

A SUSTAINABLE APPROACH TO THE URBAN DESIGN AND DEVELOPMENT OF
INNOVATION SQUARE, GAINESVILLE, FLORIDA

By

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To my family

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LIST OF ABBREVIATIONS

CRA	Community Redevelopment Agency
Georgia Tech	Georgia Institute of Technology
GIS	Geographic Information Systems
UF	University of Florida
ULI	Urban Land Institute

Abstract of Thesis Presented to the Graduate School
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Richard Florida (2002), socioeconomist and author of *"The Rise of the creative class: And How It's Transforming Work, Leisure, Community and Everyday Life"* predicts the largest growth in creative class jobs will be in Gainesville, Florida home of the University of Florida (UF). And soon, home to Innovation Square, an innovative technology business incubator program, on a 12-acre site between downtown Gainesville and the University. The Innovation Square project has great promise to increase economic development, potential to attract the creative class, and retain the many UF graduates who would otherwise have to leave Gainesville to find employment.

It is not the economy alone that attracts the creative class, but the built environment as well. Reviewing the classic texts of urban design theory and methods of analysis including: Kevin Lynch's (1960) *"The Image of the City,"* and (1962) *"Site Planning"* William Whyte's (1980) *"The Social Life of Small urban Spaces,"* Jane Jacobs's (1993) *"The Death and Life of Great American Cities,"* Ian McHarg's (1992) *"Designs with Nature,"* as well as Carmona's (2003) *"Public Places, Urban Spaces,"* reveals the key elements and systems to strive for to make a successful project with a

great “sense of place.” Analyzing the case study of Georgia Tech’s Technology Square project, a successful incubator project in Midtown Atlanta, through the classic texts reveals the strengths and weaknesses of the project and enables the author to make recommendations for Innovation Square.

The recommendations include: returning to the traditional grid form, with small walkable blocks and buildings that address the street and engage the pedestrian, designing to the human scale, increasing pedestrian safety and comfort, encouraging mixed use development and historic preservation.

CHAPTER 1 INTRODUCTION

Gainesville: “Where Nature and Culture Meet”

The University of Florida has had a profound impact on the growth and development of Gainesville, Florida. The Innovation Square project, a 12-acre site, which will house business incubators in the science and technology fields, will also drastically affect the urban form and function of Gainesville. It is important for the University of Florida and the City of Gainesville to make the most of this opportunity with its potential of great economic development. While Gainesville is a thriving college town, it does not have the job market to support its many graduates, and thus suffers from “brain drain” or losing the potential “creative class” that could help create a sustainable economy for Gainesville. The Innovation Square project promises to change this by creating jobs for University of Florida graduates.

However, it is not the job market alone that attracts the “creative class,” but other factors of the built environment as well. These factors include: the proper mix of land uses, the urban form, architecture, and amenities, such as accessibility, walkability, easy and ubiquitous public transportation options, connected greenways, recreation, arts and cultural programs and a cityscape with a “sense of place.” By studying other public/private partnerships between universities with similar technology incubator programs, one case study being Technology Square an incubator project at Georgia Institute of Technology, finding its strengths and weakness in regard to regulations, relationships and the cities’ form and function, this thesis provides planning and design guidelines for the University of Florida to help create and prepare for the growth that Innovation Square will bring. The case study provides retrospective analysis and

assistance to UF and Gainesville as it adjusts to the promising economic development that Innovation Square is sure to bring.

While, the Innovation Square is bound to have effects on Gainesville as a whole, this study, however, is limited to the immediate surroundings of the project, because it is of most interest to see its effects on the university and downtown specifically and the area between the two. The study area is bound by University Ave (north boundary) and Depot Ave (south boundary), SW 13th Street (west boundary) and SE 3rd Street (east boundary).



Figure 1-1. Gainesville map. Source: University of Florida. (2011). Retrieved April 5, 2011, from <http://innovationsquare.ufl.edu/>

The major stakeholders are the University of Florida, the City of Gainesville and the Community Redevelopment Agency (CRA), local Business owners and the citizens. In order to maximize the potential of the Innovation Square, they should work together to achieve this goal.

In order to make recommendations, this thesis studies the situation through a lens of sustainability, focusing on the environmental, the economic, and the social equity aspects of what and how to make Gainesville even greater.

Sustainable Gainesville

Environment

The environment can be greatly improved by making a much needed physical connection between the University of Florida campus to downtown Gainesville (west to east) and both the Innovation Square site and downtown to the new Depot Park (north to south) using greenways. Greenways can both help manage storm water runoff, a huge problem downtown, and create attractive links between destinations that could encourage walking or biking. Nature is one of Gainesville's greatest assets. Greenways can educate the public on the native ecology and an educated public will be more likely to help preserve and protect it.

By adding well connected, safe, scenic, educational public parks, trails, conservation areas, and venues and activities will help Gainesville to gain an even greater sense of community, while helping the environment.

Economy

In order to attract a "creative class" to live and work in Gainesville and to prevent "brain drain" from UF graduates leaving Gainesville to pursue careers elsewhere, Gainesville needs to create a strong economy where new businesses can grow and succeed, but also needs to include strong amenities of nature and culture.

Adding mixed use (commercial, office, institutional and residential) to the area surrounding downtown and connecting to the Innovation Square site will help Gainesville gain a stronger and more diverse social and economic makeup.

Equity

Providing a mix of uses, as well as a mix of housing opportunities, inclusive of all income levels, the new development will help to create a stronger, more diverse population in the downtown area. The incubator project will not only help the businesses directly involved grow, but will no doubt have a ripple effect and also increase all the supporting businesses in the area; grocery stores, restaurants, entertainment, transportation.

Purpose of this study

The purpose of this study is to develop a set of planning and design guidelines for the new Innovation Square project and the surrounding area. This is of interest to its stakeholders: the University of Florida, the CRA, the City of Gainesville, its citizens and business owners. By finding the proper mix of land uses, urban form, architecture, and amenities, such as accessibility, walkability, easy and ubiquitous public transportation options, connected greenways, recreation, arts and cultural programs and a cityscape with a “sense of place,” these planning and design guidelines will help draw and retain businesses and create employment for University of Florida graduates. It is important to keep graduates living and working here to prevent “brain drain” and transform Gainesville from a “college town” into a “university city.” This research can help other college towns’ economic development through planning and design. By studying the policies and urban forms, their strength and weaknesses, problems, opportunities and constraints of other universities that already have incubator programs, planning and design guidelines can be made to help the University of Florida and Gainesville prepare for and encourage the growth and development that will be spurred by the Innovation Square project.

CHAPTER 2 LITERATURE REVIEW

The City of Gainesville markets itself as the place “where nature and culture meet” (Visit Gainesville, 2011). This marketing is geared to the “creative class.” This term describes people in creative fields, artists, designers, educators, usually those who use large knowledge bases and specializations to problem solve innovative solutions. Cities are interested in attracting these people because they tend to spur and sustain economic development wherever they settle and turn the places they live into more interesting ones; think Bohemians in Paris, Scientists in Silicon Valley and Punk Rockers in the East Village. These ideas are important to Urban Planners; to understand what makes some cities great and vital, while others stagnate, is one of our top priorities. The purpose of this literature review is to understand what urban design principles can be used to attract the creative class. And the purpose of this thesis is to see how these can be applied to Gainesville. Gainesville has the fortunate setting to attract and accommodate the creative class and the amenities they seek.

Richard Florida and the Creative Class

Richard Florida, a socioeconomist and author of *“The Rise of the Creative Class: And How It’s Transforming Work, Leisure, Community and Everyday Life”* (2002) has become an expert on the culture of the creative class and their impacts on the places where they live, work and play. He describes the need for not just jobs but for a creative climate:

Creative people don’t just cluster where the jobs are. They cluster in places that are centers of creativity and also where they like to live. From classical Athens and Rome, to the Florence of the Medici and Elizabethan London, to Greenwich Village and the San Francisco Bay Area, creativity has always gravitated to specific locations. As the great urbanist Jane Jacobs pointed out long ago, successful places are multidimensional and diverse—they

don't just cater to a single industry or a single demographic group; they are full of stimulation and creativity interplay. (Florida, 2002, p. 7)

He suggests that places need a creativity climate, not just a business climate.

Cities should strive to become “broadly creative communities, not just centers of technological innovation and high-tech industry” (Florida, 2002, p. 7).

The University City

One of the best places to find a creative community is in a university city. A university gives a city a great lead in the Creative Economy. Florida believes universities are essential to a successful creative community:

The presence of a major research university is a basic infrastructure component of the Creative Economy—more important than the canals, railroads and freeway systems of past epochs—and a huge potential source of competitive advantage. (Florida, 2002, p. 291)

Florida describes exactly what the University of Florida (UF) is facing with the Innovation Square project. UF cannot simply rely on the innovation and technology incubator alone to bring creative people to Gainesville. It needs to have a creative climate:

While the university is a key institution of the Creative Economy, what's not so widely understood is the multifaceted role that it plays. It is not there merely to crank out research projects that can be spun off into companies. To be an effective contributor to regional growth, the university must play three interrelated roles that reflect the 3T's of creative places— technology, talent and tolerance.

- **Technology:** Universities are centers for cutting-edge research in fields from software to biotechnology and important sources of new technologies and spin-off companies.
- **Talent:** Universities are amazingly effective talent attractors, and their effect is truly magnetic. By attracting eminent researchers and scientists, universities in turn attract graduate students, generate spin-off companies and encourage other companies to locate nearby in a cycle of self-reinforcing growth.

- Tolerance: Universities also help to create a progressive, open and tolerant people climate that helps attract and retain members of the Creative Class. Many college towns from Austin, Texas to Iowa City, Iowa have always been places where gays and other “outsiders” in those parts of the country could find a home.

In doing these things, universities help to establish the broader quality of place of the communities in which they are located. (Florida, 2002, p. 292)

The “town and gown” relationship is also important to the creative class and helps foster the creative environment. Florida believes the community should support the university as much as the university spurs developments for the community:

The surrounding community must have the capacity to absorb and exploit the innovation and technologies that the university generates, and also help put in place the broader lifestyle amenities and quality of place sought by Creative Class people. (Florida, 2002, p.292)

In order to turn the intellectual property into a sustainable and prosperous economy, the city needs to be able to support the university and the creative individuals responsible for the innovation:

It is up to communities to put the other pieces in place: both the economic infrastructure and the quality of place to retain the talent the university has attracted. Stanford did not turn the Silicon Valley area into a high-tech powerhouse on its own; regional business leaders and venture capitalists built the local infrastructure that this kind of economy needed. Palo Alto, bordering Stanford University, functions as its hub in providing office space for startup companies, venture capitalists and high-technology service providers, as well as a wide range of amenities. (Florida, 2002, p. 293)

The city of Gainesville, as well as its citizens and interested investors, should cooperate with the university to establish the infrastructure required in order to make Innovation Square a success.

Gainesville at the Top of the List

As a college town, Gainesville already has great diversity and creative individuals. It also has natural amenities and beauty, the stability of the university of Florida, and soon will have the Innovation Square to provide more creative job opportunities, a great combination to attract the creative class. Throughout his book, “*The Rise of the Creative Class*,” Florida (2002) mentions Gainesville several times as an up and coming creative hub. In his blog, (Florida, 2010) Richard Florida describes how well the creative class stands during the current economic environment and predicts where there will be the most growth:

More than 35 million people are currently employed in creative class work in fields like science, technology, and engineering; business, finance, and management; law, health care, and education; and arts, culture, media, and entertainment. The creative class makes up roughly a third of total employment and accounts for more than half of all wages and salaries in America. Creative class employment has seen relatively low rates of unemployment during the course of the economic crisis. Creative class jobs will make up roughly half of all projected U.S. employment growth – adding 6.8 million new jobs by 2018. (Florida, 2010)

Florida mapped the projected gain of creative class jobs throughout the United States (Figure 2-1). According to Florida’s blog, (Florida, 2010) Gainesville stands to gain the most growth in creative class jobs:

This map plots the projected percentage change in creative class jobs for U.S. metros. Gainesville, FL – home to the University of Florida – is the biggest projected gainer, with a projected 17.7 % increase in creative class jobs, followed by Richmond, VA (17.5 %), Greater Washington, D.C. (17.4 %), Morgantown, WV (17.01 %), Punta Gorda, FL (16.9 %), Sioux Falls, SD (16.7 %), Ocala, FL (16.5 %), Columbia, MO (16.4 %), and Durham, NC (16.4 %). The only large metro to make the list is Greater Washington, D.C., and college towns stand out, as well as a couple of smaller Florida communities where jobs are growing off of a small existing base. (Florida, 2010)

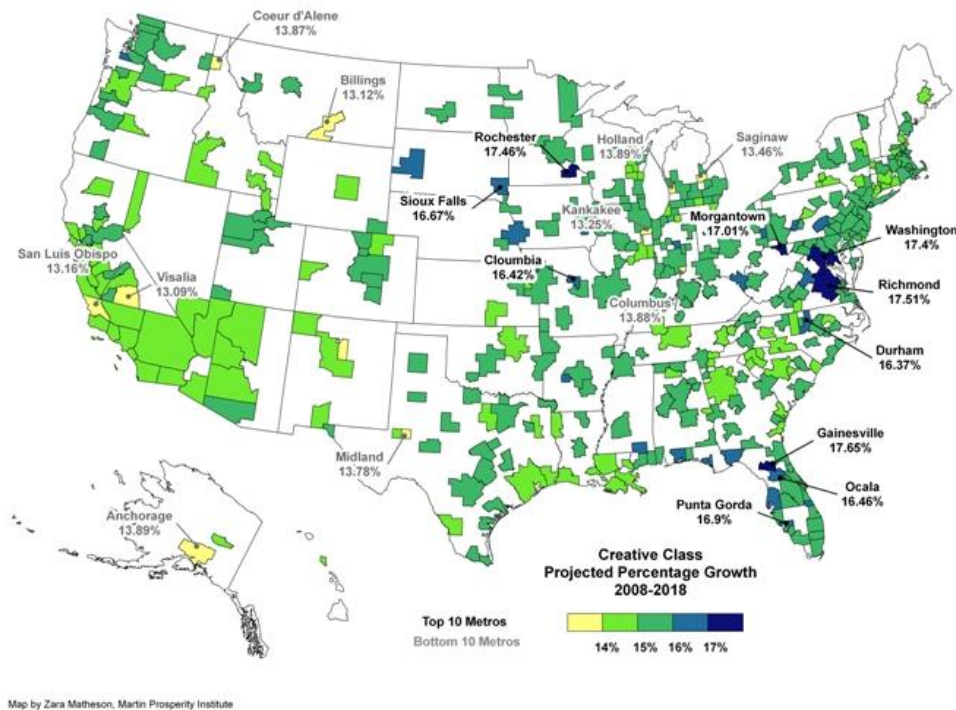


Figure 2-1. Richard Florida map. Source: Creative Class Group™. (2011). Retrieved May 21, 2011, from <http://creativeclass.com/>

Cities that successfully attract and retain the creative class have a sense of place, a lively downtown, many amenities and a diverse, talented, tolerant and dense population, and many also have a major research university to generate technology and stimulate the creative economy.

Classics of Urban Design: How to Create a “Sense of Place”

In order to help any city, including Gainesville, with downtown revitalization, it is imperative to study the classic texts of Urban Design Theory, most importantly: Kevin Lynch’s (1960) *“The Image of the City,”* William Whyte’s (1980) *“The Social Life of Small urban Spaces,”* and Jane Jacobs’s (1993) *“The Death and Life of Great American Cities,”* as well as Carmona’s (2003) *“Public Places, Urban Spaces,”* which helps to synthesize many theories. All of these help to uncover the way to analyze the current landscape and ways in which to improve it.

Elements of Kevin Lynch

Beginning with Kevin Lynch (1960), who broke up the city into elements of how humans perceive their environment through their senses (sight, sound, touch, smell). The five elements of the city he defined are: paths, edges, districts, nodes, and landmarks. He used mental mapping to study legibility and imageability. Lynch defines imageability as “that quality in a physical object which gives it a high probability of evoking a strong image in any given observer. It is that shape, color, or arrangement which facilitates the making of vividly identified, powerfully structured, highly useful mental images of the environment” (Lynch, 1960, p. 9). In other words, what about a given city makes it memorable? How do people use these five elements to navigate the city? And how can these elements work together to make a city successful? Lynch (1960) analyzed these elements in terms of volunteers recalling their memories of traveling through Boston, a successful city with a great “sense of place.” Understanding each of these elements helps to understand what a city like Gainesville has to offer and how it could improve.

Paths

Paths are the channels along which the observer customarily, occasionally, or potentially moves. They may be streets, walkways, transit lines, canals, railroads. For many people, these are the predominant elements in their image. People observe the city while moving through it, and along these paths the other environmental elements are arranged and related. (Lynch, 1960, p. 47)

As the first and most predominant element, Paths are the spine of the city. They are the most permanent, least changeable element as a city morphs over time. They are the way people circulate through a city. The paths tell the story of a city as you remember it. It is how you see your travel to work or to home, commute on the bus, ride

a bike, walk to the store. The movie-like imagery of how you remember your city takes place traveling along paths. It is important to have safe and clear paths and to have permeability to ease travel. The structure of the paths is important, whether they are in a strict or morphed grid, they allow travelers more accessibility. Ladder or cul-de-sac structures allows for quieter or safer streets perhaps, but also greatly limits accessibility and causes longer commutes and less connectivity.

Edges

Edges are the linear elements not used or considered as paths by the observer. They are boundaries between two phases, linear breaks in continuity: shores, railroad cuts, edges of development, walls. They are lateral references rather than coordinate axes. Such edges may be barriers, more or less penetrable, which close one region off from another; or they may be seams, lines along which two regions are related and joined together. These edge elements, although probably not as dominant as paths, are for many people important organizing features, particularly in the role of holding together generalized area, as in the outline of a city by water or wall. (Lynch, 1960, p. 47)

Edges are what give a place definition, what creates borders and boundaries, thresholds from one place to the next. In many cases, an edge is a natural water body, as many cities were founded and grew along a body of water for transportation, water supply or defense. These natural edges can keep a city growing densely rather than sprawling due to the limit of land. Edges can help a traveler know where he is and navigate from one place to another, but cities should avoid internal impenetrable borders. These are exclusionary elements or warning signs to keep out, or fences and walls to keep people in their place. Seams have a more positive connotation, as joining two elements together and may be a positive division from one district to the next.

Districts

Districts are the medium-to-large sections of the city, conceived of as having two-dimensional extent, which the observer mentally enters “inside of,” and which are recognizable as having some common, identifying character. Always identifiable from the inside, they are also used for exterior reference if visible from the outside. (Lynch, 1960, p. 47)

A key part of having a “sense of place” is having a district. Districts have a distinct “feel.” You know when you have entered the French quarter of New Orleans, or Chinatown in New York City, because the architecture changes, the landscape, the hard and soft scape work together, the sights, smells and sounds are unique, even the language of a district might be different from its surrounding areas. Districts are important because they create a destination. People travel to cities with districts because they feel like a unique must-see place. Districts are the largest elements and they are important for observers to learn how a city goes together. Viewed from a map, districts organize the city into more manageable areas.

Nodes

Nodes are points, the strategic spots in a city into which an observer can enter, and which are the intensive foci to and from which he is traveling. They may be primarily junctions, placed at a break in transportation, a crossing or convergence of paths, moments of shift from one structure to another. Or the nodes may be simply concentrations, which gain their importance from being the condensation of some use or physical character, as a street-corner hangout or enclosed square. Some of these concentration nodes are the focus and epitome of a district, over which their influence radiates and of which they stand as a symbol. They may be called cores. Many nodes, of course, partake of the nature of both junctions and concentrations. The concept of node is related to the concept of path, since cores are typically the intensive foci of districts, their polarizing center. In any event, some nodal points are to be found in almost every image, and in certain cases they may be the dominant feature. (Lynch, 1960, p. 47)

All previously mentioned elements are more or less independent. They can be strong or weak or non-existent. They can be taken out of a city and the city still

functions. Nodes, however, are the only essential element that cannot be taken out of a city. A node is a concentration, a concentration of people and activities at an intersection of transportation. That is where a city occurs. It is the constant interaction, the intersection and the agglomeration of people and goods. A node is a cluster of activities, a focus in the city, a city at a smaller scale.

Landmarks

Landmarks are another type of point-reference, but in this case the observer does not enter within them, they are external. They are usually a rather simply defined physical object: building, sign, store or mountain. Their use involves the singling out of one element from a host of possibilities. Some landmarks are distant ones, typically seen from many angles and distances, over the tops of smaller elements, and used as radial references. (Lynch, 1960, p. 48)

Like districts, landmarks act as an attraction for tourists, a thing of pride for residents, a mark of history, an icon or emblem of a city, and a destination point. Landmarks help to orient people. Mountains or tall buildings act as a beacon or guidance to direction. We use landmarks of every sort as we navigate a city.

These five elements are the building blocks of a city. Kevin Lynch (1960) was interested in knowing how people perceive cities, what stands out, what is memorable, what helps give us direction, what makes a place successful, or special or gives us a reason for being there. The elements are great tools to analyze a city and learn what makes it successful or not.

Carmona Urban Dimensions

Matthew Carmona, Tim Heath, Taner Oc and Steve Tiesdell co-wrote the urban design textbook *“Public Places, Urban Spaces: The Dimensions of Urban Design”* in 2003. They break down a city into different dimensions: the morphological dimension, the perceptual dimension, the social dimension, the visual dimension, the functional

dimension and the temporal dimension. These dimensions are tools to analyze what works and what does not in a city. Designers and decision makers should consider all these dimensions when working in the context of a city.

Morphological dimension

The authors define the morphological dimension as: “The layout and configuration of urban form and space” (Carmona, 2003, p. 61). There are two types of urban space, ‘traditional’ and ‘modern.’ Traditional urban space is made up of blocks of buildings and streets and squares. The buildings front the streets and squares defining them, so that the buildings become a fabric. Modernist urban form on the other hand turns buildings into free standing individual objects that may or may not address the street. This can create a negative space, or ill-defined space around these buildings, which may not address the surrounding context, or even purposefully stick out to create attention. Both modern and traditional urban form are interesting and serve functional and aesthetic purposes in their own ways and a city should try to have a mix of modern and traditional urban form.

Traditional urban form was originally created and built upon in pedestrian-oriented cities. There, density was important to keep people from having to walk too far, so every square foot was built upon since it was in high demand. New York City is a great example of a traditional urban form. Built on blocks and a street grid almost all the buildings front the street and sidewalk and create a sense of enclosure, but also arguably uniformity or monotony.

Modernist urban form was created out of the personal automobile era. Builders have catered to the automobile rather than the pedestrian as traveling by car is all the more prevalent. Today, buildings stand alone, or in strips, as islands in a sea of asphalt

parking lots. As people could travel further from the city center, builders built further as land was cheaper and more than likely greenfield, or never built upon before. Cities easily sprawled into suburbs as people grew to appreciate their distance from city centers. While today there is a renewed interest in city dwelling, the last 60 years have created a nightmare of traffic, highways and big box strip malls.

Modernist urban form does not have to be all bad. Think of the Guggenheim Museum in New York. Walking block after block of fairly uniform urban fabric a gem of a building creates focus and attention, makes a landmark and destination point out of its uniqueness against the backdrop of the regularity of the traditional city. While the traditional city should be the basis of urban form, for ease of circulation through accessibility and connectivity, some modern urban form thrown into the mix creates interest and excitement.

Visual dimension

Carmona (2003) notes that Architecture and Urban design are the only art forms that observers cannot choose to experience or not. One can choose to go to a museum or listen to music, but experiencing the built environment is inescapable. Therefore, a city's appearance should try to please the broader public (Carmona, 2003). While it would be difficult to please everyone, there are a few tried and tested formulas for a positive visual experience.

Pattern and aesthetic order. The elements of the built environment should work harmoniously together in terms of rhyme, rhythm, and balance. This can be achieved through repetition of similar elements; buildings, windows, columns of similar sizes or styles, a repeating color or motif can make great visual impact and help turn a place into a distinct district (Carmona, 2003). However, there needs to be a balance between

order and complexity, with some elements of surprise or mystery to keep a place visually interesting (Carmona, 2003).

Kinaesthetic experience is how we move through the city. Carmona (2003) describes this aspect of the visual dimension:

As our experience of urban environments is a dynamic activity involving movement and time, the kinaesthetic experience of moving through space is an important part of the visual dimension of urban design. Environments are experienced as a dynamic, emerging, unfolding temporal sequence. (Carmona, 2003, p. 134)

This ties back to Kevin Lynch's (1960) path element; experiencing the city as if through a movie, dynamic, changing, a sequence of places and views. Today, cities can be experienced kinaesthetically at varying speeds, walking, biking, car, or train. The impression of a city varies based on the speed you are going. Walking you may see great details, but you may miss the big picture of how the city is laid out. By car or bus you may only be able to read larger signs, rather than seeing fine details or appreciating individual buildings. But, you may get a greater understanding of the city at a different scale. Traveling by car, you may more quickly get a good understanding of street networks and changes in topography or see more easily different boundaries, districts and neighborhoods.

Positive and negative space, streets and squares. Positive space is enclosed outdoor space with a definite, definable, measurable shape. Its shape is equally as important as the buildings that surround and define it. Negative space on the other hand, is the space leftover surrounding freestanding object buildings. It has little to no definition and is just residual. Positive space creates a sense of containment or enclosure and gives focus to an observer. There is a proven ratio of 1:2 width to height

that creates a pleasant sense of enclosure, too wide and it feels unenclosed and too tall feels claustrophobic.

Functional dimension

The functional dimension is how a space is used. Jane Jacobs (1993) was a huge proponent for having a variety of uses in a single district. This increases the number of people on the street at all different times of the day. More eyes on the street increases safety. For public spaces, environmental comfort, the interaction between public and private space, and the mix of uses, are important parts of function to consider (Carmona, 2003).

Temporal dimension

We experience a city in four dimensions. Carmona (2003) describes the temporal dimension of cities, “as time passes, spaces become lived-in places, made more meaningful by their time thickened qualities” (Carmona, 2003, p. 193). Spaces are used differently at different times of the day as activities change; it is important therefore to have some flexibility in space planning. City planners and urban designers participate as projects come and go, and time marches on. Decay, changes in fashion and obsolescence change the urban fabric overtime. It is their responsibility to keep these changes in harmony with the remaining spaces. Some practice conservation and preservation to maintain a continuity of place.

Jane Jacobs’s 24-Hour City

Jane Jacobs, the great urban theorist of the 20th century, has had an enormous influence over urban planning principles and preservation practices, even though she was not an urban planner. Against the harshness of Urban Renewal, she supported inner city communities. A proponent of historic preservation, health, safety and activity,

she wrote four theorems in *“The Death and Life of Great American Cities”* as a guide for generating diversity in cities (Jacobs, 1993):

To generate exuberant diversity in a city’s streets and districts, four conditions are indispensable:

1. The district, and indeed as many of its internal parts as possible, must serve more than one primary function; preferably more than two. These must insure the presence of people who go outdoors on different schedules and are in the place for different purposes, but who are able to use many facilities in common.
2. Most blocks must be short; that is, streets and opportunities to turn corners must be frequent.
3. The district must mingle buildings that vary in age and condition, including a good proportion of old ones so that they vary in the economic yield they must produce. This mingling must be fairly close-grained.
4. There must be sufficiently dense concentration of people, for whatever purposes they may be there. This includes dense concentration in the case of people who are there because of residence.

In combination, these conditions create effective economic pools of use. All four in combination are necessary to generate city diversity; the absence of any one of the four frustrates a district’s potential. (Jacobs, 1993, p. 151)

Though she first wrote this in 1961, these ideas are still extremely pertinent and useful to today’s planners, designers and city officials 50 years later.

Mixed-uses

The first condition to generate diversity is having a mix of land uses. Euclidean planning separates uses, commercial in one zone, residential in another, industrial uses in another, institutions in yet another and so on. This was helpful in order to keep something of “nuisance” like a pig farm or nuclear power plant from being built in your backyard. To keep similar uses together and separate from other uses is an attempt to

keep harmony between neighbors, create districts, maintain property value, and protect health, safety and welfare of citizens by reducing exposure to potentially harmful uses. However, it is also partially the cause of bedroom communities. As is much of the case for suburban America, people live in one place and drive to work in another, leaving their home neighborhoods empty during the day and their workplaces empty during the night. Both situations lead to unsafe conditions.

It is safer to have a mix of uses, that way there are always people about at different times of day. Having a vibrant and safe downtown means having establishments open beyond 5 or 6 pm. Having a variety of entertainment and activities and even residences will keep people downtown after the work day ends. This is possible through supporting mixed-use development. In New York City, you can go to a coffee shop, work in an office, pick up your dry cleaning and catch a movie all on the same block. Having a mix of uses also helps people to walk more and drive less (Jacobs, 1993).

Small blocks

Jacobs's (1993) second condition is to build and maintain small blocks. This is important to keep blocks walkable and to keep people interested while walking. Longer blocks may feel more strenuous or tedious and create isolation and give less chance for variation of routes. Shorter blocks also promote safety because you would be less likely to find yourself walking down a great distance alone (Jacobs, 1993).

In the past, developers have taken small blocks and combined them into Mega-blocks in order to accommodate larger programs, like malls or hospitals or secluded residential developments. Such is the case in much of Gainesville, where the grid is interrupted by mega-blocks causing difficulty and inaccessibility for getting across town.

Equity

“Cities need old buildings so badly it is probably impossible for vigorous streets and districts to grow without them” (Jacobs, 1993, p. 187). Having a mix of building ages, not only creates visual appeal, but also helps to ensure equity by having equal opportunities and different options for affordable housing and commerce. Having only new buildings means having only business or renters who can afford higher rents. Chain stores, chain restaurants, banks, supermarkets, subsidized government agencies and museums can go into new buildings, but local businesses often must go into older buildings. Without the local bars, restaurants, bookstores, and galleries every city would look the same with nationwide chain stores. Not to mention that helping local businesses helps the local economy. There needs to be a mix of high and low yield to have a flourishing economy (Jacobs, 1993).

Density

What makes a city a city is having dense population, sharing resources, and creating agglomeration economies. The reason you can get anything you want at any time of day in New York City is because there is a large enough population to support almost any specialty item or service. Concentration produces convenience (Jacobs, 1993).

People gathered in concentrations of city size and density can be considered a positive good, in the faith that they are desirable because they are the source of immense vitality, and because they do represent, in small geographic compass, a great exuberant richness of differences and possibilities, many of these differences unique and unpredictable and all the more valuable because they are. (Jacobs, 1993, p. 221)

All of these conditions—small blocks, equity and density—will help to generate diversity. This is so important because it leads to an active, vibrant and economically

sustainable city, providing safety through eyes on the street and healthfulness through walkability. Richard Florida has a creative capital theory: Technology, Talent and Tolerance – “The 3 T’s of Economic Development” Creative people are the ones that power regional economic growth and they prefer places that are diverse, with people that are tolerant and open to new ideas.

Diversity increases the odds that a place will attract different types of creative people with different skill sets and ideas. Places with diverse mixes of creative people are more likely to generate new combinations. Furthermore, diversity and concentration work together to speed the flow of knowledge. Greater and more diverse concentrations of creative capital in turn lead to higher rates of innovation, high-technology business formation, job generation and economic growth. (Florida, 2002, p. 249)

All of the concepts from the classic texts of urban design theory will help guide and transform Gainesville’s form and function as it attempts to attract and maintain the creative class.

Precedents and Systems of Analysis

Thus far, this literature review has looked at methods of breaking up the site into elements; landmarks, nodes, temporal and functional dimensions, density, diversity, etc. Breaking up into elements enables us to better understand them and their positives and negatives attributes. This next section of the literature review will discuss how to analyze the elements together. Since a city is a complex weave of many interrelated factors, elements and systems, it is important to see how these many layers work together in order to determine how to conserve, use, interact with, or improve upon them.

Ian McHarg Designs with multiple layers of Nature

In his book, *“Design with Nature,”* Ian McHarg (1992) teaches how to analyze a site through the use of layers. Now taken for granted with Geospatial Information

System (GIS) technologies and even photo editing programs, McHarg's (1992) use of layers was a new and effective method for planning. Trained as a town planner and landscape architect, he drew on mylar or trace paper the many different elements of a given site, whether it be soil type, vegetation, wildlife habitats, slopes, flood plains, transportation routes, waterways. "The purpose of this exploration is to show that natural process, unitary in character, must be so considered in the planning process: that changes to parts of the system affect the entire system, that natural processes do represent values and that these values should be incorporated into a single accounting system" (McHarg, 1992, p.65).

Seeing all these factors on top of one another helped him to decide which places were suitable for which programs. In order to analyze these layers for suitability, he had to give them values, such as poor, well-drained, most distinctive, least polluted, most navigable, least vulnerable, steepest slope, least erosion, etc. For instance, a parking lot or a playground is inappropriate on a very steep slope that is easily erodible because it would be difficult for the users, and damaging to the environment. "Nature can be considered as interacting process, responsive to laws, constituting a value system, offering intrinsic opportunities and limitations to human uses" (McHarg, 1992, p.55).

By studying these values of suitability he was able to determine which uses were most and least appropriate. "The basic proposition employed is that any place is the sum of historical, physical and biological processes, that these are dynamic, that they constitute social values, that each area has an intrinsic suitability for certain land uses and finally, that certain areas lend themselves to multiple coexisting land uses" (McHarg

1992, p.104). And all these factors work together, the planner and designer need to learn from the ecology present to build or not to build in the appropriate places.

Site Planning by Kevin Lynch

In "*Site Planning*," yet another important text for planners by Kevin Lynch (1962), he writes, "site planning is the art of arranging the external physical environment to support human behavior" (Lynch 1962, p.3). It involves architecture, engineering, landscape architecture, and city planning. Lynch continues, "site plans locate structures and activities in three-dimensional spaces and, when appropriate, in time. The differences that arise from that spatial and temporal arrangement are the meat and matter: they include differences in proportion, density, shape, duration, grain, rhythm, pattern, succession, or linkage" (Lynch 1962, p.4). Like McHarg (1992), Lynch (1962) saw the city and the environment as interwoven systems that need to be studied holistically to fully understand the site and what the appropriate uses are for it:

The site is not simply a collection of buildings and streets but a system of structures, surfaces, spaces, living things, climate and details. Every site, natural or man-made, is to some degree unique, a web of things and activities. Understanding a locality demands time and effort. The site planner properly suffers a chronic anxiety about this spirit of place. (Lynch 1962, p.5)

Lynch (1962) also recognized how important it is to the site planner to look beyond the site and understand its context, the surrounding community and how it relates and interacts with the site:

Preferred arrangement on the site may depend heavily on outside links, such as the movement to work, the convenience to shopping or other facilities, and surrounding negative influences. (Lynch 1962, p.33)

He recommends the site planner look beyond any given boundary lines, and take the surroundings into account.

For site design of institutional functions, university campuses, hospitals or cultural centers, Lynch (1962) recommends an “urban” character. He describes four methods of organizing an institution in space. The first is to organize by grouping administrative departments together (the entire physics department in one area). The second is by grouping program types together (all the different libraries next to each other). The third is the “college” system, by mixing functions into units to promote learning communities (a dormitory, dining hall, and classrooms as a unit). The last is the urban organization, which requires a wide dispersal and mixing of functions supported by good transportation and communication systems.

This arrangement is meant to favor diverse interactions and continuous shifts in the functional network. To be workable, spaces must be made usable for diverse purposes, communications must be excellent, and the growth, interactions, and displacement of units must be centrally monitored and controlled on a continuous basis. On occasion, activities may even be juxtaposed which have little formal connection but between which new interactions are desired. (Lynch 1962, p.347)

Ultimately, site planning is for the user, to ensure he is comfortable, that he can navigate the spaces, and that hopefully he finds what he sees harmonious, pleasant or intriguing.

William Whyte’s Social Life

In 1970, William Whyte set about the streets and plazas of New York City to observe people’s activities and behaviors to discover what makes some spaces comfortable and heavily used and what makes others uncomfortable and hardly used. His methods of observation were video recording, tallying, and mapping people’s positions, and how long they stayed in the space. The creation of all this observation and research was the manual, *“The Social Life of Small Urban Spaces,”* (1980) and the

companion film of the same name, which shed light onto what characteristics make some places work.

Through observation he discovered that successful public places have a comfortable microclimate with sun, wind, trees and water. Heavily used public spaces also had good “Sitting Space” or street furniture, and the best had movable chairs to give the users a sense of choice. Other essential elements for great public space include food facilities and other retailing, and of course public toilets (Whyte, 1980).

Methodology

Why Study Case Studies?

The definition of a case study according to Sommer in “*Behavioral Research*” (Sommer, 2002) is an “in-depth investigation of a single instance. The unit can be as small as an individual or as large as an entire community or region” (Sommer, 2002, p. 203). Case studies are integral to planning practice. Theory alone can only take a planner and his city so far. Instead, planners learn from the means and methods of other city’s failures and successes. It is seeing the results of a theory in practice in another city that is helpful to a planner in order to make decisions about his own city.

Sommer continues to define a case study and why it is useful:

It provides the opportunity to apply a multimethod approach to a unique event or setting. The case study tends to maintain the integrity of the whole with its myriad of interrelationships. It represents a holistic approach to research, and rests on the assumption that understanding is increased by considering the entire entity rather than breaking it into its constituent parts. (Sommer, 2002, p. 203)

In his book, “*Research Methodology*,” Ranjit Kumar (2011) also describes the importance of holistic research:

This design is based upon the philosophy that as a multiplicity of factors interacts in our lives; we cannot understand a situation or phenomenon

from one or two perspectives only. To understand a situation or phenomenon we need to look at it in its totality or entirety; that is holistically from every perspective. (Kumar, 2011, p. 387)

This is especially true for city case studies, as cities are complex multidimensional organisms that cannot be analyzed one factor at a time, but instead considered through many lenses at once.

Robert Yin (2009), in his book, "*Case Study Research: Design and Methods*," notes how case studies are important to Urban Planning by describing how Jane Jacobs's (1993) work, "*The Death and Life of Great American Cities*," uses the case study of New York City, but can be applied as Urban Planning theory to other cities:

The chapter topics, rather than reflecting the single experience of New York, cover broader theoretical issues in urban planning, such as the role of sidewalks, the role of neighborhood parks, the need for primary mixed uses, the need for small blocks, and the processes of slumming and unslumming. In the aggregate, these issues in fact represent Jacob's building of a theory of urban planning. Her theory, in essence, became the vehicle for examining other cases, and the theory still stands as a significant contribution to the field of urban planning. (Yin, 2009, p. 44)

It is very useful to planners to dissect a city and see what makes it "work" or not. Case studies are precedents, justifications for planners to cite the success or failures of theories and defend their own procedures. Because planners, like anyone else, cannot predict the future, through the use of case studies, they can learn from the past.

Qualitative & Quantitative Research

Many case studies use Qualitative research which is based on the "philosophy of empiricism, follows an unstructured, flexible, and open approach to enquiry, aims to describe then measure, believes in in-depth understanding and small samples, and explores perceptions and feelings than facts and figures" (Kumar, 2011, p. 394). So much of Urban Design is not quantifiable; analysis is often based on the senses;

microclimate, a sense of enclosure, a sense of safety, a sense of place, etc., so a qualitative approach is the best practice for these factors.

Other elements such as density, scale, ratios, proportions, and percentages, can all be analyzed quantitatively. “Quantitative research is an approach to enquiry in the social sciences that is rooted in rationalism, follows a structured, rigid, predetermined methodology, believes in having a narrow focus, emphasizes greater samples size, aims to quantify the variation in phenomenon, and tries to make generalizations to the total population” (Kumar, 2011, p. 394). It is important when analyzing cities as case studies to use both qualitative and quantitative research methods.

CHAPTER 3 METHODOLOGY

Study Area Selection

Gainesville, Florida, was ranked number one city in the nation for projected percentage growth in creative class jobs by Richard Florida, socioeconomist and expert on the creative class. The University of Florida is on the verge of a new public/private venture incubating innovative technology businesses, called Innovation Square, located between the university's main campus and downtown Gainesville. This thesis creates planning and design guide lines for this project by studying urban design theory and analyzing a similar case study. Planning and design guidelines for the new Innovation Square are of interest to its stakeholders: the University of Florida, the CRA, the City of Gainesville, its citizens and business owners. By finding the proper mix of land uses, urban form, architecture, and amenities, such as accessibility, walkability, easy and ubiquitous public transportation options, connected greenways, recreation, arts and cultural programs and a cityscape with a "sense of place," these planning and design guidelines will help draw and retain businesses and create employment for University of Florida graduates. It is important to keep graduates living and working here to prevent "brain drain" and transform Gainesville from a "college town" into a "university city." This research can help other college towns' economic development through planning and design. By studying the policies and urban forms, their strength and weaknesses, problems, opportunities and constraints of other universities that already have incubator programs, planning and design guidelines can be made to help the University of Florida and Gainesville prepare for and encourage the growth and development that will be spurred by the Innovation Square project.

Literature Review

The methodology began with a literature review of classic urban design theories, most importantly: William Whyte's (1980) *"The Social Life of Small Urban Spaces,"* Kevin Lynch's (1960) *"The Image of the City,"* and Jane Jacobs's (1993) *"The Death and Life of Great American Cities,"* as well as Carmona's (2003) *"Public Places Urban Spaces,"* which helps to synthesize many theories. All of these help to uncover the way to analyze the current built environment and cultural landscape of Gainesville and give light on ways in which to improve it. Additionally, other sources were reviewed: Building Codes, redevelopment plans, interviews of key players, newspaper and journal articles on business incubators and innovation buildings.

Case Study

The remainder of the methodology of this thesis is an analysis, using the case study of Technology Square in Atlanta in conjunction with Georgia Institute of Technology. As a city with a successful university and an innovation/technology incubator program, is of interest to find the design guidelines and the city and university policies that made Technology Square a successful project, in order to make recommendations for Gainesville about the implementation, phasing plan and design of the new Innovation Square. By finding the strengths and weaknesses of this project, and finding the ideal urban design features and mix of uses that would increase economic development in relation to the Innovation Square, a set of guidelines can be implemented.

Technology Square was selected as the case to study because of its positive impacts on the Midtown district of Atlanta, including increased economic development and increased activity, and providing a safer connection to Georgia Tech. It is also a

similar size eight acres to Innovations Square's twelve acre site. The climate of Atlanta is similar to Gainesville so the form and materials of buildings, plazas, streetscapes, and transportation can be similar. The project has also won many awards including one from the Urban Land Institute (Bryant, 2005).

Research Questions & Methods of Analysis

Analysis will be both quantitative—charts, and graphs of statistical data—as well as mapping of layers of qualitative data. So the final product will be development planning and design guidelines for Innovation Square. The questions asked are:

- How can Gainesville keep its graduates?
- What parts of the built environment attract the creative class?
- How can Gainesville use these urban design principles to attract the creative class and help increase and sustain economic development?

Organizing these questions into a table, with indicators, variables and units of measurement shows the major concepts that need research and testing.

Table 3-1. Research questions

Objectives/research questions/hypotheses	Major concepts	Indicators	Variables	Unit of measurement
Urban design affects economic development	Architecture and urban form	Mixed-use, walkability, sense of place	Quality and types of built environment	Block structure, circulation, land use
	Public art programs	Increase in visitors, creating a destination/sense of place	Quality and types of programs	Number of participants, patrons, profits
	Green space	Improvements in health and quality of life	Quality and types of green space	Sq. ft. of open space per person, number of people using the parks
Innovation/technology incubators affect economic development	Small business	Increase in small businesses and jobs	Jobs related to iHub	Number of jobs, length of employment, salary, percent employment
	Connection to university	Increase in revenue to the university	Investment in the university	Amount of profits to the university
	Research and patents	Increase in inventions	Quality and types of discoveries/inventions	Number of patents
Providing jobs and amenities will keep graduates in Gainesville	Job market	Increase in jobs	Quantity and Quality of jobs	Percent employment
	Housing and transportation	Increase in quality of housing stock and transportation options	Quantity and Quality of housing, infrastructure and public transportation	Rent/sales, VMT, public transit usage, congestion
	recreation	Increase in health and quality of life	Quantity and Quality of recreational facilities	Number of people in public parks

CHAPTER 4 FINDINGS

The City Scale: Statistical Analysis 2000-2009

These findings include statistical data from the United States Census. First, tracking the changes of Atlanta from 2000 to the projected data for 2009 shows what demographic, social and economic changes occurred while the Technology Square project was built. Next, studying Gainesville's statistical changes reveals the trends of the last decade. And lastly, the study compares the trends of both cities to each other to see the magnitudes of similarities and differences. Using the recommendations learned from the classic texts in the Literature Review shows the positive and negative aspects of these trends.

Atlanta, Georgia 2000-2009

First, comparing census data for Atlanta in 2000 to the projections for 2009 shows the climate of social, economic, housing and demographic changes from the time that the Technology Square developed.

Demographic and Social changes in Atlanta

Table 4-1. Population / median age / educational attainment

Atlanta	2000	2009	difference	% change
Population	416,474	515,843	99,369	24%
Median age	32	34	2	
Bachelor's degree or higher	92,929	160,045	11.10%	32%

Source: American Fact Finder US Census 2010. Retrieved July 13, 2011, from <http://factfinder.census.gov> Tabulated by author.

The population increased by 24 % from 2000 to 2009. The median age increased by 2.1 years from 31.9 to 34 years old. The percentage of people with a bachelor's degree or higher increased by 11%, showing a trend of more people achieving higher levels of education and Atlanta attracting and retaining them.

Economic changes in Atlanta

Table 4-2. Employment status

Employment status	2000	2009	difference	% change
Population 16 years and over	333,209	422,282	89,073	27%
In labor force	213,257	284,283	3.30%	5%
Civilian labor force	212,817	283,857	3.30%	5%
Employed	182,936	257,864	6.20%	11%
Unemployed	29,881	25,993	-2.80%	-31%
Armed Forces	440	426	0.00%	0%
Not in labor force	119,952	137,999	-3.30%	-9%

Source: American Fact Finder US Census 2010. Retrieved July 13, 2011, from <http://factfinder.census.gov> Tabulated by author.

The population 16 years and older increased by 27%, however, the percent of people in the labor force increased only by 5%.

Table 4-3. Commuting to work

Commuting to work	2000	2009	difference	% change
Workers 16 years and over	178,970	252,432	73,462	41%
Car, truck, or van -- drove alone	114,560	170,287	3.50%	5%
Car, truck, or van – carpooled	22,181	20,902	-4.10%	-33%
Public transportation (including taxicab)	22,181	31,058	-2.70%	-18%
Walked	6,261	10,718	0.70%	20%
Other means	2,334	5,093	0.70%	54%
Worked at home	6,741	14,374	1.90%	50%
Mean travel time to work (minutes)	28.3	25.6	-2.7	-10%

Source: American Fact Finder US Census 2010. Retrieved July 13, 2011, from <http://factfinder.census.gov> Tabulated by author.

Unfortunately, Atlanta is not a good example for transportation. Already a traffic nightmare, there was an increase of 3.5% of people driving alone, and large decreases of carpooling and using public transportation, meaning more vehicles on the road increasing traffic, congestion and pollution. There was, however, a 50% increase in the number of people who worked from home or walked to work. And the overall mean travel time to work decreased by 10% in 10 years. The daytime population change due to commuting is an additional 259,957 people, meaning 62.4% of the working population of Atlanta commutes in from outside the city (City-data, 2011).

Table 4-4. Occupation

Occupation	2000	2009	difference	% change
Civilian employed population 16 years and over	182,936	257,864	74,928	41%
Management, professional, and related occupations	74,202	121,085	6.40%	16%
Service occupations	29,960	40,480	-0.70%	-4%
Sales and office occupations	46,865	62,139	-1.50%	-6%
Farming, fishing, and forestry occupations	409	425	0.00%	0%
Construction, extraction, maintenance, and repair occupations	11,014	14,509	-0.40%	-7%
Production, transportation, and material moving occupations	20,486	19,226	-3.70%	-33%

Source: American Fact Finder US Census 2010. Retrieved July 13, 2011, from <http://factfinder.census.gov> Tabulated by author.

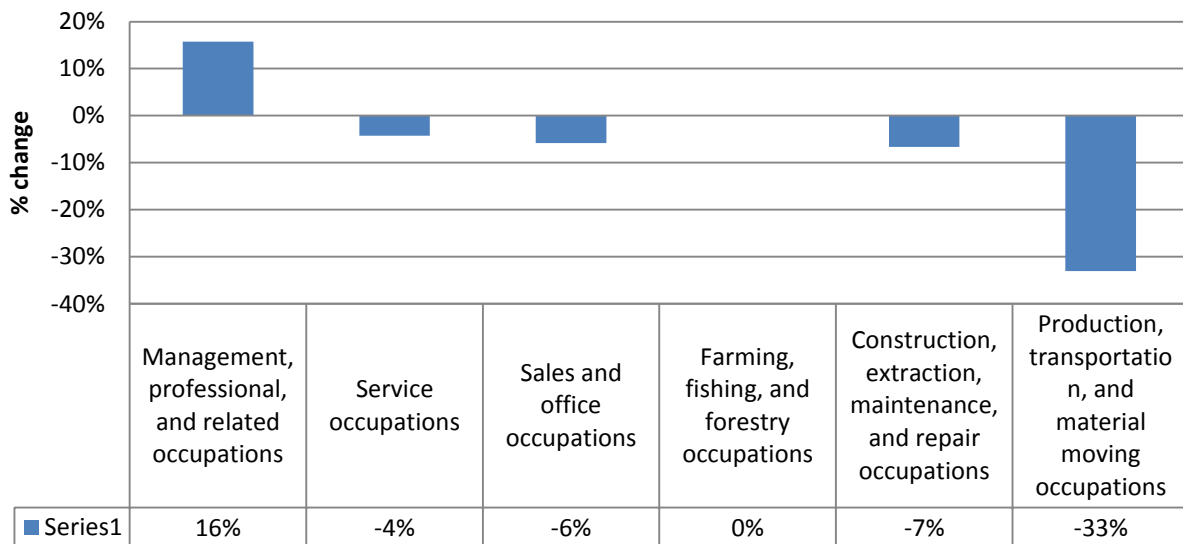


Figure 4-1. Occupation changes in Atlanta from 2000 to 2009. Source: American Fact Finder US Census 2010. Retrieved July 13, 2011 from <http://factfinder.census.gov> Graph by author.

Management and professional occupations increased by 16% from 2000 to 2009, while all other occupations decreased. The greatest decrease was 33% in production, transportation, and material moving occupations. This reflects Richard Florida's predictions for more creative careers.

Table 4-5. Industry

Industry	2000	2009	difference	% change
Civilian employed population 16 years and over	182,936	257,864	74,928	41%
Agriculture, forestry, fishing and hunting, and mining	674	617	-0.20%	-50%
Construction	9,551	13,939	0.20%	4%
Manufacturing	13,998	15,131	-1.80%	-23%
Wholesale trade	6,103	8,246	-0.10%	-3%
Retail trade	17,148	25,783	0.60%	6%
Transportation and warehousing, and utilities	10,884	12,690	-1.00%	-17%
Information	10,476	10,681	-1.60%	-28%
Finance and insurance, and real estate and rental and leasing	15,328	24,549	1.10%	13%
Professional, scientific, and management, and administrative and waste management services	31,406	47,569	1.20%	7%
Educational services, and health care and social assistance	30,754	47,416	1.60%	10%
Arts, entertainment, and recreation, and accommodation and food services	19,017	28,615	0.70%	7%
Other services, except public administration	8,683	12,053	0.00%	0%
Public administration	8,914	10,575	-0.80%	-16%

Source: American Fact Finder US Census 2010. Retrieved July 13, 2011, from <http://factfinder.census.gov> Tabulated by author.

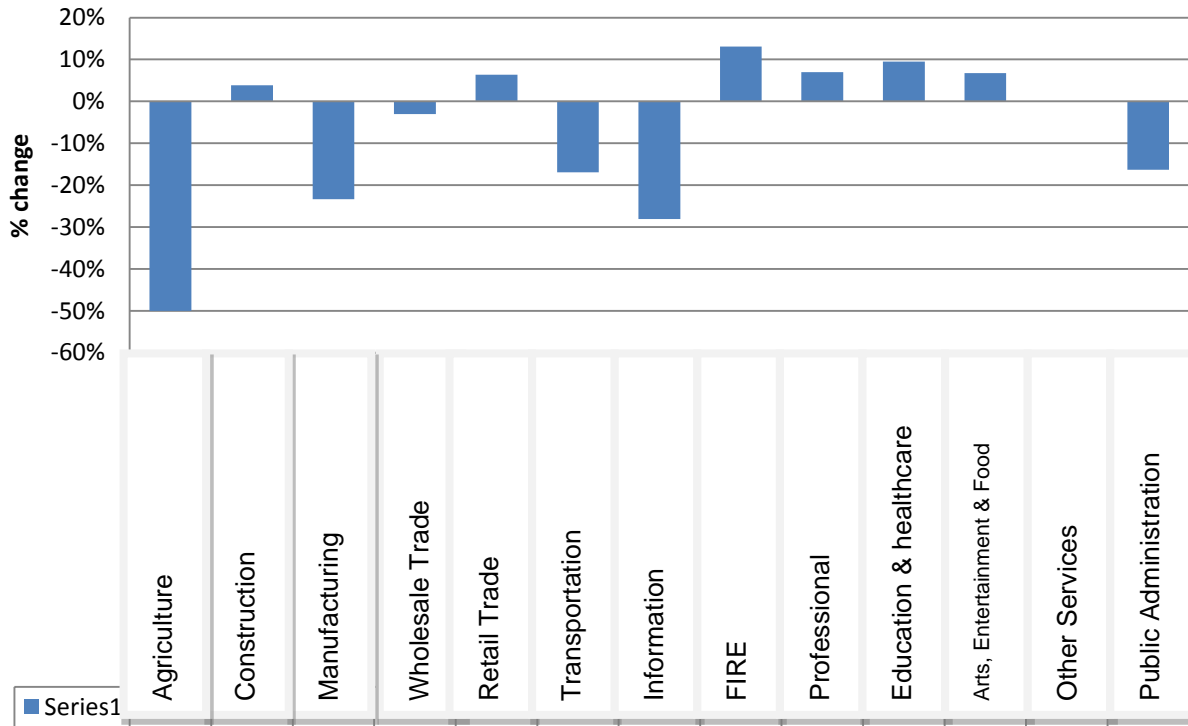


Figure 4-2. Industry changes. Source: American Fact Finder US Census 2010. Retrieved July 13, 2011 from <http://factfinder.census.gov> Graph by author.

The FIRE (Finance, Insurance, Real Estate) Industry saw the greatest increase overall from 2000-2009, followed by educational, healthcare, social assistance, professional, scientific, management, and arts, entertainment, recreation, accommodation and food services. All these industries play a part in the lives' of the creative class. The industries that saw the greatest decreases were agriculture, forestry, fishing, hunting and mining, information, and manufacturing.

Table 4-6. Class of workers

Class of workers	2000	2009	difference	% change
Civilian employed population 16 years and over	182,936	257,864	74,928	41%
Private wage and salary workers	147,840	208,330	0.00%	0%
Government workers	24,107	33,711	-0.10%	-1%
Self-employed in own not incorporated business workers	10,653	15,492	0.20%	3%
Unpaid family workers	336	331	-0.10%	-50%

Source: American Fact Finder US Census 2010. Retrieved July 13, 2011, from <http://factfinder.census.gov> Tabulated by author.

While there was an increase in the number of civilians employed, there were not great changes in the way they were employed, such as private wage and salary workers, government workers, and self-employed business owners. Another very small population, unpaid family workers decreased by half.

Table 4-7. Income and benefits

Income and benefits	2000	2009	difference	% change
Total households	168,341	200,302	31,961	19%
Less than \$10,000	28,669	22,845	-5.60%	-33%
\$10,000 to \$14,999	12,267	13,118	-0.80%	-11%
\$15,000 to \$24,999	23,191	19,781	-3.90%	-28%
\$25,000 to \$34,999	20,403	19,296	-2.50%	-21%
\$35,000 to \$49,999	21,704	24,723	-0.60%	-5%
\$50,000 to \$74,999	23,819	29,541	0.60%	4%
\$75,000 to \$99,999	12,859	19,296	2.00%	26%
\$100,000 to \$149,999	12,398	22,282	3.70%	50%
\$150,000 to \$199,999	4,475	10,014	2.30%	85%
\$200,000 or more	8,556	19,406	4.60%	90%
Median household income (dollars)	34,770	50,243	15,473	45%

Source: American Fact Finder US Census 2010. Retrieved July 13, 2011, from <http://factfinder.census.gov> Tabulated by author.

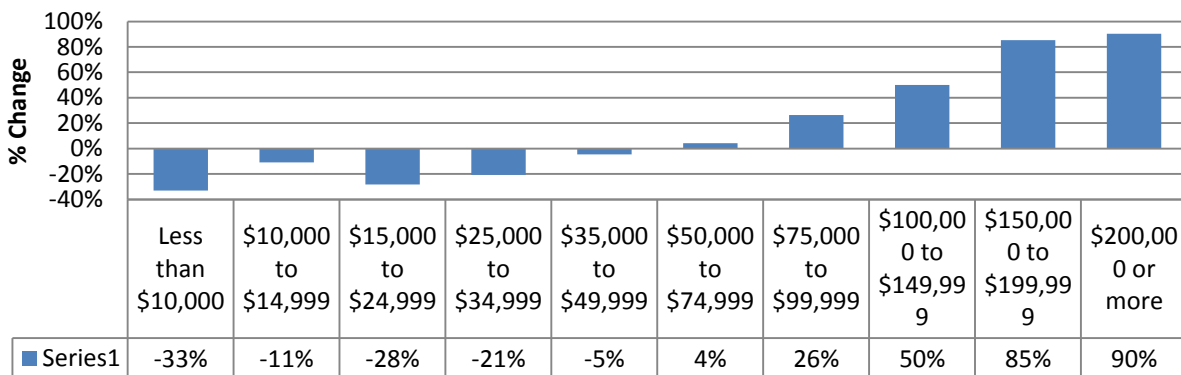


Figure 4-3. Change in Income. Source: American Fact Finder US Census 2010. Retrieved July 13, 2011 from <http://factfinder.census.gov> Graph by author.

A very significant change in income occurred in Atlanta from 2000-2009, with an increase of population earning higher wages and a decrease of population earning low wages. This may in fact be due to an increase of creative class jobs, which traditionally have higher salaries.

Housing changes in Atlanta

Table 4-8. Total housing units

Housing occupancy	2000	2009	difference	% change
Total housing units	186,998	246,633	59,635	32%

Source: American Fact Finder US Census 2010. Retrieved July 13, 2011, from <http://factfinder.census.gov> Tabulated by author.

Table 4-9. Units in structure

Units in structure	2000	2009	difference	% change
Total housing units	186,998	246,633	59,635	32%
1-unit, detached	79,803	104,307	-0.40%	-1%
1-unit, attached	7,362	12,801	1.30%	33%
2 units	7,871	8,219	-0.90%	-21%
3 or 4 units	14,358	11,562	-3.00%	-39%
5 to 9 units	19,496	24,073	-0.60%	-6%
10 to 19 units	17,659	25,742	1.00%	11%
20 or more units	39,519	58,209	2.50%	12%
Mobile home	810	1,440	0.20%	50%
Boat, RV, van, etc.	120	280	0.00%	0%

Source: American Fact Finder US Census 2010. Retrieved July 13, 2011, from <http://factfinder.census.gov> Tabulated by author.

The number of units in a structure helps to determine density. The total number of housing units increased by 32% in 10 years. Attached single-family units saw the biggest increase, followed by housing with 20 or more units and with 10-19 units. It is indeterminate whether this increased density.

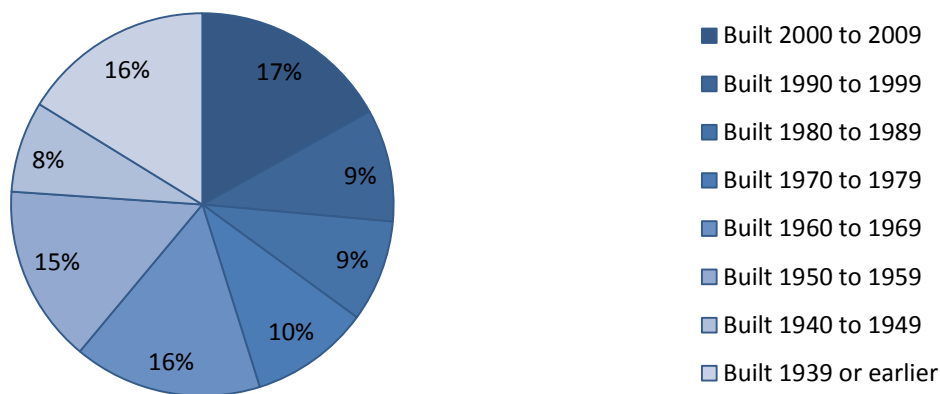


Figure 4-4. Year Structure was built. Source: American Fact Finder US Census 2010. Retrieved July 13, 2011 from <http://factfinder.census.gov> Graph by author.

Atlanta’s housing stock shows a good, almost equal, mix of age. This is the equity factor that Jane Jacobs (1993) said would increase diversity by increasing the types of people able to afford rent of all ranges.

Gainesville, Florida 2000-2009

Next, comparing census data for Gainesville in 2000 to the projections for 2009 shows the climate of social, economic, housing and demographic changes.

Demographic and Social changes in Gainesville

Table 4-10. Population / median age / educational attainment

Gainesville	2000	2009	difference	% change
Population	95,447	115,146	19,699	21%
Median age	26	24	-3	-11%
Bachelor's degree or higher	21,653	20,755	-1.3%	-3%

Source: American Fact Finder US Census 2010. Retrieved July 13, 2011, from <http://factfinder.census.gov> Tabulated by author.

Gainesville’s population grew by 21% and the already very young median age decreased to 23.5 years old, meaning the college age population far outweighs the rest of the population that supports the university and the city. The number of people with bachelor’s degrees or higher decreased by 1%.

Economic changes in Gainesville

The current economic climate of Gainesville is poor. While there is a low cost of living and the stability of the university, there is little private industry to employ the university’s many graduates, and so Gainesville suffers from “brain drain:”

Numerous guides such as the 2004 book *Cities Ranked and Rated: More than 400 Metropolitan Areas Evaluated in the U.S. and Canada* have mentioned Gainesville's low cost of living. The restaurants near the University of Florida also tend to be inexpensive. The property taxes are high to offset the cost of the university, as the university's land is tax-exempt. However, the median home cost remains slightly below the national average, and Gainesville residents, like all Floridians, do not pay state income taxes.

This city's job market scored only 6 points out of a possible 100 in the Cities Ranked and Rated guide, as the downside to the low cost of living is an extremely weak local job market that is oversupplied with college-educated residents. The University of Florida, the Shands Healthcare system (a private-public-university partnership), and the city government are the only major employers for the city. The median income in Gainesville is slightly below the U.S. average. (City-data, 2011)

This statement from city-data (2011) shows how important the increase in creative class jobs will be to Gainesville residents, as the job market is currently so weak.

Table 4-11. Employment status

Employment status	2000	2009	difference	% change
Population 16 years and over	80,637	100,347	19,710	24%
In labor force	49,083	56,398	-4.70%	-8%
Civilian labor force	49,015	56,329	-4.70%	-8%
Employed	44,249	51,802	-3.30%	-6%
Unemployed	4,766	4,527	-1.40%	-24%
Armed Forces	68	69	0.00%	0%
Not in labor force	31,554	43,949	4.70%	12%

Source: American Fact Finder US Census 2010. Retrieved July 13, 2011, from <http://factfinder.census.gov> Tabulated by author.

Table 4-12. Commuting to work

Commuting to work	2000	2009	difference	% change
Workers 16 years and over	43,060	50,211	7,151	17%
Car, truck, or van -- drove alone	30,059	35,253	0.40%	1%
Car, truck, or van -- carpoled	5,256	4,778	-2.70%	-22%
Public transportation (including taxicab)	1,386	2,579	1.90%	59%
Walked	2,430	2,862	0.10%	2%
Other means	2,600	3,249	0.50%	8%
Worked at home	1,329	1,490	-0.10%	-3%
Mean travel time to work (minutes)	18	17	-1	-6%

Source: American Fact Finder US Census 2010. Retrieved July 13, 2011, from <http://factfinder.census.gov> Tabulated by author.

While Gainesville has one of the best and most comprehensive public transportation systems in the state (RTS, 2011), only 5% of the population uses it to commute to work, this was an increase from 3.2% in 2000 for a total of a 59% change in increase. Free to University of Florida students, it is mostly heavily used by them as a means to get to and around campus. Slightly more of the population walked to work,

while slightly less carpooled. In 10 years the mean travel time to work only decreased by 1 minute a 6% change. The daytime population change due to commuting is 33,772 people, so more than half of Gainesville workers live outside of Gainesville (City-data, 2011).

Table 4-13. Occupation

Occupation	2000	2009	difference	% change
Civilian employed population 16 years and over	44,249	51,802	7,553	17%
Management, professional, and related occupations	20,308	22,134	-3.20%	-7%
Service occupations	7,796	12,072	5.70%	32%
Sales and office occupations	11,623	11,989	-3.20%	-12%
Farming, fishing, and forestry occupations	126	180	0.00%	0%
Construction, extraction, maintenance, and repair occupations	1,960	2,318	0.10%	2%
Production, transportation, and material moving occupations	2,436	3,109	0.50%	9%

Source: American Fact Finder US Census 2010. Retrieved July 13, 2011, from <http://factfinder.census.gov> Tabulated by author.

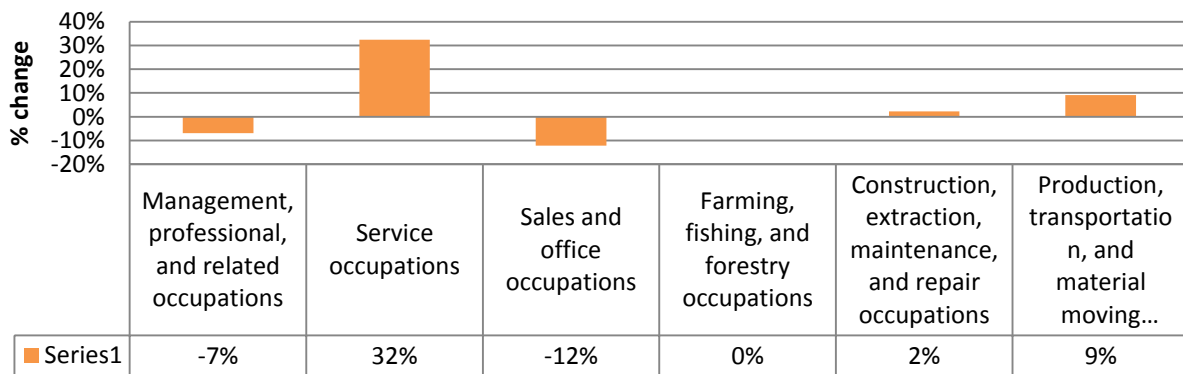


Figure 4-5. Occupation changes. Source: American Fact Finder US Census 2010. Retrieved July 13, 2011 from <http://factfinder.census.gov> Graph by author.

The largest occupation change in the decade was a 32% increase in service occupations, followed by production, transportation, and material moving occupations. The greatest decrease in 10 years was the sales and office occupations followed by management and professional occupations.

Table 4-14. Industry

Industry	2000	2009	difference	% change
Civilian employed population 16 years and over	44,249	51,802	7,553	17%
Agriculture, forestry, fishing, hunting, mining	201	388	0.20%	40%
Construction	1,616	1,658	-0.50%	-14%
Manufacturing	1,439	1,254	-0.90%	-27%
Wholesale trade	618	559	-0.30%	-21%
Retail trade	4,651	5,661	0.40%	4%
Transportation, warehousing, utilities	1,082	1,102	-0.30%	-13%
Information	1,534	1,571	-0.50%	-14%
Finance, insurance, real estate, rental, leasing	2,222	2,852	0.50%	10%
Professional, scientific, management, administrative, waste management services	3,795	4,911	0.90%	10%
Educational services, health care, social assistance	17,294	19,424	-1.60%	-4%
Arts, entertainment, recreation, accommodation, food services	5,313	8,248	3.90%	33%
Other services	2,198	2,158	-0.80%	-16%
Public administration	2,286	2,016	-1.30%	-25%

Source: American Fact Finder US Census 2010. Retrieved July 13, 2011, from <http://factfinder.census.gov> Tabulated by author.

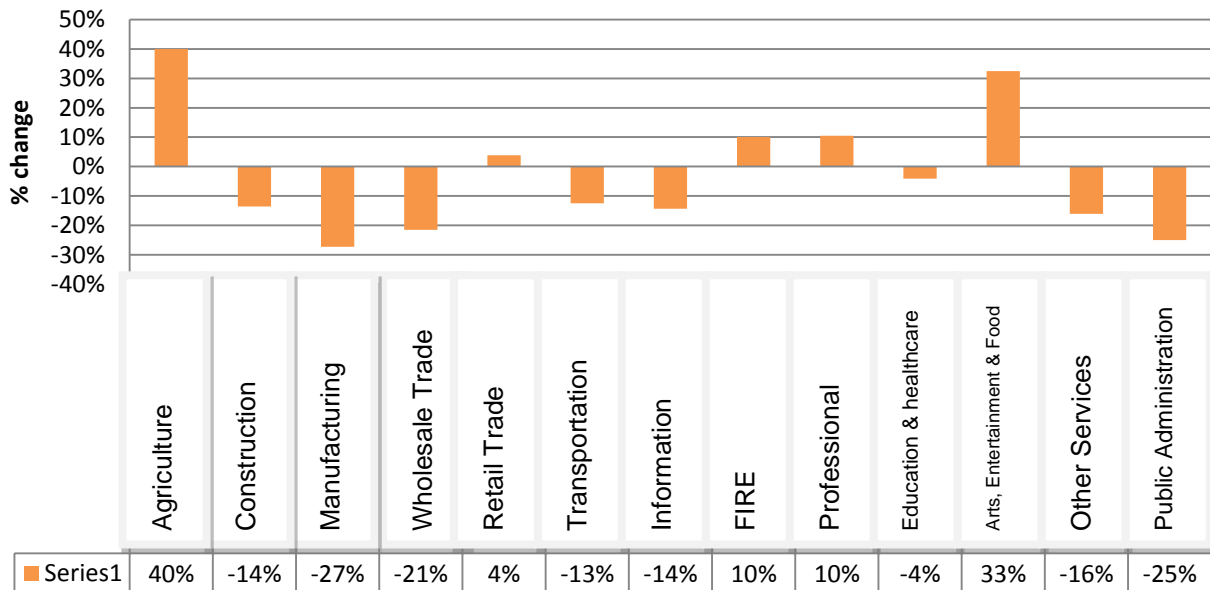


Figure 4-6. Industry Changes. Source: American Fact Finder US Census 2010. Retrieved July 13, 2011 from <http://factfinder.census.gov> Graph by author.

The industries that saw an increase were agriculture, and arts, entertainment, recreation, accommodation and food service, followed by the FIRE industry and professional, scientific, management and administrative professions, and retail trade. The other industries all saw a decrease, the largest being manufacturing followed by public administration.

Table 4-15. Class of workers

Class of worker	2000	2009	difference	% change
Civilian employed population 16 years and over	44,249	51,802	7,553	17%
Private wage and salary workers	26,502	34,433	6.60%	11%
Government workers	15,255	15,223	-5.10%	-15%
Self-employed in own not incorporated business workers	2,292	2,127	-1.10%	-21%
Unpaid family workers	200	19	-0.50%	-100%

Source: American Fact Finder US Census 2010. Retrieved July 13, 2011, from <http://factfinder.census.gov> Tabulated by author.

Gainesville saw an increase in private wage and salary workers and a decrease in government and self-employed workers.

Table 4-16. Income and benefits

Income and benefits	2000	2009	difference	% change
Total households	37,361	46,024	8,663	23%
Less than \$10,000	7,482	9,633	0.90%	4%
\$10,000 to \$14,999	3,309	3,827	-0.60%	-7%
\$15,000 to \$24,999	6,148	7,408	-0.40%	-2%
\$25,000 to \$34,999	4,904	5,128	-2.00%	-15%
\$35,000 to \$49,999	4,918	6,034	-0.10%	-1%
\$50,000 to \$74,999	5,163	5,962	-0.8%	-6%
\$75,000 to \$99,999	2,575	3,253	0.20%	3%
\$100,000 to \$149,999	1,861	3,020	1.60%	32%
\$150,000 to \$199,999	464	806	0.60%	50%
\$200,000 or more	537	953	0.70%	50%
Median household income (dollars)	28,164	28,653	489	2%

Source: American Fact Finder US Census 2010. Retrieved July 13, 2011, from <http://factfinder.census.gov> Tabulated by author.

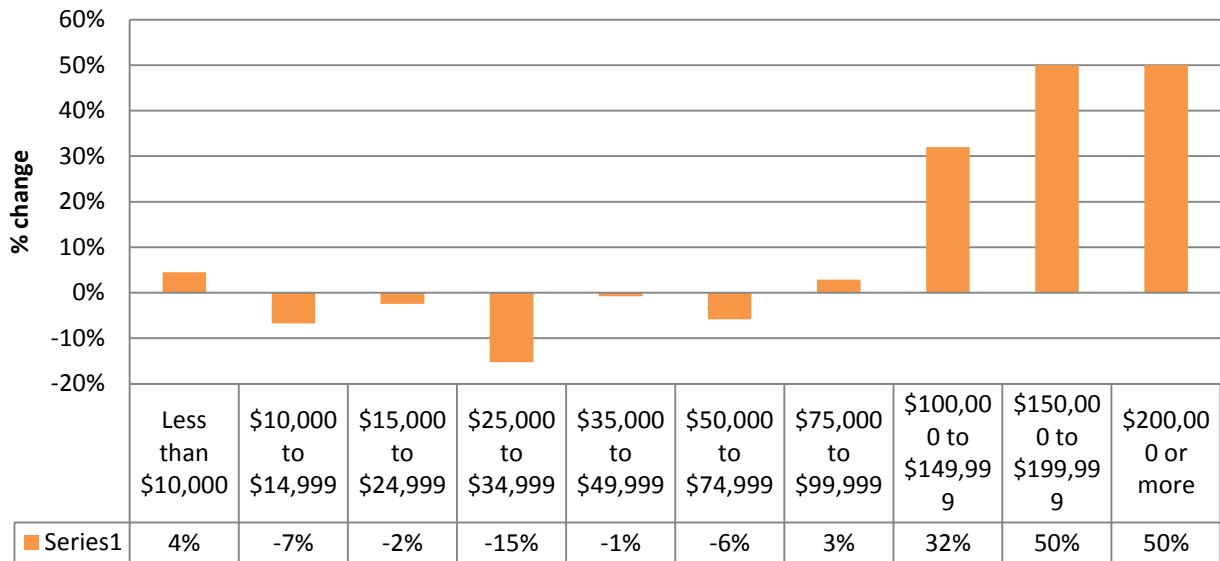


Figure 4-7. Change in income. Source: American Fact Finder US Census 2010. Retrieved July 13, 2011 from <http://factfinder.census.gov> Graph by author.

Housing changes in Gainesville

Table 4-17. Total housing units

Housing occupancy	2000	2009	difference	% change
Total housing units	40,111	51,234	11,123	28%

Source: American Fact Finder US Census 2010. Retrieved July 13, 2011, from <http://factfinder.census.gov> Tabulated by author.

Table 4-18. Units in structure

Units in structure	2000	2009	difference	% change
Total housing units	40,111	51,234	11,123	28%
1-unit, detached	20,360	21,019	-9.80%	-19%
1-unit, attached	1,722	1,869	-0.70%	-16%
2 units	1,980	2,501	0.00%	0%
3 or 4 units	2,779	4,542	2.00%	29%
5 to 9 units	3,871	6,653	3.30%	34%
10 to 19 units	3,288	7,733	6.90%	84%
20 or more units	14,885	5,737	-1.00%	-8%
Mobile home	1,207	1,180	-0.70%	-23%
Boat, RV, van, etc.	19	0	0.00%	

Source: American Fact Finder US Census 2010. Retrieved July 13, 2011, from <http://factfinder.census.gov> Tabulated by author.

Gainesville's density increased in 10 years as it saw huge increase in multifamily housing and a decrease in single-family housing.

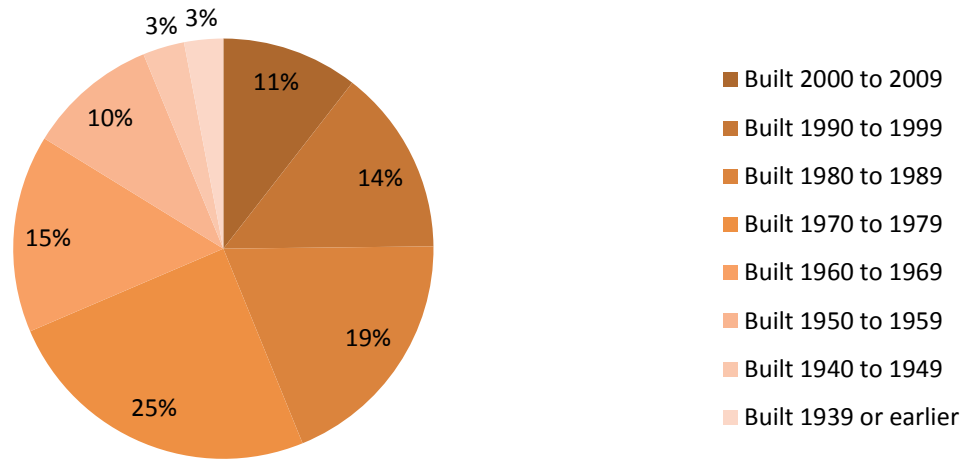


Figure 4-8. Year structure was built. Source: American Fact Finder US Census 2010. Retrieved July 13, 2011 from <http://factfinder.census.gov> Graph by author.

While not exactly an equal mix of ages with 25% being built in the 1970s, Gainesville still offers a nice range of rents for a range of incomes as Jane Jacobs would support for an increase in diversity.

Comparing Atlanta, Georgia, to Gainesville, Florida 2000-2009

Demographic and Social changes

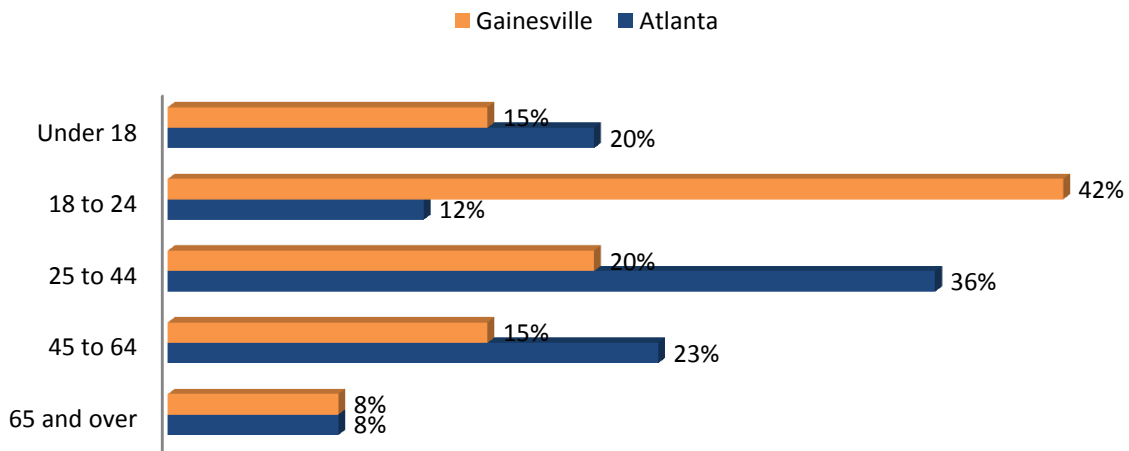


Figure 4-9. Age distribution. Source: American Fact Finder US Census 2010. Retrieved July 13, 2011 from <http://factfinder.census.gov> Graph by author.

Gainesville has a younger median age of 23 years old compared to Atlanta's median age of 34 years old. This is one of the clues that most of the student population leaves Gainesville after graduation, while a larger city like Atlanta has more attraction for graduates.

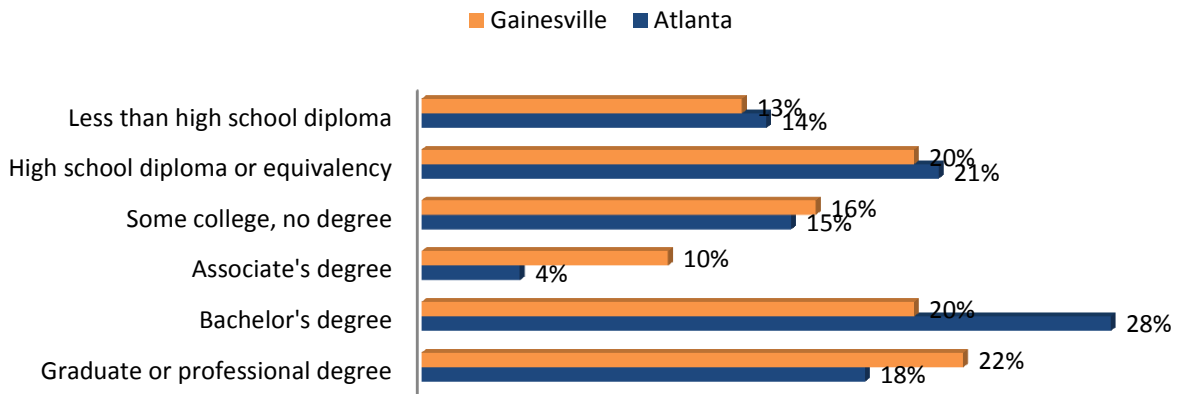


Figure 4-10. Highest level of education. Source: American Fact Finder US Census 2010. Retrieved July 13, 2011 from <http://factfinder.census.gov> Graph by author.

The levels of education are very close between only 1 % and 8 % difference. While Atlanta has a higher percentage of population with a bachelor's degree, Gainesville has a higher percentage of both populations with Associate's degrees and graduate or professional degrees.

Economic changes

The percentage of population in each industry is similar in both Gainesville and Atlanta, the major exceptions being Gainesville has a much larger population in the educational services, healthcare and social assistance industries, mostly thanks the University of Florida and Shands Hospital. The other exception is Atlanta having a higher percentage of population in professional, scientific, management, administrative and waste management.

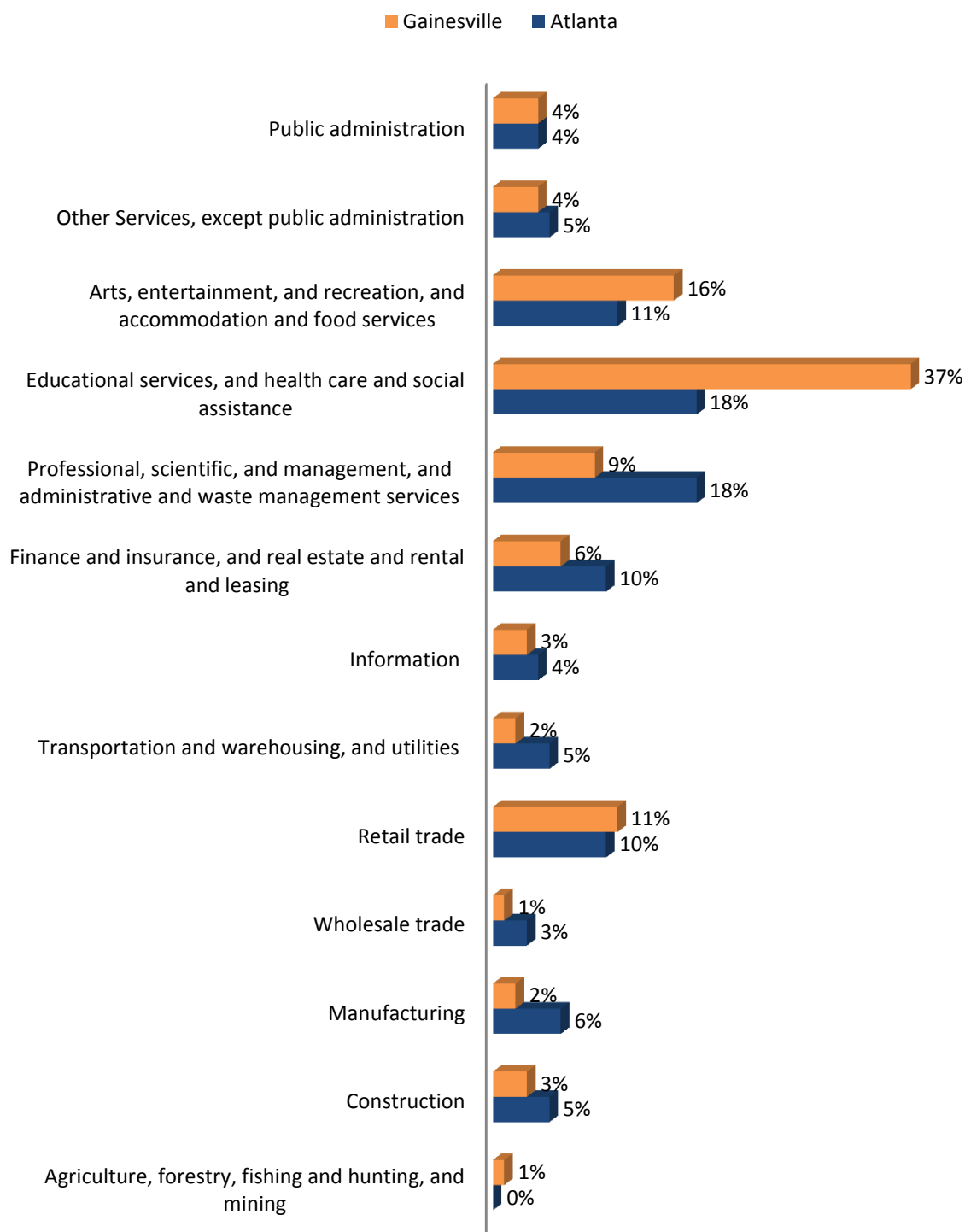


Figure 4-11. Percent of population in each industry. Source: American Fact Finder US Census 2010. Retrieved July 13, 2011 from <http://factfinder.census.gov> Graph by author.

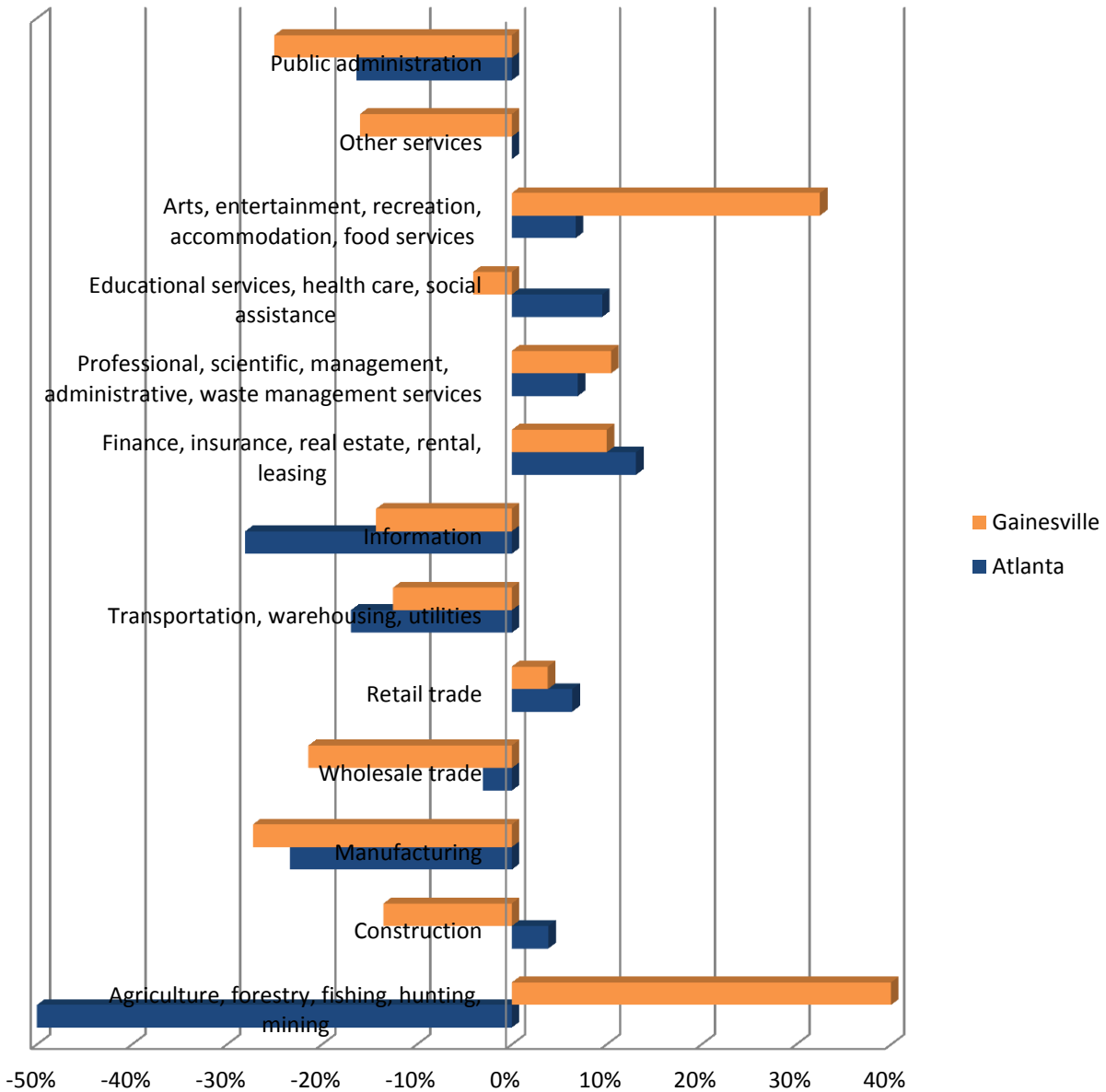


Figure 4-12. Percent change in industry. Source: American Fact Finder US Census 2010. Retrieved July 13, 2011 from <http://factfinder.census.gov> Graph by author.

The percent of change from 2000 to 2009 shows the trends of which industries are growing and which are declining. The percent of change is calculated by dividing the difference of percent from 2000 to 2009 by the original percent of population in 2000. The chart shows the magnitude of differences in trends between Atlanta and Gainesville. While most industries were on the same side of increasing or decreasing in

both cities, construction, and agriculture, forestry, hunting and mining, and educational services, healthcare and social assistance were split between the two cities. In both cities, public administration, Information, transportation, warehousing, and utilities, wholesale trade and manufacturing industries decreased. Both cities saw an increase in arts, entertainment, recreation, accommodation, and food services, professional, scientific, management and administration, FIRE and retail industries.

Housing changes

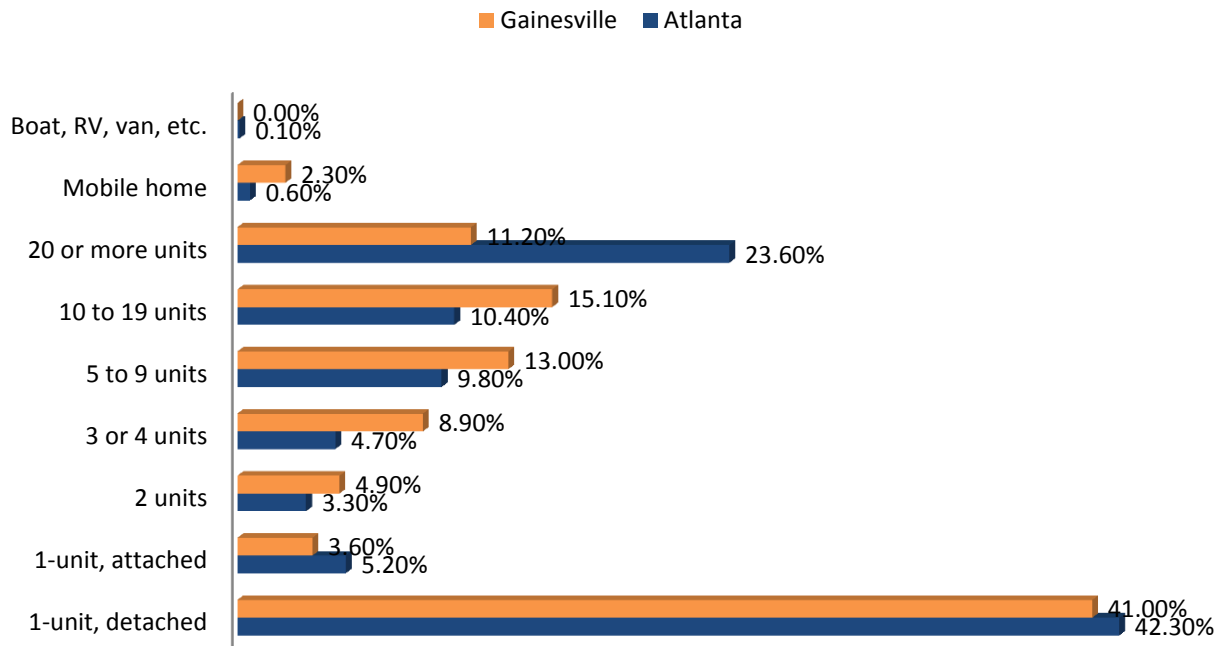
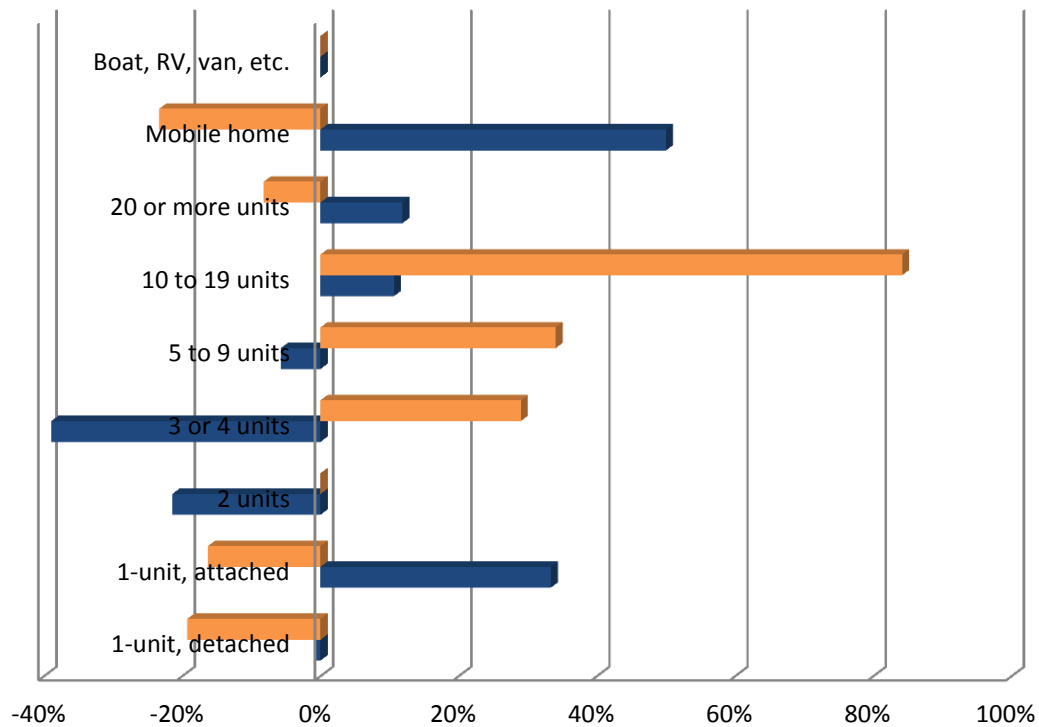


Figure 4-13. Percent of Housing Units per Structure in 2009. Source: American Fact Finder US Census 2010. Retrieved July 13, 2011 from <http://factfinder.census.gov> Graph by author.

Atlanta leads in the largest number of units per structure with 23% of structures have 20 or more housing units. The other categories are similar with differences of only 0.1% to 4.7%. Both cities have most single family detached housing types with 41% in Gainesville and 42.3% in Atlanta. In combination with the area of the cities, the number of units per structure can determine density.



	1-unit, detached	1-unit, attached	2 units	3 or 4 units	5 to 9 units	10 to 19 units	20 or more units	Mobile home	Boat, RV, van, etc.
■ Gainesville	-19%	-16%	0%	29%	34%	84%	-8%	-23%	0%
■ Atlanta	-1%	33%	-21%	-39%	-6%	11%	12%	50%	0%

Figure 4-14. Percent change of units per structure from 2000 to 2009. Source: American Fact Finder US Census 2010. Retrieved July 13, 2011 from <http://factfinder.census.gov> Graph by author.

The difference of housing stock between 2000 and 2009 shows the trend of what types of housing structures were being built during that decade. Overall, Gainesville is working to increase density by building more multifamily structures, the largest change being an 84% increase in 10-19 units, as well as a 34% increase in 5-9 units and a 29% increase in 3-4 units. According to city-data.com, Gainesville has a land area of 48.2 square miles with a density of 2,177 people per square mile, while Atlanta has a land area of 131.7 square miles and a population density of 4,106 people per square mile.

Urban Form and Function Analysis

This analysis reveals the urban form and function of Georgia Institute of Technology's Technology Square, and the current conditions of downtown Gainesville. Using the classic texts of Urban Design theory to establish positive and negative aspects of each area, this analysis is the foundation for creating the design guidelines for UF's Innovation Square project.



Figure 4-15. State map. Source: Google Maps™. (2011). Retrieved September 2, 2011, from <http://maps.google.com/> Adapted by author.

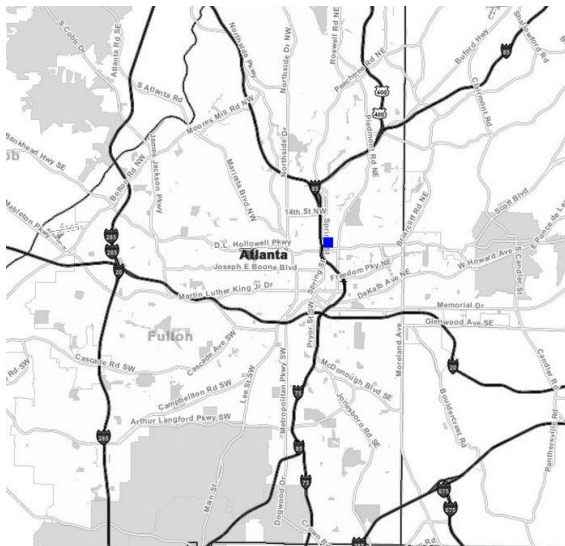


Figure 4-16. Atlanta. Source: City of Atlanta Geographic Information Systems. (2011). Retrieved July 13, 2011, from <http://gis.atlantaga.gov/> Adapted by author.

Networks and Structure

Beltline, Atlanta 1:100,000

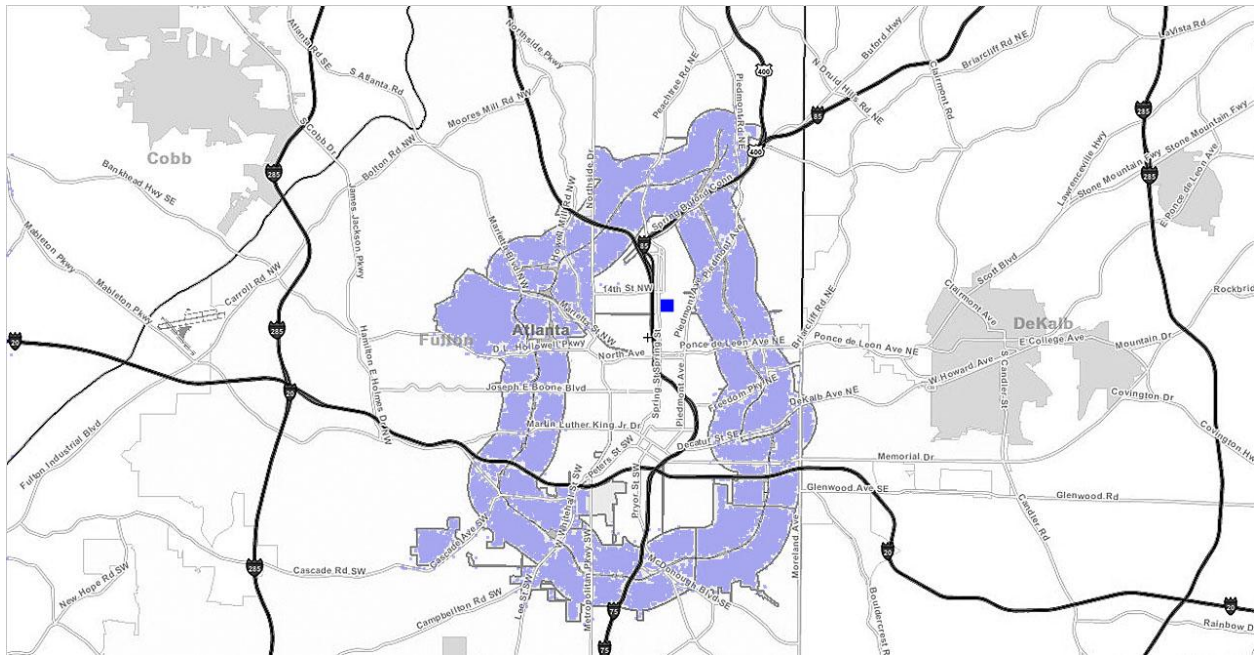


Figure 4-17. Beltline, Atlanta. Source: City of Atlanta Geographic Information Systems. (2011). Retrieved July 13, 2011, from <http://gis.atlantaga.gov/> Adapted by author

Atlanta's Department of Planning and Community Development defines the Beltline Project in their 2010 Annual Report:

Atlanta Beltline: This project will combine green space, trails, transit, and new development along 22 miles of historic rail lines that surround Atlanta's urban core. Over the past 20 years, metro Atlanta's growth has occurred in widespread and disconnected pockets of development, which starve the region of reaching its quality of life and economic growth objectives. Long commutes, poor air quality, auto dependency, and limited public space for residents and businesses throughout the region are issues the Atlanta Beltline strives to address. With the intent to change this pattern of regional sprawl in the coming decades and lead to a vibrant and livable Atlanta, the project also promises to enhance quality of life. Over the next 25 years, the Beltline will not only connect the City of Atlanta with its surrounding communities, but will create more than \$20 billion of new economic development and approximately 30,000 new full-time jobs, and 48,000 year-long construction jobs. (Department of Planning and Community Development, 2010, p.35)

Neighborhoods/districts - Georgia Tech & Midtown 1:30,000

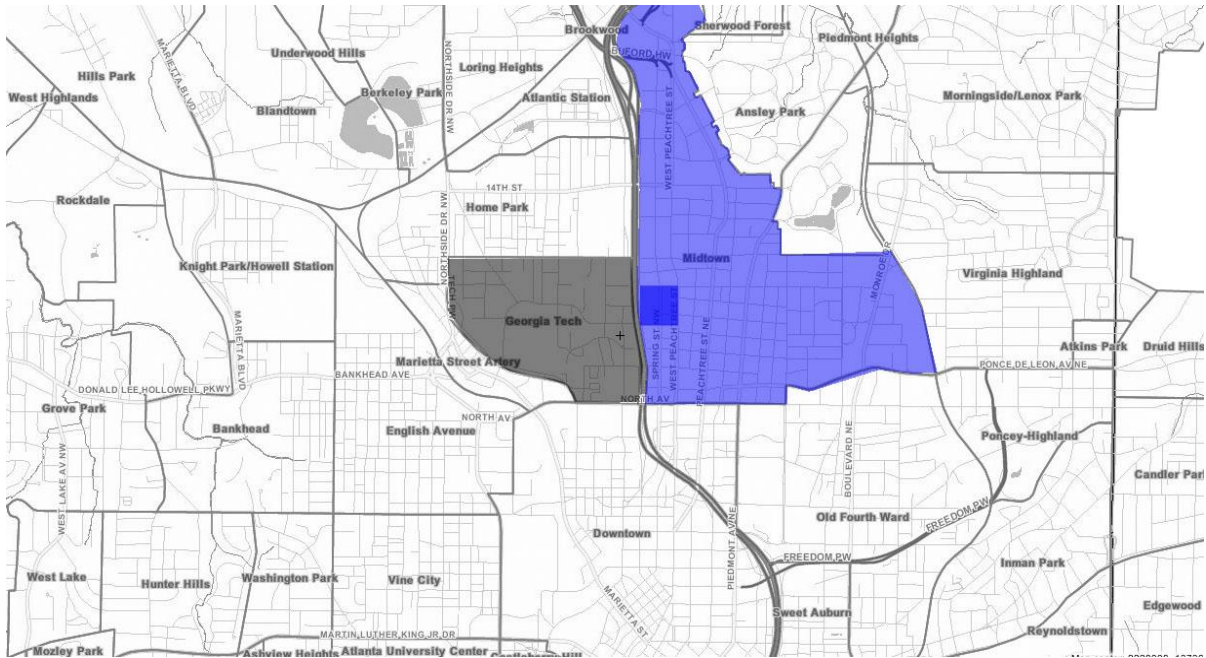


Figure 4-18. Districts, Atlanta. Source: City of Atlanta Geographic Information Systems. (2011). Retrieved July 13, 2011, from <http://gis.atlantaga.gov/> Adapted by author.

Public Transportation 1:20,000

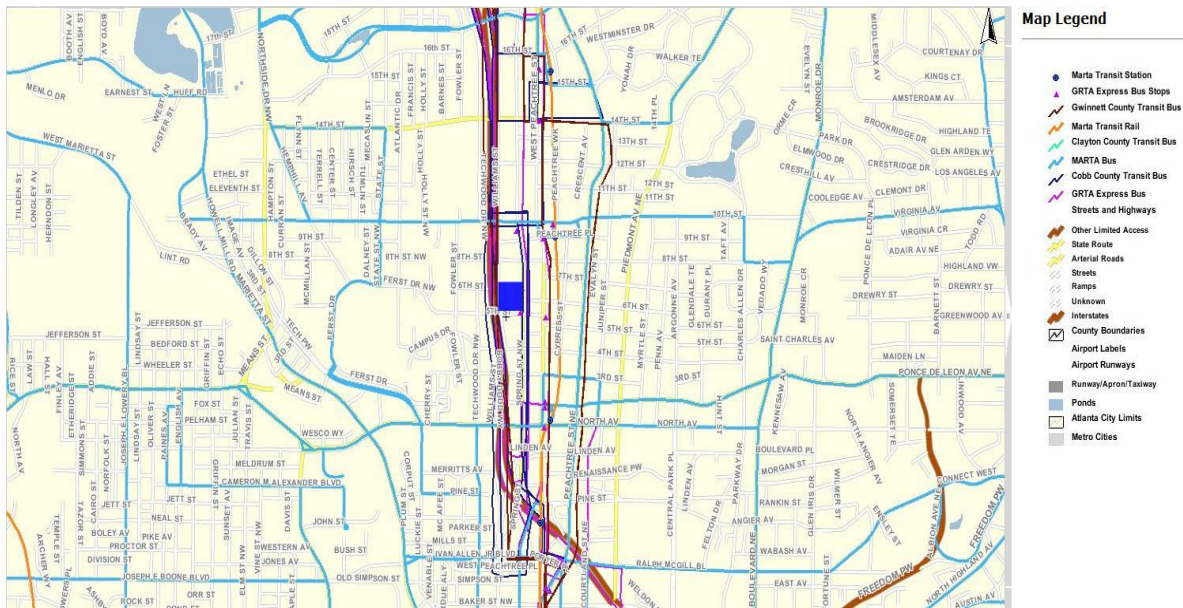


Figure 4-19. Public transportation, Atlanta. Source: City of Atlanta Geographic Information Systems. (2011). Retrieved July 13, 2011, from <http://gis.atlantaga.gov/> Adapted by author.

Bike Lanes 1:30,000

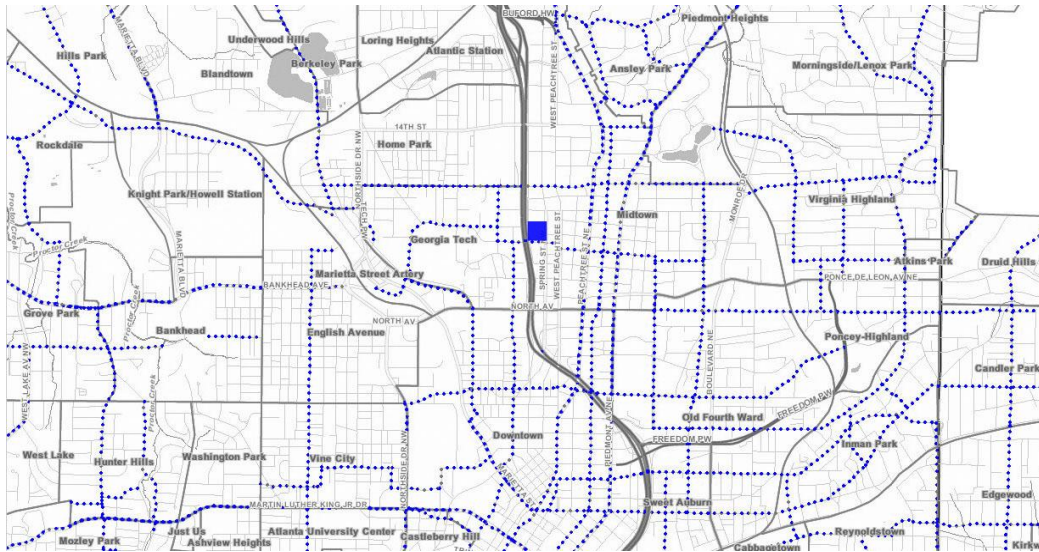


Figure 4-20. Bike lanes, Atlanta. Source: City of Atlanta Geographic Information Systems. (2011). Retrieved July 13, 2011, from <http://gis.atlantaga.gov/> Adapted by author.

Technology Square is well located for users to take advantage of both the public transportation system as well as a connected bike lanes.

Green Network 1:30,000

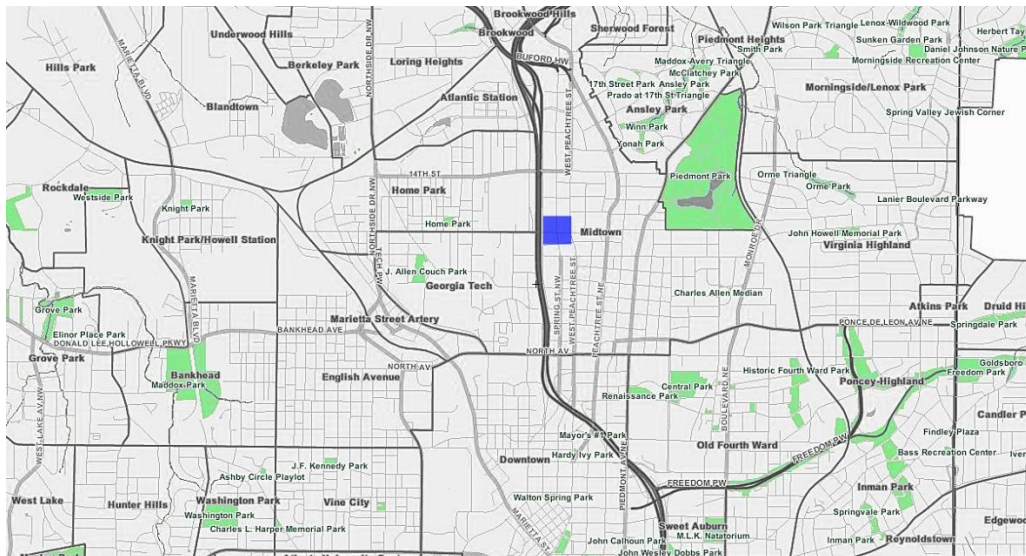


Figure 4-21. Parks, Atlanta. Source: City of Atlanta Geographic Information Systems. (2011). Retrieved July 13, 2011, from <http://gis.atlantaga.gov/> Adapted by author.

Atlanta's Department of Planning and Community Development describes their Project Greenspace (Figure 4-21) in their 2010 Annual Report:

Atlanta's Project Greenspace is an initiative designed to develop a world-class open space system in Atlanta that connects people to parks, recreational facilities, plazas, streetscapes, greenways, and natural areas. It establishes a framework for a citywide system of high quality open spaces consisting of parks, natural areas, civic spaces, and connecting greenways, streetscapes, and trails. This system is essential to Atlanta's quality of life, economy, environment, and sense of community. (Department of Planning and Community Development, 2010, p.28)

Functional Dimension - Future Land use

High Density Commercial

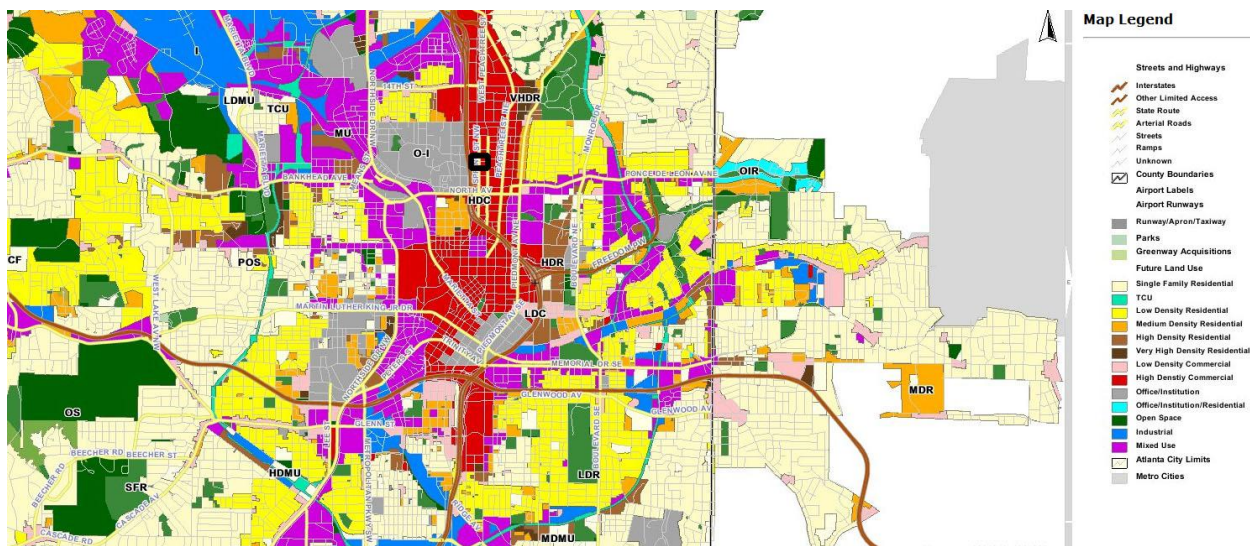


Figure 4-22. Future land use, Atlanta. Source: City of Atlanta Geographic Information Systems. (2011). Retrieved July 13, 2011, from <http://gis.atlantaga.gov/> Adapted by author.

The Technology Square site is well located in the center of a corridor of high-density commercial land use that spans from midtown to downtown Atlanta, near the university, transportation and the industry and amenities of the central business district (Figure 4-22).

Morphological analysis

Layers of the Site

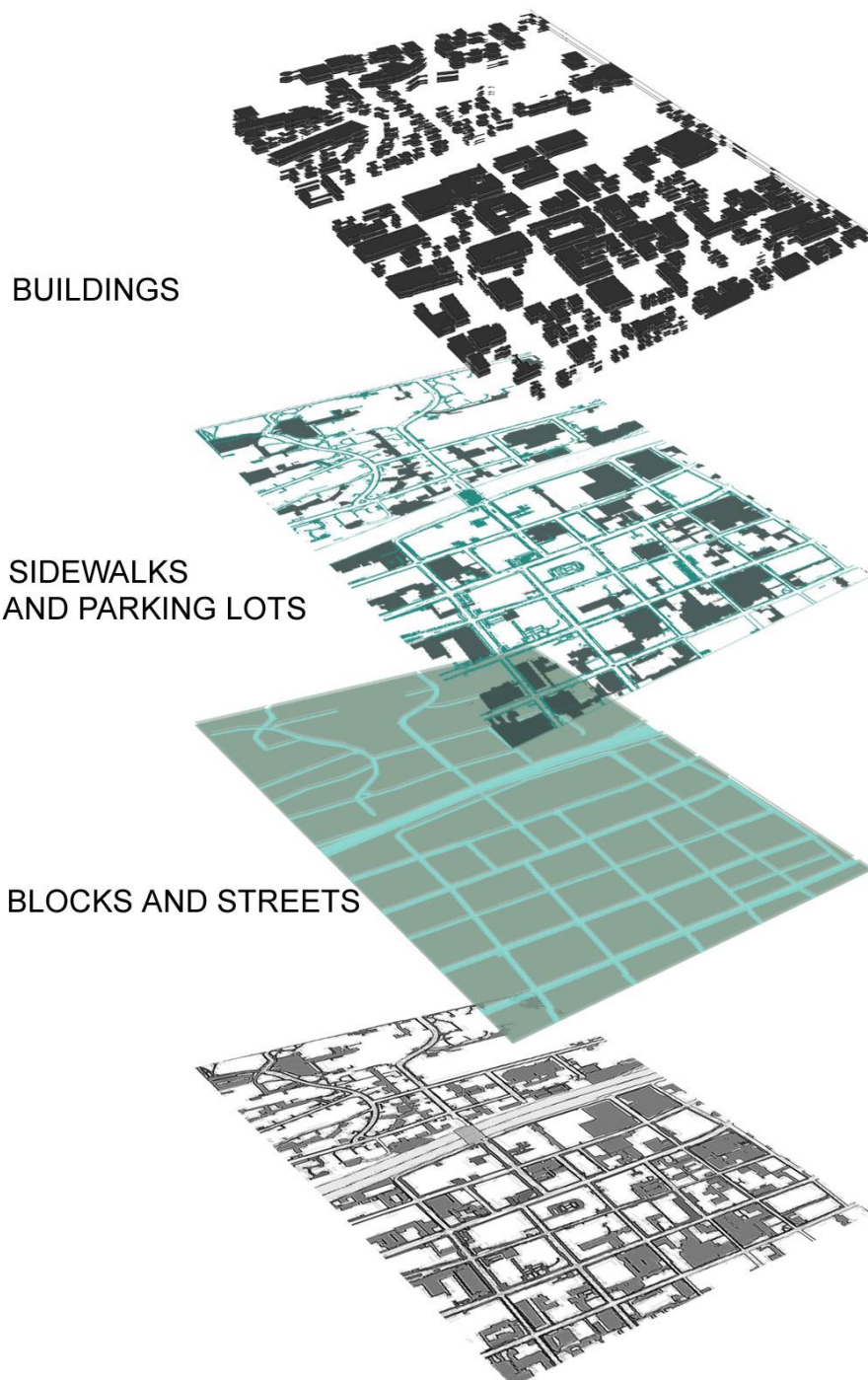


Figure 4-23. Layers, Atlanta. Source: City of Atlanta Geographic Information Systems. (2011). Retrieved July 13, 2011, from <http://gis.atlantaga.gov/> Adapted by author.

Morphology of the Site

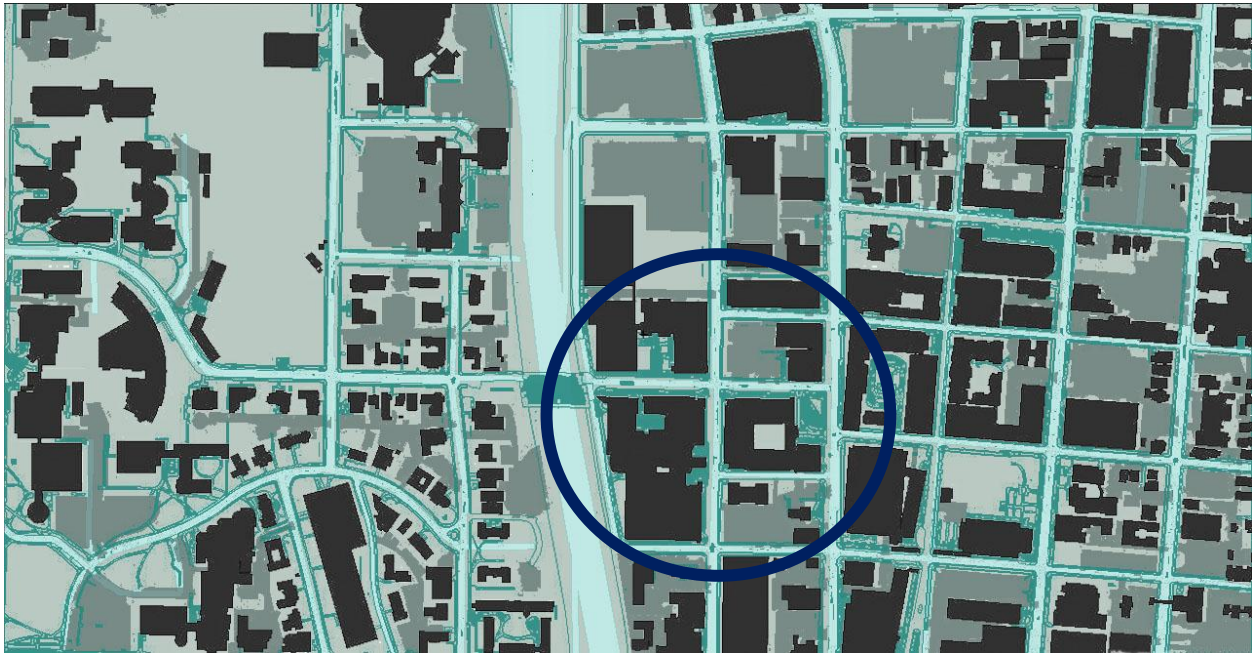


Figure 4-24. Morphology, Atlanta. Source: City of Atlanta Geographic Information Systems. (2011). Retrieved July 13, 2011, from <http://gis.atlantaga.gov/>
Adapted by author.

I-75 splits the study area in two. On the west side is the Georgia Tech campus, with a great amount of open space, and curving quiet streets and sidewalks, with buildings of every size and function for the university. Linked by the 5th street Bridge over I-75, the east side of the study area is Midtown Atlanta, with a traditional grid of blocks and streets. For the most part, the grid is complete and easily accessible and the buildings define the blocks and streets by filling out the perimeter of the blocks. The morphology of Technology Square helped to reinforce the traditional city structure (Figure 4-24), by converting negative space parking lots into buildings that address the street. The increased density brought by the development of Technology Square also helped make the area a safer destination.

Technology Square Design

Change over Time

Atlanta 2000



Figure 4-25. 2000 aerial Atlanta. Source: City of Atlanta Geographic Information Systems. (2011). Retrieved July 13, 2011, from <http://gis.atlantaga.gov/>
Adapted by author.

Atlanta 2007



Figure 4-26. 2007 aerial of Georgia Tech and Midtown, Atlanta. Source: City of Atlanta Geographic Information Systems. (2011). Retrieved July 13, 2011, from <http://gis.atlantaga.gov/> Adapted by author.

Riddled with crime and degradation, 66% of Midtown was vacant in 1996. The ULI

Case study describes the background and process of Technology Square's development:

At the time when Georgia Tech began to assemble property for the project, residents of Atlanta often referred to Midtown as the city's armpit. Midtown residents felt the same way about the site, which included land that had sat vacant for five years and contained deserted buildings (previously a restaurant and Cadillac dealership) hosting prostitutes, vagrants, and drug dealers. (Bryant, 2005, p.1)

Today, however, it is a successful infill development made possible through the collective vision of the university and the neighborhood. The Atlanta-based architecture firm, Thompson, Ventulett, Stainback & Associates, set out to design a high-tech campus with a “main street” feel. The ULI case study describes their solutions: “downsizing Fifth Street from four lanes to two, retaining on-street parking, widening sidewalks, adding trees, and accenting with glass and brick. Further, placing all street-level retail, including the entrance to Barnes & Noble, on the ground floor along the Fifth Street side added to the ambience” (Bryant, 2005).

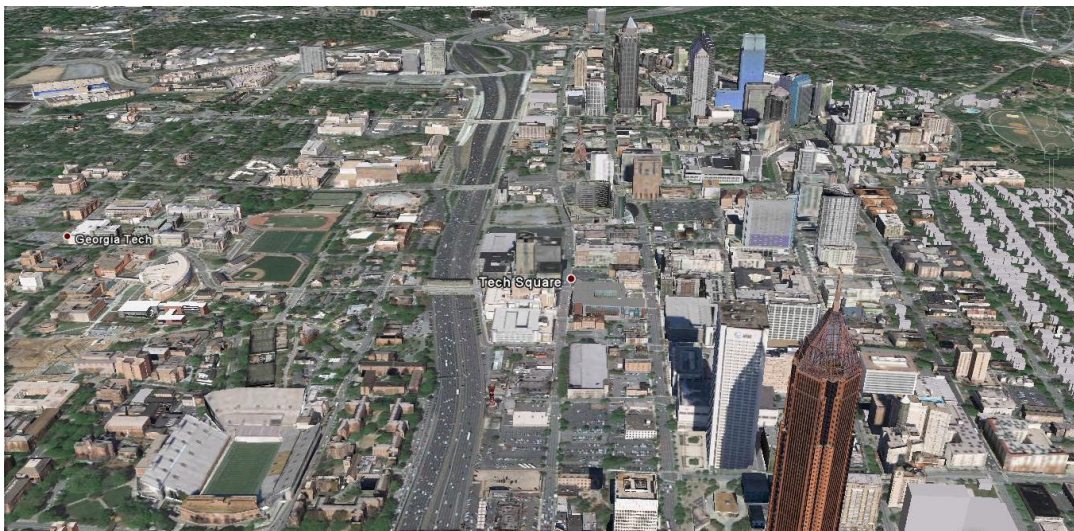


Figure 4-27. 2007 Oblique aerial view, Atlanta. Source: Google Earth™. (2011). Retrieved September 2, 2011, from <http://google.com/earth>

Elements

Gateway

The view (Figure 4-28) from the Georgia Tech campus looking east to Technology Square creates a gateway, giving the viewer a sense of arrival, entering into a destination. Intrinsic to having a “sense of place,” is this feel of entering a district. The terminus is created by the historic Biltmore hotel, which closes the vista and marks the end of the Technology Square district.



Figure 4-28. Gateway to Technology Square, Atlanta. Source: Google Earth™. (2011). Retrieved September 2, 2011, from <http://google.com/earth>

Connectivity

The 5th Street Bridge over I-75 (Figure 4-29) physically and visually creates the connection to the Georgia Tech campus. Wide sidewalks, landscaping, and traffic calming, makes the bridge safe and pedestrian friendly while crossing high above twelve lanes of heavy Atlanta traffic.



Figure 4-29. View to Georgia Tech campus, Atlanta. Source: Google Earth™. (2011). Retrieved September 2, 2011, from <http://google.com/earth>

Landmarks

Landmarks are an essential part of having a sense of place. The unique architecture of Technology Square (Figure 4-30) helps define it as a district and helps users with way-finding. The angular glass corners provide visual access into the interior circulation of the buildings, lit up at night they act as beacons, even seen from the highway below.



Figure 4-30. Landmark architecture of Technology Square, Atlanta. Source: TVS Design (2011). Retrieved May 21, 2011, from <http://tvs-design.com/>

Human Scale

In order to achieve the “Main Street” feel the university desired, the architects had to design to the human scale. This is achieved through ground floor retailing (Figure 4-31), transparency of building materials (Figure 4-35), street furniture (Figure 4-33), landscaping and awnings (Figure 4-32) which help give a sense of enclosure, safety, and hospitable microclimate. All of these amenities increase pedestrian use.



Figure 4-31. Street section, Technology Square, Atlanta. Source: Google Earth™. (2011). Retrieved September 2, 2011, from <http://google.com/earth>

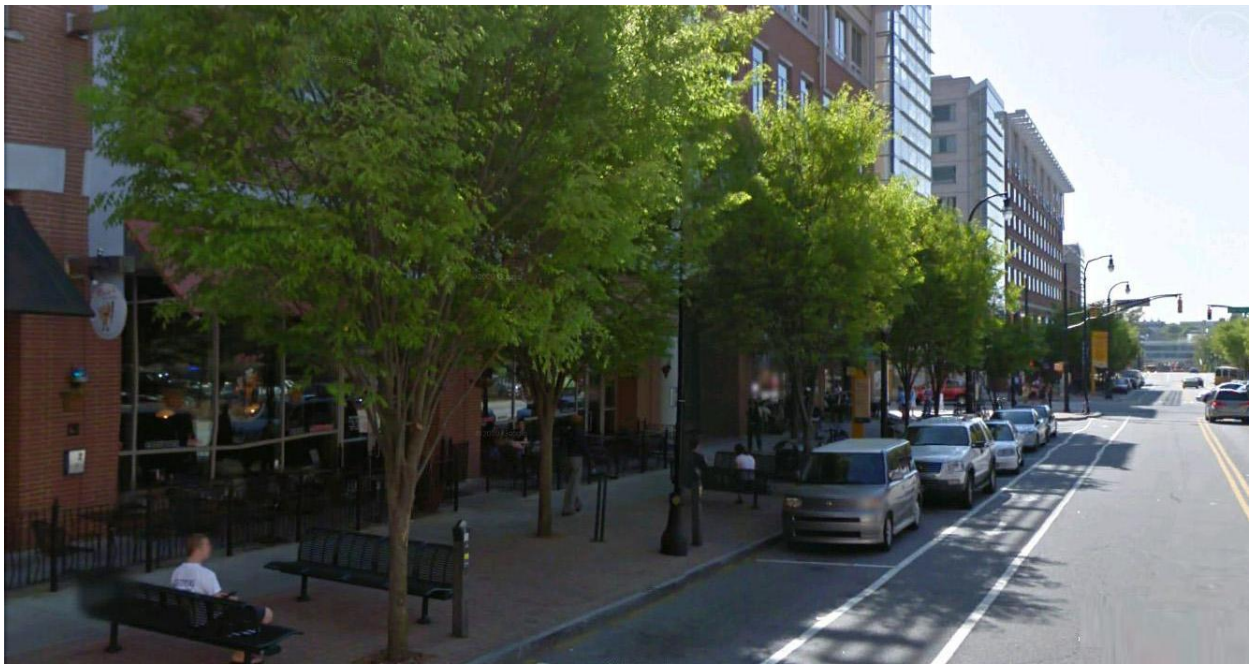


Figure 4-32. Sidewalk, Technology Square, Atlanta. Source: Google Earth™. (2011). Retrieved September 2, 2011, from <http://google.com/earth>



Figure 4-33. Street furniture, Technology Square, Atlanta. Source: Google Earth™. (2011). Retrieved September 2, 2011, from <http://google.com/earth>

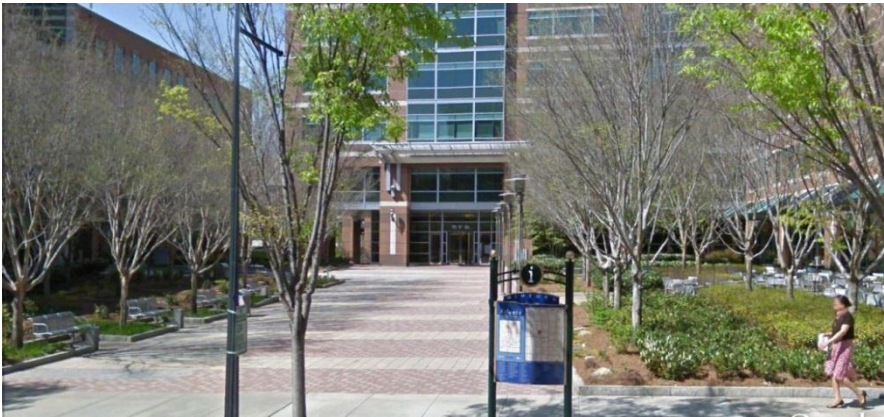


Figure 4-34. Technology Square, plaza, Atlanta. Source: Google Earth™. (2011). Retrieved September 2, 2011, from <http://google.com/earth>

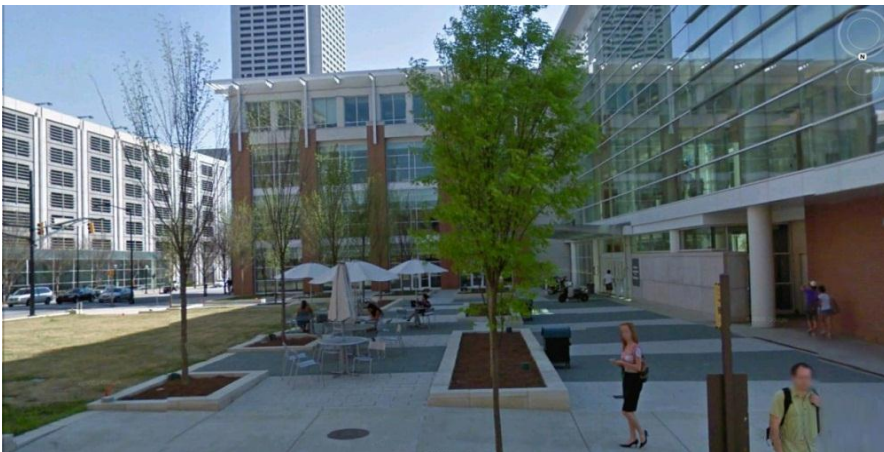


Figure 4-35. Technology Square, plaza, Atlanta. Source: Google Earth™. (2011). Retrieved September 2, 2011, from <http://google.com/earth>

Present Urban Form and Function of Gainesville and UF

The site for Technology Square is located in Gainesville, Florida (Figure 4-36), in Alachua County (Figure 4-37). The following analysis of the form and function of Gainesville reveals the present strengths and weaknesses of the city, in order to learn how and what to improve.



Figure 4-36. Florida state map. Source: Google Maps™. (2011). Retrieved September 2, 2011, from <http://maps.google.com/> Adapted by author.

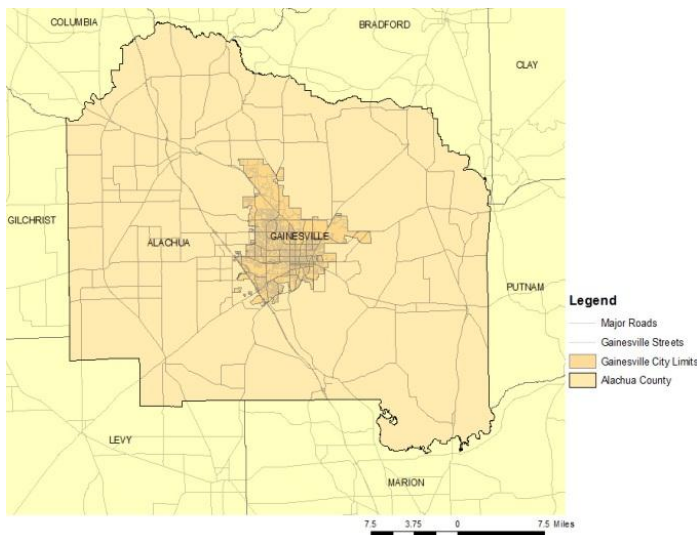


Figure 4-37. Gainesville, Alachua County, Florida. Source: Florida Geographic Data Library. (2011). Retrieved August 26, 2011, from <http://fgdl.org> Adapted by author.

Networks and Structure

Emerald Necklace

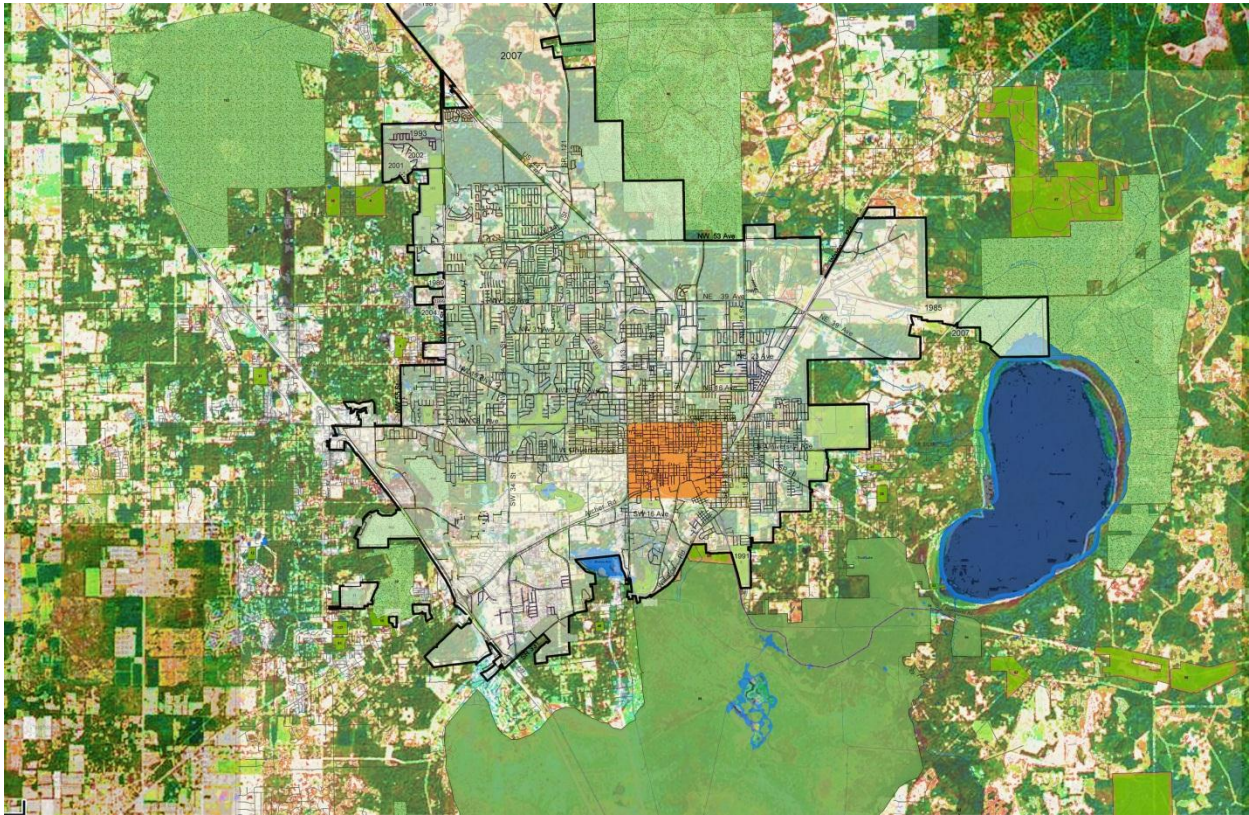


Figure 4-38. Emerald Necklace. Source: Google Earth™. (2011). Retrieved September 2, 2011, from <http://google.com/earth>, City of Gainesville. (2011). Retrieved September 15, 2011, from www.cityofgainesville.org Adapted by author.

As a way of constraining development and preventing urban sprawl, Gainesville is using a green belt method coined “the Emerald Necklace” (Figure 4-38) to keep the surrounding undeveloped land from becoming developed (City of Gainesville, 2011). This technique helps to encourage downtown redevelopment by limiting access to green fields, increasing density rather than allowing sprawl.

Historic Districts & the CRA

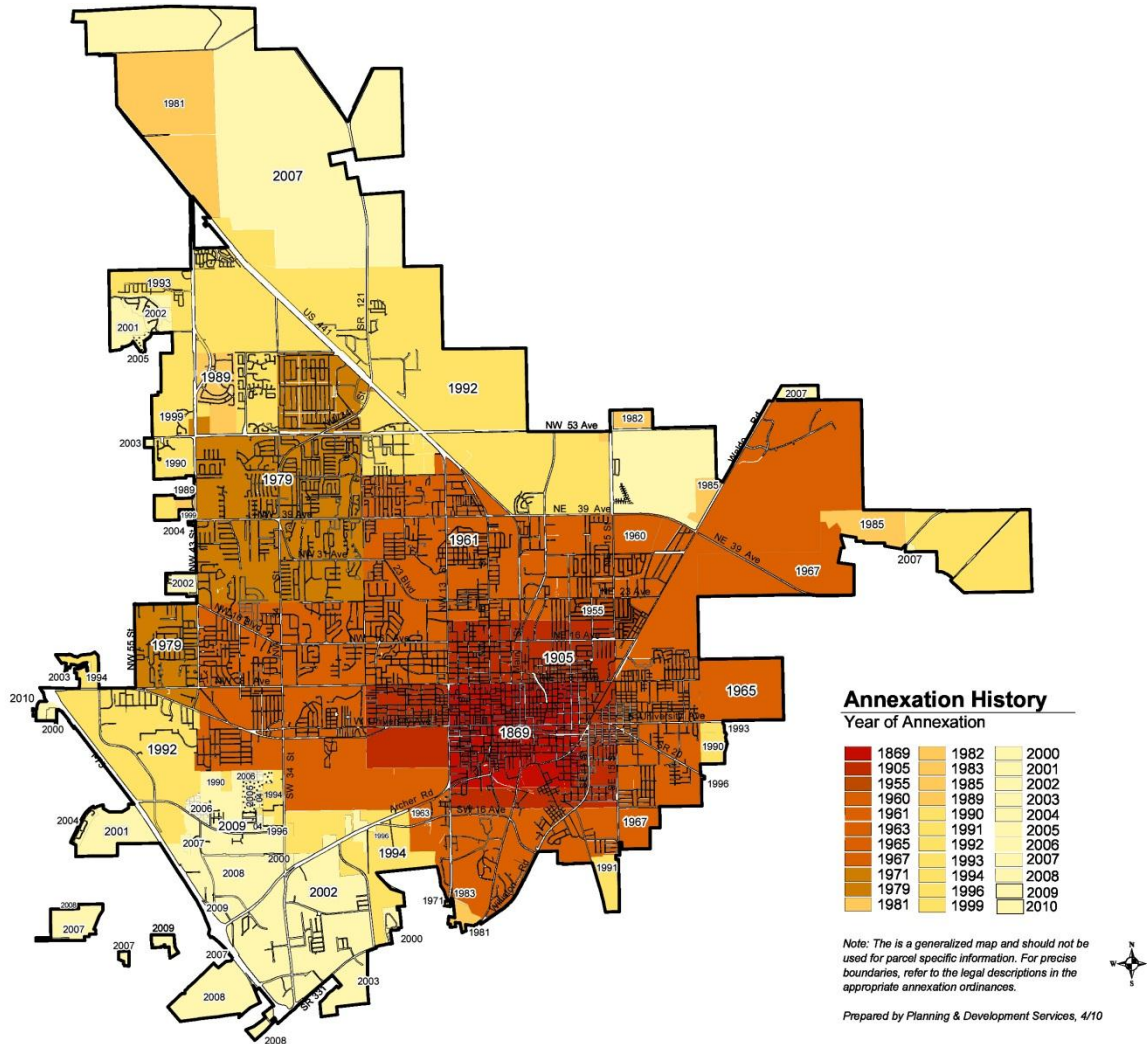


Figure 4-39. Annexation by decade. Source: City of Gainesville. (2011). Retrieved September 15, 2011, from www.cityofgainesville.org Adapted by author.

This map (Figure 4-39) shows how Gainesville has grown since it was established in 1869. Development has sprawled outward from the city center at a low density. This is what the greenbelt hopes to control. By annexing these developments into the city over time, it was promoting sprawl. Extending the city's services; schools, fire rescue, police, garbage collection and infrastructure, further and further is costly and drains those resources.

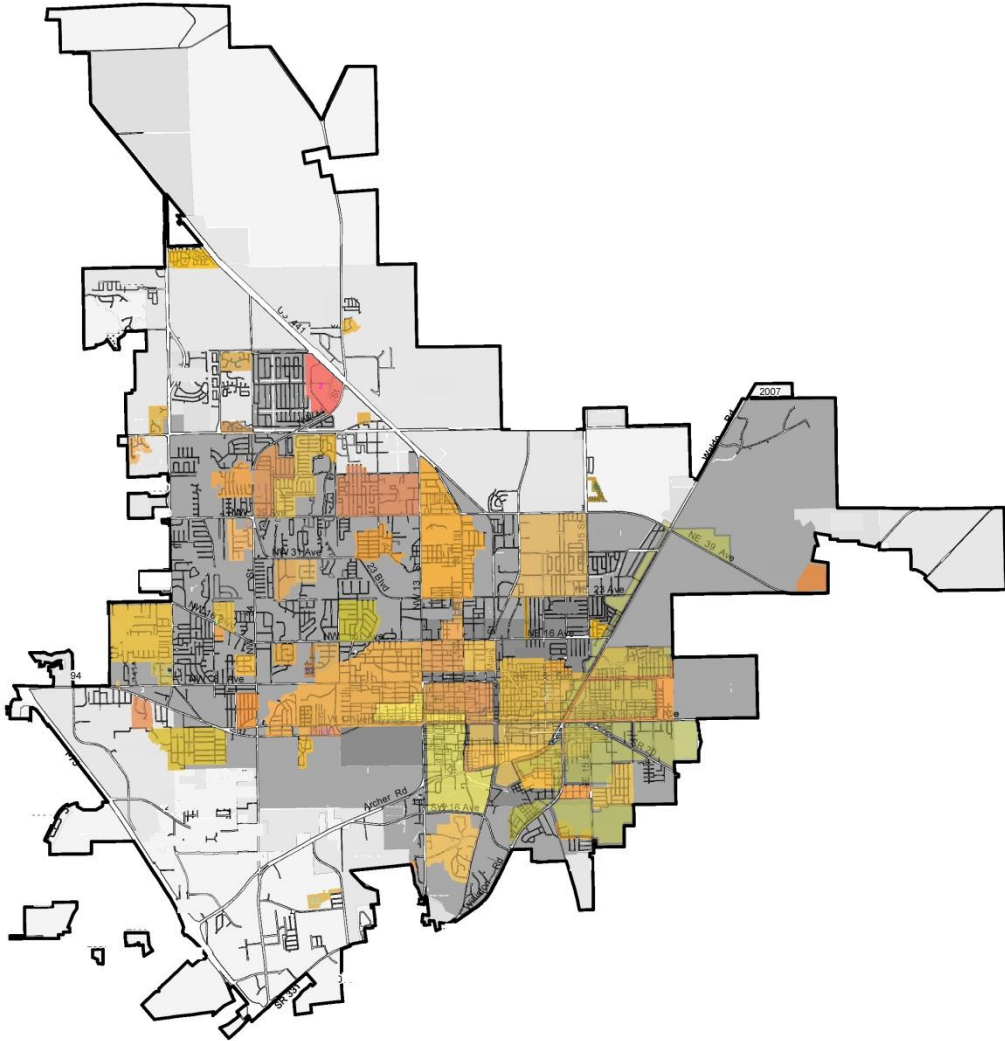


Figure 4-40. Neighborhoods, Gainesville. Source: City of Gainesville. (2011). Retrieved September 15, 2011, from www.cityofgainesville.org Adapted by author.

There are over 50 neighborhood associations (Figure 4-40) in Gainesville (City of Gainesville, 2011). The study area is located between the university campus and downtown. Gainesville's Community Redevelopment Agency (CRA) has also established four districts for redevelopment. The site is located in the CRA's College Park/University Heights district. There are also five historic districts in Gainesville established by the city planning department. The study area is central to all of them and borders the University Heights Historic District - South (Figure 4-41).

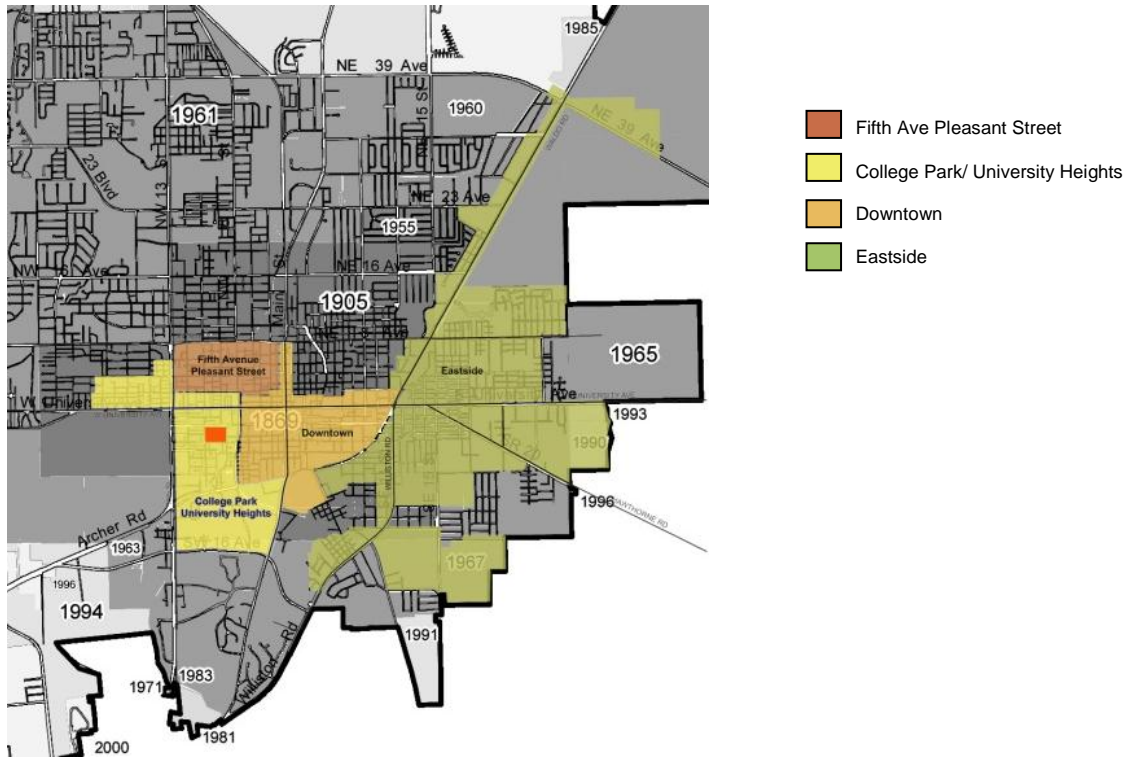


Figure 4-41. CRA districts, Gainesville. Source: City of Gainesville. (2011). Retrieved September 15, 2011, from www.cityofgainesville.org Adapted by author.

Public Transportation

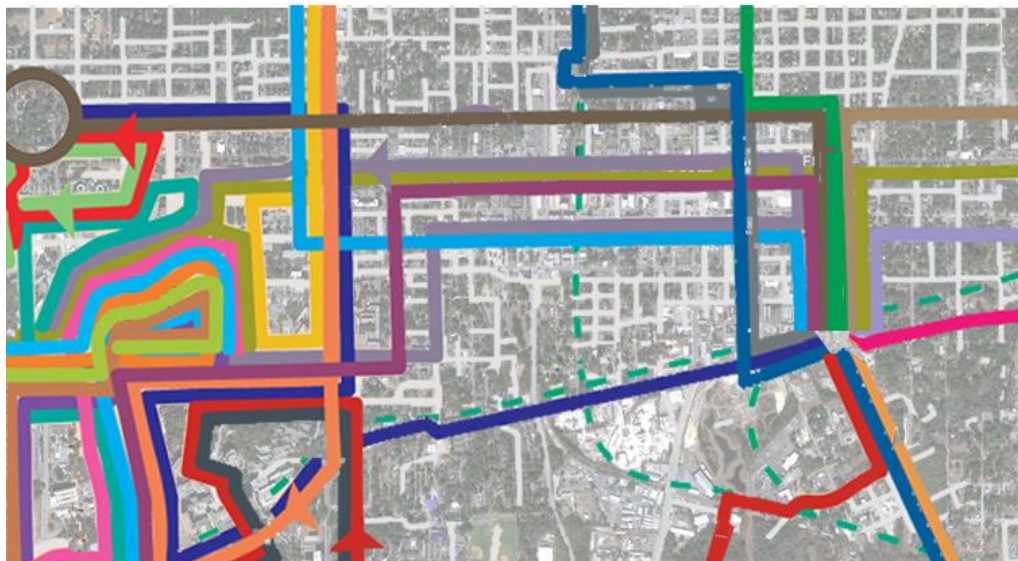


Figure 4-42. Bus routes, Gainesville. Source: Regional Transit System. (2011). Retrieved August 4, 2011, from www.go-rt.com, Google Earth™. (2011). Retrieved September 2, 2011, from <http://google.com/earth> Adapted by author.

Located between the highly accessible university and downtown Gainesville, the study area has a wide selection of public transportation options (Figure 4-42). It is also easily walkable to either downtown or the university and accessible through well-connected bike lanes. There are many parking lots and garages, and on-street parking. Multiple modes of transportation, accessibility and location between the university and downtown Gainesville make this a great site to develop.

Functional Dimension



Figure 4-43. Current land use map, Gainesville. Source: Alachua County Property Appraiser. (2011). Retrieved August 27, 2011, from <http://www.acpafl.org>

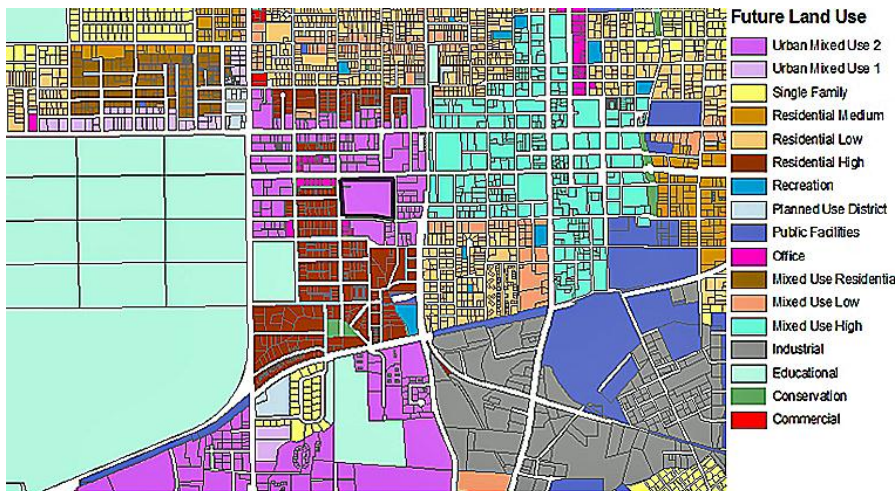


Figure 4-44. Future land use map, Gainesville. Source: Florida Geographic Data Library. (2011). Retrieved August 26, 2011, from <http://fgdl.org> Adapted by author.

As established by the City of Gainesville, the future land use (Figure 4-44) for the site is Urban Mixed Use 2 (UMU2). This designation allows up to 100 units per acre, which is the densest land use allowed in the city. As defined in the Gainesville Community Redevelopment Agency's Plan for College Park/ University Height's redevelopment, the Urban Mixed use 2 allows:

This category allows a mixture of residential, retail and office/research uses. The Urban Mixed districts are distinguished from other mixed-use districts in that they are specifically established to support biotechnology research in close proximity to the University of Florida. An essential component of the district is orientation of structures to the street and pedestrian character of the area. Retail and office uses located within this district should be scaled to fit into the character of the area. Residential density shall be limited to 100 units per acre with provisions to add up to 25 additional units per acre by special use permit. All new development must be a minimum of 2 stories in height. Building height shall be limited to 6 stories and up to 8 stories by special use permit. Land development regulations shall set the appropriate densities; the distribution of uses; design criteria; landscaping, pedestrian, and vehicular access. Land development regulations shall specify the criteria for the siting of public and private schools, places of religious assembly and community facilities within this category. (Gainesville Community Redevelopment Agency, 2005, p.10)

The surrounding uses include residential of different densities, Educational, Industrial, Office, Conservation, Recreation, and Public Facilities. Having a diverse mix of uses helps increase diversity among the population. Both Richard Florida and Jane Jacobs have espoused the importance of diversity because it promotes tolerance and even safety by having more "eyes on the street" at different times of day and night.

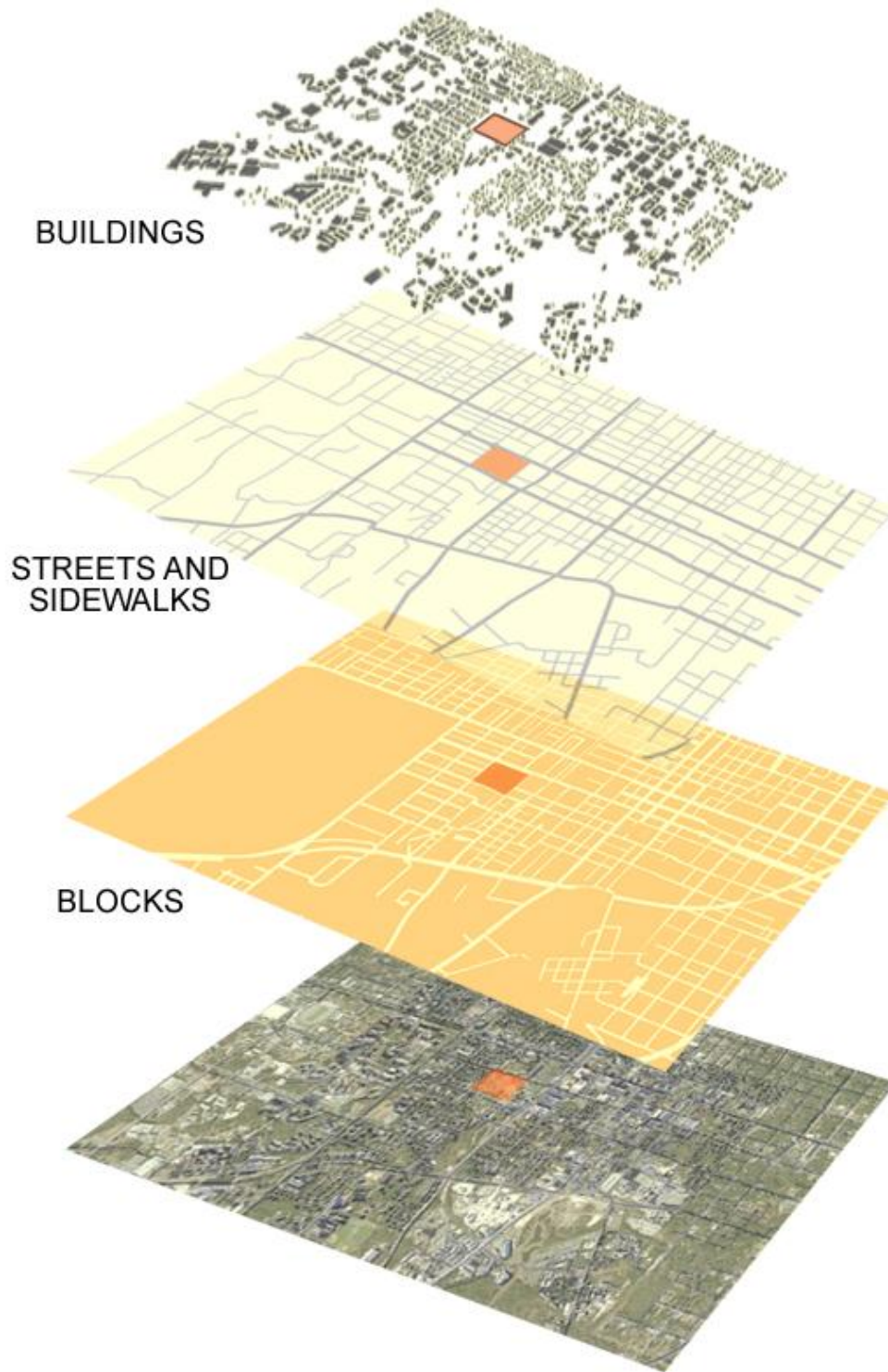


Figure 4-45. Layers of the site. Source: City of Gainesville. (2011). Retrieved September 15, 2011, from www.cityofgainesville.org, Florida Geographic Data Library. (2011). Retrieved August 26, 2011, from <http://fgdl.org> Google Earth™. (2011). Retrieved September 2, 2011, from <http://google.com/earth> Adapted by author.

Blocks – the almost complete grid



Figure 4-46. Morphology of the site. Source: City of Gainesville. (2011). Retrieved September 15, 2011, from www.cityofgainesville.org, Florida Geographic Data Library. (2011). Retrieved August 26, 2011, from <http://fgdl.org> Adapted by author.

While the morphology of Gainesville reveals a traditional grid, the very low density, and the mostly single-family, set back, detached homes do not make for positive space because the buildings do not define the blocks and streets (Figure 4-46). Instead, they generally create amorphous negative space. The grid is also not complete, leaving gaps in the street system where large unwalkable blocks or large developments occur. Being hard for any user, a pedestrian, bicyclist or even motorist to navigate from one end of town to the other, the incomplete grid increases traffic on the few roads that do connect all the way. The site of study is a mega block, an agglomeration of adjacent blocks brought together to support its former large-scale use of a regional hospital.

Present Elements

Landmarks

The Hippodrome State Theater (Figure 4-47) is currently the main landmark for downtown Gainesville. Being the terminus for SE 1st Street it shows its predominance and gives a sense of enclosure to the area. The adjacent blocks contain a variety of dining, entertainment, retail, offices and government facilities. Being near a landmark elevates their status and helps customers with way-finding. The increased density created by the recent construction of residential developments will ensure these businesses have customers making the area surrounding the landmark an even livelier one.



Figure 4-47. Downtown Gainesville, Florida. Source: Google Earth™. (2011). Retrieved September 2, 2011, from <http://google.com/earth>

Human Scale

There are a few very successful blocks downtown. Those that have a pedestrian feel with ground floor retail, restaurants, outdoor seating, awnings and street trees tend to have the most patronage (Figure 4-48). On street parking helps buffer the sidewalk from oncoming traffic (Figure 4-49). Even the cobblestone street acts as a traffic calming measure, helping to increase pedestrian safety.



Figure 4-48. Downtown Gainesville, Florida. Source: Google Earth™. (2011). Retrieved September 2, 2011, from <http://google.com/earth>



Figure 4-49. Downtown Gainesville, Florida. Source: Google Earth™. (2011). Retrieved September 2, 2011, from <http://google.com/earth>

Increased Density – new residential developments

Recently, many new multifamily residential developments have been built in downtown Gainesville (Figure 4-50). Throughout the country there has been a resurgence of people moving back to the city centers from the suburbs. With all the amenities of downtown living, without the cost and stress of commuting from the suburbs, people are willing to pay more to be closer to where they work, closer to dining and entertainment, closer to public transportation, or, as in the case of Gainesville, closer to the university. With the ever increasing gas prices and obesity epidemic, living in a walkable community is helpful to our health and savings. And the new residential developments in Gainesville will help make the area between downtown and the university safer by having more eyes on the street at different times of day. The increase in residents will help the local economy as they patronize downtown businesses.



Figure 4-50. Downtown Gainesville, Florida. Source: Google Earth™. (2011). Retrieved September 2, 2011, from <http://google.com/earth>



Figure 4-51. Downtown Gainesville, Florida. Source: Google Earth™. (2011). Retrieved September 2, 2011, from <http://google.com/earth>

Gainesville Policies, Initiatives & Stakeholders

There are many stakeholders interested in the growth and development of the city of Gainesville; the University of Florida, the city government, local businesses, the students and the full time residents. The city of Gainesville's planning department and the CRA have established a vision for the College Park / University Heights area.

From the CRA's redevelopment plan for the College Park/University Heights area outlining the vision of the AGH Site:

The CRA should look to determine the highest and best use of this property for the economic development of the area.

The site could be made more valuable by serving a greater number of purposes. If the site also integrated mixed-use and/or technology uses higher wage jobs could be provided. Other potential improvements include the creation of a stormwater park, public green space, and parking structures. The site's proximity to the University of Florida and Santa Fe Community College illustrates the potential of this site, accessible by a 5-minute walk from both campuses. The redevelopment of this site as a

mixed-use technology transfer hub could promote additional housing for professionals in the area, creating the activity necessary for the street life envisioned for the district.

A better mix of uses and more gathering places such as a plaza, outdoor eating area, walking trails or other amenities could encourage more activity. Redevelopment of this site, and the auxiliary medical office space, could be the catalyst for a new residential mixed-use technology corridor and source of tremendous activity and economic development for not only the College Park University Heights Community Redevelopment Area but also all of Gainesville.

The College Park/University Heights Advisory Board and the City of Gainesville desires a plan that begins to focus more on the systemic changes needed to create the sense of place needed for the CP/UH Community Redevelopment Area. Changes needed include transforming the overall character of the community, improving traffic circulation and mode choice, enhancing the environment for private sector investment, and an overall better utilization of land. (Gainesville Community Redevelopment Agency, 2005, p.29)

From the CRA's incentive program for the College Park/University Heights area:

Selection Criteria:

Projects seeking incentives must address issues identified in the College Park University Heights Redevelopment Plan. Requests for incentives will be evaluated on the following criteria. A project must meet eight of the criteria listed below. Does the project:

- Support the redevelopment of West University Avenue and SW 2nd Avenue as a pedestrian oriented corridor
- Redevelop surface parking lots, blighted, or underutilized sites
- Encourage mixed-use parking structures
- Address redevelopment area-wide stormwater deficiencies
- Create significant improvements to the public infrastructure
- Include pedestrian and bicycle safety improvements
- Encourage a variety of housing types and prices within the district
- Encourage the redevelopment of specific sites to discourage criminal activity

- Encourage mixed-use development in the redevelopment area where appropriate
- Encourage the development of a mix of businesses to serve the needs of the residents of the redevelopment area, adjacent neighborhoods and institutions
- Support the redevelopment of SW 2nd Avenue or the Expansion Area as a mixed use technology and/or healthcare hub.
- Create publicly viewable green spaces (i.e. plazas, courtyards, pocket parks)
- House new technology or research related enterprise
- Improve the aesthetics and safety of the Depot Avenue Rail Trail
- Redevelop high visibility corners at key intersections
- Redevelop a former automotive use. (Gainesville Community Redevelopment Agency, 2006, p.5)

Many of these criteria are compatible with the ideas of the great urban design theorists. Jane Jacobs would support the mixed uses, the variety of housing types to promote diversity and social equity, the redevelopment of underused or blighted sites, to promote safety by having more eyes on the street at different times of day and to discourage criminal activity. Ian McHarg would support the initiatives involving the rails to trails beautification and the creative ways to handle storm water. William Whyte would be interested in the public plazas, courtyards and pocket parks. Kevin Lynch would support the urban campus design, redeveloping the highly visible corners, and giving the district a sense of place. And Richard Florida would support the research and technology enterprises and all the initiatives designed to attract and retain the creative class.

From the article, “*Creating the Perfect City Is about Illusions, Such as Shorter Blocks*,” Anthony Lyons, director of Gainesville’s CRA, and David Green, an urban designer at Perkins+Will and a professor in the College of Architecture at Georgia Tech, share their ideas on creating a perfect city. Anthony Lyons said:

First, we posed a simple question, “What kind of city do we want to be?” When we asked that question in Gainesville, the answer was clear. We want Gainesville to be a walkable and flexible city. Beyond that, we just want Gainesville to be cool. The question then is how do we make that kind of city? In many ways, we’re dealing with a blank slate in our underutilized downtown. While this is an incredible opportunity, it isn’t something unique to Gainesville. Downtowns all over the country are struggling. Gainesville is a city with good bones and has land ripe for redevelopment. (Fastcode Design, 2011)

When asked what the trick is for new development David Green answered:

“Small blocks. If you can’t walk in a city, then a city isn’t walkable. And small blocks tend to be the most flexible in terms of their long-term reuse. Seriously, it’s simple. On the point about walkability, people like to walk through cities that have small blocks. It is almost coded into our DNA. It’s about making progress when walking but it’s about the perception of progress in space. When it comes to walkability, it’s more about the perception than the reality. This is true of walkable cities all over the world. Going further, look at the front of a typical suburban shopping center, nobody wants to be there. Huge distances between stores. (Fastcode Design, 2011)

Anthony Lyons gave examples of what the city of Gainesville is doing about regulations, even in terms of the study area.

We are reworking our regulations to take out everything that makes blocks big, like huge parking requirements, large setbacks and unnecessary buffers that make development cumbersome anyway. So we’re supporting the goals of walkability and flexibility and, in so doing, incentivizing innovation by creating an environment conducive to creative solutions from the development community.

We’re actually doing this right now with our plans for a new science and research district, Innovation Square, near the University of Florida. The plan will be boiled down to only the few essential things we believe this district needs. We can’t possibly anticipate exactly what buildings will be needed in the future or predict where the market will be. We can, however, predict

what conditions will support a more flexible Gainesville, meaning infrastructure that can easily accommodate many development scenarios. And we, the government and our regulations, have to be nimble while still fulfilling our obligations to the public. (Fastcode Design, 2011)

Gainesville has great potential to be a creative hub. The new Innovation Square will surely push the economy in the right direction, creating more creative class jobs. It is up to the city's leaders to ensure that the infrastructure and amenities are conducive to this growth and will have the ability to attract and retain the creative class. The initiatives that the CRA has developed in regards to the College Park / University Heights district are in line with many of the great urban design theorists, so the intentions are in the right place. It will be a matter of moving forward with the plan and having the capital to make it concrete.

CHAPTER 5 RECOMMENDATIONS

Environment – Green Streets

Gainesville enjoys the Arbor Day status of Tree City USA (Arbor Day, 2010). While there are many large parks and conservation lands at the perimeter of the city, downtown Gainesville during a rainstorm reveals the inadequate storm water management with flooding, and fast moving water sheeting. This quick water runoff moves garbage and debris into the creeks and rivers causing eutrophication and eventually depleting the water bodies of oxygen. In developed areas, water runoff is caused by too much impervious surface. The solution is simply to slow the water down and filter it through bioswales or retention ponds. In already highly developed land, with no room for retention ponds, like downtown Gainesville, green streets are a great option. In his book, *“Streets and the shaping of Towns and Cities,”* Michael Southworth (2003) describes green streets as the new alternative to curb and gutter systems:

The green streets approach views streets as important elements in the regional ecosystem. They are designed to filter storm water within the street right-of-way so that streams are protected from contaminated runoff. Planted filtration strips in the form of swales, basins, or trenches filter waste water and replace conventional concrete curb and gutter drainage systems, Street trees help filter storm water and also help moderate and improve air quality. The wastewater drainage and treatment system thus becomes a visible part of the everyday environment that can also enhance street appearance. (Southworth, 2003, p.11)

Downtown Gainesville is located at one of the highest elevations of the city, so it would be beneficial to begin the storm water treatment there at the height of the watershed. It would also be a great technique to increase connectivity to the future Depot Park and as a connection to the rails to trails paths.

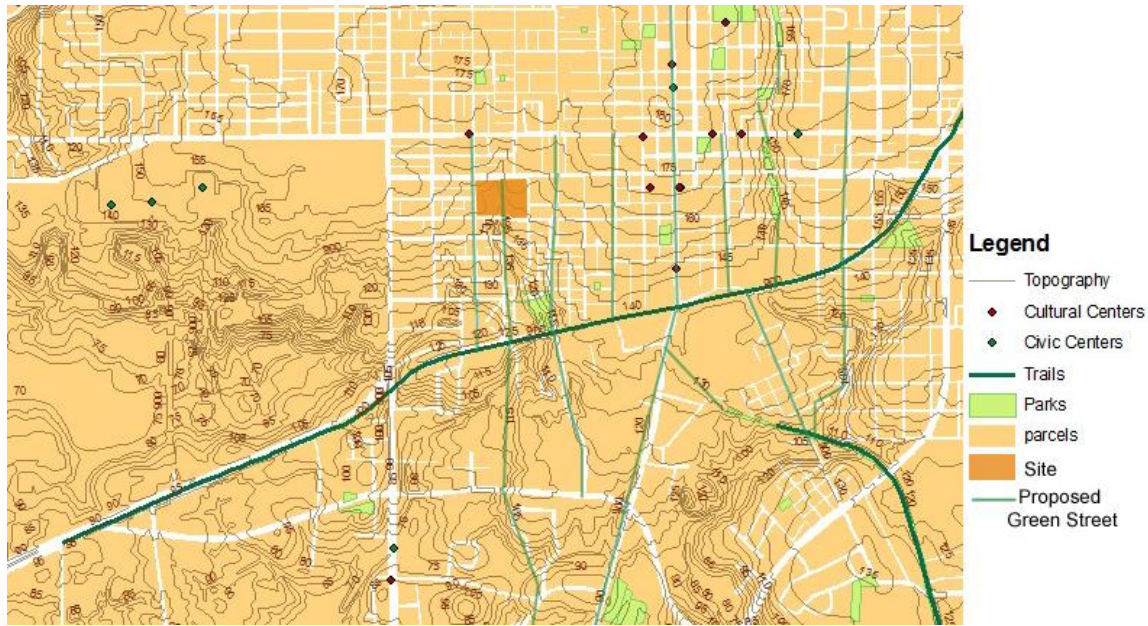
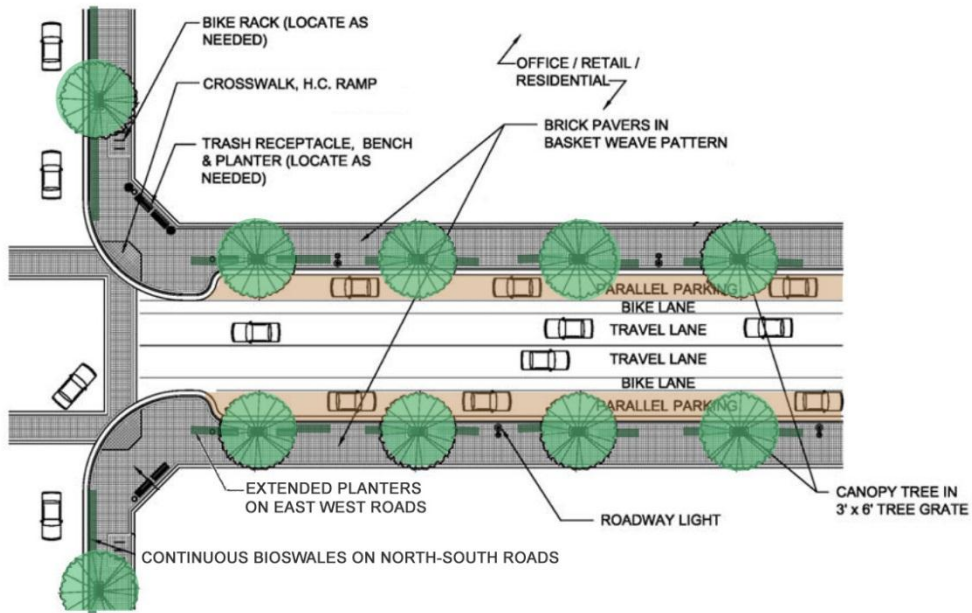


Figure 5-1. Proposed green streets. Source: Florida Geographic Data Library. (2011). Retrieved August 26, 2011, from <http://fgdl.org> Adapted by author.

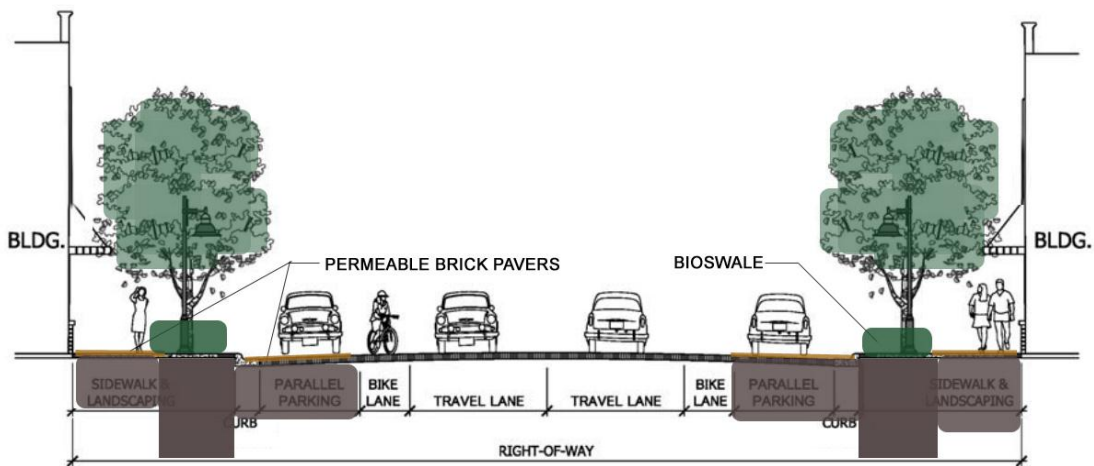
Using GIS and the layering techniques of Ian McHarg (1992) to determine the best placement, the proposed green streets run north and south to capture the stormwater running downhill from the site towards Paynes Prairie Preserve. Green streets also help to decrease the heat island effect and give pedestrians and bicyclists more shade, comfort and safety. As paths, the green streets help give pedestrians orientation, sense of direction, increase connectivity between destinations, and give the area a sense of place by repeating the types of landscaping and hardscape. In addition to way-finding, the green streets could be used as teaching tools, much like the UF NATL (Natural Area Teaching Laboratory) and SEEP (Stormwater Ecological Enhancement Program) on campus. These inform the public of Florida native flora, the cleansing process of storm water and its effects on the local water bodies and our water supply. An educated public that enjoys the beauty and benefits of green streets would also be less likely to pollute. The creative class would also find green streets an amenity.

College Park/ University Heights District



TYPICAL PLAN
WITH PARALLEL PARKING & BIKE LANES

Figure 5-2. Proposed green streets plan. Source: City of Gainesville. (2011). Retrieved September 15, 2011, from <http://www.gainesvillecra.com/FinalGainesvilleDTSMARCH2008.pdf> Adapted by author.



ROADWAY SECTION
WITH PARALLEL PARKING & BIKE LANES

Figure 5-3. Proposed green streets section. Source: City of Gainesville. (2011). Retrieved September 15, 2011, from <http://www.gainesvillecra.com/FinalGainesvilleDTSMARCH2008.pdf> Adapted by author.

Economy – Cultural Resources



"The City prides itself on its extensive park system, featuring over 2,600 acres of park land with over 40 active parks, playgrounds, recreation centers, swimming pools, sports facilities, a golf course and more. There is something for all ages and ability in your City Parks."

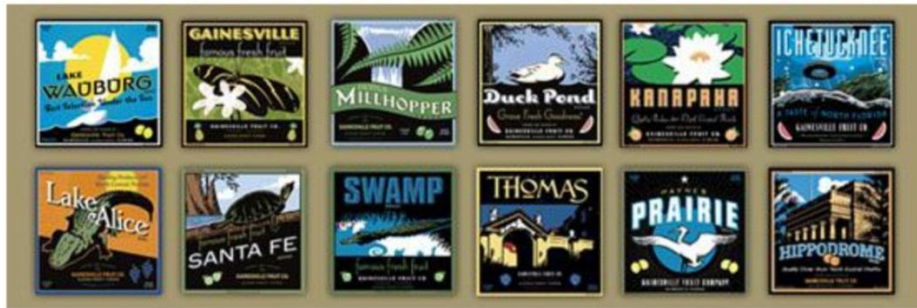


Figure 5-4. Gainesville culture posters. Source: Visit Gainesville. (2011). Retrieved September 15, 2011, from <http://www.visitgainesville.com/>

In order to support Innovation Square, Gainesville needs the amenities to attract and keep the creative class, which will in turn help local business and create a sustainable economy. The best way to do this is to appeal to the creative class by encouraging a variety of cultural venues and activities.

The Alachua County Arts and Economic Prosperity study shows exactly how much arts and cultural organizations contribute to the local economy:

The nonprofit arts and culture are a \$40.98 million industry in Alachua County—one that supports 1,145 full-time equivalent jobs and generates \$3.22 million in local and state government revenue. Nonprofit arts and culture organizations, which spend \$22.2 million annually, leverage a remarkable \$18.78 million in additional spending by arts and culture audiences—spending that pumps vital revenue into local restaurants, hotels, retail stores, parking garages, and other businesses in Alachua County. By demonstrating that investing in the arts and culture yields economic benefits, Arts & Economic Prosperity III lays to rest a common misconception: that communities support the arts and culture at the expense of local economic development. In fact, they are investing in an industry that supports jobs, generates government revenue, and is a cornerstone of tourism. This report shows conclusively that the arts mean business in Alachua County. (Americans for the Arts, 2007)

In addition to the arts, eco-tourism and heritage tourism are also abundant in North Central Florida. As unique amenities, these sites and activities give the region a sense of place and are attractive to the creative class. Supporting and promoting all these cultural resources will boost Gainesville's reputation and appeal, and in turn boost the local economy.

Equity

Affordable Housing

A city needs diversity to attract the creative class. In order to achieve diversity a city needs to have a variety of housing and commercial options for a wide range of incomes. Preserving older buildings gives renters more affordable options than all brand new developments and helps give a sense of history to a place.

Mixed Uses for a 24-Hour Live/Work/Play City

Having a variety of uses in one district will ensure people are out and about at different times of day and for different reasons, making the area safer by having more eyes on the street, benefiting the economy by turning previously blighted and underused areas into productive uses.

Having a mix of uses also promotes walkability. Rather than driving to a big box super store, a downtown resident can support many small local businesses within walking distance to their home or office. Having dining and entertainment options will even keep commuters downtown longer than just for the workday helping stimulate the local economy.

The Built Form

Perimeter blocks

Perimeter blocks (Figure 5-5) are recommended for this site. Perimeter blocks are created by buildings that address the street with minimal set back and help to define the block and create a positive space and traditional urban fabric. These buildings maximize the footprint of a site while still allowing for interior courtyards, plazas or pocket parks to get light and air to enter the interior facades of the buildings.

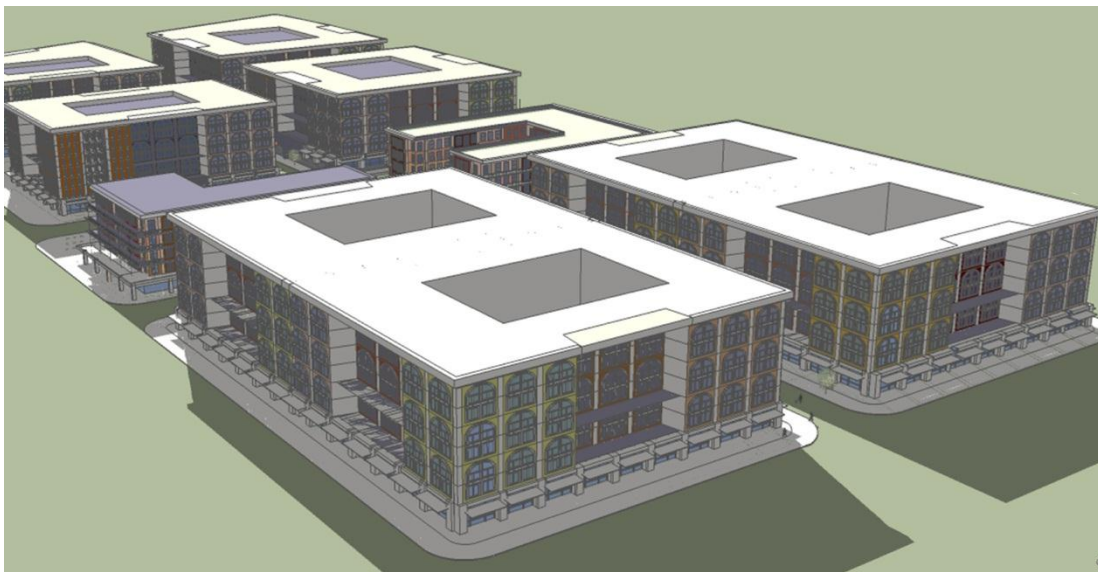


Figure 5-5. Perimeter blocks – traditional form

Sense of Enclosure

Buildings that fill out the block and define the street create a sense of enclosure (Figure 5-6). In contrast to modern buildings that stand-alone in a field of negative space like a single art object, traditional urban fabric works together to define positive space. People feel more comfortable in positively defined traditional city spaces. Taller buildings not only increase density, but the proportion of width of street to height of building is critical to the feeling of enclosure. Too short a building, or too wide a street and the sense of enclosure weakens.



Figure 5-6. Sense of enclosure

Aesthetics

Proportion, pattern, rhythm, rhyme, color and texture all create a sense of harmony and give a street a degree of uniformity without being monotonous. Undulating façades give more interest, create a play of light and shadow and help draw the eye down the street (Figure 5-7). Having similar but unique façades leaves room for surprise and individuality while still working to make a complete, harmonious street.



Figure 5-7. Aesthetics

Terminus

Like the Biltmore Hotel in Atlanta and the Hippodrome Theater in Gainesville, having a terminal iconic building at the end of a street helps draw the eye down the street while creating a sense of enclosure and the end to a district. It is important, however, to not impede traffic by creating mega blocks. Instead a terminus could be created by shifting the grid, rather than removing streets (Figure 5-8).



Figure 5-8. Terminus

Layers of Activity

Certain streets are successful because they have a great mix of activity, and a variety of public, private and semi-public spaces. Balconies and terraces (Figure 5-9) create this space that is not completely public and not completely private. Whether they are residential, office or for restaurants, being elevated off the street gives a unique vantage point. Like Bourbon Street in the French Quarter of New Orleans, balconies allow interaction from multiple levels on a densely populated street.



Figure 5-9. Layers of activity

Public Space

Public space (Figure 5-10) is essential to any great city. William Whyte (1980) studied public spaces to see why some worked and were well used and why some did not work. Through observation he discovered that successful public places have a comfortable microclimate with sun, wind, trees and water, and good street furniture. The best had movable chairs to give the users a sense of choice as to where they sat. Other essential elements for great public space include food facilities and other retailing. Public spaces are a great escape from the indoors and give people a chance to gather and to people watch.



Figure 5-10. Public space

Human scale



Figure 5-11. Human scale

The purpose of urban design is to make the user comfortable and safe. The best method of design is to think of who will be using this space and how. To appeal to the users, it is important to think in terms of the human scale. The ground floor should be inviting, with glazing where appropriate (Figure 5-11). Awnings, colonnades and street trees give a sense of enclosure and protection from the elements and traffic. Acting as sunshades in summer, deciduous trees help prevent some heat gain, and in winter allow sun light in to warm buildings and streets. This can make a huge difference in the microclimate and determine whether a space will be pedestrian friendly.

Setbacks above the first or second floor allow buildings to engage the street at ground level, while still being able to grow tall without creating claustrophobic streets, and still allowing for sun light to fall on the street, the other buildings and pocket parks and plazas.

Innovation Square Proposal



Figure 5-12. Traditional street grid

Neo-traditional street design and pattern

The site is currently a mega block, an agglomeration of traditional blocks merged together to house a large-scale development. This proposal recommends breaking the mega block back up into smaller walkable blocks to increase connectivity and permeability of the site. Without dead ends, traditional grids help to lessen traffic by providing alternative routes. Traffic calming measures would ensure bicyclist and pedestrian safety. Southworth (2003) explains how this design is preferable for all users:

The underlying concept of the shared street system is one of integration, with an emphasis on the community and the residential user. Pedestrians, children at play, bicyclists, parked cars, and moving cars all share the same street space. Even though it seems these uses conflict with one another, the physical design is such that drivers are placed at an inferior position. Such conditions are actually much safer for the pedestrian. By redesigning the physical aspects of the street the social and physical public domain of the pedestrian is reclaimed. Since this “emancipation” of the pedestrian environment is done with full integration of vehicular traffic, it is not an anticar policy. (Southworth, 2003, p.117)

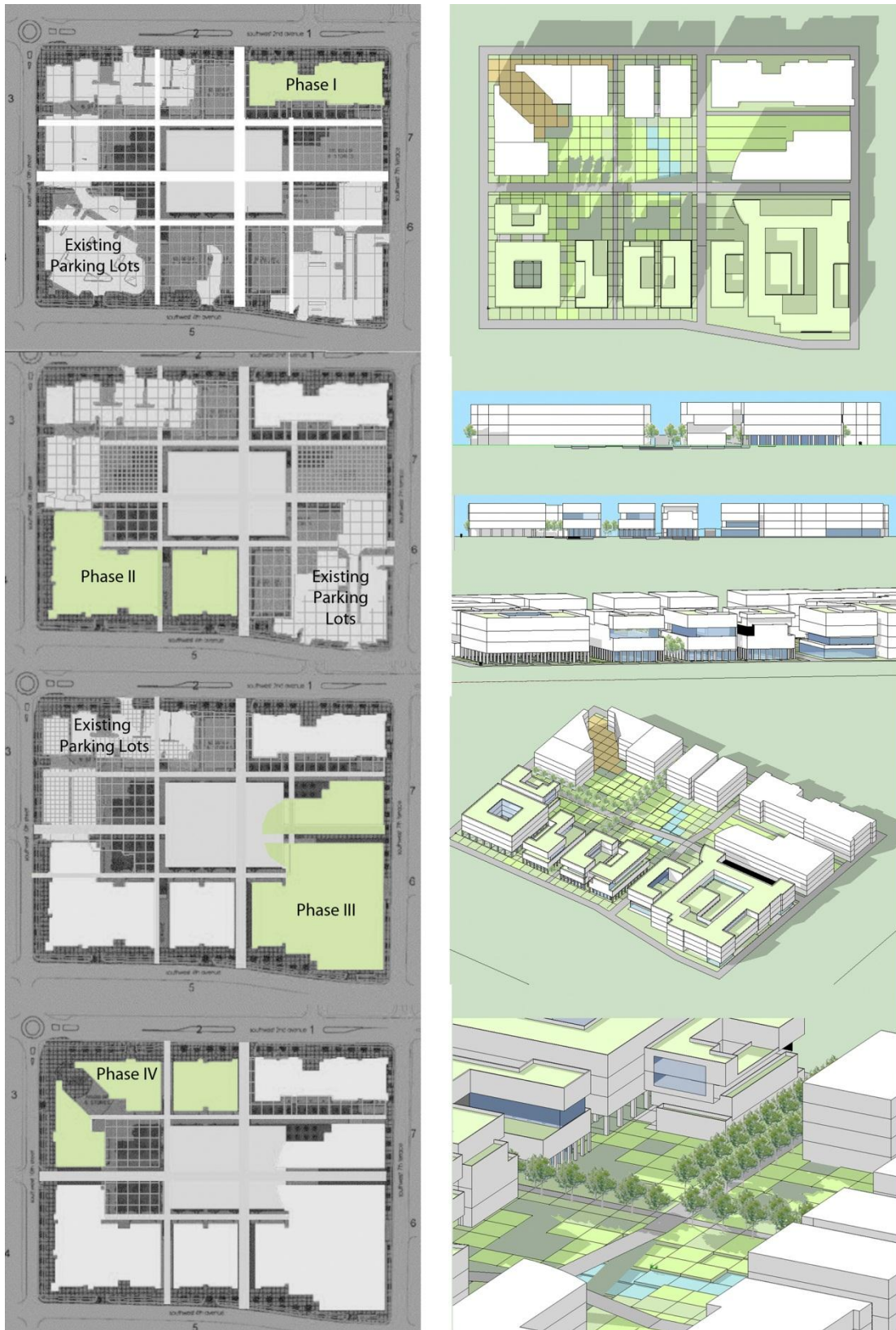


Figure 5-13. Phasing the site

Phasing

Innovation Square will not be built overnight or even all at once. It is already underway. The first building located in the north east corner of the site is almost complete. It is important to have a plan for the rest of the 12 acres while it is waiting to be developed. This proposal suggests opening the rest of the site up for art installations, farmer's markets and street fairs to increase activity, visibility, safety and awareness.

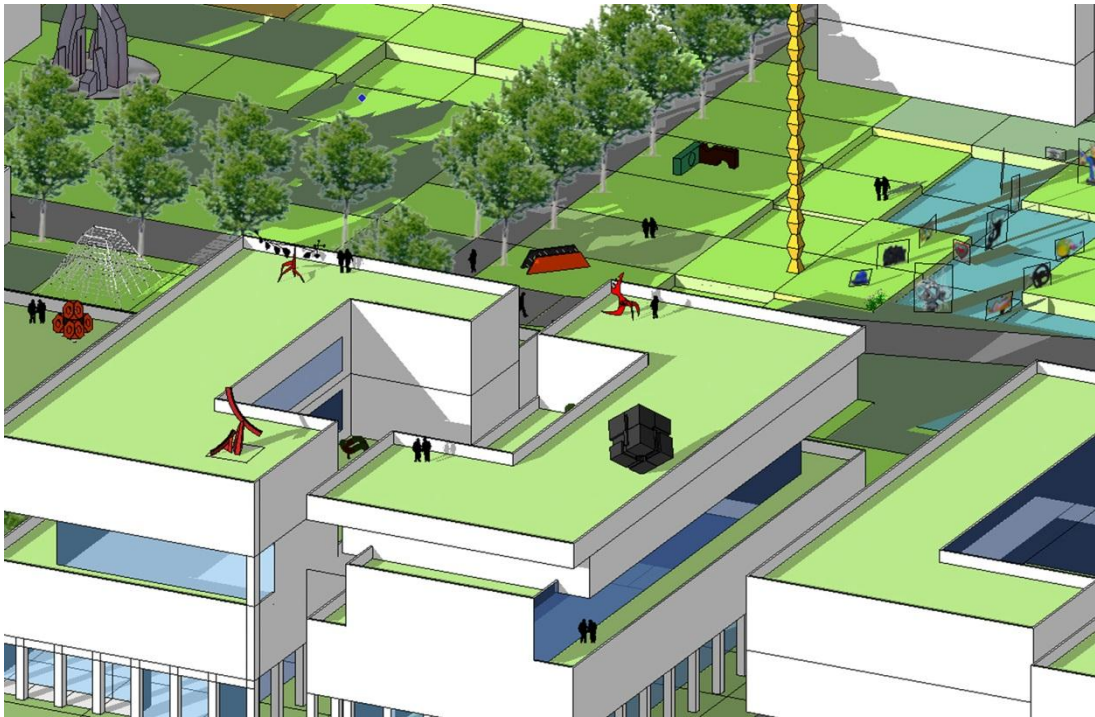


Figure 5-14. Layers of engagement

Layers of Engagement

Much of what will occur at Innovation Square will be closed to the public. Inventions, patents and intellectual property rights all need to be secured and respected. However, there should be flexible spaces that allow opportunities for collaboration, sharing and testing ideas. The architecture and public spaces should be designed with varying degrees of openness and privacy, and various levels to facilitate some public interaction, while also maintaining secure laboratories.

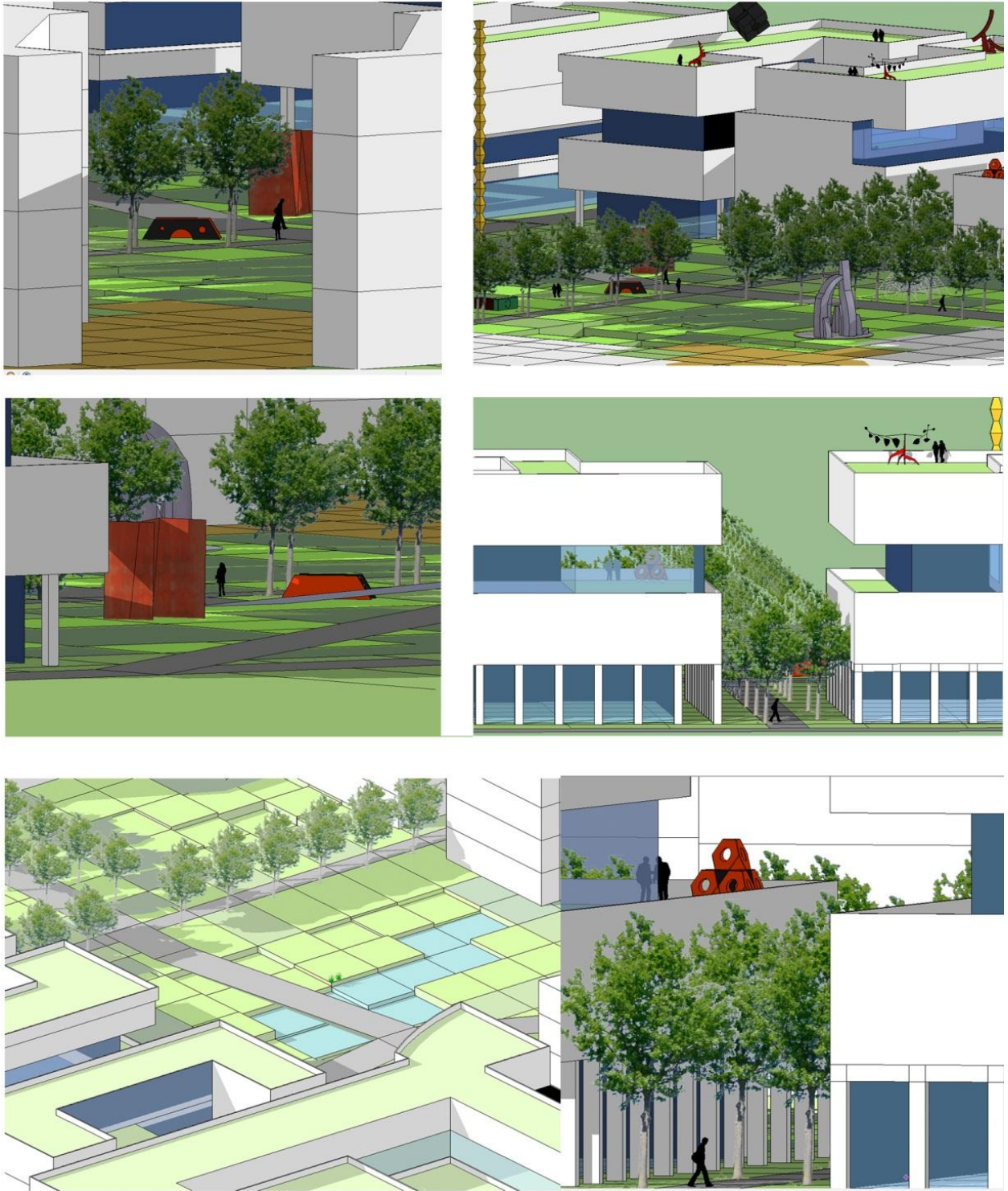


Figure 5-15. Innovation Square proposal



Figure 5-16. Innovation Square proposal

Innovation Square has the potential of being a great place, of connecting the university to downtown Gainesville, creating jobs, boosting the economy and making Gainesville a destination and an innovative hub. The urban design will be essential to giving the district imageability, safety, equity, and a sense of place. It will contribute to the amenities needed to attract the creative class.

CHAPTER 6 CONCLUSION

Site Planning - Elements, Layers and Analysis

Planning is a holistic effort. It is important to consider the many layers of a site and how they connect it to its surroundings. Some layers of the site to consider studying are; the morphological layers, the block and street structure, public, private and open space; the functional layers; land use, transportation, walkability, connectivity; the aesthetic layers; scale, proportion, pattern, material, form; the ecological layers; soil, slope, sun angles, wind rose, vegetation, habitats; and the historical layers.

It is important to learn as much as possible about a site. Since each place is unique, there are no one-size-fits-all solutions. Studying the layers will make it easier to see how the site works. Knowing what the problems, constraints, and opportunities are will help the planner to discover how they can be improved.

It is critical to study the site at many scales, not just to view it in isolation. While considering how to orient buildings and open space on a block, it is crucial to not only consider how they interact with the immediately surrounding buildings and uses, but also with the neighborhood or district and even the city as a whole. Is the site accessible to public transportation? Is a grocery store within walking distance? What are the neighborhood demographics? What kind of project do they need? Where are the parks or cultural amenities? It is important to analyze how the site fits in with the entire city in order to design the appropriate form and function. By mapping the site with the significant characteristics, and viewing the maps as layers on top of each other, a clearer understanding of the site will emerge. Giving values to the different categories in each layer will give insight into what the site requires.

This process is cyclical. It is important to work back and forth in the large and small scale. At the small scale, it is important to consider how people will actually use the space. Will there be ample shade in summer? Where are the benches, bike racks? Are the windows oriented to maximize daylight, while minimizing heat gain? Is the landscape native and appropriate for the application? Will people be comfortable? Will they want to be in this space?

Learning from Case Studies

It is also essential for planners to learn from case studies. Looking at the vision, goals, regulations, implementation and outcomes of other cities' planning efforts will help to determine what might or might not work for their own cities. Case studies are great history lessons, ways to remember past successes and to avoid repeating past mistakes. In this thesis, the case study of Technology square helped determine the design guidelines for Gainesville's Innovation Square. While Atlanta and Gainesville are not comparable in size and population, the design theorems and policies used to make Technology Square a well-used, successful project with a great "sense of place," can be translated into an appropriate design for Gainesville, by making Gainesville-specific recommendations. No case study can be applied directly to another project in another city, without translation. The lessons from Kevin Lynch (1960) and Jane Jacobs (1993) reveal the importance of uniqueness and diversity to make a place spatial and a distinct destination.

Imageability and Sense of Place

When all of the problems and opportunities have been accounted for, and the site has been properly analyzed, the urban designer needs to consider imageability. Going beyond whether people will use the space, it is necessary to consider whether they will

enjoy it. Will it be memorable? Will it have a sense of place? Will it become a destination? Will it attract visitors? Will it become a source of pride for residents?

The search for a “sense of place” is born out of the dissatisfaction with American suburbia. The suburbs are filled with big box stores, chain restaurants, strip malls, vast seas of parking lots, highways, congestion, and increasing cases of obesity. Today, you can get off the highway nearly anywhere in America and not know where you are because the urban design is no longer place specific or unique. Everywhere looks like everywhere else. The few cities that are successful all have a great “sense of place.” You know where you are when you get there. The architecture, landscape, and streetscape are unique and site specific. They have traditional morphology, walkable blocks, historic districts, high density, and mixed uses. Some examples are New York City, Boston, Savannah, San Francisco, and New Orleans to name a few American examples. These cities have imageability, or the ability to evoke strong memories in a visitor. This contributes to the reason why so many people visit these cities, grow their businesses there and call them home.

Quality of Life

Great urban design, one that considers all the users, the stakeholders, the form and function of the program, the history, the ecology and the connection to the city, has the potential to create change. The change could be increasing safety by renovating a dilapidated or underused area and inhibiting criminal activity. The change could be promoting healthy living by providing walkable blocks, bike lanes, public parks and recreational facilities. The change could be an increase in diversity by having affordable housing and a mix of uses. The change could help the environment through the use of green streets and public transportation. Gainesville’s Innovation Square has the

potential to make all these changes, help revitalize downtown and make a safer and healthier environment for its residents and visitors. It can also improve quality of life for residents by increasing economic development. Marcia Reiss, (1993) in her study for New York City, *“Public Spaces for Public Life”* describes the potential positive impacts:

Improving the public environment will also improve the economic climate of the city. Constructing and maintaining an expanded, revitalize public space system will produce badly needed jobs for city residents. Historical evidence suggests that well-built, well-maintain parks will increase property values in the neighborhoods where they are located. Generous, pleasing public spaces immeasurably improve that intangible but critical factor known as quality of life, a factor increasingly cited by businesses as an important consideration in deciding where to locate or leave. (Reiss, 1993, p. 8)

The goal of this study was to determine what aspects of the built environment might improve quality of life and create a sustainable economy. Gainesville is in the process of developing a 12-acre site to house innovative business incubators. As seen in the case study of Georgia Tech’s Technology Square in Atlanta, Georgia, well designed downtown redevelopment can help revitalize a district, boost the economy and create a well-used destination with a sense of place. The urban design is crucial to making a site attractive, memorable and well used.

Technology Square was designed not only in relation to the neighborhood and university but also with consideration of the human scale. The blocks are walkable, the streets and plazas create a sense of enclosure, there is ample public transportation, retail, landscape and street furniture all creating a pedestrian friendly atmosphere. There is a mix of uses to attract diverse people at different times of day, increasing safety and supporting the local economy.

The Innovation Square project will provide many opportunities to create a sustainable economy and produce the jobs to keep UF graduates in Gainesville. This

thesis provides justification for the planning and design efforts and sheds light on the importance of creating a sense of place.

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BIOGRAPHICAL SKETCH

Christina D'Auria grew up in Boynton Beach, Florida. She attended Dreyfoos School of the Arts, studied visual art and graduated in 2002. She received her Bachelor of Architecture from the Irwin S. Chanin School of Architecture of the Cooper Union in New York in 2007. She continued to live and work in New York City for a total of 7 years. Her experience includes working at GreenbergFarrow Architects, Scarano Architects, Barrett-Campbell General Contractors, the Museum of the City of New York and the Isamu Noguchi Garden Museum.

In January 2010, Christina moved to Gainesville, Florida to attend the University of Florida College of Design, Construction and Planning. She received a Master of Arts in Urban and Regional Planning in December 2011. While in school, she interned at the City of Gainesville in the planning department. She currently works full-time at Brame Architects in Gainesville.