

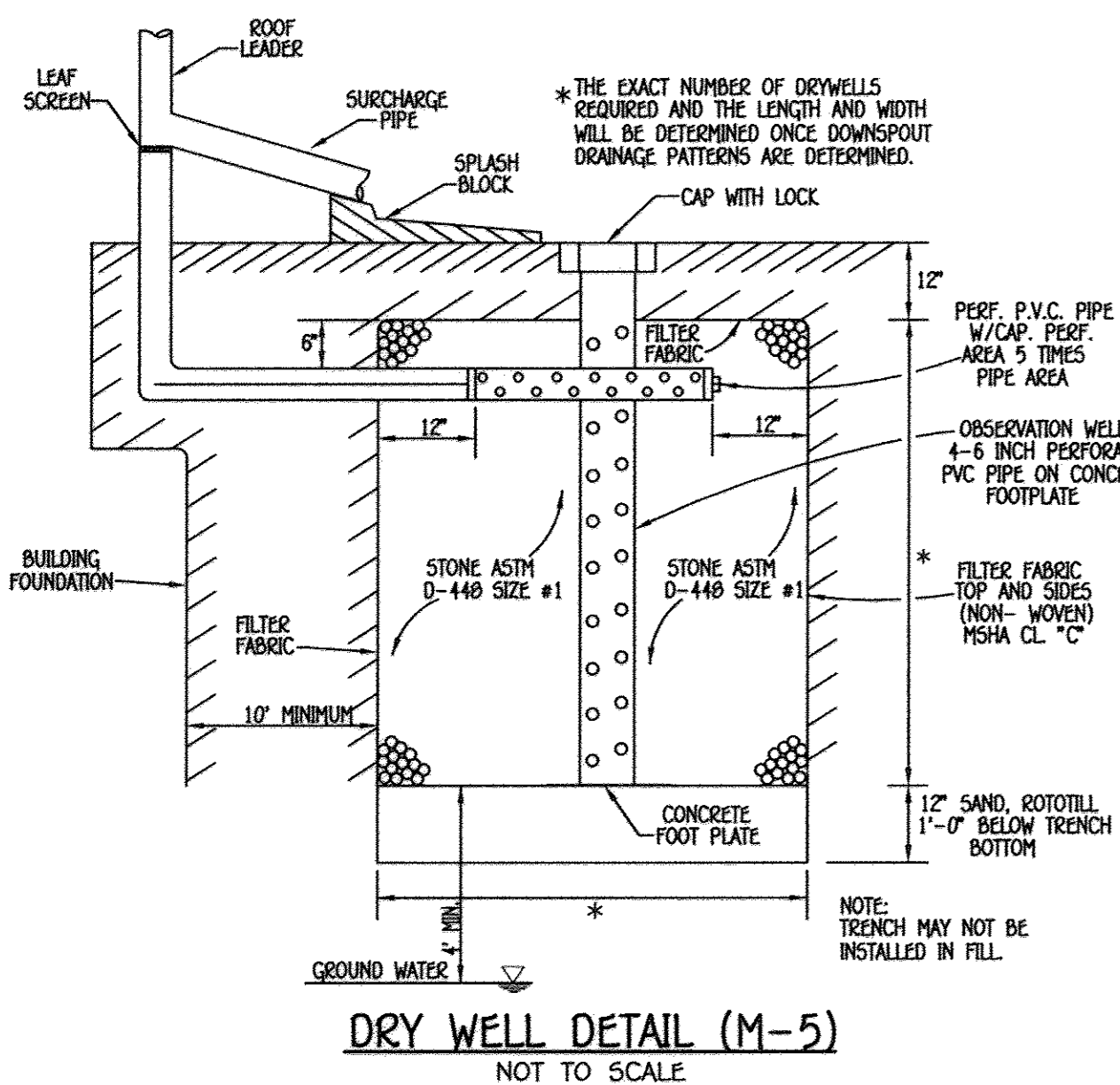
| SHEET INDEX |   |
|-------------|---|
| SHEET NO.   | DESCRIPTION                                 |
| 1           | TITLE SHEET                                 |
| 2           | ENVIRONMENTAL CONCEPT PLAN                  |
| 3           | PRELIMINARY GRADING & SEDIMENT CONTROL PLAN |

| SOILS LEGEND |   |       |          |
|--------------|---|-------|----------|
| SOIL         | NAME  | CLASS | K FACTOR |
| GgB          | Glenelig loam, 3 to 8 percent slopes              | B     | 0.20     |
| GmB          | Glenville silt loam, 3 to 8 percent slopes        | C     | 0.37     |
| GnB          | Glenville-Balle silt loams, 0 to 8 percent slopes | C     | 0.37     |

Soil Map Number: 19

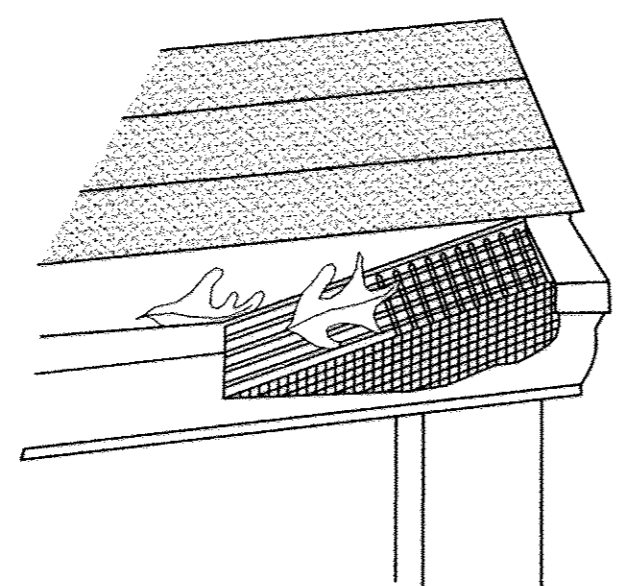
| STORMWATER MANAGEMENT SUMMARY |                     |                     |   |
|-------------------------------|---------------------|---------------------|---|
| AREA ID.                      | ESD REQUIRED CU.FT. | ESD PROVIDED CU.FT. | REMARKS   |
| SITE                          | 4,914               | 5,662               | DRYWELLS (M-5), MICRO-BIORETENTION (M-6), & NON-ROOFTOP DISCONNECTION (N-2) |
| TOTAL                         | 4,914               | 5,662               |   |

GROSS AREA = 11.98 ACRES (EXCLUDES AREA OF LOT 1 NOT WITHIN LOD)  
 LOD = 3.07 ACRES  
 RCN = 95.1  
 TARGET Pe = 1.0'



### OPERATION & MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED DRY WELLS (M-5)

- THE OWNER SHALL INSPECT THE MONITORING WELLS AND STRUCTURES ON A QUARTERLY BASIS AND AFTER EVERY HEAVY STORM EVENT.
- THE OWNER SHALL RECORD THE WATER LEVELS AND SEDIMENT BUILD UP IN THE MONITORING WELLS OVER A PERIOD OF SEVERAL DAYS TO ENSURE TRENCH DRAINAGE.
- THE OWNER SHALL MAINTAIN A LOG BOOK TO DETERMINE THE RATE AT WHICH THE FACILITY DRAINS.
- WHEN THE FACILITY BECOMES CLOGGED SO THAT IT DOES NOT DRAIN DOWN WITHIN A SEVENTY-TWO (72) HOUR TIME PERIOD, CORRECTIVE ACTION SHALL BE TAKEN.
- THE MAINTENANCE LOG BOOK SHALL BE AVAILABLE TO HOWARD COUNTY FOR INSPECTION TO INSURE COMPLIANCE WITH OPERATION AND MAINTENANCE CRITERIA.
- ONCE THE PERFORMANCE CHARACTERISTICS OF THE INFILTRATION FACILITY HAVE BEEN VERIFIED, THE MONITORING SCHEDULE CAN BE REDUCED TO AN ANNUAL BASIS UNLESS THE PERFORMANCE DATA INDICATES THAT A MORE FREQUENT SCHEDULE IS REQUIRED.



GUTTER DRAIN FILTER DETAIL  
NOT TO SCALE

### STORMWATER MANAGEMENT NOTES

- STORMWATER MANAGEMENT IS PROVIDED IN ACCORDANCE WITH CHAPTER 5, "ENVIRONMENTAL SITE DESIGN" OF THE 2007 MARYLAND STORMWATER MANAGEMENT DESIGN MANUAL, EFFECTIVE MAY 4, 2010.
- MAXIMUM CONTRIBUTING ROOF TOP AREA TO EACH DOWNSPOUT SHALL BE 1,000 SQ. FT. OR LESS.
- DRYWELLS SHALL BE PROVIDED AT LOCATIONS WHERE THE LENGTH OF DISCONNECTION IS LESS THAN 75' AT 5%. THE SIZE AND CONSTRUCTION OF THE DRYWELL SHALL BE IN ACCORDANCE WITH THE DETAIL SHOWN ON THIS SHEET.
- FINAL GRADING IS SHOWN ON THE SITE DEVELOPMENT PLAN.

### OPERATION AND MAINTENANCE SCHEDULE FOR MICRO-BIORETENTION AREAS (M-6)

- The owner shall maintain the plant material, mulch layer and soil layer annually. Maintenance of mulch and soil is limited to correcting areas of erosion or wash out. Any mulch replacement shall be done in the spring. Plant material shall be checked for disease and insect infestation and maintenance will address dead material and pruning. Acceptable replacement plant material is limited to the following: 2000 Maryland stormwater design manual volume II, table A.4.1 and 2.
- The owner shall perform a plant in the spring and in the fall 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.
- 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.
- The owner shall correct soil erosion on an as needed basis, with a minimum of once per month and after each heavy storm.

| DRY WELL CHART |                             |                 |                 |                   |     |          |
|----------------|-----------------------------|-----------------|-----------------|-------------------|-----|----------|
| DRYWELL ID.    | AREA OF ROOF PER DOWN SPOUT | VOLUME REQUIRED | VOLUME PROVIDED | AREA OF TREATMENT | L   | W D      |
| LOT 2 (FT RT)  | 875 SQ. FT.                 | 70 C.F.         | 280 C.F.        | 100%*             | 12' | 12' x 5' |
| LOT 2 (RR RT)  | 875 SQ. FT.                 | 70 C.F.         | 280 C.F.        | 100%*             | 12' | 12' x 5' |
| LOT 3 (FT RT)  | 875 SQ. FT.                 | 70 C.F.         | 280 C.F.        | 100%*             | 12' | 12' x 5' |
| LOT 3 (RR RT)  | 875 SQ. FT.                 | 70 C.F.         | 280 C.F.        | 100%*             | 12' | 12' x 5' |
| LOT 4 (FT RT)  | 875 SQ. FT.                 | 70 C.F.         | 280 C.F.        | 100%*             | 12' | 12' x 5' |
| LOT 4 (RR RT)  | 875 SQ. FT.                 | 70 C.F.         | 280 C.F.        | 100%*             | 12' | 12' x 5' |
| LOT 4 (RR LT)  | 875 SQ. FT.                 | 70 C.F.         | 280 C.F.        | 100%*             | 12' | 12' x 5' |
| LOT 4 (RR RT)  | 875 SQ. FT.                 | 70 C.F.         | 280 C.F.        | 100%*             | 12' | 12' x 5' |

\* AREA OF TREATMENT EXCEEDS THAT REQUIRED.

### OWNER/DEVELOPER

CHARBEL RIZK  
 1445 UNDERWOOD ROAD  
 SYKESVILLE, MARYLAND 21784  
 410-442-0423

**FISHER, COLLINS & CARTER, INC.**  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 CENTRAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE  
 ELICOTT CITY, MARYLAND 21042  
 (410) 461-2095

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

*[Signature]* 3-22-18  
 Chief, Division of Land Development  
 Date

*[Signature]* 3-29-18  
 Chief, Development Engineering Division  
 Date

# ENVIRONMENTAL CONCEPT PLAN RIZK PROPERTY LOTS 1 THRU 4

TAX MAP No. 9 GRID No. 09 PARCEL NO. 75  
 THIRD ELECTION DISTRICT HOWARD COUNTY, MARYLAND

| LEGEND |                            |        |                                  |
|--------|----------------------------|--------|----------------------------------|
| SYMBOL | DESCRIPTION                | SYMBOL | DESCRIPTION                      |
|        | EXISTING 2' CONTOURS       |        | PROPOSED CONTOUR                 |
|        | EXISTING 10' CONTOURS      |        | SPOT ELEVATION                   |
|        | SOILS LINES AND TYPE       |        | LIMITS OF DISTURBANCE            |
|        | EXISTING TREELINE          |        | DRAINAGE AREA DIVIDE             |
|        | INDIVIDUAL TREES & SHRUBS  |        | SILT FENCE                       |
|        | EXISTING FENCE LINE        |        | FLOW ARROWS                      |
|        | EXISTING & PROPOSED PAVING |        | STABILIZES CONSTRUCTION ENTRANCE |

### GENERAL NOTES

- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING/CONSTRUCTION INSPECTION DIVISION AT 410-313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK.
- THE CONTRACTOR SHALL NOTIFY (MISS UTILITY) AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.
- BOUNDARY SHOWN HEREON IS BASED ON FIELD RUN MONUMENTED BOUNDARY SURVEY PERFORMED BY FISHER, COLLINS & CARTER, INC. DATED APRIL 2017. TOPOGRAPHY SHOWN HEREON IS BASED ON A TOPOGRAPHIC SURVEY PERFORMED BY FISHER, COLLINS & CARTER, INC. IN APRIL 2017 AND SUPPLEMENTED WITH HOWARD COUNTY GIS TOPOGRAPHY AT 5' CONTOUR INTERVAL INTERPOLATED FOR 2' CONTOUR INTERVAL.
- THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM. HOWARD COUNTY MONUMENT NOS. 09DB AND 09HA WERE USED FOR THIS PROJECT.
- PREVIOUS DPZ FILE NUMBERS: N/A.
- STORM WATER MANAGEMENT IS IN ACCORDANCE WITH THE M.D.E. STORM WATER DESIGN MANUAL, VOLUMES I & II, REVISED 2009. NON-STRUCTURAL PRACTICES IN ACCORDANCE WITH CHAPTER 5 ARE BEING UTILIZED.
- THIS PROPERTY IS LOCATED OUTSIDE THE METROPOLITAN DISTRICT. LOTS TO BE SERVED BY PRIVATE WELL AND PRIVATE SEPTIC.
- ANY DAMAGE TO THE COUNTRY'S RIGHT-OF-WAY SHALL BE CORRECTED AT THE DEVELOPER'S EXPENSE.
- THE SUBJECT PROPERTY IS ZONED RC-DEO (PER DATE 10/06/2013 COMPREHENSIVE ZONING PLAN).
- NO STEEP SLOPES EXIST ON-SITE.
- FOREST STANDS, FLOODPLAIN, WETLANDS, STREAM(S) AND/OR THEIR BUFFERS, EXIST ON-SITE. SEE REPORT PREPARED BY ECO-SCIENCE PROFESSIONALS, INC. DATED MAY, 2017.
- LANDSCAPING WILL BE PROVIDED AT THE FINAL PLAN STAGE OF THIS PROJECT.
- FOREST CONSERVATION REQUIREMENTS FOR THIS SUBDIVISION HAVE BEEN SATISFIED BY RETENTION OF EXISTING FOREST TO MEET THE BREAK-EVEN POINT OF 5.36 ACRES.
- SOIL BORINGS WILL BE REQUIRED FOR THIS PROJECT SINCE DRYWELLS ARE BEING UTILIZED.
- APPROVAL OF THIS ECP DOES NOT CONSTITUTE AN APPROVAL OF ANY SUBSEQUENT SUBDIVISION, FOREST CONSERVATION, OR SITE DEVELOPMENT PLANS. THE APPLICANT AND CONSULTANT SHOULD EXPECT ADDITIONAL AND MORE DETAILED COMMENTS THAT MAY ALTER THE SITE DESIGN, HOUSE LOCATION, DRIVEWAY LOCATION, GRADING, TREE CLEARING, AND/OR OTHER REQUIREMENTS AS THE DEVELOPMENT PLAN PROGRESSES THROUGH THE PLAN REVIEW PROCESS IN ACCORDANCE WITH THE SUBDIVISION AND ZONING REGULATIONS AND THE FOREST CONSERVATION REQUIREMENTS.
- APPROVAL OF THIS ECP BY THE HOWARD SOIL CONSERVATION DISTRICT DOES NOT PROVIDE APPROVAL OF THE SHOWN SEDIMENT CONTROLS.
- A STRUCTURE EXISTS ON THE PROPERTY, KNOWN AS 1445 UNDERWOOD ROAD, WHICH IS TO REMAIN.
- SOILS SHOWN HEREON ARE BASED ON THE HOWARD COUNTY SURVEY AND HOWARD COUNTY SOIL MAP #19.
- THERE ARE NO CEMETERIES OR HISTORICAL FEATURES ON SITE.

### DESIGN NARRATIVE

#### Introduction:

This report will demonstrate how the criteria set forth in the Maryland Stormwater Design Manual, Volumes I and II (effective October 2009, revised May 2009) will be satisfied on this project. The goal of creating hydrology similar to that of "woods in Good Condition" will be accomplished through the use of the practices contained within Chapter 5 of said manual. The achievement of this goal will remove the requirement of providing Channel Protection Volume.

#### General Site Conditions:

Rizk Property is a four lot single family lot subdivision including one existing house to remain. Property is zoned RC-DEO and located on Tax Map 9, Grid 9, Parcel No.75 of the Howard County, Maryland Tax Map Database System. The property is an existing lot of record located at 1445 Underwood Road. Subdivision will utilize private well and septic. The property is located in the Sykesville area of Howard County in the watershed of an unnamed tributary of the Lower South Branch of the Patuxent River (02130908). This property is very irregular in shape and runoff on-site is mainly from west to east to wetlands running through the northern section of the property. The existing house sits close to Underwood Road in the higher portion of the site. A new common driveway is proposed. Forest exists on-site and forest conservation requirement will be met by retention of forest at the break-even point. Also, according to a field inspection conducted by Eco-Science Professionals (ESP) dated May 2017, wetlands and stream are present on-site. The Web Soil Survey shows soils on the site consist of Glenelig loam (GgB), Type "B" soils and Glenville silt loam (GmB) & Glenville-Balle silt loam (GnB), Type "C" soils exist on the property. The runoff from the roofs of the proposed houses is to be directed overland and be treated by eight (8) dry wells to be located on Lots 2 thru 4 in the front and rear of the proposed houses along with three (3) micro-bioretentions. The majority of the runoff from the proposed driveways will flow overland and be treated by non-rooftop disconnection and the three (3) micro-bioretentions.

#### I. Natural Resource Protection:

Environmentally sensitive areas do exist on-site (floodplain, stream, wetlands, and their buffers), therefore special effort is required to protect the natural resource on-site. Additional protection will be provided for the on-site stream, wetlands, and their buffers will be protected by the placement of the Forest Conservation Easement that is proposed.

#### II. Maintenance of Natural Flow Patterns:

It is the intent of the proposed design to discharge runoff similar to the characteristics and direction of this site prior to any of the proposed improvements.

#### III. Reduction of Impervious Areas through better site design, alternative surfaces and Nonstructural Practices

The design of this project utilizes a common driveway and individual driveways for the lots. Non-Structural practices as permitted in Chapter 5, eight (8) Dry Wells (M-5), three (3) Micro-Bioretention (M-6), and Non-Rooftop Disconnection (N-2) will be used to address ESD to the MEP requirements.

#### IV. Integration of Erosion and Sediment Controls into Stormwater Strategy:

Silt fence, super silt fence, and permanent soil stabilization control matting will be utilized for erosion & sediment control. Sediment control measures have been planned so that there is no direct discharge of runoff to a stream that is not controlled. Drainage easements will not be required. It is anticipated that all cut will be utilized on-site for construction at time of Grading Plans.

#### V. Implementation of ESD Planning Techniques and practices to the Maximum Extent Practicable (MEP)

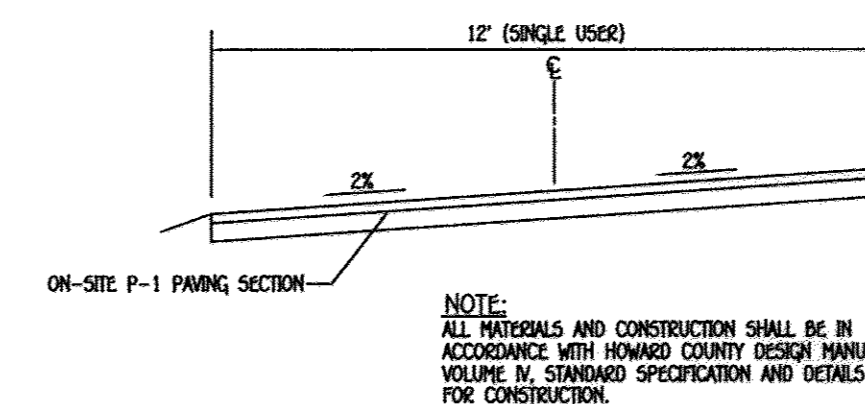
The full required ESD volume is being provided.

#### VI. Request for a Design Manual Waiver:

No waivers related to stormwater management are required.

### SITE ANALYSIS DATA CHART

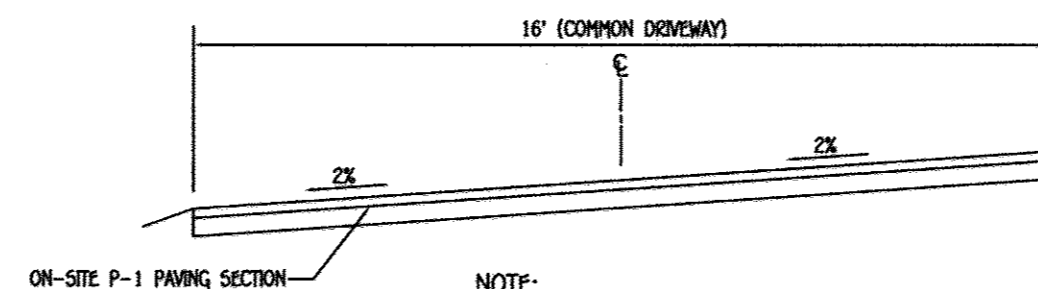
- TOTAL AREA OF THIS SUBMISSION = 18.20 AC+ (STORMWATER MANAGEMENT IS BASED ON 11.98 AC+ WHICH EXCLUDES THE AREA OF LOT 1 NOT WITHIN THE LOD)
- LIMIT OF DISTURBED AREA = 3.07 AC+
- PRESENT ZONING DESIGNATION = RC-DEO (PER 10/06/2013 COMPREHENSIVE ZONING PLAN)
- PROPOSED USE: RESIDENTIAL
- PREVIOUS HOWARD COUNTY FILES: N/A
- TOTAL AREA OF FLOODPLAIN LOCATED ON-SITE = 3.72 AC+
- TOTAL AREA OF STEEP SLOPES:  
 MODERATED STEEP SLOPES: 15%-24.9% = 0.00 AC  
 STEEP SLOPES: 25% OR GREATER = 0.00 AC
- TOTAL AREA OF WETLANDS (INCLUDING BUFFER) = 3.57 AC+ (2.29 AC+ WETLANDS)
- TOTAL AREA OF STREAM (INCLUDING BUFFER) = 1.87 AC
- TOTAL AREA OF EXISTING FOREST = 12.30 AC+ (OUTSIDE OF FLOODPLAIN)
- TOTAL AREA OF FOREST TO BE RETAINED = 6.84 AC+
- TOTAL AREA OF LOTS / BUILDABLE PARCELS = 17.75 AC+
- TOTAL GREEN OPEN AREA = 17.25 AC+
- TOTAL IMPERVIOUS AREA = 0.92 AC+
- TOTAL AREA OF ERODIBLE SOILS = 8.00 AC+
- TOTAL AREA OF ROAD DEDICATION = 0.45 AC+



TYPICAL PRIVATE DRIVE CROSS SLOPE SECTION  
NOT TO SCALE

### OPERATION & MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED, DISCONNECTION OF NON-ROOFTOP RUNOFF (N-2)

- MAINTENANCE OF AREAS RECEIVING DISCONNECTION RUNOFF IS GENERALLY NO DIFFERENT THAN THAT REQUIRED FOR OTHER LAWN OR LANDSCAPED AREAS. THE AREAS RECEIVING RUNOFF SHOULD BE PROTECTED FROM FUTURE CONSTRUCTION OR DEVELOPMENT OF IMPERVIOUS AREA. IN COMMERCIAL AREAS FOOT TRAFFIC SHOULD BE DISCOURAGED AS WELL.

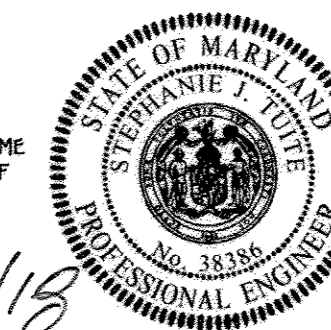


TYPICAL PRIVATE COMMON DRIVE CROSS SLOPE SECTION  
NOT TO SCALE

### PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 38366, EXPIRATION DATE: 01/12/2020.

*[Signature]* 2/26/18  
 Signature of Professional Engineer DATE



### TITLE SHEET RIZK PROPERTY, LOTS 1 THRU 4

ZONED: RC-DEO  
 TAX MAP #9 GRID 0009 PARCEL: 75  
 THIRD ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
 SCALE: AS SHOWN DATE: FEBRUARY 2018  
 SHEET 1 OF 3

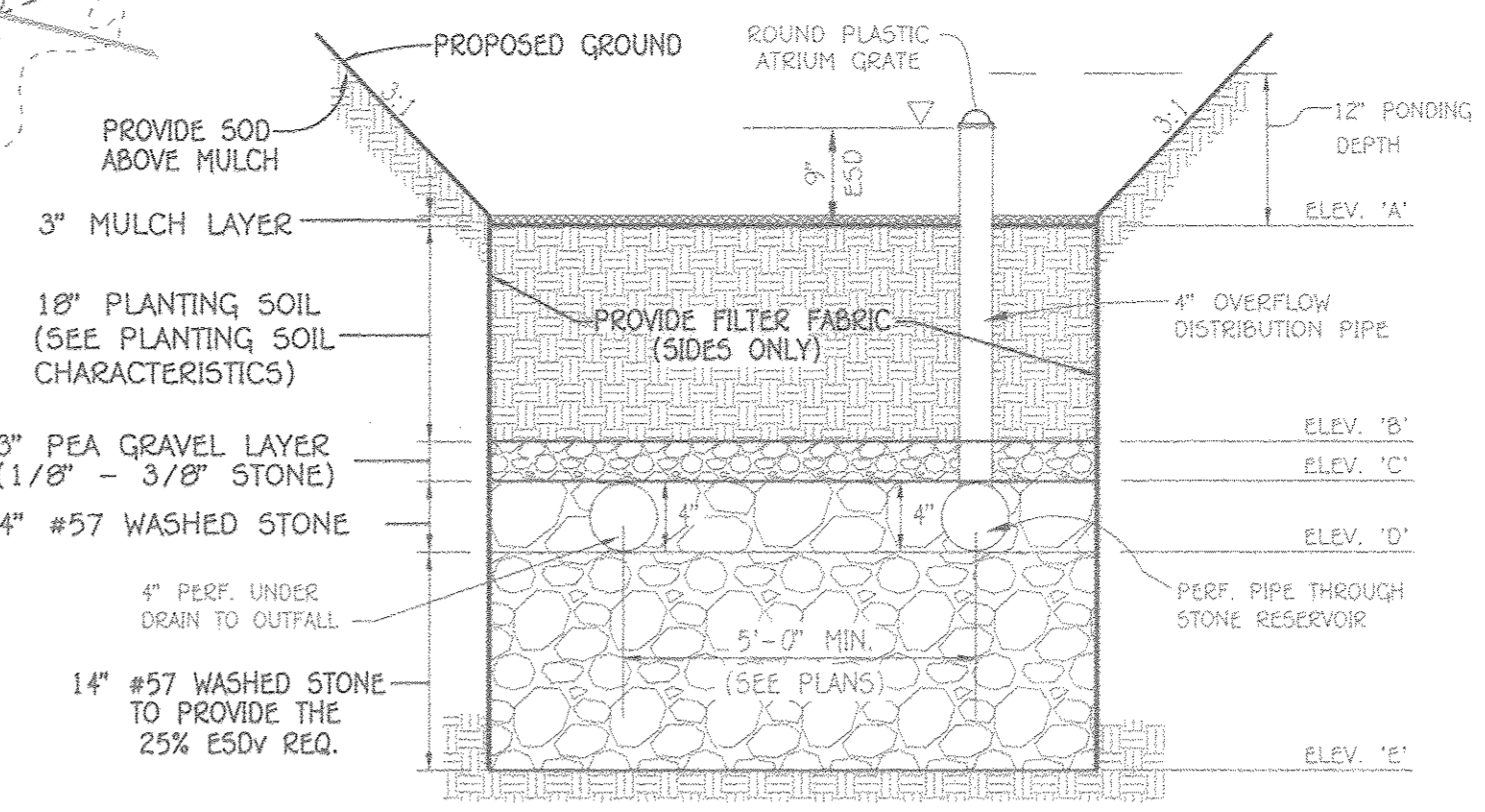
| MICRO-BIO 1 QUANTITY | MICRO-BIO 2 QUANTITY | NAME             | MAXIMUM SPACING (FT.)           |
|----------------------|----------------------|------------------|---------------------------------|
| 60                   | 55                   | MIXED PERENNIALS | 1.5 TO 3.0 FT.                  |
| 1                    | 1                    | SILKY DOGWOOD    | PLANT AWAY FROM INFLOW LOCATION |

| BIO-RETENTION FILTER | A      | B      | C      | D      | E      |
|----------------------|--------|--------|--------|--------|--------|
| #1                   | 571.40 | 569.90 | 569.37 | 569.24 | 569.63 |
| #2                   | 571.24 | 569.73 | 569.42 | 569.09 | 568.59 |

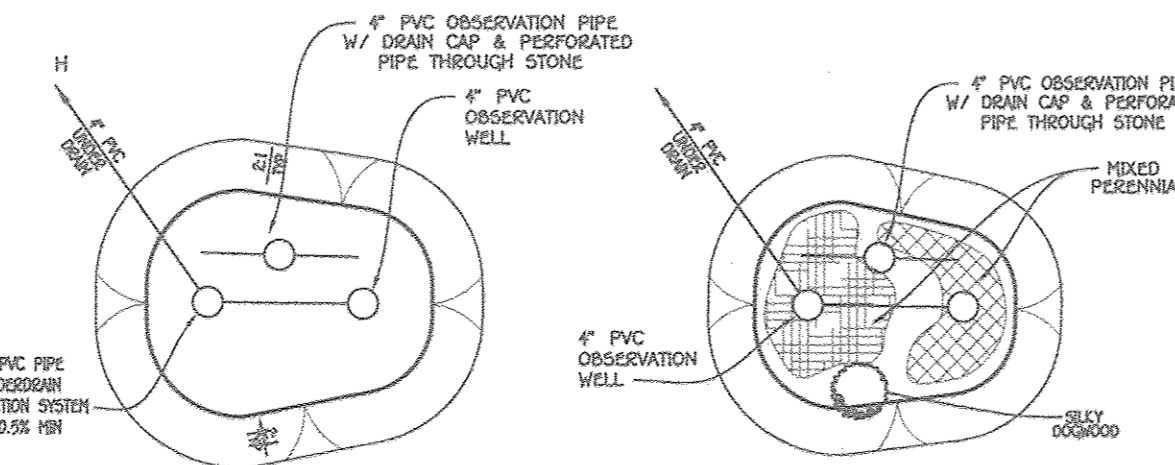
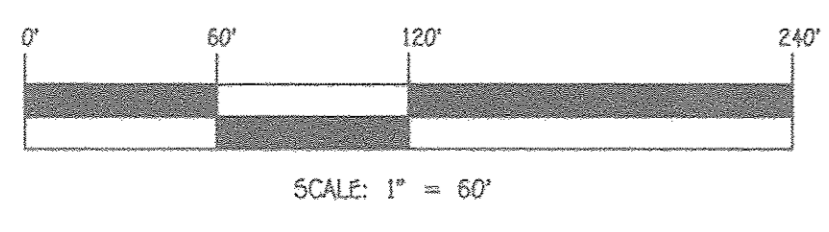
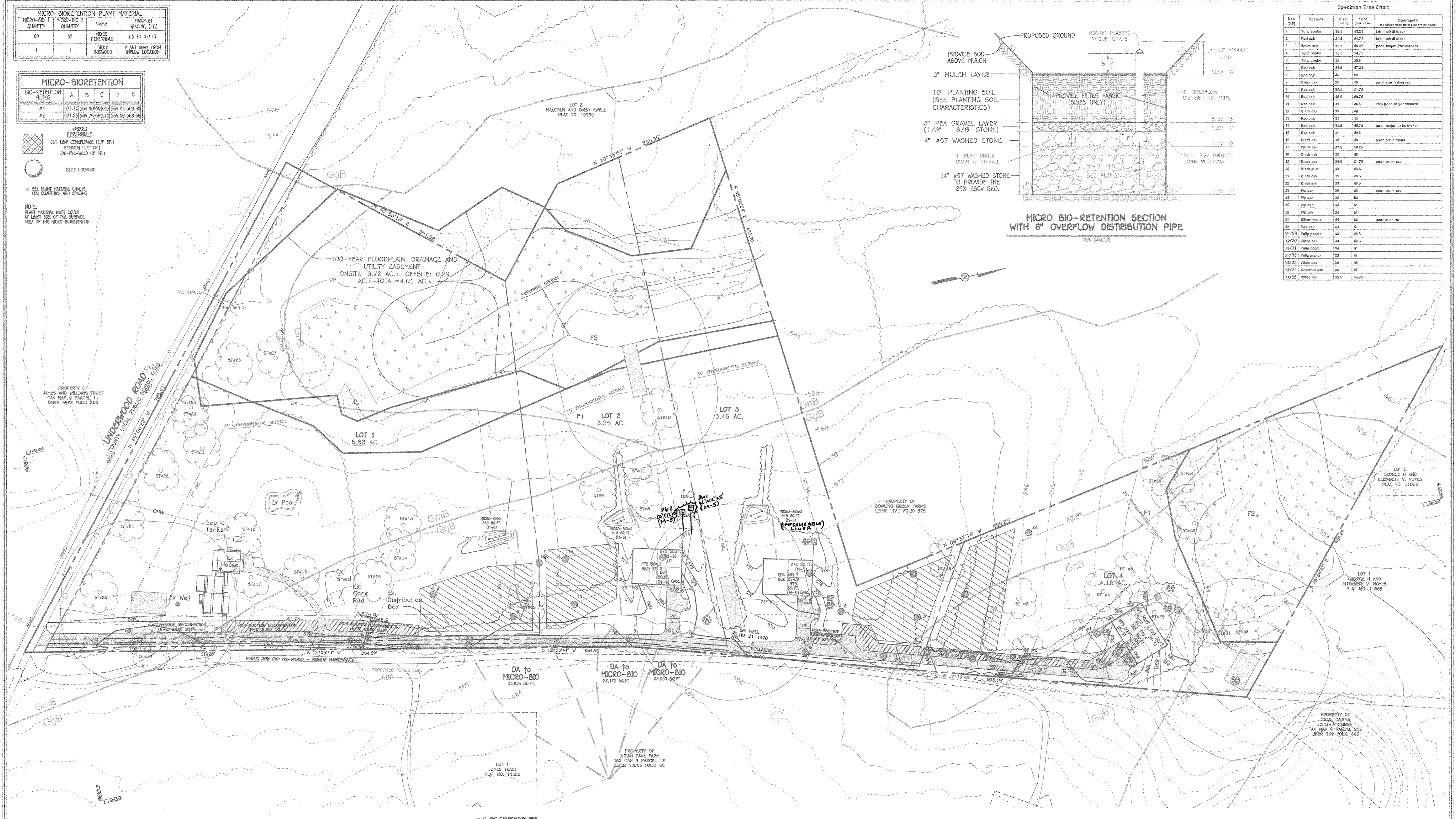
- MIXED PERENNIALS
- OUT-LEAF COMPLEXER (1.5" SP.)
- SEDUM (1.5" SP.)
- JOE-PYE-WOOD (3" SP.)
- SILKY DOGWOOD

NOTE: PLANT MATERIAL MUST COVER AT LEAST 50% OF THE SURFACE AREA OF THE MICRO-BIORETENTION

| Key (D/F) | Species      | Size (in. dbh) | CR2 (in. dbh) | Comments (condition good unless otherwise noted) |
|-----------|--------------|----------------|---------------|--|
| 1         | Tulip poplar | 34.5           | 53.25         | fair, limb dieback                               |
| 2         | Red oak      | 34.5           | 51.75         | fair, limb dieback                               |
| 3         | White oak    | 33.5           | 50.25         | poor, major limb dieback                         |
| 4         | Tulip poplar | 34.5           | 52.75         |  |
| 5         | Tulip poplar | 35             | 52.5          |  |
| 6         | Red oak      | 31.5           | 47.25         |  |
| 7         | Red oak      | 40             | 60            |  |
| 8         | Black oak    | 30             | 45            | poor, storm damage                               |
| 9         | Red oak      | 34.5           | 51.75         |  |
| 10        | Red oak      | 46.5           | 69.75         |  |
| 11        | Red oak      | 31             | 46.5          | very poor, major dieback                         |
| 12        | Black oak    | 32             | 48            |  |
| 13        | Red oak      | 30             | 45            |  |
| 14        | Red oak      | 30.5           | 46.75         | poor, major limb broken                          |
| 15        | Red oak      | 33             | 49.5          |  |
| 16        | Black oak    | 32             | 48            | poor, rot in limbs                               |
| 17        | White oak    | 33.5           | 50.25         |  |
| 18        | Black oak    | 32             | 48            |  |
| 19        | Black oak    | 34.5           | 51.75         | poor, trunk rot                                  |
| 20        | Black gum    | 33             | 49.5          |  |
| 21        | Black oak    | 31             | 46.5          |  |
| 22        | Black oak    | 33             | 49.5          |  |
| 23        | Pin oak      | 30             | 45            | poor, trunk rot                                  |
| 24        | Pin oak      | 36             | 54            |  |
| 25        | Pin oak      | 34             | 51            |  |
| 26        | Pin oak      | 34             | 51            |  |
| 27        | Silver maple | 34             | 51            | poor, trunk rot                                  |
| 28        | Red oak      | 34             | 51            |  |
| X1/29     | Tulip poplar | 33             | 49.5          |  |
| X2/30     | White oak    | 33             | 49.5          |  |
| X3/31     | Tulip poplar | 34             | 51            |  |
| X4/32     | Tulip poplar | 32             | 48            |  |
| X5/33     | White oak    | 30             | 45            |  |
| X6/34     | Chestnut oak | 38             | 57            |  |
| X7/35     | White oak    | 38.5           | 57.75         |  |



MICRO BIO-RETENTION SECTION WITH 6" OVERFLOW DISTRIBUTION PIPE



MICRO BIO-RETENTION PLANTING DETAIL NOT TO SCALE

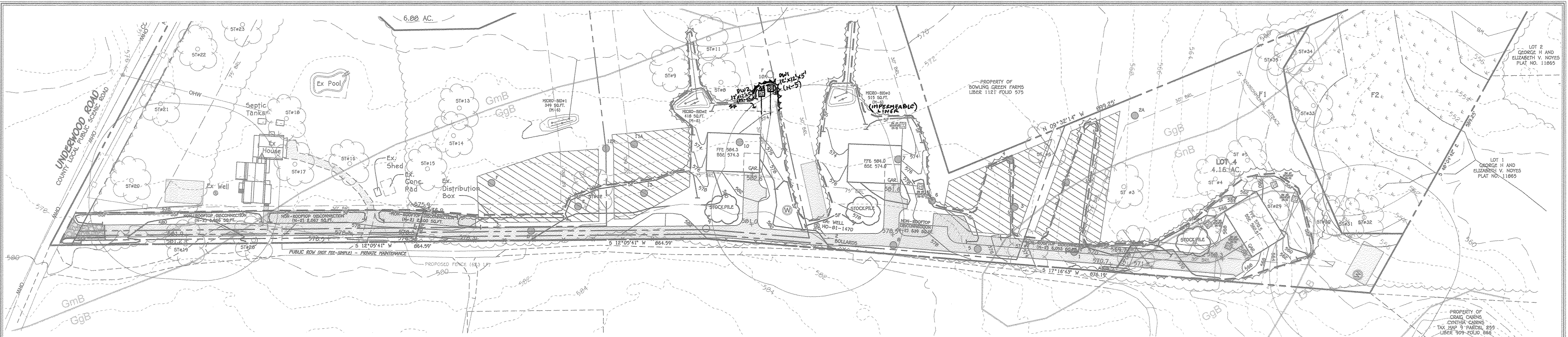
| LEGEND              |                            |                  |                                  |
|---------------------|----------------------------|------------------|----------------------------------|
| SYMBOL              | DESCRIPTION                | SYMBOL           | DESCRIPTION                      |
| (Dashed line)       | EXISTING 2' CONTOURS       | (Solid line)     | PROPOSED CONTOUR                 |
| (Dashed line)       | EXISTING 10' CONTOURS      | (Spot elevation) | SPOT ELEVATION                   |
| (Dotted line)       | SOILS LINES AND TYPE       | (Line)           | LIMITS OF DISTURBANCE            |
| (Wavy line)         | EXISTING TREELINE          | (Line)           | DRAINAGE AREA DIVIDE             |
| (Circle with cross) | INDIVIDUAL TREES & SHRUBS  | (Line)           | SILT FENCE                       |
| (Dashed line)       | EXISTING FENCE LINE        | (Arrow)          | FLOW ARROWS                      |
| (Dashed line)       | EXISTING & PROPOSED PAVING | (Line)           | STABILIZES CONSTRUCTION ENTRANCE |

PROFESSIONAL CERTIFICATION  
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 38386, EXPIRATION DATE: 01/12/2020.  
 Signature: *Stephane J. J...* DATE: 3/19/18

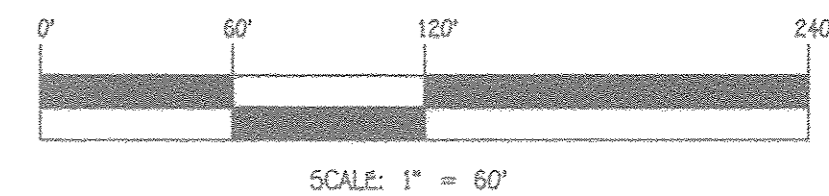


ENVIRONMENTAL CONCEPT PLAN  
**RIZK PROPERTY, LOTS 1 THRU 4**  
 ZONED: RC-DEO  
 TAX MAP #9 GRID 0009 PARCEL: 75  
 THIRD ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
 SCALE: AS SHOWN DATE: FEBRUARY 2018  
 SHEET 2 OF 3  
 ECP-17-050

1:201616041/Engineering/Drawings/16041-2001 ECP.dwg - Sheet (2) of 1



**GRADING & SEDIMENT CONTROL PLAN**  
SCALE: 1"=60'



**PROPOSED DEVELOPMENT PLAN**  
SCALE: 1"=100'

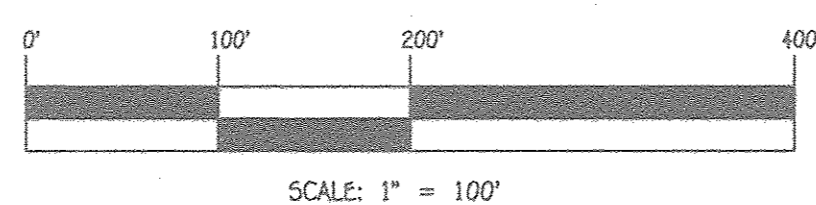
| LEGEND |                            |        |                                  |
|--------|----------------------------|--------|----------------------------------|
| SYMBOL | DESCRIPTION                | SYMBOL | DESCRIPTION                      |
|        | EXISTING 2' CONTOURS       |        | PROPOSED CONTOUR                 |
|        | EXISTING 10' CONTOURS      |        | SPOT ELEVATION                   |
|        | SOILS LINES AND TYPE       |        | LIMITS OF DISTURBANCE            |
|        | EXISTING TREELINE          |        | DRAINAGE AREA DIVIDE             |
|        | INDIVIDUAL TREES & SHRUBS  |        | SILT FENCE                       |
|        | EXISTING FENCE LINE        |        | FLOW ARROWS                      |
|        | EXISTING & PROPOSED PAVING |        | STABILIZES CONSTRUCTION ENTRANCE |

**OWNER/DEVELOPER**

CHARBEL RIZK  
1445 UNDERWOOD ROAD  
SYKESTVILLE, MARYLAND 21784  
410-442-0423

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

*P. M... 3/22/18*  
Date  
Chief, Development Engineering Division



**FISHER, COLLINS & CARTER, INC.**  
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE  
ELLSWORTH CITY, MARYLAND 21144  
(410) 461-2295

**PROFESSIONAL CERTIFICATION**  
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 38386, EXPIRATION DATE: 01/12/2020.  
*Stephen J. ... 3/19/18*  
Signature of Professional Engineer DATE



**PRELIMINARY GRADING & SEDIMENT CONTROL PLAN**  
**RIZK PROPERTY, LOTS 1 THRU 4**

ZONED: RC-DEO  
TAX MAP #9 GRID 0009 PARCEL: 75  
THIRD ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
SCALE: AS SHOWN DATE: FEBRUARY 2018  
SHEET 3 OF 3