



# STONEWALL FARMS EXPANSION

A New Approach To Midwest Venue Design

By Drew J Holmgren

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A New Approach To Midwest Venue Design

A Design Thesis Submitted to the  
Department of Architecture and Landscape Architecture  
of North Dakota State University

By

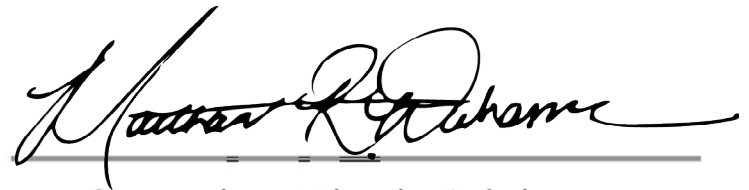
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In Partial Fulfillment of the Requirments  
for the Degree of  
Bachelor of Landscape Architecture



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# TABLE OF CONTENTS

Abstract .....	1
<b>Chapter 1</b> .....	<b>2</b>
Project Typology .....	3
Introduction .....	4
Site Information Opportunities and Challenges .....	5
Literature Review .....	6
Research Questions .....	8
Scott Outdoor Amphitheater .....	9
Jay Pritzker Pavilion .....	11
<b>Chapter 2</b> .....	<b>13</b>
Site Introduction .....	14
User/Client Description .....	18
<b>Chapter 3</b> .....	<b>19</b>
Site Inventory .....	20
Findings from Research .....	33
Applicable Values for Site and Research .....	36
Design Goals .....	37
<b>Chapter 4</b> .....	<b>38</b>
Discussion .....	39
Opportunities and Challenges of Earlier Research .....	41
Application of Results from Previous Chapters .....	42
Outcomes That Apply to Site Concept and Elements .....	43
<b>Chapter 5</b> .....	<b>44</b>
Opportunities and Challenges of the Site .....	45
<b>Chapter 6</b> .....	<b>46</b>
Final Thesis Design Introduction .....	47
Programmatic Elements .....	48
Entry Gate .....	49
Parking .....	53
Bridge Crossing .....	55
Shepherd's Island Amphitheater .....	59
Final Exhibition .....	65
Bibliography .....	67
Annotated Bibliography .....	69
Appendixes .....	72



# ABSTRACT

Stonewall Farms Expansion: A New Approach to Midwest Venue Design, builds upon a growing movement in the venue industry. This new movement is characterized by individuals and small startup-businesses looking to offer clients a more personal and unique venue experience. To create this experience, these venues connect their users with the environment in which they exist. This thesis builds upon this growing movement in venue design through the implementation of an outdoor amphitheater performance space in the Upper Midwest. After conducting research of amphitheater design, the best practice for intergrating this new venue typology was utilized. Through qualitative and quantitative research methods, the Stonewall Farms Expansion expands upon the existing venue, Stonewall Farms, located in central Minnesota. Overall, the results of the research were used to develop an expansion for the existing Stonewall Farms venue that unites the user with the site's individual, naturalistic sense of place.

Keywords: (stonewall farms expansion, romantic landscape design, amphitheater, venue, landscape architecture, outdoor performance space, environmental design, amphitheater research)





# CHAPTER 1

Defining The Stonewall Farms Expansion

Project Typology • Introduction • Site Information, Opportunities, Challenges • Literature Review • Research Questions • Case Studies

# PROJECT TYPOLOGY

## Focus of Design

Stonewall Farms Expansion, A New Approach To Venue Design, focuses on seasonal outdoor performance space design in the upper Midwest. The site is a rural, fifty six acre site located in central Minnesota. The central component is the design of a naturalistic amphitheater able to seat up to five hundred occupants. The Stonewall Farms Expansion is an expansion of an existing event venue; emphasis is placed on site progression and guest experience, as well as a design that is economically viable and environmentally responsible.



# INTRODUCTION

## Background and Emphasis

Throughout the years pursuing my professional degree in landscape architecture, I have gained a passion for analyzing the details that make a great landscape experience. During this time of study, I have supported myself by working for several different large hotel performance centers. I have also had the opportunity to work at Stonewall Farms, a private event venue that specializes in creating memorable outdoor experiences. Working in both settings, I have come to realize that clients have a more positive experience when hosting their event at the private outdoor-oriented facility. I have observed on multiple occasions, the benefits and the effects a naturalistic venue has on its clientele including hosts, guests and event staff. Traditional indoor event centers are limited in scope and uniqueness in use of space, whereas private event venues focused on the outdoor experience, connect event goers with the landscape's individual sense of place. It has been my experience working with clients in both situations that those hosting their event at the landscape-centralized venue regularly express a more positive experience. Therefore, I have chosen to do my thesis on the idea of creating an outdoor performance space that provides clients with a connection to the environment.

The primary design element to be included in my thesis, and to which most of my research will be focused, is on the creation of a new amphitheater located on the Stonewall Farm's property.

While many amphitheater definitions are in existence, the following definition of an amphitheater is given as the best fit for the landscape architecture profession.

*An amphitheater is an open-air design performance space, typically oval or circular in form, consisting of seating elements that radiate from a central focal point (Oxford University Press, 2011).*

Amphitheaters come in various shapes and sizes, from expansive

terraced landforms and lawns, to more intimate settings. Their origins trace back as far as the Roman Empire in 70 B.C. and today they are still being implemented as the most effective form of outdoor venue design (BBC, 2013).

This document contributes to the landscape architecture field by researching the best practices for combining lighting, acoustics, and site design for the creation of an outdoor amphitheater. Currently, architects dominate the field of amphitheater design (City of Chicago, 2013). However, many of these amphitheaters are lacking in connection to their surrounding environment (City of Chicago, 2013). The composition of amphitheaters could be improved by the integration of landscape elements. This thesis benefits the study of landscape architecture by connecting environmental considerations with the specific details required for designing an amphitheater.



# SITE INFORMATION OPPORTUNITIES AND CHALLENGES

## Criteria For Site Selection

Location criteria for selecting the best site for the design component of this thesis must take into account many specific elements in order to produce the best design possible. The first criterion for selecting a site is it should be located in the Upper Midwest (North Dakota, South Dakota, Minnesota, and Wisconsin). This will ensure my ability to make site visits as needed and will better suit me as a designer. I have lived in the Upper Midwest my entire life and I understand site conditions related to this part of the United States, including the climate, plant species, and cultural influences. As the design involves association to economic factors in the Midwest, I will be looking for the design to take place on land designated for private ownership. Public land of any kind will not be considered.

The next major criterion the site location will meet is locating the site in a mostly rural naturalistic landscape, meaning it will be outside of urban or heavily developed regions. The design is intended to invoke a sense of appreciation for a scenic landscape experience and therefore should possess a bold naturalistic character or element. In connecting with nature, the site should allow visitors to witness ecological phenomena such as encounters with native wildlife species. As a result, a location rich in biodiversity and multiple eco-regions would be ideal.

Final considerations for site identification include elements of size and accessibility. In order to ensure the physical location is large enough to accommodate the amphitheater footprint, a site smaller than 4 acres will not be considered. The site must accommodate either on or off site parking for the vehicles of at least 500 visitors.

# LITERATURE REVIEW

## A Summary of Current Research Related to Amphitheater Design

As my design focus is on outdoor performance space design, the literature I have included in this review has been broken up into the three sections: amphitheater design/layout, lighting, and acoustics. This literature review demonstrates the body of research applicable to my thesis and has been selected based on subject matter, ease of understanding, and recommendation by reliable sources.

**Design/Layout:** Amphitheater design is “characterized by professional theater lighting, curtains, orchestral facilities, and elaborate sounds systems” (Harris and Dines, 1998). Some amphitheatres incorporate steel or wooded fixed seating, while others simply take advantage of site grading or terracing techniques to accommodate the audience (Harris and Dines, 1998). The layout and dimensioning of the amphitheater’s stage and seating elements will define how many people can adequately view a performance. Amphitheatres can pose many “complex design, construction and operations issues” (Harris and Dines, 1998). It is therefore vital that a person looking to design an amphitheater should have specialized consultants to reference early on in the design process (Harris and Dines, 1998).

Harris and Dines (1998) give some simple guidelines to inform the initial amphitheater design process. The first recommendation is that the amphitheatres seating elements face directly away from “late afternoon sun,” as this is the time most outdoor events take place (Harris and Dines, 1998). Doing this, will reduce the uncomfortable effects of sun glare that can turn a stunning performance into an eye straining headache (Crutchfield, 2013). “Aisles should be at least 1,500 mm (5ft) wide, with a maximum space of 9,000 mm (30ft) between aisles” (Harris and Dines, 1998). Most amphitheater stages are an estimated 18 inches off the ground and are no smaller than 125 square feet (Harris and Dines, 1998). The angle of the radial seating pattern can be as “wide as 120 degrees, but more often ranges between 60 and 90 degrees” (Harris and

Dines, 1998).

**Landscape Acoustics:** Stein et al. (2006) discusses in great detail the properties of sound and how sound waves can be manipulated through design. The article states, “The acoustic environment plays an important role in supporting an overall sense of comfort in the spaces we occupy on a daily basis” (Stein, Reynolds, Grondzik, & Kwok, 2006). As designers, it is important for us to understand the properties of sound in order to enhance our ability to design spaces that require an acoustic element (Stein, Reynolds, Grondzik, & Kwok, 2006). Sound can be defined in many different ways, but in the fields of architecture and landscape architecture, sound is best understood as a “physical wave” (Stein, Reynolds, Grondzik, & Kwok, 2006). We can think of materials as being either absorbers or reflectors of these waves. Thus, by understanding what materials are sound wave absorbers and which are reflectors, we can begin to visualize and predict the acoustic outcome of our design decisions (Stein, Reynolds, Grondzik, & Kwok, 2006).

The most important aspect to consider when designing a space for music and vocal performances is whether or not every person in the audience can “hear the speaker or performer with same degree of loudness and clarity” (Stein, Reynolds, Grondzik, & Kwok, 2006). In an interview conducted for this thesis, David Crutchfield, an associate professor of architecture at North Dakota State University, states that in order to achieve this acoustic ideal, “it is all about angles and screening” (Crutchfield, 2013). Crutchfield also said, “sight lines are huge” when designing any acoustically correct performance space. Stein et al. (2006) also reinforces the importance of these elements by giving visual diagrams for understanding how angles, screens, and sight lines can be utilized to enhance the design of a performance space.

A textbook used by North Dakota State University’s architecture department lends itself useful as a secondary source for understanding



## Literature Review

acoustic principles. Titled *Plumbing, Electricity, Acoustics, Sustainable Design Methods for Architecture*, gives instruction on acoustic principles but also discusses elements related to electronic speaker systems as well (Lechner, 2012). As my site is located outdoors, a speaker system may need to be incorporated in order to meet the needs of various event and environmental situations, such as a windy day or a soft-voiced individual.

Though these sources give a great base for understanding the properties of acoustics, they are lacking information pertaining specifically to an outdoor amphitheater located in the Upper Midwest. As such, I intend to seek out additional insight as applicable considerations arise.

**Lighting:** Referred to in the design community as “the prime animator of space,” lighting is one of the key elements associated with creating visually and functionally adequate designs (Atelier, 2011). Research by psychologists, scientists, and designers has revealed that lighting plays an important role in “human mood and people’s social behaviors” (Atelier, 2011). Lighting studies have also proved that proper lighting techniques can “enhance the mood and desirability” of spaces (Designers, 2013).

“Lighting design is a combination of applied art and applied science” (Stein, Reynolds, Grondzik, & Kwok, 2006). The goal of a well executed lighting plan is to “create an efficient and pleasing” result (Stein, Reynolds, Grondzik, & Kwok, 2006). Therefore, light is to be treated as a “primary architectural material” by the designer (Stein, Reynolds, Grondzik, & Kwok, 2006). Stein et al. (2006) lists the following four elements of lighting design that should be addressed in any lighting situation:

1. “Lighting levels should be adequate for efficiently seeing a particular task involved” (Stein, Reynolds, Grondzik, & Kwok, 2006). In the case of an amphitheater, this means providing adequate lighting for viewing of performances and navigating the site after dark.

2. “Lighting equipment should be unobtrusive but not necessarily

invisible” (Stein, Reynolds, Grondzik, & Kwok, 2006). Techniques I will use for amphitheater stage lighting, paths, and parking should be taken into consideration in terms of aesthetic qualities that do not distract from the overall design vision.

3. Lighting should use accepted methods of “accent lighting, directional lighting, and other highlighting techniques” (Stein, Reynolds, Grondzik, & Kwok, 2006). In my design, measures will need to be taken in identifying the best way to highlight elements of my design with lighting.

4. “The entire lighting design must be accomplished efficiently in terms of capital and energy resources” (Stein, Reynolds, Grondzik, & Kwok, 2006). Lighting elements of my design must be reasonable in terms of cost and practicality. Access to a power source will need to be identified on site.

In addition to incorporating the four elements of lighting design, another study was analyzed to examine the effects of lighting on human behavior. A researcher, Anne Baumstarck, performed a study on dressing rooms and found that lighting was one of the key elements in whether or not a shopper purchased a clothing item (Baumstarck, 2013). Studies directed at lighting and human behavior in an amphitheater setting are unavailable; however Baumstark’s study, and others like it, can help to develop a framework to better understand human behavior related to lighting. This will assist me in making more informed choices on light selection for my site.



# RESEARCH QUESTIONS

## Research Elements That Will Improve Design

The research for my thesis will intend to answer the following broad question:

*How do you design an outdoor performance space in the Upper Midwest that specializes in connecting visitors with the environment through a unique progression of spaces?*

Within this question, many research elements will need to be investigated. The first element is what are the best method for creating a memorable sense of site progression? This research will help ensure an effective final design that leaves a lasting impression in the minds of venue guests.

# SCOTT OUTDOOR AMPHITHEATER

## Case Study 1

**PROJECT NAME:** Scott Outdoor Amphitheater

**LOCATION:** Scott Arboretum of Swarthmore College, 500 College Avenue, Swarthmore, PA

**DATE DESIGNED/PLANNED:** Original design completed in 1941

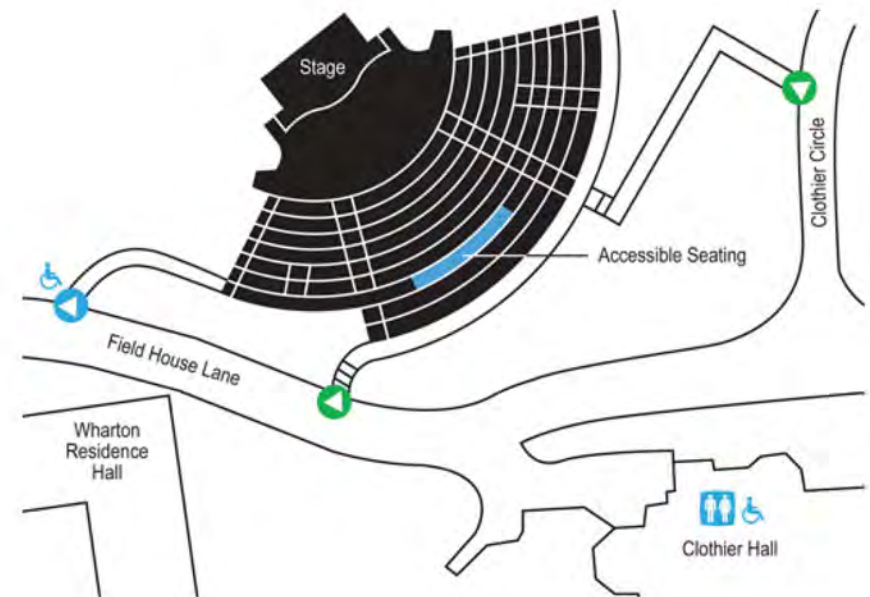
**CONSTRUCTION COMPLETED:** Built and dedicated in 1942

**CONSTRUCTION COST:** \$16,572.00

**SIZE:** Amphitheater is 220 feet long from side to side and 110 feet from front to back.

**LANDSCAPE ARCHITECT(S):** Thomas W. Sears, Philadelphia

**CLIENT/DEVELOPER:** The Scott Arboretum of Swarthmore College





## Scott Outdoor Amphitheater

**Context:** To the west of Philadelphia in the city of Swarthmore, Pennsylvania arises the Scott Arboretum, which contains the Scott Outdoor Amphitheater. The Scott Outdoor Amphitheater, located deep inside the heart of Swarthmore College campus, is an outdoor auditorium that serves as a gathering place for college and community events for people in the Philadelphia area. Sculpted beautifully into the natural and steep incline of the land, the amphitheater provides a hidden, naturalistic event space for the seating of 2,000 guests (Stiebitz, 2012). The amphitheater currently serves as a commencement ceremony site for graduating seniors of Swarthmore College and has since 1942 (Stiebitz, 2012).

**Project Background and History:** In 1941, the Scott Amphitheater was built in honor of Arthur Hoyt Scott. Thomas McCabe, Class of 1915, funded the project as a gift to Swarthmore College (Stiebitz, 2012). McCabe dedicated the amphitheater to Arthur Hoyt Scott, Class of 1985, as a tribute to his lifelong passion for nature (Stiebitz, 2012). As the president of the Scott Paper Company from 1920 until his death in 1926, Scott handpicked McCabe to be his successor (Stiebitz, 2012). For Scott's contributions and love for nature, the Scott Arboretum was also named after him.

Before the Scott Amphitheater was built, the old "Magill Outdoor Auditorium" existed, which had become run down and was later demolished (Stiebitz, 2012). In its place, the Scott Amphitheater was erected in

1942, with a design drawn by Thomas W. Sears, a prominent landscape architect from Philadelphia (Stiebitz, 2012).

**Role of Landscape Architect(s):** In 1906, Thomas W. Sears earned a Bachelor of Science in Landscape Architecture from Harvard University (The Cultural Landscape Foundation, 2013). Sears was the landscape architect who was hired to brilliantly compose the design for the Scott Amphitheater and received \$700 for the design in 1941 (Stiebitz, 2012). Sears also worked in designing schools and playgrounds, parks, private residences, cemeteries, and urban housing developments around the Philadelphia region (Stiebitz, 2012). Some of Sears' more notable works include formal gardens at Mount Cuba in Delaware and the re-design of Washington Square in Philadelphia (The Cultural Landscape Foundation, 2013).

**Design, Development, and Decision-Making Process:** Formed entirely from natural materials, the Scott Amphitheater was created to blend natural elements with the works of man. "The amphitheater is a masterful example of designing in harmony with nature" (Sawyers, 2012). Columns of tulip popular trees dot the tiered pathways of the amphitheater. "The trees' canopies provide a living ceiling" (Stiebitz, 2013). The Crum Woods lines the background of the stage outlining the amphitheater in evergreens including oriental spruce (*Picea orientalis*),

American holly (*Ilex opaca*), and red cedar (*Cryptomeria japonica*) (Stiebitz, 2013). Rhododendrons have been scattered across the entire space further adding to the variety of plantings incorporated in the design. The eight tiers that comprise the seating arrangement of the Scott Amphitheater are formed by natural stone retaining walls covered with turf (Sawyers, 2012). The tiers rise to two feet tall by seven feet wide and can hold up to 2,000 chairs during events to accommodate for guests (Stiebitz, 2012). The dimensions of the amphitheater are a total of 220 feet long side by side and 110 feet long front to back (Stiebitz, 2012). Overall, the amphitheater design combines the naturalistic elements of trees and plantings with human made tiers and a stage to create a sense of individual place amidst a lively college campus.



# JAY PRITZKER PAVILION

## Case Study 2

**PROJECT NAME:** Jay Pritzker Pavilion

**LOCATION:** On the northeastern border of Millennium Park in Chicago, Illinois

**DATE DESIGNED/PLANNED:** Original design completed in June 1999

**CONSTRUCTION COMPLETED:** Built and dedicated in July 2004

**CONSTRUCTION COST:** \$60.3 Million

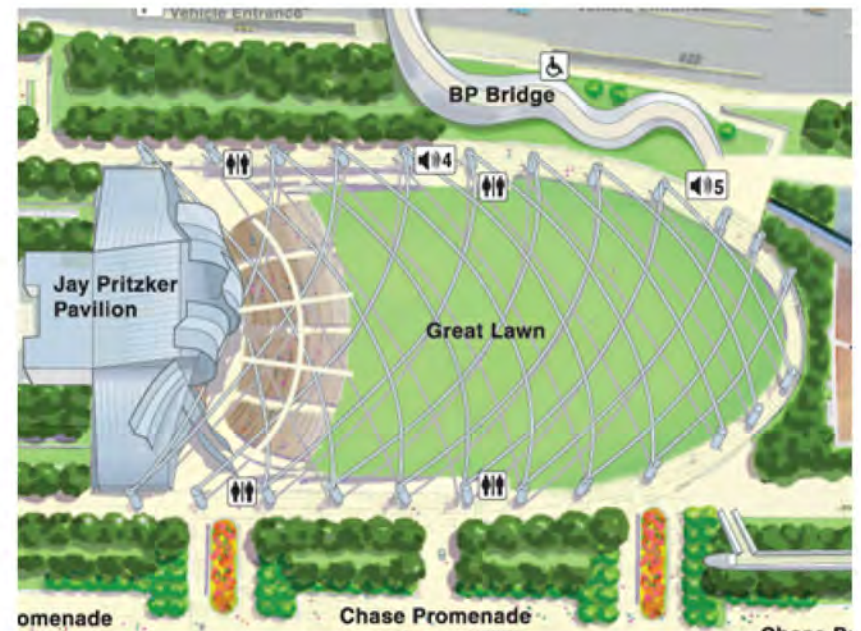
**SIZE:** Includes 95,000 square foot lawn area; 4,000 fixed seats and approximately 7,000 lawn seats

**ARCHITECT(S):** Frank O. Gehry, California; Craig Webb, California

**CLIENT/DEVELOPER:** City of Chicago

**ACOUSTICAL CONSULTANT:** Talaske - Sound Thinking, Illinois

**LIGHTING DESIGNER:** Schuler Shook, Illinois





## Jay Pritzker Pavilion

**Context:** In Chicago, Illinois, the amphitheater in Millennium Park has manifested itself in the form of the Jay Pritzker Pavilion designed by architect, Frank Gehry. The Jay Pritzker Pavilion can accommodate up to 11,000 individuals with 4,000 fixed seats with an additional lawn capable of accompanying another 7,000 people (Kamin, 2005). It is one of the world's largest and technically advanced outdoor performance spaces (City of Chicago, 2013).

**Project Background and History:** Prior to the construction of Millennium Park and the Jay Pritzker Pavillion, the space was originally Grant Park located between Lake Michigan and the wall of buildings along Michigan Avenue (Kamin, 2005). For several years, the corner of Grant Park was a dirty rail yard and parking lot. In 1998, a new design proposal for the space arose by Skidmore, Owings & Merrill of Chicago; however, it was deemed unfavorable (Kamin, 2005). One year later, Chicago Mayor Richard Daley revealed Frank Gehry's plan for the Jay Pritzker Pavilion, which began the transformation process of the park into a contemporary masterpiece (Kamin, 2005).

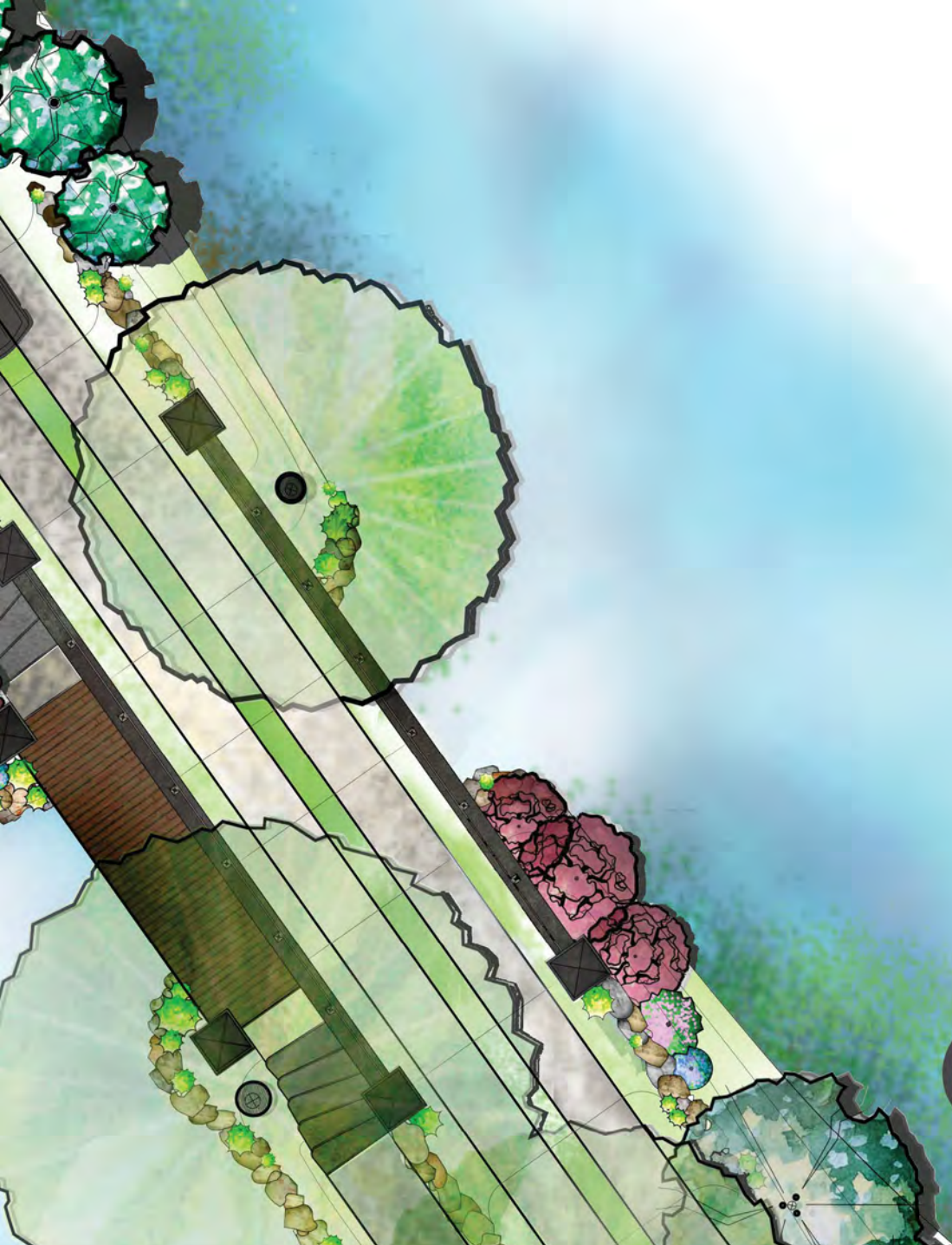
**Role of Architect(s):** In 1954, Frank O. Gehry received a Bachelor of Architect degree from the University of California (City of Chicago, 2013). He later attended graduate school at the Harvard University Graduate School of Design where he studied City Planning (City of

Chicago, 2013). Gehry's work has won many of the most distinguished awards in the field of architecture including the Pritzker Prize, the Praemium Imperiale Award, the Arnold W. Bruner Memorial Prize in Architecture, the Friedrich Kiesler Prize, the Dorothy and Lillian Gish Award, the American Institute of Architects Gold Medal, the Wolfe Prize in Art (Architecture), the National Medal of Arts, and the Royal Institute of British Architects Gold Medal (City of Chicago, 2013). Some of Frank Gehry's most noteworthy projects include "the Guggenheim Museum Bilbao in Bilbao, Spain; the DZ Bank Building in Berlin, Germany; Der Neue Zollhof, an office complex in Düsseldorf, Germany; the Nationale-Nederlanden Building in Prague, Czech Republic; the Jay Pritzker Pavilion and BP Bridge in Millennium Park in Chicago, Illinois; Walt Disney Concert Hall in Los Angeles, California; the IAC Building in New York, New York; and the Hotel Marqués de Riscal in Elciago, Spain" (City of Chicago, 2013).

**Design, Development, and Decision-Making Process:** The Jay Pritzker Pavilion stands out among most contemporary amphitheaters. The celebratory stainless steel shell-like forms that make up the amphitheater's stage structure, curl heavenward to an impressive height of 120 feet (Kamin, 2005). Compared with the amphitheater's striking appearance, the "bland corporate towers behind the stage are an effective foil to the celebratory curve

of the shells, which suggest waves of sound emanating outward from the stage"(Kamin, 2005). The combination of creative forms and acoustic accomplishment have hailed Gehry's work as "the most sophisticated outdoor concert venue of its kind in the United States" (Grand Park Music Festival , 2013).





# CHAPTER 2

An Introduction To Stonewall Farms

Research Appropriate Methodologies • Measures • Site Introduction • User/Client Description



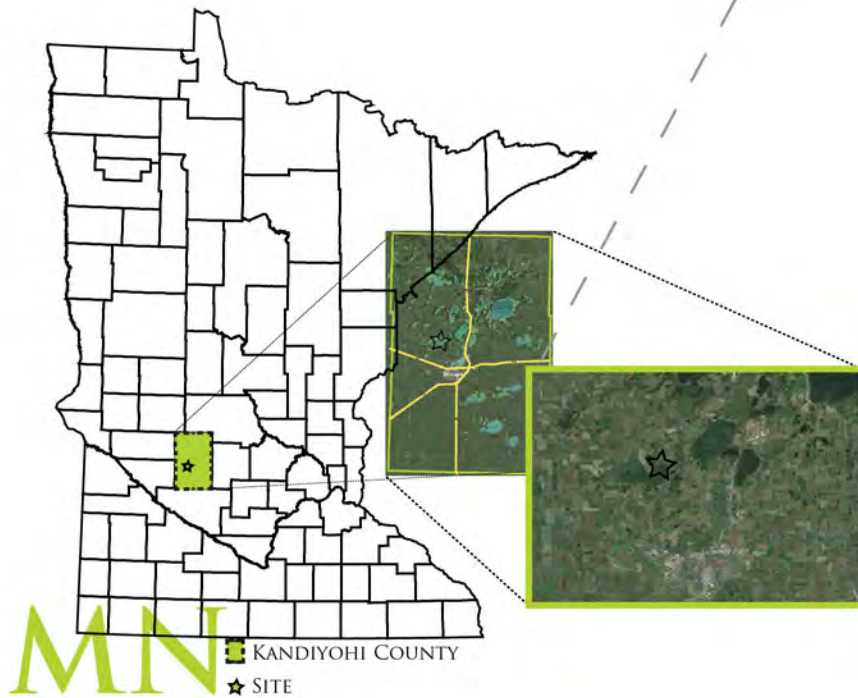
# SITE INTRODUCTION

## Shepherd's Island Site Introduction

The property selected for the implementation of the Stonewall Farms Expansion, is currently owned and operated by Stonewall Farms Friesians and Events, and is part of a greater 80-acre site. This site operates as a Friesian horse breeding facility and wedding venue year round.

A bold naturalistic element is clearly demonstrated in the fact that the site is located on a body of water.

The ten acre Shpherd's Island, is an extension of the Stonewall Farms property and is to be included in the design.



2.1 Site Map



## Site Introduction

**Site Attributes:** Located in central Minnesota, five miles southwest of the small city of Willmar, the site is situated in a mostly rural setting. Much of the surrounding area is made up of small housing developments and agricultural land; however, the majority of the land adjacent to the site is undeveloped, private, or state protected land. This is ideal to my site criteria in that it offers long, naturalistic sight lines uninterrupted by human housing development.

The site is topographically rich and demonstrates eco regions including wetlands, lakeshore, oak and cedar forests, and sections of native prairie. Wildlife, including deer, coyote, raccoon, woodchuck, beaver, muskrat, fox, squirrels, possum, pheasant, grouse, wild turkey, vulture, bald eagle, red tailed hawk and even the endangered Pileated woodpecker, have been reported as common visitors on and around the site.

A Google Earth area calculator puts the Stonewall Farms Expansion site at just over 56 acres, large enough for the implementation of design elements, while maintaining a naturalistic experience.

Overall, this site meets or exceeds site criteria previously described and therefore has been selected for the location of my thesis design.

**Existing Stonewall Farms Facilities:** Stonewall Farms existing facilities include the White Oak Barn, Scotch Pine Pavilion, Old Grove Pond and 14 acres of manicured estate for the exploration of event guests.



2.2 Stonewall Farm's White Oak Barn, Indoor Event Facility



2.3 Current Shepherd's Island Access Road







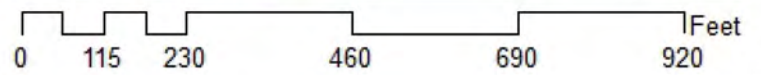
# SHEPHERD'S ISLAND SITE INVENTORY



Solomon Lake



Source: Esri, DigitalGlobe, GeoEye, Earthstar, USDA, USGS, AEX, Geomatics, AeroGRID, IGN, ICF, swisstopo, and the GIS User Community





# USER/CLIENT DESCRIPTION

## Projected Users of The Shepherd's Island Amphitheater

The users of the site may include clients, general visitors, and staff members. Clients of the venue differ from general visitors, as they would be the host of an event and have previous interaction with the site. Most often, these users would have been given a tour of the facility by a staff member, and therefore would have a greater understanding of the site layout and way finding. Clients also play a leadership role during the course of the scheduled event, as they are often the first individuals contacted by event guests (Holmgren, 2013). It is important that the clients of the venue be correctly informed on issues including parking, restroom locations, way finding, and proper procedures in the case of an emergency.

General visitors or event attendees include the mass majority of people interacting on the site. One thousand of these individuals can be expected during an event; ages ranging from young children to the elderly. Most of these individuals can be expected to be experiencing the space for the first time (Holmgren, 2013). Therefore, it is of utmost importance that signage and way finding methods be effective.

Event staff includes venue owners and their families, employees, and volunteers. These persons typically have an intimate understanding of the site and specific event routines (Holmgren, 2013). A minimum of at least one staff member is to be present on site during the duration of a scheduled event to answer questions, assist clientele, and provide supervision. Staff members need to be instructed on what to do in an emergency and be provided with a means of contacting local authorities and venue stakeholders.

Furthermore, the site's design should be able to accommodate the various needs of 1,000 visitors plus staff. Adequate parking will be provided and managed by staff if need arise. The site will be designed to accommodate the specific needs and limitation of persons who may be physically or mentally disabled through design considerations.



2.6



2.7





# CHAPTER 3

An Inventory of Stonewall Farms

Site Inventory • Research Findings • Applicable Values For Site And Research • Plan For Proceeding • Design Goals



# SITE INVENTORY

## Context of Project

**History:** History of the site dates back to “one of the most important events in Minnesota’s history” (Kandiyohi County Historical Society, 2012). In 1862, the Guri Endreson Cabin located on Solomon Lake, was the site of a horrific event known as the Dakota Indian uprising (Kandiyohi County Historical Society, 2012). The Guri Endreson Cabin is located directly west, only three quarters of a mile from the site (Google, 2013).

During this time in Minnesota’s history, Guri Endreson, her husband, Lars and their seven children were attacked by a band of Dakota on August 21, 1862 (Kandiyohi County Historical Society, 2012). Guri’s husband and son were killed in cold blood and another son was injured and left to die (Kandiyohi County Historical Society, 2012). Guri’s two oldest daughters were taken captive as well (Kandiyohi County Historical Society, 2012). Guri witnessed the entire scene, though escaped with her baby by hiding in an off site cellar hidden by tall grass (Kandiyohi County Historical Society, 2012). After the massacre, Guri found her wounded son and under fear of the Dakotas return, hitched up two oxen to a stone sled and traveled east. This eastward journey would have taken Guri directly across the Solomon Lake shoreline now operated by Stonewall Farms. Stopping at other cabins on and near Solomon Lake, Guri rescued other injured settlers and brought them to safety across the eastern Kandiyohi County line (Kandiyohi County Historical Society, 2012). Here, she was reunited with her two abducted daughters who had escaped from the Dakota (Kandiyohi County Historical Society, 2012). Guri returned to live in the Solomon Lake cabin a few years later where she died in 1881.

This story is well known to residents in the area and the Guri Endreson Cabin has been converted into a visitor center (Holmgren, 2013). The visitor center can be visited Saturdays and Sundays from 9 a.m. to 5 p.m. or by appointment (Kandiyohi County Historical Society, 2012).



3.1 Guri Endreson Cabin on Solomon Lake



3.2 Guri Endreson Cabin on Solomon Lake



## Stonewall Farms Site Inventory

**Climate:** Located in the state of Minnesota, the site is typified by a continental climate with cold winters and warm summers (Hamline University, 2010). From north to south, across the state there is a high temperature variance. “The growing season is 160 days or more in the south-central and southeastern regions, but 100 days or less in the northern counties” (Hamline University, 2010). Located in Kandiyohi County, the site is in the lower half of the state. According to the United States Department of Agriculture (USDA), Kandiyohi County lies in the 4b plant hardiness zone (Agriculture, 2013). Zone 4b is for plant species that can tolerate winter temperatures of no lower than -25° F (Agriculture, 2013).

Average temperatures in Kandiyohi County range from 14°F to 15°F during the winter months of December to February (Resources, 2013). Summer is more comfortable with an average high of 68°F from June to August (Resources, 2013).

Average precipitation in the state of Minnesota is 30 inches per year (Hamline University, 2010). Kandiyohi County is under the state average at 28 inches of rainfall per year (“Climate in Kandiyohi County, Minnesota”, 2013). The average snowfall in all major cities across the United States is 25 inches (*Climate in Kandiyohi County, Minnesota*, 2013). Kandiyohi County gets 47 inches of snow in an average year (*Climate in Kandiyohi County, Minnesota*, 2013). In a 365-day year, Kandiyohi County can expect to have 87 days with measurable precipitation in the form of rain or snow (*Climate in Kandiyohi County, Minnesota*, 2013). The heaviest snows in the area can be expected from November to April (Hamline University, 2010).

With 100 being most comfortable and 0 being least comfortable, the US comfort index lists the location of the site at 48. The US average is 44 (*Climate in Kandiyohi County, Minnesota*, 2013).



3.4 Site 10/26/2013



## Stonewall Farms Site Inventory

**Seasonal issues:** The state of Minnesota sees on average 18 tornadoes per year, most of which occur in the southern half of the state (Hamline University, 2010). Minnesota can also expect to see an average of two blizzards each winter season.

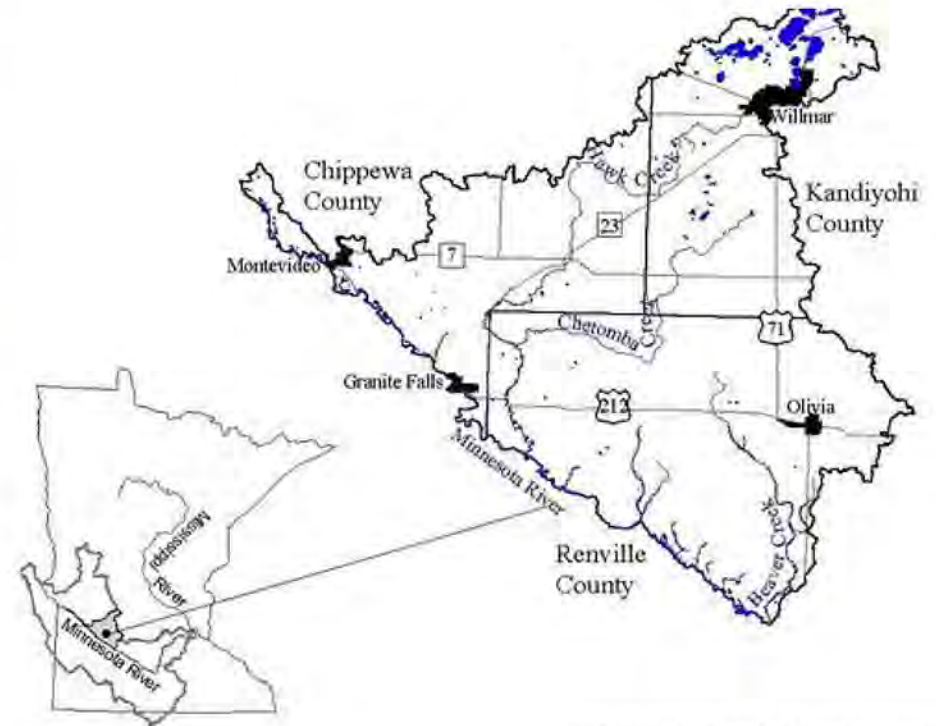
During the spring, summer and fall months when the lake surrounding the site is not frozen, the lake can be viewed as a potential drowning hazard, especially for people with disabilities and small children. This past season the Minnesota Department of Natural Resources recorded 25 non-boating instances of drowning.

Throughout the 2012 to 2013 winter season, the Department of Natural Resources recorded four fatalities as a result of breaking through ice on Minnesota lakes (Minnesota Department of Natural Resources, 2013). As the site is located on a lake, measures will need to be taken to communicate to visitors the different dangers lakes pose through all seasons (HIRSCH, 2013).

High heat can also be an issue on the site. In response to the question, “What is the scariest thing you have ever observed happen during an event on the property?” owner and manager of Stonewall Farms, Kim Holmgren, replied:

*During our first ever event on the property, July 23, 2007, it was a wedding for our oldest daughter... it was the hottest recorded day of the year and you could feel the humidity with every breath. An elderly woman, relative of the groom, suffering from heat exposure, lost her balance and tumbled down a twelve-step flight of natural stone steps. The woman did not suffer any major injuries, but it did give us quite a scare. Since then, we have experienced other heat related problems during events scheduled on those last two weeks of July, and have begun discouraging people from booking outdoor events on those dates. Some summers, it's just too hot. (Holmgren, 2013)*

**Water System:** Stonewall Farms and Solomon Lake are located in the northeastern region of the greater 623,424 acre Hawk Creek watershed (Project, 2013). This watershed extends across the Kandiyohi County boarder west through Chippewa County and into Renville County, eventually spilling into the Minnesota River (Project, 2013). Unique among major watersheds of the Minnesota River, the Hawk Creek watershed is one of only several other streams that flow directly into the Minnesota River. (Project, 2013)



3.5 Hawk Creek Water Shed



## Stonewall Farms Site Inventory

**Solomon Lake:** Solomon Lake is technically broken up into two lakes: West Solomon Lake and East Solomon Lake, though locally they are often referred to as one in the same because of the undeveloped nature of the lake system (Resources, Lake information report, 2013). “Not very many people aside from fishermen and those of us living near the lakes understand that the lake continues far beyond what can be viewed from Highway 5. All other lakes of this size in Kandiyohi have been for the most part heavily developed. Solomon Lake has been able to retain this undisturbed state due to the entirety of the surrounding lakeshore being owned by a select few individuals” (Holmgren, 2013). Large-scale housing development has threatened the uninterrupted natural lake shoreline before, “we having been staving off development for years,” says Stonewall Farm’s owner, Bryce Holmgren, “it is the undisturbed nature of the lake that makes it a special location for couples” (looking to get married at Stonewall Farms).

East Solomon Lake is a total of 675 acres (Google, 2013). At just 14 feet deep in its deepest part, it is home to a diverse number of fish species (Resources, Lake information report, 2013). According to the Minnesota Department of Natural Resources, these species include Walleye, Northern Pike, Black Cropppy, Blue Gill, Hybrid Sunfish, Yellow Perch, Pumpkinseed, White Sucker, Largemouth Bass, Black Bullhead, Yellow Bullhead and unfortunately the invasive Common Carp along with other baitfish species (Resources, Lake information report, 2013). Water clarity varies drastically throughout the seasons based on temperature of water but on average is two feet (Resources, Lake information report, 2013).



3.6 Solomon Lake’s Naturalistic Shoreline



3.7 Expansive Views



## Stonewall Farms Site Inventory

**City of Willmar:** The site is located 5.5 miles northwest of Willmar, Minnesota (Google, 2013). With a population of 19,890, Willmar was originally founded as a railroad town (Willmar, 2013). Located at the division point of the Great Northern Railway, Willmar was officially founded as a village in 1874 and later became a city in 1901 (Willmar, 2013). Early Scandinavian settlers were attracted to this region of Minnesota because of its “fertile land and an abundance of timber and game” (Willmar, 2013).

“The Minnesota demographer forecasts continued growth for Willmar because of the diverse economy, growth in the number of smaller industries, and the lakes and other recreational attractions in the area” (Willmar, 2013).

The City of Willmar is characterized as an urban core focused around the railroad and surrounded by early residential developments dating back to the early 1900’s. This historic downtown district gives way to modern shopping centers and housing developments (Willmar, 2013).

Tree-lined boulevards define Willmar neighborhoods with 92 percent of homes owned by the occupants (Willmar, 2013). The city has a transit system with buses servicing between residential and commercial areas (Willmar, 2013).



3.8 Downtown Willmar 1908



3.9 Downtown Willmar 2013



## Stonewall Farms Site Inventory

**People involved in the site:** Stonewall Farms Friesians and Events is owned and operated by Dr. Bryce and Kim Holmgren. Bryce and Kim Holmgren moved from within the city limits of Willmar to the Stonewall Farms property in 1998 because they wanted more land to begin breeding horses (Holmgren, 2013).

Bryce Holmgren is president of the St. Cloud Surgery Center in St. Cloud, Minnesota where he is a practicing anesthesiologist (Holmgren, 2013). As primary stakeholder in Stonewall Farms, Bryce Holmgren is financier of the property, overseeing all new construction. Bryce Holmgren is also in charge of hiring new event and maintenance employees (Holmgren, 2013). Kim Holmgren is a retired elementary school teacher and mother of eleven children (Holmgren, 2013). Kim Holmgren, Stonewall Farms manager, tasks include: event scheduling, event planning, decorating, employee payroll and future development (Holmgren, 2013).

Stonewall Farm's horse trainer and breeding consultant is Jessica Olander (Holmgren, 2013). Jessica Olander oversees care and training of the Friesian horses that Stonewall Farms uses to pull carriages as requested for various events (Holmgren, 2013). Dr. Nathan Olander is Jessica's husband and Stonewall Farm's trained carriage driver (Holmgren, 2013). Depending on a specific event's requirement, as many as three carriage drivers may be employed on any given weekend. The client usually contracts these additional drivers independently from outside of Stonewall Farms (Holmgren, 2013).

Other employees include event management and grounds maintenance staff members: Keith Kolle, Austin Holmgren, Hannah Holmgren, Michal Degan, Brock Wearda and Alex Norling (Holmgren, 2013).



3.10 Stonewall Farm's Owners, Dr. Bryce and Kim Holmgren



3.11 Stonewall Farm's Carriage Driver, Dr. Nathan Olander



## Stonewall Farms Site Inventory

**Goals of people involved in the site:** The goal of Stonewall Farms is to “provide a flexible, affordable and unique setting for those wanting to host a memorable event” (Holmgren, 2013). According to Kim Holmgren, “the purpose of transforming our home (Stonewall Farms) into an event venue was never to make money. After hosting a few of our own family and friends’ weddings on the property, we just fell in love with the energy surrounding the events... people began calling before we even really considered the outcome, we had everything from political rallies to weddings happening in our backyard on any given day” (Holmgren, 2013).

“Events are stressful for those planning them...especially weddings. When you can relieve that stress for a bride and see them truly enjoy their wedding from the morning photo shoot to last song of the reception, all the effort we have put into building Stonewall Farms is worth it. Sometimes delivering the bill at the end of the night is harder than cleaning up for tomorrow’s event” (Holmgren, 2013).



3.12 Second Wedding Hosted By Stonewall Farms



3.13 Bryce Holmgren



3.14 Stonewall Farm’s Unique Sense of Place





Stonewall Farms Existing 1 Foot Contour Map



## Shepherd's Island Site Inventory

**Plant Materials on site:** Vegetation on the nine acre Shepherd's Island is diverse; during a site visit three distinct growth types were identified (Google, 2013). The first covering approximately five acres of the site is old growth made up of Bur Oak (*Quercus macrocarpa*), Elm (*Ulmus*), Hack Berry (*Celtis occidentalis*) and Box Elder (*Acer negundo*), which are characterized by dense 25 to 45 foot canopies with varied hardwood undergrowth (Google, 2013). Dense Red Cedar (*Juniperus virginiana*) pine trees cover three acres of the site (Google, 2013). In most areas, these are found growing in very close proximity to one another with little to no vegetation growing beneath them. The third growth type is prairie. This growth type is found most often in clearings and transition spaces between the other woody plant types. A variety of tall grasses and wild flowers grow to a height of two to four feet tall.

Poison Ivy (*Toxicodendron radicans*) was identified in several areas of partial shade throughout the site. "According to the American Academy of Dermatology, an estimated 10 to 50 million people in this country have an allergic reaction to poison ivy each year" (Williams, 2013). The reaction can be very serious depending upon the individual who comes into contact with Poison Ivy, and eradication of this species from Shepherd's Island will be necessary to ensure the safety of visitors (Williams, 2013).



3.15 Poison Ivy (*Toxicodendron radicans*)



3.16 Wildflower Observed On Site



3.17 Shepherd's Island Is Home To A Diverse Number Of Plant Species



## Shepherd's Island Site Inventory

**Slopes:** A slope analysis using GIS Software, Google Earth and personal observation was performed revealing the steepest slopes to be located on the northeastern part of Shepherd's Island. At just over 30 percent, the steepest slopes are the banks of the lake. Across the majority of the side, slopes are more constantly found to be less than 15 percent. The human made land bridge that connects Shepherd's Island to the mainland has no noticeable slope. The existing path ways meander through the landscape at comfortable walking grades, except for one 50-foot section that exceeds a 10 percent slope (Google, 2013).

**Erosion:** Erosion was observed at the site's entry road upon my initial site visit. Here the gravel path exceeds a 10 percent slope and storm water has eroded about a 10-foot long trench, exposing large stones and depositing sediment off the trail. Erosion is also evident along the southern banks of the island. Here, the summer southern winds drive high waves against the bank exposing tree roots and large stones.

**Wind:** Winds in the region are characterized by warm, southerly winds in the summer and cool, northern winds in the winter (Holmgren, 2013). Most areas on site are heavily buffered from the wind by dense plantings and topographic features. High wind was observed, however when crossing the island's land bridge.

**Contaminants on site:** No known contaminants were observed on site. Further inspection is needed to determine whether or not the single level hunting cabin existing on site could be a potential contaminants hazard.



3.18 Exposed Boulders and Roots Caused By Erosion



3.19 High Winds Observed On Land Bridge



## Shepherd's Island Site Inventory

**Current site use, function and effect:** Shepherd's Island gets its name from the Olde English Babydoll sheep that are used as a sustainable maintenance alternative to gas powered mowers. Stonewall Farms purchased Shepherd's Island in early 2012 with the intent of expanding its current event amenities (Farms, 2013). Currently Shepherd's Island is used by photographers for graduation, engagement, wedding and people looking for a scenic location to take family photos (Holmgren, 2013). There is a small hunting cabin located on the Island that "is being converted to a bridal party staging area" as well (Farms, 2013).



3.21 Aerial Photo Of Site Looking Northwest



3.20 Site Is Comfortably Accessible By Foot Or Motorized Vehicles

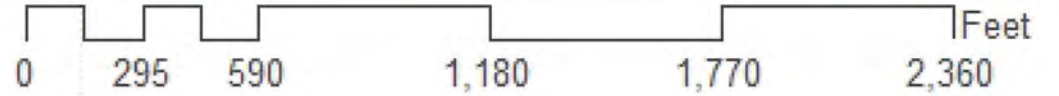


3.22 Hunting Cabin





SITE CONTOUR MAP







3.24 Aerial Photo of Stonewall Farms Looking South



# FINDINGS FROM RESEARCH

## Research Applicable to Shepherd's Island Amphitheater

Research was performed on a wide variety of topics related to amphitheater design and the site-specific requirements discussed in earlier chapters. The findings gained through this research are listed as follows.

### Results From Case Studies:

In researching amphitheaters, both in the Upper Midwest and in other regions of the United States, I have been able to derive a set of reliable parameters for the design of the Shepherd's Island Amphitheater.

**Amphitheater Layout:** There are three main variables to the layout design of amphitheaters as found in case studies.

**Amphitheater Seating:** The first is the radius of the seating elements arc. There is no set standard for what is the best radius; however, case studies revealed that amphitheaters with a greater number of seating elements tend to have a wide radius (City of Chicago, 2013). This is most often the case because large performances, such as rock concerts, are best viewed from the front, therefore a seating arrangement that offers the most consistent viewing for attendees is preferred. Small more intimate amphitheaters, on the other hand, tend to have radiuses that are smaller, embracing the staging element and providing observation of performances from a wide range of viewing opportunities (Park, 2013). There are exceptions to both of these observations, though these are most common.

Second, the case study research also demonstrated the different seating options that are used for different reasons. The three broad seating categories are fixed, removable and hybrid seating (College, Garden Tour, 2009).

Fixed seating is most often found in large theater style amphitheaters.

This type of seating is characterized by tiered seat wall or chair style, plastic or steel individual seating elements bolted to the ground (City of Chicago, 2013). This kind of seating is comfortable for long performances but limited in terms of arrangement options. This seating style can also diminish the effectiveness of smaller events held in large amphitheaters by creating a feeling of vacancy.

Removable seating is the preferred option for amphitheaters that are intended to seat less than 700 visitors. Normally wooden, plastic, or steel chairs or benches, this kind of seating has many advantages for small events. The ability for this seating to be scaled to the individual event needs and unlimited seating arrangement options make them the best choice for very small amphitheater designs. The disadvantages to this seating option are the potential of theft, higher maintenance, and the added set up labor costs.

Hybrid seating is characterized by a combination of fixed and removable seating options (College, Garden Tour, 2009). This seating type is preferred by amphitheater venues that tailor to a wide variety of event types and sizes. The most common demonstration of hybrid seating style is a combination of tiered seat walls with space for one to three rows of removable seating between each seat wall tier. This is advantageous to multifunctional amphitheaters because it allows small events to be performed without the added labor of removable seating, while still being able to increase seating if needed. This ability to manipulate the number and density of seating can make even a large amphitheater function for a small event without creating a feeling of vacancy. The Scott Amphitheater and the St. Louis Veterans' Memorial Amphitheater are both examples of this kind of seating. Amphitheaters that demonstrate this seating type are generally designed to seat between 500 to 3,000 people.



## Findings From Research

The third main element found in the case studies related to amphitheater layout design is the stage or band shell focal element. This crucial part of the amphitheater as found in case studies, range from flat cement or wooded stages to much more elaborate architectural structures (City of Chicago, 2013).

Simple cement or wooded stage elements are usually raised three to six feet off the ground. Almost always these kind of focal point staging elements are found in smaller amphitheatres where acoustic projection is not as important (College, Garden Tour, 2009). These are also often found in rural location amphitheatres where the natural scenery is the intended backdrop (College, Garden Tour, 2009).

Likewise, larger amphitheatres in more urban locations tend to utilize the acoustic and visually intriguing benefits of a band shell structure (City of Chicago, 2013). These come in all shapes, sizes and materials with the intent of calling full attention to the performance.

**Amphitheater Lighting:** Lighting used in amphitheatres varies drastically depending on scale and intended use of each specific amphitheater. Case studies, however, have revealed that most amphitheatres share a number of lighting similarities. Amphitheatres intended to be used after dark implement lighting that increases safety on site and enhances performances. Whereas many rural amphitheatres are used only during daylight hours and therefore have no lighting elements.

Those intended for after dark normally employ some sort of seat way finding lighting. Either integrated into the seating elements or built-in steps or paths, this lighting allows for safe mobility during nighttime events.

The stage lighting used by amphitheatres is as diverse as the performances each amphitheater hosts. Most stage lighting is integrated into a band

shell structure, though spotlights located at the back of the amphitheater are often used for theatrical performances as well.

**Acoustics:** Case studies unveiled that acoustic requirements vary much depending upon the size and location of the amphitheater. Amphitheatres with less than 500 seats most often rely on a portable or permanent electronic sound system, or voice and instrument projection alone. If a band shell is present, it may be used to enhance these simple systems. Larger amphitheatres usually have more advanced acoustic systems. Electronic sound systems are integrated into the entire space and enhanced by the acoustic properties of the band shell structure. These many acoustic enhancement elements operating in unison allow sound to be uniform across a large site (City of Chicago, 2013).



3.25 Jay Pritzker Pavilion Utilizes Fixed Seating



# DESIGN GOALS

## Design Expectations for The Shepherd's Island Amphitheater

Based on information gathered through literature review, case studies, interviews and site inventory, a set of theoretical, physical, and social goals for the design of the Shepherd's Island Amphitheater have emerged.

**Theoretical Goals:** To design an amphitheater on Shepherd's Island in theory is to expand and build upon the previous success of Stonewall Farms Friesians and Events. It means adding a new identity to a space that already has presuppositions in the minds of those familiar with the site. Research and site visits have enabled me to create a theoretical construct of what the site is or aspires to be, both in reality and in the minds of its caretakers.

The harmonization of this new identity with existing entities is the theoretical goal of the design work for this thesis. To accomplish this, the design must altogether fit seamlessly with the existing design language, while in itself -being something completely foreign to the site.

**Physical Goals:** Designing an amphitheater on Shepherd's Island poses many challenges. The undeveloped conditions and the fact that the site is surrounded by water are going to be physical design challenges to overcome. Of top priority are safety and accessibility. To meet these goals, all aspects of the site design, layout and materials must be combined into a final product that is conducive to the diverse needs of the different users.

The first goal is that the site is accessible to all people. This will require the design to be accessible to the healthy, elderly and those with physical or mental disabilities alike. To accomplish this, walking distances between amenities such as parking, restrooms and the amphitheater must be kept to a minimum. If this proves to be impossible based on the fact that parking will need to be located off the island, then the site must be designed to accommodate a walking alternative such as a shuttle or

drop-off zone.

Next, the site must be able to accommodate the diverse kinds and sizes of events hosted by Stonewall Farms. Wedding, concerts, religious services, classes and political rallies are just a few of the event typologies that Stonewall Farms hosts currently. The layout of the design elements will be crucial to ensure the space meets the requirements of each event typology. Ensuring the amphitheater, paths, lighting and acoustics respond appropriately to a diverse number of tasks will be essential. The final physical element this design intends to accomplish is a complimentary material palette to the existing design language of Stonewall farms.

**Social Goals:** Along with accommodating the diverse needs of different events, the site must also accommodate a varied number of ethnic groups. Willmar is a demographically rich Minnesota city (City-Data, 2013). One social goal of the Shepherd's Island amphitheater design is to present a welcoming atmosphere to people of all economic demographics and people groups. This goal can be met through unassuming and inoffensive design language.



3.29 Stonewall Farms Second Event



## Findings From Research Applicable to Shepherd's Island Amphitheater

### Results From Research Question:

**Site Orientation:** The site will need to be orientated so that the sun is at the back of the seated visitors for the greatest amount of time. Ideally, the site should also be oriented in a way that the beauty of the natural landscape can be best utilized. Orienting the amphitheater so that it best satisfies these two requirements will be a challenge of the design phase.

**Acoustics:** Based on case studies and literature reviews, the best solution for acoustics will be to integrate an electronic sound system with acoustic enhancing physical elements.

**Environmental Connection:** Site visits to Shepherd's Island show many opportunities to connect visitors with the naturalistic, Midwest landscape. This experience can be enhanced through a design that highlights views and naturalistic elements in the landscape.

**Event Industry Competition:** The Shepherd's Island Amphitheater will compete with traditional Midwest event venues by building upon marketing techniques already being employed by Stonewall Farms. These include: offering a naturalist venue experience unique to the region, utilization of social media outlets such as FaceBook and Pinterest, and traditional advertizing in area wedding magazines.

**Results From Literature Review:** The literature available on the design of amphitheatres and their related components, suggest that there are few set standards in the industry (harris & Dines, 1998). Aspects of layout, lighting acoustics and materials happen most often in response to an amphitheater's projected scale and use. In this way amphitheatres, though in theory a simple concept, are very diverse.

*A peaceful venue in Central Minnesota located on secluded Solomon Lake.*

*music get elegant...*  
**Stonewall Farms**  
WEDDINGS & EVENTS

320.250.4151

WWW.STONEWALLEVENTS.COM

3.26 Stonewall Farms Magazine Advertisement

PHOTO CREDIT: STONEWALL FARMS

The advertisement is a collage-style image. At the top, a quote describes the venue as a peaceful location on Solomon Lake. Below this is a large photo of a white barn with a window. The central text reads 'music get elegant...' followed by 'Stonewall Farms WEDDINGS & EVENTS' in a decorative font. Below the text are several smaller photos: a barn at night, a green field, a horse and rider, and a wedding scene. The phone number 320.250.4151 and website URL WWW.STONEWALLEVENTS.COM are included. The advertisement is identified as '3.26 Stonewall Farms Magazine Advertisement' and credits 'PHOTO CREDIT: STONEWALL FARMS'.



# APPLICABLE VALUES FOR SITE AND RESEARCH

## Shepherd's Island Amphitheater: A New Venue Typology

Research reveals that placing an amphitheater on a 10 acre island is unique to the region (Google, 2013). However, the idea of an amphitheater for the purpose of hosting sub 1,000 occupants is common in Minnesota. An example of this is the Veterans' Memorial Amphitheater located in St. Louis Park, Minnesota (Park, 2013). This 200-person amphitheater's intended use is for weddings and other small events (Park, 2013).

The anomaly of designing an amphitheater on an island five miles outside a small city in the Upper Midwest represents a new idea trending across the nation. Social media sites like FaceBook, Instagram, Twitter and Pinterest are enabling people to gain the marketing traction they need to promote new ideas (FaceBook, 2013). The success of Stonewall Farms "would not have been possible without social media" (Holmgren, 2013). According to Stonewall Farm's manger, Kim Holmgren, "we get many calls and emails from potential clients saying they saw the pictures from a wedding here, or even someone's decoration pictures that have been tagged as taken at Stonewall... People as far away as Wisconsin and Iowa have even come to tour the property because of Pinterest or FaceBook" (Holmgren, 2013). Because of these websites, people are beginning to discover opportunities within their region to break away from a reliance on big business franchises. People are looking for experiences that are more personal and unique, especially for weddings (Minneapolis.org, 2013).

This is why other small event venues such as Moorhead, Minnesota's Rustic Oaks have also been successful (Oaks, 2013). A visit to Rustic Oak's FaceBook page reveals how this event venue connects on a personal level with its clientele (Oaks, 2013). Likewise, Stonewall Farms also uses social media in this way. "We do our best to get to know our clients on FaceBook during the planning process by answering questions and after the event by thanking our guests and posting photos from events" (Holmgren, 2013).

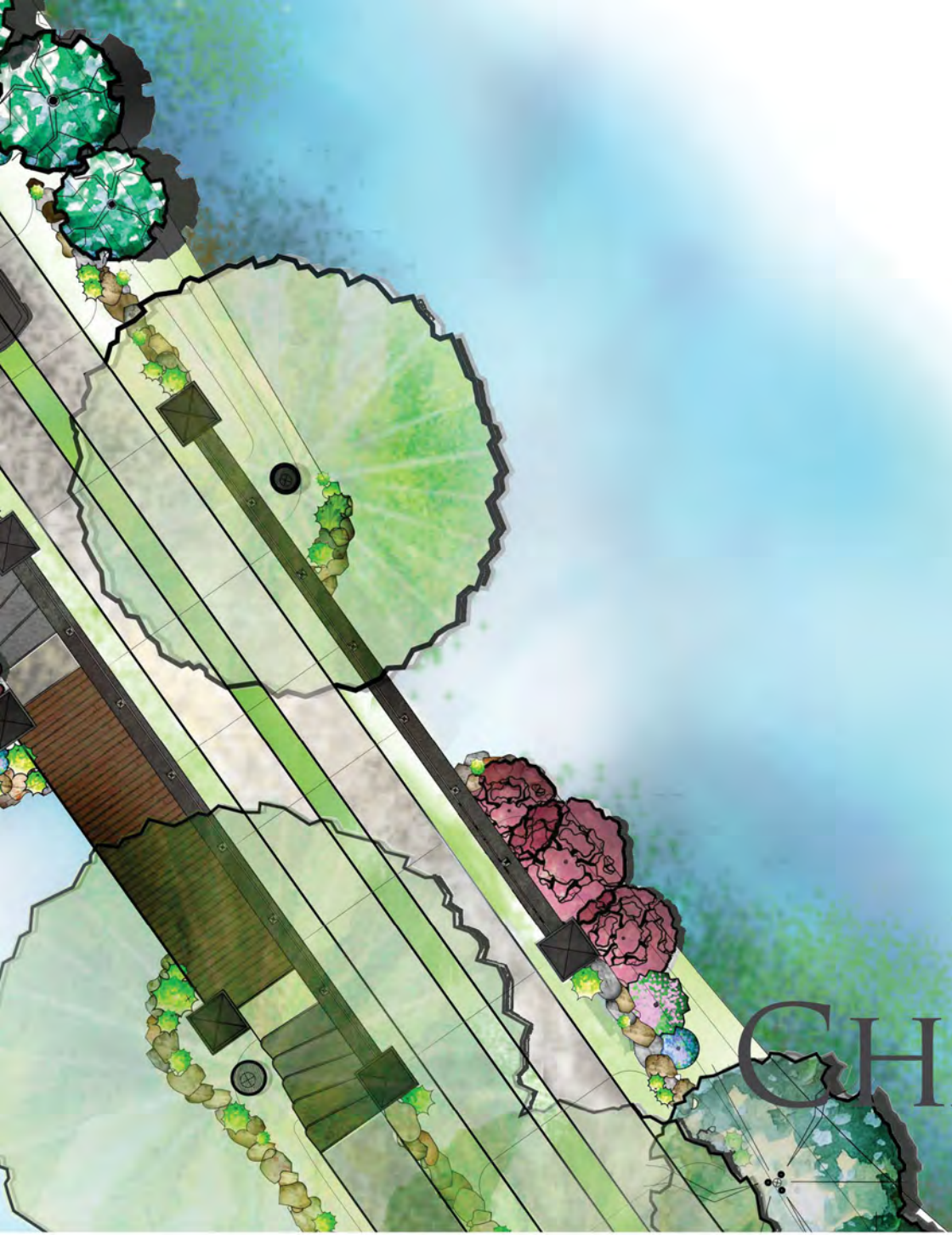


3.27 Rustic Oak's Event Facility Exterior



3.28 Rustic Oak's Event Facility Interior





# CHAPTER 4

Discussion Of Shepherd's Island

Discussion • Opportunities And Challenges Of Research • Application Of Results • Site Concept And Elements Discussion



# DISCUSSION

## A Discussion of Shepherd's Island Design Elements

The naturalist beauty of Shepherd's Island is compelling. A visitor to the site is immersed in a unique sense of central Minnesota place. Rolling hills covered in Bur Oak trees reaching over 40-feet tall with trunks up to three feet across, open to prairie clearings and expansive views of the Solomon Lake. The earthy scent of moss and crisp aroma of cedars mix with the cool, lake air. Songbirds in the forest canopy mingle their voices with the ever-present pulse of waves lapping at Solomon Lake's shoreline. Venturing onto the island either by foot or in a golf cart, stimulates the senses and harkens the visitor back to a time when Minnesota's 10,000 lakes were an uncharted wilderness.

Shepherd's Island poses many opportunities in respect to the implementation of an amphitheater on site. The site's rich topography offers many options for the location of the amphitheater, and the existing pathway can be utilized to reduce the amount of disturbance to the naturalistic landscape. View corridors reveal the uninterrupted shoreline of Solomon Lake, strengthening the concept of a naturalistic visitor experience.

Viewing the Shepherd's Island Amphitheater design as an addition to Stonewall Farms Friesians and Events, gives the concept credibility as a viable space. Knowledge of how Stonewall Farms deals with issues related to parking, pedestrian circulation and climate factors is useful when considering design interventions and parameters.

Several challenges exist in regards to the accessibility of the site. The first is parking. Parking would be limited and disruptive to the native landscape if implemented on the island. Therefore, parking will need to be located to the West in either what is now a pasture for Stonewall Farm's horses or an open field currently designated for Stonewall Farm's event parking (Holmgren, 2013). The pasture is closest to the site; however, it is undetermined how replacing the pasture with parking



4.1 Unique Sense of Minnesota Place



## Discussion

would affect the horse breeding operations of Stonewall Farms. The current Stonewall Farm's parking area is ideal in terms of access and low-site disruption, but it is further from the island's land bridge and would need to be expanded. This would require the removal of many established tree plantings.

The second challenge is the island's land bridge. The land bridge is currently only about 20 feet wide at its narrowest part (Google, 2013). This presents a problem, as the access road is only wide enough for a single car to drive across at a time with limited distance on either side for pedestrians. The simplest fix to this would be to widen the land bridge to a more suitable 25 or 30 feet. Another option that could be entertained is that of separating vehicular transportation from pedestrians entirely. Creating an additional pedestrian access point to the island in the form of a pier or floating pathway would most feasibly accomplish this.



4.2 Stonewall Farm's Pasture Land



4.3 Naturalistic View Sheds



# OPPORTUNITIES AND CHALLENGES OF EARLIER RESEARCH

## Shepherd's Island Opportunities and Challenges

Site visits to Shepherd's Island have shed light on ways the earlier research can be applied to the site. This has come about by a process of connecting observations to research and design preferences.

In considering pedestrian and vehicular circulation on site, it has been determined that either, motorized vehicular traffic needs to be restricted from the island, or pedestrian circulation should be separated from vehicular. This comes as a result of considering the safety of pedestrians on site. The many steep grades and oblique corners could pose a safety hazard to foot traffic.

Research of existing amphitheaters has demonstrated the need to consider the kind of circulation used within the amphitheater's design itself. Determining the number of aisles, spacing between seating elements and proximity of the seating to the stage will be a process of give and take. The challenge will be finding the balance between creating a space that can accommodate 500 individuals comfortably while disturbing the smallest amount of land.

The large trees on site pose an opportunity to maintain the existing sense of place. Some of these trees will need to be removed inevitably; however, the goal is to find the equilibrium between what enhances the final design and what must be removed.



4.4 Established Trees



# APPLICATION OF RESULTS FROM PREVIOUS CHAPTERS

## Shepherd's Island Research Outcomes

Applying the result derived from earlier research, connections have been made as to what size the amphitheater should be. In considering what sizes to make the amphitheater, many factors come into play. The first is what are the project uses of the space? Stonewall Farms is having the most success with and is booking more weddings than any other event typology. The biggest wedding that Stonewall Farms has hosted to date is 400 attendees (Holmgren, 2013). In order for Stonewall Farms to comfortably host events of this size or larger, they need a new, larger site. The current tent-covered wedding ceremony site located on Stonewall Farms was designed to comfortably seat just 350 visitors (Holmgren, 2013). One goal expressed by Stonewall Farm's manager, Kim Holmgren is in the near future to be able to host multiple event types and sizes on any given day (Holmgren, 2013). The creation of a new, larger event space on Shepherd's Island would make this goal a reality.

In order for this new space to be most viable for the expansion of events at Stonewall Farms, it needs to be considerably larger than the existing facilities. An amphitheater that can seat up to 500 people would seem to be the answer. This would enable Stonewall Farms to comfortably accommodate its largest wedding sizes to date while giving them the ability to book even larger events.

Setting the number to 500 people also limits the amount of environmental impact on the site. To accommodate more would require a larger amount of site disturbance, resulting in a need for more seating area, wider walking paths and more amenities such as restrooms. Case studies show that an amphitheater able to seat 500 individuals can be integrated better into a naturalistic setting than a larger amphitheater.



4.5 Stonewall Farm's Wedding Ceremony Site "Southeast"



4.6 Stonewall Farm's Wedding Ceremony Site "Southwest"



# OUTCOMES THAT APPLY TO SITE CONCEPT AND ELEMENTS

## Shepherd's Island Concept Development

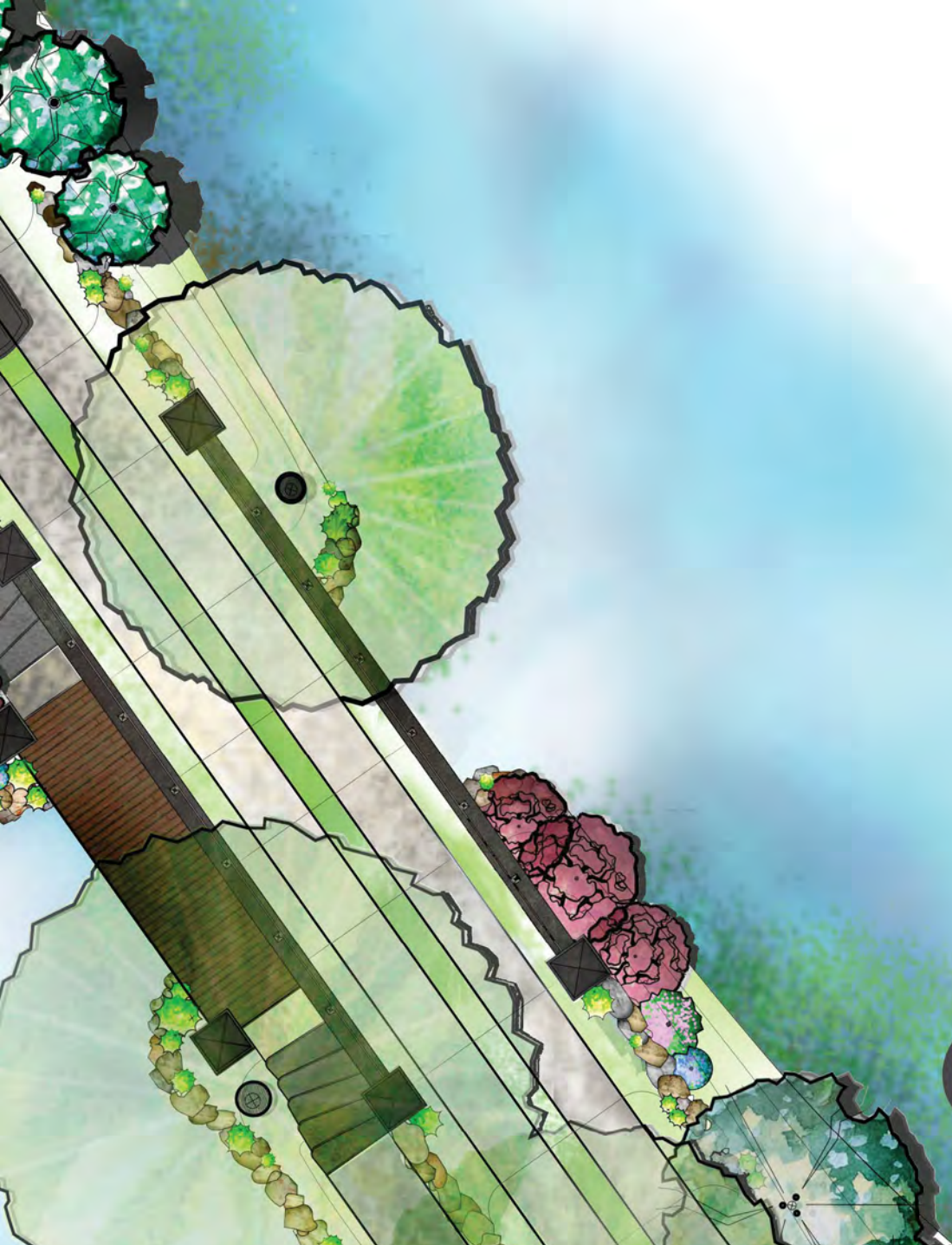
Many elements of the site design must be considered for the successful implementation of the Shepherd's Island amphitheater. Stonewall Farms is a seasonal event venue, scheduling event bookings from May to October (Holmgren, 2013). The White Oak Barn is equipped with gas heat, though events have only been scheduled during the winter for emergency or personal occasions (Holmgren, 2013). This being so, the Shepherd's Island amphitheater will be designed to only be used during the warm Stonewall Farm's event booking months. As a result, cold weather considerations such as snow removal will not be taken into consideration in the final site design.

Integrating the site to function with the already existing Stonewall Farm's facilities, such as the White Oak Barn, can be accomplished through a common design language and circulation. The pedestrian and vehicular circulation routes can be utilized to enhance the site's accessibility between venue elements. To do this, sight lines can assist an event with the ceremony performed on Shepherd's Island and a reception to take place in the White Oak Barn by improving way finding for guests. Circulation can also be used to improve the environmental experience for users. Routing circulation to frame especially scenic views and highlight naturalistic elements will help define the design sense of place.

The performance of the amphitheater's final design will also be influenced greatly by design elements. Designing for the intended scale and use of the site can improve the user experience. For example, a wedding ceremony is best traditionally performed with a central aisle. Incorporating a central aisle into the seating arrangement is therefore, one design parameter of the final design. Similarly, placement of the amphitheater within the context of Shepherd's Island can also aid in concept development. Selecting a location for the amphitheater to maximize an environmental experience for visitors is also a concept driving site development consideration.

Programming the Shepherd's Island amphitheater to function within its existing context and to meet design expectations is the goal of the final design. Concept development will be aided by knowledge gained through research, site inventory and needs of the users.





# CHAPTER 5

Moving Forward

Opportunities And Challenges Of The Site



# OPPORTUNITIES AND CHALLENGES OF THE SITE

## Conclusion of Research and Site Information

**Summary:** The process of writing this document dictated the findings and final outcomes of the research. Preconceived ideas of where the research would go and what needed to be emphasized developed throughout the entirety of the writing process. As the research took place, elements relevant to the specific goals of the site took prominence. Many elements originally thought to be of importance, were discovered to be less relevant when applied to the specific site needs. This led to some research elements finding unexpected importance, while other research faded into the background.

Existing research surrounding the topic of amphitheater design is limited. My original thought was that landscape architects would dominate the outdoor genre of amphitheaters. However, in depth research revealed that the work of architects represents the main body of knowledge available on the topic. This document therefore adds to the landscape architecture profession by expanding amphitheater design principles from the environmental perspective.

Early preconceived notions led the research to take a narrow, detailed and specific approach. As research progressed from methodology development to the literature review, it became clear that the final design would best benefit from a broader research approach. The case study research also supported the change in direction by demonstrating that amphitheaters are a very diverse design genre. A detailed approach would require that major elements related to the site and context be reduced or left out. This shift is most evident in chapters three and four. Instead of the research focusing on the details of amphitheater design, it instead placed emphasis on relating the design to the site.

Similarly, the research findings placed emphasis on the over-arching goals of the final design and the way it can be integrated into the existing site elements. It was found that integration with Stonewall Farms is the

best justification for the design as a viable product.

Discussions approached the findings from a holistic point of view, making connections between research and site inventory. Much of the discussions came as a result of these connections, focusing on how they could be used to integrate the Shepherd's Island amphitheater's design into Stonewall Farms. It was found to be beneficial to use the discussion sections to clarify elements of design intent and direction.

**Moving forward:** Further development of concepts leading to the final design is the next phase in this thesis. It will be important to continue to research specific elements of amphitheater and site design as they arise. Research demonstrated in this document has put in place the information needed to move confidently into the analysis and design phase of the project.

Research will be considering this transition into designing the Shepherd's Island Amphitheater. Knowledge gained will inform the analysis, resulting in an educated and effective design outcome.





# CHAPTER 6

Stonewall Farms Expansion Design

Stonewall Farms New Expansion • Programmatic Elements • Entry Gate • Parking • Bridge • Shepherd's Island Amphitheater



# FINAL THESIS DESIGN INTRODUCTION

## Stonewall Farms Expansion: a new approach to venue design Video Presentation

### Video Presentation: Project Statement

The video presentation, Stonewall Farms Expansion: a new approach to venue design, explores creative new ways of communicating landscape design. Through descriptive narratives and intuitive word picture relationships, the video presentation communicates a romantic, Midwest venue design in a way that is engaging for both design professionals and clients alike. The project builds upon the emerging trend in outdoor venue design that celebrates a sensitive connection to the environment and immerses guests in their own sense of regional place.

### Video Presentation: Project Narrative

Stonewall Farms: a new approach to venue design, creatively illustrates the master planning process of 56 acres of lakefront and island property for the development of an outdoor event venue expansion. Located in central Minnesota, the project employs sustainability minded development strategies and place making design philosophies.

This video presentation provokes the imagination through a story-like progression of colorful illustrations and language. The story begins with video clips of the existing Stonewall Farms Friesians and Events. This establishes the environmental setting and credibility and reasoning for the new Stonewall Farms Expansion. Viewers are then introduced to the expansions programmatic elements to be included in the design.

The programmatic elements were derived from in depth discussions between the designer and Stonewall Farms, and reflect both an innovative approach to venue design and needs of Stonewall Farms. These include, the creation of a new sense of arrival to Stonewall Farms in the form of a formal entry gate; three hundred new parking spaces to accommodate the needs of the expansion; a place making element in the form of a bridge to access Shepherd's Island; and the Shepherd's Island

Amphitheater. This naturalistic amphitheater design is the focal point of the new Stonewall Farms Expansion. Thoughtfully nestled into the existing landscape of the ten acre Shepherd's Island, the amphitheater's intimate relationship with its site would offer guests a breathtaking interpretation of Stonewall Farm's naturalistic setting.

The project focuses on site progression and the experience of the visitor throughout the course of an attended event. Design philosophies have been employed which unite classical and romanticism period landscape design principles developed by early designers such as Fredrick Law Olmstead and Henry Hoare, with modern notions of sustainability and environmental responsibility.

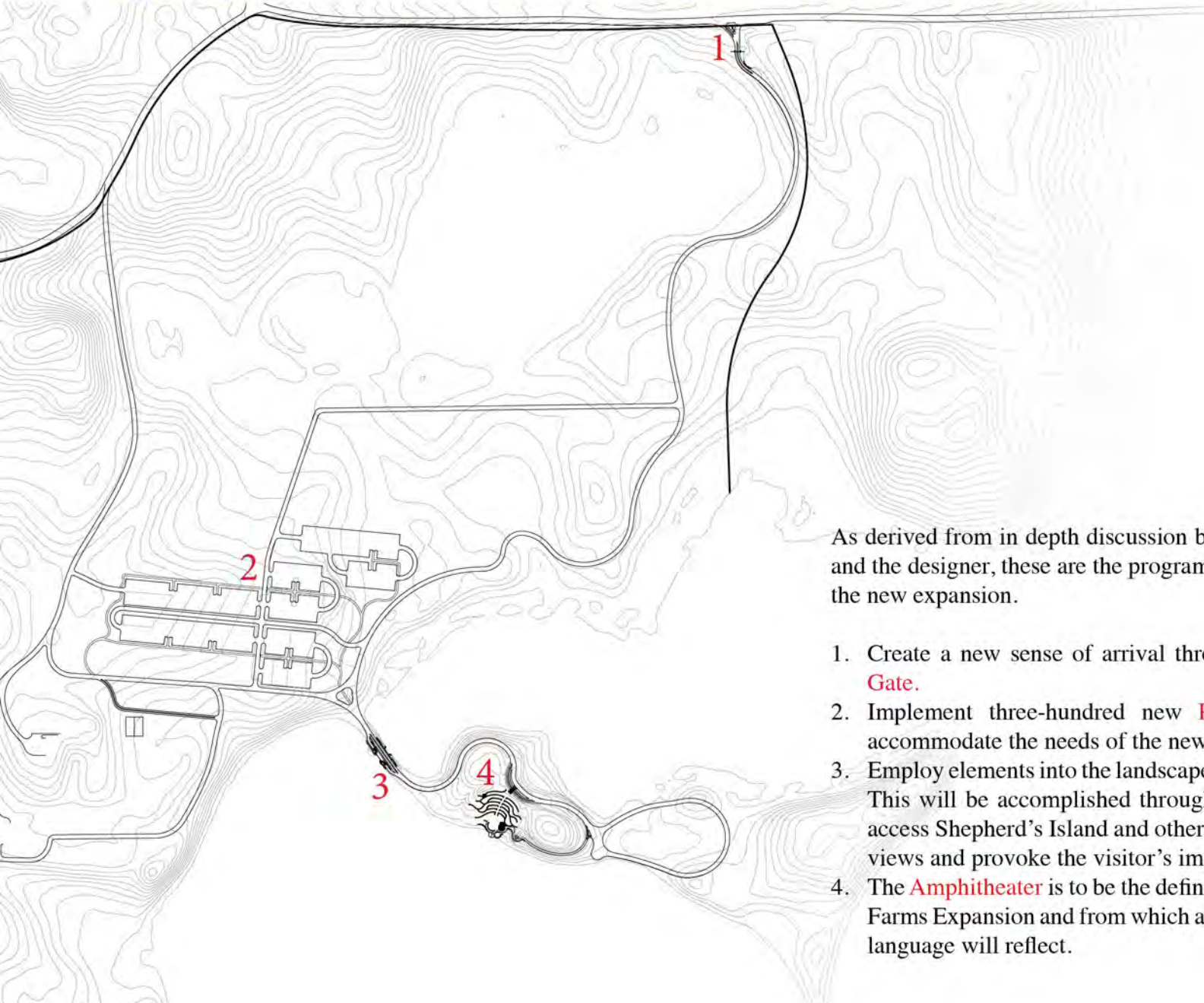


Stonewall Farms Expansion Video Presentation DVD



# PROGRAMMATIC ELEMENTS

## Design Components of The New Stonewall Farms Expansion: Components Master Plan



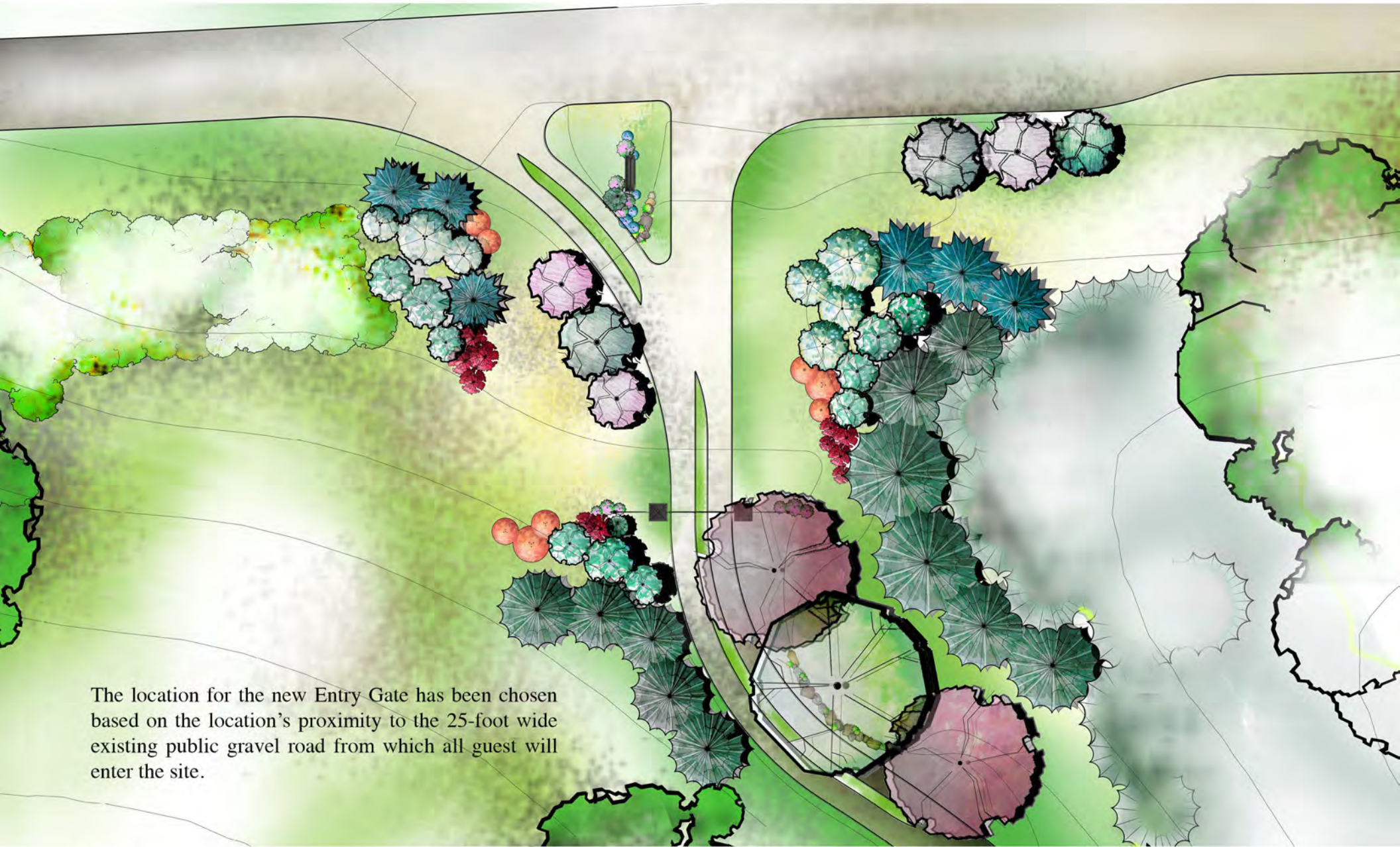
As derived from in depth discussion between Stonewall Farms owners and the designer, these are the programmatic elements to be included in the new expansion.

1. Create a new sense of arrival through the design of a new **Entry Gate**.
2. Implement three-hundred new **Parking** spaces on the site to accommodate the needs of the new expansion.
3. Employ elements into the landscape to create a unique sense of place. This will be accomplished through the design of a new **Bridge** to access Shepherd's Island and other strategic site alterations to frame views and provoke the visitor's imagination.
4. The **Amphitheater** is to be the defining element of the new Stonewall Farms Expansion and from which all other program element's design language will reflect.



# ENTRY GATE

Stonewall Farms New Sense of Arrival: Master Plan



The location for the new Entry Gate has been chosen based on the location's proximity to the 25-foot wide existing public gravel road from which all guest will enter the site.



## Entry Sign Section



The entry sign's plantings have been composed to compliment the new Stonewall Farms entry sign. This sign's design reflects current themes found in the architecture and landscape of existing Stonewall Farm's facilities and introduces guests to the expansion's material palette.



## Entry Gate Section Construction Process

This diagram illustrates the construction process of the Stonewall Farms Expansion's new Entry Gate. Simplified to this four step diagram, an expanded explanation of the entry's details and design can be referenced by watching the Stonewall Farms Expansion: A New Approach To Venue Design, Video Presentation.



1. The gate's design includes two six-foot tall masonry pillars.



2. Each one filled with cement, would have appropriately scaled footings and would be used to support the gate's rod iron works.



4. The black stained, concrete capped, masonry pillars boast an Ashlar pattern reflective of the entry sign.



5. The custom rod iron works are to be fabricated to the designer's exact specifications as illustrated.



## Entry Gate Section



Shrub Roses ground the gates appearance and a diverse, a-symmetrical planting backdrop, frames the Gate within the landscape

The designer has purposely located the entry gate 60 feet from the public gravel road. This distance allows vehicle a few moments for the narrow nature of the road and composed scenery to slow vehicles, as guests anticipate the passage through the 11-foot wide gates and begin their Stonewall Farms experience.



# PARKING

## Stonewall Farms Expansion Three Acre Parking: Master Plan

The new parking lot's design breaks up the three hundred parking spaces into easily programmable cells. This cell-like formation gives Stonewall Farms Event staff the ability to easily designate cells for individual use.







The parking lot's design incorporates 4-foot wide gravel pedestrian paths. These paths include way-finding signage to further orientate guests and improve safety on site by separating pedestrian and vehicular traffic.



# BRIDGE CROSSING

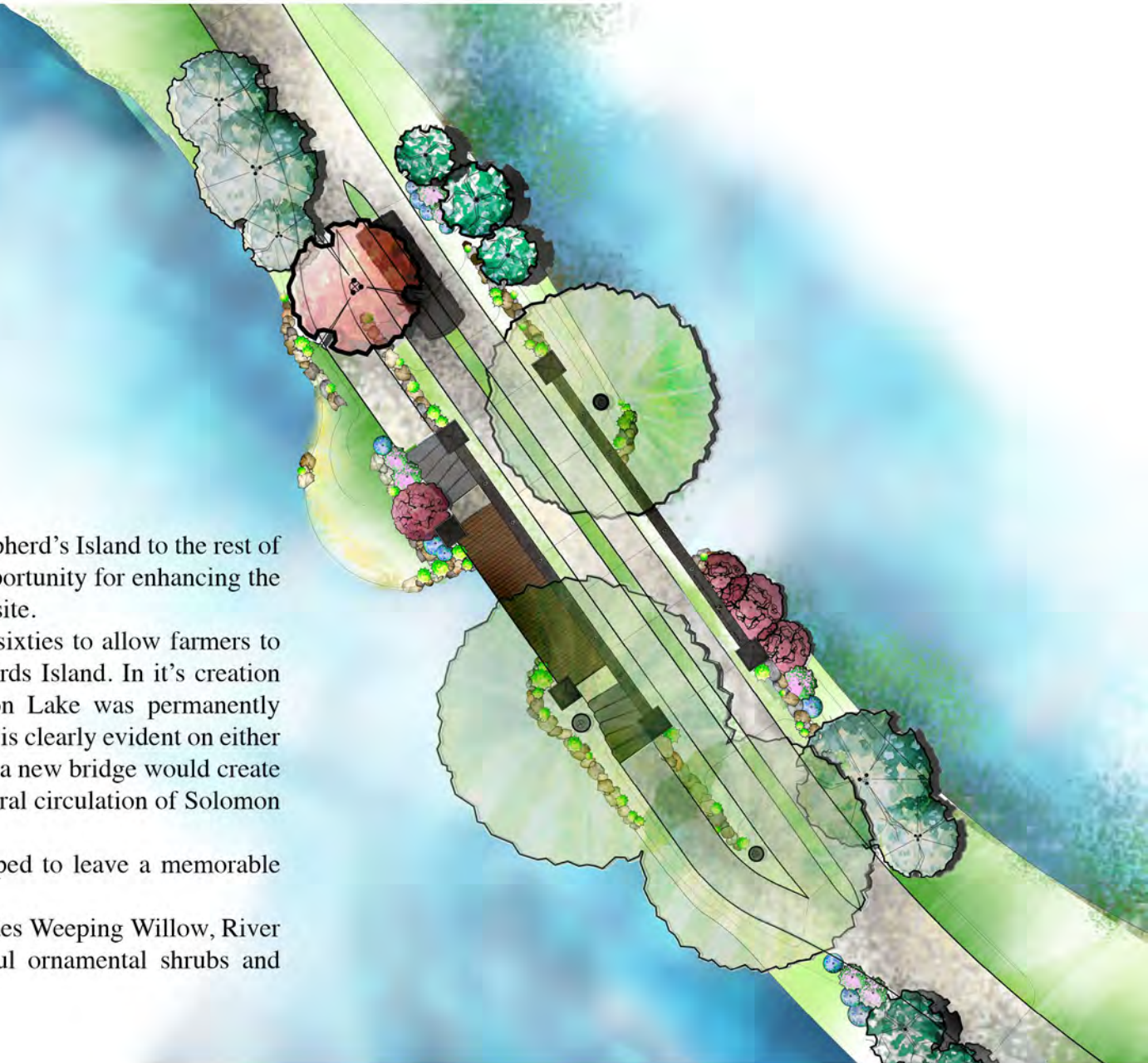
## Stonewall Farms Expansion Shepherd's Island Place Making Element: Master Plan

The man made land bridge that connects Shepherd's Island to the rest of the Stonewall Farms property presents an opportunity for enhancing the visitor's experience and interpretation of the site.

The existing land bridge was created in the sixties to allow farmers to graze flocks of sheep on the 10 acre Shepherds Island. In it's creation however, the natural circulation of Solomon Lake was permanently altered, and a drastic contrast in water quality is clearly evident on either side of the land bridge today. The creation of a new bridge would create a breach in the land bridge, allowing the natural circulation of Solomon Lake to be restored.

The Bridge's Final Master Plan was developed to leave a memorable impression in the minds of users.

A soil saturation tolerant planting plan includes Weeping Willow, River Birch and Poplars, as well as other colorful ornamental shrubs and perennial species.





## Bridge Crossing Section Construction Process

This diagram was created to illustrate the construction process of the Shepherd's Island Bridge Crossing. Simplified to six steps, an expanded explanation of the bridge's details and design can be referenced by watching the Stonewall Farms Expansion: A New Approach To Venue Design Video Presentation.



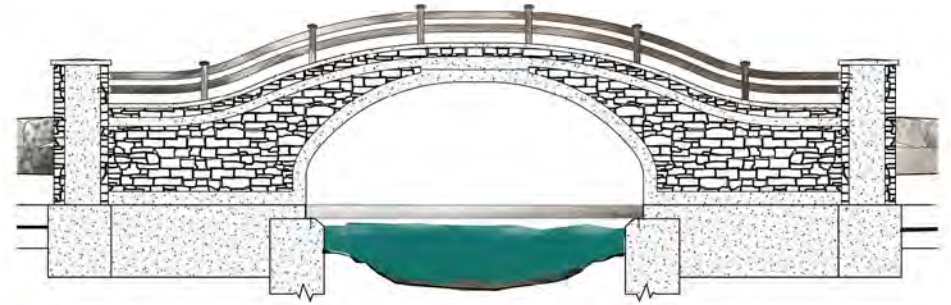
1. The two large footings have been designed to carry the weight of the new Bridge.



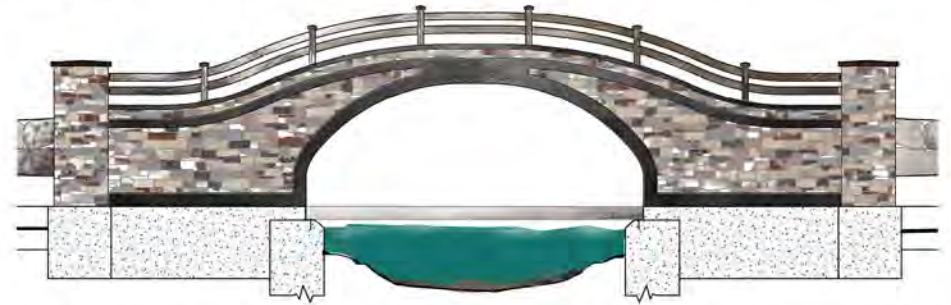
2. A series of steel I-beams make a connection between the foundation's footings, upon which a wooden support structure can be built.



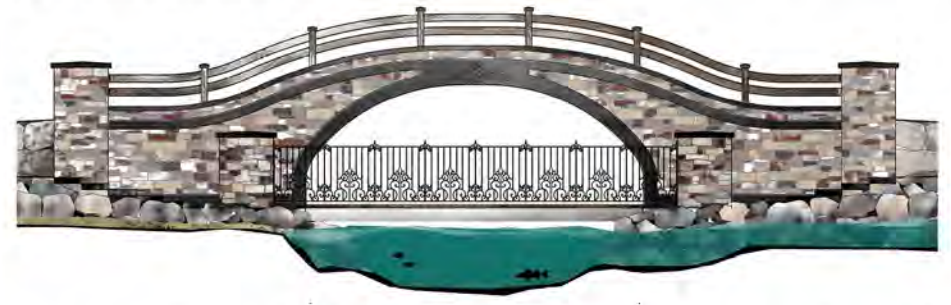
3. This wooden structure will support the reinforced concrete arc and masonry that makes up the bridge's primary structural unit as they cure.



4. Dry stack boulder walls retain the ramp up to the bridge on either side and white oak guardrails ensure a safe crossing.



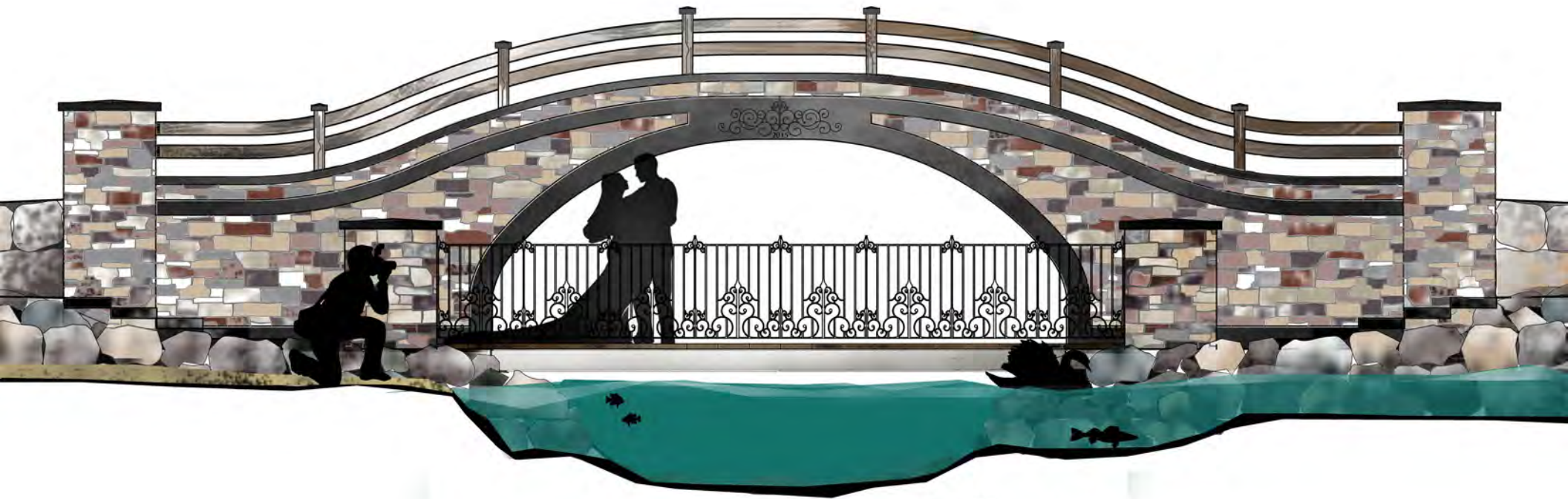
5. The colorful Ashlar stone masonry is complimented by the staining of all concrete elements black.



6. A secondary pedestrian bridge encourages guest interaction with Solomon Lake.



## Bridge Crossing Detail Section



A protrusion from the linear plan can be observed in the bridge's master plan. This protrusion provides a vantage point from which the bridge's form and details can be better appreciated. From atop the bridge, expansive views of the undeveloped shorelines of Solomon Lake would provide guests a breathtaking interpretation of Shepherd's Island's Naturalistic setting.



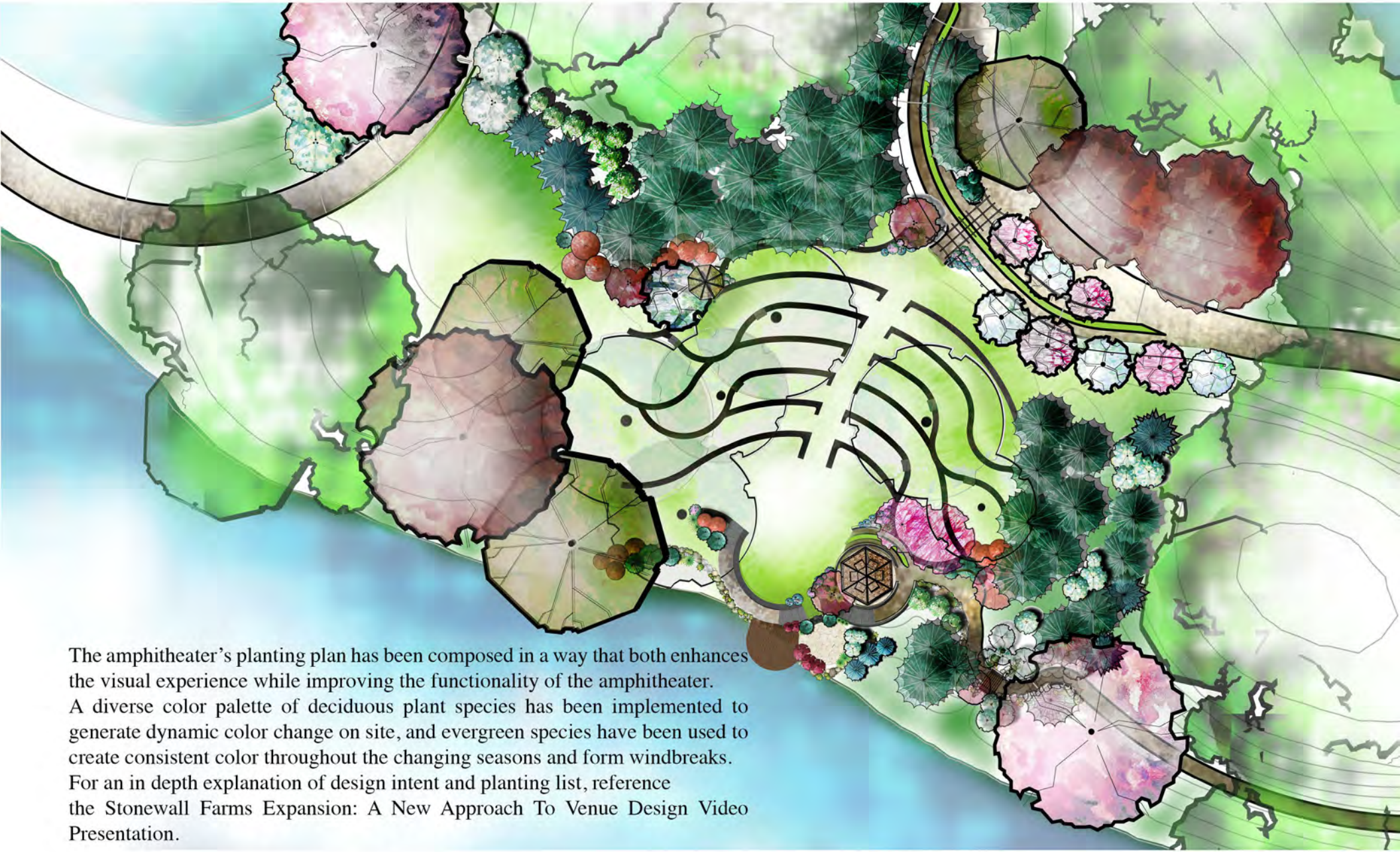


The unique experience of this crossing sets Stonewall Farms apart from all outdoor venues in the region, and is an experience that is shared by all event goers on their way to the new Shepherd's Island Amphitheater.



# SHEPHERD'S ISLAND AMPHITHEATER

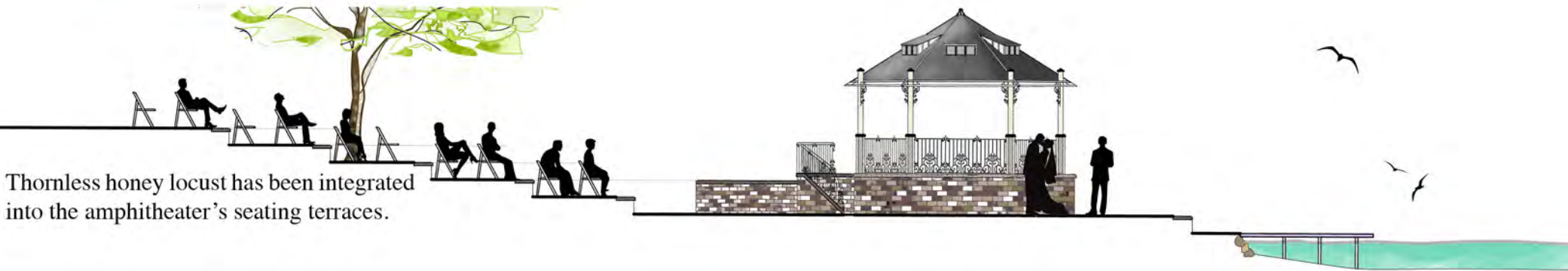
Stonewall Farms New Outdoor Venue Experience: Master Plan



The amphitheater's planting plan has been composed in a way that both enhances the visual experience while improving the functionality of the amphitheater. A diverse color palette of deciduous plant species has been implemented to generate dynamic color change on site, and evergreen species have been used to create consistent color throughout the changing seasons and form windbreaks. For an in depth explanation of design intent and planting list, reference the Stonewall Farms Expansion: A New Approach To Venue Design Video Presentation.



## Amphitheater Terrace Section



Thornless honey locust has been integrated into the amphitheater's seating terraces.

## Amphitheater Stage Section



The amphitheater's stage is framed within the landscape.















Shepherd's Island Amphitheater 1/4"=1' Scale Model: Stage Perspective





# FINAL EXHIBITION

## Stonewall Farms Expansion Final Gallery Exhibition

**Exhibition Concept:** The final Stonewall Farms Expansion exhibition was designed to encourage the viewer to experience a full video presentation. The graphic boards included limited text and were intended to act as an attention getter rather than to inform the viewer. The 3'x4', 1/4"=1' scale Shepherd's Island Amphitheater model was included in the exhibition to further illustrate the details of the video presentation.

**Exhibition Details:** The final exhibition was on display from April 28th through May 16th and included the following presentation deliverables:

- Three 6 foot wide, printed boards mounted on foam core and attached to provided gallery straps with 12 steal binder clips.
- One 3'x4' 1/4"=1' scale design model. This model included an internal lighting element to enhance the effect of the water, and was displayed on an adjustable 3'x4' white drafting table.
- One 24 inch LCD display, flat screen TV. This TV was securely suspended from the building structural roof members by black parachute cord. Attached to the bottom bracket of the TV was a custom built headphone's rack from which 4 sets of headphones rested. The TV display also included 1 five-way audio splitter.
- One blue ray player was mounted on the underside of the display table and included one HDMI cable, remote controllers, and a looped disk of the thesis presentation.

Note: It was necessary to make routine checks on the exhibit to ensure all elements were functioning properly. This was done about once every four days. However, throughout the course of the exhibition no technical problems were encountered.









# BIBLIOGRAPHY

About.com. (2013). Jay Pritzker Pavilion. Retrieved 10 4, 2013, from About.com: [http://gochicago.about.com/od/attractionsandlandmarks/ss/millennium\\_park\\_3.htm](http://gochicago.about.com/od/attractionsandlandmarks/ss/millennium_park_3.htm)

Agriculture, U. S. (2013). Agriculture Research Services. Retrieved 11 22, 2013, from USDA: <http://planthardiness.ars.usda.gov/PHZMWeb/Maps.aspx>

Art, T. M. (2013). Theater and Amphitheater in the Roman World. Retrieved 9 29, 2013, from The Metropolitan Museum of Art: [http://www.metmuseum.org/toah/hd/tham/hd\\_tham.htm](http://www.metmuseum.org/toah/hd/tham/hd_tham.htm)

Atelier, A. (2011). Interior light effects on human mood and social behavior. Retrieved 10 5, 2013, from Arefian Atelier: <http://www.arefianatelier.com/interior-light-effects-on-human-mood-and-social-behaviour.html>

Baumstarck, A. (2013). Effects of Dressing Room Lighting Direction on Consumers' Perceptions of Self and Environment . Retrieved 10 4, 2013, from UF George A Smathers Libraries: <http://ufdc.ufl.edu/UFE0024065/00001/citation>

BBC. (2013). History. Retrieved 9 28, 2013, from [bbc.co.uk: http://www.bbc.co.uk/history/ancient/romans/pompeii\\_art\\_gallery\\_02.shtml](http://www.bbc.co.uk/history/ancient/romans/pompeii_art_gallery_02.shtml)

Chicago.org, C. o. (2013). Millennium Park Map. Retrieved 10 4, 2013, from Millenium Park-Plan your Visit: [http://www.cityofchicago.org/city/en/depts/dca/supp\\_info/millennium\\_park\\_-planyourvisit.html](http://www.cityofchicago.org/city/en/depts/dca/supp_info/millennium_park_-planyourvisit.html)

City of Chicago. (2013). Millenium Park Chicago. Retrieved October 5, 2013, from Jay Pritzker Pavilion Facts and Figures: [http://www.cityofchicago.org/city/en/depts/dca/supp\\_info/millennium\\_park\\_-jaypritzkerpavilionfactsandfigures.html](http://www.cityofchicago.org/city/en/depts/dca/supp_info/millennium_park_-jaypritzkerpavilionfactsandfigures.html)

City-Data. (2013). Willmar Minnesota. Retrieved 11 20, 2013, from City-Data.com: <http://www.city-data.com/city/Willmar-Minnesota.html>

html

“Climate in Kandiyohi County, Minnesota”. (2013). Retrieved 11 25, 2013, from Sperlings Best Places: <http://www.bestplaces.net/climate/county/minnesota/kandiyohi>

College, S. (2009). Garden Tour. Retrieved 10 3, 2013, from The Scott Arboretum: <http://www.scottarboretum.org/gardentour/amphitheater/>

College, S. (2009). Swarthmore College Campus Map. Retrieved 10 3, 2013, from Swarthmore.edu: <http://www.swarthmore.edu/campusmap/destinations/details.php?destination=amphitheater>

Crutchfield, D. (2013, 10 3). Associate Profession of Architecture . (D. Holmgren, Interviewer)

Designers, I. A. (2013). Benefits Of Good Lighting. Retrieved 10 3, 2013, from International Association of Lighting Designers: <http://www.iald.org/design/benefits.asp>

FaceBook. (2013). About. Retrieved 11 29, 2013, from Facebook.com: <https://www.facebook.com/facebook/info>

Farms, S. (2013). Weddings at Stonewall Farms. Retrieved 11 5, 2013, from Stonewall Farms Friesians and Events: <http://stonewallevents.com/weddings/>

Francis, M. (1999). Landscape Architecture Foundation. Retrieved October 5, 2013, from A Case Study Method For Landscape Architecture: [www.lafoundation.org/myos/my-uploads/2010/08/19/casestudymethod.pdf](http://www.lafoundation.org/myos/my-uploads/2010/08/19/casestudymethod.pdf)

Google. (2013). Google Earth. Willamr, MN, United States.

Grand Park Music Festival . (2013). Grand Park Music Festival in Millennium Park . Retrieved October 6, 2013, from Map of Millennium Park : <http://grantparkmusicfestival.com/plan-your-experience/map->



of-millennium-park

Hamline University. (2010). Minnesota-Climate. Retrieved 11 25, 2013, from City Data.com: <http://www.city-data.com/states/Minnesota-Climate.html>

Harris, C., & Dines, N. (1998). Time-Saver Standards for Landscape Architecture. New York: McGraw-Hill, Inc.

HIRSCH, M. (2013). Minn. drownings hit 10-year high. Retrieved 11 25, 2013, from StarTribune: <http://www.startribune.com/local/161474675.html>

Holmgren, K. (2013, 9 25). Stonewall Farms Manager. (D. Holmgren, Interviewer)

Kandiyohi County Historical Society. (2012). Guri Enreson Cabin. Retrieved 11 25, 2013, from Kandiyohi County Historical Society: <http://www.kandiyohicountyhistory.com/endreson%20cabin.html>

Lechner, N. (2012). Plumbing, Electricity, Acoustics Sustainable Design Methods for Architects. New Jersey: John Wiley & Sons.

Minneapolis.org. (2013). Unique Venues. Retrieved 12 2, 2013, from Minneapolis City By Nature: <http://www.minneapolis.org/groups/weddings/suggested-venues>

Minnesota Department of Natural Resources. (2013). Minnesota Ice-Related Fatalities 1976-2013. Retrieved 11 25, 2013, from Department of Natural Resources: [http://files.dnr.state.mn.us/education\\_safety/safety/ice/ice\\_stats.pdf](http://files.dnr.state.mn.us/education_safety/safety/ice/ice_stats.pdf)

Oaks, R. (2013). Rustic Oaks, Wedding, Events, Retreats, On-Site Lodging. Retrieved 11 11, 2013, from Rustic Oaks: <http://www.rusticoaks.net/>

Park, C. o. (2013, 9 24). VETERANS' MEMORIAL AMPHITHEATER.

Retrieved 11 24, 2013, from St. Louis Park Minnesota: <http://www.stlouispark.org/facilities-services/veterans-memorial-amphitheater.html>

Project, H. C. (2013). Hawk Creek Watershed Project. Retrieved 11 26, 2013, from Hawk Creek Watershed Project: [http://www.hawkcreekwatershed.org/index\\_files/newsletter2011.pdf](http://www.hawkcreekwatershed.org/index_files/newsletter2011.pdf)

Resources, D. o. (2013). Lake information report. Retrieved 11 25, 2013, from Minnesota Department of Natural Resources: <http://www.dnr.state.mn.us/lakefind/showreport.html?downum=34024600>

Resources, D. o. (2013). Minnesota Department of Natural Resources. Retrieved 10 27, 2013, from Climate: <http://www.dnr.state.mn.us/faq/mnfacts/climate.html>

Arboretum, S. (Producer), Sawyers, C. (Writer), & College, D. o. (Director). (2012). Artful Gardens Part 2: Scott Outdoor Amphitheater [Motion Picture].

Stein, B., Reynolds, J., Grondzik, W., & Kwok, A. (2006). Mechanical and Electrical Equipment for Buildings. New Jersey: John Wiley & Sons.

The Cultural Landscape Foundation. (2013). The Cultural Landscape Foundation: Stewardship through education. Retrieved October 5, 2013, from Thomas W. Sears: <http://tclf.org/pioneer/thomas-w-sears>

Williams, S. (2013). How Poison Ivy Works. Retrieved 11 22, 2013, from How Stuff Works: <http://science.howstuffworks.com/life/botany/poison-ivy.htm>

Willmar, C. o. (2013). History. Retrieved 11 24, 2013, from The City of Willmar Minnesota: <http://www.willmarmn.gov/visitors/history>



# ANNOTATED BIBLIOGRAPHY

About.com. (2013). Jay Pritsker Pavilion. Retrieved 2013 4-10 from About.com: [http://gochicago.about.com/od/attractionsandlandmarks/ss/millennium\\_park\\_3.htm](http://gochicago.about.com/od/attractionsandlandmarks/ss/millennium_park_3.htm)

This website was referenced to support claims made in the case study section of the document.

Agriculture, U. S. (2013). Agriculture Research Services. Retrieved 2013 22-11 from USDA: <http://planthardiness.ars.usda.gov/PHZMWeb/Maps.aspx>

Information found in this source was referenced in the site inventory section of the document.

Arboretum, S. (Producer), Sawyers, C. (Writer), & College, D. o. (Director). (2012). Artful Gardens Part 2: Scott Outdoor Amphitheater [Motion Picture].

This video was used to describe the design elements of the Scott Arboretum in case study one. Clair Sawyers beautifully articulated the spatial features of the Scott Arboretum and this information was useful in understanding the key elements of the case study design.

Art, T. M. (2013). Theater and Amphitheater in the Roman World. Retrieved 2013 29-9 from The Metropolitan Museum of Art: [http://www.metmuseum.org/toah/hd/tham/hd\\_tham.htm](http://www.metmuseum.org/toah/hd/tham/hd_tham.htm)

This .org website was referenced in the history of amphitheaters section. Facts including dates of early Roman amphitheaters are given in this document.

Atelier, A. (2011). Interior light effects on human mood and social behavior. Retrieved 2013 5-10 from Arefian Atelier: <http://www.arefianatelier.com/interior-light-effects-on-human-mood-and-social-behaviour.html>

This website provided credible sources in discussing the effects of lighting on human behavior. It was referenced in the lighting section of

the literature review.

Baumstarck, A. (2013). Effects of Dressing Room Lighting Direction on Consumers' Perceptions of Self and Environment . Retrieved 2013 йил 4-10 from UF George A Smathers Libraries: <http://ufdc.ufl.edu/UFE0024065/00001/citation>

This online document was referenced in the literature review. It gives a detailed account of a study conducted by Anne Baumstarck on the effect of different lighting on customers in dressing rooms.

BBC. (2013). History. Retrieved 2013 йил 28-9 from [bbc.co.uk](http://www.bbc.co.uk/history/ancient/romans/pompeii_art_gallery_02.shtml): [http://www.bbc.co.uk/history/ancient/romans/pompeii\\_art\\_gallery\\_02.shtml](http://www.bbc.co.uk/history/ancient/romans/pompeii_art_gallery_02.shtml)  
Referenced in the history of amphitheaters section.

Cancian, S., & Jewell, L. (2004). 'Keeping the boys busy': outdoor theatres of the Great Depression: on-site, incremental design gives form to the complex relationship of site and structure. *Studies In The History Of Gardens*

This online journal article was referenced in the history of amphitheaters sector of my thesis. This source describes in great detail the documentation of amphitheaters created during the great depression.

Chicago.org, C. o. (2013). Millennium Park Map. Retrieved 2013 йил 4-10 from Millenium Park-Plan your Visit: [http://www.cityofchicago.org/city/en/depts/dca/supp\\_info/millennium\\_park\\_-\\_planyourvisit.html](http://www.cityofchicago.org/city/en/depts/dca/supp_info/millennium_park_-_planyourvisit.html)  
Used in case study 2.

City of Chicago. (2013). Millenium Park Chicago. Retrieved 2013 5-October from Jay Pritzker Pavilion Facts and Figures: [http://www.cityofchicago.org/city/en/depts/dca/supp\\_info/millennium\\_park\\_-\\_jaypritzkerpavilionfactsandfigures.html](http://www.cityofchicago.org/city/en/depts/dca/supp_info/millennium_park_-_jaypritzkerpavilionfactsandfigures.html)

Used in case study 2.

City-Data. (2013). Willmar Minnesota. Retrieved 2013 20-11 from



City-Data.com: <http://www.city-data.com/city/Willmar-Minnesota.html>

This website was used to find the demographics of Willmar, Minnesota.

College, S. (2009). Garden Tour. Retrieved 2013 3-10 from The Scott Arboretum: <http://www.scottarboretum.org/gardentour/amphitheater/>  
Used in case study 1.

College, S. (2009). Swarthmore College Campus Map. Retrieved 2013 йил 3-10 from Swarthmore.edu: <http://www.swarthmore.edu/campusmap/destinations/details.php?destination=amphitheater>  
Used in case study 1.

Crutchfield, D. (2013 3-10). Associate Profession of Architecture . (D. Holmgren, Interviewer)  
Interview with North Dakota State University's associate professor of architecture, David Crutchfield, conducted by myself on Oct 3, 2013.

Designers, I. A. (2013). Benefits Of Good Lighting. Retrieved 2013 3-10 from International Association of Lighting Designers: <http://www.iald.org/design/benefits.asp>  
This reference was used in the lighting section of the literature review.

Farms, S. (2013). Weddings at Stonewall Farms. Retrieved 2013 5-11 from Stonewall Farms Friesians and Events: <http://stonewallevents.com/weddings/>  
This reference was for the Stonewall Farms, Friesians and Events website. It was heavily referenced throughout chapters three and four.

Francis, M. (1999). Landscape Architecture Foundation. Retrieved 2013 5-October from A Case Study Method For Landscape Architecture:  
This document described the process of creating a proper case study. It was referenced here as a template for creating my two case studies. Note, not all elements of a full case study described in this document were included in the final case studies I created.

Google. (2013). Google Earth . Willamr, MN, United States.

This website was used to calculate areas and distances .

Grand Park Music Festival . (2013). Grand Park Music Festival in Millennium Park . Retrieved 2013 6-October from Map of Millennium Park :  
<http://grantparkmusicfestival.com/plan-your-experience/map-of-millennium-park>  
Referenced in case study 2.

Harris, C., & Dines, N. (1998). Time-Saver Standards for Landscape Architecture. New York: McGraw-Hill, Inc.  
This book was referenced in the literature review. It lists key elements of amphitheater design.

HIRSCH, M. (2013). Minn. drownings hit 10-year high. Retrieved 2013 25-11 from StarTribune: <http://www.startribune.com/local/161474675.html>  
This website lists the number of deaths in Minnesota lakes each year.

Holmgren, K. (2013 25-9). Stonewall Farms Manager. (D. Holmgren, Interviewer)  
Interview with Kim Holmgren, Stonewall Farms manager.

Lechner, N. (2012). Plumbing, Electricity, Acoustics Sustainable Design Methods for Architects. New Jersey: John Wiley & Sons.  
This book was recommended to me by David Crutchfield of North Dakota State University's architecture program. It was referenced in the literature review because it covers sound system acoustic methods.

Oaks, R. (2013). Rustic Oaks, Wedding, Events, Retreats, On-Site Lodging. Retrieved 2013 11-11 from Rustic Oaks: <http://www.rusticoaks.net/>  
Rustic Oak's website.

Oxford University Press. (2011). Retrieved December 3, 2013, from Oxford Advanced American Dictionary:  
<http://oaadonline.oxfordlearnersdictionaries.com/dictionary/>



## amphitheater

This was a link to the quote definition of an amphitheater found in the introduction.

Park, C. o. (2013 24-9). VETERANS' MEMORIAL AMPHITHEATER. Retrieved 2013 24-11 from St. Louis Park Minnesota: <http://www.stlouispark.org/facilities-services/veterans-memorial-amphitheater.html>

Used in case study research.

Places, B. (2013). Climate in Kandiyohi County, Minnesota. Retrieved 2013 25-11 from Sperlings Best Places: <http://www.bestplaces.net/climate/county/minnesota/kandiyohi>

This website contained the climate comfort rating of Minnesota.

Project, H. C. (2013). Hawk Creek Watershed Project. Retrieved 2013 26-11 from Hawk Creek Watershed Project: [http://www.hawkcreekwatershed.org/index\\_files/newsletter2011.pdf](http://www.hawkcreekwatershed.org/index_files/newsletter2011.pdf)

This source was used in the site inventory for information related to the watershed of the site.

Resources, D. o. (2013). Lake information report. Retrieved 2013 25-11 from Minnesota Department of Natural Resources: <http://www.dnr.state.mn.us/lakefind/showreport.html?downum=34024600>

Used in site water system inventory.

Resources, D. o. (2013). Minnesota Department of Natural Resources. Retrieved 2013 27-10 from Climate: <http://www.dnr.state.mn.us/faq/mnfacts/climate.html>

Used in site water system inventory.

Section, M. D.-B. (2013). Minnesota Ice-Related Fatalities 1976-2013. Retrieved 2013 25-11 from Department of Natural Resources: [http://files.dnr.state.mn.us/education\\_safety/safety/ice/ice\\_stats.pdf](http://files.dnr.state.mn.us/education_safety/safety/ice/ice_stats.pdf)

Used in site inventory.

Society, K. C. (2012). Guri Enreson Cabin. Retrieved 2013 25-

11 from Kandiyohi County Historical Society: <http://www.kandiyohicountyhistory.com/endreson%20cabin.html>

Used in site history inventory.

Stein, B., Reynolds, J., Grondzik, W., & Kwok, A. (2006). Mechanical and Electrical Equipment for Buildings. New Jersey: John Wiley & Sons.

This book was heavily referenced in my literature because it communicated in easy to understand terms, the many technical principles associated with acoustic and lighting design. Also recommended by David Crutchfield of North Dakota State University's architecture program.

The Cultural Landscape Foundation. (2013). The Cultural Landscape Foundation: Stewardship through education. Retrieved 2013 5-October from Thomas W. Sears: <http://tclf.org/pioneer/thomas-w-sears>

A biography of Thomas W. Sears.

University, H. (2010). Minnesota-Climate. Retrieved 2013 25-11 from City Data.com: <http://www.city-data.com/states/Minnesota-Climate.html>

Used in climate inventory.

Williams, S. (2013). How Poison Ivy Works. Retrieved 2013 22-11 from How Stuff Works: <http://science.howstuffworks.com/life/botany/poison-ivy.htm>

Used in supporting the potential dangers of Poison Ivy.

Willmar, C. o. (2013). History. Retrieved 2013 йил 24-11 from The City of Willmar Minnesota: <http://www.willmarmn.gov/visitors/history> [www.lafoundation.org/myos/my-uploads/2010/08/19/casestudymethod.pdf](http://www.lafoundation.org/myos/my-uploads/2010/08/19/casestudymethod.pdf)

Used in History inventory.



# APPENDIXES

## History of The Amphitheater

Societies have relied on amphitheaters for entertainment and to satisfy the needs of various social, political, and religious functions (BBC, 2013). An early application of amphitheater design was in the form of near circular arenas intended for the viewing of sporting events and gladiatorial battles. Today, the term amphitheater most often refers to a more semi-circular design. Many designers take advantage of natural earthen formations to create an optimal vantage point for the viewing of performances.

During the Great Depression, the United States Government's Civilian Conservation Corps (or the CCC), under the phrase "keeping the boys busy," constructed several such amphitheaters in order to provide job opportunities for the nearly ten million people needing work from 1933-1942. The CCC enlisted approximately 3,612,000 men to carry out the labor of constructing some of the United States most prominent built icons (Cancian & Jewell, 2004). These built works include the Hoover Dam, the Empire State Building, the Golden Gate Bridge and Central Park in New York City. Among these great feats, the government commissioned a series of amphitheater spaces. Best known are the Arizona Papago Theater, Berkeley California's John Hinkle Park, Mt. Tamalpais Theater, Boulder Colorado's Flagstone Theater, and possibly most notable, the Colorado's Red Rocks Amphitheater. (Cancian & Jewell, 2004).

In the twenty first century, society still recognizes the need for outdoor space design for the coming together of people for a common purpose. Whether that purpose is a musical performance, political rally, or social event (such as wedding ceremony), amphitheaters still play a unifying role in societies today as they have for the past two thousand years.

## Map of Willmar, Minnesota



## Scale Study Model







## ABOUT ME

A person with a deep appreciation for art and the natural world, my objective is to motivate those around me through my passion for design and the positive energy I bring to each project I work on. I seek the utmost level of excellence in my work, and understand the influence a positive attitude and personal integrity play in professional self-representation.

My time in North Dakota State University's Landscape Architecture program has helped develop me as a designer. This education has given me the catalyst to combine my greatest passions into a career path.

I am proud to be a part of the diverse and ever-expanding nature of the Landscape Architecture profession's present, and to be an influential part of its future.

-Drew J Holmgren