



Radrick Farms Golf Course, Hole 12 (Image courtesy of Radrick Farms Historical Archive)



Greener Golf : Gateway Course Design Guide

Supplemental Material of the Greener Golf Report: An Ecological, Behavioral, and Communal Study of the University of Michigan Golf Courses



Greener Golf



RADRICK FARMS GOLF COURSE; Ann Arbor, Mi
ARCHITECT: Pete Dye, ASGCA,
CONSTRUCTED: 1965





Radrick Farms Golf Course, Hole 14





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INTRODUCTION

Why Greener Golf?

- Why Golf?
- The Benefits of a Sustainable Golf Course.

"For centuries, golf has uniquely integrated nature and communities, providing environmental and social benefits. Protection of coastal zones and urban green space, improved air and water quality, employment, community, and a healthy, inter-generational sport set in ecologically rich landscapes. Now, as sustainability concerns and expectations rise across all aspects of life, the golf community is well positioned to contribute more."

-Golf Environment Organization





Why Golf?

This project was born from a partnership between the University of Michigan Golf Courses and the University of Michigan School of Natural Resources and the Environment. The client aimed to assess the current holistic benefits and implications of the University of Michigan's two golf courses on the surrounding community and ecosystems. This assessment served to inform further recommendations for deepening and broadening these benefits with the intent of improving the University of Michigan Golf Courses already exemplary sustainability initiatives. In doing so, this paper and the myriad of multi-disciplinary research which informs it, aims more broadly to push the boundaries of what it means for a golf course to be 'sustainable.' Prior to evaluating the courses specifically, we considered how sustainability is being considered in the golf industry as a whole. With an understanding of the industry history and trends we then aimed to provide an informed analysis of the University's courses.



The Benefits of a Sustainable Golf Course

Having explored the current trends in the golf industry, the growing impacts of global climate change, and the resulting movement for increased incorporation of sustainability practices in golf course management, the Greener Golf Masters Project Team next set out to create a working definition of sustainable golf. We selected the ethics of permaculture as guiding parameters for our definition of sustainable golf. The permaculture movement includes the integration of three main tenets: care for the earth, which for our considerations encompassed the ecological and environmental benefits and implications of incorporating potential multi-use spaces and native ecosystems in golf courses; care for the people, which encompassed the individual and communal benefits of restorative green space offered by golf courses; and fair share, which encompassed the trade-offs in economic growth and sustainability at the golf courses. A sustainable golf course engages the assets of the surrounding area. Harnessing the energy of natural systems, like developing community-wide stormwater management strategies, benefits the golf course by capturing water and using it as a resource on site while benefiting the surrounding community by reducing the amount of urban stormwater runoff ending up in the sewer system. A sustainable golf course establishes partnerships with the natural ecosystems on site; raising honeybees as a pollination source as well as a producer of honey, employing goats as a way to eradicate invasive species from natural areas, harnessing the power of the sun through photovoltaics, developing creative irrigation methods, developing multiple uses of the land with orchard plantings for a valuable food source are some of the benefits of integrating sustainability into the design, construction, and management of a golf course. But first it is critical to understand your site.





CHAPTER 1 : Design Process :

How to study the opportunities on your site

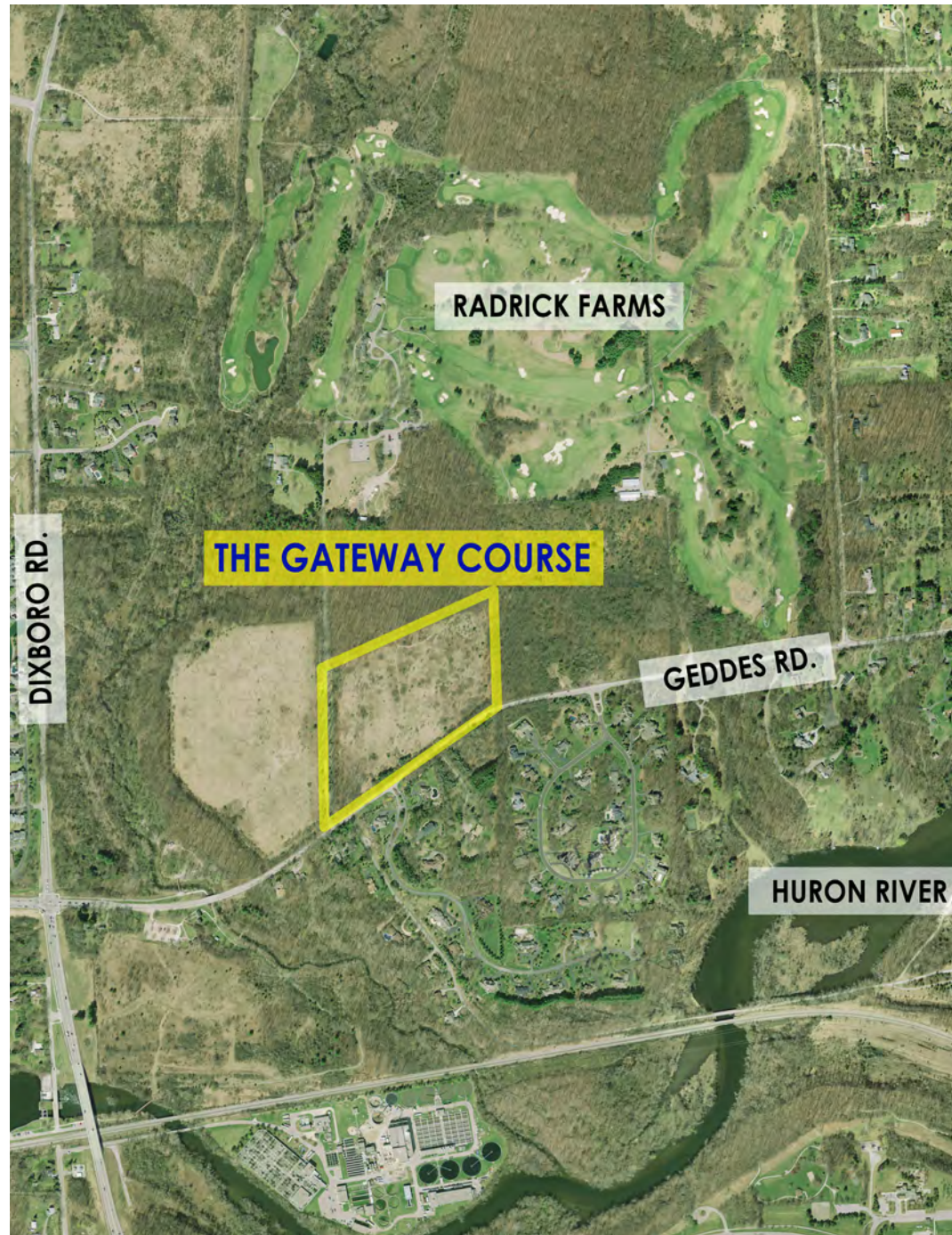
- Locate where your golf course fits into the larger context.
- Inventory : Study and document what's on the property.
- Analysis : Analyze how areas and characteristics can be used as opportunities for sustainability
- Take it to the Next Level : Build A Model!
- Continue to gain and in depth understanding of your site and how it changes.

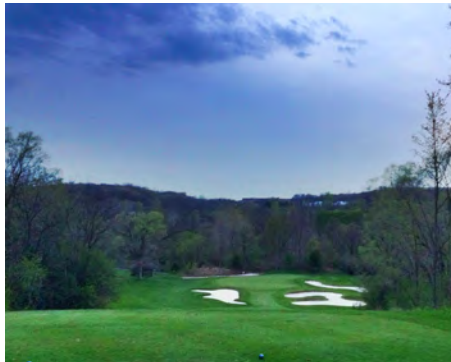
The key to making informed decisions is simply to be informed, but given the time constraints of demanding responsibilities, how can a manager invest in the resources needed to get a better understanding of the golf course ecosystems? If golf course managers can more holistically integrate the golf course into a symbiotic relationship with the surrounding community, they can ensure a great first leap forward in sustainability.



Locate where your golf course fits into the larger context.

Understanding the location of your golf course in relation to the regional watershed and other natural features will help produce smarter management decisions. This research, however is not easy, and with an already limited amount of time, a golf course manager must develop creative ways to find this information. Knowing what institutions surround the golf facility and where mutually beneficial partnerships can be forged holds positive implications for the future management of the golf course. Initiating partnerships with local research institutions and nearby schools will connect the learning objectives of those entities, while providing the golf course with valuable data collection regarding a number of beneficial criteria for the golf course by providing more background for management decision-making in the future. Partnerships with local research institutions will provide the golf facility with a greater understanding of what is happening on the golf course. Knowing the site allows for the golf course manager to be better aware of critical areas, underutilized resources, how people interact with the site, and opportunities to promote positive change.





Study and document what is on the property.

Knowledge of the site, knowledge of the local resources, and knowledge of the systems in play on the site is of the utmost importance. When there is observation and data collection regarding the hydrology, ecology, biology, anthropology, and economy of the golf course, better-informed decisions can be made regarding the long-term health and sustainability of all aspects of the golf operation in mind.

Analyze how areas and characteristics can be used as opportunities for sustainability.

It is critical to know the systems in place on the site. Golf courses have complex ties to the local ecosystems and often have significant impacts on those systems. Again, once data is collected and analyzed, systems diagrams can be created to map the complex systems in place on site. Once these systems are laid out, the manager can choose strategically at which point to intervene in these systems in order to best promote and attain the goals of the management program in parallel with the health of his or her course.



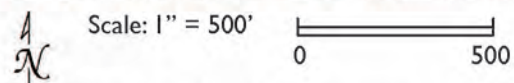
Radrick Farms Golf Course

Existing Conditions Inventory Map

Location: 4875 Geddes Road, Ann Arbor, MI 48105



Data Layer Source: 2015 Spatial and Numeric Data Services (SAND) U-M Library



Note: Specific holes are listed that include inventory on, or related to that hole

<p>Hole 1</p> <ul style="list-style-type: none"> 1.1 Entrance garden centrally located in front of Clubhouse 1.2 Planting between tees of Hole 1 & 10 1.3 Grassland containing 2 Bluebird, Mixed Forest containing 1 Purple Martin bird house to the East, and planting 1.4 Sod Farm <p>Hole 2</p> <ul style="list-style-type: none"> 2.1 Mixed Forest Land Cover with planted area <p>Hole 3</p> <ul style="list-style-type: none"> 3.1 View to the North down Hole 3 Fairway and Mixed Forest area <p>Hole 5</p> <ul style="list-style-type: none"> 5.1 Grassland containing 4 Bluebird houses, 1 Purple Martin bird house to the South, and planted area to the North 5.2 Small Creek with covered Bridge passageway 	<p>Hole 6</p> <ul style="list-style-type: none"> 6.1 Historic Barn from Radrick Farm by Green <p>Hole 8</p> <ul style="list-style-type: none"> 8.1 Grassland containing 4 Bluebird Houses <p>Hole 9</p> <ul style="list-style-type: none"> 9.1 View to the North down 9th Fairway and over Grassland <p>Hole 12</p> <ul style="list-style-type: none"> 12.1 High Point View to the Southwest 12.2 Mixed Forest and Grassland Land Cover <p>Hole 13</p> <ul style="list-style-type: none"> 13.1 View to the Southwest across 13th Hole <p>Hole 14</p> <ul style="list-style-type: none"> 14.1 View West across 14th Hole 	<p>Hole 15</p> <ul style="list-style-type: none"> 15.1 View to West towards Fleming Creek 15.2 Pedestrian Access and Connection to Radrick Forest 15.3 Threatened Species: Eastern Massasauga Rattlesnake Habitat in Wetland adjacent to Fleming Creek <p>Hole 16</p> <ul style="list-style-type: none"> 16.1 Fry Pond 16.2 View North over Fry Pond <p>Hole 17</p> <ul style="list-style-type: none"> 17.1 Fleming Creek runs South through the site <p>Hole 18</p> <ul style="list-style-type: none"> 18.1 Three sections of Parking with landscaped area 18.2 Bee Hives in Grassland Field 18.3 Vegetable Garden adjacent to Caretaker Barns 18.4 Automobile Access to Parking for site
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Radrick Farms Golf Course

Future Conditions Analysis Map

Location: 4875 Geddes Road, Ann Arbor, MI 48105



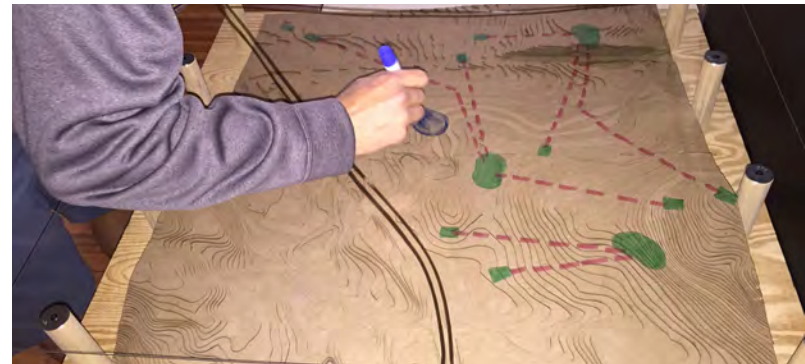
Scale: 1" = 500'

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Data Layer Source: 2015 Spatial and Numeric Data Services (SAND) U-M Library

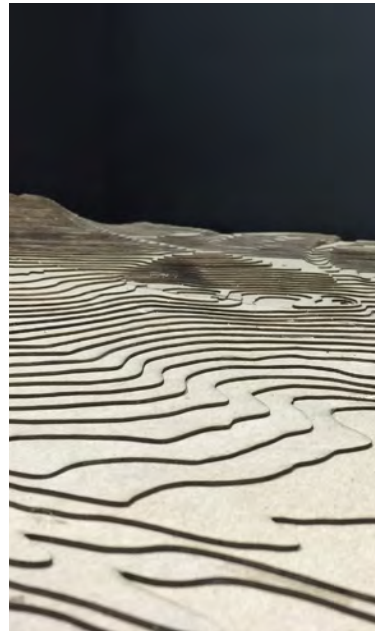
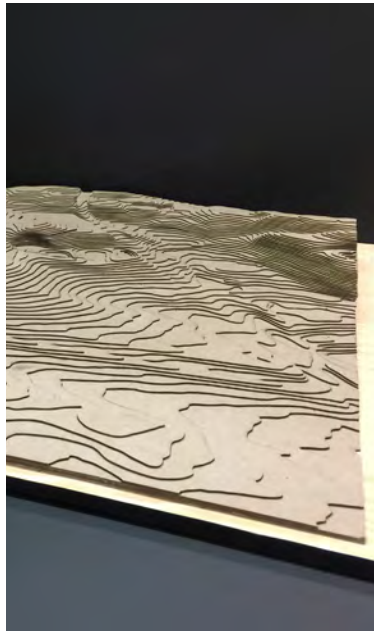
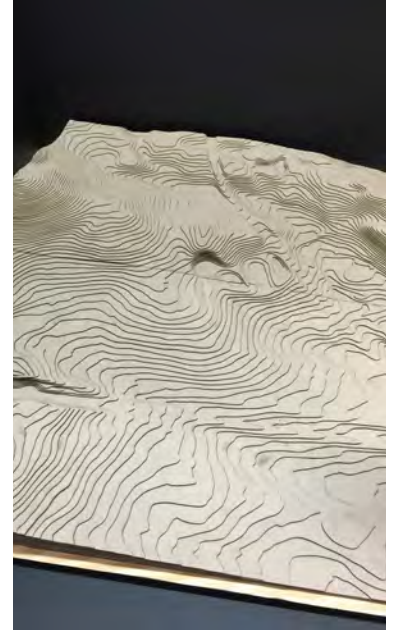
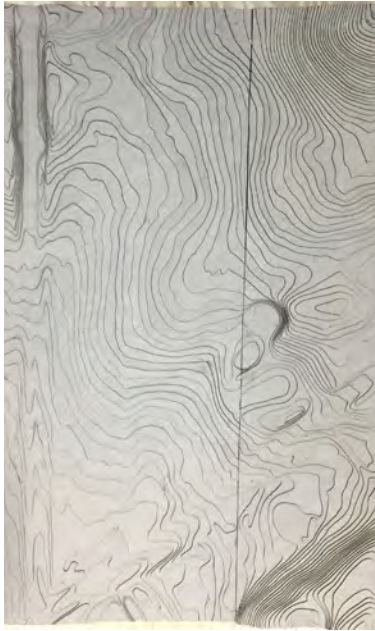
Note: Specific holes are listed that include inventory on, or related to that hole

<p>Hole 1</p> <ul style="list-style-type: none"> 1.1 Entrance garden potential to showcase new combination of native shrubs and perennials including signature species 1.2 Potential planting improvement with new native signature species 1.3 Potential for invasive removal management plan and habitat fostering plantings for Mixed Forest & Grassland land cover 1.4 Educational signage to showcase the different species of sod that are being grown and that space being used as a living lab for turf grass 	<p>Hole 5</p> <ul style="list-style-type: none"> 5.1 Potential for invasive removal management plan and habitat fostering plantings for Grassland land cover and potential for updated signature planting 5.2 Potential area to apply 'Cues to Care' maintenance and more natural plantings 	<p>Hole 13</p> <ul style="list-style-type: none"> 13.1 View to the Southwest across 13th Hole fosters Environmental Stewardship
<p>Hole 2</p> <ul style="list-style-type: none"> 2.1 Potential for invasive removal management plan and habitat fostering plantings for Mixed Forest land cover and potential for updated signature planting 	<p>Hole 6</p> <ul style="list-style-type: none"> 6.1 Educational signage for Barn to showcase the history of the course 	<p>Hole 14</p> <ul style="list-style-type: none"> 14.1 View West across 14th Hole fosters Environmental Stewardship of Protected Saginaw Forest
<p>Hole 3</p> <ul style="list-style-type: none"> 3.1 View can showcase Mixed Forest area and updated signature planting 	<p>Hole 8</p> <ul style="list-style-type: none"> 8.1 Potential for invasive removal management plan and habitat fostering plantings for Grassland land cover 	<p>Hole 15</p> <ul style="list-style-type: none"> 15.1 View to West towards Fleming Creek fosters Environmental Stewardship of Fleming Creek 15.2 Signage to Educate visitors on the Threatened Species: Eastern Massasauga Rattlesnake
	<p>Hole 9</p> <ul style="list-style-type: none"> 9.1 View can showcase Sustainable Management Practices of Grassland area 	<p>Hole 16</p> <ul style="list-style-type: none"> 16.1 Potential area to apply 'Cues to Care' around the retention pond including maintenance and native plantings 16.2 View North over Fry Pond can showcase 'Cues to Care'
	<p>Hole 12</p> <ul style="list-style-type: none"> 12.1 High Point View can showcase new Management of Natural Areas across the course 12.2 Potential for invasive removal management plan and habitat fostering plantings for Mixed Forest & Grassland land cover 	<p>Hole 17</p> <ul style="list-style-type: none"> 17.1 Potential area to apply 'Cues to Care' maintenance and more natural plantings
		<p>Hole 18</p> <ul style="list-style-type: none"> 18.1 Planting strip adjacent to entrance parking potential for bioswale planting to filter impervious surface runoff



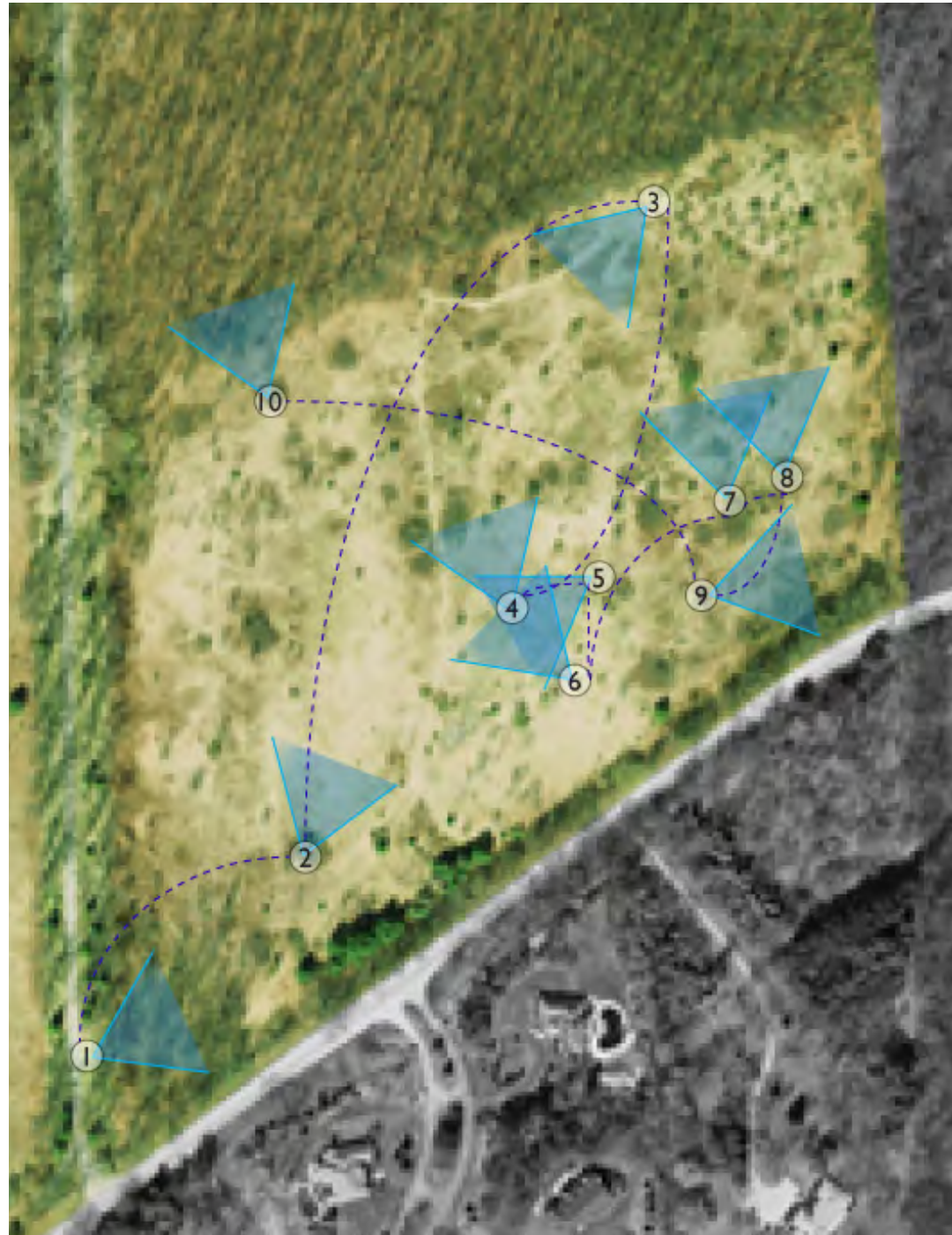
Take it to the Next Level: Build a Model!

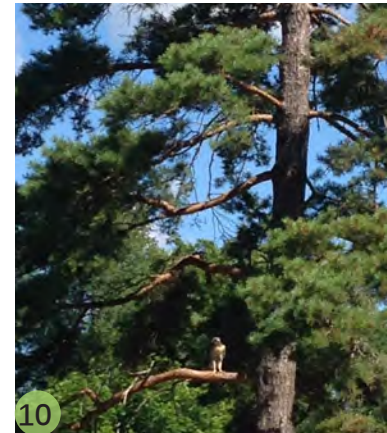
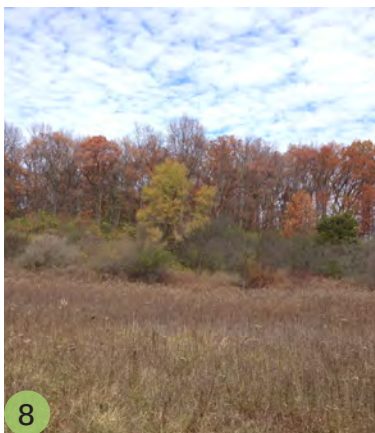
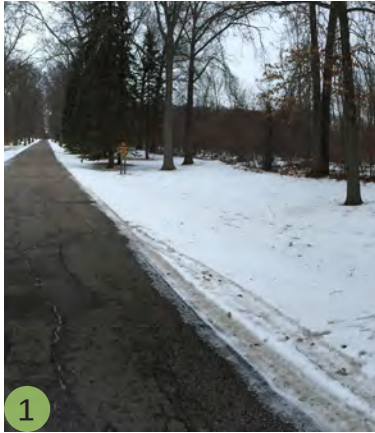
One of the biggest obstacles facing golf course managers, is the sheer scale of influence of their site. The management of the golf course will have implications for the site, but also for the surrounding community and region. A great way to better understand the character of a site is to build a model. Models can serve multiple functions and aid in the design, construction, and management of a golf course. Additionally, models are excellent teaching tools, giving clients and customers unfamiliar with reading topographic maps a tool to help them visualize the site and help the designer or manager describe the intention of a design. Creating the model and using it are great ways to communicate ideas, talk through issues on the site, explore the hydrology of the site, highlight key areas of interest, conduct view analyses, amongst other functions. Using a model in the design process will provide the designer with a tool to help them justify their decisions with regard to the routing and placement of features of the golf course.



Continue to gain and in depth understanding of your site and how it changes throughout the year.

Especially in areas with seasonality, like Michigan, it is important to understand how the site changes throughout the year. Honeybees require forage throughout the spring, summer, and fall seasons. There are times of heavy precipitation and times of drought so it is critical to attempt to capture as much water when it is available so that when water resources are limited the efforts made to harness and infiltrate as much water as possible into the soil will be rewarded by keeping the vegetation healthy and the hydrology intact. Also, understanding how the character of the site changes will give the designer or manager the insight into how to highlight different features during different times of the year. Intentional plantings need to be cognizant of the blooming time and the companion plantings in order to provide the greatest possible aesthetic qualities as well as the greatest possible ecological functions. Seasonal differences will impact management strategies with regard to mowing the managed turf areas, managing the natural areas, whether with fire using prescribed burns, or using goats to suppress invasive species. It is important to study your site so that you can plan accordingly and employ and partner with these natural processes to achieve the greater benefit.







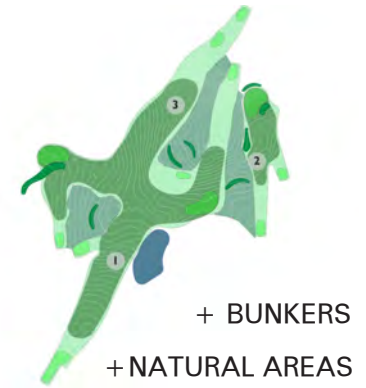
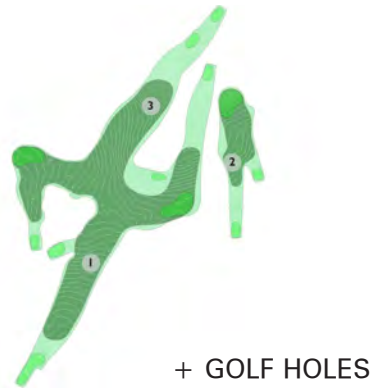
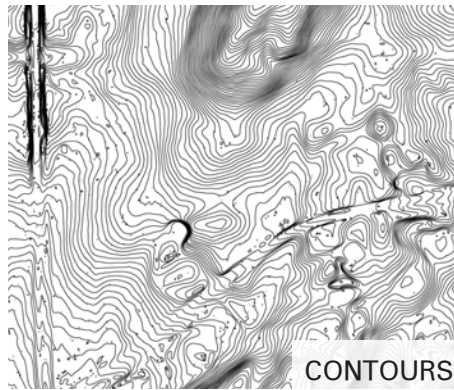
CHAPTER 2 : Master Plan

How to build a master plan for a sustainable golf course property.

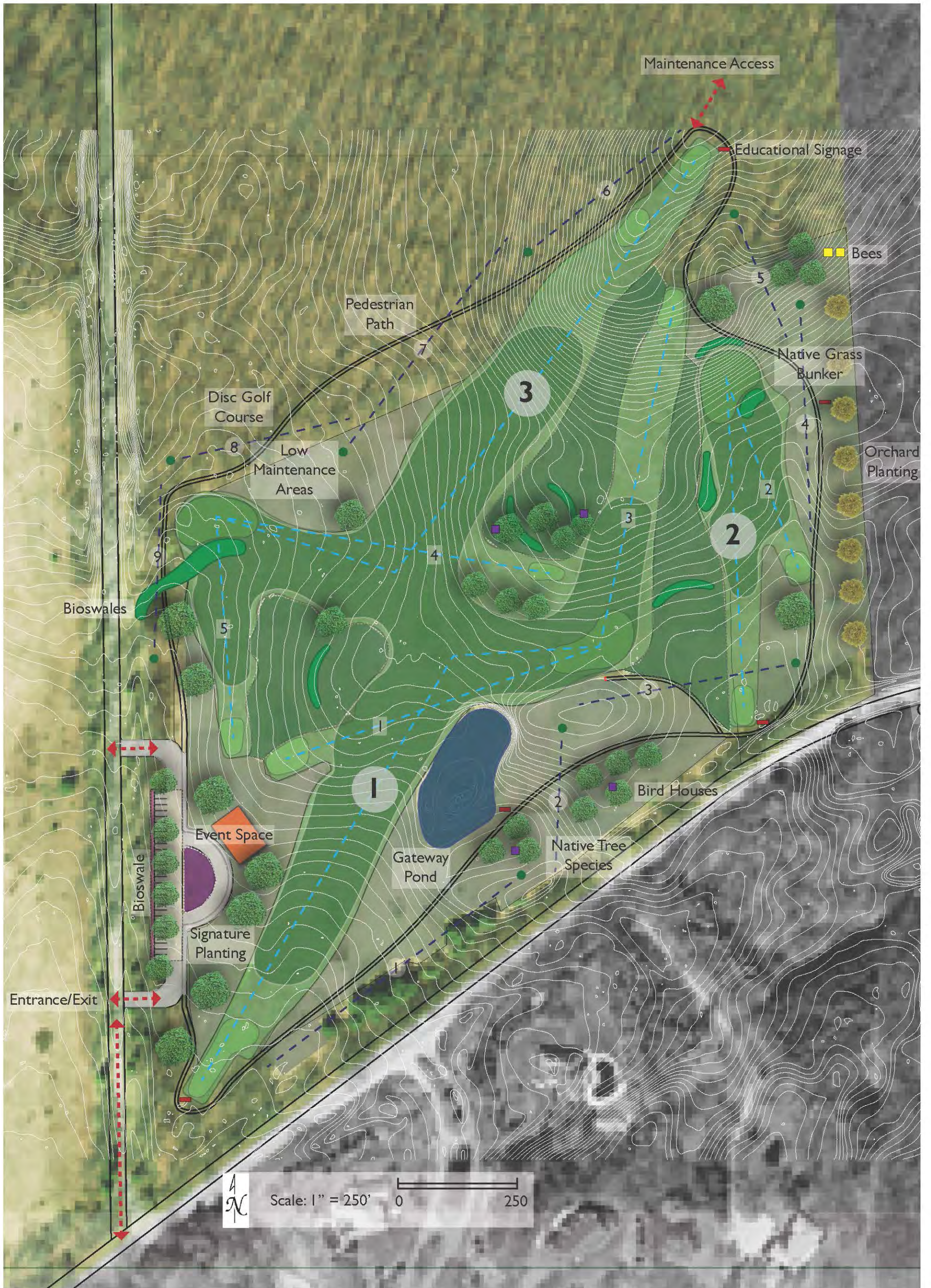
- How the course was designed and what features are important to analyze.
- Gateway Master Plan

How a design is conveyed to a customer, investor, or coworker will have a great impact on the success of that project. Along with a careful understanding of the features of the site, it is important to be able to clearly demonstrate those features along with your intentions. With the technology available, it is possible to show multiple layers of use and function of a design to better demonstrate the design intent.





How the course was designed and what features are important to analyze.





CHAPTER 3 : Design Implementation

How to implement these sustainable features into your site.

Engagement : What plants to use for your signature garden, bioswale, and rain garden.

Accessibility : What multi-uses to include to on-site to attract more users and promote environmental stewardship.

Innovation : Alternative maintenance practices that cut down on costs, while offering a unique practice of sustainable golf.

"The chief object of every golf architect worth his salt is to imitate the beauties of nature so closely as to make his work indistinguishable from nature itself."

-Dr. Alister MacKenzie





**ENGAGEMENT : What plants to use for your signature garden, bioswale,
and rain garden.**

Selecting plants is a significant undertaking and requires much deliberation and thought. It is highly recommended to employ the services of a local native plant expert. Most areas in the United States have a local plant nursery that has experience in developing a native plant palette to work from. Also, it is important to develop goals for your plantings. Do you want your plants to perform certain functions, like preventing erosion, providing forage for pollinators, or filtering contaminants from water to name a few? Your local naive plant expert will help you decide your planting palette based on your goals and objectives of your planting.



Type	ID	Botanical Name	Common Name	Size	Spread	Maintenance
Grasses	IG	<i>Sorghastrum nutans</i>	Indian Grass	1 gal	2' ocs	cut back late winter
	SG	<i>Panicum virgatum</i>	Switchgrass	1 gal	3' ocs	cut back late winter
Perennials	BHBB	<i>Buddleja davidii</i> 'Butterfly Heaven'	Butterfly Heaven' Butterfly Bush	1 gal	3' ocs	
	FG	<i>Digitalis purpurea</i>	Foxglove	1 gal	1.5' ocs	
	BFI	<i>Baptisia australis</i>	Blue False Indigo	1 gal	3.5' ocs	
	CF	<i>Lobelia cardinalis</i>	Cardinal Flower	1 gal	2' ocs	
	GH	<i>Agastache</i> 'Black Adder'	Giant Hyssop	1 gal	2' ocs	
	JPW	<i>Eupatorium purpureum</i>	Joe-Pye Weed	1 gal	4' ocs	

Note: All species are also classified as 'Deer Resistant' by the Dept. of Fisheries and Wildlife, MSU Extension and Christensen's Plant Center, [Selecting Deer Resistant Plants](#).

Signature Planting

To plan for the potential upgrade of a cohesive planting palette for your course, the use of signature species can be applied. Signature species mean the same plant species or the same mixture of multiple species is used and repeated throughout the course. This concept is one that visitors will instinctively notice while playing or exploring the course. When people understand a pattern within the landscape, they have a better appreciation for it. Using signature species can also be a type of branding tactic and provide a sense of place at each course. Highlighting the native species used on the site in a highly visible area will provide users of the site a reference for what they see when they are engaged in the site. A signature planting will showcase the interactions of native plant species and will bring together a variety of plants that provide function, forage, and beauty for a variety of species, human and non-human.

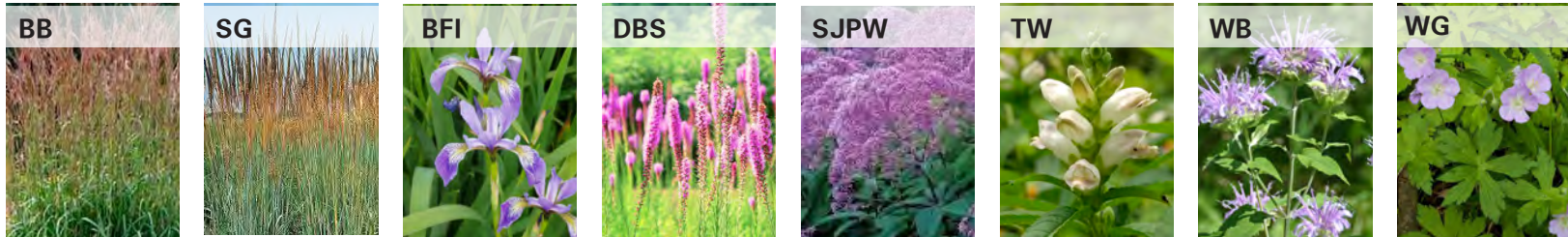


Type	ID	Botanical Name	Common Name	Size	Spread	Maintenance
Grasses	BB	<i>Andropogon gerardii</i>	Big Bluestem	1 gal	2.5' ocs	cut back late winter
	BS	<i>Carex comosa</i>	Bristly Sedge	1 gal	2.5' ocs	cut back late winter
	BBS	<i>Carex lurida</i>	Bottlebrush Sedge	1 gal	2.5' ocs	cut back late winter
	COS	<i>Carex cristatella</i>	Crested Oval Sedge	1 gal	2.5' ocs	cut back late winter
	SG	<i>Panicum virgatum</i>	Switchgrass	1 gal	2.5' ocs	cut back late winter
	VWR	<i>Elymus virginicus</i>	Virginia Wild Rye	1 gal	2.5' ocs	cut back late winter
Perennials	MBS	<i>Liatris spicata</i>	Marsh Blazing Star	1 gal	1" ocs	
	SM	<i>Asclepias incarnata</i>	Swamp Milkweed	1 gal	2.5' ocs	
	SJPW	<i>Eupatorium maculatum</i>	Spotted Joe-Pye Weed	1 gal	3' ocs	

Note: All species were classified as "Emergent Wetland" and "Wetland Edge" suitability from the Cardno JFNew Native Plant Nursery: Resource Catalog.

Bioswale

Bioswales have been incorporated in the design of the Gateway Course as an integral component of the objectives to achieve sustainable management. Bioswales are landscape elements that are designed to capture and filter stormwater. Instead of the traditional ditch, installing bioswales on a golf course will reduce the needs for irrigation by keeping the soil saturated longer in times of little precipitation. Bioswales are filled with vegetation (see above planting palette) and can filter contaminants from stormwater runoff. The plants chosen were selected for their multi-functionality and ecological benefits. The bioswales of the Gateway Course were designed along contour lines using the topographic maps in order to capture the greatest amount of stormwater and harness that resource on site.



Type	ID	Botanical Name	Common Name	Size	Spread	Maintenance
Grasses	BB	<i>Andropogon gerardii</i>	Big Bluestem	1 gal	2.5' ocs	cut back late winter
	SG	<i>Panicum virgatum</i>	Switchgrass	1 gal	2.5' ocs	cut back late winter
Perennials	BFI	<i>Iris versicolor</i>	Blue Flag Iris	1 gal	2.5' ocs	
	DBS	<i>Liatris spicata</i>	Dense Blazing Star	1 gal	1' ocs	
	SJPW	<i>Eupatorium maculatum</i>	Spotted Joe-Pye Weed	1 gal	3' ocs	
	TW	<i>Chelone glabra</i>	Turtlehead 'White'	1 gal	2.5' ocs	
	WB	<i>Monarda fistulosa</i>	Wild Bergamot	1 gal	2.5' ocs	
	WG	<i>Geranium maculatum</i>	Wild Geranium	1 gal	1.5' ocs	

Note: All species were classified as species suitability for a rain garden from from Washtenaw County's Sample Rain Garden Designs.

Rain Garden

The Gateway Course is designed to incorporate a sustainable alternative to waste bunkers on the course with rain gardens. Rain gardens have been placed throughout the Gateway Course, typically in lower areas. These intentional gardens are used to soak rainwater into the ground as opposed to flowing off site. Native plants are used in these gardens for the greatest resiliency and effectiveness. Rain gardens not only provide the function of water retention, but also provide several additional important functions for a sustainable golf course. Rain gardens filter contaminants out of the water and soil and improve the overall quality and health of the ecosystem. Rain gardens are primarily used adjacent to parking lots because of this ability to filter contaminants. Rain gardens also provide critical habitat for a multitude of species. Additionally, rain gardens can provide aesthetic qualities and educational opportunities for viewers of these areas.





ACCESSIBILITY : What multi-uses to include on-site to attract more users and promote environmental stewardship.

One of the most pervasive findings from the literature review conducted regarding the benefits golf courses can offer to their host communities is their preservation of green space in developed, urban areas. This green space allows for individual cognitive health, which is important in maintaining individual mental health and community connectedness, complimenting medical treatment to improve physical health and decrease healthcare expenditure, and ultimately in promoting local pro-environmental action. However, the provision of these benefits is contingent upon community access to this green space; restoration is only provided by time spent looking at or walking in nature. We suggest that in order to become more truly sustainable, golf courses allow for multi-use scenarios—from walking paths in the summer to cross-country skiing paths in the winter, from disc and soccer golf courses to plots for community gardens, from contemplative meditation sites to hosting community events. We understand that these multi-use scenarios will require operations expertise in both scheduling and grounds keeping to maintain the high level of maintenance and playability that patrons expect from both courses, but we ask that you understand that we believe strongly that sharing the green space of a golf course can un-tap an unrealized shared value. By our definition, sustainable golf cannot be partitioned off and isolated. Golf as a sport has shrunk, not grown from this approach. Sustainable golf, truly sustainable for the environment, for the community, and for the sport must allow access.

DISK GOLF



EVENTS PAVILION



WALKING PATHS



CROSS COUNTRY SKIING



OUTDOOR LAB



EDUCATIONAL CLUBS





INNOVATION : Alternative maintenance practices that cut down on costs, while offering a unique practice of sustainable golf.

Several ideas that demonstrate the opportunity for innovative technology are the use of goats as a maintenance tool, solar panels on roofs, and recycling water systems. Goats may not seem like a natural fit for the golf courses, but they provide a low impact method for invasive species removal, which is critical in some areas of the courses. The use of goats avoids emissions associated with motor-mowers, and goats minimize the cost of labor. Reducing dependency on resources is important for both the courses' bottom lines and their sustainability, for ultimately these issues are tied. Consideration of resource use should include new water technology that promotes recycling. Recycling water significantly decreases the courses' impacts on the surrounding environment and will help save costs in other areas. The purpose of these ideas are to demonstrate the possibility of innovation.

ALTERNATIVE ENERGY IRRIGATION STRATEGIES



NEW MOWING TECHNOLOGY



BEE HIVES FOSTERING NATIVE POLLINATION



MULT-USE ORCHARD PLANTINGS



Pollinators

It is critically important, and at the heart of what it means to be a sustainable golf course, to provide a healthy environment for the human and non-human inhabitants of your site. Developing a strategy for protecting pollinators must be addressed. Honeybees are a species of which humans greatly rely, therefore we must do what is possible to protect them. Reducing, and hopefully eliminating, the need for harmful chemical applications on the course will greatly benefit pollinators. Planning a planting plan that addresses the flowering times of plants will provide pollinators with forage year round. Keeping honeybees on a golf course is a great opportunity. Honeybees provide valuable pollination services as well as provide the valuable resource of honey. In addition to these services honeybees are a great educational tool. People are curious about honeybees and often engage in environmental stewardship, based on their peaked interest in honeybees.

Orchard Planting

An additional potential function of golf courses is to provide food. Developing an orchard planting system on site that incorporates food-producing trees with other layers of plantings of medicinal or edible shrubs. These dynamic systems add significant value of the site by attracting beneficial insects and building healthy soil. It is up to the designer and manager to decide what type of plantings will occur on their site, but careful consideration of how these plantings interact should be taken into account. Orchard plantings can provide edible and medicinal resources, but also increase the biodiversity of the site, the potential to manage pests, and generate a profit from the site. Additionally, these plantings can absorb water, provide habitat, reduce erosion, and provide an interesting and beautiful environment for people to enjoy nature.



CONCLUSION

- Looking Towards the Future of Sustainable Golf

"The easiest thing in the world is to build a hard golf course. It's far harder to design a golf course that's playable for everyone."

-Ben Crenshaw

"The golf holes on the best links in Scotland and England have several different ways of playing them, and because they do not present just one and only one way to everybody, the interest in the game increases with the diversity of its problems."

-Donald Ross





Looking Towards The Future of Sustainable Golf

Historically the golf industry has fought against the incorporation of sustainability goals into their management strategies for fear of short-term costs and risks to quality of play. The multiple examples of golf courses' efforts to reduce their impacts on the environment, combined with the holistic investigation by the Greener Golf Master's Project Team, serve to exhibit that environmental sustainability and economic profitability in the golf industry are not mutually exclusive. Using the Greener Golf Master's Project Team's definition of sustainable golf that is built around care for the earth, care for the people, and fair share, there appears to be significant opportunity for the creation of shared value. The golf industry stands at a critical juncture; incorporation, exploration, and development of these opportunities for shared value appear as a strong chance for fostering the next generation of committed, responsible golfers and mitigating the effects of climate change on the game. We hope that this report will serve as not only the foundation of a strategic road map for the University of Michigan Golf Courses but also as an inspiration for many other courses throughout the industry. We strongly urge the use of holistic and long-term considerations in golf course management decisions, as we feel that the adoption of these concerns offers an exciting, fruitful future for the sport of golf.



Case Study Course Visit: Streamsong Golf Course; Streamsong, FL

Thank You!

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Greener Golf

