Park Accessibility and Equity:
Research and Design in Salem, Oregon

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Approval

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Contents

Figures

Key Terms

Active Parks: Parks with three or more recreational amenities. Amenities could include access to soccer fields, basketball courts, baseball fields, tennis courts, and general active spaces.

Barrio: a Spanish-speaking neighborhood in the U.S.

Block Groups: A neighborhood division created by the US Census for data collecting purposes.

Green Space: an area of grass, trees, or other vegetation set apart for recreational or aesthetic purposes in an otherwise urban environment.

Latino Urbanism: The informal reordering of public and private space that reflects traditions from Spanish colonialism and indigenous Central and South American culture (Lara, 2012).

Latinx: a gender-neutral variation of “Latino” or “Latina” that refers to people of Latin American cultural or ethnic identity in the United States. Refers to a person of Cuban, Mexican, Puerto Rican, South or Central American, or other Spanish culture or origin regardless of race.

Natural Parks: Parks with relatively few active recreational amenities, typically highly vegetated with activities like sightseeing and walking trails.

Negative Cultural Service: Services that can negatively influence health outcomes for nearby residents, such as bars, liquor stores, and convenience stores.

Neighborhood Association: A neighborhood association is a group of residents or property owners who advocate for or organize activities within a neighborhood. This association is a major stake holder for the implementation of parks in their community.

Passive Parks: Parks with three or less recreational amenities. Non-recreational amenities in passive

vacant building lot or on small, irregular pieces of land (Nordh & Østby, 2013).

Positive Cultural Service: Services that can positively influence health outcomes for nearbu residents, such as gyms, grocery stores, and parks.

Riparian: A location situated on the banks of a river.

Urban Acupuncture: This theory incorporates the revitalization of a “sick” or “worn out” area and its surroundings through the implementation of healthier environments. This intervention will trigger positive chain-reactions, helping to cure and enhance the whole system (Landry, 2005).

Urban Growth Boundary: A boundary that separates urban areas from the surrounding natural and agricultural lands. Cities cannot expand beyond the urban growth boundary.

White: People having origins in any of the original peoples of Europe, the Middle East, or North Africa. Individuals who responded “No, not Spanish/Hispanic/Latino” and who reported “White” as their only entry in the racequestion (U.S. Census, 2010).

Woodland: A habitat where trees are the dominant plant form. The individual tree canopies generally overlap to create a canopy of shade.

Abstract

A review of existing literature finds that minority populations often experience negative health outcomes due to unequal park distribution, quality, and types of available public green spaces. In this study, findings suggest that the Latinx community in Salem, Oregon, lacks access to natural parks while having greater access to negative cultural services (services that n*egatively influence health outcomes*) in comparison to predominantly White population. This project was broken up into five phases: literature in, GIS analysis, site identification of potential parks, design, and analysis of the overall project. In the investigation phase, three methods were used: background study (scholarly), GIS (geographic informational analysis) and site study (qualitative site analysis). The identification phase used an analytical approach derived from the qualitative and quantitative research analysis to make a formal decision on one suitable location. During design, concept generation was guided by precedent analysis, environmental conditions, and community needs. Finally, after project research, identification, and design, this study analyzes its process of investigation as a process for further research and implementation. This research provides insight into what the planning and design process may look like to make future informed decisions for more accessible and equitable city parks for underrepresented communities.

Preface

Growing up with a large family in Salem, Oregon, I always looked forward to Sundays. On this day, aunts, uncles, cousins, and grandparents would come together to escape the busy lifestyle everyone had in common. Sunday represented a break from the laborious work week spent doing yard maintenance, running food trucks, painting houses, picking worms, housekeeping, working at the cannery, and being full time parents. On these mornings, I would wake up to the smell of fresh chilaquiles made from stale tortillas leftover from meals throughout the week, cooked in a sauce consisting of peppers and tomatoes, and garnished with cotija cheese and sour cream. While eating breakfast, we would sit around the table and watch our favorite soccer team from Mexico play on TV. Every so often, an outburst of joy would erupt when favorable goals were scored while maxing out the volume on the TV. After this morning experience, we would get ready we would get ready and head for church, located centrally. Mass always consisted of searching for familiar faces and meeting up during the break window. After church, we all collectively gathered to decide on the nearest park with suitable amenities to host our big family. On this day, I looked forward to the many dishes everyone brought to the table: fruit salad, chicken salad, horchata, sandwiches, and chicken drumsticks and steak for the grill. As soon as we pulled into the parking lot, our spot was an easy find. Filled by the little ones running around freely, aunts and uncles prepping food on the large tables, and cousins coordinating activities such as soccer, volleyball, or tag. Because of these moments, parks remind me of the times that brought us together.

As first-generation immigrants, my family settled in Salem because it was centrally located to the agricultural work that the Willamette Valley provides. One of

the sacrifices that comes with choosing to live in the United States without documentation is the restriction to travel freely and without fear. At the time, my family relied on feasible destinations, such as local parks within our city, as a distraction from their ordinary routine. Growing up, I did not question why we did not travel, but always wondered what other people's experiences were like in going to popular destinations such as Disneyland or Hawaii. Now that I am older, I understand that trips like these were not feasible because of the work my family had, and the lack of documentation that is necessary to travel. To this day, the furthest trip I have shared with my mom and brother (my dad had to stay home to work) was camping at the Redwoods in Northern California. Being outside and enjoying nature has been a continual theme for my family. As time has passed, our family has laid roots in the valley and have slowly become residents and citizens. This has brought us the liberty to travel without fear and go back and forth to our ancestral land. Although our Sunday traditions have slowed down, there are still families that experience this phenomenon and are often constrained to local parks for family vacations. To these families, parks are more than a place to run the dog or catch up with friends; they are special spaces that can be the foundation of core memories and celebratory milestones.

Acknowledgments

I wish to express my sincere appreciation to Professor Mark R. Eischeid and Professor Chris Enright, who were instrumental in this process: both convincingly guided and gave me support through conversations, ideation, and social emotional support even when the road got tough. Without their persistent help, the goal of this project would not have been realized.

The physical and technical contribution of 'Sustainable Cities Initiative' and the collaboration with the City of Salem is truly appreciated. Without their support and funding, this project would not have been as fruitful.

I wish to acknowledge the support and great love of my family and friends. They kept me going, and this work would not have been possible without their input. I must express my gratitude to my partner, Bree Hagerman, for providing me with unfailing support and continuous encouragement throughout my years of study and through the process of researching and writing this thesis. Finally, I recognize my grandparents and parents, who have paved the way for me to pursue an education. This accomplishment would not have been possible without them. Thank you.

Chapter 1
Background and Methods

1.1 Introduction

Neighborhood parks provide a destination for physical, mental, and social wellbeing while serving as a distraction from everyday life. Birthday parties, family gatherings, dog walks, yoga, pick-up games, morning runs, festivals, and picnics are just some of the activities that parks provide in their communities. Research shows that access to parks and natural settings offers beneficial opportunities for social, physical, and mental health, yet accessibility is often not equitably distributed amongst minority populations (Nordh, H., & Østby, K., 2013). This is especially true for underrepresented communities. Communities that are migration destinations often experience an undercount in the census due to unstable housing, lack of legal status, English proficiency, and low levels of education (Kissam, 2017). Communities cannot be appropriately served by parks if those communities are invisible, or not fully accounted for in official demographic data. As a result of inadequate access to parks, natural settings, and representation, underrepresented communities are likely to experience negative health consequences. There is a positive correlation between accessible healthy outlets (parks, gyms, grocery stores) and positive healthy lifestyles.

This research focuses on Salem, Oregon, and three main issues: 1) park accessibility, 2) park amenities, and 3) nearby cultural services. This research sheds light on an important development opportunity that highlights social inclusivity while also promoting a sense of belonging and community buy-in. The goal of this project is to establish a framework that could be used in the design and planning process to facilitate

the introduction of small-scale pocket parks to promote positive health outcomes. The project was guided by a research question that examined acces to parks, and cultural services.

Research Question:

Does the Latinx community in Salem, Oregon have equitable park access?

Guiding Questions:

These questions arose throughout the research and track the evolution of this project. From the beginning, they provided direction and more questions continued to follow.

- What is the largest minority population and where are they located?
- Are there differences in park access between predominantly Latinx neighborhood associations and White neighborhood associations?
- Are there differences in accessibility to different park types between both the Latinx and White population in Salem, Oregon?
- What are the differences in park amenity access between both the Latinx and White population in Salem, Oregon?
- Are there differences in accessibility to negative and positive cultural services between the Latinx and White communities in Salem, Oregon?
- In order to improve access to a natural park within the Latinx community, where would it be located?
- What would a relevant natural park look like amongst the Latinx community in Salem, Oregon?

1.2 Project Significance

Data produced from this research will be used to provide insight into the issue of inequitable park access amongst marginalized communities while also serving as a model to examine and promote more equitable park access amongst marginalized communities while also serving as a model to examine and promote more equitable park access and infrastructures across the country. The project itself can be used as a platform of knowledge for future research amongst professionals and students in order to better understand distribution, accessibility, and public perception of city parks amongst residents. The information gathered contributes to the overall perception of health in the community, as parks provides opportunities for play, physical activity, social interaction, relaxation, and recreation. This research will be made available to inform the public, professionals, local non-profits, regulatory and governmental agencies of existing park use and distribution within Salem, Oregon.

1.3 Salem, Oregon

Salem, the capital of Oregon, is nestled in the Willamette Valley with Portland an hour to the north and Eugene an hour south (see Figure 1.1). Also located an hour away is the Pacific Ocean to the west and the Cascade Range mountains to the east. The city of Salem was founded in 1842 along the Willamette River at the former site of a Calapooya Indian village (“History of Salem, Oregon,” 2020). The site was “rediscovered” by a Methodist missionary group led by Jason Lee on the Oregon Trail. The city grew rapidly with settlers due to promises of never-ending available land. Originally, Salem’s economy was dependent on the lumber

became more suitable for agriculture. With timber and crops driving the economy and providing local food, Salem continued to grow and became the prime location for government buildings and offices ("History of Salem, Oregon," 2020).

Two counties span within the city: Marion and Polk. Salem is home to three colleges, Chemeketa Community College, Willamette University, and Corban University. The average population with a high school degree is 87.19%, while those with a bachelor's degree or higher is 27% (City of Salem, 2020). The average age is 35 with an average income of $49,126 and home price of $188,900 (City of Salem, 2020). The largest employer is the State of Oregon, yet there are numerous industries that contribute to Salem's economy such as Salem Health, Truit Bros., Inc., Norpac Foods, Inc., Don Panchos Authentic Mexican Foods, Inc., Kettle Foods Inc., Garmin AT, Portland General Electric, and Willamette Valley Fruit Company.

Today, Salem is comprised of 154,637 residents and the racial demographics consist of: White (67.3%), Latino (23%), and All Other (9.7%) (U.S. Census Bureau, 2010) (see Figure 1.2). In 1970, less than 2 percent of Oregon's population was Latinx. By 1980, the census reported that the Latinx population had increased to 2.5 percent. This population continued to increase to 4 percent in 1990 and to 8 percent by 2000 (Garcia, 2019). Today, the Latinx community is the largest minority in Oregon. Census data reports that the Latinx population in Oregon increased 144 percent between 1990 and 2000 (Garcia, 2019). Part of this increase is due to the availability of agricultural work and lower housing costs compared to nearby large cities. For the purpose of this study, the largest minority population (Latinx) will be the only minority compared to the majority population (White). While other minority communities in Salem are experiencing similar inequities, the Latinx community is the most impacted due to population size and will be the focus of this study. In this study, the total Latinx population of 23% serves as a benchmark to measure equitable distribution of park resources and amenities. If the total acreage and amenities are equal to or greater than the 23% baseline, then it can be statistically considered equitable since 23% of the population is Latinx.

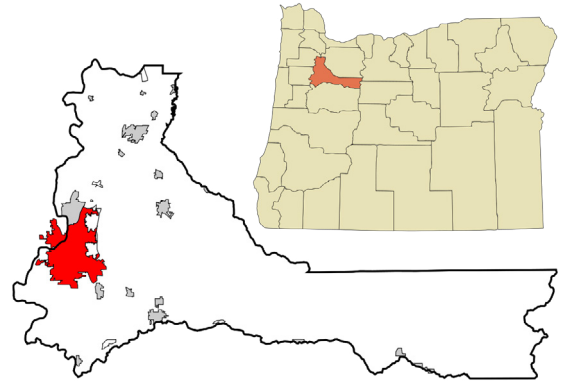


Figure 1.1 Salem, Oregon Context Map

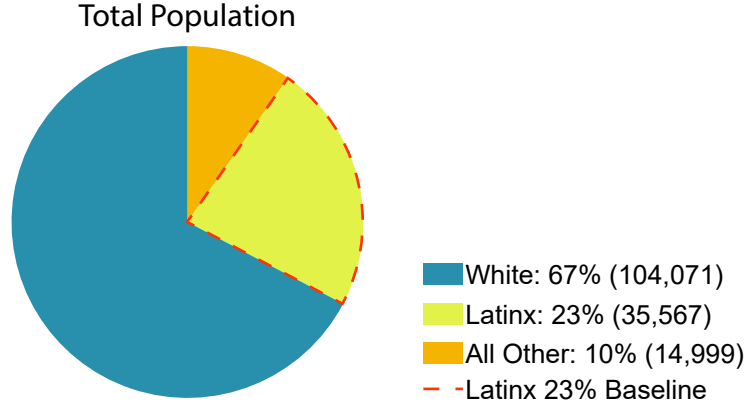


Figure 1.2 Salem, Oregon Total Population

1.4 Project Methods

The study used qualitative and quantitative data analysis that can be replicated and used in the planning and design processes to better measure access to city parks amongst all community members. The project was conducted in three phases, as represented in Figure 1.3. In the research phase, academic and spatial information was collected to measure the existing state of knowledge within the research topic, and existing demographic and physical conditions within the city of Salem, Oregon. The analysis phase focused on dissecting the research and spatial information gathered from the research phase. Lastly, the design phase integrated the knowledge attained from academic research, and project findings attenuated from the analysis phase to then integrate an inclusive and culturally responsive site design.

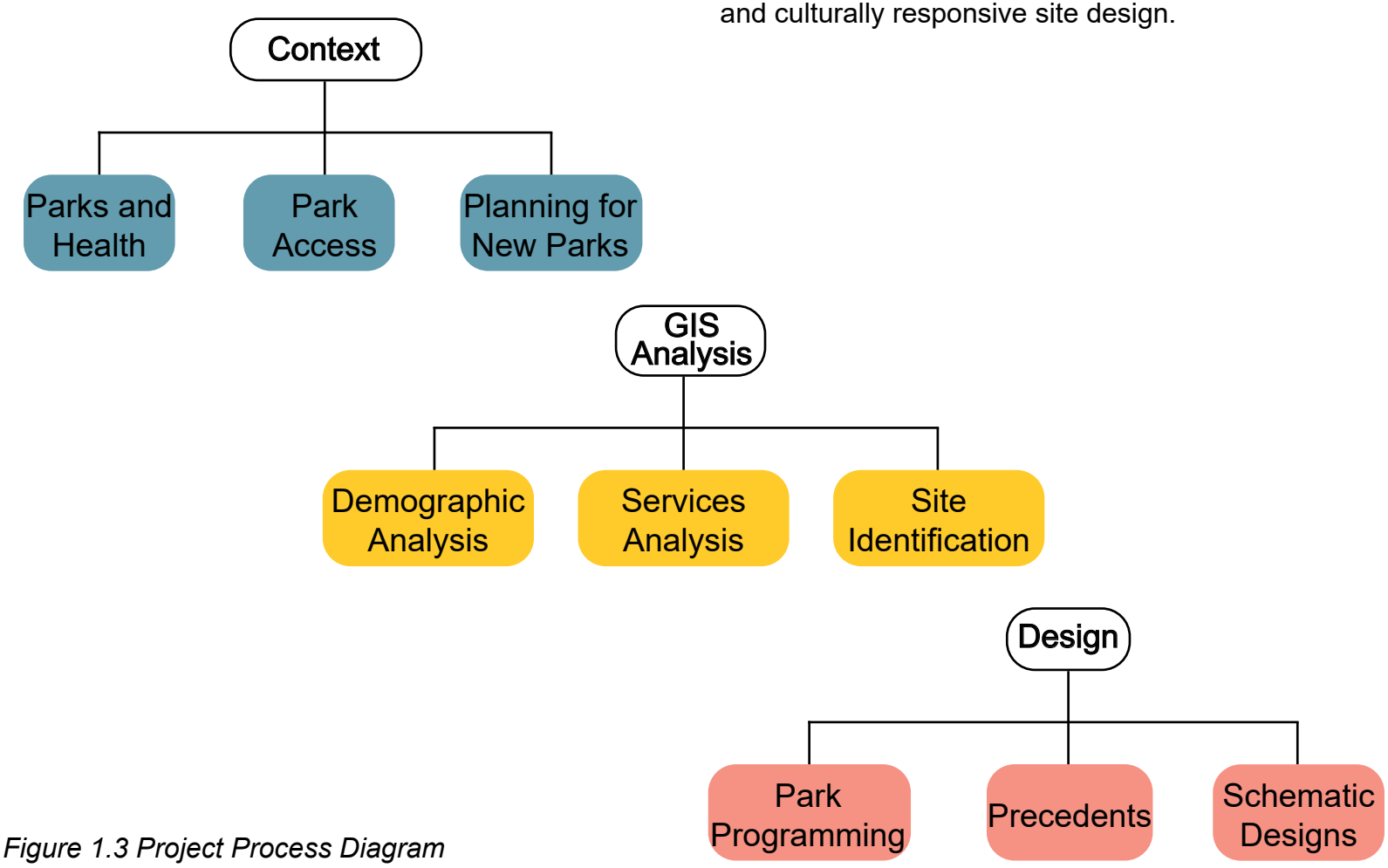


Figure 1.3 Project Process Diagram

1.5 Methods

Project Process

This process provided an overview of the existing state of knowledge, allowing for the identification of current processes, methods, and gaps of existing literature research. Literature was gathered, evaluated, and compared amongst relevant sources related to the research topic with the intended purpose of synthesizing the information and identifying a missing state of knowledge. This method provided background information necessary to identify major themes relevant to this project such as health and Latinx communities, park inequities, safety, access and gentrification.

Literature Review

A literature review was performed to gather information to examine relevant existing studies within the realm of urban green space equity. The information was gathered through the use of academic databases (Google Scholar, Academic Search Premier, Mendeley, University of Oregon's library) and a set of key terms (urban health, social determinants of health, health inequalities, immigration status, minority communities, parks, outdoor recreation, perceived barriers and constraints, park access, park equity, place attachment, urban green space)

Conference Attendance

Attending the 2019 Greater & Greener Conference in Denver, Colorado, was an educational experience that showcased what cities across the country and world are doing to make parks more equitable and accessible to all. This professional development opportunity brought understanding and raised questions for continued research. The conference was broken up into two educational experiences: guest lectures and hands-on community engagement. Guest speakers provided case studies while participating in community engagement with local community members provided insightful information that highlighted the functionality and collaboration between the city and its people. The conference focused on raising awareness to equity issues, inclusive spaces, gentrification, climate change, biodiversity, and community stewardship. This research method provided real world problems and solutions in an insightful and tactile manner.

Spatial Analysis ArcMap

Spatial analysis used spatial data collected through the City of Salem's Geographic Information Systems (GIS) website, and U.S. Census Bureau 2010 dataset to create visual representations of spatial demographics, population density, city parks, 10-minute network analysis, vacant lots, and access to negative cultural services. These visual maps provided a platform to investigate disparities and opportunities to integrate new parks as a positive cultural service. The statistics within this dataset are based out of Salem, Oregon, and is referred to as the census block (roughly the size of an urban city block). Because the Latinx community makes up the largest population amongst minority groups, this group was used as a comparison to the White majority population.

GIS Selection Method

The GIS selection method analyzed racial demographics, park accessibility within a 10-minute walk, and types of accessible city parks. In using ArcMap

(GIS spatial software), a search for natural public vacant lots was conducted as potential opportunities to integrate a natural pocket park within this community. Three vacant natural public lots within the Latinx community were selected using the dataset titled, "Salem Buildable and Lands," that of which was collected through the City of Salem's GIS website. Based on their size, composition, and accessibility, vacant lots were selected and programmed according to the Latinx community needs.

10-Minute Walk Spatial Analysis

Considering what makes a park "accessible" to residents, the 10-minute walking distance applies only to residents on foot but does not include other factors for accessibility, such as public transportation, personal transportation, and parking. With this, many parks can be accessible to a larger radius that are not technically within the walking distance. For the purpose of this study, nearby residents within walking distance were highlighted to focus on ease of access to local parks. For each city owned park, a 10-minute walkable service area buffer was done using a citywide network analysis by using a roads shapefile provided by Salem's GIS data website. The analysis identified physical barriers such as highways, train tracks, rivers, and U-turns and chose routes to follow without barriers. In using these 10-minute walk service areas, it provided a visual representation of areas that lacked access to city parks.

Negative Cultural Service Analysis

Access to negative cultural services examines access to bars, liquor stores, and convenience stores as a secondary measure to the lack of access to parks. Negative outlets are present within the urban landscape that negatively influence health behaviors and health outcomes. Bars are establishments that serve alcoholic beverages, consisting of pubs, clubs, tap house, and breweries. Liquor stores sell packaged beer, spirits, and wine intended to be drank off premises. Convenience stores provide easy access to fast on-the-go snack foods, soft drinks, alcohol, and tobacco. These three categories have a commonality of offering services that negatively impact resident's personal health.

Positive Cultural Service Analysis

Along with access to parks, positive cultural services provide healthy features that influence positive health outcomes. Because of this, measuring access to positive cultural services is a secondary measure to examine the urban landscape through access to cultural services that contributes to positive healthy behaviors and outcomes amongst residents. In this spatial analysis, there were three categories that define positive services: groceries, gyms, and produce stores. Groceries are composed of local box stores that have access to an array of foods, such as Roth's, Fred Meyer, Wal-Mart, WinCo, and Safeway. Produce stores are those that focus on selling fruits and vegetables such as Natural Grocers, and Trader Joe's. Along with these, gyms are also categorized as a positive cultural resource that provides access to amenities that influences positive physical and mental wellbeing.

Park Classification

In this study, the distance of a 10-minute walk was used to distribute the accessibility of local city parks. The radiuses served as a guide to determine social, physical, and mental health outcomes amongst the

Original Park Categories	*New Park Categories*
•Community Park •Historical Area •Neighbor-hood Park •Special Use Facility •Urban Park •Linear Park •Natural Area	**Passive** *(≤2 or less physical park amenities)* **Active** *(≥3 or less physical park amenities)* **Natural** *(Natural Area)*

Figure 1.4 Park-Recategorization

largest minority group in Salem, Oregon. Within these distances, parks were categorized into either passive, active, or natural spaces based on the amenities present. Aligned with this, access to positive cultural services (parks, gyms, grocery stores) and negative cultural services (bars, liquor stores, convenience stores) were also analyzed to determine if this population has access to equitable resources.

The purpose of park types was to assign all city owned parks into one of three categories: passive, active, and natural (see Figure 1.4). This was done through an excel spreadsheet obtained from the City of Salem's open data website titled, "Park Boundaries". This file has an established category for all park types (community park, historical area, neighborhood park, special use facility, natural area, urban park, linear park), yet for simplicity purposes these categories were rearranged based on the number of available amenities derived from their original categories. If the park was already designated as a natural park it remained a natural park. If the park had three or more physical park amenities (basketball, horseshoe, pickle ball, soccer field, football field, baseball, disc golf, tennis

Park Amenities

Using Microsoft Excel, available park amenities were quantified for both predominantly Latinx and White neighborhood associations. The excel spreadsheet was obtained from the city of Salem's open data website titled, "Park Boundaries". This information includes all city owned parks with park name, type, size, features, and amenities. This process identified distribution, access, park acreage per community, and available park amenities.

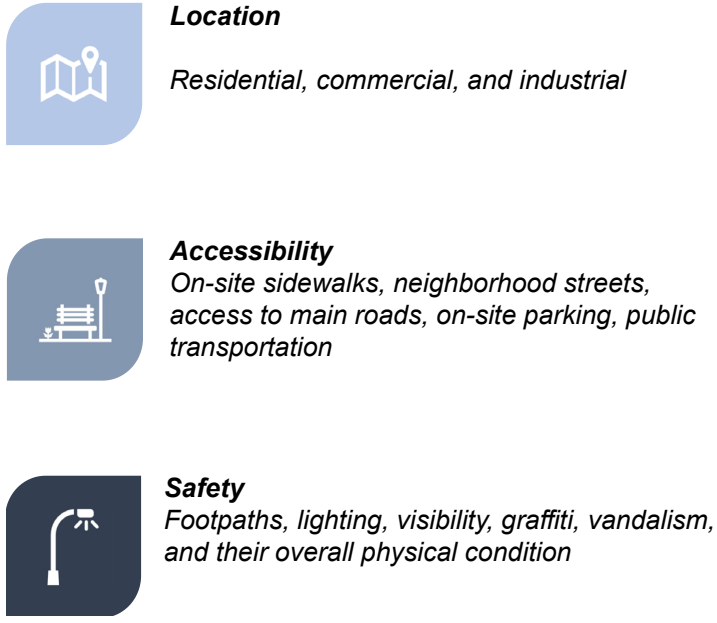


Figure 1.5 Site Considerations

Survey

The survey (see Figure A.1 in Appendix) was designed to collect and analyze observations from the select three vacant lots. This method uses a qualitative approach to examine physical characteristics such as: accessibility, neighborhood context, and natural setting.

Site Visit

The site visit was conducted in person from a preliminary list of vacant lots found using GIS. In using a vacant lot survey, I was able to capture spatial and physical characteristics such as housing, location, accessibility, conditions, and safety (see Figure 1.5). On site photography was used as a measure to capture the ambiance and visual data to later examine for analysis and potential site scoring. In doing the site visit, factors that were considered for potential suitable locations included proximity to positive and negative cultural services.

Site Considerations

Safety, accessibility, and location were considered but not quantified. While these variables are significant in developing an accessible park, vacant lots are not expected to have these elements. Instead, accessibility is a necessary factor that is implemented in developing and activating new park spaces. Vacant lots were not judged primarily on their current safety yet were ranked by accessibility and location. Current safety was not measured because the expectation is that the new park spaces will be developed with these features in mind.

Safety: examined access to footpaths, lighting, visibility, graffiti, vandalism, and their overall physical condition. In examining these physical characteristics, it allowed for a glimpse of what it is like to be within the surrounding community and social context of each vacant lot. This data is subjective to personal experience.

Accessibility: measured accessibility amongst community members through the presence of on-site sidewalks, neighborhood streets, access to main roads, and on-site parking, and public transportation. These indicators served as a basis of understanding potential use for each site.

Location: was used as a reference to understand the surrounding environment. The categories examined were residential, commercial, and industrial. These categories allowed to predict the use and user of each site.

Site Scores

In using Microsoft Excel, site scores aimed to identify the most suitable vacant lot location by quantifying the gathered spatial and onsite visit data. This was done through implementing seven categories and then tallying the number of services or elements that each vacant lot had. These categories were: presence of negative cultural services, natural landscape, park access, accessibility, and available parking. Negative cultural services refer to the number of bars, liquor stores, and convenience stores (shown in Figure 1.6) within a ten-minute walk radius from the select vacant lot candidates. The natural landscape category noted what kind of natural physical features each vacant lot had riparian, woodland, ponds, creeks available and

counted each one individually. Park access consisted of counting the number of city parks within a ten-minute walk from each of the select vacant lots. Accessibility counted the number of different transportation methods within each of the three select sites (biking, driving, walking, train, public transportation). Parking ranked points 0 or 4 points, 0 points if no parking was available 9 points if parking opportunities were available. The categorization of 0 and 4 points were derived from the highest aggregate scores from previous categories. At the end, all points were tallied and the site with the most points was the most suitable location for integrating a natural space within the Latinx community in Salem, Oregon.

Modular Paper Design

Scaled paper models were used to facilitate the design process while also programming each individual element to represent the needs within the Latinx community (recreation, health, social gathering, and cultural representation). The breadth of these elements is specific, yet all share one common trait: connectivity. To get to and from one of these spatial elements they all share a six-foot-wide sidewalk. This process set programs for each paper program hub with exact dimensions. These programmed elements can serve as base models for replication in creating functional places through planning and design processes.

Trace Paper Sketching

Trace paper sketching used visual representations as a design process by sketching varying schematic designs encompassing project findings that supported access to natural space, promoted health, engaged social cohesion, and facilitated cultural traditions. These themes were embodied through incorporating the following elements: plaza kiosk, barbecue picnic areas, food truck vendor area, picnic tables, nature play, fitness, nature trail, and an open flexible space. This process required repetitive yet unique design schematic concepts that were culturally representative to the needs amongst the Latinx community.

1.6 Chapter Previews

Chapter One introduces the methods used in completing this project. This section goes into depth discussing the selection process, citywide park analysis, and design. Chapter Two provides the reader with an understanding of existing literature knowledge across similar studies. Topics involve park access, safety, gentrification, and introduced pocket park activation. Chapter Three goes in depth in conducting GIS analysis and city investigation for equity and accessibility to park access.Chapter Four draws analysis on the selection of potential pocket parks, describing the site visit and spatial information. Chapter Five introduces potential site design schemes through varying schematic sketches aimed at covering the needs within the Latinx community. Finally, Chapter Six discusses the project processes and draws conclusions.

Chapter 2
Parks and Latinx Communities

This chapter discusses park access, parks and health, and planning for new parks. Attention is drawn to issues related to inequitable green space distribution across the country while also examining prevalent health tendencies amongst the Latinx population and factors that are likely to influence potential negative health outcomes. This chapter seeks to understand how cities could incorporate more accessible and equitable parks, while also analyzing the surrounding environment where many minority populations reside. This section is a conjunction of multiple studies as a basis for better understanding the city of Salem, Oregon, while also serving as a model to integrate planning and design.

2.1 Parks and Health

The Latinx population faces health problems linked to obesity, often characterized by gender, income, fear of crime, and safety (Day, 2006). A study conducted by Daviglus, et al., (2012) analyzes the health history of 15,079 participants living in the United States from various Latinx backgrounds (Cuban, Dominican, Mexican, Puerto Rican, Central American and South American). Results found that high cholesterol and obesity were prevalent amongst all populations and all genders. Rigolon (2016) conducts an analytical literature review and finds that urban parks play a positive role within the Latinx population as youth and adults tend to have higher obesity rates in comparison to the White population. The author acknowledges that negative health outcomes vary based on environmental conditions while also emphasizing the importance of cultural health predispositions. Similarly, Corburn et al. (2015) studies Richmond, California, a marginalized underrepresented community whose needs were acknowledged by the city through public engagement.

All of these authors address the underlying health concerns that can become common when people do not have access to healthy goods and services. Both Rigolon and Corburn et al. acknowledge the role that the environment has on Latinx communities and how marginalized communities can benefit from access to healthy environments. With the implementation of more parks, cities are likely to see positive changes within their local environments to better address health inequities within the Latinx population. Diabetes is a leading cause of death amongst the Latinx population (Lopez-Cevallos et al., 2019). In a study conducted in Chicago, Stodolska et al. (2011) finds that the Latinx community often sees minimal benefits based on the presence and use of parks, a lack of park access, poor maintenance, interracial conflicts, and discrimination. Williams (2018) finds that stress is often an outcome of discrimination, therefore linking access to green space with diabetes. These authors' findings expose issues relevant to park and maintenance inequities while also emphasizing negative consequences due to social and racial conflicts. Along with this, Fernandez (2018) finds that Latinx communities that reside within low-income neighborhoods are less likely to be employed, educated, and medically insured to help prevent diabetes. These events are likely to be offset through having access to local resources and nearby public parks.

2.2 Park Access

The distribution of urban public parks often benefits predominantly White communities leading to an inequity and environmental justice issue. Research acknowledges that there is a lack of equitable park distribution amongst minority populations and address this issue through the implementation of new urban green parks. Anguelovski et al. (2019) finds that wealthier and predominantly White communities have greater access to nearby parks and open space in comparison to Latinx communities. They reference a study in Los Angeles during the early 2000's where Latinx communities had access to .6 park acres per 1,000 residents in comparison to 31.8 park acres per 1,000 residents amongst predominantly White populated neighborhoods (Anguelovski et al., 2019). There is an unequitable gap in park distribution and accessibility, which negatively contributes to the lifestyles of nearby Latinx residents. The community surrounding a local park is likely to access urban green spaces when they are present, thus contributing to better health. Although this study shows that affluent communities tend to have a higher presence of park space, underrepresented communities with greater density do not have the space to provide large scale parks. There are opportunities to implement small scale pocket parks in higher density areas that can provide more equitable access to all residents.

In a study conducted by Bruton and Floyd (2014), the authors study 21 parks across Latinx and non-Latinx communities in Greensboro, North Carolina. This study finds that Latinx communities have less access to natural parks in comparison to non-Latinx communities. Natural parks provide different opportunities in comparison to local nearby neighborhood and recreational parks. Having access to a variety of amenities is more beneficial to a community than only having access to limited types of park spaces and amenities. Marquet et al. (2019) study park use patterns amongst minority children in New York City. In using an observational analysis, Marquet et al. (2019) observes

20 different parks and finds that use of recreational amenities (basketball courts, pickleball courts, soccer fields, playgrounds, tennis courts, etc.) varies amongst minority populations. Latinx communities utilized soccer fields more often than other minority communities. Implementing tennis courts would therefore not be as utilized if implemented. This is important because it takes into consideration existing demographics w ithin each park and examines the use of space within existing physical attractions and race. Both Bruton and Floyd (2014) and Marquet et al. (2019) studies are informative, because one examines park access, and the other examines what park use looks like amongst minority populations. These authors suggest that there are varying factors that may contribute to a lack physical activity and a lack of accessibility to varying park types. Based on this, there are opportunities to better understand accessibility and use of park space amongst Latinx communities across all ages. This research can serve as basis for an integrated planning and design process for future park development.

Environment and Perceptions amongst the Latinx Population

Day (2006) studies physical activity amongst low-income Latinx communities and finds an inequity in physical environmental characteristics that then contribute to inaccess to physical activity. These communities often experience a lack of accessiblity to park spaces, higher crime rates, fears for safety, and absence of nearby stores with healthy food choices. Other barriers include large neighborhood blocks, large parking lots, absence of sidewalks and long distances to nearby parks, which can also be a factor in lack of physical activity. Social environments within Latinx communities are perceived as unsafe with obstacles and disparities in urban parks and accessibility. In relation to the lack of adequate environmental amenities, Sister et al. (2010) study 'park pressure' in Los Angeles using GIS measuring high demand (high population density) for available parks within their surrounding neighborhoods. Sister et al. (2010) find that Latinx and low-income populations are likely to live densely within proximity to local parks leading to potential congestion. Meanwhile, predominantly White populated high-income communities who also live near parks are less dense therefore have less population density within their parks. These authors find that parks within Latinx communities are likely to be perceived as unsafe environments due to physical barriers, traffic, gang violence, crime, and high concentrations per park space. All these elements are typical amongst Latinx communities was found that increasing green space can reduce these factors.

Stodolska et al. (2013) find that perceptions of crime amongst minority youth directly affects their physical activity. Through crime and gang violence, youth are cognizant of safe and unsafe boundaries. Roman et al. (2013) finds that there is a positive correlation between fear and low levels of physical activity amongst youth in disadvantaged minority neighborhoods. In experiencing environmental stress, the physical activity amongst youth did not stop, yet it did decrease (Stodolska et al., 2013). Like Stodolska et al. (2013), Roman et al. (2013) finds that amongst Latino neighborhoods, there are limitations that hinder physical activity such as lack of green space, gang violence, and the overall poor quality of their surroundings. With this said, physical activity is directly related to the accessibility of the park due to its perceived environment

and the availability of green space. While Stodolska et al. (2013) finds that all youth, regardless of gender, are directly affected, Roman et al. (2013) finds that there are two distinct differences with girls fearing sexual assault and boys fearing physical attack when exposed in such environments. This perception of unsafe environments are often a form of alienation, hopelessness, and powerlessness (Stodolska et al., 2013). These studies suggest the need to develop a strategy to address unsafe neighborhoods. There are opportunities to gather feedback amongst the environments directly affected, to increase awareness and support for establishing safer public spaces. Due to the presence of violence, it is likely that Latinx youth feel unsafe in their neighborhoods, therefore, implementing better lighting, sightlines, and proximity can aid in the increase of park use.

Negative Cultural Services amongst the Latinx Population

An uneven balance of positive and negative cultural services is likely to influence personal health and lifestyle choices within the Latinx population. Due to the lack of a personal vehicle or legal access to a driver's license, many Latinx individuals are restricted to nearby services (Langegger, 2013). The attainability of driver's licenses is due to legal status and enforced at the governmental level, in turn making distant services less accessible given the lack of mobility many Latinx communities experience across the country. Similarly, Block et al. (2018) finds that the *Barrio* a Latinx predominant community in North Denver went through a process of *ghettoization* with the implementation of junkyards, storage lots, bars, and liquor stores. Duncan and Kawachi (2018) study alcohol consumption in young adults in Australia and find that areas with higher densities of liquor stores are more likely to influence an increase in consumption and lead to health-related issues. Based on these studies, Latinx communities are likely to experience inadequate social political benefits (driving privileges) based on their residency while also experiencing exposure to nearby negative services such as bars, liquor, and convenience stores. In having access to nearby outlets for physical activity, green spaces have the potential to counteract and reduce the pull of negative services.

Mental Health amongst Latinx Population

Williams (2018) studied stressors from the Chicago Community Adult Health Study and found that amongst the Latinx population the absence of green space is likely to trigger stress and mental health issues. In response, pocket parks offer opportunities to engage in with nature and promote physical activity, playing a role in positive mental health outcomes. In a study conducted in Perth, Western Australia, Wood et al. (2017) finds that positive mental health is associated with walking distance to natural, recreational and sporting based parks. According to these authors, positive mental health is influenced by having access to nearby parks that offer leisure, recreational and an encouraging social atmosphere. With this said, it is important to be aware of external issues revolving around this community to make better informed decisions.

In a case study conducted in Richmond, California, Corburn and Griffin (2019) find that the Latinx population within this community were likely to gravitate towards unhealthy behaviors (smoking, overeating, alcohol and drug use) to cope with trauma, fear, and

discrimination. These outcomes are real to many communities across the country; therefore, it is important to recognize the impact that current rhetoric and anti-immigrant policies have amongst the Latinx community in regard to health. In alignment to this, Wray-Lake et al. (2018) studied Latinx youth living in Southern California and found that 96% of the 562 interviewed experienced anxiety, anger, disgust, racism, and an increase in civic engagement. This discrepancy in age shows that younger individuals have more social mobility that allows them to navigate the system and invest in their futures through civic engagement. Both of these studies are coping mechanisms that are influenced based on the the This study shows that underrepresented youth are likely to experience stressors causing mental health issues, yet in being politically active, these communities can fight for positive cultural services such as access to green space to promote better mental health outcomes. All authors hint at the fact that mental health is a relevant issue amongst the Latinx community and is often seen as an outcome of politics, stress, green gentrification, and disruption of social ties.

Urban Parks and Physical Activity amongst Latinx Population

Characteristics of urban parks offer opportunities and obstacles for local community use to engage in physical activity. Research suggests that physical activity varies amongst different racial and socioeconomic groups and is often influenced by park proximity, physical maintenance, and presence of amenities. In doing a comprehensive analysis, Rigolon, (2016) finds that people with low socioeconomic status are less likely to be active from a recreational standpoint in comparison to residents with higher status. The author that physical activity through personal work often goes unseen, yet it is customary for Latinx adults to use public transportation, walking, and bicycling to get to and from work. Regarding physical activity to urban parks, Day (2006) finds that access to nearby parks is likely to support physical activity, yet access to larger parks with an amplitude of amenities can foster a destination. For example, soccer leagues in Santa Ana, California, accommodate these necessities through large open spaces. Park amenities often influence the use of space and the Latinx population may use space differently than other community members. Latinx communities emphasize the importance of family through gatherings in public open spaces or personal homes (Cole et al., 2017). This brings opportunities to create flexible spaces that can integrate recreational and social activities to better capture local neighborhood needs. Access to a wide variety of parks is an aspect that Latinx communities would benefit from, especially those that have imposed barriers such as lack of self-transportation.

2.3 Planning for New Parks

Urban cities across the world are expanding public parks in order to address issues in inequities, climate change, and public health. Public parks are known to provide key benefits that help support an increase in physical and mental health, urban ecology, safety, and social life. Through these public benefits, many private investors and developers are seeing an increase of opportunities to build upon these newly established urban parks at the expense of already established minority populations, hence creating an urban park paradox. This paradox emphasizes the false pretense that

everyone will benefit from the implementation of green spaces without the acknowledgement that vulnerable populations can be displaced. It is important to provide transparency and question the intentions behind developing new green spaces in order to avoid the displacement of existing minority populations.

Displacement: An Outcome of Development

Urban parks have the potential to provide positive ecological and social benefits while also creating displacement amongst vulnerable minority populations, also known as *gentrification*. The lack of parks amongst these vulnerable populations are 'green gaps' where investors and planners see opportunities to capitalize on 'green rent' created through redevelopment in parks and neighborhoods (Anguelovski et al., 2019). This act is often done through branding projects as being 'green' and 'beneficial' to all community members promoting sustainability, resiliency, and the overall perfect environment primarily targeted towards privileged community members. Pearsall and Eller (2020) conducted a spatial analysis in Philadelphia to examine racial demographic change based on the introduction of green space near downtown between 2000 and 2016 and found that gentrification is likely to happen based on location. The change in racial demographics suggest that with the introduction of central urban parks, pre-existing minority communities are likely to be displaced and replaced by more affluent social groups. This is seen through the increase of property values raising the gap of accessible green space between low-income and affluent communities. Essentially, the introduction of new parks and renovation of preexisting parks has the potential to increase property values while also raising rent and displacing locals. Displacement also contributes to other factors, such as affordability, the breaking of social and community ties, cultural values, and access to local resources. This change in behavior or lifestyle often leads to negative outcomes such as an increase in stress and decrease in physical and mental health. It is important to call out this paradox of 'more parks promote healthy cities' and take a critical look at the consequences of incorporating new park development amongst vulnerable minority populations. This does not mean that there cannot be an introduction of new parks, but it does mean that there needs to be more awareness of inclusive park spaces done through collaboration between designers, planners, and community members. Based on these findings, it is important to address green space inequities amongst minority populations while being aware of possible negative repercussions attached to an already vulnerable population. Finding possible alternatives such as the integration of pocket parks amongst the Latinx community is a potential solution to increase accessibility and park use. Pocket parks allow for accessible green space that is on a small enough scale that it does not contribute to displacement.

Smiley et al. (2016) calls out the lack of incorporating underrepresented communities in the park planning process while suggesting a need for having their voices heard. Through the input of minority groups, residents wish to see better park amenities, revitalized infrastructures, enhanced maintenance programs, and an increase in safety measures (Smiley et al., 2016). Coincidentally, Wolch et al. (2014) makes it clear that there is a call for environmental justice due to the lack of unequal distribution of green space, benefiting predominantly affluent White communities. Wolch

argues that the creation of new green spaces can lead to healthier neighborhoods that are more attractive yet have negative consequences that increase property values and promote the displacement of people. Wolch reiterates the importance of being aware of such processes seen through eco-gentrification. Investors and planners can have a negative impact on the displacement of minority populations through uninformed urban sustainability practices. Alternatives to benefiting both ecological and social health can be through greening of remnant urban land and the greening of vacant and underutilized transportation infrastructures (Wolch et al., 2014). Both authors call out the lack of equal representation in the planning process, and the inevitable outcome of displacement through urban greening. With that said, there should be further studies that examine park use and physical activity through park revitalization strategies rather than the introduction of new open green spaces.

Activating Vacant Lots as a Positive Service

Vacant lots have the potential to be formalized and activated to better serve underserved communities. Rupprecht and Byrne (2018) investigate accessibility to informal green spaces in the city of Sapporo, Japan, and Brisbane, Australia. By doing a comprehensive on-site study of each informal green space, the authors were able to predict suitable programs that would benefit each surrounding community. The authors point out opportunities to activate often overlooked informal sites by city planners and developers to better serve local needs without displacement. Similarly, Wolch et al. (2014) points out a need for an alliance between locals, planners, designers, and ecologists to work together in providing 'Just Green Enough' spaces that benefit rather than displace minority populations. Drawing on existing research, Wolch draws comparisons on what cities across the world are doing in comparison to the U.S. to address inequity issues without causing gentrification (Wolch et al., 2014). The study finds that 'Just Green Enough' initiatives protect social equity and can be done through clean up initiatives and the cooperation of planners and local stakeholders to integrate new spaces based on local needs, not conventional parks. Such parks often lead to the displacement of residents hence suggesting that pocket parks can be an alternative to avoiding such phenomenon. In using a 'Just Green Enough' approach through the creation of small-scale interventions and access to affordable housing, the risks associated with green gentrification are minimized. Rigolon (2016) emphasizes that there is insufficient data supporting this topic across an amplitude of diverse cities, relying on data collected through ten major cities across the country. They find that park function and location more likely to trigger gentrification in comparison to park size, specifically green space corridors that provide transportation as well as green spaces within proximity to downtown. The author sees the 'Just Green Enough' approach working through the creation of small parks and nearby affordable housing. Overall, these studies call out possible solutions to avoiding gentrification amongst minority populations through adapting 'Just Green Enough' approaches and regenerating informal vacant land to fit surrounding neighborhoods' needs without creating an urban paradox.

2.4 Design Opportunities

Within urban settings, there are opportunities to magnify and examine underlying physical elements that influence the use of space amongst residents. Through analyzing the integration of programmed design interventions, Duncan and Kawachi (2018) found that sidewalk width, vegetated streetscapes, and the absence of litter play a role in perceived safety and personal use. These outcomes include a decrease in chronic stressors, stress reduction, and social interaction opportunities (Duncan and Kawachi, 2018). Implementing these opportunities promotes healthy choices by providing easier access to parks, gyms, and sidewalks with proper green buffers between cars and pedestrians. Design qualities should focus on the location, size, type, composition, materials, uses, and the overall quality of space (Doescher et al., 2017). In being aware of external elements, design has the potential of bettering residents' health and lifestyle by addressing local community needs, providing meaningful and purposeful spaces, and adding new destinations where communities can meet and socialize. In regard to the Latinx population, creating active destinations with a sense of ownership allows community members to fully engage in their environment.

Vacant Lots and Latinx Urbanism

Lara (2012) draws recognition to the rise and presence of the Latinx community across the country and emphasizes the importance of place making within urban settings. *Latino urbanism* is described as a process that connects, adapts, and prescribes a connection between people and place (Lara, 2012). A connection is described encouraging social life through facilitating community interaction. Adaptation is the process of adapting to personal life events with actions that then lead to actions such as starting small scale businesses to help establish some form of stability. Prescription is described as empowering adaptations by establishing a place within the urban fabric to better support the Latinx community (Lara, 2012). Langegger (2013) studies the Latinx community in North Denver and finds that community members often seek recognition through place yet are denied permits to activate public spaces (adaptation), drawing question to their rights to the city. Through their efforts, the Latinx community in the Sunnyside neighborhood in North Denver converted an unused and abandoned vacant lot (publicly owned and classified as residential development) to a "Peace Garden." The place once stood as bleak, unimportant, and vandalized now acts as a shrine by its local community (Langegger, 2013). Opportunities like these promote belonging to communities that are strongly rooted within their environment and in this country. Finding opportunities to adapt, prescribe and appropriate once vacant land to translate belonging within disadvantaged and often overlooked communities is a step toward belonging for the Latinx community and culture.

Social Barriers and Opportunities

Day (2006) emphasizes that the Latinx community is likely to experience barriers that prevent them from having a healthy active lifestyle. These include affordability and accessibility to gyms, childcare, personal time (multiple jobs), lack of health-based knowledge, and language barriers. Aside from personal barriers, this community also experiences institutional oppression where public officials and planners recognize the needs that these communities experience, yet lack ac-

tion to address pressing issues (Sister et al., 2010). This is significant because the Latinx community is integral at a local, state, and national level, yet they often go underrepresented. This could hint at the lack of communication between neighborhoods, planners, and public officials. Rigolon and Németh (2018) used GIS to seek park distribution in Los Angeles to better understand the impact non-profits have in establishing and updating new parks. They find non-profits are paving the road for park equity in Los Angeles through collaboration with public park agencies, while also finding consistency and favoritism between certain non-profits and public park agency groups. In considering these perspectives, the Latinx population faces barriers and is underrepresented in the resources made available to them at the planning and social level. While there are opportunities in place, it is not uncommon for members of the Latinx community to be hesitant to access them due to lack of consistent and productive governmental and community relationships.

In examining the coalition between youth and the City of Lawrence, Massachusetts, Peréa et al. (2019) conducted an observational assessment to measure quality and conditions of existing parks and playgrounds. The research concludes that the physical environments lacked sanitation, but the social connection between youth and city members was enriching. Planners and nonprofit organizations are likely to find success through strong collaboration and personal insight from local Latinx community residents to better inform decisions through extensive outreach. Rios et al. (2012) finds possible solutions in breaking down social barriers amongst planners and the Latinx community through working in coalition with the youth. Latinx youth face constraints such as lack of transportation, time, and language barriers, yet find success in visual methods and digital storytelling (Rios et al., 2012). The Latinx community faces internal barriers that stall their complete integration within their local environment, yet through community support systems, progress is made through the cooperation of local non-profits and the integration of youth.

Chapter 3
Park Accessibility and Amenity Equity

This study uses data beyond the city limits and extends to Salem's urban growth boundary. This boundary serves to include the population that continues outside of the city limits yet is still located in the city of Salem. Population density is measured in Figure 3.1 to illustrate the population distribution and racial diversity of the White and Latinx population. The largest minority group and the majority are compared side-by-side using racial population data derived from the 2010 U.S. Census block groups.

GIS analysis was conducted to locate park presence in Salem as well as positive and negative cultural services. Mapping out these services was used to draw attention to distribution trends in Salem, while also accounting for demographic shifts across the city. This was done with the goal to find opportunities for vacant lots to be transitioned into parks through the implementation of relevant design. In doing GIS Analysis, was done with the goal to find opportunities for vacant lots to be transitioned into parks through the implementation of relevant design. In doing GIS Analysis, this method was split up into three categories: Demographic analysis, Services analysis, and site identification. During the Demographic analysis, racial demographics, neighborhood associations, and population density were examined to gain an understanding of the city's social composition. During the Services analysis, this method studied accessibility to parks and amenities while also analyzing their surrounding environment by investigating access to cultural services. Finally, the site identification phase seeked to implement a new park in order to promote accessibility while also promoting access to equitable park types. implement a new park in order to promote accessibility while also promoting access to equitable park types.

3.1 White and Latinx Population Distribution

The largest minority population is the Latinx community and they make up 23% of Salem's total population, therefore this percentage is used as the population equitable baseline. This baseline can be identified by the dashed red line in the pie charts shown in Figures 3.9 and 3.10. In looking at this map, the Latinx residents are centrally located in North Salem. The thicker red-dashed line on the map represents the Salem city boundary, and was not used in this study because the predominately Latinx population extends beyond the city limits. The urban growth boundary, seen as the thick black line (shown on Figure 3.1), was used as a measure of analysis to accommodate this population spread. Percentages in Figure 3.1 are illustrated with two colors to represent the population of both White and Latinx residents in each block group. Predominantly White block groups (50.1% or greater) are characterized by large blue dots, while predominantly Latinx block groups (50.1% or greater) are large green dots. Within each block, the larger the colored dot represents the greater the disparity between populations. For example, the larger blue dots in South Salem have a White population that consist of 50.1% to 93% of the total population for that area. The smaller the dot, the more even the population distribution is between White and Latinx communities since they are more equally dispersed.

3.2 Predominantly White and Latinx Neighborhood Associations

The green and blue shading shown in Figure 3.2 is representative of the Neighborhood Associations that reside within each block group according to the predominant population. The city boundary is represented by a red dotted line that is within the urban growth boundary, as shown by the solid black line. It is significant to mention that the predominately White area at the most northern point on the map is the city of Keizer and outside of the Salem city boundary. To the east of the map, there are two predominately Latinx areas that are outside of the city boundary that lack neighborhood associations.

There is an invisible, yet definitive, boundary that separates predominately White and Latinx populations between North and South Salem. The Latinx community resides in one area of the city, even though they are not restricted to that area. There are social aspects to this, including the familiarity of the Latinx community, living near family, Latinx food vendors, and more Spanish presence in stores and signage. These social reasons contribute to the invisible boundary between North and South Salem, and there are different resources available depending on the side of town. This does not suggest that there are no Latinx families living in South Salem or White families living in North Salem, but it does represent the juxtaposition within the same city boundaries.

3.3 Passive, Active and Natural Parks

With a total of 2,228 acres, the city of Salem has access to 84 parks as shown in purple, orange, and green lots in Figure 3.4 and 347 park amenities as shown in Figure 3.9. Of those 84 Parks, the Latinx community has access to 21 Parks, making up 25% of the total park number. This is more than the total Latinx population of 23%, which means that the Latinx community has equitable access to the number of parks in comparison to the total population. Where

this differs is in park acreage. Out of 192 park acres in Salem, the Latinx community has access to only 9% of them, which is significantly less than the 23% population baseline. The 23% population baseline is shown using a red dashed border on the pie charts shown in Figure 3.5. There are no parks outside of the Salem city limits but still within the urban growth boundary. Neighborhoods outside of the city limits yet within the urban growth boundary are managed by Marion County and not the City of Salem. Parks have been categorized as being in passive, active, or natural settings based on the availability and characteristics of available park amenities. Passive sites tend to offer an ambience that provides low to medium physical activities where folks can expect to find picnic areas, shelters, community gardens, dog parks, and shelters. Active sites offer a variety of high physical activities including football and soccer fields, basketball, tennis and pickle ball courts, cricket, open turf, skate parks, disc golf, and BMX tracks. Natural sites offer visitors to nature interaction with medium to high physical activities providing hiking trails, wildlife, wetlands, prairies, and woodland.

3.4 10-Minute Access to Passive Parks

With a total of 44 parks comprising 434 acres, passive parks appear to be the most numerous available greenspaces across the city. Amongst the majority Latinx neighborhood associations, there are 9 passive parks with a total of 40 acres as showin in Figure 3.5 (9% of total passive parks), compared to 35 sites and 394 acres (91% of total passive parks) amongst the White neighborhood associations. Passive parks are accessible across the city via the 10-minute spatial network analysis shown on Figure 3.6. This distribution shows that there is a low need of new passive park destinations, yet there is a need in accessible acreage amongst the Latinx community to transition the 9% of total park acreage to that of 23% to match the Latinx population density. In so doing, the city can move towards providing accessible and equitable passive park space to every resident in Salem. parks appear to be the most dispersed greenspaces across the city. Amongst predominantly Latinx neighborhood associations, there are 11 active parks comprising of 110 acres (27% of total passive parks), compared to 15 sites and 291 acres (73% of total active parks) amongst predominantly White neighborhood associations. Active parks are accessible across the city via the 10-minute spatial network analysis shown on figure X. This distribution shows that there is a low need of new active parks and acreage since park accessibility to active parks is above the 23% baseline for the Latinx population.

3.5 10-Minute Access to Active Parks

With a total of 26 parks comprising 401 acres, active parks appear to be the most dispersed greenspaces across the city. Within the Latinx population, there are 11 active parks comprising of 110 acres (27% of total passive parks), compared to 15 sites and 291 acres (73% of total active parks) amongst predominantly White neighborhood associations. Active parks are accessible across the city via the 10-minute spatial network analysis shown on Figure 3.7. This distribution shows that there is a low need of new active parks and acreage since park accessibility to active parks is above the 23% baseline the Latinx population.

3.6 10-Minute Access to Natural Parks

With a total of 14 parks and 1,394 acres, natural parks are the most disproportionate type of greenspace

across the city (see Figure 3.8). Access to natural parks within a ten-minute walk appear to be highly concentrated and scattered in predominantly White neighborhood associations and limited amongst predominantly Latinx neighborhood associations. Predominantly Latinx neighborhood associations have access to one natural park (3% of total natural parks), with a total of 42 acres compared to 13 natural parks (97% of total natural parks) and 1,394 acres amongst the predominantly White neighborhood associations. Access to this form of space is prevalent centrally along the Willamette River spilling into West Salem as well as on the outskirts of North and South Salem. Natural parks are the least accessible park type amongst the Latinx population with the total percentage being less than the 23% Latinx presence. There are opportunities for Salem to integrate more destinations and acreage across the city, especially within the Latinx community, to create more equitable access to natural parks.

3.7 Park Amenity Distribution

With a total of 347 individual park amenities dispersed in all city owned parks in Salem, Oregon, the Latinx population has access to 33% (115) of those while the White population has access to 67% (232) of them (see Figure 3.9). Considering these numbers, predominantly Latinx neighborhood associations are likely to have access to an equitable share of amenities based on having access to a greater percentage than the 23% benchmark. Individual amenities that do not meet this benchmark are access to group picnic areas, dog parks, multi-use courts, disc golf, boat docks, boat launch, and fishing spots. Overall, city owned pa- rks lack access to track fields, swimming pools, and gyms. Based on these results, there are opportunities to increase the number of certain amenities in predominantly Latinx communities (picnic areas, dog parks, multi-use courts, disc golf, fishing spots), while also taking into account that integrating boat docks and boat launching areas may not be feasible based on the lack of river access amongst this population. Figure 3.10 shows available park amenities across all city wide parks in Salem, Oregon. The red dashed boxes represent amenities that are below the 23% equity baseline. It is also interesting to recognize the higher presence of soccer fields, basketball half courts, Pickleball, and Cricket in predominantly Latinx neighborhood associations.

3.8 Access to Negative Cultural Services

Visually, the red dots in Figure 3.11 represent negative cultural services within city limits. At a glance, these negative services make up linear patterns through the city's major roads, clusters in more concentrated areas, and scattered in less dense areas. The city has prominent and defined linear patterns that run through major roads in North and South Salem, making it clear that these strips are established commercial areas. These linear patterns make it clear that negative services are prevalent and are highly accessible along major roads. Visually, there are three forms of spatial representation: scattered forms (West Salem), linear forms (alongside major roads), and dispersed forms (outer central area). Access to these negative cultural services are more prominent amongst the Latinx community with 76 out of 176 total locations. This amounts to 43% of their overall presence and exceed the 23% Latinx population baseline. With this said, the presence of these services is likely to influence negative health outcomes.

3.9 Access to Positive Cultural Services

The placement of positive cultural services in Figure 3.12 are scattered at random amongst predominantly Latinx neighborhood associations, which can make these establishments more difficult to locate. Services in predominantly White neighborhood associations are more concentrated along Commercial Street and downtown, which makes them more accessible since they are on a major road. Central and West Salem have access to services in a clustered form, suggesting a wide array of services offered within proximity of each other. Overall, access to these positive cultural services is more prominent amongst the predominantly Latinx neighborhood associations with 33 out of 82 total locations. This amounts to 40% of their overall presence and exceed the 23% Latinx population baseline. With this said, the Latinx population is equipped with higher access to positive cultural services, which can play a role in positive health outcomes. The Latinx community does contain 41% of the total positive cultural services in Salem. This being said, positive cultural services do not outweigh the presence of negative cultural services by 2%. While positive and negative services are nearly matched, there is still a higher presence of negative services. Population density does influence this, as there is a higher population of residents in North Salem than in South Salem as shown in Figure 3.3.

3.10 Select Natural Lots Amongst Latinx Neighborhood Associations

Using a GIS query, 16 vacant city-owned properties were identified that then prompted a personal site visit. If the site was located, the visit measured the vacant lot's ease of accessibility, natural state, and surrounding environment. In some instances, the vacant lots were either not found or completely inaccessible due to high traffic areas with no walkability. Out of the 16 original sites, the list was shortened to 3 potential sites: Parkview Natural Area, Geer Natural Area, and Pringle Creek Natural Area. This was done by narrowing down vacant lots that had natural features including creeks and tree vegetation. These sites were then evaluated based on their surrounding environment using a 10-minute walk buffer as seen in Figure 3.14. Within this buffer, the presence of negative cultural services, present park access (passive, active, natural), accessibility, and parking were ranked using an Excel spreadsheet. Ultimately, one vacant lot was selected as a potential natural park space that could increase the accessibility to natural settings for the surrounding Latinx community.

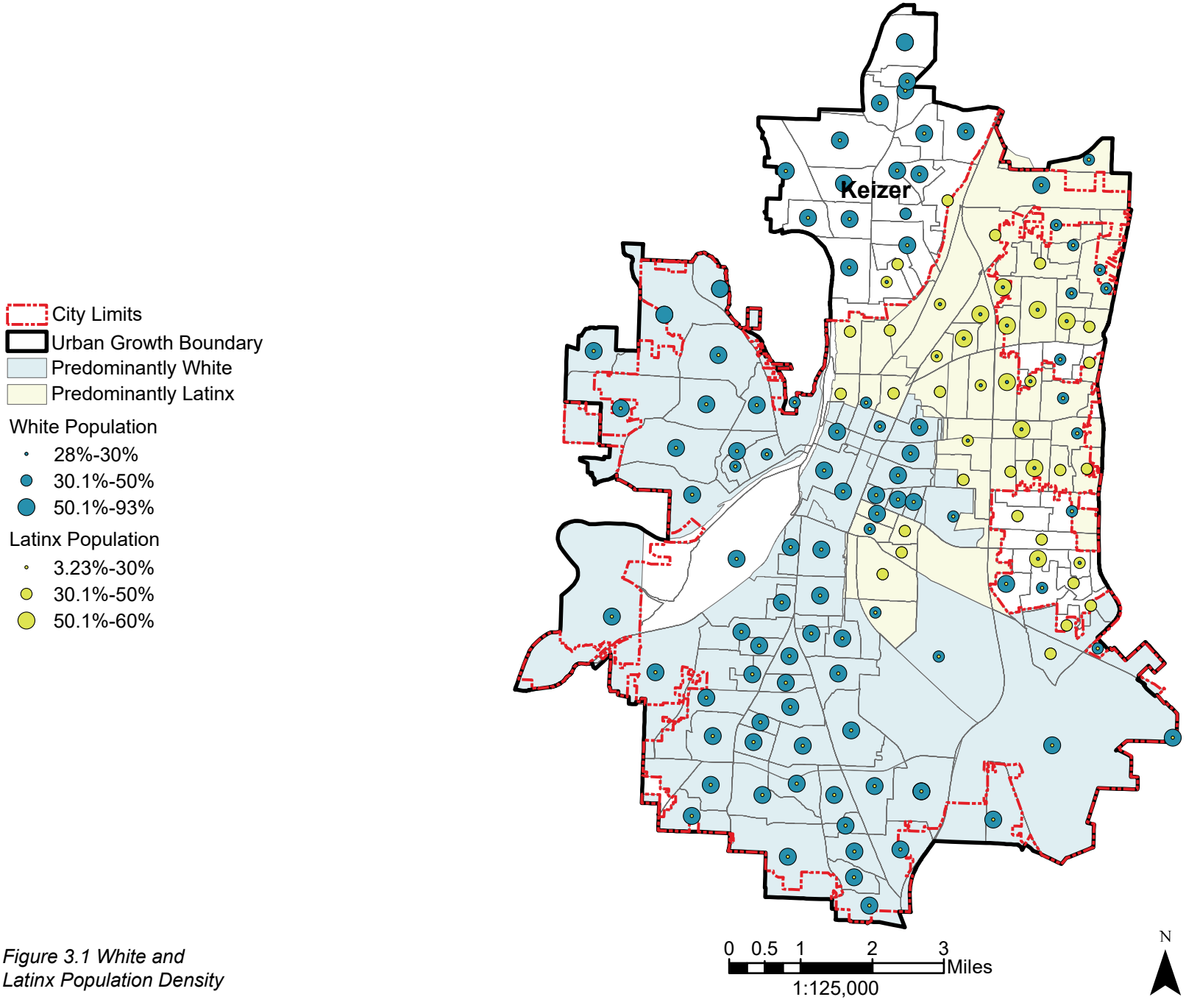


Figure 3.1 White and Latinx Population Density

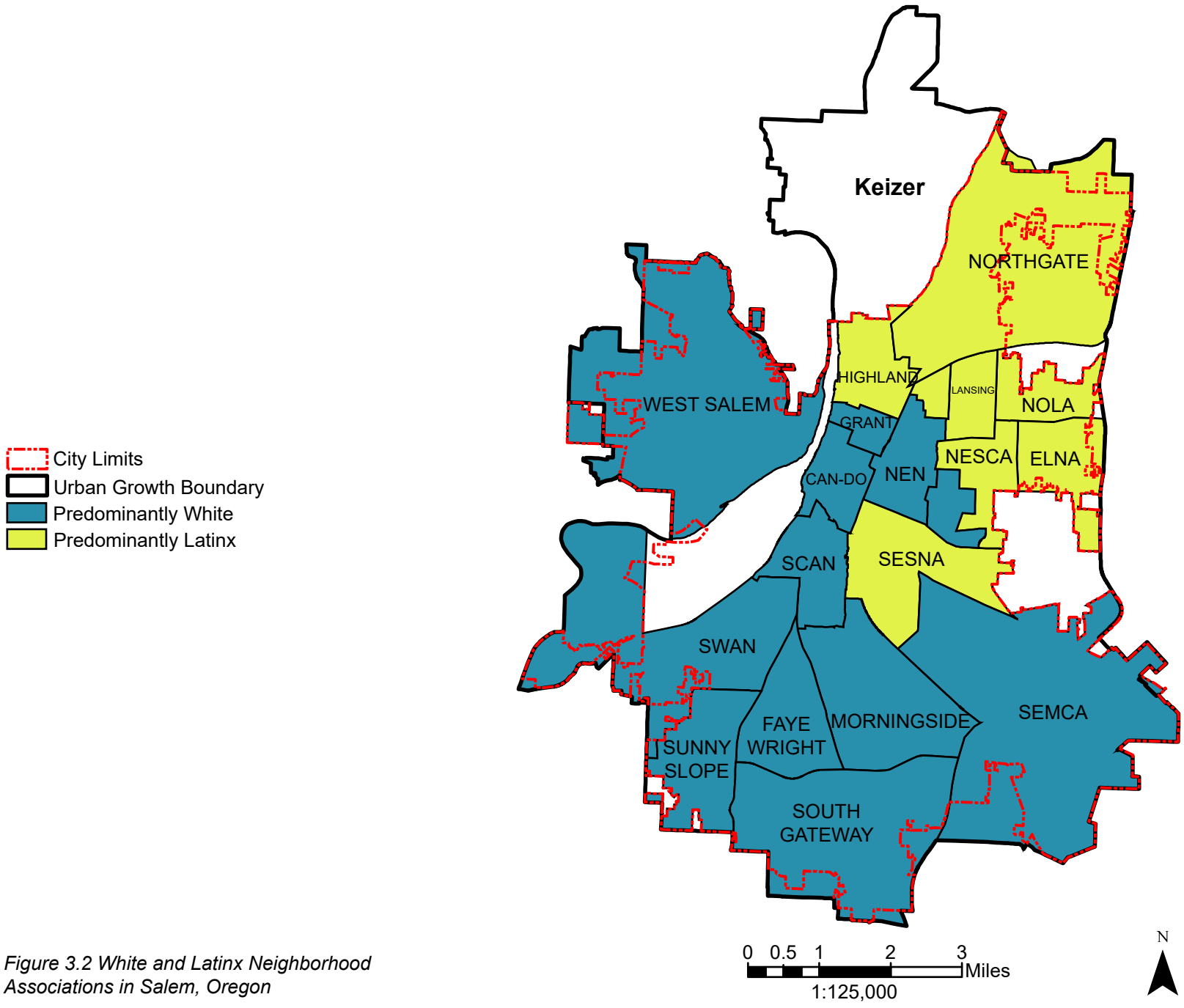


Figure 3.2 White and Latinx Neighborhood Associations in Salem, Oregon

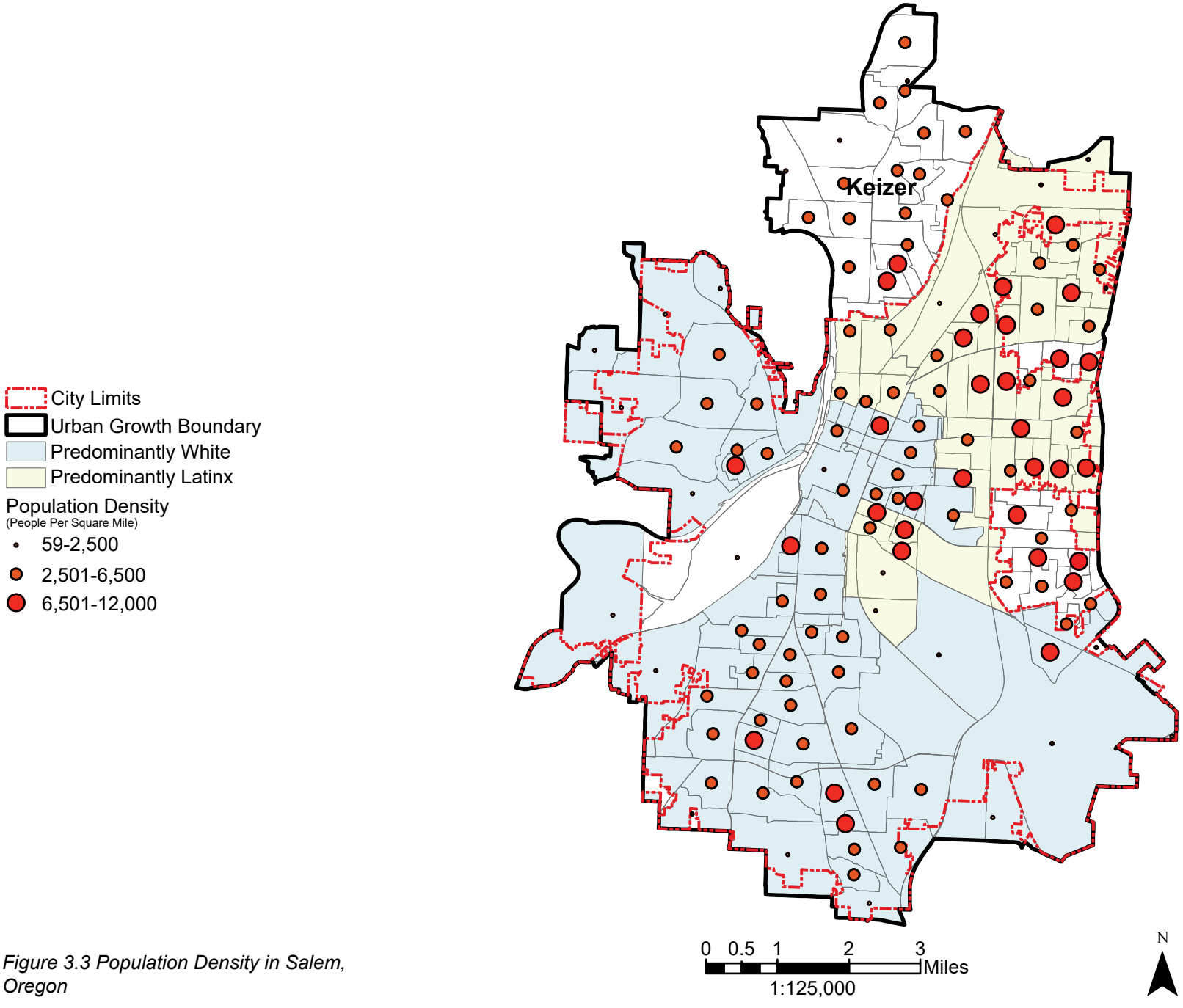


Figure 3.3 Population Density in Salem, Oregon

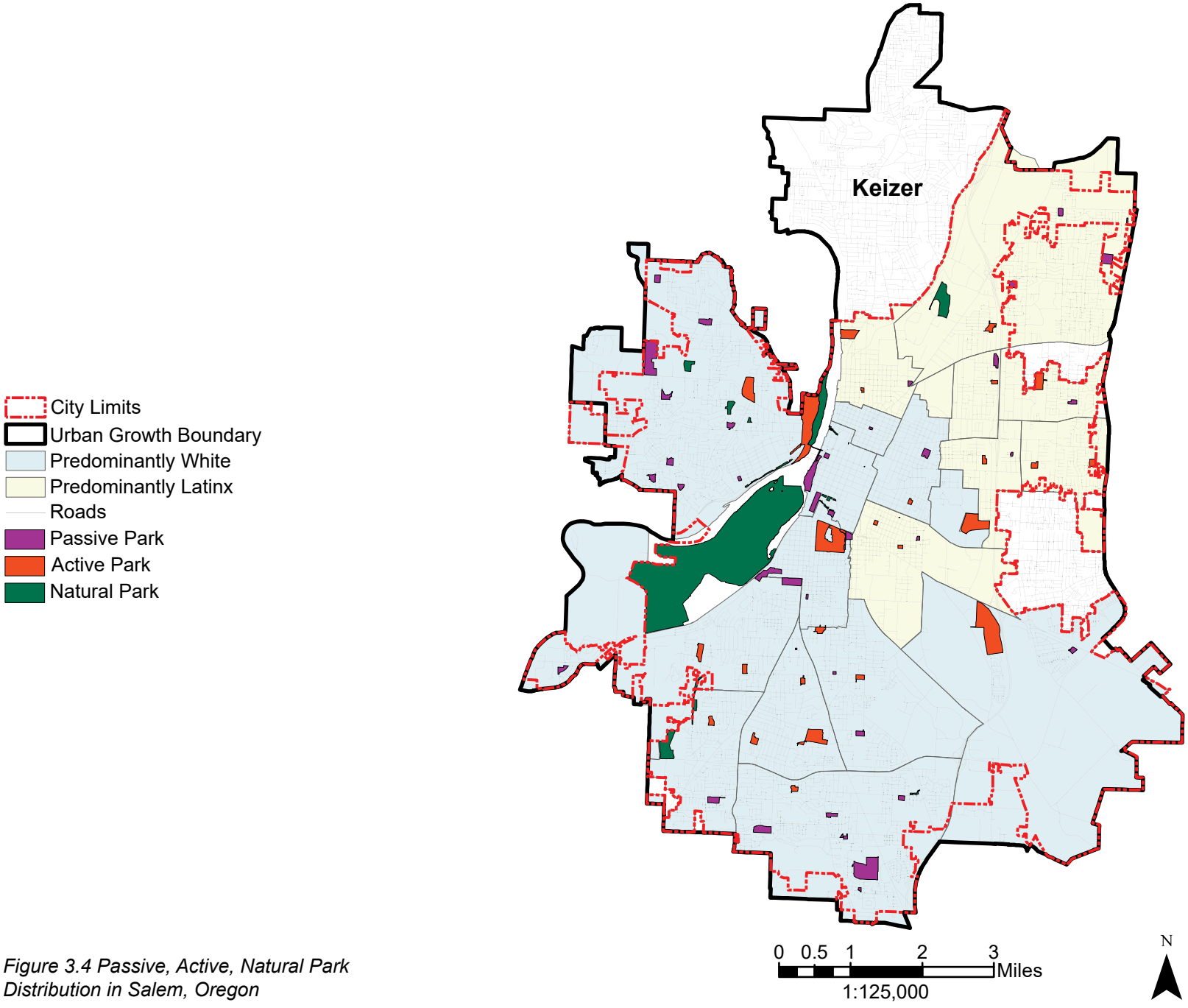
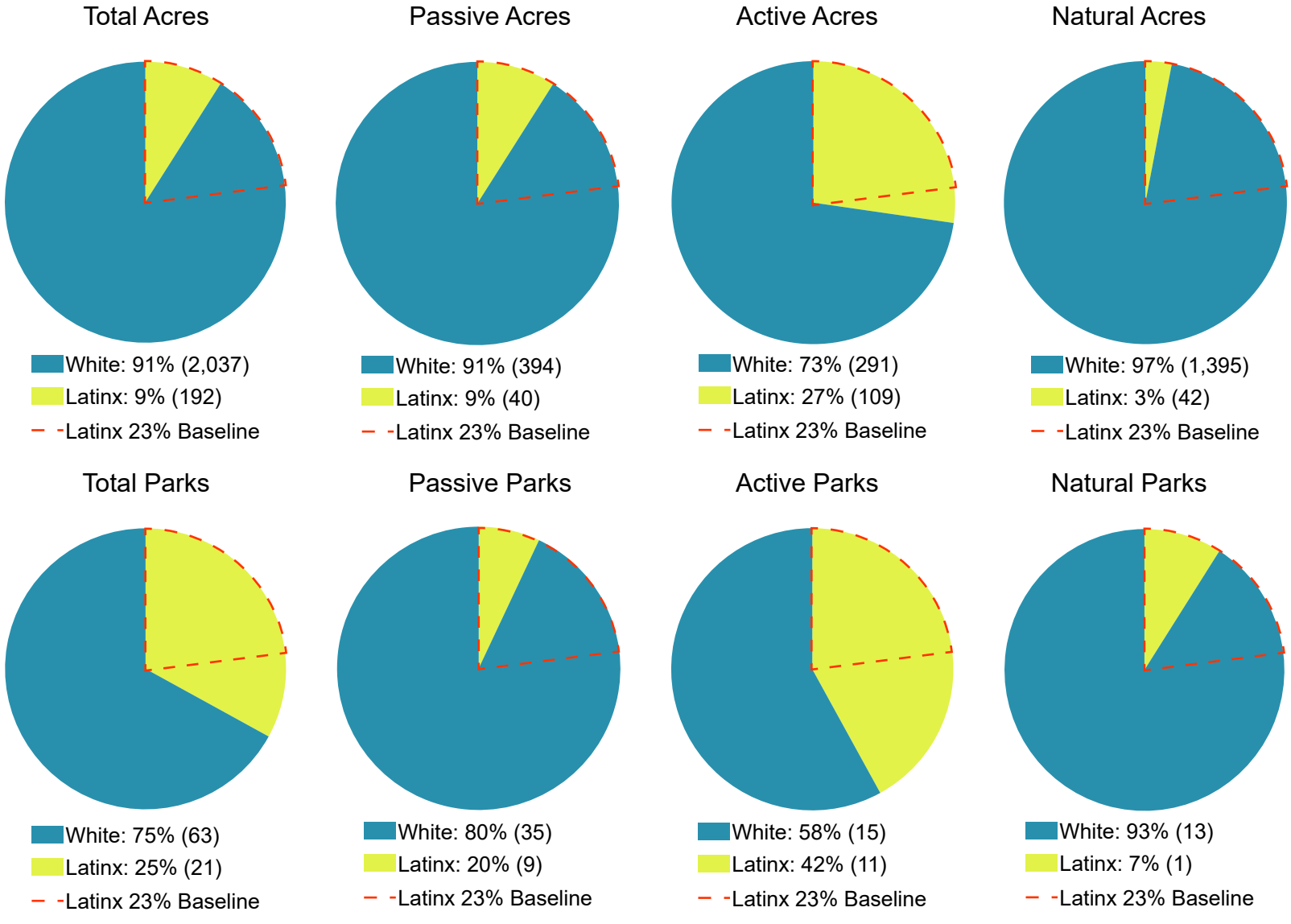


Figure 3.4 Passive, Active, Natural Park Distribution in Salem, Oregon



Figures 3.5 Park Distribution

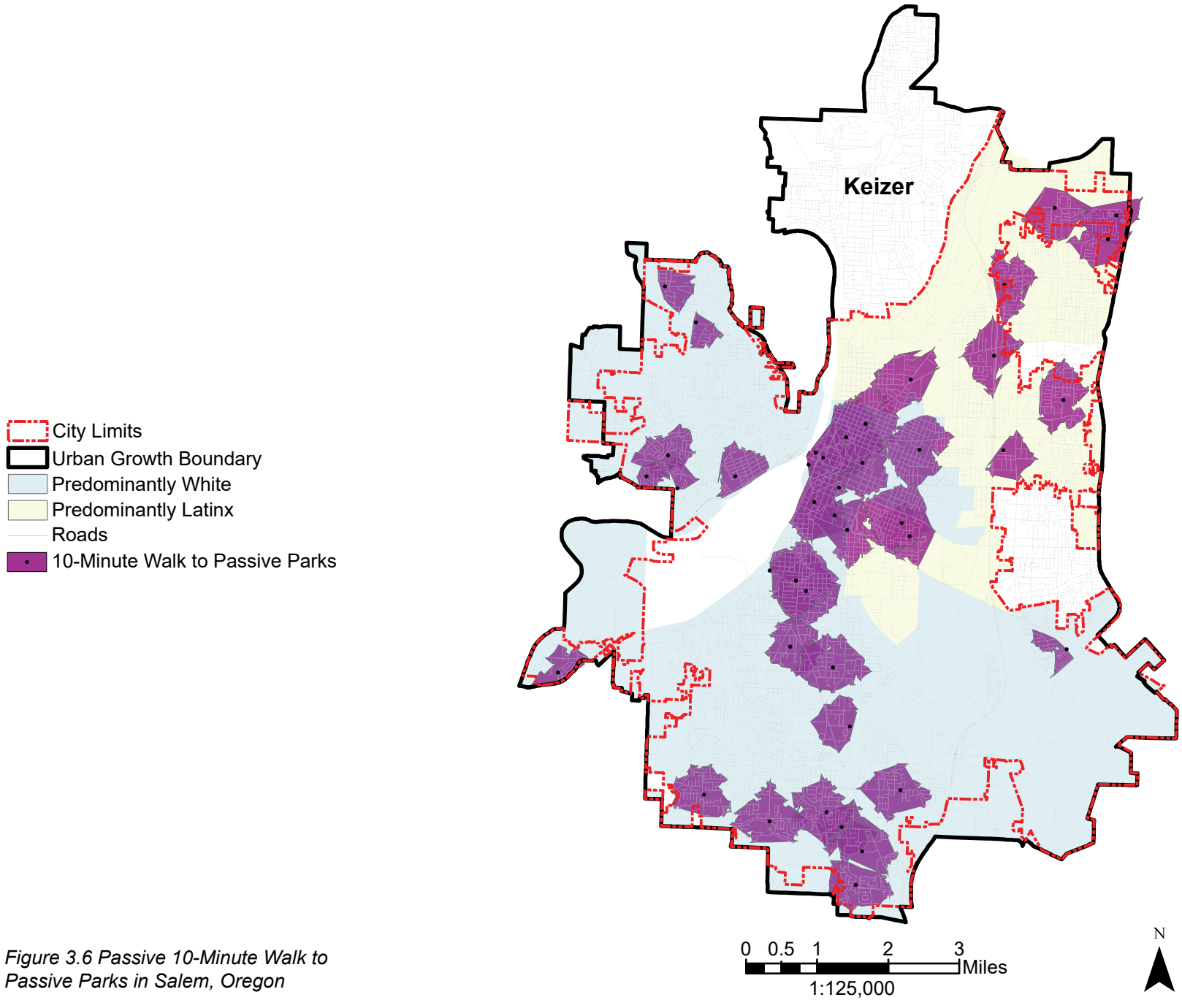


Figure 3.6 Passive 10-Minute Walk to Passive Parks in Salem, Oregon

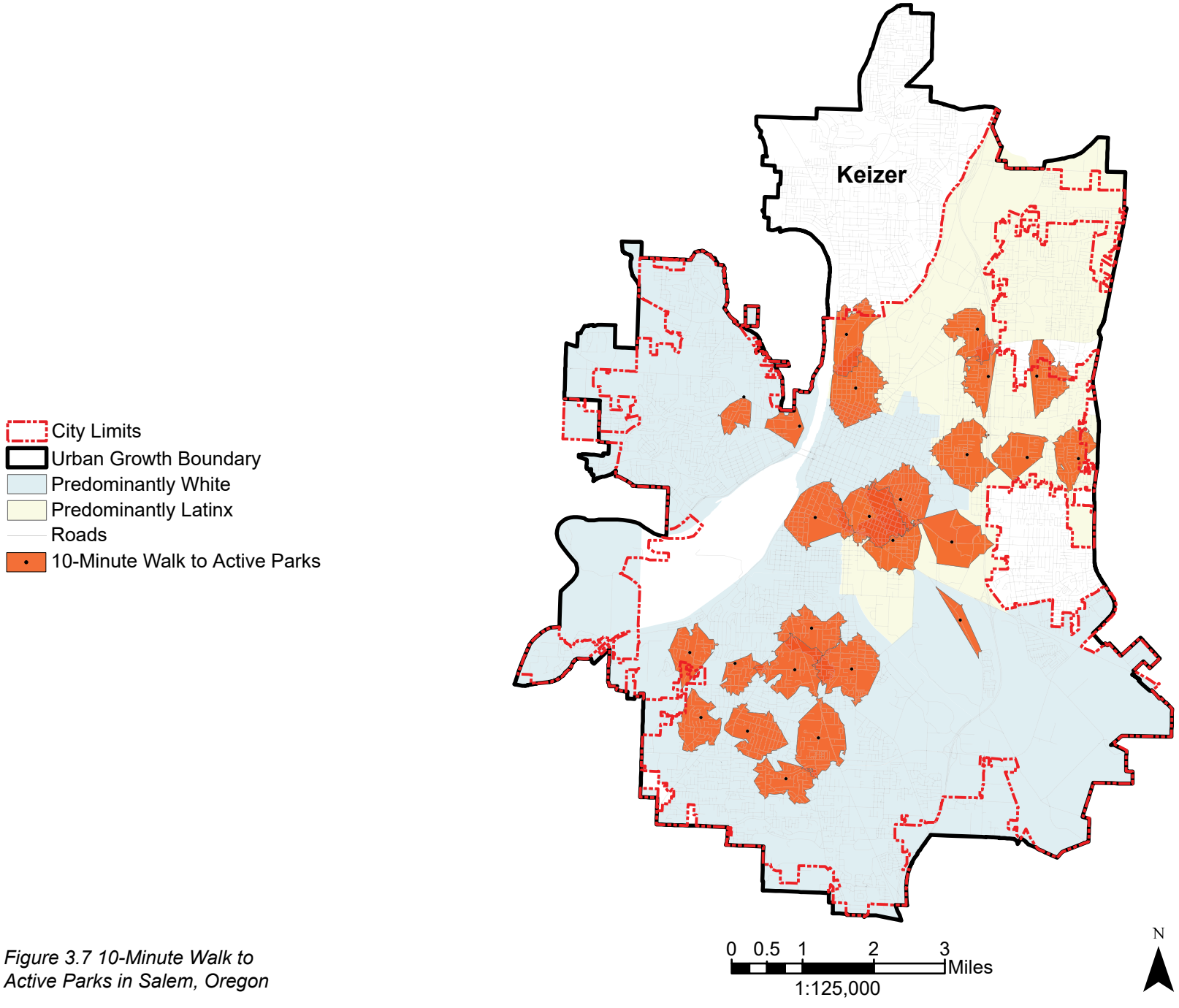


Figure 3.7 10-Minute Walk to Active Parks in Salem, Oregon

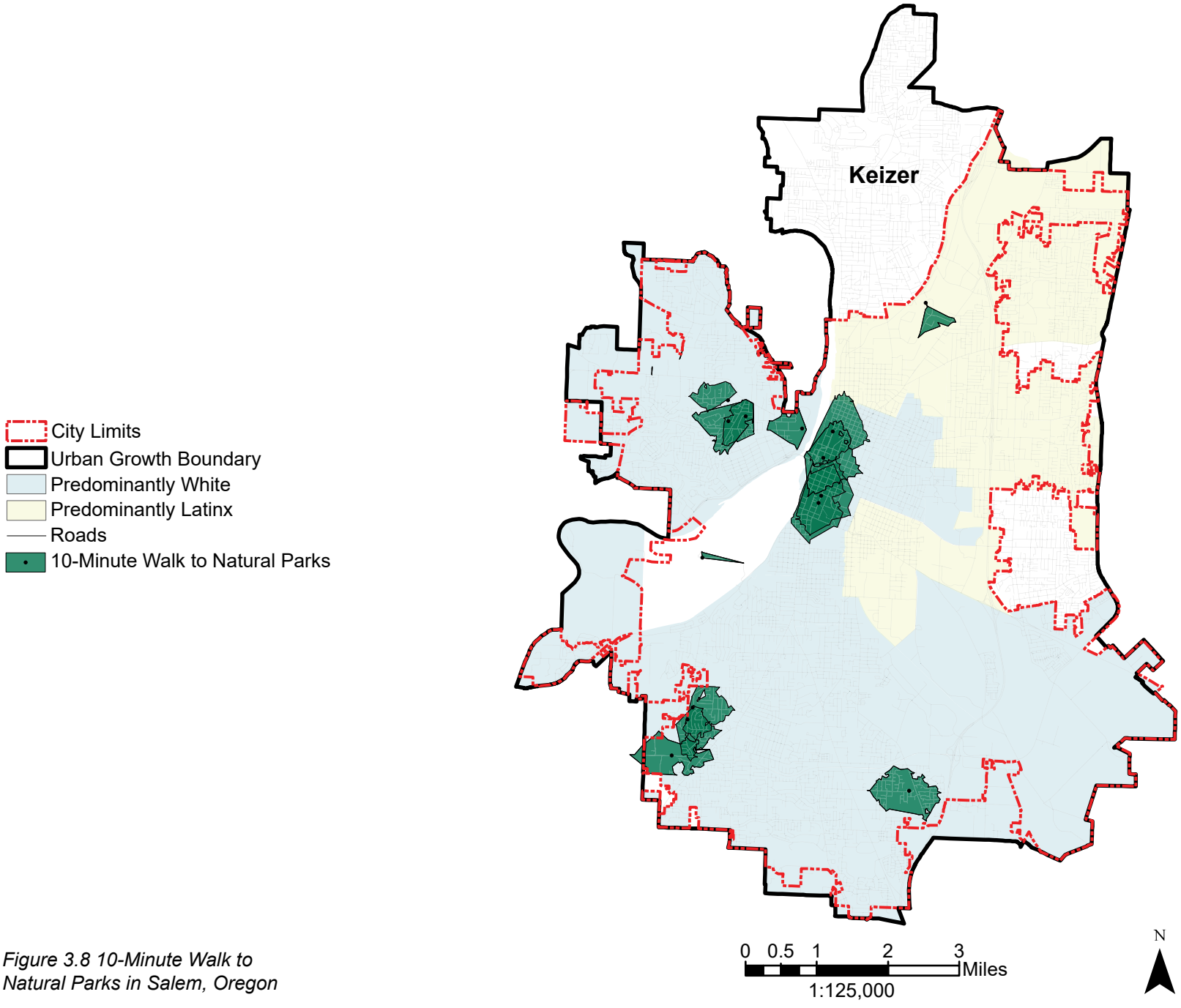


Figure 3.8 10-Minute Walk to Natural Parks in Salem, Oregon

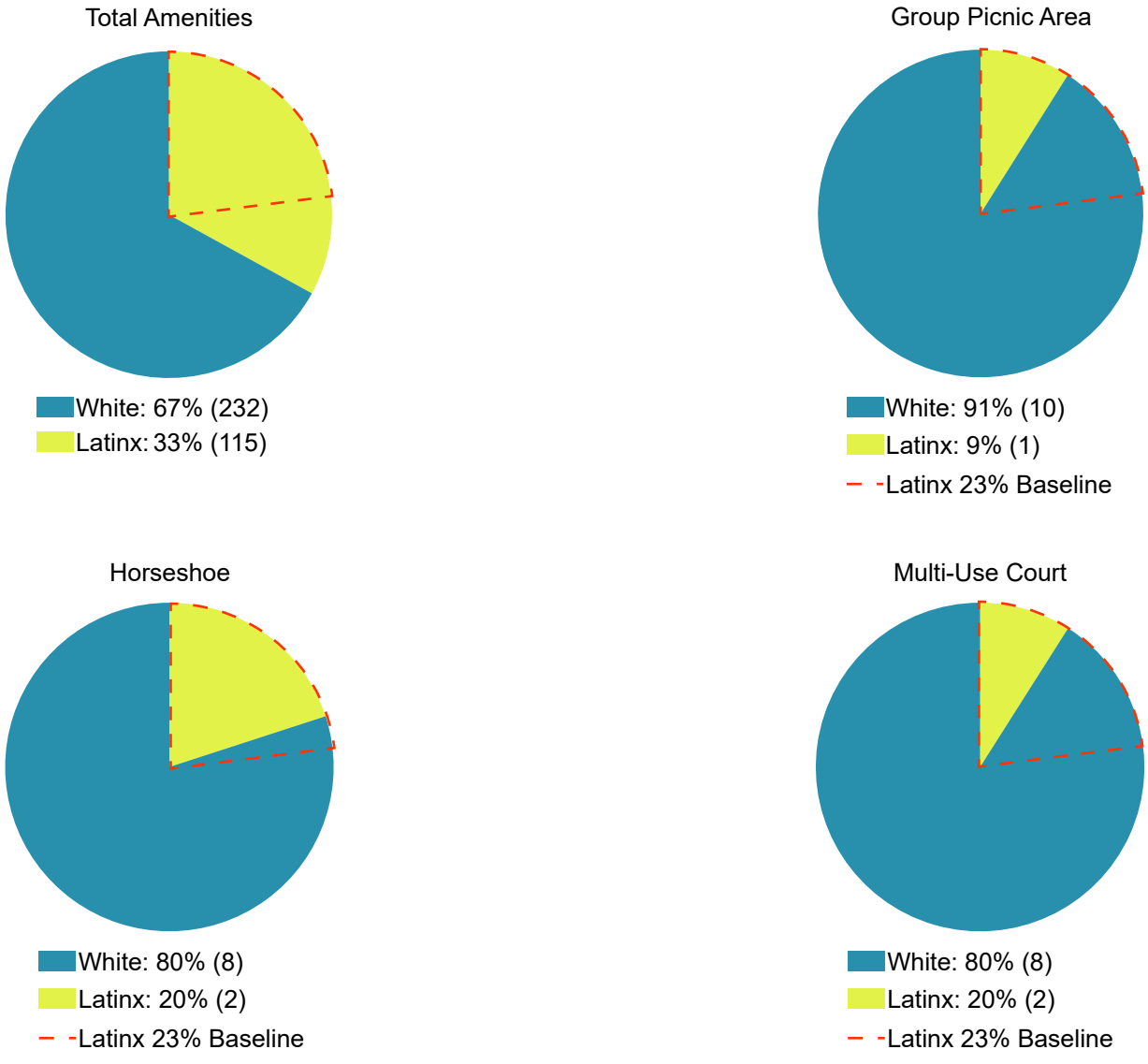


Figure 3.9 Lack of Amenities amongst the Latinx Population

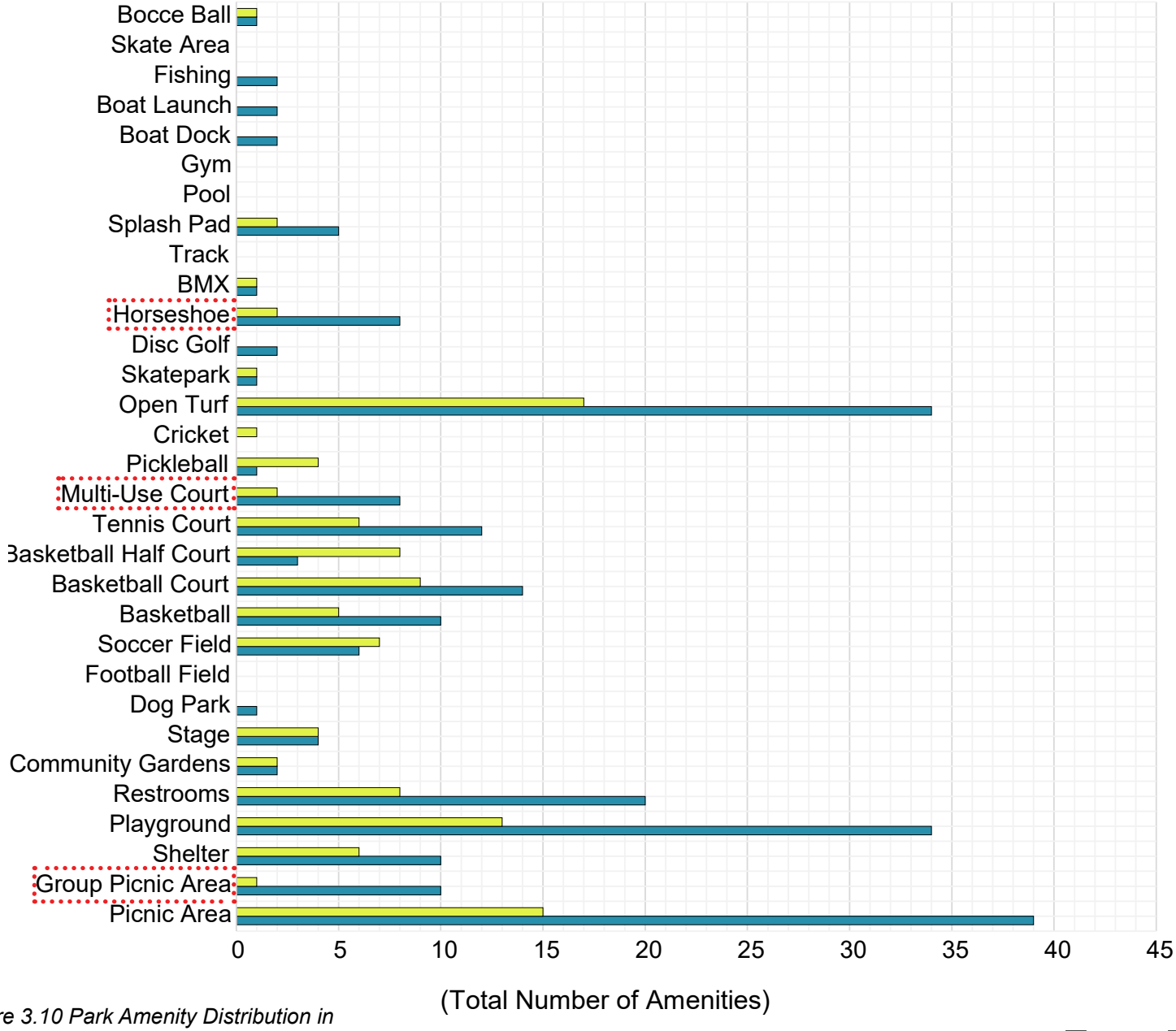


Figure 3.10 Park Amenity Distribution in Salem, Oregon

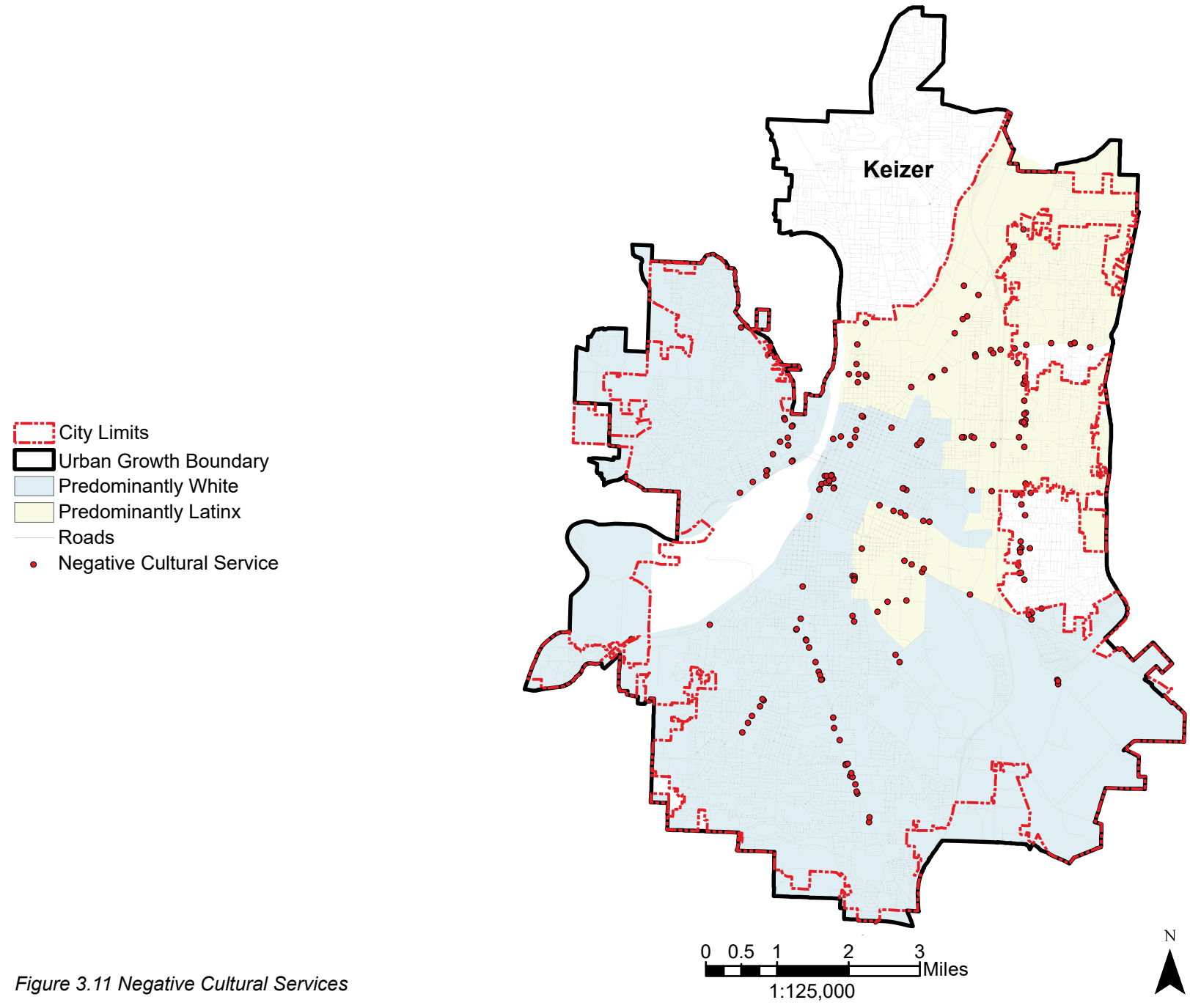


Figure 3.11 Negative Cultural Services

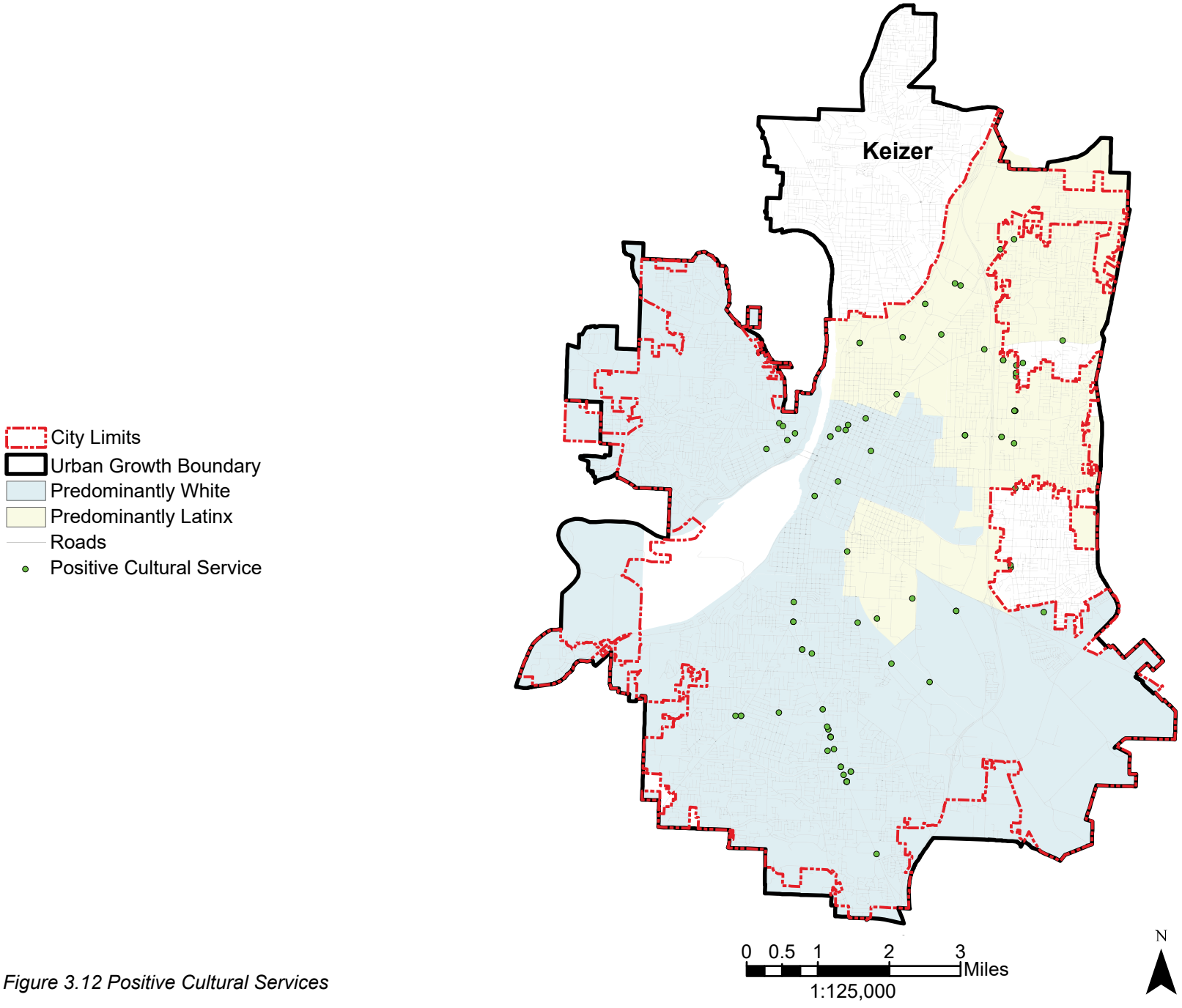


Figure 3.12 Positive Cultural Services

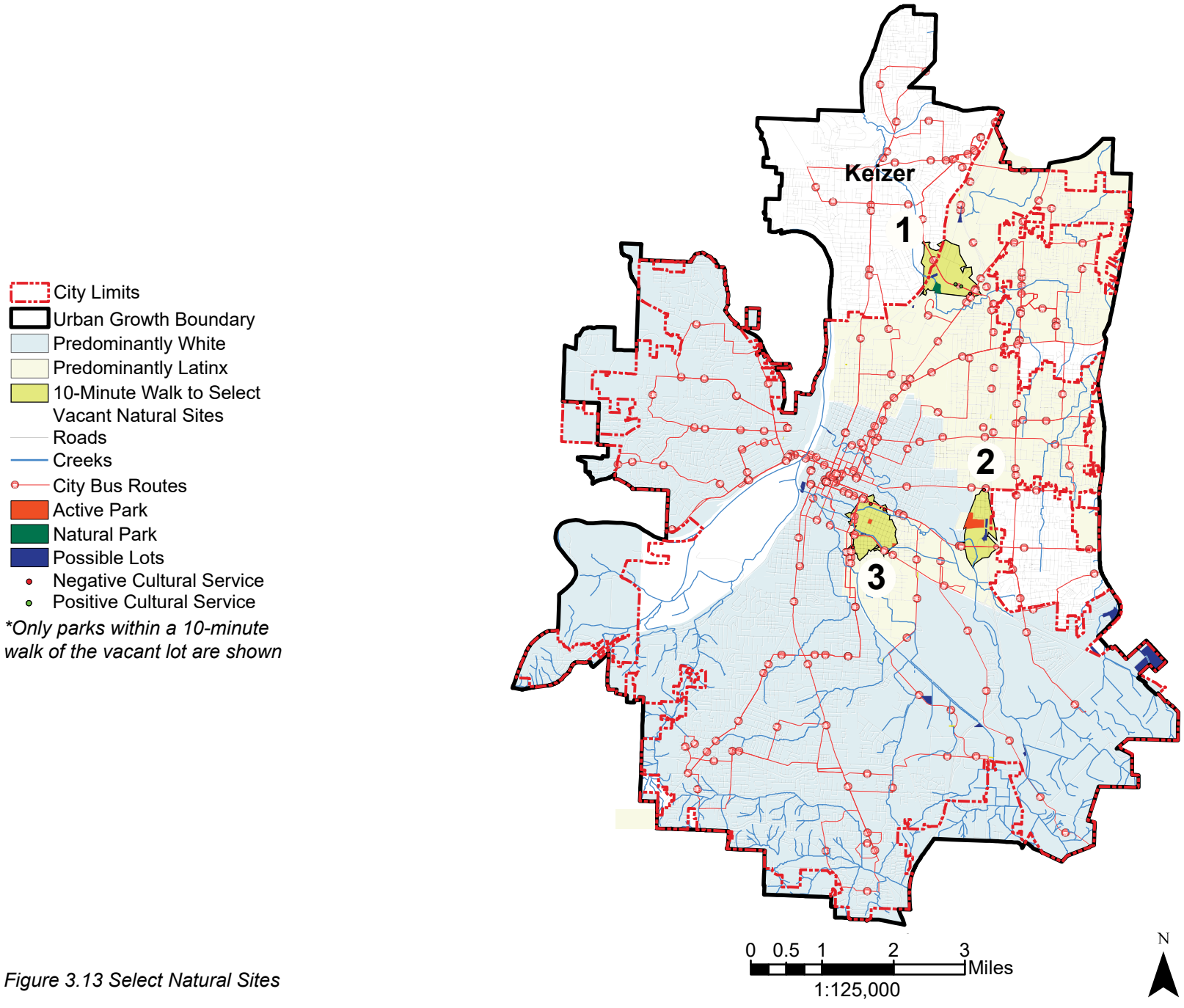


Figure 3.13 Select Natural Sites

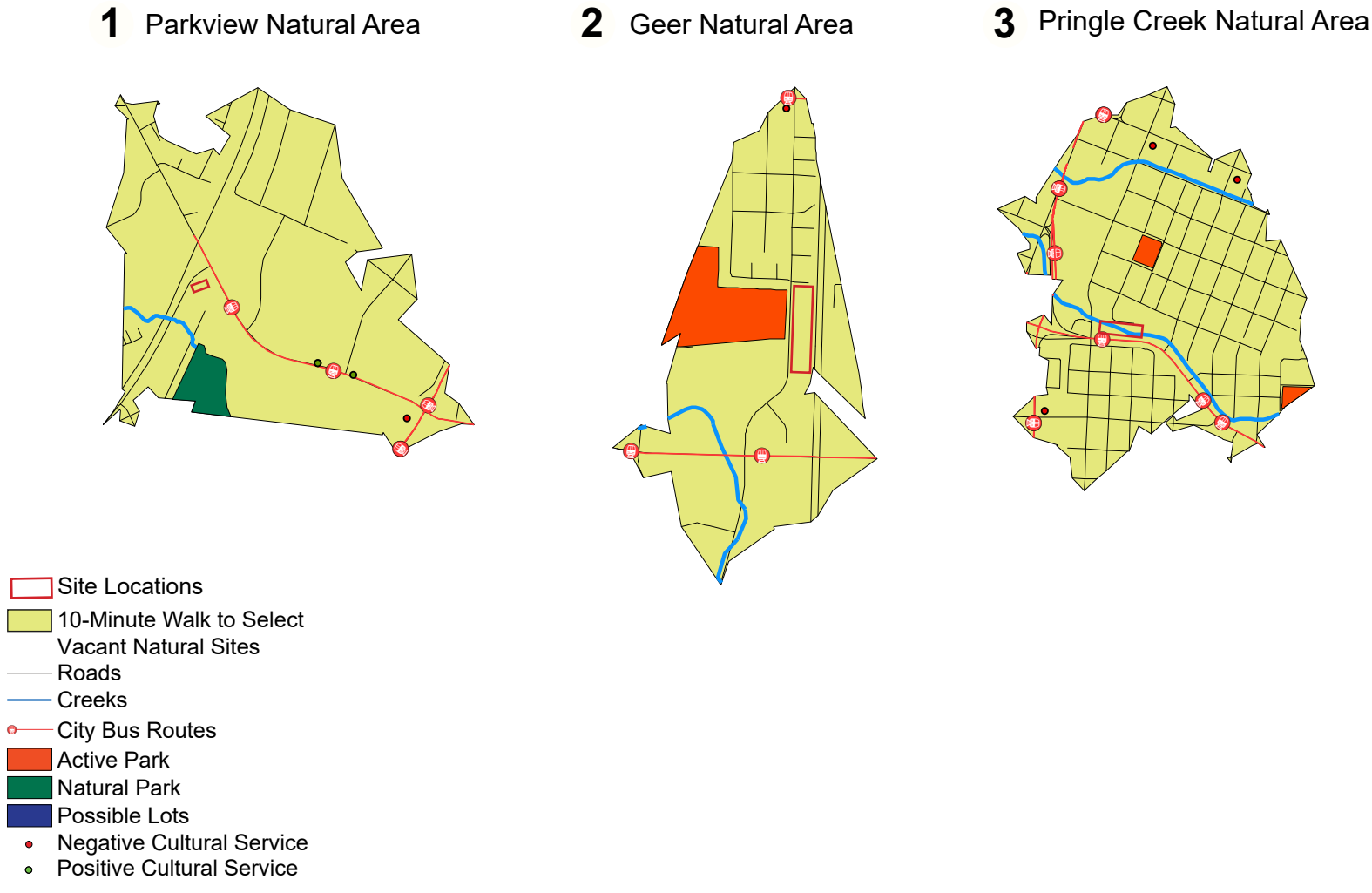


Figure 3.14 Select Natural Vacant Lots 10-Minute Walk

3.11 Discussion

Positive landscapes will contribute to positive services and health, while the reverse is true for negative cultural services and health. In having both the combination of positive cultural services and access to parks, it is more likely the nearby residents are facilitated to make use of nearby positive cultural services that can play a positive impact on health. In Salem, there is a higher presence of both negative and positive services in predominately Latinx communities compared to White communities. This is due to population density. With this density, there are fewer accessible parks when compared to the predominantly White neighborhoods. In short, the Latinx community in Salem does experience greater access to positive cultural services but does not experience higher access to parks. The lack of access to parks and dominant presence of negative cultural services amongst this population can also be connected to the higher presence of dia-betes amongst this community. With this said, there are many variables that can correspond to the likelihood of being diagnosed with diabetes that are hereditary, dietary, and/or cultural factors. Communities can benefit from the presence of parks that have multiple amenities. In having equitable access to all amenities, the Latinx community is likely to access these amenities that can then contribute to a positive heathy lifestyle.

Within communities that do not have nearby access to parks, there are other external services that can offer options for healthy lifestyle choices, such as gyms, natural grocers, and pocket parks. It is also significant to mention the difference between park presence and park accessibility. Within all three potential select natural vacant lots, there are not existing passive parks as shown in Figure 3.14. This brings into question the pros and cons of incorporating one large park with more acreage acreage and amenities versus the implementation of multiple smaller parks with better accessibility (pocket parks). This is seen in Salem with Minto-Brown Park, which is categorized into the predominately White community. This park has more acreage and natural space than any other park in Salem, but very few residents live within a 10-minute walk to make it accessible. Instead, it is more of a destination that can be driven to. Within the last few years, Salem did build a bridge over the Willamette River to connect the downtown area to the park to offer greater accessibility for more people. Looking at Minto-Brown Park as an example, while plenty of space can be a benefit to the community, accessibility is almost more relevant than acreage. It is more inclusive to incorporate multiple smaller parks with better accessibility through pocket parks in comparison to the presence of one large park with more acreage and amenities. It is also worth considering that the introduction of large open green spaces can displace the community through the increase of rent in surrounding neighborhoods. There is a balance between making a space more functional for the local community while still preserving the culture and neighborhood.

Chapter 4
Site Identification

The goal of this analysis was to identify one public vacant lot with natural features that could be transitioned to a natural park. This sought to increase access to natural parks in predominantly Latinx neighborhoods associations. Using a GIS query, 16 vacant city-owned properties were identified that then prompted a personal site visit. If the site was located, the visit measured the vacant lot's ease of accessibility, natural state, and surrounding environment was noted using a site survey as seen in Figure 6.1. On some instances, the vacant lots were either not found or completely inaccessible due to high traffic areas and no walkability. Out of the 16 original sites, the list was shortened to 3 potential sites: Geer Park Natural Area, Pringle Creek, and Parkview Natural. This was done by narrowing down vacant lots that had natural features including creeks and tree vegetation. These sites were then evaluated based on their surrounding environment using a 10-minute walk buffer (GIS network analysis). Within this buffer, the presence of negative cultural services, park access, accessibility, and parking were ranked using an excel spreadsheet to narrow down the potential sites to one vacant lot as shown in Figure 4.10. Ultimately, one vacant lot was selected as a potential natural park space that could increase the accessibility to natural settings for the surrounding Latinx community. The following site analyses and scores are for the three select lots, one of which was chosen as a potential natural park location.

4.1 Geer Natural Area
Salem, Oregon

Site Review

The Geer Park Natural area is located in the NESCA (North East Salem Community) neighborhood (see Figure 3.2) and has no adjacent sidewalk or on-site parking, but there is a side street adjacent to the property that can serve as parking (see Figure 4.1). Within the physical condition criteria, the lot is categorized as a built natural environment (home to a natural pond) (see Figure 4.2) where it does not need to be restored, yet it could be activated as a natural destination for nearby community use. It currently has main street lighting with access by foot, bike, and public transportation (see Figure 4.3). This spot has the potential to serve as an accessible location for nearby neighborhood residents. The site is zoned "Industrial Park" in while also being 100% vacant and publicly owned.

Analysis of Rankings

The Geer Natural area received a score of 6 out of a possible 15 (see Figure 1.7), coming in second in terms of site suitability. This site is categorized as a natural landscape made up of woodland vegetation and home to a pond that supports natural ecology and wildlife. The site itself is situated in a commercial and residential zone with no designated parking yet accessible via biking and public transportation. Overall, the site has access to one negative cultural service within a ten-minute walking distance (see Figure 3.13) and ranked low in the scoring and one park within the distance as a positive cultural service. Being one of the few sites that is natural, this site has the potential to increase accessibility to natural areas within this community.

Figure 4.1 Geer Park Natural Context
Image Source: Google Earth
Scale: 1”-0’=1,000’

N

Figure 4.2 View 1
Geer Natural Area
Image Source: Victor Garcia

Figure 4.3 View 2
Geer Natural Area
Image Source: Victor Garcia

4.2 Parkview Natural Area
Salem, Oregon

Site Review

The site is situated in the Northgate Neighborhood Association (shown in Figure 3.2) in a high traffic area that often goes unrecognized, with no opportunities to stop while driving. With no available parking, or informal opportunities to park, it was difficult make a meaningful connection or site visit. The street itself was a one-lane road with no sidewalk and steep slope adjacent to the site (see Figure 4.5). The site appeared densely vegetated (see Figure 4.6), with tents and miscellaneous materials. Overall, this site meets the criteria of being a natural landscape yet seemed disconnected from nearby housing and the urban environment.

Analysis of Rankings

The Parkview Natural area received a score of 4 out of a possible 15, coming in third in terms of site suitability. This site is categorized as a natural landscape made up of woodland vegetation and home to Claggett Creek that supports natural ecology and wildlife. The site itself is situated in general industrial planning zone (see Figure 4.4) with no designated parking yet accessible via surrounding public transportation. The site has no access to negative cultural services within a ten-minute walking distance while having access to one park within the distance as a positive cultural service. Being one of the few sites that is natural, this site has to potential to increase accessibility to natural areas within the Latinx community, yet it is not a priority site due to the lack of accessible and lack of adjacent negative cultural services.

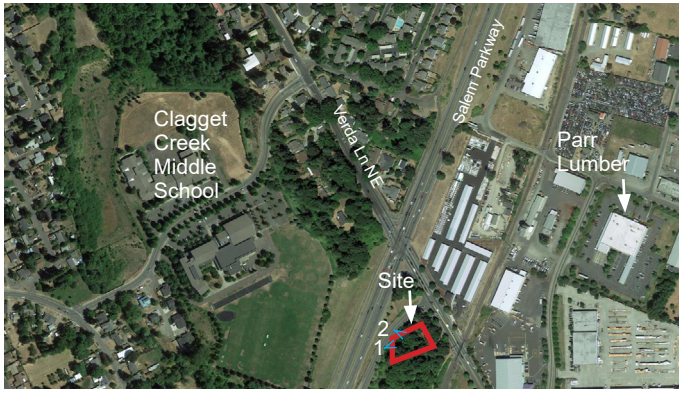


Figure 4.4 Parkview Natural Context
Image Source: Google Earth
Scale: 1”-0’=1,000’

Figure 4.5 View 1
Parkview Natural Area
Image Source: Victor Garcia

Figure 4.6 View 2
Parkview Natural Area
Image Source: Victor Garcia

4.3 Pringle Creek Natural Area Salem, Oregon

Site Review

This location is comprised of three connected publicly owned vacant lots situated in a mixed industrial and residential setting in the SESNA (Southeast Neighborhood Association) neighborhood (see Figure 3.2). The site is highly vegetated (see Figure 4.8) with a creek running adjacent to it (Pringle Creek) with no structured amenities, and potential activities like sightseeing and walking trails. Based on this, this site would need a complete restoration to bring accessibility to nearby residents. The site has no designated parking, yet does have nearby neighborhood street parking, and an adjacent sidewalk (see Figure 4.9). The onsite ambience is bleak, isolated, and abandoned, while the surrounding area is composed of student housing (Willamette University) (see Figure 4.7), and historic homes. The environment displays a lack of security seen through the presence of varying fencing techniques in residents' front yards distancing themselves from strangers while creating personal space for personal use. This being the case, there are signs of use in an informal way. The surrounding sidewalks are overgrown with strips of grass running adjacent to the sidewalks. The neighborhood has an established feel to it.

Analysis of Rankings

The Pringle Creek Natural area received a score of 13 out of a possible 15, coming in first in terms of site suitability. This site is categorized as a natural landscape made up of a riparian corridor with Pringle Creek running through it. The site itself is situated in a general industrial zone with informal designated parking avail-

Figure 4.7 Pringle Creek Natural Context
Image Source: Google Earth
Scale: 1"-0'=1,000'

Figure 4.8 View 1
Pringle Creek Natural Area
Image Source: Victor Garcia

Figure 4.9 View 2
Pringle Natural Area
Image Source: Victor Garcia

able and is accessible via foot, bicycle, public transportation, and train. Overall, the site has access to three negative cultural service within a ten-minute walking distance and two parks within the same distance acting as positive cultural services. This site should be in the radar and listed as a high priority site now that it ranks the highest amongst all three sites within the site suitability rankings.

4.4 Site Selection

The Pringle Creek lot was chosen as the selected site because it earned the highest score in the site ranking analysis as seen in Figure 4.10. Of the three sites, this lot also contained the largest amount of nearby negative cultural services, had the best accessibility, and was in a residential area as shown in Figure 3.13.

	Pringle Creek Natural Area	Geer Natural Area	Parkview Natural Area
Negative Cultural Services	**3**	**1**	**0**
Natural Landscape	**1**	**2**	**2**
Park Access	**1**	**1**	**1**
Accessibility	**4**	**2**	**1**
Parking	**4**	**0**	**0**
Total Score	**13**	**6**	**4**

Figure 4.10 Site Scores

Chapter 5
Activating a New Park in Salem, Oregon

Figure 3.8 finds a lack of accessibility to natural parks in Salem. Based on these findings, the search for potential natural pocket park began. Three sites were located, Pringle Creek, Geer Natural Area, and Parkview Natural Area. In doing site selection, accessibility, negative cultural services, number and types of natural landscapes, land use, and parking were quantified as seen in figure (x site selection results). Once a selected site was chosen, the selection process transitioned towards the design process. The process of design was inspired by previous literature reviews, and available park data (amenities) through the city of Salem's GIS database. This framework allowed design to be driven with the goal of facilitating access to a natural setting.

5.1 Site Program

The Pringle Creek site design process developed varying schematic designs with the mission of facilitating a positive cultural service (pocket park) that provides access to social, physical, and mental health outlets. This was done through the incorporation of a kiosk plaza, food vendor area, fitness area, barbecue picnic area, nature play, and cultural artwork. The kiosk is an important cultural aspect that contributes to Latinx identity and community through multi-functional social and cultural interactions.

This setting facilitates cultural activities such as dance, festivals, and performances. Often, plaza kiosks mimic Latin American architecture and can spatially represent belonging and a sense of community. Downtown Plaza in Woodburn, Oregon is a popular gathering spot and home to numerous cultural events and social gatherings while being a space of belonging. The incorporation the plaza kiosk and of food vendor area is from the idea of Latino Urbanism by James Rojas (Lara, 2012). Latino Urbanism is the idea of making

the most of your surrounding environment and adapting new forms of programs and traditions to tailor that physical environment into one that is meaningful and appropriate to its context. Latino Urbanism differs from other forms of urbanism because it is a specific style that evolves the existing structure to tailor it to Latinx heritage and cultural preferences. While Rojas focuses on the residential scale, his theories can also be applied at other levels, such as park space that is influenced by culturally relevant elements. The food vendor area stems from this idea of belonging. Known as loncheras (food trucks or taco trucks), these mobile and informal street food vendor trucks often represent cultural identity, traditions, and community development.

Growing up in Salem, Oregon, loncheras represented who we were, and where we came from. Our family business called "Taqueria Palo Alto," represented our family's native small town in Michoacán, Mexico. Like us, many first-generation families experience self-entrepreneurship in informal ways, and in informal public settings. The introduction of barbecue spaces into the design stems from experienced social gatherings in belonging to this community. Access to physical exercise areas was implemented based on the pre-disposition of diabetes that the Latinx community and extensive literature reviews revolving health and Latinx communities across the country. Access to nature play was implemented as a form of engagement for the younger population with the intention of being inclusive towards community members of all ages. Overall, this design concept was inspired by programs that fostered healthy centered healthy choices, social inclusiveness, and cultural belonging.

5.2 Site Design

The design was guided by the integration of a natural space amongst the Latinx community in Salem, Oregon. This process took into consideration information gathered through the literature review process in order to provide a design that had a direct connection for surrounding residents as well as amenities that this community lacked, such as group picnic areas (see Figure 3.9). Various designs concepts provided spaces that promoted social gathering, physical fitness, cultural places, and access to nature. The Pringle Creek site provides an opportunity to integrate amenities that this community lacks such as group picnic tables. Schematic designs were developed in three phases, with each phase building off of the prior phase. Phase I focused on providing connectivity within the site, Phase II focused on programming, and Phase III integrated the lessons learned regrading connectivity and program, culminating in a final design concept.

5.3 Precedents

Pocket parks are small scale parks that are incorporated into already dense areas. These small parks allow for urban acupuncture, which is the concept developed by Jaime Lerner that the revitalization of small or worn-out areas can bring positive relief to the larger community. Alongside literature reviews, inspiration for transforming a publically owned vacant lot was drawn from three similar case studies that examined temporary activation, regeneration, and revitalization of existing urban environments.

Temporary Activation

Los Trompos Atlanta, Georgia

This method embraces a popular Latin American toy as an expression of culture and is integrated into public space Sifly Piazza in Atlanta, GA as an installation where visitors can engage in social interaction, play, and cultural engagement (see Figure 5.1). The Trompo, a coned shaped three-dimensional object that is spun by wrapping string around the figure and launching it so that it spins on its bottom side comes to life in a human scale art form. Sifly Piazza incorporated 30 trompos to activate a public open space using a cultural art form inspired by a popular toy, going against the norm that art forms are only displayed in museum walls (Bruce, 2017). This site was activated and brought together an inclusive community where members from all ages and personal backgrounds came together to engage in colorful art forms that are meaningful to many and can be translated as a form of pride.

Figure 5.1. Los Trompos. From: Pocket Park Design: Solutions for the Regeneration of Public Space in High-Density Cities (p.101-105), by Bruce, 2017, Mulgrave, Australia: The Images Publishing Group

Regeneration of Existing Park

Napier Street Reserve Sydney, Australia

The Napier Street Reserve (see Figure 5.2) was activated to promote the use of public space by closing a road that ran through a residential neighborhood. Prior to this, this space was an abandoned derelict public space where it was underutilized yet in closing the road, it increased pedestrian use. In doing so, it created a destination where residents benefited from the introduction of a more formalized space where a previous place was revitalized and transformed into a natural oasis full of purposeful niches that displayed and amplified existing tree canopy, green screening,

Figure 5.2 Napier Street Reserve. From: Pocket Park Design: Solutions for the Regeneration of Public Space in High-Density Cities (p.150-153), by Bruce, 2017, Mulgrave, Australia: The Images Publishing Group

seating, and decorative walls (Bruce, 2017). This project introduced an opportunity to activate an existing underutilized publicly owned space to that of a more purposeful one that attracted local neighborhood residents. Overall, the pocket park provided an inviting atmosphere where the introduced physical change was meaningful in bringing relief to a space that was underutilized.

Regeneration of Streetscape

Afghan Bazaar Cultural Precinct, Melbourne, Australia

This project transformed a former streetscape into one that recognized the presence of the Afghan-Australian community by celebrating their culture through meaningful and symbolic artwork. The intention of this project aimed to provide a cultural space where the community could come together and engage in social events (see Figure 5.3). The materials and form of expressions were instrumental in providing a meaningful and attractive space using patterns, color, and texture (Bruce, 2017). This project found success in collaborating with local artist and residents to implement meaningful art forms that resonate within this community, expressing visual identity and bettering their overall livability.

Revitalization of Existing Pocket Park

Cancha La Doce, Valle del Chalco, Mexico

This project aimed at revitalizing an existing concrete futsal (soccer) court (see Figure 5.4) located in the outskirts of Mexico City. The surrounding community is densely populated and highly impoverished. The goal of this project looked at incentivizing the use of space through incorporating multi-functionality through the introduction of extra resources. These resources

Figure 5.3. Afghan Bazaar. From: Pocket Park Design: Solutions for the Regeneration of Public Space in High-Density Cities (p.32-37), by Bruce, 2017, Mulgrave, Australia: The Images Publishing Group

Figure 5.4 Cancha La Doce, Valle del Chalca, Mexico. From: https://www.archdaily.mx/mx/899281/cancha-la-doce-el-futbol-como-intervencion-social-y-urbana

prompted an increase in programs offered while also engaging in community engagement and participation. Together folks were able to intervene and revitalize a space that was already being used. Together folks were able to intervene and revitalize a space that was already being used, creating a sense of ownership and stewardship. This project was made possible through private donations from Manchester City football club in England, as well as countless hours of local community members, planners, and architects.

These case studies illustrate how vacant and existing public spaces can be activated in order to better integrate their surrounding community while also incorporating places of belonging and cultural celebration. These cases studies are relevant to this project because they focus on activating spaces in often overlooked communities while also introducing more meaningful spaces. All four of these case studies incorporate culturally specific amenities to bring more ownership and familiarity to make local space relevant to their surrounding community. When developing accessible park spaces, implementing relevant cultural elements such artwork, iconic imagery, and flexible gathering spaces creates accessible parks that are culturally inclusive and accessible.

5.4 Park Design Phase I

The goal of this phase was to integrate a new park into the SESNA (Southeast Neighborhood Association) neighborhood while offering connectivity from the east to the west end of the park, between 14th and 15th Street. With Pringle Creek running through the site, a foot bridge with varying footpaths will allow for people to access from either side. Some of these paths are curvilinear, others meandering, yet all are connected from east to west. Along these paths, there are minimal interventions seen through the minimal introduction of food vendors, natural play, and overlooks. At the end of this phase, it was solidified through two schematic options that this site needed to have adequate connectivity between 14th and 15th Street.

5.5 Park Design Phase II

Design Phase 2 carried over connectivity from the east to the west end of the park, between 14th and 15th Street from Phase I while expanding on the minimal park programming. The foot bridge remains relatively in the same area, yet gradually transitions from a direct foot bridge to that of a meandering rectilinear one. The varying curvilinear, direct, and meandering footpaths mimic wandering while still acting as an efficient walkway. Rather than bringing the natural space to an already urban location, this site brings urban characteristics to a natural setting. Other elements that are incorporated include a food vendor area and introduced picnic and fitness areas. Each phase introduces new elements that further implement the urban and natural space. At the end of this phase, the design encompassed the integration of multiple programs that drew upon its surrounding urban environment while maintaining balance between nature and the introduced setting.

5.6 Park Design Phase III

Design Phase 3 weighed every option and concluded with Option 12, as shown in Figures 5.16-5.32. This option retained design elements from Phase I and II such as a rectilinear design concept composed of all right angles embedded into one final design plan that integrates a natural park that starts on 14th Street and connects to 15th Street. This final site design em-

braced the natural setting in an urban environment while encapsulating park programming that promotes social gathering, and physical and mental health. This programming is seen through the incorporation of BBQ picnic shelters, nature play area, overlook, introduced trail bridge that connects to 15th Street, an open lawn, food vendor area, fitness area, and a plaza kiosk area. These programs are usable everyday of the week while also facilitating use for special events such as birthday parties, and family gatherings through the incorporation of the kiosk plaza.

Option 1

Figure 5.5 starts to set the stage for active, natural, and social program elements showcased through a proposed food court, nature play, and overlooks. The schematic design introduces a trail system that is very linear and direct starting on 14th Street and connecting to 15th Street, with a few stopping points (overlooks) along the way. Overall the circulation is very linear and predictable, with limited open green space and a broad range of introduced vegetation.

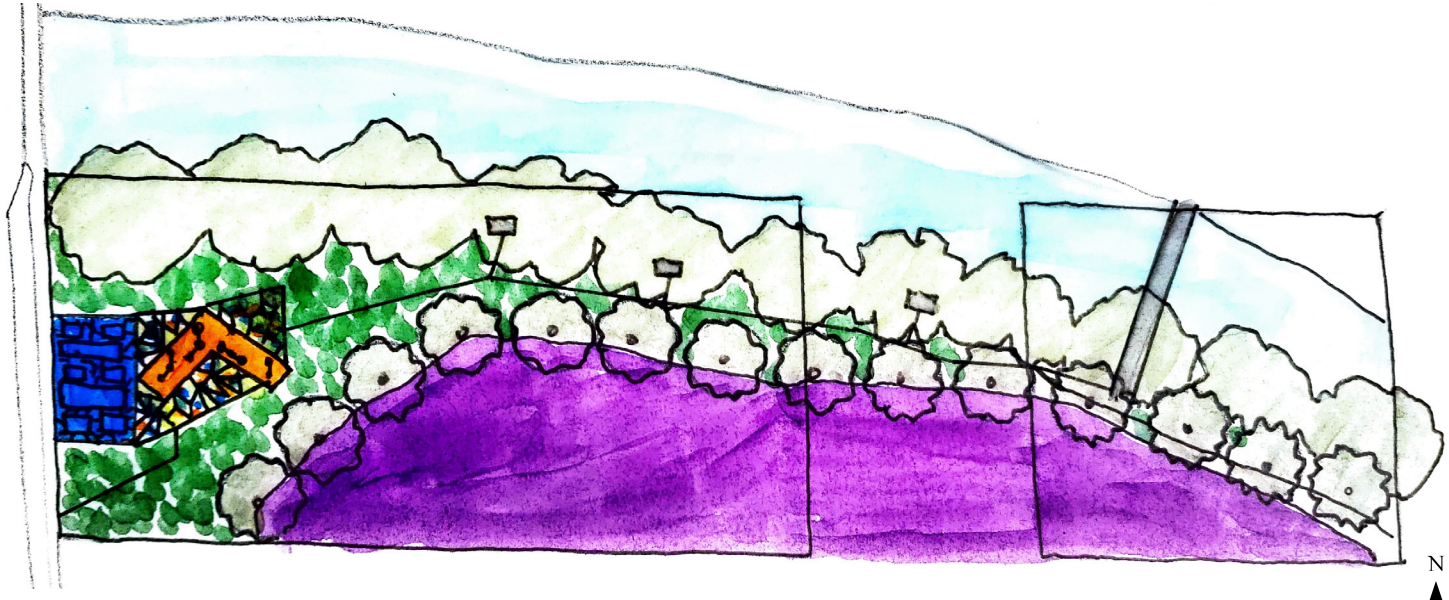


Figure 5.5 Schematic Design 1

Option 2

Figure 5.6 has minimal interventions with circulation being the dominant form of structure. This schematic design does not include the proposed food court, nature play, and overlooks as described on Option 1; instead it introduces a vegetation zone with a formal picnic covered area. The design proposes a direct a trail system similar to Option 1 without the overlook stopping points along the way. Overall the site design is minimal with limited programs and leaves opportunities to make better use of space.

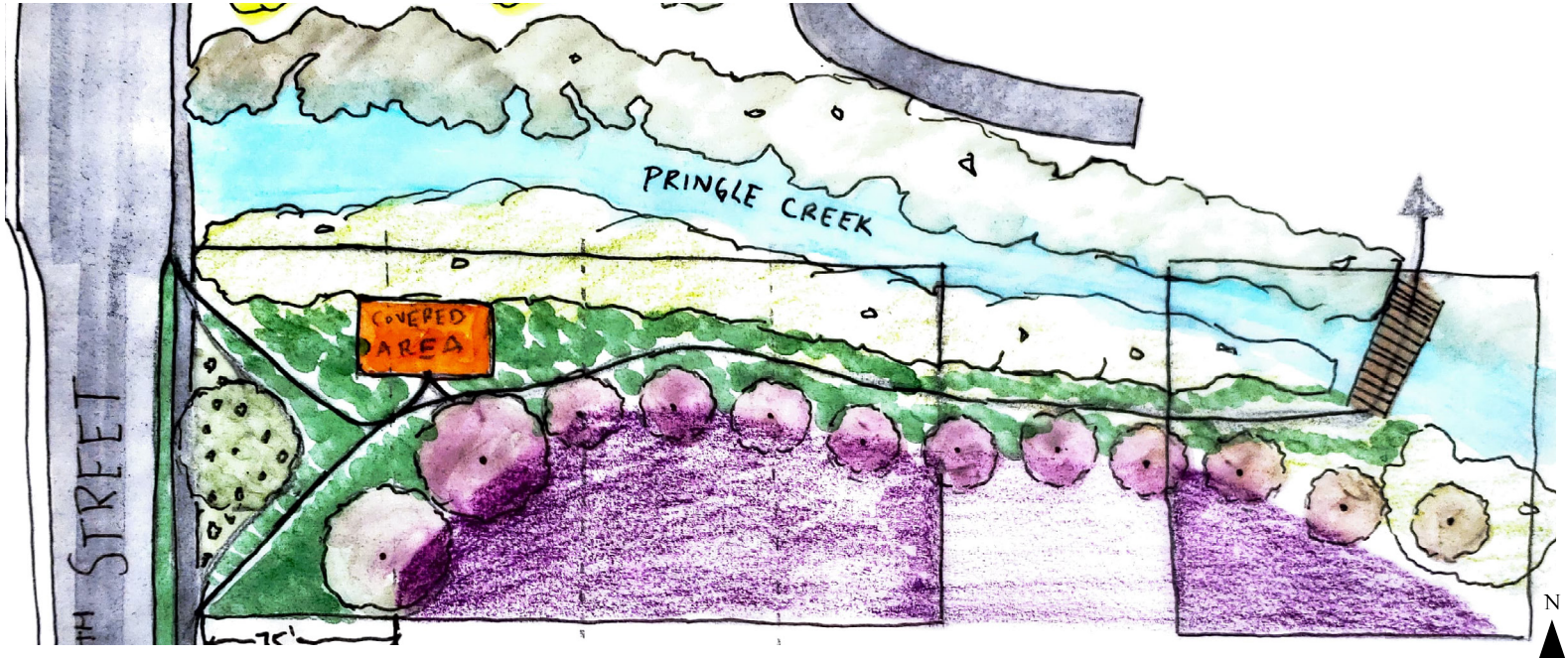


Figure 5.6 Schematic Design 2

**Not to Scale*

Option 3

Figure 5.7 has minimal introduced program interventions with covered picnic areas being the main source of attraction. Aside from these, there is an emphasis on introduced vegetation starting on the sidewalk and framing the entrance into the park. The site also emphasizes lounging and safety through scattered seating, and safety through lighting along the circulation path. The path continues to be direct with a curvilinear flow. This schematic design does not carry on the proposed food court, nature play, and overlooks as described on Option 1, but does carry on the proposed covered areas from Option 2 and introduced formalized landscape vegetation zones. The design proposes a similar direct a trail system to Option 2 with two forms of entry and one form of exit in done at the end of the proposed bridge. Overall this Option has more technical complexities than Options 1 and 2 with opportunities to integrate programs that encompass the community's needs.

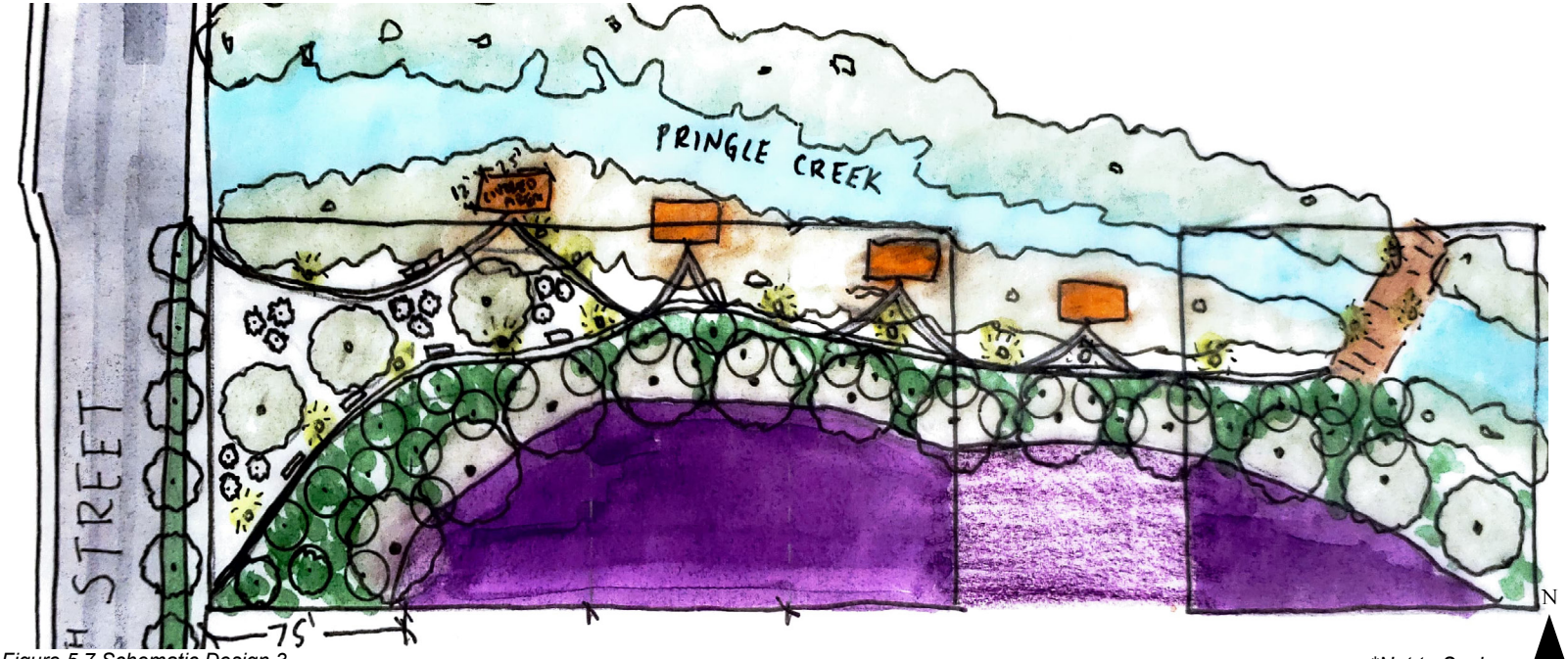


Figure 5.7 Schematic Design 3

**Not to Scale*

Option 4

Figure 5.8 introduces individualized barbecue shelters and includes overhanging overlooks from Options 1 and 3. One enters this schematic design through two entrances bordered by proposed barbecue picnic areas and introduced vegetation on both sides. Between both framed entrances there is a lawn adjacent to the linear trail that is flanked by existing and introduced vegetation. Along the linear path, there are secondary paths that lead to secluded overlooks. These overlooks are surround by the existing riparian corridors vegetation and immersed in the natural setting. This schematic design emphasizes and introduces vegetation, linear pathway, limited programs, open bowling green space, and private natural solace overlooks. This schematic design does not include the proposed vegetation from Option 2 and expands on the proposed covered areas from Option 2 into proposed individual barbecue picnic areas. The design proposes the most linear pathway embracing the natural setting.

Figure 5.8 Schematic Design 4

**Not to Scale*

Option 5

Figure 5.9 carries on a similar curvilinear pathway as Option 2 and 3 with individualized barbecue shelters like Option 4. There remain overhanging overlooks from Options 1, 3, and 4, with similar entrances as Options 2, 3, and 4. One enters this schematic design through two entrances bordered by proposed barbecue picnic areas and introduced vegetation on both sides, like Option 4, instead displayed in an organic form in this particular option. It is important to note that this site does not incorporate open green space, but instead introduces vegetation to reiterate nature in a natural setting. This site has similar overlooks to Option 1 and 4 that are surround by the existing riparian corridors vegetation and immersed in the natural setting. This schematic design brings an emphasis on introdced vegetation, curvilinear pathway along with scattered barbecue sites and intentional nature overlooks, giving off a limited yet intentional coexistence with the natural setting.

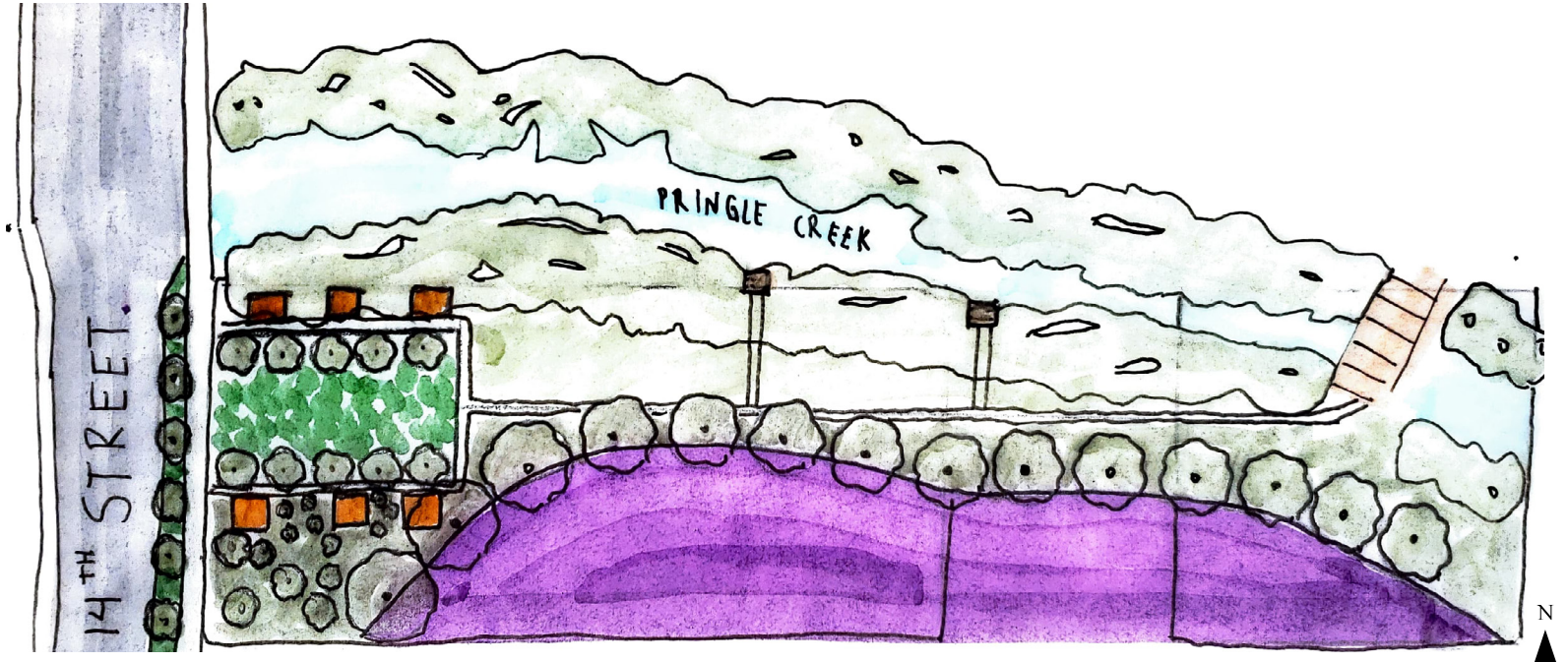


Figure 5.9 Schematic Design 5

**Not to Scale*

Option 6

Figure 5.10 introduces a rectilinear design concept with circulation that asks visitors to move in a geometric manner. The site is composed of all right angles being the main base of the circulation spine with the vegetation buffer remaining relatively the same as Options 1 through 5. This schematic design created a space starting on the street (framed through introduced sidewalk vegetation) and connecting to the riparian corridor, like Options 3, 4, and 5. This schematic design concept is referential to Lawrence Halprin with the implementation of a modernist urban style of a natural setting into the urban. This option introduces more programmed options the address play, social interaction, cultural settings, entrepreneurship, and physical active sites. There remain overhanging overlooks from Options 1, 3, 4, and 5, with similar entrances as Options 2, 3, 4, and 5, one enters this schematic design through two entrances bordered by proposed food vendor areas and introduced vegetation on both sides. This option incorporates a strip of green space between the initial entrance programs and that of the introduced buffer near the sloped area. This schematic design brings an emphasis on programing along rectilinear pathways and emphasizes the importance of programing.

Figure 5.10 Schematic Design 6

**Not to Scale*

Option 7

Figure 5.11 carries on the rectilinear design concept from previous schematic designs, asking visitors to move through the site in a geometric manner. The site is composed of all right angles being the main base of the circulation spine with the vegetation buffer remaining relatively the same as Options 1 through 6. This schematic design created a space starting on the street (framed through introduced sidewalk vegetation) and connecting to the riparian corridor, like Options 3, 4, 5, and 6. This schematic design concept is referential to Lawrence Halprin with the implementation of a modernist urban style of a natural setting into the urban. At the heart of the site there is a cultural mosaic area that represents an open plaza, making a direct connection with the Latinx community. This option introduces more programmed options that address social intera- ction, cultural settings, nature play, and educational experiences. There remain overhanging overlooks from Options 1, 3, 4, 5, and 6 and similar entrances to Options 2, 3, 4, 5 and 6. One enters this schematic design through the main entrance entrances bordered by rectangular open green with barbecue social gathering areas spaces as well as a kiosk for entertainment. This option breaks the existing greenspace open areas through the introduction of rectangular shapes. Overall, this schematic design brings a personable and inclusive approach through its programing.

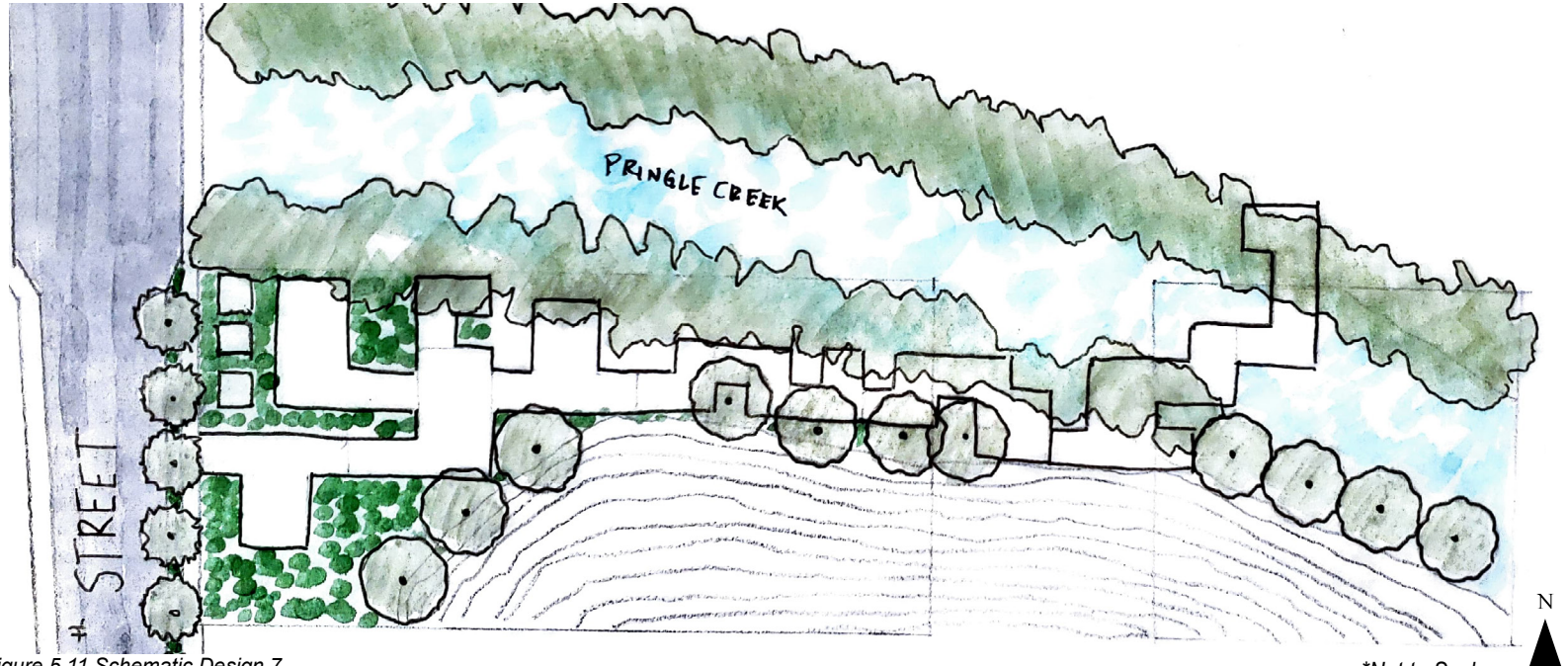


Figure 5.11 Schematic Design 7

**Not to Scale*

Option 8

Figure 5.12 carries on a similar rectilinear design concept from previous schematic designs, except this is one is more direct along the narrow bank and steep hillside. This option introduces more programmed options that address social interaction, cultural settings, nature play, and educational experiences. There remain overhanging overlooks from Options 1, 3, 4, and 5, and similar entrances to Options 2, 3, 4, 5 and 6. One enters this schematic design through the main entrance that leads directly to the kiosk to welcome you and navigates through different programs along the main pathway. This design provides spaces that promote physical activity, mental health, and social interaction.

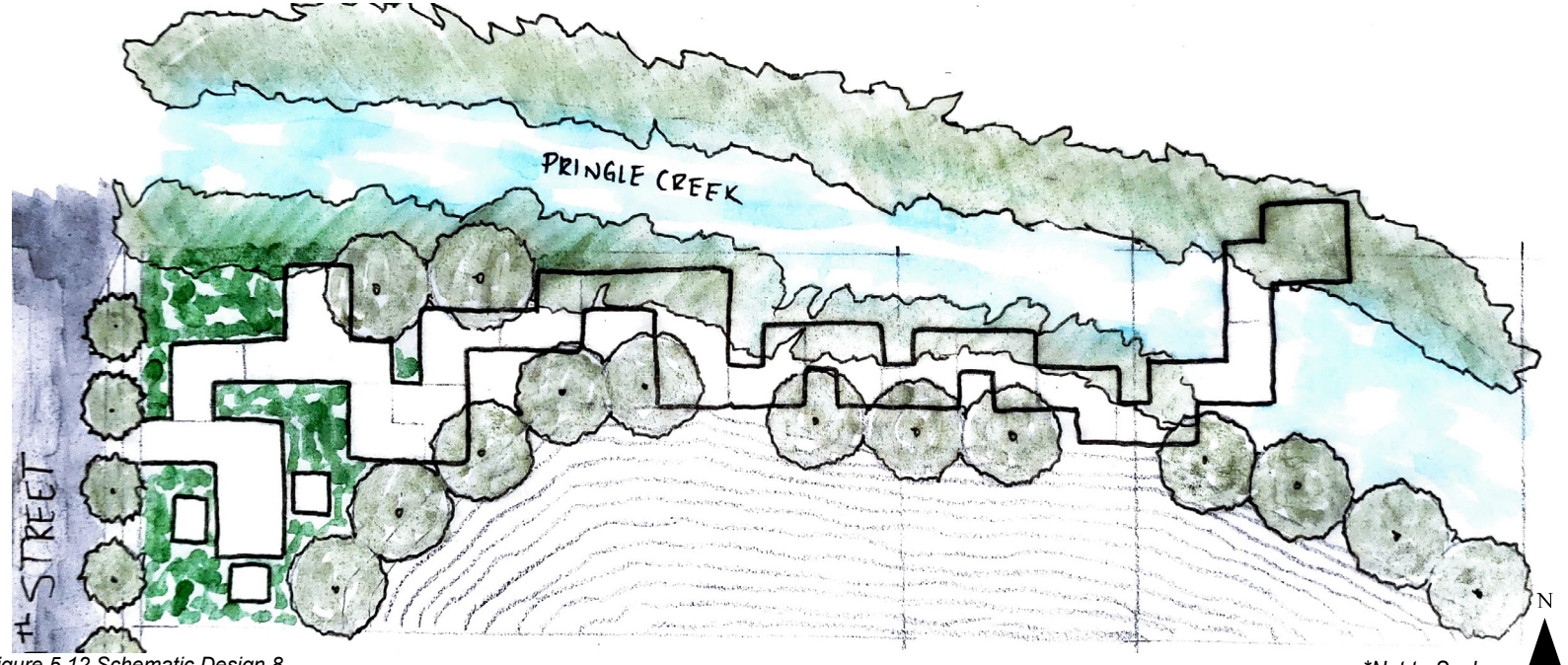


Figure 5.12 Schematic Design 8

**Not to Scale*

Option 9

Figure 5.13 continues the rectilinear design concept as the main theme for circulation, asking visitors to move in a geometric manner. The spine of this site is composed of all right angles with the vegetation buffer adjacent to the creek bank, steep hillside, and sidewalk; remaining relatively the same as Options 3 through 9. This schematic design frames this space starting on 14th Street by introducing trees adjacent to the sidewalk. This then leads pedestrians to the site itself and the Pringle Creek riparian corridor.

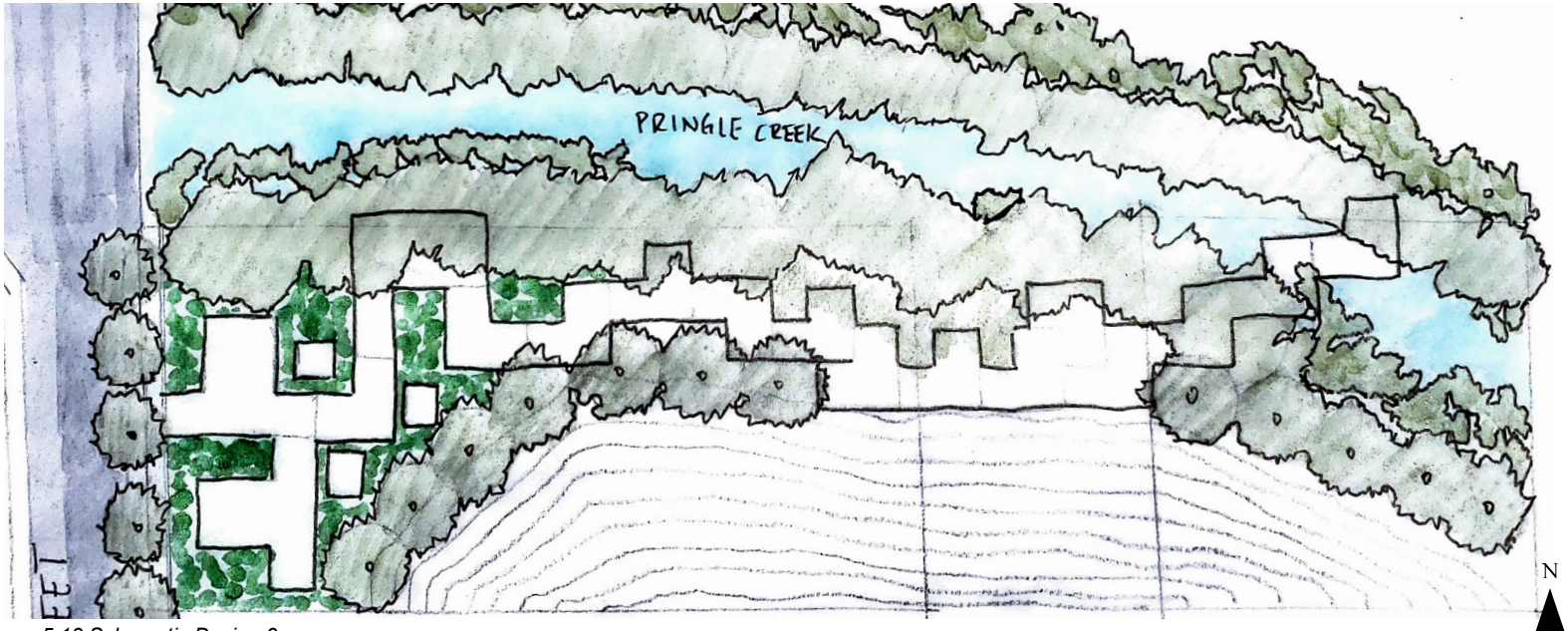


Figure 5.13 Schematic Design 9

**Not to Scale*

Option 10

Figure 5.14 continues the rectilinear design concept as the main theme for circulation, asking visitors to move in a geometric manner. The site is composed entirely of right angles that keep the vegetation buffer adjacent to the creek's steep banks. The introduced urban landscape remains relatively the same as Options 3 through 9. This schematic design is framed as a park seen through the introduction of vegetation on 14th Street and its continuation towards the park's entrance and creek's riparian corridor.

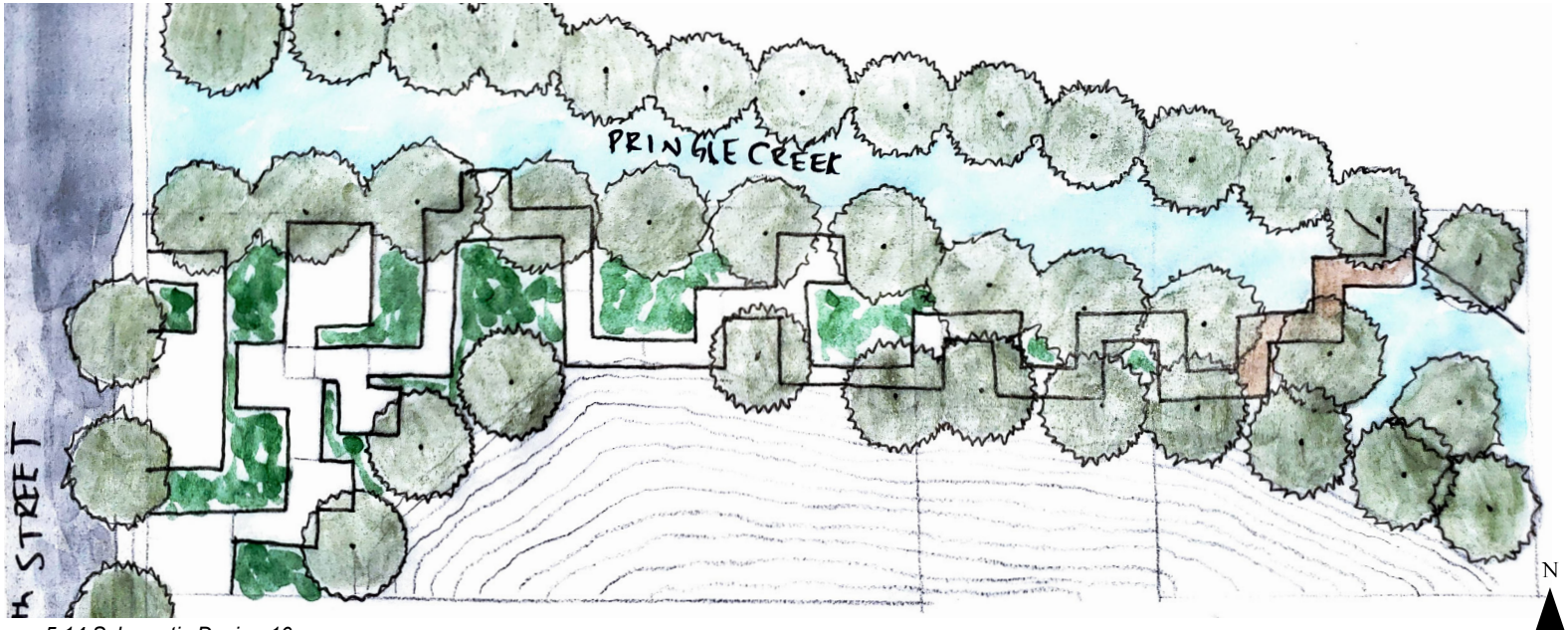


Figure 5.14 Schematic Design 10

*Not to Scale

Option 11

Figure 5.15 continues the rectilinear design concept as the main theme for circulation and park programming. The spine of this site is composed of all right angles with a vegetation buffer adjacent to the Pringle Creek bank and sidewalk, similar to Options 3 through 10. This schematic design has access to a large gathering kiosk area, food vendor area, nature play, fitness area, and picnic areas. These programs are a continuation of Phase I and II. Overall, this site uses space efficiently as seen through the creation of programmed areas and integration to its natural setting.

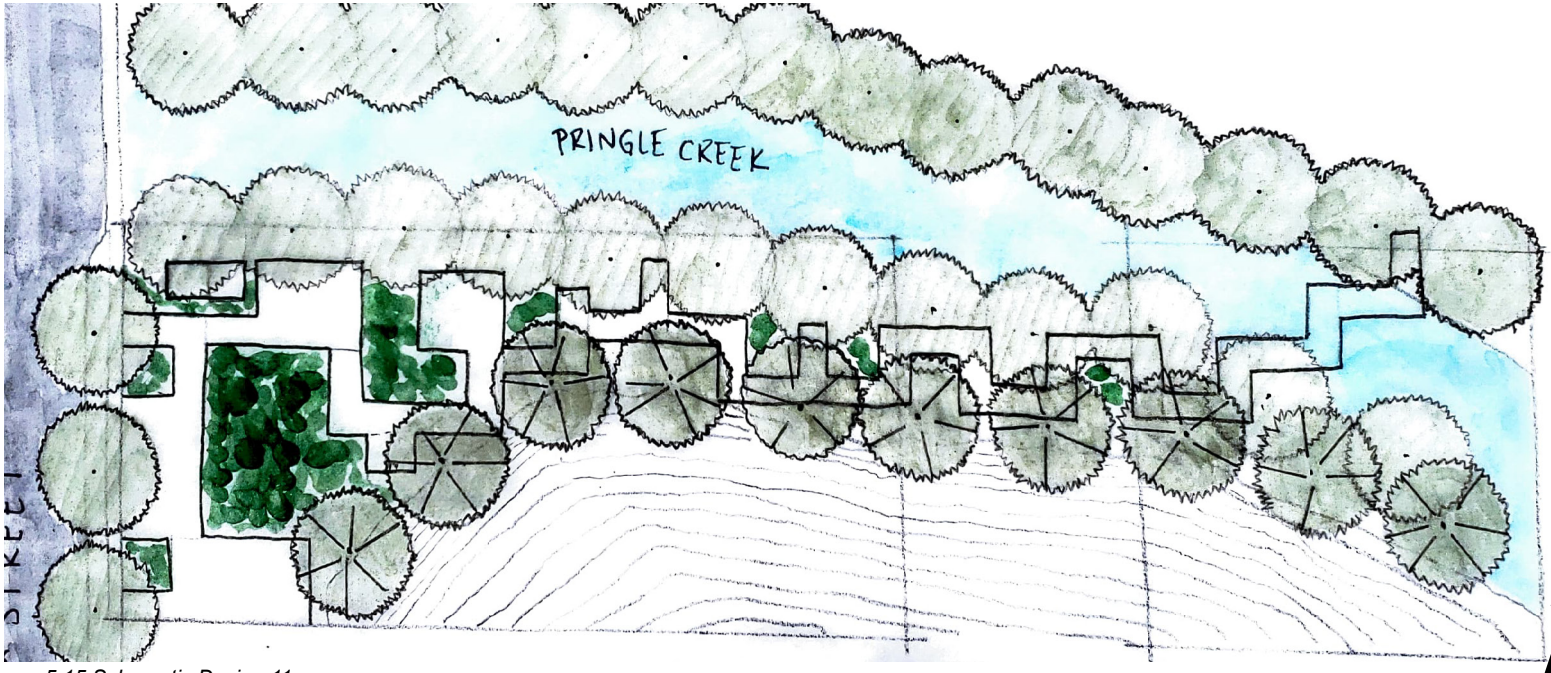
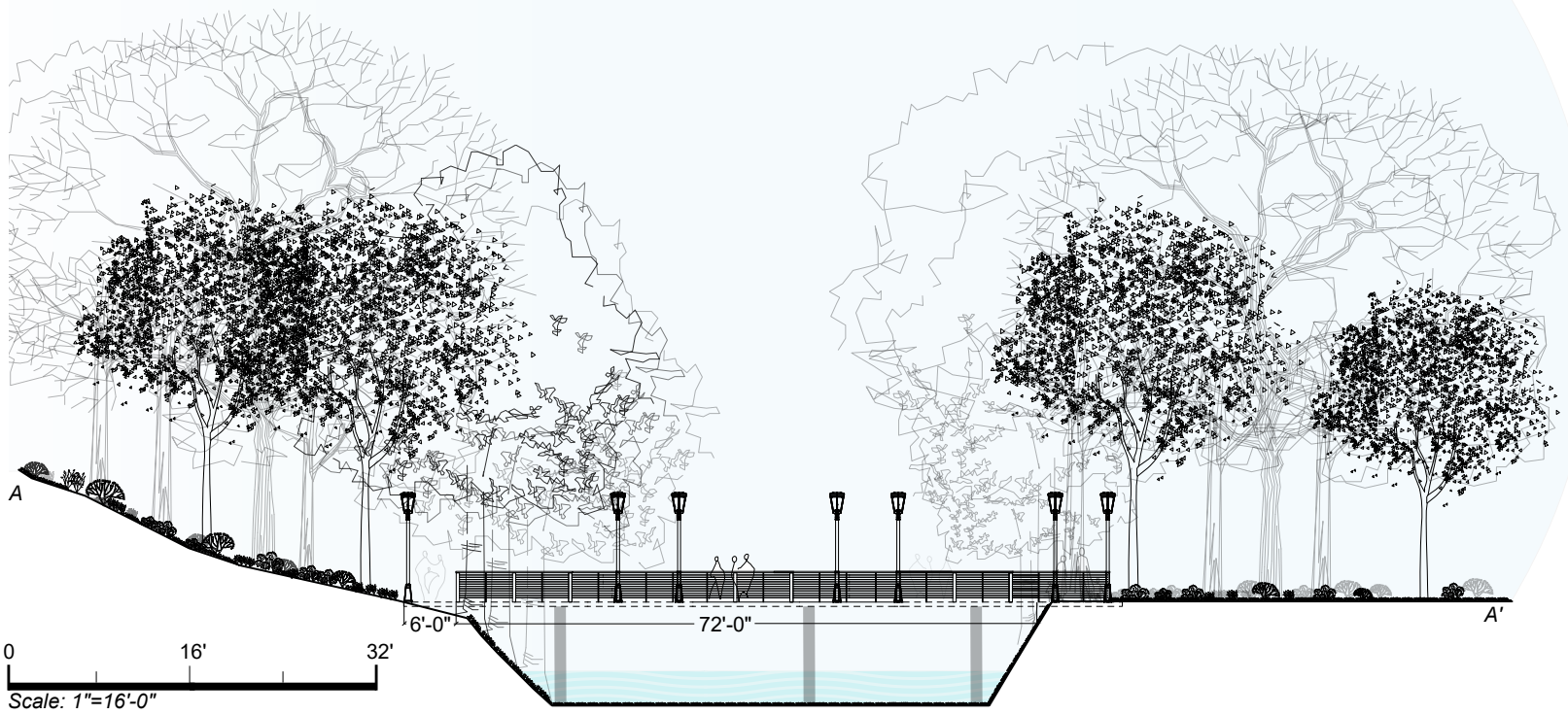


Figure 5.15 Schematic Design 11

**Not to Scale*

Figure 5.16 Pringle Creek Programming
Scale: 1:64

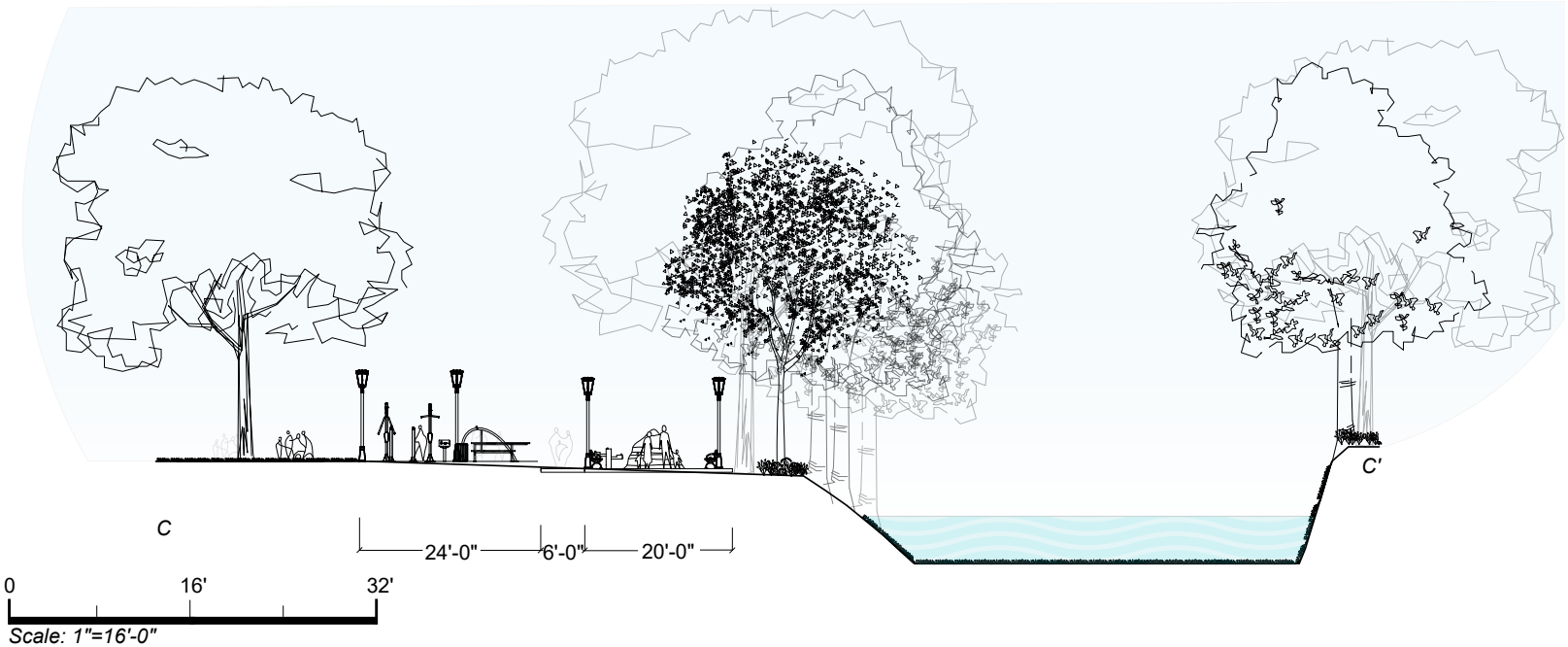


Scale: 1"=16'-0"

Figure 5.17 Section A-A'

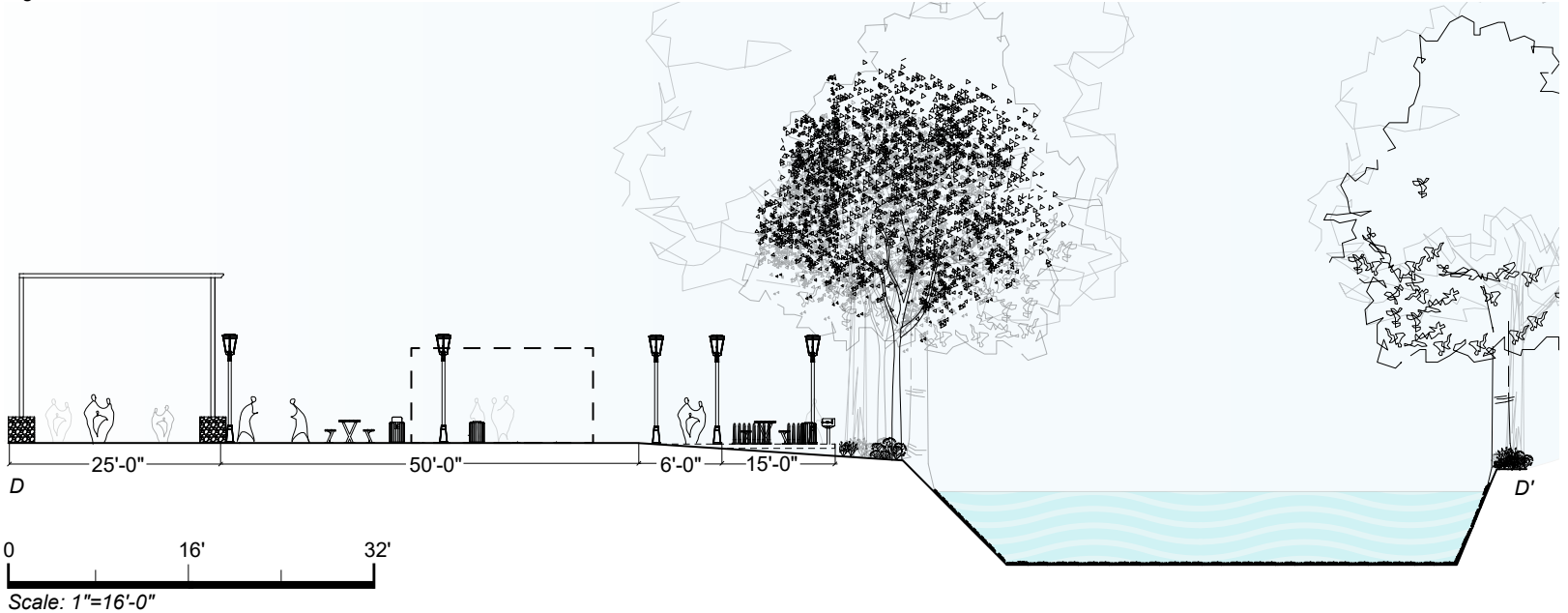
Scale: 1"=16'-0"

Figure 5.18 Section B-B'



Scale: 1"=16'-0"

Figure 5.19 Section C-C'



Scale: 1"=16'-0"

Figure 5.20 Section D-D'

Figure 5.21 BBQ and Food Vendor Area

Figure 5.22 Fitness and Nature Play

Figure 5.23 Plaza

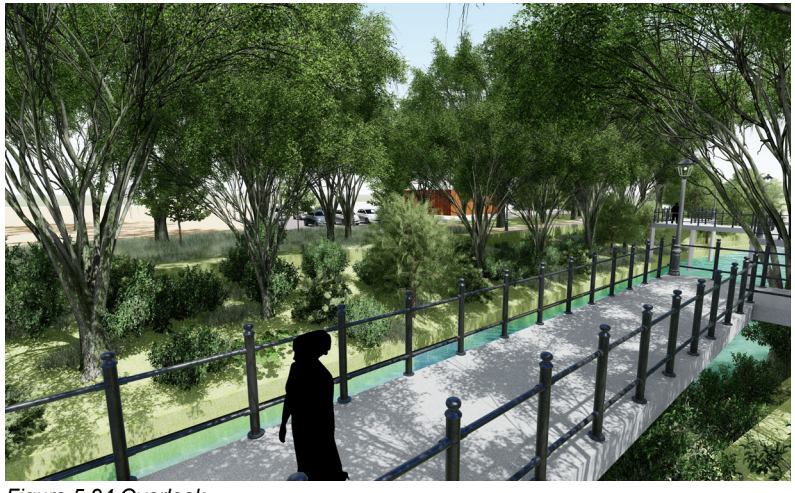


Figure 5.24 Overlook

Figure 5.25 BBQ Area

Figure 5.26 Open Space

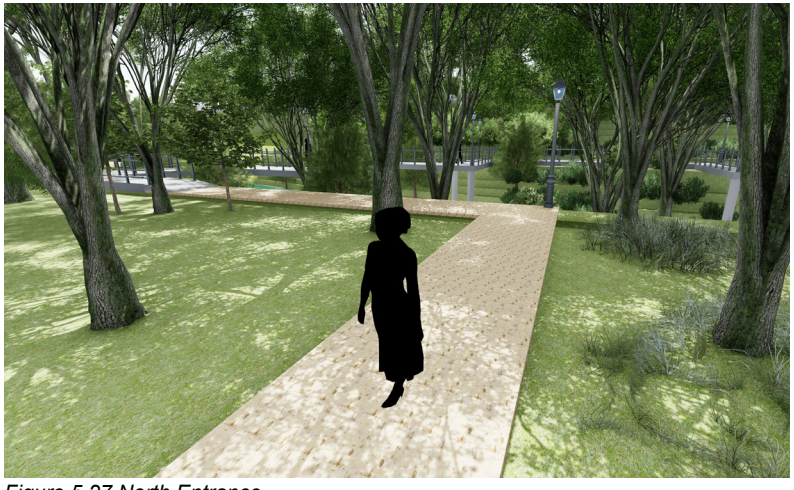


Figure 5.27 North Entrance

Figure 5.28 Site Aerial View

Figure 5.29 BBQ and Food Vendor Area at Night

Figure 5.30 Fitness and Nature Play at Night

Figure 5.31 Plaza at Night

Figure 5.32 Site Aerial View at Night

Chapter 6
Conclusion

The final design integrates a natural park into the predominantly Latinx neighborhood. This final site design embraced the natural setting in an urban environment while encapsulating park programming that promotes social gathering, and physical and mental health as shown in Figures 5.21-5.32. This design incorporates a BBQ and food vendor area where residents can come together and socialize through food. The fitness area provides accessibility to amenities that promote healthy habits, while the plaza is a place for tranquility while the overlook embraces nature. The fitness area was incorporated to target an already vulnerable population that is prone to diabetes while the food vendor area brings together community through food. Open space was designed to be an open grass area for flexibility of use for all ages, whereas the covered plaza is used as a place to gather socially and celebrate events all year round. In recognizing that fear of violence is prevalent within this social group, having adequate lighting in this design was important.

Parks provide access to recreational facilities, social gathering areas, and natural spaces that play a role in positive health outcomes. Recreational facilities provide opportunities for physical activity, social gathering areas, open lawns, trails, and natural spaces provide an escape that contribute to positive mental health. Latinx communities do not have the same access to park acreage within a ten-minute walk as predominantly White communities, but there are variations in accessibility to different kinds of parks. In the findings, access to natural spaces is limited in comparison to predominantly White neighborhoods. While both communities have nearby parks, the differences and inequities lie within the available park amenities and acreage. Parks provide a variety of benefits to their community, including positive physical, mental, and

social health. In this way, park use and accessibility can be an outlet for promoting a healthy lifestyle. Considering what makes a park “accessible” to residents, the 10-minute walking distance applies only to residents on foot but does not include other factors for accessibility, such as public transportation, personal transportation, and parking. With this, many parks can be accessible to a larger radius of residents that are not technically within the walking distance. For the purpose of this study, nearby residents within walking distance were highlighted to focus on ease of access to local parks. Urban parks encourage physical activity, promote public health, prevent obesity, and reduce incidence in chronic conditions, opportunities arise that examine park accessibility, the presence of park amenities, improvement of public parks and public participation in the planning process, as well as examine the presence and accessibility of cultural services to better understand their role and surrounding environment.

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Appendix

3/20	Location	Accessibility	Conditions	Safety
Lot 1: **Pringle Creek Park** **Date/Time Visited:**	☐ Residential ☐ Commercial ☐ Industrial	☐ Sidewalk ☐ Neighborhood Street ☐ Main Road ☐ Parking Available	☐ Vacant (Activate) ☐ Partial Vacant (Renovate) ☐ Built (Restore)	☐ Lighting ☐ Visibility ☐ Dangerous Materials
Notes: *This site is overgrown with blackberries yet has plenty of tree canopy adjacent to Pringle Creek. This vacant lot is in a riparian zone that has the opportunity to integrate itself within this creeks corridor.*				
Lot 2: **Geer Natural Area** **Date/Time Visited:**	☐ Residential ☐ Commercial ☐ Industrial	☐ Sidewalk ☐ Neighborhood Street ☐ Main Road ☐ Parking Available	☐ Vacant (Activate) ☐ Partial Vacant (Renovate) ☐ Built (Restore)	☐ Lighting ☐ Visibility ☐ Dangerous Materials
Notes: *This site is adjacent to Geer Community Park, an Active park zone according to this study. It is home to a pond, yet it is next to a main road with no sidewalk or parking.*				
Lot 3: **Parkview Natural Area** **Date/Time Visited:**	☐ Residential ☐ Commercial ☐ Industrial	☐ Sidewalk ☐ Neighborhood Street ☐ Main Road ☐ Parking Available	☐ Vacant (Activate) ☐ Partial Vacant (Renovate) ☐ Built (Restore)	☐ Lighting ☐ Visibility ☐ Dangerous Materials
Notes: *This site was hard to get to with no opportunity to pull aside while driving. The site is steep, and there is temporary shelter for people experiencing homelessness.*				
Lot 4 **Date/Time Visited:**	☐ Residential ☐ Commercial ☐ Industrial	☐ Sidewalk ☐ Neighborhood Street ☐ Main Road ☐ Parking Available	☐ Vacant (Activate) ☐ Partial Vacant (Renovate) ☐ Built (Restore)	☐ Lighting ☐ Visibility ☐ Dangerous Materials
Notes:				

Figure A.1 Vacant Lots Site Analysis Survey