



BISCOE GRAY HERITAGE FARM MASTER PLAN

A Comprehensive Design + Implementation Plan for a Unique, Public Cultural Heritage Destination
Calvert County Board of Commissioners • Adopted December 14, 2010



Table of Contents

I. FRAMEWORK	V		
A. Overview	1		
B. Master Plan Mission	2		
C. Master Plan Development Process	3		
D. Project Understanding	6		
Cultural History + Archaeological Investigation and Documentation	6		
Site Analysis	12		
Benchmarking	16		
E. Synthesis	16		
Program	16		
Master Challenges	16		
II. MASTER PLAN DESIGN	21		
A. Overview	22		
B. Primary Nodes	22		
Main Objectives	22		
Master Plan Design Key Plan	24		
1 • Entry Node	26		
2 • George E. Rice Homestead	32		
3 • Farmyard	34		
4 • Cat Hole	40		
5 • The Point	44		
6 • Paddock + Parking	46		
C. Connectors	48		
Rolling Road/Rolling Road Trail	48		
Horse Trails	49		
Flex Fields	49		
D. Infrastructure	50		
E. Program Summary	52		
III. PERFORMANCE GUIDELINES	53		
A. Overview	54		
B. Archaeological Performance Guidelines	54		
Known Archaeological Sites	54		
Pre-Development Investigations	55		
C. Site Performance Guidelines	56		
Stormwater Management	56		
Roadways and Parking	56		
Landscape Planting + Management	56		
Landscape Structures	57		
Site Furnishings	57		
Pedestrian Trails	57		
Horse Trails	58		
D. Building Performance Guidelines	58		
Water Efficiency	58		
Energy Use	58		
Indoor Environmental Quality	59		
Materials and Resources	59		
Architectural Style	59		

IV. PROJECT PHASING PLAN 61

A. Key Project Initiatives 62

Adequate Funding	62
Institutional Support	62
Management Staff	63
Institutional + Community Partners	64
Transcending the Commonplace	64

B. Detailed Project Initiatives + Phasing 65

V. APPENDICES 69

A. Initial Strategies 70

B. Preliminary Schematic Designs 74

C. Stakeholder Feedback 79

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I : FRAMEWORK

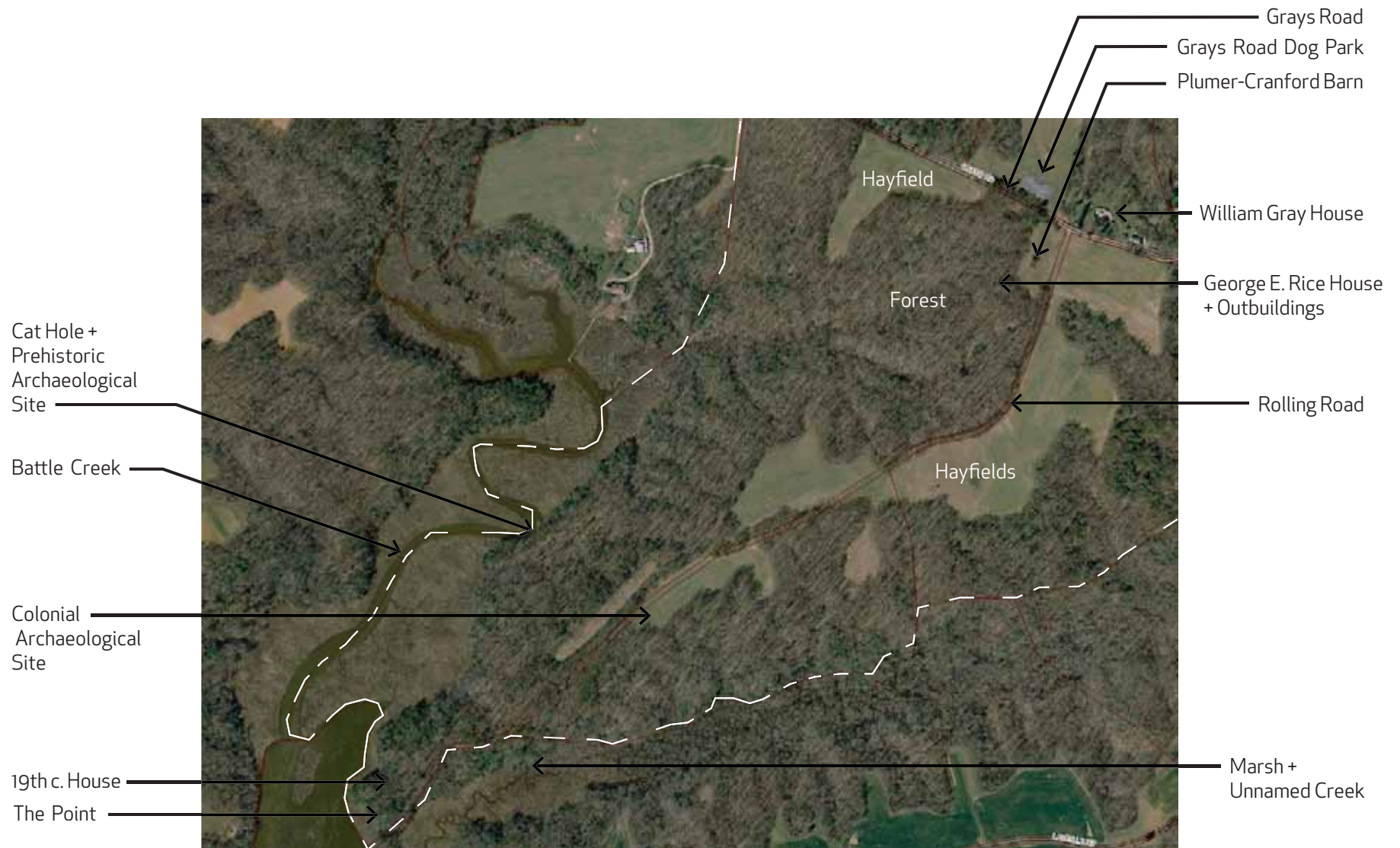


Figure 1. Aerial view of Biscoe Gray Heritage Farm property in its current state, with key features noted.

I. Framework

A. OVERVIEW

The 196-acre Biscoe Gray Heritage Farm is part of the Calvert Creeks Rural Legacy Area and is predominated by beautiful, rolling agricultural fields that are edged by primarily hardwood forest—a fitting model of historic, bucolic Calvert County farm land.

The site is located on the southern side of Grays Road in Prince Frederick, Maryland. Almost the entirety of the site's other three sides are edged by water: Battle Creek on the west and an unnamed creek on the east, the two water bodies converging at the site's southernmost, triangular tip. The site is replete with steep slopes on highly erodible soil as well as numerous drainageways and perennial streams. The resulting landform is a highly dissected landscape that has development potential on only the central ridge line of the property and a few tangential peninsulas and isolated pockets, a condition corroborated by decades of aerial photography that shows the geographic limitations of farming and homesteading. Consequently, of the site's 196 acres, its developable area is extremely limited, totalling only approximately thirty-five acres.

The site contains a number of significant cultural resources that include both buildings and built landscapes, as well as the high probability for the discovery of additional, significant archaeological findings and artifacts throughout the property [Figure 1]:

Plumer-Cranford Barn
George E. Rice House and Outbuildings
Rolling Road
Colonial Archaeological Site
19th Century House
Cat Hole/Prehistoric Archaeological Site

Calvert County purchased the 196-acre property with the assistance of the Rural Legacy Program with the expressed purpose of developing Biscoe Gray Heritage Farm to promote tourism and heritage education. The farm will provide opportunities for the public to learn about and participate in education about cultural resources and environmental stewardship. Young people will be able to explore and experience farming in programs that will encourage agricultural preservation and sustainable agricultural practices.

The first phase of the project, funded by a 2008 grant from Preserve America, included two efforts:

- 1) Completing an identification survey of all known above-ground historic resources, including one abandoned domestic structure with three associated outbuildings, one stand-alone domestic structure, a Colonial period archaeological site, a possible cemetery of unknown temporal or cultural affiliations, and an oyster shell midden dating to the pre-colonial period; and
- 2) Developing a comprehensive Master Plan for the property.

The findings of the cultural resources investigations are documented separately within a report, "Archaeological Investigations at Four Locations on the Biscoe Gray Heritage Farm, Calvert County, Maryland," dated June 2010.

This report documents the development process undertaken by the County to engage Calvert County citizens and County staff in developing the Master Plan. Its Mission Statement [Figure 2] demonstrates the ambitious yet also grounded nature of the Master Plan's development.

The primary body of this report describes, in detail, the Master Plan Design rationale and underlying concepts, as well as their outgrowths: the specific proposals for uses, structures, programs, and experiences. The report also includes Performance Guidelines that should be followed in realizing the Master Plan Design. The report concludes with an Implementation Plan that

MASTER PLAN MISSION

The Biscoe Gray Heritage Farm, a site rich in natural and cultural resources, is a living laboratory to explore, understand, and experience Calvert County agricultural practices and lifestyles throughout its history—from Native American transitory settlement, small scale colonial farming, 19th c. era agriculture, 20th c. tobacco farming to contemporary, pioneering community supported agricultural and sustainable farming efforts. Through archaeological preservation, interpretive site development and programming, and hands-on educational opportunities, the Farm targets children and youths but also includes activities and experiences for those of all ages and physical abilities. The landscape contains a topographic range from cultivated upland ridge, wooded slopes, a variety of marsh gradients, to open water creek, marking it as a unique facility to the Chesapeake Bay watershed's network of sites that support K-12 education, public outdoor recreation opportunities, heritage appreciation, and tourism. By offering lessons in how citizens have lived with the land throughout history, the Biscoe Gray Heritage Farm offers insight into how they can continue and improve good stewardship practices that will sustain the quality of life of Calvert County and the larger ecosystems of which it is a part. By providing unique and exciting programs and facilities within a beautiful landscape, the Biscoe Gray Heritage Farm engages visitors in everyday experiences that transcend the commonplace.

Figure 2. The Master Plan Mission, an outgrowth of the early part of the Master Plan process and framework for guiding its development.

describes specific actions and the associated phasing and budget planning needed to accomplish them. The report's primary sections are as follows:

1 MASTER PLAN DESIGN

Drawing and accompanying text identifying the primary programmatic and constructed elements, where they are located, their sizes, their materials, and the intended qualitative experience for visitors

2 PERFORMANCE GUIDELINES

Guidelines to ensure that, over time, the Master Plan Design intent and quality of vision is executed properly by staff and consultants

3 PROJECT IMPLEMENTATION

Identification of specific actions needed to successfully implement the Master Plan Design, the sequence of those actions, and potential leverage opportunities and efficiencies in acquiring adequate funding

Successful implementation of the Master Plan will result in one of the most unique public cultural and environmental learning centers in Maryland and the mid-Atlantic region. Successful leveraging of the site's rich collection of natural and cultural resources into multifaceted learning opportunities will distinguish it as a model public facility for K-12 education and a unique addition to the Chesapeake Bay Gateways Network. Fully supported in facilities, operations, and funding, the Biscoe Gray Heritage Farm will underscore Calvert County's historical importance in Maryland and feature its value as a tourist destination. Finally, full implementation of the Master Plan will serve as a living landscape in which Calvert County's residents can simultaneously participate in their collective past and their most sustainable future.

C. MASTER PLAN DEVELOPMENT PROCESS

The work of developing the Master Plan began in June 2009 and concluded in November 2010. Figure 3 outlines the process and the primary tasks accomplished by the Master Plan and summarized in this document.

The Master Plan was developed by landscape architectural and planning consultants POOLE DESIGN, LLC and cultural resource consultants The Ottery Group in close collaboration with Calvert County Planning and Zoning staff, Calvert County Division of Natural Resources staff, and a dedicated and highly contributory group of stakeholders that included the following:

Battle Creek Nature Center

Calvert County Public Schools—CHESPAX program

Calvert County Department of General Services

Calvert County Economic Development

Calvert Soil Conservation District

Jefferson Patterson Park and Museum

University of Maryland Extension, Calvert County, Agricultural and Natural Resources Education

University of Maryland Extension, Calvert County, 4-H Youth Development

Stakeholders developed the initial program, Objectives, and Master Challenges. They also provided thorough and insightful feedback on the consultants' proposals at regular intervals.

In June 2010, the consultants and County staff made a presentation of the project's progress to the Calvert County Board of Commissioners, which supported the Master Plan's ideas and progress. The presentation was also made available to the public via the County's public access television station. Furthermore, the PowerPoint™ version of the presentation was posted on the World Wide Web for

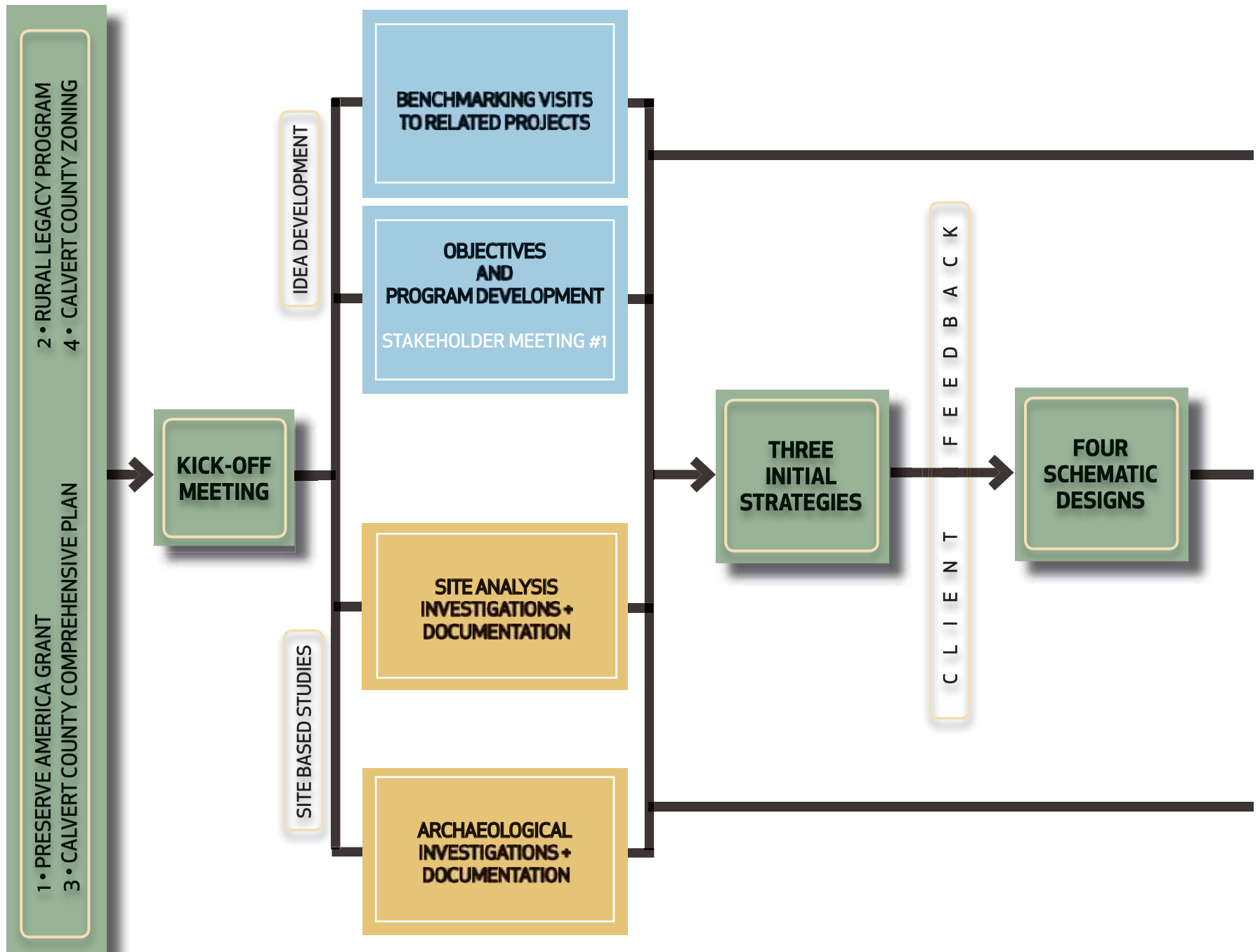
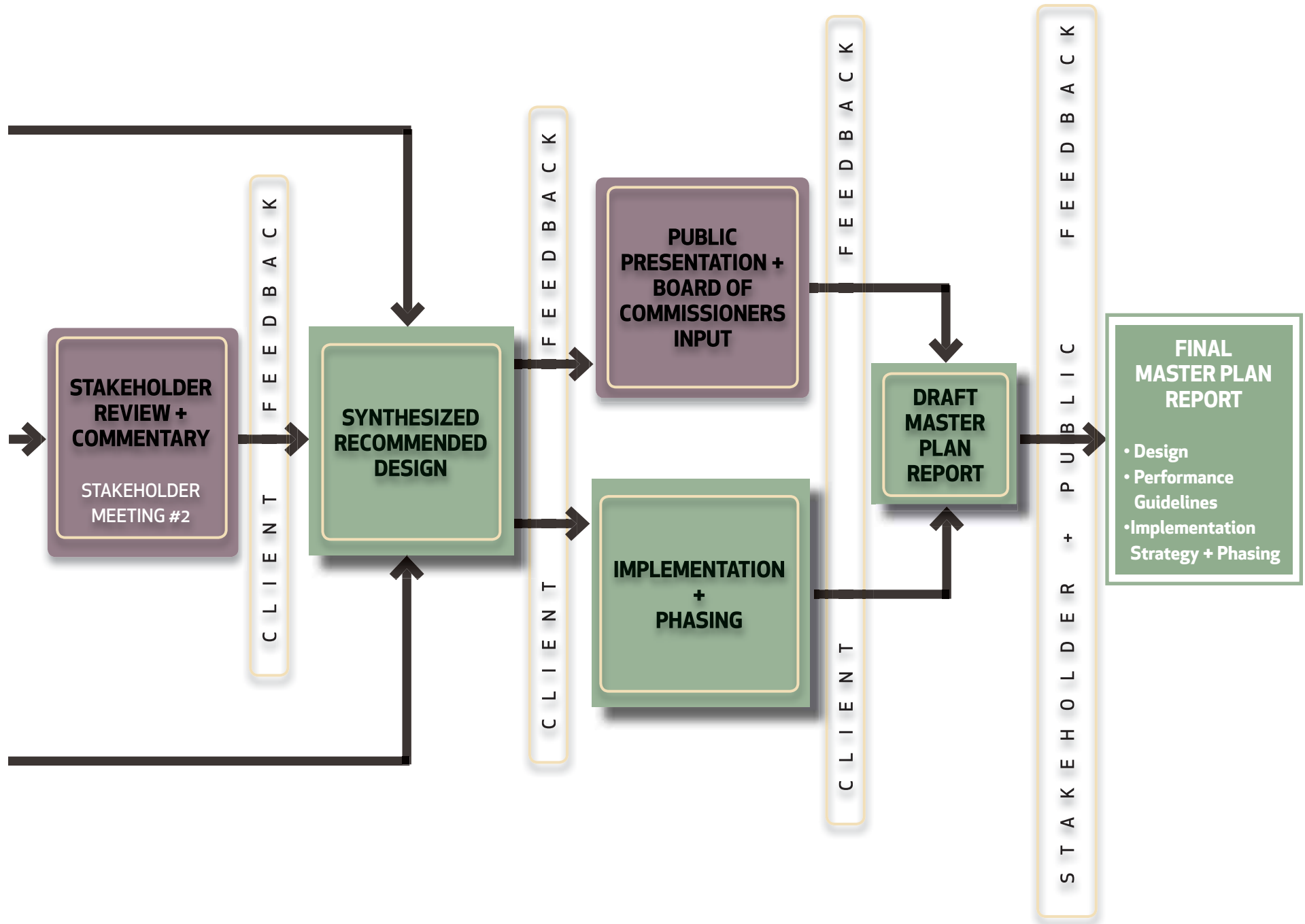


Figure 3. Outline of Master Plan Process.



comment by the general public.

In July 2010, a preliminary version of this report, the Draft Master Plan Design, was posted in its entirety (85 pages) on the World Wide Web, and comments received were considered in developing the Final Master Plan, which this report documents.

D. PROJECT UNDERSTANDING

Any successful Master Plan must have full and rich understandings of the project and its site—a firm base—upon which to build a sound plan that is authentic to the place. These understandings include conceptual ideas and tangible, physical documentation of the site. In fulfilling this goal, the consultant team undertook three primary tasks, the highlights of which are summarized in the following descriptions:

Cultural History + Archaeological Investigation and Documentation

Site Analysis

Benchmarking

Cultural History + Archaeological Investigation and Documentation

Included in the Master Plan's tasks was the study, "Archaeological Investigations at Four Locations on the Biscoe Gray Heritage Farm, Calvert County, Maryland," the complete findings of which are documented under separate cover. Figure 4 locates the archaeological investigation sites that have directly influenced the Master Plan Design.

Biscoe Gray Property

The property was a holding of John Laveille, a French Huguenot who arrived in Calvert County in the late-seventeenth or early-eighteenth century. Its original purchase is unknown, but its transfer in 1796 from to his son, Uriah Laveille, is documented. In 1902 a portion of the site was sold to George E. Rice, an African-American farmer who lived on the property with his wife Mary until 1938. William B. Gray then purchased the property, which was adjacent to his extensive landholdings along Grays Road. Gray's son, Biscoe Gray, inherited the property in 1947 and, in turn, passed it on to his children, who sold the land to Calvert County in 2004 which purchased it as part of the Rural Legacy Program.

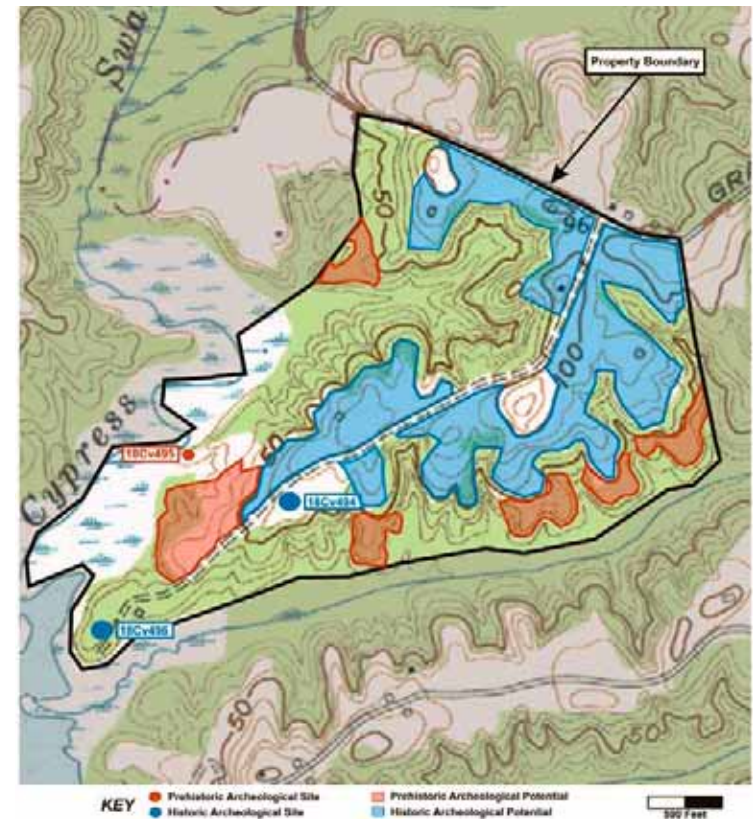


Figure 4. Archaeological study sites and areas of archaeological potential (red and blue dots denote specific sites).



The Rolling Road is easily discernible and walkable along some of its length.



The Rolling Road is easily discernible but also challenging to walk in some segments.



The Rolling Road passes unnoticed through a field in one section.



In some portions of the Rolling Road, volunteer vegetation and erosion make it difficult to see and impossible to walk.

Figure 5. The Rolling Road exists in many states as it traverses the site.

1 *Historical Road Trace (Rolling Road)*

The road trace that is a major physical feature of the site has existed since at least 1865 but likely was in use as early as ca. 1725 based on evidence of early historic occupations on the property. By 1892 the road took a sharp southeasterly turn toward the unnamed creek, then crossed over the creek to the adjoining Laveille property where it then turned southwesterly to directly meet Battle Creek. As the archaeological report notes, “this arrangement likely indicates the presence of a wharf along Battle Creek immediately south of its confluence with the unnamed stream.” (P33) Over time farmers used many methods to transport their crops to market, including ox, mule, and horse drawn carts. Nonetheless, the Master Plan adopts the particularly Maryland term for a tobacco road of “Rolling Road” because of the practice of loading tobacco in hogsheads (wooden barrels) weighing up to 800 pounds to local wharves where they were shipped by steamboat. Given how commonplace the practice from Colonial times up until the Depression, there is little doubt that it was a practice used on Biscoe Gray Heritage Farm. [Figures 1 + 5]

2 19th Century House

It likely that George E. Rice lived in the 19th century side-entry house at the tip of the property (for the purposes of this Master Plan) called The Point. The dwelling is currently in very dilapidated shape, deteriorating rapidly, and presents public safety hazards. [Figure 6]

3 The George E. Rice House and Outbuildings

Between 1915 and 1938, George E. Rice constructed a second dwelling on the property closer to Grays Road and to the farm’s main agricultural fields. Accompanying the home are three outbuildings from the period that together offer a more complete understanding of farm life in this era: a meat house, a chicken coop, and a cow shed. Currently, the house and its outbuildings are deteriorating and in need of significant repair. [Figures 1 and 6]

4 Prehistoric Shell Midden

This oyster shell midden (identified in the archaeological report as 18CV495) is located on a narrow terrace overlooking the northern extent of Battle Creek. The shell is visibly eroding from the north of the site. Based on the recovery of a triangular Levanna-typed projectile point and several sherds of Townsend pottery, the midden dates to the Late Woodland period (Native American). [Figures 1 and 4]

5 18th Century Domestic Scatter

Archaeological investigations suggest that the site (identified as Site 18CV494) contained at least two structures, most likely a domestic structure and an outbuilding such as a barn and likely dating to the period between ca. 1720 to 1775. The artifact collection, both from the archaeological investigation and from previous collections by local resident and Gray descendent Carter Gray consist of small earthenware sherds, glass pieces, tobacco pipe pipes and stems, nails, gunflint flakes and chunks, musket balls, and shot. Though there are currently no artifacts visible on the surface, the site should be protected to enable future archaeological investigations and interpretive opportunities. [Figure 4]

6 Plumer-Cranford Barn

The Plumer-Cranford Barn is an important cultural resource of the site and is a recent addition. This circa 1830s timber-frame building to the south of the field was relocated to the site in 2003-2004. The barn houses a rare and historically valuable 19th century tobacco prize, a large screw press used to compress tobacco into the hogshead barrels used for shipment. It is also the only structure on the site that can provide shelter from inclement weather, storage, or administrative space. [Figures 1 and 7]

7 Biscoe Gray Barn

The Biscoe Gray Barn was built around 1900 and represents the type of barn popular in the region from 1900 to 1930.



19th Century House.



George E. Rice House.



One of the three George E. Rice Outbuildings associated with the house.



William Gray House, located on the north side of Grays Road, immediately opposite the Biscoe Gray Heritage Farm property.

Figure 6. Historical structures associated with the site.

Together, the Biscoe Gray Barn and the Plumer-Cranford Barns represent a century of Southern Maryland tobacco barn architectural traditions. [Figures 1 and 7]

In addition to the cultural resources included within the Biscoe Gray Heritage Farm site and documented as part of the work of the Master Plan, a nearby property is noteworthy for its historic connections with the Biscoe Gray property, its adjacency, and its condition. The house directly north of the Biscoe Gray property along Grays Road was owned by William Gray, who bought what is now the Biscoe Gray Heritage Farm from George E. Rice and was father of Biscoe Gray. The two-story farmhouse was built circa 1900 and is accompanied by two barns of undetermined dates. Currently occupied by a family, the house appears to be in fine shape and to have been updated with modern conveniences. [Figures 1 and 6]

Analysis of a series of aerial photographs taken over the course of the 20th century yielded an important historical understanding of the property's farm history and ecological evolution. [Figure 8] As the diagrams note, the site has been under continual cultivation during the 20th century, and the relationship between forest cover and cleared area for crops has maintained a remarkably consistent pattern—largely due to the steep topography and drainageway distribution of the land. The advent of mechanized farm equipment, which must avoid steep side slopes caused the farmed area to slightly contract, but the location of the fields has remained relatively constant.

All of these archaeological stories are evidenced within the Biscoe Gray Heritage Farm and await further investigation and interpretation.



Biscoe Gray Barn.



Plumer-Cranford Barn.

Figure 7. Historical barns on the site.



1938 forest and field cover.



1952 forest and field cover.



1971 forest and field cover.



1991 forest and field cover.

Figure 8. Comparison of forest and field cover over the course of the 20th century, showing the influence of the steep topography in maintaining a constant farming pattern.

Site Analysis

A series of site analyses revealed conditions that directly influenced the form, placement, and techniques proposed for each of the program elements. Highlights include the following [Figures 9 and 10]:

Topography + Hydrology

The periphery of most of the site is marked by a watery edge of creeks and their attendant marshes: Battle Creek to the west and an unnamed creek to the east converge at the site's triangular tip. The site's interior contains a gently rolling, primary northeast-southwest ridge with peninsular "fingers" that are separated from one another by sharply defined swales that are consistently steep enough to be considered ravines. Springs and numerous ephemeral and perennial waterways have created the swales and have resulted in a highly dissected site in which the waterways penetrate far into the interior of the site and its central ridge.

Soils

All except one soil unit, which is limited to a very small area, are highly erodible soils and limit development (even trails) to the higher, flatter elevations.

Vegetation

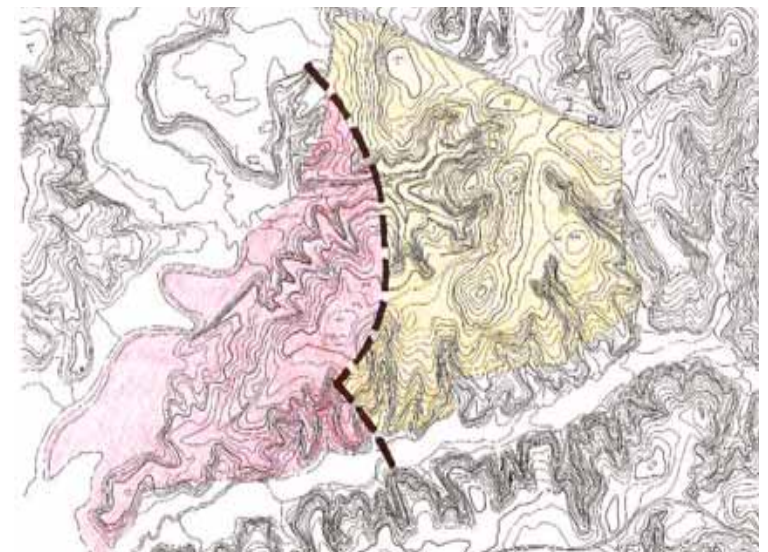
The site is heavily wooded with quality, second growth forest that is notable for the region in its lack of invasive species. The forest helps prevent erosion of the site's steep slopes and erodible soils, provides a filter for the agricultural land, and provides critical animal habitat. Its adjacency to creeks makes it particularly valuable to preserve and protect. The forest frames a series of hayfields that stand in contrast to their edges—veritable "outdoor rooms" that increase forest ecotone area and forage opportunities for animals.

Critical Area

A significant portion of the site (approximately 1/3) lies within the 1000' Chesapeake Bay Critical Area and is subject to State regulatory oversight that limits development and prescribes land management techniques.

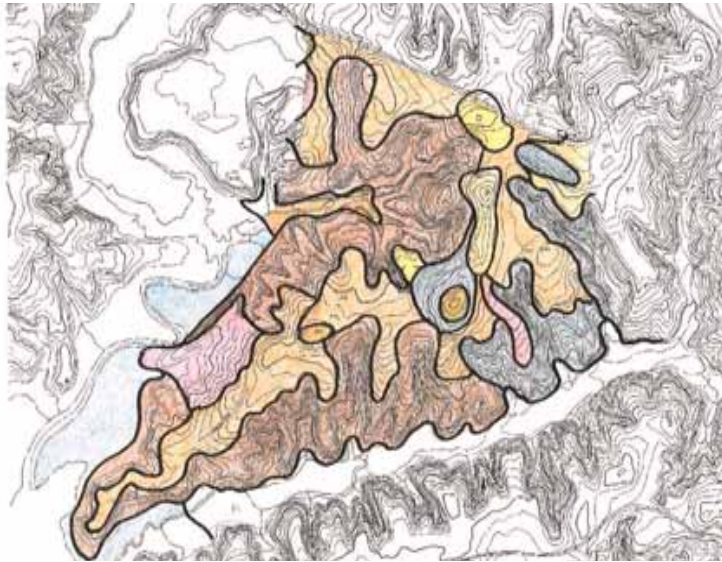
Developable Area

The total site area is one hundred ninety-six acres. However, due to the topography, forest cover, hydrology, and erodible soils of the site, only approximately thirty-five acres is developable without causing significant loss of trees, arable land, rural character, and environmental quality (through erosion and soil degradation).



The dashed line indicates the area within the Critical Area.

Figure 9. Critical Area: Environmentally and regulatory sensitive area.



Soils: Development is highly limited by erodible soils.



Topography: Steep slopes permeate most of the site.



Hydrology: The site is highly dissected by swales and water courses.



The site's hydrology, topography, and soils limit development to only 35 of the site's 196 acres.

Figure 10. Site analyses that influenced the Master Plan development.

Significant Natural Features

In addition to the cultural resources noted previously, the site's most significant attribute is its beautiful, rural character, an impression enabled by its rolling topography and series of "outdoor rooms" that gently guide the eye down the site's "spine," toward its triangular tip. Its specific natural features include the following [Figures 11 and 12]:

- A long and restful vista along the site's northeast-south-west spine
- A gentle hillock along Grays Road
- A beautiful knoll that both forms a focal point and deflects the eye at the edge of one of the outdoor hayfield rooms
- The Rolling Road that is both cultural and natural resource
- Water views, particularly at The Point and at Cat Hole
- Extensive, healthy, and varied wetlands along creeks
- A well-developed forest unimpeded by invasive species



The site's structures, like the George E. Rice House and Outbuildings, are tucked within the forest.



The site's "outdoor rooms" provide a clear structure in which to site the project's major program elements.

Figure 11. The Rolling Road exists in many states as it traverses the site.



The site rises near the middle of the north-south ridge to a copse of trees, forming a focal point.



Battle Creek meets the site on the southeast edge of the site, making it accessible from land and water.



The long vista along the site's main ridge beckons visitors to explore and leads them from Entry to "The Point."



The site's rolling topography is typical of Calvert County rural farmland.

Figure 12. The site is a beautiful collection of forest, field, rolling earth forms, and water—a typical yet also exemplary Calvert County rural landscape that allows visitors to immerse themselves in the County's rich agricultural legacy.

Benchmarking

The consultants visited other established, public, and farm-focused historical interpretive facilities: Kinder Farm Park, Millersville, Maryland; National Colonial Park, Accokeek, Maryland; Historic London Town and Gardens, Edgewater, Maryland; CERES Community Environment Park, Melbourne, Australia, and Collingwood Children's Farm, Melbourne, Australia.

The visits yielded a range of understandings to the Master Plan. [Figure 13] Some ideas transferred directly to specific program elements or details, like Animal "Avenue," how to display historic farm equipment, and the best configurations for community gatherings. Others related to larger questions like the proximity of community gardens to an urban area and how the scale of operations is tied to the scale of staff and fundraising personnel.

E. SYNTHESIS

Program

In addition to the site's existing assets, the stakeholder group identified a range of program elements to consider that accommodate numerous user groups, add to visitors' experiences, and support the interpretive opportunities of the site. [Figure 14]

Master Challenges

The Master Plan process began with some core objectives generated by County staff. During the Master Plan development, the objectives were augmented and reinforced by the stakeholders, ultimately forming the criteria upon which the preliminary schemes were assessed and the final Master Plan was developed. While multifaceted and overlapping, the objectives collectively support four Master Challenges. [Figure 15]



Community Gardens



Animal Interaction



Farm Equipment Displays



Community Supported Agriculture (CSA) Potentials



CSA Market Ideas



Kitchen Garden/Master Gardeners Ideas

Figure 13. Benchmarking visits offered ideas and program elements that were adapted to the Biscoe Gray Heritage Farm

Existing	On-Site		Program		Elements
Plumer-Cranford Barn	Biscoe Gray Barn	Rolling Road	Prehistoric Shell Midden	George E. Rice Homestead	19th Century House

Stakeholder	Group's	Suggestions	for	Additional	Program	Elements
Variety of Crops	Tobacco Crop	Community Gardens	Water Access	Kayak-Canoe Dock/Landing	Livestock Component	Pedestrian Trails
Equestrian Trails	Open Space for Outdoor Play	Natural Playground	Picnic Area	GPS or Cell Phone Audio Tours	Farm Equipment Display	Bus Drop-Off, Turnaround, and Stacking
Sheltered Area for Interpretive Introduction + Inclement Weather Refuge	Classroom That Fits Into Site to Display/Teach	Restrooms	Civic Building That Is Compatible with Calvert County Zoning/Rural Legacy Area	Ghost Frame and Other Indicators of Structures That Would Have Been On-Site	Display of Why Land Was Put Into Production and Why Taken Out	Display of Land Clearing Over Time and How Seeing the Facts Can Change One's Perspective

Figure 14. Potential program elements identified by the Stakeholders Group.

FOUR MASTER CHALLENGES

1 Protect and Creatively Interpret the natural and cultural history of the site and Calvert County with particular emphasis on agricultural practices throughout the County's history

1. Protect the cultural and archaeological resources of the site and develop in ways that do not hinder future archaeological investigations
2. Respect the rural aesthetic and use of the land
3. Leverage, highlight, and augment the rich history of the site, including both built structures and built/cultivated landscapes
4. Provide educational opportunities for all community members with special emphasis on youth, focusing on cultural and natural history and the interrelationships between the two
5. Interpret history in ways that allow the site to be a link to the past and also a key to the future—the past has not passed, the past is present, the past informs the future
6. Underscore how people's decisions and technological developments have affected the land and vice versa—and how these decisions have been made through time and will continue today and in the future
7. Provide opportunities for "hands on" farming and animal interaction

2 Encourage sustainable living practices through demonstrations of historical, contemporary, and emerging techniques

1. Work within the site's natural systems, causing no further degradation and, in particular, avoiding tree felling and substantial regrading efforts as much as possible
2. Highlight how sustainability has been an aspect of people's interaction with the land throughout its history and how it might be a part of the site's future history
3. Highlight not only emerging sustainability practices and technologies but also day-to-day historical practices that were equally sustainable
4. Utilize practices appropriate to the mission and character of the site

Figure 15. The Four Master Challenges formed one of the primary frameworks from which the Master Plan emerged.

3 Support a variety of opportunities for visitors (particularly children and youths) to discover personal connections with nature through individual discovery and exploration

1. Support Calvert County tourism in the site's programming, with a goal of joining the Chesapeake Bay Gateways Network
2. Create opportunities for people to connect with nature
3. Include experiences that are both land-based and water-based ("as a duck sees it")
4. Limit vehicular penetration into the site to create a predominantly pedestrian environment
5. Balance people and animals, pedestrians and horseback riders

4 Develop a program that is appropriate to the site and realistic in terms of funding, staffing, and maintenance requirements

1. Develop a plan that is compatible with the Rural Legacy Agreement, the Calvert County Zoning Ordinance and the Calvert County Comprehensive Plan
2. Enable the most universally accessible environment as practically possible over the site's entirety and ensure a commensurate experience for people of all physical abilities
3. Create an inter-generational and family destination that is active seven days per week



II : MASTER PLAN DESIGN

II. Master Plan Design

A. OVERVIEW

The Final Master Plan is a direct outgrowth of the Master Plan Mission and the Project Understanding efforts:

- Archaeological Findings
- Site Analysis
- Benchmarking
- Master Plan Objectives
- Program Identification

The Master Plan Design was developed through an iterative process that tested various layouts through 3 Initial Strategies and 4 Preliminary Schematic Designs. All seven draft versions of the Master Plan Design are included in the Appendix.

In comparison to other Master Plans for similar types of projects, the Master Plan Design described in the following pages is particularly detailed in its specificity of forms, materials, and qualities. Nonetheless, the Master Plan Design is a vision of the project's potentials and cannot be regarded as a construction document that can be built as described. Each proposed Node and element will require additional base information, discovery, documentation, and design development before it can be realized. Furthermore, given the archaeological sensitivity of the site, no construction should be undertaken before further historical documentation and archaeology is conducted. The results of such studies may require modification of the Master Plan Design that maintains the basic principles and activities but also incorporates the site's historical legacy in ways that are slightly different—and potentially enriching.

B. PRIMARY NODES

The Final Master Plan Design fulfills all of the Master Plan Master Challenges. To transform those Challenges into built and experientially rich spaces and structures, the Master Plan Design further enumerates these desires into nine key ideas and principles, Master Plan Main Objectives, as shown in Figure 16.

Applying these Objectives has resulted in a layout for the entire property—the Master Plan Design—as illustrated in Figure 17. The layout is organized by six Primary Nodes:

Node 1 • Entry Node

Node 2 • George E. Rice Homestead

Node 3 • Farmyard

Node 4 • Cat Hole

Node 5 • The Point

Node 6 • Paddock + Parking

The following narrative describes the Master Plan Design and each of the Primary Nodes' programmatic elements in their ultimate, fully built-out stages. Incremental stages and any accommodations that might be necessary are discussed in the section "Project Implementation."

MASTER PLAN DESIGN MAIN OBJECTIVES

- 1** Respect the existing spatial character of the site as a series of outdoor rooms, a strategy that complements the beauty and character of the land and underscores the site's and the County's pattern of land development
- 2** Maintain the open vista that currently exists along the central ridge of the site, a strategy that preserves the rural aesthetic of the land and underscores an historical condition that has characterized the property throughout its 20th century occupation
- 3** Place a major programmatic element within each of the site's eco-systems to foster maximum learning and experiential discovery
- 4** Place a major programmatic element in relation to each of the site's known cultural resources to maximize historical learning opportunities
- 5** Cluster program elements into a series of nodes that minimizes tree felling, grading, ecosystem degradation, and disruption of the visual continuity of the land, a strategy that fosters incremental and sequential discovery
- 6** Accommodate the specific needs of children by placing elements in ways that maximize educators' limited time on the site with children and youths
- 7** Balance the desire for a primarily rural, pastoral, and pedestrian experience with the practical needs of cars, buses, and horse trail users by utilizing a dual strategy of "from the water" and "from the land," a concept that includes land-based and water-based perspectives
- 8** Consider the site as a medium for CHESPAX, environmental learning advocates, and others to develop new K-12 curricula that demonstrate the integral relationships between land use changes and ecology, technology, archaeology, and sustainability
- 9** Include experiences and elements that are unique and have a "wow factor" that helps catalyze the project and establishes it as a special historical public venue

Figure 16. Master Plan Main Objectives.

MASTER PLAN DESIGN

NODE 1 • ENTRY

- 1 ENTRY DRIVE
- 2 GATEWAY DEMONSTRATION TOBACCO FIELD
- 3 BISCOE GRAY BARN
- 4 PARKING MEWS
- 5 BUS STOP
- 6 PLUMER-CRANFORD BARN
- 7 PLUMER-CRANFORD BARNYARD
- 8 SPECIAL NEEDS + EMPLOYEE PARKING
- 9 TOILETS
- 10 INTERPRETIVE DISPLAY + PICNIC AREA
- 11 GRAYS ROAD HILLOCK
- 12 SUSTAINABLE STORMWATER GARDEN

NODE 2 • GEORGE E. RICE HOMESTEAD

- 13 GEORGE E. RICE HOUSE
- 14 OUTBUILDINGS: COW SHED, CHICKEN COOP, MEATHOUSE
- 15 UNIVERSAL ACCESS PATH

NODE 3 • FARMYARD

- 16 KITCHEN GARDEN
- 17 FARMYARD
- 18 ANIMAL BARN
- 19 COOPS + SHEDS AND SUPPORT FUNCTIONS
- 20 ANIMAL PADDOCKS
- 21 ANIMAL AVENUE
- 22 COMMUNITY SUPPORTED AGRICULTURE GARDENS
- 23 LOCUST HILL ORCHARD

NODE 4 • CAT HOLE

- 24 FIELD CENTER: RESTROOMS/STORAGE/PERGOLA
- 25 COLONIAL/19th CENTURY FARMING DEMONSTRATION FIELDS
- 26 COLONIAL ARCHAEOLOGICAL SITE RESERVE
- 27 NATIVE AMERICAN INTERPRETIVE AREA
- 28 BATTLE CREEK BOARDWALK
- 29 CANOE/KAYAK TEACHING/SLEEPING PAVILION
- 30 SHELL MIDDEN VIEWING PLATFORM

NODE 5 • THE POINT

- 31 19TH CENTURY HOUSE
- 32 MARSH BOARDWALK

NODE 6 • Paddock + PARKING

- 33 Paddock PARKING
- 34 FLEX FIELD
(COMMUNITY GARDENS POTENTIAL FUTURE USE)
- 35 AUXILIARY PARKING
- 36 NO CHILD LEFT INSIDE PLAYGROUND

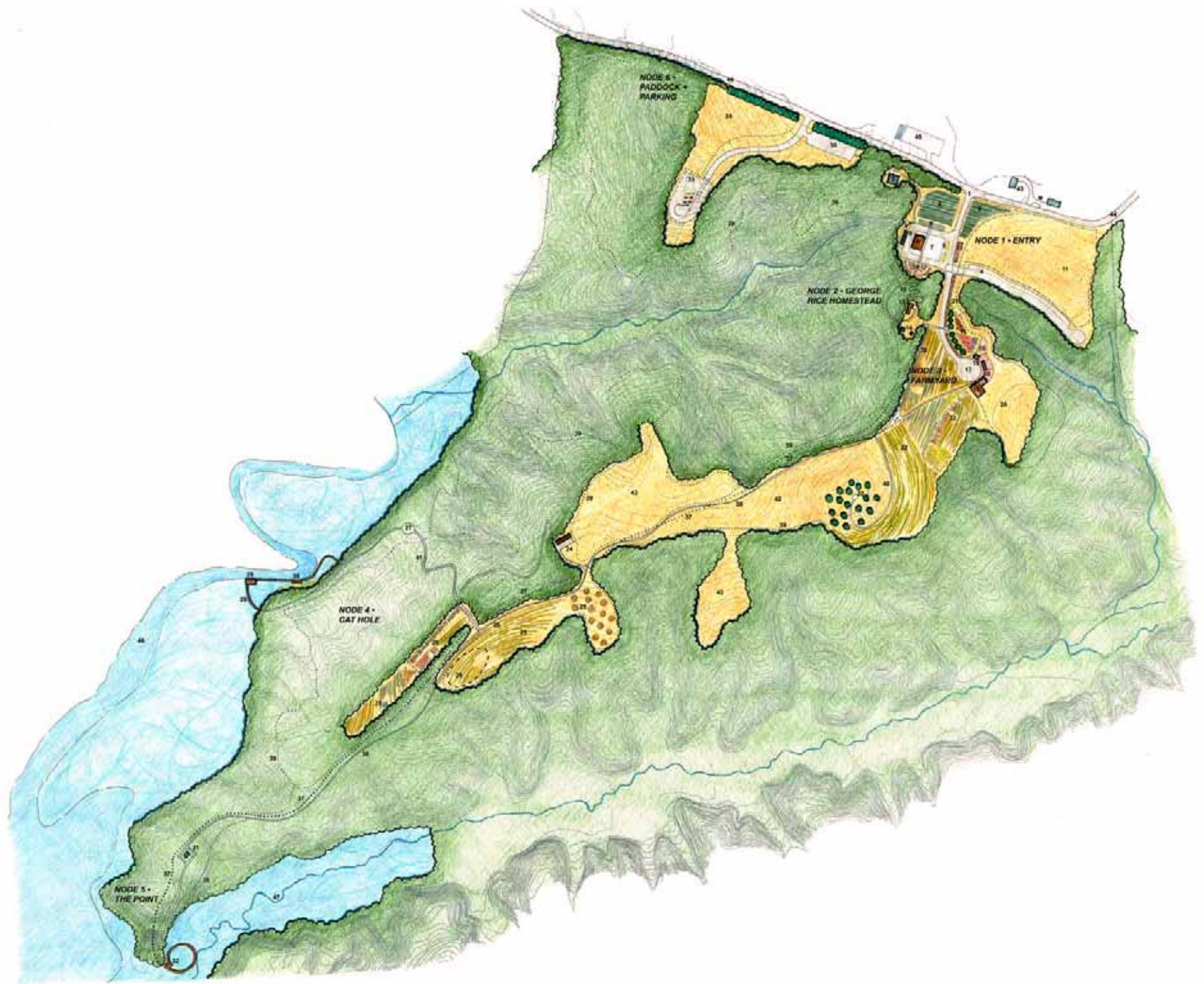
CONNECTORS

- 37 ROLLING ROAD
- 38 ROLLING ROAD TRAIL
- 39 HORSE TRAIL
- 40 LOCUST HILL ORCHARD TRAIL
- 41 CAT HOLE TRAIL
- 42 FLEX FIELD

CONTEXT

- 43 WILLIAM GRAY HOUSE
- 44 GRAYS ROAD
- 45 GRAYS ROAD DOG PARK
- 46 BATTLE CREEK
- 47 UNNAMED CREEK

Figure 17. Master Plan Design. For larger scale version, see fold-out at the back of the report.



NODE 1 • ENTRY

Consistent with the strategy of clustering program elements within existing, recognizable outdoor rooms, *Node 1 • Entry* elements are carefully placed within the existing hayfield clearing nearest Grays Road. [Figure 18]

Entry Drive

The twenty-five foot wide Entry Drive utilizes the existing entry and gate, as the location provides the safest entry/exit point along Grays Road:

- Allows adequate site distances for drivers turning into the site from Grays Road
- Allows adequate site distances to the east and west for drivers exiting the site
- Minimizes site grading
- Minimizes costs
- Avoids conflict with existing drives on the north side of Grays Road at the Grays Road Dog Park and the William Gray House that is currently a private residence.

A future engineering study will determine if a deceleration lane on the south side of Grays Road might be needed to provide vehicular stacking space for entry into the site.

Gateway Demonstration Tobacco Field

The “gateway” to the site is a landscape appropriate to the site’s rural character—a tobacco field. Visitors are “immersed” within a Demonstration Tobacco Field that flanks each side of the entry drive and immediately readies them for the interpretive experience of “living with the land” that is a key objective of the Master Plan. The approximately 2/3 acre field underscores the historical importance of tobacco farming to the County and is a palpable reminder that throughout the nineteenth and most of the twentieth centuries, tobacco was the main crop in Calvert County (and likely seen along Grays Road). The Demonstration Tobacco Field provides educational and interpretive oppor-

tunities for better understanding the ecological, social, and economic benefits of the crop in past times and the attendant consequences of the tobacco “buy out” program and the crop’s transition from being the County’s primary “money crop” to becoming an important cultural legacy. The field’s location along Grays Road is also meant to attract the interests of passersby and reestablish what was once a common—and quickly disappearing—scene in the County.

It is also fitting that the tobacco field is located adjacent to two tobacco barns. The Plumer-Cranford Barn, a circa 1830s timber-frame building, was relocated to the site in 2003-2004 and will flank the southwest corner of the newly-planted tobacco field. Paired with the Plumer-Cranford Barn and acting as bookend to the northwest of the tobacco field, the Biscoe Gray Barn was built around 1900 and represents the type of barn popular in the region from 1900 to 1930. Together, these two barns represent a century of Southern Maryland tobacco barn architectural traditions. Furthermore, the Plumer-Cranford barn houses a 19th century tobacco prize, a large screw press used to compress tobacco into the hogshead barrels used for shipment. These now obsolete and increasingly rare devices were necessary for packing tobacco until the creation of the loose leaf market in 1939. To preserve and rehabilitate these tobacco legacy structures and keep them in relation to the crop that they supported is of critical importance. A future study will determine the feasibility of renovating the Biscoe Gray Barn and its potential for two potential uses:

- 1 Housing equipment used on the site
- 2 Storage for building materials salvaged from the 19th Century House.

Also important to include in the tobacco demonstration is a tobacco seed bed, which does not need deer protection.

Visitor Arrival

Parking Mews

After emerging from the Tobacco Field, visitors arriving in cars glimpse the Plumer-Cranford Barn and receive a visual cue that this is their

NODE 1 • ENTRY

- 1 ENTRY DRIVE
- 2 GATEWAY DEMONSTRATION TOBACCO FIELD
- 3 BISCOE GRAY BARN
- 4 PARKING MEWS
- 5 BUS STOP
- 6 PLUMER-CRANFORD BARN
- 7 PLUMER-CRANFORD BARNYARD
- 8 SPECIAL NEEDS + EMPLOYEE PARKING
- 9 TOILETS
- 10 INTERPRETIVE DISPLAY + PICNIC AREA
- 11 GRAYS ROAD HILLOCK
- 12 SUSTAINABLE STORMWATER GARDEN

- 43 WILLIAM GRAY HOUSE
- 45 GRAYS ROAD DOG PARK

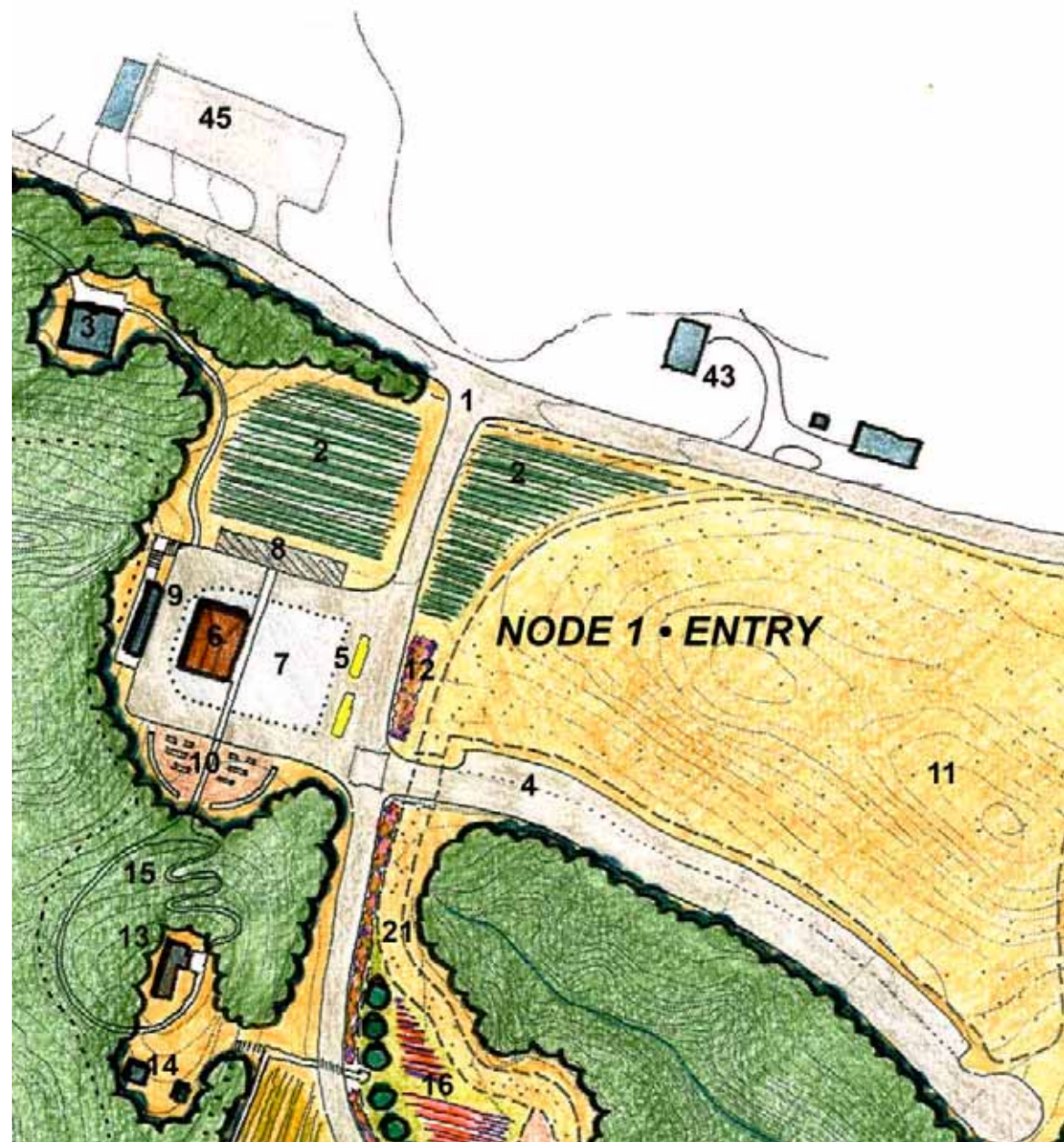


Figure 18. Detail Plan of Node 1 • Entry.

first destination. Signage directs them to the Parking Mews behind the hillock and adjacent to a wooded ravine. The drive accommodates parking for approximately forty-eight cars and includes a sixty-foot turnaround at its terminus to enable smooth traffic flow without the need for an additional and visually obtrusive drive lane that will mar the site's rural character.

Most visitors walk from their cars to the Plumer-Cranford Barn, a distance of two to four hundred feet; the maximum distance is six-hundred fifty feet. Visitors whose physical needs necessitate shorter walking distances are accommodated within the Plumer-Cranford Barnyard Parking (description following) or may be dropped off at the Bus Stop.

This entry sequence and placement of the Parking Mews supports a "park once" strategy accomplished two important tasks:

- 1 Encourages a pedestrian experience of the site that supports the authenticity of the rural experience
- 2 Minimizes environmental pollution into the interior of the site by keeping the majority of gasoline powered cars on the periphery of the site

Bus Stop

Buses enter the site, emerge from the Tobacco Field, and pause at the Bus Stop pull-off at the Plumer-Cranford Barnyard. [Figure 19] The Bus Stop provides ample space for two buses to load and unload simultaneously. The Entry Drive is of adequate width (25') to allow additional buses to queue along the drive and allow cars to both enter and exit without incident. After unloading their passengers, the buses continue south to the Farmyard, which provides them the one hundred foot diameter turnaround that buses and the Calvert County Zoning Code require for fire and rescue vehicle access. And though this strategy requires buses to penetrate further into the site than the Bus Stop, it also greatly diminishes pedestrian-bus conflicts at a major node. In addition, it provides a work space and turnaround area for the farm

equipment that the site's program will require, particularly once the Animal Barn is constructed. Once buses have turned around, they continue north to their ultimate parking spaces on the Paddock + Parking Site (see description on page 46).

Plumer-Cranford Barnyard

The Barn

The Plumer-Cranford Barn was moved and reconstructed on Biscoe Gray Farm in 2003-2004 and is in excellent condition. Located near Grays Road, it provides an appropriate first-experience visitor destination. Once parking is developed on the site, the barn is immediately available for needed program elements:

- Educational materials storage
- Small implement site maintenance equipment storage (hand tools and hand-held machinery)
- Weather shelter from both sun and rain

Toilets

Newly constructed, self-contained composting toilets are located behind (to the west) of the barn. [Figure 20] Further study will determine the best system for the toilets. Any system requires accommodation for maintenance, but the initial assessment suggests that, since space in this area is extremely limited, the most site-appropriate choice would be Bio-Sun or a similar system that does not require an accompanying discharge or septic field. The Bio-Sun system requires a below-grade maintenance access, which the Master Plan Design has accommodated. The system can be solar operated if necessary. A minimum and adequate number of toilets allow educators to manage busloads of children expeditiously and enhance the children's learning experiences on the site:

- Two toilets for girls
- One toilet plus two urinals for boys



Figure 19. Artistic vision of Plumer-Cranford Barnyard, showing how visitors enter the site through the Gateway Demonstration Tobacco Field, which opens a view to the Plumer-Cranford Barn, bus loading and unloading area, and area for gathering and farm equipment display.

- One universally accessible toilet (with 5' turnaround space and appropriate-height furnishings)

Plumer-Cranford Barnyard

A large gravel area around the barn offers a low-maintenance and multipurpose area that is fitting with a tobacco barn's utility yard and farming aesthetic. [Figure 19] It includes the following permanent elements:

- A dual-purpose gravel "forecourt" that will 1) house an outdoor farm equipment display and 2) provide a gathering area for groups engaged in an educator-led talk and for groups to embark/disembark their buses. The gravel surface is an important material selection, as it will require far less maintenance than if equipment is placed on lawn or native grass. The area will also include ADA-compliant walkways and resting spaces.
- On the north side of the yard, a permeable paving parking area (unmarked spaces) for a limited number of visitors (3 to 4 ADA-compliant spaces and 7 to 8 regular spaces)
- A drive around the rear of the barn to service the toilets and facilitate a space-efficient and safety-minded one way traffic loop
- Employee parking behind the barn (approximately 4 spaces)
- Simple fence posts, consistent with the farm aesthetic, separate the drive lane from the central pedestrian area, safeguarding pedestrians and controlling traffic

In addition, the Barnyard provides a readily available and convenient space to stage small-scale special events like heritage and farming festivals. The utility of this area is particularly enhanced given its adjacency with the Interpretive Display + Picnic Area.

Interpretive Display + Picnic Area

The area to the south of the Barnyard offers an area that is nestled in a half circle of woods that provides a sense of enclosure and substantial shade for most of the day. It is an ideal area for a series of permanent interpretive displays that explain the site's experiential offerings and provide guidance regarding the routes and time requirements for accomplishing them. The displays may also include changing exhibits that highlight seasonal events or developments on the site as well as works developed by youths who participate in the Farm's activities.

Amid the displays are picnic tables for families and groups to engage in any number of activities:

- Youth and children's workspace for educator-led projects and discussions
- Staging area for educator-led walks and talks
- Area for dining within nature
- Group picnicking and events (should the County decide to make the facility available for hire)

Grays Road Hillock

The hillock adjacent to Grays Road is one of the site's most significant and beautiful features—a gracefully rising hill that is currently a hayfield. [Figure 20] The Master Plan Design maintains it in its present form and uses it as a joint between Grays Road passersby, the visitors' Parking Mews, and the Plumer-Cranford Barnyard and Interpretive Area. The new "elements" proposed by the Master Plan are the farm animals that also use the field for daytime grazing (as they would be led back to the Farmyard in the evening for their safety). A new perimeter fence provides separation of the animals from people and cars. The Master Plan leverages the existing "outdoor room" to provide new advantages:

- Leaving the field open maintains an historic use and sensibility of the land

- Adding grazing animals reestablished a traditional, rural land scene
- Animals close to the Grays Road are likely to attract attention for the site from motorists
- The field offers an attractive focal point for visitors at the Plumer-Cranford Barnyard and Interpretive Area
- The extended fence and walking path along the Parking Mews better visitors' chances at an "up close and personal" encounter with an animal
- The hillock essentially makes the cars of the Parking Mews disappear from the view along Grays Road and from the Plumer-Cranford Barnyard

Sustainable Stormwater Garden

Between the east side of the Entry Drive at the Plumer-Cranford Barnyard and the Grays Road Hillock is an ideal opportunity to place a sustainable stormwater "garden" that controls stormwater quantity and treats stormwater quality via groundwater infiltration and plant uptake. Developed as an oblong area that foregrounds the grazing field the garden can engage Barnyard visitors demonstrate how progressive, sustainable land management strategies that are also visually attractive—practices that are now mandated by Maryland's newly-enacted, progressive stormwater management laws.

The garden can also be extended in both function and extent for additional lessons and purposes, albeit in a different form. It can become a linear stormwater bioswale paired with the Entry Drive, extending south from Stormwater Garden to Farmyard turnaround. Through a slight depression and planting, the linear garden treats the Drive's runoff and attractively "stitches" the road seamlessly into the landscape (as shown in Figure 23).



New, self-contained composting toilets can be constructed modestly and with appropriate access and furnishings. The toilets will enable school groups, families, and other visitors to visit the site without intruding on the rural character of the Heritage Farm.



The hillock along Grays Road permits the Parking Mews to be tucked between woods and hill, almost entirely concealing visitor parking.

Figure 20. Node 1 • Entry potentials.

NODE 2 • GEORGE E. RICE HOMESTEAD

If *Node 2 • George E. Rice Homestead* is an existing outdoor room, then it comes complete with a full repertoire of “furniture”—a home, three outbuildings, numerous mature trees, and a Rolling Road. The Master Plan Design retains all of these features except for selective removal of trees that are safety hazards and those that cannot be saved in order to make the site universally accessible. [Figure 21]

The George E. Rice Homestead, circa 1915-1938, is a distinctive feature of the Biscoe Gray Heritage Farm property for a number of reasons:

- It contains a collection of structures (rather than a singular structure), including both a house and associated outbuildings that would have been common in early to mid-20th century homesteads
- George E. Rice (b. circa 1882) was an African-American farmer who owned and lived on the property in the early twentieth century, underscoring the rich and diverse history of the land and its stewardship. Furthermore, as the Maryland Historical Trust, Maryland Inventory of Historic Properties Form notes, “The history of the Biscoe Gray Heritage Farm is interesting in that it was owned at separate times by both white and African-American families whose common tie was farming” (Inventory No. CT-1359)
- The collection of structures are in decay but also still standing and capable of restoration, thereby offering the potential for a richer spatial and experiential understanding of farm life in this era than almost anywhere else in the County (and perhaps even Southern Maryland)
- The adjacency of the Rolling Road (see description on page 8) adds immeasurably to imparting a complete picture of farm life in the era of tobacco and underscores the importance of preserving the ensemble of elements within a single landscape

The Master Plan Design proposes the rehabilitation of all of the structures to create an interpretive experience that allows visitors to not only view history but also to be immersed within it as an active participant in three-dimensional space. The Master Plan also includes additional elements that will heighten the interpretive potentials of the site by making it more accessible to pedestrians.

George E. Rice House

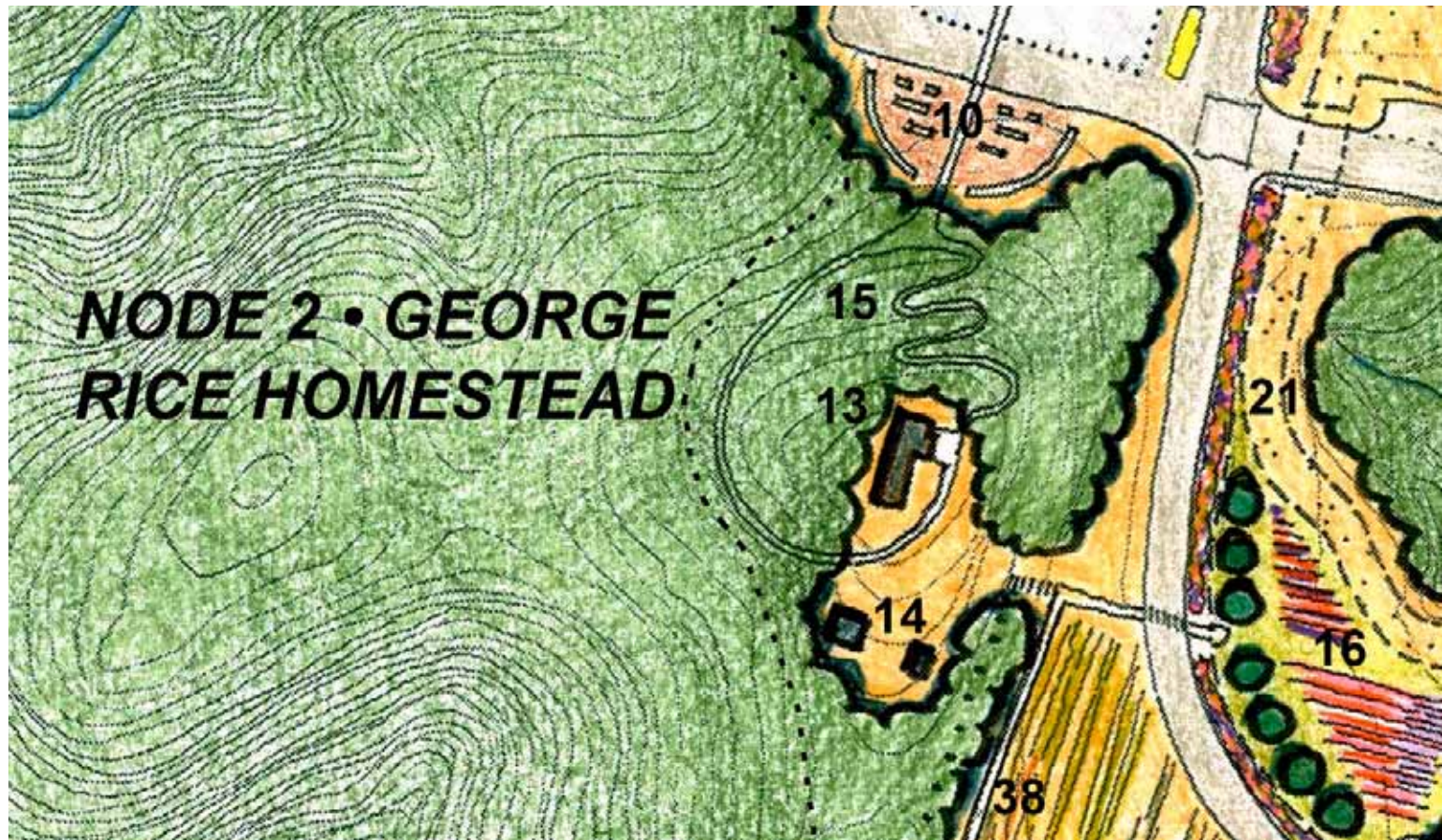
The main, or earliest, part of the George E. Rice House dates from 1915-1938 and is an L-shaped, two-story, wood frame construction home with a front-gable roof and a full-length porch. There are also two one-story, bay wings projecting from the south elevation. The house has been vacant for a number of years and has no interior furnishings. No longer weatherproofed, it shows extensive signs of deterioration and will require a substantial investment to preserve and ensure occupant safety and to comply with today’s building codes.

The interior dimensions and spatial configuration of the George E. Rice House are not conducive to its renovation as a public building such as an administration office or an historically renovated structure through which the public may tour. The best use and renovation of the house is as a home for a resident caretaker, the need for which is compulsory once the site houses animals as part of Node 3 • Farmyard. Further architectural investigation and code compliance assessment will determine the order of magnitude of costs and efforts required to realize this outcome.

In the event that costs are too high or otherwise infeasible, the Master Plan also identifies the William Gray House directly across Grays Road from the Heritage Farm as a possible alternative for a resident caretaker. Currently, it is a private residence with two historic barns, and no actions have been made toward acquiring it. The William Gray House option remains a second choice alternative to the preferred rehabilitation and modernization of the George E. Rice House.

Outbuildings

In addition to the George E. Rice House, the Master Plan Design recommends renovation of the three outbuildings, located to the south of the main house. They offer visitors a more complete picture of



NODE 2 • GEORGE E. RICE HOMESTEAD

- 13 GEORGE E. RICE HOUSE
- 14 OUTBUILDINGS: COW SHED, CHICKEN COOP, MEATHOUSE
- 15 UNIVERSAL ACCESS PATH

- 10 INTERPRETIVE DISPLAY + PICNIC AREA
- 16 KITCHEN GARDEN
- 21 ANIMAL AVENUE
- 38 ROLLING ROAD TRAIL

Figure 21. Detail Plan of Node 2 • George E. Rice Homestead restoration.

everyday farm life: a meathouse, a chicken coop, and a cow shed. The structures first appear in 1938 aerial maps of the Grays Road area, aligning their construction dates to the George E. Rice House between 1915 and 1938.

The meathouse, roughly seven feet by eight feet, is the closest out-building to the main house just to the southeast. South of the meat-house is the chicken coop; it is one-story structure, roughly fifteen by ten feet. The cow shed, located south of the George E. Rice House and west of the chicken coop, is roughly eighteen feet square.

Additional, historically appropriate elements can be added as part of future interpretive efforts, such as a root cellar dug into the surrounding slope and other, annual, moveable elements that were part of farm family life.

Universal Access Paths

A new, universally accessible pathway leads from the Interpretive Display + Picnic Area to the Homestead. Further investigation and more refined site data will determine the final layout and extent of the pathway. The universally accessible path may also be complemented with one or more additional paths to facilitate pedestrian flow.

Stairway Access

Due to the steep grade that separates the Homestead complex from the fields to the east, the Master Plan Design provides a new stairway on axis with the front door of the George E. Rice House, allowing two access points to the node and improving the circulation of people—particularly multiple school groups—through the space.

Tree Removal

Given the number of structures within Node 2, the Master Plan recommends that a Tree Assessment be conducted immediately. At least one tree threatens to cause serious damage to the Homestead House, and the number of historically valuable structures and accompanying maturing trees warrants greater attention in this area than any other.

NODE 3 • FARMYARD

Node 3 • Farmyard occupies the outdoor room that is just south of the wooded ravine closest to Grays Road. [Figure 22] This cluster of uses contains program elements that have inherent within them a plethora of appurtenances that are usually considered visually undesirable: multiple fencing runs, deer fencing, outdoor storage areas that are not always perfectly organized, animal yards, and piles of various sorts needed on a farm. The intentions of locating Node 3 in this “nook” are threefold:

- 1) To maintain the open vista that currently exists along the central ridge of the site;
- 2) To strategically locate the “back of house” items and areas in the background of the primary viewshed; and
- 3) To locate areas in need of deer fencing against a backdrop of trees that will blur the visual distinction of the fencing.

The intention for the Farmyard is to provide opportunities for visitors (and children/ youths in particular) to not only view but also interact with animals and, in the process, to learn how animals were integral parts of sustaining a farm household in mid-20th century Calvert County. Key among its lessons is that the animals occupied a crucial place in the work of the farm. Neither “show” animals nor pets, the animals were not pleasure animals or indulgences. Rather, they were necessary components of the larger, working operation of the property—all of which served the goal of feeding and otherwise providing for the family.

Consequently, the Master Plan Design for the Farmyard is based on the “Family Sustainability Model.” Thus, it is sized, stocked, and equipped to support a family of seven to eight—two parents and five to six children. This would have been an average sized family until the advent of contemporary and readily available birth control for women. More significantly and site specifically, according to the most recently released U. S. Census data currently available (1940), it was the size of

NODE 3 • FARMYARD

- 16 KITCHEN GARDEN
 - 17 FARMYARD
 - 18 ANIMAL BARN
 - 19 COOPS + SHEDS AND SUPPORT FUNCTIONS
 - 20 ANIMAL PADDOCKS
 - 21 ANIMAL AVENUE
 - 22 COMMUNITY SUPPORTED AGRICULTURE GARDENS
 - 23 LOCUST HILL ORCHARD
-
- 4 PARKING MEWS
 - 10 INTERPRETIVE DISPLAY + PICNIC AREA
 - 13 GEORGE E. RICE HOUSE
 - 14 OUTBUILDINGS: COW SHED, CHICKEN COOP, MEATHOUSE
 - 15 UNIVERSAL ACCESS PATH

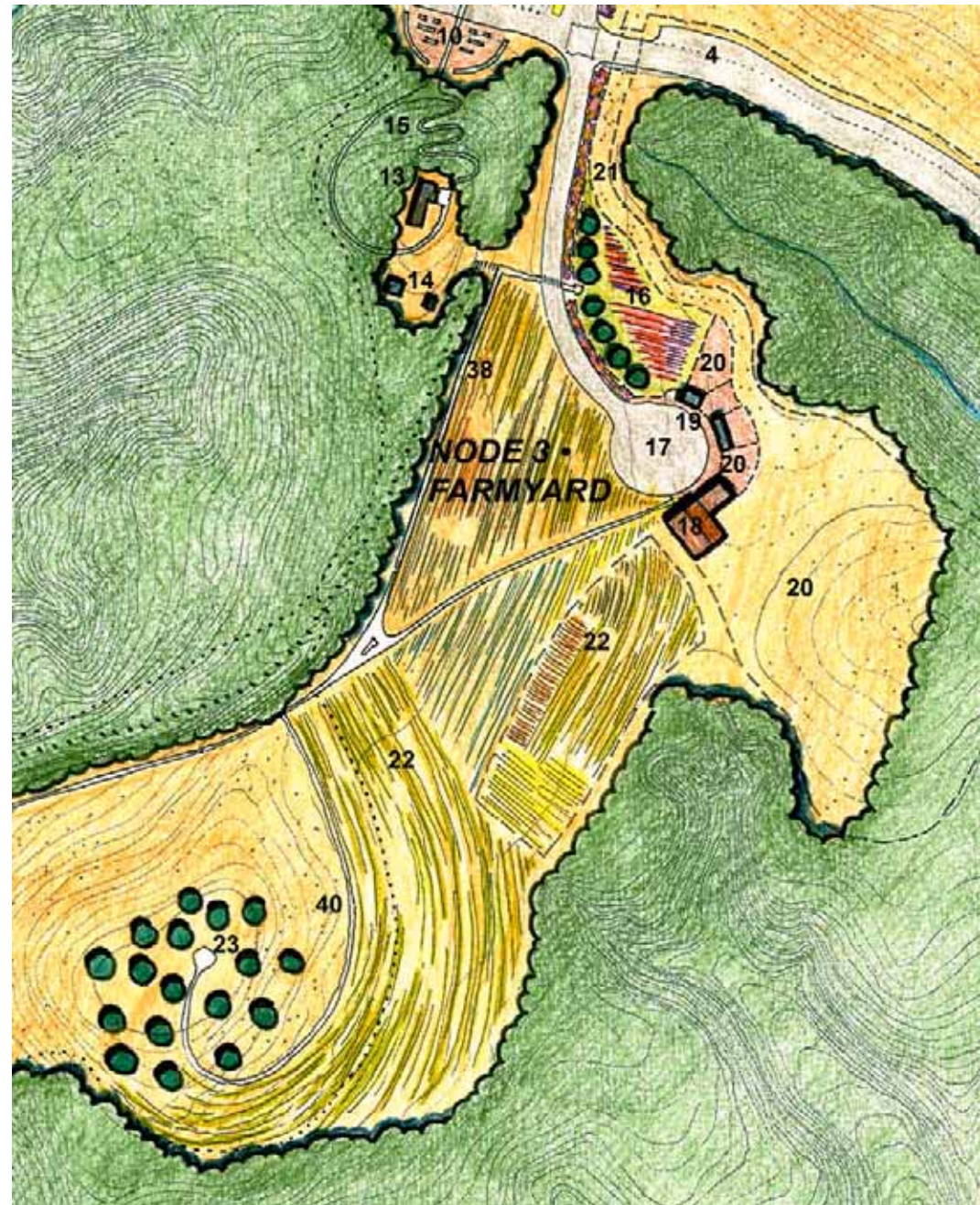


Figure 22. Detail Plan of Node 3 • Farmyard.

the family that occupied the George E. Rice Homestead at the time—Joseph and Marion Sewell and their five children. One scenario of the Family Sustainability Model is detailed on page 38.

Kitchen Garden

Visitors from the Entry Node enter *Node 3 • Farmyard* after passing through the tree-framed opening between the east-west ravine and the George E. Rice Homestead. Visitors from the Homestead descend the stairway on axis with the entry of the George E. Rice House. Greeting them is an intimate kitchen garden (approximately 7,250 square feet) that demonstrates the kind of foodstuffs that a mid-20th century farm homestead might include:

- March planting of lettuce, potatoes, cabbage, kale, and radishes
- Summer planting of tomatoes and sweet potatoes
- Fruit trees: apricot, peaches, apple, and plum

Oriented south and southwest, the garden is fenced to protect it from deer that, due to its small size, can be augmented with overhead deer guards. The garden includes gates on axis with the Rice House and at the Farmyard that allow visitors entry from both sides. The garden can be managed and tended by a range of groups: Master Gardeners, 4-H, or other volunteers.

Farmyard

The Farmyard and the road that leads to it are a simple, gravel surface (such as bank run), specifically designed as a rural road rather than a more suburban and less sustainable, impervious asphalt or concrete drive. The Farmyard and the road that it terminates are configured to allow equal access and use by animal focused group and Community Supported Agriculture (CSA) groups. A flexible space, the Farmyard serves a number of purposes:

- Fire and rescue access and Calvert County Zoning Ordinance compliance (one hundred-foot diameter)

- Turnaround for buses
- Turnaround for farm vehicles and trailers
- Roadside parking for the caretakers of the animals and the CSA Gardens (approximately 15 spaces)
- Farm work/utility yard

Figure 23 offers an artistic vision of the Farmyard.

Farm Facilities

The Master Plan Design includes programming for a range of farm facilities of various sizes and complexity, the specifics of which must remain flexible to accommodate unknown funding and staffing opportunities. What is certain is that the farm facilities include six characteristics and elements:

- 1 Opportunities for visitors to interact with a variety of animals typical of mid-20th century Calvert County farm life
- 2 Structures of various sizes and configurations appropriate to the animals
- 3 Support functions (equipment repair, storage, shops)
- 4 Facilities organized around the Farmyard in a configuration where the barns, coops, sheds, and support functions are directly adjacent to the Farmyard/turnaround
- 5 Animal paddocks of various sizes with paddock fencing configurations located to the rear of the barns, coops, and sheds toward the treeline
- 6 An “Animal Avenue” located adjacent to the treeline that provides safe passage for animals from their paddocks to the Grays Road Hillock (also a paddock), including a set of gates that latch in multiple directions at the Parking Mews to control the traffic flow between animals, people, and cars



Figure 23. Artistic vision of Farmyard, showing Kitchen Garden (on left), Animal Barn, Coops, Paddocks, and Community Supported Agriculture Fields (on right).

Family Sustainability Model

The animal husbandry criteria for the Farmyard—which animal species and how many—are based on the Family Sustainability Model, that is, what animals would have been necessary to sustain a family of 6 to 8 people in the 1940s. The following list may vary but serves as a reasonable framework from which to begin planning and developing the facilities:

- Pigs: 2 sows and 1 boar. At two litters per year, which yielded 10-12 piglets per litter, this would be ample to have enough to slaughter to feed the family and to sell/trade.
- Chickens: 20 hens and 1 rooster as a baseline. A family may have begun with 100 chicks and built from there or started with enough hens to then use the pullets. After 15 months, the hens' production yields would diminish, and the hens would become stewing chickens. At 1 egg per 30 hours, the hens should be enough to supply eggs for the family and to sell or trade for other goods.
- Cows: 1 or 2 milk cows, perhaps 1 bull, but the stud bull was often borrowed.
- Turkeys: 3-4 hens and 1 gobbler. Many families' turkeys ran wild on the property, but they would likely be penned at Biscoe Gray. The turkeys were also natural pest control for the tobacco and kitchen garden crops.
- Guinea Hens: 6-8 hens to breed for eating.
- Horses/Mules: All farms had a team (a pair) of horses or mules or both. If the family farmed more than approximately 10 acres, it had 2 teams.
- Sheep: 1-2 sheep to shear for wool and to feed the family. They were problematic, though, because they ate grass past the roots, which killed it and damaged the land.
- Geese: Some families had geese, which were good at worming and produced eggs that made very yellow cakes. They were also problematic because their excrement made such a mess.

One option is to house the cows and chickens in the Rice Homestead complex in the cow shed and the chicken coop once these structures are restored.

To illustrate the intent and accommodate the identified elements, the Master Plan Design has specifically sited the following:

Animal Barn

On axis with the turnaround that provides a terminal vista to the Entry Drive and provides equal access to the CSA Gardens and the Farm Facilities includes the following program elements:

- Two restrooms: either two unisex or one female and one male
- Central workspace (perhaps an alleyway with pens on either side)
- Small meeting space (perhaps a widening of the alleyway)
- Enclosed, lockable feed storage room
- Enclosed, locked supply room
- Office
- Hay loft
- An automatic watering system (likely)
- Pens that include a covered area inside the barn connected to outdoor runs (that can be closed in extreme weather)

Coops + Sheds

Organized around Farmyard, beginning at the Farmyard Barn and continuing northward

- Structure type and size according to species
- Incompatible animals (like pigs and chickens) separated by species

Paddocks

Forage fields located behind Animal Barn, Coops, and Sheds

- Outer fences designed for the most severe situation, that is, the animal with the most extreme needs
- Inner fences should be movable to accommodate changing collection of animals and the need to rotate forage fields

Support Functions

Ancillary buildings that demonstrate the skills and trades necessary to support a farm, such as a blacksmith shop, an equipment repair shop, or farm-related storage.

Community Supported Agriculture Gardens

There are thousands of Community Supported Agriculture (CSA) farms throughout the nation, and the one proposed for the Biscoe Gray Heritage Farm can take numerous forms. Whatever its form, it is a partnership of mutual commitment between the farm and the local community that provides a direct link between food production and consumption and fosters the production of locally-grown and locally-consumed food.

The specific scale and management strategy of the Community Supported Agriculture (CSA) Gardens have yet to be determined, but they embrace the following principles:

- 1 They are opportunities for community members to participate in growing farm products using organic and sustainable principles and techniques
- 2 The Gardens should include a Permanent Collection that is consistent with the Family Sustainability Model of the Farmyard, for example, corn for feed
- 3 The Gardens should include a Rotating Crop Collection that varies according to the interests of the participants and may include fruits, vegetables, fibers and grains (like canola, sorghum, psyllium, or spelt), or ornamentals (like cut flowers

or other domestic herbaceous plants)

- 4 The Gardens' placement adjacent to the Farmyard Barn maximizes the Barn's use and minimizes costs by avoiding duplicate efforts
- 5 The placement in the Master Plan Design allows any crops needing deer fencing to be placed along the treeline, which will act as a masking backdrop and avoid filling the "outdoor room" with objectionable visual clutter
- 6 The Gardens will extend from the Rolling Road Walk east to the treeline, gracefully resolving behind the Locust Hill Orchard (described below)
- 7 The activities of the Gardens will provide opportunities for teaching and learning about organic gardens, whether it is how to grow without irrigation (which will not be included in the gardens), bee keeping (which will be included), integrative pest management, and sustainable financing
- 8 Only crops whose maximum height remains 42" or less may be planted in Nook 3's adjacent outdoor rooms or in the viewshed of the Locust Hill Orchard (north of the Locust Hill Orchard Walking Path to the Rolling Road Trail)

Locust Hill Orchard

The existing knoll, traditionally known as Locust Hill, is one of the site's most distinctive topographic features. The Master Plan proposes that the current, visually unorganized volunteer vegetation, which lacks composition, be removed and replaced with an orchard of trees that gracefully shifts the eye up the Locust Hill and its new orchard and then extends the view south to the fields beyond. A trail—Locust Hill Trail—extends from the Rolling Road Walk and spirals up the hill among the trees, offering a hilltop overlook to the CSA Gardens. Further discussion will determine the potential damage that deer may cause an orchard composed of fruit trees. An attractive and instructive alternative would be grove of trees that support integrative pest management and pollination.

NODE 4 • CAT HOLE

Where Nodes 1, 2 and 3 are concerned with 20th century farming, *Node 4 • Cat Hole* reaches further back in time, from pre-Colonial through 19th century food production. [Figure 24] The Master Plan Design uses two of the site's smaller outdoor rooms to focus on smaller scale farming operations that were utilized during the 17th through 19th centuries. The node's name of "Cat Hole" is a local term that refers to the sharp bend in Battle Creek, presumably where one might find catfish. It is also a deepwater section of Battle Creek and often the furthest point north that canoeing and kayaking is possible. Thus, it is the optimal place to locate a canoe/kayak pull out and to aggregate uses in proximity to one another to form a node.

Field Center: Restroom/Storage/Pergola

The center of operations for Node 4 is a very modest Field Center, a necessity given the size of the site and the distance of the node from where visitors begin their walks (1/2 mile). It is a single structure that includes a collection of program uses:

- A self-contained restroom (such as a Bio-Sun or other compost toilet system)
- A small, enclosed storage space for tools and educators' materials
- A modest pergola that provides dappled shade with a built-in bench on which visitors may rest
- A small, natural stone "patio" in which group leaders can organize and impart lessons to children

Colonial/19th Century Farming Demonstration Fields

The Colonial/19th Century Farming Demonstration Fields are clustered together with the Field Center and the Rolling Road, utilizing three of the site's outdoor rooms:

Room 1—One of the smallest, most rectilinear of the site's

outdoor rooms located southwest of the Field Center

Room 2—The middle, larger outdoor room that receives greater solar radiation

Room 3—The very smallest of the site's outdoor rooms contiguous with Room 2.

This siting allows the separation of Colonial and 19th century farming demonstrations between the three rooms in a variety of configurations to interpret agriculture practices used during each of the periods, such as those suggested by the following bullets:

- Colonial period use of oxen and horses, moldboard plows, sowing by hand, cultivating by hoe, hay and grain cutting with sickle, and threshing with flail
- 1790s introduction of cradle and scythe
- 1820s patenting of iron plow with interchangeable parts and the establishment of the canning industry
- 1830 advances in steel manufacturing plows and practical threshing machines
- 1870s change from hand power to horses and gang plows
- 1890s shift to increasingly mechanized production

This siting also takes advantage of the Colonial archaeological site (discussed previously) in the southernmost end of the larger outdoor room, thus allowing the time period of artifacts to remain coincident with the time period being interpreted. Nonetheless, before the construction of the Field Center, any fields, or any activity with the potential impact sub-surface deposits, additional archaeological investigations should be completed.

Native American Interpretive Area

Native Americans actively participated in cultivation of the land on the Heritage Farm site, as evidenced by the Native American Shell Mid-



NODE 4 • CAT HOLE

- | | | | |
|----|--|----|--------------------|
| 24 | FIELD CENTER: RESTROOMS/STORAGE/PERGOLA | 37 | ROLLING ROAD |
| 25 | COLONIAL/19th CENTURY FARMING DEMONSTRATION FIELDS | 38 | ROLLING ROAD TRAIL |
| 26 | COLONIAL ARCHAEOLOGICAL SITE RESERVE | 41 | CAT HOLE TRAIL |
| 27 | NATIVE AMERICAN INTERPRETIVE AREA | | |
| 28 | BATTLE CREEK BOARDWALK | | |
| 29 | CANOE/KAYAK TEACHING/SLEEPING PAVILION | | |
| 30 | SHELL MIDDEN VIEWING PLATFORM | | |

Figure 24. Detail Plan for Node 4 • Cat Hole.

den (noted as “Prehistoric Archaeological Site” in the archaeological investigation and in Figure 4). Yet, Native Americans’ presence is noted in things that are difficult for most visitors to see. In fact, the Shell Midden itself is difficult to see from the land. The Native American Interpretive Area offers an opportunity to construct exhibits that give a definitive physical presence to these inhabitants, further enhancing visitors’ understandings of Native American culture and inhabitation of the site. It also provides an identifiable space for organized group discussions amid the shade of the forest. Also, leaders can use the intermediate stopping point to prepare visitors for the Native American Shell Midden that is featured on the Boardwalk experience (description following). Interpretive exhibits can be added over time as funds and additional archaeological knowledge is collected.

The Master Plan shows a reasonable proximal location for the Interpretive Area. However, future archaeological investigations should precede permanent locations to prevent damage to other artifacts, particularly those related to permanent Native American inhabitation of the site.

Boardwalk + Platforms

Fortunately, the steep slopes alongside Battle Creek at Cat Hole contain one, anomalous, gently-sloping peninsula that can accommodate a walkway to the water. From this point, the Boardwalk takes visitors out into the marsh and to the waters of Battle Creek. The Boardwalk continues northward, eventually circling back to the land and connecting to the woodland trail via a flight of steps.

The Master Plan Design shows a reasonable configuration for the Boardwalk. However, a final configuration should not be set until further historical research is undertaken to determine if the boardwalk can be aligned to correspond with a former shoreline before the marsh was so silted in (due to logging and less sustainable agricultural practices). To offer visitors the opportunity to walk—literally—the former shoreline would allow an interpretive experience that mere words can never convey.

Whatever its final configuration, along its way, it contains two special places:

- **Canoe/Kayak Teaching and Sleeping Pavilion**

A platform (approximately 20’ by 40’) on which canoes and kayaks can approach the site by water, pull out, and rest. The platform supports a covered Pavilion that provides a sun/rain shelter and a place for educators to gather school groups and convey lessons—an effort that is extremely difficult to accomplish on a linear boardwalk. The Pavilion also accommodates primitive camping in two ways: 1) Campers can use the wooden platform to unroll sleeping mats; or 2) Each of the Pavilion’s columns, spaced approximately 10’ apart, contain hooks for stringing a hammock and a backpack/rucksack.

- **Shell Midden Viewing Platform**

A widening of the Boardwalk to allow a close view of the sizeable and impressive Native American Shell Midden (noted as Prehistoric Archaeological Site in the Archaeological Report and Figure 4) that is part of Battle Creek’s bank and displays the native people’s interactions with the land’s resources.

Figure 25 offers an artistic vision of the Canoe/Kayak Teaching and Sleeping Pavilion, the Shell Midden Overlook, and the experience that visitors may enjoy.

The remoteness of the Boardwalk + Platforms and potential for uncivil behavior underscores the need for a resident caretaker on the property.

The constructed elements of the Boardwalk + Platforms are within the Chesapeake Bay Critical Area Buffer of 100’ landward of tidal waters. Design elements and structures planned in the Critical Area will be submitted to State agencies for review and because of that are subject to change. In the scenario proposed by the Master Plan Design, no forest cover removal is part of any of the platforms. Plus, the Boardwalk + Platforms proposed are water dependent uses, which are the only types of structures permitted within the Buffer. They will require ap-



Figure 25. Artistic vision of Canoe/Kayak Teaching and Sleeping Pavilion and associated Boardwalk and Shell Midden Viewing Platform.

proval through the permitting process. Given their small scale and the fact that they would meet the requirement, “That the project meets a recognized private right or public need,” approval is highly likely. One of the regulatory requirements states, “That the facilities are consistent with an approved local plan...” (COMAR 27.01.03.03); therefore, formal adoption of the Master Plan and incorporation into its Comprehensive Plan is important to realization of the Boardwalk + Platforms.

Similarly, the Field Center, not within the 100’ Buffer yet within the 1000’ regulated area, has been located on a previously cleared area and on which until relatively recently stood a barn. In addition, its “patio” area can be constructed of pervious materials and incorporate stormwater best management techniques that foster groundwater infiltration. Consequently, it, too, will likely succeed in obtaining approval from state agencies. Nonetheless, plans will be submitted to State agencies for review and because of that are subject to change.

NODE 5 • THE POINT

The Point, the southernmost tip of the site where the land meets the marsh of Battle Creek and a contributing unnamed creek, is located almost a mile from Grays Road. [Figure 26] The Master Plan Design balances two, competing understandings:

- 1) That few, everyday visitors will walk this distance
- 2) That the site possesses valuable, inherent resources that make a walk to The Point a worthwhile experience:
 - The 19th Century House
 - The view of Battle Creek as it flows southwesterly toward the Patuxent River
 - The intrigue of following the Rolling Road to its historic landing

The Master Plan Design responds by proposing limited program development that judiciously conserves monetary resources but also

solves problems and provides a rewarding destination experience.

19th Century House

The 19th century house is located on a ridge above Battle Creek on flat land that slopes steeply to the west, south, and east. Set deep in the woods, there are no agricultural fields or outbuildings near the dwelling. It is a two-story, side-passage plan, wood-frame construction dwelling that is roughly 18 feet by 14 feet. It is likely that this modest 19th century dwelling was constructed for use by people working the land rather than the landowners. Its construction indicates that it dates to the second half of the 19th century.

While the house is of archaeological value and a significant cultural artifact for the site, the archaeological and cultural history investigation performed as part the Master Plan process notes three aspects that have heavily contributed to the team’s decisions regarding its treatment:

- 1 A cistern, currently without a cover, constitutes a public safety hazard. Lined with brick at the top foot, it is located twenty feet from the northeast corner of the house and is fifteen feet deep.
- 2 Access to the site needs to be prevented, as it is a safety hazard. As the Maryland Historical Trust, Maryland Inventory of Historic Properties Form reports, “The 19th century house is in a poor-to-ruinous condition, rapidly deteriorating” (Inventory No. CT-1359)
- 3 Restoration is infeasible: Door openings less than five feet high, lack of municipal infrastructure availability, a configuration that is not conducive to any contemporary use and nearly impossible to bring to code, and in such a structural unstable condition that the second floor is inaccessible due to safety concerns for investigators.

NODE 5 • THE POINT

31 19TH CENTURY HOUSE
32 MARSH BOARDWALK

37 ROLLING ROAD
39 HORSE TRAIL

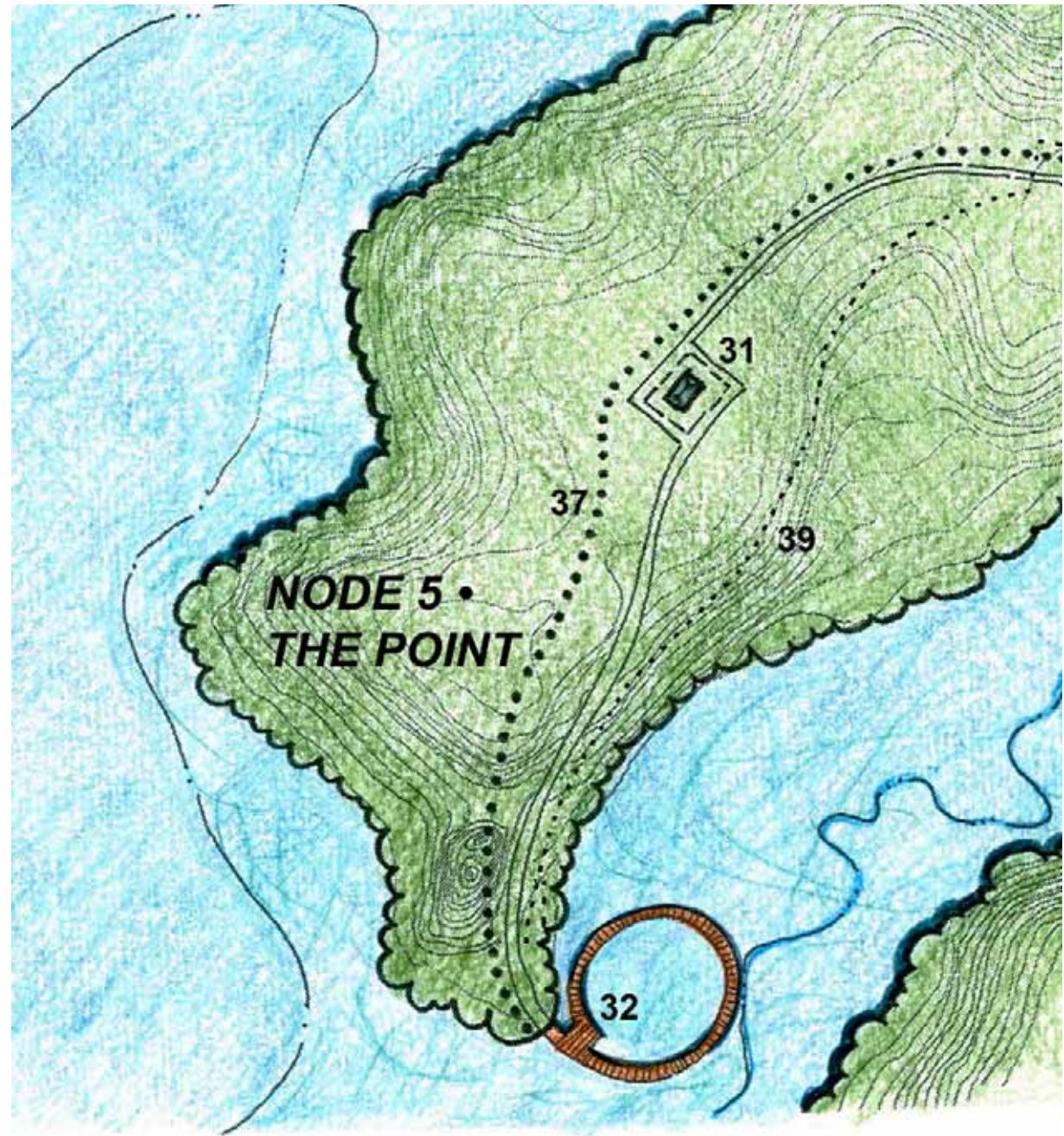


Figure 26. Detail Plan of Node 5 • The Point.

Consequently, the Master Plan Design includes the 19th Century House as an opportunity to document the deterioration of the house as a means of incorporating archaeological documentation as part of the learning experience of the site. For example, students may participate in the structure's deterioration as part of the K-12 curriculum that introduces archaeological techniques and imparts cultural history lessons. As the cultural resource report notes, "Regular reporting of the results of this documentation, at intervals appropriate to the rate of deterioration, could provide archeologists, architectural historians, and preservation planners valuable insights into the process of site degradation." (p64)

The 19th Century House is also a salvage opportunity for building materials that may be used in other building projects on-site:

- Existing Buildings Reconstruction: Biscoe Gray Barn; George E. Rice Homestead House and Outbuildings
- New Construction: Animal Barn; Cat Hole Pergola; Battle Creek Canoe/Kayak Teaching and Sleeping Pavilion

In addition, the 19th Century House should receive the following physical treatments:

- The cistern should be filled and covered
- A perimeter fence that prevents visitors from approaching the structure or falling into the cistern, located at sufficient distance to account for potential outward collapses of the upper levels of the house and the chimney
- Interpretive signage that describes the process of deterioration that the curriculum efforts continue to document

Marsh Boardwalk

As open water wetlands are distinct from highly vegetated marshes, the Marsh Boardwalk on the unnamed tributary along the southeast side of the property offers a complementary boardwalk experience to that of the Battle Creek Boardwalk. The Marsh Boardwalk is circular to facilitate educators' efforts in organizing and holding the attention of school groups. The placement of the Marsh Boardwalk is key, as it punctuates the landing of the historic Rolling Road.

As with the Boardwalk + Platforms at *Node 4 • Cat Hole*, the Marsh Boardwalk requires approval from the Maryland Critical Area Commission, which with support of the County and its classification as a water-dependent use (discussed previously), it is likely to be granted. Nonetheless, plans will be submitted to State agencies for review and because of that are subject to change.

NODE 6 • Paddock + PARKING

The Paddock + Parking Site—located to the west of the main, ridge-dominant site of the Heritage Farm—is spatially remote from the main site yet highly visible from Grays Road, which requires sensitive treatment in terms of program and visual impact. [Figure 27] It is ideal for locating elements that are compatible with the Rural Legacy covenant and the pastoral aesthetic of the area yet 1) are not easily accommodated in the pedestrian environment of the main site and 2) are too large for the relatively small outdoor rooms of the main site. The three elements identified by the Master Plan Design are all vehicle-related.

The entry drive must be carefully located, as there is a limited area along Grays Road in which there is no swale and which has adequate site lines. The Master Plan Design shows a reasonable entry point, but further study by a civil and traffic engineer is required to finalize an exact location.

Paddock Parking

The Paddock Parking accommodates horse loading and unloading and its attendant vehicle and trailer parking. Importantly, it is located on

NODE 6 • PADDOCK + PARKING

- 33 PADDOCK PARKING
- 34 FLEX FIELD
(COMMUNITY GARDENS POTENTIAL
FUTURE USE)
- 35 AUXILIARY PARKING
- 36 NO CHILD LEFT INSIDE PLAYGROUND

- 39 HORSE TRAIL
- 44 GRAYS ROAD

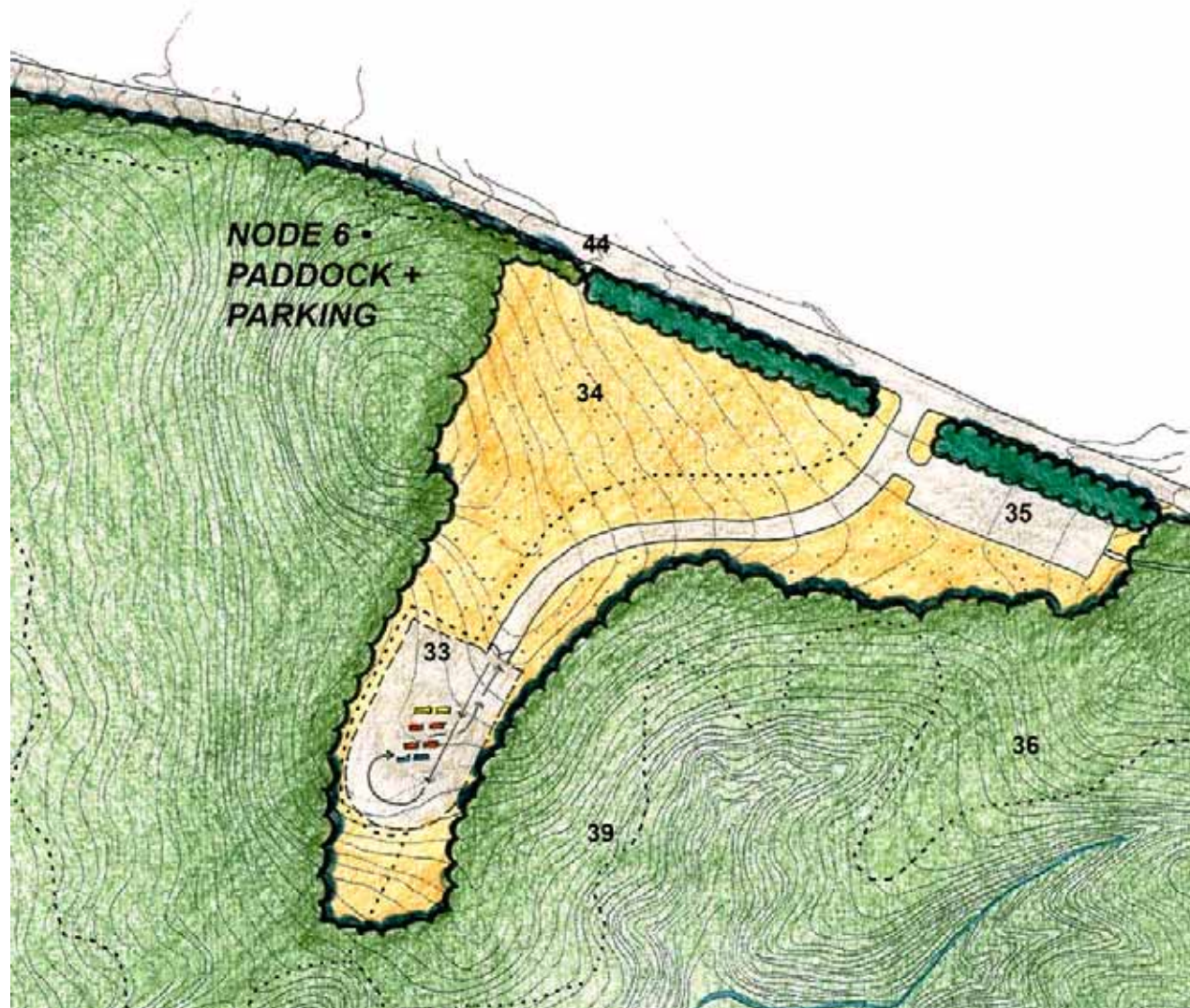


Figure 27. Detail Plan of Node 6 • Paddock + Parking.

the south side of site's highest topographic point to lessen its visual impact from Grays Road. Sited "below" the high point, it will essentially be hidden from Grays Road drivers. The visual shrouding will be enhanced by a row of evergreen trees and shrubs along Grays Road. The Paddock is fenced to secure the horses and includes a drive gate at its entry/exit point. It is adequately sized to allow drivers to pull in, unload, park, load, and drive out in a fluid motion, requiring no backing or 3-point turns.

Auxiliary Parking

Just to the east of the *Node 6 • Paddock + Parking* entry, an unstructured, gravel parking area serves a number of purposes:

- Overflow parking for events on the main site
- Parking for a future, potential Community Garden should there be a need (see "Flex Fields" description following)
- Parking for visitors who are not specifically visiting the Heritage Farm but, instead, wish to visit the No Child Left Inside Playground (description following)

By separating parking for these purposes from the main parking of the Heritage Farm, the Master Plan Design reduces the amount of land lost from the Heritage Farm, improves pedestrian safety, improves visitors' experiences of the beauty and history of the site, and facilitates the quick-in and quick-out needs of the Node 6 users.

As the Master Plan Design has depicted, a double allée of low-branching evergreen trees between the parking and Grays Road is needed to minimize the parking's visual impact from Grays Road.

No Child Left Inside Playground

This special nature of the Biscoe Gray Heritage Farm Mission and its beautiful site encourage a special kind of playground. The No Child Left Inside Playground fosters children's connections to nature through play in a "natural playground" where kids learn to love and understand nature through individual discovery and exploration that is associ-

ated with fun and not necessarily connected to formalized learning. The Playground uses the adjacent woods and streams as its primary play equipment and is enhanced with additional "play structures" that, rather than using stock playground equipment, are configured from creative combinations of natural and constructed elements. In fact, the Playground should never be "complete;" rather, to foster children's creativity, furnishing the playground may be more of a strategic and continual stockpiling of materials that might consist primarily of materials that have transitory lives.

The Playground is located within *Node 6 • Paddock + Parking* to allow easy-in, easy-out access by car, enabling County residents to utilize the Playground without necessarily visiting the Heritage Farm. It is located near the Auxiliary Parking to accommodate parents with small children who need to be near their vehicles. The siting also takes advantage of the clustering of adjacent natural features vegetation:

- **Clearing at the top of the slope**
- **Forest**
- **Perennial stream**

C. CONNECTORS

The six Nodes and its program elements are linked by trails and "Flex Fields" that both link program elements and enhance visitors' opportunities and experiences [see Figure 17]:

- **Rolling Road Trail**
- **Horse Trails**
- **Flex Fields**

ROLLING ROAD/ ROLLING ROAD TRAIL

The historic Rolling Road was a primary transportation route for those who lived on the Biscoe Gray property. More importantly, it was the mechanism for transporting tobacco and other goods to boats on Battle Creek in the eras in which the Creek was still navigable for larger vessels. Specifically, rolling roads were named such because of the practice of loading tobacco in hogsheads (wooden barrels) weighing up to 800 pounds. Sometimes loaded onto carts and sometimes attached to the carts and rolled behind, hogsheads were the primary tobacco packing and transport method until the 1930s. Few rolling roads are accessible or interpreted for the public, underscoring the importance of preserving the Biscoe Gray Rolling Road, maintaining its (currently) distinctive physical and experiential presence, and enhancing its interpretive value.

The Master Plan Design also proposes a response that respects the integrity of the Rolling Road while simultaneously using it to connect the Nodes and making it more visually accessible. Rather than locate a trail *within* the Rolling Road—which will undermine the integrity of it as a landscape in its own right—the Design proposes a complementary trail that allows varied views of the rolling road and creates a more interesting, interwoven relationship with the Rolling Road. The Trail alternates between one side of the Rolling Road and the other and crosses at strategically located moments where the topography or view is particularly salient. To enhance this relationship, the Design proposes the addition of a series of vertical markers along the entirety of the Rolling Road—simple, fence posts placed every 5 yards, the distance of a perch, a common historical land measure. The posts could also include bird boxes that provide an ecological function and impart further environmental lessons to visitors. The markers will also be useful because in the hayfields, the Rolling Road, and visitors will likely be confused without wayfinding. The fence posts/bird boxes are inexpensive, easy to install, and would strengthen the visibility of the Rolling Road. At ¼ mile increments, the fence posts can also include interpretive signage, highlighting a relevant natural or cultural history aspect. Finally, they are opportunities to engage local artists and artisans in the creative development of the Biscoe Gray Heritage Farm.

In addition, the Master Plan Design proposes selective and site-specific treatments of the multiple conditions of the Rolling Road:

- Selective tree removal in places where the visibility of the Rolling Road is compromised by excessive, volunteer growth
- Erosion stabilization and/or drainage diversion where the Rolling Road is excessively incised and is channeling water flow that compromises the long-term integrity of the Rolling Road

HORSE TRAILS

The initial implementation of the Master Plan Design maintains all of the existing horse trails. As the County incrementally develops the Nodes, the horse trails will inevitably conflict with program development (Nodes 1 and 4), vehicular traffic (Nodes 1 and 3), and pedestrian safety (Nodes 1, 3, and 4). Even then the majority of the existing horse trails can remain almost exactly as they are and will require only slight realignment. When the plan is fully implemented, some parts of the trails may need to be re-configured for safety and/or concerns regarding the transfer of disease between “visiting” horses and the Farmyard animals.

Given the highly erodible nature of the site’s soils and concerns about polluting the creeks, no new horse trails should be constructed. Any modification of trails should be held to a minimum and should follow the guidelines noted in “Performance Guidelines.”

FLEX FIELDS

Once the Master Plan Design has been fully implemented, four of the site’s outdoor rooms, currently hayfields, will remain without specific

program designated within them. These fields can remain hayfields—demonstrations of farming practices common to the early 21st century—or, as Calvert County agriculture evolves, can be converted to other crops.

The four Flex Fields also maintain flexibility in the Master Plan, providing spaces 1) for proposed program elements to expand and 2) for program elements that are compatible with the Master Plan Mission but also not specifically identified in the Master Plan. Three scenarios warrant noting:

CSA Garden Expansion

Should the CSA Gardens develop into an enterprise that outgrows the outdoor room shown on the Master Plan Design, the three Flex Fields contiguous to the CSA Gardens and west of the Locust Hill Orchard are ideally suited to absorb this expansion. Note that the crop height limit of 42" within the Orchard viewshed (identified in the CSA principles) should be honored.

Colonial/19th Century Farming Demonstration Field Expansion

Should the Colonial/19th Century Farming Demonstration Fields need room to expand, the Flex Field to its northeast can accommodate its growth. It is coincident with one of the Flex Fields notes for CSA Garden expansion, a condition that may require a choice between one or the other but may also be solved by rotating uses between seasons or years—thus offering another lesson common to farming over a range of eras.

Demonstration Tobacco Field Expansion

The Gateway Demonstration Tobacco Field is optimally located at the Entry. Yet, if there is a desire to plant another tobacco field for additional interpretation, the Flex Fields offer an option.

Community Gardens

Due to concerns that there may not be sufficient interest within the County to justify the expense of a separate Community Gardens area for individuals to cultivate plots of approximately 20' by 30', the Master Plan Design has incorporated a community garden element within the Kitchen Garden and within the CSA Gardens. Nonetheless, should

future interest develop, the Master Plan Design reserves for this purpose a field within *Node 6 • Paddock + Parking* between Grays Road and the Parking Paddock, as this use is compatible with the Rural Legacy covenant and maintaining an appropriate, rural view from Grays Road.

D. INFRASTRUCTURE

Each node requires infrastructure improvements. Some improvements accompany particular building projects and will not be required until the construction of the facility. Others may be executed independently from buildings. Due to Calvert County's commitment to sustainability, it is critical that infrastructure needs are evaluated in relationship to both each node and in relationship to the Biscoe Gray property as a whole—a practice markedly different from conventional development in which infrastructure is upgraded on a building-by-building basis. An integrative plan leverages the potential efficiencies through more holistic analysis to ensure maximum natural resource preservation.

The infrastructure projects necessary to the Master Plan Design's implementation span a range of types:

- Natural infrastructures (trees, landform, water courses)
- Unseen utilities (potable water, sewer, electric, telephone)
- Usually unnoticed (stormwater)
- Transportation (roads, parking, and trails).

Other than the natural infrastructures, the infrastructure needs of the site are somewhat challenging since none of those required to support public use are currently available to most areas of the site.

The following outline offers an overview of infrastructure currently available:

- Electrical Power: Available from Grays Road
- Municipal Sanitary Sewage: Not Available
Rural area depends on individual septic fields, which the project seeks to avoid
- Potable Water: Not Available
Rural area depends on wells
- Hard-Wired Telephone Service: Available from Grays Road
- Roads: None
Farm vehicles drive along edges of fields.

Figure 28 outlines the primary infrastructure needs by Node.

INFRASTRUCTURE NEEDS	
Node	Construction Efforts
Node 1 • Entry Node	Electrical Power Self-Contained Sewage System Gravel Drive + Parking Stormwater Management
Node 2 • George E. Rice Homestead	Electrical Power Water Well Hard-Wired Telephone Service Feasibility-Study Determination: Self-Contained Sewage System or Septic Field
Node 3 • Farmyard	Electrical Power Self-Contained Sewage System (Water Well completed as part of Node 2 construction) (Gravel Drive + Parking completed as part of Node 1 construction)
Node 4 • Cat Hole	Self-Contained Sewage System
Node 5 • The Point	None (see Program Chart)
Node 6 • Paddock + Parking	Gravel Drive + Parking (see Program Chart)

Figure 28. Infrastructure Needs Chart

E. PROGRAM SUMMARY

The program for each Node has been described in the preceding narrative. The following Program Chart [Figure 29] summarizes the program needs for ease of planning. The standards for their quality and treatment are addressed in Performance Guidelines (following).

LANDSCAPE CONSTRUCTIONS		
Paths and Trails	Existing	Proposed
Universally Accessible Path @ Rice House	0 sf	1500 sf
Rolling Road Trail	0 sf	4340 sf
Cat Hole Trail	0 sf	1000 sf
Locust Knoll Orchard Trail	0 sf	550 lf
Battle Creek Boardwalk	0 sf	450 lf
Marsh Boardwalk	0 sf	250 lf
Yards and Constructed Spaces		
Plumer-Cranford Barnyard	0 sf	8000 sf
Field Station Patio	0 sf	1750 sf
Native American Interpretive Area	0 sf	160 sf
Vehicular Elements		
Entry Road and Turnaround	0 sf	26,100 sf
Bus Stop 100' x 12' Pull-off	0 sf	1200 sf
Plumer-Cranford Barnyard 3 Handicapped and 9 Regular Spaces Plus Access Drive	0	12 spaces
Farmyard Drive-side Parking	0	15 spaces
Parking Mews 28 Regular Spaces plus 60' Diameter Turnaround	0	48 spaces
Parking Paddock	0 sf	12,000 sf
Overflow Parking	0 sf	45 spaces

BUILDINGS		
Enclosed Structures	Existing	Proposed
Biscoe Gray Barn	800 sf	0 sf
Plumer-Cranford Barn - Administration Office - Storage Area	800 sf	0 sf
Entry Toilets - 3 female toilets - 1 male toilet - 2 urinals - 1 unisex, universally accessible toilet	0 sf	205 sf
Animal Barn - Two restrooms: either two unisex or one female and one male - Central workspace (perhaps an alleyway with pens on either side) - Small meeting space (perhaps a widening of the alleyway) - Enclosed, lockable feed storage room - Enclosed, locked supply room - Office - Hay loft	0 sf	2600 sf
Field Center - Storage - One unisex restroom (Additional, exterior square footage for pergola and sitting bench)	0 sf	80 sf
George E. Rice House	640+/- sf	unknown
Meathouse	56 sf	0 sf
Chicken Coop	150 sf	0 sf
Cow Shed	324 sf	0 sf
19th c. House Undetermined due to ruinous condition. Footprint is 18' x 14'	unknown	0 sf
Open Structures	Existing	Proposed
Canoe/Kayak Teaching/Sleeping Pavilion	0 sf	800 sf
Pergola at Field Center	0 sf	200 sf

Figure 29. Program Chart

III : PERFORMANCE GUIDELINES

III. Performance Guidelines

A. OVERVIEW

In the previous section, Master Plan Design, specific proposals for archaeological sites, landscape elements, and buildings have been envisioned and located. This section further articulates their final forms, describing the intentions, use, and general character of each.

Performance Guidelines further describe the elements through a set of standards for quality and performance of the elements, including suggested materials, techniques, sizes, and process. They are not standard, off-the-shelf specifications. Rather, they are specific to the Master Plan Design while maintaining flexibility for future Master Plan evolution. Given that this Master Plan will take another generation of Calvert County staff and multiple consultants who were not part of the Master Plan's development, the Guidelines are crucial to ensuring the coherent and coordinated development of the Master Plan.

The Master Plan Design has considered site, building, and archaeological issues as inseparable, as should the Master Plan's implementation. Nonetheless, to offer clarity to projects that are inherently complex, the Performance Guidelines are separated into distinct categories:

Archaeological Guidelines

Addresses treatment of archaeological resources

- Known Archaeological Sites
- Pre-development Investigations

Site Performance Guidelines

Addresses larger landscape and outdoor systems

- Stormwater Management

- Roadways and Parking
- Landscape Planting + Management
- Landscape Structures
- Site Furnishings
- Pedestrian Trails
- Horse Trails

Building Performance Guidelines

Addresses structures that enclose interior spaces and typically require conditioned space

- Water Efficiency
- Energy Use
- Indoor Environmental Quality
- Materials and Resources
- Architectural Style

B. ARCHAEOLOGICAL PERFORMANCE GUIDELINES

Known Archaeological Sites

There are presently three known archaeological sites and two historic architectural properties located on the Biscoe Gray Heritage Farm. These sites are registered with the Maryland Historical Trust (MHT) and the Calvert County Department of Planning and Zoning as the following:

1. Archaeological Site 18CV494 – Colonial farmstead dating from ca. 1700-1750 containing evidence of early historic settlement along Battle Creek.
2. Archaeological Site 18CV495 – Native American shell midden site containing evidence of prehistoric shellfish harvesting activities, dating from roughly B.C. 1000 to A.D. 1500.
3. Archaeological Site 18CV496 – Late-nineteenth century domestic site containing standing structure and in-ground well or cistern.
4. Historic Site CT-1359 – Biscoe Gray Heritage Farm consisting of two separate domestic farmsteads containing above-ground architectural resources dating from the late-nineteenth century.

Pre-Development Investigations

Archaeological investigations conducted as of June 2010 focused on four specified areas within the 196-acre Biscoe Gray property. These areas were selected by the Calvert County Department of Planning and Zoning due to the presence of known or suspected cultural resources. It is likely that additional prehistoric and historic archaeological sites are present on the property. The coastal areas of Calvert County were among the earliest settled parts of Maryland and Early Colonial sites have been identified on St Leonard's Creek that date to the 1640s. The Biscoe Gray property is considered favorable for settlement during the seventeenth and early-eighteenth century, as evidenced by the presence of archaeological Site 18CV494. Battle Creek is a major Patuxent River tributary that provided colonists with ready access to tobacco market as well as to imported goods. Although Site 18CV494 is the only colonial period archaeological site currently identified on the Biscoe Gray property, the potential for additional colonial period sites or associated buried features must be considered moderate to high.

Similarly, areas within the Biscoe Gray property offer environmental settings favorable for prehistoric habitation and resource acquisition. Site 18CV495, the Late Woodland shell midden, attests to the presence and accessibility of marine resources, and the estuary would

have supported diverse plant and animal communities attractive to prehistoric populations. The shoreline of Battle Creek is easily accessible from land or water, is high enough above sea level to avoid flooding, and possesses well-drained soils. Each of these attributes would suggest a high probability for additional sites but would also suggest a high research potential for known sites, such as 18CV495.

Long-term management of cultural and historic resources within the Biscoe Gray property must acknowledge the high potential for additional unidentified archaeological sites and the potential for adverse effects of future activities on historic architectural resources. As such, any future development plans as part of the Biscoe Gray Heritage Farm must consider potential impacts to undocumented archaeological sites. This consideration should include the following steps:

- Consultation with Historic Preservation Planner of the Calvert County Department of Planning and Zoning
- Protection of known archaeological and historic sites through avoidance, installation of fencing, and routine conditions assessments to provide baseline documentation for management purposes
- Completion of archaeological surveys of areas proposed for new ground disturbing activities
- Development of research designs for future planned excavations or historic documentation/research
- Development of Interpretive Plan to guide future creation of exhibits, guided tours, and other public outreach efforts related to the history and archaeology of the property
- Strategic plan for accidental discovery of archaeological resources during routine maintenance or construction activities

All future cultural resource investigations on the Biscoe Gray Heritage Farm property shall be conducted in accordance with local and state guidelines, such as the Maryland Historical Trust's Guidelines for Archaeological Investigations in Maryland (Shaffer and Cole 1994). In

addition, curation of archaeological or historical materials collected from the property shall be arranged through direct consultation with the Historic Preservation Planner at the Calvert County Department of Planning and Zoning.

C. SITE PERFORMANCE GUIDELINES

Stormwater Management

The goal of future projects is to closely replicate pre-development hydrological patterns through the use of stormwater best management practices (BMPs).

1. Allow no additional discharge in volume or frequency to natural habitats beyond limit of disturbance area
2. Maintain the volume of stormwater runoff at a pre-development condition for the predominant hydrological soil group for a 2-year event
3. Do not allow damming, regrading, or other manipulation of natural, geologically-formed swales for detention/retention facilities
4. Meet or exceed Maryland Department of the Environment (MDE) current regulatory stormwater management standards
5. Treat stormwater as closely as possible to its source using MDE's Environmental Site Design standards, equals, or improvements on those standards
6. Limit impervious surfaces to the maximum degree possible
7. Optimize groundwater infiltration and evapotranspiration
8. To avoid conventional, unattractive, and engineering-aesthetic solutions, contract consultant with a proven track record of implementing successful BMPs, the team including a landscape architect skilled in integrating stormwater into projects in experientially rich and beautiful ways

Roadways and Parking

Improving access the property's rich array of ecosystems and expanding its educational outreach programs require improvements to its presently nonexistent formalized road system. The goal of future projects is to minimize the ecological impacts and maintain the rural experience to the maximum degree possible.

1. Implement stormwater best management practices as outlined above, including the use of permeable surfaces for all roads and parking
2. Respect the rural, farm history and character of the land in creating roadways by using non-curbed, gravel surfaces for high-traffic, public roads and parking; where edge delineation is required, use wooden (fence post) bollards typical of farms rather than institutionalized or commercial style bollards
3. Respect the rural, farm history and character of the land for parking by 1) configuring parking into small areas as opposed to larger, monolithic areas; 2) fitting them into natural contours and features that draw less attention to them; 3) carefully siting parking out of high-visibility areas; and/or 4) screening them when necessary
4. Do not formalize or surface any existing earthen lanes or new farm and access paths, that is, all lanes/paths south of the Farmyard
5. Accommodate rescue vehicles, including minimum turning radii, road strengths, etc., according to Calvert County standards

Landscape Planting + Management

Most of the site's planting has already been accomplished through natural processes. The goal of the Landscape Planting + Management guidelines is to continue the sustainable development and management of the site with special attention to the additional needs required due to public access and visitation.

1. Use native species whenever possible. When non-native species are required, use only documented, non-aggressive species (as may be the case in the CSA Gardens or Kitchen Garden)
2. Utilize sustainable irrigation practices, including forgoing the use of potable water for irrigation, utilizing cisterns, and using water conservation irrigations techniques like drip irrigation
3. Incorporate applicable standards of the National Fire Protection Association regarding proximity of vegetation to structure to reduce risk of structure ignition
4. Conduct a tree health assessment on an annual basis, identifying trees that present public safety hazards and devising a plan to remedy any problems
5. Conduct an ecosystem health assessment on an annual basis, identifying invasive species and devising a plan for their removal

Landscape Structures

Some program elements resemble buildings without the demand for enclosed, interior space: Marsh Boardwalk, Battle Creek Boardwalk + Platforms, and Cat Hole Pergola.

1. As a first priority, salvage materials from the 19th Century House, documenting salvage as well as the deterioration of the structure
2. Use sustainably harvested wood or recycled plastic lumber
3. Use quality materials that will withstand public use, including vandalism

Site Furnishings

A successful public destination requires adequate site furnishings for wayfinding, interpretation, resting, and trash disposal. When one of the site's goals is encouraging tourism, it is particularly important that the furnishings appear coordinated and reflect a standard of quality

commensurate with the facility. In addition, for sites such as Biscoe Gray that include historical interpretation, well developed signage is particularly important.

1. Develop a coordinated format, style, and construction system for site signage, including wayfinding, identification, safety, and interpretive signage
2. Use sustainably harvested wood or materials of high-recycled content
3. For the Entry and Farmyard nodes, develop standards for waste receptacles that encourage recycling by visitors via separate waste bins for plastics, metal, and organics
4. For areas south of the Farmyard node, develop a visitor education program that encourages "pack in/pack out" practice to minimize expenditures and maintenance demands

Pedestrian Trails

The goal of all trails is to provide reasonable visitor access while intruding on the site as little as possible. Therefore, the requirements vary according to level of use, which is predominantly a factor of where they are located on the site. The Master Plan includes three levels of intensity: Higher, Medium, and Lower.

Higher Intensity

Entry and Homestead Nodes

1. Construct a 5' minimum width, universally accessible path from the Plumer-Cranford Barnyard parking to the Homestead House. Consider using a pervious surface such as pervious concrete.
2. Include a 5' minimum width, universally accessible path in the Interpretive Display/Picnic Area. Consider using a pervious surface such as pervious concrete.
3. Avoid additional paths, instead using continuous, multi-purpose gravel surfaces

Medium Density Farmyard Node

1. Construct a 5' minimum width, universally accessible path from the Farmyard parking to the Animal Barn and through the Kitchen Garden. Consider using a pervious surface such as pervious concrete.
2. Avoid additional paths, instead using continuous, multi-purpose gravel surfaces

Lower Intensity

Rolling Road Trail, Locust Hill Orchard Trail, Cat Hole Trail, No Child Left Inside Access Trail

1. Clear vegetation for an 8' wide path (wide enough for maintenance and security vehicles), sufficiently leveling the grade where necessary and placing stabilizing material (gravel/mulch) only where necessary
2. Install interpretive signage/fence posts along Rolling Road as noted in Master Plan Design

Horse Trails

The site's existing horse trails are unsurfaced paths that have become established pathways over time. The horse trails will require adapting to the site's new uses:

1. Given the highly erodible nature of the site's soils and concerns about polluting the creeks, construct no new trails
2. Remove trails in the Entry node where they are in conflict with pedestrian and vehicular traffic and may potentially cause safety hazards to people and horses
3. Modify alignment of trails in nodes where they conflict with new uses (but do not undertake until necessary)

4. Establish new trail configurations with the utmost care for ensuring water quality, minimizing erosion, and preventing vegetation removal and destruction.

D. BUILDING PERFORMANCE GUIDELINES

Water Efficiency

The primary goal of all new structures is to minimize the use of potable water for both public (Node 1 and Node 3 restrooms) and private facilities (George E. Rice House renovation).

1. Use hand-sensored, low-flow faucets, low-flow water closet technology, and waterless urinals to ensure efficient generation of wastewater and reduce the need on-site for potable water creation and storage
2. Capture roof water for gray water reuse within restroom fixtures and other new building systems
3. Use no-water hand sanitation if possible.

Energy Use

The ultimate goal of the site is to become energy neutral, using no more energy than it can generate on-site. As an interim step, its goal is to reduce energy consumption through efficiencies and conservation.

1. Properly orient all new facilities to maximize exposure to southern daylight, northern ambient daylight, and prevailing wind patterns to take advantage of existing property micro-climates.
2. Use efficient heating systems such as on-demand hot water, solar hot water, and geothermal
3. Use Energy Star cooling systems and appliances (at the very least)

4. Use the most energy efficient windows, light bulbs, and other products
5. Utilize solar panel systems in appropriate locations that are sympathetic to the rural character of the site

Indoor Environmental Quality

The goal is to provide the best quality indoor air quality for occupants, visitors, guests, staff, and animals.

1. Use as a benchmark the most current Leadership in Energy and Environmental Design (LEED) standard for indoor air quality
2. Use low VOC use, including all paints, adhesives, sealants, glues
3. Include operable windows in all new buildings (which currently includes only the Animal Barn or a Farmyard support structure)
4. Ensure adequate daylight and views of natural surroundings for all occupied indoor spaces

Materials and Resources

The construction of new facilities on the property can continue the property's strong legacy of using sustainable materials and resources. By demonstrating building process in visible and instructive ways, Biscoe Gray Heritage Farm can strengthen public understanding of land stewardship.

1. Pursue an aggressive on-site collection and recycling program through materials harvesting of the 19th Century House, potentially using the Biscoe Gray Barn to store the materials
2. Set a high standard for recycling reuse of all construction waste

3. Encourage local purchasing to support local economy, minimize transportation expenses, and conserve resources
4. Use only sustainably harvested and manufactured goods

Architectural Style

Maintaining the rural character and historical interpretive opportunities of the Biscoe Gray Heritage Farm is a paramount goal of the project and one that demands particularly rigorous attention regarding new structures. Each restoration and building project will have unique requirements but will also share certain principles:

1. Do not depend on builders or engineers to provide services that require the expertise of those trained in aesthetics. Engage an architect with proven experience in historical buildings to complete plans for new structures.
2. Ensure that an architectural historian is part of the development of the design for new structure(s).
3. Use building forms and materials appropriate to the aesthetic of the site and consistent with the Rural Legacy Plan, determining architectural style on a case-by-case basis based on the intentions and program needs of the project (rather than using a one-size-fits-all approach)
4. Utilize vernacular forms and materials for the exterior expressions of the buildings, forming an historically consistent and aesthetic balance between contemporary additions (such as solar panels), contemporary modifications (energy-efficient windows), and a more "strict" interpretation of a particular style or era



IV : PROJECT PHASING PLAN

IV. Project Implementation

A. KEY PROJECT INITIATIVES

The impact of Biscoe Gray Heritage Farm's educational programs and tourism opportunities stands in contrast to the modest investment in site and facilities that it will require to achieve its profound and positive effects. This is not to suggest that the Heritage Farm's full realization will require insignificant amounts of money. Rather, the significance of its benefits will exponentially outweigh the investment.

Successful implementation of the Phasing Strategy will depend numerous factors. Viewed within its larger context, five aspects warrant special consideration and have been particularly formative in developing the Phasing Strategy:

- 1 Adequate Funding
- 2 Institutional Support
- 3 Management Staff
- 4 Institutional and Community Partners
- 5 Transcending the Commonplace

Adequate Funding

While Calvert County is fully supportive of the project and will offer assistance in the form of staff and an annual budget, it cannot guarantee a consistent funding stream that will fully realize the Master Plan. A key funding goal is to build a long-term endowment for the site. Whether as part of an existing agency/office, shared between agencies/offices, or devoted full-time to the project, Biscoe Gray Heritage Farm needs a development officer to pursue additional funding and, in particular, an endowment. The endowment should be large enough to allow facilities and programs to come on-line in a progressive and logical way.

The lack of project funding can trigger a variety of operational inefficiencies, promote more costly short-term solutions to facility needs, create compromised work environments, contribute to environmental degradation, and lead to short-term solutions that compromise the integrity of the Mission and long-term success of the project. Therefore, avoiding piecemeal development with whatever funds are available in favor of the project's carefully planned and holistic development will require funding that is infrastructural—an endowment.

Institutional Support

The County can support Biscoe Gray Heritage Farm, especially in its Immediate Term, in ways that do not place undue burden on its fiscal resources or staff, specifically through a formal act of adoption of the Master Plan.

Once the Calvert County Board of Commissioners formally adopts the Master Plan, it should be incorporated into its Comprehensive Plan and Rural Legacy Plan. Biscoe Gray is already included in the Land Preservation, Parks and Recreation Plan (December 2006), but that Plan should be updated to reflect the developed program of the Master Plan, which is now slightly altered from that reflected in the Plan.

Incorporation as part of the County's official cultural and natural infrastructure is necessary for certain, key actions—among them the approval by the Critical Area Commission for the Field Center and Boardwalks + Platforms of *Node 4 • Cat Hole* and the Marsh Walk of *Node 5 • The Point*. As discussed in *Node 4 • Cat Hole* section, the Boardwalks + Platforms are water dependent, do not require tree felling and incorporate environmental site design techniques. Therefore, they are likely to be viewed favorably by the Critical Area Commission. However, for a variance to be granted, the facilities must be “consistent with an approved local plan...” (COMAR 27.01.03.03). The issues of the Marsh Boardwalk are similar. Therefore, formal adoption of the Master Plan and incorporation into its Comprehensive Plan is necessary.

Management Staff

Education Staff

The Calvert County Natural Resources Division offers a range of nature education programs run by dedicated staff and volunteers of considerable expertise and skill. Using their knowledge and familiarity of Battle Creek Cypress Swamp and its attendant ecosystems, these staff members are the obvious choices for the initial staffing of education programs on Biscoe Gray Heritage Farm, including training volunteers. However, given the limited resources of the Natural Resources Division, depending on this staff is not a sustainable solution in any time period past the Immediate Term Phasing.

Securing additional funding to hire a site manager/director devoted to Biscoe Gray Heritage Farm is essential. This person will coordinate educational staff and volunteer training, coordinate student groups, act as liaison to educators in developing curricular opportunities, and work with the designated development officer (discussed previously) on endowment and other funding decisions.

Diversified Staff

Once the Heritage Farm becomes a known destination, it will require full-time staff in a variety of roles dedicated specifically to the property. This is a particularly important issue with regard to successfully becoming a member of the Chesapeake Bays Gateway Network (CBGN), which the Master Plan has identified as a key development goal. Meeting the CBGN guidelines for both nomination and commitments once accepted will require documentation of adequate staff and a plan for keeping abreast with increased visitation.

Animal Staff

Once animals are introduced onto the site in association with *Node 3 • Farmyard*, the site will require a resident caretaker. This staff member may be the site manager/director noted above, or it may be an ad-

ditional staff member, a determination of which must be made when the animal component programs are more fully developed. Two viable options are available and recommended as part of a feasibility study in the Immediate Term 2010 – 2012:

1 *Renovation of the George E. Rice House*

As noted previously, the house has been vacant for numerous years, is no longer weatherproofed, is unsafe even to casually explore, and will require a substantial investment to preserve and ensure occupant safety.

2 *Purchase of the William Gray House*

Currently the property is a private residence for a family and contains a house and two historic barns. As noted previously, Biscoe Gray is a descendent of William Gray and, in fact inherited the Heritage Farm property from his father—thus linking the two properties. Together, the immediate proximity and strong historical connection make the Gray House an alternative candidate for a caretaker's house.

While the restoration of the George E. Rice House is the preferred option, a comparison of the two options is a priority item for determining the future form of the Master Plan Design. An architect experienced in historical renovation should be contracted to conduct a feasibility study for the Rice House to examine the following: renovation options, requirements for making the house code compliant, necessary infrastructure upgrades, and a fully developed cost estimate for executing the renovations.

In tandem with a resident caretaker, the introduction of animals will also require the addition of daily animal care staff. Appropriate options might include engaging local 4H Clubs or other animal husbandry programs, maintaining a permanent staff, or a combination of the two. This decision is dependent on a range of factors, among them the scale of animal introduction, local club interest, and funding sources.

Institutional + Community Partners

Institutional Partners

A key development goal is to become a designated gateway of the Chesapeake Bay Gateways Network (CBGN), an institutional affiliation that will support the project's public education and outreach goals and increase its networking and funding opportunities. According to CBGN's most recent Strategic Plan (2006-2008), one of its primary efforts is to fill "Thematic/Interpretive gaps" to create "a fully representative Network," including the themes of "Events and Development in the Region," "Racial and Ethnic Heritage," "Sound Land Use in the Bay," and "Land and Mineral Resources: Their Harvesting and Harvesters," and "The Bay Economy in the Twenty-First Century"—all of which are themes inherent within the site and included within the Master Plan's Mission, Objectives, and Program. As soon as possible, a definitive plan for achieving partnership should be developed and aggressively pursued.

Community Partners

The citizenry of Calvert County and its supporters will form the heart of the project's workforce and financial body. Educators, naturalists, historians, archaeologists, lay people, and businesses alike will contribute time, ideas, materials, and on-site work to the Master Plan's development. Two particular efforts are particularly notable. First, forming a Biscoe Gray Heritage Farm Advisory Board is a key and early goal to spearhead the initiation of the project. Using the Master Plan as its basis and the Project Implementation/Strategic Phasing Diagram as its initial plan of actions, the Advisory Board will catalyze the project's first efforts, key among them being to hire and support a Site Manager/Director and a Development Officer(s).

Second, forming a community supported agriculture (CSA) operation

is a key to developing the farming components of the project. There are thousands of CSA farms throughout the nation, and the one proposed for Biscoe Gray Heritage Farm could take numerous forms. Whatever its form, The Biscoe Gray CSA will be a partnership of mutual commitment between the Heritage Farm and a community of supporters that provides a direct link between the production and consumption and fosters the production of locally-grown and locally-consumed food. According to community interest, the CSA may be organized in a number of ways: 1) a co-op like volunteer workforce in which citizens work the land and receive a share of the crops they tend; 2) non-profit organization with a volunteer and/or paid workforce in which community members buy shares of the harvested crops; 3) a hybrid of options 1 and 2; or 4) a more conventional business or set of businesses in which the County is acting as an incubator for progressive, organic farming, startup enterprises.

Transcending the Commonplace

In a time of increasingly contracting fiscal resources and competing needs, it is critical that the project is launched with vigor that can catalyze significant momentum. Part of this force will emanate from Calvert County staff and the Biscoe Gray Advisory Board. Yet, enthusiasm is not sufficient to generate funding. More effective are exciting and unique program elements and learning opportunities that will draw people to the site and introduce them to the site's numerous and varied wonders—in short, experiences with a "wow factor" that encourage "buzz." Therefore, the Phasing Strategy identifies selective, high-impact program elements as first projects, accomplished as soon as possible in the project's development.

B. DETAILED PROJECT INITIATIVES + PHASING

The Master Plan identifies a wide array of projects through careful development of the site's resources. It also articulates a realistic sequence and schedule for executing those projects. The Detailed Phasing Strategy Diagram [Figure 30] gives an overview of four, parallel Key Project Initiatives:

KEY PROJECT INITIATIVES

Development • Initiate Strategic and Funding Measures

Facilities + Operations • Upgrade Infrastructure and Structures

Education + Outreach • Increase Knowledge and Access to Site

History • Advance Archaeology, Cultural History, and Preservation

With preservation as an overarching goal, the Phasing Strategy considers each of the Key Project Initiatives over three, intentionally uneven time periods with the following, primary goals:

Immediate Term 2010 – 2012

Overall Goals:

- 1 Establish Frameworks for Long-Term Success
- 2 Construct Selective Program Elements, specifically, key, investment elements that offer high-impact results, public outreach results
- 3 Initiate Planning/Design for Major Projects

Near Term 2012 – 2017

Overall Goals:

- 1 Begin Major Program Construction
- 2 Expand Public Outreach
- 3 Secure Long-Term Funding

Long-Term 2017 – 2022

Overall Goals:

- 1 Complete Major Program Construction
- 2 Expand Public Outreach

The Phasing Strategy is read most effectively from left to right with left-aligned columns indicating related actions between categories. Actions best accomplished first appear first (on the left), their subsequent actions following. Actions that do not left-align can be enacted independently. That said, the Phasing Strategy represents a reasonable course of action that may vary by combining projects and shifting timing, as funding and the numerous unknown factors will likely result in a more organic growth than that represented in the chart.

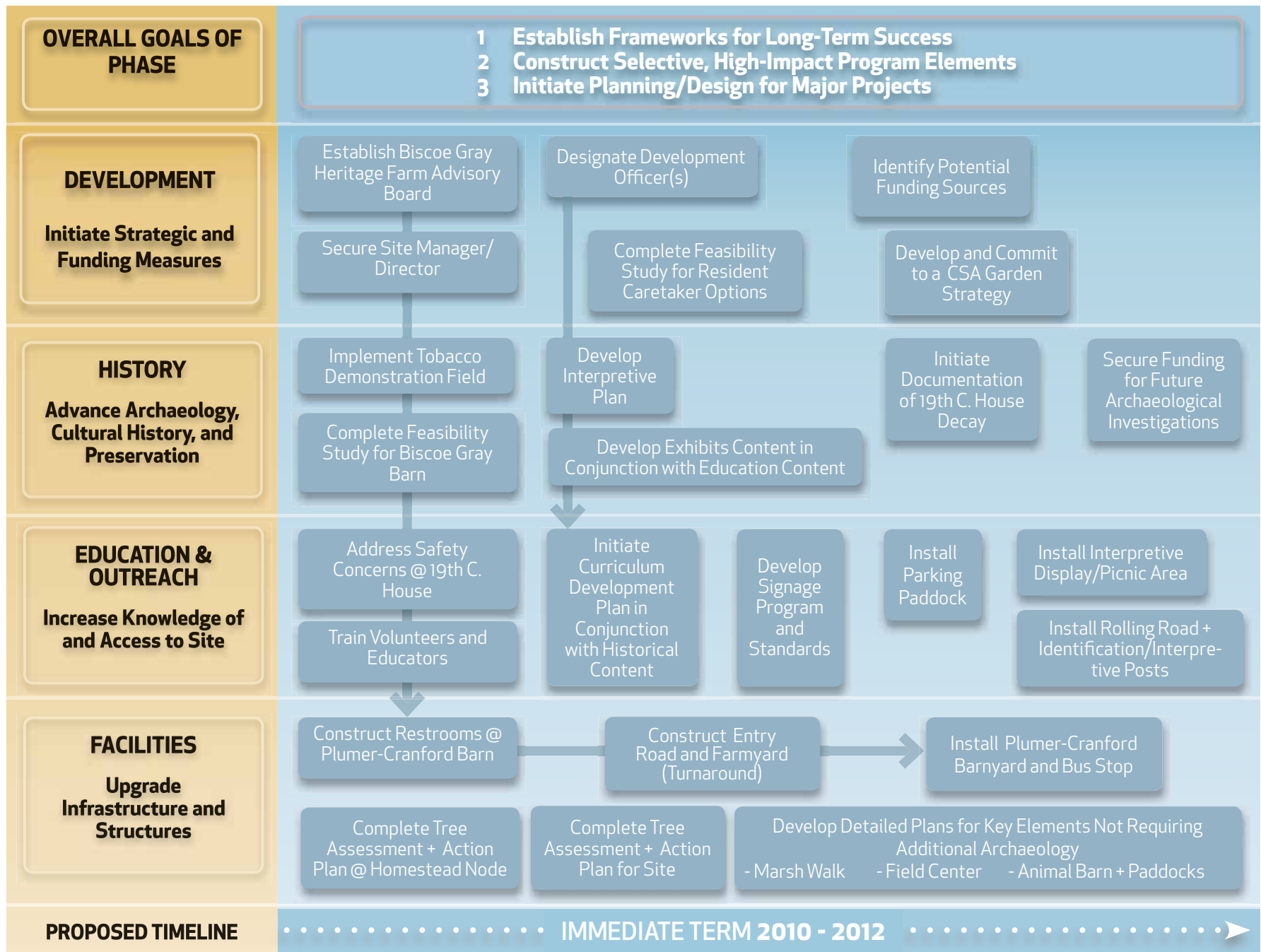
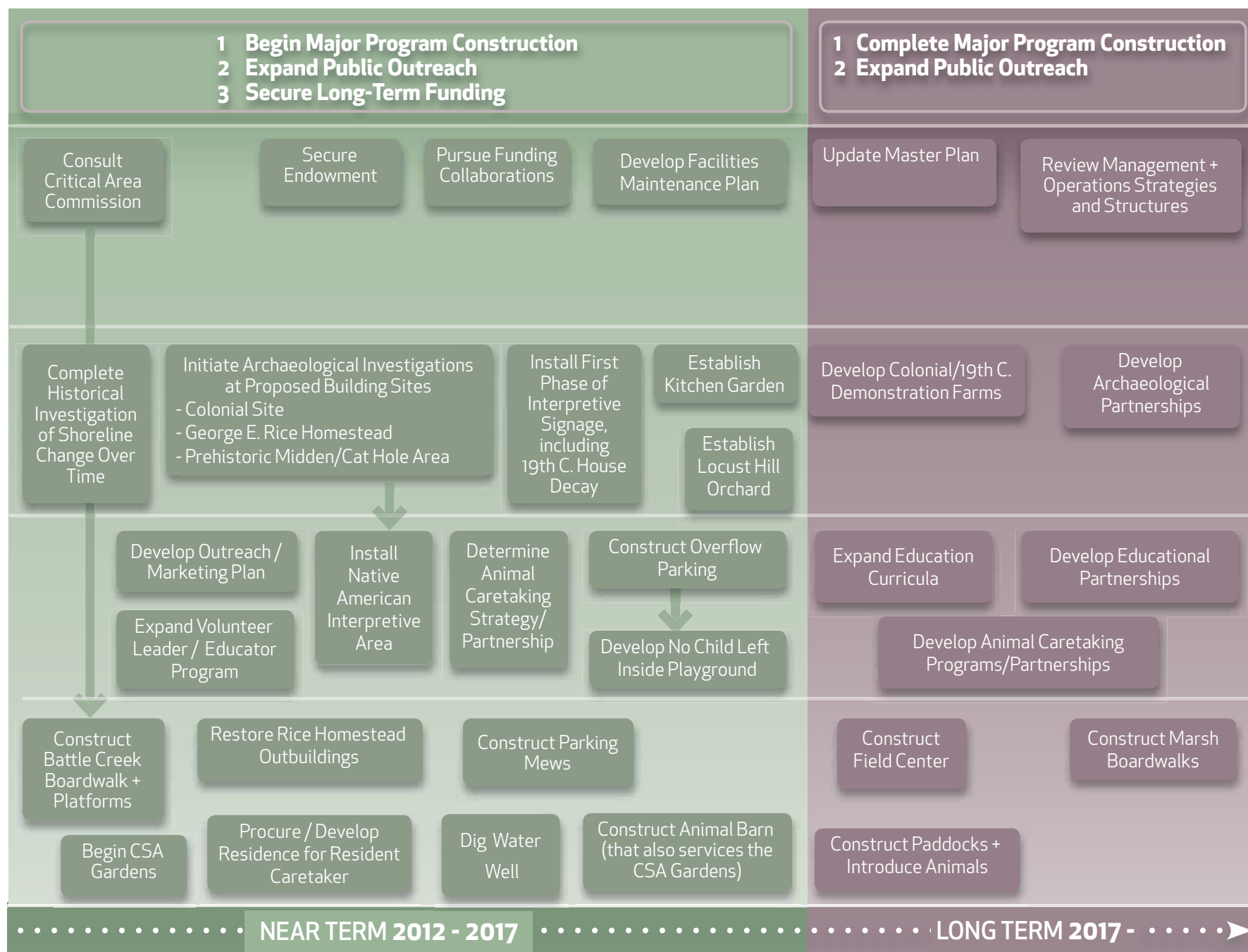


Figure 30. Phasing Strategy Diagram. The Phasing Strategy is best read from left to right with left-aligned columns indicating related actions between categories.



Actions best accomplished first appear first (on the left), their consequential actions following. Actions that do not left-align can be enacted independently.



V: APPENDICES

V. Appendices

A. INITIAL STRATEGIES

Prior to undertaking a Master Plan Design, the Project Understandings were synthesized into three Initial Strategies that identified potential layouts and their consequences:

1 **Front Loaded/Bookend [Figure 31]**

Load the program as close to Grays Road as possible with an “anchor” at The Point to draw people to into the site

2 **Linear Scheme [Figure 32]**

Keep the main facilities close to Grays Road but also extend them further into the site, organized by the Rolling Road

3 **Agriculture Service Center [Figure 33]**

Include the proposed Agriculture Services Center on the western hayfield area of the site and accommodate all of the Heritage Farm elements on the main site

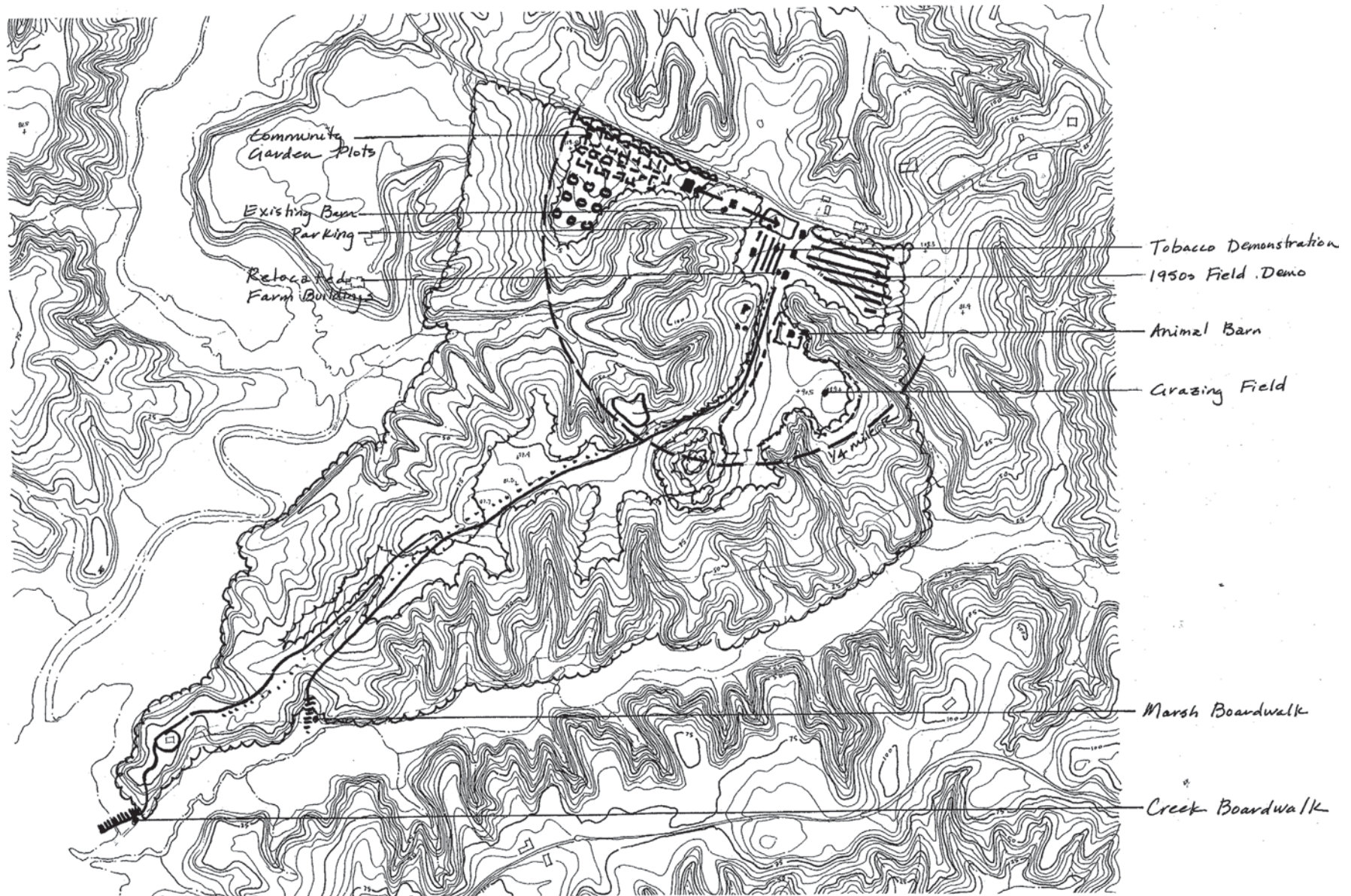


Figure 31. Front Loaded/Bookend Initial Strategy.

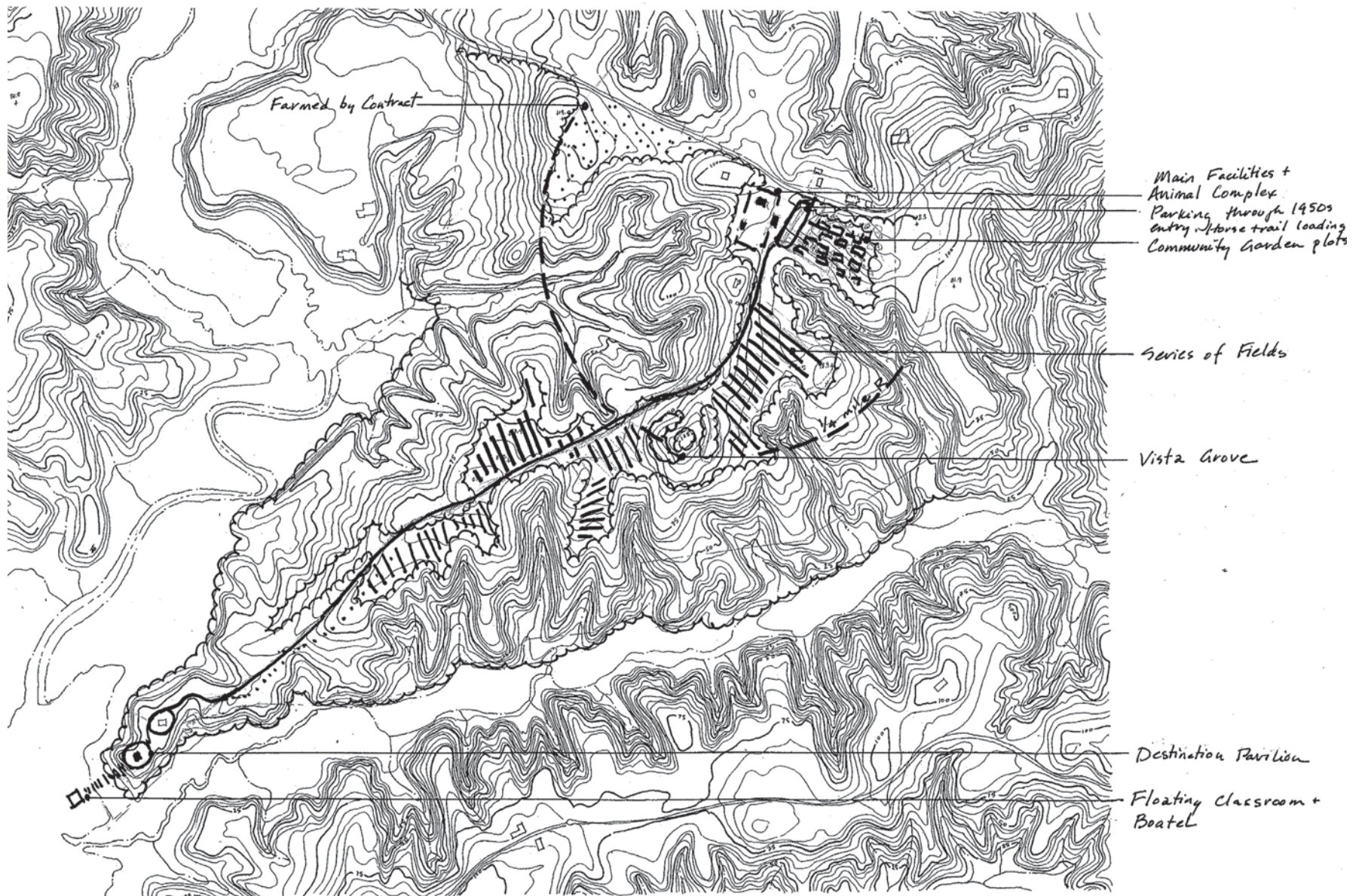


Figure 32. Linear Scheme Initial Strategy.

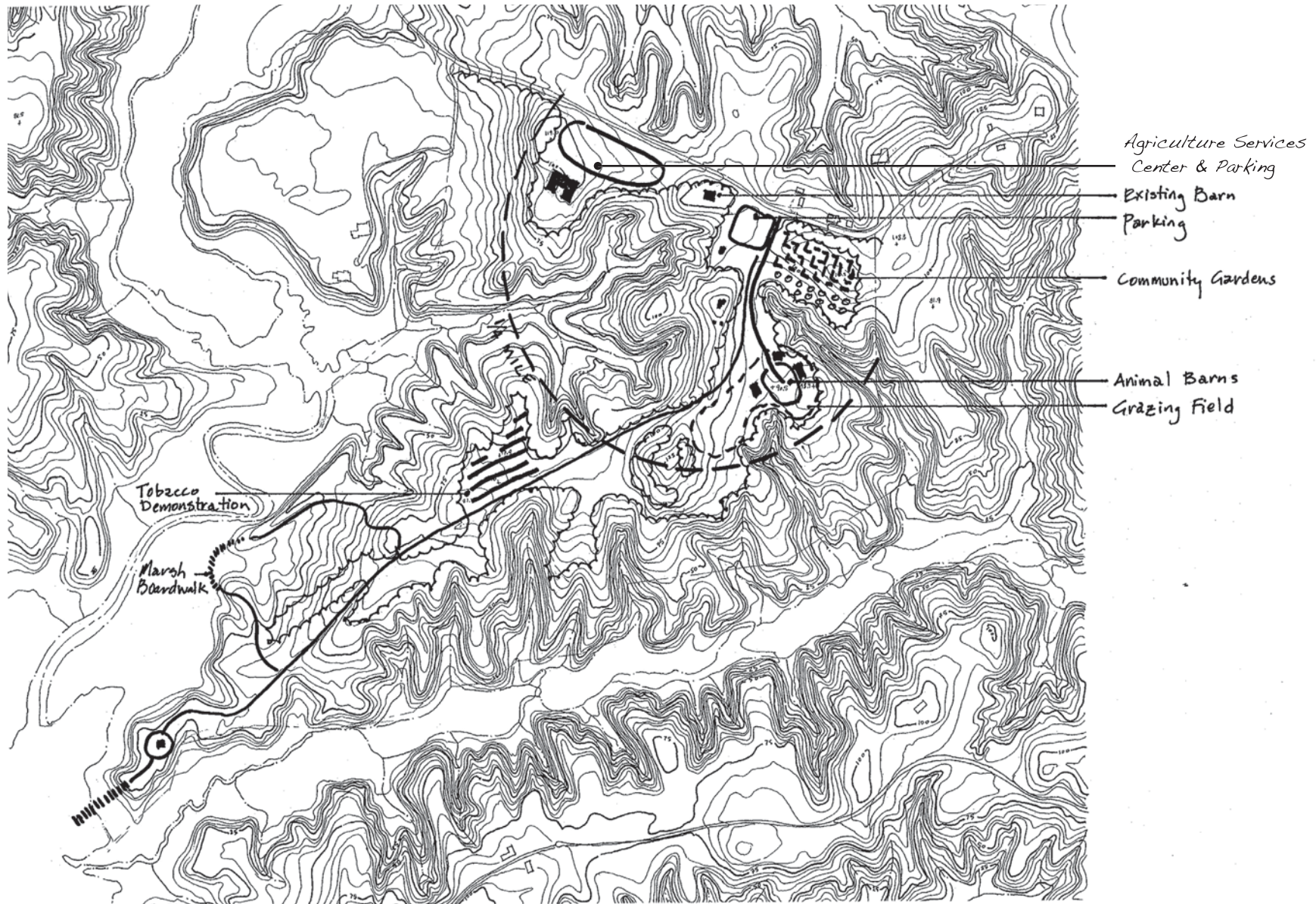


Figure 33. Agriculture Service Center Initial Strategy.

B. PRELIMINARY SCHEMATIC DESIGNS

The Initial Strategies evolved into four Schematic Designs that explored various layouts and relationships that the site might comfortably accommodate:

Scheme A • Rolling Road [Figure 34]

- Rolling Road as central, pedestrian organizing feature with various, period field along its route
- Demonstration Tobacco Field at Entry (west)
- Open field at Entry (east)
- Farmyard /CSA Fields in outdoor room beyond first ravine
- Marsh Boardwalk at unnamed creek
- Kayak/Canoe Pull Out + Floating Classroom at The Point
- Community Gardens and Horse Loading/Unloading on western hayfield

Scheme B • Animal Focused [Figure 35]

- Animal Barn and paddocks and main visitor parking at Entry
- CSA Fields in outdoor room beyond first ravine
- Bus loading/unloading at Farmyard
- Orchard Knoll
- Demonstration Tobacco Field in a mid-site outdoor room
- 19th century Demonstration Field in small outdoor room toward The Point
- Kayak/Canoe Pull Out + Floating Classroom at The Point
- Open Classroom/Camping Pavilion at The Point

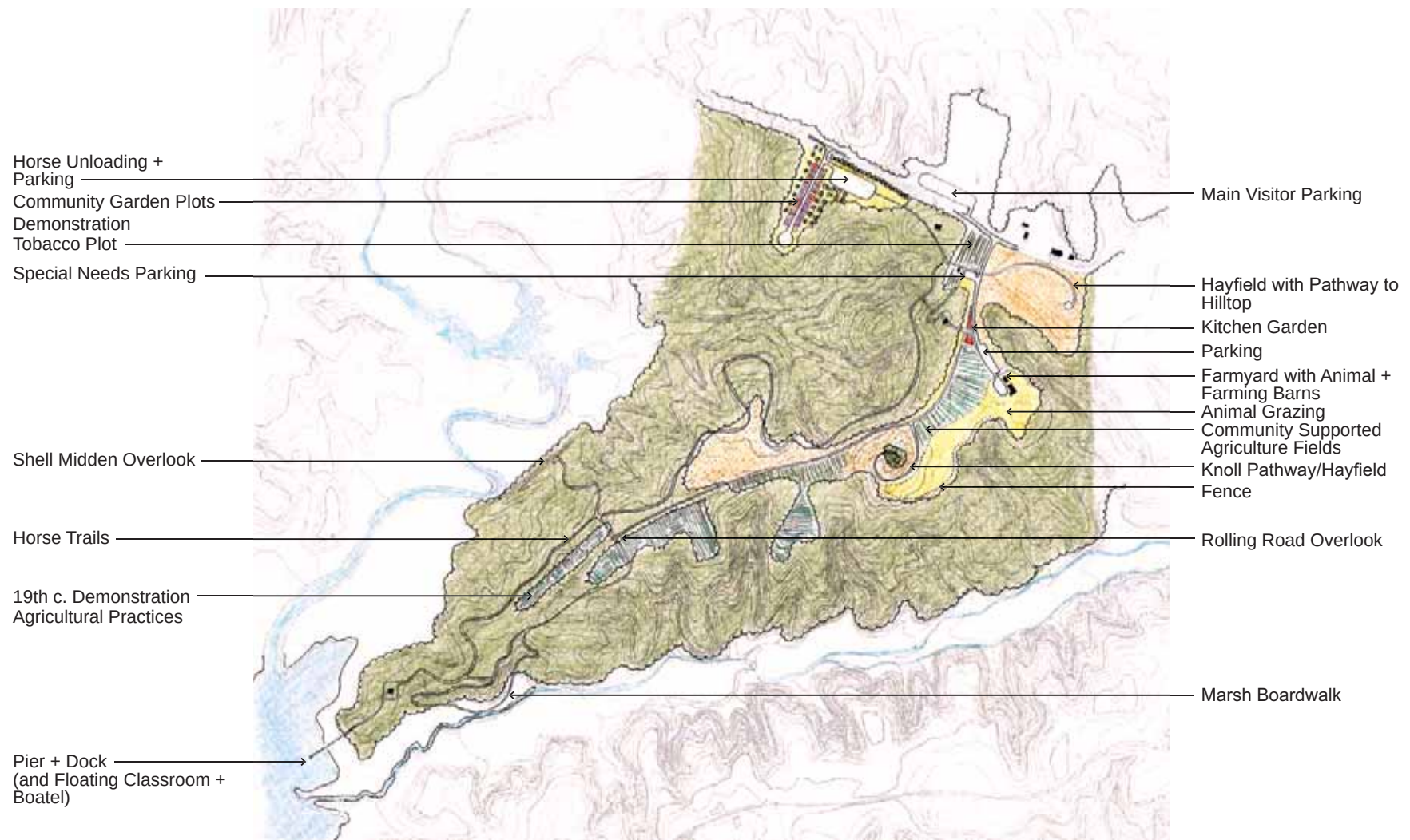
- Community Gardens and Horse Loading/Unloading on western hayfield

Scheme C • Along the Edges [Figure 36]

- Demonstration Tobacco Field at Entry (west)
- Very limited parking at Plumer-Cranford Barn
- Animal Barn located in outdoor room beyond first ravine with grazing fields split between Entry outdoor room and behind Animal Barn
- CSA Fields in outdoor room beyond first ravine
- Orchard Knoll
- Marsh Boardwalk at Battle Creek
- Kayak/Canoe Pull Out + Floating Classroom at The Point
- Bus loading/unloading at Farmyard
- Community Gardens and Horse Loading/Unloading on western hayfield

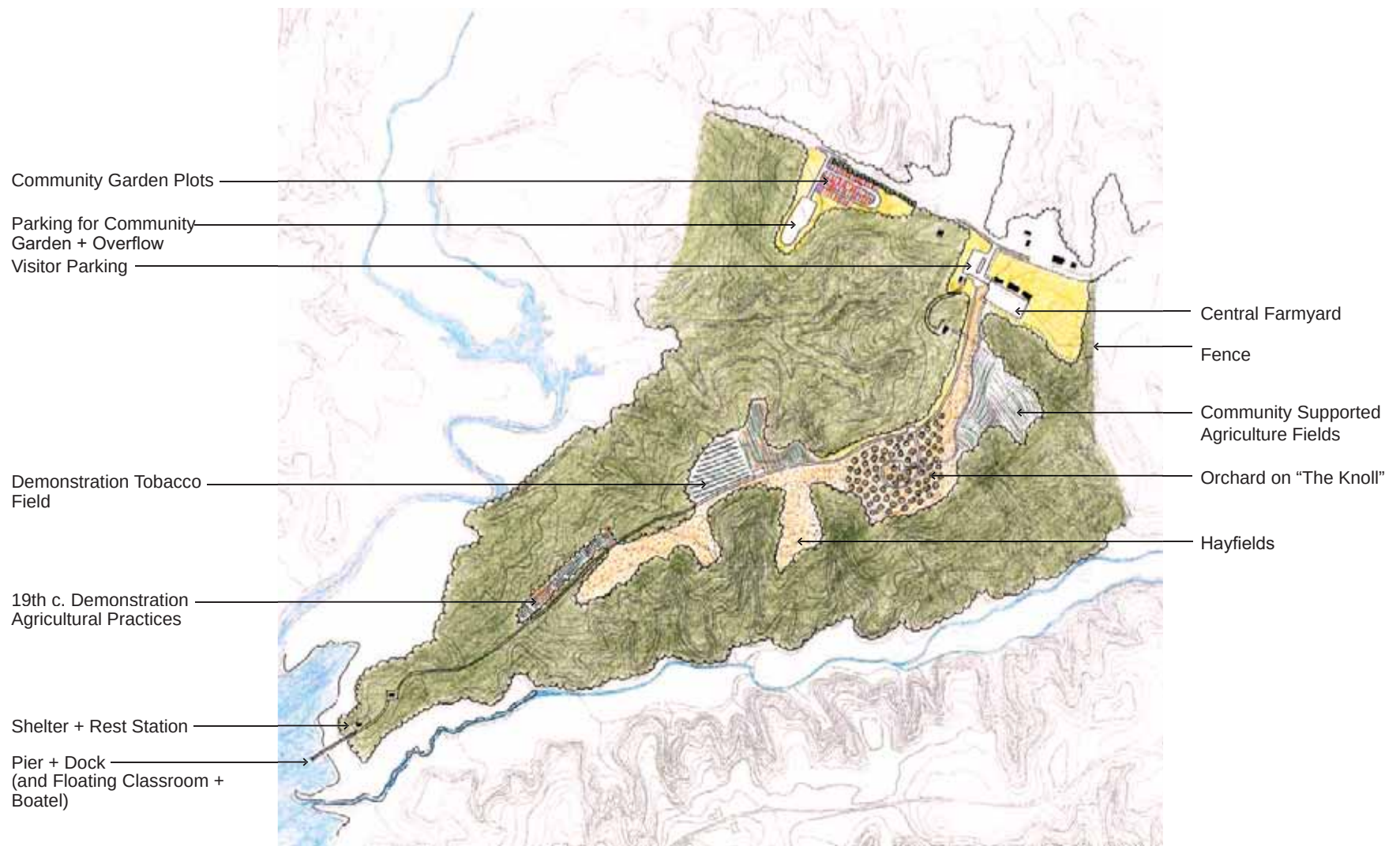
Scheme D • Agriculture Service Center [Figure 37]

- Agriculture Service Center on western hayfield
- Community Gardens at Entry outdoor room
- Primary visitor orientation and parking between Plumer-Cranford Barn and Community Gardens
- Service barn at Community Gardens with Animal Barn, creating split grazing fields
- CSA Fields in outdoor room beyond first ravine
- Demonstration Tobacco Field in a mid-site outdoor room
- 19th century Demonstration Field in small outdoor room toward The Point



Scheme A • Rolling Road

Figure 34. Preliminary Schematic Design, Scheme A • Rolling Road.



Scheme B • Animal Focused

Figure 35. Preliminary Schematic Design, Scheme B • Animal Focused.

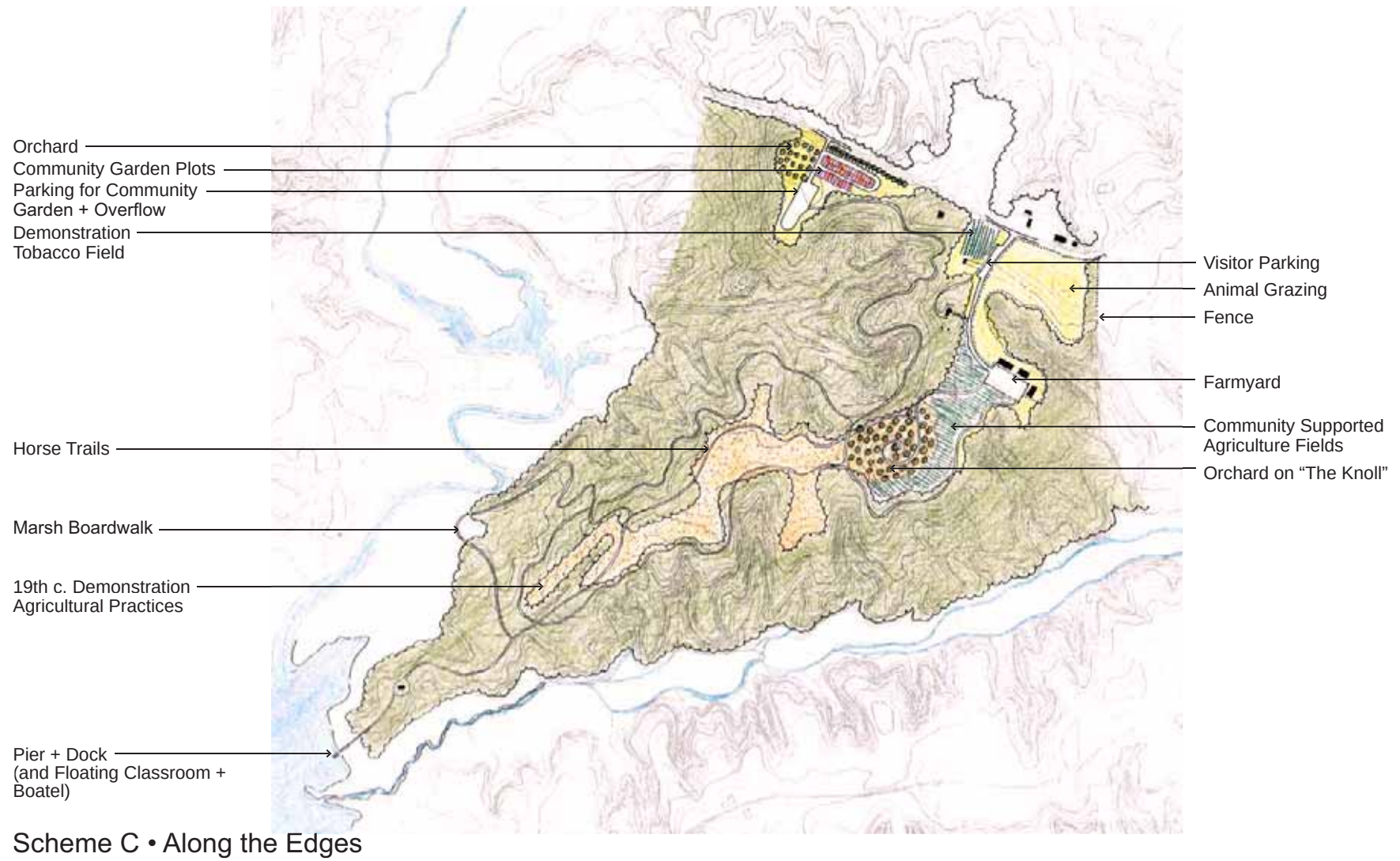
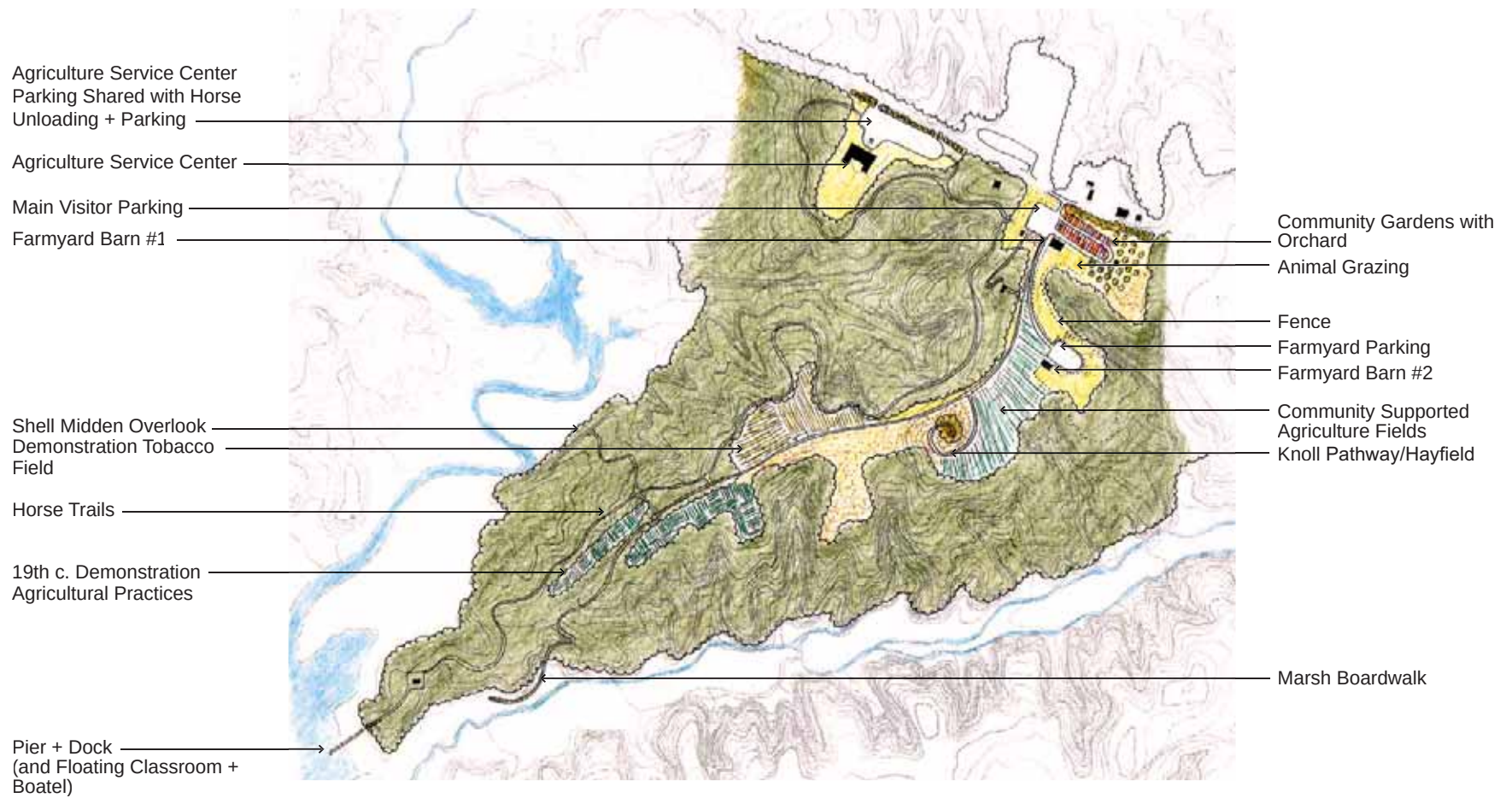


Figure 36. Preliminary Schematic Design, Scheme C • Around the Edges.



Scheme D • Agriculture Service Center

Figure 37. Preliminary Schematic Design, Scheme D • Agriculture Service Center.

C. STAKEHOLDER FEEDBACK

After presentation of the Schematic Designs in two public presentations, stakeholders were provided a copy of the PowerPoint presentation for considered study. At least one representative from each of twelve stakeholder groups offered comments. The stakeholders have consistently participated in the Master Plan process and offered thoughtful, extensive, and thorough comments that have been instrumental in the Master Plan's development.

In addition, long-time Calvert County farmers Franklin G. Wood and George Spence (who also serves on the Agricultural Preservation Advisory Board and is a former Extension Agent) offered their experience and reflections on the Master Plan effort—suggestions that were invaluable in developing the Master Plan Design.

The summary of these responses is included in its entirety in the pages following.

Biscoe Gray Heritage Farm Stakeholders

Comments On Schematic Design Options

Prepared by Kathy Poole, POOLE DESIGN, LLC and Tom Bodor, The Ottery Group

Stakeholder's Meeting

On 11 March and 15 March 2010, Kathy Poole presented four Schematic Design Options for Biscoe Gray Heritage Farm. The following are comments received by various Stakeholders involved in the development of the Biscoe Gray Heritage Farm Master Plan. The comments are presented roughly in the order in which they were stated by the various participants. Participant names are not included.

- Parking for buses, motor coaches
- School groups are very important consideration for use of the property
- No parking in dog park across street—too dangerous crossing street
- More restrooms and rest stops, i.e., benches
- Who might use community garden? Site is not located near town center and may be too remotely located.
- Is Community Supported Agriculture needed?
- Challenges of restoring the historic Rice House for use by Farm Manager
- Farm manager is important/necessary
- Pavilion at the Point – Used primarily by water access due to distance/no road to point from parking
- If Point is to be used by water people for stopover/camping, then some sort of shelter (open pavilion) is needed.
- Primitive camping allowed? Check Rural Legacy Plan for legal restrictions
- Floating Classroom – Who will use it? Tides, weather may affect plan. Low tide can expose mud flat making water access only possible sometimes
- Archaeological sites need to be protected from impacts associated with construction and/or use
- Security/Policing of grounds and CSA necessary
- Operational consideration of CSA – pay or work for shares? More details needed
- CSA Coop arrangements - 4-H, Future Farmers of America
- Deer and other pest management for CSA
- Water and other infrastructure/utilities requirements

- Group should come up with 1 option that best accommodates interests
- How many parking spaces?
- Music or other Public Events? What kinds, how many people?
- Copies of schematics for stakeholders to review

Stakeholders' Written Comments

In response to Stakeholders' requests for a printed copy for their more thorough review and comments, the PowerPoint presentation was also circulated via email. The following comments are a compilation and synthesis of solicited responses from the group of stakeholders who have consistently participated in the development of the project. The twelve sets of comments were thoughtful, extensive, and thorough. Frequency of response on any given element was generally from 1 to 4 people. High frequency items received 5-6 responses, with one element receiving 8 responses (the Agricultural Services Center). The respondents represented the interests of the following groups:

Battle Creek Nature Center

CHESPAX

Calvert County Department of Planning and Zoning

Calvert County Department of General Services

Calvert County Economic Development

Calvert County Natural Resources Division

Calvert County Planning and Zoning

Calvert Soil Conservation District

Jefferson Patterson Park and Museum

University of Maryland Extension, Calvert County, Agricultural and Natural Resources Education

University of Maryland Extension, Calvert County, 4-H Youth Development

Most Salient Issue

Several questioned, on the one hand, whether the concept of 1950s heritage farm was getting lost and, on the other hand, whether the concept had evolved into a different idea of “heritage.” Alongside and in parallel ran the question of the compatibility of the site, on the one hand, as a representation of 1950s farm life and, on the other hand, a facility that could accommodate an active animal education and management facility of any significant scale (as in a facility that accommodated 4H participation). Everyone who commented recognized the value of actively involving children in the care of animals but worried that a consolidated farmyard of animals might strike an impression more akin to a “petting zoo” than a 1950s farm, leaving people with a mistaken impression of Calvert County farming of that era. Rather than situating the project within a particular era, a couple of people articulated a vision of the plan’s agricultural heritage theme and purpose being more aligned with Calvert County farming throughout its entire history—from native American transitory settlement, small scale colonial farming, 19th c. era agriculture, 20th c. tobacco farming to current Community Supported Agricultural efforts. This latter idea was reinforced indirectly and directly with ideas about familiarizing current Calvert County residents (as one respondent noted) “in the art and science of agriculture with a sustainable agriculture emphasis through the use of community gardens and a working commercial farm.”

General Issues (in no particular order)

Scope

The plan is “very ambitious,” making its developmental staging—and its initial staging in particular—critical to ensuring the project’s success.

Program at “The Point”

Several voiced strong concern over the walking distance and, therefore, time that it takes to move from Grays Road to The Point, particularly when children are involved. They noted how any program element at this location would *require* [emphasis intentional] not only restroom facilities but also significantly sized restroom facilities. In addition, they would require a weather shelter sized large enough for a group.

Critical Area

A couple of people noted the difficulty of executing any use or element (whether at the relatively small scale of a horse trail or a much larger one of enclosed classroom) within the Critical Area, urging caution on any program element within its boundary.

Archaeology

One person noted that while the five, known archaeology sites may not have particular programmatic uses associated with them, they still need to be addressed within the Master Plan as important resources that the County maintains strong intentions to conduct further investigations.

Specific Program Issues

Listed in (generally) descending order of response frequency:

Agriculture Service Center

This element had the highest respondent frequency of any issue. Placing the Agriculture Service Center (ASC) on the property received the clearest and strongest negative reaction of any issue raised. It was opposed for a series of reasons: too many regulations to overcome, taking away too much space, economics, believing that the building and its services should be located in the town center; that there was no need for a new “home;” and that building a new building would be antithetical to Calvert County’s efforts to support sustainability and reducing resources. One respondent urged support for locating a new Agriculture Service Center (ASC) on the western

portion of the site. One voiced qualified support, noting that the Soil Conservation District staff should have the opportunity to make its case. The respondent who advocated the ASC inclusion in the plan did not include an explanation for how it would be accomplished but noted that the ASC could provide a funding strategy for implementing the plan, the importance of which was paramount given that, “Without a funding strategy any scheme is nothing but a nice concept.”

Community Gardens

Almost all [who] responded suggested that the community gardens should be downsized and combined with another program element by merging them into the CSA fields’ space or having them managed as demonstration plots by 4-H or Master Gardeners. Counter to the consensus of the public Stakeholder Meeting (and the stated opinion of one respondent) that there would likely not be enough interest to have a full-fledged collection of community garden plots, one respondent noted that the 125 plots of Kinder Park’s community garden (Anne Arundel County) has a 75-person waiting list. According to one respondent, if a block of community gardens (of around 50 plots) is included, then it should be located on the western portion of the site.

Bus Turnaround/Parking

There was strong support for a bus drop-off and turnaround on the main project site, with specific reference to school children and people with special needs. Only one noted that bus drop-off could be in the western portion of the site. As for the location of where buses should park when not loading or unloading, respondents noted Grays Road Dog Park and the western portion of the site as candidates (rather than being on the main portion of the site). A couple of people noted that the bus parking also works well as horse trailer parking. One noted that the parking should be screened by topography, fencing, and/or landscaping as much as possible.

Horse Trails

Most considered the accommodation of horse trails within the project as a positive element. However, most also voiced specific concerns about their potential negative effects that must be accounted for if they are to be included: horses causing erosion on highly erodible soil (which all of the site’s soils are); location within the Critical Area being a potential problem; needing to remain along the periphery of fields and pedestrian areas; and horses defecating in the tributaries leading to Battle Creek, increasing the water pollutant load.

Horse Loading

The clear preference for horse loading and trailer parking was the western portion of the site, as this site allows the function to remain isolated and is also safer and quieter for horses.

Farmyard Location

No one supported the Scheme B location of the farmyard next to Grays Road due to 1) danger for animals who might suffer harm from mischievous troublemakers in cars and 2) potential problems for the homeowners across the road. Others highlighted how locating the animal barns away from the road (as in Schemes A, C, and D) would be safer for the animals. The “split farmyard” configuration of Scheme C was noted as a “teaser” for interesting people immediately upon arrival and encouraging further exploration. One pointed out how locating the farmyard adjacent to the CSA fields was appropriate for both practical reasons and making the connection between sustainable agriculture and raising animals.

Tobacco Demonstration

Of those who commented on its presence, all liked the idea of a small, tobacco demonstration field. Its location between the Plumer-Cranford Barn

and Gray's Road was noted as appropriate with one note that barns do not typically have fields planted immediately adjacent (which reinforces an idea about having an access/entry road separating barn and tobacco field).

Roadside Field

Keeping open for pasture the hillside immediately adjacent to Grays Road was noted repeatedly as a desirable use for this land. Often mentioned in tandem was the idea of having animals grazing (but not residing) in the area as a draw to passerby drivers, piquing their interest to come into the site to explore further.

Shell Midden Overlook

One noted the importance of the shell midden to the story of how people used the marsh as a food source (agriculture) through the ages. Therefore, this important place should have a lookout or have a boardwalk located so that it can be fully appreciated.

Dock/Waterside Element on Battle Creek (near/on navigable water)

The floating classroom/boatel was almost unanimously considered inappropriate. Almost all noted that a fixed platform at the point of (almost) perennially canoeable water would be a better option. One educator noted how a platform such as this would be terrific for teaching because leading a group on a linear boardwalk is challenging because the group is spread so far away from the leader, making it difficult to be heard and to control children's attention.

The most supported location for a canoe/kayak output was "Cat Hole" on Battle Creek where it takes a sharp, as this would be where a boardwalk would require the shortest length to reach deep enough water.

Marsh Boardwalk

A few noted that a marsh boardwalk (distinct from and in addition to a creekside element) would be a valuable teaching tool, as well as an important feature for enjoying the site's beautiful marsh.

Pavilion/Shelter on The Point

Two noted that a pavilion on the creek side of the property would be useful, particularly for school groups who will need a resting place. Possible locations noted were Cat Hole and at the 19th c. House.

Primitive Camping

Some respondents noted that there is a need for primitive camping in the County and that the property can accommodate it. Noted sites were the shell midden area and the Point, both of which will receive a much lower visitation frequency because of the distance from Gray's Road—a very long walk for school children.

Grays Road Dog Park Parking

Regarding using the Grays Road Dog Park as a potential parking area, all considered it too dangerous for children and the general public. However, a few thought that it would be a very good and economical bus parking area.

Restrooms

The subtext of people's comments suggests that all understand the need for restrooms on the site, certainly at the Plumer-Cranford Barn and the farmyard. The only differing of opinion seems to be the numbers and location. Two of the naturalist educators noted that in association with the bus drop-off, there need to be 3 men's and

3 women's toilets (one of which needs to be universally accessible). The only question seems to be if there should be a single toilet located near the 19th c. House or the canoe/kayak put-out.

Reuse of George E. Rice House

Of those who noted the restoration of the Gray House, the opinion that it should be restored to a level of inhabitation was strong. One noted the importance of a house to the heritage farm story. Others noted the need for a resident manager and overseer of the property, particularly once animals are permanently located on the site.

Rolling Road

It was agreed that the rolling road (and it was pointed out that there are two) should be respected and highlighted. Respect includes having a path that runs parallel to it in areas where it is eroded and numerous volunteers trees have rooted.

19th Century House

No one advocated the restoration of the house, but a couple of people noted the need for a more definitive plan for its interpretation and treatment over time (preservation, marking, tracking its decay). In any case, visitor safety and protection from vandalism will remain an issue.

Community Supported Agriculture Fields

There seems a subtext that Community Supported Agriculture (CSA) is an appropriate idea. The questions remain more about who manages the crops and the scale. Some imagine "crops" that are field-sized; others imagine smaller "plots" located near the farmyard.

Orchard

Respondents expressed a general support for an orchard but of a lesser scale than that shown on the schemes.

Kitchen Garden

A couple of people noted that the kitchen garden associated with the George E. Rice house was nice. One noted that a few orchard trees associated with it (versus a full-fledged orchard) would be appropriate.

Indoor Education Space

One person noted the value of a large, simple room for indoor education during inclement weather (including electrical power).

Deer Fence

One respondent noted that any garden or food plot would need a 6 to 8 foot fence around it and that the concept drawings need to include this to enable stakeholders to view "what the final product would really look like."

Deceleration Lane

One person noted that due to the road vertical and horizontal curves, a deceleration lane in the southern lane at the site entry might be needed.