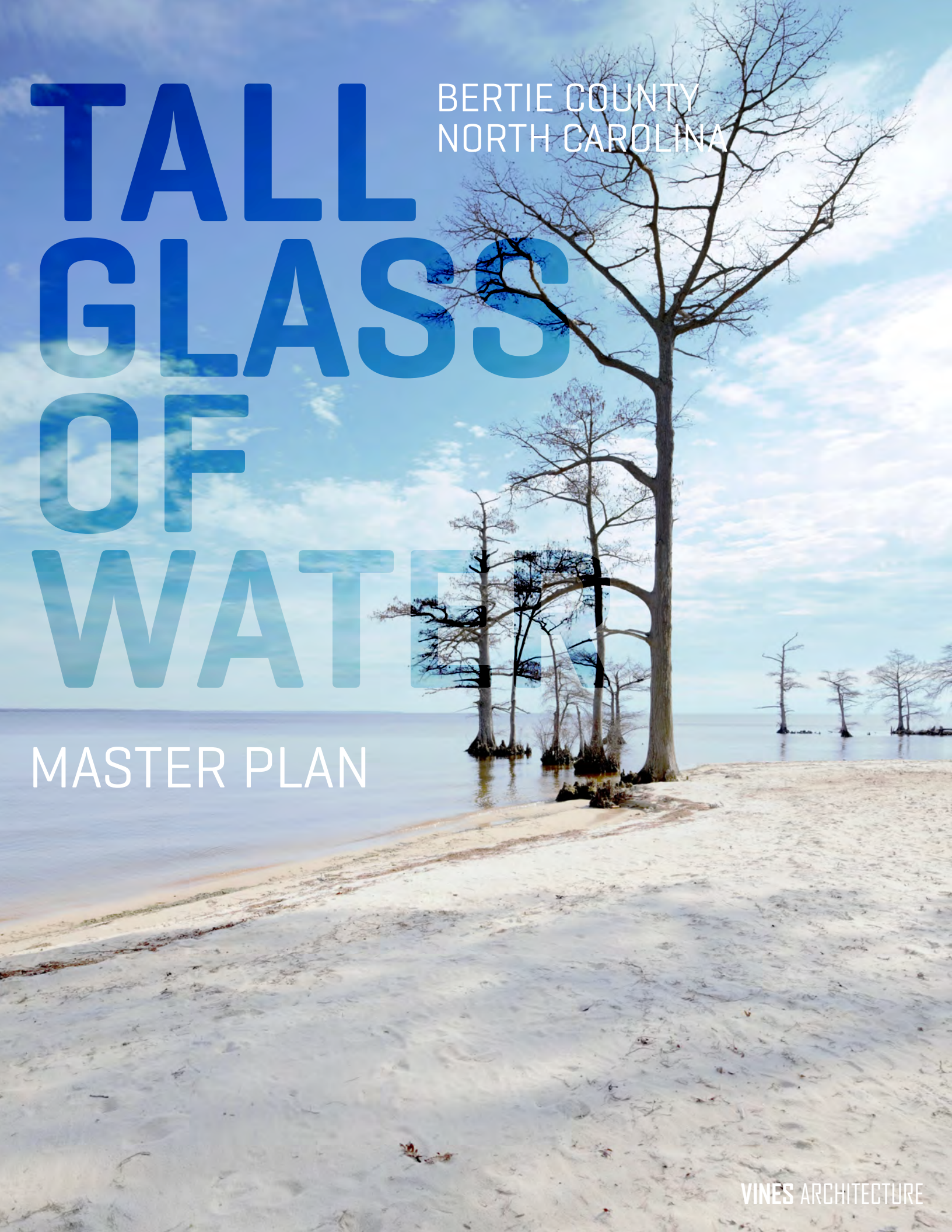

TALL GLASS OF WATER

BERTIE COUNTY
NORTH CAROLINA

MASTER PLAN

VINES ARCHITECTURE

TALL GLASS OF WATER

BERTIE COUNTY
NORTH CAROLINA

MASTER PLAN

VINES

MARCH 9, 2020

VINES ARCHITECTURE
DESIGN WORKSHOP
CAPE FEAR ENGINEERING
A.R. CHESSON CONSTRUCTION

ACKNOWLEDGEMENTS

Through the efforts of many dedicated men and women, the dream of a public outdoor recreation park in Bertie County is closer to being a reality. The Tall Glass of Water (TGOW) Park Master Plan was developed with the assistance of the following individuals.

TGOW Executive Planning Committee:

Juan Vaughan, Interim County Manager
Steve Biggs, Economic Development Director
Donna Mizelle, Parks and Recreation Director
Scott Sauer, Constultant
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TGOW Input Planning Committee:

Bertie County Commissioners
- Ernestine Bazemore, Commissioner
- John Trent, Commissioner
- Qudre' Joyner, Junior Commissioner

Bertie Couny Representatives
- Dr. Benjamin Speller
- Dr. Arwin Smallwood
- Michael Freeman
- Chris Hardison

Bertie County School
- Dr. Otis Smallwood, Superintendent
- Michael White, Executive Director of HR + Operations
- Carol Mizelle, Director of K-5 Curriculm

NC Land of Water
- Dr. Stanley Riggs, Board of Directors Chair

NC Parks and Recreation
- Steve Rogers, Superintendent
- Salmon Creek Nature Area

Parnership of the Sounds
- Tom Stroud
- John Ed Whitehurst

Town of Windsor
- James Hoggard, Mayor
- Cathy Wilson, Mayor Pro Tem
- Allen Castelloe, Town Administrator

Windsor-Bertie Chamber of Commerce
- Lewis Hoggard, Chamber Director
- Sheila Powell, Board President

Roanoke Cashie River Center
- Joe Huff, Director
- Rod Martin

Roanoke River Partners
- Carol Sheilds, Executive Director

First Colony Foundation
- Phillip Evans, President
- Nick Lucketti, Vice President for Research
- Clay Swindell

Mid-East Commission
- Bryant Buck, Executive Director
- Kevin Richards, Planning Director

Bertie County Cooperative Extension
- Billy Barrow, County Extension Director
- Jarrette Hurry, Extension Agent

Historic Hope Plantation
- Dr. Turner Sutton, Officers of the Foundation President

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Cape Fear Engineering
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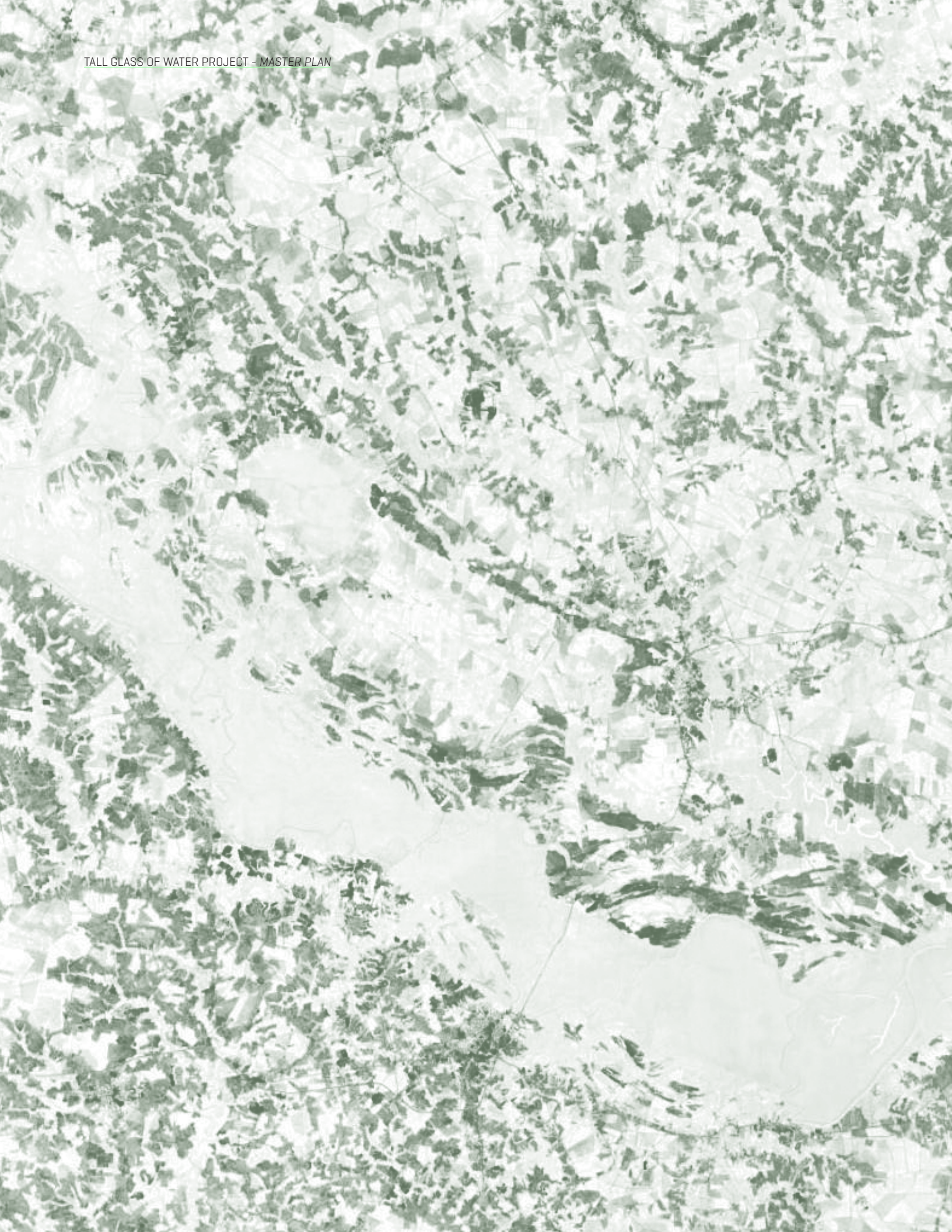
AR Chesson Construction - Estimating
- Al Chesson, President
- Joe Minoski, Project Manager
- Michael Roberts, Estimator

TABLE OF CONTENTS



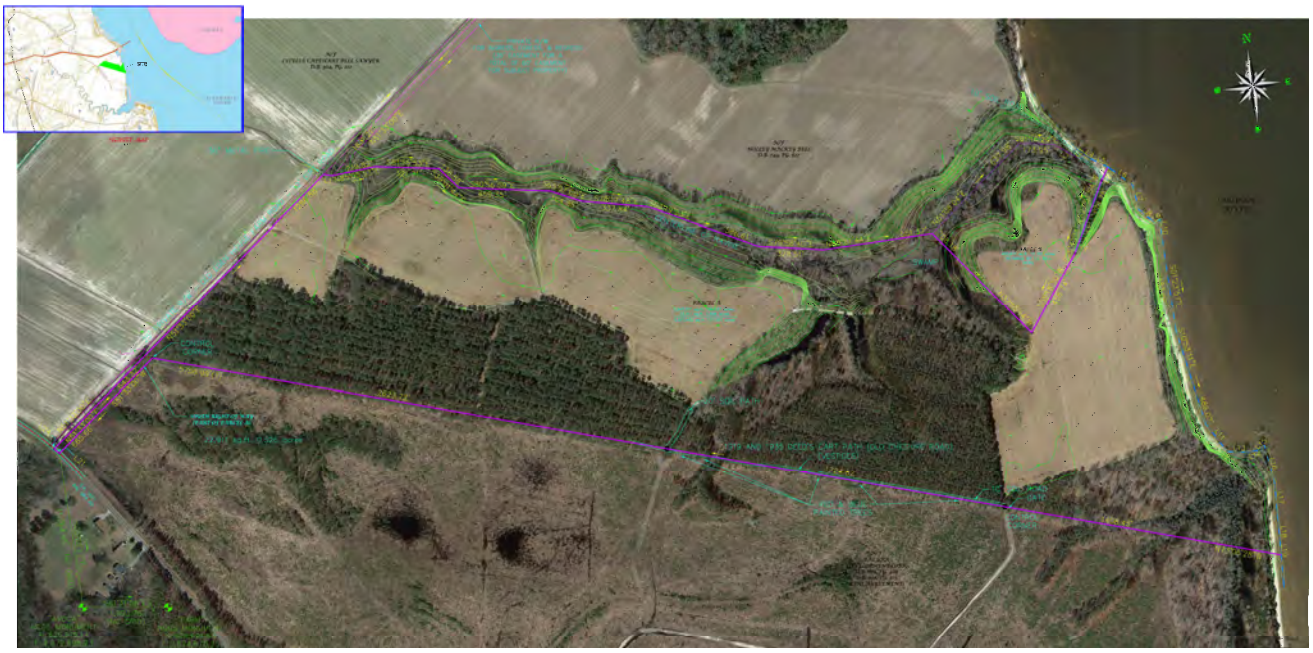
1

BACKGROUND + PROJECT GOALS

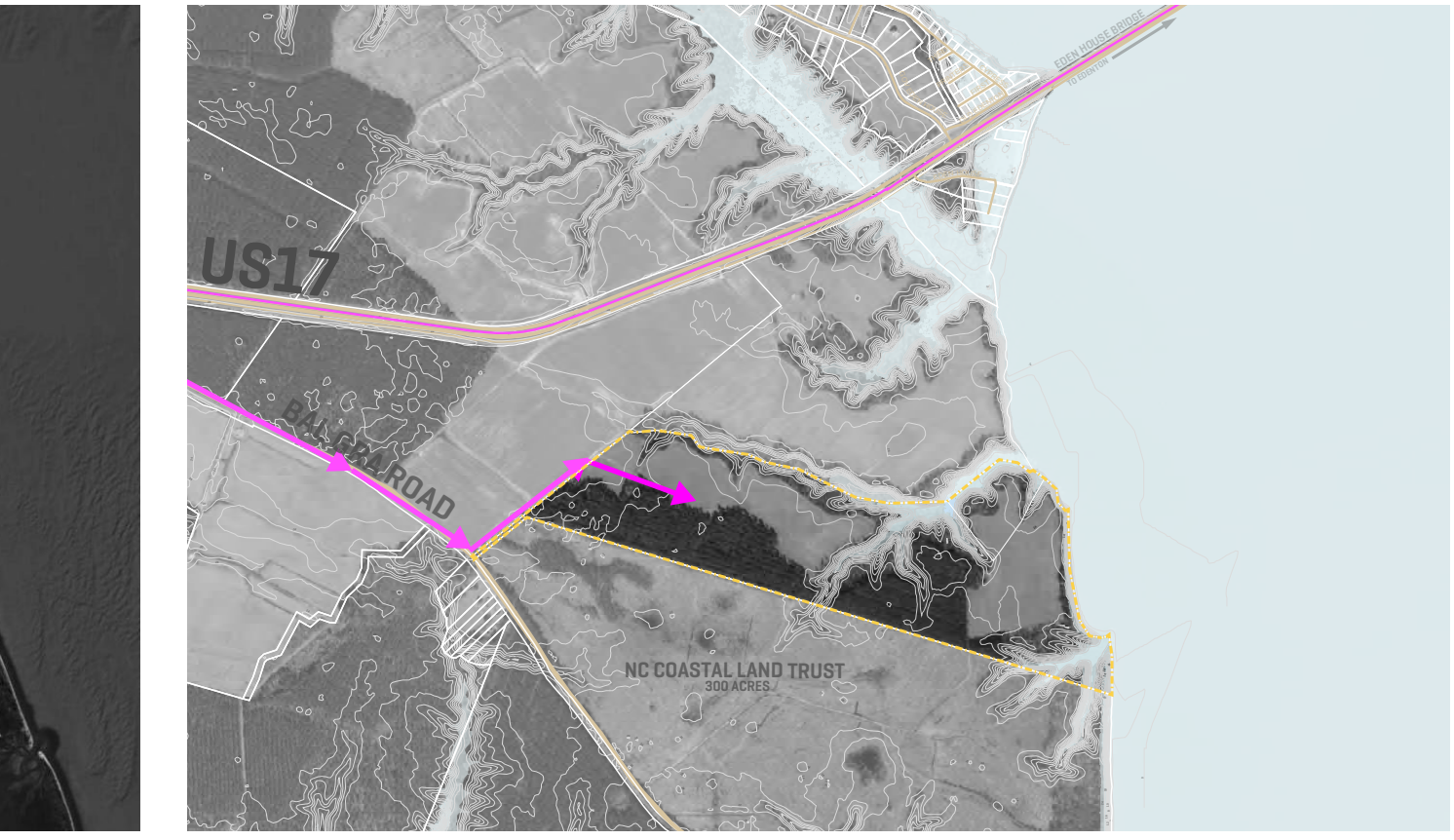
INTRODUCTION

The *Tall Glass of Water* Project represents an amazing opportunity to both celebrate the rich natural and cultural landscape of Bertie County and provide recreation and economic opportunities for its citizens. As a region, Eastern North Carolina is an amazingly beautiful and serene landscape that so often tends to be overlooked as people are drawn to the oceanfront beaches, mountains, and urban areas. The 'Tall Glass of Water' project seeks to develop a destination that will draw people from throughtout the local community, region, and state and provide an opportunity for something different; a break from the fast paced lifestyle that has seemingly overwhelmed today's culture.

This Master Plan document serves as a guide for the development of a unique historical and natural destination in the amazing landscape of Eastern North Carolina. The new park will serve as a major amenity for the local community as well as drawing people from around the region to experience the pristine waterways, dynamic eco-systems, and important history, providing education, recreation, and retreat, while also working to spur economic growth and development within the county.



TALL GLASS OF WATER PROPERTY BOUNDARY SURVEY

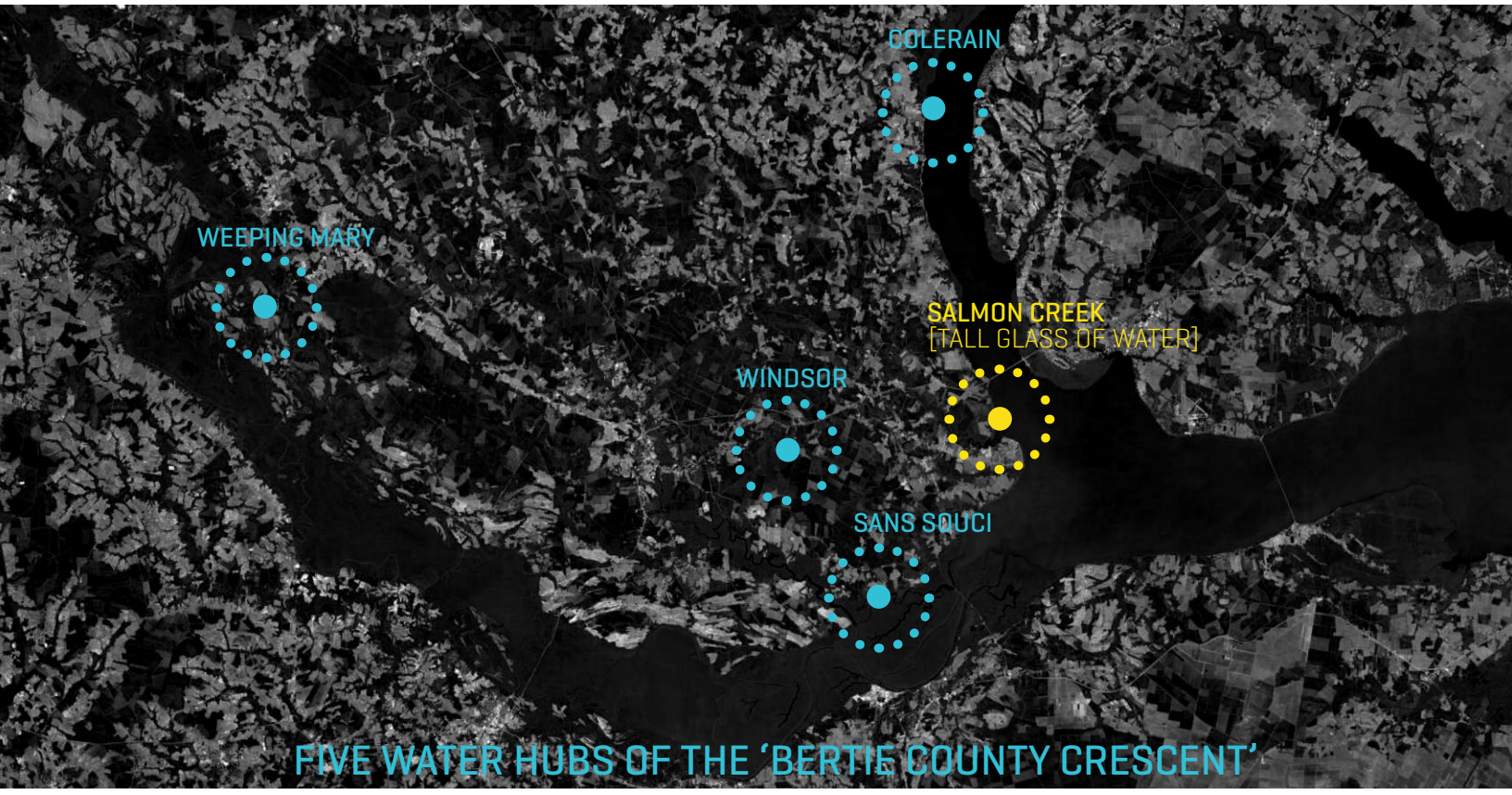


ACCESS TO THE SITE

BACKGROUND

Through the efforts of many dedicated men and women, the dream of a world-class public outdoor recreation park in Bertie County, North Carolina is closer to being a reality. This project is a top priority of the Board of Commissioners in an effort founded in providing a public recreation area with water access for all citizens. In 2016 the County invested local funds along with receiving the NC Parks and Recreation Trust Fund Grant of $500,000, to purchase a parcel that will become the destination for the Tall Glass of Water Park. The site is 147-acres located at the confluence of the Chowan River and the Albemarle Sound with an extraordinarily beautiful 2,200 linear feet of shoreline.

In 2018, Bertie County completed a Comprehensive Recreation Plan for the county outlining continued improvement of recreation programming, facilties and future resource allocation through local government, citizen input and a community survey. Simutaneously NC Land of Water (NC LOW) along with the County completed the report, From Rivers to Sounds in the Bertie Water Crescent, A Water-Based Vision for the Sustainable Eco-tourism and Environmental Education in Bertie County. NC LOW defines five "water hubs" within the county that will be the base of operations for expanded county-wide adventure tourism opportunities with the Tall Glass of Water as the catalyst site.

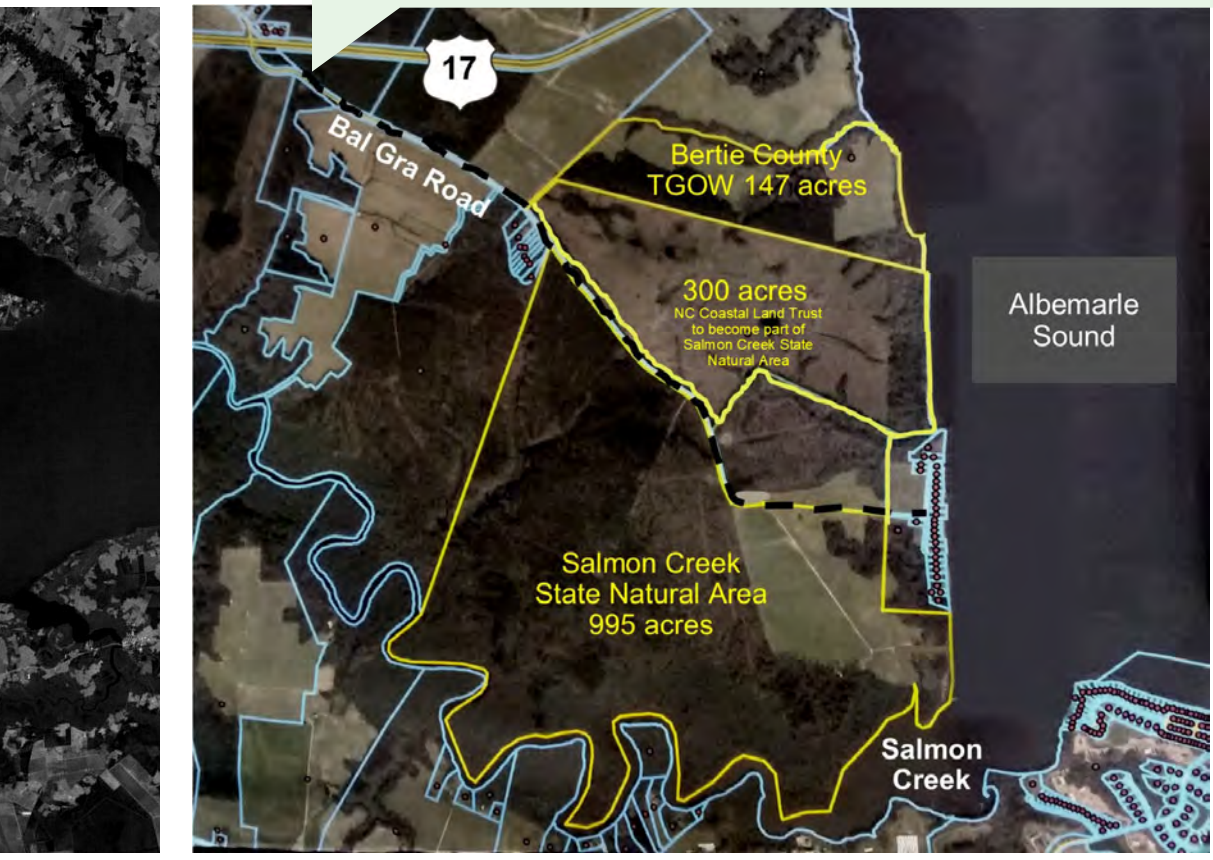


FIVE WATER HUBS OF THE 'BERTIE COUNTY CRESCENT'

Further contributing to the County's mission of eco-tourism and capitalizing on natural and historical resources, the NC Coastal Land Trust (NCCLT) aquired a 995 acre tract of land and in 2018 conveyed the property to the NC Division of Parks and Recreation to manage what is now the Salmon Creek State Natural Area. NCCLT is currently in the process of aquiring an additional 300 acre tract of land to add to the Salmon Creek Natural Area, creating a total of 1,295 acres of natural area directly south and adjacent to the Tall Glass of Water site. With a total of 1,442 acres of soundfront wildneress secured, the County and NC Parks and Recreation are working together to establish a partnership to complement, enhance and support the mission of each entity, which is to provide unparalleled experiences for all visitors to historic and natural resources available on these incredible sites.

'Bertie County is a place of water in all forms and water has shaped its development and defined its character'

NC LAND OF WATER'S 2018 REPORT - FROM RIVERS TO SOUNDS IN THE BERTIE WATER CRESCENT



SITE VICINITY MAP

PROJECT GOALS

Through discussions with the Tall Glass of Water Executive Planning Committee, the Tall Glass of Water Input Planning Committee, numerous public groups, and members of the community, the following goals were collectively defined for the project.

+ DEVELOP A **WORLD-CLASS** WATERFRONT RECREATION PARK, BUILDING ON UNPARALLELED **HISTORICAL AND NATURAL** ASSETS

+ PROVIDE **VACATION RECREATIONAL** EXPERIENCES + **YEAR-ROUND WATER ACCESS** FOR CITIZENS

+ PROVIDE **ADVENTURE TOURISM** ACTIVITIES AND BOOST **ECONOMIC DEVELOPMENT**

+ PROVIDE AN UNFORGETTABLE **EDUCATIONAL VENUE** OF NATURAL AND WILDLIFE RESOURCES, AS WELL AS HISTORICAL RESOURCES

+ INTERPRET THIS AMAZING **SITE TO TELL THE STORIES** OF THE HISTORICAL AND NATURAL RELATIONSHIP OF LAND AND WATER

"The vision of the Bertie County Board of Commissioners is to make Bertie County an attractive location for visitors, business investment, and to increase public recreation access for all citizens."

BERTIE COMPREHENSIVE RECREATION PLAN

"WHERE HISTORY MEETS ADVENTURE"

▪ SITE X EXCAVATION WORK

2

SITE HISTORY

HISTORICAL RESOURCES

Along with the rich natural resources found in Bertie County, there is also an incredible richness of historical resources some consider as the origin of many NC heritages that commingled and evolved throughout history. Particularly in the eastern region of the county where the Tall Glass of Water site and the Salmon Creek State Natural Area are located there have been numerous archaeological sites identified (see map below). Archaeologists have done thorough research and investigations (Phase I + II Cultural Resources Survey of Bal Gra) throughtout the tract of land now known as Salmon Creek State Natural Area and identified an area of specific interest named 'Site X.'

"The property is the subject of archaeological research by The First Colony Foundation. Native Algonkin and English artifacts indicative of settlement by the Roanoke colonists have been found on the site. Some researchers theorize the artifacts could provide evidence that survivors from The Lost Colony relocated to the area in the late 1580s." - NC Coastal Land Trust

PREVIOUSLY IDENTIFIED ARCHAEOLOGICAL SITES WITHIN THE VICINITY OF THE PROJECT AREA
MAP FROM PHASE I & II CULTURAL RESOURCES SURVEYS OF BAL GRA, BERTIE CO, NC

NATIVE AMERICAN HERITAGE

FIRST COLONIST HERITAGE

ENGLISH + AFRICAN HERITAGE

NC COMBINED HERITAGE

SITE HISTORY

A goal of the Tall Glass of Water Project is to interpret and integrate the unprecedented historical stories that have evolved over many years on this rare site where water meets land. Archaeologists from the First Colony Foundation are currently undergoing a Phase II archaeological investigation on the Tall Glass of Water site (BR49) to fully understand and uncover the historical resources specific to the site. There is an incredible opportunity with the historical resources found on the TGOW site and the Salmon Creek State Natural Area to weave a unique educational experience into these public parks which will draw visitors from all over to Bertie County.

TGOW ARCHAEOLOGICAL INVESTIGATION

APPROXIMATE LOCATION OF ARCHAEOLOGICAL INVESTIGATION

3

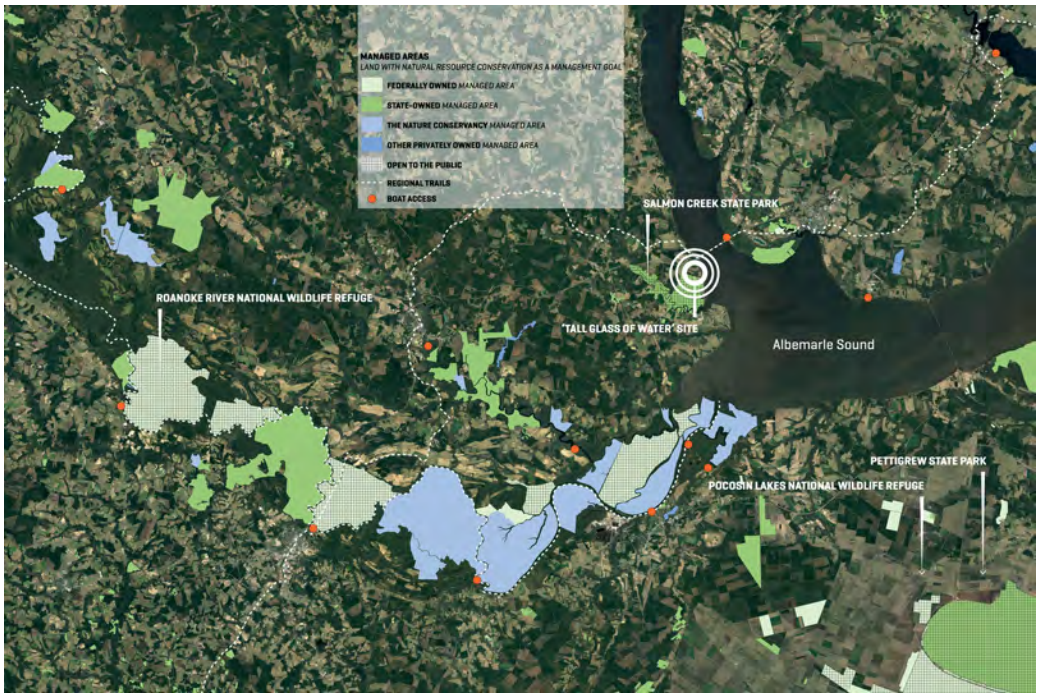
SITE ANALYSIS

STUDY AREA CONTEXT

The Tall Glass of Water site is well-situated to complement and build upon the existing natural and recreational resources of Bertie County. The county currently has a wealth of conservation lands managed by the state and private non-profit organizations, though public access is often limited. The Salmon Creek Water Hub as proposed by the N.C. Land of Water project will offer a new level of public access to and celebration of the native plants and wildlife of Bertie County. As the northern edge of the Salmon Creek hub, the Tall Glass of Water site will allow visitors to interact with those natural resources through active recreation and camping, while creating easy hiking and paddle trail access to the more extensive and passive conservation lands of the Salmon Creek State Natural Area to the south.

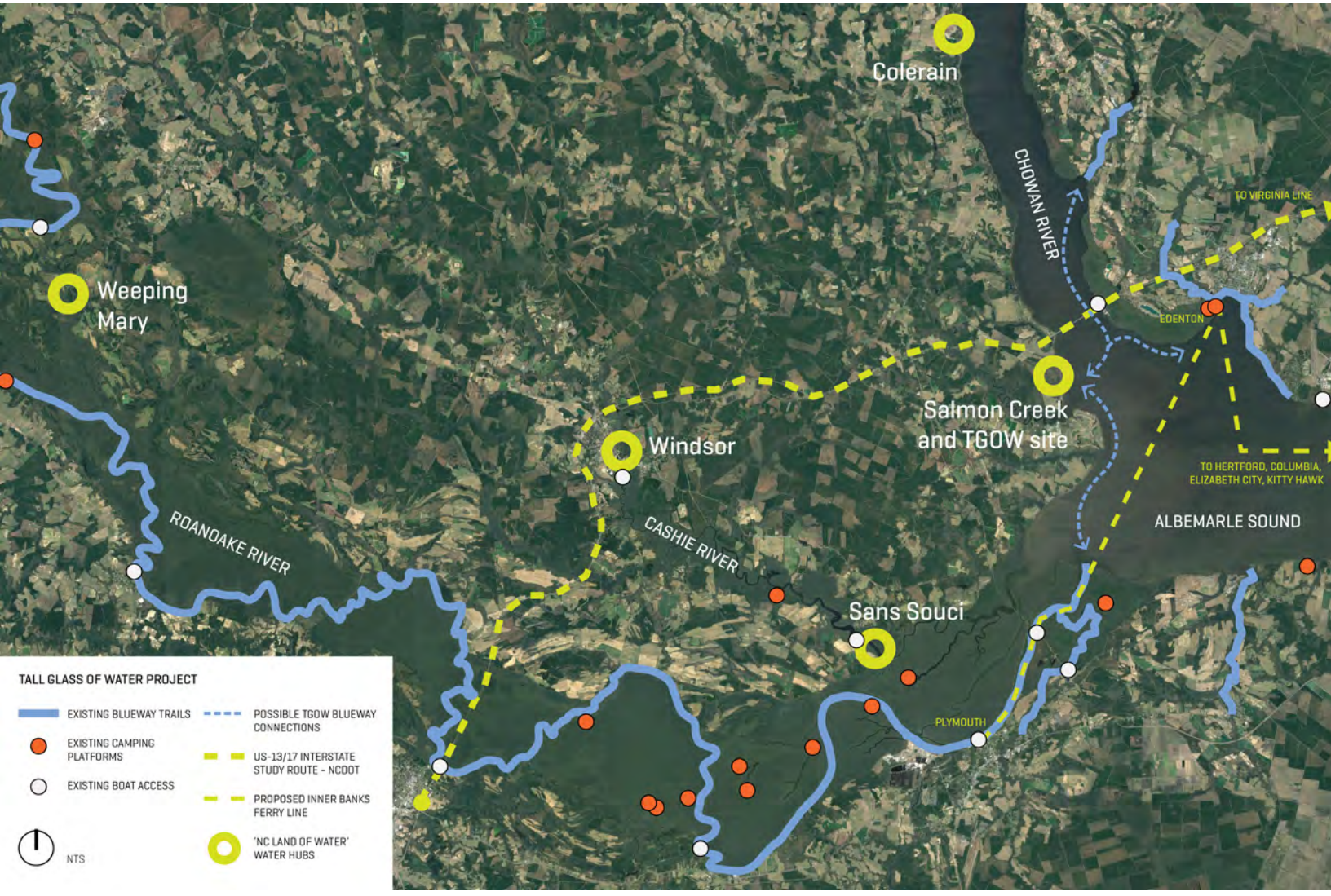
The convenient location of Tall Glass of Water promises to make it a popular destination for a variety of visitors. The U.S. 13/17 interstate study route passes just to the north of the site, and the proposed Inner Banks ferry line passes just to the east and south with stops in Edenton and Plymouth. The existing Roanoke River paddle trail system has its easternmost terminus south of the site; with its proposed kayak storage, dock and camp sites, Tall Glass of Water will offer a new destination for paddlers and an opportunity to bridge the blueway trails of the Roanoke with those of the Chowan River and the Albemarle Sound.

CONSERVATION AREAS



VIEW OF THE CONNECTION FROM THE TGOW SITE TO THE CONSERVATION LAND TO THE SOUTH

SITE AS A NEW DESTINATION FOR LOCAL AND REGIONAL PADDLE TRAIL USERS



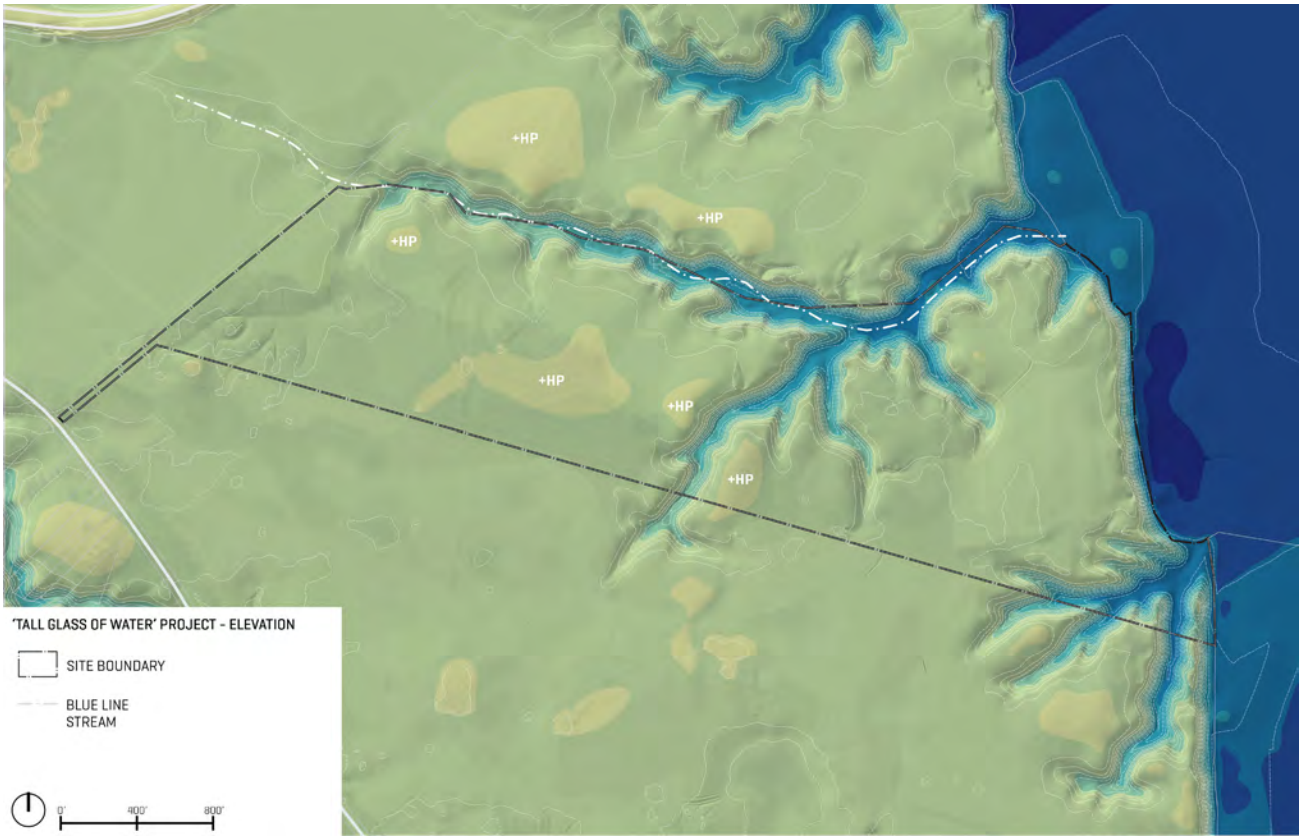
PADDLE TRAILS AND BOAT ACCESS

ELEVATION

The nature of the topography on the Tall Glass of Water site creates some of the site's defining features — its diversity of plant communities, its large expanses of flexible open space, its tucked-away ecological niches, its sandy beach and its long stretch of shallow public water. The elevation study helps to illuminate some of the site's opportunities and constraints for development, recreation and general use and access.

Generally the site's high points are targeted in the master plan for heaviest use and potential building footprints. These areas are currently covered by former agricultural fields because they are the highest and best-drained areas of the site.

The site's low points are vulnerable to floodwaters and are areas of ecological sensitivity and importance. The beach is the only low point that invites high public use in the proposed master plan. The site's other low-lying areas — currently covered by cypress-gum swamps, bottomland hardwood forests and open wetland — are protected in the master plan. Trails and boardwalks are proposed in these areas to allow for public access and enjoyment, and these features will be sited carefully to avoid disturbance of sensitive habitats and plant communities and to restrict human access to areas that are most appropriate for it. The design and placement of these features will be based on careful site observation and surveys.



SLOPES

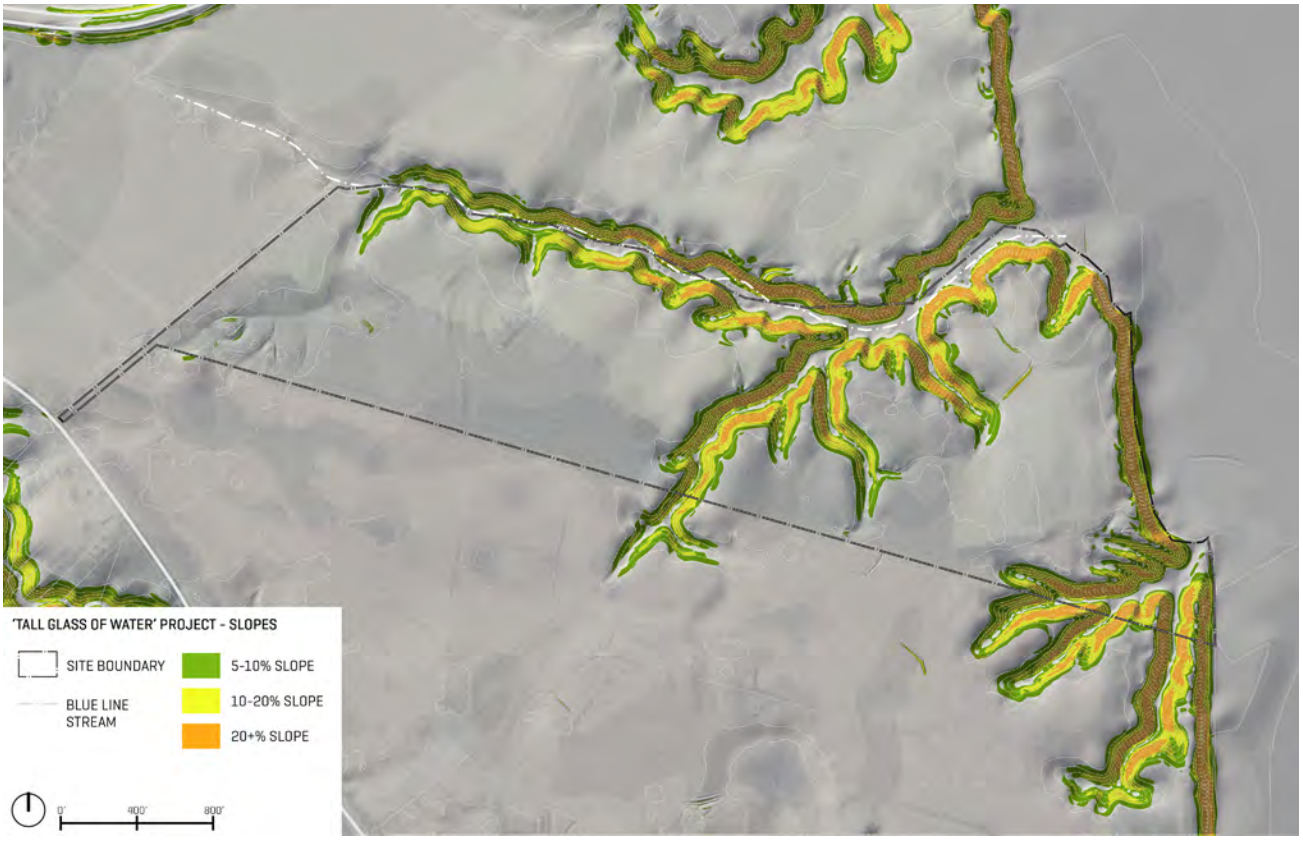
Different regulatory bodies have different definitions for areas of steep slopes, but generally they are areas where the slope's percentage (measured as rise/run multiplied by 100) ranges from 15 to 25% or greater. Protecting these areas is important for preserving terrain, protecting water quality and downslope water courses from sedimentation, and protecting important plant and animal habitats from disturbance.

On the Tall Glass of Water site, steep slopes are seen in the areas of transition from the upland agricultural fields and woods to the low-lying wetlands and swamps. For the most part, these areas are currently vegetated and are protected under the master plan.

The steep slopes that will require intervention are those along the beach, including the route of public beach access and the site's eastern bluff.

Where steep slopes are disturbed to create an ADA accessible route to the public beach, vegetation will be restored to stabilize soils and prevent erosion.

At the bluff, stabilization of steep slopes will require greater care and effort. Those efforts are described in the "Shoreline Stabilization" section below.



WETLANDS

The Tall Glass of Water property has approximately 25 acres of wetlands, according to the preliminary wetland determination provided by the U.S. Army Corps of Engineers (USACE) and pictured below. The USACE report links the wetlands on this site to a broad continuum of wetlands connected to the Chowan River and Albemarle Sound.

Wetlands perform important habitat and ecosystem service functions. The high biodiversity of Bertie County is due in part to its number and diversity of wetlands, which are home to many species of plants, insects, amphibians, reptiles, fish, birds and mammals. Wetlands also help to filter pollutants and store floodwater. Some of the most beautiful areas on the Tall Glass of Water site are its existing wetlands, including its cypress-gum swamp and bottomland hardwood forests.

The site's wetlands are an asset and are protected in this master plan. In the few areas where proposed improvements are made within the delineated wetlands, such as road crossings and boardwalk trails, those improvements will be designed to minimize impacts to the greatest extent possible.

Where impacts cannot be avoided, permitting will be required through the USACE, North Carolina Division of Water Quality (NCDEQ), and Coastal Area Management Act (CAMA).

U.S. Army Corps of Engineers Preliminary Wetland Determination / February 2020

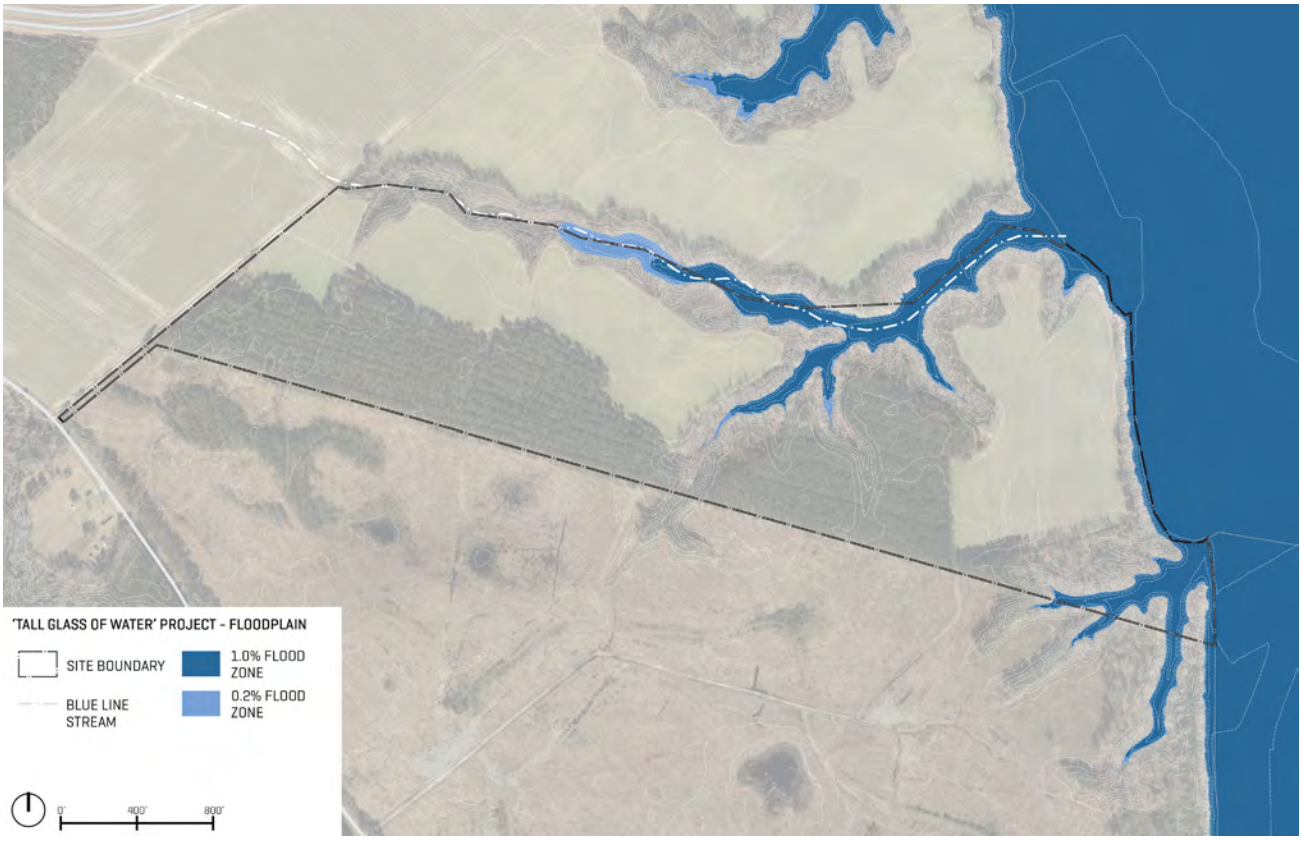
FLOODPLAIN

Portions of the Tall Glass of Water site lie within the Albemarle Sound floodplain, meaning that water from the river inundates parts of the site during or after heavy rainfall.

The map below shows the extents of the 1% and 0.2% flood zones as mapped by the North Carolina Flood Risk Information System. The 1% zone refers to the area that, based on historical data about local rainfall and river levels, hydrologists predict has a 1% annual chance of flooding. These percentages are based only on statistical probability, so it is possible for multiple flood events to occur here within a single year.

Federal, state and local policies restrict development within the floodplain. In the Tall Glass of Water master plan, the floodplain areas consist largely of existing forests and wetlands and will be protected from intensive uses and development.

Improvements proposed within the floodplain are boardwalk and surface trails, which are allowable uses under floodplain policy. These trails should be designed to withstand regular inundation, and their design should take into account the future risk of increased flood occurrence and severity.

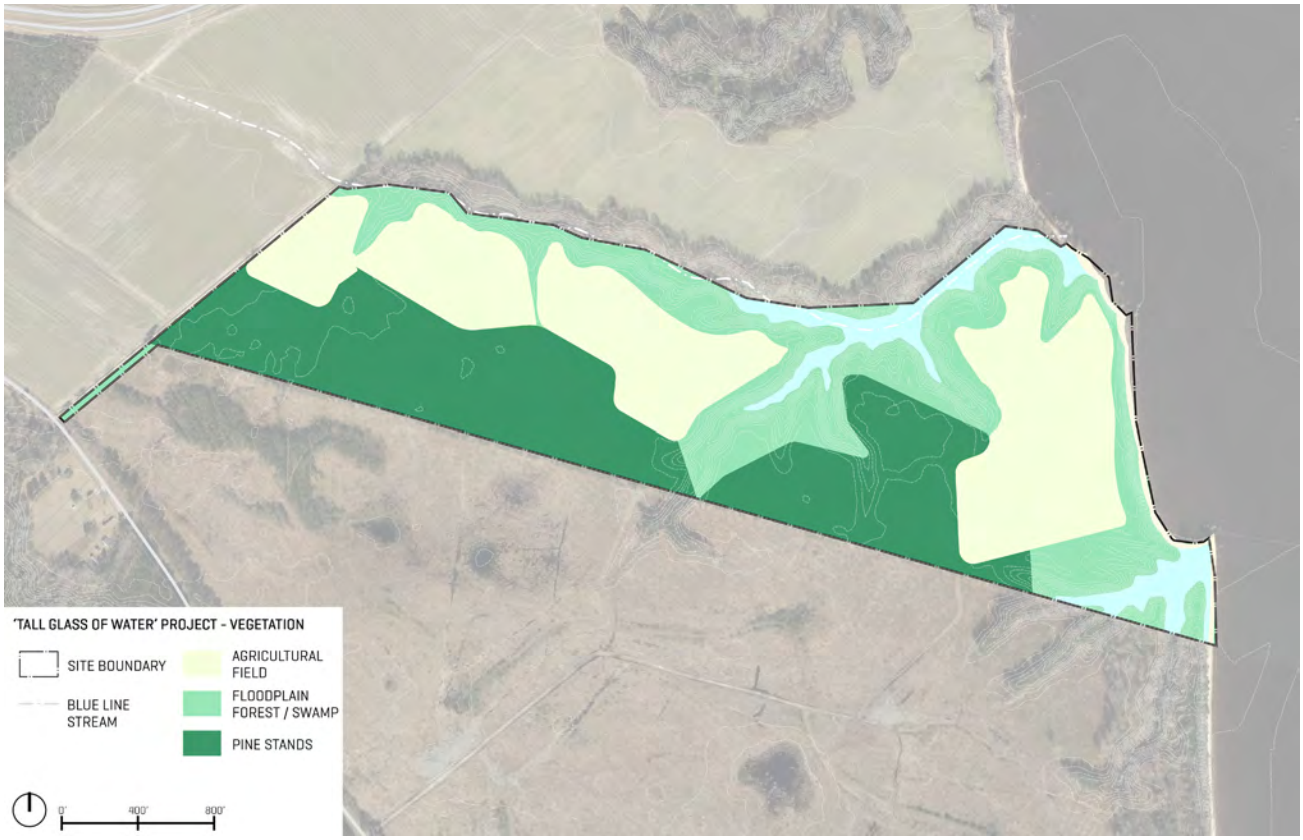


VEGETATION

The majority of the existing vegetation types are agricultural fields, loblolly pine timber stands, and smalls areas of tidal swamp forest, wetlands, and floodplain forest, where the grades were too steep to convert to agricultural fields in the past. Plant species recorded include loblolly pine, various oak species, tulip tree, bald cypress, black gum, sweet gum, red maple, and water tupelo. Animal species include gray squirrel, wild turkey, white-tailed deer, waterfowl, various fish, and song birds.

The site, located within the second largest estuary in the US and one of the most biodiverse counties in the state, is adjacent to an Audubon Important Bird Area and the Roanoke River Bottomlands. Threats to important bird habitat include logging and regulated water flow. In this important bird area, 214 bird species have been recorded including 88 breeding species, 44 neotropical migrant species, colonies of wading birds, and breeding wood ducks, whose populations have recently plummeted.

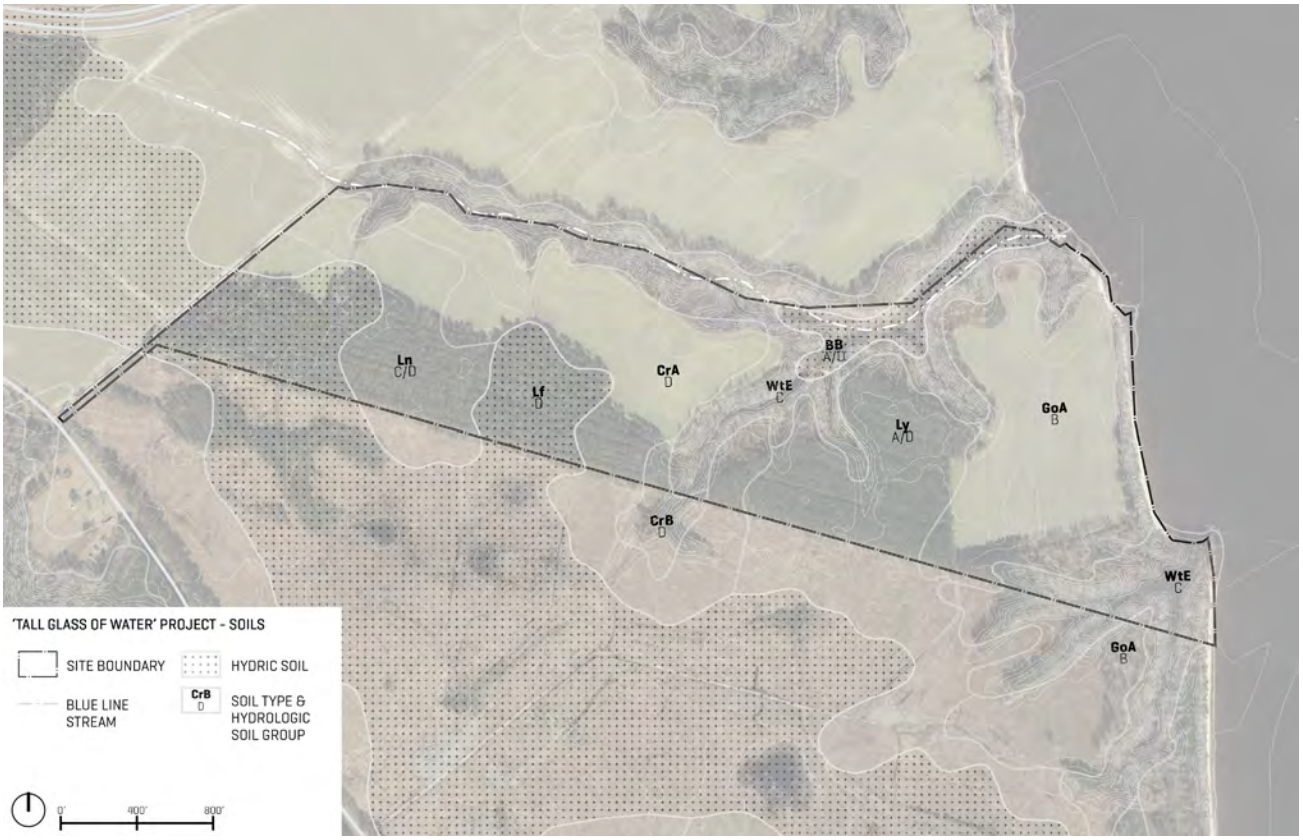
In natural areas nearby not subjected to timber production and agricultural production, typical habitats include long leaf pine woodlands, cypress-gum swamps, mixed pine-hardwood woodlands, small wetlands, and vernal pools. These habitats usually support anadromous fish, mammals like bear and river otter, wood ducks, bald eagles, big-eared bats, timber rattlesnakes, American black ducks, and many more. The intent for this project is to convert agricultural fields back to some of these native habitats.



SOILS

The soil types of TGOW range from sandy loams to loams. The majority of the site sits on a Talbot terrace, a Pleistocene-era terrace in the Atlantic Coastal Plain at the confluence of the Chowan and Albemarle estuaries. The majority of the site consists of mixed agriculture and pine plantation. The northern boundary is a small ravine formed by an incised ephemeral stream. Most of the eastern boundary is an eroding bluff.

Soil Unit	Notes	Prime Farmland	Hydric	Existing
Leaf loam (Lf)	Clayey marine deposits, poorly drained	Yes	Yes	Woodland
Lenoir fine sandy loam (Ln)	Clayey marine deposits, terraces, poorly drained	Yes	No	Fields
Goldsboro sandy loam (GoA)	Marine terraces	Yes	No	Fields
Winton fine sandy loam (WtE)	Fluviomarine deposits	No	Potentially	Floodplain
Craven fine sandy loam (Cr)	Marine terraces and clayey deposits, convex	Yes	No	Fields
Lynchburg sandy loam (Ly)	Loamy marine deposits, concave	Yes	No	Woodland
Bibb and Johnston loam (BB)	Toeslope, concave, sandy and loamy alluvium	No	Yes	Floodplain

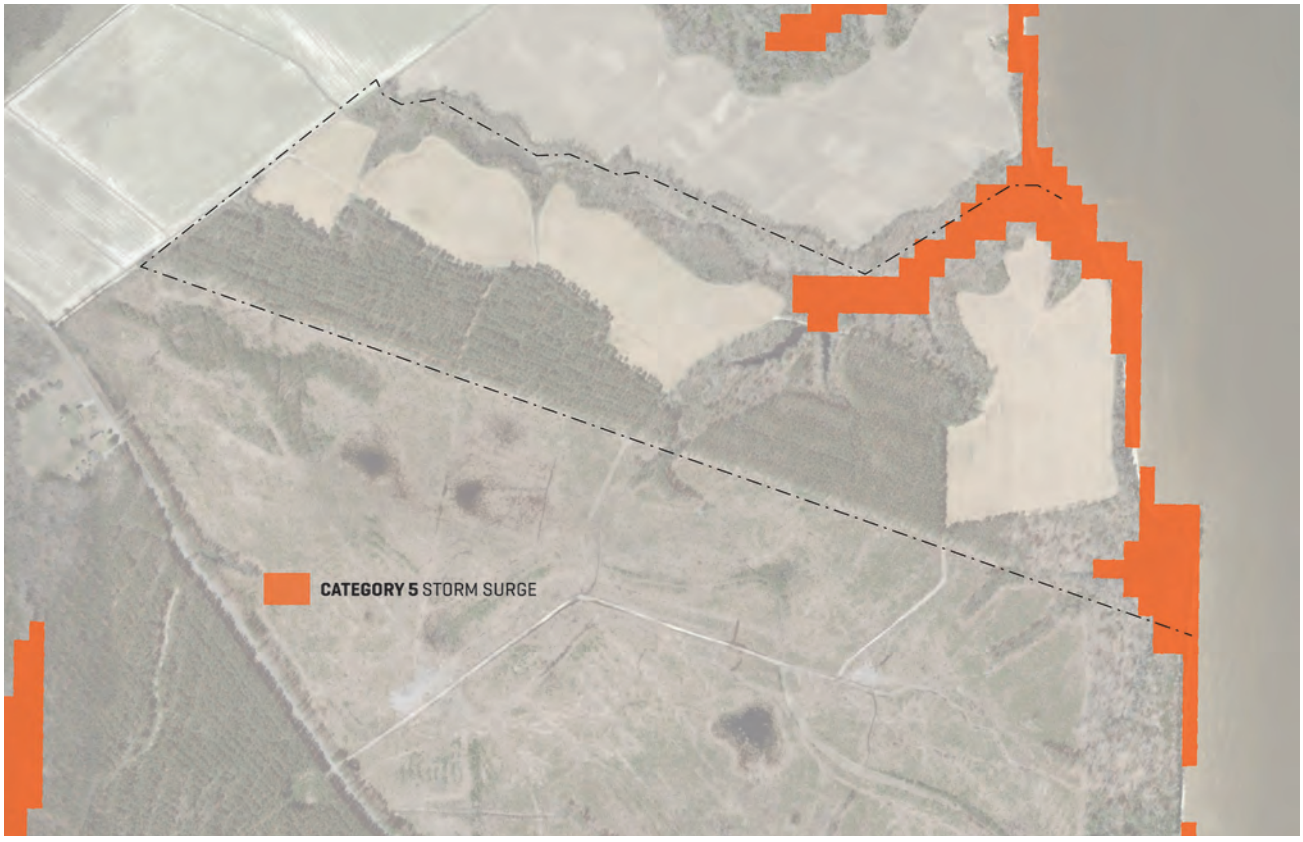


STORM SURGE

The National Oceanic and Atmospheric Administration (NOAA) defines storm surge as the abnormal rise in seawater level during a storm, measured as the height of the water above the normal predicted astronomical tide. The surge is caused primarily by a storm's winds pushing water onshore. The amplitude of the storm surge at any given location depends on the orientation of the coast line with the storm track; the intensity, size and speed of the storm; and the local bathymetry, or the nature of local underwater elevations.

The map below illustrates the extent of storm surge inundation on the Tall Glass of Water site predicted to occur during a Category 5 hurricane. This information was generated as part of the NOAA National Storm Surge Hazard Maps utilizing the hydrodynamic Sea, Lake and Overland Surges from Hurricanes (SLOSH) model to simulate storm surge from tropical cyclones.

The Tall Glass of Water site's eastern edge has been impacted in the past by hurricanes and will continue to be vulnerable in the future. The master plan considers the risk of storm surge and high winds in its recommendation of moveable features on the beach and in the water. It also takes these risks into account in its recommendation of stabilization efforts to protect beach visitors from the effects of bluff erosion and collapse.



SHORE STABILIZATION

On the Tall Glass of Water site, there is a natural bluff condition at the highest elevation along the shore created overtime by wave action driven in part by a long northeast wind fetch. This bluff condition is approximately 350 linear feet along the beach and currently presents active erosion causing soil collapse, which:

The top of the bluff area is where the archaeological area of significance and investigation is located and is anticipated to be impacted by the shore stabilization effort. The design team worked with the First Colony Foundation archaeologists to determine recommendations to document the historical resources as a part of the shore stabilization efforts.

Bertie County Commissioners seek to preserve the natural integrity of the site and at the same time provide the public with much needed outdoor recreation activities. Special attention also is required to preserve significant archaeological finds.

The design team is currently working with North Carolina environmental groups and civil and hydraulics engineers to identify and recommend an option for shore stabilization as part of this master plan.

TGOW SITE AERIAL VIEW - RECOMMEND APPROX. 350 LINEAR FEET OF SHORE STABILIZATION

TGOW SITE EXISTING CONDITIONS - VIEW FROM TOP OF BLUFF

TGOW SITE - TOP OF CLIFF EXTENTS OF ARCHAEOLOGICAL INVESTIGATION

TGOW SITE EXISTING CONDITIONS - VIEW FROM BEACH TOE OF BLUFF


FURY

4

NEEDS, PROGRAMMING + PUBLIC ENGAGEMENT

RECREATIONAL NEEDS

In 2018 the County completed the Bertie County Comprehensive Recreation Plan with the purpose "to identify the key role parks and recreation play in the health and well-being of the community, as well as gauge community support. The current plan documents the needs that residents and park and recreation professionals feel are important related to public park and recreation programs, facilities, and grounds in the next 5-10 years." The ultimate goal of the Comprehensive Recreation Plan was "to provide a) a total evaluation of the services and facilities offered by the Bertie County Recreation Department, and b) recommendations and suggestions on how they can better serve the needs of the County."

The planning effort in the Comprehensive Plan included various forms of Public Input Analysis, Staff and Volunteer Focus Groups, Advisory Partners Focus Groups, Public Meetings, Site Visits, Stakeholder Interviews, and a Community Survey.

"This plan provides a road map of continued opportunities to improve the health and quality of life for Bertie County citizens of all ages."

BERTIE COMPREHENSIVE RECREATION PLAN

Prepared by:
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Daniel Pilgreen, Graduate Assistant
East Carolina University

J. David Hodges, Jr.
Principal and President
Good Consulting Services, LLC

Prepared for:
Bertie County Board of Commissioners

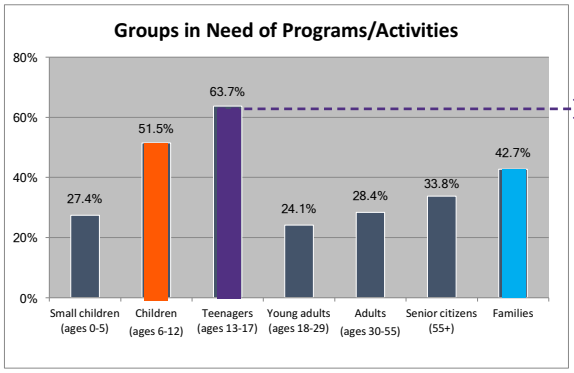
Bertie County Recreation Department

RECREATIONAL NEEDS SURVEY

The community survey collected public opinions regarding parks and recreation services and facilities. East Carolina University Department of Recreation and Leisure Studies administered an online and hard copy survey to a random sample of Bertie County residents and received 328 responses.

The following summarized survey findings contributed to the planning and the programming of the Tall Glass of Water Master Plan and align with the continued vision of creating a variety of new recreational and educational opportunities for all. From a list of 5 potential improvements to parks and recreation, the largest portion of participants listed 'building new parks' as the top priority and a new recreation center as the second priority. Through the survey, the top 3 groups identified in need of program activities are teenagers, children, and families. Within those groups, the top 5 types of programs and activities in need are 1) Swimming/water, 2) Sports, 3) Exercise, 4) Nature Exploration, and 5) Educational. The senior population was noted as needing more excercise and programs/activities as well. Citizens also identified recreational acvitivies they currently particpate in or plan to participate in as 1) Bicyling, 2) Fishing, 3) Kayaking/Canoeing, 4) Boating, and 5) Sailing.

These findings shaped the initial programming and recreational goals for the Tall Glass of Water Master Plan.



TOP 3 GROUPS IN NEED OF PROGRAMS/ACTIVITIES &
TOP 5 TYPES OF PROGRAMS/ACTIVITIES IN NEED

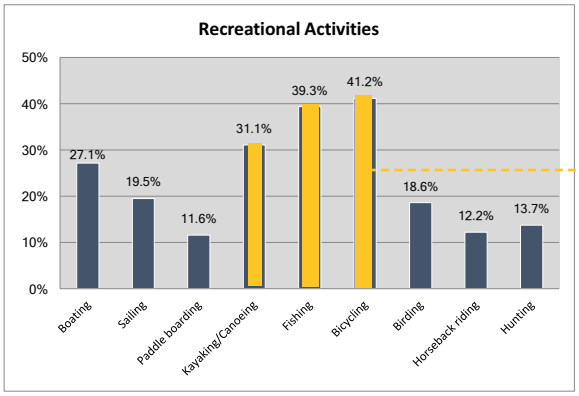
1. TEENAGERS
1. EDUCATIONAL
2. SPORTS
3. COMMUNITY SERVICE
4. SWIMMING/WATER
5. EXERCISE

2. CHILDREN
1. SPORTS
2. SWIMMING/WATER
3. NATURE/ EXPLORATION
4. SUMMER CAMPS
5. EXERCISE

3. FAMILIES
1. NATURE/ EXPLORATION
2. SOCIAL EVENTS
3. SWIMMING/WATER
4. SPORTS
5. ART

TOP 5 TYPES OF PROGRAMS/ACTIVITIES IN NEED

1. SWIMMING/WATER
2. SPORTS
3. EXERCISE
4. NATURE EXPLORATION
5. EDUCATIONAL
6. COMMUNITY SERVICE
7. SUMMER CAMPS
8. SOCIAL EVENTS
9. ART



RECREATIONAL ACTIVITIES RESIDENTS PARTICIPATE AND PLAN TO PARTICIPATE IN

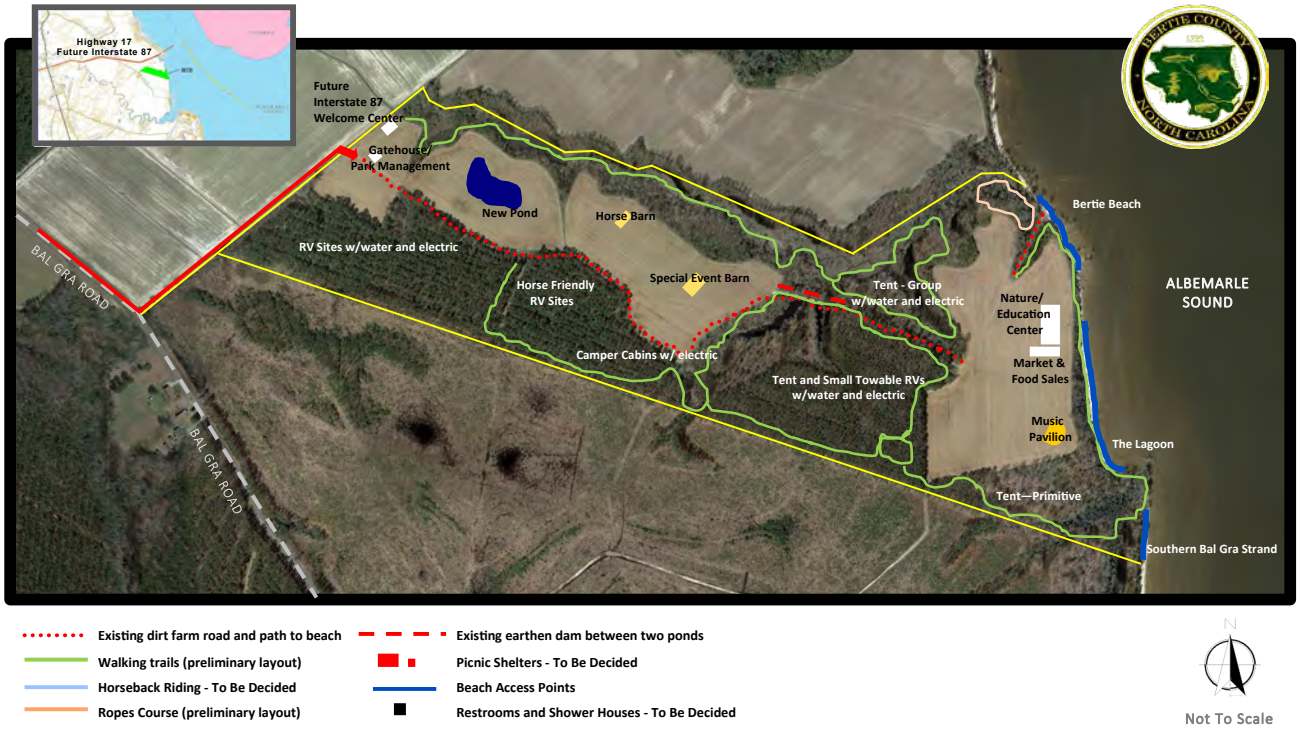
1. BICYCLING
2. FISHING
3. KAYAKING/CANOEING
4. BOATING
5. SAILING
6. BIRDING
7. HUNTING
8. HORSEBACK RIDING
9. PADDLE BOARDING

RECREATIONAL NEEDS
BERTIE COUNTY PARKS & RECREATION DEPARTMENT

Based on the recommendations from the completed Bertie County Comprehensive Plan, the County Commissioners along with Bertie's Parks and Recreation Department began formulating a plan for the Tall Glass of Water (TGOW) site. This process evolved into the following initial recreational programming components on the TGOW site:

- Beach Access with ADA accessibility
- Canoeing/Kayaking/Paddleboarding
- Fishing
- Parking + ADA Accessible Parking
- Restrooms
- Picnic Shelters
- Nature/Education Center
- Park Gatehouse
- Trails; hiking, exercise, biking
- Equestrian Trails
- ATV Trails + Track
- 3D Archery Range
- Camping Sites; primitive + group
- Camping Cabins
- RV Camping Sites
- Ropes Course
- Dog Park

BERTIE COUNTY PARKS AND RECREATION DEPARTMENT INITIAL TGOW PARK PLANNING



BERTIE COUNTY PARKS AND RECREATION DEPARTMENT TGOW PARK PLAN - UPDATE SEPTEMBER 2019

PUBLIC ENGAGEMENT
BERTIE BEACH DAY

Bertie County is surrounded by beautiful waters, yet there was no public waterfront beach access until the County purchased the 147 acre Tall Glass of Water Site in 2016. At the onset of the Tall Glass of Water Project the primary programming goal has always been to ensure all people have water access and to provide many types of aquatic and recreational activities through this new park . On June 29, 2019, the County held the first "Bertie Beach Day" and opened the TGOW beach access to the public with a 500+ visitor turn out. Many visitors expressed gratitude and support for the County's efforts to finally provide a waterfront beach access for everyone in their community.

"It isn't every day you have the chance to witness history in the making, but Saturday, June 29,2019 was one of those days. Friends, families and neighbors gathered in the eastern part of Bertie County on the shore of the Albemarle Sound to enjoy a day at the beach... We find it exciting to enjoy a look into the future and consider the possibilities for the people of Bertie County."

BERTIE POET, COMMENT FROM COUNTY WEBSITE

PUBLIC ENGAGEMENT

TGOW EXECUTIVE PLANNING COMMITTEE + INPUT COMMITTEE

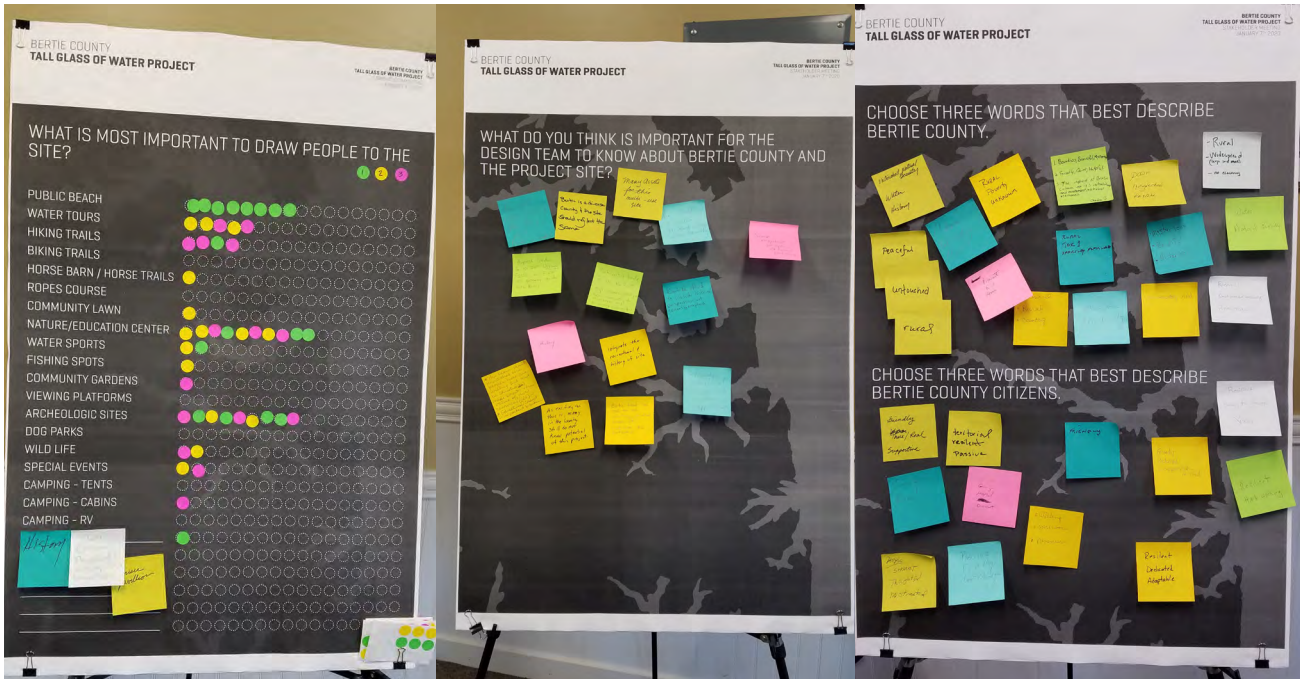
Bertie County Commissioners assembled a Tall Glass of Water (TGOW) Executive Planning Committee to lead the project and estabilish a TGOW Input Committee to provide support and feedback to the project design team once selected. In November 2019, the County issued a Request for Qualifications for professional consultant services for Planning, Design & Engineering for the project. Five design teams were interviewed in December 2019 and in January 2020 the design team led by Vines Architecture was selected for the TGOW project.

In January 2020, Vines Architecture led the first engagement meeting with the TGOW Executive Planning and Input Committees. Each member of the committee was asked to provide input to help define priorities for the park program. One question asked: WHAT IS MOST IMPORTANT TO DRAW PEOPLE TO THE SITE?

1. PUBLIC BEACH
2. NATURE/EDUCATION CENTER
3. ARCHAEOLOGICAL SITES
4. WATER TOURS
5. TRAILS

Consensus of the committee was very supportive of the project and agreed creating the public waterfront beach access with ADA accessibility is the first priority for Phase 1 of the TGOW project. The second and third priority from the group were 2) to provide a nature/ educational center and 3) integrate the historical resources on-site for educational purposes. The group discussed the need to phase the project over time to allow time for funding especially some of the larger program components and underground utilities, which currently do not exist on the site.

INPUT COMMITTEE MEETING - SEE ACKNOWLEDGMENTS FOR LIST OF COMMITTEE MEMBERS



PUBLIC INPUT BOARDS

PUBLIC ENGAGEMENT

TGOW EXECUTIVE PLANNING COMMITTEE + INPUT COMMITTEE

After gaining valuable input from the first meeting, Vines Architecture led a second engagement meeting with the TGOW Executive Planning and Input Committees in February 2020. The focus of this discussion was to present a preliminary program list and site plan for each of the 5 phases of the project and to establish consensus among the group regarding types of recreational activities and facilities recommended. In general, the group discussed the importance of not duplicating any facilities that currently exist or might be in planning on other sites. Participants agreed on the importance of a partnership with the adjacent NC Parks and Recreation - Salmon Creek State Natural Preserve Area to develop program opporunities to support and any future educational or recreational facilities on each site. The group supported the following program list presented.

SECOND INPUT COMMITTEE MEETING

TALL GLASS OF WATER PROJECT PRELIMINARY PROGRAM

PHASE 1

SWIM BEACH
KAYAK STORAGE
ACCESSIBLE PATH
RESTROOM/*PICNIC PAVILION
*OPEN PLAY FIELD
PARKING
*OVERLOOK
*TRAIL
MEADOW
*PRIMITIVE CAMPSITES

PHASE 2

*TRAIL
OUTDOOR EVENT SPACE
RESTROOM/*PICNIC PAVILION
*MULTI-PURPOSE PAVILION
PARKING
*RESTROOM/SHOWER/ PICNIC SHELTER
*GROUP CAMPSITES
*PICNIC SHELTER

PHASE 3

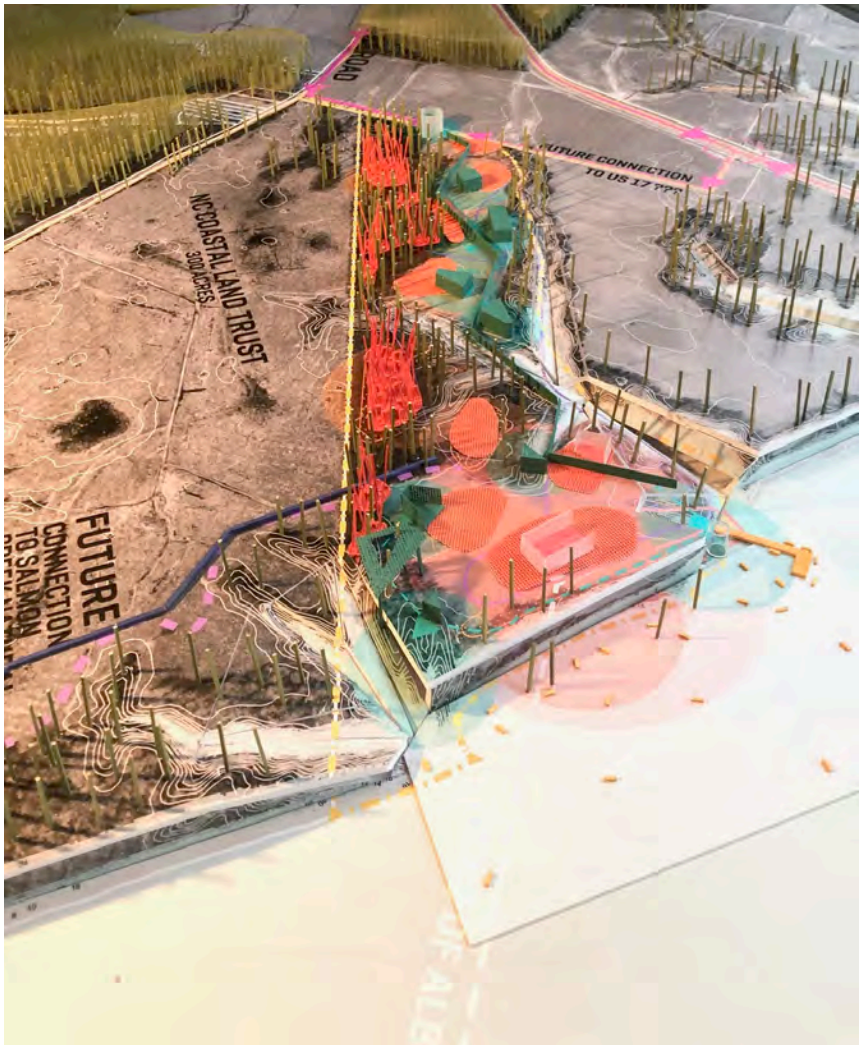
*TRAIL
PARKING
ARCHAEOLOGICAL SITE INTERPRETATION
*MULTI-PURPOSE COMMUNITY CENTER
NATURE/VISITOR
*MARKET/CONCESSIONS/ PICNIC
ROAD PAVING + REVISIONS
*CABIN CAMPING
*RESTROOM/SHOWER/ PICNIC SHELTER
MUNICIPAL WATER SUPPLY + POWER

PHASE 4

BARN [HORSE]/ MAINTENANCE BLDG
*RESTROOM/SHOWER/ PICNIC SHELTER
*RV CAMPGROUNDS

PHASE 5

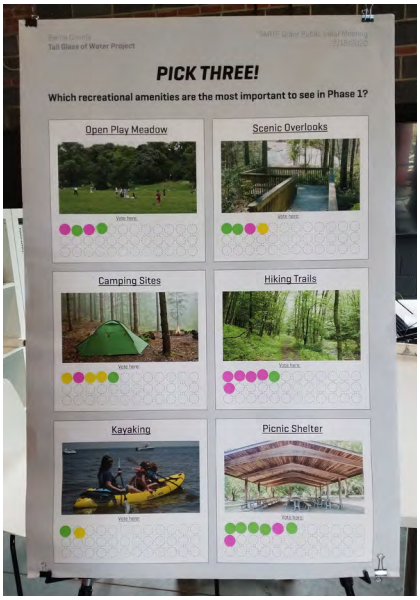
WELCOME CENTER

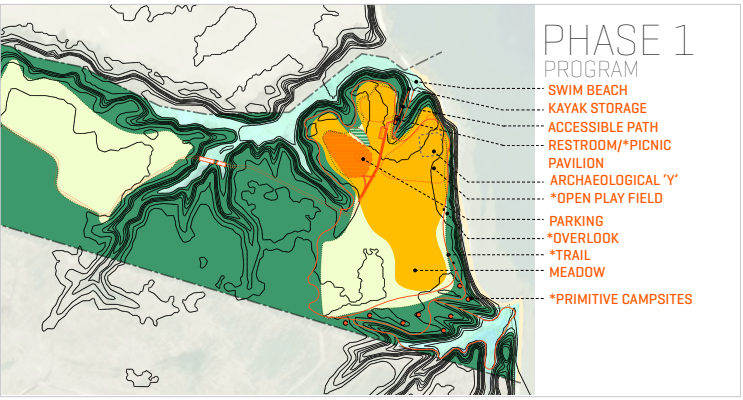


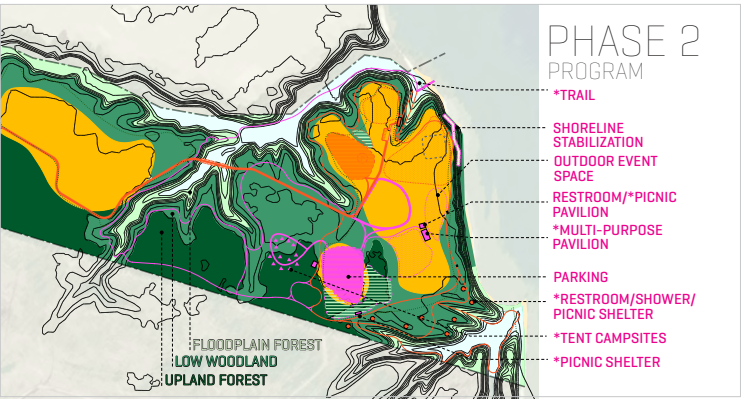
TGOW SITE MODEL

PUBLIC ENGAGEMENT
PARTF PUBLIC INPUT MEETING

On February 19, 2020, Vines Architecture led a public engagement meeting opened to anyone interested or wanting to contribute to the Tall Glass of Water Project. The focus of this meeting was to present in detail the planning and programming for Phase 1 relative to the anticipated PARTF grant funding. The design team reviewed all 5 phases of the project and asked for general input from the participants as well as prioritization of programming elements. The top priorities were 1. Picnic Shelters, 2. Trails, 3. Camping, 4. Overlooks + Open Play Fields, and 5. Kayaking. All participants were in support of the Tall Glass of Water Project.





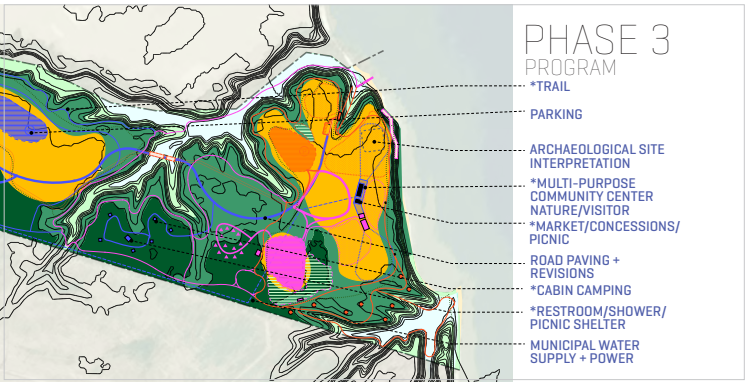


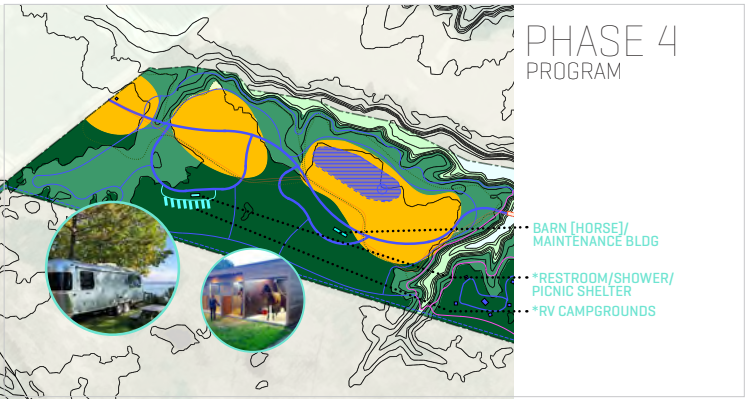
SLIDES/IMAGES SHARED AT PUBLIC MEETINGS

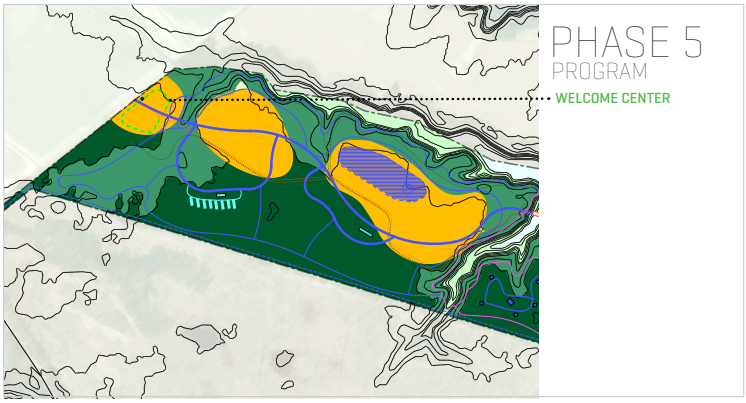
PUBLIC ENGAGEMENT
ADDITIONAL PUBLIC INPUT MEETINGS

On February 27, 2020, Steve Biggs, Director of Economic Development and Robin Payne TGOW Coordinator, presented the development of the TGOW project to the Rotary Chapter of Windsor to gain more public input for the TGOW project. Special focus was on Phase I in relation to the PARTF Grant components: handicap accessibility to the water, restrooms, picnic shelters, hiking trails, meadow and primitive camping. NC District Governor Lewis Hoggard explained "Today we're happy to learn more and provide feedback on the Tall Glass of Water Project....Our feedback is essential for this much-needed project, which will certainly be of great benefit to all of Bertie for many years to come."

On March 6, 2020, Steve Biggs and Robin Payne, presented the development of the TGOW project to the Bertie County 4-H, along with Youth Development Agent Guy Holley to gain more feedback from the community. The 4-H group asked about the potential for swimming and kayak lessons, small business and employment opportunities, lifeguard training and transportation availability. Suggestions included: advertising ideas, interpretive signage, shorten the road to the beach, low pier from the beach to the cypress trees for relaxing, and future name for the park could be derived from an artifact. After the presentation, the group visited the site and all youth in attendance were in favor of the TGOW project.





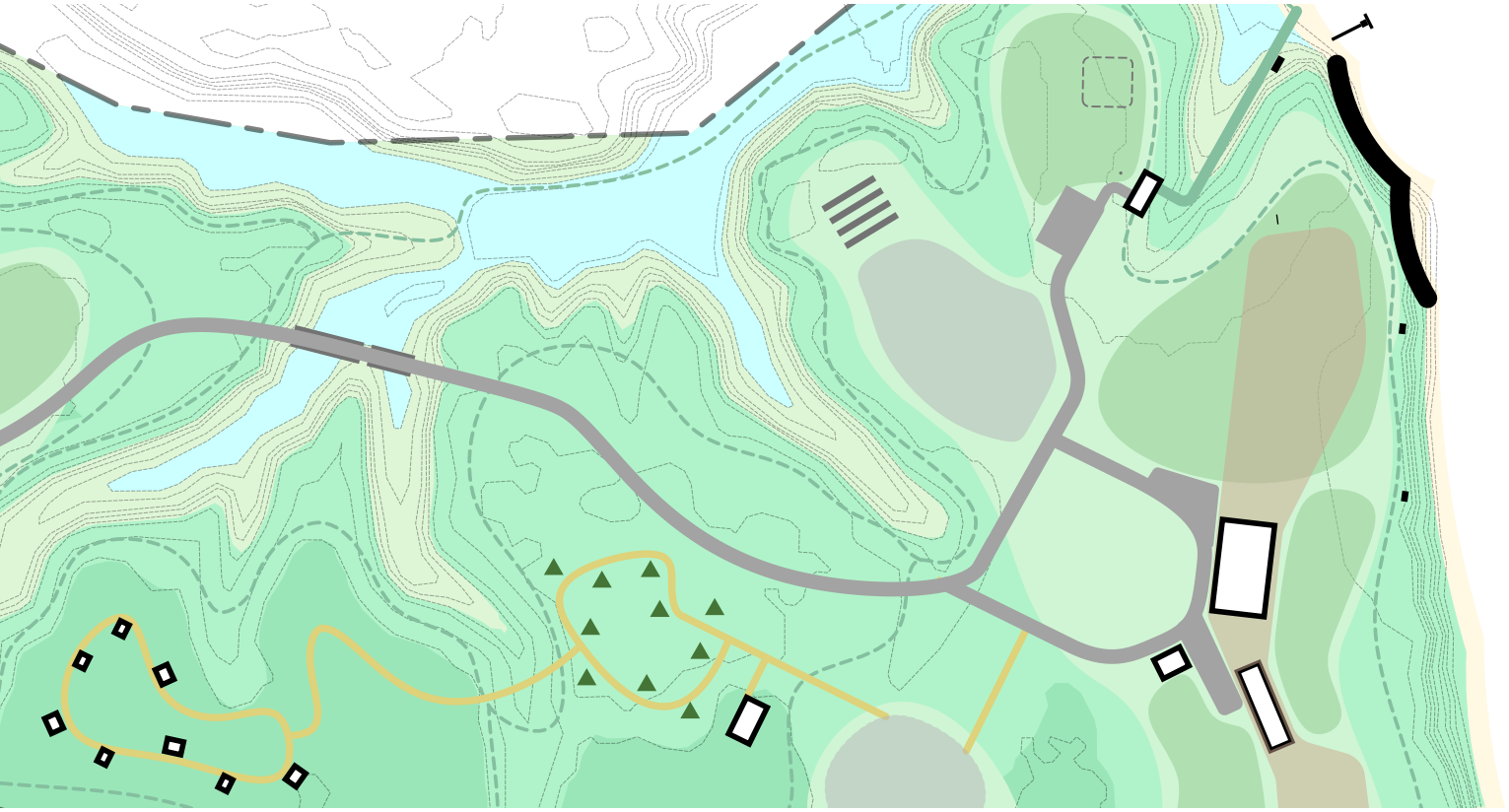


5

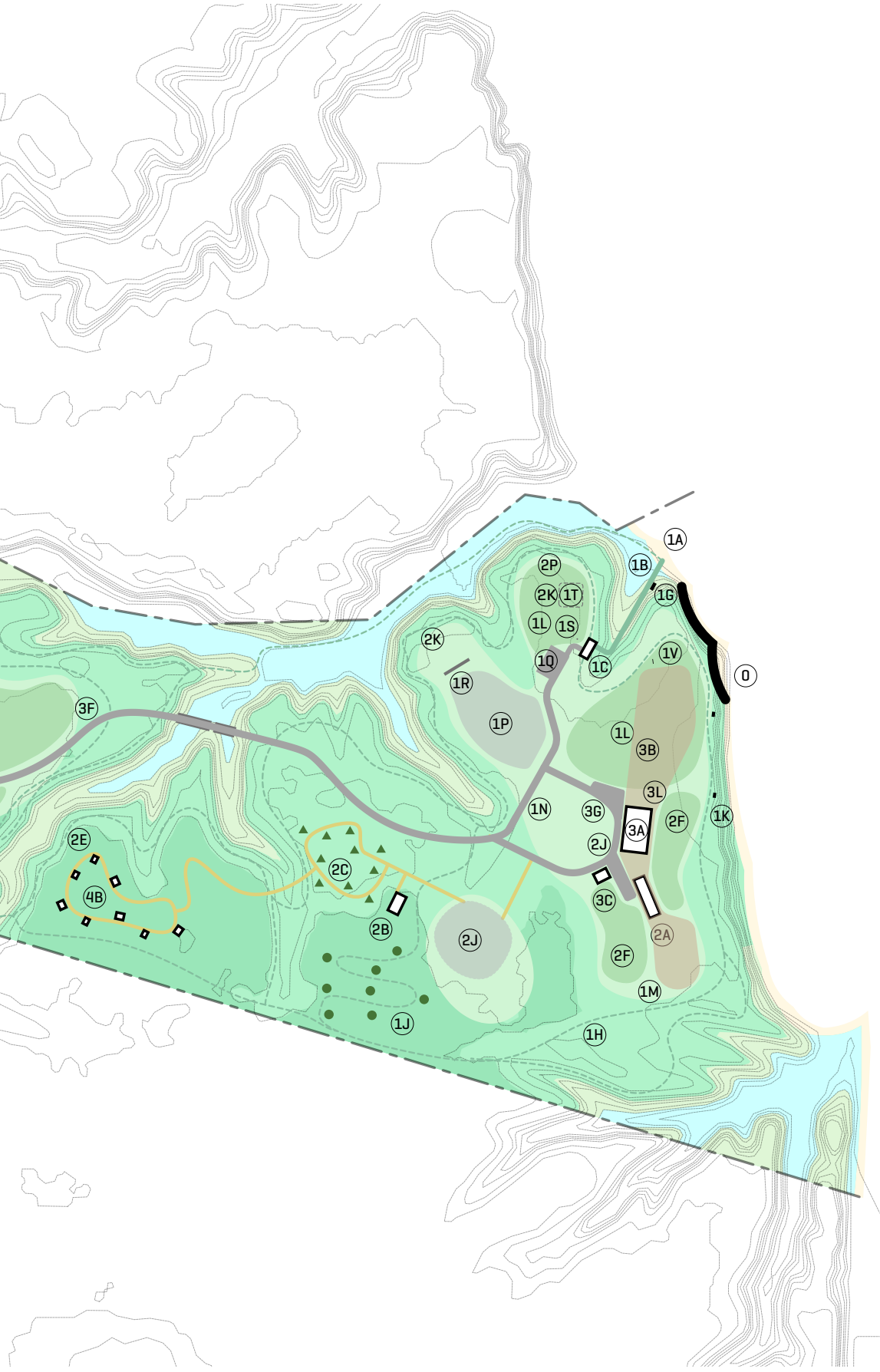
MASTER PLAN

MASTER PLAN SUMMARY

The culmination of the extensive planning effort for the future Tall Glass of Water Park is represented in this section through the final Tall Glass of Water Master Plan. The park master plan is organized through a phased approach with each phase represented on a graphic site map with keyed program components and recommended physical needs description. Also included in the park master plan are site restoration strategies for restoring portions of the site to its natural habitat, furthering the vision of the TGOW as an educational and recreational venue for exploring Bertie's natural and wildlife resources. This master plan embodies the original spirit of the initial land acquisition: to create a world-class waterfront recreation park for all by offering experiences in Bertie that are unparalleled in the realm of historical and natural resources.




1V
4A
5A
2G
3G
4C
4G
4D
4F
3E
3K
3J
3H
3D



Shoreline Improvements

0 Shoreline Stabilization

Phase 1

1A Public Swim Beach
1B ADA Beach Access
1C Restrooms
1D Showers
1E Picnic Shelter
1F Picnic Tables
1G Kayak Kiosk
1H Trails
1J Primitive Camping
1K Overlooks
1L Open Lawn
1M Site Restoration
1N Road + Bridge Repairs
1P Parking-Gravel
1Q Parking-Paved
1R Solar Power
1S Well
1T Septic Field
1V Signage

Phase 2

2A Multi-Purpose Pavilion
2B Picnic Pavilion
2C Drive-in Camp Sites
2D Kayak Launch
2E Trails
2F Open Lawn
2G Site Restoration
2H Gravel Road
2J Parking-Gravel
2K Utilities-Solar/Septic/Well
2P Play Area

Phase 3

3A Multi-Purp. Comm. Center
3B LC Interpretation
3C Market
3D Trails
3E Site Restoration
3F Paved Road
3G Paved Parking
3H Underground Power
3J Municipal Water
3K Municipal Septic
3L Teaching Garden

Phase 4

4A Gatehouse
4B Camper Cabins
4C Restroom Pavilion
4D RV Campgrounds
4E Trail
4F Open Lawn + Rec Field
4G Gravel Road

Phase 5

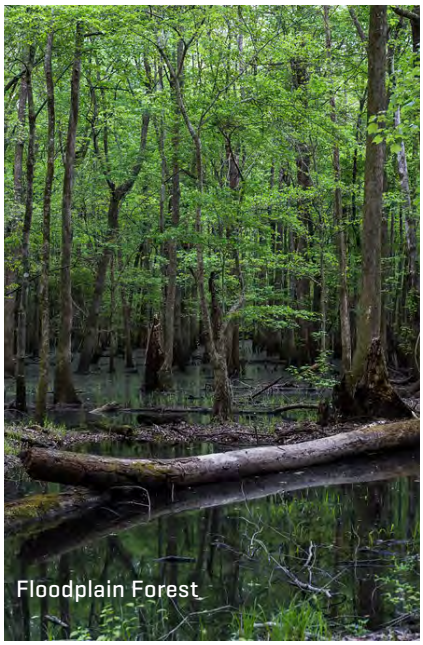
5A Welcome Center

RESTORATION STRATEGIES

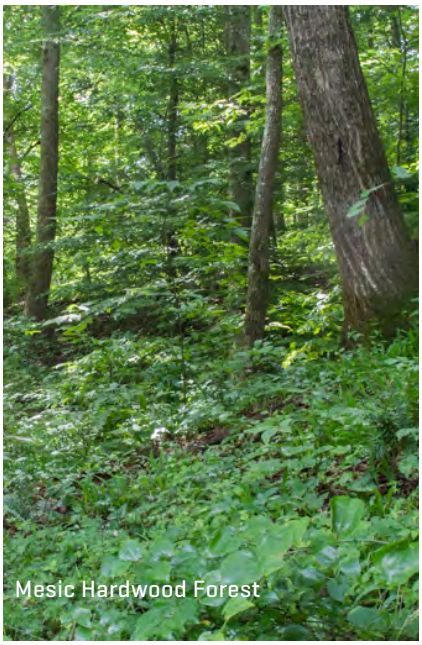
The agricultural and timbering activities on the site over the years flattened the land, filled small drainageways, dammed low lying areas, and increased stormwater runoff and erosion when compared to woodland landcover typically found in the area. These modifications have left 2 native and 2 non-native land cover types on the existing site: aquatic estuarine, the tidal swamps and floodplain forest on areas too steep to farm or timber, and on other areas, agricultural fields. However, the site has the potential to support at least 6 different native habitat types, as seen on nearby reference sites, based on hydrology, soil, and elevation: 1) aquatic estuarine, 2) tidal swamps and floodplain forest, 3) dry coniferous forest, 4) mesic oak forest, 5) native meadows, and 6) small wetlands and vernal pools.

The goal of the phased restoration is to pair park recreation improvements with restoration strategies to convert agricultural fields and pine plantation to native, more biodiverse habitat.

The goal of the restoration efforts are to improve the hydrological systems (improving water quality, reducing runoff, reducing erosion and sedimentation); increase biodiversity of native species; and target keystone species for habitat improvements. Restoration strategies will include reshaping the land to undo previously filled land; mechanical removal of pine; prescribed burning; mowing; seeding; and tree, shrub, and perennial restoration planting.


Floodplain Forest


Longleaf Pine Savanna


Mesic Hardwood Forest


Native Meadow


Native Meadow

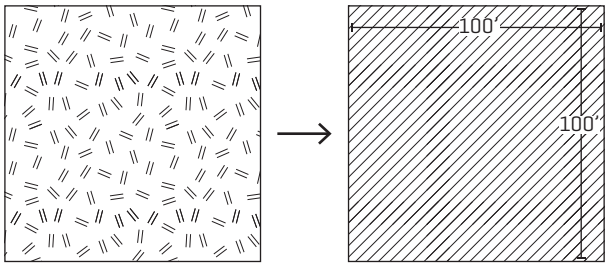
PHASE 1 RESTORATION

Restoration efforts in Phase 1 will focus on improving visitor experience on the eastern edge of the site. Ten acres of existing agricultural fields will be regraded and prepared for conversion to full-sun native meadow.

Regrading in this portion of the site — by creating subtle depressions within the meadow — could prevent stormwater from sheetflowing over the bluff and contributing to the bluff's erosion. Two seed mixes would be used here to — one for drier portions of the site, and another for areas regraded to capture stormwater.

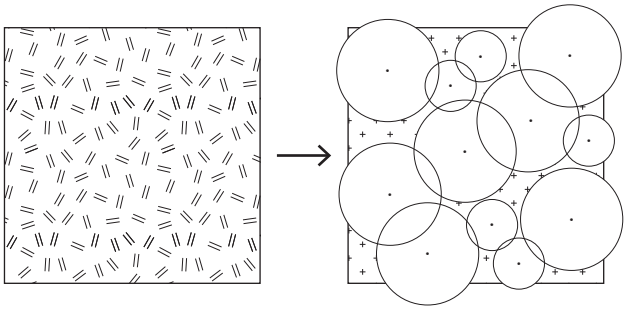
An additional quarter acre of existing agricultural fields will be converted to mesic hardwood forest to shield site open spaces from the parking lot, as illustrated in the "Mesic hardwood forest" module to the right.

plant module 1 / AGRICULTURAL FIELD TO OPEN MEADOW



Open agricultural field Full-sun native meadow

plant module 2 / AGRICULTURAL FIELD TO MESIC HARDWOOD FOREST



Open agricultural field Mesic hardwood forest

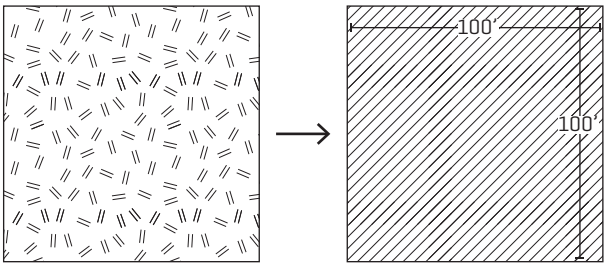
PHASE 2 RESTORATION

Restoration efforts in Phase 2 will focus on the site's remaining 41 acres of former agricultural fields.

Twenty acres will be converted through site preparation and seeding to full-sun native meadows. This conversion to meadow will boost the habitat and stormwater performance of the Tall Glass of Water landscape while cutting down on long-term maintenance and creating a beautiful backdrop for site visitors.

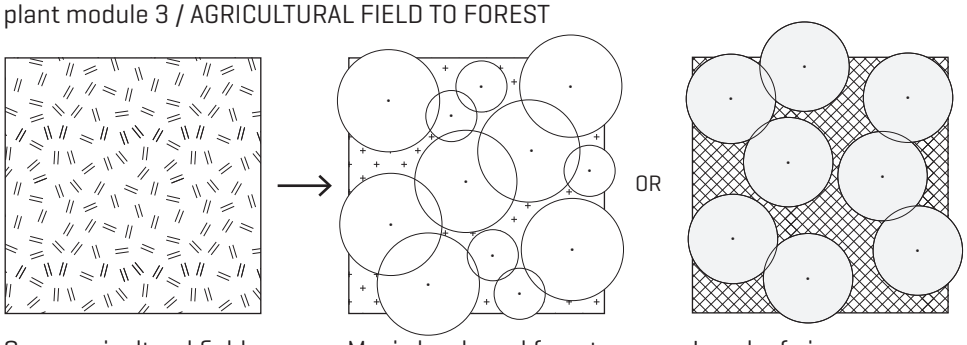
The final 21 acres of the site's existing agricultural fields will be converted to longleaf pine savanna and mesic hardwood forest. The quarter-acre planting modules to the right show the proposed gradual transition from interior forest to open meadow. Mesic hardwood forest plantings will account for 3 acres of work, and longleaf pine savanna plantings will account for 18 acres.

plant module 1 / AGRICULTURAL FIELD TO OPEN MEADOW



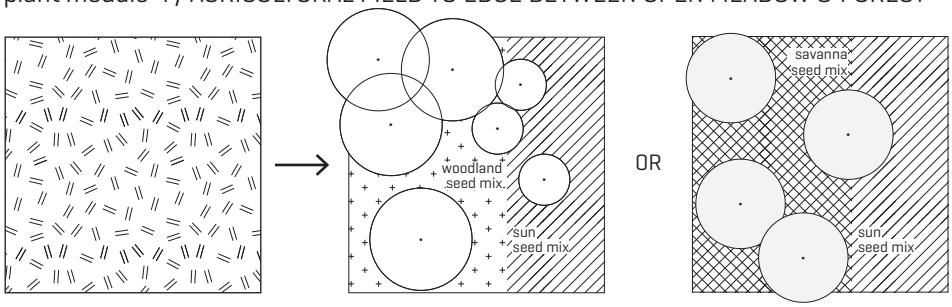
Open agricultural field | Full-sun native meadow

plant module 3 / AGRICULTURAL FIELD TO FOREST



Open agricultural field | Mesic hardwood forest | Longleaf pine savanna

plant module 4 / AGRICULTURAL FIELD TO EDGE BETWEEN OPEN MEADOW & FOREST



Open agricultural field | Mesic hardwood edge | Longleaf pine edge

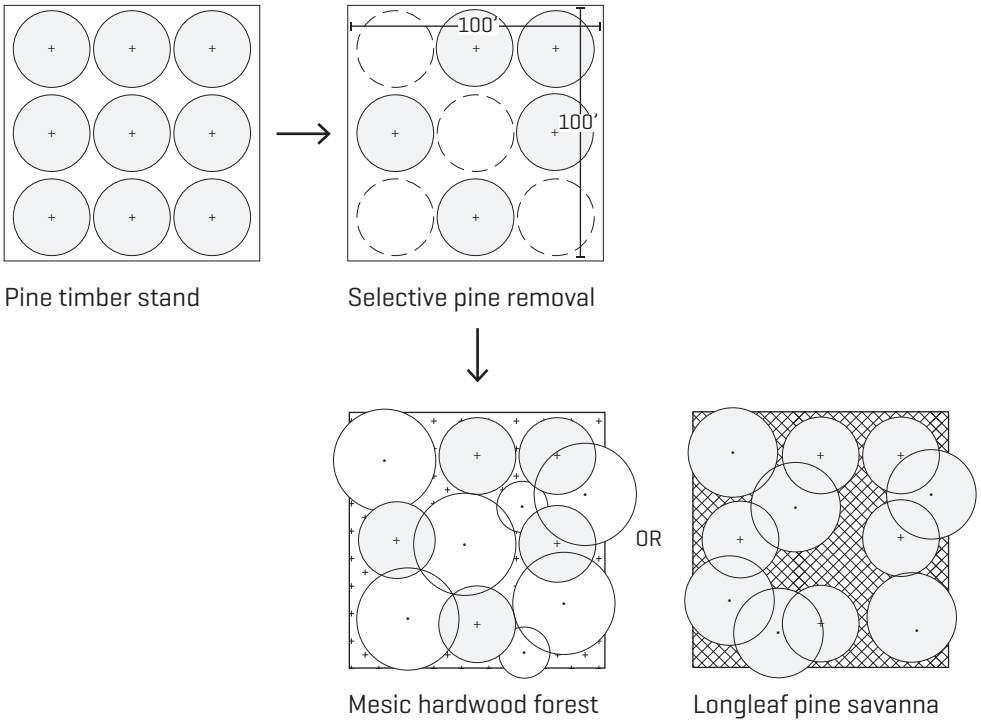
PHASE 3 RESTORATION

Restoration efforts in Phase 3 will focus on the site's existing pine stands, planted several decades ago to replace the site's native hardwood forests with pine for timber production.

Pine timber stands account for approximately 50 acres of the existing site. This phase of work will include clearing of 50% of the pine stands, with cleared wood and debris being reused on site where possible. There is the possibility for sale of merchantable timber to help cover site and restoration costs.

In the 25 acres of existing pine stands where clearing has occurred, 15 acres will be planted and seeded to restore a mesic hardwood forest, and longleaf pine savanna plantings will account for the remaining 10 acres.

plant module 5 / TIMBER STAND TO NATIVE FOREST



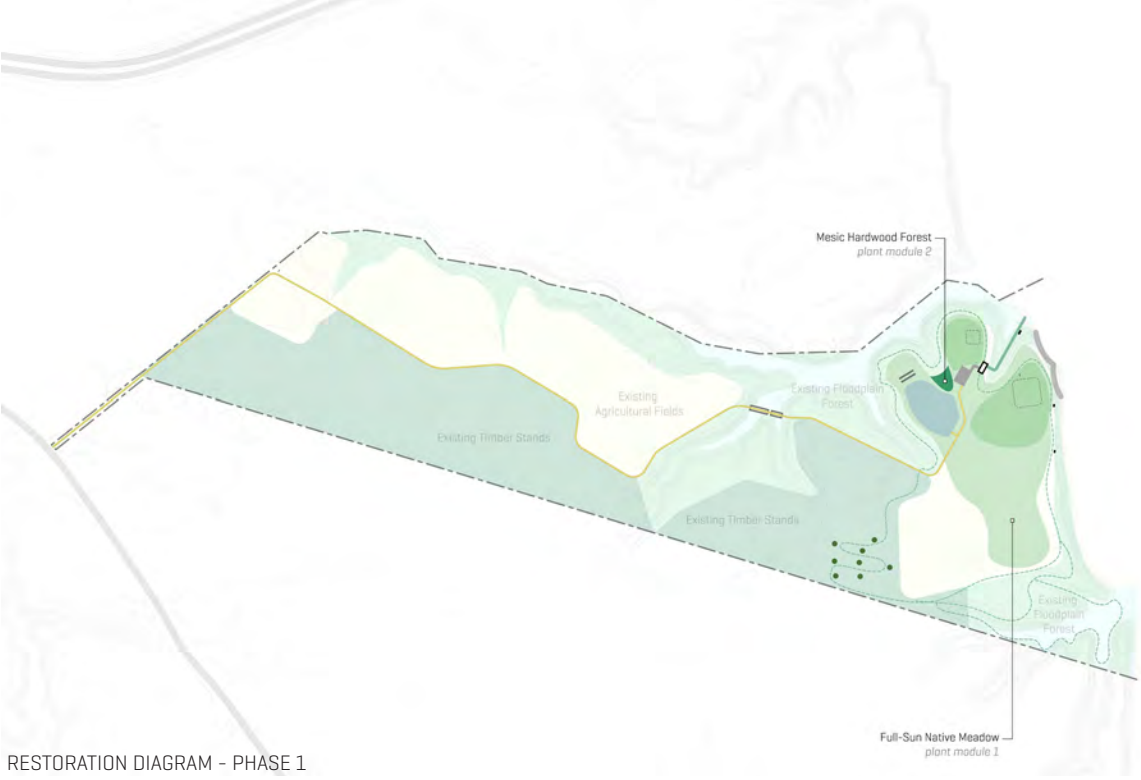
Pine timber stand

Selective pine removal

Mesic hardwood forest

Longleaf pine savanna

PHASED RESTORATION

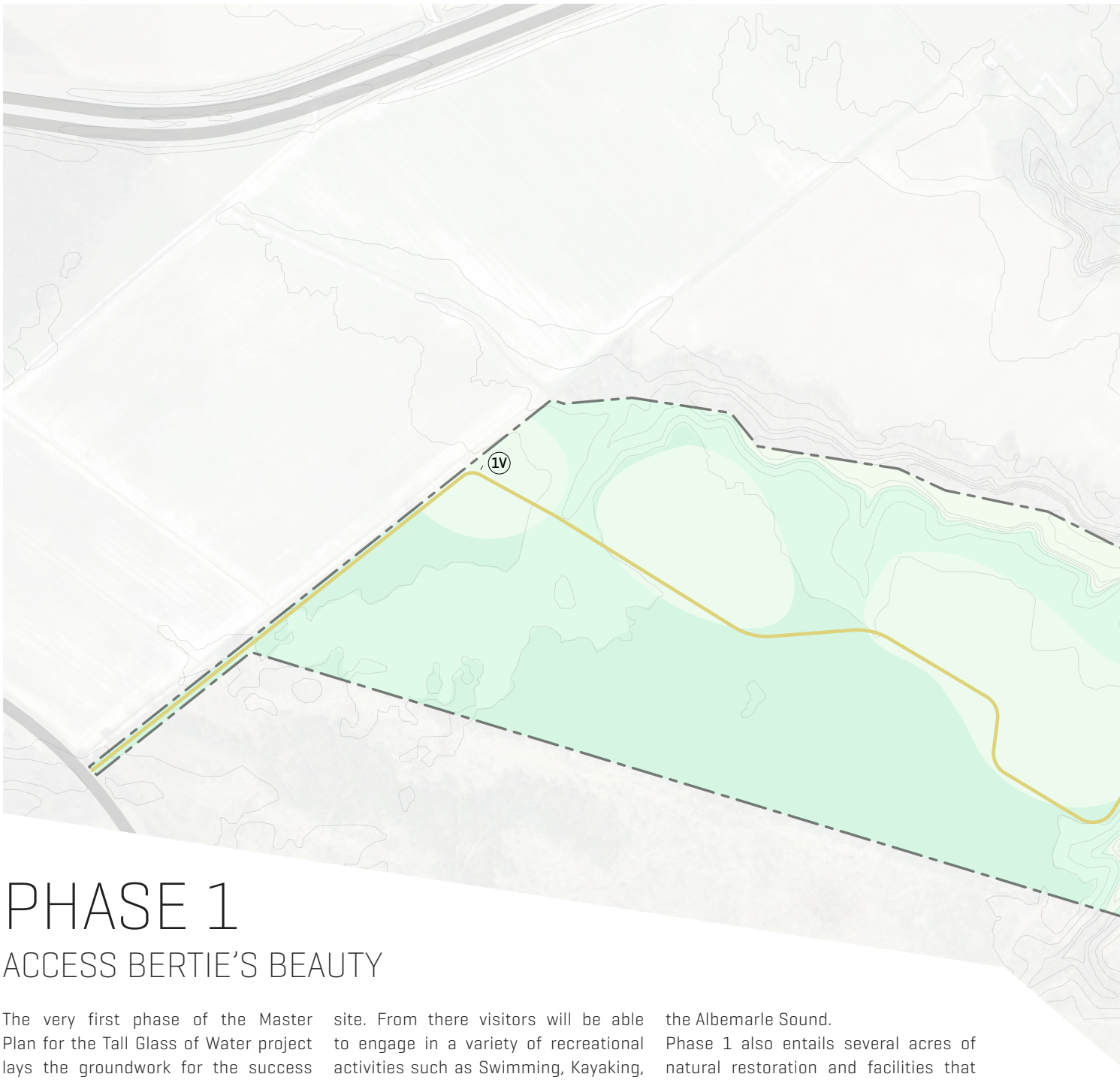


RESTORATION DIAGRAM - PHASE 1

RESTORATION DIAGRAM - PHASE 2

RESTORATION DIAGRAM - PHASE 3

RESTORATION DIAGRAM - ALL PHASES



PHASE 1

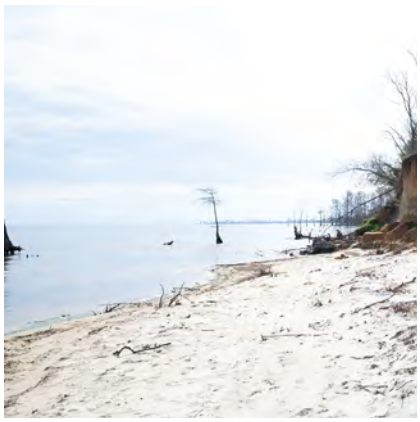
ACCESS BERTIE'S BEAUTY

The very first phase of the Master Plan for the Tall Glass of Water project lays the groundwork for the success and further development of the site by providing three key elements: ADA-compliant Public Access to the Waterfront, Recreational Programming for Visitors to enjoy the natural beauty of the land and Basic Infrastructure to support the many new activities on site. It includes a cleanup of the northern shore to create a Public Swim Beach that will be connected via an ADA-compliant ramp to the primary point of arrival on site. From there visitors will be able to engage in a variety of recreational activities such as Swimming, Kayaking, Hiking and Primitive Camping. A new trail loop explores the southern shore with its dramatic descent from upland beech woods to a serene tupelo swamp and protected beach. A primitive camp site with picnic tables and steel fire rings will be provided on naturally flat and open areas to minimize tree cutting and re-grading and an overlook platform on the walking path along the coastline will allow for stunning views of the Albemarle Sound.

Phase 1 also entails several acres of natural restoration and facilities that provide restrooms, showers, sheltered picnic areas and kayak storage as well as stormwater improvement, photovoltaic power, septic fields and signage.

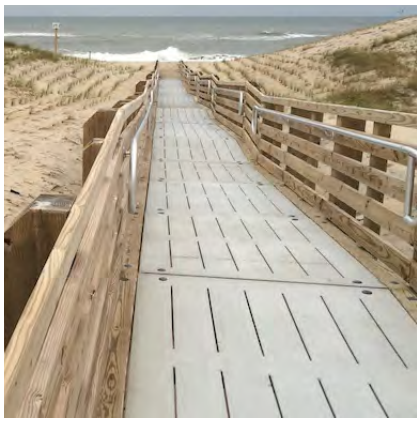
Phase 1

1A Public Swim Beach
1B ADA Beach Access
1C Restrooms
1D Showers
1E Picnic Shelter
1F Picnic Tables
1G Kayak Kiosk
1H Trails
1J Primitive Camping
1K Overlooks
1L Open Lawn
1M Site Restoration
1N Road + Bridge Repairs
1P Parking-Gravel
1Q Parking-Paved
1R Solar Power
1S Well
1T Septic Field
1V Signage



1A Public Swim Beach

1B Public Beach Access



PHASE 1

PROGRAM ELEMENTS

ADA accessible ramp - Cape Hatteras

1C Restrooms

1D Showers

1E Picnic Shelter

1G Kayak Kiosk

1H Trails

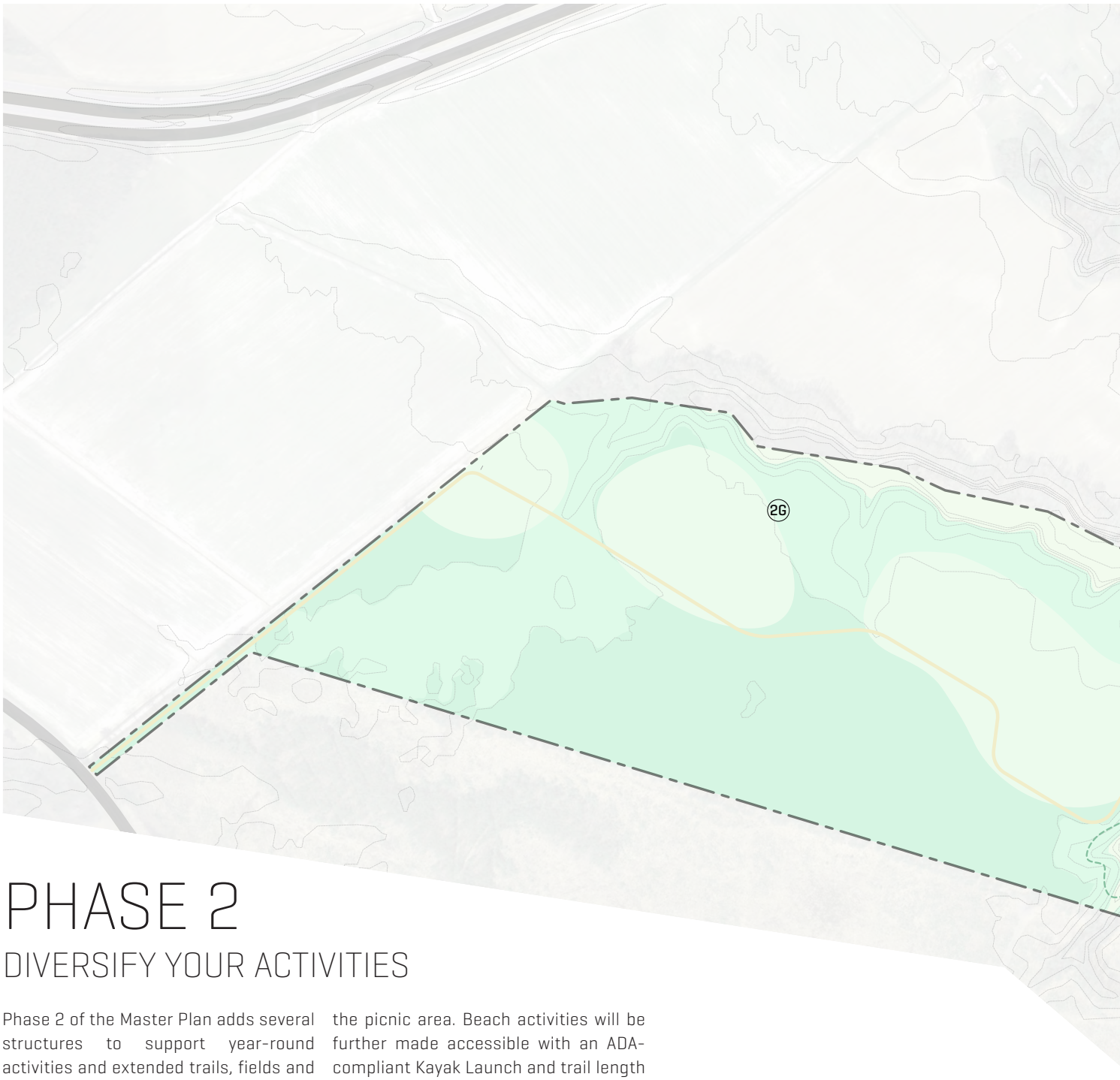
1J Primitive Camping

1K Overlooks

1L Open Lawn

1M Site Restoration

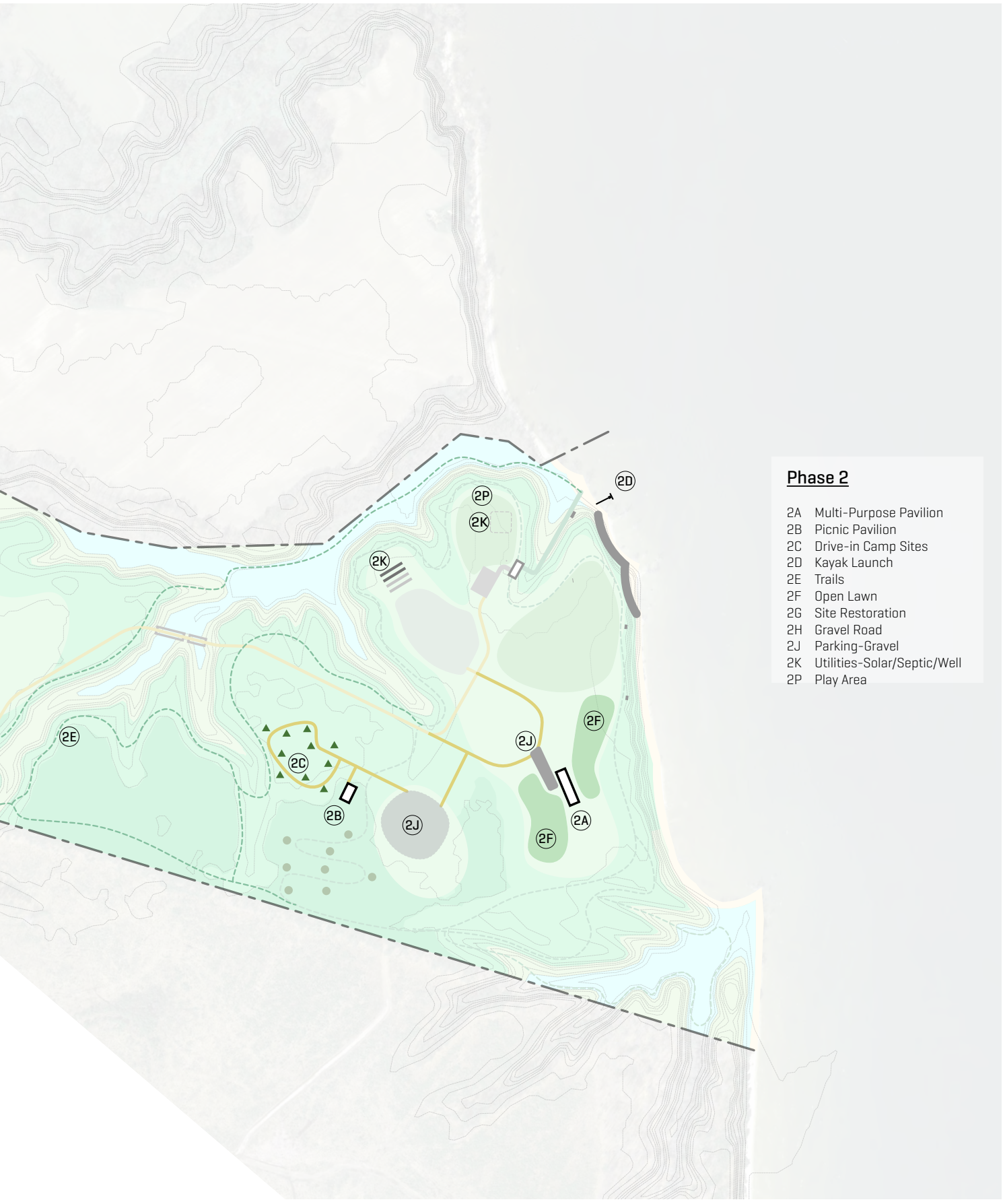
1V Signage



PHASE 2

DIVERSIFY YOUR ACTIVITIES

Phase 2 of the Master Plan adds several structures to support year-round activities and extended trails, fields and camping. The core of the second phase is a covered, open-air, clear span multi-purpose pavilion, intended to support a variety of functions: community gatherings, events, performances (music, theater, etc.), outdoor classes, picnics, reunions, etc. In addition to the covered gathering area, the structure will feature restrooms as well as a family restroom, and a maintenance closet. A fireplace is to be provided in the picnic area. Beach activities will be further made accessible with an ADA-compliant Kayak Launch and trail length will be doubled while extending into the wetland areas of the site. A landscaped outdoor event area allows for play and community events.



Phase 2

2A Multi-Purpose Pavilion
2B Picnic Pavilion
2C Drive-in Camp Sites
2D Kayak Launch
2E Trails
2F Open Lawn
2G Site Restoration
2H Gravel Road
2J Parking-Gravel
2K Utilities-Solar/Septic/Well
2P Play Area

2A Multi-Purpose Pavilion

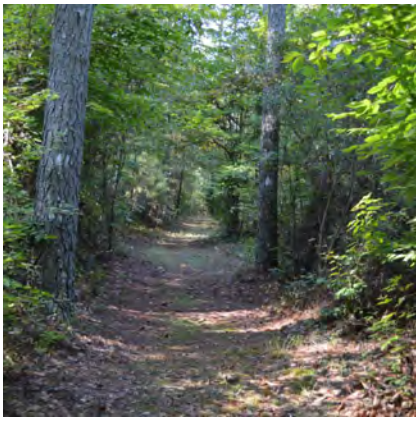
PHASE 2

PROGRAM ELEMENTS

2B Restrooms / Shower / Picnic Pavilion

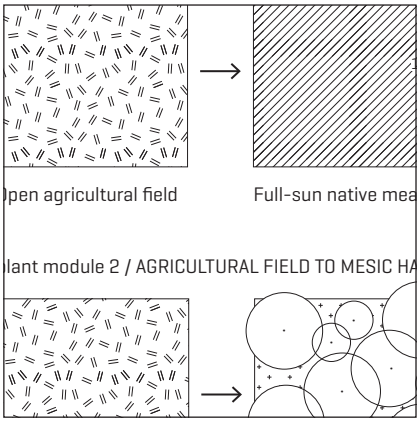
2C Drive-In Campsites

2D ADA Accessible Kayak Launch



2E Trails

2F Open Lawn



2G Site Restoration

2H Infrastructure

2P Play Area

PHASE 3

UNCOVER THE HISTORY

In the third phase the multi-purpose community center, an approximately 12,000 SF structure designed to be the flagship resource on the site, will feature two main elements - a 4,800 SF sub dividable multi-purpose room for events, lectures, weddings, banquets, etc. and a 2,400 SF lobby/gallery featuring educational exhibitions, as well as lounge/seating areas. In addition, the center will provide a classroom, offices for staff, storage, and an outdoor covered overlook/picnic area.

Furthermore, this phase will add another mile of wetland trail, a teaching garden, a market pavilion containing a concessions area and a catering kitchen and a new paved 20 feet wide main road.

Phase 3

3A	Multi-Purp. Comm. Center
3B	LC Interpretation
3C	Market
3D	Trails
3E	Site Restoration
3F	Paved Road
3G	Paved Parking
3H	Underground Power
3J	Municipal Water
3K	Municipal Septic
3L	Teaching Garden

3A Multi-Purpose Community Center

PHASE 3

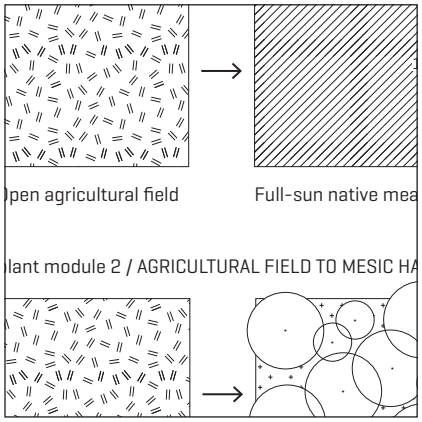
PROGRAM ELEMENTS

ADA accessible ramp - Cape Hatteras

3B Historical Site Interpretation

3C Market

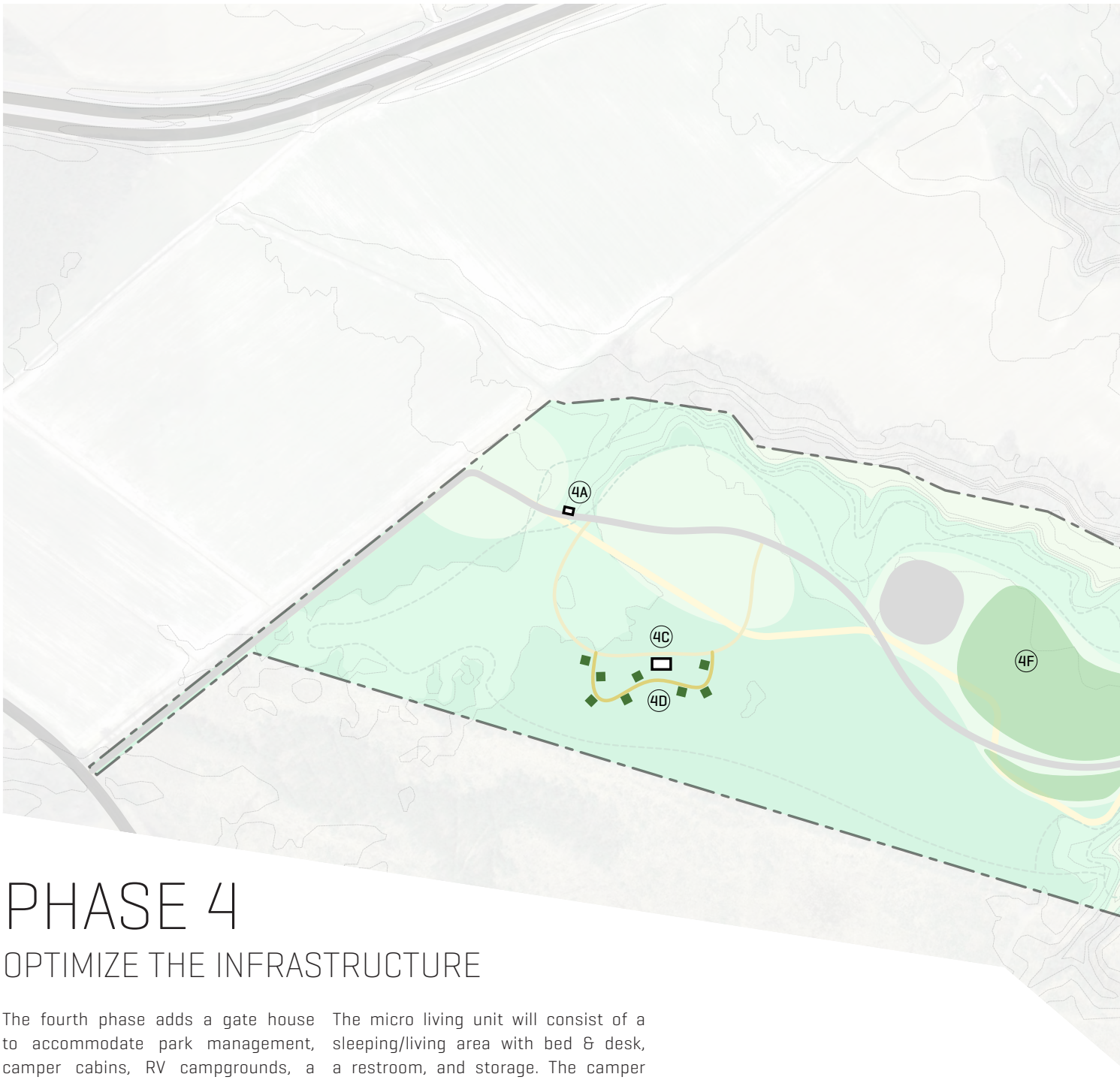
3D Trails



3E Site Restoration

3L Teaching Garden

3F Infrastructure



PHASE 4

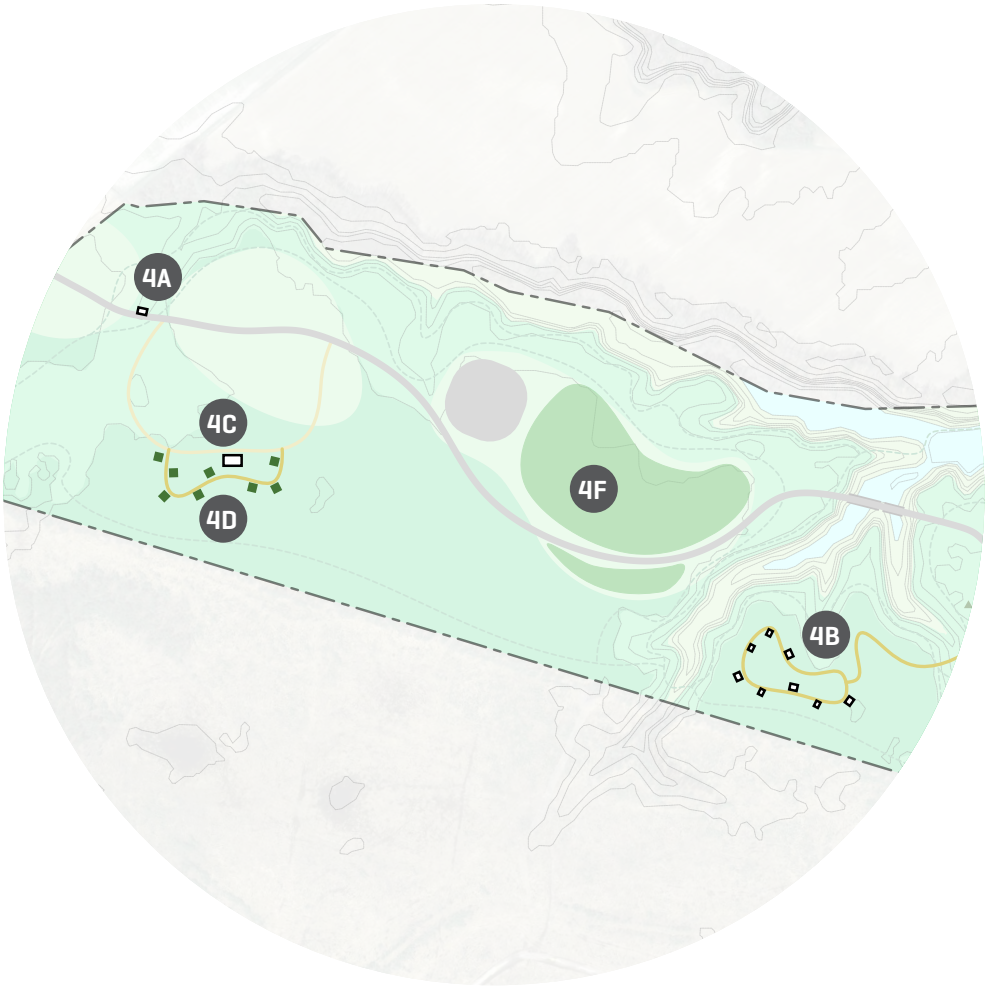
OPTIMIZE THE INFRASTRUCTURE

The fourth phase adds a gate house to accommodate park management, camper cabins, RV campgrounds, a large open recreational field and more trails to the Tall Glass of Water site.
The gatehouse building is intended to provide a compact living quarter for a single caretaker of the premises. The micro living unit will consist of a sleeping/living area with bed & desk, a restroom, and storage. The camper cabins are rustic structures designed for primitive lodging. No heat or water is provided within the structures, but electricity is supplied.

Phase 4

4A Gatehouse
4B Camper Cabins
4C Restroom Pavilion
4D RV Campgrounds
4E Trail
4F Open Lawn + Rec Field
4G Gravel Road

4A Gatehouse / Park Management



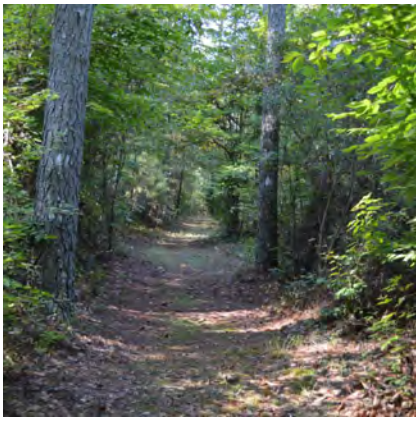
PHASE 4

PROGRAM ELEMENTS

4B Camper Cabins

4C Restroom / Shower / Picnic Pavilion

4D RV Camp Grounds



4E Trails

4F Large Open Recreational Area

4G Infrastructure

PHASE 5

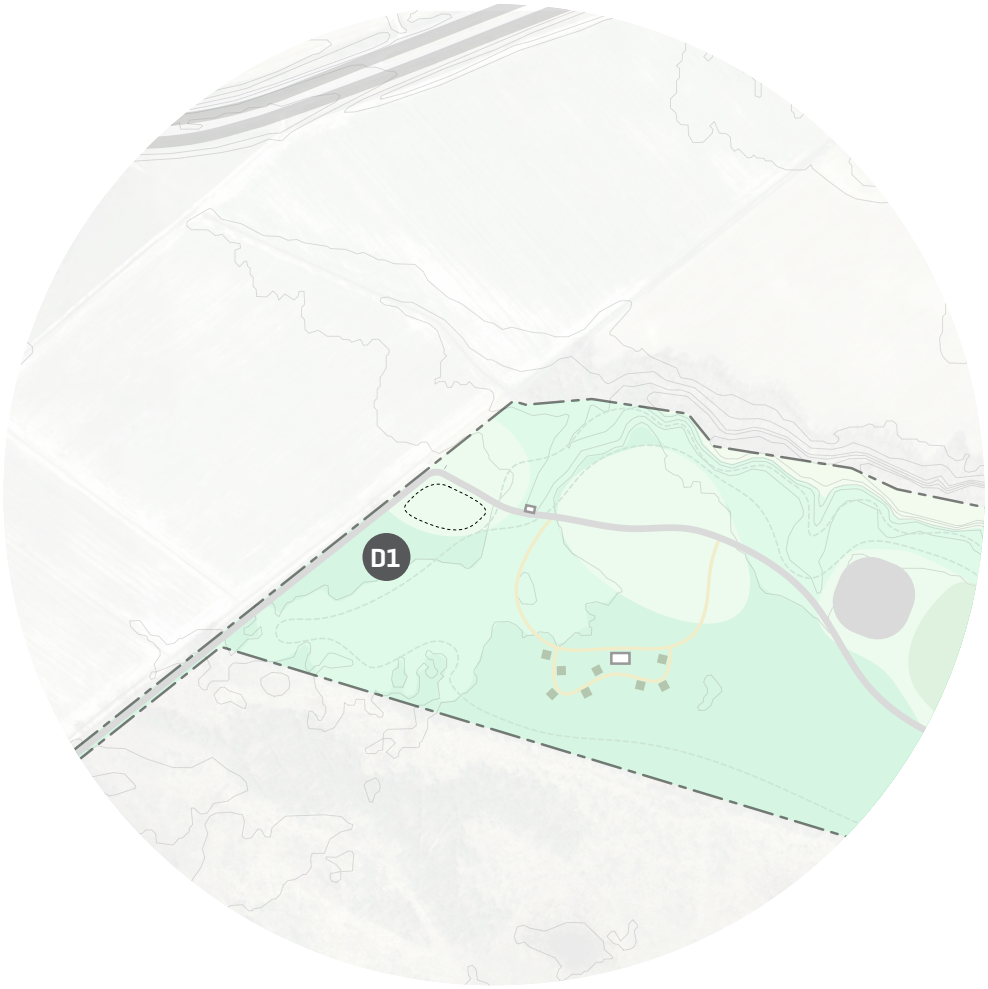
WELCOME VISITORS!

The final phase is reserved for a potential Department of Transportation [DOT] Welcome Center on site, connecting the new park and its activities to the planned DOT upgrades to US 13/17 to an interstate. Ideally there would be an exit of the interstate that would circulate visitors directly to the new location of the Welcome Center, which would be in close proximity to the entrance of the Tall Glass of Water site. A DOT Welcome Center on site could draw more visitors to boost tourism to the Tall Glass of Water Park.

Phase 5

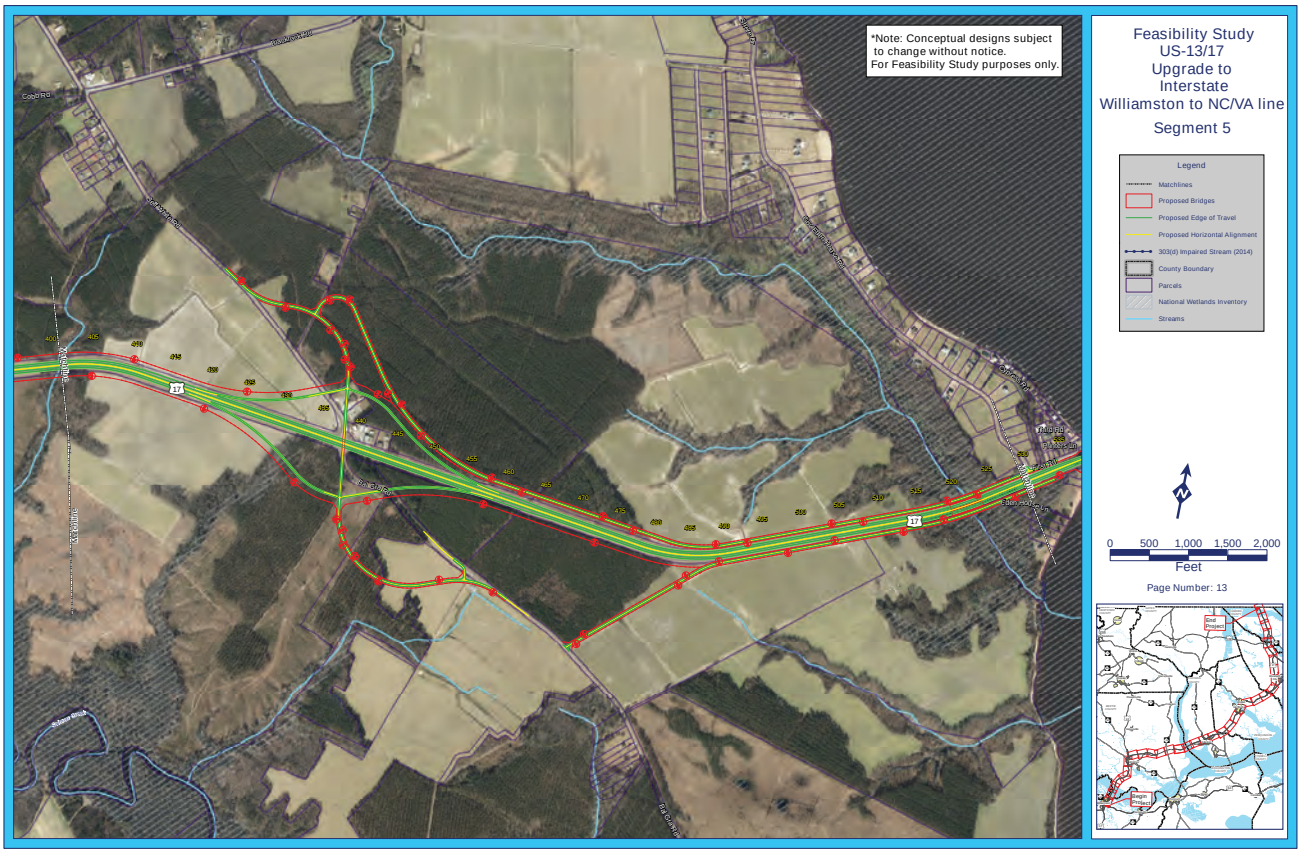
5A – Welcome Center

5A Welcome Center



PHASE 5

PROGRAM ELEMENTS



NC Department of Transportation Feasibility Study US-13/17 Upgrade to Interstate

6

IMPLEMENTATION

PERMITTING

SITE DESIGN AND PERMITTING

It is anticipated that Phase 1 will require approvals and permits from the North Carolina Department of Environmental Equality (NCDEQ), US Army Corps of Engineers (USACE), Coastal Area Management Agency (CAMA), the North Carolina Department of Transportation (NCDOT), and the Bertie County Health Department. The review time for each permit/approval varies but it is anticipated that all permits can be obtained within four to six months of submission.

NCDEQ Stormwater

Phase 1 will disturb more than 1.0 acres and construct more than 10,000 sf of impervious area and therefore will require a State Stormwater Permit from NCDEQ. The project site drains directly to the Chowan River (NCDEQ Stream Index 25, Classification B;NSW). Project will limit impervious coverage to less than 24% which is the threshold to be considered low density by NCDEQ. Permitting for Phase 1 will include considerations for "future" phases such that the overall impervious coverage does not exceed 24%. Site will be graded to provide sheet flow of runoff to the maximum extent practical and shallow vegetated conveyance swales will be provided where needed to collect runoff from roadways, parking areas, etc. No piped storm drain collection is anticipated with the exception of driveway and roadway cross culverts. It is estimated that review and approval process will be three to four (3-4) months.

NCDEQ Land Disturbance (Erosion Control)

Because Phase 1 will disturb more than 1.0 acres it will require a land disturbance permit from NCDEQ. It is anticipated that primary erosion control measures for Phase 1 will consist of a gravel temporary construction entrance at Bal Gra Road, silt fence at the limits of Phase 1 disturbance, and temporary/permanent seeding. A temporary sediment trap or skimmer basin may be required in the vicinity of the Phase 1 parking and bathroom area. It is estimated that review and approval process will be one to two (1-2) months.

USACE Wetland Impact Permitting

The USACE has previously approved the wetland delineation for the entire property. Currently the Phase 1 Area is accessed by an existing agricultural road that crosses two impounded wetland fingers. It is expected that minor upgrades to the existing impoundment will be necessary to ensure adequate ingress/egress for emergency service vehicles. Placement of additional fill material to widen and ensure stability of the existing crossing. Wetland fill will require approval from USACE; however, it is anticipated that wetland fill will be less than 0.10 acres which can be approved under Nationwide Permitting. It is estimated that review and approval process will be one to two (1-2) months.

NCDOT Driveway Permitting

Currently the project site is accessed from an existing agricultural road connecting to Bal Gra Road. The proposed Phase 1 will make minor upgrades and improvements to the existing access road to ensure safe ingress/egress for both privately owned vehicles (POVs) and emergency vehicles. It is anticipated that an NCDOT Driveway Access permit will be required for this work. It is estimated that review and approval process will be two to three (2-3) months.

CAMA Permitting

Based on the classification of receiving waters CAMA approval will be required for any improvements located within 75-feet of the mean high waterline (MHW). Typically CAMA will not issue CAMA permit approval until all other site development permits are in hand. It is estimated that CAMA permit will be issued one to two (1-2) months after receipt of all other site permits.

Bertie County Health Department

Phase 1 improvements are expected to include a well to provide potable water and a septic system to handle wastewater flows. It is anticipated that the wells and septic system designs will require approval from Bertie County Health Department. It is estimated that review and approval process will be one to two (1-2) months.

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