



Howard County

Fulton South Community Park





FULTON SOUTH COMMUNITY PARK PROJECT

MASTER OF LANDSCAPE ARCHITECTURE STUDIO III

FALL 2015

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Executive Summary

Fulton South is an 77 acre site owned by Howard County at the intersection of Route 29 and Rocky Gorge Reservoir. Howard County plans to create a community park at the Fulton South site. The Fulton South Conceptual Plan is the result of a Partnership for Action Learning in Sustainability (PALS) collaboration between Howard County Department of Recreation and Parks and a team of graduate students in Landscape Architecture at the University of Maryland. The design team was asked to prepare a detailed site analysis and two master plans for the site that include connectivity with the local community, ample and diverse recreational opportunities, and valuable habitat conservation/expansion.

Following an iterative process of research, design, and review, the design team has the following recommendations:

- 1. Implement recreational plan through creation of new trails, open play areas, volleyball courts, nature play space, playground, sun shelters, pavilions, ample parking (including for buses/trailers), and comfort stations.
- 2. Implement new connectivity with a pedestrian bridge across route 29, greenway to Maple Lawn, and connection to WSSC trails along the Rocky Gorge Reservoir.
- 3. Implement new habitat plan with reforestation and conversion of hay and cultivated fields into meadow, with a focus on pollinators, particularly the Monarch butterfly.



Figure 1. Wooded fence line on the south edge of the property



Figure 2. Panorama view of existing meadow on the site



Figure 3. Panorama view of existing forest on the site

Introduction



Figure 4. The meadow represents the rural character of Fulton South.

The Howard County Department of Recreation and Parks purchased three adjoining properties in Fulton South with the intention of creating a community park to serve the area. The site is located immediately adjacent to Route 29 and north of the Rocky Gorge reservoir, owned by WSSC. It is near the new Maple Lawn development happening in Fulton South and will serve new communities along with existing residents.

University of Maryland graduate students in Landscape Architecture were tasked with providing design assistance for Howard County as part of the Partnership for Active Learning in Sustainability (PALS) program. The design team was asked to “let the land dictate” what the park would become, or deciding what was appropriate to include in the park based on existing site conditions. Some overarching goals included providing areas for community recreation activities and preserving and increasing habitat, particularly habitat for pollinators. Parking, access, and maintenance were also important aspects

of the designs.

An analysis of existing conditions was conducted on the site. In summary, a considerable amount of elevation change exists on site, with the vast majority of the property sloping greater than 5%. The site is 36% forested, centering largely on the stream valleys and steeper slopes. The flatter ridges are currently either in cultivation or have grown up from hayfields. There are several streams that flow through the site, with associated floodplains, and what appears to be a wetland near the pond. Access to the site is stymied by Rt. 29, a challenging off/on-ramp, and a lack of sidewalks or trails along existing roads.

Two teams of designers formed to provide different alternatives for the Howard County Department of Recreation and Parks with the intention of exploring a range of possibilities for the site. Both alternative conceptual designs are informed by the overall project goals and site conditions. Each design alternative was also guided by an additional subset of goals and objectives.



Figure 6. The hardwood canopy is beautiful in fall.



Figure 5. The pond on site, surrounded by wetland areas.



Figure 7. Christmas ferns on the forest floor





Site Analysis



Figure 8. Aerial view of forest conditions.

Existing Conditions and Opportunities

- Forest covers 36% of the site, or 29 of 79 acres.
- The forest bisects the site, which currently makes it difficult to travel from one open meadow to the other.
- Forested areas mostly exist in the lower-elevation areas of the site and along streams, which means forest cover is mostly protecting existing streams.
- There are opportunities to reforest stream banks.
- The forest filters views of Route 29 from the western half of the site but not the eastern. Opportunities exist to block more of the view of the road.
- There are filtered views of the property from Murphy Road on the western side. These should be retained.
- Forest cover does not block sound from Route 29, although it does provide some psychological sound reduction. If traffic noise is to be reduced, non-forest means should be pursued.
- The western property line is demarcated by a hedge but no strip of forest, which allows views of the farm landscape to the west. These should be retained.

Mesic Mixed Hardwood Forest

These mixed hardwood forests are widespread in mesic to submesic, infertile habitats throughout the Coastal Plain and Piedmont. Forests in this group occupy mesic uplands, ravines, lower slopes, and well-drained “flatwoods” on deep acidic, relatively nutrient-poor soil. The most typical overstories contain mixtures of American Beech, oaks, tulip-tree, and hickories, but a wide variety of hardwood associates occur. Ironwood, flowering dogwood, and American strawberry-bush are prominent understory plants.

These communities lack the lush herbaceous layers of Basic Mesic Forests, although species such as Christmas fern, New York fern, and white wood aster may form moderately dense populations.

From Virginia Department of Conservation & Recreation <http://www.dcr.virginia.gov/natural-heritage/natural-communities/nctiid>



Figure 9. Red maple and pachysandra by the driveway.



Figure 10. Forest understory and stream in the middle of the site.



Figure 11. Forest edge at the back of the property

Species Observed On Site

Trees

- Red maple, *Acer rubrum*
- Sugar Maple, *Acer saccharum*
- Hickory, *Carya sp.*
- American persimmon, *Diospyros virginiana*
- American Beech, *Fagus grandifolia*,
- American Holly, *Ilex opaca*
- Butternut, *Juglans cinerea*
- Tulip poplar, *Liriodendron tulipifera*
- Black gum, *Nyssa sylvatica*
- Sycamore, *Platanus occidentalis*
- Black cherry, *Prunus serotina*
- Scarlet oak, *Quercus coccinea*
- Red oak, *Quercus rubra*
- Chestnut oak, *Quercus prinus*
- Sassafras, *Sassafras albidum*

Understory Trees

- Ironwood, *Carpinus caroliniana*
- Dogwood, *Cornus florida*

Shrubs, Herbaceous Plants, and Vines

- Spicebush, *Lindera benzoin*
- Sensitive fern, *Onoclea sensibilis*
- Christmas fern, *Polystichum acrostichoides*
- Common greenbrier, *Smilax rotundifolia*
- New York fern, *Thelypteris noveboracensis*
- Wild grape, *Vitis sp.*

Invasive Trees

- Norway Maple, *Acer platanoides*
- Mimosa, *Albizia julibrissin*
- White mulberry, *Morus alba*

Invasive Shrubs, Herbaceous Plants, and Vines

- Japanese barberry, *Berberis thunbergii*
- Oriental bittersweet, *Celastrus orbiculatus*
- Japanese stiltgrass, *Microstegium vimineum*
- Pachysandra, *Pachysandra terminalis*
- Wineberry, *Rubus phoenicolasius*



Meadow



Figure 12. Yellow area is the meadow

Current Condition

The meadow makes up about 58 acres of the 79 acres park, which is 73% of the property. The forest bisects the property into two parts. On the east side of the forest section, a farmer is currently leasing the areas to grow a crop of soybeans. Because of that, an sufficient amount of work lies ahead to turn the fields into meadow. On the west side, it is overgrown by tall grasses with very few shrubs and trees in the open area. A wood-framed fence paneled with hog wire borders the forest edge. On the northern side of the meadow near Murphy Road, a silo and three barn structures are still standing. According to the Howard County Parks and Recreation, these structures will be demolished soon,



Figure 13. A woolly bear caterpillar (*Pyrrharctia isabella*)

but the silo presents an opportunity to be reused. The slope also faces north of the northern side of the property which will cause different microclimate and different plants to grow.

The meadow gave stunning visuals and different experiences of harmony. With the steep slopes and vegetative path, it made walking in the meadow difficult. While walking in the tall grass and hay, grasshoppers would hop along and out of the way of approaching people. Every once in a while a Woolly Caterpillar would be spotted along a falling stalk of grass along the “path”. We even saw a white tail deer galloping across the meadow from the forest edge toward the barn. It is quiet inside the meadow. You cannot hear any noise from Route 29. Below are a few species of plants and animals that were found on October 15, 2015:

Scientific Name	Common Name
<u>Animal</u>	
<i>Melanoplus sp.</i>	Grasshopper
<i>Odocoileus virginianus</i>	White Tail Deer
<i>Pyrrharctia isabella</i>	Woolly Bear Caterpillar / Isabella Tiger Moth
<u>Plants</u>	
<i>Acer rubrum</i>	Red Maple
<i>Acer saccharum</i>	Sugar Maple
<i>Buxus sempervirens</i>	Boxwood
<i>Fagus grandifolia</i>	American Beech
<i>Liriodendron tulipifera</i>	Tulip Poplar Tree
<i>Platanus occidentalis</i>	American Sycamore

Table 1. Plant and animal species observed on site

Piedmont Area

The Piedmont Plateau Province is composed of hard, crystalline igneous and metamorphic rocks. Bedrock in the eastern part of the Piedmont consists of schist, gneiss, gabbro, and other highly metamorphosed sedimentary and igneous rocks of probable volcanic origin. In several places, these rocks have been intruded by granitic plutons and pegmatites. Several domal uplifts of Precambrian gneiss mantled with quartzite, marble, and schist are present in Baltimore County and in parts of adjacent counties. Differential erosion of these contrasting rock types has produced a distinctive topography in this part of the Piedmont (<http://www.mgs.md.gov/geology/>).

Maryland Meadows

According to the National Park Service (NPS) list of plants for our area (<http://www.nps.gov>), the plants that were found on site are part of the Piedmont Region. Although they were not a part of the Meadow list, but are a part of the “Wetland” list. These can give clues as to the condition of the soil.



Figure 14. Low-quality meadow on the western half



Figure 15. A field of soybeans on the eastern half

Wetland

Wetlands are lands transitional between terrestrial and aquatic systems where the water table is usually at or near the surface or the land is covered by shallow water. The wetland-upland boundary is not always easy to identify. Conceptually, wetlands usually lie between the better drained, rarely flooded uplands and the permanently flooded deep waters of lakes, rivers and coastal embayment. Wetlands include the variety of marshes, bogs, swamps, shallow ponds, and bottomland forests. They usually form in upland depressions or along rivers, lakes and coastal waters in areas subject to periodic flooding.

Wetlands are often credited with providing natural stormwater and flood control benefits. Wetlands facilitate the flow of water between the ground water system and surface water system. In addition, wetlands are valued for their ability to maintain or improve the quality of adjacent surface waters. They also provide important habitat for fish, wildlife, and plant species, including rare species.

Nearly all of the Fulton South Community Park's wetlands fall within two systems: Palustrine and Lacustrine. Deciduous forested wetlands (i.e., one of major groups of Palustrine) are the most common type in this park. Forested wetlands can be categorized into two main types: seasonally flooded Palustrine forested wetlands and temporarily flooded Palustrine forested wetlands.



Figure 16. Seasonally flooded wetland



Figure 17. A high water table

Wetlands in this area occur in floodplains of streams, at the heads of drainageways, and on rare occasions in isolated depressions. The supporting hydrology of nontidal wetlands is primarily through groundwater or a combination of groundwater and overbank flooding. The other wetland in the Fulton South Community Park is Palustrine aquatic beds, i.e., small pond with partial vegetative cover. In a wetland situation, plants are adapted to cope with stressful conditions. The following plant list shows many of the common species that are found in this wetland.



Figure 18. The existing farm pond at the Fulton South Community Park site

Shrubs
Alnus serrulata (Brook-side Alder)
Cephalanthus occidentalis (Common Buttonbush)
Rhododendron viscosum (Swamp Azalea)
Sedges and Rushes
Carex crinita (Fringed Sedge)
Carex lurida (Shallow Sedge)
Carex vulpinoidea (Fox Sedge)
Dulichium arundinaceum (Three-way Sedge)
Eleocharis obtusa (Blunt Spikerush)
Scirpus atrovirens (Green Bulrush)
Elodea canadensis (Broad Water-weed)
Iris versicolor (Blueflag)
Pontederia cordata (Pickerel Weed)
Emergents and Submerged Aquatics
Sagittaria latifolia (Broad-leaf Arrow-head)
Typha latifolia (Broad-leaf Cattail)
Vallisneria americana (Wild Celery)
Wildflowers and Grasses
Asclepias incarnata (Swamp Milkweed)
Aster puniceus (Swamp Aster)
Chelone glabra (White Turtlehead)
Cicuta maculata (Spotted Water-hemlock)
Leersia oryzoides (Rice Cutgrass)
Spartina pectinata (Prairie Cordgrass)
Osmunda regalis (Royal Fern)
Trees
Acer saccharinum (Silver Maple)
Betula nigra (River Birch)
Fraxinus pennsylvanica (Green Ash)
Quercus palustris (Pin Oak)

Table 2. Plant species suitable for wetland habitat



Drainage

Regional Context

The regional drainage pattern for the site is shown in Figure 19. The main branch that bisects the site collects water from the north, that is, water from the more developed area of Maple Lawn, as well as water passing through the pond in the northwest area of the site. This stormwater collects and carries contaminants from roads, hardscapes, and farm fields and heads towards the Rocky Gorge Reservoir. These stream channels are perennial and currently exhibit baseflow. Most of the flowlines are in forested areas, though some areas along its length may invite more forest cover.

Knowing this data, and combined with the slope and aspect data, locations can be determined for intercepting water before it drains to the reservoir. Based on the existing topography (Figure 20) there exists potential for intercepting water in the northwest part of the site and treating it before it reaches the existing



Figure 19. Regional drainage map showing Rocky Gorge Reservoir

pond. This existing pond can potentially remain as an asset to the site, serving as a focal point for visitors to enjoy its place in the scenery, and potentially for its use as a stocked pond or boating site. Currently, the pond exhibits eutrophication, so pretreating stormwater before it enters the pond can help ameliorate the algal blooms and turn it into a destination. The drainage pattern

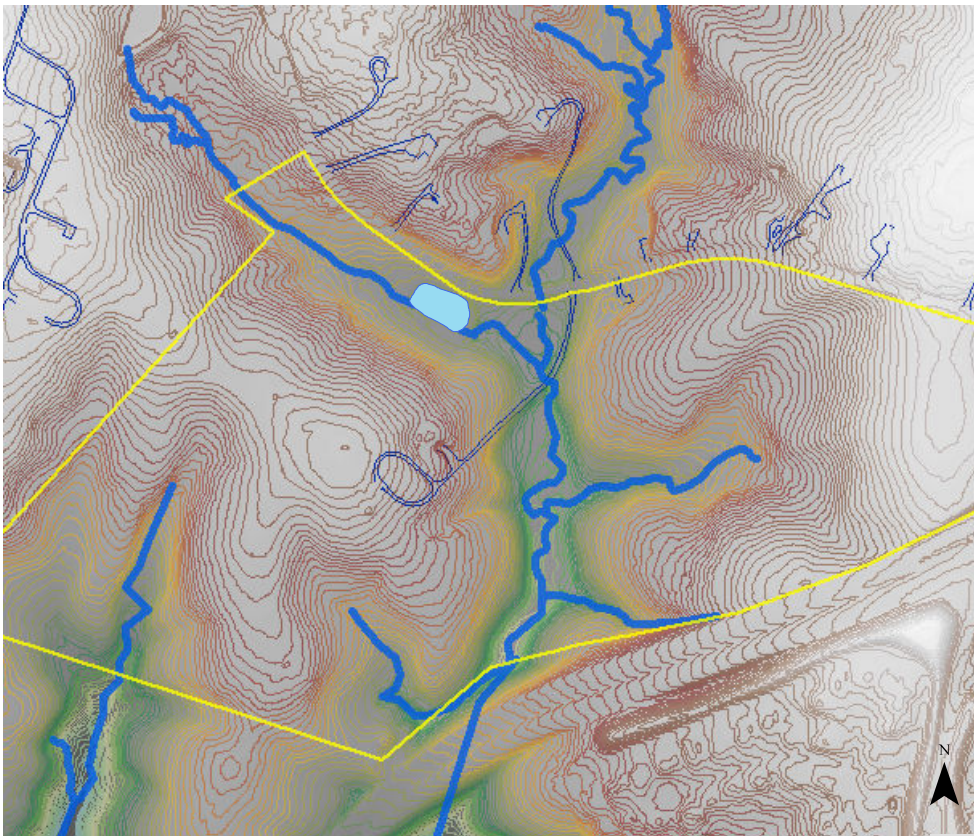


Figure 20. On site drainage showing topography.

influences the design approach of the site. As mentioned earlier, the main branch draining water from the north bisects the park, essentially creating two distinct eastern and western areas. It will be important to find ways to cross this stream by foot and by vehicle. Any vehicle traveling from the current driveway has to exit the western side, travel onto Murphy Road, and then pull off into the eastern field. It will be necessary to allow maintenance vehicles, especially off-road vehicles, to traverse the site without using Murphy Road.

Soil Drainage

Most of the soils on the site are either well drained or moderately well-drained (Figure 21). The outlines for the areas containing moderately well-drained soils correspond with the drainage patterns on site. They consist of the the silt loams, while most other soils are loams. Because of their good drainage capabilities, the soils on this site present an opportunity to capture and infiltrate stormwater runoff. It is imperative to remember that this site eventually drains to the Rocky Gorge Reservoir, Protecting such a valuable resource requires planning for the future growth of the Maple Lawn Community.

Drainage Class

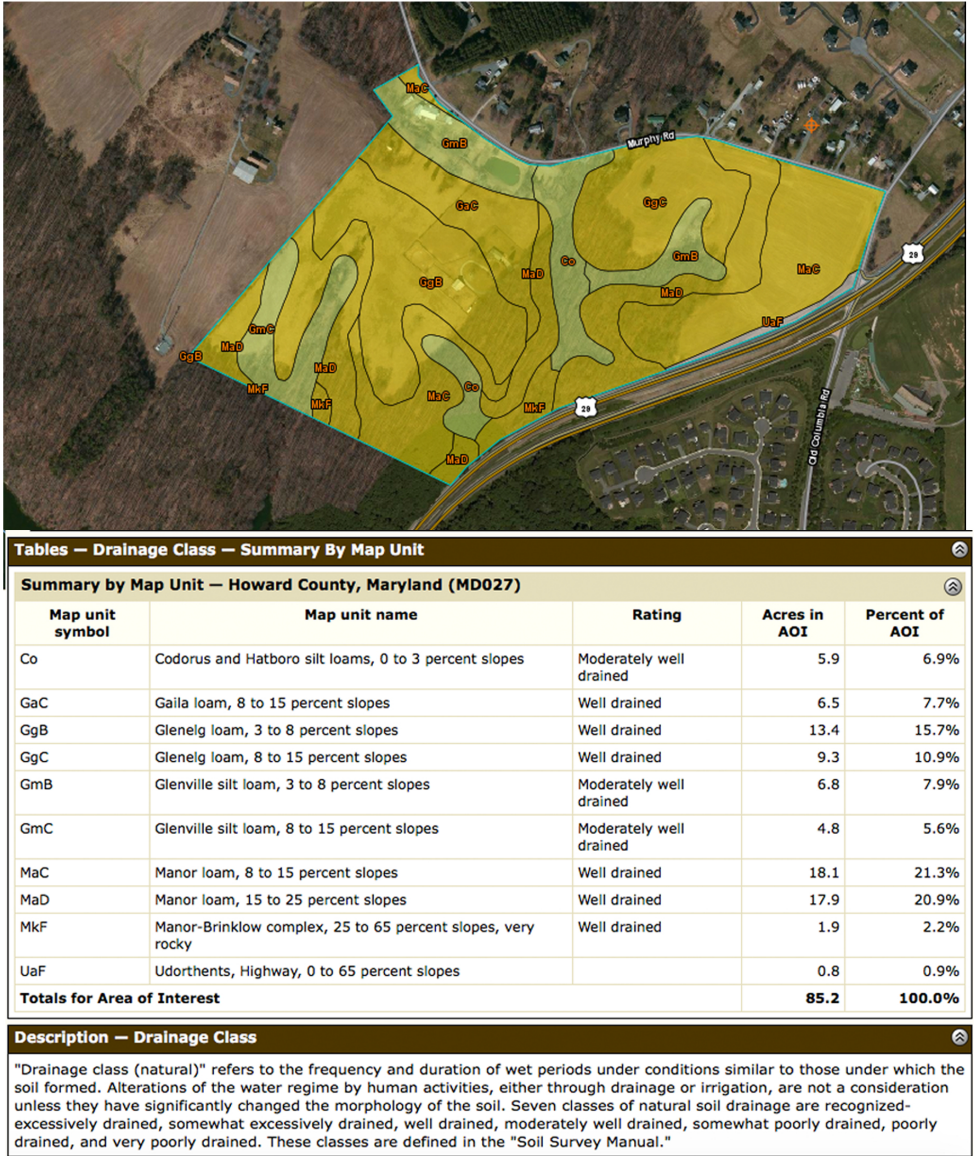


Figure 21. Drainage rating by soil type

Slope

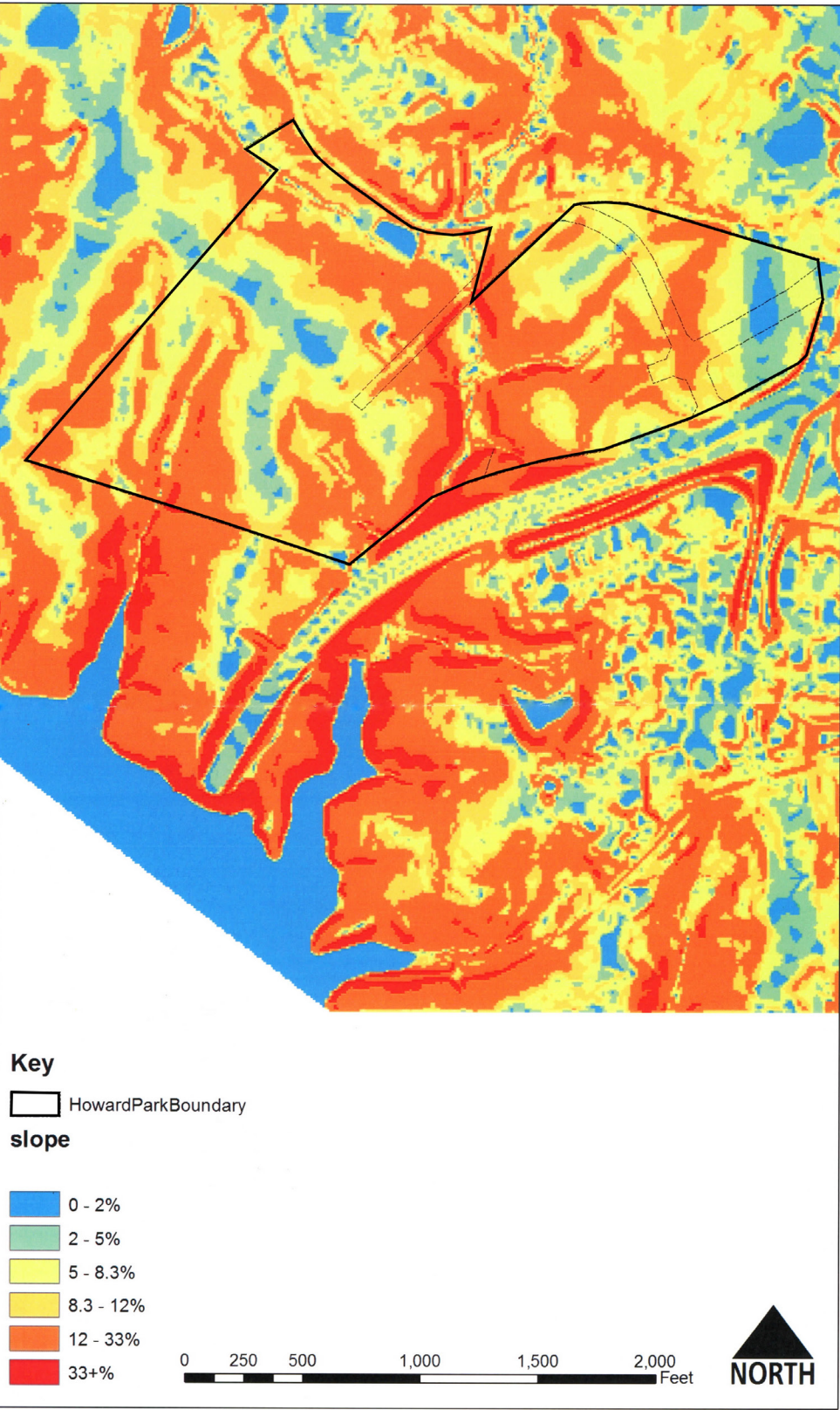


Figure 22. Slope mape for Fulton South

Slope Analysyis at Fulton South

The site includes a great deal of grade change, with the vast majority of the property sloping more than 5%. This grade change presents problems for parking and picnic pavilions, but offers unique opportunities for hiking, cross county running, cycle cross, mountain biking, and environmental education. The steep slopes make for thrilling competition and challenging practice for local teams. In the context of sporting on steep slopes, erosion can be a serious concern. The use of onsite trails for team practices and competitions should be managed to prevent erosion and dangerous failure of slopes. In particular, trails going from the west part of the site to the east must traverse slopes in excess of 33%. Trails in this area used switchbacks and cross slope paths to address this. The hilltop in the western side of the site includes slopes under 5%, which offers the opportunity for ADA accessible trails. The northeastern farm field includes an area of 2-8.3% slope along Murphy Road. This area could support an entrance, parking, picnicking, ADA trails, and a practice sports field. Slope in excess of 12% around existing barns at the far western entrance to the site provides little area for parking or structures immediately on the road. The existing building pads from the recently demolished house at the far western entrance provide the opportunity for bathrooms, picnicking and

parking structures at that location. An overall conclusion of this analysis is that steep slopes give the site a unique identity and make it more suited to non-field sports and recreation.



Figure 24. Steep farm road on the site



Figure 23. Steep wooded slope typical of Fulton South



Aspect

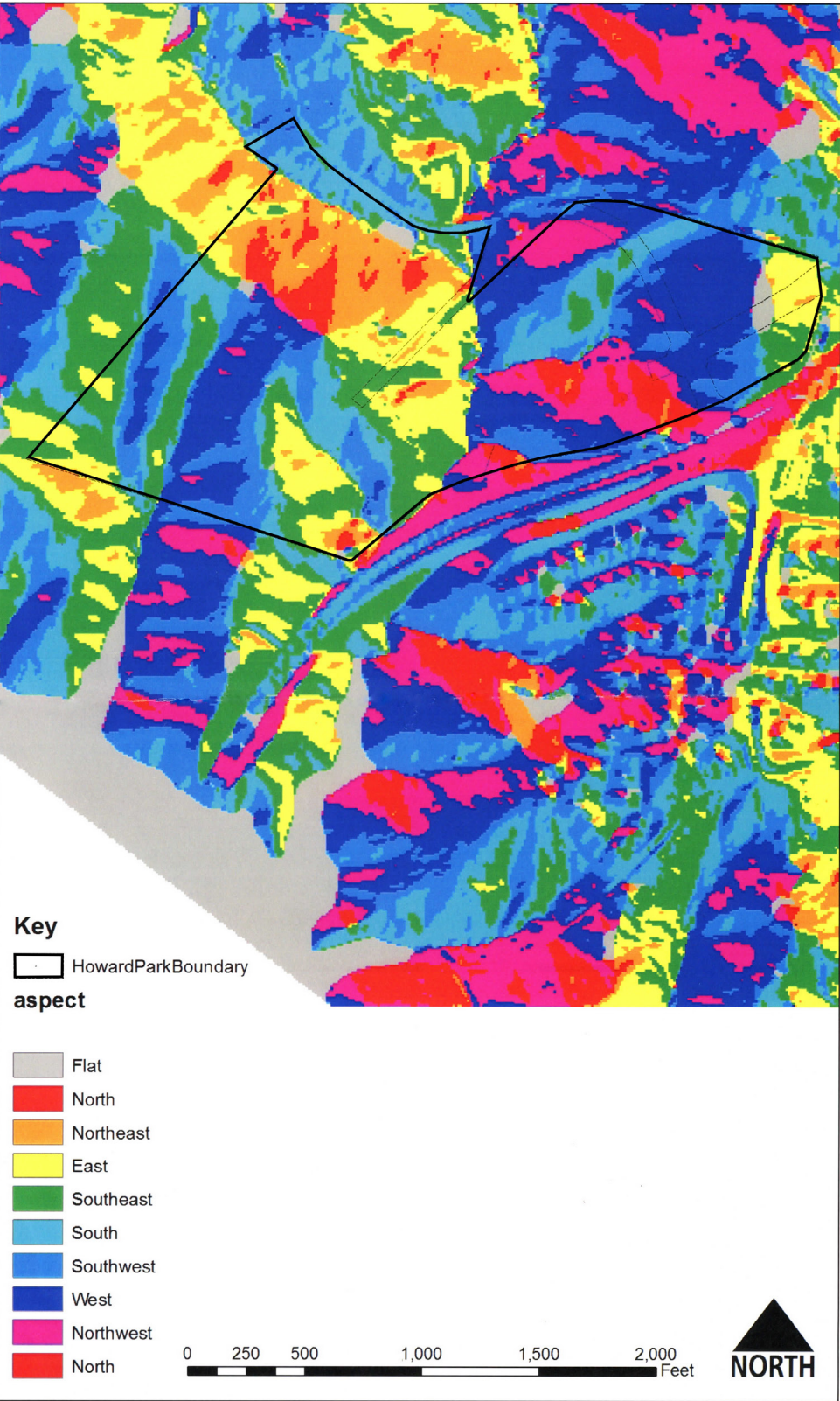


Figure 25. Aspect map of Fulton South

Aspect Analysis at Fulton South

The center of the western parcel of the park site is dominated by a central hill that slopes in all directions. This hill provides a unique opportunity for rural views, with forest to the south and fields to the north. Much of the center of the site slopes towards Route 29, which means more exposure to noise pollution. The southeastern part of the site slopes mainly south, towards the reservoir. These reservoir-facing slopes create a sense of enclosure from the surrounding suburbs and highway. The northeastern portion of the site slopes mainly northeast, towards Murphy Road and the pond.



Figure 27. View from existing road entrance heading south



Figure 26. View of neighbor's farm from hill on Fulton South site

Soils

Soils Map

This map represents the different soil types found at the Fulton South Community Park. There are various types of loams and silt loams found throughout the project area. Further investigation of the site soils will give insight into the different constraints.

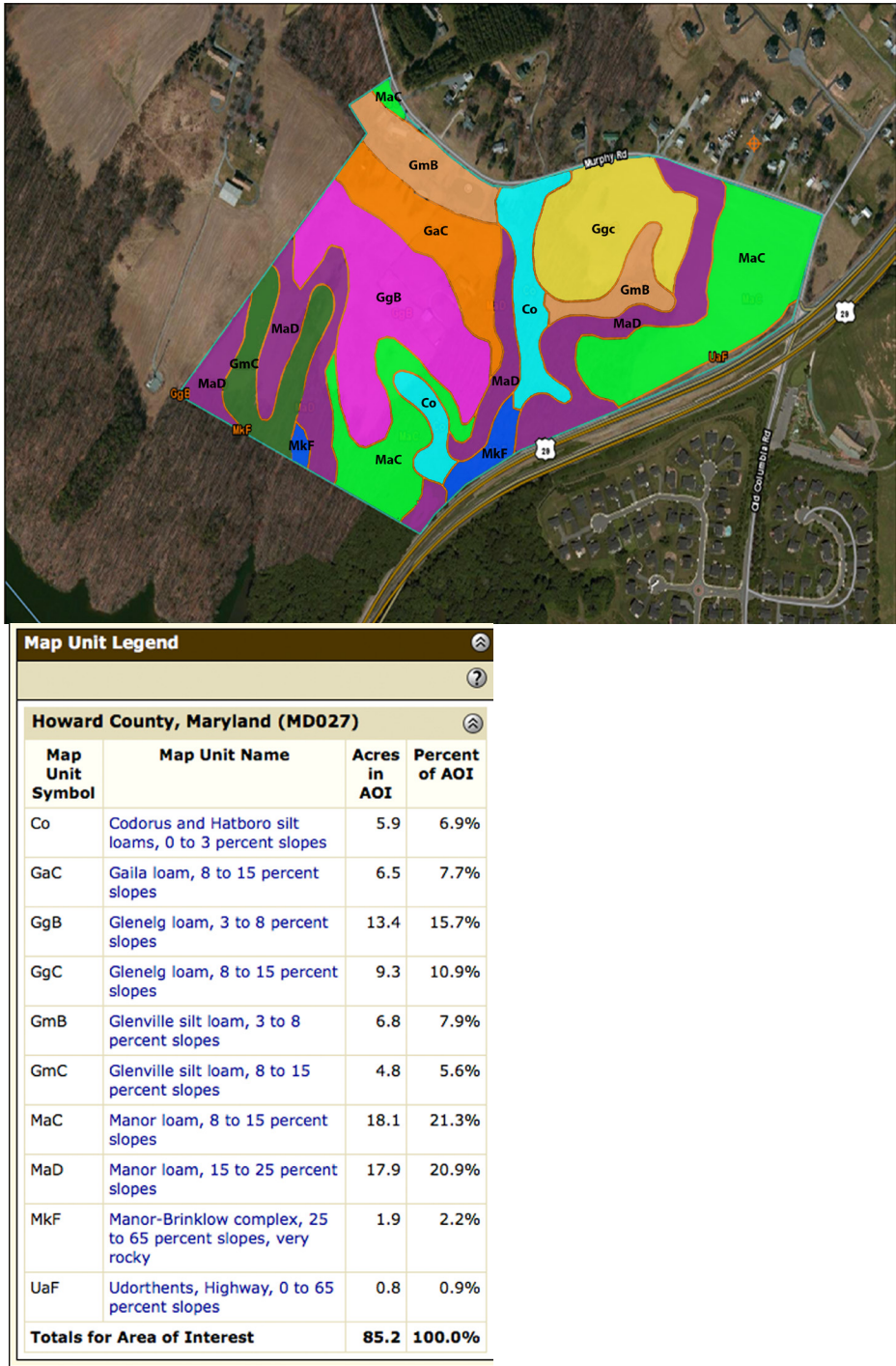


Figure 28. Soil types and key for Fulton South Community Park

Hydrologic Soil Group

The Hydrologic Soils are based on estimates of runoff potential of each soil type. The site contains B and C soils. B soils are well-drained soils that have a moderate infiltration rate and a fine to coarse texture. C soils have a slow infiltration rate when wet. These soils have characteristics that impede the percolation rate of water.

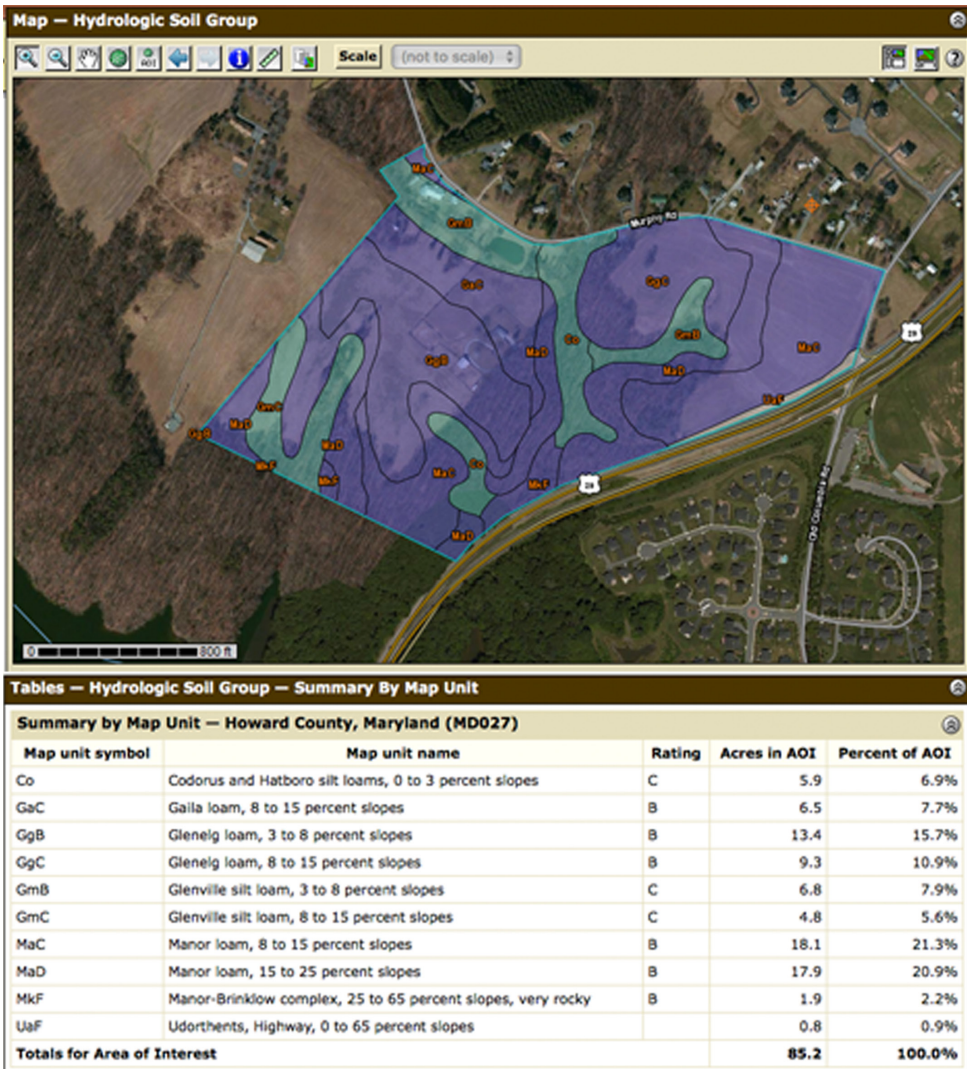


Figure 29. Hydrologic soil groups

Small Commercial Building

Small commercial building are less than three stories tall and do not have a basement. Most of the site soils have some limitations that may compromise

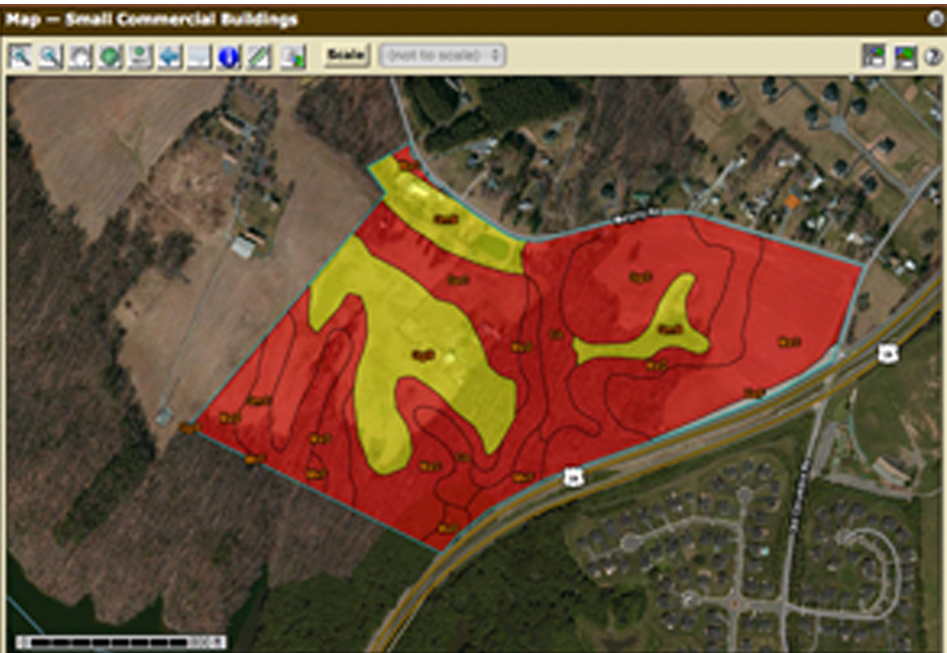


Figure 30. Soils suitable for supporting construction

structures. These limitations are based on slope and soil structure. Red soils are “very limited” and yellow soils are “somewhat limited.” In order to have structure, regrading and soil mediation will have to be considered.



Recreational Sports

Playgrounds are game facility areas like football and baseball fields. Most of the site is “very limited”, which indicates that the soils have one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome. It is also important to note that the reasons for these limitations are based on slope and if the soil is dusty when dry. Looking at the topography and the slopes in GIS it can be argued that soil type GgB and MaC are favorable locations for recreational sports fields.

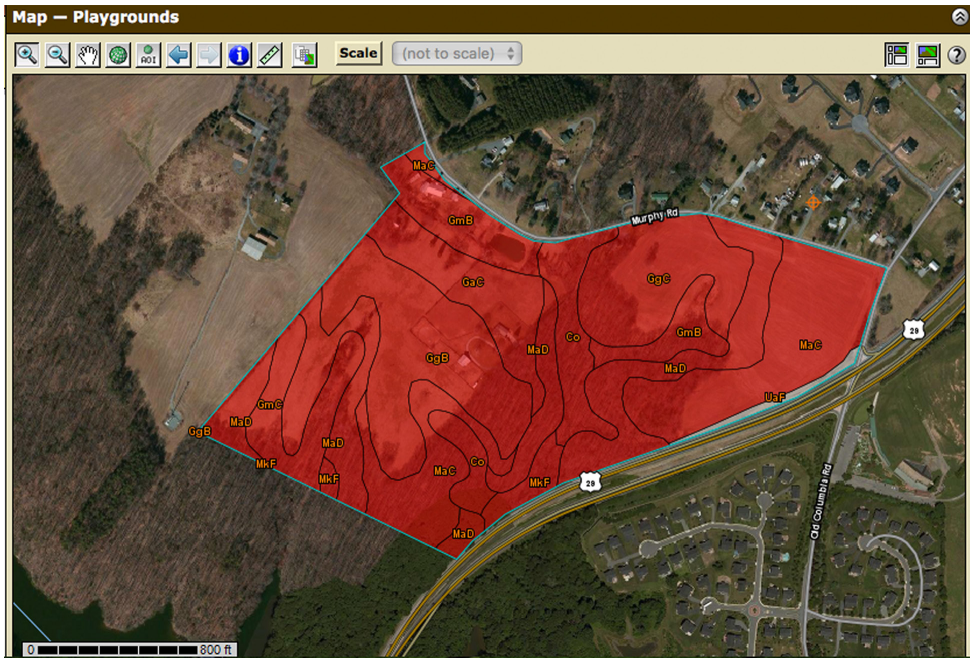
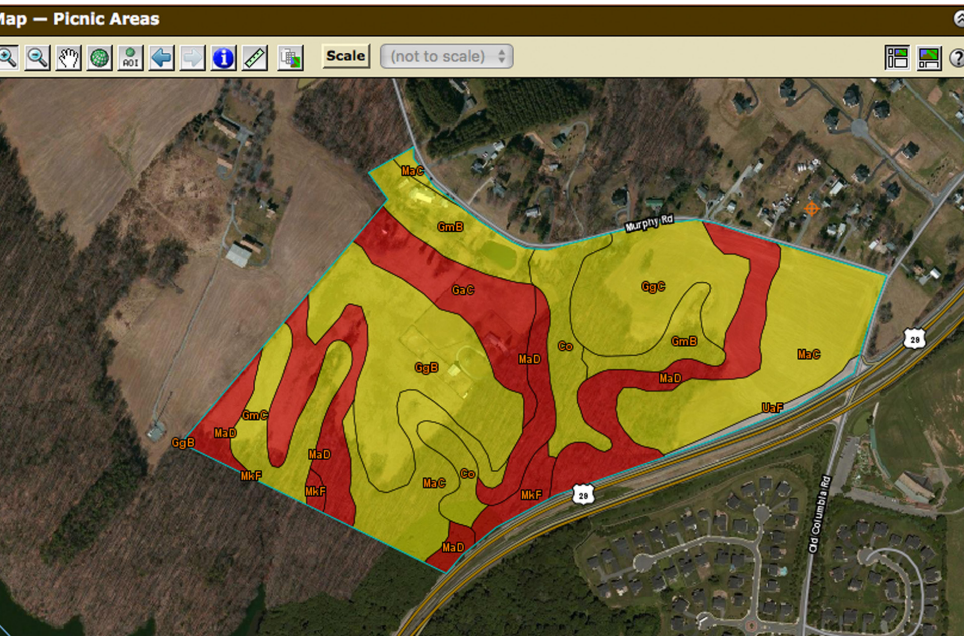


Figure 31. Soils suitable for supporting playgrounds, including sports fields

Picnic Areas

Paths and Trails

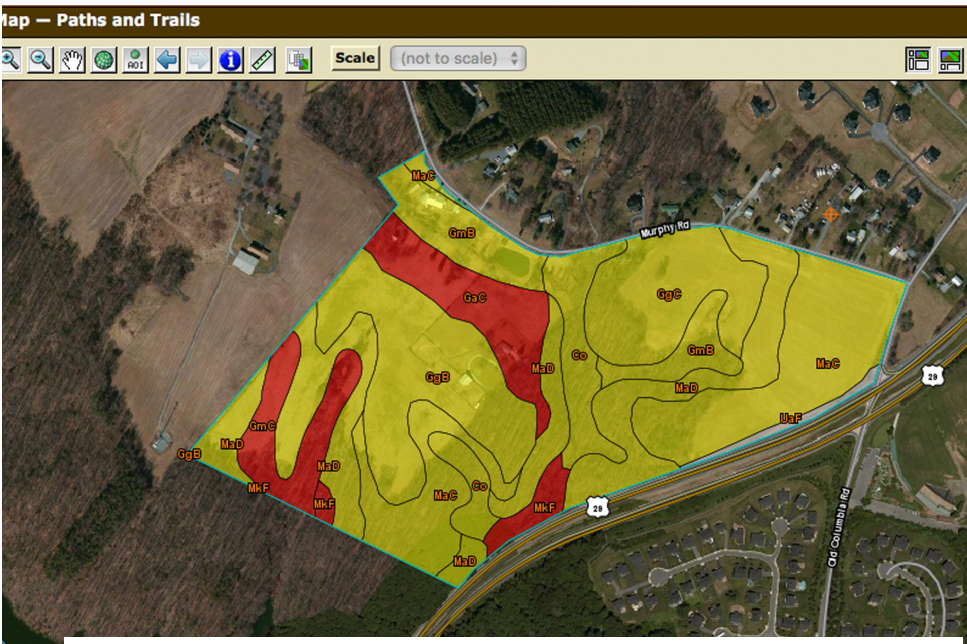
To introduce new picnic areas, paths, and trails for hiking and horseback riding, the site soils are “somewhat limited” in yellow and “very limited” in red at some locations. The somewhat limited soils need special planning, design and installation in order to implement. The very limited soils have limitations that generally cannot be overcome without major soil reclamation, special design or expensive installation procedures. High maintenance should be expected in these areas. These limitations are based on the steepness of the slope and the soil’s erodibility.



Summary by Map Unit — Howard County, Maryland (MD027)						
Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
Co	Codorus and Hatboro silt loams, 0 to 3 percent slopes	Somewhat limited	Codorus (50%)	Flooding (0.40) Depth to saturated zone (0.19) Dusty (0.07)	5.9	6.9%
GaC	Gailla loam, 8 to 15 percent slopes	Very limited	Gailla (85%)	Gravel content (1.00) Slope (0.63) Dusty (0.06)	6.5	7.7%
GgB	Glenelg loam, 3 to 8 percent slopes	Somewhat limited	Glenelg (85%)	Dusty (0.03)	13.4	15.7%
GgC	Glenelg loam, 8 to 15 percent slopes	Somewhat limited	Glenelg (85%)	Slope (0.63) Dusty (0.03)	9.3	10.9%
GmB	Glenville silt loam, 3 to 8 percent slopes	Somewhat limited	Glenville (85%)	Depth to cemented pan (0.46) Dusty (0.03)	6.8	7.9%
GmC	Glenville silt loam, 8 to 15 percent slopes	Somewhat limited	Glenville (85%)	Slope (0.63) Depth to cemented pan (0.46) Dusty (0.03)	4.8	5.6%
MaC	Manor loam, 8 to 15 percent slopes	Somewhat limited	Manor (85%)	Slope (0.63) Dusty (0.01)	18.1	21.3%
MaD	Manor loam, 15 to 25 percent slopes	Very limited	Manor (85%)	Slope (1.00) Dusty (0.01)	17.9	20.9%
MkF	Manor-Brinklow complex, 25 to 65 percent slopes, very rocky	Very limited	Manor (55%)	Slope (1.00) Large stones content	1.9	2.2%

Table — Picnic Areas — Summary by Rating Value		
Summary by Rating Value		
Rating	Acres in AOI	Percent of AOI
Somewhat limited	58.2	68.3%
Very limited	26.2	30.8%
Null or Not Rated	0.8	0.9%
Totals for Area of Interest	85.2	100.0%

Figure 32. Soils suitable for picnic areas



Tables — Paths and Trails — Summary By Map Unit						
Summary by Map Unit — Howard County, Maryland (MD027)						
Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
Co	Codorus and Hatboro silt loams, 0 to 3 percent slopes	Somewhat limited	Codorus (50%)	Flooding (0.40) Dusty (0.07)	5.9	6.9%
GaC	Gailla loam, 8 to 15 percent slopes	Very limited	Gailla (85%)	Water erosion (1.00) Dusty (0.06)	6.5	7.7%
GgB	Glenelg loam, 3 to 8 percent slopes	Somewhat limited	Glenelg (85%)	Dusty (0.03)	13.4	15.7%
GgC	Glenelg loam, 8 to 15 percent slopes	Somewhat limited	Glenelg (85%)	Dusty (0.03)	9.3	10.9%
GmB	Glenville silt loam, 3 to 8 percent slopes	Somewhat limited	Glenville (85%)	Dusty (0.03)	6.8	7.9%
GmC	Glenville silt loam, 8 to 15 percent slopes	Very limited	Glenville (85%)	Water erosion (1.00) Dusty (0.03)	4.8	5.6%
MaC	Manor loam, 8 to 15 percent slopes	Somewhat limited	Manor (85%)	Dusty (0.01)	18.1	21.3%
MaD	Manor loam, 15 to 25 percent slopes	Somewhat limited	Manor (85%)	Slope (0.50) Dusty (0.01)	17.9	20.9%
MkF	Manor-Brinklow complex, 25 to 65 percent slopes, very rocky	Very limited	Manor (55%)	Slope (1.00) Large stones content (0.53) Dusty (0.01) Brinklow (30%) Slope (1.00) Dusty (0.07)	1.9	2.2%
UaF	Udorthents, Highway, 0 to 65 percent slopes	Not rated	Udorthents (100%)		0.8	0.9%
Totals for Area of Interest					85.2	100.0%

Figure 33. Soils suitable for trails

Circulation

Figure 34. Major roads and access points to the site



SITE ANALYSIS



Vehicular Circulation

A description of key roadways is provided below.

U.S. Route 29: US 29 is a north–south United States highway. It is known as Columbia Pike and becomes a six-lane divided expressway. It intersects Old Columbia Road just beyond the reservoir.



Figure 35. US-29 adjacent to Fulton South Community Park

Murphy Road: Local access in the vicinity of the Fulton South Community Park is provided via the two lane Murphy Road. Murphy Road is an east-west roadway that provides access to the park from US 29.



Figure 36. Traveling east on Murphy Road. The park is on the right.

Trail

WSSC trail is located south of the site which provides access to the bow hunting area.



Figure 37. The WSSC emergency access trail to the south of the site.

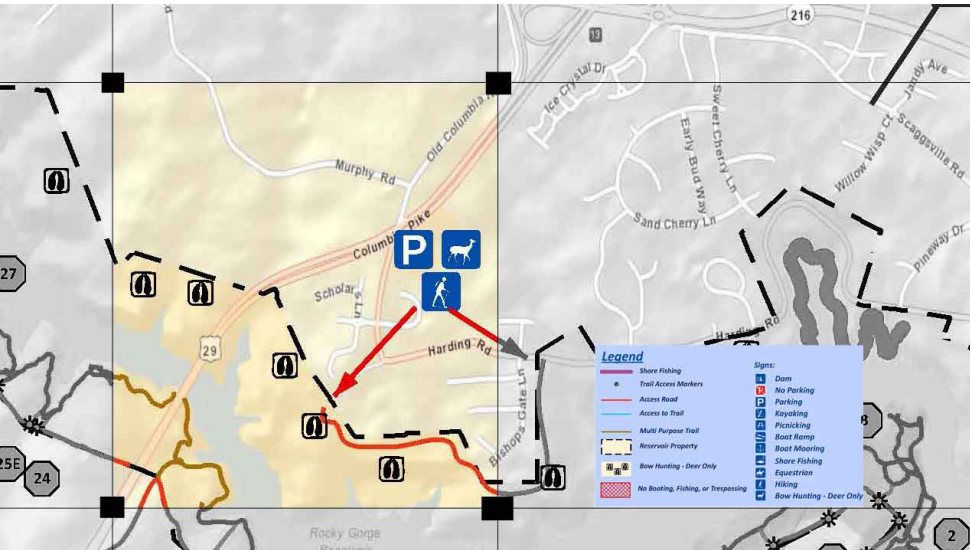


Figure 38. Major points of interest in proximity to the site

Public Transit

Local buses (e.g., 315, 305) currently serve the Fulton South Community Park. The nearest bus station is Scaggsville Park & Ride, which is about 1 mile (a 20-minute walk) from the site.

Limitations

- 1- No coherent internal street network exists to provide circulation and access to uses within the Fulton South Community Park. Murphy Road is the only local access to the site.
- 2- There is neither parking lane (onstreet parking) nor bike lane on Murphy Road.
- 3- Access from the Stratford, NVHomes (family home community in Laurel) is circuitous (about three miles drive).

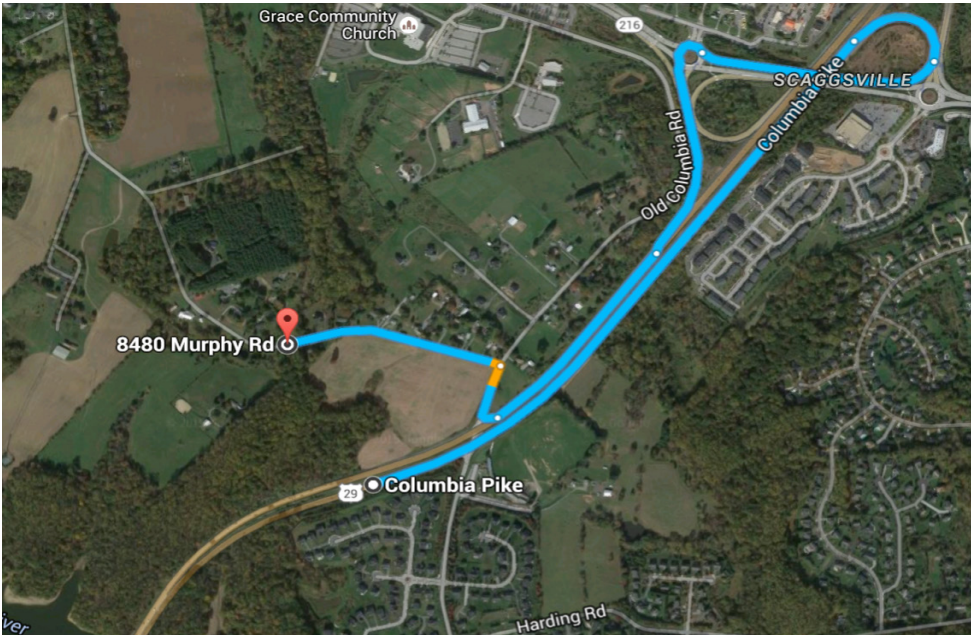


Figure 39. Indirect access to the site from US-29 Northbound.

History

Howard County Early History

Howard County is part of the territory signed over to Maryland in 1652 by the Susquehanna tribes as part of a peace agreement. Howard County's namesake is Colonel John Eager Howard, officer of the Continental Army during the Revolutionary War. Maryland was exempt from the emancipation proclamation, so Howard County continued to allow slaves through 1864, when an updated Maryland Constitution outlawed slavery. Some Howard County families participated in the Underground Railroad, while local confederate sympathizers sent militiamen to the south.

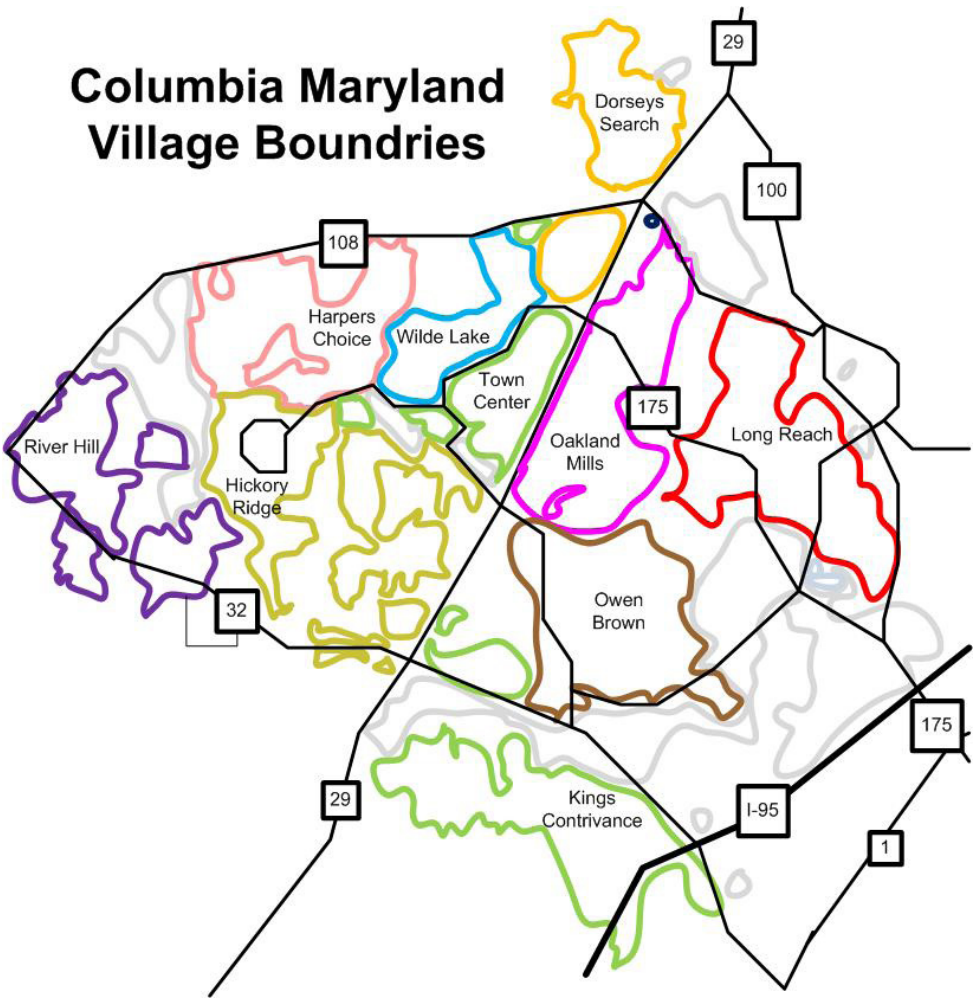


Figure 40. Map of Columbia Villages

A changing County: Suburban Development

The Washington area experienced an explosion of suburban development post-WWII and Howard County was no exception. Much of Howard County does not have city water, so there were many rural developments that included enough space for well and septic on each lot.

These properties should be 2+ acres to accommodate well and sewer. In 1952 the Rocky Gorge Reservoir was created through the construction of the Howard T. Duckett Dam on the Patuxent River. WSSC manages the reservoir to provide drinking water to the region. The southern boundary of the site abuts the WSSC property around the reservoir and runoff from the site runs into the reservoir. Great care should be taken with any park development to maintain the quality of water in the reservoir. The 1956 Federal Highway Act paved the way for Route 70 and interstate 95 to run through Howard County, connecting the county to the region and changing its character.

One of the largest developments during this period was the Columbia Development by the Rouse Company. The Columbia Development included 14,000 acres and multiple phases, beginning in 1966. In the early 1970's US-29 was completed as a four-lane divided highway to meet the needs of the Columbia Development. The expansion of Route 29 caused a rift in Old Columbia Road, separating the east side from the west side. Successful designs will have to address how to connect the Fulton South Community Park with Howard County citizens on the east side of Route 29.

Developer Greenebaum & Rose Associates initially proposed the new Maple Lawn development, north of the Fulton South Community Park, in 1998 as a dense 1168-unit mixed-use project for a portion of the 506-acre Maple Lawn farm.

Site Scale History

Looking at the micro-scale history of the site, the pond was created between 1957 and 1966. Properties around the site have been steadily developed since 1993, as shown by this satellite image. The previous owners of the western chunk of the park property proposed a 10-lot subdivision in 2004, but it was not built. Shortly thereafter Howard County purchased the property. There are no national historic register sites listed for the property. Two homes on the property and adjoining outbuildings were demolished at the beginning of the project. The style of the fencing on the property includes plank and wire mesh.

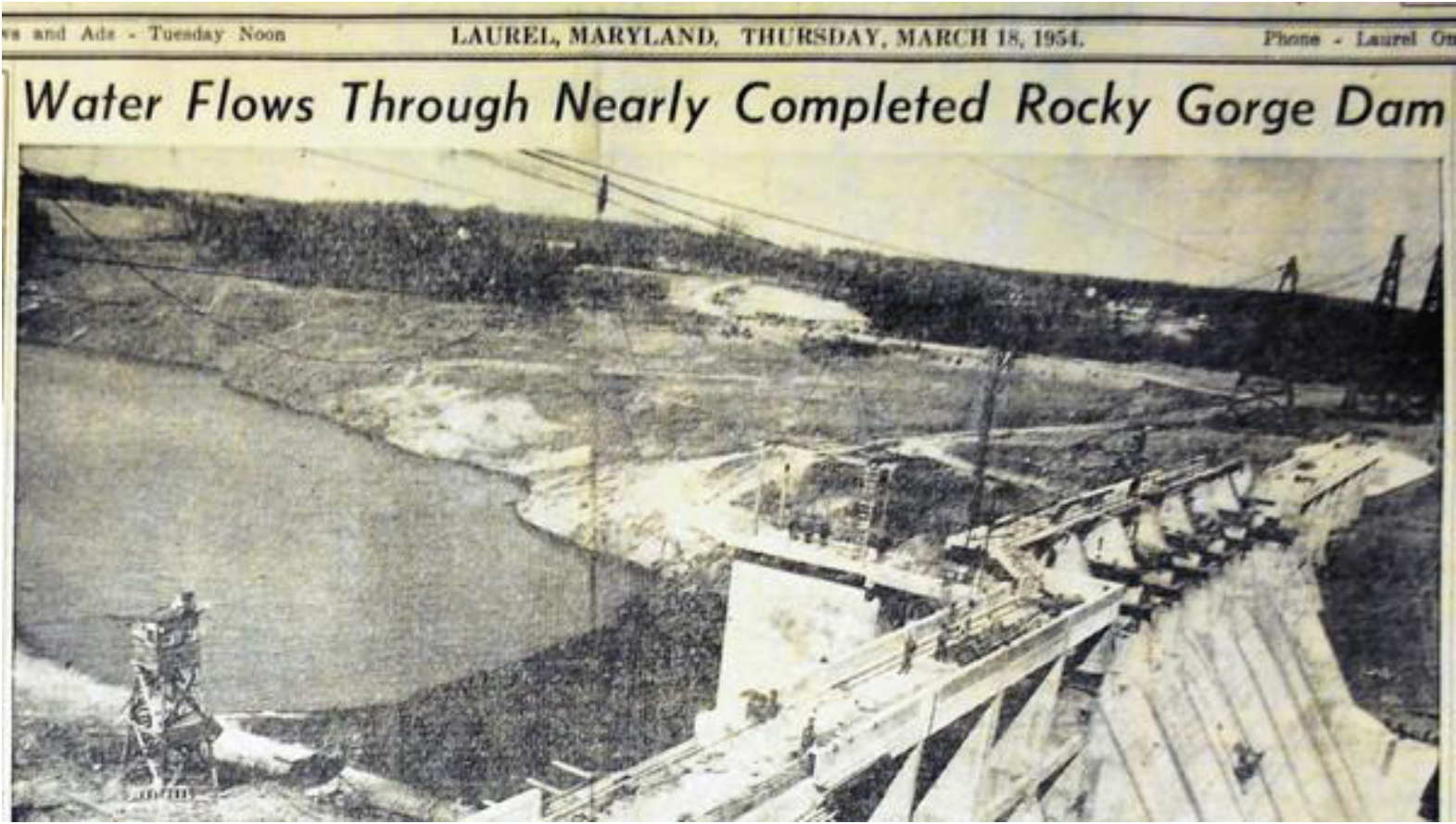
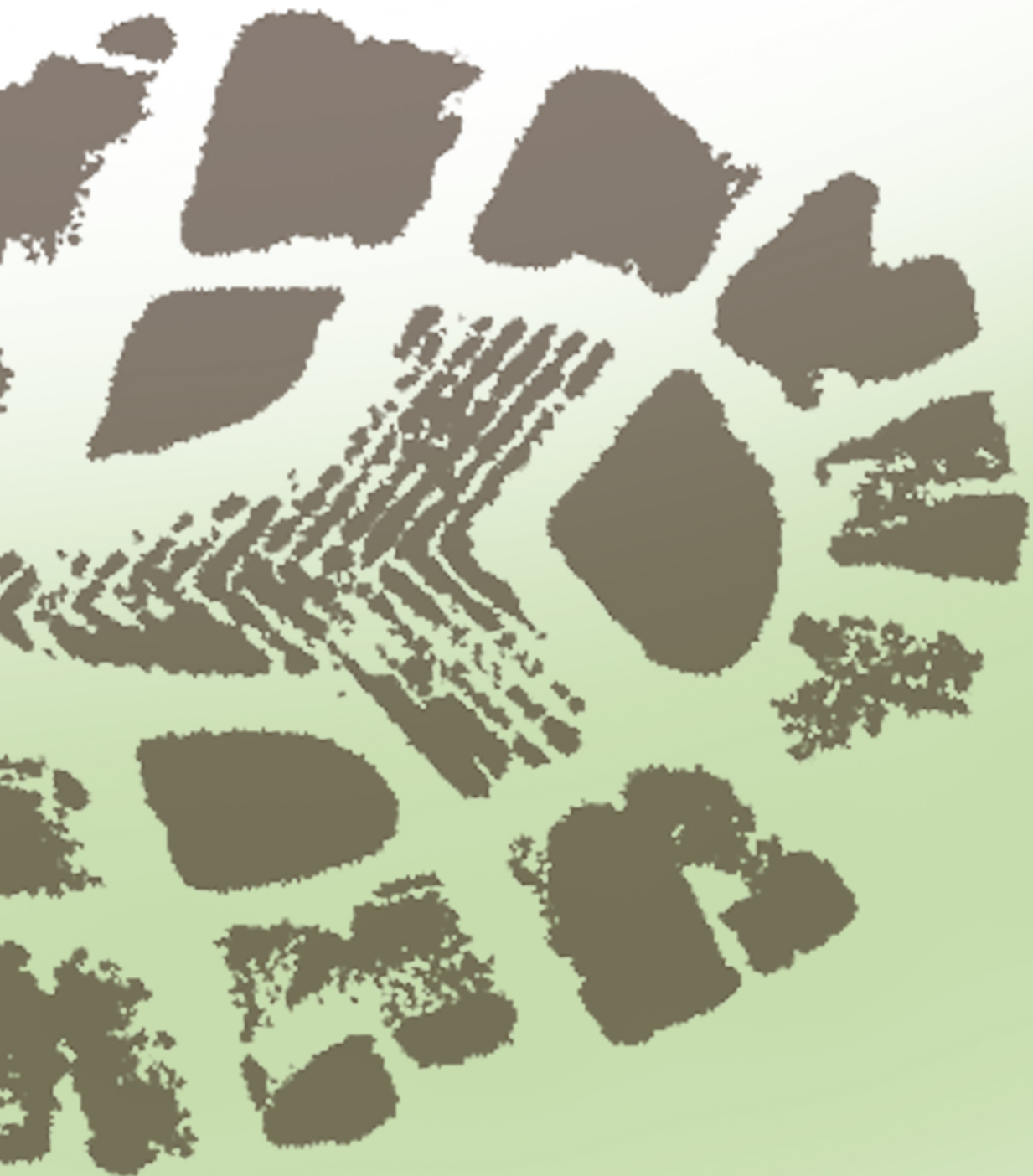


Figure 41. Newspaper clipping about Rocky Gorge Dam





Park Designs



Design For Recreation

Fulton South Community Park Description

Objective: To balance the protection of the reservoir with the needs of the local community by:

- proposing opportunities for multi-purpose recreation while mitigating runoff into the reservoir.
- creating recreational opportunities that allow for a dawn-to-dusk experience for families and children of all ages.
- increasing forest, meadow and wetland habitat to the maximum extent practicable.

The Fulton South Community Park provides a unique opportunity to program the site for the future. Given its proximity to both Rocky Gorge Reservoir and the growing land development now known as Maple Lawn, Fulton South naturally serves as a compromise between potentially lighter usage in a naturalized setting and heavier usage with more active recreational programming.

As such, it is the objective in this project to balance the protection of the reservoir with the needs of the local community. To do this, three goals have been proposed. First, it is proposed that opportunities for multi-purpose recreation be established while mitigating runoff into the reservoir. Second, it is proposed that these recreational opportunities allow for a dawn-to-dusk experience for families and children of all ages. Finally, it is proposed that increased forest, meadow and wetland habitat be established to the maximum extent practicable.

As to the active uses of the proposed design of Fulton South, two open play areas have been offered to satisfy the demand for unprogrammed open space, one on the east side and one on the west. This open area maintains the rural feel of the surrounding meadow while allowing for active recreational use.

Parking has been established that can accommodate a significant number of cars. On the east side there are a few spaces for buses or trailers (See the Landscape Performance Section). Adjacent to this parking lot is a significant stormwater system designed to treat the runoff from the parking lot. A comfort station just south of the open play area provides shelter and restroom facilities. It is here that a pedestrian bridge over US-29 connects the residential community on the other side. A trail system connects these programmed spaces with a pavilion nestled within the increased meadow habitat of the north-central region of the site, as well as the interior of the forest habitat.

A pavilion and restroom facility serve the west side of the site adjacent to the open play area. Within this area is a nature play space, a traditional playground and more access to the trail network. On the northern part of the west side, near the existing farm pond, an expanded wetland and stormwater treatment system has been proposed along the road. Because of the inherent beauty of such a pond, a pavilion has been proposed overlooking the existing farm pond.

One of the priorities on this site, given its proximity to Rocky Gorge Reservoir, is to preserve, enhance and increase forest, meadow and wetland habitat. According to the Land Preservation and Recreation Plan of Howard County, there are six priority resources designated for protection and restoration within the Patuxent River's watershed. For Fulton South Community Park, they include Rocky Gorge reservoir and its drinking water supply, terrestrial habitat, stream systems, aquatic biota, rural character and landscape, and public awareness and stewardship (The 2012 Howard County Land Preservation and Recreation Plan, 2012). Increasing the forest, meadow and wetland habitat will transform the old farm fields of Fulton South into local ecologies that support the aforementioned priority resources on this site.

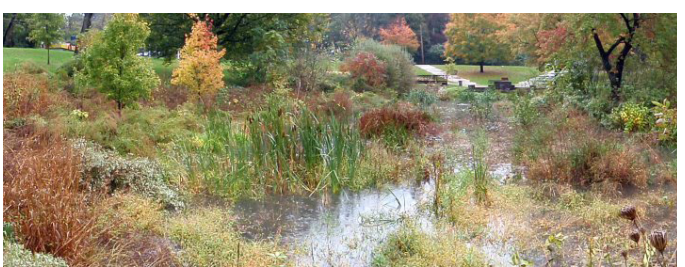


Figure 42. Precedent photos that provide inspiration



POSTER PRINTOUT



University of Maryland College Park Department of Plant Science and Landscape Architecture | LARC 642 Graduate Landscape Architecture Studio III
Instructor: Christopher D. Ellis, Ph.D. | Design Team: Nathan Collier, Mark Dennis, Maria Espinoza, Renee LaGue, Dylan Reilly, Saeed Shirazi, Vince Yi

Fulton South Community Park



Diagrams

Features at-a-glance

This proposed design for Fulton South Community Park is organized around two main approaches. The first is the environmental focus (Figure 45), which in this design includes the proposed expansion of forest, wetland and meadow habitat. The additional wetland is also part of an improved stormwater system, which is the second feature of the environmental approach. The proposed wetland is situated inline with the existing farm pond. These two stormwater treatment systems will slow down, treat, and infiltrate stormwater as it makes its way to the Rocky Gorge Reservoir, itself a very important source of drinking water. Maintaining and controlling the quality of the water entering that system remains a priority. Additionally, the necessary 50’ buffers that flank the waterways not only protect the streams from erosion and runoff, but they provide sheltered corridors around important riparian habitat.

The other main focus on the site is the human-centered development, which includes accessibility features like trails, paths, and roads. These trails include

ADA accessible routes that maintain a grade of less than 5%. It was most important to locate these accessibility features around the main points of interest, including the comfort stations, parking lots, and pavilions. Other paths, proposed as tar-and-chip to accommodate a range of visitors, are found throughout the site, including through the meadow and forest habitats. A maintenance trail, suitable for motorized carts and other official county off-road vehicles, connects the east and west side of the site. The other features of this multi-functional site that provide for human interest include facilities (Figure 46) like pavilions, comfort stations (Figure 47), and open play areas that support recreational activities.

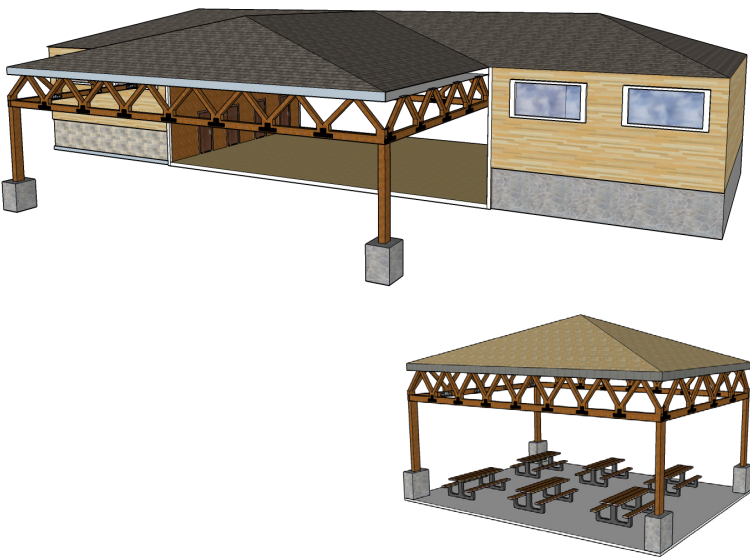


Figure 45. A comfort station (above) containing restroom facilities and an open picnic pavilion

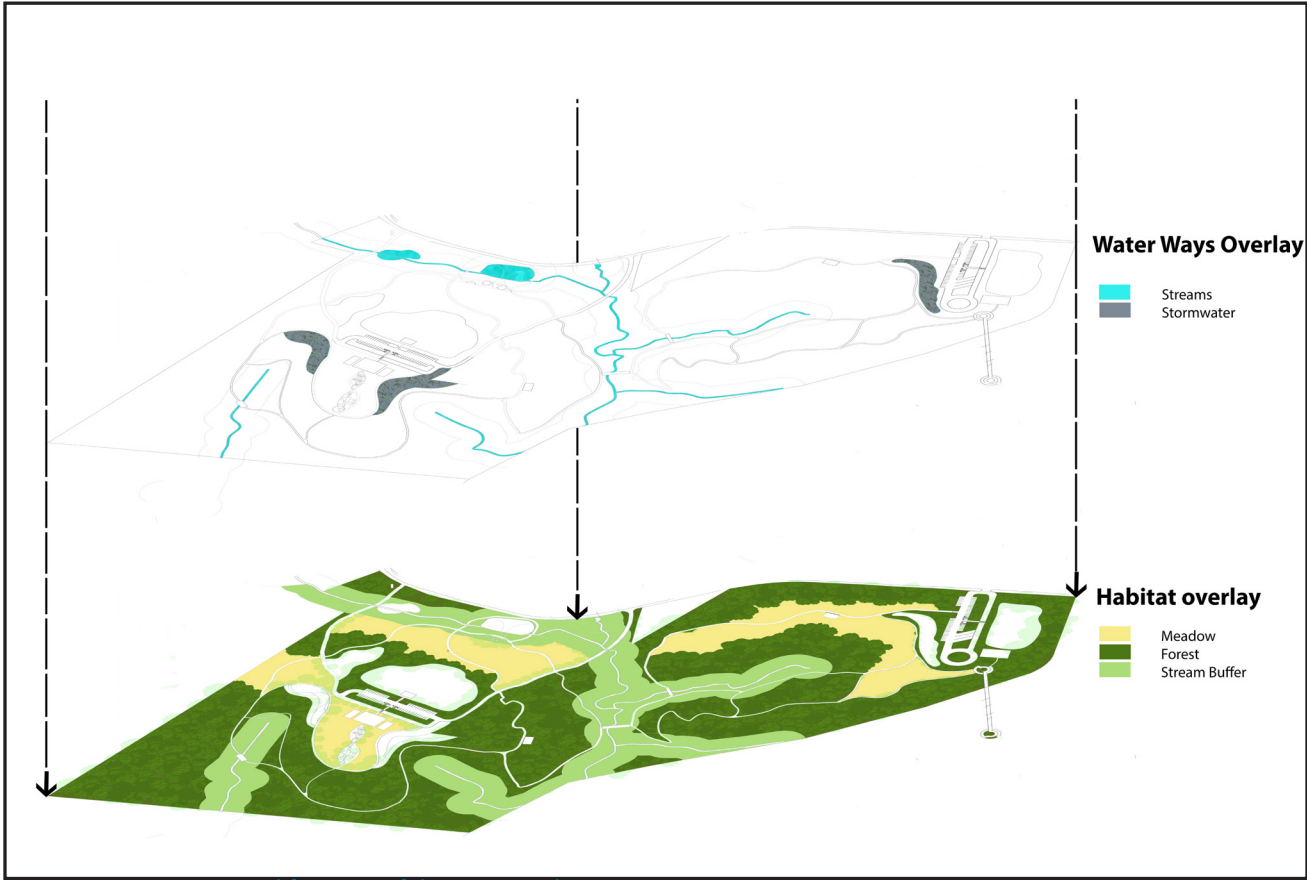


Figure 43. Environmental features of the proposed site

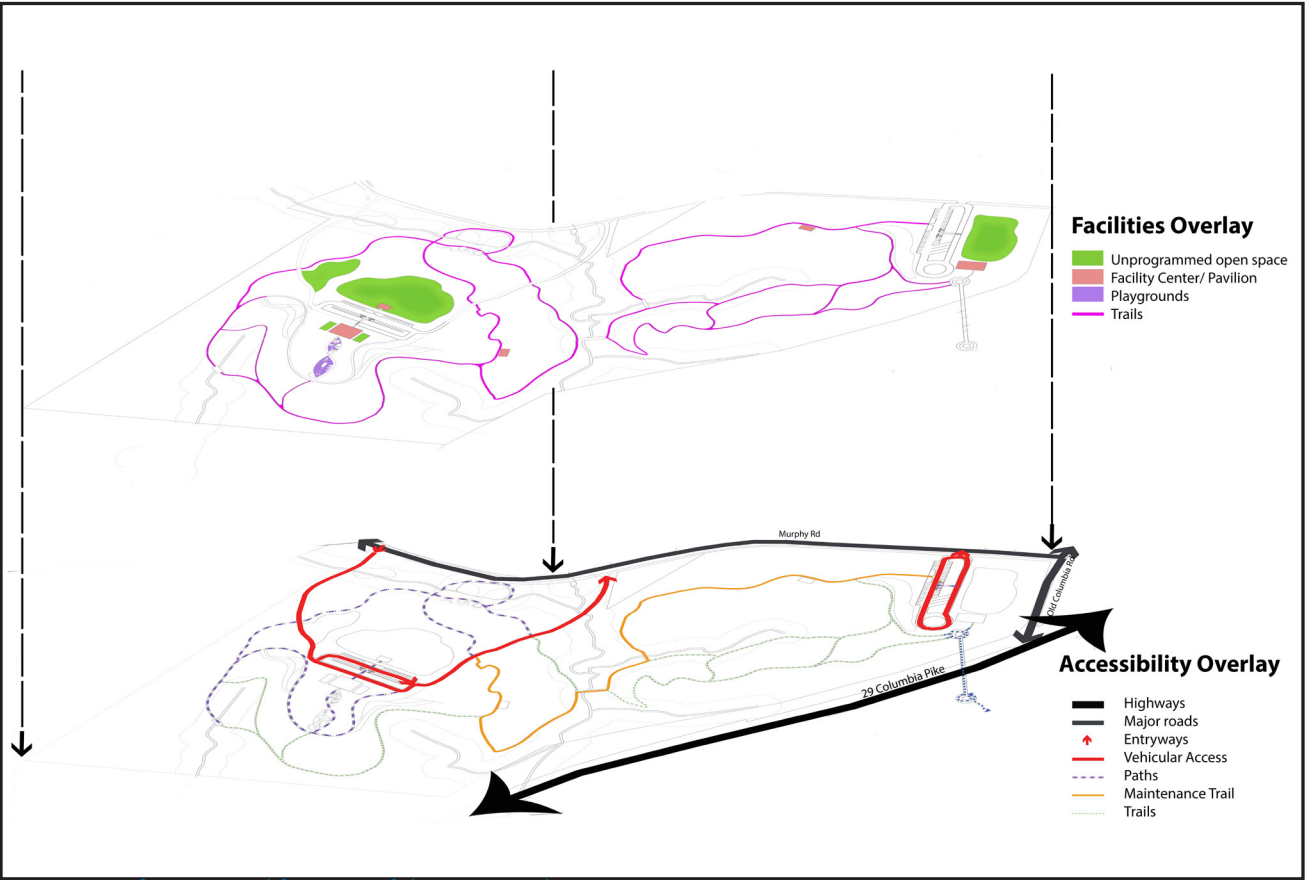


Figure 44. Infrastructural features of the proposed site



Perspectives

The first requirement for the site is an inviting entry. The proposed entry point will be located where the old farm buildings used to be, which would require new construction. This allows for the opportunity to redesign an entryway that welcomes and directs visitors to the site (Figure 48). Giving the site a sense of entry and a sense of place creates a visual, emotional connection to visitors and sets a mood that carries throughout the rest of the park experience. As it stands now, the site is hidden, uninviting and difficult to navigate, which does not suit well a community such as Fulton.

Within the site are a number of facilities that cater to the recreational needs of visitors. Various shelters and pavilions (Figure 49) are located throughout the site to provide a resting point for trail users, or as a place to gather the family for a picnic. These points of gathering also serve for educational purposes. Since they are located in proximity to various habitat types (wetland, forest, and meadow) and are accessible by trail, they allow classes of schoolchildren to congregate and immerse themselves within these exciting objects of study (Figure 52).

Another feature of the park that caters to the local residents is the traditional

playground and nature play area (Figure 51). Every community park requires a place for the young ones to run around and explore while allowing the parents time to socialize. Including a nature play area gives the young minds an additional bout of stimulus in the form of unstructured, exploratory play.

Because there is always a concern that there is never enough free parking for motor vehicles, a number of spaces have been designed for both the east and west side of the park. The lot on the east side is designed to accommodate a number of cars as well as a few trailers or buses (Figure 53). Of course, while the goal of this project is to maximize the recreational potential of the site, the complementary goal of maximizing habitat and treating stormwater must also be considered. In order to balance the extensive development required for such a lot, there is an adjoining bio-retention system that

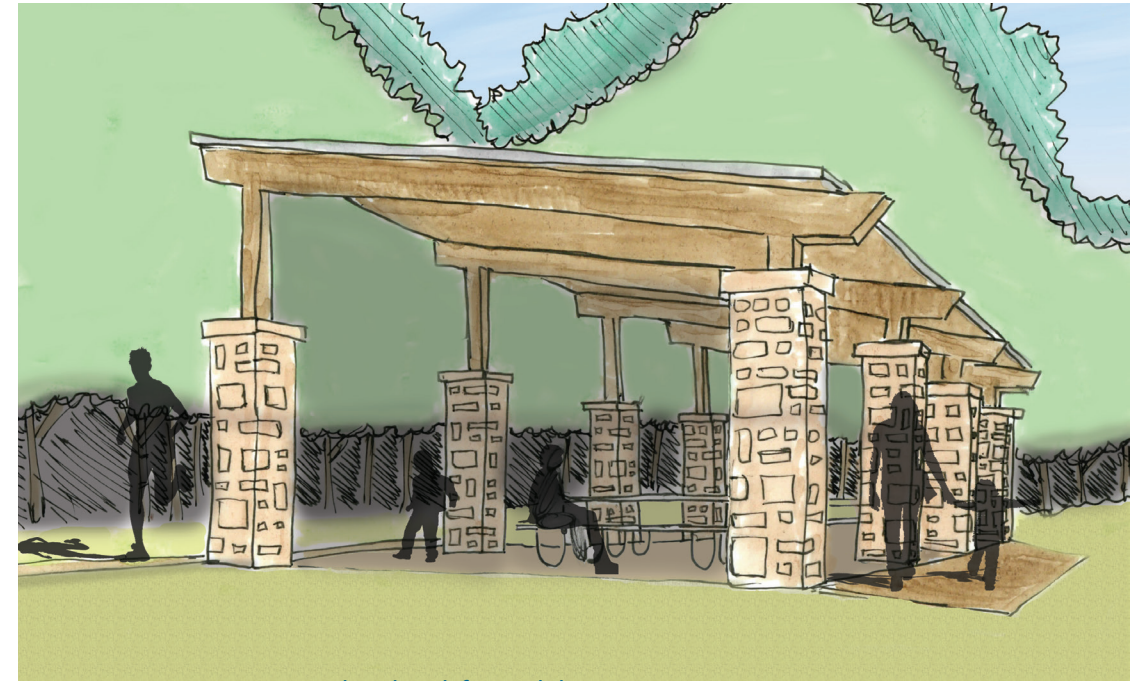


Figure 47. Enjoy a picnic or take a break from a hike.



Figure 46. Creating an entry that announces the park

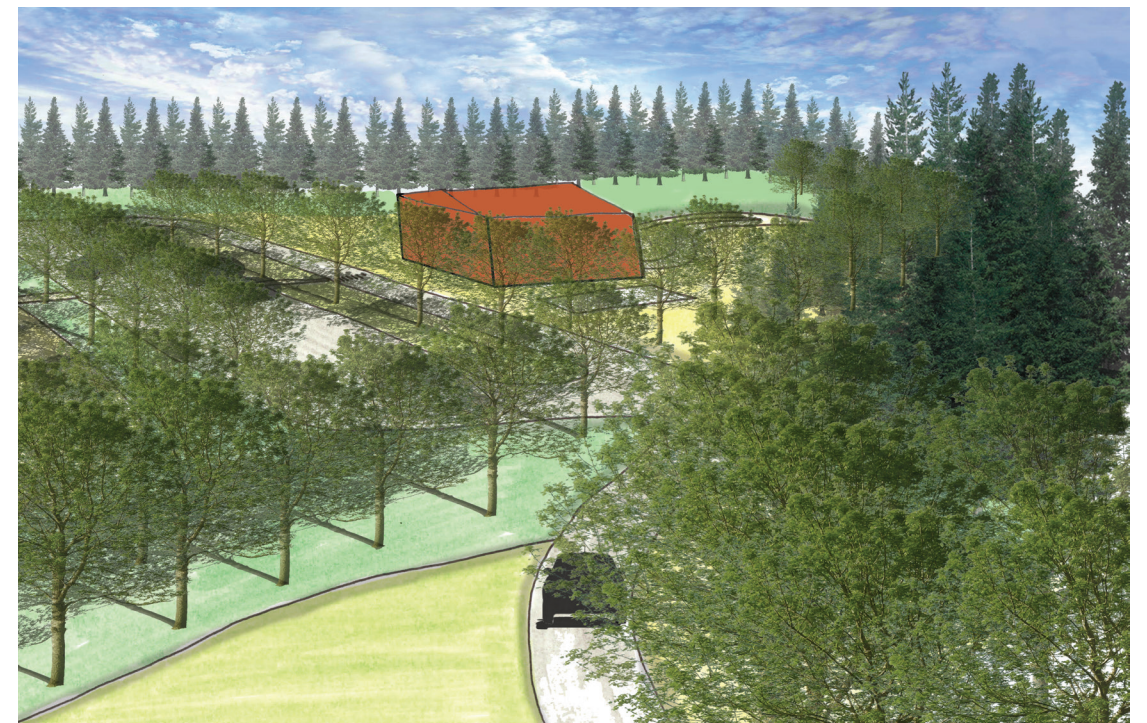


Figure 48. Experiencing the wooded nature of the site

captures runoff from the parking lot and treats it before releasing cleaner water into the existing drainage pattern.

Also located on east side of the park, and within easy access to the parking lot, is an open play area on a relatively flat surface that allows for a variety of activities. Maintaining open space for programmed and unprogrammed activities fulfills the recreational goals of the park at the same time it minimizes surface development. To support the recreational activities expected on this eastern side, a comfort station with bathrooms and shade is located near the turn-around, allowing convenient access for picking up and dropping off people.



Figure 50. The wetland experience



Figure 49. A place for young children to play and explore



Figure 51. Parking, and more parking

Plant Lists

Forest

The forest coverage within the site has been increased by 12 acres which is a whopping 15% of the overall site. The suggested plant palette for forested areas will increase wildlife and will also create seasonal interest throughout the year. Small mammals, songbirds, waterfowl, hummingbirds, and butterflies will be attracted to the project site area. Some beneficial insects will also be attracted to the forested areas. A range of different canopy, sub-canopy and ground cover plants are proposed on the plant list for the forested areas. All plants are native plants, thus balancing the native ecosystems.

These plants have different seasonal interest including leaves and different kinds of fruits. Children and adults can interact with the different features that the plant list introduces to the overall forest area, thus providing an educational element to the park and giving people something else to do. Visitors can learn about the different wildlife that will be attracted to the site and the potential for small signs can be incorporated throughout the trails so that people can learn about the benefits of each plant and what they can attract.

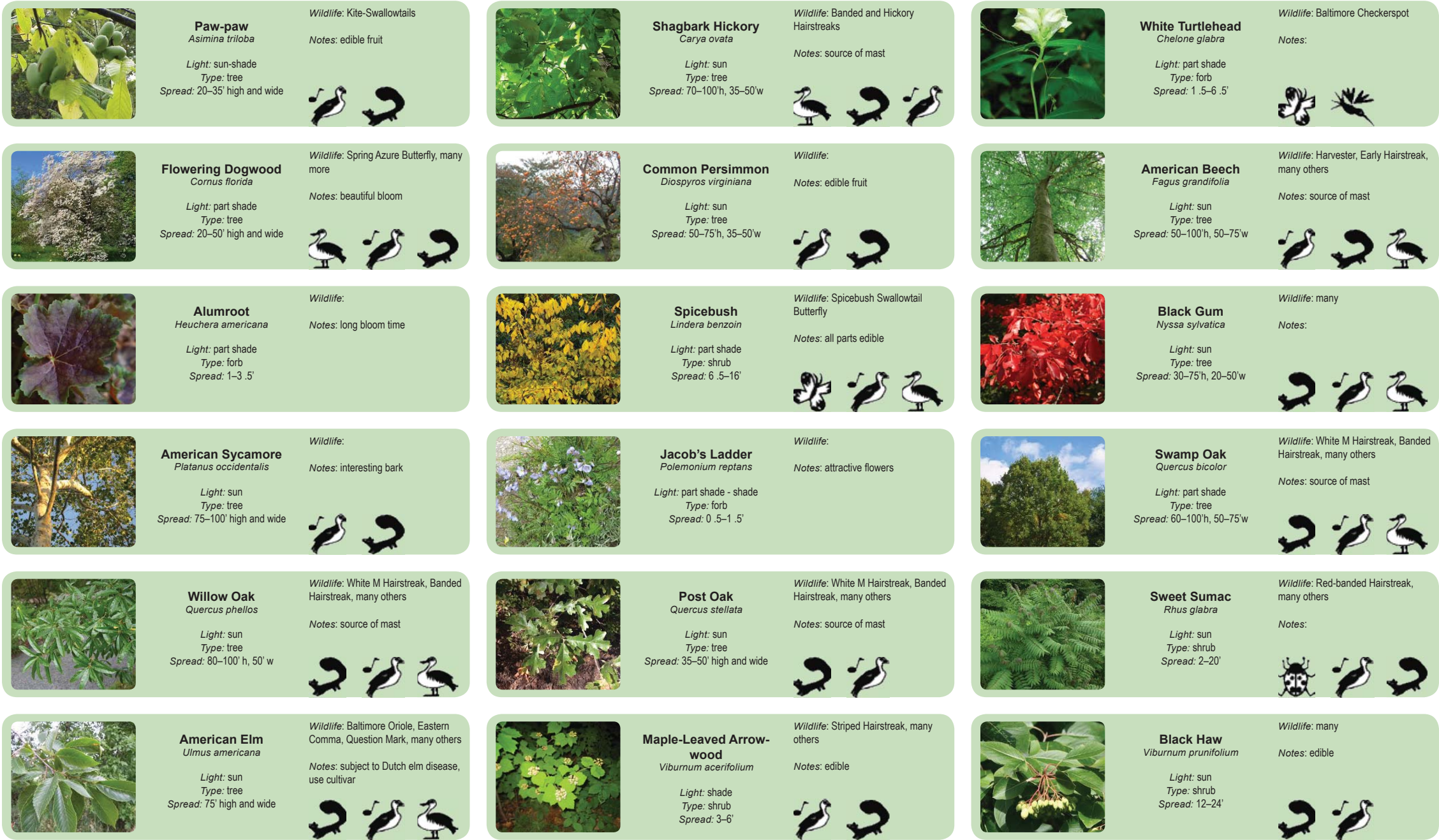


Figure 52. Selected plants for forest habitat

Meadow

The amount of meadow within the site has decreased by an amount of 12 acres or 28%. Now, that number could be higher by the number of programs that are proposed including parking, facilities, and play areas. The following plant palette is for the meadow area and will also create different visual and experiential interest throughout the year. We chose these plants based off multiple recommendations of native plants from the National Park Services and U.S. Fish and Wildlife Services. It has a range of herbaceous grasses, groundcover, and shrubs. The proposed plants were also chosen to increase the habitat of a number of pollinators and small mammals.

Children and adults can experience many different things during their walk inside the meadow, from a monarch butterfly or a ladybug zipping by to the voice of a songbird. As a result, the meadow provides an educational component inside the park, which kids can explore further on during the summer when the summer camp is active.



Figure 53. Attractive plants suitable for meadow habitat



Wetland

The proposed constructed wetland in the northwest corner of the Fulton South Community Park offers a number of opportunities. First, it will provide critical habitat for a number of species. There are a number of wetland plants that attract particular wildlife species like pollinators, beneficial insects, songbirds, waterfowl and small mammals. These plants are suited for shallow, inundated areas, which, because of the presence of water, serve as vital locations for wildlife. Additionally, the presence of designated setback buffers around wetlands and streams minimizes encroachment from development and allows for these areas to maintain a protected presence.

The wetland area, in conjunction with the existing farm pond, will provide a recreational and educational opportunity for the park’s visitors. Despite the removal of the dock from the existing farm pond, a new dock and path are proposed to allow access and enjoyment of this “wetland corridor” in the northwest section of the park. With such varied wildlife and interesting plant species producing various colors, textures and habits, this wetland habitat can serve as a point of interest for young schoolchildren and even for their guardians.



Figure 54. Attractive, functional plant species for wetland construction.

Source: Native Plants for Wildlife Habitat and Conservation Landscaping- Chesapeake Bay Watershed

Agarian Park Design

Mission:

Create a community park that welcomes people of all ages and ability to play and learn

This design proposal for the Fulton South Community Park was greatly influenced by the existing beauty and environmental amenities on site. The undulating landform, open grasslands, tranquil woods, and small, refreshing creeks led our group to a design that tried to balance the preservation of this character while providing opportunities for exploration and recreation. In order to guide our design of a community park for people of all ages and ability to play and learn, we devised a set of goals.

Goals:

- Preserve and increase forest, meadow, and wetland habitat
- Preserve the rural character
- Provide recreation and education opportunities for people of all ages and abilities
- Increase accessibility to the surrounding community

Although the overall consensus from the first introduction meeting was that the community surrounding our site needed regulation fields for organized sports, the existing landform was not conducive to such a use. The site inventory and analysis process, which included several visits to the proposed park space, informed us of the steep slope changes, which limited the space in which we could realistically construct regulation fields. We were also struck by the beauty and peacefulness of the space and wanted to preserve the existing habitats on site for nature exploration, learning and wildlife.

In addition to preserving the existing forests, we want to reforest within the 75 foot and even the 100 foot riparian buffer when possible. The reforestation will increase habitat for certain wildlife species and provide stormwater mitigation services. The existing grasslands would also be converted to native meadows to increase its value for pollinators and other species that depend on the flowers and fruits of perennials. The area surrounding the pond along Murphy Road, which we observed was already fairly wet during our site visits, is also transformed into a functioning wetland for stormwater treatment and for visitors to enjoy and learn.

In our design process, the group also took into account the cultural and historic significance of the space, which was, and still is, being used for agriculture. We discovered a concrete silo that was slated for demolition and



Figure 55. Rendering of the western entry to Fulton South Park, including the western parking lot, pond, and silo entry sign.



Figure 56. Perspective of a non-ADA hiking trail.



Figure 57. Perspective of cross country runners on the multi-use trail.



Diagrams

believe it should be kept as a welcome sign and a symbol of the past agrarian use of the site. Several other elements, like the existing fence and gate typologies and open meadow space would reflect the agrarian history of the site.

To provide recreational and educational opportunities for people of all ages at the park we developed two distinct areas. The eastern part of the park focuses on more highly developed recreational uses, including an open play field, volleyball courts, dog park, playground, comfort station, and a large parking lot with 5 bus spaces, and most of the 106 parking spaces available on the site. This area is designed for families who want to play a pick-up game, teams to practice, and for mothers who want to bring the kids and the dog. The western part of the park is less developed, with a focus on healthy ecosystems, education, picnicing, and trail activities. The western part of the site includes a nature cabin, wetland boardwalk, sunshelter with a commanding view, a meadow picnic area, a fishing pond, and a sledding hill. The western part of the site would be ideal for environemntal education programs, family hikes, picnicing, and bird watching. The two distinct sides of the site are linked by almost 3 miles of trails, 2 miles of which are ADA accessible. These trails are perfect for cross country races meets or just some woodland exploring with the kids.

Access to the park from the surrounding communities is another major consideration in the design. Several communities, including Maple Lawn to the north and the new suburban development across U.S. Route 29, are within walking distance of the park but their residents could find it difficult to reach the park due to the lack of pedestrian or bike infrastructure. To address this concern, we proposed a multi-use, paved path with a vegetated buffer along Murphy Road that connects the park to Maple Lawn and continues east to connect with Old Columbia Road. To provide access to the park from across Route 29, a pedestrian bridge is proposed that allow visitors to enter the park through the active activity area. Within the park, accessibility for people with wheelchairs is also considered, as 68 percent of the trails are ADA accessible. These ADA accessible trails offer a variety of sensory experience and run through meadow, wetland, and forest habitats.

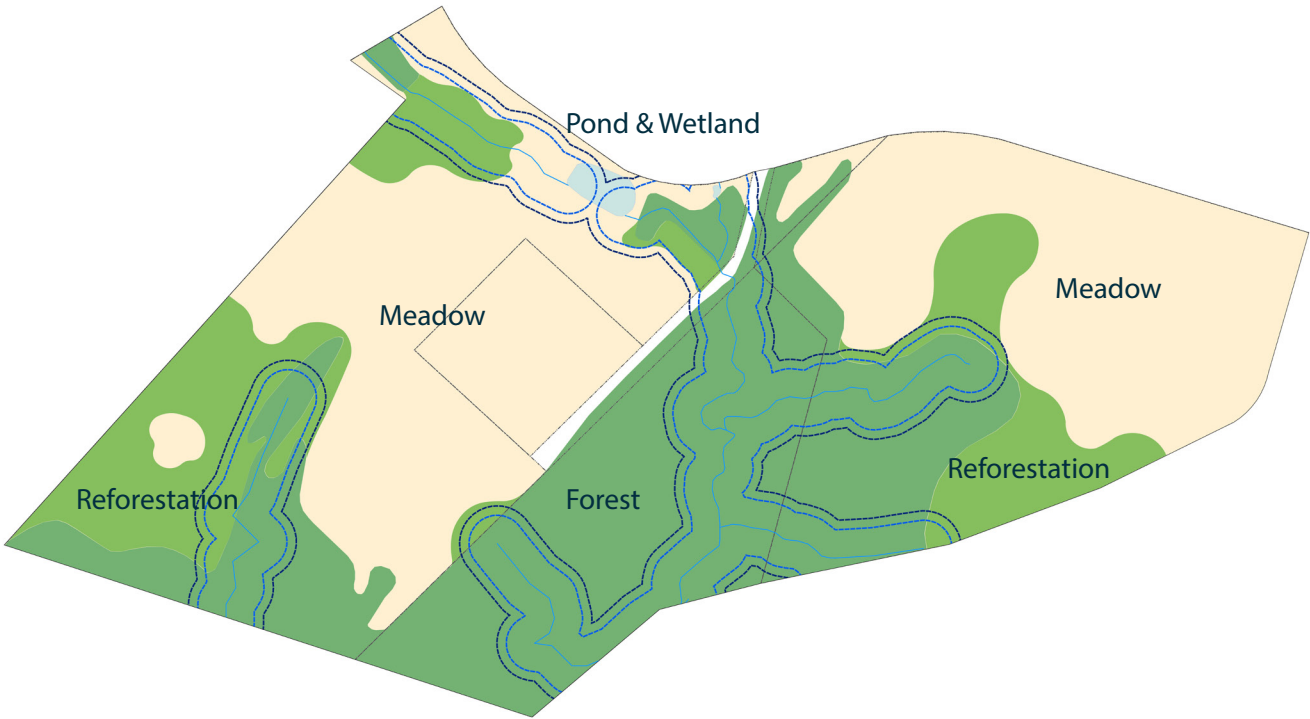
Habitat diagram

Habitat diagram illustrates three ecological/environmental area in Fulton South Community Park. Habitats areas include Forest, Meadow and wetland. Forest habitat are mainly located in the south and south west of the park. Meadow habitat divided in two separate parts and can be seen in the North West and North east of the park along with Murphy road. Our design proposes over 28 acres of meadow, a critical habitat for birds and pollinators. Nearly all of the Fulton South Community Park’s wetlands fall within two systems: Palustrine and Lacustrine. Deciduous forested wetlands (i.e., one of major groups of Palustrine) are the most common type in this park. Forested wetlands can be categorized into two main types: seasonally flooded Palustrine forested wetlands and temporarily flooded Palustrine forested wetlands. In this design, reforestation is considered within the 75 foot and 100 foot stream buffer zones. Reforesting these buffer zones helps to protect WSSC’s Rocky Gorge Reservoir, which provides drinking water to the region. Benefits of forested stream buffers are well documented and will specifically help to prevent erosion of sediment into the reservoir

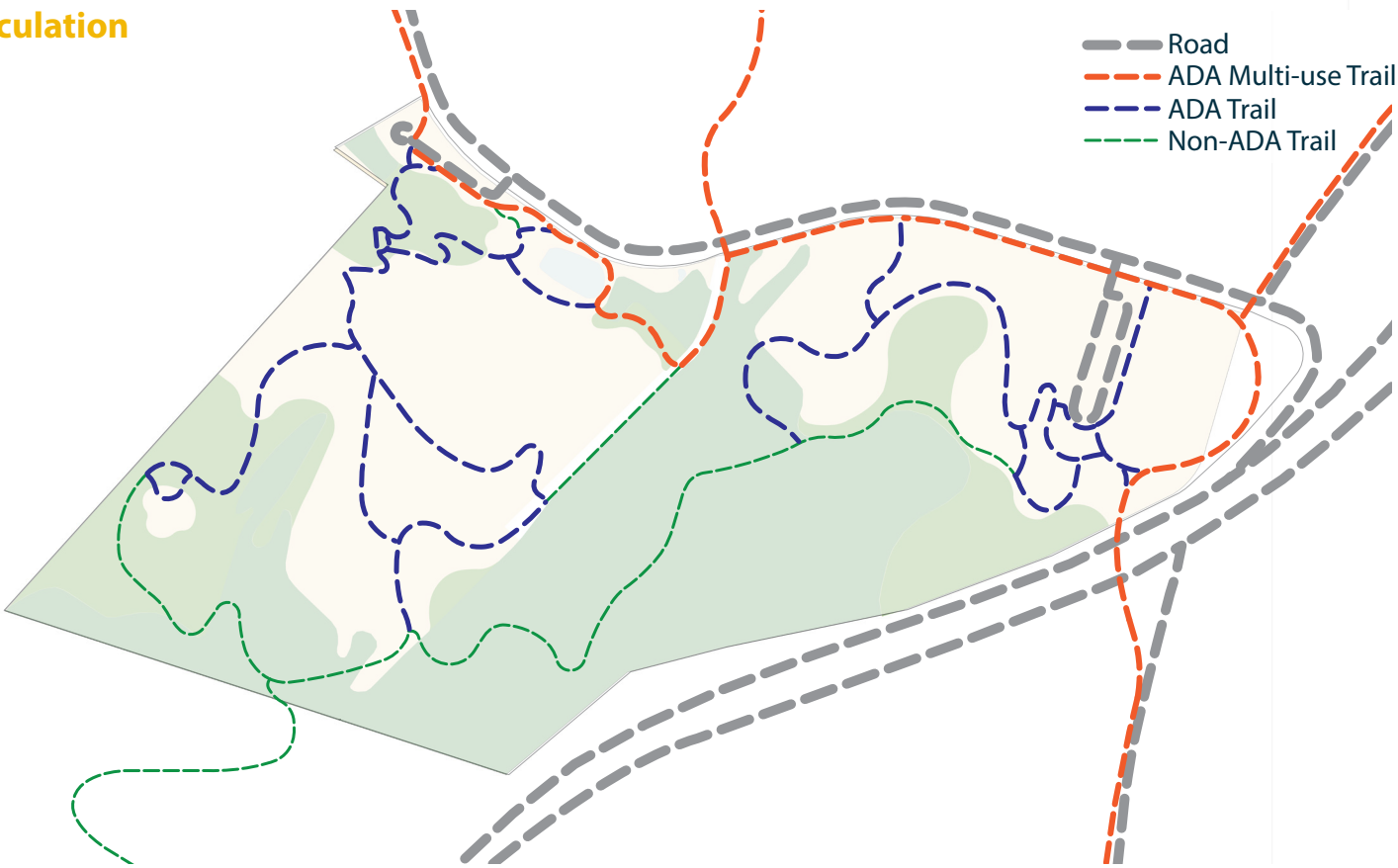
Circulation Diagram

Trails are an important component of outdoor recreation. ADA trails enables persons with disabilities to actively engage with the park and participate in such outdoor experiences as hiking, camping and picnicking. The proposed multiuse trail would be a 10 foot wide asphalt path, allowing for hikers, bikers, runner, and maintenance crews to traverse the site. The other hiking trails on the site are envisioned as 5 feet or less in wide and catering to mainly hikers and runners.

Habitat



Circulation



Perspectives



Figure 58. Rendering of the shade shelter at the top of the hill on the western half of the site.





Figure 59. The site lends itself to winter activities including sledding and snowball fights.



Figure 61. The eastern portion of the site also contains a dog park and a structure with a pavilion, restrooms, and storage.

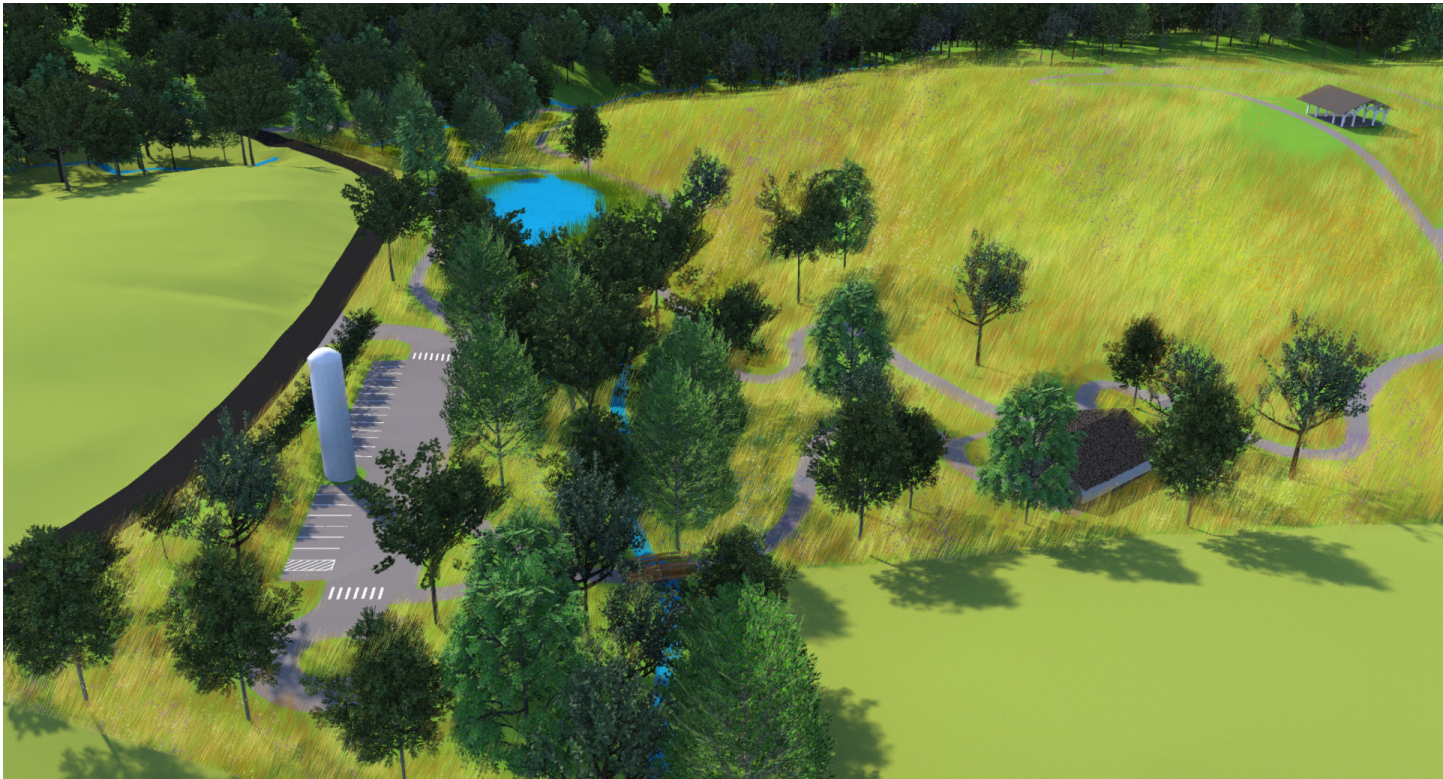


Figure 60. Aerial view of the western half of the site with silo, pond, education cabin for school groups, and shade shelter.



Figure 62. Eastern half of the site, with large parking area, playground, pedestrian bridge, volleyball, and open play field.

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Inspiration



Figure 63. A nature play area at the Robinson Nature Center.



Figure 65. An attractive pavilion with semi-enclosed space for gatherings.



Figure 67. A pavilion on top of a hill with 360 degree views.



Figure 64. A peaceful bench overlooking a forested scene.



Figure 66. A sign on an existing silo.



Figure 68. Meadow next to an existing parking area at the Robinson Nature Center.

Meadow Seed Mix

A good meadow contains 30-70% grasses and the rest broadleaf perennials. To seed a meadow, the land must be first cleared of existing weeds through the use of herbicides, fire, or frequent mowing. Then, seeds are drilled into the ground with a seed driller. Frequent mowing during the first season will keep tall weeds under control until meadow plants can outcompete the weeds. After the first season, only yearly mowing or burning is required.

Wet Meadow & Wetland

Swamp Milkweed	<i>Asclepias incarnata</i>
Purplestem Aster	<i>Aster puniceus</i>
Nodding Bur Marigold	<i>Bidens cernua</i>
Cosmos (Bristly) Sedge	<i>Carex comosa</i>
Fringed (Nodding) Sedge	<i>Carex crinita</i>
Hop Sedge	<i>Carex lupulina</i>
Lurid (Shallow) Sedge	<i>Carex lurida</i>
Blunt Broom Sedge	<i>Carex scoparia</i>
Squarrose Sedge	<i>Carex squarrosa</i>
White Turtlehead	<i>Chelone glabra</i>
Mistflower	<i>Conoclinium coelestinum</i>
Virginia Wild Rye	<i>Elymus virginicus</i>
Spotted Joe Pye Weed	<i>Eupatorium maculatum</i>
Boneset	<i>Eupatorium perfoliatum</i>
Rattlesnake Grass	<i>Glyceria canadensis</i>
Common Sneezeweed	<i>Helenium autumnale</i>
Blueflag Iris	<i>Iris versicolor</i>
Soft Rush	<i>Juncus effusus</i>
Cardinal Flower	<i>Lobelia cardinalis</i>
Great Blue Lobelia	<i>Lobelia siphilitica</i>
Seedbox	<i>Ludwigia alternifolia</i>
Monkeyflower	<i>Mimulus Ringens</i>
Sensitive Fern	<i>Onoclea sensibilis</i>
Redtop Panicgrass	<i>Panicum rigidulum</i>
Beaked Panicgrass	<i>Panicum rigidulum</i>
Green Bulrush	<i>Scirpus atrovirens</i>
Woolgrass	<i>Scirpus cyperinus</i>
Maryland Senna	<i>Senna marilandica</i>
Giant Bur Reed	<i>Sparganium eurycarpum</i>
Blue Vervain	<i>Verbena hastata</i>
New York Ironweed	<i>Veronica noveboracensis</i>

Table 3. Plant species suitable for wetter areas



Figure 69. A mix of grasses and forbs compose a lovely meadow



Upland Meadow

Indiangrass	<i>Sorghastrum nutans</i>
Virginia Wildrye	<i>Elymus virginicus</i>
Purpletop	<i>Tridens flavus</i>
Partridge Pea	<i>Chamaecrista fasciculata</i>
Big Bluestem	<i>Andropogon gerardii</i>
Black Eyed Susan	<i>Rudbeckia hirta</i>
Autumn Bentgrass	<i>Agrostis perennans</i>
Wild Senna	<i>Senna hebecarpa</i>
Tall White Beardtongue	<i>Penstemon digitalis</i>
Scaly Blazing Star	<i>Liatris squarrosa</i>
Common Milkweed	<i>Asclepias syriaca</i>
Mistflower	<i>Conoclinium coelestinum</i>
Shrubby Bushclover	<i>Lespedeza frutescens</i>
Arrowleaf Aster	<i>Aster sagittifolius</i>
Oxeye Sunflower	<i>Heliopsis helianthoides</i>
Slender Bushclover	<i>Lespedeza virginica</i>
New England Aster	<i>Aster novae-angliae</i>
Hairy Beardtongue	<i>Penstemon hirsutus</i>
Clustered Mountain Mint	<i>Pycnanthemum muticum</i>
Grassleaf Blazing Star	<i>Liatris graminifolia</i>
Gray Goldenrod	<i>Solidago nemoralis</i>
Early Goldenrod	<i>Solidago juncea</i>
Wild Bergamot	<i>Monarda fistulosa</i>
Hoary Mountainmint	<i>Pycnanthemum incanum</i>
Blue False Indigo	<i>Baptisia australis</i>
Purple Coneflower	<i>Echinacea purpurea</i>
Lanceleaf Coreopsis	<i>Coreopsis lanceolata</i>
Butterfly Weed	<i>Asclepias tuberosa</i>

Table 4. Plant species suitable for drier conditions



Landscape Performance Metrics

Summary

A number of potential environmental and recreational benefits arise as a result of the new designs for Fulton South Community Park. The open space and rural character of the site have been preserved and is available as an amenity for the local community. The recreational and cultural benefits may be difficult to quantify, but it is possible to calculate and measure some of the other benefits of the park designs. Measuring the landscape performance of the site gives county planners, government administrators and community members an accurate assessment of features within the local jurisdiction and provides a benchmark against which to measure future development decisions.

Design Proposal One

The proposed site plan for Fulton South Community Park introduces and enhances a number of critical features. First, to satisfy the goal of providing recreational opportunities for the community at large, a number of play areas have been introduced: two new open play areas for unstructured activity have been added as well as a traditional playground for acrobatic, guided play, and also a nature play area for cognitive development and stimulation.

When traveling to Fulton South by car, visitors may park in a number of parking spots. In addition to the overflow parking on the west side that can accommodate 50 vehicles, the paved parking lots on the whole site have 96 regular parking spaces, 8 accessible parking spaces, and 3 extra long spaces for trailer or bus parking.

For hikers and joggers, 2.86 miles of trails have been added to the site (Figure 19). Just over a third (0.98 miles) of these paths traverse the meadow habitat, allowing for an interactive experience with the low vegetation and the open vistas. The other 1.88 miles of trails run through the forest canopy, providing a shady walk that encloses the pedestrian within the more focused and calming tranquility of the woods.

The proposed design preserves and enhances key habitats. The total amount of aquatic habitat has more than doubled, from 0.21 acres (the existing farm pond) to 0.58 acres. The new wetland that is proposed, which is slightly more than 1/3rd of an acre, provides crucial habitat but also mitigates stormwater runoff, which is important given the site's proximity to the Rocky Gorge Reservoir. This new wetland requires a wetland buffer, which adds to the significant habitat. In effect, two acres of wetland and wetland buffer have been added to this site. The forest canopy coverage has increased 37%, which not only benefits the local wildlife, but also the members of the community in the form of increased shade, air filtration and purification, and stormwater interception. Though it may appear that the

forest canopy has increased at the expense of the meadow, it is simply the case what is classified as existing meadow is actually a seldomly mowed farm field with few meadow species. The proposed acreage of meadow, though appearing smaller relative to the total acreage of the site, is proposed to be a fully established and maintained meadow, which will sustain a number of different meadow species (Figure 21).

The ecological and recreational features of the park's proposed design balance today's environmental imperatives with the recreational needs of the local community.

Performance Measure	Quantity
Recreational Opportunities:	
Open Play Areas	2
Comfort Facilities	2
Playground	1
Nature Play Area	1
Circulation:	
Forested Trails	1.88 Miles
Paths	0.98 Miles
Parking Spaces Total:	
Accessible	8
Car	96
Overflow	50
Horse trailer parking	3

Table 5. Added features of the proposed site design

Habitat Type	Acreage Proposed	Acreage Existing
Meadow	30.90	43.40
Forest	46.10	33.60
Wetland+Buffers	19.41	17.41

Table 6. Acreage of habitats including the stream and wetland buffers.

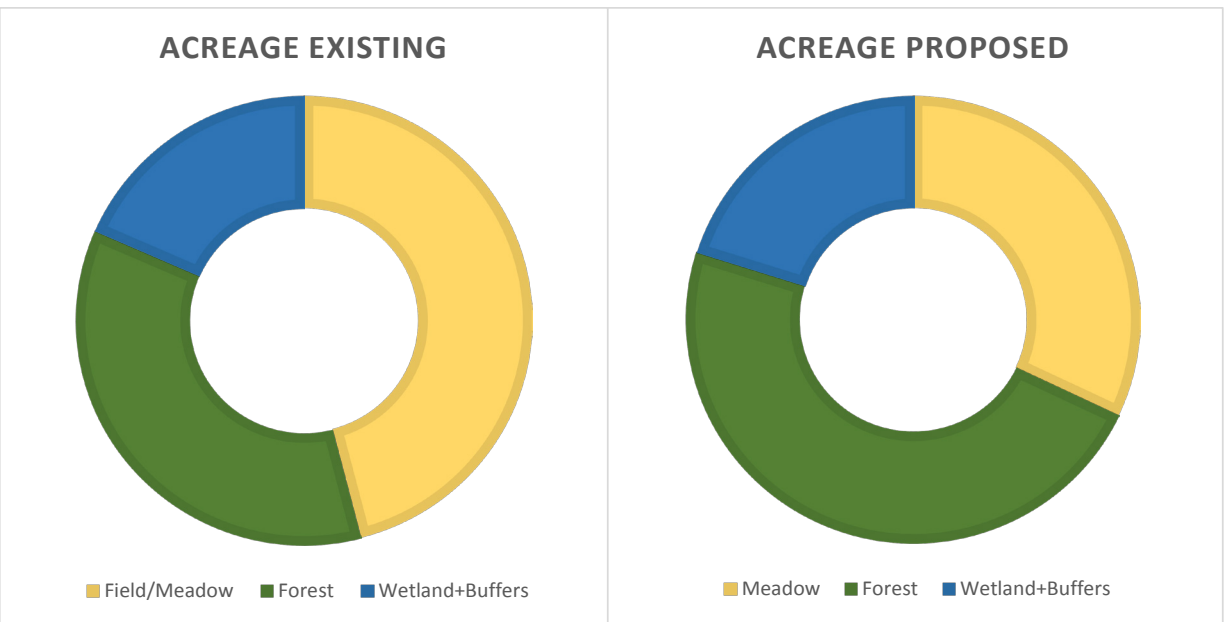


Figure 70. Change in relative acreage of existing habitats compared to proposed acreages.



Figure 71. Sample wildlife found in meadow habitat



Design Proposal Two

This second design proposal for Fulton South Community Park focuses on preserving the existing open field character of the site. The existing grasslands are converted to native meadows that have aesthetic appeal as well as wildlife value, and forest habitats are proposed mostly within the 100 foot riparian buffer for stormwater interception and infiltration purposes (Figure 74). Wetland around the existing pond is enhanced and increased, and a new stormwater treatment pond is also proposed on the east side of the park. The proposed habitats will not only provide food and shelter for wildlife, it will also offer visitors an opportunity to learn about the different natural systems that exist within them.

Aside from increasing and improving the existing habitats, amenities are also proposed to give visitors recreational and learning opportunities (Table 7). A nature center with a natural play space is proposed on the west entrance, three open play areas for unstructured activities have been added as well as a traditional playground, two volleyball courts, and a dog park. There are also a number of pavilions and sun shelters throughout the park.

Amenity	Quantity
Comfort Station	1
Nature Center	1
Pavilion/Sun Shelter	3
Open Play Area	3
Dog Park	1
Volleyball Courts	2
Playground	2
Regular Parking Spots	106
Trailer Parking Spots	5

Table 7. Proposed amenities

The need for parking is also addressed by the design proposal. 106 regular car parking spots are proposed. Five 55’ long angled trailer parking are also proposed at the larger, east parking lot

Habitat Type	Existing	Proposed	Total
Forest	29.2	13.2	42.4
Meadow*	0	28.6	28.6
Wetland	0.3	2	2.3
Riparian Buffer**	14.8	3.6	18.4

Table 8. Acreage of habitats including the stream buffers.

*Does not include existing grassland as meadow habitat
**Includes forest habitat as part of calculation

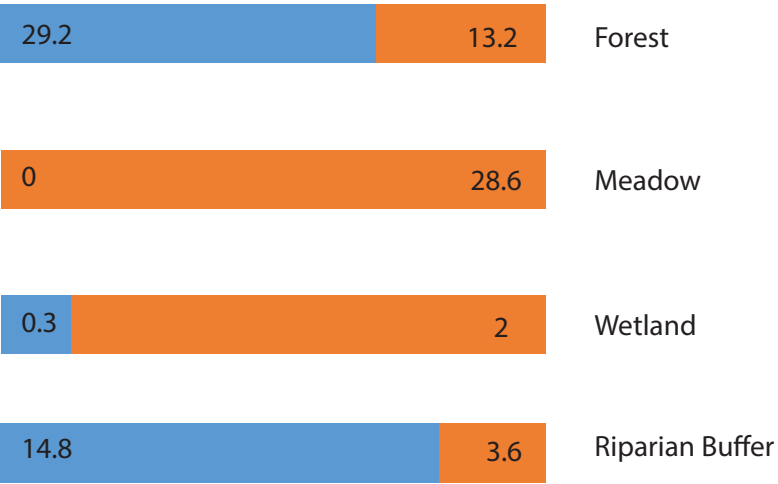


Figure 72. Existing and proposed acreage of habitat types

45% Increase in Forest Habitat

37% Increase in Wetland Habitat & Riparian Buffers

Trail Type	Distance (Miles)
ADA	2
Non-ADA	0.95

Table 9. Proposed ADA and non-ADA trail lengths

As a part of the design proposal, 2.95 miles of loop trails have been added to the site (Table 9). Over two-thirds (2 miles) of these paths are ADA accessible and allow people with disabilities to experience all the different habitat types the site has to offer. The non-ADA accessible trails are under ten percent slope as a guideline and offer hikers and joggers a variety of interest points throughout their visit.

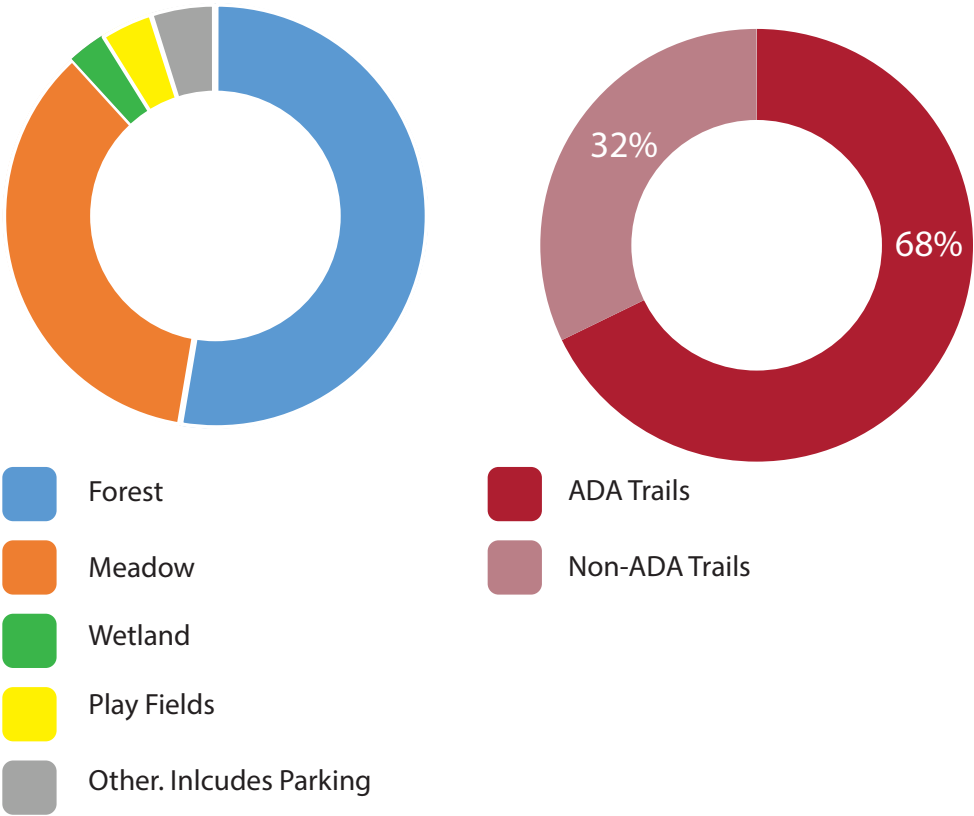


Figure 73. Proposed features including habitat, trails and amenities

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