Stormwater Companion Sheet Version:2016.09.27 (TAH)

SOLTESZ

Rockville Office
2 Research Pl., Suite 100
Rockville, MD 20850
(301) 948-2750

Date	6/21/2023
Project Name	Rock Spring Park
Project No.	0693-04-00
By	KAS
Checked	KW

Rock Spring Park
ESDv COMPUTATIONS

Property Target

Enter Study Point Area = 147643 sqft (See Technical Policy guidelines for details)
Enter Study Point Ultimate (Existing & Proposed) Impervious Area = 98252 sqft
% of Impervious D.A., I = 66.5%

HSG	RCN	Area (sqft)	Percentage	Target P_y
A	38	0	0%	2.20 in
B	55	147,643	100%	2.20 in
C	70	0	0%	2.00 in
D	77	0	0%	1.80 in
Totals			100%	2.20 in

Composite RCN for "Woods in Good Cond." = 55

ESDv Required Within LOD

Limit of Disturbance (LOD) Area (A) = 147643 sqft
Enter LOD Proposed Impervious Area = 98252 sqft
% of Impervious D.A., I = 66.5%
Volumetric Runoff Coefficient, Rv = 0.649

HSG	RCN	Area (sqft)	Percentage
A	38		0%
B	55	147,643	100%
C	70		0%
D	77		0%
Totals		147643	100%

LOD Area	Study Point Target P_y	Target ESDv (ac-ft)	Target ESDv (cu-ft)
147643 sqft	2.20 in (From Above)	0.403 ac-ft	17,565 cu-ft

Equations

Target Design Runoff Volume, $ESDv = (P_{y(Study\ Point)} * Rv_{(LOD)} * (A_{(LOD)}/43560)) / 12$

Volumetric Runoff Coefficient, $Rv_{(LOD)} = (Rv_{(LD)} = 0.05 + 0.009\ (I_{(LOD)}))$

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Ultimate ESD Summary Table
Rock Spring Park

Study Point: Target

Study Point Total Area = 147,643 sqft
Study Point Ultimate (Existing & Proposed) Impervious Area = 98,252 sqft (See Technical Policy guidelines for details)
Study Point Impervious Area Percentage (%) = 66.5%

HSG	RCN	Area (sqft)	Percentage	Target P_y
A	38	0	0%	2.2 in
B	55	147,643	100%	2.2 in
C	70	0	0%	2.0 in
D	77	0	0%	1.8 in
Totals			100%	2.20 in

Study Point Target Composite RCN for "Woods in Good Cond." = 55
Study Point Target P_y (in.) = 2.20
Sum of Target ESDv (ac-ft) = 0.403
Sum of Target ESDv (cu-ft) = 17,565

Provided Treatment Summary

Study Point Target P_y (in.) = 2.20
New Study Point P_y (in.) = 2.81 114% (% of Target ESDv)
LOD Provided ESDv (cu-ft) = 20,046
Excess ESDv (cu-ft) = 2,481 No Structural Volume Required

Study Point Summary

Study Point Provided P_y (in.) = 3.31
Study Point Volumetric Runoff Coefficient, Rv = 0.85
Study Point Reduced RCN = 55

Study Point Target Composite RCN for "Woods in Good Cond." = 55
Study Point Reduced Composite RCN for "Woods in Good Cond." = 55

Individual Facility Summary

ESD Facility	Drainage Area sq. ft.	Imp. D.A. sq. ft.	% of Imp. Cover	Provided ESDv cu. ft.	Type of Facility
186	20,000	20,000	100%	3,482	Micro Bioretention 186
188	20,000	20,000	100%	4,117	Micro Bioretention 188
189	7,000	7,000	100%	1,441	Micro Bioretention 189
190	20,000	18,000	90%	3,727	Micro Bioretention 190
191	20,000	18,000	90%	3,727	Micro Bioretention 191
192	20,000	8,000	40%	1,777	Micro Bioretention 192
193	20,000	8,000	40%	1,777	Micro Bioretention 193
TOTALS	127,000 sqft	99,000 sqft		20,046 cu-ft	

Structural Treatment Summary

$Q_{Rv(ac-ft)} = [(P1 - 0.2S)^2 / (P1 + 0.8S)]$ where P1 = 2.6in and S = (1000 / RCN) - 10 = 0.10
$Q_{Rv(cfs)} = [(P1 - 0.2S)^2 / (P1 + 0.8S)]$ where P1 = 2.6in and S = (1000 / RCN) - 10 = 0.10
$V = (Q_{Rv(cfs)} / Q_{Rv(ac-ft)} * A) / 12 =$ 00 cu-ft
Additional Structural Treatment Volume Required (V) = 00 cu-ft (From Above)

Structural Treatment Volume Provided via (ex. Stormfilter, Bioretention, Sand Filter)
Additional Structural Treatment Volume Provided (V) =

Equations

Target Design Runoff Volume, $ESDv = (P_{y(Study\ Point)} * Rv_{(LOD)} * (A_{(LOD)}/43560)) / 12$

Volumetric Runoff Coefficient, $Rv_{(Study\ Point)} = (Rv(Study\ Point)) = 0.05 + 0.009\ ((Study\ Point))$

NOTES:
1. ALL STORMWATER MANAGEMENT PRACTICES/ESD's SHOWN ARE ILLUSTRATIVE.
2. BASED ON THE DRAINAGE AREA STUDY AND COMPUTATIONS, THE ACTUAL LOCATION, SIZE, AND NUMBER OF ESD's REQUIRED WILL BE DETERMINED AT FINAL SITE PLAN.

ESD LEGEND:

PLANTERBOX

MICRO BIO

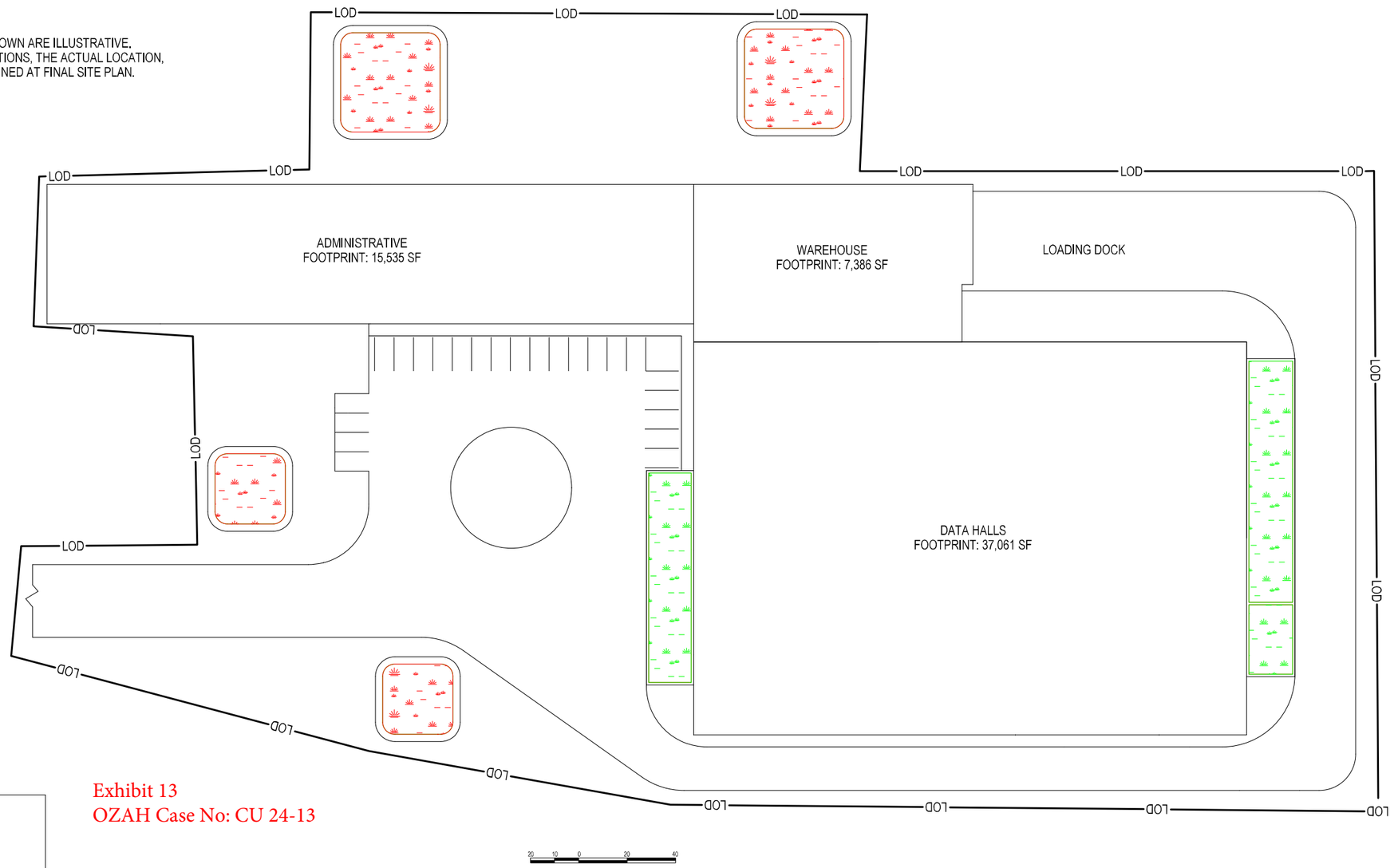

Exhibit 13
OZAH Case No: CU 24-13

Exhibit # 13

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Engineering
Surveying
Planning
Environmental Sciences

NO.	REVISIONS	BY	DATE
X	REVISION COMMENT HERE	XXX	XX/XX/XX

MISS UTILITY NOTE

INFORMATION CONCERNING EXISTING UNDERGROUND UTILITIES WAS OBTAINED FROM AVAILABLE RECORDS. THE CONTRACTOR MUST DETERMINE THE EXACT LOCATION AND ELEVATION OF ALL EXISTING UTILITIES AND UTILITY CROSSINGS BY DIGGING TEST PITS BY HAND. (MISS UTILITY ADVISES OF THE START OF EXCAVATION CONTACT MISS UTILITY AT 1-800-257-7777, 48 HOURS PRIOR TO THE START OF EXCAVATION). IF CLEARANCES ARE LESS THAN SHOWN ON THIS PLAN OR THEY ARE UNDISCLOSED, WHICHEVER IS LESS, CONTACT THE ENGINEER AND THE UTILITY COMPANY BEFORE PROCEEDING WITH CONSTRUCTION. CLEARANCES LESS THAN NOTED MAY REQUIRE REVISIONS TO THIS PLAN.

OWNER / DEVELOPER / APPLICANT

TERRA INNOVATIONS

904-206-8770
JEFF@TERRAINNOVATIONS.COM
JEFF FERREL

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._____ EXPIRATION DATE:_____

TYPICAL SWM CONCEPT EXHIBIT

DICKERSON POWER PLANT
21200 MARTINSBURG RD, DICKERSON, MD 20842
LOTS 2, 3, 7, 8 AND 9
POOLESVILLE (3rd) ELECTION DISTRICT, MONTGOMERY COUNTY, MARYLAND

TAX MAP: BV	ZONING CATEGORY: IH, AR
WSSC 200' Sq SHEET: 229NW21, 229NW22, 230NW 21, 230NW22, 231NW21, 231NW22	
SITE DATUM HORIZONTAL: NAD 83/91 VERTICAL: NAVD 88	
SCALE: 1" = 20'	DATE: 6/21/2023 DESIGNED: TR TECHNICIAN: CWW CHECKED: JS CAD STD'S VERSION: NCS
SHEET 1 OF 1	
PROJECT NO. 40250002	

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