FORT GREBLE PARK STORMWATER RETROFIT PROJECT

PUBLIC STAKEHOLDER SEMI-FINAL DESIGN MEETING

December 10, 2019

PETER NOHRDEN
Landscape Architect
Capital Projects, Planning and Design
Department of Parks and Recreation
peter.nohrden@dc.gov

CECILIA LANE
Environmental Protection Specialist
Watershed Protection Division
Department of Energy & Environment
cecilia.lane@dc.gov

DPR DC DEPARTMENT OF PARKS AND RECREATION
DEPARTMENT OF ENERGY & ENVIRONMENT
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GOVERNMENT OF THE DISTRICT OF COLUMBIA
MURIEL BOWSER, MAYOR

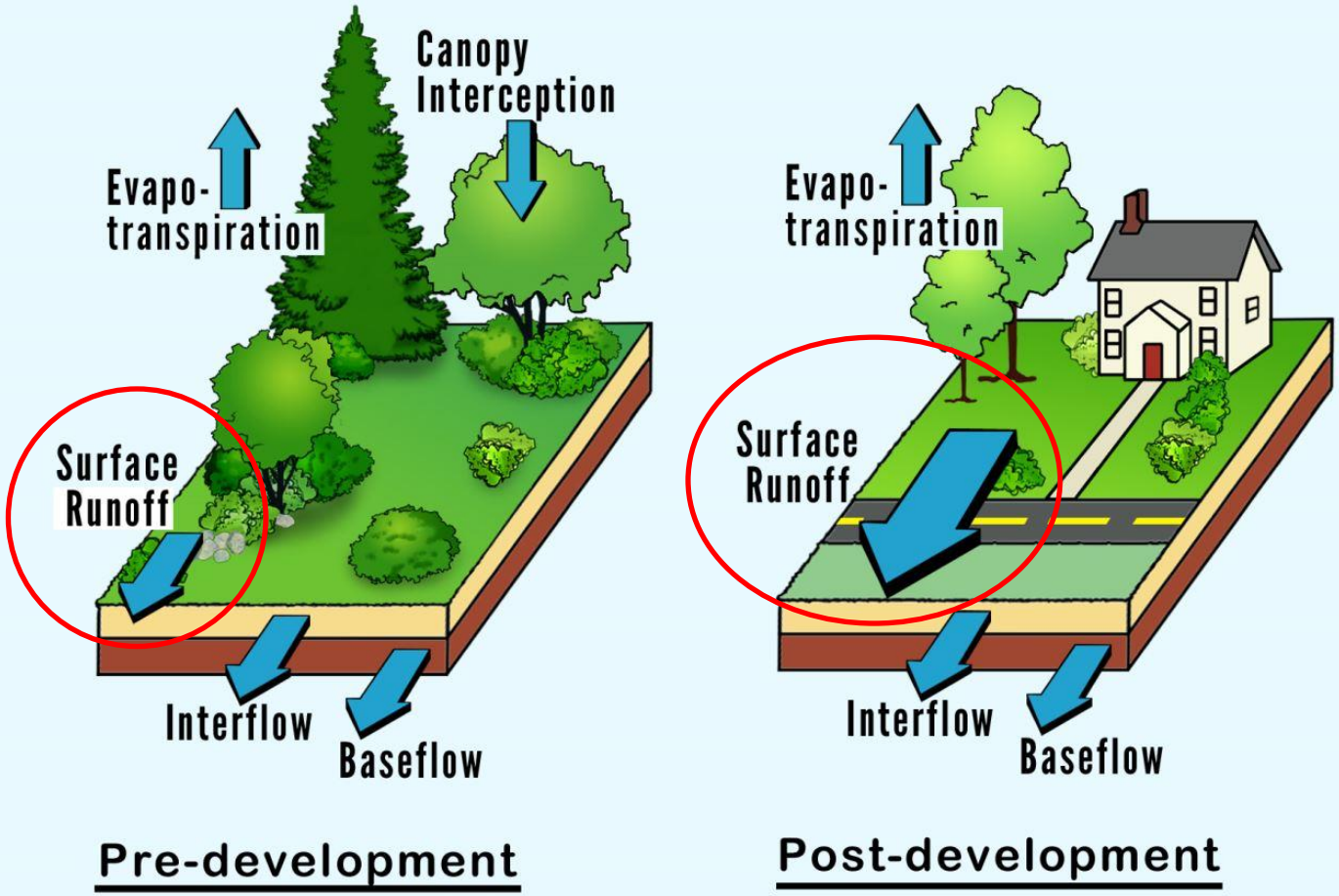
AGENDA

- Project Area & Background
- Existing Conditions
- Project Objectives
- Restoration Approach
- Project Concept
- Timeline
- FAQs
- Q&A

PROJECT LOCATION

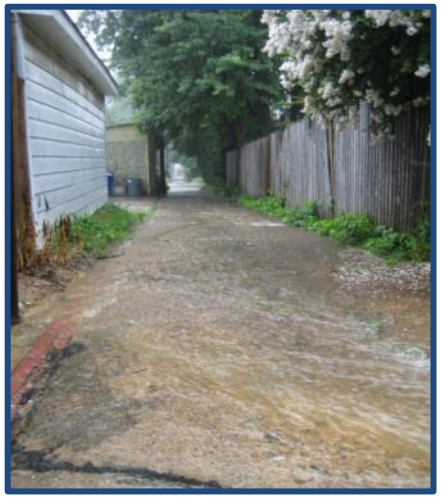
BACKGROUND

Figure 1.1 Water Balance at a Developed and Underdeveloped Site
(Source: Schueler, 1987)



Surface runoff is minimal in an undeveloped site, but dominates the water balance at a highly impervious site.

PROBLEM OF STORMWATER POLLUTION



EXISTING CONDITIONS

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- Water is drained from athletic field toward Chesapeake St. SW
- Existing, unused open space between the athletic field and the Leckie Elementary School
- Drainage issues at adjacent school property
- Good opportunity for stormwater management and ecological restoration while addressing existing problems

PROJECT OBJECTIVES

- Treat maximum amount of stormwater from the site in the most cost effective way
- Work only on District land
- Minimal impacts to the community
- Development of a community amenity
- Educational opportunities

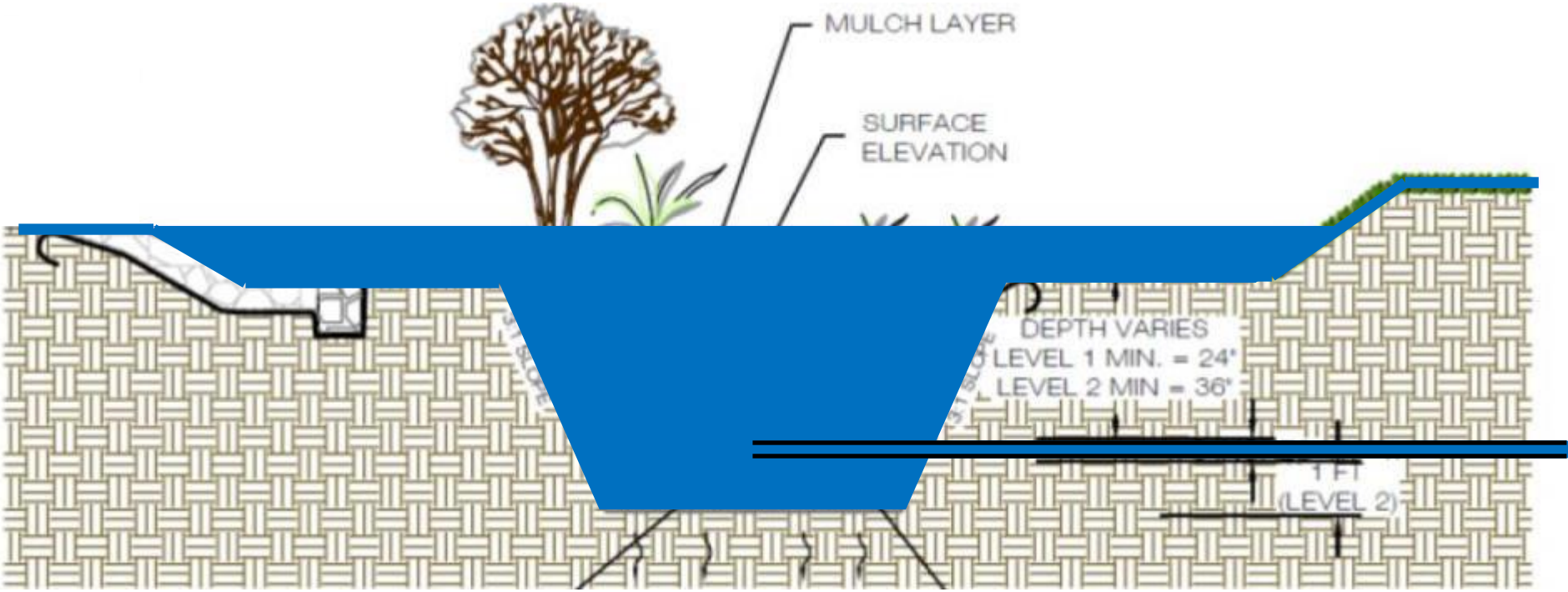
RESTORATION APPROACHES

Most stormwater practices all work the same way: "they collect stormwater runoff and use or mimic natural processes that result in the infiltration, evapotranspiration or use of stormwater in order to protect water quality and associated aquatic habitat" (EPA).

Slow it down, Spread it Out, Soak it In !

BIORETENTION

BIORETENTION: HOW IT WORKS



BIOSWALES

PERMEABLE PAVEMENT

PROJECT CONCEPT

SITE CONTEXT MAP

TREE IMAGES


Pawpaw (ASI TRI)


Heritage River Birch (BET HER)


Shagbark Hickory (CAR OVA)


American Persimmon (DIO VIR)

SHRUB, PERENNIAL & GRASS IMAGES


Brilliant Chokeberry (ARO BRI)


Hummingbird Sweetspire (CLE HUM)


Buttonbush (CEP OCC)


Sparkleberry Winterberry (ILE SPA)


Little Henry Virginia Sweetspire (ITE LIT)

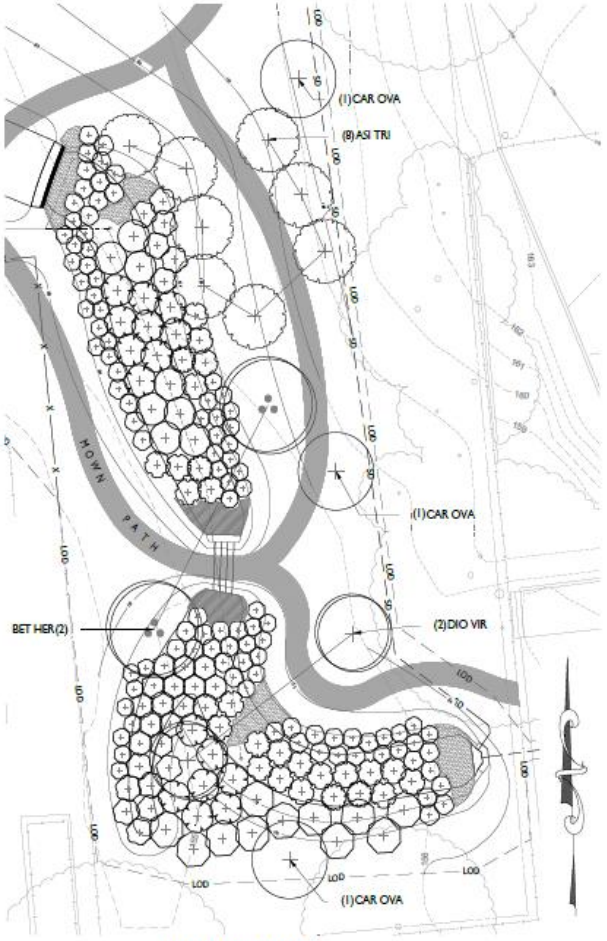

Gro-Low Fragrant Sumac (RHU GRO)


Elderberry (SAM CAN)


Winterthur Smooth Witherod (VIB WIN)


Shenandoah Switch Grass (PAN SHE)


Blue Flag Iris (IRI VER)



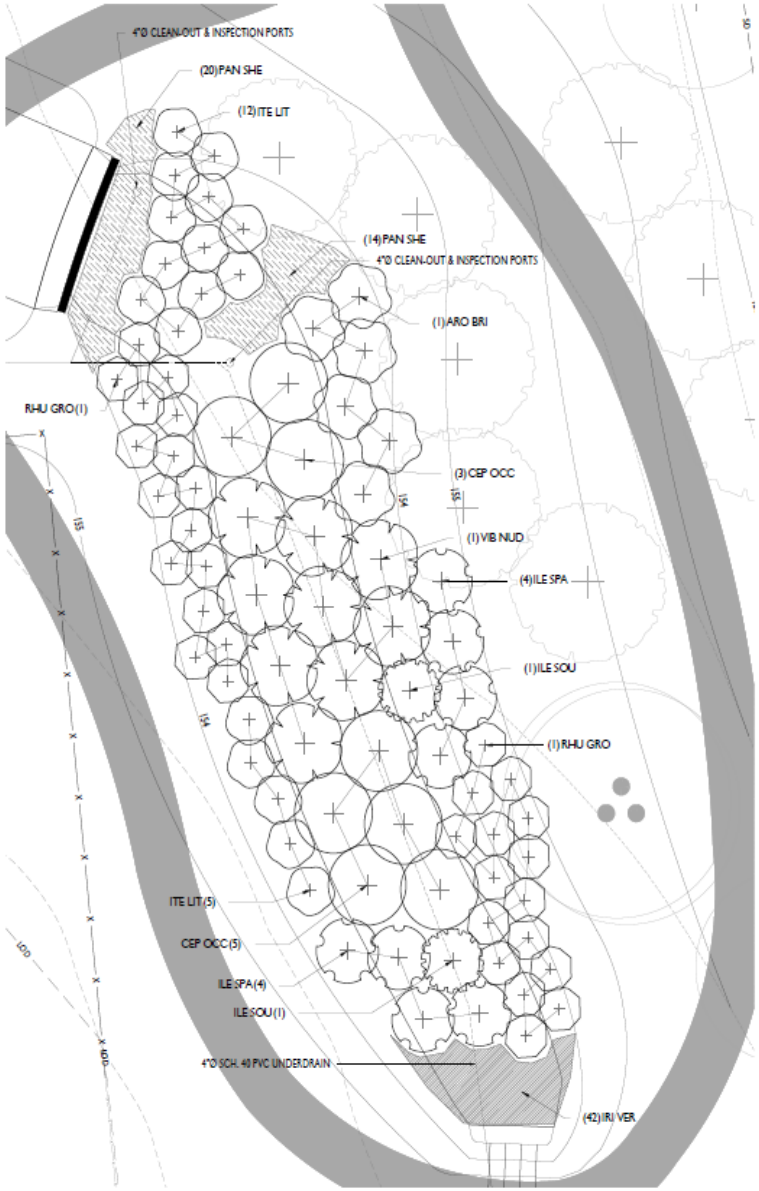
TREE PLANTING PLAN
SCALE: 1"=10'

PLANT SCHEDULE TREE PLAN

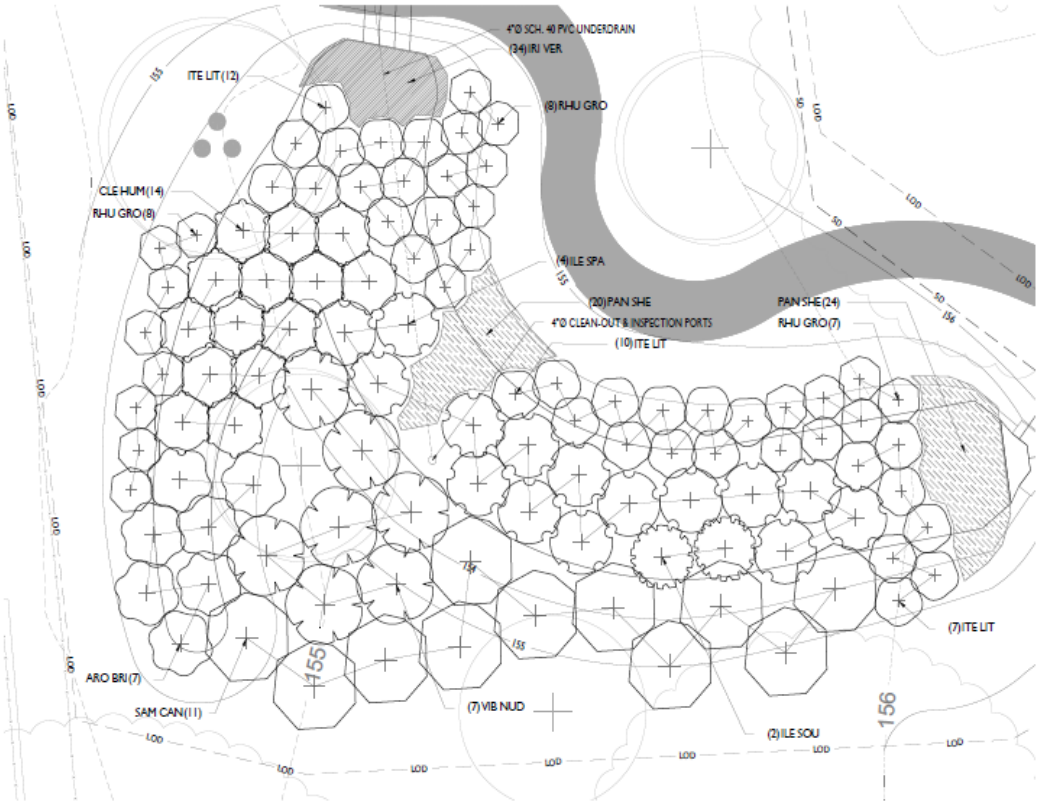
TREES	QTY	BOTANICAL / COMMON NAME	SIZE	CONDITION	REMARKS
ASI TRI	8	Asimina triloba / Pawpaw	5-6'	Cont. or B&B	
BET HER	2	Betula nigra 'Heritage' / Heritage River Birch	8'-10'	B&B	3-5 Stems
CAR OVA	3	Carya ovata / Shagbark Hickory	2-2.5" cal.	B&B	
DIO VIR	2	Diospyros virginiana / Common Persimmon	6-8'	Cont. or B&B	

SHRUBS	QTY	BOTANICAL / COMMON NAME	SIZE	CONDITION	REMARKS
ARO BRI	13	Aronia arbutifolia 'Brilliantissima' / Brilliant Red Chokeberry	24"-30"	Cont.	
CEP OCC	8	Cephalanthus occidentalis / Buttonbush	24"-30"	Cont.	
CLE HUM	14	Clethra alnifolia 'Hummingbird' / Hummingbird Sweetspire	24"-30"	Cont.	
ILE SOU	4	Ilex verticillata 'Southern Gentleman' / Southern Gentleman Winterberry Holly	24"-30"	Cont.	Alt: Apollo
ILE SPA	23	Ilex verticillata 'Sparkleberry' / Sparkleberry Winterberry	24"-30"	Cont.	
ITE LIT	46	Itea virginica 'Little Henry' TM / Little Henry Virginia Sweetspire	3 gal	Cont.	
RHU GRO	55	Rhus aromatica 'Gro-Low' / Gro-Low Fragrant Sumac	3 gal	Cont.	
SAM CAN	11	Sambucus canadensis / Elderberry	24"-30"	Cont.	
VIB NUD	16	Viburnum nudum 'Winterthur' / Winterthur Smooth Witherod	24"-30"	Cont.	

GROUND COVERS	QTY	BOTANICAL / COMMON NAME	SIZE	CONDITION	SPACING	REMARKS
IRI VER	76	Iris versicolor / Blue Flag Iris	1 qt.	Pot	12" o.c.	
PAN SHE	78	Panicum virgatum 'Shenandoah' / Switch Grass	1 qt.	Pot	18" o.c.	



PLANTING PLAN: BMP 2
SCALE: 1/4"=1'



PLANTING PLAN: BMP 1
SCALE: 1/4"=1'

PROJECT TIMELINE

- May 2019: contract awarded
- May – August 2019: field assessment (topographic survey, geotechnical investigations etc.)
- August – January 2020: design development
- 3 public meetings:
  - Concept designs on 9/5/19
  - Semi-final designs (~65%): 12/10/19
  - Construction kickoff meeting (timeline): TBA
- May 2020: construction complete*
- One year of post-construction maintenance included in contract

FAQs

- How do we find our project sites?
  - Enthusiastic landowners!
  - Funding sources
  - Large areas of untreated impervious cover
  - More impactful locations
- What can I do?
  - RiverSmart Homes
    - Rain Gardens
    - Permeable Pavers
    - Rain Barrels
    - Tree Planting
    - "BayScaping"

RIVERSMART
DEPARTMENT OF ENERGY AND ENVIRONMENT

QUESTIONS