

Acknowledgments

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Outline

- Introduction
- Background
- Methodology
- Results
- Summary

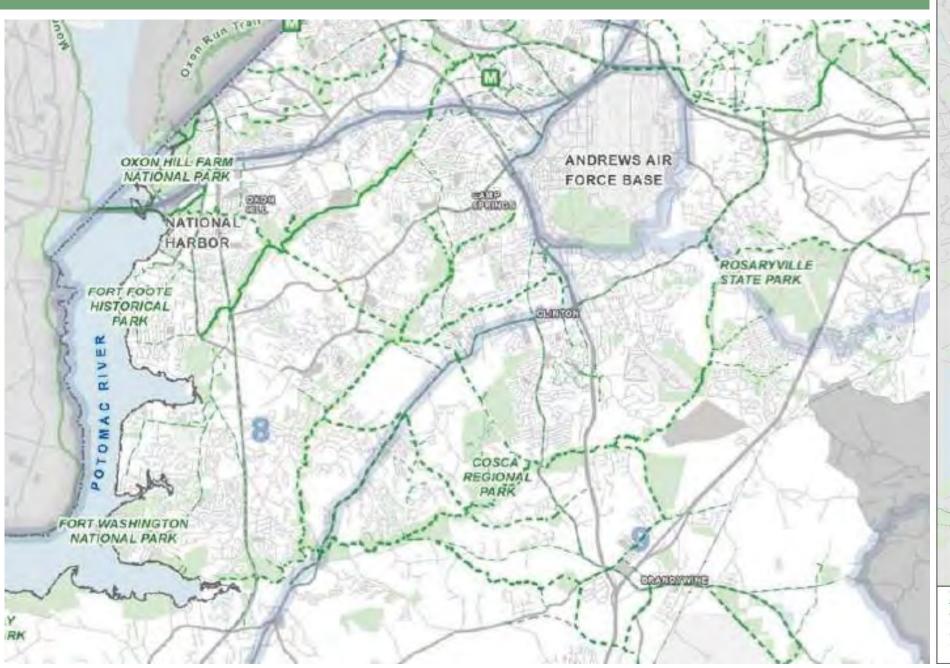
Project Goals

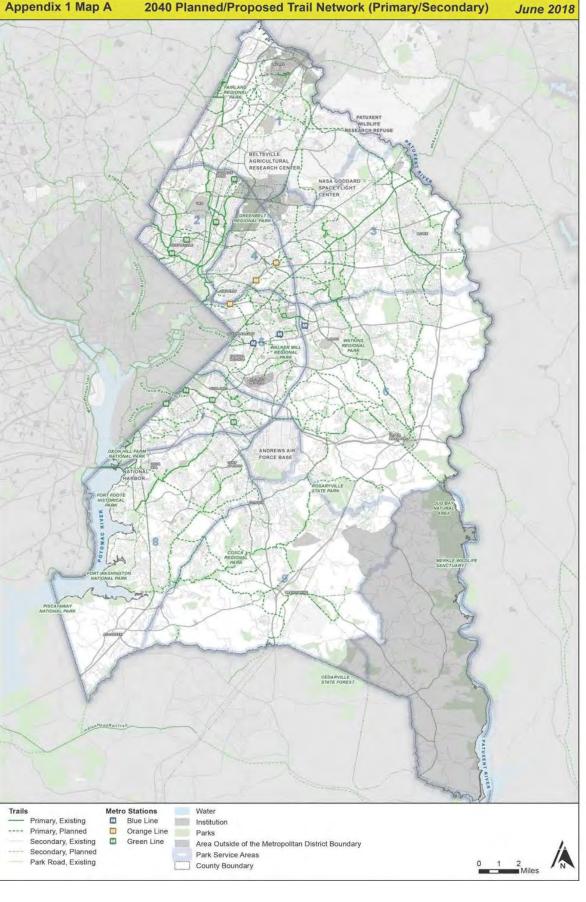
- 1) research and document the inventory, programming information, and composite analysis,
- 2) to inform and create envisioning design and planning products, and
- 3) to assist in the overall initiative of greenway systems. This project supports these ongoing efforts by greenway stakeholders

Studio Goals

- Student Learning Outcomes
 - ☐ Intermediate Proficiency in GIS
 - Creating new features
 - Analysis
 - Map Communication
 - ☐ Reiteration of Rational Design Process using GIS
 - Project Format Learning Models
 - Group Project
 - Assessment and alternate to planned Piscataway Trail
 - Ownership of Ideation to Production
 - Create envisioning design and planning products
 - Theory: Greenways

Location

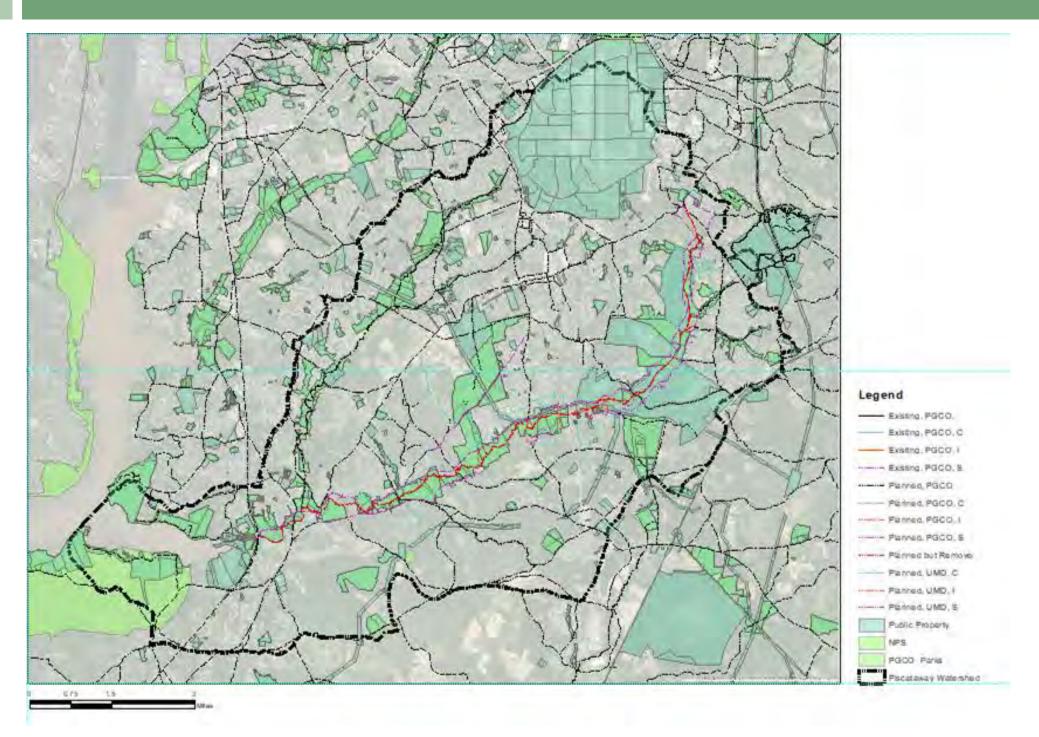








Location: Piscatawy Watershed

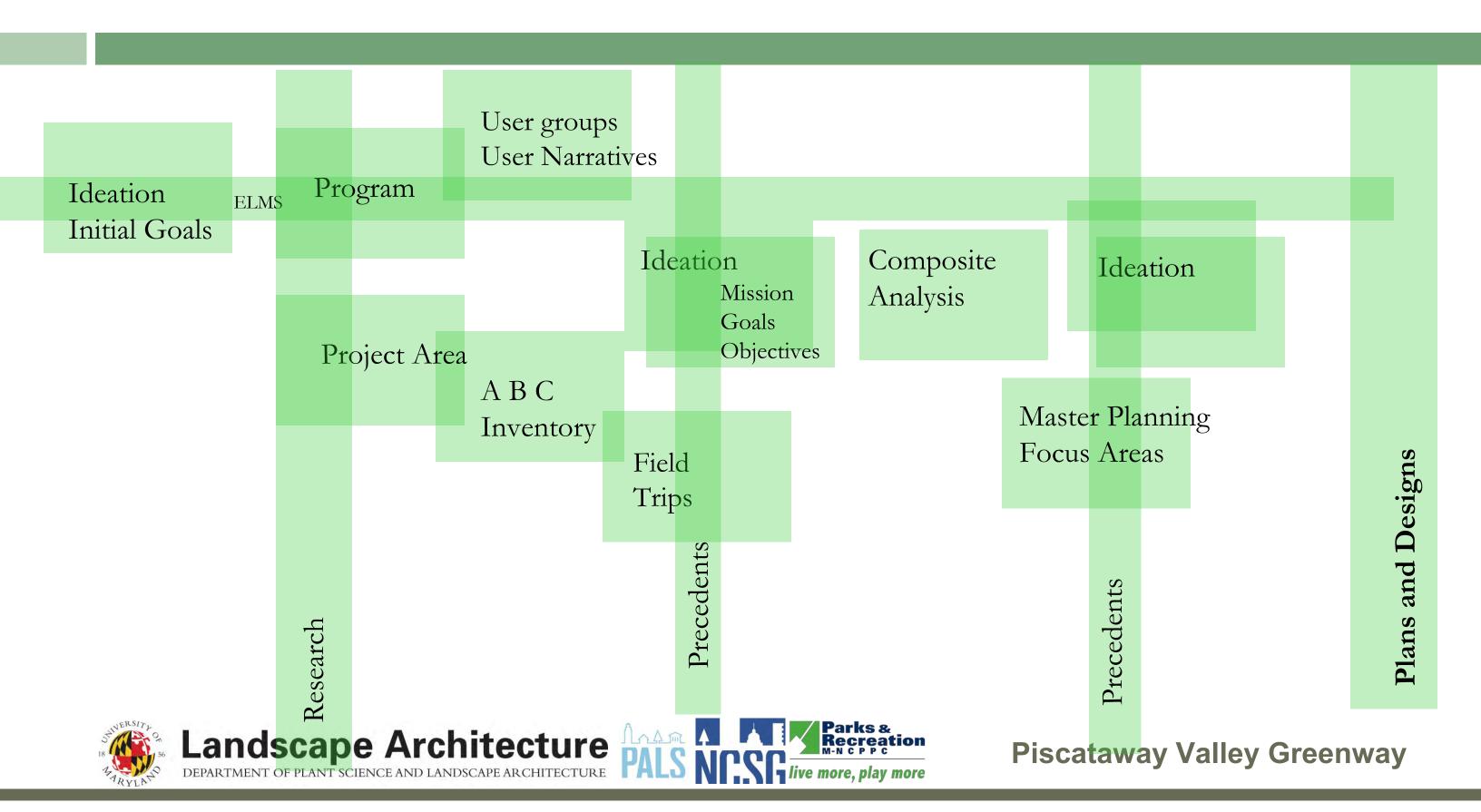




Methodology

- Ideation and Research
- Inventory Approach: Context and Group Site Visits
- Programming
- Composite Analysis: Opportunities and Constraints
- Ideation Again
- Master Plans and Focus Area
- Presentation

Methodology: Process - Iterative



Research

2019_LARC_642_References and Report Documents

Documents for Reporting Out

Using the <u>template</u> approvided, summarize information from the document that you think will be helpful for our understanding of the issues or the project scope. Include, where appropriate, the outline of the entire document and the information. Try to answer these questions:

- 1. What are the objective of the document?
- 2. What are some of the most important data that help us understand the issues of hiking, walking and biking.?
- 3. What are some items / information you think might be relevant / useful in thinking about our project?

Limit you slide number to 5 (min) to 15 (max) but they can be very dense as long as readable.

Here are the assignments:

1. PGCO

- 1. Lauren (5 slides) 2009. Part 2: Trails, Bikeways and Pedestrian Mobility. 2009. PG County Master Plan of Transportation 🚵. 33 pages
- 2. Chris (10 slides) 2014. Watershed Existing Condition Report for the Piscataway Creek Watershed 🙉 . 86 pages.
- 3. Yuki (10 slides) 2015. Piscataway Creek Watershed Restoration Plan. 🛅 145 pages.
- 4. Alison (10 slides) 2013 Sub region5 Master Plan a. 212 pages.
- 5. Emma (10 slides) 2014 Plan 2035
- 6. Plan began in 2015, was presented for public review in late 2018.

Overview, links to maps, appendix: (Links to an external site.) http://www.pgparks.com/273/Strategic-Trails-Plan (Links to an external site.)

PDF of plan summary: (Links to an external site.)http://www.pgparks.com/DocumentCenter/View/9124/Part-1-Plan-Summary-PDF

7.

2. Maryland

- 1. Lauren (5 slides) 2010. Maryland Trails: A Greener Way to Go. 🖻 2010. MD DNR. 19 pages.
- 2. Jonathan (10 slides) 2019. 2040 Maryland. 2019 🚵. Bicycle and Pedestrian Master Plan 2019 Update. 48 pages.

3. **USA**

- William (10 slides) <u>Bicycling and Walking in the United States.</u> 2012 . Alliance for Biking & Walking (Benchmarking Report). 248 pages. See pages 8-183.
- 2. Dangerous by Design. 2019 . Smart Growth America. 35 pages.

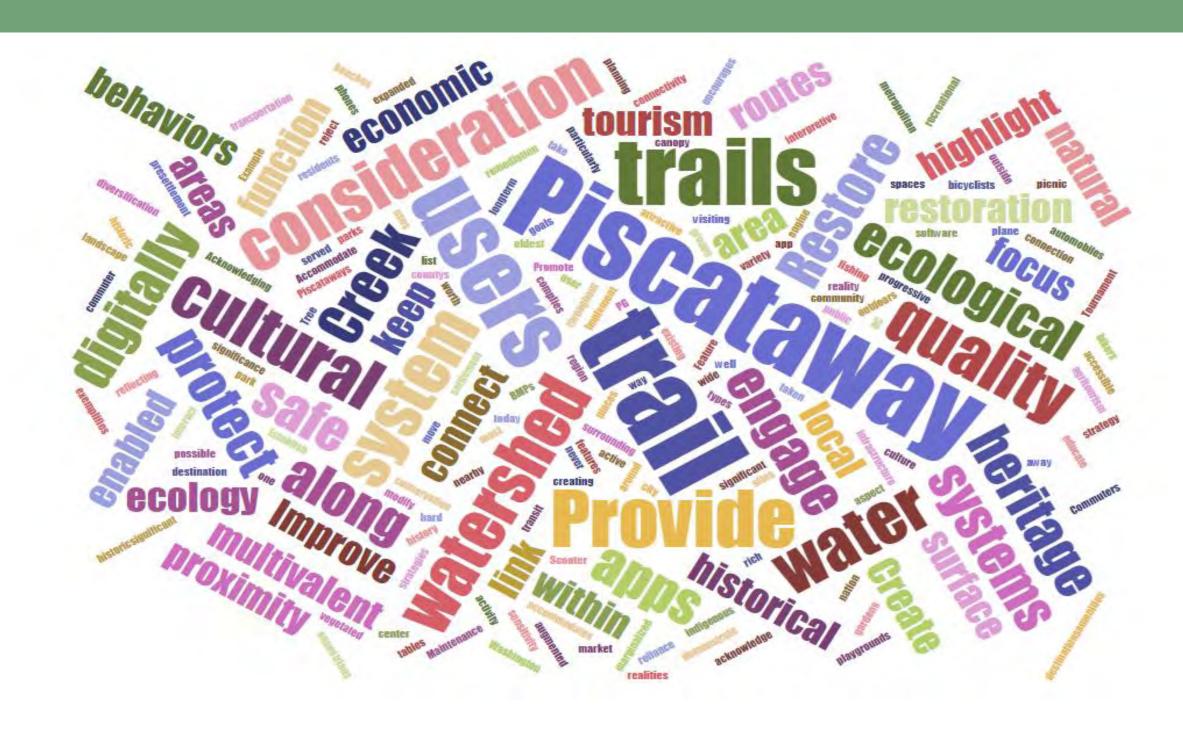
4. Links to Design Standards

- Designing Sidewalks and Trails for Access: Part 1
- Designing Sidewalks and Trails for Access, Part 2
- ABA Accessibility Standards: Chapter 4: Accessible Routes
- AASHTO Bike Guide (new)



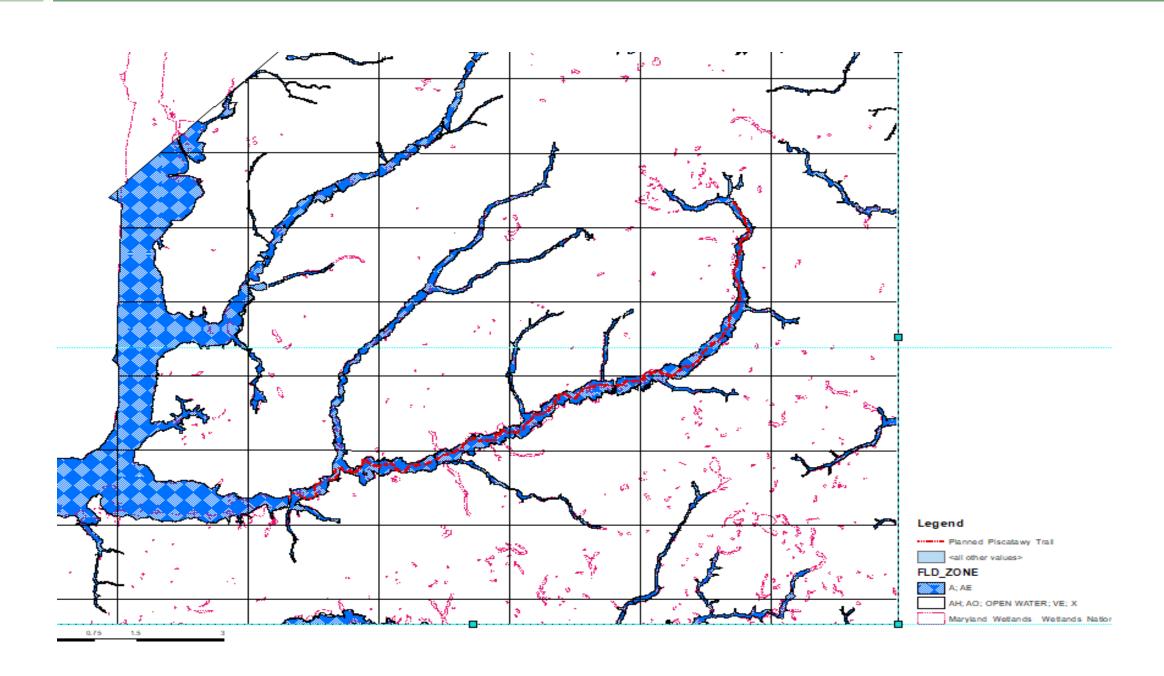


Goal Setting: Word Cloud from Exercise





Inventory Mapping: Ex. Floodplains



Opportunity and Constraint Mapping



Field Trips

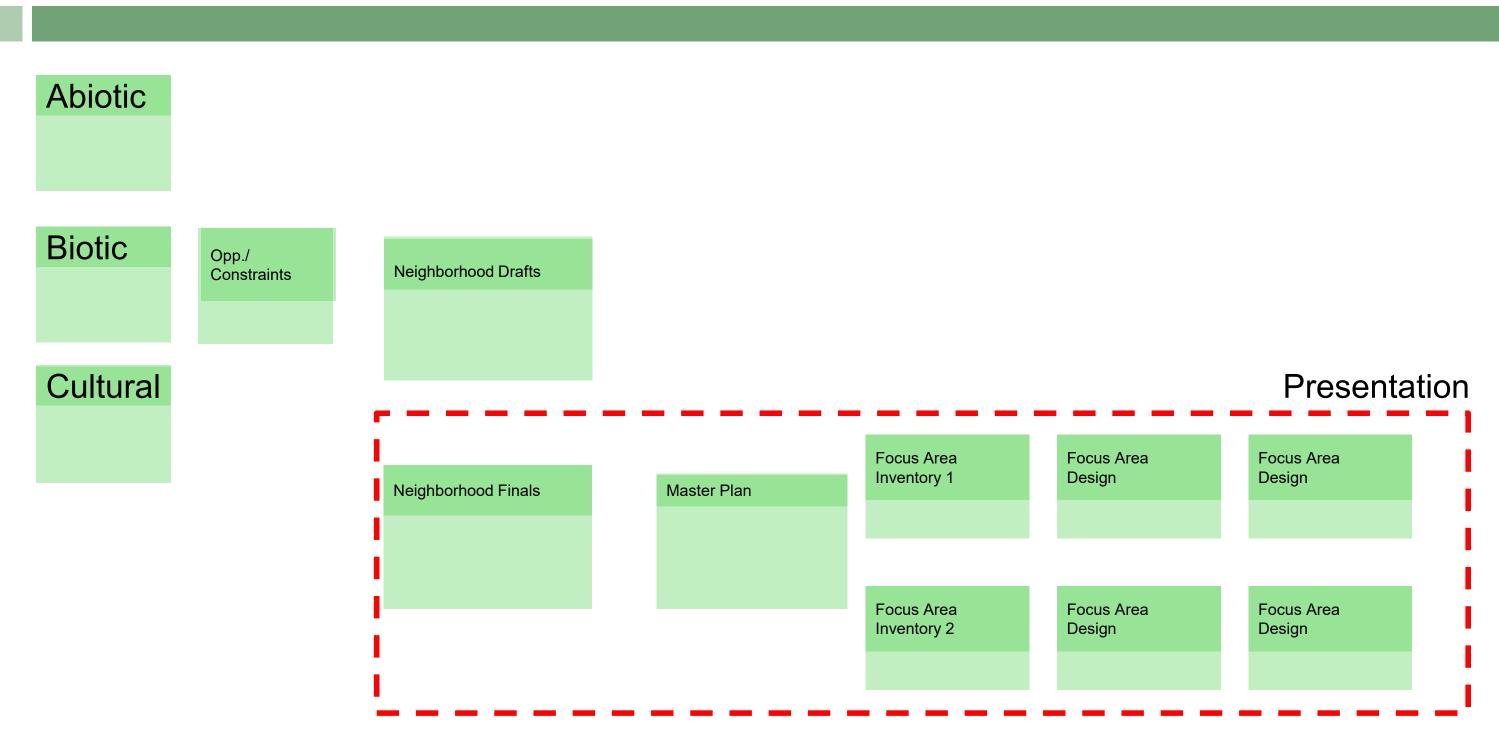




Guest Speakers and Reviewers



Results: Products-Required Boards







Board Requirements

- Board 1: Provide the overall master plan for the project area.
 - Concept (or Vision)
 - Map
 - Proposals
 - Clear labeling
 - Optional
 - Other design elements (way finding element(s), neighborhood space)
 - Precedents (Master Plan)
- Board 2: Focus Area 1: Provide the context, inventory, and analysis of the focus area-problem board.
 - Introduction
 - Design Goals
 - Maps
 - Photographs (optional)
 - Precedents (can go on next board)
- . Board 3: Focus Area 1: Provide the design solution for the focus area.
 - One plan illustrative
 - Sketch
 - 2nd sketch or illustrative section elevation
 - Design features, elements
 - 3 Narratives
 - Precedent(s)
- . Board 4: Focus Area 1: Provide the design solution for the focus area.
 - · One oblique rendered perspective
 - Items from Board 3

- Board 5: Focus Area 2: Provide the context, inventory, and analysis of the focus area-problem board.
 - Introduction
 - Design Goals
 - Maps
 - Photographs (optional)
 - Precedents (can go on the next Board)
- Board 6: Focus Area 2: Provide the design solution for the focus area.
 - One plan illustrative
 - Sketch
 - 2nd sketches or illustrative section elevation
 - · Design features, elements
 - 3 Narratives
 - Precedents(s)
- Board 7: Provide the design solution for the focus area.
 - · One oblique rendered perspective
 - Items from Board 3



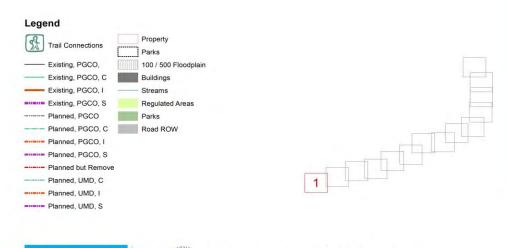
Piscataway Valley Greenway

Main Segments

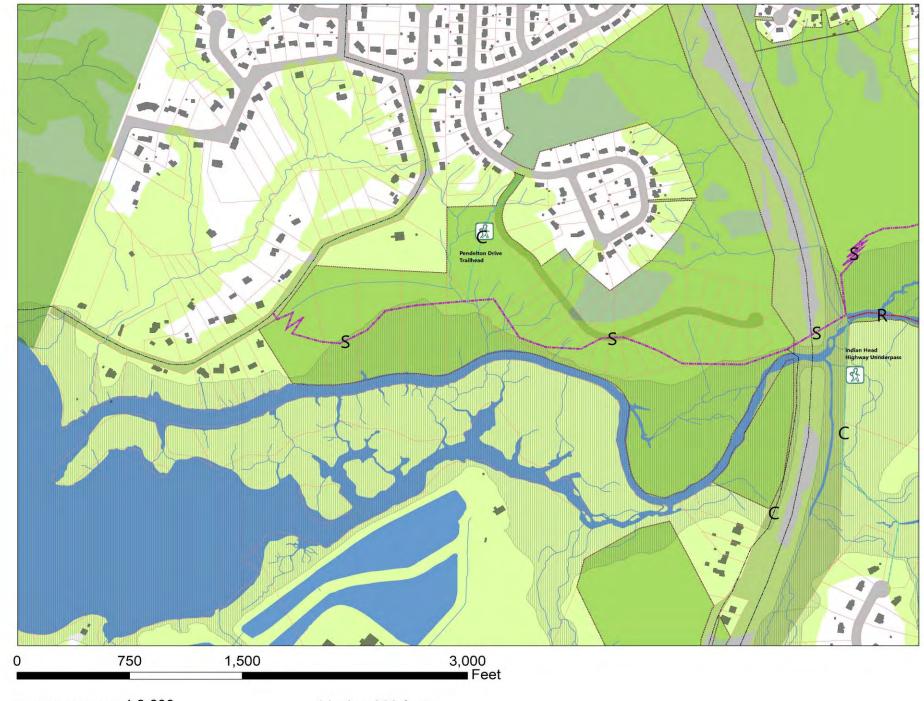
- **S1** Piscataway Drive to Pendleton Road Connector
- S2 Pendleton Road Connector to Indian Head Highway Underpass
- S3 Indian Head Highway Underpass

Trail Connections

- **C1 Pendelton Road**
- C2 South



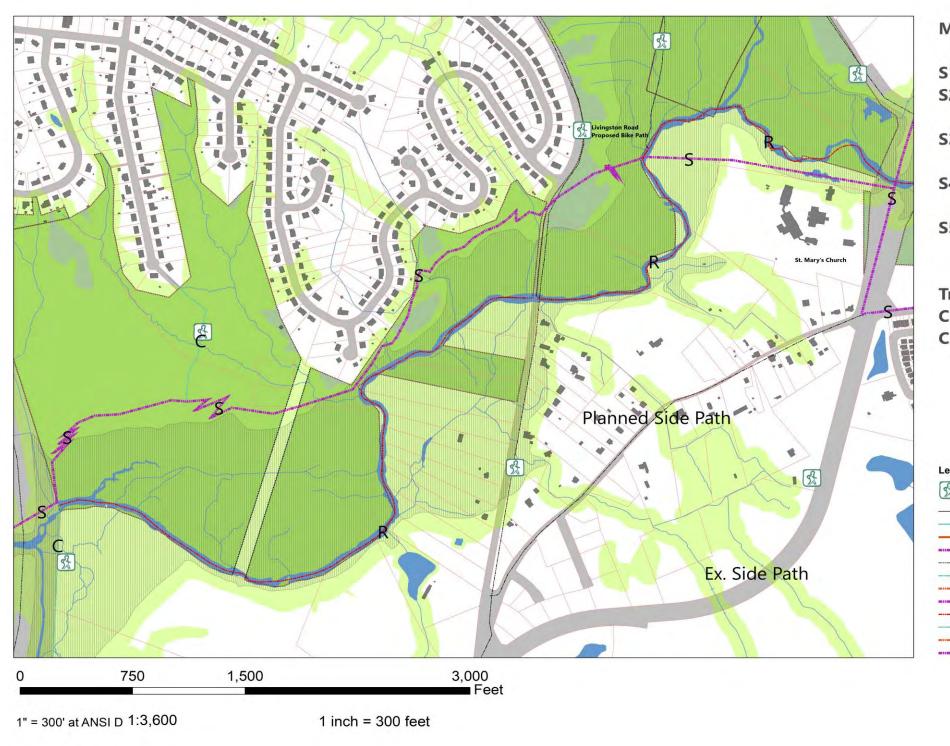
Landscape Architecture



1" = 300' at ANSI D 1:3,600







Main Segments

- **S1** Indian Head Highway Underpass
- S2 Indian Head Highway Underpass to **Harrison Avenue Connector**
- S3 Harrison Avenue Connector to **Livingston Rd Proposed Bike Path**
- S4 Livingston Road Proposed Bike Path to **Tinkers Creek Trail Connector**
- **S5 Tinkers Creek Trail Connector to Piscataway Road**

Trail Connections

- **C1** Harrison Avenue Connector
- **C2** Tinkers Creek Trail Connector









Main Segments

North Route

S1 Piscataway Road to Hillantrae Park Loop Trail

South Route

S2 Floral Park Road

Trail Connections

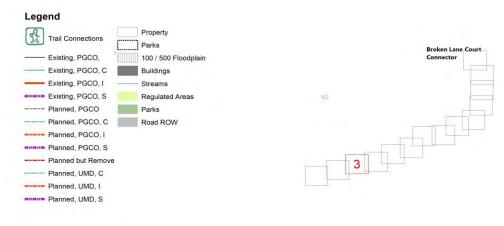
C1 Strawberry Hill Trail Head

C2 Hillanrtae Park Loop Trail Trail Head

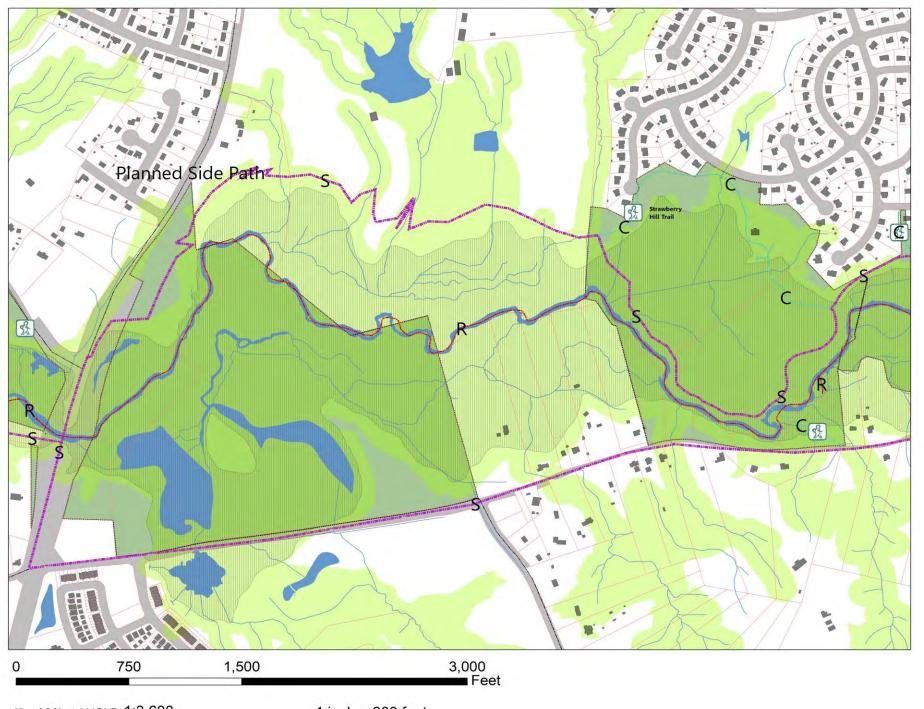
Cross Creek Connectors

I1 Hillantae Park

12 Winbrook Drive





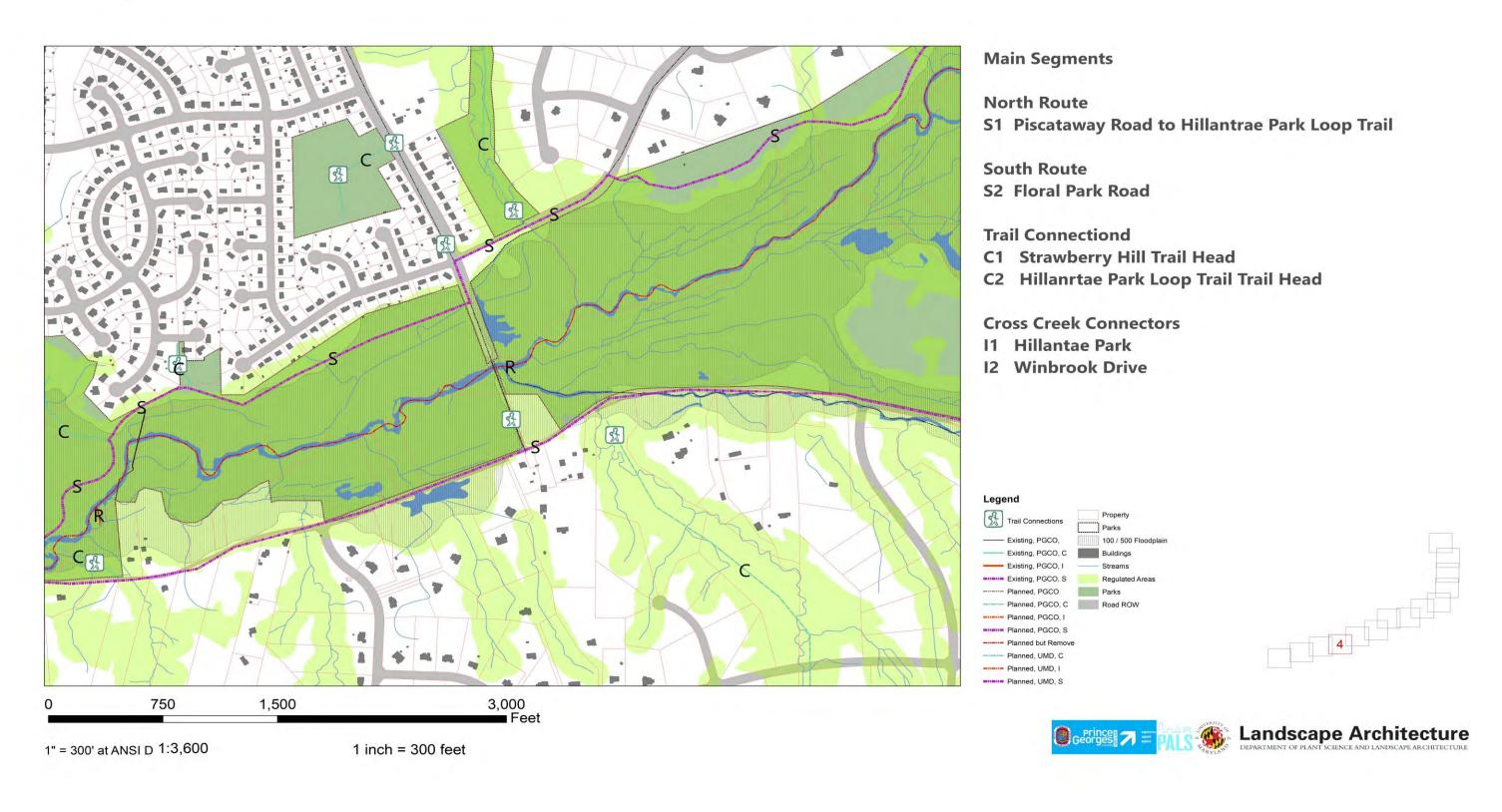


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Main Segments

North Route

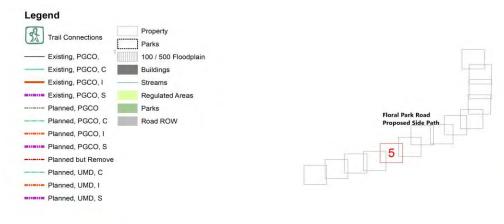
- **S1 Thrift Road to Broken Lane Court**
- S2 Broken Lane Court to Cosca Regional Park Connector
- S3 Cosca Regional ParkConnector to Birchwood Drive

South Route

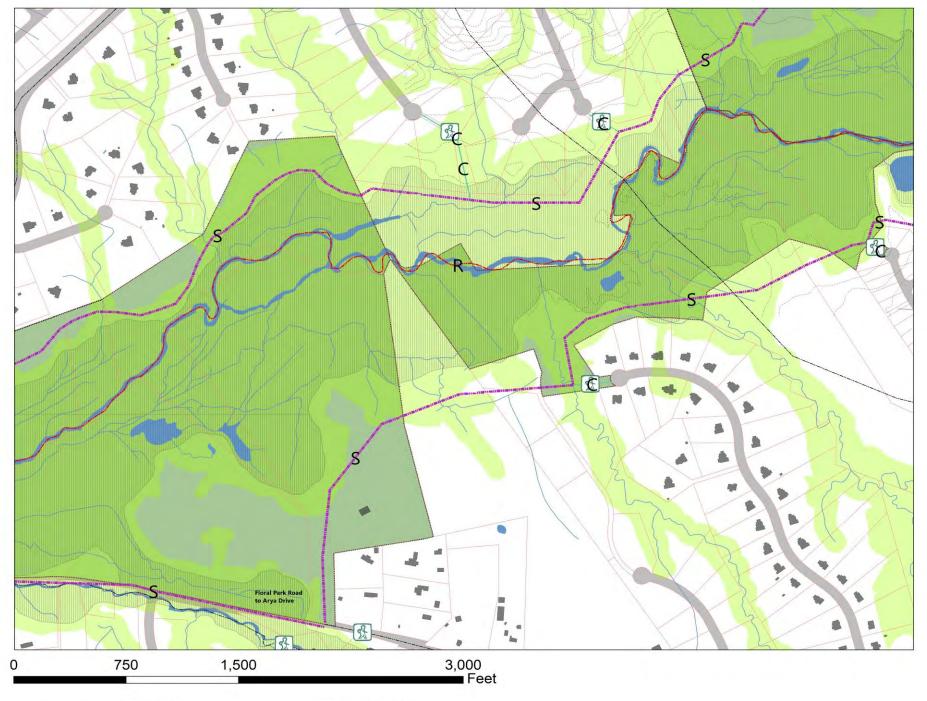
- S4 Floral Park Road to Arya Drive
- S5 Arya Drive to Old Marbury Road

Trail Connectors

- **C1** Proposed Neighborhood
- **C2** Proposed Neighborhood
- **C3** Cross Creek Link



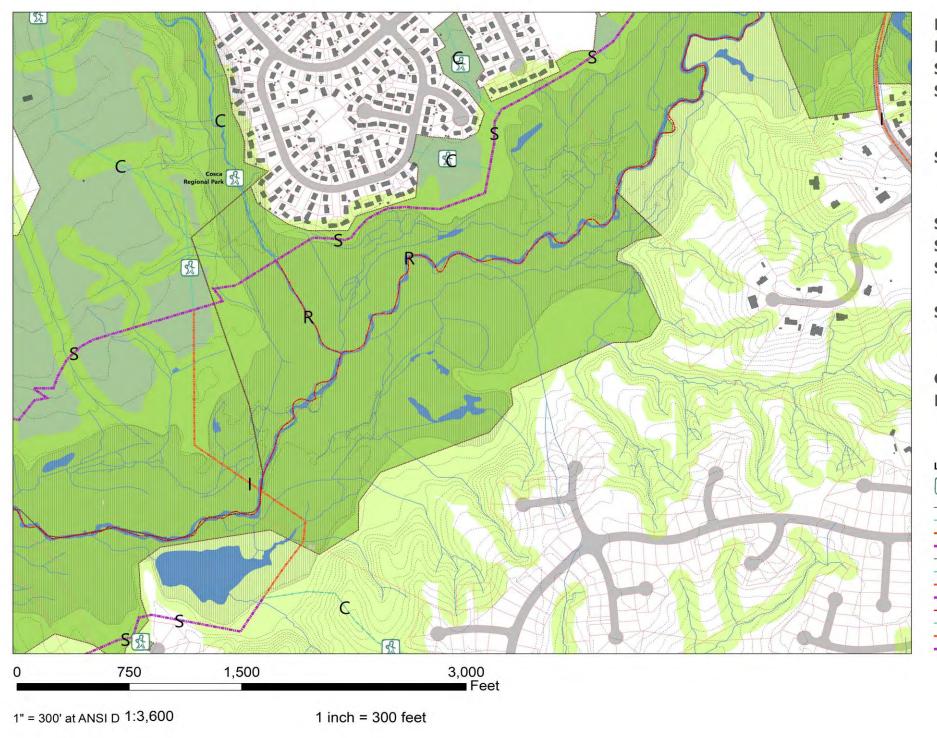




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Main Segments

North

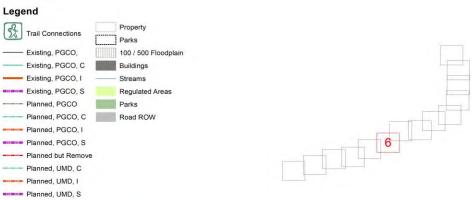
- S1: Thrift Road to Broken Lane Court.
- S4: Broken Lane Court to Cosca Regional Park Trail Connector along Butler Branch. Passes Wyoming Farm.
- S6: Cosca Regional Park Trail Connectorn to the neighborhood on Birchwood Drive.

South

- S2: Floral Park Road and ends at Arya Drive.
- S3 Links Arya Drive to a proposed neighborhood on Old Marbury Road.
- S5 Two entryways in the proposed neighborhood along Old Marbury Road.

Cross Creek Connector:

I1 South trail near Old Marybury Road to the trail in route to Cosca Regional Park.









Main Segments

- S1 Birchview/E Boniwood Turn Connectors to Power Line Easement
- S2 West part of power line easement to intersection with Brandywine Rd
- S3 Brandywine Rd intersection to Hermit St Connector
- S4 W Burch Rd, going into forest, linking back to E Burch Rd
- S5 Hermit St Connector to Sand Cherry Connector
- S6 Sand Cherry Connector, crossing Route 5, to 1-3 stream crossing
- S7 I-3 stream crossing to I-4 stream crossing & wetland trail

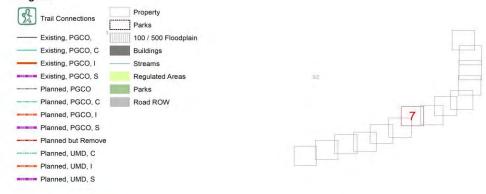
Trail Connections

- C1 Birchview Dr. Connector
- C2 E Boniwood Turn Connector
- **C3** Power Line Easement Connector
- C4 American Swing Pl Connector (to Brooke Jane Manor)
- C5 Burch Rd Connector
- **C6** Hermit St Connector (to Brooke Jane Manor)
- C7 Sand Cherry Way

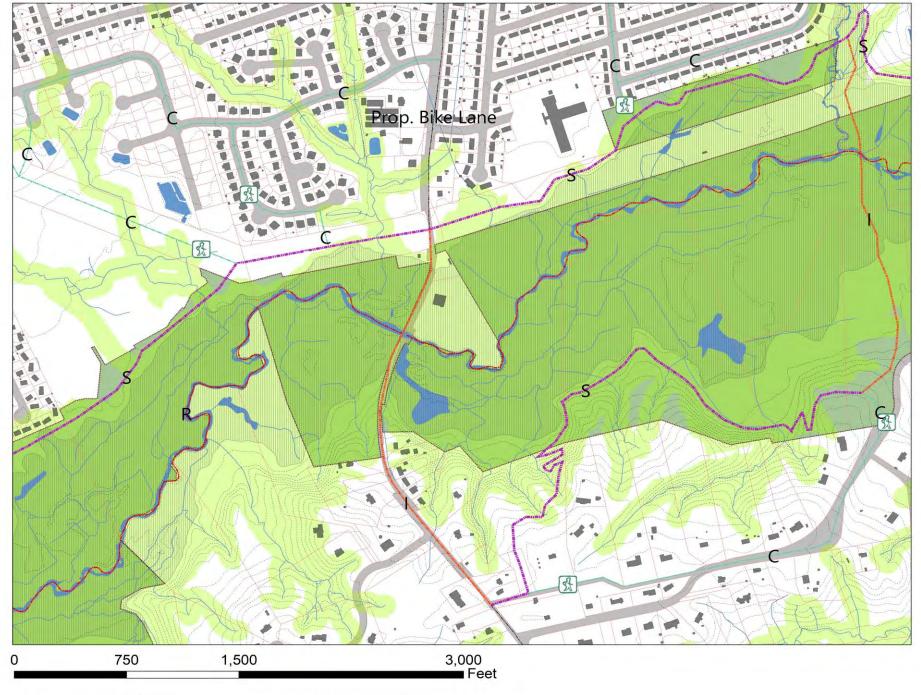
Intercrossings

- I-1 Following planned bike route from Brandywine Rd and power line easement intersection, bypassing auto parts store, ending at Burch and Brandywine intersection
- I-2 Middle of S6 (near Sand Cherry Connector), crossing power line easement and creek, to C5 (Burch Rd)
- I-3 Between S6 and S7, crossing creek to Crestwood Ave N
- I-4 End of S7, crossing creek into wetland, circulating wetland, going to Knollwood St.

Legend





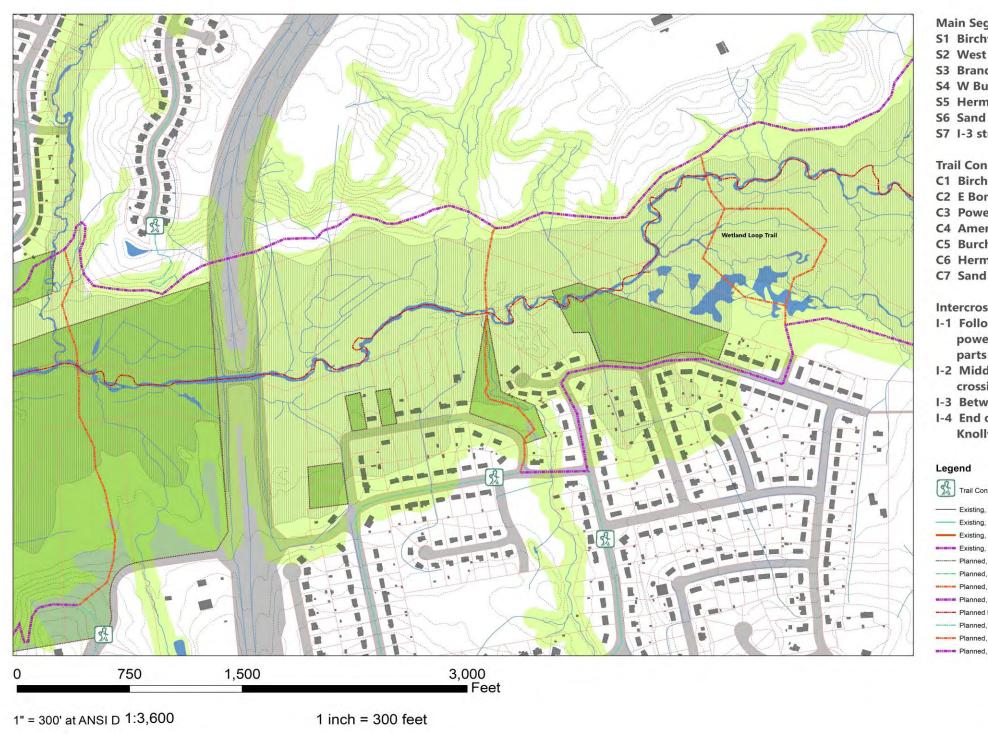


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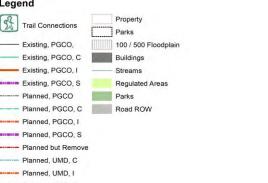
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- S4 W Burch Rd, going into forest, linking back to E Burch Rd
- S5 Hermit St Connector to Sand Cherry Connector
- S6 Sand Cherry Connector, crossing Route 5, to 1-3 stream crossing
- S7 I-3 stream crossing to I-4 stream crossing & wetland trail

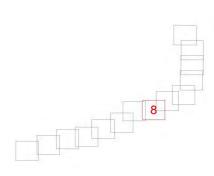
Trail Connections

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- C7 Sand Cherry Way

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Landscape Architecture

DEPARTMENT OF PLANT SCIENCE AND LANDSCAPE ARCHITECTURE

PALS

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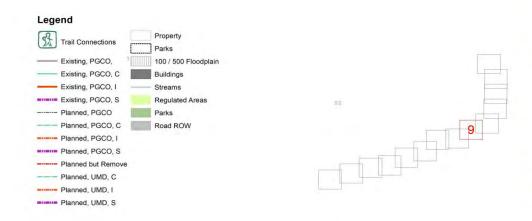
PALS Parks & Recreation

Main Segments

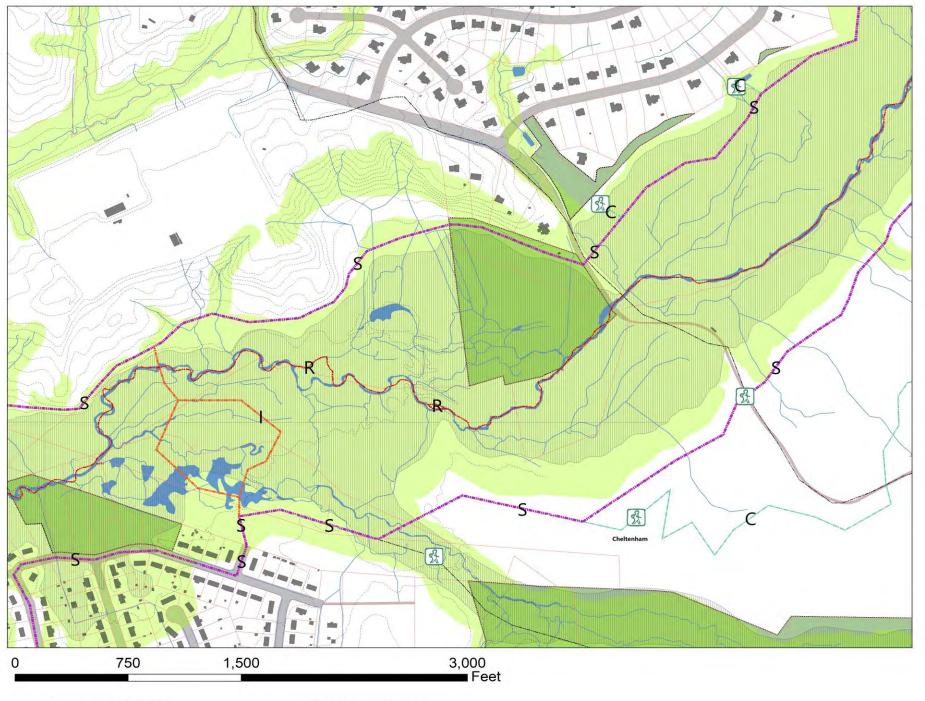
- S1 Burches Mill trail to Cheltenham Nbhd Trail
- **S2** Cheltenham Nbhd Trail to Cheltenham Nbhd Trail
- S3 Cheltenham Nbhd Trail to Federal PLaw Property
- S4 Commo Road and Piscataway Greenway trail
- S4 Piscataway Greenway trail to Surrat's Road
- S5 Surrat's Road to overlook trail

Trail Connections

C1 From intersection of Commo Road and Piscataway Greenway trail to three way intersection of Piscataway greenway trail to Cheltenham youth detention facility





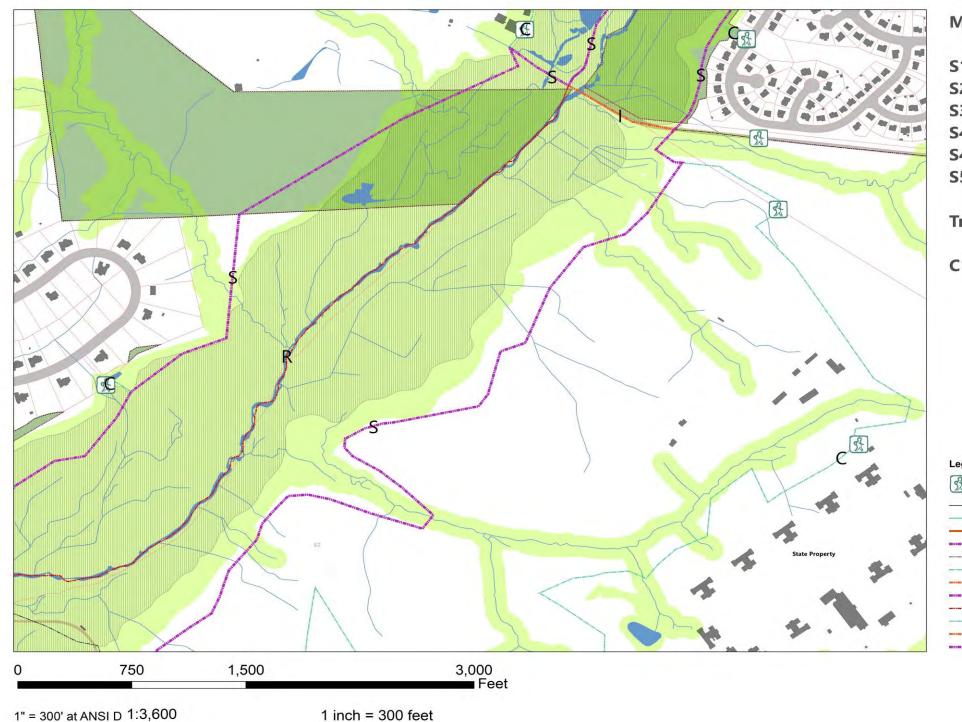


1" = 300' at ANSI D 1:3,600









Main Segments

- S1 Burches Mill trail to Cheltenham Nbhd Trail
- S2 Cheltenham Nbhd Trail to Cheltenham Nbhd Trail
- S3 Cheltenham Nbhd Trail to Federal PLaw Property
- S4 Commo Road and Piscataway Greenway trail
- S4 Piscataway Greenway trail to Surrat's Road
- S5 Surrat's Road to overlook trail

Trail Connections

C1 From intersection of Commo road and Piscataway Greenway trail to three way intersection of Piscataway greenway trail to Cheltenham youth detention facility









Landscape Architecture

DEPARTMENT OF PLANT SCIENCE AND LANDSCAPE ARCHITECTURE

PALS

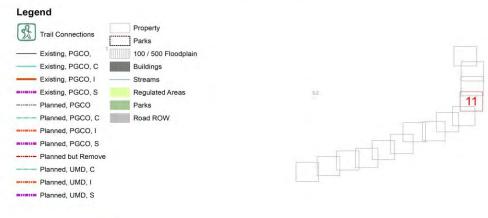
A Parks & Recreation | NCSC | New Marks | New Marks

Main Segments

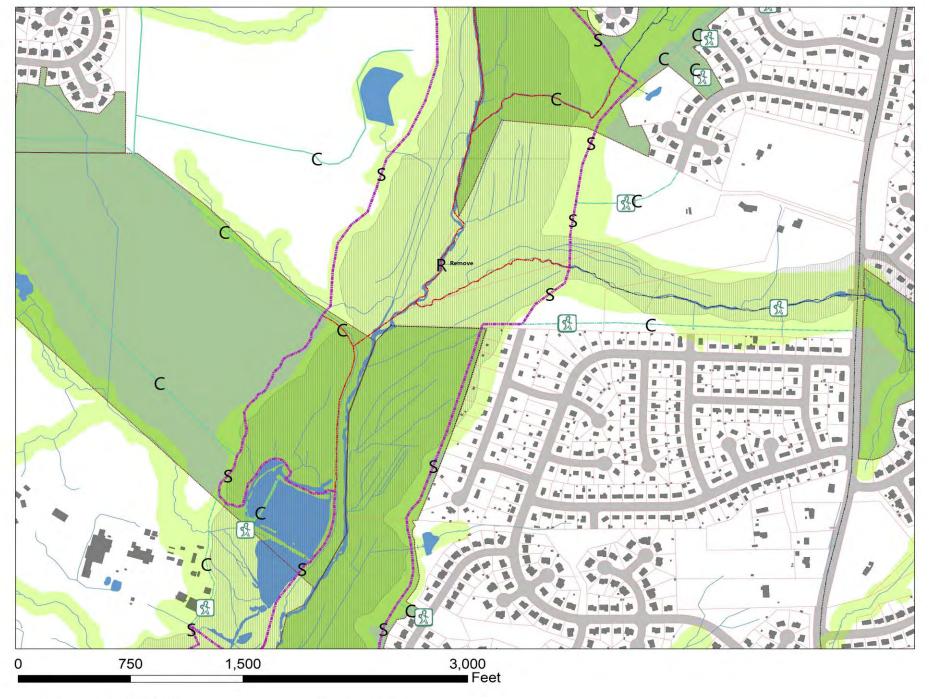
- S1 Commo Road to LeFevre Road
- **S2** LeFever Road to Dower House Branch Trail
- S3 Dower House Branch Trail to Dorval Avenue
- **S4** Cheltenham Wetlands Park to Merrymount Equestrian

Trail Connections

- **C1** Spinnaker Street
- C2 LeFevre Drive
- C3 Behun Drive
- C4 Graystone Drive (end)
- **C5** Proposed Dower House Branch Trail
- **C6** Graystone Drive (middle)
- C7 Wyld Drive
- **C8 Frank Tippett Road**
- **C9** Proposed Canter Creek Connection
- **C10 Proposed Canter Creek Connection**
- **C11 Proposed Canter Creek Connection**



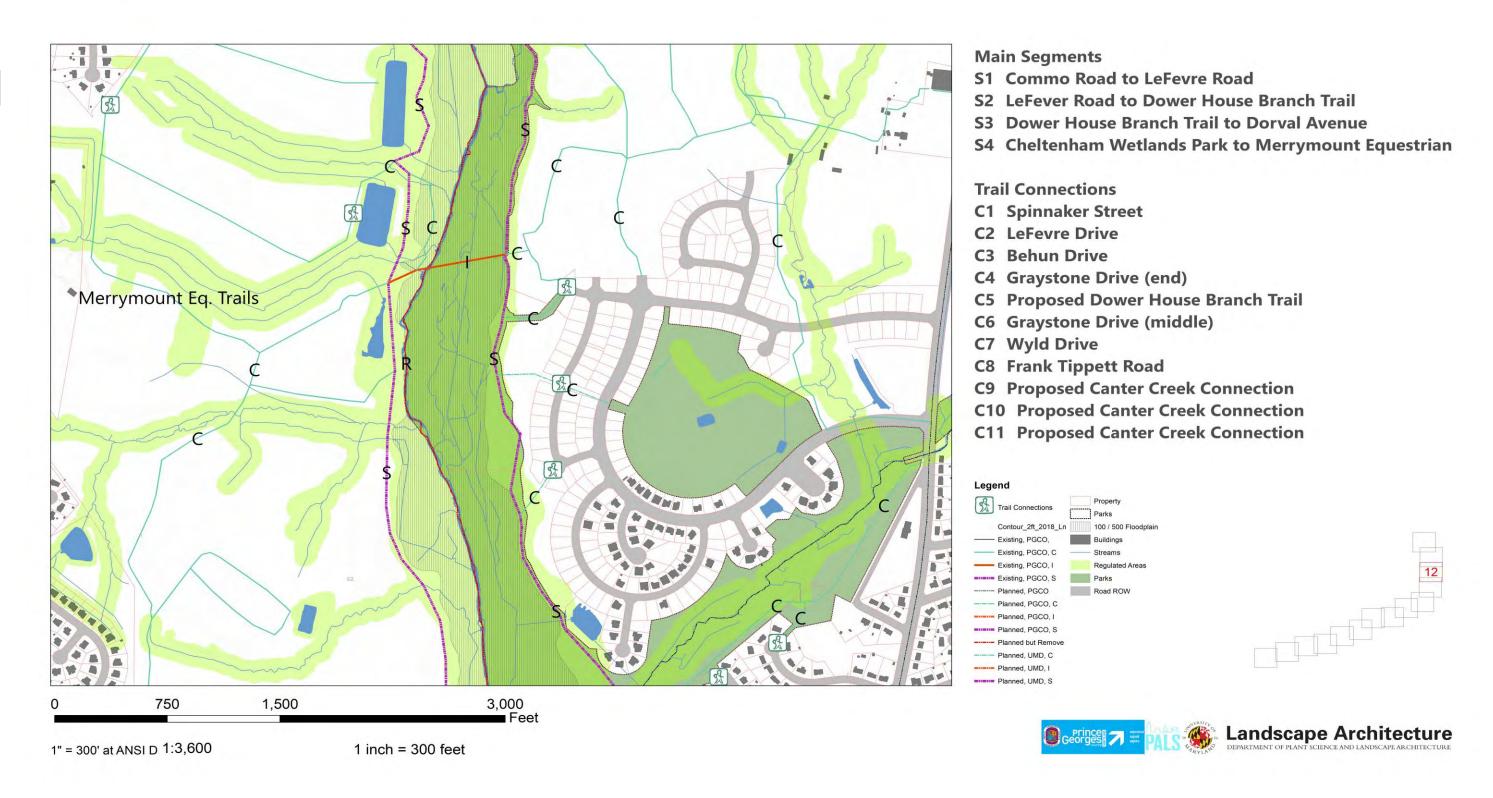




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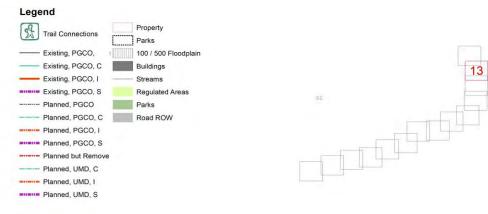


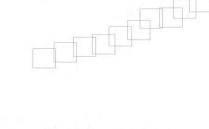




Main Segments

- S1 Dorval Ave-Rosaryville Road **Turn right onto Dorval Ave Turn left onto Williamsburg Drie** Turn left onto path 2 blocks down
- S2 Rosaryville Road Varus Pl **Cross Rosaryville Road**
- S3 Varus PI Melwood Elementary School Stay straight on Varus Place for 3 blocks Make a right at the Woodyard Make a right at James Madison Middle School
- S4 Rosaryville Equestrian Trails to Woodyard Road









1" = 300' at ANSI D 1:3,600











Piscataway Valley Greenway

Individual Plans and Designs

MASTER PLAN: SOLSTICE TRAIL

DESIGN CONCEPT

The Solstice Trail leads on a journey through time, from colonial history of St. Mary's to the sacred Piscataway land near Mockley Point. Pawpaw Park is a place where we steward the land and watch it regenerate, while reckoning with colonial history, and at Mockley Point Lookout we watch the land slip away as sea levels rise, contemplating the displacement and resilience of indigenous communities. These stories of the landscape are told throughout nodes on the trail at approximately 1-mile intervals.

GOALS: HISTORY, ECOLOGY, COMMUNITY

- 1. Connect local people with the history and ecology of the landscape through site-specific structures, interpretive features, and installations.
- 2. Provide a trail system that is accessible to communities, dovetails with existing and planned trail systems, and intervenes minimally in local ecosystems.
- 3. Provide educational opportunities for St. Mary's School and others to participate in land stewardship initiatives, learn about local landscape history, and observe surrounding natural settings in the Piscataway watershed.

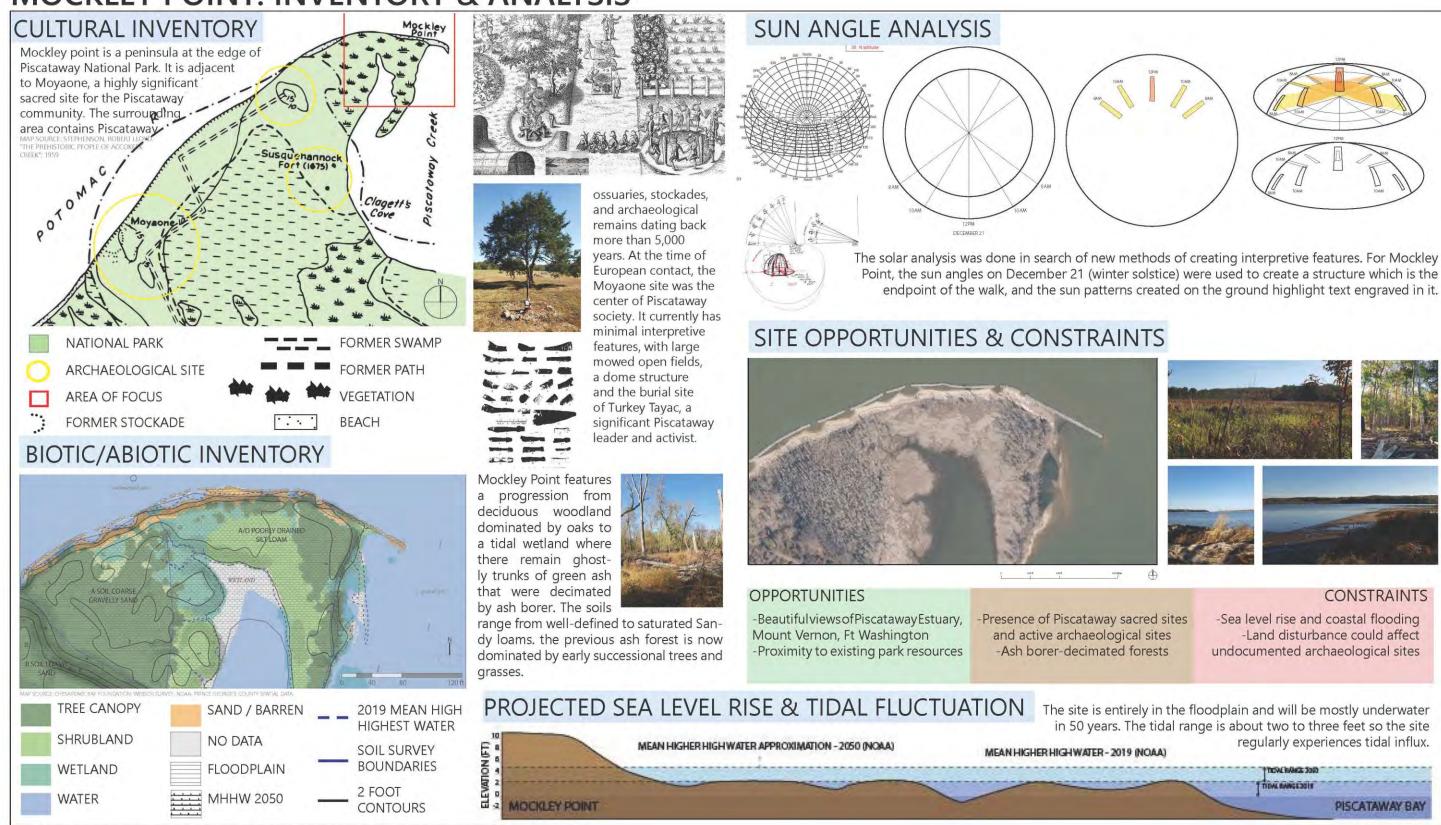
SUITABILITY STUDY



A suitability study of this area was done to partly determine trail alignment. Factors included were private property, floodplain, protected areas, and steep slopes.



MOCKLEY POINT: INVENTORY & ANALYSIS



MOCKLEY POINT: SITE PLAN

CONNECTING TO THE LAND

The Mockley point boardwalk is intended to provide a progression and viewpoint which references the history and cultural significance of the land, while minimally interfering with it. It allows people to learn about the landscape while watching it change through rising sea levels. It also provides a resting point on the Solstice trail, a connection to existing and planned trails within Piscataway Park.



SITE PLAN



1-4. HISTORY & PASSAGE OF TIME









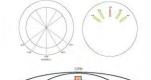
A series of monoliths offset from the main path point in the direction of Moyaone, the sacred site. Engravings on the floors of the two pavilions offer interpretive text and an opportunity to contemplate landscape history and future. Materials such as oyster shell piles (3) reference local marine life and Piscataway culture.

5-7. LOCAL ECOLOGY & ENVIRONMENTAL CHANGE









The boardwalk leads from deciduous woodland (6) through a "forest" of ash trunks, telling the story of the emerald ash borer (5). The "summer solstice" structure offers sweeping views of the Piscataway and the Potomac as well as interpretive features. Visitors watch the landscape change over time as sea levels rise.

8-9. COMMUNITY **AMENITIES**









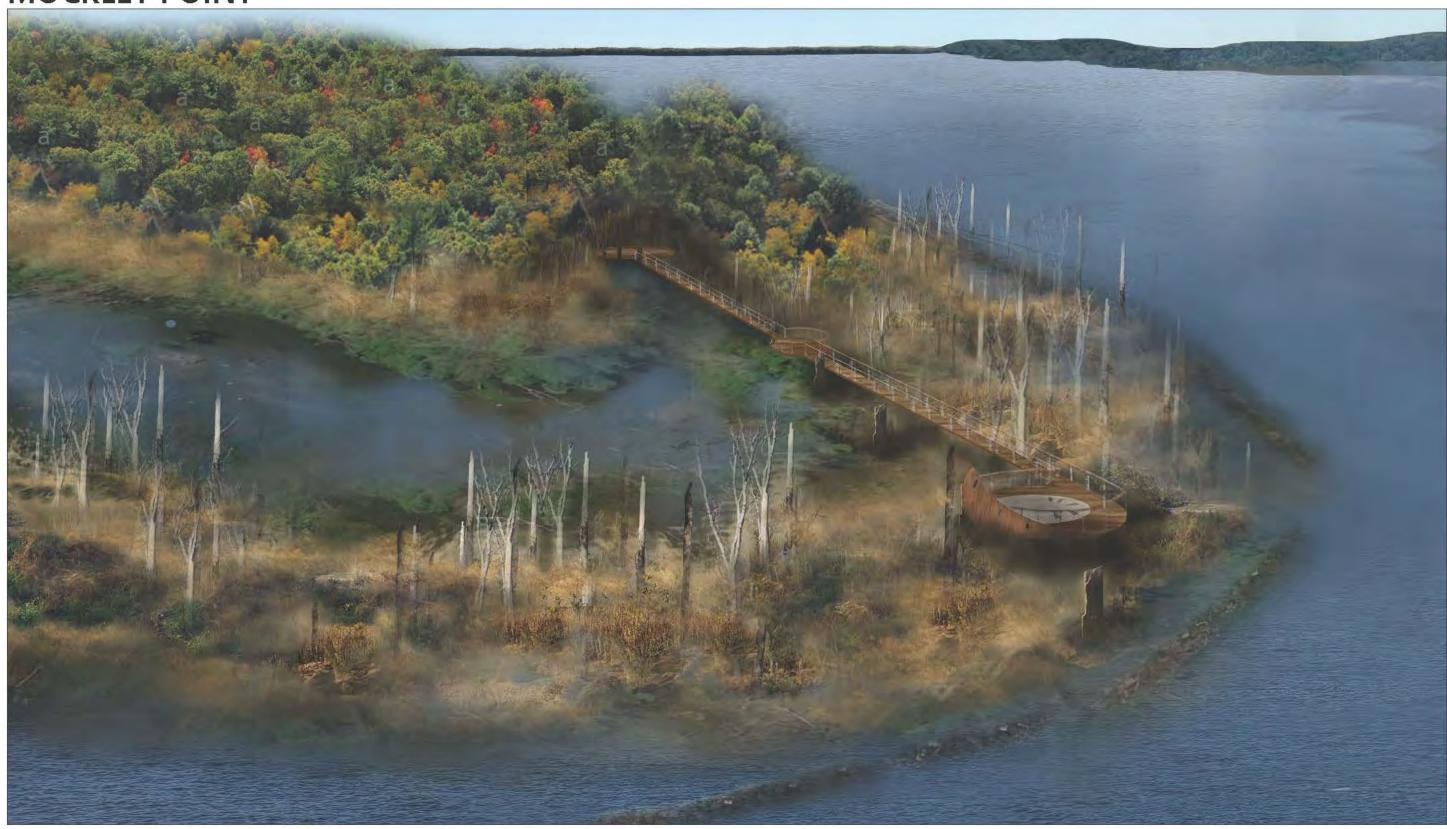


also offers a resting point for the Solstice Trail, bike racks, and connections to the existing Piscataway National Park resources. National Park visitors can easily and safely access the

VIEW OF MOCKLEY OUTLOOK



MOCKLEY POINT



EMMA PODIETZ / LARC 642 REGIONAL DESIGN STUDIO / FALL 2019 / DAVID MYERS

PAWPAW PARK: INVENTORY & ANALYSIS

CULTURAL INVENTORY PARKS - OWNED LAND PRIVATE PROPERTY **RIGHT OF WAY** HISTORIC DISTRICTS BIOTIC/ABIOTIC INVENTORY

TREE CANOPY

SHRUBLAND

WETLAND

NO DATA

2 FOOT

FLOODPLAIN

SOIL SURVEY

CONTOURS

BOUNDARIES



The site is directly across Piscataway Rd from St Mary's Church and Catholic School in the Piscataway historic district. The Piscataway Creek runs directly north of it. The land was previously used for agriculture and is now a regenerating woodland partly owned by the parks department.

St. Mary's Church was founded in the 1600s as a missionary outpost for conversion of the Piscataway Indians. The conversion of a Piscataway leader by Father Andrew White in 1640 remains a much-referenced part of local history.



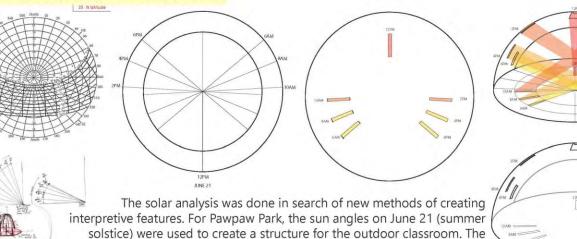








SUN ANGLE ANALYSIS



sun patterns created by the structure highlight engraved text.

SITE OPPORTUNITIES & CONSTRAINTS



OPPORTUNITIES

-Existing ecological diversity in wetland, riparian buffer, and regenerating forest

-Proximity to St. Mary's school and communities

-Adjacency to privately owned

-Green ash forest in wetland decimated by ash borer

parcel

CONSTRAINTS -Presence of

invasive species

-Sensitive ecological systems necessitates minimizing disturbance

> -Accessibility dangerous road crossing

The woodland, combined with the Riparian buffer and adjacent wetland, provide a rich array of habitats for local wildlife. The forest currently is dominated by red oaks, water oaks, sweetgum, eastern redcedar, American Holly, and American sycamore. The Riparian zone is full of pawpaws and box elders, and the wetland has dead ash trees and hydrophytic grasses. Many bird species were observed there, plus a beaver dam in the Piscataway Creek, and freshwater mussel shells.

PAWPAW PARK: SITE PLAN

CONNECTING TO THE LAND

SITE PLAN

Pawpaw Park provides a way for communities in the Piscataway area to observe the diverse ecology of a regenerating forest and wetland, as well as opportunities for recreation, education and land stewardship. Here the objective is to experience and nurture Maryland's ecological richness.



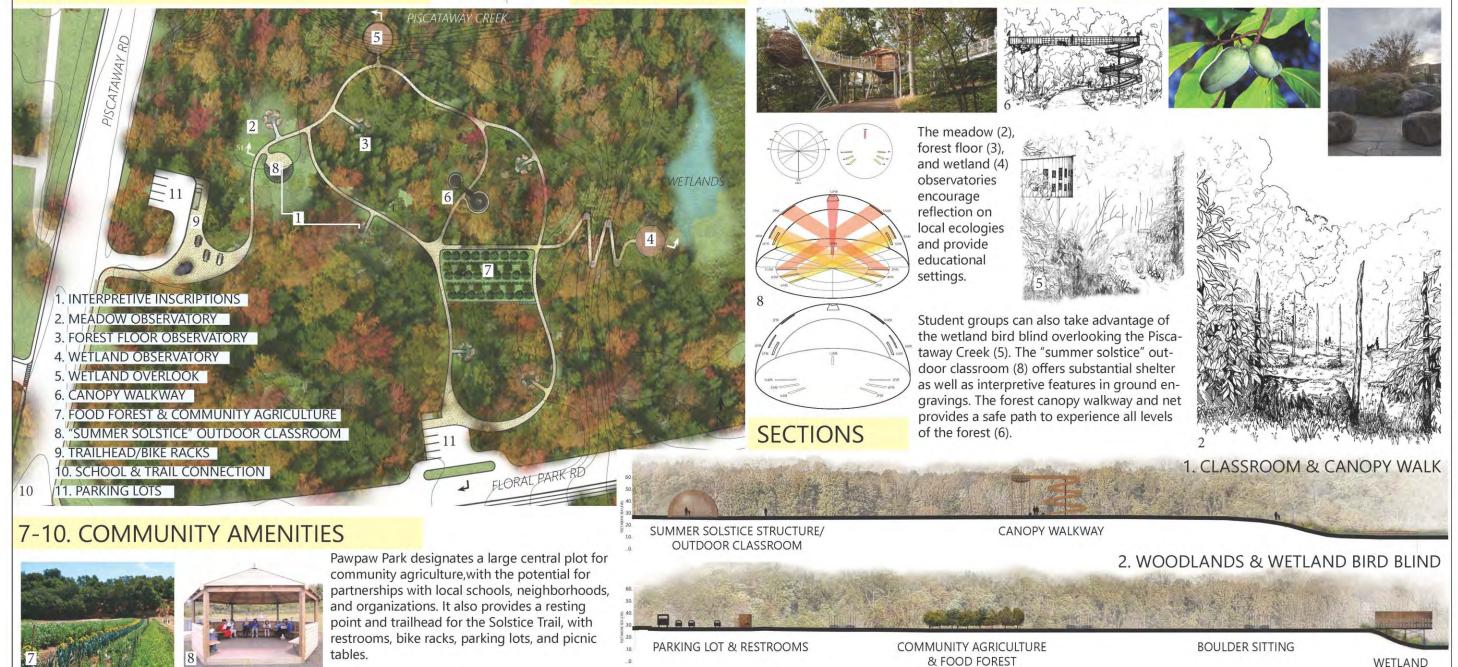
PROCESS DRAWINGS

1. HISTORY & PASSAGE OF TIME

The interpretive features on the site are much like those of Mockley Point (See Board 3). Referential materials, such as snail and mussel shells, are used to reference local ecologies and Piscataway traditions. Interpretive text is engraved into the floor of the outdoor classroom, as well as the boulders in the sitting areas.

OVERLOOK

2-6. LOCAL ECOLOGY & ENVIRONMENTAL CHANGE



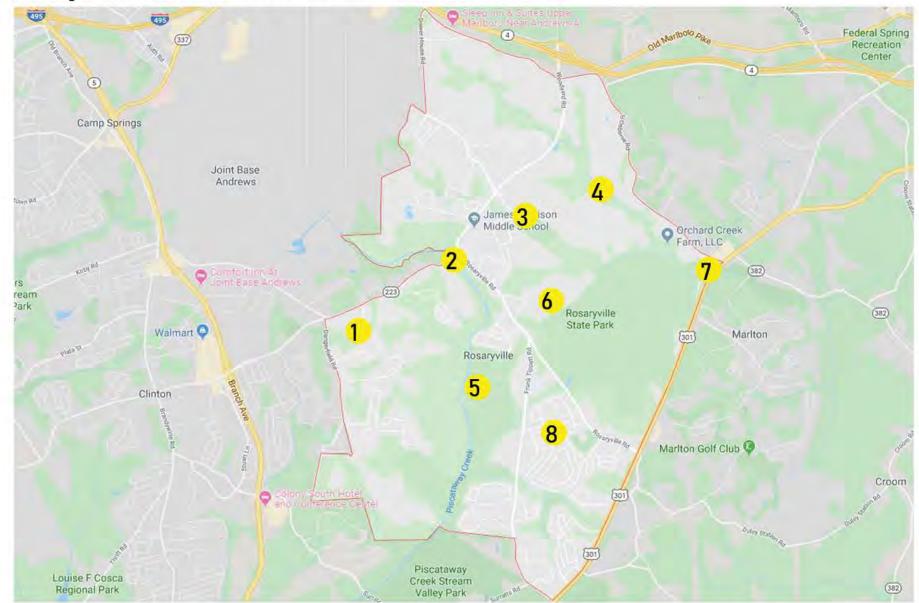
PAWPAW PARK



EMMA PODIETZ / LARC 642 REGIONAL DESIGN STUDIO / FALL 2019 / DAVID MYERS



Map of Planned Interventions



Vision

As the population in the Washington D.C. increases, surrounding communities in Prince George's County, are quickly being developed. Rosaryville, Maryland is included in this development, and has the opportunity to keep the character of the region as it heads into the future.







Images of Rosaryville State Park, equestrian trails, and local middle school in Rosaryville.

Rosaryville: Developing the Commnity

Planned Interventions

- 1 Create a park along Woodyard Road
- 2 Make a historic sites trail conntecting The Woodyard and His Lordship's Kindness Museum
- 3 Create a nature play space behind James Madison Middle School
- 4 Restore the area around the western headwaters of the Charles Stream
- 5 Create interactive signage around Piscataway Stream Valley Trail
- 6 Create Agricultural Farm to buffer Rosaryville State Park
- 7 Create downtown area for Rosaryville
- 8 Connect equestrian trails to surrounding parks

Precedent Town

Towns such as Rockville, Maryland have faced similar challenges of changing from agricultural land, to becoming a suburnban portion of the Metropolitan D.C. area.







Images of Woodley Gardens Park, local home, and Rockville Town Center in Rockville, MD.

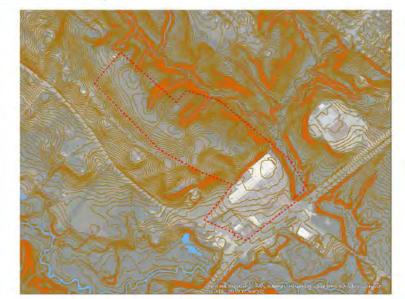
Concept Development

As Rosaryville develops, the creation of a central hub for the town will be essential. By creating a downtown area that can be accessed by car, bike, or through walking, the residents and visitors of Rosaryville gain a multi-facted space that can accommodate the many needs of a graoing town.

Existing Conditions: Biotic and Abiotic



Hydrology and Regulated Areas
The topography and steep slopes will show geogrphic features and where



Topography and Steep Slopes
The topography and steep slopes will show geogrphic features and where paths can be placed.



Vegetation Coverage
This site is little canopy coverage in the center, and the surrounding coverage
will soon be destroyed due to residential development to the North of the site.

Opportunities

Key Location

In close proximity to local schools and parks, with proposed trails within walking distance. Right off of a prominant road, Croom Highway.

In the Zone

Correct zoning has already been given to this site. The 2035 Region 6 Master Plan has clear intent on developing commercial industry in this shopping center.

Stunning Views

The views behind the shopping center offer amazing views of rolling grass hills, common to this region.

Constraints

Busy Highway

Croom highway is a major throughway for the region, causing danger from heavy traffic and high noise pollution.

Steep Slopes

Steep slopes behind the Safeway in the shoppoing center will prohibit the development in the western portion of the site.

Streams, Floodplains, and Wetlands

Easements and regulated areas surroundings the streams in the western portion of the site will prohibit development.

Precedent Images

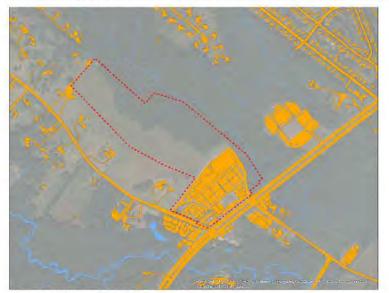






Top Right: The Glenstone Museum, Top Left: Disney Springs Bottom: Rockville Town Square

Existing Conditions: Cultural



Impervious Surfaces
The area to the North of the site is developing in low density residential, while the area South of the site, Rosaryville State Park, remains undevelopted.



Parks and Proposed Trails
Local and State parks are in close proximity to the site, with many trails proposed by Prince George's County running adjacent and through the site.



Zoning
The topography and steep slopes will show geogrphic features and where paths can be placed.

Sourced: Google Maps

Overall Site Plan



Design Goals

- Create a central gathering space for the community
- Create a high density housing area to encourage less suburban sprawl
 Attain consitive area along the stream
- Attain sensitive area along the stream to protect from development, and retain viewshed
- Provide safe central location for visitors of the local trail systems
- Decrease the amount of impervious surfaces
- Capture and filter water runoff to help improve water quality for the Charles Stream

<u>User Experiences</u>

Weekly User Kelli Southerby, 16 dept at Frederick

I am a high school student at Frederick Douglas High School, right down Croom Road. I love togo downtown after school with my friends, where we can hang out for hours. The different stores and stuff to do accomodates whatever we want to do. Daily Users
Bryan Que and Geof Davidson, 32
We live in the apartments located on top of
the Safeway, in downtown. it's so nice to be
able to relax on the big lawn right outside
our building. It feels like we have our own
backyard. It's also great to be walking distance to great trails for weekend hikes.



Downtown Rosaryville



Concept Development

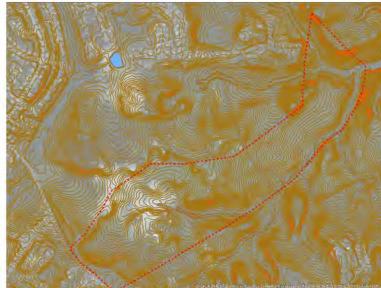
With surrounding agricultural land being sold to residential developers, creating a buffer for Rosaryville State Park and th surrounding streams in the Charles Stream watershed will become essential. Creating a park that will provide this buffer, while celebrating the agricultural history within this region will help to make a site that can be enjoyed by local and visiting peoples.

Existing Conditions: Biotic and Abiotic



Soil Types

The majority of the soil being B type will be optimal for possible crop growth as well as give options for infiltration of water.



Topography and Steep Slopes

The topography and steep slopes will show geogrphic features and where paths can be placed.



Vegetation Coverage

This site is little canopy coverage in the center, and the surrounding coverage will soon be destroyed due to residential development to the North of the site.

Opportunities

Good Soil and Sun

This site has B grade soil, a loam or silt loam, this will accommodate many different types of crop types. The hills on which the site resides, are south facing which will provide for many different crop varieties.

Prime Location

The site is surrounded to the north and to the west by newly developed neighborhoods, providing many local users to the site.

Connections to the Area

Close proximity to Rosaryville State Park, and the amenities the park supplies. Connections to the proposed Piscataway Creek Trail and the proposed Charles Stewam trail will allow connections to the surrounding region.

Constraints

Locked In

Developing housing to the north, an electrical easement to the east, Rosaryville State Park to the south, and Rosaryville Road to the west, will stop any potential growth to this park.

Steep Slopes

Steep slopes in the northwestern and sourthern portions of this site will prohibit the placement of trails and other amenities on the site.

Stream and Regulated Areas

Streams cut through the northwestern and southern central portions of the site. Regulated areas around the streams have been added to help protect the integrity of the streams. This will prevent building and development in these areas.

Precedent Images







Top Right: Tondabayashi City Agricultural Park, Top Left: House on the Hill Bottom: Mountain Running Path

Sourced: Google Maps

Existing Conditions: Cultural



Buildings and Plots

The area to the North of the site is developing in low density residential, while the area South of the site, Rosaryville State Park, remains undevelopted.



Parks and Proposed Trails

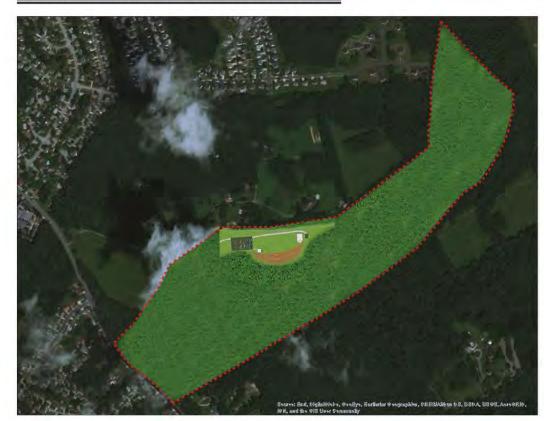
Local and State parks are in close proximity to the site, with many trails proposed by Prince George's County running adjacent and through the site.



Hydrology and Regulated Areas

The topography and steep slopes will show geogrphic features and where paths can be placed.

Overall Site Plan



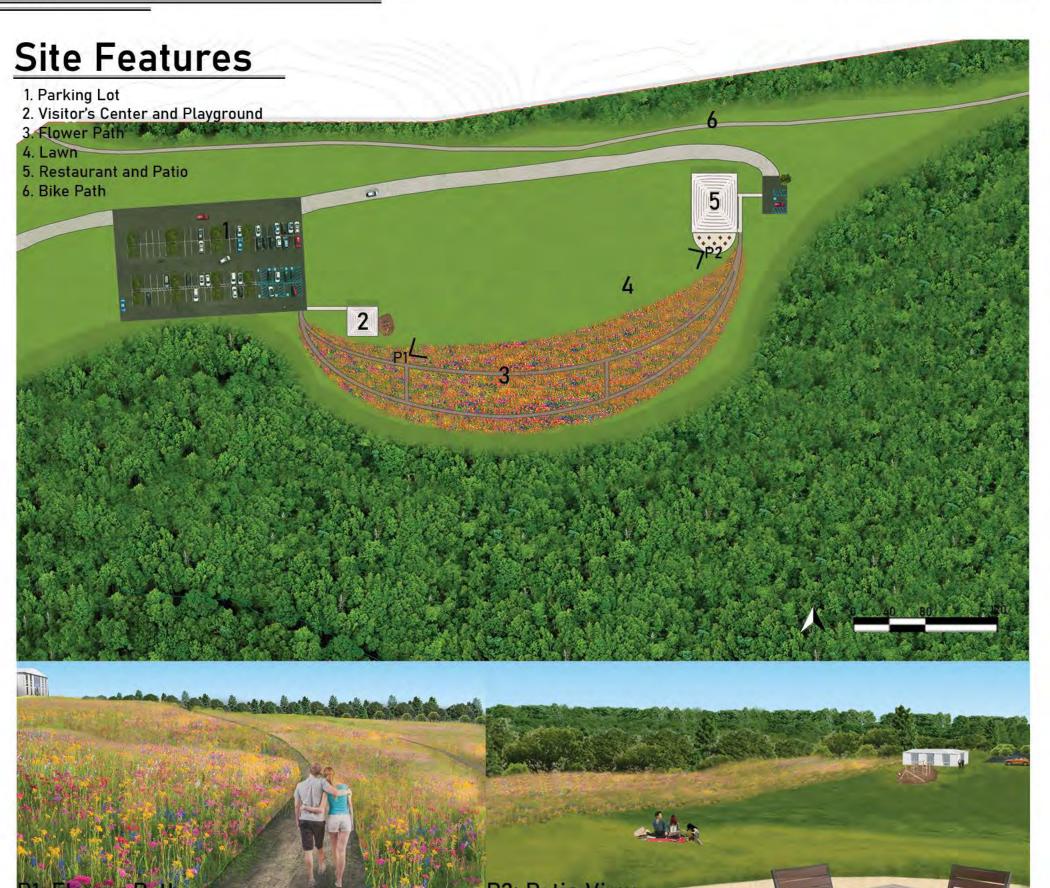
Design Goals

- Increase canopy coverage
- Provide buffer for Rosaryville State Park from surrounding development
- · Retain agricultural heritage
- Provide local park to surrounding neighborhoods
- Connect the Piscataway trail to the Charles trail
- Create a gathering space

User Experiences

Daily User
Susan Byrd, 32
I walk the bike path that goes
along the park and connects to the
Charles Branch Stream Trail. This
trail system lets me walk around
town safely without having to walk
along busy roads in a safe and
beautiful setting.

Monthly Users
Mr. and Ms. Cohen, 50+
We love to visit thee restaurant
on the top of the hill when we can
get away from the city. The patio
allows for beautiful views of the
rolling hills in a quiet the outdoor
setting we don't normally have
access to in the city.



Rosaryville Agricultural Park





The master plan addresses locations along the mouth of the Piscataway River in Prince Georges County, Maryland. Much of the Potomac shoreline in this area is considered in NOAA's top 50 priority projects to restore coastal habitat, and in recent years, there has been a push to further recognize the culture and history of the area's indigenous peoples heritage. Therefore, the pervasive theme of the site proposals celebrates the ecology and cultural heritage of the Piscataway area.

The sites of main intervention are on the south side of the river mouth, and build on a proposed system of trails connecting Colonial Farms and the Accokeek Foundation to Fort Washington. Further, the site proposals will extend the system by connections to the proposed Piscataway Trail system and to George Washington's Mt. Vernon through a proposed water connection, while also providing space-making opportunities at a site level.

VISION

Promote outdoor recreation

Improve water quality and shoreline stability

Showcase the area's local ecology and cultural heritage

GOALS

The main goal is to engage visitors with the local ecology and cultural history of the Piscataway area, as well as offer a multitude of outdoor activities on land and on the water. Providing a cross-river connection to Mt. Vernon enables access to a growing number of visitors. People visiting the site will vary, and include tourists, families, kayakers, anglers as well as bikers traveling the Potomac Heritage Trail. The goal is to provide an outdoor experience centered on the area's ecology and cultural heritage for all who visit the sites. Ideally, visitors will leave with having shared a new experience and learned about the area's unique natural and cultural character.



Master plan of the Piscataway Cultural and Natural Park sites area

PROPOSALS

- Design ferry landing incorporating cultural themes at Colonial Farms to connect Mt. Vernon
 - Enable citizen science at wetlands and proposed mussel shore near Mockley Point
- Create mussel shoal with halfmoon boardwalk near Hard Bargain Environmental Center

- Improve Farmington Landing with a picnic area and nearby hiking
- Collect trash from mouth of Piscataway Creek
- 6 Design safe crossing at Indian Head Highway

- 7 Create mussel shoal with halfmoon boardwalk on Piscataway Trail
- Increase canoe, kayak, and sailing opportunities at Ft. Washington Marina
- Design shoreline protection at Ft. Washington headlands







Connect to other existing

Existing parking can hold

plenty of visitors

Opportunities

- Provide water connection to
- Create a historical loop trail around Accokeek
 - Foundation
- School bus limitations due to
- Narrow road that may have accessibility issues

Piscataway Greenway

Cultural Park

- engagement difficult
- Trail crossing on road
- Floodplain comes near the property

Hydrology



Streams (top) and floodplain (bottom) maps of the Piscataway Cultural Site

Soils & Trees



Topography & Properties



Contour (top) and property line (bottom) maps of the Piscataway Cultural Site

Scenes of the Site



Sailing is a popular activity in the area, with a backdrop of colors of the Potomac River showcasing on an adjacent beach. A dock popular with anglers and visitors can be seen at the Accokeek Foundation.





Designer, Chris Samoray | Dr. David Myers, PLA, ASLA | LARC 642 | Fall 2019

At the proposed site, a ferry landing would enable a connection from Mt. Vernon to Colonial Farm, a west-east Potomac shore connection. The connection may increase visitation to Colonial Farm and would make the Farm a point of interest for cyclists on the Potomac Heritage Trail transferring to the Trail on the west side of the Potomac.

Site Users



■ FAMILY We're the Williams family. We live nearby, and try to come to the Accokeek Pier and Welcome Garden every other weekend. It's a great place for us and our daughter to engage with nature. We love it!



■ TOURISTS Why hello, We're tourists who took the ferry from Mt. Vernon across the river. What a great connection! The views of the water and shoreline are incredible on this side of the river. We'll spend about 2 hours here, but will definitely recommend our friends visit.

ANGLERS

Howdy, I'm Bob Wharf. I cherish getting out to the Accokeek Pier on a nice warm weekend day for some anglin'. I spend around 3-4 hours there every Saturday and Sunday morning. The pier has plenty of space, extensions, and the floating wetlands attract fish. So, the kayakers don't bother me none. Hoping to bag, I'll report any invasive catfish I pull up, too.





- parking lot size
- Steep bluffs make beach

wetland

Shoreline erosion and

sediment draining from

Interact with the Accokeek

Create a new trail system

that mimics that floodplain

Foundation

Design Goals

- Highlight the cultural history of the area
- 2. Include aspects of environmental rehabilitation with floating wetlands
- 3. Connect Accokeek/Colonial Farms to Mt. Vernon, and provide a garden welcome entrance
- 4. Increase visitation to Accokeek cultural and natural areas
- 5. Provide bikers a crossing to the Virginia portion of the Potomac Heritage Trail

Precedents

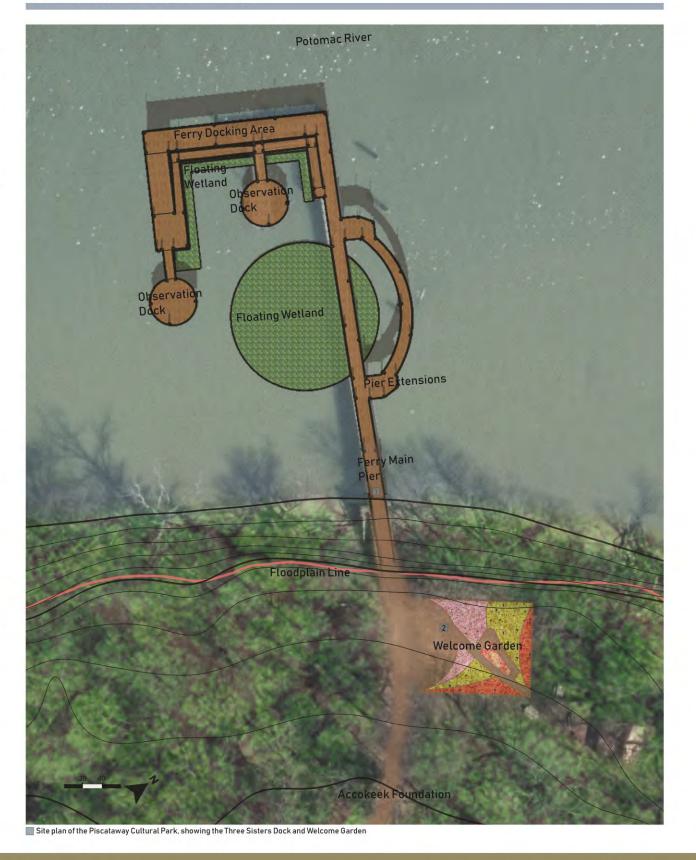


The Barangaroo Reserve in Sydney, Australia by Peter Walker & Partners focuses on aboriginal heritage in a coastal context, an inspiration for how to design along a shoreline.



The National Arboretum in Washington, DC has gardens that bloom with lots of color, an inspiration for the site's Welcome Garden.

Cultural Park Site Plan



Three Sisters Dock



III A perspective of the Piscataway Cultural Park Three Sisters Dock shows its popularity and many function

Accokeek Welcome Garden



🛮 A perspective of the Piscataway Cultural Park Welcome Garden show the garden in bloom being enjoyed by tourists, families and friends







The aerial view of the Piscataway Cultural Park Three Sisters Dock shows its popularity and many functions.







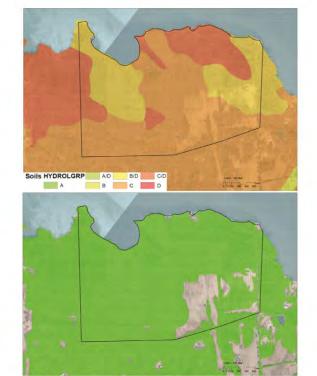
Opportunity and constraint map of the Piscataway Natural Park Site

Hydrology



Streams (top) and floodplain (bottom) maps of the Piscataway Natural Site

Soils & Trees



Soils (top) and tree cover (bottom) maps of Piscataway Natural Site

Topography & Properties



Contour (top) and property line (bottom) maps of the Piscataway Natural Site

Opportunities

- Water access at Farmington Landing
 - Provide an interactive environmental rehabilitation
 - project on the water
- Flat space for construction of parking area

environmental rehabilitation

Provide an interactive

project in a meadow

- Provide trail system in forest to accommodate environmental rehabilitation project
- Connect proposed trail system from Accokeek Foundation

Scenes of the Site



A bench at Ft. Washington, across the river from the site, gazes onto the Potomac River. Shorelines populated with dense vegetation and shoreline protection attract wildlife as well as anglers.



At the proposed site, the main feature includes a mussel shoal intervention surrounded by a halfmoon boardwalk. The boardwalk could interpret mussel harvesting it the Bay.

Site Users



What's happening? We're Ryan and Faith Bohemia. We live in DC, but visit the Park about once a month to escape the city. When we come we spend all day here. There's so much to explore!



■ LEISURE My name is Dan Williams. I like the, serenity of this park. and visit during the week after a long work day. It's a great place for thinking, communing with nature, and to spend time with friends.

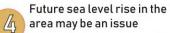
Good day to you! I'm Fin Finnigan. I'm an avid kayaker. The Natural Restoration Park in the Piscataway offers a superb spot for a day of kayaking. Nearby is Ft. Washington and Accokeek, but I like the calm waters near the mussel rehabilitation project. It's fun to show others this gem!

■ KAYAKERS



Narrow road could constrict access

Much of land area is in the



Lack of amenities at

Farmington Landing

Shoreline erosion and poor water quality

Trail would entail tree removal

from otherwise undisturbed forest





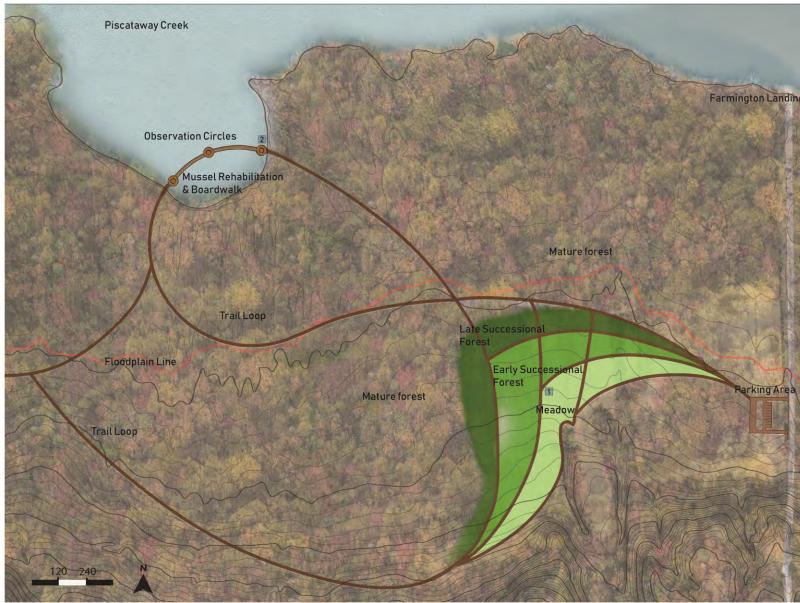
floodplain

Design Goals

1. Showcase mussels in the Chesapeake Bay

- 2. Highlight the role mussels play in water quality, as a coastal buffer for storm surge, and as an environmental engineer
- 3. Engage visitors with an environmental rehabilitation experience
- 4. Make a loop trail that connects to other proposed trails in the area
- 5. Provide a trail system and floating dock adaptable to sea level rise

Natural Park Site Plan



Site plan of Piscataway Natural Park, showing the successional forest habitat and mussel rehabilitation area.

Precedents

The Living Breakwaters
Project by Kate Orff in New
York provided inspiration
for thinking about
ways to buffer against
storm surge, which is
showcases in the site
plan in the mussel shoal
rehabilitation area.



The Accokeek
Foundation has
already taken steps to
buffer their shoreline
from the effects of
climate change by
installing their "Living
Shoreline," a concept
the site plan expands
upon.



Successional Meadow & Forest Trail



A perspective in the successional forest area of Piscataway Natural Park show transition from meadow to early successional forest, with a mature forest in the

Mussel Rehabilitation Boardwalk



2 A perspective of the Mussel Boardwalk in Piscataway Natural Par







The aerial view of the Piscataway Natural Park Mussel Walk shows users enjoying the length of the boardwalk.







Vision

A network of community use recreational parks in the Piscataway watershed dedicated to the health of local residents and the environment in which they live. Each community park will include an accessible walking loop, fitness circuit, playground and/or adventure course, multipurpose ballfield or courts, pavilion with restrooms, and open space, all set within native wetlands, grasslands, and woodlands. The parks will be 30-50 acres in size with a service radius of ½ a mile to 3 miles, and will link to the proposed Piscataway Valley Greenway.

Greenway Experiences

- Walk or bike 1-2 miles along an <u>accessible loop trail</u> with options to return at various points. Boardwalks, stepping stones and bridges will be used in ripar ian environments to protect ecosystem
- Encounter <u>points of interest</u>, which could include geologic features, hydrological features such as a stream or pond, historic or cultural features, a specimen tree or views
- Rest in the shade on a bench or seat wall and rehydrate at a water station
- Exercise outdoors on state-of-the-art equipment spread out along the walking loop
- Play in a playground (ages 2-5), Adventure Course (ages 5-12) or Court (all ages)
- Enjoy games, picnics, or concerts on open lawn
- Experience a healthy and thriving ecosystem by observing <u>distinct</u> <u>habitats</u> (open field, forest buffer, forest, riparian buffer, pond or stream) along the loop and within activity areas
- Know where you are and how to get where you want to go with directional signs and maps
- Learn about natural features of the park and other topics related to nature, exercise and health through signs, programming, demonstrations, temporary exhibits, or an app
- Stay comfortable with gender neutral, wheelchair accessible restrooms with changing tables
- Connect to another community park along the Piscataway Valley Greenway

Locations

Potential community park locations were selected by their proximity to dense residential development and to the proposed Piscataway Valley Greenway. Property owners include M-NCPPC, community associations, developers and private individuals. The following design proposals are for a new Canter Creek Park (1) and the revitalization of Hillantrae Park (2).

Alexandria

Master Plan



Context

The Canter Creek subdivision is located in the Piscataway Creek watershed in southern Prince George's County, MD. The park site lies in the center of the subdivision, which is bounded by Piscataway Creek to the west, Frank Tippett Road to the east and Dower House Pond Branch to the south. The site features streams, wetlands. and conservation woodland. Equestrian trails associated with the Merrymount Equestrian Center traverse the site.

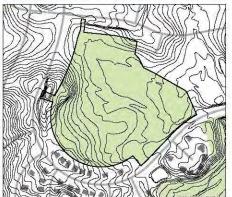
Historical aerial and satellite images show that by 1938, all but a band of trees along the Piscataway and Dower House Pond Branch streams had been cleared for agriculture. By 1965, some of the cleared area had filled back in, leaving a rectangular field which was kept mowed until construction began on the Canter Creek development in 2004. Remnants of a 19th century tobacco barn and a 20th century tenant farmhouse and barn have been found on the site.

Proposal

Wedged between two stream valleys at the heart of the Canter Creek community, Canter Creek Park will provide an active recreation park dedicated to the health of local residents and the environment in which they live. The 25-acre park will serve all ages, with facilities for adults, children and teens. Because of its historic connection to the Merrymount Equestrian Center, the park will include equestrian trails, as well as walking and biking trails that link to the proposed Piscataway and Dower House Pond Branch Valley Greenways and the bikeway along Frank Tippett Road.

Canter Creek Park Site Inventory Alison Jones, Designer | LARC 462 Regional Design Studio Fall 2019, Dr. David Myers

Abiotic



Topography

From west to east, the site drops steeply from a high point of 216 feet above sea level and then levels out toward a low point of 172 feet above sea level, an overall distance of 44 feet. On the other side of the high point the terrain descends to the Piscataway Creek.



Soils

Most of the site is composed of hydrological soil type C, with type C/D in the conservation woodland. Soil type C is made up of fine sandy loam and moderately well-drained. Soil type C/D is poorly drained and frequently flooded.

Biotic



Tree Canopy

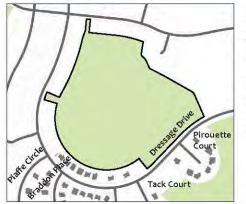
The forest stand within the site is a conservation woodland.



Wetland

Water bodies on the site include two streams and two ponds.

Cultural



Roads

The roads named on the map were built in Phase 1 of construction, the unamed roads will be built in Phase 2. Dressage Drive leads to Frank Tippett Road.



Trails

Prior to development the site served the Merrymount Equestrian Center with a series of natural surface trails between the Piscataway and Dower House Pond Branch stream valleys. The Equestrian Center has an agreement with Canter Creek to continue to use the trails.

Opportunities and Constraints

Opportunities

<u>Trail Connections</u>—the site's unique location near proposed trails along the Piscataway and Dower House Pond Branch stream valleys, Merrymount Equestrian Center and Frank Tippett Road can provide a hub and a waystation for walkers and bikers. Through traffic will need to be balanced with local traffic.

High Visibilty—views into the park from all sides make it a safe space for children to play. Select screening can offer privacy to residents directly adjacent to the park.

Protected Natural Areas — the forest conservation easement and wetlands on the site as well as the Piscataway and Dower House Pond Branch stream valleys offer opportunities for restoration and education.

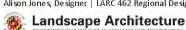
Constraints

Steep Slope—the descent from western slope will require grading to make it the site accessible to all.

Moderately Well-drained Soils —the majority of site will be able to absorb some stormwater runoff from adjacent road and buildings.

Equestrian Trails—existing trails will need to be redirected away from recreational

Lack of Tree Canopy—clearing of trees from previous use as an agricultural field will require tree replanting for shade in recreational areas.



Design Goals

Improve User Experience

- Provide <u>outdoor gathering place</u> for the Canter Creek community
- Provide facilities for <u>active and passive recreation</u> for a range of ages and abilities
- Reflect equestrian and agrarian history in design of amenities
- Create <u>sequential experience</u> along trails to highlight unique natural features such as upland and lowland habitats, moisture patterns, creek crossings, stream overlooks and notable trees
- Connect <u>walking and biking loop</u> the proposed Frank Tippett Road bikeway, Piscataway Creek and Dower House Branch Valley Greenways, and network of equestrian trails

Enhance Ecological Systems

- Remove invasive vines, forbs, shrubs and trees to <u>improve</u> <u>ecosystem health</u> and clarify woodland layers
- Reforest slope
- Plant 100' <u>critical area riparian buffer</u> around water bodies
- Enhance upland, floodplain and wetland habitats along path with suitable <u>native plant communities</u>

Design Features

- Walking/biking loop of varying lengths and equestrian trail
- Boardwalk with overlooks
- Nature playspace
- Skate Spot
- Multipurpose ballfield
- Pavilion with restrooms and storage area
- Critical area riparian buffer of 100' around water bodies
- Reforested slope



skate spot



Multipurpose ballfield



Maryland tobacco barn roof for pavilion



Nature playspace







Cut through from Canter Creek Park to Piscataway Valley Greenway



Sweetgum Pond and Overlook



5-6x a week for 1-2 hours

I live on Dressage Drive overlooking Canter Creek Park. I have two ac- I commute to my job at Andrews Air Force Base from my home in tive boys; Caden, my 13 year old likes to skateboard and Dexter, my 5 year old likes to climb. They run down to the park after school and do their thing and I keep my eye on them from my kitchen window. so often I will talk a walk during practice, around the loop a couple of the skaters or catch a ballgame. The church youth group that I lead times or onto one of the greenways if I am feeling ambitious. I love having all of these opportunities to be outdoors so close to home.

Local User–Amanda (32), Caden (13) and Dexter (5) Through User–Brandon Allen (25), Bike Commuter 2x a day for 30 min each way

Holloway Estates. I follow the Dower House Pond Branch Valley Greenway across Frank Tippett Road and then connect to the Piscataway around the Center to ride on. There has been some development Valley Greenway at Canter Creek Park. It's nice to have an off-road Caden and Dexter also play on sports teams that practice on the field route to work. I enjoy stopping at the park on my way home to watch. Dower House Pond Branch Greenway and connect to the Plscataway often meets at the park pavilion in the summer. The fresh air seems to relax the kids and allow them to talk more freely.

Destination User-Dana Rogers (32), Equestrian 2x per month for a few hours

I live in DC and take horseback riding lessons at the Merrymount Equestrian Center in Rosaryville, MD. There are numerous trails in the area, but we are still able to ride to Rosaryville Park along the Valley Greenway at Canter Creek Park. The parks along the route offer rest stops where I can water my horse.



Context

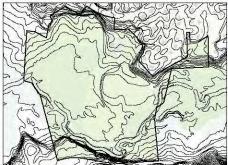
Hillantrae Community Park serves the neighborhood of Windbrook Estates in Clinton, MD a suburb in southern Prince George's County that is home to over 300 residents. Most of the park is located in the floodplain of Piscataway Creek which runs just below it. The project area encompasses a portion of the existing 43-acre park, with an entry drive that leads to a parking lot, pavillion, picnic area, playground for ages 2-5, and an asphalt path that leads to a baseball diamond and multipurpose field, then continues along the creek to a turnaround point. Paths also enter the Park from Piscataway Landing Drive and Jervis Place.

Between the 1930's and the 1980's the project area was an agricultural field. By the early 1990's the field had grown over, no longer in use, and by the end of the decade had returned to it's natural state. Windbrook Estates was established in 1998 and by 2005 the pavillion and park had been added.

Proposal

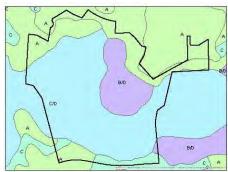
The revitalized Hillantrae Trails Community Park will allow residents of Windbrook Estates and beyond to experience the ecology of Piscataway Creek by walking or biking through restored wetland, grassland and woodland habitats along an accessible path and boardwalk. The trail will connect to the Piscataway Stream Valley Trail and loops back at several points to offer a range of walking distances. A wildflower meadow near the playground will introduce children to native flora, insects and birds. Wetland and woodland restoration, stormwater collection and tree planting around the pavilion, parking area and neighborhood will improve water and air quality.

Abiotic



Topography

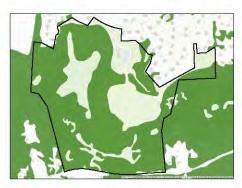
The site descends 20 feet from the northeast to the southwest towards Piscataway Creek. A ridge at the top of the site gradually flattens out into the floodplain.



Soils

The top of the site is composed of well drained hydrological soil type A. The developed area in the center of the site is soil type B/D, made of silt loam which is somewhat poorly drained and occasionally flooded. The remaining wooded portion of the site is composed of soil type C/D which is poorly drained and frequently flooded.

Biotic



Tree Canopy and Vegetation

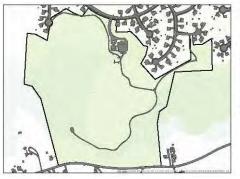
The site is forested with an open field in the center. Vegetation includes broad-leaved deciduous trees and shrubs, persistent emergents, and emergent mosses or lichens.



Wetland

Most of the site lies within the floodplain of Piscataway Creek which flows along the eastern and southern borders of the site. Numerous tributaries of the creek flow across the site. The non-tidal wetland is subject to temporary flooding. Surface water is present for brief periods during the growing season, but the water table usually lies well below the ground surface.

Cultural



Impervious Surfaces

The site lies below a large residential development and includes a concrete entry drive, parking lot and trail. Stormwater runoff from the development flows across the site and into the creek.



Paths

Asphalt paths coming from Piscataway Landing Drive, Strawberry Hill Drive and Jervis Place meet in the park and continue down along the creek, ending at a turnaround.

Site Conditions



The asphalt path lies within feet of the stream bank.



Stream bank overgrown with invasive vines.



Outfall pipe of tributary that runs beneath path.



Pavilion and parking area.

Design Goals

Improve User Experience

- Move walking trail out of critical riparian area and add <u>board-walk that loops</u> back to playground, parking area and Piscataway Landing
- Create <u>sequential experience</u> along trail to highlight unique natural features such as upland and lowland habitats, moisture patterns, creek crossings, stream overlooks and notable trees
- Connect trail to the proposed Piscataway Valley Greenway
- Create <u>meadow</u> near playground and parking lot with walking loop, benches and educational signage
- Design plantings at transition zones to denote shift in ecology

Enhance Ecological Systems

- Remove invasive vines, forbs, shrubs and trees to <u>improve</u> <u>ecosystem health</u> and and clarify layering of woodland habitat
- Plant 100' critical area riparian buffer along streams
- Enhance upland, floodplain, and wetland habitats along path with suitable <u>native plant communities</u>
- Consolidate ball fields into <u>multipurpose field</u> out of critical riparian area
- Add shade trees and vegetated swales to parking area to improve air and water quality
- Increase tree canopy in neighborhood to 40% coverage

Design Features

- Walking/biking loop of varying lengths
- Boardwalk with viewing pavilions
- Multipurpose ballfield
- Critical area 100' riparian buffer along streams
- Vegetated swales and shade trees parking area
- Children's learning meadow and walking loop



Pand Overlank



Learning Meadow



Stream Acces



Boardwalk



Hillantrae Park

____ Master Plan

Alison Jones, Designer | LARC 462 Regional Design Studio Fall 2019, Dr. David Myers



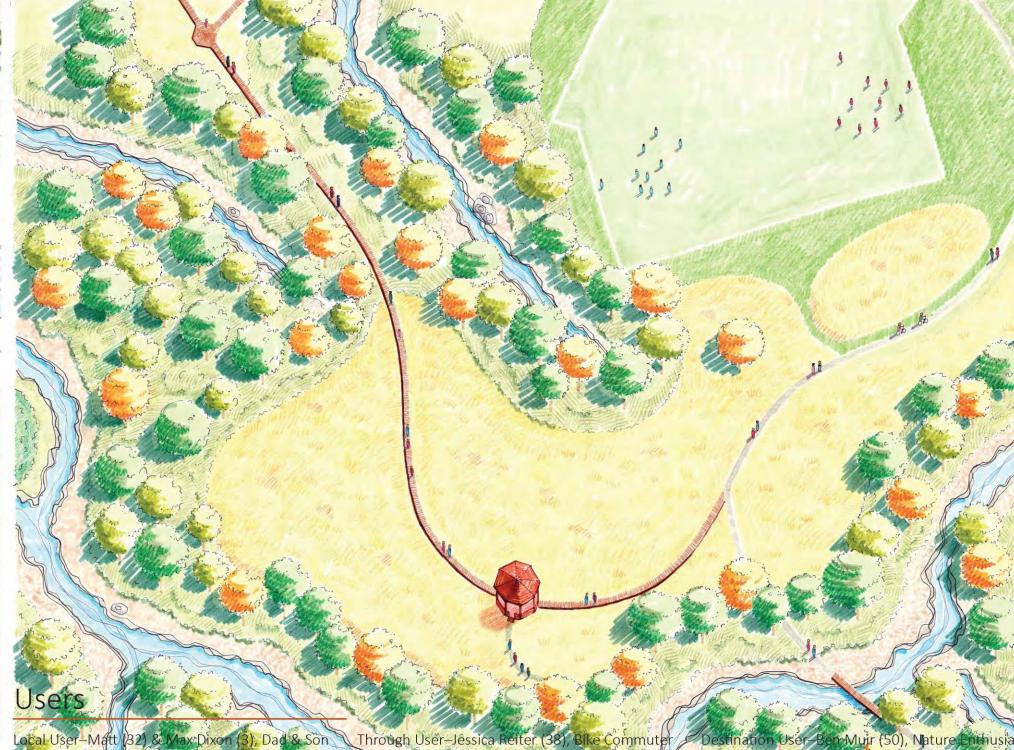




Entering Hillantrae Park from the bridge over Piscataway Creek



Walking from Piscataway Creek to Ironweed Overlook



4x a week for 1

on Piscataway Landing Drive near Hillantrae Park, I look forward finds framed by frees and plantings and clearly marked with a sign.
Screened from the road and houses by wooded slopes, the boardwalk takes us on a peaceful journey through meadows and over a streams. Along the way we see birds, butterflies, squirrels, and occasionally deer. We pass joggers, dog walkers, and bikers. After stopping at the overlook for a snack, Max often likes to take a detour down to the creek to skip stones. If he is energetic we continue past the ballfield to the a short meadow that he loves to explore.

2x a day for 30 min each way

ommute to my job at the Federal law Enforcement Training Center Hove to get out of DC on the w ny hamerin Windbrook Estates every day of the year, except when the trail is icy. I can line to the Piscataway Creek Stream Valley
Trail through Hillantiae Trails Park down the street. I ride into the
park at around 6AM—past the payilion, plays ound and ballfield and over the Creek to the trail which runs along Floral Park Road. Even at that hour, there are people on the trail other commuters, joggets, and dog walkers. Where the trail divides to go over the creek, there is a boardwalk that loops back to the neighborhood. Sometimes I'll come back that way on my way home and stop at the overlook pavilion to do some reading or writing before heading home.

2-3x a year for a few hours

go on field trips Yellow Finch's on the Purple Coneflowers. From a bridge over Piscataway Creek we watched a turtle sunbathing on a rock, then continued our hike to Cosca Regional Park.