FROM GENIUS LOCI TO SUSTAINABILITY: PLACE-BASED DESIGN PRINCIPLES FOR
DOWNTOWN ATHENS, GEORGIA
by
TIANYI DONG
(Under the Direction of Marianne Cramer)

ABSTRACT

This thesis explores the potential for approaching and expressing local identities of Athens, Georgia by place-based landscape architecture design. According to the dominant qualitative and quantitative frameworks of sustainable site principles, the existing criteria for sustainable landscapes do not prioritize place-based design. However, by integrating broad sustainable principles with site-specific solutions, place-based landscape designs can reestablish the essential connections between natural and cultural landscapes. By analyzing place-based design projects and reviewing the literature focusing on place-based design principles, this thesis attempts to be an initial step toward producing place-based sustainable design guidelines for downtown Athens, Georgia.

INDEX WORDS: Landscape architecture, landscape sustainability, place-based design, downtown Athens Georgia, Jens Jensen, Robert Marvin, Richard Haag, Laurie Olin, Gustafson Guthrie Nichol
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DOWNTOWN ATHENS, GEORGIA

by

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FROM GENIUS LOCI TO SUSTAINABILITY: PLACE-BASED DESIGN PRINCIPLES FOR
DOWNTOWN ATHENS, GEORGIA

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DEDICATION

I dedicated this thesis to my beloved grandfather and grandmother, who introduced me to the fulfillment of gardening and landscaping.
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I would like to express sincere thanks to my major professor, Marianne Cramer, for guiding me every step of the way while framing and conceiving this thesis. Thank you so much for making Thursday the most cheerful and productive day of the week in the past year. I could not have done it without you.

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Defining Place-Based Design in Landscape Architecture

French poet Noël Arnaud, expressed his sense of place as, “Je suis l’espace ou je suis (I am the space where I am),” which Lavoie translates as “there is a personal involvement in all landscape representations” (Lavoie 2005).

An object or person does not exist in isolation but through relationships with its context (Lavoie 2005). A sense of place is something that we ourselves create in the course of time and it is the result of habit or custom (Jackson 1994). Therefore, in order to understand the development of it, we need to describe place-based design in the context of history. In that case, the term *genius locus,* “the spirit of the place” is worth noting for its eminence in the development of landscape thinking. In classical times it referred less to the physical place itself as it did to the guardian divinity of that place (Turner 1996). In the eighteenth century, the Latin phrase was usually translated as “the genius of a place,” meaning its influence (Jackson 1994). Most twentieth century landscape theorists supported the principle that nature should “never be forgot,” making their approach increasingly scientific and determinist (Turner 1996).

Just like Turner claimed in the book *City as Landscape : A Post-Postmodern View of Design and Planning,* what may be called Pope’s first law of landscape planning and design, “consult the genius of the place” can be paired with a second law based on Geddes and
McHarg’s work, “Any land use in the care of a specialist profession tends towards a selfish disregard for other land users” (Turner 1996). Since place-based design possesses an intimate relationship with the genius of the place, there must be situational characteristics in regional design guidelines that account for environmental sustainability at the same time.

**Problematic**

The latest market impact report by the U.S. Green Building Council (USGBC) showed that, by 2015, an estimated 40-48% of new nonresidential construction by value will be “green”, equating to a $120-145 billion USD opportunity. The most recent USGBC rating protocol in 2011 stated that regional adaptations of rating systems best addressed environmental issues in terms of sustainability. As the USGBC continues to consider region-specific best practices, eleven new regional-specific guidelines have been put forward within the year 2013. The importance of regional and place-based design has gained traction with an increasing number of architects as well as landscape architects within the field of green building design and practices. However, according to the dominant qualitative and quantitative frameworks of sustainable site principles, the existing criteria of sustainable landscapes do not prioritize place-based design (Dinep 2010).

This research offers the opportunity to investigate the possibilities of overlap with place-based and sustainable design principles. Very few if any studies of sustainable principles target place or regional context (Rogers 2001). In addition, many of the principles are oriented toward metrics (Rogers 2001). Although metrics might quantify some regional characteristics, it may not be the best way of documenting place as a unique contextual site.
The Leadership in Energy and Environmental Design (LEED) Green Building Rating System is a suite of standards guiding environmentally sustainable design and construction. Nguyen’s comparative review of five well-known sustainable rating systems, BREEAM, LEED, CASBEE, GREEN STAR and HK-BEAM, indicates that the LEED rating system possesses strong indicators in environment, large investments and proven advantages.

The current Leadership in Energy and Environmental Design (LEED) rating system is made up of a combination of eleven credit categories, including: integrative processes; location and transportation; materials and resources; water efficiency; energy and atmosphere; sustainable sites; indoor environmental quality; innovation; regional priority credits; smart location and linkage; neighborhood pattern and design; and green infrastructure and buildings (USGBC 2009).

Although regional priority has been categorized as a single rating criterion, it is the author’s hypothesis that its credit value has been established too low, since it counts for only four credits among more than 80 points. By simply stating their requirement as, “These credits have been identified by the USGBC regional councils and chapters as having additional regional importance for the project’s region,” this credit lacks sufficient explanation as well. Just as Andrew Jackson Downing claimed, “the fundamental skills required of the landscape designer are the eye of a connoisseur who discerns, as well as the hand of an improver who alerts the best features of a site” (Meyer 2005), landscape design should be more situational, not universal (Swaffield 2002 ). This means the site’s characteristics are essential sources of design, not simply circumstances to be accommodated ranging from the environmental features to the cultural properties (Meyer 2005). Therefore, the question this thesis attempts to answer is: How might the principles
of landscape sustainability be incorporated into situational characteristics of place-based design?

**Purpose and Significance**

The purpose of this thesis is to provide place-based sustainable design guidelines for downtown Athens, Georgia, through the evaluation of place-based design projects and a review of the literature focusing on place-based design principles. The principles will then be tested through a projective design in Athens.

The significance of this thesis is based on the connection between place-based design and sustainable design criteria. Landscape planning is ecologically and socially relevant (Lei-Chang et al. 2010). By comparing and evaluating landscape sustainability principles with the place-based design philosophies of landscape architecture firms such as Andropogon Associates, Ltd., and Gustafson Guthrie Nichol (GGN), as well as 20th century landscape architects such as Jens Jensen, Robert E. Marvin and Richard Haag, this thesis will be an initial step toward producing place-based sustainable design guidelines for the Downtown Athens Georgia. This thesis will also encourage the understanding of place-based design philosophies in terms of sustainability and will be an interdisciplinary effort to bring local identities back into the realms of sustainable landscape design.

**Methodology**

The methodology of this design-research thesis combines a series of research methods including complex description, discourse analysis, classification and interpretive research strategies to research the history of place-based design and sustainable design principles. Discourse analysis will be used to extract place-based design principles from philosophies of historic and contemporary landscape architects. Classification research will
be used as a research strategy helps to clarify the place-based sustainable design guidelines. The projective design works will be used to put the design guidelines into practice and test their feasibility at the same time. In order to review the theoretical framework of place-based sustainable design, a design application will then be conducted in response to the research question: How might the principles of landscape sustainability be incorporated into situational characteristics of place-based design or the reverse — how might the situational characteristics of place-based design be incorporated into the principles of landscape sustainability.

**Thesis Structure (Figure 1.1)**
The following chapter begins with the exploration of existing frameworks of sustainable design, in order to evaluate the sustainable principles for theoretical place-based design frameworks.

In an attempt to better explain the concept of place-based design, the author conducts a comprehensive inquiry on how have ideas of place changed over time in Chapter Three. The chapter chronicles the changing meaning of the term “place” from the pre-sixteenth century to the mid-twentieth century. This section also reviews the current thinking of place-based design through careful analysis of prominent thinkers as well as practitioners in the fields of environmental design, including Jens Jensen, Robert Marvin, and Richard Haag. Then, the chapter inquiries qualitative place-based design principles from notable landscape design firms including GGN and Andropogon Associates. Concluding from the above information, a theoretical framework of place-based design will then be generalized.

Chapter Four attempts to build upon the established framework in Chapter Three, exploring the relation between sustainable principles, intending to produce a more comprehensive framework of place-based sustainable design.

Built upon the design framework of place-based sustainable design, Chapter Five seeks to answer the proposed question through the site application of projective design. The author conceptualizes the process by utilizing the paradigms of place-based sustainable design in previous chapters. The chosen site, known as the “City Hall Block”, is located in downtown Athens, Georgia. The site was chosen because of its ability to tell the story of Athens from what it was to what it is, while enlightening citizens of what the city can become.
Chapter Six served as a conclusion for this thesis by offering a design critique, which reviews the design outcomes in relation to the research question: How might the principles of landscape sustainability be incorporated into situational characteristics of place-based design?
CHAPTER 2
EXISTING FRAMEWORKS OF SUSTAINABLE DESIGN

Beginning with the onset of the 21st century, a new revolution has been taking place – the Sustainability Revolution (Edward 2005). This chapter explores the existing frameworks of sustainable design guidelines, distills the place-based criteria from existing sustainable rating systems, analyzes these criteria through the lens of place-based thinking, and then categorizes the results into a matrix for evaluation.

Existing frameworks for creating and evaluating sustainable design fall primarily into two categories: those that offer qualitative theoretical, or values-based criteria; and those that prescribe specific quantitative or standards-based criteria (Edward 2005). John Elkington, the founder of a British consultancy called SustainAbility, first coined the phrase “the triple bottom line” in 1994 (SustainAbility 2013). Over the decades environmentalists and social justice advocates have struggled to bring a broader definition of bottom line into public consciousness by adding two more "bottom lines"— social and environmental concerns (Azevedo 2013).

When comparing these two categories, Denip claims “while many of the qualitative theoretical framework tend to be highly influential and formative, the most actively utilized and applied systems tend to be the quantitative ones, where focused, tangible, and measurable directives and benefits are identified” (Denip and Schwab 2010). Throughout the century, ecologists, architects, and landscape architects have devoted themselves to the
qualitative and quantitative production of sustainable principles. In order to evaluate the sustainable rating systems for place-based criteria we need to look closely at the rating systems themselves.

**Quantitative Frameworks**

There are three essential characteristics, which contribute to the wide application of quantitative principles: the long-term economic benefits, the cachet of social consciousness, and in general applicability (Denip and Schwab 2010,5). However, in order to be measurable, existing quantitative principles focus more on scientific criteria, mainly leaving artistic, cultural, and social criteria cleanly out of the mix (Denip and Schwab, 2010,5).

Among sustainable building rating systems, the most widely followed ones are Building Research Establishment Environmental Assessment Methodology (BREEAM), Comprehensive Assessment System for Built Environment Efficiency (CASBEE), Leadership in Energy and Environmental Design (LEED), Green Star (Australia), Hong Kong Building Environmental Assessment Method (HK-BEAM), (Nguyen and Altan 2011). In the field of landscape architecture, the most adopted ones are LEED, and SITES.

Table 2.1 shows the criteria that have been valued and prioritized by the dominant quantitative sustainable rating systems. The highlighted criteria relate to place-based thinking. The result supports the current argument that place-based design has been given a very low priority. Additionally, many of the principles are oriented toward metrics (Rogers 2001). Although metrics might quantify some regional characteristics, they may not be the best way of documenting place-based criteria. Since the metrics are unlikely to provide information about the relationships between each place-based criteria, it is the author’s assumption that a diagram will better illustrate these connections.
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<th>Quantitative Frameworks</th>
<th>Key Component</th>
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<td>• Location and Transportation</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td>• Sustainable Sites</td>
<td>10</td>
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<td>• Indoor Environmental Quality</td>
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</tr>
<tr>
<td></td>
<td>• Innovation</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>• Regional Priority</td>
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<tr>
<td><strong>Total Possible Points</strong></td>
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<td><strong>SITES v2 Rating System</strong></td>
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<td></td>
<td>• Pre-design Assessment + Planning</td>
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<td></td>
<td>• Innovation or Exemplary Performance</td>
<td>9</td>
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Highlighted: Qualitative place-based considerations
Findings

As can be seen from Table 2.1, these place-based criteria only contribute to a very small portion of the total and, as a result, are not prioritized. In any case, the guidelines for place-based design are too vague to implement. For example, there is insufficient information about which considerations help generate place-based criteria. The author interpreted these guidelines by exploring and analyzing the existing (albeit limited) information.

The similarity between the LEED and SITES rating systems is fairly self-evident. They both emphasize the preservation and conservation of native plant communities, as well as the storm water management. Both specifically foreground water by requiring stormwater management, outdoor water use reduction, and aquatic ecosystem restoration, all at the same time. What separate these two is that SITES stipulates conservation of threatened and endangered native species.

The guidelines show that landscape architects are trying to design a place-based sustainable landscape through an emphasis on thinking at a broader scale, in order to preserve cultural heritage, design with creativity and uniqueness, and conserve the natural system. The question, however, is: how can these guidelines be modified to model a landscape design that belongs to place? Moreover, what additional criteria do we need?
This chapter attempts to answer the question “What is place-based design and how have ideas of place have changed over time?” Admittedly, it is difficult to give a brief definition to both the word “place”, and the phrase “place-based design”. The importance of place is hard to deny. Places serve not merely as the settings for lives, but as participants, as vibrant, living aspects of memory, tradition, history, and meaning (Donohoe 2014, xi – xxi). In his article “What is Place-Based Design”, Matthew Ackerman writes that many of the living, working, and playing environments we, as landscape architects, are tasked with designing should explore the connection between the natural and man-made realms (2014). In this case, place is physical and ecological, but also cultural and historical.

**General Introduction on History of the Ideas of Place**

Ideas of place have long existed within the history of human culture as well as that of landscape design (Meyers 2003; Rogers 2001). In fact, there is a close connection between paradigm shifts in the view of nature and the development of ideas of place (Thompson, 1998; Rogers, 2001). According to shifts in the philosophical direction which altered cultural interpretations of sense of place, place-based design can be divided into five eras: the religious-based era (pre-16th century), the aesthetic-based era (16th to late-18th century), the ecological era (19th to mid-20th century), and the current era (from late-20th
century). This identification of eras is tentative and recognizes that the boundaries between them are not definitive.

Pre-sixteenth Century: Religious-Based Era

Before the 16th century, recognition of place was primarily associated with religion and ritual. People, particularly in classical Roman religion, conceived of a certain protective spirit of place – genius loci. “It was believed that a locality – a space or a structure or a whole community derived much of its unique quality from the presence of the guardianship of supernatural spirit (Jackson, 1995).” In the realm of landscape architecture, identifying and describing the genius loci (the spirit of place) is essential to creating landscapes that are unique and timeless (Palmer 2014).

Similar ideas can be found in other parts of the world. In classical Chinese religion, the theory of fengshui was developed as a system of harmonizing individuals with their dwelling places and to gain blessings from the supernatural beings inhabiting the surrounding environments (Liu 2004). Likewise, the ritual symbol of the mandala illustrates the Hindu and Buddhist cosmological view of the universe as a circle divided into four separate sections, each containing a deity. In Islam, landscapes are viewed as symbols and metaphors of the heavens instead of sacred places coexisting with a supernatural spirit (Rogers 2001).

Sixteenth to Late Eighteenth Century: Aesthetic-Based Era

Jules Michelet defined the 16th-century Renaissance as a period in Europe’s cultural history representing a break from the Middle Ages that created a modern understanding of humanity and its place in the world (Brotton 2002). One detects in both the writings and works of the eighteenth century that place-based landscape principles mainly focus on how
to manipulate the forms of sites, thus achieving aesthetic pleasure. The sense of place coexists with the architecture or a landmark (Beretta and Bailey 2011). Theorists in this era described and admired landscapes characterized by site structure and experienced sequentially through unfolding, layered, veiled, and atmospheric spaces (Meyer 2005). From the 16th century to the early 18th century, the use of landscape gardening (later called landscape architecture) was viewed as largely ornamental to the existing architecture of the site, such as manor houses, palaces, religious complexes, and centers of government (Rogers 2001; Holden and Jamie 2014).

In the 18th century, English poet, classical scholar and gardener Alexander Pope made genius loci an important principle in landscape design with the following lines from Epistle IV, to Richard Boyle, Earl of Burlington (Rogers 2001; Palmer 2014).

> Consult the genius of the place in all;  
> That tells the waters or to rise, or fall;  
> Or helps th’ ambitious hill the heav’ns to scale,  
> Or scoops in circling theatres the vale;  
> Calls in the country, catches opening glades,  
> Joins willing woods, and varies shades from shades,  
> Now breaks, or now directs, th’ intending lines;  
> Paints as you plant, and, as you work, designs.

By the last third of the 18th century, the conception of the picturesque changed with the flourishing of picturesque design theory, although William Gilpin introduced the concept of the picturesque as an aesthetic ideal at that time (Meyer 2005). Practitioners and theorists amplified the site’s latent character, describing and admiring landscapes characterized by site structure, and experienced sequentially through unfolding, layered, veiled, and atmospheric spaces, rather than extending the building’s geometry into the landscape (Meyers 2005; Thompson 1998).
Nineteenth to Mid-Twentieth Century: Ecological Era

The modern profession gradually adopted the term landscape architecture in the 19th century (Disponzio 2014). The available journals and writings seem to suggest that the 19th century to the mid-20th century was a period of time when ideas of place were merging with ecological and sustainable thinking. Although choosing a particular date as the point at which an environmental or ecological ethos emerged is difficult, the publication of Leopold’s *Sand County Almanac* in 1949 is seen as a landmark in the establishment of the ecological era (Thompson 1998).

In the early 19th century, with the increasing development of scientific techniques, landscape architects were able to read and value place within the context of emerging geological and ecological knowledge (Rogers 2001). The intermingling of aesthetic discourse and conventions with geological knowledge reinvigorated and at times transcended aesthetic categories such as the picturesque, pastoral, and sublime (Meyer 2005). Gradually, landscape architects moved away from an English form of picturesque aesthetics as they invented a new style more influenced by, or in conjunction with, cultural, scientific, and artistic trends of their own time and place (Wiebenson 1977; Meyer 2005).

In the 20th century, geographer Yi-Fu Tuan (1930 –) deepened the meaning of place by investigating “human dispositions, capacities, and needs, and on how culture emphasizes or distorts them” (Tuan 1977, 6). In *Space and Place: The Perspective of Experience*, Tuan argued that “Places are centers of felt value where biological needs, such as those for food, water, rest, and procreation, are satisfied”, grounding his place-based theory in humanistic and experiential aspects. In the field of Architecture, there were also figures that seek to ground the design to its place. Among them Kenneth Frampton (1930 –)
is important because of his profound influence on the meaning of “critical regionalism”. In Towards a Critical Regionalism: Six Points for An Architecture of Resistance, Frampton argued that on contrary to the absolute placelessness, critical regionalism necessarily involves relation with culture and nature, including paradigms of topography, context, climate, light and tectonic form.

**Current State of Place-Based Philosophies from Landscape Architects**

This section attempted to interpret place-based design philosophies from three influential landscape architects in the 20th century. These people were renowned for their landscape projects, which possessed a strong sense of their local identity from the northwest to the southeast. They bridged the great divide between ecology and art and between traditional and modern by approaching landscape as phenomenon, by emphasizing deep collaboration, and by offering an abstraction of nature in the urban context. Their work conveyed a strong sense of the place, ultimately connecting human with the environment. The interpretation will help answer the question “What were the place-based design philosophies in the 20th century in the United States.”

Before the 20th century, design strategies attended to the physical characteristic of a site, the site tactics often fell into three categories: site as framework, figure, and fragment (Meyer 2005). In that regard, designs of Jens Jensen (1860 –1951) were epoch-making, not only for his contribution to popularize native midwestern “prairie style” landscape, but his influence in the 20th century by taking site as possessing haecceity or phenomenal characteristics, and temporal experience.

When talking about modern landscape design in southern United States, Robert Marvin (1920 –2001) was an important regional figure because of the approaches he
practice in celebration of the uniqueness of the South. Marvin built connectivity between sites and their contexts by sheltering the body and nourishing the soul, which has given us excellent examples of place-based design practice in the Deep South.

One of the authors’ discoveries is that Jensen and Marvin's theories were mostly based on the practice and experience of large-scale landscape projects in the suburban context. To answer the question "what is the current state of place-based design philosophies" in a more comprehensive approach in different contexts, this thesis takes a closer look at Haag’s design philosophies. In the northwest, landscape architect Richard Haag (1923 –) provided site-specific design response on how to offer an abstraction of nature in the urban context. Benefiting from collaborations among different disciplines, place-based theory has grown diversely and maturely, developing and a deeper learning of humanity and its place (Holden and Liversedge 2014; Rogers 2001).

Reading and Making Site as Phenomenon: Jens Jensen

Engaging site as phenomenal experience is another way that site-readings lead to site-makings, for it incorporates the importance of these nonphysical, phenomenal characteristics in the landscape; one should capture, distill, and condense a site’s temporal qualities (Meyer 2005).

Enlightened by the work of Jens Jensen, Elisabeth Meyer describes the late 1900s as a time heavily influenced by the work of Jens Jensen, taking site as possessing haecceity, and temporal experience:

In the work Siftings (1939), Jensen wrote eloquently about the non-visual experience of the midwestern landscape. Jensen’s built work and writings are perhaps the best early-twentieth-century example of a site practice wherein phenomenal, temporal moments are consistently distilled into significant landscape places and experiences. His work demonstrates spatial strategies that are in the service of manifesting time (Meyers 2005).
Throughout his career Jensen demonstrated an unending interest in creating places that soothe the human psyche and celebrate the beauty of nature. Robert Grese reported his conclusions about Jensen’s design style in Jens Jensen: Maker of Natural Parks and Gardens. Grese found that, while each project had a distinctive character that reflected the nature of the site, the needs of the client, and the process by which the project was undertaken, certain qualities nearly always made the project uniquely Jensen’s. Among these qualities or designs features were his adept handling of space and massing, the use of certain “symbolic” plant species, and the inclusion of structures such as council rings (Grese 1992).

Figure 3.1 Columbus Park, Chicago, Illinois, design by Jens Jensen, 1915 (Birnbaum 2005)

Jensen himself summed up his philosophy by saying: “Every plant has fitness and must be placed in its proper surroundings so as to bring out its full beauty. Therein lies the
art of landscaping" (Jensen 1939, 115). Generations of landscape architects have sought to understand Jensen's design philosophy and the principles that guided his works: understanding the local culture, the use of native plants and other local materials, creation of space and view, mingling of light and shadow, and a preference for organic forms in large-scale landscapes (Grese 1992; Rutz 1993; Martin 2001). These approaches helped Jensen capture, distill, and condense a site's temporal qualities into his designs. Although Jensen failed to understand fully the dynamics of his plant communities in urban areas, his approach still has a great deal of meaning for landscape architects in the 20th century (Grese 1992; Eaton 1994).

*Landscape that Sheltered the Body and Nourished the Soul: Robert Marvin*

While Jensen is known for his "prairie style" design work in the midwestern landscape, in the southern part of the country landscape architect Robert E. Marvin grew up with a passion for preserving the natural beauty of his region through design and later mentoring new generations of landscape architects. "His most representative work demonstrates an extraordinary sensitivity to the sites and vegetation of his native region" (Thompson 1997, 76).

Robert E. Marvin (1920–2001), whose landscape architecture design career spanned more than sixty years, is renowned for celebrating the unique regionalism of the South Carolina low country (Young 2001). Thompson writes about Marvin's initial idea of landscape design in an interview: "When I started out, the South was still poor and broken. But I was convinced that the South was going to become wealthy within my lifetime, and that it could be destroyed by development. I dedicated my career to saving the South through proper planning" (Thompson 1997, 74). These words were a driving force for
Marvin and Associates to “create and design an environment in which each individual can grow and develop to be a full human being as God intended him to be” (Harrison 2007, 181).

“At the core of his philosophy are three driving principles: Each person is unique; each site is unique; and each challenge usually has just one or two appropriate design solutions” (Steadman 1992, 40). Research and interviews about Marvin and his work confirm Steadman’s conclusion, suggesting that there are two major considerations contributing to Marvin’s success of southern-taste-landscape: design with extraordinary sensitivity, and deep collaborations with both clients and other professions.

Figure 3.2 Homeland Gardens, Aiken, South Carolina, design by Robert Marvin, 1969

“The Master Plan and Master Plan Update were developed through a series of meetings and design sessions with the City of Aiken, Friends of Hopelands, community leaders and citizens, and the city council. The input from these meetings and from on-site visits provided the basis for plans which wholly integrate Hopeland Gardens and Rye Patch into a unified garden.” (http://www.marvinbeach.com 2015)
Such sensitivity can be reflected not merely through the least possible impact to the original landscape or the native plant pallet, but the emphasis of pre-design process: site inventory and analysis.

Charles Fraser, Honorary ASLA was one of Marvin’s’ early clients. He recalled the working experience with Marvin:

He introduced into the fields of planning and design in this region the idea that you don’t just grab a sheet of paper and start designing, but that you first methodically gather all the facts you can about the physical features of a site. That’s regularly taught today in universities—and honored in the breach, especially by architects—but Robert actually does that over and over again in each job that he has. As a consequence Robert is the landscape design and team leader of choice in this region because you know he’s going to begin by analyzing your territory – from soils to temperature – before he starts designing (Thompson 1997,76)

In one of Steadman’s articles about Robert Marvin, he describes and emphasizes Marvin’s frequent collaborations with architects, land planners, and clients. Steadman reveals one of Marvin’s design philosophies concerning his collaborations with others: "Marvin believes that good design should nurture both natural environment and his clients" (Steadman 1992, 40). Similarly, in the article How landscape architect Robert Marvin’s work sheltered the body and nourished the soul, when talking about Marvin’s success landscape architect Ed Pinckney said, “He promoted simple landscapes, not cluttered, not full of creativity and invention. And give him great credit for making it happen. Ideas are one thing, but working with clients to make ideas come alive is another” (The Island Pocket 2007).

*Design with DNA: Richard Haag*

Over the last quarter of the 20th century, environmentalism has shifted from fringe issues to a central theme in American cultural consciousness and political discourse
(Huysen 1986, 220; Meyer 2000, 187). “Richard Haag is considered by many to be one of the most influential landscape architects of the twentieth century. Although he is based in the Pacific Northwest, his projects have won international recognition for their artistic subtlety and their groundbreaking solutions to the challenges of postindustrial landscape” (Olin et al. 2012, 6).

Richard Haag’s practices bridged the “great divide” between ecology and design and between science and art by looking for material traces in the land’s natural and cultural histories, ultimately developing a connection between humans and their constructed environment (Meyer 2000, 187). By employing the material and the processes of nature, working with site contingencies, referencing art forms outside the discipline of landscape architecture, and providing occasions for humans to revel in the moments and to feel connected to a place, his designs make the environment legible to a culture distanced from the natural world (Meyer 2000, 189 – 203).

In the article Landscapes of the Pacific Northwest and Coastal California, Laurie Olin and other landscape architects interpret Haag’s design in a more detailed manner. Haag’s work demonstrate the ideas on abstraction of nature in the urban context that Haag offers through the following approaches: translating the natural landscape into poetic experience; artistically manipulating the landform; preserving selections of existing plants for “historic, esthetic and utilitarian value”; adaptively reusing key structures; and salvaging and underscoring site history (Olin et al. 2012).
“The earth forms calm the prevailing winds capture the sun’s warmth. The 20-foot summit of the master pyramid offers prospect and refuge, is evocative of a widows walk to monitor the ebb and flow of ships, the sun and the storms.” (http://kentwa.gov 2015)

Haag believed that the landscape was inherently political and cultural, conveying how citizens and leaders envisioned their city. Not only did he interpret place into design by seeing public place as a democratic space, but also by manipulating the landform artfully to shape spatial experience and ecological process, achieving a minimalist approach to design as a result (Way 2015).

Coherently, Richard Haag himself categorized his design three important principles: consider the min-max concept, the universals of landscape architecture (Figure 3.1), and elements of the design: space, scales based on human activities, circulations and movements, then physical elements such as water, earth, furniture. These three aspects are sequentially related to each other, beginning with the site analysis and continuing through the preliminary concept to design strategies.

The min-max concept is a rational approach toward revealing the site’s character by balancing between two extreme possible design outcomes. Haag read the site by
considering the minimal and maximal influences to it. For example, "Space is an element especially for landscape architecture. And because we work with living, changing space, you can go from terrestrial to celestial and to human space" (Birnbaum 2004, 51). Haag placed his design somewhere between these two extreme space scales by emphasizing on human scale, and ideal for contemplation or attuned listening, under the influence of Japanese garden design (Way 2014; Birnbaum 2004).

When conceptualizing a landscape design, Haag created experiences that people encounter through the landscape and cannot find through other art practices and forms. The idea of landscape universals (Figure 3.4), later he called “design with DNA”, revealed Haag’s core consideration of place-based design. He intended to shape landscapes that
appealing to the instincts, drives, and desires that have evolved in people’s minds by the art of form making with land (Birnbaum 2004; Way 2014). When thinking of elements that one should assemble in designing landscapes, Haag organized space, scale, and circulation according to their magnitudes.

One possible interpretation of Haag’s design philosophies is that he provides design responses to post-industrial landscapes, which frequently result in the construction of an “aesthetic of experience”. His emphasis on conceptualizing and constructing landscapes that are dynamic, fluctuating, and process-oriented provides opportunities for people to feel a greater connection to place.

21st Century Qualitative Place-Based Principles

In order to get a comprehensive understanding of place-based design principles both theoretically and practically, it is necessary to look at the qualitative place-based criteria from firms currently practicing. By taking the framework constructed by Gustafson Guthrie Nichol and taking the design principles developed by Andropogon Associates, we can begin to consider how to implement place-based design principles into practice and how to define a successful place-based design.

Design as Layers: Gustafson Guthrie Nichol

In 2014, GGN proposed a renovation design called Pike-Pine Renaissance Streetscape: Design Concept and Action Strategies. “GGN’s approach to this project was to avoid ‘fancy paving’ and ‘quickly-dated custom elements’ that have characterized streetscape improvement districts in the past. Instead, GGN proposed a rediscovery of the simple, urban street standards that create the elegant, timeless base for ever-changing street life
and installations (GGN 2014). In a unique design move, design team categorized the features into a light layer, a middle layer, and a deep layer based on place.

The Light Layer consists of the ever-changing life that occupies the physical space (GGN 2014), encompassing events related to local civic life. Items inventoried in this layer include: festivals, community organizations and volunteer groups.

The Middle Layer is composed of the physical design elements in the space. This layer is in long-term investments, and it provides a timeless, high-quality, and neutral stage for the light layer (GGN 2014). Items inventoried in this layer include: paving, site furnishings, topography, and plant communities.

The Deep Layer is the fundamental structure of the site that is determined by the including the policy, the historic context, and the cultural background. This layer is essential, and has significant impact on how frequently and comfortably people use and experience the space (GGN 2014). Items inventoried in this layer include: policy, process and collaboration, historic context, and cultural background.

Analysis of the three layers as a collection reveals opportunities to connect place-based design principles to sustainable design principles in different types of urban public space, facilitating an understanding of the design success that will could future sustainable place-based design guidelines.

*Place First: Andropogon Associates*

Andropogon Associates is a landscape architecture and ecological design firm in Philadelphia. This award-winning design group is committed to the principles of ‘design with nature”, creating beautiful and evocative landscapes inspired by the careful observation of natural processes and informed by the best environmental
science” (Andropogon 2015). Many of these founding principles of Andropogon aim to develop sustainable communities and institutions, bringing to each project the ability to see the broader picture and generate solutions that integrate historical, cultural, economic, and environmental concerns (Andropogon 2015). By establishing strong, appropriate themes, the award-winning design firm utilizes the special qualities of each site to create captivating and memorable experiences for visitors.

The elegance and economy of natural form and process continues to be the benchmark of Andropogon’s success, inspiring people to explore how their design approaches support their design success. In light of the lecture “Place First” by Carol Franklin, a sustainable place-based design entails a combination of the following paradigms: (1) Place first; (2) High-performance; (3) Multi-function landscapes; (4) Harmonizing people and place; (5) Healing ecosystems; (6) Economy of intervention; (7) Beauty is more than skin deep.

According to Franklin, the goal of a “place first” approach is to understand and express the essential character of place, to tell the story of a site by leaning on the past and the present and realizing the opportunities they reveal. The first step in understanding the essential character of a site is to respect the topography. Preserving the existing landform, determines the spatial character, builds the microclimate, and directs the structure of circulation. Then, the place first designer must understand essential trends, including the awareness of climate change, which might lead to design responses to more realities such as sea level rise, more powerful storms, increasing temperatures, diminishing numbers of major plant species, and disrupted seasonal migrations. Third, the designer establishes relations of architecture or built environment to the landscape. Franklin argued that this
integration between architecture and landscape is important for expressing the spirit and character of the place, saying, “the idea was the inside and the outside would talk to each other and dance with each other” (Franklin 2011). The final consideration is to ground the site structure in its place.

According to Franklin (2011), a high performance landscape is one that creatively solves multiple problems. It is a synergistic design, where roles are interdependent and mutually supporting and as such is embedded in considerations of place when harmonizing people with place means designs should accommodate communities for a dynamic and relevant future that incorporates the characteristics of the site. Healing ecosystems and economy of intervention focus on establishing dynamic, holistic, and healthy ecological and social systems through non-invasive and carefully targeted solutions. When beauty is more than skin-deep means landscape design is artistic, compelling and beautiful creating evocative experiences for people to see and love, initiating lasting impressions of the native landscapes. It means to create a memorable place by lusting the realms of experiences, strengthen the layers of possible human activity, and hitting the sweet-spot between learning, entertainment, aesthetics, and spirituality.

These design principles are among the most specific found in the literature review and along with the ideas of the previous practitioners. We can begin to interpret how place-based design might be structured.

**Findings: Four Realms of Place-based Design**

The place-based design philosophies of Jens Jensen, Robert Marvin, and Richard Haag bear similarities in terms of the following aspects: respecting local culture, utilizing local materials, minimalizing impact to native ecosystems, emphasizing deep collaborations, and
designing with aesthetics. The design principles of the two design firms currently practicing are concerned with different levels of design intervention to create memorable places.

This chapter attempts to interpret the design principles of place-based landscape design by answering the question “how do space practitioners envision a successful place-based design?” The matrix below briefly summarizes the design philosophies reviewed in this chapter (Table 3.1) and creates a new way of thinking about place-based design.

<table>
<thead>
<tr>
<th>Table 3.1: The Author’s Interpretation of Place-based Design Philosophies</th>
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<tbody>
<tr>
<td>Key Components</td>
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<tr>
<td>Reading and Making Site as Phenomenon: Jens Jensen</td>
</tr>
<tr>
<td>• Understanding of local culture</td>
</tr>
<tr>
<td>• The use of native plants and other local materials</td>
</tr>
<tr>
<td>• Creation of space and view</td>
</tr>
<tr>
<td>• Mingling of light and shadow</td>
</tr>
<tr>
<td>• Preference for organic forms in large-scale-landscapes</td>
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<tr>
<td>Landscape that Sheltered the Body and Nourished the Soul: Robert Marvin</td>
</tr>
<tr>
<td>• Design with extraordinary sensitivity</td>
</tr>
<tr>
<td>• Minimal impact to the original landscape or the native plant pallet</td>
</tr>
<tr>
<td>• Thoroughly site inventory and analysis</td>
</tr>
<tr>
<td>• Deep collaborations with both clients and other professions</td>
</tr>
<tr>
<td>Design with DNA: Richard Haag</td>
</tr>
<tr>
<td>• Translating the natural landscape into poetic experience</td>
</tr>
<tr>
<td>• Manipulating the landform artfully</td>
</tr>
<tr>
<td>• Preserving the portions of the plants for “historic and utilitarian value”</td>
</tr>
<tr>
<td>• Adaptively reusing key structures such as building and other site furnishing</td>
</tr>
<tr>
<td>• Salvaging and underscoring the site history</td>
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As landscape architect Carol Franklin put in her lecture “Place First”, the goal of place-based design as an approach is to understand and express the essential character of a place, to tell the story of a site by learning what it was; understanding what it is; realizing what it can become; and to strengthen and layer everything that people could do in this place (Franklin 2011). This interpretation echoes many place-based design philosophies.

<table>
<thead>
<tr>
<th>Design with Layers: GGN</th>
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<tbody>
<tr>
<td><strong>Light layer:</strong> events related to civic life</td>
</tr>
<tr>
<td>‧ Festivals</td>
</tr>
<tr>
<td>‧ Community</td>
</tr>
<tr>
<td>‧ Organizations and volunteer groups</td>
</tr>
<tr>
<td><strong>Mid layer:</strong> physical design elements</td>
</tr>
<tr>
<td>‧ Paving</td>
</tr>
<tr>
<td>‧ Site furnishing</td>
</tr>
<tr>
<td>‧ Topography</td>
</tr>
<tr>
<td>‧ Plant community</td>
</tr>
<tr>
<td><strong>Deep layer:</strong> policies, historic context, and cultural background</td>
</tr>
<tr>
<td>‧ Policy</td>
</tr>
<tr>
<td>‧ Process and collaboration</td>
</tr>
<tr>
<td>‧ Historic context and cultural background</td>
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</tbody>
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<tr>
<th>Place First: Andropogon Associates</th>
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</thead>
<tbody>
<tr>
<td><strong>Place first</strong></td>
</tr>
<tr>
<td>‧ Respect topography</td>
</tr>
<tr>
<td>‧ Respond to essential trends</td>
</tr>
<tr>
<td>‧ Connect the building and the landscape</td>
</tr>
<tr>
<td>‧ Inherent site structure</td>
</tr>
<tr>
<td><strong>High performance landscapes</strong></td>
</tr>
<tr>
<td>‧ Find and regreen over-paved public space</td>
</tr>
<tr>
<td>‧ Technologies and highly organic soils</td>
</tr>
<tr>
<td>‧ Integrating constructed wetlands into the landscape</td>
</tr>
<tr>
<td><strong>Harmonize people and place</strong></td>
</tr>
<tr>
<td>‧ People must in place</td>
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<tr>
<td>‧ Place must evolves people</td>
</tr>
<tr>
<td><strong>Heal ecosystems</strong></td>
</tr>
<tr>
<td>‧ “Soup to Nuts” site protection to site restoration</td>
</tr>
<tr>
<td>‧ Rescue of damaged sites</td>
</tr>
<tr>
<td>‧ Ecological restoration</td>
</tr>
<tr>
<td>‧ Ecological land management</td>
</tr>
<tr>
<td><strong>Beauty is more than skin deep</strong></td>
</tr>
<tr>
<td>‧ Lust the realms of experiences</td>
</tr>
<tr>
<td>‧ Strengthen and layers everything that people could do</td>
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</table>
reviewed in this chapter, pointing to the conclusion that a well-conceived place-based design may be conceptualized from many dimensions. Consider two of the most important, as depicted in the axes of Figure 3.2.

![Figure 3.5: The illustration of place-based landscape design paradigms and key components](image)

The first axis, the horizontal, corresponds to the chronological elements of a site, dating back to its past and reaching toward its future. At one end of the spectrum lies *history*, which exhibits a branch of knowledge that records and explains past events. At the other end of the spectrum lies *future*, displaying a stream of possibilities that come next. The second (vertical) dimension of place-based design describes the *site as a space*, which serves as a palimpsest for *environmental relationships* and *social connections*. At one end of the spectrum lies environment, which is a compilation of physical, chemical, and biotic
factors that act upon an organism or an ecological community. At the other end is *human*, which relates to the activities involving human participation.

The coupling of these dimensions defines the four paradigms of a place-based design project—site structure, design decision, memorable experience, and culture. These paradigms are explained in the next chapter. As shown in Figure 3.1, these four “realms” of place-based design are mutually compatible domains that often work together to form a well-designed place-based landscape.

The next logical question, then, is how does one define these four paradigms of place-based landscape design? How can the place-based design frameworks and the sustainable design principles be effectively merged? To answer this question, this thesis overlays the theories on place-based design and sustainable thinking from the various spatial disciplines.
CHAPTER 4
THEORETICAL FRAMEWORK FOR PLACE-BASED SUSTAINABLE DESIGN

In order to think of a site in a way that combines place-based design philosophies and sustainable design principles, it is necessary for the two design realms to overlap. What happens when the place-based design theories and sustainable design principles meet? By taking the place-based design paradigms generalized from the previous chapter and overlaying them on the sustainable design principles, this chapter will attempt to create a theoretical framework for place-based sustainable design in order to illustrate its important aspects, to evaluate case studies in the following chapters in order to evaluate the efficacy of the framework, and to provide a framework for the projective design.

Merging Sustainable Thinking with Four Realms of Place-Based Design

By coupling the dimensions, the author interprets the four paradigms of place-based design as site structure, design decision, memorable experience, and culture. In order to answer the question of how place-based design theories and sustainable design principles can be effectively merged, we ask: how should the four realms of place-based design be defined, and what are the key components of the four paradigms?

The Site Structure

The site structure is the neutral stage for the historical events and cultural activities to happen, which is composed of the plant communities, topography, architecture, pavement, and water. The structure is the bone of the site. The structure shapes the spaces
of the site and built the microclimate (Franklin 2011). In the book “The Visual Elements of Landscape” Jakle writes about the environmental character of a place:

Places are cued visually. Tuan states: “Place is whatever stable object catches our attention.” As the individual searches the landscape, places are discerned as loci of meaning purposeful in the specific behavioral context. Architect Christian Norberg-Schultz sees place as “totality made up of concrete things having material substance, shape, texture, and color”. Together these things determine an “environmental character” which is the “essence of place” (Jakle 1987,7).

The site structure represents a combination of natural and man-made elements that comprises, at any given time, the essential character of a place (Groth and Todd 1997). The characters of landscapes, Henry Canby writes, “will prove to be, like style in literature, the most imponderable quality, never to be defined and never to be neglected, which when found or felt is a new clue not merely to beauty, but to subject, significance, mood, and result” (Jakle 1987, 76). Jakle argues that the search for character involves interpreting the objects of place as symbols of human intent, which are then be categorized as scale, seeing in detail, style, face, light, and change. When considered in the lexicon of general systems thinking, it is also more than the sum of its parts, understanding the essential character of a site and respecting existing site structures while consistently utilizing local materials enables the paradigms of site structure to bridge the site’s history with the environment.

The Culture

Culture is the integrated pattern of human knowledge, belief, and behavior that depends upon the human capacity for learning and transmitting knowledge to succeeding generations (Merriam-Webster 2015). Because humans and their history are intertwined with spatial perceptions, culture is an essential paradigm in place-based design, and essential for establishing peoples’ sense of a place. People make attachments to places that
contribute to either their well-being or their distress; an individual’s sense of place is both a biological response to the surrounding physical environment and a cultural creation, as the demographer Yi-Fu Tuan has argued (Groth and Todd 1997, 112).

Culture is unique to its place, and place, according to Jakle, “nests in landscape as settings of behavioral predisposition, guiding behavior according to their appearance and structuring” (Jakle 1987). Therefore place-based design calls for understanding as well as respect of local culture in order to create memorable experiences.

*The Memorable Experience*

In the book *Experience Economy* (Pine and Gilmore 1999, 30–45) Pine and Gilmore categorize the four realms of experience as entertainment, educational, escapist, and esthetic. Entertainment is defined by the Oxford English Dictionary as “the action of occupying a person’s attraction agreeably; amusement. Most people absorb experiences through their senses. In educational experiences, people absorb the events unfolding before them while actively participating in them. The people who undergo escapist experiences actively participate in an immersive environment, the polar opposite of pure entertainment experiences. In esthetic experiences, individuals also immerse themselves but remain passive.

Pine and Gilmore (1999, 50–59) argue that the richest experience encompasses aspects of all four realms. Thus the key to designing a rich, compelling, and engaging experience is to incorporate all four realms. Additionally, sustainable thinking claims that creating a memorable experience is not just about the outcome but the process; deep collaboration with stakeholders is of equal importance with great user experience.
The Design Decision

The design decision-making process is the fourth paradigm of place-based design. A place-based design decision-making process means that cross-disciplinary work between designers from many fields works, responding to local issues and trends, thus brings the site a better future. By demonstrating an extremely sensitive and thorough site inventory and analysis, design teams look in-depth at the goals, opportunities, and context of the site in order to conceptualize an informative design project.

Figure 4.1 SITES V2 Decision-Making Process

How might the principles of landscape sustainability be incorporated into the situational characteristics of place-based design? By referencing the decision-making process from Sustainable Sites Initiative (SITES), to increase the ecosystem services in a
sustainable manner, decisions need to be made based on the existing conditions Fig.4.1. According to the SITES v2 rating system for sustainable land design:

When healthy soil, vegetation, and habitat are found on site, management of these systems should take place to conserve biodiversity and the long-term health and vitality of the site. This management includes ensuring land design and development protect, maintain, and improve existing features (e.g., wetlands, habitat, floodplains) and appropriately remove and manage any undesirable elements (e.g., invasive species), which contribute to the loss of ecosystem function. When features such as large trees or streams have been lost to previous development, restore the landscape to regain performance benefits. On brownfields or previously developed sites with limited ecological activity, opportunities may exist to generate ecosystem services by planting native vegetation or implementing technologies such as raingardens or green roofs. Such management will ensure that future conditions will yield high-performance landscapes that provide ecosystem services (SITES 2014).

**Place-Based Sustainable Theoretical Framework**

In order to better understand the variety of thinking on place-based and sustainable design, all of the four paradigms are organized by their key components. The sustainable design principles have been added to the list by the author. This combination of the ideas on place-based design as well as sustainable thinking can serve as a framework or a guide for a place-based sustainable design. Table 4.1 below lists the key components of each place-based sustainable paradigm. The following chapter builds upon these key components of the paradigms by analyzing case studies through the lens of this framework.
<table>
<thead>
<tr>
<th>Paradigms</th>
<th>Theme</th>
<th>Key Components</th>
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<tbody>
<tr>
<td>Site Structure</td>
<td>Vegetation</td>
<td>• Promote use of native plants, conserve habitat for endangered species</td>
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<td></td>
<td></td>
<td>• Preserve portions of the plants for &quot;historic and utilitarian value&quot;</td>
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<td></td>
<td></td>
<td>• Control and manage invasive species</td>
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<td></td>
<td>Topography</td>
<td>• Integrate landform in creation of microclimate, space and view</td>
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<td></td>
<td></td>
<td>• Manipulate the landform artfully into stormwater management process</td>
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<td></td>
<td>Architecture</td>
<td>• Reuse key constructed structures adaptively</td>
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<td></td>
<td></td>
<td>• Support locally sourced materials and technologies</td>
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<td></td>
<td></td>
<td>• Connect to existing green infrastructure</td>
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<td></td>
<td>Paving</td>
<td>• Use permeable pavement for stormwater infiltration and collection</td>
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<td></td>
<td>• Regreen over-paved impermeable pavement</td>
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<td></td>
<td>Hydrology</td>
<td>• Integrate constructed wetland into the landscape</td>
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<td></td>
<td></td>
<td>• Conduct water system analysis thoroughly</td>
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<td></td>
<td></td>
<td>• Combine stormwater management process with technical innovation</td>
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<td></td>
<td></td>
<td>• Conserve the local water system</td>
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<td></td>
<td></td>
<td>• Protect existing floodplain function</td>
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<td>Culture</td>
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<td>• Discover users’ needs of the site</td>
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<td></td>
<td></td>
<td>• Provide on-site food production</td>
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<td></td>
<td></td>
<td>• Connect to the local context, such as historic districts, transit hubs,</td>
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<td></td>
<td></td>
<td>commercial centers etc.</td>
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<td></td>
<td></td>
<td>• Promote cultural education</td>
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<td></td>
<td>• Promote equitable site use</td>
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<td>Experience</td>
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<td>• Provide equal voices for stakeholders</td>
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<td></td>
<td></td>
<td>• Promote human health and well-being</td>
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<td></td>
<td></td>
<td>• Create space and view, circulation, mingling of light and shadow</td>
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<td></td>
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<td>• Promote social connection</td>
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<td>Design Decision</td>
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<td>• Conduct a pre-design site assessment</td>
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<td>• Support local economy</td>
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<td>• Increase ecosystem services</td>
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<td>• Promote sustainability education</td>
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<td></td>
<td>• Plan for sustainable site operations and maintenance</td>
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<td></td>
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<td>• Respond to essential trends</td>
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Figure 4.2 Place-Based Sustainable Design Color Wheel by the Author
CHAPTER 5

DESIGN APPLICATION

This chapter seeks to take the place-based sustainable design framework developed in previous chapters and apply it by conducting a projective design. Adopting this framework throughout the projective design process, from site inventory to schematic design, allows emphasis on the sense of place in a sustainable way.

![Diagram](image)

Figure 5.1: Process of the Design Application

In order to better conceptualize the design, this thesis will use the process illustrated in Figure 5.1. First, the programs of the design are generated based on a combination of the
place-based sustainable framework and the formal expression. The formal expression is based on the historic central green that occupies the center of many southern towns as the seat of local government. This formal expression originated along with the design inventory in the design phase and, although the form on this site is expressed in a long and narrow green, it functions as the historic greens do in physically connecting the administrative buildings. Then the site inventory and analysis process will push the site design in two directions, one emphasizing environmental concerns (Concept One); and the other emphasizing human needs (Concept Two). An exploration of a third concept helps combine the previous two conceptual designs by balancing their conflicts and increasing their advantages based on the place-based sustainable framework. From these, a final conceptual design will be formed featuring several design drawings to detail the design thinking behind this final concept.

**Site Selection**

The proposed design site was selected based on the following criteria: (1) located within downtown Athens-Clarke County, (2) a close connection to the historical and cultural context of the city, and (3) one city block in size. Restricting the site to Downtown Athens facilitates the author's familiarity with the site history and the ability to accurately present site conditions throughout the design development process. Strong connectivity with local context promotes a sense of place even before a design has been implemented. Limiting the site to one city block in size allows for a more in-depth projective design exploration, which seeks to build from the understanding of the four paradigms presented in the previous chapter.
Site Inventory and Analysis

The site inventory starts from an understanding of the history and culture of the site (Figure 5.2). From this a series of inventory maps ranging from the plant communities to the built environment will be developed to study the present conditions of the City Hall block. The Downtown Athens Master Comprehensive Plan 2030 grounds the design in its future context, while an exploration of the site's relationship to the surrounding community completes the inventory and analysis. This chapter concludes with an examination of the schematic design process.

![Figure 5.2: Site Inventory and Analysis Process](image-url)
A Brief Introduction of Athens

Athens is located along the North Oconee River in Athens Clarke County, in the rolling Piedmont of northeast Georgia\(^1\). The city is known for its historic neighborhoods in its largely intact 19th century townscape abuts the historic North Campus of UGA (Thomas 2004). However, in the face of the rapid growth and development of the 21st century, Athens is struggling to maintain its distinctive sense of place (Thomas 2004; ACC Economic Development 2015).

![Figure 5.3: City Hall Block, Study Area](image)

The site chosen for the projective design is located in downtown Athens, Georgia, within the boundary of the downtown central core(Figure 5.3–5.5). The property,

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\(^1\)1860. Athens, Ga. social and cultural events collection. n.p.: 1860
commonly called City Hall Block, is bounded on the north by Hancock Avenue, on the east by College Avenue, on the west by North Lumpkin Street, and on the south by East Washington Street.

Besides the City Hall, Public Utilities Department, Central Service Department, and Board of Election, the site is within walkable distance to many governmental buildings including USDA Rural Development Building, ACC Municipal Court, and the US Post Office. Additionally, the site is surrounded by a growing neighborhood. According to the local newspaper Flagpole, a new student housing with 237 bedrooms is proposed one block away from the site. The City Hall site is easy to access with two parking decks close by and a Route 6 bus stop on Hancock Avenue. Recently a local ordinance passed allowing up to six food trucks to operate in the bus bays around City Hall on Thursday will bring more foot traffic to the site.
Figure 5.5: City Hall Block, Contextual Land Use
There are two churches across the street, one on each side of the northwest corner of City Hall block, which could bring more potential users on the weekends and religious holidays. The Washington Street parking deck and the College Avenue parking deck are within walking distance to the site, which leaves questions as to the necessity of surface parking, which takes up to nearly 22% of the whole area (Figure 5.6). The answer to this question led to its proposed removal in the 2030 Downtown Athens Master Plan.

The site was chosen not only because of its central location in the city but also because its potential for high quality green space has been recognized by the city government as well. According to the 2030 Downtown Athens Master Plan, the park is conceived for the purpose of accommodating family-friendly activities in the heart of the city. Unlike most proposals in the master plan, the renovation of the City Hall block, including the newly proposed pocket park, was supported by the Athens-Clark County (ACC) government with a funding of $1 million from the SPLOST 2005 funds (Aued 2013).

![Figure 5.6: City Hall Block, Land Cover Compensation](image)

It is commonly believed by residents and visitors that a history of downtown Athens is necessarily a history of the University of Georgia. The historical as well as cultural context
indicates that Washington Street has long served as a divide between the downtown commercial district and the downtown governmental district. The south side of Washington Street is dominated by bars hosting performances of local, regional, and national bands and artists. The governmental area of Washington Street is oriented more towards the north side of downtown. However, this divide seems to be affecting the prosperity of the Washington Street businesses — currently several of the buildings are vacant.

It is the view of the author that the City Hall Block, with its unique location and historic legacy, is of great value in terms of connecting the commercial area and the governmental area. By redeveloping a high quality green space, the City Hall block park could highlight campus life as well as local civic life. The site’s historic land use, the cultural connection to residents of Athens are all reasons for the use of the City Hall block park as both a reinforcement of identity of downtown as well as a replicable and affordable precedent for place-based sustainable design in downtown Athens at large.

The Site and Its History

According to A Brief History of Athens from the Athens Convention & Visitors Bureau, Athens lies just below the foothills of the Blue Ridge Mountains, near the confluence of the North and Middle Oconee Rivers. The city began as a tiny settlement, where an ancient Cherokee trail crossed the Oconee River. It officially became a town in the new state of Georgia in the early 1800s with a government made up of a three-member commission (Hynds 1974, 9). In the mid 1800s, transportation developments, combined with the growing influence of the university, made Athens one of the state’s most important cities as
the antebellum era neared the height of its development (Hynds 1974:41). Figure 5.7–5.10 shows the development of downtown.

Figure 5.7: Downtown Athens Map in 1852, indicating that the City Hall block was originally planned as two blocks

Figure 5.8: Downtown Athens Map in 1874, showing a grid layout similar to the present-day downtown layout

Figure 5.9: Downtown Athens Map in 1893, marking the location of the old City Hall; the new City Hall was completed in 1904

Figure 5.10: Downtown Athens Map in 1930, showing the developing transportation system, including the widening of most roads

The Civil War (1861—1865) interrupted this antebellum prosperity; however, the city remained virtually intact after hostilities had ended (Thomas and Koch 2009; Hester and Hester 1999). Athens regained its momentum during the Reconstruction Period. Naturalist John Muir described the city at that time as a “remarkably beautiful and aristocratic town”, where “marks of culture and refinement” were everywhere apparent (Thomas and Koch 2009; Hester and Hester 1999). In the first half of the 1900s, Athens was
the second largest cotton manufacturer in the state. The boll weevil and the collapse of the cotton market around 1920s. Five rail lines came into town, and Athens became an important center for wholesale grocers.

Figure 5.11: 1930s view of City Hall, Thornton’s Restaurant bottom left in the Smith Building, by Facebook Group Growing up in Athens

The City Hall, designed by architect L.F. Goodrich of Augusta, was completed in 1904. It was built to provide a market on the ground floor; and a calaboose, or jail. The hall itself was used not only for political meetings, but also for theatrical performances by native talent and traveling barnstormers (athensclarkecounty.com). The dome of the City Hall is a symbolic gesture towards democracy. The site is the seat of a government by the people, relating the genius loci of the City Hall Block, in the minds of the populace, to equality and
freedom. Figure 5.11 indicates that the City Hall block was the site of a water tower, which means topographically it was the highest point of the city. In addition, as water resources are so important to civic life, the placement of the water tower indicates the close relation between the site and civic well-being. Another observation from the 1930s photo is that the City Hall building was historically designed with a sloped turf featuring a minimal amount of trees and shrubs. It is the author’s opinion that the purity of the site helps define the sense of the place visually. Another photo from the 1900s (Figure 5.12) shows bus stops along the edge of College Avenue, evidence that the City Hall Block functioned historically as a public transportation node, leading the author to believe that the site still possesses the potential to serve as an important hub for downtown Athens transit systems.

Figure 5.12: Photo from the mid 1900s, City Hall in the Snow, by Facebook Group Growing up in Athens
Today the city also has strong ties to the music industry. In the late 1970s, the Athens music scene gathered momentum and international popularity, eventually earning the city worldwide recognition as a hotbed for music.

Present Conditions of the City Hall Block

During the final quarter of the 20th century, Athens glanced back at its history and realized the importance of historical preservation. The architectural heritage of the city and irreplaceable treasures of the past forms the unique identities of today's Athens.

Figure 5.13: Geologic Map of Athens-Clarke County, Georgia (Stose et al. 1939), "ggn": Granite gneiss

Based on the theoretical framework developed in the previous chapters, it is the nature of place-based sustainable design to take a closer look at the existing site structure unique to the specific location. The City Hall block is approximately 1.7 acres in size, and sits on granite gneiss bedrock (Figure 5.13) the geologically highest point of downtown Athens. The US Climate Data reports January as the coldest month, with an average low of
33 degrees Fahrenheit, and July as the hottest, with an average high of 91 degrees Fahrenheit. According to the NOAA online weather data, given the humid subtropical climate, the site receives 46.38 inches rainfall annually, and light to moderate snowfall occasionally. The thunderstorms in spring can sometimes be severe, even producing tornadoes.

Figure 5.14: City Hall Block, Stormwater Analysis

The existing topography shows that the City Hall block is at the highest point in the downtown historic district elevation. The stormwater analysis based on the existing grading plan show that the southwest corner of the site is the lowest point of the study area (Figure 5.14). The arrows showed the stormwater movement on the site and adjacent
streets. Although the southwest corner has the advantage of collecting on site stormwater, this area has been blocked away from the site’s stormwater runoff by retaining walls. The slope on the north side of the site along Hancock Avenue is about 1.1% and 4.9% on the south side along Washington Street.

As the existing land use inventory map indicates (Figure 5.15), the site is designated for governmental use, and is surrounded by commercial and institutional parcels. According to the information provided by ACC commissioner Melissa Link, the City Hall building is underused. The City Hall is designed with meeting rooms and auditoriums on the upper floor and offices on the first floor which is half below the ground elevation. Meetings on Tuesday and Thursday bring too the City Hall, 100 or more people weekly. In normal days, there are 10 to 20 people working at the semi-underground office on the first floor.

The Public Utilities Department has 10 to 20 people working, along with the public visiting for water services. The Central Service Department has 10 to 15 people working for the Athens Finance Department. The Board of Election has 10 to 20 people on normal days. On election days, voters line up in front of the building along Washington Street. The old police building historically was an ice-cream factory. In face of the high demands for office space in downtown Athens, the City is planning to repurpose the building for office use. The peach color in Figure 5.15 shows the "eyes on the public space", which indicates the windows overlooking the site and its surroundings. The site currently has a rich palette of southern plants. Most of the trees are growing and providing shade; some trees along the edge of the Washington Street and College Avenue are in poor condition.

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2 Tianyi Dong (the author), Discussion with Melissa Link (Athens-Clarke County District 3 Commissioner), City Hall of Athens-Clarke County, November 5, 2015
Figure 5.14: City Hall Block,
Based on the author’s observations, the canopy trees disconnect the spaces — the users under the deck from the ones walking on the street by blocking the views from both sides, which causes potential safety issues. The plantings along the east side of the City Hall building are mainly shrubs that require frequent pruning, a potential source of noise pollution for users working next to windows inside City Hall. Also, because of the disrupted sight lines created by this planting layout, it is difficult for wheelchair users to find the ramp entrance under the stairways.

**Future Plans: The Downtown Athens Master Plan 2030**

Spearheaded by Professor Jack Crowley and MEPD graduate students in the College of Environment + Design at the University of Georgia, the downtown master plan is functioning as a roadmap for the development of downtown Athens through 2030 (Smith 2012). In response to concerns about the walkability of downtown for small businesses as well as suggestions for more greenspace downtown, the downtown plan 2030 proposed a pocket park embedded in the City Hall block. The following information is a summary of the Plan for the site as provided by the planning team:

- Reclaiming the width of one lane from Washington Street and adding to the width of the block along its southern edge.
- Removing the interior parking to angle and parallel parking on the Block’s perimeter.
- Developing “Family Friendly” park in the Block’s interior.
- Developing the southwest corner of the block with public/private or land lease infill project, which reconfigures the parking and adds a roof cover to serve as a hard surfaced festival and market space adjacent to the Park.
- Redevelops/repurposes the old “police building” for office, basement incubator space, street level commercial and an “alleyway” connector to the interior park.
- Public Restroom: After considerable research the Plan Team identified a “model public restroom” presently used in Portland, Oregon called the “Portland Loo” as a suggestion for the need for public restrooms in the downtown (perhaps to be augmented by “Porta Potties” during major events) The “Portland Loo” which is a resilient design that includes
optimum privacy, convenience and personal security costs about $100,000 per unit and the Plan recommendation is to initially install one on the widened sidewalk on Washington Street on the City Hall and Park block where it can be hooked into the water, sewer and electrical infrastructure of the public buildings on the block. Additional public restroom sites can be phased in later.

The conceptual master plan shows the intention to accommodate the needs of potential users by creating a variety of spaces surrounding the existing buildings, and reducing the amount of surface parking, keeping business local, and supporting the unique identity of Athens, as well as facilitating food carts and a semi-permanent farmers market. Unlike most proposals in the master plan, the renovation project already has funding. ACC set aside $1 million in SPLOST 2005 funds to redo the City Hall Block, but commissioners could not agree on whether to remove on-street parking (Aued 2013). This presents an opportunity to propose detailed designs aligned with the comments by commissioners and other potential users.

Now that the present conditions and the possible future plans for the site have been established, this thesis will explore the relationship of the community to the City Hall block, considering questions such as “Is the site underappreciated?” and “How does the community interact with the site?”

The Relationship of the Community to the Site

In order to ground the design to its context, the author conducted a series of direct observations, as well as secondary descriptions from the local press based on the day-to-day use, weekend use, and seasonal festival uses of the site.

The game day observation (Figure 5.16 – 5.20) on Saturday September 5th 2015 indicates that even during tailgating festivities the site is significantly less popular than the
southern downtown area. A small number of families walked along the sidewalks from the Hotel Indigo to the Arch. Except for two police cars, there were no public vehicles occupying street parking spots. Since there were huge demands for game day parking, the author assumed that the site might be a potential space facilitating the overflow parking and tailgating for local residences and hotel consumers, as well as a game day food truck spot within walkable distance to the UGA Campus.

Another observation (Figure 5.21 – 5.23) took place on Thursday September 9th 2015, when the downtown farmers’ market in the Creature Comforts parking lot was opening one block away from the site. It is the author’s opinion that the existing location is not ideal for growing a weekday farmers market. First, the limited space of only 0.2 acres leaves the Athens Farmers Market with only six booths and limited food choices. Secondly, it is not easy to approach the site either by public transportation or by vehicle, as only Route 6 in Hancock Avenue passes by the site. As an observer as well as a farmers’ market customer, the author senses the strong needs for accommodating downtown farmers’ market business in a larger space with optimal site accessibility. Additionally, the observation indicates that the present farmers market site experiences an unfavorable stormwater issue which causes flooding of the dining area. In contrast, at the City Hall block benefiting from being a highpoint in downtown, currently the existing pavement material performs well in terms of stormwater infiltration, leading to a potential possibility for a downtown market location.

Direct observations showed that despite the significant needs within the perimeters of the City Hall block, the interior of the site was underutilized by people as well as visitors. The center of the open space is a parking lot used by commuters and visitors to the public.
buildings on City Hall block. Now we ask: What are the civic visions of the site, or, how do people envision the site? By talking with local business owners as well as referencing and interpreting the locally owned newspaper Flagpole, the author collected responses related to the site and then categorized the civic visions of the site based on different groups of people.

Evidence shows that downtown commuters are more concerned with parking issues, since the nearest two parking decks are in such demand that over 90% of the spaces are leased. The article “Does Downtown Need Another Parking Deck? ” by Flagpole editor Blake Aued points out the fact that the upper floors of a number of downtown buildings are currently being converted into apartments, leading to a more dense downtown. Aued argues that instead of parking decks, there are other solutions for accommodating the increasing parking demands, such as adopting alternative transportation methods, allowing landlords to provide parking some distance away from the downtown core, and changing zoning codes in order to prioritize foot traffic. Other user groups such as local residents as well as future downtown residents take interest in a variety of food resources such as food trucks, farmers’ markets, and local restaurants with pleasant outdoor environments. The business owners however are worried about increasing rent costs and complain about a lack of infrastructure and economic opportunities at the same time (Crist 2015).

Local business owners cherish the identity of Athens more that the other user groups; Mike Turner, owner of HHBTM Records, claims that “If the rent goes up and locally owned stores can’t afford it anymore, where are they going to go? Downtown will turn into Anytown, USA” (Crist 2015).
Figure 5.16: Game Day Observation at the City Hall Block, Approximately one hour before the game there were no people using the site.

Figure 5.17: Game Day Observation at College Avenue, Approximately one hour before the game, a group of football fans were sitting crowded and drinking not far from the City Hall block.

Figure 5.18: Game Day Observation at Broad Street, two blocks away from the site. Football fans were walking from the hotel to the UGA campus.
Figure 5.19: Game Day Observation at Baxter Street, 0.5 miles from the site
More football fans than Broad Street; People were walking across the campus to Tate Student Center and Sanford Stadium; Foot traffic was denser in the east-west direction than the north-south direction.

Figure 5.20: Game Day Observation at Lumpkin Street, 1 mile from the site
More football fans than Baxter Street; Foot traffic was denser in the east-west direction than the north-south direction; Designs of City Hall block might help to balance the foot traffic density.

Figure 5.21: Farmers Market Observation at Creature Comforts,
The comparison between City Hall Block paving material (on the left) and Creature Comforts paving material (on the right) shows that the former one performed better on a rainy day than the latter.
Design Development Drawings

The schematic design process started by responding to the existing site conditions by pushing the design decision into two different place-based sustainable design realms, one dominated by environmental concerns, the other emphasizing human needs. Referencing the results of site inventory and analysis, the design process began with a simple conceptual plan in order to explore alternative design solutions. The site entrances were determined in different ways, according to existing building entrances as well as designed functions of the space. The designs also accented the horizontal axis of the City Hall building by aligning views from the west end of the site on the North Lumpkin Street to the east end of the site on College Avenue. In order to increase ecosystem services while
addressing the demands for downtown public green space, the design transferred a certain amount of parking lot into groundcover with a variety of local plant palettes. Bearing in mind the huge demand for downtown parking, the design also proposed a certain amount of green parking with articulated paving patterns in some areas near the building. By thinking and experimenting with a variety of design solutions, the author developed three different concepts. This method of evaluating and comparing three different design concepts would then support the formulation of the author's more detailed final design application.

_Concept One: Environmental Central Green Space_

Figure 5.24: Environmental Aspects in Place-Based Sustainable Design Frameworks

Concept One responds to the environmental concerns within the place-based sustainable design framework (Figure 5.24). This thesis based an analysis of the site’s opportunities and constraints, as shown in Figure 5.25, on these concerns. The southwest corner parking lot is the topographical low point of the City Hall Block, giving it potential
for stormwater collection. A considerable amount of impervious pavement on the site can be replaced with pervious pavement, thus reducing the urban heat island effect and encouraging stormwater retention on site. The present planting design consists of a considerable number of shrubs, including *Raphiolepis indica*, *Spiraea x bumalda*, and *Rhododendron obtusum*, which require frequent maintenance. In order to lower the maintenance needs and minimize pesticide and fertilizer use, this solution proposes a planting design utilizing more native herbaceous perennials and ornamental grasses. The analysis highlighted opportunities to repurpose the old police building for public use by connecting its interior space with surrounding outdoor spaces. With reference to the site analysis, this thesis proposes the conceptual environmental design in Figure 5.26.

The formal expression of concept one comes from the reinforcement of the horizontal axis of City Hall by aligning a linear green space along the axis from the building's west end to the east side of North Lumpkin Street. Structuring a linear green space by regreening impermeable pavement along this axis would allow for the option of increasing ecosystem services. The sloped turf around the City Hall brings unity to the space while at the same time echoing the old City Hall Block landscape designs of the mid-1900s. Additionally, maximizing permeable paving areas by replacing the asphalt paving with groundcover plants allows the increase of the block's ecosystem services by infiltrating urban stormwater contaminants, reducing the urban heat island effect, and absorbing greenhouse gases such as carbon dioxide.
Figure 5.25: Site Analysis Based on Environmental Aspects
Figure 5.26: Concept One
The southwest corner of the site features a surface parking lot covered with a green roof. In order to provide more ecosystem services, the second floor of the old police building is renovated as part of the green roof by eliminating the third floor while preserving the main structure of the building's other parts. The ground floor will be repurposed as restaurant and retailing space, facilitating the public with restrooms. Proposed bike racks and a bus stop near the green roof parking lot support fuel-efficient transportation methods. The façade of the first floor is renovated into glass, bringing more transparency and therefore saves indoor energy used for lighting and heating. A plaza is proposed within walkable distance to the Athens Public Utility Department’s new Customer Service Center. This building received a LEED Gold Certification in 2011, indicating the plaza might serve as an outdoor classroom to promote sustainability education. Sloped groundcovers help collect stormwater on-site, with surface runoff conducted to a cistern placed on the southeast corner of the green space near the Public Utilities Department. The cistern supports sustainable site maintenance by providing reusable water to site irrigation systems.

Critique: The environmental central green space concept is designed with sensitivity to existing site structures. By bridging the City Hall building to its context and reclaiming the symmetrical beauty of City Hall’s west façade, the concept works well in terms of providing an environmental identity for downtown Athens. This conceptual design features a large number of green spaces which maximize ecosystem services. The stormwater management system unites with the site’s topography; the stormwater collection process is therefore not conspicuously designed but naturally grows from the site. The placement of the green roof parking lot works well in terms of increasing ecosystem services while
accommodating parking demands. Figure 6.25 illustrates the spatial relation of the parking lot and its surroundings. Given the constant parking demands on work days, the green roof parking lot seems to work best with this concept. As the 2030 plan recommends, a public restroom identified as the "Portland Loo," costing about $100,000 per unit, is included on the ground floor of the renovated building not far from the proposed bus stop and bike racks. However the modification of the Police Building certainly degrades the historic integrity of the building. This design provides minimal access to the site from the street and from the City Hall block buildings.

**Concept Two: Multi-Functional Central Green**

![Diagram](image)

> Figure 5.27: Humanity Aspects in Place-Based Sustainable Design Frameworks

The second concept is focused on restoring the connection between the historic district and the surrounding businesses and communities in downtown Athens by acting as common ground. The multi-functional concept is conceptualized with a series of human scale spaces drawn from the human aspect of the place-based sustainable framework
(Figure 5.27). This concept responds to a desire for echoing the *genius loci*— the spirit of democracy— by promoting human well-being (Figure 5.28).

The formal expression of this concept comes from the same idea of reinforcing the horizontal axis of the City Hall building by aligning a linear green space along the axis. The centerpiece of this central green is a plaza with ground lighting and splash pads. The spray plaza promotes a memorable experience by adding water as a playful, cooling, and reflective element. Although Athens has long been recognized as a college town, the placement of the spray plaza is a gesture towards promoting equitable site use for users of all ages from toddlers to seniors, not merely students. According to the local newspaper Flagpole, there is an increasing demand for food cart service in downtown Athens. To accommodate on-site food production and festive events such as a farmers’ market, outdoor movie night, etc., the event plaza in the southwest corner of the block would be furnished with movable benches for people to shift and group easily. The design proposes eliminating the old police building for a better social connection between northern downtown and the southern end, helping bring more business opportunities from the north downtown area. Bike racks and a bus stop are placed next to the event plaza to provide diversified accessibility. On the former site of the old police building is a promenade lined with arches at the south entrance to the central plaza, which memorializes and preserves elements of the police building as well as providing possibilities for sitting and relaxation. The linear central plaza, as part of the family park, can accommodate the increasing needs of outdoor socializing for the communities.
Figure 5.29: Concept Two
Critique:

The form of concept two is well-balanced, with multiple programmatic requirements. The event plaza works well in this design as it provides convenience to a spectrum of potential users, including the downtown commuters, visitors, residents, and local business owners. Though it seems to be a significant shift from the original site’s spatial character in terms of taking down one of the existing buildings, this concept is conceptualized with more functions in response to civic visions of the site. The spray plaza adds a playful element to the site. The space of the Double-barreled Cannon and the Spirit of Athens has been utilized to promote education opportunities on local culture. Repurposing the pavilion next to the voter registration office as a coffee shop facilitates more on-site users. However, this scheme demolishes a historic building in order to provide a more symmetrical mid-block access to the site and is not in the spirit of place-based goals. Also, the intensive planting design might lead to site safety issues, since the branches might block the views from the streets to the center of the site.

**Concept Three: Sustainable Urban Open Space**

The intention of the third concept (Figure 5.30) is to combine the previous two conceptual designs. To balance their conflicts and increase their advantages based on the place-based sustainable framework, the third schema approaches the site in the following six aspects.

1. Providing more entrances into the site.

The third concept improves the site’s accessibility by opening the space along the edges of the block and providing more entrances into the site. There are four entrances functioning as access into the central green. Each entrance is characterized by a unique
local art piece, which is reclaimed on the site, including the flagpole, the spirit of Athens, the double-barreled cannon, and the statue of Ben T. Epps, Georgia’s pioneer aviator. The center of the park is surrounded by an inscribed local granite stone pavement to allow the site to communicate with its users.

2. Creating areas to display art and temporary sculpture exhibits.

Recognizing that Athens is known for its history, music, and art, it is necessary to provide opportunities to accentuate Athens’ uniqueness in the city’s front yard. The existing building entrances are elevated but too narrow for outdoor exhibitions. This concept also proposed cooperation with local art organizations, including the Georgia Museum of Art and the Lyndon House Art Foundations.

3. Providing exciting experiences and places for events in the center of the park to draw more users to the City Hall block.

Based on the theory of “Design with Layers” by GGN, events related to civic life are an important layer of a successful streetscape design. To connect the new design to the civic life of the city, the design of the central green with canopy trees on the north edge allows different types of interactions between people and the central space. In response to the growing community, while admitting that the site is more active on weekdays, the third concept provides more opportunities for events, including outdoor music, outdoor movies, morning yoga, and outdoor coffee, to draw the community in, while accommodating the needs of people working on the site. In response to the change in the downtown food truck ordinance, it is now proposed that food trucks can park along Hancock Avenue and College Avenue. This concept proposes light movable chairs both along the edge and in the center of the site to accommodate on-site food consumption. To accommodate special events,
including Athens Twilight Criterium, AthFest, the Halloween Parade, and the Christmas Parade, the third concept proposes a larger stage for these exciting experiences. This concept modifies the existing landform and eliminates the existing planting design by providing three areas that could stage events well. These areas serve as building entrances and are able to accommodate outdoor rallies, demonstrations, and performances on the south, east and north sides of the block.

4. Reclaiming the value of the historic building.

The old police building is to be repurposed as an office building with a cafe on the north side facing the central green. This concept preserves the main structure of the building and revises the envelope with translucent building material to allow the passage of natural light to improve the spatial integrity between the inside and the outside, and also to promote more efficient on-site energy use. The Board of Elections is connected to the old police building with a green roof. The proposed green roof is ten feet high, which is the same elevation as the central green. The placement of the green roof could help soften the elevation difference between the center of the park and the edge of the park. The space under this green roof could be used as space for storing the light movable chairs.

5. Getting more eyes on the park.

The existing topography on the south side of the block is elevated and above eye level, which makes the City Hall difficult to access psychologically and physically. To make the spatial relation more welcoming, the third concept opens up the space around the City Hall, introducing a clear view to the park’s center. By opening up the center of the park and choosing plant materials with higher branches, the third concept is able to provide a better sense of safety for users of the site.
6. Promoting environmental awareness.

The southwest corner of the block is a storm-water collection space for the whole site. A cistern is placed on the north edge, taking advantage of the 10ft elevation difference. The placement of the cistern allows education opportunities on site. To accommodate special events in the downtown area, the southwest corner also functions as an overflow, green parking lot. By using pervious concrete, which is traditionally used in parking areas, with aggregate filling in the gaps, the southwest corner is able to tolerate the dense pressure of cars, while allowing storm water to infiltrate efficiently.

Critique:

Compared to the first two concepts, the formal expression of the third concept is more dynamic and compelling. The design response of keeping the old police building and repurposing the space with a cafe works well with the outdoor space in the central area. The areas serving as entrances to the central green work well in terms of providing accessibility and safety to the site. Unlike concept one, where the land is covered with green ground cover, the third concept is dominated by a pervious pavement. Although a pervious paving cannot provide some of the ecosystem services provided by ground cover plants, it would reduce maintenance and the application of fertilizers and pesticides. The placement of the food truck parking and outdoor chairs in this concept works well in terms of providing job opportunities and support for on-site food consumption. The design response facilitating local events by providing an elevated outdoor stage is unique. The placement of a permanent Christmas tree is an interesting sustainable design decision. Instead of asking ACC citizens to donate their property, ACC can now grow and maintain its own cedar in the new park.
Final Concept: Athens Central Green (Figure 5.31)

Based on the design critiques of the three design concepts, the third concept (Figure 5.31) is more comprehensive and better balanced in terms of combining all the best design options from the three schemes by covering more paradigms of place-based sustainable design frameworks than the other two schemes. Since this concept includes most of the advantages of the three concepts based on the place-based sustainable framework, this thesis will use the third concept as the final concept. To develop the final concept in greater detail, this thesis has developed a master plan along with an enlarged plan for the southwest corner of the site, specifying paving, plants, and a conceptual storm-water management process. The details will help to explain the environmental concerns and the human aspects addressed in the design, based on an outline of the place-based sustainable framework. The final concept accomplishes the following sustainable actions:

- Manipulating the landform to create space and collect storm water
- Supporting local economics by repurposing the historic police building as a downtown office building with a café on the north side
- Reclaiming on-site art pieces for place-making to connect the design to its context
- Recognizing the users’ need for on-site food consumption by providing outdoor seating
- Promoting social connections by providing an exciting place where things can happen
- Balancing the conflicts of safety and planting design by carefully selecting plant materials
- Defining the northern and western edges of the block as a food truck parking space by changing the paving pattern of the present parallel parking lane on Hancock Avenue and College Avenue
- Reconfiguring on-site food production and other social events
- Promoting fuel-efficient and multimodal transportation by providing bike racks and bus stops
- Promoting environmental and cultural education
Figure 5.32: Enlarged Plan and Construction Details of the Southwest Corner
Enlarged Plan of the Southwest Corner (Figure 5.32)

The final concept proposes permeable pavement for plazas and sidewalks to maximize stormwater collection. Materials for pavements and retaining seat walls are natural stone and brick native to the Athens, Georgia area. The material selection is based on the awareness of close relations between downtown Athens and the UGA campus, both historically and spatially. The majority of the City Hall block pavements are porous beige pavers set in gravel beds. The gaps between the pavers are filled with coarse gravel that allows water to flow through quickly and infiltrate the soil (UGA Construction Standards 2013, 48). The color brings unity to the site and the buildings. Since the site sits on a bedrock of granite gneiss, the edge along the main axis is defined with granite stone pavers echoing this geological context. The gray Elberton granite is native to the Athens, Georgia area (UGA Construction Standards 2013). This concept proposes that gray Elberton granite be utilized for retaining seat walls on the south edge of the central walkway.

Plant Materials (Table 5.1)

In light of the fluctuation between recent drought and extreme precipitation, the design proactively manages the natural resources on-site by harvesting stormwater for irrigation supplies. A cistern is placed next to the north edge of the central spray plaza, providing reusable water for on-site irrigation. Canopy trees are planted along the sidewalk to promote a better pedestrian experience by providing shade in hot weather. The concept proposes red cedar (*Juniperus virginiana*) as the permanent Christmas tree planting on the southeast corner. According to Georgia Christmas Tree Association, Red cedar is the old time Georgia Christmas tree with a strong pleasant cedar smell and a good shape (2015). The choice of red cedar echoes the history of Georgia. Yellowwood has a beautiful winter
branch pattern, and turf grows reasonably well under the canopy of yellowwood trees because of their deep, less competitive root systems (Odenwald and Turner 1987). Japanese zelkova is an outstanding specimen tree for the urban landscape with its beautiful foliage and bark, and low maintenance needs. Considering the climate in Athens, consisting of approximately 70% sunny days, an average high temperature of 90 degrees Fahrenheit in July, and average annual precipitation of 46.38 inches (U.S. Climate Data 2015), this conceptual design employs a palette of drought-tolerant Southern plants including white oak (Quercus alba), Japanese zelkova (Zelkova serrata), beauty bush (Kolkwitzia amabilis), butterfly-bush (Buddleia davidii), southern wax myrtle (Myrica cerifera), and mondograss (Ophiopogon japonicus). These strategies together provide a variety of sustainable solutions to increase further the ecosystem services.

<table>
<thead>
<tr>
<th>ID</th>
<th>Scientific Name</th>
<th>Common Name</th>
<th>Height</th>
<th>Landscape Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Juniperus virginiana</td>
<td>Red Cedar</td>
<td>30'-65'</td>
<td>Native conifer, tolerates hot, dry site</td>
</tr>
<tr>
<td>2</td>
<td>Quercus alba</td>
<td>White Oak</td>
<td>50'-80'</td>
<td>Large shade tree, drought tolerance</td>
</tr>
<tr>
<td>3</td>
<td>Zelkova serrata</td>
<td>Japanese Zelkova</td>
<td>50'-80'</td>
<td>Specimen tree, usually clean tree</td>
</tr>
<tr>
<td>4</td>
<td>Acer rubrum</td>
<td>Red Maple</td>
<td>40'-60'</td>
<td>Clean, colorful, attractive all season.</td>
</tr>
<tr>
<td>5</td>
<td>Cornus kousa</td>
<td>Kousa Dogwood</td>
<td>15'-30'</td>
<td>Autumn color, wildlife food</td>
</tr>
<tr>
<td>6</td>
<td>Lagerstroemia indica</td>
<td>Crepe Myrtle</td>
<td>15'-30'</td>
<td>Widely adapted, cultural introduced</td>
</tr>
<tr>
<td>7</td>
<td>Cladrastis lutea</td>
<td>Yellowwood</td>
<td>30'-50'</td>
<td>Urban street tree, yellow autumn color</td>
</tr>
<tr>
<td>8</td>
<td>Kolkwitzia amabilis</td>
<td>Beauty Bush</td>
<td>6'-10’</td>
<td>Specimen shrub, cultural introduced</td>
</tr>
<tr>
<td>9</td>
<td>Buddleia davidii</td>
<td>Butterfly-Bush</td>
<td>6'-10’</td>
<td>Attracts butterflies, cultural introduced</td>
</tr>
<tr>
<td>10</td>
<td>Myrica cerifera</td>
<td>Southern Wax Myrtle</td>
<td>10'-15’</td>
<td>Tolerant of wet soils, native shrub</td>
</tr>
<tr>
<td>11</td>
<td>Cortaderia selloana</td>
<td>Pampas Grass</td>
<td></td>
<td>Slope stabilizer, drought tolerance</td>
</tr>
<tr>
<td>12</td>
<td>Latium perenne</td>
<td>Perennial Ryegrass</td>
<td></td>
<td>Widely adapted, wear resistance</td>
</tr>
</tbody>
</table>

*Table 5.1: City Hall Block, Planting List*

CHAPTER 6
CRITIQUE REFLECTION

This chapter attempts to evaluate the final concept’s limitations and advantages, while answering the research question: How might the principles of landscape sustainability be incorporated into situational characteristics of place-based design?

Since this thesis is a projective design using the place-based sustainable theoretical framework, it was not possible to give an equal voice to stakeholders during the development of the design application. The diagram in Figure 6.1 shows the components that have been used in this design process with red dots. The reason for missing out many of the characteristics in the “future” dimension is that this dimension very much demands a social connection, including community engagement, stakeholder communication, and multi-disciplinary cooperation. However, the absence of social connection and community engagement does not necessarily imply a failure of the design application, but instead indicates that additional work is necessary. Such work might include conducting community charrettes and establishing online social communication, as well as academic engagement in monitoring site performance, should the design be constructed.
Figure 6.1: Design Critique
Considering the plans for sustainable site operations and maintenance based on site structures is essential in any future research. With regard to the large academic community in Athens, Georgia, this thesis recommends collaboration of diverse academic and professional disciplines in the future process. As an essential part of landscape sustainability, such collaboration would help refine the environmental concerns in the place-based sustainable framework.

Most of the interior space of the buildings on the site is unused, since the City Hall building is underutilized with only 10 to 20 people working on its three floors. In response to this, the thesis recommends further work on relocating the Finance Department and the Board of Elections into the City Hall building, and keeping most of the building under active use. This thesis also realized the opportunities to provide sustainable operations and management of the site, by cooperating with local organizations or employing a “mayor” of the site. Sustainable management may include recycling construction materials and waste, diverting landscape waste from the waste stream via mulching, composting, or other low-impact means, documenting and annually reviewing site performance in terms of storm-water management, and installing environmentally-friendly pest control strategies.

Place is not so much about manipulating forms as it is about designing to capture and enhance the sense of place already existing contextually. So, providing space to enhance well-beloved festivals and celebrations, like the Wild Rumpus, and fitting this space into the city, will help it to become a place over time. Place-based design cannot be achieved without an empathetic relationship with the community of users. Throughout the whole thesis research process, as an international student coming into this city to undertake a design review after spending only two years in Athens, the author was faced with the
challenge of discovering and understanding the site and its place as a cultural and historical phenomenon. The author handled the challenge through an experiential approach by participating actively in the civic life of Athens, including reviewing and taking notes for local newspapers, talking with potential users and stakeholders, and visiting the site during special events and holidays. Although the author spent many hours observing, important details of the site and of Athens were missed. Now we know why Richard Haag moved his office to the Gas Works Park site as part of the design process.

This thesis provides the potential for approaching and expressing the local identity of Athens, Georgia by proposing place-based sustainable design frameworks. The cognitive significance of this research is a creative response to the remarkable rise of environmentalism associated with a given region's need to retain its sense of unique identity. The thesis proposes four realms of place-based sustainable design: site structure, design decision, experience, and culture. In this thesis, we argue that a place-based sustainable landscape design should encompass all four realms in order to incorporate principles of landscape sustainability into situational characteristics of place-based design.
REFERENCES


