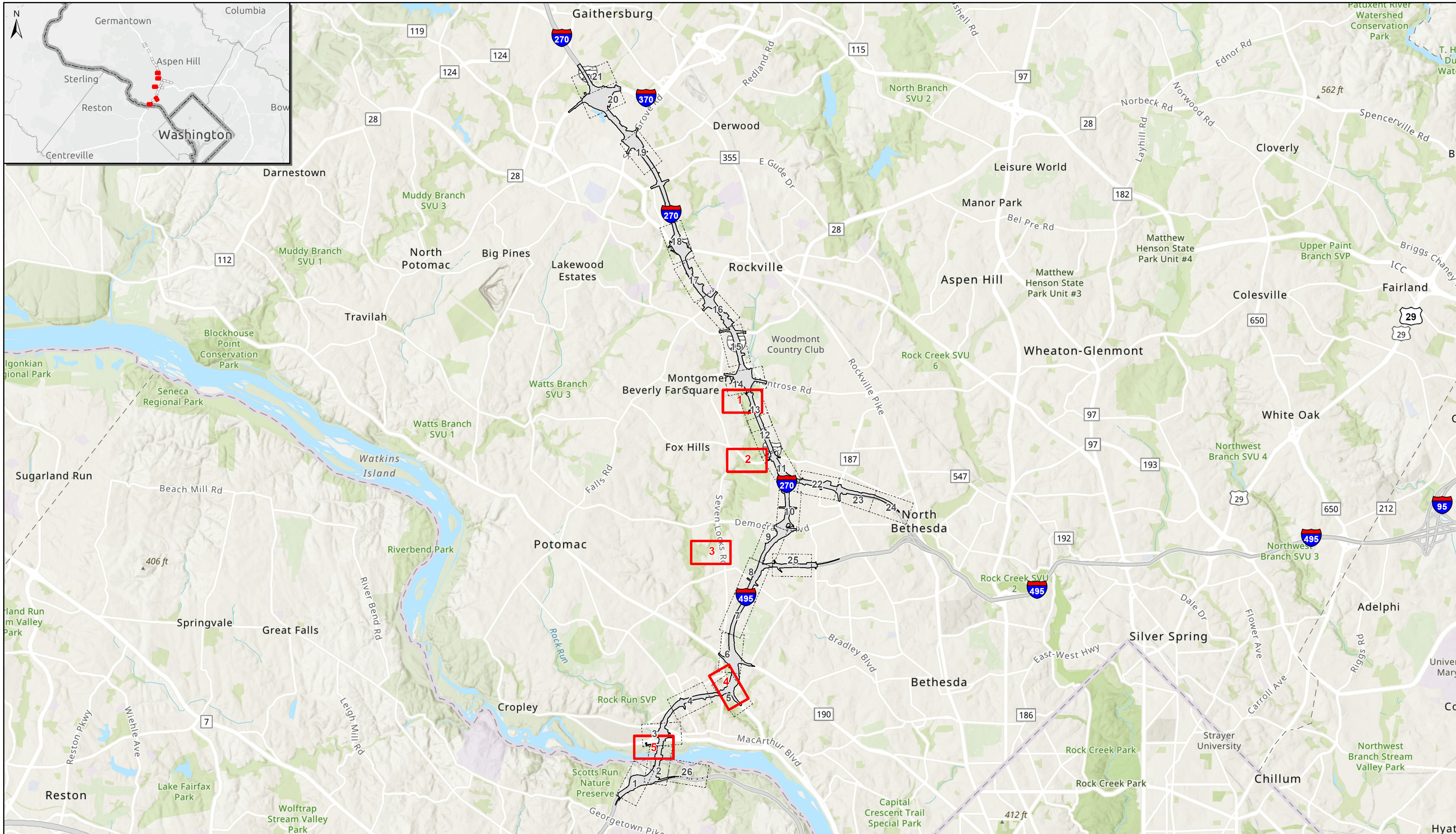
Park Mitigation
Wetland and Waterway Impact Plates

OP•LANES™
MARYLAND

I-495 & I-270 Managed Lanes Study

June 2022



- Park Mitigation Impact Plate
- Mainline Impact Plate
- MLS Mainline LOD

N W E S

June 2022

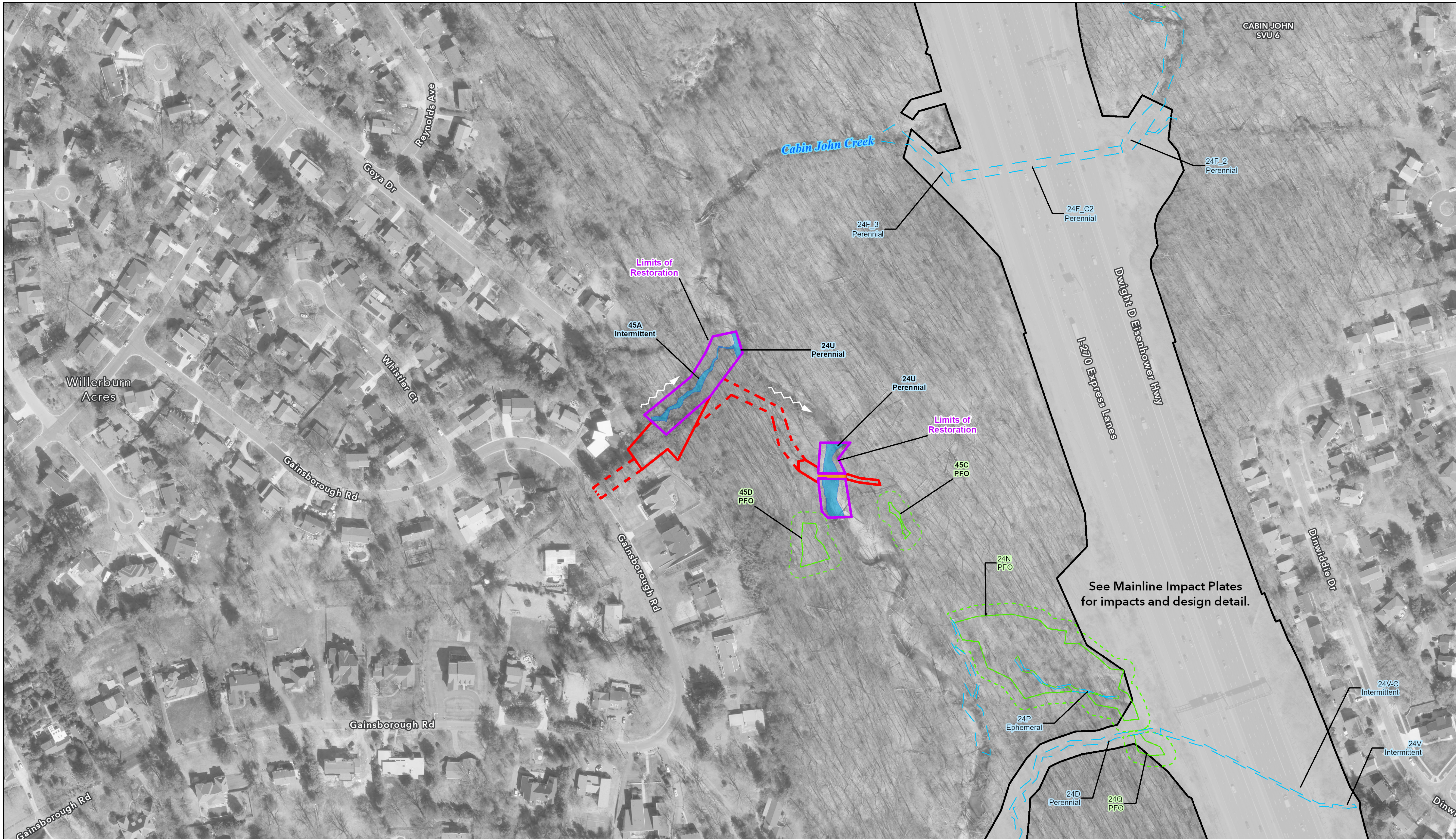
0 3,750 7,500

1 inch = 7,500 feet

Wetland and Waterway Impact Plates

Park Mitigation Key Sheet

270 495 MANAGED LANES STUDY



LOD Park Mitigation Perm
LOD Park Mitigation Temp
MLS Mainline
Limit Of Restoration
Limit Of Stabilization
Aerial Structure
Wetland Impact
Wetland Buffer Impact
Waterway Impact
FEMA Impact
Delineated Wetland
Delineated Wetland Buffer
Delineated Waterway
FEMA 100-Year Floodplain
Flow Direction

N W E S
June 2022

0 100 200
1 inch = 200 feet

Wetland and Waterway Impact Plates

Park Mitigation Impact Plate 1

495 270 MANAGED LANES STUDY

LOD Park Mitigation Perm
LOD Park Mitigation Temp
MLS Mainline
Limit Of Restoration
Limit Of Stabilization
Aerial Structure
Wetland Impact
Wetland Buffer Impact
Waterway Impact
FEMA Impact
Delineated Wetland
Delineated Wetland Buffer
Delineated Waterway
FEMA 100-Year Floodplain
Flow Direction

N W E S

June 2022

0 100 200

1 inch = 200 feet

Wetland and Waterway Impact Plates

Park Mitigation Impact Plate 2

495 270 MANAGED LANES STUDY

LOD Park Mitigation Perm
LOD Park Mitigation Temp
MLS Mainline
Limit Of Restoration
Limit Of Stabilization
Aerial Structure
Wetland Impact
Wetland Buffer Impact
Waterway Impact
FEMA Impact
Delineated Wetland
Delineated Wetland Buffer
Delineated Waterway
FEMA 100-Year Floodplain
Flow Direction

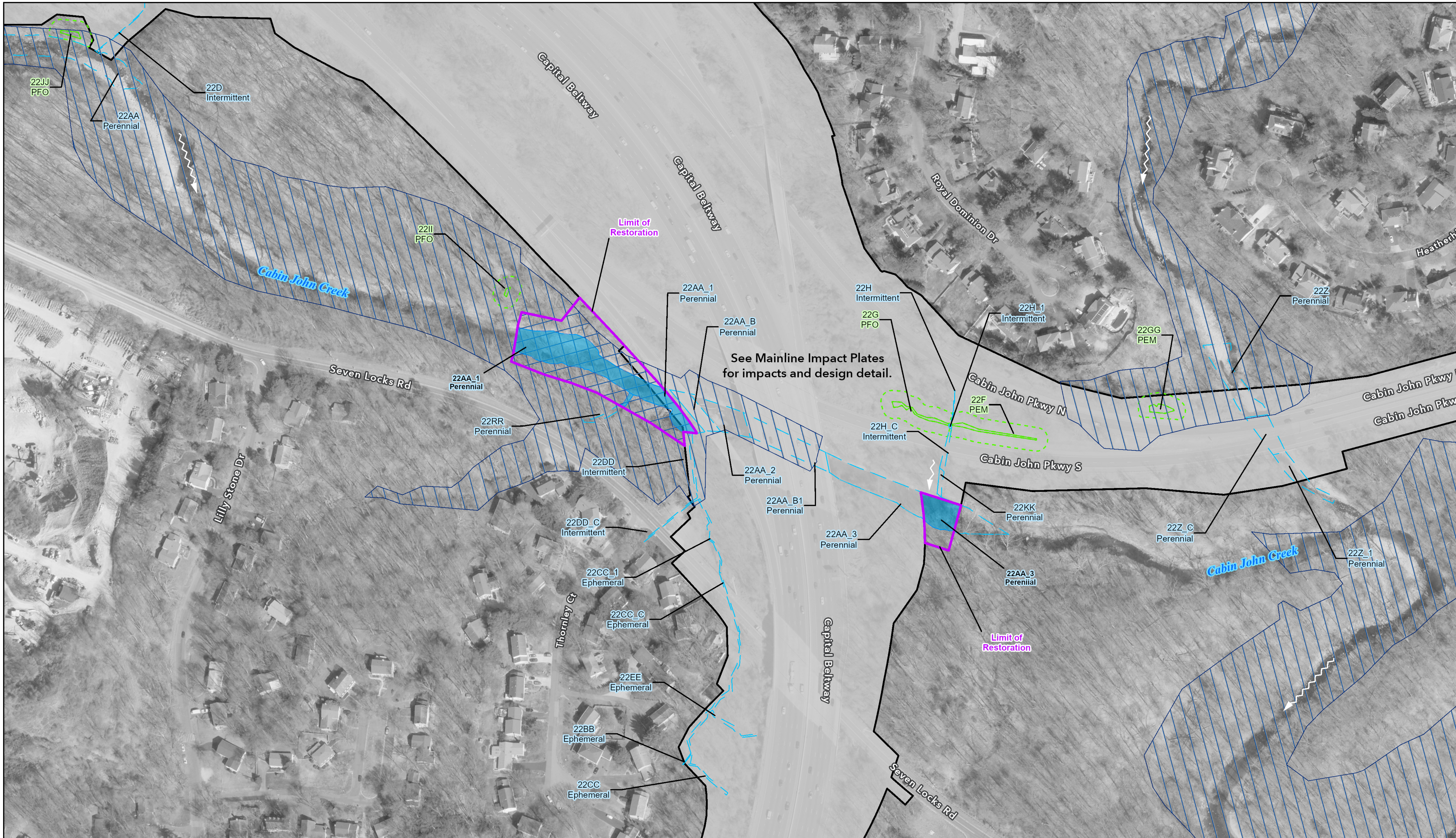
N
W E
S
June 2022

0 100 200
1 inch = 200 feet

Wetland and Waterway Impact Plates

Park Mitigation Impact Plate 3

495 270 MANAGED LANES STUDY



LOD Park Mitigation Perm
LOD Park Mitigation Temp
MLS Mainline
Limit Of Restoration
Limit Of Stabilization
Aerial Structure
Wetland Impact
Wetland Buffer Impact
Waterway Impact
FEMA Impact
Delineated Wetland
Delineated Wetland Buffer
Delineated Waterway
FEMA 100-Year Floodplain
Flow Direction

N E S W

June 2022

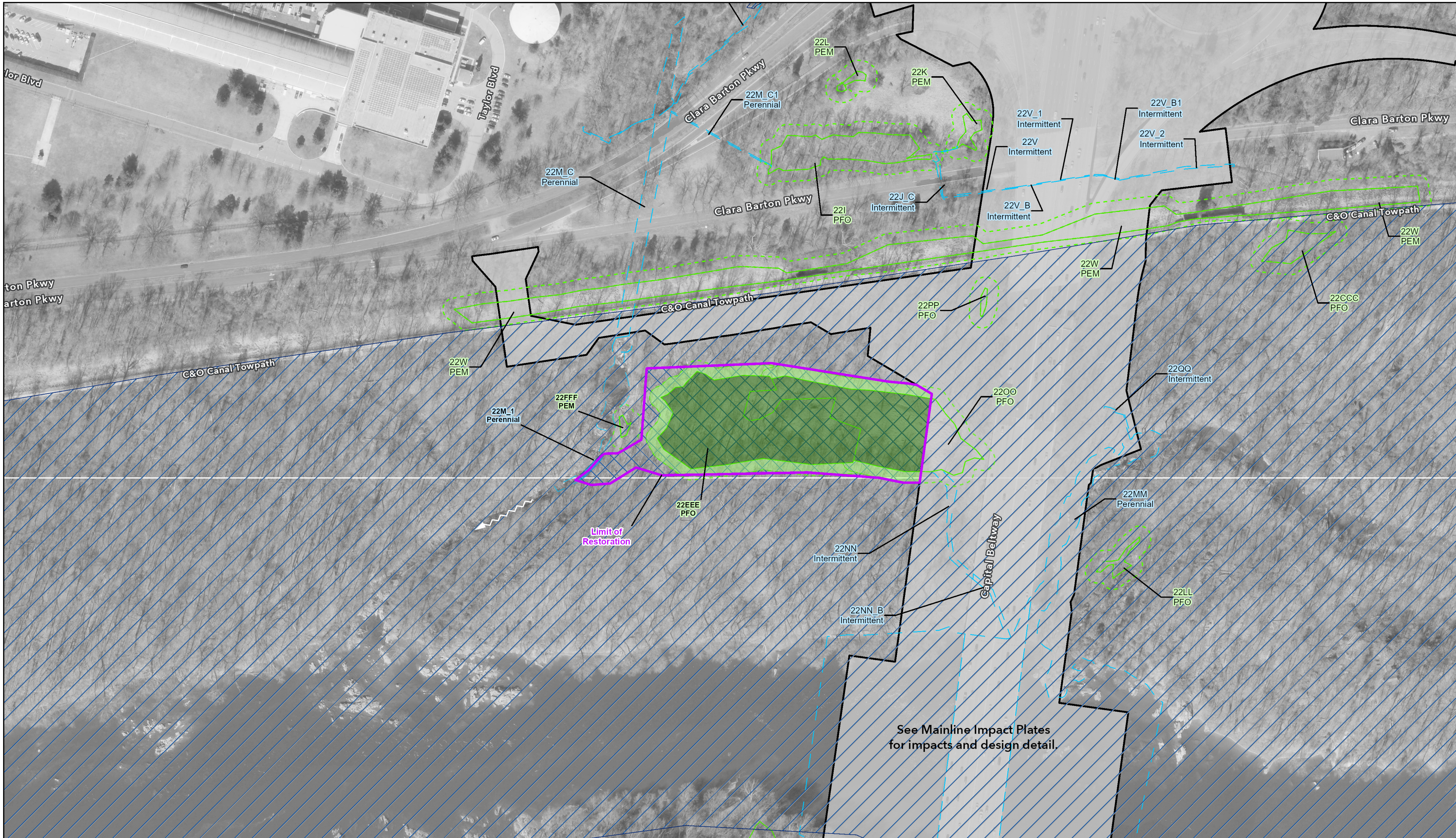
0 100 200

1 inch = 200 feet

Wetland and Waterway Impact Plates

Park Mitigation
Impact Plate 4

495 270 MANAGED LANES STUDY



LOD Park Mitigation Perm
LOD Park Mitigation Temp
MLS Mainline
Limit Of Restoration
Limit Of Stabilization
Aerial Structure
Wetland Impact
Wetland Buffer Impact
Waterway Impact
FEMA Impact
Delineated Wetland
Delineated Wetland Buffer
Delineated Waterway
FEMA 100-Year Floodplain
Flow Direction

N W E S

June 2022

0 100 200

1 inch = 200 feet

Wetland and Waterway Impact Plates

Park Mitigation Impact Plate 5

495 270 MANAGED LANES STUDY

MDE IMPACT SUMMARY TABLES
PARK MITIGATION

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MDE PARK MITIGATION IMPACT TABLES

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MDE PARK MITIGATION IMPACT TABLES

SUMMARY OF IMPACTS TO WATERWAYS

IMPACT TYPE	WATERWAYS (SF)				WATERWAYS (LF)			
	Ephemeral	Intermittent	Perennial	Total	Ephemeral	Intermittent	Perennial	Total
Permanent	0	4,779	34,153	38,932	0	657	915	1,572
Temporary	0	0	0	0	0	0	0	0
Total	**0**	**4,779**	**34,153**	**38,932**	**0**	**657**	**915**	**1,572**

NOTE: All waterways are located in the Middle Potomac-Catoctin (USGS HUC8 02070008) watershed.

SUMMARY OF IMPACTS TO WETLANDS

IMPACT TYPE	WETLANDS (SF)				WETLANDS (AC)			
	PEM	PFO	PSS	Total	PEM	PFO	PSS	Total
Permanent	0	106,485	0	106,485	0	2.44	0	2.44
Temporary	0	0	0	0	0	0	0	0
Total	**0**	**106,485**	**0**	**106,485**	**0**	**2.44**	**0**	**2.44**

NOTE: All wetlands and their buffers are located in the Middle Potomac-Catoctin (USGS HUC8 02070008) watershed.

SUMMARY OF IMPACTS TO WETLAND BUFFERS

IMPACT TYPE	WETLAND BUFFER (SF)				WETLAND BUFFER (AC)			
	PEM	PFO	PSS	Total	PEM	PFO	PSS	Total
Permanent	0	33,500	0	33,500	0	0.77	0	0.77
Temporary	0	0	0	0	0	0	0	0
Total	**0**	**33,500**	**0**	**33,500**	**0**	**0.77**	**0**	**0.77**

NOTE: All wetlands and their buffers are located in the Middle Potomac-Catoctin (USGS HUC8 02070008) watershed.

MDE PARK MITIGATION IMPACT TABLES

SUMMARY OF IMPACTS TO 100-YEAR FLOODPLAINS

ASSOCIATED WATERWAY	RELATED FEATURES	FIRM PANEL	IMPACT PLATE	HUC 8 NAME	PERMANENT IMPACT (SF)	TEMPORARY IMPACT (SF)	TOTAL IMPACT (SF)	TOTAL IMPACT (AC)
Cabin John Creek	22AA_1, 22RR	24031C0435D, 51059CO160E	4	Middle Potomac-Catoctin	48,141	0	48,141	1.11
Rock Run	22OO, 22EEE, 22M_1	24031C0435D, 51059CO160E	5	Middle Potomac-Catoctin	157,084	0	157,084	3.61
				TOTAL	**205,225**	**0**	**205,225**	**4.72**

MDE PARK MITIGATION IMPACT TABLES

PLATE 1 – WATERWAY IMPACTS

IMPACT ID	CLASSIFICATION	CHANNEL TYPE	IMPACT (SF)	IMPACT (LF)	IMPACT TYPE
24U	Perennial	Open Channel	5,568	227	Permanent
45A	Intermittent	Open Channel	2,218	279	Permanent

MDE PARK MITIGATION IMPACT TABLES

PLATE 2 – WATERWAY IMPACTS

IMPACT ID	CLASSIFICATION	CHANNEL TYPE	IMPACT (SF)	IMPACT (LF)	IMPACT TYPE
45E	Perennial	Open Channel	558	43	Permanent
45E_B	Perennial	Bridge	165	11	Permanent
45E_1	Perennial	Open Channel	775	42	Permanent

MDE PARK MITIGATION IMPACT TABLES

PLATE 3 – WATERWAY IMPACTS

IMPACT ID	CLASSIFICATION	CHANNEL TYPE	IMPACT (SF)	IMPACT (LF)	IMPACT TYPE
45F	Intermittent	Open Channel	2,561	378	Permanent

MDE PARK MITIGATION IMPACT TABLES

PLATE 4 – WATERWAY IMPACTS

IMPACT ID	CLASSIFICATION	CHANNEL TYPE	IMPACT (SF)	IMPACT (LF)	IMPACT TYPE
22AA_1	Perennial	Open Channel	21,104	387	Permanent
22AA_3	Perennial	Open Channel	5,197	84	Permanent
22RR	Perennial	Open Channel	318	38	Permanent

PLATE 4 – FLOODPLAIN IMPACTS

FLOODPLAIN	IMPACT (SF)	IMPACT TYPE
Cabin John Creek	48,141	Permanent

MDE PARK MITIGATION IMPACT TABLES

PLATE 5 – WATERWAY IMPACTS

IMPACT ID	CLASSIFICATION	CHANNEL TYPE	IMPACT (SF)	IMPACT (LF)	IMPACT TYPE
22M_1	Perennial	Open Channel	468	83	Permanent

PLATE 5 – WETLAND IMPACTS

IMPACT ID	CLASSIFICATION	IMPACT (SF)	BUFFER IMPACT (SF)	IMPACT TYPE
22OO	PFO	40,284	13,370	Permanent
22EEE	PFO	66,201	20,130	Permanent

PLATE 5 – FLOODPLAIN IMPACTS

FLOODPLAIN	IMPACT (SF)	IMPACT TYPE
Rock Run	157,084	Permanent

USACE IMPACT SUMMARY TABLE
PARK MITIGATION

OP•LANES™
MARYLAND

I-495 & I-270 Managed Lanes Study

June 2022

USACE PARK MITIGATION IMPACT TABLES

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USACE PARK MITIGATION IMPACT TABLES

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Temporary	0	0	0	0	0	0	0	0
Total	**0**	**106,485**	**0**	**106,485**	**0**	**2.44**	**0**	**2.44**

NOTE: All wetlands and their buffers are located in the Middle Potomac-Catoctin (USGS HUC8 02070008) watershed.

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