Assessing the Impacts of LAEP Extension at USU: Development of a Model Framework

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ASSESSING THE IMPACTS OF LAEP EXTENSION AT USU: DEVELOPMENT OF
A MODEL FRAMEWORK

by

Jason G. Parkinson

A thesis submitted in partial fulfillment
of the requirements for the degree
of
MASTER OF LANDSCAPE ARCHITECTURE

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2019
ABSTRACT

Assessing the Impacts of LAEP Extension at USU: Development of a Model Framework

By

Jason G. Parkinson, Master of Science
Utah State University, 2019

Major Professor: Dr. Ole R. Sleipness
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Over several decades, USU’s Landscape Architecture and Environmental Planning (LAEP) Department and Extension specialists have engaged Utah’s rural communities through several design-based outreach activities. These activities are intended to benefit both community partners interested in learning how design can positively impact the community in tangible ways, and students, who are given the opportunity to engage with real-world projects. This study documents, evaluates, and assesses outcomes of community engagement projects undertaken by LAEP Extension to better understand the program’s impact over time and come up with approaches that will enhance the impact of future community engagement projects.

This research develops a framework of indicators for assessing the impact of the selected LAEP Extension projects. Selection criteria ensures representation of an extensive array of project typologies and settings undertaken by LAEP Extension.
Selected projects’ impact will be thoroughly assessed through detailed physical site examination of selected projects, administration of surveys/questionnaires/interviews with knowledgeable individuals for each project, evaluation of relevant economic data, and analysis of projects’ relationships to other local factors.

Expected results include the assessment of issues related to preserving records of Extension projects, recommendations for establishing a model framework for assessing future projects’ impact, and structuring processes of documentation and evaluation for advancing research in landscape architecture, community engagement, and service-learning. It is also expected that this project will illuminate the way each project connects with Extension design engagement, subsequent project funding, and practitioner involvement.

Targeted outcomes include a greater understanding of the impact of design on communities’ physical, economic, and social conditions; an increased capacity among community partners to apply design to issues that they identify in their communities; and greater collaboration between USU LAEP and Extension. Outcomes also include developing a model framework that can be used to assess, evaluate, and document the various impacts of university design engagement activities at both USU and other land grant-based design programs by evaluating past design Extension projects and future design engagement activities.
ACKNOWLEDGMENTS

First, I would like to thank my loving wife for her support and encouragement throughout my schooling, for her ability to see my potential, and for believing in me. Thanks are also due to my son, Grey, for being the ray of sunshine that I needed each day and giving me the desire to work hard. Thank you to my parents, Kirk and Gwen, for supporting me in my education and teaching me the importance of education and hard work. To my brother, Cole, who always called at the right time to give me a laugh and encouragement and to my late sister, Terra, who could always see my potential and pushed me the hardest to be my best self. Thank you, family, for your patience as I worked my way from the initial proposal writing to this final document. I could not have done

I would like to thank Dr. Ole Sleipness for working with me on this project and allowing me to help him in this study. I would especially like to thank my committee members, David Anderson, David Evans, and Dr. Roslynn Brain McCann, for their support and assistance throughout the entire process. Also, Jake Powell for giving me lots of feedback and letting me stop by anytime with questions. I especially want to thank the wonderful LAEP office staff, MaryAnn Anderson and Katie Stringham, for helping me with my site visits all summer long and making sure I stayed on track.

Jason Grey Parkinson
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LIST OF ABBREVIATIONS

ASLA = American Society of Landscape Architects
BLA = Bachelor of Landscape Architecture
CDT = Community Design Team
LAEP = Landscape Architecture and Environmental Planning
MLA = Master of Landscape Architecture
NPS = National Park Service
Pop. = Population
SAESs = State Agricultural Experiment Stations
USDA = United States Department of Agriculture
USGS = United States Geological Survey
USU = Utah State University
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INTRODUCTION

Over the past several decades, Utah State University’s Landscape Architecture and Environmental Planning department (LAEP) and Extension specialists have engaged Utah’s rural communities in a variety of design-based service-learning and outreach activities, often using participatory design processes in which faculty and students work alongside community members and stakeholders to identify and address tangible needs through design. Over 200 LAEP extension projects have been recorded. While these projects have contributed to the reputation of USU LAEP as a leader in design outreach, the impacts of these endeavors have not been consistently or formally documented, evaluated, or widely disseminated as research products in scholarly venues of landscape architecture or Extension. The intentions for this project are to identify the various impacts USU LAEP has had on communities, as well as better understand where improvements to the service provided and project documentation and recording can be made. With the development of a model framework, the participants in this project hope that USU, other land-grant institutions, and community partners might apply knowledge gleaned from our process and better serve in outreach and service-learning opportunities.
Utah Has Challenges

As of 2018, 3.16 million people lived in Utah. By 2065, the population is expected to almost double. Most of this population growth is occurring along the Wasatch Front, a 15-by-86 mile corridor between Ogden to the north, Salt Lake City in the center, and Spanish Fork to the south (Lilieholm, Toth, & Edwards, 2005). Within this corridor, 2.35 million Utahns—74% of the state’s entire population—live on just 4.3% of the land (Utah Population, 2018).

The Wasatch Front faces a variety of challenges when it comes to its rapid population growth. Constrained by the Wasatch Mountains, the Great Salt Lake, Utah Lake, and the Oquirrh Mountains (Figure 1), these natural features physically limit the metropolitan area’s ability to develop in a sprawling pattern. Additional limits to the area include water availability and other ecological concerns. Because of these obstacles, the rapid growth rate threatens the quality of life for many residents by impacting ecosystems and air quality, water availability, and traditional land uses (Lilieholm, Toth, & Edwards, 2005).
Figure 1. Wasatch Front Geography (Lilieholm, Toth, & Edwards, 2005).
Responses to Utah’s Challenges via Landscape Design

Although Utah faces many physical, environmental, and social challenges—whether they be naturally-caused or due to an increase in population or resource scarcity—each challenge provides opportunities for university design programs to engage local communities in projects that will address tangible needs. Many of these needs can ultimately be resolved or mitigated by design solutions, such as master plans for revitalization of a downtown. Addressing these challenges begins with a complete understanding of the issue at play, its complexity, and its context (McHarg, 1969). Landscape architecture places a high priority on the design process for developing design solutions (McHarg, 1969). Part of this process consists of inventory and analysis (Milburn & Brown, 2003). This part of the process focuses on developing a deep understanding of the background of each issue and helps designers and landscape architects attempt to solve the problem. This process is not a one-time method, but rather a process of recurring research and project study. Revisiting the process often helps identify new information that can be useful in addressing critical issues (Milburn & Brown, 2003). Often there is more than one solution, and the design process helps flesh out new ideas. This process is not unique to landscape architecture. Many disciplines recognize the power of the design process in addressing issues (Straub, 1982). Many business models have adopted this process and have seen the benefits it produces. The design industry relies heavily on this process in the form of product development, art, graphic design, website layout, and many other areas of production and procedure (Straub, 1982). The process also plays a significant role in education, whereby students
learn to think critically, problem solve, and address issues from every angle (Barbour, 2016). Students greatly benefit from understanding the design process.

**Benefits of Design/University Design Engagement**

Service-learning is a valuable learning opportunity for students; it strengthens critical thinking and problem-solving skills, which are especially important when addressing problems in professional practice (Swaffield, 2002). It also gives students a greater appreciation for the opportunity of higher education. Eyler, Giles, & Astin (2010) identify “five key personal growth outcomes of service-learning: self-knowledge, spiritual growth, the reward of helping others, career benefits and careers in service, and changes in personal efficacy.”

Rural communities searching for solutions see the benefits of service-learning through the engagement they have with university faculty members and community members. Members of such communities experience the dedication that students have in making their community a better place. Communities can also see the importance of service-learning by gaining access to new knowledge and opportunities through design work, planning, and improved technologies. They often develop a relationship with the university that can potentially result in other connections with additional resources (Astin, Vogelgesang, Ikeda, & Yee, 2000, Bose, Horrigan, Doble, & Shipp, 2014).

After participating in service learning, participants have reported feeling a greater sense of meaning and by participating in service-learning. This community engagement helps its citizens develop a desire to give back to the community and helps them develop
personal connections with the community and environment in which they live (Eyler, Giles, & Astin, 2010).

Service-learning is also a valuable resource for the university. Connections and relationships made in communities provide universities with valuable resources, funding, and recognition. Many universities have incorporated service-learning in their studios as a way to both teach students and address the needs of surrounding communities. Service participation in studios enhances a student’s academic performance in multiple arenas: GPA, writing skills, critical thinking skills, awareness of personal values, self-efficacy, leadership and leadership activities, interpersonal skills, and the selection of a service career are all affected (Astin, Vogelgesang, Ikeda, & Yee, 2000). Such participation also instills in students a higher priority to participate in service after leaving school (Astin et al., 2000).

Each unique service-learning opportunity adds to the university’s credibility and community engagement. These activities include charrettes, studios, and Community Design Teams (CDT). Taking part in such varied engagement opportunities and documenting these service-learning projects adds to the university’s portfolio. It also provides an opportunity for future research and study on similar projects. In these ways, each project provides valuable information in moving forward with new projects or revisiting past projects for assessing performance or impacts (Angotti, Doble, & Horrigan, 2012).

The design process is a valuable tool that is fundamental in helping address issues. This process, in itself, can transform how people think and solve problems. It promotes critical thinking and creativity (Steinitz, 1995). The design process teaches
students to override any roadblocks by identifying viable solutions. It is continual and repetitive, inspiring students to constantly search for new opportunities and try to see possibilities from an elevated perspective. The design process also engages communities through design participation and involvement in design solutions. This involvement allows community members to provide input that professionals would otherwise spend valuable time digging up through research.

**Land-Grant Schools**

In 1862, the Morrill Act was passed, providing opportunities for higher education to U.S. citizens through the granting of public lands to each state for the express purpose of establishing additional educational institutions. The resulting land grant colleges focused their energies on establishing engineering, technical skills, and agricultural specializations ((National Research Council, Board on Agriculture, & Committee, 1969)).

The Morrill Act of 1862 gave land grant institutions a mandate to teach information relevant to the agriculture industry. Then, in 1887, these institutions developed a research function, thanks to the Hatch Act. Ineffective agricultural practices such as watering techniques, nutrition, and product development generated a need for original research to reinforce best agriculture practices and help develop better and more innovative ways of growing, producing, and processing food.

With legislative funding and support, State Agricultural Experiment Stations (SAES) were introduced to further the development of research. The purpose of SAESs was to aid research both on and off campus (National Research Council, 1996).
In the 1914 Smith-Lever Act, these institutions took on a third function, called "Cooperative Extension." This provided a way to disseminate agricultural knowledge beyond the university, by educating communities with the newest methods, practices, and information. Extension also served as a positive collaboration between the federal government and the states (National Research Council, 1996). You can see the evidence of this through community engagement and outreach. The difference between land-grant and other types of universities lies in the mandate to disseminate research resources through service-learning. Although other types of universities often participate in extension outreach activities, they are not mandated to do so by code. As seen in (Figure 2), each state has at least one land-grant institution (National Research Council, 1996).

Figure 2. U.S. Land-Grant Institutions (USDA, 2017).
Extension as Outreach and Applied Research

Extension is an important part of land-grant education, in that it focuses on furthering agricultural and technical knowledge and research to service external audiences (Sleipness, Ryan, Krikac, & Gomez, 2016). Such service in a university setting involves activities that build, promote, sustain, or generate new academic opportunities. Services include Service to the Institution, Community and Civic Engagement, Community Outreach, and Service to the Discipline or Profession (Bandy, 2018). In these ways, extension bridges the gap between the university and the public. Service-learning is, therefore, a method of teaching that enriches students’ understanding of academic content through authentic opportunities in which they can apply course work to addressing local and community needs (Khan and Jacob, 2015). The public is also benefitted by the resultant affordable resources, visual and programmatic design solutions, and collaboration with students and universities.

Service-learning provides a win/win situation for students looking to gain experience in a selected field and the public, who gleans knowledge from the students and institutions they represent. Applied Research is research specific to solving practical issues or to answering certain questions. When Applied Research moves hand-in-hand with Extension, it provides opportunities to understand new technology and gain a wealth of knowledge from the most current and up-to-date research (Orland, 2014).

Nationally, there are 72 Landscape Architecture programs in the U.S. Of the 72, only 26 are land-grant institutions. Of those 26, only 10 advertise their involvement in Landscape Architecture Extension. Within those 10 institutions, there are 20 degrees offered: 9 BLA degrees, 9 MLA degrees, and 2 PhD degrees. Communities recognize the
value of Extension landscape architecture as a resource for responding to local design and planning issues. Solutions provided through outreach benefit both community members and students (Bose, Horrigan, Doble, & Shipp, 2014).

**History and Purpose of Utah State Landscape Architecture Extension**

Over the past 45 years, there have been hundreds of documented Extension projects. However, this may not be a complete representation of the work that has been done through the landscape architecture and environmental planning department, which includes Extension. Numerous studio projects, CDT’s, and consultations have included outreach and service-learning in communities, although they may not have been officially documented nor had an Extension appointment.

Extension landscape architecture at Utah State University has played a major role in community engagement with the university. Since the creation of an Extension Community Development Specialist position in 1973, the department of landscape architecture and environmental planning (LAEP) has participated in over 200 projects in the Intermountain West, illustrated in (Figure 3). Those appointed to lead the LAEP Extension development have spent much of their careers devoted to serving communities throughout the state. Their careers have been full of engaging projects, successes, and relationship building. LAEP has placed high priority on the development of Extension in landscape architecture within the numerous projects and locations they have served (Utah State University, LAEP Department, 2014).
Figure 3. All Extension Landscape Architecture Projects
Effects of Design in Rural Areas

Rural communities that rely on a resource-based economy are seeing extreme changes as those resources are being challenged. Changes such as globalization, shifting demographics, and economic changes continue to threaten rural communities (Sleipness, Ryan, Krikac, & Gomez, 2016). These communities experience unique challenges such as rapid growth, unsuitable infrastructure, and planning concerns as they shift from natural, resource-based economies to amenity-rich, recreation economies (Howe, McMahon, & Propst, 2012). Although these challenges can have negative impacts on these communities, many of these challenges also provide opportunities for effective design solutions (Bartuska & Young, 2007).

The challenges of rural communities present exceptional outreach opportunities for students studying design disciplines such as landscape architecture, interior design, and architecture (Sleipness, Ryan, Krikac, & Gomez, 2016). Community engagement can inspire creative ideas and enthusiastic students. Land-grant universities mandated to extend knowledge, research, and outreach are also intended to contribute to and enhance the well-being of rural communities (Sleipness, Ryan, Krikac, & Gomez, 2016).

USU’s landscape architecture Extension understands the need for planning and design, as well as the needs of rural communities throughout Utah for professional planning and design resources (Lee, 2008). Rural communities may not have the resources to hire design and planning professionals to help them with their challenges. Therefore, many universities have contributed to service-learning exercises by creating opportunities for community members, together with design programs, to improve rural communities through design solutions (Angotti, Doble, & Horrigan, 2012).
Community Capitals in Rural Utah

The term *capital* is most frequently found in economics and refers to “money or assets” invested to yield economic outcomes (Bishop, Press, & Tauber, 2010 p. 54). The Community Capitals Framework is a measurement of resources or assets possessed by a community. There are seven capitals (see Table 1) used to assess the condition of a community: natural, cultural, human, social, political, financial, and built (Flora, Flora, & Gasteyer, 2016, pp. 14-18).

*Table 1.*

*Seven Capitals in the Community Capitals Framework* (Flora, Flora, & Gasteyer, 2016).

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<tr>
<td><strong>Natural Capital</strong></td>
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<tr>
<td>Elements of nature present in a community, including land and water resources, weather, and biodiversity</td>
</tr>
<tr>
<td><strong>Cultural Capital</strong></td>
</tr>
<tr>
<td>Values and perspectives of community members that play a major role in self-efficacy and in affecting community change</td>
</tr>
<tr>
<td><strong>Human Capital</strong></td>
</tr>
<tr>
<td>Education, skills, health, and self-esteem of community members</td>
</tr>
<tr>
<td><strong>Social Capital</strong></td>
</tr>
<tr>
<td>Trust, collaboration, and shared vision among community members</td>
</tr>
<tr>
<td><strong>Political Capital</strong></td>
</tr>
<tr>
<td>Ability of groups or communities to influence policy and ensure that policies are implemented accordingly</td>
</tr>
<tr>
<td><strong>Financial Capital</strong></td>
</tr>
<tr>
<td>Monetary resources</td>
</tr>
<tr>
<td><strong>Built Capital</strong></td>
</tr>
<tr>
<td>Facilities that contribute to the infrastructural capacity of communities</td>
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Rural communities tend to suffer with regard to Community Capital, but as they start to develop capital, these same communities tend to move to fully take advantage of its potential (Smith, Krannich, & Hunter 2001). Communities that lack human capital generally benefit from opportunities that USU LAEP Extension offers. Communities that lack financial capital often get stuck because professional design firms can be expensive and overwhelming. USU provides low-cost help to these communities. In many cases, USU also helps stakeholders apply for grants and opportunities for financial help. Built capital is not always a luxury in rural communities. The lack of infrastructure poses issues for development and limits future possibilities (Hales & Hohenstein, 2014).

The purpose of Utah State University’s Extension landscape architecture program is to provide a valuable resource to communities throughout Utah and the surrounding states. They focus on areas of landscape architecture and planning. Many of Utah’s rural communities are experiencing growth and are in need of planning expertise to meet the needs of both longtime residents and those moving into their communities. Their goal is to help these small communities make smart decisions about how they develop and plan for the future. Many of these communities lack financial and human capital, making it hard to make smart planning decisions and pay for professional planning consultants. With the work developed by USU students and faculty, these communities can receive the help they need and have access to valuable resources throughout the planning process. The work also provides students opportunities to work with real clients and help identify and solve real problems. The work done by USU’s Extension landscape architecture program has the potential to help communities apply for federal grants that will help them put into action the plans developed by USU Extension or additional professional
practitioners hired to continue the project (USU LAEP Extension, 2018). The experience that Extension projects provides for students is extremely valuable for building and diversifying a portfolio while also obtaining experience working with real clients on a real project. These experiences are critical for upcoming professionals. They build skills that cannot be learned in textbooks or in a lecture (USU LAEP Extension, 2018).

**LAEP Extension**

**1973-1992**

The LAEP department recorded the following about Larry Wegkamp’s history and career at USU:

In 1973, USU hired Larry Wegkamp to fill the new position of Extension Community Development Specialist. Larry graduated from the University of Utah and then later from the University of Massachusetts with an MLA and taught for two years in the landscape architecture program at the University of Maryland. His 19 years at USU provided many successful projects, one being the “Battle of Bear River” monument in Preston, Idaho. (Utah State University, LAEP Department, 2014).

**1992-2017**

After Larry’s retirement in 1992, David Bell filled the position with enthusiasm. He brought new skills to the department and its Extension appointment. LAEP Extension has said the following about Mr. Bell:

Graduating from USU in 1967, David then pursued an MLA at the University of Michigan. From there, he worked on the East Coast at prestigious firms including The Rouse Company and Land Design Research, Inc. David and his family then moved back to Utah, where he and partner Jay Nielson founded Land Design in Salt Lake City. David later was a Principal at Design Workshop, and for the past 26 years has served as the Extension Landscape Architect at USU. David’s time in the LAEP department added numerous projects to its portfolio and developed
meaningful connections and relationships throughout Utah. (Utah State University, LAEP Department, 2014)

David and Larry spent much of their life building the LAEP Extension program and contributed to the many successes that LAEP Extension has seen over the last 45 years.

2017-Present

With the retirement of David Bell in 2017, Jake Powell joined the LAEP Department and is the newest addition to the LAEP department and Extension program. Jake graduated from Utah State University with a BLA in Landscape Architecture and Environmental Planning (Watershed Science) in 2008. He then attended Pennsylvania State University, studying Landscape Architecture and Environmental Planning (Center for Watershed Stewardship). He graduated in 2012. He brings a wealth of knowledge and experience to the department and to the future of LAEP Extension. Following is a description of the different types of Extension landscape architecture at Utah State University.

Types of LAEP Extension Activities

Design Consultants at Different Scales

The help that Extension landscape architecture provides is not always in the form of master plans, big presentations, or months of design work. In many cases they provide helpful information to communities that may need additional expertise to solve issues through design. Extension landscape architecture can act as a sounding board for communities with design questions. Communities may not want or need a full design but are seeking recommendations. This resource is extremely valuable to communities.
Design consultations may include recommendations of tree species for a downtown main street, alternative uses for a particular site (mixed use development, rather than a strip-mall, etc.), and approaches communities may employ while applying for grants. Addressing questions and tangible issues allows Extension landscape architecture to fulfill its Extension mandate through design consulting.

**Charrette**

Charrettes—periods of intense work towards a design solution and presentation deadline—are used to quickly and collaboratively generate design products, often alongside those who will ultimately use the built product of design (Lee, 2008). Teamwork and efficiency are critical in the process, especially in design studios and intense workshops. This collaboration process aims groups of designers toward achieving solutions in a short period of time (Smith, 2012). Extension LA routinely employs charrettes for projects involving community partners, students, and LAEP faculty.

The Landscape Architecture and Environmental Planning Charrette is an annual, week-long, all-department collaborative design process that helps communities work toward solutions to real-life design problems. It gives students hands-on experience working with real clients, mentored by faculty and professionals. Each year, the department selects a site suitable for the design charrette. This is usually done at the request of communities that need the expertise the Landscape Architecture department provides. The department divides into teams with specific focus topics, such as open space, historic corridors, transportation, revitalization of the downtown, etc. Students and faculty do a site visit and use their skills and knowledge to develop creative solutions to
the design challenges. After a week of creative problem-solving, students present their work to the client and discuss with them the solutions they derived from the design charrette. These charrettes provide students with valuable work that can be showcased in their portfolio as an example of their capabilities (USU LAEP Extension, 2018).

**Community Design Teams (CDT)**

The LAEP Portfolio describes the characteristics of Community Design Studios and their role in the education of LAEP students:

The Community Design Studio is an important part of Extension landscape architecture. The CDS was created through an Extension grant to provide planning and design support to communities throughout Utah and to create a key service-learning experience for LAEP students. Much like a professional office, the students prepare a scope of services, a schedule, and a cost recovery fee proposal for CDS clients, which adds a sense of obligation and seriousness to the work. Project designs and graphic images provide communication and fundraising tools that can lead to private consulting and the next phase of project development. In the 2015-16 academic year, over 50 students signed up to work on a CDS team. The cost recovery fees collected helped fund the student chapter of the American Society of Landscape Architects (USU LAEP Extension, 2018).

**Design Studios**

Design Studios are fundamental to educating students of applied design disciplines (Armstrong, 1999). The LAEP design studios are collaborative, innovative, and creative work spaces. Each individual design studio is full of projects hanging on walls in various stages of progress. This exposure keeps the design process out in the open, allowing input from peers. This unanimity between studios encourages all to participate in the design process. The design studio atmosphere is an engaging realm of scholarship and research within landscape architecture (Armstrong, 1999). Extension projects that integrate into these studios provide excellent opportunities for students to
participate in tangible projects and learn core principles in theory, design process, and sustainable practices, helping them respond to critical and emerging issues. Design studios help develop design strategies for students and build a foundation of knowledge for students to draw from (Deming & Swaffield, 2011).

**Advisors—NPS**

Utah State University Extension landscape architecture has also served in an advisory role to the National Park Service, helping them prepare and plan for the future. There have been several projects completed over the years to help the National Park Service with transportation and planning for an increasing number of visitors. They have also helped identify and research gateway communities around National Parks. This research has helped NPS better understand the relationship between the gateway communities and the National Parks and how they affect each other.

Each of these landscape architecture Extension activities has contributed to communities all over the state of Utah. They provide service to the largest urban areas and the most rural communities, they utilize Utah’s large variety of landscapes, and they create unique teaching opportunities for LAEP extension.

**Overview of Context: Utah’s Geography and Growth**

**Geographic Regions**

There are three major landforms into which Utah is divided: the basin and ridge region, the Central Rocky Mountains, and the Colorado Plateau shown in (Figure 4). Utah is home to many types of landscapes, ranging from high mountain ski resorts with
the “best snow on earth” to national monuments in the deserts of southern Utah (Maupin, 2014).

The Utah Central Rocky Mountains comprise the Uinta and Wasatch mountain ranges, with the highest peak, Kings Peak (13,528 ft.), in the Uinta Mountains. The Colorado Plateau in the south and southeast region of Utah has an abundance of unique landforms. Among these are the Grand Staircase-Escalante National Monument, Arches National Park, Bryce Canyon, Zion Canyon, and Monument Valley. The basin and ridge region in the northwestern and western areas of Utah includes salt flats, lakes, and depressions. The Great Salt Lake is a perfect example of this (Figure 4). Many of these landforms are what remain of a large prehistoric body of water, Lake Bonneville that drained through Red Rock Pass in Idaho approximately 14,500 years ago. Among the geological formations left behind is the Wasatch Front, now the most heavily populated area in Utah. The large valley along the Wasatch Mountain range continues to rapidly increase in population, and with that growth comes many planning issues that need to be addressed. (Worldatlas, 2017).
Figure 4. Utah’s Geographic Regions
Population Growth and Density along the Wasatch Front

Utah was ranked third in the U.S. for population growth in 2016-2017 at 1.9%. Utah’s population is expected to grow from approximately 3 million to 5.8 million by 2050 (Figure 5). This suggests an increase of 2.8 million people, with an annual average rate of change of 1.3% (Perlich, Hollingshaus, Harris, Tennert, & Hogue, 2017). Natural growth (births) contribute more to the population growth than net in-migration. Utah has both the highest birth rate and lowest death rate of any state (US Census Bureau, 2018), with 16.9 births per 1,000 people. This is significantly higher than the national rate of 12.4 (Data Access - Public-Use Data Files and Documentation). Approximately 35,000 more Utahans were born in 2016 than died, the most of any state adjusted for population size. Utah also has the largest average household size in the nation at 3.19 persons per household. Population is expected to continue to rapidly increase, and density along the Wasatch front will continue to be an issue ((US Census Bureau, 2018).

Future Projections, Growth Rates, and Design Needs

With growth comes a desperate need to engage communities in the planning process in order to help them address the critical issues they face. Although many of the projects done by USU LAEP are in rural communities, the department has also played a major role in the urban planning process and has spent a lot of time along the Wasatch Front. The ongoing help from USU LAEP has been inspired by the USU land-grant mission statement, which reads, “we want to provide help by serving the public through learning, discovery, and engagement” (McHarg, 1969).
To protect the future of Utah communities from rapid growth development, plans made by USU LAEP can profoundly impact the outcomes in positive ways. In many cases, without these plans, Utah’s landscape and the surrounding communities could be compromised forever. Through its Extension contract, the University is charged with the task of helping others make good design decisions for the future of Utah and its residents.

**Yesterday’s Rural is Today’s Urban**

Because Utah is growing rapidly, past projects revealed that though a project may have existed in a rural setting at one time, today that same project falls within a suburban or urban setting. Therefore, a plan that may have been designed for a rural population must now meet the needs of a suburban or urban population. Understanding that there are population changes within communities helps determine whether or not projects accomplished by Utah State Extension have lived up to the timeless design standard.
Figure 5. Population Growth Through 2050 (Utah AGRC, GOMB, Utah Foundation analysis, 2014).

RESEARCH QUESTION

What is the Objective? What impacts/outcomes has USU LAEP Extension had?

The purpose of this study is to document, evaluate, and assess impacts of Extension landscape architecture to better understand its impacts over time on Utah’s communities, citizens, and landscape, and to enhance impacts of future community engagement projects.

Many of Utah’s problems have design solutions. Critical thinking and design can address these tangible needs, fulfilling USU’s land-grant mission and providing unique service-learning opportunities for students. Addressing these issues through Extension allows USU to serve as a model example for land grant universities nationwide. This research addresses the following two questions:

Why Is It Important?

These outreach activities intend to benefit community partners interested in learning how design can positively impact tangible community issues. They also provide educational benefits for students who get to engage with real-world projects. Knowing better how communities engage and projects are documented, and understanding the educational impact on student participants from each project, provides a better overall understanding of how to improve Extension landscape architecture and celebrate the work that has been done by USU Extension through landscape architecture.
Who Will It Benefit?

Extension landscape architecture benefits groups in several ways. This research will review past projects and assess the impacts they made. This assessment will provide a better understanding of the role Extension plays in landscape architecture. The model framework derived from this study will provide guidance and direction for the future of Extension landscape architecture and how it documents, organizes, and disseminates information gleaned from each project. Proper documentation of projects ensures valuable information will be stored, making past projects more accessible for students and faculty. With the proper information recorded, past projects can later be reviewed and/or studied as case studies.

This research is also intended to benefit other landscape architecture programs, Extension landscape architecture, universities, Extension in general, and professional practitioners. The development of the model framework is intended for other land-grant institutions to follow similar procedures in assessing their work and documenting it properly. It is also an opportunity for USU Extension landscape architecture to serve as a model example for land-grant universities nationwide.

METHODOLOGY

Overview of Methodological Approach

The process of data collection and analysis followed a sequence of steps that included identification of known Extension landscape architecture projects, construction of a project database, and identification of a smaller subset of projects for further study.
Documentation of LAEP Extension projects varies greatly. Some projects have complete records of the happenings of the projects, while others lack information. Compiling as much data as possible for each of the projects helped complete project information and provide data that could be drawn from for this study and future research. A spreadsheet with all the project names was the base point for data collection. Hundreds of projects were listed, and as projects were recalled, retrieved, or rediscovered, they were added to the list, along with the known information about the project. Each project was tagged with a project typology, project scale, and project setting. This information was useful for getting a general understanding of the types, settings, and scales of all the projects to which Extension landscape architecture has contributed.

After archival data, department memory, and historical literature were exhausted and each of the projects was classified by type, scale, and setting, a committee reviewed the 238 projects and after rigorous review, determined 20 projects which would give the best overview of the impacts of USU Extension landscape architecture. After these 20 projects were selected, the research then relied on interviews of key informants, documentation, and evaluation of physical project sites for additional information on the projects, what happened with them, and how USU was involved.

**Review of Known Projects and Assembly of Archival Documents**

For documentation purposes, the LAEP department developed an Excel spreadsheet to record the Extension projects that have been completed over the years. This document was created with the intention to keep an accurate record of key information about each project. It was instrumental in this research to assess the impacts
of Extension landscape architecture. Although the document was not fully completed when acquired for this research, many hours were devoted into retrieving as much information as possible. In the search for this additional information, countless files were examined, hard drives searched, hard copies scanned, and conversations with current and emeritus faculty engaged in to acquire and assemble missing information within these projects. At the end of the data retrieval, there were 238 projects recorded.

A great deal has changed in the manner of data storage from the beginning of Extension until now. Many of the projects may have at one time been documented, but with the advancement of technology, the data may have been lost, due to format changes and evolving software. The technology will continue to evolve, and it will be important to update old files and documents to new formats. The results of our efforts to find, document, and complete missing information has seemed to be quite helpful. For each project, there were at least one or two items of new information found. Even with this additional information, there still remained incomplete data for many projects, as well as many projects for which no record was found. With the lack of complete data, research in assessing the impacts of Extension landscape architecture may not be a completely accurate history of how Extension landscape architecture has performed. Figure 6 shows the locations of the projects of which USU LAEP has record.
Figure 6. USU LAEP Project Location History
Project Profiling

Project Engagement Format

Charrettes, studios, CDTs, and Extension LA faculty projects are varied ways in which USU LAEP department has engaged communities and involved them in design processes. Each of these project engagement formats utilizes a specific method that contributes to the outcome and experience of the project. Individually, these formats have unique benefits, depending upon the scope of the project. Projects vary greatly in size, scope, and impact. Each of these formats can engage communities in the design process and enhance the outcomes.

Before impacts of Extension LA projects could be assessed, the projects themselves were reviewed and profiled in order to accurately record their location and setting, project scale, and project engagement format (i.e. charrette, studio project, CDT, Extension faculty project). Accurate organization of project dimensions ensured that projects selected for further examination reflected the depth and breadth of projects engaged by Extension landscape architecture over the past several decades. The following is a description of the dimensions reviewed and recorded for each known project.

Project Typologies

Ever since the term “landscape architecture” was coined, the profession has expanded its expertise from mere garden design to large-scale landscape design, city planning, and management (Kilyeni, 2012). In order to select focus projects for the
project in question, the dimensions first had to be gathered, organized, and, if not already, assigned a project typology. The projects were then organized and assigned, depending on the scope of work and the deliverables derived from the project. There were nine typologies created, including the merging and combining of other typologies into one definition to classify them generally. The project breakdowns are noted in Figure 7. Classifying the projects into these typologies allowed them to be compared to similar projects with like programmatic elements to determine if the projects were successful and beneficial to other projects categorized with the same definition. Each of the projects were classified as one of the nine project typologies. They were then assigned a primary project focus and a secondary project focus. If additional classification were helpful to clarifying the project’s focus, they classified to the quinary. The project types and definitions include:
**Table 2. Project Typology Definitions**

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Campus Planning</td>
<td>The design of a school, hospital, or other institution. A preliminary plan showing proposed site development. Campus plans often comprise site work that must be executed in phases over a long time and are thus subject to drastic modification.</td>
</tr>
<tr>
<td>Charrette</td>
<td>Is a short, typically one week design event during which members of a team quickly collaborate and sketch designs to explore and share a broad diversity of design ideas.</td>
</tr>
<tr>
<td>City &amp; Regional Planning</td>
<td>City planning is mostly about city scale, it deals with the efficient placement of land use activities, infrastructure, and settlement growth across an individual city or town. Regional planning is an area larger than an individual city or town; it is a sub-field of urban planning as it relates land use practices on a broader scale.</td>
</tr>
<tr>
<td>Landscape + Garden Design</td>
<td>A planned space, usually outdoors, set aside for the display, cultivation and enjoyment of plants and other forms of nature. It addresses issues like, access, outdoor use areas, landforms, stormwater management, and more.</td>
</tr>
<tr>
<td>Parks &amp; Recreation</td>
<td>A public green area in a town, used for recreation; recreation is something people do to relax or have fun; activities done for enjoyment. Design of these spaces typically include: Trail systems, large and small “pocket parks” plazas, playgrounds, sports complexes (including arenas and equestrian facilities), and open spaces and memorial settings.</td>
</tr>
<tr>
<td>Restoration + Preservation</td>
<td>The improvement of degraded land on a large scale that rebuilds ecological integrity and enhances habitat. Preservation in landscape architecture specialization has evolved to encompass maintenance of a site in its present condition. Landscape restoration is the improvement of a site to a given date or quality.</td>
</tr>
<tr>
<td>Housing</td>
<td>The development of communities and various housing types. Or the practice of improving the appearance and aesthetic appeal of the area surrounding a home.</td>
</tr>
<tr>
<td>Site Design</td>
<td>Site Design is the art of arranging or modifying the features of the landscape, for aesthetic or practical reasons. A site design is a preliminary drawing of proposed improvements to a given landscape.</td>
</tr>
<tr>
<td>Urban Design + Transportation</td>
<td>Urban Design is the process of designing and shaping cities, towns and villages. ... Urban design is an inter-disciplinary subject that utilizes elements of many built environment professions, including landscape architecture, urban planning, architecture, civil and municipal engineering. Transportation Design is the process of defining future policies, goals, investments, and designs to prepare for future needs to move people and goods to destinations. It can also include Signage, Wayfinding, and Community Identity. This is spatial problem solving. It is knowing where you are in a building or an environment, knowing where your desired location is, and knowing how to get there from your present location.</td>
</tr>
</tbody>
</table>
Project Setting

Along with project typologies, each of the projects were categorized into the following settings: Rural, Suburban, and Urban. This information was key to understanding the location of the project and how the project might be used and by whom. Throughout the state of Utah, Extension landscape architecture has played a role in many communities, both big and small.

There has also been an exponential amount of growth in Utah over the last few decades. What was once rural could be today’s suburban and urban areas. Because of development and growth, this trend will continue to change rural communities as urban

Figure 7. Project Typology Breakdowns
areas grow outward. Several methods are used to define rural, suburban, and urban. Each method has a different set of criteria to classify them. For this study, the U.S. Census Bureau’s descriptions were modified to fit Utah’s population sizes and geography (Table 2).
Table 3.

Urban, Suburban, Rural Classification

The Census Bureau identifies two types of urban areas:

<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urbanized Areas (UAs)</td>
<td>50,000 or more people; urban areas represent densely developed territory, and encompass residential, commercial, and other non-residential urban land uses.</td>
</tr>
<tr>
<td>Urban Clusters (UCs)</td>
<td>At least 2,500 and less than 50,000 people.</td>
</tr>
<tr>
<td>Rural</td>
<td>Encompasses all population, housing, and territory not included within an urban area.</td>
</tr>
</tbody>
</table>

Classification for this Research

<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
<th>Selected Project Cities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban</td>
<td>Population 10,000+</td>
<td>Idaho Falls, Id</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Kaysville, Ut</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Cedar City, Ut</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Tooele, Ut</td>
</tr>
<tr>
<td>Suburban</td>
<td>Population 9,999 - 2,500</td>
<td>North Logan, Ut</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Payson, Ut</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Heber City, Ut</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Midway, Ut</td>
</tr>
<tr>
<td>Rural</td>
<td>Population less than 2,500</td>
<td>Orderville, Ut</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Farson, Wy</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Bicknell, Ut</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Panguitch, Ut</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Dutch John, Ut</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Highway 89, Ut</td>
</tr>
<tr>
<td>Rural by Isolation</td>
<td>50+ Miles Separation or divided by large geological formations</td>
<td>Moab, Ut</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Roosevelt, Ut</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ogden Valley, Ut</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Manti, Ut</td>
</tr>
</tbody>
</table>
Isolation was a contributor to the reclassification of the definitions of rural and urban. Although some communities may have a higher population count, their location and lack of proximity to other communities would suggest that the community be defined as rural, whereas the U.S. Census Bureau would define it as urban. Moab, as an example, is urban by definition of the U.S. census. However, it is surrounded by wilderness and a national park, is miles from a sizable neighboring community, and is isolated. To Moab citizens, it is a rural community by culture and identity. This can also be true for several other projects used in this research. Taking into account how the communities classified themselves was an important consideration when classifying them as urban, suburban, or rural for this research. The project setting breakdowns are found in Figure 8.

Figure 8. Project Setting Breakdowns
Project Scale

For this research, each project was assigned to one of three scales: regional, community, and site. Classifying each project into a specific scale determined the variety of project sizes that Extension landscape architecture has been involved with. For example, a regional project may generally affect a greater number of people, whereas a site-specific project might affect fewer people, but these effects are more personal. A community project might also impact a greater number of people personally. The scale breakdowns are found in Figure 9. These three project scales are defined as the following:

- Regional: At the Regional scale, there is a major emphasis on land-use activities, environmental planning, infrastructure, watersheds, and population growth across a larger area of land. It studies how large spans of land work in relation to each other and how one might affect another.
- Community: Community projects tend to focus on the relationships between many users and how the community fabric is sewn together. It provides cohesion and unity within a community and plans focus on how the many pieces of the community fit together to provide the best experience for community members. Examples include city planning, downtown revitalization, and transportation.
- Site: Site projects can be very detailed and focused on a particular parcel of land. The scope of work is generally focused on site-specific needs and how they relate to adjacent properties and their uses. Examples include parks, open spaces, plazas, and residential areas.
Project Timeline

The project’s start year played a role in the selection of the 20 projects. To ensure that an adequate measure of time was incorporated, 10% of the projects were more than 20 years old, 80% of the projects selected were between 15 and 5 years old, and 10% of the projects were no more than 5 years old. The greatest priority was placed on the projects that fell between 15 and 5 years old, due to the length of time it takes for projects to be completed, as well as the time allowed for each project to become established. Finding valuable data for projects over 20 years old became quite a challenge because it was difficult to assess their impacts and benefits over time. Projects designed within the last 5 years would likely be in the beginning stages of progress and might not yield as much data for assessing their impacts.
Identification of Projects for Further Study

Process

During the research process, each of the projects was assigned a project scale, project setting, and a project typology, as defined above. It was determined by the thesis committee that 20 projects would be selected for further study of the impacts of Extension landscape architecture. Once the data had been gathered and calculated, the thesis committee selected from a list of 238 projects the most promising projects to reflect the real nature of Extension landscape architecture. Physical documentation became a critical component to selecting projects at this point. If no evidence of physical documentation was found, the project was dismissed from the study. Physical documentation was the best way to evaluate the process of design and the overall outcome of a project. The presence of physical documentation, as well as satisfactory project breakdowns, helped the committee select 90 specific projects to advance to the next round and a further winnowing project selection. The committee then gathered again, and through a process of elimination, selected 40 projects from the 90, again using the project breakdowns as a resource for selecting project diversity. Finally, of the 40 projects, 20 were selected for final assessment. The number 20 was significant, in order to maintain similar representation of the original 238 projects (i.e. if 20% of the 238 were of one type, then 20% of the 20 projects would be of the same type) (Figure 10). Similar goals were set for the typology, setting, scale, and timeline. Assigning the typology, setting, scale, and timeline gave a general pattern of where Extension landscape
architecture has focused over the years. Below is the selected project list (Figure 11) and project location map (Figure 12) of the 20 selected projects.

Figure 10. Project Selection Process Diagram
<table>
<thead>
<tr>
<th>Project Name</th>
<th>Year</th>
<th>Primary</th>
<th>Setting</th>
<th>Scale/Description</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>9-11 Memorial</td>
<td>2013</td>
<td>Site Design</td>
<td>Urban</td>
<td>Site</td>
<td>Kaysville, Utah</td>
</tr>
<tr>
<td>Big Sandy River Habitat Restoration*</td>
<td>2016</td>
<td>Restoration + Preservation</td>
<td>Rural</td>
<td>Site</td>
<td>Eden Valley, Wyoming</td>
</tr>
<tr>
<td>Cedar City wayfinding CDT*</td>
<td>2017</td>
<td>Urban Design + Transportation</td>
<td>Rural</td>
<td>Community</td>
<td>Cedar City, Utah</td>
</tr>
<tr>
<td>Central Utah Pioneer Heritage Center Concept Plan, Manti</td>
<td>2010</td>
<td>Site Design</td>
<td>Rural</td>
<td>Site</td>
<td>Manti, Utah</td>
</tr>
<tr>
<td>Dutch John Community Planning Project, LAEP 611D</td>
<td>1995</td>
<td>Housing</td>
<td>Rural</td>
<td>Community</td>
<td>Dutch John, Utah</td>
</tr>
<tr>
<td>Everybody’s Playground Master Plan</td>
<td>2006</td>
<td>Parks and Recreation</td>
<td>Urban</td>
<td>Site</td>
<td>Idaho Falls, Idaho</td>
</tr>
<tr>
<td>Heritage Highway U.S. 89 LAEP Student Charrette</td>
<td>2007</td>
<td>Charrette</td>
<td>Rural</td>
<td>Regional</td>
<td>Sanpete County, Utah</td>
</tr>
<tr>
<td>Lions Park &amp; Transportation Hub</td>
<td>2007</td>
<td>Parks and Recreation</td>
<td>Rural</td>
<td>Site</td>
<td>Moab, Utah</td>
</tr>
<tr>
<td>Manti City Downtown Streetscape Concept Plan</td>
<td>2005</td>
<td>Urban Design + Transportation</td>
<td>Rural</td>
<td>Community</td>
<td>Manti, Utah</td>
</tr>
<tr>
<td>Midway Community Parks Analysis</td>
<td>2006</td>
<td>City + Regional Planning</td>
<td>Suburban</td>
<td>Regional</td>
<td>Midway, Utah</td>
</tr>
<tr>
<td>Moab Technical Education Center Concept Plan</td>
<td>2007</td>
<td>Campus Planning</td>
<td>Rural</td>
<td>Site</td>
<td>Moab, Utah</td>
</tr>
<tr>
<td>North Logan Cemetery Master Plan</td>
<td>1999</td>
<td>Parks and Recreation</td>
<td>Suburban</td>
<td>Site</td>
<td>North Logan, Utah</td>
</tr>
<tr>
<td>Ogden Vally Charrette</td>
<td>2014</td>
<td>Charrette</td>
<td>Rural</td>
<td>Regional</td>
<td>Ogden Vally, Weber county, Utah</td>
</tr>
<tr>
<td>Orderville Main Street Master Plan</td>
<td>2005</td>
<td>Urban Design + Transportation</td>
<td>Rural</td>
<td>Community</td>
<td>Orderville, Utah</td>
</tr>
<tr>
<td>Panquitch Quilt Walk Monument Park Master Plan</td>
<td>2006</td>
<td>Site Design</td>
<td>Rural</td>
<td>Site</td>
<td>Panquitch, Utah</td>
</tr>
<tr>
<td>Payson Downtown Revitalization Plan</td>
<td>2003</td>
<td>Urban Design + Transportation</td>
<td>Suburban</td>
<td>Community</td>
<td>Payson, Utah</td>
</tr>
<tr>
<td>Roosevelt City Park</td>
<td>2005</td>
<td>Parks and Recreation</td>
<td>Rural</td>
<td>Site</td>
<td>Roosevelt, Utah</td>
</tr>
<tr>
<td>Tooele Downtown Planning and Design</td>
<td>2005</td>
<td>Urban Design + Transportation</td>
<td>Rural</td>
<td>Community</td>
<td>Tooele, Utah</td>
</tr>
<tr>
<td>Wasatch County Fair Grounds Master Plan</td>
<td>2005</td>
<td>Parks and Recreation</td>
<td>Urban</td>
<td>Site</td>
<td>Heber City, Utah</td>
</tr>
<tr>
<td>Wayne County Community Center Landscape Plan</td>
<td>2004</td>
<td>Parks and Recreation</td>
<td>Rural</td>
<td>Site</td>
<td>Wayne County</td>
</tr>
</tbody>
</table>
Figure 12. Study Project Locations
Project Typologies

The project typology breakdown is as follows: 4.6% of the projects were a result of campus planning, 5.9% were a charrette, 6.3% were city + regional planning, 2.9% were housing, 6.7% were landscape + garden design, 31.9% were parks and recreation, 17.6% were site design, 1.7% were restoration + preservation, and 20.2% were urban design + transportation. When looking at additional breakdowns of parks and recreation, 18% of those projects were equestrian-related, 17% were memorial, 14% were trails, 4% were playgrounds, 35% were parks, and 12% were other (Figure 13).

Figure 13. Project Type Percentages

<table>
<thead>
<tr>
<th>Project Name</th>
<th>Character</th>
<th>City + Regional Planning</th>
<th>Charrette Planning</th>
<th>Housing</th>
<th>Landscape + Garden Design</th>
<th>Parks and Recreation</th>
<th>Site Design</th>
<th>Restoration + Preservation</th>
<th>Urban Design + Transportation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Big Sandy River Habitat Restoration*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cedar City wayfinding CDT*</td>
<td></td>
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* CDT Project

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Project Setting

The data shows that 13% of the projects were in urban settings, 8% were in suburban settings, and 79% were in rural settings (Figure 14).
Figure 14. Project Setting Percentages

**Project Scale**

When looking at project scales, 10% of the projects were done at the regional scale, 37% were done at a community scale, and 53% were done at a site scale (Figure 15).
Figure 15. Project Scale Percentages

Project Timeline

To ensure that an adequate measure of time was incorporated, projects were selected with the following parameters: 10% of the projects were older than 20 years old, 80% of the projects were between 15 and 5 years old, and 10% of the projects were no older than 5 years (Figure 16).
Figure 16. Project Study Timeline

Site Visit and Evaluation

Physically evaluating each project is a valuable yet underutilized tool in LAEP Extension. Documenting how the project performs years after its initial design and installation provides an opportunity to develop greater understanding of how well the design functions and whether or not proper analysis was completed to determine the best solution for the issues faced in the design process. Francis (2001) says the following of physical evaluations:

There also needs to be more post-occupancy evaluations of landscape architecture projects, where evaluation becomes part of every built project. With increased support, case study analysis promises to greatly advance understanding of the profession for both practitioners and the larger public (page 43).

Evaluating the projects after the design has taken place creates an additional learning opportunity for students to deepen their understanding of design principles and learn what stands the test of time in designed spaces. There is much to glean from past projects. In order to be a great designer today, one must understand what great design
looks like in the future. Evaluating past projects can develop skills that help address current issues in other projects.

Site observation was a critical component to understanding a project’s day-to-day use and the population who use it. Assessing these impacts could not be fully understood without a site visit. Even if the project were not completed, the site still told a story that one would otherwise not see if the site weren’t visited. Without understanding how the site is used, one cannot begin to understand its impacts.

One of the challenges faced while observing some of the project sites was lack of activity. There were often no people on-site to observe. This makes documenting how the site is used and who uses the site extremely difficult. Knowing in advance that this would be an issue, a section in the post-occupancy evaluation document was devoted to “activities perceived.” This is a more in-depth project site investigation. For example, if soccer goals were present, and it appeared they were highly used, it would be noted in the document as a common activity on-site. If trails were present, it was assumed that people used them for hiking and walking. These assumptions, along with design documentation, helped determine which on-site uses were common.

Weather was rarely a factor in the lack of project users during site visits. All projects were visited between the months of July and September. Although high temperatures may have been a factor, these months generally yield the best results when it comes to on-site visitors.

The importance of site visits for this research was extremely valuable. Being able to record and document each project provided a collective record of Extension landscape architecture’s past outcomes. Physically seeing each project brought on a whole new
dimension when assessing the project’s impacts. Seeing how people use the site, what key elements of the design were incorporated, and how the site relates to the community’s needs were important factors in assessing the success of each design. Post-design site visits should be incorporated in LAEP design studios. Revisiting past projects teaches students about incorporating design principles, the longevity of projects, and the overall outcomes of the design process.

**Interviews**

With each project, a relationship formed between key players of the project and the Extension-appointed LAEP faculty member. Key players provided essential information about their project and gave direction and vision regarding what they hoped the outcomes would be. Interviewing these key players and/or others familiar with the project helped provide information related to their experiences with LAEP Extension and gave extremely valuable information and feedback on the performance of the department and the university. From these key players, we learned the history of the projects, the process of each one, how the students performed, and how the community received the project.

For the interviews, a script was developed to ensure all participants were asked the same questions. Keeping the questions uniform provided consistent feedback for better comparison between project typologies. Some questions were specific to the project types, thereby providing additional information pertaining to specific project typologies.
**Conducting the Interviews**

Interviews were conducted in two ways: in person or over the phone. In some instances, when visiting the project site, those selected to be interviewed were able to meet for an in-person interview. In many other cases, the interviewees were interviewed over the phone at times that were convenient for them. Interviews were expected to last anywhere from 40 to 60 minutes, depending on the project typology and overall project complexity. The interview format and questions were determined by the thesis committee. After several iterations of the interview questions and format, the committee finalized the interview script.

For this research, “Key Project Participants” were considered those with special interest in the project. They could be stakeholders, city representatives, community members, or project users. Generally, Key Project Participants had a good understanding of the project and what had happened since the design was completed. When selecting people to interview, it was important to select those with a either thorough knowledge of the project or the most involvement with USU Extension. Although this was not always possible, great measures were taken to interview appropriate people to provide information about the project.

City representatives generally provided helpful base information and had the best records of what occurred during the design and since. If the project were completed and fully-built, then information was easy to obtain. If the project never made it past the design phase, it was difficult to track down project information, not to mention finding someone who remembered both the project itself and its impact (or lack thereof) since.
When talking with project users, it was interesting to hear how they liked the project and whether or not they knew about USU’s involvement. Community members were helpful in understanding the needs of the community and if the project fulfilled that need. They were also able to provide great insight into how the community received the design. Stake holders were the ones that typically had special interest in the project and its development. In some cases, finance was a factor in that special interest. Their priority was seeing the project fulfilled.

**Project Outcomes and Impacts**

**Kaysville 9/11 Memorial**

**Summary**

Utah Unites in Hope (UUH) conceived an idea to develop a memorial that would pay tribute to those who lost their lives in the 9/11 tragedy. The 9/11 Memorial at the USU Kaysville Botanical Center was completed in 2013, providing a place for reflection and increased awareness of those who serve our country. At a cost of $210,000, it is a tribute to those who have lost their lives in the war on terrorism.

In the case of the USU Kaysville Botanical Center, the project was finally completed more than a decade after the event that prompted the idea. In the attacks on America on September 11, 2001, three Utahns lost their lives. A mother and daughter died on one of the planes that hit the towers, and one man (a USU alum) died in the attack on the Pentagon.
In 2011, a nonprofit group called Utah Unites in Hope conceived the idea of the memorial. UUH approached USU and asked them to help with the plan. The USU Kaysville Botanical Center was proposed as the site for the memorial. Kaysville City is an urban city (pop. 31,776 in 2017) in Davis County, Utah. The project focused on a “Site Design” at a “Site” scale. UUH put forth a tremendous amount of effort, with Shawn Olsen (USU Extension Professor, Agriculture) as an advisor, David Anderson (USU Botanical Center director) as lead designer, 10-12 undergraduate USU Students, Carrol Page (Davis County Commissioner), Steve Hiatt (Former Kaysville Mayor), community members, family members of the 9/11 victims, and AJC Architects. AJC Architects was present more often during the early stages of the project, but remained a part of the team throughout the entire process. The total budget of the project was $205,000, with $5,000 for the civil engineering fee.

As the project began to take shape, it attracted people with vested or professional interest in its successful outcome. A relative of the sister and mother who died represented the community. The USU alum’s nephew’s wife (Margot) took an interest and became involved in the process. Now that the project had developed some backing and the formulation of a general outline, USU agreed to get involved. To acquire funding for the memorial, a design, documentation, and plan were needed. Through the involvement of Weber School District high school students, a small design charrette was completed. The project committee, which consisted of the families of the deceased, representatives from UUH, USU Extension, and AJC Architects, acquired private funding. USU also contributed funding (the exact amount was not shared for this report), and the project began in earnest.
An earlier project at the Botanical Center had benefitted from a pavilion that had been designed and installed. The same firm that engineered the pavilion was hired by the project committee in order to tie the pavilion into the overall design of the memorial. Throughout the design process, participants unanimously agreed that there be symbolic reference of 9/11 in the design. There were many ideas discussed and considered. At some point, LED lighting was discussed as a way to represent each individual, though it was agreed that this lighting was cost-prohibitive.

Lack of funding again slowed the project but picked up again when Margot’s mother, along with Margot herself, got involved. At this point, some of the original 9/11 focus was lost in favor of a more generalized war memorial and individuals continued to add individual interest details that raised the overall cost of the project.

David Anderson, Director of the USU Kaysville Botanical Center as well as Landscape Architecture and Environmental Planning professor at USU, developed a design that was not only more affordable than the evolving project, but his design also returned to the symbolic 9/11 and war on terrorism reference. A wall with the names of all 129 U.S. servicemen and women from Utah who had died since the 9/11 attacks, as well as a plaque that highlighted the three individuals killed in the attacks, were integral parts of this updated design. Work moved forward again when a local Utah state legislator passed a bill that appropriated $100,000+ for the project to continue. Another delay occurred when a statue of a firefighter was commissioned (unbeknownst to USU) and created, consuming over half the budget. However, the project continued to move forward as revisions were made to simplify the design and meet the resulting budget
constraints. Volunteers and servicemen and women joined together to help with the installation of the project, which also helped alleviate costs.

The project was completed and opened in 2013 in time for September 11th, with a memorial service hosted by the USU Kaysville Botanical Center and a crowd of approximately 50 people attending in support. The widow of the Utah man killed in the Pentagon unveiled the plaque that honored her deceased husband.

David Anderson commented, “rarely do things in the public sector go as planned.” Since the completion of the project, many citizens have visited and paid their respects to those lost in the war on terrorism. The USU Kaysville Botanical Center hosts an average of 5,000 visitors annually.

Outcomes

Local community members, local high school students, USU faculty and students, and volunteers helped problem-solve, design, and install the memorial. The 9/11 Memorial at the USU Kaysville Botanical Center was completed in 2013, providing a place for reflection and increased awareness of those who serve our country. With its completion, an additional amenity was added to the Kaysville Botanical Garden, increasing opportunities for visitors.

Impacts
The total cost of the project was $210,000. These fees included design, construction documentation, and installation. All those that contributed have physical evidence of their hard work and dedication. The USU Kaysville Botanical Center hosts an average of 5,000 visitors annually, and each year a memorial program is hosted on 9/11 to remember those who serve our country.

Cedar City Wayfinding Plan

Summary

Cedar City, Utah is the largest city in Iron County (pop. 31,806 in 2017), classifying it as an “urban” project setting. This project focused on “Urban Design and Transportation” from a “Community” scale. For this project, USU helped identify areas that needed updated signage, which would also unify wayfinding around Cedar City.

Members of the Cedar City council were aware of the disturbing trend of travelers sticking around just long enough to refuel their cars, and they wanted to do something about it. In 2017, members of the Council (Chris McCormick, Chamber of Commerce President; Danny Stewart, Economic Development Director; Maria Twitchell, Executive Director Tourism Bureau; and Scott Phillips, City Council member) hired a signage and wayfinding specialist to help determine why people who stopped weren’t staying in Cedar City. They discovered that the signage in and around Cedar City was disorganized, inconsistent, and confusing. More signs told visitors how to get out of town than gave reasons to stay. City officials knew they needed to do something. Chris McCormick
asked the Landscape Architecture and Environmental Planning department at USU to help study the area and develop solutions.

Cedar City is well-known for the arts, including its annual Utah Shakespearean Festival, which marked its 57th season in 2018. Southern Utah University (SUU) is a key driver of this festival, and its sizable student body (10,245 in Fall 2017) and faculty make it the biggest player in town. Brianhead Ski Resort is relatively close and also draws a lot of people into town. As a result, tourism is a major economic factor in the community. But while over 3.5 million people pass through Cedar City every year, only a handful stop and stay. Most simply stop, get fuel and possibly food, and then keep on going. Because the city has struggled with branding/identity, the Council’s main goal was to unify the community. How could they brand Cedar City? As a gateway community? A center for the Arts? A Festival city? Whatever they chose, the overarching goal of the council was unification.

David Anderson, an LAEP Faculty member, visited Cedar City for four days. Chris McCormick and others talked to David about the challenges they faced and their goals. After the initial meeting, the group held a second meeting wherein they discussed the project in greater depth. In this meeting, they discussed what their approach would be, the costs, and specific timelines. Staff members in LAEP at USU assisted in the discussion. They made suggestions based on what others are doing with regard to wayfinding and what has been successful. This input gave validation, and backed with data and facts, illustrated what was possible in what they were trying to accomplish.

“People want the facts. Reality helps get people excited about positive changes,” said McCormick. The group met again, and this time students also spent a day or two
looking at the current signage and wayfinding to develop an analysis of missing links. The city did their homework as well, taking pictures and documenting the signage. USU provided signage ideas to help with Cedar City's vision and hopes for improvement. USU also provided unity and color specifications for the types of items the signs pinpointed, such as parks, schools, etc. Streetscapes were also suggested and appreciated. The Utah Department of Transportation (UDOT) was a major challenge in the process because of their restrictive requirements and desire to move cars through town as fast as possible. USU presented its findings to the city council and made suggestions on improvements, locations, and designs for new signage.

Taxes from several government agencies, including tourism, restaurant, and hotel taxes, funded the project. Additional money may be funded through UDOT in the future. The documentation of the project that USU provided has now been attached to the proposal document for further approval and help to request funding. It shows the city’s need that for signage. The project also helped spark the idea to develop "Envision 2020," a guideline for the future of Cedar City.

Although there had not been many changes to the signage around Cedar City at the time of this document’s publication, the city now has the analysis of what exists currently and what needs attention. McCormick commented, “When working with government entities, typically things move slowly.” Some signs have changed (including a sign at the golf course), which will hopefully propel things forward. The city believes that the analysis USU has provided will help them during the next steps, and the expectation is that they will probably have to make tweaks and changes to meet the needs
of budget and committee approval. But Cedar City now has an idea of what needs to be done, and they are moving forward.

**Outcomes**

This project helped Cedar City identify inconsistencies within their city identity and branding. Goals were set to unify the community and provide clarity for transportation. Case studies were presented to Cedar City, suggesting what others are currently doing with regard to wayfinding and what has been successful. This information provided Cedar City with validation and illustrated what was possible for their community. USU also provided documentation with suggestions on improvements, locations, and designs for new signage. This documentation helped obtain approval and request funding. Most importantly, USU built lasting relationships and strengthened community engagement.

**Impacts**

USU helped guide Cedar City through a process of design, documentation, and request for funding. The project also helped spark the idea of "Envision 2020," a guideline for the future of Cedar City. Local sources were involved in the implementation of new wayfinding strategies. This project is anticipated to benefit Cedar City in the long term and help stimulate the economy.
Central Utah Pioneer Heritage Garden

Summary

Manti, Utah is a rural community (pop. 3,540 in 2017) in Sanpete County with a rich heritage in pioneer history and culture. In 2009, the Central Utah Pioneer Heritage Garden (CUPHG), the community of Manti, the Church of Jesus Christ of Latter-day Saints (LDS Church), and many others advocated for the construction of a garden that would help tell the story of early pioneers. Such a garden would also provide opportunities for community activities and green space. The project focused on a “Site” specific scale and was considered a “Landscape and Garden Design.”

Because CUPHG already owned land in Manti, Shannon Miller, President of the CUPHG, became a key player in the garden project. It was decided by Shannon that the CUPHG needed more land to complete the project properly. Through a property exchange, the CUPHG acquired 2.24 acres of land owned by the LDS Church across from the Manti Temple. The city had been concerned that the lot across from the temple would be developed into a strip mall or something similar that would hinder the view of the temple. To build gardens below the temple instead seemed very appealing.

Shannon determined that professional help was needed as the project increased in size and complexity. She contacted David Bell with the Utah State Landscape Architecture Extension. David had previously helped Shannon with a project that made improvements to Manti’s Main Street, completed in 2009. David had been instrumental in the success of the project. For this new project, his reputation built confidence in the community as he suggested creative solutions, ideas, and designs, all while acting as a sounding board for the committee. He ultimately provided the preliminary planning and
design work that established the basis for a consensus plan for the Heritage Gardens
project. His concept helped enable funding for construction and final design work.

The gardens, monuments, and walkways were created to honor the pioneers who
lived and settled rural Central Utah. Among the values embodied by the pioneers were
faith, education, cooperation, and industry. The gardens were designed to reflect these
enduring values. The concepts developed helped enable funding for construction and
final design work. USU was very involved in the design process until it was eventually
turned over to a professional firm. They were able to raise $28,500 in funding to hire
professional landscape architect Eric Lyman to develop the final design and documents.
Also, a Department of Housing and Urban Development (HUD) grant was a big part of
the process. HUD required more accountability and kept close tabs on the project to make
sure things were going according to plan.

Today, beautiful gardens provide a setting for historical information, educational
opportunities, artwork, group and family gatherings, and contemplation. The CUPHG is
also in close proximity to the Manti Temple. Shannon commented that “USU was
instrumental in the success of the project. They were able to move people from inflexible
to being more open-minded, and we were happy that it was completed. But like most
projects, it took time.”

The CUPHG is now overseen by nine individuals: Shannon Miller, President;
Thomas Anderson, Vice President; Paul Wangemann, Vice President; Clara Beus,
Secretary; Judith Gubler, Treasurer; Kent Beus, Robert Graham, Glen K. Lund, and Steve
Lund, committee members.
Outcomes

After the completion of the project, people now enjoy walking the gardens, viewing the signs, and learning the history of the place and the Mormon Pioneers. There are weddings, concerts, picnickers, tourists, homecomings, pictures, school visits, morningsides, mission call-openings, family reunions, and many other family events which take place at the gardens. They serve as a huge benefit and contribution to this community.

David Bell established confidence in the community, and countless hours were spent on this project. Those hours were provided by groups like city representatives, community volunteers, USU faculty, students, LDS Church congregations (stakes and wards), missionaries, and many others.

Impacts

Overall, $800,000 was invested in the project, with $450,000 in construction costs alone and $28,500 for professional landscape architect Eric Lyman. Robert F. Bennett, a United States Senator from Utah, was instrumental in acquiring funding for the project as well through a HUD grant.

The Central Utah Pioneer Heritage Gardens enhance the main entry of Manti, where 8,000 vehicles pass through per day. The Manti Temple has 50,000 visitors each year and an LDS Church-sponsored Manti Pageant has had, on average, 120,000 people in attendance annually. The Manti cemetery borders the north property line which has, on average, 4,000 visitors annually.
Dutch John Community Planning

Summary

The intention of this city and regional planning project was to study and provide different alternatives for the privatization of the Dutch John Community. Its focus was to develop plans for the community’s zoning and land use. As it relates to scale, the project focus was at a “City and Regional Planning” perspective. Using a newer technology, GIS helped shape the proposals in the final case study. The project/case study was completed in 1995.

Dutch John is a rural town located in Daggett County, Utah. It is about 4 miles northeast of the Flaming Gorge Dam on U.S. Route 191. The population is 150 (2017). Dutch John was developed originally to house those working on construction of the Flaming Gorge Dam. When the construction was at its peak, as many as 3,500 people lived in Dutch John. After the completion of the dam, Dutch John became home to dam maintenance and operations personnel.

Many attempts were made to contact persons involved in the project at that time, yet no one was willing or had any recollection of the project. When visiting the community, development patterns suggest that the project may have been implemented or attributed to the community’s overall plan, although that is not confirmed at this time. The community did become privatized in 1998, only three years after this project. Due to the close proximity of the study completion and the privatization of Dutch John, one may assume that the study had some influence on the outcome.
Outcomes

A large case study document was completed in 1995. There are several correlations between the case study and the current zoning plan of Dutch John.

Impacts

In 1998, three years after the document was completed, Dutch John became privatized. Although it is not confirmed that the document developed by USU contributed to Dutch John’s privatization, one can assume that there was some influence.

Eden Valley Habitat Restoration

Summary

Utah State University helped replace habitat along the Big Sandy River, where grazing cattle had destroyed the banks, and erosion was weakening the river structure. The goal of the project was to stabilize the river banks and provide riparian habitat. This project took place in the fall of 2013 in Farson City (pop. 313 in 2010), a rural community in Sweetwater County, Wyoming. The project type was a “Restoration and Preservation” project. Project collaborators on the Eden Valley Habitat Replacement project included City of Farson, WY, J.U.B. Landscape Architect/Planner Bronson Tatton and Project Engineer John Frazier, the American Society of Landscape Architects Utah Chapter (ASLA), and USU LAEP professor David Evans with an LAEP Community Design Team (CDT) comprised of 15 to 20 students. The project focused on a “Site” specific scale.
In the fall of 2013, J.U.B.’s John Frazier led the project by constructing 21 habitat replacement areas along the Big Sandy River in Farson, Wyoming. USU LAEP Department supplied 15 to 20 student volunteers to help erect 21 20’x60’ fenced areas constructed with cattle panels and T-posts. In these habitat replacement areas, USU students planted coyote willow starts that the students had harvested in Logan Canyon the day prior to the project’s construction.

A specific requirement from the Eden Valley Irrigation and Drainage District was to replace the destroyed habitat caused by the construction in the Means Canal system. Farson City suggested the habitat replacement area along the Big Sandy River. Bronson Tatton, Landscape Architect/Planner for J.U.B. Engineers, said, “Farming is the main source of the economy in Eden, so a good canal system is really important for the city, and with that came an opportunity to improve nearby habitat.” Financing came from private stakeholders to improve the Means Canal and lateral and drainage systems. Because J.U.B.’s fee for the project was considered private information, it was withheld in the interview.

Tatton also said, “This experience was a good opportunity for students to work with their hands and see what designs look like on the ground.” Although students did not participate in the design process, they contributed to the construction of the habitat replacement areas.

**Outcomes**

Students completed the construction of 21 habitat replacement areas along the Big Sandy River. The project was funded and made possible by private contributors for the
improvement of eroding river banks. When visiting the project six years after its completion, it was evident that the project had been successful in managing the river banks and providing habitat along the river.

Impacts

Students had an opportunity to work with their hands and see what designs look like on the ground. During the site visit, it was clear that the majority of the 21 habitat replacement areas have proven to be successful. The coyote willows that the USU students planted had grown and now support the banks of the river.

Everybody’s Playground at Tautphaus Park Master Plan

Summary

Idaho Falls is an “Urban” setting in Bonneville County, Idaho (pop. 61,076 in 2017). There is a strong recreation focus and high priority for parks and trails in Idaho Falls. However, of the 16 parks in Idaho Falls, there weren’t any suitable for wheelchairs. The idea of an ADA-accessible park came about in 2006 because many people noticed that the sand and bark in the parks was difficult to navigate in wheelchairs. There are “ADA parks” throughout Idaho Falls, but because of the lack of suitable play surfaces, none of those parks functioned correctly as an ADA recreation site. This project focused on a “Site” specific scale for the location of the Tautphaus ADA Park. The project was documented as a “Parks and Recreation” type.

There were a few design and construction challenges, such as selecting a surface that would allow for wheelchairs to easily maneuver the play areas and withstand harsh
weather conditions, including snow and high temperatures. The park also needed to provide all-access opportunities for its visitors. The total cost of the project was approximately $200,000. It was funded primarily by money raised by Idaho Falls City and an ADA grant. Miracle Recreation, a play space equipment company, helped ensure the playground was properly installed and safe. A local group, Braking Boundaries, also helped, through the sharing of funds from sponsorships, donations, and direct involvement. USU’s Keith Christenson was involved, due to his background in ADA accessibility. Christenson provided stakeholders with concepts and designs for the new park, as well as information regarding which surfaces would be good for wheelchairs. An engineering group (unknown) located in Idaho Falls worked on the construction documents.

Tim Arehart (recently retired from Parks and Recreation) said of Tautphaus Park,

“The city wants more parks like it to take the pressures off of the Tautphaus Park. At this point, the park has been used so hard that it needs improvements to keep up with all the use. I think it does a good job accommodating people with disabilities and large groups.”

Tautphaus Park is one of the oldest and largest parks in Idaho Falls.

Outcomes

An ADA-accessible park was designed and constructed for children with disabilities. It has since become one of the most popular playgrounds in Idaho Falls.

Impacts

The ideas derived from the projects raise awareness to the need for more ADA-accessible parks in the Idaho Falls area. Tautphaus Park is now the busiest park in Idaho
Falls. When visiting with park users, many commented that they traveled almost two hours to get there.

**Heritage Highway US89 LAEP Student Charrette**

**Summary**

Monte Bona, specifically representing the town of Mt. Pleasant, but generally representing all the communities along Highway 89 in Sanpete County, was interviewed about the process of achieving national heritage recognition of those communities and about the assistance these Sanpete communities received from USU and its 2007 charrette in this process.

Highway 89 is a nationally recognized highway for the Heritage of the West and the settlement of the Mormon pioneers. It is one of the only byways in the West that winds through true examples of the heritage and history of settling the western frontier.

The following is paraphrased from the description in Sec. 252, Findings and Purpose of the Mormon Pioneer National Heritage Area (MPNHA), from the National Heritage Area Act of 2006:

The 250-mile Highway 89 corridor from Kanab to Fairview, Utah, contains some of the best features of the Mormon colonization experience in the United States; the landscape, architecture, traditions, beliefs, folk life, products, and events along Highway 89 convey the heritage of the pioneer settlement….convey the compelling story of how early settlers interacted with Native Americans; and established towns and cities in a harsh, yet spectacular natural environment; the colonization and settlement of the Mormon settlers opened up vast amounts of natural resources, including coal, uranium, silver, gold, and copper; the Mormon colonization played a significant role in the history and progress of the development and settlement of the Western United States, and the artisans, crafters, innkeepers, outfitters, farmers, ranchers, loggers, miners, historic landscape, customs, national parks, and architecture in the Heritage Area makes the Heritage Area unique. The purpose of this subtitle is to establish the Heritage Area, foster a close working relationship with all levels of government, the private
sector, residents, business interests, and local communities in the State; empower communities in the State to conserve, preserve, and enhance the heritage of the communities while strengthening future economic opportunities; conserve, interpret, and develop the historical, cultural, natural, and recreational resources within the Heritage Area and expand, foster, and develop heritage businesses and products relating to the cultural heritage of the Heritage Area. (Bona, 2009)

According to Monte Bona, “The hardest part was getting this recognition and support through Congress.” USU became involved through David Bell, a professor at USU and the extension specialist. David was extremely involved in a local school in Mt. Pleasant, and through that involvement became connected with Monte Bona, a representative of Mt. Pleasant. The USU charrette aided in large measure in getting the legislation through the legal system. LAEP Extension Charrette is a one-week, all-department, collaborative design process that helps communities with solutions to real-life design problems. It gives students hands-on experience working with real clients while being mentored by faculty and professionals.

The charrette took place in Mt. Pleasant, and it identified economic development opportunities for Mt. Pleasant and other towns along the proposed Utah Heritage Highway 89. This charrette focused on six rural communities along Highway 89 (Gunnison, Manti, Ephraim, Spring City, Fairview, and Mt. Pleasant) and the heritage sites along Highway 89. The purpose of this project was to preserve, promote, develop, and interpret Mormon pioneer heritage along Highway 89. The charrette helped identify these areas and expand ideas of the traveler’s experience through the history and settlement of the West.

From the beginning, Monte worked with Noel Cockett (past USU Provost and current President of USU) and Gary Anderson (past Mayor of Ephraim City and Director of USU Extension in Sanpete County). These relationships helped make the connection
with the Extension landscape architecture program and provided help from USU. This “Regional” scale connected Extension with each of the six counties (Kane, Garfield, Piute, Sevier, Wayne, Sanpete) through which the highway runs.

There were many visits from both faculty and students, who were instrumental in bringing the process to fruition. USU provided the project managers with documents, maps, analyses, and designs. “It was very helpful,” Monte Bona claimed. “USU had great outreach and really helped the communities along 89. Each of the six communities in Sanpete County had a team that focused on the heritage in its community and focused on its needs and connection to Hwy 89.” Bona continued:

“There are many economic drivers, but tourism is a big part of all the communities. We used the information, designs, and the USU charrette work to get nationally recognized as Utah’s Heritage Highway and to get funding through UDOT for signs. The work done was also used in the management plan as supporting documents and also helped with organization.”

Speaking for Mt. Pleasant City, Monte said the following:

There were a lot of designs built. They might not have been exact, but they got us to where we needed to be. We wanted each community to be better and benefit from the highway. Each had needs that the highway helped with. We tried to make sure that we didn't disturb private property, and I think we did a good job. No one got upset or pushed back. It’s been a great value to all the communities. They are trying to get the concepts moving along all the highway. Slowly, the concepts will be incorporated to the individual communities. We [Mt. Pleasant and Bona himself] had a great relationship with USU. It was very open, and we love David Bell! He was fantastic. It was a very open relationship, and David was always willing to help and solve problems. Students were really involved and brought an energy to the project that made it fun. In Mt. Pleasant, about 50% of the plans have been implemented, and really, it’s an evolutionary thing that continues to grow and get added to, but the concepts all along have stayed the same.
Outcomes

The 2007 charrette generated content that was used in an application to the National Park Service for this area to be included as part of a Mormon Pioneer National Heritage Area (MPNHA) designation proposed by Senator Bennett.

Impacts

Extension’s impact on Sanpete County can be seen along the US 89 highway corridor. Locations such as Central Utah Pioneer Heritage Park in Manti; Sanpete County’s Contoy Equestrian Center built in 2008; and Wasatch Academy, a private school located in Mt. Pleasant, where over $13 million dollars in construction fees across 13 buildings and over $450,000 in professional design fees resulted from a master plan designed by USU. In 2010, the Secretary of the Interior approved the management plan.

Lions Park and Transportation Hub

Summary

In 2005, USU participated in the Lions Park and Transportation Hub project. They helped design and plan the construction of a community park and a transportation area for tourists and community members. The project’s impacts are estimated at nearly $10,000,000. Moab is a “Rural” community (pop. 5,253 in 2017) located in Grand County, Utah. It’s a gateway community to Arches National Park and adjacent to the Colorado River. Moab is the mountain biking capital of the world, as well as a Utah recreation hub for HOV, UTV, and jeeping. Lions Park is the Moab transportation hub for off-road recreation. The site covers 7.5 acres. The park includes running buses
through the transit hub, bridges over the river, ingress and egress for vehicles from the highway, trailhead information, and transit schedules. It’s also a resting stop for travelers. There is a pavilion and playground that people use frequently. It also serves as a staging area for much of the recreation in Moab, as it connects miles of single track and paved trails. This research classified this project as a “Parks and Recreation” project typology at a “Site” specific scale.

In 2005, Utah State University’s David Bell (USU LAEP Extension Specialist) created a design charrette for Lions Park with an undergraduate student class. That led to a second charrette organized by a graduate student and a planning student. The design was commissioned by the National Park Service in 2009. That charrette focused on restructuring the park as a gateway to Moab. An effort was made to make the park more attractive, as well as taking advantage of the location as a transit hub.

In 2012, a third charrette was shared with community members, which sparked excitement among citizens, as the community had ongoing opportunities to deliver feedback throughout the park design. Most extensively involved were Marcy Demillion (Utah Rivers, Trails and Conservation Assistance Field Manager) and Lindsay Winkler, a USU graduate student. USU produced the concepts, conceptual level design, and waterfront and entry design. According to Demillion, “USU was very instrumental and assisted in the long-term success of the project. Their involvement reduced the overall cost, and USU is the reason it got built.”

This project was funded primarily through grants. The Federal Transit Authority granted nearly $775,000 for the construction of the transit hub and underpass. The Connect Trails to Parks (CTTP) program granted $99,996 for the planning, design, and
implementation of interpretive displays, and $36,643 in matched funds went towards construction of a path from the City of Moab to Lions Park. Miles of paved and unpaved trails have since been built, including a $9 million paved trail along the river that was completed in 2014.

Demillion stated, “What USU provided were the basics for applying for funding RFP and schematic; the materials helped us shop for grant funding.” The designs helped the National Park Service secure $100,000 in funding. A master plan, a natural resources restoration plan, and construction drawings were made possible because of funding. Psomas, an architectural firm, was hired to carry out the design work and produce final plans. Marcy said, “Extension has worked with the Park Service for years and have had a great relationship.”

**Outcomes**

This project contributed to four Student Stipends, while engaging the community in service-learning experiences. The work USU contributed was displayed and opened for public comment.

**Impacts**

The transit hub connects miles of trails, including a 2 ½-mile river trail along the Colorado River, at a cost of $9,000,000. The Lions Park received $100,000 dollars in grant funding so that Psomas, an architectural firm, could develop the design concepts further. Lions Park is now a highly-functioning transit hub for the 1 million annual visitors to Arches National Park. USU was instrumental in coordinating the efforts of
multiple contributors. Partners included Moab City, Arches National Park, the Bureau of Land Management, Grand County, the Moab Lions Club, Trail Mix, the Moab Trails Alliance, Sovereign Lands (state and private), and Forestry.

**Manti City Downtown Streetscape Concept Plan**

**Summary**

Manti is a “Rural” community (pop. 3,540 in 2017) located in Sanpete County, Utah. It is the second poorest county in the state. The loss of the railroad some years ago was devastating to the community. In addition, the Thistle flood halted access from HWY 6, making transport into the county difficult. On the other hand, Manti thrives off the mass numbers of people that come to support the LDS Manti Pageant, its proximity to Ephraim and Snow College, and its proximity to Ephraim’s Wasatch Academy.

USU became involved in the improvement of the city’s Main Street through local connections and USU’s LAEP. Shannon Miller reached out to David Anderson (Professor in Landscape Architecture at USU) to request help with the Manti downtown streetscape plan. The typology for this project was “Urban Design and Transportation,” designing at the “Community” scale. David Anderson asked David Bell (USU LAEP Extension Specialist) to help with the project. USU LAEP undergraduate students were included in the project. Together, they surveyed Manti Main Street. The goal of the project was to unify, beautify, enhance, and promote walkability along Manti Main Street (Highway 89).

Students provided a master plan and images of what the downtown streetscape could look like. Although it is unclear as to whether the community was engaged in the
project, the students presented Manti City with the designs and renderings, and they were helpful in starting the vision for the project. USU representatives were also helpful in addressing the community’s fears, as many residents didn't want changes, and/or were distrustful of the project.

One of the ways students got involved was by providing direction for the design of a fountain in the main corner of the project area. Students also contributed to the overall concept of main street by recommending repetition as one of the principles of the design by proposing a repeating pattern for the street lamps. With the design materials, Manti City applied for a grant and worked closely with the Utah Department of Transportation (UDOT). As Shannon Miller claimed, “UDOT would have spent all the money updating infrastructure underground.”

While UDOT at times is difficult to work with, in this case they actually contributed a grant. Other funding contributors included an increase a sales tax increase, tourists, shoppers, and local businesses. The design was built with only a few alterations to the design made by Manti City representatives. Clearly, USU’s design was essential in this process.

Shannon Miller said the following about USU’s Extension LAEP program in an interview about the project:

We couldn't have done it without them…It was a long process, but we finally got it done. Having the extension program was so helpful. Small towns don't have money for beauty. It gives them a chance to make improvements. Extension just makes sense. The city and I were very happy with David Anderson and David Bell, they were both very reliable, and we are so proud that the project was built and accomplished. It was not easy!
Outcomes

David Anderson and David Bell were greatly appreciated, and their contributions led them to another project with Shannon Miller, the Central Utah Pioneer Heritage Gardens, completed in 2013. This project helped build confidence in the community members and established strong ties between LAEP and Sanpete County.

Impacts

USU helped Manti City acquire funding through design documentation. The project was completed in 2009. The improved streetscape is seen by 8,000 vehicles per day, as the Manti Temple has 50,000 visitors each year and the Manti Pageant, on average, welcomes 120,000 in attendance annually. All of these visitors experience the landscape improvements made to Manti Main Street.

Midway Community Parks Analysis

Summary

Midway, Utah (pop. 5,093 in 2017) is a small “Suburb” of Heber City. Midway has traditionally been an agricultural community. In 2006, USU participated in an analysis study to locate existing parks and trails that could be recommended as prime locations for new parks and trail links in Midway City. The project focus type was “City and Regional Planning” at a “community” scale.

People move to places like Midway because they like the rural feel, but when they buy the land, they take away from the very "feel" that attracted them in the first place. Consequently, there has been a push to create a bond to preserve the open space. Fifteen
million dollars has been put aside for purchasing land to preserve open space. The city wants to keep open space and conservation easements to maintain Midway’s rural identity. They are concerned that it will be consumed by developers. Michael Henske, City Planner in Midway, said the following:

We try to keep distinct from any other areas in the state. We want to be different. That’s what keeps people coming back, spending money, and going home. We have a European (Swiss) theme here and that rolls into how we develop and plan. There is so much growth in Midway. We have applied for grants and received them and have built new trails and will be building a new park in Midway next year (2019).

Mike added,

“I personally wasn’t involved in this project because all the staff here is new since 2010 [When shown the trail and park analyses, he didn’t recall ever seeing these particular plans before. All the parks have been given to us by the developers except for the center park. Open space is required for all developers, and they can manage it through HOA or gift it to the city if it fits the park’s plan. We took some planners from the Governor’s office around on the trails and showed off some of the parks. We are trying to loop the trails. We work hard and are good at finding grants.]”

UDOT gave Midway $180,000 to create a trail, and Midway matched the funds. In total $360,000 was used for a new trail. As it stands, there is no institutional memory of USU’s participation in any Midway project (according to Henske).

Outcomes

A parks and trails analysis was completed, where students documented where existing parks and trails are located in Midway City. With that data, USU students recommended locations for new parks and trails to link the parks and trails together.
Impacts

UDOT presented Midway City with $180,000 dollars to improve parks and trails. Midway then matched those funds, for a total of $360,000 dollars to use towards new parks and trails.

Moab Technical Education Center Concept

Summary

Moab is a “Rural” community (pop. 5,253 in 2017) located in Grand County, Utah. Many efforts were made to make contact with individuals familiar with the Moab Technical Education Center project. Contact was made with the Grand County School District, the Moab High School principal, and a Moab city official. A site visit was made, and it was determined that the concept developed by David Bell was similar to the actual building placement. The project was considered a “Campus Planning” at a “Site Scale.”

As it stands, there is no institutional memory of USU’s participation in the 2007 Moab Technical Education Center concept plan. The concept drawing was recovered, with very few similarities to the built project. The connection was made that MHTN Architects, out of Salt Lake City, led the project.

Outcomes

The Moab Technical Education Center was ultimately built. How much involvement USU had in the process is unclear.
Impacts

The impacts of this project are unknown.

North Logan Cemetery Master Plan

Summary

North Logan (pop. 10,646 in 2017) is a suburb of Logan in Cache County, Utah. The project focused on a “Site” specific scale. The project type was “Parks and Recreation.” Duane Chadwick and Roy France (both city council members) organized a committee in 1998 and began looking for land for a cemetery. They found three properties that could work for the project. They took David Bell (USU Landscape Architecture Extension specialist) to the three properties to perform soil testing. David said, while speaking about the property where the cemetery is now, “it is the perfect place.” Mr. Smith, the man that farmed the land, sold the 40 acres to the city for $11,000 an acre, with the request that it remain open/green space. It took 5-10 years to pay for the land. The committee worked on the policies and procedures during that time and completed background research to get their policy right. Most cemeteries have plots that are 3'x8' but have to remove the headstone during a burial, which often breaks the headstones. In this case, they made plots 4'x10' so that the headstones wouldn't need to be moved and broken. Headstones face the same way so that all can read the names.

Keith Christenson, professor at USU LAEP, helped design the North Logan cemetery and memorial park. The city wanted a quiet park for people to reflect and have peace. Students worked on the project and created analyses, concepts, master plans, 3D renderings, and other designs. The city incorporated the work USU students contributed and implemented the suggested trees so that there were always color in the plantings.
Most of the work was completed by a USU LAEP undergraduate class. There were students and faculty that spent time with analysis, design, and presentations. An open house was then held for the public to showcase the students’ work, and about 30 residents attended. There were many different artistic, design styles presented by students. The committee enjoyed them all, and they were very helpful in the process of developing a final plan. North Logan used the designs to develop a budget so that they could build the cemetery a little at a time. They also used the documents in city meetings to win over community members to the idea of the cemetery.

Currently, the cemetery’s first phase is ¾ full, but eventually the city will complete the final phase of the project, which contains the memorial park below the cemetery. “We took the design and went with it,” Nancy Potter said. North Logan completed construction of the cemetery. They took their time and closely followed USU’s suggestions. Since money was an issue and time was not, the building was slow. However, multiple plots sold right from the beginning, and 20 years later, the city is moving to phase two.

The project was funded through the city budget. The cost came to $300,000+ for construction of the first phase (grading, surveying, creating an access road, grass, trees, installing a water line to the property, installing a sprinkler system, software for burial plots, and maintenance). Slowly, actions were taken to obtain the funds needed to develop the cemetery, including a tax that was developed to pay off the land a little at a time. According to Nancy, “It took a long time!” The land was sold to the city at a reasonable cost, which was beneficial. Nancy commented, “Having USU help us with the design was a huge savings for our budget. We would have had to pay a lot to find and
design the large site.” USU has continued to work on the memorial park design in other classes and has used the project to help teach students how to design large parks.

Community members pushed back in the beginning. “Why do we need a cemetery when there is one in Logan?” people asked. “A city isn't a city without a cemetery,” Nancy commented. In addition, the residents who lived on 2500 North, where the cemetery was planned, didn't want the traffic because it would increase travel on their low-traffic road. Despite this initial resistance, residents eventually accepted the idea of a cemetery in its current location. The slope gives a panoramic view of the Wellsville Mountains, making them a focal point of the cemetery. Success at the cemetery has also created other opportunities. The city was so impressed by the professionalism USU provided, USU students went on to redesign all the parks in North Logan.

The cemetery hosts funerals, of course, regular visitors and walkers, and even some remote-control planes that show up from time to time. Nancy said:

“On Memorial Day there is a gun salute and a program where a member of the city will say a few words about those who we are there to remember. They fire off a cannon and have bagpipes playing. Then they have a veteran speaker, and someone from the city gives a short speech. The cemetery has been a great benefit to North Logan.”

Outcomes

After the undergraduate students completed their designs, an open house was held, wherein 30 North Logan residents reviewed the designs and asked questions of the students. Many students over the years have now had an opportunity to provide design ideas for North Logan.
Impacts

Over $300,000 was spent on the construction of the first phase. Since that time, the first phase of the cemetery is nearly ¾ full and construction has moved on to Phase Two, the construction of Memorial Park.

Ogden Valley LAEP Student Charrette

Summary

The Ogden Valley (pop. 6,817 in 2017) is made up of three small communities: Huntsville, Eden, and Liberty. The valley is known for its recreation, pristine open spaces, and transportation (Heritage Highway tours). Weber County approached USU about the project, and it became the 2014 USU LAEP Charrette. This charrette focused on Resort Planning, Agriculture & Wildlife Preservation, Water Quality & Quantity, Monastery Preservation Planning, Pineview Reservoir, Community Growth, Transportation, Recreation, and each of the three communities individually.

There are many economic drivers in the Ogden Valley, but tourism is a big driver in all three of these communities. Visitors use the highway for history tours, which are a key component to tourism in the valley. There have been plenty of benefits from the charrette, but the biggest has been the participation of the three ski resorts. There are many large events that happen in Ogden Valley, such as the Ogden Valley Balloon Festival, various races, including the Tour de Utah and Ragnar, and events such as AndShesDopeToo. These events attract thousands of visitors each year.
During the 2014 Ogden Valley Charrette, 120 LAEP students (undergraduate and graduate) spent 6,000+ hours in design development to address issues in Ogden Valley. The valley is home to three ski resorts, a reservoir, a monastery, wildlife, and 50,000+ acres of majestic landscapes.

The Planning Commission participated as a partner, as well as 100+ stakeholder participants. The students were involved and brought an extra energy to the project. Ogden Valley and the county had considered most of the ideas that were suggested from the general plan, but the information the students found and presented was a good learning opportunity for the students. “It meant they were on the right track,” commented Steven Burton from the planning department.

The students involved the community with a pre-charrette and citizen workshop. USU provided 60 24”x36” posters, drawings, and presentations to the County Council and Planning Commission, along with PowerPoint presentations and documentation. The documents provided the project with the potential to apply for and receive $100,000 for future planning. The goal of the project was to help each community with a plan. Community members could also provide input in the process. Finally, twenty miles of new trails were proposed.

Some residents didn't like the design. They claimed the “density was too dense.” However, most did approve of the recreation element. They loved the links along the canal and the roundabouts. The students came up with additional new ideas, such as connections between the two designed villages and an interpretative center with interpretive signage along the lake and river. These were also recognized as helpful ideas for guiding tourists to events in the valley. Steve Burton was asked, “Did the project help
solve issues?” He commented, “No, not yet. But plenty of issues were identified. The plan has mostly been used to brainstorm, and it clearly helped confirm that the residents hate density.”

**Outcomes**

The community was engaged in a pre-charrette activity and a citizen workshop. The results of the charrette were 60 24”x36” posters, drawings, and presentations to present to the County Council and Planning Commission, along with PowerPoint presentations and documentation.

**Impacts**

Ogden Valley representatives anticipated using the funding to apply for a $100,000 grant for future planning purposes. Subsequently, other projects were developed after the 2014 Ogden Valley Design Charrette. Weber County authorized a planning study in 2014 (using outside consultants), Trappest Monastery Design (made up of graduate-level students) in 2015, the Hinckley Ranch in 2017 (Utah APA - Outstanding Achievement Award, Caroline Lavoie), and the Summit Powder Mountain Charrette in 2018. Although each of these projects do not directly tie back to the 2014 Ogden Valley Charrette, they are an example of connections made within the communities and how professional extension services are utilized.
**Orderville Main Street Master Plan**

**Summary**

Orderville is a “Rural” community (pop. 589 in 2017) in Kane County, Utah. The project typology was “Urban Design and Transportation” at the “Community” scale. In 2005, USU provided design assistance to Orderville City to improve the Main Street landscape, with the goal of making it more welcoming and helping to slow traffic through town. In addition, designs were developed for improving the Soup Town Café site as a community gathering place.

Orderville is centrally located between Bryce Canyon National Park, Zions National Park, and the Grand Staircase-Escalante National Monument. These tourist attractions are the main source of the economy in Orderville, Utah. Orderville residents claim to be on the “prettier side” of Bryce Canyon. There are a lot of people that come through town in the summer and fall, and some stop to have lunch at the café. Best Friends Animal Sanctuary is another driver of the Orderville economy, as well as title work, county jobs, road jobs, small business, resorts and rentals, and real estate. Because of the size of the town, it’s hard to get good help at the café.

With all of the tourism traffic, the owner of Soup Town Café, Donna Adair, wanted to not only fix up the restaurant, but figure out a way to bring more people inside. She also wanted a place that would benefit the community, with space, seating, and a stage to be used for concerts, receptions, parties, and other events. In the process, her husband, Brad Adair (a former Orderville mayor), also wanted ideas for improving Main Street, including planted medians, streetlamps, and trees. He wanted it to be more
inviting and thereby slow traffic down. The Heritage Highway played a role in how USU became involved with the Orderville Projects. Donna's sister was on the committee for the Heritage Highway, a project in which USU was involved. She suggested that Donna contact USU to help design the café landscape and Main Street.

David Bell conducted a site visit and documented his experience. He developed and sent three concepts and a final design. Donna commented, “We didn’t go anywhere with the project. USU was helpful, and I still have the concepts that they gave me. Maybe one day we will get it built.” Unfortunately, funding for the project was minimal. Brad and Donna couldn't get the support from the community for Main Street, and they were forced to use their own private funding for the renovations to the café. Donna said:

“My husband was the mayor at the time, and he tried to get the city council excited about Main Street improvements, but because of the funding issue, it didn't go anywhere—there were other improvements that needed more attention….USU had some nice ideas for the café that we hadn't thought of. They were mostly things we wanted with the property, but each design had a little concept. It gave us a vision of what things could look like. The biggest help from USU was putting our ideas on paper.”

Outcomes

USU provided conceptual designs for the streetscape of Orderville Main Street and designs for the Soup Town Café’s landscape. Improvements were made to Soup Town Café’s structure.

Impacts

The designs gave Brad and Donna a vision of the possibilities for the landscape.
Panguitch Quilt Walk Monument Park Master Plan

Summary

Panguitch (pop. 1,688 in 2017) is a “Rural” community in Garfield County, Utah. The project type was a “Site Design,” and the design focused at a “Site” scale. In 2006, the Quilt Walk Association started to form design ideas for a memorial park that paid tribute to early pioneer settlers. USU’s LAEP department helped develop ideas for the Quilt Walk Park.

Panguitch is in close proximity to Bryce Canyon National Park, Brian Head Ski Resort, and Panguitch Lake. At one time, the timber industry was a big part of the community economy, but not since the saw mill closed. Now tourism has taken its place as the biggest industry.

The Quilt Walk Park is a memorial and celebration of an event that took place in the winter of 1864-1865. It was extremely cold, and snow was deep. The closest supplies were either 115 miles to the north in Gunnison or 40 miles to the west over the difficult Bear Valley Road to Parowan. Seven men left Panguitch for Parowan to procure flour and food for the starving colony. At the head of Bear Valley, they had to abandon their two yoke of oxen and a light wagon because of the deep snow. They proceeded on foot. The only way they made progress over the frozen, crusted snow was to lay a quilt down, walk to the end of it, re-lay it and walk again. In this way, they reached Parowan.

Elaine Baldwin, Claudia Crump, and Pat Oetting are recognized by the community for making the Quilt Walk Park possible. Baldwin commented, “We wanted to do something that symbolized a big part of our history here in Panguitch. This park
was in honor of those men and the faith that they had to get the supplies that were needed for the settlement.”

When these women got involved in this project, they turned to USU Extension for help. Elaine Baldwin, President of the Quilt Walk Association (QWA), said, “We go to Extension for everything.” As she recalls, after reaching out to Garfield County USU Extension, they connected the QWA with LAEP and David Bell (Landscape Architecture Extension Specialist).

The manner in which the community came together on this project illustrates just how involved the community was. Although the total cost of the project could not be remembered, most of the community pitched in to help build it. There were donations of material and labor. A statue that represented the events of 1864-1865 was commissioned. “The original event was a miracle, and so was the park… to be able to raise the money was a blessing,” said Baldwin. The QWA raised $30,000 for the statue. The QWA wasn’t expecting the statue to be so expensive. Many donated to the park, including Zions Bank, Panguitch City, Garfield County, The Mormon Pioneer National Heritage Area (represented by Monte Bona), Panguitch Businesses and Citizens, the Panguitch Lions Club, and the QWA.

USU contributed in several ways. There were site visits made by David Bell and 2-3 students, where they developed concepts and designs for the site. They helped evaluate the aspen trees that existed on-site and saved some of the original trees. USU was very involved in the design process, and QWA ultimately built what USU recommended. The QWA had a vision for the project, and USU helped put it on paper. After the designs were complete, USU wasn’t as involved.
Each year, the Quilt Walk Park and QWA hold the Quilt Walk Festival. The city also hosts a walking tour that starts at the Quilt Walk Park daily at 12:00. Those that stop are usually getting fuel down the street at the service station. They walk down the street to learn more about the park. It’s not a big park and doesn't take long to see it all. The .25-acre site is located west of the Zions Bank parking lot. The parcel was donated by Zions Bank to the QWA specifically for the park. The community has made positive remarks about its presence. Some businesses have commented that “they love the look of a park… and want a park close to their business just like the bank has.”

Outcomes

USU contributed professional services through the design of Quilt Walk Park and recommendations regarding preserving existing aspen trees on site. Community members contributed materials, services, and time. The park was built in accordance with the design delivered by USU. It was completed in 2011.

Impacts

Each year, there are several events that occur at the park, including the Quilt Walk Festival and Heritage Celebration. Every day at noon, the city hosts a walking tour that highlights the history of Panguitch. The tour starts at Quilt Walk Park. A statue of the historical quilt walk was commissioned, and $30,000 was raised for its display. The Quilt Walk Festival is recognized by the Mormon Pioneer National Heritage Area as an existing cultural resource.
Payson Downtown Revitalization Plan

Summary

In 2004, USU participated in a project that addressed enhancing the landscape that would improve the downtown of Payson, Utah. Payson is a “Suburban” community (19,892 in 2017) in Utah County, Utah. The project typology was “Urban Design and Transportation” at the “Community” scale. Payson City wanted to re-energize the downtown by improving the vehicle and pedestrian landscape. The Payson downtown was once an economic corridor in south Utah County. At that time, the main flow transportation traveled through Main Street. However, due to UDOT’s alterations to the freeway access, Main Street’s busy traffic has moved one block to the west. The area that was considered for the project was 12 blocks long (north and south) and 4 blocks wide (east and west). For this project, the planning was well-received and solved the problems they were designed to ameliorate, but progress was severely impeded by the existing 100-year-old infrastructure that would require $2 million in improvements.

Brian Hulet, a Payson city council member, said the following about the revitalization plan:

We wanted to improve the downtown parking, road, pedestrian crossing, and landscape. I'm not sure exactly how USU became involved, but...the design was proposed to the city council, and they really liked it. We then started to put numbers together and figure out what it was going to cost. What we found at that point was that the infrastructure underneath Main Street was dilapidated and falling apart and would need extensive work to repair. The city said that they didn't want to make the improvements if they would soon have to tear it all up to fix the infrastructure below. After we found out the cost of the failing infrastructure, the project died.
USU made just one initial visit by David Bell, LAEP professor, and a couple of students to conduct a site inventory and document the site. Together, they developed designs and master plan graphics, as well as before and after graphics illustrating the possibilities for downtown. All agreed that something needed to be done with the downtown corridor but couldn’t justify the cost with the condition of the infrastructure below.

When conducting the interview, Brian mentioned that recently the City had been looking at the documents that USU had completed as an example of planning activity in Payson. He also spoke of how helpful and professional the previous involvement had been, even though the project was not funded. Currently, there are no plans to improve Payson’s downtown, although Brian admits that something needs to be done.

**Outcomes**

For landscape improvements to Payson’s downtown corridor, a master plan was developed. The plan, along with USU students, inspired city officials to make changes.

**Impacts**

Payson City valued the analysis and design and archived it as an example of planning completed in Payson City.
Roosevelt Central Park Master Plan

Summary

Roosevelt is a “Rural” community (pop. 6,843 in 2017) in Duchesne County, Utah. In 2006, this project focused on a “Parks and Recreation” typology at a “Site” specific scale. Many efforts were made to contact individuals familiar with the project. However, no opportunities were found to interview and gather project information. According to the documentation, the Roosevelt Central Park project proposed improvements to the city’s central park. Improvements included pavilions, a stage, seating, walkways, restrooms, and parking. It was determined from the site visit that there is no indication that improvements were made to the park.

Outcomes

No outcomes were determined.

Impacts

No impacts were determined.

Tooele Downtown Planning and Design

Summary

Tooele is an “Urban” community (pop. 34,628 in 2017) in Tooele County, Utah. This project was an “Urban Design and Transportation” typology, and the project focused at the “Community” scale. In 2005, USU helped the city of Tooele design improvements
to the Main Street streetscape. The design suggestions improved vehicular and pedestrian traffic, as well as functionality and aesthetics. “The downtown business district of Tooele was dying, with most development moving out to the north end of Tooele. The downtown does not play the role it has in the past, and it is not the main economic driver in Tooele anymore,” commented Randy Stant.

The city of Tooele is going through the transition from an isolated, self-reliant community to a commuter community. One of the resulting changes has been the downtown business district, which has historically served as the town’s economic core. Because the town is growing in population, its residents are increasingly driving to larger nearby cities to work. This affects Tooele in a variety of ways, not the least of which is the loss of business in the traditional local economy as commuters seek more convenient shopping patterns. Tooele ranks high in population growth. The land in Tooele is inexpensive compared to land closer to Salt Lake City, and with the highway close by, the commute is appealing. Tooele is 35 miles from the Wasatch Front, and 60-70% of its residents commute to Salt Lake City and the Wasatch Front for work daily.

Local large development also has its issues. Tooele lacks infrastructure and currently can’t service big development. There are also water issues, as Tooele’s water storage is inadequate for its rapid development.

USU Landscape Architecture approached Tooele City, seeking a project. Tooele City asked for a plan to improve the prospects of the downtown business district. Randy Stant, the city official interviewed for this paper, believed the city paid a small fee to the students.
The students visited Tooele, studied the Main Street area, and took notes and pictures. Professor David Bell acted as mentor as they completed a site study and developed a design. The students then presented the master plan to the city council in a private meeting. The master plan was used in some of the planning meetings and in city council as one concept of what could happen downtown. Stant claimed “the design wasn't really new or significant and the city already had those ideas for the downtown area. But it was helpful to have those ideas on paper.” Stant commented, “There wasn't a lot of detail that could be implemented. It was a design at 5,000 feet and mostly conceptual. The plan was nice, but I think that we needed something that was more detailed and not as conceptual.”

The design was never implemented, and no progress has been made since the USU design was submitted. The issue that the city runs into now is absentee property ownership. The people who own many of the downtown buildings don't live in Tooele anymore and allow the properties to deteriorate. As a result, downtown is now becoming an unkempt part of the city. In addition, parking is not available. UDOT widened the road to improve traffic mobility, but the change also diminished on-street parking. UDOT removed trees and ultimately downgraded the downtown atmosphere. Tooele continues to talk about improvements needed in the downtown corridor.

**Outcomes**

USU designed a conceptual master plan and delivered it to Tooele City.
Impacts

USU developed a plan that helped Tooele City put ideas on paper that could be used in future planning opportunities.

Wasatch County Fairgrounds Master Plan

Summary

The Wasatch County Event Complex is located in Heber City, Utah (pop. 15,792 in 2017). This project focused design at the “Site” scale and was considered a “Parks and Recreation” typology and is located in a “Suburban” area. The main facility is a 300' x 200' indoor arena, with a floor that measures at 48,000 sq. ft. The arena measures 160’ x 300’ with 1,850 permanent seats. There is a warm-up area, an outdoor arena, and a stall barn. The Complex continues to grow in use. In 2009, Wasatch County employees started construction on the outdoor arena with a borrowed tractor, eager to start the project with little funding and no equipment. Now the arena consists of state-of-the-art animal handling equipment and four main areas: a 240' x 140' large arena, a 240' x 90' small arena, a 280' x 140' warm-up arena, large and small stock holding pens to accommodate any size event, two viewing areas for spectators consisting of grandstands seating 2,800 people and bleachers with seating for 3,400. The arena is well-known in the country as a world-class facility. There is pride in the flow of the facility, in the “ground” (ie. the condition of the dirt in the arena is excellent), and in the arena services. The Event Complex is also suitable for a variety of purposes including graduation ceremonies, fairs, and rodeos. According to Jon Provost, the Wasatch County Event Complex Director and the primary interviewee for this project, the biggest challenges the Event Complex faces
are poorly-informed citizens who don’t understand the purpose of the facility and at times will oppose the portion of the budget that the Complex receives from the county. Also, as the Complex is not completely finished, completion of the facility is an important future goal. Because of the number of events and the cost of doing business, funding the cost of facility operations and ongoing maintenance is difficult. Finally, finding and retaining adequate, trained, and experienced help is always a challenge.

Wasatch County Council began to earmark seed money for the Event Complex, and it grew from there. Mr. Provost said the following:

We had a pretty good idea of what we wanted before USU did any work with the consultant (Bruce Dickamore). The consultant then brought the ideas to us. What we did was hire a consultant to help us put into play the ideas that we already had, and from what I understand, USU mostly worked with the consultant, not Wasatch County.

Mr. Provost was unsure of the role of the University and its influence on the project’s design, although several documented concepts and renderings were produced by USU.

Many people that come for events stay in the valley. About 53-56 events are held at the Complex each year, including graduation ceremonies, wrestling competitions, rodeos, fairs, horse shows, etc. Between the number of events and the diversity of events, the Event Complex is estimated to make a significant contribution to Wasatch County’s economy, although there is no data to confirm the claim.

Another unknown was precisely how the project was funded. Mr. Provost said of the funding:

I don’t recall which grant, but it was a grant and ear-tagged for the use of agricultural lands. That helped pay for the grounds. The project is being built in stages and is not quite finished yet. Red Ledges was a partner and gave a lot of money, and their experience helped keep things going during construction. We
have 45 sponsors that keep things rolling, and there are businesses yearly that help with funding. The Event Complex is used in many different ways, but it is used primarily as an equine facility. Some people call it the "Pony Palace," but that gives people the wrong impression of the variety of uses that it has. The Event Center is used for graduation, wrestling, rodeos, the county fair, horse shows, concerts, expos, horseback riding facilities, and the list goes on. We have a hard floor that we bring in and turn the arena floor into a hardtop walking surface. There has been some pushback, like I mentioned. People just don't understand the versatility of the Event Center and think it is just a "Pony Palace." I also think other people see it as a state-of-the-art facility, and they want to see this quality implemented in other event areas and facilities in surrounding communities.

Outcomes

Utah State’s LAEP Department produced concepts and schematic designs and delivered them to a planning consultant that made recommendations to the Wasatch County Event Complex director, Jon Provost.

Impacts

Red Ledges was a partner that provided a significant amount of funding. Currently, the Wasatch County Event Complex has 45 sponsors that provide funding annually. Each year thousands visit or participate in the 53-56 events that are held at the Wasatch County Event Complex. It is estimated that it makes significant contributions to Wasatch County’s economy.

Wayne County Community Center Landscape Plan

Summary

Bicknell is a “Rural” community located in Wayne County, Utah (pop. 2,719 in 2017). The project was considered a “Landscape and Garden Design” focusing at the
“Site” scale. In 2004, concepts were developed for a meeting place, event center, and recreation area for Wayne County communities. It was proposed to have several amenities, including baseball/softball diamonds, a community pool, open space, a hospitality industry area, parking, trails, and storage. Currently, the recreation center building has been built with parking. The actual built work closely resembles the concepts developed by Chad Kenny (USU LAEP Student) and David Bell (USU LAEP Extension Specialist) in 2004. Multiple attempts were made to contact personnel that would have an institutional memory of USU’s participation in the project. Although no such persons were found for interviews, visiting the site proved valuable when comparing the concepts to the built work, as strong correlations were made between the two. Much of the site has yet to be developed.

**Outcomes**

Landscape plans and four concept plans were developed, illustrating suggestions for the new recreation center.

**Impacts**

The structure of the community center has been built and closely resembles the concept plans developed by USU. The structure was completed in 2006.
KEY FINDINGS

Limitations and Future Research: The Need to Follow a Model Framework

Throughout time, the ways in which we document and store information have changed. During the course of this research, there have been many ways in which past projects have been recorded. As these formats change over time, projects become more difficult to access. Going through hard copies can be cumbersome and time-consuming. Some computer software that was used previously no longer exists or has been updated to the point where files cannot be recovered. These “formatting roadblocks” make retrieving data from past projects extremely difficult. Finding better ways to store this information and continually update it would greatly improve the accuracy of past project documentation and future studies on past projects.

In addition to changing formats, other major roadblocks include project name changes and the continual rotation of persons working on any given project. If either of these two elements change, tracking down projects can become extremely difficult. Recording these kinds of deviations is essential in order to revisit projects at a later time.

When identifying the needs of USU Extension and developing a base model for all LAEP projects, five key principles were identified in order to create exceptional projects with the appropriate information recorded to make our database accessible and reliable. These five principles are information, organization, documentation, communication, and evaluation. With these five principles properly executed, USU’s impacts can be evaluated on an array of scales. We can measure the details of each
project, compare similar projects, and have a better understanding of LAEP Extension’s footprint in local communities. This model can be adapted in many ways to the architecture, landscape architecture, Urban and Bioregional planning, and interior design programs. It would provide a database from which it is easy to draw and which provides easy access to all projects recorded.

The model should capture and record the following:

**Information**
1. Project Name
2. Project Location
3. Project Name (phone number, email address, and company / gov. agency / group)
4. Project Start Date and End Date
5. Project Size
6. Project Type / Category
7. Faculty Relationship
8. Project Connections
9. Program Statements

**Documentation**
1. Process
2. Analysis
3. Concepts
4. Final Documents
   i. PDFs
   ii. Presentations
   iii. Posters / Packet / Report
5. Working Documents
   i. CAD
   ii. 3D Rendering Files
   iii. Adobe
   iv. GIS
6. Photos

**Organization**
1. Numbering System
2. File Consistency (Project# _Name_ Year)
3. Key Words
4. Project Type
5. Website / Access to Final Documents/Records

**Communication**
1. Phone Number(s)
2. Email
3. Name
4. Connections
5. Correspondence
   i. Emails
   ii. Visits
   iii. Notes
6. Titles (Governor, County Planner, Commissioner, CEO, etc.)

Evaluation
1. Post-design Evaluation (PDE) or Site Visit
2. PDE Plan (1 year, 2, 5, 10, 15, 20)
3. Maintain Relationship
4. Outcomes / Impacts
   i. Professional work derived from project
   ii. Community benefits
   iii. Student benefits
   iv. Funding / Grants / Direct and Indirect dollars
   v. Awards and Recognition

How to Organize the Projects?

Project organization is the second-most important thing to do when documenting projects, the first being acquisition of the proper information to document. Organization is critical when retrieving the data/information of a project. It saves time and resources when one is able to find information easily. Storing the projects on a database would allow for quick access and unlimited storage. A database would also make projects easier to query. A researcher could request to see all projects completed in a certain year or of a certain size. It would be helpful in comparing projects with similar characteristics. Consistency in how the information is recorded is key in finding the information later. It is suggested that when saving files, a system should be established and followed. A project may be named project#.Year.NAME.Location. This allows files to remain consistent in the saving process, and consistency is key to organization. An example of data collection can be found in (Figure 17).
How Can Others Apply the Model?

Others can apply this model by first acquiring project information as listed above (and more information if they have specific needs), and next, applying it to a data organizing system. Being thorough when documenting is very important on each project. Fully-documented information helps mitigate any information gaps when searching. Applying this model will make assessing the impacts of projects more efficient.

Developing a model that can serve its users is important for all, including those that wish to record and store project information, no matter which storage system they use. If the information suggested in the model were recorded properly, and the user has an organized system for storing it, then anyone can use this model, regardless of the technology they may or may not have. This also allows the model to be used for years to come, despite new technological advances.

The most difficult part of this study was finding those involved in past projects for interviews. It was clear that due to the turnover in personnel, a lot of knowledge was lost. Throughout this research, assessing impacts has proven to be difficult. Although very helpful, interviews and site visits could not always tell the full story of each project. When interviewees were asked if Extension landscape architecture were helpful, the answer was, quite simply, yes! Of the interviews conducted, 60% of the interviewees believed that the help and resources provided by Extension landscape architecture were valuable and impactful in their community. Finding reliable information and specific impact results was inherently challenging and may have been clearer if surveys were
distributed among the communities in which these projects were located in order to better understand local impacts. General impacts were discovered only through interviews.

**People Find New Jobs, Retire, or Forget**

It was evident that many of the projects were completed so long ago, key players in the communities had moved on in life. The people that currently filled their positions may have never seen the work done by USU. People find new jobs or retire, making it hard to track down individuals familiar with the projects. This was the case for the Dutch John Community Planning Project (1995), Midway Community Parks Analysis (2006), Moab Technical Education Center Concept Plan (2007), Roosevelt City Park (2005), and the Wayne County Community Center (2004). That being said, the most difficult part of this study was finding those involved in past projects who were willing to be interviewed. Often, when key individuals were unavailable, they would recommend other representatives to be interviewed. This was the case for Everybody’s Playground Master Plan (2006), Tooele Downtown Planning and Design (2005), and the Ogden Valley Charrette (2014). Even when interviewing those familiar with the projects, individuals struggled to remember all the details. Because some of these projects were done so long ago, it is understandable that many details wouldn’t be remembered. This knowledge reinforces the need to document a project’s process for the future.
CONCLUSION

Documenting Projects

Throughout history, the way we record information has changed dramatically and continues to change year-by-year and even day-by-day. We have advanced from engraving information on stone to the most highly-sophisticated databases in the world. Yet no matter how the information is recorded, if it is not well-organized and complete, valuable information can be lost. Throughout this research, one thing has been clear—valuable information has been lost, due to poor record-keeping. Developing a model framework would improve Extension landscape architecture record-keeping.

Without proper documentation of Extension projects, full advantage of these project assessments cannot be taken. Project comparisons become extremely challenging, and improvements are more difficult to recognize. The history of Extension landscape architecture cannot be told if it is never recorded. Documentation is the essential foundation necessary for assessing impacts.

USU has made many contributions through Extension to communities in the West. Although they may not all be documented or recognized as outreach, many of these projects have made positive differences. With Extension eager to help, it was clear that who received credit was less important than the service provided. This characteristic is why Extension has been so successful in helping communities. USU provides opportunities for rural communities who would otherwise not have the resources to hire professional designers. It was clear while collecting data that many of the projects were
located in rural parts of the state. This suggests that rural communities are seeking design solutions and that USU has the resources to help.

Charrettes Are the Gateway to Future Projects

Charrettes are a common link to other Extension projects. When interviewing each of the projects’ key players, it was found that the Central Utah Pioneer Heritage Garden, Manti Downtown Streetscape Plan, Orderville Streetscape, and Panguitch Quilt Walk were all connected to the Highway 89 Charrette. The Cedar City Wayfinding project was connected to the Cedar City Charrette in 2011. The Ogden Valley Charrette made connections with the Summit Powder Mountain Charrette of 2018. This finding illustrates the importance of charrettes and their influence on other projects. When issues in a community are addressed, and solutions are found, others see that progress, and as a result, desire similar outcomes for issues they are facing. They may also simply see the results of a resource they didn’t know was available to them. There is a term used when discussing wildfires called “spot fire.” This refers to new fires started by hot windborne embers from a nearby larger fire. The ember blows into the air and then transfers beyond the perimeter of the larger fire to start a new fire. Charrettes act like a large fire, whereby new ideas are created and energy travels to communities beyond the charrette perimeter to start new “spot fires,” or ideas, in surrounding communities.

Charrettes also supply the sophomores at USU with an analysis project. These students spend a portion of the semester collecting information about an upcoming design charrette and then share what they found with the seniors, who will then take that
information into the charrette as team leaders and, after the charrette, use the design ideas to further them in their senior capstone projects. Although charrettes are not the sole contributors to Extension projects, they play an active role in future projects for the landscape architecture department.

Other Opportunities for Research

This idea of spot fires could potentially be an ideal opportunity for further research, by taking a closer look at how smaller projects branch off from charrettes. This research could be valuable in identifying the relationships between charrettes and other projects. It could also provide an interesting visualization of these relationships and how projects are connected together. This research would provide evidence of the value that charrettes provide for Extension landscape architecture.

In all the projects studied, a wide variety of deliverables (analysis, concepts, master plans, documents, presentation, etc.) were given to clients. These materials were intended to help each client move forward with the project. The most critical aspect in moving a project forward is funding. One of the questions asked was, “Were the materials delivered to you used for funding?” 31.5% said yes, 50% said no, and 18.5% were unknown. For the projects that used the materials for funding, 100% of them received funding and are in progress or completed. Cedar City is in progress, Central Utah Pioneer Heritage Garden is completed, Heritage Highway (Hwy 89) is in progress (although millions of dollars have gone into the project), Lion’s Park is completed, the Manti Downtown Streetscape is completed, and the North Logan Cemetery is just
starting phase two of the project. Of the 16 projects interviewed, 90% of interviewees stated that the product delivered from USU LAEP helped the community save money. This serves as a comparison between using USU Extension and hiring a professional firm for an equivalent product.

The most common phrase used in all of the interviews was that “things take a long time to get done” and “rarely do projects go as expected or planned.” Please note that all of the projects were influenced by public representation. The process for accomplishing tasks takes much longer when designing for public projects. This is due to the policies and procedures that are in place and requirements that need to be fulfilled.

Today, engaged scholarship is an important part of landscape architecture for professionals and students. Reviewing the collective past and future contributions that landscape architecture provides reminds us of our mandate—that a land-grant university is to teach, research, and provide service.
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