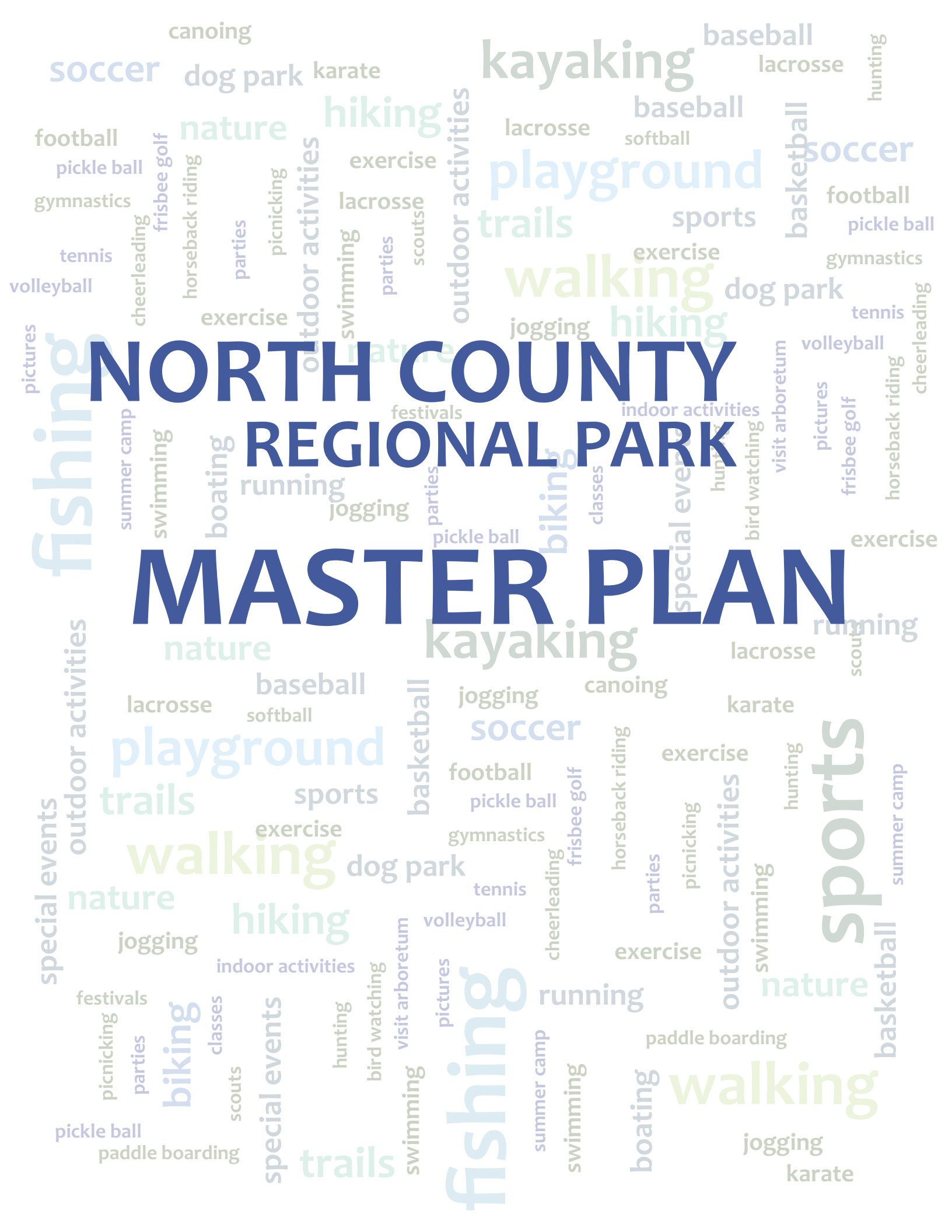
NORTH COUNTY
REGIONAL PARK
MASTER PLAN

July, 2019

NORTH COUNTY REGIONAL PARK

MASTER PLAN

Caroline County, Maryland

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ORGANIZATIONAL ACKNOWLEDGMENTS

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DESIGN TEAM

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Topic

LEGACY PARK
NORTH COUNTY REGIONAL PARK

The creation of the North County Regional Park site followed a history of public interest in securing access to the upper Choptank River and preserving environmentally important areas between it and Route 313. This effort extends back to Caroline County's acceptance of the 20-acre Christian Park parcel in the 1970s. The 2016 purchase of the former Schiff farm property added an additional 207 acres. County residents have long known the site for its shad and perch fishing along the river, its propensity to yield prehistoric artifacts after plowing, and its wooded tree line set back from Greensboro Road.

The Caroline County Land, Preservation, Parks and Recreation Plan 2017 envisioned the North County Regional Park as an important component of the growing park system, but specific development strategies were not identified. Conservation was a known commitment, as the purchase with Land and Water Conservation funds included a conservation easement on a large portion of the site's wooded acreage. Other types of recreation could be imagined but could not yet be budgeted for, staffed or programmed. They could only be known as the result of a thorough, engaged and comprehensive master plan process. That process began in late 2018 and it concludes with the final adoption of the North County Regional Park Master Plan.

This document describes that process and resulting recommendations.

PARK CONTEXT

Note: Refer to the 2018 Caroline County LPPRP for a complete inventory of municipal, county and quasi-public park land holdings in the West, East and South County regions.

PARKS

STATE PARKS
(Conservation/outdoor recreation oriented)

1. Tuckahoe State Park
2. Adkins Arboretum
3. Martinak State Park
4. Idylwild Wildlife Management Area
5. Bridgetown Ponds Heritage Conservation Area
6. Hollingsworth Pond Heritage Conservation Area
7. Smithville Community Lake
8. Chesapeake Forest Lands

REGIONAL PARKS

- North County Regional Park
9. South County Regional Athletic Complex
10. Caroline County 4-H Youth Park

MUNICIPAL PARKS
(North County Region)

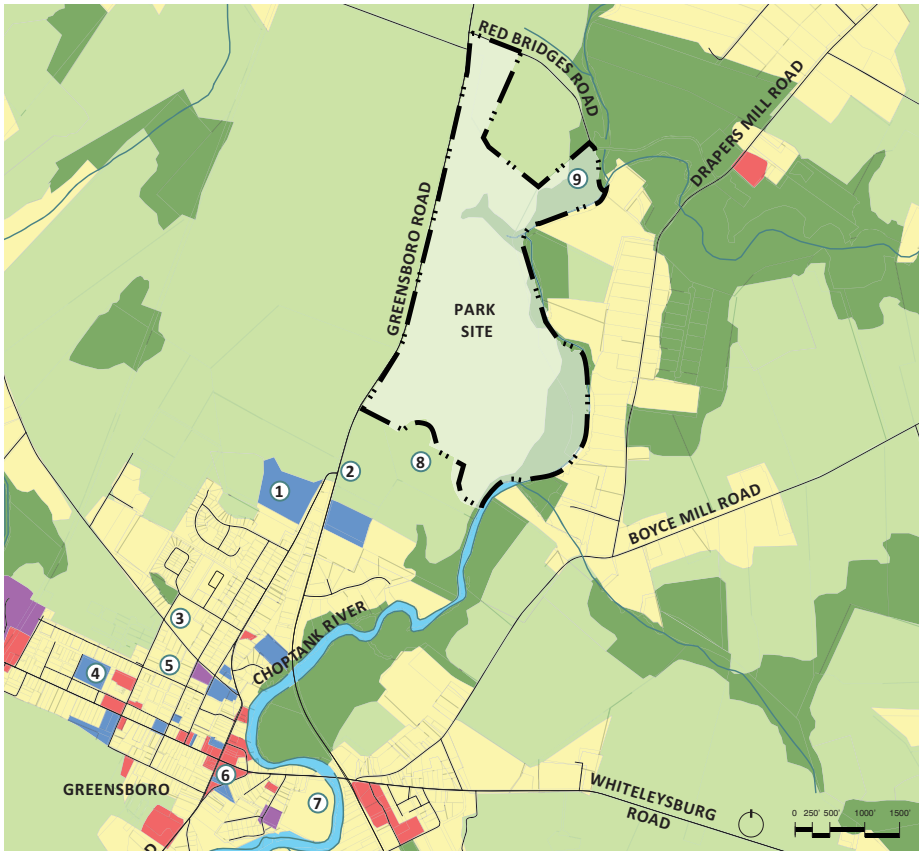
11. Henderson Park
12. Goldsboro Park
13. Marydel Community Park
14. Sunset Park West
15. Templeville Community Park
16. Nature Conservancy (no trails)

See local map (opposite) for locally adjacent municipal parks.

ZONING

- Agriculture
- Forest*
- Commercial
- Residential
- Institutional
- Industrial
- Water/Wetlands
- Barren Land
- Transportation

*Extent of site forest cover is shown on page 9



LOCAL CONTEXT

1. Greensboro Elementary School
2. Greensboro Volunteer Fire Co. & Carnival Grounds
3. Cedar Lane Park
4. Ober Park
5. Jesse Sutton Memorial Park
6. Greensboro Town Hall
7. Greensboro Boat Ramp & River Park
8. Greensboro Wastewater Treatment Plant
9. Christian Park and Landing

Context

Creating a successful park master plan requires a critical understanding of the park's context and proximity to other parks, athletic facilities, fishing and other recreation opportunities in the county. Caroline County's community and neighborhood parks are geographically well distributed; the nearest community park to the NCRP parcel is Cedar Lane Park (approximately 4.5-acres) and Ober Community Park (approx. 3.6-acres) in Greensboro. South County Regional Park (70+ acres) in Federalsburg and the Caroline 4-H Youth Park south of Denton are the only other regional parks in Caroline County.

The NCRP site is a 227-acre parcel north of Greensboro in the northeast part of Caroline County. The parcel sits along the east side of Greensboro Road (Route 313) and consists of two land parcels, the former Schiff Farm and Christian Park. The property to the west of our parcel is currently agricultural fields and a portion is allocated for a future solar farm. The northern border abuts privately-owned land zoned and used for agriculture, while the remainder is forested. Red Bridges Road lies to the north of these adjacent, privately-owned parcels and connects Greensboro Road to the Choptank River. The Choptank River is the NCRP's eastern boundary.

Immediately south of the NCRP parcel is the recently constructed Town of Greensboro wastewater treatment facility. The existing wastewater treatment access road located along the property line presents an opportunity to tie into an existing drive for a park access road.

A quarter mile south of the site, on Main Street, is Greensboro Elementary School. Despite its proximity, there is no accessible route (i.e. trail, path, or sidewalk) from the school to the park. The high speed (50 mph posted speed limit) and traffic on Greensboro Road inhibit the current walkability between the school and the park.

PARK CONTEXT

FIELD

FARM ROAD

DRAINAGE DITCH

INTERIM CROP

FIELD EDGE

FOREST

EDGE

TRAILS

STREAM

OLD GROWTH

RIVER

TRAIL

SCOUR

WATERFRONT

OUTFALL


RED BRIDGES RD
GREENSBORO RD
1
2
3
4
5
6
7
8
9
10
11
12
0 100' 200' 400' 600'

METHOD

A successful master plan identifies the needs of users and the key site features that will shape the park. Sustainable plans promote stewardship of natural and cultural resources. They result in long term management and operations strategies that conserve public fiscal resources. Creative park master plans combine these factors in a memorable and uplifting way. Ultimately, a successful master plan transforms the site into something that is greater than the sum of the individual programs that it supports.

Our method for achieving a successful master plan asks three questions to inform the design:

- What does the community desire?
- What can the park site support?
- What does good system-wide planning recommend?

The combined results form a "three-legged stool". The stool, like the design, needs balance to be successful.

The answers to these questions created a matrix of data that informed design decisions for the North County Regional Park. From this collected data, themes emerged and a range of schematic concept plans were developed. These plans were presented to the advisory committee and key stakeholders to select the optimal approach.

The foundation of the park master plan began with the gathering and analysis of existing data. This base information was overlapped by a matrix of data the team collected through community outreach, environmental and cultural resources and existing planning documents and public policies.

Community Outreach

Our team conducted outreach efforts focused on extracting a community vision of what the park is and might be. We asked in multiple ways what community members would like in their park.

Environmental & Cultural Resources

Our team examined environmental and cultural resource information. Environmental Scientists from RK & K conducted a desktop investigation of publically available mapped information. The planning team identified site topography, the 100-year floodplain, vegetative cover, non-tidal and tidal waters and wetlands with their associated buffers, Chesapeake Bay Critical Area, and hydric and highly erodible soils. The field reviews identified potentially jurisdictional wetlands and waters of the U.S. in the agricultural fields and forested areas within the boundaries of the proposed park. The archaeologists from The Ottery Group studied the likelihood and probable locations of cultural resources. The civil engineers identified key access, utility and other physical features that shaped the park's development.

Existing Planning Documents & Policy

The design team studied and applied Caroline County and State of Maryland planning objectives; adhered to local, state, and federal regulations; and referenced published design and program standards including the Caroline County Land Preservation, Parks, and Recreation Plan 2017 to the site.

WHAT DOES THE COMMUNITY DESIRE?

WHAT CAN THE PARK SUPPORT?

WHAT DOES GOOD PLANNING RECOMMEND?

COMMUNITY OUTREACH

To understand *what the community desires,* our approach to public engagement was an open and inclusive process with a series of interactive tools and opportunities for communication.

Public involvement included:

- North County Park Master Plan Advisory Committee (NCPMPAC) 7 meetings (8/18-3/19)
- a public online survey (12/18-5/19)
- a public meeting (5/15/19)
- presentations to the Caroline County Recreation & Parks Advisory Board and Caroline County Commissioners

The NCPMPAC is a volunteer committee comprised of a diverse group of Caroline County residents. NCPMPAC monthly meetings ranged from design presentations to discussions of ongoing research material, potential park program, expansion of community input and sustainability. These meetings provided existing, unrecorded site knowledge. The floor was open for questions and comments throughout the meeting. These transparent, collaborative discussions between advisory members and the design team led to consensus driven ideas for the park.

To begin gathering information on potential user preferences, the design team administered a workshop on October 10, 2018 based on Nominal Group Technique with small groups. The exercise kicked off a multi-step collaborative outreach process and helped identify base criteria for developing a program of requirements to guide the design of the master plan. The data collection method exposed unbiased ideas for park programming from participants. To decrease associative influences and increase impartiality, committee members were randomized upon arrival. Once the groups were divided, moderators were instructed to assist in the clarification of an idea, but were asked to refrain from influencing the group with their own ideas and personal bias. Each group then reported to the whole assembly and the overall assembly's preferences were summarized. This information gathering technique encouraged the program suggestions for the park.

Following the initial group survey, ideas from the three groups were combined and tallied to reflect the attending committee members' suggestions. The committee's suggestions and preferences were consolidated into general concept categories and provided the base data for an online public survey.

Results

21.65% **Indoor Facilities:**
recreation center

21.65% **Passive Recreation Uses**
picnic shelters
picnic areas
amphitheater
bird/nature watching

18.56% **Recreation Fitness**
playground
natural play areas
challenge recreation facilities
alternative golf

12.37% **Trails**
paved and unpaved
running and exercise
connection to Greensboro Elementary

12.37% **Water Dependent Activities**
access to the river
fishing
kayak/canoing

10.31% **Sports Fields & Courts**
multipurpose rectangular field
paved courts
multi-functional softball

3.03% **Supporting Park Facilities*:**
parking
restrooms
maintenance
storm water management
protection from the road
sustainable/ solar power
art as a place-maker

*Committee members may have chosen not to vote for or suggest ideas seen as necessary amenities due to their automatic inclusion and familiarity within other park designs, i.e. restrooms, benches, trash receptacles, parking etc.

PROGRAMMING IDEAS USING SMALL GROUP TECHNIQUE

COMMUNITY OUTREACH

The variation in program ideas from the NCPMPAC Small Group Technique participants indicated the need for additional input to further understand the community's goals for the North County Regional Park. The design team and NCPMPAC developed an easily accessible online survey to connect with a larger group of Caroline County residents. The online survey was available in English and Spanish through the following mediums:

- the park website https://northcountypark.org/
- the social media pages for Caroline County Recreation & Parks and Caroline County
- the list serve for Greensboro Elementary School Teachers
- a QR code link to survey
- word of mouth

Survey Questions

A 16-question survey was developed based on the original input from NCPMPAC members present at the October 10, 2018 meeting. The survey combined multiple answer-multiple choice and open-ended questions. The first eight questions of the survey focused on potential park programming with multiple answer-multiple choice questions. The results of these questions are pictured on pages 16 and 17. Each multiple answer-multiple choice question permitted respondents to select answers that suited their preferences. In addition, each park programming question included a response for participants "uninterested" in certain activities and provided an open-ended response opportunity for those that had "other" programming ideas.

The question, "List additional activities you would like to see in the park?" captured ideas not addressed in the previous eight survey questions. Final questions focused on the demographics of the participants. The demographic section of the survey addressed potential NCRP visitation frequency, proximity, and mode of transit; and asks respondents to report other facilities used in Caroline County and their general recreation habits.

The types of survey questions, multiple answer-multiple choice and open-ended, were selected as a straightforward information gathering approach. Multiple choice questions tend to be easier for a user to answer and the design team to analyze, but hinder the ability for participants to explain the reasoning behind each response. To help answer "why", the design team allowed participants to select multiple answers for program questions (1-8); and to specify other ideas through an open-ended answer.

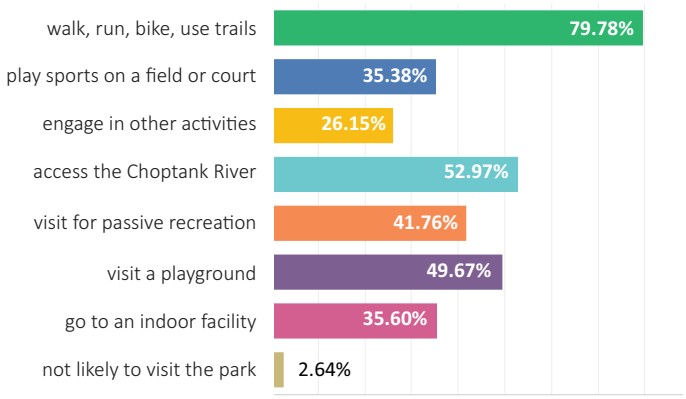
Open-ended questions were phrased in a direct manner and contained only one question per question number to minimize the time needed to complete the survey and ultimately increase the likelihood of survey completion. Questions included:

- List additional activities you would like to see in the park.
- In what recreation activities do you or your family participate in Caroline County or elsewhere?
- Which facilities do you or your family use for recreation in Caroline County or elsewhere?

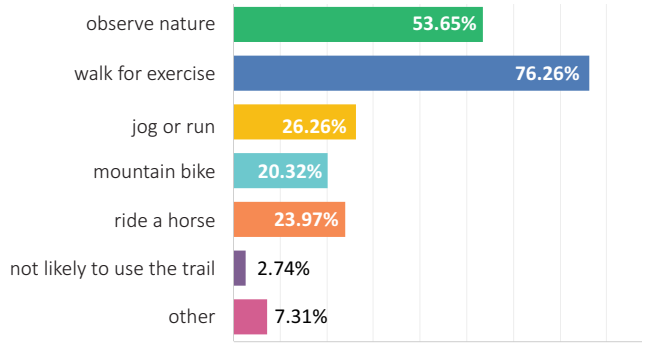
Participants could skip questions and were not obligated to answer any survey questions prior to moving forward to the next question. A summary of the survey results as of 4/29/2019 is included on the following pages.


walking
fishing
kayaking
playground
hiking
biking
soccer
basketball
baseball
softball
lacrosse
swimming
outdoor activities
canoeing
exercise
paddle boarding
trails
sports
boating
pictures
scouts
nature
jogging
running
festivals
summer camp
parties
picnicking
special events
classes
indoor activities
karate
dog park
tennis
volleyball
visit arboretum
bird watching
hunting
football
pickle ball
gymnastics
cheerleading
frisbee golf
horseback riding

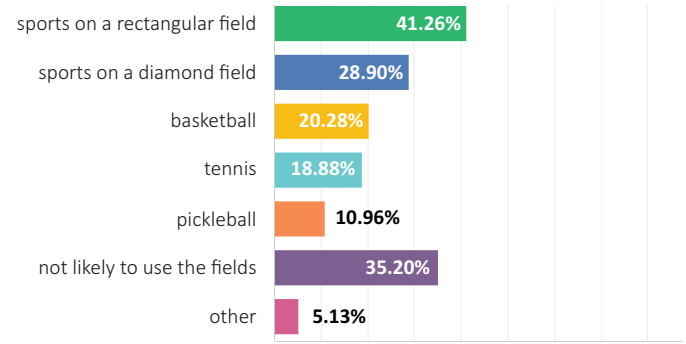
Which activities would you or your family most likely participate in?



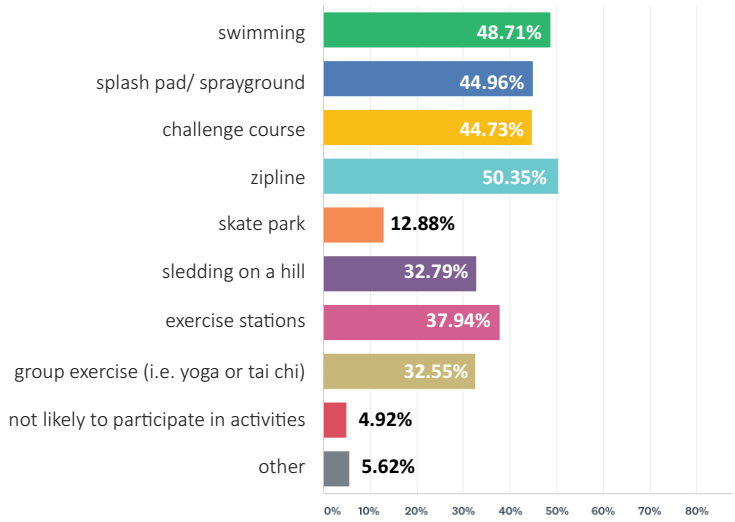
How will you most likely use the park trails?



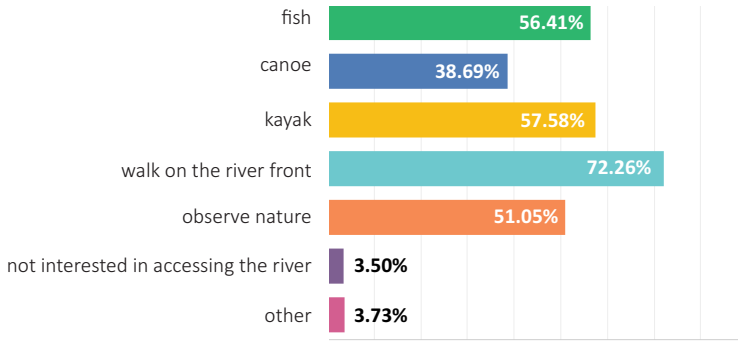
What organized field or court sport would you most likely play at the park?



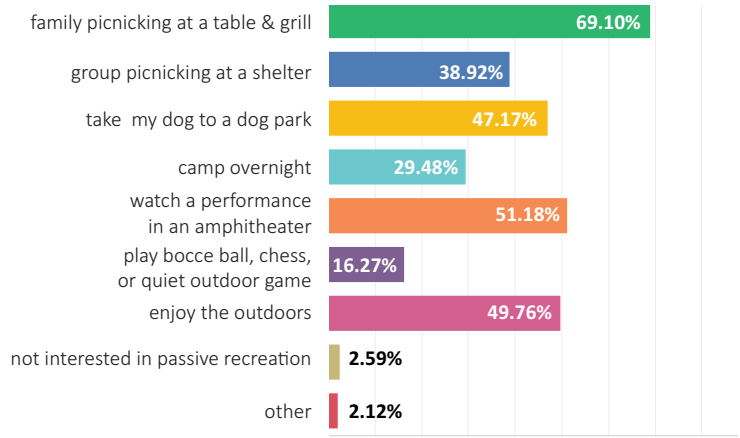
What other physical exercise or sport would you participate in?



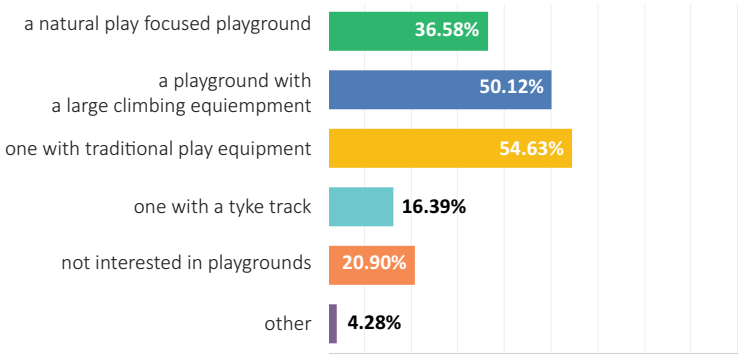
If you could access the Choptank River from the park, what would you do there ?



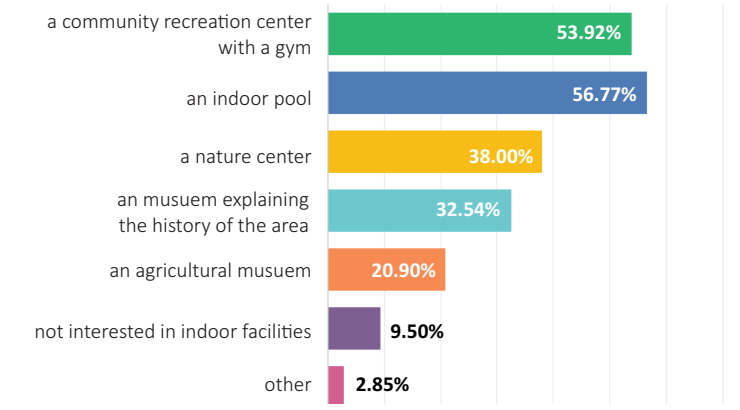
What types of passive recreation would you do at the park?



If you could visit a playground at the park, what would it be like?



What kind of indoor facility would you like to visit at the park?



PROGRAM of REQUIREMENTS

The design team developed the program of requirements (below), the recommended program for the facilities and activities at North County Regional Park. This list balances community input, good public policy, and the site's unique opportunities and constraints. It includes the kinds of facilities that are already widely considered a possible opportunity (i.e. athletic fields), but also activities that have not been considered in the past (i.e. hill for sledding included in the online survey). We drew upon the results of the initial NCPMPAC meetings, the online survey, and published standards to create the program of requirements. The team compared this list to recommended, published, or adopted Level of Service standards to determine the extent to which the proposed activity meets agreed upon County needs. The program lists each potential recreational activity and supporting facility and their size, location, and adjacency requirements.

An important part of this task determined the recommended balance between 'active' activities that may be more resource intensive and 'passive' ones that preserve land or limit the kinds of activities allowed on it. The design team has frequently seen passive/active ratios on regional parks in the range of 1/3 area devoted to active pursuits and 2/3 to preservation and low intensity activities.

Potential Program Element	**Recommended**	Criteria for Inclusion		
		Published Standards & Area Needs	**North County Regional Park Master Plan Committee**	**On-line Survey Public Input**
Passive Recreation Uses			21.65% Vote Total	
Picnic Shelters	Three to Four shelters ranging in size from 4 to 20 tables	Caroline County Land Preservation, Parks, and Recreation Plan 2017	Received 6% of total votes cast in planning session	46% of survey respondents listed group picnicking at a shelter as their passive recreation of choice.
Picnic Areas	At least one designated picnic area with 10 to 20 tables and grills	Caroline County Land Preservation, Parks, and Recreation Plan 2017	Received 5% of total votes cast in planning session	76% of survey respondents listed family picnicking as their passive recreation of choice.
Amphitheater	Open lawn area at entry sufficient to hold event of between 1,000 and 1,500 attendees		Received 2% of total votes cast in planning session	63% of survey respondents said they would enjoy an outdoor performance as a passive activity in the park.
Dog Park	10,000 sf. fenced areas with water and shade each for large and small dogs. Provide additional area to rotate in/out of use		Received 2% of total votes cast in planning session	20% of respondents in follow-up survey listed dog park as a desirable facility not shown on the draft final master plan
Bird / Nature watching	See trails, above		Received 1% of total votes cast in planning session	61% of survey respondents said they would use park trails to observe nature. 56% said they would observe nature if there was access to the Choptank River on site.
Indoor Facilities			21.65% Vote Total	
Recreation Center - Indoor	No facility proposed, however space exists if one or more fields are not constructed.	Indoor Fitness (gymnasium) is considered a "Secondary deficit" in the Caroline County Land Preservation, Parks, and Recreation Plan 2017	Received 8% of total votes cast in planning session	67% of survey respondents indicated a preference for a community recreation center with a gym as an indoor facility. 64% were in favor of an indoor pool.
Supporting Facilities			3.09% Vote Total	
Access	Two access points off 313	Caroline County Land Preservation, Parks, and Recreation Plan 2017		
Parking	Two major lots and two minor lots proposed		Eco-friendly Parking received 2% of total votes cast in planning session	
Restrooms	Two locations proposed	Restrooms in permanent structures are not typically provided in County parks. Porta-johns have been typically included with fields.	Received 1% of total votes cast in planning session	
Maintenance Access/Facilities	One location proposed			
Storm Water Management	Multiple Facilities proposed			
Protection from the road, Sustainable/Solar Power, Art as Placemaker	Can be considered during development of individual phases		Activity/Facility Recommended in planning session	
Notes:	1. North County Regional Park Master Plan Committee preferences based on small group discussion session on October 10, 2018. 46 distinct ideas were suggested and considered. All ideas receiving one or more votes are generally included above as separate entries. Other ideas have been incorporated into similar or related activities or facilities. 2. Published Standards & Area Needs are based largely on the Caroline County Land Preservation, Parks, and Recreation Plan 2017. Where a potential program element is generally supported in plan text, the document is cited. Where specific plan language refers to a program element, that language is cited. 3. General spatial requirements for recreation facilities are as found in Park, Recreation & Leisure Facilities Site Planning Guidelines (2005:George E. Fogg) and other sources. 4. On-line Survey Public Input results based on SurveyMonkey administered survey available through June 2019.			

North County Regional Park Program

Potential Program Element	Recommended	Criteria for Inclusion		
		Published Standards & Area Needs	North County Regional Park Master Plan Committee	On-line Survey Public Input
Trails			12.37% Vote Total	
Trails - natural, unpaved	Extensive trail network	Walking, hiking, biking trails are considered "primary deficits" in the Caroline County Land Preservation, Parks, and Recreation Plan 2017	Received 8% of total votes cast in planning session	78% of survey respondents said they would use trails in general. 61% of survey respondents said they would use trails to access nature. 73% said they favored walking on a waterfront trail as the best way top access the Choptank River.
Paved Trails	Paved trails linking all major park program elements to parking and restrooms	Walking, hiking, biking trails are considered "primary deficits" in the Caroline County Land Preservation, Parks, and Recreation Plan 2017	Handicap access to all major park experiences' received 1% of total votes cast in planning session	78% of survey respondents said they would use trails in general. 87% said they would walk for exercise.
Paved Trails - Running/Exercise	Same as above	Walking, hiking, biking trails are considered "primary deficits" in the Caroline County Land Preservation, Parks, and Recreation Plan 2017	Running trails received 1% of total votes cast in planning session	78% of survey respondents said they would use trails in general. 32% said they would jog or run on trails. 42% said they would enjoy access to exercise stations.
Trail/sidewalk connection to Greensboro elementary School	Paved connection and crossing protection at Route 313	Caroline County Land Preservation, Parks, and Recreation Plan 2017		78% of survey respondents said they would use trails in general.
H. Tubman Trails/ Heritage Trail Connection	Interpretive/directional signage	Caroline County Land Preservation, Parks, and Recreation Plan 2017	Activity/Facility Recommended in planning session	78% of survey respondents said they would use trails in general.
Sports Fields and Courts			10.31% Vote Total	
Multipurpose Rectangular Sports Field	Four (4) 240' x 360' fields	Multipurpose fields are considered "primary deficits" in the Caroline County Land Preservation, Parks, and Recreation Plan 2017	Received 8% of total votes cast in planning session	53% of survey respondents said they would play field sports (soccer, football, lacrosse, etc.)
Paved Courts	One (1) paved sport court	Outdoor basketball courts are considered "Secondary deficits" in the Caroline County Land Preservation, Parks, and Recreation Plan 2017	Received 1% of total votes cast in planning session	21% of survey respondents said they would use basketball courts. 25% said they would use tennis courts. 13% said they would use pickleball courts.
Multi-functional softball areas	One (1) 300' diamond field	Caroline County Land Preservation, Parks, and Recreation Plan 2017 notes that "No deficit is apparent now for baseball/softball fields." Nearby Ridgely Athletic Field Complex has three Little League baseball fields and space for expansion.	Received 1% of total votes cast in planning session	35% of survey respondents said they would use baseball/softball fields
Recreation/Fitness			18.56% Vote Total	
Playground; Natural Play Areas	Two play areas averaging 4,000 - 6,000 sf each	Caroline County Land Preservation, Parks, and Recreation Plan 2017	Playgrounds' received 4% of total votes cast in planning session; 'natural play areas' received additional 3%	60% of survey respondents said they would use a playground. 60% of survey respondents said they favored swings, slides and traditional play equipment. 60% favored large climbing and play structures. 42% favored nature focused play.
Challenge Recreation Facilities	One location		Received 4% of total votes cast in planning session	52% of survey respondents said they would use a zipline. 49% of survey respondents said they would use ropes course or climbing wall
Alternative Golf	Nine hole course adapted to both forms of play			
Water Dependent Activities			12.37% Vote Total	
Access to the river for activities (general)	Multiple soft trail access points	Caroline County Land Preservation, Parks, and Recreation Plan 2017 identified need for rehabilitation and upgrade, new access and parking, pedestrian trails, soft boat landings and fishing piers at multiple sites including Christion Park.	Received 9% of total votes cast in planning session	73% of survey respondents listed walking on a riverfront trail as their preference for a water-based activity; 56% listed nature observation
Fishing	Developed (paved) area at Red Bridges	Caroline County Land Preservation, Parks, and Recreation Plan 2017 identified need for rehabilitation and upgrade, new access and parking, pedestrian trails, soft boat landings and fishing piers at multiple sites including Christion Park.	Fishing was not measured separately. Waterfront access, in general, received 9% of total votes cast in planning session	61% of survey respondents listed fishing as their preference for a water-based activity.
Kayak and Canoe Use	Developed facilities at Red Bridges with a paved parking ad launch area	Fishing and Boating are considered "Secondary deficits" in the Caroline County Land Preservation, Parks, and Recreation Plan 2017	Received 1% of total votes cast in planning session	61% of survey respondents listed kayaking as their preference for a water-based activity. 41% listed canoeing.

NATURAL RESOURCE ASSESSMENT

WETLANDS, WATER-WAYS & FLOODPLAIN

Wetland/waterway resources identified on-site include perennial, intermittent, and ephemeral channels, emergent and forested non-tidal and tidal wetlands. Impacts to wetlands, wetland buffers, waters of the U.S., and/or 100-year floodplain will require authorization from Maryland Department of Environment (MDE) and U.S. Army Corps of Engineers (USACE). Avoidance and minimization of resource impacts will be required as part of the regulatory review process and mitigation will be required for any permanent wetland impacts within the Critical Area and permanent wetland impacts greater than 5,000 square feet outside the Critical Area. Access to the Choptank River through the forested buffer, including any proposed boardwalks and trails, will require 2:1 wetland mitigation for any permanent impacts.

The response received from Maryland Department of Natural Resources Environmental Review Program (MDNR-ERP) on December 21, 2018 determined the unnamed tributary to the Choptank Area as a Use I stream, which prohibits in-stream work from March 1 through June 15 of any given year. Caroline County will need to submit more detailed park development plans, which will be prepared during the final design stages of the project, to determine if a more detailed review by ERP is warranted. ERP will be concerned primarily with proposed work within and directly adjacent to waterways, and the details of that work will be more clearly defined during the final design stages of the project.

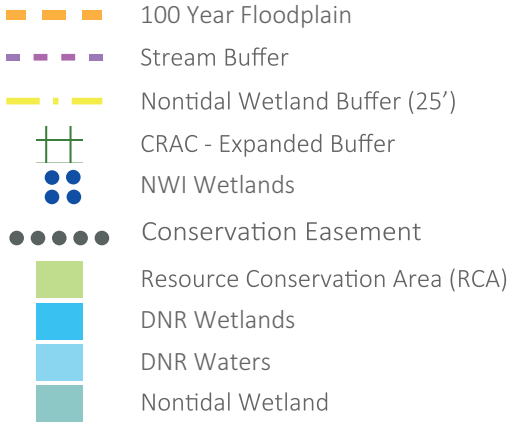
FOREST & CRITICAL AREA

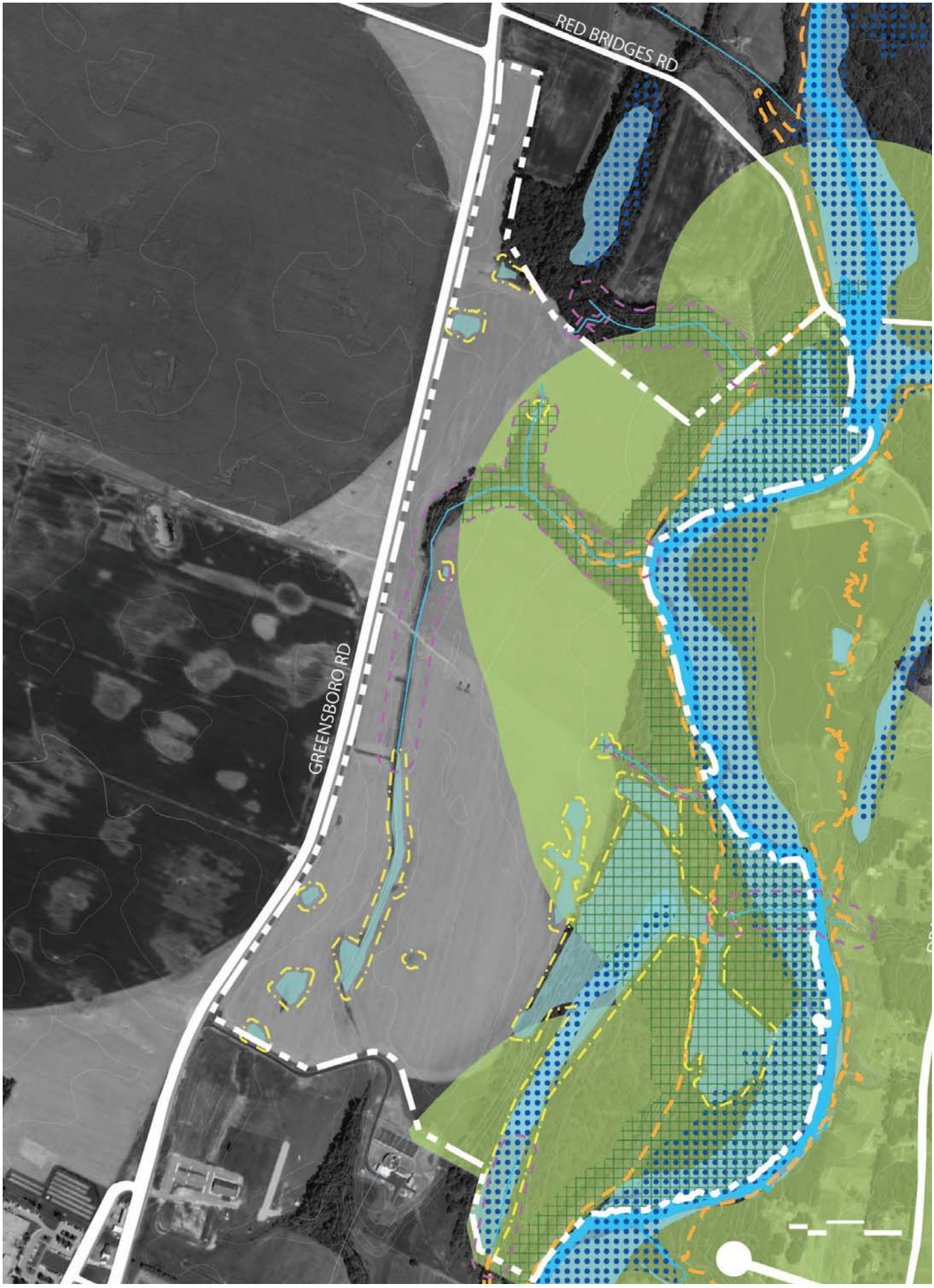
The forest cover within North County Regional Park consisted primarily of mid to late-successional oak-hickory forest. Approximately half of the proposed park site is located within the Resource Conservation Area (RCA) of the Chesapeake Bay Critical Area. Development within the RCA requires a higher level of resource impact avoidance/ minimization and mitigation.

In accordance with state and Caroline County Critical Area requirements, the 100' Critical Area Buffer was expanded in the illustrations to reflect the location of wetlands, waters of the U.S., steep slopes, hydric and highly erodible soils. The expanded Critical Area Buffer extends from the Choptank River and adjacent wetlands to the Critical Area boundary, and encompasses 67% of the site.

Stream buffer disturbance typically requires a variance. For this project, County Planning and Codes will not require a variance for disturbance outside the Critical Area, but any disturbance to a Critical Area Buffer will require review and approval from the Critical Area Commission. Critical Area buffer disturbance will require a buffer variance with 3:1 planting mitigation for permanent disturbance (lot coverage; e.g. sidewalks, parking lots, structures, etc.), and 1:1 for temporary disturbance (seeding and grading associated with the permanent disturbance).

LEGEND



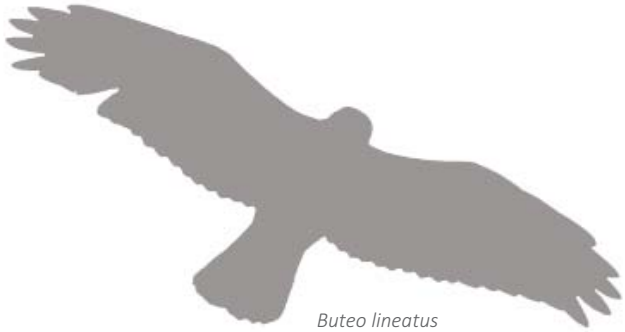

RED BRIDGES RD
GREENSBORO RD

NATURAL RESOURCE ASSESSMENT

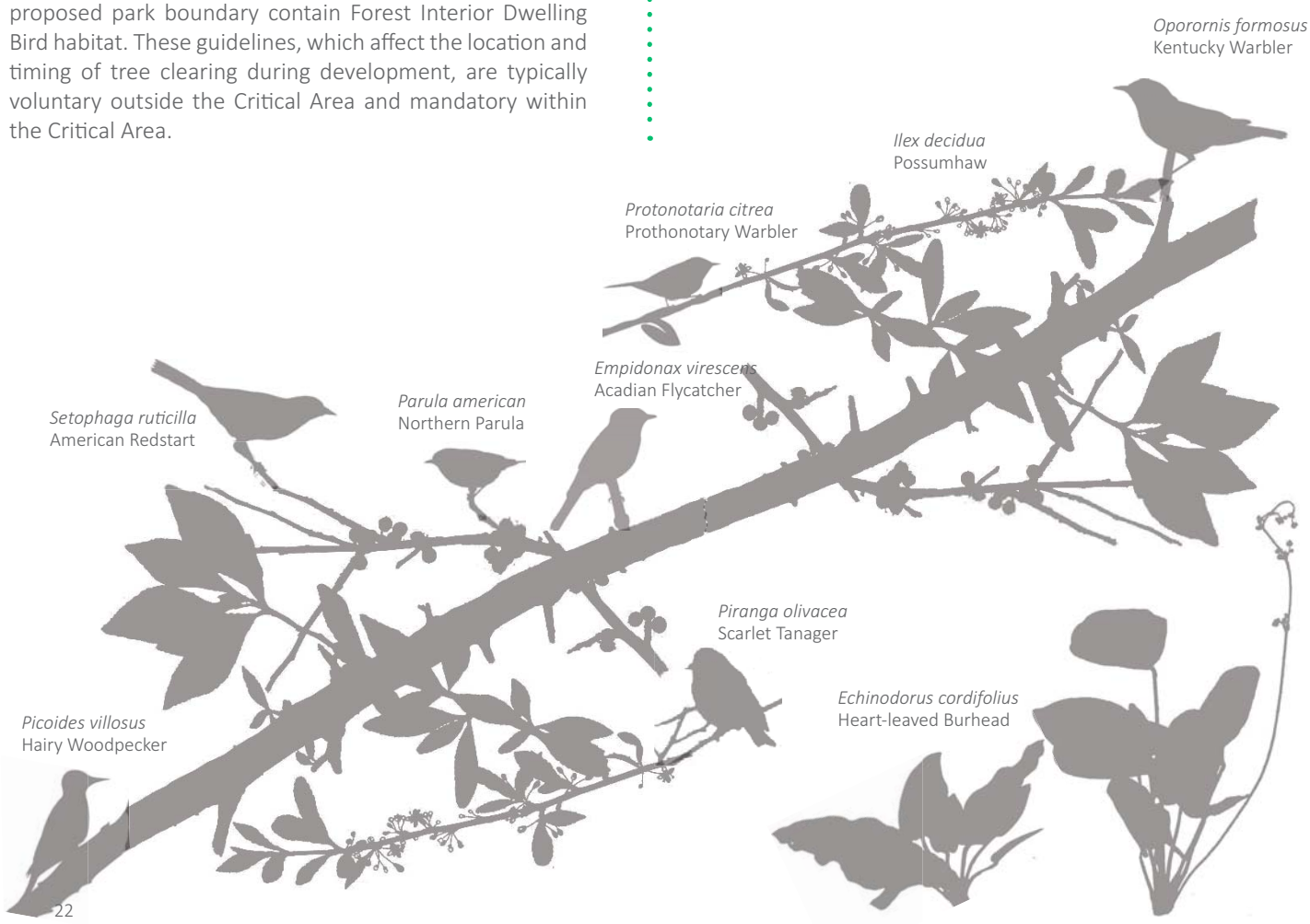
SPECIAL-STATUS SPECIES

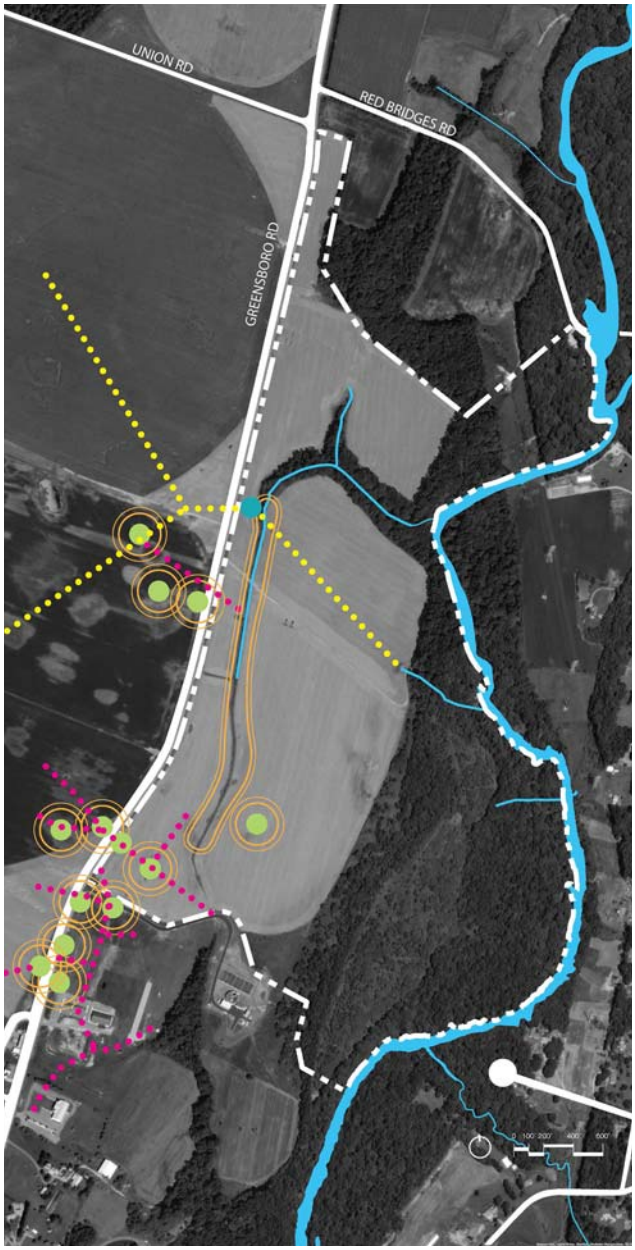
The site overlaps with a portion of the Upper Choptank River identified as rare species' habitat for the state-listed endangered plant Upright Burhead (Echinodorus cordifolius) and state rare Deciduous Holly (Ilex decidua) documented on an adjacent parcel. It is likely that these species could occur on the project site in appropriate habitat areas. Maryland Department of Natural Resources Wildlife & Heritage (MDNR-WH) staff are already coordinating with Caroline County Department of Recreation and Parks regarding potential protection measures regarding these species.

The MDNR-WH indicated that the forested areas within the proposed park boundary contain Forest Interior Dwelling Bird habitat. These guidelines, which affect the location and timing of tree clearing during development, are typically voluntary outside the Critical Area and mandatory within the Critical Area.



Buteo lineatus
Red-shouldered hawk





DRY WELLS & DRAIN TILES

The majority of the site's level areas have been in cultivation since the 18th century or before. As in many parts of the county, farmers dealt with poor drainage by constructing drainage ditches and by placing perforated vitrified clay drainage pipes (drain 'tiles') within fields below the plow line. The drain tiles either drained into the ditches or into dry wells. These were holes dug and then often filled with permeable sand, gravel, or similar materials that can hold water and slowly allow it to percolate away. A Ditch Map was obtained from the Maryland Soil Conservation Service which maintains records of these improvements. This map is reproduced on the site map at left, and shows the approximate location of ditches, drain tiles, tile lines, and dry wells that facilitated agriculture within the project site. The location of these facilities is not precise as the records do not represent surveyed locations.

The ditch within the agricultural field that runs adjacent to Greensboro Road contains intermittent and perennial stream flow and non-tidal wetlands within the southern reaches before transitioning into an unnamed Use 1 stream, tributary to the Choptank River near the woods line to the north. This feature is likely considered jurisdictional by MDE and USACE, and any proposed impacts during construction would likely require authorization from MDE and USACE.

Several potential dry well sites are identified on site and abandonment of the wells during site development may require coordination with the MDE Water Management Administration. The removal of drain tiles may require review and approval by MDE and USACE, depending upon the location of any adjacent regulated resources.

LEGEND

- Pumphouse
- Dry Well
- Tile Line
- Ditch
- Irrigation Pipeline

ARCHAEOLOGICAL ASSESSMENT

ENVIRONMENTAL SETTING

The project area is located within the Denton Plain district of the Coastal Plain physiographic province. This zone is characterized as an area of low topographic relief that serves as a drainage divide between the Chesapeake and Delaware Bays (Reger and Cleaves 2008). The project area is located within the Upper Choptank watershed (MDE 2019). The closest water source is the Choptank River, which forms the eastern boundary of the property, and two unnamed tributaries (possibly spring-fed) of the Choptank that are situated entirely within the subject property. Topography within the project area consists mostly of broad upland terrace, with well-defined step terraces along the Choptank River. The northern portion of the property contains a bluff of 30-40 feet above the river, while the southern portion tapers more gradually along the riverbank. Elevation within the property ranges from 15-40 feet above mean sea level (AMSL).

The Natural Resources Conservation Service maps 13 different soils within the project area, the most common is Ingleside sandy loam (IgA, IgB), which account for over 25% of the property (NRCS 2018). Soils are generally well drained within the western upland, with pockets of poorly drained soils flanking the drainages or in the low area in the southeast portion of the property that flanks the Choptank River. Approximately 50% of the property is in open, recently cultivated fields, while the rest is wooded or successional areas.

METHODOLOGY

The archaeological assessment consisted of documentary research, informal interviews with local informants, a site walkover/pedestrian survey, and the preparation of this assessment report. Documentary research was conducted using the following online archives and collections: MEDUSA, the cultural resources GIS portal, The Library of Congress (American Memory Collection), and United States Geological Survey (USGS) (The National Map).

No archaeological excavation was conducted as part of the assessment. A site walkover was conducted to confirm the conditions of the project area and to photographically document the property.

ARCHAEOLOGICAL POTENTIAL

An archaeological predictive model uses environmental factors from the locations of previously identified archaeological sites to extrapolate the likely locations of sites that have yet to be found. Potential is identified on a scale of high, medium, and low. Modern or historical disturbance to an area can lessen the integrity of archaeological sites, but does not affect the archaeological potential for sites to exist in a given location. Based on generally accepted predictive models, the most likely location for prehistoric period habitation sites is on relatively level, well-drained soils within 150 meters of fresh water, particularly at stream confluences and headwaters.

Historic period archaeological sites are more accurately defined through cultural rather than environmental variables. Means of transportation are keys to the presence of domestic and industrial sites. These sites are usually situated within 100 meters of an historic roadway or navigable waterway. Historic maps and aerial photographs are effective in documenting changes in the development of towns since the mid-nineteenth century.

Probability is a measure of the likelihood that an archaeological deposit exists at the time of survey. The presence of modern or historic disturbances can lower the chances of encountering intact deposits. It is possible for a given area to have a high potential based upon environmental factors and a low probability based on comprehensive soil disturbances. Because the likelihood of encountering intact resources would be low, the overall potential to yield significant data is lowered.

PREVIOUS INVESTIGATIONS

The online review of archaeological survey data utilizing the Maryland Cultural Resources Information System (MEDUSA) found that no recorded archaeological sites are present within the subject property and that the property has not been the subject of a previous archaeological investigation. Eight previous archaeological surveys have been completed within two miles of the project area (Emery and Ross 2012; Ervin 1993, 1998; Heite 1982; Lowery 1997; Shellenhammer et al 2016; Tyrer and Muir 2018; Wesler et al 1981). Half of the surveys were conducted for roadway improvement projects, two were wide ranging research projects, and two were conducted in association with utility projects (a solar farm and a wastewater treatment facility).

ARCHAEOLOGICAL SITES WITHIN ONE MILE OF PROJECT AREA

SITE #	LEVEL OF SURVEY	LANDFORM	DESCRIPTION (P=PREHISTORIC; H= HISTORIC)
18CA77	Phase I	Floodplain	P: nondiagnostic lithic scatter H: unspecified historic artifact scatter
18CA78	Phase I	Floodplain/ Upland Flat	P: Archaic period lithic scatter
18CA89	Landowner; state review	Interior Flat	H: 19th century family cemetery
18CA110	Phase I	Ridgetop/High Terrace	P: Late Archaic period short term camp
18CA111	Phase I	Ridgetop	P: Late Archaic period short term camp
18CA112	Phase I	Ridgetop	P: Early Archaic period short term camp
18CA113	Phase I	Ridgetop	P: nondiagnostic short term camp
18CA114	Phase I	Ridgetop	P: nondiagnostic lithic scatter
18CA174	Phase I	Ridgetop	P: Early and Late Archaic and possible Woodland period short term camps H: 20th century dump
18CA240	Phase I	High Terrace	P: nondiagnostic lithic scatter H: Mid 19th-Mid 20th century artifact scatter
18CA241	Phase I	Low Terrace	P: nondiagnostic lithic scatter
18CA245	Phase I	Upland Flat	H: Late 19th-Early20th century artifact scatter

PREVIOUS INVESTIGATIONS

A total of 12 archaeological sites have been identified within two miles of the project area. All but one were identified as the result of a professional archaeological survey, with the remainder being an accidentally encountered cemetery. These sites are typically interpreted as non-diagnostic or Archaic period lithic scatters containing stone refuse from tool-making. They do not have artifacts datable to a specific time period. Historic period sites are farmsteads or artifacts scatters dating from after 1850. Six of the sites were identified by Lowery (1997) with some reported to have significant numbers of diagnostic artifacts. Two of the sites were tested further by surveys that failed to recover any diagnostic prehistoric artifacts (18CA78 and 18CA174).

PREHISTORIC COMPLEXES & PHASES

PALEOINDIAN 13,000 BP - 11,500 BP	ARCHAIC 11,500 BP – 4,850 BP	TRANSITIONAL 4,850 BP – 2,800 BP	EARLY WOODLAND 2,800 BP – 2,100 BP
• Cold and dry climate; open spruce and pine forests • Populations are small family bands of approximately 15 individuals • Tools consist of spears, hide scrapers, woodworking scrapers, knives, and choppers; cherts and jaspers are preferred over other stone materials due to more durable edges • Hunters and gatherers travel over large territories of 75-250 miles exploiting the most easily gathered foods	• Warm and wet climate; broad leafed nut-bearing trees filled the forests • Populations steadily increased • Tools consist of spears, spear throwers, axes for woodworking, net sinkers for fishing, and grinding stones for processing seeds and nuts • Hunters and gatherers travel over smaller territories of 50-100 miles	• Warm and dry climate; less predictable food resources • Hunting, gathering, fishing, and gardening; travel in territories of 25-75 miles • Extensive trade network in the Mid-Atlantic develop • Population pressure results in significant technological changes including steatite bowls used as cooking containers and large, broad-bladed points and knives (Broadspear technology)	• Warm and wet climate • Possible decrease in populations, but data is poor • Fewer base camp movements and more permanent settlements • Fired clay pottery is introduced to the tool assemblage • Hunting and fishing continues, evidence of flour production from gathered seeds • Gardening intensifies using a variety of plants such as maygrass, knotweed, chenapodium, squash, and little barley
CULTURAL PERIOD			

PREHISTORIC CONTEXT

There are three general prehistoric cultural traditions recognized in the Mid-Atlantic region: Paleoindian, Archaic, and Woodland. Originally developed as cultural historical units primarily intended to classify temporal and spatial site attributes, these traditions are defined by diagnostic artifact forms and assemblages. In more recent years, this scheme has been modified to emphasize cultural adaptations to changing ecological conditions. While the various terms continue to be used, their use is now as much behavioral as classificatory.

MIDDLE WOODLAND 2,100 BP - 1,000 BP	LATE WOODLAND 1,000 BP – 1,550 AD	CONTACT 1,500 AD – 1750 AD
• Warm and wet climate • Possible decrease in populations, but data is poor • Fewer base camp movements and more permanent settlements • Fired clay pottery is introduced to the tool assemblage • Hunting and fishing continues, evidence of flour production from gathered seeds • Gardening intensifies using a variety of plants such as maygrass, knotweed, Chenopodium, squash, and little barley	• End of the Medieval Warming and beginning of the Little Ice Age • Native American populations reach their maximum size • The bow and arrow becomes the dominant tool for hunting; pottery becomes progressively thinner, more durable, and culturally distinctive; ornamental items appear, stone and earthenware pipes become common • Hunting, fishing, and gathering of wild foods continues along with and increasing dependence on domesticated plants such as corn, beans, and squash • Settlements increase in size from a few houses to villages with a circular plan and up to fifty family-size houses surrounding a central plaza; some villages consist of longhouses that include large extended families	• Little Ice Age; generally cool or cold with periodic warm periods • A time of cultural transition • Native American tools are replaced with European equivalents • Significant cultural boundaries exist between Europeans and Native Americans and at times they exploit each other for mutual gain • By the end of the mid-18th century, tribal life by Native Americans ends by a combination of warfare and disease

DENT 1996

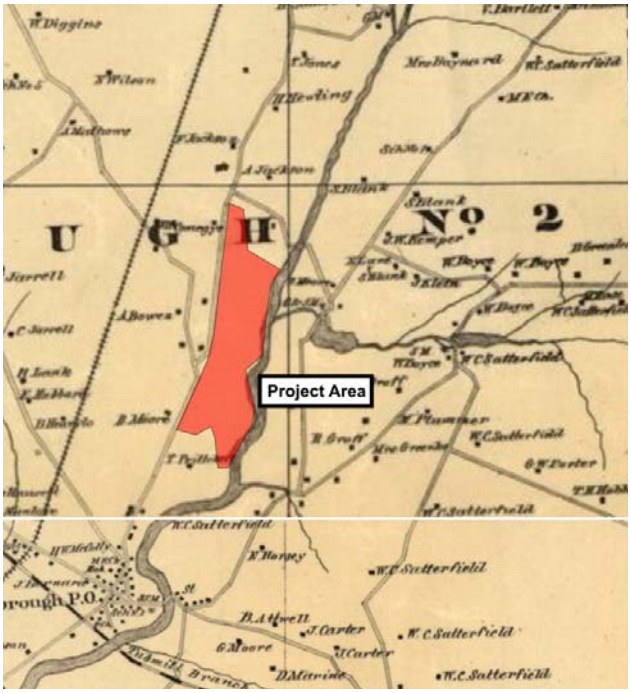
HISTORIC CONTEXT

European exploration of the Chesapeake Bay and Eastern Shore first occurred in the late 16th century, when Giovanni Verrazano mapped the eastern seaboard and John Smith mapped the Chesapeake Bay. Smith, in particular, created a detailed and relatively accurate map that documented native settlements, although it appears that he did not venture up the Choptank River. By 1631, William Claiborne, expanding out from the English colony at Jamestown, instituted a trading post in the Chesapeake on Kent Island. This was followed by the settlements of St. Mary's (1634) and Providence (1649) on the Western Shore of the Chesapeake. The pattern of English settlement worked from the confluence of the Chesapeake Bay and various rivers proceeding upstream to interior lands. Land patents were issued for tracts in the southern part of what is now Caroline County beginning in the 1650s. Those that are situated around Greensboro, including the project area, were first patented between 1665 and 1695. During the next hundred years, as the settler population grew, native tribes became marginalized until, by the end of the 17th century, only the Nanticoke and Choptank tribes were present on the Eastern Shore. The Treaty of Lancaster in 1744 further curtailed the rights of Native Americans, who by that time were relegated to three reservations.

During the earliest period of colonial settlement, the economy was based upon trade with the native population, primarily in beaver pelts. As settlement spread and tracts of land were patented and became occupied, the cultivation of crops, primarily tobacco, became the focus of the regional economy. The prominence of tobacco was not to be overtaken until the mid-19th century. The changeover was mandated by the successively smaller yields gained from the soils depleted by tobacco cultivation. By 1840, no tobacco was being produced by Caroline County. With the decline of tobacco cultivation and the need for large labor pools, the number of enslaved individuals declined dramatically and the size of land parcels began to shrink. Breakthroughs in food preservation technology, transportation, and factory production led to the development of the fish canning industry, which prospered in Caroline County in the second half of the 19th century. During the early 20th century, a statewide effort was initiated to make roads passable to automobile traffic, including the construction of hundreds of bridges and improvement of roads. The second quarter of the century saw the push for rural electrification and telephone service. The opening of the Chesapeake Bay Bridge in 1952 opened the Eastern Shore to beach tourism and provided a connection with the rest of the state.

The reliance on tobacco informed the development of towns across the Eastern Shore, with small town cores surrounded by large agricultural holdings. In 1732, in order to facilitate the tobacco trade, a town was chartered at the headwaters of the Choptank that would include a tobacco warehouse. Bridgetown was formed as a result, although the population of the area was insufficient to maintain the town, and the lagging economy of the area caused the town to fail. In 1740, the land reverted to its original patentee. By 1778, lots for a new town, Choptank Bridge, were sold on land adjacent to the former Bridgetown, which was renamed Greensboro in 1791. During the 19th century the population rose steadily as the agrarian economy flourished.

There are 35 previously identified architectural resources within one mile of the subject property. Of these one is listed on the National Register and two have been determined to be NR-eligible. The NR-listed Leonard House (CAR-116), constructed in 1832, is significant due to multiple architectural embellishments that are rare to find in Maryland and is characteristic of the 2nd quarter of the 19th century. The Greensboro Historic District (CAR-264) consists of approximately 150 contributing elements dating from 1793 to the early 20th century, that characterize the growth of Greensboro from a rural community that was self-sustaining to a larger food processing town that expanded beyond its residents. It was determined eligible for the NRHP by MHT in 1991. The A.A. Christian House (CAR-287) is a circa 1902 well-preserved Shingle/Colonial Revival style house that is unlike the neighboring houses in Greensboro. It was determined to be NR-eligible due to the architectural style and high integrity that it retains. A.A. Christian purchased land including our parcel from Edward W Linden on December 18, 1900 and retained the land in his name until 1971.



1875 John Isler *Map of Caroline County, Maryland*

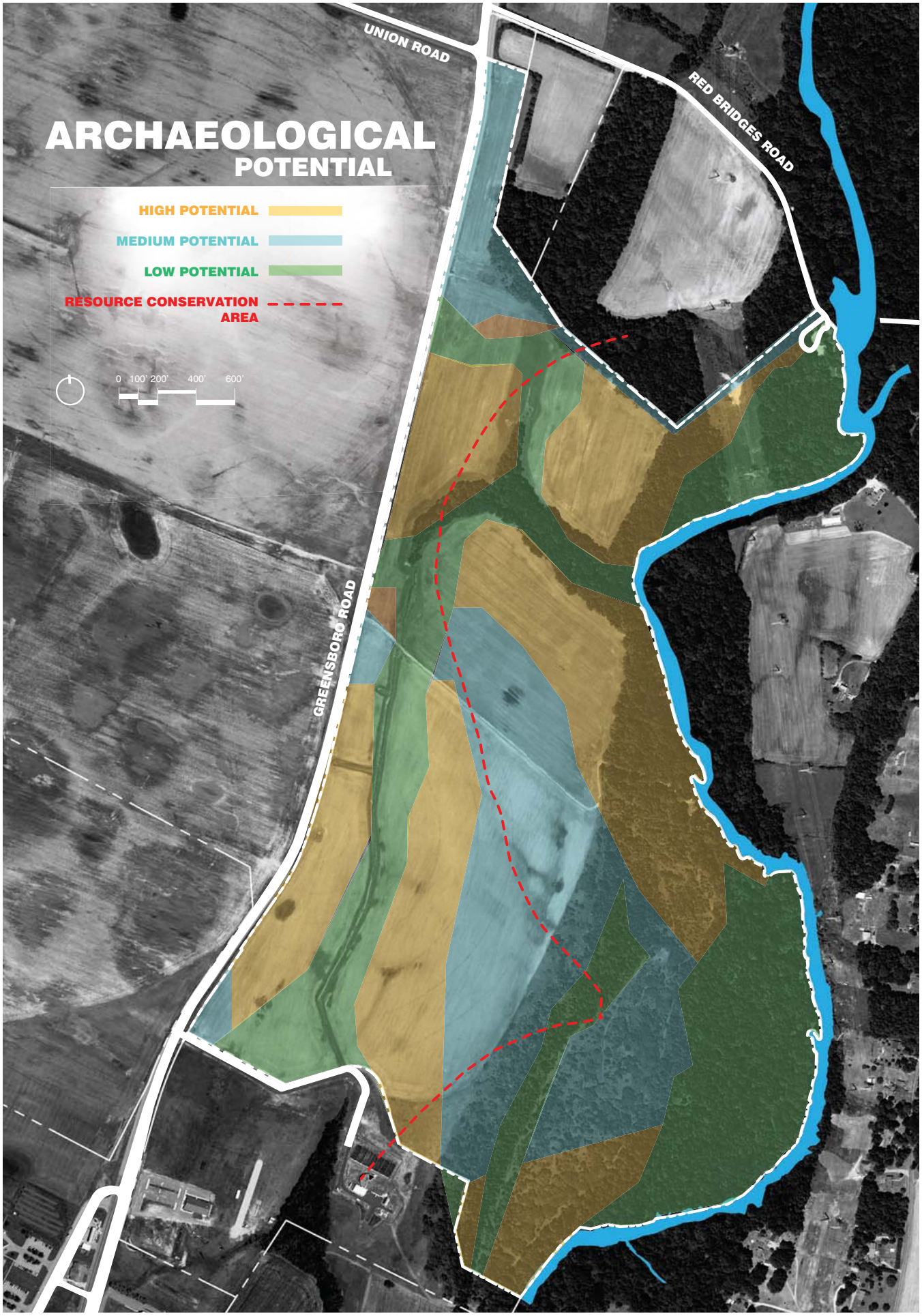
2000-Present

1950-1999

1900-1949

1850-1899

Grantee		Grantor	Liber	Folio
Caroline County	2016	Schiff Farms LLC	1196	478
Schiff Farms, LLC	2004	Richard D Spiering	529	655
James W Schiff	1991	Estate of Walter A Schiff	247	459
James W Schiff	1979	Walter A Schiff	206	279
Walter A Schiff	1974	Albert F Cooper	184	61
Albert F Cooper	1971	Morton Sunderland	174	267
Morton Sunderland	1971	Albert F Cooper	174	263
Addison A Christian	1900	Edward W Linden	66	74
William C Satterfield	1883	George Melvin (trustee)	46	467
Margaret M Pritchett	1863	Thomas T Moore		


ARCHAEOLOGICAL
POTENTIAL
HIGH POTENTIAL
MEDIUM POTENTIAL
LOW POTENTIAL
RESOURCE CONSERVATION AREA
0 100' 200' 400' 600'
UNION ROAD
RED BRIDGES ROAD
GREENSBORO ROAD

RESULTS OF ASSESSMENT

A pedestrian survey of the property was conducted to verify land conditions and determine whether any noticeable surface conditions were consistent with the presence of cultural resources. About one half of the project area is in open, recently cultivated fields, which provided good vistas and surface visibility. Some low lying wet spots are visible, but overall the fields appear well drained, likely the result of enhancements made to the natural drainages that cross the property and drain into the Choptank River.

The other half of the project area is within woods or scrub overgrowth; though it is likely that these areas were also once cleared and used for agriculture. The northern portion of the project area contains a bluff overlooking the Choptank, while the central and southern portions have lower banks along the river. The southeastern portion is low and wet as is a narrow strip along the center.

Visible findings observed during walkover:

- Prehistoric lithic materials, possibly a result of stone tool making, were observed but not collected in areas in close proximity to drainages that flowed into the Choptank.
- Historic period debris, including metal fragments and a few visible bottles, was present in low quantities, and it is uncertain whether surface debris observed is related to an actual occupation/house, or if it is related to trash and debris dumping from a different location. (No diagnostic artifacts were observed and no samples were collected.)

An examination of the soils and proximity to water were used to compile the assessment of prehistoric archaeological potential. Because there was little overall topographical relief, excessive slope was not a factor in assessing archaeological potential. The review of historical maps and the deed history were also used to determine historic period archaeological potential.

The entire parcel is assessed as having a medium potential for historic period deposits, as it remains uncertain if it was occupied or developed prior to 1863. It appears well established that there were no landowner occupations during the 18th through 20th centuries on this property. Greensboro Road appears to have been built late into the historic period, prior to which interior settlements here would have been dispersed due to a lack of formal roads. The historic navigability of the Choptank at the project area is not known, but research indicates a tobacco warehouse present at the site of Greensboro in the 18th century, which would suggest it was navigable at least to that point. There is a documented presence of a mill to the north of the project area. Accordingly, the possibility of early historic period use of the property cannot be discounted.

Archaeological data is a valuable tool in developing the NCRP Master Plan. Caroline County has a history that is preserved in the surrounding towns and farms. In addition to the array of above-ground historic architectural resources that convey the County's past, there is a relatively unexplored archaeological past that encompasses thousands of years of Native American history. While local residents are aware of the presence of artifacts, few sites in the region have been systematically studied and remain relatively unknown as to content, chronology, function, or cultural affiliation.

In the master planning stage, the knowledge of the cultural history of the property may be used to inform the development and selection of plan components. Cultural history can be actively or passively promoted to the public; however, there are related County management and stewardship considerations for protecting and preserving archaeological sites that may exist on the property.

RECOMMENDATIONS

- **Consult with federal/state and local entities early in permitting process.**
- **Propose plan for archaeological studies on site:**
  - **(1) staging plan to move with development or**
  - **(2) site-wide study to occur with in a set time.**
- **Identify and evaluate archeological site.**
- **Provide mitigation.**
- **Curate artifacts found on property.**

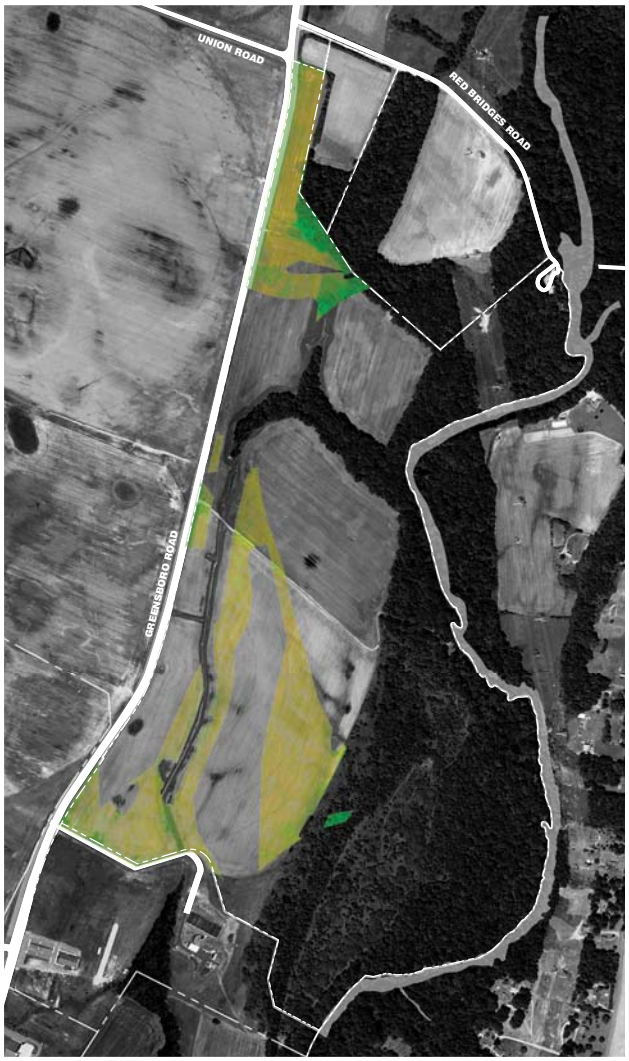
MASTER PLAN GOALS

From the answers to the three questions, what can the site support, what does the public want, and what does good planning recommend, the planning team and committee synthesized three key goals that should be met in the creation of master plan alternatives. They are:

Minimize impacts to resources:
The adjacent graphic depicts (in color) the areas where development is likely to be possible without variance or mitigation. It omits wetlands and their buffers, areas of high archaeological probability, and the Resource Conservation Area.

Maximize program elements:
Three concept plans were developed around the themes of Nature, Heritage, and Athletics. Each of these plans included program elements relevant to their respective themes (ie. sports fields for Athletics, education center for Heritage). To optimize the master plan, ideas from all three concepts were considered. The design team attempted to include as many program elements into the plan as were supported by the surveys and public input.

Maximize Flexibility:
Master planning is a changing and evolving process that benefits from flexibility. Legacy parks typically take years to fully complete. If the desires of the public, county requirements, or park budget change during the process, a good master plan adapts to meet those changes.



MINIMIZE IMPACTS TO RESOURCES

- retest layout of activities based on impact overlay

MAXIMIZE PROGRAM ELEMENTS

- refine program based on public input

MAXIMIZE FLEXIBILITY OF DEVELOPMENT

- assess cost & phasing possibilities

CONCEPT DEVELOPMENT

Concept development began at the planning kick-off meeting with the collaboration of NCPMPAC, Caroline County Recreation & Park Staff and Board and the planning team.

The team's analysis revealed three prominent 'themes': Nature, Heritage, and Athletics. These were evident in both the nature and resources of the site and is what the public expressed in the surveys and through the advisory committee. The development of three schemes based on these themes exposed alternatives to potential program elements and their arrangement. The final plan incorporates elements from each scheme, but the thematic organization allowed for ideas to be tested in a way that demonstrates to the public that all alternatives were considered.

The team's analysis revealed unique transitions between landscape types not present in other local parks. This indicated a need for a design scheme focused on nature. NCRP contains distinctive topography with almost 50 feet of change across the site and landscape types including wetland, stream, riverfront, ravine, forest, and open field. The landscape features combined with regulatory restrictions on development within the Resource Conservation Area, the 100 year flood plain, and any impacts to wetland/waterways on the park site make preservation and conservation of this *natural* landscape important.

The residents of Caroline County expressed the importance of experiencing nature on the site through the online survey. In the survey over 50% of participants said they would "like to use the park to access the Choptank River for water-based activities" and would use the park trails to "observe nature". In addition survey respondents overwhelmingly wanted to use the park to access the Choptank River to walk on the riverfront (72%), kayak (57%), fish (56%), observe nature (51%), and canoe (38%).

The investigation for a scheme focused on athletics began with the verbal interest expressed by NCPMPAC members. The athletics theme advanced when over 35% of survey respondents confirmed they would likely "play sports on ball field or court". Upon further investigation, the online survey showed mixed opinions about the need for sports fields and courts. 161 respondents said their families were likely to participate in sports, however when the entire survey group was asked, "what organized field or court sport would you most likely play at the park," 151 respondents claimed they were not interested in this type of design program. Although the survey did not refine respondents answers by asking "why" questions, several of the NCPMPAC members suggested that there is sufficient existing field space in Caroline County and other members proposed that the community's knowledge of the distinct landscape features within the park may have swayed participant's answers for park programming.

The athletics theme has the breadth to include walking/running on trails, kayaking/canoing, playing on a playground and other non-field related sports. The design team polled respondents to find out additional sports not played on a field or court: zip-line (50%), swimming (48%), splash pad/spray grounds (44%), challenge/ropes course (44%), exercise stations (37%), yoga/tai chi/other group exercise (23%), sledding on a hill (32%), and skate park (12%).

Although the survey reported mixed opinions on field/court sports, the appeal of the athletics theme to Caroline County residents was apparent through the response volume on the non-field related sports question. The question disclosed a participation rate of 427 people, of which 1,201 votes were cast with only 21 votes attributed to "not interested".

The most suitable development area for field sports and courts is in the middle, southern half of the site outside (or with minimal overlap into) the Resource Conservation Area, and with no interference to wetland/waterways or buffers. The suitable development area is located within areas considered to have high and medium archaeological potential. Special design considerations and collaboration with regulatory agencies will be necessary to incorporate field sports and courts.

The interest in a heritage design scheme emerged through conversations with NCPMPAC during the monthly meetings (7). Members discussed the importance of preserving agricultural and local heritage and providing a place for the community to celebrate indigenous culture of the region.

Large areas of the site are considered to have medium or high archaeological potential.

The online survey asked "which activities offered…would you most likely participate in?" 35% of the votes cast selected "indoor facilities." A follow up question addressing the types of facilities users would likely visit revealed 53% of the votes were attributed to a community center with a gym, 32% for a museum explaining the history of the area and 20% for an agricultural museum. With this data, the design necessitates the flexibility to incorporate a building.

NATURE

HERITAGE

ATHLETICS

NATURE

The design team crafted an experience which celebrates but shows sensitivity toward the site's natural features and unique species of flora and fauna. New trails, observation areas, and a boat launch were incorporated into the existing forest and along the Choptank River to enhance the visitors' relationship with the park's wildlife and support activities such as fishing and birdwatching. New meadow and forest were included to augment and diversify the habitat offerings in the park. Permanent structures and hardscape were relegated to outside of the Resource Conservation Areas and wetland buffers to preserve their integrity.

HERITAGE

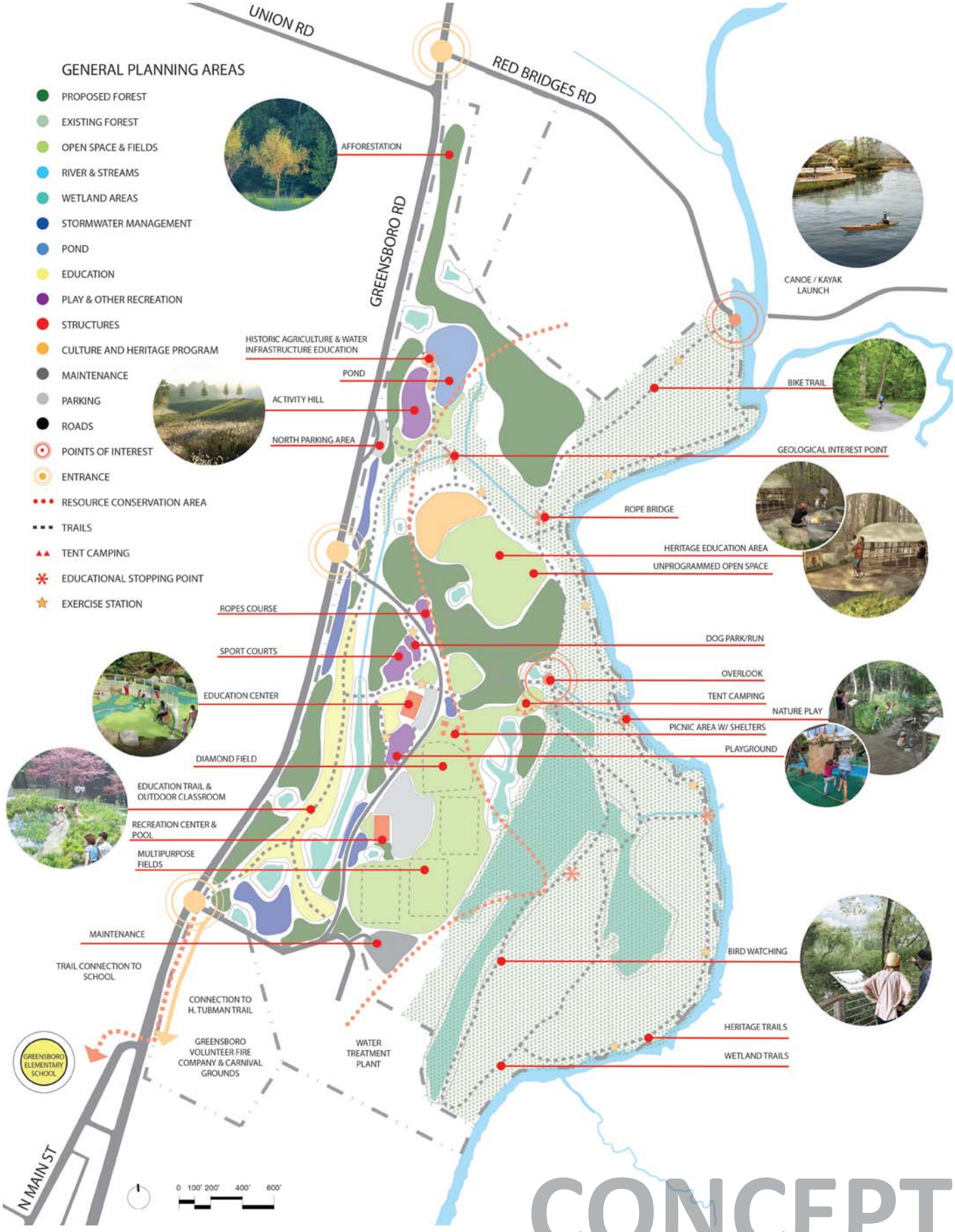
Research and archaeological reports revealed a rich story of the site's history and historic context and pointed to areas where artifacts might still be lurking. The design team weaved the park's story into the visitor experience. Signage along the woodland and waterfront trails would depict historic events in their actual or approximate location. The park shelters serve as a curatorial space and house artifacts found on site.

Part of designing for heritage was choosing where *not* to design. No permanent structures were proposed within the area of high archaeological potential.

ATHLETICS

The 2017 Land Preservation, Parks, and Recreation Plan for Caroline County identified providing new multipurpose, rectangular fields as a top priority. This was confirmed in meetings with the advisory committee and stakeholders as well as in survey responses. Of the options for types of sport facility, 41.26% of survey responses indicated a desire for a rectangular field, 28.9% for a diamond field, and 20.28% for a basketball court.

The design team identified locations on the site where the desired sport facilities might be suitable. The flat character of much of the parcel provided an opportunity for diamond and rectangular sports fields as well as a basketball court.



CONCEPT DEVELOPMENT

MASTER PLAN

The master plan on the facing page synthesizes the concept development and represents how the park may look in the future. It was conceived as a long term and flexible plan to be carried out in phases. As community input changes, the park design may change as well. It locates places for **Nature**, **Athletics**, and **Heritage** and suggests spatial relationships between the key features of the plan. Those key features are as follows:

1. Road Frontage:

Greensboro Road is the face of the park but is also a safety concern. Providing a planting buffer that was both visually pleasing but also protective was a critical part of designing the road frontage. The long, linear character of the road frontage offered a unique programming opportunity. The frontage is over a mile long and lent itself to designing open areas which accommodate **athletics** such as foot or disc golf intermixed with naturalized areas like meadow and tree plantings. At the southern entry to the park, a pond provides a fishing area for children and manages storm water.

2. Waterfront Access

Accessing the waterfront is already a key way the site is used and it was important that the master plan celebrate and enhance this use. A new parking lot and turn-around off of Red Bridges Road is proposed to ease boat launch and as a trailhead for a waterfront trail. 72.26% of survey responses indicated an interest in walking along the river front, 56.41% in fishing, and 51.05% in observing **nature** there. A waterfront trail supports these interests and provides a place, with signage and exhibits, to tell the park's **heritage** story.

3. Sport Areas

Based on the high interest in rectangular fields, and in paved court areas for basketball, tennis, and pickleball indicated in the survey responses, the design team incorporated a sports area into the park master plan. The team identified the large, flat area outside of both the critical resource area and the area of high archaeological potential as a place for sport amenities. Picnic shelters and playgrounds intermixed with the sport fields provide additional amenities. Similar to the recommendation for park facilities elsewhere on the site, the number and selection of field and court types demonstrate a balance between multiple criteria. These facilities reflect the results of the public engagement process, the existing and planned locations of such facilities within the County as recommended by the 2017 Land, Preservation, Parks and Recreation Plan, and the ability to site those facilities on site economically and without undue environmental impacts.

4. Ravine

The ravine where the tributary stream meets the Upper Choptank River has dramatic grade change and views of the river. The design team took advantage of the topographic character to provide observation decks and a bridge across the ravine. The bridge keeps the waterfront trail intact and adds a node for **nature** observation.

5. Resource Conservation Area

Within the resource conservation area, the planning team proposed design ideas which were low impact, temporary, and beneficial to the existing species and natural resources within it. These ideas included soft-surface (ie. grass or mulch) trails, elevated walkways along the waterfront, and aforestation and meadow planting.

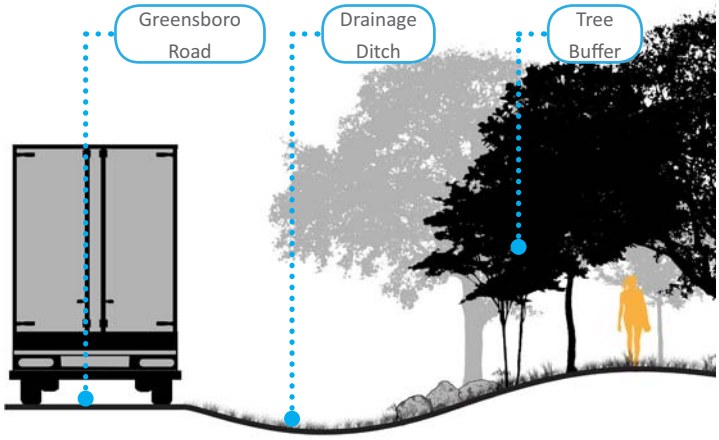

CANOE/KAYAK LAUNCH
FUTURE FIELD SPORTS
MEADOW
RESOURCE CONSERVATION AREA (RCA)
TYPICAL SOFT SURFACE TRAIL
BRIDGE
OVERLOOKS
ROADSIDE BIO-SWALES
DIAMOND FIELD
PERMEABLE PARKING
FAMILY PICNIC AREA & SHELTER
STORMWATER BIO-RETENTION
PLAYGROUND
SHELTER/RESTROOM
TYPICAL HARD SURFACE TRAIL
WETLAND RESTORATION
RECTANGULAR FIELDS
FOOT GOLF/DISC GOLF
ALTERNATE RESTROOM LOCATION
SWM POND
SHELTER/RESTROOM
SHELTER
FISH/SWM POND
SPORT COURT
DOG PARK
OPEN LAWN
MAINTENANCE FACILITY
TRAIL/SIDEWALK CONNECTED TO GREENSBORO ELEMENTARY
NORTH COUNTY REGIONAL PARK
LSG LANDSCAPE ARCHITECTURE
0 100 200 400 600

DESIGN
FOCUS AREAS

DESIGN
FOCUS AREAS

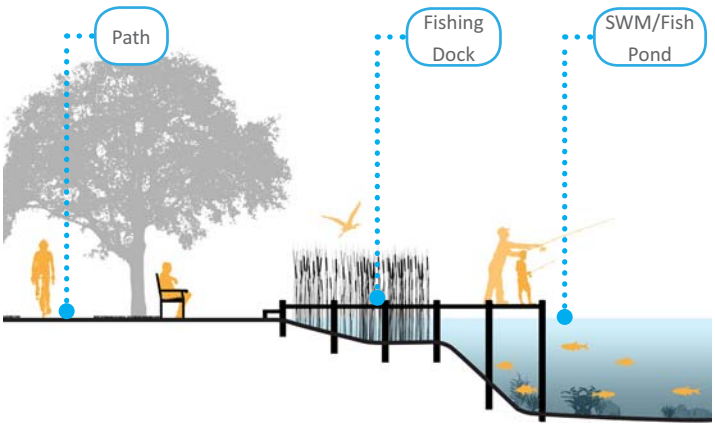
ROAD FRONTAGE

- tree buffer with designed clearings providing view sheds into the park
- linear open space for field games including foot golf and disc golf
- paved perimeter trail
- naturalized treatment areas for storm water runoff
- dog park

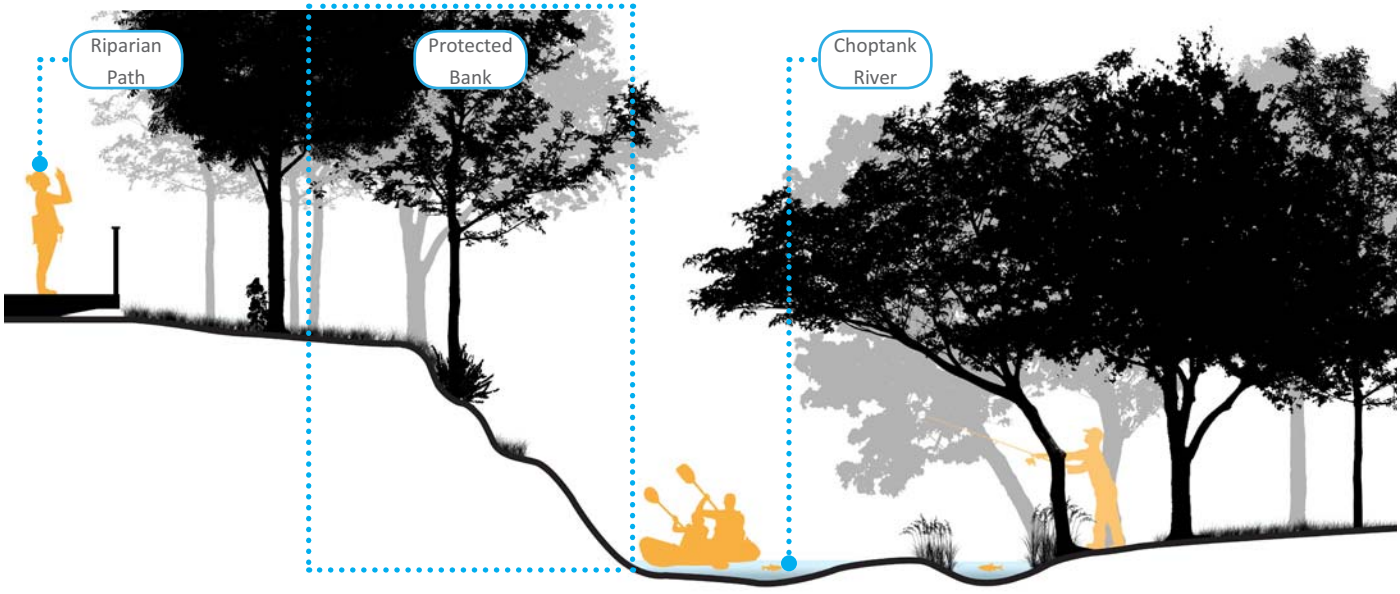


A. GREENSBORO ROAD BUFFER

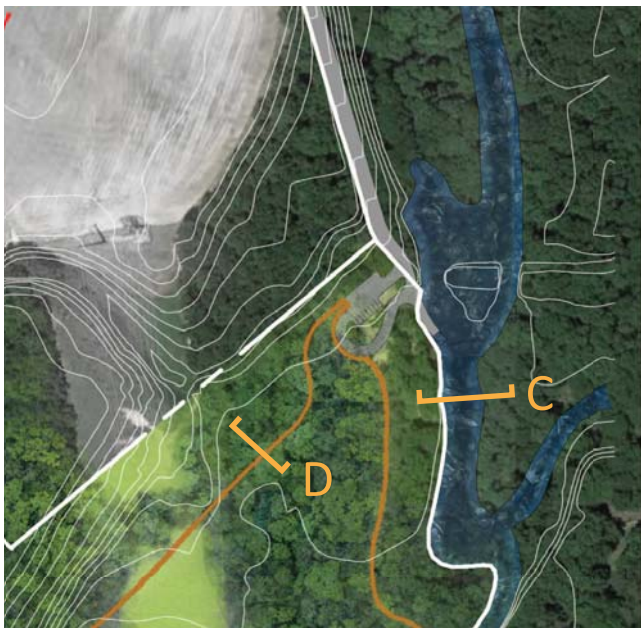
A. OPEN SPACE

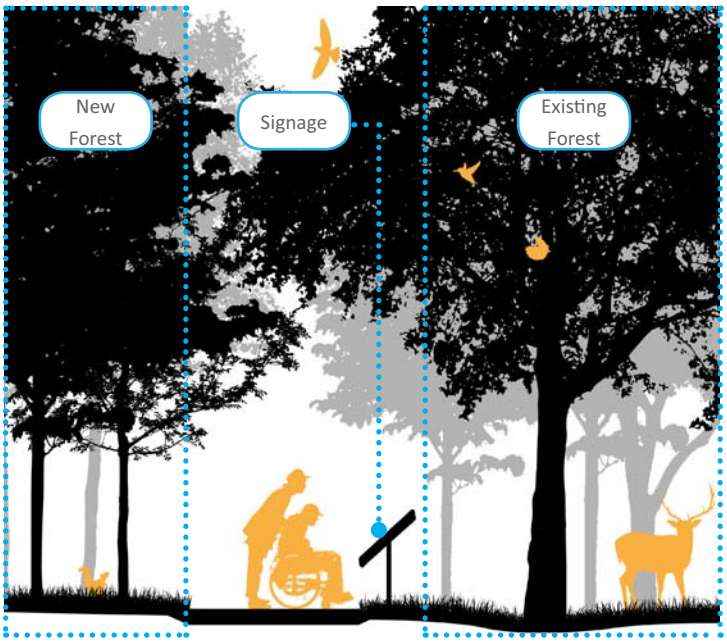


B. STORMWATER POND



C. CHOPTANK RIVER



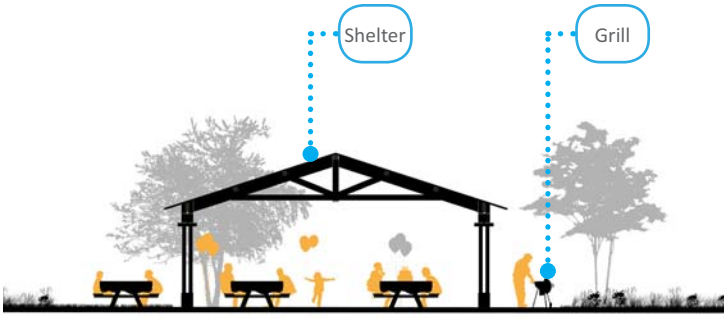


D. WOODLAND PATH

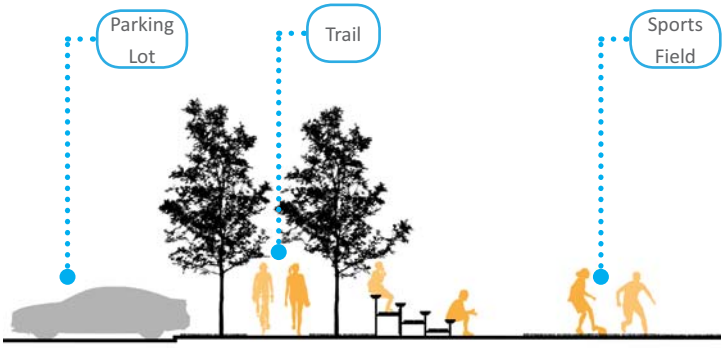
WATERFRONT ACCESS

- development footprint roughly equal to current site
- improvement to Red Bridges Road to access site
- formal non-motorized, small boat launch
- improved parking (may allow parallel parking on improved Red Bridges Road)
- improvements to fish passage at dam
- connection to trails within the park

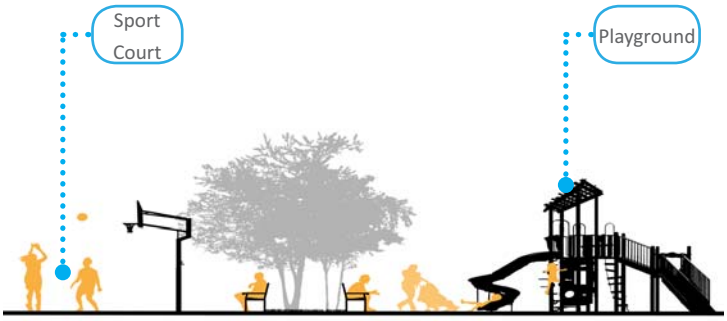
DESIGN FOCUS AREAS



A. PICNIC AREA



B. SPORTS FIELD



C. PLAYGROUND AND COURTS

SPORT AREAS

- 4-rectangular fields
- 1-300’ diamond field
- paved courts
- fields parked at 75 spaces per field
- picnic shelters of multiple sizes located near fields
- restrooms & shade areas

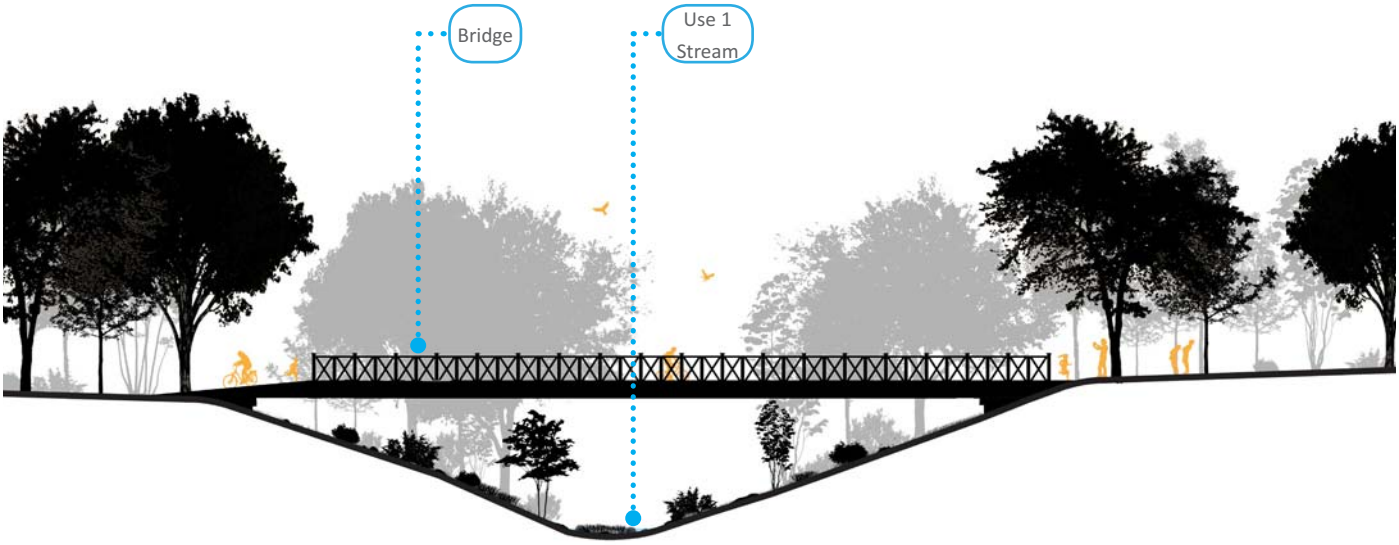
During the master planning process, potential locations for an indoor recreation facility were also evaluated. The survey and advisory committee process showed significant support for the eventual construction of some type of central indoor facility. This might be an indoor recreation building housing community spaces, a nature or interpretive facility, restrooms and changing areas to support an outdoor pool or a combination of these.

The best location was determined to be one that was least likely to encounter environmental and archaeological constraints and was close to available sewer and water. This is in the center of the site's planned developed core. Such a facility would take approximately as much space as one of the planned sports fields and could share in the central parking area with the other fields.

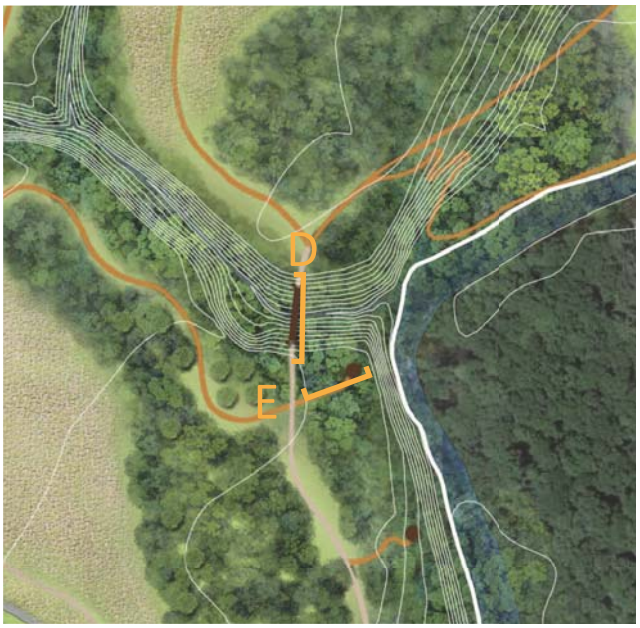
This illustration of this facility is included as future option that may be studied further as resources become available. Such a facility is consistent with the health, wellness and other goals of the 2017 Caroline County Land Preservation, Parks and Recreation Plan. However, that Plan considers indoor facilities as "secondary deficits" and the plan encourages the County to seek opportunities and partnerships that would provide additional indoor gym space without constructing new facilities. Thus, this facility is not included in the final illustrated plan, and is not part of the phasing plan capital improvement estimate included later.

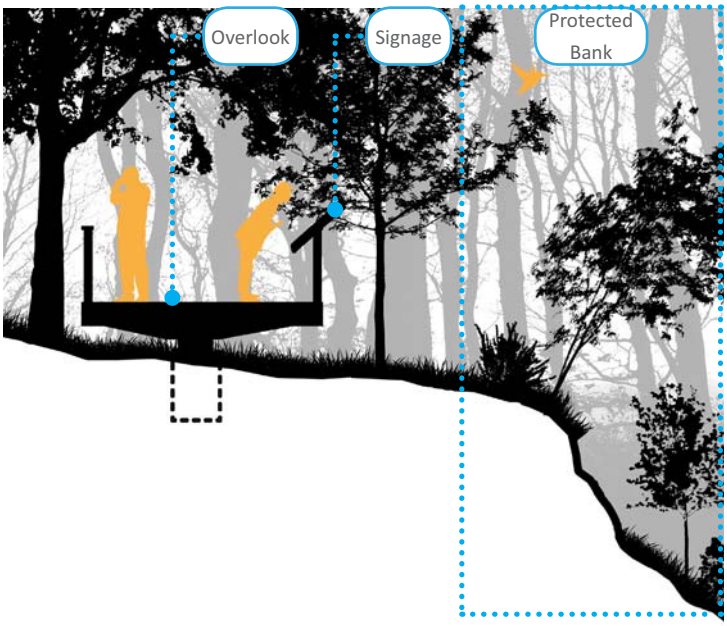
COMMUNITY RECREATION CENTER AND POOL OPTION

- sited to be in low - medium impact
- typical center shown is 20,000 - 30,000 gsf
- parking is typically 4 spaces/1,000 gsf
- additional parking shown
- pool area illustrated is 25 meter x 25 yard with zero depth entry area for children's play



D. RAVINE





E. RIVER OVERLOOK

RAVINE

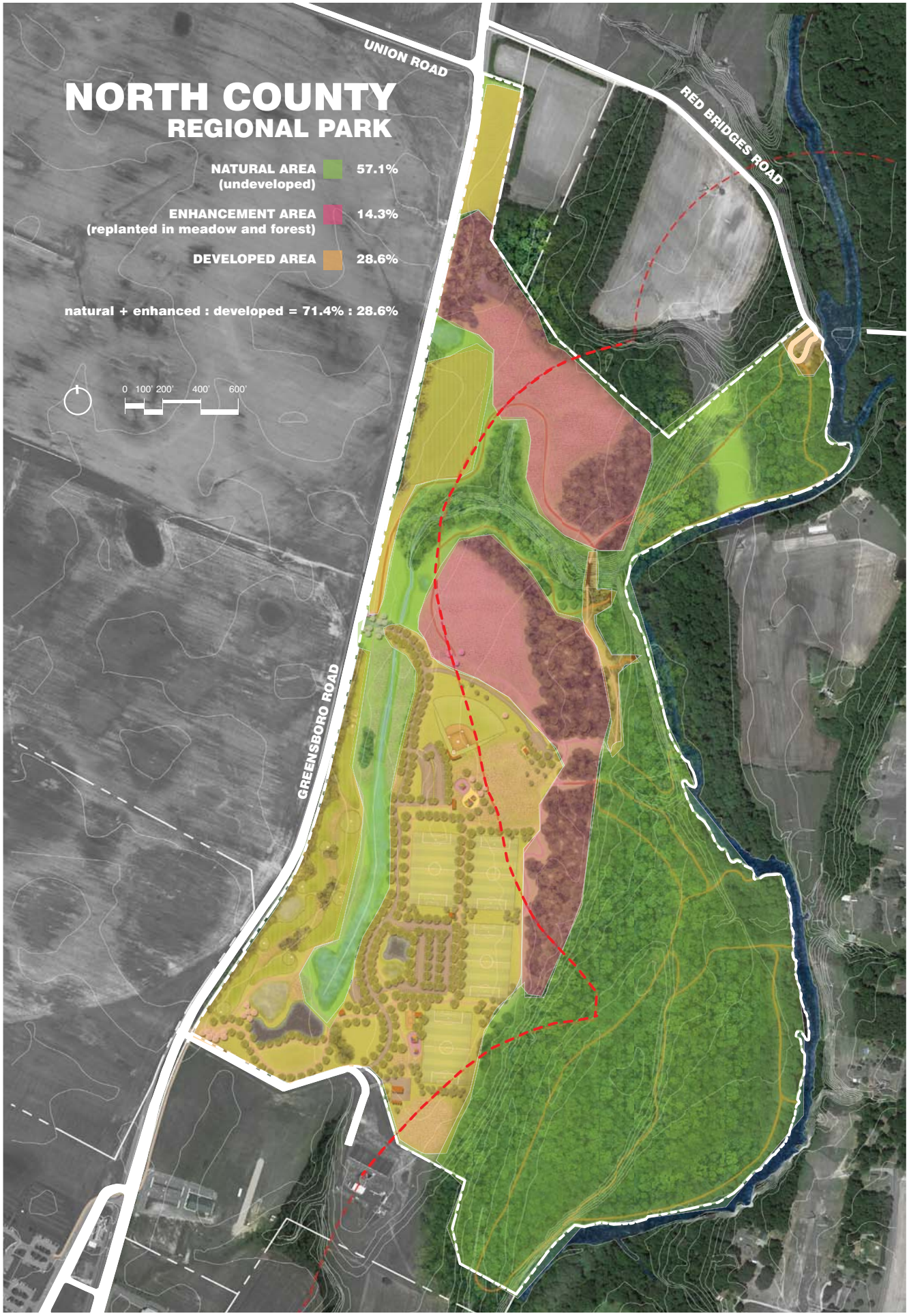
- access to water front
- accessible trail located behind current tree-line to minimize impact to bluff
- trail spurs to waterfront overlooks
- bridge crossing at narrowest point
- accessible parking
- limited impacts within RCA

LAND MANAGEMENT

The Role of a Regional Park:

Caroline County meets its park, recreation and open space needs through the combined resources of the County, the Board of Education and independent towns within Caroline County. In addition, two state parks (Tuckahoe State Park and Martinak State Park), lands owned by non-profits such as the Nature Conservancy, and other properties contribute to the county's open space. However, the largest proportion of resource lands – that including protected resources or those reserved to be developed and used in the future – are owned by the County and managed by the Department of Recreation and Parks. The Caroline County Land Preservation's Parks and Recreation Plan envisions North County Regional Park as the major facility in the northern part of the county, and a significant part of the County's natural resource protection strategy. A large portion of the site - over 61 acres - will be managed as permanent, forested natural resource land under an easement. Additionally, the Maryland Critical Areas Law and the Caroline County Critical Areas Program set guidelines for development of any land within 1,000 feet of the Choptank River tidal waters.

Preserving a large percentage of the lands within a regional park is not unusual for park systems within Maryland and elsewhere. Because these parks are often established for their natural beauty, to protect natural resources or for their historic interest, in addition to providing land for more active uses, they can be quite large compared to neighborhood or community parks. Typically the ratio of land dedicated to resource protection or passive activities and the area designed for active uses, road, parking, utilities and buildings can range from 3:1 to 1:1. At full buildout, North County Regional Park will be within this range, projected to be approximately 70 percent in forests, wetlands and managed meadow areas, all accessible by trails and 30 percent developed in active recreation, roads, parking and built facilities.

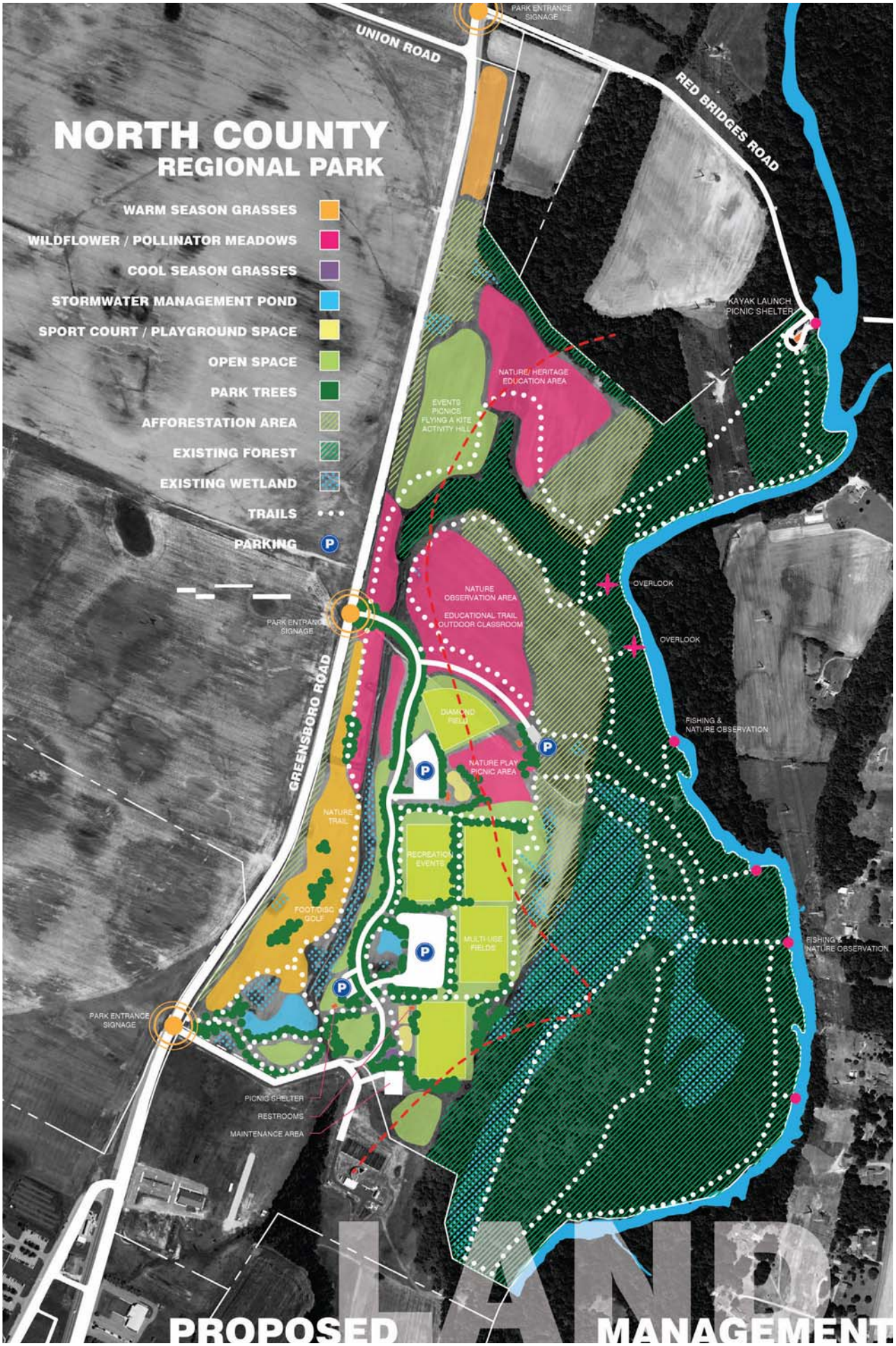

NORTH COUNTY
REGIONAL PARK
NATURAL AREA (undeveloped) 57.1%
ENHANCEMENT AREA (replanted in meadow and forest) 14.3%
DEVELOPED AREA 28.6%
natural + enhanced : developed = 71.4% : 28.6%
0 100' 200' 400' 600'
UNION ROAD
RED BRIDGES ROAD
GREENSBORO ROAD

LAND MANAGEMENT

Supporting Recreation Activities and Conserving Resources:

North County Regional Park serves a dual role as both a site for current and future recreational activities and as a means to conserve important parts of Caroline County's unique culture and natural resources. The land management strategy begins with the site's transition from cropland and forest to one in which developed area- roads, parking and active recreation facilities- combined with preserved natural areas and enhancement areas- planted meadows and reforested areas- create a more diverse park landscape. During each step of the park's transformation, there will be opportunities to enhance the park's natural resource base while creating new opportunities for visitors to access and use the park's recreation opportunities. The proposed management plan illustration summarizes the location and extent of each of these different management strategies. The strategies are composed of the following:

- **Warm Season Grasses** – Under this strategy, areas of former cropland would be revegetated with a variety of grasses and other herbaceous plants to provide conservation cover planting for wildlife habitat, water quality and erosion protection. The mixes should be designed to be suitable for light to moderate human use such as periodic events, the rough areas of Frisbee golf or similar uses. In general these areas will be farther away from the Choptank River, with closer areas recommended for forest cover. These areas may or may not be mowed.
- **Wildflower / Pollinator Meadows** – This strategy is similar to the warm season grasses, and provides similar environmental benefits. It differs by including a higher proportion of herbaceous materials, including some selected for flower color and prominence, to provide areas that are attractive to both pollinators and visitors.
- **Cool season grasses/general open space** – Most heavily accessed and regularly mowed and maintained parts of the site will be planted in a turf mixture that includes fescues or similar cool season grasses.
- **Sport Courts and Playground spaces** – These will range from paved, impervious spaces to maintained sports turf to pervious playground safety surfacing such as engineered wood fiber. These surfaces will require periodic inspections and replacement based on material type.
- **Park Trees** – New ornamental tree plantings are recommended around all use areas for shade, visual interest and to provide additional habitat opportunities. These individually planted trees and groupings of vegetation will require maintenance during and after establishment, including watering, fertilization and pruning.
- **Afforestation Areas** – In areas of former cropland within the Resource Conservation Area and closer to the Choptank River, additional forest buffer will be created to assist in improving water quality and expand the river corridor's habitat area. These plantings will require some care during establishment but will be designed to transition to mature in to an extension of the existing forest buffer.
- **Existing Forest** – Management of the existing forest will focus largely on the interface between it and users of the site, including maintaining trails to avoid the creation of cut-through paths, social trails(informal routes created by users), "braided trails" and other unplanned expansions into natural areas.
- **Existing Wetlands** – The site's existing wetlands will be protected by the restoration of vegetative buffers surrounding them and limitations to access to minimize inadvertent damage. They and the river will be protected further by creating fixed developed access points for fishing, wildlife observation and other passive uses.
- **Storm Water Management Facilities** – The plan envisions creating two permanent water bodies to serve storm water management requirements and as a visual and passive amenity. They will need to be maintained and the larger may be stocked for fishing.
- **Trails** – Paved and soft surface trails will be established to connect and access key park activity areas and to provide access from off-site.


NORTH COUNTY
REGIONAL PARK
WARM SEASON GRASSES
WILDFLOWER / POLLINATOR MEADOWS
COOL SEASON GRASSES
STORMWATER MANAGEMENT POND
SPORT COURT / PLAYGROUND SPACE
OPEN SPACE
PARK TREES
AFFORESTATION AREA
EXISTING FOREST
EXISTING WETLAND
TRAILS
PARKING
UNION ROAD
RED BRIDGES ROAD
GREENSBORO ROAD
PARK ENTRANCE SIGNAGE
KAYAK LAUNCH PICNIC SHELTER
NATURE/ HERITAGE EDUCATION AREA
EVENTS PICNICS FLYING A KITE ACTIVITY HILL
OVERLOOK
NATURE OBSERVATION AREA
EDUCATIONAL TRAIL OUTDOOR CLASSROOM
DIAMOND FIELD
FISHING & NATURE OBSERVATION
NATURE PLAY PICNIC AREA
NATURE TRAIL
RECREATION EVENTS
FOOT/DISC GOLF
MULTI-USE FIELDS
PICNIC SHELTER
RESTROOMS
MAINTENANCE AREA
PROPOSED LAND MANAGEMENT

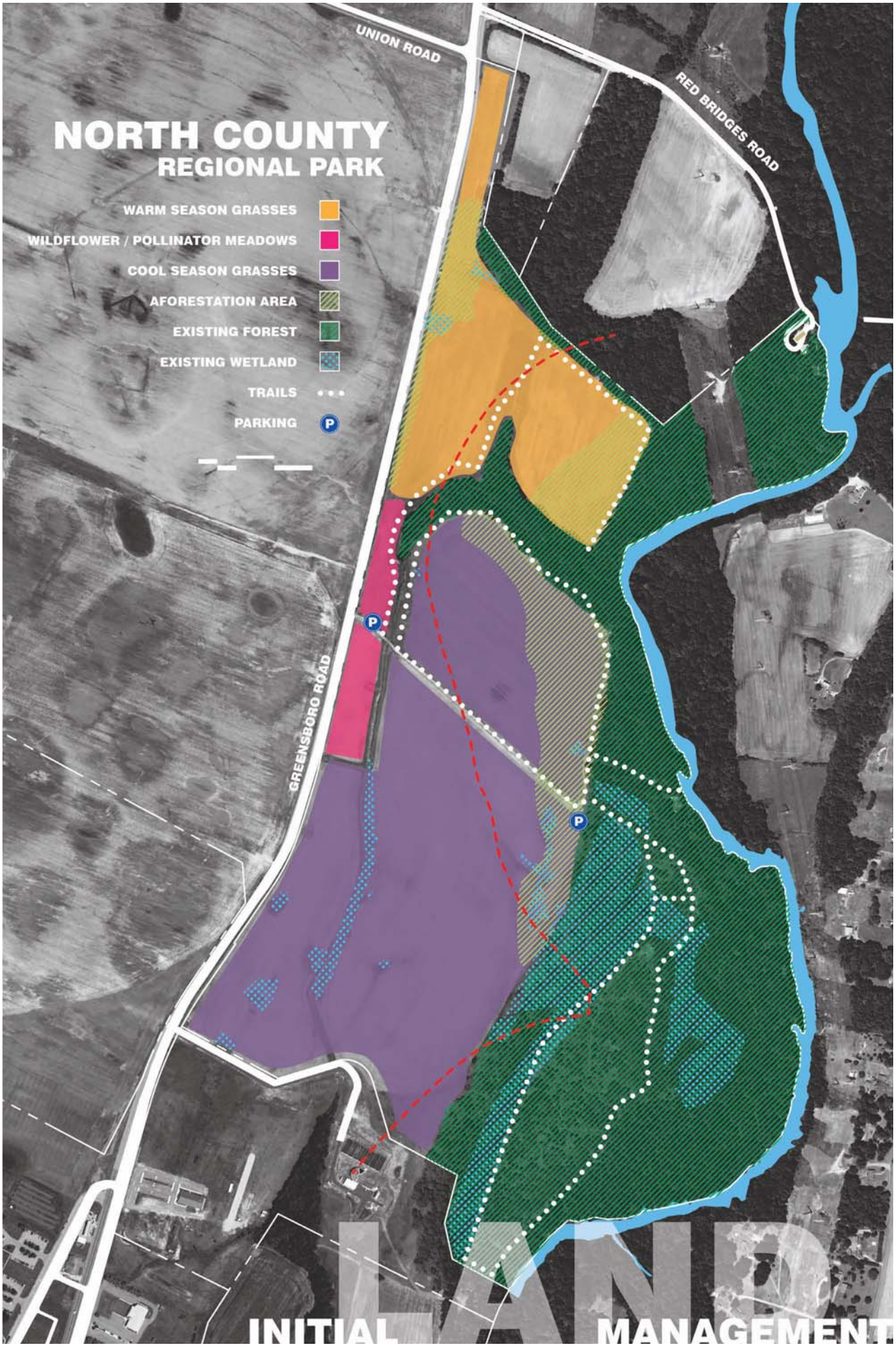
LAND MANAGEMENT

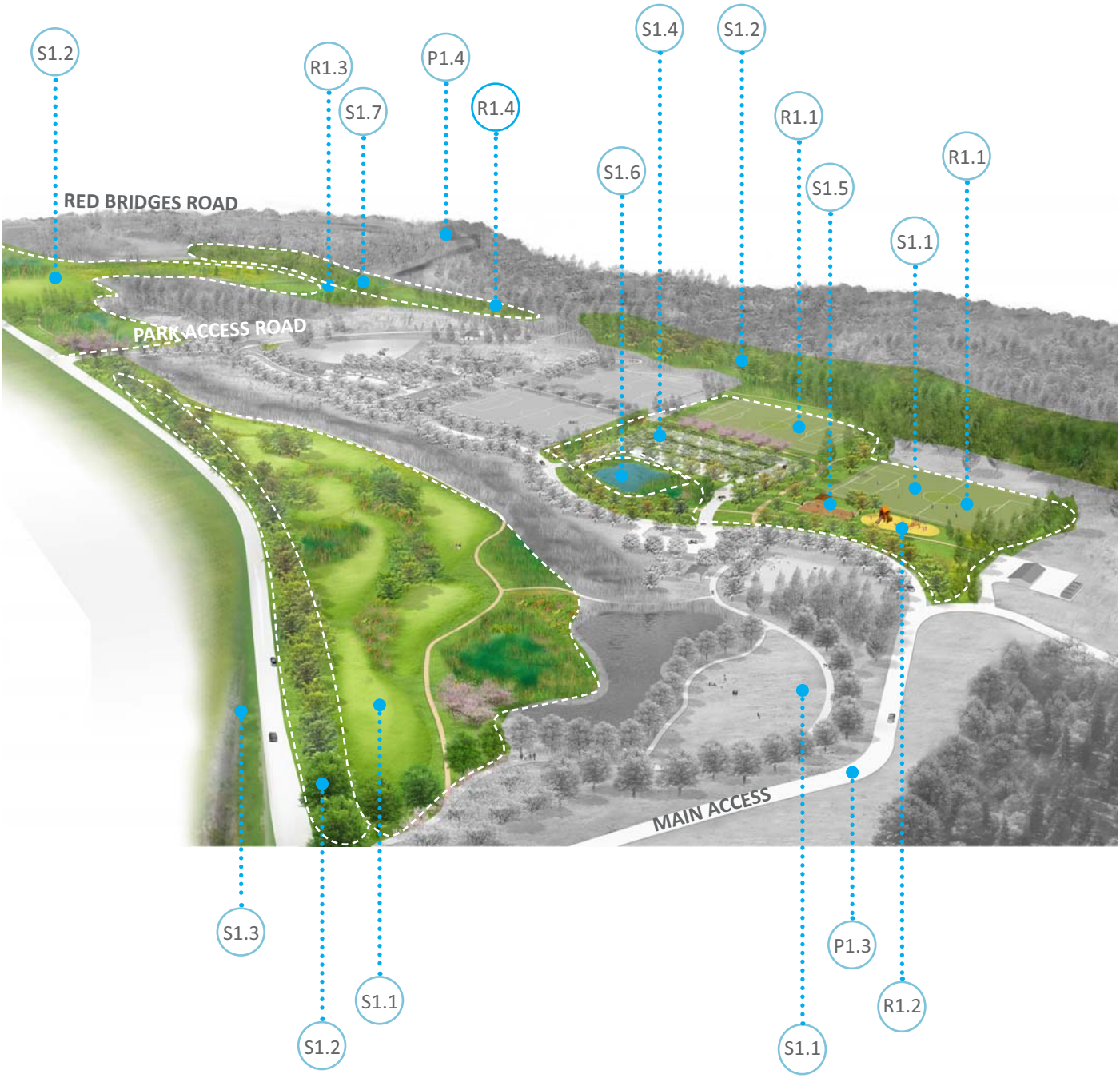
Phased Development:
Each Phase has three components, completion of a portion of the site's ultimate infrastructure, the implementation of some program of recreational activities and the completion of the necessary public, political and regulatory process steps needed to move the project forward.

Site infrastructure work will consist of general activities to stabilize and secure the site and provide basic services to support recreational programs. This can start with smaller improvements as funds are accumulated for larger development efforts. While this is occurring, it is important to incrementally add recreation programming that is scaled to the available infrastructure. Currently, the site is largely undeveloped, with only limited access opportunities at the center of the site and along Red Bridges Road. These and a maintained soft surface trail system support walking, nature observation, fishing and the ability to launch small paddled watercraft. By making only limited improvements (better access and parking, picnic tables and grills, temporary restroom facilities) the site could support family and larger gatherings, longer visitor stays and fuller accessibility.

The expansion of the park's program and its facilities need to occur concurrently with the processes required to more complicated development efforts. These include inter-agency agreements, capital improvement project budget allocation, additional cultural and natural resource studies, detailed design and engineering, permitting, grant funding application preparation, and similar tasks.

Initially, the efforts will be focused on transitioning the cultivated parts of the site from crop production under a lease to a transitional ground cover to native grasses and reforestation. Each of these initial steps will support the largely passive recreational use of the site. Over time, as Program Open Space funds are secured and the park is integrated into the County's Capital Improvement Program, larger infrastructure and recreation program components can be planned, engineered, permitted and constructed.


UNION ROAD
RED BRIDGES ROAD
NORTH COUNTY
REGIONAL PARK
WARM SEASON GRASSES
WILDFLOWER / POLLINATOR MEADOWS
COOL SEASON GRASSES
AFORESTATION AREA
EXISTING FOREST
EXISTING WETLAND
TRAILS
PARKING
GREENSBORO ROAD
INITIAL LAND MANAGEMENT


S1.2
R1.3
S1.7
P1.4
R1.4
S1.4
S1.2
R1.1
S1.6
S1.5
R1.1
S1.1
RED BRIDGES ROAD
PARK ACCESS ROAD
MAIN ACCESS
S1.3
S1.2
S1.1
S1.1
P1.3
R1.2

PHASE 1

Park Opening & Initial Development

SITE

Seed former crop lands	S1.1
Afforestation efforts in areas planned for forest buffers (e.g. highway frontage, river buffers)	S1.2
Greensboro Road frontage improvements	S1.3
Initial road access from GWWTP road to first (south) parking lot & portion of south parking lot	S1.4
Extend wet and dry utilities to parking lot area and restroom building	S1.5
Storm water management facilities	S1.6
Additional buffer, reforestation and landscape planting	S1.7

RECREATION

Two rectangular athletic fields	R1.1
Playground	R1.2
Trail overlook at ravine	R1.3
Interpretive signage	R1.4
Additional paved and soft surface trails	R1.5
Continued trail development and improvements	R1.6

PROCESS

Phase 1 Archaeological Study of likely development areas of site	P.1.1
Site Plan approval process through Planning Commission	P1.2
Conclude joint access agreement with Greensboro Waste Water Treatment Plant	P1.3
Reapply for Red Bridges Fish Passage Improvement grant	P1.4
Design and engineering of initial development program	P1.5

$3,602,000

PHASE 1 ESTIMATE


S2.2
S2.1
R2.2
RED BRIDGES ROAD
PARK ACCESS ROAD
MAIN ACCESS
R2.2
R2.1

PHASE 2

Initial Park Development

SITE

Stabilize park access road and paved trail parking area	S2.1
Maintenance/stabilization of Red Bridges Road and Choptank access site	S2.2

RECREATION

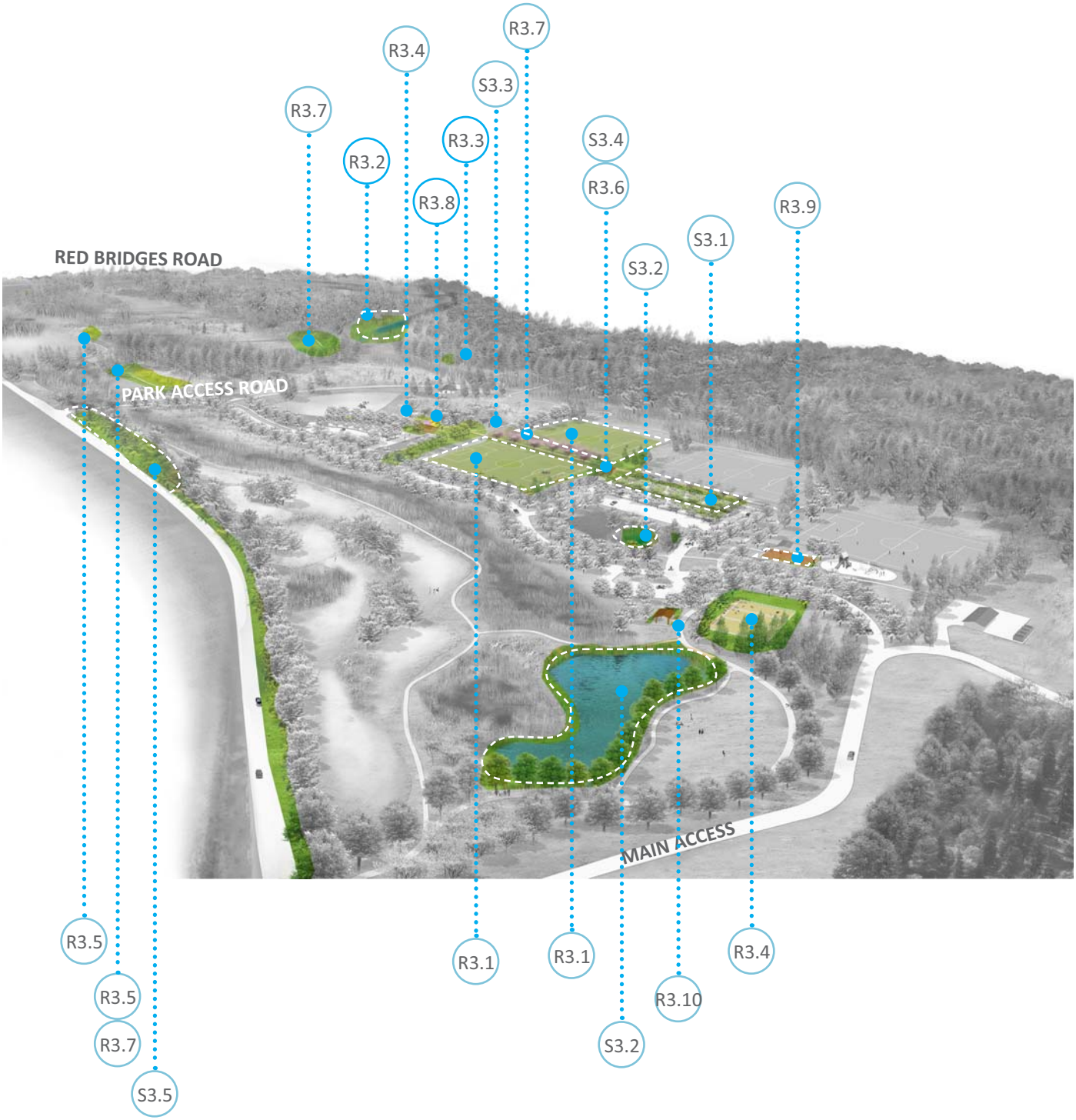
Foot/disc golf course	R2.1
Additional paved and soft surface trails	R2.2

PROCESS

Environmental permitting for first phase development	P2.1
Design and engineering for Phase 2 bidding and construction	P2.2
Design and engineering for Phase 3 development program	P2.3

$2,435,000

PHASE 2 ESTIMATE


R3.7
R3.4
S3.3
R3.7
R3.3
S3.4
R3.2
R3.6
R3.8
R3.9
S3.1
S3.2
RED BRIDGES ROAD
PARK ACCESS ROAD
MAIN ACCESS
R3.5
R3.1
R3.1
R3.4
R3.5
R3.10
R3.7
S3.2
S3.5

PHASE 3

Additional Park Development

SITE

Completion of south parking lot	S3.1
Additional storm water management facilities	S3.2
Additional restroom	S3.3
Extend wet and dry utilities to parking lot area and second restroom building	S3.4
Additional buffer, reforestation and landscape plantings	S3.5

RECREATION

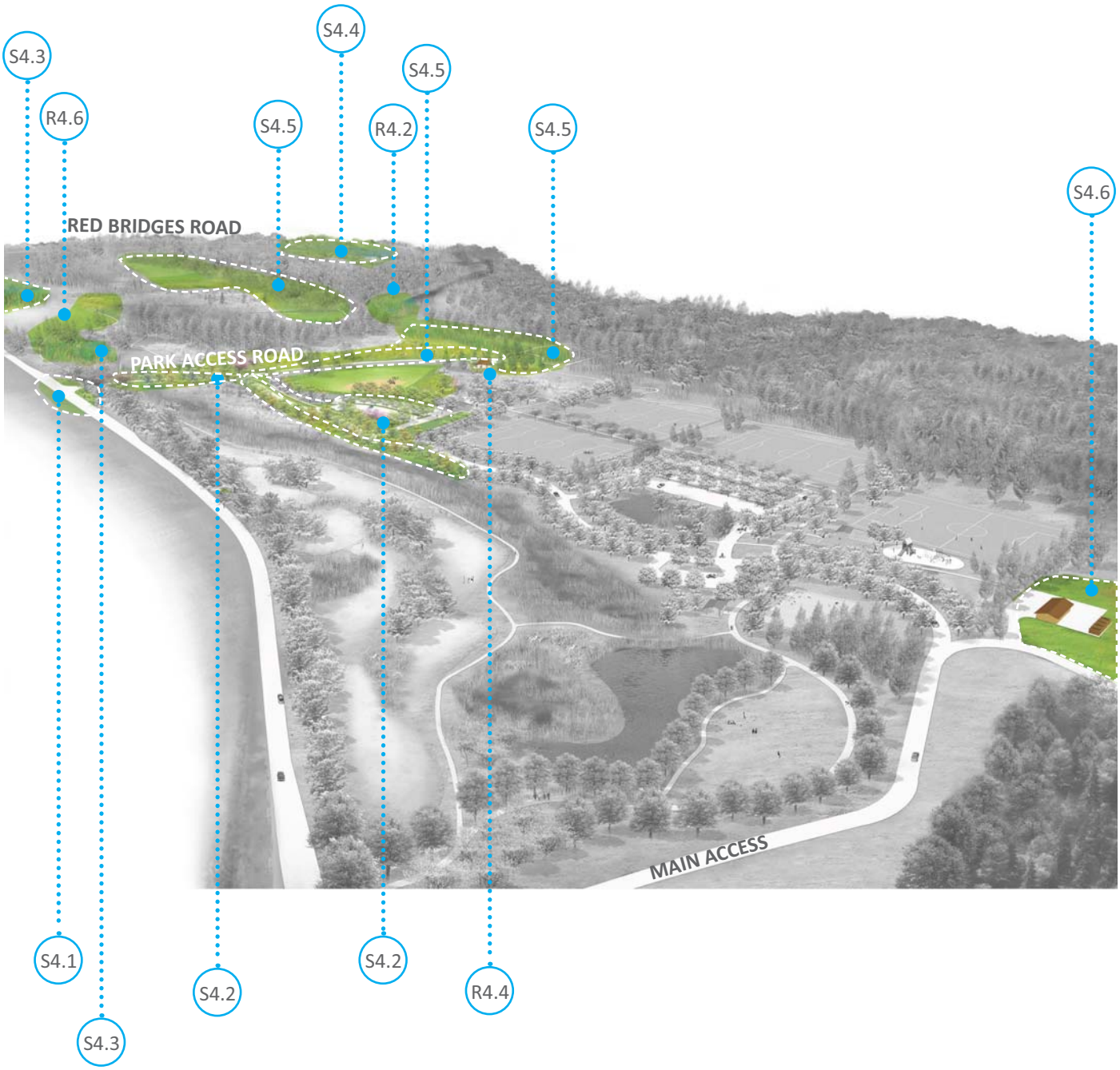
One or two rectangular athletic fields	R3.1
Pedestrian Bridge at Ravine	R3.2
Additional trail overlook at ravine	R3.3
Dog Park	R3.4
Additional Interpretive signage	R3.5
Additional picnic shelter and tables	R3.6
Additional paved and soft surface trails	R3.7
Additional Playground	R3.8
Sport court(s)	R3.9
Picnic shelter and tables	R3.10

PROCESS

Design and engineering for Phase 3 bidding and construction	P3.1
Design and engineering for Phase 4 development program	P3.2

$4,035,000

PHASE 3 ESTIMATE


S4.3
R4.6
S4.4
S4.5
S4.5
R4.2
S4.5
S4.6
RED BRIDGES ROAD
PARK ACCESS ROAD
MAIN ACCESS
S4.1
S4.3
S4.2
S4.2
R4.4

PHASE 4

Additional Park Development

SITE

Greensboro Road frontage improvements for second entrance	S4.1
Completion of internal road and secondary (north) parking facility	S4.2
Additional storm water management facilities	S4.3
Improved road and parking to waterfront access trails	S4.4
Additional buffer, reforestation and landscape plantings	S4.5
Maintenance area	S4.6

RECREATION

One or two athletic fields	R4.1
Additional trail overlook at ravine	R4.2
Additional picnic shelter and tables adjacent to ravine parking area	R4.3
Additional picnic shelter and tables	R4.4
Ropes course	R4.5
Additional paved and soft surface trails	R4.6

PROCESS

Design and engineering for Phase 3 bidding and construction	P4.1
Design and engineering for Phase 4 development program	P4.2

$1,872,000

PHASE 4 ESTIMATE