Northeast Kansas City: A walkable district

by

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A REPORT

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Abstract

New Urbanism is a planning and design approach that opposes the idea of urban sprawl, a migration pattern that is very prominent in large cities, such as Kansas City. Its purpose is to combine many aspects of daily life into a singular network that enhances accessibility and quality of life. New Urbanism consists of many components that create a successful community. This study focuses on walkability and safety, two aspects of New Urbanism that can be implemented and analyzed in any community at any scale. These principles were analyzed within the neighborhoods of Lykins and Sheffield, located east of Downtown Kansas City. These neighborhoods currently suffer from high crime rates, heavy industrial uses, and urban blight. They also lack easy access for pedestrians as well as safe and secure neighborhood environments for their residents and visitors to the area. These factors lead to the question:
How can safety and walkability be analyzed and implemented in two neighborhoods within Northeast Kansas City, Lykins and Sheffield, to influence New Urbanist development in the area?

This report aims to answer the preceding question by assessing the physical and perceived aspects of walkability and safety. This was achieved by using Google imagery, GIS analyses, and photo questionnaires distributed throughout the two neighborhoods. Sidewalk width, the existence of sidewalks, distances to community amenities, pavement conditions, visibility, lighting, the existence of vacant lots, and topography are the variables that have been examined throughout the study. These factors were first analyzed using GIS and Google Imagery and then were combined with the results from the photo questionnaire (n=43) to see what elements people prefer in their neighborhoods.

The results from the survey and the site analysis influenced the selection of areas to implement New Urbanism design interventions. Three sites were selected that scored low in the photo survey and are considered dead zones. The design works to link these three sites together by applying similar design approaches the each location. Additional considerations were also given to walkability and safety based on survey responses to create unique experiences. These design interventions can promote New Urbanist principles and inform future development within Lykins and Sheffield as well as their surrounding neighborhoods near Downtown Kansas City.



Northeast Kansas City:

A Walkable District

Konner Pendland

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Abstract

New Urbanism is a planning and design approach that opposes the idea of urban sprawl, a migration pattern that is very prominent in large cities, such as Kansas City. Its purpose is to combine many aspects of daily life into a singular network that enhances accessibility and quality of life. New Urbanism consists of many components that create a successful community. This study focuses on walkability and safety, two aspects of New Urbanism that can be implemented and analyzed in any community at any scale. These principles were analyzed within the neighborhoods of Lykins and Sheffield, located east of Downtown Kansas City. These neighborhoods currently suffer from high crime rates, heavy industrial uses, and urban blight. They also lack easy access for pedestrians as well as safe and secure neighborhood environments for their residents and visitors to the area. These factors lead to the question:
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chapter one

INTRODUCTION



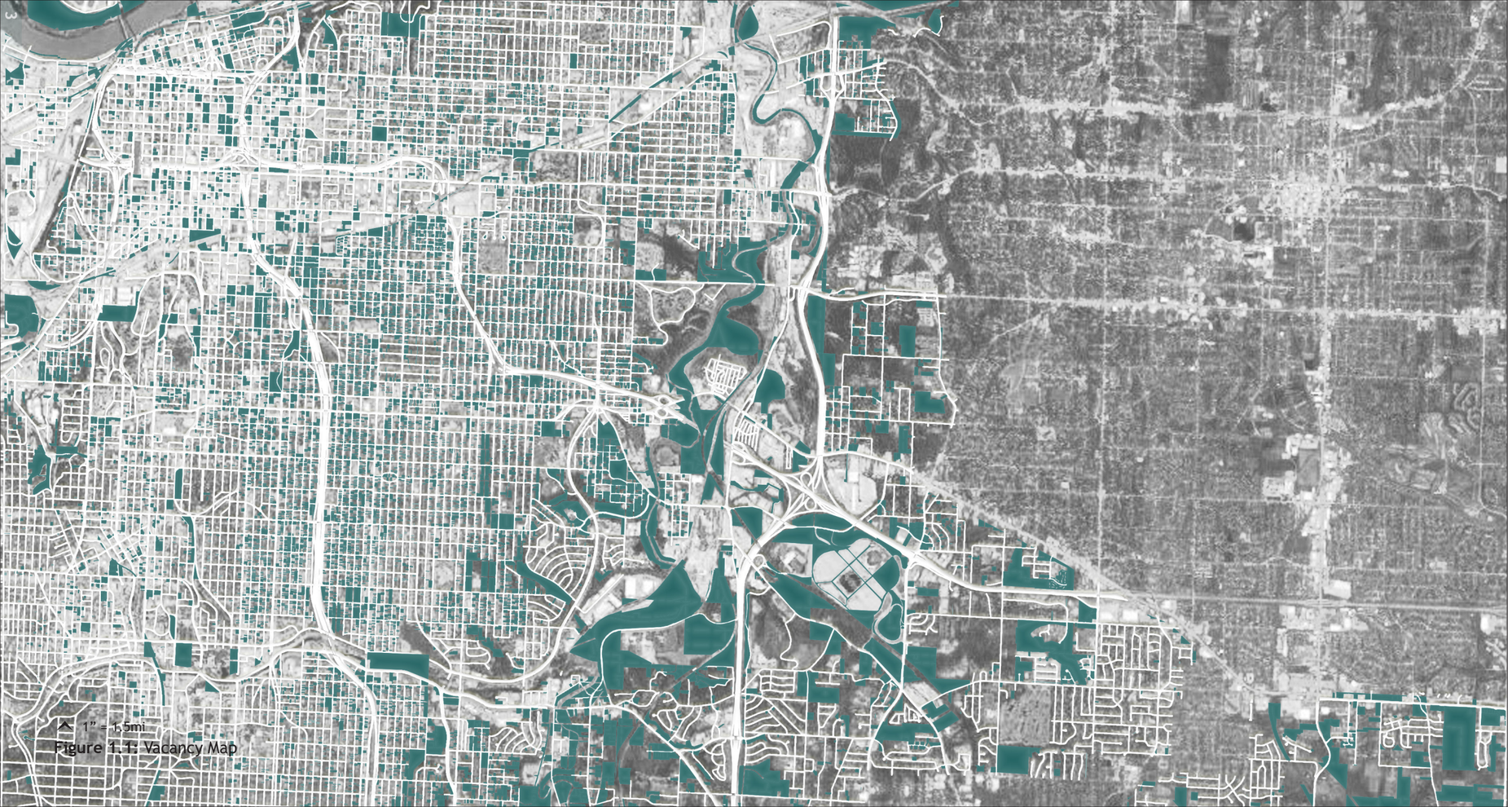


Figure 1.1: Vacancy Map

Introduction

Post-WWII development drove people out of the city into suburbia due to an increase in total population and the creation of highways making it easier for people to travel longer distances (Freilich, 1997). As seen in Figure 1.1, This flee left many lots in the city vacant creating a negative effect on economic and environmental health (Norquist, 2000; Griffith, 2010). New Urbanism is a design approach that offers effective alternatives to this kind of urban sprawl by creating walkable communities, accessible public spaces, multi-modal transit opportunities, cohesive community character, and active social environments at the neighborhood, community, and city-wide scale (Charter for the New Urbanism, 2000; Griffith, 2010). Today, there are policies in place that combat vacancy in cities, and people are more willing to move towards the city core due to job proximity and increased safety measures in the area. This study focuses on two essential aspects of urban vacancy, walkability and safety. These are also two of the principles of New Urbanism that can be implemented at the neighborhood scale. Kansas City is a strategic location to study these aspects since it is prone to urban vacancy, especially east of Downtown KCMO between Chestnut Street and the Blue River. The principles of New Urbanism have the opportunity to provide a remedy for vacancy within an urban core such as Kansas City. This study examines how safety and walkability as two principles of New Urbanism can be increased in the existing neighborhoods of Northeast Kansas City, Missouri.

Study Site

The study site includes the neighborhoods of Lykins and Sheffield in Northeast Kansas City, Missouri that are largely affected by urban vacancy. They are adjacent to one another, bisected by a railroad, and are located just south of Independence Avenue (See Figure 1.5). Many of the neighborhoods in Northeast Kansas City were once very desirable places to live attracting wealthy, white homeowners (Worley 1990, 44-45). These neighborhoods can be see in Figure 1.2. As urban sprawl has influenced migration, these neighborhoods are now home to a diverse range of ethnicities (See Figure 1.3). The majority of the population is Hispanic, closely followed by African American. A smaller percentage of the racial make-up is white and a mixture of other ethnicities (Statistical Atlas, 2020). The neighborhoods also have a much lower income than the rest of Kansas City, Missouri, which makes it difficult for future growth within the area (See Figure 1.4) (Statistical Atlas, 2020).

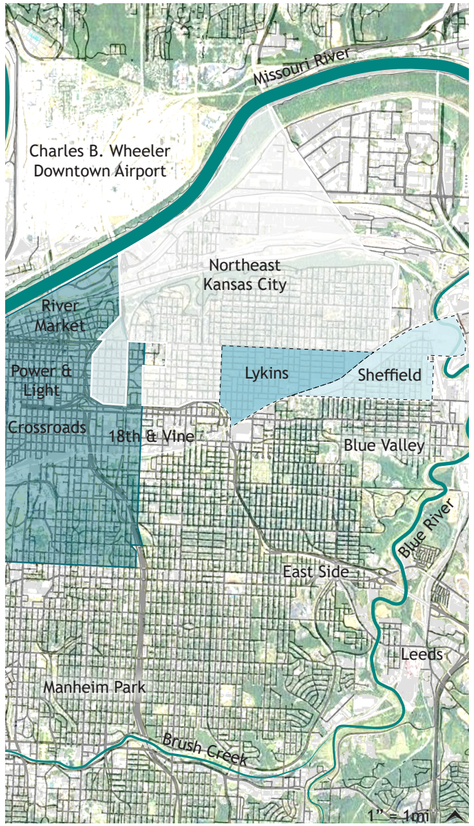


Figure 1.2: Context Map

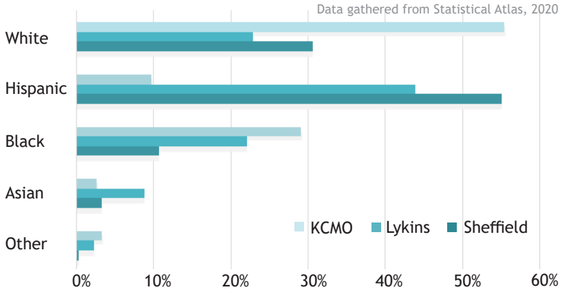


Figure 1.3: Racial Breakdown

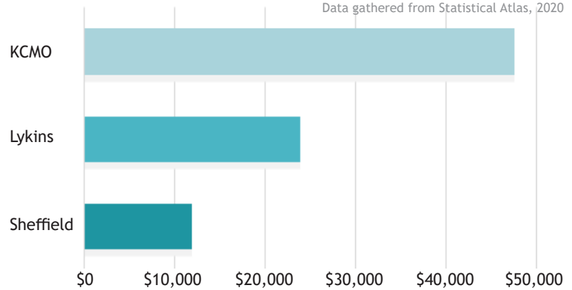


Figure 1.4: Average Household Income

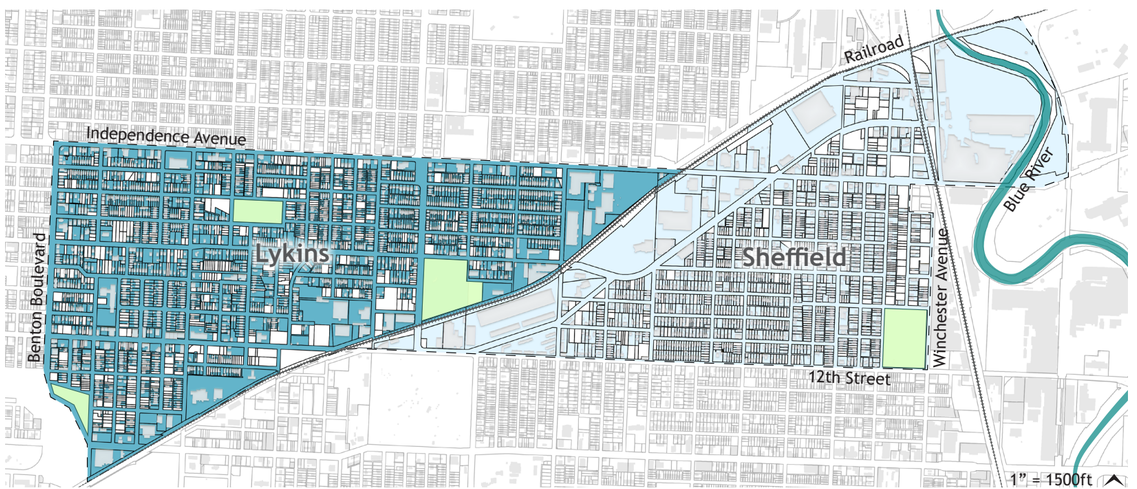


Figure 1.5: Study Area

Dilemma

The neighborhoods of Lykins and Sheffield in Kansas City, Missouri are in a prime location due to their proximity to Downtown Kansas City, the ease of access to and from the highway system, and the many design movements that have influenced their surroundings. Unfortunately, these neighborhoods suffer from urban blight. There are high amounts of crime in the area, many low-income residences, severe topography changes, and a significant amount of vacant lots that all play a part in the neighborhood atmosphere. While Kansas City has a very high crime rate, the most dangerous parts of the city are near the downtown and include the neighborhoods of Lykins and Sheffield (Neighborhood Scout, 2020). The instances of crime within the last year can be seen in Figure 1.6. The household incomes within the neighborhoods are both significantly lower than the household income of Kansas City as a whole with the average Kansas City, Missouri household income being $47,500. The Lykins neighborhood average household income is $23,900 and the Sheffield average household income is $11,900 (Statistical Atlas, 2020). The topography varies greatly throughout the study area with high topography changes near the eastern edge of Sheffield and the northeast corner of Lykins Square in Lykins (ArcMap 10.6.1, Map Data from MARC and Kansas City Parcel Viewer). There are few topography changes near the railroad in both Lykins and Sheffield, especially along the eastern side of Sheffield, making these locations ideal for commercial/industrial development (See Figure 1.7) (United States Department of the Interior National Park Service, 2010). The neighborhood of Lykins suffers from approximately 78 acres of vacant land, taking up 15% of the neighborhood. Sheffield has 55 acres of vacancy, which is about 10% of the total neighborhood area (ArcMap 10.6.1. Map Data from MARC and Kansas City Parcel Viewer). All of these conditions are important to be aware of and influence the proposed designs for the neighborhoods of Lykins and Sheffield.



Figure 1.6: Crime Map (February 2019 - February 2020)

Data gathered from Kansas City, Missouri Police Department, 2020

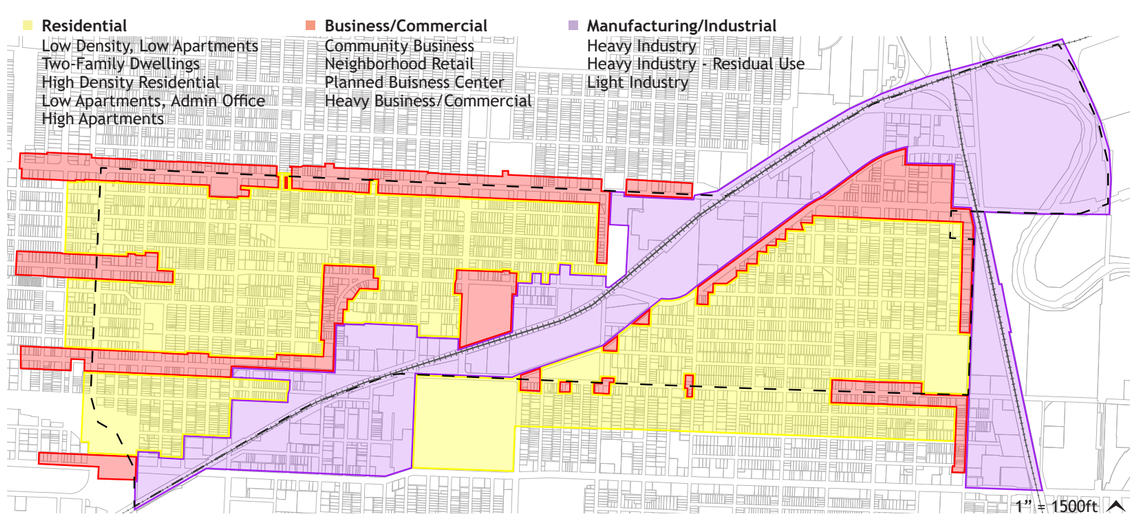


Figure 1.7: Land Use Map

Data gathered from Kansas City, Missouri Parcel Viewer, 2020

Research Question

How can safety and walkability be analyzed and implemented in two neighborhoods within Northeast Kansas City, Lykins and Sheffield, to influence New Urbanist development in the area?

Project Goals

New Urbanism is a design approach that was developed as a result of urban sprawl. It has been successful in many developments throughout the United States and can be an effective solution within existing urban neighborhoods where urban sprawl has left many lots vacant and the city empty. This study focuses on the physical and perceived aspects of New Urbanism in terms of walkability and safety in neighborhoods near Downtown Kansas City. It draws from the principles of New Urbanism to inform measurable variables of walkability and safety and combines them with the perceived results of a survey. These results can provide information about future development of the neighborhoods and how New Urbanism can be influential within an urban core.

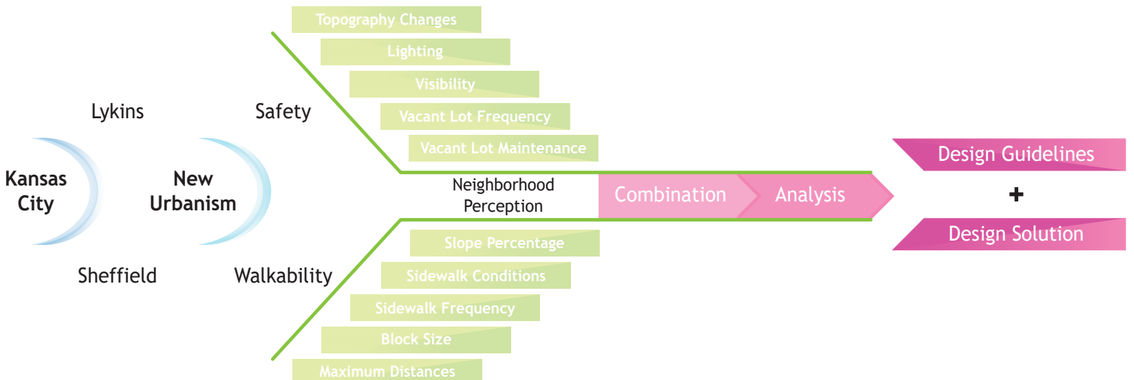
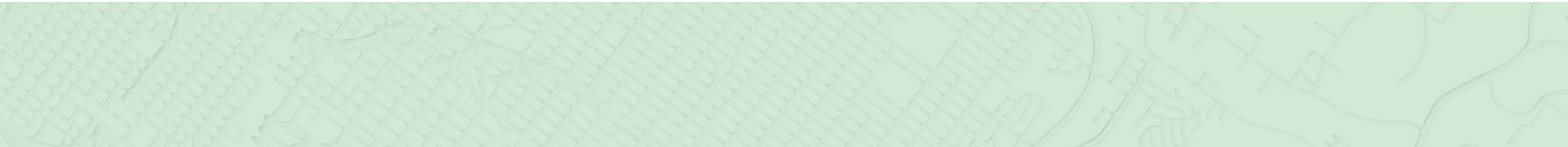


Figure 1.8: Process Diagram

chapter two
BACKGROUND



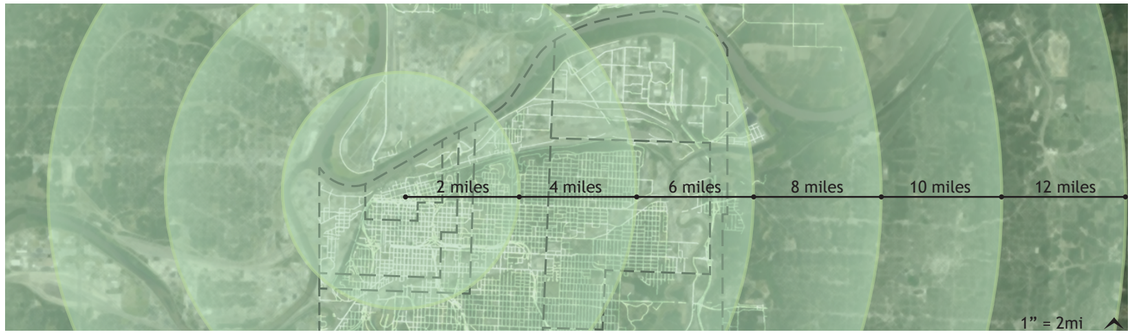


Figure 2.1: Urban Sprawl in Kansas City

Data gathered from Freilich, 1997

Literature Review

Urban Sprawl

During the development of the western world, many places in America were designed to resemble European cities that emphasized urban community (Worley 1990, 1). By the 1930s, the automobile-dominated fantasy of suburbia created a negative effect on the quality of our daily lives (Moule 2000, 105; Kulash 2000, 84). The idea of a street hierarchy with designated roads for different flows of traffic became the norm. This created isolated clusters of development connected by highways and left the standard grid layout that allows for a variety of different routes and experiences in the past (Moule 2000, 105; Kulash 2000, 84; Langdon 1994, 29, 31, 45). In the mid- to late- nineteenth century, the views of city life began deteriorating, and suburbanization was booming (Moule 2000, 105). People who had money were able to escape the city and move to the outskirts, where nature was closer and their kids were safer (See Figure 2.1). Multiple modes of transportation to and from the city center made the transition easier, so people no longer had to travel to the city if they do not want to (Moule 2000, 105; Langdon 1994, 1,11, 25). Today, three-quarters of the United States population lives in metropolitan cities while two-thirds of those people live in the suburbs, leaving many places impossible to access by foot. As a result, the average person takes twelve car trips a day for school, work, recreation, and shopping (Moule 2000, 105; Langdon 1994, 1). Studies have shown that suburbia can even have a negative effect on children since their friends and peers are so spread out (Moule 2000, 105; Langdon 1994, 1,11, 25).

Suburban communities normally are developed to provide lower residential density, inadequate street connectivity, and low land-use diversity (Gallimore, Moore, Werner, 2011; Langdon 1994, 15, 17). This leaves people more disconnected from their neighbors and communities than ever before (Langdon 1994, 15). As this kind of development grows, it leaves many existing properties within the urban core abandoned or underutilized. Sprawl accounts for the greatest amount of city-wide growth, but that does not mean that the outward expansion is beneficial for the city as a whole (Freilich 1997, 1; Langdon 1994, 1; Griffith, 2010). Sprawl increases development costs, takes up a large amount of time, consumes much needed agricultural land, and requires more energy and natural resources once developed. Instead of creating new facilities far away from the city, it would be more beneficial to revitalize the existing facilities within the urban core (Freilich 1997, 1; Langdon 1994, 5, Griffith, 2010).

There are many differences between suburban and urban living. Income, education, employment, and crime are some of the notable factors associated with urban sprawl. While suburban families desire two incomes to meet their ideal standard of living, urban families need two incomes in order to provide for their families (Freilich 1997, 7). Crime continues to drive people out of the city even though gated communities and home security systems are continuously being implemented. This can lead to lower incomes within urban neighborhoods and affect the budgets of inner-city schools. It can take years for students and families to demand change in their school systems (Speck, 2017). Regarding employment, entry- and mid- level jobs have also migrated to suburban areas leading to greater unemployment and vacancies within the urban core (Freilich 1997, 7; Moule 1994, 11). In Kansas City, property value and neighborhood pride relate directly to boulevard frontage and open-space access (Lee 1995, xxiii). There appears to be a trend in the opportunities made available to residents of an urban neighborhood compared to the opportunities that are available in suburban neighborhoods. There must be a way to create equal and accessible opportunities for all.

New Urbanism

New Urbanism is a planning and development design approach focused on people (See Figure 2.2). It connects cities and towns through commercial corridors, central gathering spaces, a variety of stores, many places for work, and diverse neighborhoods. New Urbanism allows people to interact with their neighbors on a daily basis, walk or bicycle to school and work, and run errands in their local shops (Charter for the New Urbanism 2004, 12; Griffith, 2010). Schools have the ability to form the heart of a neighborhood with other day-to-day amenities around them (Moule 200, 107; Langdon 1994, 22). These resources should be close to home in order to create a less fragmented community (Langdon 1994, 17). New Urbanist design has three components. The region is the fundamental economic unit encompassing the vision. Towns, villages, and neighborhoods are the building blocks of the region. Streets are then the guiding design elements of the design and planning strategies. They should connect walkable neighborhoods and have a strong relationship to buildings and informal public spaces where people can take part in a variety of activities (Charter for the New Urbanism 2004, 2; Langdon 1994, 22; Griffith, 2010).

New Urbanist zoning emphasizes building type, form, and shaping of spaces in between buildings. There are guidelines that inform design decisions, such as how buildings relate to each other, to streets, and to other public spaces. These strategies help create a comfortable and uplifting feeling within the public realm (Charter for the New Urbanism 2004, 12; Langdon 1997, 117; Duany Plater-Zyberk & Co., 2014; Griffith, 2010). Making streets pedestrian-oriented, reducing minimum setback requirements, reviewing building height requirements, putting public buildings in main spaces, creating minimum lot frontages, creating relationships between the streets and the buildings, and developing many neighborhood parks can help create active streetscapes and promote civic life (Charter for the New Urbanism 2004, 21-23; Langdon 1997, 123; Jones, 2015; Duany Plater-Zyberk & Co. 2014; Griffith, 2010). Creating a community atmosphere that allows more interaction between neighbors, such as a cul-de-sac which enforces familiarity, can in turn make a neighborhood feel safe since information and ideas can flow seamlessly (Langdon 1994, 25, 43; Griffith, 2010). Cul-de-sacs do have downsides though, including lack of pedestrian connectivity and civic identity. Neighborhoods without a standard grid pattern can become confusing to those unfamiliar with the area and increase emergency response time (Southworth, Ben-Joseph 2004, 29; Hochschild, 2013).

Walkability is a major factor contributing to the design and planning of New Urbanist communities. Creating walkable neighborhoods facilitates interaction between neighbors and enhances connections to and from important destinations. For an area to be walkable, it must be viewed as safe for residents and visitors to the area. As a result, safety is an important factor that not only relates to walkability but is emphasized in New Urbanist development. Together, these two can create a cohesive neighborhood environment within the residential neighborhoods of Kansas City, Missouri.

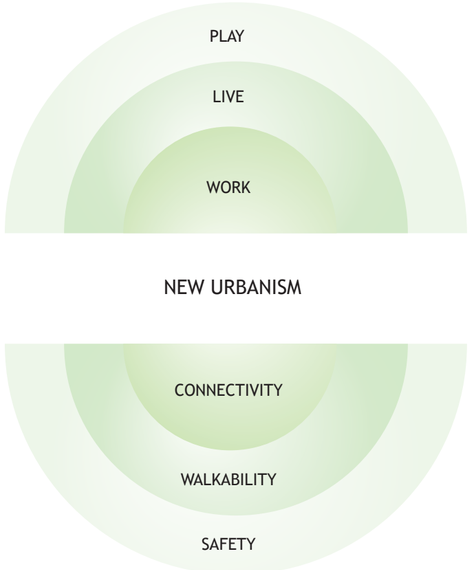


Figure 2.2: New Urbanism Principles

Walkability

Walkability is one of New Urbanism's key principles and must connect spatially to the built environment (Charter for the New Urbanism 2004, 13; Handy, Boarnet, Ewing, Killingsworth 2002). New Urbanist communities focus on reducing the need for automobiles by increasing public transit use and developing a more inclusive road system (See Figure 2.3). By reducing the use of automobiles, there is potential to reduce local traffic; encourage alternate forms of transportation such as walking, biking, or taking the bus; and conserving energy (Kulash 2000, 83). Studies have shown that in New Urbanist communities, there is a significant reduction in miles traveled by personal vehicles compared to traditional suburban communities (Kulash 2000, 86).

In the past, planners and designers separated buildings and their outdoor spaces from the street by designing projects without sidewalks altogether because of the noise, traffic, and unfamiliar connections to the rest of the world (Dover 2000, 147-148). Today, intimacy is considered a key ingredient in a city (Brooke 2005, 15). Sidewalks along streets are the most vital organs within the public realm, and the most successful neighborhoods prioritize walkability (Jacobs, 1961). Although sidewalks add to the functionality of walkability, many other factors contribute to the success of walkability in a neighborhood. Major arterial roads and lack of human scale elements can weaken the possibility and perception of walkability. Sidewalks that are in poor condition or are disjointed can also hinder the physical walkability of an area (Patterson, 2014; Griffith, 2010). On the other hand, walkability can enhance the sense of community within an area, reduce foreclosure, increase housing prices, decrease crime rates, and promote environmental justice. (Gilderbloom, Riggs, Wesley, 2015; Moule 2000, 106).

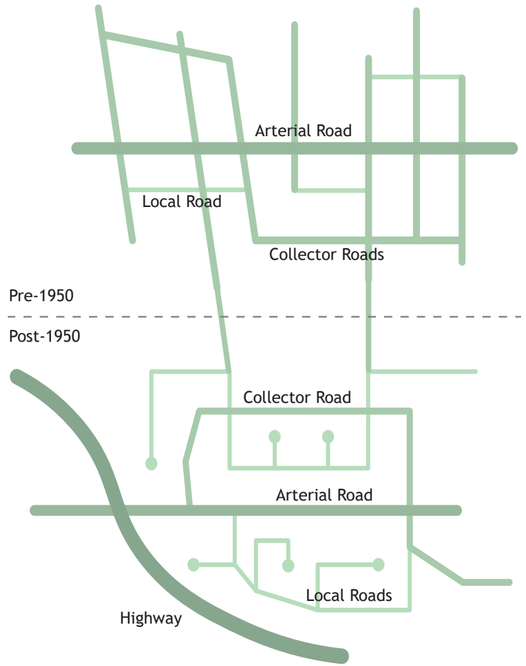


Figure 2.3: Street Hierarchy

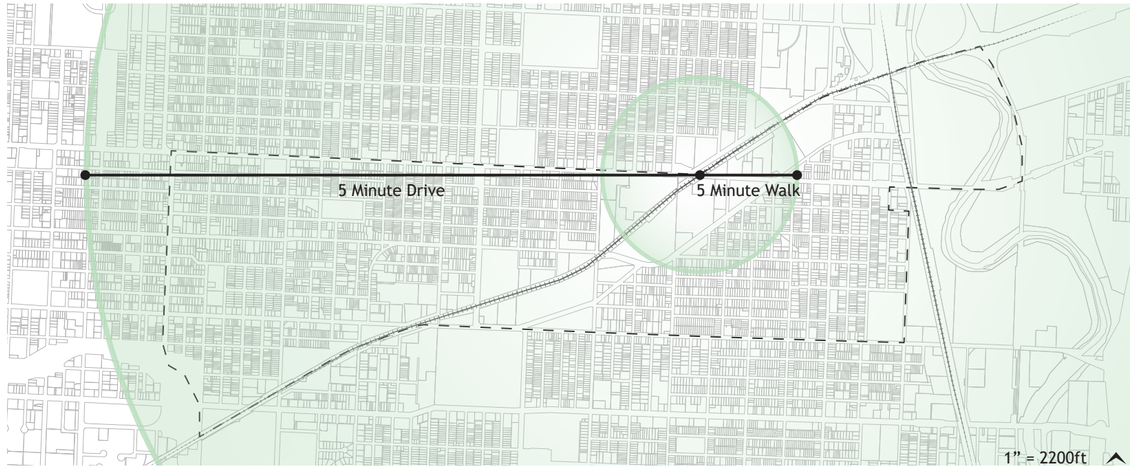


Figure 2.4: Driving vs. Walking Comparison

It is important to create a strong network of streets within a neighborhood that connect typical daily trip destinations and ensure that they are within a short walk of each other (Kulash 2000, 86; Brooke 2005, 18; Charter for the New Urbanism 2004, 20-21; Patterson 2014, 86). Studies show that adults prefer to walk more in areas of greater residential density, diverse land uses, and pedestrian friendly elements and children walk to school more often in new urbanist neighborhoods (Cervero, Kockelman 1997; Gallimore, Brown, Werner 2011). Residences and employment opportunities on site or nearby housing locations increase the potential for people to walk to work or use public transit instead of commuting solely by personal vehicle (Freilich 1997, 17). Residents of an area are willing to walk one-quarter of a mile in general to reach a bus stop (Kulash 2000, 86). Pedestrian routes to these transit systems must be appealing, because all transit trips begin and end as walking trips (Lieberman 2000; 102, Kulash 2000, 86, Speck, 2017). The ideal walking distance can be diminished to a maximum of 500 feet and vary by location or community based on how pleasant the area is to walk in (Kulash 2000, 85; El-Geneidy, Levinson, 2006). The difference between walking and driving within the study area can be seen in Figure 2.4.

Safety

Safety is a major factor that contributes to a site's walkability. As growth and urbanization continue to rise, so do crime rates around the world (Ebong, Zubairu, Olagunju 2017, 80). Both the perception and reality of security in an outdoor environment are necessary in order to attract people to urban neighborhoods (Gindroz 2000, 133). People are more willing to walk through a neighborhood that feels safe, because they would prefer to not be a victim of crime or hit by a vehicle from the street (Dover 2000, 148; Parks, Recreation, and Boulevard Staff 2010, 600). They must feel like they are in control of their surroundings or else the area is perceived as dangerous (Gindroz 2000, 133).

Crime Prevention Through Environmental Design (CPTED) is an essential practice when designing New Urbanist communities (See Figure 2.5) (Duany Plater-Zyberk & Co. 2014, 12.4). Oscar Newman came up with this behavioral and social science in order to minimize crime through perception (Newman, 1973; Atlas, 1018). The idea of CPTED generates a feeling of "eyes on the street" through design elements such as windows overlooking public spaces, definition of private spaces by walls and fences, adequate lighting of an area, enhanced visibility through and between spaces, clear assignment of ownership, and reduced accessibility by unknown people and vehicles (Duany Plater-Zyberk & Co. 2014, 12.4, Newman, 1973; Atlas, 2018). Studies show that safe spaces are orderly, well lit, clean, visible to the public eye, maintained, contain windows, and allow for open vistas (Gindroz 2000, 133; Jones 2015, 77). This is also backed by New Urbanism studies concluding that the dimensions of a space should encourage interaction among people in order to add to comfortability (Gindroz 2000, 135; Charter for the New Urbanism 2004, 12; Griffith, 2010).

New Urbanist residential streets successfully emphasize safety. Elements that promote safety in neighborhoods are large windows facing public spaces, homes facing one another, front yards defined by low plantings or fences, open and large porches, screened back yards, garages and services areas, and a room-like quality within the street. Every empty wall, garage door, or high fence along the street or sidewalk weakens the relationship between the street and its complementing architectures, as well as the residents' ability to maintain security (Gindroz 2000, 136; Brooke 2005, 18). Creating a consistent frontage where private buildings shape public space can create a more secure feeling for those within the public space (Charter for the New Urbanism 2004, 14). These aspects of New Urbanist design have to do with the built environment and the architectural characteristics of what is surrounding open space. What needs to be considered in spatial context is how people view the street. Perceived safety in relation to New Urbanism should be studied in terms of physical barriers, such as plant overgrowth and topography change, how vacancies in urban neighborhoods effect peoples' feeling of safety, and desirable visibility during the day and at night. Without information on the outdoor environment, it is hard to determine whether or not an area is safe. It is necessary for designers, community leaders, community-focused security, and residents to come together to facilitate and encourage increased safety and security measures within a neighborhood (Gindroz 2000, 133).

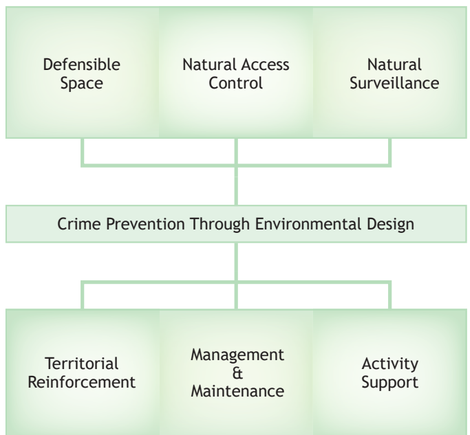


Figure 2.5: CPTED Principles

Data gathered from Atlas, 2018

The street itself is a place where physical safety and street perception can be a concern as well when addressing traffic (Gallimore, Moore, Werner, 2011; Langdon 1994, 35; Griffith, 2010). Road engineers have been designing roads that can handle speeds above the posted speed limit in order to protect unsafe drivers, but when the roads are designed for speeding, they can be a lot more dangerous for pedestrians (Dover 2000, 149-150). People also often perceive the wait time at a stop light to be longer on larger carrier roads than on smaller roads because they are more crowded and the surroundings are not as pleasant (Langdon 1994, 35, 37). Sidewalks, crosswalks, and intersections have the potential to mitigate fast moving traffic by using aesthetic treatments that are inviting and distinctive. They can also be used to guide pedestrians in a way that can be seen by motorists. In Kansas City, traffic calming through speed tables have been used to slow traffic (Parks, Recreation, and Boulevard Staff 2010, 600-5). Details within the right-of-way also play a part in confident pedestrian movement. Many minute details such as corner curb radii, landscape width, trees, lighting, sidewalk width, and on-street parking all effect a person's comfortability on the street (Dover 2000, 148).

Historical Background

Kansas City

Kansas City, Missouri has been an ever-increasing city since the mid 19th century when the population was just under 500 people (See Figure 2.6). (Worley 1990, 43; Worley 1993, 4). Today, the boundaries of Kansas City encompass a large metropolitan area that crosses the state line into Kansas (Worley 1990, 42; Freilich 1997, 10). Largely due to advances in technology and innovation in transportation, much of this radial expansion has resulted in urban sprawl (Worley 1990, 51). While nation-wide developments grows at a rate of about a million acres per year, a growth ring of expensive homes around downtown Kansas City expands two miles each year. In 1990, this ring was about 15 miles in radius (Langdon 1994, 1; Freilich 1997, 11). As the draw in Kansas City continues to be outwards, it is necessary to combat sprawl by bringing life back to the urban core through the development of vacant lots. Throughout the many changes that have led to the expansion of Kansas City, many neighborhoods have retained elements of their past in association with historic parks and boulevards (Lee 1995, xxiii).

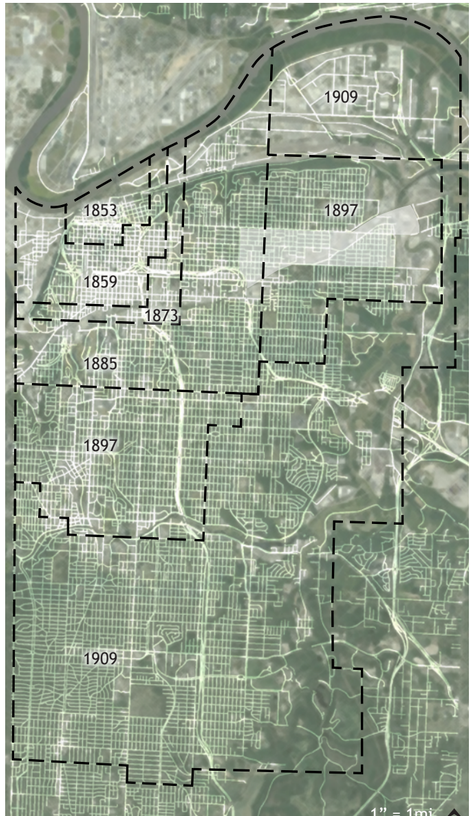


Figure 2.6: Kansas City Expansion

Kessler Park and Boulevard System

Northeast Kansas City is a central area in the Kessler Park and Boulevard System that was proposed for the city in 1893. The Kessler Park and Boulevard System was developed for the people of Kansas City to have easy access to green space (Lee 1995, xi; Jackson 2010). From this plan, many parks and boulevards were developed that enhanced community connections, created variety within the city, accounted for future growth while reflecting on the past, focused on residential needs, and was well supported throughout the city (See Figure 2.7). The Park and Boulevard System was so successful in creating a cohesive, walkable city that children within any neighborhood can walk the places they want to play (Lee 1995, xix). The middle-class housing also became much better throughout the city due to the easy accessibility to parks and boulevards (Lee 1995, xx). Unfortunately, some aspects of the proposal did not go as planned. The park and boulevard system did not expand into the central business district and existing roadways were difficult to reconstruct as they were already being used as commercial routes. Also, some of the designed boulevards began to be used for heavier traffic, the city's existing framework was challenging to work with, and some stretches of proposed boulevards were never completed (Lee 1995, xvi-xvii).

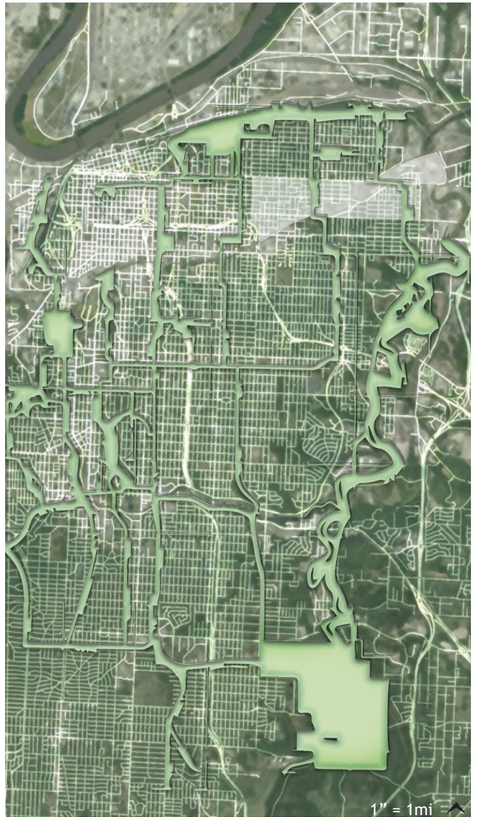


Figure 2.7: Kessler Park & Boulevard System

City Beautiful Movement

The City Beautiful Movement came about in the late 19th century, and the Kessler Park and Boulevard System helped shape this movement in Kansas City. It was focused on creating a city that is safe, convenient, and pleasant to be in (Mobly Harris, 1991, 21). Urban environments were designed to have easy access to parks and boulevards, playgrounds for children to play, trees, aesthetically pleasing buildings, and paved streets which Kansas City greatly benefited from (Mobly Harris 1991, 21). Figure 2.8 shows a structure built along the Paseo during the City Beautiful Movement.



Figure 2.8: The City Beautiful Movement

Future Growth

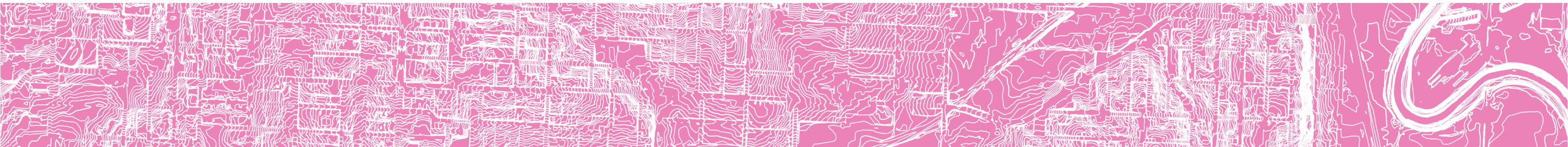
Much thought has been given to the future development of Kansas City and how to further connect the existing fabric of the city. The idea of a Centennial Boulevard that encircles the metropolitan area is to provide recreational opportunities, enhance cultural influences, preserve the landscape, and highlight historic features of the city. Plans are in place for The Paseo to link many of the ethic and minority neighborhoods so that they feel more at home in Kansas City. This can be accomplished by having roads branching off of The Paseo to create a larger greenway for a better city (Mobly Harris 1991, 97). This vision can be seen in Figure 2.9.



Figure 2.9: Centennial Boulevard Influence

chapter three

METHODS



Methods Used for Data Collection

Site Analysis: Existing Conditions

Site analysis was conducted on site and through Google Imagery to understand the existing conditions of each neighborhood. This examined public spaces within the neighborhoods, such as parks and streets. From this analysis, visibility and current street and sidewalk conditions could be assessed. Images of the existing conditions can be found on the following pages. Notable infrastructure and neighborhood services were also identified. This initial site analysis can be seen in Figures 3.1 and 3.2.

Site Analysis: Physical Measures

Physical measures were examined using GIS software. This analysis included the identification of vacant lots, slope percentages, street lighting, block size, sidewalk location, and sidewalk width. Distances to schools, grocery stores, parks, bus stops, and community centers were also noted along with a quarter-mile radius around each location. These measurements help get a feeling for what kind of services are being offered in the neighborhoods as well as areas that need additional services.

Perceived Measures: Photo Survey

Finally, a photo survey was distributed to residents and people familiar with the neighborhoods of Lykins and Sheffield. The results of the survey help to understand what people like or dislike about their surroundings, how walkable their neighborhood is, and how safe people feel within the neighborhoods. The survey also asked questions about how far common destinations are to their home and how often they walk there. Then, the results were analyzed to reflect certain demographic groups.

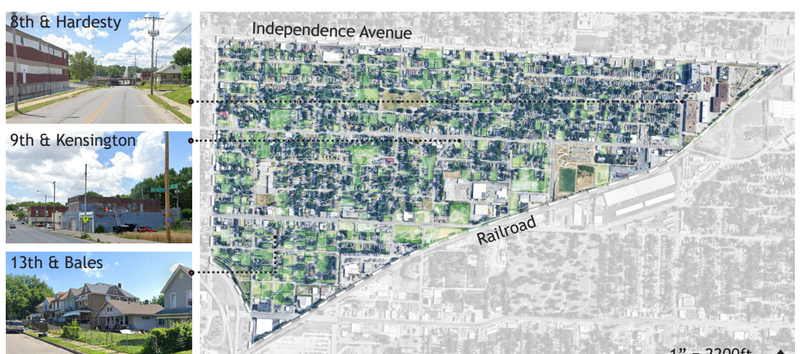


Figure 3.1: Lykins Neighborhood Existing Conditions



Figure 3.2: Sheffield Neighborhood Existing Conditions

Lykins

Background

The neighborhood of Lykins and the park within its boundaries, Lykins Square, are named after Dr. Johnston Lykins, the first legal mayor of Kansas City who settled into Kansas City in the mid 1800s (Dellinger 2000, 4; Lee 1995, 65). 9th Street runs through the middle of the neighborhood and has a history that includes Native American settlements as well as some notable Kansas City names that were once residents (Dellinger 2000, 24-25). The street transitioned from single-family residential to multi-family dwellings, commercial, and industrials uses in the early 1900s. Many of the people that worked here at the time still have family that live in the area (Dellinger 2000, 26).

Site Inventory

The Park and Boulevard System of 1893 emphasized the importance of accessible parks for everyone. This plan proposed three parks in the neighborhoods of Lykins and Sheffield. Lykins Square is about five acres and is located in the neighborhood of Lykins. It is surrounded by single-family homes and consists of a few amenities for the residents of the neighborhood that have been updated since the park's construction. The park was named after Lykins Elementary School. This school was located to the north of the park, but it is now closed, demolished, and considered to be a vacant lot (Lee 1995, 65; Dellinger 2000, 4, 58). Figure 3.4 shows the exsiting conditions of Lykins Square Park.

Freeway Park is another park in Lykins that is not a part of the proposed Park and Boulevard System. It is located on the southwest edge of the neighborhood along Highway I-70 (Dellinger 2000, 48).

There are a few boulevards from the proposed Park and Boulevard System that run through or adjacent to the neighborhoods of Lykins and Sheffield. Benton Boulevard runs along the western border of Lykins. It was named after Missouri's famous senator, Thomas Hart Benton. It was proposed as a standard boulevard that links what is now Kessler Park to the other parks in the city (Lee 1995, 161; Dellinger 2000, 44).

Van Brunt Boulevard passes through the neighborhood of Lykins. This part of the street consists of four 15-foot wide lanes with 6-foot wide sidewalks and 10-foot wide grass planting strips lined with maple trees (See Figure 3.3). It is a good example of Kessler's standard 100-food boulevard. There is a historically significant bridge which is now the AMTRAK bridge where the rail line crosses. It also plays a role in linking parks together (Lee 1995, 161; Dellinger 2000, 44). Many of these featuers can be seen in Figure 3.5.

Other significant places within Lykins are Whittier Elementary School, home of the Lions, Eleos Coffee House, a well-known coffee shop on Independence Avenue, the Urban Farming Guys, a community service organization focused on the enhancement of the neighborhood, and various restaurants and churches that service the neighborhood residents. These are located in Figure 3.6.



Figure 3.3: Van Brunt Boulevard



Figure 3.4: Lykins Square Park

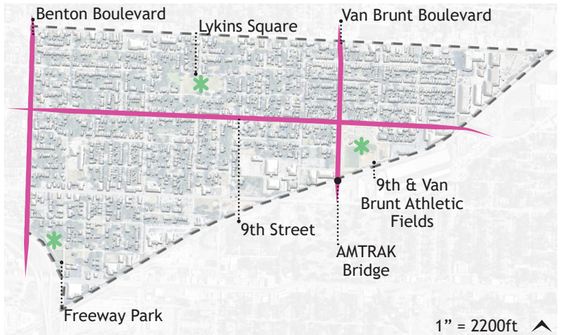


Figure 3.5: Lykins Notable Landscape Features

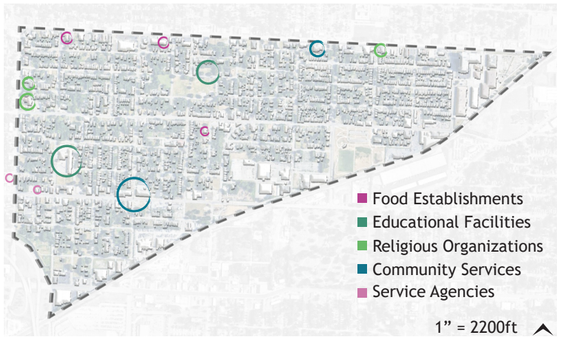


Figure 3.6: Lykins Notable Services Inventory

Sheffield

Background

The neighborhood of Sheffield was plotted in the late 1800s (Worley 1993, 5). The railroad lines in Northeast Kansas City really drove development in the area. Many industries popped up around the railroads, because it was easier to send and receive shipments. This is the story behind the neighborhood of Sheffield (United States Department of the Interior National Park Service, 2010). The factories in the area included metal processing, boiler making plants, and wire and structural steel manufacturers (United States Department of the Interior National Park Service, 2010). The neighborhood in which these industries are located between the Blue River and the AMTRAK railroad. Sheffield was named after English steel towns because of the English investment interest in the area (United States Department of the Interior National Park Service, 2010; Drouin, 2019; Worley 1993, 4). Even the street names were derived from areas in England (Worley 1993, 5). Sheffield and its surrounding neighborhoods eventually fell into disrepair by the end of the 1800s, only a few years after becoming recognized (Worley 1993, 6).



Figure 3.7: Sheffield Park



Figure 3.8: Blue River and Industrial Area



Figure 3.9: Sheffield Notable Landscape Features



Figure 3.10: Sheffield Notable Services Inventory

Site Inventory

Sheffield Park, Figure 3.7, is located in the neighborhood of Sheffield consisting of dense vegetation on one side, single-family homes on another, and some industrial businesses to the east. It is 11 acres and features of terraced hillsides that break up the steep slope of the park. Many of the design elements from the plan were not implemented in the park, as the park currently consists of mostly open grass (Lee 1995, 87).

To the east of Sheffield lies the Blue River. This can be seen in Figure 3.8. It was once main attraction for the city influencing neighborhood development around factories (Jackson, 2010). Although the river brings natural beauty to the Kansas City area, it is also viewed as a problem to many people and industries in the area due to the severe flooding that the city endures (Jackson, 2010; United States Department of the Interior National Park Service, 2010). In the past, the river was used by boaters for travel and recreation. A a boater’s club was located near 15th Street (Mobly Harris 1991, 13).

Winner Road is a notable road in Sheffield that was named after a successful land developer in Kansas City, Willard Winner (Worley, 1993). Sheffield was also known for the Kansas City Bold & Nut Company which eventually became Sheffield Steel and is now Armco Steel. Butler Manufacturing was also a successful company in the area (Worley, 1993). Other important places in Sheffield include the Sheffield Family Life Center, a large church for the community, Sheffield Place, a service organization for women and children, and the Veterans of Foreign Wars establishment, an organization of U.S. war veterans. These features can be seen in Figures 3.9 and 3.10.

Physical Measurements

Walkability

Google satellite imagery has been used to measure distances to different community assets such as schools, grocery stores, parks, community centers, and transit stations. Block size was also measured and compared to these distances. Depending on block length and size, walkability may be less pleasant.

Geographic Information System (GIS) mapping has been be used to measure landform in Lykins and Sheffield. Landform greatly affects a site's walkability. Rugged terrain makes walkability not only more difficult but potentially dangerous. Identifying steep slopes in the neighborhoods could be an indicator that an area is not as walkable as places with flatter terrain. GIS was also used to identify where sidewalks are within the neighborhoods as well as their width. These factors are crucial in identifying where people walk currently and have the potential to indicate where connections should be created or enhanced in the near future.

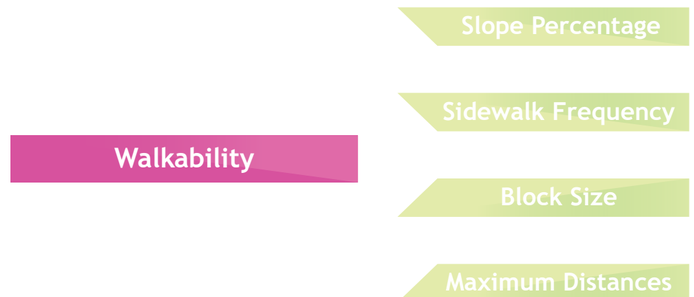


Figure 3.11: Walkability Measures

Slope Analysis

As seen in Figure 3.12, the study area includes a great variation in topography. Most of the site has a slope percentage less than 5%, which Kansas City requires a sidewalk slope to be 5% or less for accessibility (Kansas City, Missouri Construction and Material Specifications 3, 2005). Unfortunately, most of the areas that have a slope less than 5% are currently in use for industrial purposes, meaning that they are inaccessible to pedestrians.

The rest of the site that is designated for residential development are left to reside in areas of higher topography changes. This makes walking to and from work, school, and other activities much more challenging.

The highest areas of topography change are along the eastern edge of Sheffield and along a ridge in the center of the Lykins neighborhood. People will most likely avoid walking and biking along these areas and will drive to get to where they need to go.

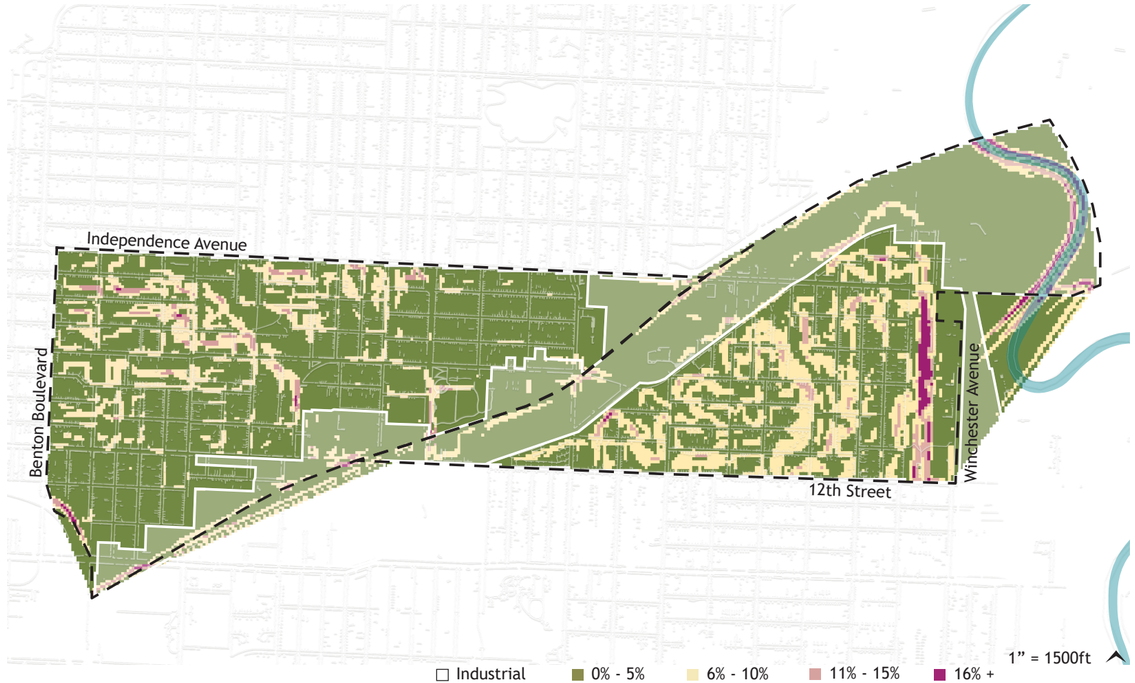


Figure 3.12: Slope in Study Area

Sidewalk Location and Width

Walkability is also determined by the availability of sidewalks and safe walking conditions. This map depicts the locations of sidewalks in the neighborhoods of Lykins and Sheffield as well as their widths. As seen in Figure 3.13, there are many sidewalks throughout the study area. This can be considered a strength of Lykins and Sheffield, because many newer neighborhoods developed today either lack sidewalks completely or only have sidewalks along the main roads (Duany, Plater-Zyberk, Speck 2000, 238; Randall, Baetz, 2001). Figure 3.13 also shows a disconnect between the two neighborhoods in terms of walkability due to the lack of sidewalk connections across the railroad. Even where roads appear to cross the railroad, sidewalks are missing.

The city of Kansas City requires public sidewalks to be five feet in width. Residential requirements lower this minimum width to four feet, but still require sidewalks along curbs to be five feet in width (Kansas City, Missouri Construction and Material Specifications 3, 2005). Figure 3.13 shows the neighborhood sidewalk widths. The majority of the sidewalks are less than five feet wide within the neighborhoods, but the sidewalks along the major roads are greater than five feet in width, because they are intended to be used by a higher volume of traffic.

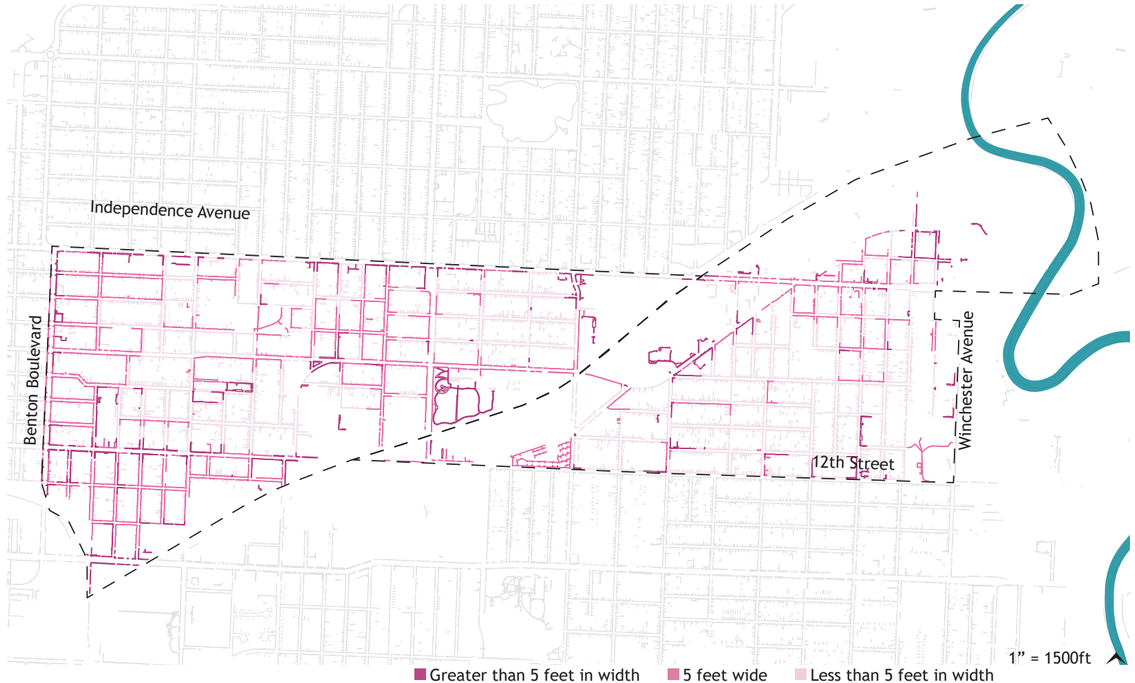


Figure 3.13: Sidewalks in Study Area

Block Length

People will walk a maximum of one-quarter of a mile to get to their desired destination (Kulash 2000, 85). In addition to that, block length must be no longer than 500 feet in order to feel walkable. Anything longer than this and the pedestrian can become bored with the route and perceive it as less pedestrian friendly (Kulash 2000, 85; El-Geneidy, Levinson, 2006; Lieberman 2000, 102; Speck, 2017).

Figure 3.14 shows the lengths of blocks within the neighborhoods. Many of the blocks in Lykins are longer than 500 feet, and many of the blocks in Sheffield are less than 500 feet. Together the average block length is about 500 feet. This creates a desirable and interesting walking route for pedestrians.

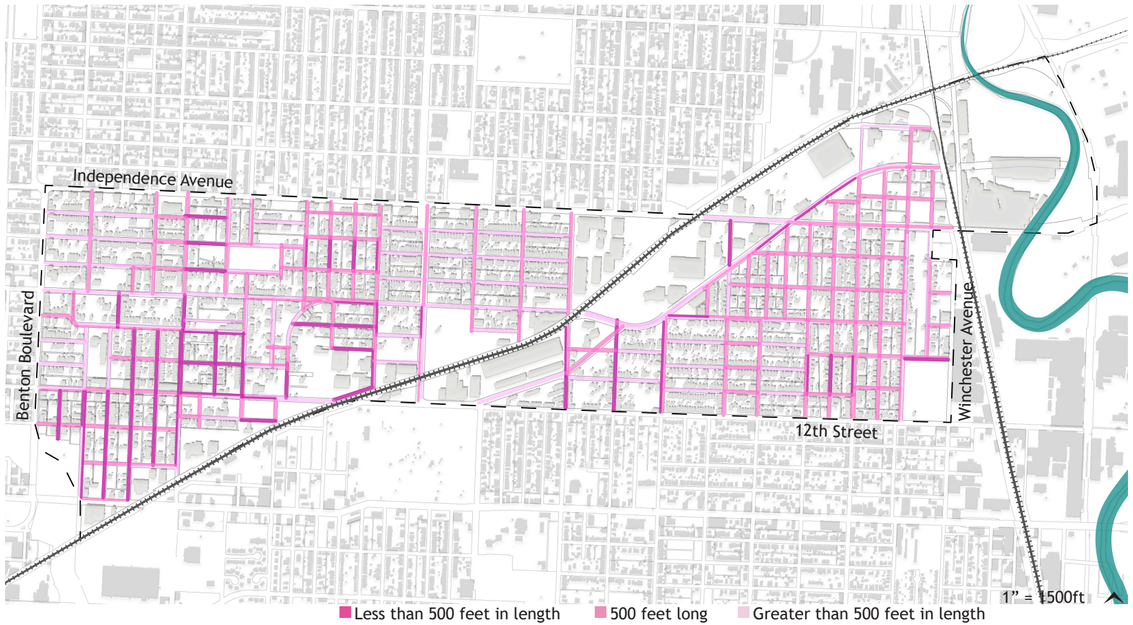


Figure 3.14: Block Length

Distance to Schools

There are many schools surrounding the neighborhoods of Lykins and Sheffield. The neighborhoods are broken up into three separate public elementary schools: Whittier Elementary, Trailwoods Elementary, and JA Rogers Elementary. A quarter mile is a reasonable distance for people to walk to reach their desired destination (Kulash 2000, 85). As seen in Figure 3.15, kids would have to walk either just across the street or over two miles depending on where they live to get to school. Even going to the Guadalupe Center Elementary School is about a two-mile walk for children who live in the farthest parts of the two neighborhoods.

The children in Lykins and Sheffield will then merge together for middle school at Northeast Middle School. The maximum walking distances for children in these neighborhoods are both under two miles.

Finally, the children within the neighborhoods of Lykins and Sheffield will separate once more and the kids from Lykins attend Northeast High School, and the children from Sheffield attend East High School. If they walk to school, the kids in the Lykins neighborhood would walk a maximum of almost two miles to get to their school, while the kids from Sheffield would walk just over two miles to get to school from the furthest extents of the neighborhoods.



Figure 3.15: Maximum Distances to School

Neighborhood Services

Being within walking distance to neighborhood services such as green space, grocery stores, and gathering spaces such as community centers are key components to New Urbanism (Charter for the New Urbanism, 2000). Most people are only willing to walk about a quarter of a mile to get to where they need to go (Kulash 2000, 86). Many of the grocery stores, community centers, and parks are outside of this quarter-mile radius for most people in the neighborhoods of Lykins and Sheffield (See Figure 3.16).

To get to a neighborhood park, the maximum distance people will have to walk is about three-quarters of a mile. Many people also have to walk around three-quarters of a mile to get to the nearest grocery store, and that might not be a full-service grocery store. Community centers are the farthest destination for people who do not have other forms of transportation. People may have to walk a maximum of 1.6 miles to get to the closest community center.

While there may be a disconnect between the quarter-mile radius boundary around the grocery stores and the rest of the neighborhoods, that does not mean that there is a lack of grocery stores. Instead of a food desert, this area could actually be considered a food swamp due to the vast amount places to purchase food. These locations may just not be within preferred walking distance for some of the residents.

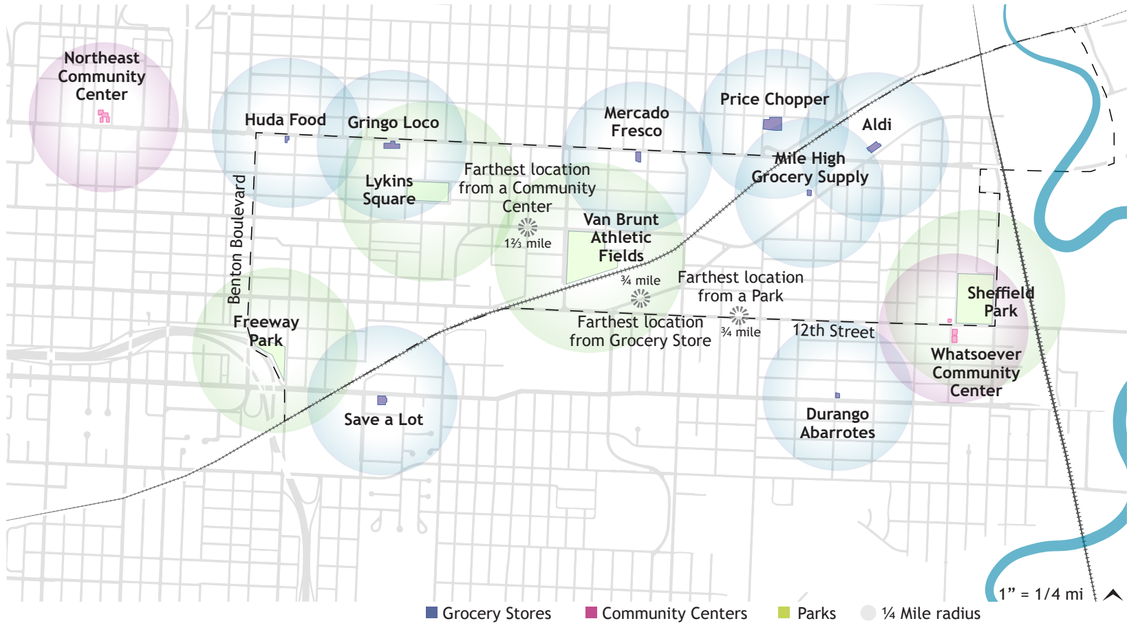


Figure 3.16: Maximum Distances to Community Services and Amenities

Distance to Public Transit

Efficient public transit is essential in creating a successful walkable community. Many New Urbanist communities implement Transit-Oriented Development for this purpose (Burden, 1999). If people need to go outside of their community, alternative modes of transportation, such as public transit is a necessity to ensure continuous connection.

As seen in Figure 3.17, there are many bus stops throughout the neighborhoods of Lykins and Sheffield. Some areas of the neighborhoods even have as many as three bus stops within their quarter-mile radius. This helps with connectivity to downtown Kansas City, to the west, and Independence, to the east. People can easily hop on and off the bus to get to where they need to go. The maximum walking distance to a bus stop from the residential neighborhoods is less than half a mile.



Figure 3.17: Bus Stops and Maximum Distances to Bus Stops

Physical Measurements

Safety

Safety has been measured using Google satellite imagery mapping. It measures visibility in areas of greater topography change as well as sight-line visibility to measure physical comfort within the space. Safety has also been measured through the amount of unmaintained vacant lots along a block. Areas with more vacant lots that are not cared for are more likely to be viewed as unsafe due to the lack of people around for constant observation (Gindroz 2000, 133).

GIS mapping was used to analyze topography within the site to identify areas of high and low slope percentages. These areas could be at a higher risk of crime due to their variation in topography since the offender has to be able to navigate his or her surroundings (Rhodes, Conley 1981). Lighting has been accounted for by measuring distances between lighting elements, types of lighting in neighborhoods, and whether or not certain places have lighting. GIS was also used to locate vacant lots in the neighborhoods of Lykins and Sheffield.

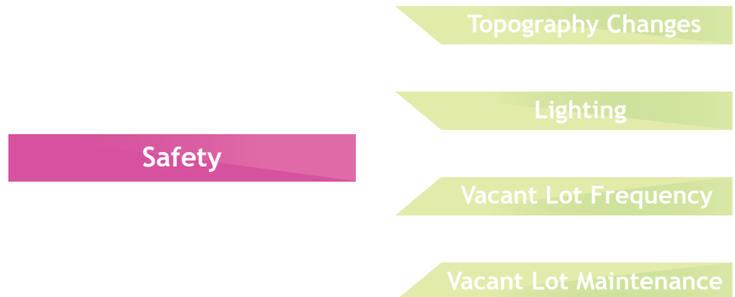


Figure 3.18: Safety Measures

Slope Analysis

Topography changes can be a concern for pedestrian safety. While people should always be aware of their surroundings, criminals also have an acute sense of their surroundings. In order to be successful in committing a crime, they must know their routes and choose the easiest escape (Rhodes, Conley 1981).

Safety can also be of concern in areas of high and low topography because of visibility. People and homes on the top of a hill have greater natural surveillance, because they can see all of their surroundings. Flatter topography allows for more visibility in and around the streets (Phipps, Horrobin 2014).

Topography change in neighborhoods also influences development. It is easier to develop on flat land, and to create flat land on a slope, retaining walls must be used. This can decrease visibility in the area and potentially increase the amount of vandalism and crime in an area (Phipps, Horrobin 2014; Ebong, Zubairu, Olagunju 2017, 81; Bachudo Sciences Co. Ltd. 2006, 94).

Areas of high slope can have the potential for greater surveillance or more crime depending on how safety is portrayed in the area (See Figure 3.19).

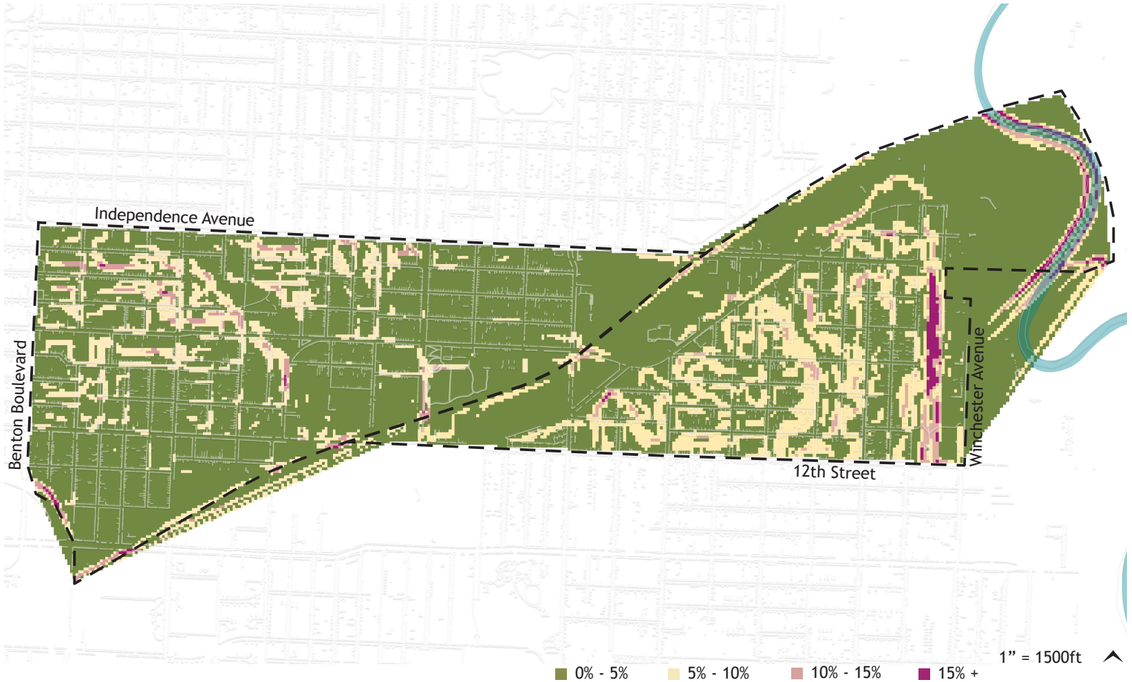


Figure 3.19: Slope in Relation to Walking Routes

Lighting

Adequate lighting helps with safety when it is dark out, because it increases visibility. Figure 3.20 shows that lighting is well spaced out within the neighborhoods of Lykins and Sheffield. Many streets just have lights on one side of the road, but some of the major roads, such as Van Brunt Boulevard, Independence Avenue, and Truman Road have lighting on both sides of the street.

It is apparent that many of the homes and businesses in Lykins and Sheffield have lights for their own personal use. This brings a sense of ownership to the neighborhoods and also helps increase visibility at night. It is unclear whether or not homeowners and business owners turn these lights on at night or if the lights are in functioning order.

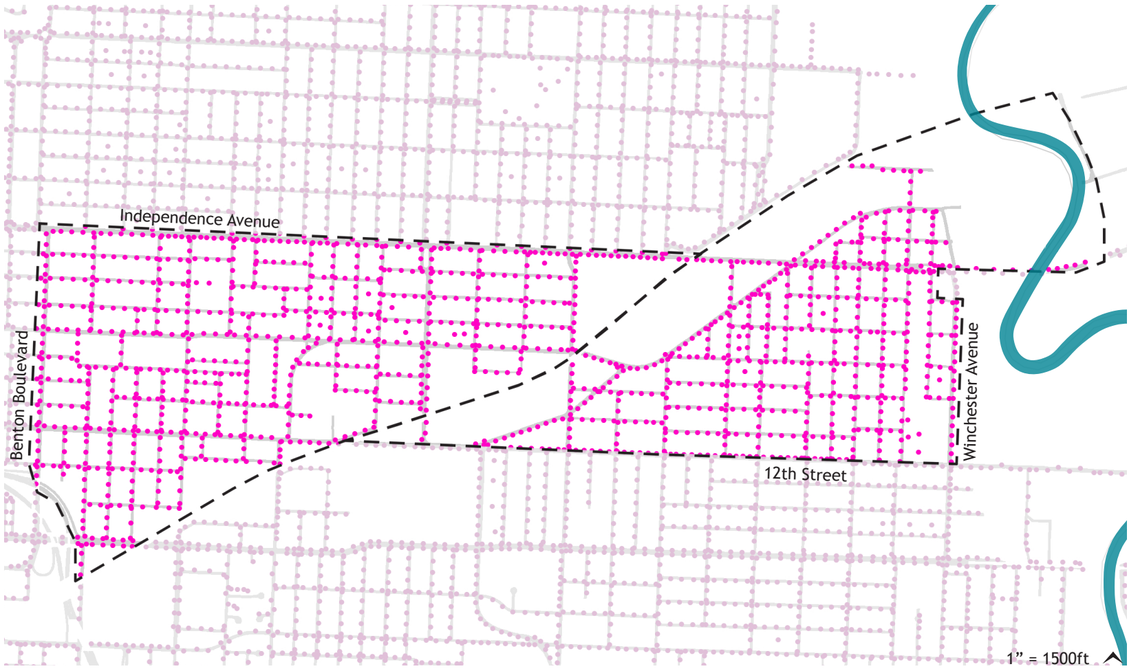


Figure 3.20: Street Lighting in Lykins & Sheffield

Vacant Lots

Together, Lykins and Sheffield have about 25% vacancy within their boundaries. Lykins accounts for 15% of this vacancy and Sheffield takes up the remaining 10%.

Urban vacancy is a problem not only in the neighborhoods of Lykins and Sheffield but in the entire city of Kansas City. Combating vacancy in cities can be done incrementally to make use of the vacant lots and bring life back into communities.

Figure 3.21 shows the vacant lots in Lykins and Sheffield as well as the topographical changes that occur in them. Many of them are relatively flat areas that have the opportunity for development and ownership. Others are vacant because the steep slopes makes them difficult to develop and maintain.



Figure 3.21: Vacant Lots and Their Accompanying Slopes

Perceived Measurements

Survey/Photo Questionnaire

Perceived walkability and perceived safety were measured using surveys. The surveys were distributed throughout the neighborhoods of Lykins and Sheffield in public facilities and by contacting neighborhood leaders would could help promote the survey. The surveys were to be completed by the residents of Lykins and Sheffield, but they were also available for people with a close relationship to the neighborhoods. These surveys were advertised by word of mouth; the posting of QR codes and survey links in public facilities; and through postings on local social media and news outlets. The survey reflects what has been found from the observations of walkability and safety in Google Maps, Google Earth, and ArcGIS and includes photographs that reflect the general neighborhood atmosphere. Perceived walkability and perceived safety are addressed through photographs that depict certain areas of each neighborhood with a step scale or likert-scale to rank residents' perceptions of the photographs (See Appendix X). The answers to these questions have been compared to the site's existing conditions and provide insights about possible design solutions.

For walkability, the survey asks questions about how people in the neighborhoods feel about the distances and time it takes to reach certain destinations; how they feel walking along certain blocks; how the different landform affects their choices of walking routes; which sidewalks are comfortable in width and are easy to walk on; and areas in which they have sidewalks in their neighborhood. It also asks questions about how often people cross certain intersections and how far they have to walk to get to different destinations.

Regarding safety, the survey asks the participants how they feel about visibility in certain parts of the neighborhoods; how lighting affects their comfortability throughout the day and night; and if the amount of vacant lots along a walkable route impacts their feeling of safety and security.

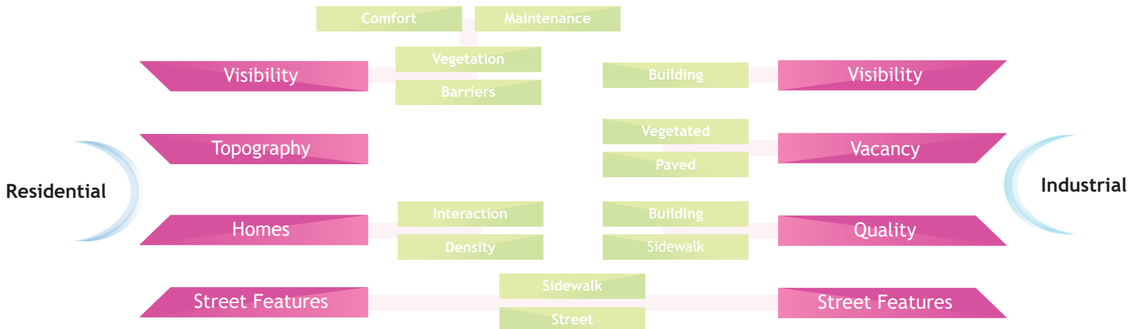


Figure 3.22: Survey Measures

Photo Selection Attributes

The factors from the physical analysis were then looked at in survey form where the survey was broken up into two major categories: residential and industrial. Both categories tested visibility. The residential category looked more at how vegetation and barriers, such as walls and fences, influence visibility. The industrial category looked at how specific building characteristics influence visibility. They also both looked at street features, such as street markings, curbs, and sidewalk quality. The residential category then looked at how topography influences walkability and how home density, frontage, and street interaction can influence perception. The industrial category looked at different perceptions of vacancy for vegetated lots versus paved lots as well as the quality of buildings and sidewalks along the street.

Survey Distribution and Photo Location

The survey consisted of 20 photographs that are located throughout the neighborhoods (See Figure 3.23). Ten photographs were from Lykins, and ten photographs were from Sheffield. Each photo had accompanying questions and a scale from 1 - 5 to rate preferences.

Ten pictures were industrial/commercial photos, and ten were from residential areas. The survey also asked demographic questions as well as their primary mode of transportation, how often they walk to popular neighborhood destinations, how far these destinations are from their home, and how often they cross the railroad that divides the two neighborhoods.

The survey was distributed in many places throughout the study area either in person or through postings on public bulletins (See Figure 3.23). Attending community meetings and engaging neighborhood leaders were steps taken to aid in survey distribution. Sheets with QR codes and survey links were also posted in libraries and coffee shops. Most of the surveys were taken in person, but there was also a good online turn out through the use of Qualtrics, an online survey platform. A total of 43 participants from the two neighborhoods filled out the survey.

Results were then put into SPSS to compare different groups and see how photos were scored.

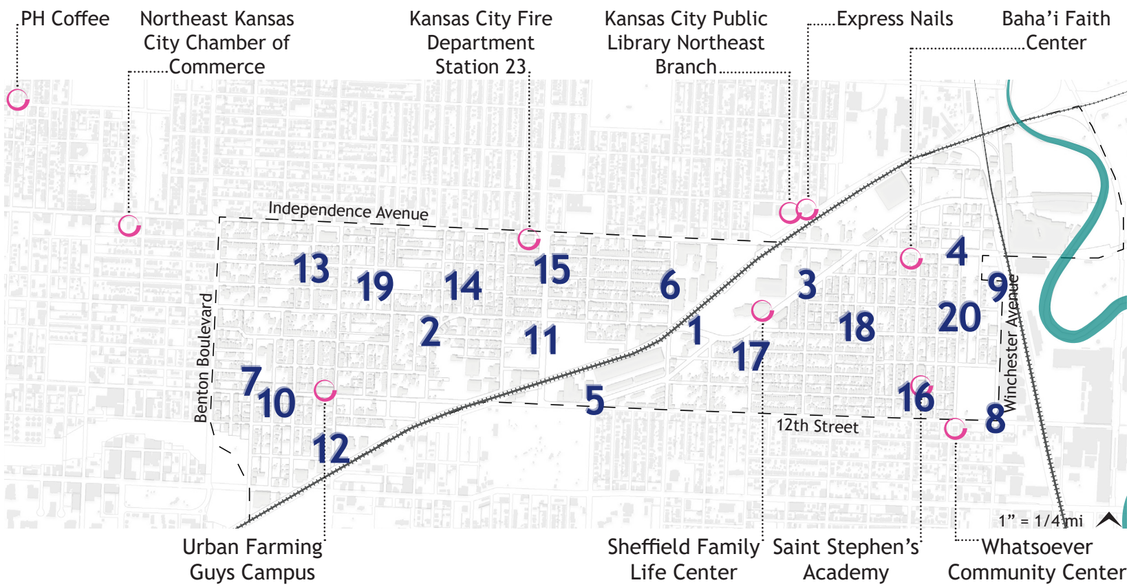


Figure 3.23: Survey Distribution and Photo Location

chapter four
FINDINGS



Synthesis

The site analysis assessed topography, vacancy, lighting, sidewalk and block dimensions, and nearby neighborhood services. Combining these different layers of analysis resulted in identifying areas that could be considered dead zones (See Figure 4.1). These areas have varying topography, lack direct access to neighborhood services, have a high number of vacancies, and do not have a strong transition from their surroundings.

The results of the site analysis then provided key information for the next stage of data collection: the photo survey. As discussed in Chapther Three, the photo survey consisted of 20 photographs taken from Google Maps that represent a significant portion of the study area. Some photos are taken within the designated dead zones, some photos are taken within close proximity to notable landmarks such as schools, parks, and main roads, and some photos represent the general character of each neighborhood.

The physical analysis and the results from the photo survey were then combined to determine areas of intervention which will be discussed further in Chapter Five.



Figure 4.1: Site Analysis Synthesis

Survey Results

The first photograph in the survey is located in the middle of the site along the railroad (See Figure 4.2). This photo was selected because of the underpass feature that pedestrians and vehicles must pass through to get to the adjacent neighborhood. There are four locations within the study area where the rail line runs overhead via an overpass. There is one location in the study area where the road is located on a bridge and the rail line passes beneath. The train and train tracks have the potential to influence people's perceptions of safety and walkability within the site and between the two neighborhoods.

This photograph is also assessing the effects of minimal lighting, the relationship between the street and the sidewalk, the slope of the road, and the impact the overpass and vegetation have on visbility. These factors were noted during the photo selection process and can be influencing factors in how people answered the questions.

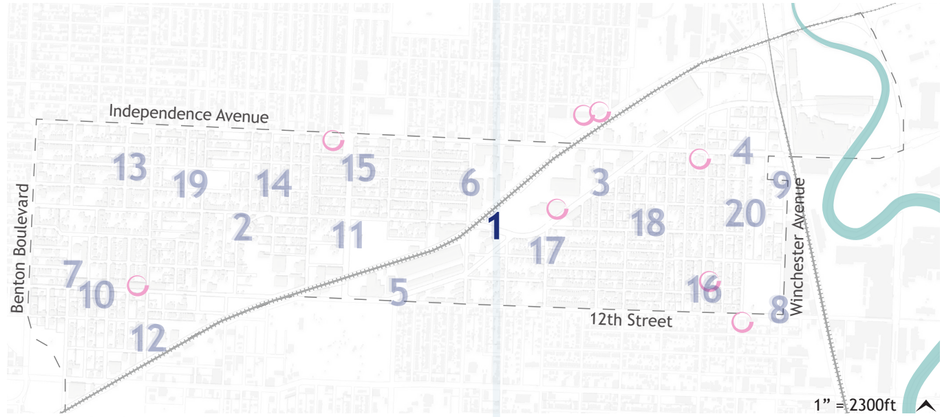


Figure 4.2: Photograph 1 Key Map



Figure 4.3: Photograph 1

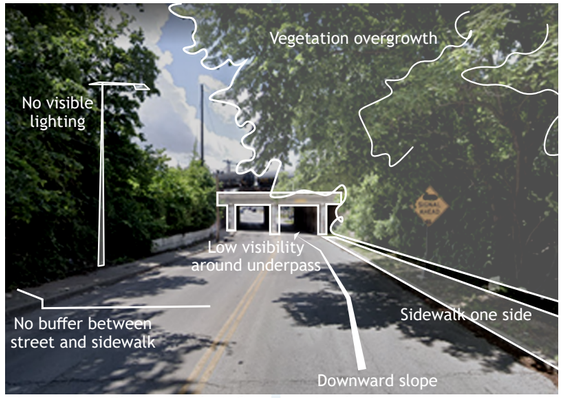


Figure 4.4: Photograph 1 Content Analysis

Survey Questions

- This area looks to be pedestrian friendly
- I would feel safe walking here during the day
- I would feel safe walking here at night
- I would easily be able to walk along this street
- The sidewalk conditions here are acceptable
- I would use this route to walk to school or work

SPSS Analysis

Photograph 1 scored the lowest in all tested variables including pedestrian friendliness, safety during the day, safety at night, easy walkability, sidewalk conditions, and preferred walking route. These results could be due to the lack of visible lighting in the area, vegetative overgrowth, the overpass inhibiting views, and the availability of the sidewalk and its proximity to the street.

This photo also scored differently among those with a college degree and those with only a high school education in terms of sidewalk condition. High school graduates scored this photo very low while college graduates gave the photo a slightly higher score.

Survey Results

The second photograph in the survey is located in the middle of the Lykins neighborhood (See Figure 4.5). Although it is in the center of the neighborhood, it is actually bordering the industrial corridor that runs between Lykins and Sheffield. This photo was chosen because it shows the transition from the industrial zone to the neighborhood zone. The photograph features sidewalks on both sides of the street, a large right-of-way between the street and the building, some vegetative overgrowth along the sidewalk, no building frontage, street lighting, a colorful fence with graffiti, one-way traffic, and vegetation in the background.

There are many elements of this photo to consider which could play a part in determining how people will answer the questions associated with the picture.

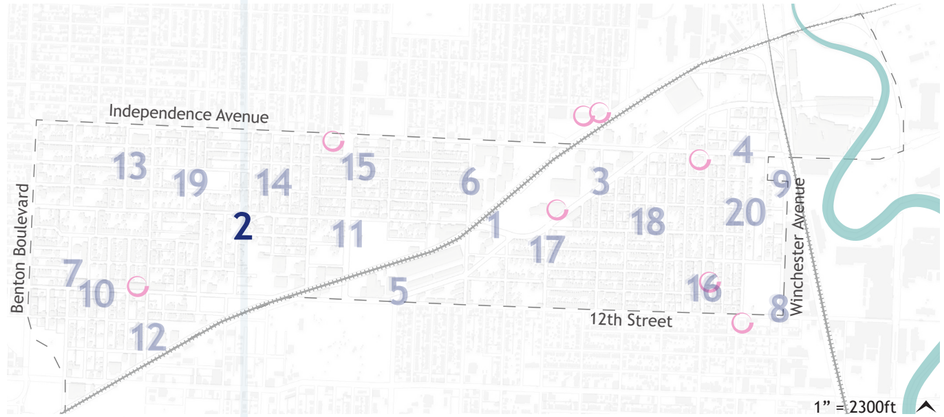


Figure 4.5: Photograph 2 Key Map



Figure 4.6: Photograph 2



Figure 4.7: Photograph 2 Content Analysis

Survey Questions

- This area looks to be pedestrian friendly
- I would feel safe walking here during the day
- I would feel safe walking here at night
- I would easily be able to walk along this street
- The sidewalk conditions here are acceptable
- I would use this route to walk to school or work

SPSS Analysis

Photograph 2 did not receive any high or low scores, but those with a high school education and those with a college degree or higher both view pedestrian friendliness in this area and easy walkability to be similar. Both groups gave pedestrian friendliness an average score and easy walkability received an above average score from both groups.

Survey Results

Photograph 3 is located along the industrial corridor in the Sheffield neighborhood (See Figure 4.8). This photo was chosen because of its proximity to the main collector road, Independence Avenue, and its location along Winner Road, a historic road within Sheffield. The photo features a nicely paved road with a well-kept sidewalk on one side, a strong curb buffer between the sidewalk and the street, and large, mostly empty paved lots on either side of the road. These lots have the potential to reduce in size to allow for more green space, and new connections can be made to Winner Road and Independence Avenue.

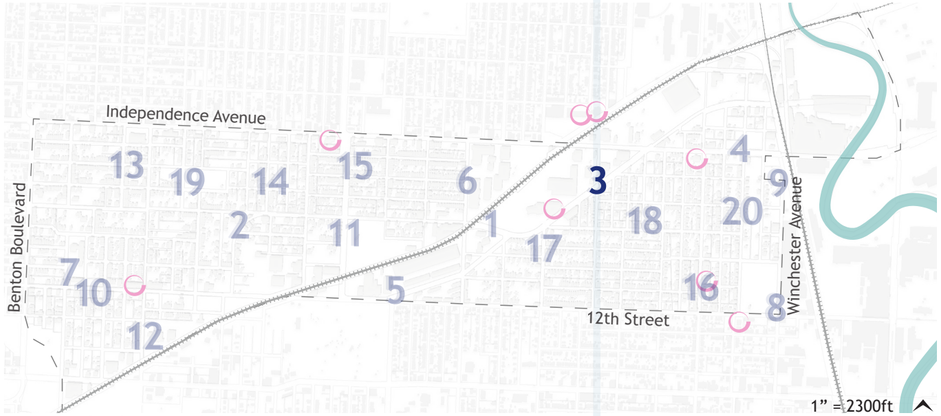


Figure 4.8: Photograph 3 Key Map



Figure 4.9: Photograph 3

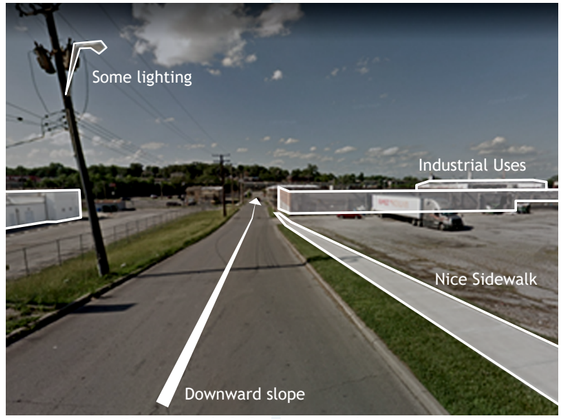


Figure 4.10: Photograph 3 Content Analysis

Survey Questions

- This street looks safe to walk next to
- I would feel safe walking here during the day
- I would feel safe walking here at night
- I would easily be able to walk along this street
- The sidewalk conditions here are acceptable
- I would use this route to walk to school or work

SPSS Analysis

Photograph 3 did not receive any high or low scores, but certain groups tested either similarly or differently on some questions. Both the male and female population view street safety in this picture similarly with scores above average, while men gave safety at night an average score and women gave safety at night a low score. People who live outside the study area, people who have lived in the neighborhoods for a long period of time, and people who have lived in the neighborhoods for a short amount of time all view the sidewalk conditions in the area similarly with scores in the average range. People who have kids under the age of 12 view the sidewalk conditions to be the same as those who do not have kids under the age of 12 with both groups scoring the photo above average. This photo also tested similarly among education levels for street safety and easy walkability with scores slightly above average.

Survey Results

Photograph 4 is located along Independence Avenue to the west of the bridge that crosses over the Blue River and some of the industrial areas of Northeast Kansas City (See Figure 4.11). This photo was chosen because of its location. This view will be the first thing people see when entering Sheffield or the last view they see when leaving the Historic Northeast neighborhoods of Kansas City. For this purpose, the photograph is facing west towards the Lykins and Sheffield neighborhoods.

The photo is assessing the width of Independence Avenue along with its street markings, the lighting along the road, and the vacant lot adjacent to the road. The photograph also features elements such as large-scale advertisements, a minimal barrier between the sidewalk and the road, and a broken-up fence along the vacant lot. It also shows businesses, apartments, and single-family residences all in one area. These factors will all play a part in determining how people prefer their commercial corridors.

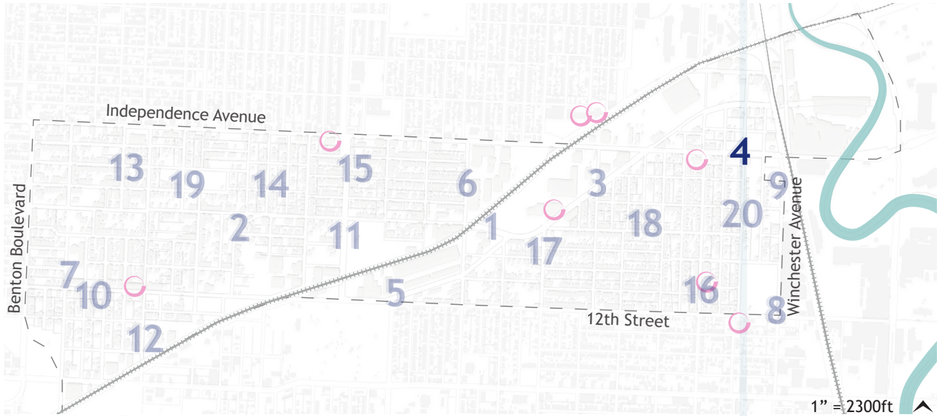


Figure 4.11: Photograph 4 Key Map

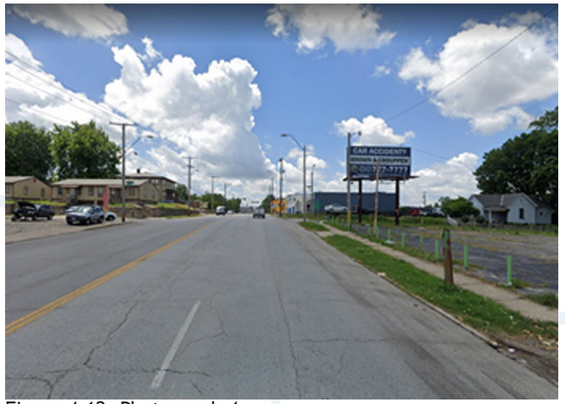


Figure 4.12: Photograph 4



Figure 4.13: Photograph 4 Content Analysis

Survey Questions

- This street looks safe to walk next to
- I would feel safe walking here during the day
- I would feel safe walking here at night
- I would easily be able to walk along this street
- The sidewalk conditions here are acceptable
- I would use this route to walk to school or work

SPSS Analysis

Photograph 4 did not receive any high or low scores. It also did not have any significant correlation between any of the tested groups. This could be because it the photo is located along a main road which are not prevalent throughout the neighborhoods.

Survey Results

Photograph 5 is located in the southwest corner of the Sheffield neighborhood (See Figure 4.14). It is located in an area that features mostly apartments but also borders the industrial areas. This photo was selected because of the openness in visibility throughout the area. The photo also has a clearly marked street with a minimal curb buffer, large lighting elements, maintained grass, a sidewalk on one side of the street, updated industrial buildings, and natural surveillance opportunity through the windows on the apartment building.

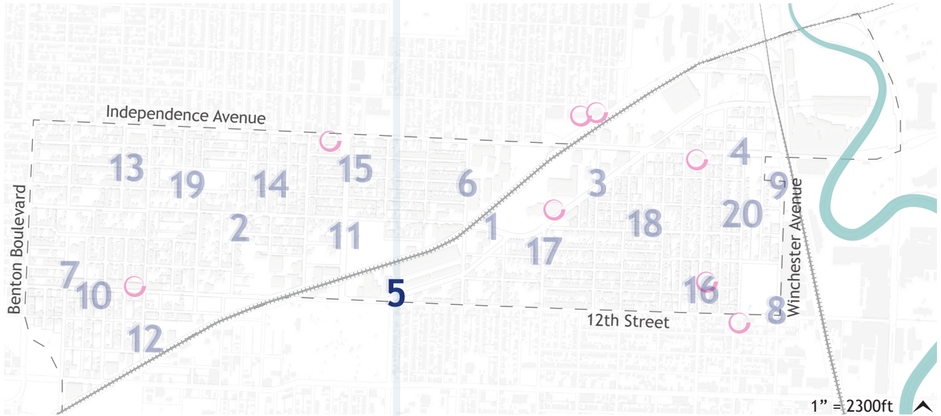


Figure 4.14: Photograph 5 Key Map

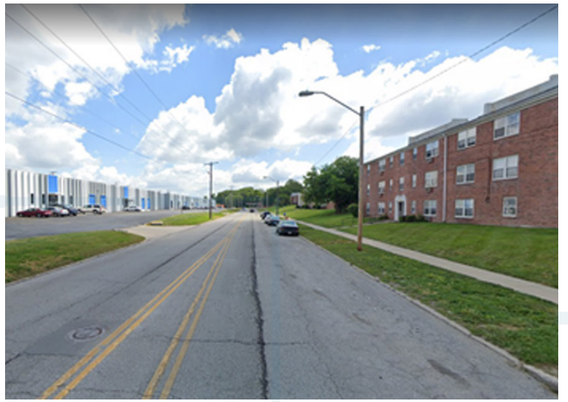


Figure 4.15: Photograph 5

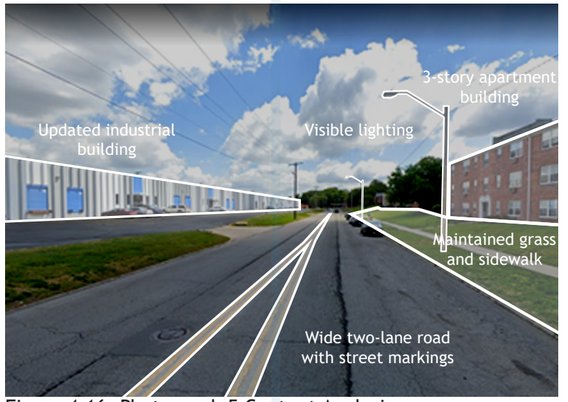


Figure 4.16: Photograph 5 Content Analysis

Survey Questions

- This street looks safe to walk next to
- I would feel safe walking here during the day
- I would feel safe walking here at night
- The vegetation in this area makes it desirable to walk here
- The sidewalk conditions here are acceptable
- I would use this route to walk to school or work

SPSS Analysis

Photograph 5 did not receive any high or low scores. It also did not have any significant correllation between any of the tested groups. This could be because of the uninterrupted transition between the industrial zone and the apartments across the street. Many of the industrial areas in the neighborhoods have a vegetative buffer or a fence of both separating them from the residential zones.

Survey Results

Photograph 6 is located in northeast Lykins (See Figure 4.17). This area features a few industrial businesses and some apartment complexes. The large white and orange building is currently used for storage but is also on the National Register of Historic Places for being associated with events that have made a significant contribution to our history. This building belonged to the National Cloak and Suit Company which sold women's, men's, and children's apparel to all states west of the Mississippi River between the years 1920 and 1927 (United States Department of the Interior National Park Service, 2017). Nearby, large lots are now owned by the non-profit organization, Asian Americans for Equality. This organization is wanting to help revitalize the area along the railroad and Independence Avenue.

This photograph also features parking on the grass between the street and the sidewalk, minimal curb barriers, some vegetation, marked roads, and minimal lighting elements. These factors can be assessed by the responses to the questions and provide insight for many of the design opportunities in the area.

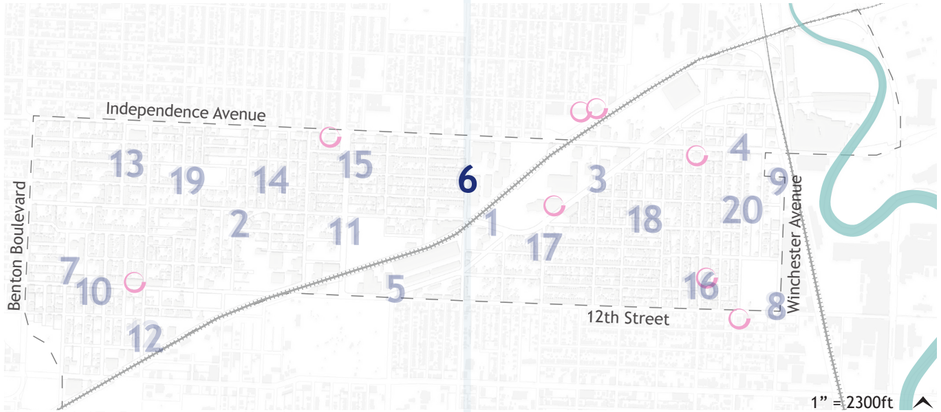


Figure 4.17: Photograph 6 Key Map



Figure 4.18: Photograph 6

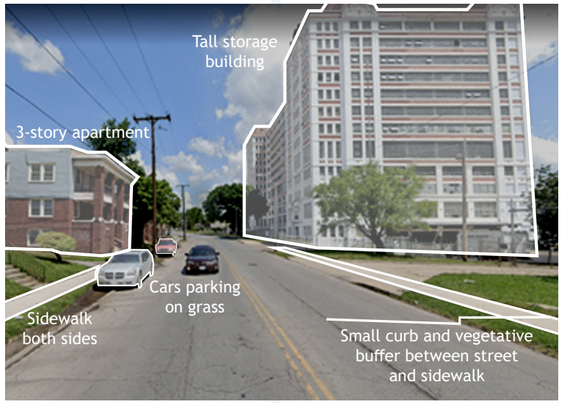


Figure 4.19: Photograph 6 Content Analysis

Survey Questions

- This street looks safe to walk next to
- I would feel safe walking here during the day
- I would feel safe walking here at night
- The vegetation in this area makes it desirable to walk here
- The sidewalk conditions here are acceptable
- I would use this route to walk to school or work

SPSS Analysis

Photograph 6 scored the highest in street safety. This could be due to the high potential for natural surveillance because of the tall storage building with many windows and the 3-story apartment building that fronts the street.

Survey Results

Photograph 7 is located near the western edge of Lykins (See Figure 4.20). This photo was selected because of its proximity to the elementary school in the area, Whittier Elementary. This is the only public school located within the site boundary.

This area has a steeper slope than some of the other photos but has a strong buffer between the street and the sidewalk. There are well-kept sidewalks on both sides of the street as well as some lighting elements to help with visibility in the evening hours. There is a retaining wall and a fence separating the school's property form the road and sidewalk. These elements can play a part in how people, especially children, feel about walking to and from school as well as how safe they feel while walking to and from school.

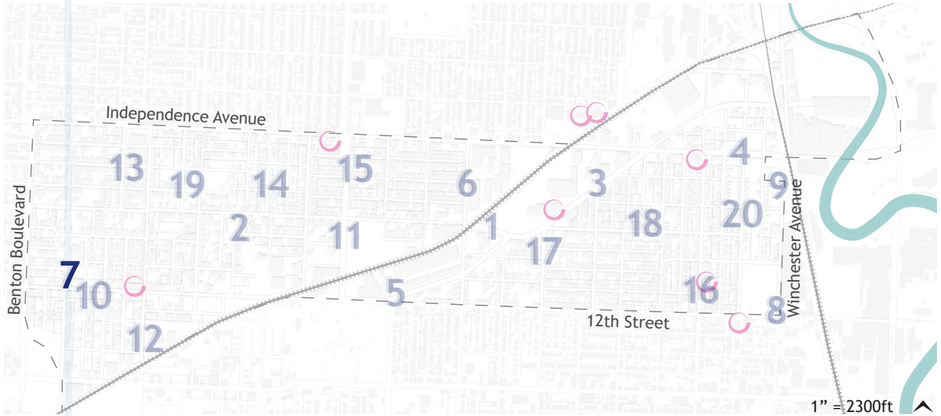


Figure 4.20: Photograph 7 Key Map

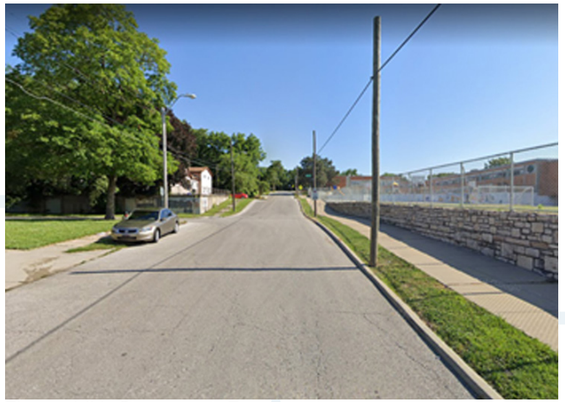


Figure 4.21: Photograph 7

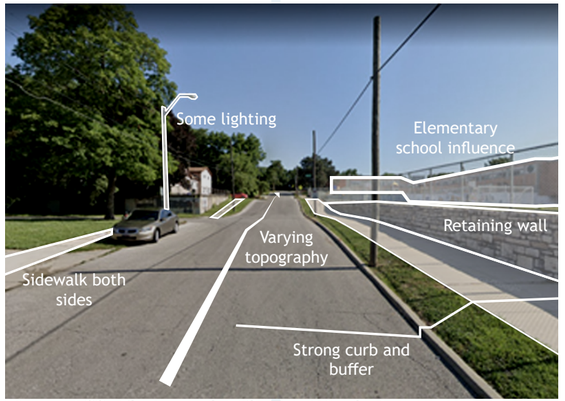


Figure 4.22: Photograph 7 Content Analysis

Survey Questions

- This area looks to be pedestrian friendly
- I would feel safe walking here during the day
- I would feel safe walking here at night
- I would easily be able to walk along this street
- The sidewalk conditions here are acceptable
- I would use this route to walk to school or work

SPSS Analysis

Photograph 7 scored the highest in pedestrian friendliness and sidewalk conditions most likely due to the well-kept sidewalks, strong curb and buffer between sidewalks, and the proximity to the elementary school.

Male and female respondents both view this area to be pedestrian friendly. Both groups gave this variable a very high score.

Survey Results

Photograph 8 is located at the southeastern edge of Sheffield (See Figure 4.23). This photo was chosen because of the large park that is located in the neighborhood. Sheffield Park is the only park located within the Sheffield neighborhood boundary. It is large but is affected by a steep slope. The park features signage and some vegetation. There are a few trees lining the street, but there is no sidewalk on the park-side of the road. There is no apparent lighting within the park, but lights do line the street along the sidewalk on the opposite side of the park. This park is also located adjacent to the industrial area just outside of the Sheffield neighborhood boundary. The answers to the questions will help determine what aspects of the park are appreciated by the community and what aspects could be improved to increase walkability and safety in the area.

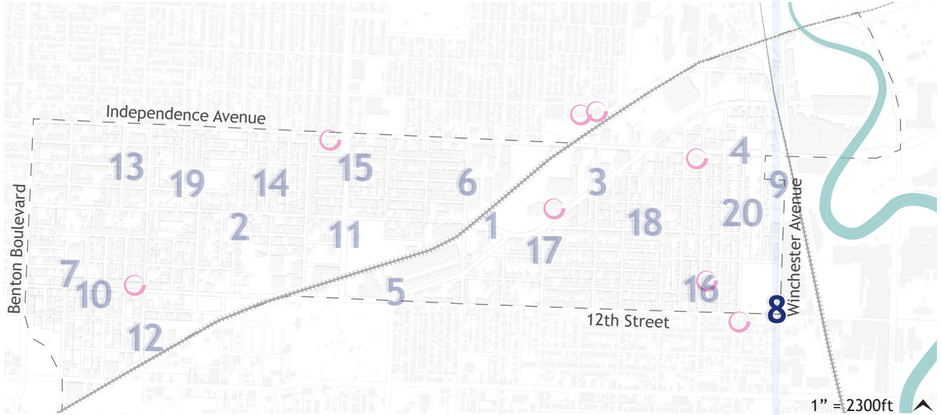


Figure 4.23: Photograph 8 Key Map



Figure 4.24: Photograph 8

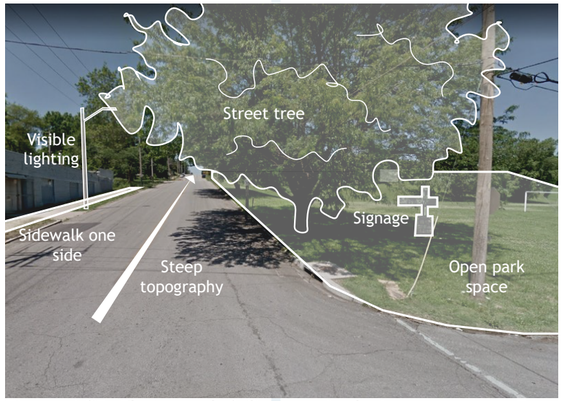


Figure 4.25: Photograph 8 Content Analysis

Survey Questions

- This area looks to be pedestrian friendly
- I would feel safe walking here during the day
- I would feel safe walking here at night
- I would easily be able to walk along this street
- The sidewalk conditions here are acceptable
- I would use this route to walk to school or work

SPSS Analysis

Photograph 8 did not receive any high or low scores, but people of different education had significant perceptions of this photo. People who have received a high school education rated the sidewalk conditions in this area very low, while those who have a college degree said the sidewalk conditions here are average. Both groups tested similarly to easy walkability in the area with average ratings.

Survey Results

Photograph 9 is located along the eastern border of Sheffield (See Figure 4.26). This area is highly influenced by the industrial zone to the east. There are many vacant lots in this area. This could be due to the steeper slopes to the west or the heavy industrial businesses that take place here. This photo features many street lights, some vegetative overgrowth, no sidewalks, vacant lots, a few single-family homes, and large trees. The responses to this photograph can determine how people view the industrial areas within their neighborhoods.

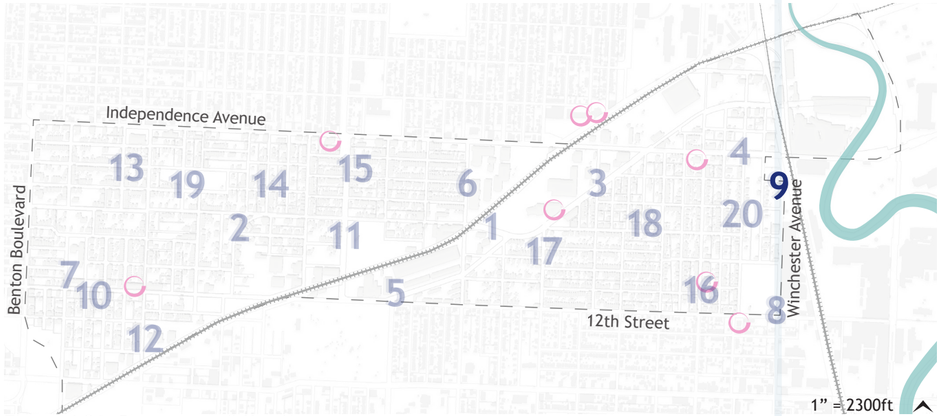


Figure 4.26: Photograph 9 Key Map



Figure 4.27: Photograph 9

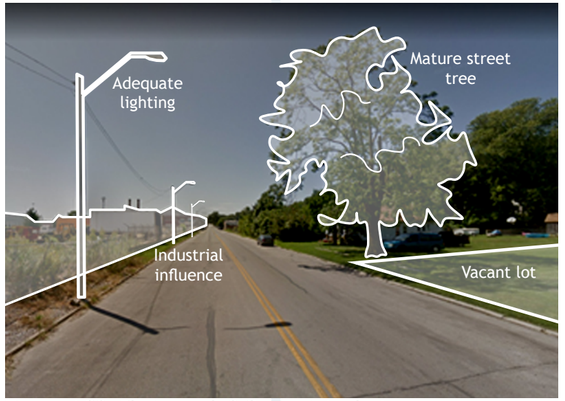


Figure 4.28: Photograph 9 Content Analysis

Survey Questions

- This street looks safe to walk next to
- I would feel safe walking here during the day
- I would feel safe walking here at night
- The vegetation in this area makes it desirable to walk here
- The sidewalk conditions here are acceptable
- I would use this route to walk to school or work

SPSS Analysis

Photograph 9 did not have any high or low scores, but the perception of night safety between those who have a college degree and those who have completed high school are significantly similar. They both scored night safety in this area low.

Survey Results

Photograph 10 is located in southern Lykins (See Figure 4.29). This area in particular consists of many vacant lots and there are few lighting elements apparent in the photograph. Homes seem to be fenced off, and even though there are sidewalks on both sides of the street, neither of them appear to be maintained.

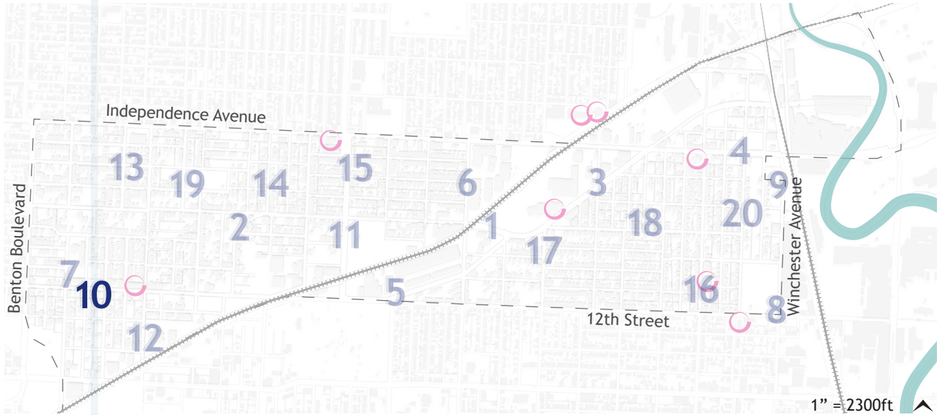


Figure 4.29: Photograph 10 Key Map



Figure 4.30: Photograph 10

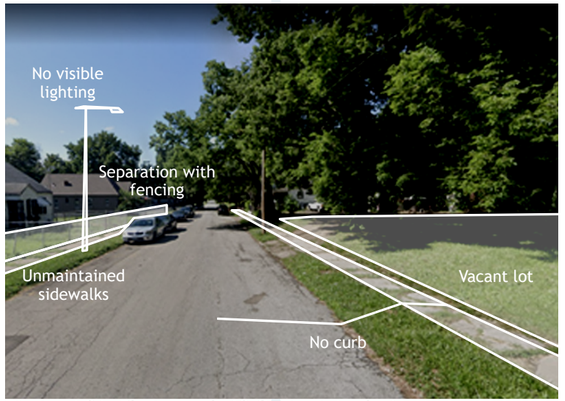


Figure 4.31: Photograph 10 Content Analysis

Survey Questions

- This area looks to be pedestrian friendly
- I would feel safe walking here during the day
- I would feel safe walking here at night
- I would easily be able to walk along this street
- The sidewalk conditions here are acceptable
- I would use this route to walk to school or work

SPSS Analysis

Photograph 10 did not receive any high or low scores, but there was a significant difference between how male respondents and female respondents viewed safety at night in this area. Males scored night safety in this area somewhat below average and females scored this variable very low.

Survey Results

Photograph 11 is located in a central area within the study site (See Figure 4.32). The photo was taken along Van Brunt Boulevard, a historic road within the Lykins neighborhood. This road features paintings of all the flags of the residents' home countries on a retaining wall that leads to a railroad overpass. This street is also adjacent to the 9th and Van Brunt Athletic Fields where there are soccer fields, a pergola, and an amphitheater. There is lighting along the street and within the park. The street is also marked with lane dividers.

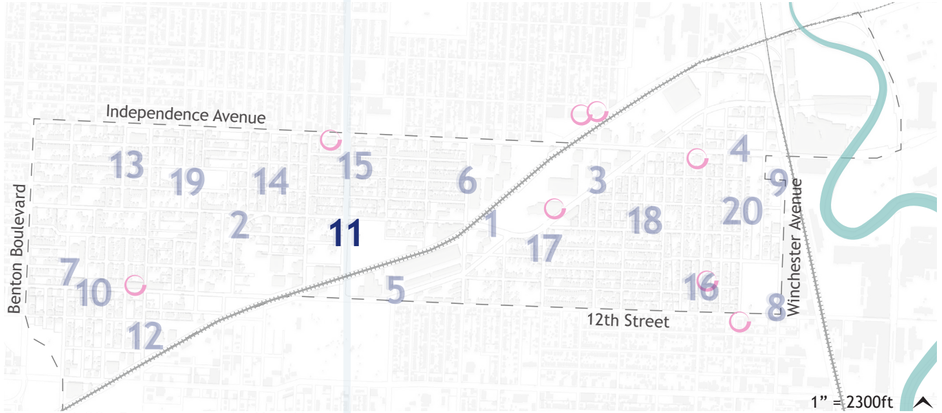


Figure 4.32: Photograph 11 Key Map



Figure 4.33: Photograph 11

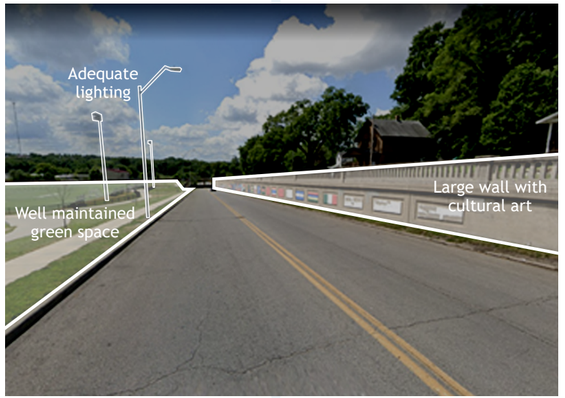


Figure 4.34: Photograph 11 Content Analysis

Survey Questions

- This area looks to be pedestrian friendly
- I would feel safe walking here during the day
- I would feel safe walking here at night
- I would easily be able to walk along this street
- The sidewalk conditions here are acceptable
- I would use this route to walk to school or work

SPSS Analysis

Photograph 11 did not receive any high or low scores, but those who took the survey and had kids under 12 tested similarly to those who do not have kids under 12 in terms of vegetation and safety at night. Both groups gave average ratings to vegetation and safety at night.

Survey Results

Photograph 12 is located the farthest south in Lykins (See Figure 4.35). This photo was selected because of how far removed this area is from the rest of the Lykins neighborhood. It is located where the industrial businesses meet residential homes. The vegetation in this area seems to be maintained with shrubs lining the fence to separate the industrial area from the residential. There is a strong curb and buffer between the street and sidewalk on one side. Lighting is also present along this street.

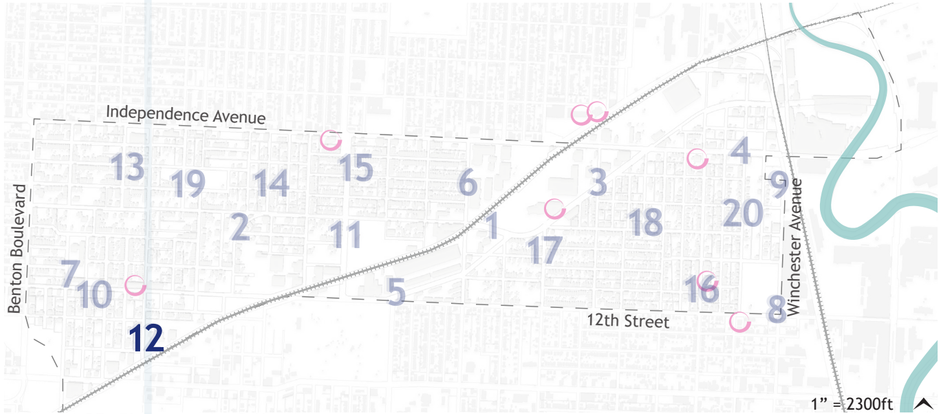


Figure 4.35: Photograph 12 Key Map



Figure 4.36: Photograph 12

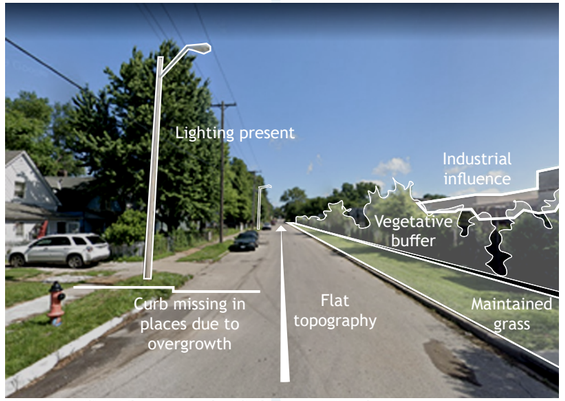


Figure 4.37: Photograph 12 Content Analysis

Survey Questions

- This street looks safe to walk next to
- I would feel safe walking here during the day
- I would feel safe walking here at night
- The vegetation in this area makes it desirable to walk here
- The sidewalk conditions here are acceptable
- I would use this route to walk to school or work

SPSS Analysis

Photograph 12 scored the lowest in street safety, vegetation, and welcoming to pedestrians possibly due to the lack of visibility from the vegetative buffer, the low maintenance along the sidewalk, and the low building frontage along the street.

It also had the same results for the perception of safety during the day for those who have a college degree and those who have graduated high school. Both groups gave this variable an average rating.

Survey Results

Photograph 13 is located in northwest Lykins (See Figure 4.38). This photo was selected because of the steep topography change that can be seen along the street and in the yards of the houses linin the street. There is lots of vegetation in this area featuring mature trees and some overgrowth in certain areas. Lighting is present in the area, and there is a strong buffer between the street and the sidewalk due to the curb and maintained grass. Based on the cars parked on either side of the street, the street here may be a little narrower than in some of the other photos.

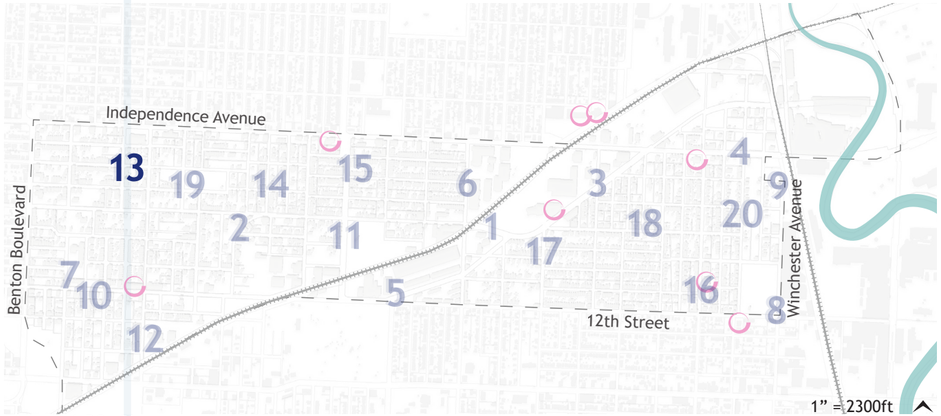


Figure 4.38: Photograph 13 Key Map



Figure 4.39: Photograph 13

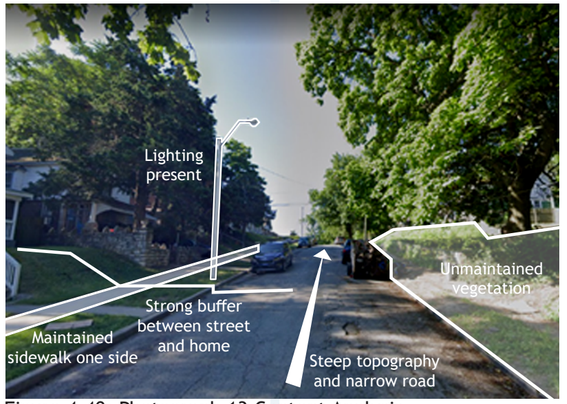


Figure 4.40: Photograph 13 Content Analysis

Survey Questions

- This street looks safe to walk next to
- I would feel safe walking here during the day
- I would feel safe walking here at night
- The vegetation in this area makes it desirable to walk here
- This area seems welcoming to pedestrians
- I could easily interact with my neighbors if I lived here

SPSS Analysis

Photograph 13 did not receive any high or low scores, but people of different education levels tested significantly similarly to the perception of easy walkability in this area as well as safety during the day. Easy walkability tested slightly below average for both groups while safety during the day tested slightly above average.

Survey Results

Photograph 14 is located in central Lykins (See Figure 4.41). This photograph features many vegetative elements such as trees lining the street and shrubs being used as barriers for private residences. Fences and retaining walls are also being used here to separate private areas from the street. The trees along the street seem to be laid out in a rhythmic pattern which can provide a balance between shade and sun for pedestrians. There is a strong barrier between the street and the sidewalk on both sides of the street, and topography here is flat making it easier and safer to walk in this area.

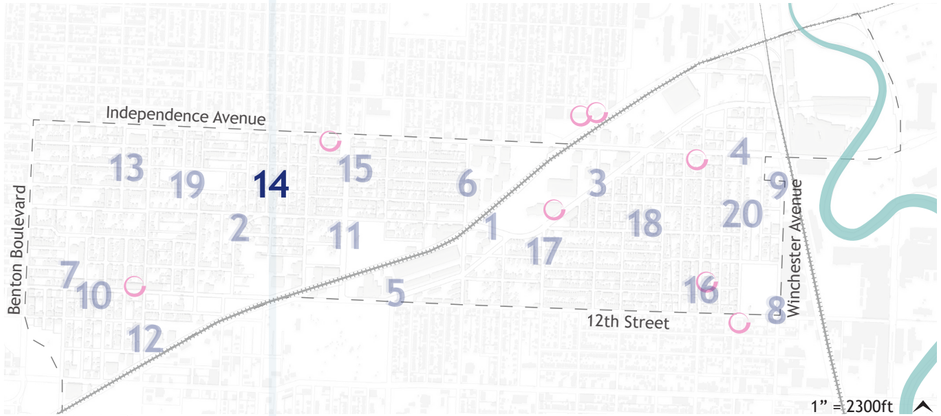


Figure 4.41: Photograph 14 Key Map



Figure 4.42: Photograph 14



Figure 4.43: Photograph 14 Content Analysis

Survey Questions

- This street looks safe to walk next to
- I would feel safe walking here during the day
- I would feel safe walking here at night
- The vegetation in this area makes it desirable to walk here
- This area seems welcoming to pedestrians
- I could easily interact with my neighbors if I lived here

SPSS Analysis

Photograph 14 had the highest score in desirable vegetation most likely due to the rhythmic placement of trees, and the use of shrubbery and landform as buffers.

The male and female responses to this photo were significantly similar in many variables. Both groups gave vegetation and easy walkability high ratings. Safety during the day and welcoming to pedestrians received above average ratings, and safety at night received average ratings. Males and females, however, responded significantly different to the perception of neighborly interaction. Males gave an average rating to this variable and females rated it very high. Those who have a college degree and those who have a high school degree also tested similarly. Safety during the day and neighborly interaction both scored above average for the two groups, and safety at night received average scores.

Survey Results

Photograph 15 is located in the Lykins neighborhood (See Figure 4.44). This photograph was selected because of the density of the homes and the relationship of the homes across the street. This street also has a greater degree of visibility because of the residential setback along the street. There are minimal fencing elements possibly because of the greater opportunity for natural surveillance due to the street frontages and front porches for every home. The topography in this area is also very flat making it easier to walk, especially with the maintained sidewalks on both sides of the street.

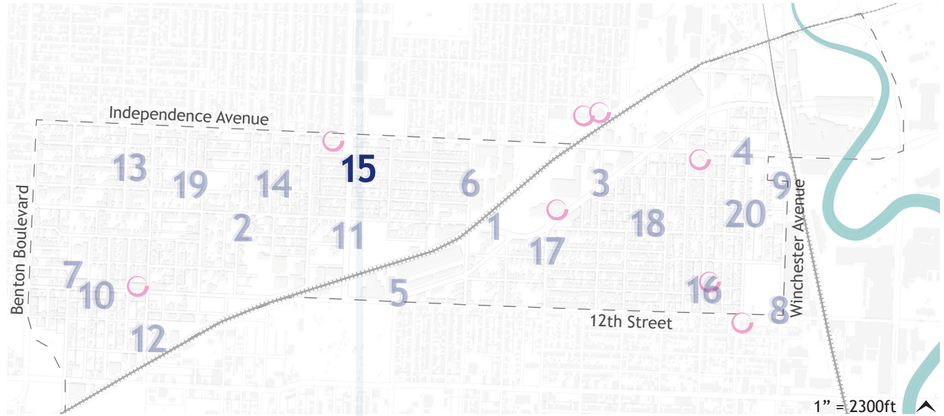


Figure 4.44: Photograph 15 Key Map



Figure 4.45: Photograph 15



Figure 4.46: Photograph 15 Content Analysis

Survey Questions

- The sidewalk conditions here are acceptable
- I would feel safe walking here during the day
- I would feel safe walking here at night
- I would easily be able to walk along this street
- This area seems welcoming to pedestrians
- I could easily interact with my neighbors if I lived here

SPSS Analysis

Photograph 15 had the highest score in many variables such as safety at night, easy walkability, welcoming to pedestrians, and neighborly interaction due to the visibility in the area and the flat topography with sidewalks on both sides of the street.

The survey also showed that people who have lived in the area for a long amount of time have the same view of easy walkability as those who have lived in the neighborhoods for a short amount of time as both groups gave this variable very high ratings. Also, those who live within the study area and those who live outside the study area tested similarly to the perception of safety at night in this photo with above average responses.

Survey Results

Photograph 16 is located in southern Sheffield (See Figure 4.47). This photograph was chosen based on its proximity to a church, which can be considered a neighborhood service. This photo also shows varying topography. While the street has minimal slope, the homes sit at a significantly higher elevation and the yards taper down to meet the sidewalk and the street. Being at a higher elevation, these homes seem to have a greater degree of natural surveillance. This area also features street trees, street markings including a pedestrian crosswalk, and well-maintained sidewalks with an adequate buffer from the street.

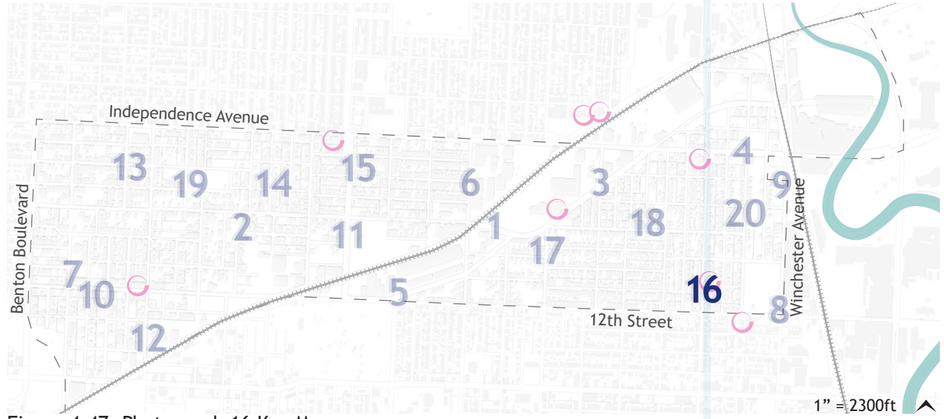


Figure 4.47: Photograph 16 Key Map



Figure 4.48: Photograph 16

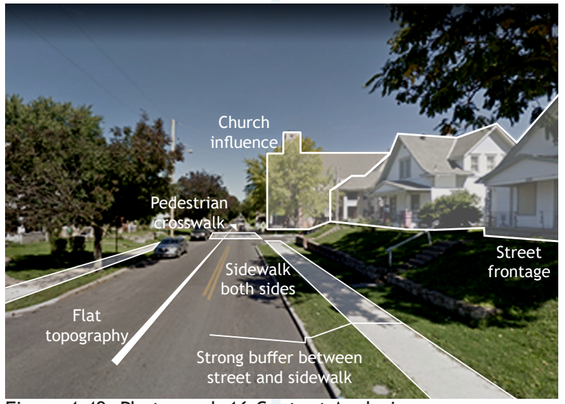


Figure 4.49: Photograph 16 Content Analysis

Survey Questions

- The sidewalk conditions here are acceptable
- I would feel safe walking here during the day
- I would feel safe walking here at night
- I would easily be able to walk along this street
- This area seems welcoming to pedestrians
- I could easily interact with my neighbors if I lived here

SPSS Analysis

Photograph 16 received the highest score in safety during the day because of the openness of the street and the building frontage along the street allowing for natural surveillance.

There is also a similar perception of easy walkability between male and female respondents which received an above average score, while safety during the day for males was given an above average score this variable scored highly for females. People of different education levels tested significantly similarly to the sidewalk conditions in this area as well as the easy walkability along the street with both variables testing above average.

Survey Results

Photograph 17 is located in the Sheffield neighborhood (See Figure 4.50). This photo depicts a typical neighborhood intersection within Sheffield and shows three homes that do not face each other. This can make it difficult to have neighborly interaction and results in a lower degree of natural surveillance. There is a somewhat steep slope in this area, but there are sidewalks on both sides of the street, a strong buffer between the street and sidewalk, and street lighting is present.

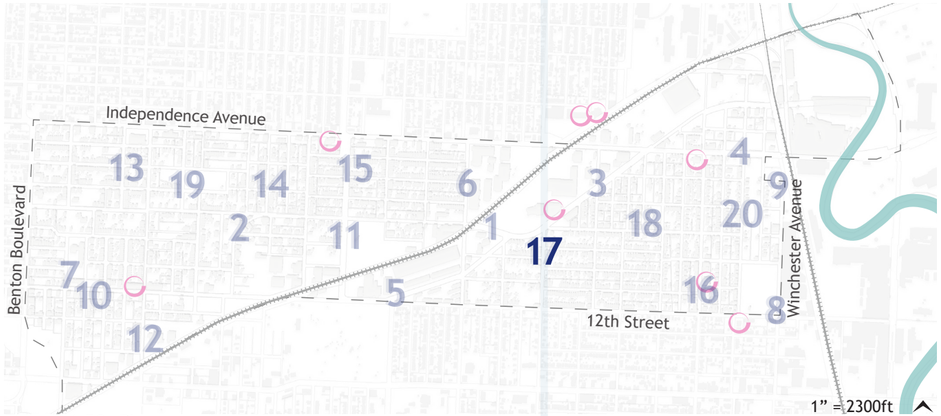


Figure 4.50: Photograph 17 Key Map



Figure 4.51: Photograph 17



Figure 4.52: Photograph 17 Content Analysis

Survey Questions

- This area looks to be pedestrian friendly
- I would feel safe walking here during the day
- I would feel safe walking here at night
- I would easily be able to walk along this street
- The sidewalk conditions here are acceptable
- I would use this route to walk to school or work
- I could easily interact with my neighbors if I lived here

SPSS Analysis

Photograph 17 did not receive any high or low scores, but those who have a college degree and those who have completed high school both view neighborly interaction similarly in this photo with both groups rating this variable above average.

Survey Results

Photograph 18 is located in the central portion of Sheffield (See Figure 4.53). This area is highly vegetated and consists of homes that face each other. This area is different, though, because the homes sit at different elevations with a large retaining wall separating one side of the street from the other. The street trees in this photo are evenly spread out, but there are some areas of vegetation that are unmaintained. The street has a slight slope with sidewalks on both sides and an adequate barrier between the street and the sidewalk.

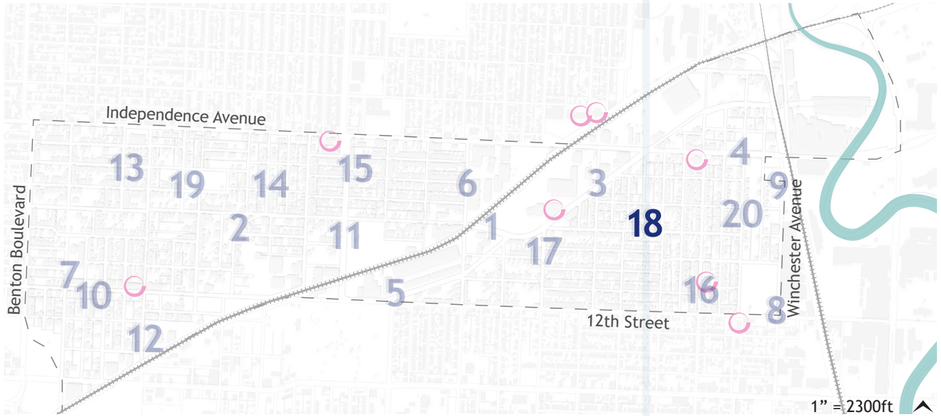


Figure 4.53: Photograph 18 Key Map



Figure 4.54: Photograph 18

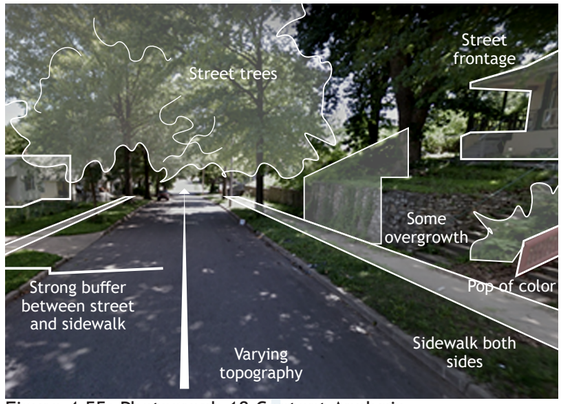


Figure 4.55: Photograph 18 Content Analysis

Survey Questions

- This area looks to be pedestrian friendly
- I would feel safe walking here during the day
- I would feel safe walking here at night
- I would easily be able to walk along this street
- The sidewalk conditions here are acceptable
- I would use this route to walk to school or work
- I could easily interact with my neighbors if I lived here

SPSS Analysis

Photograph 18 received the highest score in desirable walking route to school or work because of the vast amount of vegetation and the building frontage along the street.

This photo also tested similarly between those who have completed college and those who have completed high school in terms of neighborly interaction with both groups giving this variable a score above average.

Survey Results

Photograph 19 is located in Lykins adjacent to Lykins Square Park. Lykins Square a historically significant park within the neighborhood (See Figure 4.56). This area consists of barriers such as fences and vacant lots that separate private residences from the street. There are sidewalks on both sides of the street but neither of them is well-maintained. This area is also lacking street lighting and street trees which could reduce peoples' desire to walk.

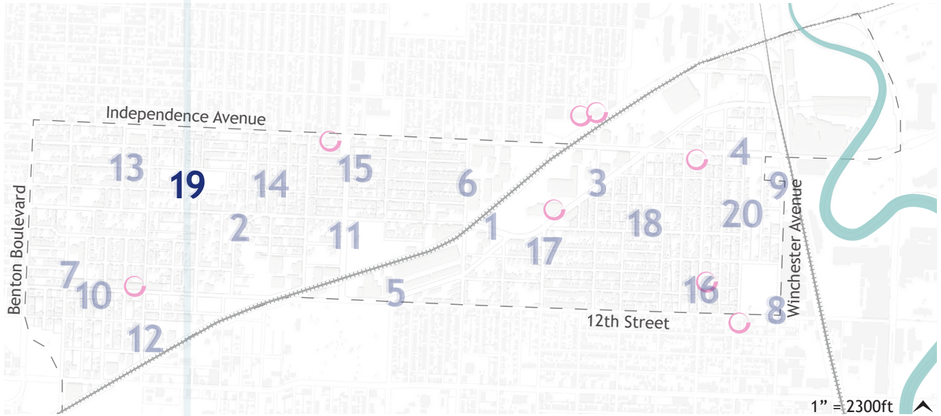


Figure 4.56: Photograph 19 Key Map



Figure 4.57: Photograph 19



Figure 4.58: Photograph 19 Content Analysis

Survey Questions

- This area looks to be pedestrian friendly
- I would feel safe walking here during the day
- I would feel safe walking here at night
- I would easily be able to walk along this street
- The sidewalk conditions here are acceptable
- I would use this route to walk to school or work
- I could easily interact with my neighbors if I lived here

SPSS Analysis

Photograph 19 received the highest score in safety during the day.

There is also a similar perception of sidewalk conditions between people outside of the neighborhoods, people who have lived in the neighborhoods for a long time, and those who have lived in the neighborhoods for a short amount of time with all groups giving an average score. This photo also tested similarly to desirable walking routes between people of different education levels with each group rating the walking route with an average score.

Survey Results

Photograph 20 is the last photo-based question in the survey. Its location is in Sheffield just before the topography starts sloping downwards toward the east (See Figure 4.59). This photograph shows homes blocked by vegetation, fences, and retaining walls, no lighting, unmaintained sidewalks, and poor buffers between the street and the sidewalks.

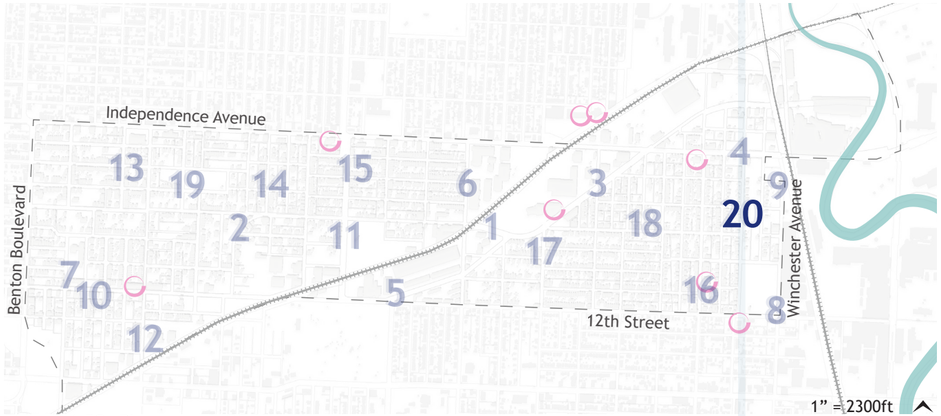


Figure 4.59: Photograph 20 Key Map



Figure 4.60: Photograph 20



Figure 4.61: Photograph 20 Content Analysis

Survey Questions

- This area looks to be pedestrian friendly
- I would feel safe walking here during the day
- I would feel safe walking here at night
- I would easily be able to walk along this street
- The sidewalk conditions here are acceptable
- I would use this route to walk to school or work
- I could easily interact with my neighbors if I lived here

SPSS Analysis

Photograph 20 had the lowest score in neighborly interaction due to the vegetative overgrowth blocking views across the street.

This photo also tested similarly between people who have a college degree and those who have completed high school in terms of desirable walking route to school or work with both groups giving this variable an average score.

Survey Results

The photo survey concluded by asking some demographic questions as well as the participant's primary mode of transportation, how far they perceive community establishment to be, how often they walk to these community establishments, and how often they cross the railroad.

The majority of surveys were taken in person at community meetings, and the majority of people who took the survey took it in English which is not representative of the racial makeup in either neighborhood (See Figures 4.62 and 4.63). There was a significant difference in the amount of male participants compared to female participants, and there was a decent distribution of age ranges who took the survey (See Figures 4.64 and 4.66).

As seen in Figure 4.65, most people who took the survey were from either Lykins or Sheffield, but there were some people who were familiar with the areas because they work here or live in one of the surrounding Northeast neighborhoods. About half of the participants have been affiliated with the neighborhoods for less than 10 years and the other half have worked or lived in these areas for over 10 years (See Figure 4.67).

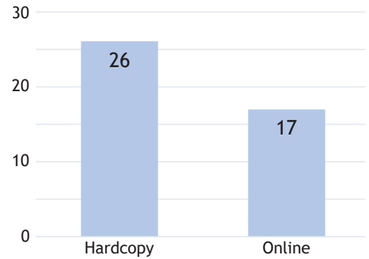


Figure 4.62: Survey Types

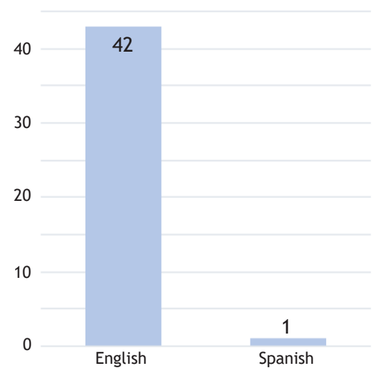


Figure 4.63: Language

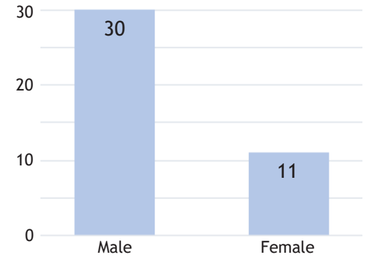


Figure 4.64: Gender

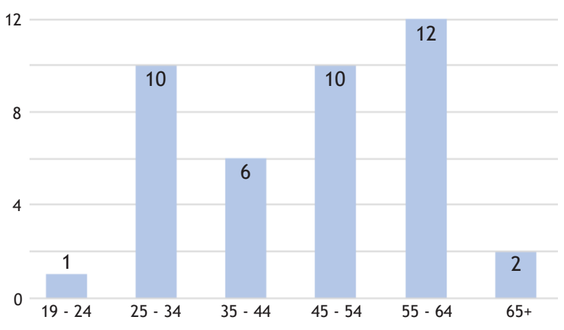


Figure 4.66: Age

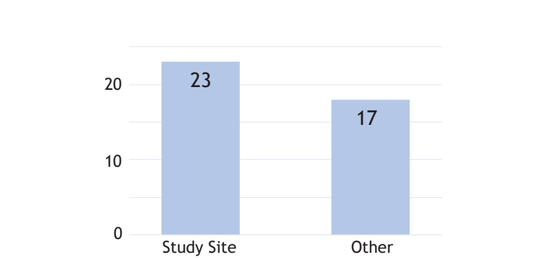


Figure 4.65: Location

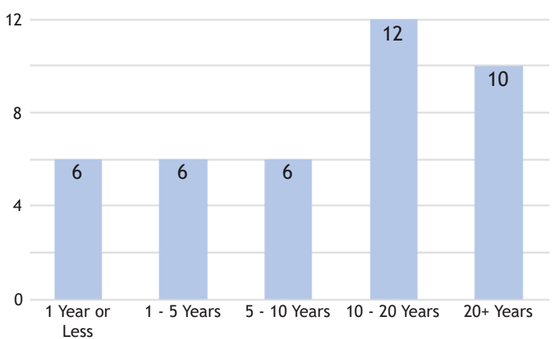


Figure 4.67: Length of Time Affiliated with Neighborhoods

Survey Results

Many people who took the survey have received a college degree or higher, and a significant amount of people who took the survey do not have kids under the age of 12 (See Figures 4.68 and 4.69).

As seen in Figure 4.70, Almost every person who took the survey uses their personal vehicle as a primary mode of transportation. There were three outliers where one person responded that they walk, and two people rely on ride share services, such as carpooling or Uber. Due to the small number of respondents who walk, comparison of perceptions between those who walk and those who use their personal vehicle could not be conducted.

There was also not a conclusive result about which railroad crossing people prefer (See Figure 4.71). This result can be influenced by designing intriguing and interactive underpass elements to draw people to specific railroad intersections.

Finally, peoples' perception of how far neighborhood services are and how often they walk there were tested (See Figure 7.72). Work, school, and grocery stores appear to be the farthest away, and people do not walk to go to these places. There is a small margin between the perception of distance and walking frequency for bus stops, gas stations, food establishments, meeting friends and family, and participating in extracurricular activities. People walk more frequently for exercise and to go to the park. By increasing walkability in the area, there is potential for walking frequency to go up and the perception of distance to go down.

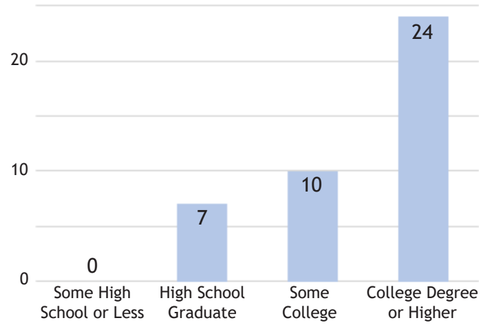


Figure 4.68: Level of Education

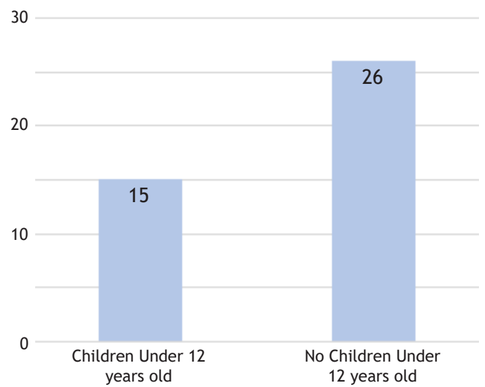


Figure 4.69: Respondents with Children

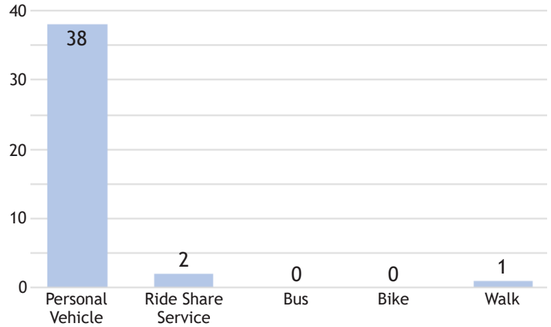


Figure 4.70: Primary Mode of Transportation

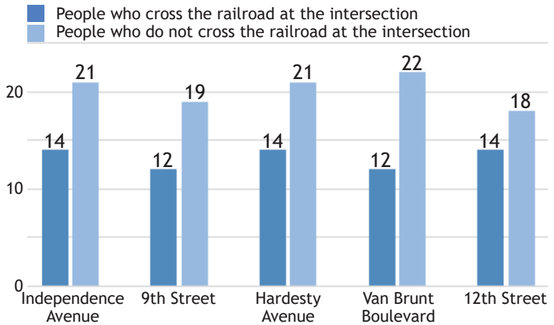


Figure 4.71: Railroad Crossings

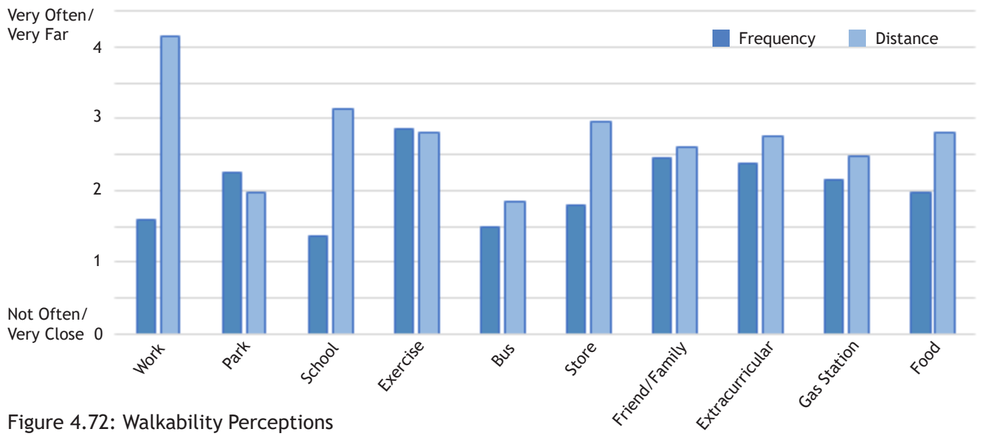


Figure 4.72: Walkability Perceptions

Significant Locations

Of the 20 photos that were selected, all but two of them received responses that were significant to the greater population or were rated highest or lowest in their categories. Photograph 4 and photograph 5 did not receive any significant scores. Both of these photos are located in the Sheffield neighborhood along major roads. These results are reflected in Figure 4.73.

Ten photographs received high or low ratings along with significant comparison factors when the data was analyzed, and eight photographs had significant comparison factors with no high or low ratings. The majority of the higher scoring photographs are located in the Lykins neighborhood. Only two photographs, 16 and 18, received high scores in the Sheffield neighborhood. Photographs 1, 12, and 20 all received low scores. Photograph 12 is located in Lykins while photographs 1 and 20 are located in Sheffield.

Many photographs from the survey were noted as statistically significant and can be seen distributed throughout the neighborhoods. Due to the small sample size, many of the results outlined in this chapter may not be statistically significant for the general population.

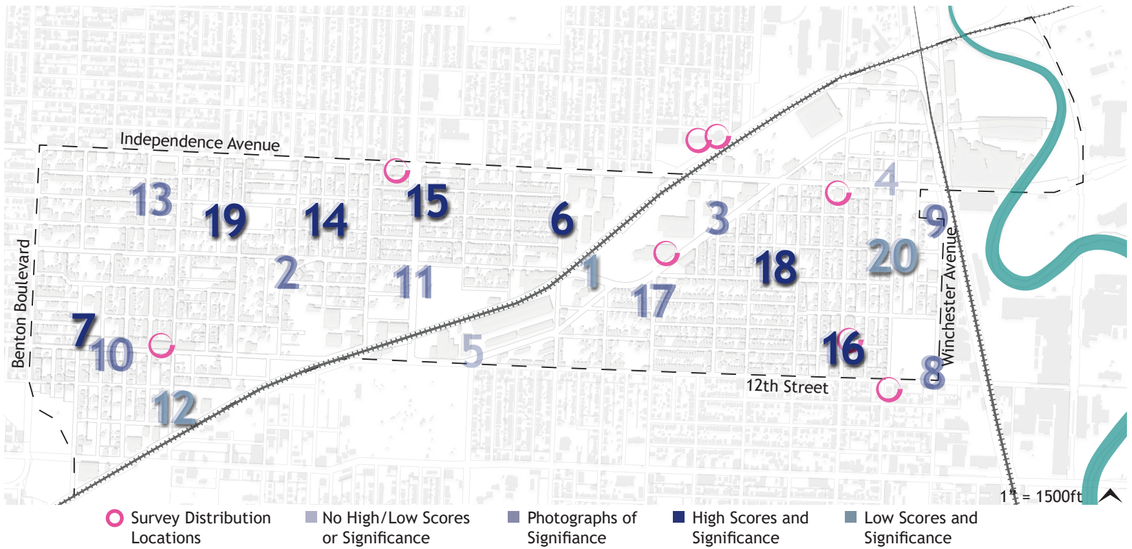


Figure 4.73: Significant Photo Locations

Data Synthesis

This study draws from the principles of New Urbanism to inform measurable variables of walkability and safety. It combines these variables with the perceived results of a survey to find applicable planning and design solutions. Data collected via analysis of the site was conducted to identify existing conditions within the neighborhoods. Then, surveys were distributed to people within the neighborhoods to assess their perceptions of safety and walkability in the area. These were then synthesized to identify specific aspects of the neighborhoods in which New Urbanist intervention can take place. This analysis guides design solutions in order to create a hub for New Urbanism within Northeast Kansas City.

Figure 4.74 shows the site analysis base with the dead zones as gray circles. The photograph locations that scored the lowest in the photo survey are circled in black. These lie either within or next to the dead zones found from the site analysis. The locations for site design are based off of this combination of analysis.



Figure 4.74: Photograph Locations with Lowest Scores

chapter five

DESIGN



Site Selection

Three sites were chosen for design intervention based on the site analysis and the survey results (See Figure 5.1). Site one is located in the southern portion of the Lykins neighborhood. Site two is in the middle of the two neighborhoods where many intersections meet underneath an overpass for the railroad. Site three is located on the eastern edge of the Sheffield neighborhood. These sites were selected because they are currently within the boundaries of a dead zone and have received low scores based on the community's preferences. All three sites have the opportunity to enhance connections within the study area and create destinations for the residents and visitors.

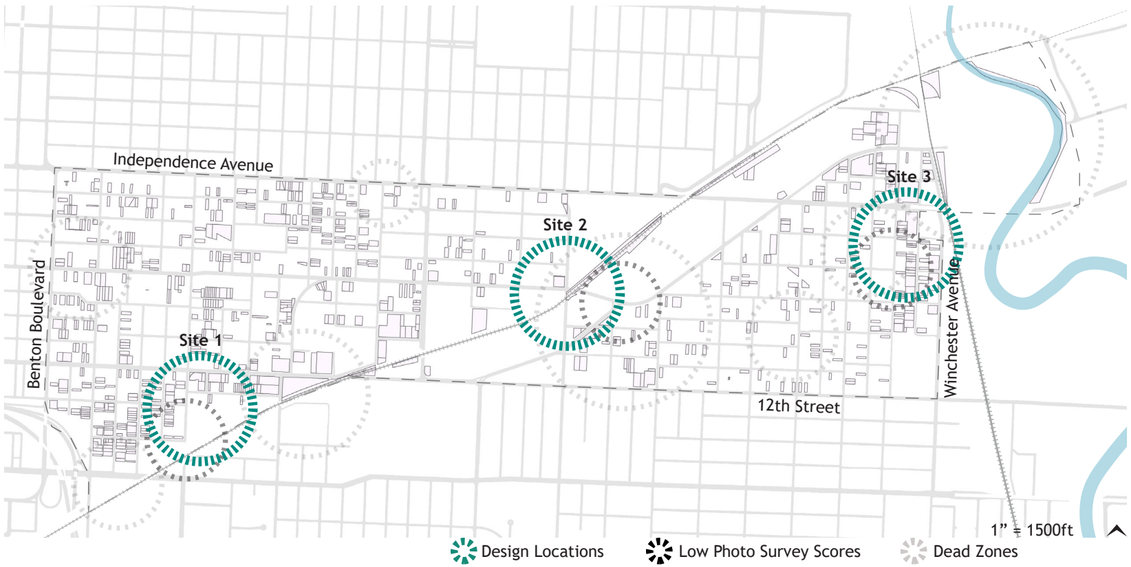


Figure 5.1: Site Selection

Proposed Location: Lykins Links

Site 1 can be seen in Figure 5.2. The site was selected because of its close proximity to the Urban Farming Guys, a community service organization that works closely with the neighborhood of Lykins to take ownership of vacant lots and create community gardens. There is also some industrial influence within from the central rail corridor to the southeast.

This area has minimal access to neighborhood services and received low scores in the photo survey for street safety, vegetation, and welcoming to pedestrians.

The design potential for this site, Lykins Links, is very high due to its location between two major roads, Truman Road and 12th Street. This creates the opportunity for a new hub within the Lykins neighborhood. Due to the vast amount of vacancy in this area, there is also opportunity to enhance connectivity through new walking trails. This location is also within close proximity to Freeway Park, so connections to this park should be addressed as well as introducing new neighborhood services to the area since most of the businesses surrounding the site are auto shops, beauty supply, or industrial distributors.



Figure 5.3: Key Map

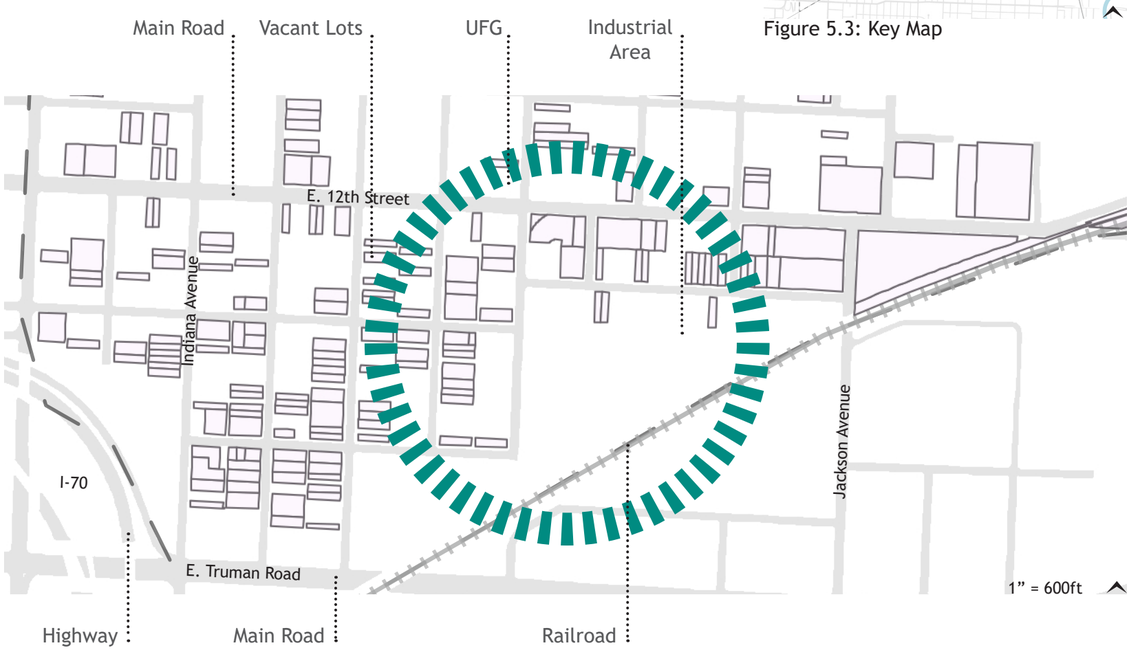


Figure 5.2: Site 1: Lykins Links

Proposed Location: Northeast Node

Site 2 was selected because of its central location in the study site (See Figures 5.4 and 5.5). It also features two overpasses where cars and pedestrians must travel underneath to avoid the rail line. In addition to the overpass infrastructure, the Northeast Node location currently has a vast expansion of pavement. This is mostly due to the industrial businesses along the railroad, but many times the paved lots are not being used to their fullest potential. This is especially true with the church parking lot, which would only be full on Sunday mornings. This site also scored very low throughout the survey responses in categories such as pedestrian friendliness, safety during the day, safety at night, preferred walking route, easy walkability, and sidewalk conditions.

There are many design opportunities to consider in this area as well. Since it is in a central location between the two neighborhoods, there is the possibility to enhance the connection between the two at a central node. This would include designing an underpass system that is desirable for pedestrians and those traveling between the communities. There is also potential to add more green space in the area by taking some of the underutilized paved lots as well as rearranging some of the current businesses along the railroad tracks. Finally, there must be more integration between the industrial area and the residential areas to create a cohesive environment and make people feel more comfortable in the neighborhoods.



Figure 5.5: Key Map

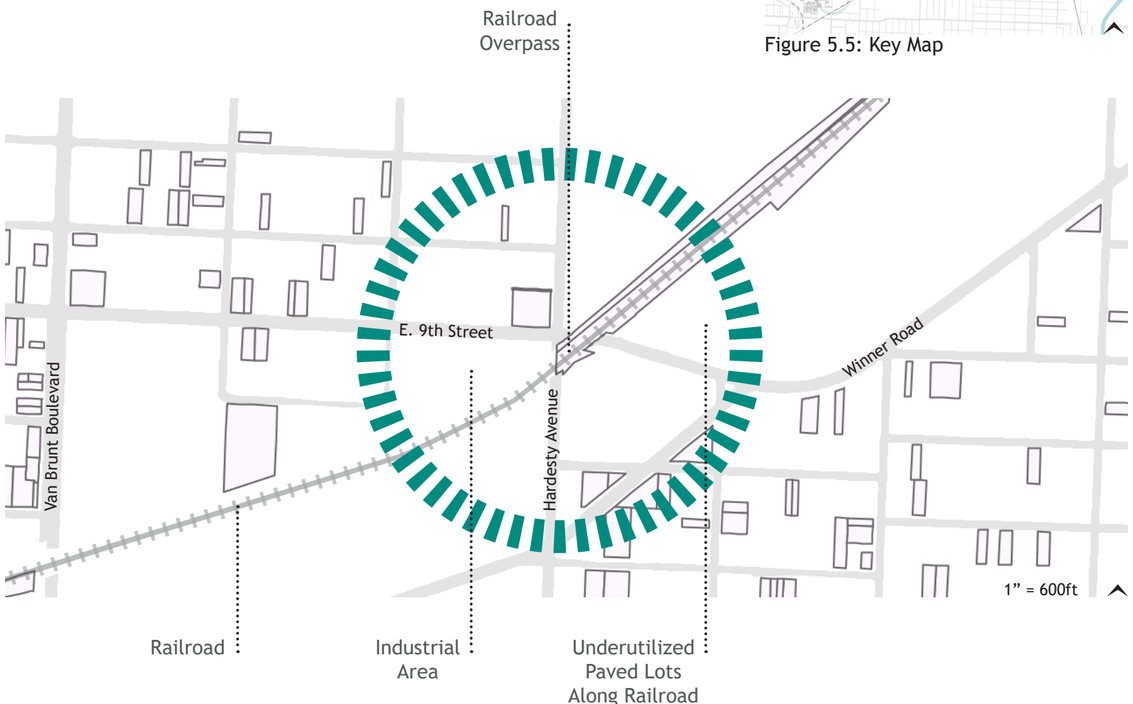


Figure 5.4: Site 2: Northeast Node

Proposed Location: Sheffield Pointe

Site 3 can be seen in Figure 5.6. It was selected because of its location in a dead zone. There are not many amenities or services near the northeast corner of Sheffield, and it also suffers from high topography changes which results in many vacant lots. It scored low in one aspect of the photo survey which was the ability to have interaction between neighbors. This site was also chosen because of its position along Independence Avenue. This will either be the first interaction people will have with Sheffield and the Historic Northeast or the last interaction they will have on their way out to Independence.

There is opportunity to create a gateway element or system along Independence Boulevard where the bridge meets grade. Unique possibilities could be unearthed to address the steep slopes in the area along with integrating elements of the Blue River and the industrial background that influence the Sheffield neighborhood. Additional neighborhood services could be implemented here as well.

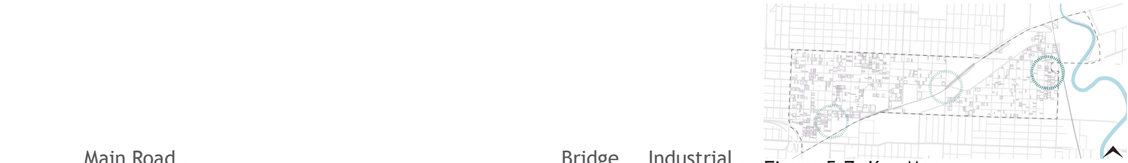


Figure 5.7: Key Map

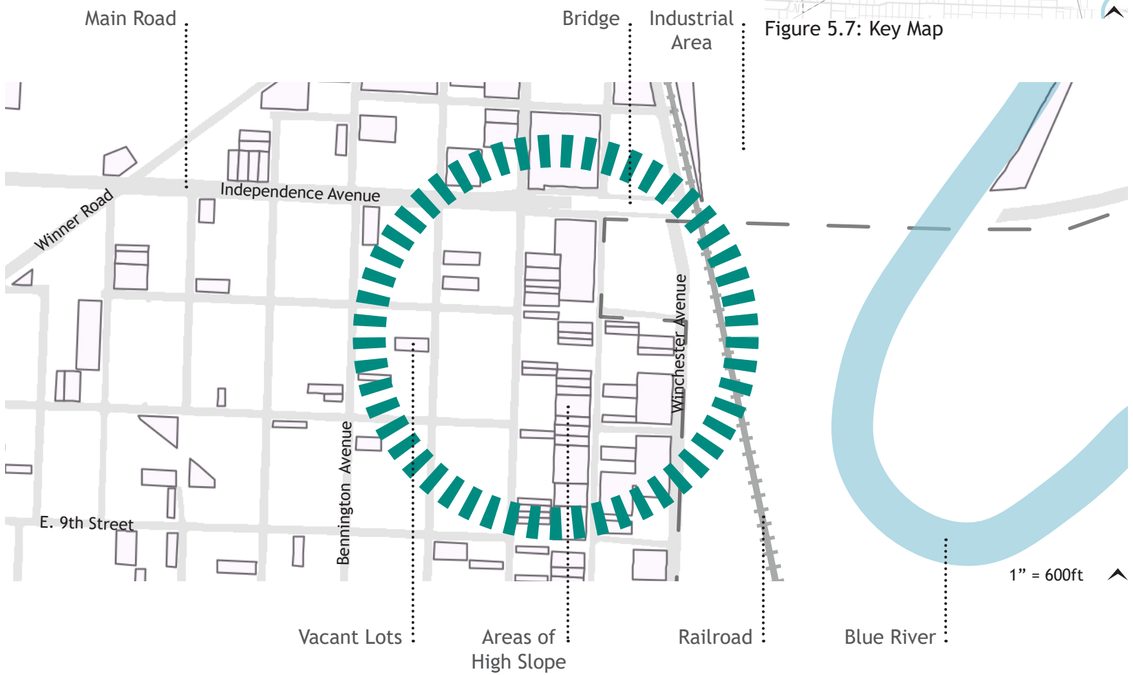


Figure 5.6: Site 3: Sheffield Pointe

Concept Plan

As seen in Figure 5.8, the three selected sites create an opportunity for connection throughout the study area. It not only focuses on the main commercial corridor and collector road, Independence Avenue, but draws people in and through the neighborhoods to experience what all the Historic Northeast has to offer.

The locations of the focus areas, specifically Site 1 and Site 3, pull in parts of the neighborhood that could be considered outside of the central neighborhood corridor. This helps activate parts of the neighborhoods that have not been accessible or are currently overlooked.

The design focuses on connecting Lykins and Sheffield across the railroad that acts as their neighborhood boundaries. Since much of travel in these neighborhoods is north to south and vice versa, this design provides a smooth transition that interweaves the east-west movement while allowing pedestrians to travel north and south in an intriguing fashion that connects to existing elements in the greater Kansas City landscape.

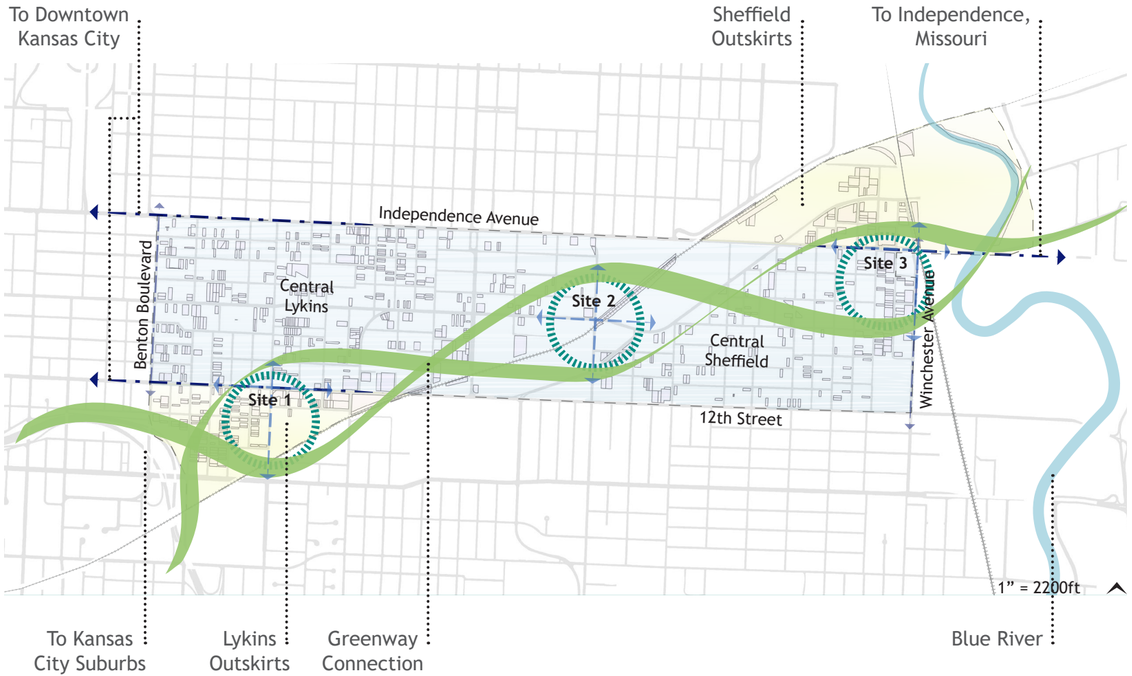


Figure 5.8: Concept Plan

New Urbanism Design Guidelines

Mixed Use Development

- Multiple services in a designated area
- Variety of housing options
- Live, Work, Play

Street Hierachy

- Highway connection
- Arterial roads
- Collector roads
- Local roads
- Variety of roads to ease the flow of traffic
- Logical flow from one to another

Enhanced Streetscape

- Pedestrian friendly design
- Adequate building setback
- Connected and sidewalks
- Minimal curb-side parking
- Buffers between street and sidewalk
- Slower traffic speeds
- Green Street influence
- Enhanced vegetation

Sense of Place

- Create a unique atmosphere that represents the Historic Northeast
- Enhance the feeling of community within Lykins and Sheffield
- Use similar design elements to connect throughout

Walkable Distances

- Ensure neighborhood amenities and services are within walking distance
- 10 minute walking radius to places of interest
- Reduce the perception of the amount of time it takes to get places
- Comfortable walking conditions

Green Space

- A variety of parks and mixed-use spaces
- Community gardens
- Sporting amenities
- Pocket parks
- Formal gathering areas
- Create a sense of community through neighborly interaction

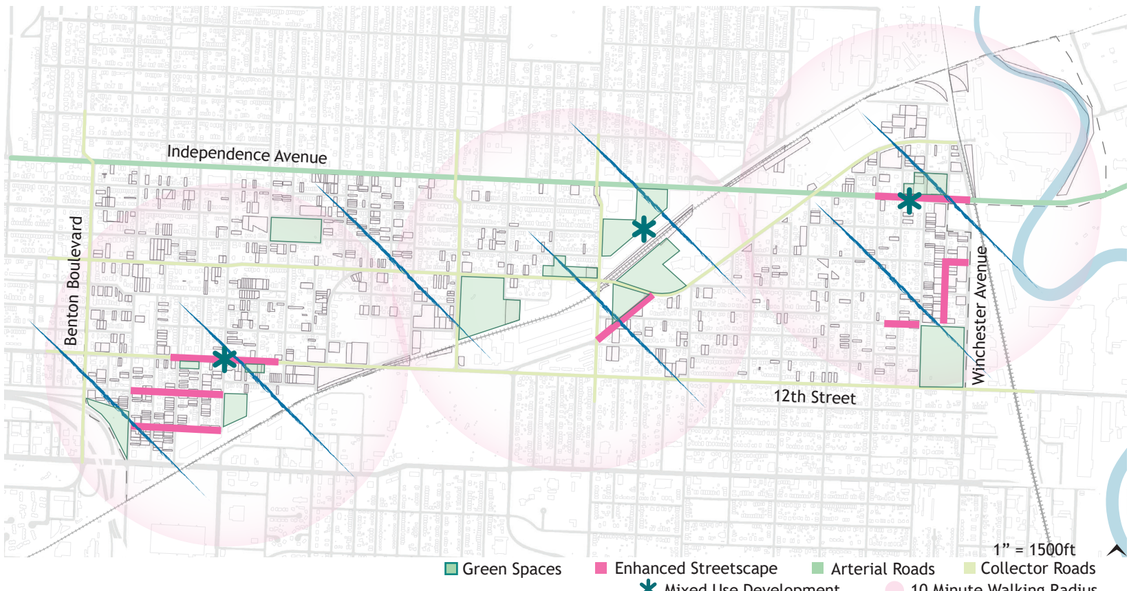


Figure 5.9: Guidelines

Lykins Links: Design Intervention

Lykins Links is designed to prioritize green space and maximize the potential of the vacant lots while creating a pedestrian network that links the residential areas with the industrial influences.

The first step in the design was to identify which vacant lots could be used to widen the existing streets to create more of a pedestrian friendly atmosphere. Then, vacant lots were chosen to create an interconnected series of pedestrian pathways throughout the site.

Much of the site was separated due to the differences in zoning allowances, so in order to re-link the site back together, building layout had to be adjusted. Large industrial buildings were relocated closer to the railroad to act as a barrier to the rail traffic, and the size and shape of the buildings were adjusted to better fit the site while maintaining their original area.

There were many outlying businesses consuming underutilized buildings or standing on their own, so in order to provide more green space, these businesses have been consolidated into a Mixed Use Corridor along 12th Street. This makes it easier for residents and visitors to find what they need without having to make many stops, and it provides new space for existing neighborhood services and future services that can aid the area.

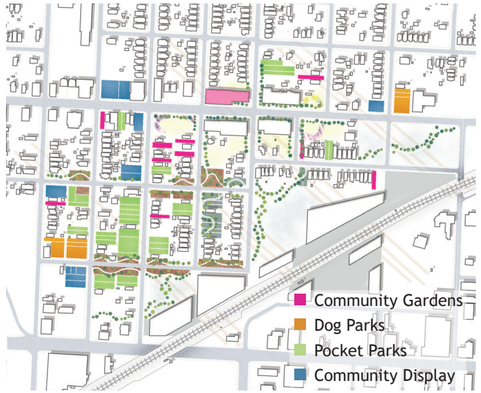


Figure 5.10: Vacant Lot Solutions

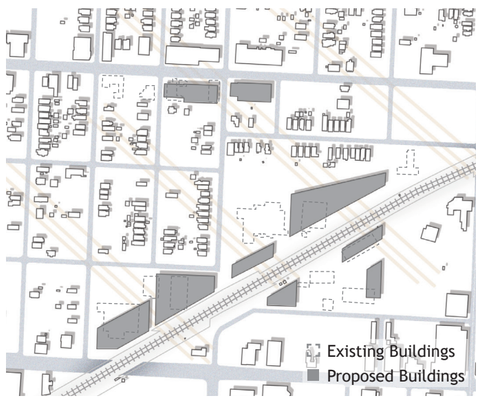


Figure 5.11: Building & Business Relocations



Figure 5.12: Lykins Links Plan

Lykins Links: Design Intervention

12th Street has been transformed into a mixed-use hub in the southern corner of the Lykins neighborhood. Making use of the Urban Farming Guys current building and the AT&T building on the north side of the street, the existing buildings have been expanded vertically and refaced to allow for more room and bring more interest to the area. The vacant lots across the street have been filled with buildings mirroring those to their north. These buildings are to be used by existing businesses in the area that are currently occupying old, worn down structures and help consolidate many of the businesses into one area. This provides the option for residents and visitors to only have to make one stop to find what they need. These mixed-use buildings also provide extra space for neighborhood necessities, such as grocery stores, pharmacies, and other shops.

Closer to the railroad, the industrial buildings have been rearranged to better integrate the businesses with the residential areas. A greenway was implemented in between the zones that incorporates some industrial elements reflecting on how the neighborhoods once came to be. This design feature can help residents and visitors feel more connected with their neighborhood businesses and create a stronger feeling of community.



Figure 5.13: Mixed Use Corridor

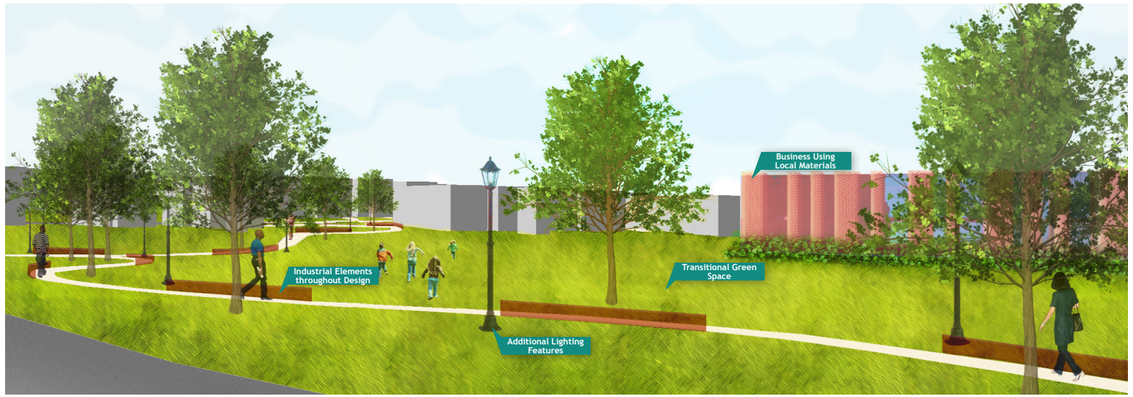


Figure 5.14: Industrial Greenway

Northeast Node: Design Intervention

The Northeast Node side focuses on connecting the neighborhoods of Lykins and Sheffield across the railroad. This is accomplished by making the area around the railroad more aesthetically pleasing and pedestrian friendly. Much of this area was taken up by pavement that was not being used to its fullest potential. By removing much of that pavement, there was an extensive amount of space to make the majority of this site a large, open, green space with a variety of activities.

This site has trails on both sides of the railroad and are able to connect to existing parks and major roads within the study area. What makes the Northeast Node so unique are the overpasses that people must cross under to reach the adjacent neighborhood. Each underpass is designed with a unique feature that is experienced only by approaching it from a certain direction. These range from lighting elements, to rotating murals, to reflective designs, and interactive sculptures. These features will help bring interest to the area and reduce vehicular and pedestrian traffic along Independence Avenue to the north.

The buildings in this site have also been rearranged and consolidated to create more of a mixed-use atmosphere. Buildings are fronting the roads and a large pedestrian mall and formal green space will encourage walking in the area.

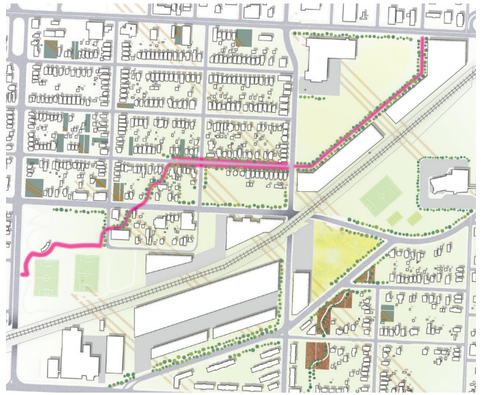


Figure 5.15: Greenway Connections

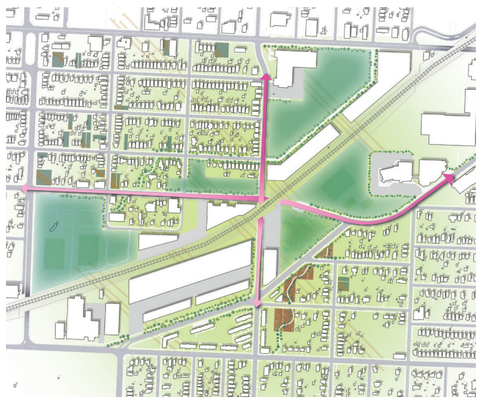


Figure 5.16: Underpass Connections

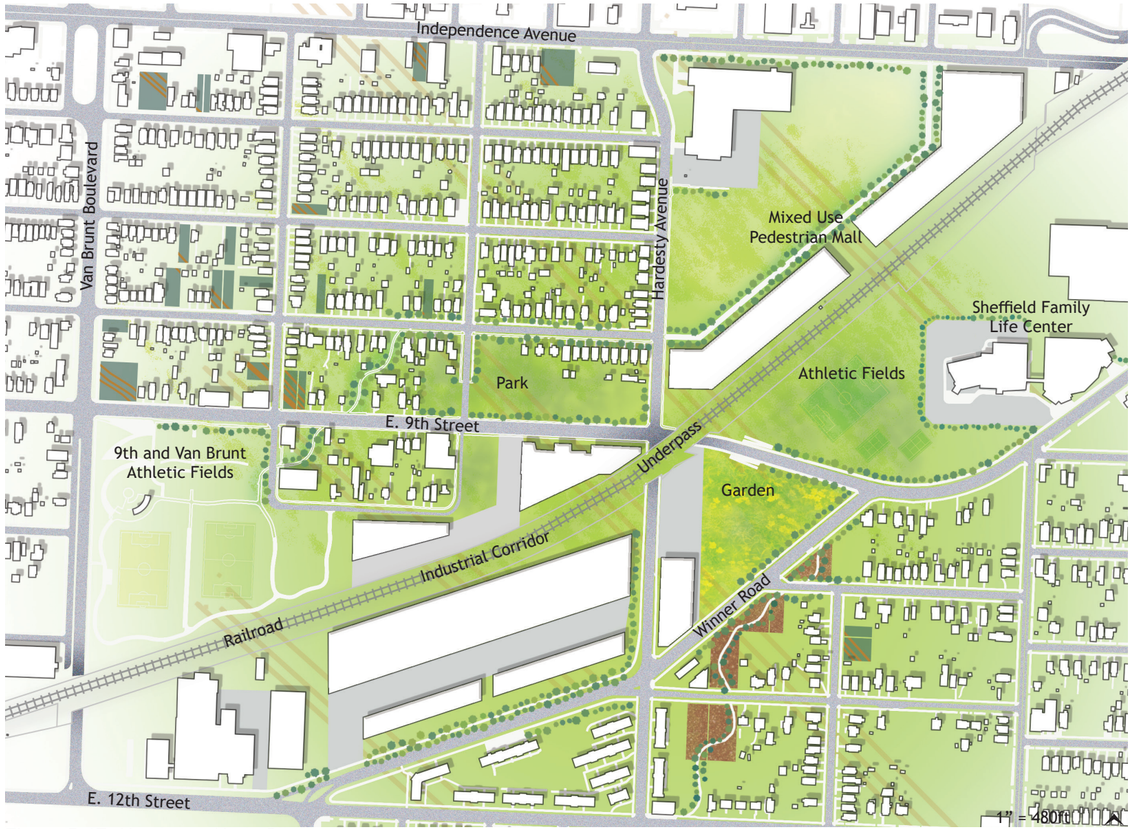


Figure 5.17: Northeast Node Plan

Northeast Node: Design Intervention

The Northeast Node is where both Lykins and Sheffield come together. Currently, there are not many places where pedestrians can cross the railroad. It is important to create an environment where people feel safe walking underneath the few overpasses along this corridor. This is accomplished by implementing more gathering spaces near the overpasses, such as parks and outdoor activities. Safer spaces can also be accomplished through visibility and eyes on the street when people are out enjoying themselves in the park. The addition of intriguing elements within and around the overpass can also help encourage people to use these roads as common walking routes. As seen in Figure 5.18, lighting elements and painted murals can make the overpass much more welcoming for all.

A pedestrian walk was also implemented in this area that is complimented with a couple of mixed-use buildings. This provides an alternative route to Independence Avenue and around the railroad. This pedestrian path also connects to a series of meandering paths that meet at the 9th and Van Brunt Athletic Fields. This pedestrian promenade has space for new retail, restaurants, grocery, and living units. It also fronts a large open green with an amphitheater where kids can run and people can perform.



Figure 5.18: Underpass



Figure 5.19: Pedestrian Promenade

Sheffield Pointe: Design Intervention

Sheffield Pointe is an important piece in the success of the overall design. This site is either the first or last interaction people will have with not only the Sheffield neighborhood but with the entire Historic Northeast district.

Sheffield Pointe features a large gateway element welcoming people into the site along with a memorial park that documents the history of the Historic Northeast neighborhoods. There are meandering paths throughout the site design that connect to the memorial park, the existing Sheffield Park, and to the Walk KC path that the city of Kansas City is proposing on the east side of the Blue River.

This site is very sensitive due to the drastic topographical changes that occur in the area. Many of the vacant lots along the ridge will be used for native plantings and flood protection elements to help slow the flow of water before it reaches the structures within the flood plain and eventually the Blue River.

The remaining vacant lots in the area will be used as pocket parks or for productive services for each block. Some businesses have also been consolidated in this area to leave more room for green space and create more space for essential neighborhood services such as grocery stores, minute clinics, and community meeting spaces.

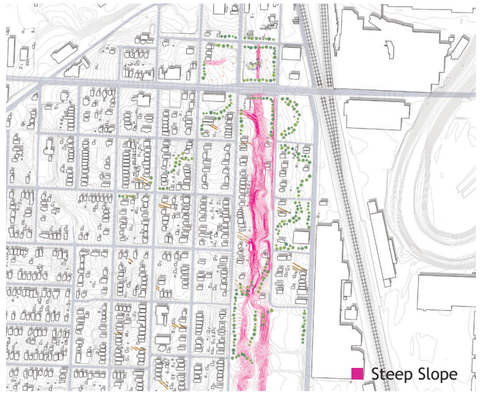


Figure 5.20: Areas of High Slope



Figure 5.21: Influential Elements



Figure 5.22: Sheffield Pointe Plan

Sheffield Pointe: Design Intervention

Upon arrival into the Sheffield neighborhood, one will be welcomed by four large steel structures. These pay homage to the Kansas City Bolt & Nut Company plant, a large steel manufacturer for the city, that brought people and jobs to the Sheffield neighborhood and the surrounding Northeast neighborhoods. People will also be greeted by maintained shrubbery along the steep slopes and a memorial park to the north that documents the history of the Historic Northeast neighborhoods of Kansas City. Paths throughout the site will cross within this park and then exit the Sheffield neighborhood boundary along Independence Avenue to pick up along the proposed Walk KC trail to the east of the Blue River.

The eastern edge of Sheffield consists of a very steep slope with many vacancies. Then, the site flattens out enough for homes to be built before entering the industrial area along the Blue River. Many vacancies in the area are most likely due to the runoff water flooding homes and the lack of stable soil to build upon. This means stabilizing the land and catching water before it gets to the rest of the homes down-slope is important. Natural, native plantings can help stabilize the earth and slow the runoff water along the areas of steeper slope, and detention areas can help capture water to slow it down. The detention areas are also accessible to pedestrians in times of low rainfall to mimic the shoreline of the Blue River since the river is currently inaccessible due to the industries surrounding it.

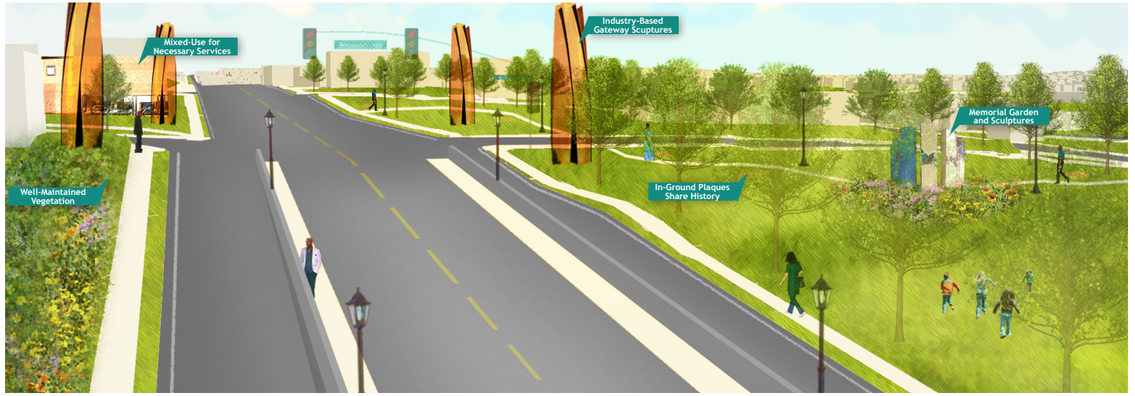


Figure 5.23: Historic Northeast Entrance



Figure 5.24: Slope Solution

New Urbanist Influence Throughout Neighborhoods

Each site, while unique in their own forms, comes together in a way that reflects the history of how the Historic Northeast came to be and implements a new design framework that Northeast Kansas City can grow with.

The three destinations reflect the goals of New Urbanism through the addition of mixed use businesses and outdoor public spaces that enhance visibility and create an atmosphere of community. Larger, well-kept sidewalks, complete streets with bike lanes and safe pedestrian ways, and a notable street hierarchy help with walkability by creating safe and desirable pedestrian thoroughfares. Along these walking routes, greenways and park spaces have been designed to increase use in their surrounding urban areas. These allow for independence in young children, create spaces for recreation for people of all ages, races, and levels of income, and reduce the amount of time that it takes to get to certain destinations within the neighborhoods. While each site is located approximately 20 minutes from each other by foot, there are connecting elements such as integrated industrial design and greenways that reduce this perception of time and bring interest to the walking routes. Without the influence of New Urbanist design, these neighborhoods would be those that people drive by on their way to work. Using the principles of New Urbanism, Lykins and Sheffield can become destinations that reflect the history of the Historic Northeast.

These designs are rooted in New Urbanism and provide the opportunity to create a cohesive and connected atmosphere in the Historic Northeast. Safety and walkability are emphasized through eyes on the street, Crime Prevention Through Environmental Design, and creating new destinations that incorporate neighborhood services in areas that could be considered dead zones. These designs can result in getting people outside and encouraging neighborhood interaction, which are alternative characteristics of New Urbanist design. This will bring new life back to these neighborhoods and influence future development within the area.



Figure 5.25: Master Plan

Phasing Plan

All three sites require the relocation of existing businesses into new buildings in order to consolidate uses and enhance the public spaces in the areas. These neighborhoods are highly influenced by the industrial areas that are located within and around them. Integrating the industrial zones and the residential zones can facilitate a better relationship between the business owners and the residents. As these relationships grow stronger, there could be more potential for employment within the neighborhoods to help the movement of New Urbanism which encourages working in places that are close to home.

Of course, this vision requires a substantial amount of funding and planning for the city of Kansas City and the neighborhoods of Lykins and Sheffield, which could take quite a while to come to fruition. The age and condition of current buildings must be assessed, and a plan must be developed for revitalization. Some of the cost could be alleviated through a phasing plan for the area.

The first phase would be to clear and construct the designated vacant lots. This will help get the community involved in taking ownership of their neighborhoods and see the good that can come from the vacant lots on their block. Then, widened sidewalks, grass buffers, tree canopy, and lighting can be implemented to create a more pedestrian-friendly atmosphere along the streets where possible. Next, the connecting elements in each site can be added as well as the areas designated for flood control to help aid in the preservation of the site's history. Finally, once adequate funding has been arranged, the buildings and businesses can be adjusted to allow for more green spaces. The city can work to adjust the zoning allowances and new buildings can be implemented that cater to the industrial businesses while allowing more space for the neighborhood residents. Once this is completed, parks can be plotted and designed to facilitate neighborhood interaction and provide space for children to play and people to gather within their own blocks.

Funding Opportunities

Raising and collecting money can be tough and take a long time, but there many are organizations in the Kansas City area that could be willing to donate time, money, and resources to help.

For example, The Sunderland Foundation supports construction projects and issues grants to nonprofits in Kansas City and the greater Midwest area. This organization can help fund construction projects for essential services for youth and families and provide grants for arts- and culture- based projects. Many places in the area currently use this service such as the Guadalupe Centers and the YMCA of Greater Kansas City. A total of $153,474,700 was allocated in grants in 2019 (The Sunderland Foundation, 2020).

Kansas City can also apply for the Community Development Block Grant and the Section 108 Loan Guarantee Program. Both of these provide grants for the development of urban communities. These grants help by providing decent housing and expanding economic opportunities for low- to medium- income persons (HUD Exchange, 2020).

Finally, one of the largest development opportunities that was proposed was in the Northeast Node just south of Independence Avenue. This area is currently owned by the Asian Americans for Equality organization. They focus on enriching the lives of Asian Americans and others in need. Much of their work centers around housing, social services, and community development. This organization can be a great asset for receiving funding and providing resources for these neighborhoods due to their strengths in community outreach and fundraising (Asian Americans for Equality, 2020).

Future Growth

New Urbanism has proved its success in many cities in the United States. It can be an effective way to enhance the Northeast neighborhoods of Kansas City as it can be implemented at a variety of scales. If New Urbanist development starts with the neighborhoods of Lykins and Sheffield, it can trigger future improvement within the surrounding neighborhoods of the northeast such as Indian Mound, Pendleton Heights, Independence Plaza, and Scarritt Renaissance (See Figure 5.26). Then, development can move inward toward Downtown Kansas City and branch outward toward the rest of the city to create a cohesive and connected city for everyone.

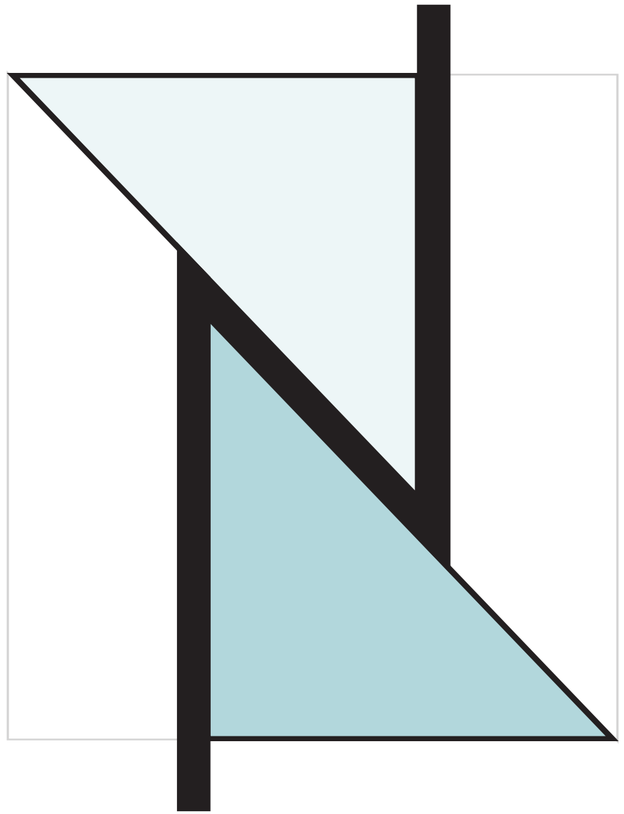


Figure 5.26: Concept Diagram for Future Growth

chapter six

CONCLUSION

Conclusion

This report focuses on walkability and safety in the neighborhoods of Lykins and Sheffield which currently are struggling with connectivity, crime, and urban vacancy. A new vision of the neighborhoods can be drawn from implementing the principles of new urbanism to enhance peoples' perception of safety and walkability within the neighborhoods.

This study examined two aspects of design that are necessary for the successful implementation of New Urbanist development: walkability and safety. While there are multiple ways to study walkability and safety, examining the physical characteristics of urban neighborhoods within Kansas City, Missouri and comparing them to the perceived walkability and safety gathered from the photo survey provides in-depth information on how safety and walkability is viewed in an urban setting. The findings were used to inform design decisions for future development of the neighborhoods east of downtown Kansas City.

Project Limitations

Many aspects of walkability and safety are discussed in this report, but it should be acknowledged that there are other factors that contribute to a site's walkability and safety, as well as other design principles of New Urbanism which are not covered by this study.

There were limitations in the survey analysis such as the comparison between people who walk and people who drive as their primary mode of transportation because of the limited number of survey participants who walk more than drive. There is also a limitation in the survey data, because a significant amount of people who took the survey were from outside of the site boundary, so they could have a different perception of safety and walkability. Those that do live in the area could be familiar with the locations in the photos from the survey as well, making their perceptions of safety and walkability different from the general environmental/spatial elements that were to be analyzed. There was also low participation in the survey in general making the survey pool small. This low respondent number could report results that differ from the general population of the study area.

Content analysis was conducted after the survey responses were recorded to see why people would rate the photos the way that they did. This was done by studying the principles of New Urbanism and assessing the photos based on what was learned about New Urbanism. The survey did not explicitly ask what it was about the photo that made people rate the photos in a certain way.

Future Research

There are many opportunities for future research within the topics of Kansas City, New Urbanism, and urban vacancy.

Regarding Kansas City, case studies can be done on how New Urbanism has been implemented in downtown areas in other cities, how New Urbanism can be studied at a larger scale within the greater Historic Northeast neighborhoods, and other design influences that have influenced or can influence the city or neighborhoods.

Different priciples of New Urbanism can be studied outside of walkability and safety to enhance the implementation of New Urbanism as a whole, or these principles could be implemented at different scales, such as street-scale or regional-scale.

Lastly, safety and walkability can be assessed in areas with signifcant urban vacancy by studying children's perceptions of the two variables as well as how vacant lots can promote concepts beyond walkability and safety in a neighborhood setting.

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KANSAS STATE UNIVERSITY | University Research Compliance Office

TO: Dr. Sara Hadavi
Architecture, Planning, and Design
1096 Seaton Hall

Proposal Number: 9999

FROM: Rick Scheidt, Chair
Committee on Research Involving Human Subjects

DATE: 12/23/2019

RE: Proposal Entitled, "Northeast Kansas City: A Walkable District"

The Committee on Research Involving Human Subjects / Institutional Review Board (IRB) for Kansas State University has reviewed the proposal identified above and has determined that it is EXEMPT from further IRB review. This exemption applies only to the proposal - as written – and currently on file with the IRB. Any change potentially affecting human subjects must be approved by the IRB prior to implementation and may disqualify the proposal from exemption.

Based upon information provided to the IRB, this activity is exempt under the criteria set forth in the Federal Policy for the Protection of Human Subjects, **45 CFR §46.101, paragraph b, category: 2, subsection: ii.**

Certain research is exempt from the requirements of HHS/OHRP regulations. A determination that research is exempt does not imply that investigators have no ethical responsibilities to subjects in such research; it means only that the regulatory requirements related to IRB review, informed consent, and assurance of compliance do not apply to the research.

Any unanticipated problems involving risk to subjects or to others must be reported immediately to the Chair of the Committee on Research Involving Human Subjects, the University Research Compliance Office, and if the subjects are KSU students, to the Director of the Student Health Center.

203 Fairchild Hall, Lower Mezzanine, 1601 Vattier St., Manhattan, KS 66506-1103 | 785-532-3224 | fax: 785-532-3278
comply@k-state.edu | k-state.edu/comply

IRB Approval

KANSAS STATE UNIVERSITY

Dear Participant,

My name is Konner Pendland, and I am a graduate student at Kansas State University. I am conducting research in Northeast Kansas City, specifically the neighborhoods of Lykins and Sheffield, for my master's report and would appreciate your participation in the following survey. This survey aims to understand the preferences of Lykins and Sheffield residents to assess the quality of their neighborhoods.

The following questionnaire will take about 12 minutes to complete. Participation in this survey is entirely voluntary and you can stop anytime if you decide not to continue. In order to ensure that all information remains anonymous, please do not include your name. Copies of this project will be provided to Kansas State University. If you choose to participate in this survey, please answer all questions honestly and to the best of your ability.

Thank you for taking the time to assist me in my educational research. The data collected will provide useful information in order to help me complete my master's report.

Sincerely,

Konner Pendland
konner@ksu.edu

For the following photographs, please indicate to what extent you agree or disagree with each statement by circling a number from 1 (Strongly Disagree) to 5 (Strongly Agree):

I would easily be able to walk along this street 1 2 3 4 5
I would feel safe walking here during the day 1 2 3 4 5
I would feel safe walking here at night 1 2 3 4 5
This area looks to be pedestrian friendly 1 2 3 4 5
The sidewalk conditions here are acceptable 1 2 3 4 5
I would use this route to walk to school or work 1 2 3 4 5



I would easily be able to walk along this street 1 2 3 4 5
I would feel safe walking here during the day 1 2 3 4 5
I would feel safe walking here at night 1 2 3 4 5
This area looks to be pedestrian friendly 1 2 3 4 5
The sidewalk conditions here are acceptable 1 2 3 4 5
I would use this route to walk to school or work 1 2 3 4 5



I would easily be able to walk along this street 1 2 3 4 5
I would feel safe walking here during the day 1 2 3 4 5
I would feel safe walking here at night 1 2 3 4 5
This street looks safe to walk next to 1 2 3 4 5
The sidewalk conditions here are acceptable 1 2 3 4 5
I would use this route to walk to school or work 1 2 3 4 5



I would easily be able to walk along this street 1 2 3 4 5
I would feel safe walking here during the day 1 2 3 4 5
I would feel safe walking here at night 1 2 3 4 5
This street looks safe to walk next to 1 2 3 4 5
The sidewalk conditions here are acceptable 1 2 3 4 5
I would use this route to walk to school or work 1 2 3 4 5



The vegetation in this area makes it desirable to walk here 1 2 3 4 5
I would feel safe walking here during the day 1 2 3 4 5
I would feel safe walking here at night 1 2 3 4 5
This street looks safe to walk next to 1 2 3 4 5
The sidewalk conditions here are acceptable 1 2 3 4 5
I would use this route to walk to school or work 1 2 3 4 5



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The sidewalk conditions here are acceptable 1 2 3 4 5
I would use this route to walk to school or work 1 2 3 4 5



Survey Sample

I would easily be able to walk along this street 1 2 3 4 5
I would feel safe walking here during the day 1 2 3 4 5
I would feel safe walking here at night 1 2 3 4 5
This area looks to be pedestrian friendly 1 2 3 4 5
The sidewalk conditions here are acceptable 1 2 3 4 5
I would use this route to walk to school or work 1 2 3 4 5



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I would feel safe walking here during the day 1 2 3 4 5
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The sidewalk conditions here are acceptable 1 2 3 4 5
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I would feel safe walking here during the day 1 2 3 4 5
I would feel safe walking here at night 1 2 3 4 5
This street looks safe to walk next to 1 2 3 4 5
This area seems welcoming for pedestrians 1 2 3 4 5
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This area seems welcoming for pedestrians 1 2 3 4 5
I could easily interact with my neighbors if I lived here 1 2 3 4 5



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What is your primary mode of transportation?

☐ Personal Vehicle ☐ Ride Share Service ☐ Bus ☐ Bike ☐ Walk

How often do you walk to:

1 = Seldom/Never
2 = Occasionally
3 = Sometimes
4 = Often
5 = Most of the time/Always

1 2 3 4 5 Work
1 2 3 4 5 Parks
1 2 3 4 5 School
1 2 3 4 5 Exercise
1 2 3 4 5 Bus Stops
1 2 3 4 5 Grocery Store
1 2 3 4 5 Meet Friends/Family
1 2 3 4 5 Extracurricular Activities
1 2 3 4 5 Convenience Store/Gas Station
1 2 3 4 5 Restaurants/Food Establishments

How far is it walk to:

1 = 5 minutes or less
2 = 10 minutes
3 = 15 minutes
4 = 20 minutes
5 = More than 20 minutes

1 2 3 4 5 Work
1 2 3 4 5 Parks
1 2 3 4 5 School
1 2 3 4 5 Exercise
1 2 3 4 5 Bus Stops
1 2 3 4 5 Grocery Store
1 2 3 4 5 Meet Friends/Family
1 2 3 4 5 Extracurricular Activities
1 2 3 4 5 Convenience Store/Gas Station
1 2 3 4 5 Restaurants/Food Establishments

How often do you cross the railroad at:

1 = Seldom/Never
2 = Occasionally
3 = Sometimes
4 = Often
5 = Most of the time/Always

1 2 3 4 5 Independence Avenue
1 2 3 4 5 East 9th Street
1 2 3 4 5 Hardesty Avenue
1 2 3 4 5 Van Brunt Boulevard
1 2 3 4 5 East 12th Street

This survey is intended for residents of Northeast Kansas City that live in the neighborhoods of Lykins and Sheffield. Please mark which neighborhood you belong to.

☐ Lykins ☐ Sheffield ☐ Other Please Specify: _____

How long have you lived in this neighborhood?

☐ Less than 1 year ☐ 2 - 5 years ☐ 5 - 10 years ☐ 10 - 20 years ☐ 20+ years

Which age group do you belong to?

☐ 19 - 25 ☐ 25 - 34 ☐ 35 - 44 ☐ 45 - 54 ☐ 55 - 64 ☐ 65+

Do you have children under the age of 12?

☐ Yes ☐ No

Which gender do you identify as?

☐ Male ☐ Female ☐ Other ☐ Prefer not to answer

What is the highest level of education that you have completed?

☐ Some high school or less ☐ High school graduate
☐ Some college ☐ College degree or higher

Are you a resident of **Lykins**, **Sheffield**, or the surrounding **Northeast Kansas City** neighborhoods? **Scan this QR code** with your smart phone OR **visit the link below** to take a short survey about your street/walking conditions.

https://kstate.qualtrics.com/jfe/form/SV_786zlAkpe0Ae7VH

Contact Konner Pendland (konner@ksu.edu) with questions

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Survey Fliers

https://kstate.qualtrics.com/jfe/form/SV_786zlAkpe0Ae7VH

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