

**UtahStateUniversity**  
**BOTANICAL CENTER**

# MASTER PLAN

NOVEMBER 18, 2016  
Prepared by MHTN Architects, Inc.

# MASTER PLAN

## Contents

<b>01</b>	Executive Summary	<b>07</b>	Appendix
<b>02</b>	Existing Conditions	<b>A</b>	Demographic Projections
<b>03</b>	Vision & Needs	<b>B</b>	Cost Projection Detail
<b>04</b>	Plan Elements	<b>C</b>	Vision Input & Initial Draft
<b>05</b>	Design Standards	<b>D</b>	USUBC Existing & Proposed Facilities Summary
<b>06</b>	Phasing & Costs	<b>E</b>	Existing Building Plans
		<b>F</b>	UTA Routes - Davis & Weber Counties
		<b>G</b>	WFRC Recommended Improvements
		<b>H</b>	Plant List
		<b>I</b>	Preliminary Master Plan Concepts
		<b>J</b>	Meeting Agendas & Reports

## Acknowledgments

THE FOLLOWING CONTRIBUTED TO THE UTAH STATE UNIVERSITY  
BOTANICAL CENTER MASTER PLAN:

### CORE TEAM

#### Utah State University

**Ken White** College of Agriculture & Applied Sciences, Dean & VP of Extension

**Tom Lee** Brigham Campus, Dean & Executive Director RCDE

**Ben Berrett** Facilities, Director PD & C

**Jordy Guth** Facilities, Assistant Director PD & C

**John Chase** Facilities, RCDE Manager

**Jim Huppi** Facilities, Landscape Architect

**Kelly Christoffersen** Facilities, Architect

#### USU Botanical Center

**Jerry Goodspeed** Director

**JayDee Gunnell** Regional Horticulturist

**Deanne Corrales** Manager

**Richard Anderson** Curator of Plant Development

#### USU Extension

**Justen Smith** Director, Davis County Extension

**Diane Reese** Director, Northern Region Extension

**Zuri Garcia** 4-H Agent, Davis County Extension

**Stacie Stone** Staff Assistant, Davis County Extension

**Paula Scott** EFNEP State Director

**Cynthia Lyman** Wasatch Front Marketing Director

**Andree Walker** Urban Director

#### USU Continuing Education

**Gayle Mahler** Assistant Director, Kaysville Education Center

**Melissa Thomas** Program Coordinator, Kaysville Education Center

**Dave Woolstenhulme** Vice Provost, Regional Campuses

### ADDITIONAL INPUT

#### Utah Agricultural Experiment Station

**Craig Thompson** Kaysville Farm Manager

#### USU Botanical Center

**Jayne Mulford** Utah House Coordinator

**Dale Lisby** Master Gardener

#### Ogden Botanical Center

**Susie Jones** Gardens Manager

#### Kaysville City

**Chris Snell** City Council, Liaison

**Lyle Gibson** Community Development Staff

**Steve Hiatt** Mayor

**Andy Thompson** City Engineer

**Cole Stephens** Parks Director

**Vance Garfield** Parks & Recreation Supervisor

**Lisa Thompson** Resident

**Kevin Thompson** Resident

#### Davis County

**Jim Smith** Commissioner

**Brad Wilson** Representative

**Stewart Barlow** Representative

**Stuart Adams** Representative

**Barry Burton** Planning Director

**Jeff Oyler** Senior Planner

#### Davis Chamber of Commerce

**Angie Osguthorpe** President/CEO

#### Hights Creek Irrigation

**Rodney Hill** General Manager/Treasurer

**Dan Robinson** Water Master

#### Northern Utah Electric

**Kory Hansen** Owner

#### J & J Nursery and Garden Center

**Jerry Stevenson** Owner

#### Utah Transit Authority (UTA)

**Christopher Chesnut** URSTA Vice President & Treasurer

**Levi Roberts** URSTA UTA Regional Representative

#### Wasatch Front Regional Council (WFRC)

**Julie Bjornstad** Transportation Planner

**Callie New** Planner/GIS Analyst

**PLANNING CONSULTANT TEAM**

**MHTN Architects, Inc.**

**Randy Boudrero** Associate Principal/Landscape Architect

**Kyle Taft** Vice President

**Sarah Miller** Pre-design Architect

**Ryan Wallace** Architect/Campus Planner

**Glen Beckstead** Cost Estimator

**Spectrum Engineers (Electrical & Mechanical)**

**Chris Kobayashi** Principal Electrical Engineer

**Ryan Boogaard** Principal Mechanical Engineer

**Forsgren Associates, Inc. (Civil)**

**Craig Rasmussen** Division Manager/Civil Engineer





**01** EXECUTIVE  
SUMMARY

## Introduction

The Utah State University Botanical Center (USUBC) and the adjacent Utah Agricultural Experiment Station (UAES) provide an oasis of green along Utah's increasingly developed Wasatch Front. When the Botanical Center moved to this location in 1999, the two institutions formed a unique site featuring the three aspects of Utah State University's mission: Education, Research and Extension.

While UAES research requires a controlled, non-public environment, the Botanical Center has an outward focus that welcomes the community to participate in its educational and recreational offerings.

Its Kaysville, Utah location is in the geographic center of Davis County, between Salt Lake County to the south and Weber County to the north. The Center occupies approximately 95 acres, and the UAES 65 acres.

The mission of the Utah State University Botanical Center is to educate Utah residents about conservation and the wise use of plant, water and energy resources, with a particular focus on the needs and interests of urban homeowners. There are many educational opportunities:

- a children's discovery program
- elementary and secondary school programs
- 4-H and FFA programs
- community education classes, seminars and workshops
- Master Gardener programs
- Utah State regional campus and distance education opportunities

Informal education at the Center includes observation of Center gardens, landscapes and interpretive signs; visits to the Utah House, a demonstration home showcasing sustainability and universally accessible design; and participation in a multitude of hands-on experiences.

Although education is its primary focus, the Center also provides many opportunities for recreation and community activities for all ages and interests. Amenities and activities include:

- trails for walking and bicycling
- ponds for fishing, kayaking and canoeing
- a central green space used for large events such as Baby Animal Days, Farm Field Days and a weekly farmer's market
- an arboretum that educates about water-wise landscape plantings
- Wetland Discovery Point, which focuses on wetlands ecology
- venues available for rent by the community, used for weddings and corporate events

### MASTER PLAN SCOPE

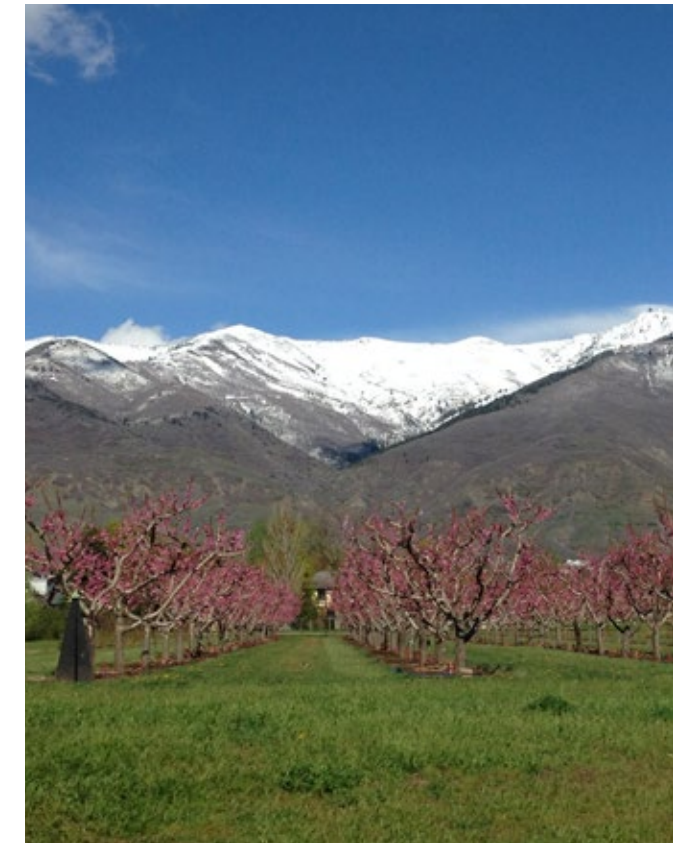
The Utah State University Botanical Center undertook a master planning effort in order to explore and articulate their vision for the future, and to formulate a plan for implementation. The master plan scope included the following:

- document USUBC existing conditions, programs and needs
- define the vision for the future Botanical Center
- develop a plan that fulfills the Center's future vision, in three phases (10, 25 and 50 years).

The master plan builds upon and complements the facilities and gardens that currently exist at the Botanical Center. The plan seeks to preserve open green space as much as possible, while providing the structures necessary to fulfill its educational mission. It seeks to have a minimal impact on the natural environment and to use as few resources as possible, thereby exemplifying its conservation mission.



Botanical Center arboretum



UAES with view to the Wasatch Mountains



Pond and wetlands area



Rasmussen Teaching Garden

## Process

The master plan process occurred from April through September, 2016. It was guided by a Steering Committee consisting of Botanical Center and Utah State University administrators and staff, who had primary input and decision-making.

USU and the Botanical Center established a group of stakeholders who gave input during the consensus-building and information-gathering phases. The group included representatives from local municipalities, utilities and the surrounding neighborhood.

The process included public input, with open-invitation town hall meetings during concept development and master plan review phases.

The process included these phases:

### 1 - BACKGROUND INFORMATION

In order to become familiar with Botanical Center existing conditions and programs, the consultants:

- reviewed background information received from USU and the Botanical Center
- toured and photographed the site to become familiar with existing conditions through direct observation

### 2 - CONSENSUS-BUILDING & INITIAL OUTREACH

The consultants conducted a session with the Steering Committee to obtain input on their vision for the future Botanical Center. This was followed by a series of outreach focus group meetings with members of the stakeholder group, representing:

- Kaysville City
- Davis County
- USU Facilities & Planning
- USU Extension and Regional Campus Education
- local electrical and secondary water utilities
- Davis Chamber of Commerce
- local nursery and landscape businesses
- residents of adjoining neighborhoods

### 3 - INFORMATION-GATHERING

The consultant team held meetings with stakeholder group representatives to gain input on needs for the future development of the Botanical Center.

### 4 - PLANNING ANALYSIS & INITIAL CONCEPTS

The consultants used the information gathered to develop initial concepts, which were presented to the Steering Committee for input.

### 5 - MASTER PLAN CONCEPT DEVELOPMENT

The input obtained from the Steering Committee was used to further develop the master plan concept. A second concept presentation meeting was held with the Steering Committee, during which proposed design standards and guidelines, and preliminary phasing, were discussed.

### 6 - DOCUMENTATION

The consultant team formulated the input and the resulting conceptual design into a draft master plan, which was reviewed by the Steering Committee. Review comments were incorporated to create the final master plan document.



Steering Committee kick-off meeting

	TASK   ELEMENT	MEETINGS	TIMELINE
step 1	<b>BACKGROUND INFORMATION</b>  Data collection: Past studies Programs & activities Utilities & infrastructure Growth projections		April 2016
step 2	<b>CONSENSUS &amp; OUTREACH</b>  Define Botanical Center vision Survey existing conditions Conduct broad outreach	Project kickoff & visioning Outreach focus group meetings USU, Extension, Education City & County Business partners Neighborhood/community	April 2016
step 3	<b>NEEDS INPUT</b>  Gather input from Steering Committee and broad stakeholder group on future Botanical Center needs	Information-gathering meetings USU Facilities USU, Extension, Education City & County UTA/WFRC Neighborhood/community	May 2016
step 4	<b>ANALYSIS &amp; INITIAL CONCEPTS</b>  Evaluate opportunities/ constraints Generate initial concepts Invite community input Select concept direction	Initial Concept Presentation Refined Concept Presentation Town Hall Meeting	May-June 2016
step 5	<b>CONCEPT DEVELOPMENT</b>  Refine concept base on input Develop standards & guidelines Develop draft phasing plans Develop cost projections	On-site concept review with Steering Committee	June-July 2016
step 6	<b>DOCUMENTATION</b>  Create draft document Present draft document Incorporate review comments Publish final document	On-site draft document review with Steering Committee	July-November 2016

## Vision & Needs

The Botanical Center is actively engaged in its educational and conservation missions and has been successful implementing them. Administrators see a great potential for the Center to be even more successful and want to work toward their future vision.

Davis County and the Wasatch Front are anticipating a high rate of growth in the future. Over the next fifty years, the County's population is expected to increase by 64%, or about 200,000 people. To meet the demands of this growth, serving an ever greater density of people, the Botanical Center must implement changes that will help it to maximize use of the site.

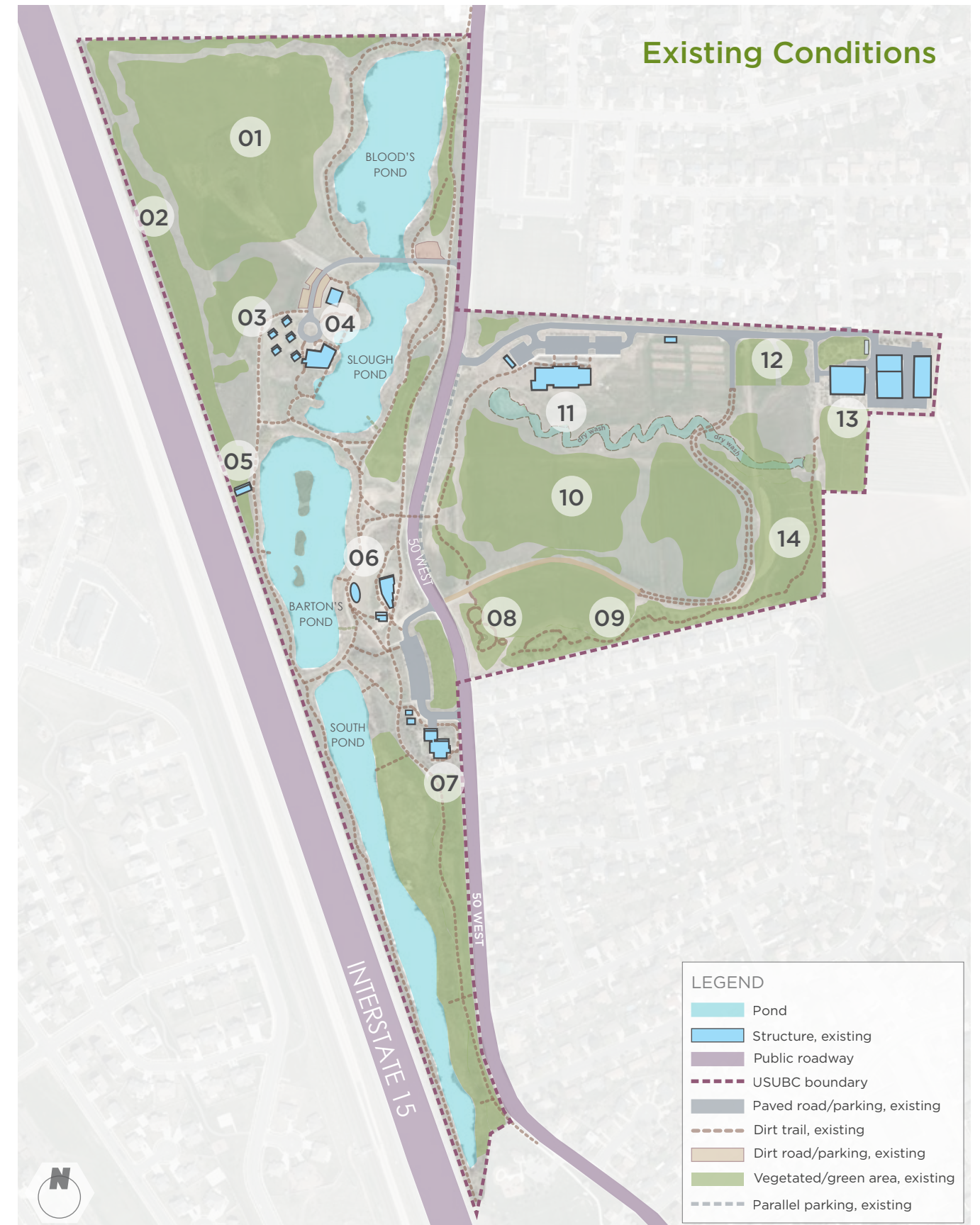
In order to identify the appropriate changes, the team considered and articulated the needs of the Center. The master plan team explored ideas that will lead the Botanical Center toward the future with the organization and elements that will support its success. The following opportunities for strengthening the Botanical Center were identified:

- form a more cohesive identity and stronger leadership in the natural resources and conservation arena
- increase visibility and presence of the Botanical Center within the immediate community and surrounding areas
- add to the educational facilities for better support of the educational mission
- through activities that are recreational and experiential in nature, expose visitors to the natural environment, ecological concepts, and the principles of conservation and wise natural resource use
- place small maintenance facilities in each sector of the site to facilitate the expansive maintenance and operations

- enhance the trails and make them more accessible
- add demonstration gardens and other opportunities for community members of all ages and interests to have interaction with master gardeners and hands-on involvement
- modify existing facilities and land usage to increase capacity and functionality
- look for opportunities to partner with local communities and municipalities

### EXISTING ELEMENTS

- 1 Field/Prairie
- 2 Berm
- 3 Photovoltaic Panels
- 4 Wetland Discovery Point
- 5 Botanical Center Sign
- 6 Garden View Pavilion
- 7 Utah House
- 8 Ornamental Grass & Iris Garden
- 9 Arboretum
- 10 Quad
- 11 Kaysville Education Center
- 12 Demonstration & Teaching Gardens
- 13 Support Facilities (no public access)
- 14 Hill





## Master Plan Concept

The key concept of the master plan is the creation of multiple identifiable focal points on the Botanical Center site. This multi-centric approach maximizes site utilization by providing clusters of facilities and natural elements for distinct uses in different areas.

### Key drivers of the master plan concept include:

- the creation of three identifiable campus quads with distinct areas of emphasis: 1) events, 2) education and 3) youth education and recreation
- protection of the east-west viewshed through the site, to maximize views to the Wasatch Mountains and the Great Salt Lake
- multiple gateways that provide access to the site, and a Visitor's Center that serves as an intuitive front door
- gardens distributed throughout the east sector, creating a green ribbon at the edges of the Events and Education Quads
- reinforcement of the site's rural character by maximizing open space
- building placement that frames the campus quads and complements natural site features
- parking that is minimal but sufficient for needs, placed to minimize visibility
- a dry wash concept running from east to west through the site, with an integral trail and plantings that educate about native vegetation

### PLAN ELEMENTS

- 1 Events Quad
- 2 Education Quad
- 3 Kaysville Education Center & Addition
- 4 ICLT
- 5 Amphitheater
- 6 Restroom/Maintenance Facility
- 7 Arboretum
- 8 Education Pavilion
- 9 Visitor Center
- 10 Terrace Garden
- 11 Dry Wash
- 12 Events Quad Parking Area
- 13 Youth Quad
- 14 Barn
- 15 Guest House
- 16 Ropes Course
- 17 Children's Garden
- 18 Central Maintenance Facility
- 19 Wetland Discovery Point
- 20 Garden View Pavilion
- 21 Utah House & Expansion
- 22 Kayak & Canoe Access
- 23 Interpretive Sign
- 24 Paved Multi-use Path
- 25 Welcome Sign
- 26 Education Garden



## Phasing & Costs

The USUBC master plan is presented with three implementation phases:

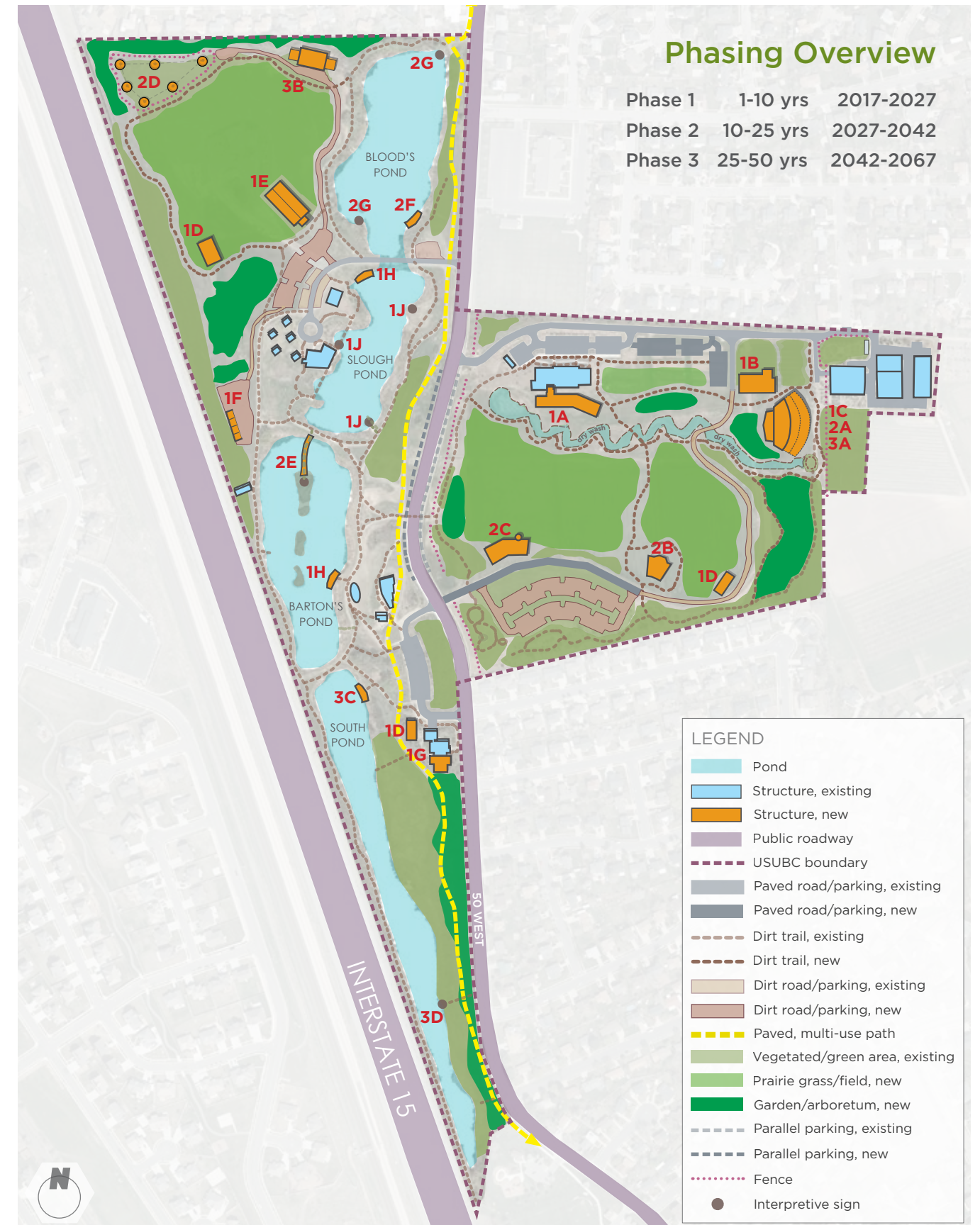
Phase 1	1 - 10 years	2017 - 2027
Phase 2	10 - 25 years	2027 - 2042
Phase 3	25 - 50 years	2042 - 2067

The image at right shows master plan elements labeled with their projected implementation phase. Plans in Section O6 illustrate the implementation phase-by-phase. An opinion of probable Total Project Cost, in 2016 dollars, is assigned to each master plan element. An inflation factor of 5% per year should be assigned to determine the likely cost at the time of implementation.

### TOTAL PROJECT COST OPINION (2016 dollars)

<b>PHASE 1 - Structures</b>	<b>\$9,816,890</b>
1A Education Center expansion, 6,500 GSF	\$2,300,064
1B ICLT, 4,000 GSF	\$1,507,840
1C Amphitheater, 500 seats, platform stage	\$1,672,000
1D Restroom & maintenance facilities (3), 600 GSF	\$145,920
1E Barn, 15,000 GSF	\$3,192,000
1F Central maintenance facility	\$108,954
1G Utah House expansion, 2,000 GSF	\$790,400
1H Kayak/canoe access (2)	\$44,992
1J Boardwalk/interpretive signs (3)	\$54,720
<b>PHASE 1 - Site Work</b>	<b>\$2,957,512</b>
Pathways, fencing along 50 West, roadways, parking, east quads, plantings, terraced garden	
<b>Total Phase 1:</b>	<b>\$12,774,402</b>

<b>PHASE 2 - Structures</b>	<b>\$6,582,208</b>
2A Amphitheater expansion, add 500 seats, augment performance structure	\$2,614,400
2B Education Pavilion, 2,000 GSF	\$99,712
2C Visitor Center, 8,000 GSF	\$3,161,600
2D Ropes course	\$583,680
2E Barton's Pond bridge	\$63,840
2F Kayak/canoe access (1)	\$22,496
2G Boardwalk/interpretive signs (2)	\$36,480
<b>PHASE 2 - Site Work</b>	<b>\$3,356,370</b>
Pathways, fencing, roadways, parking, Youth Quad, plantings, buffer yard, arboretum expansion	
<b>Total Phase 2:</b>	<b>\$9,938,578</b>
<b>PHASE 3 - Structures</b>	<b>\$3,126,336</b>
3A Amphitheater, add 500 seats	\$167,200
3B Guest House, 8,000 GSF	\$2,918,400
3C Kayak/canoe access (1)	\$22,496
3D Boardwalk/interpretive signs (1)	\$18,240
<b>PHASE 3 - Site Work</b>	<b>\$323,082</b>
Pathways, fencing, roadways, parking, plantings, Children's Garden	
<b>Total Phase 3:</b>	<b>\$3,449,418</b>





**02** EXISTING  
CONDITIONS

## Introduction

The initial phase of the master planning process included gaining an understanding of the existing conditions, elements and programs at the Botanical Center, through background information, site visits, observation, interviews and focus groups. This section presents a summary of this information.

The Utah State University Botanical Center is in northern Utah, at the base of the Wasatch Mountain range that runs north-south through Utah. It is in Kaysville, a city of around 28,000 people which is near the geographic center of Davis County. Davis County is between Weber County to the north and Salt Lake County to the south.

The Botanical Center moved to its Kaysville location in 1999. The Utah State University Agricultural Experiment Station (AES) Kaysville Research Farm is directly adjacent. The two entities form a unique site where all aspects of the Utah State University mission – teaching, research and Extension – are present.

The primary mission of the Botanical Center is to educate the public about the natural environment and resource conservation. Through a variety of activities and formats, it raises awareness about sustainable gardening practices, and the native and adaptive plant species that thrive in Utah’s climate.

The Kaysville Farm researches plant cultivation, production and irrigation, and pest management. Due to the need for a controlled research environment, the farm cannot have public visitors, in contrast to the public outreach mission of the Botanical Center. However, the farm and the Botanical Center have compatible functions and a complementary relationship regarding landscaping and gardening best-practices and the wise use of natural resources.

The Botanical Center’s location is highly visible from the adjacent Interstate 15 freeway. While I-15 bounds the western edge of the site, SR-273 (Kaysville City

Main Street) serves as the eastern boundary. A local road, 50 West Street, traverses the site north-south, east of the ponds, and provides direct access to many of the Center’s resources.

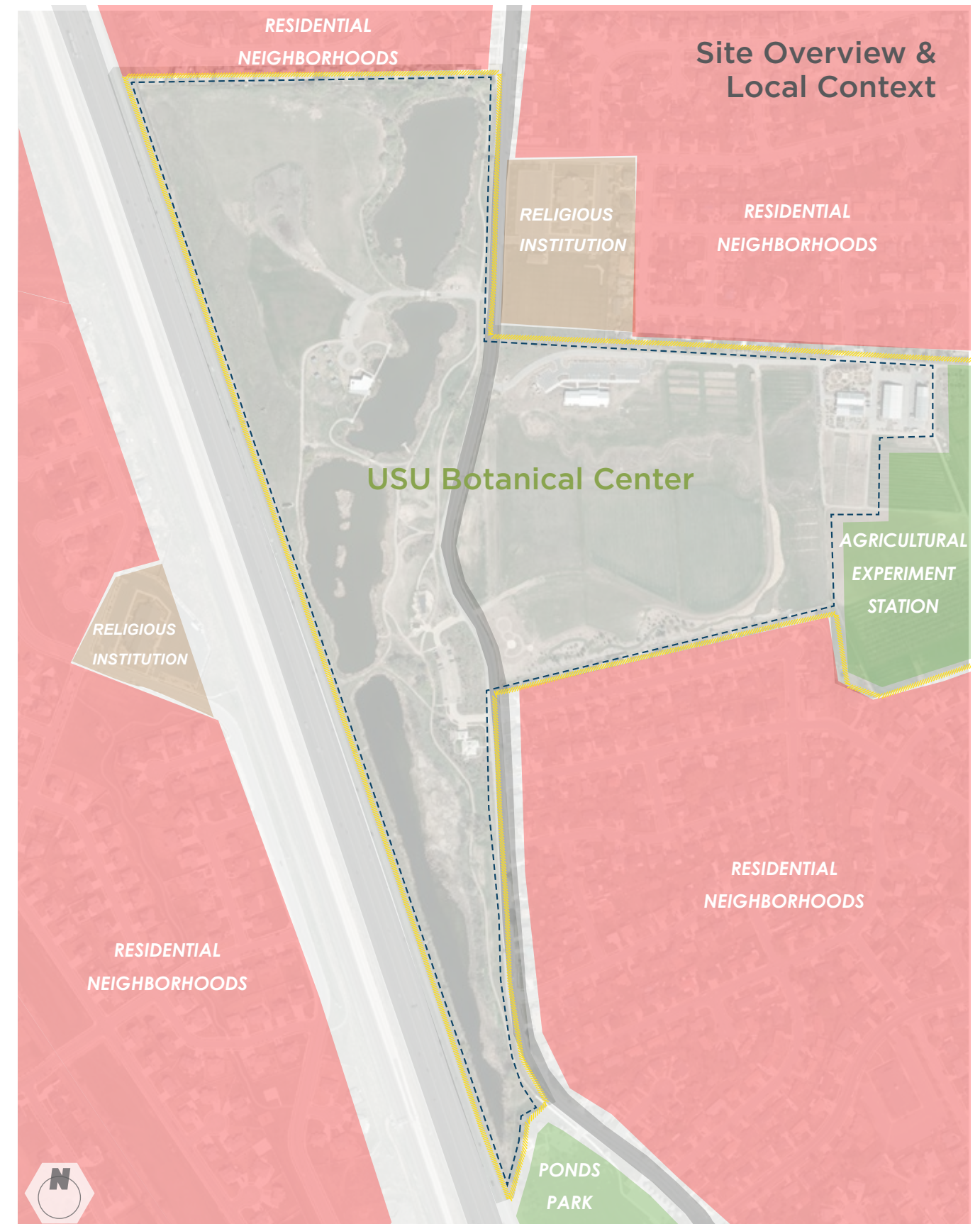
Surrounding land uses are primarily residential neighborhoods. Several educational and academic resources are in the immediate proximity, including elementary, junior high and high schools, and the Davis Applied Technology College (DATC). Utah State University owns approximately 160 acres, outlined in yellow on the adjacent map. Of this acreage, roughly 95 acres belong to the Botanical Center (outlined in a blue dashed line), while the remaining 65 acres belong to the AES Kaysville Research Farm.

The education mission of the Botanical Center takes many forms. Informal learning includes demonstration gardens, displays and interpretive signs, participation in workshops and classes, and other hands-on experiences.

More structured education is available through multiple programs:

- a children’s discovery program
- elementary and secondary school programs
- 4-H and FFA programs
- community education classes, seminars and workshops
- Master Gardener programs
- Utah State regional campus and distance education courses

In addition to education, community members use the Botanical Center for recreation: walking, running or bicycling on its paths; fishing, kayaking and canoeing in its ponds; strolling through and studying its arboretum and demonstration gardens; and enjoying views toward the Wasatch Mountains to the east or the Great Salt Lake to the west.



The Center welcomes community members at multiple large public events, such as:

- Baby Animal Days
- Farm Field Days
- 4-H and Boy Scout gatherings
- a weekly farmer's market

The Center welcomes and provides activities for all ages and sectors of the population. While at the Center, visitors enjoy the natural environment while increasing their awareness of environmental and conservation issues and principles.

Another important function of the Botanical Center is working with the local green industry to promote plants that will succeed in the intermountain west climate. The Center coordinates with area nurseries to ensure that they have climate-favorable plants in production.

**Ponds**

The most visible feature of the site is the Kaysville Ponds, which provide crucial habitat for birds and other wildlife while offering a much-loved urban fishery.



**Quad**

At the heart of the Botanical Center, trails surround a large open field that affords visitors powerful views of the Wasatch Mountains to the east and the Great Salt Lake to the west.

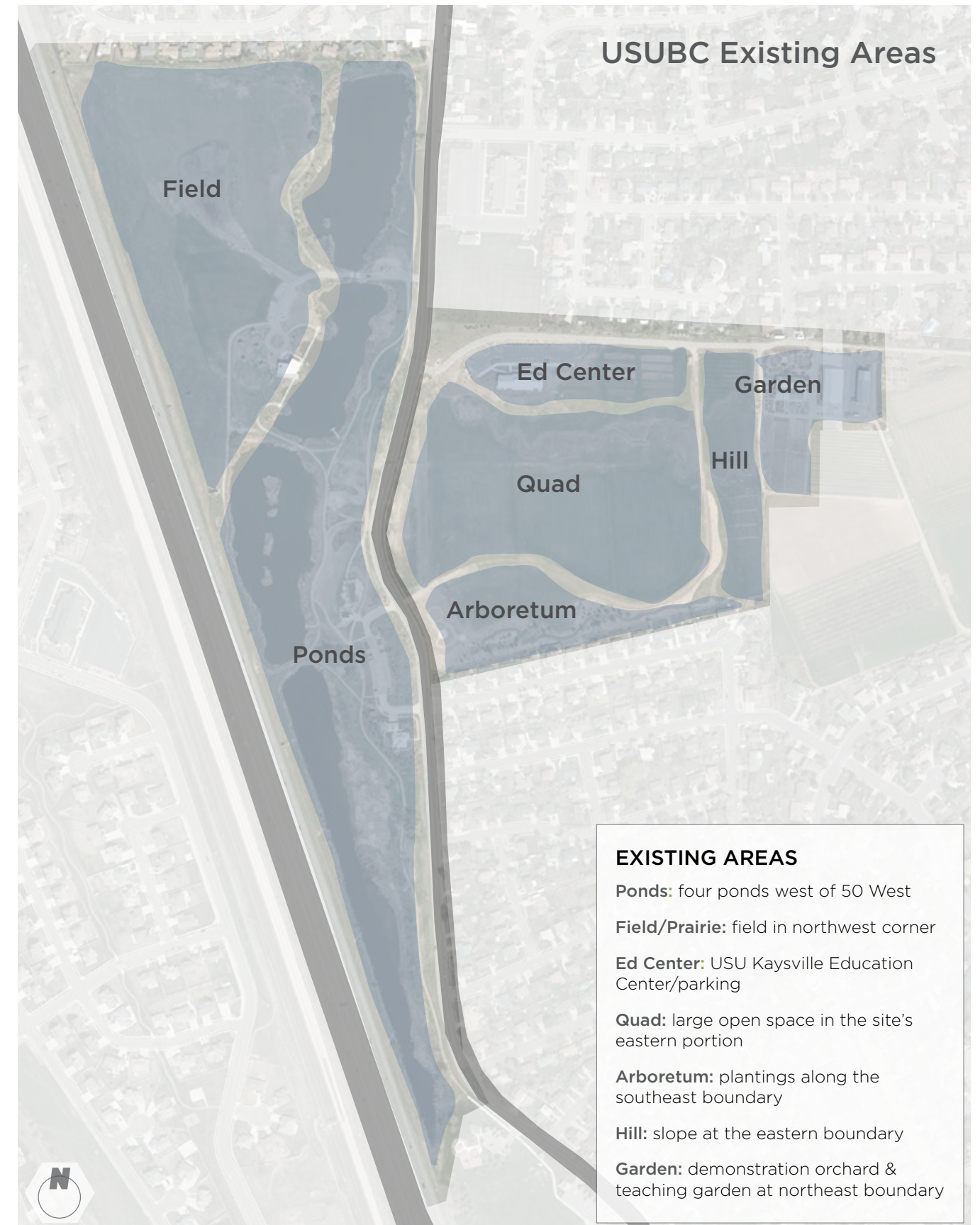
**Arboretum**

An extensive arboretum meanders along a portion of the southern edge of the site, educating visitors about a wide variety of tree and plant species in an immersive setting.



**Agriculture Experiment Station (AES)**

Immediately east of the Botanical Center, the 65 acre farm is home to: active research of fruit and vegetable cultivation and production; irrigation requirements; and pest management.



## Davis County Outdoor Recreational Resources

Davis County offers multiple outdoor recreational resources. The Botanical Center's central location within the county makes it well-suited to act as the first stop to educate and inform visitors about the region's unique geography and its extensive network of diverse outdoor recreational opportunities. Several of the County's points of interest are described here.

### Great Salt Lake

The largest salt water lake in the western hemisphere, the Great Salt Lake provides habitat for millions of native birds, shorebirds and waterfowl.



### Great Salt Lake Shorelands Preserve

In this unique system of salt and fresh water marshes, ponds, pools and mudflats, visitors can access over a mile of boardwalk to view thousands of migratory birds.

### Wasatch Mountains

The Wasatch Mountain Range stretches south from the Utah-Idaho border, serving as the eastern edge of the Great Basin region.



### Antelope Island

Antelope Island is the largest island within the Great Salt Lake. It serves as home to bison, mule deer, bighorn sheep, antelope and many other desert animals.



### Legacy Nature Preserve

This 2,225-acre wetlands and wildlife preserve borders the southeastern shore of the Great Salt Lake.



### Farmington Bay

Located along the eastern shore of the Great Salt Lake, this fresh water bay provides habitat for a wide variety of bird and other animal life.



Davis County Outdoor Recreational Resources



## Davis County Transportation Network

Davis County has a diverse transportation network, providing many options for movement through the County and region. These include an extensive road network for cars, public transportation options consisting of fixed rail and bus, and active transportation alternatives such as trails and sidewalks. The USU Botanical Center is located centrally within these numerous transportation alternatives, making it available to a wide variety of potential visitors with differing abilities and preferences.

### PRIVATE AUTOMOBILE

The Botanical Center is easily accessed by car, with Interstate 15 and several highways providing regional access to the site. Once in Kaysville, an extensive network of arterials and local roads allow easy access from several unique routes to the site. Although these routes are easy to use for those who have visited the Botanical Center previously, signage and wayfinding to the site is lacking for first time or potential visitors. This has led to the Botanical Center being known by some as “the best kept secret in Kaysville.”

### REGIONAL RAIL

Utah Transit Authority (UTA) operates the FrontRunner north commuter train through Davis and Weber Counties and south through Salt Lake and Utah Counties. The Botanical Center is located between stations in Layton and Farmington, with each of the stations approximately three miles from the Center. While neither of these stations are located within reasonable walking distance, a visitor could conveniently ride their bike from the station to access the Botanical Center.

### BUS

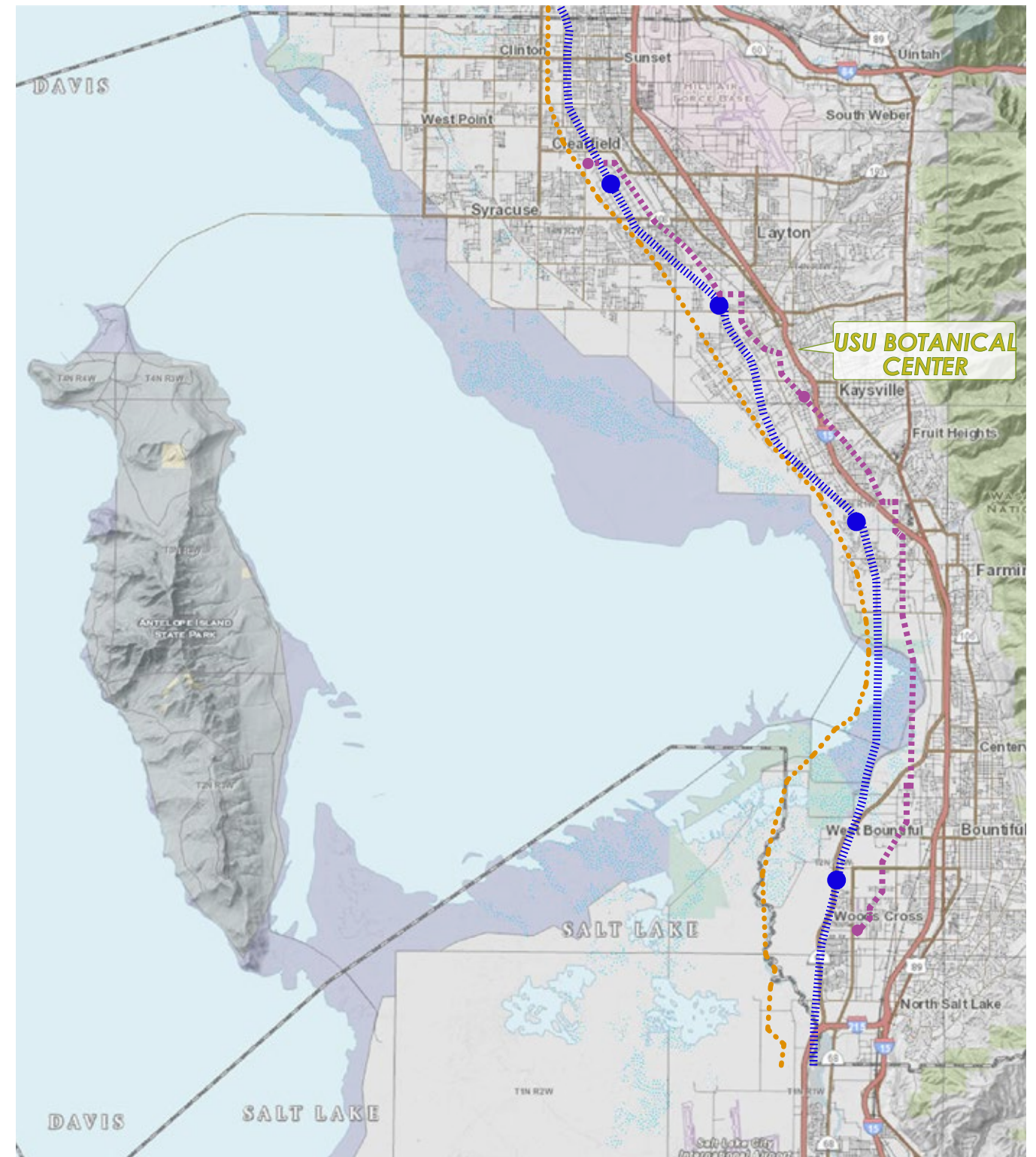
Currently, three UTA bus routes provide service along SR-273, or South Main Street in Kaysville (routes 477, 470, 627). This allows visitors from around Davis and Weber Counties to gain access to the site proximity. However, because these bus

routes focus on providing service to Davis Applied Technology College (DATC), east of S. Main Street, Botanical Center visitors need to walk roughly one mile to gain access to most Botanical Center resources.

While all the Botanical Center and AES property is owned by Utah State University, the AES portion of the site is the Kaysville Research Farm. Because active research takes place on the farm, access by pedestrians through this portion of the site is not allowed. Bus service for the USUBC would be preferred on 50 West street, which is closer to resources many visitors seek, including the ponds, trail systems and other facilities. Current USUBC visitation and usage numbers aren't high enough for UTA to justify the expense of implementing bus service along 50 West.

### ACTIVE TRANSPORTATION

Several shared use paths, when considered together, form a network which provides connections to the USU Botanical Center through Davis County, for walkers and bicyclists. These trail connections extend throughout the region including Salt Lake and Weber Counties. These include the D&RG Rail Trail, Legacy Parkway Trail and the Jordan River Trail. From the D&RG Rail Trail, access to the Botanical Center would occur from Burton Lane over I-15 and then along a paved pathway adjacent to 50 West Street. There is an existing unpaved path that extends from Ponds Park at the Botanical Center's southern tip to the residential neighborhood at its northern boundary. The Botanical Center, in cooperation with Kaysville City and UTA, is currently exploring the possibility of obtaining a grant to pave this pathway for the benefit of transit users and bicyclists.



Davis County Transportation Network



LEGEND	
	UTA FrontRunner
	Interstate Highway
	UTA Bus Service
	Bicycle Trails

## Circulation & Parking

A variety of mobility options provide access to and throughout the Botanical Center. The legend on the facing page describes the connections, pathways and gateways indicated in the map. Some key points include:

**01** - Interstate 15 forms the west boundary of the Botanical Center site. The Center's ponds, natural environment and USU identification sign are visible to both freeway travel directions. The Botanical Center is centrally located north-south between the two closest freeway exits, and from the freeway it is not obvious how to reach the Center. Construction of a new interchange at Shepherd Lane in Farmington is being explored; this would provide a more easily accessible route to the Botanical Center from the west.

**02** - 50 West Street travels north-south through the site. It is a 66 foot wide roadway. Currently, parallel parking is allowed along its eastern side, but could be allowed along both east and west.

**03** - At the northern boundary of the Botanical Center, there is a storm drain clean-out that is maintained by Kaysville City. The city has a difficult time reaching the inlet by truck. City representatives have expressed that a wider and more level access roadway would result in more frequent maintenance of the inlet with cleaner water entering the pond system.

**04** - A paved road leads west to Wetland Discovery Point and the northernmost pond.

**05** - Segó Lily Drive provides access to the AES Kaysville Research Farm, the Kaysville Education Center, and demonstration and teaching gardens and orchards. A paved parking lot for 66 cars serves primarily education program patrons.

**06** - There are two entry points to the Utah House and its paved parking lot. The lot has capacity for approximately 50 cars.

**07** - A new vehicular access and parking lot made of road base was under construction during the master plan process. This permeable lot will have capacity for approximately 150 cars. A walking path continues east and north in a curving configuration, connecting with Segó Lily Drive on the north side of the site.

**08** - A gate in an existing fence provides access for UAES vehicles and materials from the north residential neighborhood. In the future, the gate will be replaced by fencing and access at this location will be closed.

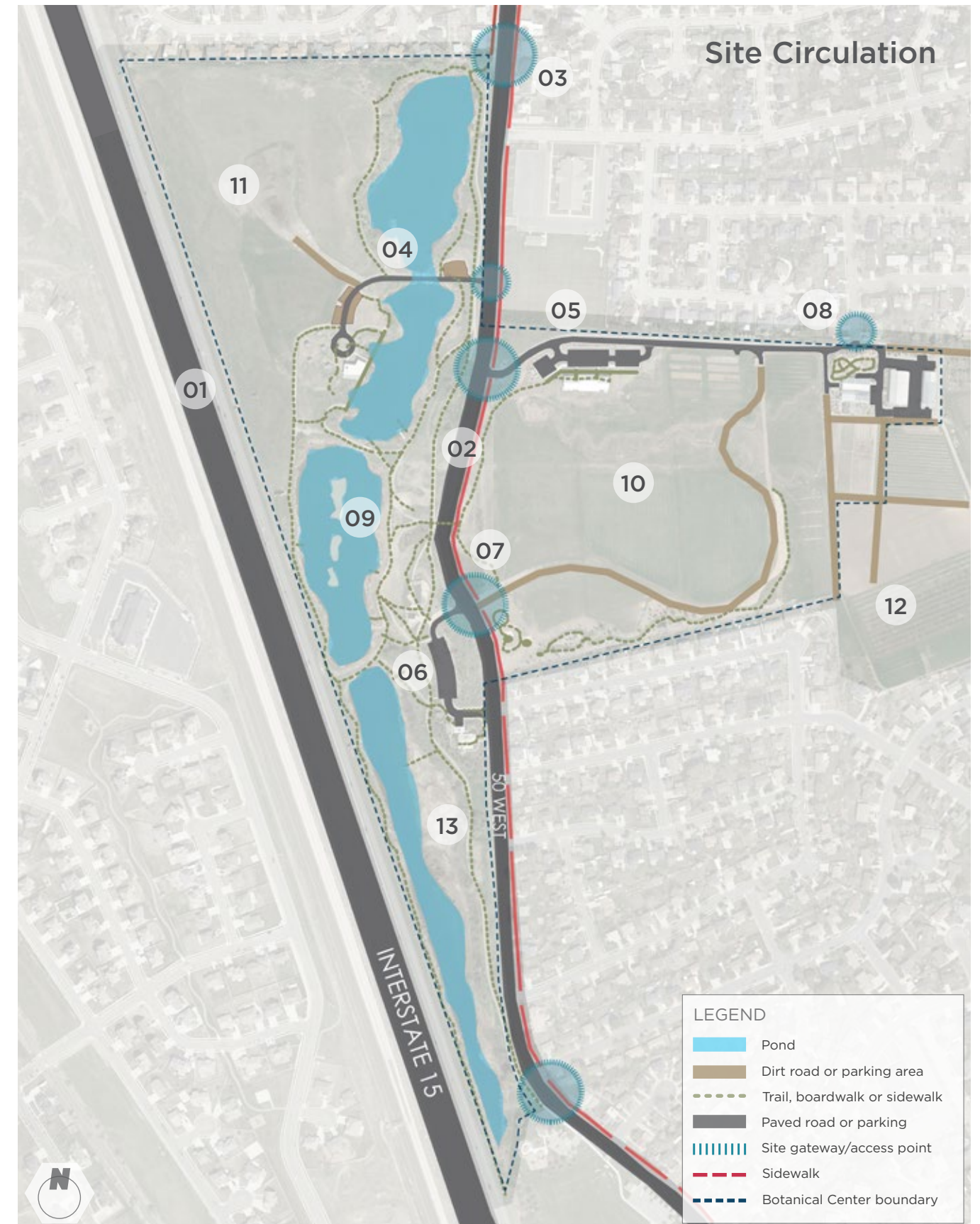
**09** - The ponds portion of the site is well-served by existing trail networks.

**10** - The trail network in the quad area east of 50 West could be improved for better connections and access.

**11** - The Field/Prairie area in the northwest corner of the Botanical Center lacks access roads or trails.

**12** - Public access to the Botanical Center from the east is non-existent.

**13** - The Botanical Center is currently exploring paving an existing path that runs along the west side of 50 West. The path would be designed for shared pedestrian and bicycle use. If this paving is implemented, it may be possible to use both sides of 50 West for vehicle parking.





## Regional Environmental Context

The Botanical Center site is located roughly equidistant between the Wasatch Mountains to the east and the Great Salt Lake to the west, illustrated in the site section at the bottom of the facing page. Due to the elevation change on the site, visitors are offered an ideal view of the major geographical features of this region from the Botanical Center.

The Wasatch Mountains shield early sunrise light year-round, while the western and southern aspects of the site are exposed to the powerful rays of the daytime and setting sun. This orientation is desirable in the winter when solar gains are preferred; however, it can create uncomfortable conditions during the summer.

Strong canyon winds from the east are a unique site feature to be considered. In the winter, cold winds from the north can occur.



01 View of arboretum from northwest



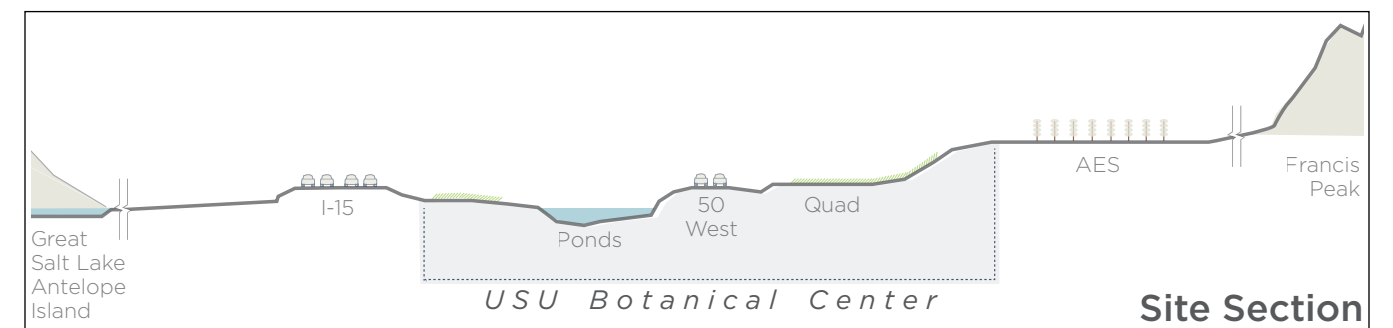
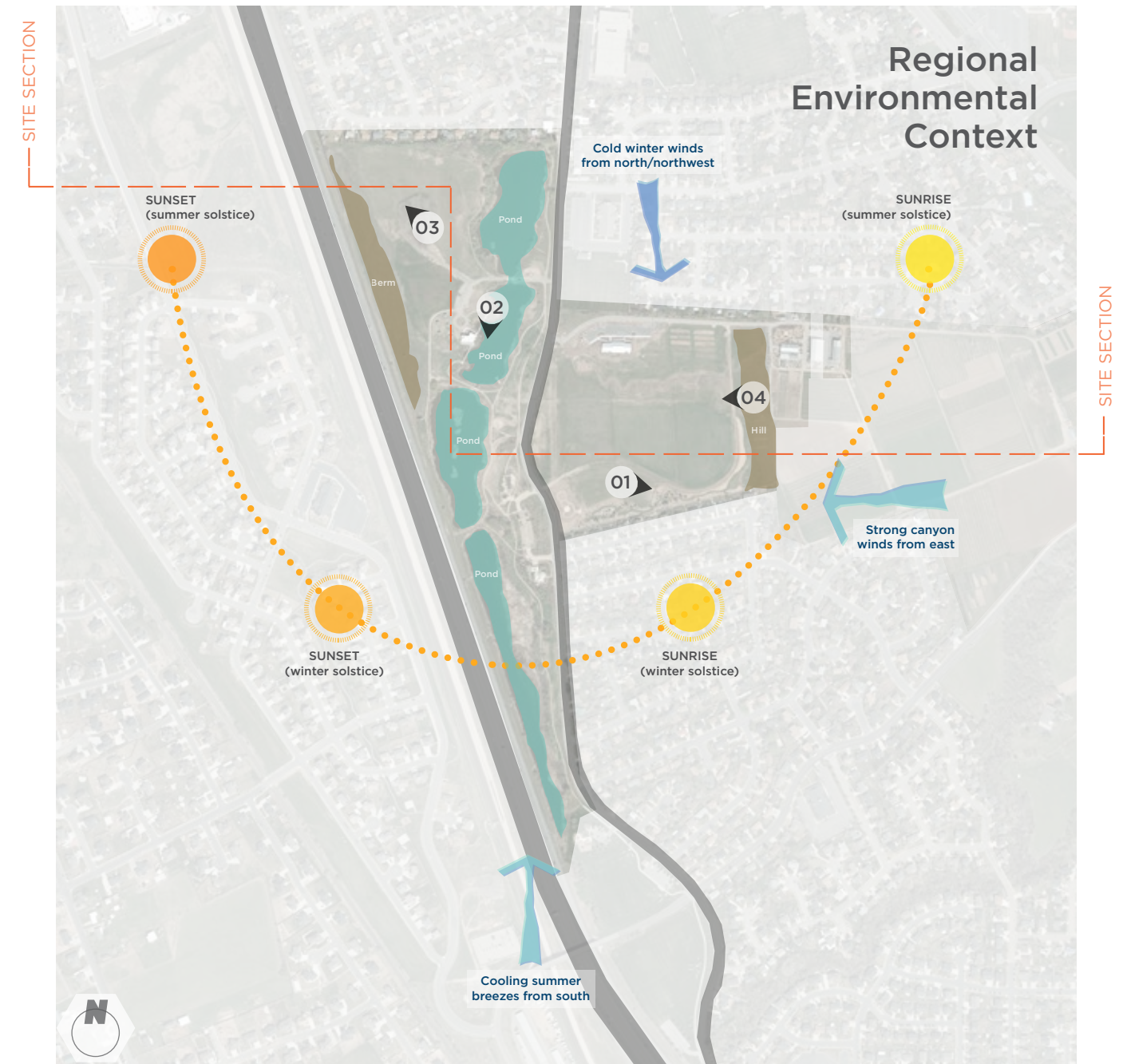
02 View of ponds area from northeast



03 View of prairie area from southeast



04 View of Antelope Island from east



## Site & Landscape Features

**01 - Field/Prairie.** This low-use area serves as the northwest boundary of the Center. A berm along the west edge features native plants, while the center field is planted with pasture grass.

**02 - Wetland Discovery Point.** This center features the wetlands environment of the ponds, and provides programs, classes and community events.

**03 - Ponds.** The ponds perform several important functions: storm water retention for Kaysville City; a wetlands habitat for many species; and a popular venue for fishing, kayaking and canoeing. The pond water is also used for irrigation. Storm water enters the pond system at the Center's north end and is bio-filtered as it flows southward through the four ponds. The ponds have a public access easement, so are always available for public use during Botanical Center hours of opening. The ponds are

deeper at the north end and become shallow and less usable for recreation toward the south. The water level fluctuates up to three feet.

**04 - Pavilion, Restrooms, 9/11 Memorial.** This area provides access to the adjacent ponds and trails. It also serves as a community gathering point and a staging area for educational activities.

**05 - Utah House Water-Wise Landscape Garden.** The gardens surrounding the Utah House are an important teaching tool, featuring water-wise plantings and landscape practices.

**06 - Demonstration & Teaching Gardens.** The Rasmussen Teaching Garden, north of the Greenhouse, is a public garden that is used as a classroom for USU's horticulture program. The adjacent Demonstration Orchard and Edible



Prairie, with native plant berm at the west edge



Wetland Discovery Point from the south



Ponds



Demonstration Garden provide educational opportunities through exhibits, classes and hands-on gardening experiences.

**07 - Dry Wash.** Extending west from the Botanical Center east boundary, the Dry Wash will demonstrate riparian plants for both wet and dry wash environments.

**08 - Quad/Flexible Event Space.** The open field at the center of the site is the venue for large events, such as Baby Animal Days, Farm Field Days and the farmer's market that occurs weekly during the summer and early fall.

**09 - Open Space/Native Grasses.** The area east of the flexible event space serves as a land bank for the Botanical Center, as well as helping to accommodate large public events.

**10 - Ornamental Garden.** The Stokes Ornamental Grass and Iris Garden has a highly visible location along 50 West street.

**11 - Arboretum.** The Varga Arboretum is located along the southern boundary of the Center's east zone, providing an attractive buffer zone between the Botanical Center and the residences to the south. The arboretum's plantings are ordered according to water usage, so perform a valuable water conservation learning experience.

**12 - Parking.** A new vehicle access and parking lot will serve visitors to the arboretum, gardens, and large events.



06 Rasmussen Teaching Garden



11 Arboretum



06 Demonstration Orchard



06 Edible Demonstration Garden



## Existing Structures

**01 - Photovoltaic Panels.** Solar panels mounted on sun-tracking platforms were constructed with the Wetland Discovery Point project.

**02 - Wetland Discovery Point.** Completed in 2008, this 3,214 GSF building is highly sustainable, having achieved a LEED Platinum rating from the US Green Building Council. It features green design elements such as passive solar heating, rainwater harvesting and natural ventilation. It is a venue for wetland education programs attended by thousands of school children each year, and is available for community and private events and classes. An open education pavilion has recently been constructed north of the WDP building.

**03 - USU Botanical Center Sign.** Located along the west edge of the Botanical Center, the sign is visible to motorists on Interstate-15.

**04 - Garden View Pavilion.** Adjacent to the 9/11 Memorial and restrooms that serve the fishing pier, the pavilion offers shade and an informative display about the Botanical Center site and programs. It was constructed in 2003.

**05 - Restroom Building.** A support facility for people recreating at the ponds, it provides a fish cleaning station in addition to two toilet rooms.

**06 - Storage Shed.** There are multiple storage sheds on the Botanical Center site, ranging in size from 69 to nearly 1,800 GSF.



01 Photovoltaic panels at Wetland Discovery Point



02 Wetland Discovery Point



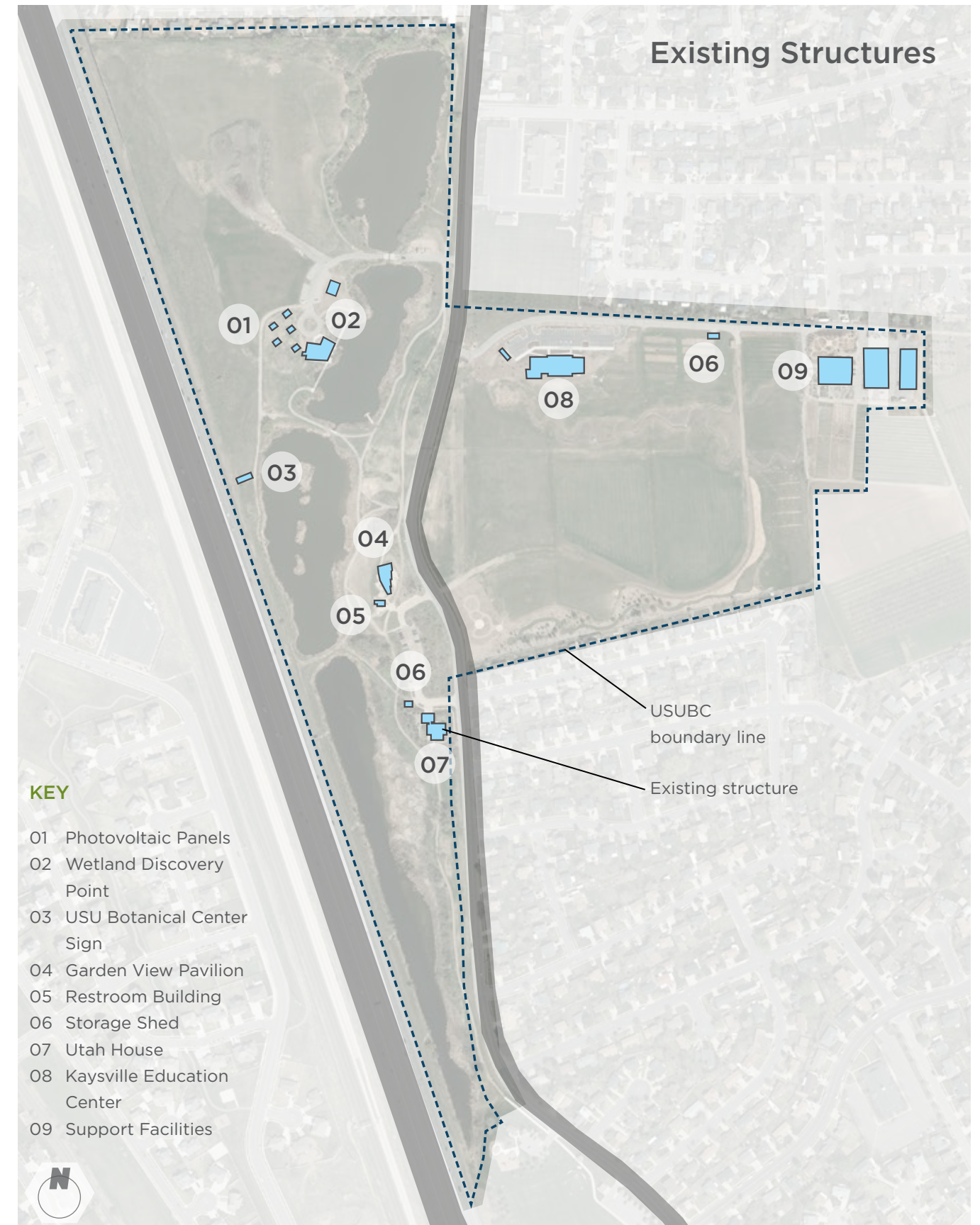
03 USU Botanical Center freeway sign



04 Garden View Pavilion



06 Storage shed near the Utah House





Utah House garden area

**07 - Utah House.** The Utah House was constructed in 2002 as a learning center and a model of sustainable best practices. Including its associated support building, it has 3,471 GSF. Its primary function is education, although it is also available as a community and private event venue.



Kaysville Education Center

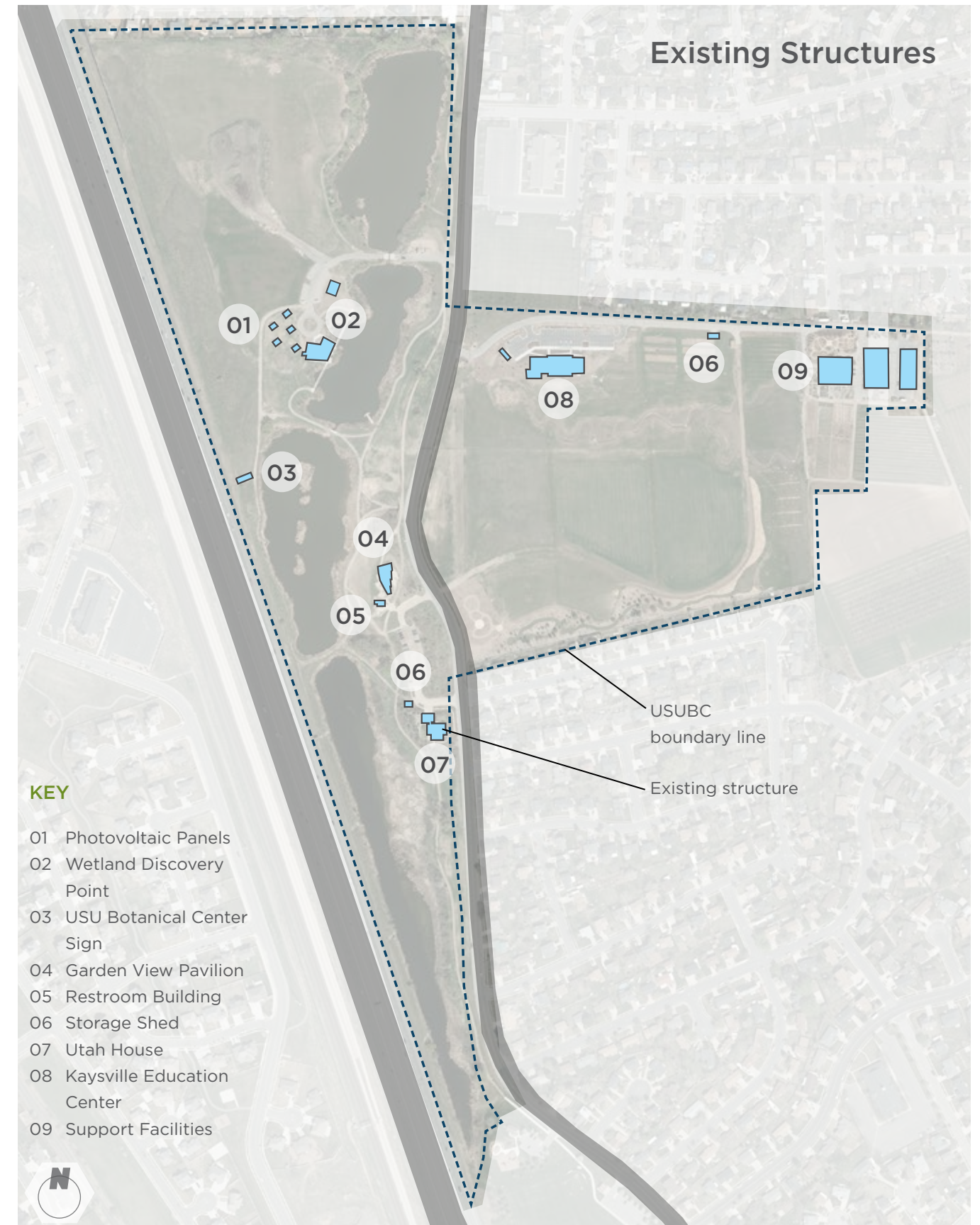
**08 - Kaysville Education Center.** This 6,527 GSF facility was constructed in 2011 as a venue for USU on-site and distance education courses, and Extension programs. It has two large and three medium classrooms, six small classrooms/offices, distance education facilities, and a reception area with office and testing room.

**09 - Support Facilities.** These include three facilities in the northeast corner of the Botanical Center that are not accessed by the public:

- The Greenhouse was constructed in 2000 at 7,922 GSF with a headhouse, greenhouse, propagation room, and office space.
- The 8,757 GSF barn was constructed in 2000 and has a 4,600 SF farm equipment garage and 1,496 SF shop.
- The Shade House was constructed in 2006 at 5,041 GSF.



Greenhouse with Shop and Shade House beyond



## Site Utilities

**Electrical.** The site is fed by Kaysville Power with 3-phase underground lines. A series of existing sectionalizing cabinets are used for distribution by Kaysville Power. Transformers are provided and installed by Kaysville power with all work on the secondary of the transformers done by project contractors.

**Telecommunications.** The existing Botanical Center facility has Comcast telecommunications service; this same trunk line is intended to feed the campus as it develops.

**Site Lighting.** The existing Botanical Center facility has minimal site lighting for building entrances and the parking lot.

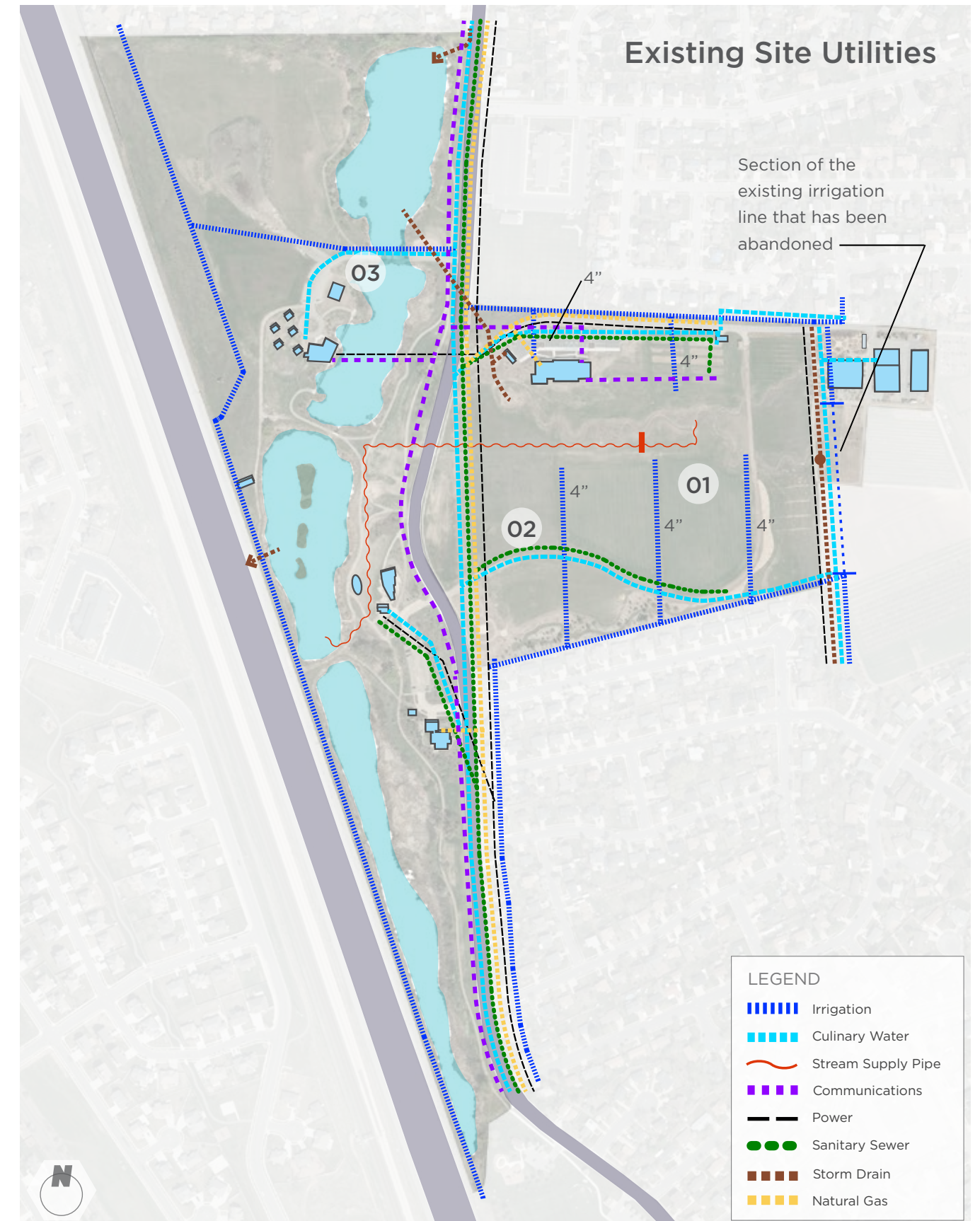
**Secondary Water.** Secondary water was updated in summer 2016 to provide irrigation to much of the eastern portion of the site. The existing line running north - south at the crest of the hill remains in place but has been abandoned, so new service was brought from 50 West street. A junction box with a discharge to the dry wash exists as indicated by the node on the abandoned storm drain line in the plan.

### CIVIL

**01 - Events & Education Quad.** Water and sewer main lines are in place or are being installed with current work at the site. Utility work for future buildings includes minimal service connections to adjoining existing utility main lines.

**02 - Sewer Main Line.** Being installed as part of the Kaysville City work currently in progress.

**03 - Existing Elements.** Existing fire hydrant and end of existing 8-inch water line.





**03** VISION &  
NEEDS

## Botanical Center Master Plan Vision

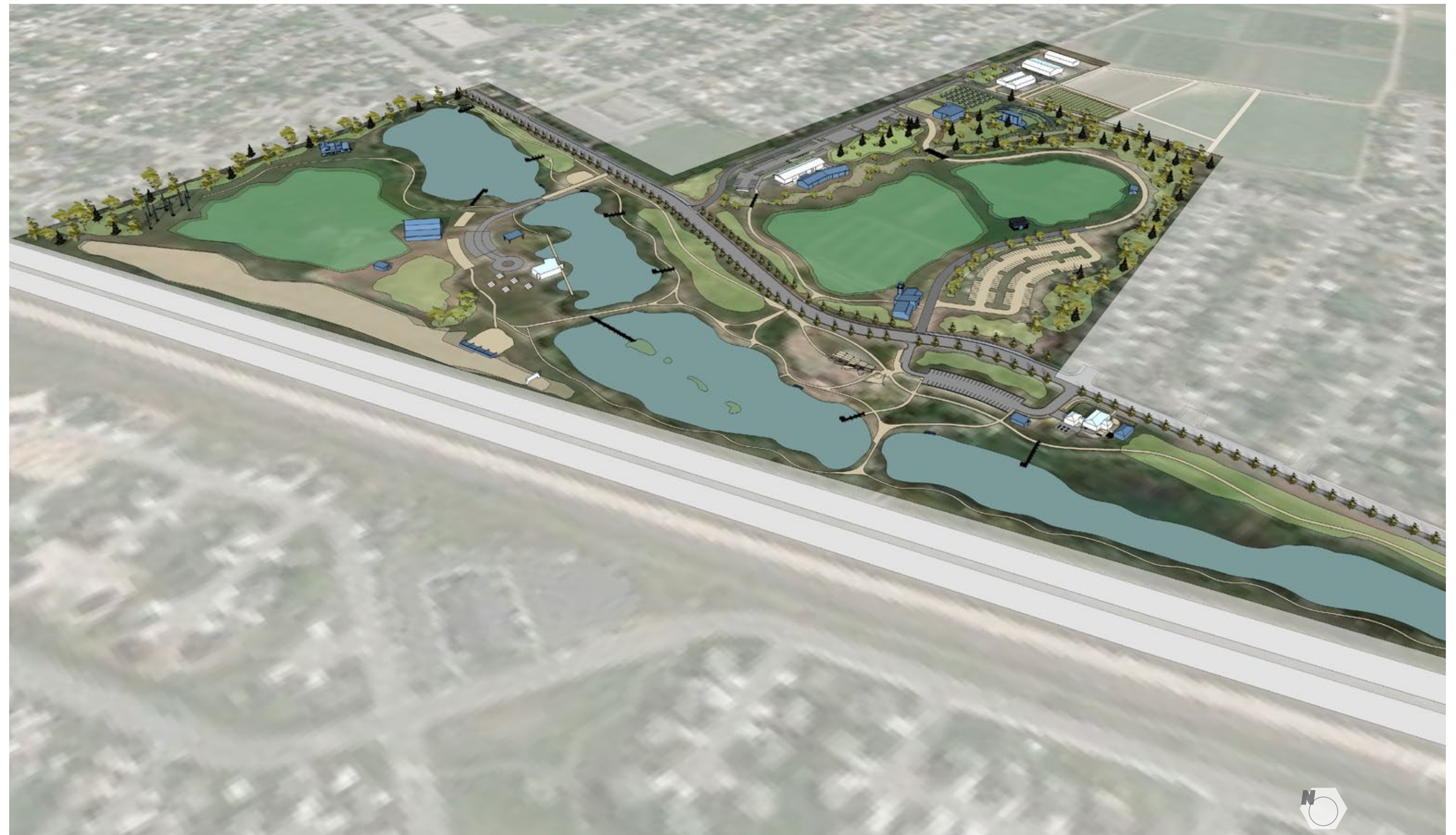
From an initial visioning session and multiple meetings with a broad group of stakeholders, and through the entire master planning process, project participants expressed their vision and priorities for the Botanical Center and its future. The ideas expressed most strongly are presented here in the form of planning directives, to be used as a guideline in future Botanical Center development.

### Future growth and development at the Botanical Center will be guided by these planning directives:

- *Maintain the Center's integrity as a green open space by limiting the construction of buildings on the site. Gardens, landscaping and open vistas should be the most prominent elements, especially to residents of surrounding neighborhoods.*
- *Feature natural resource conservation as a key theme of the Center.*
- *Preserve the central gathering space in the east sector. This open green space has great importance as a venue for community events large and small. Open space of this type and size will become increasingly rare as the regional population continues to grow.*
- *Recognize the Center as an educational and cultural amenity that improves the quality of life of the community. Understand that it is not a commercial enterprise and that it must not compete with the private sector.*
- *Develop a strong and cohesive identity as an Extension center and a Utah State University institution.*
- *Incorporate accessibility throughout the Botanical Center and design the landscape and gardens for pedestrians to enjoy.*
- *Foster partnerships with surrounding communities and municipalities; become an integral part of the community.*
- *Design all elements for ease of maintenance and upkeep, so the Center can be successful with minimal staffing.*
- *Include utilities and infrastructure as an integral and critical aspect of planning, when future projects occur.*

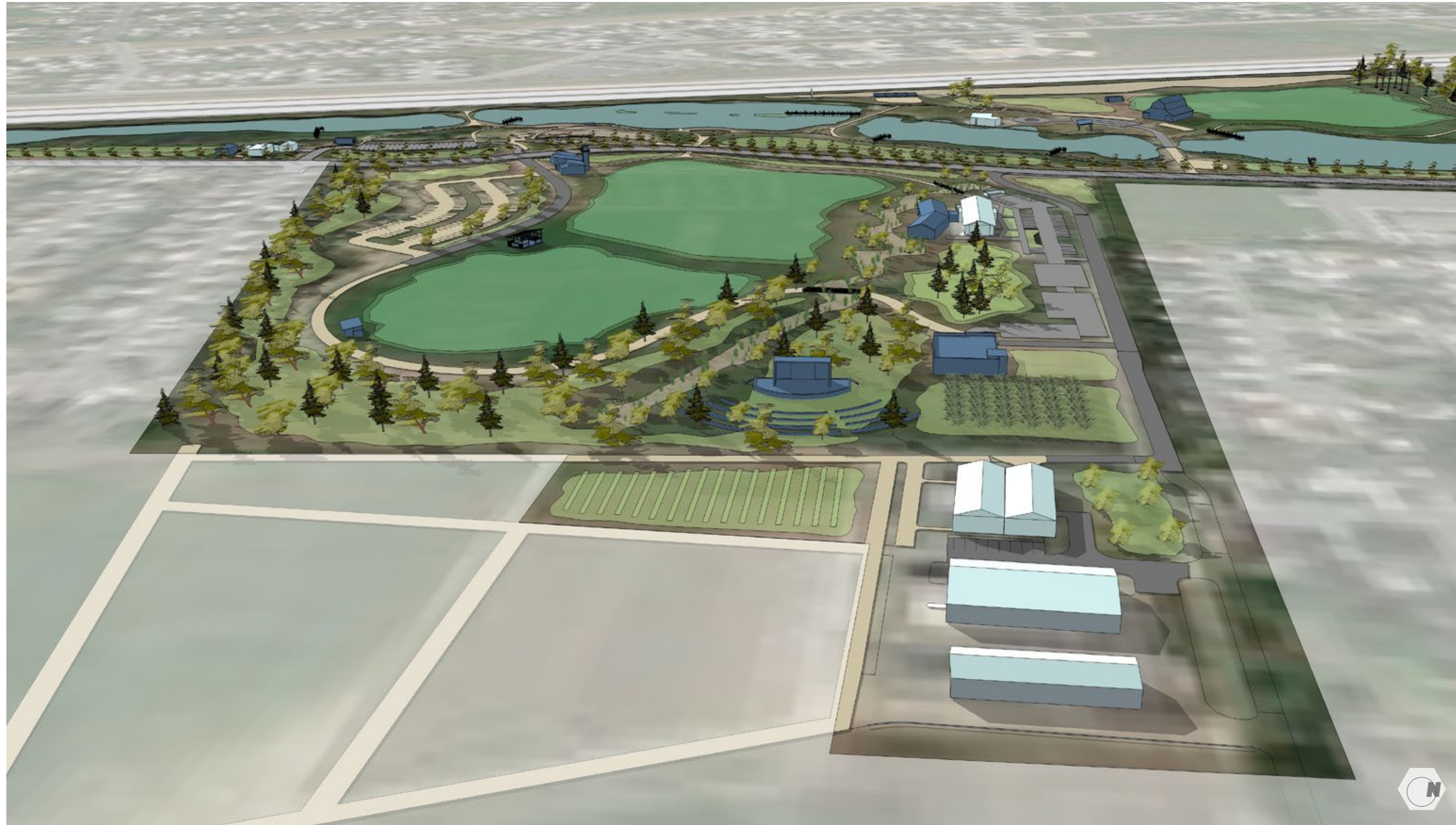
### BOTANICAL CENTER VISION (from the USUBC website)

The vision of the Utah State Botanical Center is to guide the conservation and wise use of plant, water and energy resources through research-based educational experiences, demonstrations and technologies. The center provides experiences for diverse audiences through USU Distance Education degree programs, Master Gardener programs, workshops, conferences, seminars, a children's discovery program, collaborative elementary and secondary school programs, and community education projects.



Bird's eye view of the Botanical Center from the south west





Bird's eye view of the Botanical Center from the east



Bird's eye view of the northwest sector from the southeast



Bird's eye view of the east sector from the south



Bird's eye view of the Botanical Center from the northeast



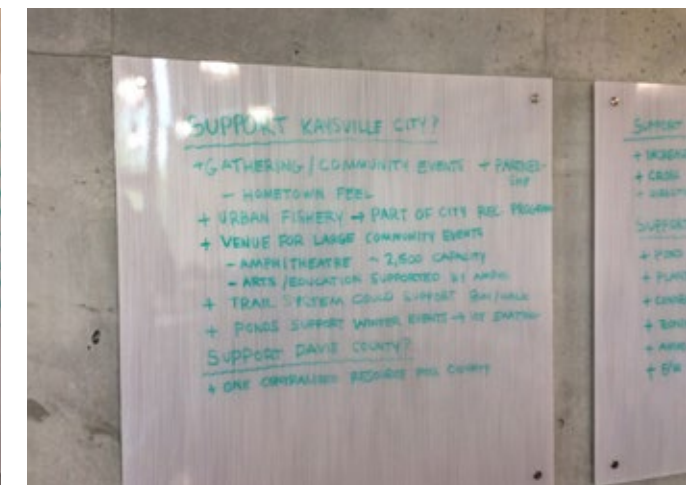
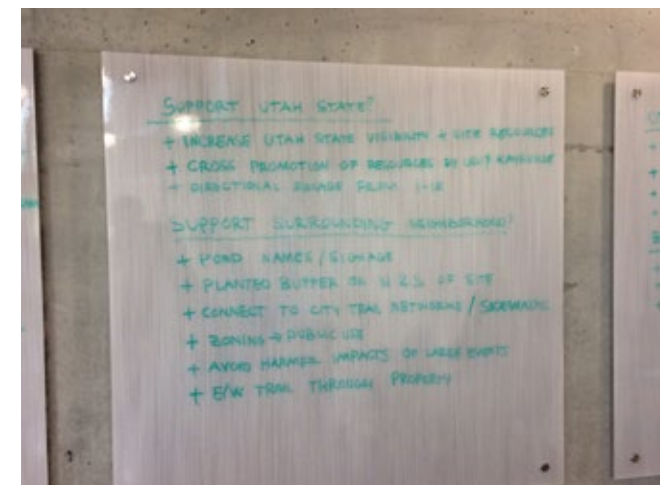
Bird's eye view of the Botanical Center from the west

## Botanical Center Needs

During the third phase of master planning, Data Review & Information Gathering, the planning consultants met with representatives from USUBC stakeholder groups to gain input on current and future needs of the Botanical Center. A summary of the needs is presented in this section.



Stakeholder interview at Wetland Discovery Point



## EVENT SUPPORT

**Events.** Current and potential future events include:

- community celebrations/activities
- Farmer’s Market
- Baby Animal Days
- Farm Field Days
- Zombie Run/Monster Mash & Dash
- Boys Scout activities
- 4-H activities
- farm-to-fork events
- community education classes such as yoga and tai chi
- “movies on the grass” events
- ropes course/outdoor adventure area
- winter lighting in the arboretum
- concerts/plays

**Informal Uses.** Provide amenities and support to encourage informal use of the Center, including walking, running, picnics, photo sessions, self-education.

**Support Facilities.** Locate support elements for easy access from event venues, the arboretum, fishing and canoing areas, and trails and pathways:

- restrooms and drinking fountains
- trash receptacles
- electrical power
- maintenance/storage facilities for gardening and event support



## PATHS & TRAILS

### General

- enhance the east zone trail system
- improve trail surfaces: road base for most natural trails; concrete or asphalt for sidewalk type trails; boardwalk in water areas
- design trails for ADA-compliance
- provide convenient trail access points for adjacent neighborhoods
- add mileage markers for walkers/runners
- connect to city and county trail systems

### Ponds Area

- pave east edge trail for bicycle use
- complete loop at north and south ends



## SIGNAGE

**Entrance Signs.** Ease wayfinding and establish strong identity as a USU facility

**Interstate-15 Sign.** An electronic, variable messaging, 300 SF sign visible from Interstate 15; a design that is appropriate for the Botanical Center mission and functions. Sign design must be coordinated with Kaysville City zoning requirements.

**Directional Signs.** Guide visitors to the site from major access routes (I-15, FrontRunner station, Highway 89).

**Signage Within the Center.** Provide signs for clear wayfinding, and identification of areas and boundaries.

**Interpretive Signs.** Place signs along trails or at functional areas, that identify plant and animal species, and ecological and environmental features.



## SITE FURNISHINGS

**Seating.** Locate informal seating areas throughout, near trails and gardens, for resting, watching the sunset, etc.

**Shade.** Use structures and/or trees and other plantings, to shade areas where events and casual uses will take place.

**Support Facilities.** Locate support elements for easy access from event venues, the arboretum, fishing and canoing areas, and trails and pathways:

- restrooms and drinking fountains
- trash receptacles
- electrical power
- maintenance/storage facilities for gardening and event support



## BUILDINGS

**Education/Extension.** In two new buildings currently being designed, and at least one additional future education building, the following are needed:

- more and larger classrooms
- distance education capability
- Extension offices
- multi-functionality as event venues
- outdoor classrooms/demonstration kitchen

**Visitor Center.** Possible functions: reception; information; small food venue (Aggie creamery); sales of branded items; rest rooms/support for adjacent event areas; office space; auditorium.

**Amphitheater.** Capacity for 500 in the short-term, expanding to 2,500 long-term. Functions: educational, Boy Scouts, 4-H, entertainment; requires support facilities.

- parking must be expanded
- some events would be fee-based
- should be unobtrusive, part of landscape
- small concerts and venues would be supported by the community.
- could be used for teaching, scouts, in addition to music, theater, etc.
- provide educational and recreational offerings

**Barn.** Possible functions: maintenance support/storage; 4-H functions & storage; Boy Scout activities; private events.

**Wetland Discovery Point.** Needed enhancements:

- acoustic control for the main interior gathering space
- increased storage
- improved event support, including catering
- improved access and parking



**Utah House.** Needed enhancements:

- southern open-air expansion for educational and private event capacity for up to 300
- shade structure for 100 people, with possible enclosure for all-season use
- breakout space for four groups of 25
- catering support and storage space for anticipated uses
- strategies for improved access

Restrooms & Maintenance Needs:

- shed by arboretum
- storage with the restrooms (gardening tools)
- multiple sheds in various locations
- trash receptacles near the ponds and periodically on the trails



## GARDENS

**Gardens.** Needs include:

- children's garden
- edible, ornamental & water conservation plant species garden(s)
- herb garden (near demo kitchen)
- hands-on demonstration garden
- healing garden
- pollination garden

**Additional Gardens/Landscape Elements.**

Needs/ideas include:

- arboretum expansion to full perimeter of the Botanical Center
- riparian/stream zone
- terraced landscaping along 50 West
- Aggie/observation tower
- fitness course
- outdoor study/lounge area(s) for students
- children's play/exploration areas adjacent to walking paths, gardens, or student study/lounge areas



## OUTDOOR ELEMENTS

**General.** Needs specific to this area include:

- trash receptacles
- public rest rooms
- signage to identify this as part of the USU Botanical Center, to identify the individual ponds, to explain usage guidelines, and to provide interpretive information
- an accessible path to the boardwalk
- canoe, kayak docking station; possible multifunction as a wading spot
- facilities to support a potential future recreational fishing program

**Children's Elements.** incorporate ways to engage children throughout pathways and trails.

It would be beneficial to have:

- signage informing visitors about which areas are open to access or off-limits
- an area for children to play or pursue an activity while their parents visit with other adults or study.



## FIELD/PRAIRIE

**Potential Functions.** The northwest field is underused currently. Possible future uses for the area were discussed by project participants. Ideas includes:

- events and educational programs for youth (4-H, Boy Scouts, etc.)
- community gardening
- composting demonstration
- venue for high-volume events such as Farm Field Days and Baby Animal Days
- real estate development, such as a hotel, guest house or conference center



## ACCESS, PARKING, INFRASTRUCTURE

**New Crosswalks.** Needed across 50 West street, at Utah House parking area and Seago Lily Drive; consider pedestrian lights

**50 West Tunnel.** Desired enhancements include improved lighting, possible security camera(s), an inviting pedestrian approach and installation of road base.

**Access Control.** Under consideration for the future: fencing (high-quality, low-visibility) and entry gates to control access, especially during high-volume events.

**Parking Strategies.** Possibilities include:

- non-paved parking (currently planned)
- angled or parallel parking on one or two sides of 50 West
- non-paved parking in Field/Prairie area, with interpretive trail leading visitors to venues
- shuttle strategy for high-volume events, with parking at neighboring institutions

**Utilities & Infrastructure.** Needs include:

- night-sky friendly lighting for added security: along Seago Lily Drive; parking areas; event venues and access pathways. Note: avoid lighting in the Quad
- security cameras at strategic locations
- utility corridors that have excess capacity; are easy to access and easy to expand
- designated snow removal zones
- the northwest sector is undeveloped; utilities and infrastructure will need to be provided for future facilities and functions
- city vehicle access-way to pond inlet, for more frequent maintenance



**04** PLAN  
ELEMENTS



## Master Plan Concept

The key concept of the master plan is the creation of multiple identifiable focal points on the Botanical Center site. This multi-centric approach maximizes site utilization by providing clusters of facilities and natural elements for distinct uses in different areas.

Key drivers of the master plan concept include:

- the creation of three identifiable campus quads with distinct areas of emphasis: 1) events, 2) education and 3) youth education and recreation
- protection of the east-west viewshed through the site, to maximize views to the Wasatch Mountains and the Great Salt Lake
- multiple gateways that provide access to the site, and a Visitor's Center that serves as an intuitive front door
- gardens distributed throughout the east sector, creating a green ribbon at the edges of the Events and Education Quads
- reinforcement of the site's rural character by maximizing open space
- building placement that frames the campus quads and complements natural site features
- parking that is minimal but sufficient for needs, placed to minimize visibility
- a dry wash concept running from east to west through the site, with an integral trail and plantings that educate about native vegetation

### PLAN ELEMENTS

- 1 Events Quad
- 2 Education Quad
- 3 Kaysville Education Center & Addition
- 4 ICLT
- 5 Amphitheater
- 6 Restroom/Maintenance Facility
- 7 Arboretum
- 8 Education Pavilion
- 9 Visitor Center
- 10 Terrace Garden
- 11 Dry Wash
- 12 Events Quad Parking Area
- 13 Youth Quad
- 14 Barn
- 15 Guest House
- 16 Ropes Course
- 17 Children's Garden
- 18 Central Maintenance Facility
- 19 Wetland Discovery Point
- 20 Garden View Pavilion
- 21 Utah House & Expansion
- 22 Kayak & Canoe Access
- 23 Interpretive Sign
- 24 Paved Multi-use Path
- 25 Welcome Sign
- 26 Education Garden

*This section contains a description of master plan concepts and major elements.*

*See page 4.11 for Circulation, Parking & Access Plan*

*See section 05 for additional landscape and planting information and descriptions.*



**The east sector of the Botanical Center will focus on education and large public events.**

**01 - Events Quad.** The expansive green space that currently exists east of 50 West will be preserved, maintaining the east-west view corridor across the site. It will provide a venue for community events such as the weekly farmer's market, and will be available for informal use by community members. The arboretum will surround the area on the north, east and south.

**02 - Education Quad.** East of the Events Quad, the Education Quad is a central open space linking the Center's education facilities along the north boundary and the Education Pavilion on the south.

**03 - Kaysville Education Center (KEC).** An expansion of the existing Kaysville Education Center and associated parking is currently being planned. This will increase the capacity of the Center's educational offerings, and will allow the relocation of the Farmington Extension offices to the USUBC, consolidating services in a single location.

**04 - ICLT.** The new ICLT building will be east of the Kaysville Education Center. It will be used for education and events. It will have indoor and outdoor kitchens for food preservation and cooking demonstrations, and for hosting cooking competitions. It will share parking with the KEC.

**05 - Amphitheater.** An amphitheater for educational and recreational events will be constructed where it can take advantage of the hill's natural grade. The Amphitheater design should be unobtrusive, blending with the landscape and natural environment. It will be built in three phases. The first consists of a simple platform stage with bench seating for 500 built into the upward slope. Phase 2 adds 500 seats and a more substantial stage facility with a roof structure and support facilities such as a green room and performer rest rooms. Phase 3 retains the stage structure but adds 500 seats, for 1,500 total. Informal seating on the hillside can augment the seating capacity. The Amphitheater design must minimize noise impacts on the adjacent neighborhoods. The Center may partner with Kaysville or Fruit Heights on the project.

**06 - Restroom & Maintenance Facility.** A 200 GSF building with visitor restrooms and maintenance shed space will be located in the southeast corner.

The restrooms will serve patrons visiting this area, including Amphitheater attendees. The maintenance portion will store tools and materials used in the daily operation of the Botanical Center.

**07 - Arboretum.** The Varga Arboretum, which exists along the south boundary of the east sector, will be extended eastward up the hill and then northward.

**08 - Education Pavilion.** The Education Pavilion will be a 2,000 GSF open-sided, roofed structure for informal education events of around 30 people. It will have a small amount of enclosed storage space.

**09 - Visitor Center.** Located in the southwest corner of the east sector, the Visitor Center will be easily identifiable to visitors as the primary gateway to the USUBC. The building will have a tower element to enhance its visibility. In addition to providing information and public rest rooms, it may offer limited retail such as USU and Botanical Center publications and branded items, and a small refreshment venue such as an Aggie creamery. It will contain offices, classrooms and an auditorium.

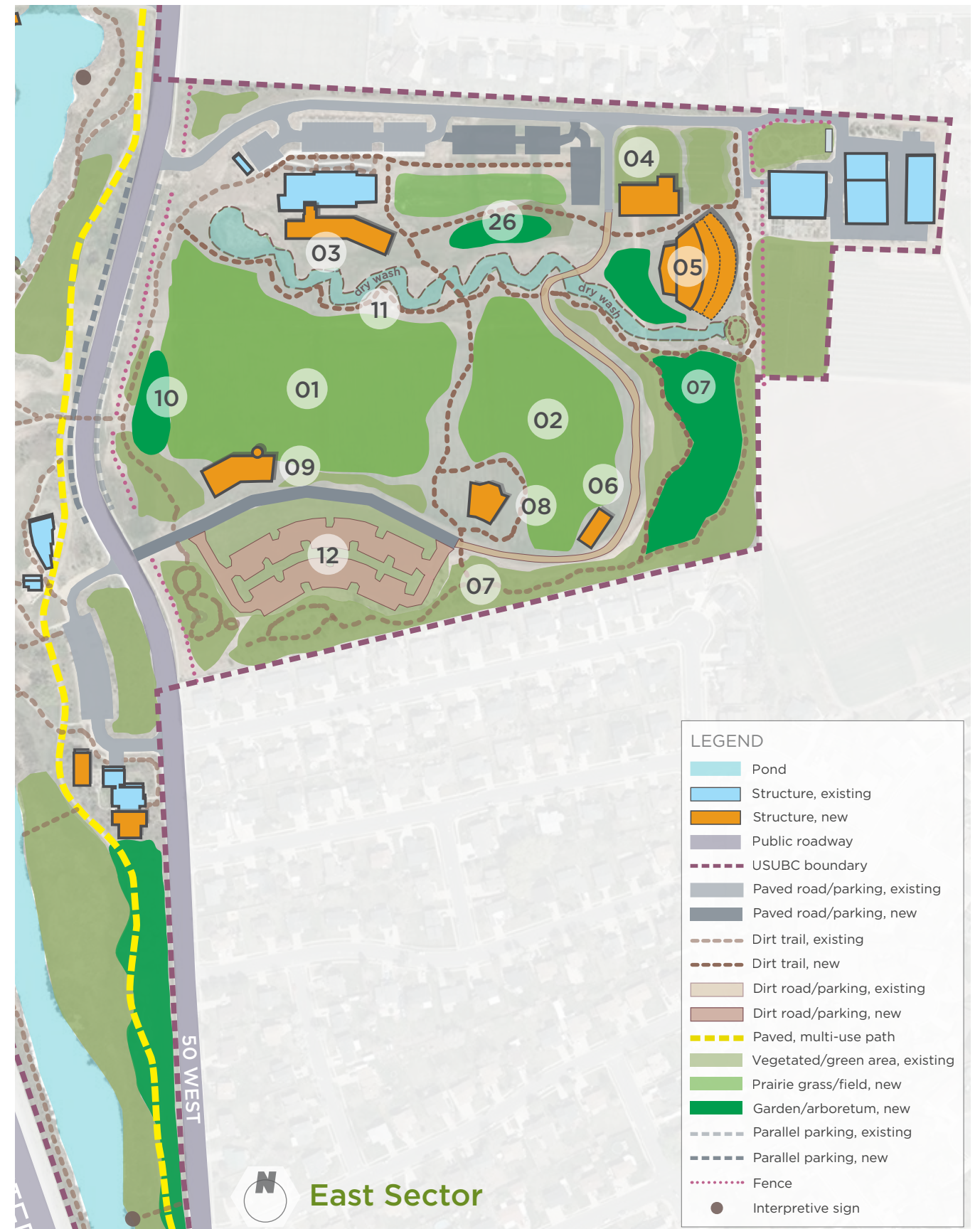
**10 - Terrace Garden.** A Terrace Garden at the 50 West tunnel overpass will be built to create a stepped entrance to the tunnel.

**11 - Dry Wash.** Extending west from the Botanical Center east boundary, the Dry Wash will demonstrate riparian plants for both wet and dry wash environments. It will also assist with storm water detention and drainage.

**12 - Events Quad Parking.** A new road-base parking area will provide 142 stalls for use during large events at the Botanical Center.

**26 - Education Garden.** This garden will be a demonstration center for sharing gardening advice and techniques for creating a successful garden. It will be used for horticultural teaching and will illustrate when various plants are in bloom.

**Paths & Trails.** The existing trail that continues east from the new Events Quad parking area will be converted to a road base roadway to provide service and emergency vehicle access to the east portion of the site. Throughout, interpretive signs will be added to enhance the Center's educational mission. Seating will be placed to take advantage of views and to provide resting spots. Trail surfaces will be improved for ease of navigation and accessibility.



**The northwest sector of the Botanical Center will focus on youth activities and facilities.**

Major plan elements are described below.

**06 - Restroom & Maintenance Facility.** A 200 GSF building with visitor restrooms and maintenance shed space will be located near the Barn and north of the new Children's Garden. The restrooms will serve patrons visiting this area, and the maintenance portion will store gardening tools and maintenance materials to support this sector.

**13 - Youth Quad.** The open field at the north edge will host large youth-oriented events such as Baby Animal Days, Farm Field Days, and Boy Scout, 4-H and FFA gatherings, camps and field trip groups.

**14 - Barn.** The barn is anticipated to be around 15,000 GSF, with rest rooms and a substantial amount of storage space for 4-H and other groups that use the Youth Quad. The building may have informal learning space. The Barn will be a back-up venue when outdoor events have inclement weather. The existing parking area that serves Wetland Discovery Point will be expanded to serve the Barn, Youth Quad and Children's Garden.

**15 - Guest House.** An 8,000 GSF guest house is planned at the north boundary of the Botanical Center. It will provide accommodations for around 50 people in bunkhouse-style rooms and will have limited food preparation and serving facilities. The Guest House is anticipated to be used primarily for youth groups and youth-oriented activities. It will be accessed by a road-base access way extending from the barn, and will have limited adjacent parking for accessibility and service. North of the Guest House, screening vegetation will provide visual privacy for Guest House visitors and residences to the north.

**16 - Ropes Course.** The northwest corner of the site will contain a ropes course, to be used in conjunction with youth activities occurring in this sector. Fencing will control access to the course.

**17 - Children's Garden.** A Children's Garden will be developed south of the Youth Quad, near parking and visitor restrooms, for patron convenience. The Children's Garden and adjacent areas will incorporate creative ideas to engage and interest

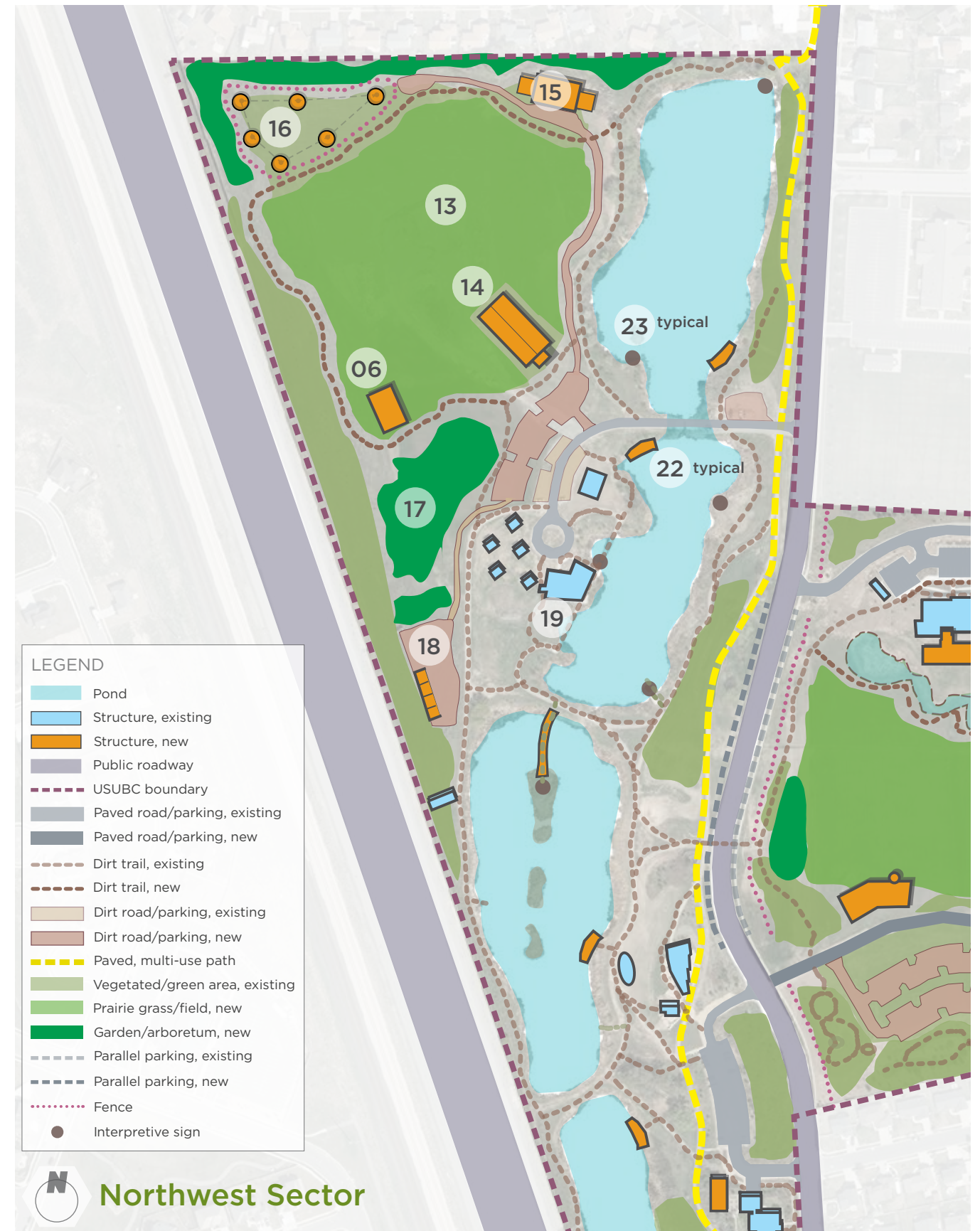
children in gardening and the natural environment. Consideration should be given to incorporating a natural-scape play area for children in this area, with adjacent seating for adults that has clear visibility to the play area.

**18 - Central Maintenance Facility.** This facility will store bulk materials used in the care and maintenance of the Botanical Center, such as soil, gravel and bark mulch. Configured as side-by-side bins with open tops and fronts it will be built into the western berm. It will require a hose-bibb for cleaning gardening tools and materials. Large trucks deliver the bulk materials. The area immediately east of the bins will be designed to allow truck access with ample turnaround space. Landscaping between the maintenance area and the Children's Garden to the north should be designed for visual separation between these two areas.

**19 - Wetland Discovery Point.** Wetland Discovery Point is an existing, highly sustainable facility that is used heavily for education. No major changes are required, but minor improvements are desired, such as creating teaching breakout areas and enhancing acoustic absorption in the primary open space. The existing access way and parking in this area will be augmented to support the new venues and activities for the northwest sector. A recently constructed pavilion will serve as an outdoor classroom for youth and school field trips and education.

**22 - Kayak & Canoe Access.** Large concrete steps at pond edges will provide convenient water access for canoes and kayaks, and places to wade in the water or sit and enjoy the wetlands environment. These elements will help prevent erosion of pond banks. Four access points are planned, one in each pond. One should be planned for wheelchair accessibility, most likely in the vicinity of the 9/11 Memorial.

**23 - Boardwalk/Interpretive Signs.** Areas adjacent to the ponds that may be submerged in water should receive boardwalks to enhance their accessibility. Interpretive signs can be incorporated that educate visitors about the wetlands ecology.



The southwest sector of the Botanical Center focuses on the Utah House and the wildlife and ecology of the Ponds area. Major plan elements are described below.

**06 - Maintenance Facility.** A 200 GSF maintenance shed will be located near the access point to the south pond. The shed will store gardening tools and maintenance materials to support the southwest sector. In the master plan, the new facility is shown on the site of an existing, small storage shed. The USUBC may choose one of several options when building the new Maintenance Facility: add on to the existing shed; build the new facility near the existing; or replace the existing shed with the new facility.

**20 - Garden View Pavilion.** The pavilion is adjacent to the 9/11 Memorial and restrooms that serve the pond area. No master-planned changes or enhancements are anticipated for this area.

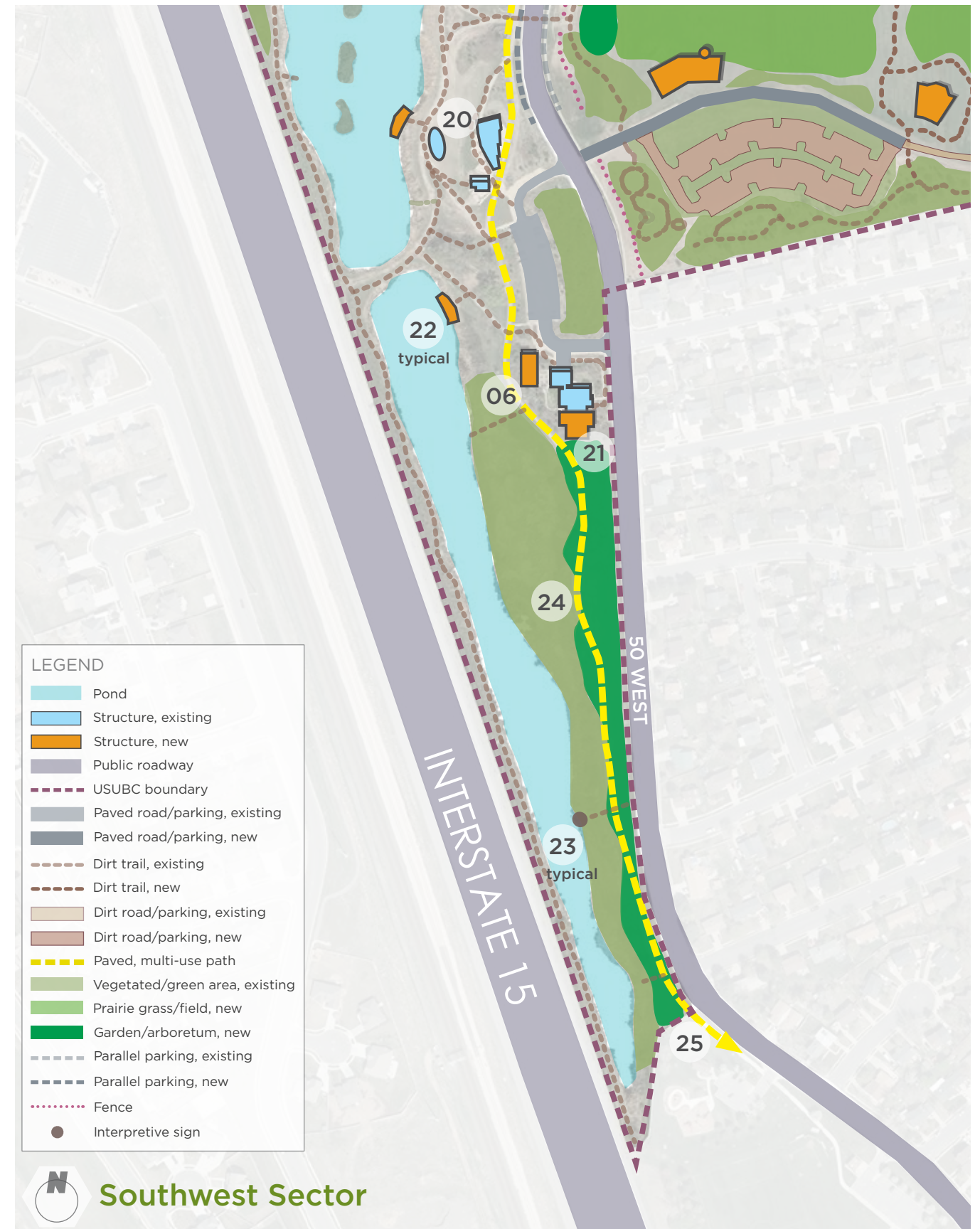
**21 - Utah House.** The existing Utah House demonstrates sustainable and conservation principles in both building construction and landscape. It is a successful venue for educational purposes, and is also rented frequently for private events such as wedding and corporate meetings. To facilitate use of the Utah House for larger events than at present, an addition will be constructed south of the structure, in an existing outdoor courtyard space. The addition should have glass walls that can open either by sliding or by being raised like a garage door, so it can function as indoor or outdoor space depending on the time of year and weather. At an anticipated 2,000 GSF, it will accommodate about 100 people for banquets, or up to 150 for non-seated receptions.

**22 - Kayak & Canoe Access.** Large concrete steps at the south pond edge will provide convenient water access, and a place to wade or sit and enjoy the wetlands environment. This element will help prevent erosion of the pond bank. One access point will be constructed in this sector, on the north end of the south pond.

**23 - Boardwalk/Interpretive Signs.** Adjacent to the pond, areas that may be submerged in water should receive boardwalks to enhance accessibility. Interpretive signs can be incorporated to educate visitors about the wetlands ecology.

**24 - Paved Multi-use Path.** An existing gravel path will be paved for shared use by pedestrians and bicyclists. The path connects with Ponds Park on the south and extends northward the full length of the Botanical Center. When paved, it will improve access to the Center by bicyclists who are arriving in the area by UTA's FrontRunner train system.

**25 - Welcome Sign.** A new welcome sign will be added at the south end of the pedestrian and bicycle path.



## Circulation, Parking & Access

**Campus Access.** The route to the USUBC from major access points (I-15, FrontRunner station, Highway 89) is not well-defined and difficult to navigate. It is recommended that the USUBC work with municipalities to add directional signs to improve wayfinding and access.

**Roads & Gateways.** Road access to the Botanical Center is via 50 West Street, which runs north-south through the Center, providing several access points that serve as gateways to different areas.

Crosswalks should be added on 50 West to improve pedestrian safety. Recommended locations include the Utah House parking lot entry and the turn-off to Se-go Lily Drive. Pedestrian light systems should be considered, especially for the Utah House location.

**Parking.** One of the goals of the Botanical Center is to retain as much natural area as possible, and to build structures and infrastructure only as needed to support programs that fulfill the Center's mission. Parking is an element that must be provided but only to the extent needed for functionality.

The master planning approach to parking at the USUBC is to provide capacity to meet the demands of today's visitors, students and staff as well as those of the future. Accessibility and universal design have been considered to ensure that parking is located where needed and in sufficient quantity to provide the same experience for Botanical Center users of all ages and abilities.

In order to ensure that the overall appearance and experience of the facility remain appropriate for a Botanical Center - with natural resources on display and with views to mountains and the Great Salt Lake preserved - the visual and environmental impact of parking has been limited to the greatest extent possible. Parking resources are provided at the edges of the property, nearest to existing roads or facilities, to limit the hardscape surfaces which detract from the experience of the Center and its gardens. Parking is carefully broken into smaller lot sizes that respond to the natural topography of the site, and lots are surrounded by vegetation wherever possible. Parking areas have been

carefully inserted in the plan where they will serve the primary activity centers on the site: Events Quad, Education Quad, the Youth Quad and the Utah House. Opportunities for shared parking for facilities with complementary schedules have been used to the greatest extent possible. Parking plans and strategies are described below:

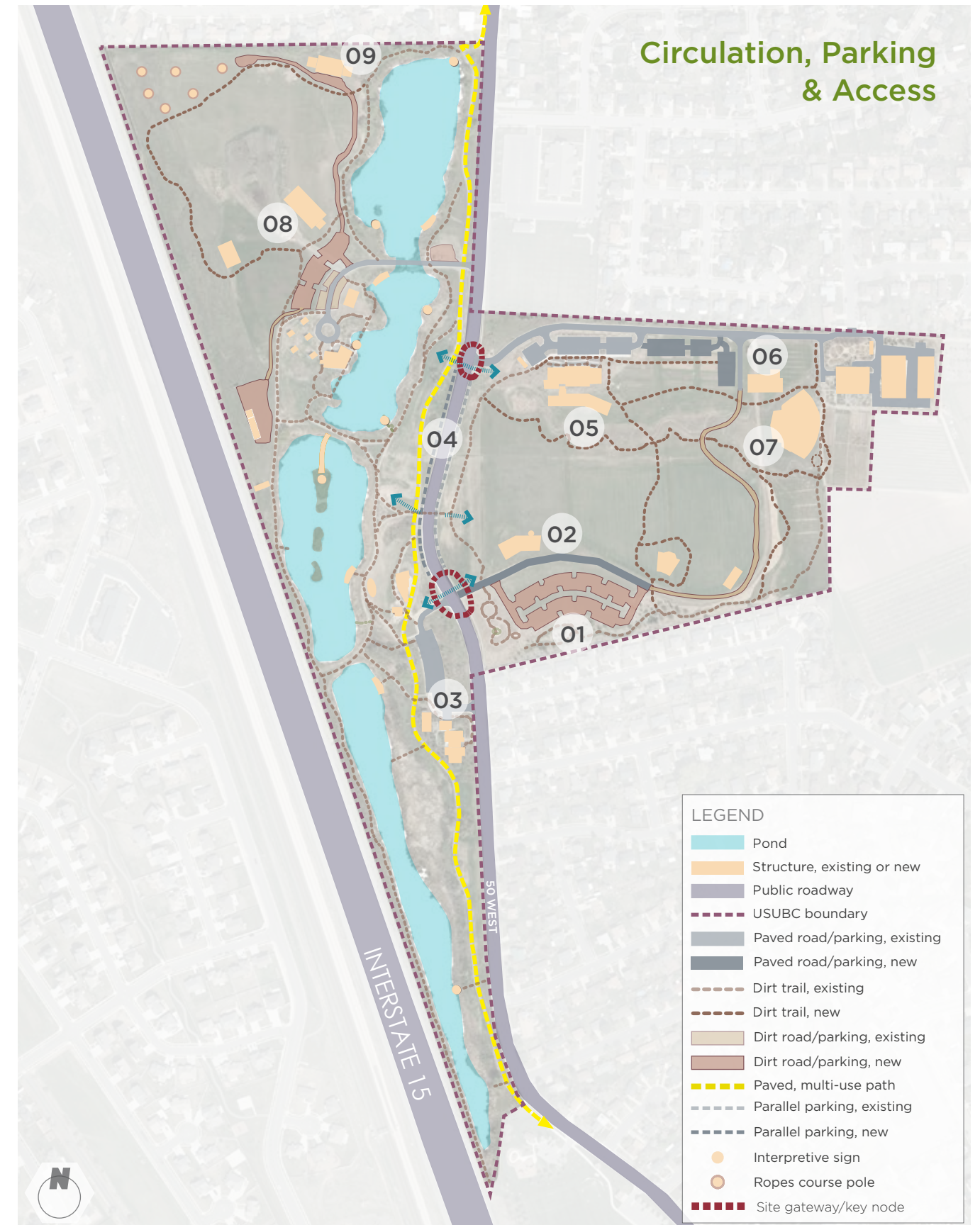
**01 - Events Quad Parking.** A new paved drive and road-base parking area are currently being constructed near the south edge of the Botanical Center's east sector. This will accommodate 142 cars and will serve large events in the Events and Education Quads and the future Amphitheater.

**02 - Visitor Center.** The location for the Visitor Center was selected to be easily identified by visitors, provide support to large events, offer maximum views of the site and to take advantage of existing parking resources. The 142 parking spaces at the adjacent Events Quad parking lot will more than meet the demand of the Visitor Center.

**03 - Utah House Expansion.** The current parking at the Utah House meets the demand, and was deemed sufficient for the small expansion planned for this facility.

**04 - 50 West Street.** On the east side of the street, roughly 45 cars are able to parallel park during large events such as Baby Animal Days. The west side of the street is not currently utilized for parallel parking, in order to provide a safer roadway for bicyclists. Once the paved multi-use path to the west of 50 West Street is completed, the west side of the roadway will be used for an additional 45 parallel parking spaces during large events.

**05 - Kaysville Education Center Expansion.** The Kaysville Education Center (KEC) is being expanded in response to high enrollment demand and an increase in course offerings. The expanded facility will also provide offices for Davis County Extension Services, which will relocate from Farmington. Parking demand peaks are in the afternoon and evening for KEC students, who arrive at the USUBC primarily in private cars. The expansion of the paved lot will have a similar parking ratio as the currently existing facility. The parking expansion has been planned to ensure that parking is at the site edges, to minimize its visibility within the Botanical Center.



**06 - ICLT.** This facility will provide a venue for events and instruction in conjunction with the edible garden spaces immediately to the north. The event schedule is anticipated to have little or no overlap with the instruction schedule of the KEC, so parking will be shared between the two facilities.

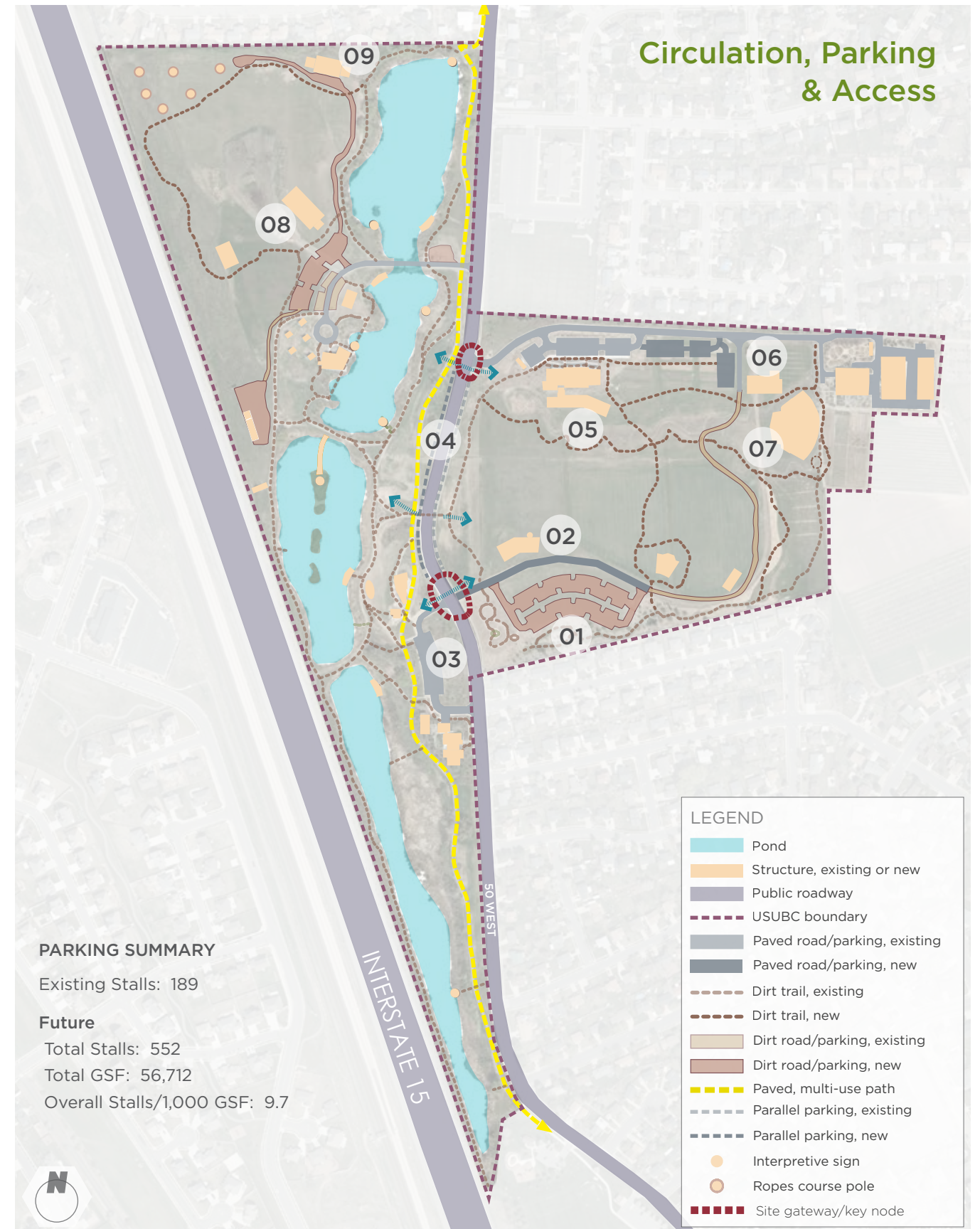
**07 - Amphitheater.** Parking needs for accessibility, event support and emergency personnel will be met with a few spaces adjacent to the Amphitheater. For significant events held at the facility, parking will be available at the Kaysville Education Center and Events Quad lots; event schedules will allow these parking areas to be shared with the Amphitheater. There will be roughly 300 parking spaces within a brief walking distance of the Amphitheater, giving visitors the opportunity to experience the beauty of the Botanical Center as they walk from their vehicles to the venue. When all Master Plan phases are complete, the Amphitheater will have around 1,500 seats, a parking ratio of one stall per five visitors. Additional capacity can be provided by parking on the Events Quad turf when needed.

**08 - Barn.** Large events for youth groups such as 4-H will be held at the Barn, requiring significant parking. In addition to the existing parking at Wetland Discovery Point, 75 new spaces will be provided to meet the demands for these events.

**09 - Guest House.** Intended to provide overnight facilities for youth groups and leaders, significant parking is not likely required for this facility. Twenty stalls will meet anticipated demand for guests, and significant additional parking resources exist a short walk away at the Barn. Five stalls will be directly adjacent to the facility for ADA and service needs. Additional capacity will be available along the access road.

**Shuttling.** During very large events in the Events Quad, Youth Quad or Amphitheater, a shuttle service will be used. In the past, Kaysville schools have been open to supporting the Botanical Center as shuttle locations; it is anticipated that this will continue.

### Circulation, Parking & Access



FACILITY	GSF	STALL QUANTITY				STALLS/ 1,000 SF
		Existing	Ph 1	Ph 2	Ph 3	
<b>Existing</b>						
Kaysville Education Center (KEC)*	6,527	66				10.1
Utah House	3,471	48				13.8
Wetland Discovery Point	3,214	30				9.3
50 West Street	NA	45				NA
<b>Phase 1</b>						
Events Quad parking	NA		142			NA
50 West Street	NA		45			NA
KEC Expansion*	6,500		76			11.7
ICLT*	4,000		0			NA
Barn	15,000		75			5.0
Utah House (expansion)	2,000		0			NA
Amphitheater, 500 seats*	NA		5			NA
<b>Phase 2</b>						
Visitor Center	8,000			0		NA
Amphitheater, +500 seats*	NA			0		NA
<b>Phase 3</b>						
Guest House**	8,000				20	2.5
Amphitheater, +500 seats*	NA				0	NA
<b>Parking Totals</b>		189	343	0	20	

\*ICLT & Amphitheater will share Kaysville Education Center & Expansion parking stalls

\*\*Guest House parking includes 5 ADA/service stalls, with additional parking along access road

**Paths & Trails.** There is an extensive system of paths and trails throughout the Botanical Center, as pedestrian travel is the primary form of circulation. In addition to use by Botanical Center visitors, the paths are popular among area residents for walking, running and bicycling.

Several general improvements are desired that will make the trails enjoyable and functional, listed below. They should be implemented in a particular vicinity as large projects occur in that area, or as funding allows.

- extending trails so they are interconnected and form circuits throughout the Center
- upgrading trail surfaces for improved accessibility and ease of walking
- adding trail extensions and gates to increase connections with surrounding neighborhoods

Other features that would be beneficial to trail users are distance markers and signs for wayfinding and access. Informal seating for resting or enjoying views would likely be appreciated by Botanical Center visitors.

An existing gravel path west of 50 West and east of the ponds provides uninterrupted access from the residential area on the north to Ponds Park and the residential area on the south. The Botanical Center is currently exploring funding options to pave this path, perhaps in conjunction with UTA and Kaysville City. If paved, it will become a wide, paved, shared-use path for pedestrians and bicycle use. This path can connect to and be an integral part of the city and county trail system.

The area west of the ponds is rustic; trails in that location are to remain non-paved. In areas where the pathway soil may become moist or destabilized, boardwalks should be provided.

West of the ponds, on the north end, additional paths and trails connecting the existing facilities

with the new Youth Quad will increase circulation opportunities to the proposed facilities.

A trail around the very south tip of the south pond and connecting to the paved multi-use path will minimize plant damage and will provide a convenient path of travel. New trails in the ponds district can support access to the proposed Kayak/Canoe Access points and the wildlife discovery interpretation nodes which provide viewing opportunities across the ponds and a location for interpretive signage.

**Access Control.** The Botanical Center ponds and trails are open from dawn until dusk. The Center is open and free to the public during those hours.

The Botanical stages several large public events that have an admissions charge. Temporary fencing is used to control access during those times.

Vandalism or uncontrolled access have not been a problem at the Center in the past, but may become so as population density in the area increases.

In the future, fencing, gates and similar elements may be used to limit or control access, especially in the east sector, so that vandalism and other potential problems will be minimized.

The Center has an easement access agreement for the ponds area, so it is unlikely that access control will be implemented in that area.

The ropes course master-planned for the northwest corner of the site will require controlled access for liability reasons. Security fencing will be installed along with the course.

The master plan shows future fencing along the east side of 50 West that should be installed when it becomes prudent or necessary to control access.

Major gateways are indicated at the access point to the Visitor's Center and Utah House, and at Segoe Lily Drive. Crosswalks with flashing beacon pedestrian signals are recommended for those

## Sustainability Goals

Utah State University has the goal to become carbon neutral by the year 2050. The University requires that all new buildings achieve LEED Silver or higher, and places a high priority on all elements of sustainability. This is highly compatible with the Botanical Center's mission of conservation and wise use of natural resources. Sustainability has been prioritized in past development at the Botanical Center and should continue to be in the future.

As new projects begin, Botanical Center administrators and design team members should explore how they can be designed and constructed with a minimum of environmental impact.

Buildings should be programmed for the minimal size that will provide the needed functionality. Multi-functionality of spaces should be implemented to help reduce square footage. Buildings should be sited and oriented for maximum solar benefit. Strategies to minimize energy and water consumption should be developed. Materials should be carefully considered for their embodied energy, longevity, and future impacts when the building has reached the end of its useful life.

### ELECTRICAL SUSTAINABILITY GOALS

The campus should remain as sustainable as possible within the project budget. Currently all projects should meet the following requirements: Utah State High Performance Building Standard, LEED Silver minimum, and Energy Code.

Lighting power densities should target 20-30 percent better than energy code and use the most efficient sources available that fit within the project budget. At this time LED sources are anticipated for projects moving forward. Lighting controls must meet or exceed the energy code requirements while meeting the USU standards for manufacturers. Controls should anticipate each building to be a dark building where all lighting within the building is capable of being automatically turned off completely at night when unoccupied.

It is a desire of the campus to explore and provide as much PV solar generation as possible given each project's budget considerations. At minimum each building shall consider and if prudent make provisions for future building mounted PV arrays. This should include pathways, space, structure sizing and other pertinent considerations

### MECHANICAL/PLUMBING SUSTAINABILITY GOALS

Mechanical system selection should be based off of life cycle analysis. Where life cycle cost effective, new construction and major renovation projects should have a 20% reduction energy cost compared to a baseline building per ASHRAE 90.1-2010. Where possible use of evaporative cooling should be considered for partial or staged cooling. Sizing of insulation thickness for chilled water, hot water, steam, and condensate piping should optimize cost and efficiency rather than code minimum. Provide life cycle economic evaluation of the insulation system. Mechanical systems should utilize water or air side economizers. Electric motors for HVAC equipment should be high efficiency three phase type. Air handlers, pumps, and fans should utilize VFD or EC type motors for energy efficient modulation.

Provide separate thermal zones for all classrooms, conference rooms, or other multi-occupant spaces. Provide separate thermal control per room where possible. Group rooms of similar occupancy, usage, and solar orientation as a thermal zone when necessary for economical purposes. It is recommended to not exceed three rooms or 1,500 sq ft. per zone. Occupancy sensors or CO2 sensors should be provided in all multi-occupant spaces for demand control ventilation to allow the spaces to reduce the outside air flow to the space.

Plumbing fixtures shall be low-flow type. Use of waterless fixtures is not allowed.

## Site Utilities

The Site Utilities plan indicates utility corridors where future utilities should be located. Utility corridors should be accessible and planned with extra capacity for future use.

With each project, existing and as-built conditions must be carefully documented.

Utilities should be designed so that individual zones within the site can be shut-off separately. Zones should be determined with input from the Owner.

Kaysville City prefers that wet utilities (sanitary sewer, culinary water, storm drain) be placed under asphalt. Gas should be placed in the park strip. Electrical lines should be three feet beyond the sidewalk and cable should be placed beyond electrical.

Initial projects in an area must anticipate and plan for the infrastructure needs of future projects, so that future projects can build upon past completed work.

Infrastructure should be designed to accommodate future needs and capacities. In particular, potential future technology needs must be considered and accommodated where possible.

Utah State University standards must be followed in all utility work.

### PHASE 1 UTILITIES

#### 01 - Central Maintenance Facility

Water: Connect to the 2-inch service line to Wetland Discovery Point.

Sewer: Provide a residential pump station to pump into the Glendon bio-filter holding tank for Wetland Discovery Point.

#### 02 - Maintenance Facility (if Rest Rooms included)

Water: Provide water service from 50 West Street,

or connect to water service to restrooms near the Pavilion after the water meter, and combine the service.

Sewer: Provide gravity flow sewer service to 50 West sewer main.

#### 03 - Restroom & Maintenance Facility

Water: Install 2-inch poly service line from the existing 2-inch service line for Wetland Discovery Point.

Sewer: Provide gravity sewer line to a holding tank. Provide holding tank and duplex grinder pump station with 2-inch pressurized line to Kaysville sewer line in 50 West Street.

#### 04 - Barn

Water: Install 2-inch poly water service line to connect to the 2-inch service line for the Restroom & Maintenance Facility.

Sewer: Connect gravity flow sewer to the holding tank for the Restroom & Maintenance Facility.

Fire Protection: If a sprinkler system is required for the Barn, extend the 8-inch water line from the fire hydrant at the pond crossing (03).

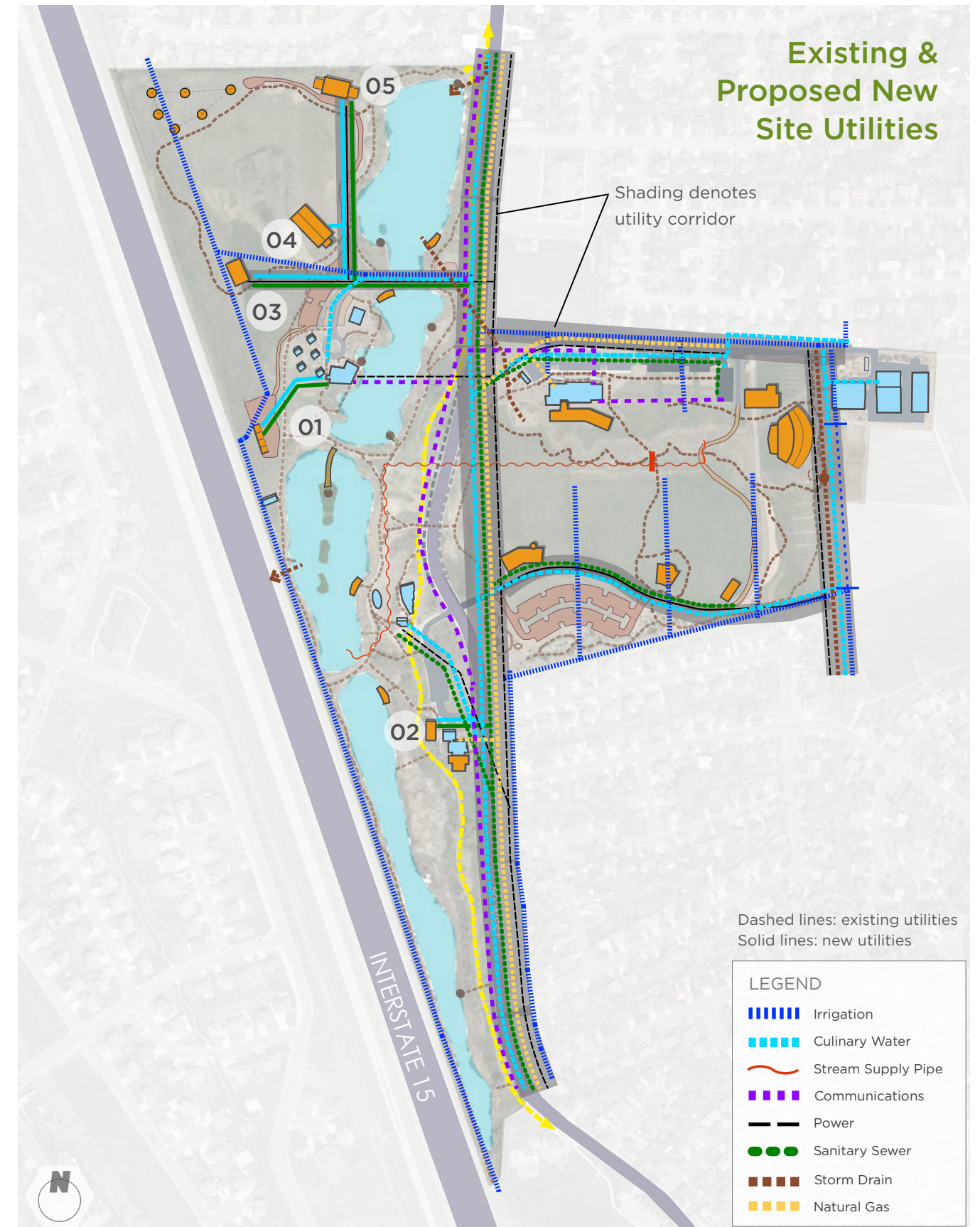
### PHASE 3 UTILITIES

#### 05 - Guest House

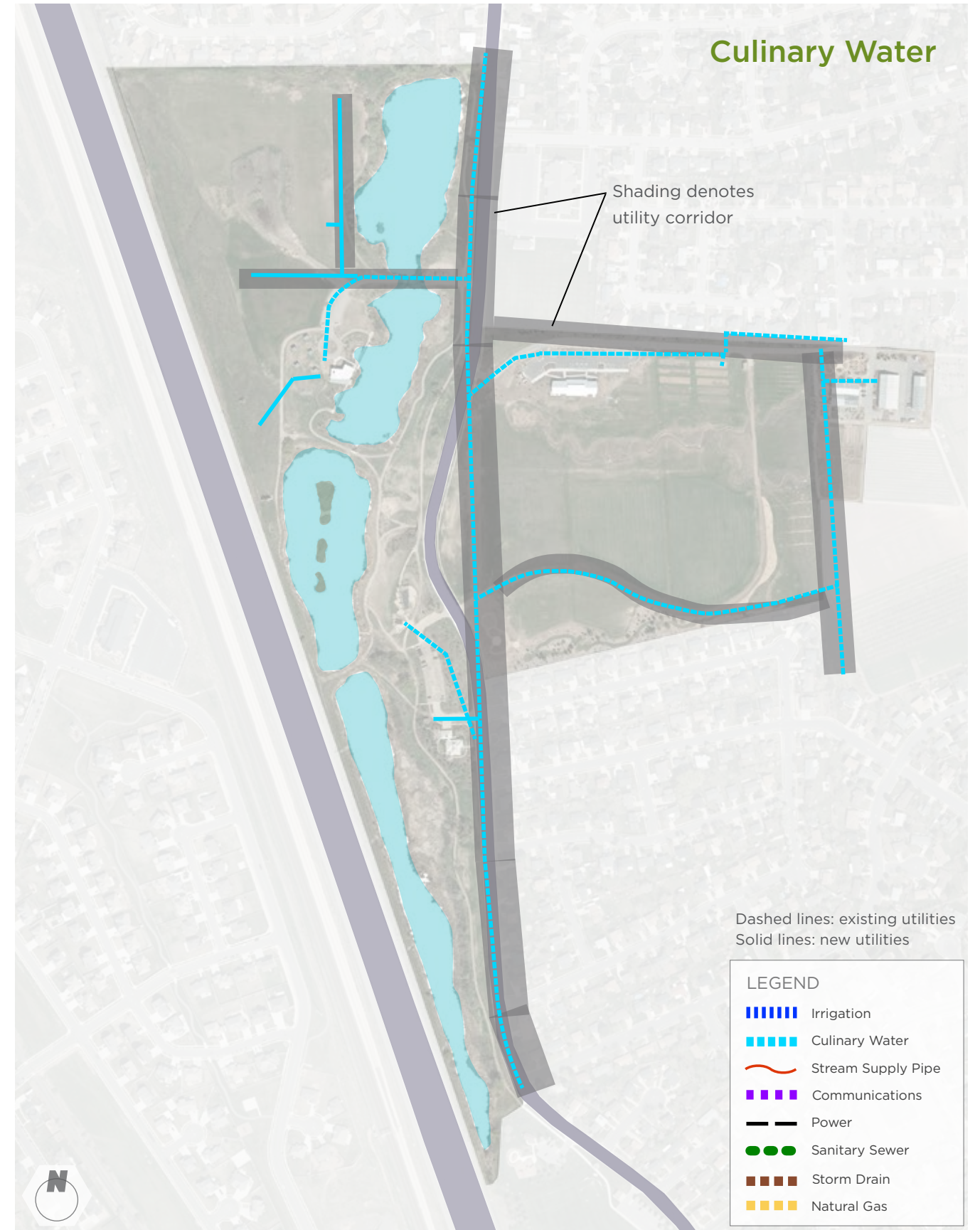
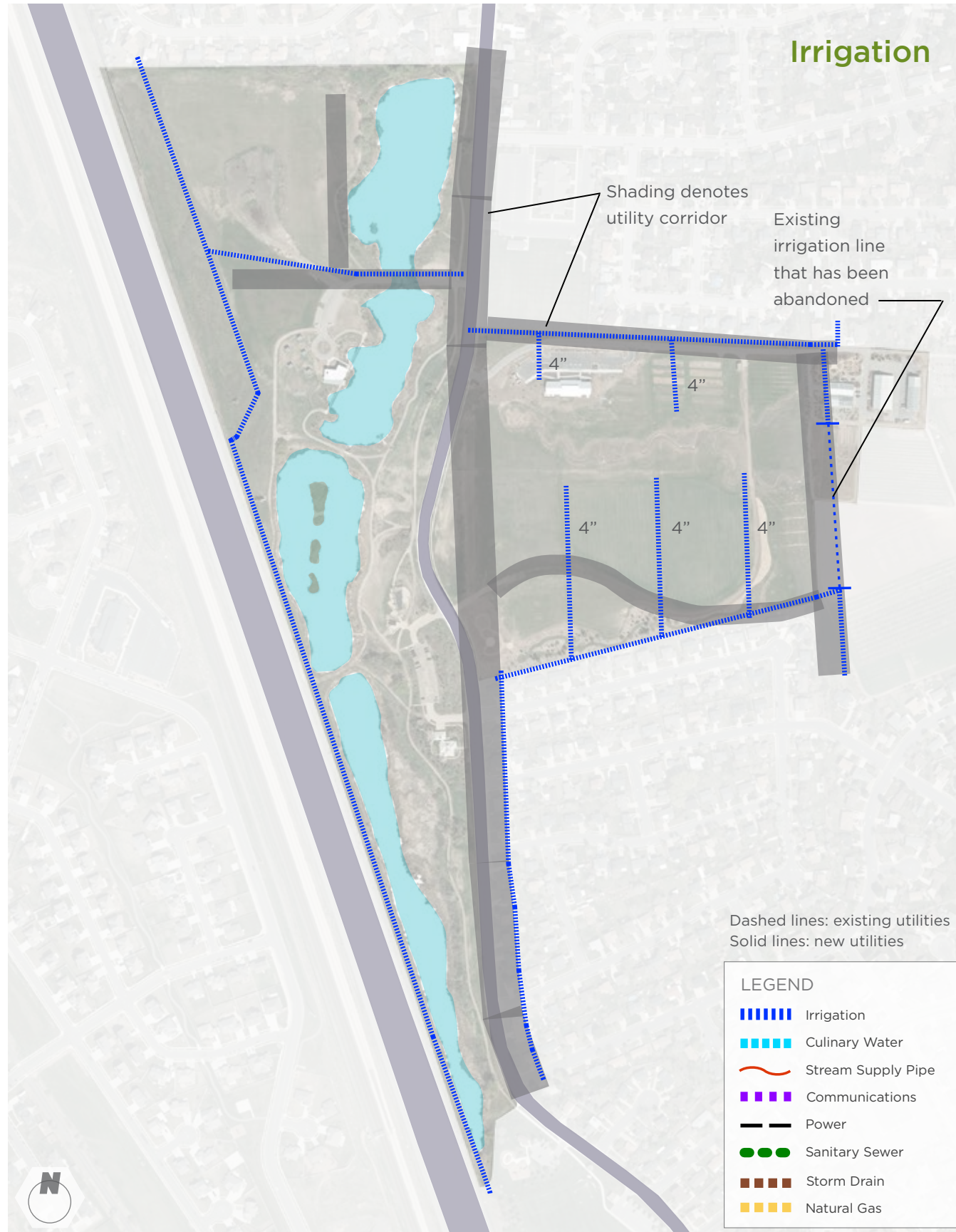
Water: Install 2" poly water service and connect to the service line to the Barn.

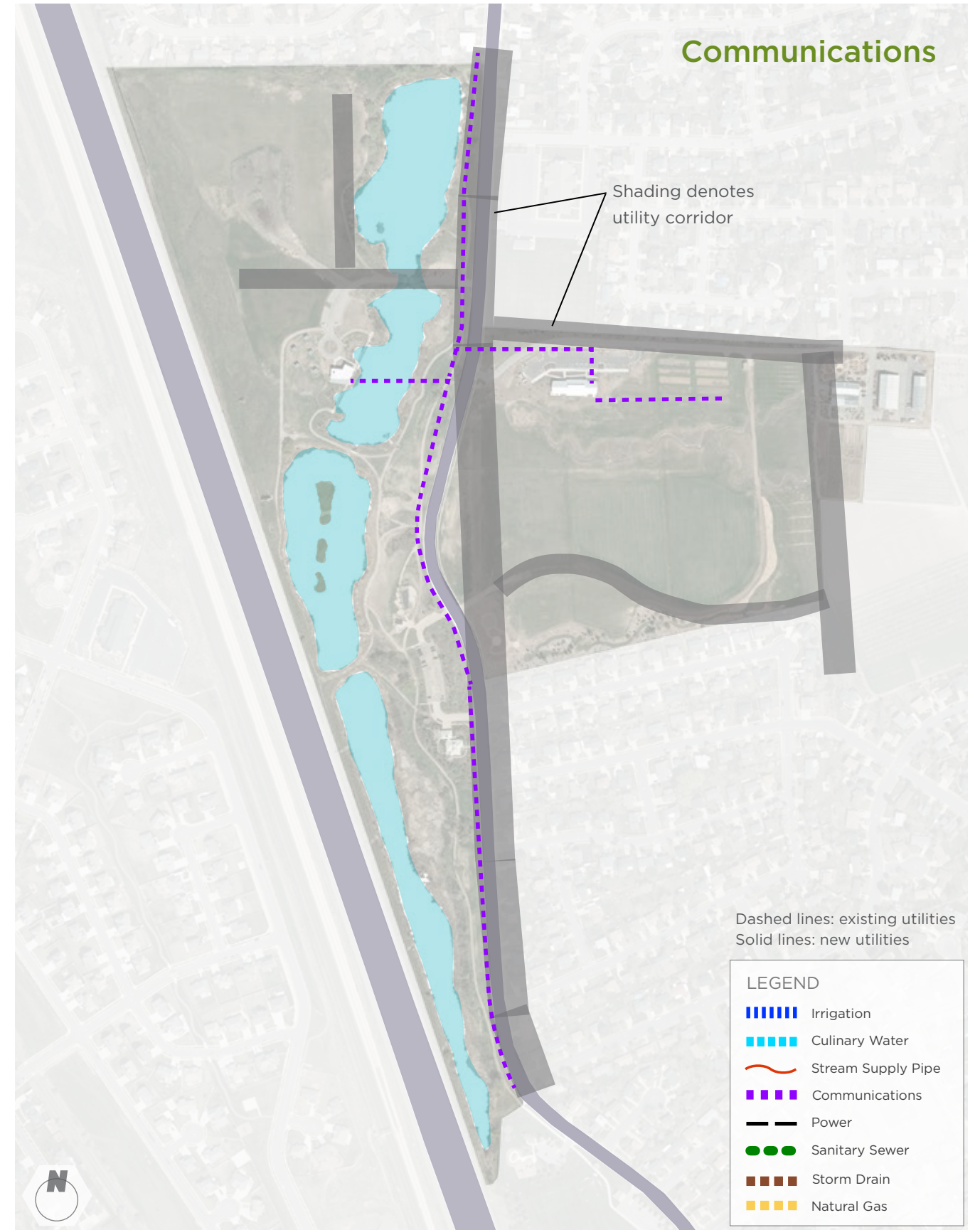
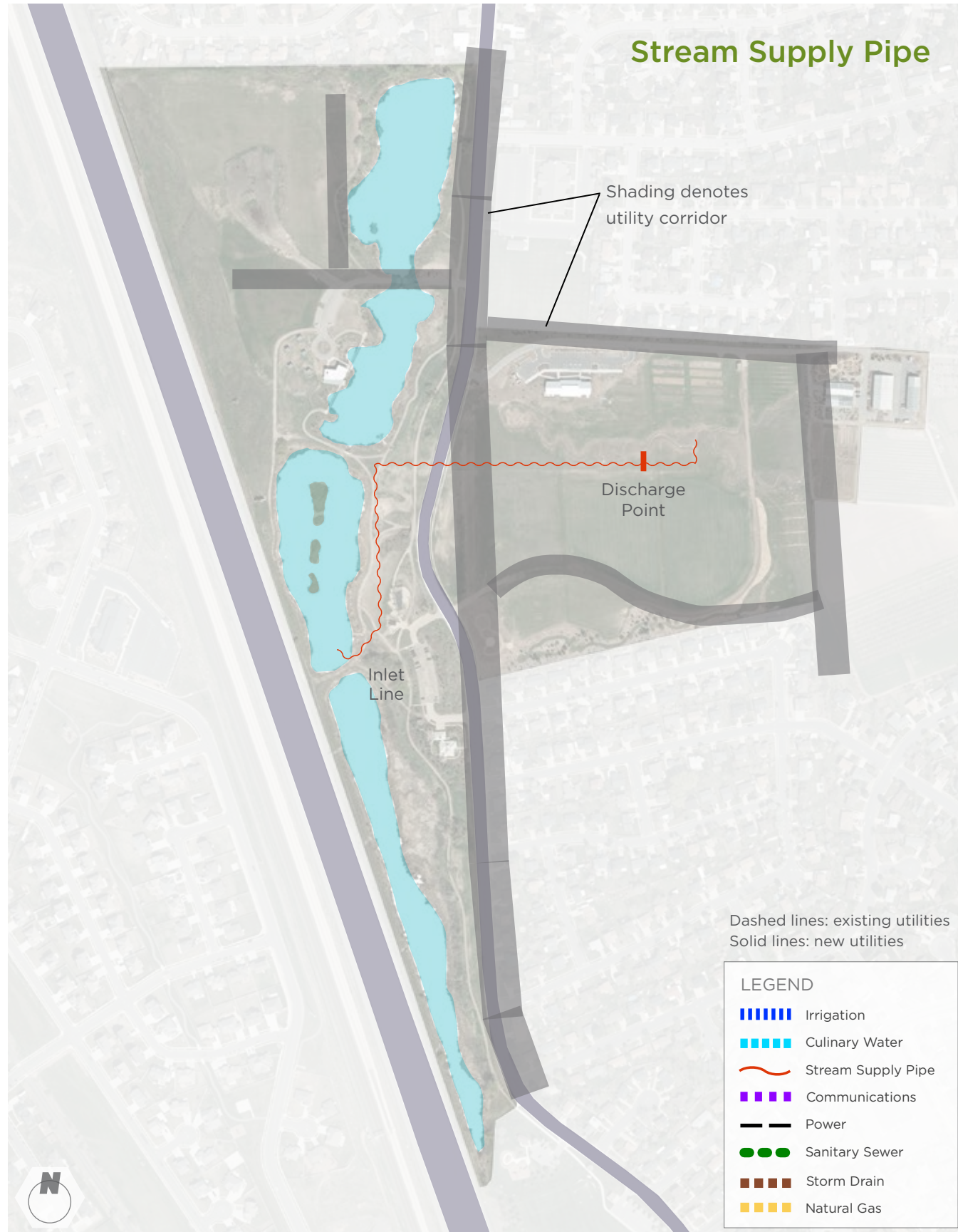
Sewer: Install gravity flow sewer service from the Guest House to connect to the sewer service line from the Barn.

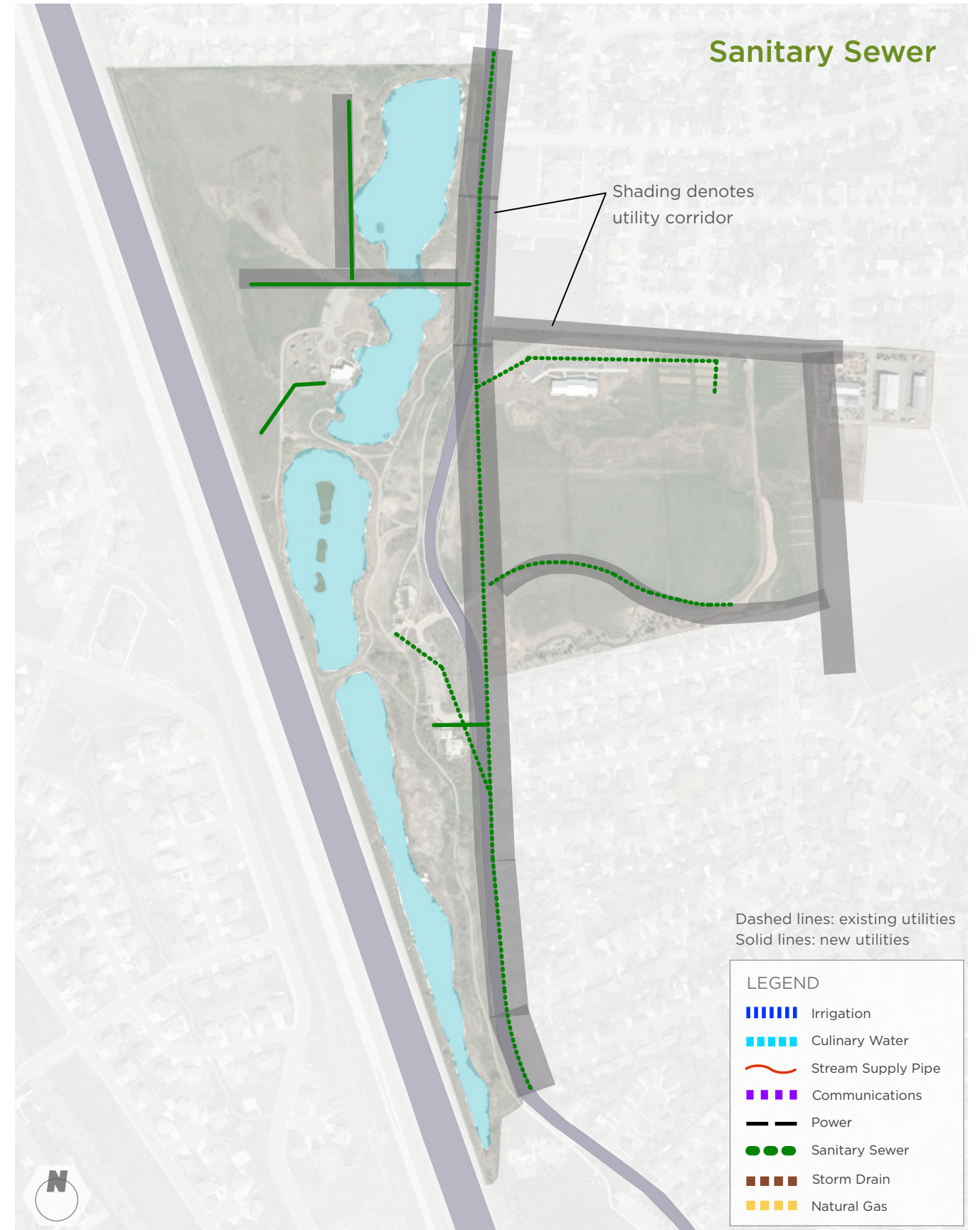
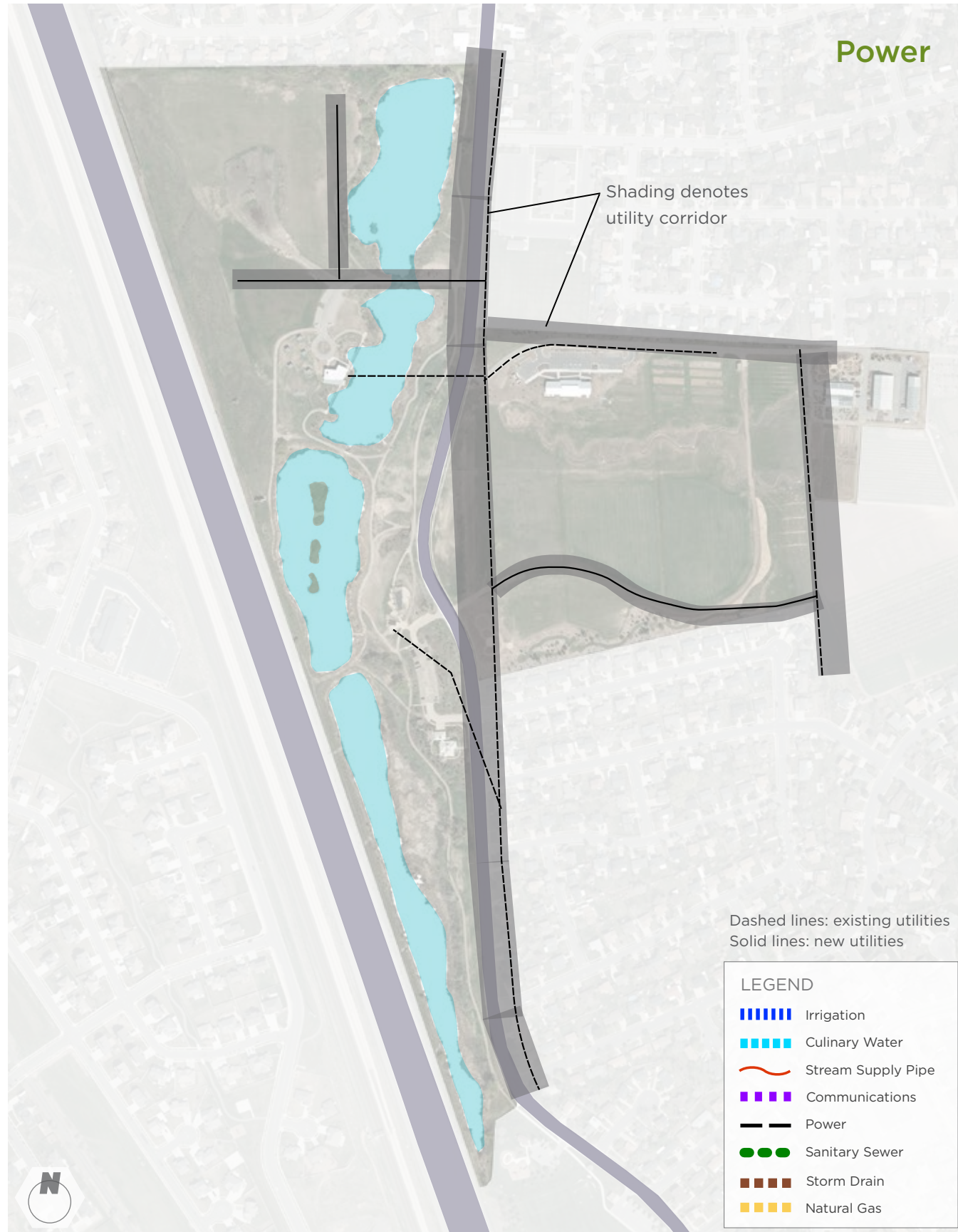
Fire Protection: Extend an 8" water line from the Barn, or from the existing hydrant by the pond crossing (03), if not already extended for the Barn. Provide a building fire sprinkler connection if required, or provide a fire hydrant in proximity to the building.

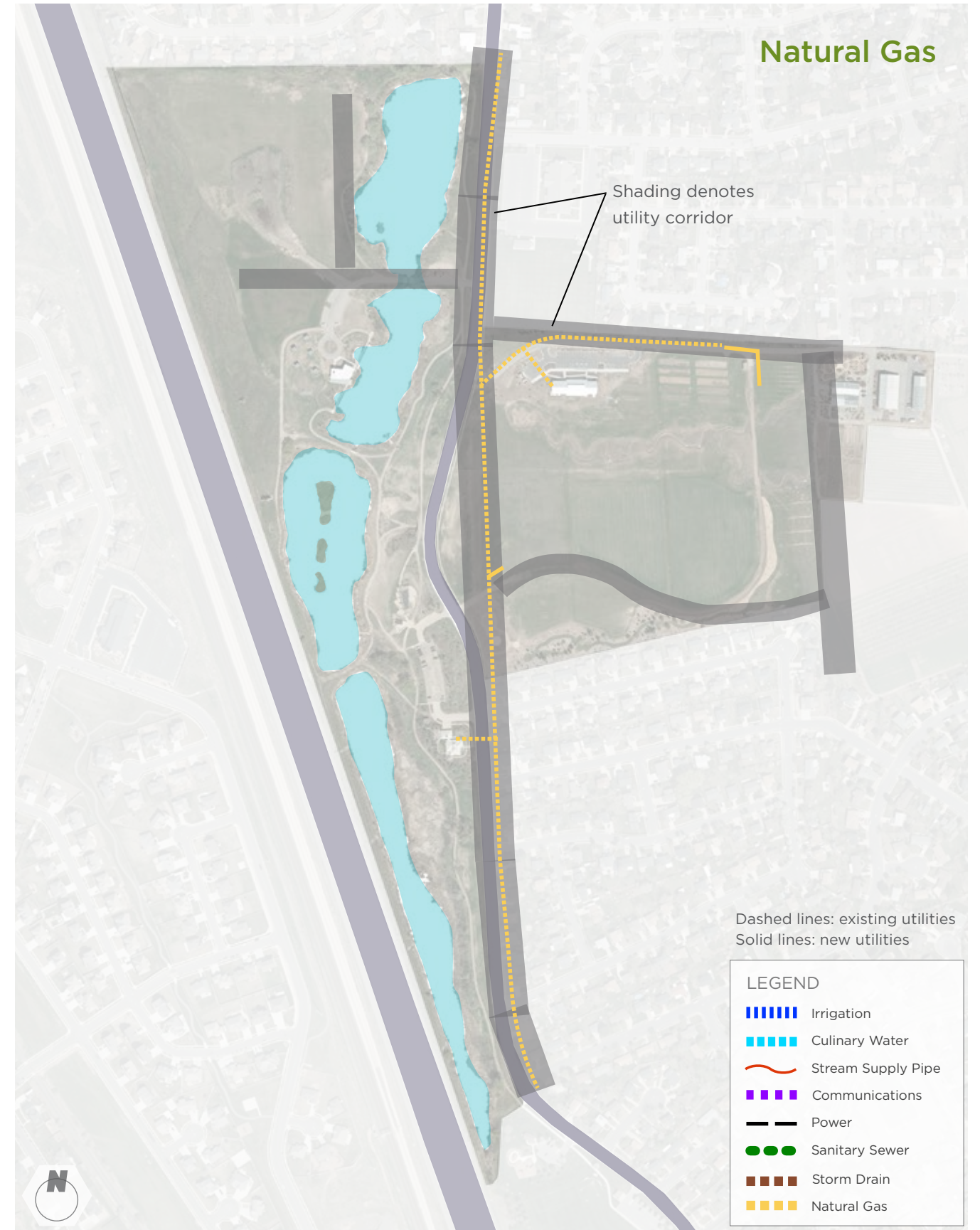
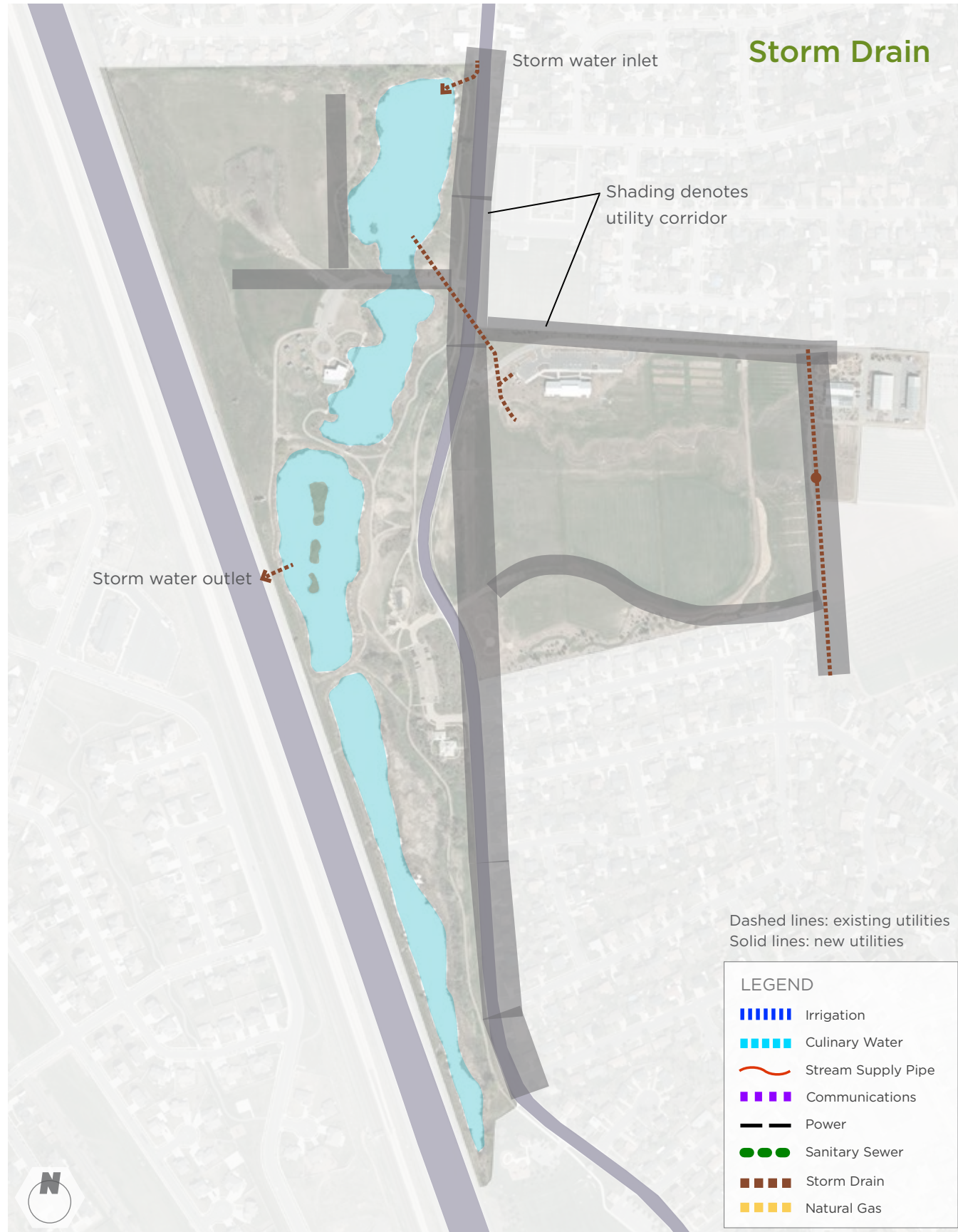














**05** DESIGN  
STANDARDS

## Landscape Standards

### OPEN SPACE & LANDSCAPE

The existing Center new campus is located on the western front of the Wasatch Mountains of Utah between the mountain range and the Great Salt Lake and as such, the planting concept should require the use of both native and adaptive water-wise or xeric plant material. Arrival locations and building entries of the Botanical Center may use plant materials that are adaptive with limitation. A consistent palette of xeric, low water use plants, pasture grasses, ornamental grasses and perennials will tie the entire campus landscape together with a cohesive aesthetic.

**01 - Gateway Zones.** The landscape design in arrival or gateway zones should include a more formal lush low water use planting design, with small inviting entry garden areas which lead pedestrians into the visitor center, event quad spaces or arrival areas. Signage in these zones should clearly delineate the paths to various spaces on the campus. These zones should create interest and provide a visible contrast to the other xeric or native grass plantings around the campus. The use of perennials in these spaces will provide a seasonal color palette. The height of planting should remain low to protect the pedestrians vision and should pique the interest of exploring other spaces. The remainder of the planting adjacent to the arrival zones should include masses of low water use plant material.

**02 - North Residential Green Edge Buffer Zone.**

This area should include a mix of evergreen trees and shrubs, as well as informal tree and shrub plantings. The use of these materials will lessen the perceived impact of the site to the residential housing on the north west edge of the site. This plant material will screen the residential zone from the campus north west activity zones. This planting area should include native and or adaptive low water use trees, shrubs and grasses which will require minimal maintenance. A path of stabilized crushed aggregate paving will provide a separation between the buffer yard and the youth quad. (See North Buffer Zone section cut A.)

This section of the master plan outlines design standards and guidelines for the following:

- Landscape
- Site Furnishings
- Signage
- Paths & Trails
- Architectural Elements
- Roads & Parking

**03 - Multi-Use Zone & Youth Quad Zones.** The plant material in the three main quad areas should include a base plane of native pasture grasses. These areas are large flexible multi-purpose spaces and will be used for botanical center, educational, community and 4H youth events which meet the functions of the Botanical Center. Because they are planned for events, the pasture grasses will utilize less water and fertilizer and will require lower maintenance than typical turf grasses and demonstrate alternatives to water hungry turf grasses. The perimeter of the quad areas should contain informal and formal plantings of medium and low water use trees, shrubs and perennials which will create a sense of place for each of the three main quad areas. These large pasture grass areas provide an opportunity to host large events whether they be community or educational. Benches should also be provided to help create casual gathering spaces and areas of respite.

The larger tree plantings can provide shade as well as enhance the views and create enclosure for the quad areas.

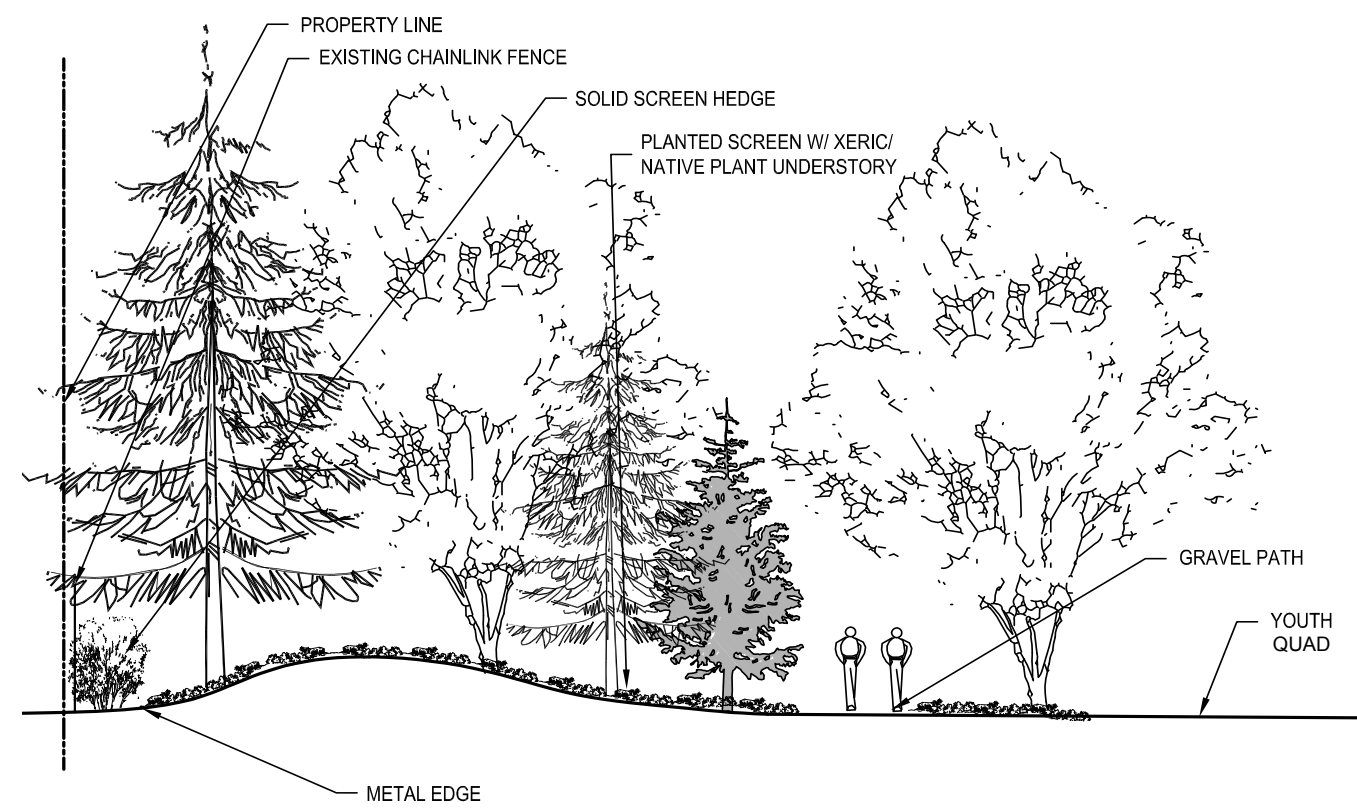
The combined area of the events and education quad is 5.7 acres in size in size and is large enough to allow for event overlap when required. The edges of both quads are framed by the Botanical Center's structures, providing a view shed to both the east and the west and allowing views of the mountains and the Great Salt Lake. The Youth Quad is 4.5 acres in size and is enclosed by the Center's structures, the berm and ropes course, as well as Blood's Pond.



Fire lanes in this zone, 12' to 16' wide will be functional as well as aesthetically pleasing. Stabilized aggregate pavement should be used as approved by the Campus Fire Marshall to minimize the amount of hard surface in the quad areas while maintaining a rural open space aesthetic. The stabilized aggregate paving shall meet fire lane loading requirements.

**04 - Dry Wash.** The dry wash zone provides a great opportunity not only for pedestrian circulation but also for a dry stream bed or bioswale feature which can provide for storm water surcharge into the water table when water is desired and can be a beautiful amenity when water is not available. This free form and narrow water feature should be constructed of multiple sized boulders, cobble and stone to create interest. It should include the

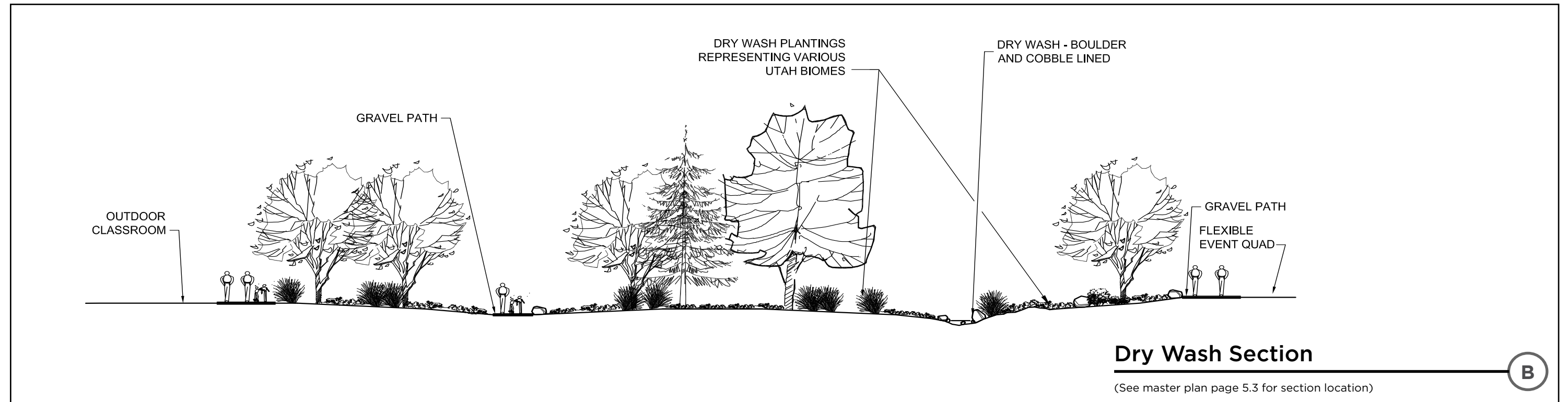
existing lower basin at which the storm water can temporarily pond and surcharge before flowing west into Slough Pond. Flat topped boulders can be used to provide seating at intermittent areas along the pedestrian path for and pedestrian use. The use of plants from the four Utah biomes in the dry wash can highlight the diverse habitats found in the state of Utah. Some of the Utah biomes are Riparian, Forest and Alpine. Representative plantings from the upland forest through the valley upland to the riparian species can effectively demonstrate the diversity of native and adaptive plants found within the region. The use of xeric and native plant material in informal groupings and masses will provide year-round interest in plant forms, seasonal color change and interest. This dry wash space can also be used as a teaching tool for all of the visitors who come to the site. (see Dry Wash section cut B.)



**North Buffer Zone Section**

(See master plan page 5.3 for section location)

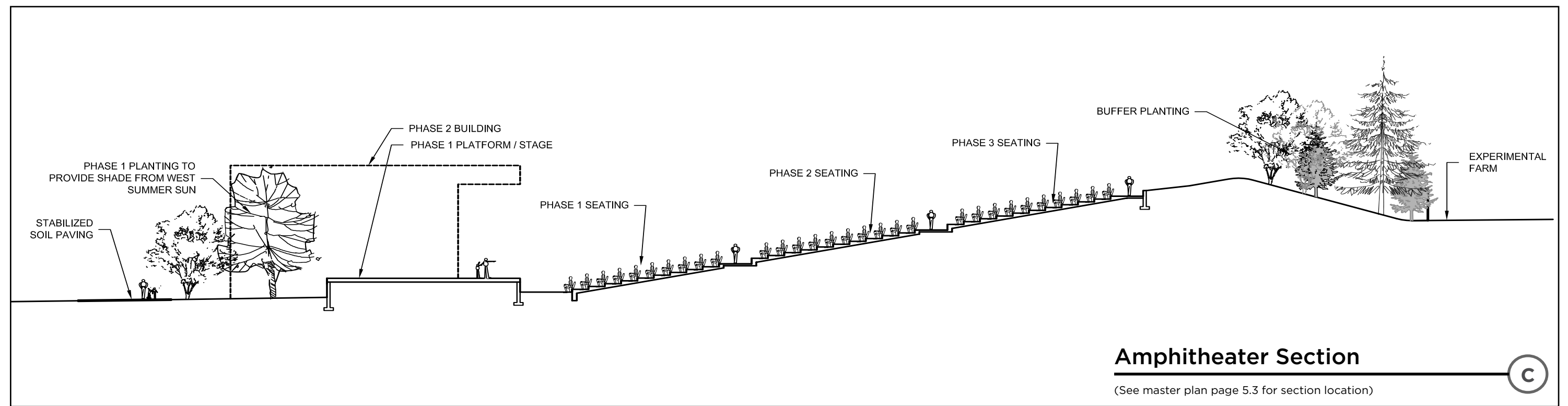
**A**



**Dry Wash Section**

(See master plan page 5.3 for section location)

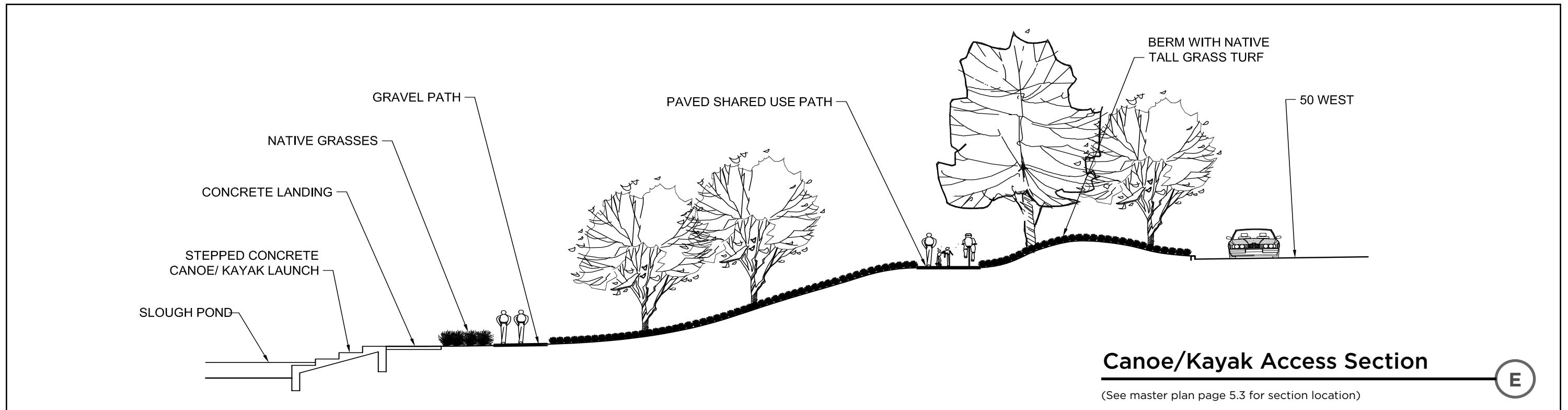
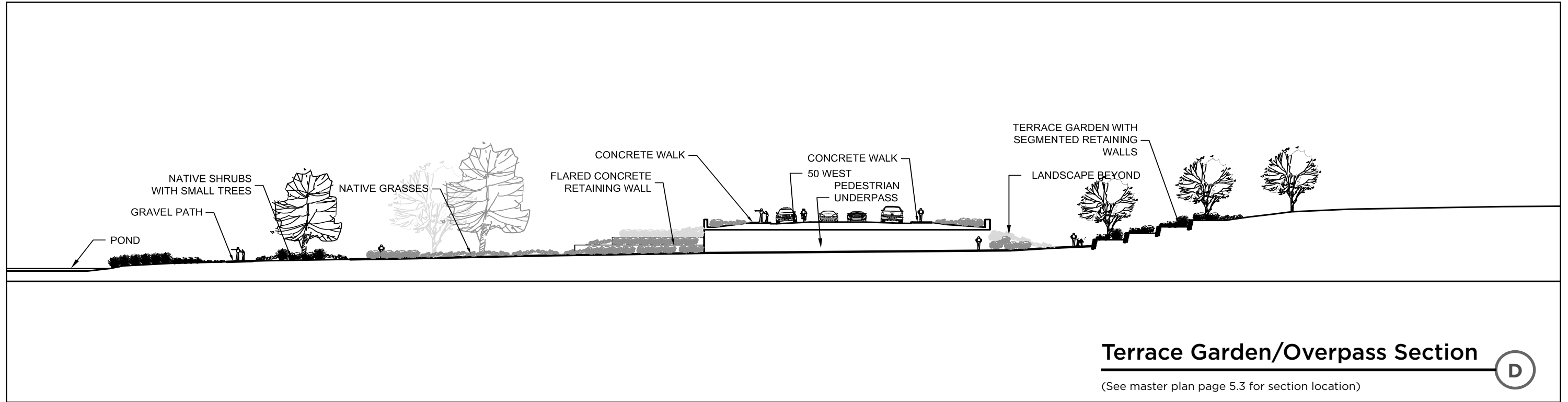
**B**



**Amphitheater Section**

(See master plan page 5.3 for section location)

**C**





**05 - The Ponds.** The north-south oriented ponds are an integral part of the Botanical Center and provide continuous visitor draw and opportunities for the community on the site. Fishing, boating, bird watching, walking and jogging opportunities are available in this zone. The enhancement of the existing circulation paths will continue to enhance this unique element and provide new opportunities for all site visitors to enjoy nature and the ecology of this zone. Previous designs and master plans have taken advantage of this amenity, including Wetland Discovery Point, the Utah House and the 9-11 Memorial site. The landscape character of this area should remain native and natural in its planting and should continue to provide a quiet respite in the center of Davis County. The perimeter plantings along 50 West should maintain the native planting style.

**06 - Vehicular Zone.** The landscape in the park strip and adjacent turf areas are proposed to match the non-mown, native/adaptable grasses in the ponds zone and will create a seamless landscape aesthetic with the ponds along the entire corridor.

**07 - Display Gardens.** The design of new gardens should create beautiful, inviting and educational gardens, meeting the vision of the Botanical Center which includes the conservation of and wise use of natural resources. The proposed new entry garden, terrace garden, children's garden, xeric garden and others, provide opportunities for small events and education.

**08 - Research Zone.** The adjacent research zone is an agrarian zone unique to this campus and connotes the original mission of the University as a land-grant institution. Research plots of various crops, plants and turf types may be grown and tested in this area. The test plots include fruit tree orchards with various types of stone and non-stone fruits.



*Stream bed options*

**LANDSCAPE WATER USE/CONSERVATION**

The State of Utah DFCM Landscape Guidelines were established in 2002 to set water allowance guidelines for new and existing facilities. Both landscape and irrigation design standards have been established by the guidelines. A typical Botanical Center/institution will not meet the design standard in all aspects due to the unique nature of the garden type plantings found in a botanical garden.

**IRRIGATION DESIGN STANDARDS**

Secondary water use is available to the USU Botanical Center. The design of the secondary irrigation system should be carefully reviewed to assure that the use of water is minimized. The following standards, in addition to the DFCM Irrigation Design Standards, should apply to the Botanical Center irrigation design. A variance change request should be made for specific garden area plantings that may not meet the typical DFCM design standard.

**Controllers.** The design should incorporate ET based controllers that schedule landscape irrigation use according to current weather and landscape conditions. These controllers, when used in conjunction with weather stations, rain gauges, soil moisture sensor and other equipment and when used correctly will prevent over-watering, reduce water consumption even in high water use garden zones and maintain a healthy landscape.

**Hydrometers.** The use of a hydrometer on the system will provide the following benefits:

- maintain constant pressure at the mainline source
- constantly read irrigation flows and prevent water waste in broken mains and lateral lines.
- provide overall metering of the system.

When tied to a central control irrigation system can accumulate a record of use which can assist in determining annual costs, usage and opportunities to fine tune the irrigation schedule for increased water savings.

**Drip/Low Volume or Point Source Irrigation.** Drip or point source irrigation can significantly reduce the amount of water required in the landscape. Point source will place the water directly to the plant material and ensure adequate water to the roots as the plant grows to maturity. The use of point source and drip irrigation is recommended in all shrub planting areas including specialized display gardens.

**Irrigation Heads.** Large area irrigation heads which have a specific CU and DU rating over 88% shall be used. These ratings allow for optimum uniformity of water distribution and will allow for passing the water use efficiency review required on all State funded projects.

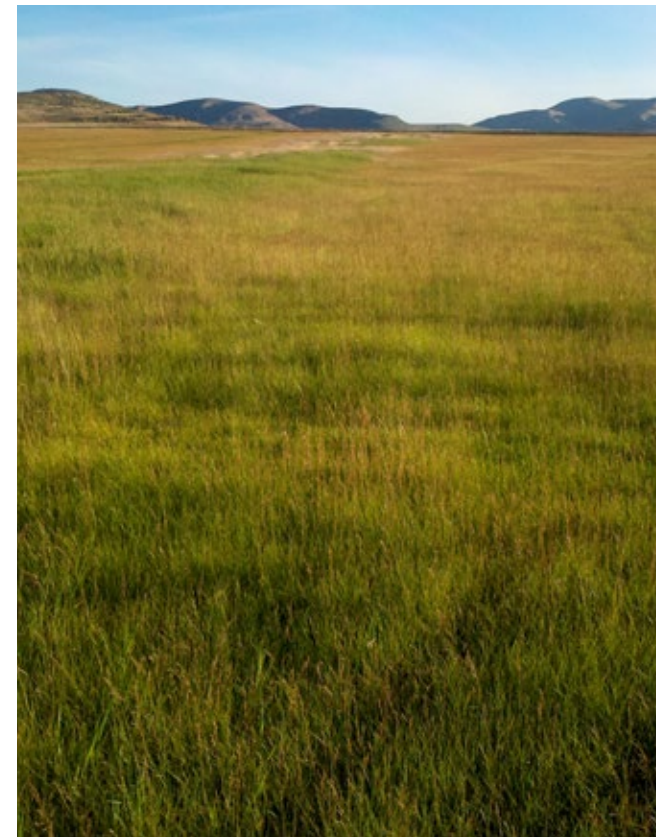
A low water use irrigation demonstration area should be created to show cost effective methods to provide low water irrigation usage for educational purposes. This demonstration area and exhibit should provide educational tools demonstrating the latest technology in irrigation design which will demonstrate the fact that a typical home owner over waters both turf and plant material use. The USU Botanical Center should be a state-wide leader for the demonstration of the wise use of the precious resource of water.

**OVERALL LANDSCAPE DESIGN STANDARDS**

Landscape plantings on Botanical Center should establish an overall character for the Botanical Center and provide unity and scale to the building and garden design. Low water use and low maintenance plantings should define the non-garden space landscape style of the Botanical Center.

The plantings of the Botanical Center should be diverse in nature and allow for flexibility in plant habitats. Typical low water use planting should be used to provide a cohesive planting style throughout the center to create a unified aesthetic.

Plantings should be used to create and enhance the sense of place, create outdoor rooms, enhance and define pedestrian pathways and provide four-season interest.



Pasture grasses

Use drought tolerant, attractive but low maintenance plant material where possible. Native plants should be given first consideration. Adaptable non-natives are acceptable. (See Appendix Plant List.)

The use of low water use turf types in various spaces should be used to encourage and educate patrons in the variety of native and non-native turf types that can provide usable turf areas with less fertilizer and water use.

Display gardens should provide a diversity of display and water use allowing for the public education of various and diverse plant ecosystems and planting styles. These gardens should be elegantly designed and be audience friendly spaces which are not only inspiring and educational but can showcase a four season landscape which inspires users regarding potential plant material for use in their own landscape design.

**Large Shade Trees**

- Use to provide shade in parking areas and reduce the heat island effect.
- Large shade trees in conjunction with understory accent and evergreen trees may be used in the north buffer zone to screen the residential area from the Botanical Center and vice versa.
- Use large shade trees and understory trees in a non-formal pattern along perimeter pedestrian paths to create seasonal interest and provide shade to informal seating areas. The use of formal plantings is not recommended due to the diversity

**Understory Trees**

- Use understory flowering trees for way-finding in all gateway areas.
- Use carefully placed understory trees to define quad and garden areas while preserving the main east west view corridor. Understory trees should also to create seasonal interest.
- Use to frame views on and off site.
- Use to define and create outdoor spaces.

**Shrubs**

- Use a combination of native and low maintenance adaptive ornamental shrubs as foundation plantings at primary and secondary building entries.
- Use adaptive ornamentals to provide screening of the adjacent residential zone on the east of Botanical Center.
- Use low maintenance native shrubs in informal groupings along pedestrian corridors, parking lot plant planting and in the dry stream area.

**Ground Plane**

- Ground cover areas should be minimized and used only for display garden accent plantings.
- The use of stabilized aggregate paths to separate areas of planting between the plant zones in the areas west of 500 West is recommended. Stabilized aggregate may also be used in path and seating areas of the activity and educational quads and along the dry wash area to create interest in the ground plane. Use of the correct aggregate types and installation methodologies will assist in reducing the maintenance time and associated costs.
- Stone mulch is recommended in all xeric planting areas. This type of mulch is cost effective in that it does not need to be replenished and will retain moisture in the soil for plant use. Various sizes of stone should be used to create interest when used in conjunction with informal native or perennial plantings.

**Perennials/Ornamental Grasses**

- Use native and adaptive perennials/grasses in large masses in select locations around the sides of the youth quad to create interest and frame the native turf areas.
- Masses of perennials and grasses should also be used as accent plantings at the smaller quad and outdoor classroom areas.
- Smaller masses may be used sparingly at building entries, at pedestrian site entry points along 500 West.



Grasses

**Turf and Grasses**

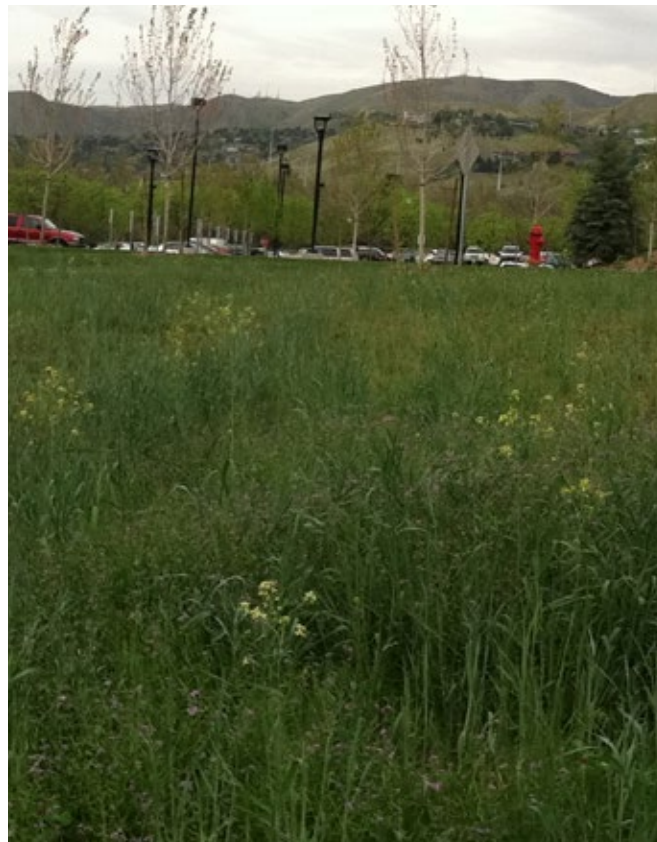
- High use areas may include bluegrass varieties or a combination of bluegrass and fescue. All other turf areas should include the use of sod forming native or adaptive drought tolerant low water use pasture grasses which require less water and maintenance.
- Native/Adaptive grasses: The low-use turf areas, (non-daily use) which would include the Youth Quad, Education Quad and Events Quad, should use various types of prairie/pasture grasses which will minimize mowing and fertilizing operations. Pasture and prairie grass mixes are described in Appendix H - Plant List.

**INDIVIDUAL DISPLAY GARDENS**

Plant material collections are the center and the foundation of the Botanical Center garden design experience. These cultivated displays should be educational as well inspirational.

Major goals for these display gardens should be:

- Each garden should be designed and maintained to be beautiful to all visitors, from home owners to professionals. Each garden should be effective in inspiring each to support the conservation of water.
- Each garden shall be visually appealing.
- Each garden should provide an opportunity for learning. Planting designs should be clear and be easily understood visually.
- Create a diversity of plantings so that each garden is unique. The plant material that connects all of the gardens and site together shall provide the cohesive aesthetic and design.
- Each garden shall provide for four season experience.



Grasses



Display gardens

## Site Furnishings

Furnishings should support the program requirements of specific Botanical Center spaces. A standard palette of furnishings should be developed which will help establish a sense of place and unify the Botanical Center aesthetic.

**Site Context:** Furnishings should be harmonious with the display gardens, outdoor spaces and buildings and outdoor structures of the Botanical Center. Site furnishings can strengthen the sense of place and should be responsive to scale, form and texture of the Botanical Center structures.

Furniture does not need to be of one style or type throughout the Center, but can vary according to the particular setting. However, a given area should have a consistent look.

Furnishings should be simple styles that can be provided by multiple manufacturers, so that they can be competitively bid.

Benches should be fixed in place.

Picnic tables and benches should be located throughout the Center,

Trash receptacles must have lids to discourage wildlife from accessing them. They should be side-opening for ease of maintenance.

Some art exists in the Center gardens currently. This will be augmented in the future.

**Functionality:** Site furnishings should be practical, low maintenance and yet aesthetically pleasing.

**Quality:** The site furnishings must be of such quality that they cannot easily be damaged. A long term, high-quality Botanical Center environment is of key importance. Powder coated metal is recommended over wood.



Seating area at the Rasmussen Teaching Garden



Bench in the ponds area



Large stone which can be used for seating



Stone seat wall

**Economy:** It is imperative that site furnishings provide and maintain a cost effective life cycle.

**Sustainability:** The use of eco-friendly materials and technologies will reduce the consumption of energy and non-renewable resources. Benches and/or trash receptacles should be located at gathering places, the outdoor classrooms, at nodes along the pedestrian pathways in strategic locations across the botanical center site. Additional trash receptacles along the natural stone paths around the ponds should decrease the amount of trash left on the ground in that area. Informal stone or concrete steps may be used to create canoe launch points at each of the four ponds. Flat top boulders should be considered along the non-paved pedestrian trails around the ponds.

Bike racks should be provided in strategic building locations across the botanical center with adequate storage for all users to encourage the bicycle usage.

### Lighting

Exterior lighting should be placed along pathways from parking areas to buildings. Do not provide lighting in gardens or at garden access points, to discourage people from entering them.

Exterior lighting must be on poles, with full cutoff light sources to avoid light pollution. There is to be no in-ground or bollard lighting.



Trash receptacle



Use full cutoff light fixtures to avoid night sky pollution



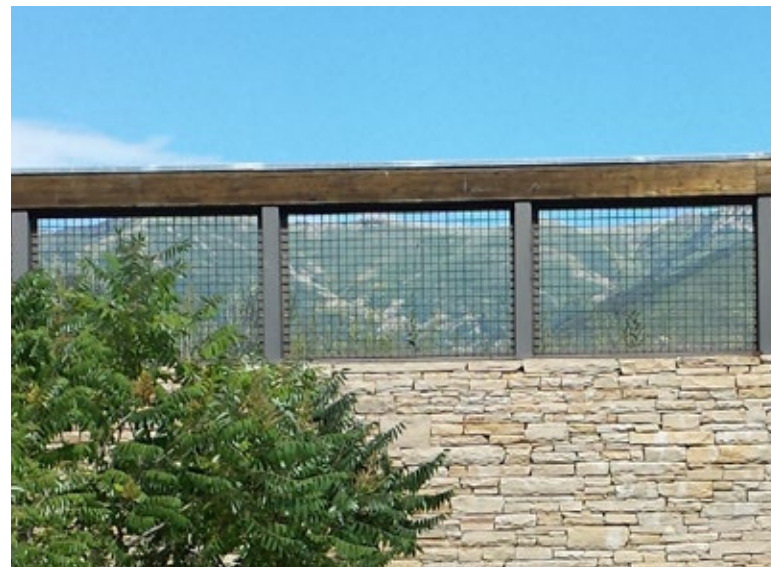
**Fencing and Gates**

Perimeter fencing at the property is galvanized chain link and will remain in place.

Fencing on site, in locations described in this document, will be more ornamental. A black painted metal panel fence, similar to a welded wire mesh pattern, with painted metal posts, will be utilized for the majority of the fencing. Gateways will be constructed of a similar material framed in rough timber openings compatible with the style of the rest of the campus. Some woven wood lath fencing may be utilized at a few special locations to give greater prominence to selected sections of fencing and their gateways.



*The style of this fence is acceptable; however, the color must be black or a low-visibility neutral, as in the top photograph.*



*Existing fence at the 50 West tunnel*



*Woven rail fencing*



*Rusted steel entry fence and gate*



*Decorative entry fence and gate*

## Signage

All signage proposed is intended to provide ease of access or wayfinding onto the site and through the Botanical Center. All signage should be comprehensive in style and orientation. Signage should have a consistent design with existing signs at the Center. New signs should build upon the established sign types and styles.

An issue expressed during the master planning process was accessing the Botanical Center from the adjacent I-15 freeway. The identification sign visible from I-15 provides visitors with a general location of the site from the freeway, but the path of travel to reach the Center is difficult to discern.

The University, in conjunction with Kaysville City, should petition the Utah Department of Transportation (UDOT) to provide wayfinding signs to simplify the path of travel to the Botanical Center from the freeway exit. Kaysville City should provide directional signage with the Botanical Center logo on Highway 89, to increase ease of access to the Center. These small signs should have simple text, the Center logo and a directional arrow.

The freeway identification sign should be enhanced with an electronic sign board which would advertise events at the Botanical Center and increase the number of visitors frequenting the activities. The size and design of an electronic sign of this type must be coordinated with Kaysville City planning.

Primary entry signs should be stone, similar to the existing Botanical Center entry signs.

Well-designed directional and identification signage within the Center will provide clear wayfinding to all areas of the site. The directional signage should contain the Botanical Center logo, simple text indicating a location or facility, and an arrow indicating direction. This signage should be consistent in design and allow for a unified style and color with the Kaysville directional signage.

Trail identification and directional signs should have distance markers for the benefit of walkers and runners. Wayfinding signs within the trail systems should be simple and streamlined in design.

Botanical signage is an extremely important educational tool in the gardens. Botanical signage will demonstrate plant material types that can be used in the home landscapes. An app could be developed which allows the sign to be scanned for visitors to retrieve information regarding the size, shape, color, texture, etc. of each plant. The botanical signage should contain three elements: 1) the Botanical Center logo, 2) a botanical plant name and 3) the common name of the plant. Botanical signs should be simple in design and minimal in quantity, so as not to distract from the plants and landscape in the gardens.

Interpretive signage should include the Botanical Center logo, provide interpretive graphics and text, and should be educational in nature. This signage type can be installed in each garden to explain each display garden type with the foundational mission of the Center. Educational signage indicating the geography of the site, various plants and animals found in the ponds habitat, and the use of the ponds for storm water, for example, can assist in the Center's educational mission.

All of these sign elements should be consistent in pedestal style, graphic layout, color and text font style.



Identification sign visible from the I-15 freeway



Interpretive sign at Discovery Point



Identification sign at Utah House entry on 50 West



Interpretive sign at the Arboretum



Garden identification sign



Botanical identification sign



Wayfinding signs

## Paths & Trails

Paths and trails are the fundamental pedestrian circulation element through the Botanical Center. The main paths in the Center consist of paved concrete. The main paths exist along each side of 50 West and at building entries. Other paved pathways are found at the Utah House and Wetland Discovery Point.

Several patios are paved with stone. Stone paths should be minimal, located only at building entries. The Botanical Center has used stone from Brown's Quarry and would like future stone to be from that quarry or of a similar appearance and color as that used in the past.

The east path in the pond area is the only path that is anticipated to have an asphalt surface in the future. This path will serve as a pedestrian/bicycle multi-use path.

Paths in the pond area (immediately around the pond) are rural paths which means they are dirt paths created by removing vegetation. New paths which provide access the proposed kayak/canoe loading and to the wildlife discovery nodes are to be rural paths.

Boardwalks are installed in several locations in the pond area. New boardwalks matching the existing design should be used where moisture in the soil is a concern and the rural path needs to be stabilized.

Crushed granite or gravel should be the standard paving material on campus for pedestrian pathways. The gravel should always be edged with a sturdy 1/8" thick metal edge. 4" of road base should be installed over geotextile fabric as the base for these paths.

The future pathways to the Amphitheater shall utilize chat over 4" of compacted road base. This material shall also be edged with metal edging. The chat will remain in place on the slopes of the hillside biter than the crushed gravel.

Road base is to be used as a finish surface only for the access road to the Central Maintenance Facility.

Rural paths should be a minimum of 4' wide, all other paths should be a minimum of 5' wide.



Paved multi-use path



Gravel path with steel edging



Gravel path with stone edging



Boardwalk in the ponds area



Bridge in the ponds area



01 - Stone paths



Stone path at the Center



Stone court /plaza at the Stokes Grass & Iris Garden



Gravel landscape feature at the Stokes Garden



## Architectural Elements

Architectural elements are defined as buildings and other constructed elements.

Buildings on the Botanical Center site are secondary to its gardens and landscape features. They are constructed to support the mission of the Center - to educate the community regarding conservation and wise use of resources. Minimizing the built environment is a manifestation of that mission.

New buildings at the Botanical Center should strive to fulfill their functions, with minimal resources. When planning new buildings, project teams should seek to minimize the building program by incorporating flexible and multi-functional spaces.

The size, configuration and materiality of new buildings should complement and relate well to existing buildings on the site. Existing building materials include: corrugated steel, stone and timber. The existing buildings are one-story; new buildings should be two stories maximum. In particular, new buildings at the site perimeter, adjacent to residential neighborhood should be sensitive to scale, and to the privacy needs of the neighbors.

All new buildings should incorporate the following:

- easily accessed electrical outlets
- built-in facilities for storage and maintenance
- daylighting
- flexibility of use and configuration
- good acoustic control and sound absorption

**Youth Quad.** The buildings at the Youth Quad should have a rustic, agrarian character. Per the master plan, the barn will be the largest structure on the campus, but



*Outdoor demonstration kitchen*



*Amphitheater similar to that needed for Phase 1 of the Master Plan*



*USU Animal Teaching & Research Facility*

that is appropriate for a barn function. The Guest House is intended to be rustic as well.

**Visitor's Center.** The Visitor's Center must be easily visible to people approaching from 50 West. The design should communicate its gateway and information function to first-time visitors. It will have a tower form attached to the building proper, for visibility and prominence, and also in reference to the Aggie Tower on the Old Main building at the USU main campus in Logan.

**Amphitheater.** The Amphitheater should be unobtrusive and designed to blend in with the landscaping and hillside.

**Utah House.** Needed enhancements for this existing facility include:

- expansion to the south to increase educational and private event capacity to up to 300 total
- added structure that will hold 100 people; with enclosure by movable glass walls for all-season use
- breakout space for four groups of 25
- catering support and storage space for anticipated uses
- strategies for improved access and increased parking capacity

**Maintenance Facilities.** Restroom and Maintenance Facilities will be located strategically to support Center operations and visitor convenience. The functionality of maintenance facilities is critically important, because the Center operates with minimal staffing. Convenient access to needed tools and materials eases the challenging task of caring for the large site.

Restroom & Maintenance Facilities will store basic gardening tools such as shovels and pruners, and will also hold mowers, snow blowers, chairs used for events, etc.



*Modern barns*

Easily used and maintained trash receptacles should be placed at carefully chosen locations in the Center. The receptacles should be open with elevated covers, so that rain and snow don't enter them. Emptying should occur from the side of the receptacle. Possible locations include adjacent to restroom facilities, the ponds, and at major entry points to venues. They must be easy for the operations staff to access and maintain.

Flammables, fertilizers and chemicals will not be stored in the new Restroom & Maintenance Facilities. They will be stored in an existing structure with appropriate enclosure and separation.

**Wetland Discovery Point.** Needed enhancements for this existing facility include:

- improved acoustic control and absorption in the primary gathering space
- creation of breakout space within the existing interior

**Shade Structure.** Use structures to shade areas where events and casual uses will take place.

The Botanical Center has several beautiful pergolas and pavilions. New shade elements should be consistent or compatible in design with these.



Wetland Discovery Point



Pergola at the Rasmussen Teaching Garden



Kaysville Education Center

## Roads & Parking

### Roads and Paths

The Utah State University Botanical Center (USUBC) incorporates pathways and access roads as needed to safely and efficiently access buildings, venues, undeveloped areas, and group services at the USUBC. Recognizing one objective of the Center is to promote and provide examples of sustainable systems; travel ways should, to the extent possible, reflect this objective.

The USUBC historically has incorporated a combination of hard surface trails/sidewalks to provide all weather maintainable surfaces. In addition, roadbase or bark surface trails are often utilized for pedestrian and service vehicle access to natural areas with a focus on low maintenance cost and flexible systems. These path locations can be adapted or easily modified to fit the changing dynamics of the USUBC.

Soft surface pathways and roads should be considered for intermittent and non-essential use facilities. Consideration of future use and access requirements should be incorporated into the design of trail and roadway corridors such as placement of base materials as part of earlier phases of development with the ability to provide a hard surface (pavement or otherwise) upon construction of subsequent phases that bring a higher use.

High-use and essential roadways should receive a hard surface pavement upon initial construction. Emergency access requirements, necessity of all-weather use, and the volume and size of the vehicles expected on the roadway should all be considered when evaluating the alignment, width and surfacing of permanent access road systems.

Fire truck turn-arounds and roads with periodic or emergency use only classification should incorporate plantable surfaces and other low impact design methodology.

### Parking Facilities

The USUBC is intended to host wide variety of opportunities ranging from very small to large groups with several thousand attendees. Plans for parking facilities should be incorporated as the quads are developed and various use categories are established. Similar to roadway surfaces, parking lots are planned to meet the intended respective use.

Hard surface, permanent parking facilities may include curb and gutter as installed at the Education Building, or softer edges such as the parking lot at the Utah House. Parking areas should be sized to meet the intended objective and building code requirements associated with the respective permanent facilities served by the parking areas.

Whereas the USUBC hosts periodic activities with a large number of participants, temporary or overflow parking is incorporated into the Master Plan. Field parking as designated at the perimeter of designated quads shall be so configured to facilitate adequate vehicular access, while maintaining acceptable pedestrian control and safety to the respective venue. Surfacing for overflow or temporary parking should be a planted, durable, and multi-use medium.

See page 4.10 for existing and future phased parking counts.



**06** PHASING &  
COSTS

## Overview

The USUBC master plan is presented with three implementation phases:

Phase 1	1-10 years	2017-2027
Phase 2	10-25 years	2027-2042
Phase 3	25-50 years	2042-2067

The image at right shows master plan elements labeled with their projected implementation phase. Plans on the following pages illustrate the implementation phase-by-phase.

Phasing has been assigned by need and priority; items in Phase 1 are seen as the most important for the Botanical Center to implement to fulfill its mission and functions.

### Cost Opinion

An opinion of probable Total Project Cost, in 2016 dollars, is assigned to each master plan element. Total Project Cost equals construction cost plus soft costs. For this estimate, soft costs have been projected at 21.6% of construction cost.

Soft Costs include:

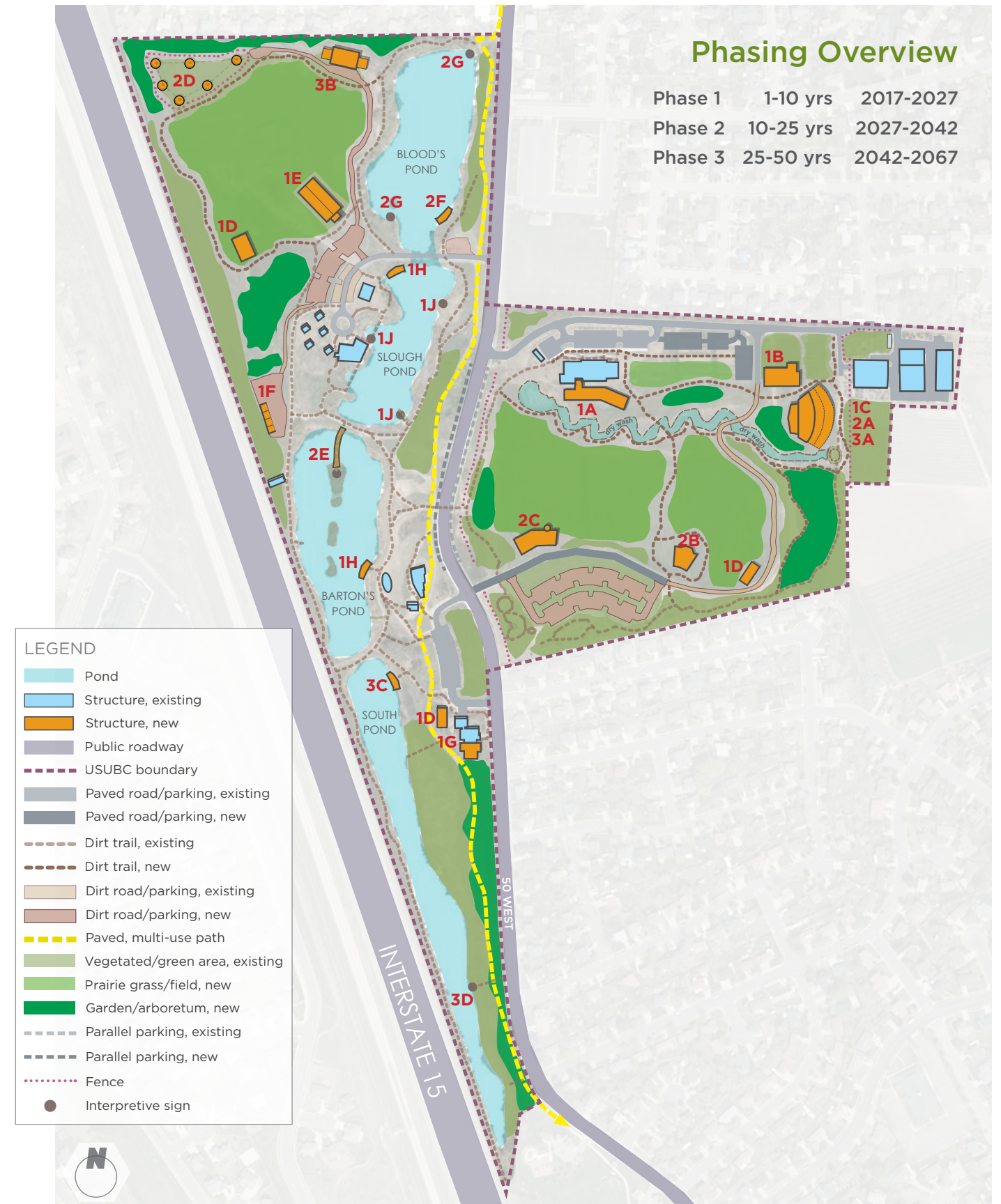
- impact fees
- design fees
- furnishings, fixtures & equipment
- testing & inspection costs
- change order allowance
- printing & miscellaneous costs
- Owner costs

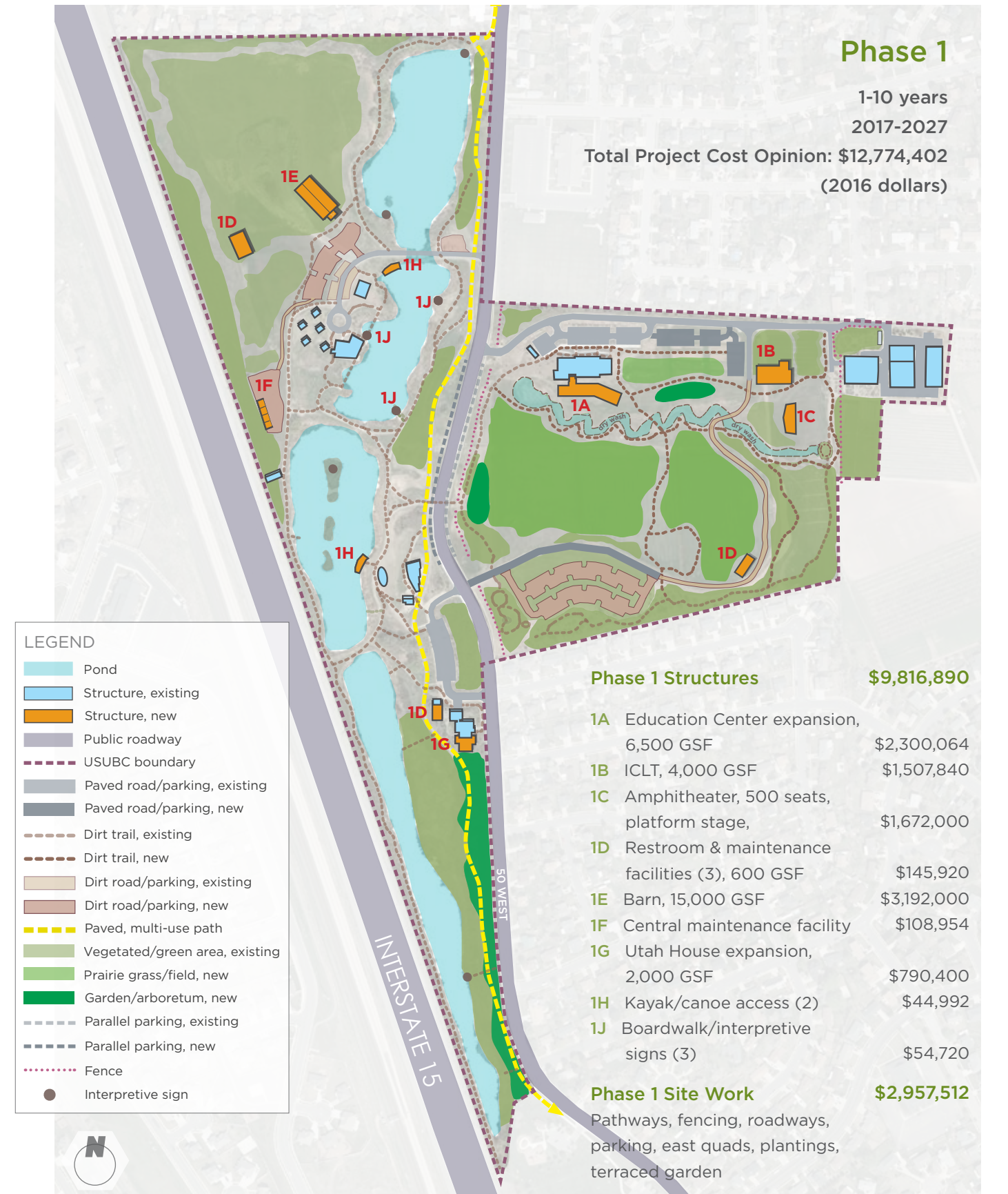
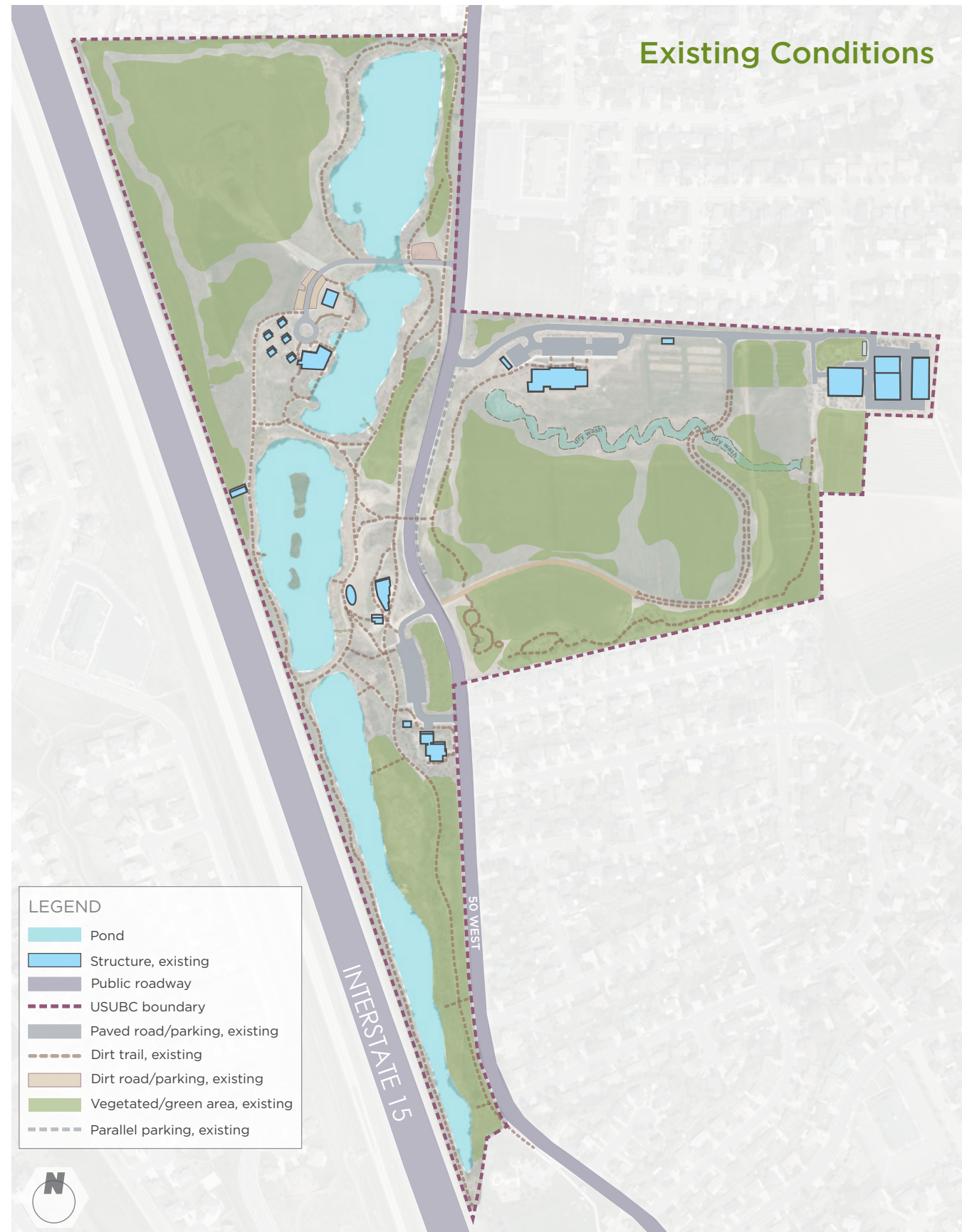
Associated site and utility improvements are to be implemented with each master plan element.

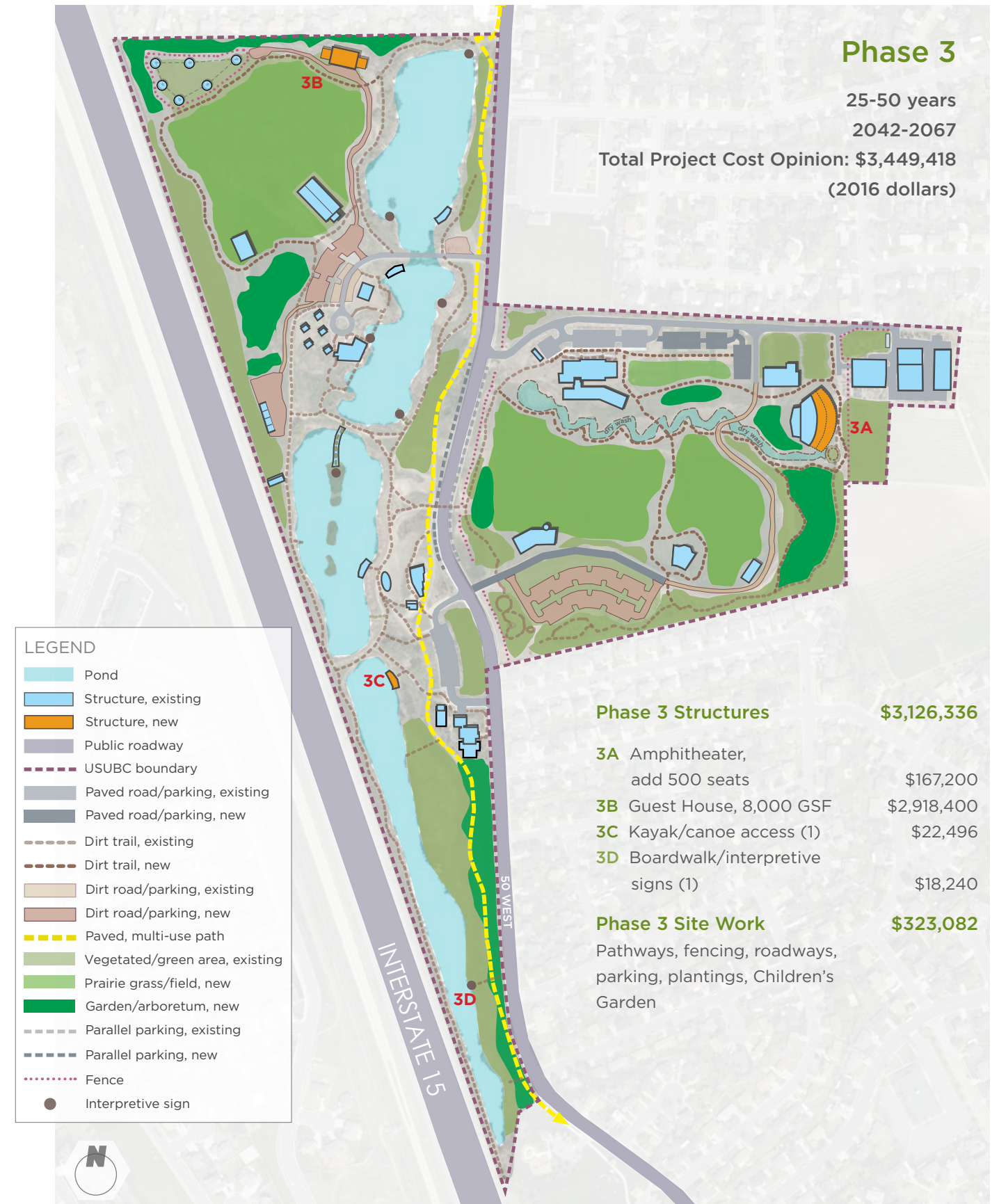
Projected Costs (2016 dollars)	
Phase 1	\$12,774,402
Phase 2	\$9,938,578
Phase 3	\$3,449,418

### Inflation Factors

Costs shown are without any inflation factor. An inflation factor of 5% per year should be assigned to determine the likely cost at the time of implementation.







## 07 Appendix Contents

- A Demographic Projections
- B Cost Projection Detail
- C Vision Input & Initial Draft
- D USUBC Existing & Proposed Facilities Summary
- E Existing Building Plans
- F UTA Routes - Davis & Weber Counties
- G WFRC Recommended Improvements
- H Plant List
- I Preliminary Master Plan Concepts
- J Meeting Agendas & Reports



## 2012 Baseline City Population Projections

From State of Utah Population Projections 2013  
2010-2060

City / County	Census 2010	2020	2030	Projections 2040	2050	2060	Projected Population Increase 2010-2060	
<b>Population Projection Summary</b>								
Davis County	306,479	356,968	391,933	426,392	465,664	503,985	64%	
Morgan County	9,469	11,945	15,013	17,926	20,654	24,234	156%	
Salt Lake County	1,029,655	1,180,859	1,340,665	1,507,997	1,659,566	1,812,891	76%	
Weber County	231,236	258,423	300,477	349,009	398,699	449,053	94%	
	0	27,300	32,500	35,465	37,261	40,623	43,809	60%
	0	67,311	79,594	84,894	84,953	90,327	94,942	41%

**Notes:**

1. All populations are date July 1, except for the April 1, 2010 figures produced by the U.S. Census Bureau.
2. Initial projections of subcounty populations maintained a constant share based on the distribution of the most recent Census Bureau estimates.
3. Projections are approved by the respective Associations of Government

**Sources:**

1. U.S. Census Bureau
2. Governor's Office of Planning & Budget, 2012 Baseline Projections
3. Associations of Government

## 2012 Baseline City Population Projections

From State of Utah Population Projections 2013

2010-2060

City / County	Census 2010	2020	2030	Projections		Projected Population Increase	
				2040	2050	2060	
<b>Population Projection Detail</b>							
<b>Davis County</b>	<b>306,479</b>	<b>356,968</b>	<b>391,933</b>	<b>426,392</b>	<b>465,664</b>	<b>503,985</b>	<b>64%</b>
Bountiful city	42,552	45,993	47,737	48,323	48,993	49,808	
Centerville city	15,335	18,484	21,000	25,323	26,496	27,395	
Clearfield city	30,112	31,684	32,502	33,056	33,995	34,866	
Clinton city	20,426	24,205	26,008	27,126	29,100	30,871	
Farmington city	18,275	22,292	26,277	31,893	37,052	42,417	
Fruit Heights city	4,987	5,816	5,907	6,663	6,750	6,725	
<b>Kaysville city</b>	<b>27,300</b>	<b>32,500</b>	<b>35,465</b>	<b>37,261</b>	<b>40,623</b>	<b>43,809</b>	<b>60%</b>
<b>Layton city</b>	<b>67,311</b>	<b>79,594</b>	<b>84,894</b>	<b>84,953</b>	<b>90,327</b>	<b>94,942</b>	<b>41%</b>
North Salt Lake city	16,322	19,313	20,646	21,373	22,799	24,047	
South Weber city	6,051	7,656	10,001	14,578	17,819	21,292	
Sunset city	5,122	5,417	5,485	5,509	5,599	5,678	
Syracuse city	24,331	29,678	34,975	39,855	46,479	53,389	
West Bountiful city	5,265	6,395	7,443	9,200	10,573	11,987	
West Point city	9,511	12,162	16,326	24,541	30,326	36,554	
Woods Cross city	9,761	11,689	13,003	12,331	13,734	15,125	
Balance of Davis Co.	3,818	4,088	4,266	4,407	4,999	5,080	
<b>Morgan County</b>	<b>9,469</b>	<b>11,945</b>	<b>15,013</b>	<b>17,926</b>	<b>20,654</b>	<b>24,234</b>	<b>156%</b>
Morgan city	3,687	4,887	6,439	8,043	9,675	11,830	
Balance of Morgan Co.	5,782	7,058	8,574	9,883	10,979	12,404	

## 2012 Baseline City Population Projections

From State of Utah Population Projections 2013

2010-2060

City / County	Census 2010	2020	2030	Projections		Projected Population Increase	
				2040	2050	2060	
<b>Salt Lake County</b>	<b>1,029,655</b>	<b>1,180,859</b>	<b>1,340,665</b>	<b>1,507,997</b>	<b>1,659,566</b>	<b>1,812,891</b>	<b>76%</b>
Alta town	383	400	441	480	502	523	
Bluffdale city	7,598	10,099	16,777	19,499	22,098	25,125	
Cottonwood Heights	33,433	37,336	38,738	39,321	38,726	37,144	
Draper city (pt.)	40,532	46,420	52,680	56,742	62,421	67,893	
Herriman city	21,785	27,003	38,458	50,114	64,896	81,310	
Holladay city	26,472	29,641	31,062	31,998	33,147	34,170	
Midvale city	27,964	33,010	41,207	50,464	60,206	70,635	
Murray city	46,746	53,748	61,798	67,668	75,445	83,161	
Riverton city	38,753	44,339	50,150	56,512	61,974	67,192	
Salt Lake City city	186,440	210,592	227,824	229,985	233,031	234,704	
Sandy city	87,461	97,826	102,107	104,993	106,471	105,929	
South Jordan city	50,418	59,509	74,258	92,403	110,083	128,992	
South Salt Lake city	23,617	26,845	29,693	31,287	33,454	35,327	
Taylorsville city	58,652	65,637	66,282	66,546	66,795	66,330	
West Jordan city	103,712	118,872	135,254	149,637	165,075	180,050	
West Valley City city	129,480	145,400	150,641	150,990	152,675	153,765	
Balance of SL Co	146,209	174,183	223,295	309,359	372,568	440,640	
<b>Weber County</b>	<b>231,236</b>	<b>258,423</b>	<b>300,477</b>	<b>349,009</b>	<b>398,699</b>	<b>449,053</b>	<b>94%</b>
Farr West city	5,928	6,835	7,238	8,163	9,479	11,593	
Harrisville city	5,567	6,314	7,741	7,146	8,428	9,782	
Hooper city	7,218	8,967	13,989	21,640	28,691	36,586	
Huntsville town	608	666	727	688	698	692	
Marriott-Slaterville city	1,701	2,003	2,741	4,826	5,895	7,054	
North Ogden city	17,357	19,927	25,351	36,923	43,802	51,103	
Ogden city	82,825	90,971	100,123	102,059	105,457	106,934	
Plain City city	5,476	6,431	8,727	10,694	13,492	16,572	
Pleasant View city	7,979	9,204	11,876	15,626	18,860	22,337	
Riverdale city	8,426	9,093	9,365	9,694	9,544	9,409	
Roy city	36,884	39,979	41,890	43,876	44,739	44,618	
South Ogden city	16,532	17,941	18,885	19,387	19,387	19,399	
Uintah town	1,322	1,502	1,851	1,749	2,072	2,415	
Washington Terrace city	9,067	9,857	10,446	13,456	13,567	13,358	
West Haven city	10,272	13,121	21,731	32,674	44,760	58,405	
Balance of Weber Co	14,074	15,613	17,796	20,408	29,826	38,798	

**USU Botanical Center Master Plan**  
**MHTN Architects**  
**Master Plan Cost Opinion**

Phase 1: 1-10 years	Years 2017-2027	Preparation Date July 12 2016	
<b>Buildings</b>			
1A Education Center expansion 6,500 gsf	6500 sf	\$ 291.00	\$ 1,891,500
	Soft Cost	21.60%	\$ 408,564
	Total Project Cost		\$ 2,300,064
1B ICLT 4,000 gsf	4000 sf	\$ 310.00	\$ 1,240,000
	Soft Cost	21.60%	\$ 267,840
	Total Project Cost		\$ 1,507,840
1C Amphitheater, 500 seats, platform stage	500 seat	\$ 2,750.00	\$ 1,375,000
	Soft Cost	21.60%	\$ 297,000
	Total Project Cost		\$ 1,672,000
1D Restroom/maintenance facility, (3) at 200 gsf each	600 sf	\$ 200.00	\$ 120,000
	Soft Cost	21.60%	\$ 25,920
	Total Project Cost		\$ 145,920
1E Barn 15,000 gsf	15000 sf	\$ 175.00	\$ 2,625,000
	Soft Cost	21.60%	\$ 567,000
	Total Project Cost		\$ 3,192,000
1F Central maintenance facility (material bins)	2800 sf	\$ 32.00	\$ 89,600
	Soft Cost	21.60%	\$ 19,354
	Total Project Cost		\$ 108,954
1G Utah House expansion (glass) - high quality green house	2000 sf	\$ 325.00	\$ 650,000
	Soft Cost	21.60%	\$ 140,400
	Total Project Cost		\$ 790,400
1H Kayak/canoe access (2)	2 ea	\$ 18,500	\$ 37,000
	Soft Cost	21.60%	\$ 7,992
	Total Project Cost		\$ 44,992
1J Boardwalk/interpretive signs (3)	3 ea	\$ 15,000	\$ 45,000
	Soft Cost	21.60%	\$ 9,720
	Total Project Cost		\$ 54,720
<b>Total Phase 1 Building Construction</b>			\$ 8,073,100
<b>Total Phase 1 Building Soft Cost</b>			\$ 1,743,790
(See soft cost breakdown on page 6)			
<b>Total Phase 1 Building Project Cost</b>			\$ 9,816,890

**USU Botanical Center Master Plan**  
**MHTN Architects**  
**Master Plan Cost Opinion**

Phase 1: 1-10 years	Years 2017-2027	Preparation Date July 12 2016	
<b>Site Work</b>			
Bike and walking pathway paved	22800 sf	\$ 2.75	\$ 62,700
Fencing at 50 west	780 lf	\$ 55.00	\$ 42,900
Other fencing chain link area control fence	4500 lf	\$ 22.00	\$ 99,000
Flexible events	210000 sf		work underway
Flexible events Education	120000 sf	\$ 2.75	\$ 330,000
New garden outdoor Instruction	33000 sf	\$ 2.75	\$ 90,750
New garden	26000 sf	\$ 25.00	\$ 650,000
Pathways - DG gravel 15000 lf	4500 lf	\$ 20.00	\$ 90,000
Pathways - gravel	3000 lf	\$ 12.00	\$ 36,000
East side of pond xeric planting	305000 sf	\$ 2.75	\$ 838,750
Terrace gardens	30000 sf	\$ 12.00	\$ 360,000.0
Roadway allowance 500 lf	12500 sf	\$ 4.00	\$ 50,000
<b>Total Phase 1 Site Construction</b>			\$ 2,650,100
<b>Total Phase 1 Site Soft Cost</b>		11.60%	\$ 307,412
<b>Total phase 1 site project cost</b>			\$ 2,957,512
<b>Total Project Cost Phase 1 building</b>			\$ 9,816,890
<b>Total Project Cost Phase 1 Site</b>			\$ 2,957,512
<b>Total Phase 1 Project Cost</b>			\$ 12,774,401
<b>Inflation to median point of 10 years</b>		131%	\$ 16,790,609

**USU Botanical Center Master Plan**  
**MHTN Architects**  
**Master Plan Cost Opinion**

Phase 2: 10-25 years		Years	Preparation Date	
		2027-2042	July 12 2016	
<b>Buildings</b>				
2A	Amphitheater expansion, add 500 fixed seats Augment stage & support space	500 seats allow	\$ 300.00	\$ 150,000
				\$ 2,000,000
				\$ 2,150,000
	Soft Cost		21.60%	\$ 464,400
	Total Project Cost			\$ 2,614,400
2B	Education Pavilion 2,000 gsf	2000 sf	\$ 41.00	\$ 82,000
	Soft Cost		21.60%	\$ 17,712
	Total Project Cost			\$ 99,712
2C	Visitor Center 8,000 square feet	8000 sf	\$ 325.00	\$ 2,600,000
	Soft Cost		21.60%	\$ 561,600
	Total Project Cost			\$ 3,161,600
2D	Ropes course, fence enclosed	60000 sf	\$ 8.00	\$ 480,000
	Soft Cost		21.60%	\$ 103,680
	Total Project Cost			\$ 583,680
2E	Barton's Pond bridge	150 lf	\$ 350.00	\$ 52,500
	Soft Cost		21.60%	\$ 11,340
	Total Project Cost			\$ 63,840
2F	Kayak/canoe access	1 ea	\$ 18,500	\$ 18,500
	Soft Cost		21.60%	\$ 3,996
	Total Project Cost			\$ 22,496
2H	Boardwalk/interpretive signs	2 ea	\$ 15,000	\$ 30,000
	Soft Cost		21.60%	\$ 6,480
	Total Project Cost			\$ 36,480
<b>Total Phase 2 Building Construction</b>				\$ 5,413,000
<b>Total Phase 2 Building Soft Cost</b>				\$ 1,169,208
(See soft cost breakdown on page 6)				
<b>Total Phase 2 Building Project Cost</b>				\$ 6,582,208

**USU Botanical Center Master Plan**  
**MHTN Architects**  
**Master Plan Cost Opinion**

Phase 2: 10-25 years		Years	Preparation Date	
		2027-2042	July 12 2016	
<b>Site Work</b>				
	Arboretum expansion to east & north complete loop pathway	60000 sf	\$ 6.00	\$ 360,000
	Other fencing chain link area control fence	7000 lf	\$ 22.00	\$ 154,000
	Parking allowance	20000 sf	\$ 5.00	\$ 100,000
	Youth area native grasses large head irrigation	350000 sf	\$ 2.75	\$ 962,500
	Buffer yard planting and separation wall	65000 sf	\$ 3.00	\$ 195,000
	Buffer yard fence 10' masonry	1200 lf	\$ 105.00	\$ 126,000
	Dry stream bed	56000 sf	\$ 10.50	\$ 588,000
	Pathways - DG gravel	6500 lf	\$ 20.00	\$ 130,000
	Pathways - gravel	3500 lf	\$ 12.00	\$ 42,000
	Arboretum extensions	45000 sf	\$ 5.00	\$ 225,000
	Compost area	7500 sf	\$ 10.00	\$ 75,000
	Roadway allowance 500 lf	12500 sf	\$ 4.00	\$ 50,000
<b>Total Phase 2 Site Construction</b>				\$ 3,007,500
<b>Total Phase 2 Site Soft Cost</b>				11.60% \$ 348,870
<b>Total phase 2 site project cost</b>				\$ 3,356,370
Total Project Cost Phase 2 Building				\$ 6,582,208
Total Project Cost Phase 2 Site				\$ 3,356,370
<b>Total Phase Project Cost</b>				\$ 9,938,578
Inflation to median point of 25 years		2035	253%	\$ 25,137,049

**USU Botanical Center Master Plan**  
**MHTN Architects**  
**Master Plan Cost Opinion**

**Phase 3: 25-50 years**

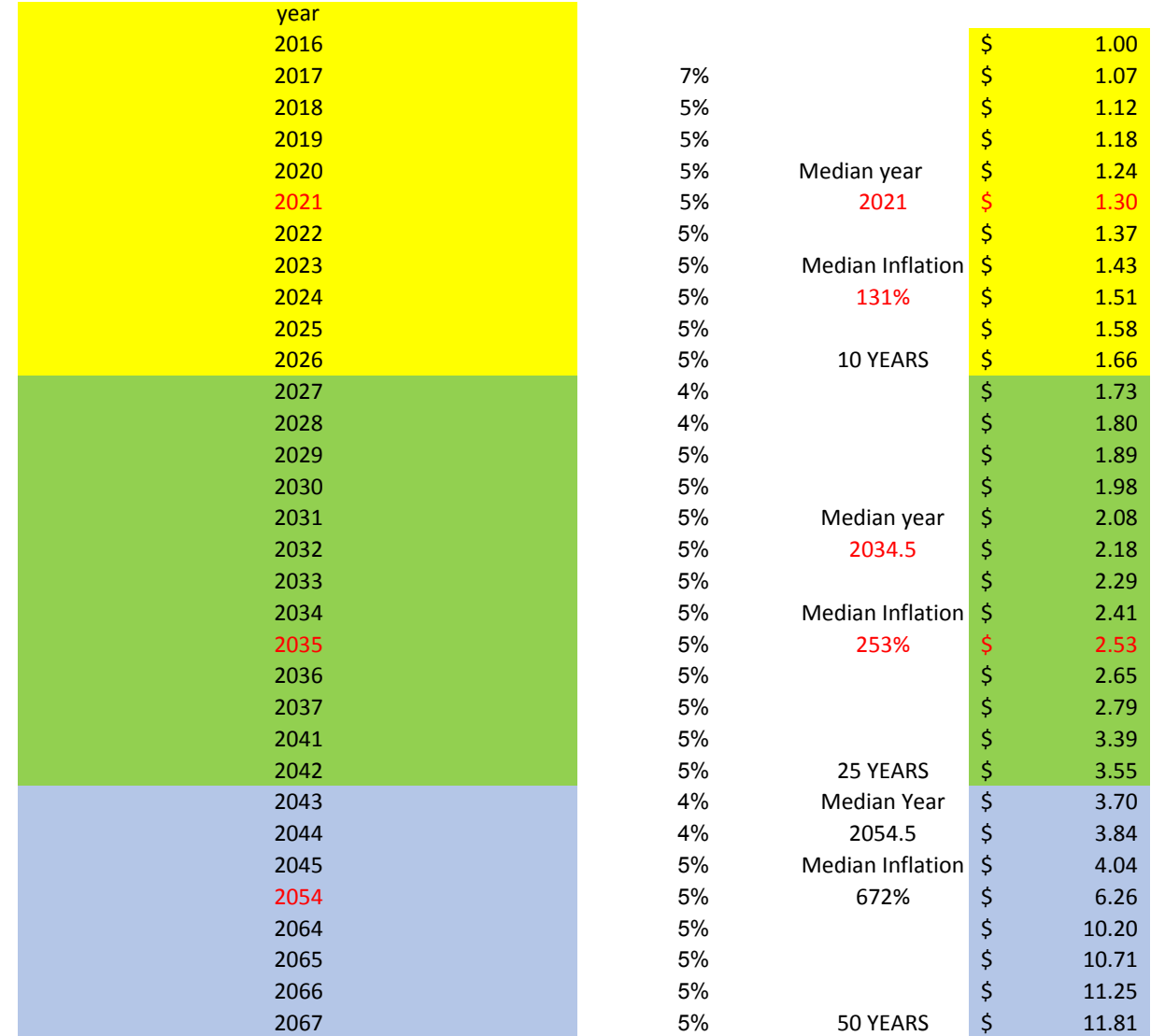
**Buildings**

	Years 2042-2067	Preparation Date July 12 2016		
3A Amphitheater expansion, add 500 fixed seats	500 seats	\$ 275.00	\$ 137,500	
	Soft Cost	21.60%	\$ 29,700	
	Total Project Cost		\$ 167,200	
3B Guest House 8,000 gsf	8000 sf	\$ 300.00	\$ 2,400,000	
	Soft Cost	21.60%	\$ 518,400	
	Total Project Cost		\$ 2,918,400	
3C Kayak/canoe access	1 sf	\$ 18,500.00	\$ 18,500	
	Soft Cost	21.60%	\$ 3,996	
	Total Project Cost		\$ 22,496	
3D Boardwalk/interpretive signs	1 sf	\$ 15,000.00	\$ 15,000	
	Soft Cost	21.60%	\$ 3,240	
	Total Project Cost		\$ 18,240	
<b>Total Phase 3 Building Construction</b>			\$ 2,571,000	
<b>Total Phase 3 Building Soft Cost</b>			\$ 555,336	
(See soft cost breakdown on page 6)				
<b>Total Phase 3 Building Project Cost</b>			\$ 3,126,336	

**Site Work**

Children's garden	3500 sf	\$ 25.00	\$ 87,500	
Planting allowance	50000 sf	\$ 3.00	\$ 150,000	
Pathways - gravel 15000 lf	2500 sf	\$ 12.00	\$ 30,000	
Other fencing chain link area control fence	1000 lf	\$ 22.00	\$ 22,000	
<b>Total Phase 3 Site Construction</b>			\$ 289,500	
<b>Total Phase 3 Site Soft Cost</b>		11.60%	\$ 33,582	
<b>Total phase 3 site project cost</b>			\$ 323,082	
Total Project Cost Phase 2 Building			\$ 3,126,336	
Total Project Cost Phase 2 Site			\$ 323,082	
<b>Total Phase 3 Project Cost</b>			\$ 3,449,418	
Inflation to median point of 25 years	2054	672%	\$ 23,190,319	

Inflation Chart  
 Cost of \$1.00 inflation rated



**Soft Cost Breakdown**

**Other Costs Not Part of Construction (Soft Costs)**

	Buildings	Site
Impact fees	2.00%	2.00%
Design	6.00%	4.00%
F F & E	9.00%	1.00%
testing and inspection	0.60%	0.60%
Change order	3.00%	3.00%
printing and other costs	1.00%	1.00%
<b>Total</b>	<b>21.60%</b>	<b>11.60%</b>

**DESIGN & AESTHETICS**

Maintain open space for the property & not “overbuild” with structures  
Cohesive sense of place (make it connect)  
Wayfinding & boundaries

**USU BRAND**

Improve, enhance curb appeal from I-15  
Maintenance, appearance \$\$\$  
Signage

**NEIGHBORS**

Be a good neighbor  
Part of the community

**OPERATIONS & UTILITIES**

Organizational stability  
Support from USU Logan  
Docent program  
Security  
Safe place  
Lighting  
Controlled access  
Professional staff  
Risk Management  
Wildlife control – protect gardens  
Storage for maintenance

**COMMUNITY OUTREACH**

Community gathering, large indoor / outdoor  
Farm to fork events  
Open space community gathering  
Amphitheater for public events  
Family friendly destination  
Community hub for multiple uses  
No fees

**FACILITIES**

Infrastructure to support events: parking, restrooms, lighting...  
All-seasons destination  
Dog park  
Sustainable facilities  
Visitor center  
Night-sky friendly  
ADA – access to public  
Open & welcoming to the public  
Able to accommodate all Botanical Center, Extension & continuing education programs  
Plenty of gathering & sitting areas

**CITY & COUNTY**

Financial & political support from city and county elected officials (example: County government funding operating budget for Extension)  
Support from Kaysville / Davis County  
A destination

**RETAIL**

Don’t compete with private enterprise  
Farmer’s market  
Wedding receptions  
Boy Scout pow wows  
Creamery outlet?  
Food trucks space  
Retail (stores), café...  
Bookstore for Extensions publications  
Ropes course  
High adventure area

**EVENTS**

Arboretum lighting (trees)  
Community events  
Music venue?  
Private & public events  
Boy Scout pow wows for merit badges (charge fees)  
Baby Animal Days  
Farm Field Days

**RESEARCH**

Demonstration plots that involve the public  
Develop for commerce – native & water-wise plant material for intermountain area  
Demonstrate USU research  
Research based info readily accessible by public

**EXTENSION**

Youth development / 4-H  
Regional 4-H events  
Regional Extension center  
New Davis County Extension building (end of 2017)  
Destination for regional and state 4-H activities

**EDUCATION**

Educational signage re birds, fish, vegetation  
Day & evening distance ed classes  
Holistic approach to education / extension  
Regional education hub  
Programs for all ages  
Expanded classrooms

Expanded labs for hands-on teaching horticulture  
Interpretative signage to tie gardens together  
Continue to expand student enrollment of Education Center  
One site – education, extension, research  
Holistic approach, multi-faceted  
Experiences / doing  
Ed includes extension, research, demonstration, etc.

**DEMONSTRATION**

Educational community classes  
Campus wide arboretum  
Community gardens  
Demonstration classes  
Hands on demonstrations for public / research  
Research plots to demonstrate to the public  
Edible gardens and ornamental gardens  
Home owner take away  
Water conservation / best practices

**WETLANDS**

Wetlands protection education  
Better utilization of ponds  
4-H fishing program  
Adult & youth environmental programs  
Public fishing opportunities  
Enhance / encourage current fishing

**GARDENS**

Children’s garden  
Sense of community  
Healing garden  
Demonstration of numerous edible native & ornamental plant species  
Water conservation gardens

**TRAILS**

Additional interests for guest – draw through  
Measured for walkers / runners  
Experiential  
Intuitive  
Open / not trespassing  
Walking paths  
Public / exercise  
Paved & unpaved  
Bike & hike  
Well maintained trails throughout the property readily accessible to the public

**PARKING**

Angled parking on street – widen  
Capacity for large events – screening

**STANDARDS**

Comprehensive signage

**SUSTAINABILITY & RESILIENCE**

More full-time employees  
Financial sustainability  
Model / example to state

**BUSINESS PARTNERS**

Maintain close partnerships with local nurseries & landscape companies  
Provide sponsorship opportunities for city & county businesses at events held on property

**CAMPUS ZONING**

Connect east / west zoning  
Develop west of ponds for arboretum, paths, seating, etc.  
Updated to fit campus needs & community values

**TRAFFIC / TRANSPORTATION**

Public transportation stops  
UTA stop  
I-15 crossing to west Kaysville  
Ped / bike  
Improve pedestrian & bicycle access to site

**DEVELOPMENT & FUNDING**

Possible conference center on west side  
Hotel on west side  
New Aggie football / basketball stadium / arena



**PROJECT VISION STATEMENT – DRAFT** May 31, 2016

**The USU Botanical Center will have a cohesive identity and a visible presence. It will reflect community values and serve campus needs.** Qualities and features will include:

- a unified aesthetic and a strong sense of place
- a trail system that links all areas
- a good connection between the east and west zones
- signage that effectively communicates identity, wayfinding and boundaries
- an appearance and level of maintenance consistent with USU standards

**The Center will be a good neighbor to the community and will be known as an area destination and gathering place. Open and welcoming to the public, it will be fee-free and accessible by all.** It will provide:

- activities and events for all ages, throughout all seasons
- open space that accommodates community gatherings
- seating areas throughout
- a docent program and other opportunities for community-member involvement

**The Center will embody its conservation mission, providing examples of best practices to homeowners and municipalities throughout the state.** At the Center:

- open space and the natural environment will be preserved as much as possible
- buildings will be limited to those needed for educational and operational support
- sustainable design and water conservation principles will be manifested in facilities and landscape elements
- lighting will be night-sky friendly

**The Center's outdoor environment will be designed for recreational purposes as well as more serious educational pursuits.** Elements will include:

- paths and trails available for walkers/runners/bikers, with mileage markers, a variety of surfaces, open-access entry points and intuitive way-finding
- trails with interpretive signs that inform as they guide visitors through the Center
- gardens that foster a sense of community, serving a variety of ages and interests, from children to serious gardeners, to local nurseries and landscape businesses
- possible garden types that include: edible, ornamental and water conservation plant species; children's garden; healing garden
- enhanced designs for ponds and wetlands that support recreational uses, 4H fishing programs, and awareness of issues related to wetlands and environmental protections
- a campus-wide arboretum that educates while providing a pleasant visitor experience

**The Center will offer facilities for a variety of programs and events. Services will support visitors and programs, without competing with the private sector.** Elements under consideration include:

- services: visitor's center; creamery outlet; Extensions publications bookstore; ropes course / high adventure area; food trucks; small café/food outlet
- open space events: farmer's market, Baby Animal Days, Farm Field Days, Boy Scout gatherings; farm to fork events; arboretum lighting
- indoor and outdoor facilities available for private gatherings such as corporate meetings and wedding receptions
- an amphitheater for musical and theatrical productions

**The Center will be a regional education hub offering a holistic, multi-faceted approach. Education, extension services and research will be present at this site.** Educational elements include:

- experiential, demonstration, traditional and research-based learning
- increased classroom capacity for expanding student enrollment, daytime and evening distance ed classes, and community education classes; expanded labs for horticulture hands-on teaching
- support for youth development in 4-H programs, and regional and state 4-H events
- visibility for USU research
- hands-on demonstration plots that involve the public
- research focusing on native and water-wise plants suitable for the Intermountain region

**Center operations will prioritize safety, functionality and financial sustainability.** Elements may include:

- events, activities and services that bring financial assistance
- strong relationships with surrounding municipalities and local businesses that may result in potential sponsorship opportunities, partnerships, grants or other financial support
- visitor donation opportunities at entry points
- possible real estate development in the northwest zone, with a goal of financial sustainability
- increased University funding that enables hiring additional needed staff
- entry and access-control strategies that protect facilities and gardens
- a design that addresses USU Risk Management issues and concerns
- exterior lighting that contributes to visitor safety
- service access, storage space, catering areas, etc., that support events, programs and Center maintenance

**The Center will improve access for pedestrians, bicycles, vehicles and users of mass transit, through:**

- increased entry points to the site for walkers and bicyclists, from all directions
- improved connections to bus routes
- safer Interstate-15 east-west crossings
- a parking strategy that meets needs, including for high-attendance events, while preserving open space and the natural environment



### 2012 Baseline City Population Projections

From State of Utah Population Projections 2013

2010-2060

City / County	Census		Projections				Projected Population Increase 2010-2060
	2010	2020	2030	2040	2050	2060	
<b>Population Projection Summary</b>							
Davis County	306,479	356,968	391,933	426,392	465,664	503,985	64%
Morgan County	9,469	11,945	15,013	17,926	20,654	24,234	156%
Salt Lake County	1,029,655	1,180,859	1,340,665	1,507,997	1,659,566	1,812,891	76%
Weber County	231,236	258,423	300,477	349,009	398,699	449,053	94%
	0	27,300	35,465	37,261	40,623	43,809	60%
	0	67,311	84,894	84,953	90,327	94,942	41%

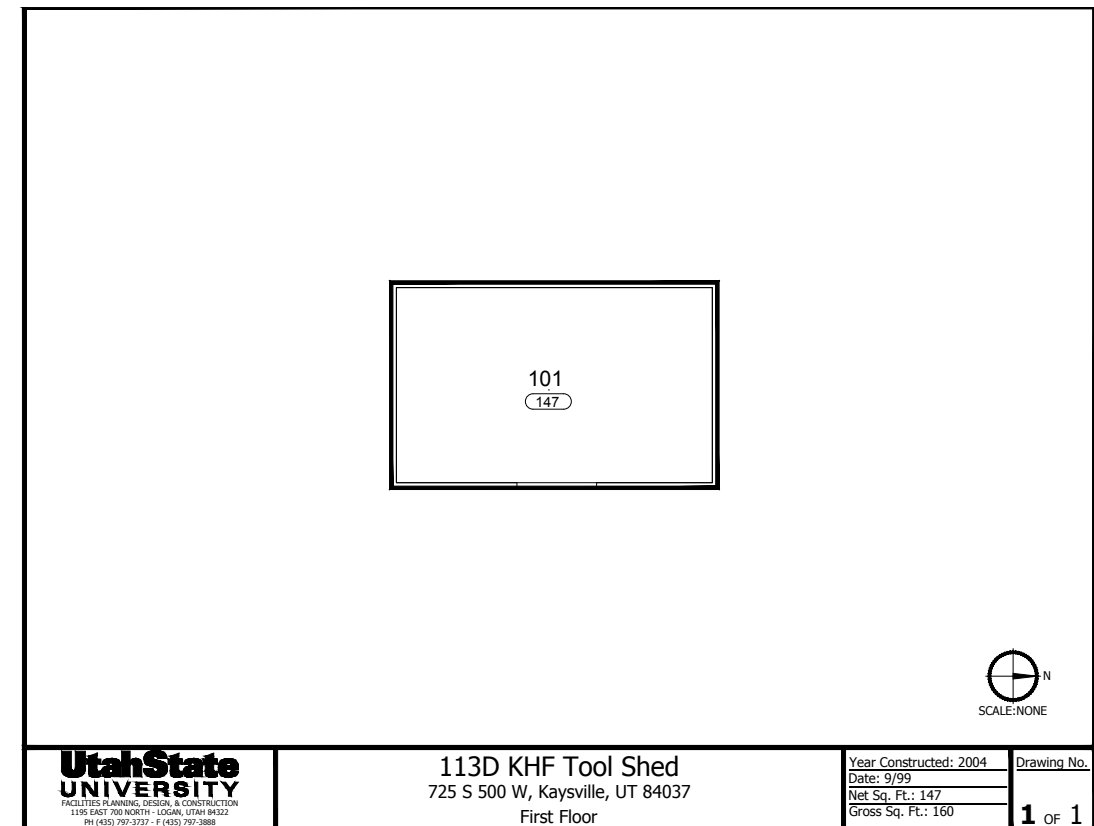
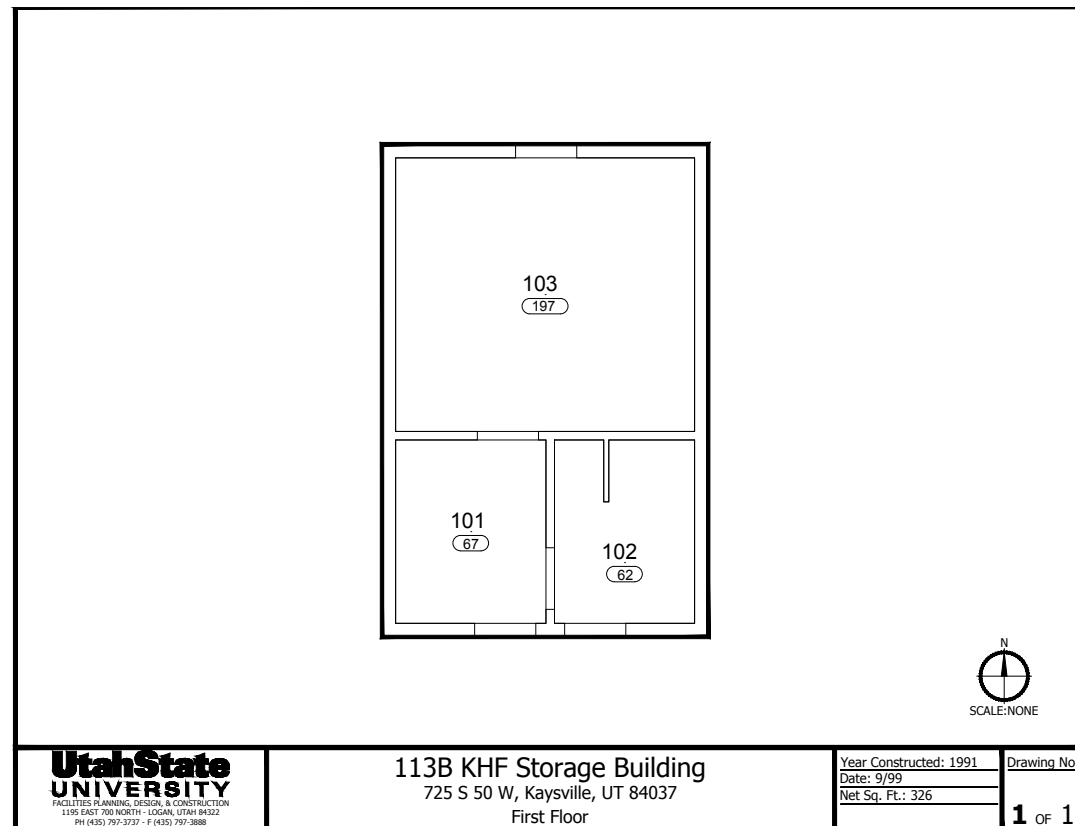
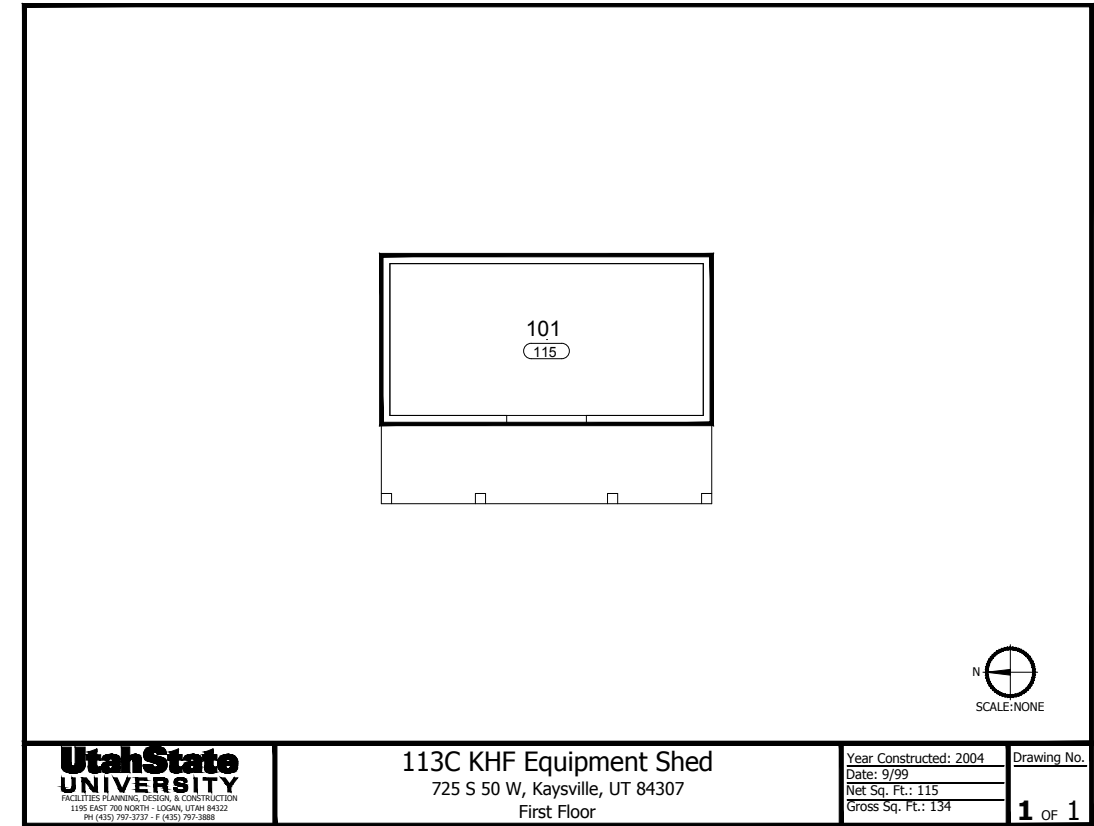
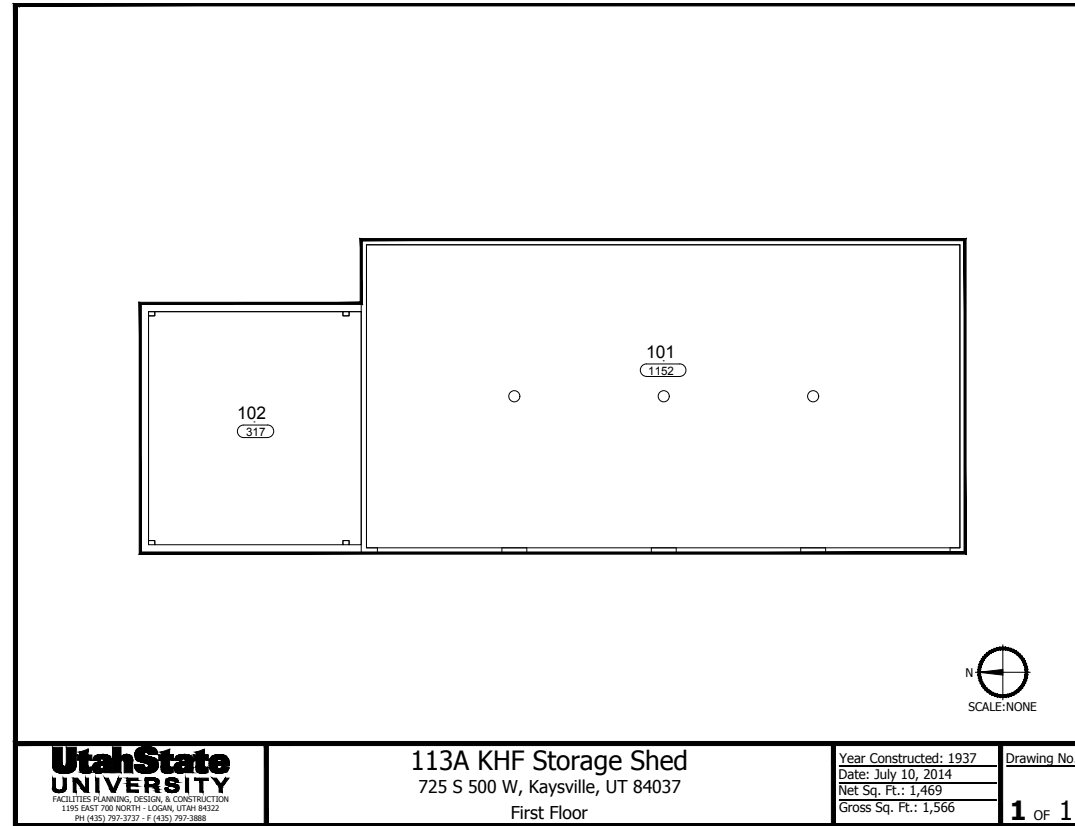
**Notes:**

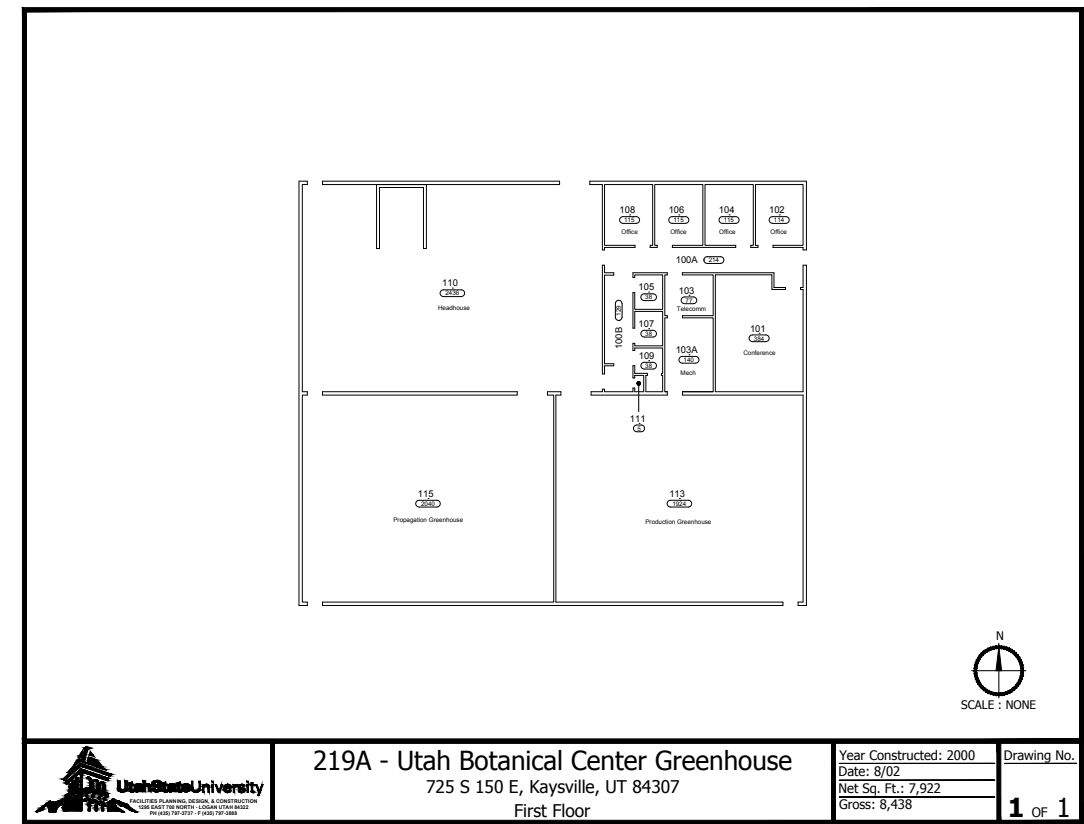
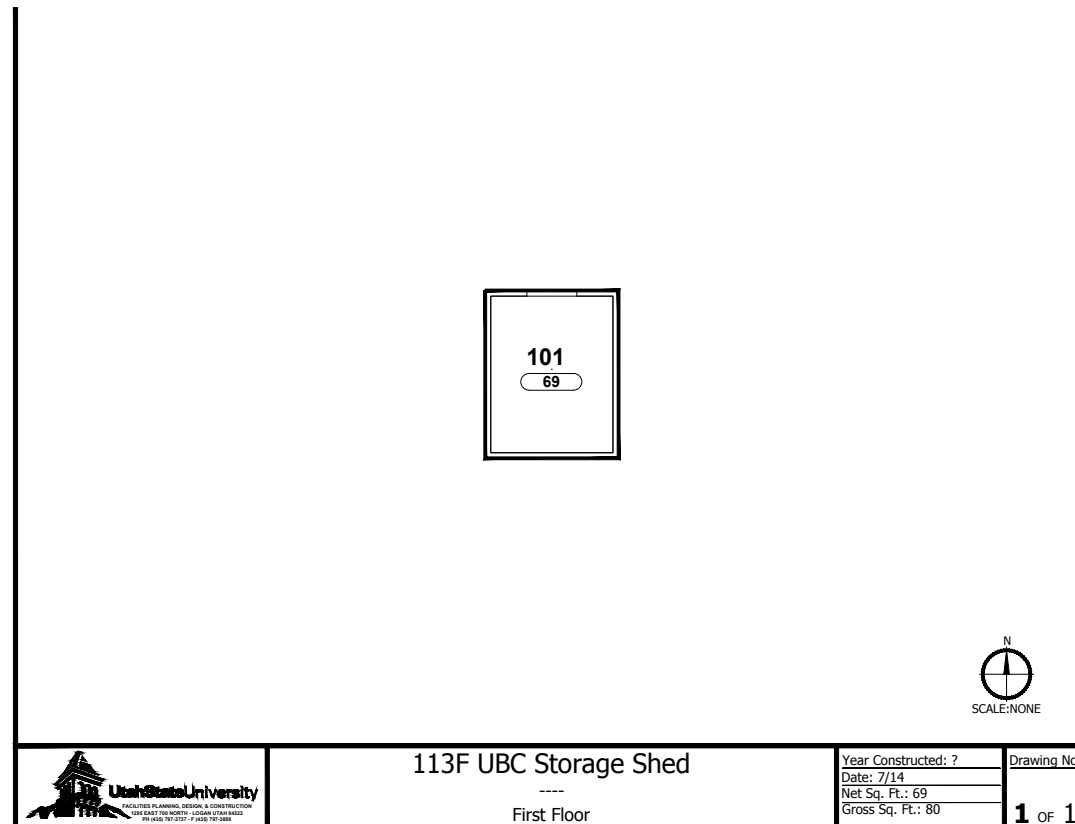
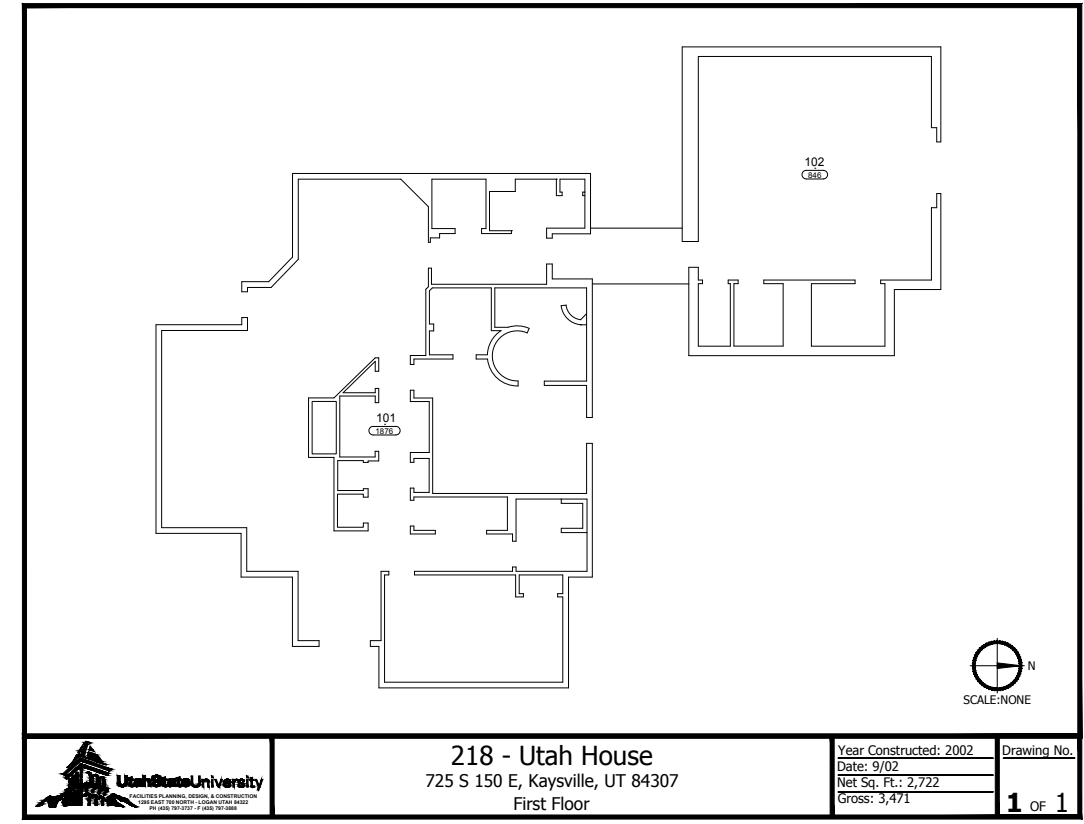
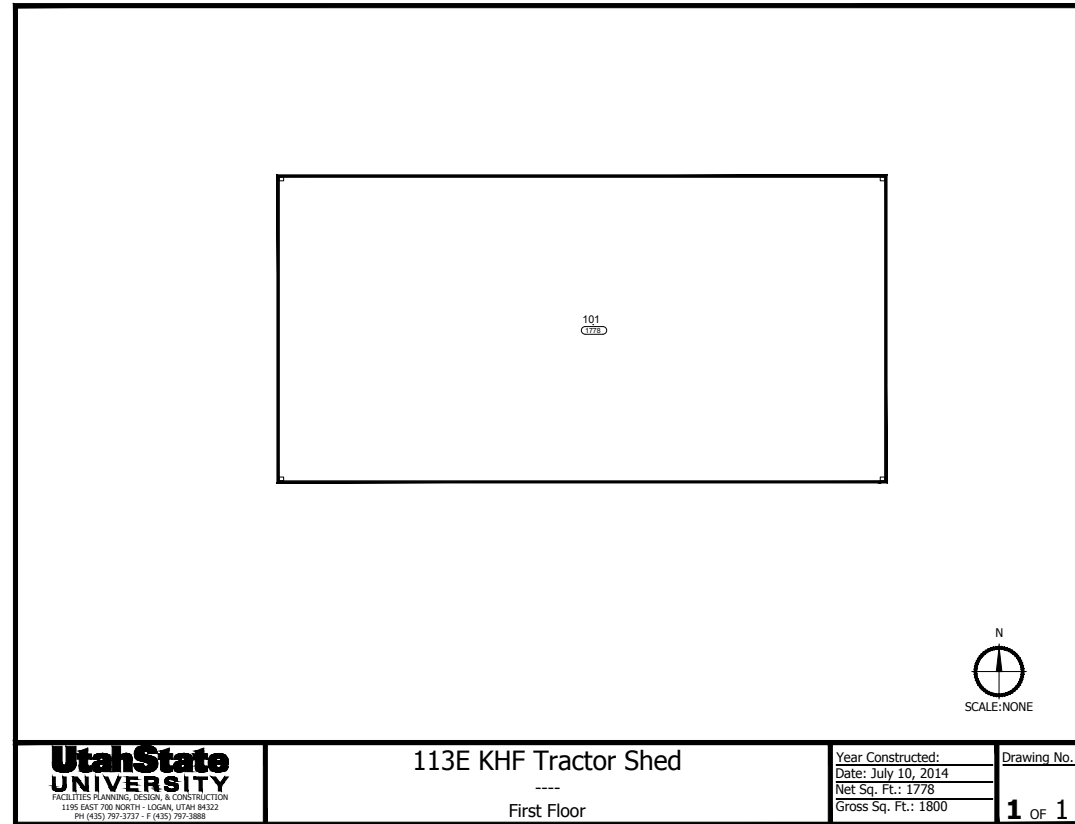
1. All populations are date July 1, except for the April 1, 2010 figures produced by the U.S. Census Bureau.
2. Initial projections of subcounty populations maintained a constant share based on the distribution of the most recent Census Bureau estimates.
3. Projections are approved by the respective Associations of Government

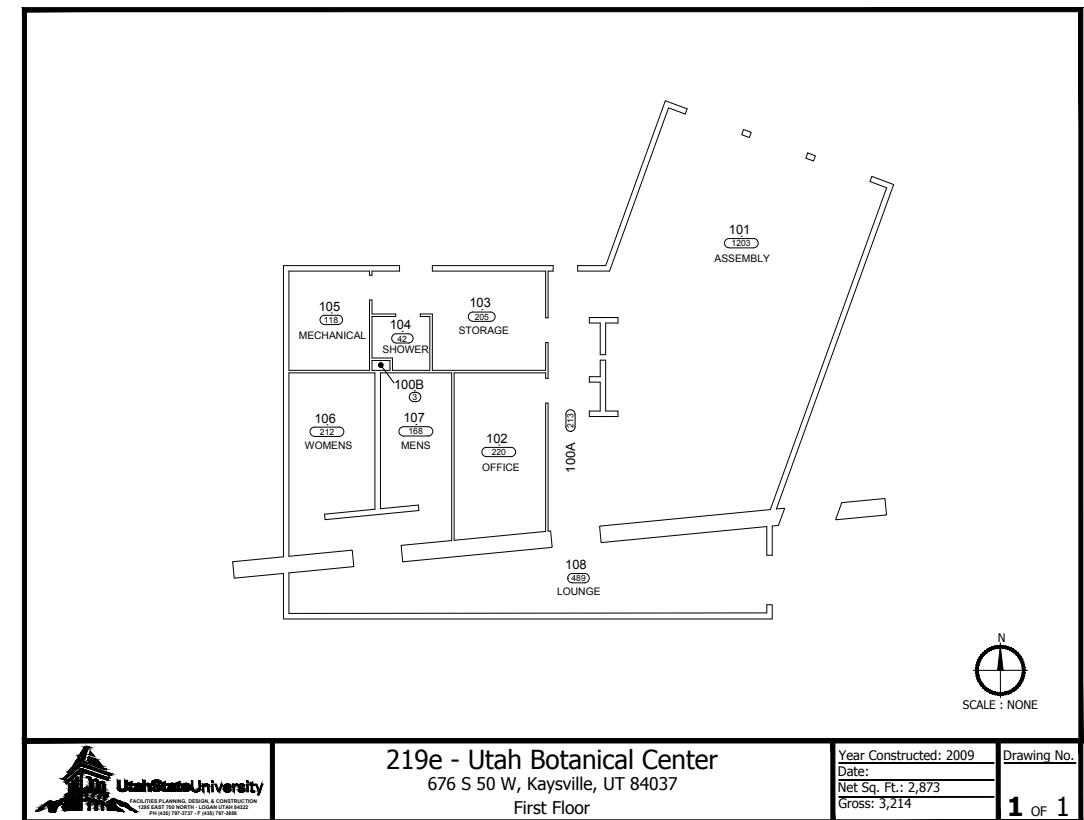
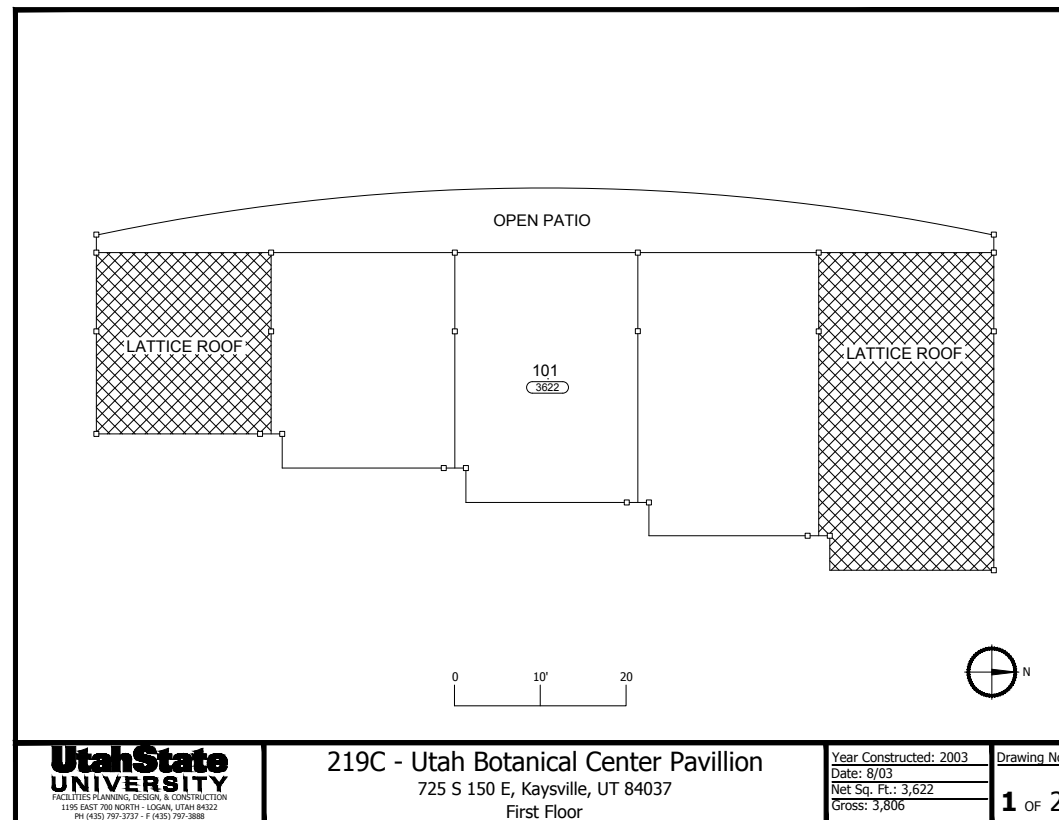
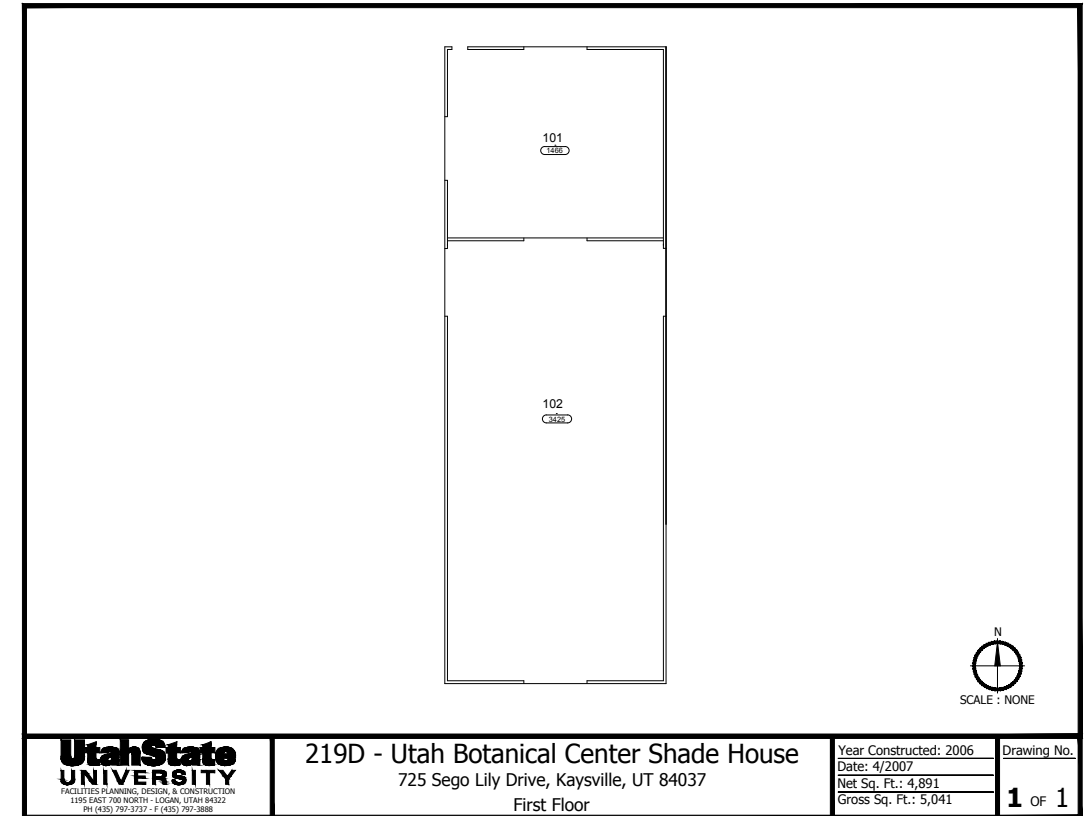
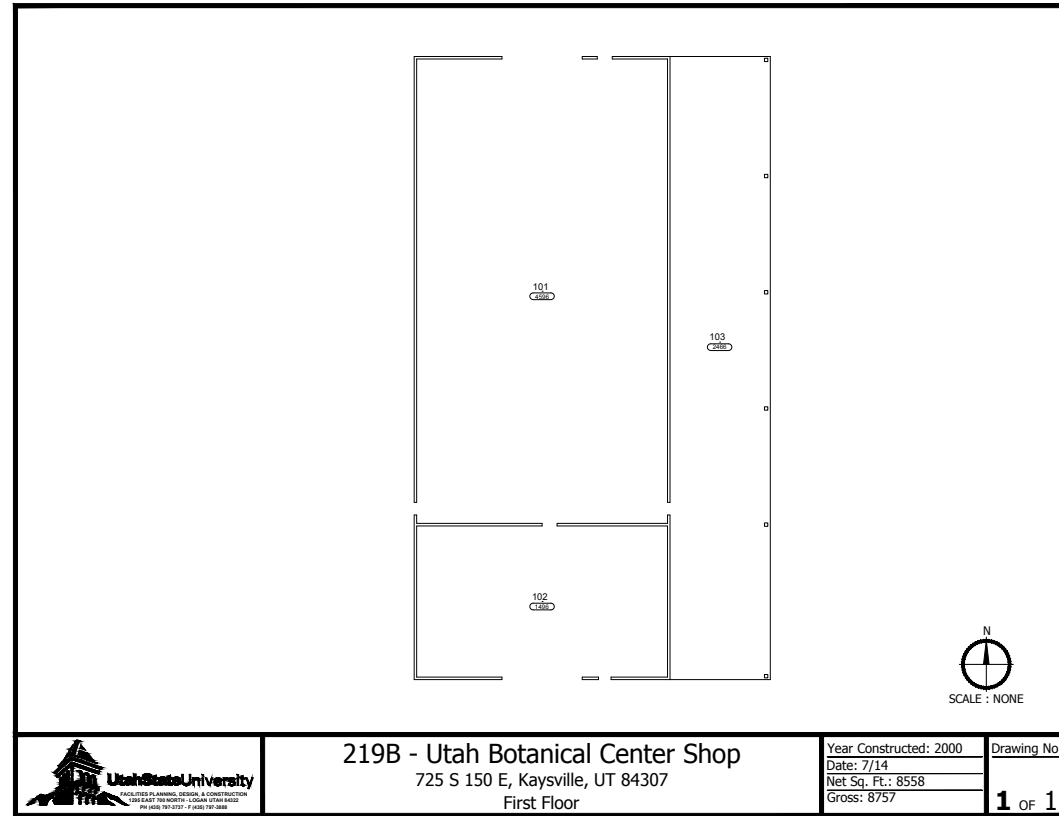
**Sources:**

1. U.S. Census Bureau
2. Governor's Office of Planning & Budget, 2012 Baseline Projections
3. Associations of Government









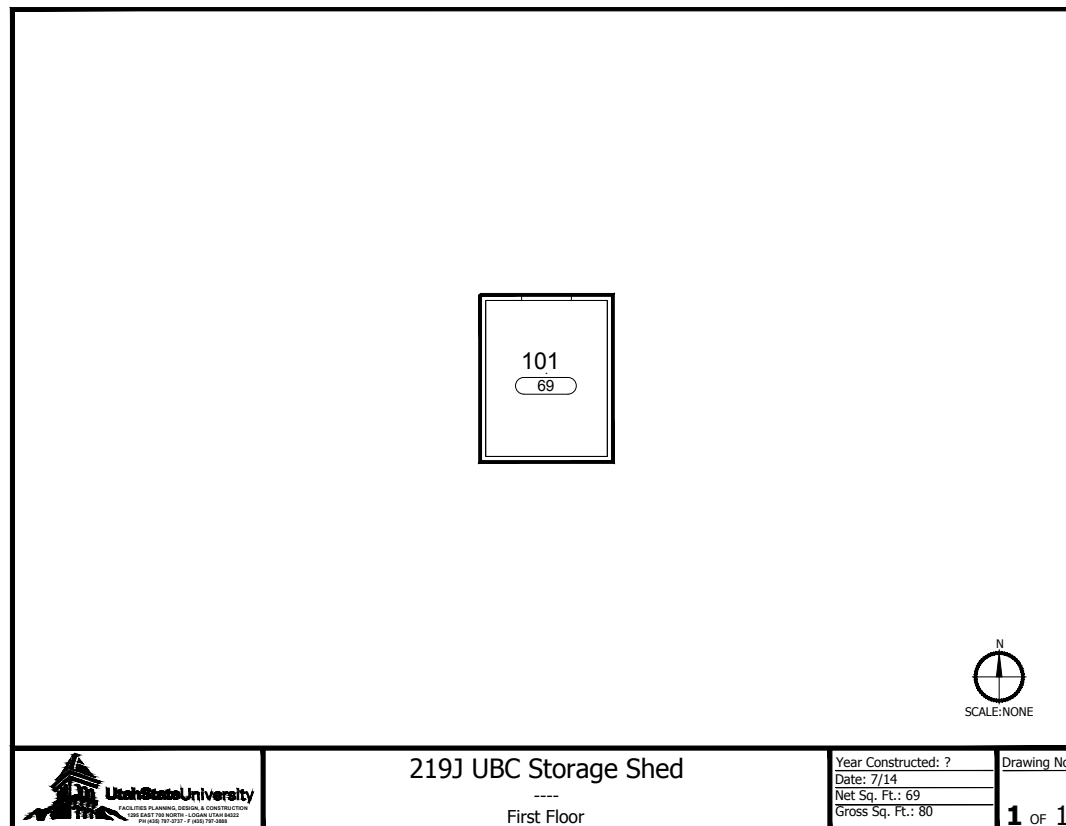
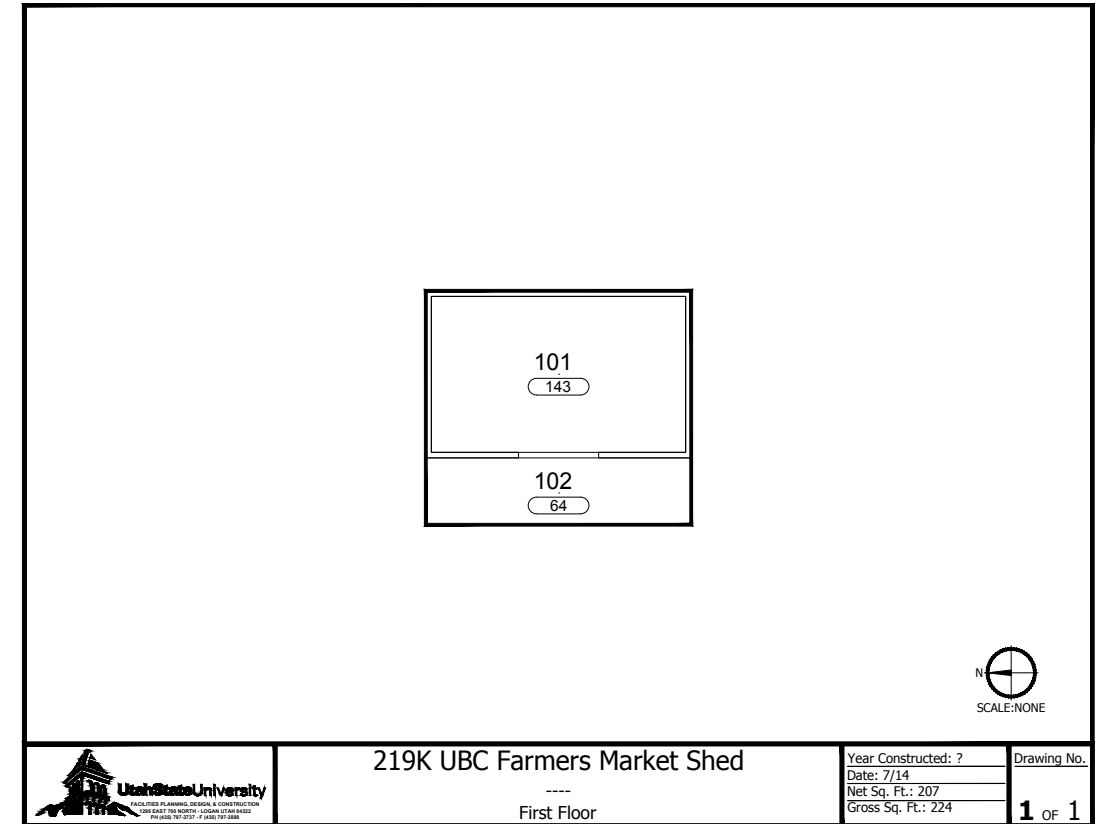
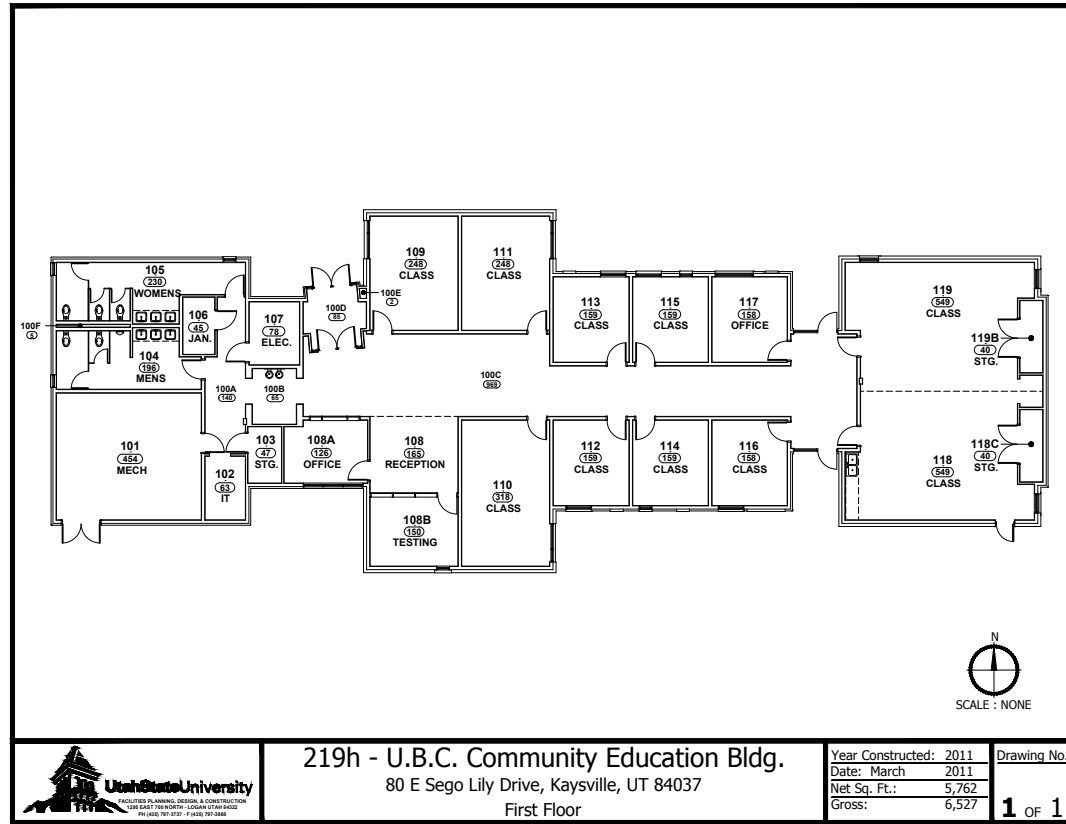
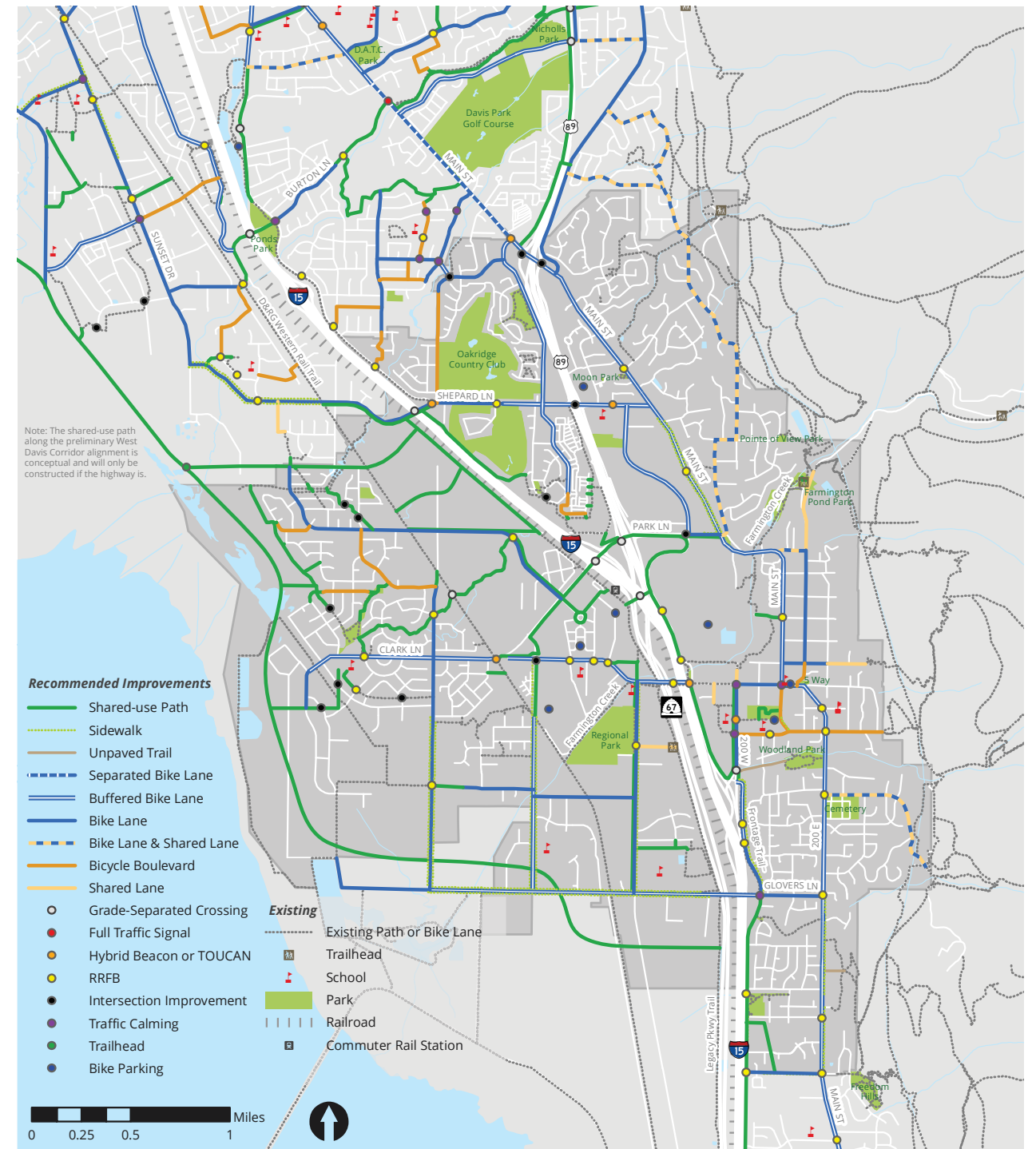




Figure 4.2: Kaysville Recommended Improvements Map

Figure 4.2: Farmington Recommended Improvements Map



**APPENDIX H - PLANT LIST**

The plant materials listed in Appendix H - Plant List are recommended throughout the gardens; however, the display garden plants are not listed because each garden will have its own theme and plant palette.

**PRAIRIE OR PASTURE GRASSES**

Several different mixes are available for use. Each has its own limitations for stability, longevity, drought tolerance and water requirements.

**Natures Prairie**

This native prairie mix consists of several clump type grasses which can withstand the heat and cold of our environment and can survive on 12” to 14” of water. Grass seed will grow to a height of 12” to 15” and seed heads will grow to a height of 30”.

It is composed of Canadian Blue Fescue, Prairie June grass, Smooth Brome, Big Blue Stem, Chewing Fescue, Red Fescue and Tufted Hair Grass.

The stems holding the seed heads are taller and stouter than blue grass seed stems. Being a collection of clump grasses, it is critical to maintain the turf correctly or bare spots of earth could appear.

**CSR Native Prairie**

This native see mix also consists of several clump type grasses which can withstand the heat and cold of our environment and can survive on 12” to 14” of water. This grass will grow to a height of 8” and the seed heads will extend a maximum height of 24”.

This mix is composed of Idaho Fescue, Prairie June grass, Blue Grama and Buffalo Grass. Buffalo Grass is a midwest native that will go dormant in the summer without supplemental water. The stems of the Prairie June grass and the Buffalo grass are taller and stouter than the Fescue stems and any type of bluegrass stems.

**Native Meadow**

This native turf is both cold and water resistant. This native sod product consists of several clump type grasses. It is composed of Canadian Blue Fescue, Prairie June grass, Smooth Brome, Big Blue Stem, Chewing Fescue, Red Fescue and Tufted Hair Grass. This turf can survive on 12” to 15” of water. Grass seed will grow to a height of 6” to 9” and seed heads will grow to a height of 16”.

The stems holding the seed heads are taller and stouter than blue grass seed stems. Being a collection of clump grasses, it is critical to maintain the turf correctly or bare spots of earth could appear.

**Meadow Grass Mix**

This native mix product consists of several clump type grasses which are drought tolerant and can withstand the heat and cold in our climate. This sod can survive on 12” to 14” of water per season. This grass will grow to a height of 10” to 12” and the seed heads will extend a maximum height of 16” to 18”.

This sod is a combination of seven different varieties of seed: a smooth brome, Canada Blue Fescue, three tall turf type fescues, a creeping fescue and a chewing fescue. This combination of broom and fescue does not appear to lay down as other varieties do.

**Pasture Grasses**

Several mixes are available for various types of uses. A common mix consists of Orchard Grass, perennial ryegrass, Duo festulolium, Timothy, meadow brome and tall fescue. This pasture grass requires irrigation.

Botanical Name	Common Name	Botanical Name	Common Name
<b>DECIDUOUS TREES</b>			
Acer campestre	Hedge Maple	Gymnocladus dioicus	Kentucky Coffeetree
Acer ginnala	Amur Maple	Koelreuteria paniculata	Goldenraintree
Acer glabrum	Rocky Mountain Maple	Maclura pomifera	Osage-Orange
Acer gradidentatum	Bigtooth Maple	Malus 'spring snow'	Spring Snow Crabapple
Acer platanoides	Norway Maple	Morus alba	Fruitless Mulberry
Acer pseudoplatanus	Sycamore Maple	Parrotia persica	Persian Ironwood
Acer tataricum	Tatrain Maple	Plantanus occidentalis	Ameican Sycamore
Acer truncatum	Shantung Maple	Platanus x acerifolia	London Plane Tree
Alnus tenuifolia	Thinleaf Alder	Prunus cerasifera	Purpleleaf, Cherry
Amelanchier alnifolia	Saskatoon, Western Serviceberry	Prunus padus	May Day Tree
Amelanchier laevis	Laevis Serviceberry	Prunus sargentii	Sargent Cherry
Amerlancier uthanensis	Utah Serviceberry	Prunus virginiana	Common Chokecherry
Carpinus betulus	European Hornbeam	Prunus virginiana "Canada Red"	Canada Red Chokecherry
Carpinus caroliniana	American Hornbeam	Ptelea trifoliata	Hop Tree
Celtis occidentalis	Common Hackberry	Pyrus Calleryana	Callery Flowering Pear
Cercis canadensis	Eastern Redbud	Quercus gambelii	Gambel Oak / Scrub Oak
Cercocarpus ledifolius	Curleaf Mountain Mahogany	Quercus gambelii	Gambel's Oak
Cercocarpus montanus	Mountain Mahogany	Quercus muhlenbergii	Chinquapin Oak
Corylus americana	American Hazelnut	Quercus palustris	Pin Oak
Corylus corlurna	Turkish Filbert	Robinia neomexicana	New Mexico Locust
Corylus cornuta	Beaked Hazelnut	Sophora japonica	Japanese Pagoda Tree
Continus coggyria	Common Smoketree	Sorbus alnifolia	Korean Mountain Ash
Crataegus crusgalli 'inermis	Cosckpur Hawthorn	Sorbus aucuparia	European Mountain-Ash
Crataegus douglasii	Douglas Hawthorn	Sorbus scopulina	Green Mountain Ash
Fagus grandifolia	American Beech	Syringa reticulata	Japanese Tree Lilac
Fagus sylvatica	European Beech	Tamarix ramoisissima	Tamarisk, Salt Cedar
Fraxinus americana	White Ash	Tilia cordata	Littleleaf Linden
Fraxinus anomala	Single-leaf Ash	Tilia X euchlora	Crimean Linden
Fraxinus pennsylvanica	Green Ash	Ulmus parvifolia	Lacebark Elm
Ginkgo biloba	Ginkgo, Maidenhair Tree	Zelkova serrata	Japanese Zelkova
Gleditsia triacanthos inermis	Thornless Honey Locust		
<b>EVERGREEN TREES</b>			
Abies concolor	White Fir	Picea pungens	Blue Spruce
Abies lasiocarpa	Subalpine or Alpine Fir	Pinus aristata	Bristlecone Pine
Cedrus deodara	Deodar Cedar	Pinus densiflora	Japanese Red Pine
Cedrus libani	Cedar of Lebanon	Pinus edulis	Pinyon Pine
Cedrus sp.	Cedar	Pinus flexilis	Limber Pine
Juniperis osteosperma	Utah Juniper	Pinus leucodermis 'Iseli fastigiata'	Columnar Heldreichii Pine
Juniperis scopulorum	Rocky Mountain Juniper	Pinus monophylla	Singleleaf Pinyon Pine
Juniperus virginiana	Eastern Red Cedar	Pinus monticola	Western White Pine
Picea abies	Norway Spruce	Pinus mugo	Mugo Pine
Picea aristata	Bristlecone Pine	Pinus nigra	Austrian Pine
Picea engelmannii	Engelmann spruce	Pinus sylvestris	Scotch Pine
Picea glauca	White or Balckhills Spruce	Pseudotsuga menzeisii 'Glauca'	Rocky Mountain Fir
Picea mariana 'Fast Well's Wellspire'	Columnar Black Spruce	Pseudotsuga menziesii	Douglas Fir
Picea ormorika	Serbian Spruce		
<b>SHRUBS</b>			
Agave utahensis	Utah Century Plant	Jamesia americana	Waxflower, Cliff Jamesia
Amelanchier grandiflora	Apple Serviceberry	Juniperus communis	Common Juniper
Amelanchier utahensis	Utah Serviceberry	Juniperus horizontalis	Creeping Juniper
Amerlancier alnifolia	Saskatoon Serviceberry	Juniperus Sabina	Tam Junper
Amorpha canescens	Lead Plant	Kolkwitzia amabilis	Beauty Bush
Arctostaphylos nevadensis	Hardy Manzanita	Krascheninnikovia lanata	Winterfat
Aronia arbutifolia 'Brilliantissima'	Brilliant Red Chokeberry	Ligustrum amurense	Amur Privet
Aronia melanocarpa	Black Chokeberry	Ligustrum x vicaryi	Golden Vicary Privet

Botanical Name	Common Name	Botanical Name	Common Name
Artemisia tridentata	Big Sage, Sagebrush	Ligustrum vulgare	Common Privet
Artemisia cana	Silver Sagebrush	Ilex meservea 'Blue Boy'	Blue Boy Holly
Artemisia ludoviciana	Prarie Sagebrush	Ilex meservea 'Blue Girl'	Blue Girl Holly
Artemisia nova	Black Sagebrush	Lonicera sp.	Tatarian Honeysuckle
Atriplex canescens	Fourwing Salt Brush	Mahonia aquafolium	Oregon Grapeholly
Artiplex garderi	Gardner Salt Bush	Mahonia fremontii	Utah Holly
Baccharis x 'Centennial'	Centennial Broom	Mahonia repens	Creeping Mahonia
Berberis sp.	William Penn Barberry	Pachistma myrsinites	Mountain Lover
Berberis sp.	Red Leaf Barberry	Petrophytum caespitosum	Rock Spirea
Berberis mentorensis	Mentor Barberry	Philadelphus sp.	Dwarf Mockorange
Berberis thunbergii	Japanese Barberry	Philadelphus lewisii 'Cheyenne'	Cheyenne Mock Orange
Buddleia alternifolia	Alternate-leaf Butterfly Bush	Physocarpus malvaceus	Mountain Ninebark
Buddleia davidii	Butterfly Bush	Physocarpus sp.	Ninebark
Buxus Microphylla 'Winter Gem'	Winter Gem Boxwood	Picea glauca 'Conica'	Dwarf Alberta Spruce
Buxus Microphylla var. koreana	Korean Boxwood	Pinus aristata	Bristlecone Pine
Buxus Sempervirens	Common Boxwood	Pinus Mugo	Mugo Pine
Caragana Arborescens	Siberian Peashrub	Pinus mugo pumilo	Dwarf Mugo Pine
Caragana frutex 'Globosa'	Globe Peashurb	Pinus sylvestris 'Hillside Creeper'	Creeping Scotch Pine
Caragana pygmaea	Pygmy Peaschrub	Potentilla fruticosa	Shrubby Cinquefoil
Caryopteris clandonensis	Blue Mist Spirea	Prunus besseyi	Western Sandcherry
Cenothus intergerrimus	Deer Brush	Prunus besseyi 'Select Spreader'	Select Spreader Sand Cherry
Cenothus martinii	Utha Mountain Lilac	Prunus glandulosa	Dwarf Flowering Almond
Ceratoides lanata	Winterfat	Prunus tomentosa	Nanking Cherry
Cercocarpus ledifolius	Curl-leaf Mountain Mahogany	Prunus x cistena	Purple-leaf Sand Cherry
Cercocarpus montaus	True Mountain Mahogany	Purshia mexicana	Mexican Cliffrose
Chaenomeles japonica	Flowering Quince	Purshia mexicana var. stansburia	Cliff Rose
Chamaebatiaria millifolium	Fernbush	Purshia tridentata	Antelope Bitterbrush
Chilopsis linearis	Desert Willow	Rhamnus cathartica	Tallhedge Buckthorn
Chilopsis x Chitalpa tashkentensis	Chitalpa	Rhus glabra	Smooth Sumac
Chrysothamnus ssp.	Rabbit Bush	Rhus glabra 'Cismontana'	Dwarf Mountain Sumac
Clethra alnifolia 'Ruby Spice'	Ruby Spice Summersweet	Rhus trilobata	Oakbrush Sumac
Continus coggyria	Smoke Tree or Smokebush	Rhus typhina	Staghorn Sumac
Cornus Sericea 'Kelsey'	Dwarf Kelsey Dogwood	Ribes sp.	Alpine Currant
Corylus avellana 'Contorta'	Contorted Filbert	Ribes aureau	Golden Current
Corylus maxima 'Purpurea'	Purple Giant Filbert	Rosa foetida	Copper Rose
Cotinus obovatus	American Smoketree	Rosa foetida bicolor	Austrian Brier Rose
Cotoneaster acutifolius	Peking Cotoneaster	Rose foetida 'Persiana'	Persian Yellow Rose
Cotoneaster adpressus	Creeping Cotoneaster	Rosa meideland	Meideland Rose
Cotoneaster apiculatus	Cranberry Cotoneaster	Rose rubrifolia	Redleaf Rose
Cotoneaster dammeri	Bearberry Cotoneaster	Rosa rugosa	Rugosa Rose
Cotoneaster divaricatus	Spreading Cotoneaster	Rosa woodsii	Woods Rose
Cotoneaster horizontalis	Rockspray Cotoneaster	Rubus deliciosus	Colorado Thimbleberry
Cotoneaster lucidus	Hedge Cotoneaster	Salix purpurea	Dwarf Blue Arctic Willow
Cowania mexicana	Cliff Rose	Salvia dorrii	Dorr Sage
Cytisus purgans 'Spanish Gold'	Spanish Gold Hardy Broom	Sambucus caerulea	Blue Elderberry
Daphne x burkwoodii	Burkwood Daphne	Sambucus sp.	Elderberry
Daphne caucasica	Caucasian Daphne	Shepherdia argentea	Silver Buffaloberry
Daphne cneorum	Rose Daphne	Shepherdia sorbifolia	Ural Falsespirea
Dasyliirion wheeleri	Green Desert Spoon	Shepherdia rotundifolia	Roundleaf Buffaloberry
Ephedra viridis	Mormon Tea	Shepherdia sp.	Buffaloberry
Ericameria laricifolia	Turpentine Bush	Sorbus scopulina	Rocky Mountain Ash
Ericameria nauseosus	Rubber Rabbitbrush	Spirea cineria 'Grefsheim'	Grefsheim Spirea
Eriogonum corymbosum	Freemont's Buckwheat	Spirea x bumalda	Bumald Spiraea
Euonymous alatus 'Compacta'	Dward Winged Euonymus	Spirea x vanhouttei	Bridal Wreath Spiraea
Euonymous japonica	Evergreen Euonymous	Symphoricarpos albus	Common Snowberry
Euonymous japonica 'Microphylla'	Box Leaf Euonymous	Symphoricarpos occidentalis	Mountain Snowberry
Fallugia paradoxa	Apache Plume	Symphoricarpos oreophilus	Mountain Snowberry
Forestiera neomxicana	New Mexico Privet	Syringa meyeri 'Palibin'	Dwarf Korean Lilac
Forsythia sp.	Forsythia	Syringa patula 'Miss Kim'	Dwarf Korean Lilac
Genista Lyda	Lydia Broom	Syringa vulgaris	Common Lilac

Botanical Name	Common Name	Botanical Name	Common Name
Grayia spinose	Snankebrush	Taxus baccata	English Yew
Hesperaloe parviflora	Red Yucca	Taxus sp. (low, spreading)	Spreading English Yew
Hibiscus syriacus 'Arden'	Rose of Sharon	Thuja sp. (low, spreading)	Woodward Globe Arborvitae
Hibiscus syriacus 'Blushing Bride'	Rose of Sharon	Thuja sp.	Emerald Arborvitae
Hibiscus syriacus 'Helene'	Rose of Sharon	Vauquelinia comymbosa v. heterdon	Slim Leaf Rosewood
Hibiscus syriacus 'Violet Satin'	Rose of Sharon	Viburnum juddii	judd Viburnum
Hibiscus syriacus 'Diana'	Rose of Sharon	Viburnum rhytidophyllum	Leatherleaf Viburnum
Hibiscus syriacus 'Collie Mullens'	Rose of Sharon	Viburnum sp.	Dwarf Arrowwood Viburnum
Hibiscus syriacus 'Lucy Red'	Rose of Sharon	Viburnum trilobum	American Cranberrybush Viburnum
Holodiscus discolor	Ocean Spray	Weigela florida	Weigela
Holodiscus dumosus	Mountain Spray	Yucca angustissima	Narrow Leaved Yucca
Hydrangea arborescens	Smooth Hydrangea	Yucca elata	Soaptree Yucca
Hydrangea macrophylla	Bigleaf Hydrangea	Yucca filamentosa	Yucca
Hydrangea paniculata	Peegee Hydrangea	Yucca glauca	Great Plains Yucca
Hydrangea quercifolia	Oak-leaf Hydrangea	Yucca sp.	Yucca
Hypericum 'Hidcote'	Shrubby St. John's Wort	Zizophora clinopodioides	Blue Mint Bush

**VINES AND GROUNDCOVERS**

Arctostaphylos uva-ursi	Kinnikinnick	Juniperus sp.	Juniper
Campsis radicans	Trumpet Vine	Lonicera japonica	Japanese Honeysuckle
Cerastium tomentosum	Snow In Summer	Mahonia repens	Creeping Oregon Grape
Clematis 'Hybrids'	Clematis	Pachistima canbyi	Mountain Lover
Convallaria majalis	Lilly-of-the-Valley	Pachysandra terminalis	Pachysandra
Cotoneaster sp.	Cotoneaster	Parthenocisisis sp.	Virginia Creeper
Delosperma cooperi	Delosperma, Ice Plant	Polygonum aubertii	Silverlace Vine
Delosperma nubigenum	Yellow Ice Plant	Rhus aromatica	Grow Low Sumac
Euonymus fortunei	Winter Creeper	Rosa sp.	Spreading Rose
Euphorbia myrsinites	Spurge	Sedum sp.	Utah Green Sedum
Fragaria sp.	Wild Strawberry	Sempervivum tectorum	Hens And Chicks
Galium odoratum	Sweet Woodruff	Thymus sp.	Woolly Thyme
Genista pilosa	Vancouver Gold Genista	Vinca major	Periwinkle
Hedera helix	English Ivy	Vinca minor	Dwarf Periwinkle
Helianthemum nummularium	Sunrose, Rockrose	Wisteria	Wisteria
Hypericum calcinum	St. John's Wort		

**ORNAMENTAL GRASSES**

Achantherum lettermanii	Needlegrass	Miscanthus sinensis 'Gracillimus'	Maidenhair Grass
Achnatherum hymenoides	Indian Rice Grass	Miscanthus sinensis 'Graziella'	Maiden Grass
Andropogon gerardii	Big Bluestem	Miscanthus sinensis 'Little Zebra'	Little Zebra Japanese Silver Grass
Aristida purpurea	Purple Threeawn	Miscanthus sinensis 'Morning Light'	Morning Light Maiden Grass
Bouteloa curtipendula	Side Oats Grama	Miscanthus sinensis 'Nippon'	Nippon Dwarf Maiden Grass
Bouteloa gracilis	Blue Grama Grass	Miscanthus sinensis 'Silberfeder'	Silver Feather Grass
Bromus anomalus	Nodding Brome	Miscanthus sinensis 'Silverfeil'	Variiegated Japanese Silver Grass
Bromus carinatus/marginatus	California, Mountain Brome	Miscanthus sinensis 'Strictus'	Porcupine Grass
Buchloe dactyloides	Buffalograss	Miscanthus sinensis 'Yaku Jima'	Yaku Jima Maiden Grass
Calamagrostis brachytricha	Korean Feather Reed Grass	Miscanthus sinensis 'Zebrinum'	Zebra Grass
Calamagrostis x acutiflora 'Avalanche'	Avalanche Feather Reed Grass	Muhlenbergia montana	Scratch Grass
Calamagrostis x acutiflora 'Karl Foerster'	Karl Foerster Reed Grass	Muhlenbergia richardsonis	Mat Muhly
Calamagrostis x acutiflora 'Overdam'	Overdam Feather Reed Grass	Nassella tenuissima	Mexican Feather Grass
Calamagrostis x acutiflora 'Stricta'	Feather Reed Grass	Oryzopsis hymenoides	Indian Rice Grass
Danthonia intermedia	Oat Grass	Panicum var. 'Prairie Fire'	Red Switch Grass
Deschampsia caespitosa	Tufted hairgrass	Panicum virgatum 'Heavy Metal'	Heavy Metal Switch Grass
Elymus cinereus	Great Basin Wildrye	Panicum virgatum 'North Wind'	North Wind Switch Grass
Elymus elymoides	Bottlebrush Squirrel Tail	Panicum virgatum 'Prairie Sky'	Prairie Sky Switch Grass
Elymus glaucus	Blue Oat Grass	Panicum virgatum 'Rehbraun'	Rehbraun Switch Grass
Elymus lanceolatus	Thickspike Wheatgrass	Panicum virgatum 'Shenandoah'	Shenandoah Switch Grass
Elymus trachycaulus	Slender Wheatgrass	Pascopyrum smithii	Western Wheatgrass
Erianthus ravennae	Ravenna Grass	Pennisetum alopecuroides 'Hameln'	Dwarf Fountain Grass







**SITE CONCEPT 1 - ECO-TRANSECT**

**KEY SITE FEATURES**

An outdoor classroom acts as the launch point for education about native plants, gardening, conservation, regional wildlife, composting, and water-wise landscaping.

An interpretive trail with outdoor fitness equipment provides recreational and educational benefits to visitors.

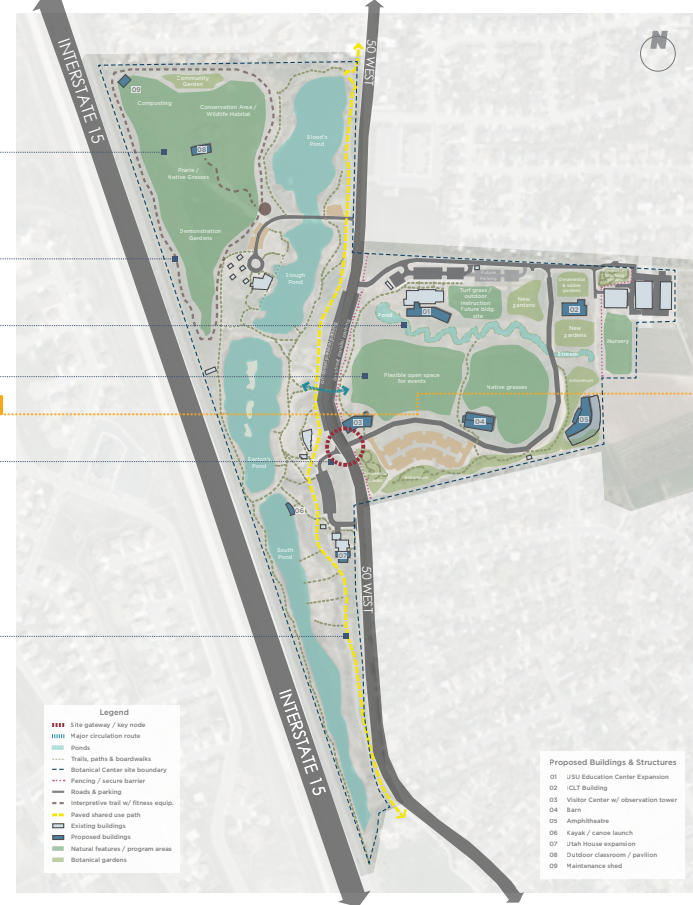
The stream educates visitors about riparian ecology while assisting to store and treat water captured on site.

The stream, native grasses, gardens and the arboretum highlight site features which seek to educate visitors about the unique natural resources of the region by protecting viewsheds and open space.

A primary gateway to the site provides an intuitive "front door" to the Botanical Center for visitors. It also provides a sense of arrival to the site and eases wayfinding, while allowing for controlled access to the site resources.

A paved shared use path runs the entire length of the site along 50 West Street providing enhanced pedestrian and bicycle access to the Botanical Center.

**CONCEPT FRAMEWORK PLAN**



- Legend**
- Site gateway / key node
  - Major circulation route
  - Ponds
  - Trails, paths & boardwalks
  - Botanical Center site boundary
  - Fencing / secure barrier
  - Shade & parking
  - Interpretive trail w/ fitness equip.
  - Paved shared use path
  - Existing buildings
  - Proposed buildings
  - Natural features / program areas
  - Botanical gardens

- Proposed Buildings & Structures**
- 01 USU Education Center Expansion
  - 02 ICCI Building
  - 03 Visitor Center w/ observation tower
  - 04 Barn
  - 05 Amphitheatre
  - 06 Kayak / canoe launch
  - 07 Utah House expansion
  - 08 Division Classroom / pavilion
  - 09 Maintenance shed

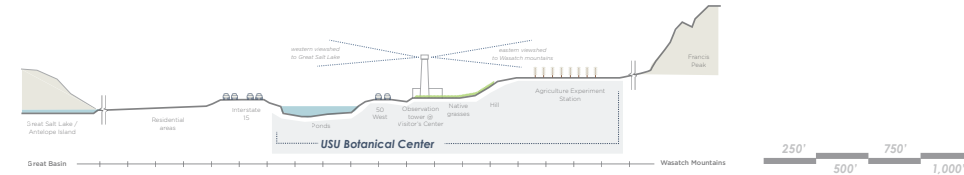
**CONCEPT DRIVERS**

The primary focus of the Eco-Transsect site concept is to preserve significant open space running east-west through the Botanical Center in order to educate the visitor about the variety of biomes in the geographical region. The conceptual site section below illustrates the unique location of the Botanical Center.

The following are key drivers of the Eco-Transsect site concept:

- site development pattern focused on **protection of east-west viewshed** through the site in order to maximize views to Wasatch Mountains and Great Salt Lake
- **minimal site development** to protect natural resources and maximize open space for gardens and other natural features
- **single gateway** emphasis creates intuitive **front door** for visitors to site
- **Botanical Gardens concentrated along single green ribbon** along the eastern edge of the site
- maximizing open space creates **rural feel** and limited street presence by putting buildings to the edge of the site
- **building orientation focuses on solar orientation** or following site contours
- **limited parking** at edge of site in order to maximize pedestrian focus of the site
- **stream concept** is a prominent site feature to educate visitors about riparian habitats and conservation

**CONCEPTUAL SITE SECTION**



250' 500' 750' 1,000'



**SITE CONCEPT 2 - CAMPUS QUADS**

**KEY SITE FEATURES**

The barn, guest house, children's garden and ropes course highlight the creation of a youth quad hosting events, camps and field trip groups.

An arroyo with integrated trail acts as a circulation route through the site while educating the visitor about arid landscapes.

A visitor's center, amphitheatre, new botanical gardens, new buildings and expanded parking support the creation of an education and events quad to meet the future growth of academic programs and community events.

New fencing enhances the brand and image of the site while creating secure borders for large events.

A paved shared use path runs the entire length of the site along 50 West Street providing enhanced pedestrian and bicycle access to the Botanical Center.

**CONCEPT FRAMEWORK PLAN**



- Legend**
- Site gateway / key node
  - Major circulation route
  - Ponds
  - Trails, paths & boardwalks
  - Botanical Center site boundary
  - Fencing
  - Shade & parking
  - Paved shared use path
  - Existing buildings
  - Proposed buildings
  - Natural features / program areas
  - Botanical gardens

- Proposed Buildings & Structures**
- 01 USU Education Center expansion
  - 02 Future education building
  - 03 ICCI Building
  - 04 Amphitheatre
  - 05 Outdoor classroom / pavilion
  - 06 Restrooms & maintenance
  - 07 Visitor's center
  - 08 Utah House expansion
  - 09 Kayak / canoe launch
  - 10 Youth barn
  - 11 Restrooms & maintenance
  - 12 Rope course
  - 13 Guest house

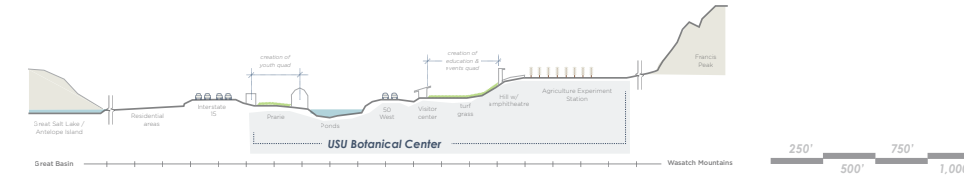
**CONCEPT DRIVERS**

The primary focus of the Campus Quads site concept is to create two distinct, identifiable campus spaces at separate locations of the Botanical Center. The multi-centric nature of this site concept maximizes site utilization by providing unique clusters of focused facilities for separate uses.

The following are key drivers of the Campus Quads site concept:

- development pattern focused on creation of enclosed **identifiable campus districts** with distinct areas of emphasis
- **Quad 1 focuses on education and events**, while **Quad 2 focuses on youth education and recreation**
- **gateway boulevard** signifies arrival rather than a single gateway / front door
- **site utilization is maximized** for future facility development
- **Botanical Gardens distributed** throughout the site
- **greater edge presence** along 50 West
- **building orientation focuses on creation of campus districts** over orientation
- **significant amount of parking distributed** throughout the site for ease of vehicular access
- **stream concept** is reimaged as an **arroyo with an integrated trail** to educate visitors about desert dry wash vegetation types

**CONCEPTUAL SITE SECTION**



250' 500' 750' 1,000'



DRAFT PREFERRED SITE MASTER PLAN

KEY SITE FEATURES

The barn, guest house, children's garden and ropes course highlight the creation of a youth quad hosting events, camps and field trip groups.

An arroyo with integrated trail acts as a circulation route through the site while educating the visitor about arid landscapes.

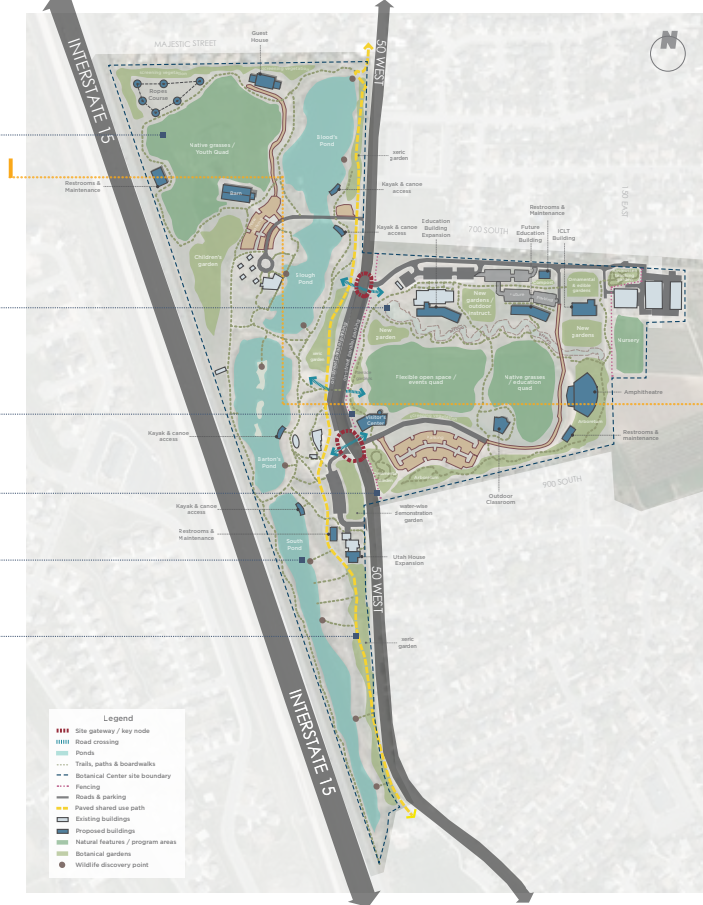
A visitor's center, amphitheater, new botanical gardens, new buildings and expanded parking support the creation of an education and event quads to meet the future growth of academic programs and community events.

New fencing enhances the brand and image of the site while creating secure borders for large events.

10 different wildlife discovery points provide access for an interpretive exploration of some of the wildlife and associated habitat of the Botanical Center, with specific focus on the South Pond area.

A paved shared use path runs the entire length of the site along 50 West Street providing enhanced pedestrian and bicycle access to the Botanical Center.

DRAFT CONCEPTUAL MASTER PLAN



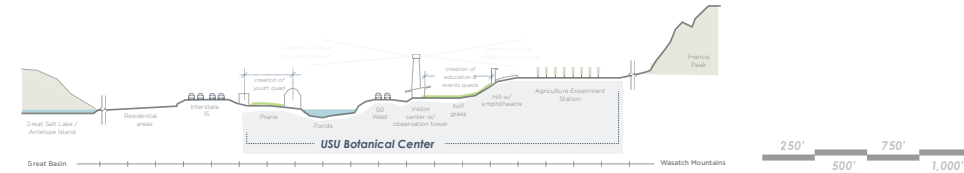
KEY CONCEPTS

The primary focus of the Campus Quads site concept is to create several distinct, identifiable campus spaces at separate locations of the Botanical Center. The multi-centric nature of this site concept maximizes site utilization by providing unique clusters of focused facilities for separate uses with unique needs.

The following are key drivers of the Campus Quads site concept:

- development pattern focused on creation of enclosed **identifiable campus quads** with distinct areas of emphasis
- protection of **east-west viewshed** through the site in order to maximize views to Wasatch Mountains and Great Salt Lake
- Quad 1 focuses on **events**, while Quad 2 focuses on **education** and Quad 3 focuses on **youth education** and recreation
- multiple gateways** provide easy access to site, while Visitor's Center serves as intuitive **front door** for visitors
- site utilization is maximized** for future facility development
- Botanical Gardens distributed** throughout the site creating a green ribbon at the edges of the field district
- maximizing open space creates **rural feel** and limited street presence by pushing buildings to the edge of the site
- building orientation focuses on creation of campus districts**, while seeking to maximize solar orientation while respecting natural site features
- significant amount of parking for ease of vehicular access, but **parking is held to edges of the site** to maximize open / natural spaces
- stream concept is reimagined as an **arroyo with an integrated trail** to educate visitors about desert dry wash vegetation types

CONCEPTUAL SITE SECTION



DRAFT MASTER PLAN

KEY SITE FEATURES

The 4-H barn, guest house, children's garden and ropes course highlight the creation of a youth quad hosting events, camps and field trip groups.

A dry wash with integrated trail acts as a circulation route through the site while educating the visitor about arid landscapes.

A visitor's center, amphitheater, new botanical gardens, barn, new buildings and expanded parking support the creation of an education and event quads to meet the future growth of academic programs and community

New fencing enhances the brand and image of the site while creating secure borders for large events.

10 different wildlife discovery points provide access for an interpretive exploration of some of the wildlife and associated habitat of the Botanical Center, with specific focus on the South Pond area.

A paved shared use path runs the entire length of the site along 50 West Street providing enhanced pedestrian and bicycle access to the Botanical Center.

DRAFT MASTER PLAN



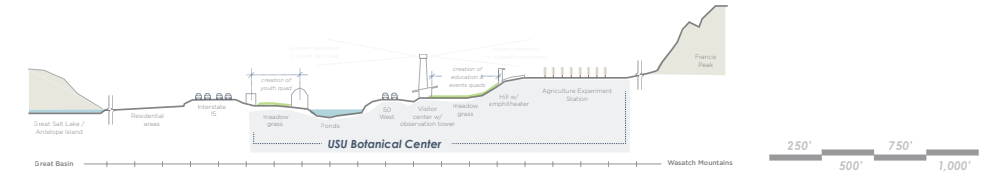
KEY CONCEPTS

The primary focus of the Campus Quads site concept is to create several distinct, identifiable campus spaces at separate locations of the Botanical Center. The multi-centric nature of this site concept maximizes site utilization by providing unique clusters of focused facilities for separate uses with unique needs.

The following are key drivers of the Campus Quads site concept:

- development pattern focused on creation of enclosed **identifiable campus quads** with distinct areas of emphasis
- protection of **east-west viewshed** through the site in order to maximize views to Wasatch Mountains and Great Salt Lake
- Quad 1 focuses on **events**, while Quad 2 focuses on **education** and Quad 3 focuses on **youth education** and recreation
- multiple gateways** provide easy access to site, while Visitor's Center serves as intuitive **front door** for visitors
- site utilization is maximized** for future facility development
- Botanical Gardens distributed** throughout the site creating a green ribbon at the edges of the field district
- maximizing open space creates **rural feel** and limited street presence by pushing buildings to the edge of the site
- building orientation focuses on creation of campus districts**, while seeking to maximize solar orientation while respecting natural site features
- significant amount of parking for ease of vehicular access, but **parking is held to edges of the site** to maximize open / natural spaces
- stream concept is reimagined as an **arroyo with an integrated trail** to educate visitors about desert dry wash vegetation types

CONCEPTUAL SITE SECTION



Refined Concepts Presentation & Town Hall Meeting, June 21, 2016

Master Plan Concept Review Meeting, July 12, 2016





DRAFT MASTER PLAN

KEY SITE FEATURES

The 4-H barn, guest house, children's garden and ropes course highlight the creation of a youth quad hosting events, camps and field trip groups.

A dry wash with integrated trail acts as a circulation route through the site while educating the visitor about arid landscapes.

A visitor's center, amphitheater, new botanical gardens, barn, new buildings and expanded parking support the creation of an education and event quad to meet the future growth of academic programs and community.

New fencing enhances the brand and image of the site while creating secure borders for large events.

10 different wildlife discovery points provide access for an interpretive exploration of some of the wildlife and associated habitat of the Botanical Center, with specific focus on the South Pond area.

A paved shared use path runs the entire length of the site along 50 West Street providing enhanced pedestrian and bicycle access to the Botanical Center.



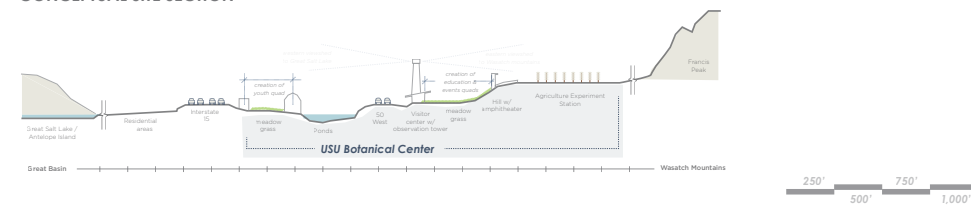
KEY CONCEPTS

The primary focus of the Campus Quads site concept is to create several distinct, identifiable campus spaces at separate locations of the Botanical Center. The multi-centric nature of this site concept maximizes site utilization by providing unique clusters of focused facilities for separate uses with unique needs.

The following are key drivers of the Campus Quads site concept:

- development pattern focused on creation of enclosed **identifiable campus quads** with distinct areas of emphasis
- **protection of east-west viewshed** through the site in order to maximize views to Wasatch Mountains and Great Salt Lake
- Quad 1 focuses on **events**, while Quad 2 focuses on **education** and Quad 3 focuses on **youth education** and recreation
- **multiple gateways** provide easy access to site, while Visitor's Center serves as intuitive **front door** for visitors
- **site utilization is maximized** for future facility development
- **Botanical Gardens distributed** throughout the site creating a green ribbon at the edges of the field district
- **maximizing open space** creates **rural feel** and limited street presence by pushing buildings to the edge of the site
- **building orientation** focuses on **creation of campus districts**, while seeking to maximize solar orientation while respecting natural site features
- significant amount of parking for ease of vehicular access, but **parking is held to edges of the site** to maximize open / natural spaces
- stream concept is reimagined as an **arroyo with an integrated trail** to educate visitors about desert dry wash vegetation types

CONCEPTUAL SITE SECTION



Draft Document Presentation, August 16, 2016





### Agenda for Meeting No. 1

Project Name: **USU Botanical Center Master Plan**  
 MHTN Project No.: 2016521  
 Date: 15 April 2016  
 Time: 1:30 pm - 4:30 pm  
 Location: Rm. 111 80 E. Segoe Lily Drive Kaysville, UT  
 Purpose: Project kickoff meeting with Steering Committee

Items for Discussion	Time Allocated
1. <i>Introductions:</i>  Introductions by members of steering committee and design team including roles and responsibilities.	5 minutes
2. <i>Scope Review:</i>  Overview of project scope and deliverables, including proposed process and schedule.	30 minutes
3. <i>Visioning Session:</i>  Interactive visioning session led by the design team to establish initial vision statement and vision principles by steering committee.	90 minutes
4. <i>Review Assignments:</i>  Review and confirm new direction and assignments from the meeting. Review upcoming schedule and deliverables.	5 minutes
5. <i>Site Tour:</i>  Tour of the site on foot by members of the design team (required) and steering committee members (optional) to review and document existing site conditions.	60 minutes

**End of Agenda for Meeting No. 01**



### USU Botanical Center Master Plan

### Meeting Report 01

MHTN Project No.: 2016521.00  
 Date: 15 April 2016  
 Location: Rm. 111 80 E. Segoe Lily Drive Kaysville, UT  
 Purpose: Project Kickoff & Vision Input Session

Attendees	Representing
<input checked="" type="checkbox"/> Dean Ken White	USU College of Agriculture & Applied Sciences, Dean & VP of Extension
<input checked="" type="checkbox"/> Dean Tom Lee	USU Brigham Campus, Dean & Executive Director RCDE
<input checked="" type="checkbox"/> Chris Snell	Kaysville City Council, Liaison
<input checked="" type="checkbox"/> JayDee Gunnell	Regional Horticulturalist, USU Botanical Center
<input checked="" type="checkbox"/> Justen Smith	Director, Davis County Extension
<input checked="" type="checkbox"/> Jerry Goodspeed	Director, USU Botanical Center
<input checked="" type="checkbox"/> Jim Huppi	USU Facilities, Facilities Landscape Architect
<input checked="" type="checkbox"/> John Chase	USU Facilities, Facilities RCDE Manager
<input checked="" type="checkbox"/> Kelly Christoffersen	USU Facilities, Facilities Architect
<input checked="" type="checkbox"/> Lyle Gibson	Kaysville City, Community Development
<input checked="" type="checkbox"/> Deanne Corrales	Manager, USU Botanical Center
<input checked="" type="checkbox"/> Ryan Wallace	AIA, LEED GA, Campus Planner
<input checked="" type="checkbox"/> Sarah Miller	AIA, LEED AP, IIDA, Data Gathering and Evaluation
<input checked="" type="checkbox"/> Randy Boudrero	ASLA, Principal-in-Charge and Team Leader
<input checked="" type="checkbox"/> Kyle Taft	AIA, LEED AP, Community Outreach and Stakeholder Collaboration

- 01.1 Scope Review: The master plan will have three (3) phases:
  - A. 10 years
  - B. 25 years
  - C. 50 years
- 01.2 Master Plan:
  - A. The USUBC is comfortable with what has happened to date on the USUBC site; the master plan elements should complement and build upon what is existing.
  - B. What are the goals with respect to sustainability? They would like the environmental impacts of site and campus development to be as minimal as possible. USU has a goal to be carbon neutral by 2050.
- 01.3 Process and Schedule:
  - A. Background materials: USU has sent MHTN the background information that they have. The previous Master Plan (2007) has been sent. It can be used for its data projections and any other useful information.
  - B. Focus Groups: There will be four (4) focus groups at one (1) hour each on Tuesday, 26<sup>th</sup> of April. A larger room is needed for these. Justen, Jerry and Jim will attend the focus groups. The schedule will be:
    - 1.) 1:30 pm - USU Reps
    - 2.) 3:00 pm - City & County
    - 3.) 4:30 pm - Business Partners
    - 4.) 6:00 pm - Neighborhood

USU Botanical Center Master Plan  
 Kickoff Meeting  
 15 April 2016  
 Page 2 of 2

C. Information-Gathering. This will consist of gathering more detailed and specific input on needs. These meetings will take place on Tuesday, 17<sup>th</sup> of May. In addition to USU and USUBC groups, MHTN will be meeting with the groups below and will contact them to arrange the meetings:

- 1.) Kaysville City at 9:00 am @ their offices.
- 2.) Davis County at 10:30 am.
- 3.) UTA
- 4.) Davis Chamber of Commerce - Angie Osguthorpe.

D. Initial Concepts - Tuesday, June 7.

E. Refined Concepts - Tuesday, June 21 @ 1:30 pm. Public Town Hall meeting will be held in the evening, 7:00 pm.

F. On-site Concept Review - Tuesday, July 12 @ 1:30 pm.

G. Document. Master Plan Draft, Tuesday, 2nd of Aug. @ 1:30 pm.  
 The Draft may need to be reviewed by USU Administration.

H. MHTN will revise the schedule per these dates and resend it, and will send out invites for all meetings. The Deans' Assistants should be copied on the invites:

- 1.) tammy.firth@usu.edu
- 2.) pauline.olsen@usu.edu

01.4 Vision Session

A. Vision Input Session followed.

**End of Kickoff Meeting**



**USU Botanical Center Master Plan**

**Focus Group 1**

MHTN Project No.: 2016521.00  
 Date: 26 April 2016 @ 1:30 pm  
 Location: Rm. 111 80 E. Sego Lily Drive Kaysville, UT  
 Purpose: USUBC Extension & Education Input

<b>Attendees</b>	<b>Representing</b>
<input checked="" type="checkbox"/> Dean Ken White	USU College of Agriculture & Applied Sciences, Dean & VP of Extension
<input checked="" type="checkbox"/> Dean Tom Lee	USU Brigham Campus, Dean & Executive Director RCDE
<input checked="" type="checkbox"/> Paula Scott	EFNEP State Director
<input checked="" type="checkbox"/> Susan Syberg	
<input checked="" type="checkbox"/> Jane Mulford	Utah House Coordinator
<input checked="" type="checkbox"/> Melissa Thomas	Program Coordinator, Kaysville Education Center
<input checked="" type="checkbox"/> Tom Lee	USU Brigham Campus, Dean & Executive Director RCDE
<input checked="" type="checkbox"/> John Chase	USU Facilities, Facilities RCDE Manager
<input checked="" type="checkbox"/> Jerry Goodspeed	Director, USU Botanical Center
<input checked="" type="checkbox"/> Dale Lisby	Master Gardener
<input checked="" type="checkbox"/> Stacie Stone	Staff Assistant, Davis County Extension
<input checked="" type="checkbox"/> Susie Jones	Ogden Botanical Gardens Manager
<input checked="" type="checkbox"/> Dede Corrales	Manager, USU Botanical Center
<input checked="" type="checkbox"/> Craig Thompson	AES Kaysville Farm Manager
<input checked="" type="checkbox"/> Gayle Mahler	Assistant Director, Kaysville Education Center
<input checked="" type="checkbox"/> Zuri Garcia	4-H Agent, Davis County Extension
<input checked="" type="checkbox"/> Cynthia Lyman	Wasatch Front Marketing Director
<input checked="" type="checkbox"/> Andree Walker	Urban Director
<input checked="" type="checkbox"/> Ryan Wallace	AIA, LEED GA, Campus Planner
<input checked="" type="checkbox"/> Sarah Miller	AIA, LEED AP, IIDA, Data Gathering and Evaluation
<input checked="" type="checkbox"/> Randy Boudrero	ASLA, Principal-in-Charge and Team Leader
<input checked="" type="checkbox"/> Kyle Taft	AIA, LEED AP, Community Outreach and Stakeholder Collaboration

01.1 What is the best use of the BC?

- A. The property provides a marketing opportunity for USU. The Center has great potential.
- B. Great place for recreation: walking, fishing.
- C. Community education for youth, adults, families.
- D. Opportunity for demonstration, hands-on learning: teaching gardens, experiential learning, while recreating, reading signs that inform.
- E. "Guerilla gardening" (when kids learn to grow vegetables, they eat them).
- F. Education - broader than gardening, extension

01.2 What is needed for facilities?

USU Botanical Center Master Plan  
 Focus Group 1  
 Education - Extension  
 26 April 2016  
 Page 2 of 6

USU Botanical Center Master Plan  
 Focus Group 1  
 Education - Extension  
 26 April 2016  
 Page 3 of 6

- A. Maybe twice as much as current. Need larger classrooms.
  - B. Majority of site should be green space.
  - C. Board of Regents sets service areas for higher education. USU is able to operate at this location (within Weber State University area) because they offer degrees which are not offered through Weber. USU has plans to add SF equal to current amount, plus that again for Extension offices.
  - D. Co-location of Extension services here at the site will enhance customer service - many customers come to the site looking for Extension Services which are not currently located in the same building.
- 01.3 How can development of the property best support your program's needs?
- A. Need a demo kitchen (food, nutrition). Kitchens needed both indoors and outdoors. Chef demos outside. Cooking food that comes right out of the garden.
  - B. Extension = non-degree education. Branding, visibility, etc., important. Entire Wasatch Front community should know about opportunities for extending their education.
  - C. Space (venues) for events. 200 - 500-person capacity.
  - D. Continuing focus on urban audience - backyard farmer and gardener interests must be represented.
- 01.4 How can the property best support the interests of USU?
- A. Electronic sign out by road with variable message display near I-15 could help invite passerby who might not know the resources that exist.
    - 1.) Integrate with, and place adjacent to the existing stone sign
    - 2.) Must be carefully approached so as to not encroach on Weber State interests
      - Brown (attraction/point of interest) signs need to be more visible
      - Directions how to get here, and what is offered at the site
  - B. People know the ponds, but don't understand what is here and available. Don't know how to get here.
  - C. Visibility is key; what is offered, how to get here.
  - D. Botanical Center: "Best kept secret in Davis County."
  - E. Usually word of mouth communication about its existence.
  - F. Need to plan how the center will be taken care of - basic maintenance. How can public contribute to that? How will they deal with the growth and increased visitation?
  - G. Will there be an entrance charge in the future? Baby Animal Days is an event where entrance is charged.

- H. Public likes to have ponds open access.
  - I. Master plan should look ahead to having controlled access. In Ogden center - they have vandalism, etc. problems resulting from non-controlled access.
  - J. Need to get community input on any fees. Changes the feel if there is a fence and gate. Great site, don't want to exclude people.
  - K. Perhaps a donation at the gate?
  - L. Events would need to be charged (amphitheater).
  - M. Visibility and more relaxed atmosphere. If you build amphitheater, how big and visible? Should be unobtrusive - should be part of landscape. Mission is resource conservation - keep with that.
  - N. Visibility for education center, credit classes - advertising limited because of Weber State.
  - O. Signage and advertising carefully themed due to non-compete with WSU.
  - P. Advertise programs that WSU doesn't offer. Specific targets for degrees.
  - Q. How much social media advertising is done? Mostly word of mouth.
  - R. Interesting mix of credit / non-credit. Is offered.
- 01.5 How can the property best support interests of Kaysville City?
- A. Could be a huge draw for Kaysville City. Many SLC don't know where / how far Kaysville is from SLC.
  - B. If it could bring people to Kaysville, would benefit the city.
  - C. There is an economic benefit of Baby Animal Days, to the city.
  - D. Events such as weddings are economic drivers.
  - E. There is exposure to other services and amenities when people are here for events.
  - F. Should there be retail food on the campus? Sandwich shop, Gordon Café.
  - G. "Utah's Home Town" - Kaysville slogan. Kaysville wants to grow its identity. Relationship between the city and USU could benefit each. University town identity.
  - H. People will come here because it is beautiful. People take pictures here. That is the primary draw. Botanical Center is the driver / draw for visitors.
- 01.6 How can the property best support interests of Davis County?

USU Botanical Center Master Plan  
Focus Group 1  
Education - Extension  
26 April 2016  
Page 4 of 6

USU Botanical Center Master Plan  
Focus Group 1  
Education - Extension  
26 April 2016  
Page 5 of 6

- A. Good central place, good for meetings, coalitions, etc. Large meeting room would be good.
  - B. Station Park has outdoor facilities – don’t want to duplicate.
  - C. Layton has an amphitheater (2,000 people?). Previous design for BC amphitheater was for 2,500. Easy access from both ends of Kaysville.
  - D. Would need parking for large events.
  - E. From Hill Air Force Base to North SL – County extents. BC is in the middle of the county – centralized venue.
- 01.7 How can the property best support interests of the surrounding neighborhood?
- A. Place gardens on display to surrounding residents rather than buildings.
  - B. If a strong showcase, would increase property values of neighbors.
  - C. Need to maintain the integrity of the center as a garden. Neighbors appreciate having access to this next door.
  - D. More cohesiveness for walking. Many runners come by here.
  - E. Neighbors can help with security – keeping an eye on the property.
  - F. Naming opportunities – sections (“Maverick Mile”).
  - G. Need a good outdoor wedding venue for Davis county. Doesn’t exist.
  - H. Garden types: children’s garden would be good. Have been thinking of this. Water conservation is the basis of all gardens, so would need to be in line.
  - I. Outdoor garden with an outdoor kitchen; near an herb garden.
  - J. Indoor facility with multiple kitchenettes. Good advertising opportunities.
  - K. Like Glendale Community Learning Center – big space with multiple kitchens. Could be a revenue source.
  - L. Develop a sense of place. Trained volunteers. Define themselves to help develop the sense of place.
- 01.8 What are the best aspects?
- A. Proximity to the mountains.
  - B. Grade change provides opportunities.
  - C. Good meeting point between different areas of Kaysville and County.

- D. Students are amazed at the beauty of the classroom setting. Student enjoy taking a break between classes.
- 01.9 What are challenges?
- A. Being close to the schools - parking impacts.
  - B. Being close to freeway – noise.
  - C. Constrained site – bound on all sides.
- 01.10 How do you want to use this property? How do you foresee others using it?
- A. Demonstration of innovation – would like to see that.
  - B. Wetlands building – difficult to divide in small groups form a sound aspect. (Needs sound absorption.)
  - C. Lack of breakout space in the Education Building. Need larger classrooms in the future.
  - D. Having some outdoor classroom space could be beneficial. Perhaps a covered pavilion.
  - E. Need a breakroom; space for students to study.
  - F. Pavilion with enclosed storage space.
  - G. Outdoor spaces could be used by schools in the neighborhood.
  - H. Facility similar to Cactus & Tropicals for weddings.
  - I. Ideal to have indoor / outdoor facility for weddings.
  - J. Need to be multiuse, not just for weddings. Corporate events.
  - K. Need floor outlets, lots of outlets in general; expectations to charge devices. Laptop outlets for students at evening classes.
  - L. Operational aspects – back of house; design for these aspects.
  - M. Try to anticipate future of technology and build for that. What will be needed in the future? Perhaps being in the garden with an iPad, to get further information.
  - N. Expandability and ability to upgrade.
  - O. Identification of utility corridors that can be accessed and upgraded.
  - P. Trails and accessibility. Liberty Park perimeter. Concrete path, wood chip trail, trail worn in grass – options.





USU Botanical Center Master Plan  
 Focus Group 1  
 Education - Extension  
 26 April 2016  
 Page 6 of 6

- Q. Rest rooms for public. And water.
- R. Lighting. Night-sky friendly. Flexibility in lighting areas and levels.
- S. Rest room near the ponds.
- T. Visitor Center? Central area for visitors. Information. Gateway. Where does it belong? At Education Center. Could dispense info regarding educational offerings. Hat sales.

**End of Focus Group 1 - Education-Extension Meeting**



**USU Botanical Center Master Plan**

**Focus Group 2**

MHTN Project No.: 2016521.00  
 Date: 26 April 2016 @ 3:00 pm  
 Location: Rm. 111, 80 E. Sege Lily Drive, Kaysville, UT  
 Purpose: Kaysville City and Davis County Input

<u>Attendees</u>	<u>Representing</u>
<input checked="" type="checkbox"/> Mayor Steve Hiatt	Kaysville City
<input checked="" type="checkbox"/> Vance Garfield	Parks & Recreation Supervisor, Kaysville City
<input checked="" type="checkbox"/> Cole Stephens	Parks Director, Kaysville City
<input checked="" type="checkbox"/> Rodney Hill	Hights Creek Irrigation
<input checked="" type="checkbox"/> Dan Robinson	Hights Creek Irrigation
<input checked="" type="checkbox"/> Cole Stephens	Parks Director, Kaysville City
<input checked="" type="checkbox"/> Ryan Wallace	AIA, LEED GA, Campus Planner
<input checked="" type="checkbox"/> Sarah Miller	AIA, LEED AP, IIDA, Data Gathering and Evaluation
<input checked="" type="checkbox"/> Randy Boudrero	ASLA, Principal-in-Charge and Team Leader
<input checked="" type="checkbox"/> Kyle Taft	AIA, LEED AP, Community Outreach and Stakeholder Collaboration

- 02.1 What is the best use of the BC in supporting the interests of Kaysville City?
- A. Being a gathering place; venue for events; central gathering and community events.
  - B. Fishing opportunities - urban fishery, want to support that. Gathering place for recreation.
  - C. \$3,200 dollars / year to stock ponds. Dept of Wildlife Resources stocks the ponds. Want to create a rec program for fishing. Rec program: summer classes, kids, educational classes re fishing, opportunity to fish.
  - D. Currently have wilderness park program - outdoor rec.
  - E. Partnership between City Parks and Rec, and BC.
  - F. Quantities anticipated: ponds are like an extension of their parks. Baby Animal Days brings in people from outside the community.
  - G. Need a venue for the arts. Don't have currently (amphitheater). Music, theater. 2,500 capacity max.
  - H. Many community events could expand into larger venues. Fireworks 4<sup>th</sup> of July.
  - I. Performing arts classes, smaller functions.
  - J. Races. October - Monster Mash and Dash. Stage one at the BC. 5K walk / run events.
  - K. Winter - ice skating. Snowfall isn't predictable for skiing. Not very feasible. No other ice skating facilities in the city.

USU Botanical Center Master Plan  
 Focus Group 2  
 Kaysville City – Davis County  
 26 April 2016  
 Page 2 of 3

USU Botanical Center Master Plan  
 Focus Group 2  
 Kaysville City – Davis County  
 26 April 2016  
 Page 3 of 3

02.2 Supporting the interests of Davis County?

- A. Extension has been officed elsewhere, will be moving to BC. All faculty will be based here, will be able to increase offerings ten-fold.

02.3 Supporting the interests of Utah State?

- A. Unknown commodity – people don't know about it. People think the ponds are the city's. Need to be able identify the facility, ponds, etc. as USU. People need to know what's here.
- B. How can the city help promote the BC?
- C. Have a good relationship. Can help each other grow. Need to get to know each other better.
- D. Opportunities to help spread the word about the BC.

02.4 Supporting the interests of the neighborhood?

- A. Haven't heard of any issues.
- B. One pipe for secondary water for west side of Kaysville City. Beneath the ponds. Exact location unknown. Main supply goes under the freeway. 24 inch. Will need a second line in the future.
- C. Where are the right of ways? Need to know for master plan.
- D. Need to know where the utilities are, for the master plan. Craig Thompson knows the locations the best. It's on GIS.
- E. Irrigation reps will send it to Jim Huppi, he will forward it to us.
- F. Kaysville Power provides the electricity for the site.

02.5 Best Aspects?

- A. Ponds.
- B. Glad that it's going to be a one-stop for education and extension.
- C. Staff is great to work with. Very collaborative. Good relationship.
- D. Walking trails are great.
- E. Could use more places to sit (watch sunset).
- F. Scouting and merit badge classes.
- G. Farmer's market – could grow.
- H. Farm Field Days is happening right now.

- I. Blood's Pond (north), Slough Pond, Barton's Pond, South Pond.

- J. Ponds should have signage.

02.6 Neighbors?

- A. Have tried to buffer on each side (arboretum-south, planting beds-north)
- B. If developing the northwest area, utilities will be a challenge. Hotel, convention center, café.
- C. How will community members use the property? Fishing (all the time); Farm Field Days (1st and 2nd grade classes); merit badge pow-wows; casual visitors.
- D. City has trails to the south; connect to Shepherd Lane.
- E. Parks and Rec will send the city plan of trails.
- F. Any past sticking points? None, just have communication now. Now there is a partnership; there wasn't before.
- G. Want to be part of Kaysville. Want to be part of the community. Were more isolated in the past. To succeed, must be part of Kaysville. High priority. Solve problems, don't create them.
- H. Signage requirements. (electronic signs). Mayor isn't aware of any prohibitions regarding signage.
- I. Electronic billboards could be a problem.
- J. There are city ordinances that don't allow billboards.
- K. DATC signage. Advertise for other entities.
- L. Noise ordinances, re amphitheater.
- M. Parking impacts of events.
- N. Signage, directional, to access BC from freeway. Must met certain visitation requirements to have off-premise signs directing visitors to a location.
- O. Track visitor quantities for some events, but not for daily visitation.
- P. Planned sidewalk addition from this year's legislative session (where?)
- Q. AES. Agricultural Experiment Station.

**End of Focus Group 2 – City-County**





**USU Botanical Center Master Plan**

**Focus Group 3**

MHTN Project No.: 2016521.00  
 Date: 26 April 2016 @ 4:30 pm  
 Location: Rm. 111, 80 E. Segoe Lily Drive, Kaysville, UT  
 Purpose: Business Partners Input

<b>Attendees</b>	<b>Representing</b>
<input checked="" type="checkbox"/> Jerry Stevenson	Utah State Senator; Owner, J&J Nursery and Garden Center
<input checked="" type="checkbox"/> Justen Smith	Director, Davis County Extension
<input checked="" type="checkbox"/> Jerry Goodspeed	Director, USU Botanical Center
<input checked="" type="checkbox"/> Ryan Wallace	AIA, LEED GA, Campus Planner
<input checked="" type="checkbox"/> Sarah Miller	AIA, LEED AP, IIDA, Data Gathering and Evaluation
<input checked="" type="checkbox"/> Randy Boudrero	ASLA, Principal-in-Charge and Team Leader
<input checked="" type="checkbox"/> Kyle Taft	AIA, LEED AP, Community Outreach and Stakeholder Collaboration

- 03.1 How can the BC support the nurseries?
- A. Great source of employees (master gardener program).
  - B. Good people running the programs. Good coordination between education and the industry.
  - C. Symbiotic relationship? Should be more coordination between BC and growers, before plants are introduced to the public.
  - D. Feb - July very busy. Hard to coordinate during that time.
  - E. BC trying to help the Growing industry. 3 - 4 people. Time is limited. Could industry and BC share a staff person for better coordination?
  - F. Jerry: his job is to educate the public about the natural environment and conditions, and what works, performs best in this area.
  - G. Program serves the entire state. Management needs to be focused in one location. Flagship. Investment, growth tool. Amazing potential. More opportunities for people to come and take classes
  - H. Potential is great here (Jerry). Education center for youth, underserved, all portions of population.
  - I. Davis County cities are well-integrated. If good for Kaysville, will be good for other county cities. BC in the center. Demographic center of County is moving north.
  - J. Good aspects: headed in great direction. Great progress. Good location.
  - K. Bad aspect: acreage off the tax rolls.
  - L. Need to be careful not to compete with private enterprise.
  - M. As population continues to grow, may have a USU branch in Kaysville (distant future).
  - N. Public facility with capacity for more than 200 people is rare.
  - O. No currently existing regional park with large event space.
  - P. Frontage on two (2) main roads.
  - Q. Ponds

**End of Focus Group 3 - Business Partners**

420 East South Temple, Suite 100 . Salt Lake City . Utah . 84111 . 801.595.6700 . Fax 801.595.6717 . www.mhtrn.com



**USU Botanical Center Master Plan**

**Focus Group 4**

MHTN Project No.: 2016521.00  
 Date: 26 April 2016 @ 6:00 pm  
 Location: Rm. 111, 80 E. Segoe Lily Drive, Kaysville, UT  
 Purpose: Neighborhood Input

<b>Attendees</b>	<b>Representing</b>
<input checked="" type="checkbox"/> Justen Smith	Director, Davis County Extension
<input checked="" type="checkbox"/> Jerry Goodspeed	Director, USU Botanical Center
<input checked="" type="checkbox"/> Jim Huppi	USU Facilities, Facilities Landscape Architect
<input checked="" type="checkbox"/> Lisa Thompson	Kaysville City Resident
<input checked="" type="checkbox"/> Kevin Thompson	Kaysville City Resident
<input checked="" type="checkbox"/> Ryan Wallace	AIA, LEED GA, Campus Planner
<input checked="" type="checkbox"/> Sarah Miller	AIA, LEED AP, IIDA, Data Gathering and Evaluation
<input checked="" type="checkbox"/> Randy Boudrero	ASLA, Principal-in-Charge and Team Leader
<input checked="" type="checkbox"/> Kyle Taft	AIA, LEED AP, Community Outreach and Stakeholder Collaboration

- 04.1 What facilities do you use the most?
- A. Walking path. Kayak on the ponds. Have brought scouts trips here.
  - B. Some people leave a mess behind. Is there a service opportunity for people to clean up the trash? (Scout groups, etc.). More trash cans may help. Resources would be needed to pick up all the trash.
  - C. Need the support structure as well as facilities.
- 04.2 What should be added? What would draw more people?
- A. Perhaps a central area with grass.
  - B. Utah house - information about what birds are here, what months.
  - C. Farmer's market? The Thompsons grow their own garden, so don't go much. They think it's a great thing. Quite a few people seem interested in it. 200 people / year visit it. Has grown.
  - D. Walking paths - gravel is good, so they're not muddy.
  - E. Sometimes walk after dark.
  - F. Like to watch the garden, different plants and varieties.
  - G. Have they taken any classes? No.
  - H. They've seen the Utah House - some receptions, opening tour.
- 04.3 Highest priority for the community?
- A. Family centered activities. Getting more young families in the neighborhood.
  - B. Kayaks and canoes - would they build some way to get in the water more easily?

420 East South Temple, Suite 100 . Salt Lake City . Utah . 84111 . 801.595.6700 . Fax 801.595.6717 . www.mhtrn.com

USU Botanical Center Master Plan  
Focus Group 4  
Neighborhood  
26 April 2016  
Page 2 of 3

USU Botanical Center Master Plan  
Focus Group 4  
Neighborhood  
26 April 2016  
Page 3 of 3

Docking station? May be less risk to have one. Dock. Concrete steps. Kids can sit on to get feet wet. Keep banks from eroding. 3 large steps.

- C. Water 90% from storm drains. 2 natural springs. Pretty clear until August. As water moves through the ponds, it gets cleaner.
  - D. Nice to have a park atmosphere in the east portion. Like the quad at USU. Gathering spot.
  - E. Would a visitor center be appropriate? Yes, but keep the center field area open and visually unobstructed. People on field trips could eat lunch there.
  - F. Is there a café in the plans? Maybe a small local shop. Maybe Aggie Ice Cream store.
- 04.4 Any issues or challenges?
- A. Have only heard favorable comments. Nice, natural place. Always people fishing. Teaching signs or information about what you're seeing
  - B. Ponds are a public easement. Access is made available to the public. Number of ponds included is not defined.
  - C. Trash – fishing line, ducks get tangled in it.
  - D. One year – frogs, lots of them.
  - E. Fishing ponds in some other areas are closed to fishing, except for children under 12. Perhaps segregate the ponds by age.
  - F. Trees, gardens, etc. – tie all together.
- 04.5 How has the BC improved relationships with the neighbors?
- A. Sales
  - B. Getting bigger / better
  - C. Should they add crosswalks on 50th? North of the tunnel. Yes.
  - D. Would a 3-story building be an issue? Depends on where it's built and how much ground is taken to build it. Would be better if it's near the homes. Don't obstruct the mountain views. View from west to east in spring is great – important. Nice to have garden / open space, rather than development.
  - E. Concerts? Would be great. Beautiful setting. Noise concerns? For certain times and days, would be okay.
- 04.6 Any challenges or issues?
- A. People don't like the garbage. Or the vandalism (to signs).
  - B. Had a neighborhood watch program previously. Could this area be incorporated into it?
  - C. Haven't stolen the new signs on the trees.
  - D. If people come from the outside, need to provide parking. Tough issue. Lots of parking space on the street.

- E. UTA – any stops near here? Just on Main Street.
- F. Tie into a stop on Main Street.
- G. Research area has controlled access.
- H. Loop around the ponds – about 2.5 miles.
- I. Suggestion to promote Eagle Scout projects to help with path construction labor.
- J. Haven't seen any bikes on the paths. Lots of bike traffic on the road. Too narrow for parking on both sides. There is a no parking on one side.
- K. Electronic sign on freeway – would this be viewed as a negative? Some people may be concerned.
- L. Parking on west side; begin the interpretive trail there to guide them to the BC. Freeway noise on that side.
- M. Highest priority – central gathering place.
- N. Community involvement will help people want to take care of it. The more involvement, the better.

**End of Focus Group 4 – Neighborhood**



Email input from:

Kent Miller  
 Cell 801-940-2577  
 kentmiller@perennialfavoritesnursery.com

**Subject:** USU Botanical Center Master Plan input

Kent,

We know this is a very busy time for nurseries and were sorry that you couldn't attend the master plan session Tuesday.

The input of community & business partners is valuable to the master plan process. Could you please take a few minutes to answer the questions below? Just type your responses within the message and "reply all" by next Friday, May 6. We would appreciate it very much.

1. How can the Botanical Center support the interests and needs of the nurseries?  
**I think the best way to support growers would be to devote an area to side by side plant trials.**
2. What type of symbiotic relationship do you envision between the nurseries and Botanical Center?  
**If the trials were in place, we could use our influence with the breeders to bring the newest products not only to the trails, but in turn to the consumer.**
3. How will the teaching and research that takes place at the Botanical Center be of benefit to you?  
**If followed through the entire process, the teaching and research will raise the entire horticultural industry.**
4. Are you interested in partnering with the Botanical Center? If yes, how?  
**We are presently working with UBC on their Sego Supreme selections.**
5. From your perspective, what are the best aspects of the Botanical Center?  
**So far they seem to be totally accessible.**
6. How can the Botanical Center support the interests of Kaysville city and Davis County?
7. What are your thoughts about the growth of the Botanical Center over the next 50 years (the master planning period)?  
**I hope their focus can remain on primarily supporting the horticultural industry.**

Thank you very much for your time.  
 Sarah



### Agenda for Meeting with Davis County

Project Name: **USU Botanical Center Master Plan**  
 MHTN Project No.: 2016521  
 Date: 13 May 2016  
 Time: 9:00 – 10:00 am  
 Location: Davis County Administration Building, Room 314  
 61 South Main Street, Farmington, UT 84025  
 Purpose: Information gathering meeting – Davis County

---

#### Items for Discussion

---

- 1 How do you see the BC fitting into County goals and plans?
- 2 Is there a county master plan? If yes, how does it relate to the BC?
- 3 Are there County-wide cultural, art or recreational master plans?
- 4 Current & anticipated Davis Co. event venues; types & attendance capacities.
- 5 Would a BC amphitheater compete with the existing Layton venue?
- 6 Current & anticipated County green spaces; relationship to BC
- 7 Is there a trail network that the BC could connect with?
- 8 Population growth & potential impact on higher education development
- 9 Should the BC cross-promote other County outdoor learning sites (Antelope Island, Farmington Bay, etc.)?
- 10 USU favors "Complete Streets" strategies. Is that acceptable to the County?
- 11 Possible to share parking with BC neighboring entities (school, church)?
- 12 Possible to have electronic signage visible from freeway?
- 13 Coordination with area transportation plan
- 14 How can the BC benefit local businesses & community members?

#### End of Agenda



**USU Botanical Center Master Plan**

**Davis County Input**

MHTN Project No.: 2016521.00  
 Date: 13 May 2016  
 Location: Davis County Offices, Farmington, UT  
 Purpose: USUBC - Information Gathering Meetings

<u>Attendees</u>	<u>Representing</u>
<input checked="" type="checkbox"/> Jim Smith	Davis County Commissioner
<input checked="" type="checkbox"/> Barry Burton	Planning Director, Davis County Planning Department
<input checked="" type="checkbox"/> Ryan Wallace	AIA, LEED GA, Campus Planner
<input checked="" type="checkbox"/> Sarah Miller	AIA, LEED AP, IIDA, Data Gathering and Evaluation
<input type="checkbox"/> Randy Boudrero	ASLA, Principal-in-Charge and Team Leader
<input type="checkbox"/> Kyle Taft	AIA, LEED AP, Community Outreach and Stakeholder Collaboration

- 01.1 County - big supporters of USU efforts, involved in the efforts to fund extension on site
- 01.2 Utah population growth likely to double, however Davis County only has about 20% of undeveloped land. This could run the risk of losing green space.
  - A. Maintaining Botanical Center protects this area for future generations at the center of the County
  - B. Also provides education and resources for conservation and planting through Extension and Research
  - C. Vital piece of open space - however the County would like to protect this space in perpetuity so that it isn't pressured to become housing or commercial
  - D. 316,000 latest estimate - Likely to reach 450,000 as the maximum population long-term
- 01.3 Community gardens are also a great resource - should be expanded.
- 01.4 Davis County trail network:
  - A. Property is located in a major east-west trail corridor. Nichols hollow (Fruit Heights). Box culvert underneath highway 89 to connect to Bair Creek trail and then connect to Kaysville trail network and eventually DNRG trail. Finding a way to provide this east-west connection through the site provides excellent access to trails throughout the region via Shepard Lane. Sparrows painted on Burton Lane currently but a separate facility may be necessary long term to make east-west connections.
  - B. Trail through site rather than on sidewalk desired to provide easy of access.
  - C. DNRG is north south arterial, east west connections from this are the next target. Currently including trail in Syracuse known as Immigrant trail.
  - D. Cross promotion of cultural resources is desirable - no current plan in place.

- 01.5 Amphitheater:
  - A. Layton is starting to fill up
  - B. Fruit Heights also has a plan to include an amphitheater. Could these two municipalities work together with the Botanical Center to create this shared amenity?
  - C. Short term not likely for this type of facility due to expense. Possibly in the short term something similar to National Parks and later become more sophisticated.
  - D. Layton capacity is around 1500. Only a few hundred fixed seats and the rest are seated on the grassy hillside.
- 01.6 Complete streets:
  - A. Davis County favors complete streets policy - this is becoming standard operating procedure.
  - B. One of the challenges on this site is parking - partner with churches, public facilities schools and Higher Ed facilities nearby for shuttle service?
- 01.7 USU operating in Weber State footprint:
  - A. 51% of students at WSU now reside in Davis County.
  - B. Cooperative agreement desirable between the institutions.
  - C. Some land should be preserved for this as the growing population likely means all education resources will be needed for the County long term.
- 01.8 Some piece of the Agriculture Research Station could be used for a future expansion of the USU Educational presence on the site.
- 01.9 Electronic Sign on Interstate 15:
  - A. Likely within Kaysville City jurisdiction - up to local land use.
  - B. High quality USU advertising sign (not enormous like the sign in Layton) is preferred. County would help support something tasteful.
  - C. Be sensitive to the nature of the place.
- 01.10 Surrounding land uses
- 01.11 Amphitheater near the freeway in the northwest portion of the site?
  - A. Potential for expansion into the area north in the distant future - not historic homes but older. Could be location for parking or other resources.
  - B. Other potential expansion to the south into the large parcel of private land.
  - C. East of SR. 173 - a piece of private property - potential for expansion?

USU Botanical Center Master Plan  
 Davis County Input Meeting  
 13 May 2016  
 Page 3 of 3

01.12 Benefit to Community:

- A. Green space and events are opportunities for promoting these community resources.
- B. Avoid commercial uses or competition with local businesses.
- C. Focus should be a quality of life amenity.
- D. Benefits to community are ancillary rather than direct.
- E. Weber Basin Water Demonstration Garden
- F. Close to DATC and Davis School District – these schools should utilize this facility to greatest extent possible. More exploration of sharing resources should take place. Vocational and higher Ed provide interesting opportunities for sharing resources
- G. Davis High School is known for cross country running. Demonstration 3-mile loop could be used for events. Could connect to Nichols Hollow through box culvert under the road to create this distance loop.
- H. Davis High also is well known for band – ties to the site?

01.13 Other:

- A. Meeting with Angie could include other educational institutions as well for discussion.
- B. Mindset will need to change long-term in order to accommodate population growth in the County.

**End of Davis County Input Meeting**



**Agenda for Meeting, Davis Chamber of Commerce**

Project Name: **USU Botanical Center Master Plan**  
 MHTN Project No.: 2016521  
 Date: 16 May 2016  
 Time: 1:00 – 1:30 pm  
 Location: Teleconference  
 Purpose: Information gathering from Davis Chamber of Commerce

**Items for Discussion**

- 1 How do you see the BC fitting into County goals and plans?
- 2 Is there a county master plan? If yes, how does it relate to the BC?
- 3 Are there County-wide cultural, art or recreational master plans?
- 4 What are current & anticipated Davis Co. event venues; types & attendance capacities?
- 5 Would a BC amphitheater compete with the existing Layton venue?
- 6 What are current & anticipated County green spaces, and their relationships to the BC?
- 7 Is there a trail network that the BC could connect with?
- 8 What are the potential impacts of future population growth on higher education development?
- 9 Should the BC cross-promote other County outdoor learning sites (Antelope Island, Farmington Bay, etc.)?
- 10 USU favors "Complete Streets" strategies. Is that acceptable to the County?
- 11 Possible to share parking with BC neighboring entities (school, church)?
- 12 Possible to have electronic signage visible from freeway?
- 13 What are the possibilities for coordination with the area transportation plan?
- 14 How can the BC benefit local businesses & community members?

**End of Agenda**



**USU Botanical Center Master Plan      Davis Chamber Meeting**

MHTN Project No.: 2016521.00  
 Date: 16 May 2016 @ 1:00 pm  
 Location: Teleconference  
 Purpose: USUBC - Information Gathering Meetings

<u>Attendees</u>	<u>Representing</u>
<input checked="" type="checkbox"/> Angie Osguthorpe	Davis Chamber of Commerce
<input checked="" type="checkbox"/> Ryan Wallace	AIA, LEED GA, Campus Planner
<input checked="" type="checkbox"/> Sarah Miller	AIA, LEED AP, IIDA, Data Gathering and Evaluation
<input type="checkbox"/> Randy Boudrero	ASLA, Principal-in-Charge and Team Leader
<input checked="" type="checkbox"/> Kyle Taft	AIA, LEED AP, Community Outreach and Stakeholder Collaboration

- 01.1 Chamber Role. The Chamber is a partner with the County. There is one Chamber for 15 cities. Chamber sees the need to protect green space. This is good for economic development.
- 01.2 How does the USUBC fit into Chamber goals? Aspects in which the USUBC supports Chamber goals include:
  - A. Economic development
  - B. Quality of life
  - C. Education - STEM
  - D. Making county a better place to live, work, play.
  - E. Exercise.
  - F. BC provides another nice place in the County to be outdoors, be educated.
- 01.3 Potential for retail, revenue generation at USUBC.
  - A. There is always a chance someone will perceive retail / revenue generation as competition.
  - B. Angie doesn't think a creamery / Aggie ice cream store would be undue competition. Tee shirts from a concert, Aggie tee shirts, etc. would likely not upset anyone. Should talk with Kaysville city, Mayor Steve Hiatt, to get his input.
  - C. Amphitheater. Ed Kenly Theater in Layton has offerings every weekend in the summer. Location - Layton Commons Park. Will likely need another venue in 10 or so years, with population growth. 10-20 years down the road, an amphitheater at USUBC would likely be acceptable.
  - D. Davis Chamber involved in Taste of the Town, held July 24 at Layton Commons Park. Up to 4,000-5,000 people attend. Will need more venues in future, with potential doubling of population.
- 01.4 STEM Education Focus. Appropriate for USUBC to educate regarding elements similar to Ogden Nature Center: water usage, community gardens, plant life, crops. Programs to educate elementary and older. Doesn't complete with DATC, where focus is on mechanical, vocational programs.

- 01.5 Parking Issues. What are the Chamber's thoughts about parking related to large public events at the BC? (Baby Animal Days, potential amphitheater activities)
  - A. Trying to work toward mass transit, but Angie doesn't see people using transit to attend amphitheater. Parking strategy would need to be part of the plan. Possible Front Runner usage.
- 01.6 Possibility of a hotel on the northwest zone?
  - A. Needs Analysis would be necessary to determine if there is a lack of capacity in the area. Would need to ask Mayor Hiatt about that.
- 01.7 Would there be any opportunities for private commercial development at certain borders of the USUBC such as northwest corner? Condo development?
  - A. Usually commerce develops around an amenity like that. Would have to work with City zoning.

**End of Davis Chamber of Commerce Input Meeting**





### Agenda for Meeting with Kaysville City

Project Name: **USU Botanical Center Master Plan**  
 MHTN Project No.: 2016521  
 Date: 17 May 2016  
 Time: 9:00 - 10:00 am  
 Location: Kaysville City Hall  
 Purpose: Information gathering meeting - Kaysville City  
 Attendees: Steve Hiatt, Mayor  
 Cole Stephens, Parks Director  
 Vance Garfield, Park and Recreation Supervisor  
 Andy Thompson, City Engineer  
 Lyle Gibson, Community Development Staff  
 Chris Snell, City Council Liaison  
 Randy Boudrero, MHTN Landscape Principal  
 Kyle Taft, MHTN Principal in Charge  
 Ryan Wallace, MHTN Planner  
 Sarah Miller, MHTN Predesign Specialist

---

#### Items for Discussion

---

- 1 Current or future zoning of areas surrounding the USUBC & their impacts
- 2 Overlay districts or small area plans that could impact the BC
- 3 Anticipated future city changes, developments or growth that could impact the BC
- 4 Current and future park locations and relationships to BC
- 5 Potential BC connections to current or planned trail/path networks
- 6 Should there be a relationship between Bair Creek and the BC?
- 7 Current & anticipated Kaysville event venues; types & attendance capacities
- 8 City parking requirements
- 9 Possibilities for BC to share parking with neighboring entities (school, church)
- 10 City street width requirements; possibilities for parking on both sides of 50<sup>th</sup> West
- 11 BC utility providers
- 12 Connections to City utilities & identification of utility corridors
- 13 Possibilities for implementing electronic signage visible from the freeway

#### End of Agenda for Meeting with Kaysville City

420 East South Temple, Suite 100 . Salt Lake City . Utah . 84111 . 801.595.6700 . Fax 801.595.6717 . [www.mhtn.com](http://www.mhtn.com)



### USU Botanical Center Master Plan

### Kaysville City Input

MHTN Project No.: 2016521.00  
 Date: 17 May 2016 @ 9:00 am  
 Location: Kaysville City Offices, Kaysville, UT  
 Purpose: USUBC - Information-Gathering Meetings

#### Attendees

#### Representing

<input checked="" type="checkbox"/> Cole Stephens	Parks Director, Kaysville City
<input checked="" type="checkbox"/> Lyle Gibson	Community Development Staff
<input checked="" type="checkbox"/> Andy Thompson	City Engineer, Kaysville City
<input checked="" type="checkbox"/> Ryan Wallace	AIA, LEED GA, Campus Planner
<input checked="" type="checkbox"/> Sarah Miller	AIA, LEED AP, IIDA, Data Gathering and Evaluation
<input checked="" type="checkbox"/> Randy Boudrero	ASLA, Principal-in-Charge and Team Leader
<input checked="" type="checkbox"/> Kyle Taft	AIA, LEED AP, Community Outreach and Stakeholder Collaboration

- 01.1 Lyle will email a zoning map - single family residential zoning currently
- 01.2 Most has been developed, large parcel on eastern portion near AES is currently zoned agricultural but very likely to be residential in the future
- A. Developer - has no current plans to develop it. Howard Kent owns the land, owns around 18-20 acres in the area.
- 01.3 Hotel would be possible on the site, but not likely. A recent hotel study found that Davis County is saturated for the near future.
- 01.4 Currently zoned public use - provide quite a bit of flexibility. Aggie Ice Cream or something similar could exist on the site, but if it is sold to a private entity it could be difficult to change the zone.
- 01.5 No plans for residential uses to be changing in 50 years around the BC. Possibly slight increase in density.
- 01.6 Commercial is not desired near residential areas; multi-family housing is even less desirable.
- 01.7 Farmington and Layton will accommodate much of the anticipated growth in the County.
- 01.8 Kaysville City and residents view Botanical Center and its open space and activities as a benefit/amenity. Administration is very happy to have it. Happy that USU is willing to pay for it.
- 01.9 Currently utility impact is minimal however the traffic impacts are more significant when large events occur. Some long range concern about parking and traffic access to the site.
- A. 50 W is the best road for access to the site, although access overall is limited.  
 B. 66' ROW

420 East South Temple, Suite 100 . Salt Lake City . Utah . 84111 . 801.595.6700 . Fax 801.595.6717 . [www.mhtn.com](http://www.mhtn.com)



USU Botanical Center Master Plan  
 Information Gathering  
 Kaysville City Input  
 17 May 2016 @ 9:00 am  
 Page 2 of 3

USU Botanical Center Master Plan  
 Information Gathering  
 Kaysville City Input  
 17 May 2016 @ 9:00 am  
 Page 3 of 3

- C. Hard surface connected from Ponds Park through the site would allow for bikes to be off street and allow for on-street parking both sides of the street.
  - D. Long-term angled parking could be accommodated if the roadway were to be widened.
- 01.10 Trails master plan just adopted.
- A. 10' widening of Burton Lane will create room for a shared use path.
  - B. Bridge over Burton is limited for widening, fence installed recently. UDOT owns the road and has been notified that Kaysville City would like to see it widened
  - C. Trail through the botanical site would be desirable if possible to provide access to the ponds and increase use of the BC
  - D. Active transportation plan replaces any complete streets policies
  - E. Lyle to email map
- 01.11 Parking ordinance in place, not likely to apply to uses at USU BC
- A. Davis High has been a successful parking location for shuttles, although most people typically need to be educated that shuttles are offered
- 01.12 Kaysville City in favor of amphitheater on site
- A. Provide educational and recreational offerings
  - B. Residents have been interested for some time, currently use High school
  - C. Kaysville runs Fruit Heights recreation program
  - D. Don't see any potential for encroaching on Layton amphitheater
  - E. Kaysville City likely to be willing to participate financially on an amphitheater and work together through a joint use agreement
- 01.13 Electronic sign on freeway
- A. No billboards allowed in Kaysville or off-premise signage. However directional signage is permitted. It is permissible because it is on USU's property, maximum size of sign would be 300 SF with roughly have could be a electronic messaging sign
  - B. Planning commission could consider anything, more favorable to things only advertising USU activities
- 01.14 Farmington is pushing to construct interchange at Shepard Lane. This would create a much more accessible southern route to the site.
- 01.15 Prior years with lack of public access to UAES has led many people not understanding public welcome to the Botanical Center
- 01.16 Kaysville City provides all utilities to site
- A. Kaysville Power -- -below grade at this site (put underground along 50 W) 3' behind sidewalk
  - B. Secondary water is provided by Hights Creek Irrigation Company (trunk line through site location not totally certain). Must feed from east side to west side through the site and come under the freeway to feed new growth on the west side of the City. Shares determine where water can be used. All new development is required to have a secondary water connection. Anything over a certain amount of culinary will lead to an increase in water rates.
  - C. Quester Gas - in parks trip

- D. Central Davis Sewer services the site
  - E. Kaysville Water and Storm Drain services the site
- 01.17 Sustainability approaches
- A. Solar energy exists and is allowed - discussion currently ongoing
  - B. Storm water is regulated on a national level - more and more encouraged to use green infrastructure
  - C. A scaled culinary water rate encourages conservation
  - D. Requirement for treatment off of parking lots is likely coming (water passing through oil water separators or grass treatment bio Swales)
  - E. Ponds currently treat the water on site prior to it passing through the outflow
  - F. City would be willing to clean out bloc at outflow point from the ponds but the vactor truck is unable to access the box near the bridge
  - G. Ground loop systems for heating and cooling of the building have been used in public facilities and City is open to it
- 01.18 City open to above grade crossings - raised crossing not preferred but striping and flashing beacons or HAWK beacons allowed
- 01.19 Ponds Park views connection to BC as a natural connection
- A. 50 parking stalls in two lots, 35 additional on Ponds Park South on other side of Burton
  - B. Connectivity and demonstration are benefits of shared connection between parks.
  - C. Trail is open during the winter (plowed) for year round use.
- 01.20 Rec email newsletter, marquee, and City website could be used to advertise the public open house.
- A. Provide information to Cole 3rd or 4th week of the month to include in digital newsletter.
- 01.21 New EPA storm water regulations - public education is a big component. Partnering with City, County, State and USU for education here on site.
- A. Kaysville City Storm line at the crest of the hill could service the riparian demonstration stream through the site could be a natural fit for both groups.
- 01.22 Follow-up with Lyle about information we need.

**End of Information Gathering Meeting in Kaysville City**



### Agenda for Meeting with Administration

Project Name: **USU Botanical Center Master Plan**  
 MHTN Project No.: 2016521  
 Date: 17 May 2016  
 Time: 1:00 – 2:00 pm  
 Location: Botanical Center  
 Purpose: Information gathering meeting – Administration  
 Attendees: Jerry Goodspeed, Director USUBC  
 JayDee Gunnell, Regional Horticulturist  
 Justen Smith, Director, Davis County Extension  
 Dede Corrales, Manager USUBC  
 Ken White, Dean & VP of Extension  
 Tom Lee, Dean of USU RCDE  
 Randy Boudrero, MHTN Landscape Principal  
 Kyle Taft, MHTN Principal in Charge  
 Ryan Wallace, MHTN Planner  
 Sarah Miller, MHTN Predesign Specialist

#### Items for Discussion

- 1 Growth projections for the Center and its programs
- 2 Access control, current & future: Security aspect; financial aspect
- 3 Visitor's Center - what is needed? Co-located with what other functions?
- 4 Event facilities (Music/performance, receptions, meetings, etc.)  
 Facility capacities, sizes, parking needs/strategies
- 5 Retail priorities and needs  
 Types, capacities, facility sizes, parking needs
- 6 Utah House: current uses, functions; future needs
- 7 Farmer's Market: current size; anticipated growth; operational needs
- 8 Possible uses/functions for the northwest field
- 9 Ponds: boat put-in; other ideas?
- 10 Administrative facilities needed now/in future (offices, staff support, storage, etc.)
- 11 Operations/maintenance needs (trash receptacles, storage, service access, etc.)
- 12 Crosswalks for 50th West
- 13 Connection to UTA on Main Street
- 14 Trails: mileage markers; interpretive signs; surfaces; accessibility
- 15 Central gathering space as a community priority
- 16 Outdoor classroom(s)
- 17 Names & functions of new buildings currently being planned/designed
- 18 Should a sustainable site initiative be considered for the BC?

#### End of Agenda for Meeting with Administration

420 East South Temple, Suite 100 . Salt Lake City . Utah . 84111 . 801.595.6700 . Fax 801.595.6717 . [www.mhtn.com](http://www.mhtn.com)



### USU Botanical Center Master Plan

### USUBC Administration

MHTN Project No.: 2016521.00  
 Date: 17 May 2016 @ 12:30 pm  
 Location: Botanical Center  
 Purpose: USUBC Admin – Information-Gathering Meetings

Attendees	Representing
<input checked="" type="checkbox"/> Justen Smith	Director, Davis County Extension
<input checked="" type="checkbox"/> Tom Lee	USU Brigham Campus, Dean & Executive Director RCDE
<input checked="" type="checkbox"/> Deanne Corrales	Manager, USU Botanical Center
<input checked="" type="checkbox"/> Ryan Wallace	AIA, LEED GA, Campus Planner
<input checked="" type="checkbox"/> Sarah Miller	AIA, LEED AP, IIDA, Data Gathering and Evaluation
<input checked="" type="checkbox"/> Randy Boudrero	ASLA, Principal-in-Charge and Team Leader
<input checked="" type="checkbox"/> Kyle Taft	AIA, LEED AP, Community Outreach and Stakeholder Collaboration

- 01.1 Growth projections
  - o Extension will add 40-50 daily visitors (12 full time employees, the rest are clients)
  - o Spring and Summer busy with clients, winters slower
  - o 4H events will add hundreds of additional, it could also add thousands to events like Baby Animal Days
  - o Undergrad programs which can grow would be College of Ag or Natural Resources
- 01.2 Education Center
  - o Fall 2012 – 500, last couple years have been in the 400s
  - o Anticipate student enrollment growth to 500-600, 750
  - o Outdoor space for instruction for horticulture classes
  - o Constraints of WSU footprint, many programs will not come here
  - o Some programs are difficult in Distance Education format
  - o 200 majors total through USU, about 25 can be offered through Distance Education format
  - o Some pieces of classes will (and are currently) offered outside and then come back inside – outdoor instruction space adjacent to education center important
  - o People places would be nice
  - o Leaving some green space for future education expansions would be wise, reserved as future potential building site
  - o Most buildings should be located north of the stream
- 01.3 Access Control
  - o Prohibit vehicle access for off pavement riding at night etc.
  - o Public restrooms located near arboretum, could be colocated with a future visitors center. Also located in each corners of the site for trash, etc. as well
  - o Security cameras could be useful in some locations, problems with vandalism at the gates to WDP
  - o Security and liability and ponds may require disclaimers
  - o Night security could become a need
  - o Ogden Botanical Gardens has issues at night
  - o AES is totally fenced off, this must remain
  - o Access control and point of sale for amphitheater will be important
  - o Lights and camera in tunnel could enhance safety

420 East South Temple, Suite 100 . Salt Lake City . Utah . 84111 . 801.595.6700 . Fax 801.595.6717 . [www.mhtn.com](http://www.mhtn.com)

USU Botanical Center Master Plan  
 Information Gathering  
 USUBC Admin  
 17 May 2016 @ 12:30 pm  
 Page 2 of 3

USU Botanical Center Master Plan  
 Information Gathering  
 USUBC Admin  
 17 May 2016 @ 12:30 pm  
 Page 3 of 3

- 01.4 Visitors Center
  - o Must include restrooms
  - o Include education component
  - o First-stop for visitors to the site
  - o Maps and information, orientation of site
  - o Meeting rooms
  - o Located close to road, adjacent to tunnel
  - o Located at intersection of trail network
- 01.5 Events/Facilities
  - o ICLT should meet needs for weddings and receptions, provide cooking, prep facilities for nearby gardens for extension education
  - o Barn has been discussed in the field to support Baby Animal Days, farmer's market - if the barn had an upper level it could support receptions or events
  - o Picnics for students and families near Ed Center could be part of future expansion, green space. Could also be for movies on the grass, etc.
  - o Community events such as Tai Chi, yoga, etc. also provides formal and informal education opportunities. Sometimes receive calls for events like Essential Oils sales meetings, etc. Events center somewhere needed
- 01.6 Retail priorities and needs
  - o Plant sales currently are only to members
  - o Some retail sales in connection with the Visitors Center could include USU brand shirts, hats, books, drinks, Aggie ice cream
  - o Membership to the Botanical Center sales would be beneficial
- 01.7 Utah House
  - o Would like to expand outdoor area further south with some shade structure for outdoor classroom
  - o 5,000-6,000 school children per year visit, would need to accommodate 75 -100 people in outdoor classroom. Expansion would allow for charging more for events. Attend in spring and fall. Glass structure with operable doors could potentially expand seasonal use of the facility. Often come in groups of 100
- 01.8 Farmer's Market
  - o Currently utilize shed and 20x20 tents and the open field
  - o People prefer the market in the grass
  - o Power is needed, shaded would be nice - trees are always the answer. Needed on the south and west
  - o Averages 800 people now, would like to grow to 1,000
  - o Good way to promote programs, but not a revenue generator
  - o Orchard produce could eventually be sold here on site - primarily for research but not currently set up to do this. Anything produced in the name of research can be sold. Produce needs to be a by-product of the research, not the purpose to sell
- 01.9 Northwest Field - likely for a barn is the best idea
  - o Great opportunity to get youth on site
  - o Children's garden for learning
  - o Mounds of grass for kids to play
- 01.10 Administrative Facilities
  - o Storage for equipment could be co-located with restrooms - maybe 10x10 at each location

- o 4-H currently has 40x60 in storage units for youth activities - this could be moved to the barn
- 01.11 Operations
  - o Interspersed trash cans in addition to at restroom locations
- 01.12 Access Points to Ponds
  - o Erosion and trash are problems because there are no places to enjoy the pond currently
  - o Not a ramp, but maybe concrete steps that extend into the water
  - o Located near the parking for ease of launch, etc.
  - o Launch canoes, kayaks by hand, float tubes
  - o ADA accommodation
  - o Near 9/11 memorial
  - o Boardwalk access for users of all abilities could be appropriate
- 01.13 Crosswalk at 50 West
  - o Yes at both ends of the site - Utah House parking lot and another at Sego Lily Drive
- 01.14 Trails, mileage markers, interpretive signs, surfaces, accessibility, fitness course - yes to all of this
- 01.15 Central Gathering Space
  - o Proximity to the Visitors Center
  - o Open field?
- 01.16 Outdoor Classroom
  - o Associated with education building
  - o No others necessary, except maybe at the barn
- 01.17 Additional Buildings Planned
  - o ICLT building is in design documents
  - o Ed Center expansion is in programming
  - o Kelly Christoffersen can share information
- 01.18 Sustainable Sites Efforts to be Included
  - o Compost locations
  - o Vactor truck access needs further negotiation, would require significant expansion almost like a fire truck access

**End of Information Gathering Meeting: USUBC Administration**





### Agenda for Meeting with Facilities & Planning

Project Name: **USU Botanical Center Master Plan**  
 MHTN Project No.: 2016521  
 Date: 17 May 2016  
 Time: 1:45 - 2:30 pm  
 Location: Botanical Center  
 Purpose: Information gathering meeting - Facilities & Planning

#### Items for Discussion

- 1 Planning principles, preferences
- 2 Planning & design parameters & standards
- 3 Desired open space ratio for the BC; current & long-range (25-50 years)
- 4 Long-range usage of AES property for other functions (garden expansion, etc.)
- 5 Physical connections to surrounding neighborhoods
- 6 USU image/connection strategies (graphic, other)
- 7 BC visibility, wayfinding
- 8 Signage considerations
- 9 Electronic signage visible from freeway
- 10 Maintenance & image issues
- 11 Trails: materials, accessibility
- 12 Facilities: size, height restrictions
- 13 Boundaries with neighborhoods
- 14 Zones within the BC; clarity for boundaries & public access areas
- 15 Parking design guidelines & standards

#### End of Agenda for Meeting with Facilities & Planning

420 East South Temple, Suite 100 . Salt Lake City . Utah . 84111 . 801.595.6700 . Fax 801.595.6717 . [www.mhtn.com](http://www.mhtn.com)



### USU Botanical Center Master Plan

### Facilities & Planning

MHTN Project No.: 2016521.00  
 Date: 17 May 2016 @ 1:30 pm  
 Location: Botanical Center  
 Purpose: USUBC - Information-Gathering Meetings

Attendees	Representing
<input checked="" type="checkbox"/> Justen Smith	Director, Davis County Extension
<input checked="" type="checkbox"/> Tom Lee	USU Brigham Campus, Dean & Executive Director RCDE
<input checked="" type="checkbox"/> Deanne Corrales	Manager, USU Botanical Center
<input checked="" type="checkbox"/> Ryan Wallace	AIA, LEED GA, Campus Planner
<input checked="" type="checkbox"/> Sarah Miller	AIA, LEED AP, IIDA, Data Gathering and Evaluation
<input checked="" type="checkbox"/> Randy Boudrero	ASLA, Principal-in-Charge and Team Leader
<input checked="" type="checkbox"/> Kyle Taft	AIA, LEED AP, Community Outreach and Stakeholder Collaboration

- 01.1 Planning principles
  - o Follow USU standards
  - o Infrastructure that is built grows with the plan, phasing builds upon itself (no piping upsizing required for future development)
  - o Should anticipate future technology
  - o Leave empty conduits? Additional duct banks or other additional capacity
  - o Define master plan utility paths / corridors. Not only where utilities should be, but also where they should not be
  - o Locate current as-built condition
  - o Water supplier is building an extensive loop backbone system with sufficient redundancy
  - o Retain as much open space and education as possible, minimal building footprints
  - o Educational facility with focus on landscape is the current priority
- 01.2 Long range usage of the AES property
  - o Possibly talk to some from AES
  - o Don't touch it - leave it be - hard line
- 01.3 Image, signage, way finding
  - o should follow typical campus standards and approach
  - o Quad and Aggie Tower? Physical identifiers that brand this campus
  - o Could the barn have an A on it?
  - o Stepped landscape design (terraced) on gentle graded site along 50 W to bridge
- 01.4 Open space ratio
  - o Maximize outdoor experience here, buildings to the north. Minimal building footprints
- 01.5 Physical connections to surrounding neighborhoods
  - o Fencing should provide access points to reduce vandalism for everything east of 50 west
  - o Soft control to ponds could be vegetation which discourages certain access points
  - o Access to green houses at top of hill through residential neighborhood is temporary only for construction, fence will be replaced and access closed off

420 East South Temple, Suite 100 . Salt Lake City . Utah . 84111 . 801.595.6700 . Fax 801.595.6717 . [www.mhtn.com](http://www.mhtn.com)

- 01.6 Botanical Center signage should be associated with USU
- 01.7 Maintenance / Architecture Design Guidelines
  - o Cleaning inlet structure to the ponds with Kaysville City
  - o Kaysville City needs to provide education as part of Federal EPA guidelines
  - o Architecture should be consistent in look feel and maintenance and but should not be identical, corrugated metal and stone should continue
  - o Stone on building is from Oakley quarry
  - o High visibility locations should use expensive fencing, etc. However most should be quality but blend into the landscape. Plant and landscape are the focus of the site
  - o Wedding receptions or events make parking at WDP difficult (about 30 stalls currently) happens about once per week throughout summer and fall
  - o Gazebo being built adjacent to WDP parking
- 01.8 NW field ideas
  - o Prairie area
  - o Hotel / convention center
  - o 4-H youth facility
  - o Composting
- 01.9 Recycling stream
  - o Assist in enhancing oxygen of ponds
  - o Reduce algae
  - o Cost of running the pump is significant
  - o No money for installing and maintaining the recycling stream component, costs significant to operate the recirculating water pumps
  - o Spectrum Engineers to contact John Chase info about electrical power at WDP
- 01.10 Snow removal
  - o Wetland road, Segoe Lily drive, parking lots, and Utah house
  - o South parking lot will not be used in the winter - road base
- 01.11 Trails
  - o Road base for most 'natural' trails
  - o Concrete or asphalt for 'sidewalk' type trails to include road bikes
  - o Boardwalk in water or accent areas
  - o Pond water could raise up to 3' in current configuration
  - o Close trail loop with Kaysville City at Ponds park to complete trail loop
  - o Make sure all trails are ADA compliant
- 01.12 Facility size, height, etc.
  - o Low scale to protect the green, prefer low-rise single story over anything taller
  - o Botanical Center rather than an extension campus
  - o Evaluate if going taller assists in protection of green space
  - o Parking design guidelines will follow USU Campus standards
- 01.13 Utilities corridors
  - o Loop along path through field could serve as utility corridor as well in order to be closed for service and maintenance
  - o No utilities currently down to the northwest field, only irrigation and culinary are west of the ponds
  - o Sidewalk area south of Utah House has become overgrown weeds with no water connection

- o Some vehicle access trail may need to be installed in Blood ponds to allow Kaysville City to clean out inlet location
- 01.14 Site lighting
  - o Desirable along Segoe Lily drive and in parking lots there as well
  - o Keep field free of lighting
  - o Lighting near amphitheater and possibly along pathway to access amphitheater from Extension Center Bldg parking

**End of Information Gathering Meeting: Facilities & Planning**





### Agenda for Meeting with Educational Programs

Project Name: **USU Botanical Center Master Plan**  
 MHTN Project No.: 2016521  
 Date: 17 May 2016  
 Time: 3:00 – 5:00 pm  
 Location: Botanical Center  
 Purpose: Information gathering meeting – Educational Programs

---

#### Items for Discussion

---

- 1 Clarify different educational programs
  - Extension, education, continuing education, others?
- 2 Anticipated program development & growth, & facilities impact
  - Plan to double current SF for education
  - Plan to add that amount again for extension offices
  - Time frame? What about more distant future?
  - How much more building SF will be needed for 25 and 50 years?
- 3 Do gardens need to grow in size?
- 4 Does arboretum need to grow in size?
- 5 Children’s garden: Educational goals? Specific elements? Space needs?
- 6 Any other new gardens needed? Anticipated sizes / features?
- 7 How to proceed with ideas such as hotel / conference center? Retail?
- 8 What should relationship be with neighboring educational institutions (high schools, DATC, Weber State Davis campus, etc.)?

#### End of Agenda for Meeting with Educational Programs

420 East South Temple, Suite 100 . Salt Lake City . Utah . 84111 . 801.595.6700 . Fax 801.595.6717 . [www.mhtn.com](http://www.mhtn.com)



### USU Botanical Center Master Plan

### Education & Extension

MHTN Project No.: 2016521.00  
 Date: 17 May 2016 @ 2:30 pm  
 Location: Botanical Center  
 Purpose: USUBC – Information-Gathering Meetings

- 01.1 Two (2) main categories of education: Extension and Regional Campus.
- 01.2 Extension: Extend the research and learning to the public.
  - o 4H, family consumer science, home relationships, food preservation, finance, home buyers, horticulture.
  - o Free or low cost education, service
  - o Specialists come from USU to teach
  - o Subject matter specialists develop the materials, county educators choose and teach.
  - o Majority are 1 to 3-class programs. Some are on line. Master gardeners - longer term program.
  - o Need some cubicles for volunteers to answer questions.
  - o Will be moving Extension services here from Farmington.
  - o ICLT classroom / banquet space, kitchen (teaching).
- 01.3 Education and continuing education are the same thing. Identified as Regional Campuses. Courses for college credit.
  - o Online classes don’t have to honor the higher education boundaries – any subject can be taught.
  - o MBA program – grandfathered at this campus (was offered before Weber added an MBA program).
  - o Education partners with outside entities - Nature Conservancy, University departments.
  - o Facility can be used by entities that need a place to teach or lecture.
- 01.4 Education and Extension will share: Reception, break areas will be joint between the two programs.
- 01.5 Current - 6,000 GSF, will double with new building.
  - o Extension will build 3,000 of this.
  - o MBA, Counseling, Social Work programs - rent rooms for these programs now.
  - o Don’t have plans to grow very large.
- 01.6 Education is changing as a whole – difficult to anticipate future needs as delivery methods will change. Lots of growth is online. Where will technology be in 10 or 25 years?
  - o Will need small study areas. No place for students to study right now.
  - o Online students have advisors in Logan. Will have an advisor on USUBC site also.
  - o Students come to local sites for testing.
- 01.7 Extension will have need for larger demonstration gardens, kitchen, etc.
  - o Need outdoor structures for gathering, children’s classes. Outdoor classrooms.

420 East South Temple, Suite 100 . Salt Lake City . Utah . 84111 . 801.595.6700 . Fax 801.595.6717 . [www.mhtn.com](http://www.mhtn.com)

USU Botanical Center Master Plan  
 Information Gathering  
 Education & Extension  
 17 May 2016 @ 2:30 pm  
 Page 2 of 2

- 01.8 Need to let K-12 schools know what is offered at this site. Help educators understand the resource that are available.
  - o Extension opportunities to work with local schools is good.
- 01.9 Education program is focused more on graduate students. HS students are not a target.
  - o Have coordinated some with DATC. Have an agreement with DATC.
- 01.10 Ideas to consider for USUBC:
  - o Children's Garden.
  - o Spaces where parents can see their children while studying or taking a break.
  - o Natural scape playground for kids.
  - o Family learning opportunities.
  - o Children's elements: incorporate ways to engage them throughout the pathways.
  - o Signage letting people know it's okay for children to access areas.
  - o Something for kids to do while adults talking.
- 01.11 Study area for adults at the perimeter of where children can be engaged.

**End of Information Gathering Meeting: Education & Extension**



**USU Botanical Center Master Plan UT Transit Authority / WFRC**

MHTN Project No.: 2016521.00  
 Date: 17 May 2016 @ 12:00 pm  
 Location: Botanical Center  
 Purpose: USUBC - Information-Gathering Meetings

<u>Attendees</u>	<u>Representing</u>
<input checked="" type="checkbox"/> Christopher Chesnut	UTA, URSTA VP & Treasurer
<input checked="" type="checkbox"/> Levi Roberts	UTA, URSTA Regional Representative
<input checked="" type="checkbox"/> Julie Bjornstad	WFRC Transportation Planner
<input checked="" type="checkbox"/> Callie New	WFRC Planner/GIS Analyst
<input checked="" type="checkbox"/> Jerry Goodspeed	Director, USU Botanical Center
<input checked="" type="checkbox"/> Ryan Wallace	AIA, LEED GA, Campus Planner
<input checked="" type="checkbox"/> Sarah Miller	AIA, LEED AP, IIDA, Data Gathering and Evaluation
<input checked="" type="checkbox"/> Randy Boudrero	ASLA, Principal-in-Charge and Team Leader
<input checked="" type="checkbox"/> Kyle Taft	AIA, LEED AP, Community Outreach and Stakeholder Collaboration

- 01.1 Daily basis - the building has between 400-500 students attending classes, with expansion coming. Estimate 750 - 1,000 will be attending in future.
- 01.2 Other site trip generators are the Utah House and Wetland Discovery Center hosting grade school children, events, wedding receptions, etc.
  - A. Student groups are primarily local from Davis County
  - B. 5,000-6,000 school children per year
  - C. Joint groups for 4<sup>th</sup> graders through the Nature Conservancy; hands-on learning about environment
  - D. 20-25 people per day walk-in visitors
  - E. Wedding receptions every weekend
- 01.3 350-500 registered USU students each semester, with variety of schedules. This number is likely to double with new expansion occurring.
- 01.4 Heavier afternoon and evening schedule for student courses/classes; Monday-Thursday, very few on Friday.
- 01.5 Summer - general education classes; 5 days/week, heavier in evening.
- 01.6 Parking currently insufficient; will increase by 75-100 stalls with upcoming project.
- 01.7 ICLT building (informal classroom and wedding center) hopefully to bring 30 per day (Interlocking Cross Laminate Timber construction)
  - A. Cooking classes will be held here.
- 01.8 Extension Offices will bring another 50 or so individuals daily.
- 01.9 Best transit location would be somewhere on south side of Segoe Lily Drive on 50 West.
- 01.10 Plans are to develop this site as a destination.



USU Botanical Center Master Plan  
 Information Gathering  
 UT Transit - WFRC  
 17 May 2016 @ 12:00 pm  
 Page 2 of 2

- 01.11 Number of visitors not sufficient to justify a bus route here.
- 01.12 Closest stop now – on Main Street.
- 01.13 Recently-passed Proposition 1 has funding for connections to transit, within three (3) miles of a transit line. Kaysville and UTA have money for paths. Paving bike trails is part of that. The west (pond) property could be eligible for this funding. Goal is to connect pedestrians and bikes to transit. Possibility to obtain funding from Prop 1 to help with paving of west pond pathway. Jerry and Chris will follow up, with Kaysville City.

**End of Information Gathering Meeting: UT Transit Authority / Wasatch Front Regional Council**



**Agenda for Concept Review Meeting**

Project Name: USU Botanical Center Master Plan  
 MHTN Project No.: 2016521  
 Date: 07 June 2016  
 Time: 1:30 pm – 3:00 pm  
 Location: Rm. 111 80 E. Sego Lily Drive Kaysville, UT  
 Purpose: Concept review meeting with Steering Committee

Items for Discussion	Time Allocated
1. <i>Refined/Draft Vision Statement:</i>  Review of refined/draft vision statement; collection of Steering Committee review comments and suggested revisions.	10 minutes
2. <i>Preliminary Program Summary:</i>  Distribution of preliminary summary of programmatic needs expressed during Information-Gathering phase.	10 minutes
3. <i>Initial Site Concepts:</i>  Interactive review session of initial site concepts, including master plan program elements. Select direction for design team to refine preferred master plan concept for presentation at June 21 <sup>st</sup> concept review meeting.	60 minutes
4. <i>Discuss Upcoming Schedule:</i>  Review upcoming schedule with emphasis on details and planning for the public open house on June 21st.	5 minutes
5. <i>Review Assignments:</i>  Review and confirm new direction and assignments from the meeting. Discuss upcoming deliverables.	5 minutes

**End of Agenda for Concept Review Meeting**



**USU Botanical Center Master Plan Initial Concepts Meeting**

MHTN Project No.: 2016521.00  
Date: 7 June 2016 @ 1:30 pm  
Location: Botanical Center  
Purpose: USUBC - Initial Concepts Meetings

Attendees	Representing
<input checked="" type="checkbox"/> Heather	
<input checked="" type="checkbox"/> Alonso	
<input checked="" type="checkbox"/> Jim Huppi	USU Facilities, Facilities Landscape Architect
<input checked="" type="checkbox"/> Kelly Christoffersen	USU Facilities, Facilities Architect
<input checked="" type="checkbox"/> John Chase	USU Facilities, Facilities RCDE Manager
<input checked="" type="checkbox"/> Jerry Goodspeed	Director, USU Botanical Center
<input checked="" type="checkbox"/> Ryan Wallace	AIA, LEED GA, Campus Planner
<input checked="" type="checkbox"/> Sarah Miller	AIA, LEED AP, IIDA, Data Gathering and Evaluation
<input checked="" type="checkbox"/> Randy Boudrero	ASLA, Principal-in-Charge and Team Leader
<input checked="" type="checkbox"/> Kyle Taft	AIA, LEED AP, Community Outreach and Stakeholder Collaboration

01.1 Vision Statement

- A. Create a summary of the key ideas as an introduction to the project vision statement.
- B. Conservation, education and natural resources are key ideas to capture in the summary. Good neighbor to the State of Utah
  - o Continuing Ed and Extension (education) are the primary directives, while recreation is a secondary goal
- C. Pull a piece from each category to create final refined statement
- D. Jerry has a few comments he will send offline

01.2 Program Needs

- A. Storage and facilities - possibly expand this section to ensure this big concern is properly captured
- B. Storage should be included in new facilities
- C. Concrete might be the best solution for the boat launch area. Must be low-maintenance. Will help prevent erosion.
- D. Maintenance and operations of master plan must be an important consideration, as staffing numbers will likely always be low.

01.3 Concept Review

- A. Concept 1: Eco-Transept. Input:

- o Like the location of the visitor center. First element that people see. Easy for people to locate the "front door". Observation tower to see the offerings. Perhaps small retail, film. Restrooms. Similar to Swaner Ecocenter.
- o Barn would support both front and back fields. Barn represents tie to USU and agricultural heritage and emphasis.
- o Amphitheater. Needs truck access and possibly fire suppression. Proximity to neighbors may be a problem. Kaysville city has expressed interest in joint use or programming of amphitheater.
- o New gardens are concentrated near existing gardens.
- o Utility corridors should be coordinated with the plan. Relevant information.
- o South ponds area not appropriate for a boat launch.
- o Art of sculpture garden? Some have wanted to add sculpture in grass garden.

B. USUBC problem areas: south ponds area and entire Prairie area.

C. Concept 2

- o Buildings surround 2 distinct quads: education and events; youth.
- o Gardens are more dispersed.
- o Guest House; variation of hotel idea.
- o Arboretum expanded to north.
- o Dry stream bed.
- o Feeling of enclosure in the two zones. Inward focus rather than outward connections.
- o Visitor center at center of east quad west end.
- o Education facilities spread out.

D. Concept 2 Feedback:

- o Youth area idea is great. Potential to generate revenue. Youth camps are big. In this location, wouldn't distract from main quad. 4-H camps would be part of educational aspect of USUBC.
- o Farm Field Days could occur there. Potential to host livestock share of State Fair.

01.4 Overall Feedback:

- A. Like 2nd concept, although it would be harder to maintain.
- B. Like the visitor's center to the south as in Concept 1, with a tower, with restrooms.
- C. Youth Quad: Could have Baby Animal Days there also.
  - o Needed in Utah and in this region.
  - o Need a location for a regional 4H camp.
  - o Wetland Discovery Point and pavilion are used mostly for youth now.
  - o Would be a better location for Baby Animal Days.
  - o Youth center would be attractive to donors.
  - o Have power and culinary to the Youth Center area. Need to check whether sufficient capacity.
  - o Ropes course would be difficult to maintain and certify once/year. Must be recertification yearly.
- D. Like the open corridor of the east zone - pull the visitor's center to the south, so people can watch sunset or sunrise from the center.
- E. Amphitheater to south, with restrooms.
  - o Provide emergency vehicle access to Amphitheater

USU Botanical Center Master Plan  
Initial Concepts  
7 June 2016 @ 1:30 pm  
Page 3 of 3

- o Compacted gravel paths. Paved to end of parking only. Then 12' wide path. Not intended for vehicles but could serve for that.
  - o Truck access must be within 150' of all areas of building.
- F. Stream. Wet or dry?
- o Secondary water runs under north fence and under south fence also.
  - o Use that water for the stream? Plausible?
- G. Maintenance sheds: youth center; near visitor center; northeast education area.
- H. Town Hall meeting. Ask the cities (Kaysville and Farmington) to send an email notice. Kyle will send email draft to Jerry, who will send it to needed contacts at cities.
- o Master plan presented to the public will be a draft plan, not a final.

**End of Initial Concepts Meeting**



**Agenda for Meeting with Educational Programs**

Project Name: **USU Botanical Center Master Plan**  
 MHTN Project No.: 2016521  
 Date: 21 June 2016  
 Time: 4:00 - 5:00 pm  
 Location: Kaysville City Hall, Council Chambers  
 Purpose: Master Plan Draft Review Prior to Public Meeting

---

**Items for Discussion**

---

1. Review updated Vision Statement
2. Review Schedule: Next Events
3. Review USU Expectations and Comments regarding: Project Process and Progress
4. Review Revised Draft Master Plan
5. Discuss Format and Agenda for Public Meeting at 6:30 PM
6. Discuss American Planning Association opportunity for October 2016

**End of Agenda for Draft Master Plan Review Meeting**



**USU Botanical Center Master Plan Refined Concept Meeting**

MHTN Project No.: 2016521.00  
 Date: 21 June 2016  
 Location: Botanical Center  
 Purpose: USUBC - Refined Campus Quads Concept Meeting

Attendees	Representing
<input checked="" type="checkbox"/> Jim Huppi	USU Facilities, Facilities Landscape Architect
<input checked="" type="checkbox"/> Kelly Christoffersen	USU Facilities, Facilities Architect
<input checked="" type="checkbox"/> John Chase	USU Facilities, Facilities RCDE Manager
<input checked="" type="checkbox"/> Jerry Goodspeed	Director, USU Botanical Center
<input checked="" type="checkbox"/> Deanne Corrales	Manager, USU Botanical Center
<input checked="" type="checkbox"/> Ryan Wallace	AIA, LEED GA, Campus Planner
<input checked="" type="checkbox"/> Sarah Miller	AIA, LEED AP, IIDA, Data Gathering and Evaluation
<input checked="" type="checkbox"/> Randy Boudrero	ASLA, Principal-in-Charge and Team Leader
<input checked="" type="checkbox"/> Kyle Taft	AIA, LEED AP, Community Outreach and Stakeholder Collaboration

- 01.1 Youth Quad
  - A. Native grasses, low maintenance
  - B. Same pasture grass as in farmer's market area. Mow once / year
  - C. Guest house is undefined. Bunkhouse - 2 rooms, male and female, rooms for chaperones. Similar to a dorm.
  - D. Screening landscape / vegetation for neighbors to the north.
  - E. Kitchen for minor food prep. Good resource for 4H.
  - F. Commons area with refrigerator and microwave. Bring drinks. Cater hot food. Not a kitchen.
  - G. Barn. Supporting 4H functions. Fallback location for inclement weather. Good branding opportunity.
  - H. Baby Animal Days in this area. Double the number of existing parking stalls.
  - I. 8,000 visitors during Baby Animal Days. Nothing else will occur during that event.
  - J. Usually have bad weather during the event.
  - K. No access to guest house area from the north. Too tight.
  - L. Educators centered in Wetland Discovery Point. Work from that area. Keep youth programs in that area.
- 01.2 Amphitheater
  - A. Approximately 2,000 seats size represented on plan
  - B. Parking within a 5-minute walk of the amphitheater
- 01.3 Utilities
  - A. Visitor Center shown in a crowded utility area. May need to move east.
- 01.4 Barn
  - A. Possibility of having the barn in the "new Garden" area, near the Ed Center.
  - B. Perhaps 2 barns. One near south edge of Flexible Open Quad.
  - C. Long term future development in the north west youth center. Put first in New Garden area, near Ed Center.
  - D. Long term, in the Youth Center.
  - E. 8,000 to 12,000 SF

- 01.5 Education
  - A. Close to 1,000 students at education facilities. Parking concerns.
  - B. Education building. Will there be a placeholder for another education building on the site?
- 01.6 50 West
  - A. Parallel parking only
  - B. Xeric garden along west side of 50 West.
- 01.7 Visitor's Center
  - A. Move Visitor's Center to east, at apex of parking arc. Needs to be visible for people approaching the Center. Directly across from Ed Center.
  - B. Location for retail, Aggie Ice Cream.
  - C. Retail outlets tend not to be money-makers. Serve more of an outreach and service function.
- 01.8 Utah House
  - A. Provides a model for low-energy, water design.
  - B. Expansion isn't to the House, but for an indoor/outdoor structure.
- 01.9 Ponds
  - A. Water level of ponds fluctuates up to 3 feet.
  - B. Controls the flow to the water west of I-15.
  - C. Concrete steps serve as a boat access point.
  - D. South end not used for fishing very much - too shallow
- 01.10 Access
  - A. Must have limited access. Controlled access that is free. Reduces vandalism.
  - B. Plan shows 3 access points on the east side, but open access on west side.
  - C. With ropes course, must limit access.
  - D. Have signed agreement with DNR and Kaysville. Easement access to the ponds, but that doesn't exclude limiting access.
  - E. Include trash cans in the access points. You bring it in, you pack it out. Put it on the signs.
- 01.11 Composting: Can have a demonstration area, but limited.
- 01.12 Maintenance Facility
  - A. Need to have a utility area.
  - B. Places to store surplus soil, compost, bark chips; 3 walls plus a cover.
  - C. Large trucks make the deliveries. Have envisioned it on the west side. Difficult to access - will always be. Needs maneuvering space.
  - D. To south of children's garden. Grow plants around it.
  - E. Basic gardening tools will be stored in each shed. Shovels, pruners, etc.
  - F. Flammables will be kept on the farm. Mower gasoline in the sheds.
  - G. Fertilizer, chemicals, etc., need to be in controlled area, separately by themselves.

They are good with the overall direction.

Next Steps, July 12 Meeting

- Phasing
- Updates based on feedback
- Guidelines: Signage paving, pathways, landscape and architectural guidelines

USU Botanical Center Master Plan  
 Refined Concept  
 21 June 2016  
 Page 3 of 3

Friday, October 6, afternoon, 3-6. APA planning conference  
 • Possible presentation about the USUBC Master Plan.

**End of Refined Concept Meeting**



**Agenda for Meeting with Educational Programs**

Project Name: **USU Botanical Center Master Plan**  
 MHTN Project No.: 2016521  
 Date: 21 June 2016  
 Time: 6:30 – 8:30 PM  
 Location: Kaysville City Hall, Council Chambers  
 Purpose: Master Plan Draft: Public Presentation, Q/A, Open House

---

**Items for Discussion**

---

1. Discuss process
  - a. Introduction of our team
  - b. Hired by USU
  - c. Create a Master Plan with phasing for 10 years, 25 years, and 50 years
  - d. Involve the community – Kaysville, Farmington, other cities, Davis County
  - e. Involve governmental agencies – UDOT, UTA, Public Works, etc.
  - f. Extensive meetings with stakeholders
  - g. Design meetings with USU
  - h. Draft Master Plan
  - i. Seeking your comments and input
  
2. Review Schedule
  - a. Where we have been
  - b. Where we are going
  
3. Present Master Plan Concepts and Guiding Principles – from Vision Statement
  - a. USU BC seen as a community amenity
  - b. Perhaps discuss major planning concepts
  - c. Overall Draft Master Plan
  - d. Discussion of overall Precincts / Districts / Quads / Zones and relationships
  - e. Discussion of individual precincts and facilities
  - f. Other Items
  
4. Q/A and input
  
5. Open House
  - a. Additional opportunity to review the plans up close
  - b. Opportunity for additional comments / plan mark-ups by team
  - c. Discussion

**End of Agenda for Draft Master Plan Presentation Agenda**



### Agenda – Refined Concept Review

Project Name: **USU Botanical Center Master Plan**  
 MHTN Project No.: 2016521  
 Date: 12 July 2016  
 Time: 1:00 – 3:00 pm  
 Location: USUBC Kaysville Education Center, Room 118  
 Purpose: Review refined concept, phasing/costs and draft standards and guidelines, prior to draft documentation

---

#### Items for Discussion

---

1. Refined Concept. Discussion Points:
  - a. Barn Access
  - b. Service Road
  - c. Central Maintenance
  
2. Utilities
  
3. Preliminary Phasing & Costs
  
4. Design Standards & Guidelines
  - a. Paths & Trails
  - b. Signage
  - c. Site Furnishings
  - d. Fences & Roads
  - e. Landscape
  
5. Schedule & Next Steps

#### End of Agenda



### USU Botanical Center Master Plan

### Concept Review

MHTN Project No.: 2016521.00  
 Date: 12 July 2016  
 Location:  
 Purpose: USUBC – Concept Review – Standards & Guidelines

Attendees	Representing
<input checked="" type="checkbox"/> Jerry Goodspeed	Director, USU Botanical Center
<input checked="" type="checkbox"/> Jim Huppi	USU Facilities, Facilities Landscape Architect
<input checked="" type="checkbox"/> Kelly Christofferson	USU Facilities, Facilities Architect
<input checked="" type="checkbox"/> Dede Corrales	Manager, USU Botanical Center
<input checked="" type="checkbox"/> Lyle Gibson	Kaysville City, Community Development
<input checked="" type="checkbox"/> Dean Tom Lee	USU Brigham Campus, Dean & Executive Director RCDE
<input checked="" type="checkbox"/> Craig Rasmussen	Forsgren Associates Civil Engineers
<input checked="" type="checkbox"/> Ryan Wallace	AIA, LEED GA, Campus Planner
<input checked="" type="checkbox"/> Sarah Miller	AIA, LEED AP, IIDA, Data Gathering and Evaluation
<input checked="" type="checkbox"/> Randy Boudrero	ASLA, Principal-in-Charge and Team Leader
<input checked="" type="checkbox"/> Kyle Taft	AIA, LEED AP, Community Outreach and Stakeholder Collaboration

- 01.1 Ryan reviewed the changes made to the master plan since the previous meeting:
  - A. The west berm is shown, labelled “native plant zone”.
  - B. Second barn is shown, near entry point to Segó Lilly Drive.
  - C. Barn location shifted.
  - D. Central Maintenance bins shown.
  
- 01.2 Feedback / input on plan:
  - A. Jerry requested that the second barn be removed from the plan. The Youth Quad barn will be constructed earlier, rather than constructing this barn as a temporary structure.
  - B. The Central Maintenance facility will be open bins. Semi-trucks will access this area for deliveries.
  - C. The “S” road that Craig Rasmussen of Forsgren Engineers brought to MHTN’s attention this week has already been constructed, is shown on Google Earth images and will be incorporated into the plan. It is 12 feet wide and provides an ambulance access route.
  
- 01.3 Utilities discussion:
  - A. With construction of the ICLT, utilities will be provided to the east zone of the campus, with the exception of electrical to the amphitheater location.
  - B. There are two bio filter systems at Wetlands Discovery Point; only one is being used. This system may be sufficient for the new buildings shown in the west / northwest

zone of the Center (barn, guest house, restrooms), especially if low-water fixtures are used in these new facilities.

- C. The Central Maintenance facility will require secondary water for cleaning tools and equipment.
  - D. Possible connections points for culinary water and fire water, for the new proposed buildings in the northwest zone, were discussed. There are an existing 2-inch culinary water line with 75 lbs. of pressure and an 8-inch fire water line that currently serve the Wetlands Discovery Point building.
  - E. Kaysville City allowed the Wetlands Discovery Point building to have a fire water connection that is located midway on the access road coming from 50 West St. The City may allow this for the new proposed buildings.
- 01.4 Phasing discussion:
- A. Barn 1A is removed from the plan.
  - B. The phasing of particular Kayak / Canoe Access and Boardwalk / Interpretive Sign locations will be modified per meeting attendee input.
  - C. The majority of the xeric planting east of the ponds will be changed to lower-maintenance landscape of trees with native grasses. Xeric plantings will be used at locations where high-impact visuals are desired.
  - D. Barn 2A will be moved to Phase 1.
  - E. The ICLT is mislabeled as a Restroom / Maintenance facility; this will be corrected. Restrooms and storage will be provided by the ICLT; a separate building will not be needed in that location.
- 01.5 Design Standards and Guidelines:
- A. Boardwalks – design similar to existing
  - B. Asphalt: will be used on bicycle / walking path along east edge of pond zone (only location for asphalt path)
  - C. Stone: used on some patios now; match this use going forward
  - D. Crushed granite / gravel: use steel edging (don't use stone edging)
  - E. Chat (small stones left over from screened gravel): use on pathway to amphitheater
  - F. Mulch: use in planting beds only, not on walkways and paths
  - G. Road base: will be in access road to new parking currently being constructed; should be used for access road to Central Maintenance facility; otherwise, avoid using
  - H. Entry signs: use stone, similar to existing
  - I. Plant ID and interpretive signs: similar to existing. Should be minimal in design and quantity, so as not to distract from the plants, landscape, etc.

- J. Trail Wayfinding: the type shown in the photo is good; these are needed
  - K. Wayfinding maps: don't mimic the look of Forest Service signs; keep them simple, minimalist
  - L. Benches: fixed only, no loose. A given area should have a consistent look / similar styles. Simple styles that can be provided by multiple manufacturers. Can be loose (not fixed) if too heavy to move.
  - M. Trash receptacles: require lids (raccoons). Function is a priority. Side-opening is good.
  - N. Art: they would like some garden art.
  - O. Shade structures: these will be "extras", will have if funded by donors
  - P. Picnic tables / benches: provide these
  - Q. Lighting: provide from parking to buildings. Do not provide in gardens and garden access points (don't encourage accessing gardens after dark). No in-ground lighting; no bollard lighting
  - R. Gateways: yes, some types
  - S. Fencing: metal mesh (black) and metal lattice at limited, special locations (costly)
  - T. Gabion wall: perhaps, limited (not good for sitting)
  - U. Dry stream bed: bottom image (most natural appearance)
  - V. Pasture grasses: those shown are good
  - W. Xeric buffer: no – too labor intensive
  - X. Formal buffer: easiest to maintain
  - Y. Architectural element / materials: rustic materials (corrugated steel; rusted steel; stone (Brown's Quarry). Pitched roof forms. Locate glass where needed / beneficial (views, solar orientation). In Visitor Center, but perhaps not classrooms.
- 01.6 The University would like to get more public input on the master plan, before it is finalized. Showing it at the Farmer's Market is a possibility. Jerry will follow up.

**End of Concept Review – Standards and Guidelines**



### Agenda – Refined Concept Review

Project Name: **USU Botanical Center Master Plan**  
 MHTN Project No.: 2016521  
 Date: 16 August 2016  
 Time: 1:30 – 3:30 pm  
 Location: USUBC Kaysville Education Center, Room 118  
 Purpose: Review the draft master plan document.

#### Items for Discussion

1. Steering Committee Questions:
  - a. Education Building and ICLT Building: show as new or existing in the plan document.
  - b. Please provide existing parking stall counts
  - c. Feedback on Vision Statement

2. Facility Visits: Tour of Sandy Amphitheater?

3. Draft Document Review

4. Schedule & Next Steps

USU review of Draft Document	August 16 - 23
Final edits based on review comments	August 23 - 30
Publish final Master Plan Document	August 31

**End of Agenda**



### USU Botanical Center Master Plan

### Draft Document

MHTN Project No.: 2016521.00  
 Date: 16 Aug. 2016  
 Location: Botanical Center  
 Purpose: USUBC – Draft Document Presentation & Review

Attendees	Representing
-----------	--------------

- |                                     |                      |  |
|-------------------------------------|----------------------|--|
| <input checked="" type="checkbox"/> | Jerry Goodspeed      | Director, USU Botanical Center                                 |
| <input checked="" type="checkbox"/> | Jim Huppi            | USU Facilities, Facilities Landscape Architect                 |
| <input checked="" type="checkbox"/> | Kelly Christofferson | USU Facilities, Facilities Architect                           |
| <input checked="" type="checkbox"/> | Dede Corrales        | Manager, USU Botanical Center                                  |
| <input checked="" type="checkbox"/> | Lyle Gibson          | Kaysville City, Community Development                          |
| <input checked="" type="checkbox"/> | Ryan Wallace         | AIA, LEED GA, Campus Planner                                   |
| <input checked="" type="checkbox"/> | Sarah Miller         | AIA, LEED AP, IIDA, Data Gathering and Evaluation              |
| <input checked="" type="checkbox"/> | Randy Boudrero       | ASLA, Principal-in-Charge and Team Leader                      |
| <input checked="" type="checkbox"/> | Kyle Taft            | AIA, LEED AP, Community Outreach and Stakeholder Collaboration |

01.1 Input to Questions:

- A. Show ICLT (\$1.5) and EC (\$2.3M) as new
  - o Interlocking Cross Laminated Timber building
- B. Around 145 parking stalls in the new parking lot, 50 at Utah House, 25 at WDP
  - o Also include 50 West Street parking
- C. Send Jerry a list of dates to visit Sandy Amphitheatre
- D. Follow up with Tom Lee about aerial photograph of the site
- E. Update utility plans to reflect information shared from Kaysville City

01.2 Review Comments:

- A. Add new WDP pavilion to existing plans adjacent to WDP
- B. Move Amphitheatre to north of dry wash, leave RR & Storage building in place but shift west to take advantage of utilities
- C. ICLT building is 4,000 SF – update in Executive Summary
- D. Update fence line to preclude public access to the Rasmussen teaching garden
- E. Sanitary sewer line stops short of road on utilities
- F. No power line on south road
- G. Hights Creek line on 50 W provides access to southern edge of site for irrigation



USU Botanical Center Master Plan  
Draft Document Presentation & Review  
16 Aug. 2016  
Page 2 of 2

- H. Identify irrigation water line as abandoned from se corner north
- I. Remove fence from utility plan
- J. Include lateral lines from irrigation line into the Quad area and near Ed building
- K. Follow-up with Kelly Christoffersen about plans of Ed Building expansion and parking
- L. Remove some of the trails in the south pond – just one as a boardwalk near Utah house
- M. Rapid flashing beacons at crosswalks in narrative
- N. Show parking turnaround of maintenance storage bins
- O. Show storm drain in and out of the ponds on utility plans
- P. Remove Arizona image which looks contrived, or any red stone images
- Q. Include reference to Brown's Quarry stone
- R. Follow-up with Jim Huppi about images of metal fencing on Logan Campus
- S. Interpretive arboretum signs are not liked or durable – come up with alternative solution for smaller signage with QR codes
- T. Stone paths should be minimal for ease of maintenance – only at building entries
- U. Amphitheater image well received
- V. 15 physical copies for final, 4 copies for Logan review

**End of Draft Document Presentation & Review**

