (410) 480-0023

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION: *[Signature]* DATE: 9.2.15

CHIEF, DIVISION OF LAND DEVELOPMENT: *[Signature]* DATE: 9.2.15

DIRECTOR: *[Signature]* DATE: 9.2.15

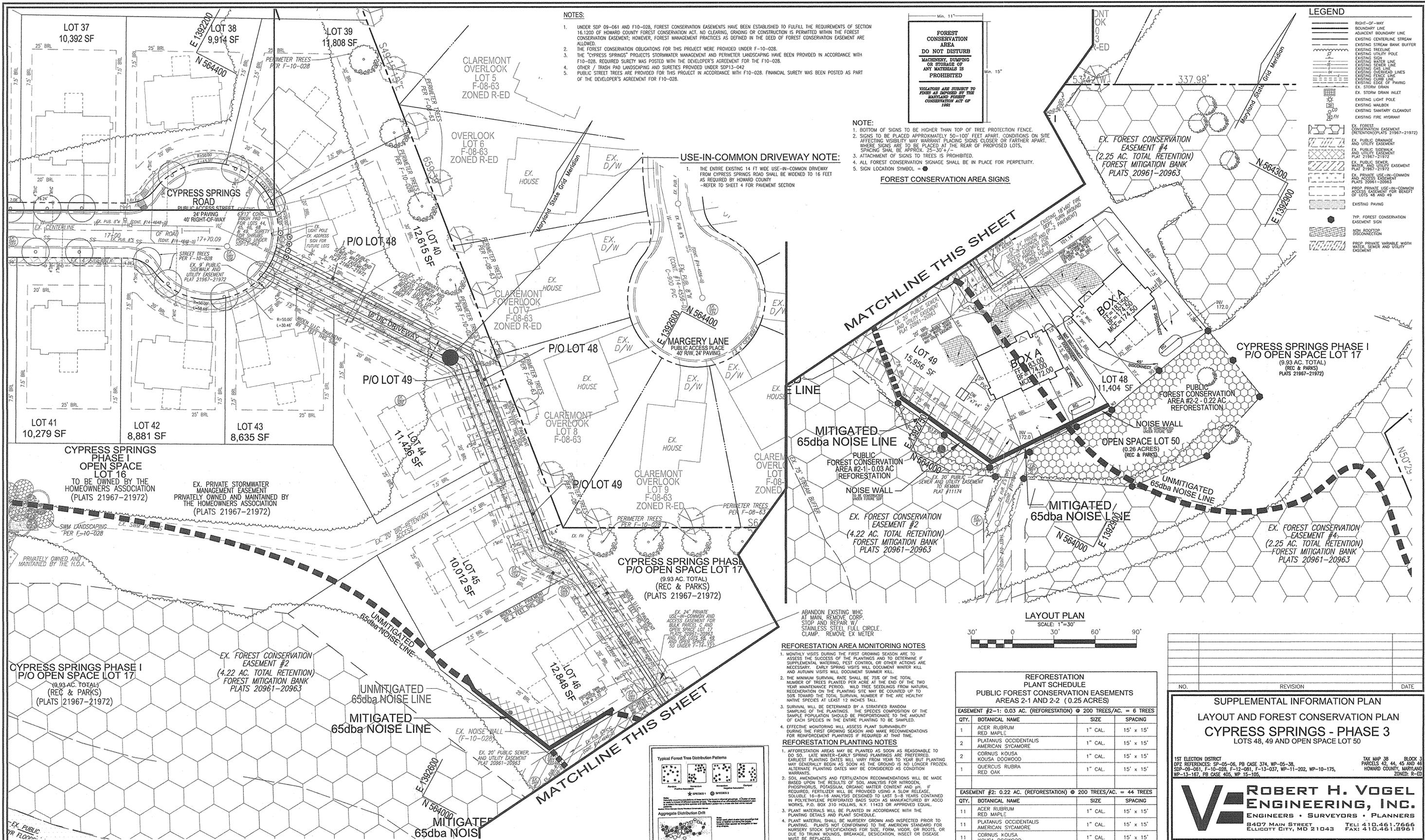
**ROBERT H. VOGEL ENGINEERING, INC.**  
 ENGINEERS - SURVEYORS - PLANNERS

8407 MAIN STREET  
 ELLICOTT CITY, MD 21043  
 TEL: 410.461.7666  
 FAX: 410.461.8961

DESIGN BY: TJW/JEDS  
 DRAWN BY: TJW  
 CHECKED BY: RHV  
 DATE: JULY, 2015  
 SCALE: AS SHOWN  
 W.O. NO.: 04-30

PROFESSIONAL CERTIFICATE  
 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. 18193  
 EXPIRATION DATE: 09-27-2016

1 SHEET OF 5



**NOTES:**

- UNDER SDP 09-061 AND F10-028, FOREST CONSERVATION EASEMENTS HAVE BEEN ESTABLISHED TO FULFILL THE REQUIREMENTS OF SECTION 16.1200 OF HOWARD COUNTY FOREST CONSERVATION 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.
- THE FOREST CONSERVATION OBLIGATIONS FOR THIS PROJECT WERE PROVIDED UNDER F-10-028.
- THE "CYPRESS SPRINGS" PROJECTS STORMWATER MANAGEMENT AND PERMETER LANDSCAPING HAVE BEEN PROVIDED IN ACCORDANCE WITH F10-028. REQUIRED SURETY WAS POSTED WITH THE DEVELOPER'S AGREEMENT FOR THE F10-028.
- OTHER / TRASH PAD LANDSCAPING AND SURETIES PROVIDED UNDER SDP13-042.
- PUBLIC STREET TREES ARE PROVIDED FOR THIS PROJECT IN ACCORDANCE WITH F10-028. FINANCIAL SURETY WAS POSTED AS PART OF THE DEVELOPER'S AGREEMENT FOR F10-028.

**FOREST CONSERVATION AREA DO NOT DISTURB**

MACHINERY, DUMPING OR STORAGE OF ANY MATERIALS IS PROHIBITED

VIOLATORS ARE SUBJECT TO FINES AS IMPOSED BY THE MARYLAND FOREST CONSERVATION ACT OF 1991

**USE-IN-COMMON DRIVEWAY NOTE:**

- THE ENTIRE EXISTING 14 FT WIDE USE-IN-COMMON DRIVEWAY FROM CYPRESS SPRINGS ROAD SHALL BE WIDENED TO 16 FEET AS REQUIRED BY HOWARD COUNTY - REFER TO SHEET 4 FOR PAVEMENT SECTION

**FOREST CONSERVATION AREA SIGNS**

- BOTTOM OF SIGNS TO BE HIGHER THAN TOP OF TREE PROTECTION FENCE.
- SIGNS TO BE PLACED APPROXIMATELY 50-100 FEET APART, CONDITIONS ON SITE AFFECTING VISIBILITY MAY WARRANT PLACING SIGNS CLOSER OR FARTHER APART.
- WHERE SIGNS ARE TO BE PLACED AT THE REAR OF PROPOSED LOTS, SPACING SHALL BE APPROX. 25-30' +/-.
- ATTACHMENT OF SIGNS TO TREES IS PROHIBITED.
- ALL FOREST CONSERVATION SIGNAGE SHALL BE IN PLACE FOR PERPETUITY.
- SIGN LOCATION SYMBOL = ●

**LEGEND**

[Symbol]	RIGHT-OF-WAY
[Symbol]	BOUNDARY LINE
[Symbol]	ADJACENT BOUNDARY LINE
[Symbol]	EXISTING CENTERLINE STREAM
[Symbol]	EXISTING STREAM BANK BUFFER
[Symbol]	EXISTING TREE LINE
[Symbol]	EXISTING UTILITY POLE
[Symbol]	EXISTING SEWER LINE
[Symbol]	EXISTING OVERHEAD LINES
[Symbol]	EXISTING CURB LINE
[Symbol]	EXISTING EDGE OF PAVING
[Symbol]	EX. STORM DRAIN
[Symbol]	EX. STORM DRAIN INLET
[Symbol]	EXISTING LIGHT POLE
[Symbol]	EXISTING MAILBOX
[Symbol]	EXISTING SANITARY CLEANOUT
[Symbol]	EXISTING FIRE HYDRANT
[Symbol]	EX. FOREST CONSERVATION EASEMENT (RETENTION) (PLATS 21967-21972)
[Symbol]	EX. PUBLIC GRASSLAND AND UTILITY EASEMENT
[Symbol]	EX. PUBLIC SIDEWALK, WATER, AND UTILITY EASEMENT (PLAT 21967-21972)
[Symbol]	EX. PUBLIC SEWER, WATER, AND UTILITY EASEMENT (PLAT 21967-21972)
[Symbol]	EX. PRIVATE USE-IN-COMMON AND ACCESS EASEMENT (PLATS 20961-20963)
[Symbol]	PROP. PRIVATE USE-IN-COMMON AND ACCESS EASEMENT FOR BENEFIT OF LOTS 48 AND 49
[Symbol]	EXISTING PAVING
[Symbol]	TYP. FOREST CONSERVATION EASEMENT SIGN
[Symbol]	NON-ROOFTOP DISCONNECTION
[Symbol]	PROP. PRIVATE VARIABLE WIDTH WATER SEWER AND UTILITY EASEMENT

**REFORESTATION AREA MONITORING NOTES**

- 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.
- 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.
- 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.
- EFFECTIVE MONITORING WILL ASSESS PLANT SURVIVABILITY DURING THE FIRST GROWING SEASON AND MAKE RECOMMENDATIONS FOR REINFORCEMENT PLANTINGS IF REQUIRED AT THAT TIME.

**REFORESTATION PLANTING NOTES**

- FORESTATION 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 WARRANTS.
- SOIL AMENDMENTS AND FERTILIZATION RECOMMENDATIONS WILL BE MADE BASED UPON THE RESULTS OF SOIL ANALYSIS FOR NITROGEN, PHOSPHORUS, POTASSIUM, ORGANIC MATTER CONTENT AND pH. IF 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 HOLLIS, N.Y. 11423 OR APPROVED EQUAL.
- PLANT MATERIALS WILL BE PLANTED IN ACCORDANCE WITH THE PLANTING DETAILS AND PLANT SCHEDULE.
- PLANT MATERIAL SHALL BE NURSERY GROWN AND INSPECTED PRIOR TO PLANTING. PLANTS NOT CONFORMING TO THE AMERICAN STANDARD FOR NURSERY STOCK SPECIFICATIONS FOR SIZE, GROW, WOOD, OR ROOTS, OR DUE TO TRUNK WOUNDS, BREAKAGE, DESICCATION, INSECT OR DISEASE, MUST BE REPLACED.
- 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 PLACEMENT.
- 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.
- MULCH SHALL BE APPLIED IN ACCORDANCE WITH THE DIAGRAM PROVIDED AND SHALL CONSIST OF COMPOSTED, SHREDDED HARDWOOD BARK MULCH, FREE OF WOOD ALCOHOL.
- ALL NURSERY STOCK TO BE SPRAYED WITH DEER REPELLENT CONTAINING BITERX, SUCH AS REPELLIX. ALL NURSERY STOCK TO BE GROWN WITH DEER REPELLENT TABLETS IN GROWING MEDIUM, SUCH AS REPELLER TABLETS.

**REFORESTATION PLANT SCHEDULE**

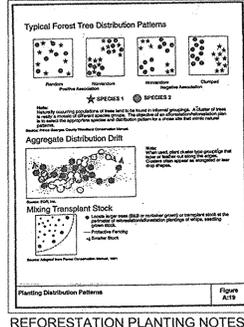
PUBLIC FOREST CONSERVATION EASEMENTS AREAS 2-1 AND 2-2 (0.25 ACRES)

QTY.	BOTANICAL NAME	SIZE	SPACING
1	ACER RUBRUM RED MAPLE	1" CAL.	15' x 15'
2	PLATANUS OCCIDENTALIS AMERICAN SYCAMORE	1" CAL.	15' x 15'
2	CORNUS KOUSA KOUSA DOGWOOD	1" CAL.	15' x 15'
1	QUERCUS RUBRA RED OAK	1" CAL.	15' x 15'

**REFORESTATION PLANT SCHEDULE**

EASEMENT #2: 0.22 AC. (REFORESTATION) @ 200 TREES/AC. = 44 TREES

QTY.	BOTANICAL NAME	SIZE	SPACING
11	ACER RUBRUM RED MAPLE	1" CAL.	15' x 15'
11	PLATANUS OCCIDENTALIS AMERICAN SYCAMORE	1" CAL.	15' x 15'
11	CORNUS KOUSA KOUSA DOGWOOD	1" CAL.	15' x 15'
11	QUERCUS RUBRA RED OAK	1" CAL.	15' x 15'



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

DATE: 9-2-15

DATE: 9-2-15

**NOTES:**

- FOR THE NEW WATER CONNECTIONS TO LOTS 48 AND 49, UTILIZE A TWIN 1" OUTSIDE METER SETTING DETAIL PER W 3.32, WHERE SHOWN HEREON.
- FOR THE EXISTING CONNECTION TO LOT 47, REMOVE THE CORPORATION STOP AND REPAIR WITH STAINLESS STEEL FULL CIRCLE CLAMP.
- UTILIZE EXISTING SEWER HOUSE CONNECTION SHOWN FOR LOT 47 FOR LOT 48 (CONTRACT 14-4648-0) AND THE EXISTING CONNECTION FROM EXISTING MANHOLE 5 (CONTRACT 10-3991) FOR LOT 49

**SUPPLEMENTAL INFORMATION PLAN**

LAYOUT AND FOREST CONSERVATION PLAN

CYPRESS SPRINGS - PHASE 3

LOTS 48, 49 AND OPEN SPACE LOT 50

1ST ELECTION DISTRICT: SP-05-06, PB CASE 374, WP-05-08, SDP-09-061, F-10-028, F-12-081, F-13-037, WP-11-202, WP-10-175, WP-15-167, PB CASE 405, WP-15-105

TAX MAP 38 BLOCK 3 PARCELS 42, 44, 45 AND 46 HOWARD COUNTY, MARYLAND ZONED: R-ED

**ROBERT H. VOGEL ENGINEERS, INC.**

ENGINEERS • SURVEYORS • PLANNERS

8407 MAIN STREET ELLICOTT CITY, MD 21043 TEL: 410.461.7666 FAX: 410.461.8961

DESIGN BY: TJW/JEDS

DRAWN BY: TJW

CHECKED BY: REV

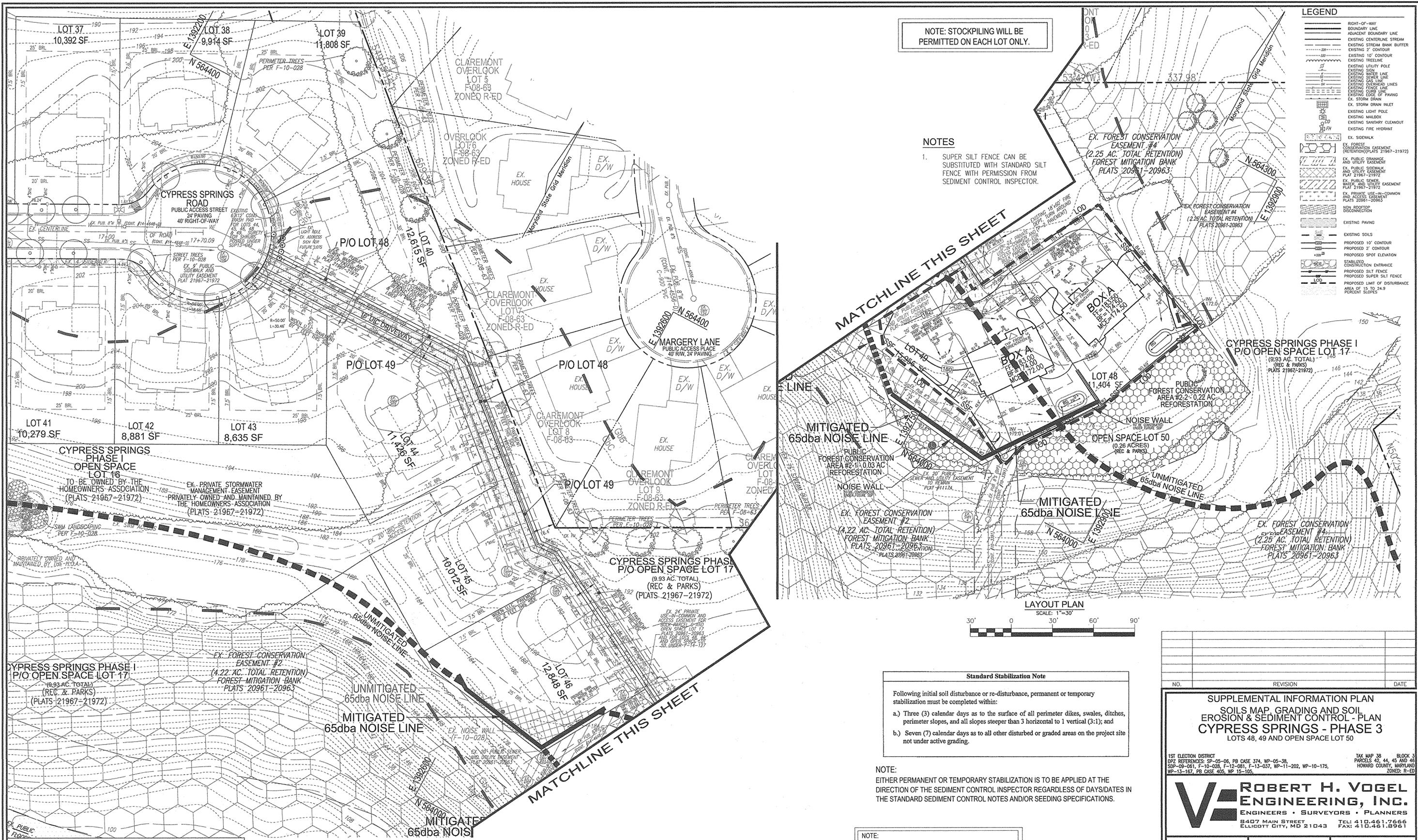
DATE: JULY, 2015

SCALE: AS SHOWN

W.O. NO.: 04-30

PROFESSIONAL CERTIFICATE 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. 16193 EXPIRATION DATE: 09-27-2016

2 SHEET OF 5



NOTE: STOCKPILING WILL BE PERMITTED ON EACH LOT ONLY.

- NOTES**
- SUPER SILT FENCE CAN BE SUBSTITUTED WITH STANDARD SILT FENCE WITH PERMISSION FROM SEDIMENT CONTROL INSPECTOR.

**Standard Stabilization Note**

Following initial soil disturbance or re-disturbance, permanent or temporary stabilization must be completed within:

- Three (3) calendar days as to the surface of all perimeter 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 or graded areas on the project site not under active grading.

**NOTE:**

EITHER PERMANENT OR TEMPORARY STABILIZATION IS TO BE APPLIED AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR REGARDLESS OF DAYS/DATES IN THE STANDARD SEDIMENT CONTROL NOTES AND/OR SEEDING SPECIFICATIONS.

**NOTE:**

- SILT FENCE SHALL BE CURLED UPHILL. NO MORE THAN 35 FEET APART
- DOUBLE ROWS OF SUPER SILT FENCE SHALL BE INSTALLED AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR.

**OWNER / DEVELOPER /**  
 MATTHEW PFAU  
 3675 PARK AVENUE, SUITE 301  
 ELLICOTT CITY, MARYLAND 21043  
 (410) 480-0023

**LEGEND**

[Symbol]	RIGHT-OF-WAY
[Symbol]	BOUNDARY LINE
[Symbol]	ADJACENT BOUNDARY LINE
[Symbol]	EXISTING CENTERLINE STREAM
[Symbol]	EXISTING STREAM BANK BUFFER
[Symbol]	EXISTING 2' CONTOUR
[Symbol]	EXISTING 10' CONTOUR
[Symbol]	EXISTING TREELINE
[Symbol]	EXISTING UTILITY POLE
[Symbol]	EXISTING SIGN
[Symbol]	EXISTING WATER LINE
[Symbol]	EXISTING SEWER LINE
[Symbol]	EXISTING GAS LINE
[Symbol]	EXISTING OVERHEAD LINES
[Symbol]	EXISTING FENCE LINE
[Symbol]	EXISTING EDGE OF PAVING
[Symbol]	EX. STORM DRAIN
[Symbol]	EX. STORM DRAIN INLET
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[Symbol]	EXISTING MAILBOX
[Symbol]	EXISTING SANITARY CLEANOUT
[Symbol]	EXISTING FIRE HYDRANT
[Symbol]	EX. SIDEWALK
[Symbol]	EX. FOREST CONSERVATION EASEMENT (RETENTION/PLATS 21967-21972)
[Symbol]	EX. PUBLIC DRAINAGE AND UTILITY EASEMENT (PLATS 21967-21972)
[Symbol]	EX. PUBLIC SEWER AND UTILITY EASEMENT (PLATS 20961-20963)
[Symbol]	EX. PRIVATE USE-IN-COMMON (PLATS 20961-20963)
[Symbol]	DISCONNECTION
[Symbol]	EXISTING PAVING
[Symbol]	EXISTING SOILS
[Symbol]	PROPOSED 2' CONTOUR
[Symbol]	PROPOSED 10' CONTOUR
[Symbol]	PROPOSED SPOT ELEVATION
[Symbol]	STABILIZED CONSTRUCTION ENTRANCE
[Symbol]	PROPOSED SILT FENCE
[Symbol]	PROPOSED SUPER SILT FENCE
[Symbol]	PROPOSED LIMIT OF DISTURBANCE AREA OF 15 TO 24.9 PERCENT SLOPES

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

*[Signature]* 9-2-15  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION 8 DATE

*[Signature]* 9-2-15  
 CHIEF, DIVISION OF LAND DEVELOPMENT 8 DATE

DIRECTOR *[Signature]* *[Signature]*

**SOILS LEGEND**

SYMBOL	NAME / DESCRIPTION	SOIL GROUP	K-FACTOR	HYDRIC	HYDRIC INCLUSIONS	POSS. FLOODING	CLAY SLOPE POTENTIAL
Gbc	GLADSTONE LOAM, 8 TO 15 PERCENT SLOPES.	B	.20	NO	NO	YES	NO

TAKEN FROM: USDA, SCS-WEB SOIL SURVEY, HOWARD COUNTY  
 K-FACTOR = K<sub>w</sub> WHOLE SOIL

**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

**SUPPLEMENTAL INFORMATION PLAN**  
**SOILS MAP, GRADING AND SOIL EROSION & SEDIMENT CONTROL - PLAN**  
**CYPRESS SPRINGS - PHASE 3**  
 LOTS 48, 49 AND OPEN SPACE LOT 50

1ST ELECTION DISTRICT: SP-05-06, PB CASE 374, WP-05-38  
 2ND ELECTION DISTRICT: SP-09-061, F-10-028, F-12-081, F-13-037, WP-11-202, WP-10-175, WP-13-167, PB CASE 405, WP 15-105

TAX MAP 38 BLOCK 3  
 PARCELS 42, 44, 45 AND 46  
 HOWARD COUNTY, MARYLAND  
 ZONED: R-ED

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**PROFESSIONAL CERTIFICATE**  
 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. 16193, EXPIRATION DATE: 09-27-2016

DESIGN BY: T.J.W./E.D.S.  
 DRAWN BY: T.J.W.  
 CHECKED BY: R.H.V.  
 DATE: JULY, 2015  
 SCALE: AS SHOWN  
 W.O. NO.: 04-30

3 SHEET OF 5

SECTION NUMBER	ROAD AND STREET CLASSIFICATION	CALIFORNIA BEARING RATIO (CBR)				MIN. HMA WITH GAB				HMA WITH CONTIGUOUS GAB			
		3 TO 4.5	5 TO 6.7	7 TO 8.5	9 TO 11.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
P-1	PAVING DECK, NON-RESIDENTIAL, MINOR COLLECTOR, NON-RESIDENTIAL WITH NO MORE THAN 2 HOIST THROUS FOR GUT	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
P-2	PAVING DECK, NON-RESIDENTIAL, MINOR COLLECTOR, NON-RESIDENTIAL WITH NO MORE THAN 2 HOIST THROUS FOR GUT	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
P-3	PAVING DECK, PAVEMENT, NON-RESIDENTIAL WITH NO MORE THAN 2 HOIST THROUS FOR GUT	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
P-4	PAVING DECK, PAVEMENT, MAJOR COLLECTOR	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0

NOTES:  
 1. ALL PAVING SHALL BE PERFORMED BY THE CONTRACTOR.  
 2. THE PAVING DECK SHALL BE CONSTRUCTED TO THE PROPOSED FINISH GRADE.  
 3. THE PAVING DECK SHALL BE CONSTRUCTED TO THE PROPOSED FINISH GRADE.  
 4. THE PAVING DECK SHALL BE CONSTRUCTED TO THE PROPOSED FINISH GRADE.  
 5. THE PAVING DECK SHALL BE CONSTRUCTED TO THE PROPOSED FINISH GRADE.  
 6. THE PAVING DECK SHALL BE CONSTRUCTED TO THE PROPOSED FINISH GRADE.  
 7. THE PAVING DECK SHALL BE CONSTRUCTED TO THE PROPOSED FINISH GRADE.  
 8. THE PAVING DECK SHALL BE CONSTRUCTED TO THE PROPOSED FINISH GRADE.  
 9. THE PAVING DECK SHALL BE CONSTRUCTED TO THE PROPOSED FINISH GRADE.  
 10. THE PAVING DECK SHALL BE CONSTRUCTED TO THE PROPOSED FINISH GRADE.

Howard County, Maryland  
 Department of Public Works  
 PAVING SECTIONS  
 P-1 to P-4  
 Detail  
 R-2.01

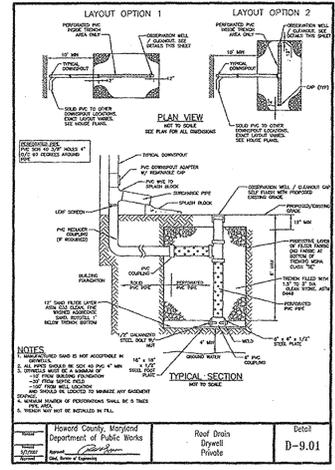
### N-1. DISCONNECTION OF ROOFTOP RUNOFF

CONSTRUCTION CRITERIA:  
 THE FOLLOWING ITEMS SHOULD BE ADDRESSED DURING THE CONSTRUCTION OF PROJECTS WITH PLANNED ROOFTOP DISCONNECTIONS:

- EROSION AND SEDIMENT CONTROL: EROSION AND SEDIMENT CONTROL PRACTICES (E.G., SEDIMENT TRAPS) SHALL NOT BE LOCATED IN VEGETATED AREAS RECEIVING DISCONNECTED RUNOFF.
- SITE DISTURBANCE: CONSTRUCTION VEHICLES AND EQUIPMENT SHOULD AVOID AREAS RECEIVING DISCONNECTED RUNOFF TO MINIMIZE DISTURBANCE AND COMPACTION. SHOULD AREAS RECEIVING DISCONNECTED RUNOFF BECOME COMPACTED, SCARIFYING THE SURFACE OR ROTOTILLING THE SOIL TO A DEPTH OF FOUR TO SIX INCHES SHALL BE PERFORMED TO ENSURE PERMEABILITY. ADDITIONALLY, AMENDMENTS MAY BE NEEDED FOR TIGHT, CLAYEY SOILS.

INSPECTION:  
 A FINAL INSPECTION SHALL BE CONDUCTED BEFORE USE AND OCCUPANCY APPROVAL TO ENSURE THAT SIZING FOR TREATMENT AREAS HAS BEEN MET AND PERMANENT STABILIZATION HAS BEEN ESTABLISHED.

MAINTENANCE CRITERIA:  
 MAINTENANCE OF AREAS RECEIVING DISCONNECTED RUNOFF IS GENERALLY NO DIFFERENT THAN THAT REQUIRED FOR OTHER LAWN OR LANDSCAPED AREAS. THE AREAS RECEIVING RUNOFF SHOULD BE PROTECTED FROM FUTURE COMPACTION (E.G., BY PLANTING TREES OR SHRUBS ALONG THE PERIMETER). IN COMMERCIAL AREAS, FOOT TRAFFIC SHOULD BE DISCOURAGED AS WELL.



Howard County, Maryland  
 Department of Public Works  
 Rain Garden  
 Private  
 Detail  
 D-9.01

OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED DRYWELL (M-5)  
 THE OWNER SHALL INSPECT & CLEAN ANNUALLY, INCLUDING PIPES, GUTTERS, DOWNSPUTS AND FILTERS.  
 B. PONDING STANDING WATER OR ALGAL GROWTH ON THE TOP OF A DRYWELL MAY INDICATE FAILURE DUE TO SEDIMENTATION IN THE GRAVEL MEDIA. IF WATER PONDING FOR MORE THAN 48 HOURS AFTER A MAJOR STORM OR MORE THAN SIX INCHES OF SEDIMENT HAS ACCUMULATED, THE GRAVEL MEDIA SHOULD BE EXCAVATED AND REPLACED.

### APPENDIX B.4.C SPECIFICATIONS FOR MICRO-BIORETENTION, RAIN GARDEN, LANDSCAPE INFILTRATION & INFILTRATION BERMS

1. MATERIAL SPECIFICATIONS  
 THE ALLOWABLE MATERIALS TO BE USED IN THESE PRACTICES ARE DETAILED IN TABLE B.4.1.  
 2. FILTERING MEDIA OR PLANTING SOIL  
 THE SOIL SHALL BE A UNIFORM MASH 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 HINDERANCE 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 COM-15.03(01).  
 \* SOIL COMPONENT - LOAMY SAND OR SANDY LOAM (USDA SOIL TEXTURAL CLASSIFICATION).  
 \* ORGANIC CONTENT - MINIMUM 10% BY DRY WEIGHT (ASTM D 2974). IN GENERAL, THIS CAN BE MET WITH A MIXTURE OF LOAMY SAND (80%-65%) AND COMPOST (15-20%) OR SANDY LOAM (LOAM, COARSE SAND (LOAM), AND COMPOST (40%).  
 \* CLAY CONTENT - MEDIA SHALL HAVE A CLAY CONTENT OF LESS THAN 5%.  
 \* PH RANGES - 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 STOCKPILE TOPSOIL IF TOPSOIL IS IMPORTED, THEN A TEXTURAL ANALYSIS SHALL BE PERFORMED FOR EACH LOCATION WHERE THE TOPSOIL WAS EXCAVATED.

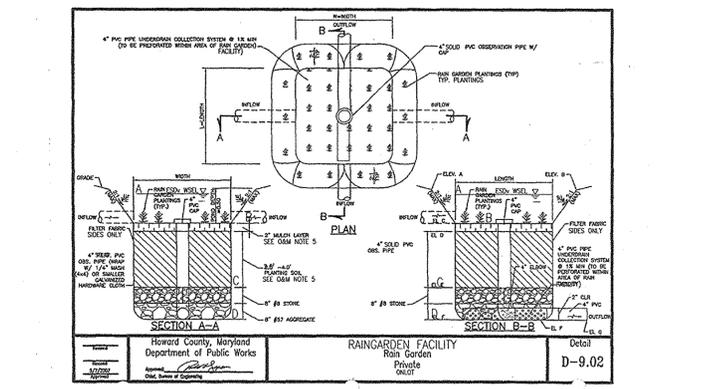
3. COMPACTION  
 IT IS VERY IMPORTANT TO MINIMIZE COMPACTION OF BOTH THE BASE OF BIORETENTION PRACTICES AND THE REQUIRED BACKFILL. WHEN POSSIBLE, USE EXCAVATION HOES TO REMOVE ORIGINAL SOIL. IF PRACTICES ARE EXCAVATED USING LOADERS, THE CONTRACTOR SHOULD USE WIDE TRACK OR WASH TRACK EQUIPMENT, OR LIGHT EQUIPMENT WITH TURF TIRE TIRES. 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 ALLEVATED 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 RESTRUCTURE THE SOIL PROFILE THROUGHOUT THE 12 INCH COMPACTED ZONE. SUBSTITUTE METHODS MUST BE APPROVED BY THE ENGINEER. ROTOTILLERS TYPICALLY DO NOT TILL DEEP ENOUGH TO REMOVE THE EFFECTS OF COMPACTION FROM HEAVY EQUIPMENT. ROTILL 2 TO 3 INCHES OF SAND INTO THE BASE OF THE BIORETENTION FACILITY BEFORE BACKFILLING THE OPTIONAL SAND LAYER. PUMP ANY PONDING 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 FINISH 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 SAND AND SAND. GRADE BIORETENTION MATERIALS WITH LIGHT EQUIPMENT SUCH AS A COMPACT LOADER OR A DOZER/LOADER WITH WASH 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 SHOULD BE PLACED IN SURROUNDING TO A UNIFORM THICKNESS OF 2" TO 3". SHREDED OR CHIPPED HARDWOOD MULCH IS THE ONLY ACCEPTED MULCH. FINE MULCH AND WOOD CHIPS WILL FLOAT AND MOVE TO THE PERIMETER OF THE BIORETENTION AREA DURING A STORM EVENT AND ARE NOT ACCEPTABLE. SHREDED MULCH MUST BE WELL AGED (6 TO 12 MONTHS) FOR ACCEPTANCE.  
 ROOTS 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 TREE 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 ENOUGH ORGANIC MATERIAL TO ADEQUATELY SUPPLY NUTRIENTS FROM NATURAL CYCLING. THE PRIMARY FUNCTION OF THE BIORETENTION STRUCTURE IS TO IMPROVE WATER QUALITY. ADDING FERTILIZERS DEFERS, OR AT A MINIMUM, IMPROVES THIS GOAL. ONLY ADD FERTILIZER IF WOOD CHIPS OR MULCH ARE USED TO AMEND THE SOIL. ROTILL UREA FERTILIZER AT A RATE OF 2 POUNDS PER 1000 SQUARE FEET.

6. UNDERDRAINS  
 UNDERDRAINS SHOULD MEET THE FOLLOWING CRITERIA:  
 \* PIPE - SHOULD BE 4" TO 6" DIAMETER, SLOTTED OR PERFORATED RIGID PLASTIC PIPE (ASTM F 758, TYPE PS 28, OR AASHTO M-278) IN A GRAVEL LAYER. THE PREFERRED MATERIAL IS SLOTTED, 4" RIGID PIPE (E.G., PVC OF HOPE).  
 \* 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 PERFORATED WITH 1/4" (NO. 4 OR 6) GALVANIZED HOLLOW 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 SAND, NON-PERFORATED OBSERVATION WELL MUST BE PROVIDED (ONE PER EVERY 1,000 SQUARE FEET) TO PROVIDE A CLEAN-OUT PORT AND MONITOR PERFORMANCE OF THE FILTER.  
 \* A 4" LAYER OF PEA GRAVEL (1/4" TO 3/8" STONE) SHALL BE LOCATED BETWEEN THE FILTER MEDIA AND UNDERDRAIN TO PREVENT MIGRATION OF FINES INTO THE UNDERDRAIN. THIS LAYER MAY BE CONSIDERED PART OF THE FILTER BED WHEN BED THICKNESS EXCEEDS 24".  
 THE 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.

### Appendix B.4. Construction Specifications for Environmental Site Design Practices

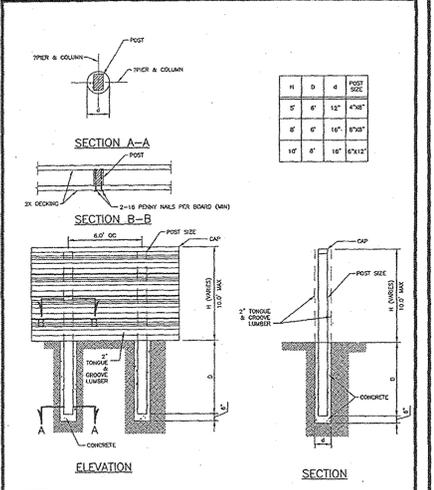
Table B.4.1 Materials Specifications for Micro-Bioretention, Rain Gardens & Landscape Infiltration-	Material	Specification	Size	Notes
Plantings	see Appendix A, Table A.4	n/a	n/a	plantings are site-specific
Planting soil [2" to 4" deep]	loamy sand (60-65%) & compost (35-40%) or sandy loam (30%), coarse sand (30%) & compost (40%)	n/a	n/a	USDA soil types loamy sand or sandy loam; clay content < 5%
Organic content	Min. 10% by dry weight (ASTM D 2974)	n/a	n/a	
Mulch	shredded hardwood	n/a	n/a	aged 6 months, minimum; no pine or wood chips
Pea gravel diaphragm	pea gravel: ASTM-D-448	NO. 8 OR NO. 9 (1/8" TO 3/8")	n/a	
Curtain drain	ornamental stone: washed cobbles	stone: 2" to 5"	n/a	
Geotextile	n/a	n/a	n/a	PE Type I nonwoven
Gravel (underdrains and infiltration berms)	AASHTO M-43	NO. 57 OR NO. 6	AGGREGATE (3/8" to 3/4")	
Infiltration piping	F 758, Type PS 28 or AASHTO M-278	4" to 6" rigid schedule 40 PVC or SDR35	n/a	Slotted or perforated pipe; 3/8" perf. @ 6" on center, 4 holes per row; minimum of 3" of gravel over pipe; not necessary underdrain pipes. Perforated pipe shall be wrapped with 1/4-inch galvanized hardware cloth.
Poured in place concrete (if required)	MSHA Mix No. 3; f <sub>c</sub> = 3500 psi @ 28 days, normal weight, air-entrained; reinforcing to meet ASTM-615-60	n/a	n/a	on-site testing of poured-in-place concrete required; 28 day strength and slump test; all concrete design (cast-in-place or pre-cast) not using previously approved State or local standards require design drawings sealed and approved by a professional structural engineer licensed in the State of Maryland - design to include meeting ACI Code 350.0R9, vertical loading (H-10 or H-20); allowable horizontal loading (based on soil pressures); and analysis of potential cracking
Sand	AASHTO M-6 or ASTM-C-33	0.02" to 0.04"	n/a	Sand substitutions such as Diabase and Graystone (AASHTO #10 are not acceptable. No calcium carbonated or dolomitic sand substitutions are acceptable. No "rock dust" can be used for sand.



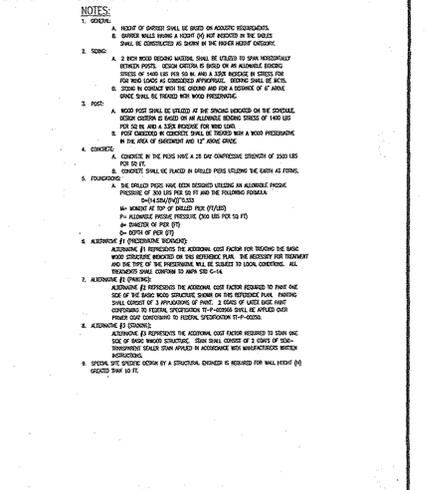
Howard County, Maryland  
 Department of Public Works  
 Rain Garden  
 Private  
 Detail  
 D-9.02

NOISE WALL LOCATION CHART						
STREET NAME	POINT	NORTHING	EASTING	GROUND	WALL	WALL HEIGHT
LOT 48	W1	N 564030	E 1392725	175	181	6 FEET TALL
LOT 48	W2	N 564020	E 1392805	171	177	6 FEET TALL
LOT 48/49	W3	N 564097	E 1392861	177	183	6 FEET TALL

TYPICAL NOISE WALL DETAILS OR EQUAL  
 NOISE WALL SHALL BE CONSTRUCTED UNDER FUTURE SITE DEVELOPMENT PLAN



Howard County, Maryland  
 Department of Public Works  
 Noise Wall  
 Private  
 Detail  
 R-9.05

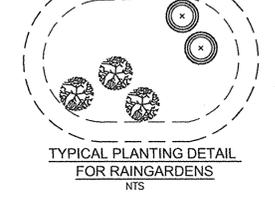


Howard County, Maryland  
 Department of Public Works  
 Noise Wall Notes  
 Private  
 Detail  
 R-9.06

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
 CHIEF, DIVISION OF LAND DEVELOPMENT  
 DATE: 9-2-15  
 DATE: 9-2-15

NOISE / PRIVACY WALL - 6 FEET TALL

PROJECT: CYPRESS SPRINGS - PHASE 2 - LOTS 48-49 - SITE DATA											
LOT	IMPROVEMENTS	GRAND	TOTAL	PERCENT	RY	END	END	PERCENT	RY	END	END
48	38415	13575	16990	0.20	0.23	327	850	392	0.47	ISDV Required @ 1.2"	392
DRIVE	1475	0	1475	1.00	0.95	117	140	0.94	PROVIDED	REMAINING	
HSE ROOF	470	0	470	1.00	0.95	37	45	0.91	117 CF	28 CF	
HSE ROOF	470	0	470	1.00	0.95	37	45	0.91	37 CF	7 CF	
HSE ROOF	470	0	470	1.00	0.95	37	45	0.91	22 CF	22 CF	
HSE ROOF	470	0	470	1.00	0.95	37	45	0.91	22 CF	22 CF	
200	cfr x 0.75 =	150	SF RAINGARDEN REAR YARD	PROVIDES REMAINING VOLUME @ 1FT Ponding					200 CF		
49	38115	15355	19170	0.20	0.23	366	952	439	0.53	ISDV Required @ 1.2"	439
DRIVE	1875	0	1875	1.00	0.95	142	170	0.95	PROVIDED	REMAINING	
HSE ROOF	470	0	470	1.00	0.95	37	45	0.91	148 CF	30 CF	
HSE ROOF	470	0	470	1.00	0.95	37	45	0.91	37 CF	7 CF	
HSE ROOF	470	0	470	1.00	0.95	37	45	0.91	7 CF	37 CF	
HSE ROOF	540	0	540	1.00	0.95	75	80	0.93	59 CF		
190	cfr x 0.75 =	143	SF RAINGARDEN REAR YARD	PROVIDES REMAINING VOLUME @ 1FT Ponding					190 CF		
7330	TOTAL AREA	30160 SF							442	CF TOTAL ISDV PROVIDED	
		0.82 AC							693	1802	832
									841	CF TOTAL SITE ISDV PROVIDED	



TYP. 100 SF X 75% X 0.229 STEMS PER SQUARE FOOT = 2 PLANTS  
 FILTER AREA SHALL BE 50% COVERED BY PLANTINGS AT FULL GROWTH

ONLOT RAINGARDEN PLANTING SCHEDULE			
QTY	BOTANICAL NAME/COMMON NAME	SIZE	REMARKS
2	ILEX GLABRA	3 GALLON	CONT
4	SPIRUEA	3 GALLON	CONT

OPERATION AND MAINTENANCE SCHEDULE FOR (M-7) RAIN GARDEN AREAS  
 1. ANNUAL MAINTENANCE OF PLANT MATERIAL, MULCH LAYER AND SOIL LAYER IS REQUIRED. MAINTENANCE OF PLANT MATERIAL IS LIMITED TO CORRECTING AREAS OF EROSION OR WASH OUT. ANY MULCH REPLACEMENT SHALL BE DONE IN THE SPRING. PLANT MATERIAL SHALL BE REPLACED BY THE LANDSCAPE CONTRACTOR TO PREVENT INFESTATION AND MAINTENANCE WILL ADDRESS DEAD MATERIAL.  
 2. SCHEDULE OF PLANT INSPECTION WILL BE TWICE A YEAR IN SPRING AND FALL. THIS INSPECTION WILL INCLUDE REMOVAL OF DEAD AND DISEASED VEGETATION CONSIDERED BEYOND TREATMENT, TREATMENT OF ALL DEFICIENT STAKES AND WIRES.  
 3. MULCH SHALL BE INSPECTED EACH SPRING. REMOVE PREVIOUS MULCH LAYER BEFORE APPLYING NEW LAYER ONCE EVERY 2 TO 3 YEARS.  
 4. SOIL EROSION TO BE ADDRESSED ON AN AS NEEDED WITH A MINIMUM OF ONCE PER MONTH AND AFTER HEAVY STORM EVENTS.  
 5. FILTER MATERIAL MUST BE REPLACED WHEN WATER REMAINS ON THE SURFACE OF THE FILTER BED FOR MORE THAN 24 HOURS FOLLOWING A 1" OR 2" YEAR STORM EVENT OR MORE THAN 48 HOURS FOLLOWING A 10" YEAR STORM EVENT."

HOWARD COUNTY, MARYLAND  
 DEPARTMENT OF PUBLIC WORKS  
 RAIN GARDEN  
 PRIVATE  
 SCHEDULE FOR (M-7) RAIN GARDEN AREAS  
 Detail  
 R-9.07

FACILITY #	A	B	C	D	SURFACE AREA	APPROX. DIMENSIONS
LOT 48	176.00	175.00	172.75	171.42	150 SF	SEE PLAN
LOT 49	176.00	175.00	172.75	171.42	143 SF	SEE PLAN

FACILITY #	SURFACE AREA	REQUIRED PLANTINGS	PLANTINGS
LOT 48	150 SF	3	2 GLACIER OR WHITE ROSEBUD HYBRID AZALEA 1 MOUNTAIN LAUREL
LOT 49	143 SF	3	2 GLACIER OR WHITE ROSEBUD HYBRID AZALEA 1 MOUNTAIN LAUREL

NO.	REVISION	DATE

SUPPLEMENTAL INFORMATION PLAN  
 STORMWATER MANAGEMENT NOTES & DETAILS  
 CYPRESS SPRINGS - PHASE 3  
 LOTS 48, 49 AND OPEN SPACE LOT 50  
 1ST ELECTION DISTRICT  
 2ND ELECTION DISTRICT  
 3RD ELECTION DISTRICT  
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 100TH ELECTION DISTRICT

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

DESIGN BY: TJW/EDS.  
 DRAWN BY: TJW  
 CHECKED BY: RHV  
 DATE: JULY 2015  
 SCALE: AS SHOWN  
 W.O. NO.: 04-30

PROFESSIONAL CERTIFICATE  
 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. 16193  
 EXPIRATION DATE: 09-27-2016

4 SHEET OF 5

