**PLAN**
SCALE:
HORZ: 1" = 50'

3,940 sf
RCN = 83
BMP
R-20
I = 50.8%

FOR ROOF AREA: ADDRESSED WITH MICRO-BIORETENTION (M-6) BMP

GENERAL NOTES

1. STORMWATER MANAGEMENT HAS BEEN PROVIDED USING "ESD TO THE MEP". SPECIFICALLY, ONE (1) MICRO-BIORETENTION FACILITY AND NON-ROOFTOP SHEET FLOW CREDIT ARE PROPOSED TO ADDRESS THE STORMWATER MANAGEMENT FOR THIS SITE. PLEASE REFER TO THE ECP SWM REPORT PREPARED BY CIVIL DESIGN SERVICES, LC DATED DECEMBER 6, 2013 FOR MORE INFORMATION.
2. THE PROPERTY BOUNDARY SURVEY WAS PERFORMED IN MARCH, 2007, AND THE TOPOGRAPHIC SURVEY WAS PERFORMED IN MARCH 2007 AND SEPTEMBER 2013, BY SHANABERGER & LANE (ELLICOTT CITY, MD). TOPOGRAPHY OUTSIDE THE BOUNDARY WAS TAKEN FROM HOWARD COUNTY G.I.S. MAPS.
3. HOWARD COUNTY APPROVAL OF THIS ECP DOES NOT GUARANTEE APPROVAL OF SUBSEQUENT PLANS (e.g., SUBDIVISION AND/OR SITE DEVELOPMENT PLANS).
4. THERE ARE NO WETLANDS OR FORESTS LOCATED ON THIS PROPERTY BASED ON A SEPTEMBER 2013 SITE VISIT BY CIVIL DESIGN SERVICES, LC. SEE ECP REPORT FOR ADDITIONAL INFORMATION.
5. THIS PROPERTY IS NOT SUBJECT TO HOWARD COUNTY FOREST CONSERVATION REQUIREMENTS PER HOWARD COUNTY CODE SECTION 16.1202(b)(1)(i).
6. THE EXISTING VEGETATION ON THIS PROPERTY IS LAWN (GRASS) AND SEVERAL TREES (MOSTLY EVERGREEN TREES).
7. THIS PROPERTY DOES NOT CONTAIN RARE, THREATENED, AND/OR ENDANGERED PLANT SPECIES.

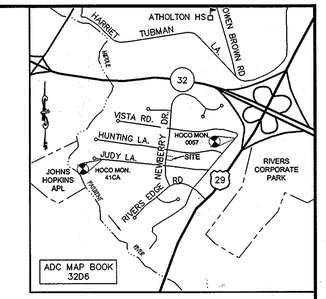
**LEE PROPERTY**
*ESD$_v$ SUMMARY TABLE*

| | Provided | Required |
|---|---|---|
| Micro-Bioretention BMP | 250 cf [a] | 229 cf [b] |
| Non-Rooftop Disconnection credit | 940 sf | 940 sf |

[a] See stage-storage table in Appendix A.
[b] This value reflects 75% of the calculated required ESD$_v$.

LEGEND

- Property Line
- Edge of Existing Paving
- Existing Asphalt Curb
- 2' Contour
- 10' Contour
- Proposed Contour
- UGE — Existing Underground Electric
- UGC — Existing Underground Cable
- G — Existing Underground Gas line
- W — Existing Public Water Line
- S — Existing Public Sewer
- Proposed Public Sewer
- Ex. Privacy Fence
- Ex. Fence
- Drainage Direction
- Drainage Divide
- L.O.D. — LOD
- SSF — Super Silt Fence
- Ex. Tree and Brush Line
- Impervious Area
- Non-Rooftop Disconnection Credit Area
- Ex. Tree
- TBR — To Be removed




VICINITY MAP
1" = 2,000'

ECP DESIGN NARRATIVE

1. Natural Resources Protection Enhancement: This residential site does not contain wetlands, floodplains, forests, steep slopes or associated buffers. Therefore, these resources are not impacted. Groundwater recharge will be provided to compensate for impervious areas.
2. Maintenance of Natural Flow Patterns: There is no significant on-site proposed grading that will alter drainage patterns. Stormwater generally flows to the same location after development as before development. In addition, post-development one (1) year peak flow is not expected to increase after development due to the ESDv in the BMP and the SWM credit.
3. Reduction of impervious areas through better site design, alternative surfaces, non-structural practices: The SWM concept is consistent with ESD practices. The micro-bioretention BMP is considered to be a non-structural practice. The driveway was designed to promote sheet flow across flat grassed areas precluding concentrated flow.
4. Integration of E&SC into SWM strategy: The E&SC design will follow HSCD standards & specifications and will meet the goal of keeping sediment from leaving the site. The practices will be integrated in SWM strategy by embracing sheet flow patterns where practicable and is a preferred ESD practice.
5. Implementation of ESD planning techniques and practices: a micro-bioretention BMP has been proposed.

SITE DATA
Site Area: 20,001 sf (0.46± acre).
Wetland and Wetland Buffers: 0.0 acres
Floodplain: 0.0 acres
Forests: 0.0 acres
Steep Slopes: None
Erodible Soils: None
LOD: 15,430 sf±
Proposed Site Use: Residential
File References: PB7-FGA
Impervious Area: 2,900 sf±
Green Open Area: 17,101 sf±
Environmental Waivers for Necessary Disturbance: N/A.

*SOILS TABLE*

| SYMBOL | NAME | HSG |
|---|---|---|
| GfB | Gladstone-Urban Complex, 0-8% slope | B |

GRAPHIC SCALE:
0 25' 50' 100' 200'

SEDIMENT/EROSION CONTROL:

1. ALL EXCAVATED SOIL SHALL BE PLACED ON THE HIGH SIDE OF TRENCH/EXCAVATION.
2. CONTRACTOR SHALL USE REASONABLE MEASURES TO KEEP SEDIMENT FROM ENTERING THE EXISTING DRAINAGE SYSTEM/DITCHES AND ROADWAY SURFACE. USE SILT FENCE, INLET PROTECTION, OR OTHER CONTROLS AS NECESSARY.
3. ONLY CONSTRUCT THAT PORTION OF UTILITY THAT CAN BE BACKFILLED, SEEDED AND MULCHED IN THAT SAME DAY.
4. SEDIMENT AND EROSION CONTROL DEVICES SHALL BE INSPECTED DAILY AND MAINTAINED IN WORKING CONDITIONS AS PER THE STANDARD DETAILS AND SPECIFICATIONS AND TO THE SATISFACTION OF THE INSPECTOR.


**CIVIL DESIGN SERVICES, LC**
6123 Holly Ridge Court, Columbia, Maryland 21044
410.531.0572 phone/fax
civildesign@comcast.net


STATE OF MARYLAND — ANDREW A. PORTER — No. 15838 — REGISTERED PROFESSIONAL ENGINEER

I hereby certify that I prepared this plan and the seal signifies that I am a duly licensed professional engineer under the laws of the State of MD, License No. 15,838 w/expiration December 17, 2015.

ANDREW A. PORTER, P.E. — DATE 2/10/2014

| NO. | REVISION | DATE |
|---|---|---|

OWNER/DEVELOPER
Mr. Dae Yung Lee
10717 Hunting Lane
Columbia, Maryland 21044
(410) 531-7962
daeyung2000@yahoo.com

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development — Date 2/24/14

Chief, Development Engineering Division — Date 2-26-14

| PROJECT | SECTION | LOT NO. |
|---|---|---|
| Holiday Hills, Section 4, Lot 118 | N/A | 118 |

| PLAT | BLOCK NO. | ZONE | TAX/ZONE | ELEC. DIST. | CENSUS TR. |
|---|---|---|---|---|---|
| TBD | 6 | R-20 | 41 | 5th | 6051.02 |

ENVIRONMENTAL CONCEPT PLAN

**HOLIDAY HILLS, SECTION 4, LOT 118**
**(LEE PROPERTY)**
A Re-Subdivision of Holiday Hills, Section 4, Lot 48
Zoning: R-20
TAX MAP NO: 41 PARCEL NO.: 252 GRID NO.: 6
FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

February 10, 2014

SHT 1 OF 1

ECP-14-040