Davis Brody Bond

MARTIN VAN BUREN NATIONAL HISTORICAL SITE

PRE-PLANNING & PROGRAMMING STUDY

National Park Service / Martin Van Buren National Historical Site

PMIS: MAVA – 310971

16 June 2022

Contents

1. PROJECT SUMMARY 4
- Project Overview 6
- Programming Process & Project Goals 8
- Project Team & Participants 10

2. EXISTING INVENTORY & CONDITION ASSESSMENT 12
- Site Location and Description 14
- Existing Office Complex and Visitor Center 28
- Existing Maintenance Facility 40

3. BUILDING PROGRAM REQUIREMENTS 46
- Program Analysis and Requirements 48
- Administration and Visitor Center Program Requirements 50
- Maintenance Program Requirements 56
- Program Efficiency and Space Consolidation 60

4. SITE & CONTEXT ANALYSIS 62
- Site Analysis and Context 64
- Building Siting 70

5. PROPOSED BUILDING DESIGN 72
- Building Design Concept, 74
- Building Massing Concept – Cluster 77
- MAVA Headquarters Floor Plan 78
- Maintenance Facility Floor Plan 86
- Cluster Form + Materiality 90
- Building Massing Concept – Linear 94
- MAVA Headquarters Floor Plan 95
- Maintenance Facility Floor Plan 97
- Linear Form + Materiality 100
- Proposed Building Options 102

6. DESIGN NARRATIVES 104
- Structural 106
- Building Systems 110
- Civil Design 114
- Landscape Design 122
- Interpretation 134
- Cost Estimate 140

7. PROPOSED BUILDING OPTIONS 206
- Option A - Cluster North 208
- Option B - Cluster Orchard 210
- Option C - Linear North 212
- Construction Phasing 214

8. APPENDIX 218

1
PROJECT SUMMARY

MAVA seeks to inspire and educate present and future generations on the life and career of President Martin Van Buren, and the issues facing America during the formative years of the republic through the turbulent decades leading up to the Civil War.

1.1 Project Overview

Over four decades after its establishment, Martin Van Buren National Historic Site (MAVA) continues to preserve, protect, and interpret the home and surrounding estate of Martin Van Buren, the eighth President of the United States. MAVA seeks to inspire and educate present and future generations on the life and career of President Martin Van Buren, and the issues facing America during the formative years of the republic through the turbulent decades leading up to the Civil War. To help the park continue its mission and operate more efficiently, two new distinct building projects dedicated to the preservation and celebration of the site's history are needed: 1) a new visitor contact station and administration building and 2) a new maintenance facility.

Today, MAVA operates out of a series of outdated buildings that do not meet the operational needs of staff and visitors. Davis Brody Bond (DBB) and its consultants studied MAVA's operational needs and developed three distinct planning alternatives for a new visitor contact station, administration building and maintenance facility. The alternatives proposed will focus on sympathetic design, space efficiency and consolidation, and flexibility of public spaces (adaptable for future purposes).

The alternatives will also prioritize alternative ways to meet the park's interpretative requirements, especially those not accommodated in the park's current set up.

In general, the National Park Service visitor engagement patterns are seemingly shifting, and health concerns due to Covid-19 are changing the way visitors want to experience parks. Thus, visitor centers throughout all NPS units are increasingly adapting their services to remain relevant. MAVA and DBB explored creative and innovative alternatives to the conventional NPS visitor centers, administration buildings and maintenance facilities with the intent of reducing the strain on future NPS financial resources. The following ***Pre-Planning & Programming Study for MAVA*** developed by DBB and its consultants will address the park's critical need for new, more efficient structures while questioning the use of traditional exhibit-centric visitor centers.

View of Lindenwald Mansion, Kinderhook, NY

1.2 Programming Process & Project Goals

PRE-PLANNING & PROGRAMMING PROCESS

Davis Brody Bond was selected as the programming architects for the Martin Van Buren National Historic Site Visitor Center and Maintenance Facility space planning and programming study. Recognizing the limitations of the parks current administrative, visitor center and maintenance facilities, DBB collaborated with MAVA to outline the park's operations and space requirements for new buildings. The team aimed to maximize space efficiency while meeting the park's future programmatic needs and growing interpretive goals. To meet the tasks outlined in the scope of services, DBB divided the project into the following phases:

- **Phase 1: Existing conditions documentation**
- **Phase 2: Program data collection and analysis**
- **Phase 3: Concept development**
- **Phase 4: Cost estimating**

During Phase 1 of the project, DBB and its consultant team (A/E team) reviewed existing documents provided by the park, surveyed and photographed the current conditions of the existing office complex (administration trailers), visitor center and the multiple structures that make up the park's maintenance facility. The team's findings can be seen in the Existing Conditions & Inventory Assessment chapter.

Phase 2 gave the A/E team an in-depth look at how MAVA functions. DBB developed and distributed programming questionnaires and interviewed park staff on specific space and operational requirements. The potential challenges and opportunities of new building structures on historically and archaeologically significant grounds and reducing square footage needs were among the critical topics discussed. DBB documented the park's current operations and its future needs (including the impact of the rehabilitation of an Orchard in the park). The data collected was analyzed by DBB and served as the basis for establishing the project's building program and required square footage, presented in the form of program matrix, block diagrams and typical room/furniture layouts.

View of Existing Visitor Center and Headquarters

The team's findings during Phase 1 were used to determine appropriate building siting, the first step in the Concept Development Phase of the project. The park's complex historical narrative and appealing natural resources inspired the building masses and design concepts. The A/E team is proposing three distinct design alternatives or "options" each offering a different relationship to the users it serves and the ground it sits on. Even though each option has a mix of components that make it unique, all options aim to change the conventional view of NPS visitor centers, administration buildings and maintenance facilities. The proposed designs address ground disturbance, building modularity, sustainability, space reduction, flexible programs among other important topics relevant to the future of NPS buildings and architecture as a whole. Construction phasing for each option was studied and cost estimates were developed based on the options proposed. The results of the Space Planning & Programming Process are described in detail in the pages of this report.

IMPORTANT PROJECT DATES

Critical On-site / Virtual Meetings:

- Kick-off Meeting via MS Teams (October 4th, 2021)
- Introduction Site Visit (October 5th, 2021)
- On site Building Survey (November 3rd, 2021)
- 21st Century Visitor and Curatorial Trends Conversation via MS Teams (December 13th, 2021)
- Archeology and Compliance Considerations Discussion via MS Teams (December 9th, 2021)

Interim Deliverables / Presentations

- Programming Questionnaires (December 1st, 2021)
- Programming Presentation - HQ (January 6th, 2022)
- Programming Presentation - Maintenance Building (January 20th, 2022)
- Massing and Site Location (February 17th, 2022)
- Architectural Development Presentation (March 25th, 2022)

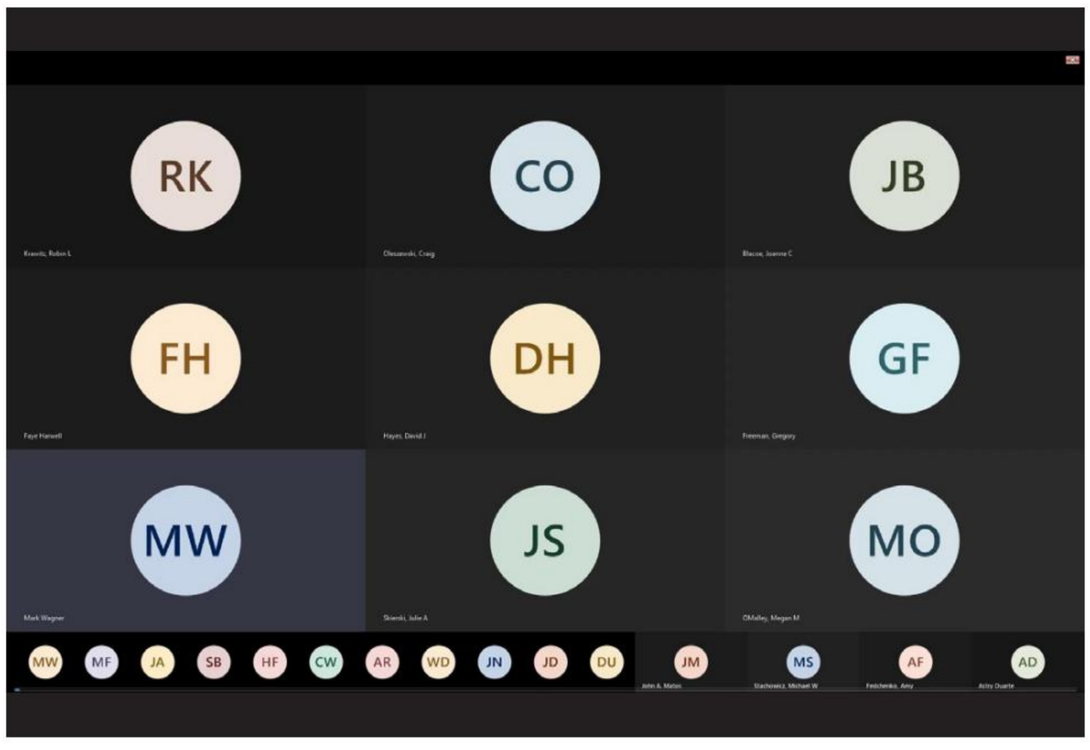
PROJECT GOALS

The following Pre-Planning & Programming Study seeks to provide MAVA with financially, environmentally and operationally sustainable replacements to the outdated building they currently operate in. While the park has adapted well to working within their outdated structures, they have also outgrown them. The park requires more efficient buildings that address long term planning and critical archaeological and environmental concerns, as well as enhances visitor and administrative experiences. Our primary space planning and programming goals include the following:

1. **Understand the state of the park's existing buildings and utilities** (office complex, visitor center and maintenance buildings).
2. **Determine and document the current and future programmatic needs** of visitor and administrative services and maintenance operations at MAVA NHS.
3. **Understand the site's history and narrative** and how it can influence project planning.
4. **Identify opportunities for space efficiency,** flexible spaces and program consolidation in the planning of the new buildings.
5. **Propose spaces that encourage visitor engagement to the outdoors** and maintain the collaborative relationship between MAVA and the Kinderhook community at large.
6. **Minimize impact of scenic viewsheds,** protect the unobstructed views to the surrounding farm fields and Catskill Mountains without compromising functional spaces needed for the park's current and future programs.
7. **Provide contextually sympathetic building masses** that are simultaneously identifiable and respectful of the natural and cultural features of the property.
8. **Consider project development in phases** or over a period of time.
9. **Explore creative and innovative alternatives** to the conventional NPS visitor center that can potentially reduce the strain on NPS financial resources

Site Visit, October 05, 2021
MAVA, Kinderhook, NY

Site Visit, October 05, 2021
MAVA, Kinderhook, NY



Full Team Presentation, March 25, 2022
Microsoft Teams

1.3 Project Team & Participants

PROJECT TEAM

National Parks Service, Interior Region 1
- Julie Skierski, Project Specialist

Martin Van Buren National Historic Site (MAVA)
- Megan O'Malley, *Superintendent*
- Annette Rousseau, *Interpretation and Education Program Manager*
- Caitlin Woodie, *Museum Technician*
- Michael Wasco, *Museum Specialist*
- Steve Hanaburgh, *Supervisory Facility Operations Specialist*
- Mike Orapello, *Facility Operations*
- Will Daly, *Facility Operations*

ARCHITECTURE
Davis Brody Bond, LLP
- Mark Wagner, *Project Director*
- Astry Duarte, *Project Designer*
- Andre Pause, *Project Designer*

STRUCTURAL ENGINEERING
Thornton Tomasetti
Gregory Freeman

MEP ENGINEERING
WSP Group
Phil Brychta • Matthew Flannery

CIVIL ENGINEERING
Langan
Juan C. Osorio • John Matos

LANDSCAPE
Rhodeside Harwell (RHI)
Faye Harwell • Jeff Dragan

INTERPRETATION
C&G Partners
Jonathan Alger • Laura Grady

COST ESTIMATING
Axias
Thomas Joseph

PARTICIPANTS

- Tracy McConnor, Contract Specialist (NPS)
- Joanne Blacoe, Interpretation Planner (NPS)
- David Hayes, Chief of Resource Management (ROVA)
- Dave Uschold, Regional Coordinator (NPS)
- David Goldstein, Anthropologist (NPS)
- Amy Fedchenko, Archaeologist (NPS)
- James Nyman, Archaeologist (NPS)
- Jennifer Claster, (NPS)
- Michael Stachowicz, NPS Program Manager Preservation Maintenance, Olmsted Center for Landscape Preservation (NPS)
- Robert Page, Director Olmsted Center for Landscape Preservation (NPS)

2 EXISTING CONDITIONS & INVENTORY ASSESSMENT

NPS Boundary

Martin Van Buren
Nature Area Trailhead

Old Post Road

Route 9-H

Trailhead

Administration/
Visitor Services

North Woodlot

Maint.
Buildings

Lower Terrace
Field

Upper
Terrace
Field

Lindenwald
Mansion

Escarpment

Curatorial
Storage

Barn

Irrigation
Ditch

Farm
Cottage

South
Woodlot

Farm
Road

Roxbury
Farm
Complex

Kinderhook Creek

Lower Terrace Field

Farm
Road

Ditch Traces

Woodland Area

Albany Avenue (County Route 25)

2.1 Site Location & Description

SITE DESCRIPTION (DBB & RHI)

Martin Van Buren National Historic Site
1013 Old Post Road
Kinderhook, NY 12106-3605

Martin Van Buren National Historic Site was established on October 26, 1974 by an act of Congress (Public Law 93-486) to commemorate the life and work of Martin Van Buren, the eighth president of the United States. Located two miles east of Kinderhook in Columbia County, NY and 20 miles south of Albany, the park's authorized boundary includes approximately 300 acres of mostly active farmlands bordered by woodland, open green spaces and undeveloped agricultural land.

Lindenwald, the land and home of Van Buren following his defeat for a second term (1841-1862) is the centerpiece of this historic site. Lindenwald, a Georgian-style mansion, is the park's main cultural resource and attraction. In addition to the mansion, a semi-circular driveway lined with locust trees, Old Post Road, the South Gatehouse, North Gatehouse foundation, the well cap, the carriage path and the farm cottage contribute to the historical character of the property. A restored portion of the circular front garden near the front entrance to the mansion and remnants of Van Buren's fish ponds are historic features that remain.

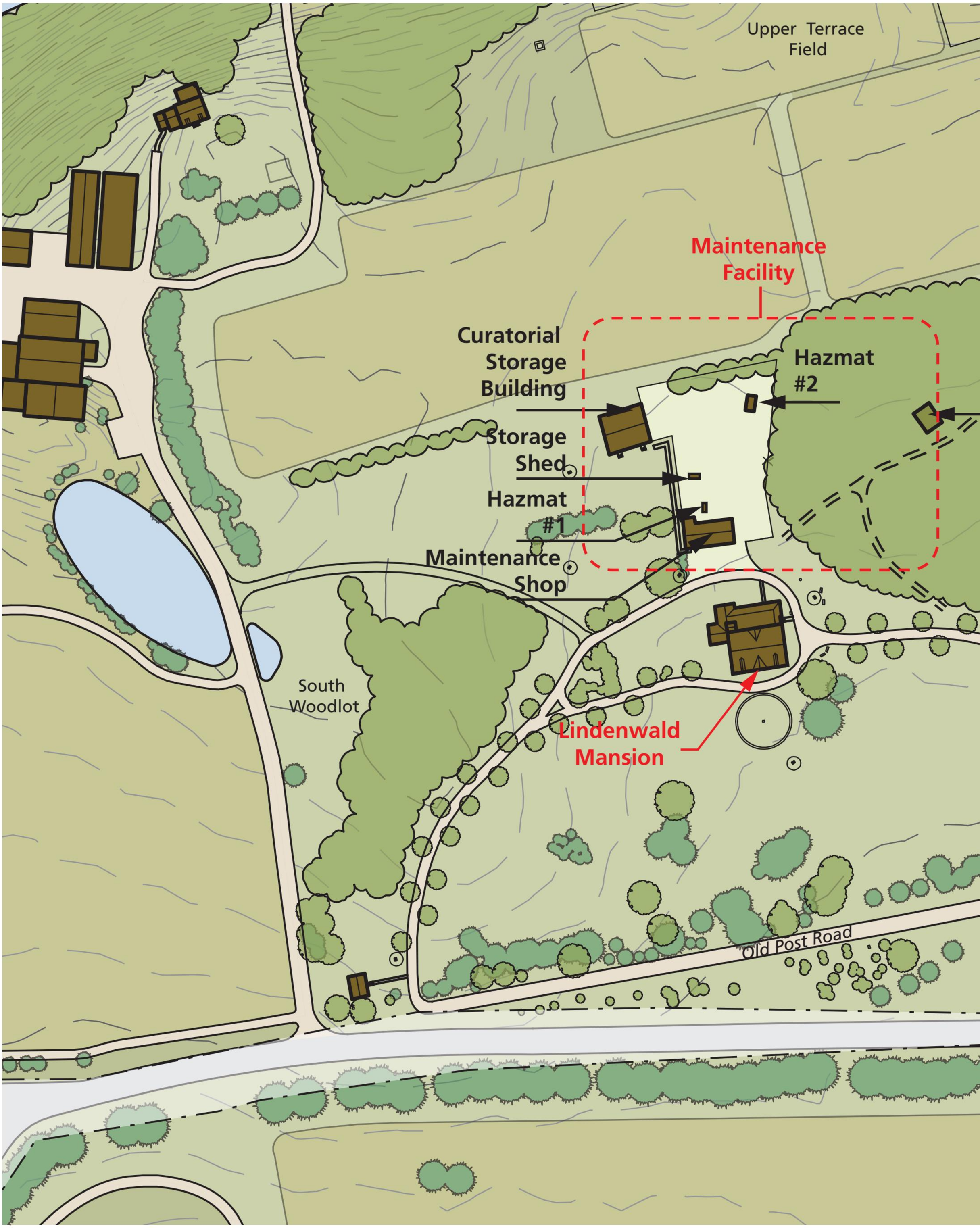
North of the mansion is an existing densely-planted woodlot. This area will be used to reestablish the historically significant Martin Van Buren Orchard at Lindenwald. The rehabilitation plan, led by Olmsted Center for Landscape Preservation, states the purpose of the project is "to increase the historic authenticity of the landscape and improve visitor experience of the park". The future orchard will be an important component in the interpretation and visitor center design.

Other built structures sitting on the historic property include: a series of waysides within the historic core, the park visitor center and office complex (administration trailers) housed in temporary trailers north of Lindenwald, and the park's curatorial storage building, and maintenance buildings located behind the mansion. The latter have altered the open character of the rear pasture that was appreciated during the historically significant period of the site. At the time of this writing, these structures are planned to be demolished as part of the park's plan for historic character enhancement.

Natural resources within the park's boundaries include the riparian corridor along Kinderhook Creek and the wooded areas bordering the upper and lower terrace fields. Recreational visitors have access to the Lindenwald wayside trail around the park grounds. The park trails connect to additional nature trails in the area.

Van Buren's interest in progressive farming and his political beliefs, which emphasized the value of agriculture and free labor to the future of democracy are reflected in the property. The core of Van Buren's original property which include the park's fundamental resources has been persevered by the park for over four decades. According to the Cultural Landscape Report for Martin Van Buren National Historic Site, Volume II "The fundamental resources at Martin Van Buren National Historic Site are the Lindenwald mansion, the South Gatehouse, the Farm Cottage, the Lindenwald cultural landscape encompassing the historic core and historic farmlands, the museum collections, Van Buren period archaeological sites, and scenic viewsheds". The historically significant cultural landscape has mostly retained its integrity. However, as noted above, the landscape has seen some changes since the Van Buren era due to "loss of historic outbuildings and barns, the addition of new farm buildings and circulation routes, the growth and decline of vegetation, and the accommodation for public use".

**(Sources: National Park Service, Olmsted Center for Landscape Preservation, Orchard Rehabilitation Plan, Martin Van Buren National Historic Site, Kinderhook, NY, 2021; National Park Service, Olmsted Center for Landscape Preservation, Cultural Landscape Report for Martin Van Buren National Historic Site, Kinderhook, NY, Volume II: Updated Treatment Plan, Record of Treatment, 2016).*


Upper Terrace Field
Maintenance Facility
Curatorial Storage Building
Hazmat #2
Storage Shed
Hazmat #1
Maintenance Shop
South Woodlot
Lindenwald Mansion
Old Post Road

North
Woodlot
Maintenance
Storage
Pole Barn
Administration/
Visitor Services
Office
Complex
(Trailers)
Visitor
Center
(Trailers)
Parking
29 Spaces
Route 9-H

MAVA Site Location and Description, *cont'd*

View of Lindenwald Mansion, MAVA NHS

Interior of Lindenwald Mansion, MAVA NHS

Interior of Lindenwald Mansion, MAVA NHS

South Gatehouse, MAVA NHS

View towards Agricultural Fields (Upper Terrace Field)

North Gatehouse, MAVA NHS

PARKING

The National Park Service constructed an asphalt visitor parking lot in the triangle of land between the Old Post Road and Route 9H at the northeast corner of the property. There, a short asphalt entry drive from Route 9H turns left into the parking area. There is a large green island in the center of the lot which vehicles maneuver around to park in the 29 lined car parking spaces at the east side of the lot, including two compliant accessible spaces. Bus offloading and parking, which accommodates two buses, is located at the west drive aisle of the parking lot at the pedestrian path leading to the visitor center.

VEHICULAR CIRCULATION

When Route 9H was built in the 1930's, it followed much of the roadbed of the Old Post Road. A trace of this old road was preserved in front of the Van Buren property from which it continues north. It is currently maintained as an unpaved road and connects to the semicircular entry drive, though it is not accessible to public vehicles. The gravel, semicircular entrance drive follows the historic configuration, used by maintenance vehicles and pedestrians only. A gravel roadway connects to this drive at both the north and south sides of the house as well as to the existing maintenance area that lies to the west. The gravel continues up to the maintenance buildings garage doors which face the mansion and to a large gravel maintenance yard further west.

PEDESTRIAN CIRCULATION

Visitors must park in the lot and access the rest of the site by pedestrian pathways. An asphalt path runs from the western edge of the parking lot, crosses Old Post Road and leads to the accessible ramp up to the Visitor Center. From the Visitor Center or the parking lot, pedestrians have access to the mansion by walking south along the Old Post Road then along the north section of the semi-circular entry drive. The southern end of the entry drive loops back to Old Post Road.

There are other trails of mown grass around the site that have interpretive signage. One of these trails links up with the Kinderhook Dutch Farming Heritage Connector running north along Old Post Road.

Leashed dogs are allowed in the park, except for the Kinderhook trail.

SITE LIGHTING

Existing site lighting is only at the parking lot and Visitor Center path. Around the parking lot, there are several small area lights mounted on top of ten-foot-high wood poles. The pedestrian path from Old Post Road to the Visitor Center is lined with mushroom cap garden lights, mounted on small concrete footings

Parking Area, MAVA NHS

Pedestrian path towards Lindenwald.

North Woodlot, MAVA NHS

MAVA Site Location and Description, *cont'd*

North Wood Lot

Cherry Trees

Upper Terrace Field

KNOWN AREAS OF SENSITIVE CULTURAL AND NATURAL RESOURCES

-Views and Vistas

The dramatic views west to the adjacent cultivated fields and distant Catskill Mountains are vital to understanding the context of Van Buren's Lindenwald. Currently the best viewing spots are the western side of the North Woodlot.

AREAS IN NEED OF CODE COMPLIANT UPDATES

-ABBAS

The requirements for accessible paths as defined by ADA guidelines are 'firm, stable and slip resistant.' The asphalt parking area and the asphalt path from the parking area to the visitor center are accessible pathways. The gravel roads that lead from the parking lot and Visitor Center to the mansion meet the accessibility criteria. Park staff report that visitors with accessibility issues can be driven to the mansion in a small electric vehicle.

SITE FURNISHINGS

There are wood benches, metal benches, metal and wood picnic tables and metal trash receptacles located on the north side of the house and around the Visitor Center. A small bicycle rack is adjacent to the parking area and a single tall, metal flagpole is in the parking lot island. A historic urn, which was in the circular lawn area in front of the mansion is missing.

TOPOGRAPHY

The study area is essentially flat with no significant grade changes.

VEGETATION

A distinctive allée of black locust trees, line the semi-circular entry drive. The allée was planted before Van Buren purchased the property and was maintained during his residency. Missing trees in the allée have since been replanted by the National Park Service. Most of the landscape around the mansion and within the entry drive is lawn. Across from the front door, there is a circular garden feature defined by a stone dust border, which Van Buren's maintained as a manicured lawn, different from the surrounding front lawn which was left unkempt. Currently all the lawn areas are maintained in the same manner.

An historic row of pine trees line the Old Post Road and remains mostly intact. Crabapples planted in a gridded pattern has been installed between the parking lot and the Visitor Center to reference an orchard planted during Van Buren's time. The original orchard was situated between the current Visitor Center and mansion which is currently an area of predominantly volunteer cherry, ash and black locust trees called the North Woodlot. A large mown lawn area extends west from the Visitor Center and north of the North Woodlot. A mature hedgerow runs east/west on the north side of the Visitor Center. The NPS lot north of the parking lot, across the entry drive from Route 9H, is undeveloped mature woodland between Route 9H and Old Post Road.

There is no shrub planting at the foundations of the mansion or Visitor Center and no significant ornamental planting in the park. The entire park is well maintained by a small crew of NPS personnel.

EXISTING SITE SYSTEMS (WSP)

The MAVA compound is provided with single phase power (120V) from National Grid. Metered connections are provided to the Office Complex and Visitor Center and the Lindenwald Mansion.

The site has no natural gas connection. Fuel is delivered via truck and held in aboveground storage tanks (AST). The site has no water or sewer utility connections. Water is pumped from the ground, and sanitary piping is discharged to septic tanks and leach fields.

The site's fiber optic telecommunications connection enters the Office Complex and Visitor Center and is then routed to other buildings. The South Gate house has an abandoned water well, and a septic tank and leach field.

Lindenwald

Heating is provided by kerosene-fueled hot water boilers. Kerosene is stored in aboveground storage tanks. There is a planned upgrade to replace kerosene infrastructure with fuel oil. Electrical is supplied to the building via external transformer on grade. Power is provided at 120 volt / single phase.

Water is provided to the building via a well, which feeds the house and the fire water storage tank. There is a septic tank with leach field. These services are shared with the Maintenance Shop and Curatorial Storage buildings.

The building has sprinklers throughout, with a nitrogen tank mist system located in the basement. Water is stored in a 3,000 gallon below grade fire water storage tank. The building is equipped with a VESDA detection system.

The building is equipped with a security system.

SITE UTILITIES (LANGAN)

Water Utility

There are three water wells on-site; however only two are currently in use, approximate locations are provided on Figure 1. The first active well is located in the maintenance yard and provides water to the Maintenance Shop. At this time, the water connection to the Lindenwald Mansion exists and operates but the well it sources from, location, age, and material of piping is unknown.

The second active well is located south of the Visitor Center/ Office Complex and services that building. The material, age, and condition of the wells and corresponding pipes are unknown at this time. The third well, which was abandoned in 2014, is adjacent to the South Gatehouse.

Sanitary Service

There are three septic tanks located on-site. The septic system that serves the Visitor Center/Office Complex is comprised of 4-in ductile iron pipe flowing via gravity to a 1500-gal septic tank, and 440-gal pump chamber. From the pump chamber, it flows via a 3-in PVC force main to a leach field that lies to the north of the Visitor Center/Office Complex. Per correspondence with Park staff, this system was installed approximately between 1996 and 1997, and is still currently operating.

The remaining two septic tanks are located west of the Maintenance Shop, and adjacent to the South Gatehouse, respectively. Both have an associated leach field, see Figure 1. The material, age, and condition of these septic systems are unknown at this time.

Storm Drainage

The topography of the site was observed to be relatively flat, with localized depressions concentrated mostly to the front lawn area. There are no catch basins located on-site. According to the Facility Manager and Park staff, the soil drains well and no issues with ponding have arisen.

The only storm infrastructure located on-site is at the Lindenwald Mansion and Maintenance Shop. The downspouts from the Lindenwald House drain at-grade, directly into 11 cast-iron grates spread out around the house. Per As-Builts dated 1986, these drains are then routed underground to four different 600-gal leaching tanks (dry wells), located on each side of the Lindenwald House. Rainwater from the Maintenance Shop is also managed via a combination of at-grade discharge and via underground drain piping. As-built documents dated 1986 indicate that this underground drain is piped to one of the 600-gal leaching tanks that also serves the Lindenwald Mansion. The material of the underground pipes and tanks is unknown at this time. See image below for location of downspouts, piping, and leaching tank (dry wells).

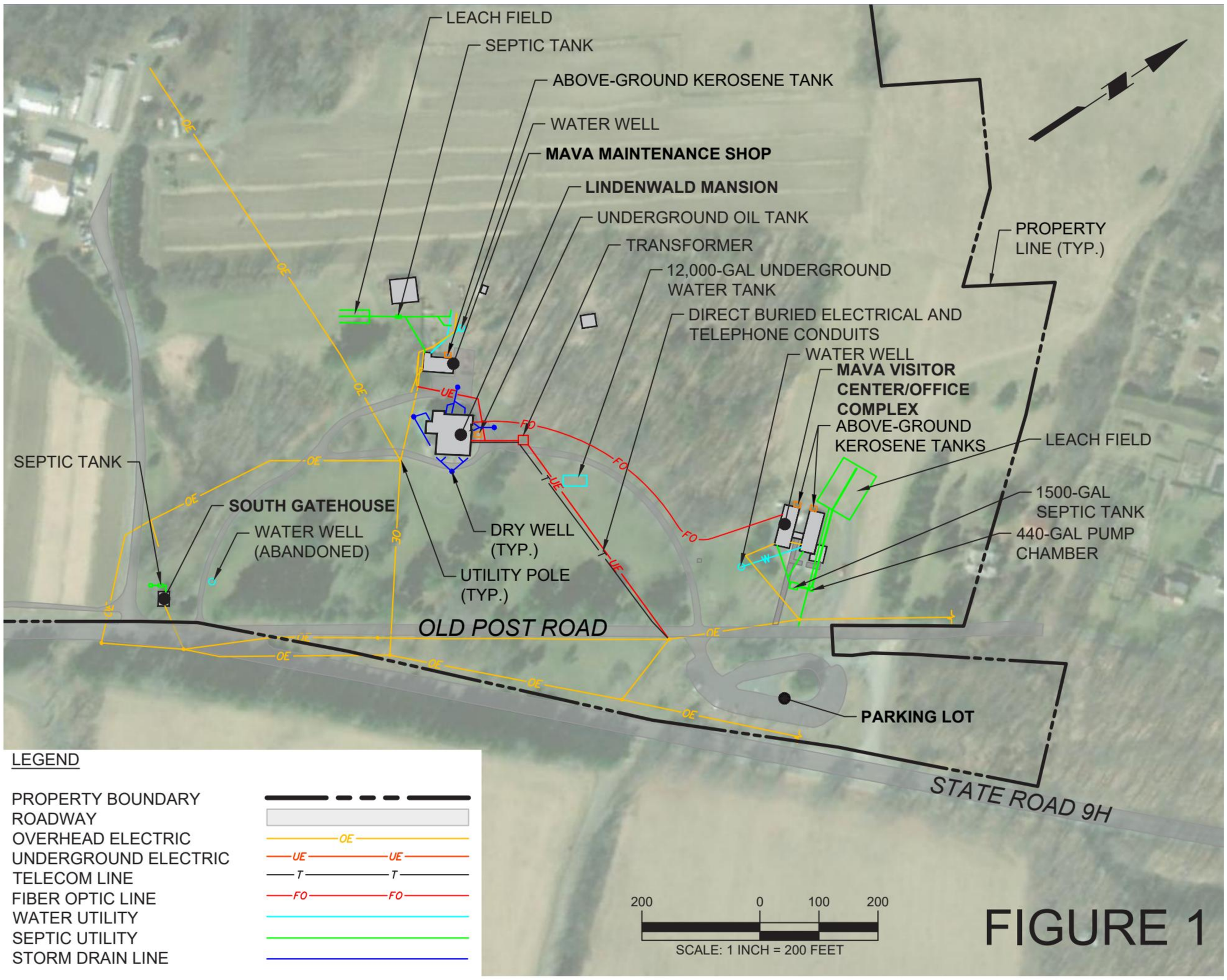


Figure 1 : Utility Site Plan

Figure 2 : As-Built Drainage for Downspouts

Septic Tank and Lift Station Manholes

Heating/Fuel Service

Above ground kerosene tanks are located in the maintenance yard and at the rear of the MAVA Office Complex. The kerosene tanks are normally refilled every two weeks during the winter. There is also a 1000-gal, fiberglass, underground oil tank adjacent to the Lindenwald Mansion, which services the house. Per photographs in the "Completion Report" for the Lindenwald Mansion, the tank was installed in 1985. The approximate locations of the different tanks is shown in Figure 1 (Page 25).

Electric/Telephone Service

Electric and telephone service is provided through multiple overhead lines that originate from the public electric grid. The electric and telephone lines enter the site overhead at two points. The first point travels overhead to the Visitor Center/ Office Complex from a utility pole located west of Old Post Road across from the parking lot. The second point serves the Lindenwald Mansion and Maintenance Shop. That service transitions to underground at a utility pole installed just south of Old Post Road and the parking lot. From this utility pole, it is routed via direct buried PVC conduits to a transformer located southeast of the Lindenwald Mansion. From the transformer, service is distributed via underground PVC conduits to the Maintenance Shop and Lindenwald Mansion.

As-built documents dated 05/27/1986 indicate that the underground electrical lines were installed in 1985 and continue to be operated by National Grid PLC (formerly known as Niagara Mohawk Power Corp.). The same document indicates that the underground telephone lines were placed in 1985 by Berkshire Telephone Corporation. The approximate location of the transformer, electrical lines, and telephone lines are provided in Figure 1 (Page 25).

Fiber Optic Service

Incoming fiber optic service is via overhead line. Once it reaches the Office Complex, it is routed underground, in a conduit about 1-2-in. in diameter and follows the wood-line towards the Lindenwald Mansion. Per correspondence with Park employees, this line was installed in 2004. Visual inspection revealed areas where the underground conduit was exposed at the surface. Proper re-installation, with adequate cover, will be required in order to meet typical direct-buried requirements.

Natural Gas

There is no natural gas on-site. Potential future aboveground tanks have been considered by the Facility Manager.

Transformer serving Lindenwald House and Maintenance Shops

Above-ground Kerosene Tanks at Office Complex

Accessibility

The site is relatively flat with gentle slopes. Upon visual inspection, walkable paths seem to be accessible, but a topographic survey would be required in order to confirm. However, the 2015 MAVA State of the Park Report describes the Visitor Center and park grounds as accessible. ADA travel paths begin at the parking lot, where two van accessible spaces are located. From here, visitors can make their way to the Visitor Center, which is equipped with an accessible ramp. A gravel walkway leads from the Visitor Center/Office Complex to Lindenwald where a wheelchair lift is available to provide access to the first floor.

Stormwater Management

Because future developments are planned, consideration will have to be given to local and federal stormwater management requirements. Local stormwater management requirements are triggered if a development exceeds 5,000 sf. of land disturbance. The same number also triggers federal requirements. As per Section 438 of the Energy Independence and Security Act of 2007, "The sponsor of any development or redevelopment project involving a Federal facility with a footprint that exceeds 5,000 square feet shall use site planning, design, construction, and maintenance strategies for the property to maintain or restore, to the maximum extent technically feasible, the predevelopment hydrology of the property with regard to the temperature, rate, volume, and duration of flow." Typically, this involves the design and construction of stormwater management facilities that will restore runoff volumes and rates to their pre-development condition. Since this is a historical site and cultural resources could be present underground, there is a limitation to the amount of stormwater management strategies that could be employed. Per ESA 438, technical infeasibility would have to be documented and supported with analyses, maps, and calculations, among others.

Above-ground Kerosene Tanks at Office Complex

ADA accessible ramp into Visitor Center

Martin Van Buren
National Historic Site
Visitor Center &
Park Headquarters

2.2 Existing Office Complex & Visitor Center

MARTIN VAN BUREN NATIONAL HISTORIC SITE OFFICE COMPLEX & VISITOR CENTER

Located across Old Post Road, about 600 feet from Lindenwald is Martin Van Buren National Historic Site's office complex (administration trailers) and visitor center. Based on the A/E teams' visual surveys and conversations with park staff, MAVA is struggling to operate smoothly without the appropriate facilities for visitors, park staff and maintenance operations. The park's administrative functions are currently housed in two outdated prefabricated trailers, constructed in March 2000. Shortly after the administration trailers were in place, a small visitor contact station was built on the northeast corner the trailers by the park maintenance staff. All aforementioned structures were built as temporary measures. However, they have remained in place for 20+ years. While the park has adapted to working within the space available in these structures, they have outgrown them and require a more efficient layout.

Office Complex: Administration (4,600 GSF)

The building includes the following spaces:

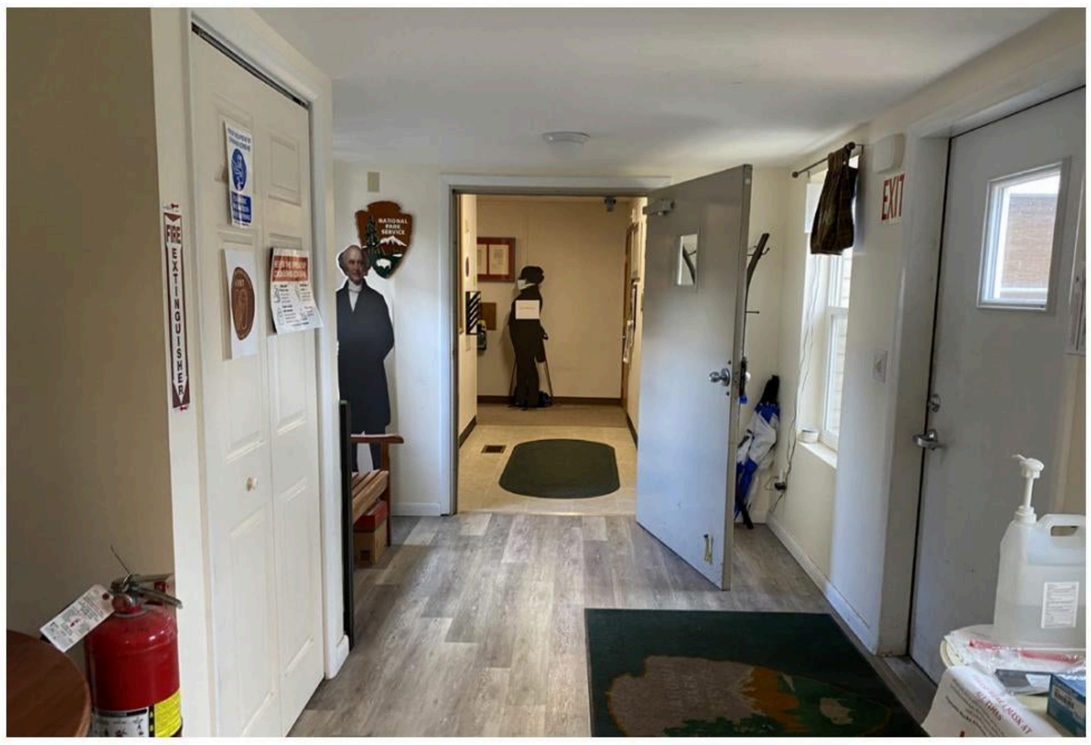
- Entry Way

South Wing:

- Curators Office
- Maintenance Supervisor Office
- (1) Staff Office
- JC
- Mechanical Room
- Restroom
- Pantry
- Conference Room
- Library
- Outdoor Deck

North Wing:

- Superintendent Office
- (4) Staff offices
- Office Administrator / Receptionist
- Storage Room
- Mail Room
- Records Room
- Restroom
- Server Room
- Archival Storage



Entry / connection between North and South Wing

Office Automation Assistant Office North Wing

Existing Headquarters & Visitor Center, *cont'd*

The office complex is comprised of two +/- 2,000 sf., double-wide modular trailers (north wing and south wing). These single-story structures are adjoined by an entry way / reception of +/- 160 sf. on the eastern edge, and an exterior wooden deck in the western edge, allowing the two wings to function as one. The combined areas total 4,600 gsf. Each wing has 5 feet wide double loaded corridor with two rows of programed spaces on each side. To a large extent, the layout maintains a uniform height, material, and direction on each side

The south wing contains most of the parks large gathering spaces, while the north wing contains mostly offices and storage rooms. Common areas like the conference room in the administration building are utilized for multiple purposes, including orientation for large visitors when they cannot be accommodating outside. The library is primarily used internally. Occasionally, park approved visiting scholars have access to the parks collection. From our visual surveys, the building did not present accessibility challenges. Visitors and staff access the building via a ramp that connects to the main pedestrian path.

According to manufacturer's data, the trailers are Construction Type V-B and feature unprotected wood frame with no fire resistance, constructed with standard lumber. .

The building has central hot air heating, air conditioning, and security and smoke alarms, but no sprinkler system. According to the "Preliminary Analysis of Existing Facility Needs and Parking Requirements" Report developed by the NPS in 2008, the server and telecom room and the closets enclosing the heating units have fire- resistance rated walls. The exterior of the building is finished with vinyl exterior siding. Generally, all rooms have acoustic ceiling tiles with LED lighting, wood panels or vinyl covered gypsum walls, commercial grade vinyl tile or carpet with base cove molding. The exterior and interior finishes are in fair conditions given their lifespan and use. Their conditions have clearly depreciated over time and are probably close to the end of their life cycle. Interior finishes although standard throughout, vary slightly in color and style from room to room. These variations are due to some finishes being replaced after the originals deteriorated. At the time of this writing, some wear and tear can be noticed on the walls, ceiling tiles, door frames and vinyl tiles.

Archival Storage in South Wing

Mailroom in South Wing

OFFICES
COMMON / PRIVATE
COMMON/ PUBLIC
VISITOR SERVICES
SUPPORT SPACES / MECH.
STORAGE DEDICATED
STORAGE INFORMAL
SOUTH WING
NORTH WING
28'–0"
28'–0"
LIBRARY (365 SF)
CONFERENCE (365 SF)
BREAK ROOM (380 SF)
W/C (88 SF)
CLOSET (50 SF)
OFFICE (75 SF)
OFFICE (195 SF)
OFFICE (150 SF)
RECEPTION (133 SF)
ENTRY WAY
15'–9"
51'–10"
72'–6"
STORAGE (105 SF)
OFFICE (105 SF)
OFFICE (105 SF)
OFFICE (105 SF)
MAIL (105 SF)
RECORDS (40 SF)
OAA (90 SF)
WC (45 SF)
SERVER (90 SF)
ARCHIVES (135 SF)
SUPERINTENDENT (330 SF)
54'–1"
VISITOR CENTER
13'–6"
FILM PROJECTION
BOOK SHOP
(370 SF)
INFO DESK
WC (35 SF)
WC (45 SF)
22'–10"
10'–4"
13'–11"
32'–4"
TOWARDS LINDENWALD
TOWARDS PARKING AREA
SCALE: 0 4 8 16 ft

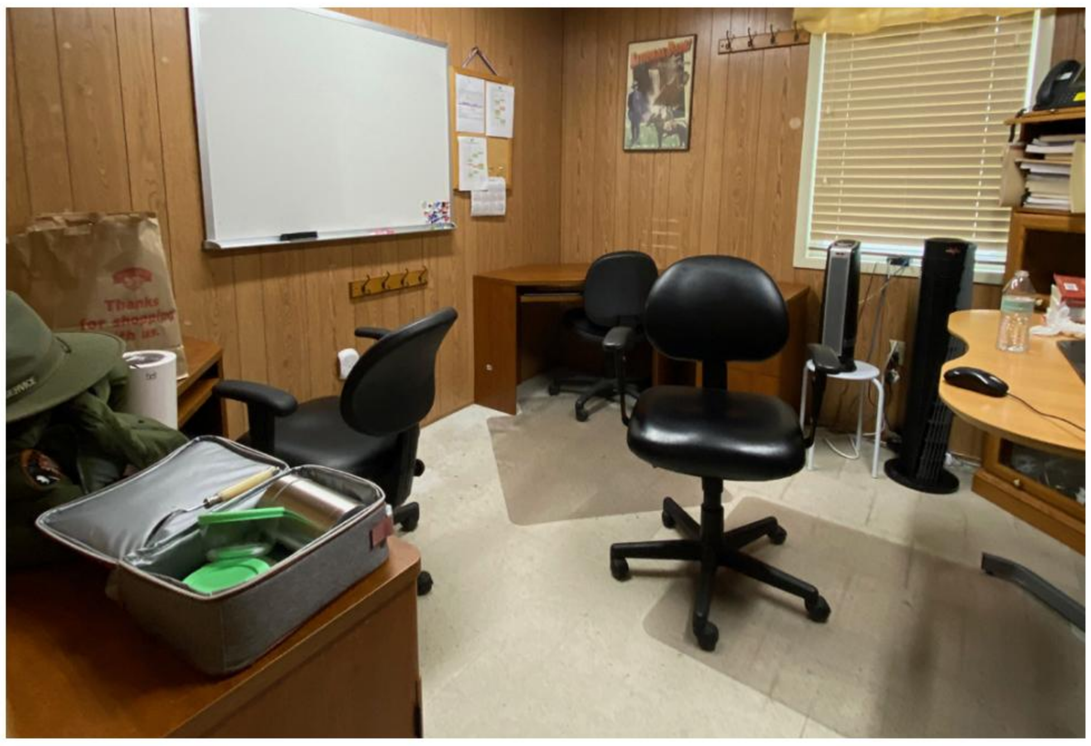
Library in South Wing

Misc. Informal Storage at Corridor North Wing

Pantry in South Wing

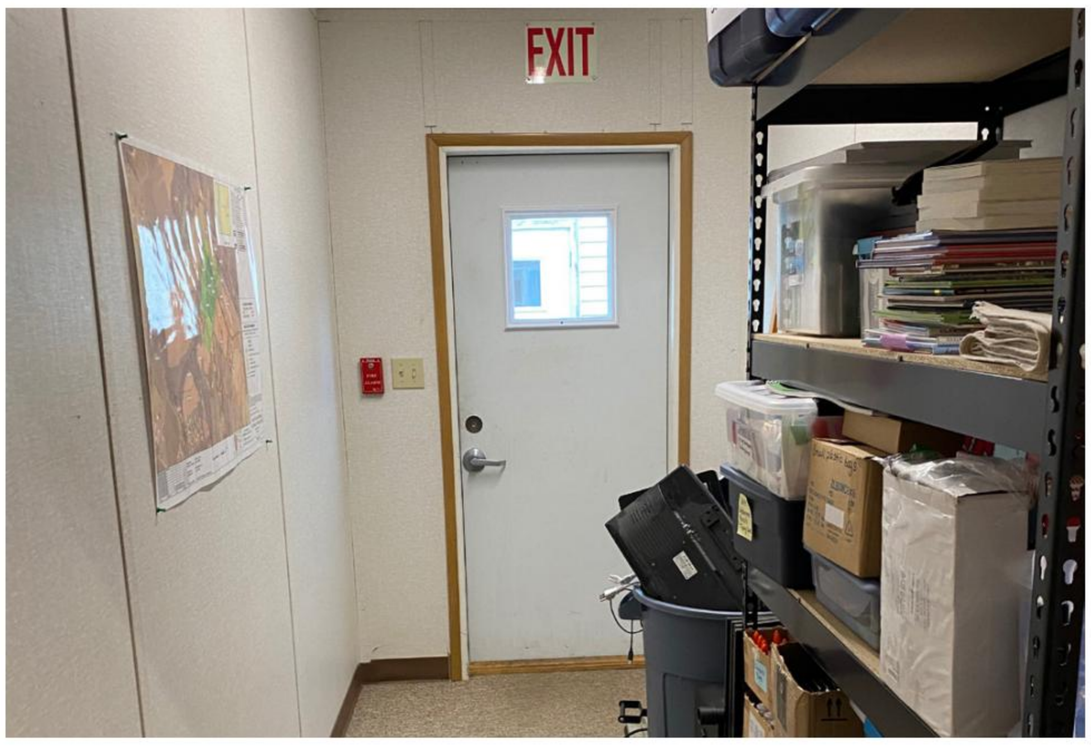
Conference Room in South Wing

Office in South Wing



Office shared by multiple staff members in North Wing

Existing Headquarters & Visitor Center, *cont'd*



Storage at exit corridor in North Wing

Storage at exit corridor in North Wing

Visitor Center Bookshop & Film Display

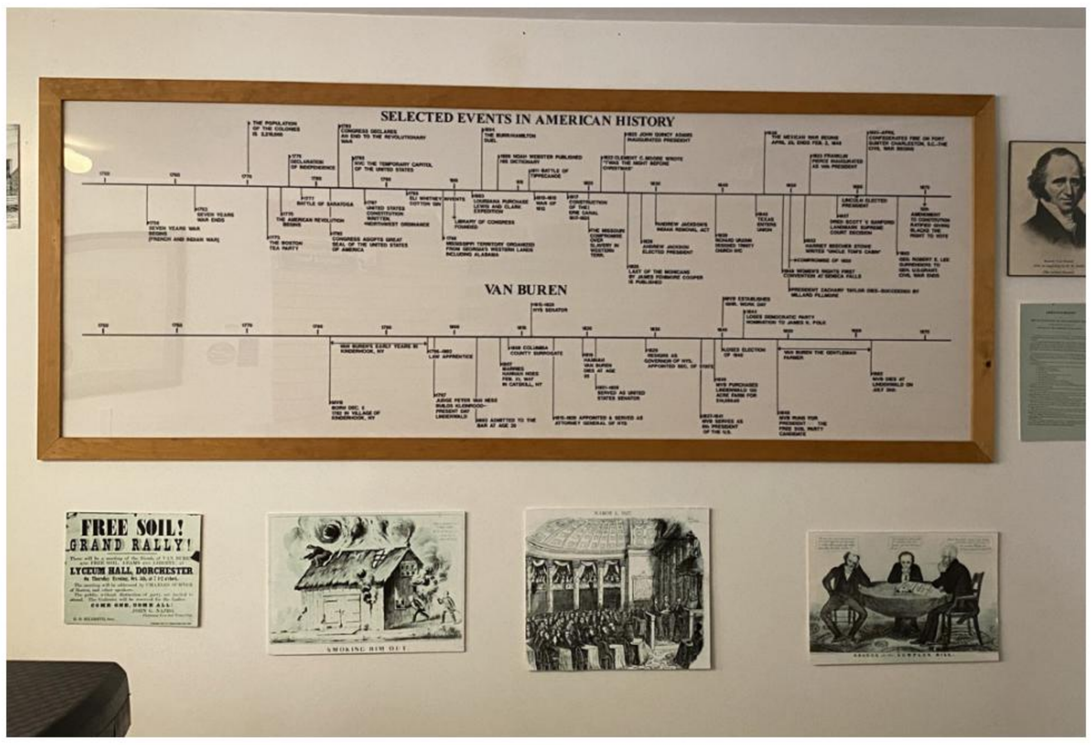
MAVA maintenance staff confirmed the roof of the trailers was replaced in 2014 and the trailers were placed on concrete piers or blocks on specific points on site clear of archaeologically sensitive material. This strategy was used to minimize site disturbance. Skirting around the bottom of the buildings are used to hide the space between the structure and the ground.

Storage in the office complex is noticeably insufficient. Several rooms in the trailers are used for storage in addition to their primary function. There are 3 dedicated storage areas: archive room, temporary records storage and storage room. Permanent museum records are currently stored in one of the staff members offices. The eastern end of the hall in the north wing is utilized for general storage. Additionally, park staff have placed some storage, trash cans and other miscellaneous objects in the hall. Given that the hall is a primary means of egress, it should not be used for any purpose other than as a means of egress and a circulation path, per IBC Section 1024. Although the minimum width or required capacity of a means of egress did not appear to be diminished, the hall, should be -continuously- maintained free of all obstructions or impediments to full instant use in the case of fire or other emergency.

Visitor Center (610 GSF)

As in many other units in the National Park Service, the visitor center at MAVA is intended to be the first point of contact for destination visitors and intended to provide information on where to go and what to do at the park. As mentioned in the previous section, the visitor center was constructed by park staff in 20014, as an addition to the office complex. The visitor center was built to match the office complex in scale, materiality and style. The structures are located next to each other but have no direct connection. Staff members must exit the administration building to access the visitor center. Storage from the visitor center is typically kept in the administration building conference or storage room.

The 610 sf. visitor center houses a small bookshop on one wall, a projection screen for the parks film on another, and exhibit displays on the remaining walls. A small reception desk that doubles as a bookshop checkout, is located by the door and adjacent to the two single-use, unisex bathrooms for visitors. One ranger typically sits behind the reception desk, providing orientation for visitors. Because of the limited space in the visitor center, all functions blend into one another. There is no separation of functions. The open plan doesn't allow for each activity to operate without the visual, audial and physical interruption of the next.



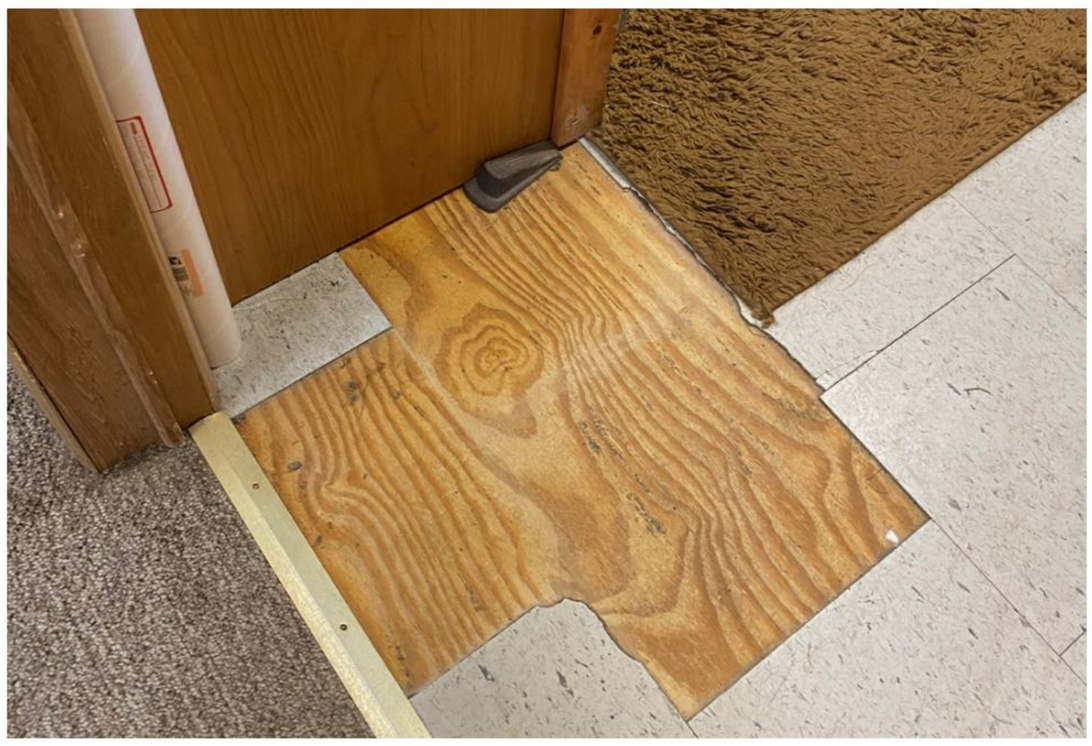
Visitor Center Bookshop & Film Display

Temporary Visitor Center Information Tent

Depreciation of Interior and Exterior Finishes

Depreciation of Interior and Exterior Finishes

Depreciation of Interior and Exterior Finishes



Depreciation of Interior and Exterior Finishes

Depreciation of Interior and Exterior Finishes

Depreciation of Interior and Exterior Finishes

The size of the visitor center cannot accommodate more than 8-10 visitors at a time. The lack of sufficient space also limits the exhibit display. The exhibit area is minimal, displaying a time line of Martin Van Buren's life and politics, and several interpretative display boards with key facts of his life. Although the park grounds remain open year-round, the visitor center and Lindenwald (the park's main interpretative feature), operate from April through December, depending on the weather.

COVID -19

During peak pandemic restrictions, visitors and locals looking to escape their COVID-19 confines and spend time outdoor found relief in the park. However, to ensure the safety of park staff and visitors, many visitor centers closed their facilities to the public. The impact of COVID-19 created an interesting challenge for most national parks: operating without visitor centers. To address this challenge, MAVA installed a temporary information tent for visitors and an informal meeting tent for park staff outdoors between the existing office headquarters and the parking area. These simple yet flexible structures have had a positive effect on park operations and visitors. The tents provided an important insight and influenced the design team in developing the architectural concept for this project.

EXISTING SYSTEMS - (WSP)

Office Complex and Visitors Center

The Office Complex and Visitor Center are cooled by Split DX air conditioning (AC) units. Heating is provided by forced air heating coils, fueled by kerosene stored in aboveground storage tanks.

Electrical is supplied to the building via external transformer on grade. Power is provided at 120 volt / single phase. There is an IT room housing telecommunications equipment which serves the entire compound.

Water is provided to the building via a well. There is a septic tank with leach field. These services are shared with the Maintenance Shop and Curatorial Storage buildings. There is no fire protection system in the building.

All systems will require replacement as part of the renovations, with the possible exception of the water well and septic tank and leach field. These systems will need to be evaluated for capacity before being considered for reuse. A water quality test is recommended for the water and an inspection is recommended for the septic tank to aid this evaluation. Temporary IT service provisions may need to be provided to ensure continued service for the compound throughout the renovations.

EXISTING INTERPRETIVE ELEMENTS (C&G)

The interpretive experience consists of three major different types of experiences: interpretive wayside kiosks, the visitor center, and an interpretive house tour for groups. (In addition to these site-specific experiences, there are also printed materials that visitors can get, and a website and NPS app they can use with multimedia information.)

Interpretive Experience Type 1: Interpretive Kiosks

Before arriving at the visitor center, it is likely that any visitors will have encountered at least one interpretive wayside kiosk. These kiosks are similar scale, design and interpretive density to other kiosks in the National Park Service system nationwide. They appear individually all around the property, at sites of interest and locations where things of interest can be seen in the distance.

The kiosks have two legs, which support a central angled plank that is about waist high. This panel displays one or more visuals, accompanied with text, maps, charts and QR codes, which link to online information. The interpretive visuals of these panels, for the most part, comprise historical engravings, paintings, and other illustrations related to the themes of the site. Accompanying text comes in the form of headlines, introductory paragraphs, body text, captions and credit information. Additional illustrations may include diagrams, maps, and other visuals.

On this site, these kiosks are organized around the landscape, placed in locations where visitors might stand to see a distant sight, and ask questions about it from where they stand. For example, a kiosk interpreting the historic house would be near the house, but far enough away for a visitor to get a view of the house from that point, and oriented in the direction so that the visitor could simultaneously read the kiosk information, and look up to see the house itself, in alternating fashion.

For example, one kiosk wayside panel is titled "...a Farmer in my native Town" and features a historical image of Van Buren, a large artist's interpretation of the landscape of the Lindenwald area circa 1850, a quote, a paragraph of text, and apple and pear species historically grown on the site.

Around the site, there are a total of 12 interpretive kiosks, which range in subject matter from historical to natural. For the purposes of this project, there has been no discussion of augmenting, revising, or replacing these interpretive kiosks. In time, of course, it will be necessary to repair or replace them as they are worn, but they are designed in a durable way

Interpretive Experience Type 2: Visitor Center

The visitor center is essentially a one room space inside a raised temporary trailer just west of the north end of the parking lot, adjacent to the temporary trailers that hold staff offices, the library, storage, and conference rooms. The general impression of the space is that it is temporary, modest and small, with very basic fixtures and displays.

Inside this single room, which measures perhaps 200-300 SF total, the largest function is that of a bookstore or shop. A small desk, roughly 10 feet inside the front door, is the location for the person who is tending the store. Behind this location, one wall allows for changing merchandise to be on view. One last wall in the back of the room has some additional display furniture.

On the opposite wall of the same small room are two additional elements. There is a drop-down screen and ceiling-mounted projector, which is used to show an orientation film about the site. Next to that, is one wall that has a series of simple visual illustrations, the largest of which is a simple timeline of events relative to the site. Just inside the front door to the right, opposite the entrances to the two restrooms, are two additional display boards, and a cut out scale figure of Martin Van Buren himself, with his famous hairstyle.

When our team visited, it was during Covid times, so the room was not open to the visiting public. We heard, but did not experience first-hand, that the room is challenging to use for its purposes, given its size and the multiple functions inside it. This is not hard to imagine: an orientation movie, a shopping experience, and waiting space for a restroom would be a challenging set of overlapping functions in any space, not to mention one that is small.

Interpretive Experience Type 3: House Tour

The centerpiece experience of the visitor experience at this site is the house tour for small groups. A group of eight or 10 visitors maximum is accompanied by a knowledgeable interpretive guide, moving through the rooms of the house, and hearing verbal explanations from the guide as the tour proceeds. The guide draws attention to various parts of the spaces as the accompanying live narration plays out.

The tour includes the main first floor of the home, some rooms in the lower level / basement, and some rooms in the upstairs (mostly bedrooms). There is also an attic floor, which is not open for normal visitors. There are additional rooms in the basement, first and second floors that are not part of the tour.

Each room is decorated not only in a period manner, but also in a way to suggest a specific historical moment in time in some cases. For example, the large main dining room in the center of the first floor, when we visited, had a specific set of tableware, carefully produced false food items, and other elements sent out. These were in order to evoke the particular historical moment when the Free Soil Party was founded in that room at one point. Another example would be an upstairs bedroom with furnishings and beddings arranged deliberately casually to suggest Van Buren's sickbed at a certain point.

Open rooms use similar techniques, but not necessarily recreating a specific moment in time. These may recreate a particular use, or make a comment on the social situation of the time, placing props, soft goods, and furnishings to highlight a particular aspect about the family or the protagonist himself. For example, the first floor includes a parlor that was reserved in the past for women and children, juxtaposed with another side parlor that was used by men after dinner. An additional small dining room displays a unique imported drip coffee making apparatus that demonstrates Van Buren's interest in the finer things in life. One popular stop on the first floor is the bathroom, which features and old style tub, and an old style toilet.

Interpretive wayside kiosk

2.3 Existing Maintenance Facility

MARTIN VAN BUREN NATIONAL HISTORIC SITE MAINTENANCE FACILITY

The park's maintenance facility is comprised of multiple buildings and sheds spread throughout the eastern edge of the historic core. The maintenance shop (the facility's main building), is housed in a 4-bay garage that stands behind Lindenwald. This 2,883 gsf cinderblock and wood structure (includes attic space), was built in 1960 and renovated in 1978. Each bay is approximately 254 sf; the two northernmost bays are used as a carpentry shop, the center bay is used for vehicle & equipment maintenance/ storage, and the last bay is used as an office and staff break area. The office bay is set up for 3 staff members with a common table. Two small additions on the west side of the building serve as a staff rest room/locker room/ JC, the other as a heating equipment and storage. Above the garage bays, the buildings attic is used for general storage.

In addition to the maintenance shop, the park has several maintenance and curatorial related buildings that date to the 1980s and 1990s including a curatorial storage building (pole barn planned to be demolished in 2022), a small storage shed, two small hazmat buildings and a maintenance storage pole barn in the north woodlot that is also planned on being removed. Until recent, the curatorial storage building (1,616 gsf.) was used as a temporary space for the park's curatorial needs and museum collection. From existing documentation, we understand the barn housed important collections items that have since been relocated offsite. The hazmat building #2 (66 gsf) is used for storage of paint and cleaners is located behind the maintenance shop. This metal shed seemingly has fire suppression but is unclear if it is set up. The maintenance storage pole barn (480 gsf) in the woodlot and storage shed (165 gf) in the western edge of the yard are used to store equipment and miscellaneous supplies. Gasoline and other combustible items, as well as chainsaws are stored in hazmat building #1 (135 gsf) in the eastern edge of the yard. This metal shed has neither heating nor fire suppression, all gasoline stored in 2.5/5 gallon-tanks behind self-closing cabinet doors. All deliveries are received at garage directly adjacent to Lindenwald (using mansion driveway). Due to proximity to interpretive tour, deliveries can only be received early AM or late PM. Larger deliveries require forks attached to tractor, otherwise all manual labor for sorting.

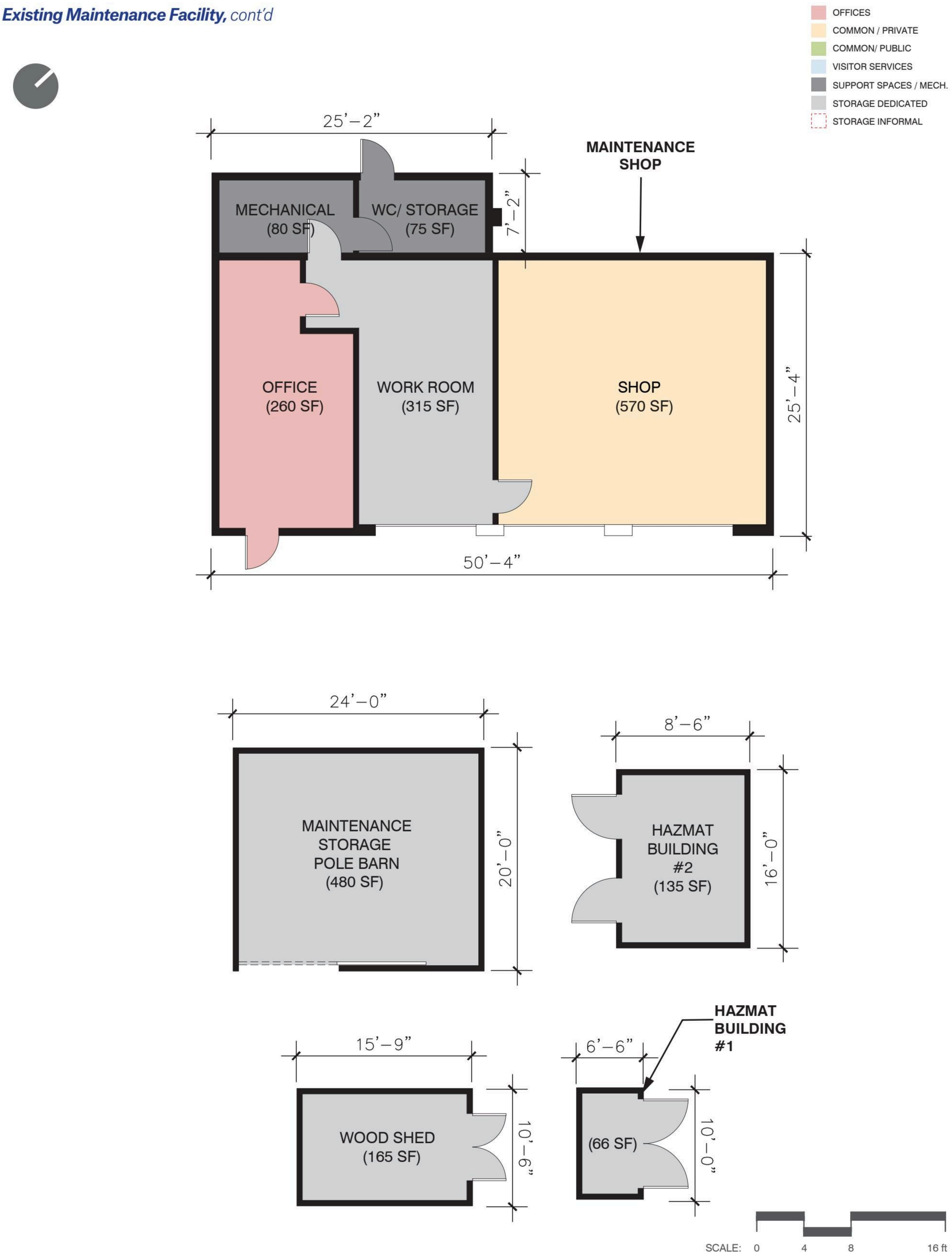
The available space within the structures are used to their capacity. The walls in the workshops are covered with hand tools and storage cabinets. The limited building layout and storage space have created operational inefficiencies and piecemeal storage throughout the site. Currently, many of maintenance tasks are performed outdoors due to lack of space. The execution of these tasks highly depends on the weather. A larger indoor clear space within workshop for work & vehicular maintenance tasks is needed. The maintenance staff expressed desire to right-size maintenance facility to take on smaller scale projects and cut down on third party expenses (lack of space for shapers and lathes in workshop).

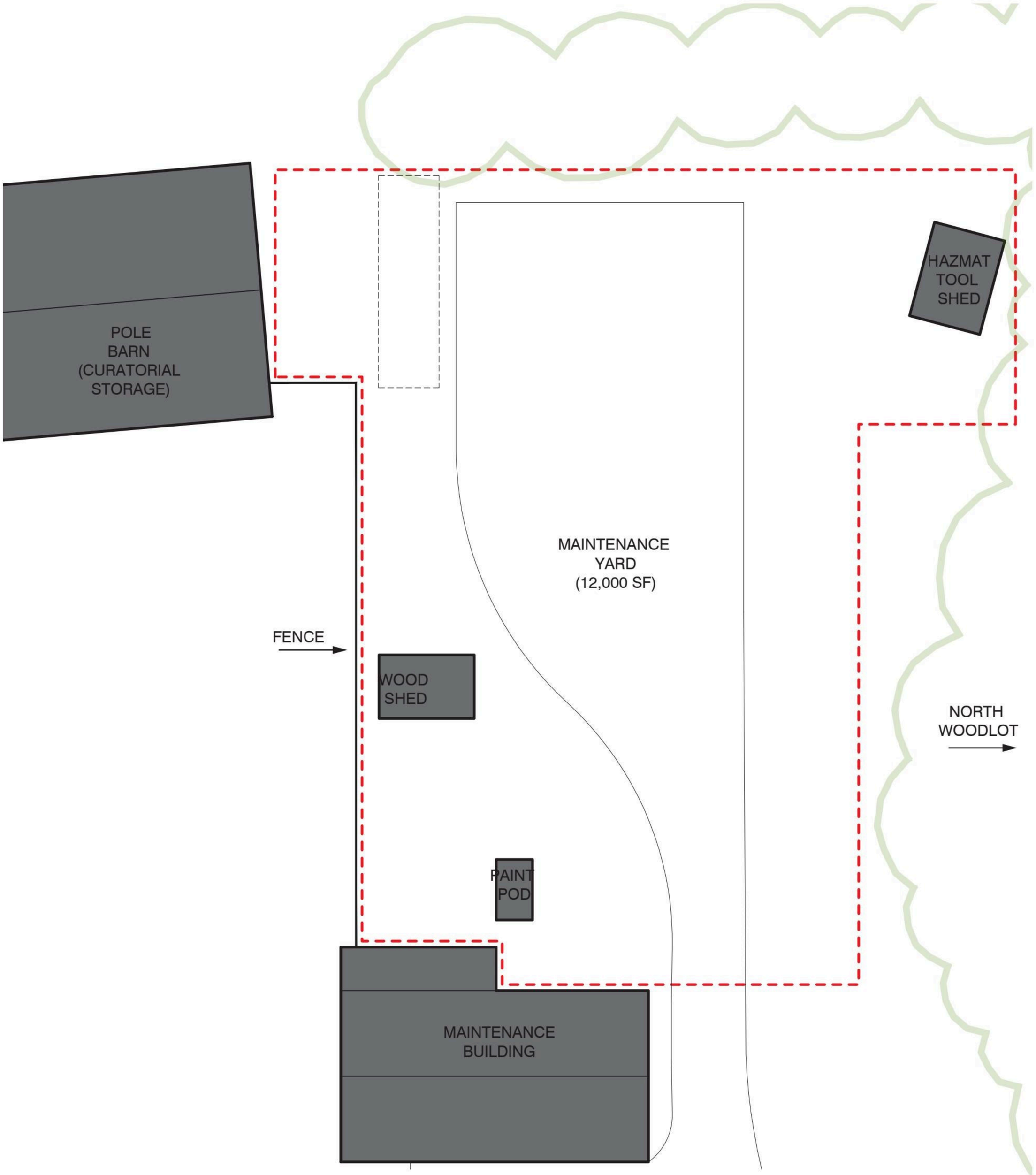
Much like the office complex, the use of the garage for maintenance shop and the pole barn for curatorial storage were also intended to be temporary. However, these buildings have served the park for decades. Most of the maintenance structures are located within the historic core of the park (curatorial storage building, maintenance shop, hazmat buildings 1 & 2, storage shed, yard and accompanying infrastructure including paths and fencing). With the reestablishment of the historically significant Martin Van Buren Orchard in the north woodlot, the maintenance storage pole barn will also need to be removed to restore the historic authenticity of the landscape.

EXISTING SYSTEMS (WSP)

The curatorial storage building, and maintenance shop are equipped with kerosene-fired heaters, stored in aboveground storage tanks. Water and septic are shared with Lindenwald.

Existing Maintenance Facility, *cont'd*



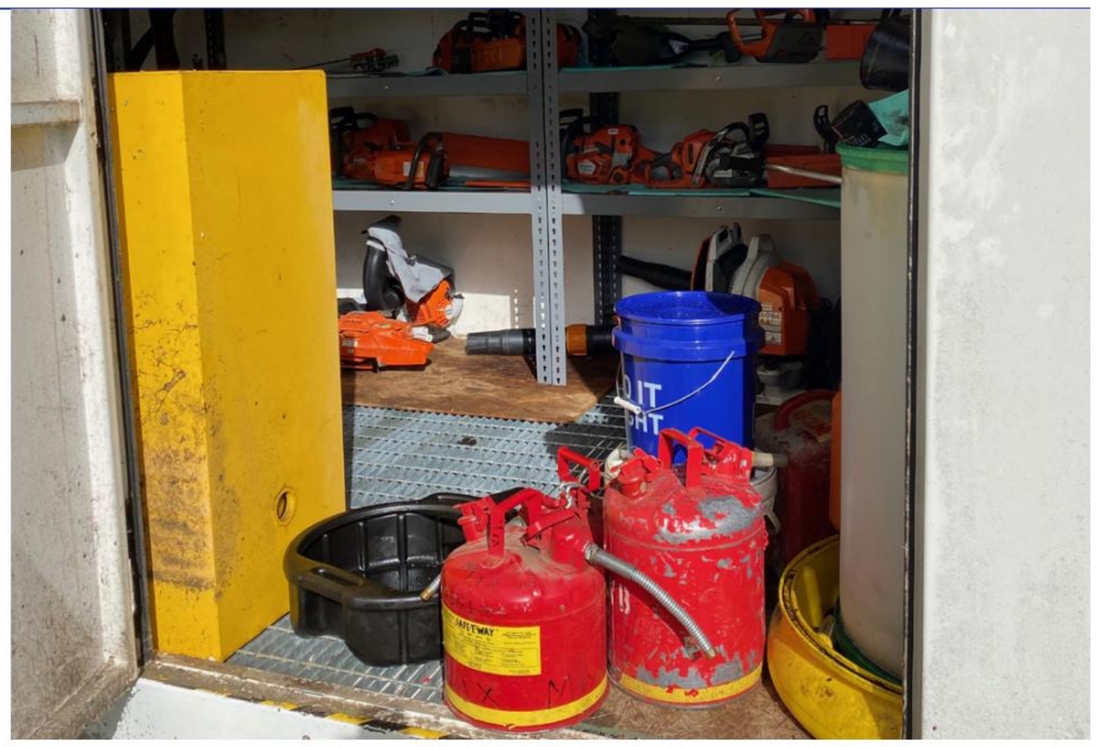

POLE
BARN
(CURATORIAL
STORAGE)
HAZMAT
TOOL
SHED
MAINTENANCE
YARD
(12,000 SF)
FENCE
WOOD
SHED
PAINT
POD
NORTH
WOODLOT
MAINTENANCE
BUILDING

Maintenance Yard with View of Pole Barn (Curatorial Storage)

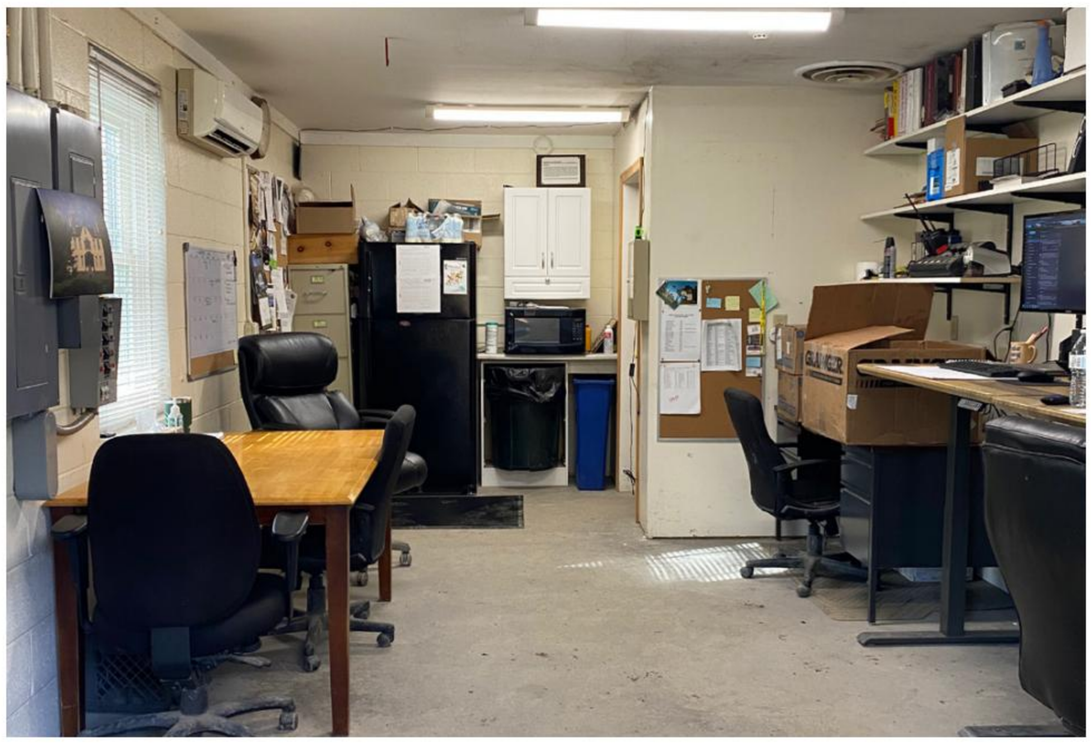
Shed in North Woodlot

Hazmat Storage

Exterior Storage in Maintenance Yard

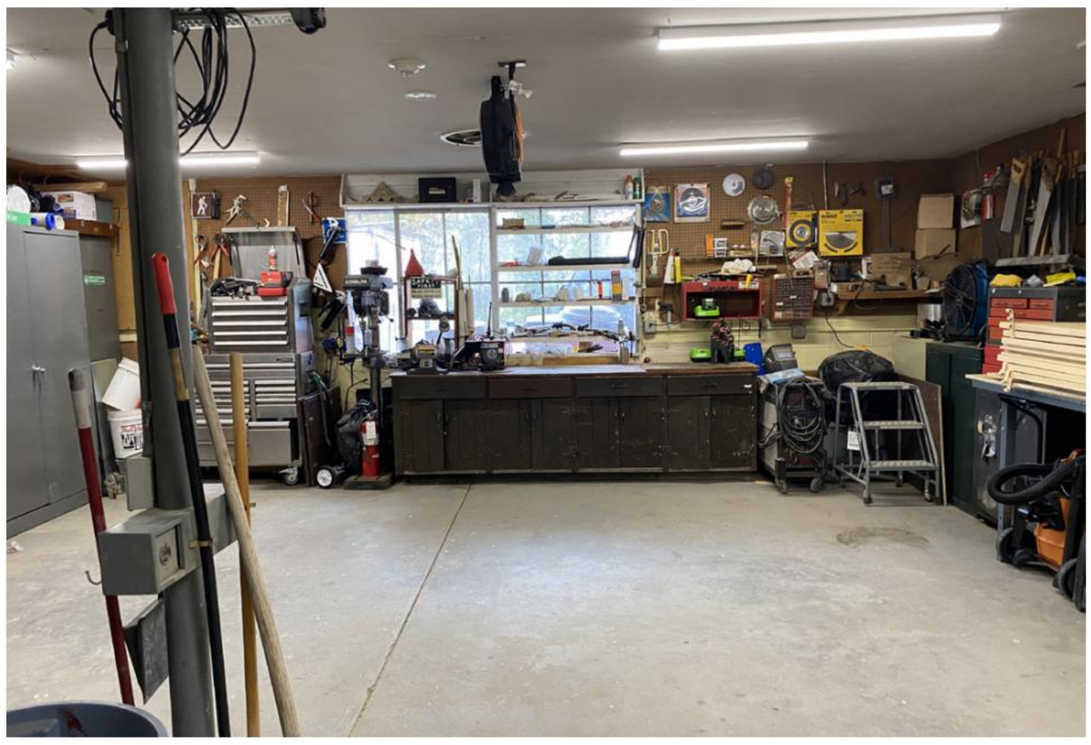


Hazmat Storage



Office in Maintenance Facility

Storage and Workshop at Maintenance Facility



Workshop at Maintenance Facility

Storage at Shed in North Woodlot.

3 BUILDING PROGRAM REQUIREMENTS

3.1 Program Analysis and Requirements

DATA COLLECTION & ANALYSIS

The A/E team and MAVA established future space requirements by studying the parks current operations and existing buildings. DBB collected the park's programmatic requirements through virtual meetings, interviews, and visual surveys of the site. In addition to these discussions with the park, questionnaires developed by DBB and completed by key MAVA staff members, prompted MAVA staff to share the park's long-term objectives, describe desired public and non-public facing operations and list all programmatic requirements and/or support spaces that will help each department achieve its goal at the park. The questionnaires also helped park staff evaluate the efficiency of their own spaces and rethink their square footage needs.

The responses to the questionnaires gave the design team further insight into both the quantitative and qualitative needs of the park. Program charts outlining the park's needs were developed including the necessary back of house and nonpublic spaces to support the main program.

Additionally, block diagrams and preliminary furniture layouts of the required program were then created to help visualize the data collected.

As noted in an earlier section of this report, the park's administrative functions are housed in prefabricated trailers with an unconnected visitor contact station on its northeast corner. The maintenance building stands in a 4-bay garage, behind Lindenwald. The program requested by the park is mostly comparable in function and size to the program in the existing buildings. However additional meeting and visitor services spaces were requested. The following section summarizes the parks requirements.

Nature Trails at MAVA

Recreational Visitors
Photo Credit: nps.gov

3.2 Administration & Visitor Center Program Requirements

ADMINISTRATION REQUIREMENTS

Administration program requested consisted of primarily office spaces. The park preferred dedicated office spaces for all permanent staff members and flexible "hoteling" workstations for interns and seasonal staff. Fourteen administration staff members (not including maintenance) will need to be accommodated in the planning of the new building, using the following guidelines:

Park guides:

- Staff work year-round and similar job duties as seasonal staff in terms of interaction with visitors.
- Perform more at administrative tasks than seasonal staff.
- Park guides work on research, special or "overflow" projects mostly in their offices or in common areas, if larger work surface is needed. Flexible work areas are need for special tasks.

Seasonal staff

- Work from late spring to early fall.
- Similar job duties as park guides in terms of interaction with visitors.
- Flexible workstations needed. Currently use a mix of desktop and laptop but moving towards laptop in the future.
- Seasonal staff have similar responsibilities as park guides. Both roles require the same time indoors and outdoors. Both roles are independent of each other.
- Seasonal staff and interns typically work on special or "overflow" projects in common spaces like the library, break room and (mostly) the conference room.

Interns (interchangeable with seasonal staff)

- Work during the summer typically but can be a year-round position depending on the on the park's activities.
- Flexible workstations w/ laptops but moving towards laptop in the future.
- The parks ability to have interns is limited by their available space to host them. At the time of this writing, MAVA hosts no more than 1 intern at a time in their 12-week program. Ideally the park would have 2 interns.

Curators

- Tasks performed by staff members need to be securable. Curatorial workspace has been lost due to the demolition of the Pole Barn (curatorial storage barn.
- Dedicated and secure workspace is needed for curatorial tasks including receiving, holding and inspecting furniture pieces that are to be placed in the mansion.
- Climate control for archives needed.

- In addition to office spaces, private and public gatherings spaces were requested as well. The private gatherings program refers to common spaces for NPS staff use only. The public does not have access to these spaces. Public gathering spaces are completely open to the public or to approved visitors. The following guidelines were taken into consideration:

Private gathering:

- General purpose meeting and work rooms for park staff. Public typically does not have access to these spaces
- Small-scale collaboration spaces are needed for small team meetings. The curatorial staff currently meets outside of the park for team meeting due to lack of suitable meeting space.
- Workrooms for large tasks that cannot be performed at individual desks are needed.
- The existing staff pantry, in addition to its main purpose, is used for informal meetings or as a collaboration space. The design team thought important to keep the versatility of the existing space. A pantry with adaptable furniture (capable of providing multiple seating patterns) and of comparable size to the existing is included in the building program.

Common / Public Spaces (non-interpretative spaces)

- Meeting spaces with full or limited access from visitors.
- Common areas like the conference room in the current HQ building are utilized for multiple purposes. Much like the staff pantry, keeping the versatility of this meeting space is a key consideration in the development of the program square footage. Common spaces need to be flexible to accommodate multiple uses including special projects.

Common / Public Spaces (non-interpretative spaces), cont'd.

- The park would like to host community meetings and lectures but due to lack of indoor and outdoor space to comfortably accommodate 40+ visitors, they are unable to do so.
- Library is mostly for internal use and its current size is appropriate for the park's purposes. The library is a reference collection for staff members or for approved visiting scholars and includes a reading station and a work station used by park seasonal staff or interns. Workstations in the library are not desirable in the future. Space to accommodate seasonal staff and interns will need to be accommodated elsewhere (flexible, hoteling workstations).

Martin Van Buren National Historical Site's Pre-Planning and Programming Study defines a program for the park's Administration Building and Visitor Center in six major areas:

		COUNT	NSF
ADMINISTRATION	**ADMINISTRATION**		
	Dedicated Office, Enclosed	5	660 SF
	Dedicated Workstation, Semi-open	4	256 SF
	Shared Workstations, Open ("Hoteling")	4	192 SF
	COMMON / PRIVATE GATHERING		
	Pantry/ Informal Staff Meeting	10-12 seats	320 SF
	Meeting Room	6 seats	192 SF
	Curatorial Workroom	1	240 SF
	Quiet / Lactation Room	1	72 SF
	COMMON / PUBLIC GATHERING		
	Library	1	384 SF
	Conference Room	14 seats	384 SF
	Exterior Lecture / Public Meeting Space **	50 seats	800 SF **
	SUPPORT SPACES		
	Reception	1	96 SF
	Restrooms	2 WC's	72 SF
	Locker room / Personal Storage	16 Lockers	44 SF
	Mail Room & Copy Room	1	128 SF
	IT / Security Room	1	48 SF
	Electrical Room	1	48 SF
	Mechanical Room	1	48 SF
	Janitor's Closet	1	24 SF
	STORAGE		
	General Storage	1	240 SF
	Archival Storage	1	120 SF
	Record Storage	1	60 SF
	Curatorial Storage	1	60 SF
	Sub-Total (Indoor)		3,688 SF
	+20% circulation		738 SF
	Total Requested Program SF (Indoor)*		**4,426 SF****
	Total Requested Program SF (Exterior Covered)*		**800 SF**
VISITOR CENTER	**VISITOR SERVICES**		
	Information Desk / Visitor Services	1	96 SF
	Exhibition Area	15 people	480 SF
	Exterior Covered Theatre (Film Display) **	15 seats	280 SF **
	Bookshop / Retail	1	100 SF
	Workstation	1	48 SF
	SUPPORT SPACES		
	Restrooms	4 WCs	240 SF
	General Storage	1	128 SF
	Mechanical Room	1	48 SF
	Janitor's Closet	1	24 SF
	Sub-Total		1,164 SF
	+20% circulation		233 SF
	Total Requested Program SF (Indoor)*		**1,397 SF**
	Total Requested Program SF (Exterior Covered)*		**280 SF**

**requested program developed from questionnaires and interviews, square footage shown prior to efficiency excercise.*

***program listed planned considered optional. square footage not included in total required inddor program*

Storage & Support Spaces

- To sustain the operation of the building and the park, support functions including restrooms, storage, mechanical rooms etc. were included in the overall building program requirements. Code complaint spaces and functions, comparable to the existing program are required supplements to the main program. Some additional requirements expressed by the park included: all restrooms were requested to be gender neutral and storage spaces were considered deficient (although A/E identified lack of efficient storage as being the issue more so than lack of space).
- Each space proposed complies will applicable building and accessibility codes in addition to providing the necessary space for optimal use by staff members.

VISITOR CENTER REQUIREMENTS

Visitor services at the visitor center includes a mix of interpretation and site orientation. Generally, visitors do not have a strong understanding of what historic events happened at the site. Similar to most national parks, a park film is displayed in the visitor center. Viewing the park film gives visitors some background info and orientation. However, the interpretation of Martin Van Buren's life in Kinderhook and the history of the site has mostly been limited to tours of Lindenwald, the park film and a small exhibit in the visitor center. Important themes like Martin Van Buren's agricultural and political history have not been including in a meaningful way in the interpretative experience offered to visitors. The park typically receives 3 types of visitors: the recreational visitor; the destination visitor and education / tour groups. Recreational visitors primarily use restrooms and outdoor features. They typically do not engage in interpretation programs. The destination visitors on the other hand spend the time in the visitor center booking tours and viewing the park's film and exhibits, in addition to touring Lindenwald and the site at large.

Education groups, much like destination visitors, participate in the interpretation features of the park. The groups visit the park primarily in May, June and September. Students gather outdoors with park rangers and are split up into multiple groups of 15 visitors max. to tour the site and mansion. Due to space limitations in the existing visitor center, large school groups do not view in the film in the building. The existing conference room is used when the park needs indoor space.

The existing bookshop is adequate in size for the visitors it receives. An Eastern National part-time staff member might be a part of the staff in future. Thus, a private hoteling workstation and secure bookshop storage is needed. In addition to this, the existing restrooms are insufficient for the recreational and destination visitor flow the park receives. Multiple accessible gender-neutral restrooms are needed.

Prior to the impact of COVID-19 (2019) the park received +/- 7000 visitors that engage in formal interpretation (destination visitor); +/-800 education groups a year. The closure of the visitor center due to the spread of COVID-19 led MAVA to set up an information tent outdoors between the existing headquarters and the parking area. The indoor/ outdoor structure was received well by visitors but eliminated the possibility to display the park film. Conversely, the tent produced an unexpected need for indoor / outdoor flexibility. While the park does not receive large quantities of visitors at once daily, a multipurpose space that can accommodate 15 - 30 visitors at a time is needed on site to give the park the ability to provide adequate visitor services.

Temporary Visitor Center Tent at MAVA
Photo Credit: nps.gov

Recreational Visitors
Photo Credit: nps.gov

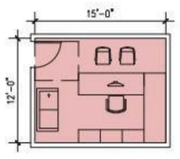
Ranger's Choice Talk.
Photo Credit: nps.gov

Administration and Visitor Center Program Requirements, cont'd

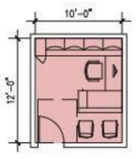
ADMINISITRATION

OFFICES

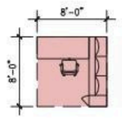
Dedicated offices and "hoteling" workstations primarily for seasonal use.



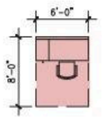
EXECUTIVE OFFICE (DEDICATED)
180 SF



ENCLOSED OFFICE (DEDICATED)
120 SF



OPEN WORKSTATION (DEDICATED)
64 SF



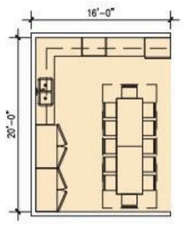
OPEN WORKSTATION (SHARED)
48 SF

PRIVATE GATHERING

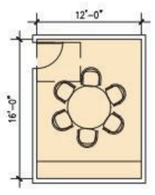
General purpose meeting and work rooms for park staff. Public typically does not have access to these spaces

PUBLIC GATHERING

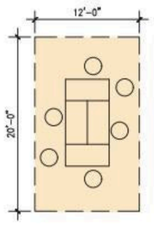
Meeting spaces with full or limited access from visitors.



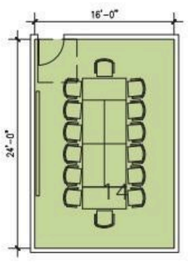
PANTRY (10-12 PPL)
320 SF



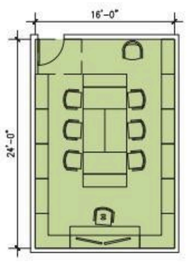
MEETING ROOM (6 PPL)
192 SF



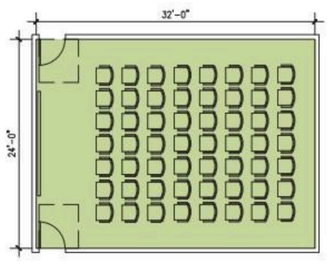
CURATORIAL WORKROOM (6 PPL)
240 SF



CONFERENCE ROOM (14 PPL)
384 SF



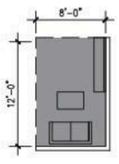
LOUNGE / LIBRARY
384 SF - 710 CF



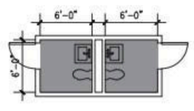
*EXTERIOR COVERED PUBLIC MEETING ROOM (OPTIONAL 56 SEATS)
384 SF

SUPPORT

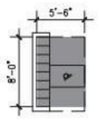
Essential supplements to the main program. These functions help sustain the operation of the building.



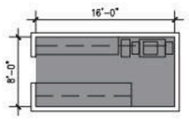
RECEPTION (4 PPL)
96 SF



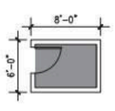
GENDER NEUTRAL RESTROOMS
72 SF



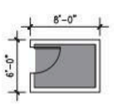
LOCKERS (16 STACKED)
44 SF



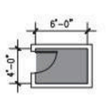
COPY/MAIL
160 SF



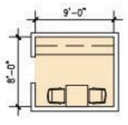
ELEC/ IT / AV
48 SF



MECHANICAL
48 SF



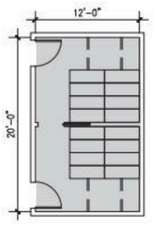
JC
24 SF



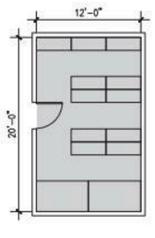
QUIET/LACTATION ROOM
72 SF

STORAGE

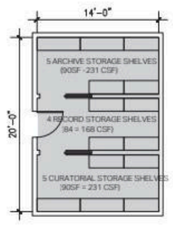
General and specialized storage for administrative functions.



CURATORIAL / ARCHIVE / RECORD STORAGE
240 SF - 336 CF



GENERAL STORAGE
240 SF

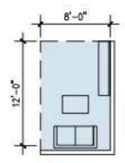


* CURATORIAL / ARCHIVE / RECORD STORAGE
400 SF - ALT LAYOUT

VISITOR SERVICES

ORIENTATION

Spaces dedicated to interpretative programs and providing site orientation to visitors.



INFO DESK (4 PPL)
96 SF

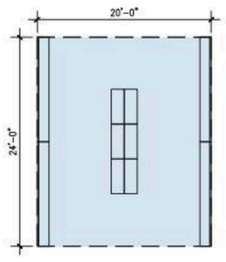
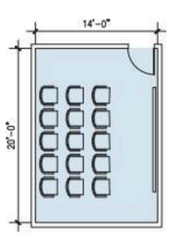
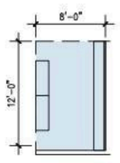


EXHIBIT
480 SF



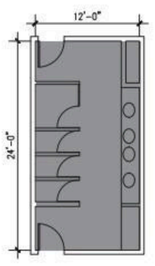
**EXTERIOR COVERED THEATRE / FILM DISPLAY - 15 SEATS (OPTIONAL)
280 SF



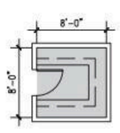
BOOKSHOP (4 PPL)
96 SF

SUPPORT & STORAGE

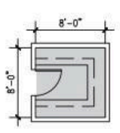
Spaces to help sustain the operation of visitor contact station. Includes general and bookshop storage.



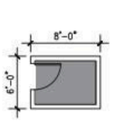
GENDER NEUTRAL RESTROOMS
240 SF



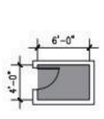
BOOKSHOP STORAGE
64 SF



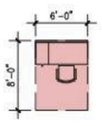
GENERAL STORAGE
64 SF



MECHANICAL
48 SF



JC
24 SF



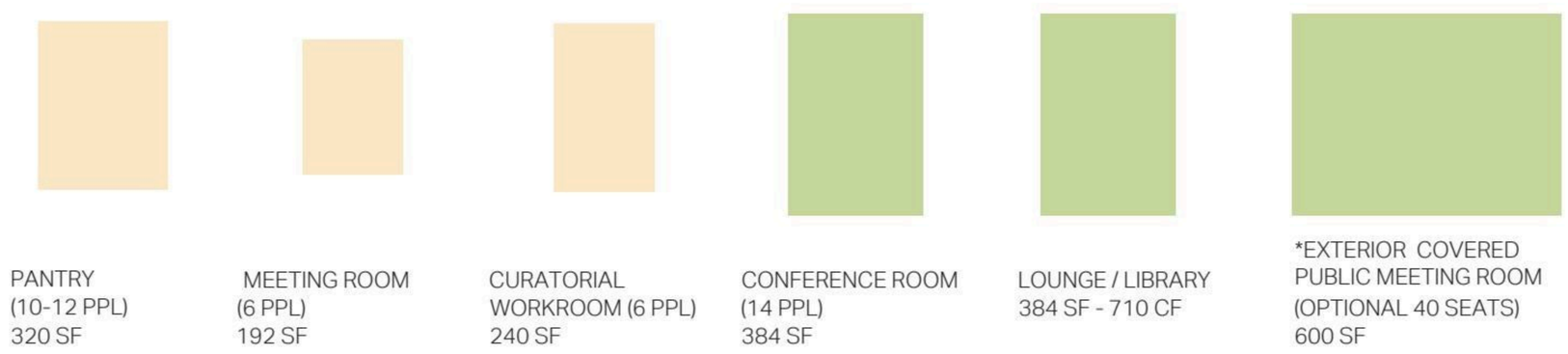
OFFICE
48 SF

The visitor center and administration program studied separately.

ADMINISITRATION

EXECUTIVE OFFICE (DEDICATED) 180 SF
ENCLOSED OFFICE (DEDICATED) 120 SF
OPEN WORKSTATION (DEDICATED) 64 SF
OPEN WORKSTATION (SHARED) 48 SF

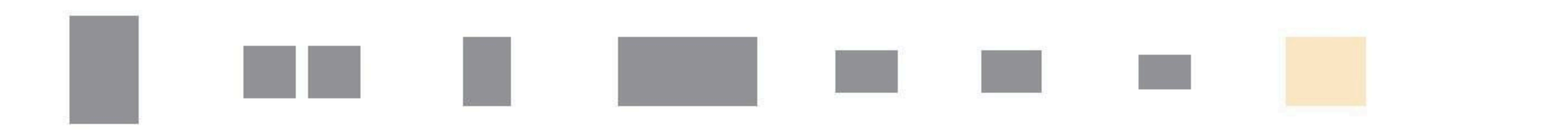
OFFICES
Required SF:
1,108 nsf



PANTRY (10-12 PPL) 320 SF
MEETING ROOM (6 PPL) 192 SF
CURATORIAL WORKROOM (6 PPL) 240 SF
CONFERENCE ROOM (14 PPL) 384 SF
LOUNGE / LIBRARY 384 SF - 710 CF
*EXTERIOR COVERED PUBLIC MEETING ROOM (OPTIONAL 40 SEATS) 600 SF

PRIVATE GATHERING
Required SF:
752 nsf

PUBLIC GATHERING
Required SF:
1,368 nsf



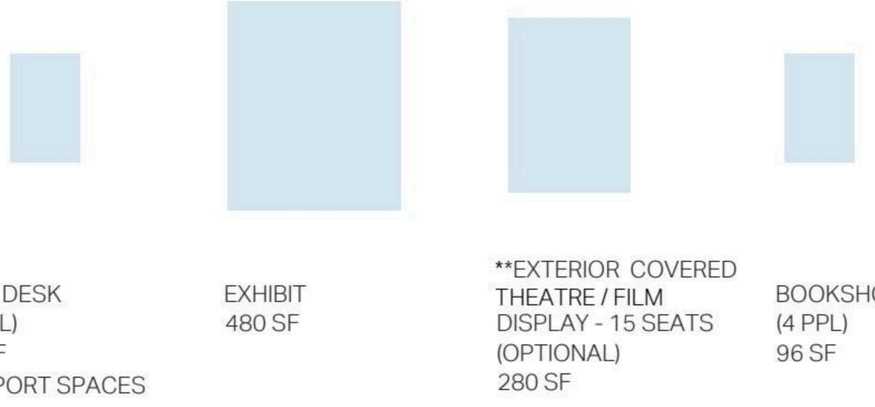
RECEPTION (4 PPL) 96 SF
GENDER NEUTRAL RESTROOMS 72 SF
LOCKERS (16 STACKED) 44 SF
COPY/MAIL 160 SF
ELEC/ IT / AV 48 SF
MECHANICAL 48 SF
JC 24 SF
QUIET/LACTATION ROOM 72 SF

SUPPORT
Required SF:
580 nsf

CURATORIAL / ARCHIVE / RECORD STORAGE 240 SF - 336 CF
GENERAL STORAGE 240 SF
* CURATORIAL / ARCHIVE / RECORD STORAGE 400 SF - ALT LAYOUT

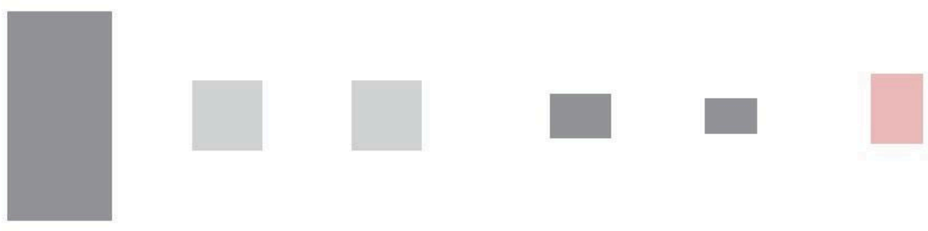
STORAGE
Required SF:
480 nsf

VISITOR SERVICES



INFO DESK (4 PPL) 96 SF SUPPORT SPACES
EXHIBIT 480 SF
**EXTERIOR COVERED THEATRE / FILM DISPLAY - 15 SEATS (OPTIONAL) 280 SF
BOOKSHOP (4 PPL) 96 SF

ORIENTATION
Required SF:
952 nsf



GENDER NEUTRAL RESTROOMS 240 SF
BOOKSHOP STORAGE 64 SF
GENERAL STORAGE 64 SF
MECHANICAL 48 SF
JC 24 SF
OFFICE 48 SF

SUPPORT & STORAGE
Required SF:
488 nsf

3.3 Maintenance Program Requirements

MAINTENANCE REQUIREMENTS

The primary function of MAVA's maintenance facility is maintaining the park buildings – including Lindenwald, park grounds, equipment and site utilities. Typical tasks include road repairs, snow removal, landscaping and tree pruning, plowing, clearing sidewalks, roof raking, maintaining equipment and exterior building & ground projects. While many projects take place outdoors, other projects like painting and renovation tasks take place in the maintenance workshop.

The staff's primary obstacles in performing their tasks are lack of space and storage in their existing workshops. The design team identified 3 types of maintenance program spaces:

Enclosed (required to be inside the building e.g. workstations).
- Open Workstations + Hoteling station
- Small 4-person pantry
- Locker room and restroom with shower.
- JC
- Shop Storage
- (2) Workshops

Exterior covered
(storage and work areas under protected cover).
- Work area adjacent to workshops.
- Equipment storage
- General (relocated storage)
- Hazmat Storage
- Delivery and Receiving Area

Open (yard and equipment storage)

Program Guidelines

Staff members perform typical at desk duties. Workstations for 3 full time staff plus 1 hoteling station for volunteers is needed. An enclosed office for Supervisory Facility Operations Specialist is required. However, this office will be located in administration building per MAVA request. Maintenance staff typically do not utilize common spaces in administration building. A small pantry was requested. Adequate support functions including code complaint restrooms and lockers, separate JC closet, general storage and mechanical rooms etc. were included in the overall building program requirements. Flexible storage (combination of standard, movable, high storage) is ideal. Storage should be near workshops

The existing garage bays are too small to repair vehicles and large equipment. Two enclosed workshops and one semi-enclosed work area are required. Maintenance shop layouts provided are based on the type of work that will be performed. Overhead clearances, expandability to open yard, tool and storage efficiency were considered when establishing the proposed square footage.

Additional equipment storage is needed. A portion of storage requires protection from the elements (see program chart for details. All deliveries are currently received at garage directly adjacent to mansion (using mansion driveway). Due to proximity to interpretive tour, deliveries can only be received early AM or late PM. A receiving area separate from public facing functions is needed. The rehabilitation of the orchard will impact maintenance operations. More equipment storage for ladders, additional floor mowers, trimmers, and saws will be needed. Storage for maintenance and operation of an irrigation system

The park is moving away from the use of combustion engine equipment and vehicles. An all-electric facility with charging stations inside the workshop and tool storage, as well as outside in the yard and parking lot will be needed in the future. These features require in-depth study. Locations will be established at a later phase of the project.

Offsite Storage

Three (3) 12ft x 24ft sheds will need to be relocated to maintenance area. No heating or special environmental controls needed; just power. The sheds contain general storage items and belong to multiple groups (maintenance, interpretation, administration, general park storage etc). Offsite storage is documented for programing purposes, however not included in final square footage needs per NPS request.

Martin Van Buren National Historical Site's Pre-Planning and Programming Study defines a program for the park's maintenance facility in five major areas:

MAINTENANCE

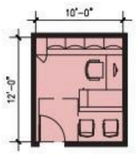
	COUNT	NSF
ADMINISTRATION		
Dedicated Workstation, Open	2	128 SF
Shared Workstations, Open ("Hoteling")	2	96 SF
COMMON / PRIVATE GATHERING		
Pantry/ Breakroom / Lounge	2-4 seats	96 SF
WORKSHOPS		
Workshop (Indoor)	2	1,280 SF
Workshop (Exterior Covered)	1	640 SF
SUPPORT SPACES		
Receiving	1	72 SF
Restrooms	1 WC	70 SF
Locker room / Personal Storage	5 Lockers	33 SF
Printing / Office Storage	1	64 SF
IT / Security Room	1	48 SF
Electrical Room	1	48 SF
Mechanical Room	1	48 SF
Janitor's Closet	1	24 SF
STORAGE		
General Storage	1	264 SF
Hazmat Storage	1	96 SF
Equipement Storage (Exterior Covered)	1	1,800 SF
Equipement Storage (Exterior Open + Yard)	1	4,650 SF
Sub-Total (Indoor)		2,271 SF
+20% circulation		454 SF **
Total Requested Program SF (Indoor)		2,725 SF
Total Requested Program SF (Exterior Covered + Exterior Open + Yard)		7,463 SF ** 923 SF
Total Requested Program SF (Indoor + Exterior)*		**10,188 SF** [1]

**requested program developed from questionnaires and interviews, prior to efficiency excercise*
*** storage circulation excluded. clearances included in NSF*
[1] total requested program includes sf for open maintenance yard

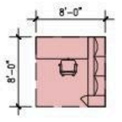
MAINTENANCE PROGRAM

OFFICES

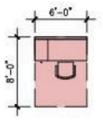
Open workstations for full time staff and "hoteling" workstations for seasonal use.



ENCLOSED OFFICE (DEDICATED) 120 SF



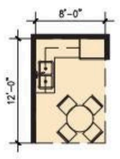
OPEN WORKSTATION (DEDICATED) 64 SF



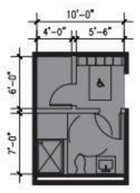
OPEN WORKSTATION (SHARED) 48 SF

PRIVATE GATHERING

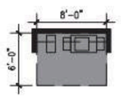
Small pantry for staff of four. Can be utlized as collaboration / meeting space



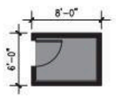
PANTRY 96 SF (4 PPL)



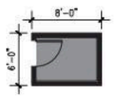
RESTROOM /JC/ LOCKER ROOM 135 SF (5 PPL)



COPY & STORAGE (64 SF)



ELEC/ IT / AV (48 SF)



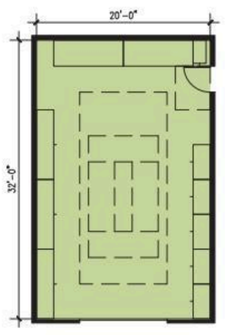
MECHANICAL (48 SF)

SUPPORT

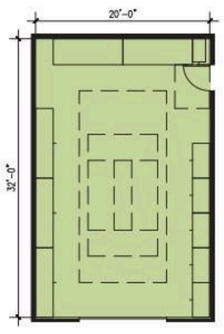
Essential supplements to the main program. These functions help sustain the operation of the building.

WORKSHOPS

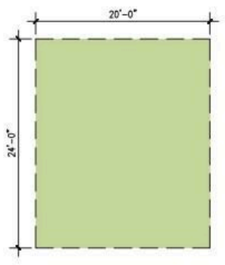
Functional layout of maintenance workshop based on tasks typically performed.



WORKROOM T-1 GARAGE/SHOP (640 SF)



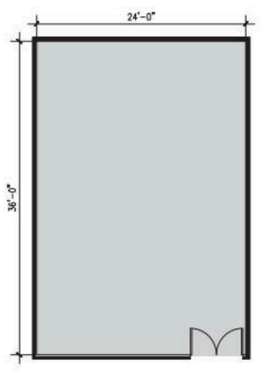
WORKROOM T-1 GARAGE/SHOP (640 SF)



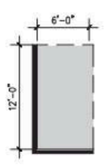
EXTERIOR COVERED WORKROOM T-1 GARAGE/SHOP (480 SF)

STORAGE

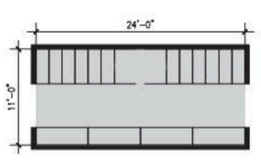
General and specialized storage for the park and maintenance facility.



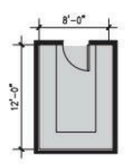
RELOCATED OFF-SITE STORAGE (864 SF)



RECEIVING COVERED AREA (72 SF)



SHOP STORAGE (264 SF - 1272 CF)

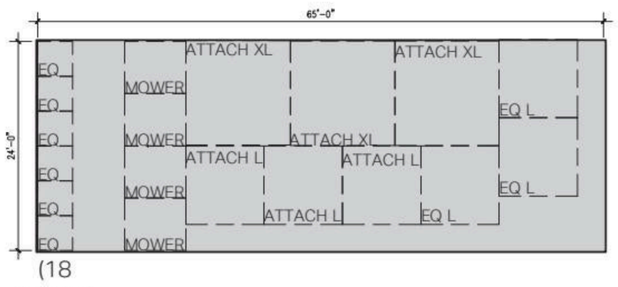


HAZMAT (96 SF)

EQUIPMENT STORAGE

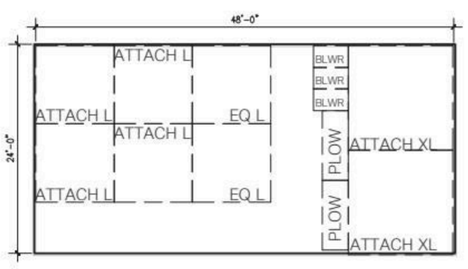
Large maintence equipment used daily or seaonally

EXTERIOR COVERED & INTERIOR EQUIPMENT STORAGE



(18 STACKED)

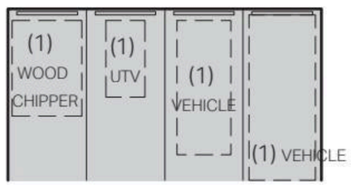
EXTERIOR OPEN EQUIPMENT STORAGE



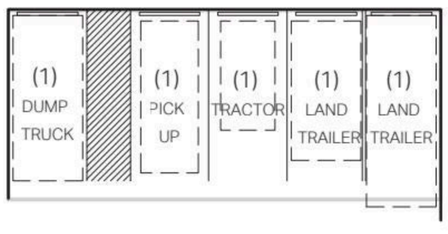
VEHICLE STORAGE

Maintence vehicles used daily or seaonally

EXTERIOR COVERED VEHICLE STORAGE



EXTERIOR OPEN VEHICLE STORAGE



MAINTENANCE PROGRAM

ENCLOSED OFFICE
(DEDICATED)
120 SF

OPEN WORKSTATION
(DEDICATED)
64 SF

OPEN WORKSTATION
(SHARED)
48 SF

PANTRY
96 SF (4 PPL)

RESTROOM /JC/
LOCKER ROOM
135 SF (5 PPL)

COPY & STORAGE
(64 SF)

ELEC/ IT / AV
(48 SF)

MECHANICAL
(48 SF)

WORKROOM T-1
GARAGE/SHOP
(640 SF)

WORKROOM T-1
GARAGE/SHOP
(640 SF)

EXTERIOR COVERED
WORKROOM T-1
GARAGE/SHOP
(480 SF)

RELOCATED
OFF-SITE STORAGE
(864 SF)

RECEIVING
COVERED AREA
(72 SF)

SHOP STORAGE
(264 SF - 1272 CF)

HAZMAT
(96 SF)

EXTERIOR COVERED & INTERIOR EQUIPMENT STORAGE

EXTERIOR OPEN EQUIPMENT STORAGE

EXTERIOR COVERED VEHICLE STORAGE

EXTERIOR OPEN VEHICLE STORAGE

OFFICES

Required SF:

224 nsf*

*enclosed office for Supervisory Facility Operations Specialist included in administration program per MAVA request

PRIVATE GATHERING

Required SF:

96 nsf

SUPPORT

Required SF:

295 nsf

WORKSHOPS

Required SF:

1,780 nsf

INDOOR STORAGE

Required SF:

432 nsf*

*relocated off-site storage captured for programming purposes. square footage not included in program per NPS request

EQUIPMENT STORAGE

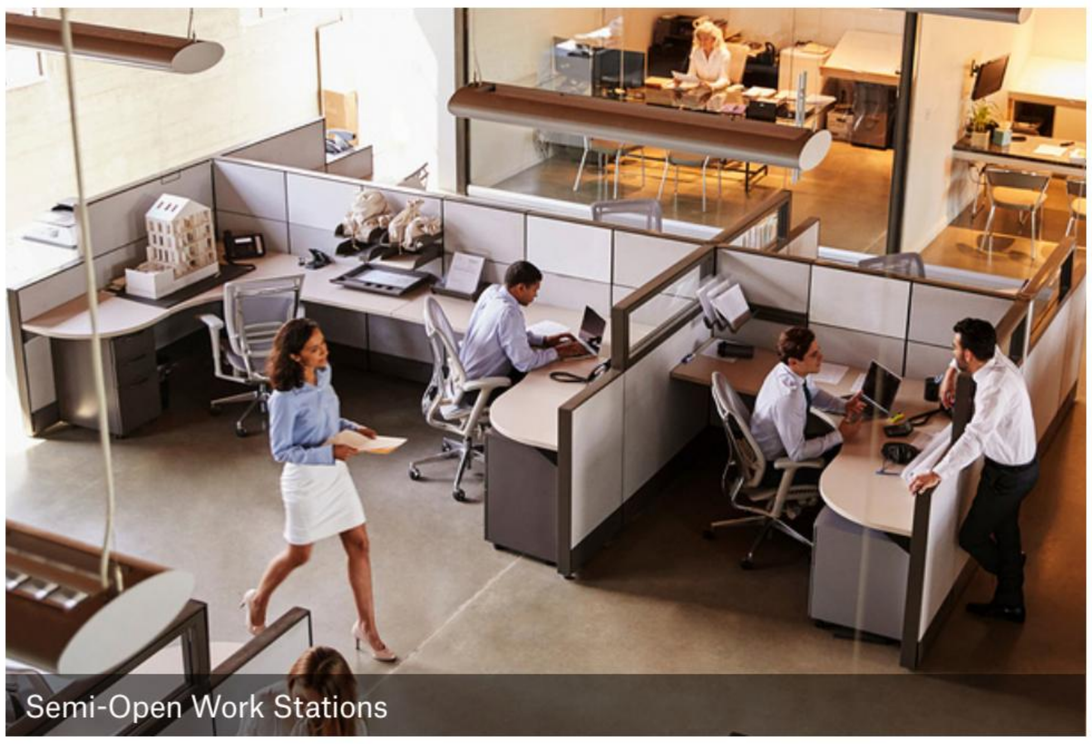
Required SF:

952 nsf

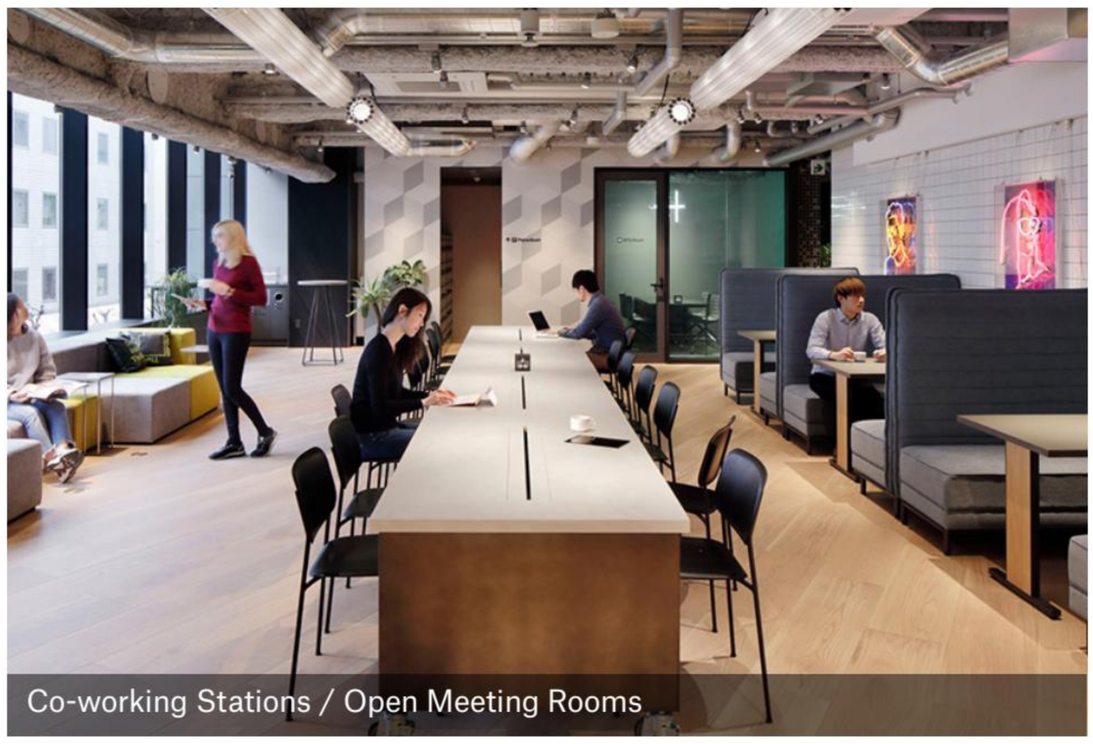
VEHICLE STORAGE

Required SF:

488 nsf

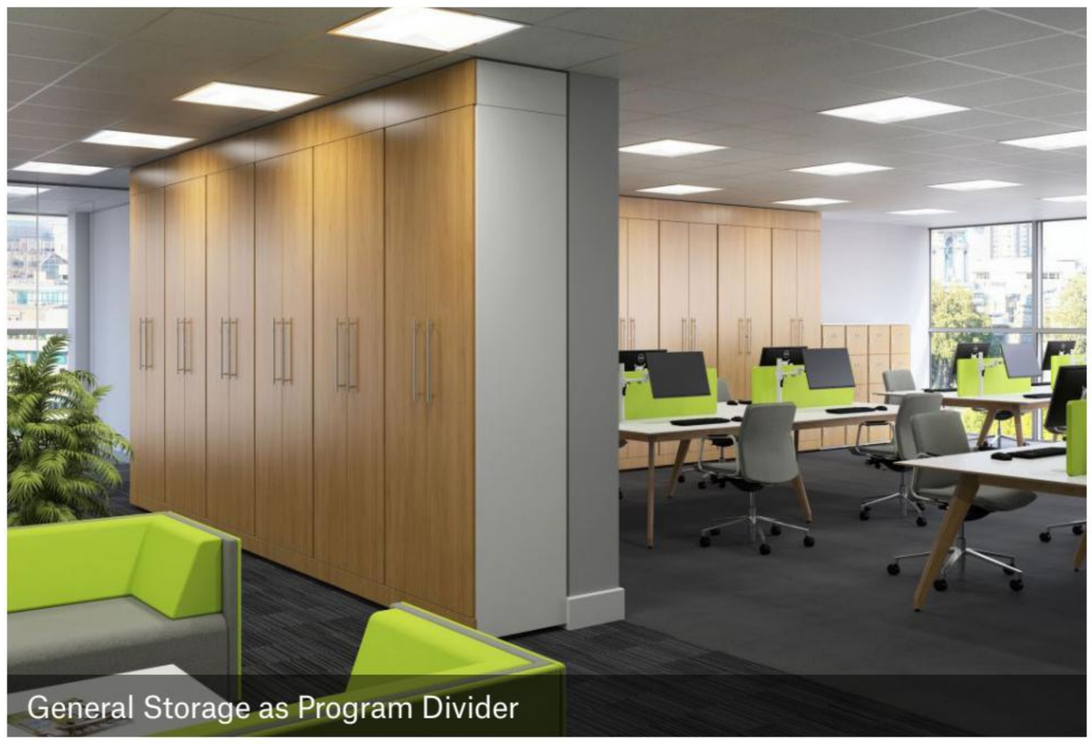


Semi-Open Work Stations

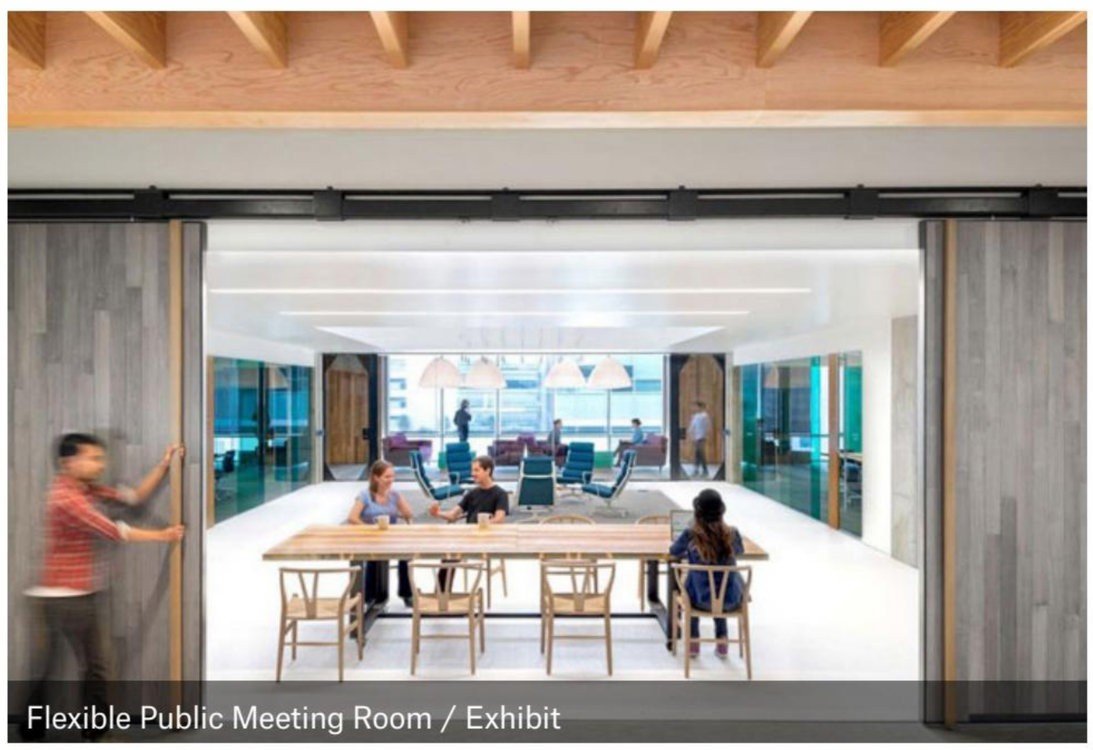


Co-working Stations / Open Meeting Rooms

Compact Shelving for Archival and Admin Records



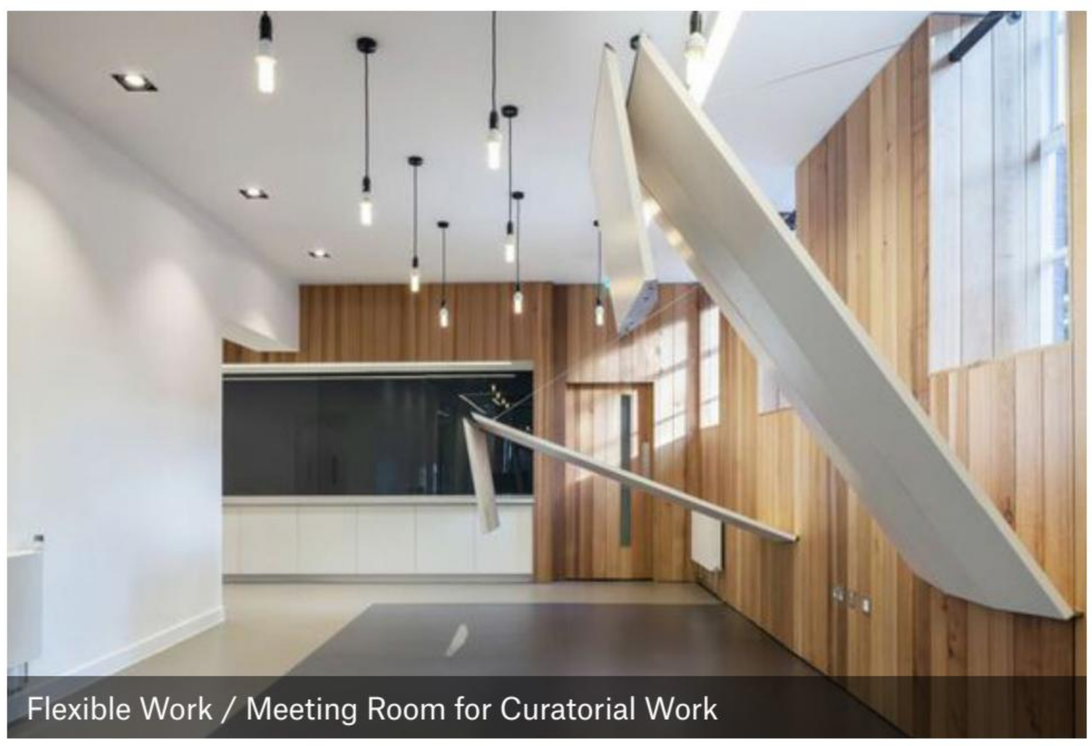
General Storage as Program Divider



Flexible Public Meeting Room / Exhibit

Gender Neutral Restrooms

Compact Storage for Maintenance Facility



Flexible Work / Meeting Room for Curatorial Work

3.4 Program Efficiency & Space Consolidation

As part of the programming effort, MAVA and DBB explored alternatives to the conventional NPS visitor center, administration and maintenance programs. With the knowledge that visitor centers and their associated buildings can be fiscally or operationally unsustainable, the A/E team aimed to provide an effective spatial planning strategy that helps reduce the strain on NPS financial resources. The A/E teams space efficiency strategy consisted in:

- Providing transient spaces that encourage visitors to stay outdoors.
- Flexible Communal spaces such as pantries and meeting spaces (adaptable for multiple uses).
- Alternative space division — utilizing storage closets, lockers etc as room dividers.
- Exploring the use of collaborative workspaces like open offices.
- Studying typical work patterns, hours and season of operation of each department at the park for adjacency purposes.
- Providing indoor / outdoor spaces for public "year-round" use (unconditioned, passive structures that require very little maintenance)
- Passive design strategies implemented in planning to reduce reliance on building systems.
- Orientation of programs relative to access to natural resources (sun and wind).
- Maintain necessary square footage while meeting code and accessibility requirements.

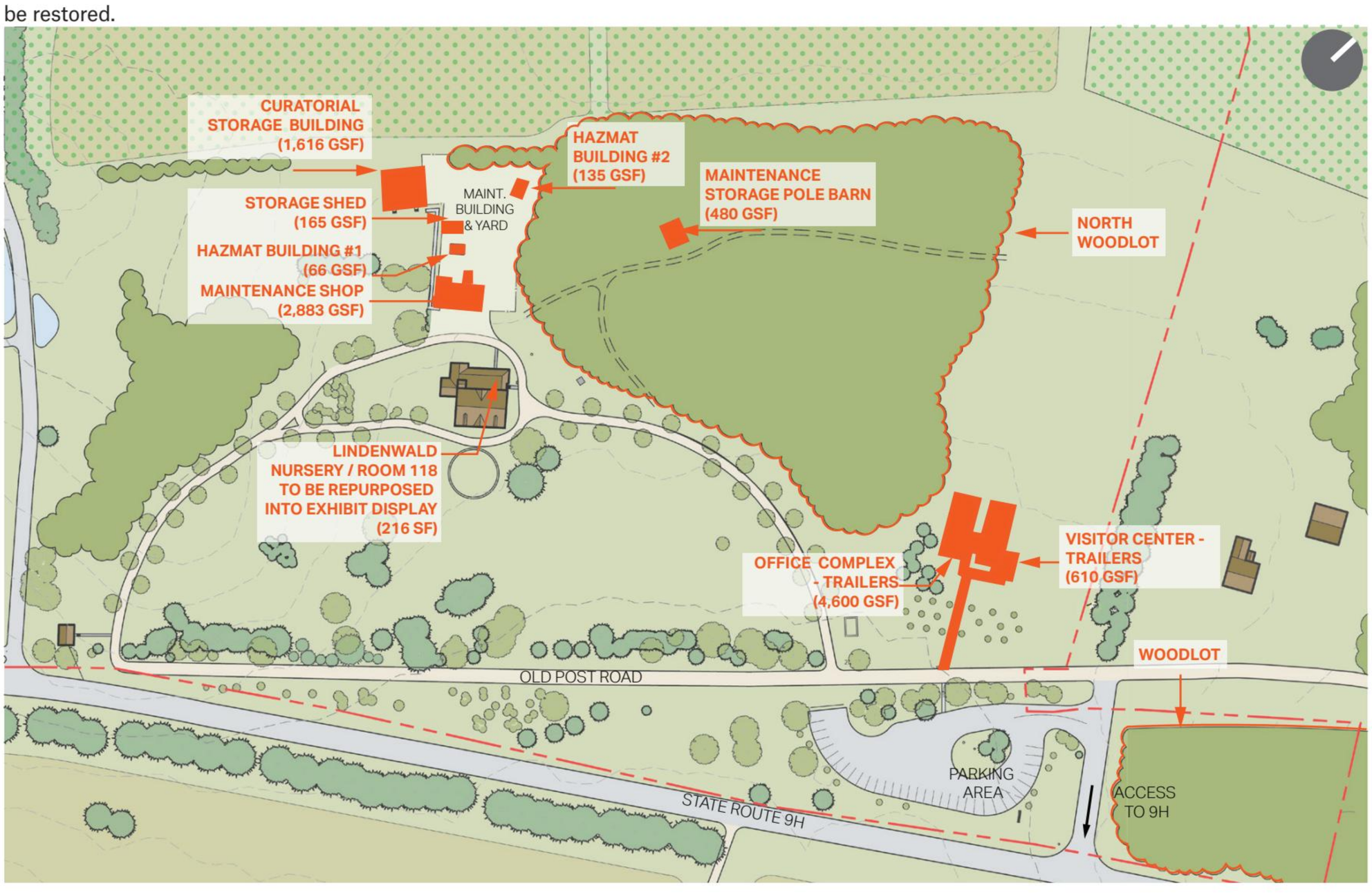
These strategies helped reduce the park's overall square footage requirements. The reduction gave the team the opportunity to add new program currently not provided in the existing buildings but needed by the park. This means, the park is receiving more program in a smaller or comparable footprint. The chart below illustrates the square footage difference between the required program without implementing effective spatial planning and an efficient layout driven by flexibility and strategies described above.

	EXISTING GSF	REQUESTED GSF *	EFFICIENT GSF **
ADMINISTRATION PROGRAM	4,600 SF	4,426 SF	3,800 - 4,100 SF
COMMON / PRIVATE GATHERING (EXTERIOR COVERED OUTDOOR)	+/- 384 SF		
COMMON / PUBLIC GATHERING (EXTERIOR COVERED OUTDOOR)		800 SF	800 SF [1]
VISITOR SERVICES PROGRAM	610 SF	1,397 SF	800 SF [2]
VISITOR SERVICES PROGRAM (EXTERIOR COVERED OUTDOOR)	+/- 256 SF	280 SF	280 SF
MAINTENANCE PROGRAM	2,833 SF	2,367 SF	2,367 SF
MAINTENANCE STORAGE (EXTERIOR COVERED OUTDOOR)	2,777 SF	2,440 SF	2,440 SF
MAINTENANCE STORAGE [3] (EXTERIOR OPEN OUTDOOR)	5,788 SF	4,650 SF	4,650 SF

**requested GSF shown based on questionnaires and interviews*
***efficient GSF achieved by consolidating building program and minimizing spatial inefficiencies*
[1] efficient sf for common / public gathering assumed to be used as common / private gathering as well.
[2] efficient sf for visitor services assumes minimal exhibit display (Lindenwald Nursery Room 118 studied as potential location for exhibits. See chapter 6 for details).
[3] maintenance storage (open outdoor) sf includes maintenace open yard.

4
SITE ANALYSIS & CONTEXT

Existing Site Plan (as of June 2022): Historic views to and from Lindenwald to be restored.



Existing Site Plan (as of June 2022):: structures / features proposed to be demolished (highlighted in orange) as part of plan for historic character enhancement

4.1 Site Analysis and Context

SITE FEATURES

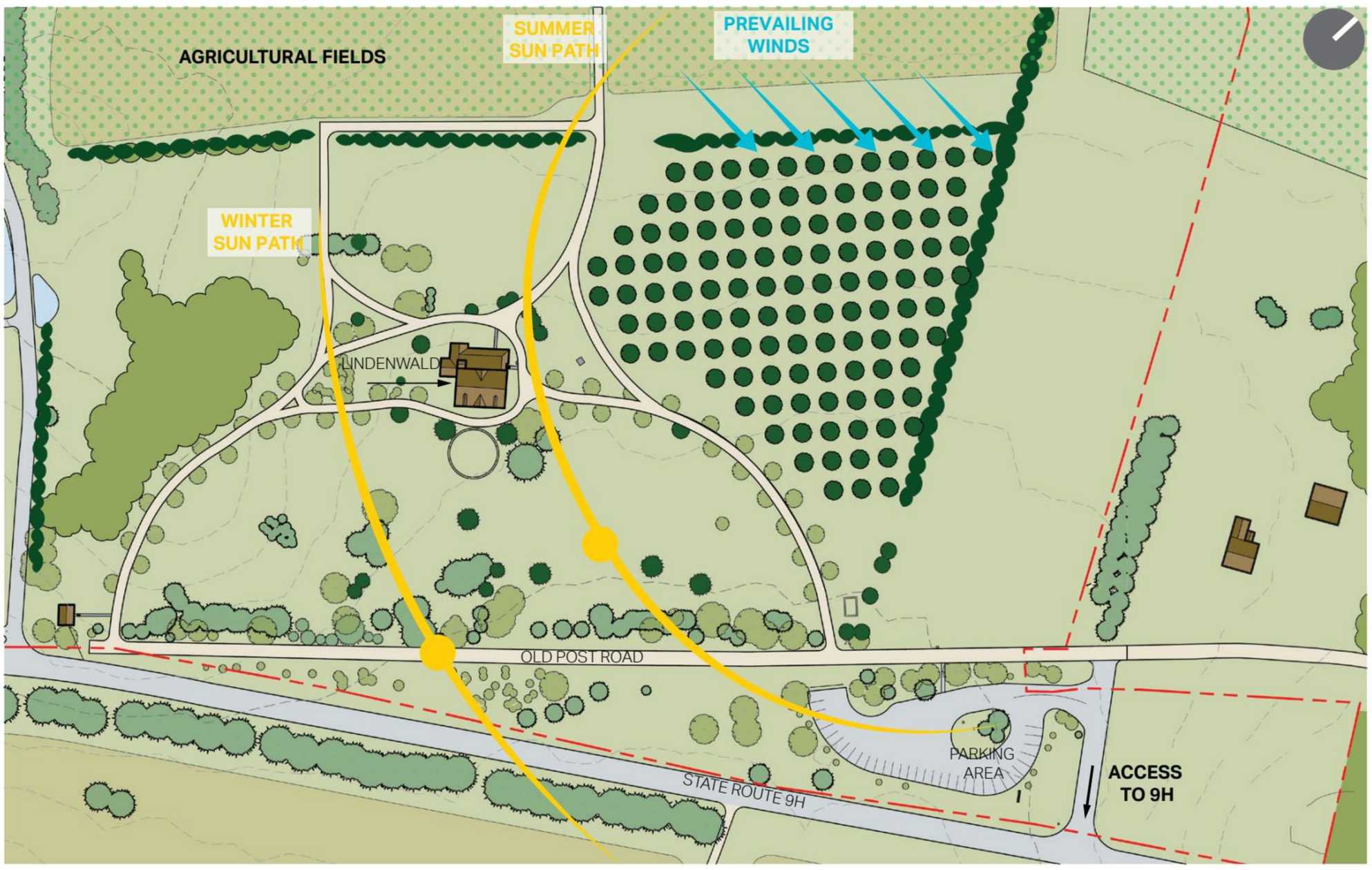
The park's authorized boundary includes approximately 300 acres of mostly active farmlands bordered by woodland, open green spaces and undeveloped agricultural land. For the purposes of this project, the A/E team focused on the federal land (owned in fee or less than fee) immediately surrounding the Lindenwald mansion.

The grounds at Martin Van Buren National Historic are interesting and complex. The historically significant cultural landscape has mostly retained its integrity. However, the landscape has seen some changes since the Van Buren era; some historic buildings and barns have been lost while other non-historic structures have been added.

Several of the parks existing maintenance buildings have altered the open character of the rear pasture behind the Lindenwald that was appreciated during the historically significant period of the site. However, the park is working on a series of projects that will continue to restore the historic character of the site including restoring historic views to and from the mansion. The Curatorial Storage Pole Barn will be demolished in winter of 2022. At the time of this writing, several maintenance buildings page are planned to be demolished as part of the park's plan for historic character enhancement. The site plans on the page on the adjacent page illustrates the sites buildings planned on being demolished.

Aerial View Lindenwald and Historic Core w/ maintenance structures and curatorial barn in rear pasture, altering historic open character.

Proposed Restored Site Plan including Historic Orchard (illustrative plan not for construction)- Source: *National Park Service, Olmsted Center for Landscape Preservation, Orchard Rehabilitation Plan, Martin Van Buren National Historic Site*



Proposed Restored Site Plan (illustrative plan not for construction)- Site Analysis.

The Orchard

Martin Van Buren developed the north and south orchards on the site through the 1840s. The orchards included both apple and pear trees and extended across much of the northern portion of his property. The orchards have been removed. The western portion of what once was the orchard is actively farm land and the eastern is now an overgrown north woodlot. As part of the effort to restore the historic agricultural landscape of the site, the park will be replacing the north woodlot with a large apple orchard, like the one that once occupied the site.

The design team met with the Olmsted Center via MS Teams on February 3rd, 2022 to discuss the restoration plan and how the building planning project can be integrated into restoration plan and vice-versa. The orchard restoration project is an opportunity to expand the park's interpretation features. Building siting and interpretation planning will include the future orchard as a main natural resource at the park.

Archaeological Grounds

In addition to the site's historic importance relative to the Martin Van Buren, the site is a vessel to the Mohicans, a Native American tribe of the Lenni-Lenapes, cultural heritage. The Mohicans occupied the valley of the Hudson River prior to European settlement. The park sits squarely on the Tribes homeland. The NPS does not contest this fact and consider themselves as co-stewards of the land.

Objects of archaeological significance related to Mohican, Dutch Colonial and Van Buren era can be found throughout the site. Disturbing or removing the Mohicans cultural heritage is not desired. The Tribe prefers objects are subject to natural processes and remain in the ground. MAVA and A/E team respect the tribe's wishes and will integrate this into the project. Ground disturbance will be a major consideration in building siting and structural foundation design. The placement and types of utilities will also be studied to minimize soil disturbance.

Existing North Woodlot, location of Orchard Restoration.

SITE ANALYSIS

As noted in the Site Description chapter of this report, the cultural landscape that comprises the historic core of the site has retained integrity and continues to contribute to the understanding of Van Buren's life at Lindenwald. The core of Van Buren's original property which include the park's fundamental resources has been persevered by the park for over four decades. A new visitor center is an opportunity to contextualize the historic significance of Martin Van Buren political career, the house, and site for visitors. Therefore, the design team's primary task in analyzing the site for building location is to identify areas that contribute to the park's mission to conserve the integrity of the sites historic core.

The NPS' General Management Plan (GMP) identifies 5 management zone within the boundaries of the park: Historic Management Zone, Historic Transition Zone, Administrative Zone, Agricultural Zone and Natural Resource Zone. In addition to reviewing the guidelines and analysis in the management plan, the A/E team reviewed the treatment tasks for long-term stewardship and historic character enhancement of the park proposed by the Olmsted Center in the Cultural Landscape Report Volume II (CLR II). Three of these zones and their respective treatment plans significantly impact building siting for both the maintenance facility and park's headquarters (visitor center and administration building) in this project.

Historic Management Zone or the historic core:

The A/E team referred to this zone as the Restoration Zone. The long-term goal is to restore the landscape of this zone to its mid-1800s appearance and reflect the country estate of Martin Van Buren during this era as much as possible. The historic core includes the Lindenwald mansion, associated outbuildings, Farm Cottage and surrounding grounds. No significantly visible architectural or interpretive structures are proposed within this zone. All existing contemporary structures shall be planned to be removed including the existing maintenance buildings and pole barn used for curatorial storage.

Historic Transition Zone:

The A/E team referred to this zone as the Rehabilitation Zone. This area is considered a buffer between the historic core and contemporary environment that surrounds it and includes a portion of the area once occupied by the orchard. The treatment plan proposed in the CLR seeks to rehabilitate the area to evoke the historic agricultural character of the landscape. Architectural and interpretative interventions may have a larger presence than the proposals in the historic core. However, these interventions shall not significantly comprise the historic character of the site in both design and scale.

Administrative Zone:

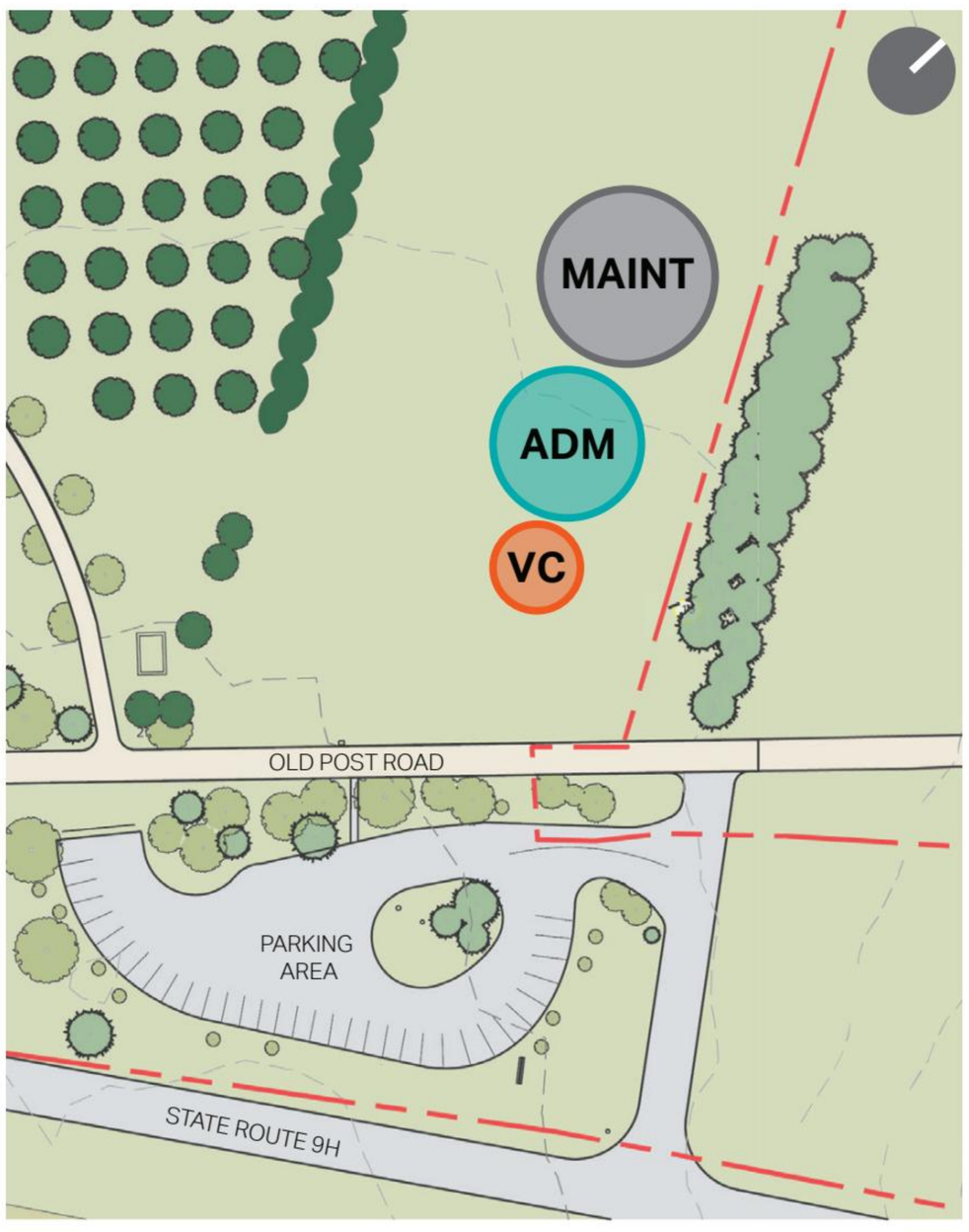
The A/E team referred to this zone as the Building Zone. The existing visitor center and office complex are located in this zone. Placing any new construction or perceptible building interventions (architectural or interpretative) in this zone, will contribute to the preservation of the character of the historic core. The massing and definition of the proposed structures within this zone will need to be sympathetic and harmonious to the surrounding management zones and neighboring structures.

**(Sources: National Park Service, Olmsted Center for Landscape Preservation, Orchard Rehabilitation Plan, Martin Van Buren National Historic Site, Kinderhook, NY, 2021; National Park Service, Olmsted Center for Landscape Preservation, Cultural Landscape Report for Martin Van Buren National Historic Site, Kinderhook, NY, Volume II: Updated Treatment Plan, Record of Treatment, 2016; National Park Service, General Management Plan Environmental Assessment, 2015).*

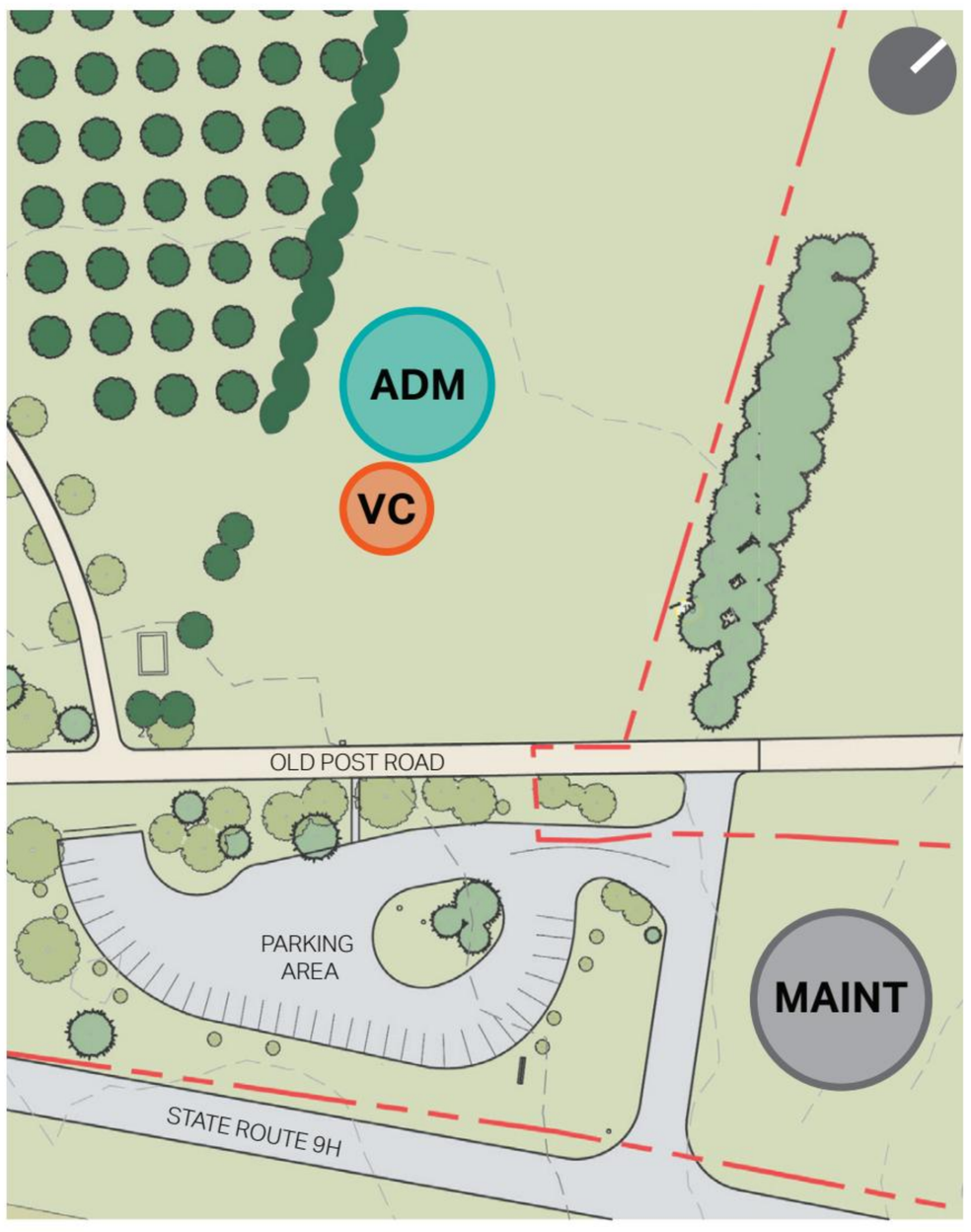
Existing Conditions Site Plan- GMP Development Zones

Proposed Restored Site Plan w/ potential interpretative and architectural interventions in each Development Zone (illustrative plan not for construction).

Building locations studied and selected



1 - Site North Program Allocation



2 and 3 - Existing Site / Orchard and Site 9H Program Allocation

4.2 Building Siting

BUILDING SITING

Multiple building locations primarily within the Building Zone and some within the Rehabilitation Zone were studied (see diagram page 59 for details) . Siting buildings within these zones must follow these considerations:

1. Minimal Disturbance of Historic Grounds & Preservation Landscape Viewshed
2. Prominence of Structure & Preservation of historic views from and to the mansion
3. Relationship to the Park & the Narrative
4. Access / Accessibility
5. Context & Relationship to Neighboring Properties

Based on site analysis performed, the Building Zone is considered prime location for new construction. Among the attributes of this zone are: 1) proximity to the historic core, 2) proximity to existing parking area and easy access to 9H, 3) free of limiting historic constraints, 4) openness of field provides flexibility in design and 5) familiarity of location for returning visitors and community members.

Three sites were selected within the Building Zone to be developed for this project (see diagram page 62 for details).

1 – Site North

Located at the northern edge of the site, this site maximizes openness & view of the park, orchard and Catskills beyond. It requires new site utilities and infrastructure and landscaping to buffer park activities from the neighboring properties north.

Potential Program Allocation:
- Administration
- Visitor Center
- Maintenance

2 – Existing Site / Orchard

Re-utilizing the already disturbed ground where the headquarters is currently located addresses the concerns of the park's Tribal partners. This site has the potential of reutilizing many existing utilities, provides a familiar location for visitors. Its proximity to the historic core can be used to easily orient visitors to significant features of the site.

Potential program Allocation:
- Administration
- Visitor Center
- *Due to its visibility, this site is not appropriate for maintenance functions.

3 – Site 9H

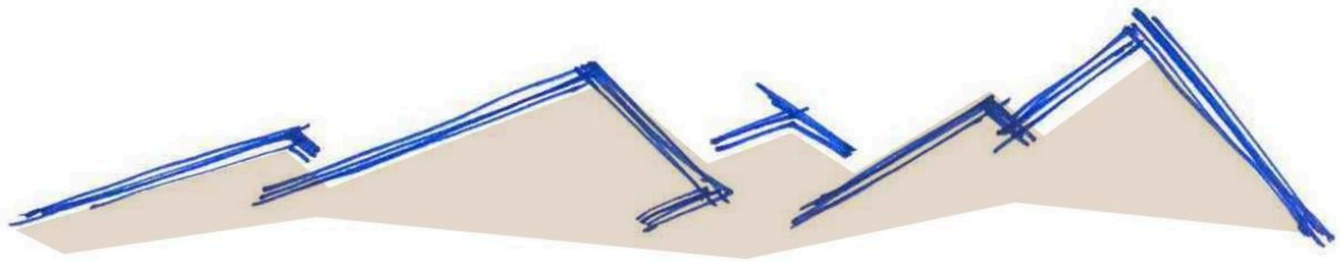
Siting the building in this location relocates the park functions to the area adjacent to the existing parking lot. All park activities would no longer be near the historic core and viewshed would be completely unobstructed. This building would have a larger public presence from the road. This site requires new site utilities and infrastructure and landscaping to buffer park activities from the neighboring properties north

Potential program Allocation:
- Maintenance

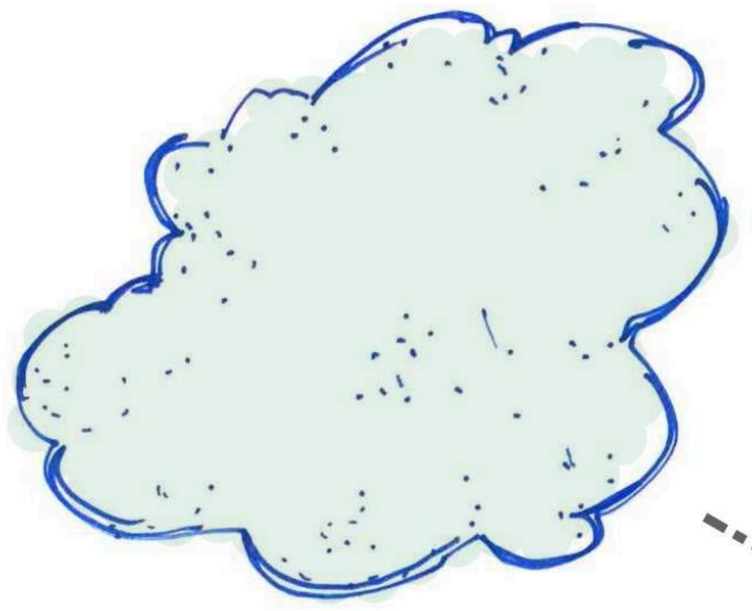
*Due to its remoteness, this site is not appropriate for public facing functions.

The diagrams on the adjacent page illustrate the site location and its respective program allocation options proposed. All locations studied by the A/E team look to contribute and work within the treatment plans proposed by the NPS and Olmsted Center.

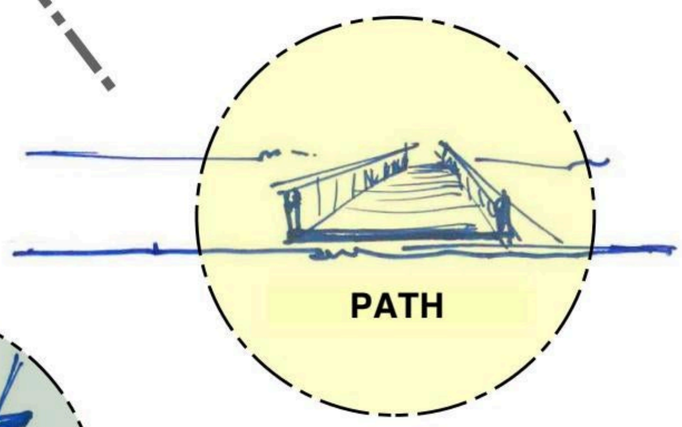
5 PROPOSED BUILDING DESIGN



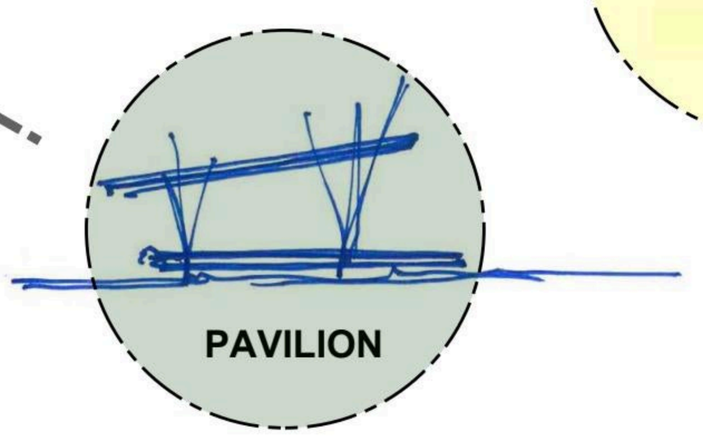
LANDSCAPE
CULTURAL / RECREATION



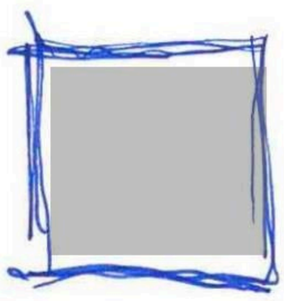
ORCHARD
AGRICULTURE / POLITICS



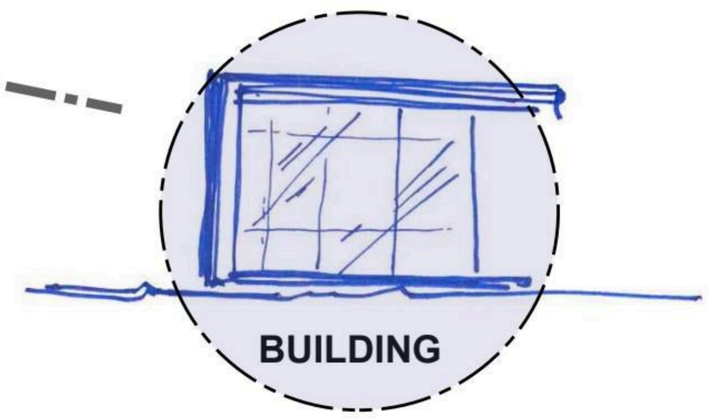
PATH



PAVILION



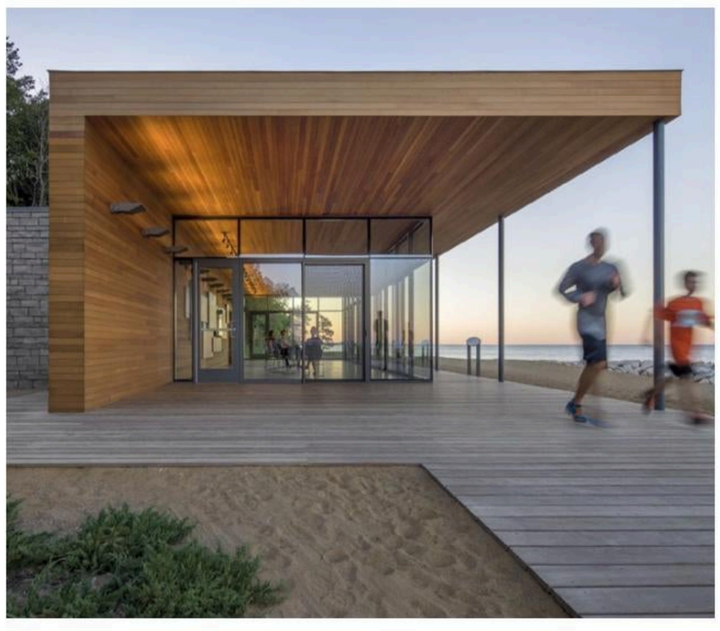
LINDENWALD
HISTORY / POLITICS



BUILDING

PATH

PAVILION



BUILDING

5.1 Building Design Concept

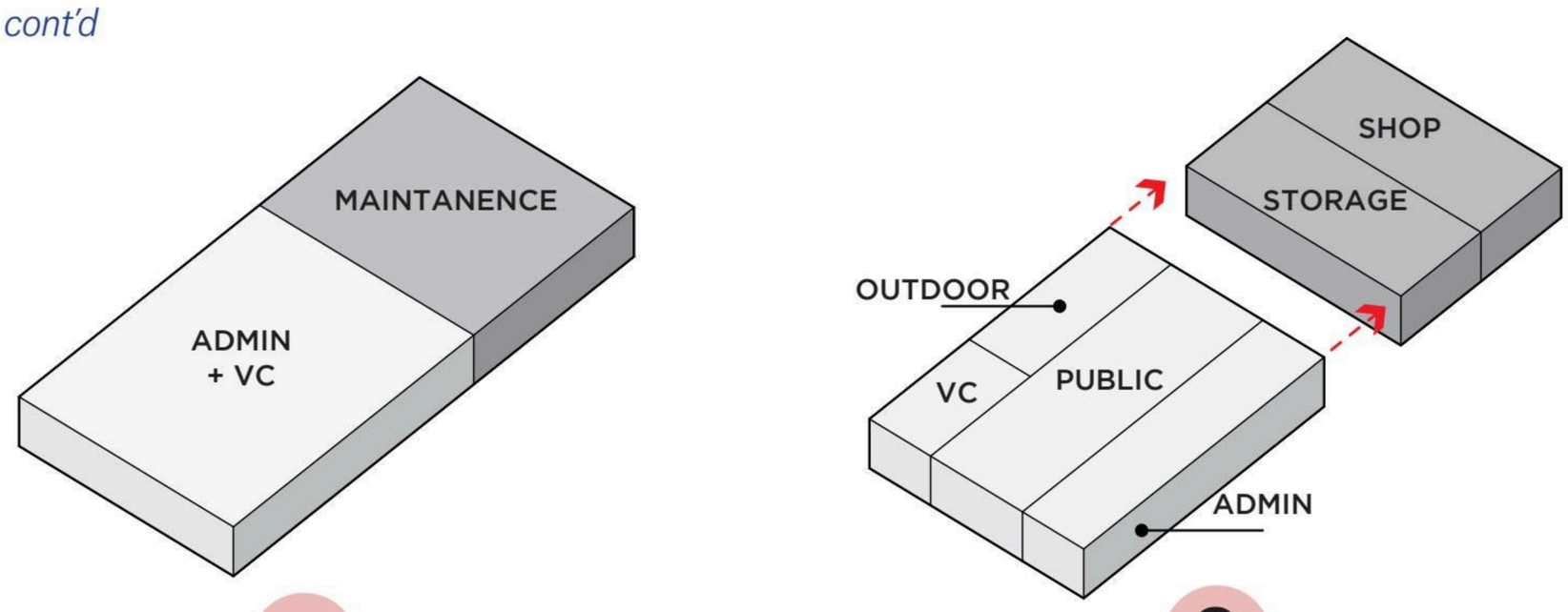
Architecture should provide a physical built identity with a composition of structures and interventions that complement the landscape rather than dominate it.

MAVA is a geographically small park with a complex historical narrative enjoyed by a broad range of visitors with varying interests and needs. Through the Park staff the design team was introduced to the interpretive narrative of the site which included decades of history, politics, agriculture, and of generations of settlers and the Native Americans. Anchored by the Catskill mountains and the rural agricultural communities surrounding Kinderhook, throughout Columbia County, the history is tied together by the land itself. To experience the pastureland, to view the Catskills or walk through the halls and rooms of Lindenwald is to experience and participate in history.

As we consider what a new Visitors Center could be, or should be, now is the time to look to the landscape as the primary inspiration and attraction. Could the building be the portal that allows visitors to experience the land? It is the lens that focuses visitors' attention and informs their time at the park. The building is there only to serve the landscape, historic home, and the Park narrative. Through the historic place the park serves the destination visitors with their NPS Passports waiting to be stamped, it provides an educational platform for many groups of students, historians and researchers, but it also serves a local community as a recreational destination.

How can architecture support the mission of the park by providing visitors and staff with the needed intuitive structures that provide purposeful shelters, intuitive wayfinding and program specific workspaces for operations? Architecture should provide a physical built identity with a composition of structures and interventions that compliment the landscape rather than dominate it. Our conceptual planning of the Visitor Center is meant to encourage exploration, highlight key moments and attributes of landscape and history, provide opportunities for conversation and community gatherings, while ultimately and quietly providing the workspaces for the park staff to provide for and meet the needs of the visitors.

Evaluation of the program reveals three distinct overarching needs. These include traditional buildings for workspace, research, and park operation, shelters within the park, which could be open air structures for visitor gatherings and interpretive content, and the wayfinding paths that allow visitors to wander and explore the parks history. It is our proposal that these needs will inform and shape the architectural form of the built environment. In discussions we simplified these as "the building", "the pavilion" and "the paths".


MAINTANENCE
ADMIN
+ VC
SHOP
STORAGE
OUTDOOR
VC
PUBLIC
ADMIN
1
2
STEP 1:
DETERMINE
REQUIRED SQF
STEP 2:
GROUP FUNCTIONS
INTO BLOCKS
OUTDOOR
PUBLIC
ADMIN
VC
HEADQUARTERS
SHOP
STORAGE
MAINTENANCE
3
STEP 3: SHIFT BLOCKS TO CREATE
CLUSTER COMPOSITION
PROGRAMS ARE SEPARATED BY FUNCTIONS
& OCCUPY MULTIPLE SITES
OR
HEADQUARTERS + MAINTENANCE
3
STEP 3: SHIFT BLOCKS TO CREATE
LINEAR COMPOSITION
PROGRAMS ARE ADJOINED & OCCUPY
SINGLE SITE

5.2 Building Massing Concept: Cluster

BUILDING MASSING

DBB's approach to building massing was largely influenced by the park's programmatic requirements and conservation of viewsheds. The need to provide a sympathetic building scale and design with respect to the surrounding context also played a major role in developing the building forms. DBB translated those needs into massing and planning options that blends interior and exterior environments, encouraging visitors and staff to remain outdoors.

Once the square footage needs for the park's administration, visitor services and maintenance programs were determined in the programming phase of the project, the required building masses were broken into volumes of various sizes and heights based on their functional requirements. These volumes were arranged in 2 ways: 1) Clustered Composition 2) Linear Composition. Each massing composition creates different programmatic adjacencies, separations and visual connections.

CLUSTER COMPOSITION

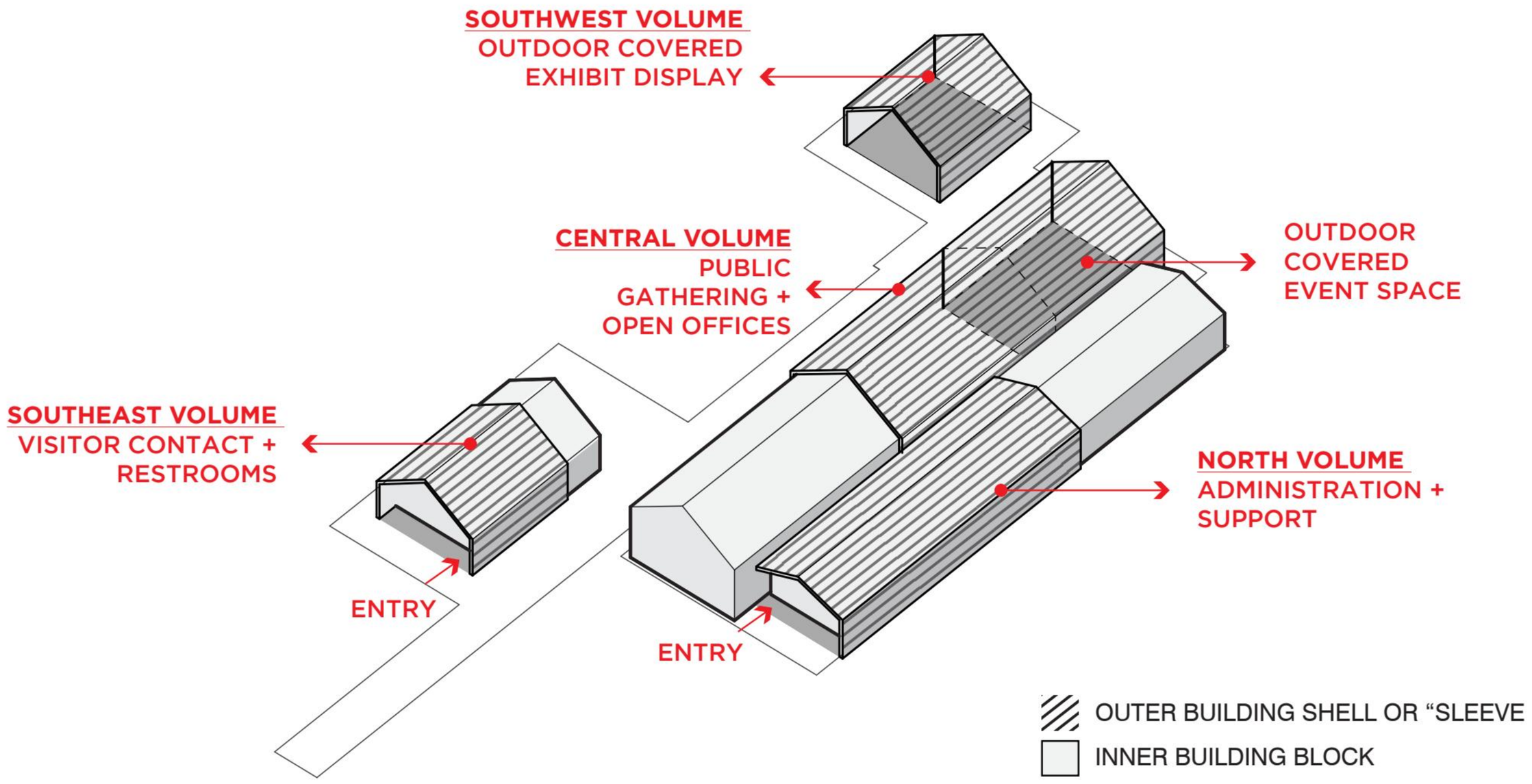
The cluster composition proposes placing the administration and visitor services program on one of the selected building sites (see site analysis chapter for details), and the maintenance program on a separate site where remoteness from public activities is beneficial. This composition arranges the required program volumes to form a cluster of shifting blocks, grouped according to their programmatic relationship to one another. The result is an "exploded building" made of isolated volumes. The volumes are designed as independent structures separated by circulation, open and/or green space and unified through material and formal expression. Each structure can operate without disrupting the other functions.

The shifting volumes add dynamism to the building composition. Oriented perpendicular to State Route 9H, the overall depth and appearance of the volumes is reduced and views to the farmlands beyond remain relatively unobstructed. From the State Route 9H, the building elevations are simplified to a series of sculptural profiles with the Catskills mountains as their background

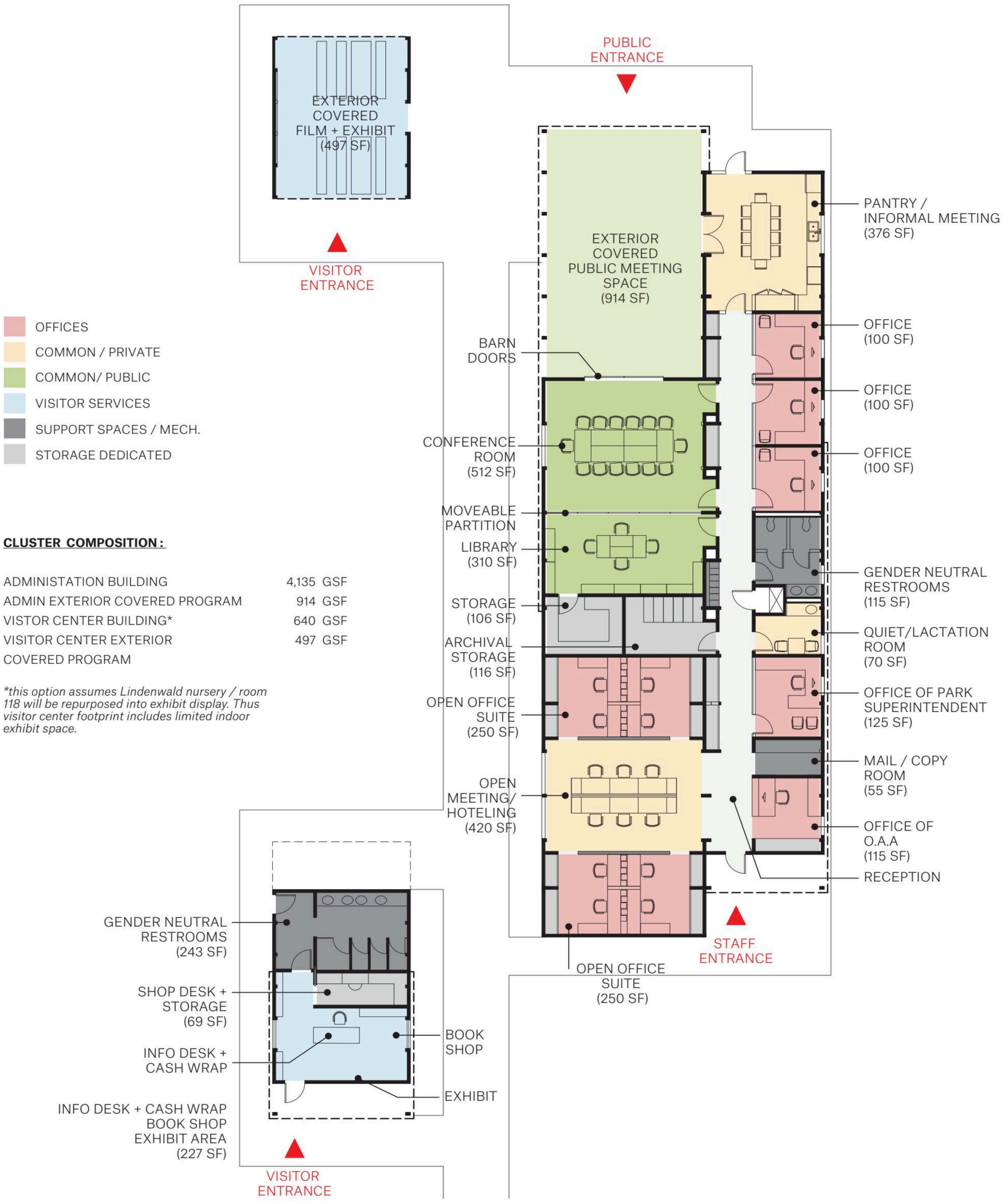
1. MAVA Administration Building + Visitor Center Planning Layout

The administration building and visitor center are arranged in a programmatic gradient relative to one another, swaying from private to public. As the volumes move from north to south on the site, they become not only more open to the public programmatically, the building mass becomes more open to the exterior environment. That is, visitors and staff experience a seamless connection between the indoor spaces and outdoor spaces.

The northern volume contains the park's most private programs including enclosed offices and support spaces. The central volume is a double height building that houses open offices and public gathering spaces. The two southernmost volumes are dedicated to visitor services and interpretation.



MAVA Administration Building + Visitor Center



CLUSTER COMPOSITION :

ADMINISTATION BUILDING	4,135 GSF
ADMIN EXTERIOR COVERED PROGRAM	914 GSF
VISTOR CENTER BUILDING*	640 GSF
VISITOR CENTER EXTERIOR COVERED PROGRAM	497 GSF

**this option assumes Lindenwald nursery / room 118 will be repurposed into exhibit display. Thus visitor center footprint includes limited indoor exhibit space.*

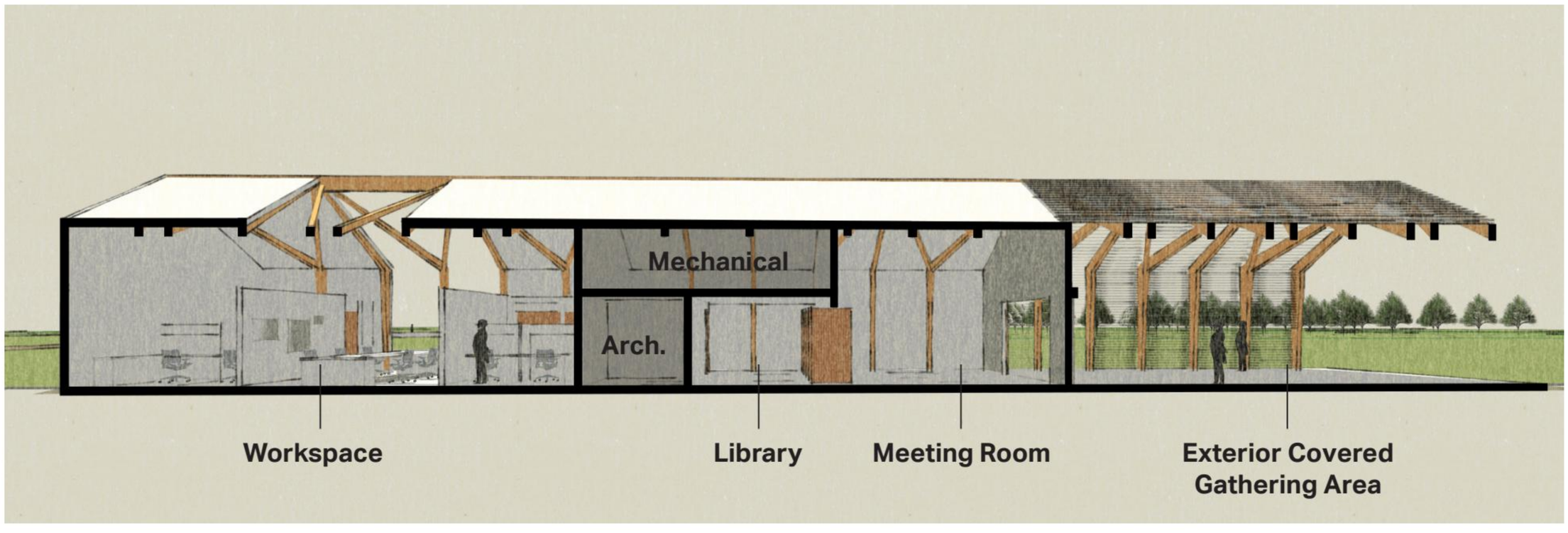
These last two volumes face the park's historic core, giving staff and visitors the opportunity to view the park's surrounding features from within the structures. They are separated from the park's administration volumes by exterior open circulation and active spill out space for visitors and park staff. The orientation and length of the building invites visitors and staff to move through it. This interstitial space is designed for social interaction and to encourage movement without interrupting the activities in the administration volumes. The proximity and openness of the administration volume to visitor services provides a visual connection to the public activities outdoors for park staff.

Similar to the open circulation separating visitor services and admiration functions, an interior circulation spine connects the northern and central administration volumes, allowing them to act as one. The spine is more than a corridor, architecturally and functionally. It is lined with general storage closets, reducing the need for a dedicated storage space. Architecturally, it creates visual depth. The window at the western edge of the spine provides views to the farmlands to the west of the site and allows light to flow into corridor, giving it a sense of openness to the exterior.

North Volume: Enclosed offices are provided for department heads and the park's Superintendent. The offices line the north volume along with the pantry and the required support spaces. The pantry was designed to be used primarily for park staff. However, the pantry can used as a staging and catering area for large events. It is located adjacent to the covered outdoor event space with direct access from its southern edge.

Support spaces like the mailroom are used as program dividers and are integrated into the building circulation by maintaining an open plan. Staff restrooms and lockers are gender neutral.

Central Volume: As part of the efficiency exercise performed during the programming phase of the project, DBB deviated from the standard enclosed office plan and proposed an open office suite. Located at the eastern edge of the central administration volume, the open office suite is a double height space containing semi-open workstations open work stations. Permanent staff members are place in semi-open workstations, next to open workstations for seasonal staff. The workstations are divided into two clusters of 4 (separated by a breakout meeting space or hoteling stations. A partial height wall partially encloses the meeting space and provides a pin-up wall for project tasks. Acoustic fins can be placed over the workstation to reduce noise-flow.



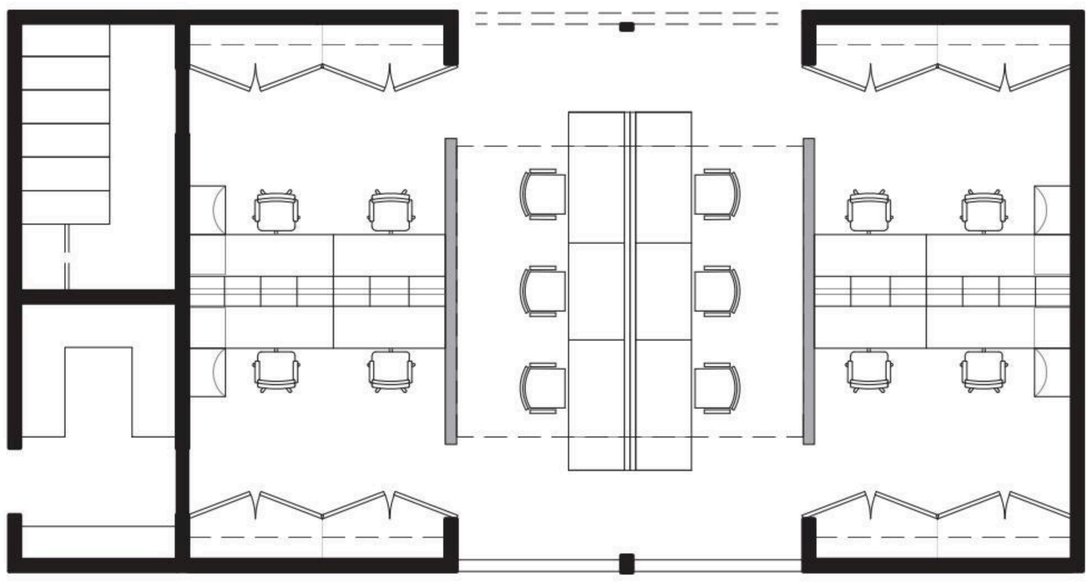
Longitudinal Section through Central Volume

Central Volume Open Office Suite:

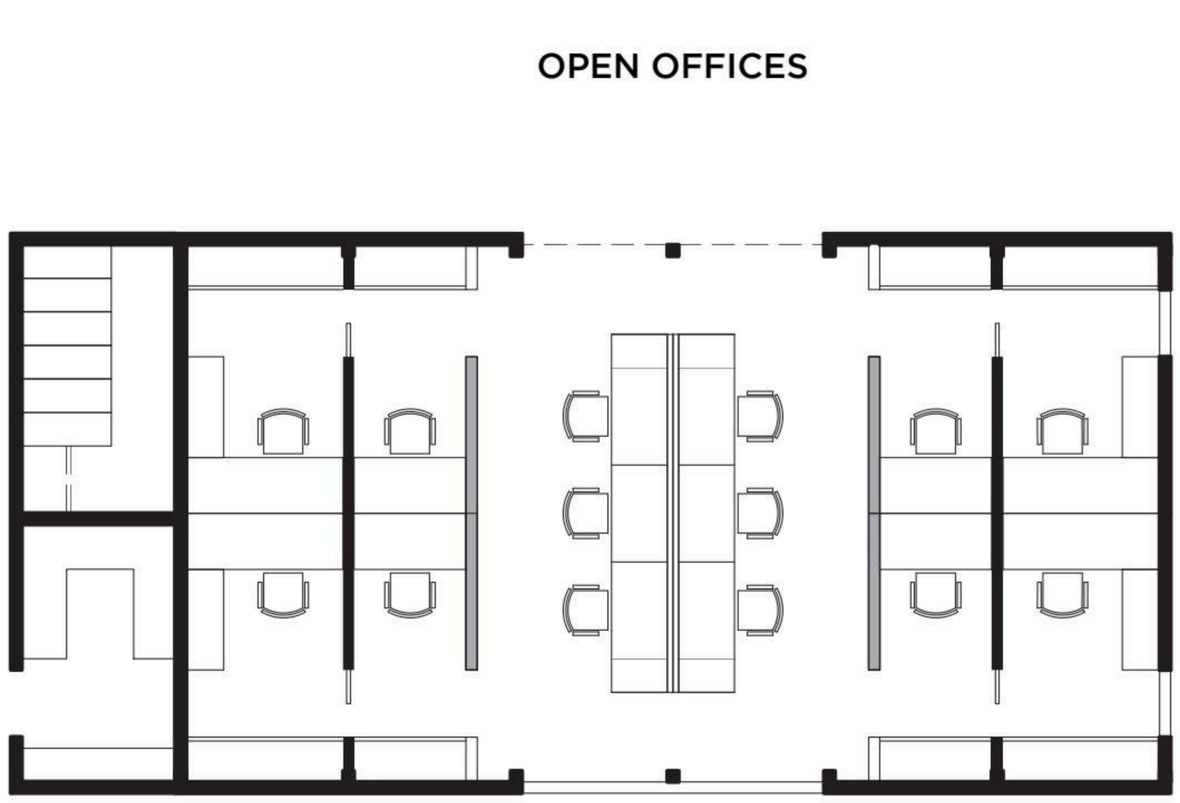
Open office layouts are generally flexible and encourage collaboration work. Among the benefits to such layouts are: can be easily rearranged, more resources can be shared between users, occupy less space and require less individual environmental controls. The open office layout proposed for MAVA, intentionally places permanent staff members next to seasonal staff. This is intended to give permanent staff members a greater sense of privacy in an open office environment. As seasonal staff spend most of the day outdoors with visitors, each section of the open suite is effectively occupied by 2 permanent staff members for the majority of working hours. Additionally, making the suite a double height room, gives the illusion that the workstations occupy more space than they really do.

A large floor-to ceiling window facing the visitor center brings abundant light into the space, adding to the sense of openness of the suite and providing a visual connection to outdoor activities.

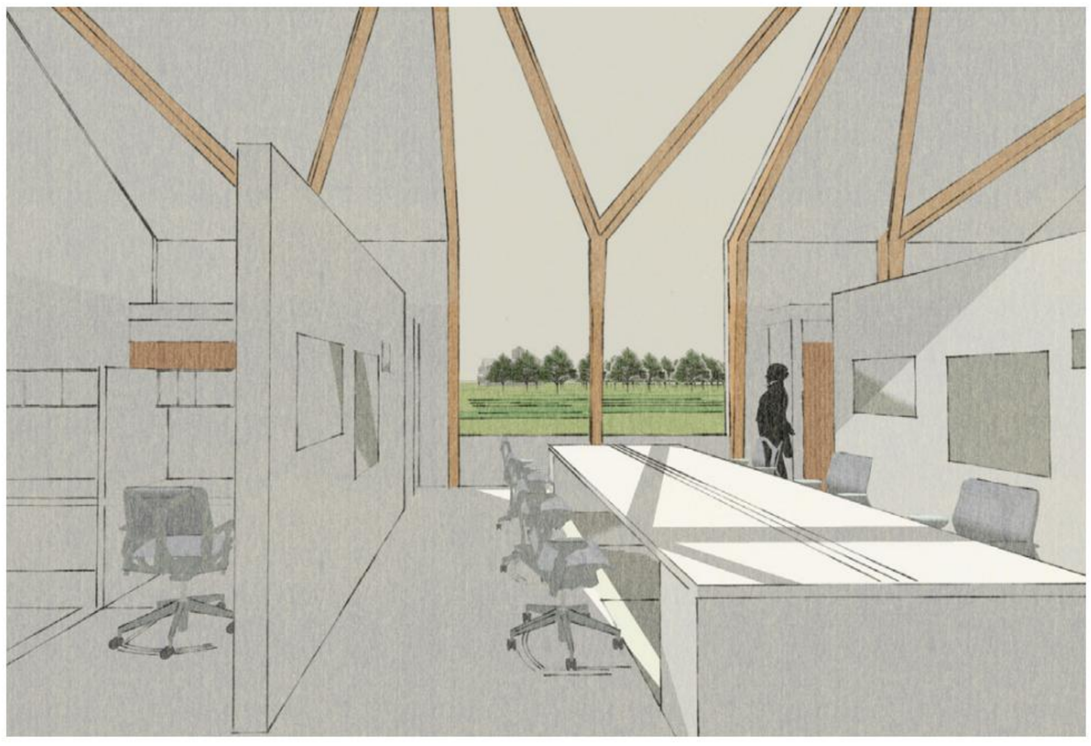
Providing shared breakout areas like the quiet/ lactation room and the open meeting/ hoteling station address some of the privacy challenges of an open office layout. However, DBB recognizes the need for varying work environments and work styles. So the team also explored providing a mix of enclosed offices and open workstations in the suite. The floor plans and perspectives below illustrate the result of the explorations.



OPEN OFFICES

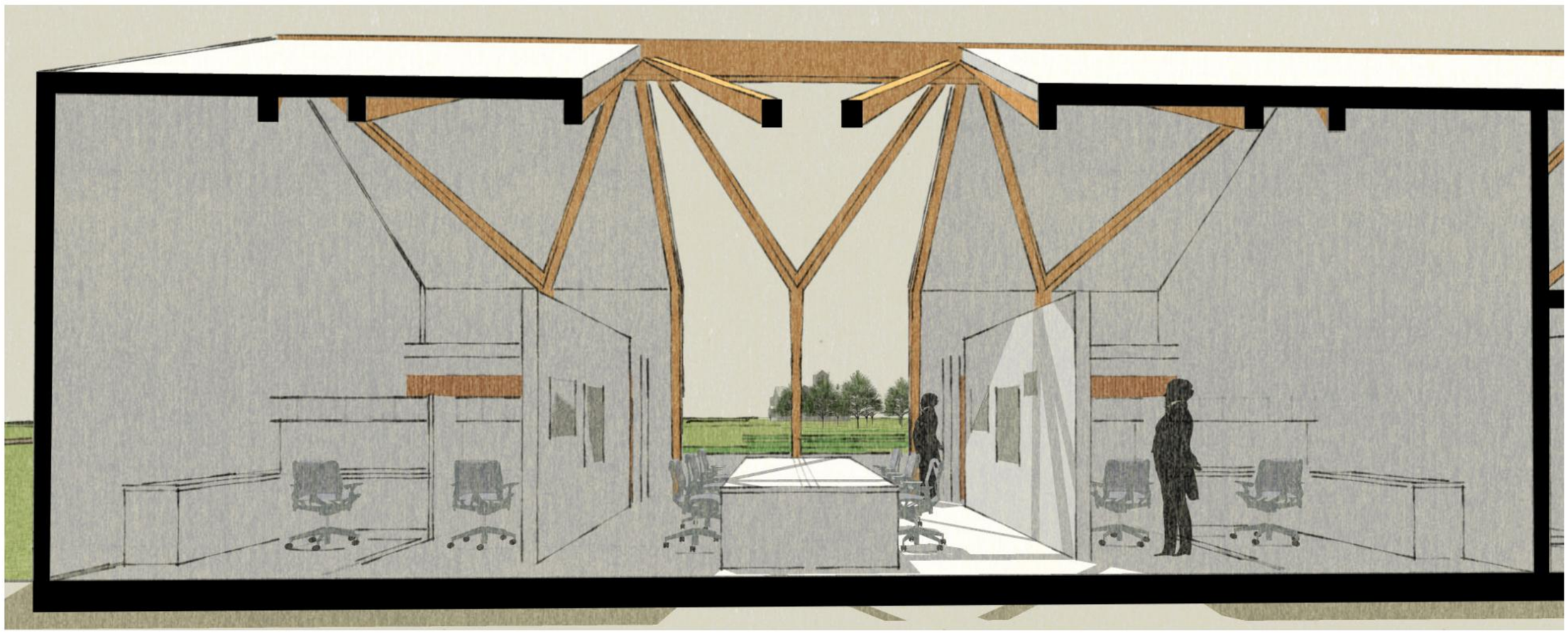


ENCLOSED OFFICES
ALTERNATE



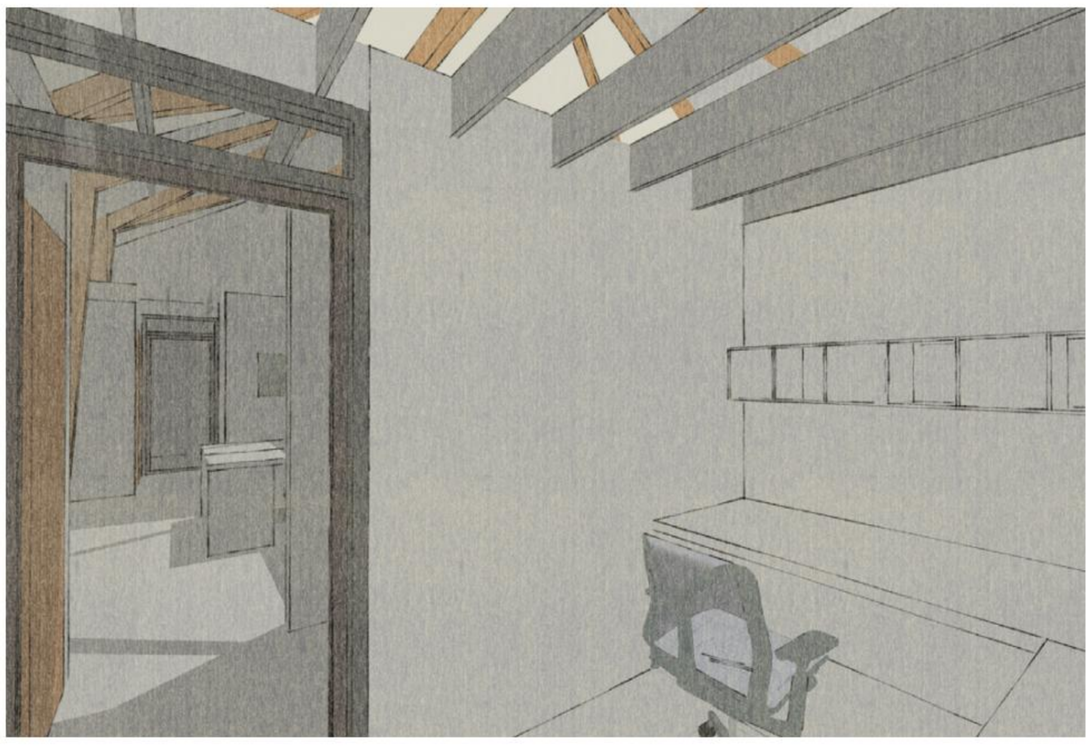
Breakout Meeting Space / Hoteling Stations in Open Office Suite

Permanent Staff Open Workstation in Open Office Suite



Longitudinal Section through Open Office Suite

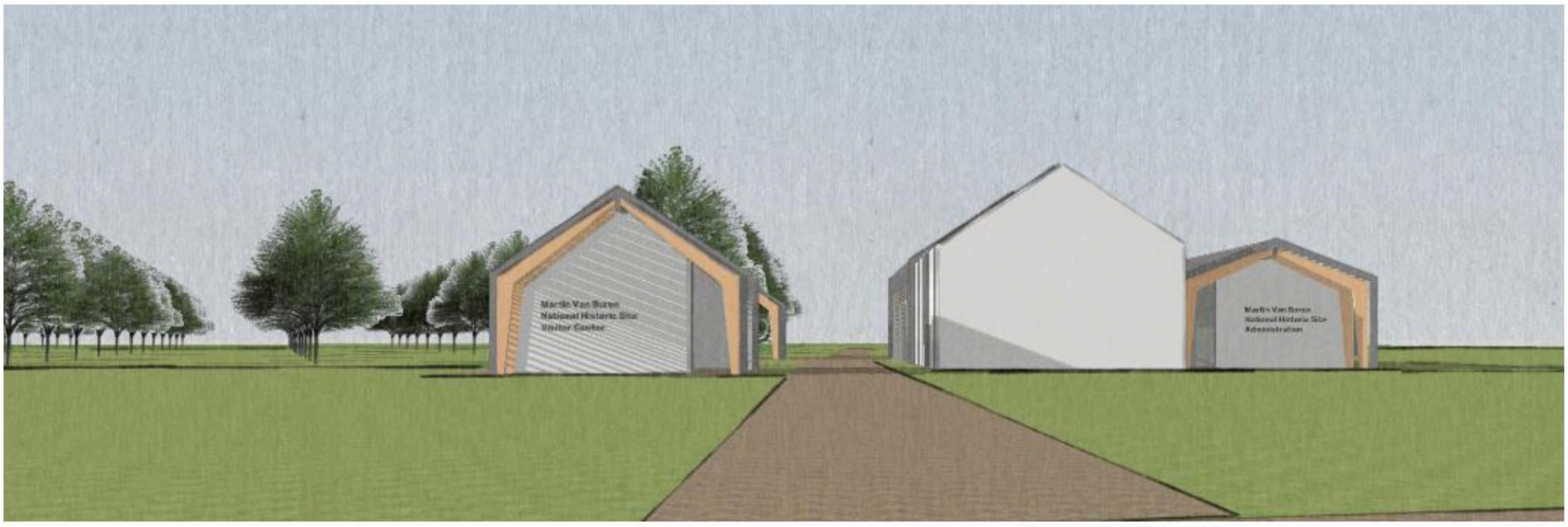
Permanent Staff Open Workstation w/ Acoustic Fins in Open Office Suite



Permanent Staff Enclosed office w/ Acoustic Fins in Open Office Suite

Building Massing Concept: Cluster, *Visitor Center + Administration Building cont'd*

Aerial View of Cluster Composition in Site 2 Orchard



View West towards Administration Building and Visitor Center from Old Post Road.

General and curatorial storage room are used as buffers or program dividers. The A/E team took advantage of the double height space by placing mechanical room over the storage buffers, decreasing the side of the building footprint.

Public gathering spaces in the central volume were designed with not only space efficiency in mind (see section 3.4 space efficiency for design approach), but also flexibility and versatility. The library and conference room are adjacent to each other. Movable partitions connect the two spaces, giving the park the ability to expand its conference room for indoor public events.

The east-west orientation of the building volumes allows for framed views the Catskills Mountains and farmlands beyond. The roof of the central volume extends west to create a covered multipurpose space. The space provides shelter from the elements and can be accessed from the outdoors on its western edge. From the interior of the building, the space is accessed through large barn doors on the western edge of the conference room. When completely opening the divisions between the library, conference room and covered multipurpose space, the result is a continuous indoor/ outdoor space that accommodates 60+ visitors at a time. The increasing openness between these spaces creates an interesting procession of spaces and blurs the lines between interior and exterior of the building.

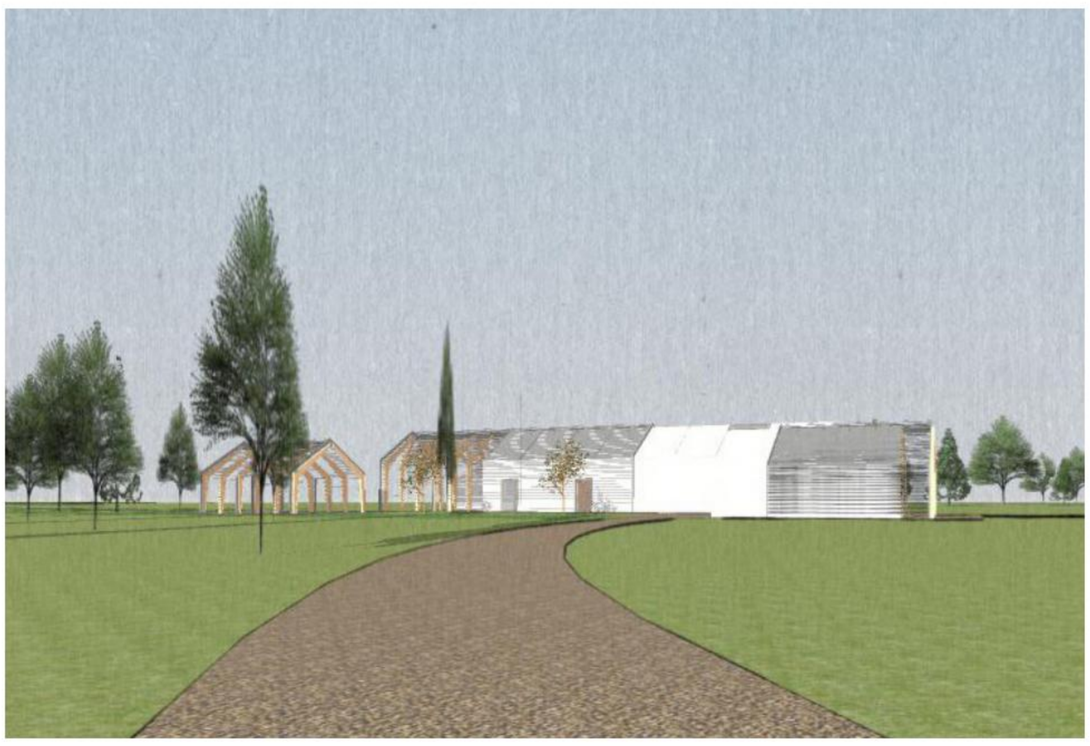
Southern Volumes: The proposed visitor services structures are designed to encourage visitors and staff to explore the site. Inspired by the temporary visitor services tent, they are pass through spaces occupying small footprints and intended to feel transient. The eastern visitor center structure includes a small exhibit area, a welcome desk, a book shop with an office and storage area and multiple gender-neutral restrooms with access from the interior and exterior of the visitor center. The building provides expansive views south towards Lindenwald and the Orchard, giving staff and visitors the opportunity to view the site features they are about to experience.

The western structure is a protected interpretation space for film display and exhibits. The structure does not require heating nor cooling. It provides shelter from the elements and is completely open to visitors and passersby. An alternative to building the western structure is using the multi-purpose covered outdoor event space in the central volume for film display and exhibits as well as outdoor events. While this is a cost-effective option, it has circulation and visitor flow challenges. This alternative requires more study and can be developed further a later phase of the project.

View South of Administration Building and Visitor Center from Old Post Road - Lindenwald in background.

View North of Cluster Composition from Locus Ailee. North gate seen in foreground and Orchard seen to the left of the buildings.

View East of Cluster Composition (rear) from path towards Farmlands. Orchard seen to the right of the buildings.



View North of Cluster Composition from Lindenwald Mansion

View North from Orchard of Cluster Composition including Maintenance Facility in background near State Route 9H

View East into Central Volume from rear (Covered Event Space w/ Conference and Movable Partitions in Library in the Background), North Volume to the left, and Southwest Volume (Exterior Film Exhibit).

View West from interior Central Volume (Covered Event Space w/Southwest Volume - Exterior Film Exhibit and Orchard in the Background to the left

MAVA Maintenance Facility

CLUSTER COMPOSITION SQF

MAINT. BUILDING	3,364 GSF
MAINT. - EXTERIOR COVERED STORAGE	1,720 GSF
MAINT. - EXTERIOR OPEN STORAGE	1,971 GSF
OPEN YARD	4,944 GSF

2. Maintenance Facility Planning Layout

The maintenance facility is designed as a farmyard that hides it everyday operations from the public. The building is made up of two shifting volumes, a double height volume containing the maintenance workshops and a smaller discrete volume adjoining it.

South Volume: houses the park's private programs, including open workstations for staff and support spaces like a copy/ printing station, small pantry, restroom (with shower) and locker room. A key feature in this volume is the curatorial workroom. This multipurpose space is a dedicated area for staff to execute curatorial tasks and meetings. It is adjacent to the maintenance workshops to give staff easy access to tools and maintenance supplies.

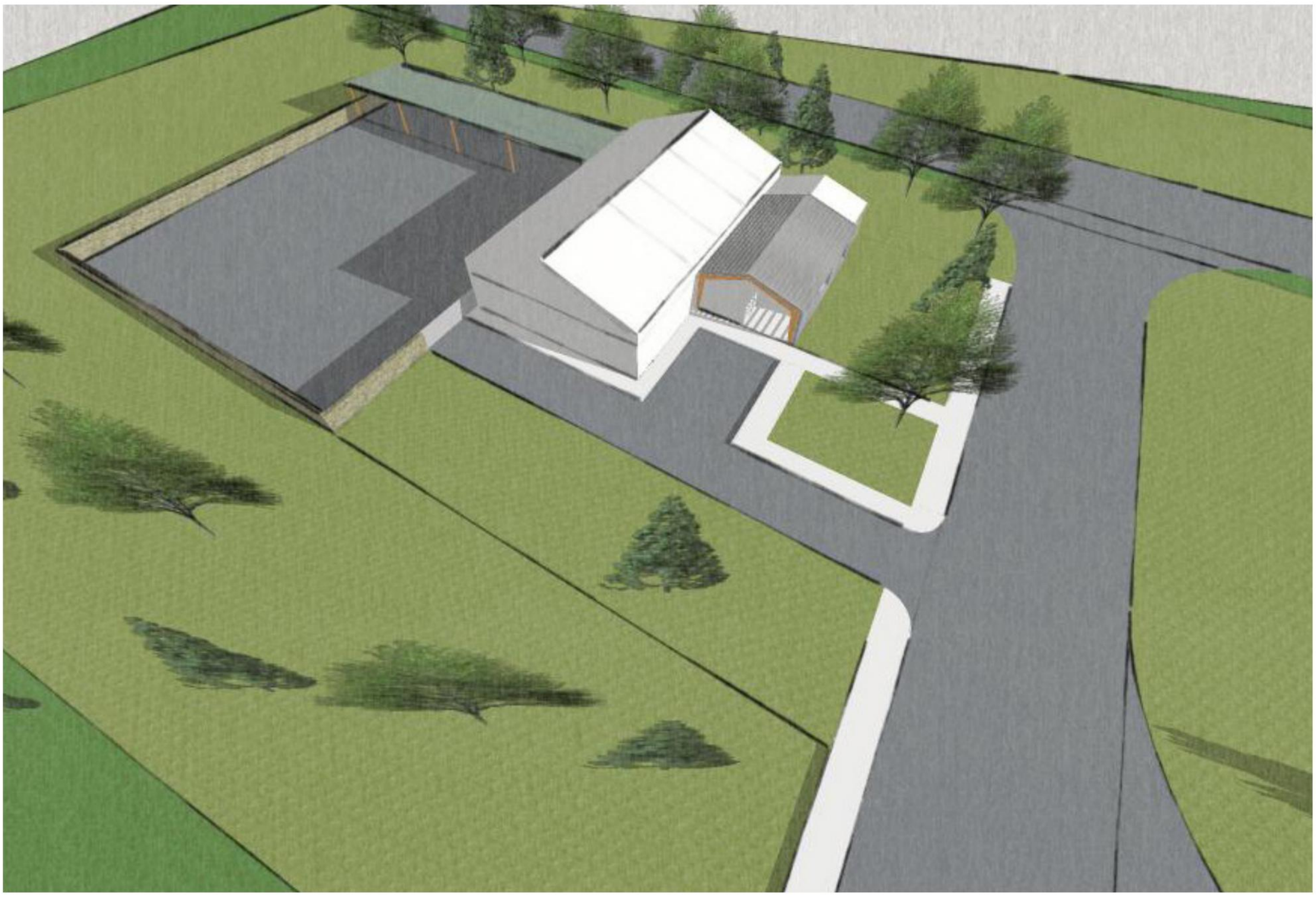
A receiving area for packages and deliveries is provided at the entry to the building.

North Volume: is a large double height shed housing enclosed workshops and protected outdoor work area. The workshops include compact shelving and traditional tool storage to reduce square footage requirements. Rolling pr pan service doors allow for all three spaces to work as one.

Open Yard and Storage: Dedicated covered and open storage areas designed to store the equipment and machinery used for the maintenance of Lindenwald and the Park, sit opposite each on the maintenance yard. The square footage provided consolidated the parks storage needs and eliminates the multiple, isolated sheds that currently in use. The open yard provides enough clear space for moving large equipment and vehicles and for outdoor work.

The building follows the planning and aesthetic principals used in the design of the administration building. The maintenance building is visually unified to the rest of the project through formal rhythm, building material and shape.

Building Massing Concept: Cluster, *Maintenance Facility cont'd*



Aerial View of Maintenance Facility

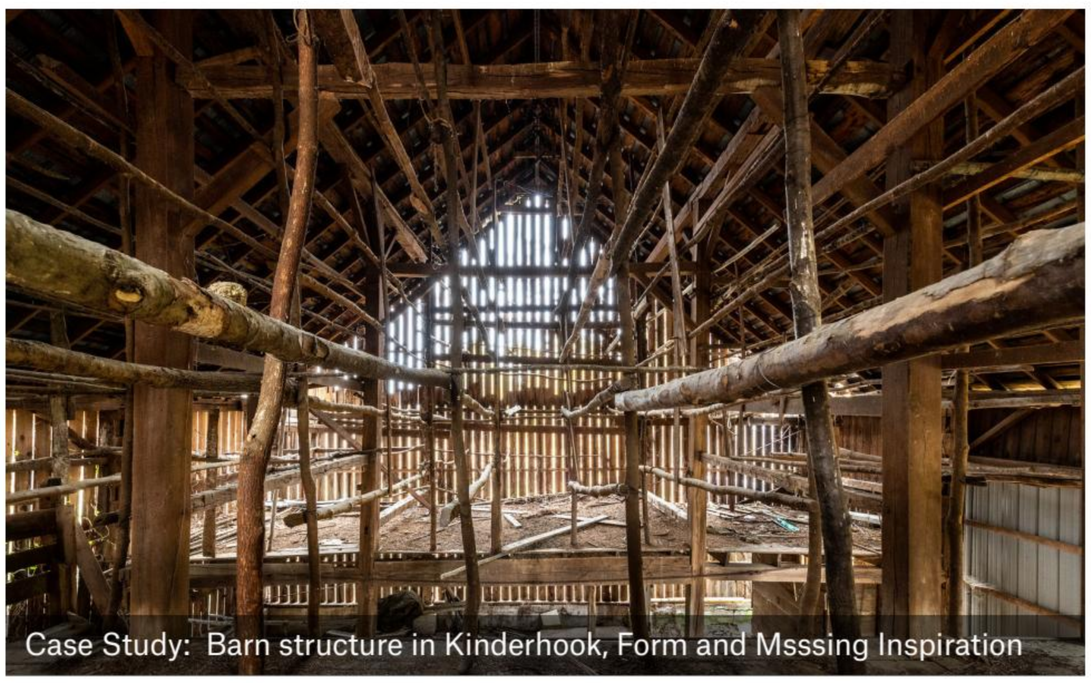
View of Maintenance Facility from entry road.

View of Entry to parking from State Route 9H (headquarters in the background)

View of Maintenance Facility Yard (Covered storage in background to the left)

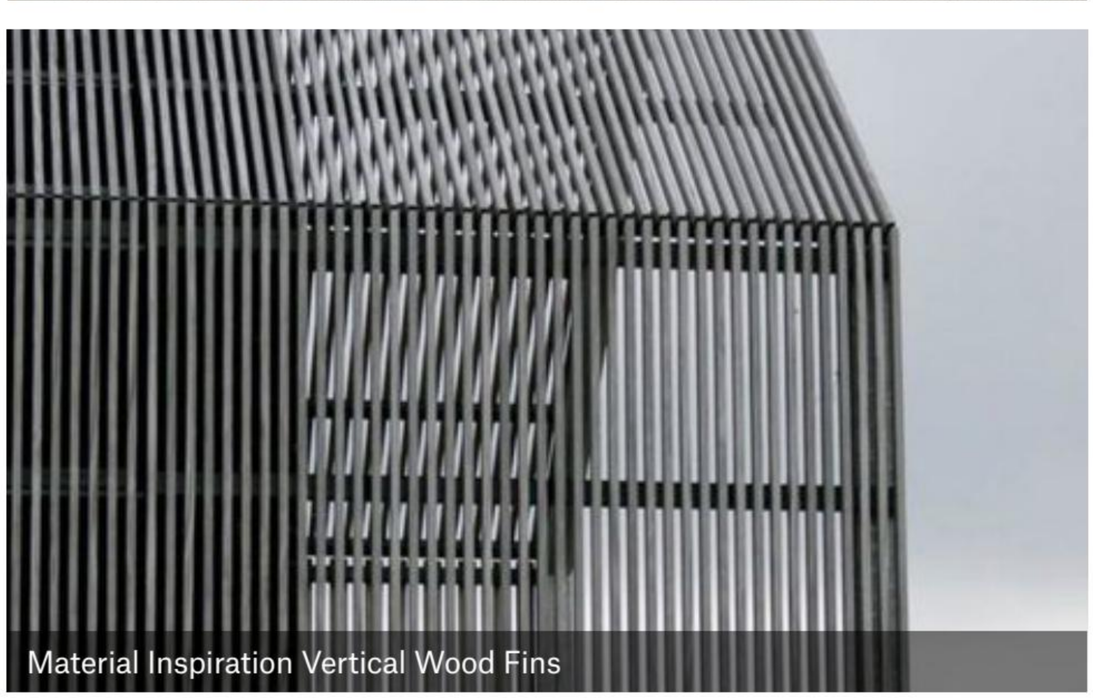
Building Massing Concept: Cluster, *Building Form + Materiality, cont'd*

Case Study: Barn structure in Kinderhook, Form and Msssing Inspiration

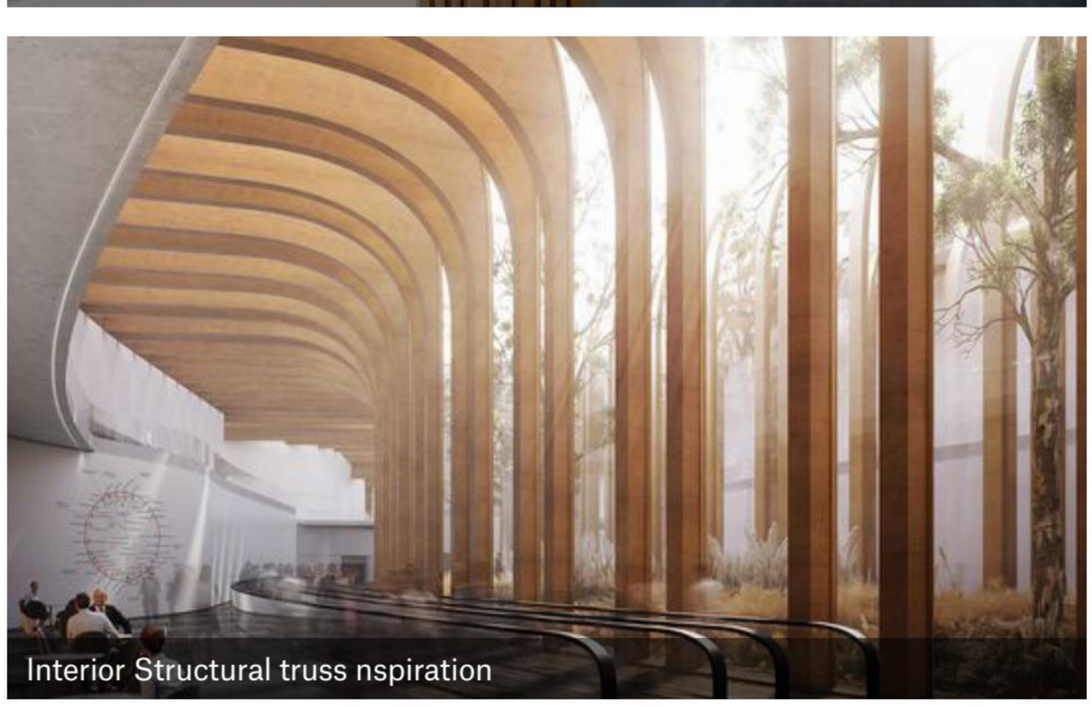


Case Study: Barn structure in Kinderhook, Form and Msssing Inspiration

Case Study: Interior - Exterior Connection



Material Inspiration Vertical Wood Fins



Interior Structural truss nspiration

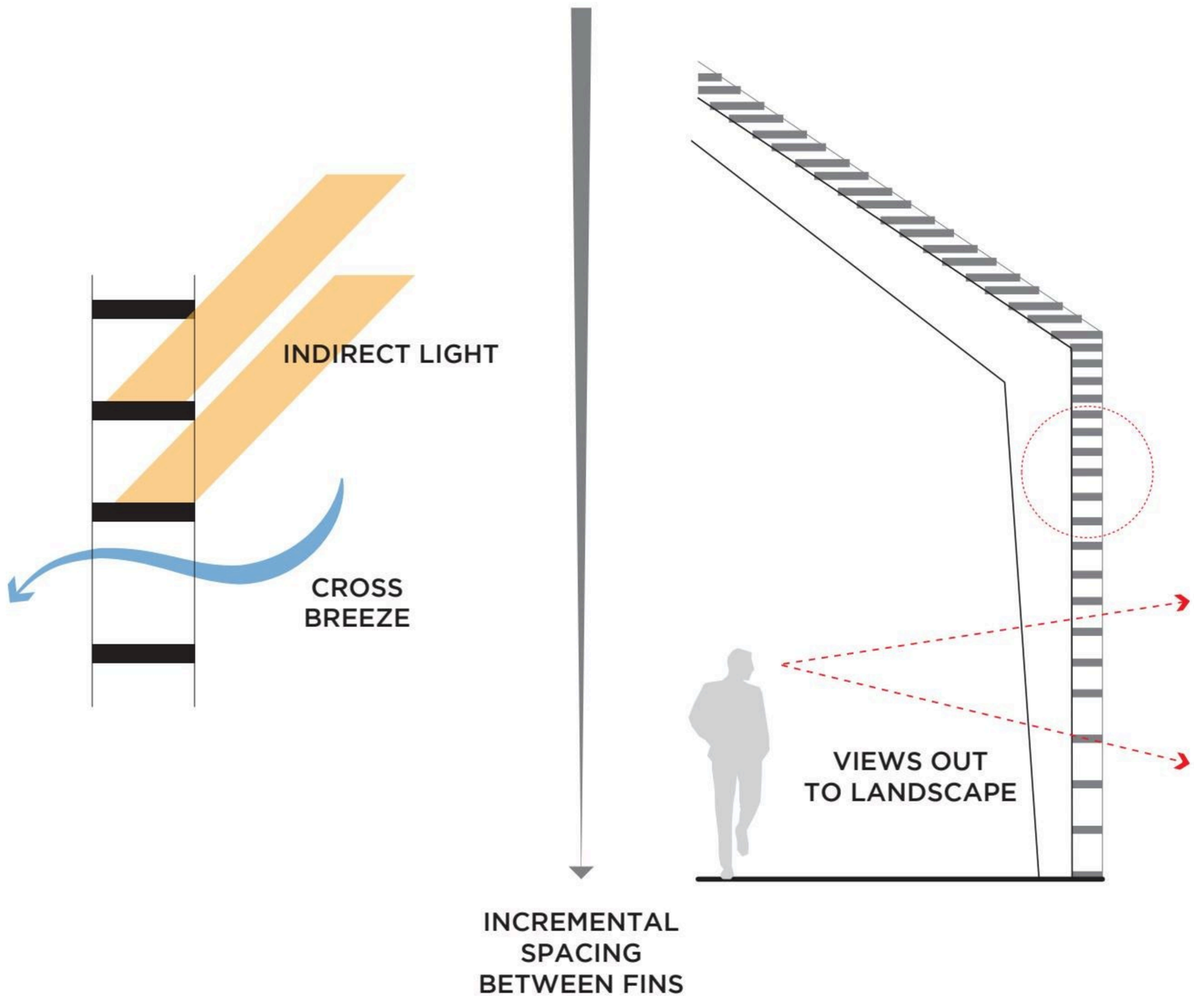
CLUSTER FORM + MATERIALITY

The buildings are comprised of multiple isolated volumes unified through material and formal expression. Each building volume is conceived as two elongated blocks – a smaller inner block sleeved into a larger outer shell. The outer shell extends pass the inner block to create covered outdoor space, shelters and overhangs. Sleeving the two components creates two distinct types of spaces: the solid inner block that emanates permanence and a lighter outer shell that disappears into its environment. The lightness of the outer shell helps reduce the appearance of the building, making it seem smaller than its actual footprint.

The shell is made of horizontal fins with incremental spacing as the fins meet the ground. The tight spacing of the fins at the top of the structure, along with the depth of the fins, allow for views out to park, cross ventilation into the space and block unwanted heat gain while letting indirect light in. The resulting gradient effect allows viewers to see the landscape beyond structure.

The fins can be made of wood (charred to resist weather and rot) or perforated metal panels. The texture given by the fins is juxtaposed by a less articulated inner block (large wood or metal panels). Windows, skylights and punched openings break the solidity of the inner block. The inner block and outer shell are meant to pure forms, each wrapped by their respective materials for complete uniformity.

The form of the volumes speaks to the farming structures seen around Kinderhook. Mirroring the shape, simplicity and practicality of these structures is a contextually appropriate approach to the building design. The design looks to blend into its historic environment and add to the rural aesthetic of the site, leaving room for Lindenwald, the park's main cultural and interpretative resource, to continue to be the centerpiece.



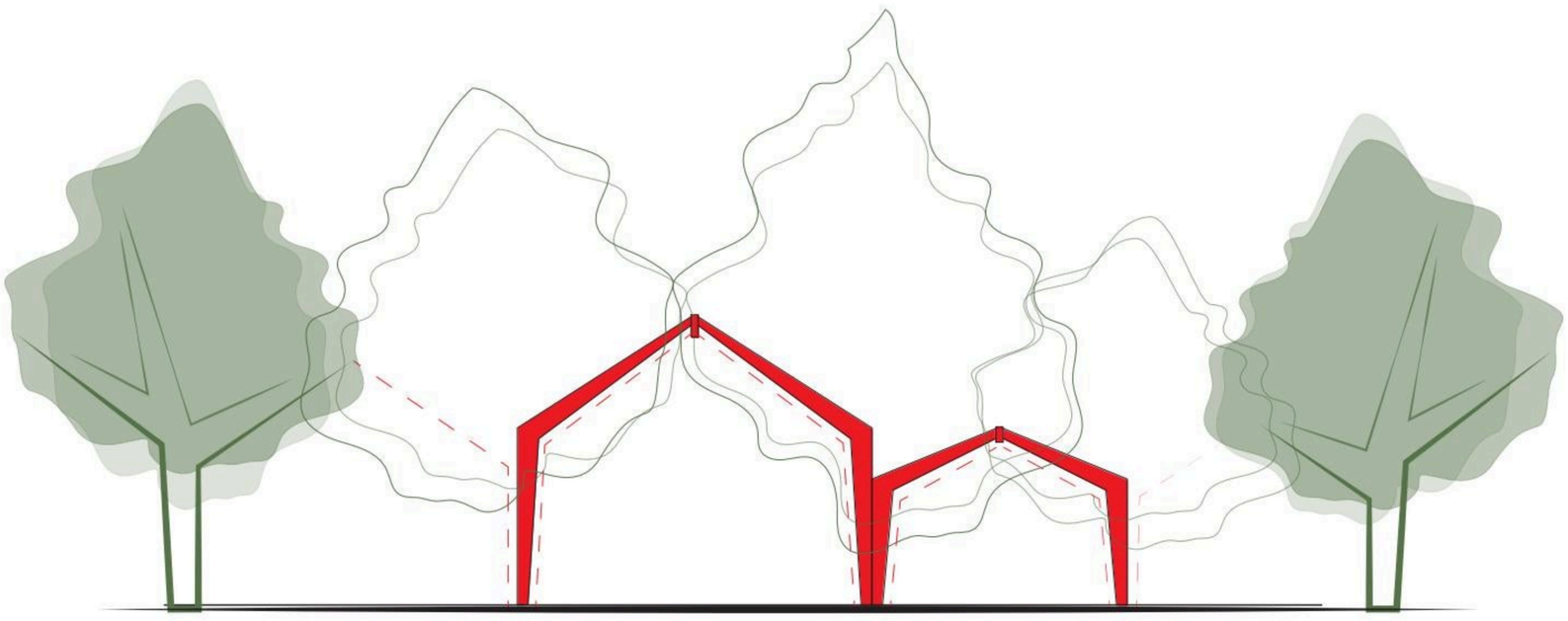
Concept Sketch - Horizontal Fins with Incremental spacing allow view out of structure and cross ventilation. Depth and close spacing fins prevent unwanted heat gain.

Structural Expression

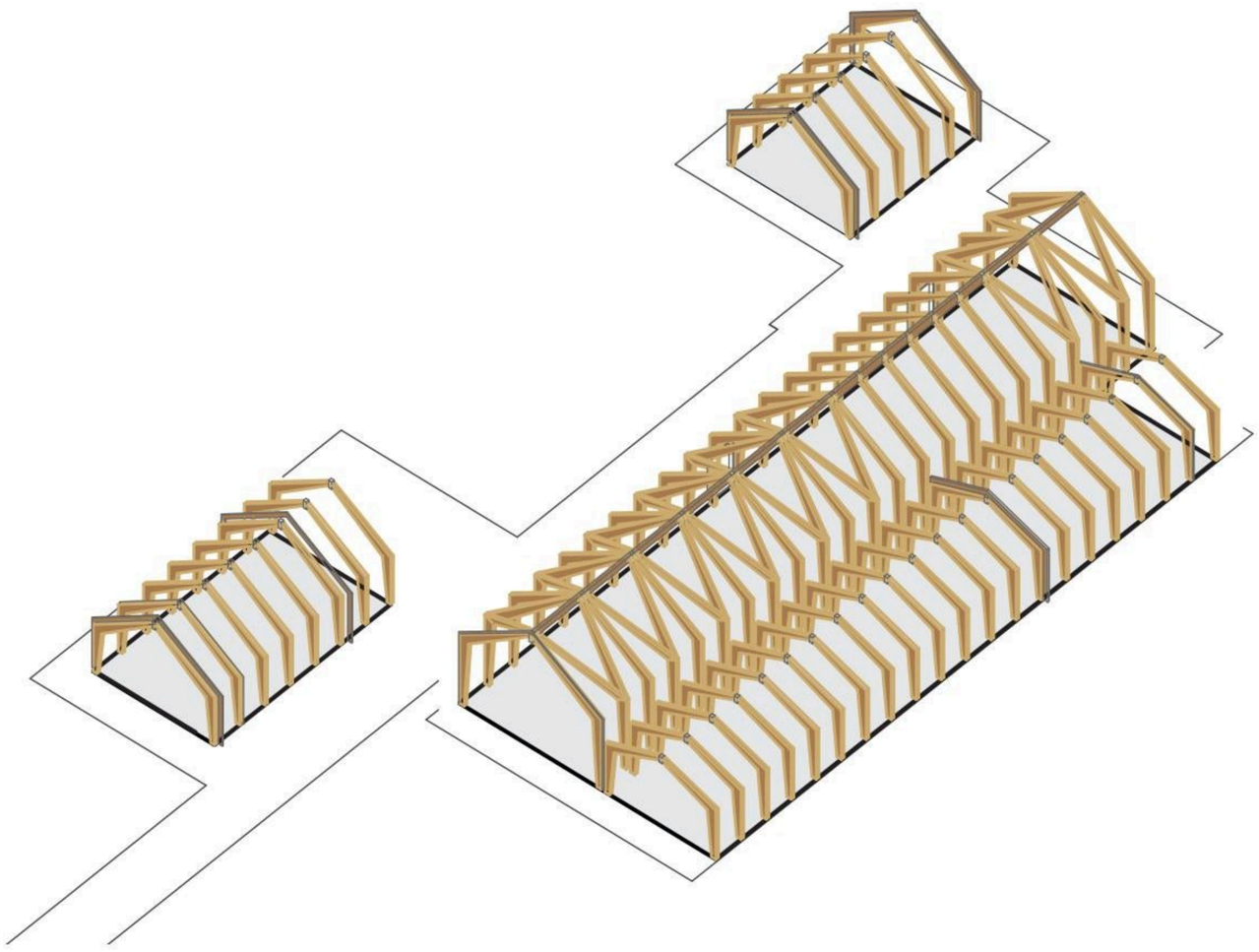
Blending interior and exterior environment was applied to the design of the buildings structure as well. The buildings structural design is an ode to the park's passion for pomology and an exploration of the relationship between architecture and the natural environment.

The interior of the inner block and outer sleeve is lined with a series of exposed roof trusses or portal frames. The trusses are Y shaped to reference tree canopies. The space between the trusses are used for windows and other necessary openings, bringing some of the exterior environment into the building.

Staff and visitors will feel as if they're surrounded by the nature while inside the buildings. This can be especially appreciated in the double height spaces like the open office suite, the conference room and the covered event space.



Concept Sketch - Truss Section through Y trusses shaped to reference tree canopies

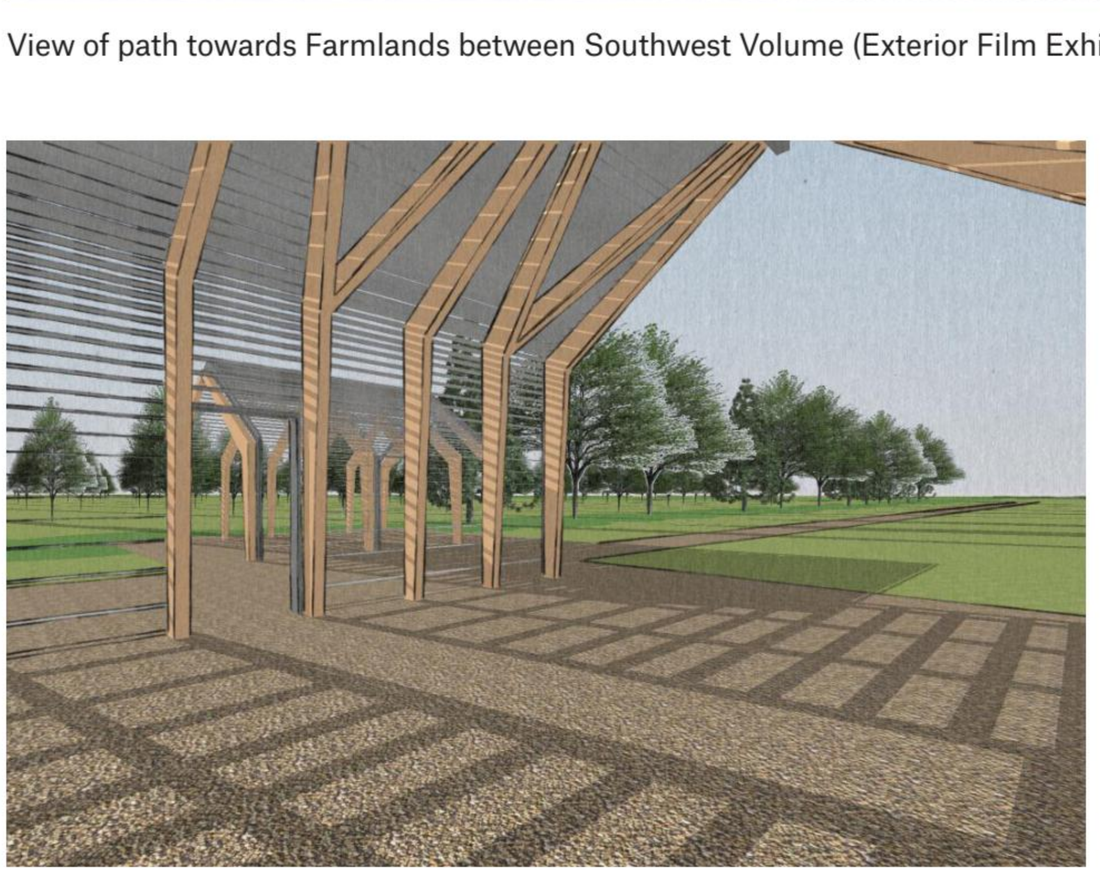


Building Skeleton - Axonometric View of Building Trusses shaped to reference tree canopies

View of Southeast Volume (Visitor Center) Sleeve w/ Incremental Spacing of Horizontal Fins and Inner block

View of Southeast Volume (Visitor Center) Entry. Administration Building in background.

View of path towards Farmlands between Southwest Volume (Exterior Film Exhibit) and Central Volume. Sleeve w/ Incremental Spacing of Horizontal Fins.



View West from interior Central Volume (Covered Event Space w/Southwest Volume - Exterior Film Exhibit and Orchard in the Background to the left

View East of path between Southwest Volume (Exterior Film Exhibit) and Central Volume. Sleeve w/ Incremental Spacing of Horizontal Fins. Southeast Volume (Visitor Center) seen in background.

5.3 Building Massing - Linear

LINEAR COMPOSITION

The linear composition proposes placing all program components (visitor services, administration, and maintenance) onto a single site to minimize the impact on the existing property and provide proximity for all park staff to one another and their respective duties. This approach arranges the program into a long, slim composition with a small pavilion upfront providing a public porch. The need for exterior program and storage space helps break down one large massing into a sequence of separate structures and outdoor spaces that are joined through exterior circulation and architectural elements with unifying material choices. Public and private spaces are clearly separated along a central walkway, creating an architectural boundary for the visitor experience, shielding maintenance from view of the historic zone, and ensuring each structure can operate without disrupting the other functions.

The slim profile but deep massing perpendicular to State Route 9H recalls an agrarian vocabulary that allows the building to recede against the backdrop of farmland views beyond.

This composition arranges the Administration and Maintenance programs into a single slim bar while Visitor Services are provided in a pavilion adjacent to the administration and closest to visitor parking opposite Old Post Road. The program components are arranged to welcome visitors and maximize adjacencies for park staff.

The minimally enclosed Visitor Services Pavilion utilizes an extended roof and covered walkways as a public porch, providing a large, covered exterior footprint for gatherings, programs and events, and outdoor interpretation, as well as providing direct access to key park administrative staff.

To the west, a single, long wall joins the administration and maintenance buildings behind, providing a public boundary and partially covered walkway from which visitors can enjoy views of the park, the future orchard, and the historic core without disrupting staff.

To the south, the enclosure hosts a small, info/shop (fully glazed to allow views through), as well as gender neutral bathrooms, and a storage room for outdoor furniture with the potential to become a future interior exhibit or vendor space. Beyond is the large, covered meeting and interpretive area with a direct line-of-sight to the Lindenwald mansion. In addition to regular park programs, the pavilion's covered area can also be used to shelter community events like farmer's markets or family celebrations.

The Administration Building is split into internal zones. Up front, (1) a visitor lobby with access to the superintendent and rangers accessed from the front porch. West, a skylit central circulation spine splits the building into a north and south bar with (2) gathering and public spaces (including the pantry, library and conference rooms) alongside the southern edge of the building leveraging views and enhancing connectivity between interpretive staff and visitors, and (3) private staff work and support spaces alongside the northern edge of the building shielded from visitor view. Glass partitions provide acoustic barriers for additional privacy without sacrificing visual connectivity and daylighting. Clerestory windows help daylight spaces without sacrificing staff privacy along the public walkway.

MAVA Administration Building + Visitor Center

- OFFICES
- COMMON / PRIVATE
- COMMON/ PUBLIC
- VISITOR SERVICES
- SUPPORT SPACES / MECH.
- STORAGE DEDICATED

LINEAR COMPOSITION SQF

ADMINISTATION BUILDING	4,108	GSF
VISTOR CENTER BUILDING	925	GSF
VISTOR CENTER EXTERIOR COVERED PROGRAM	825	GSF

Individual workspace sizes are reduced into shared offices but supplemented with common spaces including the pantry, library, conference room, and quiet rooms. Small storage opportunities are provided close to workstations, compacting the need for expansive areas of large storage space. Copy and Mail are integrated into the support and quiet spaces alongside the northern edge.

One single office for the superintendent gives way to a sequence of three clusters of shared offices separated by closets each divided into pairs separated by acoustic partitions. The deliberate placement of permanent staff members next to seasonal staff is intended to give permanent staff members a greater sense of privacy in an open office environment. Seasonal staff spend most of the day outdoors, so each cluster is effectively occupied by 2 permanent staff members.

Public and Gathering spaces (the public meeting room, library, and pantry) are placed along the southern edge to allow for direct access between each and the public porch and covered walkway. This allows the private workspaces within the administration building to remain private while the larger program elements could be leveraged for public programming as part of the Visitor Services Pavilion

The linear arrangement places the maintenance program directly behind the administration building. First, uncovered outdoor vehicular storage separates the main building volumes (a wall separates this program from the public walkway), then the maintenance building itself followed by protected outdoor storage. This massing creates a long, extended boundary to the south for visitors and shields the maintenance program, storage, and yard from view.

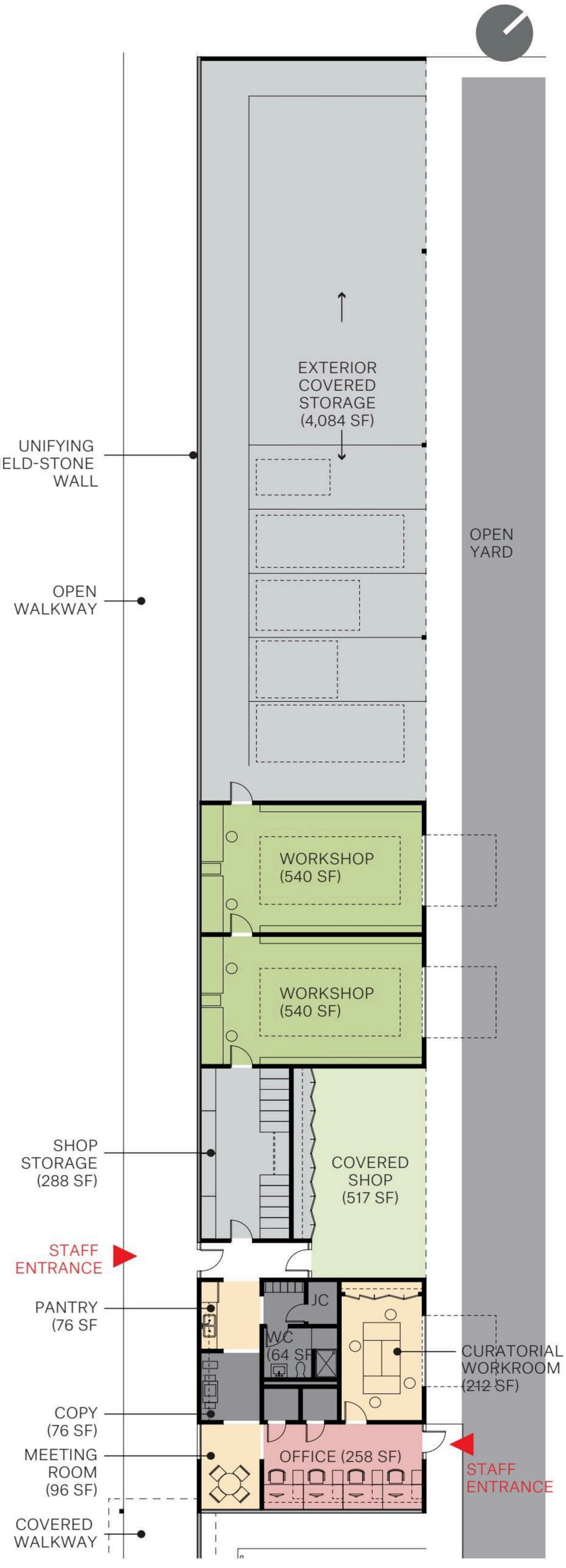
The Maintenance Building is split into zones, as well: (1) staff work and support spaces as well as the curatorial shop, (2) outdoor, covered, double-height workshop and tool storage, and (3) indoor, double-height workshops. This adjacency leverages the middle program (2) as an acoustic barrier between office and shop. The shared open office has direct line of sight to the orchard, while the northern edge of the building faces an open yard which all four shops can directly access. Clerestory windows help light spaces internally without breaking staff privacy along the public walkway.

MAVA Maintenance Facility

- OFFICES
- COMMON / PRIVATE
- WORKSHOPS
- SUPPORT SPACES / MECH.
- STORAGE DEDICATED

LINEAR COMPOSITION SQF

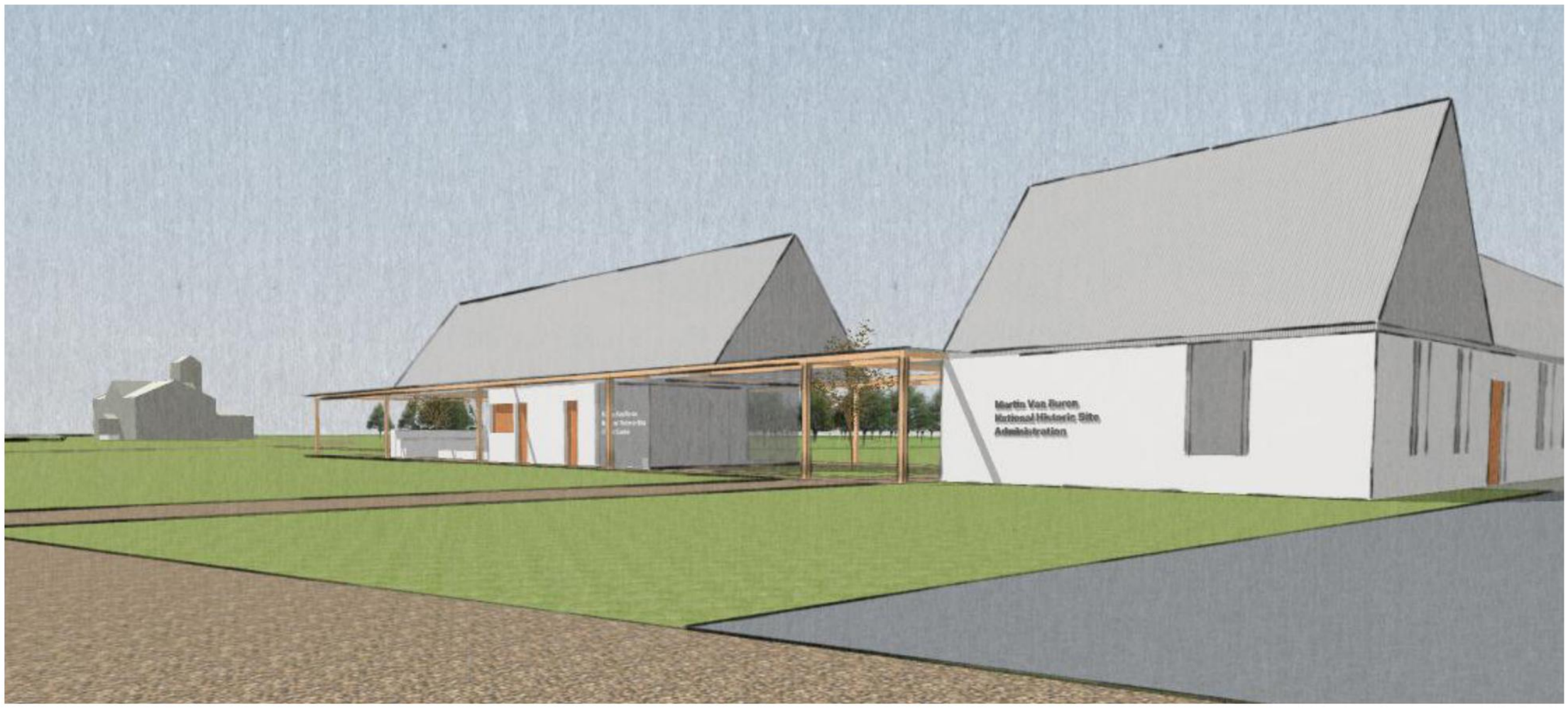
MAINTENANCE BUILDING	3,100	GSF
MAINTENANCE - EXTERIOR COVERED STORAGE	4,084	GSF
MAINTENANCE - EXTERIOR OPEN STORAGE	1,678	GSF
OPEN YARD	7,405	GSF



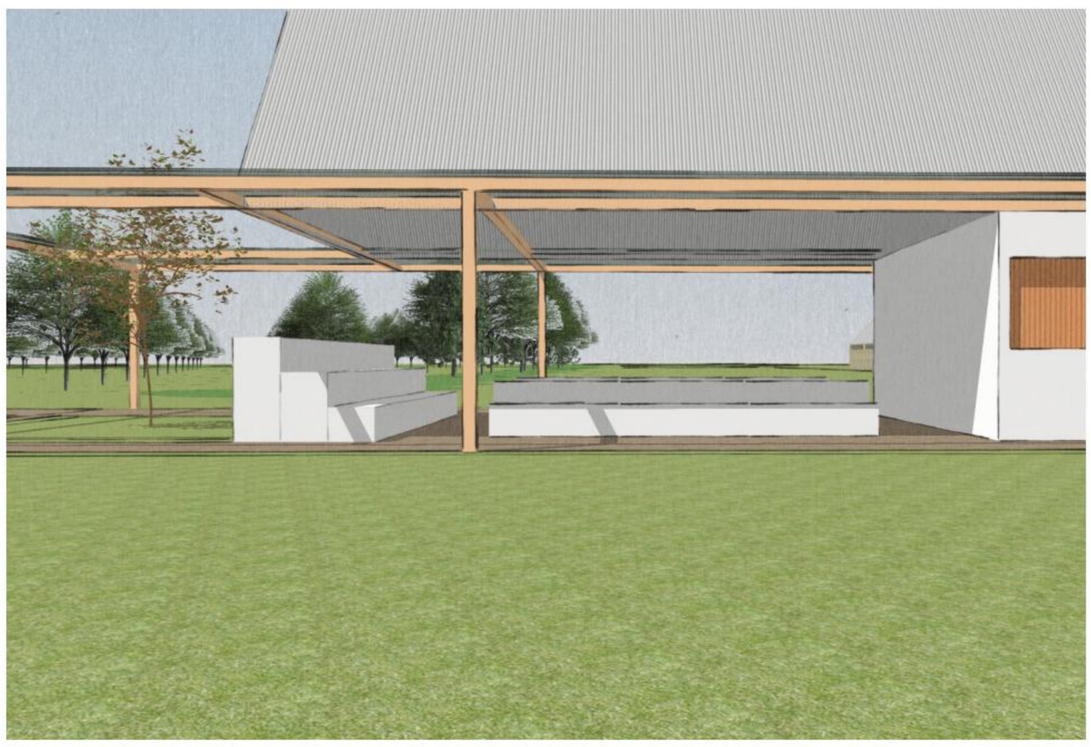
Aerial View of Linear Composition on Site 1 - North

View of Linear Composition from Old Post Road

View of Linear Composition from State Route 9H



View of visitor center and Administration Volumes with Lindenwald in background



View of Visitor Center Outdoor Gathering

View of Visitor Center Outdoor Gathering

View of Administration Building Field Wall from Farmlands

LINEAR FORM + MATERIALITY

The park's authorized boundary includes mostly active farmlands and undeveloped agricultural land. The architectural vernacular of the working farms found in the area includes many simple, purpose-built barns and sheds using locally sourced wood, stone, and metal. These forms, compositions, and materials provided the inspiration for the formal massing and material choices of all options. The agrarian history of the Van Buren home made this choice feel especially appropriate.

Massing Materials

The staggered administrative and maintenance buildings rely on a long, unifying field-stone wall, akin to a barn foundation or field wall, to stitch the separate buildings, covered storage areas, and vehicular storage areas together into a mass that reads as a single form from the southern, public side. The northern and eastern facades of the buildings, as well as the visitor services pavilion itself, area treated in a simple surface allowing the stone to be the feature.

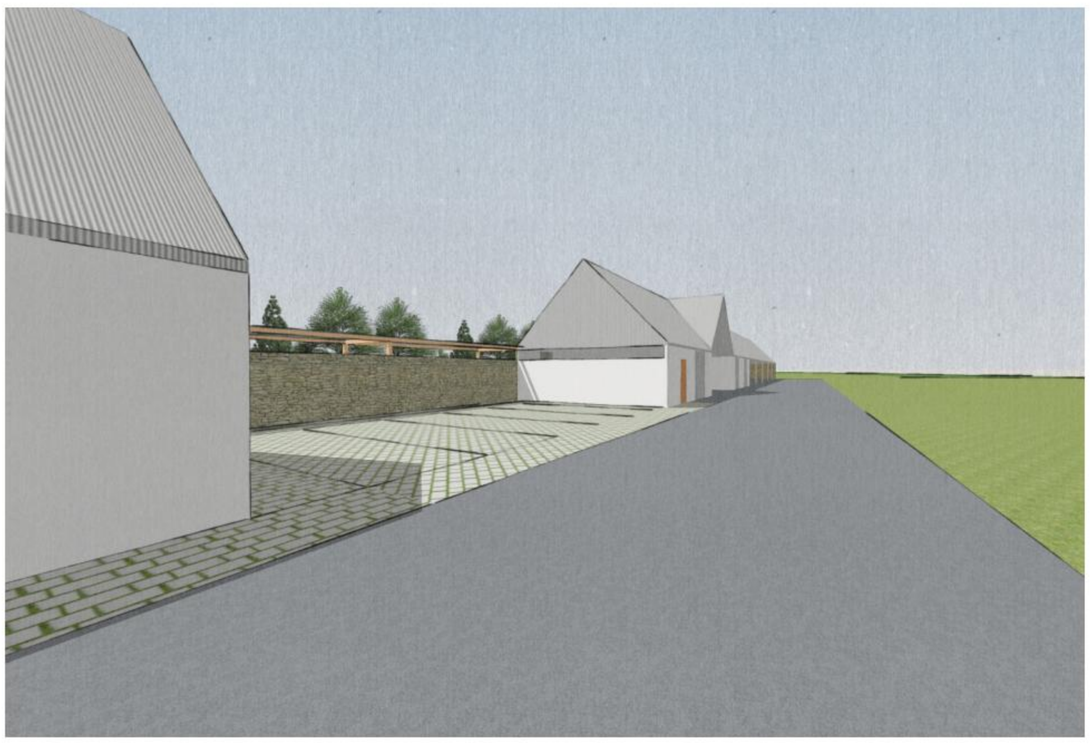
Coverings

The dominant shared architectural feature for the administration and maintenance buildings, covered storage area, and visitor services pavilion is a metal gable roof all at the same height, creating a unifying datum and connector. Additionally, the pavilion is surrounded by a covered walkway providing additional shelter and outdoor covered exhibit space inspired by wooden arbors and porches often found on local farms and gardens.

Structural Expression

The structure for the buildings, pavilion, and covered walkway uses wooden trusses, columns, and beams recalling not only nearby agrarian structures but the orchard tree canopies themselves. Under the exterior pavilion roof, as well as the double-height spaces of the administration and maintenance buildings and the covered storage, the exposed wooden trusses appear as a man-made canopy providing shelter to visitors, staff, and equipment below.

View of Linear Composition from Farmlands & Orchard



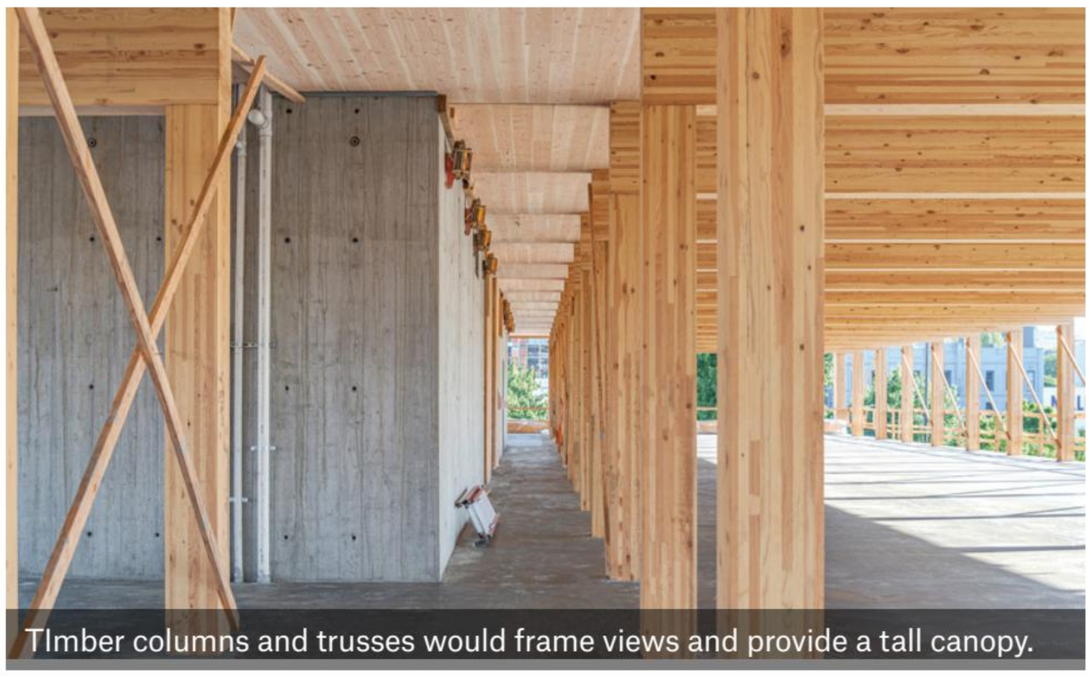
View of Open Yard and Maintenance Road

The Parrish Museum by Herzog & DeMeuron mimics contextual farm vernacular.

Aluminum roofing provides a contemporary contrast to wood and stone.

Fieldstone Walls as seen in agrarian fields and farm building foundations.

PVC covered walkways provide shelter without diminishing daylight.



TImber columns and trusses would frame views and provide a tall canopy.

Option A – Cluster Composition @ Site North (Site 1) and 9H (Site 3)
- Administration Building + Visitor on Site 1
- Maintenance Building on Site 3

(See page for aerial view)

Option B – Cluster Composition @ Existing Site / Orchard (Site 2) and 9H (Site 3)
- Administration Building + Visitor Center on Site 2
- Maintenance Building on Site 3

(See page for aerial view)

5.4 Proposed Massing Options

SITE + BUILDING MASSING

The following images illustrate the 3 options proposed by the A/E team for new Administration Building, Visitor Center and Maintenance Facility. Design narratives developed by the consultant team have been proposed based on the three options proposed. These options reference the programing, site selection, massing and architectural descriptions illustrated in this and previous chapters. Details (plans, sections, perspectives and material descriptions) of each option can be seen in sections 5.1, 5.2 and 5.3 of this chapter.

Option A – Cluster Composition @ Site 1 & 3

- Administration Building + Visitor on Site 1
- Maintenance Building on Site 3

Option B – Cluster Composition @ Site 2 & 3

- Administration Building + Visitor Center on Site 2
- Maintenance Building on Site 3

Option C – Linear Composition @ Site 1

- Administration Building + Visitor Center + Maintenance Building on Site 1

Full description of each option including design narratives can be seen in chapter 7.

Option C – Linear Composition @ Site North (Site 1)

- Administration Building + Visitor Center + Maintenance Building on Site 1

(See page for aerial view)

6
DESIGN NARRATIVES

6.1 Proposed Structural Design

developed by Thornton Tomasetti

BUILDING SUPERSTRUCTURE

The primary system of the buildings' superstructure will be portal frames constructed of glued laminated timber. This will be used to create an open interior free of columns or structural walls. In addition to the architectural appeal, this system is quite efficient for single-bay, single-story buildings and offers many structural advantages for the project. It is a relatively light-weight form of construction, which will reduce foundation loads and sizes, minimizing site disturbance. Each frame would be a delegated design, manufactured off-site and assembled in-place with simple connections. This further reduces site disturbance by limiting staging areas and on-site construction time. The structure is also environmentally friendly, utilizing a renewable, sustainable material.

BUILDING FOUNDATION

We have approached the structural engineering of the buildings with consideration for the Tribal Partners' concerns about limiting any disturbance to the soil. The proposed buildings are single-story and relatively lightweight construction. The geotechnical properties of the soil are unknown, but based on the magnitude of the loading, it is anticipated that the building can be supported on shallow concrete foundations.

The greatest disturbance to the soil would come at the building perimeter. The frost penetration depth at the project site is 50 inches. To protect against frost heave, standard construction practice would be to construct a perimeter foundation wall that bears on soil at least 50 inches below the adjacent exterior grade. Alternatively, the 2020 New York State Building Code, which references the 2018 International Building Code, section 1809.5 permits frost protection by constructing in accordance with ASCE 32 (Design and Construction of Frost-Protected Shallow Foundations). To follow these guidelines, the foundation would be constructed with a layer of insulation on the outside of the perimeter foundation. This would contain the heat produced within the building in the soil below the foundation and prevent frost heave. Using this procedure, the perimeter foundation depth can be limited to about 16"-18". The added cost of the insulation would be largely offset by the savings in foundation material and excavation. We feel this is the best approach to minimizing the disturbance to the ground at the project site.

Case Study - Wood Trusses

Case Study - Steel Trusses

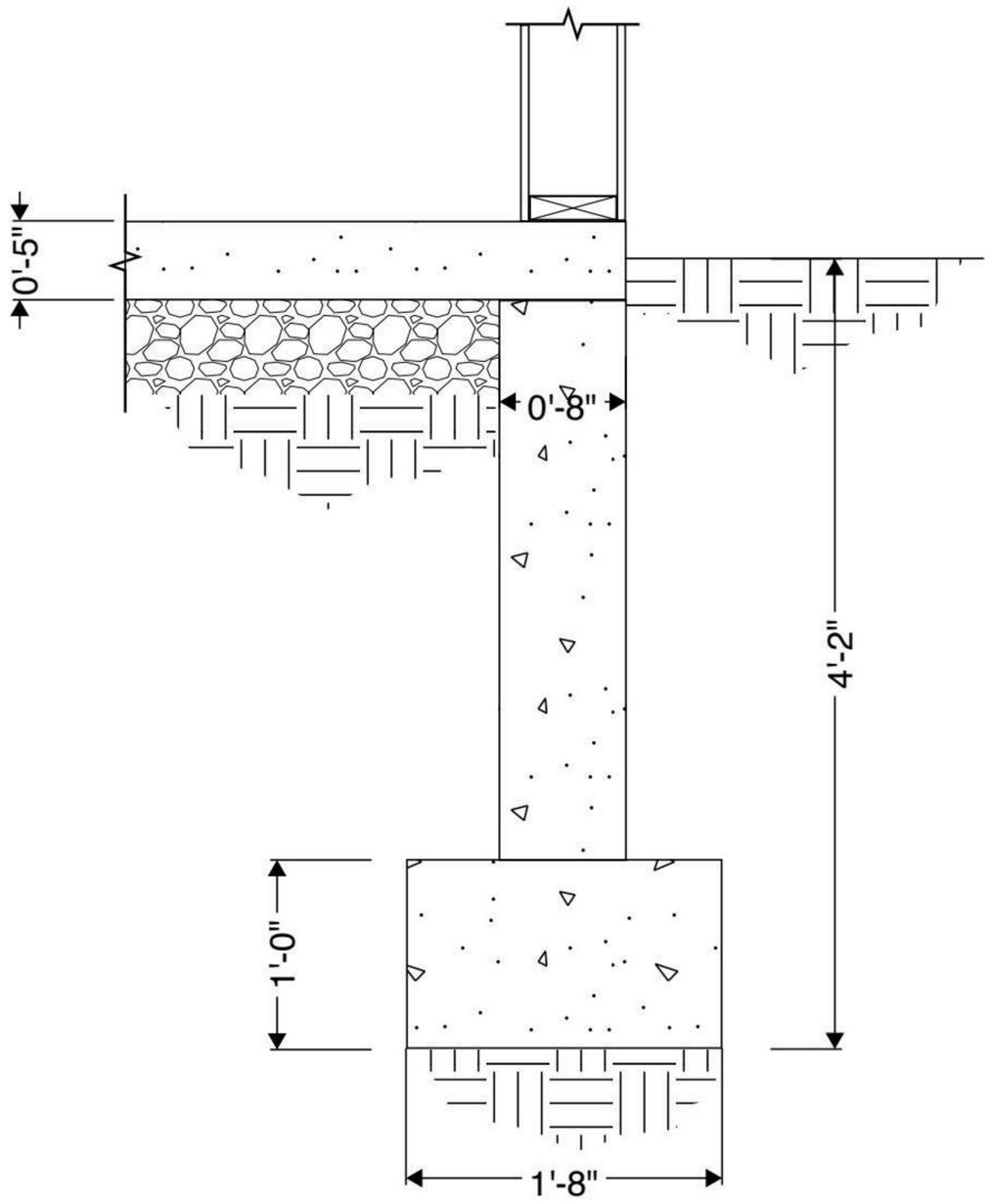


Figure 1. Traditional Foundation Constructed to Frost Depth

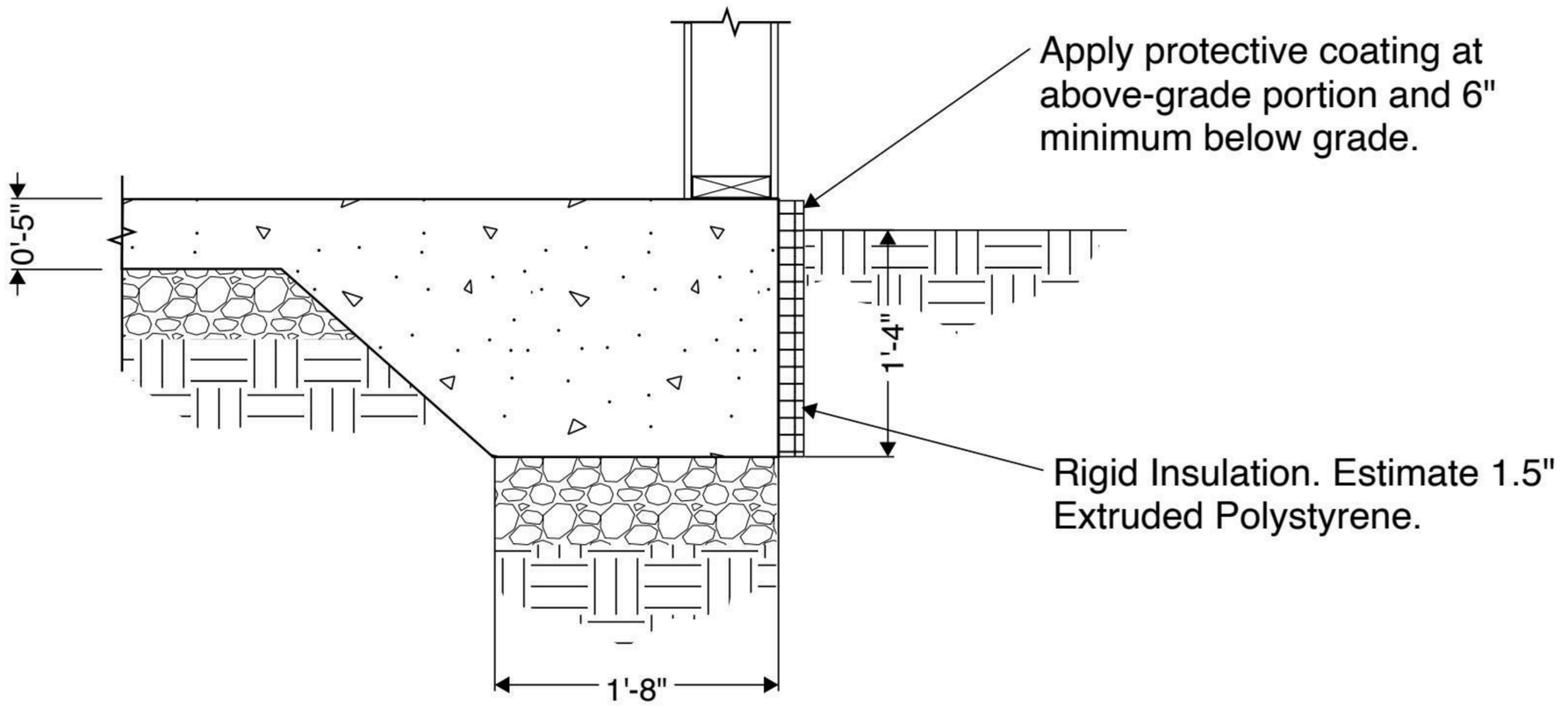


Figure 2. Frost Protected Shallow Foundation at Heated Spaces

We have prepared the following detailed sketches of the foundation options. Figure 1 indicates the foundation that would be used using the traditional method of building down below frost depth. Figure 2 shows the recommended alternate that uses a frost-protected shallow foundation. This design is only applicable at heated buildings, as the design approach is to use the heat produced within the building to prevent freezing of the ground below. For buildings that will be unheated, the required frost-protected shallow foundation is shown in Figure 3.

These sketches are suitable for preliminary comparative pricing. They sketches were prepared without the benefit of a site geotechnical study. Such a study will be required for the final foundation design. The horizontal dimension of the footings (estimated as 1'-8" in all sketches) may be impacted by the results of the geotechnical study.

The insulation would be provided by rigid foam (extruded polystyrene) with an estimated thickness of 1.5", as indicated in Figures 2 and 3. Care should be taken to prevent damage to the insulation. Any damage that occurs should be repaired. A permanent loss of insulation would not compromise the structure as a whole but could lead to localized frost-heave. This in turn could lead to damage to the façade, flooring and ceiling, but no loss of structural integrity.

We have also considered the option of using pile foundations. For the load magnitude of the project, timber piles would likely be the most economical. The piles could be used to support the ground floor of the buildings slightly above the finished grade. This would limit the disturbance of the soils to only the pile locations, rather than the footprint of the entire building. However, the disturbance at each location would extend to a depth of many feet below the surface. The required size, number, and depth of the piles is highly dependent on the site conditions, so it is difficult to estimate these quantities without a geotechnical study. The cost of a pile foundation is likely to be greater than the cost of a frost-protected shallow foundation. Additionally, the structural costs of the building will also be greater as this system would require a structurally framed ground floor, rather than a floor supported on grade. We also believe that the life-cycle costs of the building will be higher due to heat-loss from below the raised floor.

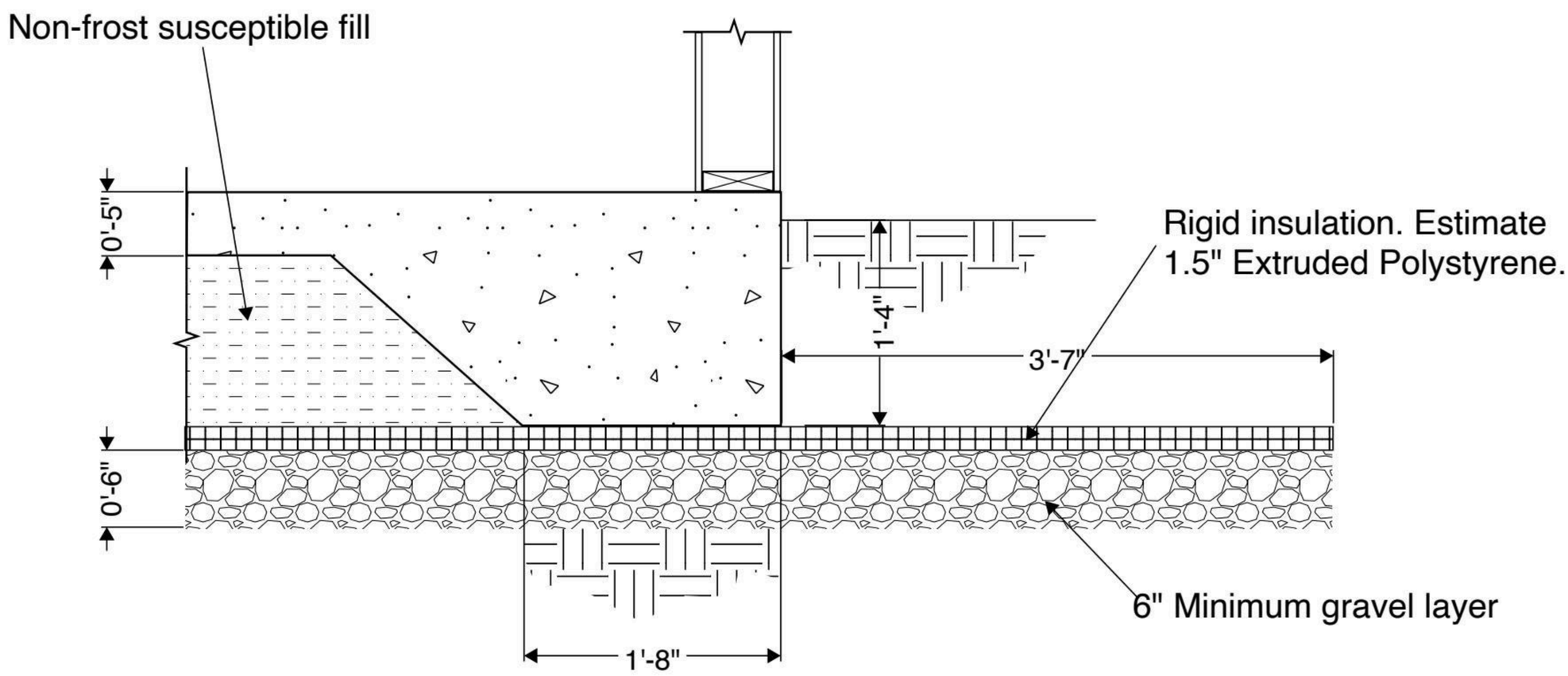


Figure 3. Frost Protected Shallow Foundation at Unheated Spaces

6.2 Proposed Building Systems

developed by WSP

HEATING, VENTILATING, AIR CONDITIONING (HVAC)

Design Philosophy

The specific systems for the Visitor Center are not determined at this time, and are still in discussion with NPS.

WSP is presenting two HVAC design options that offer full cooling and heating and seasonal natural ventilation — one with separate heating and cooling systems for simplicity and the other with a combined high efficiency water source heat pump system. They must strike a balance to achieve the Park's goals between cost, complexity, energy, and comfort.

The systems are being designed with the following goals in mind:

- Provide reliability and comfort
- Minimize maintenance complications
- Achieve energy efficiency goals
- Allow for minimal visual impact

The below diagram outlines the general scheme of high efficiency solutions for the project, common to HVAC options:

Common Ventilation

Each toilet, janitors' closet, copy room, and pantry will be provided with a dedicated exhaust fan. This is common to all heating and cooling design options.

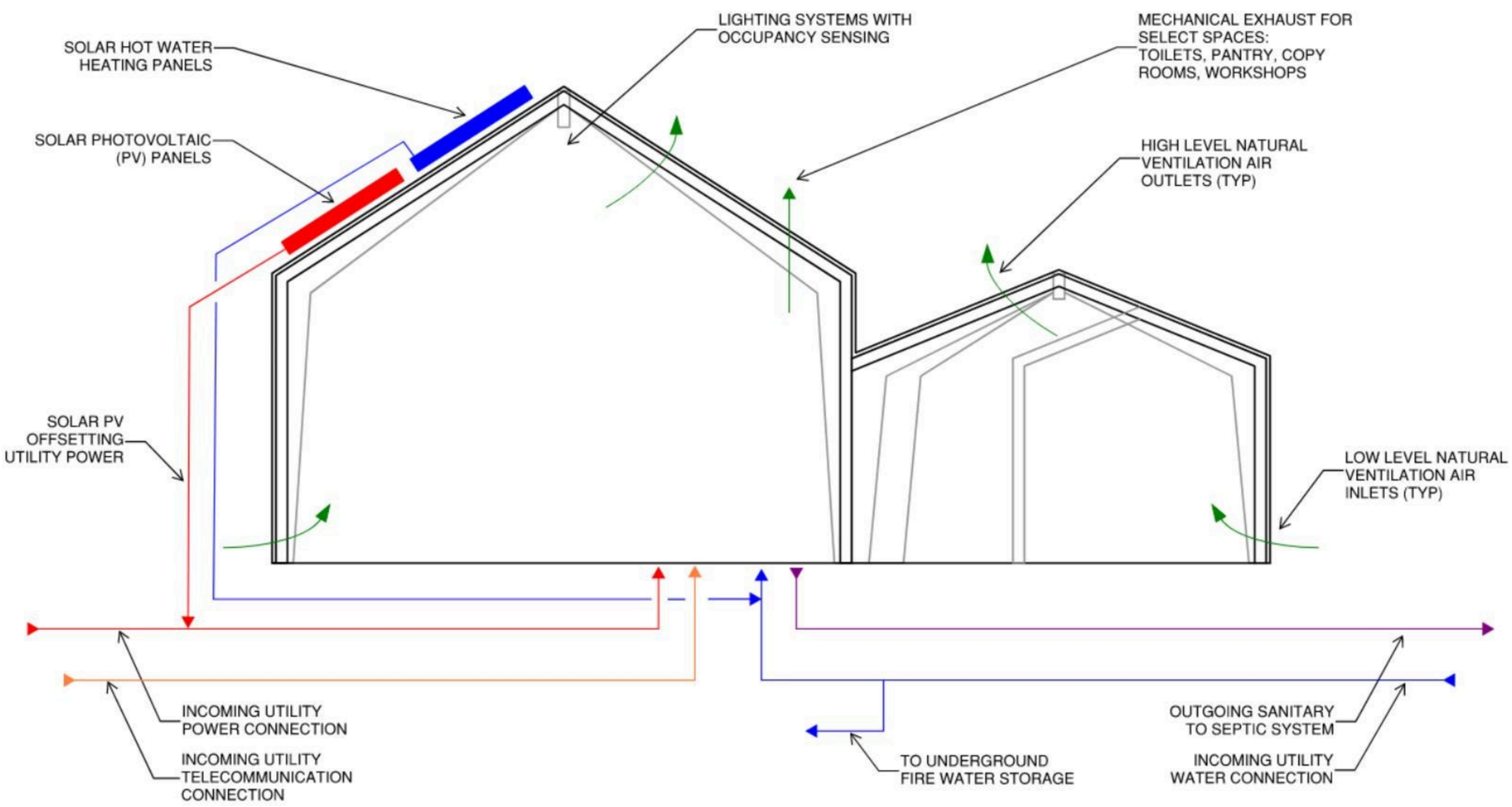
HEATING AND COOLING OPTIONS

At this time, WSP is presenting two options of design, which need to be further discussed and agreed upon prior to proceeding with design:

OPTION 1 – HEATING AND MECHANICAL COOLING

This option consists of mechanical ventilation, noted in "Common Ventilation" above, plus the following:

- Heating via Fuel Oil fired hydronic boilers: Two (2) at 100 MBh in the Administration building and Two @ 75 MBh in the Maintenance building, each sized of 75% of the peak load.



Case Study - On Site Energy Generation (solar panels at roof)

OPTION 1 – HEATING AND MECHANICAL COOLING, cont'd

* Zone-level fin tube radiators or radiant floors, specific application TBD.
* Ceiling-mounted hydronic unit heaters in work and storage areas.
- Operable windows at perimeter, operable high level relief dampers to encourage natural ventilation. Door and window sensors to de-activate air conditioning if opened.
- Variable Refrigerant Volume (VRV) Split DX Cooling, with ducted indoor ACs for select areas (conference rooms, offices, etc.) and ductless ACs for electrical and telecom spaces.

OPTION 2 – FULL HEATING AND COOLING VIA HIGH EFFICIENCY HEAT PUMPS AND DOAS

This option consists of mechanical ventilation, noted in "Common Ventilation" above, plus the following:

- Heating and cooling via high efficiency electric hydronic heat pumps: two (2) at 100 MBh in the Administration building and Two @ 75 MBh in the Maintenance building, each sized of 75% of the peak load. All-electric system, without the use of fossil fuels.
* Heat rejection via air-cooled condensers. This decision requires further study to determine which is most optimal/ feasible.
* Two-pipe changeover heating/cooling system.
* Zone-level fin tube radiators or radiant floors, specific application TBD.
* Ducted indoor two-pipe fan coil units (FCU) for cooling of all areas
- Operable windows at perimeter, operable high level relief dampers to encourage natural ventilation. Door and window sensors to de-activate air conditioning if opened.
- Dedicated Outside Air Handling (DOAH) unit with energy recovery ventilator (ERV) to manage ventilation needs, anticipated to be approximately 400 CFM in Administration building and 300 CFM in maintenance building.
- Ductless split DX ACs for electrical and telecom spaces, to ensure year-round cooling availability.

ELECTRICAL AND FIRE ALARM SYSTEMS

General

All new mechanical equipment, new general receptacles and new lighting are fed from new electrical panelboards and branch circuit panelboards.

Based on ASHRAE 90.1- 2007, feeder voltage drop shall be 2% and branch circuit 3%. Maximum total voltage drop shall be not more than 5%.

- All branch circuits for 20A circuit breaker with #12 AWG may not exceed 75 feet with 80% of load. Anytime where they do exceed 3% VD the next size higher cable size is used.
- Voltage drop calculations included in this report are for feeders 100 feet or longer in length and show feeder size, feeder length and 2% voltage drop requirement adherence.

Pantry and Toilet Areas:

Power will be provided to all new lighting, GFI receptacles and hand dryers.

Lighting Controls:

- Toggle switch will be provided in janitor closet
- Occupancy sensor will be provided in the toilet and corridor
- Vacancy sensor will be provided in the break room
- Lighting control system will be based on NPS recommendation. Lighting control manufacturer shall be approved by NPS. Lighting control basis of design will be based on Lutron system.

Renewable Energy: On Site Power Generation

A new solar photovoltaic (PV) system will be connected to electrical service switch and reduce the demand for electrical heating and all other loads. Assuming approximately 1500 sf of roof would be suitable for PV panels, and perhaps 50% of that could accommodate panels, we'd anticipate a system of approximately twenty (20) panels each 400W nominal peak output. Further study is required to determine annual output of the array, as seasonal effects such as cloud and tree cover will cause variability.

Wind turbines require further analysis for suitability, and will be included in later design phases.

We will provide secondary cable requirements between solar panel KWH meter to switchgear room including disconnect switch and step up transformer rated 500KVA, 480V~4160V or as recommended by power company to match existing voltage rating. All trenching and conduit routing shall be shown on civil drawings. Solar system detail requirements shall be specified on SD report by architect.

Fire Alarm

Full fire alarm coverage will be provided with detection, strobes, and horns per latest code requirements.

PLUMBING AND FIRE PROTECTION

In the administration building, a heating hot water system will be provided with rooftop solar hot water heating panels, and a storage type water heater with electric backup. In the maintenance building hot water in lavatories will supplied via electric point-of-use heaters under the sinks.

The sanitary system will rely on new and existing septic systems. An alternate to septic systems of composting toilets is being considered for the less frequently used restrooms, with four units in the Visitor's Center and one in the Maintenance building.

Standpipe and sprinkler system will be provided per latest code requirements.

Case Study - On Site Energy Generation (solar panels at roof)

Case Study - On Site Energy Generation (hybrid wind and solar at roof)

1
WARNING

6.3 Proposed Civil Design

developed by Langan

SITE AND UTILITY DESIGN

Based on conversations with the park, we understand that there exists a very healthy relationship with the Indigenous tribes that once inhabited the space. As a result, the protection of cultural artifacts that have been buried in the ground is of the utmost importance. The civil design approach to utility routing has been developed with the goal to minimize the amount of ground impacted by the installation or re-routing of utilities. We propose to achieve this by:

- Re-using existing utility infrastructure, where possible.
- In the case of electricity and telecommunications, proposing the use of overhead infrastructure.
- Routing and locating any necessary underground utilities in areas that have previously been disturbed.

We also understand that there will be a need or preference by the Park to relocate overhead utilities underground, due to aesthetic concerns. We have considered this as well and are including it in our design options.

SITE/UTILITY CONCEPT - CLUSTER NORTH

This configuration locates the Visitor Center near the location where the existing building is currently situated on-site. The Maintenance Shop has been relocated from being situated west of the Lindenwald Mansion to being adjacent to the parking lot located between Old Post Road and State Road 9H.

Water Utility

Option A - Propose to re-use the existing water well located just south of the existing Visitor Center/Office Complex, and branch off the existing water line to serve the new Visitor Center and Maintenance Yard. If current quality and yield is not sufficient for the new building, the existing water well can be removed and a new one be installed in its place, so as to not disturb any “new” ground.

- Option B – Have two separate water wells that serve the Visitor Center and Maintenance Building, respectively. Propose to install a new water well located south of the new Maintenance Yard and connect it to the building via an underground line. The location of the water well is coordinated to comply with the following New York State Department of Health setback requirements:
- 100’ from Absorption (leach or tile) field or bed
- 50’ from Septic tank

Sanitary Service

Option A - Propose to re-use the leach field that currently serves the Visitor Center/Office Complex. New septic tank will have to be provided and this can be located within the footprint of the existing Visitor Center/Office Complex. Propose a new lift station and force main for the Maintenance Building to convey sewage to the septic tank/ leach filed located adjacent to the Visitor Center.

Option B – Have two separate septic systems that serve the Visitor Center and Maintenance Building, respectively. Propose to install a new sanitary septic system to support the Maintenance Yard. The location of the septic system and leach field are coordinated based on the setback requirements listed above.

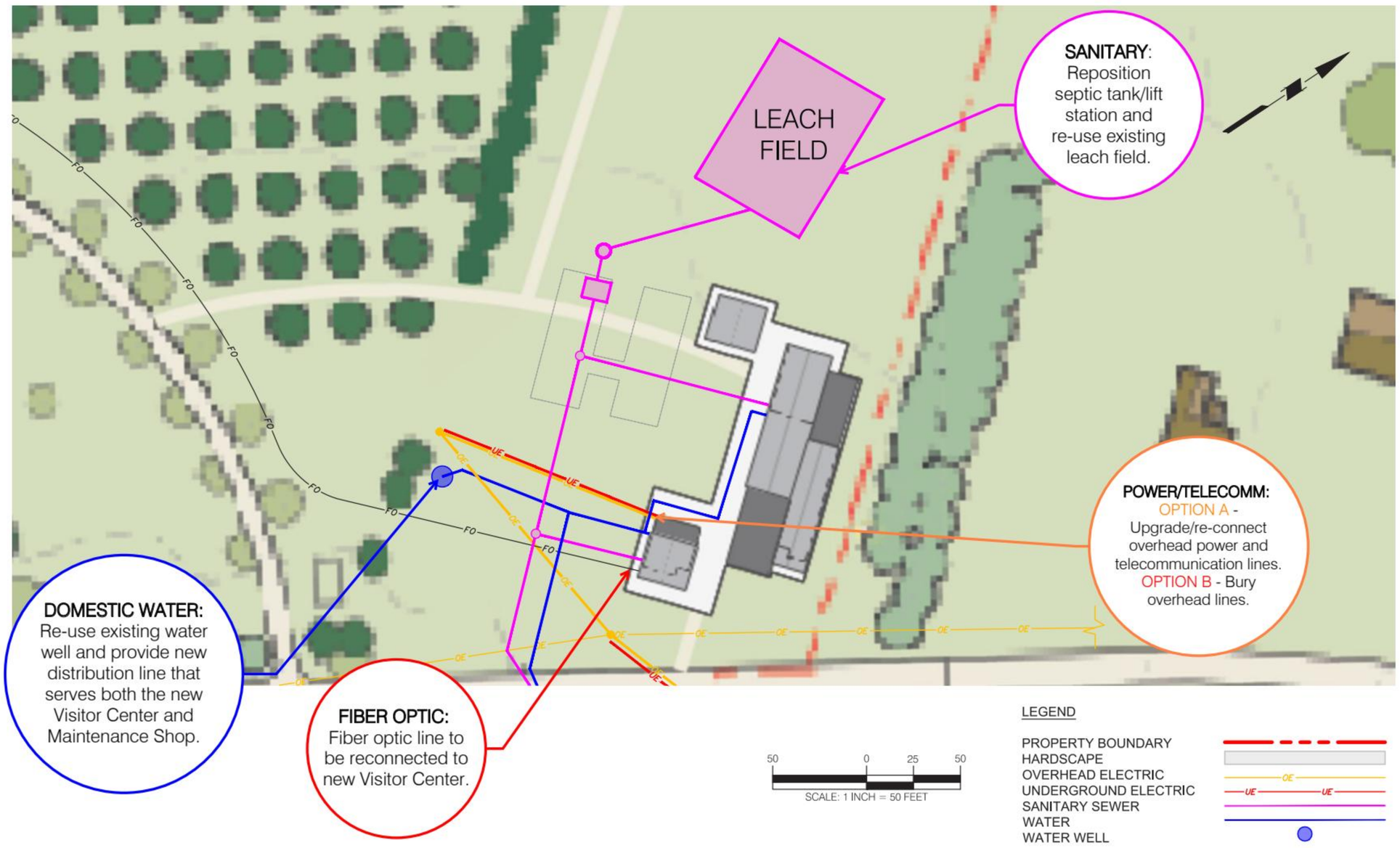
Electric/Telephone Service

Option A - Electric and telephone service can be continued to be provided through overhead lines that originate from the public grid and connect to the utility pole located west of Old Post Road across from the parking lot.

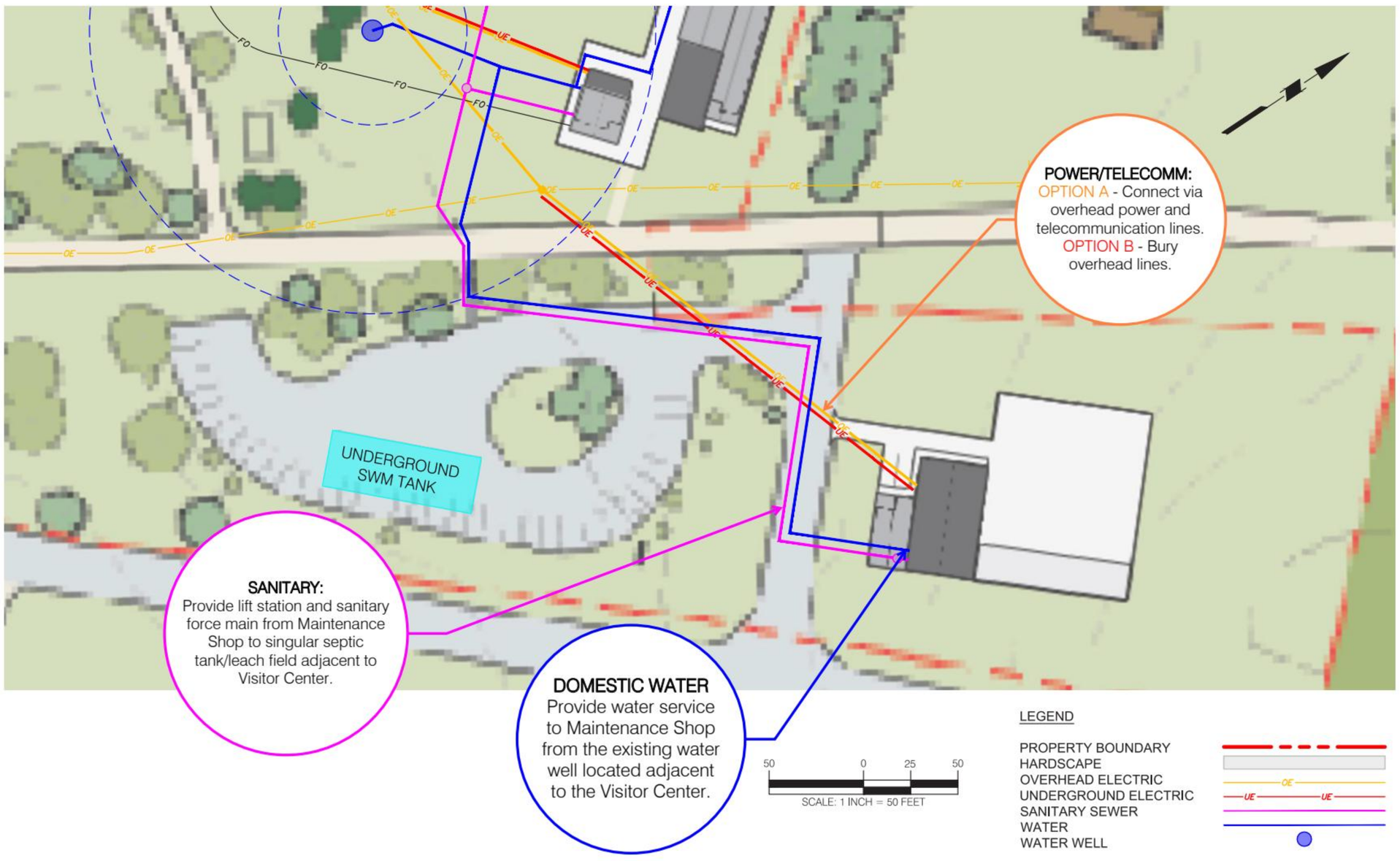
Option B - Encase and bury necessary electric and telephone lines to serve the new buildings.

Fiber Optic Service

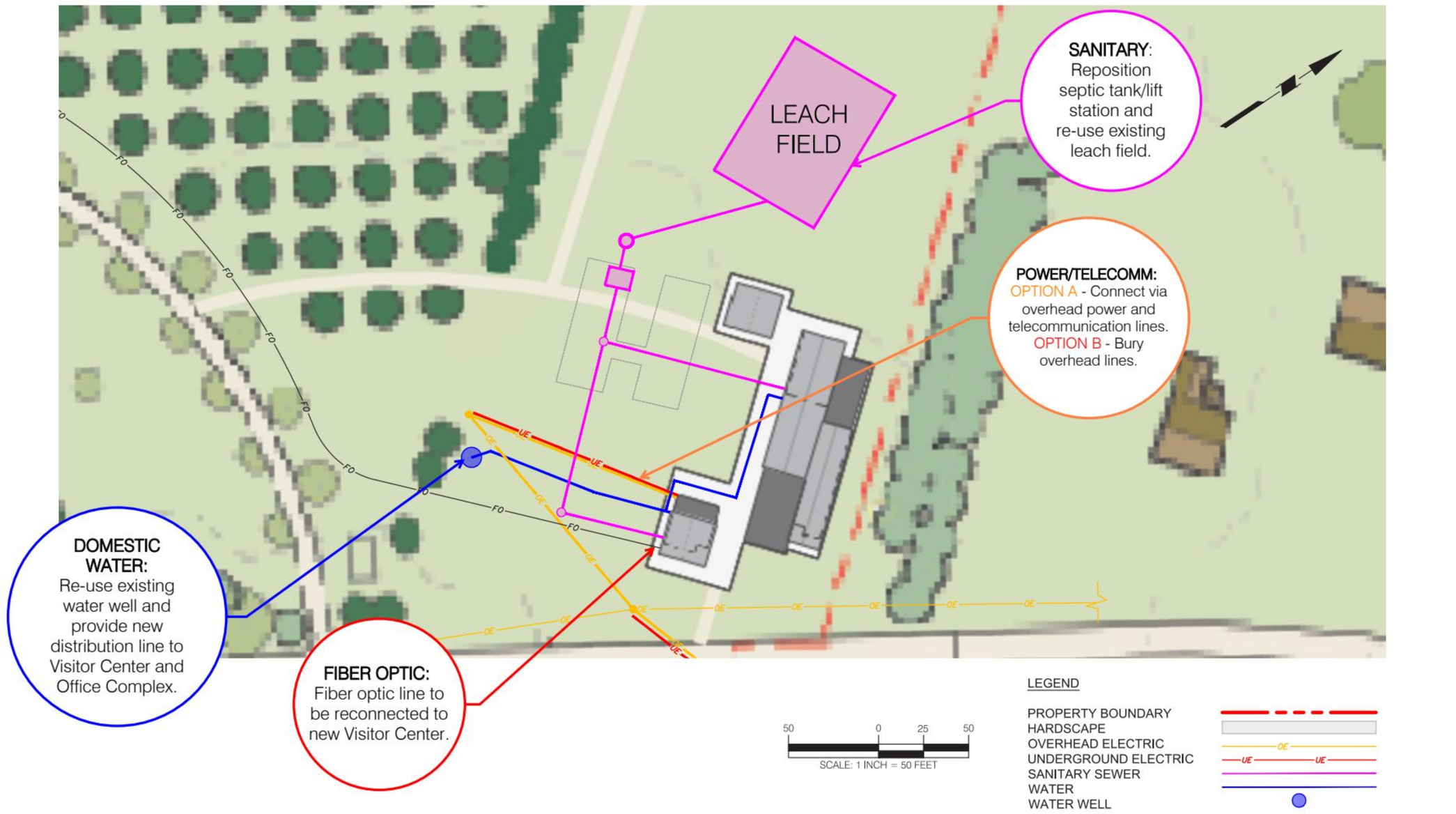
Incoming fiber optic service is proposed to remain as an overhead line that connects into the relocated Visitor Center. The incoming and outgoing lines will have to be reconnected to the relocated Visitor Center.



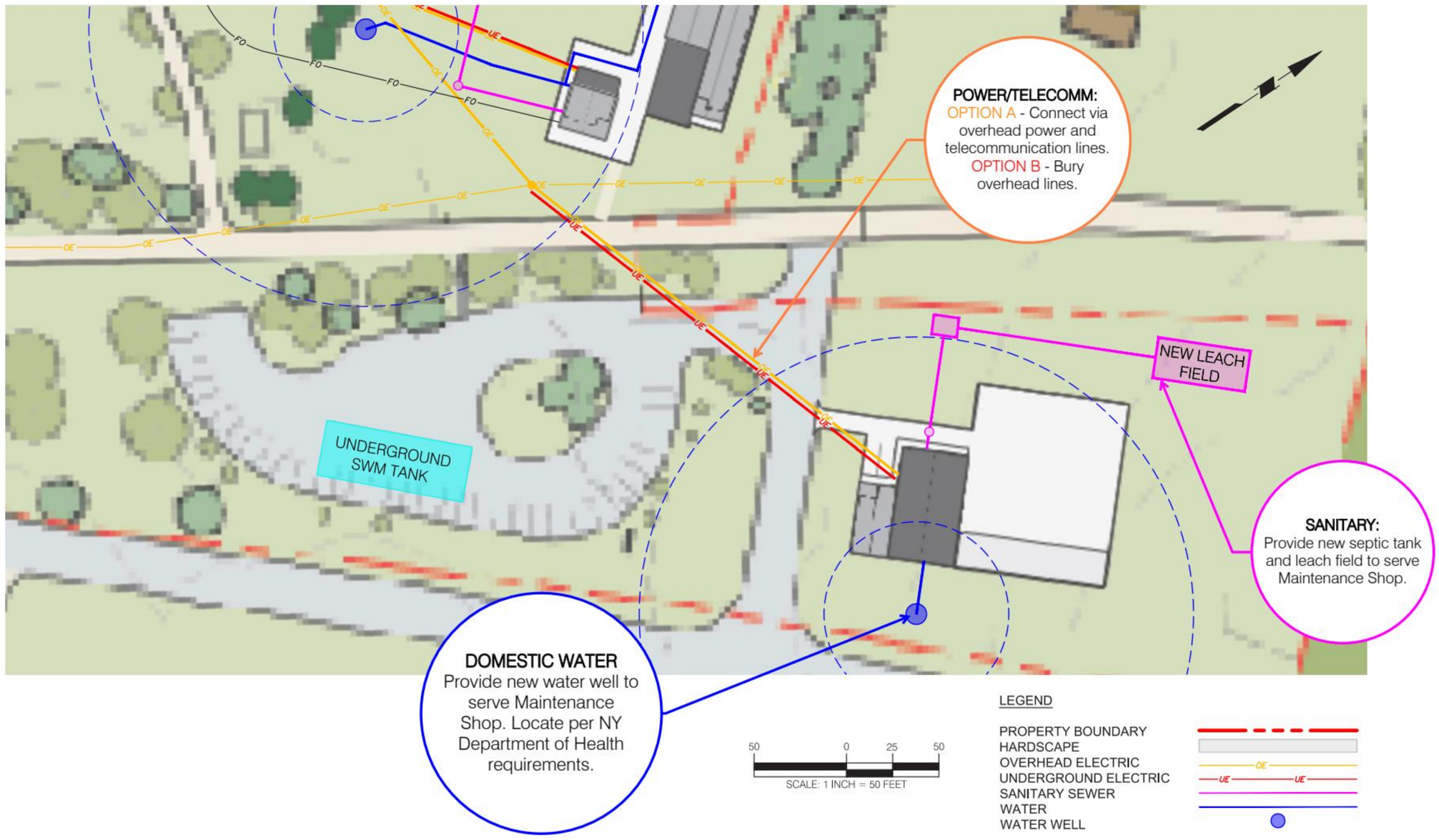
Site/Utility Concept Option A for Cluster North - Administration Building + Visitor Center



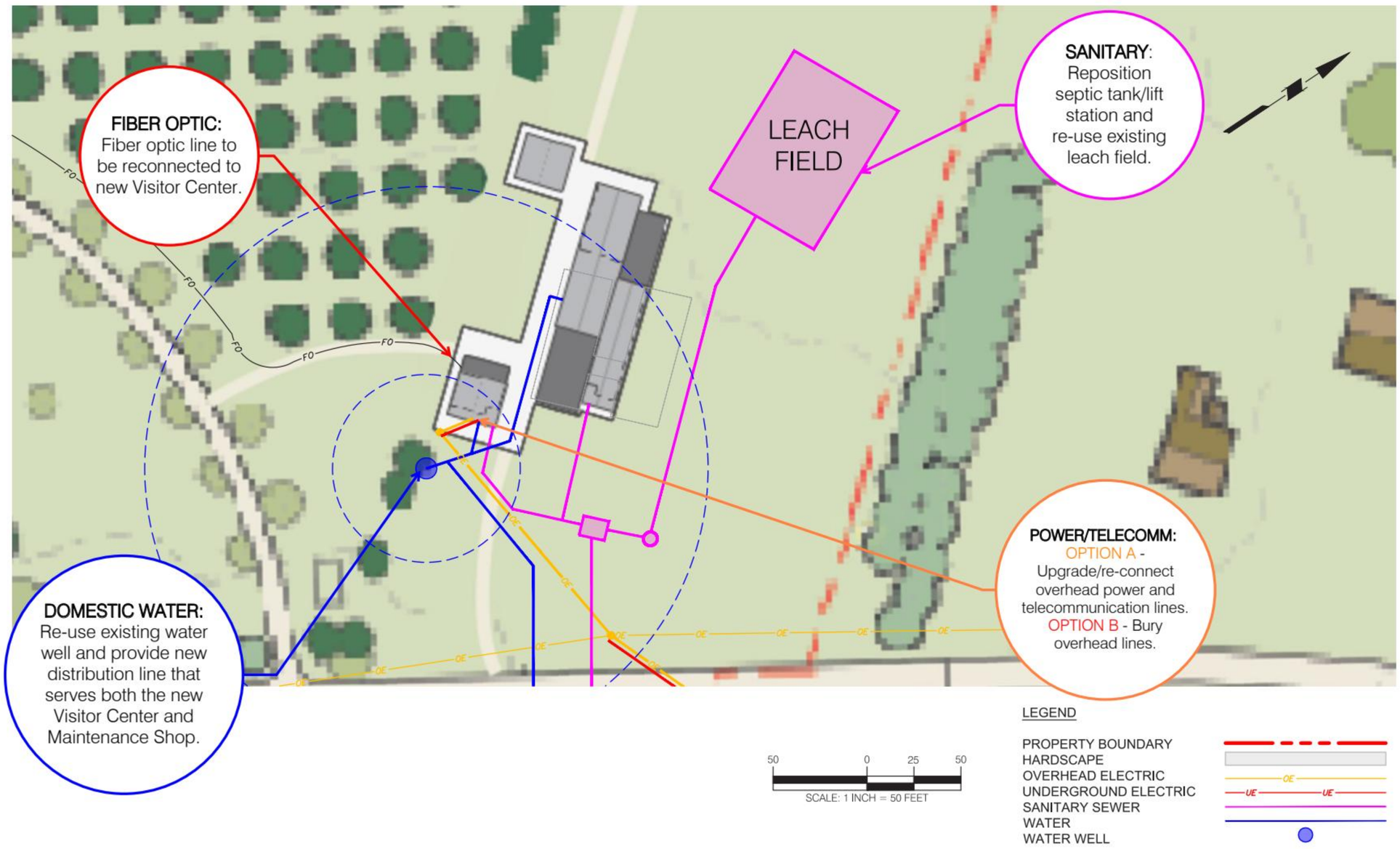
Site/Utility Concept Option A for Cluster North Maintenance Facility



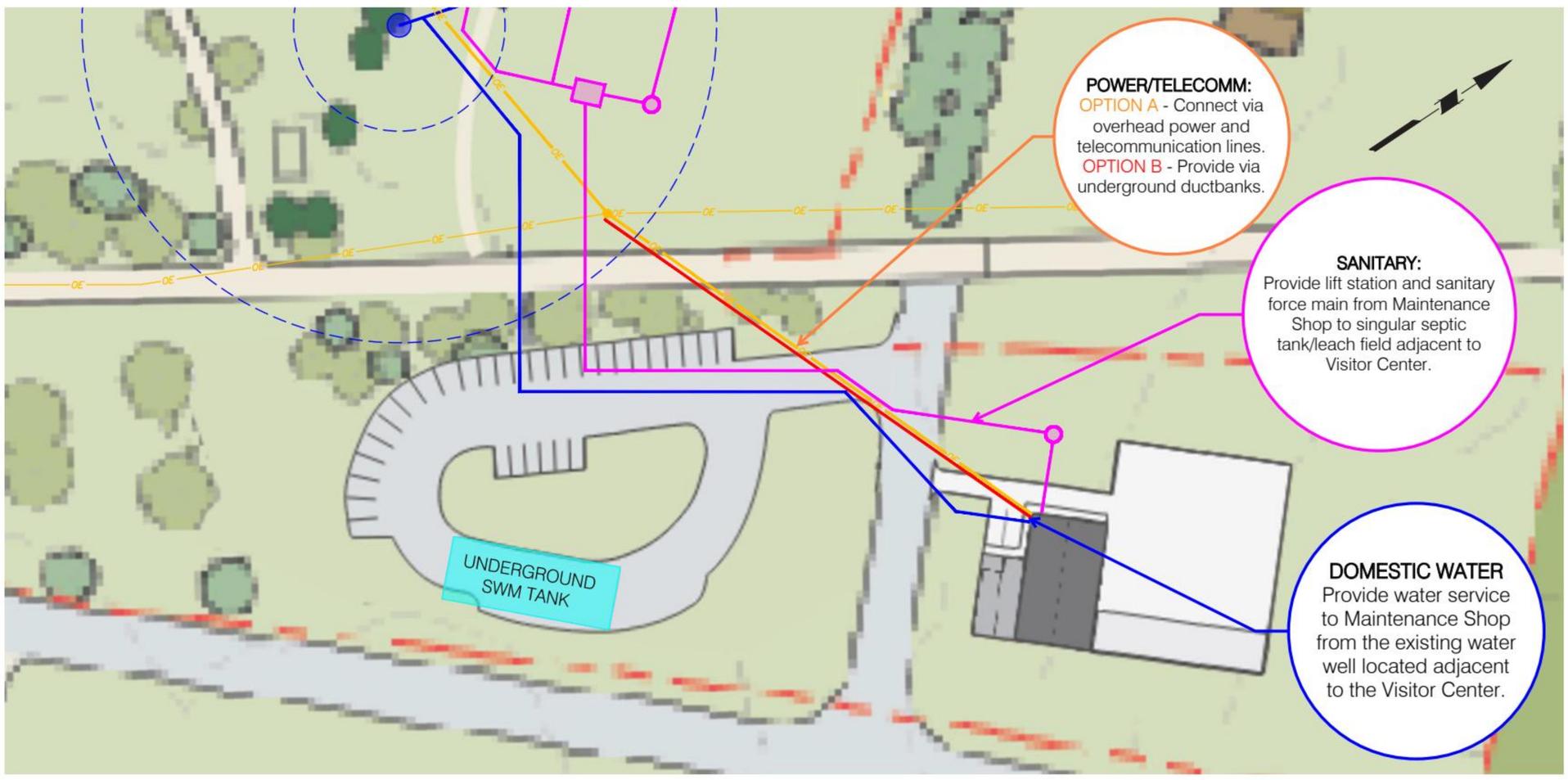
Site/Utility Concept Option B for Cluster North - Administration Building + Visitor Center



Site/Utility Concept Option B for Cluster North Maintenance Facility



Site/Utility Concept Option A for Cluster Orchard - Administration Building + Visitor Center



Site/Utility Concept Option A for Cluster Orchard Maintenance Facility

SITE/UTILITY CONCEPT - CLUSTER ORCHARD

This configuration locates the Visitor Center at the location where the existing building is currently situated on-site. The Maintenance Yard has been relocated from being situated west of the Lindenwald Mansion to being adjacent to the parking lot located between Old Post Road and State Road 9H.

Water Utility

Option A - Propose to re-use the existing water well located just south of the existing Visitor Center/Office Complex, and branch off the existing water line to serve the new Visitor Center and Maintenance Yard. If current quality and yield is not sufficient for the new building, the existing water well can be removed and a new one be installed in its place, so as to not disturb any "new" ground.

Option B – Have two separate water wells that serve the Visitor Center and Maintenance Building, respectively. Propose to install a new water well located south of the new Maintenance Yard and connect it to the building via an underground line. The location of the water well is coordinated to comply with the following New York State Department of Health setback requirements:

- 100' from Absorption (leach or tile) field or bed
- 50' from Septic tank

Sanitary Service

Option A - Propose to re-use the septic system that currently serves the Visitor Center/Office Complex. Design drawings obtained from the Park indicate that this system is comprised of 4-in ductile iron pipe flowing via gravity to a 1500-gal septic tank, and 440-gal pump chamber. From the pump chamber, it flows via a 3-in PVC force main to a leach field that lies to the north of the Visitor Center/Office Complex. Propose a new lift station and force main for the Maintenance Building to convey sewage to the septic tank/leach filed located adjacent to the Visitor Center.

If current size is not adequate for the demands of the new buildings, the existing sanitary system can be removed and a new one be installed in its place, so as to not disturb any "new" ground.

Option B – Have two separate septic systems that serve the Visitor Center and Maintenance Building, respectively. Propose to install a new sanitary septic system to support the Maintenance Yard. The location of the septic system and leach field are coordinated based on the setback requirements listed above.

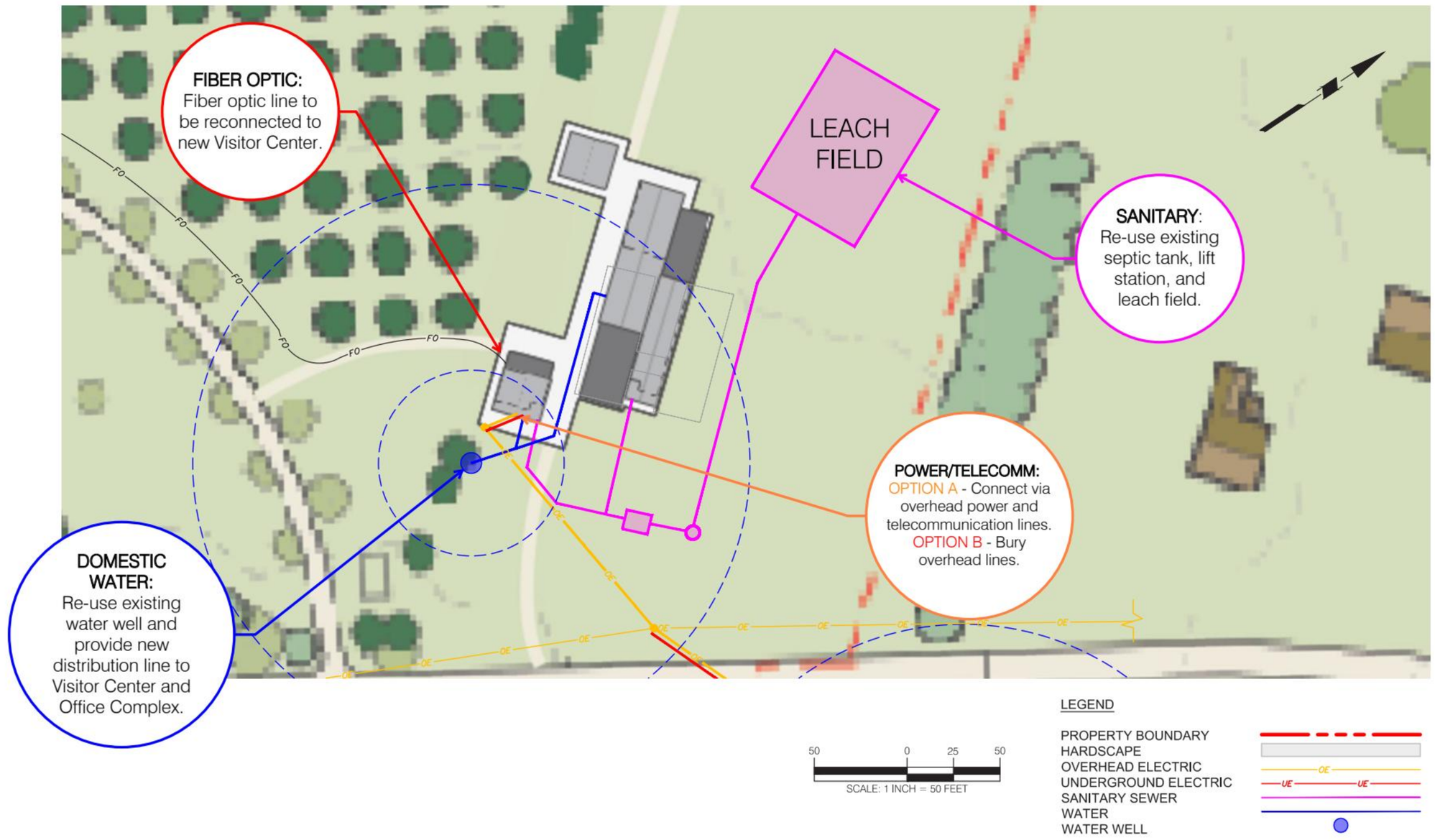
Electric/Telephone Service

Option A - Electric and telephone service can be continued to be provided through overhead lines that originate from the public grid and connect to the utility pole located west of Old Post Road across from the parking lot.

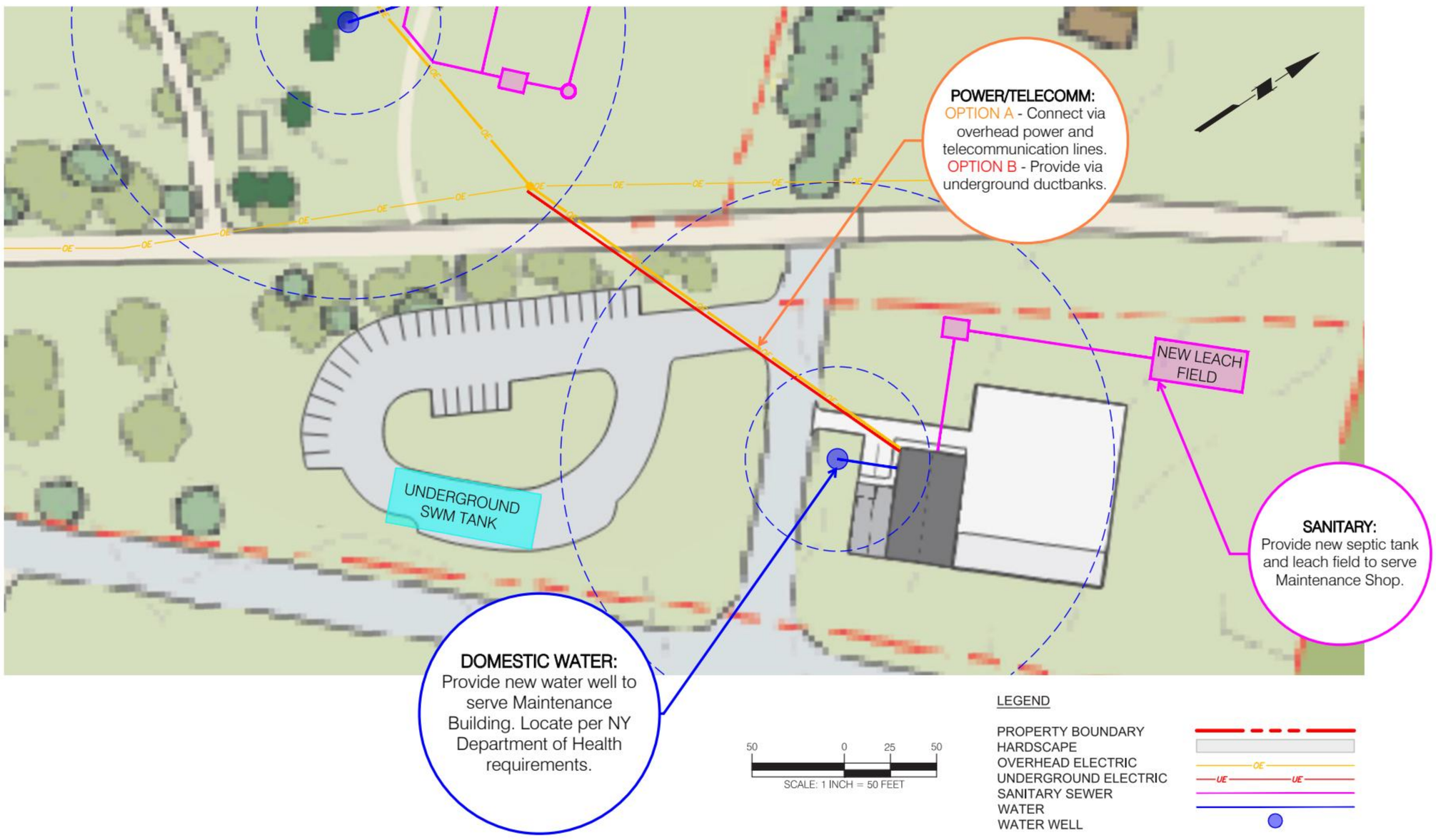
Option B - Encase and bury necessary electric and telephone lines to serve the new buildings.

Fiber Optic Service

Incoming fiber optic service is proposed to remain as an overhead line that connects into the relocated Visitor Center. The incoming and outgoing lines will have to be reconnected to the relocated Visitor Center.



Site/Utility Concept Option B for Cluster Orchard - Administration Building + Visitor Center



Site/Utility Concept Option B for Cluster Orchard Maintenance Facility

SITE/UTILITY CONCEPT - LINEAR NORTH

This configuration locates the Visitor Center and Maintenance Building adjacent to each other, near where the existing Visitor Center is currently located.

Water Utility

Propose a new water well located just south of the existing Visitor Center to serve the new buildings. The location of the water well is coordinated to comply with the following New York State Department of Health setback requirements:

- 100' from Absorption (leach or tile) field or bed
- 50' from Septic tank

Sanitary Service

Propose to install a new septic system just west of the proposed Buildings. New septic tank and pump chamber can be installed within the footprint of the existing Visitor Center to minimize "new" land disturbance.

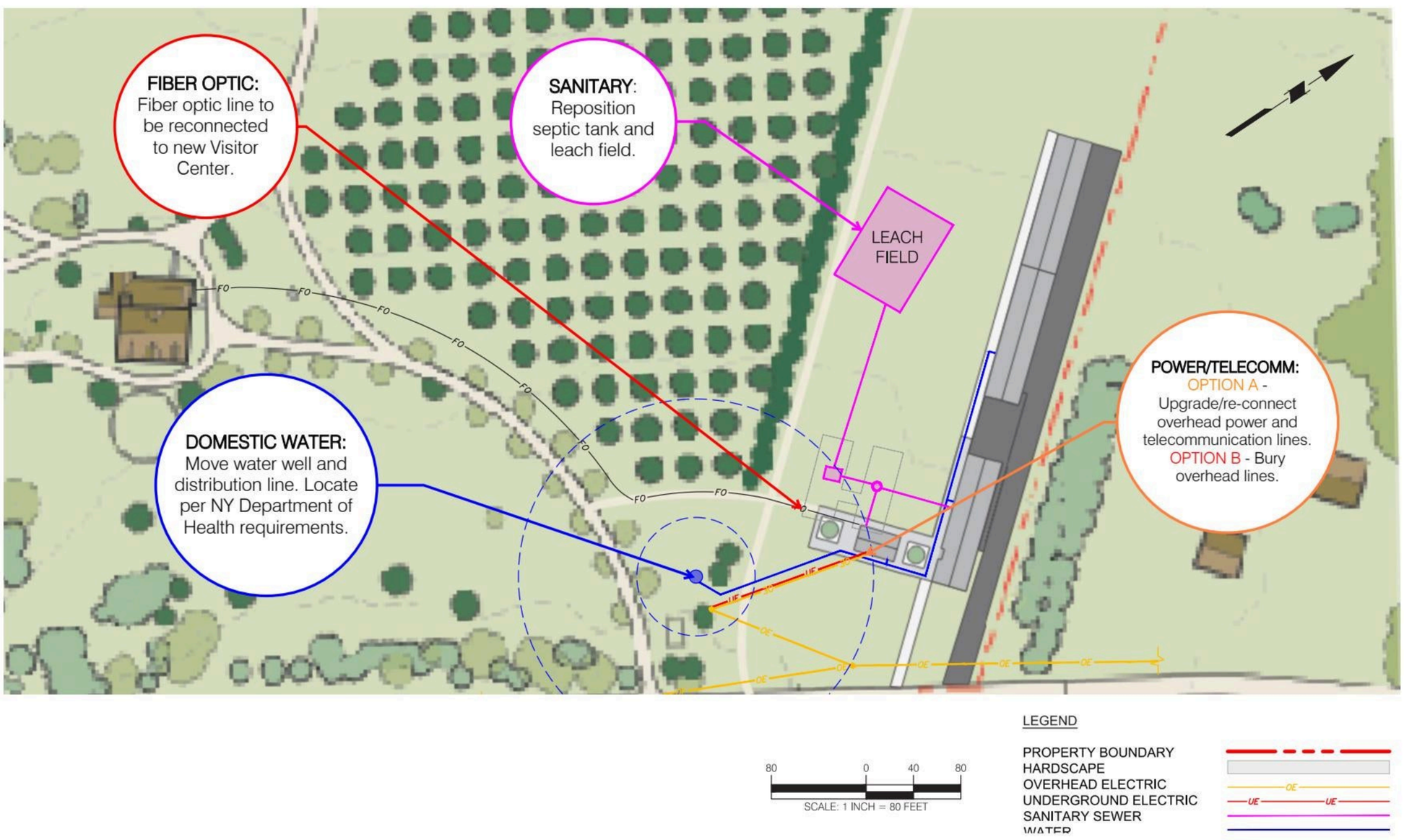
Electric/Telephone Service

Option A - Electric and telephone service can be continued to be provided through overhead lines that originate from the public grid and connect to the utility pole located west of Old Post Road across from the parking lot.

Option B - Encase and bury necessary electric and telephone lines to serve the new buildings.

Fiber Optic Service

Incoming fiber optic service is proposed to remain as an overhead line that connects into the relocated Visitor Center. The incoming and outgoing lines will have to be reconnected to the relocated Visitor Center.



Site/Utility Concept for Linear North Headquarters and Maintenance Facility

6.4 Proposed Landscape Design

developed by Rhodeside Harwell

CONTEXTUAL ANALYSIS

Parking

The parking lot layout is inefficient with more paving than necessary for the number of spaces provided. The small leg at the south end dead ends without the necessary turning movement allowance making backing out of the last spot difficult. The bus parking is next to the path that leads from the parking lot to the visitor center. When buses are parked there, pedestrians must maneuver around the bus to access the pedestrian path to the Visitor's Center.

The two existing accessible parking spaces meet minimum requirements, but to be code compliant, one must be meet a van accessible parking space.

ABBAS

The current site is ADA compliant except for some of the informational signage both in the front yard and along the edge of the cultivated fields to the west, which are located along the mown grass paths.

Vegetation

The existing vegetation around the house and front yard should follow the landscape treatment recommendations in the 2016 Cultural Landscape Report (CLR), prepared by the Olmsted Center. The report recommendations include preserving historic trees, replacing missing historic trees, removing incompatible non-historic trees, preserving the tree row along Old Post Road, preserving the historic character of the black locust allée, and reestablishing the pasture west of the mansion. The 2016 CLR includes little or no guidance for landscape treatments around the proposed Visitor Center, maintenance building, maintenance yard and the parking lot, since it is outside the original property line at the time of Van Buren's ownership and has no historic significance to that time. The CLR does mention that the historic hedgerow along the original property line at the northern edge of the orchard should be reinstalled and recommends replacing the showy ornamental shrubs surrounding the parking area with an historically compatible plant palette.

The lawn areas are all maintained turf, but this is not historically accurate. In Van Buren's time some areas of the lawn were left to grow higher. Modern lawn maintenance equipment does not accommodate mowing higher than 4 inches. There is a concern that the higher lawns look messy and unkempt to visitors. The large lawn areas allow for a variety of uses, provides a formal setting to the front of the house, and maintains open vistas to the west, especially from the area to the west of the Visitor Center.

The existing large hedgerow north of the Visitor Center reflects the historic agricultural use of the site as the edge of an historically cultivated field and screens the private residences beyond. The grid of crabapples between Old Post Road and the Visitor Center is meant to reference the historic orchard, but many of the trees are within the footprint of the proposed building disturbance area.

The National Park Service is proceeding with a plan to replace the North Woodlot with an orchard restoring that area to its use during Van Buren's time as outlined in the 2021 Orchard Rehabilitation Plan prepared by Ausra Musset for the Olmsted Center. An historical print of the house from the Van Buren era shows the house with no foundation planting. This is reflected in the current landscape of trees and turf with little of no shrubs or ornamental planting.

PROPOSED VISITOR CENTER AND MAINTENANCE BUILDING

Parking and Vehicular Circulation

The reconfiguration of the parking is intended to be confined within the footprint of the existing parking lot to minimize disturbance to the site. The intent is to maintain the number of parking spaces including accessible spaces, allow for bus drop off and bus parking, minimize pedestrian vehicular conflicts, and maximize efficiency of the parking lot. The short entry road off Route 9H and the access drive into the parking lot are to remain. The lot will be reconfigured to locate the parking spaces on the west side of the drive aisle, so visitors don't have to cross the drive aisle to get to the pedestrian circulation system. Bus drop off can be in the drive aisle near the pedestrian path leading to the Visitor Center. Once the bus discharges it's passengers, the bus can proceed to the bus parking area on the east side of the lot, away from the pedestrian circulation areas.

The existing Old Post Road, entry drive, paths around the house, and the restored historic paths to the west of the house will be accessible to maintenance and service vehicles, but not to the public.

Pedestrian Circulation

New paved pedestrian pathways will be kept to a minimum to reduce disturbance to the site but allow accessible circulation to key destinations. Once the maintenance area is relocated, new paths to the west of the house will restore the historic circulation on that side. Along the parking spaces on the west side of the parking lot, a 5-foot-wide sidewalk will collect visitors and direct them to a path that leads to the Visitor Center. From the west side of the Visitor Center a new accessible path will run west along the new hedgerow north of the orchard to take visitors to the vistas and interpretative signage at the edge of the cultivated fields. The path will then run south on the west side of the orchard and connect to the restored historical paths west of the house. A new path running south will connect the Visitors Center to the entry drive leading to the house.

Lighting

LED fixtures, rated for dark sky requirements will have timers for maximum control and minimized light pollution. Parking area lights will be selected and located to provide required footcandles. Pathway lights, selected for aesthetics, performance, and durability, will be located along the pedestrian path between Old Post Road and the new Visitor Center.

Vegetation

The existing vegetation should be maintained except for selective removals of nonnative vegetation and plants intruding into the black locust allée. New planting will also include historical replacements, and enhancements around the house and front yard following the landscape treatment recommendations in the 2016 Cultural Landscape Report (CLR), prepared by the Olmsted Center. The ornamental planting around the parking will be removed and new plantings along parking lot, next to Old Post Road will extend the native tree planting that exists along Old Post Road in front of the house. A new hedgerow will be planted along the north side of the proposed orchard. The existing woodlot where the maintenance building is being located will selectively remove trees in the area of disturbance needed for the building's construction and new screen planting will be added to help screen the maintenance building from Route 9H to the east, the parking lot to the south and the residences to the west. A small native meadow garden will be located in the open space between the Visitor Contact building and the Outdoor Covered Exhibit structure. All disturbed areas not planted will be lawn.

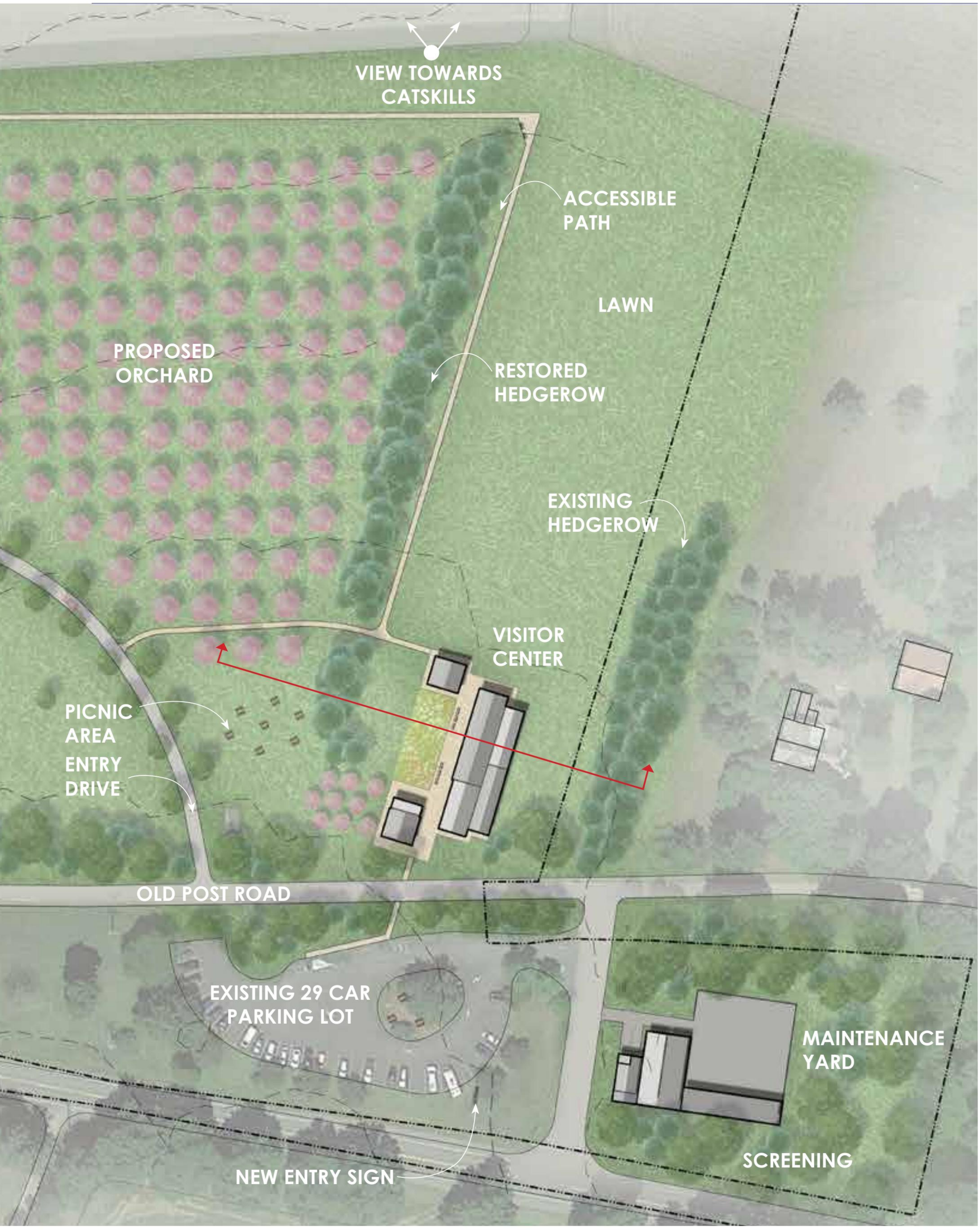
Site Furnishings

Site furnishings should be selected for the program uses defined by the NPS staff and accessible for all visitors. The furnishings should include benches, picnic tables, trash receptacles and bicycle racks. The existing flagpole should either be removed, refurbished or replaced. An historically appropriate replica of the urn in the circular lawn area should be installed to replace the original missing feature.

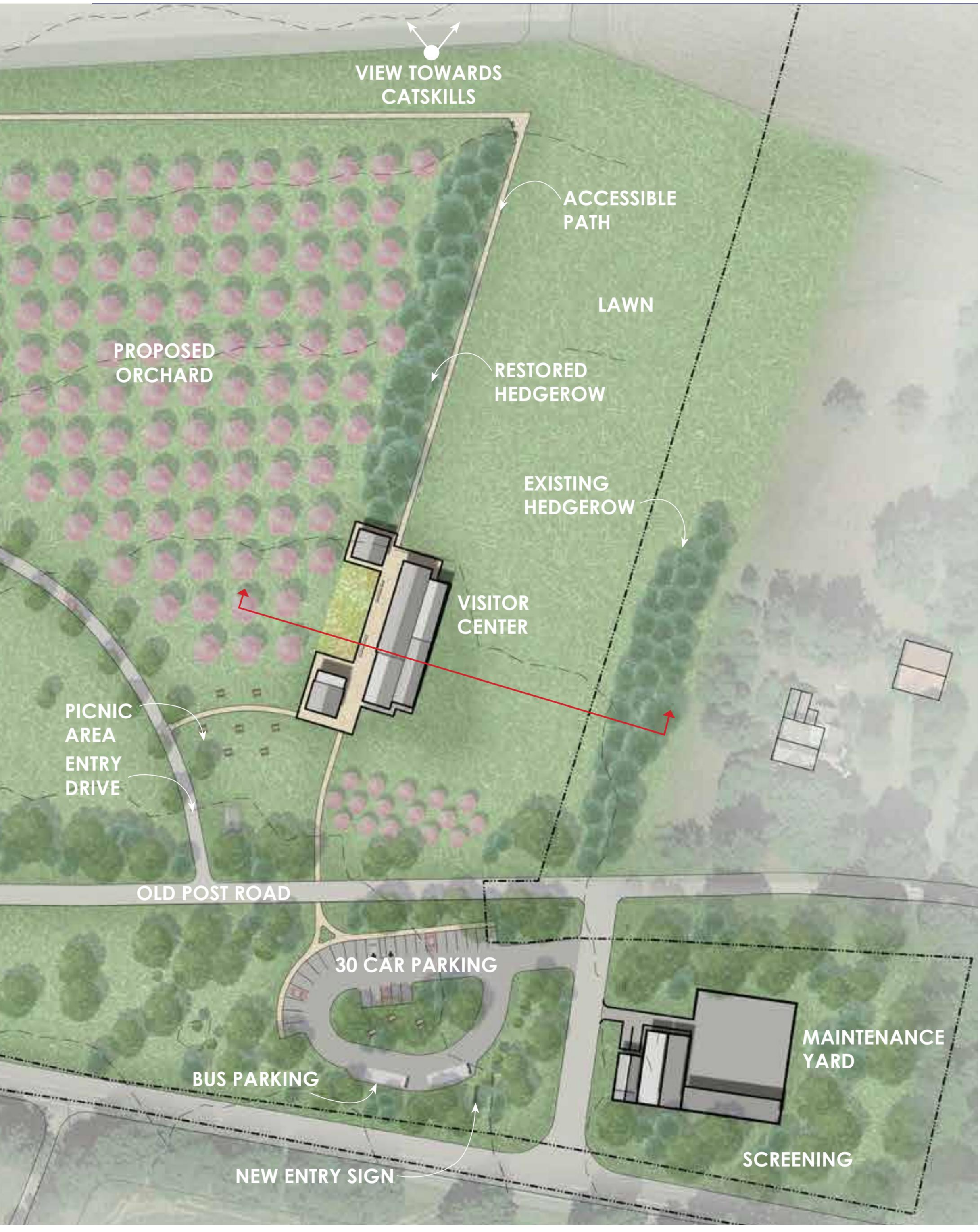
Views

The views and vistas to the farm fields and the Catskill Mountains, best viewed from the west side of the existing woodland or the proposed orchard, will not only be maintained but will now be accessible to all via the new pathways to the best viewpoints.

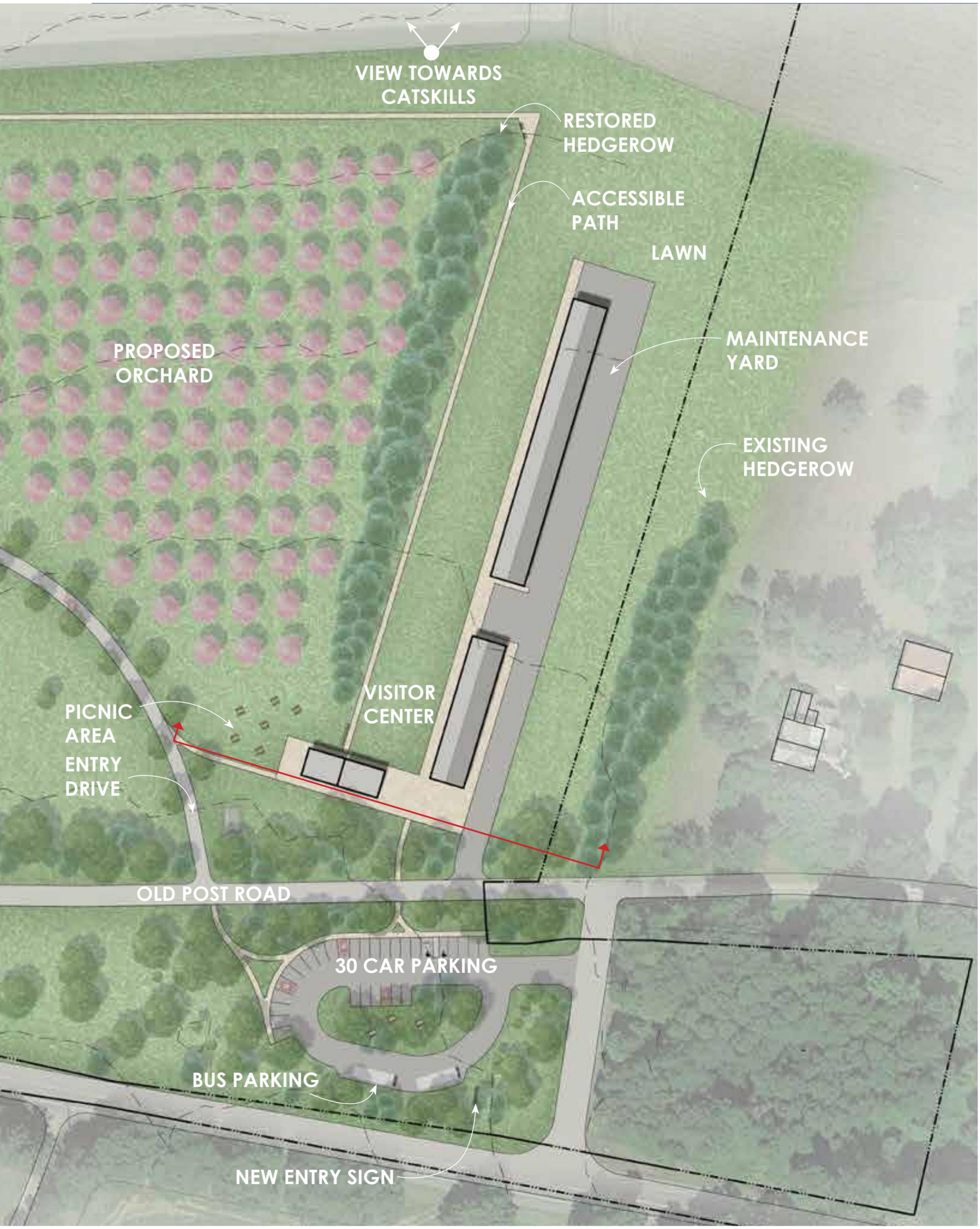
SITE PLAN - OPTION 1


VIEW TOWARDS CATSKILLS
ACCESSIBLE PATH
LAWN
PROPOSED ORCHARD
RESTORED HEDGEROW
EXISTING HEDGEROW
VISITOR CENTER
PICNIC AREA
ENTRY DRIVE
OLD POST ROAD
EXISTING 29 CAR PARKING LOT
MAINTENANCE YARD
SCREENING
NEW ENTRY SIGN

SITE PLAN - OPTION 2


VIEW TOWARDS CATSKILLS
ACCESSIBLE PATH
LAWN
PROPOSED ORCHARD
RESTORED HEDGEROW
EXISTING HEDGEROW
VISITOR CENTER
PICNIC AREA
ENTRY DRIVE
OLD POST ROAD
30 CAR PARKING
MAINTENANCE YARD
BUS PARKING
SCREENING
NEW ENTRY SIGN

SITE PLAN - OPTION 3


VIEW TOWARDS CATSKILLS
RESTORED HEDGEROW
ACCESSIBLE PATH
LAWN
MAINTENANCE YARD
PROPOSED ORCHARD
EXISTING HEDGEROW
VISITOR CENTER
PICNIC AREA
ENTRY DRIVE
OLD POST ROAD
30 CAR PARKING
BUS PARKING
NEW ENTRY SIGN

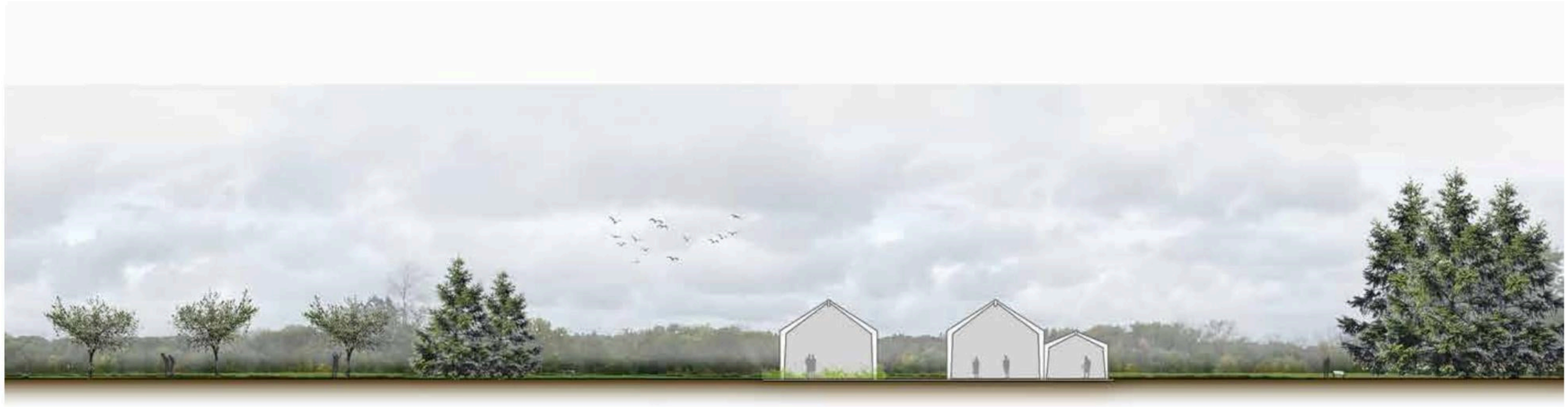
PROPOSED VISITOR CENTER AND MAINTENANCE BUILDING, cont'd

There are minor variations in the site work development between the three building location options. The variations occur at the parking lot, the maintenance yard, and the crab apple planting next to the existing Visitor Center. The pedestrian circulation and proposed landscape treatments remain consistent through all three options.

In Option 1, the parking is maintained as it exists, in Option 2, the parking lot in reconfigured using the existing parking lot geometry and within the existing footprint of the parking lot. The reconfiguration results in a reduction in the amount of paved surface then currently exists. In Option 3, the parking lot is reconfigured and realigned to be parallel to Old Post Road while also reducing the amount of paved surface. Options 2 and 3 add 1 more parking space than exists.

The two proposed locations for the maintenance facility requires two different access points and results in different levels of site disturbance. Options 1 and 2 locate the maintenance facility in the undeveloped wooded lot north of the parking lot across the entry drive from Route 9H. Access to the facility is from the entry drive coming off Route 9H. Construction activity for the new facility including earth work and tree removal will result in significant disturbance to that location. In Option 3, the maintenance facility is in the lawn area aligned with the proposed Visitor Center complex. Vehicular access to the maintenance yard is from Old Post Road and disturbance by construction activities will be limited to existing lawn areas.

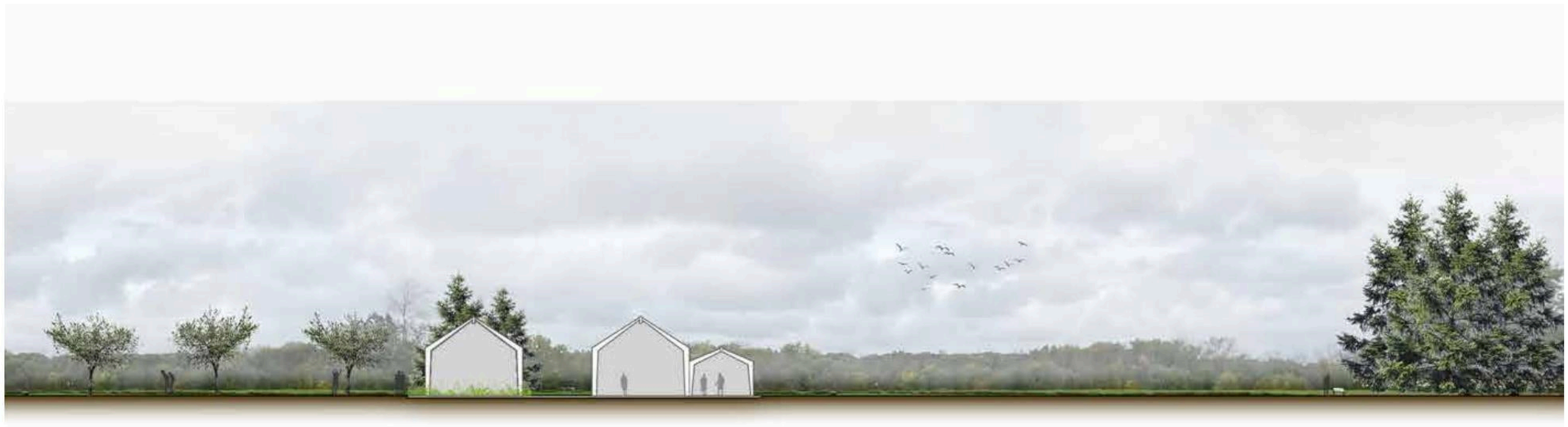
The existing crabapple plantings in front of the existing Visitor Center are affect by two proposed Visitor Center building siting. For the building location Option 1, at least half of the crabapples will have to be removed. Option 2 building location will allow the crabapples to remain and in Option 3, the building location requires removal of all the crabapples.



SECTION - OPTION 1

0' 25' 50'

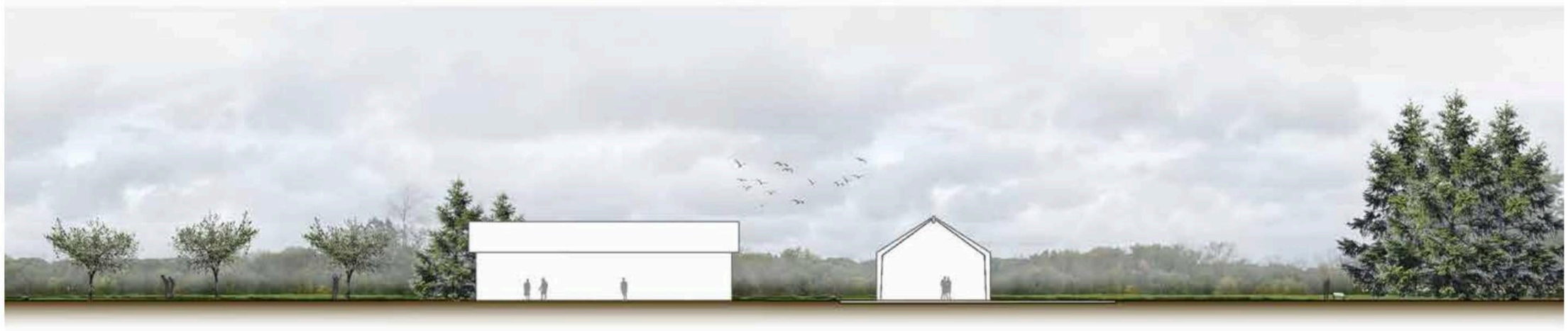
Site Section through Cluster North Visitor Center + Administration Buildings



SECTION - OPTION 2

0' 25' 50'

Site Section through Cluster Orchard Visitor Center + Administration Buildings



SECTION - OPTION 3

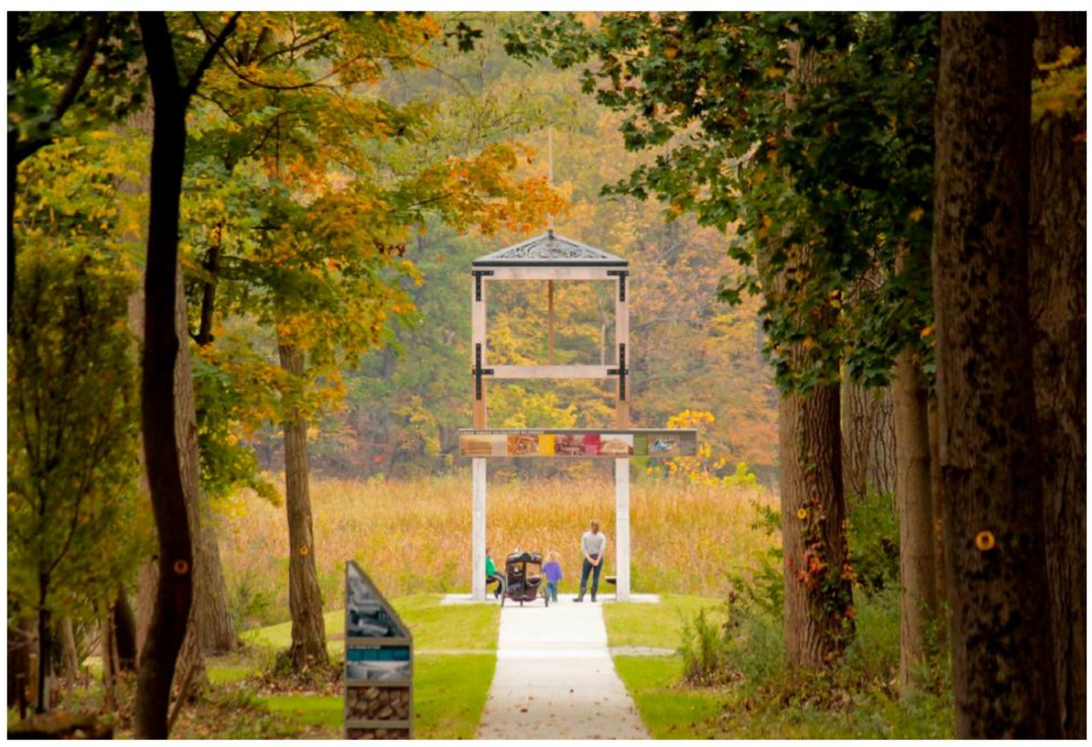
0' 25' 50'

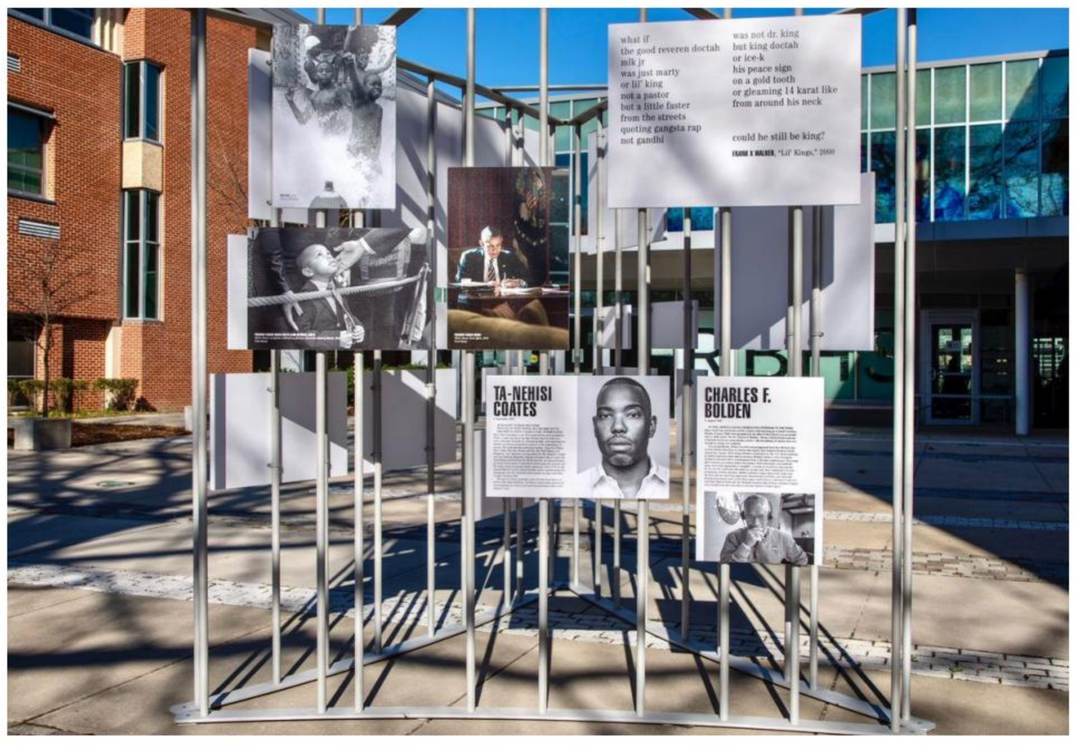
Site Section through Linear North Visitor Center + Administration Buildings + Maintenance Facility

1849-50
A House Transformed

New York
EMPIRE STATE TRAIL
New York
THE EMPIRE STATE TRAIL
NEW YORK CITY

WEST POINT FOUNDRY PRESERVE




what if
the good reveren doctah
mlk jr
was just marty
or lil' king
not a pastor
but a little faster
from the streets
queting gangsta rap
not gandhi
was not dr. king
but king doctah
or ice-k
his peace sign
on a gold tooth
or gleaming 14 karat like
from around his neck
could he still be king?
FRANK X WALKER, "Lil' Kings," 2010
TA-NEHISI COATES
CHARLES F. BOLDEN

6.5 Proposed Interpretation Design

developed by C&G

OVERVIEW

The interpretive experience elements on the site are planned to offer the following features:

- Low cost, but high impact
- Increase visit time and park usage
- Be a model for other Sites
- Lie lightly on the land
- Combine interior experience with exterior
- Offer an engaging and innovative experience at each station

Low Cost, High Impact

The individual experiential elements shown here are deliberately simple in construction and scale, allowing the system to have a low cost relative to its positive impact on the visitor experience.

Increasing Visit Time and Usage of the Park

Adding a series of additional experiences can increase visit time and usage of the park by the public. A small historic site with a historic house and visitor center is perceived as having “two things to do”. Adding a system of small additional experiences results in “three things to do”. This in turn increases interest and dwell time.

A Model for Other National Historic Sites

The underlying philosophies of planning and design for these additional interpretive experiences are intentionally applicable to other situations. Any National Historical Site, both small and otherwise, is a potential candidate for adding a modest system like this, for similar strategic reasons.

Lying Lightly on the Land

The system deliberately requires very little disruption to the land and space below the ground plane. In this specific case, this is partly in order to accommodate the wishes of Native stakeholders. But this approach also has additional benefits, such as a lower production budget, simpler installation process, and ease of ownership.

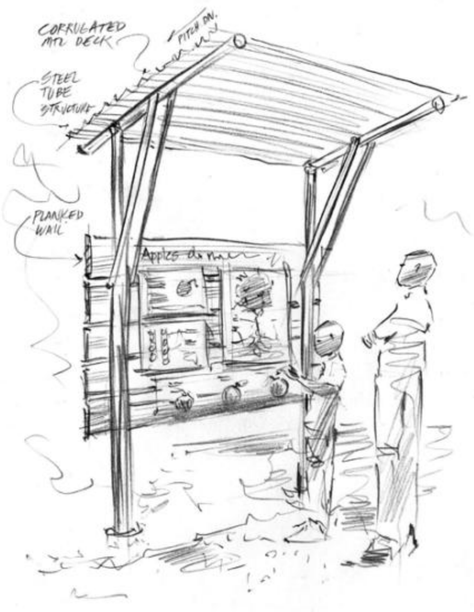
Combining Exterior Experience with Interior

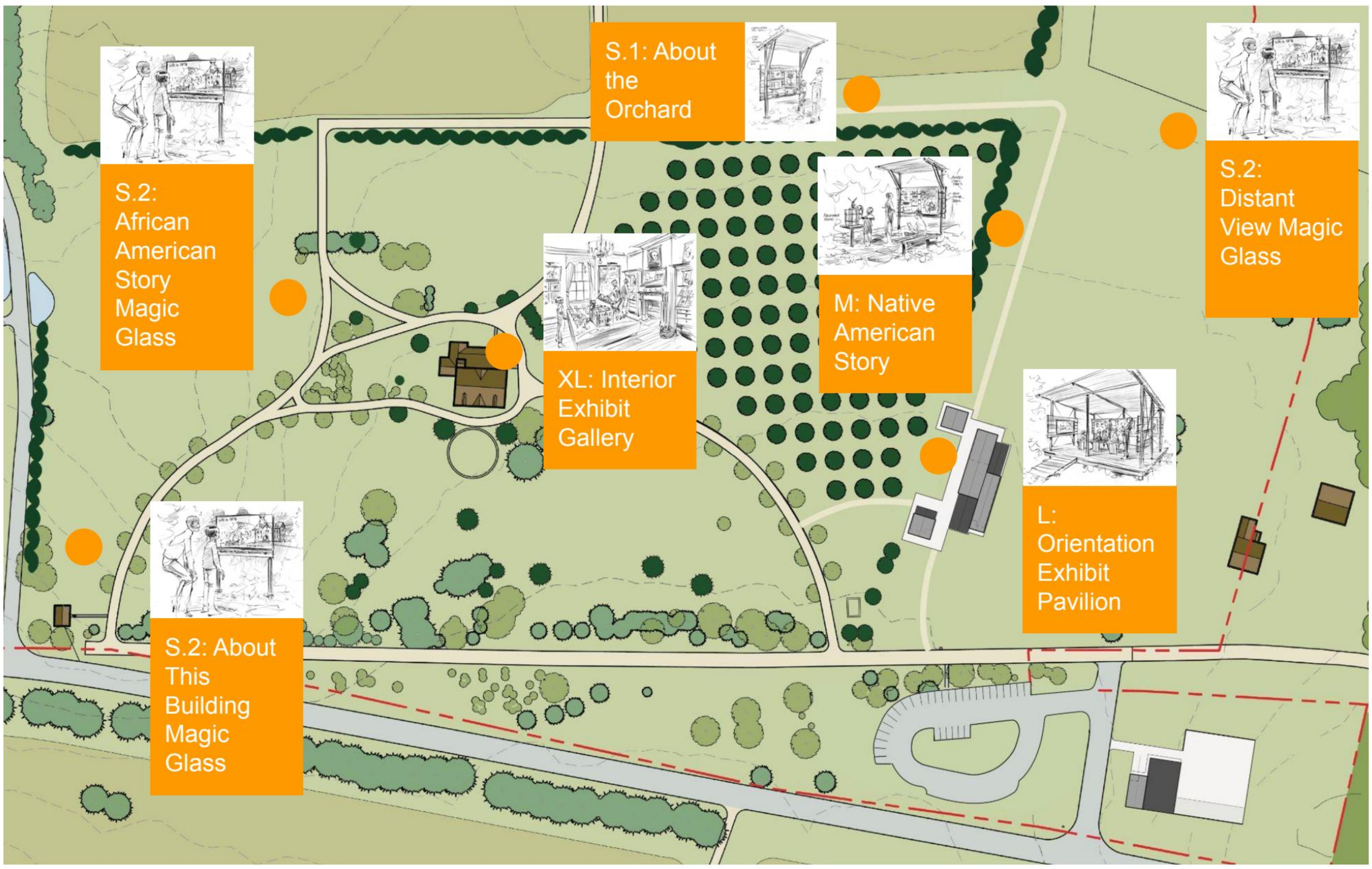
Although the project area is outside the historic structure, one space inside it is also suggested. This would be an exhibition gallery that could display objects of a certain type, along with various other experiences. There are many benefits of using an existing interior space for this purpose, one of the most important being reducing the need for new construction of museum-type space.

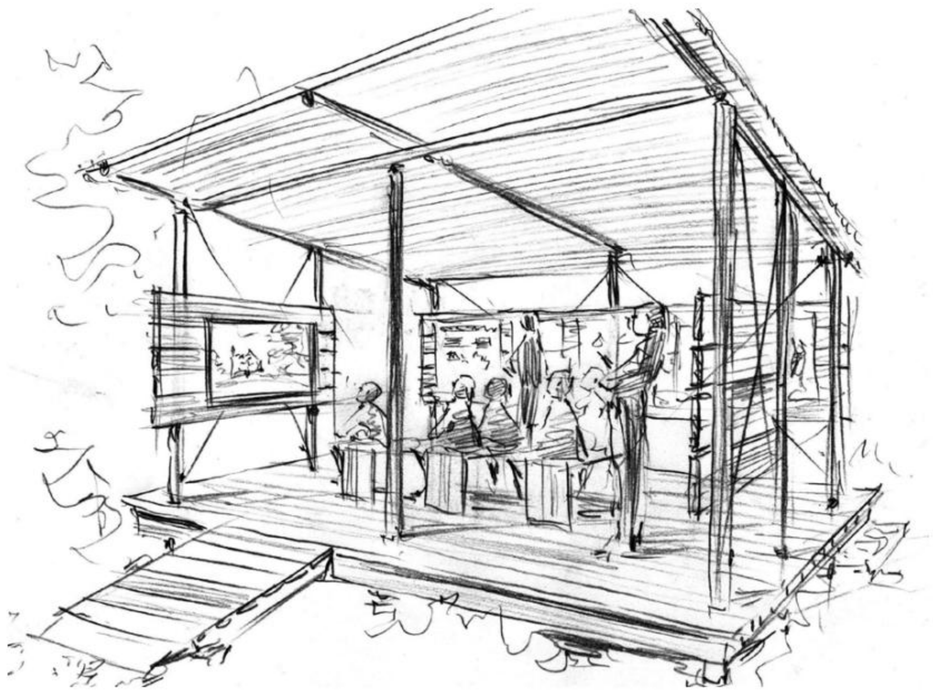
This strategy will offer educational and enjoyable interpretive experiences for all visitors, while also serving as a model for other similar Sites in the system.

*Previous Page: Collage of inspiration / precedent images for a series of outdoor interpretive experiences at various scales of size and complexity. Includes a typical NPS wayside, previous projects done by C&G Partners, and others

Family View: S, M, L, XL - *Stations That "Make New Places" for Visitors to Stay Longer*







Family of Components: "S.2" - "Magic Glass" African American Story Station

S.1: About the Orchard

The "Small Type 1" is akin to a simple trailhead kiosk one might find along a walking path. It has a vertical structure with a simple eave to keep water and snow off the elements below. One or two people could also shelter somewhat while taking in the story of this station. The structure also holds a series of durable outdoor-grade full-color graphics for images, diagrams and text about the immediate context. In addition, some simple, durable 3D replica casts can recreate small objects of tactile interest that visitors can experience in all seasons.

S.2: Distant View Magic Glass

The "Small Type 2" is a way to "see into the past". A particular point is chosen, where a visitor will stand to have the experience. A photograph of the view from that point is taken, and then a line drawing (or other see-through medium) is created that illustrates some aspect of that view that cannot normally be seen. That drawing is then placed on site, in that spot, on a transparent glass panel held by a rigid, durable structure so that people can look through it and see the drawing align with the real-time scene. In this case, we draw in landscape elements, people, vehicles and activities that would have been different at some time in the past. For a distant view that was once even more pastoral, we draw those features in, so that looking through the glass is like looking at a moment in the past.

S.2: African American Story Magic Glass

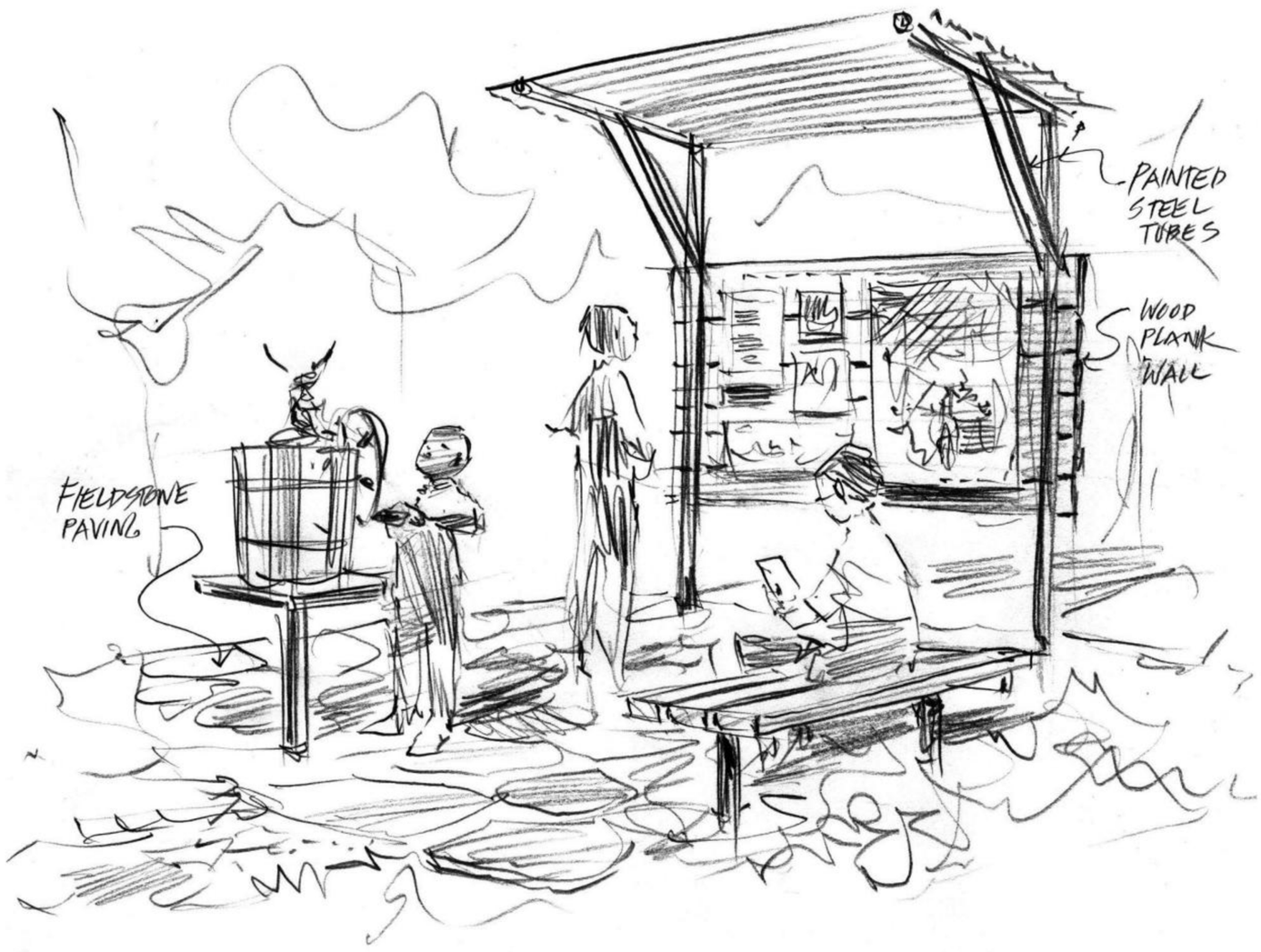
This uses the same technique as the Distant View location, but draws in people and activities related to the African American story on the site.

S.2: About this Building Magic Glass

This uses the same technique as the Distant View location, but draws in activities, vehicles, objects and people using a building as they would have in previous times.

M: Native American Story

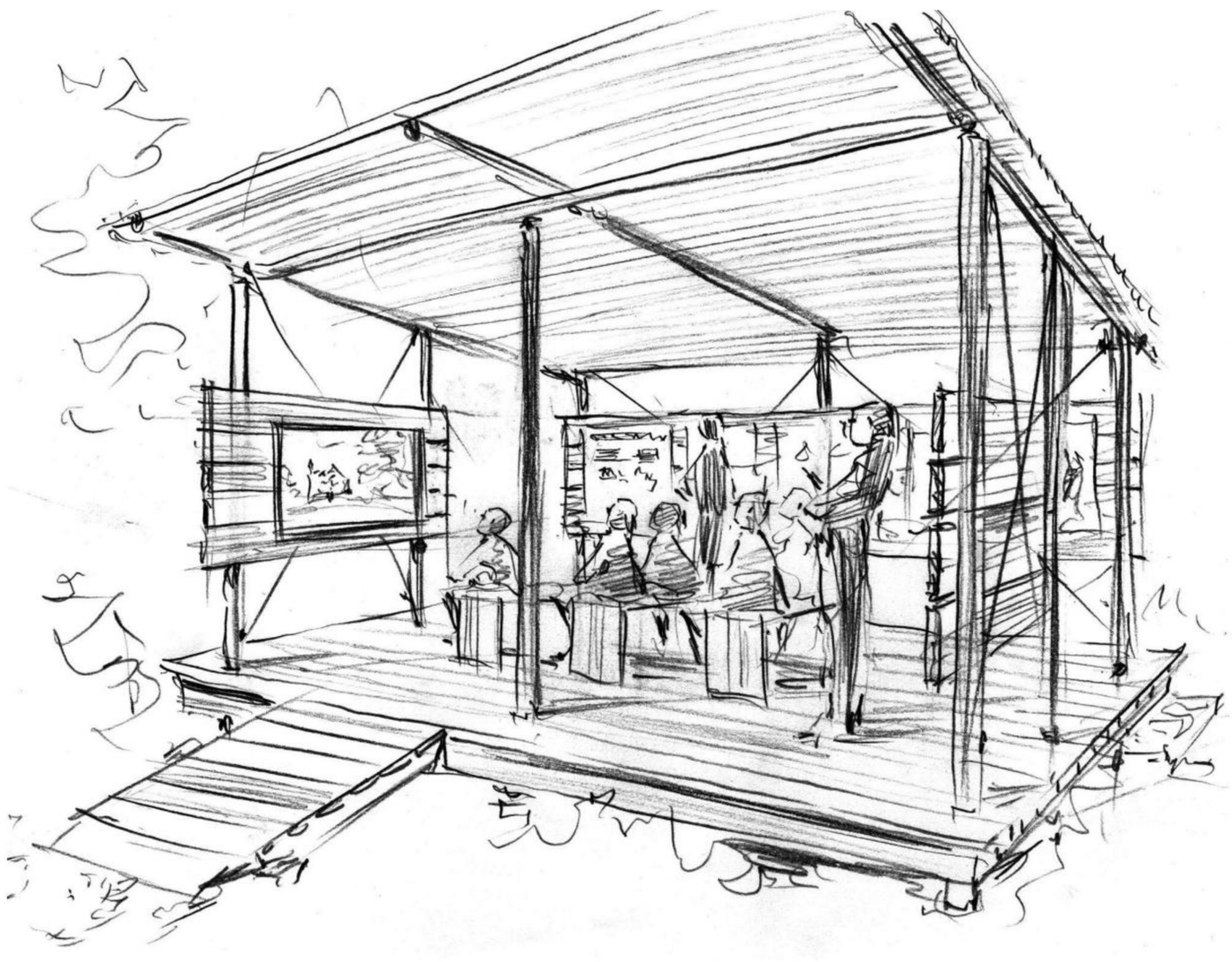
The "Medium Type" size of experience has an S.1 at its core, with its vertical structure, sheltering eave, durable outdoor full-color graphics, and potential small tactile elements at the upright panel. It adds a freestanding simple interactive or tactile centerpiece nearby, which can offer an experience of hands-on re-creation of a historical activity. It also adds a seating element to allow different groups sizes and age ranges of visitors a period of respite.



Family of Components: "S.1" - Trailhead Style - Orchard Story Station

L: Orientation Exhibit Pavilion

The "Large Type" experience is a full sheltered outdoor pavilion structure with interpretive materials all around, and an outdoor-grade audio-visual presentation system with seating suitable for a large group or class. The surrounding durable interpretive materials offer the same features as the S.1 and M types listed above, with full-color outdoor graphics, diagrams, images and text. Every wall surface can contain collages or large single surfaces of this kind, along with a larger collection of simple durable tactile elements for education and enjoyment. The centerpiece is an outdoor theater setup, where an orientation video (or other videos as desired) can be played on demand for visitors. This includes a large daylight-bright monitor in an all-weather sheltered housing, and a sound system grid above that offers rich surround sound capability, focused so that visitors some distance away cannot hear it.



Family of Components: "S.2" - "Magic Glass" African American Story Station

Family of Components: "XL" - House Nursery - Indoor Exhibit Gallery Station

XL: Interior Exhibit Gallery

The "Extra Large Type" experience is a complete interior exhibition gallery. The Lindenwald Room 118 (216 SF nursery room) was considered as a potential location for this experience.

This offers a full museum-like experience in an existing built space, avoiding costly construction of new facilities. Objects, images, graphics and text surround the visitor. A special centerpiece is a durable "dollhouse" style model which visitors and guides can take apart and reassemble, to see a full-color scale model of the house, including parts of the structure that they may not visit that day.

This is very durable and easy to move around. A special media element is a "Harry Potter" style painting over the mantelpiece that seems at first to be an oil portrait, but then moves to tell a story.

Conclusion

This strategy will offer educational and enjoyable interpretive experiences for all visitors, while also serving as a model for other similar Sites in the system. Any type of structure proposed in the cultural landscape would be well vetted during later stages of design by an interdisciplinary NPS team..

United States Department of the Interior
National Park Service
Class C Construction Cost Estimate

BASIS OF ESTIMATE

PROJECT INFORMATION

Project:	Visitor Center, Shop and Open Exhibit - Option A Cluster North
Park:	Martin Van Buren National Park
Park Alpha:	MAVA
PMIS Number:	214672/214673
Estimate Date:	5/12/2022
Prepared By:	Saifon Bips
Company:	Axias NY LLC
Address:	197 Route 18 South, Suite 200
City, State Zip:	East Brunswick, NJ -08816
Phone:	914-837-1062

BACKGROUND SUPPORTING MATERIAL (Scope of Work):

The scope of work includes installation of new steel trusses and columns including slab on grade which supports metal framing all around for office/ admin building and shop. An exterior enclosure of these buildings is to be covered with perforated metal panel (arch skin) and aluminum panel (arch building) as per the schematic building massing option A. Roofing will be covered with aluminum metal panel as per the schematic building massing option A as well. The estimate was prepared from conceptual documents which were prepared by David Brody Bond Architects presentation package and scaled drawings including cost option sheet which was received by Axias on March 25th, 2022 and April 1st, 2022 and May 6th, 2022 respectively. Besides the presentation meeting, Axias also has 3 separate meetings with the design team to ensure that all the scope was picked up at this early stage in the design.

SOURCE OF COST DATA:

1. Estimator Judgement - many of the prices used are the result of first principles estimating - a determination of the actual time required to perform the activity using local labor rates, plus material costs that reflect the typically small quantities required, plus equipment rental costs as applicable. RS Means is used only as a general guide, and the WBS reference at each line item indicates the area of the price book used as the general guide.
2. Davis Bacon Wage Rates - New York State, Columbia County - rates inflated where necessary using Bureau of Labor Statistics Cost Indexes.
3. RS Means 2022 Building Construction Cost Data, 80th Annual Edition
4. Historic cost data for similar projects/structures and then adjusted to reflect current scope, size, location etc.

ESTIMATE ASSUMPTIONS:

Estimate assumes that the project will be carried out under a single contract. Assumed that the approximate start date is January 2024 with a 12 months duration. Estimate assumes it will be competitively bid to at least 3 contractor's. All quantities have been advised by the drawings issued by the Davis Brody Bond design team. Estimate assumes no hazardous material abatement is required. Estimate assumes normal working hours only. Estimate excludes any furniture cost especially to offices, exhibits etc.

MAJOR CHANGES FROM PREVIOUS ESTIMATE:

N/A

United States Department of the Interior
National Park Service
Class C Construction Cost Estimate

BASIS OF ESTIMATE

PROJECT INFORMATION

Project:	Visitor Center, Shop and Open Exhibit - Option A Cluster North
Park:	Martin Van Buren National Park
Park Alpha:	MAVA
PMIS Number:	214672/214673
Estimate Date:	5/12/2022

DESCRIPTION OF MARK-UP & ADD-ONS:

Location Factor:	10.21%	Albany, NY is the closet CCI which is 102.1
Remoteness Factor:	5.00%	Site is at least 25 miles from nearest CCI plus some small winding road access - this should be at least 5%
Wage Rate Factor:	3.92%	Wage rate analysis indicated that Davis Bacon rates were higher than RS Means rates adjusted for location. So using higher rates.
State & Local Taxes:	8.00%	Combined State & Local Taxes
Design Contingency:	20.00%	Feasibility/Concept Study stage documents. However, narrative, sketches and existing conditions photos provided by the design team helps reduce the lack of information. Suggest 20% allowance.
Standard. General Conditions:	15.00%	Relatively simple project, however we would recommend higher allowance to cover for site staging area, site protection due to historical nature of the building.
Government General Conditions:	5.00%	Middle of range percentage due to potential phasing and regular liaising with NPS staff.
Historic Preservation Factor:	0.00%	Assumed no historical preservation is necessary.
Contractor Overhead:	10.00%	Allowance - based upon research for area
Contractor Profit:	10.00%	Allowance - based upon research for area
Bonds and Permits:	3.00%	Allowance - based upon research for area
Contracting Method Adjustment:	5.00%	Axias advised this will be competitive bid with negotiating price with best technically-qualified contractor. Percentage included to cover limited competition due to few contractors in the area able to perform this type of project.
Annual Inflation Escalation Factor:	5.00%	Axias researches various published articles on data such as ENR, Turner, BLS etc. and determined a fair and reasonable factor for this location and nature of work.
Time Until Project Midpoint (Months)	26	Projected midpoint of construction as June 2024. Therefore approximately 26 months from date of this estimate.

OTHER COMMENTS:

N/A

United States Department of the Interior
National Park Service

Wage Rate Factor Analysis

Park: Martin Van Buren National Park
Project Name: Visitor Center, Shop and Open Exhibit - Option A Cluster North
Published Market Center: Albany, NY
Project County: Columbia County, NY
BLS Wage Rate City/Town: Albany-Schenectady-Troy, NY

Date Updated: 5/12/2022
Estimate Data Source: RS Means 2022 BCCD
Market Center Adjustment Factor: 108.50%
Estimator: Saifon Bips

Trade	2022 Estimate Direct Wage Rate	Market Adjusted Wage Rate for Albany, NY	Davis Bacon Wages w/Fringe Wage Class Columbia County, NY	Wage Difference	Approximate Wage Adjustment Factor	BLS Prevailing Wages Albany-Schenectady-Troy, NY	Fringe Allowance 40% Applied to BLS Wage	Wage Difference	Approximate Wage Adjustment Factor
Mix of some of the anticipated trades									
Common Building Laborers	$45.60	$49.48	$49.90	$0.42	0.86%	$24.80	$9.92	-$14.76	-29.83%
Bricklayers	$55.25	$59.95	$91.94	$31.99	53.37%	$34.38	$13.75	-$11.81	-19.70%
Carpenters	$56.30	$61.09	$60.45	-$0.64	-1.04%	$27.54	$11.02	-$22.53	-36.88%
Cement Finishes	$53.15	$57.67	$54.84	-$2.83	-4.90%	$36.03	$14.41	-$7.23	-12.54%
Electricians	$66.20	$71.83	$60.66	-$11.17	-15.55%	$32.07	$12.83	-$26.93	-37.50%
Equipment Operator; Medium Equipment	$60.40	$65.53	$79.28	$13.75	20.98%	$35.56	$14.22	-$15.76	-24.04%
Painters	$47.80	$51.86	$47.57	-$4.29	-8.28%	$22.23	$8.89	-$20.74	-39.99%
Plumbers	$69.80	$75.73	$65.08	-$10.65	-14.07%	$39.45	$15.78	-$20.50	-27.07%
Sheet Metal Workers	$61.85	$67.11	N/A			$28.63	$11.45	-$27.02	-40.27%
Truck Drivers, Heavy	$53.05	$57.56	N/A			$26.43	$10.57	-$20.56	-35.71%
Avg Wage & Adjustment Factor	$56.94	$61.78	$63.72	$2.07	3.92%	$30.71		-$18.78	-30.35%

Conclusion:

Based upon the above analysis of 3 sources for wage rates, Davis Bacon wage rates adjusted for Columbia County, NY area will form the basis of this estimate. RS Means wages are on average 3.92% lower with BLS being 30.35% lower.

United States Department of the Interior
National Park Service
Class C Construction Cost Estimate

PROJECT COST SUMMARY

Project: Visitor Center, Shop and Open Exhibit - Option A Cluster North
Park: Martin Van Buren National Park
Alpha: MAVA
PMIS: 214672/214673

Estimate By: Saifon Bips
Date: 05/12/22

Reviewed By: Thomas Joseph
Date: 05/12/22

Item No.	Description	Quantity	Unit	Cost/Unit	Total
1	MAVA Visitor Center, shop & open exhibit	6,769	SF	$364.13	$2,464,780
	(Admin bldg 4,389 sf, shop 600 sf, open exhibit/ out door programe space 1,780 sf, site work 50,000 sf)				
	Subtotal Direct Construction Costs				**$2,464,780**
	Value of Government Furnished Property (GFP) Included in Direct Cost (see footnote)*				**$0**
				Direct Cost Subtotal without GFP	**$2,464,780**
	Published Location Factor	10.21%			$251,654
	Remoteness Factor	5.00%			$123,239
	Federal Wage Rate Factor - on 60% of Direct Cost	3.92%			$57,986
	State & Local Taxes - on 40% of Direct Cost	8.00%			$78,873
	Design Contingency	20.00%			$492,956
	Total Direct Construction Costs				**$3,469,489**
	Standard General Conditions	15.00%			$520,423
	Government General Conditions	5.00%			$173,474
	Historic Preservation Factor	0.00%			$0
	Subtotal NET Construction Cost				**$4,163,386**
	Overhead	10.00%			$416,339
	Profit	10.00%			$416,339
	Estimated NET Construction Cost				**$4,996,064**
	Bonds & Permits	3.00%			$149,882
	Contracting Method Adjustment	5.00%			$249,803
	Inflation Escalation	26	Months	5.00%	$601,635
	Total Estimated NET Cost of Construction				**$5,997,384**

* GFP costs are only used when the Government pre-purchases items, or provides other materials out of Government inventory, to be installed by contractor. Adjustments and Markup on GFP only include Inflation Escalation; No other adjustment factors or O&P markup have been applied.

United States Department of the Interior
National Park Service
Class C Construction Cost Estimate

LINE ITEM COST SUMMARY

Project:	**Visitor Center, Shop and Open Exhibit - Option A Cluster North**	**Estimate By:**	Saifon Bips
Park:	**Martin Van Buren National Park**	**Date:**	05/12/22
Park Alpha:	**MAVA**	**Reviewed By:**	Thomas Joseph
PMIS Number:	**214672/214673**	**Date:**	05/12/22
Summary Item 1	**MAVA Visitor Center, shop & open exhibit**	**Total Cost:**	$2,464,780

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
A10	**FOUNDATIONS**					
A1010	Standard foundations (shallow footing)					
A1010	Wall footings excavation	28	CY	$ 30.00	$840	
A1010	Concrete in footings, incl. formwork & rebar	12	CY	$ 675.00	$8,100	
A1010	Concrete foundation wall	225	SF	$ 25.00	$5,625	
A1010	Perimeter foundation insulation	225	SF	$ 10.00	$2,250	
A1010	Backfilling around footings, using excavated soils	16	CY	$ 35.00	$560	
A1010	Haul surplus excavated material - stage on site for reuse	12	CY	$ 15.00	$180	
A1030	Slab On Grade:					
A1030	Slab on grade w/ reinf & waterproofing _ assume 6" tk	4989	SF	$ 8.50	$42,407	
A1030	Perimeter foundation drainage	150	LF	$ 25.00	$3,750	
	SUBTOTAL FOUNDATIONS	**4989**	**SF**	**$12.77**	**$63,712**	

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
A20	**BASEMENT CONSTRUCTION**					
	N/A				$0	
	SUBTOTAL BASEMENT CONSTRUCTION	**4989**	**SF**		**$0**	

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
B10	**SUPERSTRUCTURE**					
B1010	Steel trusses/ structrures structure - Admin	4389	SF	$ 22.00	$96,558	
B1010	Steel trusses/ structrures structure - Shop	600	SF	$ 22.00	$13,200	
B1010	Steel trusses/ structrures structure - Open exhibit	1780	SF	$ 22.00	$39,160	
B1010	Fire proofing - Admin & Shop	6769	SF	$ 1.50	$10,154	
	SUBTOTAL SUPERSTRUCTURE	**4989**	**SF**	**$31.88**	**$159,072**	

United States Department of the Interior
National Park Service
Class C Construction Cost Estimate

LINE ITEM COST SUMMARY

Project:	**Visitor Center, Shop and Open Exhibit - Option A Cluster North**	**Estimate By:**	Saifon Bips
Park:	**Martin Van Buren National Park**	**Date:**	05/12/22
Park Alpha:	**MAVA**	**Reviewed By:**	Thomas Joseph
PMIS Number:	**214672/214673**	**Date:**	05/12/22

Summary Item 1 **MAVA Visitor Center, shop & open exhibit** **Total Cost:** $2,464,780

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
B20	**EXTERIOR CLOSURE**					
B2010	Metal Panel (arch bldg.) at admin + shop	1475	SF	$ 42.50	$62,668	
B2010	Perforated Metal Panel (arch skin) admin + shop + open exhibit	2391	SF	$ 35.00	$83,690	
B2010	Metal framing sub base at admin + shop	4976	SF	$ 10.00	$49,759	
B2010	Moisture protection & insulation	4976	SF	$ 3.50	$17,416	
B2010	Alum. Window 3'-0" w x 6'-0" h	14	EA	$ 1,770.00	$24,780	
B2010	Alum. Window 6'-7" w x 6'-0" h	4	EA	$ 3,703.20	$14,813	
B2010	Alum. Glass Door_3'-0" w x 7'-0" h	2	EA	$ 3,520.00	$7,040	
B2010	Alum. Glass Doors_6'-0" w x 7'-0" h	1	PR	$ 7,040.00	$7,040	
B2010	Hardware for Alum. Glass Door	4	SET	$ 750.00	$3,000	
	SUBTOTAL EXTERIOR CLOSURE	**4989**	**EA**	**$ 54.16**	**$270,205**	

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
B30	**ROOFING**					
B3010	Metal Panel (arch bldg.) - admin + shop	5541	SF	$ 42.50	$235,488	
B3010	Perforated Metal Panel (arch skin) - admin + shop + open exhibit	4359	SF	$ 35.00	$152,569	
B3010	Metal framing sub base at admin + shop	5541	SF	$ 12.00	$66,491	
B3010	Moisture protection & insulation	5541	SF	$ 3.50	$19,393	
	SUBTOTAL ROOFING	**4989**	**SF**	**$ 95.00**	**$473,941**	

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
C10	**INTERIOR CONSTRUCTION**					
C1010	Interior gypsum wall bd - admin + shop assume 10' HT w/ insulation	3591	SF	$ 9.50	$34,119	
C1010	Pocket wall for acordian door	296	SF	$ 15.00	$4,433	
C1010	Interior glass wall w/ wood frame assume 10' HT	451	SF	$ 65.00	$29,347	
C1010	Interior office door _3'-0" x 7'-0" wd/ glass	13	EA	$ 1,150.00	$14,950	
C1010	Interior bathroom door_3'-0" x 7'-0"	4	EA	$ 1,000.00	$4,000	
C1010	Pivot conference room divider assume 8' HT	25	LF	$ 650.00	$16,250	
C1010	Bathroom mirror - 4'-0" x 5'-9"	1	EA	$ 1,495.00	$1,495	
C1010	Bathroom mirror - 4'-0" x 15'-0"	1	EA	$ 3,900.00	$3,900	
C1010	Allow for toilet accessories i.e. soap dispenser, hand dryer etc.	8	Ea.	$ 500.00	$4,000	
	SUBTOTAL INTERIOR CONSTRUCTION	**4989**	**SF**	**$ 22.55**	**$112,493**	

United States Department of the Interior
National Park Service
Class C Construction Cost Estimate

LINE ITEM COST SUMMARY

Project:	**Visitor Center, Shop and Open Exhibit - Option A Cluster North**	**Estimate By:**	Saifon Bips
Park:	**Martin Van Buren National Park**	**Date:**	05/12/22
Park Alpha:	**MAVA**	**Reviewed By:**	Thomas Joseph
PMIS Number:	**214672/214673**	**Date:**	05/12/22

Summary Item 1 **MAVA Visitor Center, shop & open exhibit** **Total Cost:** $2,464,780

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
C20	STAIRCASES					
	N/A			$ -	$0	
	SUBTOTAL STAIRCASES				**$0**	

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
C30	INTERIOR FINISHES					
C3010	Kitchen cabinet 2'-2" bottom	31	LF	$ 450.00	$13,853	
C3010	Buit in pantry closet_2'-6" w x 8' HT	6	LF	$ 680.00	$4,187	
C3010	Kitchen counter top_assume butcher block counter top 1-3/4" tk	66	SF	$ 65.00	$4,322	
C3010	Built in storage shelves_1'-7" full height	62	LF	$ 275.00	$16,931	
C3010	Floor tile assume non slip porcelain tile - admin + shop	377	SF	$ 22.00	$8,285	
C3010	VCT flooring - admin pantry	400	SF	$ 7.50	$3,001	
C3010	Grind & polished concrete - admin + shop	3414	SF	$ 2.50	$8,535	
C3010	Carpet tile - admin	584	SF	$ 5.00	$2,918	
C3010	Bathroom countertop - admin 2'-0" x 5'-9"	12	SF	$ 75.00	$885	
C3010	Bathroom countertop - shop 2'-0" x 15'-0"	31	SF	$ 75.00	$2,309	
C3010	Bathroom stall - shop	8	EA	$ 300.00	$2,400	
C3010	Bathroom accessories - admin	1	SET	$ 300.00	$300	
C3010	Bathroom accessories - shop	8	SET	$ 300.00	$2,400	
C3010	Bathroom mirror - 4'-0" x 5'-9"	1	EA	$ 750.00	$750	
C3010	Bathroom mirror - 4'-0" x 15'-0"	1	EA	$ 1,500.00	$1,500	
C3010	Interior wall painting	1198	SF	$ 1.25	$1,497	
C3010	Interior door & frame painting	17	EA	$ 150.00	$2,550	
	SUBTOTAL INTERIOR FINISHES	**4989**	**SF**	**$ 15.36**	**$76,622**	

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
D10	CONVEYING SYSTEMS					
	N/A			$ -	$0	
	SUBTOTAL CONVEYING SYSTEMS				**$0**	

United States Department of the Interior
National Park Service
Class C Construction Cost Estimate

LINE ITEM COST SUMMARY

Project:	**Visitor Center, Shop and Open Exhibit - Option A Cluster North**	**Estimate By:**	Saifon Bips
Park:	**Martin Van Buren National Park**	**Date:**	05/12/22
Park Alpha:	**MAVA**	**Reviewed By:**	Thomas Joseph
PMIS Number:	**214672/214673**	**Date:**	05/12/22

Summary Item 1 **MAVA Visitor Center, shop & open exhibit** **Total Cost:** $2,464,780

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
D20	**PLUMBING**					
D2010	Plumbing fixtures (admin + shop) :					
D2010	Water closets	6	EA	$ 1,350.00	$8,100	
D2010	Lavatories	6	EA	$ 1,250.00	$7,500	
D2010	Pantry sinks	1	EA	$ 1,175.00	$1,175	
D2010	Floor drain - allow	2	EA	$ 550.00	$1,100	
D2010	Piping (admin + shop) :					
D2010	Sanitary/vent piping - allow	375	LF	$ 72.50	$27,188	
D2010	Domestic water piping - allow	650	LF	$ 64.00	$41,600	
D2010	Roof drain & penetration - allow	5	EA	$ 550.00	$2,750	
D2010	Roof vent & penetration - allow	20	EA	$ 550.00	$11,000	
D2010	CW/HW hose bibb - allow	2	EA	$ 250.00	$500	
	SUBTOTAL PLUMBING	**4989**	**SF**	**$ 20.23**	**$100,913**	

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
D30	**HVAC**					
D3010	Option 3 - traditional includes followings - admin + shop allow	4989	SF	$ 45.00	$224,505	
	• Heating and cooling via water souce heat pumps					
	• Dedicate outside air system (DOAS)					
	• Full conditioning w/ natural ventilation (includes sensors at windows RP@RT disable AC)					
	SUBTOTAL HVAC	**4989**	**SF**	**$ 45.00**	**$224,505**	

United States Department of the Interior
National Park Service
Class C Construction Cost Estimate

LINE ITEM COST SUMMARY

Project:	**Visitor Center, Shop and Open Exhibit - Option A Cluster North**	**Estimate By:**	Saifon Bips
Park:	**Martin Van Buren National Park**	**Date:**	05/12/22
Park Alpha:	**MAVA**	**Reviewed By:**	Thomas Joseph
PMIS Number:	**214672/214673**	**Date:**	05/12/22

Summary Item 1 **MAVA Visitor Center, shop & open exhibit** **Total Cost:** $2,464,780

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
D40	**FIRE PROTECTION**					
D4010	Install new sprinkler system	4989	SF	$ 5.50	$27,440	
	SUBTOTAL FIRE PROTECTION	**4989**	**SF**	**$ 5.50**	**$27,440**	

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
D50	**ELECTRICAL**					
D5010	Allow for new electrical system incl. power distribution lighting, tele/data system	4989	SF	$ 40.00	$199,560	
	SUBTOTAL ELECTRICAL	**4989**	**SF**	**$ 40.00**	**$199,560**	

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
E10	**EQUIPMENT**					
	N/A				$0	
	SUBTOTAL EQUIPMENT	**4989**	**SF**	**$ -**	**$0**	

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
E20	**FURNISHINGS**					
	N/A				$0	
	SUBTOTAL FURNISHINGS	**4989**	**SF**		**$0**	

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
F10	**SPECIAL CONSTRUCTION**					
F1010	Waysides - XS (reuse existing)					
F1010	Magical Glass - SM/ Magic Glass (About this Building, African American Story, Distant View)	3	EA	10,000.00	$30,000	
F1010	About the Orchard - SM	1	EA	30,000.00	$30,000	
F1010	Native American Story - M	1	EA	30,000.00	$30,000	
F1010	Interior exhibit galler (nursery) - XL	1	EA	200,000.00	$200,000	
	SUBTOTAL SPECIAL CONSTRUCTION	**4989**	**SF**		**$290,000**	

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
F20	**SELECTIVE BUILDING DEMOLITION**					
				$ -		
F2010	Demolition of existing visitor center & hauling debris off site	5322	SF	$ 12.00	$63,864	
	SUBTOTAL SELECTIVE BUILDING DEMOLITION	**5322**	**SF**	**$ 12.00**	**$63,864**	

United States Department of the Interior
National Park Service
Class C Construction Cost Estimate

LINE ITEM COST SUMMARY

Project:	**Visitor Center, Shop and Open Exhibit - Option A Cluster North**	**Estimate By:**	Saifon Bips
Park:	**Martin Van Buren National Park**	**Date:**	05/12/22
Park Alpha:	**MAVA**	**Reviewed By:**	Thomas Joseph
PMIS Number:	**214672/214673**	**Date:**	05/12/22

Summary Item 1 **MAVA Visitor Center, shop & open exhibit** **Total Cost:** $2,464,780

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
G10	**SITE PREPARATION**					
G1010	Site Clearing ;					
G1010	Remove exisitng underground utilities	1	LS	$ 6,500.00	$6,500	
G1010	Grading & site preparation - admin + shop	50000	SF	$ 0.50	$25,000	
	SUBTOTAL SITE PREPARATION	**50000**	**SF**	**$ 0.63**	**$31,500**	

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
G20	**SITE IMPROVEMENTS**					
G2050	New pedestrian paths - option A concrete paver, 1400 LF	5600	SF	15.50	$86,800	
G2050	New hedgerow plants	120	EA	30.00	$3,600	
G2050	Native plant garden	3,000	SF	5.00	$15,000	
G2050	Remove trees	20	EA	630.00	$12,600	
G2050	New trees	20	EA	250.00	$5,000	
G2050	New lawn	24000	SF	1.50	$36,000	
G2050	Renovate ex lawn	100000	SF	0.15	$15,000	
G2050	Misc. Site furnishing	1	LS	10,000.00	10,000.00	
	SUBTOTAL SITE IMPROVEMENTS	**50000**	**SF**	**$ 3.68**	**$184,000**	

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
G30	**SITE CIVIL/MECHANICAL UTILITIES**					
G3010	Water line (option - replace systems - multiple sites) includes followings ;					
G3010	4" PVC - allow	115	LF	$ 75.00	$8,625	
G3010	Water well - allow w/ excavation	1	EA	$ 10,000.00	$10,000	
G3010	Pipe excavation	51	CY	$ 30.00	$1,533	
G3010	DGA Back fill beneath pipes, 6" tk	4	CY	$ 55.00	$234	
G3010	Pipe back fill with excavated soil	52	CY	$ 30.00	$1,554	
G3020	Sanitary line (option - reuse existing - cluster buildings) includes followings ;					
G3020	4" PVC - allow	65	LF	$ 100.00	$6,500	
G3020	300 gal. septic tank	1	EA	$ 850.00	$850	
G3020	1" PVC (Leech field)	180	LF	$ 45.00	$8,100	
G3020	Excacation for septic tank	3	CY	$ 30.00	$80	
G3020	Pipe excavation	109	CY	$ 30.00	$3,267	
G3020	DGA Back fill beneath pipes, 6" tk	9	CY	$ 55.00	$499	
G3020	Pipe back fill with excavated soil	110	CY	$ 30.00	$3,287	
G3020	Septic tank back fill with excavated soil	3	CY	$ 30.00	$100	
G3030	DGA back fill beneath septic tank & lift station, 6" tk	1.00	CY	$ 30.00	$30	
G3030	Storm water management including following;					
G3030	Storm line	150	LF	$ 110.00	$16,500	
G3030	48" HDPE for detention basin	480	LF	$ 150.00	$72,000	
G3030	Allow rain water harvesting tank	1	LS	$ 12,500.00	$12,500	
G3030	Excavation for detention basin	241	CY	$ 30.00	$7,222	
G3030	DGA fill beneath pipes, 12" tk	30	CY	$ 55.00	$1,655	
G3030	Back fill with excavated soil	193	CY	$ 35.00	$6,762	
	SUBTOTAL SITE MECHANICAL UTILITIES	**50000**	**SF**	**$ 3.23**	**$161,299**	

United States Department of the Interior
National Park Service
Class C Construction Cost Estimate

LINE ITEM COST SUMMARY

Project:	**Visitor Center, Shop and Open Exhibit - Option A Cluster North**	**Estimate By:**	Saifon Bips
Park:	**Martin Van Buren National Park**	**Date:**	05/12/22
Park Alpha:	**MAVA**	**Reviewed By:**	Thomas Joseph
PMIS Number:	**214672/214673**	**Date:**	05/12/22

Summary Item 1 **MAVA Visitor Center, shop & open exhibit** **Total Cost:** $2,464,780

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
G40	**SITE ELECTRICAL UTILITIES**					
G2010	Option - Connect via overheard : overhead power & tele communication line (reuse/ upgrade existing)	195	LF	$ 43.75	$8,531	
G2010	Utility pole - allow	1	EA	$ 2,125.00	$2,125	
G2010	Site Lighting - allow	1	LS	$ 15,000.00	$15,000	
	SUBTOTAL SITE ELECTRICAL UTILITIES	**50000**	**SF**	**$ 0.51**	**$25,656**	

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
TOTAL COST - MAVA Visitor Center, shop & open exhibit		**6769**	**SF**	**$ 364.13**	**$2,464,780**	

United States Department of the Interior
National Park Service
Class C Construction Cost Estimate

BASIS OF ESTIMATE

PROJECT INFORMATION

Project:	Maintenance Building - Option A Cluster North
Park:	Martin Van Buren National Park
Park Alpha:	MAVA
PMIS Number:	214672/214673
Estimate Date:	5/12/2022
Prepared By:	Saifon Bips
Company:	Axias NY LLC
Address:	197 Route 18 South, Suite 200
City, State Zip:	East Brunswick, NJ -08816
Phone:	914-837-1062

BACKGROUND SUPPORTING MATERIAL (Scope of Work):

The scope of work includes installation of structural steel & steel trusses including slab on grade which supports metal framing all around for maintenance building. An exterior enclosure of these buildings will be covered with metal panel at exterior wall (arch building) and perforated metal panel (arch skin) Roofing of maintenance building is assumed to be covered with corrugated metal with metal frame sub base as per the schematic building massing option A as well. The corrugated metal roof is to be used for covered garage without moisture protection and insulation. The estimate was prepared from conceptual documents which were prepared by David Brody Bond Architects presentation package and scaled drawings including cost option sheet which was received by Axias on March 25th, 2022 and April 1st, 2022 and May 6th, 2022 respectively. Besides the presentation meeting, Axias also has 2 separate meetings with the design team to ensure that all the scope was picked up at this early stage in the design.

SOURCE OF COST DATA:

1. Estimator Judgement - many of the prices used are the result of first principles estimating - a determination of the actual time required to perform the activity using local labor rates, plus material costs that reflect the typically small quantities required, plus equipment rental costs as applicable. RS Means is used only as a general guide, and the WBS reference at each line item indicates the area of the price book used as the general guide.
2. Davis Bacon Wage Rates - New York State, Columbia County - rates inflated where necessary using Bureau of Labor Statistics Cost Indexes.
3. RS Means 2022 Building Construction Cost Data, 80th Annual Edition
4. Historic cost data for similar projects/structures and then adjusted to reflect current scope, size, location etc.

ESTIMATE ASSUMPTIONS:

Estimate assumes that the project will be carried out under a single contract. Assumed that the approximate start date is January 2024 with a 12 months duration. Estimate assumes it will be competitively bid to at least 3 contractor's. All quantities have been advised by the drawings issued by the Davis Brody Bond design team. Estimate assumes no hazardous material abatement is required. Estimate assumes normal working hours only. Estimate excludes any furniture cost especially to offices, exhibits etc.

MAJOR CHANGES FROM PREVIOUS ESTIMATE:

N/A

United States Department of the Interior
National Park Service
Class C Construction Cost Estimate

BASIS OF ESTIMATE

PROJECT INFORMATION

Project:	Maintenance Building - Option A Cluster North
Park:	Martin Van Buren National Park
Park Alpha:	MAVA
PMIS Number:	214672/214673
Estimate Date:	5/12/2022

DESCRIPTION OF MARK-UP & ADD-ONS:

Location Factor:	10.21%	Albany, NY is the closet CCI which is 102.1
Remoteness Factor:	5.00%	Site is at least 25 miles from nearest CCI plus some small winding road access - this should be at least 5%
Wage Rate Factor:	3.92%	Wage rate analysis indicated that Davis Bacon rates were lower than RS Means rates adjusted for location. So kept higher rates.
State & Local Taxes:	8.00%	Combined State & Local Taxes
Design Contingency:	20.00%	Feasibility/Concept Study stage documents. However, narrative, sketches and existing conditions photos provided by the design team helps reduce the lack of information. Suggest 20% allowance.
Standard. General Conditions:	15.00%	Relatively simple project, however we would recommend higher allowance to cover for site staging area, site protection due to historical nature of the building.
Government General Conditions:	5.00%	Middle of range percentage due to potential phasing and regular liaising with NPS staff.
Historic Preservation Factor:	0.00%	Assumed no historical preservation is necessary.
Contractor Overhead:	10.00%	Allowance - based upon research for area
Contractor Profit:	10.00%	Allowance - based upon research for area
Bonds and Permits:	3.00%	Allowance - based upon research for area
Contracting Method Adjustment:	5.00%	Axias advised this will be competitive bid with negotiating price with best technically-qualified contractor. Percentage included to cover limited competition due to few contractors in the area able to perform this type of project.
Annual Inflation Escalation Factor:	5.00%	Axias researches various published articles on data such as ENR, Turner, BLS etc. and determined a fair and reasonable factor for this location and nature of work.
Time Until Project Midpoint (Months)	26	Projected midpoint of construction as June 2024. Therefore approximately 26 months from date of this estimate.

OTHER COMMENTS:

N/A

United States Department of the Interior
National Park Service

Wage Rate Factor Analysis

Park: Martin Van Buren National Park
Project Name: Maintenance Building - Option A Cluster North
Published Market Center: Albany, NY
Project County: Columbia County, NY
BLS Wage Rate City/Town: Albany-Schenectady-Troy, NY

Date Updated: 5/12/2022
Estimate Data Source: RS Means 2022 BCCD
Market Center Adjustment Factor: 108.50%
Estimator: Saifon Bips

Trade	2022 Estimate Direct Wage Rate	Market Adjusted Wage Rate for Albany, NY	Davis Bacon Wages w/Fringe Wage Class Columbia County, NY	Wage Difference	Approximate Wage Adjustment Factor	BLS Prevailing Wages Albany-Schenectady-Troy, NY	Fringe Allowance 40% Applied to BLS Wage	Wage Difference	Approximate Wage Adjustment Factor
Mix of some of the anticipated trades									
Common Building Laborers	$45.60	$49.48	$49.90	$0.42	0.86%	$24.80	$9.92	-$14.76	-29.83%
Bricklayers	$55.25	$59.95	$91.94	$31.99	53.37%	$34.38	$13.75	-$11.81	-19.70%
Carpenters	$56.30	$61.09	$60.45	-$0.64	-1.04%	$27.54	$11.02	-$22.53	-36.88%
Cement Finishes	$53.15	$57.67	$54.84	-$2.83	-4.90%	$36.03	$14.41	-$7.23	-12.54%
Electricians	$66.20	$71.83	$60.66	-$11.17	-15.55%	$32.07	$12.83	-$26.93	-37.50%
Equipment Operator; Medium Equipment	$60.40	$65.53	$79.28	$13.75	20.98%	$35.56	$14.22	-$15.76	-24.04%
Painters	$47.80	$51.86	$47.57	-$4.29	-8.28%	$22.23	$8.89	-$20.74	-39.99%
Plumbers	$69.80	$75.73	$65.08	-$10.65	-14.07%	$39.45	$15.78	-$20.50	-27.07%
Sheet Metal Workers	$61.85	$67.11	N/A			$28.63	$11.45	-$27.02	-40.27%
Truck Drivers, Heavy	$53.05	$57.56	N/A			$26.43	$10.57	-$20.56	-35.71%
Avg Wage & Adjustment Factor	$56.94	$61.78	$63.72	$2.07	3.92%	$30.71		-$18.78	-30.35%

Conclusion:

Based upon the above analysis of 3 sources for wage rates, Davis Bacon wage rates adjusted for Columbia County, NY area will form the basis of this estimate. RS Means wages are on average 3.92% lower with BLS being 30.35% lower.

United States Department of the Interior
National Park Service
Class C Construction Cost Estimate

PROJECT COST SUMMARY

Project: Maintenance Building - Option A Cluster North
Park: Martin Van Buren National Park
Alpha: MAVA
PMIS: 214672/214673

Estimate By: Saifon Bips
Date: 05/12/22

Reviewed By: Thomas Joseph
Date: 05/12/22

Item No.	Description	Quantity	Unit	Cost/Unit	Total
1	MAVA Visitor Center - Maintenance	5,284	SF	$192.96	$1,019,613
	(Maintenance building 2,789 sf, covered storage 2,495 sf, outdoor yard 7317 sf, concrete sidewalk 2040 sf (510 lf)				
	Subtotal Direct Construction Costs				**$1,019,613**
	Value of Government Furnished Property (GFP) Included in Direct Cost (see footnote)*				**$0**
				Direct Cost Subtotal without GFP	**$1,019,613**
	Published Location Factor	10.21%			$104,103
	Remoteness Factor	5.00%			$50,981
	Federal Wage Rate Factor - on 60% of Direct Cost	3.92%			$23,987
	State & Local Taxes - on 40% of Direct Cost	8.00%			$32,628
	Design Contingency	20.00%			$203,923
	Total Direct Construction Costs				**$1,435,234**
	Standard General Conditions	15.00%			$215,285
	Government General Conditions	5.00%			$71,762
	Historic Preservation Factor	0.00%			$0
	Subtotal NET Construction Cost				**$1,722,281**
	Overhead	10.00%			$172,228
	Profit	10.00%			$172,228
	Estimated NET Construction Cost				**$2,066,737**
	Bonds & Permits	3.00%			$62,002
	Contracting Method Adjustment	5.00%			$103,337
	Inflation Escalation	26	Months	5.00%	$248,880
	Total Estimated NET Cost of Construction				**$2,480,956**

* GFP costs are only used when the Government pre-purchases items, or provides other materials out of Government inventory, to be installed by contractor. Adjustments and Markup on GFP only include Inflation Escalation; No other adjustment factors or O&P markup have been applied.

United States Department of the Interior
National Park Service
Class C Construction Cost Estimate

LINE ITEM COST SUMMARY

Project:	**Maintenance Building - Option A Cluster North**	**Estimate By:**	Saifon Bips
Park:	**Martin Van Buren National Park**	**Date:**	05/12/22
Park Alpha:	**MAVA**	**Reviewed By:**	Thomas Joseph
PMIS Number:	**214672/214673**	**Date:**	05/12/22
Summary Item 1	**MAVA Visitor Center - Maintenance**	**Total Cost:**	$1,019,613

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
A10	**FOUNDATIONS**					
A1010	Standard foundations (shallow footing)					
A1010						
A1010	Wall footings excavation	26	CY	$ 30.00	$780	
A1010	Concrete in footings, incl. formwork & rebar	11	CY	$ 675.00	$7,425	
A1010	Concrete foundation wall	209	SF	$ 25.00	$5,225	
A1010	Perimeter foundation insulation	209	SF	$ 10.00	$2,090	
A1010	Backfilling around footings, using excavated soils	15	CY	$ 35.00	$525	
A1010	Haul surplus excavated material - stage on site for reuse	11	CY	$ 15.00	$165	
A1030	Slab On Grade:					
A1010	Slab on grade w/ reinf & waterproofing _ assume 6" tk	5284	SF	$ 8.50	$44,914	
A1030	Perimeter foundation drainage	139	LF	$ 15.00	$2,084	
	SUBTOTAL FOUNDATIONS	**5284**	**SF**	**$11.96**	**$63,208**	

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
A20	**BASEMENT CONSTRUCTION**					
	N/A				$0	
	SUBTOTAL BASEMENT CONSTRUCTION	**5284**	**SF**		**$0**	

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
B10	**SUPERSTRUCTURE**					
B1010	Structural Steel including roof trusses, misc. connections (maint +. + covered storage)	5284	SF	$ 22.00	$116,248	
B1010	Fire proofing	5284	SF	$ 1.50	$7,926	
B1010	Allow supports/pockets/grouting on the bearing wall	35	EA	$ 850.00	$29,750	
	SUBTOTAL SUPESTRUCTURE	**5284**	**SF**	**$29.13**	**$153,924**	

United States Department of the Interior
National Park Service
Class C Construction Cost Estimate

LINE ITEM COST SUMMARY

Project:	**Maintenance Building - Option A Cluster North**	**Estimate By:**	Saifon Bips
Park:	**Martin Van Buren National Park**	**Date:**	05/12/22
Park Alpha:	**MAVA**	**Reviewed By:**	Thomas Joseph
PMIS Number:	**214672/214673**	**Date:**	05/12/22

Summary Item 1 **MAVA Visitor Center - Maintenance** **Total Cost:** $1,019,613

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
B20	**EXTERIOR CLOSURE**					
B2010	Metal panel (arch bldg.) - maintenance	2625	SF	$ 42.50	$111,566	
B2010	Heavy gauge metal framing	2625	SF	$ 10.00	$26,251	
B2010	Moisture protection & insulation	2625	SF	$ 3.50	$9,188	
B2010	Perforated metal panel (arch skin)	931	SF	$ 35.00	$32,581	
B2010	Alum. Windows 3'-0" w x 6'-0" h	4	EA	$ 1,770.00	$7,080	
B2010	Metal galv door 3'-0" w x 7'-0" h	2	EA	$ 3,950.00	$7,900	
B2010	Metal galv door 6'-0" w x 7'-0" h	1	PR	$ 7,500.00	$7,500	
B2010	Door hardware	3	SET	$ 750.00	$2,250	
	SUBTOTAL EXTERIOR CLOSURE	**5284**	**SF**	**$ 38.67**	**$204,316**	

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
B30	**ROOFING**					
B3010	Corrugated steel roof - maintenance building	2789	SF	$ 10.00	$27,890	
B3010	Heavy gauge metal framing	2789	SF	$ 12.00	$33,468	
B3010	Moisture protection & insulation	2789	SF	$ 3.50	$9,762	
B3010	Corrugated steel roof - covered storage	2495	SF	$ 10.00	$24,950	
B3010	Heavy gauge metal framing	2495	SF	$ 12.00	$29,940	
	SUBTOTAL ROOFING	**5284**	**SF**	**$ 23.85**	**$126,010**	

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
C10	**INTERIOR CONSTRUCTION**					
C1010	Interior gypsum wall bd - maintenance assume 10' HT w/ insulation	2734	SF	$ 9.50	$25,969	
C1010	Interior office door _3'-0" w x 7'-0" h wd/ glass	1	EA	$ 1,150.00	$1,150	
C1010	Interior bathroom door_3'-0" w x 7'-0" h	2	EA	$ 1,000.00	$2,000	
C1010	Interior metal door_3'-0" w x 7'-0" h	1	EA	$ 1,350.00	$1,350	
C1010	Garage door -assume automatic 9'-0" w x 12'-0" h	3	EA	$ 6,500.00	$19,500	
	SUBTOTAL INTERIOR CONSTRUCTION	**2734**	**SF**	**$ 18.28**	**$49,969**	

United States Department of the Interior
National Park Service
Class C Construction Cost Estimate

LINE ITEM COST SUMMARY

Project:	**Maintenance Building - Option A Cluster North**	**Estimate By:**	Saifon Bips
Park:	**Martin Van Buren National Park**	**Date:**	05/12/22
Park Alpha:	**MAVA**	**Reviewed By:**	Thomas Joseph
PMIS Number:	**214672/214673**	**Date:**	05/12/22
Summary Item 1	**MAVA Visitor Center - Maintenance**	**Total Cost:**	$1,019,613

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
C20	**STAIRCASES**					
	N/A			$ -	$0	
	SUBTOTAL STAIRCASES				**$0**	

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
C30	**INTERIOR FINISHES**					
C3010	Install new Ceiling	2789	SF	$ 7.50	$20,918	
C3010	Kitchen cabinet 1'-0" w_top	4	LF	$ 360.00	$1,330	
C3010	Kitchen cabinet 2'-2" bottom	4	LF	$ 450.00	$1,662	
C3010	Kitchen counter top assume butcher block counter top 1-3/4" tk	8	SF	$ 65.00	$519	
C3010	Built in storage shelves _1'-7" full height	38	LF	$ 275.00	$10,413	
C3010	Built in storage shelves w/ doors _1'-7" full height	18	LF	$ 275.00	$5,079	
C3010	Floor tile assume non slip porcelain tile	120	SF	$ 22.00	$2,641	
C3010	Wall tile - 4'-0"	148	SF	$ 20.00	$2,955	
C3010	Sealed concrete	2789	SF	$ 2.50	$6,973	
C3010	Carpet tile	220	SF	$ 5.00	$1,101	
C3010	Bathroom accessories	1	SET	$ 500.00	$500	
C3010	Bathroom mirror - 4'-0" x 5'-9"	1	EA	$ 1,495.00	$1,495	
C3010	Interior wall painting	5049	SF	$ 1.25	$6,311	
C3010	Interior door & frame painting	4	EA	$ 250.00	$1,000	
	SUBTOTAL INTERIOR FINISHES	**2789**	**SF**	**$ 22.55**	**$62,897**	

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
D10	**CONVEYING SYSTEMS**					
	N/A			$ -	$0	
	SUBTOTAL CONVEYING SYSTEMS				**$0**	

United States Department of the Interior
National Park Service
Class C Construction Cost Estimate

LINE ITEM COST SUMMARY

Project:	**Maintenance Building - Option A Cluster North**	**Estimate By:**	Saifon Bips
Park:	**Martin Van Buren National Park**	**Date:**	05/12/22
Park Alpha:	**MAVA**	**Reviewed By:**	Thomas Joseph
PMIS Number:	**214672/214673**	**Date:**	05/12/22
Summary Item 1	**MAVA Visitor Center - Maintenance**	**Total Cost:**	$1,019,613

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
D20	**PLUMBING**					
D2010	Plumbing fixtures (maintenance) :					
D2010	Water closet	1	EA	$ 1,350.00	$1,350	
D2010	Lavatory	1	EA	$ 1,250.00	$1,250	
D2010	Pantry sink	1	EA	$ 1,500.00	$1,500	
D2010	Floor drain - allow	1	EA	$ 550.00	$550	
D2010	Piping (maintenance) :					
D2010	Sanitary/vent piping - allow	100	LF	$ 72.50	$7,250	
D2010	Domestic water piping - allow	150	LF	$ 64.00	$9,600	
D2010	Roof drain & penetration - allow	5	EA	$ 550.00	$2,750	
D2010	Roof vent & penetration - allow	20	EA	$ 550.00	$11,000	
D2010	CW/HW hose bibb - allow	2	EA	$ 250.00	$500	
	SUBTOTAL PLUMBING	**2789**	**SF**	**$ 12.82**	**$35,750**	

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
D30	**HVAC**					
D3010	Option 3 - traditional includes followings - admin + shop allow	2789	SF	$ 45.00	$125,505	
	• Heating and cooling via water source heat pumps					
	• Dedicate outside air system (DOAS)					
	• Full conditioning w/ natural ventilation (includes sensors at windows RP@RT					
	SUBTOTAL HVAC	**2789**	**SF**	**$ 45.00**	**$125,505**	

United States Department of the Interior
National Park Service
Class C Construction Cost Estimate

LINE ITEM COST SUMMARY

Project:	**Maintenance Building - Option A Cluster North**	**Estimate By:**	Saifon Bips
Park:	**Martin Van Buren National Park**	**Date:**	05/12/22
Park Alpha:	**MAVA**	**Reviewed By:**	Thomas Joseph
PMIS Number:	**214672/214673**	**Date:**	05/12/22

Summary Item 1 **MAVA Visitor Center - Maintenance** **Total Cost:** $1,019,613

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
D40	**FIRE PROTECTION**					
D4010	Install new sprinkler system	2789	SF	$ 5.50	$15,340	
	SUBTOTAL FIRE PROTECTION	**2789**	**SF**	**$ 5.50**	**$15,340**	

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
D50	**ELECTRICAL**					
D5010	Allow for new electrical system incl. power distribution lighting, tele/data system (maintenance bldg. + covered storage)	2789	SF	$ 40.00	$111,560	
	SUBTOTAL ELECTRICAL	**2789**	**SF**	**$ 40.00**	**$111,560**	

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
E10	**EQUIPMENT**					
	N/A				$0	
	SUBTOTAL EQUIPMENT	**0**	**SF**		**$0**	

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
E20	**FURNISHINGS**					
	N/A				$0	
	SUBTOTAL FURNISHINGS	**0**	**SF**		**$0**	

United States Department of the Interior
National Park Service
Class C Construction Cost Estimate

LINE ITEM COST SUMMARY

Project:	**Maintenance Building - Option A Cluster North**	**Estimate By:**	Saifon Bips
Park:	**Martin Van Buren National Park**	**Date:**	05/12/22
Park Alpha:	**MAVA**	**Reviewed By:**	Thomas Joseph
PMIS Number:	**214672/214673**	**Date:**	05/12/22
Summary Item 1	**MAVA Visitor Center - Maintenance**	**Total Cost:**	$1,019,613

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
F10	SPECIAL CONSTRUCTION					
	N/A			$ -	$0	
	SUBTOTAL SPECIAL CONSTRUCTION	**0**	**SF**		**$0**	

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
F20	SELECTIVE BUILDING DEMOLITION					
					$0	
F2010	Demolition of existing maintenance building & hauling debris off site	4155	SF	$ 12.00	$49,860	
					$0	
	SUBTOTAL SELECTIVE BUILDING DEMOLITION	**4155**	**SF**		**$49,860**	

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
G10	SITE PREPARATION					
G1010	Site Clearing ;					
G1010	Remove existing under ground utilities	1	LS	$ 6,526.00	$6,526	
G1010	Remove existing asphalt - existing	0	SF	$ -	$0	
G1010	Grading & site preparation - admin + shop	29500	SF	$ 0.50	$14,750	
	SUBTOTAL SITE PREPARATION	**29500**	**SF**	**$ 0.72**	**$21,276**	

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
G20	SITE IMPROVEMENTS					
G2050	New asphalt paving_6" tk including sub base - existing	0			$0	
G2050	Parking lot striping - existing	0			$0	
G2050	New pedestrian paths - existing	0			$0	
G2050	Path lighting - existing	0			$0	
G2050	Remove trees - existing	0			$0	
G2050	New trees - existing	0			$0	
G2050	New lawn - existing	0			$0	
G2050	Renovate ex lawn - existing	0			$0	
G2050	New site sign - existing	0			$0	
G2050	Stone wall (arch feature wall) - existing	0			$0	
G2050	Misc. Site furnishing - existing	0			$0	
	SUBTOTAL SITE IMPROVEMENTS	**29500**	**SF**	**$ -**	**$0**	

United States Department of the Interior
National Park Service
Class C Construction Cost Estimate

LINE ITEM COST SUMMARY

Project:	**Maintenance Building - Option A Cluster North**	**Estimate By:**	Saifon Bips
Park:	**Martin Van Buren National Park**	**Date:**	05/12/22
Park Alpha:	**MAVA**	**Reviewed By:**	Thomas Joseph
PMIS Number:	**214672/214673**	**Date:**	05/12/22
Summary Item 1	**MAVA Visitor Center - Maintenance**	**Total Cost:**	$1,019,613

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
G30	SITE CIVIL/MECHANICAL UTILITIES					
G3010	Water line (option - replace systems - multiple sites)					
G3010	See visitor center					
G3020	Sanitary line (option - reuse existing - cluster buildings)					
G3020	See visitor center					
G3030	Storm water management including following:					
G3030	See visitor center					
	SUBTOTAL SITE CIVIL/MECHANICAL UTILITES	29500	SF	$ -	$0	

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
G 40	SITE ELECTRICAL UTILITIES					
G2010	Option - Connect via overheard : overhead power & tele communication line (reuse/ upgrade existing) - see visitor center					
G2010	Utility pole - allow	1	EA	$ 2,125.00	$2,125	
G2010	Site Lighting - allow	1	LS	$ 10,000.00	$10,000	
	SUBTOTAL SITE ELECTRICAL UTILITIES	29500	SF	$ -	$0	

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
TOTAL COST - MAVA Visitor Center - Maintenance		5284	SF	$ 192.96	$1,019,613	

United States Department of the Interior
National Park Service
Class C Construction Cost Estimate

BASIS OF ESTIMATE

PROJECT INFORMATION

Project:	Visitor Center, Shop and Open Exhibit - Option B Cluster Orchard
Park:	Martin Van Buren National Park
Park Alpha:	MAVA
PMIS Number:	214672/214673
Estimate Date:	5/12/2022
Prepared By:	Saifon Bips
Company:	Axias NY LLC
Address:	197 Route 18 South, Suite 200
City, State Zip:	East Brunswick, NJ -08816
Phone:	914-837-1062

BACKGROUND SUPPORTING MATERIAL (Scope of Work):

The scope of work includes installation of engineered wood trusses and columns including slab on grade which supports wood framing all around for office/ admin building and shop. An exterior enclosure of these buildings is to be covered with wood slat (arch skin) and wood panel (arch building) as per the schematic building massing option B. Roofing will be covered with wood panel (arch building) and wood slate (arch skin) as per the schematic building massing option B as well. The estimate was prepared from conceptual documents which were prepared by David Brody Bond Architects presentation package and scaled drawings including cost option sheet which was received by Axias on March 25th, 2022 and April 1st, 2022 and May 6th, 2022 respectively. Besides the presentation meeting, Axias also has 3 separate meetings with the design team to ensure that all the scope was picked up at this early stage in the design.

SOURCE OF COST DATA:

1. Estimator Judgement - many of the prices used are the result of first principles estimating - a determination of the actual time required to perform the activity using local labor rates, plus material costs that reflect the typically small quantities required, plus equipment rental costs as applicable. RS Means is used only as a general guide, and the WBS reference at each line item indicates the area of the price book used as the general guide.
2. Davis Bacon Wage Rates - New York State, Columbia County - rates inflated where necessary using Bureau of Labor Statistics Cost Indexes.
3. RS Means 2022 Building Construction Cost Data, 80th Annual Edition

ESTIMATE ASSUMPTIONS:

Estimate assumes that the project will be carried out under a single contract. Assumed that the approximate start date is January 2024 with a 12 months duration. Estimate assumes it will be competitively bid to at least 3 contractor's. All quantities have been advised by the drawings issued by the Davis Brody Bond design team. Estimate assumes no hazardous material abatement is required. Estimate assumes normal working hours only. Estimate excludes any furniture cost especially to offices, exhibits etc.

MAJOR CHANGES FROM PREVIOUS ESTIMATE:

N/A

United States Department of the Interior
National Park Service
Class C Construction Cost Estimate

BASIS OF ESTIMATE

PROJECT INFORMATION

Project:	Visitor Center, Shop and Open Exhibit - Option B Cluster Orchard
Park:	Martin Van Buren National Park
Park Alpha:	MAVA
PMIS Number:	214672/214673
Estimate Date:	5/12/2022

DESCRIPTION OF MARK-UP & ADD-ONS:

Location Factor:	10.21%	Albany, NY is the closet CCI which is 102.1
Remoteness Factor:	5.00%	Site is at least 25 miles from nearest CCI plus some small winding road access - this should be at least 5%
Wage Rate Factor:	3.92%	Wage rate analysis indicated that Davis Bacon rates were higher than RS Means rates adjusted for location. So using higher rates.
State & Local Taxes:	8.00%	Combined State & Local Taxes
Design Contingency:	20.00%	Feasibility/Concept Study stage documents. However, narrative, sketches and existing conditions photos provided by the design team helps reduce the lack of information. Suggest 20% allowance.
Standard. General Conditions:	15.00%	Relatively simple project, however we would recommend higher allowance to cover for site staging area, site protection due to historical nature of the building.
Government General Conditions:	5.00%	Middle of range percentage due to potential phasing and regular liaising with NPS staff.
Historic Preservation Factor:	0.00%	Assumed no historical preservation is necessary.
Contractor Overhead:	10.00%	Allowance - based upon research for area
Contractor Profit:	10.00%	Allowance - based upon research for area
Bonds and Permits:	3.00%	Allowance - based upon research for area
Contracting Method Adjustment:	5.00%	Axias advised this will be competitive bid with negotiating price with best technically-qualified contractor. Percentage included to cover limited competition due to few contractors in the area able to perform this type of project.
Annual Inflation Escalation Factor:	5.00%	Axias researches various published articles on data such as ENR, Turner, BLS etc. and determined a fair and reasonable factor for this location and nature of work.
Time Until Project Midpoint (Months)	26	Projected midpoint of construction as June 2024. Therefore approximately 26 months from date of this estimate.

OTHER COMMENTS:

N/A

United States Department of the Interior
National Park Service

Wage Rate Factor Analysis

Park: Martin Van Buren National Park
Project Name: Visitor Center, Shop and Open Exhibit - Option B Cluster Orchard
Published Market Center: Albany, NY
Project County: Columbia County, NY
BLS Wage Rate City/Town: Albany-Schenectady-Troy, NY

Date Updated: 5/12/2022
Estimate Data Source: RS Means 2022 BCCD
Market Center Adjustment Factor: 108.50%
Estimator: Saifon Bips

Trade	2022 Estimate Direct Wage Rate	Market Adjusted Wage Rate for Albany, NY	Davis Bacon Wages w/Fringe Wage Class Columbia County, NY	Wage Difference	Approximate Wage Adjustment Factor	BLS Prevailing Wages Albany-Schenectady-Troy, NY	Fringe Allowance 40% Applied to BLS Wage	Wage Difference	Approximate Wage Adjustment Factor
Mix of some of the anticipated trades									
Common Building Laborers	$45.60	$49.48	$49.90	$0.42	0.86%	$24.80	$9.92	-$14.76	-29.83%
Bricklayers	$55.25	$59.95	$91.94	$31.99	53.37%	$34.38	$13.75	-$11.81	-19.70%
Carpenters	$56.30	$61.09	$60.45	-$0.64	-1.04%	$27.54	$11.02	-$22.53	-36.88%
Cement Finishes	$53.15	$57.67	$54.84	-$2.83	-4.90%	$36.03	$14.41	-$7.23	-12.54%
Electricians	$66.20	$71.83	$60.66	-$11.17	-15.55%	$32.07	$12.83	-$26.93	-37.50%
Equipment Operator; Medium Equipment	$60.40	$65.53	$79.28	$13.75	20.98%	$35.56	$14.22	-$15.76	-24.04%
Painters	$47.80	$51.86	$47.57	-$4.29	-8.28%	$22.23	$8.89	-$20.74	-39.99%
Plumbers	$69.80	$75.73	$65.08	-$10.65	-14.07%	$39.45	$15.78	-$20.50	-27.07%
Sheet Metal Workers	$61.85	$67.11	N/A			$28.63	$11.45	-$27.02	-40.27%
Truck Drivers, Heavy	$53.05	$57.56	N/A			$26.43	$10.57	-$20.56	-35.71%
Avg Wage & Adjustment Factor	$56.94	$61.78	$63.72	$2.07	3.92%	$30.71		-$18.78	-30.35%

Conclusion:

Based upon the above analysis of 3 sources for wage rates, Davis Bacon wage rates adjusted for Columbia County, NY area will form the basis of this estimate. RS Means wages are on average 3.92% lower with BLS being 30.35% lower.

United States Department of the Interior
National Park Service
Class C Construction Cost Estimate

PROJECT COST SUMMARY

Project: Visitor Center, Shop and Open Exhibit - Option B Cluster Orchard
Park: Martin Van Buren National Park
Alpha: MAVA
PMIS: 214672/214673

Estimate By: Saifon Bips
Date: 05/12/22

Reviewed By: Thomas Joseph
Date: 05/12/22

Item No.	Description	Quantity	Unit	Cost/Unit	Total
1	MAVA Visitor Center, shop & open exhibit	6,769	SF	$330.14	$2,234,713
	(Admin bldg. 4,389 sf, shop 600 sf, open exhibit/ out door program space 1,780 sf, site work 50,000 sf)				
	Subtotal Direct Construction Costs				**$2,234,713**
	Value of Government Furnished Property (GFP) Included in Direct Cost (see footnote)*				**$0**
				Direct Cost Subtotal without GFP	**$2,234,713**
	Published Location Factor	10.21%			$228,164
	Remoteness Factor	5.00%			$111,736
	Federal Wage Rate Factor - on 60% of Direct Cost	3.92%			$52,574
	State & Local Taxes - on 40% of Direct Cost	8.00%			$71,511
	Design Contingency	20.00%			$446,943
	Total Direct Construction Costs				**$3,145,641**
	Standard General Conditions	15.00%			$471,846
	Government General Conditions	5.00%			$157,282
	Historic Preservation Factor	0.00%			$0
	Subtotal NET Construction Cost				**$3,774,769**
	Overhead	10.00%			$377,477
	Profit	10.00%			$377,477
	Estimated NET Construction Cost				**$4,529,722**
	Bonds & Permits	3.00%			$135,892
	Contracting Method Adjustment	5.00%			$226,486
	Inflation Escalation	26	Months	5.00%	$545,478
	Total Estimated NET Cost of Construction				**$5,437,578**

* GFP costs are only used when the Government pre-purchases items, or provides other materials out of Government inventory, to be installed by contractor. Adjustments and Markup on GFP only include Inflation Escalation; No other adjustment factors or O&P markup have been applied.

United States Department of the Interior
National Park Service
Class C Construction Cost Estimate

LINE ITEM COST SUMMARY

Project:	**Visitor Center, Shop and Open Exhibit - Option B Cluster Orchard**	**Estimate By:**	Saifon Bips
Park:	**Martin Van Buren National Park**	**Date:**	05/12/22
Park Alpha:	**MAVA**	**Reviewed By:**	Thomas Joseph
PMIS Number:	**214672/214673**	**Date:**	05/12/22
Summary Item 1	**MAVA Visitor Center, shop & open exhibit**	**Total Cost:**	$2,234,713

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
A10	**FOUNDATIONS**					
A1010	Standard foundations (shallow footing)					
A1010	Wall footings excavation	45	CY	$ 30.00	$1,350	
A1010	Concrete in footings, incl. formwork & rebar	12	CY	$ 675.00	$8,100	
A1010	Concrete foundation wall_3'-0" d	450	SF	$ 25.00	$11,250	
A1010	Perimeter foundation insulation	450	SF	$ 10.00	$4,500	
A1010	Backfilling around footings, using excavated soils	33	CY	$ 35.00	$1,155	
A1010	Haul surplus excavated material - stage on site for reuse	12	CY	$ 15.00	$180	
A1030	Slab On Grade:					
A1030	Slab on grade w/ reinf & waterproofing _ assume 6" tk	4989	SF	$ 8.50	$42,407	
A1030	Perimeter foundation drainage	2	LF	$ 25.00	$50	
	SUBTOTAL FOUNDATIONS	**6769**	**SF**	**$10.19**	**$68,992**	

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
A20	**BASEMENT CONSTRUCTION**					
	N/A				$0	
	SUBTOTAL BASEMENT CONSTRUCTION	**6769**	**SF**		**$0**	

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
B10	**SUPERSTRUCTURE**					
B1010	Engineered wood trusses/ structure - Admin	4389	SF	$ 18.00	$79,002	
B1010	Engineered wood trusses/ structure - Shop	600	SF	$ 18.00	$10,800	
B1010	Engineered wood trusses/ structure - Open exhibit	1780	SF	$ 18.00	$32,040	
B1010	Fire proofing - Admin & Shop	6769	SF	$ 1.50	$10,154	
	SUBTOTAL SUPERSTRUCTURE	**6769**	**SF**	**$19.50**	**$131,996**	

United States Department of the Interior
National Park Service
Class C Construction Cost Estimate

LINE ITEM COST SUMMARY

Project:	**Visitor Center, Shop and Open Exhibit - Option B Cluster Orchard**	**Estimate By:**	Saifon Bips
Park:	**Martin Van Buren National Park**	**Date:**	05/12/22
Park Alpha:	**MAVA**	**Reviewed By:**	Thomas Joseph
PMIS Number:	**214672/214673**	**Date:**	05/12/22
Summary Item 1	**MAVA Visitor Center, shop & open exhibit**	**Total Cost:**	$2,234,713

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
B20	**EXTERIOR CLOSURE**					
B2010	Wood panel (arch bldg.) at admin + shop	1475	SF	$ 20.00	$29,491	
B2010	Wood slat (arch skin) admin + shop + open exhibit	2391	SF	$ 28.00	$66,952	
B2010	Wood frame sub base at admin + shop	4976	SF	$ 10.00	$49,759	
B2010	Moisture protection & insulation	4976	SF	$ 3.50	$17,416	
B2010	Alum. Window 3'-0" w x 6'-0" h	14	EA	$ 1,770.00	$24,780	
B2010	Alum. Window 6'-7" w x 6'-0" h	4	EA	$ 3,703.20	$14,813	
B2010	Alum. Glass Door_3'-0" w x 7'-0" h	2	EA	$ 3,520.00	$7,040	
B2010	Alum. Glass Doors_6'-0" w x 7'-0" h	1	PR	$ 7,040.00	$7,040	
B2010	Hardware for Alum. Glass Door	4	SET	$ 750.00	$3,000	
	SUBTOTAL EXTERIOR CLOSURE	**6769**	**EA**	**$ 32.54**	**$220,290**	

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
B30	**ROOFING**					
B3010	Wood panel (arch bldg.) - admin + shop	5541	SF	$ 20.00	$110,818	
B3010	Wood slat (arch skin) - admin + shop + open exhibit	4359	SF	$ 28.00	$122,055	
B3010	Wood framing sub base at admin + shop	5541	SF	$ 12.00	$66,491	
B3010	Moisture protection & insulation	5541	SF	$ 3.50	$19,393	
	SUBTOTAL ROOFING	**6769**	**SF**	**$ 47.09**	**$318,757**	

United States Department of the Interior
National Park Service
Class C Construction Cost Estimate

LINE ITEM COST SUMMARY

Project:	**Visitor Center, Shop and Open Exhibit - Option B Cluster Orchard**	**Estimate By:**	Saifon Bips
Park:	**Martin Van Buren National Park**	**Date:**	05/12/22
Park Alpha:	**MAVA**	**Reviewed By:**	Thomas Joseph
PMIS Number:	**214672/214673**	**Date:**	05/12/22
Summary Item 1	**MAVA Visitor Center, shop & open exhibit**	**Total Cost:**	$2,234,713

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
C10	**INTERIOR CONSTRUCTION**					
C1010	Interior gypsum wall bd - admin + shop assume 10' HT w/ insulation	3591	SF	$ 9.50	$34,119	
C1010	Pocket wall for acordian door	296	SF	$ 20.00	$5,910	
C1010	Interior glass wall w/ wood frame assume 10' HT	451	SF	$ 65.00	$29,347	
C1010	Interior office door _3'-0" x 7'-0" wd/ glass	13	EA	$ 1,150.00	$14,950	
C1010	Interior bathroom door_3'-0" x 7'-0"	4	EA	$ 1,000.00	$4,000	
C1010	Pivot conference room divider assume 8' HT	25	LF	$ 650.00	$16,250	
C1010	Bathroom mirror - 4'-0" x 5'-9"	1	EA	$ 1,495.00	$1,495	
C1010	Bathroom mirror - 4'-0" x 15'-0"	1	EA	$ 3,900.00	$3,900	
C1010	Allow for toilet accessories i.e. soap dispenser, hand dryer etc.	8	Ea.	$ 500.00	$4,000	
C1010	Misc. repair & protection	4989	SF	$ 0.50	$2,495	
	SUBTOTAL INTERIOR CONSTRUCTION	**4989**	**SF**	**$ 23.34**	**$116,466**	

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
C20	**STAIRCASES**					
	N/A			$ -	$0	
	SUBTOTAL STAIRCASES				**$0**	

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
C30	**INTERIOR FINISHES**					
C3010	Kitchen cabinet 2'-2" bottom	31	LF	$ 450.00	$13,853	
C3010	Built in pantry closet_2'-6" w x 8' HT	6	LF	$ 680.00	$4,187	
C3010	Kitchen counter top_assume butcher block counter top 1-3/4" tk	66	SF	$ 65.00	$4,322	
C3010	Built in storage shelves_1'-7" full height	62	LF	$ 275.00	$16,931	
C3010	Floor tile assume non slip porcelain tile - admin + shop	377	SF	$ 22.00	$8,285	
C3010	VCT flooring - admin pantry	400	SF	$ 7.00	$2,801	
C3010	Large format VCT flooring - admin + shop	3414	SF	$ 7.25	$24,751	
C3010	Carpet tile - admin	584	SF	$ 5.00	$2,918	
C3010	Bathroom countertop - admin 2'-0" x 5'-9"	12	SF	$ 75.00	$885	
C3010	Bathroom countertop - shop 2'-0" x 15'-0"	31	SF	$ 75.00	$2,309	
C3010	Bathroom stall - shop	8	EA	$ 300.00	$2,400	
C3010	Bathroom accessories - admin	1	SET	$ 300.00	$300	
C3010	Bathroom accessories - shop	8	SET	$ 300.00	$2,400	
C3010	Bathroom mirror - 4'-0" x 5'-9"	1	EA	$ 750.00	$750	
C3010	Bathroom mirror - 4'-0" x 15'-0"	1	EA	$ 1,500.00	$1,500	
C3010	Interior wall painting	1198	SF	$ 1.25	$1,497	
C3010	Interior door & frame painting	17	EA	$ 150.00	$2,550	
	SUBTOTAL INTERIOR FINISHES	**4989**	**SF**	**$ 18.57**	**$92,638**	

United States Department of the Interior
National Park Service
Class C Construction Cost Estimate

LINE ITEM COST SUMMARY

Project:	**Visitor Center, Shop and Open Exhibit - Option B Cluster Orchard**	**Estimate By:**	Saifon Bips
Park:	**Martin Van Buren National Park**	**Date:**	05/12/22
Park Alpha:	**MAVA**	**Reviewed By:**	Thomas Joseph
PMIS Number:	**214672/214673**	**Date:**	05/12/22
Summary Item 1	**MAVA Visitor Center, shop & open exhibit**	**Total Cost:**	$2,234,713

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
D10	**CONVEYING SYSTEMS**					
	N/A			$ -	$0	
	SUBTOTAL CONVEYING SYSTEMS				**$0**	

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
D20	**PLUMBING**					
D2010	Plumbing fixtures (admin + shop) :					
D2010	Water closets	6	EA	$ 1,350.00	$8,100	
D2010	Lavatories	6	EA	$ 1,250.00	$7,500	
D2010	Pantry sinks	1	EA	$ 1,175.00	$1,175	
D2010	Floor drain - allow	2	EA	$ 550.00	$1,100	
D2010	Piping (admin + shop) :					
D2010	Sanitary/vent piping - allow	375	LF	$ 72.50	$27,188	
D2010	Domestic water piping - allow	650	LF	$ 64.00	$41,600	
D2010	Roof drain & penetration - allow	5	EA	$ 550.00	$2,750	
D2010	Roof vent & penetration - allow	20	EA	$ 550.00	$11,000	
D2010	CW/HW hose bibb - allow	2	EA	$ 250.00	$500	
	SUBTOTAL PLUMBING	**4989**	**SF**	**$ 20.23**	**$100,913**	

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
D30	**HVAC**					
D3010	Option 2 - hybrid includes followings - admin + shop allow	4989	SF	$ 37.00	$184,593	
	• Hydronic heating via fuel oil boiler					
	• Natural ventilation plus select exhaust fans					
	• Full conditioning w/ natural ventilation (includes sensors at windows RP@RT disable AC)					
	SUBTOTAL HVAC	**4989**	**SF**	**$ 37.00**	**$184,593**	

United States Department of the Interior
National Park Service
Class C Construction Cost Estimate

LINE ITEM COST SUMMARY

Project:	**Visitor Center, Shop and Open Exhibit - Option B Cluster Orchard**	**Estimate By:**	Saifon Bips
Park:	**Martin Van Buren National Park**	**Date:**	05/12/22
Park Alpha:	**MAVA**	**Reviewed By:**	Thomas Joseph
PMIS Number:	**214672/214673**	**Date:**	05/12/22
Summary Item 1	**MAVA Visitor Center, shop & open exhibit**	**Total Cost:**	$2,234,713

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
D40	**FIRE PROTECTION**					
D4010	Install new sprinkler system	4989	SF	$ 5.50	$27,440	
	SUBTOTAL FIRE PROTECTION	**4989**	**SF**	**$ 5.50**	**$27,440**	

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
D50	**ELECTRICAL**					
D5010	Allow for new electrical system incl. power distribution lighting, tele/data system	4989	SF	$ 40.00	$199,560	
	SUBTOTAL ELECTRICAL	**4989**	**SF**	**$ 40.00**	**$199,560**	

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
E10	**EQUIPMENT**					
	N/A				$0	
	SUBTOTAL EQUIPMENT	**4989**	**SF**	**$ -**	**$0**	

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
E20	**FURNISHINGS**					
	N/A				$0	
	SUBTOTAL FURNISHINGS	**4989**	**SF**		**$0**	

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
F10	**SPECIAL CONSTRUCTION**					
F1010	Waysides - XS (reuse existing)					
F1010	Magical Glass - SM/ Magic Glass (About this Building, African American Story, Distant View)	3	EA	10,000.00	$30,000	
F1010	About the Orchard - SM	1	EA	30,000.00	$30,000	
F1010	Native American Story - M	1	EA	30,000.00	$30,000	
F1010	Interior exhibit galler (nursery) - XL	1	EA	200,000.00	$200,000	
	SUBTOTAL SPECIAL CONSTRUCTION	**4989**	**SF**		**$290,000**	

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
F20	**SELECTIVE BUILDING DEMOLITION**					
				$ -		
F2010	Demolition of existing visitor center & hauling debris off site	5322	SF	$ 12.00	$63,864	
	SUBTOTAL SELECTIVE BUILDING DEMOLITION	**4989**	**SF**	**$ 12.80**	**$63,864**	

United States Department of the Interior
National Park Service
Class C Construction Cost Estimate

LINE ITEM COST SUMMARY

Project:	**Visitor Center, Shop and Open Exhibit - Option B Cluster Orchard**	**Estimate By:**	Saifon Bips
Park:	**Martin Van Buren National Park**	**Date:**	05/12/22
Park Alpha:	**MAVA**	**Reviewed By:**	Thomas Joseph
PMIS Number:	**214672/214673**	**Date:**	05/12/22
Summary Item 1	**MAVA Visitor Center, shop & open exhibit**	**Total Cost:**	$2,234,713

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
G10	**SITE PREPARATION**					
G1010	Site Clearing ;					
G1010	Remove existing underground utilities	1	LS	$ 6,500.00	$6,500	
G1010	Grading & site preparation - admin + shop	50000	SF	$ 0.75	$37,500	
	SUBTOTAL SITE PREPARATION	**50000**	**SF**	**$ 0.88**	**$44,000**	

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
G20	**SITE IMPROVEMENTS**					
G2050	New pedestrian paths - option A concrete paver, 1400 LF	5600	SF	15.50	$86,800	
G2050	New hedgerow plants	120	EA	30.00	$3,600	
G2050	Native plant garden	3,000	SF	5.00	$15,000	
G2050	Remove trees	20	EA	630.00	$12,600	
G2050	New trees	20	EA	250.00	$5,000	
G2050	New lawn	24000	SF	1.50	$36,000	
G2050	Renovate ex lawn	100000	SF	0.15	$15,000	
G2050	Misc. Site furnishing	1	LS	10,000.00	10,000.00	
	SUBTOTAL SITE IMPROVEMENTS	**50000**	**SF**	**$ 3.68**	**$184,000**	

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
G30	**SITE CIVIL/MECHANICAL UTILITIES**					
G3010	Water line (option - cluster buildings) includes followings ;					
G3010	4" PVC - allow	70	LF	$ 75.00	$5,250	
G3010	Water well - allow w/ excavation	1	EA	$ 10,000.00	$10,000	
G3010	Pipe excavation	31	CY	$ 30.00	$933	
G3010	DGA Back fill beneath pipes, 6" tk	3	CY	$ 55.00	$143	
G3010	Pipe back fill with excavated soil	32	CY	$ 30.00	$954	
G3020	Sanitary line (option - reuse existing - cluster buildings) includes followings ;					
G3020	4" PVC - allow	65	LF	$ 100.00	$6,500	
G3020	Clean out - allow	1	EA	$ 550.00	$550	
G3020	300 gal. septic tank	1	EA	$ 850.00	$850	
G3020	1" PVC (Leech field)	180	LF	$ 45.00	$8,100	
G3020	Excavation for septic tank	3	CY	$ 30.00	$80	
G3020	Pipe excavation	109	CY	$ 30.00	$3,267	
G3020	DGA Back fill beneath pipes, 6" tk	9	CY	$ 55.00	$499	
G3020	Pipe back fill with excavated soil	110	CY	$ 30.00	$3,287	
G3020	Septic tank back fill with excavated soil	3	CY	$ 30.00	$100	
G3030	DGA back fill beneath septic tank & lift station, 6" tk	1.00	CY	$ 30.00	$30	
G3030	Storm water management including following;					
G3030	Storm line	150	LF	$ 110.00	$16,500	
G3030	48" HDPE for detention basin	480	LF	$ 150.00	$72,000	
G3030	Allow rain water harvesting tank	1	LS	$ 12,500.00	$12,500	
G3030	Excavation for detention basin	241	CY	$ 30.00	$7,222	
G3030	DGA fill beneath pipes, 12" tk	30	CY	$ 55.00	$1,655	
G3030	Back fill with excavated soil	193	CY	$ 35.00	$6,762	
	SUBTOTAL SITE MECHANICAL UTILITIES	**50000**	**SF**	**$ 3.14**	**$157,182**	

United States Department of the Interior
National Park Service
Class C Construction Cost Estimate

LINE ITEM COST SUMMARY

Project:	**Visitor Center, Shop and Open Exhibit - Option B Cluster Orchard**	**Estimate By:**	Saifon Bips
Park:	**Martin Van Buren National Park**	**Date:**	05/12/22
Park Alpha:	**MAVA**	**Reviewed By:**	Thomas Joseph
PMIS Number:	**214672/214673**	**Date:**	05/12/22
Summary Item 1	**MAVA Visitor Center, shop & open exhibit**	**Total Cost:**	$2,234,713

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
G40	**SITE ELECTRICAL UTILITIES**					
G2010	Option - reroute overhead lines - multiple sites (power & tele com line reuse/ upgrade existing)	260	LF	$ 65.00	$16,900	
G2010	Utility pole - allow	1	EA	$ 2,125.00	$2,125	
G2010	Site Lighting - allow	1	LS	$ 15,000.00	$15,000	
	SUBTOTAL SITE ELECTRICAL UTILITIES	**50000**	**SF**	**$ 0.68**	**$34,025**	

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
TOTAL COST - MAVA Visitor Center, shop & open exhibit		**6769**	**SF**	**$ 330.14**	**$2,234,713**	

United States Department of the Interior
National Park Service
Class C Construction Cost Estimate

BASIS OF ESTIMATE

PROJECT INFORMATION

Project:	Maintenance Building - Option B Cluster Orchard
Park:	Martin Van Buren National Park
Park Alpha:	MAVA
PMIS Number:	214672/214673
Estimate Date:	5/12/2022
Prepared By:	Saifon Bips
Company:	Axias NY LLC
Address:	197 Route 18 South, Suite 200
City, State Zip:	East Brunswick, NJ -08816
Phone:	914-837-1062

BACKGROUND SUPPORTING MATERIAL (Scope of Work):

The scope of work includes installation of structural steel including slab on grade which supports metal stud wall all around for maintenance building. An exterior enclosure of these buildings is to be covered with wood panel (arch building) and wood slat (arch skin) as per the schematic building massing option B. Roofing of maintenance building is to be covered with standing seam metal with metal frame sub base as per schematic building massing option B as well. The standing seam metal roof is assumed for roofing of covered garage without moisture protection and insulation. The estimate was prepared from conceptual documents which were prepared by David Brody Bond Architects presentation package and scaled drawings including cost option sheet which was received by Axias on March 25th, 2022 and April 1st, 2022 and May 6th, 2022 respectively. Besides the presentation meeting, Axias also has 2 separate meetings with the design team to ensure that all the scope was picked up at this early stage in the design.

SOURCE OF COST DATA:

1. Estimator Judgement - many of the prices used are the result of first principles estimating - a determination of the actual time required to perform the activity using local labor rates, plus material costs that reflect the typically small quantities required, plus equipment rental costs as applicable. RS Means is used only as a general guide, and the WBS reference at each line item indicates the area of the price book used as the general guide.
2. Davis Bacon Wage Rates - New York State, Columbia County - rates inflated where necessary using Bureau of Labor Statistics Cost Indexes.
3. RS Means 2022 Building Construction Cost Data, 80th Annual Edition
4. Historic cost data for similar projects/structures and then adjusted to reflect current scope, size, location etc.

ESTIMATE ASSUMPTIONS:

Estimate assumes that the project will be carried out under a single contract. Assumed that the approximate start date is January 2024 with a 12 months duration. Estimate assumes it will be competitively bid to at least 3 contractor's. All quantities have been advised by the drawings issued by the Davis Brody Bond design team. Estimate assumes no hazardous material abatement is required. Estimate assumes normal working hours only. Estimate excludes any furniture cost especially to offices, exhibits etc.

MAJOR CHANGES FROM PREVIOUS ESTIMATE:

N/A

United States Department of the Interior
National Park Service
Class C Construction Cost Estimate

BASIS OF ESTIMATE

PROJECT INFORMATION

Project:	Maintenance Building - Option B Cluster Orchard
Park:	Martin Van Buren National Park
Park Alpha:	MAVA
PMIS Number:	214672/214673
Estimate Date:	5/12/2022

DESCRIPTION OF MARK-UP & ADD-ONS:

Location Factor:	10.21%	Albany, NY is the closet CCI which is 102.1
Remoteness Factor:	5.00%	Site is at least 25 miles from nearest CCI plus some small winding road access - this should be at least 5%
Wage Rate Factor:	3.92%	Wage rate analysis indicated that Davis Bacon rates were lower than RS Means rates adjusted for location. So kept higher rates.
State & Local Taxes:	8.00%	Combined State & Local Taxes
Design Contingency:	20.00%	Feasibility/Concept Study stage documents. However, narrative, sketches and existing conditions photos provided by the design team helps reduce the lack of information. Suggest 20% allowance.
Standard. General Conditions:	15.00%	Relatively simple project, however we would recommend higher allowance to cover for site staging area, site protection due to historical nature of the building.
Government General Conditions:	5.00%	Middle of range percentage due to potential phasing and regular liaising with NPS staff.
Historic Preservation Factor:	0.00%	Assumed no historical preservation is necessary.
Contractor Overhead:	10.00%	Allowance - based upon research for area
Contractor Profit:	10.00%	Allowance - based upon research for area
Bonds and Permits:	3.00%	Allowance - based upon research for area
Contracting Method Adjustment:	5.00%	Axias advised this will be competitive bid with negotiating price with best technically-qualified contractor. Percentage included to cover limited competition due to few contractors in the area able to perform this type of project.
Annual Inflation Escalation Factor:	5.00%	Axias researches various published articles on data such as ENR, Turner, BLS etc. and determined a fair and reasonable factor for this location and nature of work.
Time Until Project Midpoint (Months)	26	Projected midpoint of construction as June 2024. Therefore approximately 26 months from date of this estimate.

OTHER COMMENTS:

N/A

United States Department of the Interior
National Park Service

Wage Rate Factor Analysis

Park: Martin Van Buren National Park
Project Name: Maintenance Building - Option B Cluster Orchard
Published Market Center: Albany, NY
Project County: Columbia County, NY
BLS Wage Rate City/Town: Albany-Schenectady-Troy, NY

Date Updated: 5/12/2022
Estimate Data Source: RS Means 2022 BCCD
Market Center Adjustment Factor: 108.50%
Estimator: Saifon Bips

Trade	2022 Estimate Direct Wage Rate	Market Adjusted Wage Rate for Albany, NY	Davis Bacon Wages w/Fringe Wage Class Columbia County, NY	Wage Difference	Approximate Wage Adjustment Factor	BLS Prevailing Wages Albany-Schenectady-Troy, NY	Fringe Allowance 40% Applied to BLS Wage	Wage Difference	Approximate Wage Adjustment Factor
Mix of some of the anticipated trades									
Common Building Laborers	$45.60	$49.48	$49.90	$0.42	0.86%	$24.80	$9.92	-$14.76	-29.83%
Bricklayers	$55.25	$59.95	$91.94	$31.99	53.37%	$34.38	$13.75	-$11.81	-19.70%
Carpenters	$56.30	$61.09	$60.45	-$0.64	-1.04%	$27.54	$11.02	-$22.53	-36.88%
Cement Finishes	$53.15	$57.67	$54.84	-$2.83	-4.90%	$36.03	$14.41	-$7.23	-12.54%
Electricians	$66.20	$71.83	$60.66	-$11.17	-15.55%	$32.07	$12.83	-$26.93	-37.50%
Equipment Operator; Medium Equipment	$60.40	$65.53	$79.28	$13.75	20.98%	$35.56	$14.22	-$15.76	-24.04%
Painters	$47.80	$51.86	$47.57	-$4.29	-8.28%	$22.23	$8.89	-$20.74	-39.99%
Plumbers	$69.80	$75.73	$65.08	-$10.65	-14.07%	$39.45	$15.78	-$20.50	-27.07%
Sheet Metal Workers	$61.85	$67.11	N/A			$28.63	$11.45	-$27.02	-40.27%
Truck Drivers, Heavy	$53.05	$57.56	N/A			$26.43	$10.57	-$20.56	-35.71%
Avg Wage & Adjustment Factor	$56.94	$61.78	$63.72	$2.07	3.92%	$30.71		-$18.78	-30.35%

Conclusion:

Based upon the above analysis of 3 sources for wage rates, Davis Bacon wage rates adjusted for Columbia County, NY area will form the basis of this estimate. RS Means wages are on average 3.92% lower with BLS being 30.35% lower.

United States Department of the Interior
National Park Service
Class C Construction Cost Estimate

PROJECT COST SUMMARY

Project: Maintenance Building - Option B Cluster Orchard
Park: Martin Van Buren National Park
Alpha: MAVA
PMIS: 214672/214673

Estimate By: Saifon Bips
Date: 05/12/22

Reviewed By: Thomas Joseph
Date: 05/12/22

Item No.	Description	Quantity	Unit	Cost/Unit	Total
1	MAVA Visitor Center - Maintenance	5,284	SF	$233.14	$1,231,905
	(Maintenance building 2,789 sf, covered storage 2,495 sf, outdoor yard 7317 sf, concrete sidewalk 2040 sf (510 lf)				
	Subtotal Direct Construction Costs				**$1,231,905**
	Value of Government Furnished Property (GFP) Included in Direct Cost (see footnote)*				**$0**
	Direct Cost Subtotal without GFP				**$1,231,905**
	Published Location Factor	10.21%			$125,777
	Remoteness Factor	5.00%			$61,595
	Federal Wage Rate Factor - on 60% of Direct Cost	3.92%			$28,982
	State & Local Taxes - on 40% of Direct Cost	8.00%			$39,421
	Design Contingency	20.00%			$246,381
	Total Direct Construction Costs				**$1,734,061**
	Standard General Conditions	15.00%			$260,109
	Government General Conditions	5.00%			$86,703
	Historic Preservation Factor	0.00%			$0
	Subtotal NET Construction Cost				**$2,080,873**
	Overhead	10.00%			$208,087
	Profit	10.00%			$208,087
	Estimated NET Construction Cost				**$2,497,048**
	Bonds & Permits	3.00%			$74,911
	Contracting Method Adjustment	5.00%			$124,852
	Inflation Escalation	26	Months	5.00%	$300,699
	Total Estimated NET Cost of Construction				**$2,997,511**

* GFP costs are only used when the Government pre-purchases items, or provides other materials out of Government inventory, to be installed by contractor. Adjustments and Markup on GFP only include Inflation Escalation; No other adjustment factors or O&P markup have been applied.

United States Department of the Interior
National Park Service
Class C Construction Cost Estimate

LINE ITEM COST SUMMARY

Project:	**Maintenance Building - Option B Cluster Orchard**	**Estimate By:**	Saifon Bips
Park:	**Martin Van Buren National Park**	**Date:**	05/12/22
Park Alpha:	**MAVA**	**Reviewed By:**	Thomas Joseph
PMIS Number:	**214672/214673**	**Date:**	05/12/22
Summary Item 1	**MAVA Visitor Center - Maintenance**	**Total Cost:**	$1,231,905

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
A10	**FOUNDATIONS**					
A1010	Standard foundations (shallow footing)					
A1010	Wall footings excavation	26	CY	$ 30.00	$780	
A1010	Concrete in footings, incl. formwork & rebar	11	CY	$ 675.00	$7,425	
A1010	Concrete foundation wall	209	SF	$ 25.00	$5,225	
A1010	Perimeter foundation insulation	209	SF	$ 10.00	$2,090	
A1010	Backfilling around footings, using excavated soils	15	CY	$ 35.00	$525	
A1010	Haul surplus excavated material - stage on site for reuse	11	CY	$ 15.00	$165	
A1030	Slab On Grade:					
A1010	Slab on grade w/ reinf & waterproofing _ assume 6" tk	5284	SF	$ 8.50	$44,914	
A1030	Perimeter foundation drainage	139	LF	$ 15.00	$2,084	
	SUBTOTAL FOUNDATIONS	**5284**	**SF**	**$11.96**	**$63,208**	

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
A20	**BASEMENT CONSTRUCTION**					
	N/A				$0	
	SUBTOTAL BASEMENT CONSTRUCTION	**5284**	**SF**		**$0**	

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
B10	**SUPERSTRUCTURE**					
B1010	Structural Steel including roof truss, misc. connections (maint +. + covered storage)	5284	SF	$ 22.00	$116,248	
B1010	Fire proofing	5284	SF	$ 1.50	$7,926	
B1010	Allow supports/pockets/grouting on the bearing wall	35	EA	$ 850.00	$29,750	
	SUBTOTAL SUPESTRUCTURE	**5284**	**SF**	**$29.13**	**$153,924**	

United States Department of the Interior
National Park Service
Class C Construction Cost Estimate

LINE ITEM COST SUMMARY

Project:	**Maintenance Building - Option B Cluster Orchard**	**Estimate By:**	Saifon Bips
Park:	**Martin Van Buren National Park**	**Date:**	05/12/22
Park Alpha:	**MAVA**	**Reviewed By:**	Thomas Joseph
PMIS Number:	**214672/214673**	**Date:**	05/12/22

Summary Item 1 **MAVA Visitor Center - Maintenance** **Total Cost:** $1,231,905

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
B20	**EXTERIOR CLOSURE**					
B2010	Wood panel (arch bldg.) - maintenance	2625	SF	$ 20.00	$52,502	
B2010	Heavy gauge metal framing	2625	SF	$ 10.00	$26,251	
B2010	Moisture protection & insulation	2625	SF	$ 3.50	$9,188	
B2010	Wood slat (arch skin)	931	SF	$ 28.00	$26,065	
B2010	Alum. Windows 3'-0" w x 6'-0" h	4	EA	$ 1,770.00	$7,080	
B2010	Metal galv door 3'-0" w x 7'-0" h	2	EA	$ 3,950.00	$7,900	
B2010	Metal galv door 6'-0" w x 7'-0" h	1	PR	$ 7,500.00	$7,500	
B2010	Door hardware	3	SET	$ 750.00	$2,250	
	SUBTOTAL EXTERIOR CLOSURE	**2625**	**SF**	**$ 52.85**	**$138,735**	

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
B30	**ROOFING**					
B3010	Standing seam metal roof - maintenance building	2789	SF	$ 12.00	$33,468	
B3010	Heavy gauge metal framing	2789	SF	$ 12.00	$33,468	
B3010	Moisture protection & insulation	2789	SF	$ 3.50	$9,762	
B3010	Standing seam metal roof - covered storage	2495	SF	$ 12.00	$29,940	
B3010	Heavy gauge metal framing	2495	SF	$ 12.00	$29,940	
	SUBTOTAL ROOFING	**5284**	**SF**	**$ 25.85**	**$136,578**	

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
C10	**INTERIOR CONSTRUCTION**					
C1010	Interior gypsum wall bd - maintenance assume 10' HT w/ insulation	2734	SF	$ 9.50	$25,969	
C1010	Interior office door _3'-0" w x 7'-0" h wd/ glass	1	EA	$ 1,150.00	$1,150	
C1010	Interior bathroom door_3'-0" w x 7'-0" h	2	EA	$ 1,000.00	$2,000	
C1010	Interior metal door_3'-0" w x 7'-0" h	1	EA	$ 1,350.00	$1,350	
C1010	Garage door -assume automatic 9'-0" w x 12'-0" h	3	EA	$ 6,500.00	$19,500	
	SUBTOTAL INTERIOR CONSTRUCTION	**2734**	**SF**	**$ 18.28**	**$49,969**	

United States Department of the Interior
National Park Service
Class C Construction Cost Estimate

LINE ITEM COST SUMMARY

Project:	**Maintenance Building - Option B Cluster Orchard**	**Estimate By:**	Saifon Bips
Park:	**Martin Van Buren National Park**	**Date:**	05/12/22
Park Alpha:	**MAVA**	**Reviewed By:**	Thomas Joseph
PMIS Number:	**214672/214673**	**Date:**	05/12/22
Summary Item 1	**MAVA Visitor Center - Maintenance**	**Total Cost:**	$1,231,905

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
C20	**STAIRCASES**					
	N/A			$ -	$0	
	SUBTOTAL STAIRCASES				**$0**	

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
C30	**INTERIOR FINISHES**					
C3010	Install new Ceiling	2789	SF	$ 7.50	$20,918	
C3010	Kitchen cabinet 1'-0" w_top	4	LF	$ 360.00	$1,330	
C3010	Kitchen cabinet 2'-2" bottom	4	LF	$ 450.00	$1,662	
C3010	Kitchen counter top assume butcher block counter top 1-3/4" tk	8	SF	$ 65.00	$519	
C3010	Built in storage shelves _1'-7" full height	38	LF	$ 275.00	$10,413	
C3010	Built in storage shelves w/ doors _1'-7" full height	18	LF	$ 275.00	$5,079	
C3010	Floor tile assume non slip porcelain tile	120	SF	$ 22.00	$2,641	
C3010	Wall tile - 4'-0"	148	SF	$ 20.00	$2,955	
C3010	Sealed concrete	2789	SF	$ 2.50	$6,973	
C3010	Carpet tile	220	SF	$ 5.00	$1,101	
C3010	Bathroom accessories	1	SET	$ 500.00	$500	
C3010	Bathroom mirror - 4'-0" x 5'-9"	1	EA	$ 1,495.00	$1,495	
C3010	Interior wall painting	5049	SF	$ 1.25	$6,311	
C3010	Interior door & frame painting	4	EA	$ 250.00	$1,000	
	SUBTOTAL INTERIOR FINISHES	**2789**	**SF**	**$ 22.55**	**$62,897**	

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
D10	**CONVEYING SYSTEMS**					
	N/A			$ -	$0	
	SUBTOTAL CONVEYING SYSTEMS				**$0**	

United States Department of the Interior
National Park Service
Class C Construction Cost Estimate

LINE ITEM COST SUMMARY

Project:	**Maintenance Building - Option B Cluster Orchard**	**Estimate By:**	Saifon Bips
Park:	**Martin Van Buren National Park**	**Date:**	05/12/22
Park Alpha:	**MAVA**	**Reviewed By:**	Thomas Joseph
PMIS Number:	**214672/214673**	**Date:**	05/12/22
Summary Item 1	**MAVA Visitor Center - Maintenance**	**Total Cost:**	$1,231,905

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
D20	**PLUMBING**					
D2010	Plumbing fixtures (maintenance) :					
D2010	Water closet	1	EA	$ 1,350.00	$1,350	
D2010	Lavatory	1	EA	$ 1,250.00	$1,250	
D2010	Pantry sink	1	EA	$ 1,500.00	$1,500	
D2010	Floor drain - allow	1	EA	$ 550.00	$550	
D2010	Piping (maintenance) :					
D2010	Sanitary/vent piping - allow	100	LF	$ 72.50	$7,250	
D2010	Domestic water piping - allow	150	LF	$ 64.00	$9,600	
D2010	Roof drain & penetration - allow	5	EA	$ 550.00	$2,750	
D2010	Roof vent & penetration - allow	20	EA	$ 550.00	$11,000	
D2010	CW/HW hose bibb - allow	2	EA	$ 250.00	$500	
	SUBTOTAL PLUMBING	**2789**	**SF**	**$ 12.82**	**$35,750**	

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
D30	**HVAC**					
D3010	Option 3 - traditional includes followings - admin + shop allow	2789	SF	$ 45.00	$125,505	
	• Heating and cooling via water source heat pumps					
	• Dedicate outside air system (DOAS)					
	• Full conditioning w/ natural ventilation (includes sensors at windows RP@RT					
	SUBTOTAL HVAC	**2789**	**SF**	**$ 45.00**	**$125,505**	

United States Department of the Interior
National Park Service
Class C Construction Cost Estimate

LINE ITEM COST SUMMARY

Project:	**Maintenance Building - Option B Cluster Orchard**	**Estimate By:**	Saifon Bips
Park:	**Martin Van Buren National Park**	**Date:**	05/12/22
Park Alpha:	**MAVA**	**Reviewed By:**	Thomas Joseph
PMIS Number:	**214672/214673**	**Date:**	05/12/22

Summary Item 1 **MAVA Visitor Center - Maintenance** **Total Cost:** $1,231,905

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
D40	**FIRE PROTECTION**					
D4010	Install new sprinkler system	2789	SF	$ 5.50	$15,340	
	SUBTOTAL FIRE PROTECTION	**2789**	**SF**	**$ 5.50**	**$15,340**	

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
D50	**ELECTRICAL**					
D5010	Allow for new electrical system incl. power distribution lighting, tele/data system (maintenance bldg. + covered storage)	2789	SF	$ 40.00	$111,560	
	SUBTOTAL ELECTRICAL	**2789**	**SF**	**$ 40.00**	**$111,560**	

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
E10	**EQUIPMENT**					
	N/A				$0	
	SUBTOTAL EQUIPMENT	**0**	**SF**		**$0**	

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
E20	**FURNISHINGS**					
	N/A				$0	
	SUBTOTAL FURNISHINGS	**0**	**SF**		**$0**	

United States Department of the Interior
National Park Service
Class C Construction Cost Estimate

LINE ITEM COST SUMMARY

Project:	**Maintenance Building - Option B Cluster Orchard**	**Estimate By:**	Saifon Bips
Park:	**Martin Van Buren National Park**	**Date:**	05/12/22
Park Alpha:	**MAVA**	**Reviewed By:**	Thomas Joseph
PMIS Number:	**214672/214673**	**Date:**	05/12/22
Summary Item 1	**MAVA Visitor Center - Maintenance**	**Total Cost:**	$1,231,905

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
F10	SPECIAL CONSTRUCTION					
	N/A			$ -	$0	
	SUBTOTAL SPECIAL CONSTRUCTION	**0**	**SF**		**$0**	

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
F20	SELECTIVE BUILDING DEMOLITION					
					$0	
F2010	Demolition of existing maintenance building & hauling debris off site	4155	SF	$ 12.00	$49,860	
					$0	
	SUBTOTAL SELECTIVE BUILDING DEMOLITION	**4155**	**SF**		**$49,860**	

United States Department of the Interior
National Park Service
Class C Construction Cost Estimate

LINE ITEM COST SUMMARY

Project:	**Maintenance Building - Option B Cluster Orchard**	**Estimate By:**	Saifon Bips
Park:	**Martin Van Buren National Park**	**Date:**	05/12/22
Park Alpha:	**MAVA**	**Reviewed By:**	Thomas Joseph
PMIS Number:	**214672/214673**	**Date:**	05/12/22
Summary Item 1	**MAVA Visitor Center - Maintenance**	**Total Cost:**	$1,231,905

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
G10	**SITE PREPARATION**					
G1010	Site Clearing ;					
G1010	Remove existing under ground utilities	1	LS	$ 6,526.00	$6,526	
G1010	Remove existing asphalt - parking area 2	29150	SF	$ 0.75	$21,863	
G1010	Grading & site preparation - admin + shop	29500	SF	$ 0.50	$14,750	
	SUBTOTAL SITE PREPARATION	**29500**	**SF**	**$ 1.46**	**$43,139**	

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
G20	**SITE IMPROVEMENTS**					
G2050	New asphalt paving_6" tk including sub base	18600	SF	5.75	$106,950	
G2050	Parking lot striping	600	LF	1.50	$900	
G2050	New pedestrian paths, 510 LF - option B chip seal	2040	SF	9.72	$19,829	
G2050	Path lighting	16	EA	350.00	$5,600	
G2050	Remove trees	10	EA	630.00	$6,300	
G2050	New trees	10	EA	250.00	$2,500	
G2050	New lawn	13100	SF	1.00	$13,100	
G2050	Renovate ex lawn	16750	SF	0.15	$2,513	
G2050	New site sign	1	EA	2,500.00	$2,500	
G2050	Green wall (arch feature wall) 5'-0" h	1090	SF	62.50	$68,125	
	SUBTOTAL SITE IMPROVEMENTS	**29500**	**SF**	**$ 7.74**	**$228,316**	

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
G30	**SITE CIVIL/MECHANICAL UTILITIES**					
G3010	Water line (option - reuse existing - cluster building)					
G3010	See visitor center					
G3020	Sanitary line (option - reuse existing - cluster buildings)					
G3020	See visitor center					
G3030	Storm water management including following;					
G3030	See visitor center					
	SUBTOTAL SITE CIVIL/MECHANICAL UTILITES	**29500**	**SF**	**$ -**	**$0**	

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
G 40	**SITE ELECTRICAL UTILITIES**					
G2010	Option - reroute overhead lines - multiple sites (power & tele com line reuse/ upgrade existing) - see visitor center					
G2010	Utility pole - allow	1	EA	$ 2,125.00	$2,125	
G2010	Site Lighting - allow	1	LS	$ 15,000.00	$15,000	
	SUBTOTAL SITE ELECTRICAL UTILITIES	**29500**	**SF**	**$ 0.58**	**$17,125**	

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
TOTAL COST - MAVA Visitor Center - Maintenance		**5284**	**SF**	**$ 233.14**	**$1,231,905**	

United States Department of the Interior
National Park Service
Class C Construction Cost Estimate

BASIS OF ESTIMATE

PROJECT INFORMATION

Project:	Visitor Center, Shop and Open Exhibit - Option C Linear
Park:	Martin Van Buren National Park
Park Alpha:	MAVA
PMIS Number:	214672/214673
Estimate Date:	5/12/2022
Prepared By:	Saifon Bips
Company:	Axias NY LLC
Address:	197 Route 18 South, Suite 200
City, State Zip:	East Brunswick, NJ -08816
Phone:	914-837-1062

BACKGROUND SUPPORTING MATERIAL (Scope of Work):

The scope of work includes installation of heavy timber trusses and columns including slab on grade which supports metal framing all around for office/ admin building and shop. An exterior enclosure of these buildings is to be covered with stone wall (arch feature wall/ arch building, wood siding (arch building) and arch skin material is not applicable as per the schematic building massing option C. Roofing will be covered with standing seam metal roofing as per the schematic building massing option C as well. The estimate was prepared from conceptual documents which were prepared by David Brody Bond Architects presentation package and scaled drawings including cost option sheet which was received by Axias on March 25th, 2022 and April 1st, 2022 and May 6th, 2022 respectively. Besides the presentation meeting, Axias also has 3 separate meetings with the design team to ensure that all the scope was picked up at this early stage in the design.

SOURCE OF COST DATA:

1. Estimator Judgement - many of the prices used are the result of first principles estimating - a determination of the actual time required to perform the activity using local labor rates, plus material costs that reflect the typically small quantities required, plus equipment rental costs as applicable. RS Means is used only as a general guide, and the WBS reference at each line item indicates the area of the price book used as the general guide.
2. Davis Bacon Wage Rates - New York State, Columbia County - rates inflated where necessary using Bureau of Labor Statistics Cost Indexes.
3. RS Means 2022 Building Construction Cost Data, 80th Annual Edition

ESTIMATE ASSUMPTIONS:

Estimate assumes that the project will be carried out under a single contract. Assumed that the approximate start date is January 2024 with a 12 months duration. Estimate assumes it will be competitively bid to at least 3 contractor's. All quantities have been advised by the drawings issued by the Davis Brody Bond design team. Estimate assumes no hazardous material abatement is required. Estimate assumes normal working hours only. Estimate excludes any furniture cost especially to offices, exhibits etc.

MAJOR CHANGES FROM PREVIOUS ESTIMATE:

N/A

United States Department of the Interior
National Park Service
Class C Construction Cost Estimate

BASIS OF ESTIMATE

PROJECT INFORMATION

Project: Visitor Center, Shop and Open Exhibit - Option C Linear
Park: Martin Van Buren National Park
Park Alpha: MAVA
PMIS Number: 214672/214673
Estimate Date: 5/12/2022

DESCRIPTION OF MARK-UP & ADD-ONS:

Location Factor:	10.21%	Albany, NY is the closet CCI which is 102.1
Remoteness Factor:	5.00%	Site is at least 25 miles from nearest CCI plus some small winding road access - this should be at least 5%
Wage Rate Factor:	3.92%	Wage rate analysis indicated that Davis Bacon rates were higher than RS Means rates adjusted for location. So using higher rates.
State & Local Taxes:	8.00%	Combined State & Local Taxes
Design Contingency:	20.00%	Feasibility/Concept Study stage documents. However, narrative, sketches and existing conditions photos provided by the design team helps reduce the lack of information. Suggest 20% allowance.
Standard. General Conditions:	15.00%	Relatively simple project, however we would recommend higher allowance to cover for site staging area, site protection due to historical nature of the building.
Government General Conditions:	5.00%	Middle of range percentage due to potential phasing and regular liaising with NPS staff.
Historic Preservation Factor:	0.00%	Assumed no historical preservation is necessary.
Contractor Overhead:	10.00%	Allowance - based upon research for area
Contractor Profit:	10.00%	Allowance - based upon research for area
Bonds and Permits:	3.00%	Allowance - based upon research for area
Contracting Method Adjustment:	5.00%	Axias advised this will be competitive bid with negotiating price with best technically-qualified contractor. Percentage included to cover limited competition due to few contractors in the area able to perform this type of project.
Annual Inflation Escalation Factor:	5.00%	Axias researches various published articles on data such as ENR, Turner, BLS etc. and determined a fair and reasonable factor for this location and nature of work.
Time Until Project Midpoint (Months)	26	Projected midpoint of construction as June 2024. Therefore approximately 26 months from date of this estimate.

OTHER COMMENTS:

N/A

United States Department of the Interior
National Park Service

Wage Rate Factor Analysis

Park: Martin Van Buren National Park
Project Name: Visitor Center, Shop and Open Exhibit - Option C Linear
Published Market Center: Albany, NY
Project County: Columbia County, NY
BLS Wage Rate City/Town: Albany-Schenectady-Troy, NY

Date Updated: 5/12/2022
Estimate Data Source: RS Means 2022 BCCD
Market Center Adjustment Factor: 108.50%
Estimator: Saifon Bips

Trade	2022 Estimate Direct Wage Rate	Market Adjusted Wage Rate for Albany, NY	Davis Bacon Wages w/Fringe Wage Class Columbia County, NY	Wage Difference	Approximate Wage Adjustment Factor	BLS Prevailing Wages Albany-Schenectady-Troy, NY	Fringe Allowance 40% Applied to BLS Wage	Wage Difference	Approximate Wage Adjustment Factor
Mix of some of the anticipated trades									
Common Building Laborers	$45.60	$49.48	$49.90	$0.42	0.86%	$24.80	$9.92	-$14.76	-29.83%
Bricklayers	$55.25	$59.95	$91.94	$31.99	53.37%	$34.38	$13.75	-$11.81	-19.70%
Carpenters	$56.30	$61.09	$60.45	-$0.64	-1.04%	$27.54	$11.02	-$22.53	-36.88%
Cement Finishes	$53.15	$57.67	$54.84	-$2.83	-4.90%	$36.03	$14.41	-$7.23	-12.54%
Electricians	$66.20	$71.83	$60.66	-$11.17	-15.55%	$32.07	$12.83	-$26.93	-37.50%
Equipment Operator; Medium Equipment	$60.40	$65.53	$79.28	$13.75	20.98%	$35.56	$14.22	-$15.76	-24.04%
Painters	$47.80	$51.86	$47.57	-$4.29	-8.28%	$22.23	$8.89	-$20.74	-39.99%
Plumbers	$69.80	$75.73	$65.08	-$10.65	-14.07%	$39.45	$15.78	-$20.50	-27.07%
Sheet Metal Workers	$61.85	$67.11	N/A			$28.63	$11.45	-$27.02	-40.27%
Truck Drivers, Heavy	$53.05	$57.56	N/A			$26.43	$10.57	-$20.56	-35.71%
Avg Wage & Adjustment Factor	$56.94	$61.78	$63.72	$2.07	3.92%	$30.71		-$18.78	-30.35%

Conclusion:

Based upon the above analysis of 3 sources for wage rates, Davis Bacon wage rates adjusted for Columbia County, NY area will form the basis of this estimate. RS Means wages are on average 3.92% lower with BLS being 30.35% lower.

United States Department of the Interior
National Park Service
Class C Construction Cost Estimate

PROJECT COST SUMMARY

Project: Visitor Center, Shop and Open Exhibit - Option C Linear
Park: Martin Van Buren National Park
Alpha: MAVA
PMIS: 214672/214673

Estimate By: Saifon Bips
Date: 05/12/22

Reviewed By: Thomas Joseph
Date: 05/12/22

Item No.	Description	Quantity	Unit	Cost/Unit	Total
1	MAVA Visitor Center, shop & open exhibit	6,754	SF	$414.54	$2,799,787
	(Admin bldg. 4,985 sf, shop 938 sf, open exhibit/ out door program space 831 sf, site work 50,000 sf)				
	Subtotal Direct Construction Costs				**$2,799,787**
	Value of Government Furnished Property (GFP) Included in Direct Cost (see footnote)*				**$0**
				Direct Cost Subtotal without GFP	**$2,799,787**
	Published Location Factor	10.21%			$285,858
	Remoteness Factor	5.00%			$139,989
	Federal Wage Rate Factor - on 60% of Direct Cost	3.92%			$65,868
	State & Local Taxes - on 40% of Direct Cost	8.00%			$89,593
	Design Contingency	20.00%			$559,957
	Total Direct Construction Costs				**$3,941,053**
	Standard General Conditions	15.00%			$591,158
	Government General Conditions	5.00%			$197,053
	Historic Preservation Factor	0.00%			$0
	Subtotal NET Construction Cost				**$4,729,264**
	Overhead	10.00%			$472,926
	Profit	10.00%			$472,926
	Estimated NET Construction Cost				**$5,675,116**
	Bonds & Permits	3.00%			$170,253
	Contracting Method Adjustment	5.00%			$283,756
	Inflation Escalation	26	Months	5.00%	$683,408
	Total Estimated NET Cost of Construction				**$6,812,534**

* GFP costs are only used when the Government pre-purchases items, or provides other materials out of Government inventory, to be installed by contractor. Adjustments and Markup on GFP only include Inflation Escalation; No other adjustment factors or O&P markup have been applied.

United States Department of the Interior
National Park Service
Class C Construction Cost Estimate

LINE ITEM COST SUMMARY

Project:	**Visitor Center, Shop and Open Exhibit - Option C Linear**	**Estimate By:**	Saifon Bips
Park:	**Martin Van Buren National Park**	**Date:**	05/12/22
Park Alpha:	**MAVA**	**Reviewed By:**	Thomas Joseph
PMIS Number:	**214672/214673**	**Date:**	05/12/22
Summary Item 1	**MAVA Visitor Center, shop & open exhibit**	**Total Cost:**	$2,799,787

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
A10	**FOUNDATIONS**					
A1010	Foundation piles 8'-0 ft					
A1010	Building foundation system (admin + shop) - assume every 100 sf	59	EA	$ 1,200.00	$71,076	
A1030	Slab On Grade:					
A1030	Slab on grade w/ reinf & waterproofing _ assume 6" tk	4989	SF	$ 8.50	$42,407	
A1030	Perimeter foundation drainage	150	LF	$ 25.00	$3,750	
					$0	
	SUBTOTAL FOUNDATIONS	**6754**	**SF**	**$17.36**	**$117,233**	

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
A20	**BASEMENT CONSTRUCTION**					
	N/A					
	SUBTOTAL FOUNDATIONS	**6754**	**SF**	**$0.00**	**$0**	

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
B10	**SUPERSTRUCTURE**					
B1010	Heavy timber trusses/ structure - Admin	4985	SF	$ 26.50	$132,103	
B1010	Heavy timber trusses/ structure - Shop	938	SF	$ 26.50	$24,857	
B1010	Heavy timber trusses/ structure - Open exhibit	831	SF	$ 26.50	$22,022	
B1010	Fire proofing - Admin & Shop	6754	SF	$ 1.50	$10,131	
	SUBTOTAL SUPERSTRUCTURE	**6754**	**SF**	**$28.00**	**$189,112**	

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
B20	**EXTERIOR CLOSURE**					
B2010	Wood siding (arch bldg.) at admin + shop	7620	SF	$ 21.84	$166,421	
B2010	Stone clad wall (feature wall/ arch bldg.) at admin	3060	SF	$ 34.95	$106,947	
B2010	Metal frame sub base at admin + shop	10680	SF	$ 10.00	$106,800	
B2010	Moisture protection & insulation	10680	SF	$ 3.50	$37,380	
B2010	Alum. Window 3'-0" w x 6'-0" h	14	EA	$ 1,770.00	$24,780	
B2010	Alum. Window 6'-7" w x 6'-0" h	4	EA	$ 3,703.20	$14,813	
B2010	Alum. Glass Door_3'-0" w x 7'-0" h	2	EA	$ 3,520.00	$7,040	
B2010	Alum. Glass Doors_6'-0" w x 7'-0" h	1	PR	$ 7,040.00	$7,040	
B2010	Hardware for Alum. Glass Door	4	SET	$ 750.00	$3,000	
	SUBTOTAL EXTERIOR CLOSURE	**6754**	**EA**	**$ 70.21**	**$474,221**	

United States Department of the Interior
National Park Service
Class C Construction Cost Estimate

LINE ITEM COST SUMMARY

Project:	**Visitor Center, Shop and Open Exhibit - Option C Linear**	**Estimate By:**	Saifon Bips
Park:	**Martin Van Buren National Park**	**Date:**	05/12/22
Park Alpha:	**MAVA**	**Reviewed By:**	Thomas Joseph
PMIS Number:	**214672/214673**	**Date:**	05/12/22

Summary Item 1 **MAVA Visitor Center, shop & open exhibit** **Total Cost:** $2,799,787

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
B30	**ROOFING**					
B3010	Standing seam roof (arch bldg.) - admin + shop + open exhibit	5650	SF	$ 12.00	$67,805	
B3010	Standing seam roof (arch bldg.) - admin covered storage	4747	SF	$ 12.00	$56,964	
B3010	Metal framing sub base at admin + shop + open exhibit + admin covered storage	10397	SF	$ 12.00	$124,769	
B3010	Moisture protection & insulation	15144	SF	$ 3.50	$53,005	
	SUBTOTAL ROOFING	**6754**	**SF**	**$ 44.79**	**$302,543**	

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
C10	**INTERIOR CONSTRUCTION**					
C1010	Interior gypsum wall bd - admin + shop assume 10' HT w/ insulation	4264	SF	$ 9.50	$40,506	
C1010	Pocket wall for acordian door	351	SF	$ 20.00	$7,017	
C1010	Interior glass wall w/ wood frame assume 10' HT	536	SF	$ 65.00	$34,841	
C1010	Interior office door _3'-0" x 7'-0" wd/ glass	13	EA	$ 1,150.00	$14,950	
C1010	Interior bathroom door_3'-0" x 7'-0"	4	EA	$ 1,000.00	$4,000	
C1010	Pivot conference room divider assume 8' HT	25	LF	$ 650.00	$16,250	
C1010	Bathroom mirror - 4'-0" x 5'-9"	1	EA	$ 1,495.00	$1,495	
C1010	Bathroom mirror - 4'-0" x 15'-0"	1	EA	$ 3,900.00	$3,900	
C1010	Allow for toilet accessories i.e. soap dispenser, hand dryer etc.	8	Ea.	$ 500.00	$4,000	
C1010	Misc. repair & protection	5923	SF	$ 0.50	$2,962	
	SUBTOTAL INTERIOR CONSTRUCTION	**5923**	**SF**	**$ 21.93**	**$129,921**	

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
C20	**STAIRCASES**					
	N/A			$ -	$0	
	SUBTOTAL STAIRCASES				**$0**	

United States Department of the Interior
National Park Service
Class C Construction Cost Estimate

LINE ITEM COST SUMMARY

Project:	**Visitor Center, Shop and Open Exhibit - Option C Linear**	**Estimate By:**	Saifon Bips
Park:	**Martin Van Buren National Park**	**Date:**	05/12/22
Park Alpha:	**MAVA**	**Reviewed By:**	Thomas Joseph
PMIS Number:	**214672/214673**	**Date:**	05/12/22

Summary Item 1 **MAVA Visitor Center, shop & open exhibit** **Total Cost:** $2,799,787

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
C30	**INTERIOR FINISHES**					
C3010	Kitchen cabinet 2'-2" bottom	37	LF	$ 450.00	$16,446	
C3010	Built in pantry closet_2'-6" w x 8' HT	7	LF	$ 680.00	$4,970	
C3010	Kitchen counter top_assume butcher block counter top 1-3/4" tk	79	SF	$ 65.00	$5,131	
C3010	Built in storage shelves_1'-7" full height	73	LF	$ 275.00	$20,101	
C3010	Floor tile assume non slip porcelain tile - admin + shop	447	SF	$ 22.00	$9,836	
C3010	VCT flooring - admin pantry	475	SF	$ 7.50	$3,563	
C3010	Sheet vinyl/ Marmoleum (Forbo) flooring - admin + shop	4053	SF	$ 25.00	$101,326	
C3010	Carpet tile - admin	693	SF	$ 5.00	$3,464	
C3010	Bathroom countertop - admin 2'-0" x 5'-9"	14	SF	$ 75.00	$1,051	
C3010	Bathroom countertop - shop 2'-0" x 15'-0"	37	SF	$ 75.00	$2,741	
C3010	Bathroom stall - shop	8	EA	$ 300.00	$2,400	
C3010	Bathroom accessories - admin	1	SET	$ 300.00	$300	
C3010	Bathroom accessories - shop	8	SET	$ 300.00	$2,400	
C3010	Bathroom mirror - 4'-0" x 5'-9"	1	EA	$ 750.00	$750	
C3010	Bathroom mirror - 4'-0" x 15'-0"	1	EA	$ 1,500.00	$1,500	
C3010	Interior wall painting	1688	SF	$ 1.25	$2,110	
C3010	Interior door & frame painting	17	EA	$ 150.00	$2,550	
	SUBTOTAL INTERIOR FINISHES	**5923**	**SF**	**$ 30.50**	**$180,639**	

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
D10	**CONVEYING SYSTEMS**					
	N/A			$ -	$0	
	SUBTOTAL CONVEYING SYSTEMS				**$0**	

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
D20	**PLUMBING**					
D2010	Plumbing fixtures (admin + shop) :					
D2010	Water closets	6	EA	$ 1,350.00	$8,100	
D2010	Lavatories	6	EA	$ 1,250.00	$7,500	
D2010	Pantry sinks	1	EA	$ 1,175.00	$1,175	
D2010	Floor drain - allow	2	EA	$ 550.00	$1,100	
D2010	Piping (admin + shop) :					
D2010	Sanitary/vent piping - allow	375	LF	$ 72.50	$27,188	
D2010	Domestic water piping - allow	650	LF	$ 64.00	$41,600	
D2010	Roof drain & penetration - allow	5	EA	$ 550.00	$2,750	
D2010	Roof vent & penetration - allow	20	EA	$ 550.00	$11,000	
D2010	CW/HW hose bibb - allow	2	EA	$ 250.00	$500	
	SUBTOTAL PLUMBING	**5923**	**SF**	**$ 17.04**	**$100,913**	

United States Department of the Interior
National Park Service
Class C Construction Cost Estimate

LINE ITEM COST SUMMARY

Project:	**Visitor Center, Shop and Open Exhibit - Option C Linear**	**Estimate By:**	Saifon Bips
Park:	**Martin Van Buren National Park**	**Date:**	05/12/22
Park Alpha:	**MAVA**	**Reviewed By:**	Thomas Joseph
PMIS Number:	**214672/214673**	**Date:**	05/12/22

Summary Item 1 **MAVA Visitor Center, shop & open exhibit** **Total Cost:** $2,799,787

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
D30	**HVAC**					
D3010	Option 3 - traditional includes followings - admin + shop allow	5923	SF	$ 45.00	$266,535	
	• Heating and cooling via water source heat pumps					
	• Dedicate outside air system (DOAS)					
	• Full conditioning w/ natural ventilation (includes sensors at windows RP@RT disable AC)					
	SUBTOTAL HVAC	**5923**	**SF**	**$ 45.00**	**$266,535**	

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
D40	**FIRE PROTECTION**					
D4010	Install new sprinkler system	5923	SF	$ 5.50	$32,577	
	SUBTOTAL FIRE PROTECTION	**5923**	**SF**	**$ 5.50**	**$32,577**	

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
D50	**ELECTRICAL**					
D5010	Allow for new electrical system incl. power distribution lighting, tele/data system	5923	SF	$ 40.00	$236,920	
	SUBTOTAL ELECTRICAL	**5923**	**SF**	**$ 40.00**	**$236,920**	

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
E10	**EQUIPMENT**					
	N/A				$0	
	SUBTOTAL EQUIPMENT	**5923**	**SF**	**$ -**	**$0**	

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
E20	**FURNISHINGS**					
	N/A				$0	
	SUBTOTAL FURNISHINGS	**5923**	**SF**		**$0**	

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
F10	**SPECIAL CONSTRUCTION**					
F1010	Waysides - XS (reuse existing)					
F1010	Magical Glass - SM/ Magic Glass (About this Building, African American Story, Distant View)	3	EA	10,000.00	$30,000	
F1010	About the Orchard - SM	1	EA	30,000.00	$30,000	
F1010	Native American Story - M	1	EA	30,000.00	$30,000	
F1010	Interior exhibit galler (nursery) - XL	1	EA	200,000.00	$200,000	
	SUBTOTAL SPECIAL CONSTRUCTION	**5923**	**SF**		**$290,000**	

United States Department of the Interior
National Park Service
Class C Construction Cost Estimate

LINE ITEM COST SUMMARY

Project:	**Visitor Center, Shop and Open Exhibit - Option C Linear**	**Estimate By:**	Saifon Bips
Park:	**Martin Van Buren National Park**	**Date:**	05/12/22
Park Alpha:	**MAVA**	**Reviewed By:**	Thomas Joseph
PMIS Number:	**214672/214673**	**Date:**	05/12/22
Summary Item 1	**MAVA Visitor Center, shop & open exhibit**	**Total Cost:**	$2,799,787

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
F20	**SELECTIVE BUILDING DEMOLITION**					
				$ -		
F2010	Demolition of existing visitor center & hauling debris off site	5322	SF	$ 12.00	$63,864	
	SUBTOTAL SELECTIVE BUILDING DEMOLITION	**5322**	**SF**	**$ 12.00**	**$63,864**	

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
G10	**SITE PREPARATION**					
G1010	Site Clearing :					
G1010	Remove existing underground utilities	1	LS	$ 6,500.00	$6,500	
G1010	Grading & site preparation - admin + shop	50000	SF	$ 0.50	$25,000	
	SUBTOTAL SITE PREPARATION	**50000**	**SF**	**$ 0.63**	**$31,500**	

Uniformat II WBS	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
G20	**SITE IMPROVEMENTS**					
G2050	New pedestrian paths - option A concrete paver, 1400 LF	5600	SF	15.50	$86,800	
G2050	New hedgerow plants	120	EA	30.00	$3,600	
G2050	Native plant garden	3,000	SF	5.00	$15,000	
G2050	Remove trees	20	EA	630.00	$12,600	
G2050	New trees	20	EA	250.00	$5,000	
G2050	New lawn	24000	SF	1.50	$36,000	
G2050	Renovate ex lawn	100000	SF	0.15	$15,000	
G2050	Misc. Site furnishing	1	LS	10,000.00	10,000.00	
	SUBTOTAL SITE IMPROVEMENTS	**50000**	**SF**	**$ 3.68**	**$184,000**	

United States Department of the Interior
National Park Service
Class C Construction Cost Estimate

LINE ITEM COST SUMMARY

Project:	**Visitor Center, Shop and Open Exhibit - Option C Linear**	**Estimate By:**	Saifon Bips
Park:	**Martin Van Buren National Park**	**Date:**	05/12/22
Park Alpha:	**MAVA**	**Reviewed By:**	Thomas Joseph
PMIS Number:	**214672/214673**	**Date:**	05/12/22

Summary Item 1 **MAVA Visitor Center, shop & open exhibit** **Total Cost:** $2,799,787

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
G30	**SITE CIVIL/MECHANICAL UTILITIES**					
G3010	Water line (option - replace systems - multiple sites) includes followings ;					
G3010	4" PVC - allow	115	LF	$ 75.00	$8,625	
G3010	Water well - allow w/ excavation	1	EA	$ 10,000.00	$10,000	
G3010	Pipe excavation	51	CY	$ 30.00	$1,533	
G3010	DGA Back fill beneath pipes, 6" tk	4	CY	$ 55.00	$234	
G3010	Pipe back fill with excavated soil	51	CY	$ 30.00	$1,530	
G3020	Sanitary line (option - replace system - multiple sites) includes followings ;					
G3020	4" PVC - allow	20	LF	$ 100.00	$2,000	
G3020	Clean out - allow	1	EA	$ 550.00	$550	
G3020	300 gal. septic tank	1	EA	$ 850.00	$850	
G3020	1" PVC (Leech field)	180	LF	$ 45.00	$8,100	
G3020	88 gal. lift station	1	EA	$ 4,400.00	$4,400	
G3020	Excavation for septic tank	3	CY	$ 30.00	$80	
G3020	Excavation for lift station	4	CY	$ 30.00	$107	
G3020	Pipe excavation	89	CY	$ 30.00	$2,667	
G3020	DGA Back fill beneath pipes, 6" tk	7	CY	$ 55.00	$407	
G3020	Pipe back fill with excavated soil	90	CY	$ 30.00	$2,687	
G3020	Septic tank & lift station back fill with excavated soil	8	CY	$ 30.00	$233	
G3030	DGA back fill beneath septic tank & lift station, 6" tk	1	CY	$ 30.00	$18	
G3030	Storm water management including following;					
G3030	Storm line	150	LF	$ 110.00	$16,500	
G3030	48" HDPE for detention basin	480	LF	$ 150.00	$72,000	
G3030	Allow rain water harvesting tank	1	LS	$ 12,500.00	$12,500	
G3030	Excavation for detention basin	241	CY	$ 30.00	$7,222	
G3030	DGA fill beneath pipes, 12" tk	30	CY	$ 55.00	$1,655	
G3030	Back fill with excavated soil	193	CY	$ 35.00	$6,762	
	SUBTOTAL SITE MECHANICAL UTILITIES	**50000**	**SF**	**$ 3.21**	**$160,661**	

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
G40	**SITE ELECTRICAL UTILITIES**					
G2010	Option - reroute underground - multiple sites (power & tele com line reuse/ upgrade existing) includes followings;					
G2010	Handhole	2	EA	$ 1,000.00	$2,000	
G2010	Concrete duct bank	445	LF	$ 45.00	$20,025	
G2010	Utility pole - allow	1	EA	$ 2,125.00	$2,125	
G2010	Site Lighting - allow	1	LS	$ 15,000.00	$15,000	
	SUBTOTAL SITE ELECTRICAL UTILITIES	**50000**	**SF**	**$ 0.78**	**$39,150**	

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
TOTAL COST - MAVA Visitor Center, shop & open exhibit		**6754**	**SF**	**$ 414.54**	**$2,799,787**	

United States Department of the Interior
National Park Service
Class C Construction Cost Estimate

BASIS OF ESTIMATE

PROJECT INFORMATION

Project:	Maintenance Building - Option C Linear
Park:	Martin Van Buren National Park
Park Alpha:	MAVA
PMIS Number:	214672/214673
Estimate Date:	5/12/2022
Prepared By:	Saifon Bips
Company:	Axias NY LLC
Address:	197 Route 18 South, Suite 200
City, State Zip:	East Brunswick, NJ -08816
Phone:	914-837-1062

BACKGROUND SUPPORTING MATERIAL (Scope of Work):

The scope of work includes installation of steel trusses and structure including slab on grade which supports metal stud wall all around for maintenance building. An exterior enclosure of these buildings is assumed to be covered with aluminum metal panel (arch skin) and wood siding (arch building) at exterior wall as per the schematic building massing option C. Roofing of maintenance building and covered garage is to be covered with corrugated metal with metal frame sub base as per schematic building massing option C as well. There is no moisture protection and insulation for the covered garage. The estimate was prepared from conceptual documents which were prepared by David Brody Bond Architects presentation package and scaled drawings including cost option sheet which was received by Axias on March 25th, 2022 and April 1st, 2022 and May 6th, 2022 respectively. Besides the presentation meeting, Axias also has 2 separate meetings with the design team to ensure that all the scope was picked up at this early stage in the design.

SOURCE OF COST DATA:

1. Estimator Judgement - many of the prices used are the result of first principles estimating - a determination of the actual time required to perform the activity using local labor rates, plus material costs that reflect the typically small quantities required, plus equipment rental costs as applicable. RS Means is used only as a general guide, and the WBS reference at each line item indicates the area of the price book used as the general guide.
2. Davis Bacon Wage Rates - New York State, Columbia County - rates inflated where necessary using Bureau of Labor Statistics Cost Indexes.
3. RS Means 2022 Building Construction Cost Data, 80th Annual Edition
4. Historic cost data for similar projects/structures and then adjusted to reflect current scope, size, location etc.

ESTIMATE ASSUMPTIONS:

Estimate assumes that the project will be carried out under a single contract. Assumed that the approximate start date is January 2024 with a 12 months duration. Estimate assumes it will be competitively bid to at least 3 contractor's. All quantities have been advised by the drawings issued by the Davis Brody Bond design team. Estimate assumes no hazardous material abatement is required. Estimate assumes normal working hours only. Estimate excludes any furniture cost especially to offices, exhibits etc.

MAJOR CHANGES FROM PREVIOUS ESTIMATE:

N/A

United States Department of the Interior
National Park Service
Class C Construction Cost Estimate

BASIS OF ESTIMATE

PROJECT INFORMATION

Project:	Maintenance Building - Option C Linear
Park:	Martin Van Buren National Park
Park Alpha:	MAVA
PMIS Number:	214672/214673
Estimate Date:	5/12/2022

DESCRIPTION OF MARK-UP & ADD-ONS:

Location Factor:	10.21%	Albany, NY is the closet CCI which is 102.1
Remoteness Factor:	5.00%	Site is at least 25 miles from nearest CCI plus some small winding road access - this should be at least 5%
Wage Rate Factor:	3.92%	Wage rate analysis indicated that Davis Bacon rates were lower than RS Means rates adjusted for location. So kept higher rates.
State & Local Taxes:	8.00%	Combined State & Local Taxes
Design Contingency:	20.00%	Feasibility/Concept Study stage documents. However, narrative, sketches and existing conditions photos provided by the design team helps reduce the lack of information. Suggest 20% allowance.
Standard. General Conditions:	15.00%	Relatively simple project, however we would recommend higher allowance to cover for site staging area, site protection due to historical nature of the building.
Government General Conditions:	5.00%	Middle of range percentage due to potential phasing and regular liaising with NPS staff.
Historic Preservation Factor:	0.00%	Assumed no historical preservation is necessary.
Contractor Overhead:	10.00%	Allowance - based upon research for area
Contractor Profit:	10.00%	Allowance - based upon research for area
Bonds and Permits:	3.00%	Allowance - based upon research for area
Contracting Method Adjustment:	5.00%	Axias advised this will be competitive bid with negotiating price with best technically-qualified contractor. Percentage included to cover limited competition due to few contractors in the area able to perform this type of project.
Annual Inflation Escalation Factor:	5.00%	Axias researches various published articles on data such as ENR, Turner, BLS etc. and determined a fair and reasonable factor for this location and nature of work.
Time Until Project Midpoint (Months)	26	Projected midpoint of construction as June 2024. Therefore approximately 26 months from date of this estimate.

OTHER COMMENTS:

N/A

United States Department of the Interior
National Park Service

Wage Rate Factor Analysis

Park: Martin Van Buren National Park
Project Name: Maintenance Building - Option C Linear
Published Market Center: Albany, NY
Project County: Columbia County, NY
BLS Wage Rate City/Town: Albany-Schenectady-Troy, NY

Date Updated: 5/12/2022
Estimate Data Source: RS Means 2022 BCCD
Market Center Adjustment Factor: 108.50%
Estimator: Saifon Bips

Trade	2022 Estimate Direct Wage Rate	Market Adjusted Wage Rate for Albany, NY	Davis Bacon Wages w/Fringe Wage Class Columbia County, NY	Wage Difference	Approximate Wage Adjustment Factor	BLS Prevailing Wages Albany-Schenectady-Troy, NY	Fringe Allowance 40% Applied to BLS Wage	Wage Difference	Approximate Wage Adjustment Factor
Mix of some of the anticipated trades									
Common Building Laborers	$45.60	$49.48	$49.90	$0.42	0.86%	$24.80	$9.92	-$14.76	-29.83%
Bricklayers	$55.25	$59.95	$91.94	$31.99	53.37%	$34.38	$13.75	-$11.81	-19.70%
Carpenters	$56.30	$61.09	$60.45	-$0.64	-1.04%	$27.54	$11.02	-$22.53	-36.88%
Cement Finishes	$53.15	$57.67	$54.84	-$2.83	-4.90%	$36.03	$14.41	-$7.23	-12.54%
Electricians	$66.20	$71.83	$60.66	-$11.17	-15.55%	$32.07	$12.83	-$26.93	-37.50%
Equipment Operator; Medium Equipment	$60.40	$65.53	$79.28	$13.75	20.98%	$35.56	$14.22	-$15.76	-24.04%
Painters	$47.80	$51.86	$47.57	-$4.29	-8.28%	$22.23	$8.89	-$20.74	-39.99%
Plumbers	$69.80	$75.73	$65.08	-$10.65	-14.07%	$39.45	$15.78	-$20.50	-27.07%
Sheet Metal Workers	$61.85	$67.11	N/A			$28.63	$11.45	-$27.02	-40.27%
Truck Drivers, Heavy	$53.05	$57.56	N/A			$26.43	$10.57	-$20.56	-35.71%
Avg Wage & Adjustment Factor	$56.94	$61.78	$63.72	$2.07	3.92%	$30.71		-$18.78	-30.35%

Conclusion:

Based upon the above analysis of 3 sources for wage rates, Davis Bacon wage rates adjusted for Columbia County, NY area will form the basis of this estimate. RS Means wages are on average 3.92% lower with BLS being 30.35% lower.

United States Department of the Interior
National Park Service
Class C Construction Cost Estimate

PROJECT COST SUMMARY

Project: Maintenance Building - Option C Linear
Park: Martin Van Buren National Park
Alpha: MAVA
PMIS: 214672/214673

Estimate By: Saifon Bips
Date: 05/12/22

Reviewed By: Thomas Joseph
Date: 05/12/22

Item No.	Description	Quantity	Unit	Cost/Unit	Total
1	MAVA Visitor Center - Maintenance	7,920	SF	$190.92	$1,512,103
	(Maintenance building 3,100 sf, covered storage 4,820 sf, outdoor yard 5,100 sf, concrete sidewalk 2040 sf (510 lf)				
	Subtotal Direct Construction Costs				**$1,512,103**
	Value of Government Furnished Property (GFP) Included in Direct Cost (see footnote)*				**$0**
	Direct Cost Subtotal without GFP				**$1,512,103**
	Published Location Factor	10.21%			$154,386
	Remoteness Factor	5.00%			$75,605
	Federal Wage Rate Factor - on 60% of Direct Cost	3.92%			$35,574
	State & Local Taxes - on 40% of Direct Cost	8.00%			$48,387
	Design Contingency	20.00%			$302,421
	Total Direct Construction Costs				**$2,128,476**
	Standard General Conditions	15.00%			$319,271
	Government General Conditions	5.00%			$106,424
	Historic Preservation Factor	0.00%			$0
	Subtotal NET Construction Cost				**$2,554,171**
	Overhead	10.00%			$255,417
	Profit	10.00%			$255,417
	Estimated NET Construction Cost				**$3,065,006**
	Bonds & Permits	3.00%			$91,950
	Contracting Method Adjustment	5.00%			$153,250
	Inflation Escalation	26	Months	5.00%	$369,094
	Total Estimated NET Cost of Construction				**$3,679,300**

* GFP costs are only used when the Government pre-purchases items, or provides other materials out of Government inventory, to be installed by contractor. Adjustments and Markup on GFP only include Inflation Escalation; No other adjustment factors or O&P markup have been applied.

United States Department of the Interior
National Park Service
Class C Construction Cost Estimate

LINE ITEM COST SUMMARY

Project:	**Maintenance Building - Option C Linear**	**Estimate By:**	Saifon Bips
Park:	**Martin Van Buren National Park**	**Date:**	05/12/22
Park Alpha:	**MAVA**	**Reviewed By:**	Thomas Joseph
PMIS Number:	**214672/214673**	**Date:**	05/12/22
Summary Item 1	**MAVA Visitor Center - Maintenance**	**Total Cost:**	$1,512,103

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
A10	**FOUNDATIONS**					
A1010	Foundation piles 8'-0 ft					
A1010	Building foundation system (maintenance bldg + covered storage) - assume every 100 sf	79	EA	$ 1,200.00	$95,040	
A1030	Slab On Grade:					
A1010	Slab on grade w/ reinf & waterproofing _ assume 6" tk	7920	SF	$ 8.50	$67,320	
A1030	Perimeter foundation drainage	139	LF	$ 15.00	$2,085	
	SUBTOTAL FOUNDATIONS	**7920**	**SF**	**$20.76**	**$164,445**	

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
A20	**BASEMENT CONSTRUCTION**					
	N/A				$0	
	SUBTOTAL BASEMENT CONSTRUCTION	**7920**	**SF**		**$0**	

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
B10	**SUPERSTRUCTURE**					
B1010	Structural Steel including roof truss, misc. connections (maint +. + covered storage)	7920	SF	$ 22.00	$174,240	
B1010	Fire proofing	7920	SF	$ 1.50	$11,880	
B1010	Allow supports/pockets/grouting on the bearing wall	40	EA	$ 850.00	$34,000	
	SUBTOTAL SUPESTRUCTURE	**7920**	**SF**	**$27.79**	**$220,120**	

United States Department of the Interior
National Park Service
Class C Construction Cost Estimate

LINE ITEM COST SUMMARY

Project: Maintenance Building - Option C Linear
Park: Martin Van Buren National Park
Park Alpha: MAVA
PMIS Number: 214672/214673

Estimate By: Saifon Bips
Date: 05/12/22
Reviewed By: Thomas Joseph
Date: 05/12/22

Summary Item 1 MAVA Visitor Center - Maintenance

Total Cost: $1,512,103

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
B20	**EXTERIOR CLOSURE**					
B2010	Wood siding (arch bldg.) - maintenance	2918	SF	$ 21.84	$63,725	
B2010	Aluminum metal panel (arch skin)	493	SF	$ 40.00	$19,709	
B2010	Heavy gauge metal framing	3411	SF	$ 10.00	$34,105	
B2010	Moisture protection & insulation	3411	SF	$ 3.50	$11,937	
B2010	Alum. Windows 3'-0" w x 6'-0" h	4	EA	$ 1,770.00	$7,080	
B2010	Metal galv door 3'-0" w x 7'-0" h	2	EA	$ 3,950.00	$7,900	
B2010	Metal galv door 6'-0" w x 7'-0" h	1	PR	$ 7,500.00	$7,500	
B2010	Door hardware	3	SET	$ 750.00	$2,250	
	SUBTOTAL EXTERIOR CLOSURE	**2918**	**SF**	**$ 52.85**	**$154,205**	

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
B30	**ROOFING**					
B3010	Standing seam roof - maintenance building	3100	SF	$ 12.00	$37,200	
B3010	Heavy gauge metal framing - maintenane building	3100	SF	$ 12.00	$37,200	
B3010	Moisture protection & insulation	3100	SF	$ 3.50	$10,850	
B3010	Corrugated steel roof - covered storage	4820	SF	$ 10.00	$48,200	
B3010	Heavy gauge metal framing	4820	SF	$ 12.00	$57,840	
	SUBTOTAL ROOFING	**7920**	**SF**	**$ 24.15**	**$191,290**	

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
C10	**INTERIOR CONSTRUCTION**					
C1010	Interior gypsum wall bd - maintenance assume 10' HT w/ insulation	3038	SF	$ 9.50	$28,865	
C1010	Interior office door _3'-0" w x 7'-0" h wd/ glass	1	EA	$ 1,150.00	$1,150	
C1010	Interior bathroom door_3'-0" w x 7'-0" h	2	EA	$ 1,000.00	$2,000	
C1010	Interior metal door_3'-0" w x 7'-0" h	1	EA	$ 1,350.00	$1,350	
C1010	Garage door -assume automatic 9'-0" w x 12'-0" h	3	EA	$ 6,500.00	$19,500	
	SUBTOTAL INTERIOR CONSTRUCTION	**3038**	**SF**	**$ 17.40**	**$52,865**	

United States Department of the Interior
National Park Service
Class C Construction Cost Estimate

LINE ITEM COST SUMMARY

Project:	**Maintenance Building - Option C Linear**	**Estimate By:**	Saifon Bips
Park:	**Martin Van Buren National Park**	**Date:**	05/12/22
Park Alpha:	**MAVA**	**Reviewed By:**	Thomas Joseph
PMIS Number:	**214672/214673**	**Date:**	05/12/22
Summary Item 1	**MAVA Visitor Center - Maintenance**	**Total Cost:**	$1,512,103

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
C20	STAIRCASES					
	N/A			$ -	$0	
	SUBTOTAL STAIRCASES				$0	

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
C30	INTERIOR FINISHES					
C3010	Install new Ceiling	3100	SF	$ 7.50	$23,250	
C3010	Kitchen cabinet 1'-0" w_top	4	LF	$ 360.00	$1,478	
C3010	Kitchen cabinet 2'-2" bottom	4	LF	$ 450.00	$1,848	
C3010	Kitchen counter top assume butcher block counter top 1-3/4" tk	9	SF	$ 65.00	$576	
C3010	Built in storage shelves _1'-7" full height	42	LF	$ 275.00	$11,574	
C3010	Built in storage shelves w/ doors _1'-7" full height	21	LF	$ 275.00	$5,646	
C3010	Floor tile assume non slip porcelain tile	133	SF	$ 22.00	$2,936	
C3010	Wall tile - 4'-0"	164	SF	$ 20.00	$3,285	
C3010	Sealed concrete	3100	SF	$ 2.50	$7,750	
C3010	Carpet tile	245	SF	$ 5.00	$1,224	
C3010	Bathroom accessories	1	SET	$ 500.00	$500	
C3010	Bathroom mirror - 4'-0" x 5'-9"	1	EA	$ 1,495.00	$1,495	
C3010	Interior wall painting	6238	SF	$ 1.25	$7,797	
C3010	Interior door & frame painting	4	EA	$ 250.00	$1,000	
	SUBTOTAL INTERIOR FINISHES	3100	SF	$ 22.70	$70,358	

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
D10	CONVEYING SYSTEMS					
	N/A			$ -	$0	
	SUBTOTAL CONVEYING SYSTEMS				$0	

United States Department of the Interior
National Park Service
Class C Construction Cost Estimate

LINE ITEM COST SUMMARY

Project:	**Maintenance Building - Option C Linear**	**Estimate By:**	Saifon Bips
Park:	**Martin Van Buren National Park**	**Date:**	05/12/22
Park Alpha:	**MAVA**	**Reviewed By:**	Thomas Joseph
PMIS Number:	**214672/214673**	**Date:**	05/12/22
Summary Item 1	**MAVA Visitor Center - Maintenance**	**Total Cost:**	$1,512,103

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
D20	**PLUMBING**					
D2010	Plumbing fixtures (maintenance) :					
D2010	Water closet	1	EA	$ 1,350.00	$1,350	
D2010	Lavatory	1	EA	$ 1,250.00	$1,250	
D2010	Pantry sink	1	EA	$ 1,500.00	$1,500	
D2010	Floor drain - allow	1	EA	$ 550.00	$550	
D2010	Piping (mainteance) :					
D2010	Sanitary/vent piping - allow	100	LF	$ 72.50	$7,250	
D2010	Domestic water piping - allow	150	LF	$ 64.00	$9,600	
D2010	Roof drain & penetration - allow	5	EA	$ 550.00	$2,750	
D2010	Roof vent & penetration - allow	20	EA	$ 550.00	$11,000	
D2010	CW/HW hose bibb - allow	2	EA	$ 250.00	$500	
	SUBTOTAL PLUMBING	**3100**	**SF**	**$ 11.53**	**$35,750**	

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
D30	**HVAC**					
D3010	Option 3 - traditional includes followings - admin + shop allow	3100	SF	$ 45.00	$139,500	
	• Heating and cooling via water souce heat pumps					
	• Dedicate outside air system (DOAS)					
	• Full conditioning w/ natural ventilation (includes sensors at windows RP@RT					
	SUBTOTAL HVAC	**3100**	**SF**	**$ 45.00**	**$139,500**	

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
D40	**FIRE PROTECTION**					
D4010	Install new sprinkler system	3100	SF	$ 5.50	$17,050	
	SUBTOTAL FIRE PROTECTION	**3100**	**SF**	**$ 5.50**	**$17,050**	

United States Department of the Interior
National Park Service
Class C Construction Cost Estimate

LINE ITEM COST SUMMARY

Project:	**Maintenance Building - Option C Linear**	**Estimate By:**	Saifon Bips
Park:	**Martin Van Buren National Park**	**Date:**	05/12/22
Park Alpha:	**MAVA**	**Reviewed By:**	Thomas Joseph
PMIS Number:	**214672/214673**	**Date:**	05/12/22
Summary Item 1	**MAVA Visitor Center - Maintenance**	**Total Cost:**	$1,512,103

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
D50	**ELECTRICAL**					
D5010	Allow for new electrical system incl. power distribution lighting, tele/data system (maintenance bldg + covered storage)	3100	SF	$ 40.00	$124,000	
	SUBTOTAL ELECTRICAL	**3100**	**SF**	**$ 40.00**	**$124,000**	

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
E10	**EQUIPMENT**					
	N/A				$0	
	SUBTOTAL EQUIPMENT	**0**	**SF**		**$0**	

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
E20	**FURNISHINGS**					
	N/A				$0	
	SUBTOTAL FURNISHINGS	**0**	**SF**		**$0**	

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
F10	**SPECIAL CONSTRUCTION**					
	N/A			$ -	$0	
	SUBTOTAL SPECIAL CONSTRUCTION	**0**	**SF**		**$0**	

United States Department of the Interior
National Park Service
Class C Construction Cost Estimate

LINE ITEM COST SUMMARY

Project:	**Maintenance Building - Option C Linear**	**Estimate By:**	Saifon Bips
Park:	**Martin Van Buren National Park**	**Date:**	05/12/22
Park Alpha:	**MAVA**	**Reviewed By:**	Thomas Joseph
PMIS Number:	**214672/214673**	**Date:**	05/12/22
Summary Item 1	**MAVA Visitor Center - Maintenance**	**Total Cost:**	$1,512,103

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
F20	**SELECTIVE BUILDING DEMOLITION**					
					$0	
F2010	Demolition of exisiting maintenance building & hauling debris off site	4155	SF	$ 12.00	$49,860	
					$0	
	SUBTOTAL SELECTIVE BUILDING DEMOLITION	**4155**	**SF**		**$49,860**	

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
G10	**SITE PREPARATION**					
G1010	Remove existing under ground utilities	1	LS	$ 6,526.00	$6,526	
G1010	Remove existing asphalt - parking area 2	29150	SF	$ 0.75	$21,863	
G1010	Grading & site preparation - admin + shop	29500	SF	$ 0.50	$14,750	
	SUBTOTAL SITE PREPARATION	**29500**	**SF**	**$ 1.46**	**$43,139**	

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
G20	**SITE IMPROVEMENTS**					
G2050	New asphalt paving_6" tk including sub base	18600	SF	5.75	$106,950	
G2050	Parking lot striping	600	LF	1.50	$900	
G2050	New pedestrian paths, 510 LF - option C stained concrete	2040	SF	11.72	$23,909	
G2050	Path lighting	16	EA	350.00	$5,600	
G2050	Remove trees	10	EA	630.00	$6,300	
G2050	New trees	10	EA	250.00	$2,500	
G2050	New lawn	13100	SF	1.00	$13,100	
G2050	Renovate ex lawn	16750	SF	0.15	$2,513	
G2050	New site sign	1	EA	2,500.00	$2,500	
G2050	Green wall (arch feature wall) 5'-0" h	1090	SF	62.50	$68,125	
	SUBTOTAL SITE IMPROVEMENTS	**29500**	**SF**	**$ 7.88**	**$232,396**	

United States Department of the Interior
National Park Service
Class C Construction Cost Estimate

LINE ITEM COST SUMMARY

Project:	**Maintenance Building - Option C Linear**	**Estimate By:**	Saifon Bips
Park:	**Martin Van Buren National Park**	**Date:**	05/12/22
Park Alpha:	**MAVA**	**Reviewed By:**	Thomas Joseph
PMIS Number:	**214672/214673**	**Date:**	05/12/22
Summary Item 1	**MAVA Visitor Center - Maintenance**	**Total Cost:**	$1,512,103

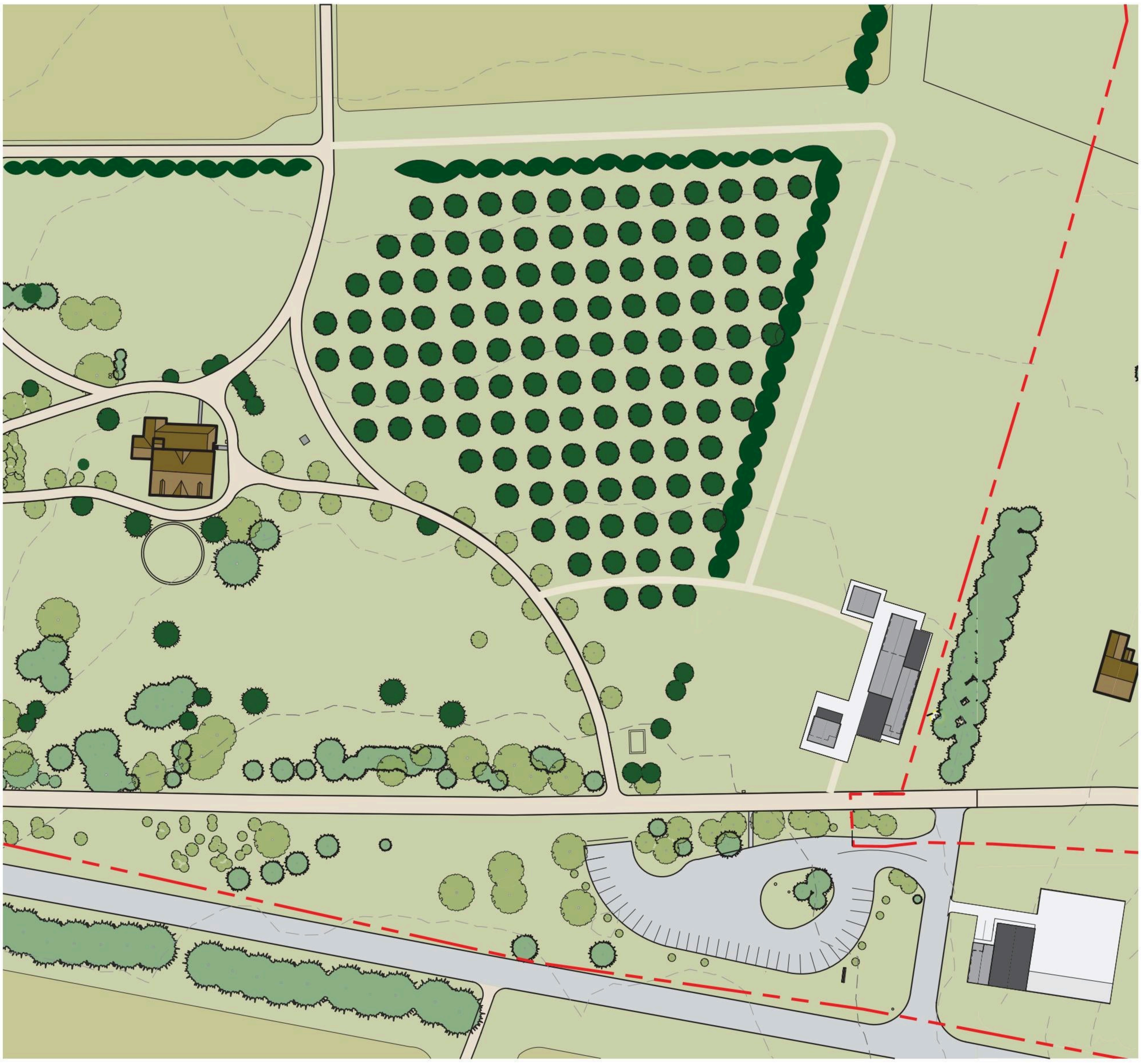
Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
G30	SITE CIVIL/MECHANICAL UTILITIES					
G3010	Water line (option - replace systems - multiple sites)					
G3010	See visitor center					
G3020	Sanitary line (option - replace system - multiple sites)					
G3020	See visitor center					
G3030	Storm water management					
G3030	See visitor center					
	SUBTOTAL SITE CIVIL/MECHANICAL UTILITES	**29500**	**SF**	**$ -**	**$0**	

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
G 40	SITE ELECTRICAL UTILITIES					
G2010	Option - reroute underground - multiple sites (power & tele com line reuse/ upgrade existing) - see visitor center					
G2010	Utility pole - allow	1	EA	$ 2,125.00	$2,125	
G2010	Site Lighting - allow	1	LS	$ 15,000.00	$15,000	
	SUBTOTAL SITE ELECTRICAL UTILITIES	**29500**	**SF**	**$ 0.58**	**$17,125**	

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
TOTAL COST - MAVA Visitor Center - Maintenance		**7920**	**SF**	**$ 190.92**	**$1,512,103**	

7
DESIGN OPTIONS

7.1a Option A - Cluster North



OPTION A : CLUSTER COMPOSITION @ SITE NORTH (SITE 1) AND 9H (SITE 3)

- Administration Building + Visitor on Site 1
- Maintenance Building on Site 3

Opportunities:
- Occupies 2 building sites and separates functions.
- Building location provides openness & view of the park
- Requires modified & new infrastructure
- Maximizes visibility from Old Post Road

Architecture: This composition arranges the program volumes to form a cluster of shifting building blocks, grouped according to their programmatic relationship to one another. The multiple isolated buildings that comprise this option are unified through material and formal expression. The form of the buildings mirrors the shape, simplicity and practicality of farming structures seen around Kinderhook. The buildings blend into their historic environment and add to its rural aesthetic. See Chapter 5, Section 5.2 for details.

Visitor Center + Administration Building (4,135 GSF not including covered outdoor): The two buildings are arranged in a programmatic gradient from private to public. As the building volumes move from north to south, they become more open to the public programmatically and more open to the exterior environment. Visitors and staff experience a seamless connection between the indoor and outdoor spaces. Exterior finishes for all buildings are to be: Outer Skin or "Sleeve": Perforated Metal Panel and Inner Skin or "Block": Solid Metal Panel. Standard interior finishes for Visitor Center and Administration Building include but not limited to: solid core wood doors, VCT in pantry, tile in restrooms and carpet flooring in private spaces, grind and polished concrete floors in public spaces

Maintenance Facility (3,444 GSF not including covered outdoor): designed as a farmyard that hides its everyday operations from the public. The building is made up of two shifting volumes, a double height maintenance workshops volume and a smaller support volume adjoining it.

Exterior finishes for all buildings proposed to be following: Outer Building Skin or "Sleeve": Perforated Metal Panel; Inner Building Skin or "Block": Solid Metal Panel; Maintenance Covered Storage Roof: Corrugated Steel and a 5ft stone wall lining the perimeter of the open maintenance yard, enclosing the facility. Standard interior finishes for Maintenance Facility include but not limited to: hollow metal doors, VCT in pantry, tile in restrooms, carpet flooring in offices, seal unpolished concrete floors in shops and workrooms.

Structural System: The interior of the inner block and outer sleeve of all buildings including the Maintenance Facility is lined with a series of exposed steel roof trusses or portal frames. The building foundation proposed will be a frost-protected shallow foundation. See Chapter 6 for details.

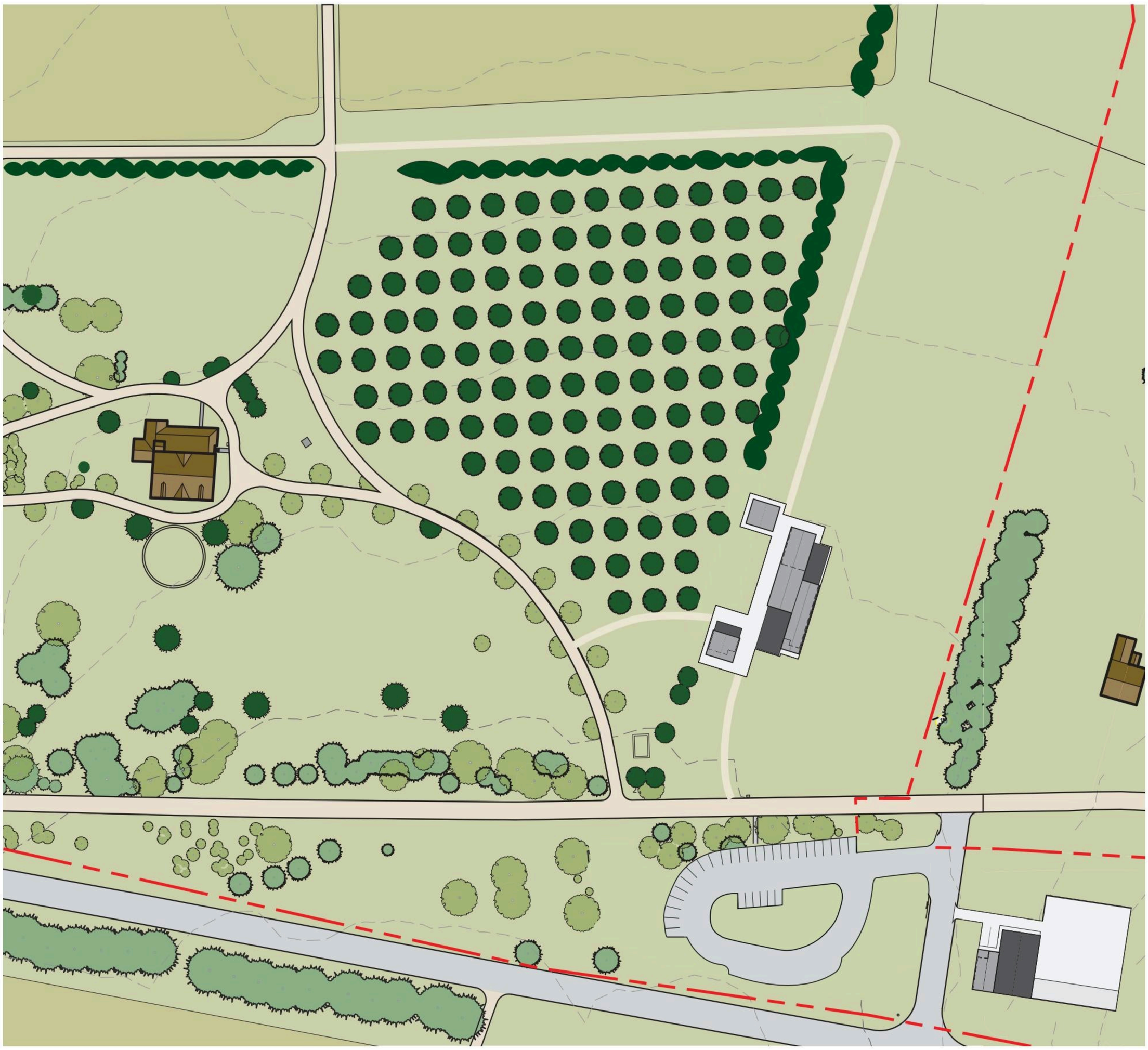
Mechanical Systems: the systems proposed include Heating and Cooling via Water Source Heat Pumps; Dedicated Outside Air System (DOAS) and Full Conditioning w/ natural ventilation (includes sensors at windows to disable AC). This option includes solar photovoltaic (PV) system or solar array on-site as an add-alternate.

Utility Systems:
- Water Utility: Re-use the existing water well located just south of the existing Visitor Center and branch off the existing water line to serve the new Visitor Center and Maintenance Yard.
- Sanitary Service: Re-use the leach field that currently serves the Staff Headquarters/Visitor Center.
- Electric/Telephone Service: Electric and telephone service can be continued to be provided through overhead lines
- Fiber Optic Service: Incoming fiber optic service is proposed to remain as an overhead line that connects into the relocated Visitor Center.
- Stormwater Management: Detention Basin proposed.

Landscape Design:
- The parking area is maintained as it exists with 29 spaces including accessible spaces, bus drop off and bus parking. Access to the maintenance facility from the entry drive coming off Route 9H.
- New paved pedestrian pathways to key destinations on site (kept to a minimum to reduce disturbance to the site) site furnishings and site lighting.
- Selective removal of exiting crabapples, new selective planting including historical replacements, and enhancements around the house and front yard following the landscape treatment recommendations in the 2016 Cultural Landscape Report (CLR), prepared by the Olmsted Center. A small native meadow garden will be located in the open space between the Visitor Contact building and the Outdoor Covered Exhibit structure. All disturbed areas not planted will be lawn.

Interpretation: Include the following interpretive experience elements. See Chapter 6, Section 6.5 for details.
- Small Type 1 (S.1) Kiosk: About the Orchard
- Small Type 2 (S.2) glass panel: Distant View Magic Glass
- Small Type 2 (S.2) glass panel: African American Story Magic Glass
- Small Type 2 (S.2) glass panel: About this Building Magic Glass
- Medium Type (M): Native American Story
- Large Type (L): Orientation Exhibit Pavilion
- Extra Large Type (XL): Interior Exhibit Gallery. The Lindenwald Room 118 (216 SF nursery room) was considered as a potential location for this experience.

7.1b Option B - Cluster Orchard



OPTION B : CLUSTER COMPOSITION @ SITE ORCHARD (SITE 2) AND 9H (SITE 3)

- Administration Building + Visitor on Site 2
- Maintenance Building on Site 3

Opportunities:

- Occupies 2 building sites and separates functions.
- Building location integrated into park and Orchard and minimizes ground disturbance.
- Requires existing & new infrastructure.

Architecture: This composition arranges the program volumes to form a cluster of shifting building blocks, grouped according to their programmatic relationship to one another. The multiple isolated buildings that comprise this option are unified through material and formal expression. The form of the buildings mirrors the shape, simplicity and practicality of farming structures seen around Kinderhook. The buildings blend into their historic environment and add to its rural aesthetic. See Chapter 5, Section 5.2 for details.

Visitor Center + Administration Building (4,135 GSF not including covered outdoor): The two buildings are arranged in a programmatic gradient from private to public. As the building volumes move from north to south, they become more open to the public programmatically and more open to the exterior environment. Visitors and staff experience a seamless connection between the indoor and outdoor spaces. Exterior finishes for all buildings are to be: Building Skin or "Sleeve": Wood Slat Panels and Inner Building Skin or "Block": Solid Wood Panels. Standard interior finishes for Visitor Center and Administration Building include but not limited to: solid core wood doors, VCT in pantry, tile in restrooms and carpet flooring in private spaces, grind and large format VCT in public spaces.

Maintenance Facility (3,444 GSF not including covered outdoor): designed as a farmyard that hides its everyday operations from the public. The building is made up of two shifting volumes, a double height maintenance workshops volume and a smaller support volume adjoining it. Exterior finishes proposed to be following: Outer Building Skin or "Sleeve": Wood Slat Panels; Inner Building Skin or "Block": Solid Wood Panels; Maintenance Covered Storage Roof: Corrugated Steel and a 5ft stone wall lining the perimeter of the open maintenance yard, enclosing the facility. Standard interior finishes for Maintenance Facility include but not limited to: hollow metal doors, VCT in pantry, tile in restrooms, carpet flooring in offices, seal unpolished concrete floors in shops and workrooms.

Structural System: The interior of the inner block and outer sleeve of the Visitor Center and Administration Building is lined with a series of exposed engineered wood roof trusses or portal frames and the Maintenance Facility is lined with steel frames. The building foundation proposed will be traditional method of building down below frost depth. See Chapter 6 for details.

Mechanical Systems: the systems proposed include Hydronic Heating via Fuel Oil Boiler, Natural Ventilation plus Select Exhaust Fans and Full Conditioning w/ natural ventilation (includes sensors at windows to disable AC). This option includes solar photovoltaic (PV) system or solar array off-site as an add-alternate.

Utility Systems:

- Water Utility: Re-use the existing water well located just south of the existing Visitor Center and branch off the existing water line to serve the new Visitor Center and Maintenance Yard. As an alternative, two separate water wells that serve the Visitor Center and Maintenance Building.
- Sanitary Service: Re-use the leach field that currently serves the Staff Headquarters/Visitor Center. As an alternative, two separate septic systems can serve the Visitor Center and Maintenance Building, respectively.
- Electric/Telephone Service: Electric and telephone service can be continued to be provided through overhead lines
- Fiber Optic Service: Incoming fiber optic service is proposed to remain as an overhead line that connects into the relocated Visitor Center.
- Stormwater Management: Detention Basin proposed.

Landscape Design:

- A reconfigured parking area (within the existing footprint) with 30 spaces including accessible spaces, bus drop off and bus parking. Access to the maintenance facility from the entry drive coming off Route 9H.
- New paved pedestrian pathways to key destinations on site (kept to a minimum to reduce disturbance to the site) site furnishings and site lighting.
- New selective planting including historical replacements, and enhancements around the house and front yard following the landscape treatment recommendations in the 2016 Cultural Landscape Report (CLR), prepared by the Olmsted Center. A small native meadow garden will be located in the open space between the Visitor Contact building and the Outdoor Covered Exhibit structure. All disturbed areas not planted will be lawn.

Interpretation: Include the following interpretive experience elements. See Chapter 6, Section 6.5 for details.

- Small Type 1 (S.1) Kiosk: About the Orchard
- Small Type 2 (S.2) glass panel: Distant View Magic Glass
- Small Type 2 (S.2) glass panel: African American Story Magic Glass
- Small Type 2 (S.2) glass panel: About this Building Magic Glass
- Medium Type (M): Native American Story
- Large Type (L): Orientation Exhibit Pavilion
- Extra Large Type (XL): Interior Exhibit Gallery. The Lindenwald Room 118 (216 SF nursery room) was considered as a potential location for this experience.

7.1c Option C - Linear North

OPTION C : LINEAR COMPOSITION @ SITE NORTH (SITE 1)

- Administration Building + Visitor + Maintenance Building on Site 1

Opportunities:

- Occupies 1 Building Site
- All functions are proximate to each other.
- Building location maximizes openness & view of the park and requires new infrastructure

Architecture: The linear composition proposes placing all program components (visitor services, administration, and maintenance) onto a single site to minimize the impact on the existing property.

Visitor Center + Administration Building (4,108 GSF not including covered outdoor) + Maintenance Facility (3,100 GSF not including covered outdoor): This composition arranges the Administration and Maintenance programs into a single slim bar while Visitor Services are provided in a pavilion adjacent to the administration and closest to visitor parking opposite Old Post Road. The program components are arranged to welcome visitors and maximize adjacencies for park staff. The staggered administrative and maintenance buildings rely on a long, unifying field-stone wall, akin to a barn foundation or field wall, to stitch the separate buildings, covered storage areas, and vehicular storage areas together. Exterior finishes proposed to be following: Outer Building Skin: Wood Siding; Maintenance Covered Storage Roof: Corrugated Steel, 8ft stone clad feature wall and a 5ft wood fence lining the perimeter of the open maintenance yard, enclosing the facility. Standard interior finishes for Maintenance Facility include but not limited to: hollow metal doors, VCT in pantry, tile in restrooms, carpet flooring in offices, seal unpolished concrete floors in shops and workrooms.

Structural System: The interior of the inner block and outer sleeve of the Visitor Center and Administration Building is lined with a series of exposed timber roof trusses or portal frames. The Maintenance Facility is lined with steel portal frames. The building foundation proposed are timber pile foundations used to support the ground floor of the buildings slightly above the finished grade. See Chapter 6 for details.

Mechanical Systems: the systems proposed include Heating and Cooling via Water Source Heat Pumps; Dedicated Outside Air System (DOAS) and Full Conditioning w/ natural ventilation (includes sensors at windows to disable AC). This option includes solar photovoltaic (PV) system or solar array on-site as an add-alternate.

Utility Systems:

- Water Utility: New water well located just south of the existing Visitor Center to serve the new buildings.
- Sanitary Service: Install a new septic system just west of the proposed Buildings.
- Electric/Telephone Service: Encase and bury necessary electric and telephone lines to serve the new buildings.
- Fiber Optic Service: Incoming fiber optic service is proposed to remain as an overhead line that connects into the relocated Visitor Center. The incoming and outgoing lines will have to be reconnected to the relocated Visitor Center.
- Stormwater Management: Detention Basin proposed.

Landscape Design:

- A reconfigured parking area (within the existing footprint) with 30 spaces including accessible spaces, bus drop off and bus parking. Access to the maintenance facility from the entry drive coming off Old Post Road.
- New paved pedestrian pathways to key destinations on site (kept to a minimum to reduce disturbance to the site) site furnishings and site lighting.
- Selective removal of exiting crabapples, new selective planting including historical replacements, and enhancements around the house and front yard following the landscape treatment recommendations in the 2016 Cultural Landscape Report (CLR), prepared by the Olmsted Center. A small native meadow garden will be located in the open space between the Visitor Contact building and the Outdoor Covered Exhibit structure. All disturbed areas not planted will be lawn.

Interpretation: Include the following interpretive experience elements. See Chapter 6, Section 6.5 for details.

- Small Type 1 (S.1) Kiosk: About the Orchard
- Small Type 2 (S.2) glass panel: Distant View Magic Glass
- Small Type 2 (S.2) glass panel: African American Story Magic Glass
- Small Type 2 (S.2) glass panel: About this Building Magic Glass
- Medium Type (M): Native American Story
- Large Type (L): Orientation Exhibit Pavilion
- Extra Large Type (XL): Interior Exhibit Gallery. The Lindenwald Room 118 (216 SF nursery room) was considered as a potential location for this experience.

7.2 Construction Phasing

CONSTRUCTION PHASING CONSIDERATIONS

During this preliminary design phase, the team discussed and considered issues related to construction, means and methods, logistics and phasing of the proposed options. In addition to design considerations of appropriateness, scale, and sensitivity to historic land and view sheds, the team also considered potential environmental impact, minimized disturbance of historic ground, construction methods, and phasing to evaluate impact to Park operations during construction.

Environmental Impact (LEED / Green building):

- Statement on Green design. Strive to achieve LEED gold or equivalent.
- Minimize reliance on fossil fuels and mechanical systems as described in MEP narrative
- Use of construction materials of high recycled content, that are readily available within the region.
- Prefab / modular offsite construction to optimize efficiency, reduce travel/delivery radius, reduce on-site construction duration and disturbance.
- Target local fabricators and craftspeople to stimulate local economies.

Ground Disturbance (minimizing disturbance):

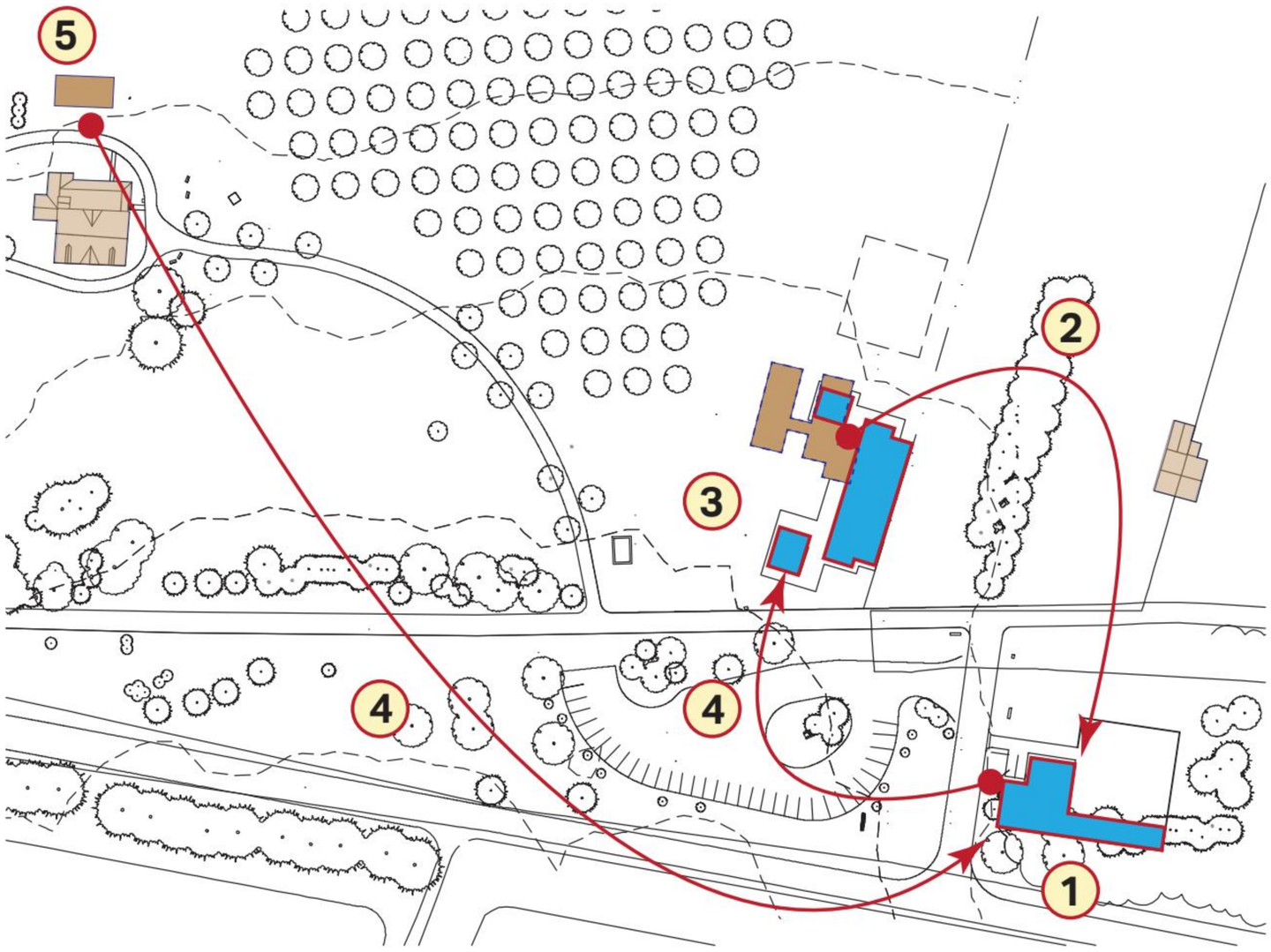
- Contractor to provide construction means and methods document documenting impact to site and grounds
- Construction mobilization and points of access
- Existing documentation (photos and record documents)
- Archaeological survey of proposed affected areas
- Architectural, structural, and landscape design as described somewhere else in this report

CONSTRUCTION PHASING

Understanding that the preferred approach would allow the park to remain open for visitors and general operations during the construction of the new facilities the team has identified several potential sequencing strategies to achieve that goal.

As a general summary of the approach, construction can be executed in either one or two phases of construction. With each of the approaches there are many subtle variations and nuisances that can be adjusted. Single or double phase construction approaches can be applied to any of the building design options presented in this report. However, for clarity the following diagrams apply two phase construction to Option 1 and one phase construction to Options 2 and 3. At this stage it is unknown if the Visitor Center + Administration Building and Maintenance Facility would be under a single contract or two individual contracts on different schedules. The following diagrams assumes that construction of both buildings will be concurrent.

The one phase diagrams, Options 2 and 3, highlight the need for temporary facilities to maintain park operations during construction. The temporary facilities would be prefabricated trailers rented or purchased for the duration of construction. In this sequence both the Visitor Center + Administration Building and Maintenance Facility could be constructed in parallel, reducing the overall construction duration. Two phase construction suggests that the two buildings built in series, which would allow temporary use of one new building while the other is built. This approach could eliminate the need for temporary facilities and reduce project cost. This would increase project duration. It is also worth noting that in the process of this evaluation an additional approach was identified which could potentially be executed as a one phase construction and eliminate the need for temporary facilities. This could be achieved by adjusting the location of the proposed Visitor Center + Administration Building to allow for continued use of the current Visitors Center and Office Complex, and all essential maintenance buildings. To capture this potential, the following diagrams use Option 2 (clearing the footprint of the existing building). Additional coordination with the Orchard planning will be required as the orchard is developed.

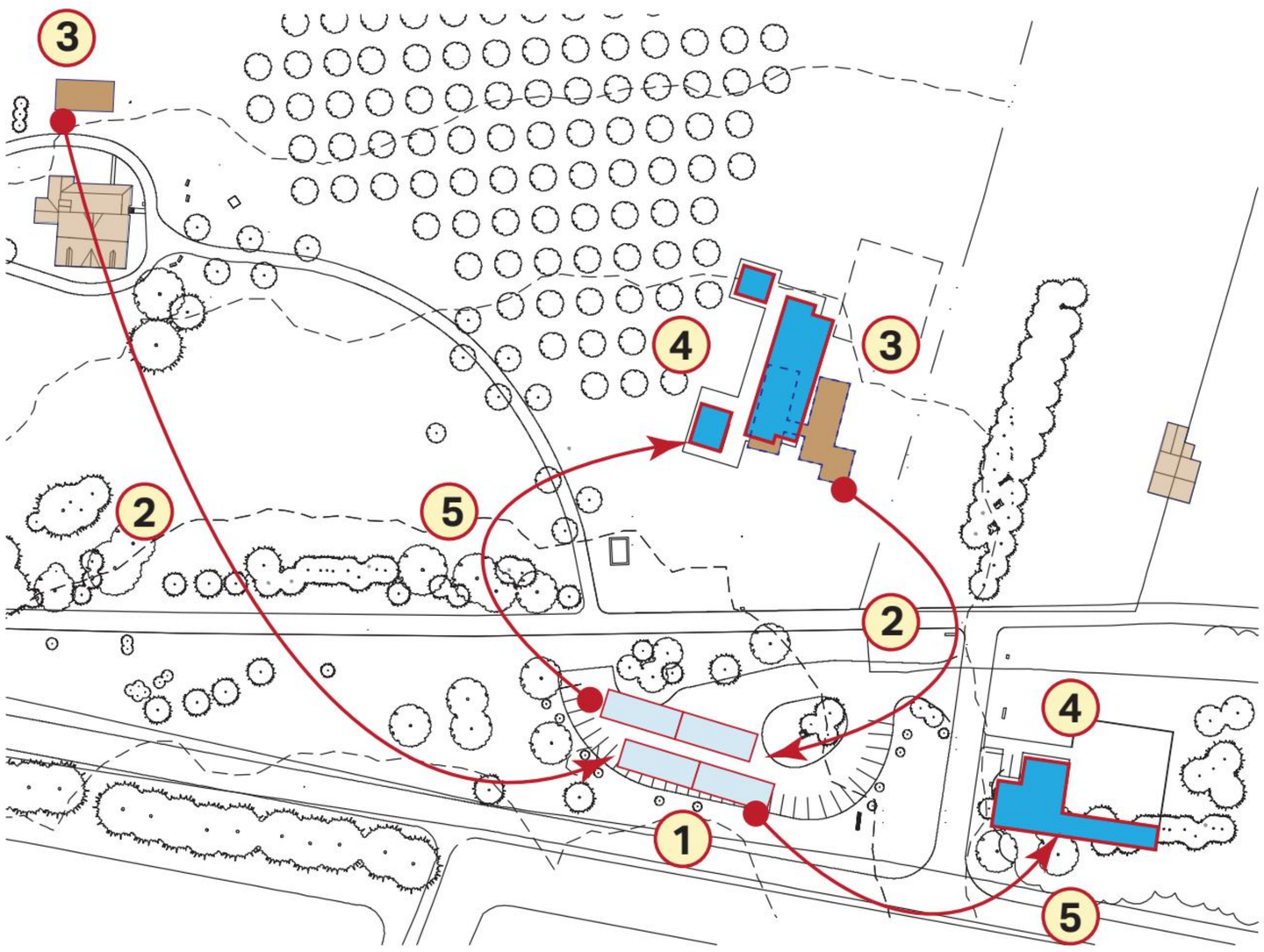


Two phase construction / Temporary facilities NOT required

Sequence:

1. Construction Phase 1: New building Maintenance Facility
2. Administrative staff relocates to New Maintenance facility. Temporary workstations as required to accommodate administrative and public visitor functions.
Maintenance staff remains in existing building.
3. Construction Phase 2: Demo existing and build new Visitor Center
4. Administrative staff relocates to new Visitors Center
Maintenance Staff relocates to new Maintenance Facility
5. Demo existing Maintenance buildings and sheds.

OPTION 1: CLUSTER AT NORTH PROPERTY LINE

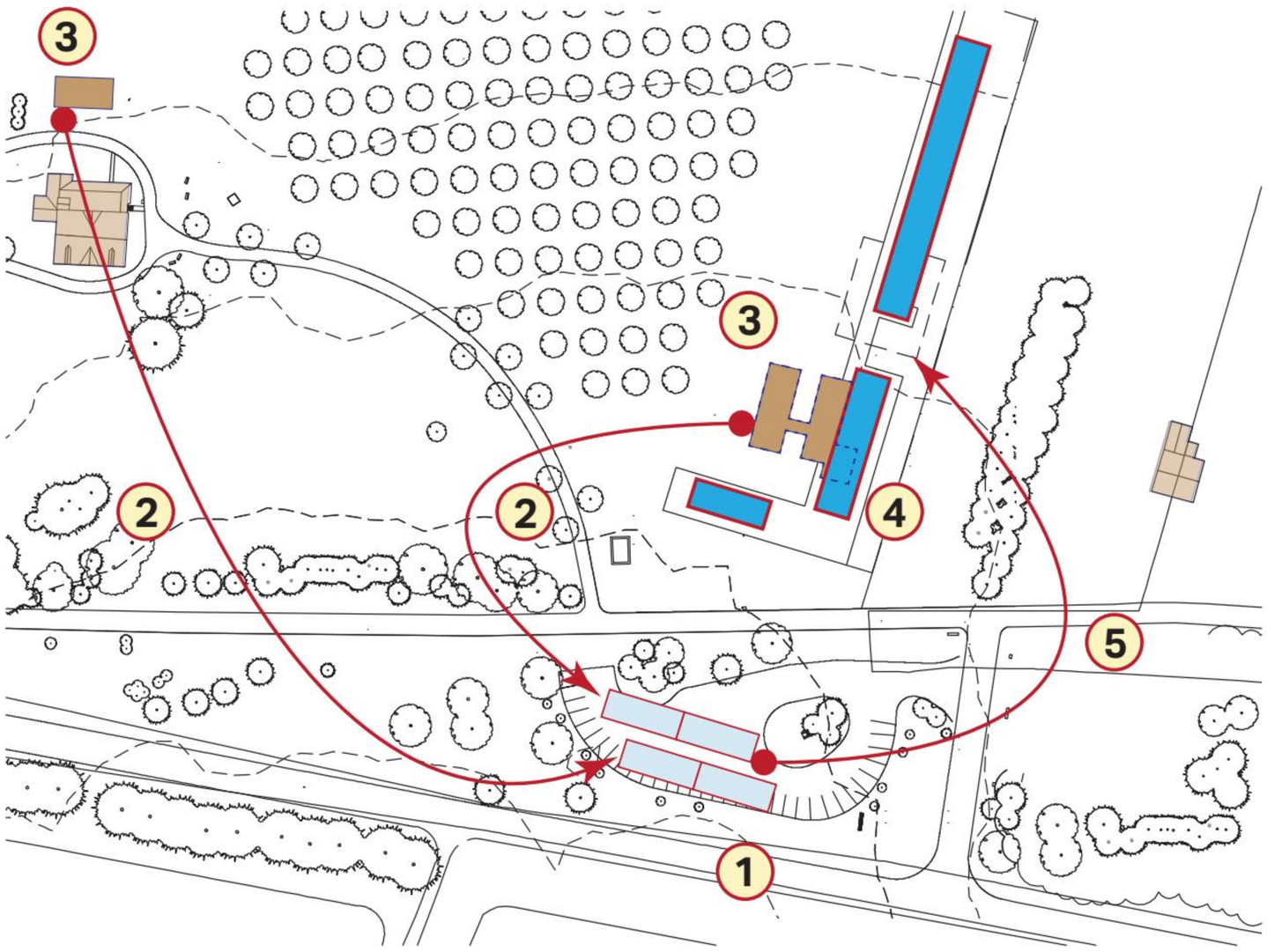


One phase construction / Temporary facilities required

Sequence:

1. Establish temporary facility for administrative and maintenance staff.
2. Administrative and Maintenance staff relocates to temporary facility.
3. Demo existing Visitor Center and Maintenance building.
4. Construction Phase 1: Construct new Visitor Center and Maintenance buildings.
5. Administrative and Maintenance staff relocates to new buildings.
6. Demo remaining maintenance storage sheds. Relocate miscellaneous materials and equipment to new buildings

OPTION 2: CLUSTER AT ORCHARD



One phase construction / Temporary facilities required

Sequence:

1. Establish temporary facility for administrative and maintenance staff.
2. Administrative and Maintenance staff relocates to temporary facility.
3. Demo existing Visitor Center and Maintenance building.
4. Construction Phase 1: Construct new Visitor Center and Maintenance buildings.
5. Administrative and Maintenance staff relocates to new buildings.
6. Demo remaining maintenance storage sheds. Relocate miscellaneous materials and equipment to new buildings

OPTION 3: LINEAR AT NORTH PROPERTY LINE

One phase construction / Temporary facilities NOT required

*This option began to evolve through the process of this Phasing analysis. As diagrammed, a potential adjustment to the location of the proposed Visitor Center could allow for the existing building to remain in service during construction therefore eliminating the need for temporary facilities.

The feasibility of this option requires verification of the existing building location and coordination with Orchard planning.

Sequence:
* All staff and operations to remain in existing facilities during construction of new buildings.

1. Construction Phase 1: Construct new Visitor Center and Maintenance buildings.
2. Administrative and Maintenance staff relocates to new buildings.
3. Demo existing Visitor Center, Maintenance building and miscellaneous storage sheds.

OPTION 2 (MODIFIED): CLUSTER AT ORCHARD

8 APPENDIX

Davis Brody Bond

Martin van Buren National Historic Site
Programming Questionnaire – CURATORIAL

DATE: "[Click here and type date]"

ISSUED BY: "[Click here and type Name]"

CONTACT INFO: "[Click here and type Contact Info]"

Background Information

Division Name:	Curatorial
Supervisor:	Megan O'Malley
Primary Work Location:	Headquarters
Secondary Work Location:	Lindenwald

1. **Department Function/Organization**

a) What is the general function and objective of your department?

Preserve and Conserve the cultural resources of Martin Van Buren National Historic Site.

b) Describe a typical workday in both in low and peak season for your group?

Low Season: housekeeping, records management, exhibit and collections care

Peak Season: extra housekeeping, exhibit and collections care, records management

c) What interior and exterior spaces are primarily used by your group?

Park library, archives, offices, file room, and historic Lindenwald

d) What are the primary obstacles that your group faces in achieving your objectives at the Park?

Lack of storage space and work space for care of collections. Lack of defined and separated spaces for Storage and museum collection care, as required by the automated checklist program, enacted by the Department

Davis Brody Bond, LLP
Architects and Planners
One New York Plaza, Suite 4200, New York, NY 10004
Tel +212.633.4700

2. Personnel

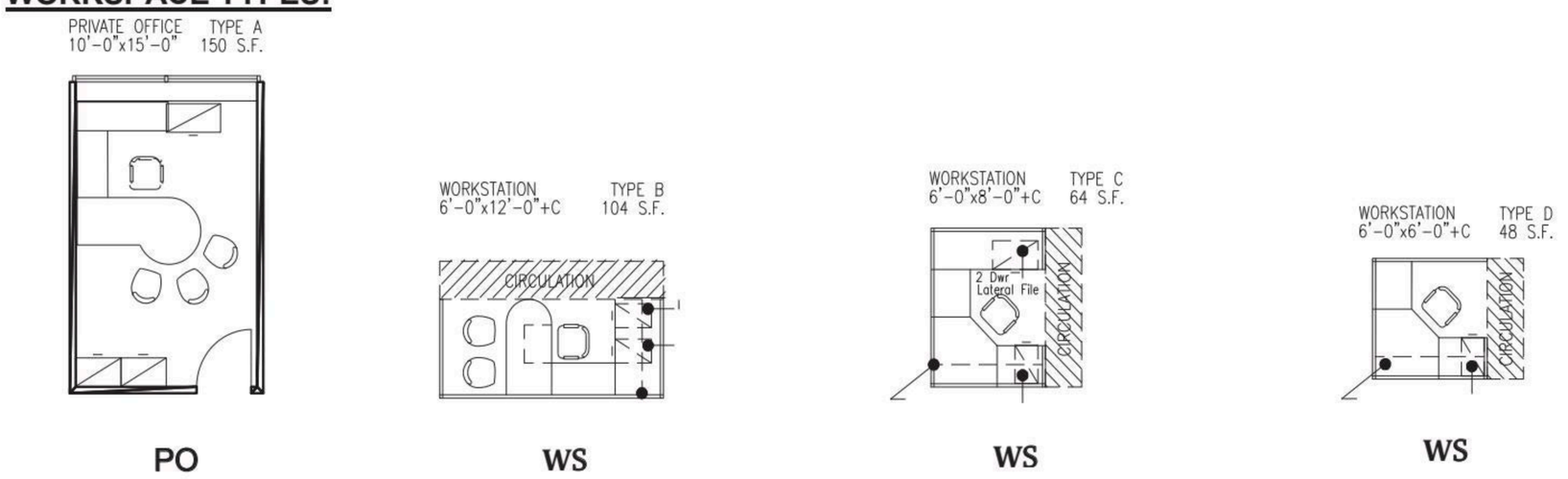
Work Space Requirements Worksheet

Department: **Curatorial**

Current Location:

a) Please indicate your workspace type (private office or workstation/cubicle) and your office equipment requirements in the chart below.

WORKSPACE TYPES:



PO **WS** **WS** **WS**

CLOSED SEMI -OPEN OPEN

EQUIPMENT TYPES:

PC = Computer Terminal P = Printer

LT = Lap Top Computer O = Other (*please describe*)

PERSONNEL STATUS

P = Permanent S = Seasonal

Personnel: Current and Projected Staff

Position / Title	Current (C) / Future (F)	Personnel Status	Primary Work Location	Avg. Usage Per Week	Workspace Type	Equipment Type
Curator / Historian	C	P	HQ	40	PO	P LT
Museum Specialist	C	P	HQ	40	PO	LT
Museum Technician	C	P	HQ	40	PO	LT
Intern	F	S	HQ	varied	WS	LT

*** Equipment Type refers to that dedicated to a particular individual.*

Davis Brody Bond, LLP
Architects and Planners
One New York Plaza, Suite 4200, New York, NY 10004
Tel +212.633.4700

Davis Brody Bond

3. Physical Space Requirements
Conference Room Requirements

a) Where do you currently meet with your group and how often?

For formal meetings, such as planning meetings, at a local restaurant, due to lack of privacy in the HQ.

For informal shorter meetings, in a private office.

b) Indicate below the number and use of conference rooms / group workspaces that may be required for your group. Please indicate if these spaces may be shared with other groups or partners.

No. of People (Min./Max)	Avg. Usage Per Week	Shared (S) / Private (P)	Remarks
3/6	1-2 days a week	P	This can double as a reading area / work space in the archives room.

c) What audio-visual capabilities are required in the conference rooms?

Some sort of screen / projector for hooking up a laptop for presentations or group training.

4. Support Spaces & Special Purpose Rooms Requirements

a) Support spaces & special purpose rooms are additional non-standard areas required to accommodate specific activities which are unique and essential to particular programs. List support spaces and/or special purpose rooms which are or may be used by your group. Some examples are listed below. Indicate if these spaces may be shared with other departments or groups. Please list any special requirements in the remarks column.

Special Use Space	Current (C) / Future (F)	Approximate Area	Shared (S) / Private (P)	Remarks
Library / Research Area	C		P	Archives room, with room for growth in archives (resource management records) and permanent museum file storage and a work / research space that can double as division conference space. Includes a workstation for an intern or staff while supervising researchers
Copy Rooms				
Coat Storage / Locker Rooms				
Workrooms	F		P	A storage / museum collection holding/work area for storing supplies, such as large rolls of ethofoam, bubble wrap, collapsed boxes, and other packing supplies. This would be used to inspect, conserve, pack, and catalog objects.
Other				

Davis Brody Bond, LLP
Architects and Planners
One New York Plaza, Suite 4200, New York, NY 10004
Tel +212.633.4700

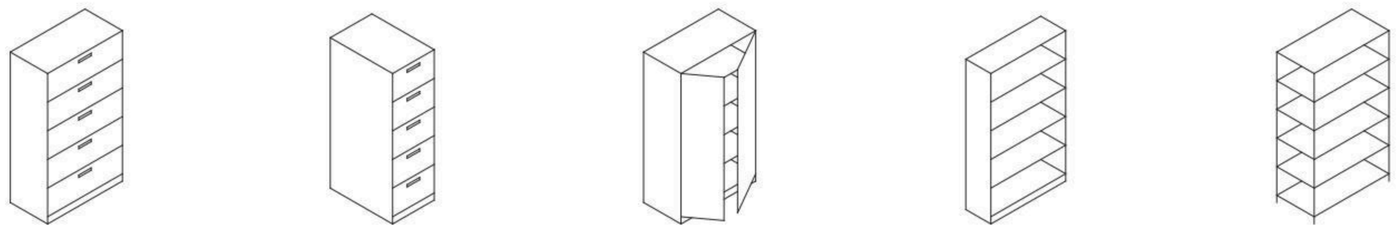
5. Files & Storage Space Requirements

a) Provide a list of your departments present and forecast file and storage space requirements. List all filing or miscellaneous storage requirements that belong in open areas or enclosed rooms.

Files & Storage

Description	Approximate Area	Height	Current QTY	Current Location	Future QTY	Future Location
5-Drawer Lateral File Cabinets						
4-Drawer Lateral File Cabinets			3	Museum tech office	4	Archives room
3-Drawer Lateral File Cabinets						
2-Drawer Lateral File Cabinets						
Lateral Overhead file Cabinets						
5-Drawer Vertical File Cabinets						
4-Drawer Vertical File Cabinets						
3-Drawer Vertical File Cabinets						
2-Drawer Vertical File Cabinets						
Vertical Overhead file Cabinets						
Card Files						
Storage Cabinet, 18" Deep						
Storage Cabinet, 24" Deep						
Bookcases			2	Park library	3	Archives room
Metal Shelving Unit			3	Off site storage	~4	Museum storage room
Other: Wire Shelving (Archives)			12	Archives	15+	(Or mobile compact shelfing) Archives
Other: Flat File Cases (Archives)			3	Archives	3	Archives
Other:						

Examples:



LATERAL FILE | VERTICAL FILE | STORAGE CABINET | BOOKCASE | SHELVING UNIT

b) Are there any storage requirements specific to you your group?

The archives room would best be served by mobile compact shelving units that allow more efficient use of the space.

Both the archives and museum storage room would required extra security, such as dedicated locks.

Davis Brody Bond, LLP
Architects and Planners
One New York Plaza, Suite 4200, New York, NY 10004
Tel +212.633.4700

Davis Brody Bond

6. Building Environment/Security Requirements

a. Does your group require any special building environment conditions, such as special lighting, air conditioning or security?

No UV lighting in rooms with museum collections or archives, minimal or no windows preferred.

Both spaces would require a dedicated key only issued to the MAVA Curatorial Staff.

7. Adjacency Requirements

The aim of this section is to obtain adjacency requirements for your group. Adjacencies are the physical needs of one group to be close to or separate from other groups or interior/ exterior spaces. In the section provided below, please list groups and/or functions your department has adjacency requirements for. We ask that you indicate your requirements using the following three classifications:

Essential - critical workflow or direct communication, must be directly next to your group.

Important - should be in close proximity, probably on the same floor

Normal - probably not more than one or two floors apart.

Undesirable - should be physically separated from this group either by means of distance or physical barriers.

Essential

Group Name	**Where are they currently located?**

Important

Group Name	**Where are they currently located?**

Normal

Group Name	**Where are they currently located?**

Undesirable

Public Space	**Where are they currently located?**
For security purposes the Museum Workspace	
Should be located away from the public Visitor spaces.	

Davis Brody Bond, LLP
Architects and Planners
One New York Plaza, Suite 4200, New York, NY 10004
Tel +212.633.4700

Davis Brody Bond, LLP
Architects and Planners
One New York Plaza, Suite 4200, New York, NY 10004
Tel +212.633.4700

Davis Brody Bond

Martin van Buren National Historic Site
Programming Questionnaire – CURATORIAL

8. Visitor Interaction

a) What image do you think the park should convey to visitors?

Well researched and informative, professional.

b) Please provide a brief description of your departments current and desired public-facing operations/ programs and where they take place in the Park (e.g. site tours, demonstrations, lectures, exhibits, etc.):

a. CURRENT:
   i. Indoor Program Description
      1. Visitor Center
      2. Lindenwald
      3. Other
   ii. Outdoor Program Description
b. DESIRED:
   i. Indoor Program Description
   ii. Outdoor Program Description

c) Please provide a brief description of your departments current and desired non-public operations within the Park (e.g. community meetings, research, training, etc.)

a. CURRENT:
   i. Indoor Program Description
      1. Visitor Center
      2. Lindenwald
      3. Other
   ii. Outdoor Program Description
b. DESIRED:
   i. Indoor Program Description
   ii. Outdoor Program Description

d) How often would these programs take place? What would the hours of operation be for your group?

e) What spaces currently facilitate the programs described above? Or what spaces would facilitate visitor interaction in the future?

A visitor center with exhibit space would be ideal for display museum collections to the public.

Davis Brody Bond, LLP
Architects and Planners
One New York Plaza, Suite 4200, New York, NY 10004
Tel +212.633.4700

Public Indoor Space Requirements Worksheet

f) Of the following spaces, please provide the following requirements for the spaces listed below

Essential (E) or Preferred (P) – essential spaces are considered critical for

Quantity – Staff members / visitors expected to occupy the space.

Frequency of use – Average times per week your group would be occupying the space.

	Essential (E)/ Preferred (P)	QTY	Avg. Usage Per Week	Remarks
Communal Spaces				
Classrooms				
Public Meeting Room				
Theatre				
Exhibition	E	1	Daily	Main way to display museum objects and convey history of Lindenwald and MVB without seeing house.
Library / Archiving	E	1	Several times weekly	More information above
Leased Space (Café / Bookshop / Retail)				

9. Other Thoughts

- We want to make sure that the Curatorial Workspace and Storage Area will be separate from and not shared with other divisions. There are security concerns and Department Level Policy requiring separated and secured workspaces. The curatorial staff are the only people that should have access to these spaces. Right now we are the only personnel with access to the Park Archives and Museum File Room(Cait's office) in the park.
- It would be ideal for our offices to be adjacent to each other and the Curatorial Workspaces and Archives. This would help with research, working with objects, and as a team.

Davis Brody Bond, LLP
Architects and Planners
One New York Plaza, Suite 4200, New York, NY 10004
Tel +212.633.4700

Davis Brody Bond

Martin van Buren National Historic Site
Programming Questionnaire – ADMINISTRATION & VISITOR CENTER

DATE: November 17, 2021

ISSUED BY: Maryalice Montoya

CONTACT INFO: 518-758-9689 ext. 2009

Background Information

Division Name:	Martin Van Buren National Historic Site
Supervisor:	Annette Rousseau
Primary Work Location:	Interpretation Office
Secondary Work Location:	None

1. **Department Function/Organization**

a) What is the general function and objective of your department?

Cultural Heritage Interpretation

b) Describe a typical workday in both in low and peak season for your group?

Low Season: In the office and in the Visitor's Center, as well as at least tours a day.

Off Season: In the office creating children's programs in person/on- line, researching and writing next season's talks and Tours. Community outreach for off- site talks.

Peak Season: Tours and talks and Visitor's Center.

c) What interior and exterior spaces are primarily used by your group?

Interior: Office and Visitor's Center

Exterior: Mansion for tours

d) What are the primary obstacles that your group faces in achieving your objectives at the Park?

From late May to November (pre-covid) 2 permanent and 2 to 3 Seasonal Employees shared one office. 3 desks are all we are able to fit into the space. The rest of the year at least 2 permanent Rangers share the same Office. Now (because of Covid restrictions) the staff is spread out and using commons spaces. Internet is useless.

Davis Brody Bond, LLP
Architects and Planners
One New York Plaza, Suite 4200, New York, NY 10004
Tel +212.633.4700

2. Personnel

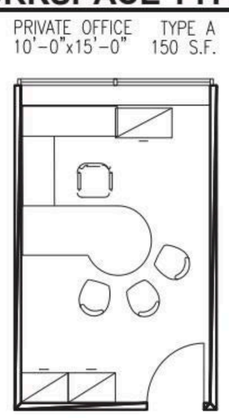
Work Space Requirements Worksheet

Department:

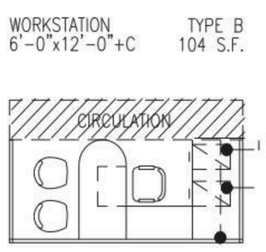
Current Location:

a) Please indicate your workspace type (private office or workstation/cubicle) and your office equipment requirements in the chart below.

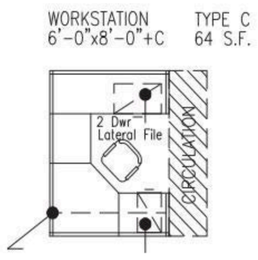
WORKSPACE TYPES:



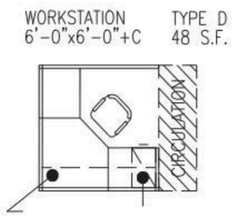
PO



WS



WS



WS

CLOSED SEMI -OPEN OPEN

EQUIPMENT TYPES:

PC = Computer Terminal P = Printer

LT = Lap Top Computer O = Other (*please describe*)

PERSONNEL STATUS

P = Permanent S = Seasonal

Personnel: Current and Projected Staff

Position / Title	Current (C) / Future (F)	Personnel Status	Primary Work Location	Avg. Usage Per Week	Workspace Type	Equipment Type
Park Guide		Perm. Subject to Furlough	Office shared with 4 others pre-covid	5 days	Office	P.C. but will be given a lap top – still require monitor

Davis Brody Bond, LLP
Architects and Planners
One New York Plaza, Suite 4200, New York, NY 10004
Tel +212.633.4700

Davis Brody Bond

*** Equipment Type refers to that dedicated to a particular individual.*

3. Physical Space Requirements
Conference Room Requirements

a) Where do you currently meet with your group and how often?

Hardly. When we do it is in the "Conference Room."
We are unable to have schools /groups use the premises for concrete study due to a lack of a real conf. center.

b) Indicate below the number and use of conference rooms / group workspaces that may be required for your group. Please indicate if these spaces may be shared with other groups or partners.

No. of People (Min./Max)	Avg. Usage Per Week	Shared (S) / Private (P)	Remarks
Mi: 5 Max. 10 (?)	2	shared	
School/groups	25-50	Shared	Instructional learning, meetings, symposiums and workshops

c) What audio-visual capabilities are required in the conference rooms?

Screen, Wiifi , technology for the ability to have visual presentations, non-lectern microphone ability for lectures,

4. Support Spaces & Special Purpose Rooms Requirements

a) Support spaces & special purpose rooms are additional non-standard areas required to accommodate specific activities which are unique and essential to particular programs. List support spaces and/or special purpose rooms which are or may be used by your group. Some examples are listed below. Indicate if these spaces may be shared with other departments or groups. Please list any special requirements in the remarks column.

Special Use Space	Current (C) / Future (F)	Approximate Area	Shared (S) / Private (P)	Remarks
Library / Research Area	C/F			
Copy Rooms	C/F			
Coat Storage / Locker Rooms	C/F			
Workrooms	C/F			
Other				

Davis Brody Bond, LLP
Architects and Planners
One New York Plaza, Suite 4200, New York, NY 10004
Tel +212.633.4700

5. Files & Storage Requirements

a) Provide a list of your departments present and forecast file and storage space requirements. List all filing or miscellaneous storage requirements that belong in open areas or enclosed rooms.

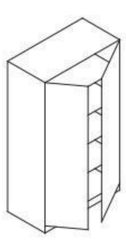
Files & Storage

Description	Approximate Area	Height	Current QTY	Current Location	Future QTY	Future Location
5-Drawer Lateral File Cabinets						
4-Drawer Lateral File Cabinets						
3-Drawer Lateral File Cabinets						
2-Drawer Lateral File Cabinets						
Lateral Overhead file Cabinets						
5-Drawer Vertical File Cabinets						
4-Drawer Vertical File Cabinets						
3-Drawer Vertical File Cabinets						
2-Drawer Vertical File Cabinets						
Vertical Overhead file Cabinets						
Card Files						
Storage Cabinet, 18" Deep						
Storage Cabinet, 24" Deep						
Bookcases						
Metal Shelving Unit						
Other:						
Other:						
Other:						

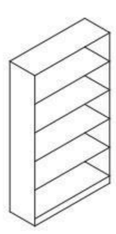
Examples:

LATERAL FILE

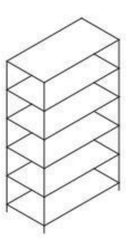
VERTICAL FILE



STORAGE CABINET



BOOKCASE



SHELVING UNIT

b) Are there any storage requirements specific to you your group?

Yes, bookshelves in the shared offices as well as at least 2 file drawers per office mate.

Lockers large enough to hold heavy jackets ***and*** our Stetson Hats without damaging them.

6. Building Environment/Security Requirements

a. Does your group require any special building environment conditions, such as special lighting, air conditioning or security?

Lighting for that is adequate for extended reading.

Davis Brody Bond, LLP
Architects and Planners
One New York Plaza, Suite 4200, New York, NY 10004
Tel +212.633.4700

Davis Brody Bond

7. Adjacency Requirements

The aim of this section is to obtain adjacency requirements for your group. Adjacencies are the physical needs of one group to be close to or separate from other groups or interior/ exterior spaces. In the section provided below, please list groups and/or functions your department has adjacency requirements for. We ask that you indicate your requirements using the following three classifications:

Essential - critical workflow or direct communication, must be directly next to your group.

Important - should be in close proximity, probably on the same floor

Normal - probably not more than one or two floors apart.

Undesirable - should be physically separated from this group either by means of distance or physical barriers.

Essential

Group Name	Where are they currently located?

Important

Group Name	Where are they currently located?
Interp	Shared Office 2-5 people

Normal

Group Name	Where are they currently located?

Undesirable

Group Name	Where are they currently located?

Davis Brody Bond, LLP
Architects and Planners
One New York Plaza, Suite 4200, New York, NY 10004
Tel +212.633.4700

8. Visitor Interaction

a) What image do you think the park should convey to visitors?

It is important that we continue to present the image of a professional national historic site, but one that highlights our mission to continue the legacy of Martin van Buren while also promoting site capabilities and additional attractions.

b) Please provide a brief description of your departments current and desired public-facing operations/ programs and where they take place in the Park (e.g. site tours, demonstrations, lectures, exhibits, etc.):

a. CURRENT:
   i. Indoor Program Description
      1. Visitor Center
      2. Lindenwald
      3. Other
   ii. Outdoor Program Description

b. DESIRED:
   i. Indoor Program Description
   ii. Outdoor Program Description

c) Please provide a brief description of your departments current and desired non-public operations within the Park (e.g. community meetings, research, training, etc.)

a. CURRENT:
   i. Indoor Program Description
      1. Visitor Center
      2. Lindenwald
      3. Other
   ii. Outdoor Program Description

b. DESIRED:
   i. Indoor Program Description
   ii. Outdoor Program Description

d) How often would these programs take place? What would the hours of operation be for your group?

Interpretation programs are at least 3 times per day, more pre-covid, and are conducted between 10 and 3 p.m. with the visitor center open from 8:30 -4:30.

e) What spaces currently facilitate the programs described above? Or what spaces would facilitate visitor interaction in the future?

f)

Right now we use tents for school programs and events.

Davis Brody Bond, LLP
Architects and Planners
One New York Plaza, Suite 4200, New York, NY 10004
Tel +212.633.4700

Davis Brody Bond

Martin van Buren National Historic Site
Programming Questionnaire – ADMINISTRATION & VISITOR CENTER

Public Indoor Space Requirements Worksheet

g) Of the following spaces, please provide the following requirements for the spaces listed below

Essential (E) or Preferred (P) – essential spaces are considered critical for

Quantity – Staff members / visitors expected to occupy the space.

Frequency of use – Average times per week your group would be occupying the space.

	Essential (E)/ Preferred (P)	QTY	Avg. Usage Per Week	Remarks
Communal Spaces				
Classrooms	E	1	2	
Public Meeting Room	E	1		
Theatre	P			
Exhibition	E	3	daily	Allowing for rotating exhibits.
Library / Archiving	E	1	daily	Imperative
Leased Space (Café / Bookshop / Retail)	P			Yes!

9. Other Thoughts

- List…

It would be helpful to the public to have access to a water bottle filling station – inside and outside,

We are not allowed to sell water and on hot days have only the bathroom sink water to offer them.

- It is important that we have an ability to use new technology and "old School" forms. I have been at too many museums where "state of the art" technology was installed only to become outdated quickly and become useless.
- Conference room next to kitchen and a place for attendees to place coats etc..

Davis Brody Bond, LLP
Architects and Planners
One New York Plaza, Suite 4200, New York, NY 10004
Tel +212.633.4700

Davis Brody Bond

Martin van Buren National Historic Site
Programming Questionnaire – ADMINISTRATION & VISITOR CENTER

DATE: November 18, 2021

ISSUED BY: Dawn Olson

CONTACT INFO: Dawn_Olson@nps.gov

Background Information

Division Name:	Interpretation
Supervisor:	Annette Rousseau
Primary Work Location:	Winter Location – Office. Summer Location – Office, Visitor Center, Historic House.
Secondary Work Location:	N/A

1. Department Function/Organization

a) What is the general function and objective of your department?

Provide services to visitors including orientation to the historic site; Kinderhook; and geographic areas of Columbia County, the Hudson River Valley, and occasionally western Massachusetts.

b) Describe a typical workday in both in low and peak season for your group?

Low Season: January and February. Plan for the upcoming visitor season including education programs

Participate in training sessions online or in person. Answer information requests.

Spend a bit of time cataloging library books.

Peak Season: Facilitate house tours. A daily shift in the visitor center. Informal interpretation while outside for a walk.

Support seasonal staff and volunteers.

c) What interior and exterior spaces are primarily used by your group?

Personal office, conference room for school groups, historic house, picnic tables for school group lunch, landscape for programs.

d) What are the primary obstacles that your group faces in achieving your objectives at the Park?

Indoor space for education programs. Tiny visitor center – example: orientation video plays while visitor completes purchase from Eastern National bookstore.

Davis Brody Bond, LLP
Architects and Planners
One New York Plaza, Suite 4200, New York, NY 10004
Tel +212.633.4700

Davis Brody Bond

Martin van Buren National Historic Site
Programming Questionnaire – ADMINISTRATION & VISITOR CENTER

2. Personnel

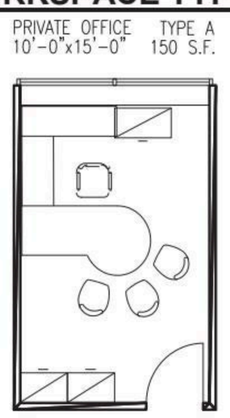
Work Space Requirements Worksheet

Department:

Current Location:

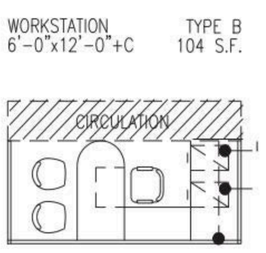
a) Please indicate your workspace type (private office or workstation/cubicle) and your office equipment requirements in the chart below.

WORKSPACE TYPES:



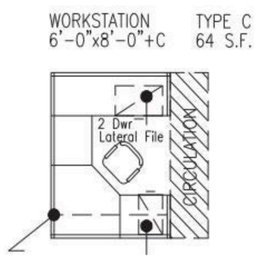
PO

CLOSED

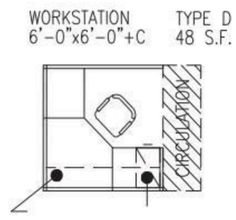


WS

SEMI -OPEN



WS



WS

OPEN

EQUIPMENT TYPES:

PC = Computer Terminal P = Printer

LT = Lap Top Computer O = Other (*please describe*)

PERSONNEL STATUS

P = Permanent S = Seasonal

Personnel: Current and Projected Staff

Position / Title	Current (C) / Future (F)	Personnel Status	Primary Work Location	Avg. Usage Per Week	Workspace Type	Equipment Type
Park Ranger (me)	C	P	Office/Historic House and Landscape	40	I have a private office currently. A work station with desk, bookcase and secure file cabinet would also work.	Laptop. Monitor. Network Printer

*** Equipment Type refers to that dedicated to a particular individual.*

Davis Brody Bond, LLP
Architects and Planners
One New York Plaza, Suite 4200, New York, NY 10004
Tel +212.633.4700

3. Physical Space Requirements
Conference Room Requirements

a) Where do you currently meet with your group and how often?

_____

_____

b) Indicate below the number and use of conference rooms / group workspaces that may be required for your group. Please indicate if these spaces may be shared with other groups or partners.

No. of People (Min./Max)	Avg. Usage Per Week	Shared (S) / Private (P)	Remarks

c) What audio-visual capabilities are required in the conference rooms?

_____

_____

_____

4. Support Spaces & Special Purpose Rooms Requirements

a) Support spaces & special purpose rooms are additional non-standard areas required to accommodate specific activities which are unique and essential to particular programs. List support spaces and/or special purpose rooms which are or may be used by your group. Some examples are listed below. Indicate if these spaces may be shared with other departments or groups. Please list any special requirements in the remarks column.

Special Use Space	Current (C) / Future (F)	Approximate Area	Shared (S) / Private (P)	Remarks
Library / Research Area				
Copy Rooms				
Coat Storage / Locker Rooms				
Workrooms				
Other				

Davis Brody Bond, LLP
Architects and Planners
One New York Plaza, Suite 4200, New York, NY 10004
Tel +212.633.4700

Davis Brody Bond

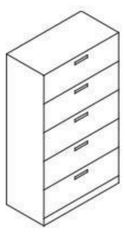
5. Files & Storage Space Requirements

a) Provide a list of your departments present and forecast file and storage space requirements. List all filing or miscellaneous storage requirements that belong in open areas or enclosed rooms.

Files & Storage

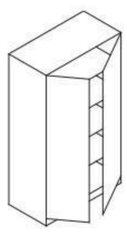
Description	Approximate Area	Height	Current QTY	Current Location	Future QTY	Future Location
5-Drawer Lateral File Cabinets						
4-Drawer Lateral File Cabinets						
3-Drawer Lateral File Cabinets						
2-Drawer Lateral File Cabinets						
Lateral Overhead file Cabinets						
5-Drawer Vertical File Cabinets						
4-Drawer Vertical File Cabinets						
3-Drawer Vertical File Cabinets						
2-Drawer Vertical File Cabinets						
Vertical Overhead file Cabinets						
Card Files						
Storage Cabinet, 18" Deep						
Storage Cabinet, 24" Deep						
Bookcases						
Metal Shelving Unit						
Other:						
Other:						
Other:						

Examples:

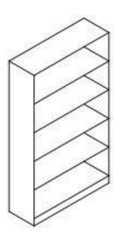


LATERAL FILE

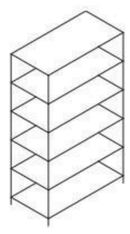
VERTICAL FILE



STORAGE CABINET



BOOKCASE



SHELVING UNIT

b) Are there any storage requirements specific to you your group?

_____

_____

6. Building Environment/Security Requirements

a. Does your group require any special building environment conditions, such as special lighting, air conditioning or security?

_____

_____

Davis Brody Bond, LLP
Architects and Planners
One New York Plaza, Suite 4200, New York, NY 10004
Tel +212.633.4700

7. Adjacency Requirements

The aim of this section is to obtain adjacency requirements for your group. Adjacencies are the physical needs of one group to be close to or separate from other groups or interior/ exterior spaces. In the section provided below, please list groups and/or functions your department has adjacency requirements for. We ask that you indicate your requirements using the following three classifications:

Essential - critical workflow or direct communication, must be directly next to your group.

Important - should be in close proximity, probably on the same floor

Normal - probably not more than one or two floors apart.

Undesirable - should be physically separated from this group either by means of distance or physical barriers.

Essential

Group Name	Where are they currently located?

Important

Group Name	Where are they currently located?

Normal

Group Name	Where are they currently located?

Undesirable

Group Name	Where are they currently located?

Davis Brody Bond, LLP
Architects and Planners
One New York Plaza, Suite 4200, New York, NY 10004
Tel +212.633.4700

Davis Brody Bond

8. Visitor Interaction

a) What image do you think the park should convey to visitors?

_____

_____

_____

b) Please provide a brief description of your departments current and desired public-facing operations/ programs and where they take place in the Park (e.g. site tours, demonstrations, lectures, exhibits, etc.):

a. CURRENT:
   i. Indoor Program Description
      1. Visitor Center
      2. Lindenwald
      3. Other
   ii. Outdoor Program Description
b. DESIRED:
   i. Indoor Program Description
   ii. Outdoor Program Description

c) Please provide a brief description of your departments current and desired non-public operations within the Park (e.g. community meetings, research, training, etc.)

a. CURRENT:
   i. Indoor Program Description
      1. Visitor Center
      2. Lindenwald
      3. Other
   ii. Outdoor Program Description
b. DESIRED:
   i. Indoor Program Description
   ii. Outdoor Program Description

d) How often would these programs take place? What would the hours of operation be for your group?

_____

_____

_____

e) What spaces currently facilitate the programs described above? Or what spaces would facilitate visitor interaction in the future?

_____

_____

_____

Davis Brody Bond, LLP
Architects and Planners
One New York Plaza, Suite 4200, New York, NY 10004
Tel +212.633.4700

Public Indoor Space Requirements Worksheet

f) Of the following spaces, please provide the following requirements for the spaces listed below

Essential (E) or Preferred (P) – essential spaces are considered critical for

Quantity – Staff members / visitors expected to occupy the space.

Frequency of use – Average times per week your group would be occupying the space.

	Essential (E)/ Preferred (P)	QTY	Avg. Usage Per Week	Remarks
Communal Spaces				
Classrooms				
Public Meeting Room				
Theatre				
Exhibition				
Library / Archiving				
Leased Space (Café / Bookshop / Retail)				

9. Other Thoughts

- I answered the questions re: my personal workspace. Size of bookcase and secure file cabinet is flexible.
- There is a need within the interpretive/education division for reference library, exhibits and site orientation, bookstore, space for teacher workshops and education programs. In addition to indoor space, an outdoor pavilion would be awesome!
- In the future, forty students could be on-site at once. Right now, we host twenty students at one time.

Davis Brody Bond, LLP
Architects and Planners
One New York Plaza, Suite 4200, New York, NY 10004
Tel +212.633.4700

Davis Brody Bond

Martin van Buren National Historic Site
Programming Questionnaire – MAINTENANCE

DATE: November 18th 2021

ISSUED BY: Mike Orapello, Will Daly & Steve Hanaburgh

CONTACT INFO: (518) 758 – 6986 Ext. 2019

Background Information

Division Name:	Maintenance
Supervisor:	Steve Hanaburgh
Primary Work Location:	Martin Van Buren N.H.S.
Secondary Work Location:	

1. Department Function/Organization

a) What is the general function and objective of your department?

Maintain the buildings, grounds, equipment and utilities within the park.

b) Describe a typical workday in both in low and peak season for your group?

Low Season: Clean employee and public restrooms, Check buildings for mouse traps, Make sure the furnace in All buildings are on & working properly, make repairs to roads, Snow removal; plowing, clearing sidewalks, roof raking. Salt walkways & the parking lot. Remove any fallen debris within the park. Work on interior projects; painting & Reno's

Peak Season: Clean employee & public restrooms & areas, check traps, clean Lindenwald, all aspects of landscaping, Tree pruning/chipping, Clean gutters, make repairs to roads, maintain equipment, Exterior building & ground projects, Assist other divisions with misc. projects

c) What interior and exterior spaces are primarily used by your group?

Maintenance garage for projects/offices.

Facility Managers Office for safety tailgate meetings/daily briefings.

d) What are the primary obstacles that your group faces in achieving your objectives at the Park?

Not enough garage space for projects & not enough equipment storage

Garage bays are too short to bring vehicles, trailers, and other big equipment inside to work on

Davis Brody Bond, LLP
Architects and Planners
One New York Plaza, Suite 4200, New York, NY 10004
Tel +212.633.4700

2. Personnel

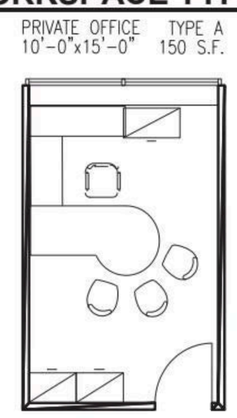
Work Space Requirements Worksheet

Department:

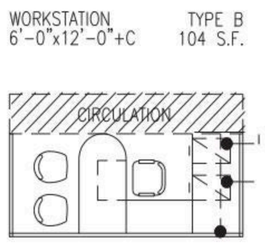
Current Location:

a) Please indicate your workspace type (private office or workstation/cubicle) and your office equipment requirements in the chart below.

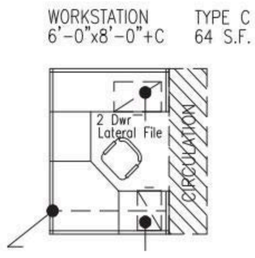
WORKSPACE TYPES:



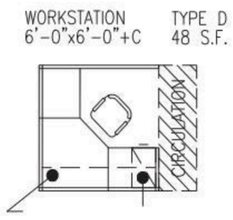
PO



WS



WS



WS

CLOSED SEMI -OPEN OPEN

EQUIPMENT TYPES:

PC = Computer Terminal P = Printer

LT = Lap Top Computer O = Other (*please describe*)

PERSONNEL STATUS

P = Permanent S = Seasonal

Personnel: Current and Projected Staff

Position / Title	Current (C) / Future (F)	Personnel Status	Primary Work Location	Avg. Usage Per Week	Workspace Type	Equipment Type
Facility Manager	C	P	Headquarters	40-50	PO	PC/LT/O
Maintenance Worker	C	P	Maintenance Shop	40-50	WS	PC/LT/O
Maintenance Worker	C	P	Maintenance Shop	40-50	WS	PC/LT/O
Maintenance Worker	F	P	Maintenance Shop	40-50	WS	PC/LT/O

*** Equipment Type refers to that dedicated to a particular individual.*

Facility Manager "Other Equipment"; File cabinets, Bookshelves, Clothing lockers, Misc. Cleaning equipment

Maintenance Workers "Other Equipment"; One printer needed down at the shop, File Cabinets, Bookshelves, Multiple clothing/gear lockers, Fridge, Microwave, Lunchroom table

Davis Brody Bond, LLP
Architects and Planners
One New York Plaza, Suite 4200, New York, NY 10004
Tel +212.633.4700

Davis Brody Bond

3. Physical Space Requirements

a) List typical maintenance tasks performed in the maintenance shop and yard (example: small equipment repair, furniture repair, painting, etc.), time of year and where the tasks are performed. Also list any projected tasks that are expected to take place in the future.

Task Description	Seasonal (S)/ Year round (Y)	Current Location
Equipment Repair; Small and Heavy Equipment	Y	Shop & Yard
Carpentry Projects	Y	Shop & Yard
Painting Projects	Y	Shop & Yard

b) Are there any tasks performed outside the maintenance shop and yard that impact space planning? Please list them below.

Outdoor activity storage; multiple tents, chairs, tables, heaters, ac units, misc. are kept down the road at 3 storage units, Each measuring 12ft wide x 24ft deep

c) Where does the parks shipping and receiving take place? Describe the process below.

We do not have a designated shipping/receiving area, small boxes are brought into headquarters & left inside Hallway near entrance. Big deliveries are left roadside & then picked up with tractor

Davis Brody Bond, LLP
Architects and Planners
One New York Plaza, Suite 4200, New York, NY 10004
Tel +212.633.4700

4. Storage & Equipment Space Requirements
Files and Small Equipment Storage

a) Provide a list of your departments current and future file and equipment storage space requirements. All items on this list is currently placed or will need to be placed within the maintenance workshops.

Files & Storage

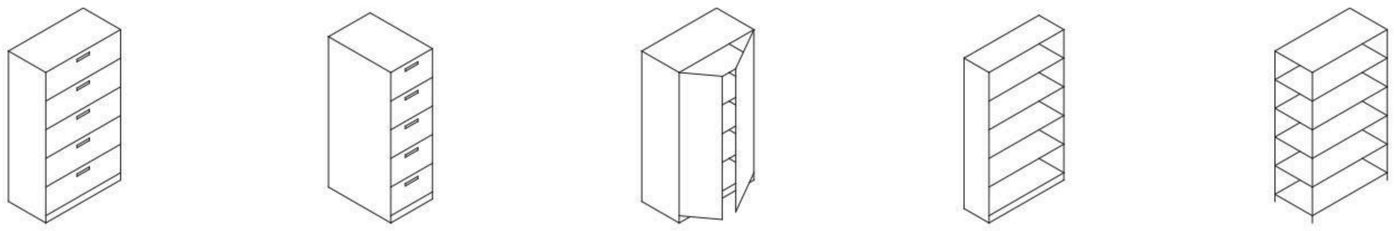
Description	Approximate Area	Height	Current QTY	Current Location	Future QTY	Future Location
5-Drawer Lateral File Cabinets						
4-Drawer Lateral File Cabinets						
3-Drawer Lateral File Cabinets						
2-Drawer Lateral File Cabinets						
Lateral Overhead file Cabinets						
5-Drawer Vertical File Cabinets		5 Feet	4	3 @ Shop 1 @ Manager Office		
4-Drawer Vertical File Cabinets						
3-Drawer Vertical File Cabinets						
2-Drawer Vertical File Cabinets						
Vertical Overhead file Cabinets						
Storage Cabinet, 18" Deep		6 Feet Tall x 4 Feet Wide	2	Chemical/Paint Shed		
Storage Cabinet, 24" Deep		7 Feet Tall x 4 Feet wide	9	5 @ Shop 4 @ Manager Office		
Bookcases						
Metal Shelving Unit		6 Feet Tall x 8 Feet Wide x 2 Feet deep	6	4 @ Shop 2 @ Outdoor equipment/ Fuel Shed		
Other: Work Benches		3-1/2 Feet Tall x 8 Feet Long x 3 Feet Deep	4	4 @ Shop		
Other:						
Other:						

Davis Brody Bond, LLP
Architects and Planners
One New York Plaza, Suite 4200, New York, NY 10004
Tel +212.633.4700

Davis Brody Bond

Martin van Buren National Historic Site
Programming Questionnaire – MAINTENANCE

Examples:



LATERAL FILE | VERTICAL FILE | STORAGE CABINET | BOOKCASE | SHELVING UNIT

Medium to Large Equipment and Vehicle Storage

b) Please provide a detailed equipment inventory and summarize below. Approximate equipment / vehicle sizes: S= Handled equipment (not including portable tools), M=2'-6', L=6'-12', XL=12'+. Storage Method: (U) Uncovered, (C) Covered, (E) Enclosed.

Equipment Type	Current QTY	Future QTY	Size				Storage Method	Storage Location	Frequency of need
			S	M	L	XL			
Tractor – Would like covered	1	1				1	U	Yard	Weekly
Kubota UTV – Would like Covered	1	1			1		U	Yard	Daily
Ram Pickup – Would like Covered	1	1				1	U	Parking Lot	Daily
Ford Dump Truck- Would like Covered	1	1				1	U	Parking Lot	Daily
Ford Van	1	1				1	U	Parking Lot	Weekly
Chrysler sedan	1	1				1	U	Parking Lot	Weekly
Chipper – Would like Covered	1	1				1	U	Yard	Weekly
Dump Trailer	1	1				1	U	Yard	Month
Landscape Trailer	1	1				1	U	Yard	Month
Snow Plows	2	2			1		U	Yard	Season
Sander/Snow Blowers	3	3		1			U	Yard	Season
Mowers – Need Sheltered	4	4			1		U	Barn	Season
Equipment Attachments –	15	15		2	8	5	Some	Yard/Bar	Daily

Davis Brody Bond, LLP
Architects and Planners
One New York Plaza, Suite 4200, New York, NY 10004
Tel +212.633.4700

Would like covered							U Some C	n/Shed	
Weedwackers/Chainsaws/blowers	20	20		16	4		C	Shed/Barn	Daily

c) Please estimate the number of parking spaces needed for department employees and park vehicles.

Park Vehicles; 6
Employee Vehicles; 20

Hazardous Material / Special Containment Storage

d) List all special containment equipment and hazardous material storage requirements below. All items listed here require special security measures. Storage Method: (D) Dedicated Storage, (S) Shared.

Haz Mat / Equipment Type	Current QTY	Future QTY	Storage Method	Storage Location	Frequency of need
Gas Cans	50G	50G	S	Fuel/equipment shed	Daily
Motor Oil/Bar and Chain Oil/Fuel Additives	60G.	60G.	S	Fuel/Equipment Shed	Weekly
Aerosol Chem; WD40/Pb Blaster/etc	25 Cans	25 Cans	S	Fuel/Equipment Shed	Weekly
Paint	40G	40G	S	Paint/Cleaning shed	Weekly
Cleaning Chemicals	25G	25G	S	Paint/Cleaning Shed	Daily
Other Chemicals	15G	15G	S	Paint/Cleaning Shed	Daily

Davis Brody Bond, LLP
Architects and Planners
One New York Plaza, Suite 4200, New York, NY 10004
Tel +212.633.4700

Davis Brody Bond

5. Support Space, Special Equipment/Room Requirements

a) List support spaces which are or may be used by your group. Some examples are listed below. Please list your present and forecast requirements for special equipment in the remarks columns.

Special Use Space	Approximate Area	Remarks
Office/Locker/Break Room	25'x25'	Would like Small Kitchen @ Shop
Woodshop/Paint Shop	25'x25'	Would like adequate Ventilation and Bright Lights
Equipment Repair Room	25'25'	Tall Garage Doors to bring in vehicles, & Large Equipment. Plenty of tool storage

6. Building Environment/Security Requirements

a. Does your group require any special architectural and/or building environment conditions, such as extra height, special lighting, air conditioning or security?

Extra Tall Garage doors (Tallest Equipment is 10'). Air Conditioning, Security, Extra Ventilation in work areas.

Bright Lights in work areas, Exterior outlets, Hose Connections, Exterior air supply lines

7. Adjacency Requirements

The aim of this section is to obtain adjacency requirements for your group. Adjacencies are the physical needs of one group to be close to or separate from other groups or interior/ exterior spaces. In the section provided below, please list groups and/or functions your department has adjacency requirements for. We ask that you indicate your requirements using the following three classifications:

Essential - critical workflow or direct communication, must be directly next to your group.

Important - should be in close proximity, probably on the same floor

Normal - probably not more than one or two floors apart.

Undesirable - should be physically separated from this group either by means of distance or physical barriers.

Davis Brody Bond, LLP
Architects and Planners
One New York Plaza, Suite 4200, New York, NY 10004
Tel +212.633.4700

Essential

Supervisor	Where are they currently located?
	Headquarters

Important

Group Name	Where are they currently located?

Normal

Group Name	Where are they currently located?

Undesirable

Historic Home, All other work personnel	Where are they currently located?
	Headquarters. Infront of shop (Historic Home)

8. Other Thoughts

- Put all other work personnel to be separate from the shop area due to; Equipment running, Loud tools and other work-related sounds, Dust, Fumes interferes with other park divisions operations
- Tall & Wide Garage doors are an absolute necessity

Davis Brody Bond, LLP
Architects and Planners
One New York Plaza, Suite 4200, New York, NY 10004
Tel +212.633.4700

Davis Brody Bond

Davis Brody Bond, LLP
Architects and Planners
One New York Plaza, Suite 4200
New York, NY, 10004
www.davisbrodybond.com

Davis Brody Bond

Davis Brody Bond, LLP
Architects and Planners
One New York Plaza, Suite 4200
New York, NY 10004
www.davisbrodybond.com