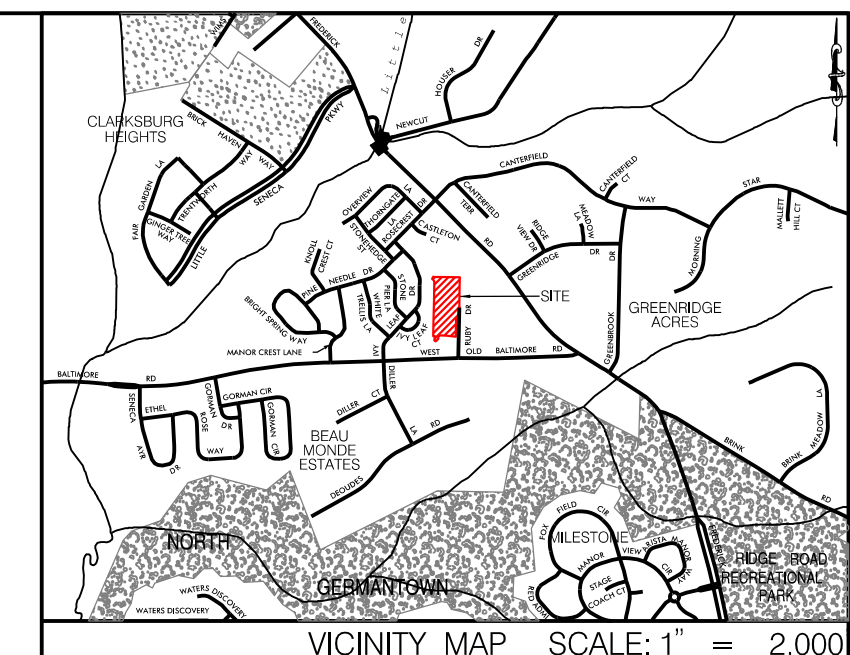
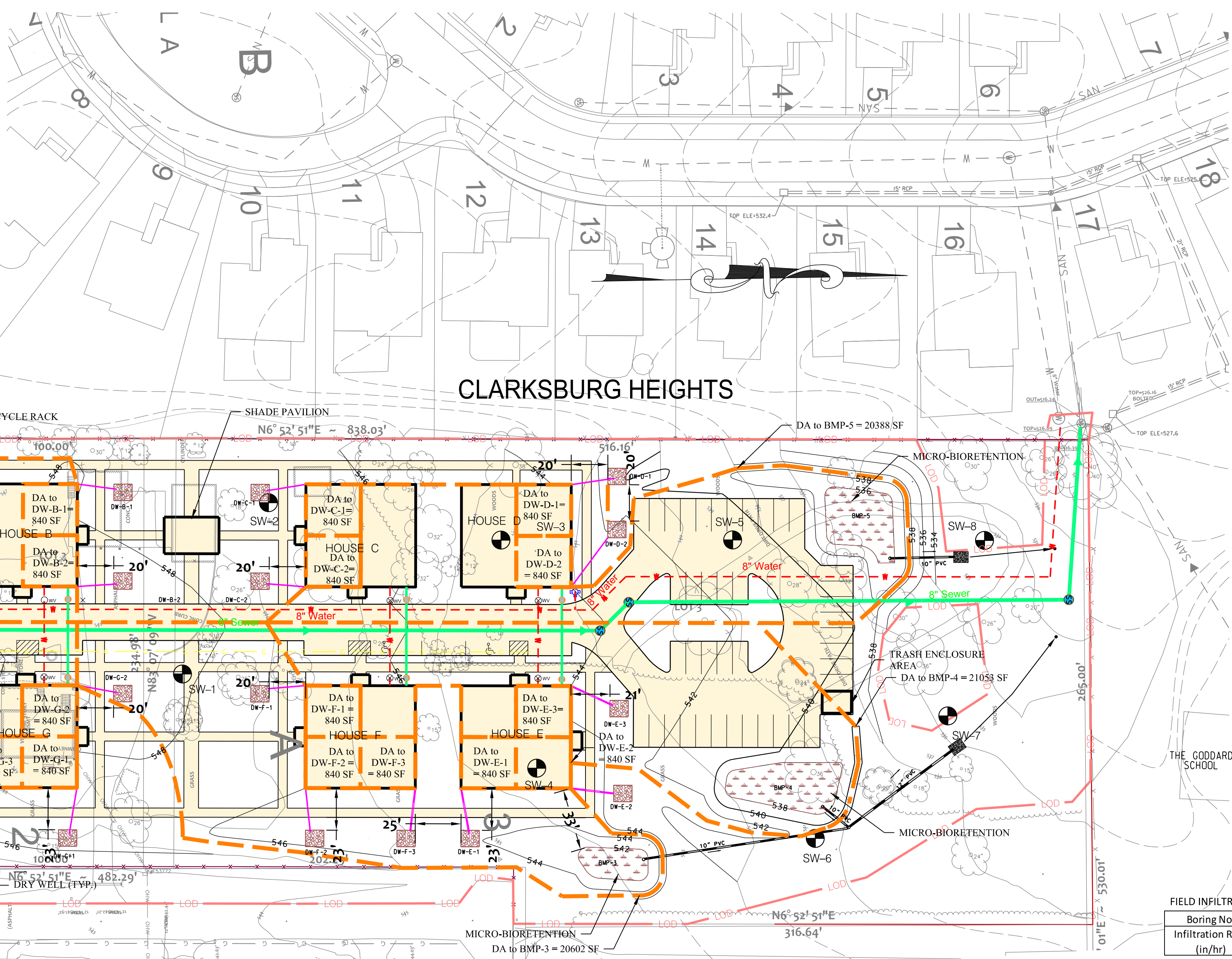
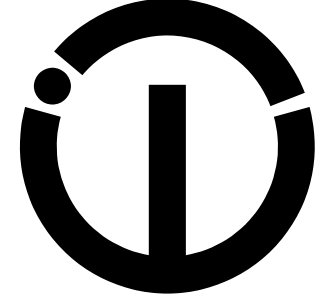


**LEGEND**

- LIMIT OF DISTURBANCE
- DRAINAGE AREA TO BMP
- MICRO-BIORETENTION
- DRY WELL
- DRY WELL UNDER DRAIN
- SIDEWALK AND DRIVEWAY
- BUILDING FOOTPRINT
- BORING LOCATION



**ENDESCO, INC.**  
ENGINEERS, DESIGNERS & CONSULTANTS  
15245 SHADY GROVE RD  
SUITE 335  
ROCKVILLE, MD 20850  
TEL: (301) 987-8776  
FAX: (301) 987-8777



PT LOT 1, LOTS 2 AND 3  
**RUBY SENIOR HOMES**  
MONTGOMERY COUNTY, MARYLAND

**DRYWELL SPECIFICATIONS:**

- SETBACKS**  
DRYWELLS SHALL SET BACK AT LEAST 20 FEET FROM BUILDING FOUNDATIONS. IF THE STRUCTURE IS SLAB ON GRADE THE SET BACK MAY BE REDUCED TO 10 FEET. REFER TO THE DRY WELL STANDARD DETAILS FOR OTHER SET BACK REQUIREMENTS. WHILE IT IS PREFERABLE TO LOCATE DRY WELLS DOWN GRADIENT FROM BUILDING FOUNDATIONS, IT IS NOT A REQUIREMENT IN ALL CASES.
- OVERFLOW DESIGN CRITERIA**  
IN ORDER TO PREVENT BACKUP OF WATER IN THE DOWNSPOUT, AN OVERFLOW DOWNSPOUT SURCHARGE PIPE MUST BE PROVIDED AS SHOWN ON THE DRY WELL DETAIL. DISCHARGE FROM THE DOWNSPOUT SURCHARGE PIPE MUST BE DIRECTED TO AN ABOVE GROUND SPLASH BLOCK AND CONVEYED IN A NON-EROSIVE MANNER TO A STABLE OUTFALL. IN SOME CASES IT MAY BE DESIRABLE TO ADD AN ADDITIONAL OVERFLOW PIPE OR POP UP EMITTER DIRECTLY OUT OF THE DRY WELL. THIS SHALL BE IN ADDITION TO THE REQUIRED SPLASH BLOCK OVERFLOW. THE FLOW FROM THE ADDITIONAL OVERFLOW PIPE OR EMITTER MUST BE DIRECTED TO A SAFE LOCATION THAT IS UNLIKELY TO CONTRIBUTE TO NUISANCE DRAINAGE PROBLEMS SUCH AS A WET LAWN AREAS OR SEEPAGE ACROSS SIDEWALKS.
- STONE**  
DRYWELLS SHALL BE FILLED WITH CLEAN 1.5-3.0 INCH DIAMETER STONE MEETING ASTM D448, SIZE NO. 1. FILTER FABRIC SHALL BE PLACED ON THE TOP AND SIDES OF THE FACILITY AS SHOWN ON THE DRY WELL DETAIL. NO GEOTEXTILE OR FILTER FABRIC IS ALLOWED TO BE PLACED ON THE BOTTOM OF THE FACILITY OR IN ANY OTHER LOCATION NOT CALLED FOR SPECIFICALLY ON THE DETAIL.
- SAND BED**  
A 12-INCH LAYER OF FINE AGGREGATE SAND SHALL BE PROVIDED AT THE BOTTOM OF THE EXCAVATION. CLEAN ASTM C33 OR AASHTO M6 FINE AGGREGATE CONCRETE SAND IS REQUIRED PER MONTGOMERY COUNTY SAND SPECIFICATIONS.
- OBSERVATION WELL**  
THE DRY WELL MUST INCORPORATE AN OBSERVATION WELL IN ACCORDANCE WITH THE STANDARD DETAIL.

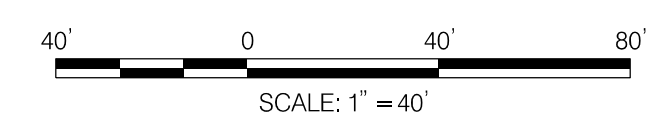
**SURVEY NOTES:**

- HORIZONTAL DATUM - NAD 83 - MARYLAND STATE PLANE
- VERTICAL DATUM - NAVD 88
- CONTOUR INTERVAL IS 2 FOOT
- THIS SURVEY WAS PERFORMED BY LIGGIE SURVEYS, INC.
- UNDERGROUND UTILITY MARKINGS PERFORMED BY MISS UTILITY

**FIELD INFILTRATION TESTING SUMMARY**

Boring No.	SW-1	SW-2	SW-3	SW-4	SW-5	SW-6	SW-7	SW-8
Infiltration Rate (in/hr)	2.16	0.48	1.19	3.12	2.16	1.56	2.04	1.68

Exhibit 13 (a)  
OZAH Case No: CU 23-11



**GENERAL NOTES & ZONING ANALYSIS**

- PROJECT NAME:** RUBY SENIOR HOMES, BOYDS MONTGOMERY COUNTY, MARYLAND
- OWNER / DEVELOPER:** WORLDSHINE HOME, LLC  
9200 CORPORATE BLVD, SUITE 330  
ROCKVILLE, MD 20850  
PHONE: (240) 261-6678
- CIVIL ENGINEER:** ENDESCO, INC.  
15245 SHADY GROVE RD, SUITE 335  
ROCKVILLE, MD 20850  
CONTACT: MR. KEVIN HUANG  
PHONE: (301) 987-8776, FAX: (301) 987-8777
- LEGAL DESCRIPTION:** MUSGROVE'S ADDITION TO NEELSVILLE LOT 1, LOT 2, & LOT 3
- SURVEY:** ORIGINAL TOPOGRAPHIC SURVEY PREPARED BY LIGGIESURVEYS, INC. IN OCTOBER 2018
- PROPOSED USE:** CONDITIONAL USE - GROUP HOMES
- CONSTRUCTION WITHIN PUBLIC RIGHT-OF-WAY:** TWO ENTRANCE ROADS AND UTILITY CONNECTIONS
- STORMWATER MANAGEMENT:** STORMWATER MANAGEMENT IS BEING PROVIDED IN ACCORDANCE WITH MCDPS REQUIREMENTS.
- NOTIFY MARYLAND NATIONAL CAPITAL PARK AND PLANNING COMMISSION AND MONTGOMERY COUNTY DEPARTMENT OF PERMITTING SERVICES 48 HOURS BEFORE BEGINNING CONSTRUCTION OF PROPOSED IMPROVEMENTS.**
- WSSC 200 SCALE SHEET NO. 230W12**
- NRI / FSD PLAN #420191830**
- PUBLIC UTILITY COMPANIES:**  
WATER AND SANITARY SEWER: WSSC PH: 800-828-6349  
ELECTRICITY: PEPCO PH: 202-833-7500  
NATURAL GAS: WASHINGTON GAS PH: 703-750-1000
- WATERSHED:** LITTLE SENECA CREEK
- ROADWAY AND PAVEMENT SECTION IS PER MC DOT STANDARD MC-211.03**

**SWM Concept Summary Table:**  
Contact Information for Design Engineer (for technical issues): Kevin Huang, kevinhuang@endescocinc.com

**General Property Information:**  
SM# 289123  
Type of Concept: Preliminary Water Quality Plan  
MNC&PC Process/No: Conditional Use: CU202311  
Property Address: Ruby Drive, Boyds, MD 20841  
Property Legal Description: MUSGROVE'S ADDITION TO NEELSVILLE, PT LOT 1, LOT 2, AND LOT 3  
Property Size (ac./sq.ft.): 4.66/202,898  
Total Concept Area (ac./sq.ft.): 5.14/224,099  
Zoning: R-200  
Watershed(s) and Stream Class: Little Seneca Creek /Class IV  
Special Protection Area: Clarksburg  
100 YR Floodplain: Zone X (FEMA Map 24031C0160D 9/29/2006)  
Ex. % impervious/Redevelopment or New Development: 7% - New Development

**SWM Summary:**  
Target P<sub>i</sub>/Proposed P<sub>r</sub>: 1.8/NA  
Target ESDv/Provided ESDv: 11,570 cu.ft./12,582 cu.ft.  
ESD Measures: MB (5) and DW (16)  
Structural Storage Required/Provided: No  
Structural Measures: No  
Waiver Request/QL/QN/Both: No  
Provided ESDv + Structural Storage Provided + Requested to be Waived = 12,582 cu.ft.  
BMP-1 Provided ESDv: CF 1,794 (Micro-Bioretentation)  
BMP-2 Provided ESDv: CF 1,870 (Micro-Bioretentation)  
BMP-3 Provided ESDv: CF 1,172 (Micro-Bioretentation)  
BMP-4 Provided ESDv: CF 2,575 (Micro-Bioretentation)  
BMP-5 Provided ESDv: CF 2,398 (Micro-Bioretentation)  
16 Dry Wells Provided ESDv: CF 2,774  
Other Information: N/A

**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, LICENSED NO. 23093, EXPIRATION DATE 05/06/2025

**REVISIONS**

NO.	DATE	DESCRIPTION
1.		
2.		
3.		
4.		

DATE	TITLE	DRAWN:	DESIGNED:	CHECKED:
OCT 2023	PRELIMINARY WATER QUALITY PLAN	GJ	GJ	KH
SCALE 1"=40'				
SHEET				
CPP-11				