The Biophilic Neighborhood

A Framework for Affordable Housing and Connection to Nature

Jahlil Stockard
Thesis Studio Advisor: Virginia Stanard
External Advisor: Russell Baltimore I
Daniel Pore
ARCH 5100-5200 | 5110-5210
Fall 2022-Winter 2023
School of Architecture and Community Development | University of Detroit Mercy

I appreciate my thesis advisor Virginia Stanard for guiding me through this whole process.

In addition, a special thanks to my external advisors Russell Baltimore and Daniel Pore.

My parents, friends, faculty and staff who have supported me through the thesis process, so far.

Table of Contents

Introduction

01

Abstract

Detroit's affordable housing issues are mainly centered around availability. With the excessive amount of vacancy, the Milwaukee Junction neighborhood is a top candidate for redevelopment. This thesis explores neighborhood planning through the lens of biophilic design as a means to promote health and well-being for the residents within the Milwaukee Junction neighborhood. The City of Detroit created a seven point plan to develop affordable housing options to be funded in 2022 (detroitmi.gov). Out of the $203 million provided, $100 million of those dollars were set aside for five affordable housing projects in Detroit (theneighborhoods). As a result 536 affordable units were created or preserved. One of the affordable housing projects is located in the Milwaukee Junction neighborhood.

The Planning to Stay neighborhood framework written by William Morrish and Catherine Brown (2000) provides a clear understanding of the physical features and themes within the neighborhood. These physical features essentially define a neighborhood and the themes are helpful for analyzing a neighborhood. These neighborhood elements in unison were used to analyze Milwaukee Junction and a much more developed neighborhood in Brush Park. In order to successfully implement affordable housing options a study of different housing typologies needed to occur.

The housing typologies studied are between single family homes and large apartment buildings. Some methods used to further the process were mapping, interviews, composing scale models, and taking photos/videos. Using the findings from my research related to affordable housing and neighborhood planning, biophilic design will be the key to connecting all these framing concepts within the Milwaukee Junction neighborhood. Biophilic design developed by Terrapin Bright Green, wants us to connect our inherent need to associate with nature in the modern built environment. The 14 patterns associated with biophilic design are meant to promote the health benefits of a space. These patterns can be applied to various scales and should be catered to the user population.

The goal is to develop a plan that incorporates biophilic design, the neighborhood elements, and affordable housing options.

Thesis Statement

This thesis explores neighborhood planning through the lens of biophilic design as a means to promote health and well-being for the residents within the Milwaukee Junction neighborhood. The idea is to redevelop vacant lots/buildings within the neighborhood for uses that strive towards revitalization.

Regardless of where you are in the world, the need for shelter is one of life's necessities. Detroit, specifically, has an ongoing issue with housing availability at affordable rates. In 2022 there was a 7 point, $203 Million plan introduced by the Mayor of Detroit and Detroit city council members (Detroit Housing Plan of 2022). The plan is to develop affordable housing options for Detroiters to be funded. Out of the $203 million provided, $100 million of those dollars were set aside for five affordable housing projects in Detroit (theneighborhoods). As a result 536 affordable units were created or preserved. One of the affordable housing projects is located in the Milwaukee Junction neighborhood.

To couple the affordability aspect of housing, the public spaces outside the homes should serve to promote the health and well being of the users in these spaces. Terra bright green examined the relationship between biophilia and design. The authors developed 14 patterns of biophilic design that ensure health and well being rooted from nature. The scale in which it is needed to approach housing and public spaces is the neighborhood scale.

The "Planning to Stay: A Collaborate Project" by Wiliam R. Morrish and Catherine M. Brown , is a framework for neighborhood planning that relates to liveability and portrays the identity of the neighborhood. The neighborhood elements and organizing themes in combination can be used to analyze neighborhoods.

The first of three questions guiding me through my research and findings is:

Where is the best location for affordable housing? In addition, how will the inclusion of affordable housing impact the neighborhood assets?

How can biophilia improve a neighborhood? Can the patterns of biophilic design be a solution for redevelopment for vacant parking lots and land?

How does the community contribute to the neighborhood's identity? What's the community like and how is it conveyed in the built environment.?

Biophilic design can be used to incorporate nature back into the neighborhood scale. The natural elements of biophilic design will promote the health and well being of the users of the spaces. The inclusion of affordable and market housing avoids displacement while supporting a truly mixed-income neighborhood of residents.

Evidence sustaining this thesis would include interviews with the community, photography of existing conditions, building typology study, mapping of vacancies relating to buildings and lots. In addition to any existing affordable housing, parking lots, greenspaces, and biophilic elements. As a result, the mapping methods and interviews would provide areas for opportunity within the focus area. The building typology study provides various

Figure 1.0: Aerial view of Milwaukee Junction

housing options for implementation within the focus area.
The critique of this approach could be related to the affordability of biophilic design elements. At what point is the limit of "too much" nature. On the contrary, some questions arise like does nature have any effect on humans anymore? Has the use of technology diminished our natural connection to nature? The critique that biophilic design at this scale has not been tested before.

The limitations are indeed the perception of the elements of biophilic design. Nature has been excused from multiple aspects of design for so long that it might appear to be a new phenomenon to some people. The design might have to go as far as tricking the user to avoid a predetermined reaction which could take away from the curated experience. The excursion of biophilia or nature in the public interviews of the Milwaukee Junction community is a limitation that could have been revisited.

The neighborhood's identity relies on the community that makes it up. The neighborhood's assets rely on the people that make up the community. The people that make up the community need available and affordable housing options to reside in. The use of biophilic design at these different scales of a neighborhood will improve the users health and well being.

Figure 1.1: View of street in Milwaukee Junction

Biophilia

02

What is Biophilia?

A simple definition of biophilia is as humans we have a need to connect to nature and living things. According to Terrapin Bright Green, biophilia is the humankind's innate biological connection with nature. It helps explain why crackling fires and crashing waves captivate us; why a garden view can enhance our creativity; why shadows and heights instill fascination and fear; and why animal companionship and strolling through a park have restorative, healing effects.

The word 'biophilia' was coined by social psychologist Eric Fromm and adopted afterwards by biologist Edward Wilson. The various connotations that have arisen from biology and psychology and been applied to neuroscience, endocrinology, architecture, and beyond all link back to the yearning to have a (re)connection with nature and natural processes. Gordon Orians and Judith Heerwagen proposed that humans have a tendency to prefer certain types of nature and environments, specifically the savanna, and that this might be part of the motivation for shifting to the suburbs, with the suburban yard being a savanna for everybody. This idea of biophilia and design working coherently can offer stress reduction, improve cognitive skills, improve health and wellbeing. In fact, this involvement with nature has been around since the earliest structures made by humans. Dating back to the Great Sphinx of Giza or the primitive hut. (Terrapin Bright Green)

This phenomenon of humans' inclination towards natural and living things can be dated back to the very beginning. Take a moment and imagine that the world humans occupy was created in seven days. Day one this masterplanner decided to create light. Day two this masterplanner decided to create the sky. The dry land, seas, plants and trees were created on day three. Then the Sun, Moon, and stars followed on day four. Day five this designer created creatures that live in the sea and creatures that fly. On day six the designer created animals that live on land and humans that were made in the likeness of the creator. By day seven it was time to rest. Now if this belief were to be true any designer, architect, or planner would have a "blueprint" of the first true elements of design.

The commonality of natural themes in historic structures and places indicates that

Figure 2.0: View of the Great Sphinx

Figure 2.1: View of Fallingwater

Figure 2.2: A Louis Comfort Tiffany Lamp with flower pattern design

biophilic design is not a new trend; rather, it is a regulation of history, human intuition, and neural sciences demonstrating that connections with nature are essential to maintaining a healthy and vibrant existence as an urban species. As urban populations rose in the nineteenth century, reformers became increasingly concerned with health and sanitation issues such as fire dangers and dysentery.

The construction of huge public parks became a campaign to enhance health and lessen the stress of urban living. Nature was a major source of inspiration in late-nineteenth-century Art Nouveau designs. Architect Victor Horta's flamboyant plant tendrils interweaving through structures in Belgium, the vibrant blossoms found in Louis Comfort Tiffany lamps, and Antonio Gaud's clearly biomorphic forms are all strong examples. Louis Sullivan designed ornate decoration with leaves and cornices that resemble tree branches in Chicago. Frank Lloyd Wright, his protégé, was a member of the crew that founded The Prairie School. For his art glass windows and embellishments, Wright abstracted grassland flowers and plant life. Wright, like many others in the Craftsman movement, employed the natural grain of wood and the roughness of brick and stone as elements of decoration. Wright also allowed interiors to flow through residences in novel ways, creating spectacular views tempered with intimate refuges. Later designs, such as the balcony extending out over the cascade at Fallingwater, incorporate exciting areas.

Patterns of Biophilic Design

Terrapin Bright Green claims that three categories—Nature in the Space, Nature Analogues, and Nature of the Space—can be used to organize and understand biophilic design. With the help of this framework, it will be possible to comprehend and encourage the intelligent use of a variety of tactics to the built environment.

The topic of "Nature in the Space" focuses on the immediate, tangible, and transient presence of nature in a place or space. There are seven biophilic design patterns in the nature of the area. The first is a visual connection to nature, which is a glimpse of natural components, living things, and organic processes. The second type of connection to nature is non-visual, and it involves auditory, tactile, olfactory, or gustatory sensations that cause people to intentionally and favorably refer to living things, natural processes, or other aspects of nature. Non-rhythmic sensory stimuli are made up of random and transient connections with nature that can be statistically studied but may not be precisely predicted.

Thermal & airflow variability is the subtle mimicking of natural settings in air temperature, relative humidity, airflow across the skin, and surface temperatures. A place is better to enjoy when there is water around since you can see, hear, or touch it. Dynamic and diffuse light uses different light and shadow intensities that fluctuate over time to mimic natural settings. Awareness of environmental processes, particularly the seasonal and periodic changes typical of a healthy ecosystem, is related to connections with natural systems.

Natural Analogues discusses direct, indirect, and organic allusions to the natural world. There are three types of biophilic patterns in Natural Analogues.Patterns and forms that are biomorphic. Symbolic allusions to curved, patterned, textured, or numerical compositions seen in nature. Second, there is a physical connection to nature. Nature-inspired materials and features that, with minimal processing, represent the local environment or geology and provide a particular sense of location.Finally, there is intricacy and order. Rich sensory information organized in a spatial hierarchy comparable to that seen in nature.

Nature of the Space is concerned with natural spatial configurations. Four biophilic design patterns are represented by Nature of the Space. The first is a prospect, which is a clear vision over a long distance for observation and planning. Following that is a refuge, which is a space for withdrawal from environmental circumstances or the main flow of activity, where the individual is sheltered from behind and above.Then there's mystery, which is the promise of additional knowledge realized by partially blocked views or other sensory gadgets that urge the individual to explore deeper into the surroundings. Finally, there is risk and peril. A recognizable threat combined with a dependable safety.

Combining patterns increases the possibility of a space's health benefits. Incorporating a varied variety of design solutions can suit the needs of many user groups from various cultures and demographics while also creating a psycho-physiologically and cognitively restorative environment. For example, vegetated areas can boost an individual's self-esteem and happiness, while the presence of water can be relaxing.

Adding various biophilic measures to increase diversity may backfire unless they are integrative and promote a holistic approach.

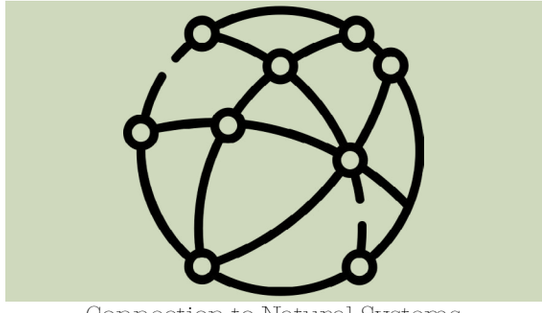
Biophilic design patterns should be scaled to the surrounding environment and the space's expected user population. Patterns can be implemented at the micro-space, room, building, neighborhood, campus, or even an entire district or city size. Depending on the programming, user types and dynamics, climate, culture, and various physical elements, as well as existing or required infrastructure, each of these venues will bring unique design problems.
The descriptive term 'pattern' is used for the following reasons: to propose a clear and standardized terminology for biophilic design; to avoid confusion with multiple terms that have been used to clarify biophilia and biophilic design; and to optimize accessibility across fields by maintaining a familiar terminology.

As a result of overlapping qualties within these patterns instead of fourteen patterns the Biophilic Design framework needed to condensed to ten to avoid confusion with simliar patterns.

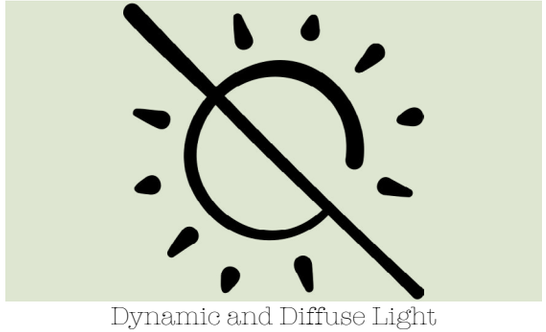
Nature in Space Patterns

Visual Connection to Nature

Presence of Water

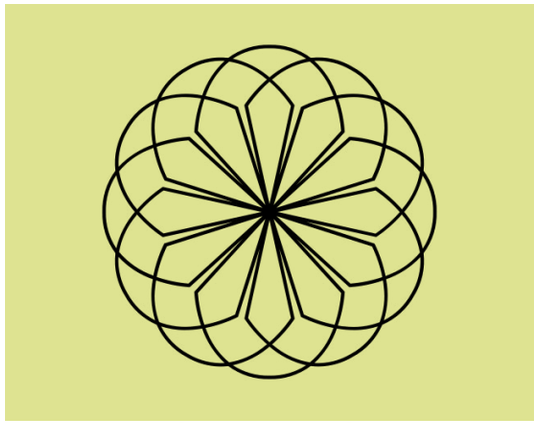


Connection to Natural Systems



Dynamic and Diffuse Light

Nature Analouges Patterns



Biomorphic Forms and Patterns

Material Connection with Nature

Complexity and Order

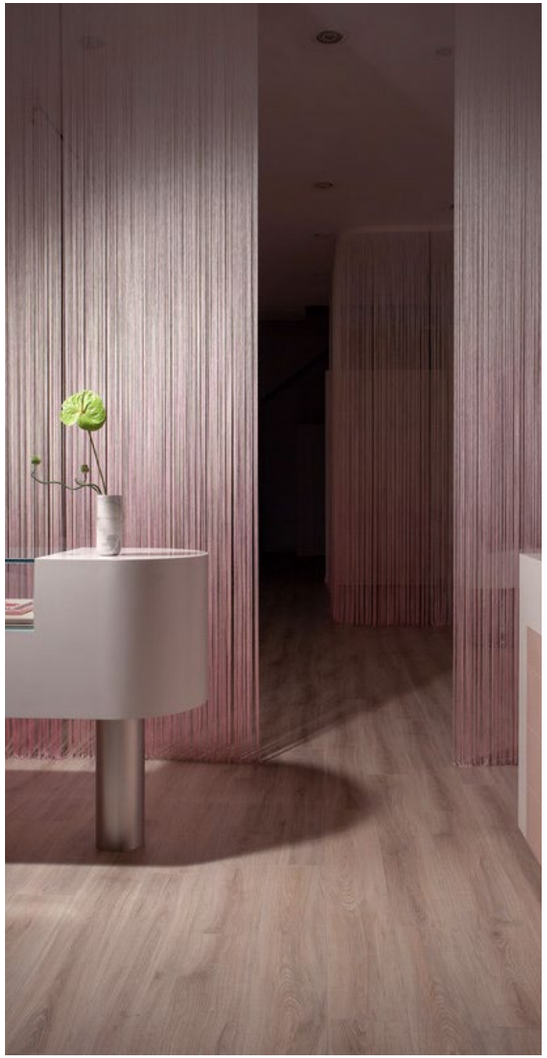
Nature of the Space Patterns

Prospect

Refuge

Mystery

Figure 2.3: Based on information gathered from:
"14 Patterns of Biophilic Design." Terrapin Home - Terrapin Bright Green, 12 Sept. 2014, https://www.terrapinbrightgreen.com/reports/14-patterns.



Precedent Studies

In order to understand these patterns in combination in terms of scale and the predicted user population of the space there needed to be a analysis of precedent studies at various scales. The Glam Seamless designed by Sergio Mannino studios creates a space where it directs traffic as well as avoid multiple people gathering in one area. The positioning of these colorful partitions create a sense of mystery and invites the user to explore the space. The partitions themselves could mimic something like vines in nature.

Figure 2.4: View of GLAM SEAMLESS

In the Levantine Hill Estate designed by FK architects this restaurant exhibits wood structures that offer a sense of refuge within this restaurant . The form of these wooden structures mimic organic shapes within nature.

Figure 2.5: View of Levantine Hill Estate

Affordability

03

Housing

According to the City of Detroit, affordable housing is,"Defined as housing on which the occupant is paying no more than 30 percent of annual income for housing costs, including utilities. HUD calculates AMI as the median, or middle, income for a household in your metropolitan area.The AMI in the Detroit-Warren-Livonia metropolitan area is $62,800 for a 2-person household." For a 2-person household, a low-income household is considered as 80% AMI or $50,240, a very low-income household is considered a 50% AMI or $31,400, and an extremely low-income household is considered as 30% AMI or $18,840.

There are two primary categories of affordable housing for rent in Detroit, as stated by the City of Detroit. The first type is known as naturally occurring. This kind of housing is not officially regulated, yet it is considered affordable to market-rate families because their housing costs are less than 30% of their monthly income. The second type is known as controlled. Government initiatives fund this form of housing to ensure that low-income households do not pay more than 30% of their income on rent, or that rents are limited to a level that is reasonable for low-income households. According to the City of Detroit, regulated affordable housing falls into two broad groups. The Detroit Housing Commission owns and operates public housing. Other regulated housing is privately held yet provides low-income renters with cheap rents. Each program has different eligibility requirements.

Figure 3.0: Based on information gathered from:
"Who Is Eligible?" City of Detroit, https://detroitmi.gov/departments/housing-and-revitalization-department/affordable-housing/who-eligible.

This map provides information pertaining to affordable properties, units available, and management: Within the property information it includes the address, neighborhood, structure, if it's under DHC Public Housing, and population if- available. Within the units information it includes the rent-restriction, total units, 1-bedroom, 2-bedroom, and 3-bedroom if applicable. Within the management information it includes the property phone, company, manager and website. This is a good tool for finding gaps within the city that do not have many affordable housing units as well as finding existing affordable housing options. Such as neighborhood's like the Milwaukee Junction. The availability of these units may not be always updated, but the website and contact information of the manager is included for any clarifications.

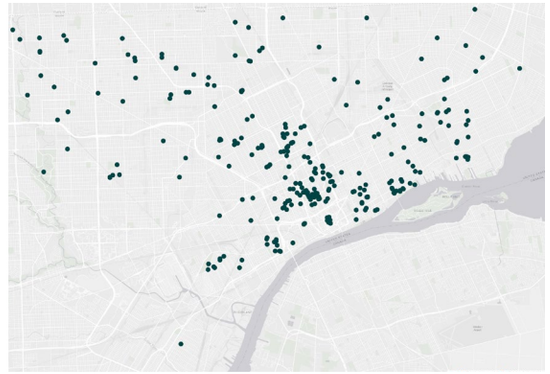


Figure 3.1: Directly sourced from:
"Affordable Housing Map." City of Detroit, https://detroitmi.gov/webapp/affordable-housing-map.

Recent Housing Strategies

These housing developments listed all include affordable housing options in Detroit.

Midtown's Woodward West

Woodward West has 204 units and 25,000 square feet of retail space. The majority of the units have already been leased, while 95% of the inexpensive ones are still available. In addition, two new retail tenants have been revealed. N'Namdi staged permanent shows of artwork by Detroit artists in the building.

Deeply affordable housing near 7 Mile/Mound

Mayor Duggan and LISC Detroit are renovating 30 deeply inexpensive units of housing near 7 Mile/Mound. By transforming Le Chateau Apartments into 7 Mound Apartments in D3, the Farwell community will have accessibility to higher quality affordable housing with a 40%-50% local median income. The Detroit Housing for the Future Fund's $1.6 million project will give residents with brand new apartments.

Figure 3.2: View of Woodward West

Figure 3.3: View of Deeply affordable housing near 7 Mile/Mound

Detroit Housing Plan

Mayor Mike Duggan and members of the Detroit City Council devised a seven-point, $203 million plan to create affordable housing choices for Detroiters in 2022. The City of Detroit plans to turn long-vacant apartment buildings and Land Bank properties into affordable rental housing. Converting long-vacant apartment buildings and Land Bank homes into affordable rental housing, obtaining faster City approval for thoroughly low-income housing projects, down payment assistance to increase home ownership, assistance for landlords to bring their rental properties into compliance, rapid placement for good-paying jobs, and more are all part of the plan.

The first phase in this seven-point plan is to establish a housing services division so that citizens of Detroit who are in need or at risk of losing these services can get them. Some of these services include a hotline for help if you are about to lose your home or living circumstances. People experiencing homelessness have access to emergency services. Finally, there will be more access to housing resources. A comprehensive homelessness diversion program will attempt to keep people off the streets. A database of affordable housing options in the city makes it simple for residents to locate apartments or units that meet their budget and demands. According to the City of Detroit, a collection of at least six Detroit Housing Network neighborhood service centers run by nonprofit suppliers will serve as one-stop-shop assets to connect current and future Detroit homeowners with numerous different programs, such as housing counseling and foreclosure prevention.Is $26 million in ARPA funds.

The second step focuses on Detroit Housing Commission apartment building rehabilitation. This program will rehabilitate modest apartment buildings that have been underused or neglected into affordable housing, typically 20-30 units in size. According to the City of Detroit, the Detroit Housing Commission (DHC) would use the proceeds from the auction of the Brewster-Douglass property to establish financing and leveraging opportunities for the rehabilitation of small and medium-sized multifamily apartment buildings as deeply affordable housing. DHC is currently considering four structures with ten to twenty units each. The units will be marketed at extremely low rental prices. This will require $20 million in DHC money.

The third step is to concentrate on the Detroit Land Bank's affordable housing initiative. This plan will identify 20-50 Detroit Land Bank Authority-owned homes that will be sold to local community development organizations before being rehabbed with city funds. These DLBA residences will be rented for a minimum of ten years at a reasonable rate of 50%-60% AMI. This also enables a renter to become a homeowner if the tenant purchases the property. This concept is designed for larger families who demand more space than a studio or one-bedroom apartment. According to the City of Detroit, the Housing & Revitalization Department, in collaboration with CDOs, will begin this program soon, with The City estimating that home renovations will begin in spring 2023, with the first homes ready for tenants in winter 2023. This will require $3 million in ARPA money.

The fourth step emphasizes more affordable housing and a faster approval process. According to the City of Detroit, the City Council will collaborate with the Detroit Housing & Revitalization Department to accelerate the process for the Council to approve affordable housing developments that include apartments rented at 60% AMI or less. The existing procedure frequently necessitates nine or more procedures to obtain City Council approval. In addition to speeding up the process, the plan calls for the construction of 1,600 new affordable housing units, 250 of which will be designated as permanent supportive housing with a variety of services available to Detroiters transitioning out of homelessness. This will cost $132 million in ARPA, state, and federal money.

In 2022, the Michigan State Housing Development Authority (MSHDA) approved 8 projects totalling 341 affordable units using Low-Income Housing Tax Credits (LIHTC). Low income housing tax credits (LIHTC) fund the acquisition, development, and rehabilitation of low- and moderate-income rental housing.

The first four of these were announced in June 2022

Residences at St. Matthew's include: According to the City of Detroit, the vacant St. Matthew School in MorningSide will become home to 46 units of affordable housing after a $17.4 million conversion by Catholic Charities of Southeast Michigan. MSHDA provided $9.8 million in LIHTC funds for the project, as well as 25 project-based vouchers for permanent supportive housing apartments, ensuring that tenants spend no more than 30% of their income for rent and utilities. With the Section 8 vouchers plus the city's rental subsidies, half of St. Matthew's households will pay no more than 30% of their income. The remaining units will be reserved for residents with an AMI of 60% or less.

According to the City of Detroit, this development at 4401 Rosa Parks Boulevard will replace an empty property that was once part of the Wilbur Wright School campus. The project's low cost will assist to alleviate the high demand and rentals in the popular Woodbridge neighborhood. It will have 60 affordable housing units, all of which will be below 60% AMI. Cinnaire Solutions Corp. and Woodbridge Neighborhood Development Corp. intend to begin building in the first quarter of 2020 and finish in the third quarter of 2024.

Orchard Village Apartments: According to the City of Detroit, CHN Housing Partners and Detroit Blight Busters are collaborating on the 48-unit Orchard Village Apartments, which will be located at Orchard and Santa Clara streets in the heart of Old Redford and near Blight Busters' numerous commercial corridor projects near Lahser and Grand River. All 48 units will be between 30% and 60% AMI. Construction is set to begin in the spring of 2023 and be finished in 2024.

Greystone Senior Living: This new construction is on a vacant site at 440 Martin Luther King Jr. Boulevard, just west of Cass Avenue. The building will have 49 one- and two-bedroom units spread across four floors. The Greystone, located in the heart of Midtown, will provide seniors with quick and simple access to public transportation such as the QLINE as well as shopping attractions such as Whole Foods. It will have 49 apartments, all of which will be less than 60% AMI. Cass Corridor Neighborhood Development Corp. work is planned to begin in early 2023 and be completed by the end of the year.

Figure 3.4: Mayor Mike Duggan announcing affordable housing development to public

Figure 3.5: Elevation of Orchard Village Apartments

Figure 3.6: View of vacant site at 440 Martin Luther King Jr. Boulevard

According to the City of Detroit, 12 projects totaling around 750 units that get MSHDA additional support have been halted because to rising expenses.

The fifth phase is all about down payment and homeownership help programs. According to the City of Detroit, this program will assist 600 renters in becoming homeowners through a down-payment assistance program. A third of those assisted will receive cash and assistance to transition from renting to owning their houses through capital improvements and homebuyer counseling. The remainder will receive assistance with down payments on homes they are not currently renting. This will cost $13 million in ARPA money.

The sixth step focuses on measures that will bring over 1,000 rental units into conformity. According to the City of Detroit, $5 million in funds will be utilized to bring rental units into compliance with rental rules through a suite of three programs, ensuring that Detroit renters get the quality apartments they deserve and the City requires. A empty second-floor rental renovation scheme in commercial corridors will convert unoccupied second-floor apartment units into affordable housing. Small-scale landlords will be offered property management and improvement training programs, after which they will be eligible to apply for matching subsidies to rehabilitate their properties and bring them into compliance with the rental registration ordinance. ARPA funds of $5 million are required.

The seventh step focuses on self-sufficiency assistance for those who are facing increased rents. According to the City of Detroit, if rents rise due to increased demand for housing in the city, the City of Detroit's Detroit at Work program can assist citizens by immediately placing them in good-paying employment or in "earn to learn" programs such as literacy and GED programs. Detroiters can get started by visiting detroitatwork.com or calling 313-962-WORK. This will require $10 million in ARPA money.

The 5 Housing Projects in Detroit

The City of Detroit announced a housing investment of more than $100 million in the city, all of which will go toward protecting affordable housing.

Six competitive Low-Income Housing Tax Credit awards will be used to fund five affordable housing initiatives in Detroit. The city will benefit from a limited amount of 9% low income housing tax credits (LIHTC) to assist construct or preserve 536 units of affordable housing.

In total, 318 affordable housing units that were slated to expire soon will be extended for a further 45 years. The new construction projects will result in a total of 235 units, with 218 of them designated as affordable units, for a total of 92% of all new units supported by the credits.

Many of the new and protected apartments will be home to people earning between 30% and 80% of the area median income (AMI), or $16,050 to $42,800 per year.

"If we're going to make sure everyone in Michigan, no matter their community, has the opportunity to get ahead, we must get to work to ensure safe, affordable housing for everyone," said Gov. Whitmer. "Because of this partnership with MSHDA and Mayor Duggan's office, we are now one step closer to that goal. These projects will be critical in helping Detroiters and people all over the state move into affordable homes. It's good for our families, for our economy, and for the future of our state."

The City's Department of Housing and Revitalization collaborated with developers who applied for and were given a series of 9% LIHTCs to accomplish this. Because it leverages up to 90% in equity to develop affordable housing units, the 9% LIHTC award is the most valued and competitive affordable housing tool in the country. It also allows developers to serve families and people on the lower end of the economic spectrum, including those who have been homeless.

The following projects have been chosen:

7850 E. Jefferson Phases I and II - Ginosko's project won two MSHDA contracts totaling $1,778,730. All 150 units in this building will be designated as affordable housing for the residents of this complex for the next 45 years. Income levels at this complex range from 60% to less than 30% of AMI. The Detroit Housing Commission has provided funding for the project in the form of project-based vouchers to assist low-income residents.

Figure 3.7: Render of 7850 E. Jefferson Phases I and II project

The total cost of the project is $27.3 million.

Brush + Watson - Of the 60 units in this new mixed-income building, 48 (80%) will be dedicated for people earning between 30% and 80% AMI. This project is one of over 1,000 planned for the Brush Park neighborhood and will be built on vacant city-owned lots. American Community Developers is in charge of the project. The LIHTC grant is worth $1,500,000.

Figure 3.8: Render of Brush and Watson development

The total cost of the project is $19.1 million.

Figure 3.9: View of Cathedral Tower

Cathedral Tower - For years, the 236-unit Cathedral Tower, one of the most recognized structures in Midtown, has provided inexpensive rentals in one of the City's most crowded areas. All 236 units will now be refurbished and retained as affordable, with half designated for households earning 40% AMI and the other half reserved for residents earning 80% AMI. The project is being created in collaboration with MRK Partners and Bedrock. The LIHTC grant is worth $1,500,000.

The total cost of the project is $27 million.

Orchestra Place Apartments - Also in Midtown, this 82-unit senior affordable housing complex will be refurbished and preserved as affordable, with a 60% AMI, ensuring that long-term residents can remain in their homes for years to come. The project will be led by Larc Properties, Inc. The LIHTC grant is worth $887,876.

Total Project Cost: $21 million.

Figure 3.10: View of Orchestra Place Apartments

Milwaukee Junction - This new construction venture, sponsored by a collaboration between MHT and the Detroit Catholic Pastoral Alliance, will bring 25 units to the Milwaukee Junction neighborhood, with 20 units affordable at various levels. Seven units will be reserved at 40% AMI or $573 per month for a one bedroom, six units at 60% AMI or $859 per month for a one bedroom, and seven units at 80% AMI or $1,146 per month for a one bedroom, resulting in a truly mixed-income development in a rapidly rising neighborhood of the city. The LIHTC grant is worth $570,203.

The total cost of the project is $7.2 million.

Figure 3.11: View of Milwaukee Junction Apartments

Milwaukee Junction AMI Breakdown

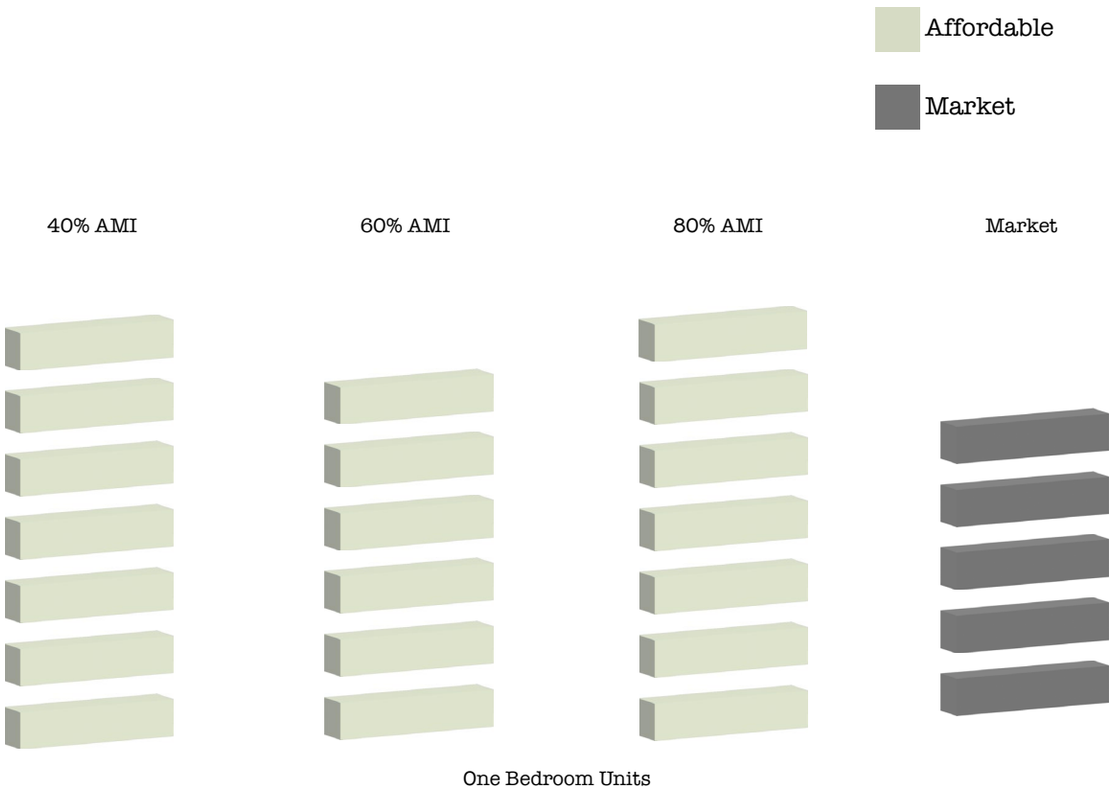


Figure 3.12: Based on information gathered from:
Staff, The Neighborhoods. "$100 Million Funding Announced for Five Affordable Housing Projects in Detroit." The Neighborhoods, https://www.theneighborhoods.org/story/100-million-funding-announced-five-affordable-housing-projects-detroit.

Unit Breakdown

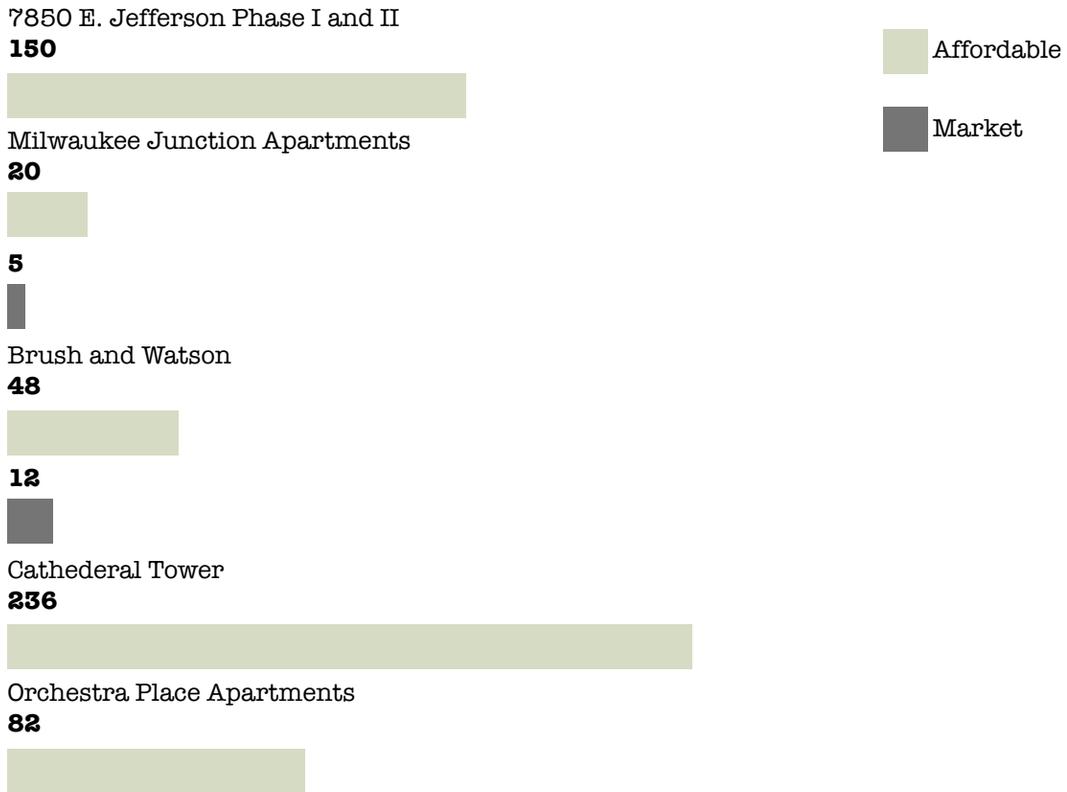


Figure 3.13: Based on information gathered from:
Staff, The Neighborhoods. "$100 Million Funding Announced for Five Affordable Housing Projects in Detroit." The Neighborhoods, https://www.theneighborhoods.org/story/100-million-funding-announced-five-affordable-housing-projects-detroit.

Neighborhood

04

Why a Neighborhood?

With the thought of affordable housing and biophilic design there needed to be a scale in which both these framing concepts can be realized. The scale of a building felt very limited in terms of change in regards to biophilia elements. On the other hand, there's the scale of a city which would speak to biophilic design and housing as well. Although, the scale of a city would be more impactful than the scale of a building it is quite intimidating and ambitious. As a result, the scale of a neighborhood seemed to be the perfect median of the two, which led me to the exploration of neighborhood planning.

To grasp the aspects of a community, a neighborhood framework from William R. Morrish and Catherine R. Brown's Planning to Stay: Learning to See the Physical Features of Your Community provides clarity in doing so. Neighborhoods have traditionally planned in two ways: proactively, anticipating change and consistently building on existing resources, or reactively, responding to change as it comes. Residents must acquire and organize information that explains needs, supports opportunities, and indicates a variety of options in order to plan ahead of time. The resulting focused agenda serves as the foundation for neighborhood power. It allows people to work on a more equal footing with the commercial and public interests that have traditionally guided economic and political decisions affecting neighborhood life.

You can use the techniques provided here to assist your area in developing proactive strategies to direct future expansion. For example, requesting private investment or state cash, such as funding from the Michigan State Housing Development Authority. You can also use the same concepts to respond to initiatives that may have an influence on your community, such as developing criteria for evaluating a new retail development or a proposed residential complex.

If neighborhoods adopt cohesive plans in a consistent manner, their mutual interests in broad public policy or big projects can be more successfully coordinated--with the type of vision that transforms livable neighborhoods into outstanding cities. Cities are built on the foundation of neighborhoods. Comprehensive city planning cannot possibly address the very local block-by-block concerns in the Twin Cities, which have over one hundred unique communities. However, when coordinated by efficient city planning, neighborhood plans can add up to a holistic picture. Community agendas fueled by narrow interests might push participants away. A strategy based on the common interests of neighborhood residents may be able to settle difficulties without the need of confrontational techniques or back-room dealmaking. Developers and investors prefer neighborhoods with a clear agenda and development rules. A comprehensive neighborhood plan prevents surprises and assists the developer in designing a project that actually matches the expectations of the community. The plan can disclose undiscovered investment opportunities by expressing broad needs.

A community that plans for the future follows the same principles as the public and private groups that have traditionally sat at the table when development choices are made. A neighborhood that can communicate in a comparable language

can better advocate for its own interests. Every neighborhood ages and changes. Residents are continually discussing which economic, social, and physical traits should alter and which should remain as they go through their typical development cycles. You can incorporate these stabilizing pillars into community development plans by recognizing and comprehending the core services and important symbols of continuity. In neighborhoods, social and economic issues are not political abstractions. They manifest themselves in the form of vacant buildings, untended properties, hazardous streets, schools, and playgrounds, as well as hatred among neighbors. By focusing on physical planning, your community will be addressing bigger challenges.

Neighborhood Planning Framework

The tangible resources that represent a neighborhood's character, impact its values, and define its social and economic systems are referred to as physical features. According to Morrish and Brown, the following physical features appeared to be crucial in shaping Twin Cities neighborhoods: homes and gardens, community streets, neighborhood niches, anchoring institutions, and public gardens.

Figure 4.0: Aerial view of Twin Cities

Homes and Gardens are the places where humans raise their families, live their everyday lives, express their identities, and contribute to the general image of the neighborhood. Residents frequently share these areas with their friends and neighbors. The home and garden element can be found in a variety of housing units, ranging from a single-family house with a lot to a multifamily complex with courtyards, patios, and balconies. It is essential in all home types to maintain a sense of seclusion within the dwelling while remaining linked to the natural environment and the greater community at all times.

Community Streets are lanes that provide a functional and pleasant mix of automotive and pedestrian traffic. These streets provide important social areas for sidewalk talks, dog walks, and infant strolls. When streets are scaled to pedestrian dimensions and proportions, these informal activities can coexist with traffic.

Neighborhood Niches are places where neighbors can buy essential goods and services as well as certain speciality things to help them with their everyday activities. Despite the gravitational pull of downtowns and malls, these service zones remain and add to a neighborhood's identity.

Anchoring Institutions are the focal points of a communities' cultural, educational, and social traditions. The neighborhoods' social patterns and communal life are shaped by the elementary school, church, library, community leisure center, and even the local brewery or auto company.

Public Gardens individually and collectively, connect people to the natural world. People of different ages, ethnic backgrounds, and economic circumstances can congregate in these public open places. Humans practice performing in public, respecting community norms, enjoying common activities, and simply getting outside at bandstands, ball diamonds, fishing docks, and vegetable gardens.

The quality, accessibility, and convenience of these qualities define the image and character of a community. The livability of these physical resources is determined by the manner in which people maintain and build on them.

Scale refers to the size of objects and their relationship to other objects in the same scene. Neighborhoods, in particular, dictate scale in respect to human proportions. People may have the impression that the store is too far away, the building is too enormous, the street is too crowded, the walkway is too narrow, or the playground is too little without knowing why. These scale sensations are frequently reflected in actual dimensions related to the surroundings. A four-foot-wide sidewalk may be enough on a residential street, but it may appear severely constrained in a business neighborhood. Designers have an intuitive tape measure on hand to determine whether physical elements are comfortable and suitable. With some probing. Designers have the ability to fine-tune their sense of size. Understanding why certain aspects are appealing can help individuals realize why some structures and settings are successful or unsuccessful.

Mix is primarily concerned with groups of uses and activities that contribute to a community being livable for all people. Adjusting the balance becomes crucial as neighborhoods change. Do the residents' transportation, housing, entertainment, recreational activities, necessary products and services needs get met? What are the current applications? What else should be included? Where are they, and how are they physically connected? Are the respective applications appropriate and mutually beneficial? A neighborhood can maintain its vibrancy over time by offering the correct balance for its residents. A neighborhood can create a distinct identity by incorporating characteristics such as ethnic eateries, distinctive shops, neighborhood gardening, and seasonal events.

Time is concerned with how physical structures in a community support day and night patterns, adjust to seasonal changes, and offer a sense of continuity. With the frigid temperature and long periods of less daylight hours, time is especially important in the Twin Cities. Turning inward during the winter, only coming outside to shovel snow or engage in winter recreational activity. During the summer, people go to their yards and gardens, lakes, parks, and streets. The climate certainly has an impact on community spirit. Neighborhoods must organize activities and create physical structures with the four seasons and nighttime uses in mind.

Existing neighborhoods are primarily the result of decisions made by previous residents, ranging from the selection of trees and building styles to the placement of parks and the arrangement of street grids. History, memory, tradition, and culture as they exist in locations and structures must necessarily be addressed by planning organizations. The quality of the community people leave to the next generation will be determined by how well planners incorporate landmarks and adapt historic areas for contemporary needs.

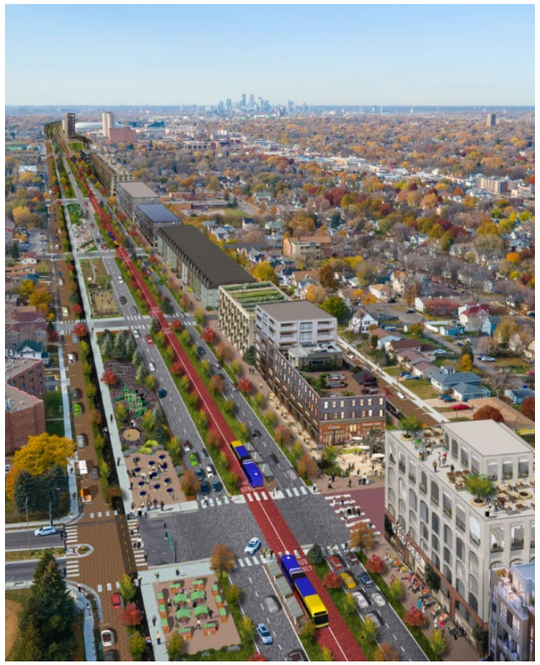


Figure 4.1: Aerial render of Twin Cities

Movement takes into account physical features in the neighborhood as well as amenities in the greater metropolitan area. This theme is concerned with how planners coordinate transit between residential regions and places where we work, shop, and play. It recognizes pedestrian and bicycle movement as intrinsic to, rather than subservient to, the needs of autos and public transportation networks. Movement is concerned with creating clear, safe, and enjoyable passages that are required for daily existence. A related challenge is how planners structure the destination features so that people can get there easily and without relying too heavily on automobiles. Finally, how good is our movement system's spatial quality? How do neighborhood patterns integrate into citywide and metropolitan networks while retaining their desired local character?

Planners can more quickly recognize parallels, contrasts, and relationships among resources in different areas by applying these five themes to what they see. These themes can help to define responses to certain physical aspects in more nuanced ways. When you understand why consumers appreciate or dislike a certain feature, you can start discussing what to preserve and what to alter.

Milwaukee Junction

The Milwaukee Junction district in Detroit was the epicenter of vehicle manufacture in the early 1900s. More than 20 auto-related firms were concentrated at the intersection of the Milwaukee and Grand Trunk railroad lines, which gave rise to the neighborhood's name. The automobile industry has mostly left Milwaukee Junction, although many of the early twentieth-century structures still stand, either empty or adapted for other purposes. Milwaukee Junction is experiencing new investment after years of decay and neglect. Because of this new activity, some media sites have labeled the region as Detroit's "next hot neighborhood." The district's location at the crossroads of the Midtown, New Center, Tech Town, and North End neighborhoods makes it a natural growth region as Detroit's current wave of reconstruction spreads out from the city centre.

Milwaukee Junction is near several major corporations and institutions, such as Wayne State University, Henry Ford Health System, the State of Michigan, College for Creative Studies, and Tech Town. DDOT bus service and the Q Line streetcar, which travels along Woodward Avenue and has stations at Amsterdam, Baltimore, and Grand Boulevard, serve the area. At Woodward and Baltimore, it also houses the city's lone commuter rail station.

The study region is generally sparsely inhabited, with roughly 521 residents living in 244 houses. The median household income is $15,304, which is significantly lower than the median income in Detroit, which is $32,498 .

Brush Park

Brush Park has seen more residential construction than any other neighborhood in Detroit in recent years. The neighborhood between downtown and Midtown was once almost forgotten, with deteriorating historic Victorian mansions and tall weeds growing in vacant lots as a backdrop for media coverage. The area has changed dramatically in just a few years.

Figure 4.2: Alley condition in between homes in Brush Park

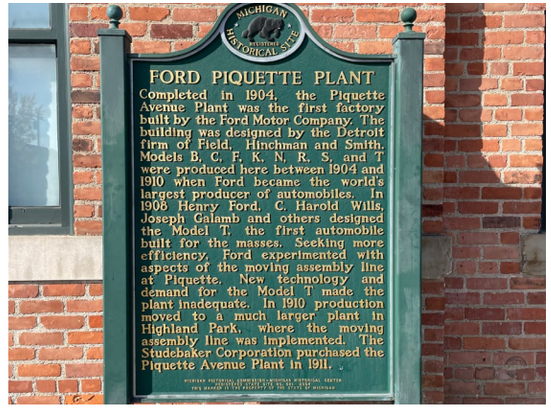


Figure 4.3: Ford Piquette Plant historical site marker

Milwaukee Junction Land Use Map

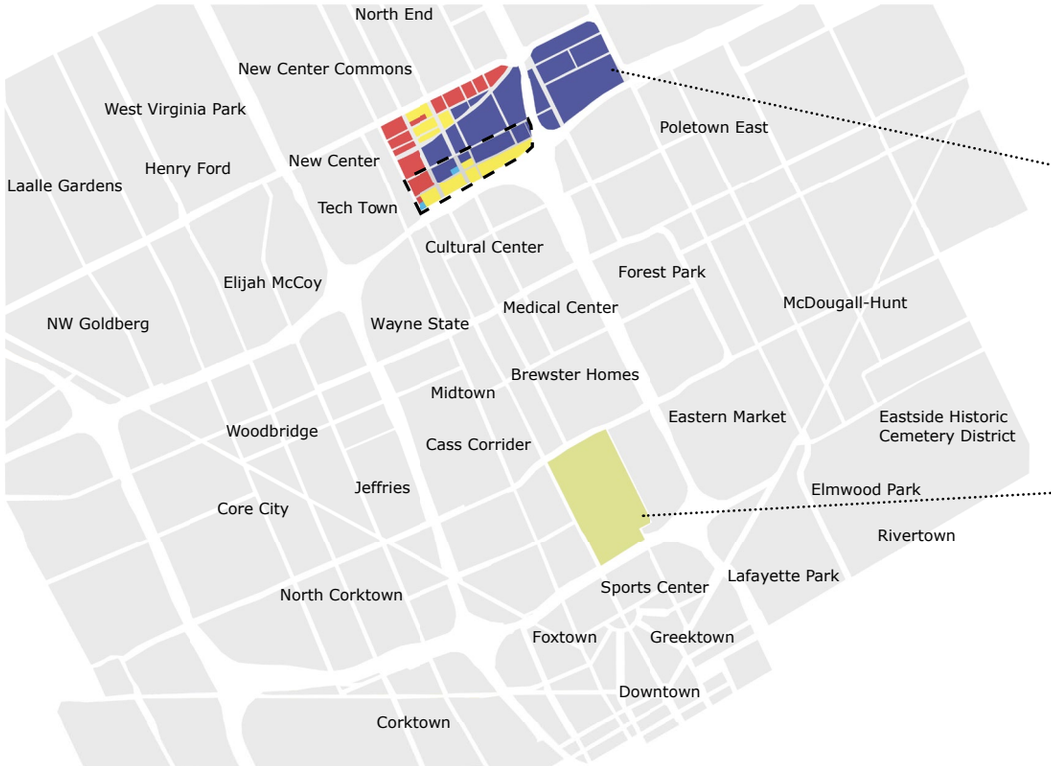


Figure 4.4: Milwaukee Junction Land Use Map

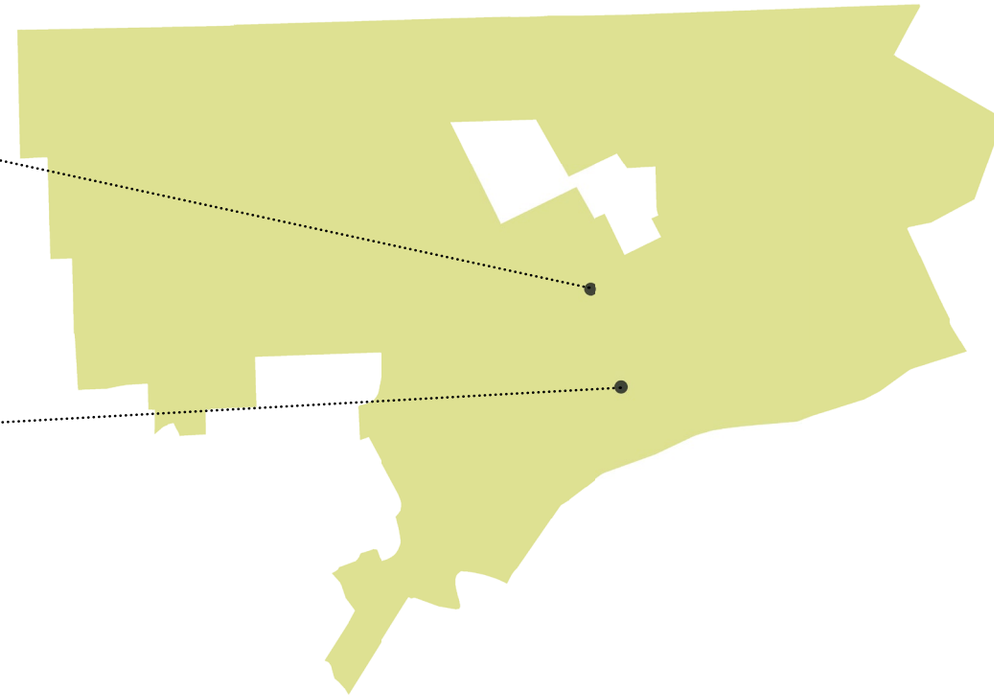


Figure 4.5: Map of Detroit locating Brush Park and Milwaukee Junction

- Industrial
- Commercial
- Residential
- Institutional
- Brush Park
- Medbury Park

Investigations

05

Figure 5.0: One bedroom unit sketch model

Exploring Biophilic Design at the Scale of a One Bedroom Unit

This exploration was a learning experience that happened early within the process of understanding biophilic design. This model exhibits biophilic elements like material connection with nature with the wooden materiality throughout. The windows offer a visual connection to nature. The unit itself offers a sense of refuge from outside conditions. As far as a holistic design this unit is not successfully portraying biophilic design.

Neighborhood Comparative Analysis

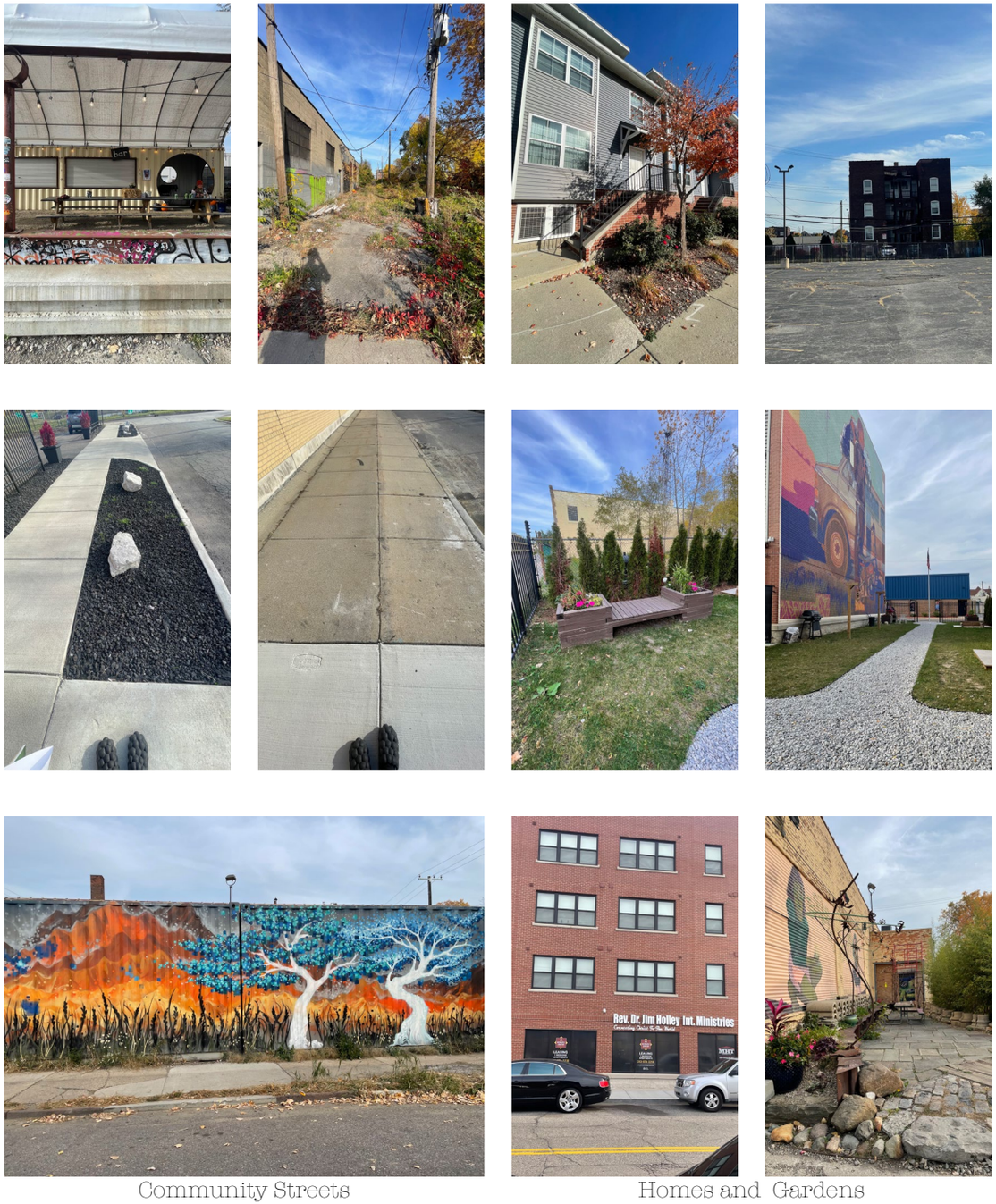
Comparing the Brush Park neighborhood to the Milwaukee Junction area to have a better grasp of neighborhood planning. The Medbury Park area was included in the Milwaukee junction data and study. The Milwaukee Junction is the primary focus, and the addition of Brush Park is solely relevant for the neighborhood study. Having said that, no other neighborhood has seen as much housing development as Brush Park. With the establishment of various mixed-income homes and retail spaces. Brush Park has already undergone major development and is still in the works.

Milwaukee Junction's takeaways are that there are more neighborhood niches than any other feature. People gathered in the Bucharest parking lot in particular, and the Milwaukee junction cafe appeared to be a popular hangout as well. Neighborhood niches, whether indoors or outdoors, can serve as communal places. There are a few low-rise apartment complexes and a couple single-family residences in terms of homes and gardens. As a result, it was assumed that there aren't enough inexpensive or market housing options available right now. There are currently no markets or grocery stores in the neighborhood. At this moment, the community is unlikely to support a grocery shop.

Brush Park had far more residences and gardens than any other feature. Restaurants and pubs dominated the neighborhood niches. While the residential streets featured wider sidewalks and gardens in front of the new developments, the area seemed very walkable. The majority of the anchoring institutions are concentrated at the neighborhood's north and south ends. Home and neighborhood niches were more centralized. The majority of the community roadway components were situated between the homes and gardens. This provided an additional path for pedestrian movement. These lanes provide residents with a private public space. This investigation had an impact on Milwaukee junction's alley circulation moving forward. There were few public areas outside the dwellings in Brush Park.

In comparison, both of these communities are close to the Qline, have several bus stops, and have enough bike lanes along the main streets.

Collection of Photos-Milwaukee Junction

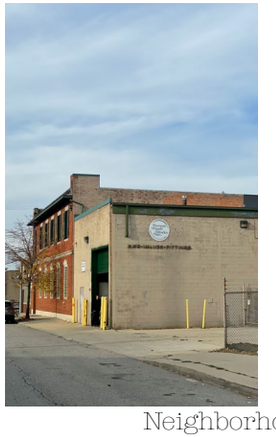


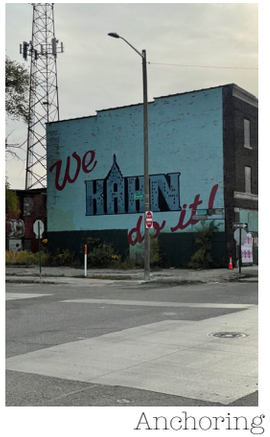
Community Streets

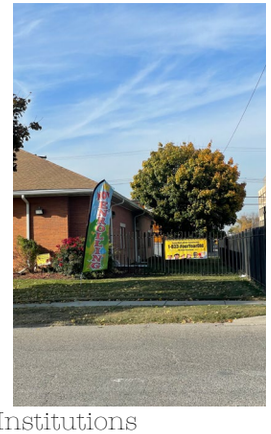
Homes and Gardens

Figure 5.1: Collection of photos-M.J.

Collection of Photos-Milwaukee Junction





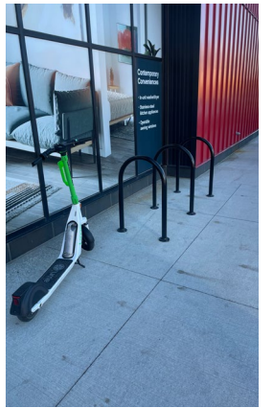


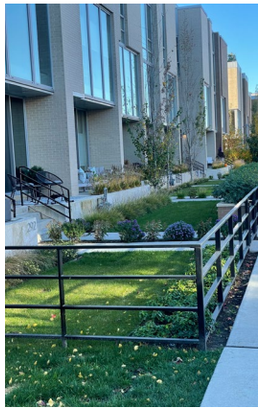
Neighborhood Niches

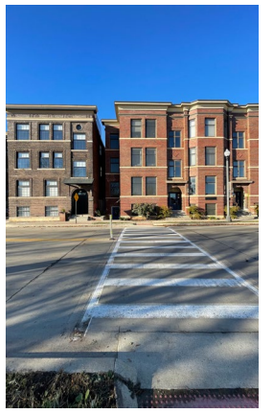
Anchoring Institutions

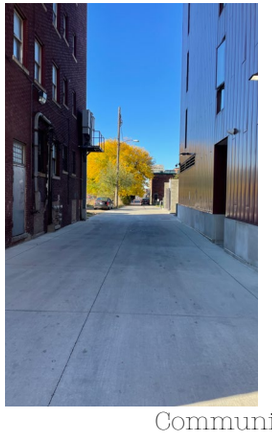
Figure 5.2: Collection of photos-M.J.

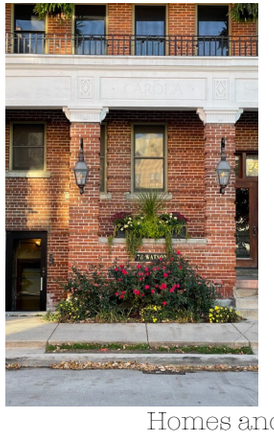
Collection of Photos-Brush Park

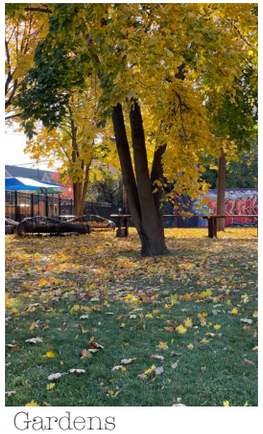










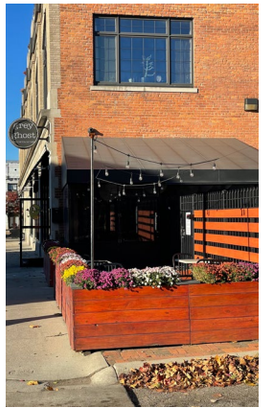


Community Streets

Homes and Gardens

Figure 5.3: Collection of photos-B.P.

Collection of Photos-Brush Park



Neighborhood Niches

Anchoring Institutions

Figure 5.4: Collection of photos-B.P.

Research Making |Collage

Neighborhood Identity

This cube depicts the Detroit communities of Milwaukee Junction and Brush Park. The goal of this project was to use photos to compare and contrast the two communities. To capture the many scales of a neighborhood. These scales take into account the neighborhood elements. To compare and contrast the two communities, the images are placed in a grid.

Figure 5.5: Research Making cube model

Planning to Stay Neighborhood Chart - Milwaukee Junction

PHYSICAL FEATURES

ORGANIZING THEMES

	HOMES & GARDENS	STREETS	N'HOOD NICHES	ANCHORS	PUBLIC GARDENS
LOCATION	Mainly at the south end of the site		Mainly along woodward and E. Grand Blvd.		North end of the site
SCALE	Blocks more than lots		lots more than blocks	lots	1 is half a block the rest are lots
MIX	apartments and single family homes	Q-line bus vehicle scooters bike lanes	Zero markets or grocery stores	Variety of schools, churches, and museums	Milwaukee Junction apartments public space is very well maintained The other parks are not
TIME					
MOVEMENT		Walkable active during the day and night Safety could be an issue			

Figure 5.6: Chart based on information gathered from:
MORRISH, WILLIAM R. Planning to Stay: A Collaborative Project. Milkweed Editions, 1994.

Planning to Stay Neighborhood Chart - Brush Park

PHYSICAL FEATURES

ORGANIZING THEMES

	HOMES & GARDENS	STREETS	N'HOOD NICHES	ANCHORS	PUBLIC GARDENS
LOCATION			integrated within the site very well done!	Schools along mack zero churches or religous institutions	within central block
SCALE					
MIX	Mixed housing types; lots of new developments (healthy contrast) and existing homes	Q-line bus vehicle scooters bike lanes	mainly restaurants and pubs		John R Watson park is currently being used to house building materials Brush-Adelaide park is unused and not maintained
TIME					
MOVEMENT		Walkable active during the day and night			

These chart are used to record notes and thoughts while you travel through the communities you've chosen.

Figure 5.7: Chart based on information gathered from:
MORRISH, WILLIAM R. Planning to Stay: A Collaborative Project. Milkweed Editions, 1994.

Milwaukee Junction Neighborhood Elements Map

Figure 5.8: Milwaukee Junction neighborhood elements map

Brush Park Neighborhood Elements Map

Mack Ave.

Eliot St.

Erskine St.

Watson St.

Wilkins St.

Edmund Pl.

Division St.

Alfred St.

Adelaide St.

Winder St.

375

75

Homes and Gardens

Community Streets

Neighborhood Niches

Anchoring Institutions

Public Gardens

Bus Stop

Q-Line Stop

Bike Lanes

0 500’

N

Figure 5.9: Brush Park neighborhood elements map

A Day in the Life of a Milwaukee Junction Resident

The goal of this film is to get people engaged with the community. The interviewer did not want to conduct formal interviews since it would take the authenticity out of the relationship. Instead, a story for a new inhabitant of the area known as "Julian" was created. The questions varied depending on the interviewee. The questions for the residents of the neighborhood included;

"What's your favorite spot to eat in the neighborhood?"

"Are you active/where do you work out?"

"Anywhere to take a break from reality in the area? Work? School?"

"Where do you get your groceries? Is it far away? Would you prefer a closer location?"

"Best coffee in the neighborhood?"

"Do you value your privacy in your home?"

"Would you raise your kids here?"

"How do you get to work?"

The questions for the buisness worker and owners of the neighborhood included;

"How do you get to work?"

"What are your high times? Busiest time of the day?"

"How's business?"

"Are most of your customers from the neighborhood or somewhat adjacent?"

"Where do you park?"

"What do you do on your break? Do you stay in the neighborhood or leave?"

Figure 5.10: QR code for "A Day in the Life of a Milwaukee Junction Resident" video

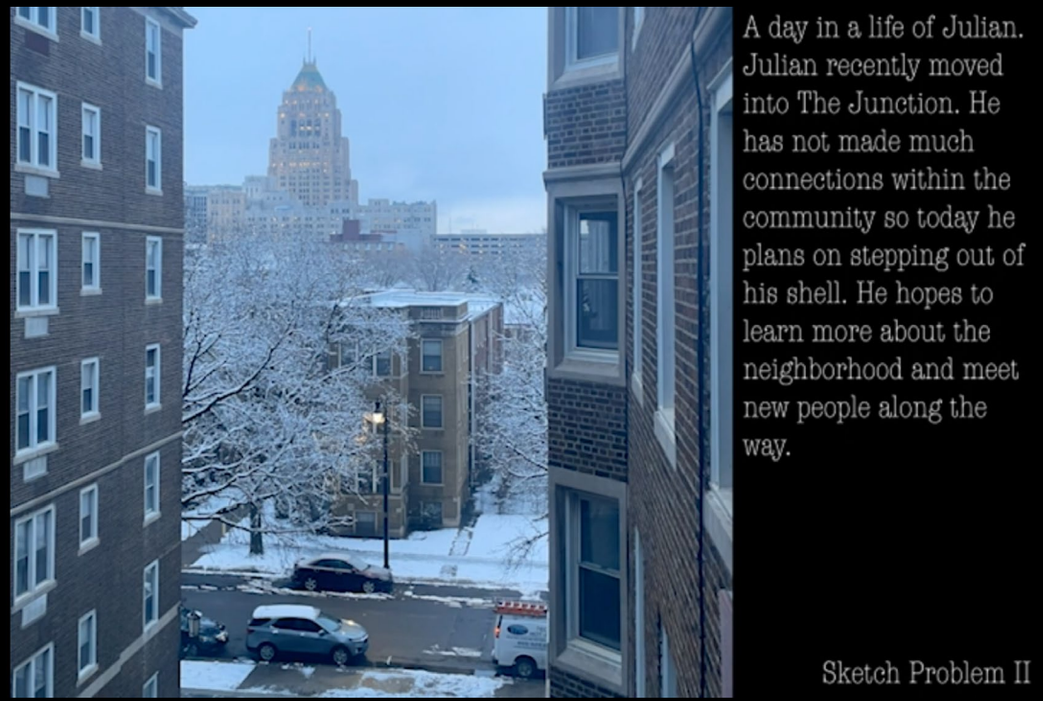
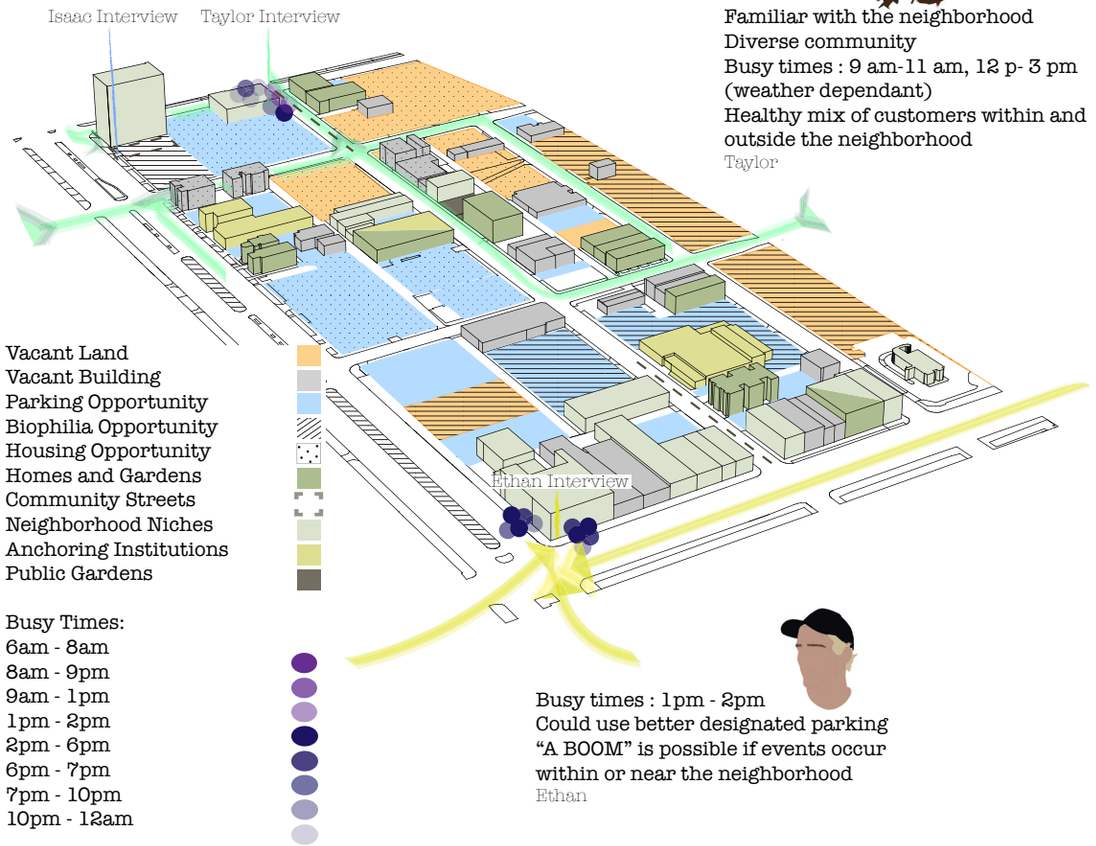


Figure 5.11: Screen capture of "A Day in the Life of a Milwaukee Junction Resident" video

Familiar with the neighborhood
Busy times: 3pm-7pm
“Curate experiences in the space to bring people in”
Mixture of customers within and without the neighborhood (features small buisnesses)
Explores the neighborhood on break
“Support whats in the city”
Affordable housing
“More places to eat during the day”
Daisha

Works at the hospital nearby
(assuming the Henry Ford)
Shop at SAVE-A-LOT
(Approx. 2 miles)
Isaac

Familiar with the neighborhood
Diverse community
Busy times : 9 am-11 am, 12 p- 3 pm (weather dependant)
Healthy mix of customers within and outside the neighborhood
Taylor



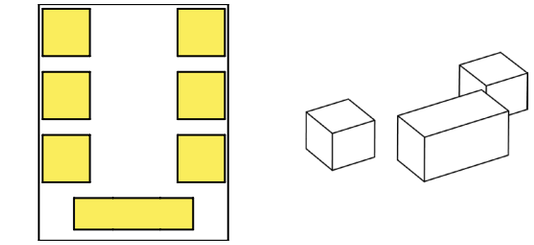
Busy times : 1pm - 2pm
Could use better designated parking
“A BOOM” is possible if events occur within or near the neighborhood
Ethan

Focus Area Map of Milwaukee Junction

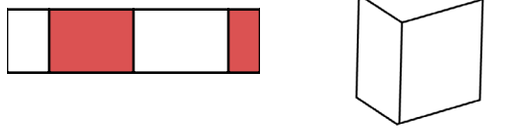
The decision to narrow the area focus to a 2-3 block radius was required for a more in-depth investigation. The specific area includes E. Grand Blvd., Woodward Ave., Detroit Amtrak, and Beaubien Ave. This map contains neighborhood elements, data from interviews, and opportunities for parking, biophilia, and housing. Moving forward, the input from the interviews served as design drivers.

Figure 5.12: Focus Area Map of Milwaukee Junction

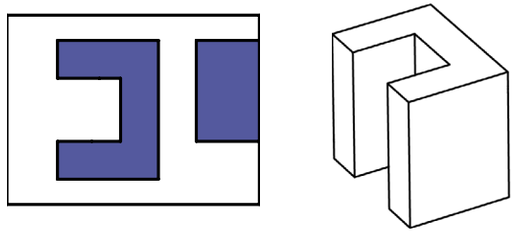
Building Typology Study



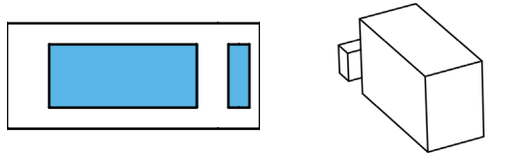
Cottage Court
- One lot with a group of 3 to about 10 detached buildings, each with one single-story dwelling.
- Each cottage fronts the shared court and has a dooryard, stoop, or porch providing entry to the unit.
- Cottages share side yards and usually do not have a rear yard.



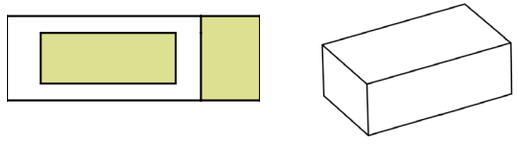
Rowhouse (Townhouse)
- An attached dwelling within an array of up to 10 total dwellings that appear as one building.
- Each dwelling is a walk-up unit with no other unit above, built without side setbacks, with a small dooryard at the sidewalk and a small rear yard with an attached or detached garage.



Courtyard
- One lot with a detached building that is ‘U’ - or ‘C’ - shaped to form at least one share court.
- Entry to each unit is from the street for street-facing units and from the courtyard for interior units.
- Parking is in a surface parking area at the rear of the lot.



Duplex
- A Detached building containing 2 to 6 dwellings that appear as one house.
- The building has a small- to medium-sized front yard, or shared space to all or some units with other units accessed through a side yard.
- The building has a small- to medium-sized rear yard with an attached or detached set of garages that are accessed by a side drive or an alley.



Multiplex Large
- A detached building with more than 6 up to about 20 dwellings that appears as one large house.
- The building has a medium-sized front yard,often with a porch, providing a common entry from the street for mostor all of the units.
- The building has a small rear yard with an attached or detached set of garages accessed by a side drive or an alley.

Figure 5.13: Building typology study showing form and plan

Application

06

Guiding Principles

The planned development plans contain several guiding ideas such as;

- A connection to nature
- Public places
- Parks
- Affordability and the housing market
- Various building styles
- More density along important streets
- Improvements to the pedestrian experience

Homes and Gardens

Community Streets

Neighborhood Niches

Anchoring Institutions

Public Gardens

Parking/Public Space

Proposal

Existing Nodes

Proposed Primary Nodes

Potential Pedestrian Circulation

Although each hub serves a different role, the intention is to keep some elements the same, such as bike racks, water fountains, and, of course, the grid layout of green space and seating.

Proposed Development Plans

Garden Central Plan

The goal of the garden central plan is to build three central parks near current and proposed residential zones. To accommodate the congestion of the bustling route, there are neighborhood nooks all along the E. Grand Blvd. Therefore the houses are better integrated with the community. The alleyways are meant for alternate pedestrian circulation routes.

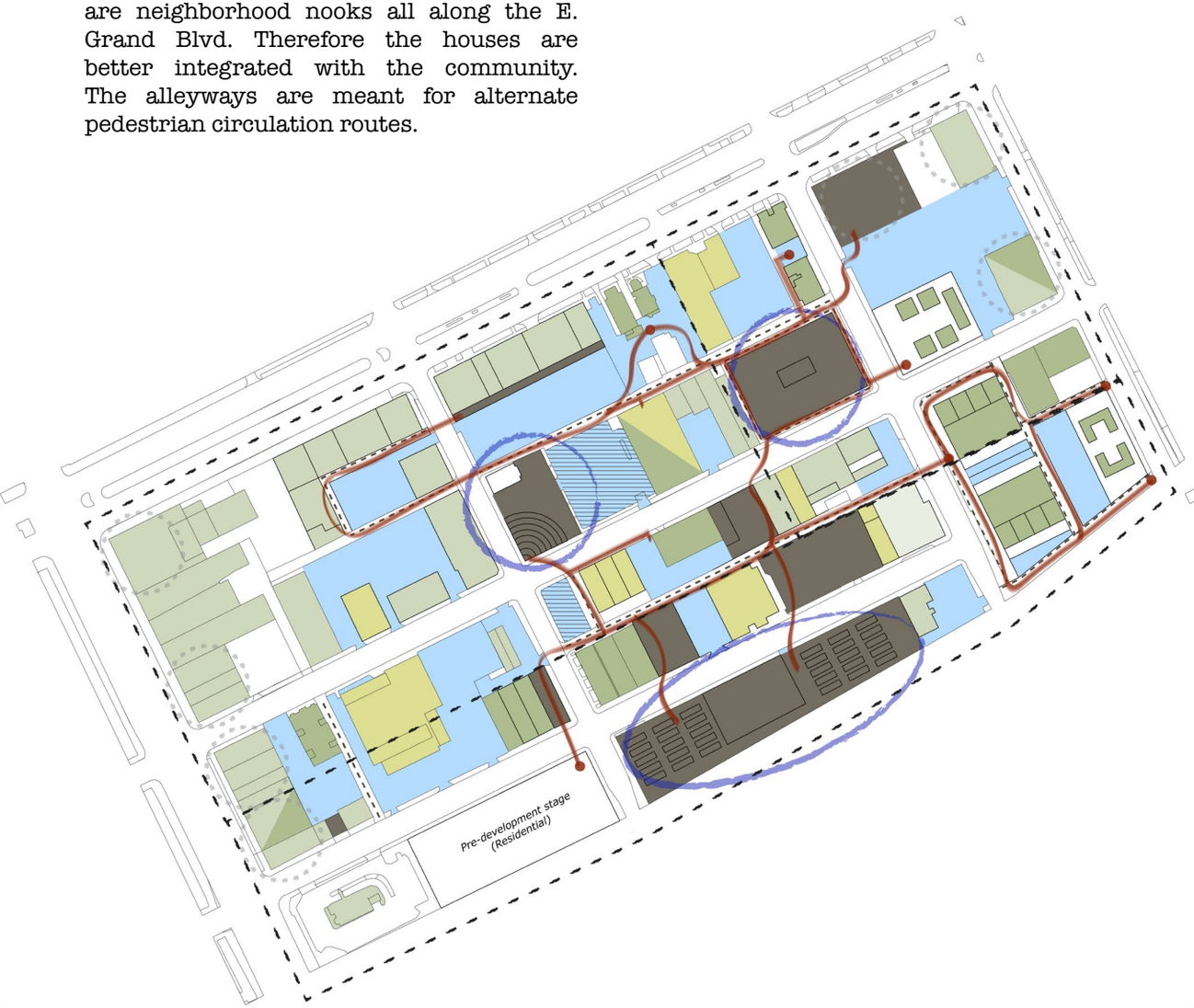


Figure 6.0: Garden central plan

Retail Hub Plan

The goal of the retail hub idea is to enhance the corner moments along Milwaukee St. with retail/commercial areas. As a result, there will be greater foot traffic and more engaging spaces for residents. These two hubs are virtually surrounded by housing and public gardens. One residential area along the Boulevard to meet the density of the busy route, as well as some imbedded inside the community. The alleyways are also used for pedestrian movement.

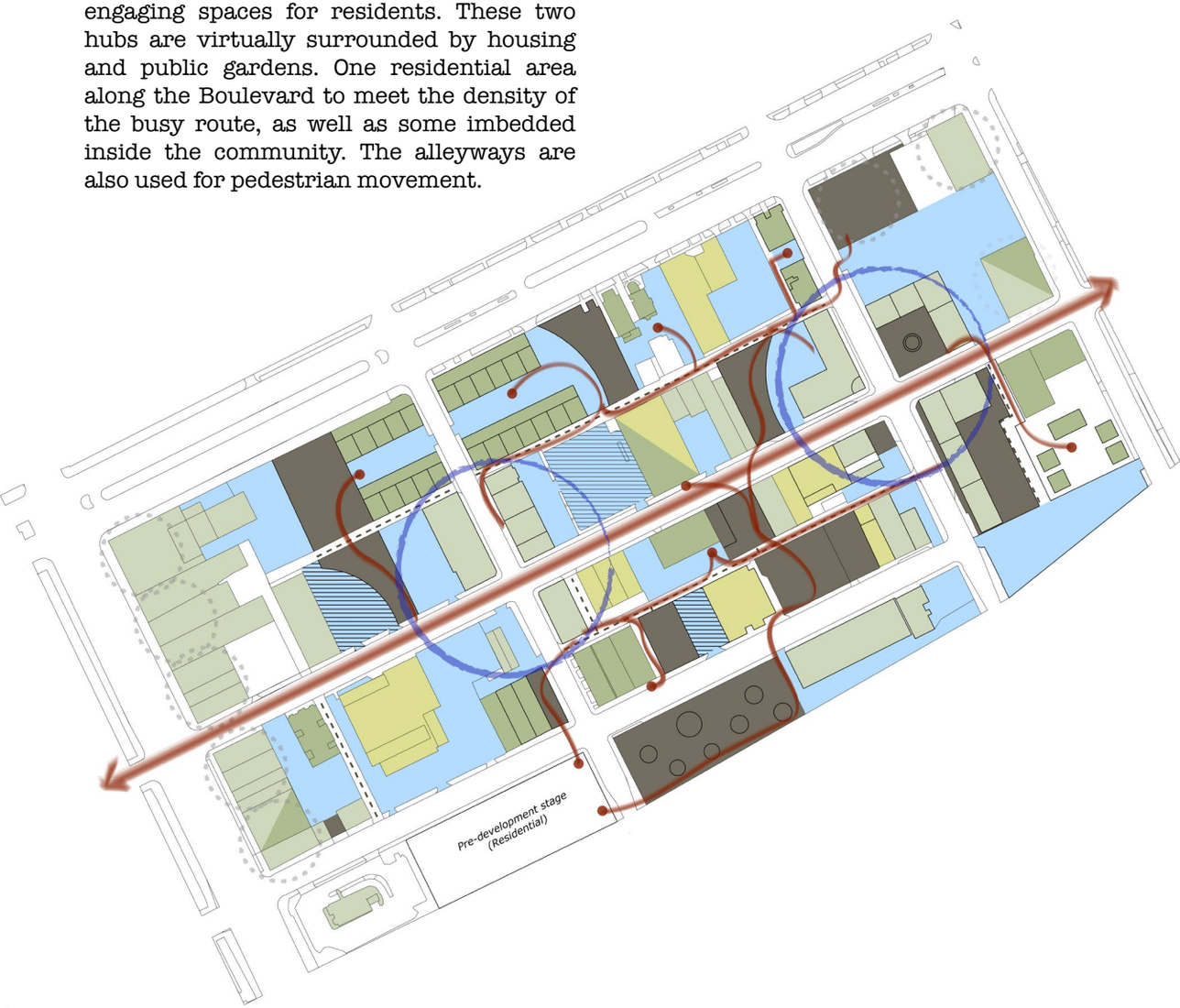


Figure 6.1: Retail hub plan

Green Pathway Plan

The green pathway plan is recommended. The goal is to establish a sequence of green/public spaces that encourage social interaction and are close to residential and commercial/retail districts. The walkway is divided into hubs that cater to different functions. Fitness, public art, gardening, outdoor seating, and other activities are among them. Each of these places features a unique blend of biophilic design elements. To meet the density along the main thoroughfare, homes are positioned along E. Grand Blvd. Given that residential units are being proposed for E. Baltimore Ave. The decision to include more is in this context.

Figure 6.2: Green pathway plan

Figure 6.3: Proposed zoning plan

Pedestrian Pathway

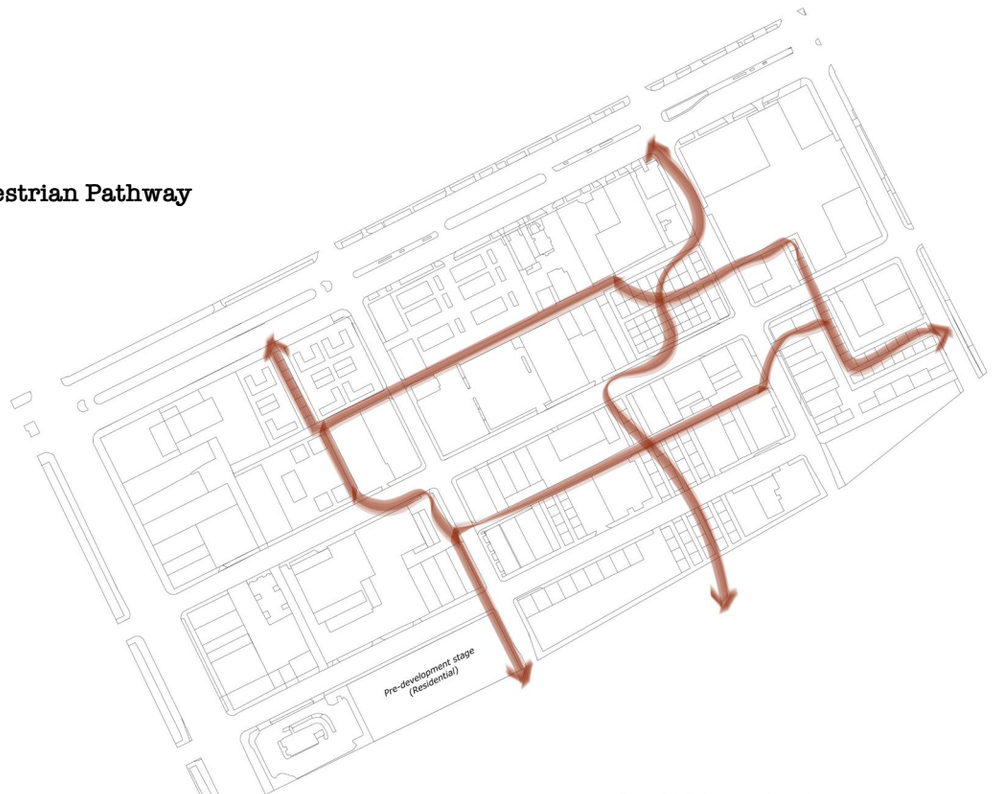


Figure 6.4: Pedestrian pathway plan

Existing/Proposed Nodes

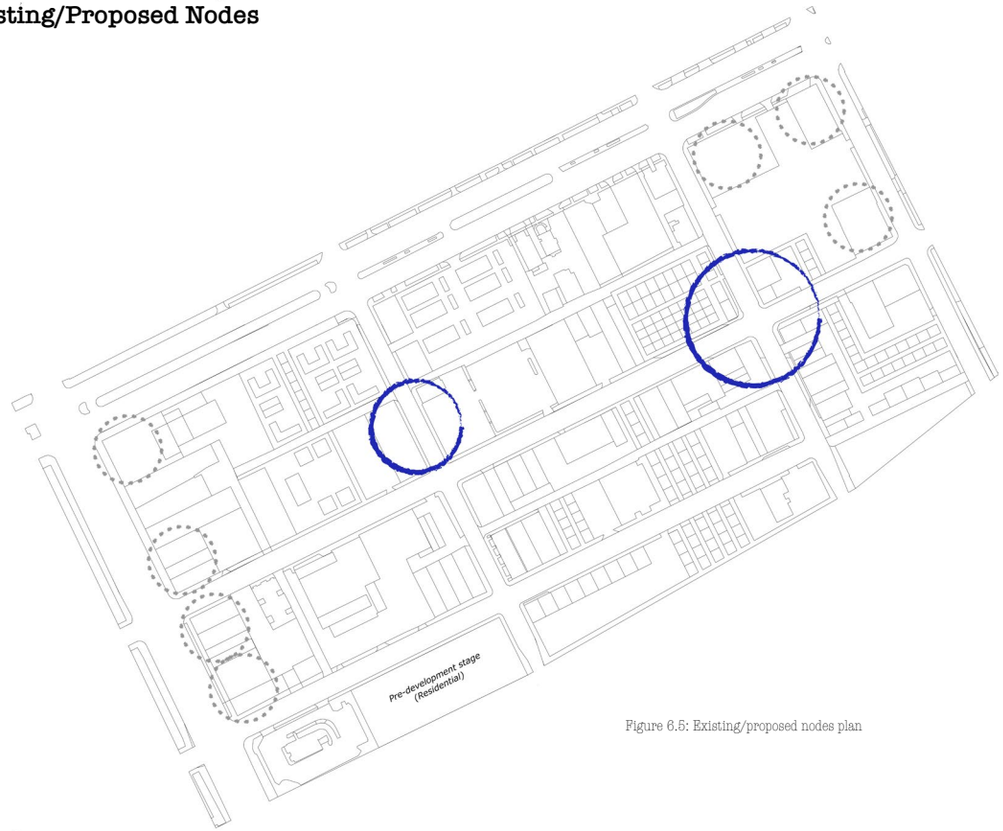


Figure 6.5: Existing/proposed nodes plan

Proposed Building Typologies

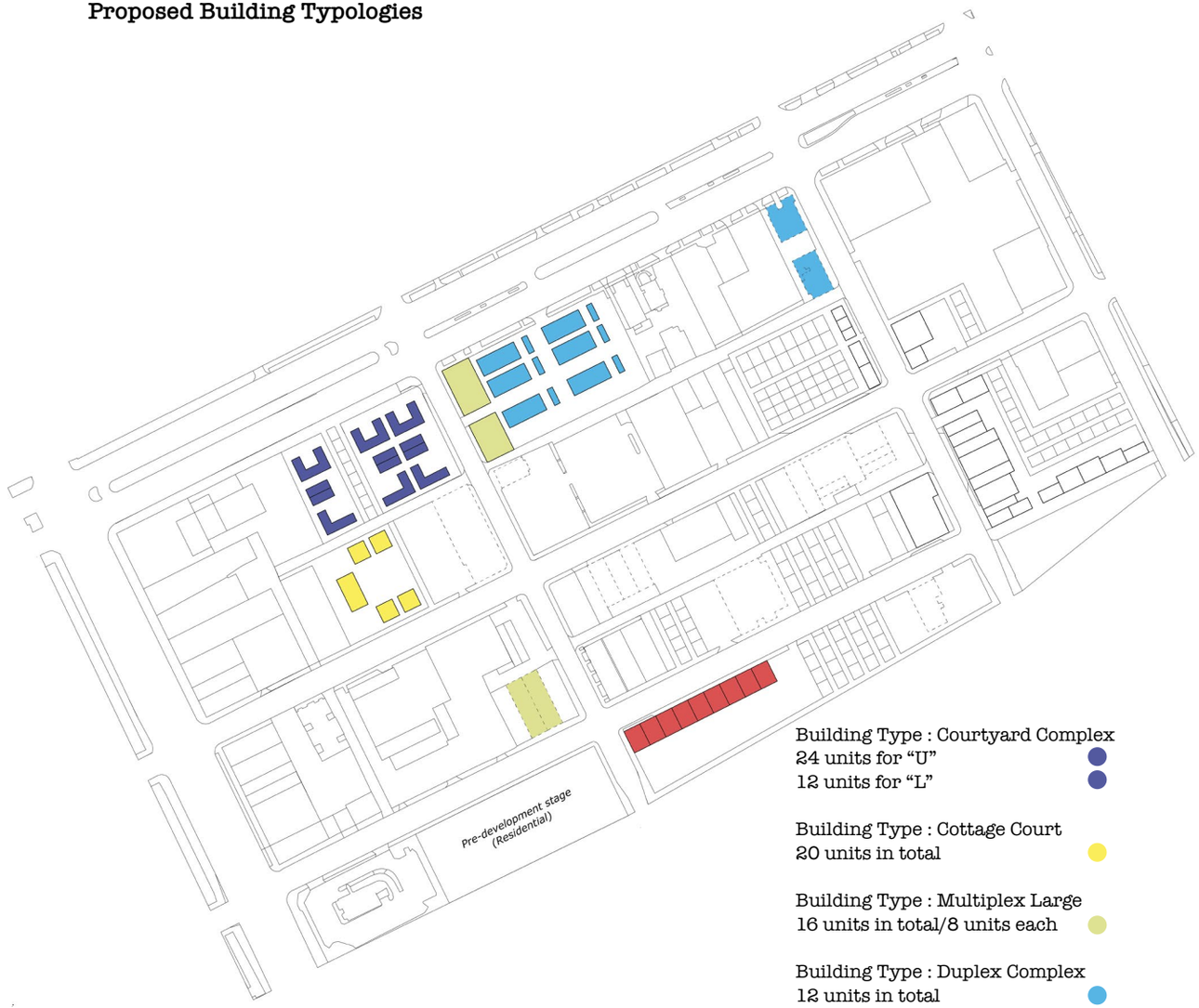


Figure 6.6: Proposed building typologies

Building Type : Courtyard Complex
24 units for “U”
12 units for “L”

Building Type : Cottage Court
20 units in total

Building Type : Multiplex Large
16 units in total/8 units each

Building Type : Duplex Complex
12 units in total

Building Type : Townhouse
9 units in total

Building Type :Adaptive Reuse
12 units in total

Building Type : Adaptive Reuse
12 units in total

Building Type : Adaptive Reuse
2 units in total

Building Type : Adaptive Reuse
2 units in total

Green Pathway Axon

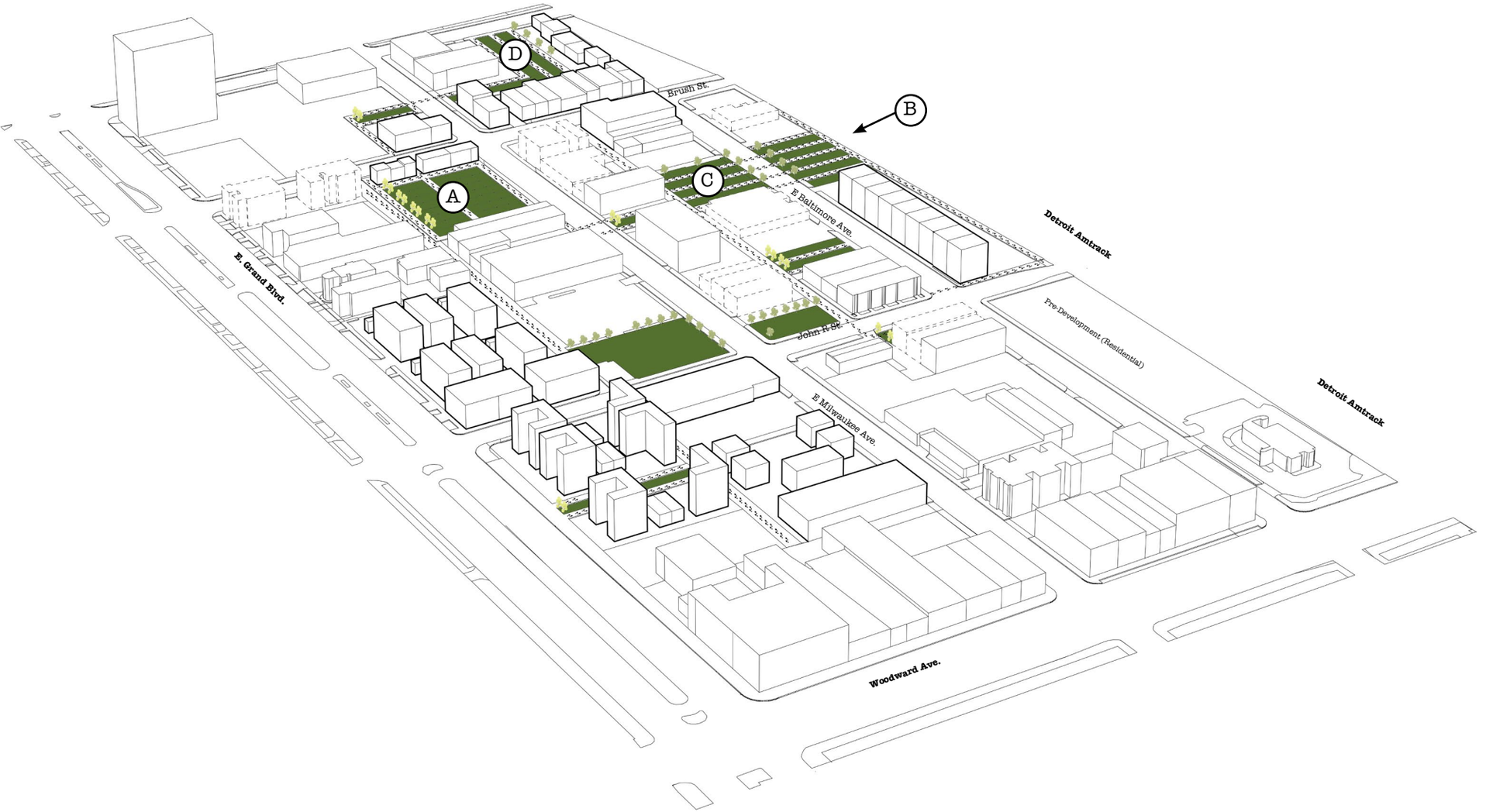


Figure 6.7: Axon of proposed site

By providing a space for disengagement from the main flow of activity, the junction gardens demonstrate the element of refuge. The sensory aspects provided by the coneflowers inside the green spaces add a sense of intricacy and order. With the wood decking and stone walkways, there is a material link to nature. The J garden intervention is based on the symbolic reference of biomorphic forms found in nature.

The Junction Activity Hub is abbreviated as J.A.H. The refuge aspect is present in a way that encourages movement. The umbrella walkway provides overhead cover while also creating a light and shadow experience. The larger chess and checker boards are also related to the material link.

Milwaukee Park includes features such as mystery. When approaching the park from the alley pathway, there is an air of mystery. Because the park's visibility isn't fully apparent until you arrive. The concrete "M" serves as multi-purpose seats. The concrete blocks rise up to 8 feet in height and offer a beautiful view over the area. The park itself is designed to showcase artists, particularly sculptors. This refers to the neighborhood's rich artistic culture.

The M.J. a fitness hub is a place where people may work out and exercise. The presence of water is an unexpected feature here. This is depicted as water sprouting from the ground, which may be both interactive and relaxing to play with.

Adaptive Reuse Buildings

Proposed Buildings

Existing Buildings

Public/Green Space

The Milwaukee Park (A)

Figure 6.8: The Milwaukee Park

B The J.A.H. & M.J. Fitness

Figure 6.9: The J.A.H. & M.J. Fitness

The J.A.H. ©

Figure 6.10: The J.A.H.

Figure 6.11: The Junction Gardens

Conclusion

07

Limitations

The interviews with the community would have limitations. The questions were more concerned with neighborhood planning than with biophilic or nature-related issues. Plants, flowers, and pollinators may have been more intentionally incorporated into the design as well. The coneflowers in the Junction Gardens are chosen for their beauty, scent, and ability to attract pollinators. Regardless, there was no intention of plant life in any other hub Eucalyptus plants would have been ideal in the fitness center to improve air quality while users exercise. Garden food production would have contributed to the community's and neighborhood's identity.

A more in-depth examination of the benefits of nature and design could have also aided the thesis. Adaptability, attentiveness, attention, concentration, emotion, and mood are all examples of psychological responses. This includes natural responses that affect healing and stress management. Empirical research, for example, have found that experiences in natural surroundings promote more emotional repair, with less occurrences of tension, anxiety, rage, exhaustion, bewilderment, and total mood disruption than metropolitan situations with fewer natural qualities. Physiological responses include humans auditory, musculoskeletal, respiratory, and circadian systems, as well as humans overall physical comfort. Connections with nature cause physiological responses such as muscle relaxation, as well as a decrease in diastolic blood pressure and stress hormone.

Figure 7.0: Eucalyptus plant

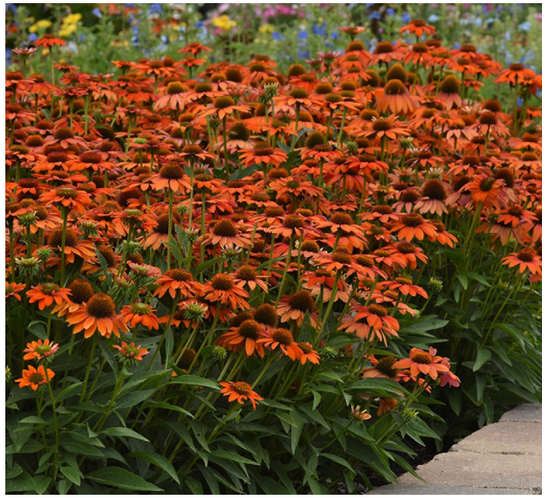


Figure 7.1: Coneflower plant

Why Biophilia?

In some cases, biophilia might serve as a framework for regeneration. In this scenario, the proposal is to transform a forgotten auto manufacturing district into a vibrant natural neighborhood that caters to the user rather than their cars. The interpretation is that this lens of biophilic design has similiar elements to the original design of the earth. It also relies on providing a better experience for the user. In addition to improving the users' health and well-being. Strong or consistent relationships with nature can provide opportunities for mental recuperation, during which time humans' higher cognitive functions may take a break.

As a result, humans have a stronger potential for executing focused tasks than someone with tired cognitive resources. While this thesis primarily focuses on a 2-3 block radius of a relatively small area, consider what would happen if this framework were to be applied to other neighborhoods. Thus developing toward a metropolis with biophilic design traits or creating a parallel to Earth's initial design.

To quote the late great Kobe Bryant,

"Jobs not finished."

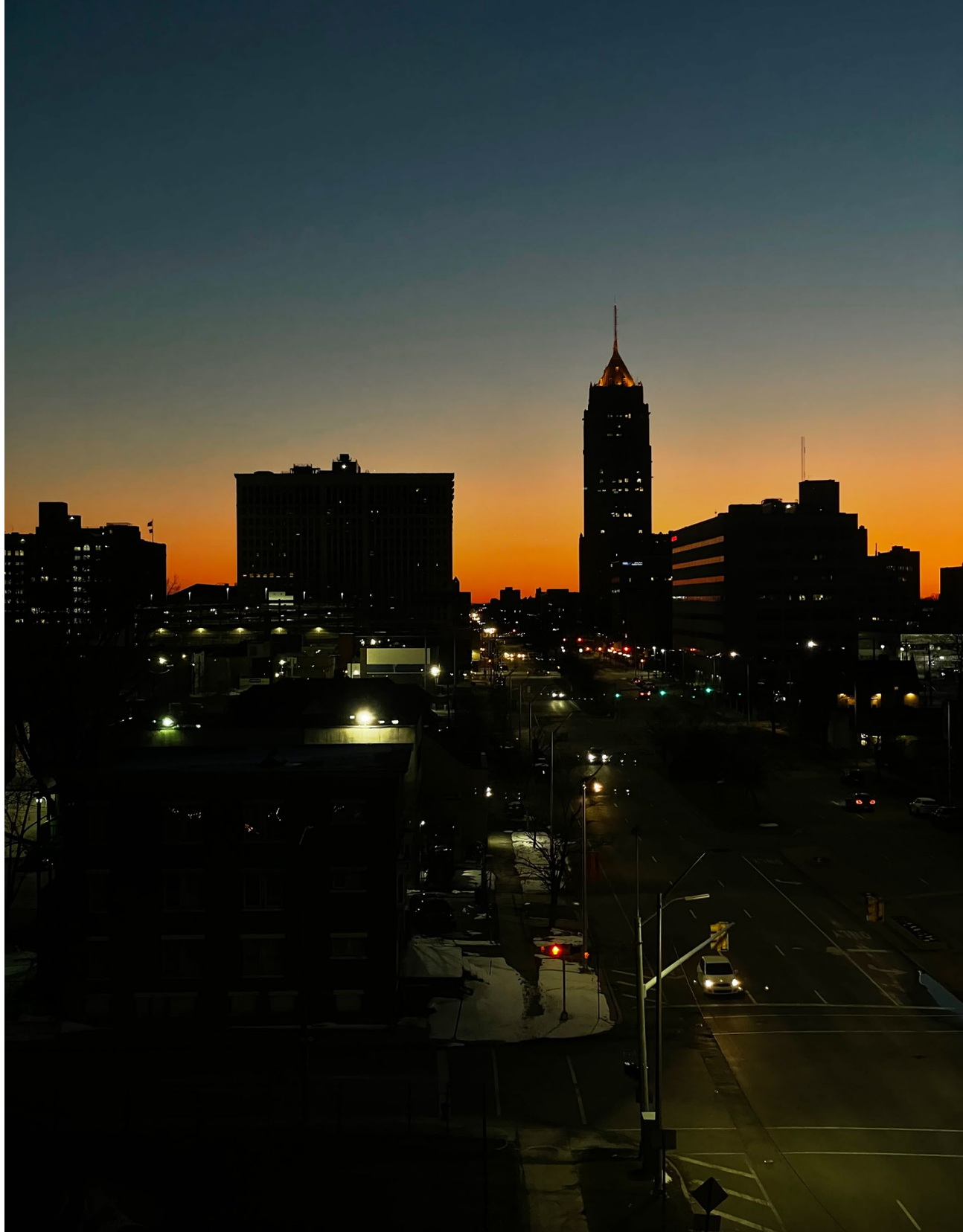


Figure 7.2: Picture from CHROMA building

Endnotes

08

Works Cited

“14 Patterns of Biophilic Design.” Terrapin Home - Terrapin Bright Green, 12 Sept. 2014, https://www.terrapinbrightgreen.com/reports/14-patterns/#footnote-103.

“Affordable Housing Map.” City of Detroit, https://detroitmi.gov/webapp/affordable-housing-map.

“Biophilic Design & Community: Looking beyond Individual Wellbeing · Anooi.” Anooi, https://anooi.com/blog/biophilic-design-community-looking-beyond-individual-wellbeing.

“Biophilic Design & Social Distancing in Public Spaces · Anooi.” Anooi, https://anooi.com/blog/biophilic-design-social-distancing-in-public-spaces.

Bureau, U.S. Census. Explore Census Data, https://data.census.gov/map?g=1400000US26163985100&layer=VT_2020_100_00_PY_D1&mode=selection&loc=42.3670%2C-83.0653%2Cz14.4398.

“Carolina Green Space: Potrero Hill, San Francisco CA.” Mysite, https://www.carolinagreenspace.org/.

Chen, Collin. “Landscape Design of Hony Tower / Aspect Studios.” ArchDaily, ArchDaily, 29 June 2022, https://www.archdaily.com/984372/landscape-design-of-hony-tower-aspect-studios?ad_source=search&ad_medium=projects_tab.

“Cigler Marani Architects: Arquitectura De Paisaje, Arquitectura Paisajista, Diseño Urbano Arquitectura.” Pinterest, 28 May 2020, https://www.pinterest.com/pin/295056213091260391/.

Clancy, Joe, et al. “The Role of Landscape Architecture in Creating Biophilic Environments.” Human Spaces, 22 Jan. 2018, https://blog.interface.com/the-role-of-landscape-architecture-in-creating-biophilic-environments/.

Detroit Future City. https://detroitfuturecity.com/wp-content/uploads/2019/04/2019-05-Milwaukee-Junction-Framework-Study.pdf.

“Detroit Housing Plans.” City of Detroit, https://detroitmi.gov/departments/housing-and-revitalization-department/affordable-housing/detroit-housing-plans.

Farr, Douglas. Sustainable Urbanism: Urban Design with Nature. John Wiley & Sons, 2008.

“Home.” DCPA, https://www.dcpasite.com/.

“HUD Archives: Glossary of Terms to Affordable Housing.” HUD, https://archives.hud.gov/local/nv/goodstories/2006-04-06glos.cfm.

“HUD Archives: Glossary of Terms to Affordable Housing.” HUD, https://archives.hud.gov/local/nv/goodstories/2006-04-06glos.cfm.

Leete, Rebecca Ildikó “5 Regenerative Strategies to Activate the Dead Edges in Our Cities Post-Pandemic.” ArchDaily, ArchDaily, 11 Mar. 2022, https://www.archdaily.com/978256/5-regenerative-strategies-to-activate-the-dead-edges-in-our-cities-post-pandemic?ad_source=search&ad_medium=search_result_all.

Madhulika-Ra-Chauhan. “Biophilic Design : Embark on the Road to Wellness.” Thrive Global, 20 Mar. 2020, https://community.thriveglobal.com/biophilic-design-embark-on-the-road-to-wellness/.

McCain, Maria. “Bringing the Outdoors in: The Benefits of Biophilia.” Be a Force for the Future, 23 June 2020, https://www.nrdc.org/bio/maria-mccain/bringing-outdoors-benefits-biophilia.

"Michigan Affordable Housing." MHT Housing, https://mhthousing.net/.

Milwaukee Junction Apartments. Milwaukee Junction Apartments, https://milwaukeejunctionapartments.com/.

Mondry, Robin Runyan and Aaron. "Brush Park's Rapid Redevelopment, Mapped." Curbed Detroit, Curbed Detroit, 27 Sept. 2019, https://detroit.curbed.com/maps/brush-park-development-construction-map.

Montjoy, Valeria. "The Biophilic Response to Wood: Can It Promote the Wellbeing of Building Occupants?" ArchDaily, ArchDaily, 2 Mar. 2022, https://www.archdaily.com/974790/the-biophilic-response-to-wood-can-it-promote-the-wellbeing-of-building-occupants.

MORRISH, WILLIAM R. Planning to Stay: A Collaborative Project. Milkweed Editions, 1994.

OnTheMap, https://onthemap.ces.census.gov/.

"Our Community Partners." San Francisco Parks Alliance, https://sanfranciscoparksalliance.org/our-community-partners/.

overview: Encourage Mixed-Use/Mixed-Income Development - NAHB. https://www.nahb.org/-/media/NAHB/advocacy/docs/top-priorities/housing-affordability/overview-encourage-mixed-use-mixed-income-development.pdf.

Planh, https://planh.ca/take-action/healthy-environments/built-environments/page/healthy-neighbourhood-design.

"Project Description." Burnside Mural+, https://gpmural.com/project-description/.

Rahman, Nushrat. "$38m In Tax Incentives Will Turn Former Detroit Classrooms, 3 Other Projects into Affordable Housing." Detroit Free Press, Detroit Free Press, 23 June 2022, https://www.freep.com/story/news/local/michigan/detroit/2022/06/23/detroit-housing-developments-low-income-tax-credits/7709325001/.

"Spotlight Park." NW Goldberg Cares, https://www.nwgoldbergcares.com/spotlight-park.

Staff, The Neighborhoods. "$100 Million Funding Announced for Five Affordable Housing Projects in Detroit." The Neighborhoods, https://www.theneighborhoods.org/story/100-million-funding-announced-five-affordable-housing-projects-detroit.

"What Is and Is Not Biophilic Design." Metropolis, 19 Sept. 2022, https://metropolismag.com/viewpoints/what-is-and-is-not-biophilic-design/.

"What Is the Low-Income Housing Tax Credit and How Does It Work?" Tax Policy Center, https://www.taxpolicycenter.org/briefing-book/what-low-income-housing-tax-credit-and-how-does-it-work.

"Who Is Eligible?" City of Detroit, https://detroitmi.gov/departments/housing-and-revitalization-department/affordable-housing/who-eligible.

"Zoning Map Index." City of Detroit, https://detroitmi.gov/departments/buildings-safety-engineering-and-environmental-department/bseed-divisions/zoning-special-land-use/zoning-map-index.

List of Figures

Figure 3.9: View of Cathedral Tower. Goldchain, Michelle. “Midtown’s Cathedral Tower Will Be Renovated for $12m.” Curbed Detroit, Curbed Detroit, 7 Aug. 2017, https://detroit.curbed.com/2017/8/7/16106886/midtown-cathedral-tower-renovation.

Figure 3.10: View of Orchestra Place Apartments. “Orchestra Place - 100 Parsons St Detroit, MI.” Apartments.com, 25 Apr. 2023, https://www.apartments.com/orchestra-place-detroit-mi/4v13cyl/.

Figure 3.11: View of Milwaukee Junction Apartments. MJ Galbraith |Tuesday, August 3, and Sponsored By. “With an Emphasis on Affordability, New Apartment Building Opens in Milwaukee Junction.” Model D, https://www.modeldmedia.com/devnews/258-Milwaukee.aspx.

Figure 3.12: Based on information gathered from:
Staff, The Neighborhoods. “$100 Million Funding Announced for Five Affordable Housing Projects in Detroit.” The Neighborhoods, https://www.theneighborhoods.org/story/100-million-funding-announced-five-affordable-housing-projects-detroit.

Figure 3.13: Based on information gathered from:
Staff, The Neighborhoods. “$100 Million Funding Announced for Five Affordable Housing Projects in Detroit.” The Neighborhoods, https://www.theneighborhoods.org/story/100-million-funding-announced-five-affordable-housing-projects-detroit.

Figure 4.0: Aerial view of Twin Cities. Midwest Living editors Updated September 12, 2022. “20 Things to Do in the Twin Cities.” Midwest Living, https://www.midwestliving.com/travel/minnesota/14-top-things-to-do-the-twin-cities/.

Figure 4.1: Aerial render of Twin Cities. Twin Cities Boulevard, https://www.twincitiesboulevard.org/.

Figure 4.2: Alley condition in between homes in Brush Park. Stockard, Jahlil. 2023.

Figure 4.3: Ford Piquette Plant historical site marker. Stockard, Jahlil. 2023.

Figure 4.4: Milwaukee Junction Land Use Map. Stockard, Jahlil. 2023.

Figure 4.5: Map of Detroit locating Brush Park and Milwaukee Junction. Stockard, Jahlil. 2023.

Figure 5.0: One bedroom unit sketch model. Stockard, Jahlil. 2023.

Figure 5.1: Collection of photos-M.J. Stockard, Jahlil. 2023.

Figure 5.2: Collection of photos-M.J. Stockard, Jahlil. 2023.

Figure 5.3: Collection of photos-B.P. Stockard, Jahlil. 2023.

Figure 5.4: Collection of photos-B.P. Stockard, Jahlil. 2023.

Figure 5.5: Research Making cube model. Stockard, Jahlil. 2023.

Figure 5.6: Chart based on information gathered from:
MORRISH, WILLIAM R. Planning to Stay: A Collaborative Project. Milkweed Editions, 1994.

Figure 5.7: Chart based on information gathered from:
MORRISH, WILLIAM R. Planning to Stay: A Collaborative Project. Milkweed Editions, 1994.

Figure 5.8: Milwaukee Junction neighborhood elements map. Stockard, Jahlil. 2023.

Figure 5.9: Brush Park neighborhood elements map. Stockard, Jahlil. 2023.

Figure 5.10: QR code for “A Day in the Life of a Milwaukee Junction Resident” video. Stockard, Jahlil. 2023.

Figure 5.11: Screen capture of “A Day in the Life of a Milwaukee Junction Resident” video. Stockard, Jahlil. 2023.

Figure 5.12: Focus Area Map of Milwaukee Junction. Stockard, Jahlil. 2023.

Figure 5.13: Building typology study showing form and plan. Stockard, Jahlil. 2023.

Figure 6.0: Garden central plan.

Figure 6.1: Retail hub plan.

Figure 6.2: Green pathway plan.

Figure 6.3: Proposed zoning plan.

Figure 6.4: Pedestrian pathway plan.

Figure 6.5: Existing/proposed nodes plan.

Figure 6.6: Proposed building typologies.

Figure 6.7: Axon of proposed site.

Figure 6.8: The Milwaukee Park.

Figure 6.9: The J.A.H. & M.J. Fitness.

Figure 6.10: The J.A.H.

Figure 6.11: The Junction Gardens.

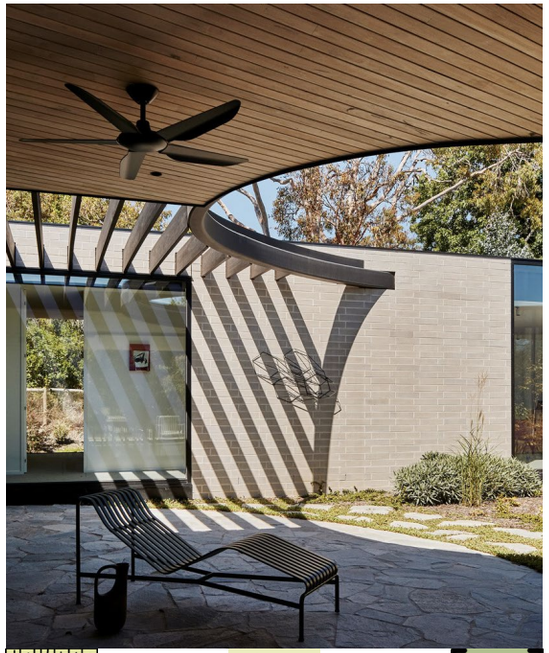
Figure 7.0: Eucalyptus plant. Woodland Trust. “Eucalyptus (Eucalyptus Sp..).” Woodland Trust, https://www.woodlandtrust.org.uk/trees-woods-and-wildlife/british-trees/a-z-of-british-trees/eucalyptus/.

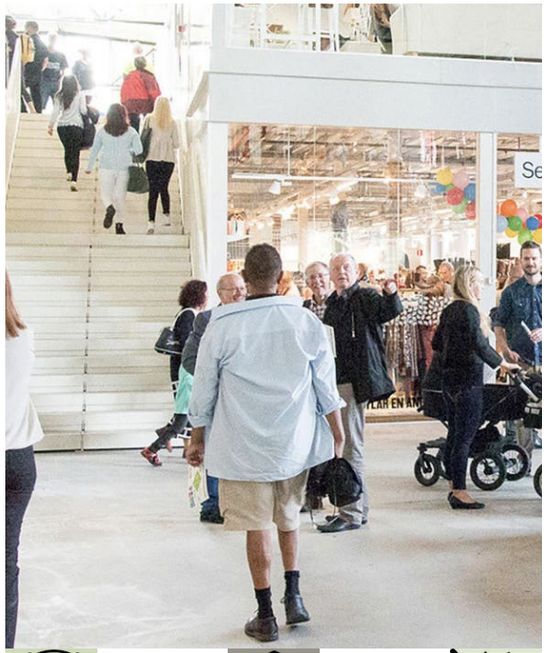
Figure 7.1: Coneflower plant. “Soft Orange Coneflower.” Plant Addicts, https://plantaddicts.com/soft-orange-coneflower.

Figure 7.2: Picture from CHROMA building. Stockard, Jahlil. 2023.

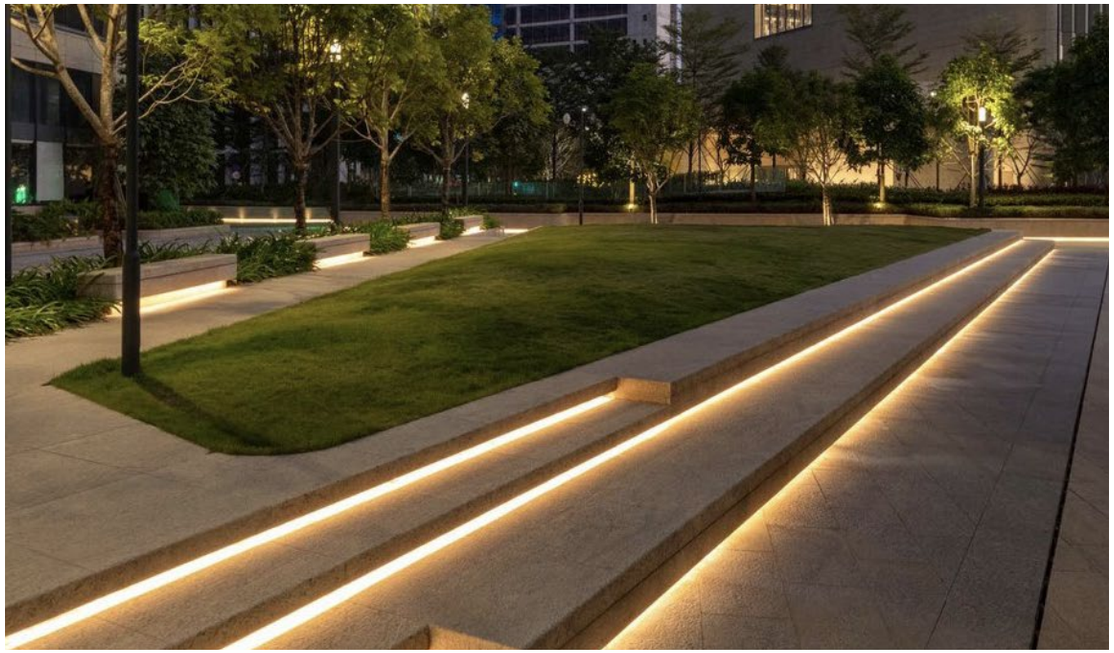
Precdent Studies Expanded Data

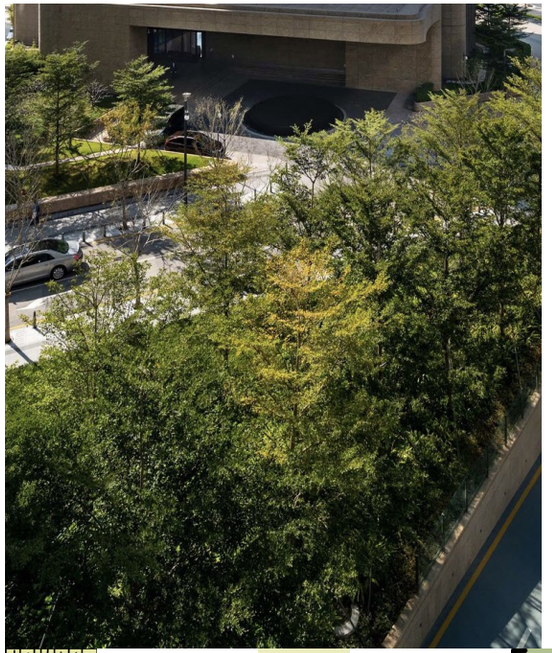
Mount Martha House - Kister Architects

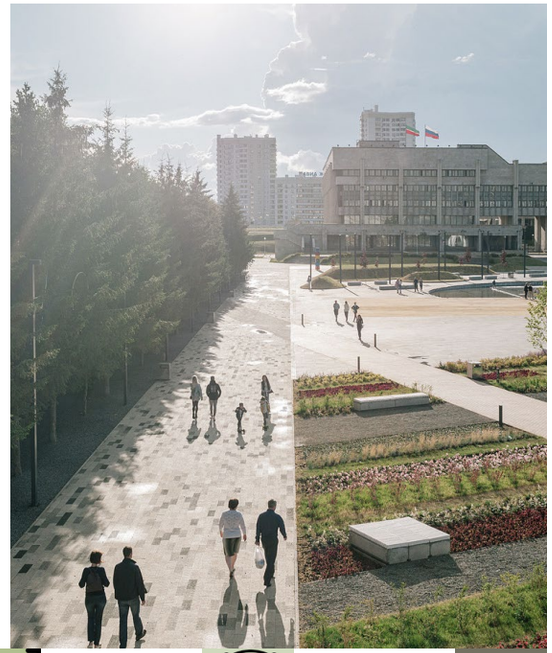




Landscape Design of Hony Tower-ASPECT Studios

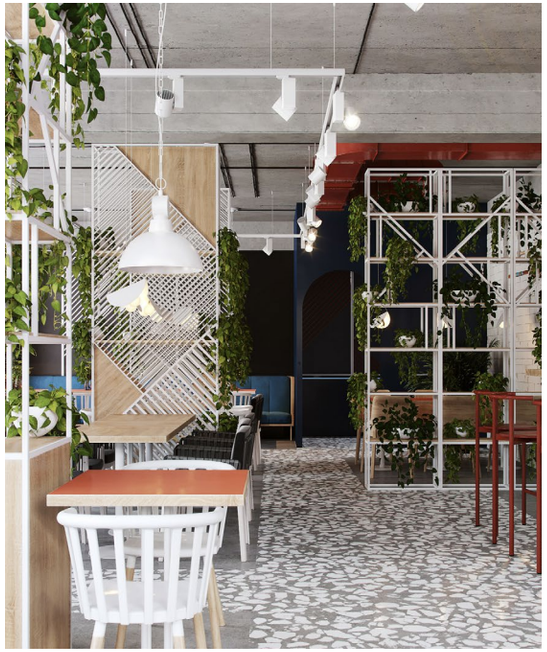


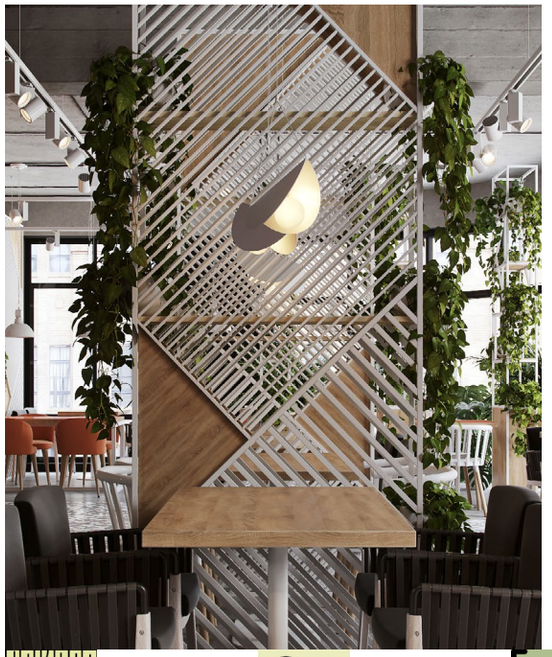




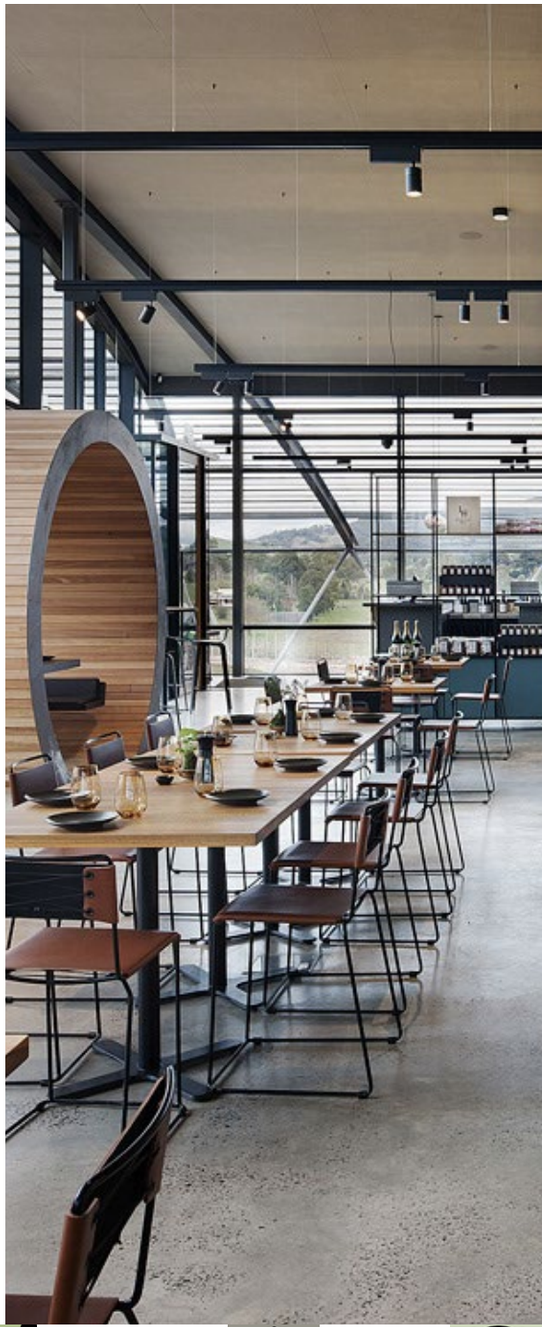
Bioenergy Research & Demonstration Facility-McFarland Marceau Architects Ltd.

Emphāsis-ATO Studio | Photos: Kirill Vill



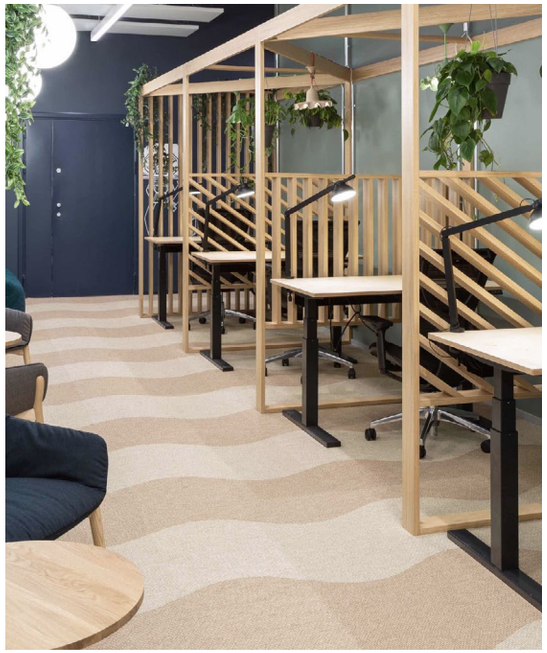


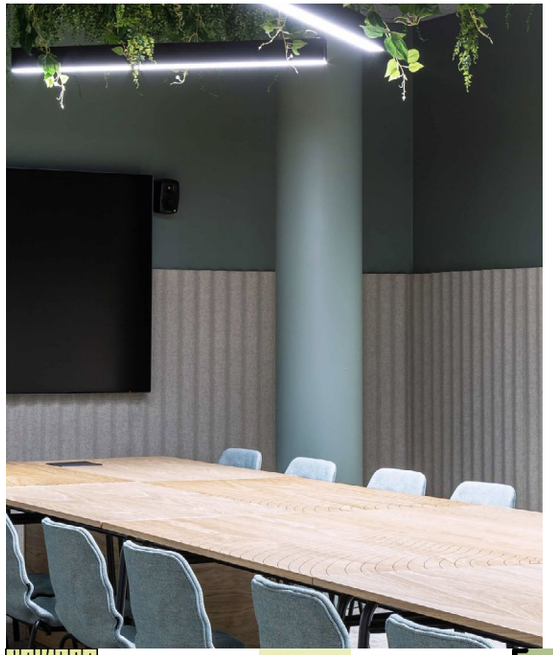
Levantine Hill Estate-Fender Katsalidis Architects| Photos: Shannon McGrath

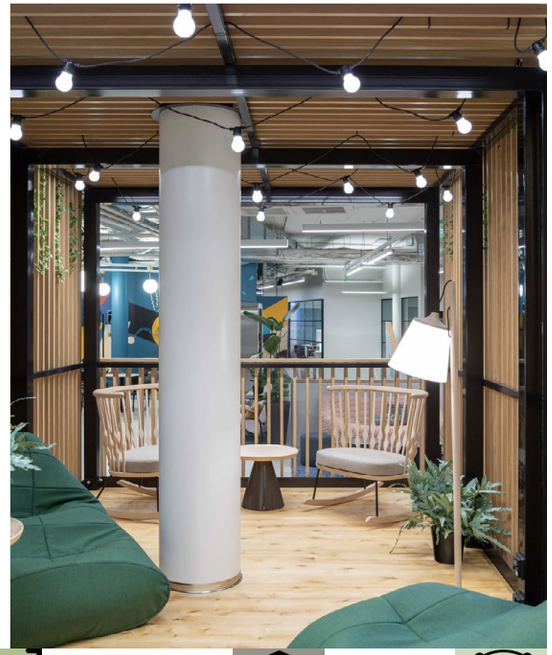


GLAM SEAMLESS-SERGIO MANNINO STUDIO

MOW Supernova-Mint & More







Barbican Centre-Geoffry Powell, Christoph Bon, and Peter Chamberlin

Gardenhouse-MAD Architects

Transcription-“A Day in the Life of a Milwaukee Junction Resident”

Jahlil:
All right, so my name is Jahlil . Nice to meet you. What is your name?

Taylor:
I’m Taylor. Nice to meet you.

Jahlil:
Taylor. Nice to meet you. First question is how do you get to work?

Taylor:
So I actually commute, um, from Ferndale. I used to live in the new center area right off of Grand Boulevard. Mm-hmm. But now I’m right off of eight Mile in Ferndale.

Jahlil:
Okay, cool. What would you say are the busiest times of the day or high times?

Taylor:
Feels like it’s always busy over here in one way or another because there’s so many different types of people that, you know, live around here and work around here. I would definitely say morning rush, you know, probably like nine to 11.Then picks back up around noon. Stays busy usually till three if it’s not raining.

Jahlil:
Then are most of your customers from the neighborhood or somewhere adjacent? To the Milwaukee Junction new center area?

Taylor:
I would say from or adjacent. Okay. But definitely like lots of people from the neighborhood or surrounding areas, you know, people who live here more so than people who just come down here and work.

Jahlil:
Okay, perfect.

Taylor:
But we get both, you know. Healthy mix.

Jahlil:
Where do you go on break? Do you stay within the neighborhood or do you?

Taylor:
I don’t get a break, just cuz we usually are working here by ourselves. Okay. Um, but I would probably just stay in the neighborhood.

Jahlil:
Okay. Thank you.

Taylor:
I appreciate your time.

Taylor:
Hey, no problem.

Jahlil:
First start off with your name?

Isaac:
Isaac.

Jahlil:
Do you work within the neighborhood?

Isaac:
I work at the hospital.

Jahlil:
Where do you get your groceries? Is it far away from here or?

Isaac:
Save a lot.

Jahlil:
Do you drink coffee?

Isaac:
No. Nasty. energy drink.

Jahlil:
Energy drink! Thank you.I appreciate it. Okay. Have a good one.

Isaac:
Have a good one.

Jahlil:
First, what are the high times of the day or like the best times of the day?

Ethan:
Like one or two.
Jahlil:
One or two?

Ethan:
Yeah.

Jahlil:
Where do you park?

Ethan:
An abandoned lot that says $3 over there past the Goodyear.

Jahlil:
When you go on break, do you stay like this area or do you drive?

Ethan:
I don't go on break.

Jahlil:
You don't go on break?

Ethan:

I don't go on break.

Jahlil:
How is business in general?

Ethan:
Yeah. Uh, what about it?

Jahlil:
Do you guys get a surplus of customers every day? Or is it...

Ethan:
Honestly, sometimes we don't. Like when the trend gets slower than it's small. Yeah. That's just how it goes, you know.Especially in January on the wrong day, you know, like, uh, right now I think we made a few surpluses. Today, this is pretty busy for January plus, but we're having a boom right now, we think because there's something going on at the Fisher Theater here.

Jahlil:
Wow. Yeah. Cool.

Ethan:
So yeah, it's like an event based, like pretty much off that one event, like off the Fisher Theater. Like when there's shit going on there, that's when we get this one.

Jahlil:
Wonderful. Could I have your name?

Ethan:
Ethan.Ethan Hill.

Jahlil:
Ethan Hill. Okay. Thank you. Ethan Hill.

Jahlil:
All right, so if you start with your name, please.

Daisha:
Daisha McKenzie.

Jahlil:
I'm Jahlil Stockard. Nice to meet you.

Daisha:
Nice to meet you.

Jahlil:
First question is how do you get to work?

Daisha:
We lyft. I just moved out of the neighborhood. I also lived in the neighborhood.I just moved to West Village.

Jahlil:
Nice.

Daisha:
So we drive and lyft.

Jahlil:
Wonderful. A little bit of both. What are your busiest times of the day?

Daisha:
My busiest times of the day are usually in the evening, like 3:00 PM to 7:00 PM. It's usually like my rush times.

Jahlil:
How's business?

Daisha:
Business is pretty good. We don't rely on street traffic. We curate experiences in the space to bring people in. Just being more proactive about making sure that we have, we create our own traffic.

Jahlil:
Are there any challenges and if there are, how did you approach them?

Daisha:
Well challenges are gonna come. I think the biggest thing about challenges arising is being willing to go from plan A to plan C if you have to. Being willing to pivot and think outside the box to overcome barriers.

Jahlil:
Are most of your customers within the neighborhood or somewhere adjacent?

Daisha:
It's actually a mixture. We are somewhat of a destination place. Because we feature small businesses with products from all over the city and Michigan. So people are coming because they're fans of these brands. People are coming because they live in the neighborhood or driving past, or because they work in the neighborhood.

Jahlil:
Where do you go on break? Do you usually stay within the neighborhood or do you stay in the neighborhood?

Daisha:
I put a be back and 10 minute sign on the door.

Jahlil:
Wonderful.

Daisha:
and I take a break by going either to the gas station across the street. They know us by name or I go to either of the two coffee shops that I'm in between. So I don't necessarily eat lunch, but I might drink a coffee or three.

Jahlil:
So you are a business owner yourself? Do you usually wander or explore different, you know, restaurants or cafes like you said, probably the Milwaukee Cafe?

Daisha:
I do. I'm really into cute restaurants and experiences, so I make it my business to find new places to eat with my girlfriends or go for date night. I might not be able to get there on lunch, but, you know, on my off days or in the evening after we close up, I'm trying to experience new stuff that's, You know, in the city, I rarely, very rarely go outside of the city because there's so many cool things that are popping up around here, and I just want to support. What's in the city, you know, and expect and hope for that in return with my business.

Jahlil:
What would you like to see?

Daisha:
Affordable housing in the area.

Jahlil:
Yes, ma'am.

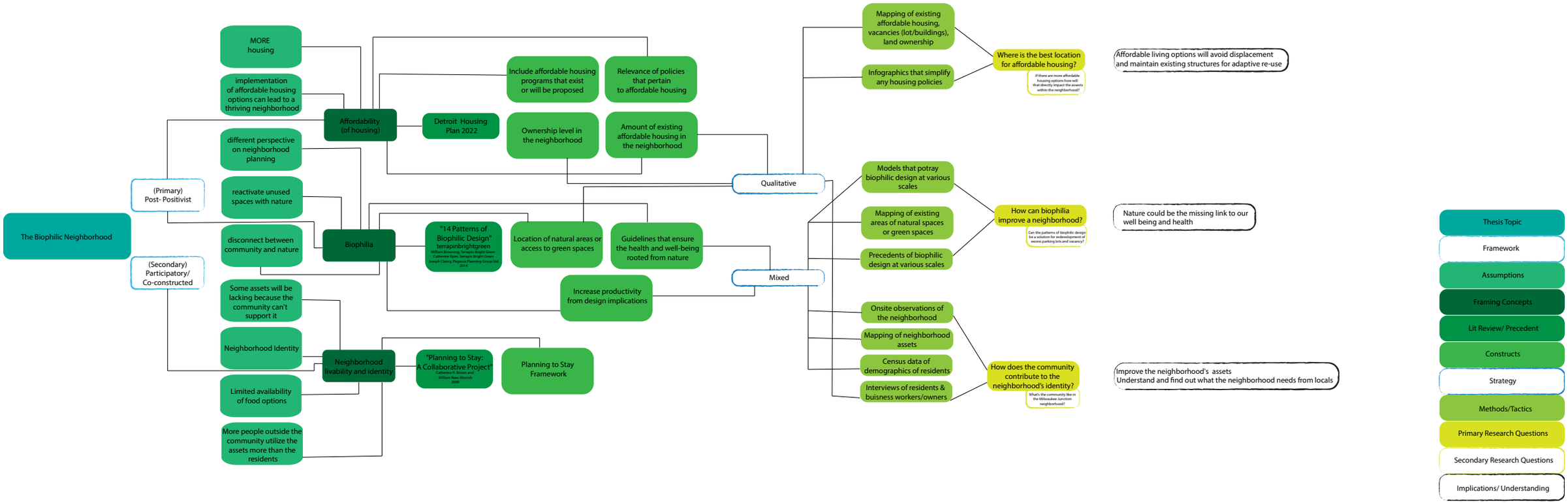
Daisha:
and not $400,000 condos. Um, because where are those people working? Also would love to see more places to eat during the day, because a lot of the places around here don't open until five.

Jahlil:
Wow.

Daisha:
So for dinner, so for lunch, if I don't bring it from home, I have to either DoorDash or just settle for just a coffee and a pastry. So there could definitely be an influx of places that open at 10, you know, and could fulfill that lunch crowd for all the people who work in the neighborhood.

Jahlil:
Thank you. That was very insightful.

Conceptual Diagram



The Biophilic Neighborhood

A Framework for Affordable Housing and Connection to Nature