WATKINS REGIONAL PARK

Partnership for Action Learning in Sustainability

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Acknowledgements

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LARC471- Capstone Studio: Community Design
Spring 2022

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WiFi
Building Resilience through Internet and Digital Greenspace Exposure

PALS
Partnership for Action Learning in Sustainability

Table of Contents

Project Description

The need for new approaches to ensure internet access that would bridge society's "digital divide" became evident when instruction shifted online during the COVID-19 pandemic. Project BRIDGE, a UMD project funded by the National Science Foundation, aims to bring free Wi-Fi to public parks while creating technology that could bridge the digital divide and provide internet access to individuals and communities who now struggle to get online.

In this studio, students explored community needs by conducting a community engagement session in Watkins Regional Park and then proposing design solutions to accommodate Wi-Fi use in various areas of the park.

Source: Maryland Today

Site Inventory

• Community History	- Delaney Accomando
• Park History	- Elin Fan
• Context	- Zaria Stebbins
• Demographics	- Alondra Liriano
• Zoning	- Elise Shallbetter
• Circulation	- Kianna Chow
• Ecological Community	- Alyssa Steele
• Climate	- Rahat Duary
• Soil	- Lital Kirshenboim
• Hydrology	- Deanna Cowley
• Recommended Vegetation	- Karisha Rodrigo
• Transportation	- Theodore Ziolkowski
• Watkins Regional Park (Facilities and Users)	- Jacob Hess
• Land Cover	- Luke Peterson
• Utilities	- Nicole Cavender
• Park Masterplan	- Ellen (Yike) Xu

Site Inventory | Community History

UPPER MARLBORO HISTORY (Total area: 0.43 square miles)

1695: Settled and named after the first Duke of Marlborough

Among the oldest of the surviving Southern Maryland towns dating back to colonial times. The original land was part of several estates belonging to three different families.

1706: Marlborough Town was established as a port town by the Act for the Advancement of Trade and Erecting Ports and Towns and became an agricultural, social, and political hub

1721: Became county seat of Prince George's County.

Late 18th and early 19th centuries: many prominent merchants, lawyers, and politicians lived and worked in the area.

1870: The town was incorporated by the Maryland General Assembly

Original Court House

Aerial view of Upper Marlboro, 1967

1954 class photo, Frederick Sasscer HS

Present

Upper Marlboro initially boomed as a port town for tobacco trade, but the clearing and cultivation of land for farming lead to erosion in the area. Over the years, this erosion caused sedimentation, leading the Western Branch to become unnavigable. The fields of tobacco that once dominated the area have been converted over to residential developments, with the number of farms dwindling each year. Upper Marlboro's economy consists of small businesses, with a majority of employment opportunities in the city in the courthouse. There are 26 shops and restaurants in Upper Marlboro, 22 of which are small businesses. The courthouse makes up a large amount of revenue for the city.

Source: The Town of Upper Marlboro Historical Committee (TUMHC)

Watkins Nature Center

Old Maryland Farm

WATKINS REGIONAL PARK HISTORY (864 acres or 1.35 miles)

It was named in honor of Robert Watkins, who served as the Chairman of The Maryland National Capital Park and Planning Commission (M-NCPPC) from 1951 until 1954 and played a significant role in establishing and planning parks and open space in PG County. In 1964, Watkins Regional Park joined the growing network of public lands managed by M-NCPPC.

The land was once part of a large estate owned by the Belt family, dating back to the 1600's. After last Belt family member to live on the property, William Seton Belt, died in 1959, the M-NCPPC purchased a portion of the property in order to preserve the land and create a regional park. Two parcels totaling 437 acres were bought from the William Seton Belt estate.

Since 1991, ten additional parcels were purchased totaling 427 acres, doubling the park's size. Watkins Regional Park offers recreational amenities including: Watkins Nature Center, Old Maryland Farm, Chesapeake Carousel, an 18-hole miniature golf course, a miniature train, Watkins Tennis Bubble, two imagination playgrounds, picnic pavilions, a variety of trails and natural areas. Over one million visitors come each year to enjoy the recreational amenities, festivals and special events. The park still has large, beautiful fields used for agricultural production that display the importance of the County's agricultural heritage.

Source: The Historical Marker Database https://www.hmdb.org/m.asp?m=192205

Renovated Court House

PG County Correctional Facilities

Clagett Farm and CSA

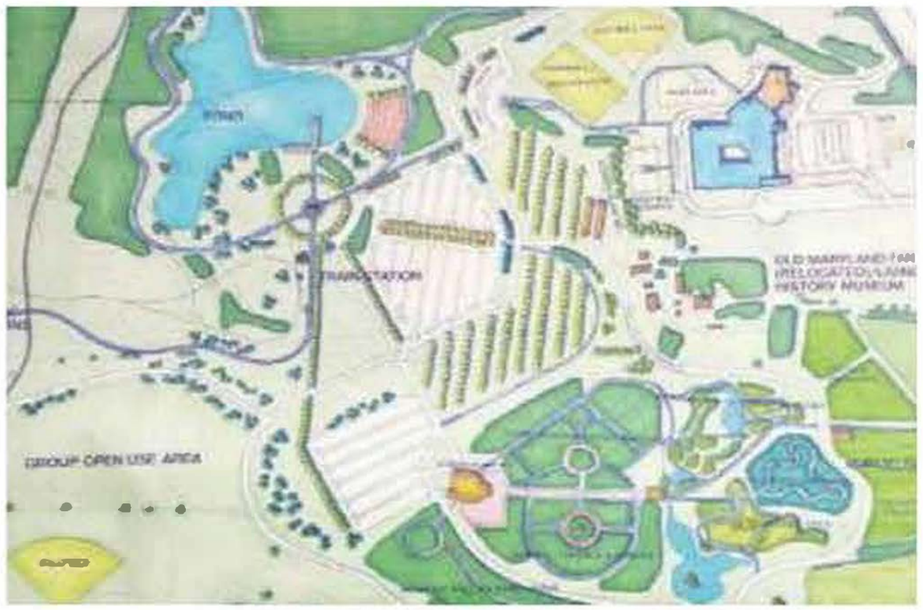
Miniature Train

"Wizard of Oz" Imagination Playground

Chesapeake Carousel

Site Inventory | Park History

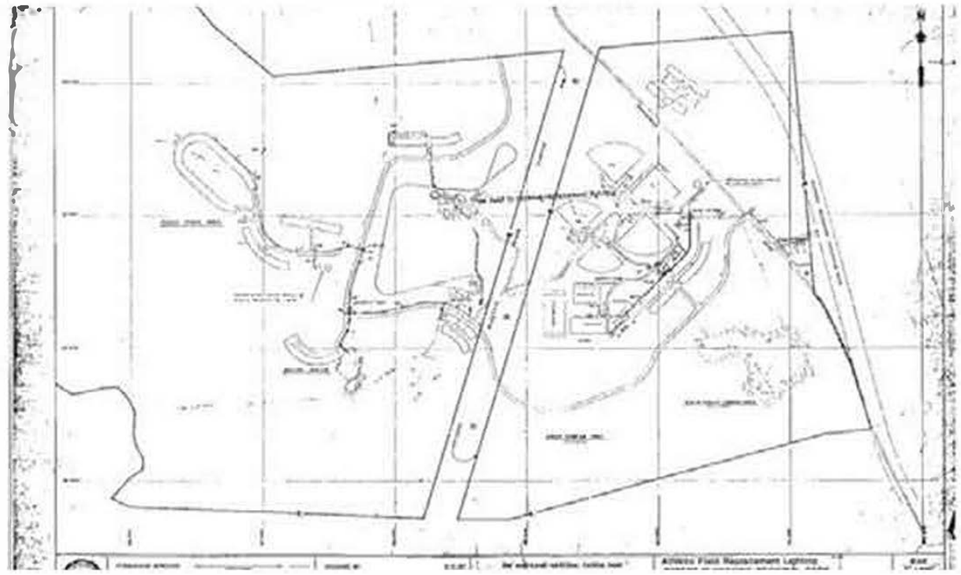
• Officially founded in 1964, was named after former Maryland National Capital Parks & Planning Commission (M-NCPPC) chairman (1951-54) Robert M. Watkins, who was instrumental in the establishment and planning of PG County's parks and open space.
• Land in which the park is situated on was originally a part of the Belts family estate that dates back to the 1600s. There, the Chelsea Plantation cultivated tobacco.
• The last Belt family member who lived on the property was William Seton Belts and upon his death in 1959, the M-NCPPC purchased two parcels of land totaling 437 acres with the intent to preserve the property and create a regional park. This land today is the park's northern portion.
• Since 1991 the M-NCPPC has purchased 10 additional parcels of land (last purchase in 1961), doubling the size of the park, which now stands at 864 acres. The new acquisitions make-up most of the southern half of the park.
• A master plan was drafted for Watkins (below) in the late 1990s - but never fully adopted. The plan focused on four big additions to the southern portion:
▫ The development of a botanic garden (incorporated)
▫ The addition of a large pond just east of the Pepco property and water features in the south (notincluded due to environmental restrictions)
▫ A ball and group use area (included)
▫ The relocation of Old Maryland Farm (included)
Original master plan would have also connected the spur road with the covered bridge and the northern section of the park.
• Much of the acreage in the southern portion is currently leased to a local farmer



Sources:

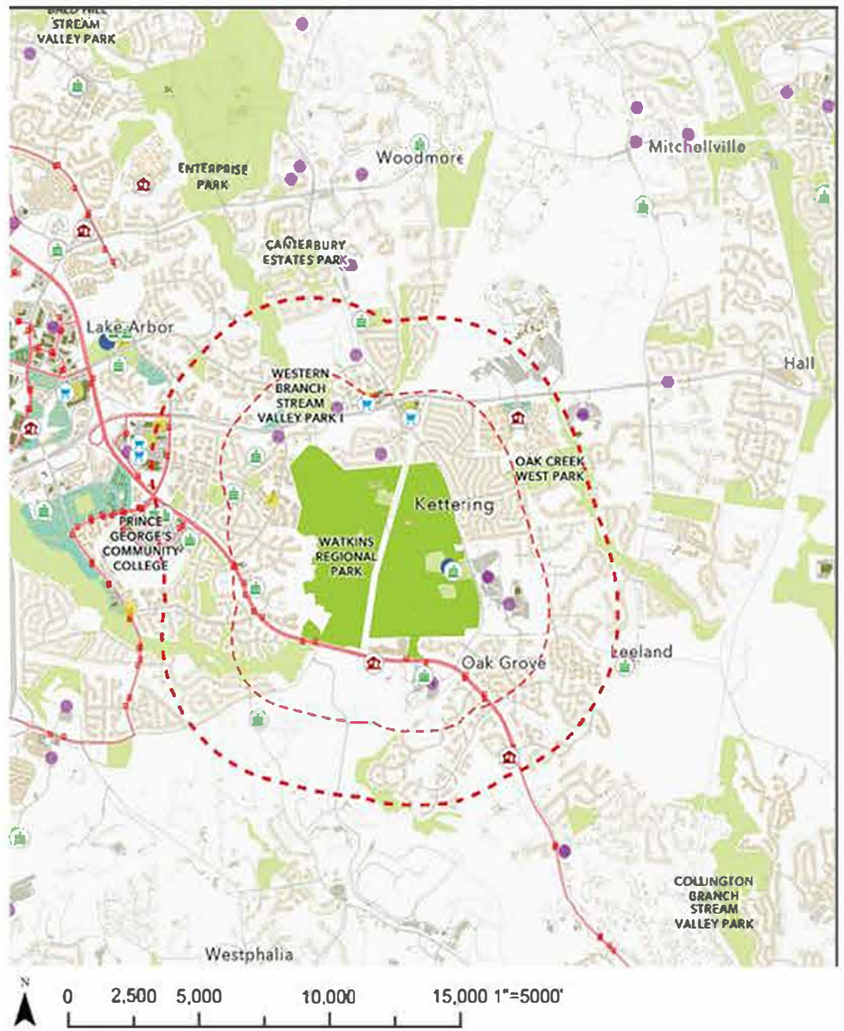
1. Bruton, J Makali, ed. "The History of Watkins Regional Park Historical Marker." Historical Marker. February 19, 2022. https://www.hmdb.org/m.asp?m=192205.
2. "Watkins Regional Park Master Park Development Plan," Chapter 2: The Park Today. Maryland-National Capital Park and Planning Commission. December 2018. http://www.mncppc.org/DocumentCenter/View/14403/P40-13-8_AddendumOne?bidId=.

Above Left: map which shows areas of Watkins Regional Park with Tree Conservation Plan regulations and owned by PEPCO2.
Above Right: a historic marker that sits at beginning/end of the Loop Trail, marker indicates 38° 53.392 N, 76° 47.237 W1.
Below: 1970 site plan showing how the northern portion of the park is much the same as it is today. A 1979 site plan expressed the intent to progress the park infrastructure from a dependency on well water and septic systems to pubic water and sewer. One restroom remains on septic service today in the northern portion of the park and well-water is still used to irrigate the athletic fields.



Site Inventory | Context

Watkins Regional Park is an 850 acre park within MNCPPC's North Divison in Kettering - an unincorporated area and census-designated place in Upper Marlboro, Prince George's County MD 20772. It is flanked by highway routes 193, 202, and 214. The park is surrounded by middle class, suburban neighborhoods, shopping centers, churches, and schools both public and private. The southern park entrance is served by Bus Route 21.



- Senior Housing
- Schools
- Healthy Food Retailer
- Religious Institution
- Shopping Centers
- Multifamily Complex
- Half Mile Buffer
- 1 Mile Buffer
- Bus Stops
- Community Centers
- Bus Routes
- Watkins Park
- Surrounding Parks
- Transportation_2020_P

Building Type

- Non-Residential
- Residential
- Misc.

Political Boundary
-District 6
- City: Kettering, Maryland
- over 5,000 home, 1/4 being town houses

Residential Support
- Largo Landing Fellowship House
-government-assisted apartment community designed for individuals with limited income

Education/ Community Institution
- Schools
- Perrywood Elementary School
- Edified Christian Preparatory Academy
- Riverdale Baptist Elementary/ Middle/ Highschool
- Kingsford Elementary School
- Kettering Elementary/ Middle School
- Largo Highschool

Public Charter School
-Churches
-First Baptist Church of Glenarden
- Largo Community Church
-Kettering Baptist Church
- St Michael's Truth ELCA
-Parks
-Whiteholm Park
- Northeast/ Western Branch Stream Valley Park
-Oak Creek West Park
- Community Center
-Largo Kettering Perrywood Community Center

Retail
-Restaurants and Food
- Maryland's Fresh Seafood
-Wendy's
-KFC
- Chipotle
- Dunkin Doughnuts/ Baskin Robins
- McDonalds
- Negril
- Peru Chicken
- Grocery Stores
-Weis
- Shopping Centers
- Watkins Park Plaza
- Mitchelleville Plaza

Special Sites
- Recreation/ Amusement
- Six Flags
- Historical Sites

Immediate Context

Watkin's Plaza


First Baptist Church of Glenarden


Largo/Kettering/ Perrywood Community Center


Chelsea House Historic Site

Site Inventory | Demographics

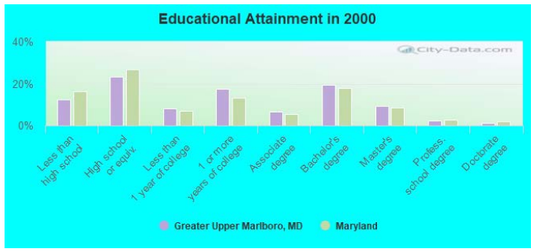
The area of Greater Upper Marlboro, Maryland covers 37.2 mile and as of 2007, has a population of 19,407,From the data presented, you may observe this area has a diverse population and design initiatives should foster growth as a community and the enhancement of individuals.

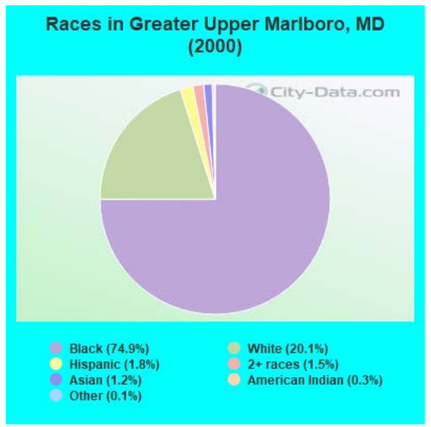
Quick Facts

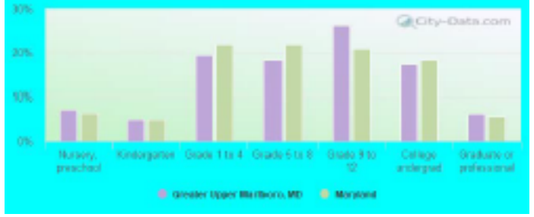
1. Median age 34.2yrs (MD avg. 36 yrs)
2. Population density: 521 people per sq mi (low)
3. Unemployment Nov. 2020: 9% (MD avg. 6.6%)
4. 3.4% of Residents live with incomes below poverty level

Education

GINI index (Edcuation Inequality): 11.1 (MD: 12.2) - Index coefficients above 0.5 represent severe gaps in education, hence income
87.7% Highschool or higher
32.5% Bachelor's or higher
13% Graduate or professional degree%







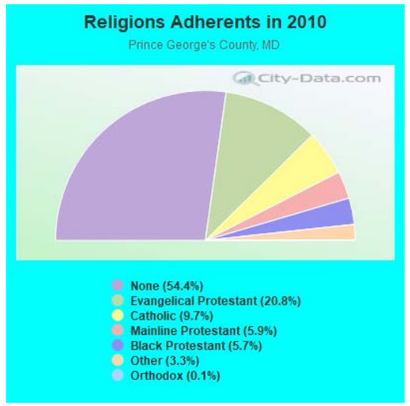
Quick Facts Continued

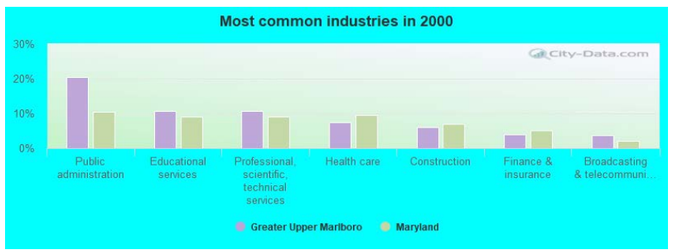
5. 2019 Median house/ condo value was $353,038 ($151, 800 in 2000)
6. 2019 cost of living index in Greater Upper Marlboro: 176.0 (very high, U.S. avg. is 100)
7. Average commute time of 40.2 minutes.
8. Daytime population change due to commuting: -3,412 (-18.2%)
9. Workers who live and work in this place: 623 (6.4%)

- **Household Info**
  Avg. Household Size: 2.7 people
  70.2% of residents live in family households
- 48% of residents are currently married, while 33.4% have never married
- Female - 9,726 (50.1%) Male - 9, 681 (49.9%)

Income Rate

The median household income in 2019 was $114,008 (MD mean was $86,738.)
Estimated per capita income in 2019: $47,051 (it was $29,218 in 2000)





Families enjoying Watkins Regional Park in Upper Marlboro, Maryland

Marlboro Day Festival & Parade 2021

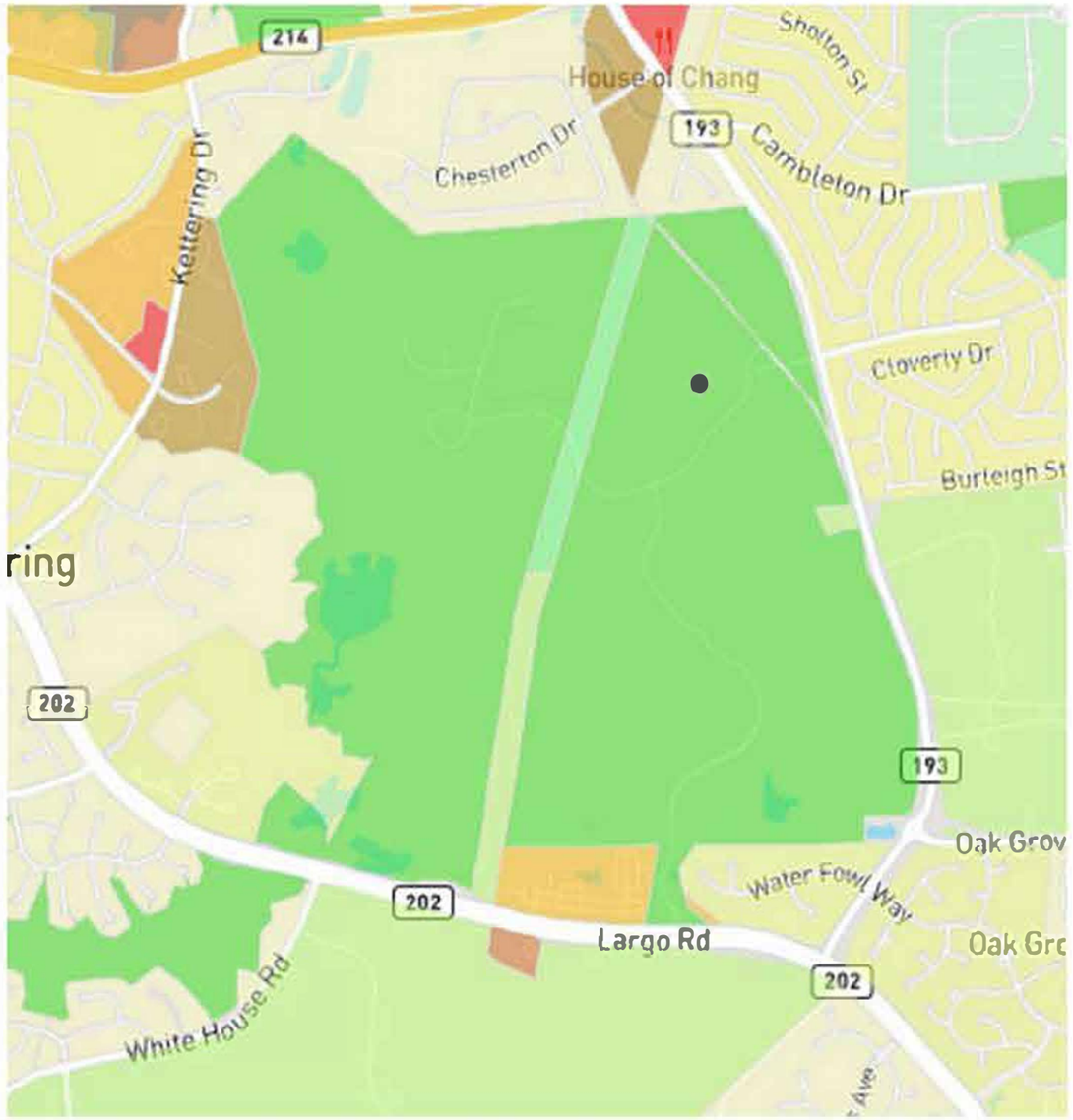
From the data points collected, one can see that this area in Prince George's County is young, mobile, affluent, and quickly growing. To continue to maintain the quality of life amidst demographic shifts can be the addition or improvement of park spaces - which can be greatly beneficial, especially given the number of family households that live here. Expanding amenities, activities, and services that existing parks provide can help respond to many more of the developing interests and needs of this diverse community.

Sources

https://www.city-data.com/city/Greater-Upper-Marlboro-Maryland.html

Site Inventory | Zoning

Most of the land surrounding Watkins Regional Park falls within the Residential Zoning Category with some Commercial Zoning as well. Looking at the minimum lot size, site setbacks, and the type of structures allowed within each of these zones is essential to the design of a site. The park is surrounded directly by more R-O-S zones and a corridor of O-S zoning, then branching out to more residential zones, then eventually commercial zones.



Definitions:

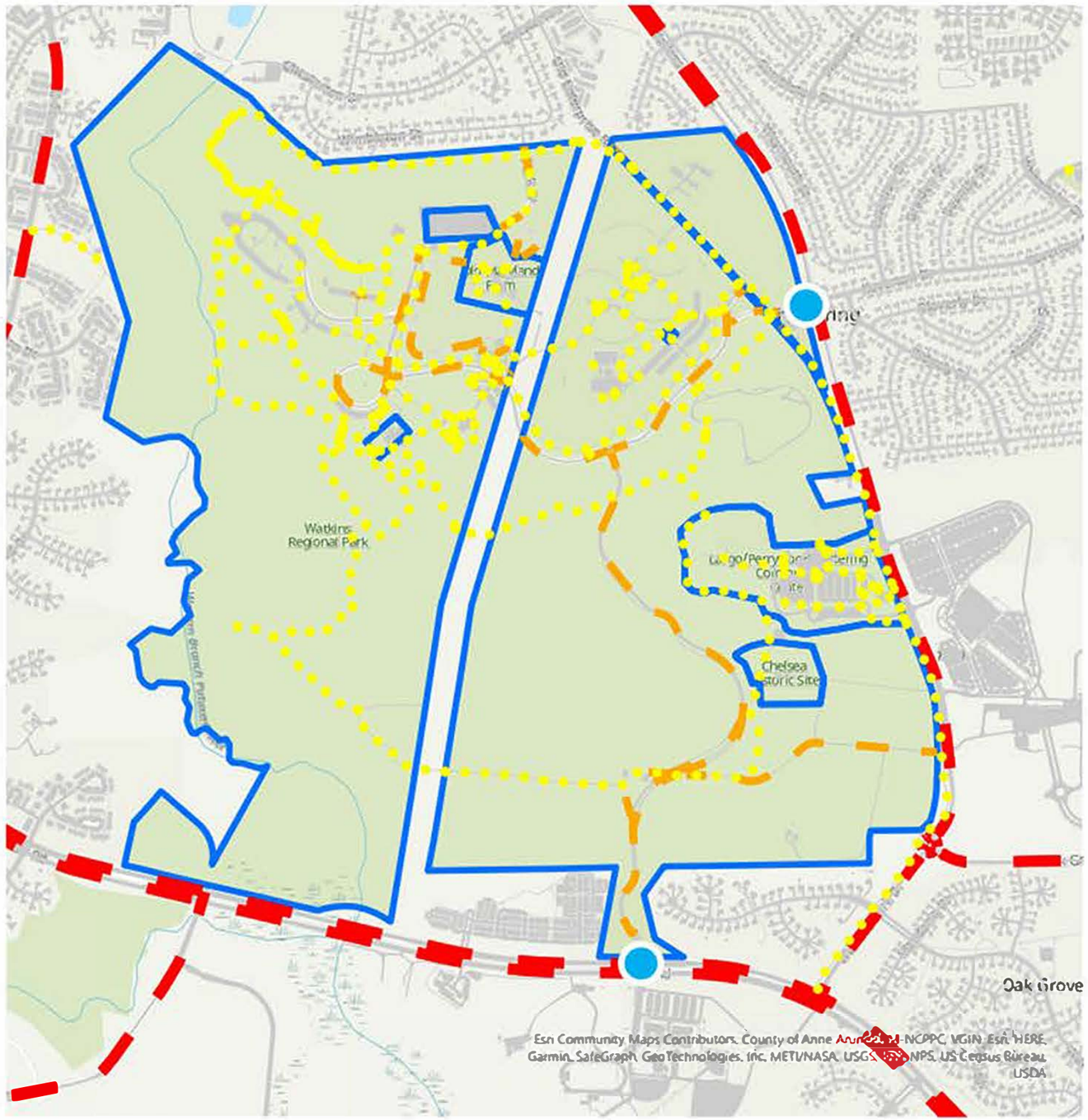
- Minimum or Standard lot size: The current minimum net contiguous land area required for a lot.
- Average dwelling units per acre: The number of dwelling units which may be built on a tract--including the typical mix of streets, public facility sites and areas within the 100-year floodplain--expressed as a per-acre average.
- Maximum dwelling units per net acre: The number of dwelling units which may be built on the total tract--excluding streets and public facility sites, and generally excluding land within the 100-year floodplain--expressed as a per-acre average.

- *R-O-S: Reserved Open Space*
- *O-S: Open Space*
- *R-R: Rural Residential*
- *R-18: Multifamily Medium Density Residential*
- *R-80: One Family Detached Residential*
- *R-L: Residential Low Development*
- *R-T: Townhouse*
- *C-S-C: Commercial Shopping Center*

Reserved Open Space - Provides for permanent maintenance of certain areas of land in an undeveloped state, with the consent of the property owners; encourages preservation of large areas of trees and open space; designed to protect scenic and environmentally sensitive areas and ensure retention of land for nonintensive active or passive recreational uses; provides for very low density residential development and a limited range of public, recreational, and agricultural uses.

- Minimum lot size - 20 acres*
- Maximum dwelling units per net acre - 0.05
- * Except for public recreational uses, for which no minimum area is required.

Site Inventory | Circulation



What is Circulation?

Circulation is referred to as the way people move through a given space. It has a connective purpose and impacts our experience of a space. Circulation can represent different uses such a horizontal circulation like hallways and paths whereas vertical circulation can be features like stairs and elevators.

What is Access?

Access can be described as the ability to enter or exit a site. Access can range in terms of accessibility through different such as pedestrian access, vehicular access, and inclusion of ADA access features like ramps and handrails

Vehicular Access

Much of the vehicular circulation is intended for the park staff for maintenance and not for visitors other than providing multiple parking lots in various areas.

Pedestrian Access

Much of the pedestrian cisculation is intended for park visitors who wish to utiliza the extensive trail system throughout the park.

What have we learned about this site's circulation and access?

from both the maps we have learned that this is primarily a park meant for pedestrians, bikers, and euestrians due to amount of trails. visitor's vehicular access have twopoints of entry but is primarily concentrated t one on the northeast side of the park

What recommended changes should be made?

Some possible changesin terms of circulation and access could be providing more points of entry and more informative signage for pedestrian entry and circulation.

- Points of Entry
- Pedestrian Traffic with Watkins Regional Park
- Vehicular Traffic within Watkins Regional Park
- Main Road Traffic surrounding Watkins Regional Park
- Watkins Regional Park

0 500 1,000 2,000 3,000 4,000 Feet

1" = 1,000'

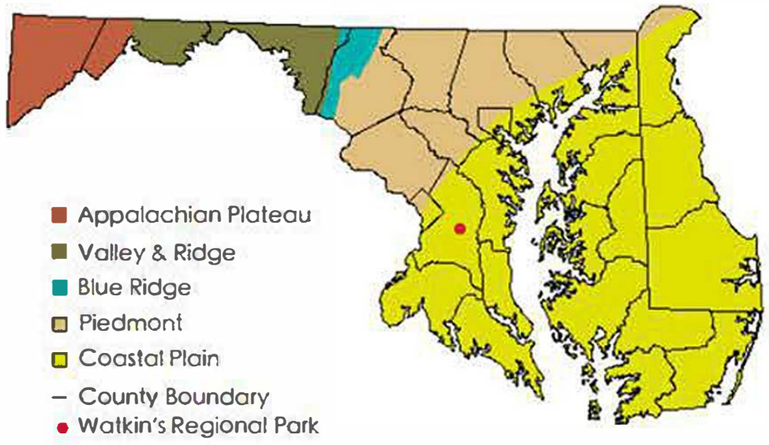
N

References:
https://gisdata.pgplanning.org/opendata/
https://www.mncppc.org/9204/Watkins-Regional-Park

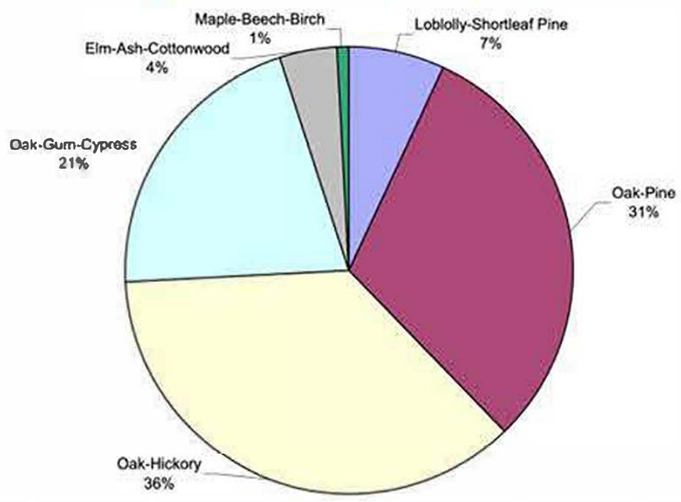
Site Inventory | Ecological Community

A Natural community is best described as recurring assemblages of plants and plants found in a particular physical environment. These ecological communities are an important part of Maryland's biodiversity. The classification of these communities creates better opportunity for these areas to be managed & protected through conservation efforts.

Physiographic Provinces of MD



Forest Types within Coastal Plain



Watkin's Regional Park is located within the Coastal Plain Province. This region is the largest physiographic province in Maryland.

- Forests in this area are typically hardwood, including a large domination of Oaks mixed with some Pine, Hickory, Chestnut, Gum, Elm, Ash, and Cypress.

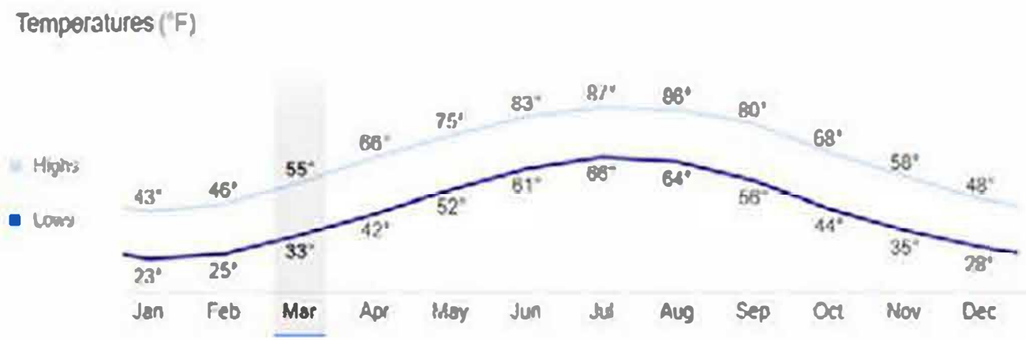
- Soils in this physiographic region typically have a higher sand content, and are made up of gravel, clay, silt, and some iron ore.

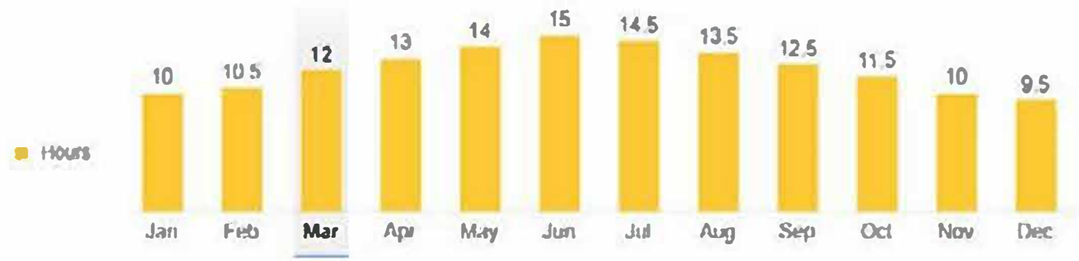
Wildlife of Coastal Plains

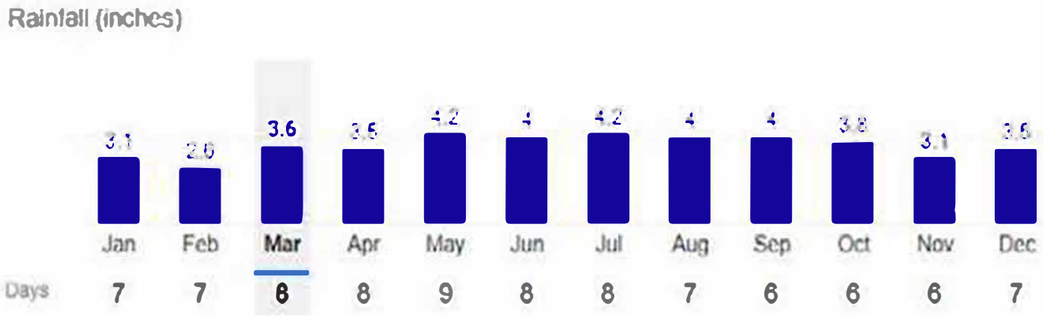
Refrences:
MD DNR - https://dnr.maryland.gov/wildlife/Documents/Natural_Communities%20_Maryland_2016_Framework.pdf

Site Inventory | Climate

The data shows the average climate affecting the Upper Marlboro area where Watkins Regional Park resides.



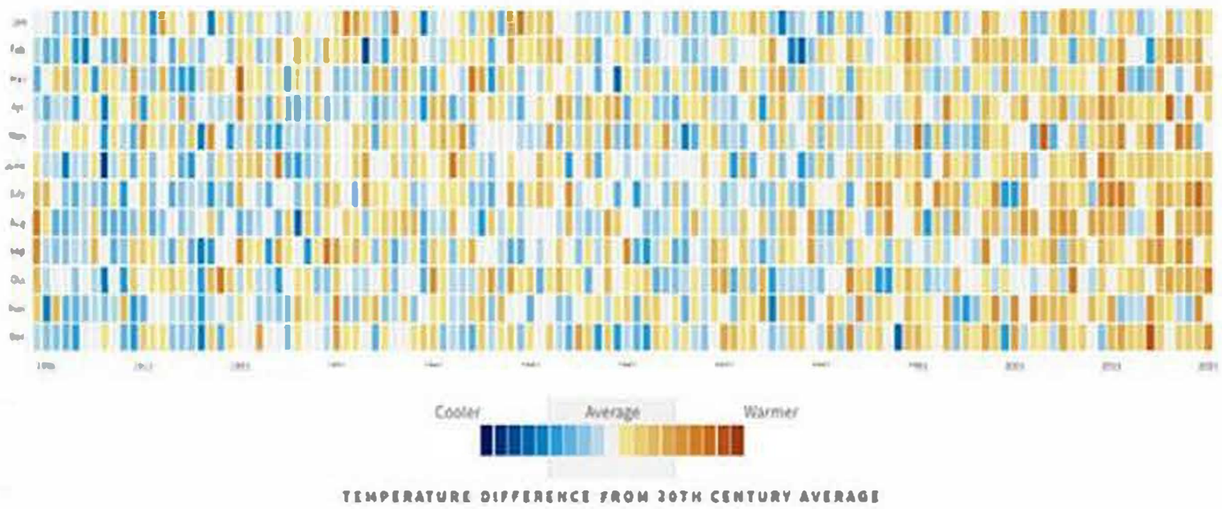




Climate Change Effects:

- In 2020 Prince George's County experienced 26 days back to back of 90-degree heat or greater
- On September 10, 2020, there was 4 to 6 inches of rain in less than two hours on the Hyattsville/Riverdale/ Mount Rainier area of Prince George's County.

Temperature difference from 20th century average for every month between 1900 and 2021

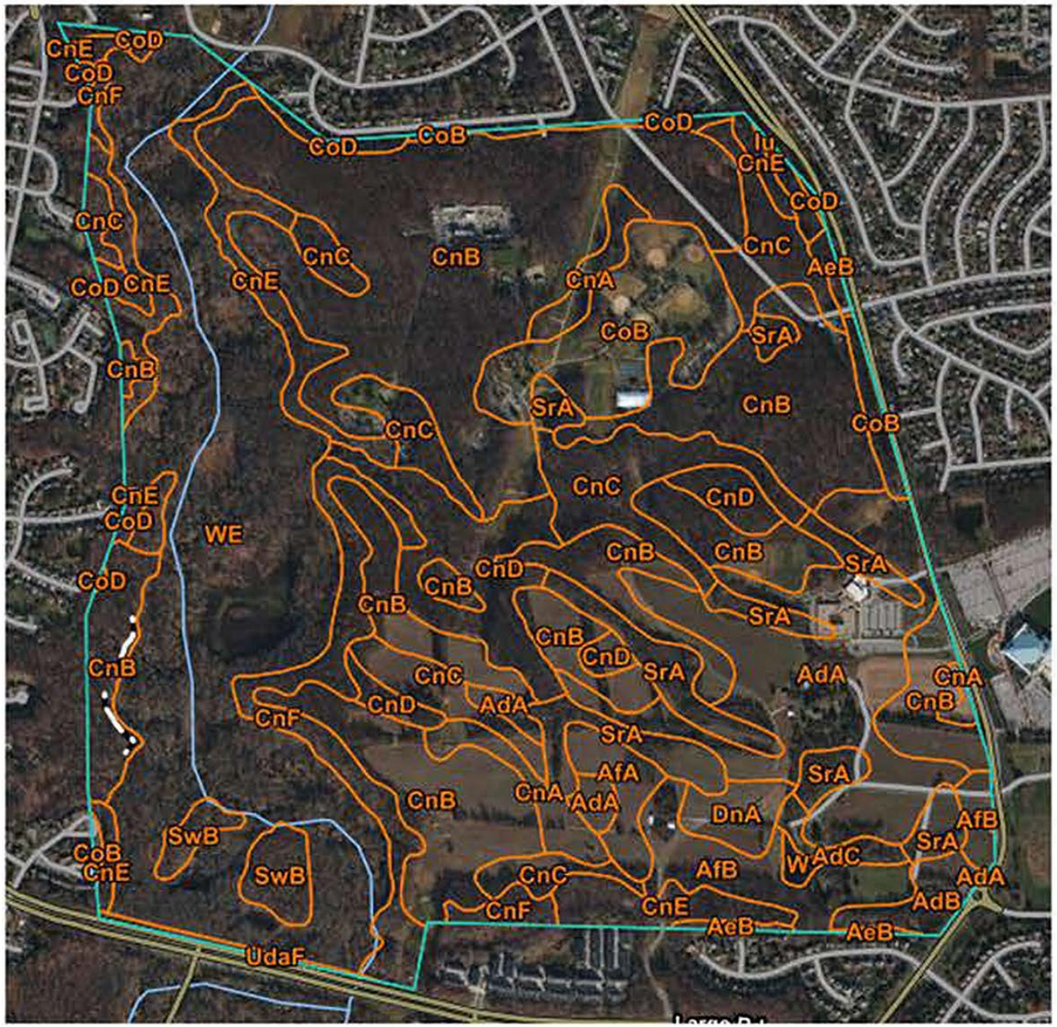


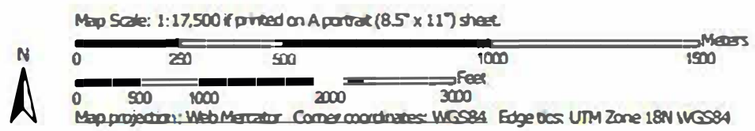
Sources:

- *https://www.ncei.noaa.gov/1*
- *https://www.princegeorgescountymd.gov/3741/Climate-Action-Commission2*
- *https://usafacts.org/issues/climate/state/maryland/county/prince-georges-county*

Watkins Regional Park soil analysis

MAP INFORMATION
Source of Map: Natural Resources Conservation Service
Date(s) aerial images were photographed: Nov 23, 2020—Nov 28, 2020

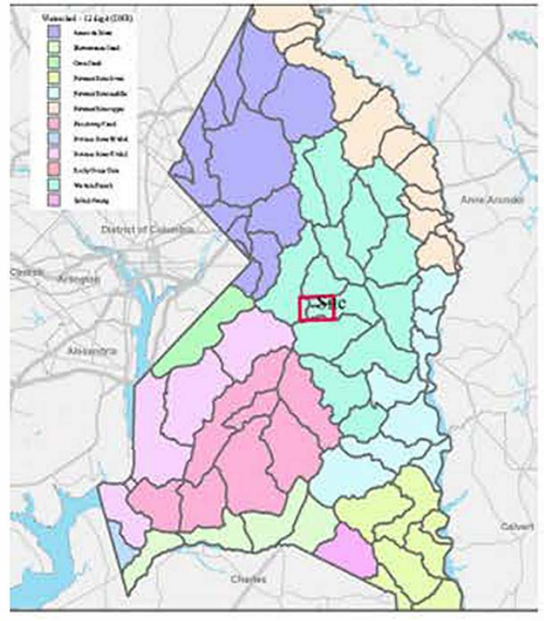




Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
AdA	Adelphia-Holmdel complex, 0 to 2 percent slopes	79.8	8.3%
AdB	Adelphia-Holmdel complex, 2 to 5 percent slopes	8.5	0.9%
AdC	Adelphia-Holmdel complex, 5 to 10 percent slopes	4.4	0.5%
AeB	Adelphia-Holmdel-Urban land complex, 0 to 5 percent slopes	4.0	0.4%
AfA	Annapolis fine sandy loam, 0 to 2 percent slopes	10.1	1.0%
AfB	Annapolis fine sandy loam, 2 to 5 percent slopes	25.8	2.7%
CnA	Collington-Wist complex, 0 to 2 percent slopes	17.3	1.8%
CnB	Collington-Wist complex, 2 to 5 percent slopes	301.0	31.2%
CnC	Collington-Wist complex, 5 to 10 percent slopes	68.8	7.1%
CnO	Collington-Wist complex, 10 to 15 percent slopes	41.3	4.3%
CnE	Collington-Wist complex, 15 to 25 percent slopes	44.2	4.6%
CnF	Collington-Wist complex, 25 to 40 percent slopes	33.5	3.5%
CoB	Collington-Wist-Urban land complex, 0 to 5 percent slopes	48.3	5.0%
CoD	Collington-Wist-Urban land complex, 5 to 15 percent slopes	11.0	1.1%
DnA	Donlonton fine sandy loam, 0 to 2 percent slopes	8.4	0.9%
Iu	Issue-Urban land complex, occasionally flooded	0.3	0.0%
SrA	Shrewsbury loam, 0 to 2 percent slopes	43.5	4.5%
SwB	Swedesboro-Galestown complex, 0 to 5 percent slopes	11.8	1.2%
UdaF	Udorthents, highway, 0 to 65 percent slopes	1.9	0.2%
W	Water	1.7	0.2%
WE	Widewater and Issue soils, frequently flooded	199.4	20.7%

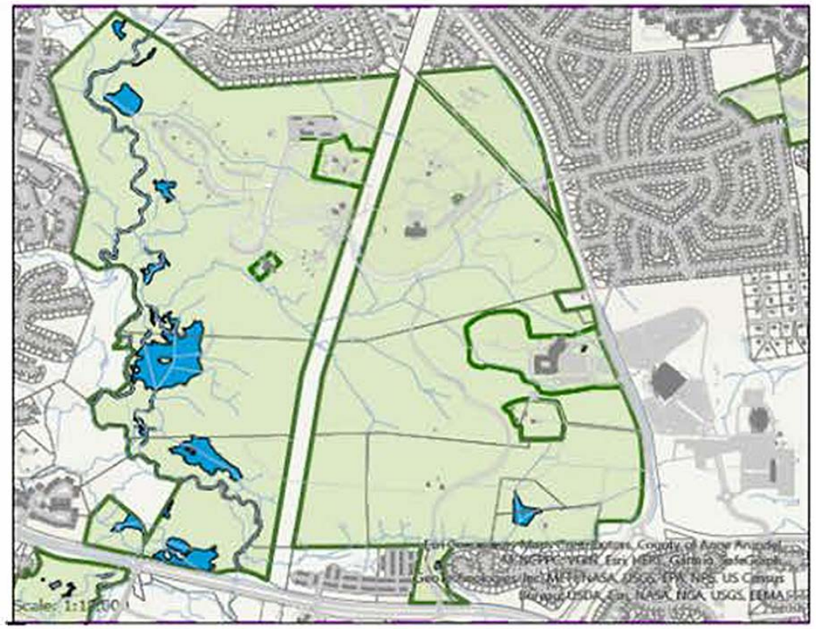
Waterways

Watkins Reginal Park is located in the Western Branch Watershed within the Patuxent River drainage basin. The Park is situated along the Kettering Area Sub-Watershed. It will be important to consider how flooding upstream will affect the site and how this system may affect flooding downstream.

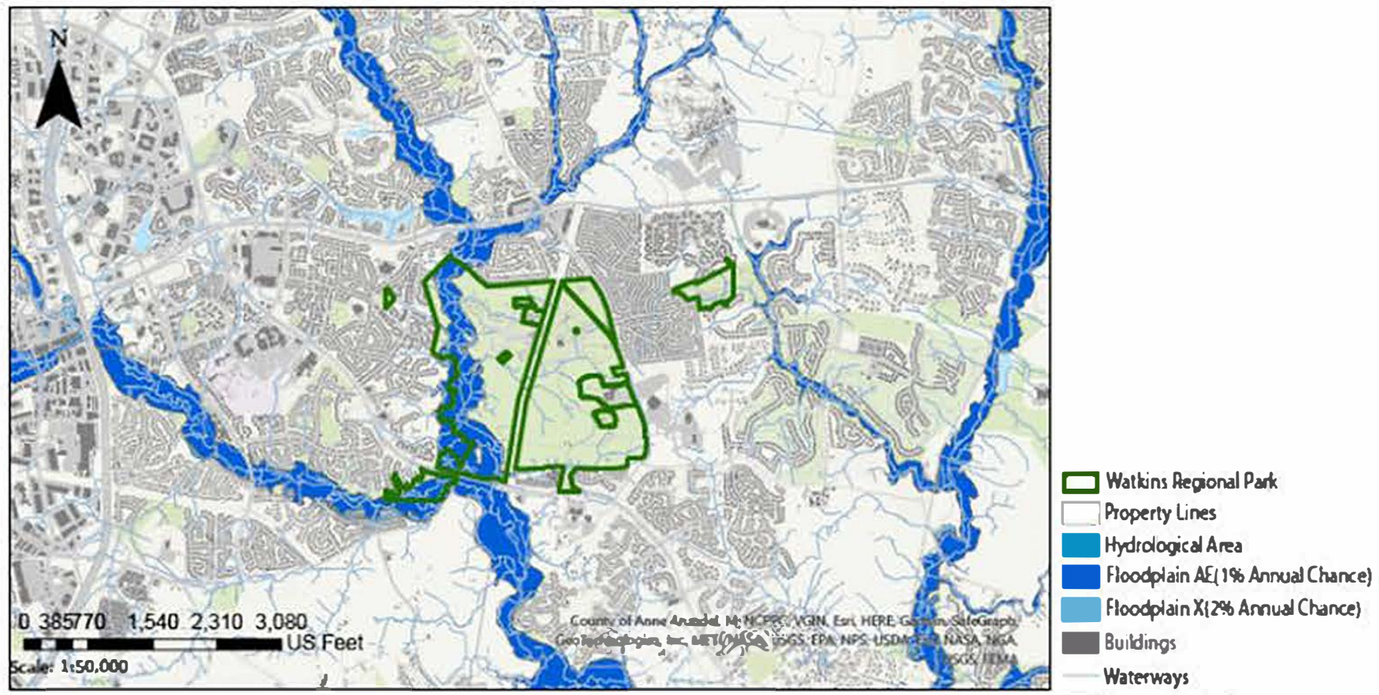


Floodplain

FEMA flood zones are geographical areas defined by FEMA based on different levels of flood risk. Any relatively high streamflow that overflows the natural or artificial banks of a stream in any reach is defined as a flood. Each zone represents the level or type of flooding in the area.



Site Floodplain



Regional Hydrology and FEMA Floodplain

Native Plants

USDA Hardiness Plant Zone: 7b
Physiographic Province: Coastal Plain - Western Shore Uplands Region

Key:

Light (L):
- F = Full Sun; > 6 hr
- P = Part Sun; 3-6 hr
- S = Shade; < 3 hr

Moisture (M):
- D = Dry
- A = Average (Moist)
- W = Wet

Trees

Large >50'

Scientific Name	Common Name	L	M	Notes
Acer rubrum	red maple	F	A-W	Fall Color
Acer saccharum	sugar maple	F-P	A-W	Fall Color
Betula nigra	river birch	F	A-W	Attractive Bark
Carya glabra	pignut hickory	P-S	D	Wildlife Benefits
Diospyros virginiana	persimmon	F-S	D-A	Edible Fruit
Liquidambar styraciflua	sweetgum	F-S	A-W	Fall Color
Liriodendron tulipifera	tulip-tree	F	A	Butterfly Host
Pinus taeda	loblolly pine	F	D-W	Wildlife Benefits
Quercus alba	white oak	F-P	D	Wildlife Benefits
Quercus phellos	willow oak	F-P	A-W	Butterfly Host

Small <50'

Scientific Name	Common Name	L	M	Notes
Amelanchier canadensis	serviceberry	F	A-W	Showy Flowers
Asimina triloba	paw paw	P-S	A	Edible Fruit
Cercis canadensis	eastern redbud	F-P	A	Showy Flowers
Chionanthus virginicus	fringetree	F-P	A	Fragrant Flwoers
Crataegus phaenopyrum	Washington hawthorn	F	D-W	Large Thorns
Cornus florida	flowering dogwood	P-S	D-A	Showy Flowers
Magnolia virginiana	sweetbay magnolia	P-S	A-W	Fragrant Flowers
Rhus glabra	smooth sumac	F	D-A	Winter Berries
Ilex opaca	American holly	F-S	D-W	Wildlife Benefits
Salix nigra	black willow	F-P	A-W	Butterfly Host

Shrubs

Scientific Name	Common Name	L	M	Notes
Viburnum prunifolium	black haw	F-S	D-W	White Flowers; Berries attract Birds and Mammals
Cephalanthus occidentalis	buttonbush	F-S	A-W	White Flowers; Fragrant; Rain Garden
Photinia pyrifolia	red chokeberry	F-P	D-W	White Flowers; Showy Berries Persist In Winter
Vaccinium pallidum	hillside blueberry	F-S	D-A	Edible Fruits; Butterfly Host
Cornus amomum	silky dogwood	F-P	A-W	Erosion Control

Groundcover

Scientific Name	Common Name	L	M	Notes
Phlox stolonifera	creeping phlox	F-P	D	Pink, Purple Flowers; May-Jun
Antennaria plantaginifolia	pussytoes	P-S	A	Flower clusters resemble the toes of a cat's paw
Polystichum acrostichoides	christmas fern	P-S	D-A	Evergreen
Packera aurea	golden ragwort	F-S	A-W	Golden-Yellow Flowers; Mar-Aug
Chrysogonum virginianum	green-and-gold	P	A-W	Yellow Flowers; Apr-Oct

Perennials

Scientific Name	Common Name	L	M	Notes
Aster cordifolius	blue wood aster	F-P	W	Blue-Purple Flowers; Aug-Nov
Eupatorium coelestinum	mistflower	F-S	A	Lavender Flowers; Aug
Tiarella cordifolia	heartleaf foamflower	S	A	White Flowers; Apr-July
Heuchera americana	American alumroot	S	D	Attractive Foliage; Greenish Flowers; Spring
Rudbeckia hirta	black-eyed susan	F-P	D-A	Yellow Flowers;

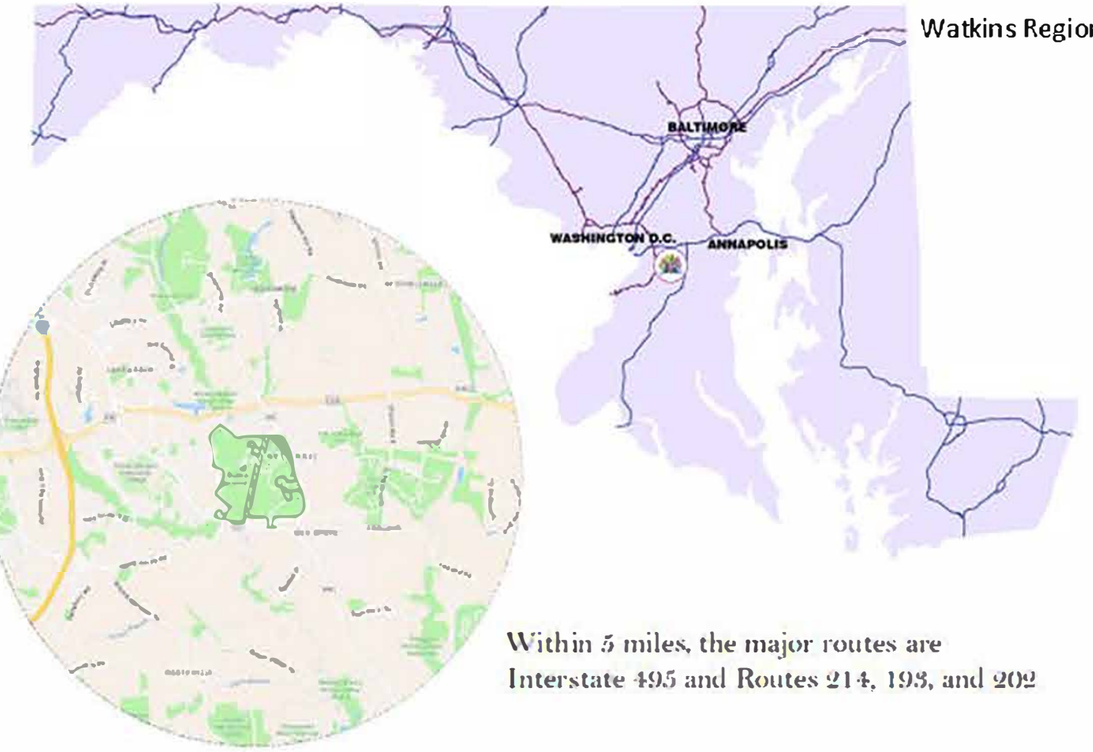
Grasses

Scientific Name	Common Name	L	M	Notes
Carex glaucodea	blue sedge	P-S	D-W	0.5'-2' tall; 3-sided Growth Habit
Scirpus cyperinus	woolgrass	F-P	A-W	6' tall; Inflorescense is wooly-looking
Sorghastrum nutans	indian grass	F-P	D-A	1'-2' tall; Silky-Golden Flowering Plumes
Andropogon gerardii	big bluestem	F-P	D-A	4'-7' tall; Orange-Red in Fall
Panicum virgatum	switchgrass	F-P	D-W	4'-6' tall; Reddish in Fall

Vines

Scientific Name	Common Name	L	M	Notes
Celastrus scandens	American bittersweet	F-S	D-W	Showy Fruit; Attracts Birds; Low toxicity when eaten
Campsis radicans	trumpet vine	F	D-W	Showy Reddish-Orange Flowers; Aggressive
Clematis virginiana	devil's darning needles	F-S	D-W	White Flowers; Jul-Sep; Poisonous when eaten
Bignonia capreolata	crossvine	F-P	D-W	Showy Orange-Red Flowers; Mar-May
Parthenocissus quinquefolia	Virginia creeper	F-P	A	Red Fall Color; Attracts Birds

Sources:
https://www.allnaturebythebay.org/2016/05/10-chesapeake-native-trees-and-shrubs-to-plant-this-spring/
https://dnr.maryland.gov/wildlife/Pages/plants_wildlife/home.aspx
https://www.wildflower.org/plants/result.php?id_plant=MIRE
https://mda.maryland.gov/msa/mdmanual/01glance/plants/trees/html/trees.html#maryland
https://www.mdflora.org/Resources/Documents/YearofVines/vines.pdf
https://www.plantmaster.org/rpl.nsf/archive.nsf



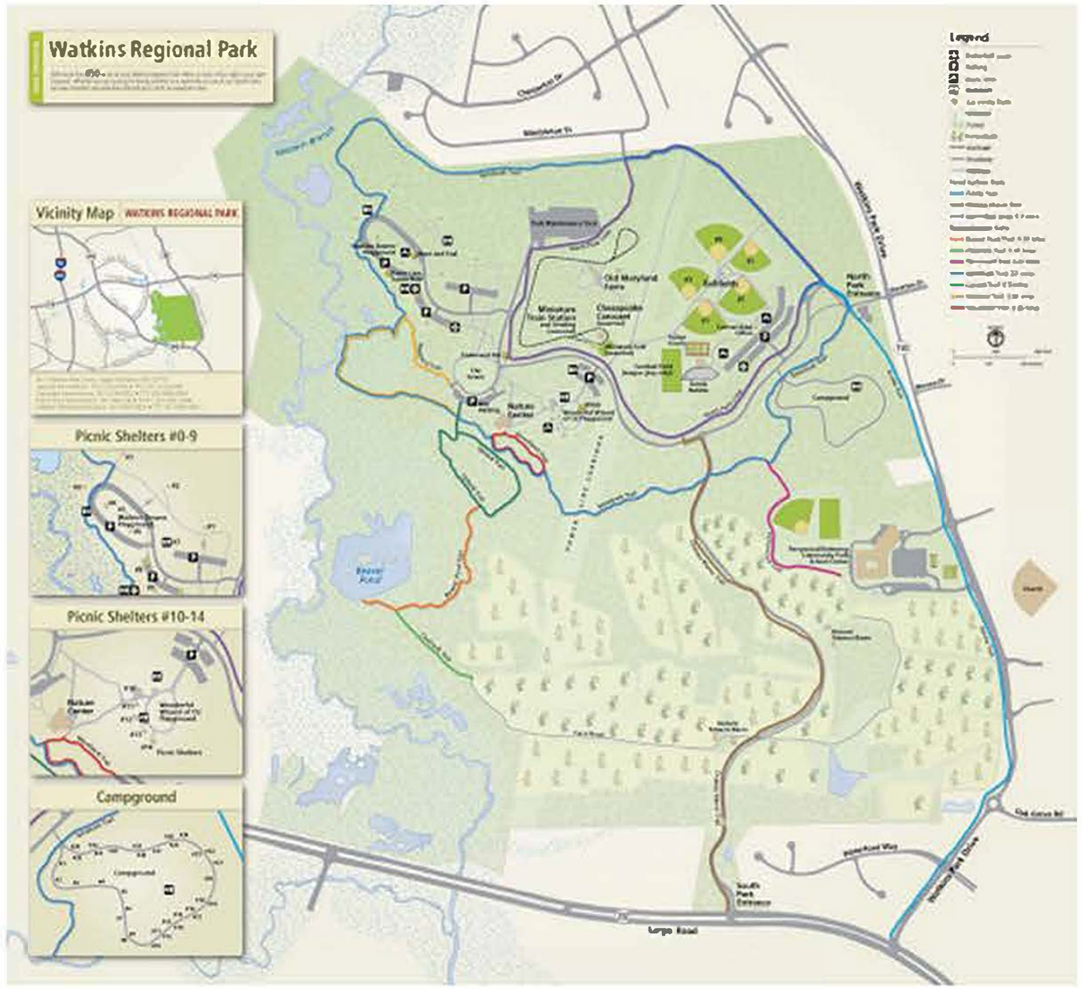
Watkins Regional Park is located in Upper Marlboro, outside Interstate 495 (Capital Beltway)

Within 5 miles, the major routes are Interstate 495 and Routes 214, 193, and 202

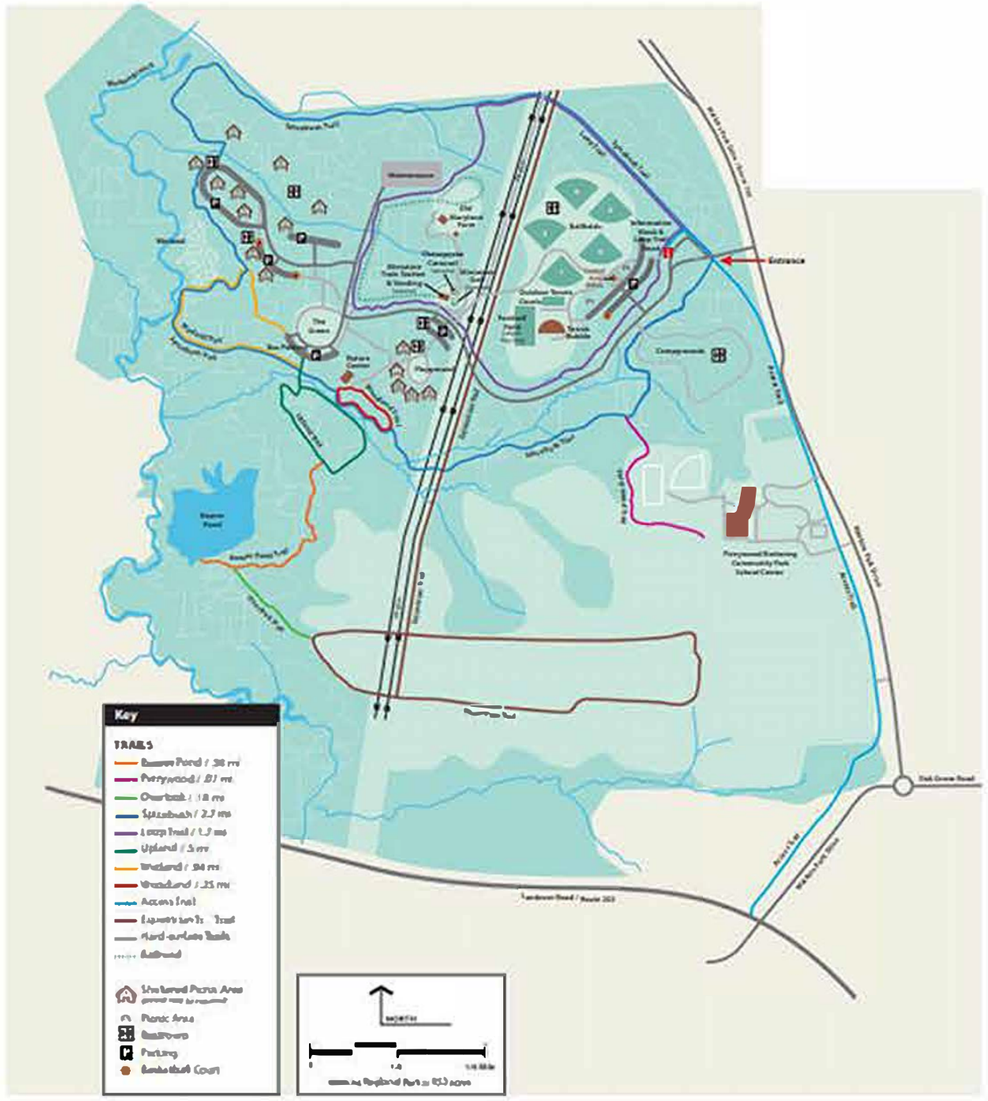
Documenting the different forms of transportation to and throughout the site help us understand accessibility to the different sections of the park, the expected demographics, and the user's experience getting towards the site.

The majority of the site contains connected shared use park trails. Trails are located throughout the entirety of the park and are interconnected with each other

The Central Avenue Line (C Line) is a mass transit offered through Metrobus as an option to access Watkins Regional Park. The Central Line is accesible by the Blue Line (Metroline).



FACILITIES WITHIN THE PARK
- CAMP GROUNDS
- TENIIS COURS (INDOOR & OUTDOOR)
- SPORTS FIELDS
- WATKINS NATURE CENTER
- OLD MARYLAND FARM
- WONDERFUL WORLD OF WATKINS TRAIN, CAROUSEL & MINIATURE GOLF
- HIKING TRAIS



USERS WITHIN WATKINS REGIONAL PARK
- ADULTS
- KIDS
- FAMILIES
- ATHLETES
- NATURE ENTHUSIASTS
- BIKERS
- HIKERS
- ANIMAL LOVER

Site Inventory | Land Cover

Watkins Regional Park is a 853 acre Park. There is around 536 acres of canopy cover throughout the park with various programed spaces to picnic, play recreational sports, camp, visit the Wonderful World of Watkins Playground, Nature Center, or the Old Maryland Farm. You can also enjoy the park by playing a round of mini-golf, riding the Carousel, or jumping on the miniature train for a tour of part of the park. Watkins Regional Park is part of a Woodland Conservation effort with over 285 acres of woodlands throughout the site. (25 acres have been planted) There are many structures and buildings throughout the park, over 65 buildings and structures exist within the park grounds. As part of the effort to maintain the site, 36 acres of land must be mowed and kept by the grounds crew.

Canopy Cover

536 Acres of Canopy

Woodland Conservation

285 Acres of Woodland Conservation

Impervious Cover

Impervious Cover

Hydrology + Mowing Areas

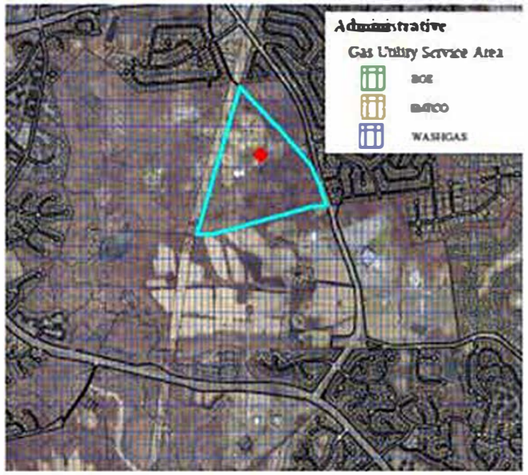
36 Acres of Mowing

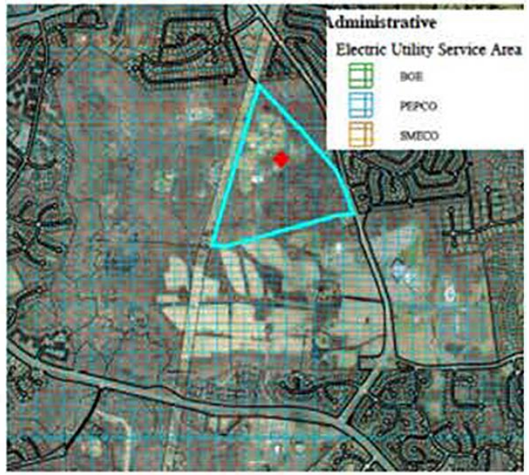
Water Area

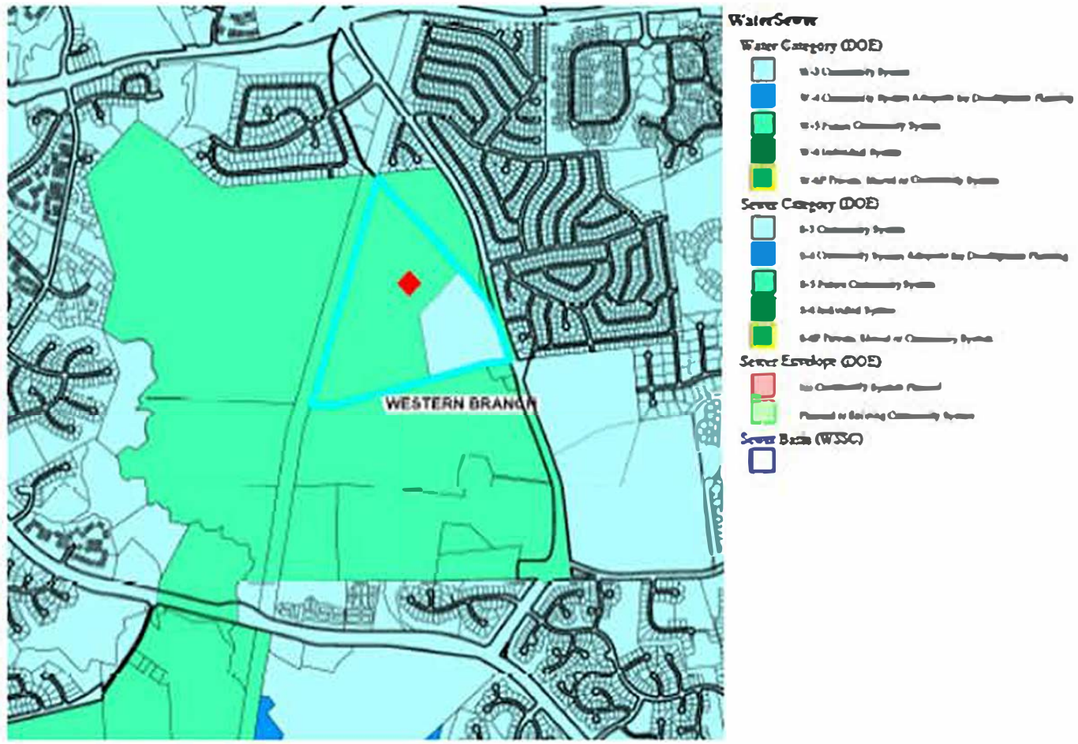
Site Inventory | Utilities

Utilities: Water, Electricity, Sewer

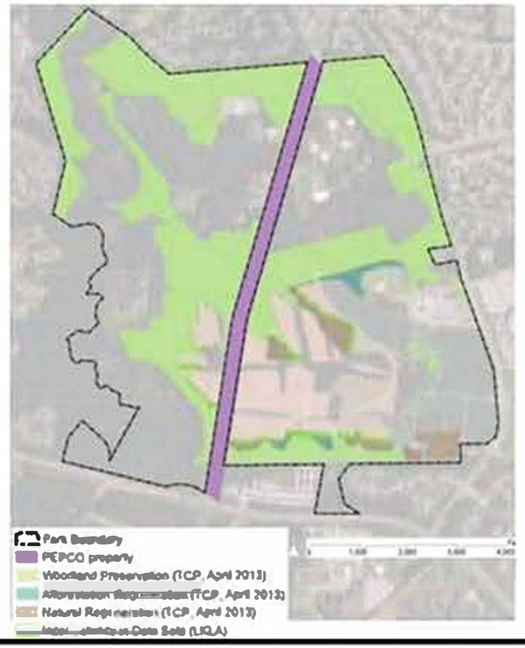
Northern half of park: developed in 1970s
Public sewer and water replaced private facilities
Electric, parking, current road system
Southern half of park:
Not served by public water or sewer
Individual site s have electric
Any improvements of southern part of park will require transition to public







Athletic fields are still irrigated with well water
First Baptist Church of Glenarden (across MD 193/Watkins Park Drive from the southern portion of the park) taps into the public water system
No public water service along Watkins Park Drive south of Largo/Kettering/Perrywood Community Center
No public water service north of traffic circle in Watkins Park Drive
There is public water and sewer service along MD 202 (Largo Road)



Design Considerations:

The PEPCO electricity corridor cannot be moved, or be part of any construction plans.

Water resources outside of the site boundary cannot be moved, although additional services inside the boundary can be created and integrated into the current system.

Stormwater management is minimal and should be part of design plans

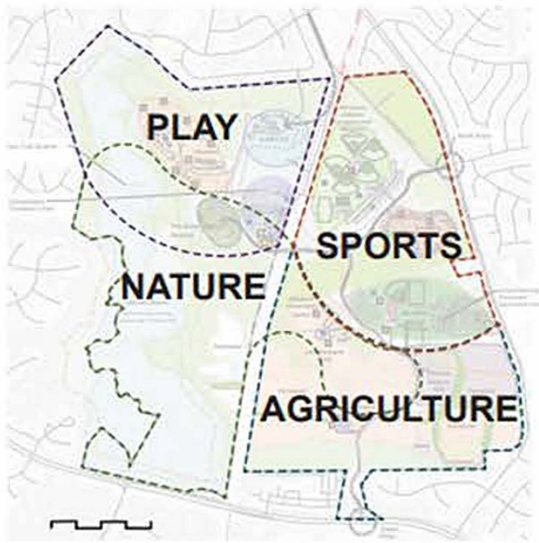
Guiding Principles

Based on Countywide guiding documents, specifically the Formula 2040: Functional Master Plan for Parks, Recreation and Open Space, the Watkins Park Master Park Development Plan's six guiding principles were generated to balance
environmental, social, and economic concerns to meet current needs without sacrificing the ability to meet the needs of future generations:

1. Create a Sense of Place
2. Education and Environmantal Learning
3. Infrastructure Expansion
4. Family Fun
5. Personal Health and Fitness
6. Habitat and Wildlife

Themes and Activity Nodes

Largely based on exsiting park features and conditions, four primary quadrants were established with
themes that incorportae how the park functions currently and in the future.
The plan strengthens each quadrant by recommending improvements to each activity area.



Play

- Western Branch Picnic Area
- Chesapeake Children's Park
- The Green and Pavilion

Sports

- Northern Athletic Complex and Park Welcome Center
- Coville's Picnic Area
- Soutern Athletic Complex

Agriculture and Nature

- Chelsea Historic Site
- Watkins Discovery Center (WDC) & Old Maryland Farm (OMF)

Watkins Regional Park Master Park Development Plan

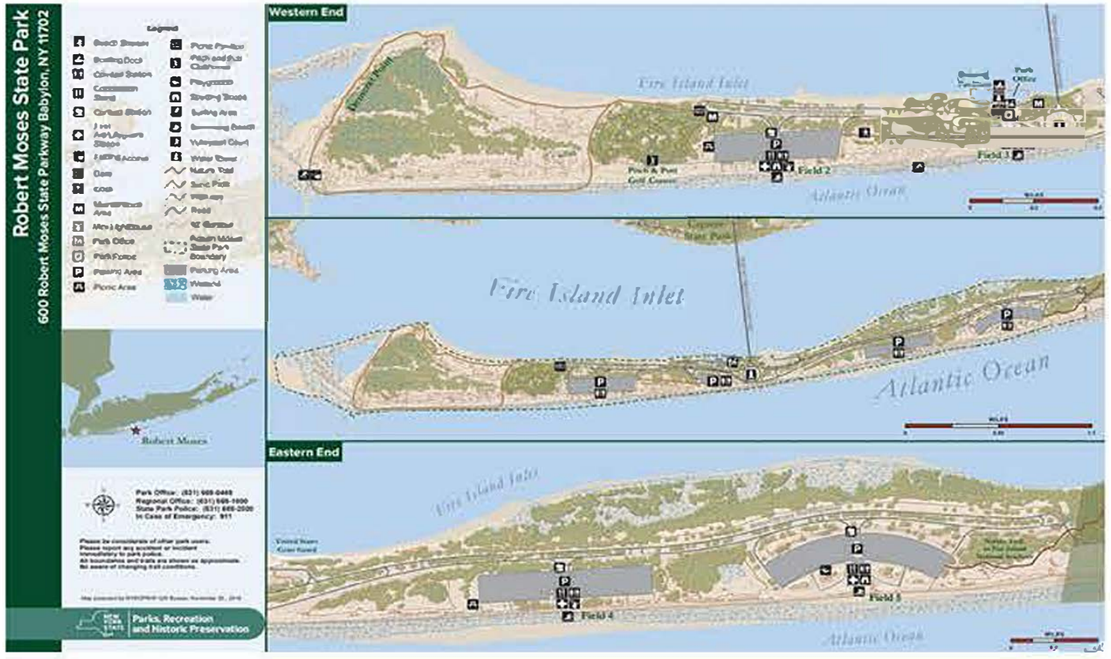
LEGEND

- Primary Park Road
- Secondary Park Road
- Park Road - Staff Access Only
- Parking - new and existing
- New Trail (paved)
- New Trail (soft/gravel)
- Existing Trail (hard)
- Existing Trail (soft)
- Primary Trail Route
- Primary Trail Desireline
- Train Route
- Building/Structure
- Picnic Table Area
- Picnic Shelter - 150 capacity
- Picnic Shelter - 100 capacity
- Picnic Shelter - 50 capacity
- Picnic Shelter - specify
- Picnic Shelter - 150 cap removed
- Picnic Shelter - 100 cap removed
- Playground/water feature
- Restroom - seasonal/year
- Restroom - no sewer
- Restroom - removed
- Basketball Court
- Half Basketball Court
- Softball/Baseball Field
- Multi-purpose Field
- Tennis
- New sport - pump track, skate park, other
- Forest Interior Dwelling Bird Buffer (FID) - 300'
- Wetland
- High Quality Forest
- Tree Conservation Area
- Tree Bank Opportunity

Case Studies

Robert Moses State Park	- Delaney Accomando
Lee District Family Recreation Area	- Grace Barton
Domino Park, Brooklyn	- Nicole Cavender
Balboa Park, San Diego	- Kianna Chow
Grand Teton National Park	- Deanna Cowley
West End Square	- Rahat Duary
The Eden Project	- Elin Fan
City Trees and Municipal Wi-Fi Networks	- Bridgette Hammett
Shelby Farms Park	- Jacob Hess
Hunter's Point South Waterfront Park	- Lital Kirshenboim
Rose Kennedy Greenway	- Luke Peterson
The Underline, Miami	- Karisha Rodrigo
Jones Beach State Park	- Elise Shallbetter
Virginia Tech Infinite Loop and Green Links	- Zaria Stebbins
Depot Park	- Alyssa Steele
Shenzhen Rencai Park	- Ellen (Yike) Xu
Bryant Park Case Study	- Theodore Ziolkowski

Case Study | Robert Moses State Park, NY



History and context

Robert Moses State Park is located off the south shore of Suffolk County, New York. The park lies on the western end of Fire Island and is known for its five-mile stretch of beaches on the Atlantic Ocean. The park is accessible from Long Island by the Robert Moses Causeway across Great South Bay. Established as Fire Island State Park in 1908, the park is the oldest state park on Long Island. As of 2014, the facility attracts ~3.5 million visitors per year.

Wifi implementation

A free public WiFi network launched in 2015 at Robert Moses State Park, just a year after it was implemented at nearby Jones Beach State Park. "Oh, Ranger! Wi-Fi" has been installed at no expense to taxpayers at Fields 2, 3, 4 and 5 as a part of a partnership between Toyota Motors, the American Park Network and the New York State Office of Parks, Recreation and Historic Preservation. "Whether opting to use Wi-Fi to share real-time photos of friends and family exploring our parks, or accessing apps and maps, having access to this technology is another way to draw people to spend precious leisure time at our parks," said Rose Harvey, the state parks commissioner.The Wi-Fi program has been expanded as part of Toyota's "Let's Go Places" program. Officials are hopeful that this program will not only enhance visitors' experiences by improving Internet access at the beach, but encourage them to learn about upcoming events, promote volunteerism, and support state park-related groups.

Source: Long Island Press https://www.longislandpress.com/2015/08/04/free-wifi-debuts-at-robert-moses-state-park-beaches/

Designer information - Robert Moses

The park's current name was given to honor Robert Moses in 1964, the influential mid-20th century urban planner and former president of the Long Island State Park Commission.

Design concept and theme

Moses' decisions favoring highways over public transit helped create the modern suburbs of Long Island which he did at the expense of bulldozing homes with Black and Latino residents to make way for parks, chosing the middle of minority neighborhoods as the location for highways, and deliberately designing the bridges that connect New York City to Long Island to be too low for buses from the inner city to access the beaches.Robert Moses State Park facilitates access to the Fire Island National Seashore, immediately east of the park. Since there is no parking at the Seashore itself, many visitors park at Field 5 in order to walk to Lighthouse Beach, the Fire Island Lighthouse and Museum, or the nearby community of Kismet.

Design elements

- Car-oriented: Highway access and parking lots ($8-$10 parking fee from April to November)
- Historical Landmark: Robert Moses Water Tower
- Boat Basin
- 18-hole Pitch and Putt Golf Course (secluded course is set among native trees and beach vegetation)
- US Coast Guard Station Fire Island
- Four bathouses
- Four concession stands (one at each field)
- Volleyball courts, Picnic areas, First aid stations
- Playground at Field 5

A $1.7 million project to increase energy efficiency and install a 500-kilowatt solar photovoltaic power system at the park was announced in 2015. The planned improvements aim to make Robert Moses State Park the first energy‐neutral state park in the United States.

Water tower and Robert Moses Causeway roundabout

Pitch and Putt Golf Course

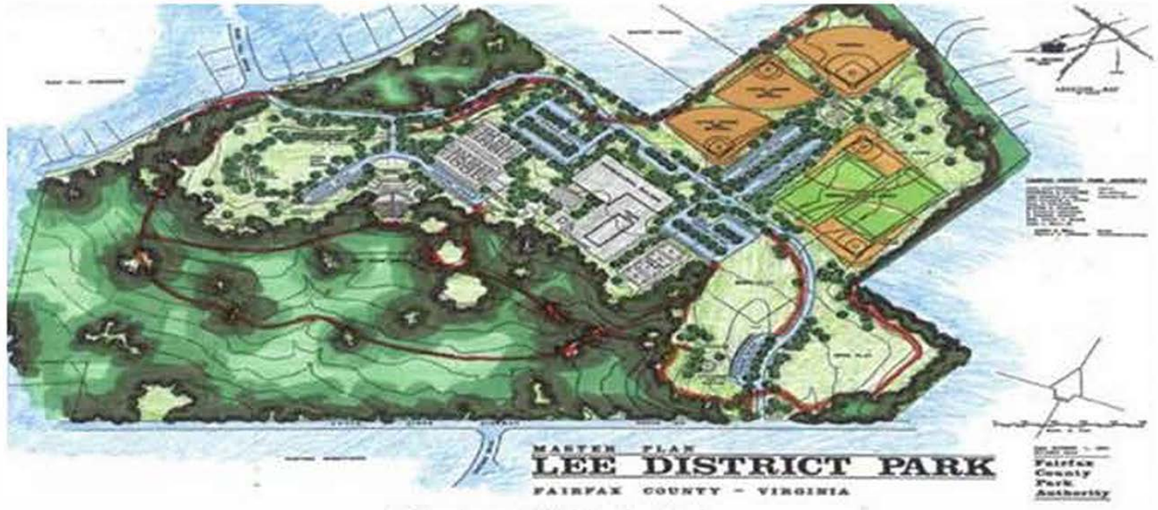
Aerial view of parking lots in comparison to the beaches

Inspriation for Watkins Regional Park Design

- There may be pushback from some groups against implementing Wifi, but overall it is beneficial. To decrease pushback, it might be helpful to educate the resisting groups about the benfits of implenting Wifi.
- Wifi was implemented only in frequently used portions of the park, not all throughout. To compromise between people who are pro versus those against Wifi, it can be implemented in specific zones of Watkins park.

Case Study | Lee District Family Recreation Area

The Lee District Family Recreation Area in Alexandra, Virginia, contains multiple area for adventure. Whether in the water, on a trail, or even in a treehouse, there is a place for everyone here. This Chesapeake Bay-themed park allows for adults and children to learn while also immersing themselves in the nature around them. This park has appeared many times in blogs, websites, and online forums as one of the 'best places to visit' as well as many other compliments.



Main Areas Within the Park

- Chesapeake Bay-themed 'Our Special Harbor' spray ground
- Large Playground
- Chesapeake Bay-themed carousel
- Multiple Picnic Area
- Fully Accessible 'Treehouse'
- 'Chessie' Nature Trail
- Sensory Stations

Activity Areas in Lee District Family Recreation Area


Chessie's Trail


Our Special Harbor Area


Animal Statues


Sensory Play Area


Chessie's Playground


Carousel


Picnic Area


Amphitheater


Treehouse

Map of Playground and Treehouse Area

Case Study | Domino Park, Brooklyn NYC

Domino Park was built on the previous Domino Sugar processing facility to highlight the history of the waterfront factory and the hardworking employees.
The park is segmented and linear with different experiences at each section including a dog park, volleyball court, playground, and taco shopDirectly off of a main street on the edge of Williamsburg it is in a highly populated area with many demographics of people including families, students, businesspeople

Aside from the various features of the park there is free wifi
AT&T made a deal to provide free wifi to New York City parks for 5 years
This aspect of the park draws people to do work outside either on the grass, on benches along the water, on benches along the street, or anywhere there is a place to sit
Part of the popularity of the park comes from the free wifi which many people take advantage of when the weather is good

Case Study | Balboa Park, San Diego, CA

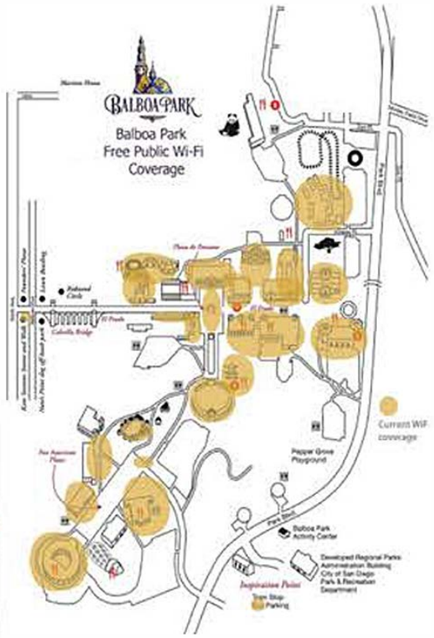
Park Information

Designer: Original plan by
Samuel Parsons Jr. in 1902

- Updates to the master plan were made by later landscape architects

Size: 1200 acres

- The park has a historically significant design that combines Spanish colonial revival architecture and the Picturesque style applied to the unique topographical features native to San Diego



San Diego's Public Wi-Fi Initiative

The "SD Access 4 All" program has attempted a city-wide endeavor to minimize the digital divide by providing free Wi-Fi from mobile hotspots across the city at various street locations as well as public spaces like libraries and parks. Balboa Park contributes to this initiative by providing free Wi-Fi in the most popular spots in the park.

Features of Balboa Park

Balboa Park, San Diego's cultural crown jewel, is home to a zoo, a golf course, dozens of cultural institutions, and acres of picnic spots and recreational fields. The city trustees set aside 1,400 acres for a park in 1868, but it wasn't until the Panama-California Exposition in 1915 that it gained more popularity. There followed the San Diego Zoo, the San Diego Museum of Art, a second expo in 1935, the Old Globe Theatre, and reconstructions and restoration Some things to do at the park is visit the museums, theaters and zoo. There are also free concerts, a carousel, and a miniature railroad

Site Plan

Lessons Learned

Balboa Park offers a valuable perspective in the execution of the multi-purpose function of a park at this scale. It hosts multiple different kinds of attractions like museums, sports recreation, and interactions with flora and fauna. This park also offers insight on the inclusion of Internet access to a historically significant park through its focus on Wi-Fi access in the areas where people are likely to use it most. Visitors can use it to interact with the museum exhibitions and other features of the park. This park can inform design decisions regarding Watkins Regional Park through observing the user interactions and how the inclusion of certain features can encourage or discourage Wi-Fi usage.

Case Study | Grand Teton National Park

The United States has 63 national parks, and like most places it has to overhall its telecommunications infrastructure. Most people think of the national parks as a place to unplug but this has changed as fewer North Americans are using camping to unplug, in 2020 it was reported that 41% campers were working during their visits. Although, technology can detract from the park experience, but it can also enhance it greatly.

Enrich your park visit

1. Spotting bears in real time with bearcam
2. Street View your way through the National Parks
3. Take a ranger tour, by cell phone
4. Use technology wisely with the Acadia Youth Technology Team
5. Listen to park podcasts

Grand Teton National Park

Located in Jackson Hole, Wyoming Grand Teton National Park has a fascinating natural and cultural history. Grand Teton provides activites for every age and skill level. The FONSI will allow park authorities to issue a right-of-way permit for telecommunications infrastructure improvements, including cellular and broadband services at strategic locations in the developed areas of the park. Installation of wireless telecommunications facilities and associated infrastructure will also get underway at nine developed areas in the park that currently support critical operations and/have a high volume of park visitors.

Wifi Locations

- Flagg Ranch
- Colter Bay
- Jackson Lake Lodge
- Signal Mountain
- North Jenny Lake
- South Jenny Lake
- Beaver Creek
- Moose
- Kell

Case Study | West End Square, Tx

- Location: West End District of Dallas, Texas
- Client: The City of Dallas
- Cost: $6.25 million
- Developer: James Corner Field Operations
- Size: .78 acre
- Project Designer: Kate Rodger
- Goal: Create a park that mirrored the innovation of the surrounding neighborhood

Innovative Technological Features:

- Self regulating water fountain
- Air cooling mist system
- Self regulating irrigation system (uses weather patterns to determine how much water goes into planting beds)
- Smart lighting system (notifies the city if bulbs need to be replaced and lights dim to save power when no one is around)
- 50-foot long table equipped with wireless charging pads
- Free WIFI
- Pergola structure used to contain all the technological equipment and contains vacant spots for new technology

Case Study | The Eden Project, Bodelva,UK

THE EDEN PROJECT is a 37 acre botanical visitor attraction in Cornwall, England that was built in a reclaimed china-clay pit, that prior, had been in use for over 160 years.

DESIGNED BY Nicholas Grimshaw of Grimshaw Architects together with Anthony Hunt Associates; master planning and landscape design by Land Use Associates

COST €141 million ($154.9 million USD) to build between 2.5 yrs

OPENED to public on Mar. 17, 2001. Has attracted over 22 million visitors

over 2 decades, including 50,000 schools

FREE WIFI throughout park, strongest indoors. Currently testing 5G Internet service as part of Eden Universe research project to observe how 5g can enhance the visitor experience.

RAIN FOREST BIOME DOME
3.9 acre tropical biome that houses over 1000 different plant species.

MEDITERRANEAN BIOME DOME
1.6 acre biome that emulates a Mediterranean climate.

THE CORE
Provides an educational facility with classrooms and exhibition spaces

OUTDOOR GARDENS
Represents the temperate regions of world with edible, medicinal, and native plants.

Sources:

1. "10 Facts About the Eden Project." The Valley | Cornwall, July 28, 2021. https://www.thevalleycornwall.co.uk/news/6-facts-eden-project/#:~:text=The%20Eden%20Project%20cost%20over,Lottery%20%E2%80%93%20and%20European%20regeneration%20funds.
2. "Eden Project, Cornwall." Eden Project, Cornwall, UK. Accessed March 16, 2022. https://www.cornwall-calling.co.uk/eden-project-cornwall.htm.
3. "Eden Project." Wikipedia. Wikimedia Foundation, March 14, 2022. https://en.wikipedia.org/wiki/Eden_Project.
4. "Homepage." The Eden Project. The Eden Project. Accessed March 16, 2022. https://www.edenproject.com/

• Educational Charity • Social Enterprise • Eco Attraction • Global Movement

Other Features of Interest:

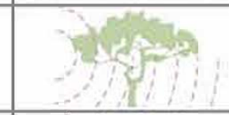
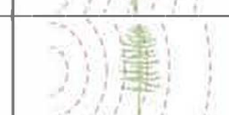
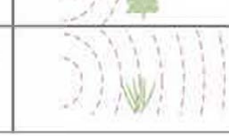
- Has generated over $2.2 billion dollars to regional economy since 2002
- Complex uses Green Tariff Energy, it receives energy from local wind turbines and will build a geothermal electricity plant by 2021 to support both Eden and 5000 households
- Only mains water used is for hand-washing and cooking. All of the rest of the site facilities use sanitized rain water that would otherwise collect at the bottom of the quarry.
- There are plans to build an Eden North Project in Lancashire with an emphasis on marine environments

HOW IT WILL INSPIRE MY DESIGN

- Intrigued by fresh, futuristic aesthetic and how eclectic program elements are cohesively united around the mission theme of linking plants together with people
- Structures similar to the hexagonal biome domes would visually resonate with the existing tennis bubbles that currently seem out of place in Watkins and offer interest during bad weather or off-season times
- Inspires need to add more suitable educational facilities on the site
- Connectivity and full-dedication to creating an immersive environment as seen in Eden can help better thematically link the different features of Watkins Regional Park
- Consider transportation alternatives within Watkins other than personal vehicles and walking on foot

Case Study | City Trees and Municipal Wi-Fi Networks

In GUIDELINES FOR OUTDOOR WIFI SPACE DESIGN (Guangyan Wang), the author references a case study Called "City Trees and Municipal Wi-Fi Networks: Compatibility or Conflict?" The case study was completed in the City of Mountain View, California, U.S. and looked at how vegetation can impact Wi-Fi by interfering with signal transmission.

	Trunk Height	Foliage	Function	Signal Transmission
Tree/Shurb	High	Sparse	Shade Tree in the park	
	High	Dense	Boundary Tree at the edge of the park	
	Low	Sparse	Landscape Tree in the park	
	Low	Dense	Boundary Tree in the park	
Grass	High	Dense	Boundary /Landscape Plant in the park	

KEY POINTS:

- The study examines attenuation of Wi-Fi signals by positioning a wireless-equipped computer so that trees obstructed the line-of-sight (LOS) between the computer and a Wi-Fi access point.
- Potential exists for conflict between urban trees and municipal Wi-Fi
- Although trees significantly attenuated signals, they did not diminish the average signal strength below -75 dBm (the minimum for a Wi-Fi connection) in any of the tests
- A general linear model (r2 = 0.55) indicated that some tree characteristics (tree size, canopy depth,leaf type), but not others (number of trees in LOS, presence of leaves, leaf size, and shape) helped explain variation in signal attenuation

CONCLUSION:

As long as the effect of urban trees is taken into account during planning of Wi-Fi networks, trees should not interfere with municipal Wi-Fi operation. However, an appropriate vegetation plan will result in a more effective Wi-Fi signal distribution

STUDY FINDINGS:

Firstly, plants with high trunks and sparse foliage can allow most signals through near the surface, so they can be used as shade trees in the park.

Secondly, trees or shrubbery with high trunks or dense foliage, which allow less signal through the surface, are the best boundary vegetation to be planted at the edge of the park in order to diminish the reflection from the surrounding architectural environment. Shrubbery with low trunks and dense foliage, which buffers the signal temporarily, should be used as the boundary vegetation in the park.

Thirdly, trees with low trunks and sparse foliage are recommended as the landscaping tree in the park as their aesthetic morphology allows the majority of the signal to pass.

Finally, high grass is considered to be the best plant material in a Wi-Fi park not only because it forms a sense of density in visual effect but also maintains permeability in terms of signal transmission.

WORKS CITED:

Lacón, I. & McBride, J.R.. (2009). City Trees and Municipal Wi-Fi Networks: Compatibility or Conflict?. Arboriculture and Urban Forestry. 35. 203-210. 10.48044/jauf.2009.034.

Wang, G. (2011). GUIDELINES FOR OUTDOOR WIFI SPACE DESIGN. CORE. Retrieved March 28, 2022, from https://core.ac.uk/download/pdf/4837511.pdf

Case Study | Shelby Farms Park

A strategic threefold concept of "One Park, One Million Trees, Twelve Landscapes," defines the new park. "One Park" addresses the goals of unity, connectivity, sense-of-place, ecosystem, identity and inclusion

-James Corner

showcases memphis ecology, arts, food, and music. designed to be a natural beased hub for recreation, health, and wellbeing. the design improved local connectivity and accessibility. this 4,500 acre park offers just about anything you could want to do. multiple destination buildings. has capability to increase free wifi access.

Shelby Farms Park Conservancy (SFPC or the Conservancy) is the 501(c)3 nonprofit organization that manages and operates Shelby Farms Park and Shelby Farms Greenline through a private-public partnership with Shelby County Government.

Designed by James Corner Field Operations and Local Landscape Architect: JPA, Inc.

Park size 4,500 acres "heart of the park" 195 acres

Phase 1 Cost $100 million

Case Study | Hunter's Point South Waterfront Park

ABOUT

Park Size - 9.5 acres (Phase 1)
Budget - $66 million (park, re-alignment of roadway, water and electrical infrastructure)
Completion Date - 2013
Location - Center Boulevard Long Island City, New York 11101
Former Land Use - Industrial

DESIGN CONCEPT

"We actually celebrate the kind of crazy shoreline that we were given. We leveraged its peninsulas into an extraordinarily different kind of waterfront experience, one that allows people to wander in and out, going closer to the water and back away from it. Those shifting perspectives ... are really only possible with this kind of diverse shoreline." – Tom Balsley,

INSPIRATION

ENVIRONMENTAL
- Intercepts, infiltrates, and evaporates 73% of average annual rainfall in permeable pavers and a biofiltration swale.
- Increases flood storage capacity by approximately 557,800 gallons,accommodating up to a 6-ft storm surge flood event.
- Generates 37,000 kWh of energy annually using photovoltaic solar cells.

SOCIAL
- Attracts an estimated 1,170 daily visitors on a typical June weekday.
- Promotes physical activity for 465 users who engage in active recreation activities on a typical June weekday.
- Creates iconic views of Manhattan as demonstrated by 11,037 social media posts from 2013 to 2018 referring to the Manhattan skyline and the site.
- Contributes to an increase in ridership for the East River route of the New York City Ferry. Annual ridership was roughly estimated to be around 200,000 in 2018, up from 19,055 in 2010.

ECONOMIC

- Contributed to a 49% average increase in assessed property value for 8 randomly selected parcels within a 3-block radius from 2012 to 2017.

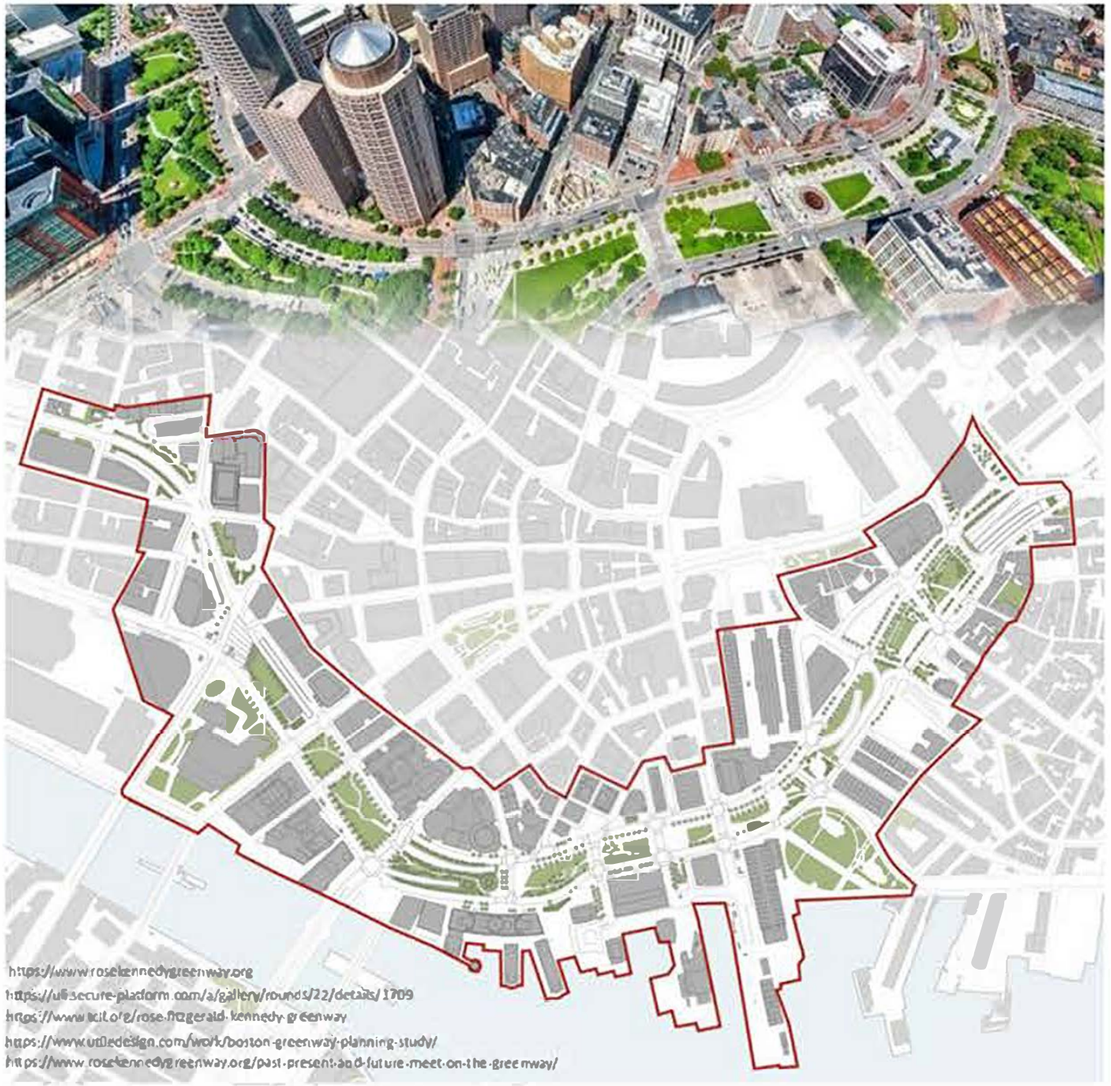
DESIGNER INFORMATION

Clients: New York City Economic Development Corporation Office of the Deputy Mayor for Economic Development; Queens West Development Corporation
Landscape Architect: SWA/Balsley
Architect: Weiss/Manfredi
Prime Consultant and Infrastructure Designer: ARUP
Ecological Systems and Restoration Ecologist: E-Design Dynamics
Marine Engineering: Halcrow
Public Art: Karyn Olivier
MEP/FP Engineer: A.G. Consulting Engineering, P.C.
Environmental Engineer: Yu & Associates
Cost Estimator: VJ Associates
Traffic Engineer: B-A Engineering, P.C.
Graphic Designer: Two Twelve
Historical Researcher: AKRF
Resident Engineer: The LiRo Group

Case Study | Rose Kennedy Greenway

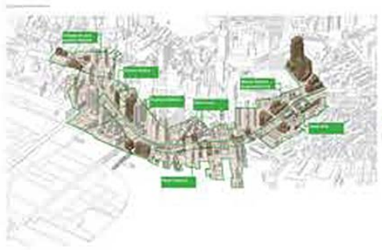
The Greenway is 1 1/2 miles long park in the heart of Boston. Completed in 2008 as part of the Central Artery or known as "The Big Dig" when DOT sunk an elevated highway underground and restored connection between historic neighborhoods and downtown Boston. 7 distinct parks make up almost 27 acres of vibrant parkland to activate and link previously unused space.

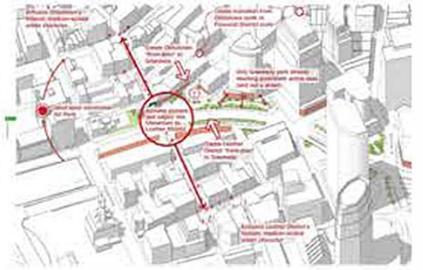
Designers: Chinatown Park (Carol R. Johnson Associates), Dewey Square (Machado and Silvetti Associates), Fort Point Channel Parks (Halvorson Design Partnership), Wharf Distric Park (EDAW, Copley Wolff), Amenian Heritage Park (Stantec), North End Parks (GGN).



https://www.rosekennedygreenway.org
https://ull.secure-platform.com/a/gallery/rounds/22/details/1709
https://www.asla.org/e/rose.fitzgerald.kennedy.greenway
https://www.utiledesign.com/work/boston-greenway-planning-study/
https://www.rosekennedygreenway.org/past-present-and-future-meet-on-the-greenway/

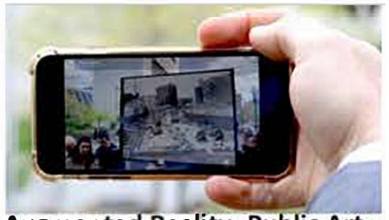
Concept/Initial Idea





Wifi Project:

The Greenway Conservancy with the City of Boston launched the largest free wifi networks in the entire state in July 2010. Solar power benches allow for charging and expansion of the wifi network. Wifi is integral to the park experience as well... While in the park wifi can be used to access an interactive map of the park, share photos, or make dinner reservations. Street and wayfinding signs show where wifi is available and tools you can use. "Color Commons", a responsive art display allows passerby to change the color of the 12 24' tall Light blades via text message. Wifi also allows interactive Kiosks to show where/when events are happening and orientation within the park. Augmented Reality is a public art feature blending digital elements and the history of the Greenway site to show transformation from city-highway-park. Finally, along with public art and wayfinding, wifi allows access to the Conservancy interactive Bloom Tracker which shows how many species are blooming and where to find them within the Greenway.



Augmented Reality- Public Art

Soofa Benches

Interactive Art Display

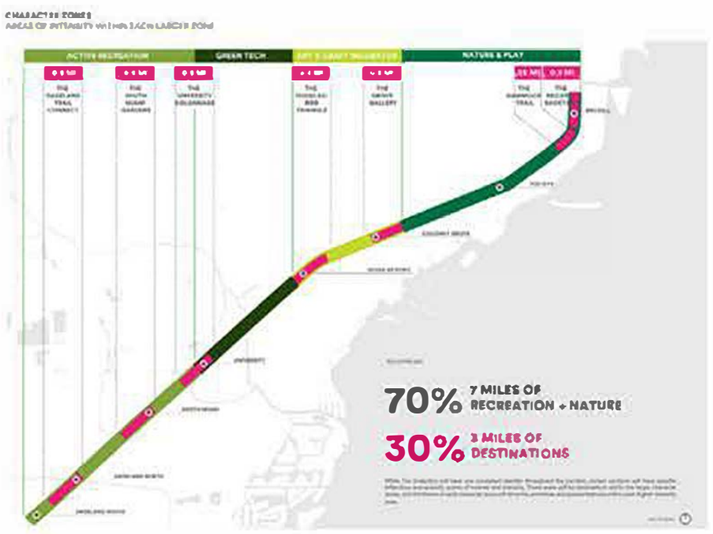
Solar Bench/

Case Study | The Underline, Miami, FL

Overview

Concept: The transformation of the underside of a raised rail corridor into a 'smart park' and testing ground for civic technology.
Designer: James Corner Field Operations
Size: 10 mile linear park; 120 acres
Scheduled Opening: December 2025

Masterplan: Character Zones



Character Zones

1. Nature & Play
2. Art & Craft Incubator
3. Green Tech & Sustainable Initiatives
4. Active Recreation

Visions of Park Spaces

Technology in the Park

Focus on using technology for nature, education, health, and wellness
Technology initiatives:

- Free public WiFi
- Accessible technology resources
- Real time information about public transportaion and mobility
- Educational resources and games
- Education resources featuring local flora and fauna
- Augmented reality game: 'Dig & Learn'

Technology will be implemented throughout the corridor, but the Green Tech zone will have the highest concentration.

Construction of the Technology Masterplan is underway

Takeaways

- Technology for all users - accessible tech resources and various programming
- Digital signage & wayfinding
- Real time park information (weather, trail conditions/ closures, events, etc.)
- Interactive technology - games, flora & fauna identification, fitness

Sources

https://www.theunderline.org/technology/
https://www.theunderline.org/2021/05/05/miami-dade-college-and-the-underline-launch-dig-learn-augmented-reality-mobile-game-to-experience-miami-history-and-nature/
https://archive.curbed.com/2019/9/24/20881872/miami-park-underline-technology-civic-tech
https://www.theunderline.org/public-documents/

Case Study | Jones Beach State Park

Location: Long Island, NY
Date Finished: August 4, 1929
Designer: Primary - Robert Moses, Team - Herbert Magoon (architect), W. Earle Andrews (supervising architect/ engineer), A. E. Howland (engineer) & Clarence Combs (landscape architect)
Size: 2,413 acres
Style: Beaux-Arts

Much of the wifi service is located on the main boardwalk area, as well as Field 4 and Field 6, both of which are located directly off of the boardwalk area. This allows for the wifi to reach the largest crowds on site, without the pressure of wifi access directly next to the surf. The seperation of wifi-supported areas and those untouched by internet connections, makes it so that the public does not feel "surrounded" by tons of people on their phones or computers when trying to relax at the beach, disconnected from the stress of work or school.

The Wifi program at Jones Beach has been funded through a sponsorship by Toyota Prius Plug-in Hybrid and American Park Network, instead of taxpayer funds. This can allow for less pushback from the public who may not be in full support of the move to install wifi, for the economic cost it could have on the public.

"connectivity also provides the opportunity to better monitor park visitation patterns, generate awareness of upcoming programs and events, promote volunteerism and support parks friends groups such as the National Heritage Trust." - *Long Island Press*

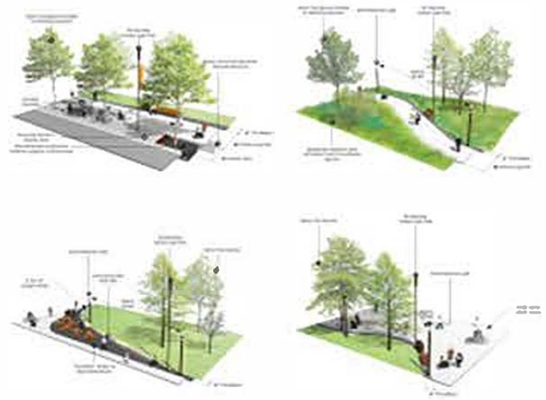
"We want to preserve the history of the park while modernizing and making it more relevant," said Commissioner Rose Harvey. "Statistics say that 94 percent of park visitors feel Wi-Fi is the most important amenity a park could offer." - *LI Herald*

Design Aspects to Pay Attention To:
- Wifi installation on park grounds
- Signage showing users how to utlize amenities
- Clear communication with public about new wifi areas
- How funding was found for this project (wifi sponsor

Case Study | Virginia Tech Infinite Loop and Green Links

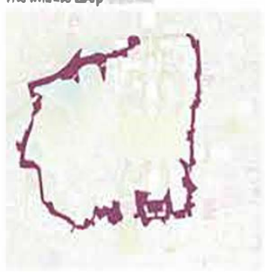
Designer: Sasaki
Client: Virgina Polytechnic Institue and State University
Location: Blacksburg,VA
Size:Infinite Loop (2.1 mile) Green Links (3.5 miles)
Mission: These projects are two landscape systems at the heart of Virginia Tech's Master Plan. The main goal is to re-evaluate how to make Virginia Tech's campus more accessible and accomodate all mobility modes to travel through campus. The Infitine Loop is a 2.1 mile barrier free corridor tha connects multiple districts and open space. The Green Links is network of barrier-free paths that unlocks accessible routes across the campus. The Project's ultimate goal is to acchieve universal accessibility

Application: I am interested in its approach to create a constant chain of connection around the campus, much like a park trail.
Technical Connection
- Devices spaced 500' apart for constant connection
- Specialty lighting
- Interactive Map Apps
Environmental Connection
-Universal Accessibility encourages outdoor activity
- Enhanced Campus Quads and outdoor classrooms
Social Connection
- "Productive Collisions"
-Constant chain of accessibility to widen range of user types



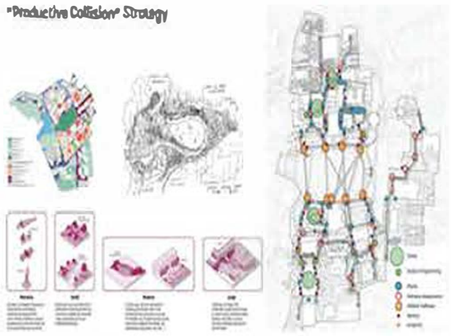
Project Area

The Infinite Loop (project area)



The Green Links (project area)

"Productive Collision" Strategy



"Productive Collision" Strategy

Case Study | Depot Park

Location:
Gainesville, FL

Project Type:
Park/Open Space & Stormwater Management Facility

Designers:
JOLA Inc & IBI Placemaking

Size of Park:
32 acres

Former Land Use:
Brownfield

Completion Date:
2016

Budget:
6.75 million

WiFi:
Not currently running, but planning to get wifi

Entrance Fee:
Free

Park Hours:
7 AM - Sunset

Electrical Outlets Available:
Not currently

Depot Park has a playground that is 1 acre in size, a splash pad, walking trails, biking trails, and open event space. The site's pond and marsh captures and cleans runoff from downtown areas. The playground is ADA and train themed.

The park is dedicated to native species plantings and wildlife preservation.

Depot Park is very dedicated to consumer and community surveys and is keeping a check of how to continue making improvements to the park including adding shade, water fountains, parking, and food prices.

In the future designs, Depot Park is planned to have an amphitheater, plaza, water remediation space, a botanical garden, sculpture garden, skate park, bird sanctuary, paddle boats, and wifi throughout the park. They do not currently have a Nature Center. One of the largest setbacks of wifi being added to the park in the future is the lack of power outlets, and outlets for public usage. The park is a great reference for a variety of amenities and opportunities that can be provided in a public space while making great ecological contributions

Case Study | Shenzhen Rencai Park

Site Plan

Location: Shenzhen, China
Design Company: AUBE Design
Project Year: 2017
5G Smart Park Project Year: 2021
Area: 770000 m² (8288210 ft²)
Water Area: 330000 m² (3552090 ft²)
Land Area: 440000 m² (4736120 ft²)
Total Construction Area: 4939 m²(53163 ft²)
Green Space Rate: 77%
Parking Spaces: 191 + 5 bus parking spaces
Length of cirular jogging track: 2.7 km (8858 ft)
Footbridge length: 222 m (728 ft)

About the Park

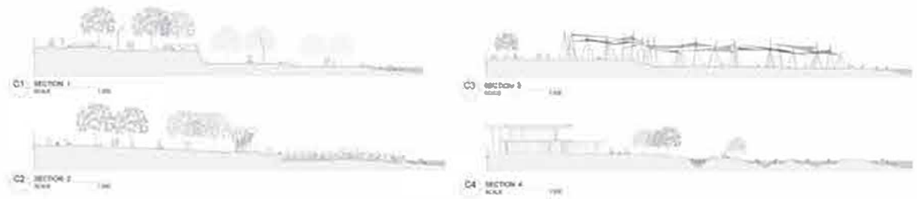
The park is an urban green space created from reclaimed land. In order to awaken the sleeping memory of the sea here, the designer put the design concept of "flow" throughout the design of the park:

1. Many square spaces are designed with more relaxed curves.
2. Use many different varieties of ornamental grasses to weaken the boundary lines.
3. Different walking paths allow the flow of people in the site to produce interaction in different spaces.

Aerial View

Rain Garden

Children Playfround



5G Smart Park Project in 2021

1. Cleaning Robot

- 24 hours cleaning
- Autonomous navigationand obstacle avoidance
- Functions: sweeping, vacuuming, garbage

2. 5G Full-Color Camera

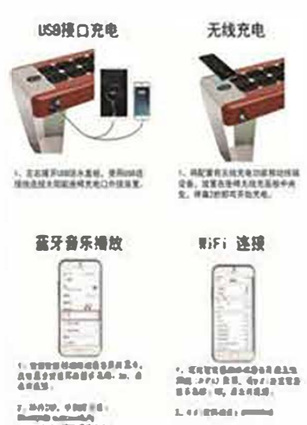
- Energy saving
- Send the alarm automatically
- Real-time monitoring of water

3. 5G Flexible Screen

- Incorporates flexible screens on surface of the clothing of park cleaners, security guards.
- Display photos of park and management requirements

4. Smart Bench

- Solar panel
- Functional signs on both sides
- WiFi (no password required)
- Smeartphone charding (wireless & USB)
- Bluetooth music playing

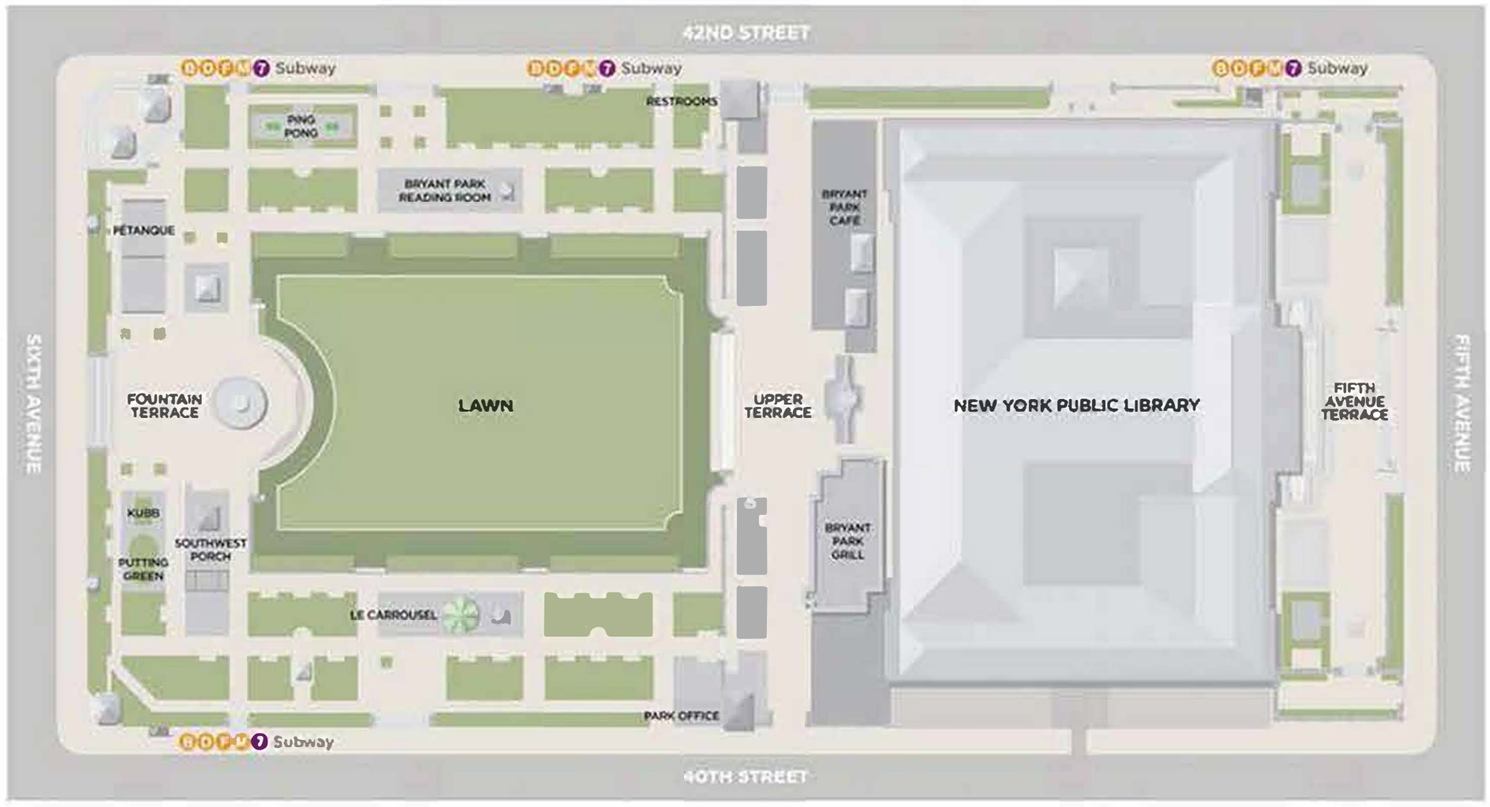


Case Study | Bryant Park Case Study

New York City, New York
Restored 1988-1992
Designed by Hanna/Olin Ltd., Hardy Holzman Pfeiffer Associates
9.6 Acres

Bryant Park was one of the first urban parks to offer free wi-fi access (July, 2002). Notable features: three acres of open green space, tree shade, food and beverage kiosks, a children's carousel, and more than 1,000 moveable chairs

Takeaways:
- There can be different spaces to accomodate different uses of wi-fi (work vs. social)
- Keep in mind the relationship of these spaces towards other programmed spaces in the park



Social Urban Conclusions of Bryant Park
- Majority of users stayed in place from 1-2 hours
- 70% visited more after wi-fi became available
- Signal strength strong throughout entire site
- Wi-fi users spread out more evenly
- Locations dictated by infrastructure needs (power outlets, comfortable seating)
- Less social interactions in areas immediately around a cluster of wi-fi users
- 51 % of wi-fi users purpose is primarily work (27% @ other sites)
- Wi-fi workers tend to be less open to sociability
- Not clear wi-fi use attracts new people to urban public spaces
- Wi-fi usually doesn't disrupt the space for other people (Bryant Park is an exception)
- Infrastructure for wireless Internet connectivity within urban public spaces may have unanticipated and positive consequences for participation in the public sphere.

University Of Maryland- Landscape Architecture Senior Studio

Build Resilience through the Internet and Digital Greenspace Exposure

Date: March 30, 2022

Time: 2:00-3:30

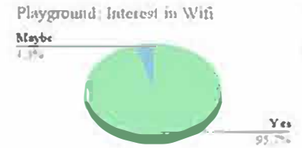
Locations:

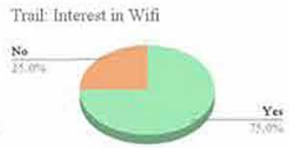
Playground

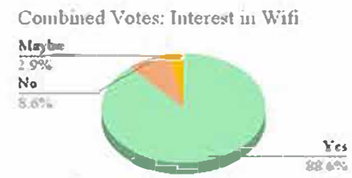
Trail

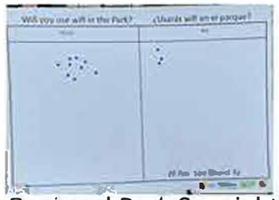
On March 30, 2022, the LARC 471 students embarked to Watkins Regional Park with the goal of gaining input from park visitors about outdoor WIFI. These surveys would showcase which area of Watkins would need to be altered, added, or erased. With help from the community, our class is able to tailor the redesign of Watkins to the community it will be serving the most.

Board 1: Will You Use Wifi in the Park?



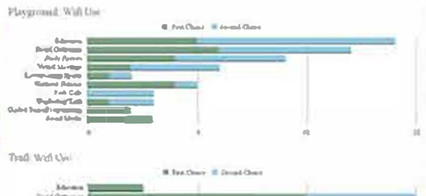


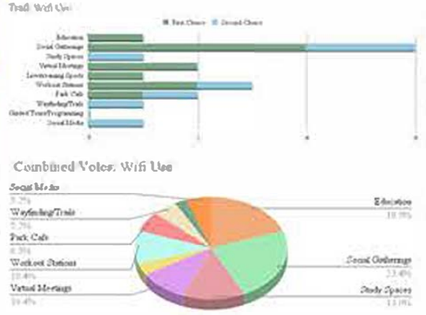




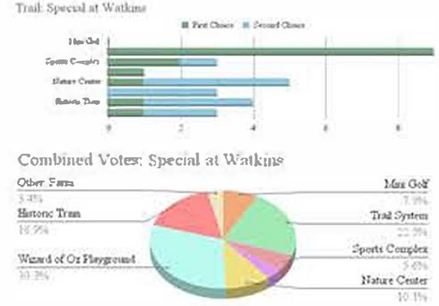
Board 2: Where Do You Want Wifi in the Park?

Board 3: How Might You Use Wifi in the Park?





Board 4: What Make Watkins Regional Park Special to You?



Board 5: How would you like the Park to change Seasonally?

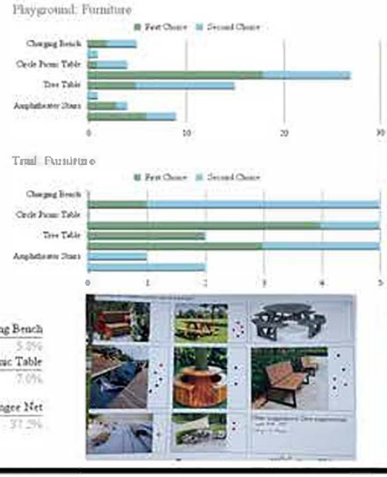
Holiday events
- Holiday lights
- Easter Activities- Easter egg hunt

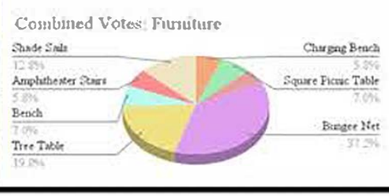
Events
- Hayrides
- Sledding/Snowball fights
- Punkin Patch/Pumpkin Carving
- Running event (Turkey Trot)
- Festivals
- Farmers market
- Movies + Concerts

Activities
- Girlscout activities
- Playground activities
- Nature center activities during the week
- Art in the park
- Making/flying kites
- Outdoor reading
- Water gunfights
- Scavenger hunt

Programs/Infrastructure
- Flowers
- Volleyball courts
- pool/icerink
- Trails
- Pond
- Camp facilities

Board 6: What type of Furniture Would You Use Most in the Park?





Board 7: Where Would You Like to See Improvements in the Park & Why?

Wonderful world of Watkins
- More flexible hours
- Fix trails

Recreational Fields & Tennis Bubble
- Better quality courts

Trail Network
- Better maintenance
- More benches
- More security

Playgrounds
- Shade
- Rope Climbing
- More spinning equipment
- Rock climbing wall
- Separation for different age groups
- More seating
- More playgrounds

Campgrounds
- Electricity

Other
- Petting zoo
- More bathrooms and bathroom maintenance
- Shade
- Skatepark
- More security

Presentation Boards

- Elemental Cafe and Gardens - Elise Shallbetter, Bridgette Hammett and Lital Kirshenboim
- Watkins Hot Spot Haven - Kianna Chow and Zaria Stebbins
- Connecting to Nature - Karisha Rodrigo, Ellen (Yike) Xu and Grace Barton
- Connectivity Commons - Delaney Accomando, Nicole Cavender and Alyssa Steele
- The Eco Corridor - Elin Fan, Rahat Duary and Theodore Ziolkowski
- Eco - Regions - Deanna Cowley
- Connecting Watkins - Luke Peterson, Alondra Liriano and Jacob Hess

ELEMENTAL CAFE & GARDENS

DESIGN PROGRAM

- *Placemaking for young adults and older*
- *Outdoor gathering space*
- *Provide shade (both natural and built)*
- *Signage and community posting board*
- *Seating for different uses*
- *Wifi and charging stations*
- *Outdoor cafe space and boardwalk*
- *Dynamic water feature*
- *Space for meditation and rest*

N

00 10 20 40 80

PLANTING PALETTE

TECH IMPLEMENTATION

Utilizing a community cork bulletin, scannable QR Codes will be curated either weekly or monthly that allows visitors to learn more about local artists, music recommendations, and upcoming community events. Connecting people as they move through the park can be improved by new Wifi access - increasing engagement and feelings of togetherness in the Watkins Park community.

Interpretive signage about the native plantings located on site could also utilize QR Codes, with scannable information allowing people to greater connect with the landscape within Watkins Regional Park.

Potential interpretive signage located along boardwalk

SUN STUDY: Light is not limited year-round by buildings or canopy cover - vegetation choices can therefore have a range of light requirements.

MARCH JUNE

DECEMBER SEPTEMBER

TOPOGRAPHY
Relatively flat site

BUILDINGS
Few tall structures by site

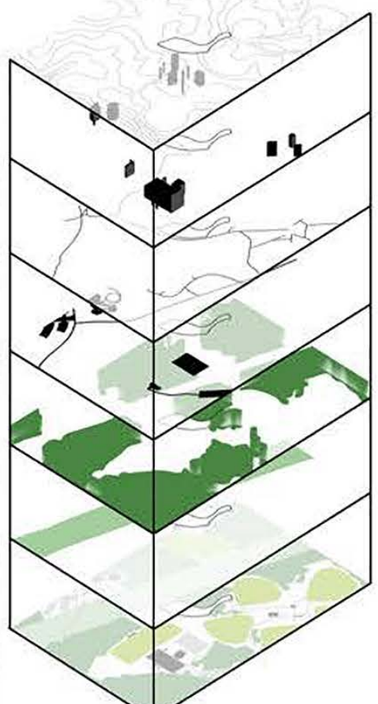
TRAILS
Main trail along edge of site

ROADS
No vehicular roads alongside site

CANOPY
Dense forest alongside N and E of site

POWERLINE
Powerline corridor located to the W of site

SITE & SURROUNDING AREA



Example of QR Code scanning for arts access.

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Section A-A': *Water Feature*

View 1: Connection of Water Feature to Cafe

View 2: Connection of Water Feature to Cafe

View 3: Stairs onto Roof of Cafe

View 4: Community Bulletin & Cafe

00 10 20 40 80

Section B-B': *Outdoor + Indoor Cafe*

00 10 20 40 80

View 5: Entrance Into Meditation Garden

View 6: Seating Outside Meditation Garden

Section C-C': *Meditation Garden*

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WATKINS HOT SPOT HAVEN

STRENGTHENING CONNECTIONS INSIDE AND OUTSIDE THE DIGITAL WORLD

Location

Kettering Neighborhood

Watkins Regional Park is an 850-acre M-NCPPC Park located in Kettering MD. It is flanked by Highway routes 193, 202, and 214. The park is surrounded by middle class suburban neighborhoods, shopping centers, churches and schools both public and private.

Watkins Park Map

Our Chosen Area

Goals

How to make Watkins Park more accommodating to the Wi-Fi user by answering two questions:

"Why will people come to this park?"
Making Watkins different than a library/community center/ cafe

"Why will people stay at this park?"
There is more to provide other than Wi-Fi that will help close a digital divide in contemporary social interaction, education, and work life

Objectives

- Designing incentives to make people stay in the park by providing food, shelter, opportunities to be creative and community gathering space
- Incorporating spaces dedicated to education, social interaction, and work into the existing park's framework
- Weaving in new technology with existing natural features to make the Wi-Fi incorporation feel seamless

Site Inventory & Analysis

Circulation

The existing traffic and trail circulation leads users to the green, framing it as a terminus to gravitate towards, making it a natural "heart" to the park. Parking and existing amenities around the Wonderful World of Watkins indicates users navigate and stay in this area the most.

Topography

We chose the flattest and highest areas in each grad.to minimize grading manipulation

Existing Vegetation

We wanted to steer clear of building in the Woodland Camping has Areas and also keep as much existing vegetation as possible.

Community Engagement

After looking at the data collected from the community engagement we conducted in the park's playground and trail areas, we determined that the most relevant results to our design revolved around improving accommodations to the park. We wanted to address concerns about shade, seating, extending the seasonality of facilities, and designing for the Wi-Fi's most common uses.

"How Will You Use Wi-Fi in the Park?"

Park Improvements

Seasonality

Design Development

Getting a Footing

Looking at the overall park and decoding which area would serve the most people and would best be retrofitted with Wi-Fi

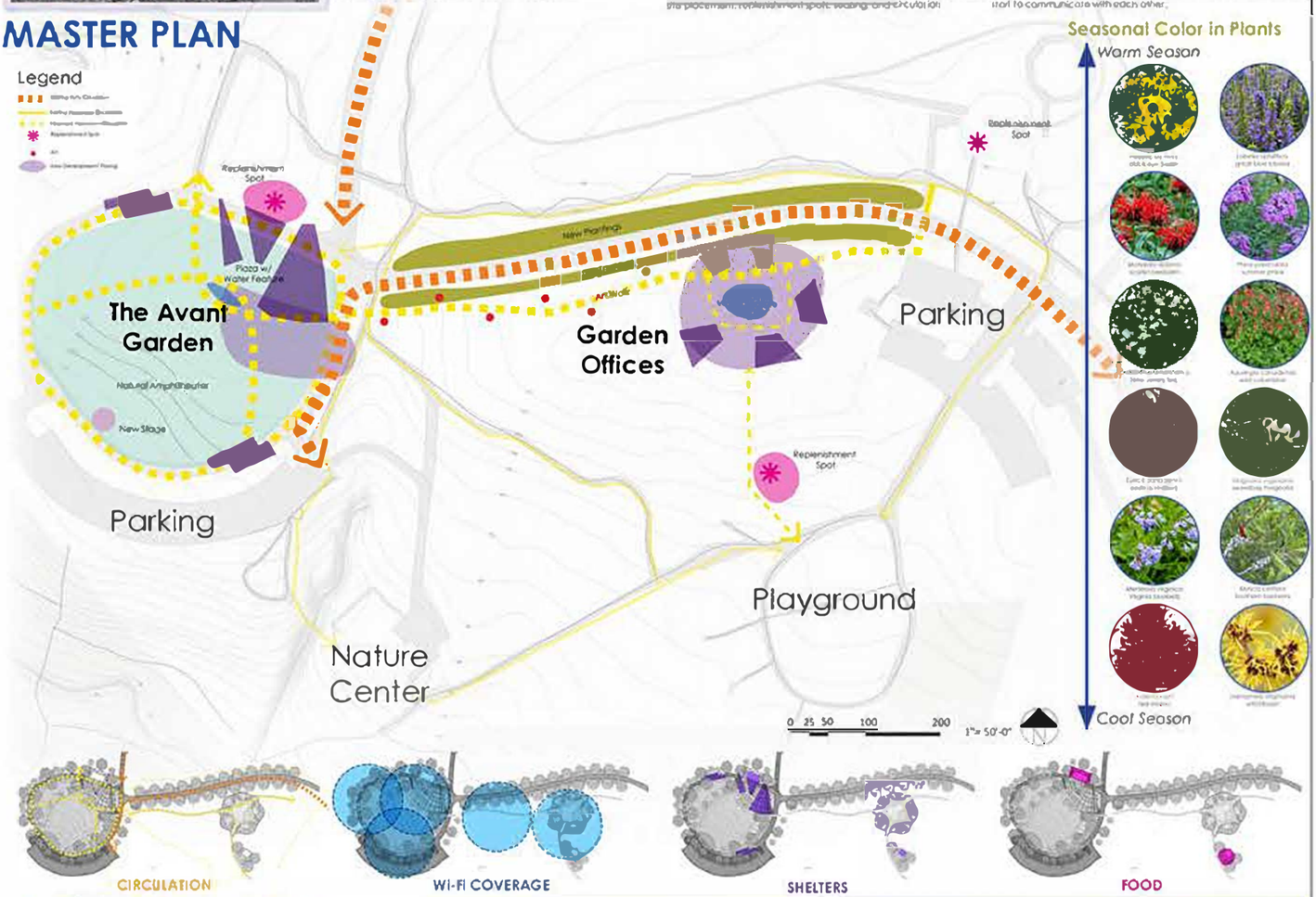
Program and Spaces

After choosing The Green and the flat area to the west of the Wonderful World of Watkins, we began to sketch in the best places for the placement of pavilions, park seating, and circulation

Fine Tuning Concept Plan

We started to fine tune our general design and programming. We also began to explore how the Avant Garden and the Garden offices can start to communicate with each other.

MASTER PLAN



Kianna Chow & Zaria Stebbins | LARC 471: Capstone Studio: Community Design | Dr. Byoung-Suk Kweon | Spring 2022

THE AVANT GARDEN SITE PLAN

KEY MAP

Existing Influences

Community Art Pieces:

AR Activities:

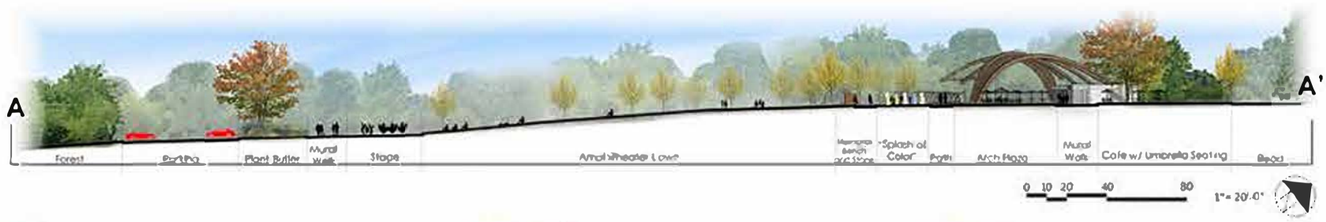
Arch Motif:

View 1

LEGEND

1. Amphitheater
2. Hammock Garden
3. "Splash of Color" Interactive Splash Pad
4. Café
5. Augmente Reality (AR) Mural Walk
6. Covered Seating Plaza
7. Covered Seating Archway
8. Parking
9. Stage
10. Gravel Seating

SECTION A-A'



VIEW 2

SPLASH PAD IN PLAZA

VIEW 3

COVERED SEATING ARCHWAY

VIEW 4

AMPHITHEATER AND AR WALK

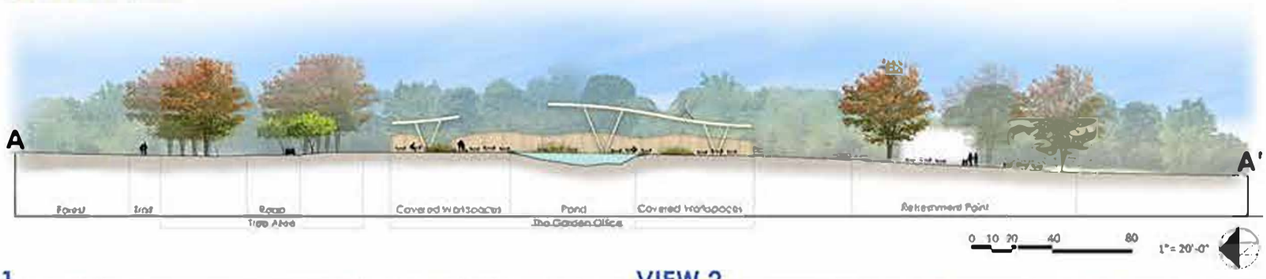
THE GARDEN OFFICE SITE PLAN

KEY MAP

LEGEND

1. Alleé
2. Art Walk
3. Multifunctional Outdoor Workspaces
4. Naturalized Water Pond
5. Varied Native Plantings
6. Wooden Alcove Fencing
7. Refreshment Point

SECTION A-A'



VIEW 1

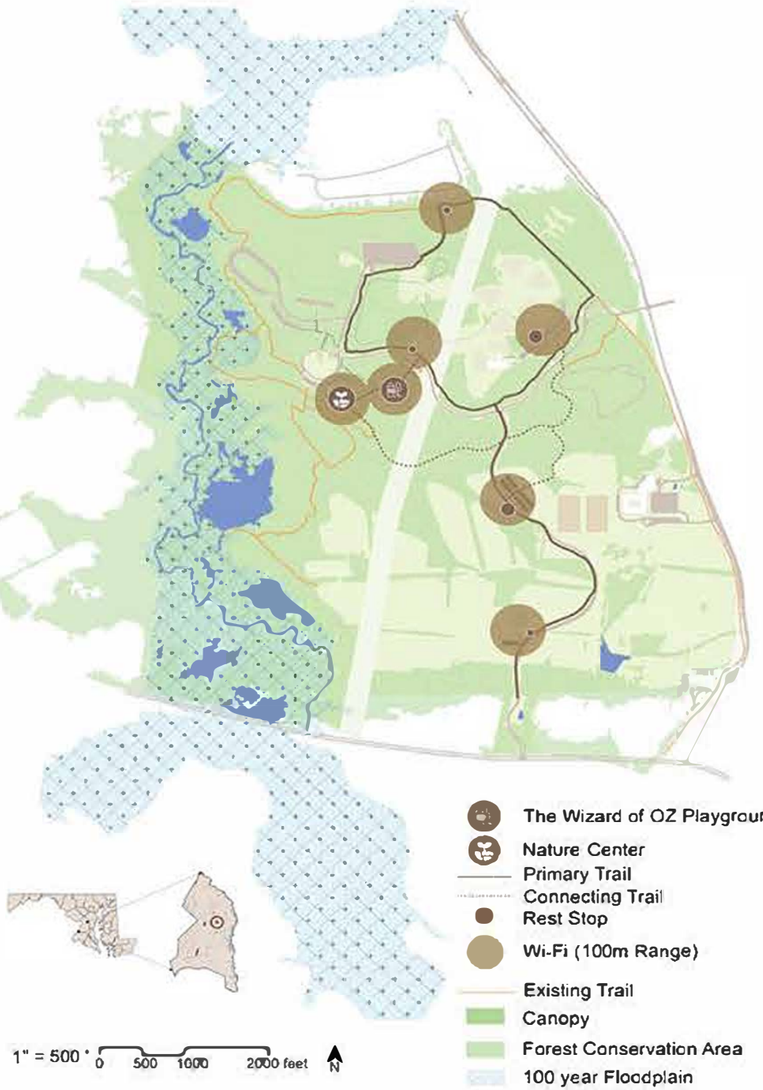
ENTRY FROM ART WALK

VIEW 2

INSIDE THE GARDEN OFFICE

Connecting to Nature

Watkins Regional Park, MD



Introduction

Watkins Regional Park is an 839 acre park with the most visitors in Prince George's County at 1,000,000 visitors annually. Due to its scale in popularity, Watkins Park has the ability to provide meaningful amenities to many people in the community. With society's growing dependence on technology and internet in everyday life, it is vital that the park is able to provide these services and become more accessible to everyone.

With this project, our goal is to create a more **inclusive** and **connective park** that integrates technology with nature thoughtfully.

Design Goals

- Add amenities that appeal to all ages and demographics
- Take education outdoors
- Integrate technology and Wi-Fi into the park
- Improve trail system
  - Additional Seating
  - Shade
- Add more flexible gathering spaces for the community

2018 Masterplan Influence

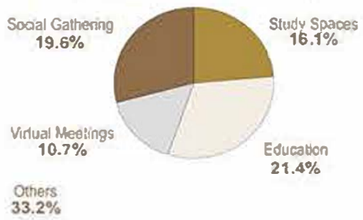
Theme Quadrants:
Sports, Play, Nature, Agriculture

Southern Sports Complex
Additional Fitness Amenities

South Entrance Parking
Expand Trail & Amenity Accessibility

Community Engagement

How might you use WiFi in the park?



Other useful feedback

Seasonal Activities

- Farmers markets
- Egg hunts
- Hay rides through food forest

Trail Improvements

- Multi-function trail
- Sitting spaces and rest areas
- Shade

Education

- Plant and Animal identification
- Bird watching and migration
- Food forest

Program

Multi-Function Trail
Trek Focused
- Semi-divided lanes
- Rest/Activity stations
- Seating
- Shade

Playground
Recreation Focused
- Ropes course
- Food forest
- Imagination Playground
- Education

Nature Center
Education & Community Focused
- Farmers markets
- Outdoor classroom
- Community gathering

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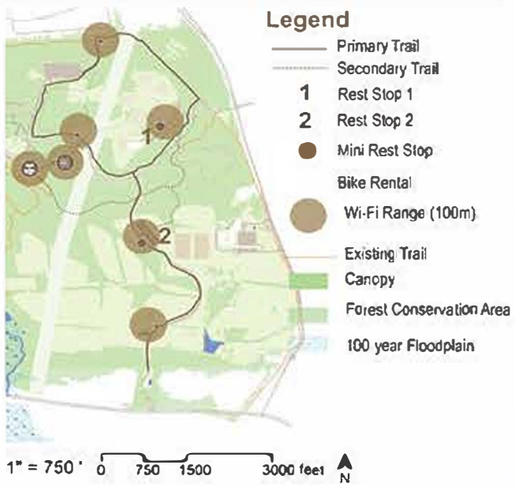
Watkins On The Web Trail

Designed by Karisha

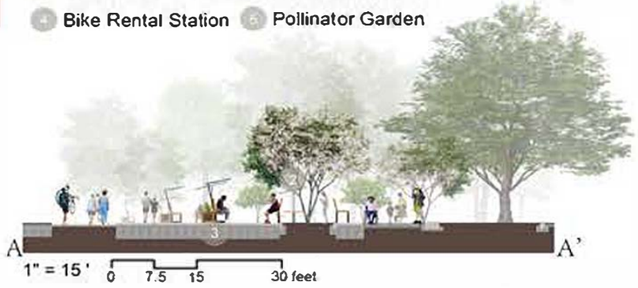


Trail Design Goals

- 2.5 miles of Fun!
- Mixed Use Lanes
  - Leisure & Fast Lane
- Mixed Hardscape Lanes
  - Permeable Recycled Wood Carpet
  - Porous Asphalt
- Every 1/4 mile (~10 minute walk)
  - Rest stop
  - Wi-Fi spot
- Every 1/8 mile (~5 minute walk)
  - Seating
  - Shade

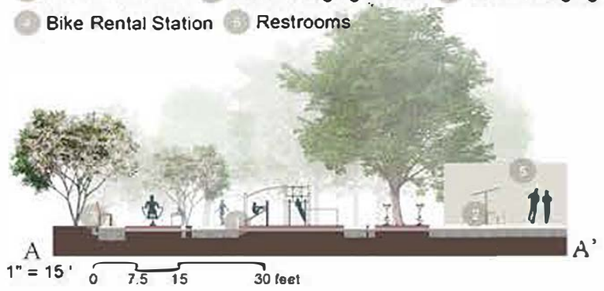
Legend

1 Digital Sign 2 Solar Charging Tables 3 Solar Charging Benches
4 Bike Rental Station 5 Pollinator Garden

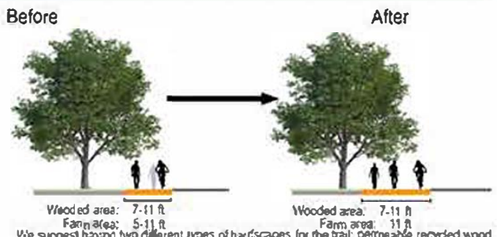


Legend

1 Fitness Stations 2 Solar Charging Tables 3 Solar Charging Benches
4 Bike Rental Station 5 Restrooms



Trail



We suggest having two different types of hardscapes for the trail; permeable recycled wood carpet and porous asphalt. The wood carpet is ideal for pedestrians and the asphalt is ideal for bikes and motorized vehicles.

The wooded trail does not need to be expanded, just repaved. The farm trail is thinner and lacks shade, so the trail's width should be expanded, and rest stops should be added.

Perspectives


Solar Charging Table & Seating


Fitness in the Park Stations

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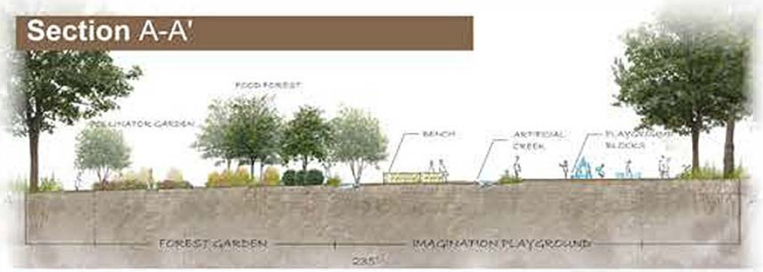
The Wizard of Oz Playground

Designed by Yike

The goal of this design is to make the playground more inclusive and to attract children of all ages.

Playground Planning

Section A-A'



Imagination Playground (a)

Ropes Course Elements

3. Kid's Area

4. Teen's Area


Forest Garden (b)
Eastern bluebird
Sialia sialis
feed on insects - Japanese beetles
Black locust
Robinia pseudoacacia
rot resistant, nitrogen fixing
William's Pride Apple
Malus domestica
bear fruit in August
Let's learn the difference between bees and wasps!
Noble scoliid wasp
Scolia nobilitata
important pollinator
Pomegranate
Punica granatum
bear fruit in August
Mulberry
Morus alba
bear fruit from June to Sept
Purple coneflower
Echinacea purpurea
bloom form July to Sept
Passion fruit
Passiflora edulis
bloom in spring, bear fruit in fall
Black-eyed susan
Rudbeckia hirta
bloom in summer and fall
White clover
Trifolium repens
nitrogen fixing, ground paver
Blueberry
Vaccinium.
bear fruit from June to July
Thornless blackberry
Rubus.
bear fruit from June to Sept
iNaturalist
Parks & Recreation M-NCPPC
live more, play more
pgparks.com
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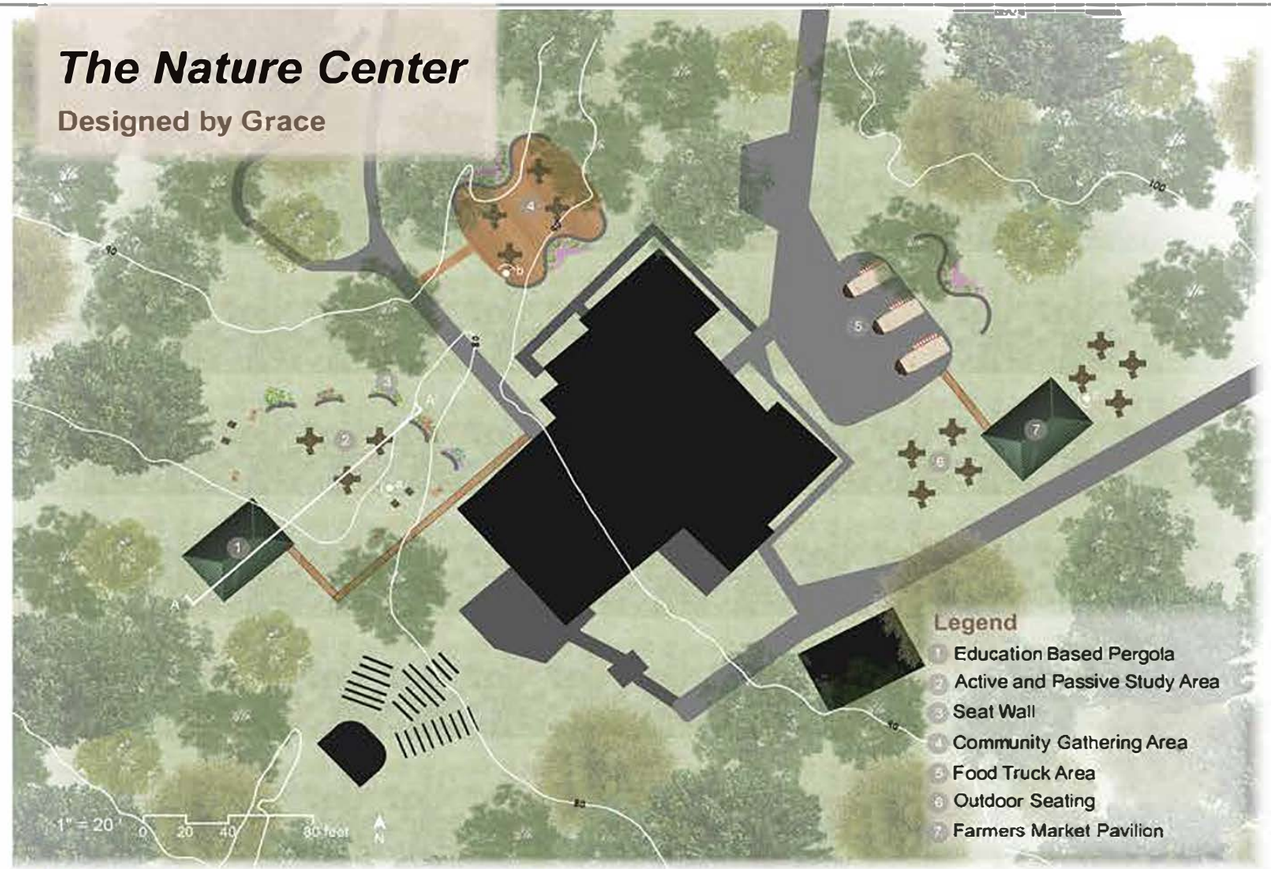


Proposed Scenario

Perspective a: Studying In Nature

Under the pergola teachers are able to host classes outdoors and allow for their students to learn in a different setting. The study area right outside of the pergola provides students with tables to study at and also spaces to relax.

Perspective b: Gathering on the Patio

Here, peopel are able to host events, hang out with friends, chat on a zoom meeting, or even just eat a meal surrounded by nature

Section A-A'

Section A:
Student Centered Zone

This section portrays the study area where teachers are able to move their classrooms outdoors and provide a whole new environment to their students. The seating area outside of the study pergola provides students with an area to conversate, eat, read, relax, and much more.

Perspective C: A Stroll Through the Farmers Market

The Farmers Market allows for people to see what local foods are available. The food trucks and tables provvide people a place to grab a snack and relax while they are at the park.

CONNECTIVITY COMMONS

Watkins Regional Park
Prince George's County, MD

CONTEXT

SITE SELECTION

GOALS

- INCREASE CONNECTIVITY WITHIN THE PARK
- CREATE A STRONGER PARK IDENTITY
- APPEAL TO YOUNGER AND ELDER AGE DEMOGRAPHICS
- INCREASE AWARENESS AND ATTENDANCE OF PARK EVENTS
- OPEN MORE OPPORTUNITIES FOR SEASONAL PARK EVENTS
- CREATE MORE FLORAL INTEREST IN ALL SEASONS
- CONNECT HUMANS AND NATURE
- INCREASE BIODIVERSITY
- CARRY PARK IDENTITY THROUGH THE GROUNDS

COMMUNITY ENGAGEMENT

PARK USERS WANT TO SEE:

- A VARIETY OF SEATING
- BETTER AWARENESS OF EVENTS & SEASONAL HAPPENINGS
- MORE SEASONAL ACTIVITIES
- SEPARATION OF PLAY SPACES FOR DIFFERENT AGES
- SPACES PROTECTED FROM THE SUN TO SIT
- RELAXING, QUIET PLACES TO SIT & WORK
- MORE AMENITIES SUCH AS CHARGING STATIONS

STATISTICS BASED ON A SURVEY DONE AT 2 PARK LOCATIONS, ITH PLAYGROUND AND TRAILS:

- Of 28 respondents, the top interests for wifi uses were education, social gatherings, and study space. (Fig. 1)
- Out of 86 voters, people wanted to see several types of seating with the most votes being for net seating, tree tables, and shaded seating.
- 50% of the surveyed want to see play spaces as the first thing improved within the park.
- They want to see primary wifi access along trails and in the play spaces.
- 47% of respondents said the World of Oz was most valuable to them and another 30% said the trails were most important to them.

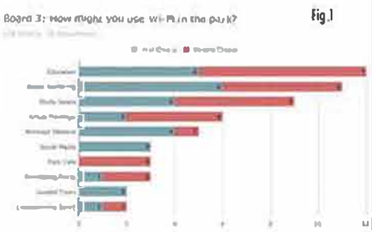


Fig.1

SITE ANALYSIS

Canopy Cover

536 Acres of Canopy

Hydrology + Mowing Areas

36 Acres of Mowing
Water Area

Woodland Conservation

285 Acres of Woodland Conservation

Graphics courtesy of Lake Peterson

DESIGN PROCESS

OPPORTUNITIES

- Implement designated Wifi working spaces
- Connect separated areas
- Increase existing biodiversity

CONSIDERATIONS

- Power lines running through middle of site
- Avoid floodplain and woodland conservation area
- Keep design simple for maintenance

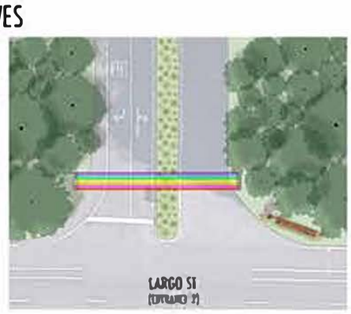
MASTER PLAN

A Information Station B Hang Out Hub

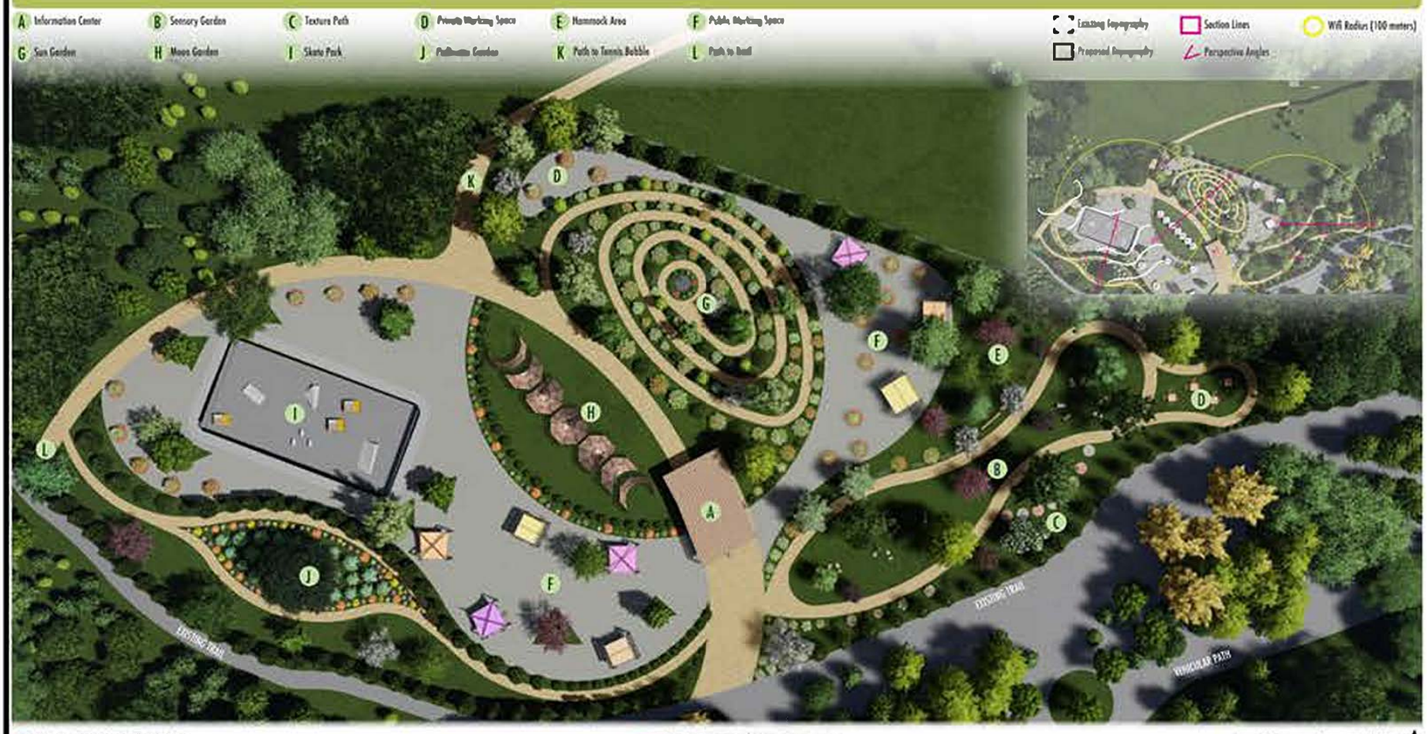
People come to Watkins for many reasons. The park serves various different demographics, age groups, and interests. Our job as designers was challenging because there are already so many great things happening in this park! After reviewing the community engagement statistics, we realized that a central information hub could help improve the connectivity in Watkins Regional Park. The information center is a place where all types of park goers can start their park journey to find out what events are happening and learn more information about the park and there are different amenities for all kinds of park users. It is meant to be a lively hub that visitors can use to find out where in the park they want to go and what in Watkins interests them the most. We implemented a quiet relaxation area for elderly people who want to come to Watkins but don't feel comfortable on the trails or playground and want somewhere else to sit besides the visitors center. Finally, we not only want to connect the park internally, but in order to make this connection successful, we need to show the surrounding community what's inside of Watkins with the entrances.

THE ROAD TO WATKINS

ENTRANCE PLANS & PERSPECTIVES



INFORMATION STATION



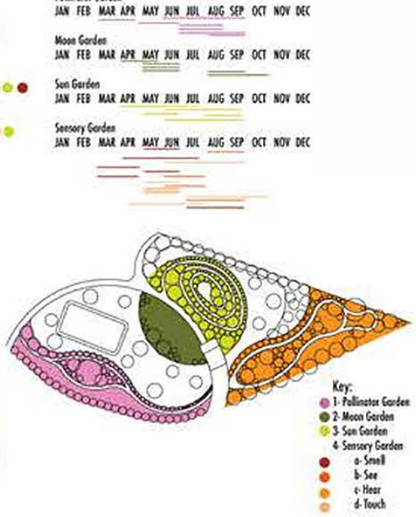
PLANTING PLAN

Ornamental Trees:
Betula nigra/ Riverbirch
Cornus florida /Flowering dogwood
Magnolia virginiana /Sweetbay Magnolia

Shrubs:
Callicarpa americana/ Beautyberry
Calycanthus floridus 'Athens' /Eastern Sweetshrub
Cephalanthus occidentalis/ Buttonbush
Cotinus obovatus /American Smokebush
Hypericum densiflorum/ Dense St. John's Wort
Lindera benzoin /Spicebush
Physocarpus opulifolius /Ninebark
Rosa carolineana/ Pasture Rose
Sassafras albidum /Sassafras

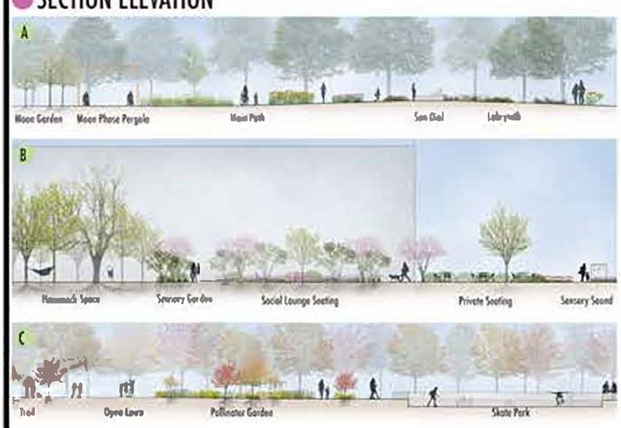
Perennials, Grasses, Vines:
Achillea millefolium /Yarrow
Aquilegia canadensis/ Wild Columbine
Amsonia hubrichtii/ Bluestar
Anemone canadensis/ Anemone
Asclepias incarnata /Swamp Milkweed
Asclepias tuberosa /Butterfly Weed
Baptisia australis/ Blue Wild Indigo
Baptisia tinctoria /Yellow Wild Indigo
Clematis terniflora /Sweet Autumn Clematis
Conoclinium coelestinum/ Blue Mistflower
Coreopsis rosea /Pink tickseed
Echinacea purpurea /Purple Coneflower
Helianthus angustifolius /Swamp Sunflower
Phlox stolonifera/ Creeping Phlox
Physostegia virginiana /Obedient
Pycnanthemum incanum /Mountain Mint
Rudbeckia hirta /Black Eyed Susan
Schizachyrium scoparium/ Little Bluestem
Solidago nemoralis /Dwarf goldenrod
Sorghastrum nutans /Yellow Indiangrass

Bloom Chart: (Plants in order by alphabetical)



Key:
1- Pollinator Garden
2- Moon Garden
3- Sun Garden
4- Sensory Garden
a- Smell
b- See
c- Hear
d- Touch

SECTION ELEVATION



1"= 10'

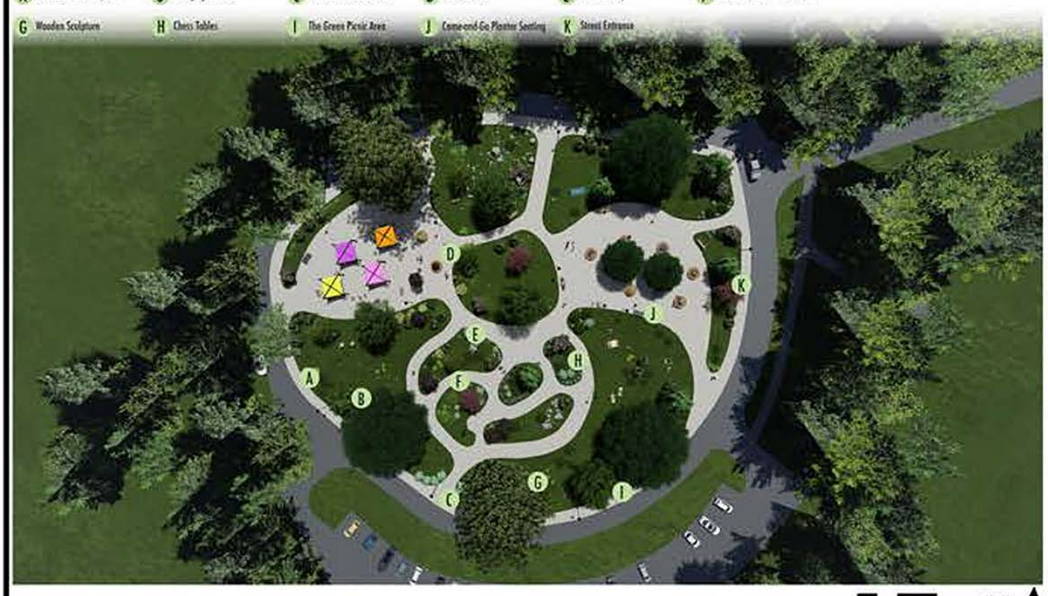
PERSPECTIVE VIEWS

1"= 20'

LARC 471: Capstone Studio: Community Design | Dr. Byoung-Suk Kweon | Watkins Regional Park | Spring 2013 | Delaney Accomando, Nicole Cavender, Alyssa Steele | LANDSCAPE ARCHITECTURE

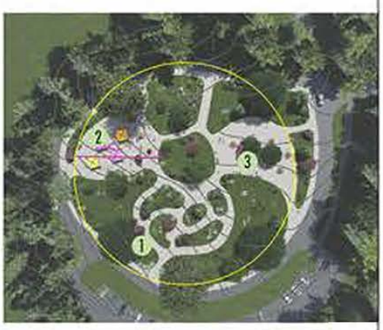
HANG OUT HUB

A Shade Sail Work Space
B Charging Benches
C Pollinator Garden Walk
D Rock Garden
E Little Library
F Water Bottle Refill Station
G Wooden Sculpture
H Chess Tables
I The Green Picnic Area
J Come-and-Go Planter Seating
K Street Entrance

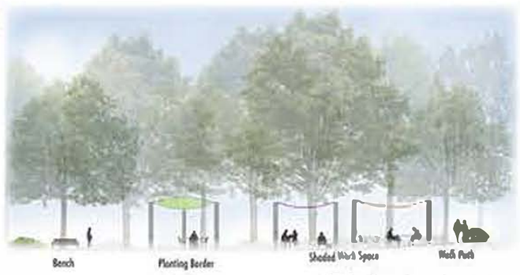


1" = 20'

Existing Topography
Proposed Topography
Section Lines
Perspective Angles
Wifi Radius (100 m)



A



1" = 10'

EXISTING CONDITIONS

1

2

3

4

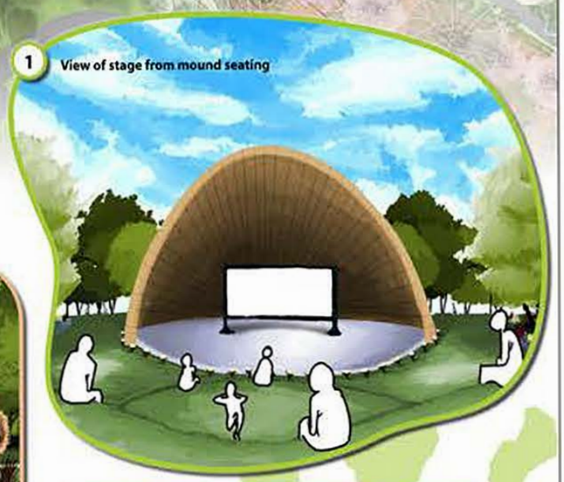
LARC471: Capstone Studio: Community Design | Dr. Byoung-Suk Kweon | Watkins Regional Park | Spring 2022 | Delaney Accomando, Nikki Cavender, Alyssa Steele | LANDSCAPE ARCHITECTURE


CONTEXT:
Founded: 1964
Location: 301 Watkins Park Dr. Upper Marlboro MD 20774
Size: 850 acres
Surroundings: Middle class & surburban residential neighborhoods, public & private schools, commercial buildings, and churches, etc.
REGIONAL CONTEXT:
PRINCE GEORGES COUNTY
WATKINS REGIONAL PARK
ECO CORRIDOR AREA
FEATURED PLANTINGS
WATKINS REGIONAL STATE PARK
THE ECO CORRIDOR
Master Plan:
Key:
Trails
Bathrooms
Emergency Blue Lights
NATURE CENTER
SITE INVENTORY
CONCEPT DIAGRAM
SITE ANALYSIS & REFINED FINAL CONCEPT
6. CHILDREN'S FORAGING PLAYGROUND
Influential Survey Data:
Requests & Improvements
More Flowers
More Shade
More Security
More Art
More Seating
More Playgrounds
INTENDED WIFI RADIUS

WATKINS REGIONAL STATE PARK

THE ECO CORRIDOR

1-2. The Pollinator Circle & Art Walk



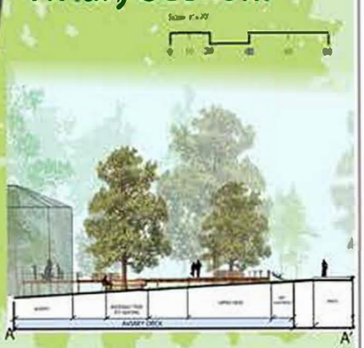
Sections:

WATKINS REGIONAL STATE PARK

THE ECO CORRIDOR

3. The Meadow Walk

Aviary Section:



Gazebo Section:

PROJECT GOALS:

The Meadow

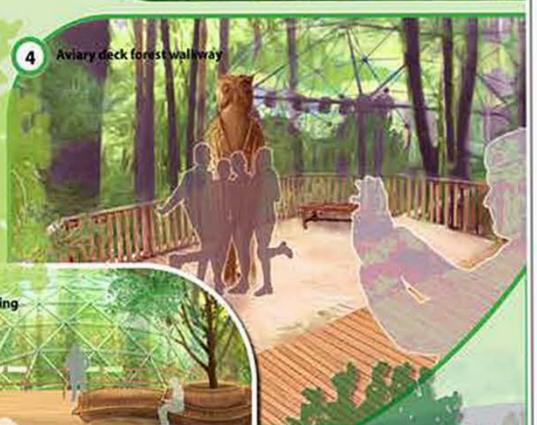
- Create a joint space that connects all the major nodes of the central park area
- Provide additional trails and stroll paths
- Include ornamental plantings revolving around a meadow habitat
- Include rest stops with wayfinding elements

The Aviary Deck

- Bring Nature Center's program into forefront of park activity so people are aware of its existence
- Provide better homes for the Nature Center's rescue raptors via large outdoor aviaries
- Create a space for education, recreation, and relaxation for families and in

The Forest Adventure Playground

- Provide an opportunity for nature-based play, featuring equipment and experiences that the existing Wizard of Oz Playground does not provide.



Before:

Playground Section:

4-5. The Aviary Deck & Forest Adventure Playground

WATKINS REGIONAL STATE PARK

THE ECO CORRIDOR

6. The Children's Foraging Playground

Key:

Path light
Trash bins
Bathrooms
Emergency Blue Light

1. Foraging vegetation
2. Boardwalk
3. Trampolines
4. Aluminum tree cage
5. Climbing net structure
6. Hillside seating
7. Pavilions

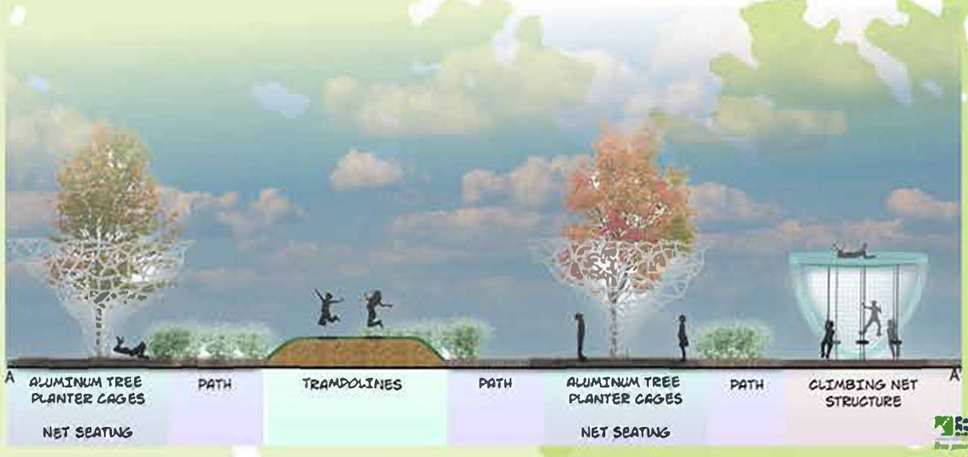
Precedents:

PROJECT GOALS:

- Expand existing Wizard of Oz playground space with unused mulch margins
- Bring play area within 30 picnic pavilions
- Create new space around outdoor foraging and edible plants
- Create areas where adults and teens have enough space from younger children, while still maintaining safe visibility

Before:

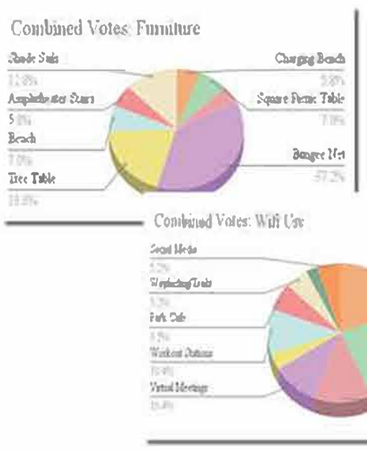
Site Section:



ECO-REGIONS

INTERMINGLE OF WILD & NATURE

Community Engagement



SITE ANALYSIS

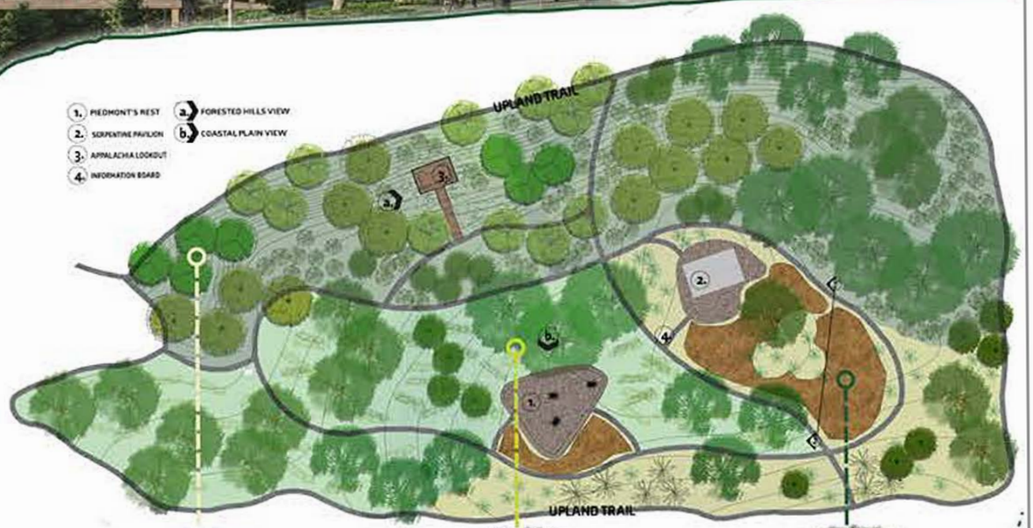
Design Process

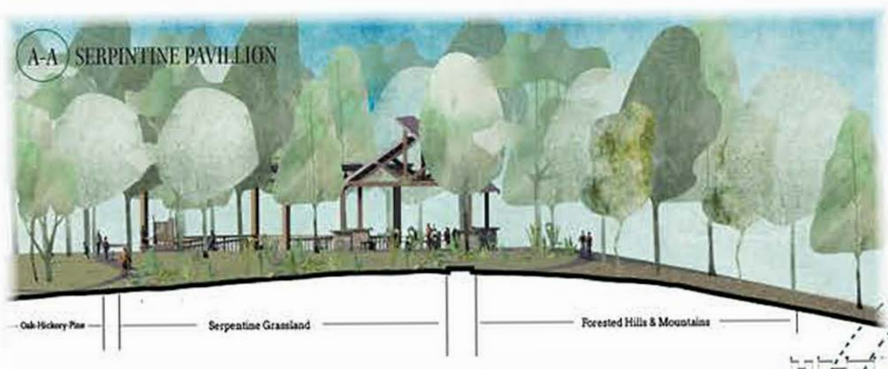
Deanna M. Cowley | LARC471 Capstone Studio/Community Design | Professor Kerson | Spring 2022

ECO-REGIONS

GOALS

Based on the community engagement results the people would like to see spaces that can be used for Education, Social Gatherings, or Study Space. Further development of the Nature Center would be ideal in creating an area that represents the 4 eco-regions of Maryland
1. Forested Hills and Mountains - Central Appalachians





1|Connecting Watkins|Design Development

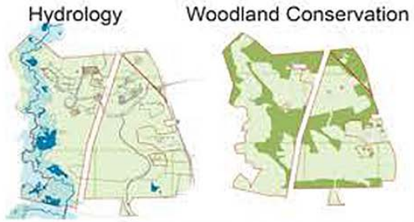
May 9th, 2022

Goals

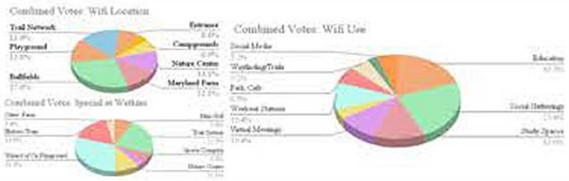
- Connect the Parks prominent areas through additional trails and site improvements
- Create Social, Work, and Educational Spaces to accommodate the addition of Wifi
- Increase shade and seating throughout the park
- Implement additional Signage and Wayfinding to increase park awareness and engagement
- Use Technology and Adaptability to allow for the use of wifi in the park
- Create A Wifi Destination

Location Map

Site Inventory



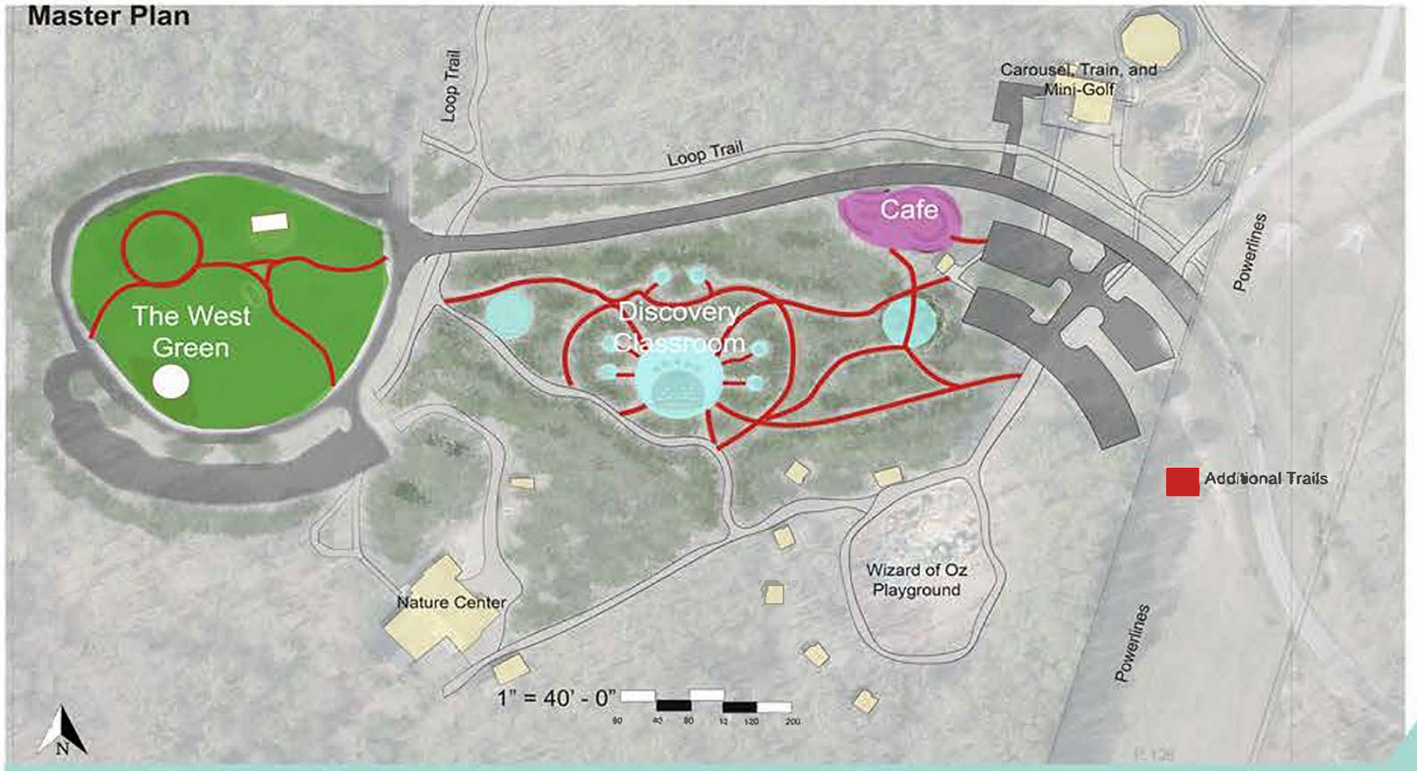
Community Engagement



Site Analysis + Process

Site Conditions

Master Plan



Signage + Wifi Involvement

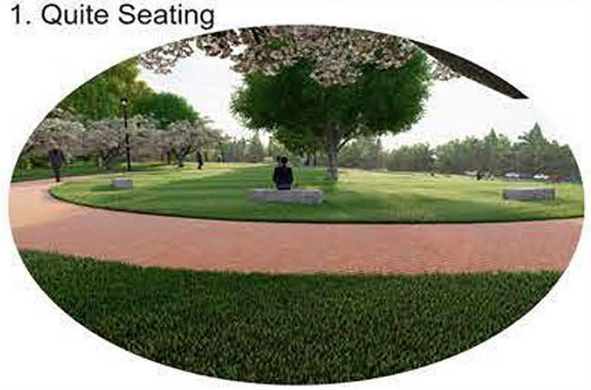
Project Designers:Luke Peterson, Alondra Liriano, Jacob Hess

Professor: Byoung-Suk Kweon | LARC471:Community Engagment Capstone Studio

2|Connecting Watkins | The West Green

May 9th, 2022

1. Quite Seating



2. Reflexology Path

3. Amphitheater Seating

Proposed Plan

Goals
- Create a wifi destination
- Increase park safety
- Activate an unused space
- Provide a large social space

Legend
A. Reflexology Path
B. Pavilion
C. Grilling Area
D. Flex Space
E. Apphitheater Seating
F. Stage

Proposed Section

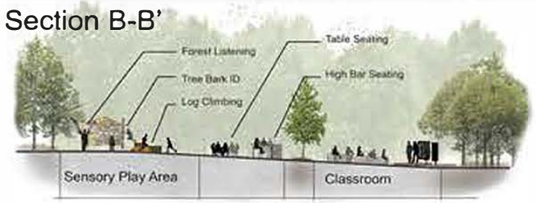
Project Designers:Luke Peterson, Alondra Liriano, Jacob Hess

Professor: Byoung-Suk Kweon | LARC471:Community Engagment Capstone Studio

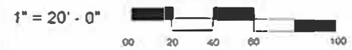
3|Connecting Watkins | Discovery Classroom

May 9th, 2022

Section B-B'



Section A-A'



Goals

- Provide Space for Group education, Individual Study, and Interactive Learning
- Create space for Passive learning and Relaxation

A. Hammock Grove

B. Quiet Study Pod

C. Discovery Classroom

Project Designers: Luke Peterson, Alondra Liriano, Jacob Hess

Professor: Byoung-Suk Kweon | LARC471:Community Engagment Capstone Studio

4|Connecting Watkins| Park Cafe

May 9th, 2022

1 Long Meandering Concrete Bench

2 Close Up Espresso Bar

3 East Espresso Bar Entrance

4 North West Entrance

SITE PLAN 1"=10'-0"

10' 20'

DESIGN GOALS

Encourage wifi use, enhance park security, bring forth a space that promotes interaction

DESIGN EXECUTION

Curved hightop espresso bar, that can also be a flexible space based on seasonality, tables and benches on the West side to encourage community engagement, curved pergolas over two-sided seating bench. Wayfinding signage on East and South entrances.

Section A 1"=10'-0"

10' 20'

live more, play more

Project Designers:Luke Peterson, Alondra Liriano, Jacob Hess

Professor: Byong-Suk Kweon | LARC471:Community Engagment Capstone Studio