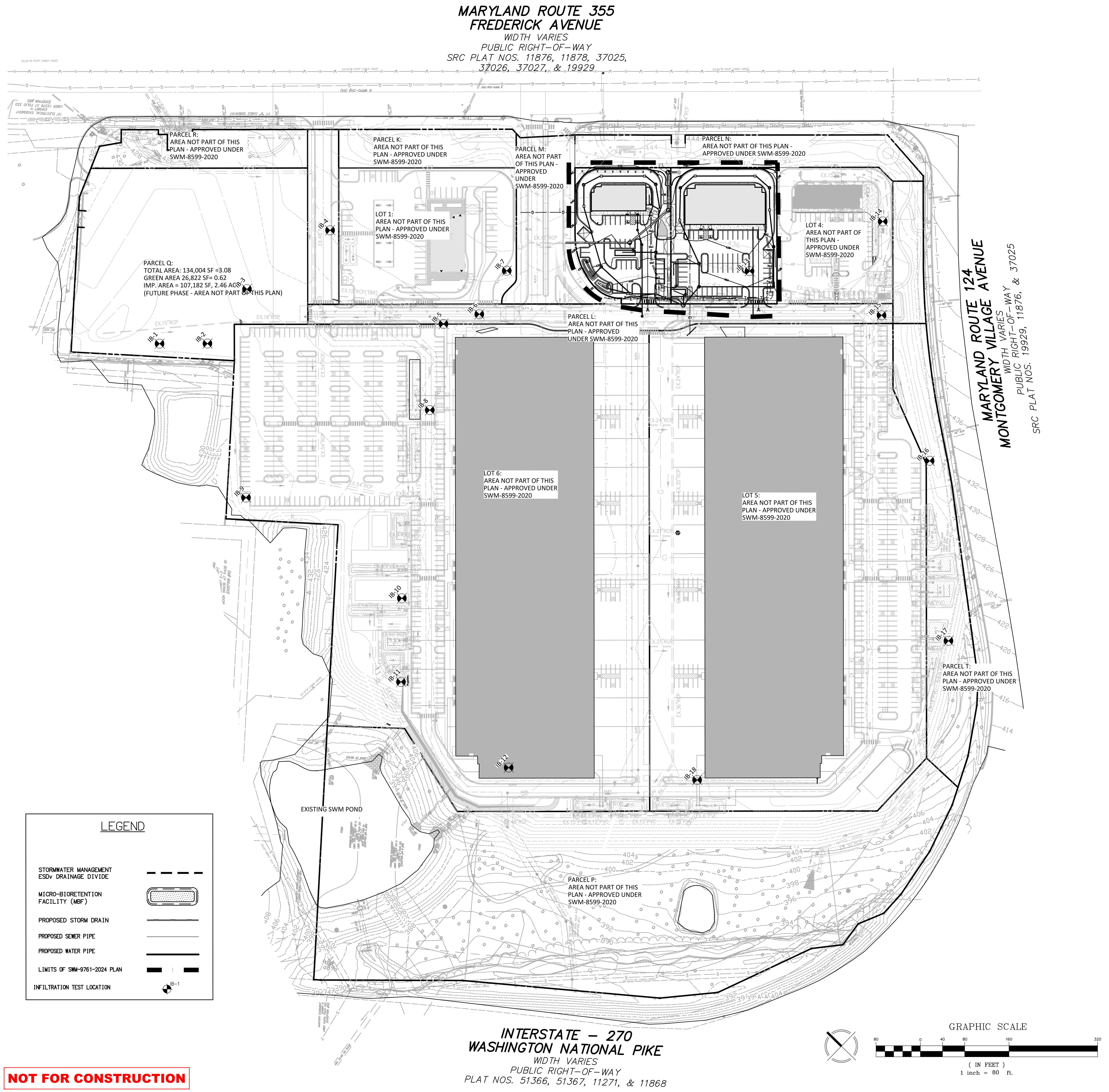
Joint Hearing - MCC & PC
SDP-9759-2024
Exhibit #37



LEGEND

STORMWATER MANAGEMENT ESDv DRAINAGE DIVIDE	— — —
MICRO-BIORETENTION FACILITY (MBF)	
PROPOSED STORM DRAIN	
PROPOSED SEWER PIPE	
PROPOSED WATER PIPE	
LIMITS OF SWM-9761-2024 PLAN	
INFILTRATION TEST LOCATION	IB-1

NOT FOR CONSTRUCTION

"FOR LOCATION OF UTILITIES CALL 8-1-1 or 1-800-257-7777 OR LOG ON TO www.call811.com or http://www.missutility.net 48 HOURS IN ADVANCE OF ANY WORK IN THIS VICINITY"

The excavator must notify all public utility companies with underground facilities in the area of proposed excavation and have those facilities located by the utility companies prior to commencing excavation. The excavator is responsible for compliance with requirements of Chapter 36A of the Montgomery County Code.

LAYOUT: SWM-1, Plotted By: ehekarchi

STORMWATER MANAGEMENT SUMMARY TABLE

PROJECT SITE INFORMATION SUMMARY						
Total Area (LOD)	94,709	sq. ft	2.17	acres		INPUT
Existing Impervious Area*	48,213	sq. ft	1.11	acres		OUTPUT
50% Existing Impervious Area	24,107	sq. ft	0.55	acres		
Proposed Impervious Area	75,809	sq. ft	1.74	acres		
Proposed Impervious Area Increase	27,596	sq. ft	0.63	acres		
Existing Percent Impervious	51	percent	Soil Hydrologic Group:		B/D	
Proposed Percent Impervious	80	percent				
Proposed Rv = (0.05 + (0.009 * (I)))	0.7704	Rv used for PE Achieved				

ESDv REQUIRED FOR 50% OF EXISTING IMPERVIOUS AREA			
ESDv Sizing Criteria Per MD SWM Design Manual Chapter 5, Section 5.2:			
Rv = (0.05 + (0.009 * (I)))	0.9500	Rv used for 50% Existing Impervious Area Computation	
Required P_E per ESDv Criteria =	1.00	inches	
ESDv = (P_E x Rv x A) / 12	0.04381	acre-ft	Section 5.5.2 of MD SWM Design Manual (Page 5.18)
cubic-feet = ESDv * 43560 ft^2/acre	1908	cubic feet (ESD for 50% of Existing Imperviousness)	

ESDv REQUIRED FOR 100% OF INCREASE IN IMPERVIOUS AREA			
ESDv Sizing Criteria Per MD SWM Design Manual Chapter 5, Section 5.2:			
Rv = (0.05 + (0.009 * (I)))	0.9500	Rv used for 100% Increase Impervious Area Computation	
Rainfall Target (P_E) Determination per Table 5.2, MDE SWM Manual			
Required P_E per ESDv Criteria =	1.80	inches	
ESDv = (P_E x Rv x A) / 12	0.00000	acre-ft	Section 5.5.2 of MD SWM Design Manual (Page 5.18)
cubic-feet = ESDv * 43560 ft^2/acre	3932	cubic feet (ESD for 100% of Increase in Imperviousness)	

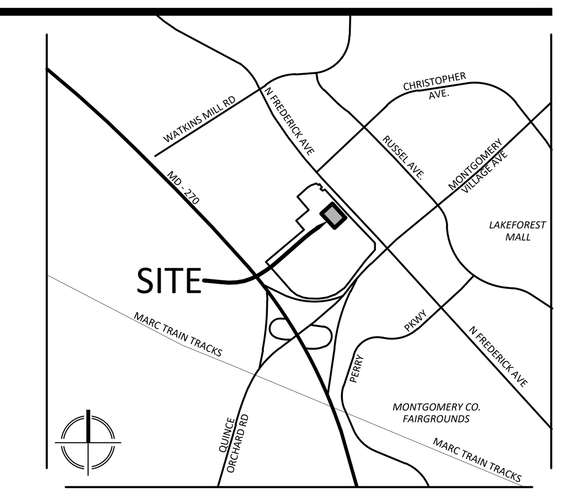
TOTAL ESDV REQUIRED	5841	cubic feet (ESD for 50% imp. plus ESD for 100% imp. increase)	
ESDV PROVIDED	3859	CF	
P_E (Achieved) = [(12 x ESDV) / (Rv x A)]		0.60	inches
Runoff Calculation Per Urban Hydrology for Small Watersheds (TR-55) Chapter 2:			
1-YR Design Storm=	2.60	inches, 1-YR design Storm	

Remaining Volume* = 1981 cubic feet

*Remaining Volume is calculated per MDE July 2010 ESD Process, Page 43, since the Pe achieved is less than 1" the reduced RCN computation was not used. The remaining volume is calculated as the difference between the had been achieved.

Remaining Volume Available in Ex. Pond = 56972 cubic feet

OVERALL SITE STORMWATER MANAGEMENT SUMMARY TABLE	
TOTAL SITE AREA (AC.)	38.07
PROJECT SITE AREA (AC.)	2.17
DISTURBED AREA (AC.)	2.17
EXISTING IMPERVIOUS AREA FOR SITE (AC.)	1.11
PROPOSED IMPERVIOUS AREA FOR SITE (AC.)	1.74
EXISTING IMPERVIOUS AREA FOR PROJECT SITE (AC.)	1.11
PROPOSED IMPERVIOUS AREA FOR PROJECT SITE (AC.)	1.74
ESDv REQUIRED (CF)	5841
TARGET PE (IN.)	1.80
ESDV PROVIDED BY MICRO BIORETENTION (CF)	3859
PE ACHIEVED (IN.)	0.60
VOLUME TO BE SUPPLEMENTED BY POND (CF)	1981
WQv PROVIDED (CF)	3859
Rev PROVIDED (CF)	0
CPv PROVIDED (CF)	0
Qp PROVIDED (CF)	0
Qf PROVIDED (CF)	0



VICINITY MAP
SCALE: 1" = 2000'

VIKA MARYLAND, LLC
20251 Century Blvd., Suite 400
Germantown, MD 20874
301.916.4100 | vika.com
Our Site Set on the Future.

PREPARED FOR:
MFV 700 NFA, LLC &
DNIP4 700 NFA, LLC
4600 WEDGEWOOD BLVD.
SUITE A
FREDERICK, MD 21703
301-815-9984
CONTACT: BRIAN MORRIS

DESIGN CONSULTANTS

ARCHITECTS
BIGNELL WATKINS HASSER ARCHITECTS, PC
ONE PARK PLACE
SUITE 250
ANNAPOLIS MD,21401
410.224.2727
ADEL NUR

PLANNER, LANDSCAPE ARCHITECT
CIVIL ENGINEER
VIKA MARYLAND, LLC
20251 CENTURY BOULEVARD
SUITE 400
GERMANTOWN MD, 20874
301.916.4100
ROBERT TILSON

REVISIONS	DATE

715 & 725 PROGRESS WAY

PHASE 4
9TH ELECTION DISTRICT
MONTGOMERY COUNTY, MARYLAND
WSSC GRID: 224NW10
TAX MAP:FT32

PRELIMINARY OVERALL STORMWATER MANAGEMENT PLAN

PROFESSIONAL SEAL

STATE OF MARYLAND JULIA S. LAPIDES NO. 49870 PROFESSIONAL ENGINEER
Julia Lapides 5/13/2024

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.
ENGINEER'S NAME: JULIA LAPIDES, P.E.
LICENSE No.: 49870
EXPIRATION DATE: SEPTEMBER 8, 2024

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CITY OF GAITHERSBURG
DEPARTMENT OF PUBLIC WORKS
STORMWATER MANAGEMENT

APPLICATION NO. 9761-2024
CONCEPT PLAN ☐ PRELIMINARY PLAN ☒
APPROVAL DATE 6/13/24
BY

DRAWN BY:
DESIGNED BY:
DATE ISSUED:

VIKA PROJECT VM50240

DRAWING NO.

SHEET NO. SWM 1 OF 5

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