



# Trees as Green Stormwater Infrastructure

PROJECTS IN ATLANTA AND  
BEYOND

ANDREA GRECO, PLA, ISA CERTIFIED ARBORIST      POND & CO.



# EMORY UNIVERSITY CAMPUS

## WOODRUFF CIRCLE SHUTTLE AREA

ATLANTA, GA



*Designed by Kimley-Horn*





Rochelle L. Schmidt, PharmD

Emory Univeristy  
School Medcn

Emory Woodruff  
Memorial Research...

Department of  
Biomedical Engineering

Emory University  
School of Medicine

Emory University Psy

Clifton Rd

Uppergate Dr

Clifton Rd

Pierce Dr NE

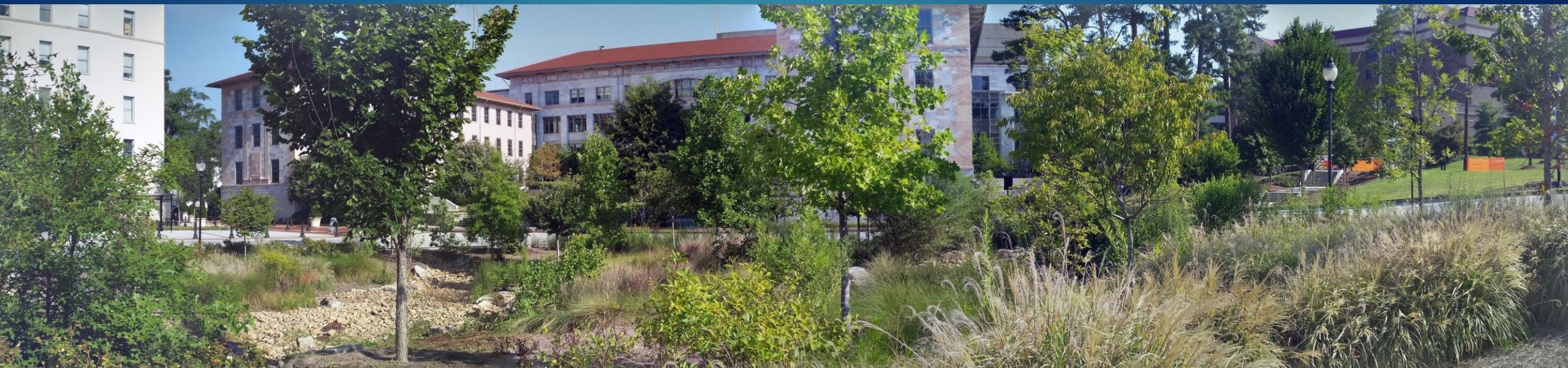
Pierce Dr NE

Woodruff

Woodruff Ctr

Woodruff Ck













# EMORY UNIVERSITY CAMPUS

## 2 EAGLE ROW DORMITORY

ATLANTA, GA

*Designed by Jay Wansley, PLA*





Management Dr

Facilities Management Dr

Dooley's Den



Water Tower Pl

Eagle Row

Eagle Row

Eagle Row

Means Dr

Emory -  
Longstreet-Means Hall



Asbury Cir

Hamilton Holmes Hall



Means Dr

McDonough  
Field













2 Eagle Row

Office of Residence Life & Housing









# (FORMER) SIMMONS HEADQUARTERS

PEACHTREE CORNERS, GA

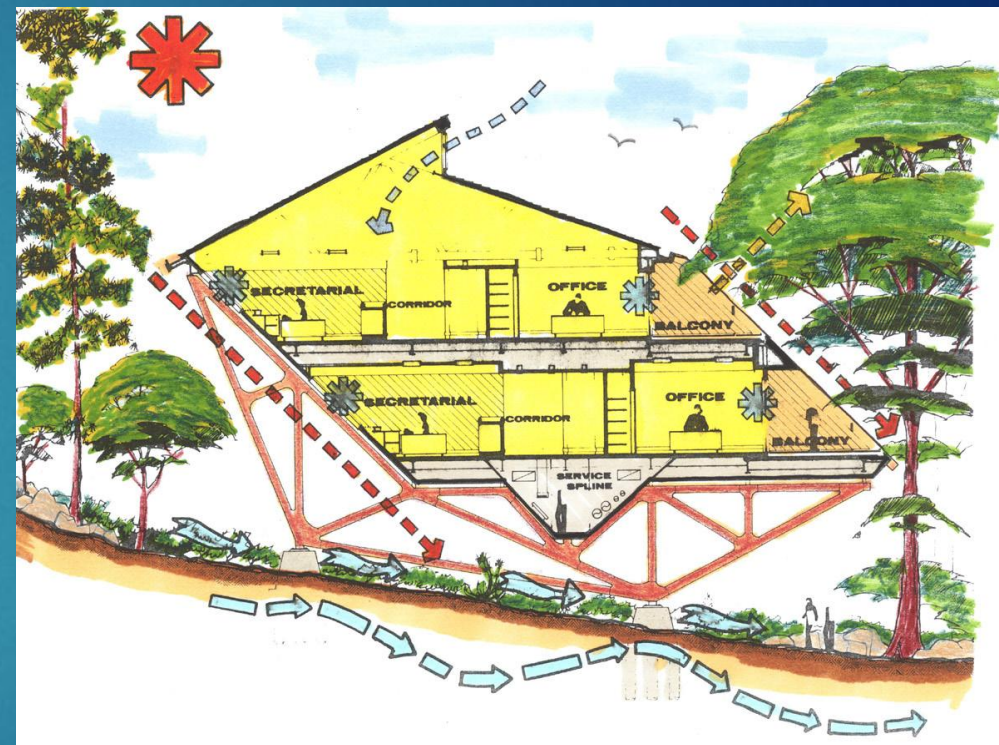
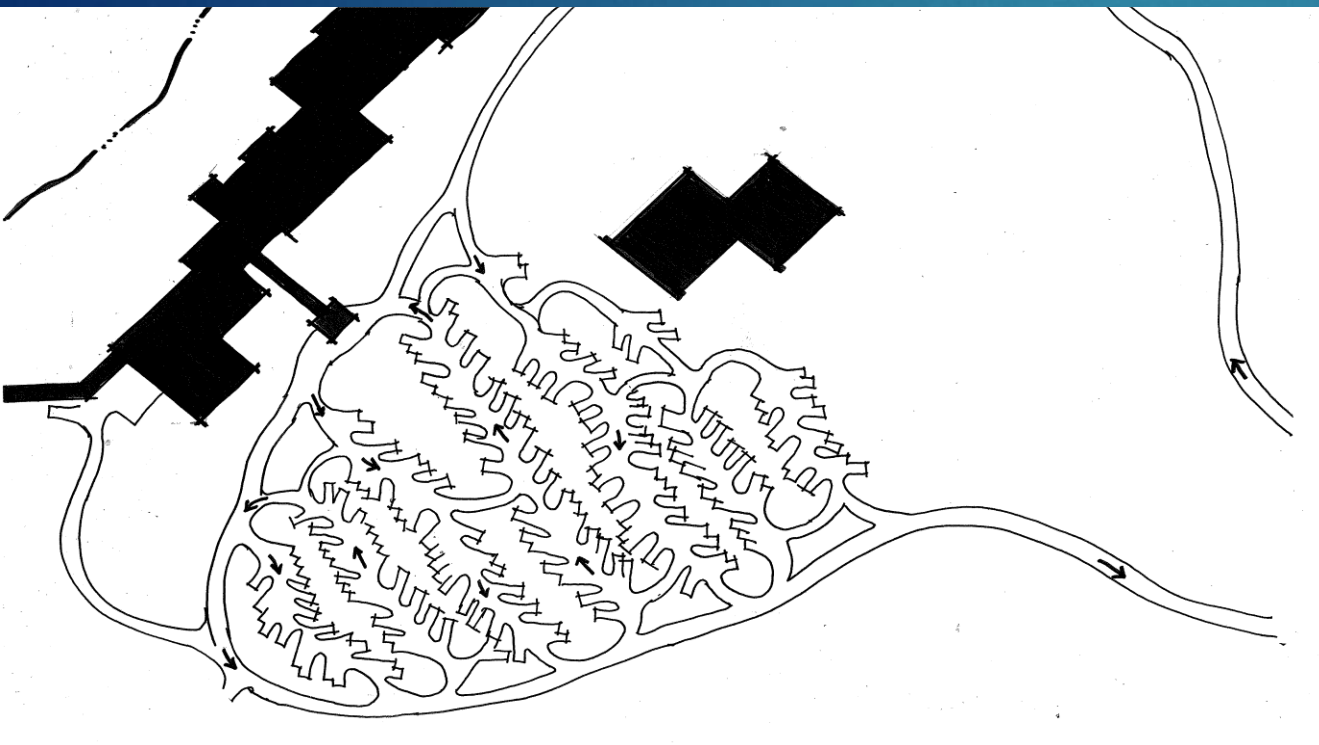
Robert Marvin, Landscape Architecture

Images courtesy of Mack Cain, Mack Cain Landscape Architecture



# (FORMER) SIMMONS HEADQUARTERS

## PEACHTREE CORNERS, GA



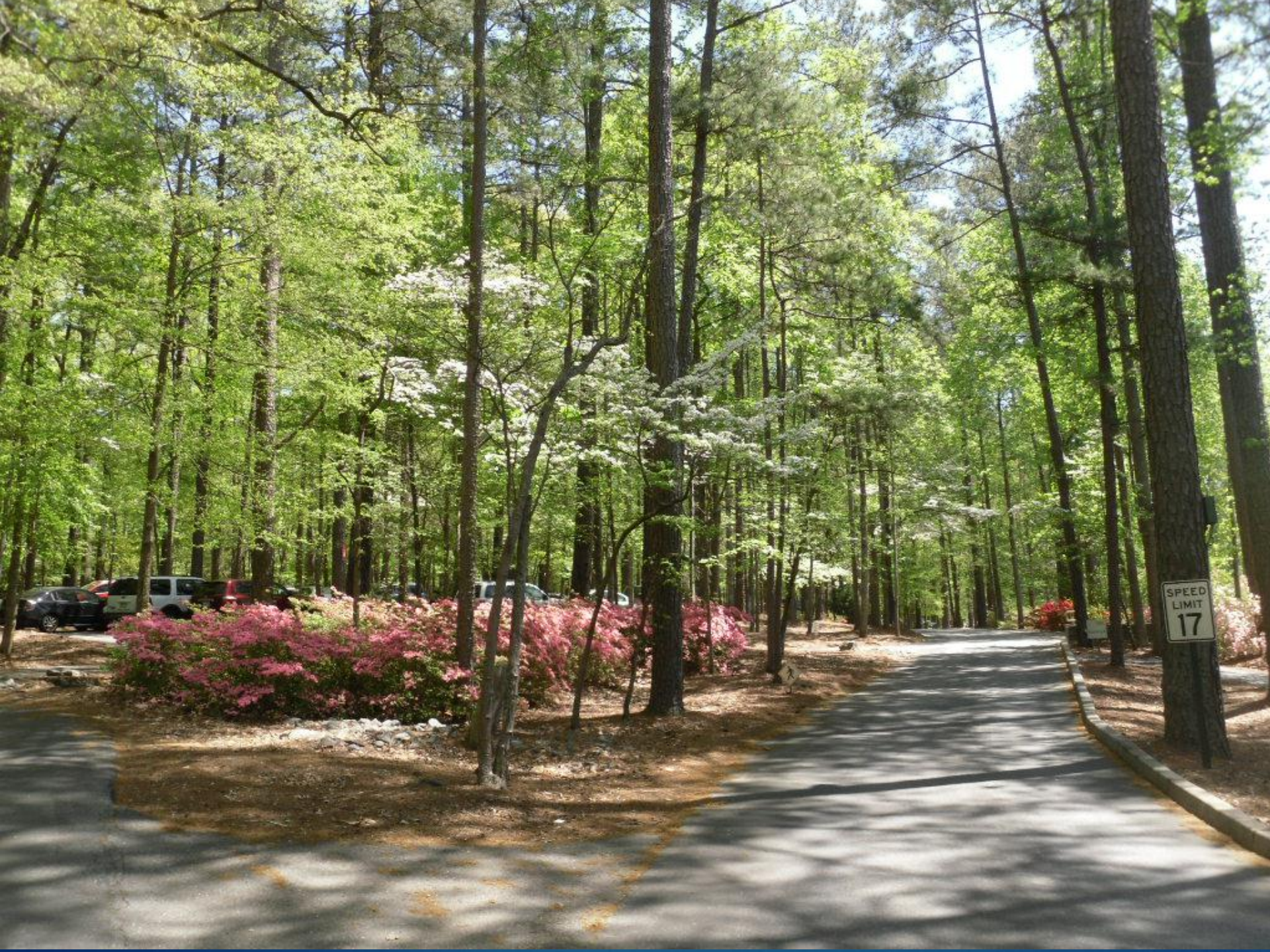












SPEED  
LIMIT  
17



















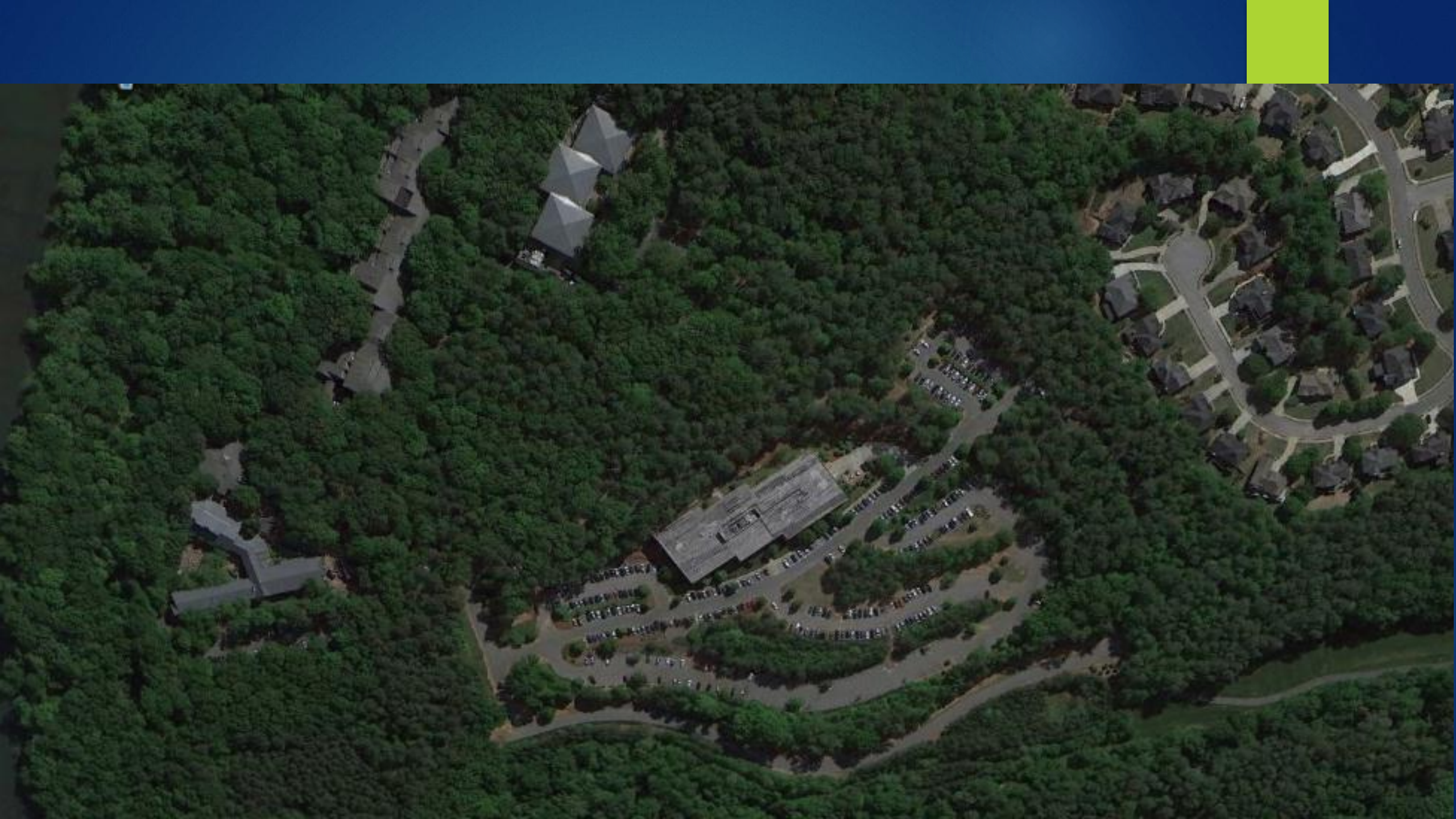
















# NESHAMINY CREEK STORMWATER ORDINANCE

WARRINGTON  
TOWNSHIP, BUCKS  
COUNTY, PA



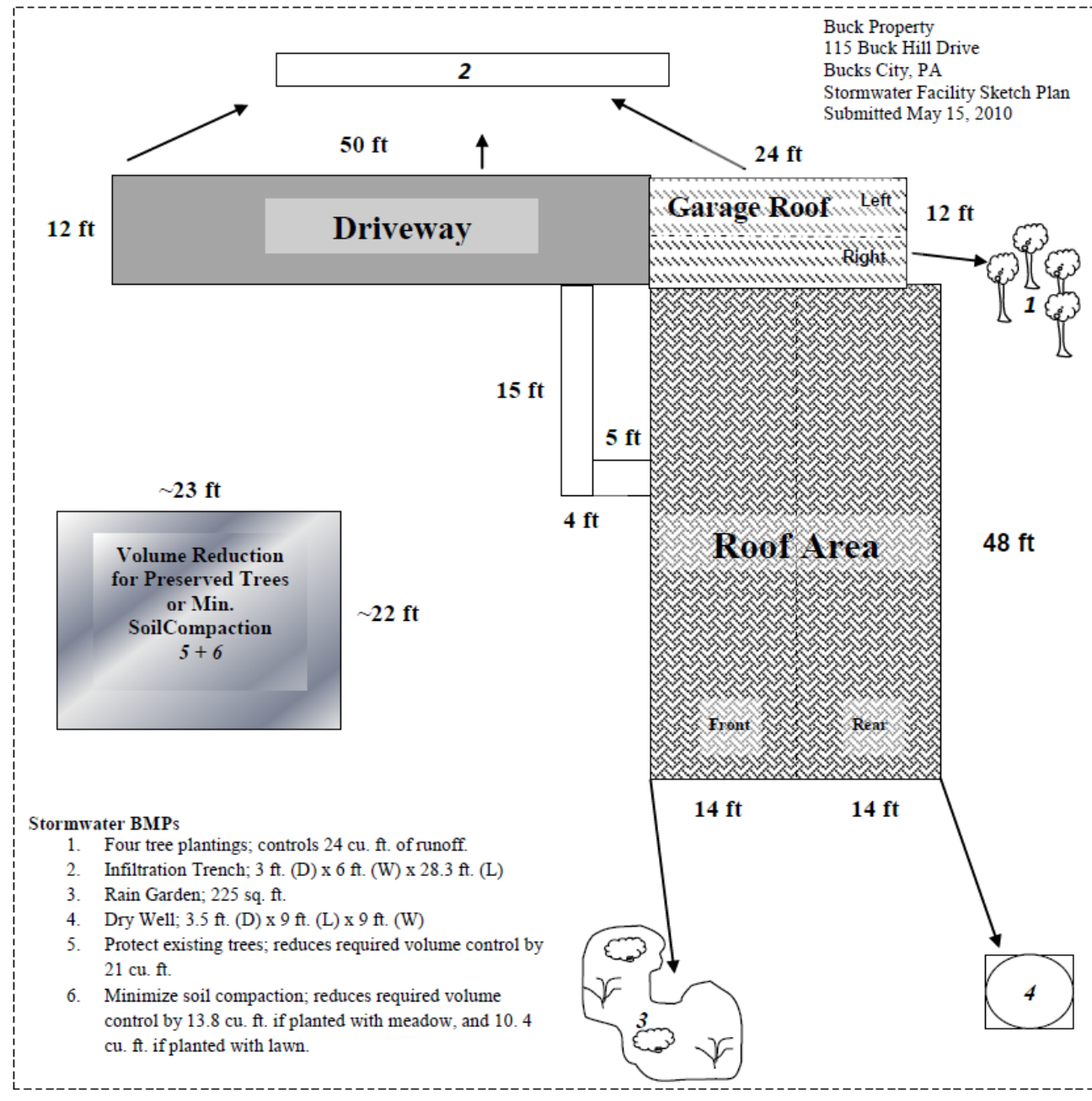


# APPLIES TO

- Projects with  
Less than 5,000 sf of  
impervious surface and  
<1 acre earth  
disturbance



Figure 1: Sample Site Sketch Plan



#### Stormwater BMPs

1. Four tree plantings; controls 24 cu. ft. of runoff.
2. Infiltration Trench; 3 ft. (D) x 6 ft. (W) x 28.3 ft. (L)
3. Rain Garden; 225 sq. ft.
4. Dry Well; 3.5 ft. (D) x 9 ft. (L) x 9 ft. (W)
5. Protect existing trees; reduces required volume control by 21 cu. ft.
6. Minimize soil compaction; reduces required volume control by 13.8 cu. ft. if planted with meadow, and 10.4 cu. ft. if planted with lawn.

- Reduce runoff by planting new trees or preserving existing trees
  - Volume reduction determine the cubic feet to be directed to the area under the tree canopy for infiltration
- OR
- Determine a volume reduction credit to reduce the size of the planned structural BMPs



# WHAT COUNTS?

- Existing trees 4" Caliper or greater
- Existing tree canopy within 100' of impervious surfaces
- New trees 6' in ht/min 2" caliper
- Trees must be native to Pennsylvania
- When used as volume control, runoff from impervious areas to be directed to drain under tree canopy



# IF YOU WANT TO SEE THE CALCS

i.e.  $(500 \text{ sq. ft.} \times 0.5 \text{ inches} \times (1 \text{ foot} / 12 \text{ inches})) = 21 \text{ cu. ft.}$

GO TO:

[www.warringtontownship.org/download/Planning and Development/WTNC Watershed Ordinance Act 167/WTNC Watershed Act 167 Ordinance APPENDIX I.pdf](http://www.warringtontownship.org/download/Planning%20and%20Development/WTNC%20Watershed%20Ordinance%20Act%20167/WTNC%20Watershed%20Act%20167%20Ordinance%20APPENDIX%20I.pdf)