

# LSU Hilltop Arboretum Master Plan

August 2017

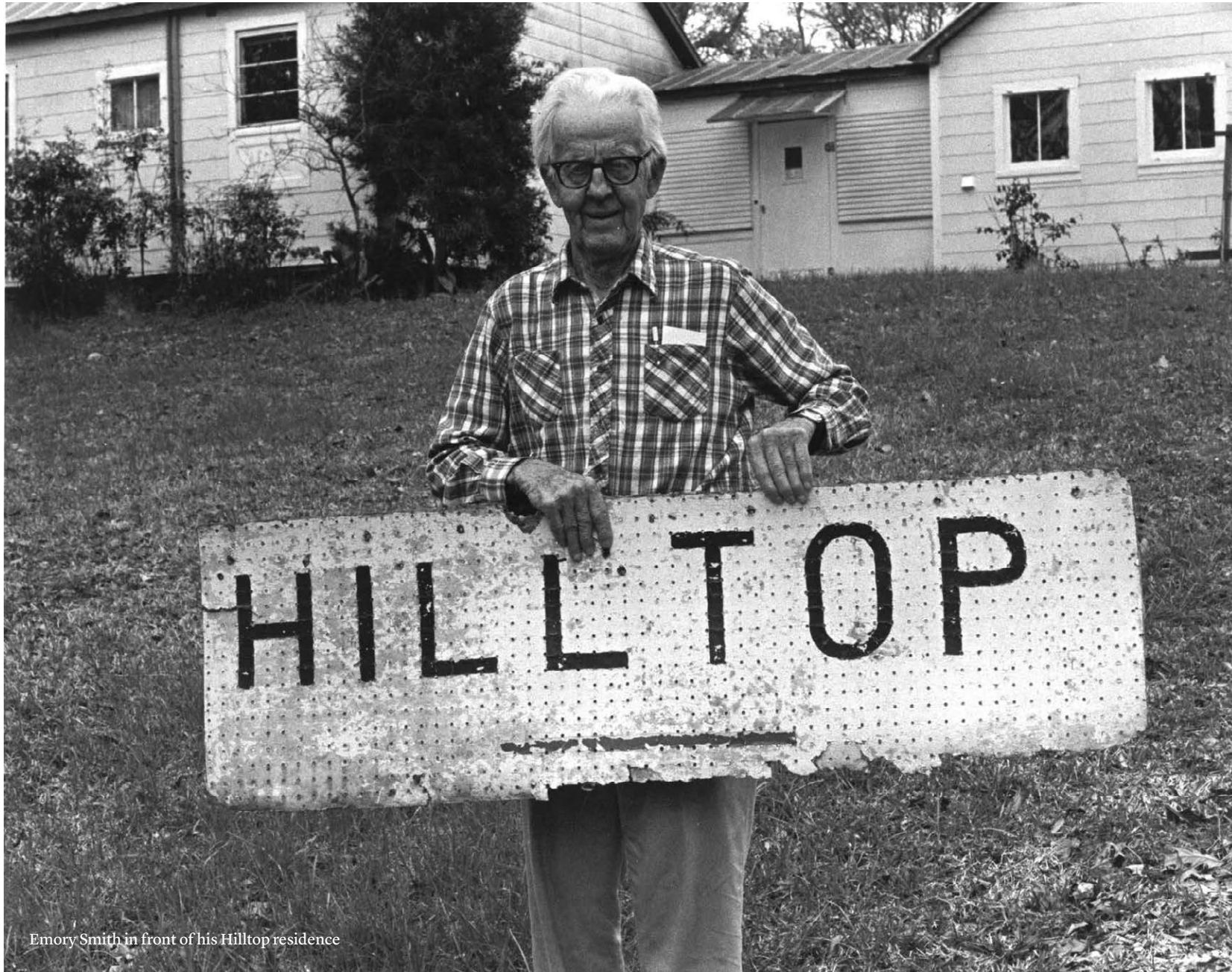
REED-HILDERBRAND

## HISTORY AND OVERVIEW

Hilltop Arboretum was entrusted to Louisiana State University in 1981 as a gift from its former resident and creator, Emory Smith. Emory and his wife Annette lived a humble lifestyle at the Highland Road property for over 50 years. The land functioned as a working vegetable and livestock farm, however there is more to the story. Emory had a deep love for the plants of Louisiana and spent countless hours collecting native specimens along the Gulf Coast to grow and display on his property. He opened the farm to the public - including classes of students in landscape architecture - and provided walking trails throughout the planted ravines so as to share the enjoyment of his extensive collection. Today, under the careful guidance of the LSU Robert Reich School of Landscape Architecture and the Friends of Hilltop Arboretum, Hilltop continues to carry on Emory's legacy.



Hilltop site circa 1941



Emory Smith in front of his Hilltop residence

## MISSION

The mission of the LSU Hilltop Arboretum is to provide a sanctuary where students and visitors can learn about natural systems, plants, and landscape design.

## SHARED VISION

The LSU Hilltop Arboretum will be a nationally-recognized center for the study of plants and landscape design. Hilltop will build upon donor Emory Smith's love for native Louisiana plants and sanctuary. Stewardship of Hilltop is shared by the LSU Robert Reich School of Landscape Architecture and the Friends of Hilltop. Hilltop is an integral part of the School which uses the arboretum in its research, teaching, and service activities. Friends of Hilltop will provide education programs to engage the broader community, operational support, and fundraising activities.

## MASTER PLAN CONCEPT

The Master Plan is guided by the founding principle of providing a haven for outdoor learning and observation. As Hilltop gains recognition as a culturally significant institution, the plan renews the site's original horticultural offerings and accommodates expanding programs for its visitors. The Master Plan supports current operations and anticipates future needs of its staff, volunteers, and most importantly its visitors by providing new areas of interest that more completely express the unique hydrology and landform of the fourteen-acre site. In doing so, a great variety of experiences are to be encountered along the proposed accessible walkways: sunny to shaded, open to wooded, organic to geometric, upland to lowland, and indigenous to cultivated. The proposed paths and meadows, which are structured along recovered drainage ditches of the former farm fields, evoke the agrarian heritage of the site. The Master Plan aspires to not only celebrate Emory Smith's commitment to education and LSU, but to also service contemporary needs of the greater Baton Rouge area and beyond.



Bird's eye view of proposed site plan

# ILLUSTRATIVE MASTER PLAN

- ① CATHEDRAL
- ② BRIDGE / RAVINE TRAIL RESTORATION
- ③ EMORY SMITH INTERPRETIVE PAVILION
- ④ EMORY SMITH GLADE
- ⑤ HIGHLAND ROAD WOODLAND
- ⑥ RAVINES AND TRAIL NETWORK
- ⑦ BRIDGE EXTENSION
- ⑧ POND OVERFLOW STRUCTURE
- ⑨ BOARDWALK
- ⑩ ENTRY DRIVE IMPROVEMENTS
- ⑪ PARKING
- ⑫ VISITOR CENTER
- ⑬ EVENT COURTYARD
- ⑭ CYPRESS GROVE
- ⑮ MEADOWS
- ⑯ VEGETATED SWALES
- ⑰ SPINE PATH
- ⑱ HORTICULTURE COURT
- ⑲ GREENHOUSE
- ⑳ MAINTENANCE BARN / OFFICES / RESTROOMS
- ㉑ WOODLAND TRAIL
- ㉒ AMPHITHEATER
- ㉓ MEADOW TRAILS



Note: Red numbers indicate proposed projects / Black indicates completed projects

# EXISTING AND PROPOSED PLANS

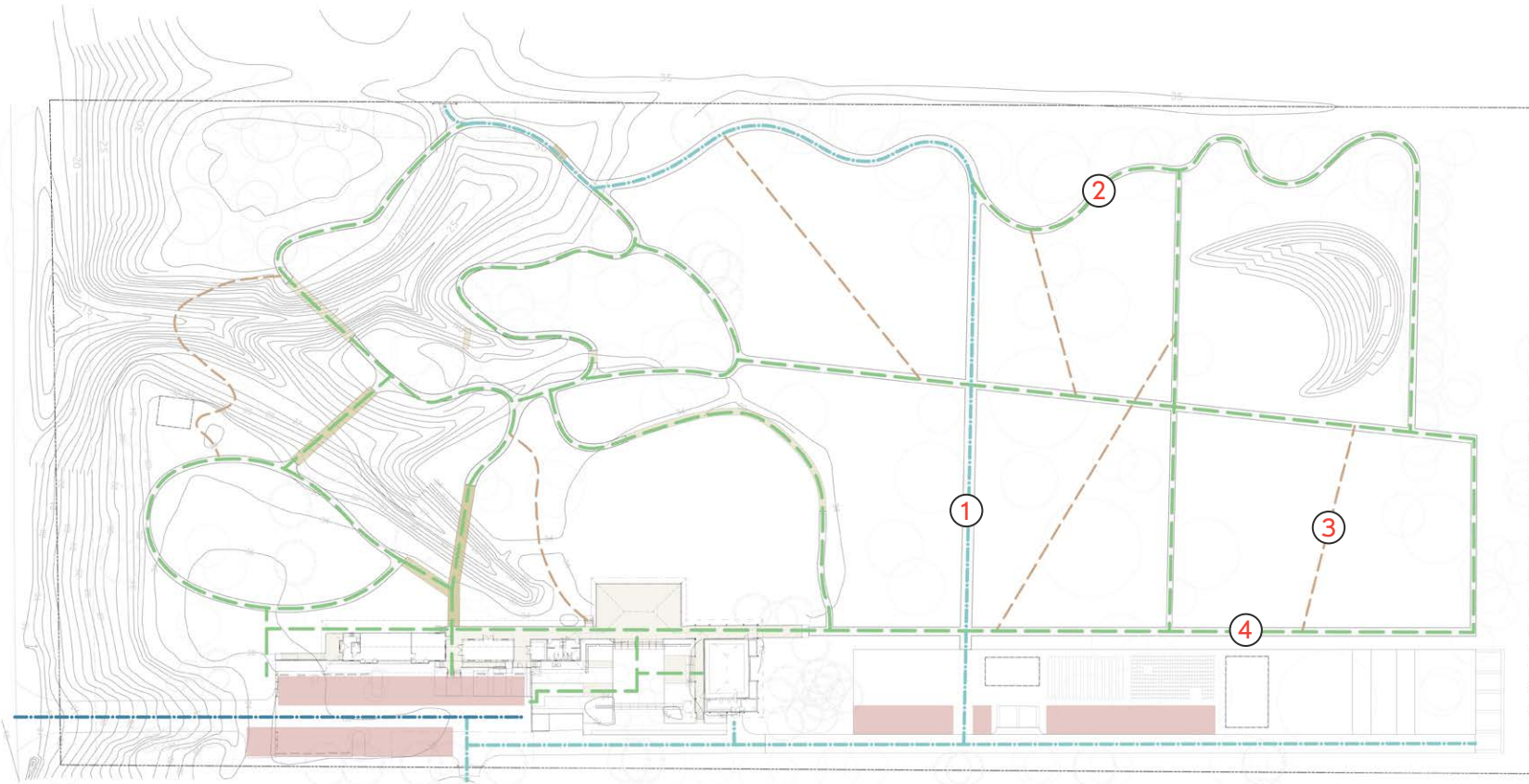


EXISTING SITE PLAN (2017)

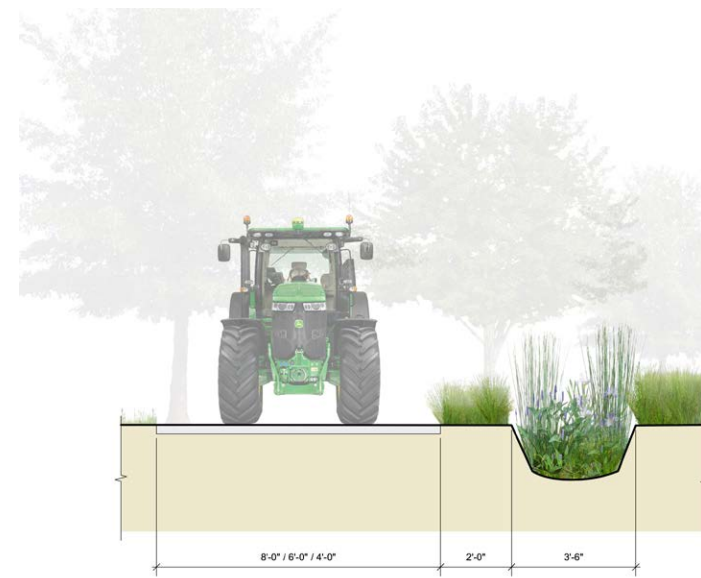


PROPOSED MASTER PLAN

# CIRCULATION / PATH NETWORK



- ACCESSIBLE TRAIL
- SECONDARY TRAIL
- VEHICULAR: VISITOR
- VEHICULAR: SPECIAL EVENTS
- PARKING



① SERVICE / CROSS PATH



② WOODLAND PATH



③ LAWN PATH THROUGH MEADOWS



④ SPINE PATH (ALONG HORTICULTURE COURT)

VEGETATION



LAWNS AND MEADOWS



UNDERSTORY



CANOPY



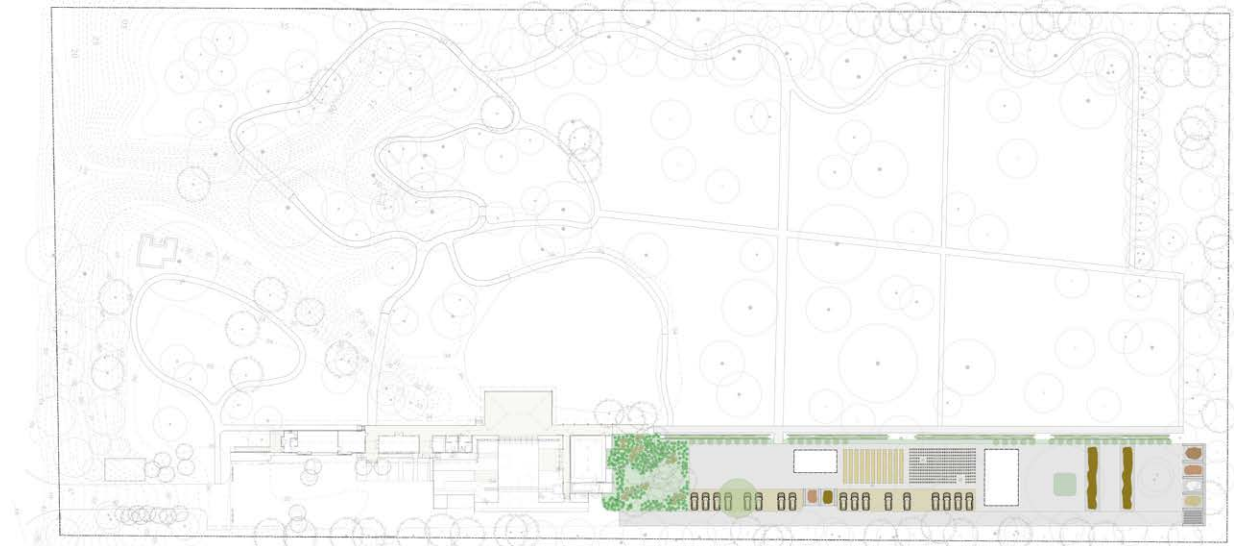
HYDRIC



PRIORITY PROJECTS



ARBORETUM ENTRY AND EMORY SMITH INTERPRETIVE PAVILION



HORTICULTURE COURT



UPLAND MEADOWS



PERIMETER PLANTINGS

## ARBORETUM ENTRY

LSU's Hilltop Arboretum embodies the rural character of Highland Road's terrace/floodplain landscape, defined by vestiges of farms, woods, a mature live oak canopy, and the natural bluff that the road conforms to. These distinct features are part of what attracted Emory Smith and his wife Annette to Hilltop in 1929. The Master Plan proposes to establish this character along the public face of the arboretum, as the identity of Hilltop.

Along the length of Highland Road the plan removes lawn and introduces native plantings of oak, palmetto, and viburnum, screening the road from the interior of the property. The existing entry driveway is narrowed and new live oaks populate its sides to shade the approach into the arboretum. To the west of the administration building, the plan establishes a glade, which currently houses Hodge Podge, as a prominent destination, defined by a grove of persimmon and other fruit trees. A path circumnavigates the glade and leads to the proposed Emory Smith Interpretive Pavilion and to a bridge over the ravine that connects this currently isolated fragment of land to the rest of the Arboretum.



View of proposed entry from Highland Road

## ARBORETUM ENTRY

- ① IMPROVEMENTS TO EXISTING DRIVE / REDUCTION IN WIDTH
- ② NATIVE TREE AND SHRUB PLANTINGS ALONG HIGHLAND ROAD BLUFF
- ③ LAWN GLADE INCLUDING PERSIMMON GROVE AND UPLAND PLANTINGS
- ④ ACCESSIBLE PATHS (500 LF)
- ⑤ WOOD WALK CONNECTING GLADE AND ADMINISTRATION BUILDING (40 LF)
- ⑥ WOOD BRIDGE OVER RAVINE (75 LF)
- ⑦ EMORY SMITH INTERPRETIVE PAVILION



20 HILLTOP ARBORETUM



## EMORY SMITH INTERPRETIVE PAVILION

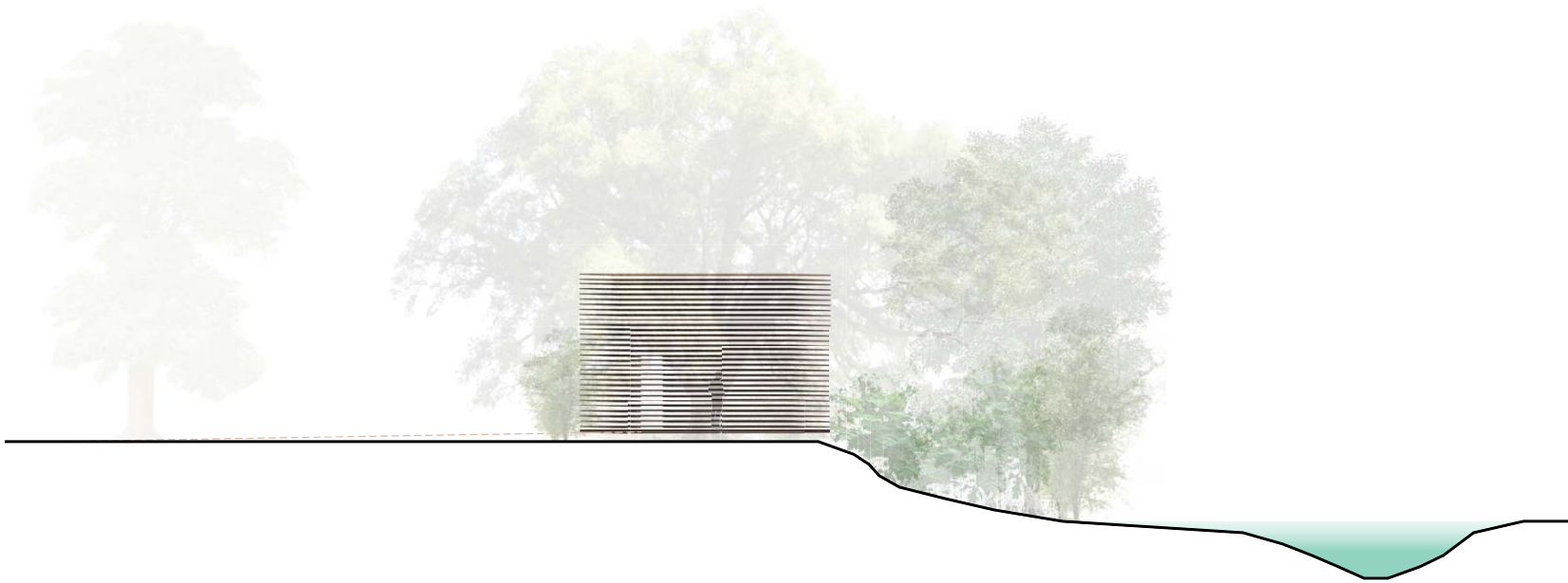
Emory Smith was known for his profound love and reverence for nature. He built his house at the Arboretum in such a way that characterized his relationship with nature. His house was of petite scale, with a delicate footprint on the land. He placed a window in every room to connect to the woods, a personal sanctuary throughout his life.

The Emory Smith Interpretive Pavilion, in celebration of his legacy, centers on the key element in his home – the window. The design interprets what his house meant to him in an abstract way, an aperture and constant connection between manmade enclosed dwelling and the natural world. His house was simply a pervious container to hold him and his family while they shared inhabitation amongst the living things in the arboretum. The open-air pavilion will be made of seemingly floating horizontal plates that provide just enough enclosure of space while framing and filtering the views out to the landscape, as the window did in Emory's house. Replacing the existing dilapidated house, the pavilion's ephemeral presence in the landscape speaks to the way Emory saw himself, as a momentary observer and custodian of the small part of nature that lived on his property, a role that he has imparted the LSU Hilltop Arboretum and those who wish to visit.



View of proposed Emory Smith Interpretive Pavilion under existing live oak canopy

## EMORY SMITH INTERPRETIVE PAVILION



The proposed pavilion siting will engage the edge of the existing ravines

### PRINCIPLES OF THE DESIGN

- Preserve the intimate, domestic scale of the original house
- Provide views out to the landscape on all sides
- Maintain desired orientation towards the Cathedral
- Utilize adjacent landscape features (Live Oak canopy as 'roof')
- Exploit the dramatic change in elevation down to the ravine



Concept image from inside the Interpretive Pavilion

## UPLAND MEADOWS

With Emory Smith's aspirations in mind, as well as the need to expand horticultural offerings and educational programs, the Master Plan seizes the opportunity of the currently underutilized three-and-a-half acre field at the rear of the property to significantly augment the Arboretum.

Meadow defines the predominant character of this area, incorporating four regional landscape typologies of southern Louisiana that may consist of a native grass meadow, wildflower meadow, wet meadow (or bog), and pasture. The design locates an earthen amphitheater in the northeast corner of the meadow to be used as outdoor classroom and performance space, as well as informal gathering. Shaped by relocating soils from the existing mound near the pond, this sculptural component draws visitors out into the meadows to discover a variety of plant communities. Areas around the amphitheater and pond will be maintained as lawn.

To drain this flat expanse of land, the design structures a rectangular pattern of linear ditches that recall the field ditches that existed on the site at the time of Smith's acquisition of the property. These features, with their hydric soils, support a community of wet-loving plants such as the swamp lily, iris, and numerous species of sedges. Accessible paths shaded by canopy trees engage the drainage ditches and lead visitors through the various meadows to the edges of the site. They also provide access for equipment and vehicles required to maintain and manage the landscape.



View of proposed amphitheater and meadows

## UPLAND MEADOWS

- ① QUARTER MILE OF ACCESSIBLE PATHS
- ② CANOPY TREES ALONG PATHS
- ③ VEGETATED DRAINAGE DITCHES
- ④ AMPHITHEATER
- ⑤ WET MEADOW
- ⑥ GRASSLAND MEADOW
- ⑦ WILDFLOWER MEADOW
- ⑧ PASTURE



Vegetated swale at Shangri La Botanical Gardens, Orange, TX



Mown lawn paths through meadow at private residence, East Hampton, NY



## HORTICULTURE COURT

LSU's Hilltop Arboretum is a cultural and educational institution with continually growing programs that require expanded facilities to accommodate the needs of its diverse user groups. Programs for these groups include classes for university level students, children, and adults, camp and scout troop events, interpretive information for visitors, performance and wedding venues, and plant propagation and growing areas for Hodge Podge volunteers who generously devote their time to growing native plants for Hilltop's annual plant sales.

The Horticulture Court, located along the eastern boundary of the property and north of the Beverly Brown Coates Auditorium, is designed to efficiently accommodate numerous functions that support the operations of the Arboretum. While preserving the Doc Robert Reich Cypress Grove, the proposed arrangement locates a commercial-sized greenhouse and working barn in the court to further assist Hodge Podge volunteers in their horticultural work and maintenance staff in caring for the property. The design also showcases Hilltop's sustainability efforts by incorporating composting and soil storage facilities at the northern edge of the court, a location that is ideal for both management and educational purposes. The court provides more than 20 additional parking spaces when overflow parking is required.

The barn integrates an apartment for one to two scholars, a collaborative program with Louisiana State University that supports the rich tradition of cross-curriculum studies and furthers Hilltop's commitment to educating the public about the ecological systems of the region.

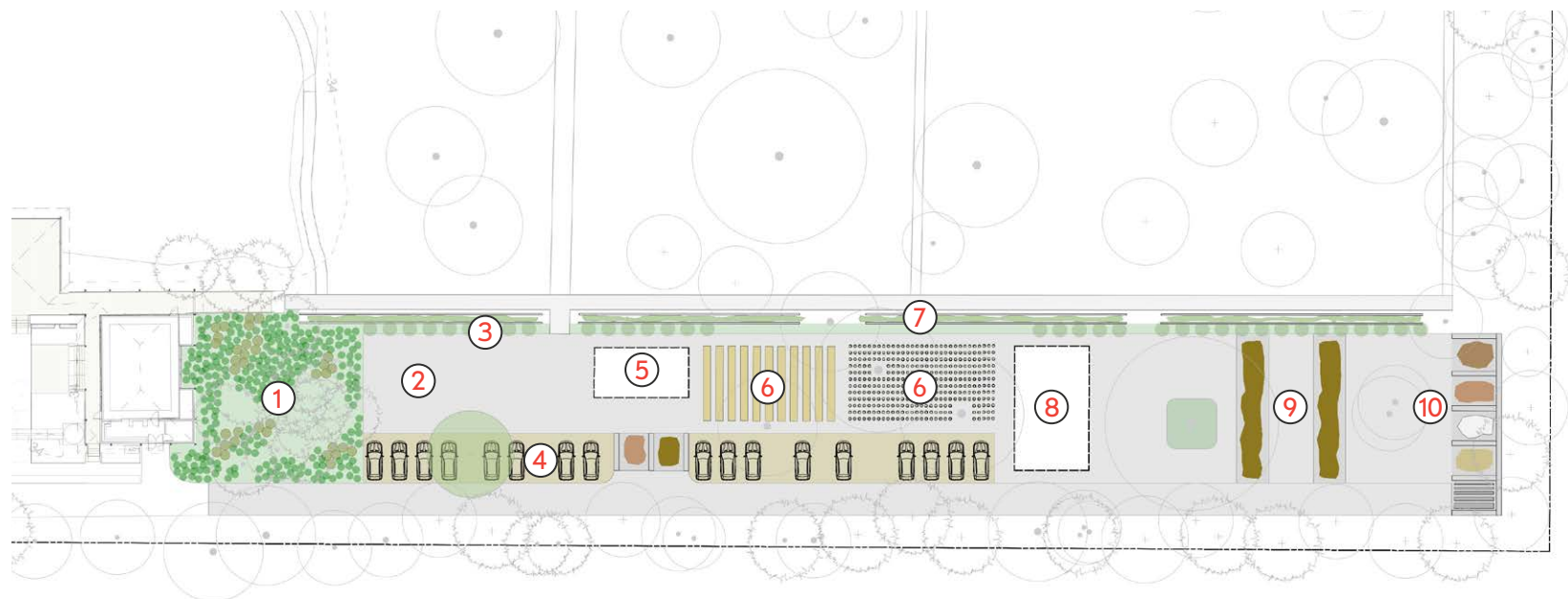


View into proposed horticulture court with barn and greenhouse



## HORTICULTURE COURT

- ① PROTECTION AND EXPANSION OF DOC ROBERT REICH CYPRESS GROVE
- ② POROUS PAVING (30,000 SF) INCLUDING FLEXIBLE USE SPACE FOR SPECIAL EVENTS
- ③ MAGNOLIA HEDGE (300 LF)
- ④ ADDITIONAL / OVERFLOW PARKING (22 SPACES)
- ⑤ COMMERCIAL GREENHOUSE (20' X 40')
- ⑥ NURSERY AND POTTING SPACE / PLANT STORAGE (6,000 SF)
- ⑦ DRAINAGE CHANNEL (400 LF)
- ⑧ MAINTENANCE BARN (30' X 50') INCLUDING ONE TO TWO UNIT APARTMENT, VOLUNTEER OFFICES, AND RESTROOMS
- ⑨ COMPOSTING FACILITY
- ⑩ SOIL STORAGE UNITS (7)



Commercial greenhouse



Composting windrows



Volunteers spread compost at Houston Arboretum and Nature Center

## PERIMETER PLANTINGS

Houses consistently surround three sides of Hilltop's 14-acre landholding with private domestic yards facing the arboretum. In order to screen these areas from the visitor's view, the Master Plan proposes planting hedgerows of different character along the west, north, and east stretches of the property. These diverse plantings also serve to define the landscape spaces within the arboretum, expand upon the existing native plant collections, and contribute to the site's rural character.

Hilltop has never fully enclosed its 14-acre property with fencing. Today the boundaries are marked in some places as the result of neighbors erecting fences to enclose their individual properties. The Master Plan proposes the installation of a pervasive perimeter fence to secure the property.



Example of screen planting at rear (north) perimeter

## PERIMETER PLANTINGS

### ① WEST HEDGEROW

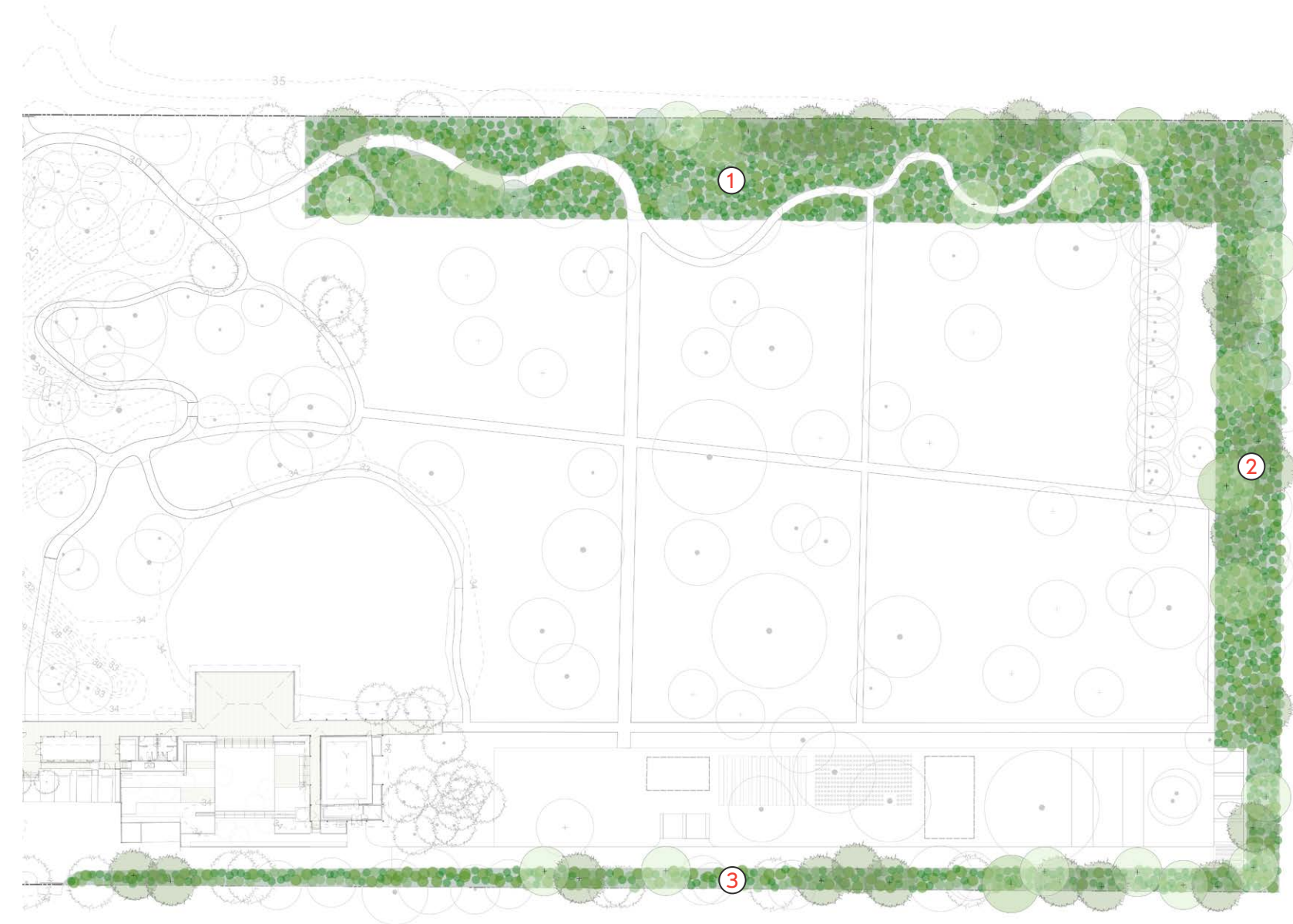
The design augments the existing mature canopy trees and irregular ground with new trees like catalpa and a dense planting of mixed evergreen and deciduous shrubs including star anise, wax myrtle, and red bay. This hedgerow is wide in dimension – some sixty feet – with a long path meandering through the plantings and around low pockets of wet-loving perennials.

### ② NORTH HEDGEROW

The Arboretum's north edge is the most open in character, allowing views of single-family homes. The design proposes a forty-foot wide mass planting of mixed evergreen trees and shrubs including southern magnolia, bay magnolia, spruce pine, wax myrtle and star anise. One of the meadow paths runs along the length of this hedgerow offering views south across the full expanse of meadows.

### ③ EAST HEDGEROW

The east edge of the property is narrow with some existing trees and shrubs extending between the boundary and the proposed Horticulture Court. The design introduces more upright growing species of pine, holly, and evergreen magnolia to screen views of the neighbors.





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