

Visualizing the Landscape: Plans and Recommendations for Matteson Farm

by

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Visualizing the Landscape: Plans and Recommendations for Matteson Farm

2009 Report Generated by Joane Slusky and Sara Turner for Matthaei Botanical Gardens



Figure 1. Current Site: Residential Development Encroaching on Midwest Vernacular Landscape
Matteson Farm Site, North end of MBG's property, 2224 North Dixboro Road, Ann Arbor MI
Source:

Abstract

Today, barns and farmsteads are rapidly disappearing from the Midwest due to neglect, new development, weathering, and lack of practical purpose.

This project is a future vision for the adaptive reuse of the two barns and the Matteson Farm located on the Matthaei Botanical Garden's property. The approach this project takes to addressing the cultural significance of the Matteson farm is characterized by the Secretary of the Interior's standards for rehabilitation and preservation. The project includes the following deliverables: site plan, phasing schedule, planting recommendations, guidelines for the treatment of a cultural landscape, and suggestions for interpretation and educational programming.

The project followed a traditional approach to site planning including: a site inventory, site analysis, program design, schematic design, and final design. A stakeholder focus group, case studies, and interviews all helped inform the overall site design and circulation network.

The plans and vision for the adaptive reuse of the barns and Matteson farm present Matthaei Botanical Gardens with a sustainable plan for the future development and maintenance of the property. The creation of a ceremony garden, event center, and agricultural space allows MBGNA to extend its mission by promoting environmental enjoyment, stewardship, and sustainability through education, research, and interaction with the natural world.

Acknowledgements

We gratefully acknowledge our client, the members of the Matthaei Botanical Gardens staff, and thank them for their time and efforts to make this project a success. We would especially like to thank our practicum advisor, Robert Grese, director of Matthaei Botanical Gardens gardens for countless hours of support and wisdom.

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We would especially like to thank the people who are not with us any longer that built and sustained this farm for over one-hundred years. We are grateful that the Matteson family tended the land and built a farmstead worth preserving.

Sincerely,

Joane Slusky

Sara Turner

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Project Summary

Covering roughly 350 acres, Matthaei Botanical Gardens (MBG) includes a variety of outdoor display gardens, a 10,000 square foot conservatory, miles of nature trails, and a greenhouse with laboratory facilities. The Gardens offer a wealth of resources to all visitors, from the scientist and student to the general visitor. Matthaei Botanical Gardens and Nichols Arboretum, located near central campus, are part of the larger entity MBGNA. Nichols Arboretum and MBG combined together in 2004 as one unit within the University of Michigan. MBGNA's main mission is to promote environmental enjoyment, stewardship, and sustainability through education, research, and interaction with the natural world.

Planning for the future, MBGNA has requested guidance for the short and long term planning and design of the Matteson farm site which includes an original farm house and two historic barns from the mid to late 19th century. The barns are currently being used for storage, and MBGNA is looking for ways to reuse the barns that would bring in financial benefits. The reuse of the structures needs to be in alignment with MBGNA's guiding mission. The adaptive reuse of the barns also presents a potential way for MBG to expand its capacity for event space.



Figure 2. An example of vanishing barns across the mid-west

Located on the northern part of MBG’s property, the barns and farmhouse bring historical and cultural significance to the landscape as many Americans readily identify with the cultural icon of the big red barn. Because Americans have not been too far removed from their heritage with farming and the agrarian landscape, the barns remain relative architectural symbols today.

Nevertheless, barns are rapidly disappearing from the Midwestern countryside due to neglect, new development, weathering, and lack of practical purpose. The current disrepair and dysfunctional status of barns across the Midwest landscape reveals how farming practices have transformed over the last fifty years from small family owned farmsteads characterized by handwork and horse powered labor to large corporate farms with powerful equipment for the mass production of food (Davey 2008).

This report called “Visualizing the Landscape” provides MBG with a set of plans and recommendations for the future of the Matteson property. The approach this project takes to addressing the cultural significance of the Matteson Farm is characterized by the Secretary of the Interior’s standards for rehabilitation and preservation. These standards are described at length in the report. A scenario development exercise produced recommendations for the adaptive reuse of the barns and Matteson Farm. After presenting the scenarios for the property at a stakeholder focus group, a site plan was created for the space that features a program synthesized from stakeholder feedback. The program includes an event center, a ceremony garden, and acreage allotted for small scale farming. The purpose of including an agricultural component was to restore some of the original functions of the barns.

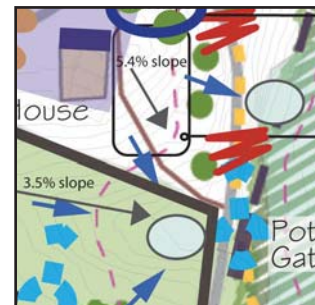
The report includes a set of recommendations for phasing, planting design, and general guidelines for the treatment of the cultural and historic landscape. The site plan gives considerable attention to visitor and vehicular circulation, access, and the cohesive integration of these new project areas into the landscape. Case studies and interviews helped inform the overall design and circulation network. In order to decrease surface parking needs to accommodate the event center, a series of scenarios were developed to address parking needs and access to the site from the general parking lot. Finally, key areas for educational displays and interpretation points are identified in order to uphold MBGNA’s commitment to education.



Scenario Development



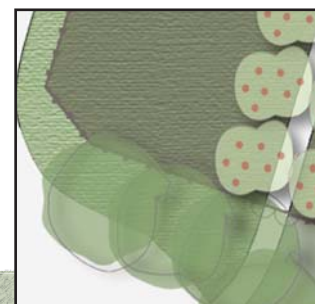
Case Studies



Site Analysis



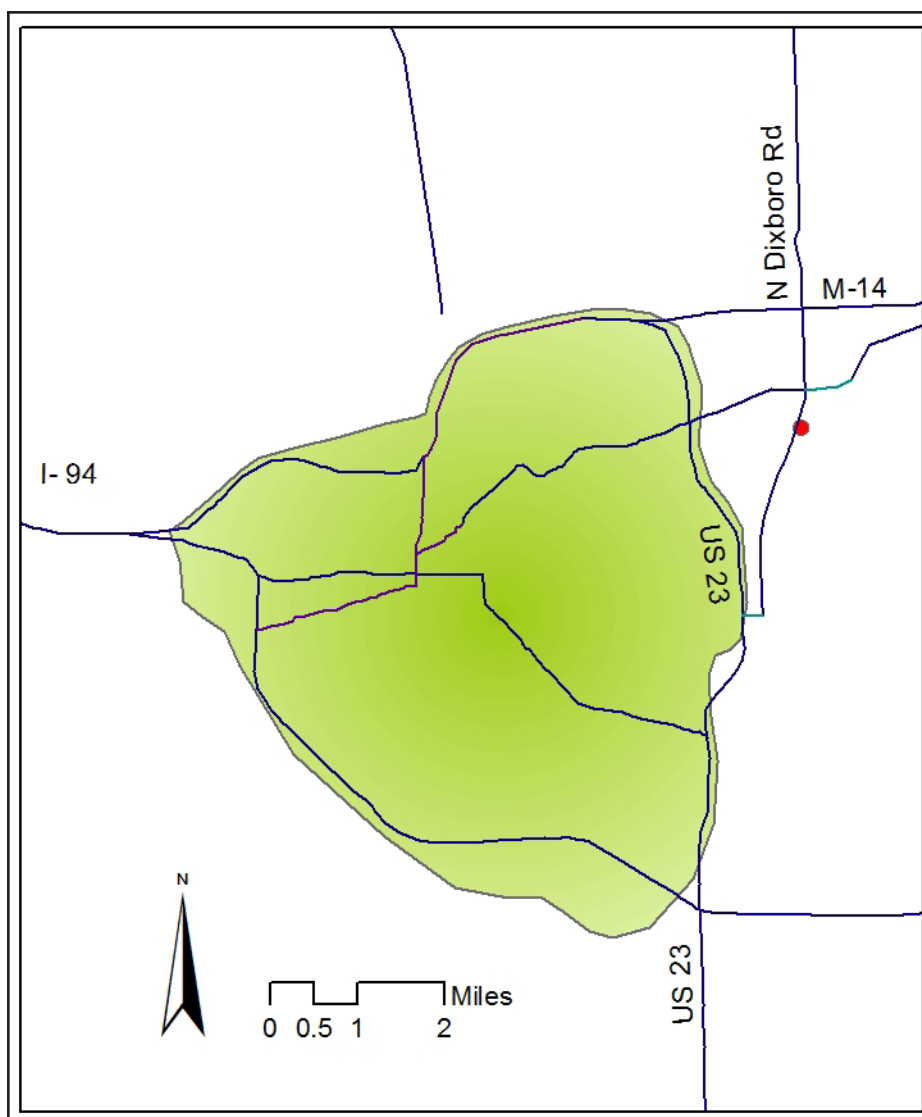
Schematic Design



Site Design

Introduction

This project, “Visualizing the Landscape”, was developed as a conservation planning tool for Matthaei Botanical Gardens (MBG). Located at 1800 North Dixboro Road in Ann Arbor, Michigan, MBG covers approximately 350 acres (Fig. 3). In 1957, the University of Michigan began relocating the Botanical Gardens from Iroquois Street near Stadium Boulevard to land donated by Frederick C. Matthaei, Sr. and his wife Mildred Hague Matthaei (MBG 2007). This property along with the Matteson Farm became what is now the present Matthaei Botanical Gardens. MBG offers a wealth of resources to students, scientists, nature lovers, and the general public. Facilities at MBG include a 10,000 square foot conservatory, a variety of outdoor display gardens, miles of nature trails, several greenhouses, and laboratory facilities (MBG 2006). In 2004, MBG joined the University’s Nichols Arboretum to form a larger unit within the University known as MBGNA. The Gardens and Nichols Arboretum attract over 200,000 visitors a year (MBG 2006).



MBGNA’s main mission is to promote environmental enjoyment, stewardship, and sustainability through education, research, and interaction with the natural world. One specific purpose of MBGNA is to function as a living museum for plant species, such as the heritage peony cultivars at Nichols Arboretum (Fig 4); another purpose is to simply provide a restorative and beautiful environment for a world that is continuing to urbanize. In 2007, MBGNA celebrated its centennial anniversary as an important resource to the local community and University. The celebration was an important milestone for MBGNA to reflect on its accomplishments and begin envisioning the next one hundred years. After some introspection, MBGNA reaffirmed its goals and mission by promising to continue its service to the community as

Figure 3. Matteson Farm on Dixboro Road

a leader in sustainability and stewardship, as a place for people to connect with nature, as an environmental educator, and as a living museum for both plants from around the world and Michigan native ecosystems.

Planning for the future, MBGNA has requested guidance for the short and long term vision for the Matteson farmstead, located at the north end of the Gardens' property. The only remnants from the farmstead include the original farm house and two historic barns from the mid to late 19th century (Figure 5). Matthaei Botanical Gardens is fortunate to have ownership of the Matteson Farm, an agrarian and vernacular landscape with historically significant architecture that connects people to a past way of life. The decision to plan for this space comes at an important time as new urban development continues to sprawl across Washtenaw County



Figure 4. Nichols Arboretum peony garden



Figure 5. Farmhouse, little barn and big barn

and as a growing number of interest groups demonstrate concern for building sustainable cities and increasing localized food production. How the American agrarian landscape has transitioned over the last century establishes the purpose and relevance for the project.

Today small scale farming is a vanishing way of life as evidenced by deteriorating barns, falling silos, and agrarian landscapes that are continually encroached upon by single family housing developments. Not until mid last century did small, family farming start to become an insignificant livelihood rather than the predominate way of life. In 2000, the number of farms was similar to the number of farms in 1860, just after the Civil War . Figure 6 shows how the number of farms has waned in the last fifty years. Between 1950 and 2000, the number of farms in the United States has decreased by roughly 60% (Groover 2008). The number of farms in the United States reached its peak in the 1920s, and the decline of the family farm began shortly after the close of WWII; at this time industrial growth, new technologies, and rapid suburbanization in the 50s and 60s changed the agrarian landscape. Improvements in machinery and biotechnology made large scale food production possible. Agricultural specialization was the product of farmers who could afford large scale machinery specifically designed to plant, cultivate or harvest a particular crop, who were then inclined to raise as much of that crop as possible to realize a return on the investment (Ganzel 2007). Unfortunately the cost of increased agricultural specialization required small farms to consolidate into larger entities.

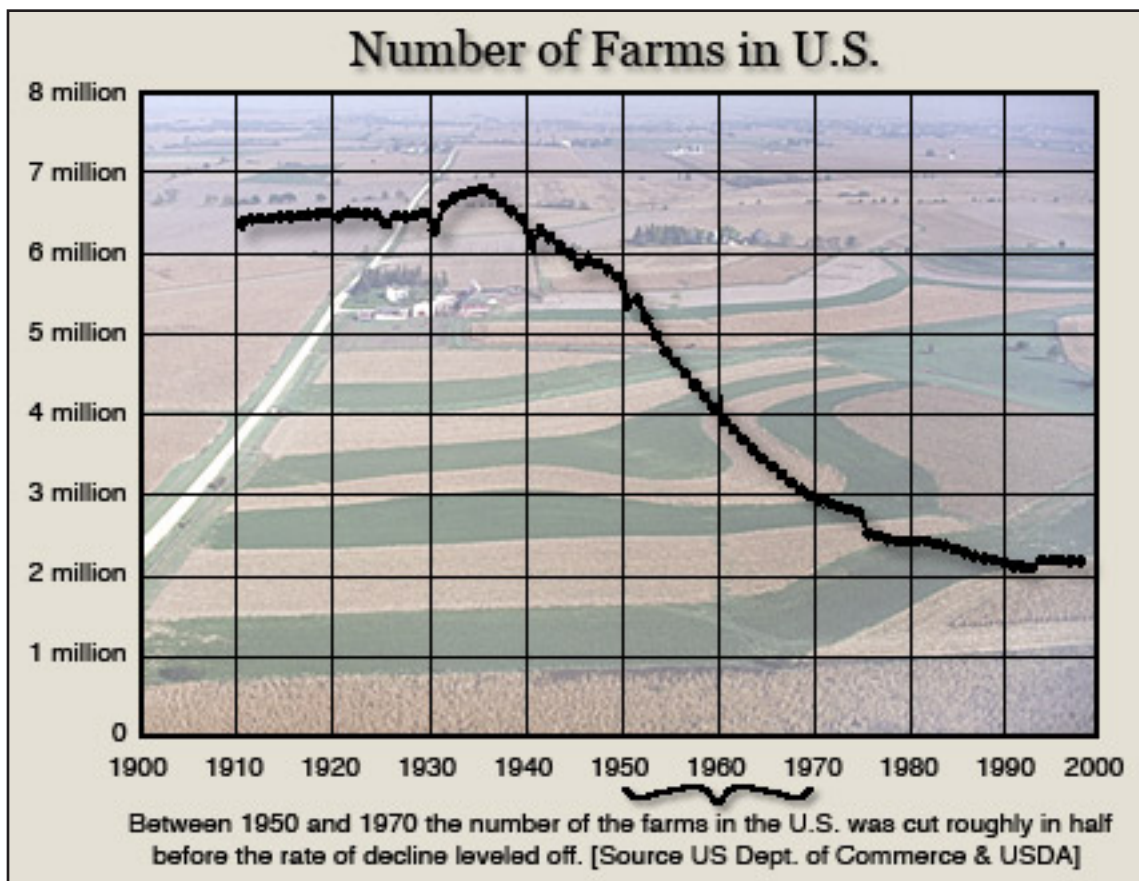


Figure 6. Chart showing farm decline in United States

As a result of the decline in small scale farms, today, many young people have no physical connection to a way of life that once dominated the American landscape. Therefore it is important to document historic records and preserve culturally significant landscapes in order for people to maintain a connection with the past. The visioning process for the Matteson property must indicate how to protect the historic integrity of the landscape and balance preservation goals with the future growth needs of Matthaei Botanical Gardens. This latter part poses a great challenge as MBG seeks to expand its market for wedding and large scale gathering space as a means to increase revenue. Scenario Development on page 31 expands on these goals and needs.

This project offers plans and designs for the future vision of the Matteson farmstead. The designs address these overarching goals:

1. To provide guidelines for a cultural landscape treatment that connects people to the agrarian landscape of the past
2. To create an event center that accommodates 200 people
3. To restore function and purpose to the Barns
4. To create meaningful and restorative places for the community to visit and learn from

After developing these goals, some of which derived from the Client and others that derived from literature review, the project followed a traditional approach to site development. This included site inventory, site analysis, program development, schematic development, and site design. In addition to this approach, key processes like scenario development, a focus group meeting, investigation of case studies, and interviews all helped inform the plans and designs.

The project began with a site visit and inventory. GIS data was gathered along with information pertaining to the history of the site. An analysis of the property was completed and presented to MBG staff and other interested parties. A critical component of this project, the a focus group helped to define needs and desires for the Matteson Farm. The final design documents include a layout plan, planting plan, sections, elevations, and vignettes. Included in these design documents are recommendations that address guidelines for cultural landscape treatment, interpretation strategies, and potential phasing for the project.

Why Preserve?

“The attempt to derive meaning from landscapes possesses overwhelming virtue. It keeps us constantly alert to the world around us, demanding that we pay attention not just to some of the things around us but to all of them--the whole visible world in all of its rich, glorious, messy, confusing, ugly, and beautiful complexity.” Pierce Lewis (Birnbaum 1994).

It is easy for preservationists to understand why protecting cultural and historical icons is an important and relevant task. However, because preservation is not a priority for everyone, the importance of preservation must be made known. Why anything is preserved is central to two basic questions— what is worth preserving and why is preservation important to society?

According to *Preservation News*, there are several reasons why historic preservation is important. To name a few: preservation links people to the past, helps maintain enchantment, uniqueness, and meaning in an era of increasing cultural homogeneity, possesses intrinsic value as art, and informs people how past environments influenced society and how society can influence the forms of environments in the future (Stipe 2003).

Preserving historical physical resources connects people to the past and helps people recognize who they are, how they came to be, and how they differ from other cultures. Compared to photo documentation, historic records, and oral histories, preserving physical heritage provides a living and tangible object, structure, or place for people to connect with the past.

Many people may be inclined to think preservation is primarily the practice of preserving historic buildings and structures. They may fail to recognize the cultural and historical significance of the surrounding physical environment of these buildings and structures. Therefore people may not as easily comprehend the importance of cultural landscape preservation. Primary concern with landscape preservation was not fully acknowledged until 1988, when the National Park Service (NPS) identified cultural landscapes in their management policies (Page,Gilbert,Dolan 1998). Subsequently, the Secretary of the Interior’s Standards for the Treatment of Historic Properties, a document that codified the 1966 National Historic Preservation Act, were updated in 1996 to provide guidelines for landscape resources (Page,Gilbert,Dolan 1998). At this time, preservation specialists developed criteria, guidelines, and standards for evaluating and treating significant cultural, vernacular, and rural landscapes (Stipe 2003).

According to the NPS, a cultural landscape is, “ A geographic area, including both cultural and natural resources and the wildlife or domestic animals therein, associated with a historic event, activity, or person, or that exhibit other cultural or aesthetic values (Page,Gilbert,Dolan 1998). There are four general types of cultural landscapes: historic sites, historic designed landscapes, historic vernacular landscapes, and ethnographic landscapes. A historic site is a landscape significant for its association with a historic event, activity, or person. Examples would include Abraham Lincoln’s Birthplace, George Washington’s Mt. Vernon Estate, the Frederick Douglass National Historic Site, and the Frederick Law Olmsted National Historic Site.



Figure 7. Collapsing barn in Lodi Township, Michigan

Another type of cultural landscape, the historic designed landscape, is a landscape that was designed and laid out by a architect, landscape architect, or horticulturist and has an association with a significant trend or movement in landscape design and architecture (Page,Gilbert,Dolan 1998). An example would be Central Park in New York City. Historic vernacular landscapes develop from functions of everyday life and reflect traditions and social customs that are expressed in the patterns of spatial organization, land use, circulation, vegetation, structures, and objects (NPS). Historic vernacular landscapes are generally characterized by large acreage and a small proportion of structures (Bernsten 1998). The most common examples of vernacular historic landscapes are related to agriculture. The final cultural landscape, the ethnographic landscape, can be a variety of natural and cultural resources that are defined as having significant heritage. Examples include Devil’s Tower, the Petroglyph National Monument in Albuquerque, New Mexico, and Sleeping Bear Dunes, in Glen Arbor, Michigan.

Under the classification as a historic vernacular landscape, the Matteson farmstead could be qualified as a cultural landscape. Vernacular landscapes are often difficult to evaluate because they are so ordinary and ubiquitous. Furthermore, no formal plans or design trends exist to provide a comparative analysis for determining historic integrity and significance. The National Park Service advises that integrity is the “authenticity of a property’s historic identity, evidenced by the survival of physical characteristics that existed during the property’s prehistoric or historic period (Alanen and Melnick 2000). The measure of integrity of a cultural landscape will determine the most appropriate landscape treatment for protecting a cultural landscape: preservation, rehabilitation, restoration, and reconstruction. These treatments types will be further described in Treatment Guidelines on page 93.

Not all vernacular landscapes should be preserved, but as the homogenization of the landscape becomes increasingly more common, the preservation of vernacular landscapes takes on greater importance. Matthaei Botanical Gardens has a great opportunity to demonstrate the cultural, scenic, and educational value of the Matteson Farm. As more subdivisions continue to spread, the agrarian landscape becomes a rare jewel that must be safeguarded. If vernacular landscapes are not protected and become endangered, the irony is that the term vernacular will no longer signify the ordinary and common. The ongoing protection of Matteson Farm can yield an improved quality of life for the community and help to maintain a sense of place or identity for future generations.

Planning for the protection of a vernacular landscape is an important process to prevent cultural resources from losing their significance or integrity. Planning provides tools such as management guidelines and recommendations for interpretation that will guide how the landscape will be protected in the future. Preservation planning involves the following steps: historical research; inventory and documentation of existing conditions; site analysis and evaluation of integrity and significance; the development of a cultural landscape preservation approach and treatment plan; and the development of a cultural landscape management plan (Birnbaum 1994). The result of such steps is formatted into a Cultural Landscape Report (CLR). The CLR documents the history, significance, and treatment of a cultural landscape. As CLRs provide management and landscape treatment guidelines, CLRs are used as a planning tool to inform decisions about proposed changes or additions to a landscape, such as a new visitor’s parking lot or large scale event center.

The next two chapters provide historic research and documentation of existing conditions. Both of these investigatory processes helped inform decisions later on in the design process for the vision of Matteson farm.

Site Location

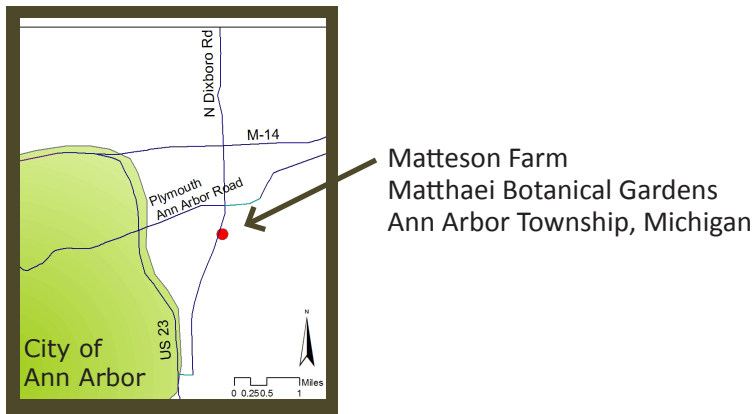


Figure 8. Location Map

The Matteson farm parcel covers 30 acres and is located at 2224 Dixboro Road, ½ mile South of Plymouth-Ann Arbor Road in Ann Arbor Township, Washtenaw County, Michigan.

The farm is approximately 2 ½ miles west of the city of Ann Arbor and east of Fleming Creek. The farm is located north of MBG’s main entrance, ½ mile drive from the main greenhouses and nestled between Helen V. Smith Woodland Wildflower Garden and the Marilyn Bland Prairie. Immediately west of the farm is a single-family home subdivision with sidewalks that connects to an informal trail system. The trail links the Medical Facility building on Plymouth Road to the subdivision homes.



Figure 9. Aerial with Matteson Farm site

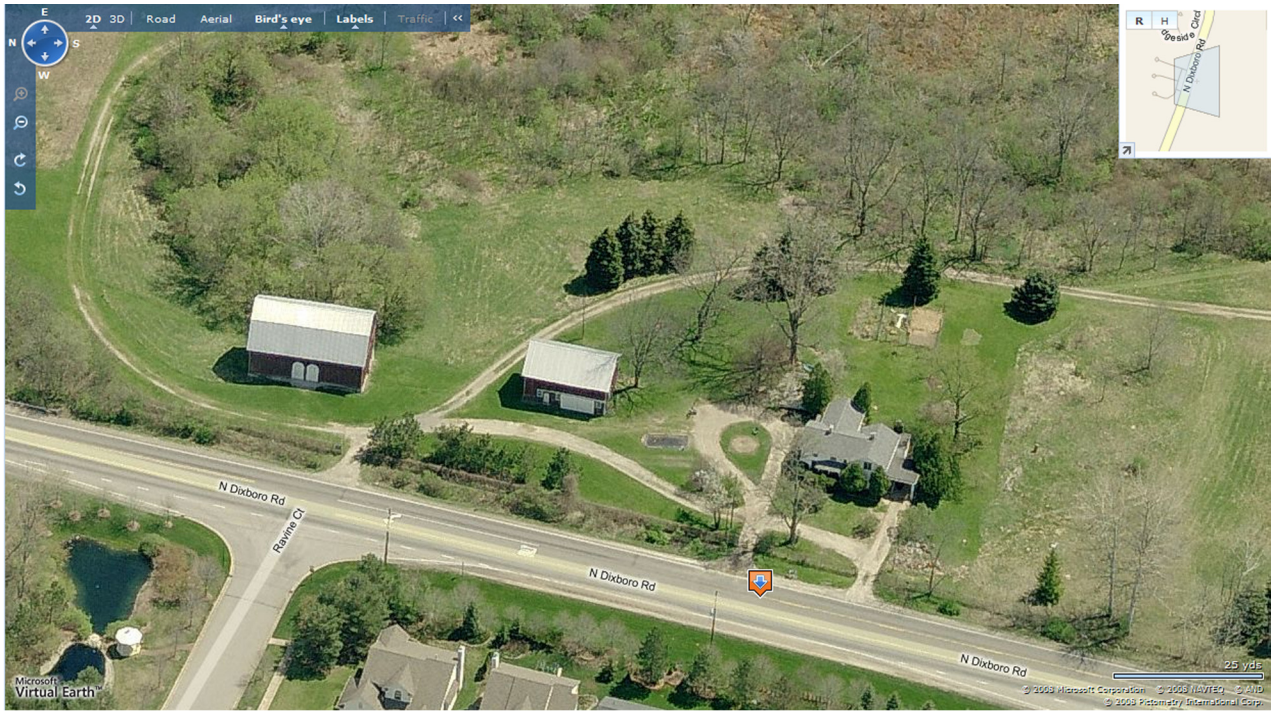


Figure 10. House, little barn and big barn

This project will focus on 4.8 acres of the Matteson parcel. There are three buildings that comprise the farmstead with three separate entry drives that are connected by an interior driveway. An 1825 farmhouse, a smaller 1845 barn and an 1875-1900 barn. Due to the vast old growth forests of America, the settlers built their structures out of wood instead of sticks and stones that were common in England (Cleek). The house is aligned with the little barn and sits parallel to Dixboro Road. The larger barn is at a higher elevation and is at an angle to the line of house and barn.

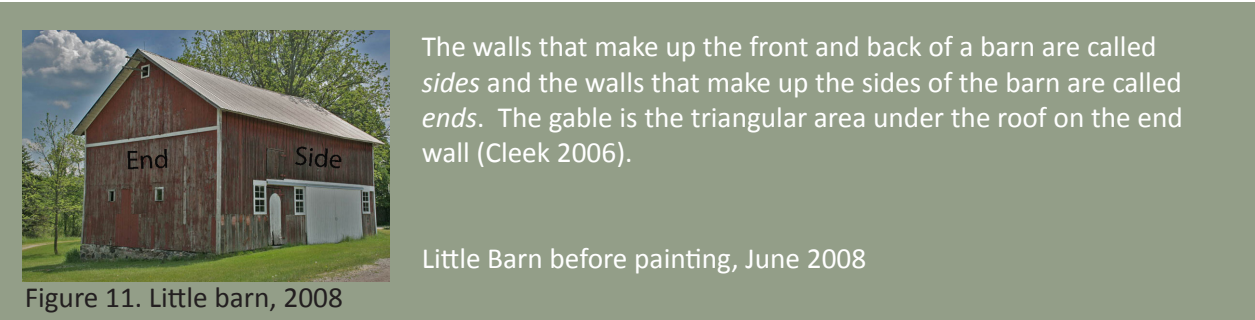


Figure 11. Little barn, 2008

Photographic Documentation and Analysis

HOUSE

The 1825 farmhouse is constructed with a gable front and wing shape with several additions. (McAlester 2000). It has a shed-roofed porch at the “L” of the two wings. It is divided into two apartments that provide a residence for two caretaker families.

The smaller apartment contains a living room, kitchen and dining room on the first floor and two bedrooms and a bathroom on the second floor. This apartment has a carport adjacent to its south door entry and the east entry leads to the back yard.

The larger apartment located on the north side has a living room, kitchen, dining room and a bathroom on the first floor and three bedrooms on the second floor. An enclosed porch is adjacent to the north side entry and an open porch is adjacent to the west side entry.



Figure 12. The larger apartment on the north side with covered porch



Figure 13. Front of House looking east



Figure 14. House from back yard looking west



Figure 15. Carport attached to smaller apartment may need repairs

Each apartment has its own forced air furnace located in the basement.

The planted beds surrounding the house contain a variety of cover including perennials, shrubs and bulbs. The 1825 farmhouse is divided into two apartments that provide a residence for two caretaker families.



Figure 16. View of the house looking north



Figure 17. Brides will use the back door of the smaller apartment



Figure 18. Yard east of the house, the barns are in the background

Figure 19. Flagstone Paving on the north side of the house



Figure 20. Side yard and wood fence around concrete slab



Figure 21. Concrete Slab Area with Wood Fence



Figure 22. Circle Drive



Figure 23. Sumacs line Dixboro Road and provide privacy during the growing Season

BIG BARN

The larger barn is an English style bank barn (Cleek 1996) with a gambrel roof (McAlester 1984) built between 1875 and 1900. The outside dimensions are 29'-5" x 36'-6" with an approximate roof overhang of 1'-6". The main level is accessible from the front (west) side and the lower level is at grade and is accessible from the gable end doors on the north and south. A forty foot section of the foundation wall was rebuilt in 2003 and the roof was replaced. The posts on the interior of the barn show signs of circular saw cuts. Presently this barn is used for storage. There were significant signs of animal droppings, most likely bats.

The Michigan style painted arch doors were once thought to keep the devil out (Radojkovic 2007). Devil doors and witch windows are described in Eppis Fuun de Mahadunky (1948) edited by Walter Boyer. "To keep the devil out of your barn, paint a white line around your barn door much higher than the door. When the devil opens the door he will not stop and will run against the line. This will discourage the devil and he will not return to the barn." Elmer Smith (Smith 1965) suggests that "when similar lines are painted around windows these decorations have been called "witch windows". The barn was repainted in the fall of 2008 and maintained the Michigan style paint decorations.

The turf grass surrounding the barn is mowed to keep it low and there are no significant plantings within twenty feet.



Figure 24. Big Barn Looking South prior to Fall 2008 painting



Figure 25. Big Barn and Yellow Trail



Figure 26. Little Barn Looking East



Figure 27. Little Barn and Walnut tree Looking North

LITTLE BARN

The smaller barn is an English style three-bay barn built in 1845, 21 years after the farmhouse. A large sliding door provides access to the ground floor twenty-eight foot wide bay typically used for tying up animals and circulation (Hubka). A smaller door provides access to the smaller fourteen foot bay. This side door barn design also known as an old English, Connecticut or Yankee barn was popular until the gable-door version proved more convenient in the mid-1800's (Hubka 2004). There is an interior stair for access to the second floor. This barn is illuminated. The simple gable roof was common on barns from this period and is thought to have been a result of the necessary form for roof thatching, a common roofing material in England. Settlers found that the abundant wood plants and shingles could withstand the harsh winters better than reed thatching (Cleek 2006).



Figure 28. Second floor interior view with lighting

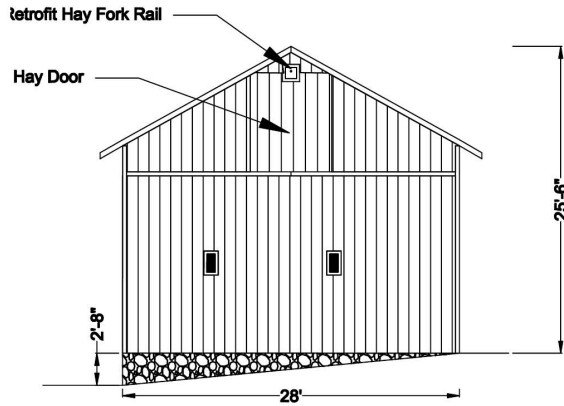
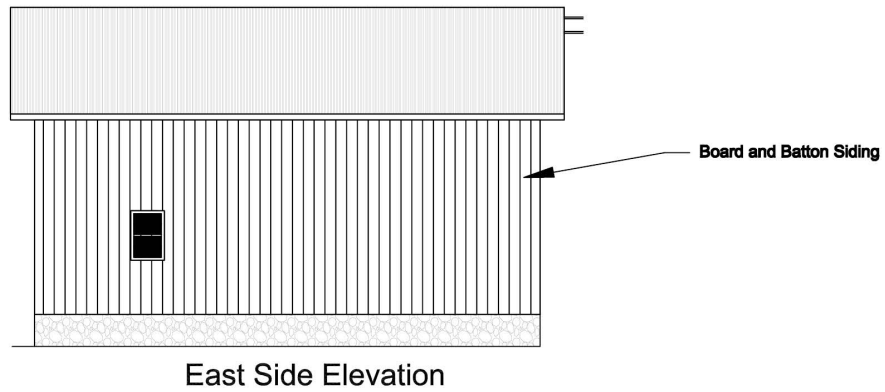


Figure 29. Little Barn looking southwest

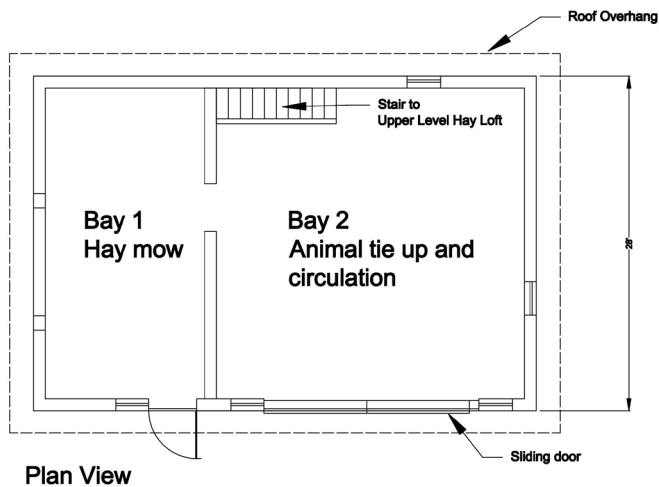
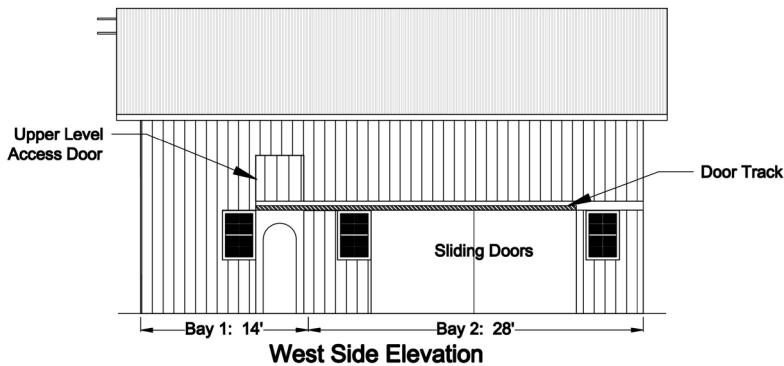
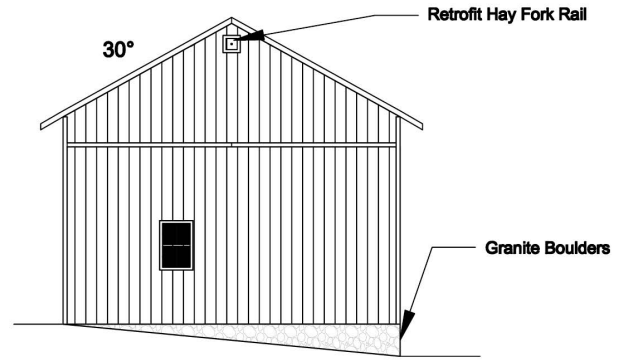
The hand hewn post and beam timber frame has vertical saw marks and the second floor joists are split log beams. The second floor plate beams, located at the top of the side walls, and the ridge beam, located at the top of the gable peak, run the forty-two foot length of the barn side to allow an open space unimpeded by columns for threshing grain. Round and square nails indicate that the barn was under construction at different time periods. Round steel wire nails were available after the development of the Bessemer process for producing soft steel in the 1880's. (Visser) The vertical posts are attached to a sill, a horizontal beam that rests on the stone foundation.

The stone foundation keeps the wood away from the moist ground and it also allowed the barn to be constructed on a slope. The Michigan landscape was filled with boulders and small rocks left by the melt waters of the Wisconsin Glacier and this enabled the settlers to construct these stone foundation walls (Barnes 1998).

Figure 30. Plan and elevations of little barn



Scale: 1" = 10'-0"
0 5 10



The exterior board and batten siding was repainted in the fall of 2008.

There is a grape vine growing on the east side and the turf grass is regularly mowed. Presently, this barn is used for storage.



Figure 31. In 1845, loading hay would have been done by hand. Marcella Plantation, Mileston Mississippi (Vlach 2003).

Open Field

South of the house lies an open field with a dense line of Spruce, Oak and Walnut trees. There are many sapling walnut trees and must be removed or relocated.



Figure 32. Poplars along Dixboro Road in field South of the house with spruce on the left



Figure33. Field South of the House

HISTORY

French fur traders first visited what is now known as Washtenaw County in the early 1600's. By the 1700's, the French were trading with American Indians and Jesuit missionaries. In 1805, the territory of Michigan was formed and in 1809 a settlement was established in Washtenaw County. As noted in *The History of Washtenaw County, Michigan*, "The first Government surveys of land in the Territory of Michigan were made in 1816, and two years later they came into market." From this period dates the permanent settlement of the State. The Indian claim to 6,000,000 acres (including Washtenaw) was extinguished by a treaty concluded by General Cass, at Saginaw in September, 1819, and two years later, 'The Chicago Treaty' obliterated the Indian title to all the remaining lands in the State south of the Grand River. Thus, the lands were thrown open to settlement; the next 10 years were an important decade in the history of Washtenaw County" (Chapman 1881).

The boundaries of Washtenaw County were formally declared by Governor Lewis Cass following their establishment by the legislative council in 1822. The first settlers arrived the following year (Chapman 1881). According to Eldridge Gee,



Figure 34. The Henderson Residence in 1874 had a circle drive drop off at the front door of the house with an iron fence.



Figure 35. Zigzag fence in Ann Arbor in 1876

“there were no white men residing in Washtenaw County,” when he and his father-in-law, Epaphras Matteson first visited in 1822. Eldridge returned the following year without his family, to construct a shanty and then a cabin six months later. He was ordered off the property by the rightful owner and managed to live with friends and neighbors until his father-in-law returned (Beakes 1906).

Epaphras Matteson purchased eighty acres of land for \$100. in Ann Arbor Township from the United States government on July 24, 1824 in section 13 (Peck 1831). He immediately began construction of his home. Both men moved their families from New York, into the farmhouse and established the Matteson farmstead (Beakes1906).

Epaphras Matteson was born in Connecticut in 1763. He married Mary Madison from Orleans County, New York, in 1801 and they had four children.

Amos, their fourth son married Roby Norton in 1835 and they had three children, Epaphras (2nd), Artela (Stark) and Zilpah. Their son, Epaphras (3rd) Matteson and Mary Connelly were married in 1868 and by 1881 they owned 180 acres of tillable land.

Ann Arbor Township contained over 21,000 acres divided into two-hundred and twenty four farms which approximated ninety-five acres per farm.

The farm was owned by a member of the Matteson family until 1957 when Frederick C. Matthaei and his wife Mildred Hague Matthaei presented a monetary gift to the

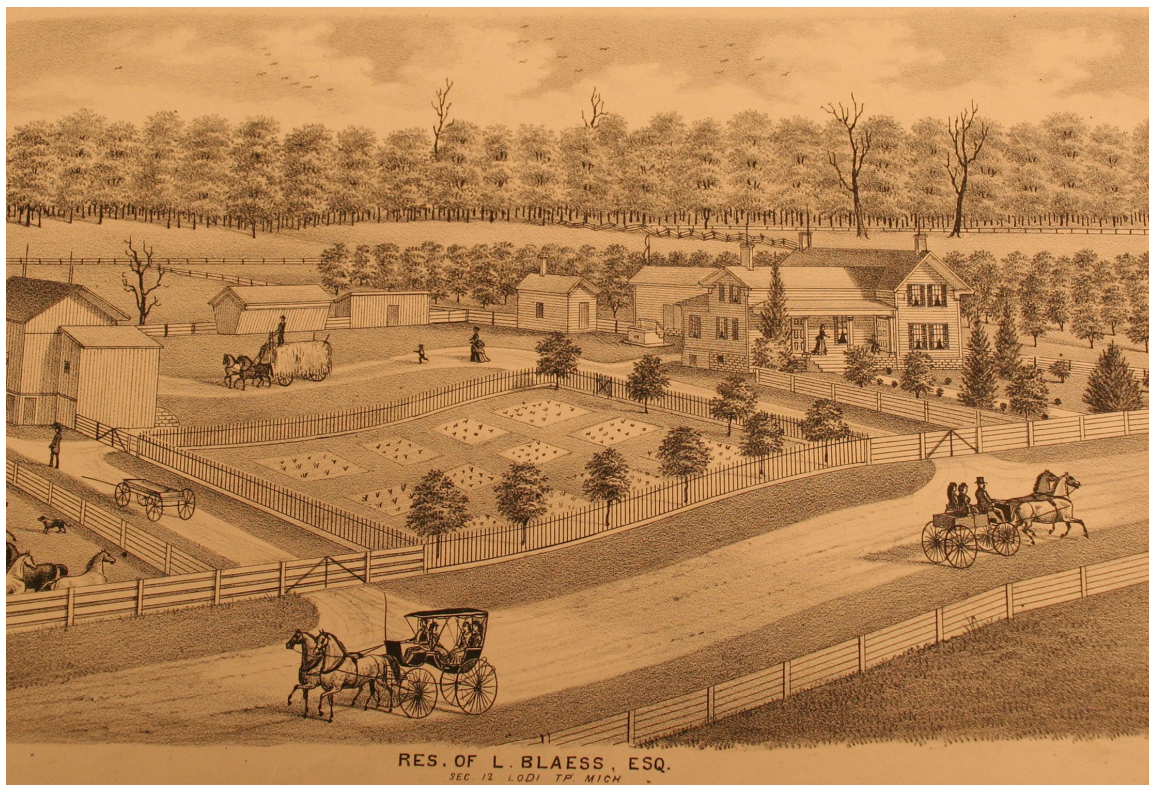


Figure 36. 1874 Blaess Farm in Lodi Township had a picket fence around the vegetable garden and the typical post and rail horse fence surrounding the rest of the property.

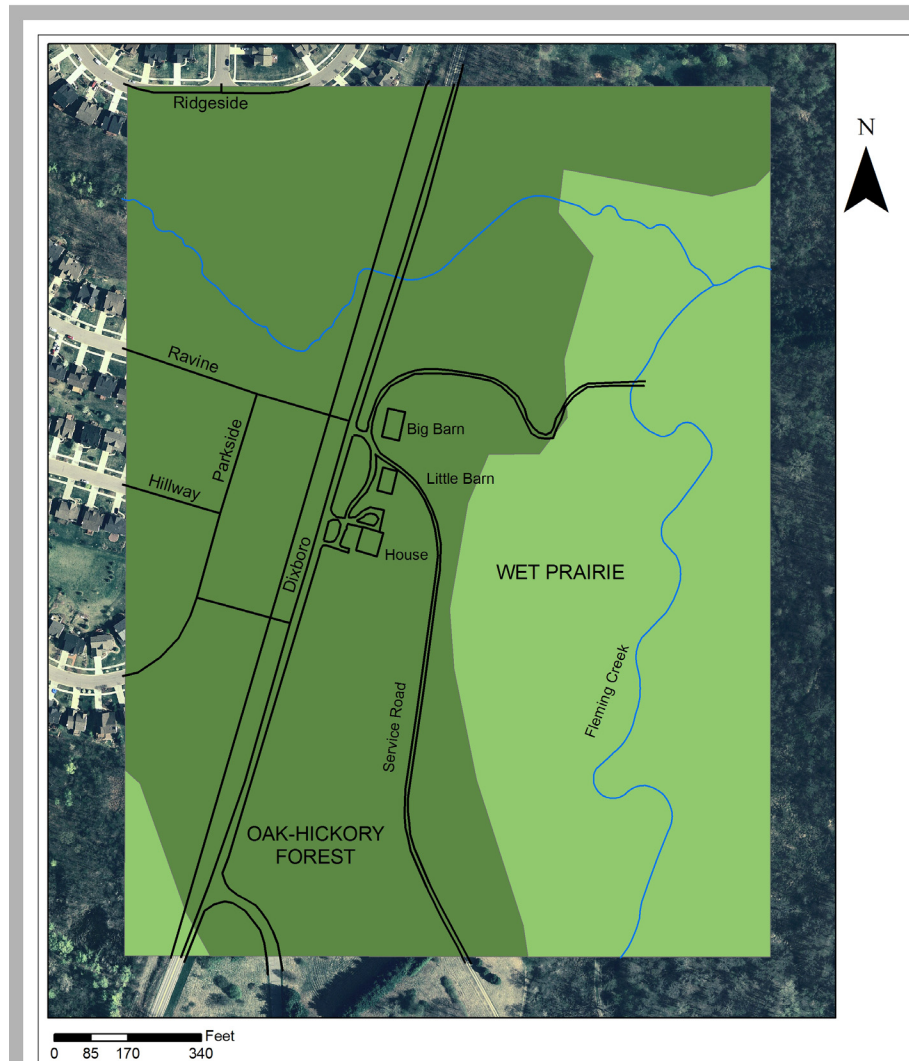


Figure 37. 1800's Land Cover Map

University of Michigan that allowed the purchase of Matteson farm (Norman 1982).

Historic Land Cover

From the original notes of the pre-settlement land survey, Washtenaw County was covered with 62,966 acres of Oak Barrens, a forest type that has up to a 60% canopy cover. The 1800's land cover map (figure 37) indicated that the farmstead area was an Oak-Hickory forest. Typical plant occurrences might have been White Oak, Black Oak, Red Oak, Shagbark Hickory, Hop-Hornbeam, Witch-hazel, Downy Serviceberry, Flowering Dogwood and Dwarf Hackberry (Barnes). A wet prairie flanks Fleming Creek and lies east of the farm site. Massasauga rattlesnakes are typically found in river bottom forests and mesic prairies along rivers such as Fleming Creek (WI DNR).

A rectangular area for agriculture is visible just south of the house in the 1966 aerial. Also visible is a display garden that was installed by MBG.

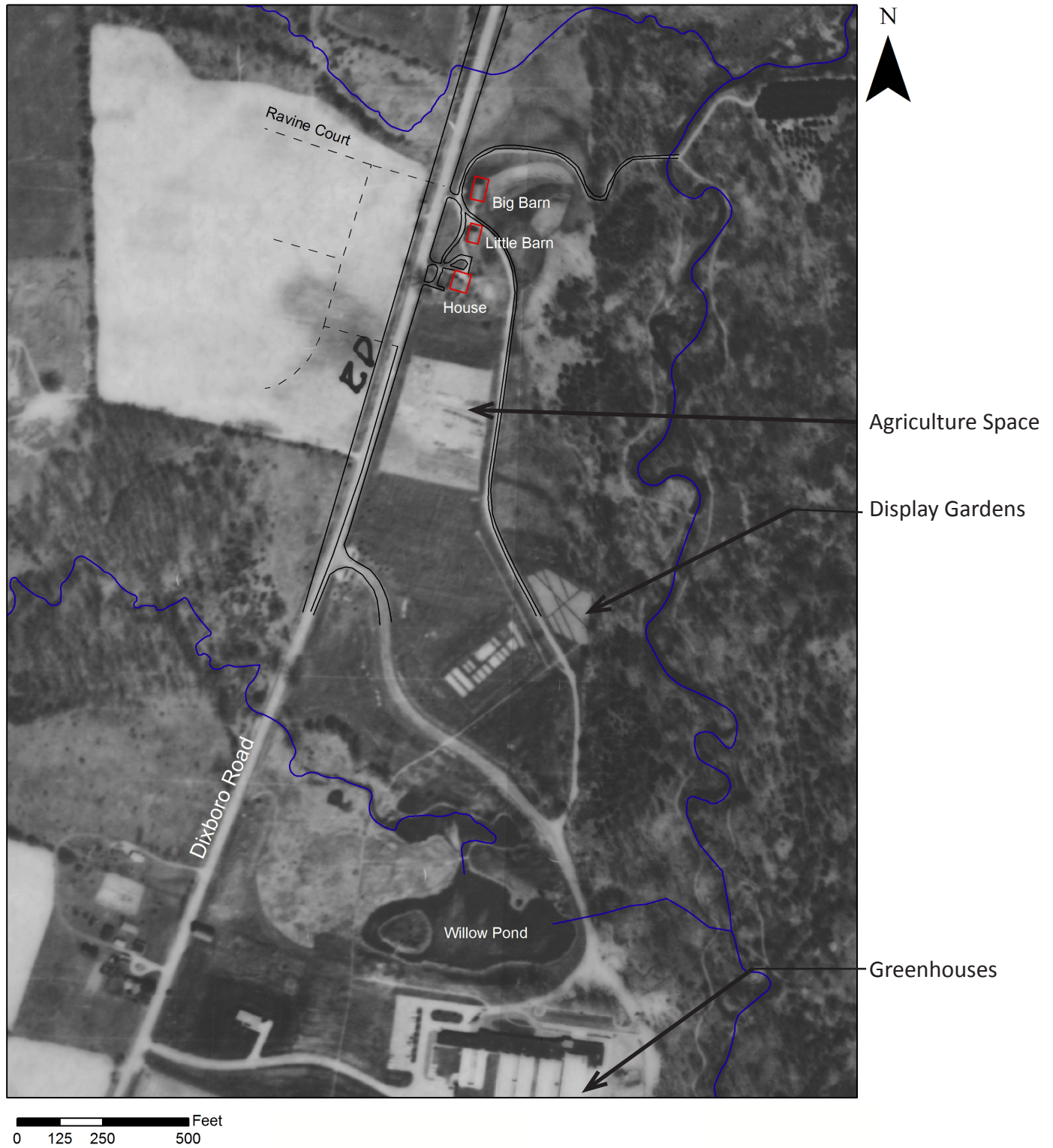


Figure 38. 1966 Aerial

Scenario Development

The large and small barns of the Matteson Farm are significant cultural resources. The buildings of the Matteson Farm and surrounding landscape have significant educational value in that these resources remind people of their American heritage and its rich association with farming as a way of life. Over the last several years, MBG has placed considerable amount of attention into finding an economic justification for keeping the barns and finding creative ways for how the farm can be tied into the mission of the Gardens.

Prior to the big barn's renovations in 2002 and 2003 that included a new roof and a repaired foundation, several estimates were prepared to evaluate the cost effectiveness of repairing the barns versus demolition. Stephen Stier, a Michigan licensed builder specializing in preservation and traditional construction methods, provided a consultation regarding the condition and value of the barns. His report concluded that the barns lack in meaningful maintenance and that repairs would be less expensive than the cost of demolition (Stier). A major item that came out of the report was the storage value of the barns. To recreate the same amount of storage space the barns provide would cost between \$70,000 and \$95,000. From Steve's report, MBG and the University who owns the buildings and rents them to MBG, concluded that the barns were irreplaceable because of their utility value and significance as cultural resources. One of the suggestions that came out of Steve's report was that the University and MBG adopt a regular maintenance plan in order to help preserve the barns and decelerate any deterioration.

Today, the two barns on the Matteson property are currently used for light storage of University materials and other miscellaneous items belonging to MBG. Though storage was the original function of the barns, MBG and the University are seeking ways to maximize their utility and economic value. As the barns age and maintenance costs become more expensive, the benefits the barns offer as storage may not be worth the costs of continual repairs and maintenance. The future of the barns and Matteson Farm may be in jeopardy if a renewed, meaningful, and profitable purpose is not restored. Finding creative ways and recommendations for how the barns and surrounding landscape could be reused was an important part of this project.

The designs and visualization for the future of Matteson Farm were informed by a scenario development process. This planning tool has its roots in military strategic planning, and has since expanded to be a common planning device for several disciplines such as business and urban planning. Scenario development is not about predicting the future, but instead is the process of developing future stories for what is possible. For this project, the purpose of developing the scenarios was to collect feedback from MBG and relevant stakeholders in order to foster a better understanding of the objectives of the client and also to guide design development for Matteson Farm. After the development of the future scenarios a focus group was held where the scenarios were shared and discussed with MBG leaders, general staff, and stakeholder groups with interest in the future use of Matteson Farm. This section describes the formation of the scenarios.

The future scenarios for the Matteson Farm derived from various trends, previous recommendations, and opportunities for creating partnerships. The list below summarizes the factors that were the basis for four scenarios that were presented at a focus group meeting.

- Need to increase revenue by expanding rental space for events like weddings, workshops, and retreats
- Previous recommendations issued by JJR and Matteson Farm Committee
- A growing emphasis on local food production
- An opportunity for a partnership with Old House Gardens

Over the last few years MBG has experienced growth in visitor rates and membership. Increasingly popular are indoor and outdoor space rental requests for various types of events. The auditorium, located in the main building, is available for rent but only has the capacity to sit one hundred people. The Conservatory is available for rent after public hours and can accommodate sixty chairs in rows or one hundred standing guests. Outdoor gardens are available for rent in four locations at designated times; they can accommodate up to seventy-five chairs or one hundred and fifty standing guests. The locations include the Herb Knot Garden, the Perennial Garden, the Gateway Garden, and Willow Pond Island. Tents are not allowed in these locations. These garden areas are often booked on the weekends and present some interference to regular visitors.

Presently, MBG hosts about seventy weddings per year. These events bring in approximately \$70,000 in rental revenue. Potential for increased revenue is lost as MBG cannot currently accommodate large wedding parties. MBG has made a financial goal to increase revenue through facility rentals, and this can be accomplished through the development of a catered event center in connection with outdoor ceremony gardens. Additionally, the development of new gardens specifically planned and designed to accommodate private events will help resolve the conflicts events pose currently on general guests. Because of the historical and architectural significance of the Matteson property, MBG began considering how the site could be developed to meet its needs to generate revenue and accommodate expanding growth in the future. In 2003, a staff committee of Mike Quinn, Mike Hommel, David Michner, Linda Cody, Jane Hayes, and Mark Johnson prepared a report for how the Matteson Farm could be adaptively reused. The committee's vision for the site was an educational center where MBG could expand its mission of exploring people, plants, and culture. Many of the recommendations of the committee derived from the master plan, *The Guide for Future Development*, prepared by the firm Johnson, Johnson & Roy in 1983.



Figure 39. Ceremony in the Gateway Garden

The committee came up with a list of potential uses that included:

- Convert the large barn into an Educational Center where one floor would be used by MBG and the other floor would be rented to a group or organization that would benefit from the setting and have goals in alliance with the Gardens
- Convert the large barn as a base for a Landscape Heritage Day Camp, this unique camp would host educational activities spanning science, history, culture, ecology, and out door adventure
- Convert the large barn to host day camps and forge partnerships with other groups in the region and community that offer camps
- Convert the large barn into a center for teacher education, continued learning, and workshop space
- Convert the large barn into a classroom space for Ann Arbor Schools to teach ecology based curriculum
- Develop a working demonstration farm

In the summer of 2007, Britt Zimmerman, an intern and master's student studying landscape architecture prepared several future scenarios for MBG. One of these scenarios included a vision for the Matteson farm. Britt's vision for the Matteson Farm and showed the property restored as a small demonstration area for small agriculture. The scenario included a farmer's market and incorporated sustainable materials like grass crete, an example of a pervious paving material. Britt's vision for the adaptive reuse of the Matteson property may have been influenced by a growing interest in local food production.

When audiences ask Wendell Berry what urban communities can do to help slow the decline of small scale farming he responds, "Eat responsibly" (Berry 2002). He and a number of other authors including Barbara Kingsolver (*Animal Vegetable, Miracle*), Michael Pollan (*Omnivore's Dilemma*), and Bill McKibben (*Deep Economy*) have contributed to a new social movement — locavorism. What is a locavore? It is pretty easy to decipher what the term means. The term locavore was coined in 2005 on the analogous words carnivore and herbivore (Safire 2008). A locavore devours things that are essentially local. Eating local is not a radical idea, but rather a growing trend. Since 2005, the noun locavore has become so trendy that in 2007 it was Oxford American Dictionary's word of the year (Safire 2008).

The mass industrialization and mechanization of agriculture just after WWII transformed the way people eat, what they eat, and the expectations they hold about food availability. Michael Pollan, author of *Omnivore's Dilemma*, points out that before WWII, Americans ate locally and in season because they had no choice (Bennett 2007). Today people can buy strawberries all year round, and sometimes they come from as far as Mexico. Though people have access to what were once seasonal products now all year round, the forces of globalization and mass production have distanced people from agricultural processes. People generally have no appreciation or understanding for how food got to the dinner table.

In an article by Peter Rosset, the Executive Director of The Institute for Food and Development Policy, states about the value of small farms:

Most consumers have little connection to agriculture and food production. As a consequence, they have little connection with nature, and lack an appreciation for farming as cultivation of the earth for the production of food that sustains us. Through farmers' markets, community supported agriculture, and the direct marketing strategies of small farmers, consumers are beginning to connect with people growing their food, and with food itself as a product of a farmer's cooperation with nature (Rosset 1999).

Eating locally shifts people away from being passive consumers by connecting people to agricultural processes. Eating locally nurtures a better connection between people and the earth. When people participate in agricultural processes like knowing their local farmers, growing their own food, and learning about plants and natural processes like pollination, they have a richer appreciation for the food on the table and how well it tastes.

Before eating locally produced food became so popular, the hot food trend was eating organic. Organic foods initially satisfied consumer demand for food grown without chemicals and artificial means. Though eating organic food has its merits for being chemical free, many have begun to question its contributions to sustainability and environmental health. According to Michael Pollan, "The typical item of food on an American's plate travels some fifteen hundred miles to get there." (Bennett 2007). People are no longer solely concerned with eating healthy for individual reasons. Rising concern about climate change has shifted people's perspective on eating and what it means to eat responsibly. Because there is less energy input, in terms of transportation and packaging, eating locally can reduce carbon footprints and energy costs. Barbara Kingsolver suggests that just eating one organic, locally grown meal a week would save the nation 1.1 million barrels of oil a week (Knox 2007).

The trend of eating locally has spawned huge numbers of followers and interest groups. Nationally the number of farmers' markets has flourished. According to the U.S. Department of Agriculture, between 2004 and 2006 the number of markets across the U.S. grew 18% (Enis 2007). People are not only shopping for local foods at grocery stores and farmers' markets. A growing number of restaurants are purchasing produce and food goods from local farmers. In the summer of 2007 in New York City, three locatarian restaurants opened promising to deliver dishes composed from local foods (Diamond 2007). Here locally, the restaurant Vinology in downtown Ann Arbor has a menu of as many locally produced dishes as possible. On September 24th, the restaurant's chef, Brandon Johns, hosted a 100-mile dinner (Morgan 2008). The menu featured food from no further than 100 miles away and most of the food came from a 25 mile radius of Ann Arbor. Farms that supported the dinner were: Almar Orchards, Back Forty Acres farm, Calder Dairy, Ernst Farm, Four Corner Creamery, Garden Works, Jennings Brothers Stone Ground Grains,

Kapnick Orchards, Proschaska farms, Snows maple Syrup, Tantre Farm, and Turk Farms (Morgan 2008).

In addition to its health and environmental benefits, eating locally can boost local and regional economies. The financial impact of locally grown foods can be big for Michigan. According to Don Koivisto, Director of the Michigan Department of Agriculture, Michigan grown foods add 63.7 million dollars to the state's economy (MDA 2008). Koivisto goes on to say, "If every family spent \$10 a week more on Michigan-grown produce, it would add \$37 million to the Michigan economy each year" (Kaffer 2008). Many local food interest groups and non profits are trying to increase the awareness of the benefits of eating locally and educating people to grow their own food. Already many groups exist in the local community and region who want to develop a sustainable food system. Some of these groups include: Growing Hope, Food Gatherers, Project Grow, The Community Farm Kitchen, Slow Food Huron Valley, and Locavorious. These interest groups and several others assembled to rally common goals and strengthen support networks at a recent meeting, Local Food Summit 2009, held at Matthaei Botanical Gardens on January 29th. Some of the goals that came out of this meeting were:

- Find land for new growers and farmers
- Deregulate food handling system, so more food can be locally processed
- Provide more training on how to cook and prepare fresh food
- Make fresh produce more affordable and accessible to low income persons
- Encourage gardens and farmers to donate extra produce to food banks
- Hold agricultural based job training workshops for unemployed and laid off
- Develop a local food currency

The goals formed at the summit present a lot of opportunities for MBG to form alliances with local food groups and farmers. MBG currently has a partnership with Project Grow, who maintains a garden at Matthaei to produce locally grown food. MBG also runs its own outreach program, Cultivating Community, which grows food on campus for Food Gatherers, a local food bank, and the University. MBG could restore Matteson Farm to its original use as small scale agriculture and combine it with educational programming. Under this scenario, MBG could help strengthen and foster a local food system.

Shortly after Britt's work in 2007, this master's project began to materialize when MBG issued a request for proposal (RFP) to assess if there was any local interest from businesses in developing the Matteson Farm into a large scale event center.

The objectives of the development were as follows:

- Provide a high quality 200-person conference center serving Ann Arbor and surrounding communities and the University of Michigan
- Provide for the physical renovation of the existing facility including any necessary code upgrades and accessibility requirements
- Maximize MBG's revenue from the site
- Focus on sustainable building and land use practices and align the project with the standards and policies of MBG

Initially Zingerman's, a local business of Ann Arbor, showed interest in the project. They wanted to adapt the large barn into an event center that would benefit their culinary and catering businesses. Additionally the farm would be used to produce locally grown food for their businesses and the events hosted in the large barn. It was initially thought that a partnership could be forged between MBG and Zingerman's in which Zingerman's would invest in the renovation of the barns in exchange for rent credit. MBG would benefit from the partnership through the increased revenue generated from being able to serve large events like weddings, banquets, and workshops that feature a menu of locally produced food. The majority of this scenario was based on the thought that the large barn could be used to host events as large as two hundred people. Unfortunately, after a site study and inspection, Zingerman's concluded that the large barn could not support as many people as originally thought. Without a huge capital investment to expand the capacity of the barn, the venture was determined to be unprofitable.

It was originally thought that this project would conceptualize design ideas for the site development of the event center and farm space for the previously described scenario. The dissolution of a business venture between MBG and Zingerman's did not mean an end for this project. This project kept in mind the lost opportunity and sought alternative solutions for how MBG could generate revenue from the site and showcase the cultural significance of the barns.

In the fall of 2008, an opportunity for a new partnership emerged between MBG and Scott Kunst, owner of Old House Gardens, in Ann Arbor. Scott grew up loving to garden and developed a mad love affair with old plants, specifically heirloom bulbs. His passion for saving and preserving heirloom plants for future generations led him to open Old House Gardens in 1993. His business is widely known across the United States where heirloom bulbs from his business are grown at the Smithsonian, Hearst Castle, Old Sturbridge Village, Mepkin Abbey, Monticello, Filoli, the Chicago Botanic Garden, the Denver Botanic Garden, the San Antonio Botanic Garden, and other public gardens and historic sites. Without Scott's dedication to preserving heirloom plants, many classic and old time favorite garden plants would vanish.

Scott was already a familiar face at Matthaei Botanical Gardens. His business participates in MBG's annual plant sale and several MBG staff purchase bulbs from Scott for their own personal gardens. Currently Scott operates Old House Gardens out of a garage behind his house on 3rd street. His business has grown so much in the last few years that the garage has become insufficient in terms of space and storage. He states in an article in the Ann Arbor News, "We're at the bursting point," (McGovern 2007). In 2006, Old House Gardens shipped over 200,000 bulbs. Because of Old House Garden's success, Scott and his wife are desperately seeking a farm to where they could move the business. On the Old House Garden's website Scott asks for any advice or hints about potential farms, "Old House Gardens needs a new place to grow, and we're hoping our friends can help us find a small historic farmstead to move to and preserve" (Old House Gardens). On the website he lists four requirements for the potential farm:

1. An old farmhouse to use for offices. Small to medium-sized would be best.
2. An old barn to ship bulbs from. Medium-sized and in reasonable shape would be ideal.
3. Five to ten acres of farmland, ideally with agricultural zoning for space to start growing rare bulbs and expand the trial garden.
4. Within 15 to 20 minute drive from 536 Third Street.

Beyond these four requirements, what Scott wants most is a historic property that would embody the mission and values of his business.

The Matteson farm site meets all of Scott's requirements. A partnership between Old House Gardens and MBG would have many advantages. First, a partnership between MBG and Old House Gardens brings meaningful use to the barns. The mission of Scott's business is akin to MBG's mission to educate people about plants, only Scott specifically wants people to appreciate the cultural, historical, and genetic value of heirloom plants. Educational programming and interpretation that addresses the value of preserving heirloom plants could be tied to Scott's trial demonstration garden. Scott's business could be the cornerstone for the adaptive reuse of Matteson Farm and serve as the financial vehicle for maintaining the barns in the future.

Financially MBG would benefit from the revenue collected in rent from Scott's business. Though Scott prefers purchasing his own land for Old House Gardens, he would settle on renting from Matthaei because of their loyal and continual patronage. In the fall and winter of 2008-09, discussion about the terms of the partnership ensued between Karen Sikkenga, Associate Director of MBG, and Scott. He was eager to relocate Old House Gardens by the summer so that he could operate his fall bulb sale out of the big barn. Unfortunately in the winter of 2009, it was found out that the University restricts MBG from renting to any private entities outside of the University. For MBG to be able to rent to Scott Kunst, it would need to take full ownership and responsibility for Matteson Farm. MBG must now do a cost evaluation to determine if renting to Scott Kunst will earn enough revenue for MBG to continually maintain and repair the barns and farmhouse in the future. As the agreement is right now, the University pays for these costs.

For planning and design purposes, this project assumed a partnership between Old House Gardens and MBG would be realized. Scott was interviewed in order to gather more information about the operation of his business and his specific needs for space. A couple of important points came out of this interview. First, Scott was generally impressed with the quality and condition of the barns. This indicated that a significant investment would not be required by Scott to begin business operations. Secondly the requirements for the trial garden: full sun, relatively flat slope, and well drained, precluded where agricultural space would be located in the final site design. See program on page 44 and schematic development on page 51 for more detail.

At this stage of the project, many options were on the table for the adaptive reuse of Matteson Farm. The project synthesized all these ideas into four scenarios that were presented at a focus group meeting. The four scenarios were:

- Adapt Matteson farm into a large scale event center with ceremony gardens and reception space
- Convert the barn and farm into educational facilities and outdoor learning labs
- Restore the farm into a demonstration of small scale agriculture
- Allow the barns to remain the same

The last scenario was presented as the status quo to assess the advantages and weaknesses of maintaining the current condition and use of the property.

Case Studies

The Phipps Conservatory and Botanical Gardens in Pittsburgh, Pennsylvania, offers its one acre outdoor garden for corporate and personal events. A wedding ceremony can be set up in a radial layout with three access isles that will accommodate two-hundred seated guests. The walkways are paved and the seating area is turf grass. A two hour event with one-hundred white chairs will cost \$1200 and a three hour event for ceremonies and cocktails or showers will cost \$1600. A six hour ceremony and reception will cost \$2600 for use of the outdoor garden and 100 chairs (2008 prices). Adjacent is the reception tent that will seat 70 guests and a dance floor. Additional tents are available and this facility can accommodate up to one-hundred and seventy-five guests. The garden offers its visitors a colorful collection of perennials, shrubs, conifers and annuals. There is also a sunny herb garden and a shade garden. The food prep area consists of a large driveway, a shed that contains a large sink, a tent for a covered work area, a dumpster and electrical service for a dozen or more appliances. The conservatory recently built a brides room with an attached bathroom.



Figure 40. Ceremony set-up

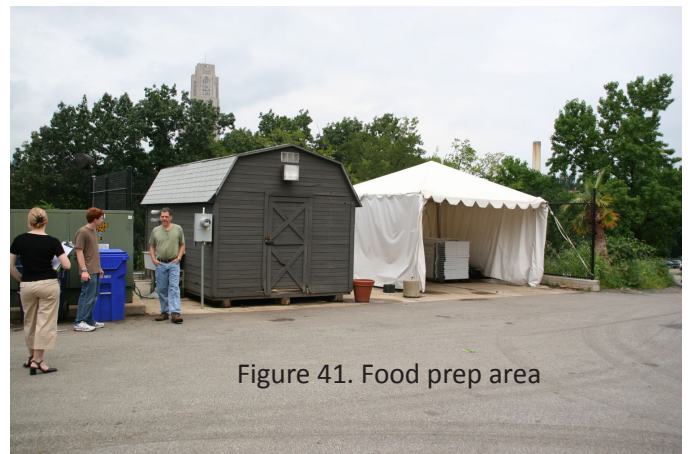


Figure 41. Food prep area



Figure 42. Reception tent behind ceremony set-up area



Figure 43. Walk from brides room to ceremony set-up

The Holden Arboretum, in Kirtland Ohio, offers a lawn setting for two-hundred and fifty guests at a cost of \$1000. A 80' x 120' tent is an additional \$1000. A 10' x 10' tent is also available for ceremonies. The butterfly garden brick patio is available for one-hundred and fifty guests for \$300 and will not hold a tent. (2008 prices). There is no electricity in the display gardens and Holden recommends battery power if necessary. The main parking lot holds ninety-two cars and the overflow parking lot holds approximately one-hundred cars.



Figure 44. Wild flower border in August



Figure 45. Butterfly interpretive signage



Figure 46. The Holden Arboretum uses the lawn areas for ceremonies



Figure 47. Reception tent on paved patio



Figure 48. Ceremonies are set up in front of this arbor on the lawn



Figure 49. The pergola provides cool shade on a hot day

Lewis Ginter Botanical Garden in Richmond, Virginia offers the first floor of the Bloemendaal House, a 30' x 60' tent on a brick paver patio and 200 chairs, set up for a ceremony for \$3940. on a Saturday night or \$3580. on a Friday Night.

Focus Group Meeting

A focus group meeting was held at Matthaei Botanical Gardens on October 20th to discuss the four scenarios that were developed in the last section. The focus group meeting was a participatory process to gather feedback and input from stakeholders. A summary of the notes from this meeting is in Appendix A. Key stakeholders that were invited to attend represented the general interest of MBG staff, interest from the development team and event planning, local food groups, and MBG members.

The meeting began with a brief presentation of the farm's site history and a very general site analysis. After the presentation the four scenarios were presented along with precedent images of readapted barns. After the scenarios were introduced, the meeting opened up for discussion. To help facilitate participation the following questions were asked about each scenario:

- How does the scenario align with MBG's mission?
- How will the site be used seasonally?
- How can each scenario help MBG financially?
- Are there education and interpretation opportunities?
- What are the barriers to feasibility?
- Can any scenarios be combined cohesively?

The first scenario discussed was whether the site could be adaptively reused for educational purposes. Under this scenario the large barn would be converted to house classes, workshops, retreats, and meetings. The space could be rented out to groups and utilized by local schools and educational programs of MBGNA. The barns and property could also serve as space for day camp programs. It was brought up that educational facility space is plentiful and perhaps even underutilized at MBG and in Ann Arbor. MBG already has two classroom spaces. Additionally the University and Leslie Science Center provide facilities. The site would have to compete with several other camp offerings provided by the City of Ann Arbor, religious groups, and other interest groups. Though this scenario aligned with the educational goals of MBG and could be feasible, it was concluded that this development would not contribute significantly to MBG's pocket. Finally it was said that this scenario should not necessarily be dismissed as it could easily be included as a component of a larger scenario.

The second scenario that was discussed was if the site could be developed into a large event center. Many of the attendees present showed enthusiasm and urged that this scenario was necessary to expand the rental facilities MBG offers. The number of public places that cater to outdoor weddings and receptions in Ann Arbor is relatively small. Existing places that do offer outdoor facilities have limited capacity. The only other location in Ann Arbor that offers rental programs for outdoor space is Cobblestone Farm in Ann Arbor. Cobblestone Farm has capacity for approximately 200 people. Other comments that came up about the scenario included how the space could differ from the existing outdoor ceremony gardens MBG already offers and how the space could be used in the off season. Someone expressed concern that the barns

would have to be renovated to have HVAC in order for them to be used all year long. Someone had the great suggestion that the event facility could be marketed as the only “Zero Waste” facility in town. There could be zero waste conferences, weddings, and receptions. MBG could make use of the compost or sell it for additional revenue. Many people showed interest in this scenario, though some showed hesitation about how it related to MBG’s mission. Beyond the potential for showcasing a zero waste facility, this scenario would need to be supported by educational programming and interpretation that could be linked somehow to the barns and ceremony gardens.

The third scenario that was considered was adapting the site to its original purpose — farming. This scenario would bring meaningful purpose to the barns. A farmer could reside at the farmhouse and serve as caretaker of the property, that way MBG would have less responsibility for the maintenance of the site. MBG could partner with local food groups who are seeking land to produce food. It was suggested that educational programming could include everything from learning how to grow vegetables, preserve fruits and vegetables, and cook local produce. This scenario would be the best scenario to preserve the innate character of the barns and agrarian landscape. People did wonder how this scenario would contribute financially to MBG. One suggestion was that MBG could better market the farmhouse as the oldest University owned structure. It was pointed out that this scenario would be less expensive than renovating the barns for classroom and event space.

The last scenario discussed represented what would happen if the site remained at its current status. People expressed concern that the barns could pose safety hazards, could fall into disrepair and neglect, and could be razed by the University without a restored and meaningful purpose. There was a consensus that this scenario was not an option.

The discussion at the focus group meeting indicated divided interest between adapting the site into an event center and restoring the property to a demonstration of small scale agriculture. Many agreed that the scenarios could be combined to accommodate multiple visions. The synthesis of the two leading scenarios would bring the interest of many stakeholders together. The next challenge was to design how these two scenarios would connect together and how they would relate to the cultural and historical significance of Matteson Farm.

The next section describes the programmatic elements the project developed to fulfill the goals of the two leading scenarios — event center and small scale agriculture.

Programmatic Development

The program is a result of the expressed needs of the client, suggestions from a MBG preferred caterer and information gathered from case studies. The needs are listed here to provide a foundation of elements that must be incorporated into the design. The requirements for the project are listed below.

Design Program - Phase I

Element	Square Foot Space Required
Entry Way into farm site, Warm and Welcoming	
<ul style="list-style-type: none"> Pedestrian Car Entry and Exit Fence Flower Garden 2) 5x10 	100 sf
	<ul style="list-style-type: none"> Bold Colors Signage Signature farm implement
Ceremony Area	
<ul style="list-style-type: none"> Garden, Colorful Pergola Circulation Main Isle (15 rows of chairs) 8x50 200 Chairs (2x2) with 15 inch walk space 6.5 sf per person 	100 sf 400 sf 400 sf
Reception Tent	1300 sf
<ul style="list-style-type: none"> 60x90 Dining: 12 sf per person 	3000 sf
	<ul style="list-style-type: none"> Buffet Table: 100 sf/200 sf Round cake table 50 sf Band/DJ 150 sf Dance floor 1250 sf Bar 150 sf Circulation 1000 sf
Patio	
<ul style="list-style-type: none"> 4-6 Umbrella Tables 	500 sf
Toilet Rooms	
<ul style="list-style-type: none"> Women's Men's 	80 sf 60 sf

Shade Pavilion 15x25		375 sf
	2 Picnic Tables Storage Tool Storage in Small Barn	
Small Agriculture Gardens	Orchard-Hazelnut, Peach, Apple, Cherry, Pear	(1 Acre) 43,560 sf
Parking	70 Cars 10x20 1 Bus	28,000 sf 1000 sf
Catering Requirements		
	Outdoor Kitchen, 16x18	
		Refrigerator Commercial Oven Grill/Stove Commercial size sink 2) sets of 3 circuits for appliances
		Small Tent or Canopy with sides to hide dishwashing Covered food prep area, (Quantity of 4-8) 8 foot tables Refrigerated Truck
Circulation	Drop Off/Pick Up Area Pedestrian Circulation, accessible Barn Interpretation	
Stormwater Management	Rain Harvesting Infiltration Areas	
Additional		
	Lighting Fence Dumpster	300 sf

Site Analysis

The purpose of the site analysis was to evaluate the limitations and opportunities of the site. The site analysis looked at the following factors: slope, vegetation, land cover, soil, hydrology, circulation, view points, surrounding land use, and constraints. Information about these factors was collected from a site inventory, aerial photos, and GIS data from Washtenaw County and Matthaei Botanical Gardens. The GIS data provided information regarding topography, soil types, vegetation, circulation, hydrology, and land use coverage. Page 49 shows the graphic site analysis.

Some constraining factors on the site were land cover, traffic noise, and topography. Wetland habitat exists within some of the project scope boundary. The area east of the yellow trail must be protected as wetland habitat. This limits any development on the east side of the yellow trail. Traffic noise indicated by the orange squiggly line in the site analysis precludes the proximity of any event space close to the road. Pushing the space dedicated to events east of the barns and farmhouse has the advantage of creating a sense of privacy and reducing any visual or audible conflicts between event space and the neighboring subdivision.

Topography had the greatest influence on the development of the site. Originally, based from a site observation, it was thought the area east of the farm house was generally flat. Of all areas within the project scope area, this flat area would be the most suitable location for a tent or structure. The GIS data available at the time was very rough; contour information was given at ten foot intervals. Not until the winter was finer data available from MBG at one foot intervals. The greater accuracy of the one foot contour data provided insight into what areas of the site may need to be graded to accommodate the programmatic elements such as the tent, patio, and parking lot. Because tables and chairs should sit on a slope of no more than 4%, grading will have to be done to accommodate the flat surface for the reception area under the proposed tent.

Based on the topography, the blue arrows in the site analysis show the flow direction of runoff. Water is draining towards Fleming Creek. The Huron River Watershed Council maintains vigilance over the creek's flow dynamics and channel shape by monitoring these qualities. Because the receiving areas that feed this stream are rapidly urbanizing and undergoing major land use changes, the water and habitat quality of Fleming Creek is at risk. MBG has already restored portions of the bank of Fleming Creek where the bank was eroding and being undercut from the creek's flow. To restore the bank MBG implemented bioengineering techniques like live staking to control erosion and used riprap to redirect the creek's flow. As the development of Matteson farm is likely to increase the rate of runoff, care must be taken to reduce both the amount of runoff and speed at which runoff enters Fleming Creek. Opportunities for raingardens, bioswales, and other low impact development strategies are indicated in the site analysis.

Some of the opportunistic natural factors of the site were soil and vegetation. Existing vegetation informed certain opportunities for programmatic elements like the ceremony garden. As the majority of the existing ceremony gardens at MBG are full sun, it was thought that it would be advantageous to have a shaded ceremony garden. The three Walnut trees (two of which are mature) near the small barn indicated a good opportunity for a garden that would be shaded and located relatively close to the farmhouse. This area is shown in site analysis.

The area represented by light green in site analysis is largely open field space that is low quality in terms of habitat. The abandoned field shown in the 1966 aerial indicates some of this space was once used for agriculture. The open field could be restored to agricultural use or could be restored to the oak hickory forests present in the 1800s Land Cover Map, figure 37. Both these options would be in alignment with MBG's mission to protect and steward open space.

Because agriculture played a significant role in the scenario development process, both soil and hydrology were important factors to evaluate. According to the GIS data from Washtenaw County, the majority of the Matteson property is fox sandy loam, specifically soils classified as FoB and FoD. FoB and FoD are part of the Fox soil series. Figure 49 shows the soil map. This series consists of well drained, nearly level to steep soils that are commonly used for crop production, and they have moderate available water capacity (Michigan Agricultural Experiment Station 1985). The fox series falls under capability group IIe-3. Capability groups describe the suitability of soils for field crops based on factors like organic matter, balance of air and water, and available root zone. Generally capability class II has moderate limitations that reduce the choice of plants that can be supported by the soil. According to the Washtenaw County soil survey, the soil is well suited for crops commonly grown in the county: corn, wheat, soybeans, oats, and grass-legumes (Michigan Agricultural Experiment Station 1985). Management may be required to improve soil properties and increase crop yields. For the fox series it is suggested that tillage is minimized and plants are grown closely together to control erosion. It may be necessary to supplement the soil with compost in order to increase the amount of organic matter. Based on these facts and the prior use of the site for agriculture, it was concluded that the area within the solid brown line, as indicated in the site analysis, is best suitable for agriculture.

The fox series is classified under the 1o1 woodland group; this classification indicates that the productivity of the soil is high and there are few limitations that restrict the use of trees. Important trees to the fox series group are Northern red oak, Sugar maple, White oak, and Yellow-poplar. According to the 1800s Land Cover Map, figure 37, the majority of the Matteson farm was Oak- Hickory forest before it was converted to agriculture. It is suggested that any reforestation of the site include oak species, as they were naturally present. The table on page 48 lists suitable trees and shrubs for the fox soil series. This list was used to source appropriate plant species for the planting designs on page 62 and 67. The fox soil series has very few limitations to supporting open land and woodland habitat. Open land habitat can support birds and mammals associated with pastures, lawns, meadows, and overgrown areas of shrub and grass (Michigan Agricultural Experiment Station 1985). Open land habitat would support: bobwhite quail, meadowlark, cottontail rabbit, red fox, and wood chuck. Woodland habitat supports wildlife associated with hardwood and coniferous forests. These species include: ruffed grouse, wild turkey, raccoon, white-tailed deer, wood-cock, thrushes, woodpeckers, warblers, owls, and tree squirrels (Michigan Agricultural Experiment Station 1985).

Fox series soil is a fine loamy soil over sand with an underlying gravelly sand. It has a poor filtering capacity but runoff is slow. The shrink-swell potential and frost action is moderate and the available water capacity is also moderate. Fox soil is suitable for woodland, pasture, building site development and recreational uses. The Fox B soil is also suitable for agriculture and with a high level of management the soil can be expected to produce 95 bushels of corn or 30 bushels of soybeans on one acre. (Feenstra 1982).

Fox Series Suitable Plants and Shrubs:

American Basswood	<i>Tilia americana</i>
Black Walnut	<i>Juglans nigra</i>
Eastern White Pine	<i>Pinus strobus</i>
Flowering Dogwood	<i>Cornus florida</i>
Hackberry	<i>Celtis occidentalis</i>
Serviceberry	<i>Amelanchier arborea</i>
Lilac	<i>Syringa vulgaris</i>
Northern White-cedar	<i>Thuja occidentalis</i>
Norway Spruce	<i>Picea abies</i>
Red Pine	<i>Pinus resinosa</i>
Shagbark Hickory	<i>Carya ovata</i>
Vanhoutte Spirea	<i>Spiraea x vanhouttei</i>

The last factors that were evaluated were viewsheds, gateways, and circulation. The viewsheds and gateways indicate critical areas where views should be framed or enhanced to heighten the experience of visitors and guests. The first major gateway exists at the entrance to the site along Dixboro Road; here the landscape treatment should formalize the entrance to Matteson farm with signage and plantings. Another critical gateway will be where visitors and trail users enter the site from the south. Like the main entrance, the landscape treatment here should reflect that people are entering Matteson farm. An important viewshed to protect is along Dixboro Road. The site of the barns along Dixboro Road adds a significant cultural and architectural component to the landscape. This view along Dixboro on the Garden's property must not be altered by adding any large structures that would subtract from the presence of the barns.

Currently, the yellow trail provides the main circulation for the site. The proximity of the yellow trail to the potential location of the ceremony garden presents some potential for conflict between users. Natural buffers may be required to minimize this conflict and maintain privacy for the event space. Nevertheless, whatever way the buffer system is designed, it is recommended that it not make trail users feel unwanted or uncomfortable.

One of the last influencing factors that came out of the analysis was that a fence would be required. The ceremony garden and agricultural space will need to be protected from deer and other animals that may feed on the vegetation. Currently Mike Palmer, who lives in the farmhouse, encloses his small 10 x 10 garden with 10 foot tall mesh wire. It will be a challenge to create a fencing system that is attractive, feels relevant to the cultural landscape of the Matteson property, and keeps deer from feeding on the gardens.

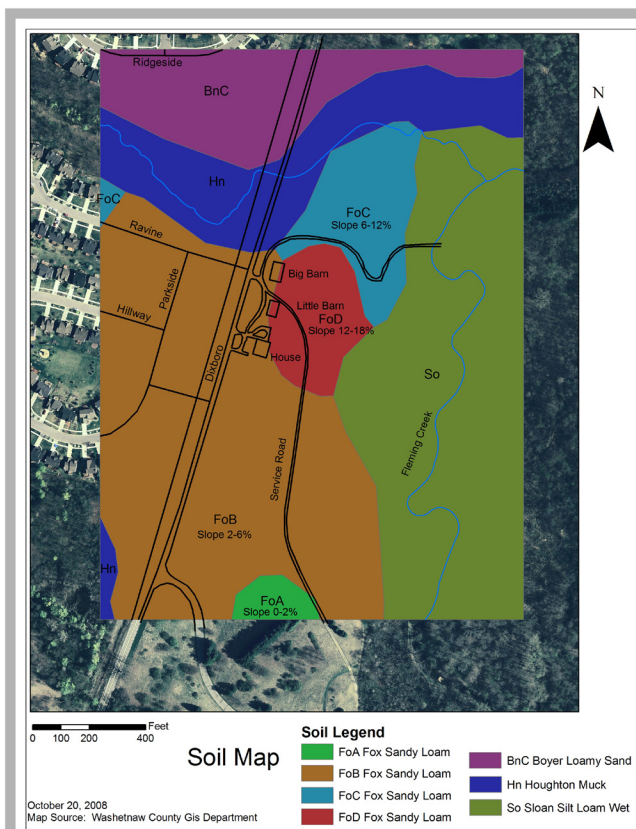
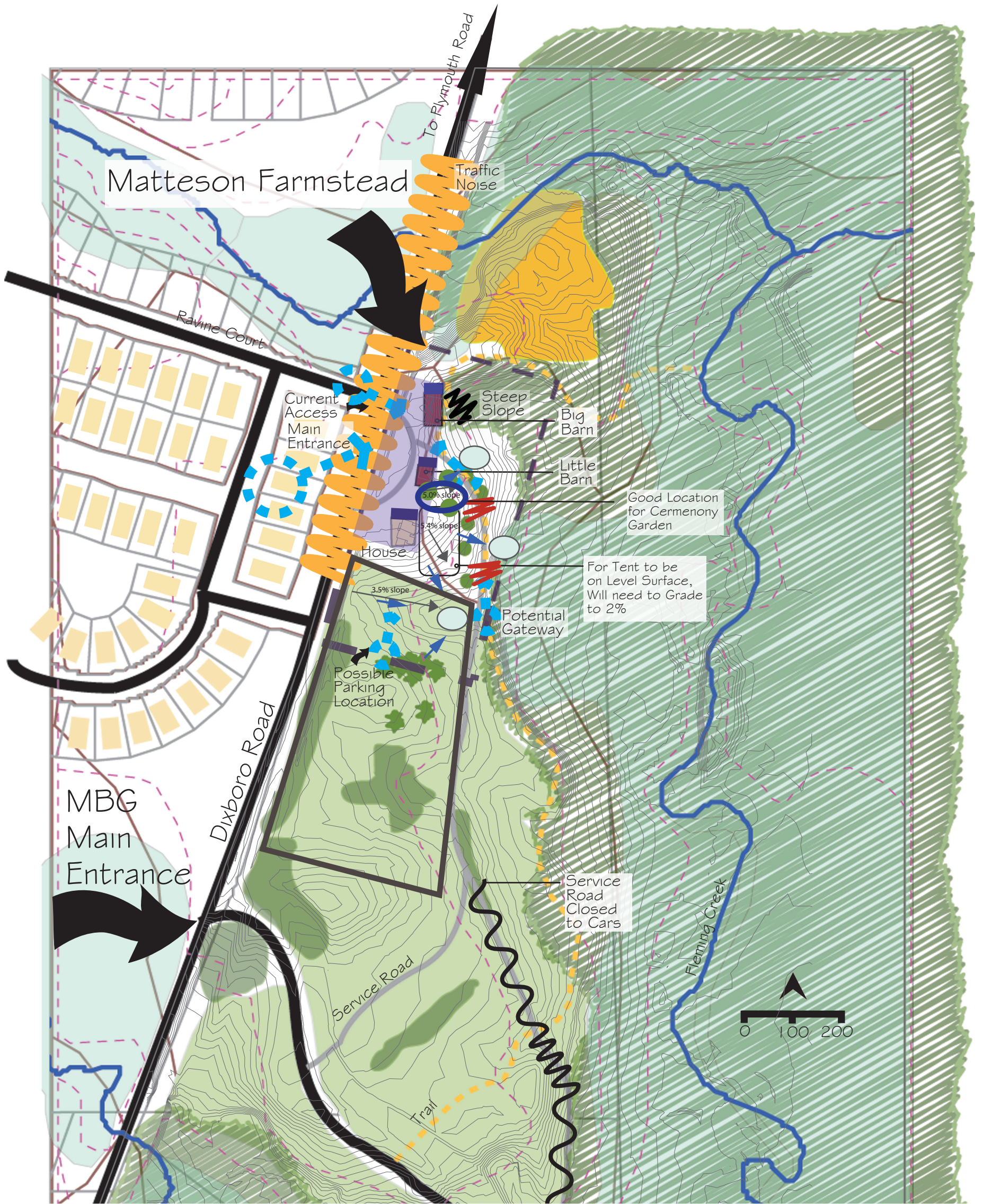










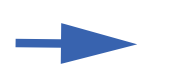




Figure 50. Soil Map

Site Analysis



- | | | | | | |
|---|--|---|--------------------|---|--|
|  | Prairie |  | Yellow Trail |  | Conflict Between Users |
|  | Forested Wetland |  | 10' Contours |  | Opportunities for Storm Water Management |
|  | Open Field with No Significant Quality |  | Streams |  | 1' Contours |
|  | Vegetation Patches |  | Drainage Direction | | |
|  | Maintain Cultural/Historic Integrity | | | | |
|  | Area Good for Agriculture | | | | |

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Schematic Design

After researching case studies and preparing a site analysis, a schematic diagram was created to show the relationships between program elements and illustrate circulation patterns. The Schematic Plan shows the general layout of major circulation, agricultural space, parking, and the ceremony Garden.

The historic zone outlines the landscape surrounding the barns and farmhouse. In this zone, special consideration will be given to preserving the cultural and historical character of Matteson Farm. The ceremony garden and general landscape treatment in this zone shall keep with the time period the barns were built. Common materials used for fences and structures were either timber or field stone. Literature on the landscape treatment of farmsteads suggests emphasizing the farmhouse with massed plantings that flank the sides and a backdrop of woodland. A flower garden is suggested at the side or rear of the House. Buffers along the road shall be planted thickly. Suggestions for trees and shrubs include common plants found in the woods: Maples, Basswood, Buttonwood, Oaks, Birches, Hickories, Willows, Witch-hazel, Dogwood, Elders, and Sumac (Roberts 1914).

The site analysis primarily informed the location of the ceremony garden. The area underneath the three Walnut trees was large enough to meet the program needs for 200 chairs, had a gentle slope that provided a natural amphitheater like space, and had ample shade. Having the ceremony garden here makes use of the small barn as an architectural backdrop for the arrangement of chairs.

The tent was located nearest the house for greatest accessibility to the caterers and where significant amounts of trees and shrubs would not need to be removed. The existing carport provides an opportunity to shelter the catering staging area. This location allows access to the farmhouse's kitchen and utilities can easily be set up here without major renovations.

The existing entrances and driveway were used to establish the circulation route for cars. The north entry as it currently exists will need signage and may be supplemented with planting to mark the entrance. A drop off area was indicated near the house and ceremony garden to provide ease of access. Parking was oriented linearly in a north to south position so that the most acreage could be preserved for agriculture space. It was thought to be undesirable for the parking lot to run east to west and segment agricultural space. Where the agricultural space is indicated, it provides a buffer between the event space and parking.

The Working Farm Area is reserved for growing space that will include an orchard and a vegetable and flower garden. The area is properly sited to receive the most sun and is situated on a low slope of well drained soil. A built structure such as a small pavilion will serve as a shady oasis and area for educational demonstrations. Providing access from the service drive to the agricultural space will be beneficial to dropping off compost and other materials for gardeners.

Transitional space is needed to mark the experience of entering juxtaposing areas of the site. An important transition space would be between the agricultural space and the event space. Some means of a formal gateway should indicate a transition from one space to a new one. Another transitional space is needed to mark the entrance to the ceremony garden. The transitional space can be achieved through planting design or overhead structures.

Schematic Diagram

The schematic shows the general relationships between the program elements and circulation.

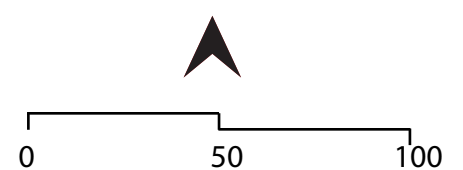
The Historic Zone outlines the landscape surrounding the Barns and House. In this zone, special consideration will be given to preserving the cultural and historical character of the Matteson Farmstead.

The Agricultural area is reserved for growing space that will include an orchard and a vegetable and flower garden. The area is properly sited to receive the most sun and is situated on a low slope of well drained soil. A built structure such as a small pavilion will serve as a shady spot for gardeners to rest and for educational demonstrations.

Phase IV is the extension of the barn to increase sitting capacity to 200 people. The main floor of the barn would be cantilevered over the yellow trail. This expansion may pose some conflicts with the wetland area.



- Dixboro Entry
- Barn Area
- House/ Reception Area
- Agriculture Area
- Parking Lot
- Fence
- Main Pedestrian Circulation Paths
- Historic Preservation Area



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Ceremony Mock Up



Figure 51. Existing yard behind barn looking south with chairs set up



Figure 52.. View guests will have while seated (looking north)

Design Description

Vision for Matteson Farm: Site Plan

The overall vision for the adaptive reuse of the Matteson property is a synthesis of goals and desires formulated by public input processes. The diversity of uses incorporated in the site plan offer a range of experiences for MBG visitors. The vision for Matteson Farm is a place where people can celebrate, learn, experience nature, grow food, and find relief from an urbanized environment. The large and small barns are the site's most important physical landmarks. The small barn and the three Black Walnuts create a room around the ceremony space. The trees act like a ceiling and the barn and ceremony garden serve as walls. The big barn will make a great backdrop for wedding photos. The inclusion of heritage peonies (divided from plants at Nichols Arboretum), heirloom bulbs from Old House Gardens, and other old time favorite garden plants in the display gardens make the site a living museum. This feature connects well with the historical significance of the property. Finally the designated agricultural space offers plentiful opportunities for MBG to partner with local food groups who are seeking growing space. Specific elements of the site plan and their design intent are described below.

Circulation:

Enter the Matteson farm through the north driveway into a one way entry drive. Accessible parking will be available on the right and a drop off on the left. Upon drop off, the visitor will pass through the blooming arbor and enter the fence enclosed ceremony garden. Guests may walk directly to the ceremony area or head to the umbrella tables on the patio. Drivers may head south to park a car or bus in the parking lot. Pedestrian entry is available on the north side of the parking lot with a two-hundred and thirty foot walk to the patio. The patio connects to the tent with a gentle slope and it also connects to the lower portion of the ceremony garden down a stairway. A bride will exit the back door of the smaller (south) apartment and turn left to follow the paved walkway toward the pergola. Half way to the ceremony garden she will pass under the pergola. At the top of the ceremony garden, she will pause before heading down the gentle slope towards her groom. A late arriving guest may enter the ceremony garden on the right or left. The service drive provides a drop off and pick up location for the agriculture space.

Accessibility:

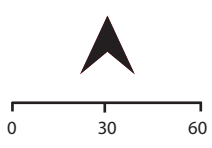
The site is designed with wheelchair accessibility in mind. A 6.3% slope occurs in the ceremony isle where gravity is used to direct a shaky-kneed bride. All pathways will accommodate a five foot turning radius.

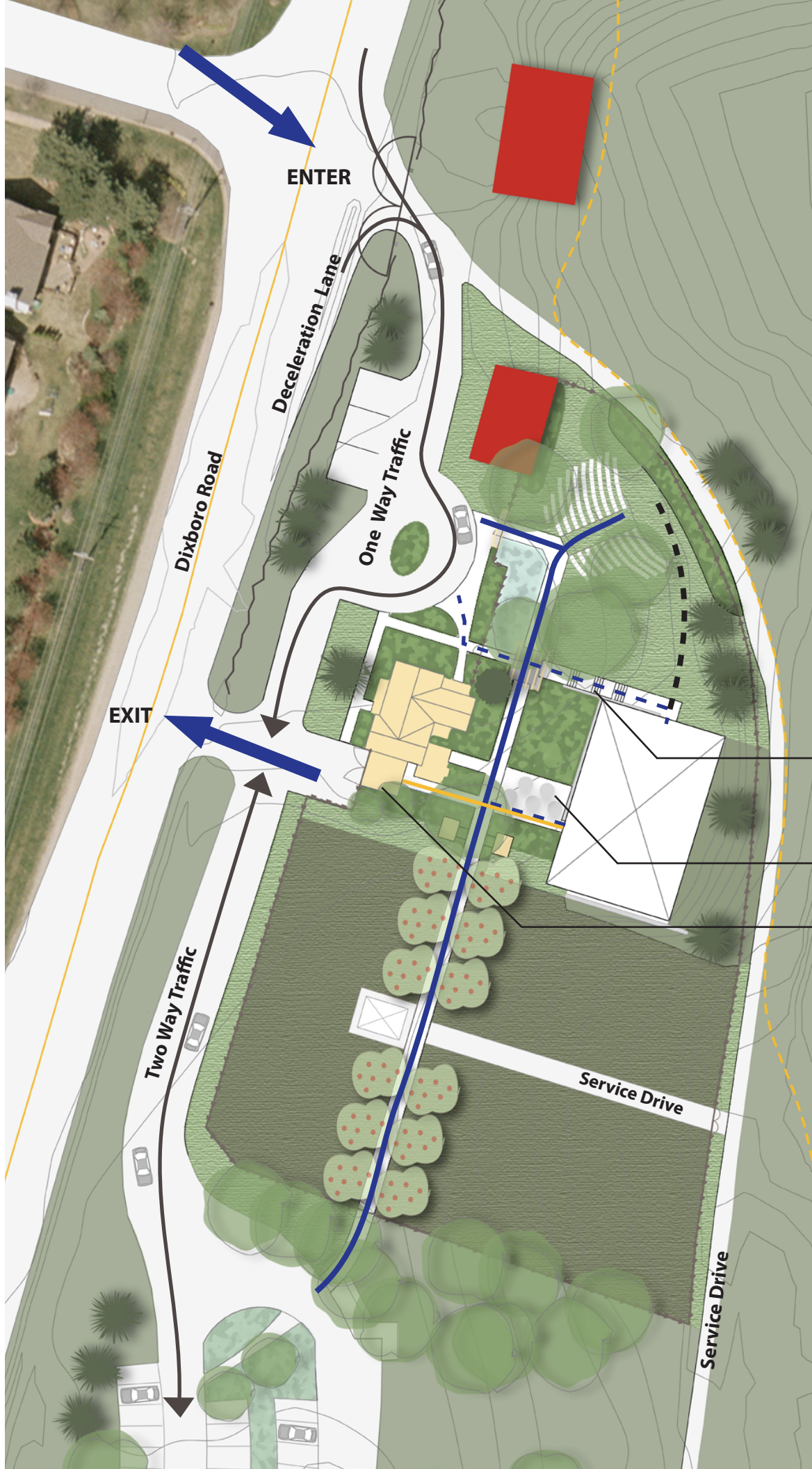
Vision for Matteson Farm Site Plan



- Split Rail Fence
- Handicap Parking
- Ceremony Garden (200 Seats)
- Guest Drop Off
- Rain Garden
- Arbor
- Matteson Farm House
- Patio 32' X 15' with Tables
- Covered Porta John
- Temporary Reception Tent 60' x 90'
- Catering Staging Area
- Pavilion 20' x 15'
- Fruit Trees
- Bike Racks
- Vegetated Swale
- Parking Lot 73 Spaces

- Small and Large Barns
- Naturalized Areas
- Lawn
- Display Gardens
- Agricultural Space \approx 1 acre
- 1' Contours
- Fence
- Yellow Trail
- Fruit Trees
- Conifers
- Deciduous Trees





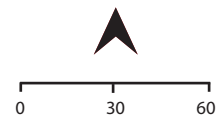
Slope Diagram

- - - - - Retaining Wall
- ▶ Natural Slope
- ▶ Graded Slope

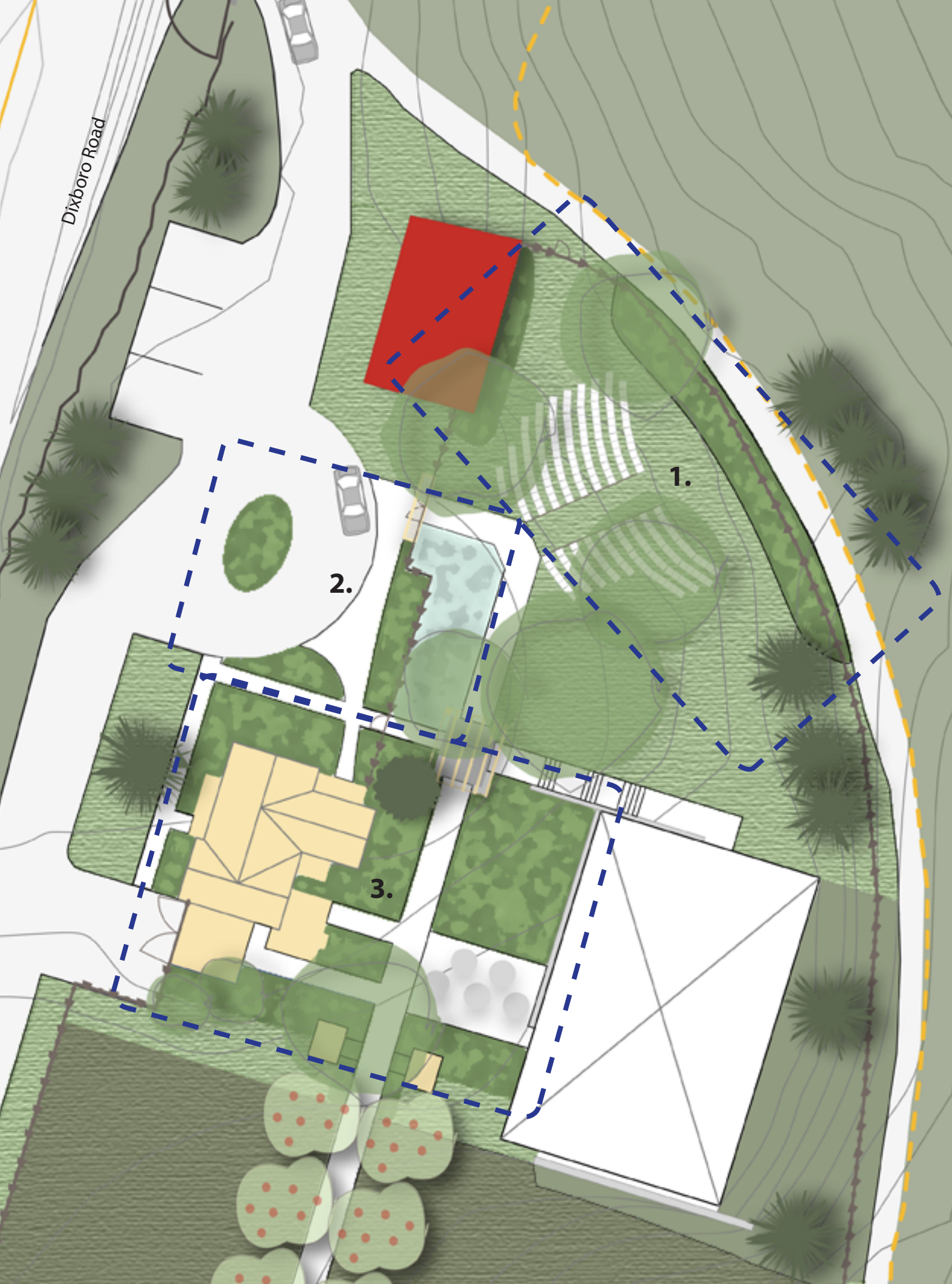
Circulation Diagram

- Steps
- Cocktail Area
- Catering Staging Area

- Main Pedestrian Traffic
- - - Secondary Paths
- Catering Staff
- - - Accessible Path
- - - - - Yellow Trail
- Automobile



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Garden Reference Plan

1. Ceremony Garden

2. Entry Garden

3. Front and Patio Garden

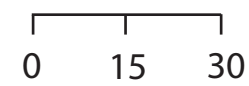
-  Small and Large Barns
-  Naturalized Areas
-  Lawn
-  Display Gardens
-  Agricultural Space
-  1' Contours
-  Fence
-  Yellow Trail



Conifers



Deciduous Trees

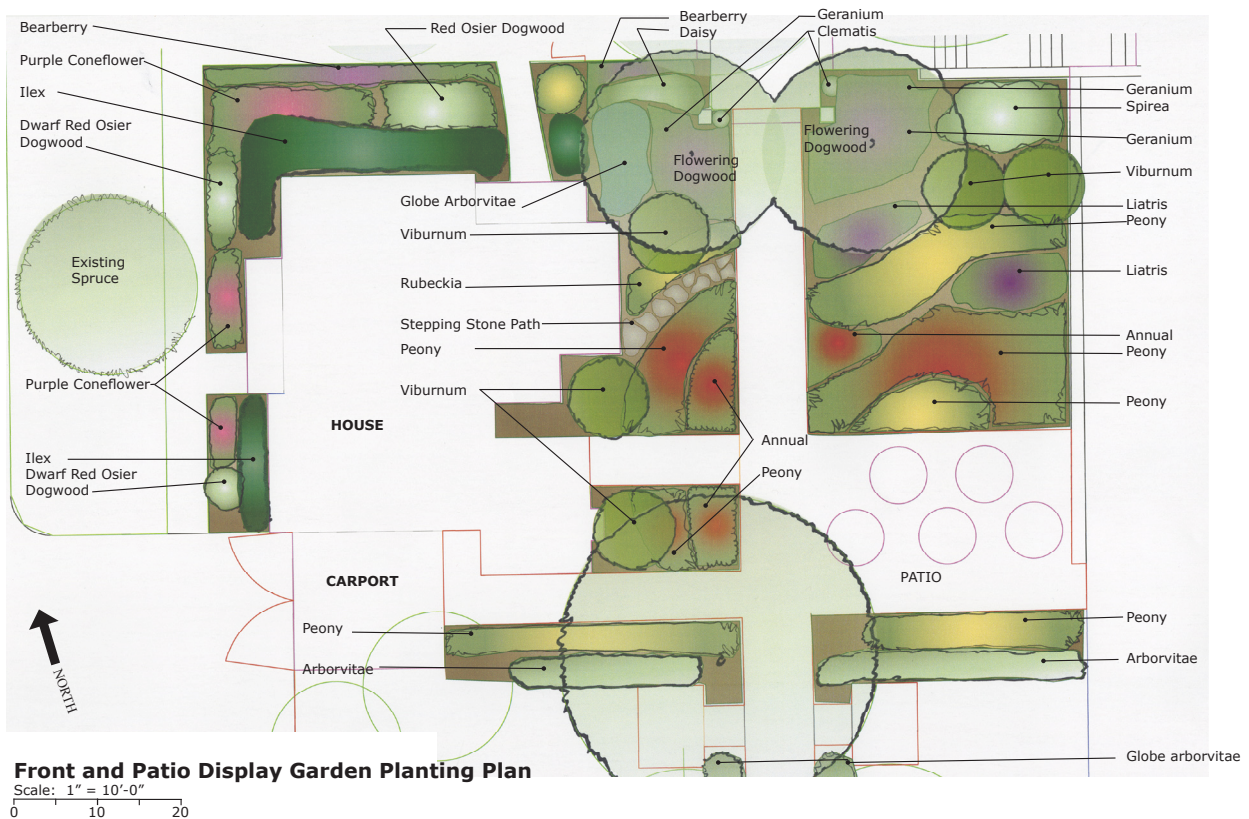


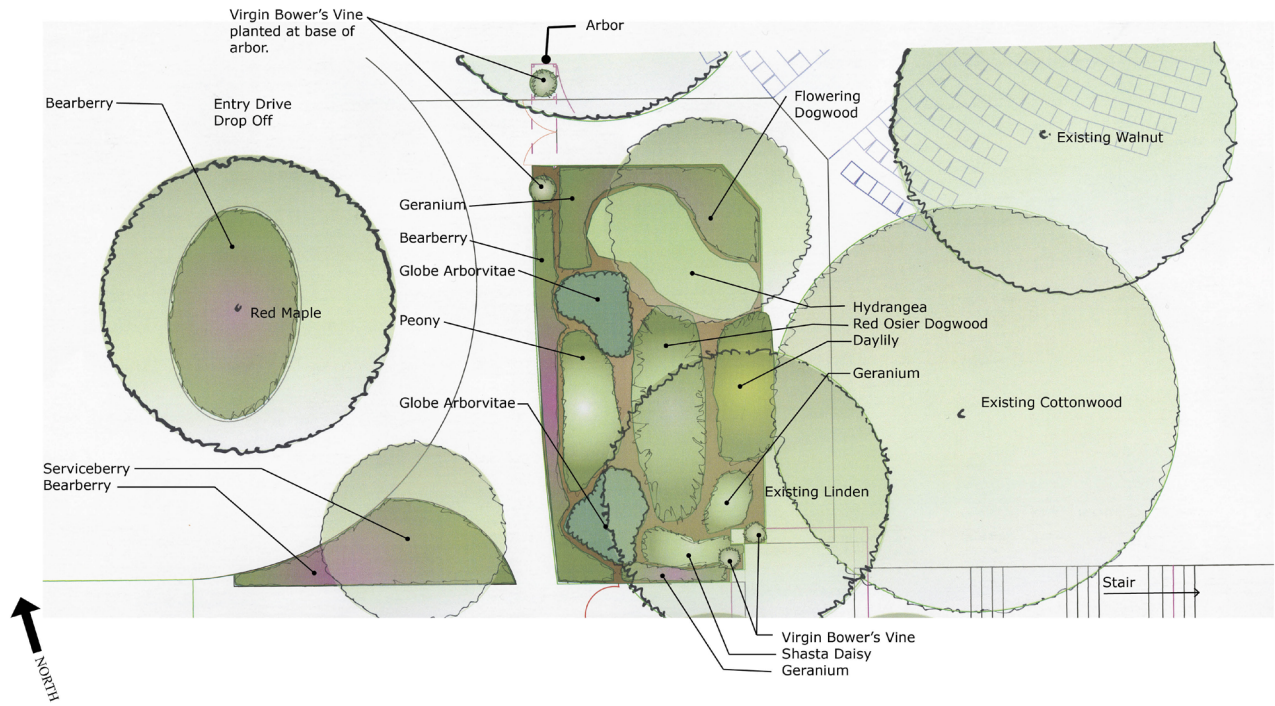
Vegetation:

The various vegetation areas that are shown in the site plan include: lawn, gardens, naturalized areas, and agricultural space. The agricultural space is approximately one acre. This area can expand to the south as needed. The main path that bisects the agricultural space is lined with small fruit trees such as pear or sour cherry. Space designated as lawn shall be planted with a native grass seed mix like the new American lawn, buffalo grass, or fescue. These seed mixes will allow the lawn to be mowed sparingly and will not require any fertilizer.

The areas designated as display gardens are described in more detail in the planting diagrams. These areas are planted with species associated with the historical time period of the barn. Sources supplying lists of popular plants during the 1800s informed the plant selection. Many of the plants were selected on their suitability to be companions with the three Black Walnut trees that encircle the ceremony garden. Overall the designed garden areas provide a sequence of blooms beginning in May and lasting until September. The bloom chart on page 80 shows the bloom chart for the planting designs.

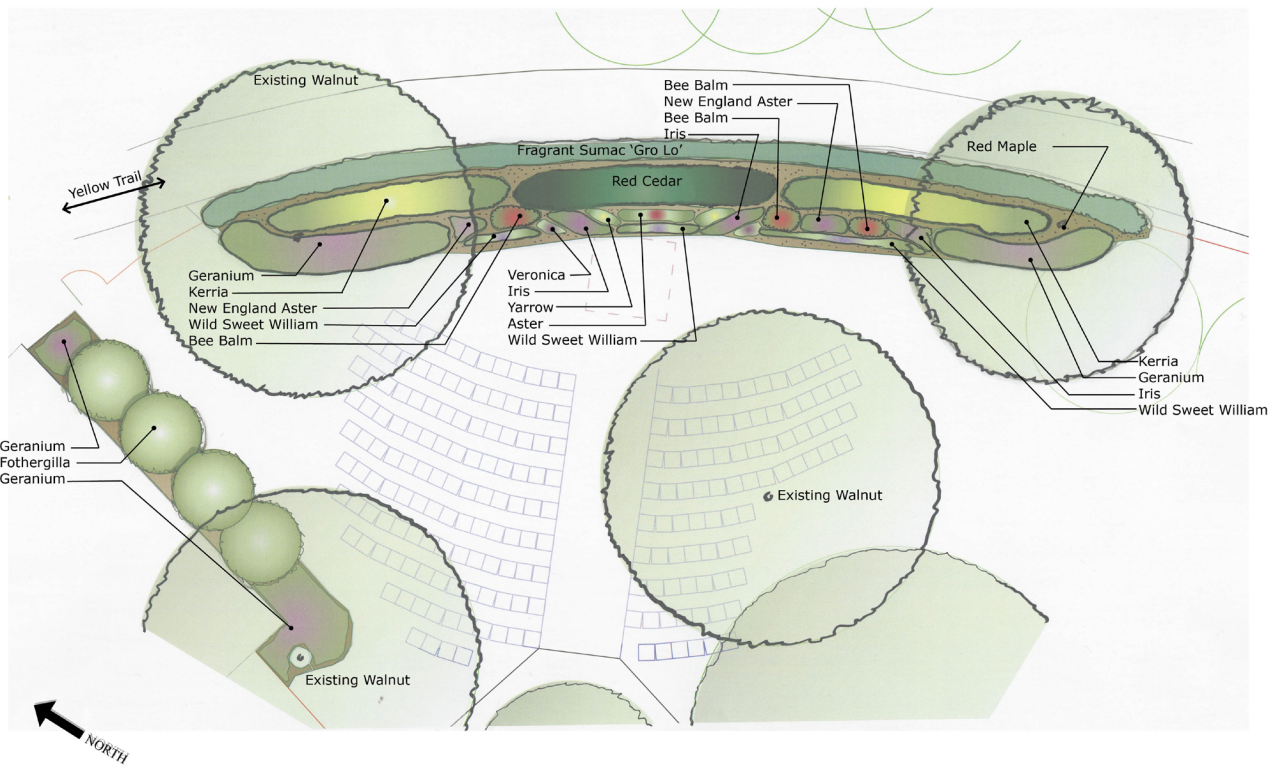
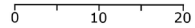
The naturalized areas are to be maintained regularly so that they are not overgrown by invasive species and other weeds. The corridor along the east side of Dixboro shall be maintained as sumac and other native shrub plantings. The steep slope to the east of the tent shall be planted with some ground cover or shrubs that will control erosion and have a nice appearance to Yellow trail users. Some suggestions for this area include: 'Gro Low' Sumac, Red Osier Dogwood, Common Juniper, Running Strawberry, Black Eyed Susan, and Common Milkweed, and Native Aster.





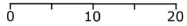
Entry Display Garden Planting Plan

Scale: 1" = 10'-0"



Ceremony Display Garden Planting Plan

Scale: 1" = 10'-0"



The large Cottonwood tree near the ceremony garden shall be removed if debris and falling limbs pose a hazard to guests. The coniferous trees along the yellow trail will need to be replaced. Several of them are currently suffering from a fungal disease. These trees serve as an important backdrop to the ceremony area. It is recommended that these trees are replaced with evergreens so that there is some seasonal interest along the trail.

Display Gardens:

The planting plans divide the garden into three sections; the entry area, the ceremony area and the patio area. Upon arrival at the drop off, the entry garden greets the visitor with a red maple island and peony shrub border. Passing under a vine covered arbor, the visitor passes under the shade of a flowering dogwood tree. The ground cover in the front is the more formal Bearberry and the ground cover in the back is an herbaceous geranium. The rain garden, a shallow depression where roof water will be directed contains Red Osier Dogwood and Daylilies.

The ceremony garden is a one-hundred and twenty foot flowering backdrop for the bride and groom. A red cedar hedge will provide a dense privacy screen from the visitors walking along the yellow path. Pleniflora Kerria blooms throughout July and will coincide with the rose Bee Balm. Fothergilla blooms white and will stand out from the red barn backdrop.

The patio gardens showcase the Nichol’s Arboretum peonies. The peonies will be blooming in late May in swaths of red, yellow and white and they will also provide textural foliage throughout the remaining growing season. In June, Viburnum and Dogwood will bloom in white and Liatris will bloom in purple.

A stepping stone path allows access to the water faucet. The tall Arborvitae hedge will provide visual privacy for guests on the patio.



Figure 53. Rain garden and main pedestrian pathway

Moments of the Big Day

Demonstration Rain Garden:

The rain garden is set north of the house and is approximately 1000 square feet. A segment of the main walkway and portions of the farmhouse roof will drain into the rain garden. The demonstration rain garden adds potential for interpretation and educational programming and will be a great display for visitors and event guests. Figure 53 shows an elevation of the rain garden.



Figure 54. The ceremony garden

Ceremony Garden:

The ceremony garden seats 200 guests on a gentle grassed slope under the walnut trees. The view is open on both sides of the red cedar hedge. A ten foot wide isle allows the passage of four people.

Agriculture Space:

The agriculture area is almost one acre in size and will be graded to have a 5.8% slope. It is divided into 3 large sections and will have a shelter pavilion. One section could be used for display by Old House Gardens, a mail order heirloom bulb business owned by Scott Kuntz. The agricultural space is adjacent to the parking lot and presents an opportunity to showcase locally grown food.



Figure 55. Lady Bird Johnson flagstone patio

Patio:

The paved patio will offer nine-hundred square feet of hard surface flooring material for guests. Following grading, the patio will have a four percent slope. It will be a social space for gathering at the umbrella tables while serving appetizers.

Catering Staging Area:

The carport shall house the catering staging area. An awning extension off the carport will provide additional set up space. The staging area was located for its accessibility to the main drive, house, and tent.

Toilet Facilities:

The design provides two temporary toilet facilities. They are strategically located to provide easy access to both event guests and those working in the agricultural space. The Port a Johns will be enclosed on three sides with a lattice structure that may be planted with vines. The toilets may be accessed from the service drive or from the main drive near the exit.

Reception Tent:

The tent is a temporary means of shelter for outdoor receptions that will be held from May through September. The tent which is 60' x 90' is sized to enclose round tables to sit 200 guests, a dance floor with space for a band, a couple of buffet tables, a cake table, a bar area, and some catering staging space.



Figure 56. Patio and tent elevation

Because the tent will be up for several months, the ground surface may not be lawn. A material similar to playscape surfacing is recommended until the site is profitable enough to require a more permanent material. Other possibilities for the surface include brick and pavers. The tent has three access points as shown in the circulation diagram. Two of these paths are accessible by wheelchair. For night time receptions the tent will require some means of artificial lighting such as string lights, hanging globes, or portable light posts.

Fencing and Gates:

The site requires a perimeter fence to keep deer and other animals from feeding on the gardens. Overall the fence materials and character will relate to the cultural and historical significance of Matteson Farm. The fence's style (height and material) will change according to the site context. Fence sections will be more formal near major entrances and the display gardens. Fencing that encloses the agricultural space will be less formal. The fence diagram shows the designation of different fence styles.

Fence Style C

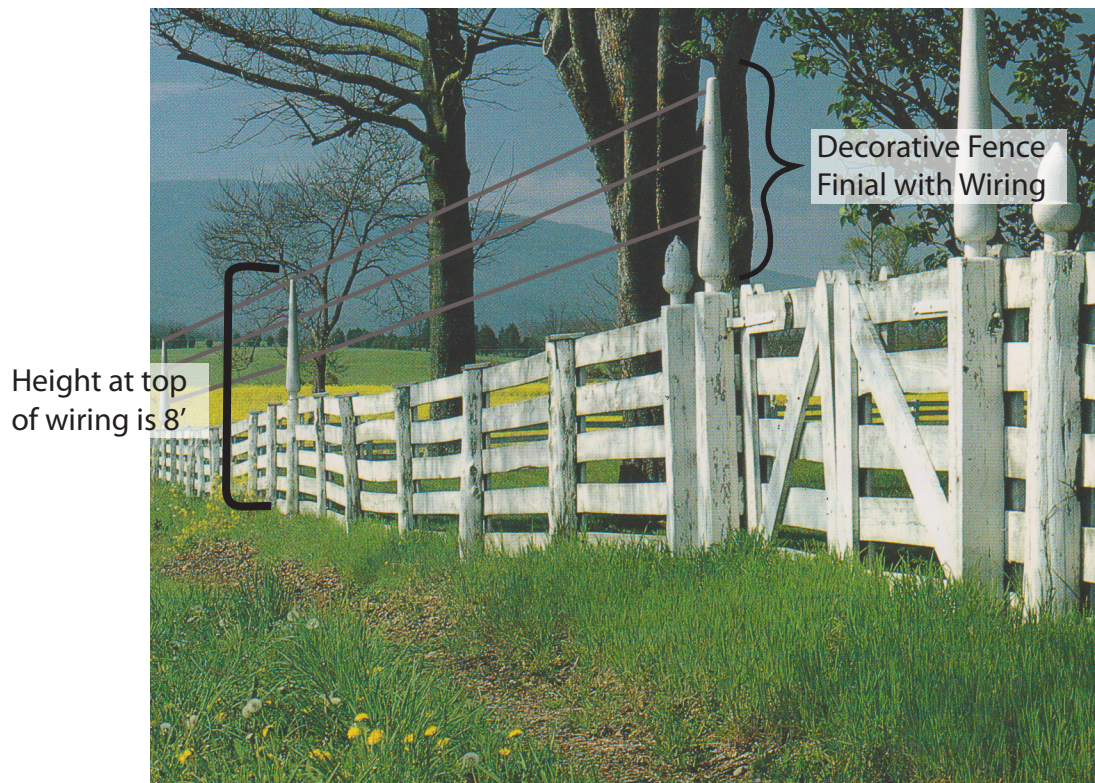


Figure 57. Fence style C



Figure 58. Wood Fence at North Barn



Figure 59. Zigzag Fence at Parker Mill Park, Ann Arbor Township

Fence Diagram

Location of Gates and Fence Styles

Gates: 1-7

Fence Styles: A, B, C

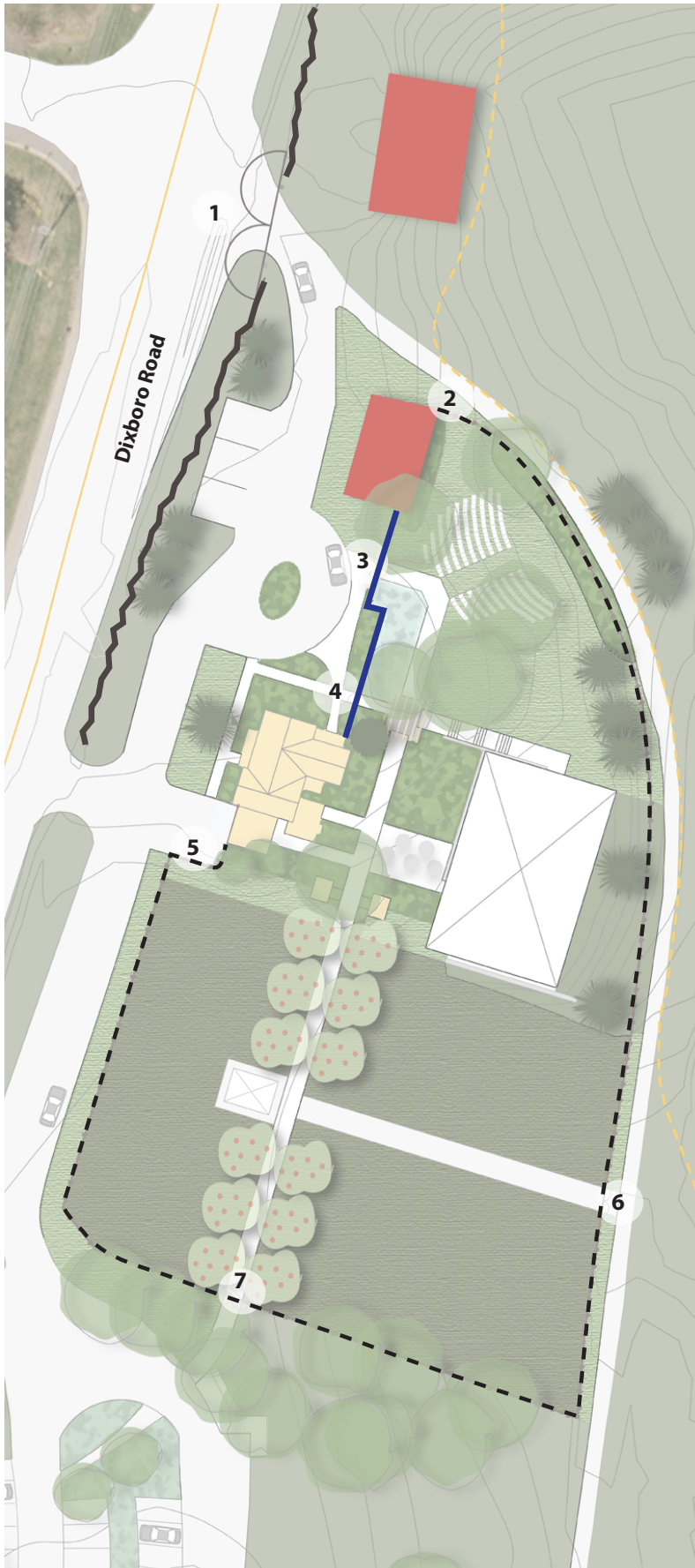
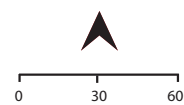


Figure 60. Gate 4. Artisan Gate, Tools of the Farm



Figure 61. Fence B, Short Paling Fence

- Fence Style A
- Fence Style B
- - - Fence Style C
- Yellow Trail



Arbors:

The site design includes two arbors. Figure 62 shows the general character these structures will have. The main arbor sits above the existing concrete slab and serves as a transition point along the main path from the parking area to the center aisle of the ceremony garden. After the ceremony, the arbor can house the receiving line. This experience is captured in figure 53. The secondary arbor serves as an important gateway as it marks the main guest entrance to the site. It is located just east of the drop off area. From here guests can take their seats in the ceremony garden.



Figure 62. Suggested arbor treatment



Figure 63. Dry stack boulder retaining wall

Retaining Walls:

The retaining walls will permit a two percent slope in the tent area and a four percent slope in the patio area. The walls will be constructed out of boulders to match the barn foundation.

Parking:

The parking lot will accommodate 73 cars in the main lot and three additional cars in the accessible spaces in front of the small barn. Drivers and passengers walking from the farthest parking space will have a 350 foot walk to the agriculture entry gate. Pathways through the vegetated swales allow walkers the most direct passage to the entry. The swales will infiltrate a portion of the stormwater runoff and direct the overflow to the south.



Figure 64. Parking Lot Swale at Holden Arboretum, Kirtland Ohio

Vehicular Entry and Drop Off Gardens



Figure 65. Drop off and garden entry



Vehicle Entrance

Entry on Dixboro shall be marked with stone pillars. The character of the columns should match the foundation of the barns.

Figure 66. Vehicle Entrance column

Plants:

Plant selection was based on five criteria: 1) resistance to the phytotoxin juglone, 2) aesthetics, 3) sunlight exposure, 4) water requirements and 5) historical appropriateness.

The ceremony garden contains three large Black Walnut (*Juglans nigra*) trees. The leaves, roots, fruits and branches contain a phytotoxin juglone which can cause death or stunting to a plant that is susceptible. Juglone toxicity typically reaches out sixty feet from the trunk of a mature tree and can remain in the soil following the removal of a large tree. (MSU Extension 2009) A list of plants was derived from the Michigan State University's comprehensive juglone tolerant plant list for the area within sixty feet of a walnut tree.

A flower color palette was determined based on the colors of the heirloom peonies at Nichols Arboretum. Matteson farm was selected as a destination for back up peonies to help ensure their survival in the event of catastrophic loss of the peony collection. A main component of the planting design is the peony. Plant selections also incorporated the characteristics of size, shape, fall color and winter interest.

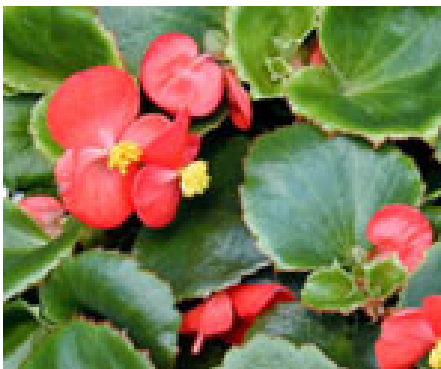
A sun and shade analysis provided information regarding the number of hours each garden was exposed to sunlight. A full sun garden receives six hours of sunlight or more and partial shade garden receives four hours of morning sunlight per day. The juglone tolerant plants were evaluated for their sun or shade requirements. A second plant list was generated for areas not within the juglone root zone that identified only the bloom color and exposure requirements for the plants.

Presently, the site is not irrigated and the soil is well drained. Using the previous criteria, a final list of plants were highlighted that could tolerate dry conditions. The rain garden plants also required a tolerance for rain water inundations.

Preference was given to plants that were likely garden inhabitants of American gardens in the 1800's.

Following is a brief explanation of how the four criteria influenced the plant selection for the annual Wax Begonia. The annual wax begonia was selected because of its tolerance to juglone, it is available in colors that work with red, pink and white peonies, its round leaf will contrast with the jagged edge of the peony leaf, it grows well in full sun or partial shade, and it will tolerate dry conditions for a short period of time.

Plant Portraits



Begonia sempervirens
1x1
May-September
Full sun to part shade

Wax Begonia



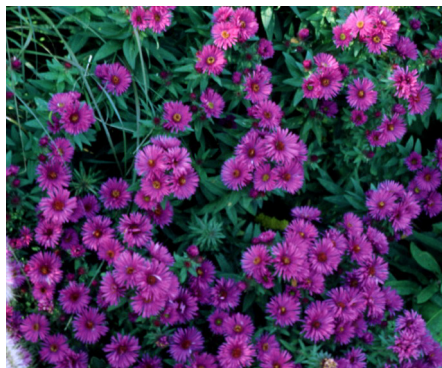
Achillea filipendulina Yarrow
1.5 X 1.5
June-Sept
Full sun



Amelanchier arborea Serviceberry
15 X 15
Red leaves
March-April
Full sun to part shade



Arctostaphylos uva-ursi Bearberry
1x5
Red and copper, evergreen
June
Partial Shade, Partial Sun, Full Sun



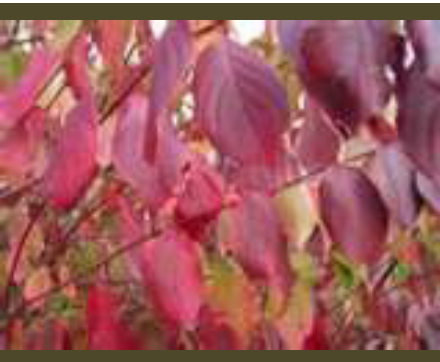
Aster novae-angliae 'Purple Dome' Purple Dome Aster
1.5x3
Aug-Sept
Full sun



Clematis virginiana Clematis
12X 3
August-October
Full sun to part shade



Cornus florida Flowering Dogwood
30x30 Red
May
Full sun to part shade



Cornus stolonifera Red Osier Dogwood
30x30
Red Fall
May
Full sun to part shade



Echinacea purpurea Purple coneflower
2 X1.5
Seed heads
June-August
Full sun to part shade



Fothergilla major Fothergilla
10x10
Orange, red and yellow Fall
May-June
Partial shade, partial sun, full sun



Geranium maculatum Wild Geranium
1 X 1.5
April-May
Full sun to part shade



Heliopsis helianthoides 'Tuscan Sun' Ox-eye Daisy
1 X 1
June-Sept
Full sun



Hemerocalis Daylily 4x4
June-July
Partial shade, partial sun, full sun



Hydrangea arborescens 'Annabelle' Hydrangea
5x6+
June-August
Part Shade



Hydrangea quercifolia Oakleaf Hydrangea
6x6
Red Fall
July-August
Partial shade, partial sun, full sun



Ilex verticillata Winterberry
10x10
May
Partial shade, partial sun, full sun



Iris virginica Iris
1 X 1
June
Full sun



Juniper virginiana Red Cedar
30 X 8
Evergreen
Full sun



Kerria japonica 'Pleniflora' Pleniflora Kerria
10x15
June-July
Partial shade, partial sun, full sun



Leucanthemum x superbum Shasta daisy
1 X 1
June-August
Full sun



Liatris spicata Blazing star
3x1.5
August-September
Full sun



Monarda didyma Bee Balm
3x2
July-August
Full sun to part shade



Paeonia Peony
2.5 X 3
June
Full sun to part shade



Phlox divaricata Wild Sweet William
1 X 1
April-May
Full sun to part shade



Rhus aromatica Fragrant Sumac
6x10
April
Full sun



Rudbeckia fulgida Black eyed susan
2X2
Seed heads
June-October
Full sun



Spiraea alba Meadowsweet(spirea)
3 X 3
June-August
Full sun to part shade



Thuja occidentalis 'Woodwardii' Woodwardii Globe Arborvitae
3x3
Evergreen
Partial shade, partial sun, full sun



Viburnum lantana Wayfaring Tree
10x10
May-June
Full sun to part shade

Plant portraits source from Horticiopia, vigoro.com and live.com.

Plant List

	Latin	Common	H & S	Fall	Color	Bloom Time	Exposure
1	<i>Achillea filipendulina</i>	Yarrow	1.5 X 1.5		Yellow	June-Sept	Full sun
2	<i>Amelanchier arborea</i>	Serviceberry	15 X 15	Red leaves	White	March-April	Full sun to part shade
3	<i>Arctostaphylos uva-ursi</i>	Bearberry	1x5	Red and copper, evergreen	Pink and White	June	Partial Shade, Partial Sun, Full Sun
4	<i>Aster novae-angliae 'Purple Dome'</i>	Purple Dome Aster	1.5x3		Purple	Aug-Sept	Full sun
5	<i>Begonia sempervirens</i>	Wax Begonia	1x1		Red	May-September	Full sun to part shade
6	<i>Clematis virginiana</i>	Clematis	12X 3		White	August-October	Full sun to part shade
7	<i>Cornus florida</i>	Flowering Dogwood	30x30	Red	White	May	Full sun to part shade
8	<i>Cornus stolonifera</i>	Red Osier Dogwood	10x10	Red	White and yellow	May-June	Partial shade, partial sun, full sun
9	<i>Echinacea purpurea</i>	Purple coneflower	2 X1.5	Seed heads	Purple pink	June-August	Full sun to part shade
10	<i>Fothergilla major</i>	Fothergilla	10x10	Orange, red and yellow	White	May-June	Partial shade, partial sun, full sun
11	<i>Geranium maculatum</i>	Wild Geranium	1 X 1.5		Pale pink, lilac	April-May	Full sun to part shade
12	<i>Heliopsis helianthoides 'Tuscan Sun'</i>	Ox-eye Daisy	1 X 1		Yellow with gold centers	June-Sept	Full sun
13	<i>Hemerocallis</i>	Daylily	4x4		Yellow	June-July	Partial shade, partial sun, full sun
14	<i>Hydrangea arborescens 'Annabelle'</i>	Hydrangea	5x6+	None	White	June-August	Part Shade
15	<i>Hydrangea quercifolia</i>	Oakleaf Hydrangea	6x6	Red	White	July-August	Partial shade, partial sun, full sun
16	<i>Ilex verticillata</i>	Winterberry	10x10		White	May	Partial shade, partial sun, full sun
17	<i>Iris virginica</i>	Iris	1 X 1		Violet blue w/ yellow crests	June	Full sun
18	<i>Juniper virginiana</i>	Red Cedar	30 X 8		Evergreen		Full sun
19	<i>Kerria japonica 'Pleniflora'</i>	Pleniflora Kerria	10x15		Yellow	June-July	Partial shade, partial sun, full sun
20	<i>Leucanthemum x superbum</i>	Shasta daisy	1 X 1		White	June-August	Full sun
21	<i>Liatis spicata</i>	Blazing star	3x1.5		Purple	August-September	Full sun
22	<i>Monarda didyma</i>	Bee Balm	3x2		Red, violet, purple	July-August	Full sun to part shade
23	<i>Paeonia</i>	Peony	2.5 X 3		Red, white and pink	June	Full sun to part shade
24	<i>Phlox divaricata</i>	Wild Sweet William	1 X 1		Rose, lavender, violet blue	April-May	Full sun to part shade
25	<i>Rhus aromatica</i>	Fragrant Sumac	6x10	Red	Yellow	April	Full sun
26	<i>Rudbeckia fulgida</i>	Black eyed susan	2X2	Seed heads	Yellow	June-October	Full sun
27	<i>Spiraea alba</i>	Meadowsweet(spirea)	3 X 3		White	June-August	Full sun to part shade
28	<i>Syringa vulgaris</i>	Lilac	15x12		Red, violet, purple	April-May	Full sun
29	<i>Thuja occidentalis</i>	Arborvitae	40x15	Evergreen			Full sun to part shade
30	<i>Thuja occidentalis 'Woodwardii'</i>	Woodwardii Globe Arborvitae	3x3	Evergreen			Partial shade, partial sun, full sun
31	<i>Viburnum lantana</i>	Wayfaring Tree	10x10	Red	White	May-June	Full sun to part shade
32	<i>Veronica spicata 'Sunny Border Blue'</i>	Speedwell	2x2		Blue	June	Full sun to part shade

A few recommended substitutes are Wild Rose, Forsythia, and Lilac.

Plant Bloom Chart

This chart shows the bloom colors and their expected bloom period. Evergreen plants were included to show year round interest.



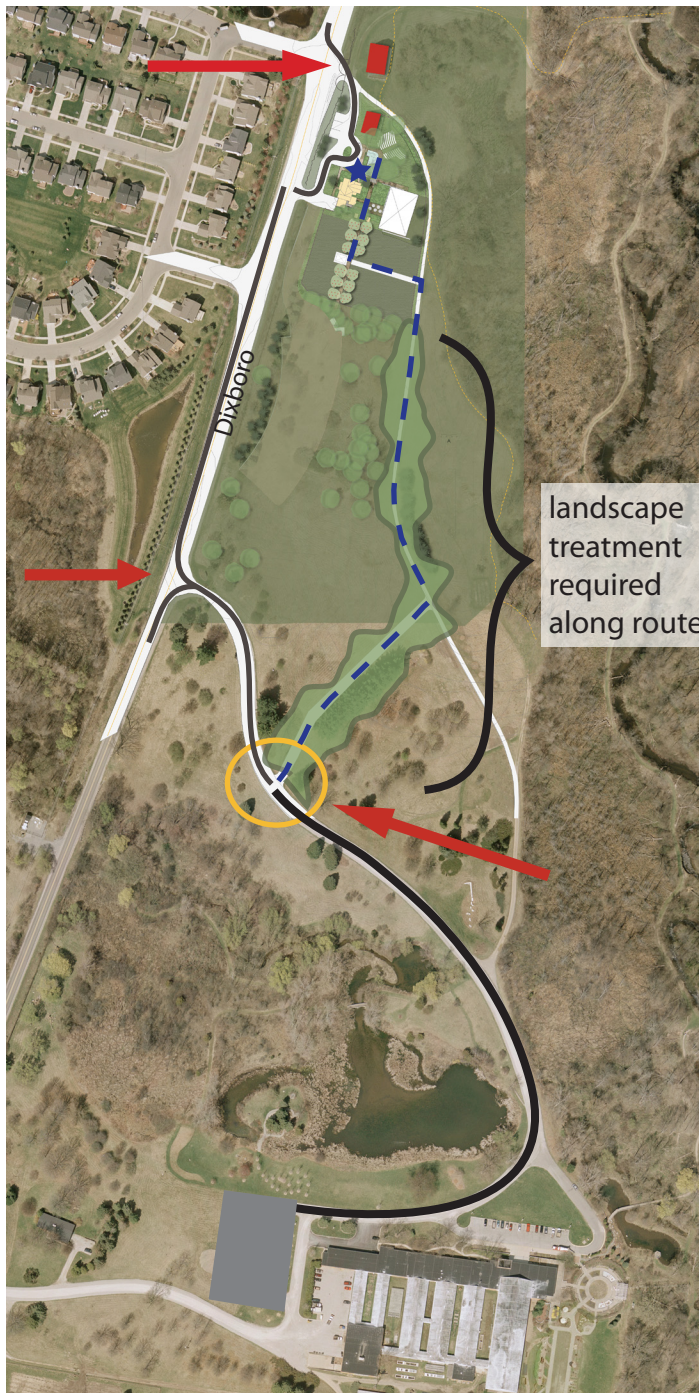
Ox-eye daisy	June-Sept	
Peony	June	
Pleniflora Kerria	June-July	
Purple Coneflower	June-Aug	
Purple Dome Aster	Aug-Sept	
Red Maple		
Red Osier Dogwood	May-June	
Serviceberry	March-April	
Shasta daisy	June-Aug	
Veronica	June	
Wayfaring Tree	May-June	
Wild Geranium	April-May	
Wild Sweet William	April-May	
Winterberry	May	
Yarrow	June-Sept	

Parking Alternatives

The number of parking spaces to allot on the site was a controversial issue. It was difficult to compromise on a minimum amount of spaces to designate. Linda Neely, Director of Visitor Service and event coordinating, believed having parking is an important amenity for guests, especially those female guests wearing high heels. Parking near the site offers convenience and greater accessibility. The final 73 spaces that were allotted also provide parking for persons working in the agricultural space.

A series of parking alternatives are suggested to help preserve as much open space as possible and reduce the environmental degradation and visual impact of the parking lot. These alternatives vary in convenience. The alternatives maybe considered a part of a potential phasing plan or may be a substitute for developing a permanent lot on the site. Some of the parking alternatives play a role in the mission of MBGNA to connect people to plants and nature.

Parking Alternative : Valet Service and Walking



In this alternative valet service would be provided at the point of exchange. From this point guests would enjoy a scenic walk to the site. Valet service would park guests' cars at the main lot.

Advantages

1. No parking lot required
2. Adds character and unique experience for guests
3. Interpretation component can be tied into ride
4. Connects people to nature, provides restoration from human fatigue
5. Has health benefits

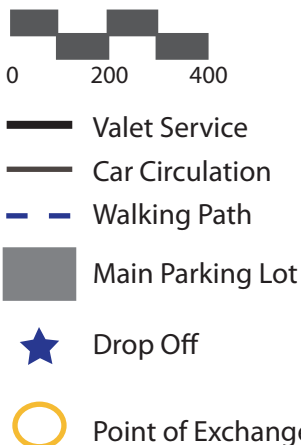
Disadvantages

1. Time consuming
2. Requires guests to arrive early
3. May be inconvenient
3. Cars could queue at the service drive and create a conflict with general visitor traffic

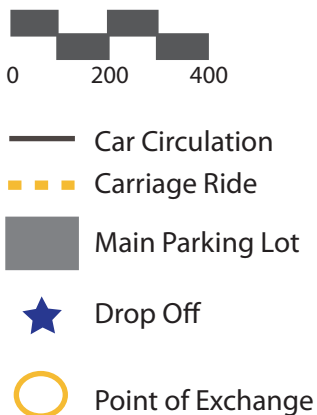
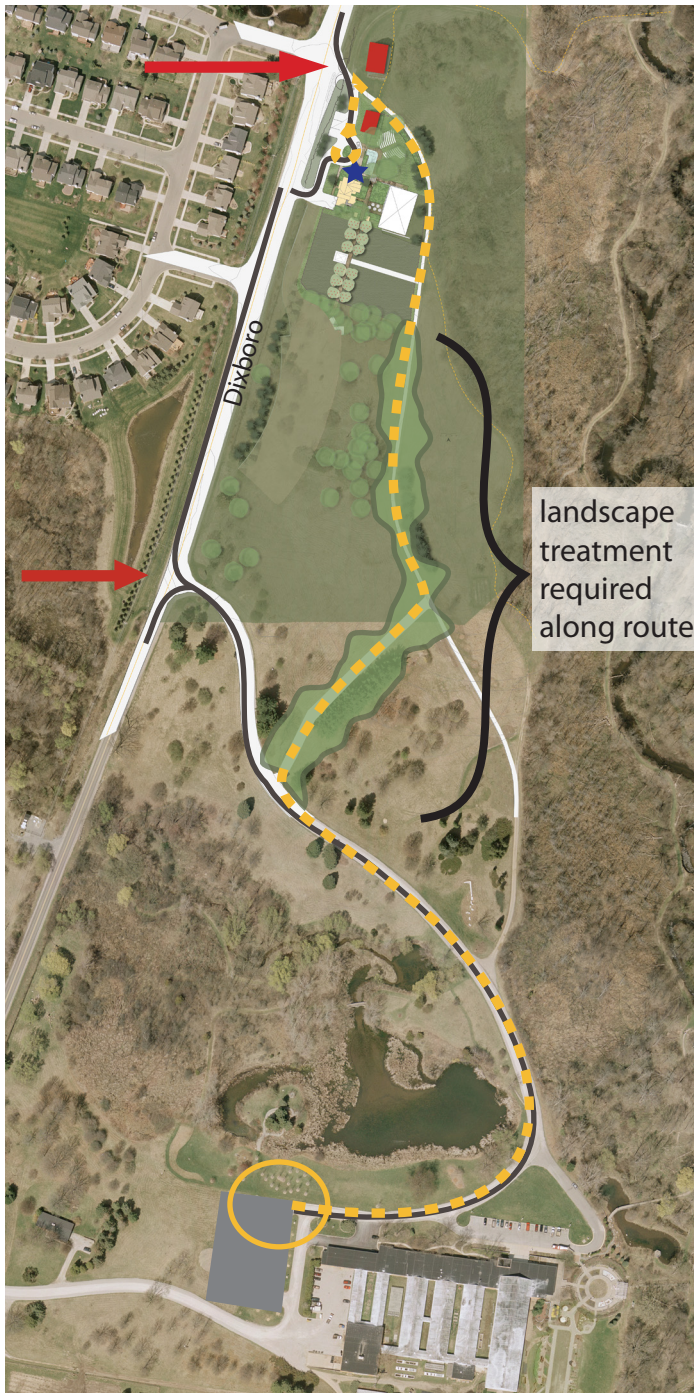
Notes:

The landscape along the route would need to be maintained.

This area could be restored to the oak hickory forest that existed in the 1800s or the guests could experience a display of native Michigan habitats along the route.



Parking Alternative : Carriage Ride



In this alternative guests would be delivered to the site via a romantic carriage ride. Guests have two options. They can park at the main lot and take a carriage as a group to Matteson farm or the driver can drop off guests at the drop off point, park at the main lot, and take the carriage.

Advantages

1. No parking lot required
2. Adds character and unique experience for guests
3. Interpretation component can be tied into ride
4. Connects people to nature, provides restoration from human fatigue
5. Added experience for bridal party, may take carriage ride from main building, prop for group photos

Disadvantages

1. Time consuming
2. Requires guests to arrive early
3. May need multiple carriages

Notes

The landscape along carriage route would need to be maintained.

This area could be restored to the oak hickory forest that existed in the 1800s or the guests could experience a display of native Michigan habitats along the route.

At the drop off point there may be a conflict between cars and carriages. This would need resolved.

Two way traffic would need to be provided along the service drive.



Figure 67. Carriage example



Figure 68. Carriage example



Figure 69. Carriage example



Figure 70. Carriage example

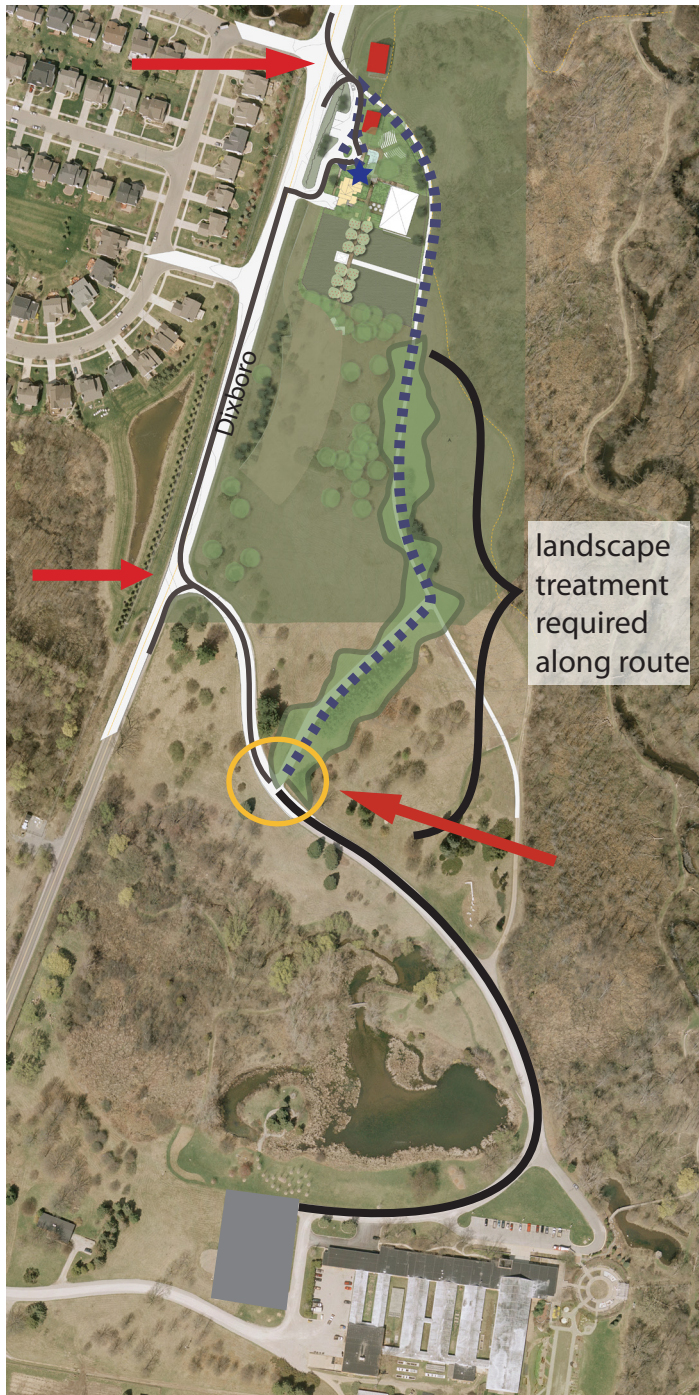


Figure 72. Carriage example



Figure 71. Carriage example

Parking Alternative : Valet from Service Drive



In this alternative guests would be delivered to the site via a golf cart. The point of exchange is at the service drive along the main entry drive. Valets would park the guests' cars at the main parking lot.

Advantages

1. No parking lot required
2. Moves guests faster than carriage
3. Interpretation component can be tied into ride
4. Connects people to nature, provides restoration from human fatigue

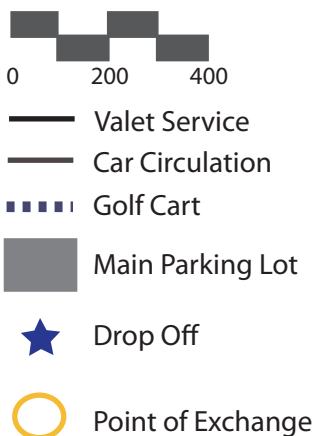
Disadvantages

1. Cars could form a queue at service drive and create conflict with general visitor traffic
2. Requires guests to arrive early
3. Will need multiple golf carts
4. Not as much character as carriage scenario

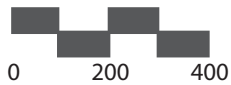
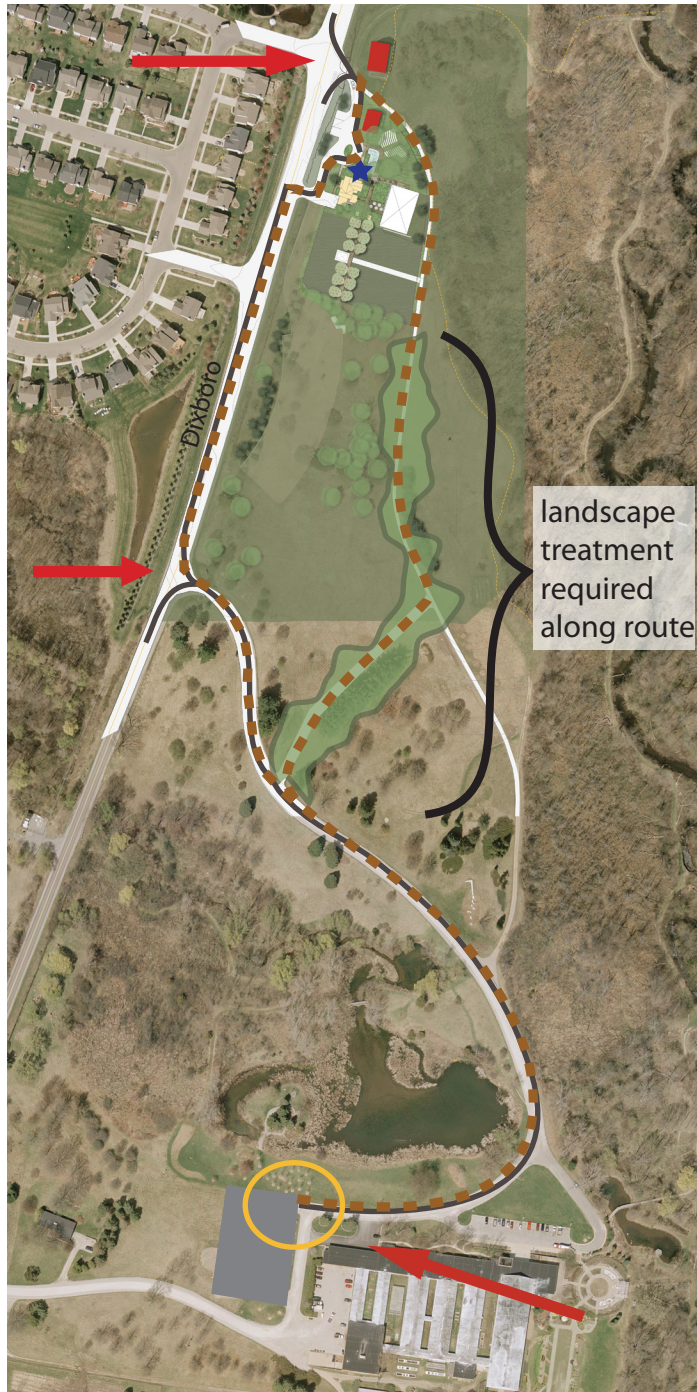
Notes

The landscape along route would need to be maintained.

This area could be restored to the oak hickory forest that existed in the 1800s or the guests could experience a display of native Michigan habitats along the route.



Parking Alternative : Shuttle Ride



- Car Circulation
- Shuttle Ride
- Main Parking Lot
- Drop Off
- Point of Exchange

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Similar to the carriage scenario, in this alternative guests would be delivered to the site via shuttle. Guests have two options. They can park at the main lot and take the shuttle as a group or the driver can drop off guests at the drop off point, park at the main lot, and take the shuttle.

Advantages

1. No parking lot required
3. Interpretation component can be tied into ride

Disadvantages

1. Not unique experience
2. Time consuming
3. May need multiple shuttles

Notes

Shuttle would need to be attractive or sophisticated



Figure 73. Shuttle Vehicle

Parking Alternative : Valet From Drop Off

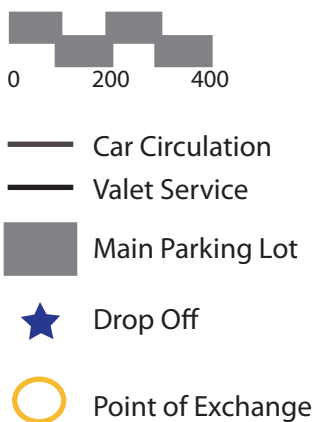


Figure 74. Convenience of valet

This alternative proposes using a valet service from the point of drop off to park guests' cars at the main parking lot. A valet would have to use a golf cart or car to travel between the main lot and exchange point.

Advantages

1. No parking lot required
2. Added service could increase profit
3. Provides guests quick access to site

Disadvantages

1. Cars could queue and back up at drop off
2. Added required cost to guests
3. No added visual or outdoor experience



Phasing Strategy

The following is a potential phasing plan for the completion of the project. The project is presented in four phases. Each phase will be completed within separate time frames. Phasing will allow MBG to get started with the installation of several components of the design without excessive costs. This phased development will permit market testing and agricultural display interest. It will promote the use of the barn area and help ensure the preservation of the farmstead setting in a more expedient fashion.

Phasing Hierarchy

	Barns/Farmhouse	Property	Partnership	Constraints
Phase 1	<ul style="list-style-type: none"> -Continued maintenance of Barns -Utilize space for storage of farming equipment (Small Barn) -North & South Apts for Rental 	<ul style="list-style-type: none"> -Determine irrigation method for agriculture area -Clear vegetable garden area -Grade soil for fence installation -Mulch garden beds -Buffer garden plots with fencing -Install Ceremony Gardens -Close off center entry drive -Remove chain link fence along Dixboro Widen north and south entry drives -Install new zigzag fence -Install signage -Parking on site as is 	<ul style="list-style-type: none"> MSU Extension Slow Food Huron Valley 	<ul style="list-style-type: none"> -Deer/animals -Soil -Water
Phase 2	<ul style="list-style-type: none"> -Bottom of Large Barn adapted for Non-profit group -South Apartment updated for bridal room, conference space and catering -Carport adaptations: water and electricity 	<ul style="list-style-type: none"> -Develop bulb trial gardens -Expand small farm, add orchard -Parking on site as is -Create reception area to seat 150-200 people -Seasonal Tent for Reception Space -Explore parking options/ Valet 	<ul style="list-style-type: none"> Scott Kunst & Old House Gardens MSU Extension Slow Food Huron Valley 	<ul style="list-style-type: none"> -Electricity -Barn Floor -Ceiling Height -Insulation -Bulb Light Preference and Slope
Phase 3	<ul style="list-style-type: none"> -Renovate Large Barn for receptions/lectures -extend main floor 	<ul style="list-style-type: none"> -Expand small farm, add hoop house 	<ul style="list-style-type: none"> Scott Kunst & Old House Gardens MSU Extension Slow Food Huron Valley Food Pantry 	<ul style="list-style-type: none"> -HVAC -Barn Floor -Renovations may affect Scott- Small Barn Used as Flex Space -Wetland Delineation -Cost
Phase 4	<ul style="list-style-type: none"> -Kitchen Attachment -Canning space -Catering space -North Apartment for Caretaker 	<ul style="list-style-type: none"> -Expand small farm, add chicken coop and domestic animals 	<ul style="list-style-type: none"> Scott Kunst & Old House Gardens MSU Extension Slow Food Huron Valley Catering Groups Farm/Agriculture Groups 	<ul style="list-style-type: none"> -Cost -Liability -Caretaker



Figure 75 Garden area

One of the first steps to prepare this garden is to remove or relocate the existing wood fence and any remaining debris from prior tenants.

Existing concrete slab and wood fence in the back yard

Phase I: Ceremony Garden and Agriculture Space

It is anticipated that Phase I will commence in the spring of 2010 and will be completed within several months. This phase includes completion of Ceremony garden and the agriculture space.

The first order of priority is to clean up any remaining personal effects from prior tenants. Items that must be removed include the wood fence, swing set, deer fencing around vegetable gardens and any other remaining debris. Remove chain link fence along Dixboro Road. Remove unwanted trees, sapling and existing tree stumps. Prune all dead wood and broken branches out of remaining trees. Relocate small trees that were recently planted, shrubs, vines and perennials to a holding bed or other permanent location. Once the site is cleared and cleaned, then grading will be undertaken to level out certain areas. This includes land to be utilized for agriculture, tent and patio. Except for the planted border behind the little barn there will be no grading in the ceremony garden.

The deer fence will be installed following grading to act as a perimeter barrier around the garden. An irrigation system must be installed prior to the installation of the garden. Planting and or a mulch application must occur immediately following the fence installation and grading to prevent weed growth. Seed-in areas with turf grass that are not planted as a garden border. The small barn must be cleaned out to allow its use as a tool, material and equipment storage area for agricultural implements.

Install new zigzag fence along Dixboro Road. Center entry drive must be closed and existing north and south entry drives widened. The entry garden and signage can be installed. New drive and drop-off layout must be incorporated. Shrub and perennial beds and borders can be planted. The garden is now ready for the non-profit agriculture groups to plant fruit and vegetables. The Port a-Johns can be installed at this time. Parking will remain as it is along the west side of the property with additional spaces at the main building.

The garden can now be used be used for day time visitors and demonstrations.

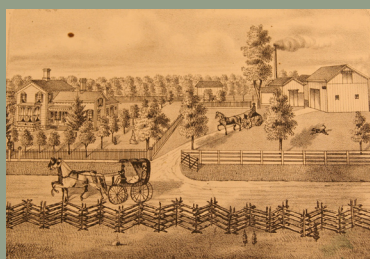


Figure 76. 1874 Zigzag Fence

Zigzag fencing is recommended as a replacement for the existing chain link fence along Dixboro Road. This fence was popular in the 1800's because the wood for 100 yards of fencing could be split by one man working with an ax and a wedge in one day. (Nash 1999). Early American farmers had an abundance of lumber and a minimum amount of manpower. The rails were typically ten to eleven feet long and interlocked at an angle of 120 degrees. Typically, these fences were 5 to 8 rails high. An illustration from the 1874 *Combination Atlas Map of Washtenaw County* shows zigzag fencing at the David Depue Residence located in Pittsfield Township, Michigan.

Phase II: Reception Tent, Patio and Catering Space

It is anticipated that Phase II will commence in the summer of 2011 and will be completed within several months.

No specific order of completion is required for this phase and projects can commence simultaneously. Projects for this phase include the adaptation of the small (south) apartment to be used for the bridal party prior to the ceremony, meeting and display space for the event planning department and conference space for general use. The small kitchen must be evaluated for commercial use and updating might be necessary. In addition to utilizing the small kitchen, the caterer requires use of the carport. The carport must be checked for structural soundness and the electrical outlet requirements must be addressed. A commercial size sink with hot and cold running water must be installed. Exterior illumination must be addressed and installed. Additional grading and masonry work must be completed at this time. Retaining walls must be installed to achieve a 2% grade for patio and tent area. Install patio and walkway paving and any arbors. Install seasonal tent for ceremonies and receptions. Parking options must be considered at this time. See parking options section.



The Byron Colby barn at Prairie Crossing in Greyslake, Illinois accommodates 180 seated guests. The original timber framing has been maintained to provide a warm, homey space.



Figure 77 and 78. Colby Barn

Phase III & IV: Barn Addition and Parking

Phase III and Phase IV can be completed simultaneously. It is anticipated that commencement will be anytime after phase II depending on financing available and will be completed in excess of one year.

Large (north) barn must be evaluated by a preservation architect for complete rebuilding and renovation. Existing square footage must be enlarged an additional six-thousand square feet to accommodate two-hundred people in a banquet style setting. A catering, canning, education kitchen and food pantry is also included in the addition. A seventy car parking lot with lighting and stormwater management systems will be necessary with this addition. Explore the feasibility of animals living on the property to complete the farm setting. This would include shelter for the animals and utilization of animal waste. Explore the feasibility of a hoop house for an extended growing and harvesting season.

Treatment Guidelines:

This section is meant to provide guidelines for the landscape treatment of the Matteson farm. One of the steps of preservation planning includes determining an appropriate treatment approach. Treatment is defined as the work carried out to achieve a historic preservation goal (Birnbaum 1996). In 1992 the Secretary of the Interior established a set of four cultural landscape treatment types: preservation, rehabilitation, restoration, and reconstruction. What approach is selected for treatment depends on the level of integrity and significance to be retained. Integrity is defined as the “authenticity of a property’s historic identity, evidenced by the survival of physical characteristics that existed during the property’s historic period” (Alanen and Melnick 2000). Significance is defined as the meaning and value that derive from the physical characteristics of a certain historic period (Birnbaum 1996). It is important to note that properties can have more than one period of significance in which the property is associated with important events, land uses, activities, and persons (Alanen and Melnick 2000). For example, Piper Farm at Antietam Battlefield has two periods of significance — the period of the battle and the turn of the century development of the farm complex. The farm complex had a high level of integrity compared to the site’s association with the battlefield; in other words a high level of physical evidence relating to the farm’s period of significance remained intact. Understanding the integrity of the landscape helped inform the treatment type. If Piper farm had been restored to the period of battle, it would have resulted in the removal of the farm complex and the loss of historical significance (Birnbaum 1996).



Figure 79. Piper Farm at Antietam Battlefield

Of the four treatment levels, preservation has the strictest standards. The preservation standards are meant to sustain the existing form and integrity of a historic property (Birnbaum 1996). The ability to preserve the integrity of a historic property as a physical record of a certain time and use depends largely on research and a thorough understanding of the features, details, and craftsmanship techniques specific to a certain time period. Exterior additions are not in the scope of preservation work; generally properties are to be used for their historical use or given a new use that maximizes the conservation of the property's historical integrity including: materials, features, spaces, and spatial relationships (Birnbaum 1996).

Rehabilitation treatment standards accommodate the need to alter the cultural landscape in order to meet new uses. The goal of rehabilitation is to retain the character of the cultural landscape, yet allow flexibility in the use of the property. The property does not have to be used as it was historically. Alterations and additions to the landscape should be compatible with the character of the historic period.

Restoration standards allow a cultural landscape to be depicted at a certain time period. Restoration treatment requires the removal of materials from other time periods in order to create one period of significance. Restoration treatment is most appropriate when contemporary alterations and additions are not planned. Restoration treatment requires a thorough understanding of the historical time period and relies on historical documentation to achieve the highest integrity.

The last treatment type, reconstruction, allows non surviving historic properties to be recreated or replicated. This treatment type is generally used for interpretive purposes (Birnbaum 1996). Consideration must be taken in this treatment type to uphold authentication. Because very little historical documentation exists for the layout and spatial configurations of historic properties, it is easy to create a false sense of history. Often reconstruction of historic properties results in an overly imagineered or too beautiful landscape because too much importance is placed on aesthetics as a way to attract visitors.

Of the four treatment types, preservation and rehabilitation seek to secure and emphasize continuity between old and new uses, and these treatment types acknowledge that landscapes are dynamic and change over time (Birnbaum 1996). As natural processes and human activities shape the quality and form of a cultural landscape, Charles Birnbaum of the National Park Service Historic Landscape Initiative believes preservation treatment efforts should be directed toward acknowledging the dynamic qualities of landscapes (Alanen and Melnick 2000). Though either of these two treatment approaches may be appropriate for maintaining the historical significance of Matteson farm, in the development scenario process of this project it was concluded that an adaptive reuse of the property and barns was needed to establish a meaningful use that related to the mission statement of Matthaei Botanical Gardens and allowed MBG to benefit financially. Therefore a rehabilitation treatment is most appropriate for keeping the character of Matteson farm intact while accepting that new uses are needed.

The first process of rehabilitation treatment begins with identifying the significant landscape features and materials that characterize the cultural landscape. For the Matteson property, these features include: the material components of the barns and farmhouse, the craftsmanship related to the barns' construction, vegetation, fencing materials, and spatial organization. The rehabilitation guidelines for the treatment of Matteson farm serve to protect and maintain these identified features. The rehabilitation guidelines also

ensure that new features to the Matteson property are compatible with the inherent character of the Matteson property. The following points are given as guidelines to maintain the character of Matteson farm while accepting new uses. They are derived from the rehabilitation standards addressed in the Secretary of the Interior's Standards for the Treatment of Historic Properties.

- Repair and maintain historic features and materials

Deteriorated materials should be repaired with materials that convey the same visual appearance as the historic period of significance. Colors and textures should be similar.

- Replace damaged features

If features cannot be repaired because of extensive damage and removal is required, replacement is suggested. Substitute materials should be similar to the character of the original materials.

- Replace missing historic features

Lost features that are significant to the cultural landscape can be reconstructed. Adequate replacements depend on the availability of historical documentation, either pictorial or written. An example of a lost historic feature of the Matteson farm is the orchard. Under this guideline an orchard could be re-established in the agricultural space designated in the site plan. Old aerial photos, historical drawings, and personal narratives may inform the orchard's reconstruction. Care must be taken to not create a false historical appearance when a missing feature is reconstructed.

In the Johnson, Johnson and Roy 1983 Guide to Future Development report, a windmill is suggested as a landmark orientation feature for visitors (Johnson, Johnson and Roy Inc 1983). Moreover, several photos of Midwest farms show such windmills present in the landscape. Cobblestone farm in Ann Arbor had a windmill as shown in figure 79. It is suggested that more research be done to investigate if a windmill ever existed on the Matteson property. A windmill may be an important missing feature of the landscape.



Figure 80.
Cobblestone Farm, Ann
Arbor, 1900

Its reconstruction could add character and boost the cultural significance of the farm. If it happens that a windmill was never present, it should not necessarily be dismissed as a landscape feature. A windmill could be constructed to serve as an important source for interpretation and wayfinding. The materials and construction of the windmill should be compatible to the historic time period.

- Provide alterations and additions that are needed to assure continued use

Alterations to the historic property must not radically change, obscure, or destroy the inherent character of the cultural landscape. New work will be compatible with the old in terms of massing, scale, construction, and material choice. New features should not block or alter historical vistas. Topographical changes should be compatible with the shape and slope of the historic topography. It is suggested that there be as little grading as possible to accommodate new uses like a parking lot and reception tent. New circulation features should not subtract from the historic circulation pattern. For this reason, the parking alternatives described earlier in the report are recommended. Utilizing any of these parking alternatives will also reduce the visual impact of a new parking lot on the landscape. When adding new additions, accessibility may need to be addressed. Measures taken to meet accessibility requirements should not destroy the character of the historic landscape. Creative solutions must be found to comply with barrier-free requirements.

- Protect and Maintain historic features and materials

Traditional maintenance techniques should be used at the extent possible in preference to contemporary techniques. Traditional farming equipment and planting and harvesting techniques are suggested in the agricultural space. These techniques will add to the cultural and historical significance of the farm. It is suggested that plant material be retained and perpetuated by propagating existing plants to preserve the genetic pool. Any plant material that diminishes the historical character of the barns should be replaced. For example the yews should be replaced with vegetation associated with the historical period of the farmstead, the late 1800s. Indigenous plants should be used to the greatest extent possible.

Overall following the rehabilitation treatment guidelines provides a flexible means of protecting the historic features and character of the Matteson property. Rehabilitations standards accept that changes to the landscape, either natural or human induced, are inevitable. The treatment style accepts that new uses may be required to make a historic property meaningful in contemporary times. Nevertheless alterations and new additions to the landscape including structures, vegetation, spatial organization, topography, and land use must be compatible with the historical character of the site.

Interpretation:

This project has followed some of the general steps of preservation planning. A final step of preservation planning includes developing methods for interpretation. Interpretation provides tools for the visitor to experience, find meaning, and learn from the historic significance of the cultural landscape. Interpretation can be a formal description, a visual, an auditory experience (these are becoming popular at museums), or a performance piece. Traditionally gardens, parks, and arboretums have relied on docents to provide education and interpretation of the plants, ecosystems, natural processes, and garden displays.

Saving the discussion of interpretation for the final chapter does not diminish the topic's value in preservation planning. Catherine Howett, Professor of Landscape Architecture and Historic Preservation in the School of Environmental Design of the University of Georgia, notes about the value of interpretation to cultural landscapes:

To speak of the integrity of historic sites is rightly to define their potential to provide that important and meaningful physical reality; they are more or less complete fragments of the record, and we want to hold on to as much as we can of what might help us to make sense of the past. But the quality and importance of any preservation project is determined not by the integrity of the site, but by the quality of what is made of the site through interpretation of its history. That is the added value that can turn even a precious few evocative fragments, transformed by the intelligence and imagination, into significant history; without it, even historic sites of exceptional integrity will remain sterile. (Howett 2000)

In other words, a site could have a lot of integrity, the physical qualities and character of the historic site being largely intact, yet this integrity has no significant value if men and women cannot relate to the historic site or find meaning in experiencing them. Howett goes on to argue that the entire field of cultural landscape preservation needs to shift to cultural landscape interpretation. This shift would capture the main purpose of preservation — provide a physical link to the past that is a reminder of “who we are, how we became so, and how we differ from others of our species” (Stipe 2003).

This project generates many opportunities for interpretation. The form of interpretation that MBG employs must be shaped by the audience. Interpretation strategies must relate to the visitor and the experience they are seeking. Traditional forms of interpretation, such as the docent lead tour, may not be appropriate for the site in all cases. A wide range of interpretation strategies are suggested as a way to strengthen the experience for all visitors.

A short list of opportunities and strategies are listed.

Opportunity	Strategy	Audience	Notes
Rain Garden Display	Water Quality Testing	High School	Rain Garden could be engineered so filtered water empties into a basin, runoff could be monitored by students
Rain Garden Display	Plant Identification Signage	General	
Rain Garden Display	Coloring Book	Children 2-7	
Scott Kunst Trial Garden	Plant Identification	General	
Scott Kunst Trial Garden	Docent Tour	General	
Scott Kunst Trial Garden	Painting Classes	General	
Scott Kunst Trial Garden	Ann Arbor Garden Tour	General	
Agricultural Space	Canning Demonstrations	General	
Agricultural Space	Volunteer Harvest Day	General	
Agricultural Space	Seed Collection, Propagation Class	Adult	
Agricultural Space	Volunteer Planting Day	General	
Agricultural Space	Hay Ride	General	
Agricultural Space	Pumpkin Picking, Strawberry Picking	General	
Agricultural Space	Blind Food Test of Home Grown vs. Non local Dishes	General	
Agricultural Space	Pollinator Garden & Signage	General	Planted area specifically requiring pollinators linked to a bee keeping demonstration
Agricultural Space	Rain Barrel Fabrication	General	
Agricultural Space	Traditional Farm Implements Display	General	
Matteson Farm	Docent Tour	General	
Matteson Farm	Pod Cast Tour	General	
Matteson Farm	Coloring book	Children 2-7	
Matteson Farm	Aerial Photo Progression over Time (on web or signage)	General	This could be a photo display that is hung in barn as part of a tour
Matteson Farm	Time Capsule Interpretation Point	General	A pretend capsule could be brought out once a year on the anniversary of the farm's founding; capsule would have artifacts from Matteson farm, story telling component
Matteson Farm	Website Literature	General	
Matteson Farm	Painting Classes	General	
Matteson Farm	Family Plaque	General	To immortalize Matteson Family
Matteson Farm	Quilt showing Matteson Farm History	General	Quilt pieces could be sewn by visitors, could make their own faux narrative quilt
Matteson Farm	Living History with Costumed	General	Bob Grese could dress as Epaphras
Matteson Farm	Family Day Camp	General	A survival camp where visitors remove all modern day conveniences and live a day in the life of a early 20th century farmer
Matteson Farm	Family Tree	General	Visual or a tree sculpture with Matteson genealogy
Matteson Farm	University of Michigan Classes	General	Sociology, Architecture, History, Archaeology, Botany

Conclusion

“the best adaptive reuse projects manage to strike a sensible and sensitive balance between the three factors of integrity of heritage value, commercial profitability, and architectural merit . . . ” (Kar Lin 2007).

Conceptualizing the future of the Matteson property began over thirty years ago when Johnson Johnson and Roy Inc issued the 1983 Guide for Future Development. Since this time, there have been various planning visions for the potential use of Matteson farm. These visions included the adaptive reuse of the large barn for educational purposes, converting the large barn into an event center, and restoring the barns and farm to its original use as a working farm. This plan synthesized these thoughts into a larger vision. The site plan and deliverables included in this project are of great value.

First, they align with the needs of the client, MBGNA. The adaptive reuse of the farm creates many opportunities through which MBGNA can employ its mission. The designated agricultural space will demonstrate MBGNA’s commitment to sustainability and open space stewardship. The agricultural space serves to foster better relationships between humans and the earth by providing opportunities for people to grow plants and observe natural processes. In this space, MBGNA can increase its partnerships with community groups to promote a more sustainable and environmentally healthy food system in Ann Arbor.

The ceremony garden and the gardens surrounding the farmhouse have two purposes. First, they are specifically designed to showcase heirloom plants and plants associated with the historic time period of the farm. The collection of heirloom peonies, the heirloom bulbs from Old House Gardens, and plants associated with the historical time period of the farm such as flowering dogwood all define this area as a living museum of plants. Secondly, the plants form part of a larger goal to restore human fatigue. The plants in concert with the agricultural space and barns form an environment that will reduce the fatiguing effects of the urbanized world. The vision for the farm will provide an additional environment on the MBG property for passive recreation and relaxation.

As a whole, the adaptive reuse of Matteson farm offers many opportunities for educational programming and interpretation. Allowing people both young and old to connect to a way of life that is fading from the American landscape provides an opportunity for informing people about their relationship with the environment. By observing past human impacts on the environment, people can make informed decisions about how environments and natural resources should be managed in the future.

Secondly, the adaptive reuse of the farm allows MBGNA to grow its capacity for large event space. The ceremony garden and reception area that are sized to accommodate 200 people will increase the opportunities for revenue generation. The local food produced in the agricultural space could also be financially rewarding. As more restaurants in Ann Arbor begin to feature local dishes, MBGNA can capitalize on the demands of local restaurants for fresh, local produce.

Thirdly, this project restores meaningful use to the barns. Without a new use that provides more benefits than the cost of structural and cosmetic maintenance, the barns would pose a financial burden on the University. A portion of the revenue generated from the events and agricultural space can be directed toward the preservation of the barns thereby reducing their financial drain on the University.

None of the planning visions for the Matteson farm have been implemented. This project provides a springboard for realizing a common vision set forth by so many over the last thirty years.

Next Steps:

To facilitate the development of the site, the first next step would be to conduct additional participatory meetings like stakeholder focus groups and charettes for the purposes of discussing reactions to this project's plan. From this point, the best design alternative can be reached.

More exploration is required for the site's development. This project serves as a starting point for a cost benefit analysis and feasibility study for phase one and two. The next step for MBGNA is to work with the University's Business School or other entities to evaluate the capital investment and the return rate for that investment.

Secondly, a detailed site survey with accurate contours will provide sufficient information for a development at this site. More accurate contour data will give insight into the minimum amount of grading necessary to implement a program that includes a tent, parking lot and patio. A detailed site survey that includes plant location information will ensure that the layout of hard surfaces will not have an impact on the existing significant vegetation. More accurate information will permit MBGNA to explore other design alternatives for the site.

MBGNA needs to work with local agriculture groups to define their space requirements for a productive yield. Soil testing will be required to evaluate the soil quality for agricultural use and will help determine if any soil amendments are necessary. Immediate removal of the walnut saplings in this area would prevent juglone deposition in the soil.

The productive use of Matteson Farm is long overdue. This project's vision for the farm brings many opportunities for Matthaei Botanical Gardens. The potential of this plan is that Matteson farm will be recognized as a community landmark.



Figure 81. Big barn 2008

Appendix A

Summary of Notes

Focus Group Meeting
Monday, October 20th, 2008

Attendance:

Bob Grese
Joane Slusky
Sara Turner
Catriona Mortell
T.J. Smith
Linda Neely
Corinne Robertson
Joni Rosenthal
Kim Bayer
Deirdra Stockmann
Jeff Plakke
Sarah Weiss
Joan Wolf
Dorothea Coleman
Andy Sell
Peter Graham
Karen Sikenga
Claudia Scioly
Mike Hommel

Meeting:

Joane and Sara presented project goals, site history, and a brief site analysis.

Thereafter, four scenarios for the barn re-adaptation project site were shared along with some precedent examples and pictures.

The four scenarios:

Event Facility: Adapt farmstead area to accommodate receptions and ceremonies
Classroom: Adapt barn area for educational facilities and outdoor learning labs
Small Scale Farming: Restore the working farm, Demonstration Gardens
Status Quo: Barns remain the same

Meeting opened up for discussion of the four scenarios using the following questions as guidance:

- How does the scenario align with MBG's mission
- How will the site be used seasonally
- How can each scenario help MBG financially
- Are there education and interpretation opportunities
- What are the barriers to feasibility
- Can any scenarios be combined cohesively

Discussion:

Classroom:

- In terms of MBG's own classrooms and Leslie Science center, education facilities and space are already underutilized; therefore the best use of the barns may not be for classrooms and lab space unless they were to be unique in some way that would attract new users.

Event Facility:

- Several people stated the need for an event space in Washtenaw County that would hold more than 150 people. MBG is the only entity within the area to offer outdoor weddings in beautiful garden settings, however space is limited to 100 people. One question is how will additional ceremony gardens add space and how will they be different from the current gardens? Furthermore will readapting the project site for event facility space allow the site to be used during cold and inclement weather? Perhaps the barns will have to be renovated to HVAC. With this upgrade, more events may take place inside the barns in extreme weather conditions.
- Having a catering kitchen and restroom facilities as part of the events facility would be essential
- Perhaps event facilities could be marketed as the only "Zero Waste" facilities in town. Pursue the idea of "Zero Waste" conferences, weddings, receptions.
- Thinking of the garden spaces as rooms, design a range of rooms from small to large scale to serve as wedding ceremony spaces. These rooms could be accessed along the route to the barns.

Working Farm:

- Adapting the site to its original purpose, a working farm, restores meaning and heritage to the site. Demonstrations of small scale farming make connection to Michigan's farming heritage. Barns are utilized for their original purpose- storage of equipment.
- Small scale farming with Washtenaw County extension
- As the Massasauga Rattlesnake, a species of concern, may be moved to the endangered species list, having the least amount of disturbance, or in other words the greatest amount of conservation in terms of Massasauga habitat may be crucial. Conservation may play a pivotal role in connecting the project's purpose to the philosophy and mission statement of MBG.
- Cooking preparation and food canning/preservation classes could be a supplementary educational component to the demonstration gardens.
- Forge partnerships with local food groups. Local food groups would serve as the caretakers of demonstration gardens and offer education and outreach. Was suggested that a head farmer live in the farmhouse. Grants may be available for funding.
- No matter what, the development should display the innate character of the barns and pay attribute to the history of the barns and the land
- How will working farm bring profit or other benefits to MBG?
- Barns once served as part of UM Architecture class component
- Restoring to original purpose would be cheaper than converting to HVAC or modern facility
- Utilize the house for conference space, break out rooms
- The farmhouse is the oldest building that the university owns, capitalize on this feature
- Investigate domestic animals

Status quo:

- Safety risks of leaving barns unused and neglected
- MBG might be viewed as not valuing the land, and University may redirect the land for another purpose
- Maybe the barns fall down

Additional comments:

- Barns may be used for exhibition space for university students. On campus space is limited and difficult to attain.
- A lot of these ideas could be combined cohesively to accommodate all the visions for the re-use of the property
- In terms of parking needs, why not shuttle people from main parking lot
- Upgrades should be green, LEED-certified, show sustainability and preservation

Mentioned Precedent Sites:

Minnesota Landscape Arboretum Community Ed: cooking demonstration classes are extremely popular

Greenfield village has a working farm
Meijer has canning class
Blue Dress Barn
Tom Gladwin Barn, local venue site for 70 people
Tillers International, Battle Creek
Cobblestone Farm

Next Steps:

- Finalize scenario concept that incorporates event center, working farm, and garden rooms for ceremonies. A hierarchy of phasing will help achieve all the elements
- Develop program, a description of desired requirements, for project site using focus group feedback
- Use program and site analysis to design a series of schematics that show possible site designs
- Evaluate schematics

End of Focus Group Meeting Notes

Appendix B

Notes from phone conversation
with Tom Coates

Builder of open air pavilions

March 25, 2009

810-229-8916

email: oldfartswimmer@gmail.com, web site: coatesdesignf.com

Pavilions require deep footings to prevent uplift. Electricity for lighting and electrical outlets are also necessary. They are typically installed on a concrete slab. Water and sewer are sometimes installed. Pavilions can include sinks, ovens and other kitchen appliances for commercial applications. A 1700 square foot pavilion will use 29,000 pounds of steel and 900 bolts and would cost about \$175,000. Raised decks would require railings. A general price estimate would be \$100. per square foot for a pavilion and that price does not include fees for permits, water hookup, electricity or equipment.

Pavilions are available in three finishes:

1. Galvanized, steel frame parts are shipped to galvanizer and each piece is dipped into a tank. This process treats all parts and is the longest lasting.
2. Powder coat, has many colors to choose from and uses an electro-static process.
3. Painted, a paint layer covers all the exposed parts. This method requires more maintenance.

Meeting Notes at Matteson Farm

Joane Slusky and Sara Turner

with Jeff Zak, Jeff Zak Catering

Linda Neely

March 18,2009

Jeff has been catering for 16 years. The average wedding employes 16-20 staff members. His staff requires 3 parking spaces, they often carpool. A larger space for a van is required. A typical wedding begins at 4:30 and ends at midnight. Often, people gather before the ceremony to have appetizers. A cocktail area with umbrella tables would work. A tent with three windowed sides are needed for improved comfort. Lighting in the tent, cooking area and parking area are essential. Running water and electricity (2 sets of 3 circuits) are necessary. A commercial sized sink with hot and cold water are also necessary. He will bring grills with tanks, coffee burners, warming boxes, six table top burners and other appliances. It would be helpful to have an oven. Four to eight tables are required for washing dishes and food preparation. It would be nice to have a canopy with sides to hide the dishwashing etc. The distance from the carport to the tent if placed in the back yard would work for servers. Servers require a six foot path to deliver food on trays. Dumpsters are usually free, pick up is \$90. from Waste Management. A privacy fence for the port-a-johns would provide improved privacy.

Appendix C

Matthaei Botanical Gardens
Meeting Notes
April 30, 2008

Bob Grese
Catriona Mortell
Mike Hommel
Karen Sikkenga
Sara Turner
Joane Slusky

Tour of Matteson Farmstead
Small and Large Barn and Farmhouse Lots

Linda Neeley: MBG Events Coordination, Rentals and Wedding Planner

Requirements: Tent area and ceremony area
Utility issues: need city water, has city sewer

1845 Smaller Barn
1875 to 1900 Larger barn

Must maintain vehicle access for Woodland Wildflower volunteers
Temporary 2 track to get people up there, not original in layout

Old enamel pots were found in areas to the right of 2 track road

Work done on barns was done in 2002 or 2003
There was a water leak in the Large Barn and wind had shifted the building and foundation on west had given away. Work was done to keep it standing.

A staff member lives in the farm house, the other side of duplex is vacant but will be filled.

The wetland boundary is where the land starts to drop off. It comes up close to the barn and is an issue in expanding outside of the barn and limits where parking can go. Labyrinth was designed and funds are being raised and is a circular plan by Britt Zimmerman and Sara.

People coming up the 2 track road mainly come to see the prairie
People come through informally through Fleming Creek.

This project is an opportunity to explore walking path to East Medical Center and other things that are up there.

There is an informal path that leads up through the subdivision to the hospital campus.

The planner (Sue G) is willing to help formalize that path.
This could be a collaborative relationship where people waiting at the medical center will know that they can come to MBG and take a walk.

The 1958 Survey is available and is the original survey for land transfer.

Project boundary:
Wetland boundary must be identified.
Stream drains into Kirks Fen
Oak Savanna
Marilyn Bland Prairie, created in late 60' early 70's

Inside Large Barn: Concrete floor was installed for dairy sanitation and the floor boards were replaced.
The only crop we know of that was produced is Hay because of the penciled on notes regarding bushels and grain counts on posts and wall boards.
Construction is mortise and tenon with wood pegs.
The barn contains a granary which stored grains for animals.
The threshold, a piece of wood to stop grain from being threshed out of barn, was still in place.
Layers of bat guano was found on the floor.

Eldridge D., considered a squatter, married E. Matteson (daughter of Matteson) they started work on the farmhouse in 1824, now the oldest structure in the area
Captain John Dix had an older home but he left town in 1833.
Dixboro General store has a book that describes the history.

The 1822 deed history shows that the French claims to the property are recognized as legitimate.

Lou Vermillion found a grindstone but it has not been located recently
In 1847 there was a saw mill.

Posts are circular saw cut.

Today barns such as this one are not of any use because visquine has replaced them to keep hay dry. There is no economic motive for a farmer to maintain a barn.

The large barn is 2700 sf and also has a lower level.

There is an issue with bringing cars into the farm property from Dixboro Road.
The city took out an old White Oak after an accident.

A bicycle trail on West side of Dixboro is planned by the county. They determined a point that is the safest crossing between the farmstead and MBG's front entrance for a

cross walk and it is 100 feet from barn side of entrance.
The residents did not want the trail.
There are Massasauga Rattlesnakes near stone foundations

The smaller barn is older and is a more significant structure. There are no signs of circular saw cuts. Lights were installed on 2nd floor. Sam Graham Pine trees were planted to represent native Pines of Michigan. The volunteer access road adjacent to the pines is a logical connection to the farmstead area.

Meeting at offices with Karen Sikkenga: Catering vender has backed out.

New Master's Practicum Plan may be required. Three schematic solutions for farmstead complex is an option for a revised project.

Look at alternative uses for barns

Mike has barn reference books and property information in file cabinet.

Sara and Joane will meet with Linda Neeley to discuss barn options and rentals.

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