



# Building Permit Application

Howard County Maryland  
Department of Inspections, Licenses and Permits  
3430 Court House Drive  
Permits: 410-313-2455  
www.howardcountymd.gov

Date Received: 9/26/14

Permit No.: B14003522

(FORMERLY PRESTWICK DR)

Building Address: 6490 HEATHER GLEN WAY  
 City: CLARKSVILLE State: MD Zip Code: 21029  
 Suite/Apt. # \_\_\_\_\_ SDP/WP/BA #: \_\_\_\_\_  
 Census Tract: \_\_\_\_\_ Subdivision: WILLOW POND  
 Section: \_\_\_\_\_ Area: \_\_\_\_\_ Lot: 5  
 Tax Map: 34 Parcel: 444 Grid: \_\_\_\_\_  
 Zoning: \_\_\_\_\_ Map Coordinates: \_\_\_\_\_ Lot Size: \_\_\_\_\_

Existing Use: VACANT LOT  
 Proposed Use: NEW SFD  
 Estimated Construction Cost: \$ 800,000  
 Description of Work: SBL, 4 CARGAR, 1 GAS FP, 4 FB, 2 HB, 2 KITCHI,

Occupant or Tenant: HASAN ASKARI  
 Was tenant space previously occupied?  Yes  No  
 Contact Name: \_\_\_\_\_  
 Address: 6490 HEATHER GLEN WAY  
 City: CLARKSVILLE State: MD Zip Code: 21029  
 Phone: \_\_\_\_\_ Fax: \_\_\_\_\_  
 Email: \_\_\_\_\_

Property Owner's Name: GREENFIELD HOMES  
 Address: 1818 LIBERTY RD  
 City: FREDERICK State: MD Zip Code: 21784  
 Phone: 410-365-3702 Fax: 410-549-4954  
 Email: RAMINOR@COMCAST.NET

Applicant's Name & Mailing Address, (If other than stated herein)  
 Applicant's Name: SEE AS ABOVE  
 Address: \_\_\_\_\_  
 City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_  
 Phone: \_\_\_\_\_ Fax: \_\_\_\_\_  
 Email: \_\_\_\_\_

Contractor Company: GREENFIELD HOMES  
 Contact Person: RICK MINOR  
 Address: 1818 LIBERTY RD  
 City: FREDERICK State: MD Zip Code: 21784  
 License No.: 361  
 Phone: 410-365-3702 Fax: \_\_\_\_\_  
 Email: RAMINOR@COMCAST.NET

Engineer/Architect Company: JOHNSCHNEIDER  
 Responsible Design Prof.: MARK BONDY  
 Address: 100 N POWELL RD  
 City: CRANFORD State: MD Zip Code: 21228  
 Phone: 410-734-2262 Fax: \_\_\_\_\_  
 Email: MJBMODEL@VP1201.NET

Commercial Building Characteristics	Residential Building Characteristics
Height: _____	<input checked="" type="checkbox"/> SF Dwelling <input type="checkbox"/> SF Townhouse
No. of stories: _____	Depth _____ Width _____
Gross area, sq. ft./floor: _____	1 <sup>st</sup> floor: <u>79'6" 137'2"</u>
Area of construction (sq. ft.): _____	2 <sup>nd</sup> floor: <u>45'9" 83'5"</u>
Use group: _____	Basement: <u>45'9" 107'2"</u>
<b>Construction type:</b>	<input type="checkbox"/> Finished Basement
<input type="checkbox"/> Reinforced Concrete	<input checked="" type="checkbox"/> Unfinished Basement
<input type="checkbox"/> Structural Steel	<input type="checkbox"/> Crawl Space
<input type="checkbox"/> Masonry	<input type="checkbox"/> Slab on Grade
<input type="checkbox"/> Wood Frame	No. of Bedrooms: <u>5</u>
<input type="checkbox"/> State Certified Modular	<b>Multi-family Dwelling</b>
<input checked="" type="checkbox"/> Roadside Tree Project Permit	No. of efficiency units: _____
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	No. of 1 BR units: _____
Roadside Tree Project Permit # _____	No. of 2 BR units: _____
	No. of 3 BR units: _____
	Other Structure: _____
	Dimensions: _____
	Footings: _____
	Roof: _____
	<input type="checkbox"/> State Certified Modular
	<input type="checkbox"/> Manufactured Home

Utilities	
<b>Water Supply</b>	
<input type="checkbox"/> Public	
<input type="checkbox"/> Private	
<b>Sewage Disposal</b>	
<input type="checkbox"/> Public	
<input checked="" type="checkbox"/> Private	
Electric: <input type="checkbox"/> Yes <input type="checkbox"/> No	
Gas: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
<b>Heating System</b>	
<input type="checkbox"/> Electric <input type="checkbox"/> Oil	
<input checked="" type="checkbox"/> Natural Gas <input type="checkbox"/> Propane Gas	
<input type="checkbox"/> Other: _____	
<b>Sprinkler System:</b>	
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Grading Permit Number: <u>614000307</u>	
Building Shell Permit Number: _____	

THE UNDERSIGNED HEREBY CERTIFIES AND AGREES AS FOLLOWS: (1) THAT HE/SHE IS AUTHORIZED TO MAKE THIS APPLICATION; (2) THAT THE INFORMATION IS CORRECT; (3) THAT HE/SHE WILL COMPLY WITH ALL REGULATIONS OF HOWARD COUNTY WHICH ARE APPLICABLE THERETO; (4) THAT HE/SHE WILL PERFORM NO WORK ON THE ABOVE REFERENCED PROPERTY NOT SPECIFICALLY DESCRIBED IN THIS APPLICATION; (5) THAT HE/SHE GRANTS COUNTY OFFICIALS THE RIGHT TO ENTER ONTO THIS PROPERTY FOR THE PURPOSE OF INSPECTING THE WORK, PERMITTED AND POSTING NOTICES.

Applicant's Signature: RAMINOR@COMCAST.NET Print Name: RICK MINOR  
 Email Address: RAMINOR@COMCAST.NET Date: 9-25-14  
 Title/Company: PROJ. MGR GREENFIELD HOMES, INC.

Checks Payable to: DIRECTOR OF FINANCE OF HOWARD COUNTY  
 \*\*PLEASE WRITE NEATLY & LEGIBLY\*\*  
 -FOR OFFICE USE ONLY-

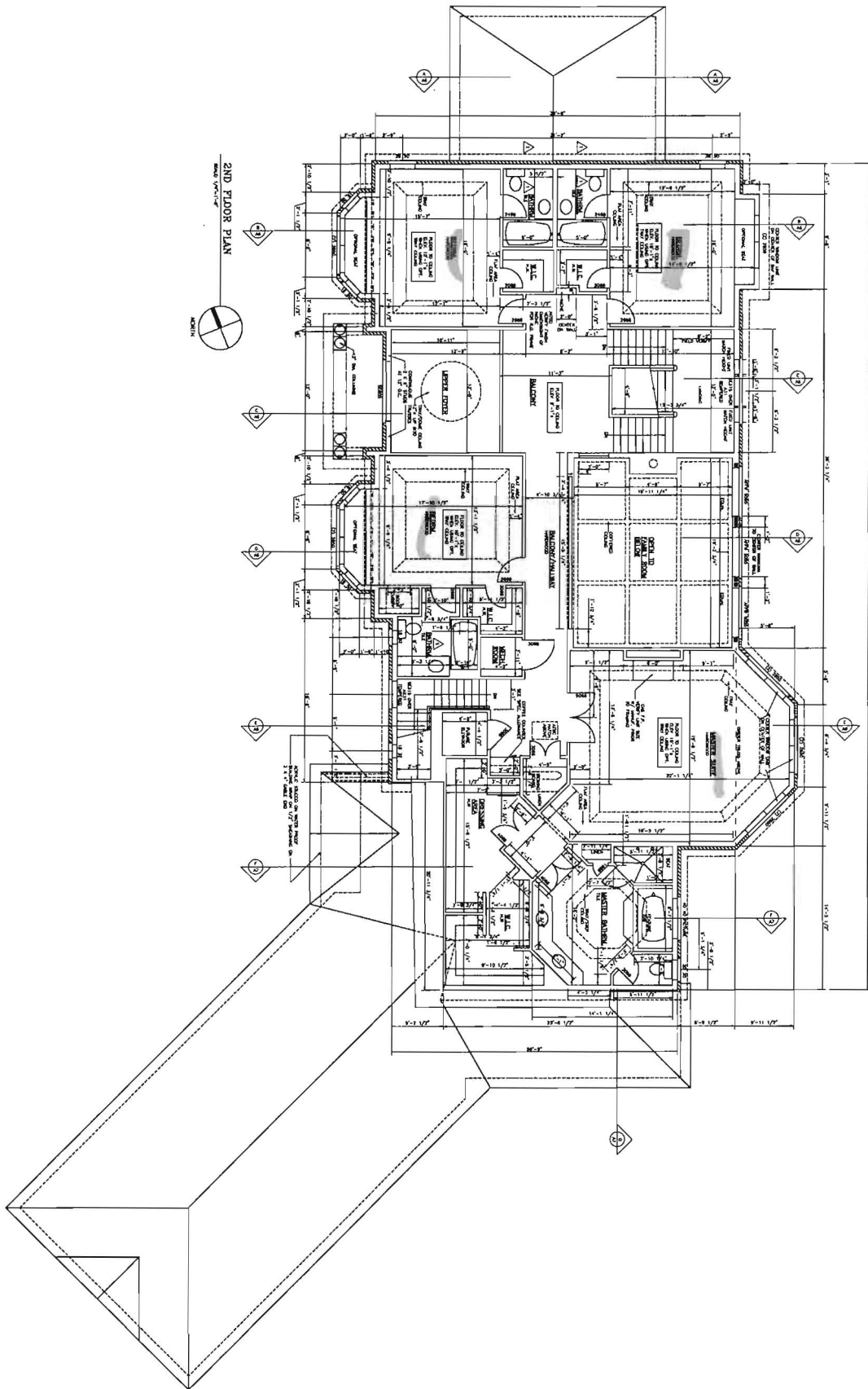
AGENCY	DATE	SIGNATURE OF APPROVAL
<input checked="" type="checkbox"/> State Highways		
<input checked="" type="checkbox"/> Building Officials		
<input checked="" type="checkbox"/> PSZA (Zoning)	<u>10/30/14</u>	<u>H. Osgood</u>
<input checked="" type="checkbox"/> PSZA (Engineering)		
Health		

Is Sediment Control approval required for issuance?  Yes  No  
 CONTINGENCY CONSTRUCTION START.

DPZ SETBACK INFORMATION
Front: _____
Rear: <u>60</u>
Side: <u>30</u>
Side St.: _____
All minimum setbacks met? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Is Entrance Permit Required? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Historic District? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Lot Coverage for New Town Zone: _____
SDP/Red-line approval date: _____

Filing Fee	\$ <u>100</u>
Permit Fee	\$
Tech Fee	\$
Excise Tax	\$
PSFS	\$
Guaranty Fund	\$ <u>50.00</u>
Add'l per Fee	\$
Total Fees	\$
Sub-Total Paid	\$
Balance Due	\$ <u>8310</u>
Check	# <u>8310</u>

Distribution of Copies: White: Building Officials Green: PSZA,Zoning Yellow: PSZA,Engineering Pink: Health Gold: SHA



B14003522  
 5 bedroom house  
 (Basement unfinished)

A3

2ND FLOOR PLAN  
 SCALE: 1/4" = 1'-0"

GREENFIELD HOMES  
 THE ASKARI RESIDENCE

PERMIT DRAWINGS:  
 DATE: 09-12-2014

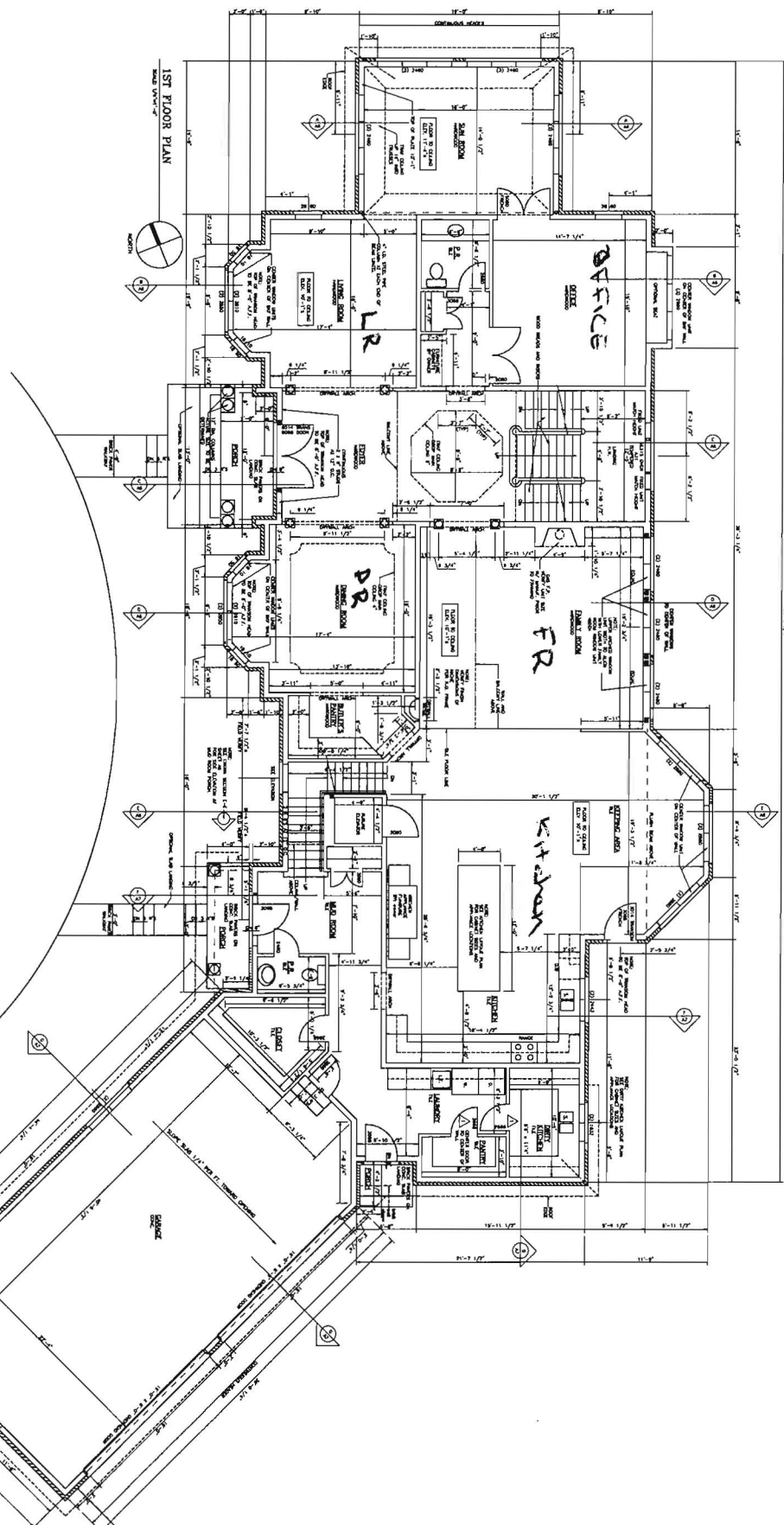
STRUCTURAL ENGINEER:  
 JOHN SCHNEIDER  
 100 N ROLLING ROAD  
 CATONSVILLE, MD 21228  
 phone: 410 744 1945

REVISION	DATE	DESCRIPTION
1	09-03-2014	ISSUE FOR PERMIT

DRAWN BY:  
 MARK J. BANDY, INC.  
 DATE: 7-01-2014

**GENERAL NOTES:**

1. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE NOTED.
2. FINISH FLOOR IS 1" ABOVE FINISH GRADE UNLESS OTHERWISE NOTED.
3. FINISH GRADE IS TO BE DETERMINED BY THE SURVEYOR.
4. ALL WALLS TO BE CONCRETE BLOCK WITH INTERIOR FINISH UNLESS OTHERWISE NOTED.
5. ALL CEILING TO BE 8'0" UNLESS OTHERWISE NOTED.
6. ALL FLOORING TO BE AS NOTED.
7. ALL DOORS TO BE 6'0" HIGH WITH 1/2" RISE AT THRESHOLD UNLESS OTHERWISE NOTED.
8. ALL WINDOWS TO BE 4'0" HIGH WITH 1/2" RISE AT THRESHOLD UNLESS OTHERWISE NOTED.
9. ALL EXTERIOR WALLS TO BE CONCRETE BLOCK WITH EXTERIOR FINISH UNLESS OTHERWISE NOTED.
10. ALL EXTERIOR ROOFING TO BE AS NOTED.
11. ALL EXTERIOR FINISHES TO BE AS NOTED.
12. ALL EXTERIOR LIGHTING TO BE AS NOTED.
13. ALL EXTERIOR PAINT TO BE AS NOTED.
14. ALL EXTERIOR LANDSCAPING TO BE AS NOTED.
15. ALL EXTERIOR FENCES TO BE AS NOTED.
16. ALL EXTERIOR DRIVEWAYS TO BE AS NOTED.
17. ALL EXTERIOR PATIOS TO BE AS NOTED.
18. ALL EXTERIOR DECKING TO BE AS NOTED.
19. ALL EXTERIOR STAIRS TO BE AS NOTED.
20. ALL EXTERIOR RAMPING TO BE AS NOTED.
21. ALL EXTERIOR ELEVATIONS TO BE AS NOTED.
22. ALL EXTERIOR SECTIONS TO BE AS NOTED.
23. ALL EXTERIOR DETAILS TO BE AS NOTED.
24. ALL EXTERIOR MATERIALS TO BE AS NOTED.
25. ALL EXTERIOR METHODS TO BE AS NOTED.
26. ALL EXTERIOR SCHEDULES TO BE AS NOTED.
27. ALL EXTERIOR SPECIFICATIONS TO BE AS NOTED.
28. ALL EXTERIOR STANDARDS TO BE AS NOTED.
29. ALL EXTERIOR CODES TO BE AS NOTED.
30. ALL EXTERIOR REGULATIONS TO BE AS NOTED.
31. ALL EXTERIOR ORDINANCES TO BE AS NOTED.
32. ALL EXTERIOR LAWS TO BE AS NOTED.
33. ALL EXTERIOR DECREES TO BE AS NOTED.
34. ALL EXTERIOR STATUTES TO BE AS NOTED.
35. ALL EXTERIOR ACTS TO BE AS NOTED.
36. ALL EXTERIOR ORDINANCES TO BE AS NOTED.
37. ALL EXTERIOR LAWS TO BE AS NOTED.
38. ALL EXTERIOR DECREES TO BE AS NOTED.
39. ALL EXTERIOR STATUTES TO BE AS NOTED.
40. ALL EXTERIOR ACTS TO BE AS NOTED.



PERMIT SET:  
09-13-2014

A2

1ST FLOOR PLAN  
SCALE: 1/4" = 1'-0"

**GREENFIELD HOMES**  
THE ASKARI RESIDENCE

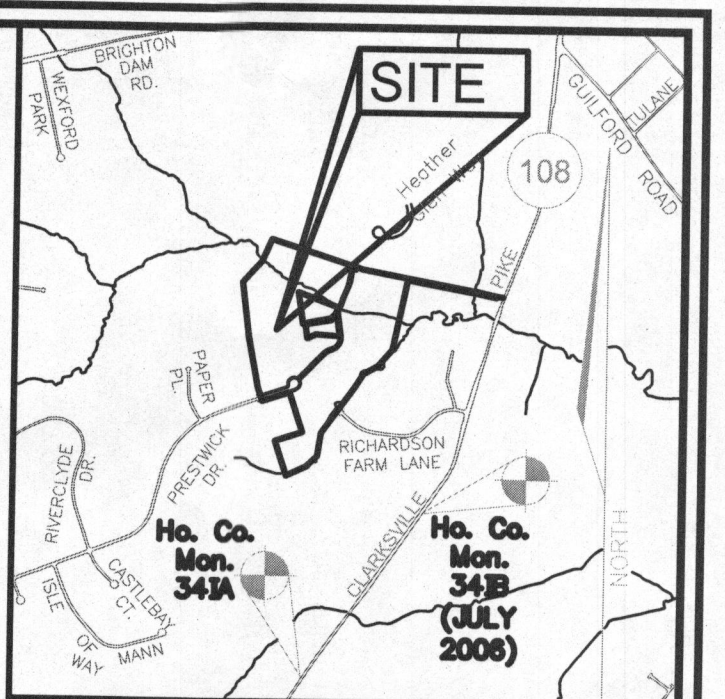
PERMIT DRAWINGS:  
DATE: 09-12-2014

STRUCTURAL ENGINEER:  
JOHN SCHNEIDER  
100 N ROLLING ROAD  
CATONSVILLE, MD 21228  
PHONE: 410 744 1845

DATE	DESCRIPTION
09-12-2014	PERMIT & ASH DOORS

DRAWN BY:  
MARK J. BANDY, INC.  
DATE: 7-01-2014



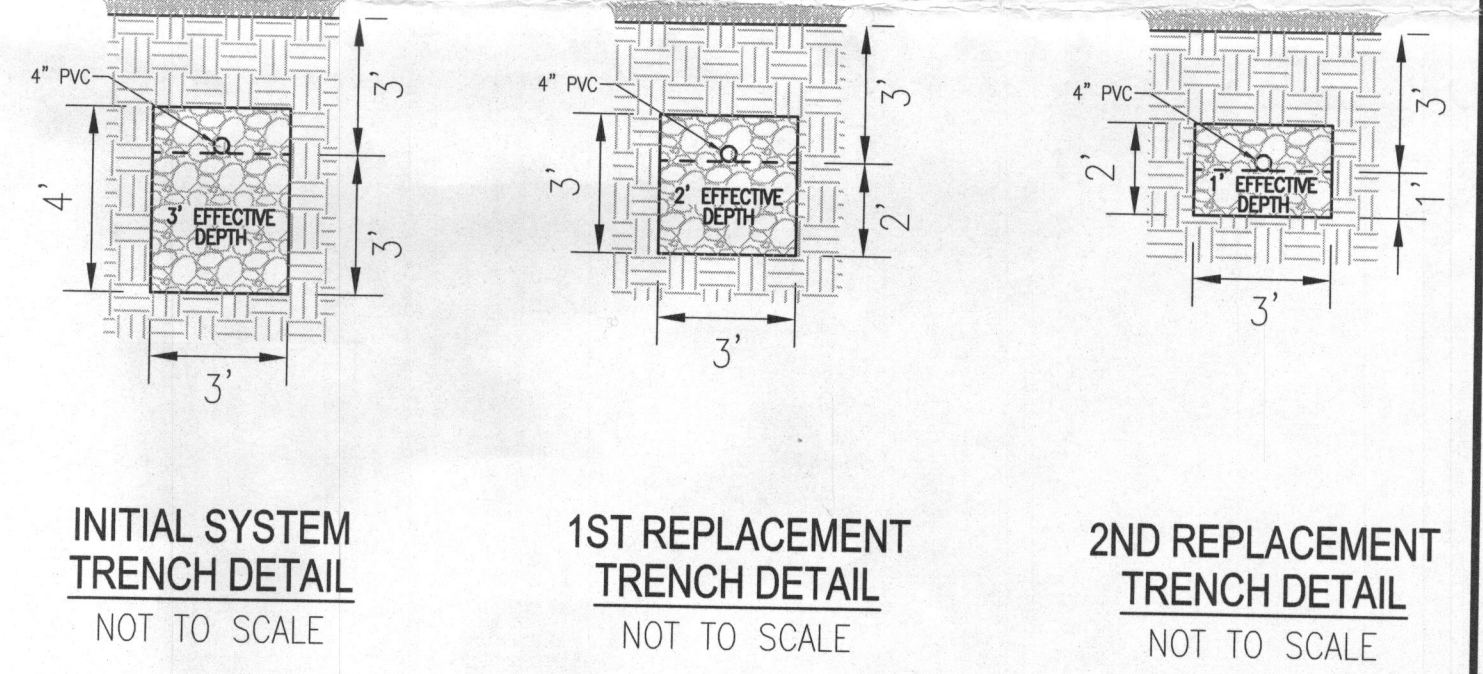
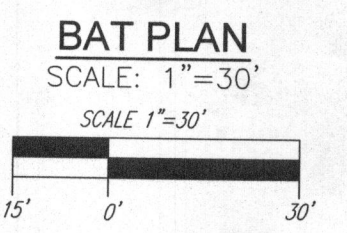


**LEGEND:**

---	PROPERTY LINE
---	RIGHT-OF-WAY LINE
---	ADJACENT PROPERTY LINE
○	EXISTING SANITARY MANHOLE
---	EXISTING SANITARY LINE
---	EXISTING CLEANOUT
---	EXISTING FIRE HYDRANT
---	EXISTING WATER LINE
---	EXISTING 10' CONTOUR
---	EXISTING 2' CONTOUR
---	SOILS
---	EXISTING TREELINE
---	PROPOSED TREELINE
○	EXISTING WELL
○	PROPOSED 10' CONTOUR
○	PROPOSED 2' CONTOUR
○	PROPOSED SPOT ELEVATION
○	FAILED PERC. TEST
○	PASSED PERC. TEST
○	PROP. REPLACEMENT WELL
○	EXISTING WELL FIELD LOCATED
---	APPROVED SEPTIC AREA

Site plan approved  
for B14003522  
H.O.

THIS AREA DESIGNATES A PRIVATE SEWAGE EASEMENT OF AT LEAST 10,000 SQ. FT. AS REQUIRED BY THE MARYLAND DEPARTMENT OF ENVIRONMENT FOR INDIVIDUAL SEWAGE DISPOSAL. IMPROVEMENTS OF ANY NATURE IN THIS EASEMENT ARE RESTRICTED. THIS EASEMENT SHALL BECOME NULL AND VOID UPON CONNECTION TO A PUBLIC SEWAGE SYSTEM. THE COUNTY HEALTH OFFICER SHALL HAVE AUTHORITY TO GRANT ADJUSTMENTS TO THE PRIVATE SEWAGE EASEMENT. RECORDED OF A REVISED SEWAGE EASEMENT SHALL NOT BE NECESSARY.



**TRENCH INFO.**

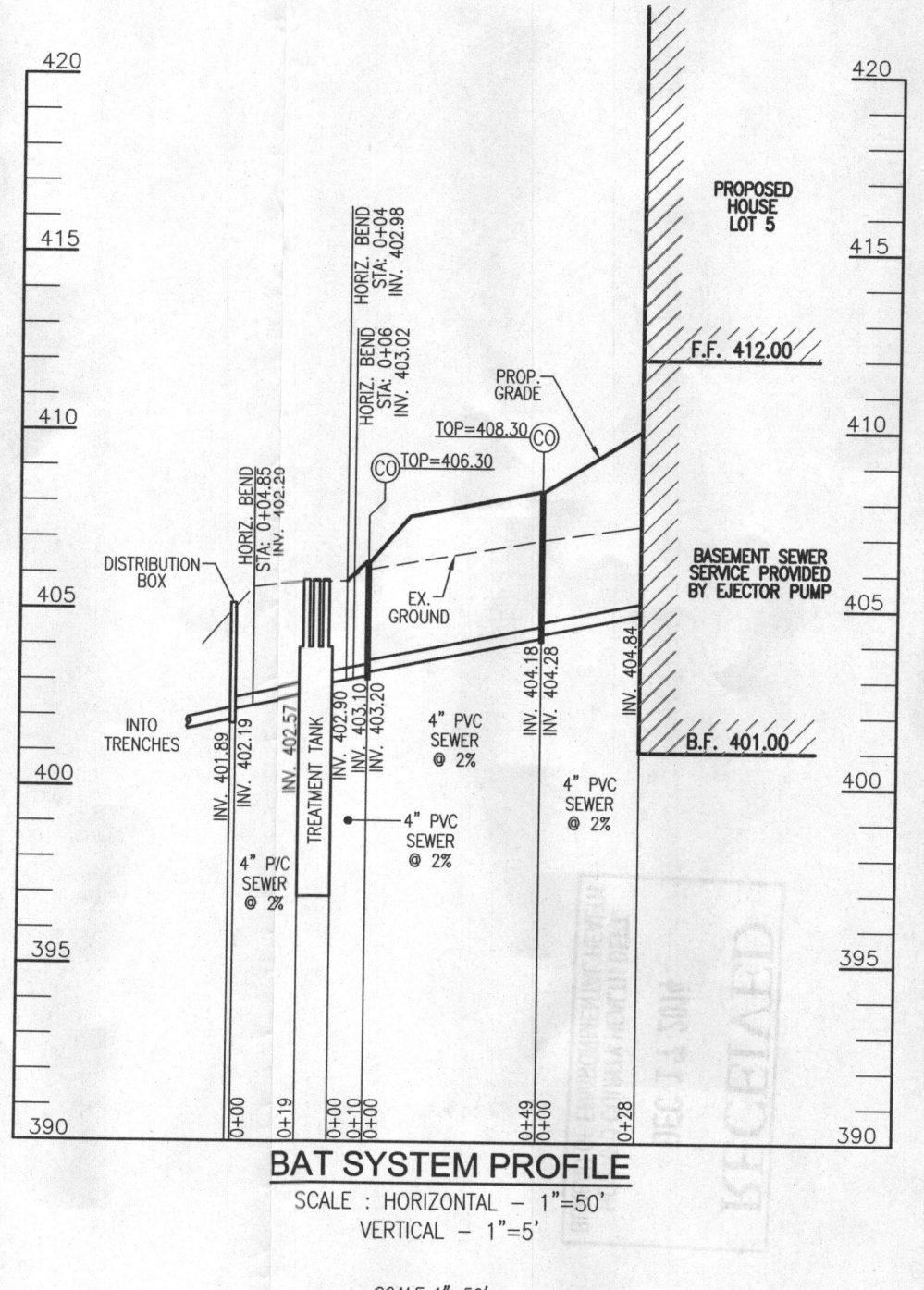
TRENCH	TRENCH LENGTH	TRENCH WIDTH	EXISTING GROUND
1	52'	401.53	398.53
2	52'	400.16	397.16

**SYSTEM CALCULATIONS:**

**INITIAL SYSTEM:**  
5 BEDROOMS AT 750gpd / 1.2 ABSORPTION RATE = 625 SQ. FT.  
625 SQ. FT. / 3 (TRENCH WIDTH) x 50 (SIDEWALL REDUCTION) = 104 LINEAR FEET  
2 TRENCHES (13' ON CENTER) OF 52 FEET IN LENGTH ARE PROVIDED WITH THE INITIAL SYSTEM.

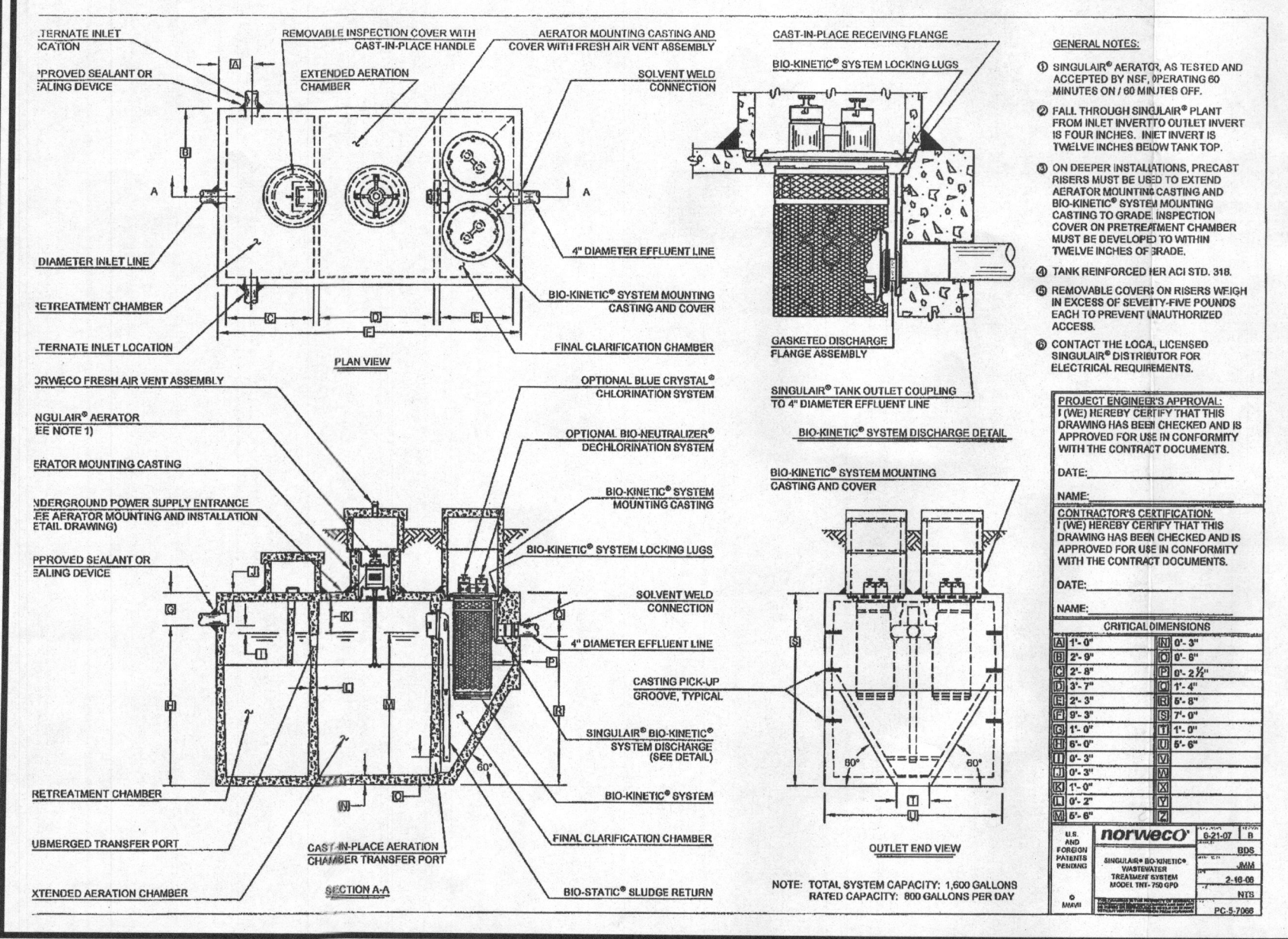
**1ST REPLACEMENT SYSTEM:**  
5 BEDROOMS AT 750gpd / 1.2 ABSORPTION RATE = 625 SQ. FT.  
625 SQ. FT. / 3 (TRENCH WIDTH) x 63 (SIDEWALL REDUCTION) = 131 LINEAR FEET  
2 TRENCHES (13' ON CENTER) OF 66 FEET IN LENGTH WOULD BE PROVIDED WITH THE 1ST REPLACEMENT SYSTEM.

**2ND REPLACEMENT SYSTEM:**  
5 BEDROOMS AT 750gpd / 1.2 ABSORPTION RATE = 625 SQ. FT.  
625 SQ. FT. / 3 (TRENCH WIDTH) x 1.0 (NO SIDEWALL REDUCTION) = 208 LINEAR FEET  
4 TRENCHES (9' ON CENTER) OF 52 FEET IN LENGTH WOULD BE PROVIDED WITH THE 2ND REPLACEMENT SYSTEM.



**GENERAL NOTES:**

- ANY CHANGE TO THE LOCATIONS OR DEPTHS TO ANY COMPONENTS MUST BE APPROVED BY THE ENGINEER AND THE HOWARD COUNTY HEALTH DEPARTMENT PRIOR TO INSTALLATION. A REVISED SITE PLAN MAY BE REQUIRED.
- THE MAXIMUM DEPTH OF THE BAT PER THE MANUFACTURER'S SPECIFICATION IS 3 FEET.
- NO BLOWER IS REQUIRED. THE NORWECO WASTEWATER TREATMENT SYSTEM HAS AN AERATOR MOUNTED IN THE TANK.
- THE BAT SYSTEM SHALL BE MAINTAINED AND OPERATED FOR THE LIFE OF THE SYSTEM.
- THE BAT SHALL BE OPERATED BY AND MAINTAINED BY A CERTIFIED SERVICE PROVIDER.
- WITHIN ONE MONTH OF INSTALLATION, A PERSON INSTALLING THE BAT SYSTEM SHALL REPORT TO THE MARYLAND DEPARTMENT OF THE ENVIRONMENT (MDE) IN A MANNER ACCEPTABLE TO MDE, THE ADDRESS AND DATE OF COMPLETION OF THE BAT INSTALLATION AND THE TYPE OF BAT INSTALLED.
- ELECTRICAL WORK FOR THE BAT INSTALLATION MUST BE PERFORMED BY A LICENSED ELECTRICIAN.
- AN AGREEMENT AND EASEMENT MUST BE COMPLETED AND SIGNED BY ALL APPLICABLE PARTIES, AND RECORDED IN LAND RECORDS OF HOWARD COUNTY.
- THE HEALTH DEPARTMENT REQUIRES DOCUMENTATION FOR THE START-UP CERTIFICATION FROM THE MANUFACTURER PRIOR TO FINAL APPROVAL OF THE INSTALLATION.



**OWNER**  
HASAN A. ASKARI  
6490 HEATHER GLEN WAY  
CLARKSVILLE, MD 21029  
(410) 781-6782

**DEVELOPER**  
GREENFIELD HOMES, INC.  
6656 LUSTER DRIVE  
HIGHLAND, MARYLAND 20777  
(410) 781-6782

**SITE PLAN FOR BAT INSTALLATION**  
**WILLOW POND - LOT 5**  
6490 HEATHER GLEN WAY  
(FORMERLY PRESTWICK DRIVE)  
CLARKSVILLE, MD 21029

**BUILDING PERMIT**  
#

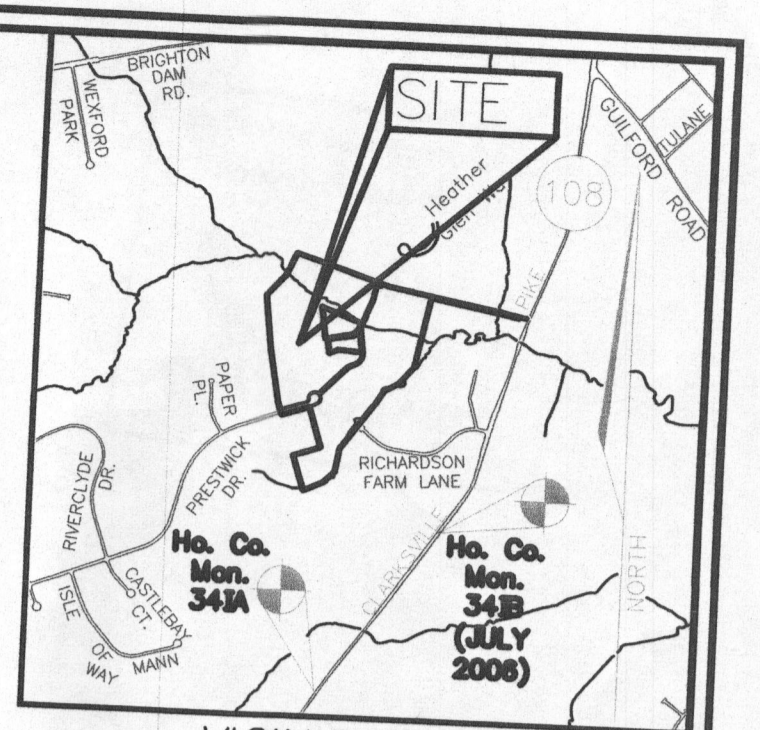
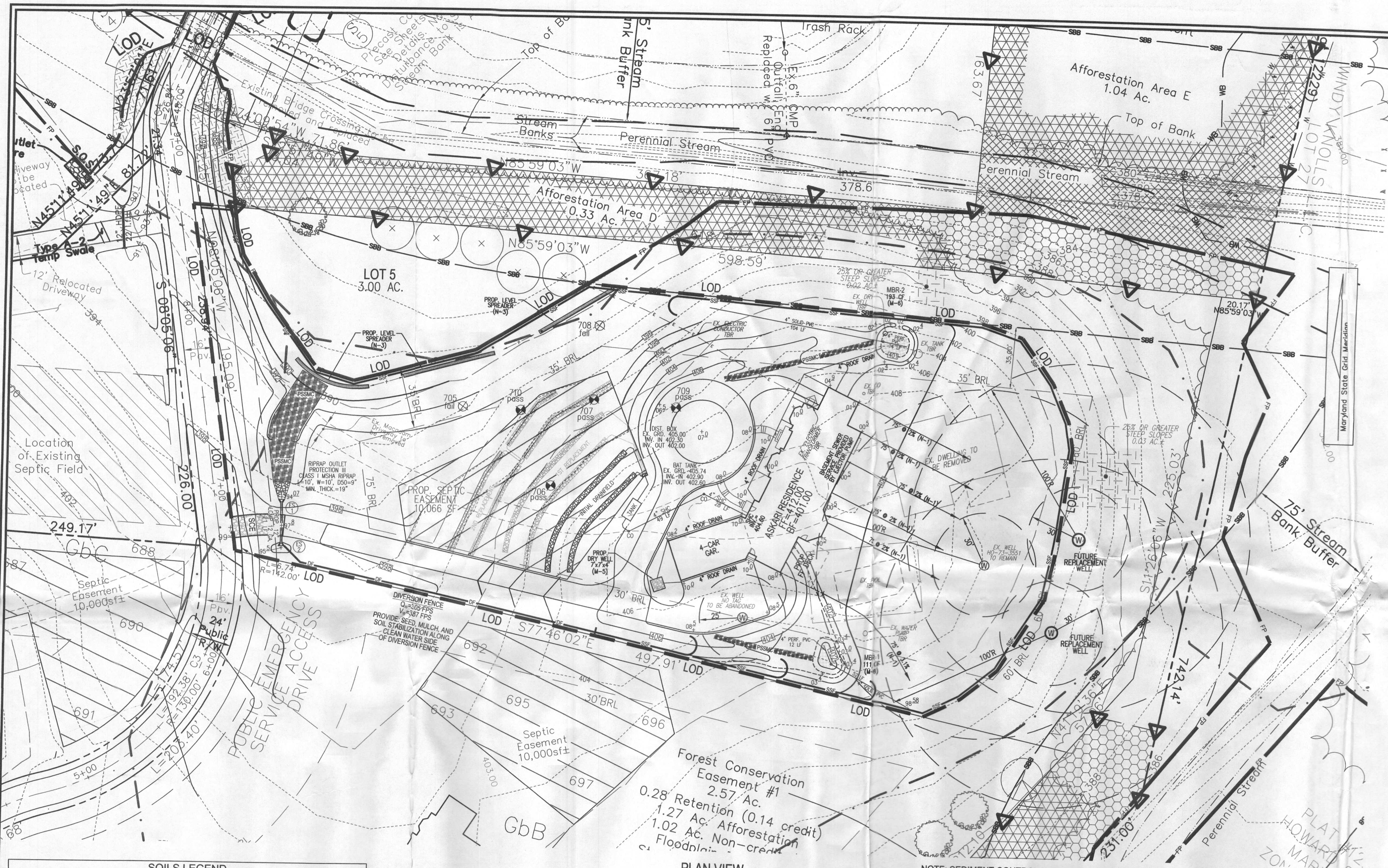
5TH ELECTION DISTRICT  
DPZ REF'S: F-10-106, F-08-13, F-06-170, F-08-112, F-07-174, F-78-115, SP-09-03, SP-07-011, WP-07-103, WP-09-02, PLAT 7288

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

**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. 16183 EXPIRATION DATE: 09-27-2016

DESIGN BY: RHV  
DRAWN BY: JMR  
CHECKED BY: RHV  
DATE: DECEMBER 2014  
SCALE: AS SHOWN  
W.O. NO.: 14-33

1 SHEET OF 1



- LEGEND:**
- PROPERTY LINE
  - - - RIGHT-OF-WAY LINE
  - - - ADJACENT PROPERTY LINE
  - EXISTING SANITARY MANHOLE
  - EXISTING SANITARY LINE
  - EXISTING CLEANOUT
  - EXISTING FIRE HYDRANT
  - EXISTING WATER LINE
  - EXISTING 10' CONTOUR
  - EXISTING 2' CONTOUR
  - SOILS
  - EXISTING TREELINE
  - PROPOSED TREELINE
  - EXISTING WELL
  - PROPOSED 10' CONTOUR
  - PROPOSED 2' CONTOUR
  - PROPOSED SPOT ELEVATION
  - PROPOSED STABILIZED CONSTRUCTION ENTRANCE
  - SSF PROPOSED SUPER SILT FENCE
  - DF PROPOSED DIVERSION FENCE
  - LOD PROPOSED LIMIT OF DISTURBANCE
  - PROPOSED EROSION CONTROL MATTING
  - PROPOSED SEPTIC EASEMENT

**SOILS LEGEND**

SYMBOL	NAME / DESCRIPTION	GROUP	K-FACTOR	ERODIBLE
Gb	ODOROUS AND HARBOR SILT LOAMS, 0 TO 3 PERCENT SLOPES	C	.37	NO
GbB	GLADSTONE LOAM, 3 TO 8 PERCENT SLOPES	B	.20	NO
GbC	GLADSTONE LOAM, 8 TO 15 PERCENT SLOPES	B	.20	NO
GbD	CLEVELLE-BAILE SILT LOAMS, 0 TO 8 PERCENT SLOPES	C	.37	YES

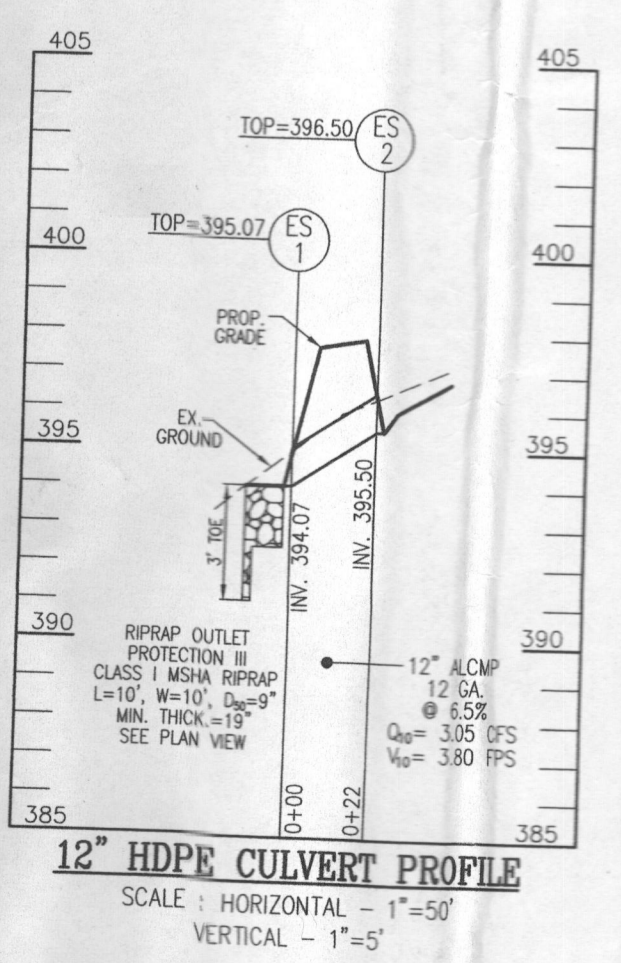
SOILS INFORMATION FROM USDA WEB SOIL SURVEY WEBSITE  
HOWARD COUNTY SOILS MAP NUMBER 16 - CLARKSVILLE NW

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

Forest Conservation Easement #1  
2.57 Ac.  
0.28 Retention (0.14 credit)  
1.27 Ac. Afforestation  
1.02 Ac. Non-credit  
Floodplain

PLAN VIEW  
SCALE: 1"=30'

NOTE: SEDIMENT CONTROL IS TO BE PROVIDED ALONG ACCESS DRIVE AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR.



NOTE: STOCKPILING WILL BE PERMITTED ON LOT 5 ONLY.

**DEVELOPER'S CERTIFICATE**

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

SIGNATURE OF DEVELOPER: *John M. ...*

**ENGINEER'S CERTIFICATE**

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

SIGNATURE OF ENGINEER: *John K. Blanton*

DATE: 9/23/14

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

HOWARD SCD

NO.	REVISION	DATE

**GRADING PLAN**  
**WILLOW POND - LOT 5**  
6490 HEATHER GLEN WAY  
(FORMERLY PRESTWICK DRIVE)  
CLARKSVILLE, MD 21029

BUILDING PERMIT #

5TH ELECTION DISTRICT  
TAX MAP: 34 PARCEL: 444  
DPZ REF: F-10-106, F-09-113, F-09-170, F-09-112, F-87-174, F-79-115, SP-09-03, SP-07-011, VP-87-103, WP-09-02, PLAT 7288

BLOCK: 17  
ZONED: RR-DEO  
HOWARD COUNTY, MARYLAND

**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: RHV  
DRAWN BY: JMR  
CHECKED BY: RHV  
DATE: SEPTEMBER 2014  
SCALE: AS SHOWN  
W.O. NO.: 14-33

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. 18183, EXPIRATION DATE: 09-27-2018

1 SHEET OF 3



**LEGEND:**

---	PROPERTY LINE
- - -	RIGHT-OF-WAY LINE
- - - -	ADJACENT PROPERTY LINE
○	EXISTING SANITARY MANHOLE
SS	EXISTING SANITARY LINE
○	EXISTING CLEANOUT
○	EXISTING FIRE HYDRANT
W	EXISTING WATER LINE
---	EXISTING 10' CONTOUR
---	EXISTING 2' CONTOUR
S&E	SOILS
---	EXISTING TREETLINE
---	PROPOSED TREETLINE
---	EXISTING WELL
---	PROPOSED 10' CONTOUR
---	PROPOSED 2' CONTOUR
---	PROPOSED SEPTIC EASEMENT
○	PROPOSED MICRO-BIORETENTION FACILITY (M-6)
○	PROPOSED DRY WELL (M-5)
○	AREA OF DRAINAGE TO GO TO DRY WELL (M-5)
○	AREA OF DRAINAGE TO SHEETFLOW TO LEVEL SPREADER (N-3)
○	AREA OF DRAINAGE TO GO TO MICRO-BIO-RETENTION FACILITY (M-6)
○	AREA OF DRAINAGE TO GO TO ROOFTOP DISCONNECT (N-1)
○	ROOFTOP DISCONNECT (N-1)
○	DRAINAGE AREA TO DIVERSION FENCE



**APPENDIX B.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.C.1.

**2. FILTERING MEDIA OR PLANTING SOIL**

The soil shall be a uniform mix, free of stones, stumps, roots or other similar objects larger than two inches. No other materials or substances shall be mixed or dumped within the micro-bioretentation practice that may be harmful to plant growth, or prove a hindrance to planting or maintenance operations. The planting soil shall be free of Bermuda grass, quackgrass, Johnson grass, or other noxious weeds as specified under COMAR 15.08.02.05.

The planting soil shall be tested and shall meet the following criteria:

- SOIL COMPACTION - LOAMY SAND OR SANDY LOAM (USDA SOIL TEXTURE CLASSIFICATION)
- ORGANIC CONTENT - MINIMUM 10% BY DRY WEIGHT (ASTM D 2974). IN GENERAL, THIS CAN BE MET WITH A MIXTURE OF LOAMY SAND (60%-65%) AND COMPOST (5-10% OR SANDY LOAM (SOIL), COARSE SAND (30%), AND COMPOST (40%).
- CLAY CONTENT - MEDIA SHALL HAVE A CLAY CONTENT OF LESS THAN 10%.
- pH RANGE - SHOULD BE BETWEEN 5.5 - 7.0. AMMONIUMS (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 TEXTURE ANALYSIS IS REQUIRED FROM THE SITE STOCKPILED TOPSOIL. IF TOPSOIL IS IMPORTED, THEN A TEXTURE 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 BORETENTION 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 WIDE TRACKS OR WASH TRACKS. 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 BORETENTION FACILITY BY USING A PRIMARY TILLING OPERATION SUCH AS CHISEL PLOW, DISK, OR SUBSOILER. THESE TILLING OPERATIONS ARE TO RESTRUCTURE THE SOIL PROFILE THROUGHOUT THE 12 INCH COMPACTION 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 BORETENTION FACILITY BEFORE BACKFILLING THE ORIGINAL SAND. PUMP ANY POOLED WATER BEFORE PREPARING (ROTILLING) BASE.

WHEN BACKFILLING THE TOPSOIL OVER THE SAND LAYER, FIRST PLACE 3 TO 4 INCHES OF TOPSOIL OVER THE SAND, THEN ROTILL THE SAND/TOPSOIL TO CREATE A GRADATION ZONE BETWEEN THE REMAINDER OF THE TOPSOIL TO FINAL GRADE.

WHEN BACKFILLING THE BORETENTION FACILITY, PLACE SOIL IN LIFTS 12 TO 18". DO NOT USE HEAVY EQUIPMENT WITHIN THE BORETENTION BASIN. HEAVY EQUIPMENT CAN BE USED AROUND THE PERIMETER OF THE BASIN TO SUPPLY SOILS AND SAND. GRADE BORETENTION MATERIALS WITH LIGHT EQUIPMENT SUCH AS A COMPACT LOADER OR A DOZER/TRACTOR WITH WASH TRACKS.

**4. PLANT MATERIAL**

RECOMMENDED PLANT MATERIAL FOR MICRO-BIORETENTION 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" SURROUNDING OR CHIPPED HARDWOOD MULCH IS THE ONLY ACCEPTED MULCH. PINE MULCH AND WOOD CHIPS WILL FLOAT AND MOVE TO THE PERIMETER OF THE BORETENTION AREA DURING A STORM EVENT AND SHOULD BE KEPT AWAY FROM THE BORETENTION FACILITY.

ROOTS OF THE PLANT MATERIAL SHALL BE KEPT MOST DURING TRANSPORT AND ON-SITE STORAGE. THE PLANT ROOT BALL SHALL BE PLANTED 1/3 TO 1/2 THE BALL'S 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 PLANTING PROCESS THROUGHOUT WATER GROUND BED COVER AFTER INSTALLATION. STAKES 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 BORETENTION STRUCTURE IS TO IMPROVE WATER QUALITY. ADDED FERTILIZERS, SUCH AS A MINIMUM INCHES OF SOIL, 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**

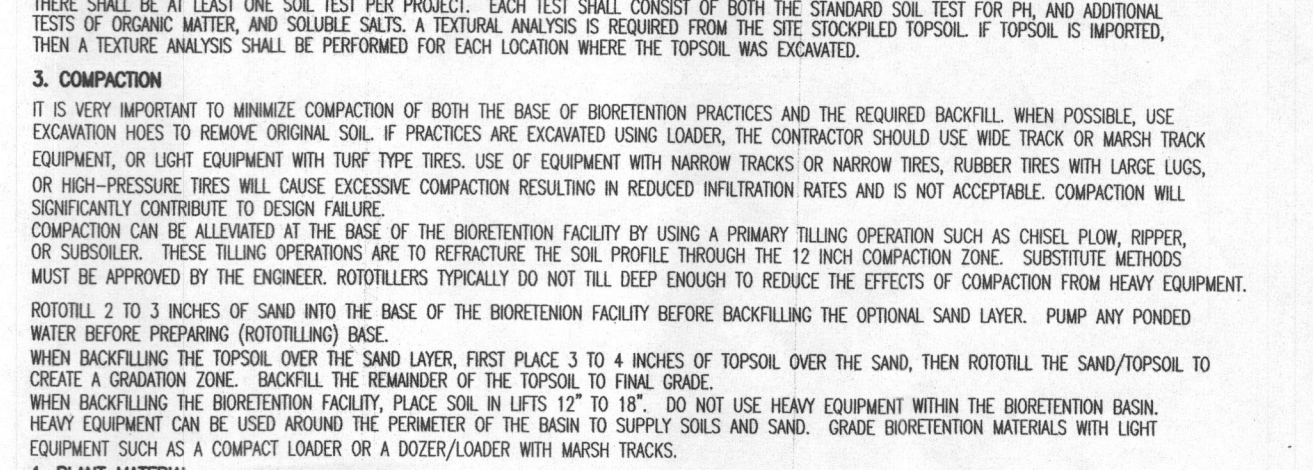
UNDERDRAINS SHOULD MEET THE FOLLOWING CRITERIA:

- PIPE - SHOULD BE 4" TO 6" DIAMETER, SLOTTED OR PERFORATED RIGID PLASTIC PIPE (ASTM F756, TYPE PS 28, OR ASHSTO-M-278) IN A GRAVEL LAYER.
- PERFORATIONS - IF PERFORATED PIPE IS USED, PERFORATIONS SHOULD BE 3/8" DIAMETER LOCATED 6" ON CENTER WITH A MINIMUM OF FOUR HOLES PER FOOT. PIPE SHALL BE UNPERFORATED THROUGH BOTTOM.
- 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 10" DIA. 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 10" DIA. PERFORATED OBSERVATION WELL (1/8" TO 3/8" STONES) SHALL BE LOCATED BETWEEN THE FILTER MEDIA AND UNDERDRAIN TO PREVENT MIGRATION OF FINES IN TO THE UNDERDRAIN. THIS LAYER MAY BE CONSIDERED PART OF THE FILTER BED WHEN BED THICKNESS EXCEEDS 24".

THE MAIN COLLECTOR PIPE FOR UNDERDRAIN SYSTEMS SHALL BE CONSTRUCTED AT A MINIMUM SLOPE OF 0.5%. OBSERVATION WELLS AND/OR CLEAN-OUT PORTS MUST BE PROVIDED (ONE MINIMUM PER EVERY 1,000 SQUARE FEET OF SURFACE AREA).

**7. MISCELLANEOUS**

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



**OPERATION AND MAINTENANCE SCHEDULE FOR LANDSCAPE INFILTRATION (M-3), MICRO-BIORETENTION (M-6), RAIN GARDENS (M-7), BIORETENTION SWALE (M-8), AND ENHANCED FILTERS (M-9)**

1. THE OWNER SHALL MAINTAIN THE PLANT MATERIAL, MULCH LAYER AND SOIL. FILTER FABRIC BETWEEN LAYER OR AT THE BOTTOM OF THE MICROBIORETENTION WILL CAUSE THE MBR TO FAIL AND THEREFORE SHALL NOT BE INSTALLED.

2. THE OWNER SHALL PERFORM A PLANT IN THE SPRING AND IN THE FALL OF EACH YEAR. DURING THE INSPECTION, THE OWNER SHALL REMOVE DEAD AND DISEASED VEGETATION CONSIDERED BEYOND TREATMENT. REPLACE DEAD PLANT MATERIAL WITH ACCEPTABLE REPLACEMENT PLANT MATERIAL. TREAT DISEASED TREES AND SHRUBS, AND REPLACE ALL DEFICIENT STAKES AND WIRES.

3. THE OWNER SHALL INSPECT THE MULCH EACH SPRING. THE MULCH SHALL BE REPLACED EVERY TWO TO THREE YEARS. THE PREVIOUS MULCH LAYER SHALL BE REMOVED BEFORE THE NEW LAYER IS APPLIED.

4. THE OWNER SHALL CORRECT SOIL EROSION ON AN NEEDED BASIS, WITH A MINIMUM OF ONCE PER MONTH AND AFTER EACH HEAVY STORM.

**DETAIL - MICROBIORETENTION**

NOT TO SCALE

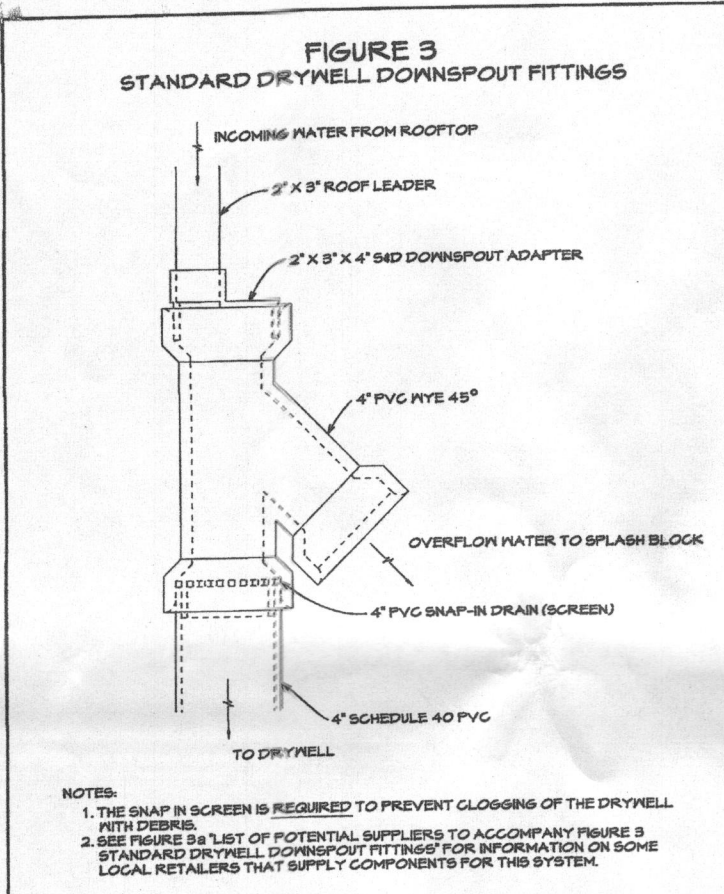
**MICROBIORETENTION NOTES:**

1. ONLY THE SIDES OF MICROBIORETENTION ARE TO BE WRAPPED IN FILTER FABRIC.

2. WALLED PERFORATED MBR UNDERDRAIN PIPE WITH 1/4" MESH (4x4) OR SMALLER GALVANIZED HARDWARE CLOTH.

**OWNER:** HASAN A. ASKARI  
6490 HEATHER GLEN WAY  
CLARKSVILLE, MD 21029  
(410) 781-6782

**DEVELOPER:** GREENFIELD HOMES, INC.  
6656 LUSTER DRIVE  
HIGHLAND, MARYLAND 20777  
(410) 781-6782



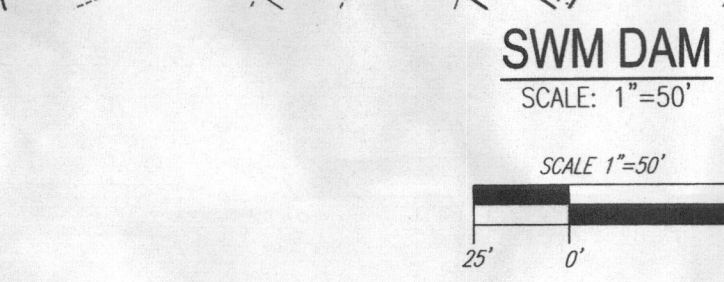
**FIGURE 3**  
STANDARD DRYWELL DOWNSPOUT FITTINGS

**SOILS LEGEND**

SYMBOL	NAME / DESCRIPTION	GROUP	K-FACTOR	ERODIBLE
Co	COODOR AND HARBORO SILT LOAMS, 0 TO 3 PERCENT SLOPES	C	.37	NO
GbB	GLADSTONE LOAM, 3 TO 8 PERCENT SLOPES	B	.20	NO
GbC	GLADSTONE LOAM, 8 TO 15 PERCENT SLOPES	B	.20	NO
GbD	GLADSTONE-PALE SILT LOAMS, 0 TO 8 PERCENT SLOPES	C	.37	YES

SOILS INFORMATION FROM USDA WEB SOIL SURVEY WEBSITE  
HOWARD COUNTY SOILS MAP NUMBER 16 - CLARKSVILLE NW

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



**SWM DAM**  
SCALE 1"=50'

**OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED SHEETFLOW TO CONSERVATION AREA (N-3)**

1. CONSERVATION AREAS SHALL REMAIN UNDISTURBED AND UNMANAGED OTHER THAN ROUTINE DEBRIS REMOVAL AND REPAIRING AREAS OF CONCENTRATED FLOW. INVASIVE AND NOXIOUS PLANT REMOVAL AND BI-ANNUAL MOWING FOR MEADOW AREAS MAY BE NEEDED. SIGNS DELINEATING THE LIMITS OF THE CONSERVATION SHOULD BE MAINTAINED AND SUPPLEMENTAL PLANTINGS PERFORMED AS NEEDED.

**HOWARD COUNTY - OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED DRYWELL (M-5)**

A. THE OWNER SHALL INSPECT & CLEAN ANNUALLY, INCLUDING PIPES, GUTTERS, DOWNSPOUTS 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.

**N-1. DISCONNECTION OF ROOFTOP RUNOFF**

**CONSTRUCTION CRITERIA:**

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

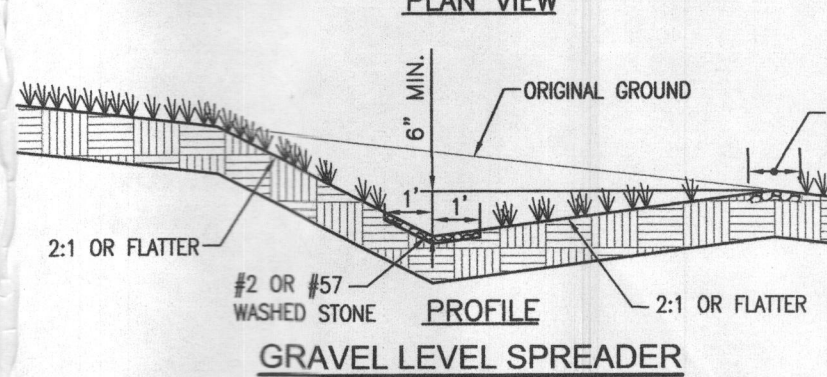
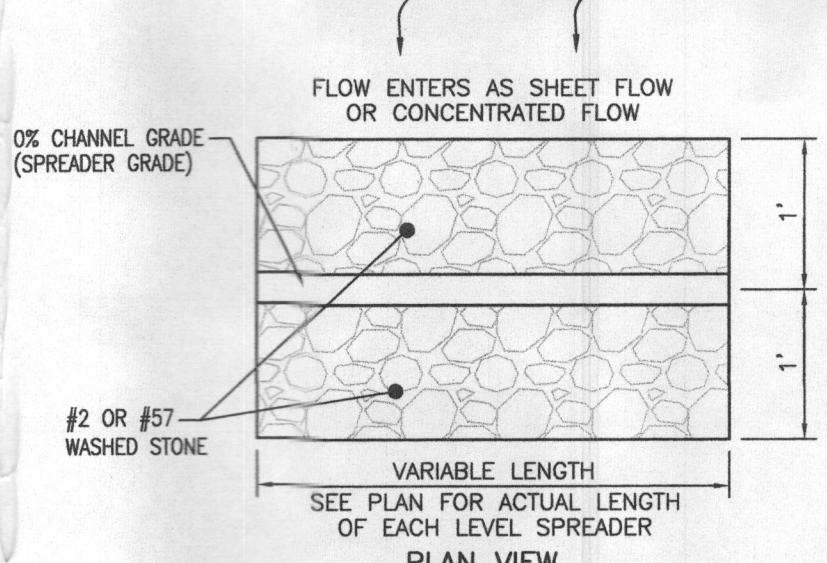
- EROSION AND SEDIMENT CONTROL: EROSION AND SEDIMENT CONTROL PRACTICES (E.G., SEDIMENT TRAPS) SHALL NOT BE LOCATED IN VEGETATED AREAS RECEIVING DISCONNECTED RUNOFF
- SITE DISTURBANCE: CONSTRUCTION VEHICLES AND EQUIPMENT SHOULD AVOID AREAS RECEIVING DISCONNECTED RUNOFF TO MINIMIZE DISTURBANCE AND COMPACTION. SHOULD AREAS RECEIVING DISCONNECTED RUNOFF BECOME COMPACTED, SCARRIFYING 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:**

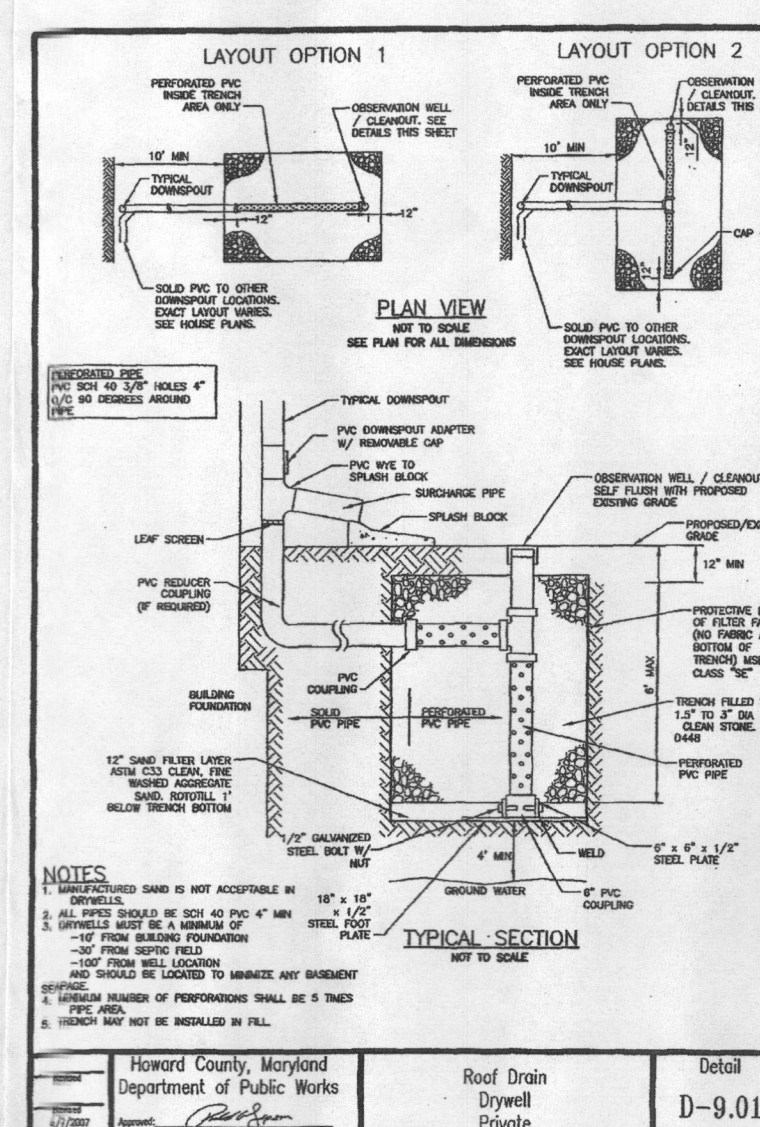
A FINAL INSPECTION SHALL BE CONDUCTED BEFORE USE AND OCCUPANCY APPROVAL TO ENSURE THAT SIZING FOR TREATMENT AREAS HAVE BEEN MET AND PERMANENT STABILIZATION HAS BEEN ESTABLISHED.

**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.



**NOT TO SCALE**



**Typical Section**  
D-9.01

**Table B.C.1 Materials Specifications for Micro-Bioretentation, Rain Gardens & Landscape Infiltration**

Material	Specification	Notes
Planting soil (2' to 4' deep)	See Appendix A, Table A.4	USDA soil types loamy or sandy loam, clay content < 5%
Organic content	Min. 10% by dry weight (ASTM D 2974)	
Mulch	shredded hardwood	used 6 months, minimum 1/2 inch or wood chips
Pre-gravel diaphragm	see ASTM C-448	NO. 4 (IR NO. 9) (1/8" TO 3/8")
Clayton drain	ornamental stone, washed cobble	size: 2" to 5"
Geotextile	see Appendix A, Table A.4	NO. 10 (IR NO. 6) (3/8" TO 1/2")
Gravel underdrains and infiltration berms	see Appendix A, Table A.4	NO. 57 (IR NO. 9) (3/8" TO 1/2")
Underdrain piping	F75L Type PS 28 or ASHSTO M-278	4" or 6" rigid schedule 40 PVC or HDPE
Flowed in place concrete (if required)	MSHA Mts. No. 3, f <sub>c</sub> = 3500 psi (28 days, normal weight, air-entrained, nonshrinkage to meet ASTM A611-04)	Slotted or perforated, 3/8" per ft. @ 6" on center, 4 holes per row, minimum 2" gravel over pipes and necessary underdrain mesh. Filtered pipe shall be wrapped with 1/2 inch non-woven geotextile. (See Appendix A, Table A.4 for details.)
Sand	ASHSTO M-4 or ASTM C-33	0.075" to 0.425"

**DEVELOPER'S CERTIFICATE**

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

*Signature of Developer*  
SIGNATURE OF DEVELOPER

**ENGINEER'S CERTIFICATE**

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

*Signature of Engineer*  
SIGNATURE OF ENGINEER

9/25/14  
DATE

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

*Signature of Howard SCD*  
HOWARD SCD

9/25/14  
DATE

**GRADING PLAN**  
**WILLOW POND - LOT 5**  
6490 HEATHER GLEN WAY  
(FORMERLY PRESTWICK DRIVE)  
CLARKSVILLE, MD 21029

**BUILDING PERMIT #**

5TH ELECTION DISTRICT  
TAX MAP: 34 PARCEL: 444  
SP-10-11, SP-09-13, F-06-170, F-09-112, F-07-174,  
SP-17-15, SP-09-03, SP-07-011, VP-07-013, WP-09-02, PLAT 7288

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

**DESIGN BY:** RHV  
**DRAWN BY:** JMR  
**CHECKED BY:** RHY  
**DATE:** SEPTEMBER 2014  
**SCALE:** AS SHOWN  
**W.O. NO.:** 14-33

**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. 16183, EXPIRATION DATE: 09-27-2018

**3 SHEET OF 3**