

U.S. National Arboretum Core Framework Master Plan

3501 New York Avenue, NE, Washington DC

Approval of Comments on Concept Master Plan

United States Department of Agriculture

Project Summary

Commission Meeting Date: April 1, 2021

NCPC Review Authority: 40 U.S.C. § 8722(a) and (b)(1)

Applicant Request: Approval of Comments on Concept Master Plan

Session: Open

NCPC Review Officer: Lee Webb

NCPC File Number: MP57

Project Summary:

The U.S. National Arboretum of the Department of Agriculture has submitted a Core Framework Master Plan concept plan for the Commission's comment. The Commission reviewed the most recent National Arboretum Master Plan in 2000, followed by a master plan modification in 2007 to reflect development of a Chinese Garden complex; an Anacostia waterfront access path; and decorative security entrances to the Arboretum from the Anacostia River. The Commission reviewed a concept for new perimeter fencing and gates in May 2019 but have not reviewed preliminary or final applications for the project. The arboretum has been operating under a strategic plan from 2013-2017 that identified the core values as discovery, connections, sustainability, service, and access. The strategic plan goals included:

- 1. Ensure the National Relevance of US National Arboretum Research to the Agricultural Research Service, other Scientific Institutions, Stakeholders and the Public*
- 2. Increase the Public & Stakeholder's Awareness of and Engagement with the U.S. National Arboretum and its Programs.*
- 3. Enhance the Visitor's Experience of the U.S. National Arboretum*
- 4. Ensure the Long-term Sustainability for the U.S. National Arboretum*

Project Summary

The updated Master Plan vision statement is : *The United States National Arboretum will reposition and redevelop its Core landscape to give greater expression to its mission — **connecting people to plants in one of the Capital’s greatest open space** — according to a vision that capitalizes on the cultural and ecological heritage of its 446-acre property, and sets forth practical and attainable.*

The 2020 Master Plan Update includes the following recommendations:

Identify:

1. USNA should express its identity through a combination of its scientific mission and the unique ecological and cultural heritage of its landscape.

Arrival, Circulation, and Parking:

2. Construct a distinct new main entrance at Bladensburg Road, and close to the public vehicular access at the other entrances. The new entrance drive shall provide an overview of the varied natural systems of the site, show clear views of destinations within the arboretum, and terminate with a sense of arrival at the Administration Building and USNA Campus.
3. Simplify the site-wide vehicular circulation to create a series of hierarchical one-way loops for visitors to tour the grounds. Repurpose excess drives into pedestrian paths with limited service access.
4. Extend a network of pedestrian circulation across the site to connect the Core and the eastern collections and to provide access to the riparian areas. Establish a clear hierarchy within the pedestrian circulation across the site.
5. Reduce the Arboretum’s impervious footprint by renovating the New York Ave and M Street Gate lots into stabilized meadow parking.
6. Construct small satellite parking areas and parallel parking along the loop drives to handle the varying demands of Arboretum attendance and at the appropriate locations within the site.

Project Summary

Horticultural Operations:

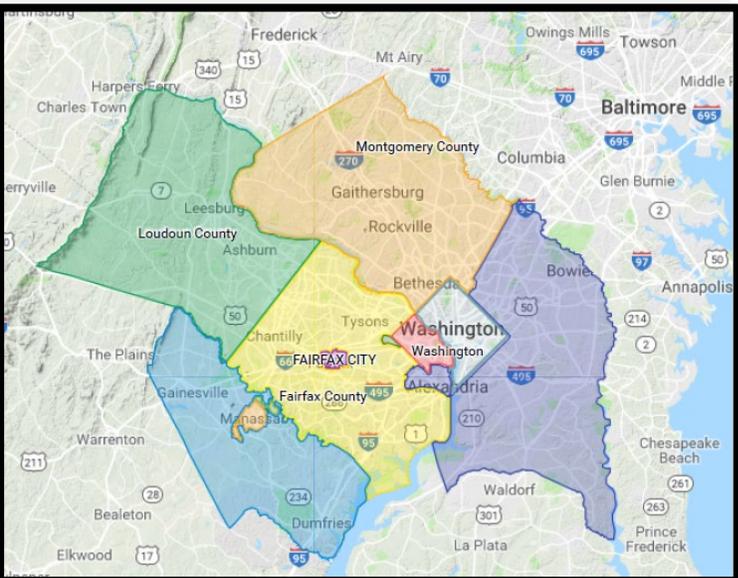
7. Augment the sense of expansiveness within the Arboretum; New plantings should reflect this vastness and keep in scale with the larger natural systems of the site.
8. Renovate the greenhouse complex to extend public education opportunities.

Core Framework:

9. Reinforce the campus at the Core using the modernist language of the existing administration building and extending it to the adjacent greenhouses. The campus shall serve as the gateway to the larger site and the interface between the visitor and the Arboretum's scientific research.
10. Centralize and relocate the office of Friends of the National Arboretum within the Core Campus, and utilize their fundraising capacity for visitor services such as docents and programming.
11. Extend the campus order to the south to create a promenade, flanked by perennial displays, that provides a flexible space for events and service access to the adjacent collections.
12. Construct an event pavilion on the east side of the new promenade to serve as an on-site source of revenue.

U.S. Commission of Fine Arts reviewed and approved the Master Plan Concept at its July 16, 2020 meeting.

Location within the Capital

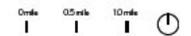


PROJECT STATEMENT: LOCATION WITHIN THE CAPITAL



LOCATION OF UNITED STATES NATIONAL ARBORETUM IN WASHINGTON, D.C.
(IMAGE FROM GOOGLE MAPS)

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U.S. National Arboretum Master Plan Update and Framework

PRESENTATION TO THE US COMMISSION OF FINE ARTS

United States National Arboretum Master Plan Update & Core Framework

June 12, 2020 - DRAFT STAFF REVIEW



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Project Statement



Project Statement: Vision

PROJECT STATEMENT: VISION

The United States National Arboretum will reposition and redevelop its Core landscape to give greater expression to its mission — connecting people to plants in one of the Capital's greatest open space — according to a vision that capitalizes on the cultural and ecological heritage of its 446-acre property, and sets forth practical and attainable

Project Statement: Plan 3 (2013-2017)

PROJECT STATEMENT: STRATEGIC PLAN 3 (2013-2017)

MISSION STATEMENT:

The U.S. National Arboretum enhances the economic, environmental, and aesthetic value of ornamental and landscape plants through long-term, multi-disciplinary research, conservation of genetic resources, and interpretive gardens and exhibits.

VISION STATEMENT:

The U.S. National Arboretum, a premier scientific institution, inspires discovery, understanding, conservation, and the love of plants. Connecting people with plants in a serene urban oasis with unique collections, gardens, and natural settings, the U.S. National Arboretum, through its programs and exhibits, demonstrates the practical application of plant science and man's dependence on plants.

CORE VALUES:

Discovery

Connections

Sustainability

Service

Access

GOALS:

- 1. Ensure the National Relevance of US National Arboretum Research to the Agricultural Research Service, other Scientific Institutions, Stakeholders and the Public.*
- 2. Increase the Public & Stakeholder's Awareness of and Engagement with the U.S. National Arboretum and its Programs.*
- 3. Enhance the Visitor's Experience of the U.S. National Arboretum*
- 4. Ensure the Long-term Sustainability for the U.S. National Arboretum*

Project Statement: Mandate

PROJECT STATEMENT: MANDATE



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Previously Approved Master Plan, 2007

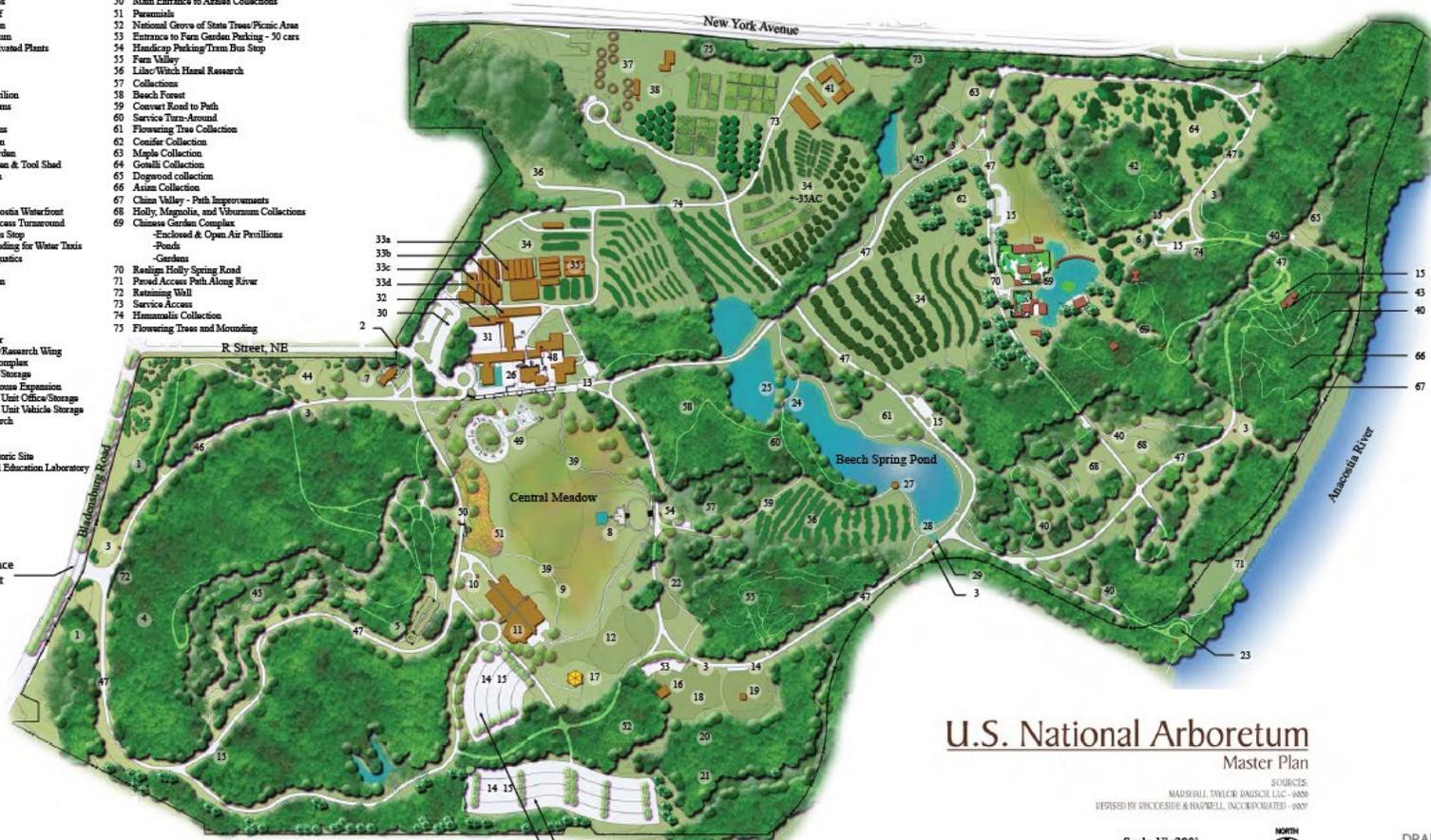


2007 Illustrative Plan

PREVIOUSLY APPROVED MASTER PLAN, 2007 : ILLUSTRATIVE PLAN

- 1 Flowering Tree Bank
- 2 Staff Gate
- 3 Tram Bus Stop
- 4 Mount Hamilton Overlook
- 5 Morrison Azalea Garden
- 6 Whitcomb Collection
- 7 Friendship Garden & Arbor House
- 8 Capital Columns
- 9 Hi Ha Wall
- 10 Main Tram Stop
- 11 Visitor Center
- 12 Origin of Cultivated Plants
- 13 Gate
- 14 Bus Parking
- 15 Parking
- 16 Children's Pavilion
- 17 Events Pavilion
- 18 Adventure Garden
- 19 Growing Garden & Tool Shed
- 20 Family Garden
- 21 Nursery Area
- 22 Bird Garden
- 23 Potential Anacostia Waterfront
- 24 Boardwalk Aquatics
- 25 Ripple Falls
- 26 Aquatic Garden
- 27 Gazebo
- 28 Waterfall
- 29 Ford
- 30 Staff Parking
- 31 Court of Honor
- 32 Administration/Research Wing
- 33 Greenhouse Complex
- 34 Nursery/Research
- 35 Polyhouses
- 36 Compost
- 37 Backyard Historic Site
- 38 Environmental Education Laboratory
- 39 Flowering Tree Walk
- 40 Outer Loop/Asia Trail Improvements
- 41 Maintenance Expansion
- 42 Overlook
- 43 Interpretive Node/Visitor's Center East
- 44 Botwood Collection
- 45 Azalea Collections
- 46 Service/Tram/Bus Staff Access
- 47 Tram Bus/Vehicular Access
- 48 National Bonsai & Penjing Museum
- 49 National Herb Garden
- 50 Main Entrance to Azalea Collections
- 51 Paeonials
- 52 National Grove of State Trees/Prairie Area
- 53 Entrance to Fern Garden Parking - 50 cars
- 54 Handicap Parking/Tram Bus Stop
- 55 Fern Valley
- 56 Lino/Winch Hand Research
- 57 Collections
- 58 Beach Forest
- 59 Convert Road to Path
- 60 Service Turn-Around
- 61 Flowering Tree Collection
- 62 Conifer Collection
- 63 Maple Collection
- 64 Ginkgo Collection
- 65 Dogwood collection
- 66 Asian Collection
- 67 China Valley - Path Improvements
- 68 Holly, Magnolia, and Viburnum Collections
- 69 Chinese Garden Complex
- 70 Realign Holly Spring Road
- 71 Permeable Access Path Along River
- 72 Retaining Wall
- 73 Service Access
- 74 Hamamelis Collection
- 75 Flowering Trees and Mounding

Main Entrance
Traffic Light



990 Cars
RV/Bus overflow

U.S. National Arboretum Master Plan

SOURCE: MARSHALL TAYLOR BAUSCH LLC - 2005
DESIGNED BY ROCKEFELLER & HANDELL, INCORPORATED - 2007

Scale 1"=200'
0 100 200 400'



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Previously Approved Master Plan 2007, Recommendations

PREVIOUSLY APPROVED MASTER PLAN, 2007: RECOMMENDATIONS

Determined to be consistent with the Strategic Plan and appropriate

RECOMMENDATIONS AS A SCIENTIFIC INSTITUTION

1. Renovate the greenhouse complex to provide state of the art facilities to serve the research and horticultural needs of the Arboretum
2. Modernize the Administration Building to support research reference collections (i.e., library, herbarium, and plant documentation) and construct a new wing to house laboratories
3. Build a new maintenance building to provide for the increased maintenance requirements that will come from additional Arboretum Development
4. Enlarge the area devoted to research plots to 35 acres and increase the area devoted to collections of plants for the preservation of genetic diversity
5. Develop an efficient composting and staging facility

RECOMMENDATIONS SERVING THE COMMUNITY

1. Build a new main entrance to Bladensburg Road that is worthy of a major public institution. The corollary to this is to close all the other entrances to the public. This entrance should be as attractive as the rest of the Arboretum experience.
5. Create a core pedestrian precinct around the ellipse linking the Visitor's Center, Azalea Collections, herb Garden, Bonsai and Penjing Museum, Fern Valley, and the Capitol Columns supplemented by new displays
6. Create a perennial display within the core to further enhance the core and provide popular appeal.
7. Create an area which engages families and educates and enchants the next generation of Arboretum supporters
8. Simplify the circulation to create a series of loops for visitors to tour the grounds.
10. Renovate and modernize the existing infrastructure
11. Create a comprehensive introduction of the USNA on the www which includes virtual tour

Previously Approved Master Plan 2007, Recommendations

PREVIOUSLY APPROVED MASTER PLAN, 2007: RECOMMENDATIONS

Re-examined and determined to be inappropriate

RECOMMENDATIONS SERVING THE COMMUNITY

2. Construct parking areas to handle approximately 1,000 vehicles with easy access to the new visitor center.
3. Build a visitor center to serve as the gateway to the site and provide facilities to educate the public about the world of plants
4. Build a garden about the Origin of Cultivated Plants to introduce the public to the origin and evolution of economically important plants.
9. Provide a network of educational and visitor facilities across the site including interpretive centers, restrooms, limited satellite parking and places to get on an off the tram.

Previously Approved Master Plan 2007: Modifications

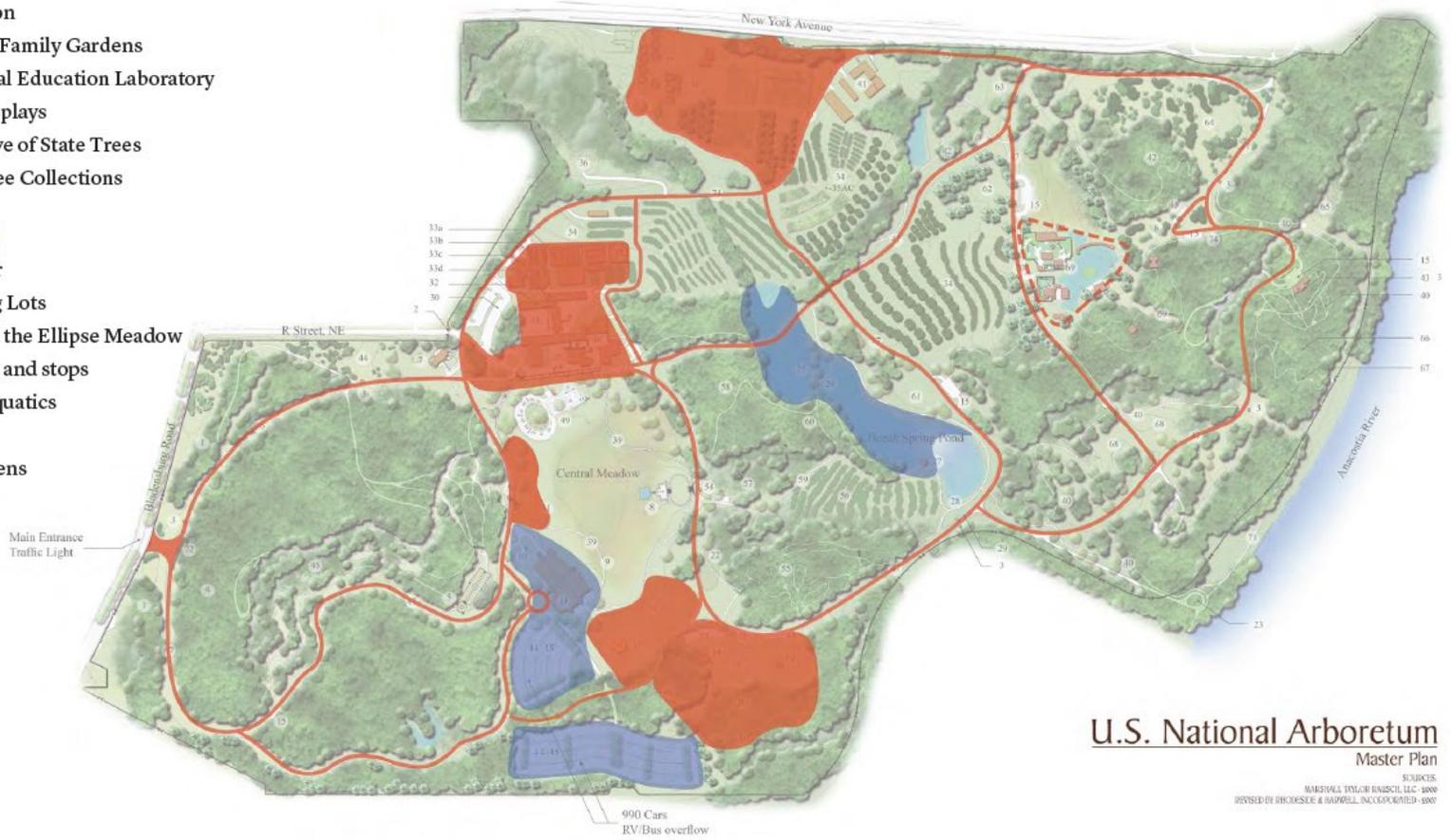
PREVIOUSLY APPROVED MASTER PLAN, 2007: MODIFICATIONS

ITEMS RE-EXAMINED AND RE-IMAGINED

- 1. Vehicular Circulation System
- 2. Parking & Bus Parking
- 3. Events Pavilion
- 4. Adventure & Family Gardens
- 5. Environmental Education Laboratory
- 6. Perennial Displays
- 7. National Grove of State Trees
- 8. Flowering Tree Collections

ITEMS REMOVED

- 1. Visitor Center
- 2. Large Parking Lots
- 3. Ha-Ha wall in the Ellipse Meadow
- 4. Tram System and stops
- 5. Boardwalk Aquatics
- 6. Ripple Falls
- 7. Aquatic Gardens
- 8. Waterfall



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U.S. National Arboretum
Master Plan
SUBJECT:
MATERIAL TAYLOR RUSSELL, LLC - 4000
DESIGNED BY SHOOBEE & HANFORD, INCORPORATED - 4007

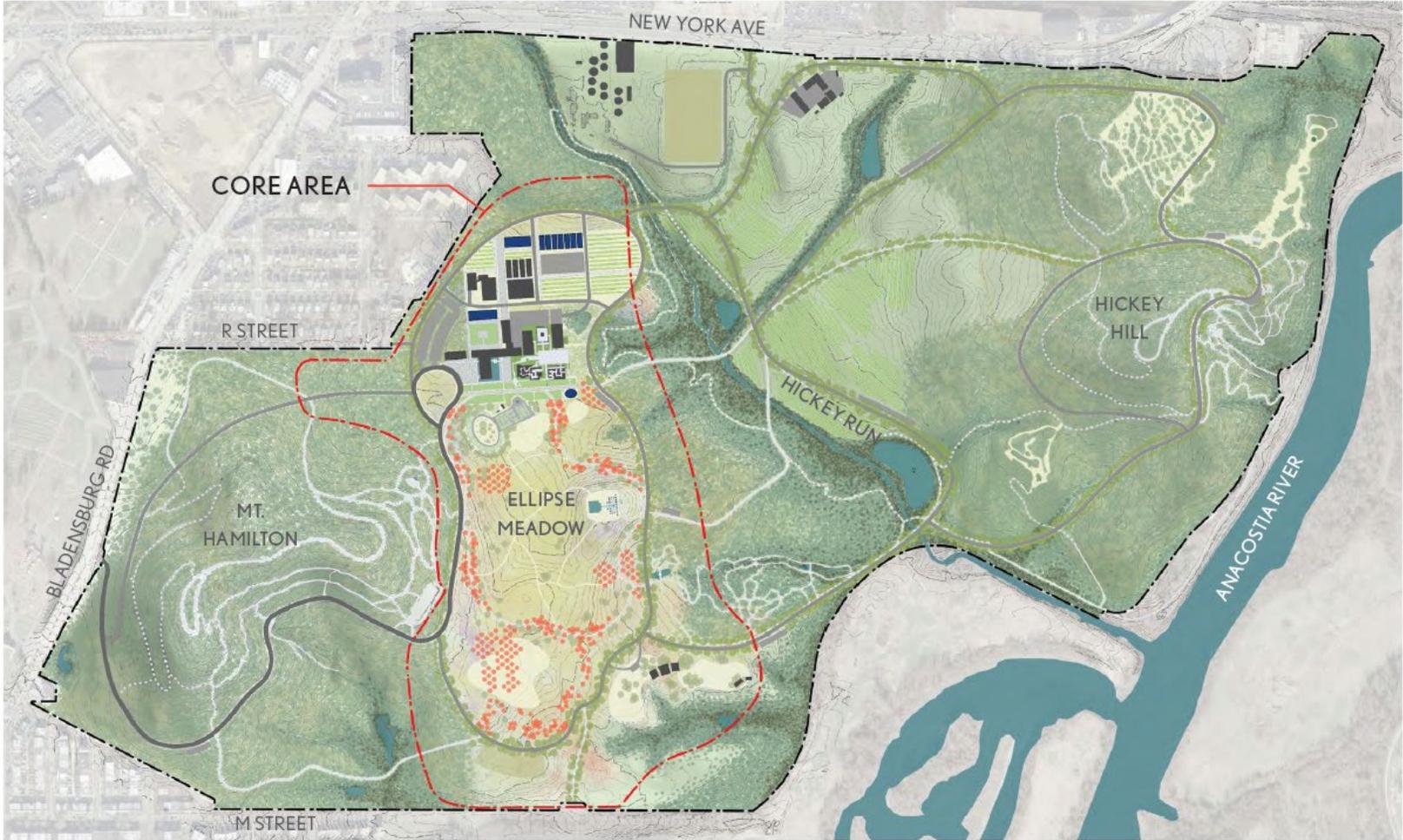
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Master Plan Update, 2020



Master Plan Update, 2020: Illustrative Plan

MASTER PLAN UPDATE- 2020: ILLUSTRATIVE PLAN



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Master Plan Update, 2020: Recommendations

MASTER PLAN UPDATE- 2020: RECOMMENDATIONS

IDENTITY

1. USNA should express its identity through a combination of its scientific mission and the unique ecological and cultural heritage of its landscape.

ARRIVAL, CIRCULATION & PARKING

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HORTICULTURAL OPERATIONS

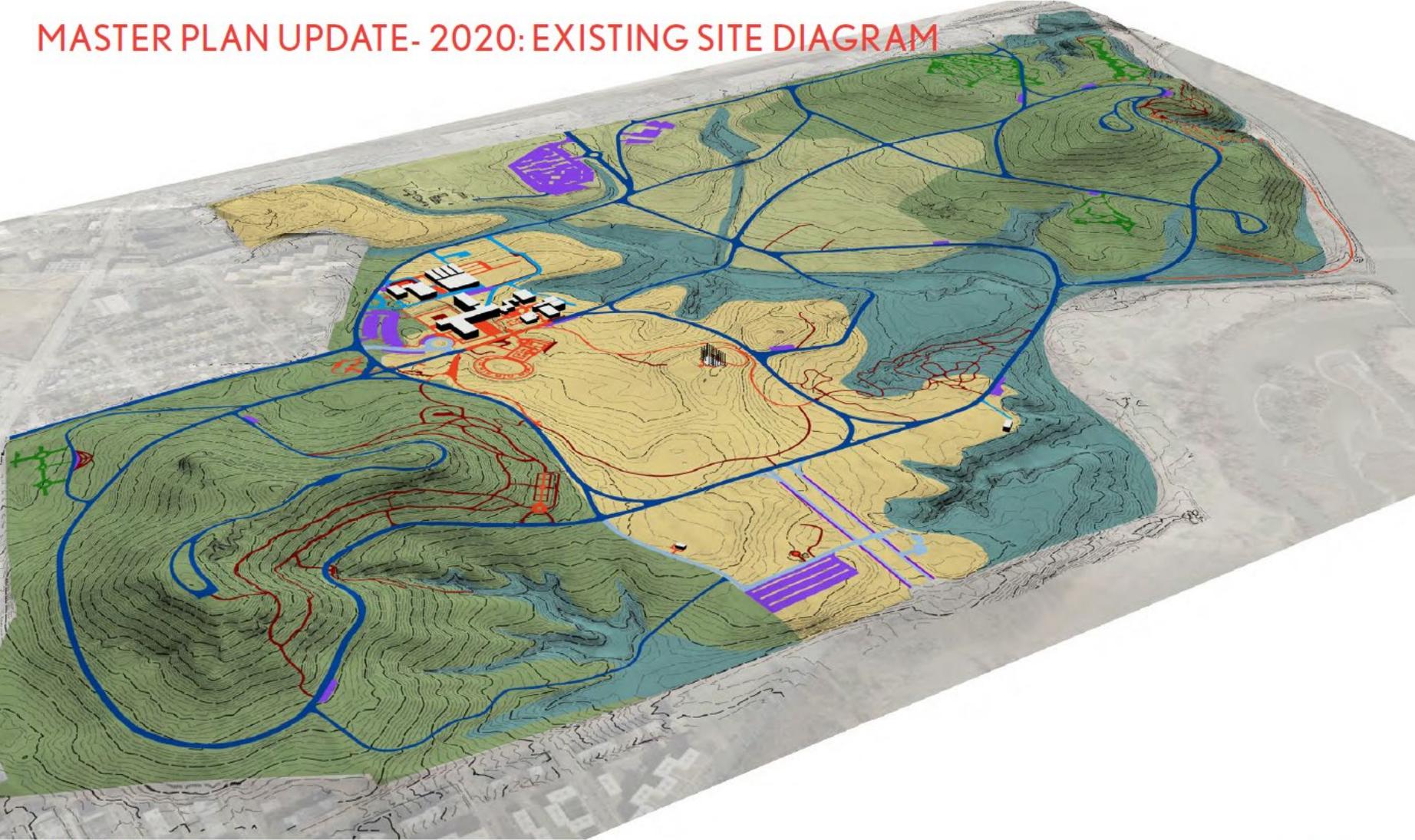
7. Augment the sense of expansiveness within the Arboretum; New plantings should reflect this vastness and keep in scale with the larger natural systems of the site.

CORE FRAMEWORK

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Existing Site Diagram

MASTER PLAN UPDATE- 2020: EXISTING SITE DIAGRAM



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Proposed Plan

MASTER PLAN UPDATE- 2020: PROPOSED PLAN



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Master Plan Update, 2020: Identity

MASTER PLAN UPDATE- 2020: IDENTITY

Four principal zones of character based upon the heritage of the land



WOODLAND HILLS

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MEADOW



DENDRITIC RAVINES

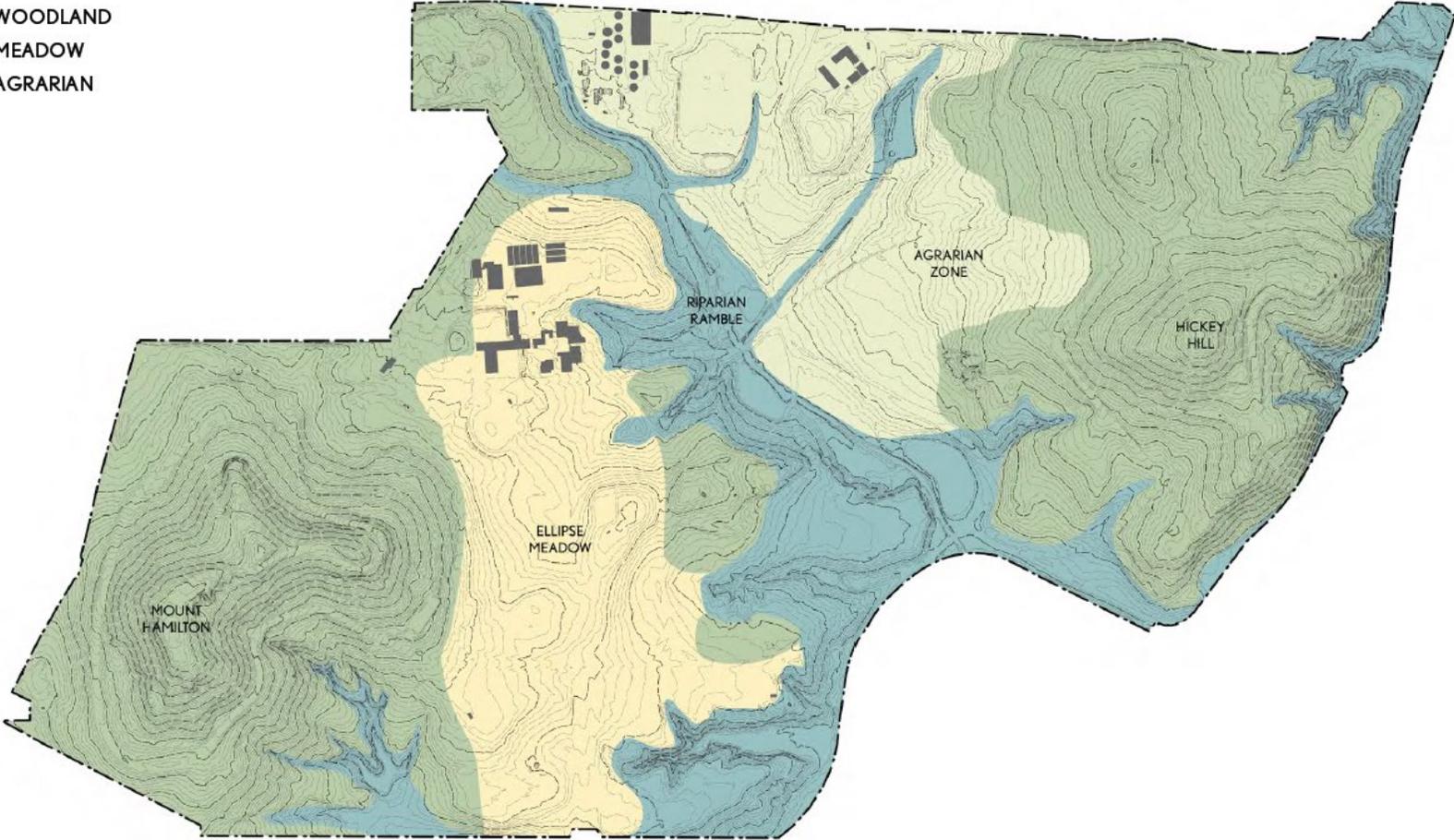
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Master Plan Update, 2020: Identity

MASTER PLAN UPDATE- 2020: IDENTITY

Four principal zones of character based upon the heritage of the land

- RIPARIAN
- WOODLAND
- MEADOW
- AGRARIAN



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Master Plan Update, 2020: Arrival, Circulation, and Parking

MASTER PLAN UPDATE- 2020: ARRIVAL, CIRCULATION & PARKING

Recommendations to heighten experience of the essential character

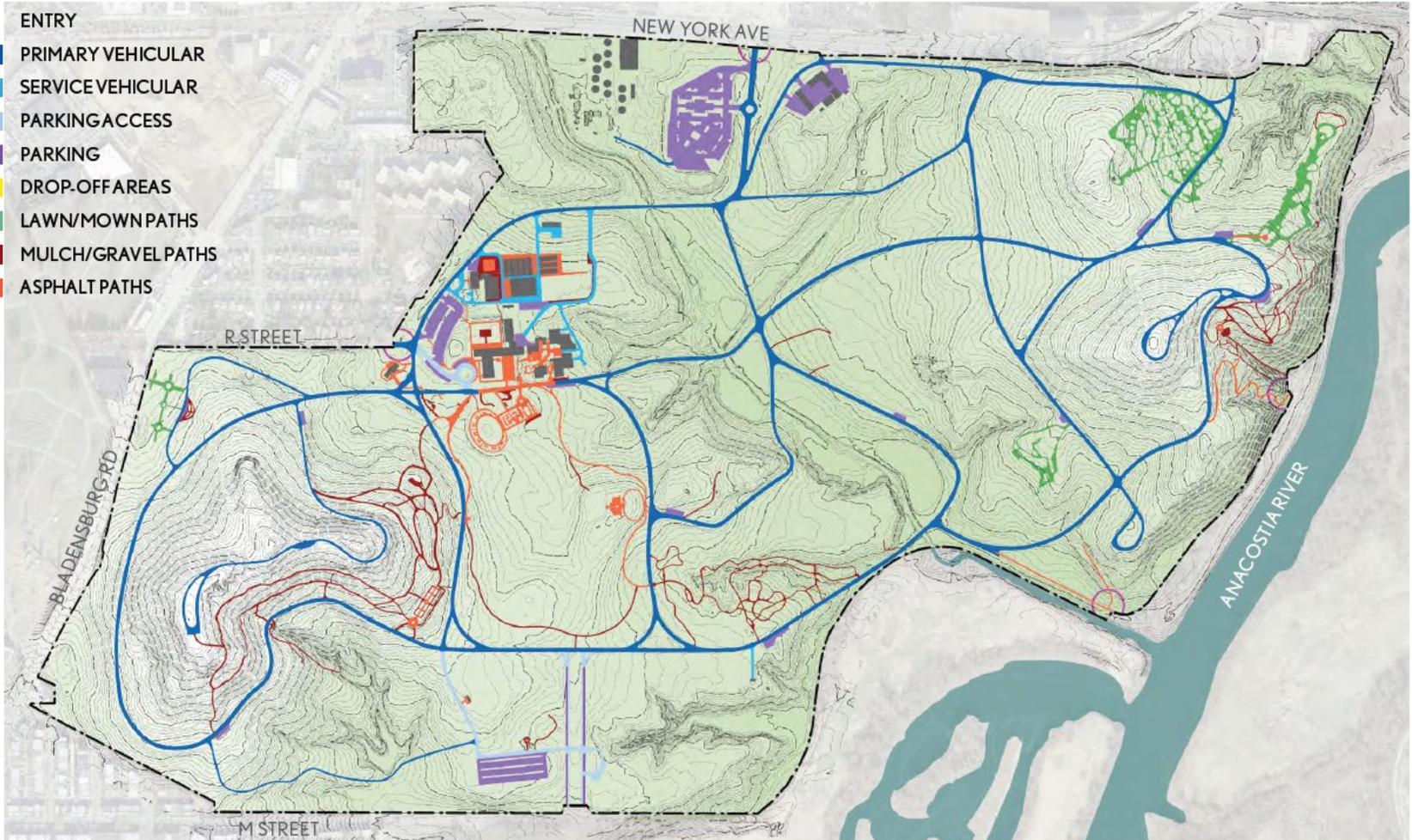
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Master Plan Update, 2020: Arrival, Circulation, and Parking

MASTER PLAN UPDATE- 2020: ARRIVAL, CIRCULATION & PARKING

2017: Existing Pedestrian and Vehicular Circulation

-  ENTRY
-  PRIMARY VEHICULAR
-  SERVICE VEHICULAR
-  PARKING ACCESS
-  PARKING
-  DROP-OFF AREAS
-  LAWN/MOWN PATHS
-  MULCH/GRAVEL PATHS
-  ASPHALT PATHS



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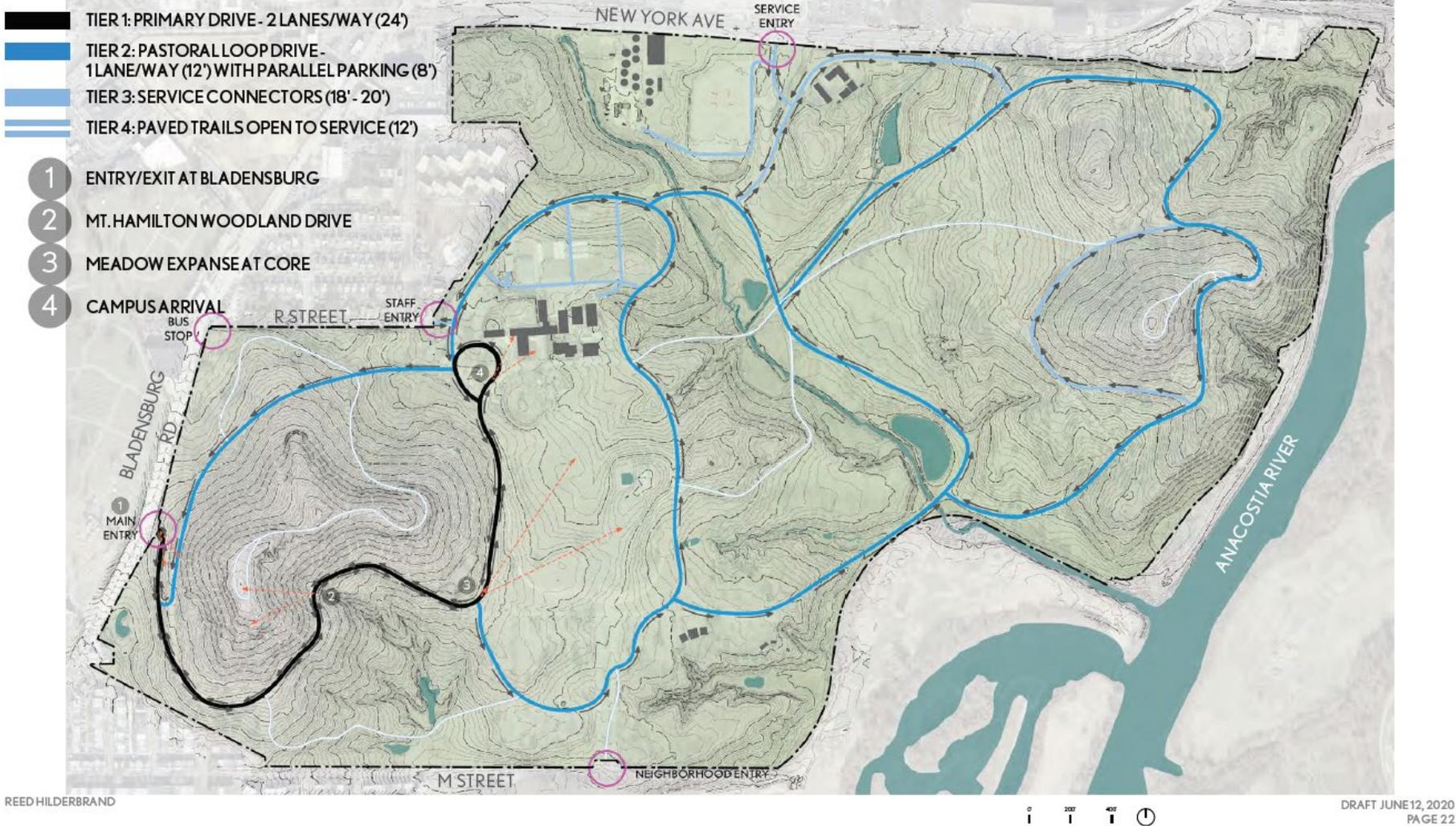


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Master Plan Update, 2020: Arrival, Circulation, and Parking

MASTER PLAN UPDATE- 2020: ARRIVAL, CIRCULATION & PARKING

Proposed Vehicular Loops: Entry at Bladensburg Road



Master Plan Update, 2020: Arrival, Circulation, and Parking

MASTER PLAN UPDATE- 2020: ARRIVAL, CIRCULATION & PARKING

Proposed Vehicular Loops: Entry Sequence



AZALEA ROAD ENTRY

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WOODLAND DRIVE



MEADOW EXPANSE



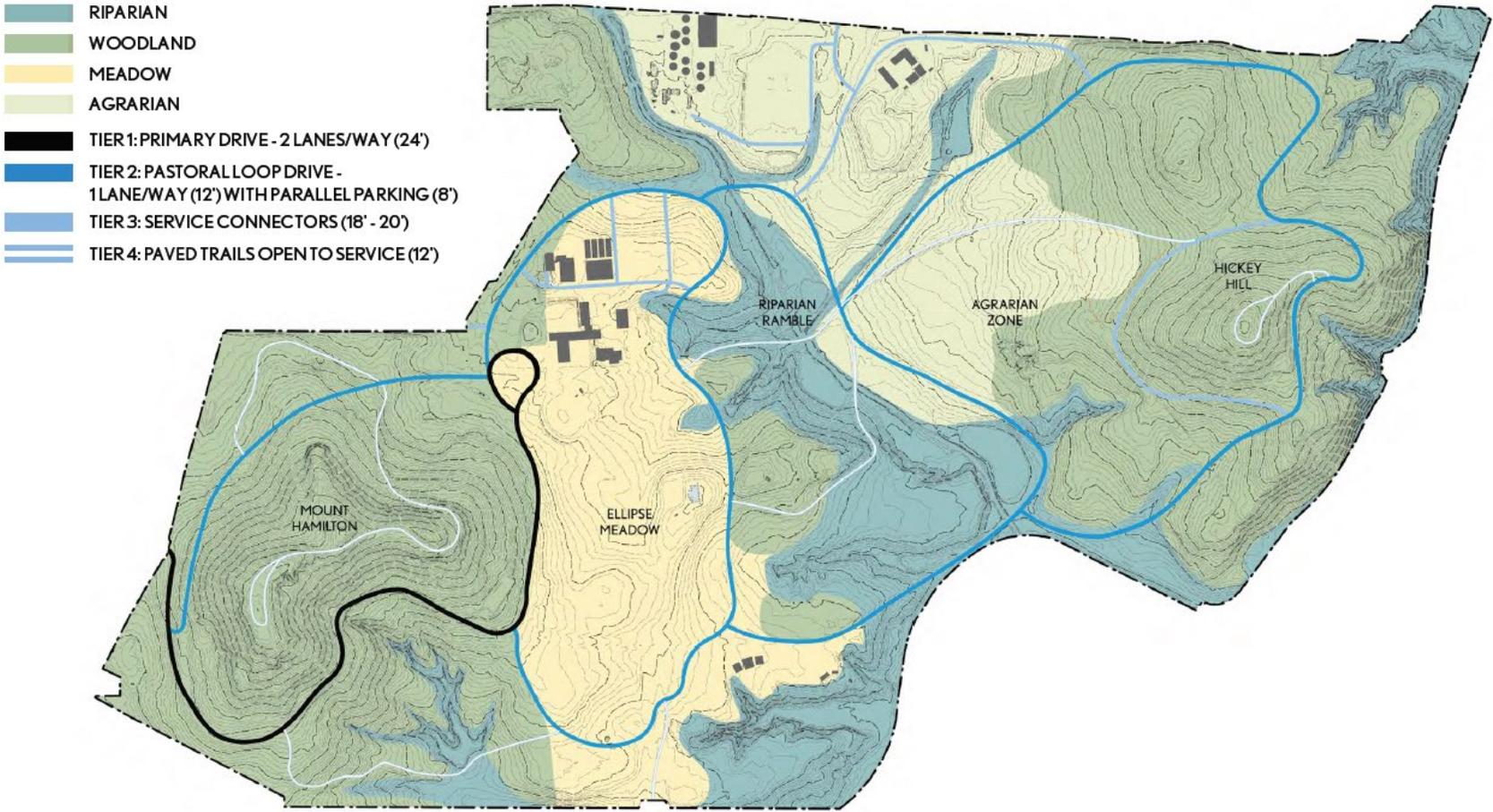
CAMPUS ARRIVAL

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Master Plan Update, 2020: Arrival, Circulation, and Parking

MASTER PLAN UPDATE- 2020: ARRIVAL, CIRCULATION & PARKING

Four Vehicular Loops associated with Landscape Character



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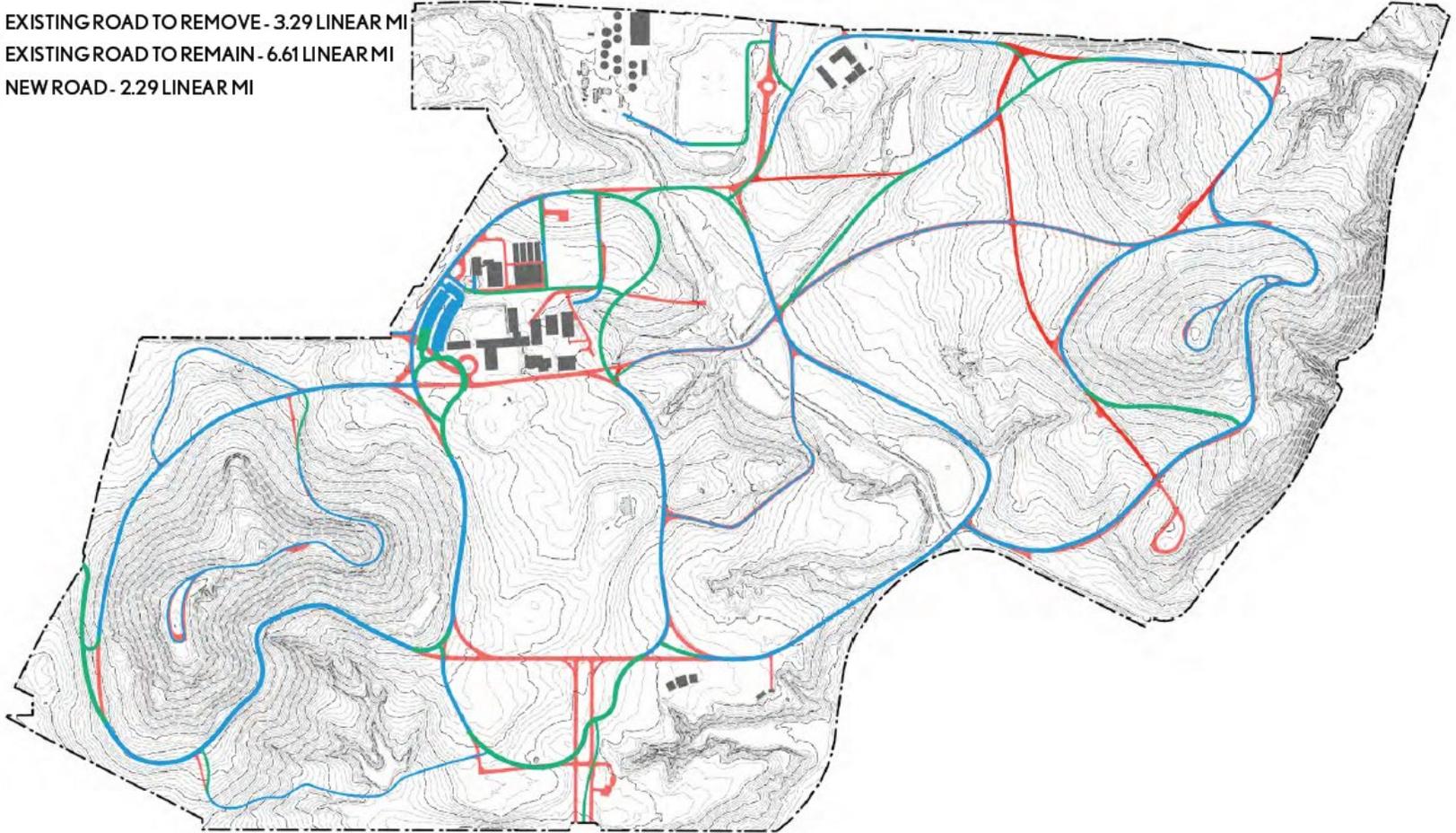
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Master Plan Update, 2020: Arrival, Circulation, and Parking

MASTER PLAN UPDATE- 2020: ARRIVAL, CIRCULATION & PARKING

Road Reconfiguration - improving heirarchy & experience while reducing impervious surface

- EXISTING ROAD TO REMOVE - 3.29 LINEAR MI
- EXISTING ROAD TO REMAIN - 6.61 LINEAR MI
- NEW ROAD - 2.29 LINEAR MI



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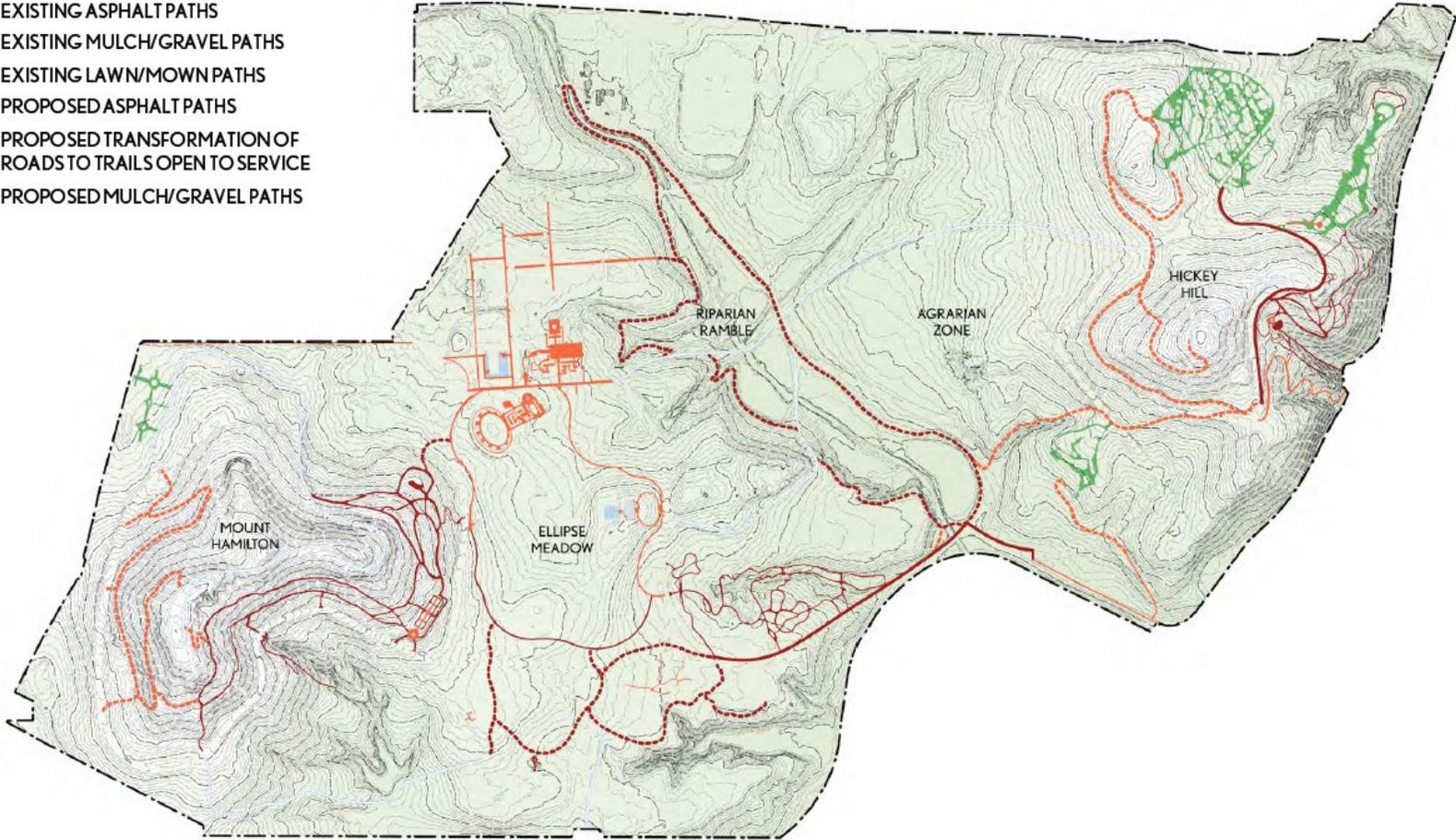
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Master Plan Update, 2020: Arrival, Circulation, and Parking

MASTER PLAN UPDATE- 2020: ARRIVAL, CIRCULATION & PARKING

Proposed Pedestrian Circulation connects the existing networks while offering new paths through the ravine

- EXISTING ASPHALT PATHS
- EXISTING MULCH/GRAVEL PATHS
- EXISTING LAWN/MOWN PATHS
- PROPOSED ASPHALT PATHS
- PROPOSED TRANSFORMATION OF ROADS TO TRAILS OPEN TO SERVICE
- PROPOSED MULCH/GRAVEL PATHS



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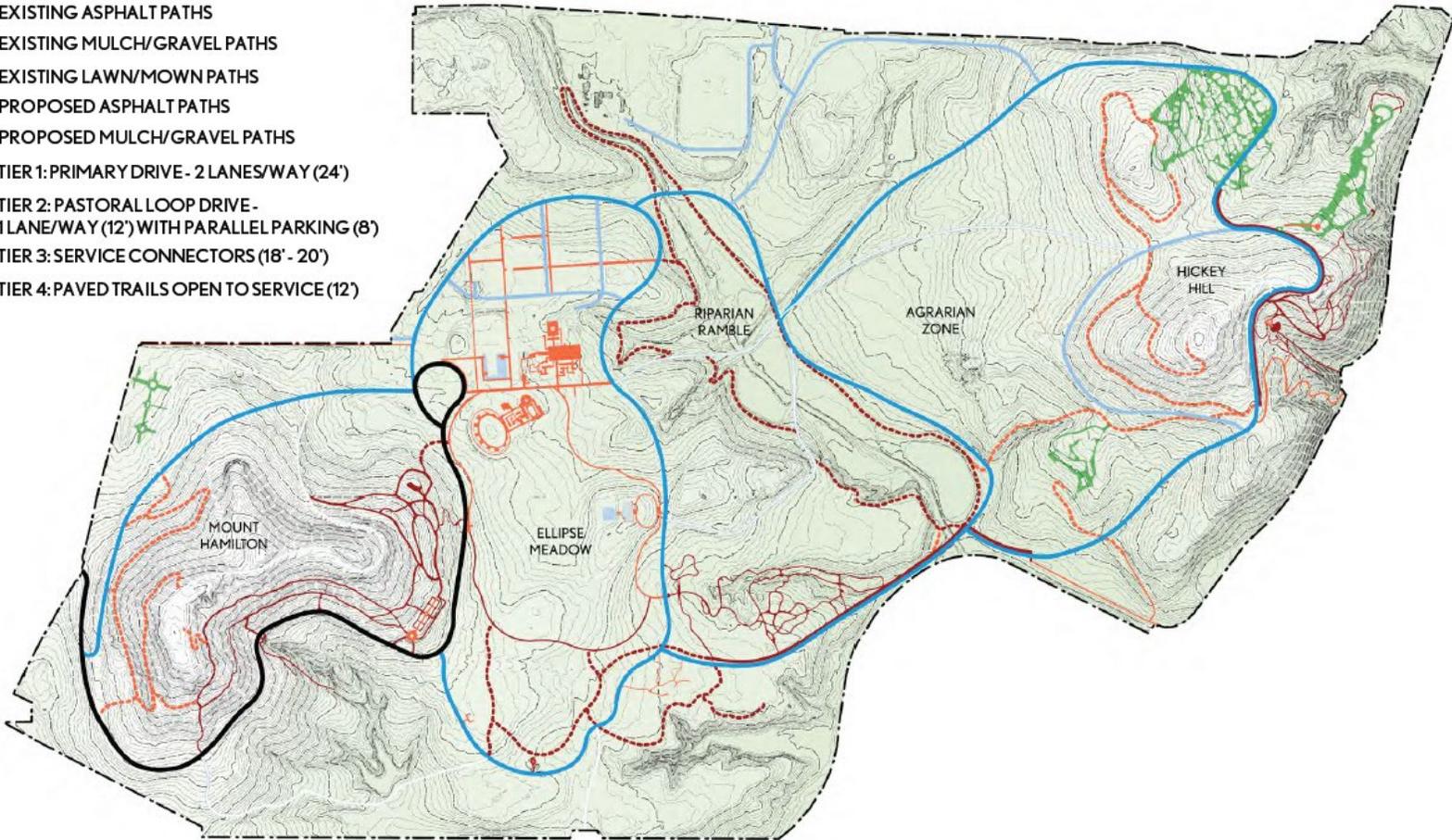
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Master Plan Update, 2020: Arrival, Circulation, and Parking

MASTER PLAN UPDATE- 2020: ARRIVAL, CIRCULATION & PARKING

Proposed Pedestrian and Vehicular Circulation — Combined Network and Hierarchy

-  EXISTING ASPHALT PATHS
-  EXISTING MULCH/GRAVEL PATHS
-  EXISTING LAWN/MOWN PATHS
-  PROPOSED ASPHALT PATHS
-  PROPOSED MULCH/GRAVEL PATHS
-  TIER 1: PRIMARY DRIVE - 2 LANES/WAY (24')
-  TIER 2: PASTORAL LOOP DRIVE - 1 LANE/WAY (12') WITH PARALLEL PARKING (8')
-  TIER 3: SERVICE CONNECTORS (18' - 20')
-  TIER 4: PAVED TRAILS OPEN TO SERVICE (12')



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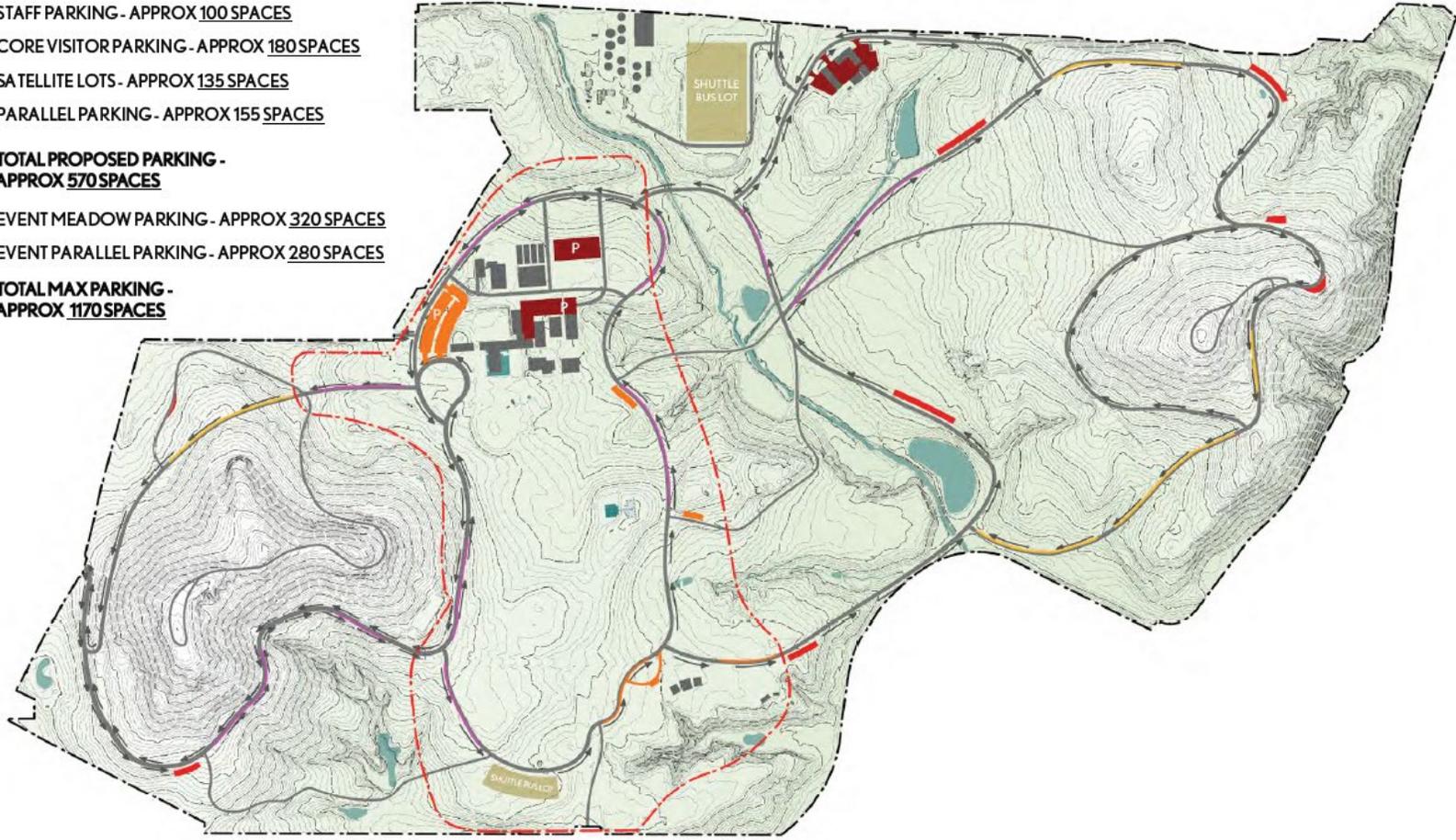
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Master Plan Update, 2020: Arrival, Circulation, and Parking

MASTER PLAN UPDATE- 2020: ARRIVAL, CIRCULATION & PARKING

Proposed Parking maximizes the existing impervious footprint while distributes spaces throughout the Arboretum

- STAFF PARKING - APPROX 100 SPACES
- CORE VISITOR PARKING - APPROX 180 SPACES
- SATELLITE LOTS - APPROX 135 SPACES
- PARALLEL PARKING - APPROX 155 SPACES
- TOTAL PROPOSED PARKING - APPROX 570 SPACES
- EVENT MEADOW PARKING - APPROX 320 SPACES
- EVENT PARALLEL PARKING - APPROX 280 SPACES
- TOTAL MAX PARKING - APPROX 1170 SPACES



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Master Plan Update, 2020: Core Framework

MASTER PLAN UPDATE- 2020: CORE FRAMEWORK



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Master Plan Update, 2020: Core Framework

MASTER PLAN UPDATE- 2020: CORE FRAMEWORK

Recommendations to consolidate development and concentrate the public offerings

8. Renovate the greenhouse complex to extend public education opportunities.
9. Reinforce the campus at the Core using the modernist language of the existing administration building and extending it to the adjacent greenhouses. The campus shall serve as the gateway to the larger site and the interface between the visitor and the Arboretum's scientific research.
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Master Plan Update, 2020: Core Framework

MASTER PLAN UPDATE- 2020: CORE FRAMEWORK

Amplifying Administrative Area Character and Organization

- EXISTING BUILDINGS
- PROPOSED BUILDINGS
- SERVICE COURT
- TERRACE
- PEDESTRIAN CIRCULATION
- VEHICULAR CIRCULATION
- PARKING
- MEADOW PARKING
- LAWN
- GARDEN
- RESEARCH / DISPLAY FIELDS
- EVERGREEN GROUNDCOVER

RESEARCH HOOP HOUSES
 RESEARCH / EDUCATION
 EDUCATION / DISPLAY HOOP
 HOUSES

RESEARCH / DISPLAY FIELD
 RENOVATED HEAD HOUSE /
 EDUCATION
 RESEARCH GREEN HOUSE
 SERVICE LANE
 RESEARCH PROMENADE
 CLASSROOMS / FOOD SERVICES
 HERBARIUM / LIBRARY
 COURTYARD

STAFF / ADMIN
 PARKING
 RESEARCH /
 DISPLAY FIELD
 RESEARCH /
 ADMINISTRATION
 STAFF PARKING
 SERVICE YARD

ADD ANNOTATIONS ABOUT WHAT IS
 SIGNIFICANT AND BEING PRESERVED

ADD LABELS

VISITOR PARKING
 FONA / GIFT SHOP
 DOCENT SERVICES,
 AUDITORIUM, FOOD
 ARRIVAL COURT
 GARDEN PAVILION



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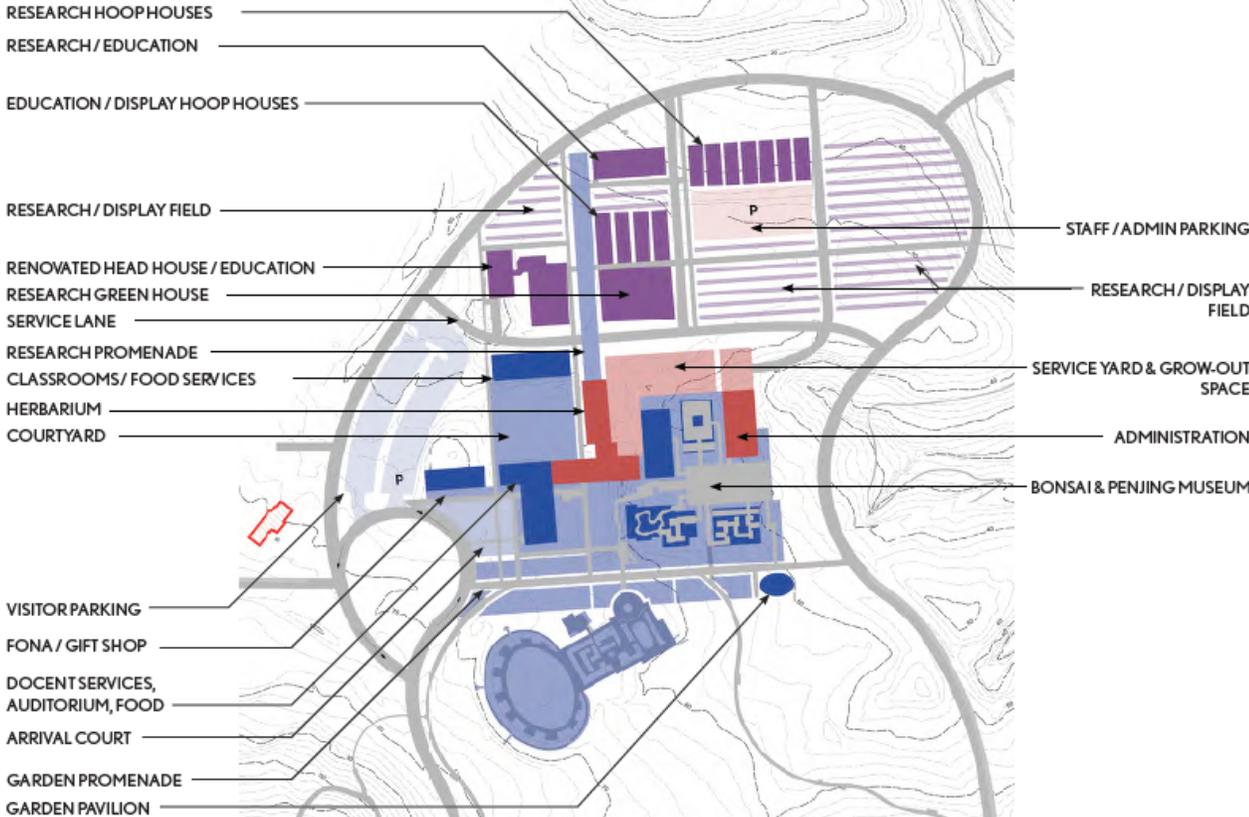
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Master Plan Update, 2020: Core Framework

MASTER PLAN UPDATE- 2020: CORE FRAMEWORK

Expanding the Visitor Experience to Engage the Science

- VISITOR - INTERIOR
- VISITOR - EXTERIOR
- VISITOR - ARRIVAL COURT
- VISITOR - PARKING
- ADMIN/RESEARCH/SERVICE - INTERIOR
- ADMIN/RESEARCH/SERVICE - EXTERIOR
- ADMIN/RESEARCH/SERVICE - PARKING
- HYBRID - INTERIOR
- HYBRID - EXTERIOR
- RELOCATE
- PAVILIONS



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Existing Arboretum Site, 2020



Proposed Arboretum Site, 2020



Appendix



Appendix: Summary of Site Development

APPENDIX: SUMMARY OF SITE DEVELOPMENT

Summary

DEVELOPMENT PATTERNS

Long before the establishment of this site as US National Arboretum, the site reflects an agricultural heritage from the 1800's. The farmsteads of Abercrombie, Colonel Hickey, Dr. Palmer and Corcoran subdivided this landscape into a patchwork of fields, orchards and woodlands, and suggest that the ellipse meadow is a century and half old open space within the Capital.

The 1933 aerial photograph still reflects this patchwork even as new developments such as the New York Avenue Brickworks and the neighborhood north of R street begin to grow around at the periphery of the Arboretum.

The 1937 Preliminary Road study by the National Capital Parks in collaboration with the National Capital Park and Planning Commission suggests a system of loop roads that circumnavigate the topography and ecology of the landscape.

Portions of this proposed road system has been implemented by 1951, such as the loops at Mt. Hamilton and Hickey Hill while the loop at the Ellipse meadow had been truncated. Entrances exist on R Street and M Street. Research nurseries occupy the open space of former agricultural fields prior to opening to the public in 1959.

By 1988, the public offerings of the Administration Building (1962-63), the National Herb Garden (1980), the Japanese Pavilion (1972) within the Bonsai Museum all have been constructed within the core, and the site of the Capitol Columns appears to be under construction. The majority of the vehicular circulation that exists today has been implemented, including the boulevard and parking area at the M street gate and the New York Avenue entrance.

By 2017 the preponderance of public offerings exists within the Core of the Arboretum. Their relationship suggests fragmentation and disconnection from each other, devoid of the larger spatial expansiveness of the Arboretum.



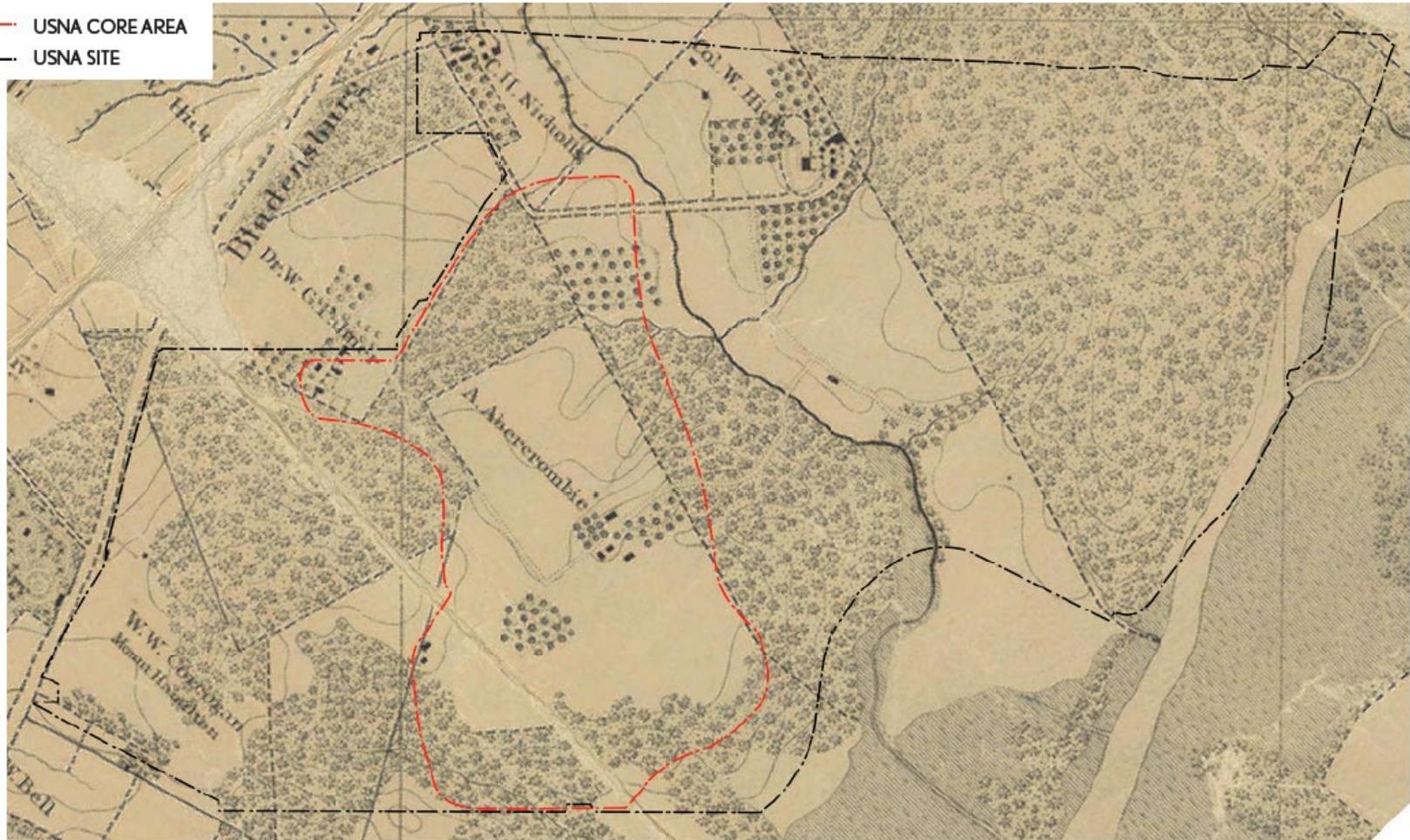
1933 AERIAL PHOTOGRAPH OF THE US NATIONAL ARBORETUM SITE

Appendix: Summary of Site Development, 1863

APPENDIX: SUMMARY OF SITE DEVELOPMENT

Aerial Map - 1863

- USNA CORE AREA
- - - USNA SITE



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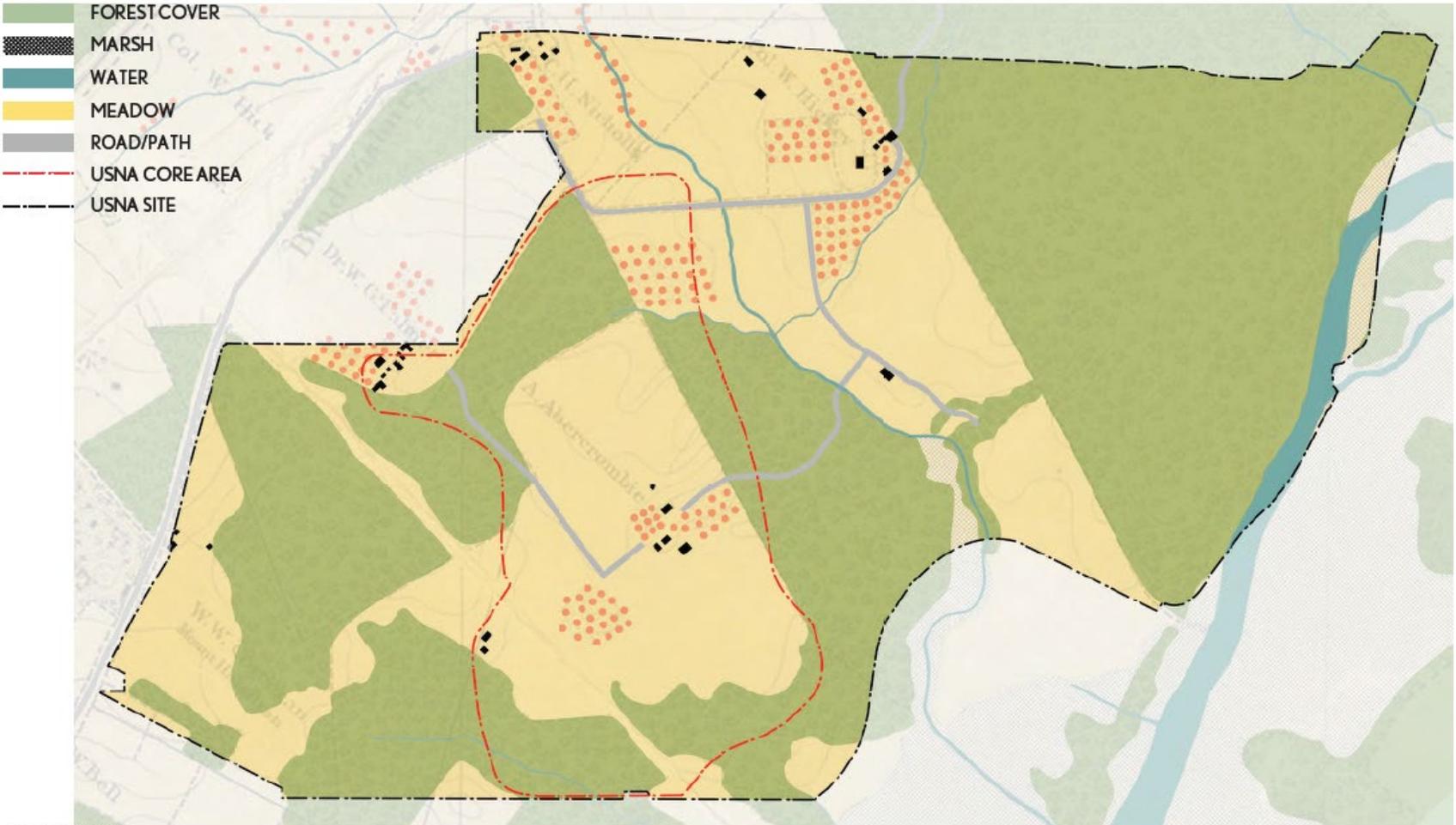


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Appendix: Summary of Site Development, 1863

APPENDIX: SUMMARY OF SITE DEVELOPMENT

Landscape Character - 1863



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Appendix: Summary of Site Development, 1933

APPENDIX: SUMMARY OF SITE DEVELOPMENT

Aerial - 1933

- USNA CORE AREA
- USNA SITE



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Appendix: Summary of Site Development, 1933

APPENDIX: SUMMARY OF SITE DEVELOPMENT

Landscape Character - 1933



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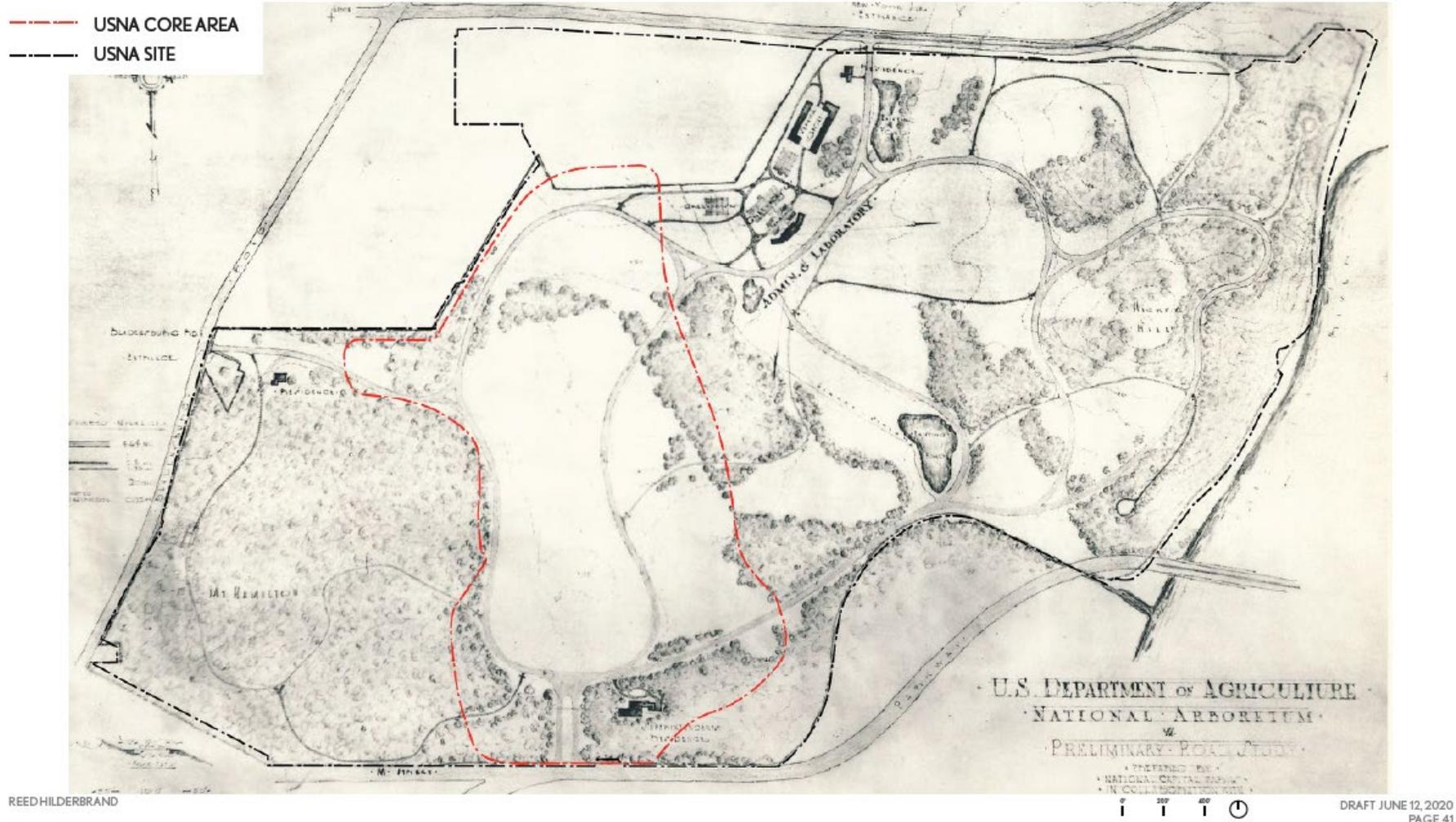


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Appendix: Summary of Site Development, 1937

APPENDIX: SUMMARY OF SITE DEVELOPMENT

Preliminary Road Study - 1937



Appendix: Summary of Site Development, 1951

APPENDIX: SUMMARY OF SITE DEVELOPMENT

Aerial - 1951

- USNA CORE AREA
- USNA SITE



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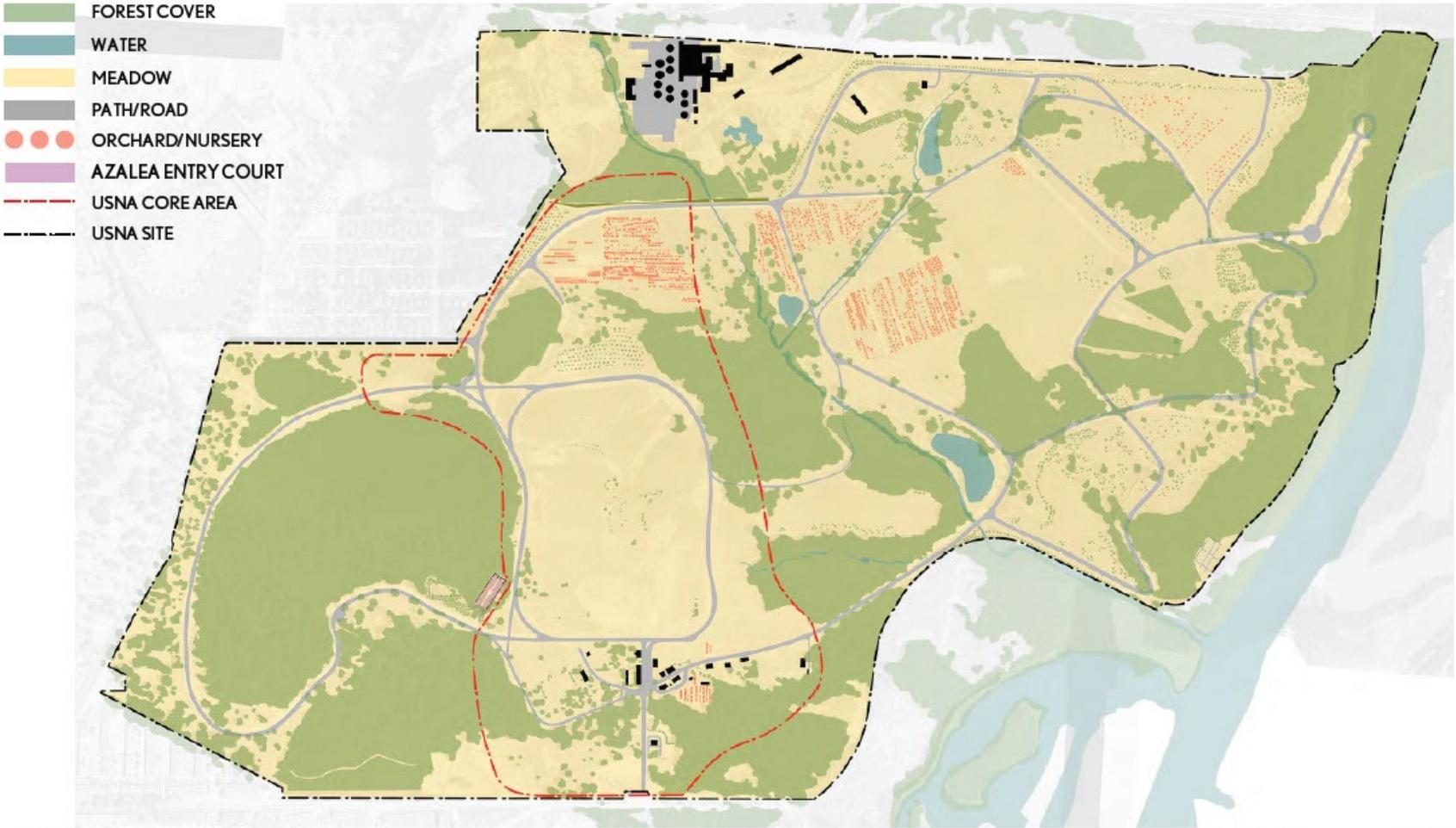


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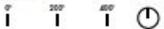
Appendix: Summary of Site Development, 1951

APPENDIX: SUMMARY OF SITE DEVELOPMENT

Landscape Character - 1951



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Appendix: Summary of Site Development, 1988

APPENDIX: SUMMARY OF SITE DEVELOPMENT

Aerial - 1988

- USNA CORE AREA
- USNA SITE



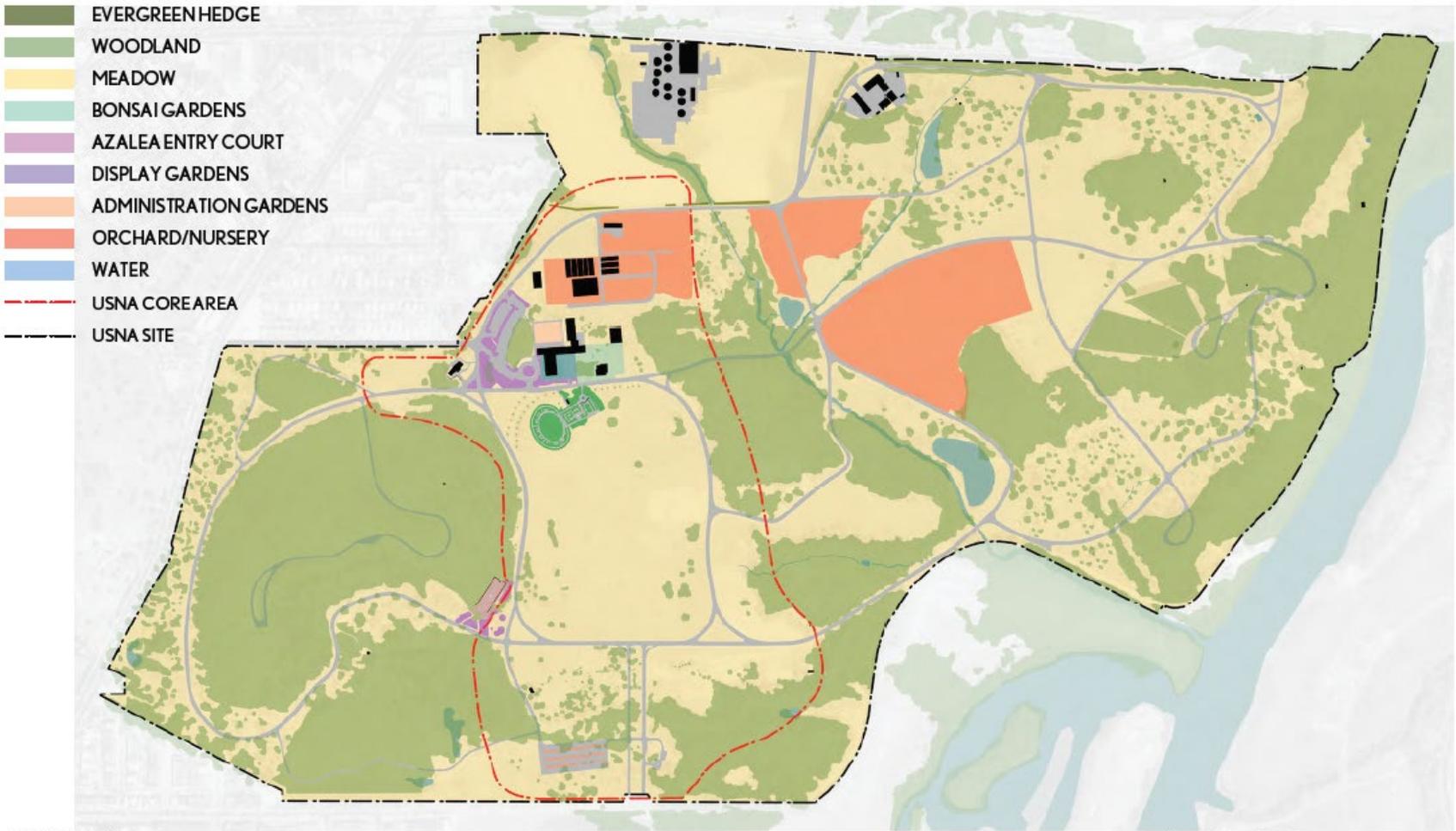
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Appendix: Summary of Site Development, 1988

APPENDIX: SUMMARY OF SITE DEVELOPMENT

Landscape Character - 1988



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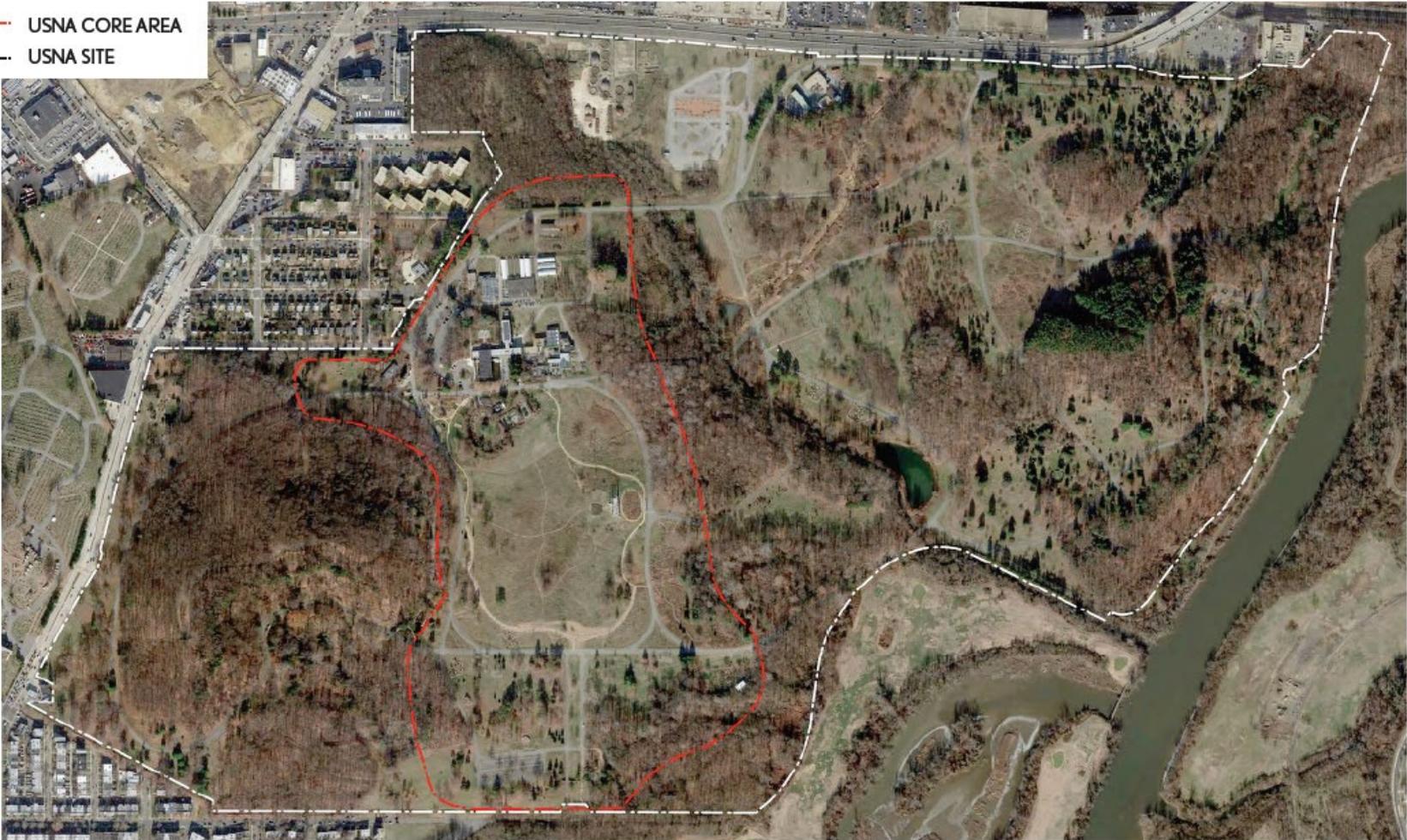
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Appendix: Summary of Site Development, 2017

APPENDIX: SUMMARY OF SITE DEVELOPMENT

Aerial - 2017

- USNA CORE AREA
- USNA SITE



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Appendix: Landscape Character 2017

APPENDIX: SUMMARY OF SITE DEVELOPMENT

Landscape Character - 2017



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Appendix: Existing Conditions Analysis

APPENDIX: EXISTING CONDITIONS ANALYSIS

Summary

ESSENTIAL CHARACTER

Summary of topography, drainage patterns and ecology.

Distillation of larger systems into three key components - wooded hills, rolling midlands and dendritic ravines.

HUMAN EXPERIENCE

Summary of circulation system, both pedestrian and vehicular.

Confused sequence starting with entrance, continuing with arrival, and following through with vehicular circulation. Lack of hierarchy.

Limited pedestrian -dedicated circulation. Large void in the system between the Core and the collections on the East edge of the Arboretum. That void is primarily research fields.

Large lots developed for defunct Tram system in locations nowhere near the USNA Offerings. Lots of impervious surface causing excess tax bills...

ARBORETUM CORE

Fragmented character with internal room offerings.

Resources placed towards small horticultural intensifications that do not contribute to the larger arboretum landscape.

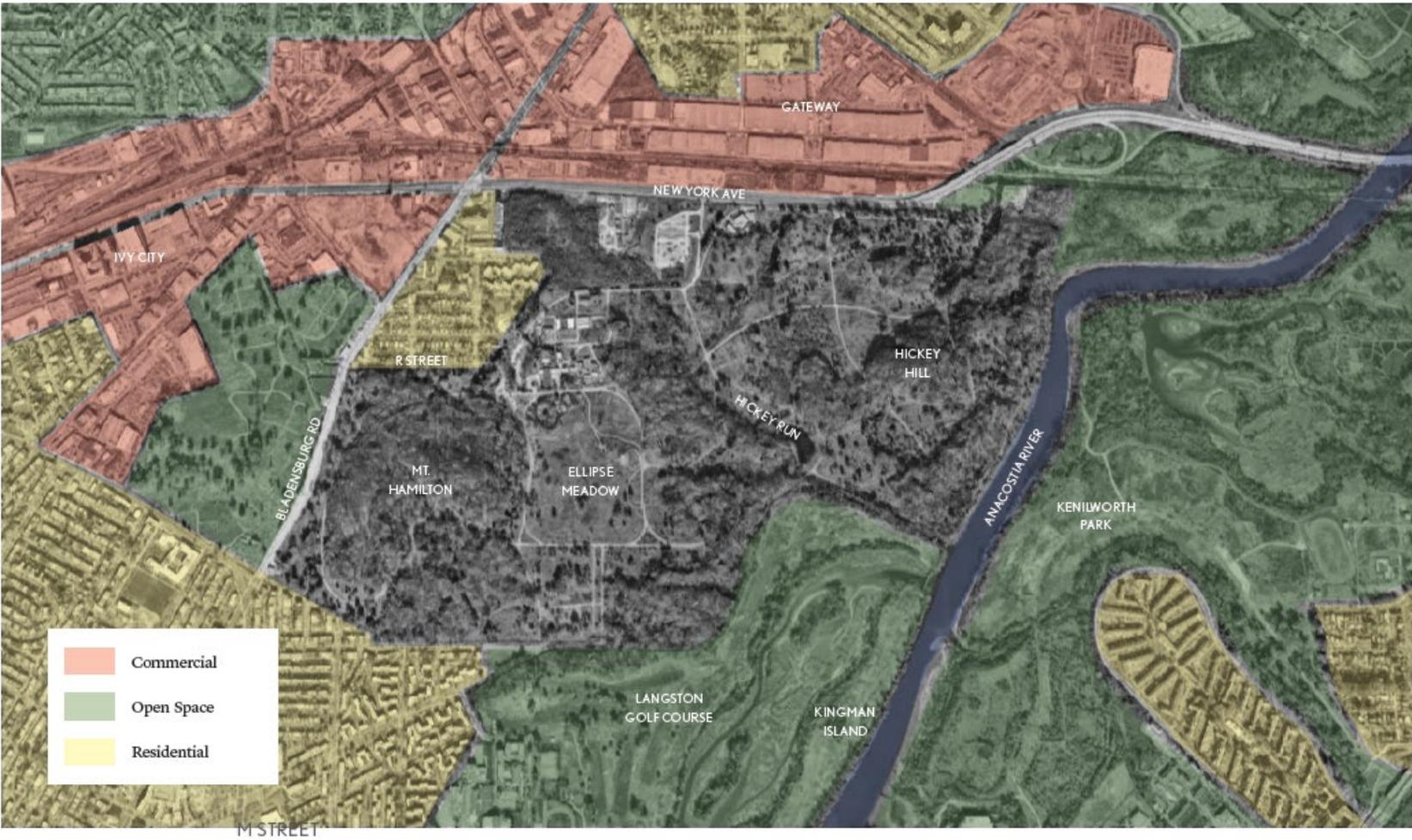
Large portion of space off-limits to the public or dedicated to service.

Lacking in educational offerings that display the science that occurs at USNA.



Surrounding Context Fabric

SURROUNDING CONTEXT FABRIC



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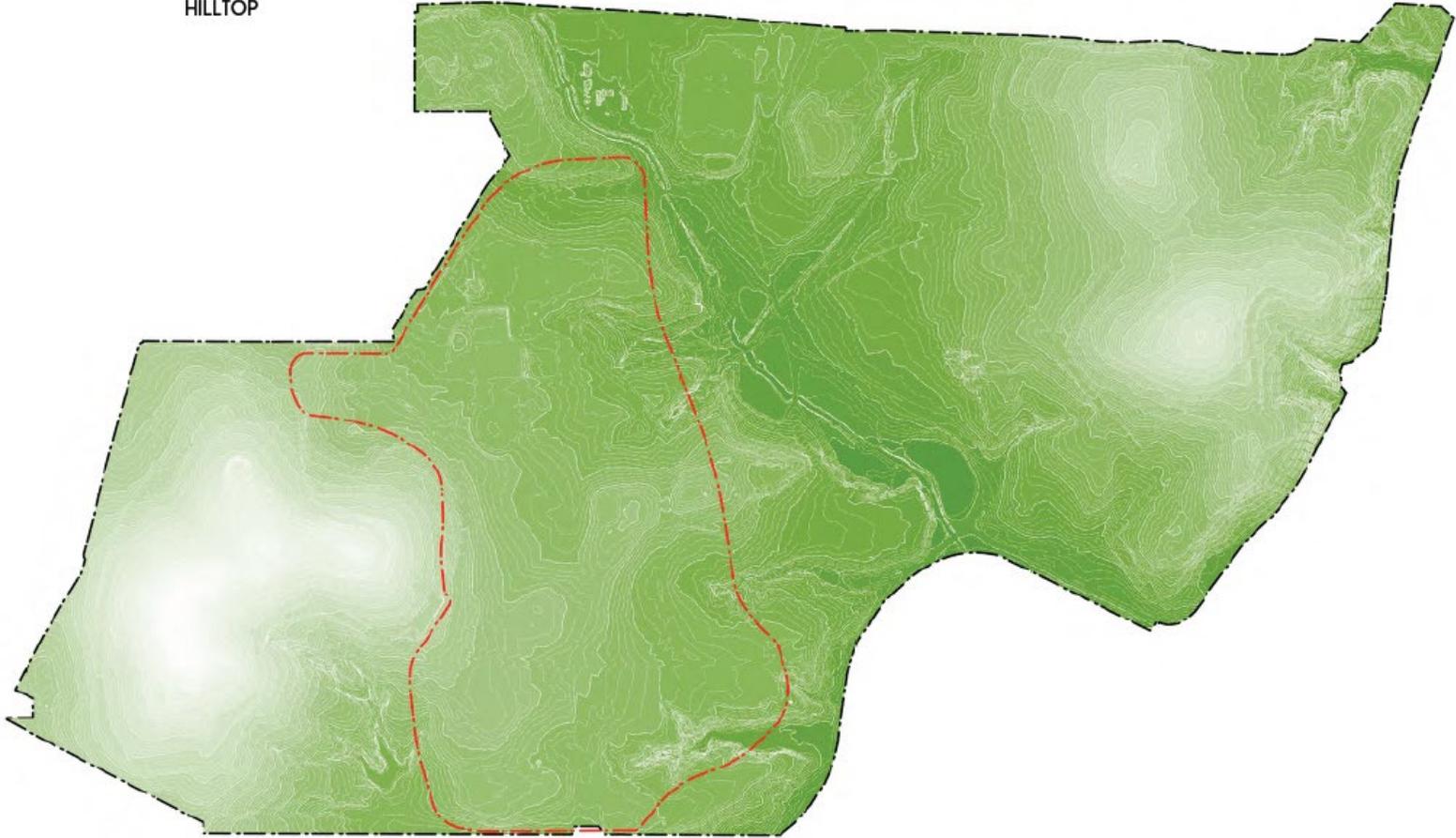
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Appendix: Existing Conditions Analysis Landform

APPENDIX: EXISTING CONDITIONS ANALYSIS

Landform

RIPARIAN HILLTOP



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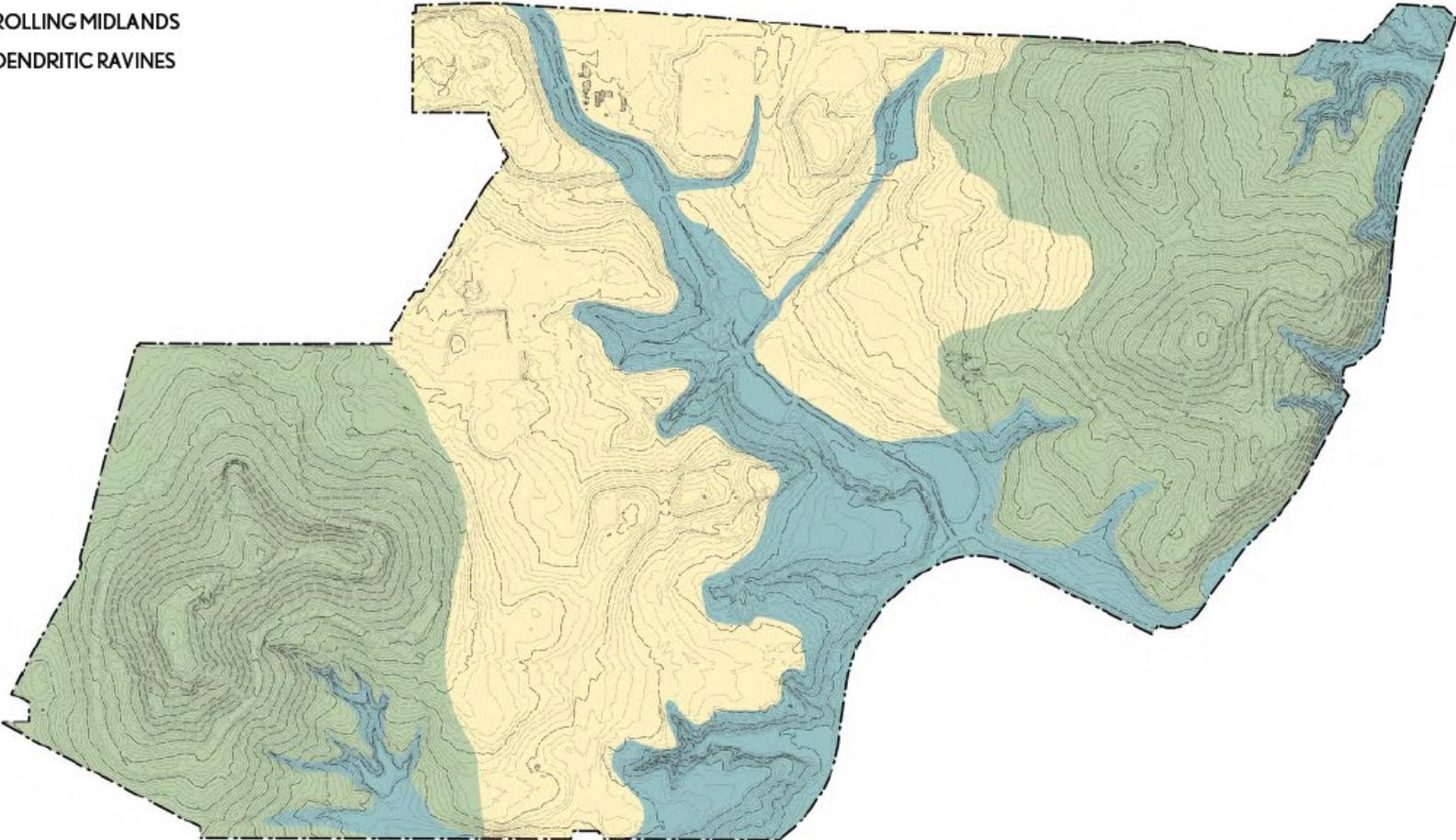
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Appendix: Existing Conditions Analysis Landform Character

APPENDIX: EXISTING CONDITIONS ANALYSIS

Landform and Character

- WOODLAND HILLS
- ROLLING MIDLANDS
- DENDRITIC RAVINES



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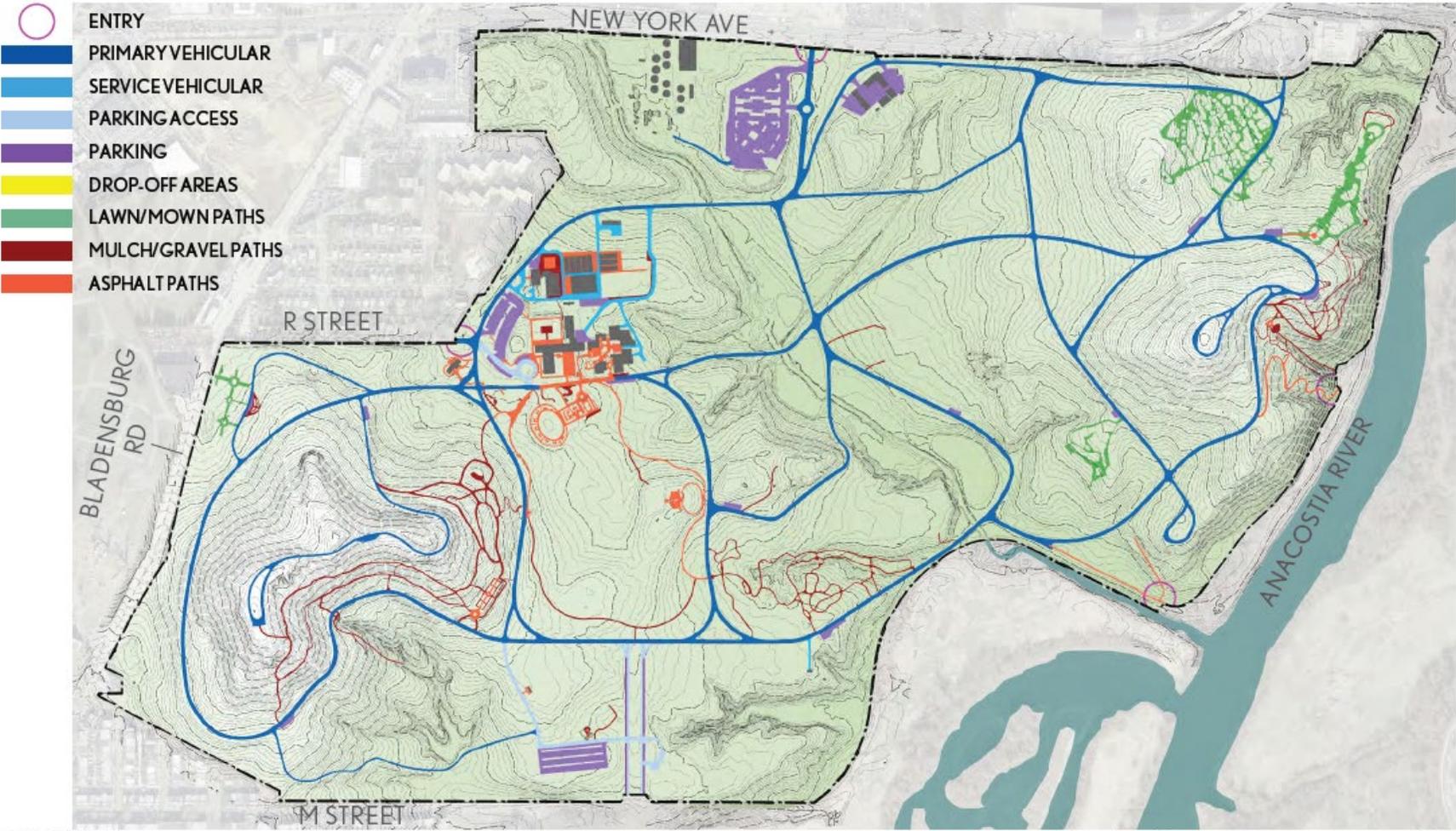


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Appendix: 2017 Pedestrian and Vehicular Circulation

APPENDIX: EXISTING CONDITIONS ANALYSIS

2017: Pedestrian and Vehicular Circulation



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Appendix: 2017 Pedestrian Circulation

APPENDIX: EXISTING CONDITIONS ANALYSIS

2017: Pedestrian Circulation

- LAWN/MOWN PATHS
- MULCH/GRAVEL PATHS
- ASPHALT PATHS



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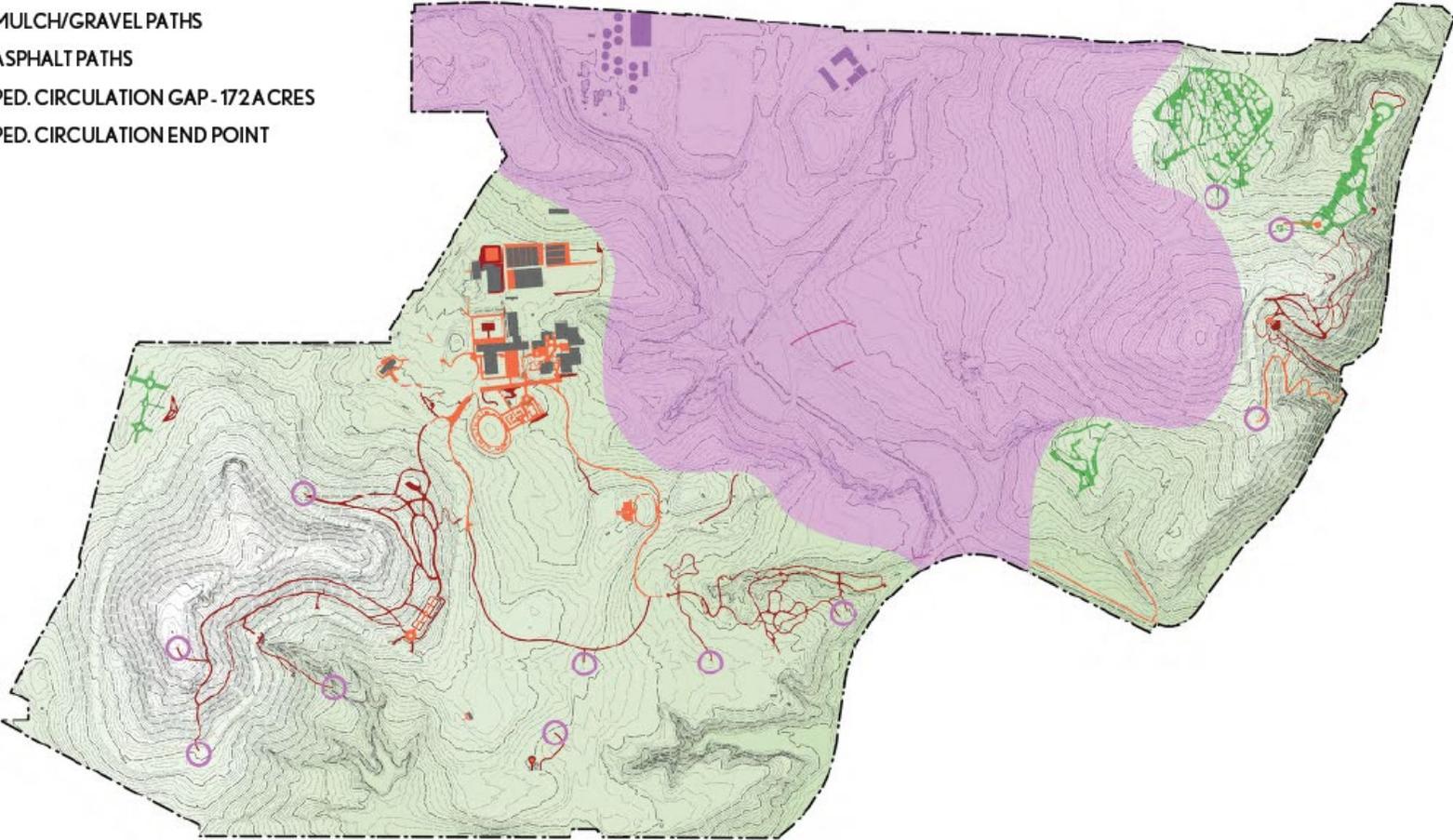
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Appendix: 2017 Pedestrian Circulation Assessment

APPENDIX: EXISTING CONDITIONS ANALYSIS

2017: Pedestrian Circulation Assessment

- LAWN/MOWN PATHS
- MULCH/GRAVEL PATHS
- ASPHALT PATHS
- PED. CIRCULATION GAP - 172 ACRES
- PED. CIRCULATION END POINT



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Appendix: 2017 Collections

APPENDIX: EXISTING CONDITIONS ANALYSIS

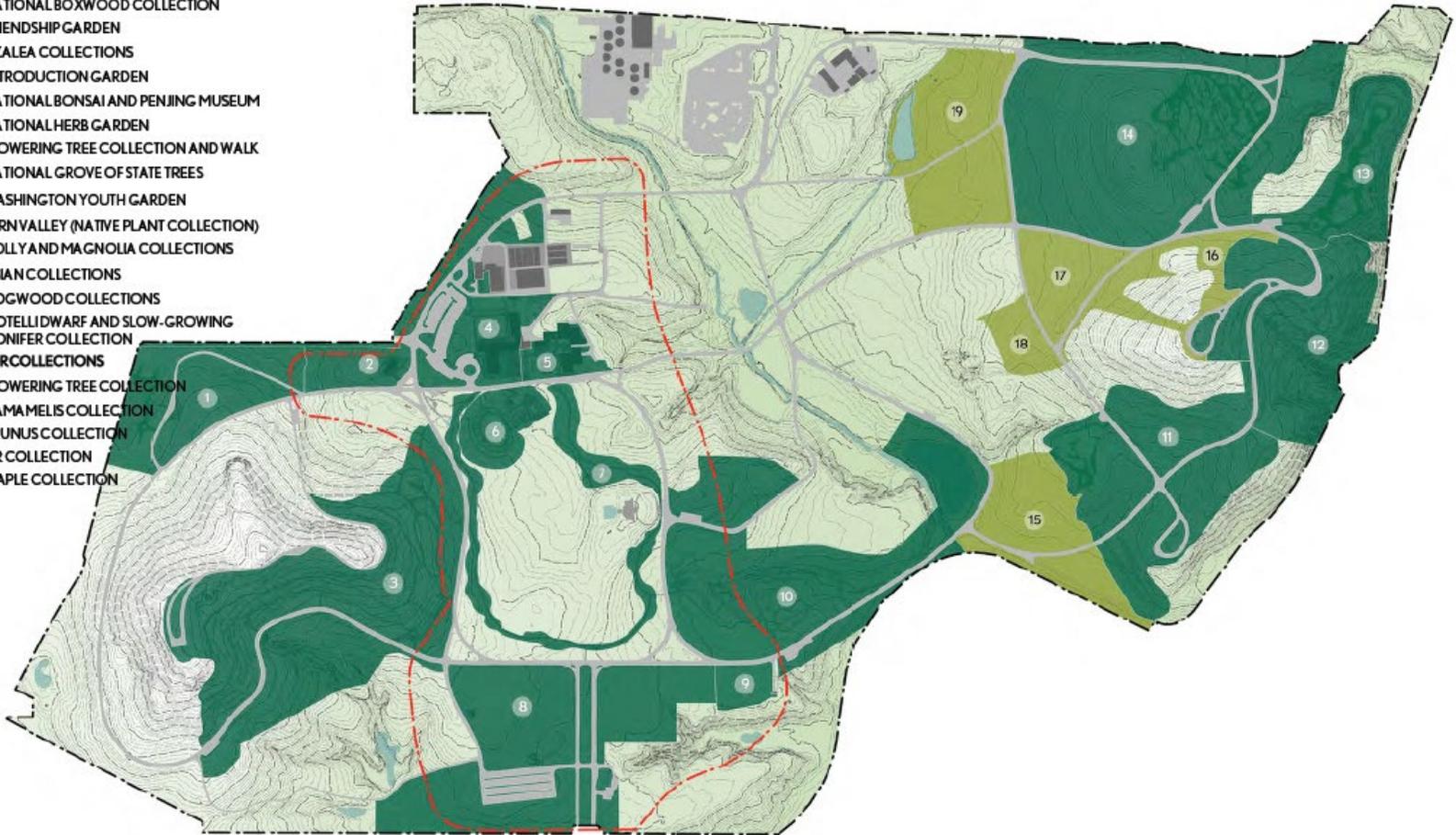
2017: Collections

MAJOR COLLECTIONS

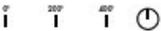
- 1 NATIONAL BOXWOOD COLLECTION
- 2 FRIENDSHIP GARDEN
- 3 AZALEA COLLECTIONS
- 4 INTRODUCTION GARDEN
- 5 NATIONAL BONSAI AND PENJING MUSEUM
- 6 NATIONAL HERB GARDEN
- 7 FLOWERING TREE COLLECTION AND WALK
- 8 NATIONAL GROVE OF STATE TREES
- 9 WASHINGTON YOUTH GARDEN
- 10 FERN VALLEY (NATIVE PLANT COLLECTION)
- 11 HOLLY AND MAGNOLIA COLLECTIONS
- 12 ASIAN COLLECTIONS
- 13 DOGWOOD COLLECTIONS
- 14 GOTELLIDWARF AND SLOW-GROWING CONIFER COLLECTION

MINOR COLLECTIONS

- 15 FLOWERING TREE COLLECTION
- 16 HAMAMELIS COLLECTION
- 17 PRUNUS COLLECTION
- 18 FIR COLLECTION
- 19 MAPLE COLLECTION



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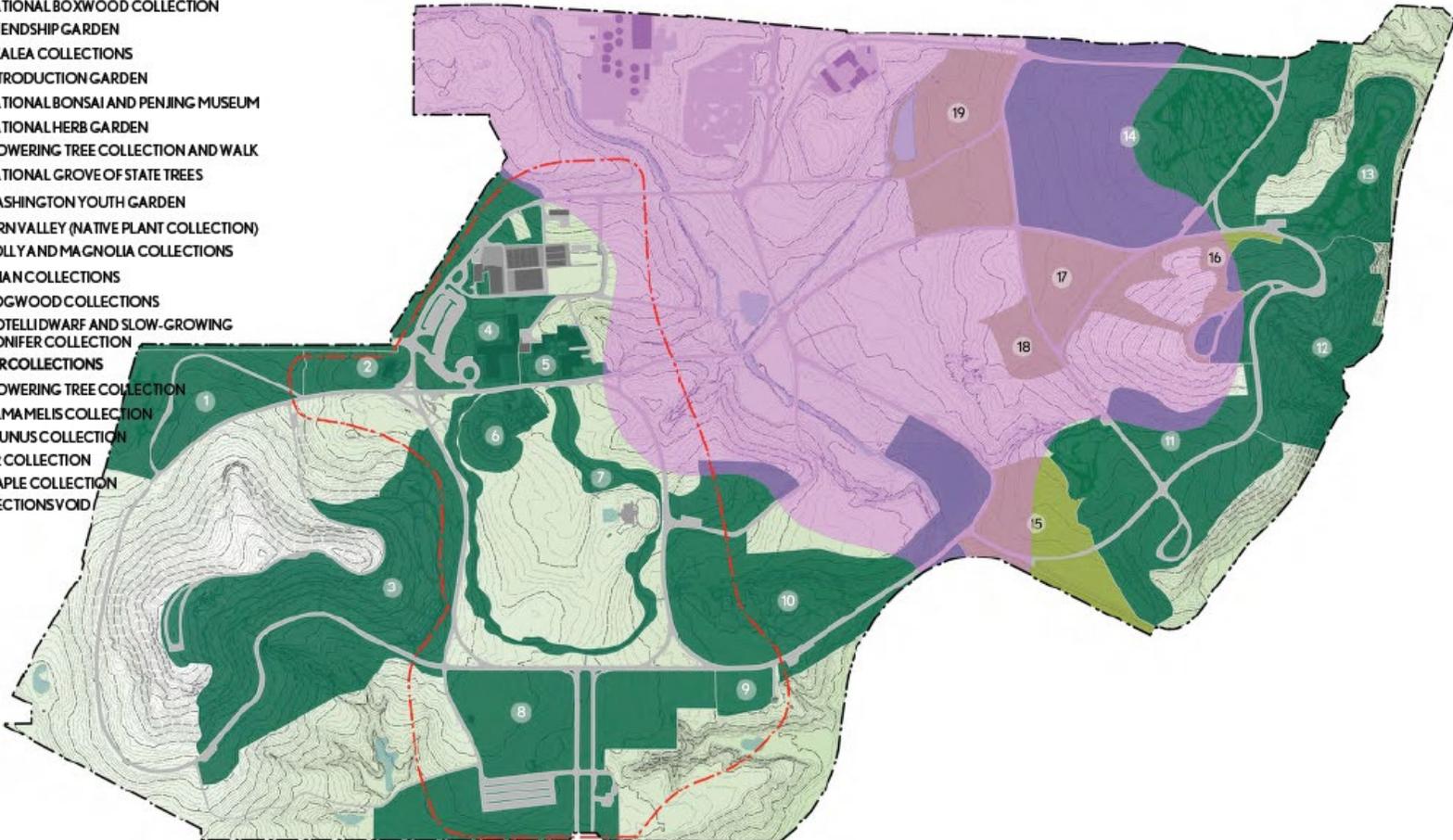
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Appendix: 2017 Collections Assessment

APPENDIX: EXISTING CONDITIONS ANALYSIS

2017: Collections Assessment

- MAJOR COLLECTIONS**
- 1 NATIONAL BOXWOOD COLLECTION
- 2 FRIENDSHIP GARDEN
- 3 AZALEA COLLECTIONS
- 4 INTRODUCTION GARDEN
- 5 NATIONAL BONSAI AND PENJING MUSEUM
- 6 NATIONAL HERB GARDEN
- 7 FLOWERING TREE COLLECTION AND WALK
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- 14 GOTTELDWARF AND SLOW-GROWING CONIFER COLLECTION
- MINOR COLLECTIONS**
- 15 FLOWERING TREE COLLECTION
- 16 HAMAMELIS COLLECTION
- 17 PRUNUS COLLECTION
- 18 FIR COLLECTION
- 19 MAPLE COLLECTION
- COLLECTIONS VOID**



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Appendix: 2017 Existing Parking and Impervious Paving

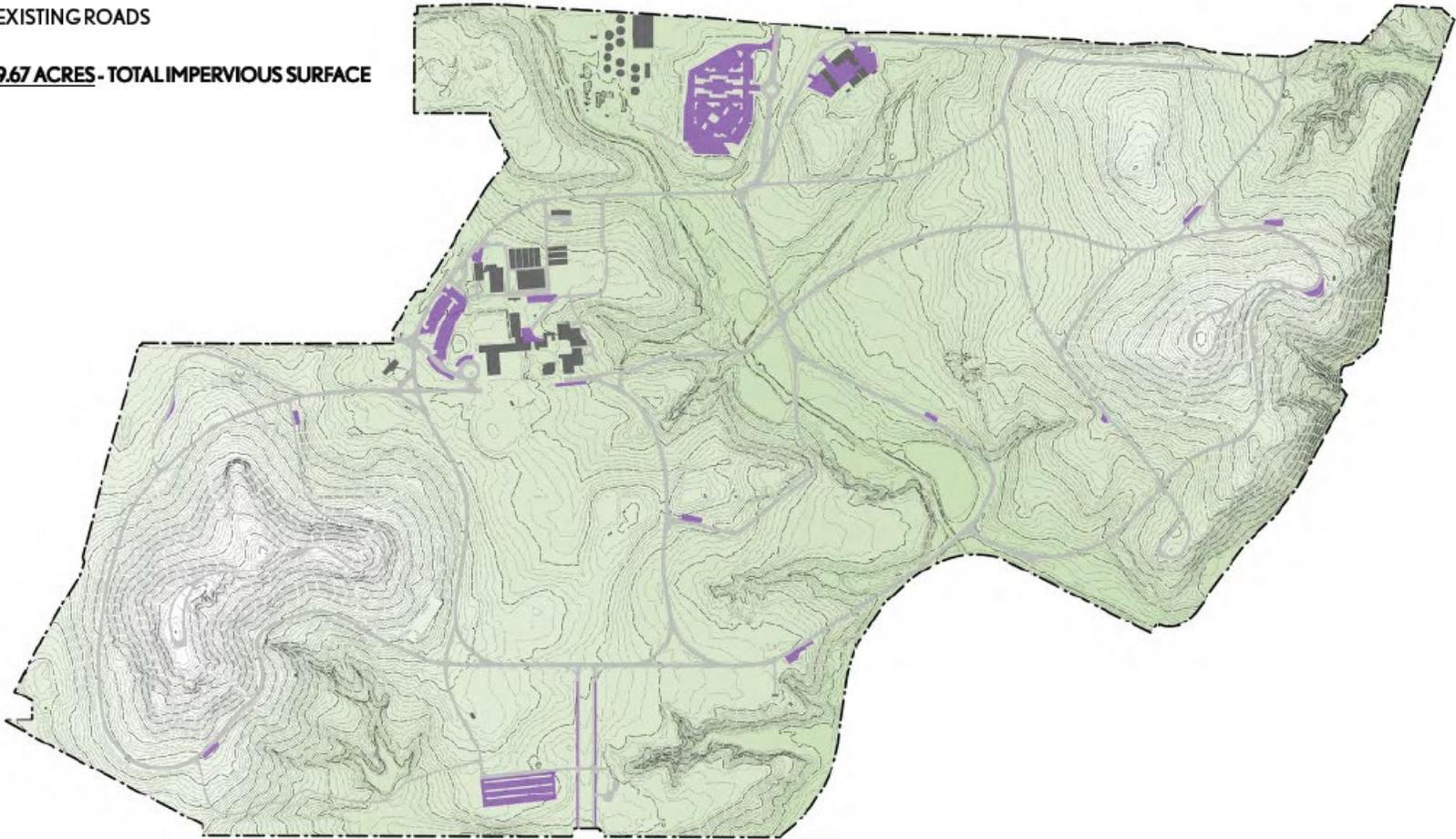
APPENDIX: EXISTING CONDITIONS ANALYSIS

2017: Existing Parking and Impervious Paving

EXISTING PARKING - APPROX 609 SPACES

EXISTING ROADS

APPROX 39.67 ACRES - TOTAL IMPERVIOUS SURFACE



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Appendix: 2017 Landscape Character

APPENDIX: EXISTING CONDITIONS ANALYSIS

2017: Landscape Character

- COLLECTION LAWN
- EVERGREEN HEDGE
- FLOWERING TREE WALK
- WOODLAND
- TREES IN LAWN
- LAWN
- MEADOW
- TURF/GRASSES COLLECTION
- BONSAI GARDENS
- FRIENDSHIP GARDEN
- PERENNIAL COLLECTIONS
- AZALEA ENTRY COURT
- POLLINATOR GARDENS
- DISPLAY GARDENS
- ADMINISTRATION GARDENS
- ORCHARD/NURSERY
- OFF LIMITS TO PUBLIC
- LOST LANDSCAPE
- RAVINE VEGETATION
- WATER



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Appendix: 2017 Landscape Character Assessment

APPENDIX: EXISTING CONDITIONS ANALYSIS

2017: Landscape Character Assessment

- 1. Gardens as internal rooms
 - Administration Garden
 - National Bonsai & Penjing Museum
 - National Herb Garden
- 2. Varying horticultural intensifications
- 3. Areas closed to the public
- 4. Service/indeterminate space
- 5. Temporary research
 - Pollinator Gardens
- 6. Arbor House
- 7. Incomplete Collection
 - Grove of State Trees



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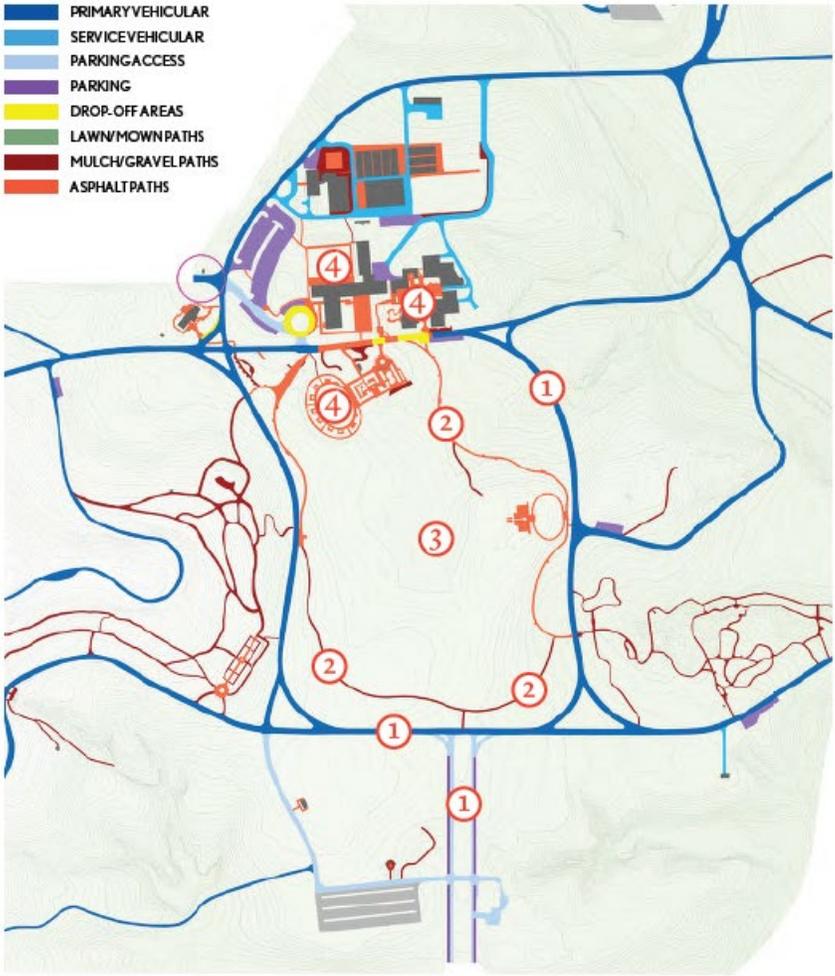
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Appendix: 2017 Circulation Assessment

APPENDIX: EXISTING CONDITIONS ANALYSIS

2017: Circulation Assessment

- 1. Vehicular drive serves as primary pedestrian path
- 2. Flowering Tree Walk lacks circulation connections to adjacencies
- 3. Limited circuits providing options for different length walks
- 4. Primary collections operate as discrete offerings, separated from each other and internally focused



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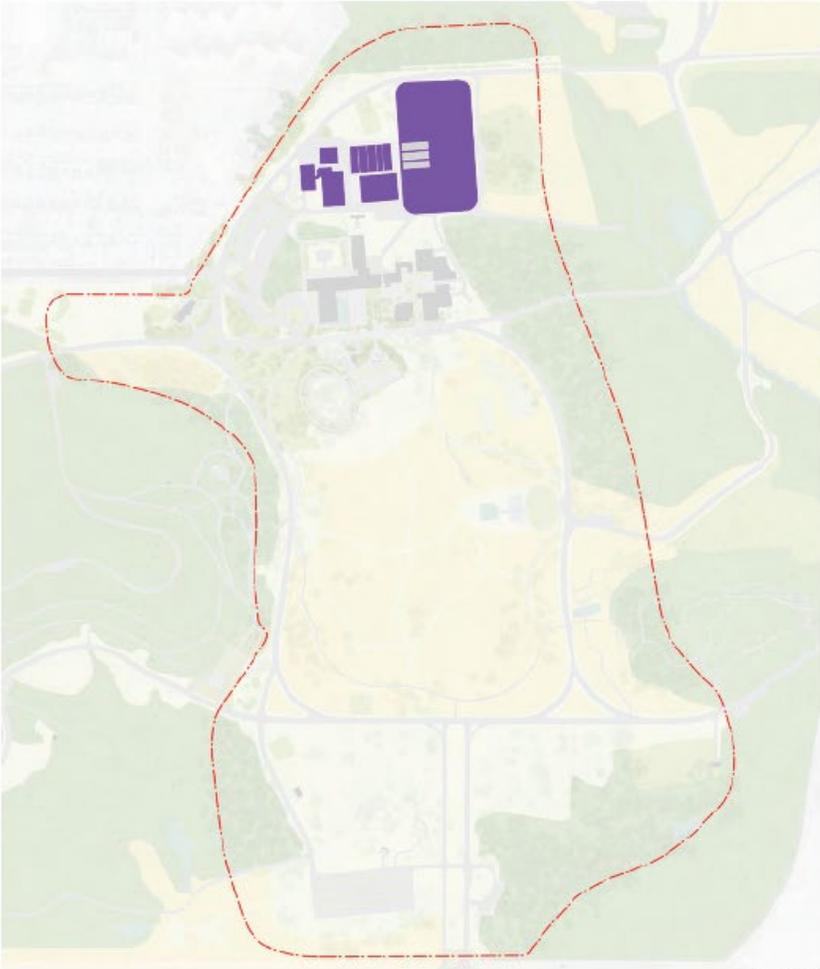
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Appendix: Synergies USNA and ARS Mission

APPENDIX: EXISTING CONDITIONS ANALYSIS

Synergies: USNA and ARS Mission

- Take advantage of the location to highlight the science behind the Arboretum
- Expose and celebrate through programming
- Increase public awareness



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Appendix: Synergies USNA and FONA

APPENDIX: EXISTING CONDITIONS ANALYSIS

Synergies: USNA and FONA

- Strengthen physical connection, relocate offices to Administrative Core
- Recognize their fundraising capacity
- Utilize FONA's resources for interpretive guides, docents, etc.



Appendix: Existing Site Conditions

APPENDIX: BUILT RESOURCES SURVEY

Existing Site Conditions

- 01 - GATEHOUSE
- 02 - "M" STREET RESIDENCE
- 09 - COMFORT STATION 1
- 10 - RAIN SHELTER
- 12 - SHOP / STORE / OFFICE
- 13 - OFFICE / SHOP
- 14 - EQUIPMENT STORAGE
- 15 - GARAGE STORAGE
- 16 - GARAGE STORAGE
- 18 - HEAD HOUSE / GREENHOUSE
- 19 - ADMIN. BUILDING
- 20 - ARBOR HOUSE
- 20A - RESTROOM
- 21 - GAZEBO / AZALEA
- 22 - COMFORT STATION 2
- 25 - FLAM. LIQ. STORAGE
- 29 - GAZEBO-CHINA
- 30 - GAZEBO-BEECH
- 46 - GAZEBO-GOTELLI
- 47 - BRICK KILN COMPLEX
- 48 - RED OAK SPRINGHOUSES
- 49 - JAPANESE PAVILION
- 51 - CHINESE PAVILION
- 52 - BRICK BRIDGE WALL
- 53 - BEECHWOOD ROAD BRIDGE
- 54 - MEADOW RD BRIDGE
- 55 - MORRISON GARDEN
- 56 - R STREET GATES
- 57 - NY AVENUE GATES
- 58 - CONIFER ROAD GATES
- 59 - M STREET GATES
- 60 - BLADESBERG GATES
- 61 - DOGWOOD FOUNTAIN
- 62 - IRON FENCE/WALL
- 63 - CAPITAL COLUMNS
- 65 - NATL. HERB GARDEN
- 66 - JAPANESE FOUNTAIN
- 67 - ARBOR HOUSE SCULP.
- 68 - INTL. PAVILION
- 69 - GARDEN SHED
- 70 - NATL. TREE GROVE



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Built Resources Survey, Proposed Site Conditions

BUILT RESOURCES SURVEY

Proposed Site Conditions

- 01 - GATEHOUSE
- 02 - "M" STREET RESIDENCE
- 09 - COMFORT STATION 1
- 10 - RAIN SHELTER
- 12 - SHOP / STORE / OFFICE
- 13 - OFFICE / SHOP
- 14 - EQUIPMENT STORAGE
- 15 - GARAGE STORAGE
- 16 - GARAGE STORAGE
- 18 - HEAD HOUSE / GREENHOUSE
- 19 - ADMIN. BUILDING
- 20 - ARBOR HOUSE
- 20A - RESTROOM
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- 29 - GAZEBO-CHINA
- 30 - GAZEBO-BEECH
- 46 - GAZEBO-GOTELLI
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- 67 - ARBOR HOUSE SCULP.
- 68 - INTL. PAVILION
- 69 - GARDEN SHED
- 70 - NATL. TREE GROVE



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Experience: Arboretum Core, Precedents: Teaching Greenhouses

EXPERIENCE: ARBORETUM CORE

Precedents: Teaching Greenhouses



LABEL

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Experience: Arboretum Core, Precedents: Teaching Greenhouses

EXPERIENCE: ARBORETUM CORE

Precedents: Teaching Greenhouses



LABEL

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Experience: Arboretum Core, Existing Administrative Character

EXPERIENCE: ARBORETUM CORE Existing Administrative Area Character



LABEL

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Experience: Arboretum Core, Precedent of Ordered Dense Core: Miller House

EXPERIENCE: ARBORETUM CORE Precedent of Ordered Dense Core: Miller House and Garden



ALL PHOTOS BY MILLICENT HARVEY, 2013

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Experience: Arboretum Core, Precedent of Promenade: Miller House

EXPERIENCE: ARBORETUM CORE

Precedent of Promenade: Miller House and Garden



PHOTO BY ALAN WARD

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Experience: Arboretum Core, Precedent of Promenade Garden: Kew Garden

EXPERIENCE: ARBORETUM CORE

Precedent of Promenade Garden: Kew Gardens



PHOTO BY JOSEPH JAMES, 2017



PHOTO BY KEW GARDENS

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Arboretum Core: Precedent of Promenade Pavilion: Rice University

ARBORETUM CORE

Precedent of Promenade Pavilion: Rice University Brochstein Pavilion



ALL PHOTOS BY THOMAS PHIFER AND PARTNERS, 2009

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Experience: Precedent: Parallel Shoulder Parking

EXPERIENCE

Precedent: Parallel Shoulder Parking



PIERCE STOCKING SCENIC DRIVE, SLEEPING BEAR DUNES



ARBORWAY JAMAICA PLAINS, ARNOLD ARBORETUM



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Experience: Character, Precedent of Tree Lined Drives: World's End, MA

EXPERIENCE: CHARACTER

Precedent of Tree Lined Drives: World's End: Hingham, MA — Frederick Law Olmsted



TREE-LINED CARRIAGE PATHS DESIGNED BY FREDERICK LAW OLMSTED



need better
photo