

Community Focused Urban Renewal



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Community Focused Urban Renewal

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By
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THESIS PROPOSAL

THESIS ABSTRACT

Cities across the nation continue to develop and grow, but in many, rundown industrially zoned lots tend to be left alone and become an eyesore. These sites need to be better utilized by the community living around them. There needs to be a way to develop and design a living community system integrated into the surrounding city and local community with the bonus of being semi-self-sufficient. Combining these new buildings into the existing context of the urban fabric is essential to any growing city. Urban redevelopment of a large site within an already growing city can help to influence further community growth if done with specific methods.

This thesis seeks to find an architectural solution to how an urban redevelopment project can renew an area of a downtown district by creating an integrative living system into an existing built community. This urban renewal project consists of utilizing and reusing vacant industrial land. This architectural framework hopes to reconnect new integrative communities into their existing urban fabric while starting and integrating into their own.



Figure 1.1 - Abandoned Building

THESIS NARRATIVE

Our country is currently facing a problem of too much urban sprawl, and some downtown areas are starting to feel the effects of this. With abandoned buildings and lots becoming more and more prevalent, you can feel unwelcome in some parts of downtown. When cities were first built, these downtown areas were vibrant areas for all to live, work, and play, but over time, businesses and people have left a good amount of wear on these now undesirable downtown areas. Looking to the future, the question of how we address these unwanted sites is not a one-size fits but rather one that includes different precedent strategies that best work the need of the area.

This thesis will look at a downtown area that has been left with vacant holes just outside the edge and think of how to fix undesirable regions that were once vibrant. It might seem easy to replace the old with the new, but it's more than that. **How can architecture help renew areas within cities by creating new integrated communities that seamlessly fit into their existing urban context?** Through research and design, a redevelopment at the edge of downtown Mankato to reconnect the downtown to the rest of the city will be attempted. Additionally, focusing on creating a community that directly links back into the existing community through the integration and using different connection points.



Figure 1.2 - The Idea to Stop Urban Sprawl

PROJECT TYPOLOGY



Figure 1.3 - Mixed-Use Development

The project's typology is an **urban mixed-use building** with an open central mixed-use plaza. A complex of sorts with many amenities and urban typologies like restaurants, commercial and retail, event centers, different forms of public transportation, and community spaces. All centered around a connecting outdoor green gathering plaza. These areas have so much potential to flourish within the urban setting.

Throughout the project these are some terms that will be brought up and referenced

Mixed-Use - is a style of urban development, urban planning, and/or a zoning type that blends residential, commercial, cultural, institutional, or entertainment uses into one space, where those functions are to some degree physically and functionally integrated, and that provides pedestrian connections.

Mobility Hub - places in a community that bring together public transit, bike share, car share and other ways for people to get where they want to go without a private vehicle.

Urban Infill - is a new development that is sited on vacant or undeveloped land with an existing community.

Urban Redevelopment - is any new construction on a site that has preexisting uses.

Urban Renewal - is the clearing out of blighted areas in inner cities to clear out slums and create opportunities for higher class housing, businesses, and more.

Economics - is the social science that studies how people interact with value; in particular, the production, distribution, and consumption of goods and services.

Urban Sprawl - is the rapid expansion of the geographic extent of cities and towns, often characterized by low-density residential housing, single-use zoning, and increased reliance on the private automobile for transportation.

MAJOR PROJECT ELEMENTS

Apartment and Condo Housing:

Designed for a range of living options, including studios, one-bedroom, two-bedroom, four-bedroom apartments, and two-bedroom two-story condos.

Mobility Hub:

Designed to connect this community to the rest of the city quickly and attractively, that can act as a hub for all transportation to integrate into the downtown and surrounding neighborhood.

Outdoor Recreational Space:

Creating a central mixed-use space to be used by the residents as well as the outside community. This includes features like a sizable grassed Performance stage, an ice/ skating loop that changes use through different seasons, and a playground to connect the children's museum across the street.

Commercial Space:

Seen as a part of this integrated living, you can gather the essentials found in a small department store and other retail shops and have a few options for food within the urban confides.

USER-CLIENT DESCRIPTION

As this is seen to be a community-centered development, the client would be a developer with a passion for urban revitalization with a focus on giving back and providing for the community. Additionally, the owner of the finished development would be a group or organization that sees value in bringing communities together.

The user group for this project is unlimited because of the open-to-anyone nature of the project. The target audience of this development is people of all ages and abilities looking to find a place in the community. The most frequent users of the site would include residential residents, business employees, and surrounding Mankato residents.

Residential Residents:

People of all backgrounds will make up the residential portion of the building and will be the primary users of the facility. These users can vary from small families to students and anyone looking to join an integrated community. The residents can choose how active or passive they want to be within the living community development.

Mankato Residents:

The secondary users of the development and site are the residents and visitors that come to the site. The places that they will use the most are commercial spaces, outdoor recreational spaces, and convention centers. The development may also host more significant community events that outside visitors attend, like markets, concerts, and conventions.

Business Employees:

The tertiary users of the facility and site are the employees that work at the many commercial spaces. Mainly, these users will inhabit the facility during typical business hours. The employees will foster an environment that drives economic activity and draws people to the site.

SITE INFORMATION



Figure 1.4 - Site View Showing Two Pieces of Land

The site chosen is located in Mankato, Minnesota, just outside the downtown design district. This site is appropriate for my thesis proposal because it sits on mostly unused building and land that could be renewed into something way better for the city than what is currently there. I've lived in Mankato for 18 years or like and seen these plots of land stay unused for the majority of that time.

Contextually it sits next to a major highway and a high use secondary road, public transit routes, one of three high schools, two grocery stores making its location a great place for development

Mankato also borders North Mankato, a city that would benefit for this system due to being just across the river.

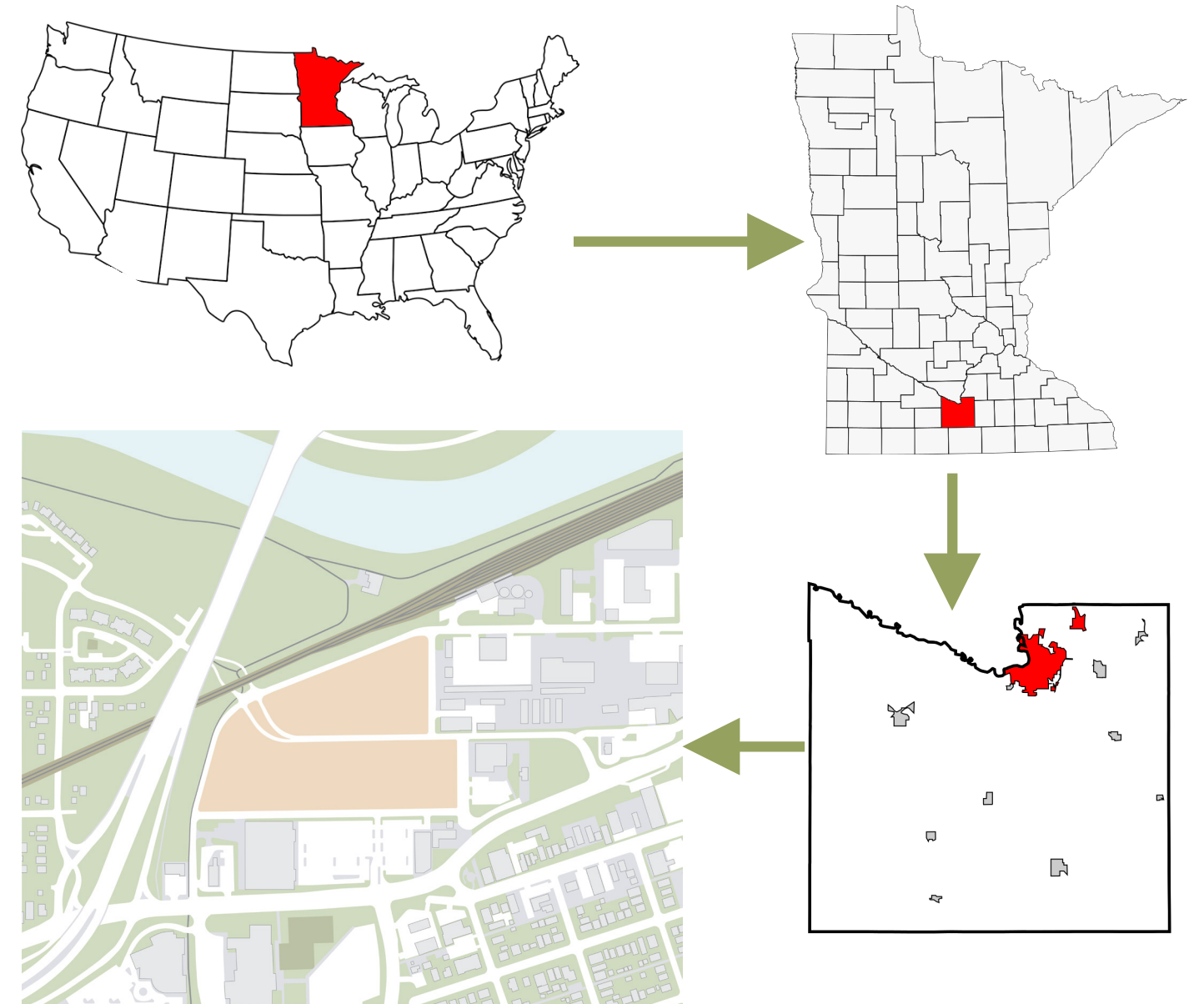


Figure 1.5 - Progression From US Down to Prospective Site

PROJECT EMPHASIS

Provide an architectural solution to the redevelopment of urban sites that have been left abandoned and unused.

Seeking to transform the site back into a place of life and serve as a catalyst for the integration of a new community.

Identify how a community is affected by a new building

This entails seeing how a building not designed with the context in mind could hurt many aspects of the city due to the fact there was no integration.

Create a integrated community living system that links to the surrounding communities

How can we design to link building as one community rather than just another apartment complex but instead a community within the larger community where you can do a majority of tasks within the community and still have the opportunity to leave into another

Develop a meaningful space that can serve the needs of the integrated community and the greater area

This includes designing community spaces that can be used by both the members of the internal tenants but the community that the complex is integrated into. This can be a great space to bring us together.

PROJECT GOALS

Throughout this thesis I hope to find the solutions to these three main goals as well as six additional goals.

1. **Renewal** - Bring new life to an otherwise dull and ill-used heavy industrial site just outside of the downtown design district
 2. **Connection** - Create a connection point or mobility hub that helps people navigate the city through public transport
 3. **Community** - Start a community focused build where the residents are directly integrated into the existing community of the downtown area
1. Understand how to use spaces to their full potential through urban renewal. Finding ways to redevelop an ill-used site into something that helps the city flourish.
 2. Find new ways to bring communities together through architecture and contextual integration. Understanding the link between a new building in an established area.
 3. Learn how to use new research methods that can have an influence on my design work. Through experimentation of source material and how that helps design.
 4. Continue to develop a better scale of time frame when working on big projects that require commitment to your craft.
 5. Create a thorough thesis project worth displaying and discussing throughout my life. This project will get brought back up whenever an employer looks through my portfolio.
 6. Learn how to give a better verbal presentation and how to get my point across well. Practicing how to give a presentation through trial runs in front of peers.

RESEARCH DIRECTION

Through research, I will look into precedents in existing projects that create an integrated living community along with the organization of such. Finding what is needed to link this community to the context. The end goal is to develop a way that an apartment building can be more than just that but instead find a structure to integrate into the community smoothly.

DESIGN METHODOLOGY

1. Theoretical premise
2. Research premise topic to answer questions and create solutions relating to the questions
3. Test solution
4. Make design opinion
5. Conclude through design

DOCUMENTATION OF THE DESIGN PROCESS

Document Compilation

- Design Investigation - Hand Sketching and Modeling
- Software Investigation - Revit, SketchUp, Lumion
- Representation - Illustrator, Photoshop, InDesign

Design Preservation

- Create and investigate representing drawings and models
- Feedback from Advisor(s)
- Document research material
- Backup files weekly to external hard drive
- Update Thesis book weekly

Content Publication

- Final content material recorded and credited in final thesis book
- Available in the NDSU Repository or Hardcover book format

Presentation Intentions

- Power Point Presentation going through final design
- Presentation boards with final design
- Final 3-D Model

SCHEDULE

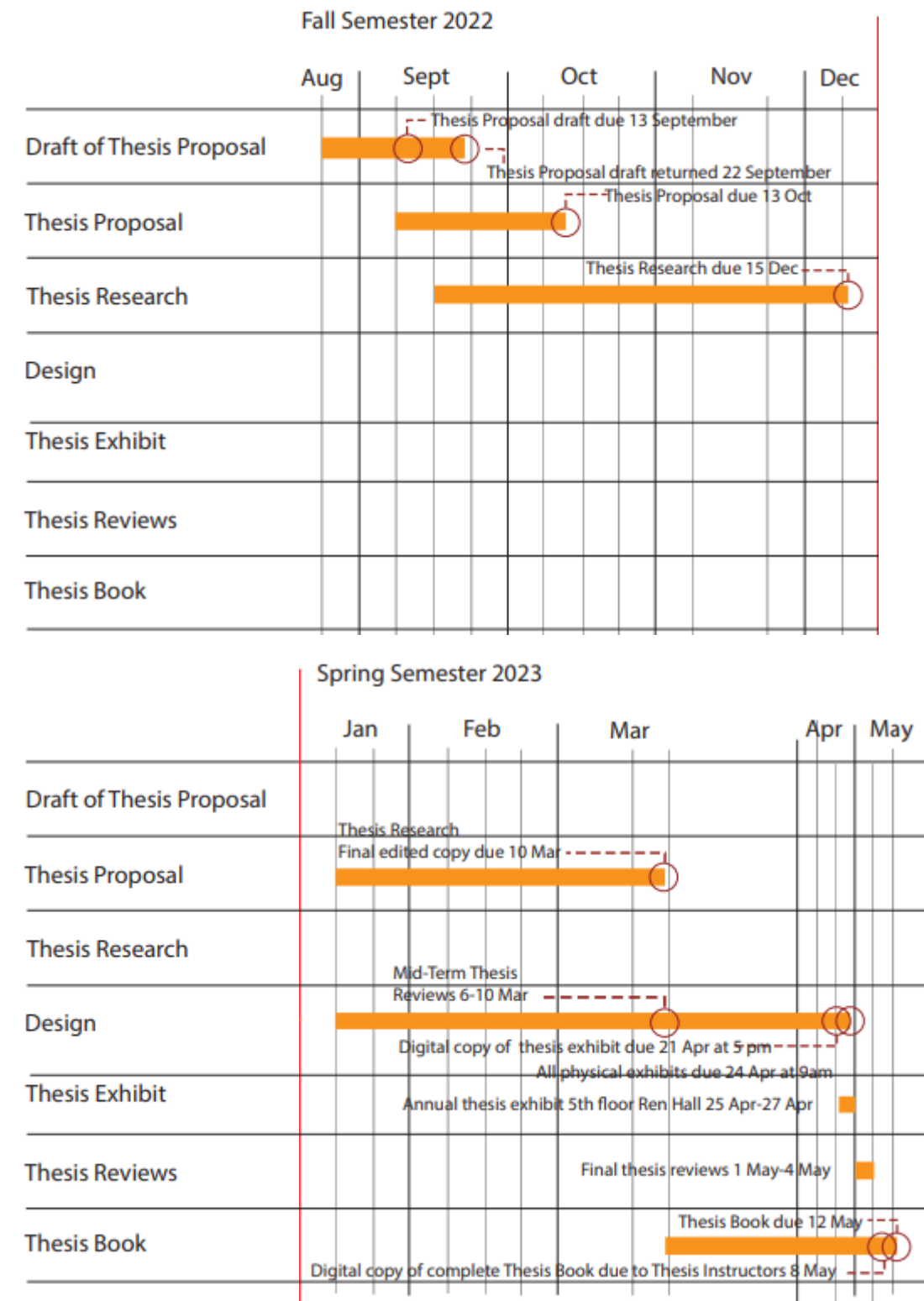


Figure 1.6 - Thesis Schedule



**THESIS
RESEARCH**

RESEARCH RESULTS

The research for this thesis project was collected through mainly five different case studies and three literature reviews. Later in this document, I will dive more in-depth into three case studies and one of the three literature reviews. Together these resources will be influential in my design solution for this thesis project, urban renewal with a community focus.

The results I have recorded from the literature reviews include vital data to help drive my urban design. It was important for me to understand the necessary means to create adequate housing and urban design before I got started on my design solution. Based on the information gathered from my case studies, the types of community-first accommodation can vary depending on what setting you build it in. Therefore you must know your site and the context well before designing. I also learned from the case studies that transit is a crucial way to connect to the existing community, so that brought the addition of the mobility hub to my design. Along with these case studies and literature review, I conducted a substantial site analysis to determine many different factors and how they will play into the final design of my mixed-use complex.

An area of the project that I will need to give a touch more thought to now after performing my research would be the different social factors of creating community and how bringing the outside into this new community will affect those living there and what these effects can help to determine a specific outcome within my design.

In conclusion, the results of the various research I have conducted have been very beneficial in increasing my background knowledge of urban design and the communities living within them. With this information, however, I will continue researching the city of Mankato and how I can cater to their needs more effectively.

LITERATURE REVIEW

Of the three kinds of literature that I read ("The Urban Design Handbook" ~ by Ray Gindroz, "City Comforts-How to Build an Urban Village" ~ by David Sucher, and "Housing as if People Mattered" ~ By Clare Cooper Marcus and Wendy Sarkissian), I took the most information from David Sucher's writing. The central question investigated was, "*How can architecture be used to help renew areas within cities by creating new integrated communities that seamlessly fit into their existing urban context?*" The information provided by and collected from these texts are the primary sources that will be used to influence the future design solution. Therefore, these texts need to be reliable and accurate.

City Comforts-How to Build an Urban Village By David Sucher (2003)

The author David Sucher argues that many cities have become too focused on the needs of cars and need to pay more attention to the needs of pedestrians. He suggests that cities should be designed to prioritize walking and cycling, with cars being relegated to the periphery. This would help create more vibrant streets and public spaces and make cities more enjoyable.

Suture also emphasizes the importance of "human scale" design in cities. This means designing buildings and public spaces that are proportionate to those who use them. He argues that this is essential for creating a sense of community and belonging in urban environments.

Another key thing in the book is the importance of city public spaces. Suture argues that public spaces are essential for creating community and fostering social interaction. Cities should have a variety of public areas, parks, squares, and plazas designed to meet the needs of different groups of people.

Finally, Sucher emphasizes the importance of good design within cities. He argues that well-designed public spaces can significantly impact the quality of life in cities. He suggests that cities should have design guidelines that encourage good design and that Architects and developers should be held to high standards.

Overall, "city comforts" is thought-provoking and offers practical suggestions for creating more livable, attractive, and functional urban environments while creating a great community.

CASE STUDIES

I researched and found three great examples of mixed-use buildings with three different driving forces in their design. These helped me understand how to look into different factors when designing a mixed use building especially when focused on building for the community.

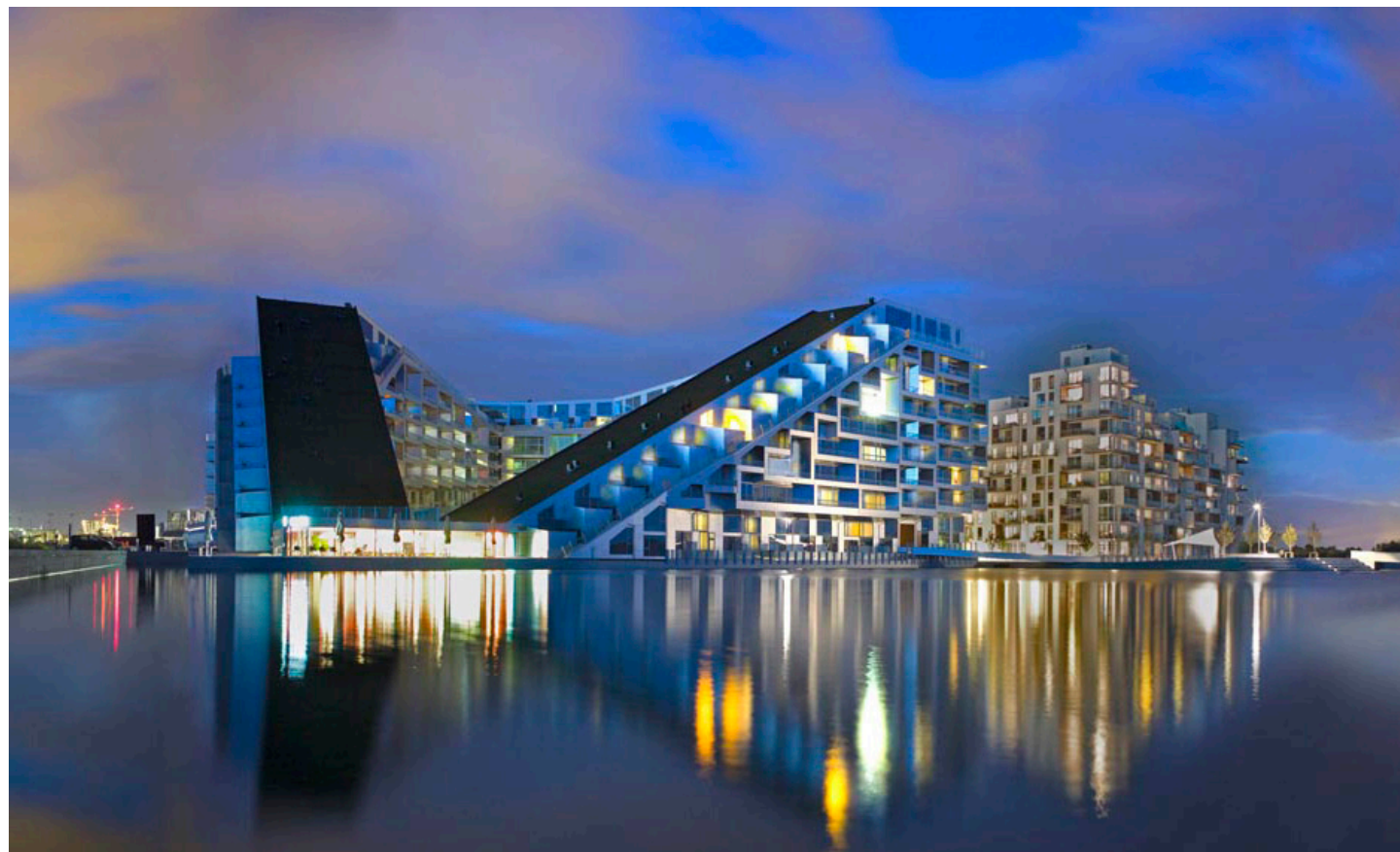


Figure 2.1 - 8 House

- #1 **Wilshire Vermont Station**
Transportation Hub and Mixed-Use Building

- #2 **Edwin M. Lee Apartments**
Low Income Multi-Family Building

- #3 **8 House**
Community Centered Mixed-Use Development

Wilshire Vermont Station



Figure 2.2 - Wilshire Vermont Open Entrance Corner

Location: Los Angeles, California
 Year Completed: 2016
 Architects: COE
 General Contractor: Taisei Construction

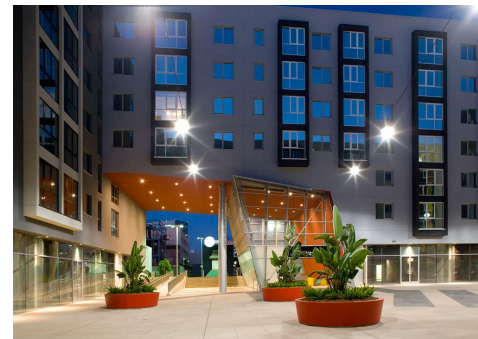


Figure 2.3 - W.V. Open Corridor



Figure 2.4 - W.V. Landscaped Plaza

- 449 Apartments
- 669 Car Parking Garage
- 30,000 sq ft of Retail Space
- Bus Plaza Adjacent
- Main Metro Line Underground
- Communal Spaces
- Two Central Green Plazas
- Rooftop Pool Lounge
- "Mixed-Use Transit Village"

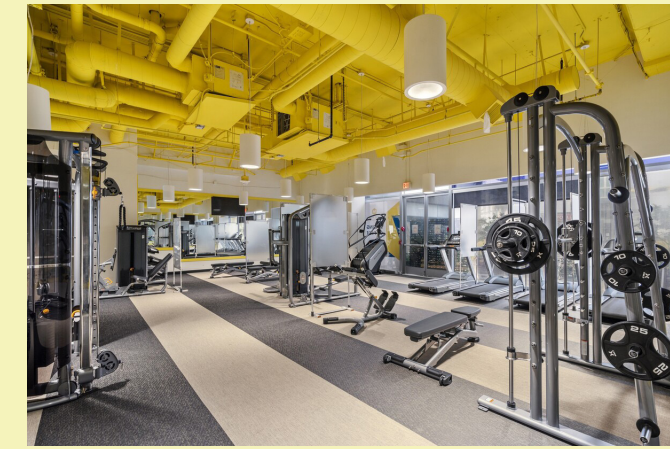


Figure 2.5 - W.V. Gym



Figure 2.6 - W.V. Lobby Entrance

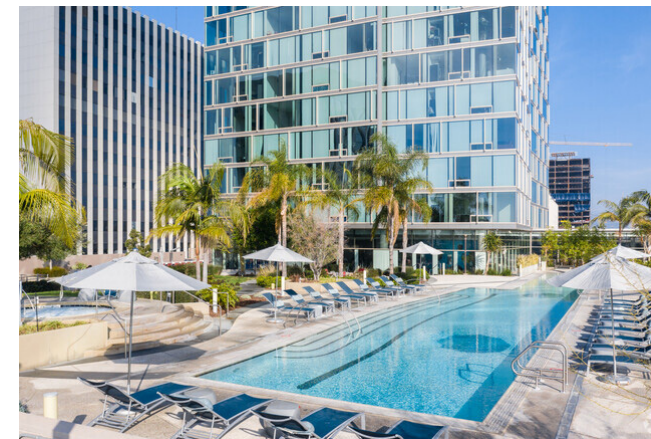


Figure 2.7 - W.V. Rooftop Pool



Figure 2.8 - W.V. Metro Station Entrance

Project Takeaways:

Wilshire Vermont Station is a mixed-use "village" comprising residential apartments atop ground-level retail; the building is centered around the existing W/V Metro Station. The alignment is broken at the corner announcing the entrance to one of the two inner courtyards. The structure protects these courtyards and makes the user feel safer. This building atop the metro line and next to a bus plaza creates connection points where residents and visitors can quickly come and go without relying on the automobile. Putting community areas at the entrance and exits of the complex makes the sense of being part of a community.

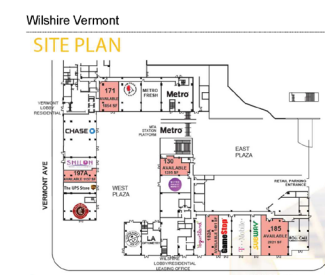


Figure 2.9 - W.V. Site and Apartment Floor Plans

Edwin M. Lee Apartments



Figure 2.10 - Edwin M. Lee Apartments

Location: San Francisco, California
Year Completed: 2020
Architects: Leddy Maytum Stacy Arch.
General Contractor: Nibbi Brothers

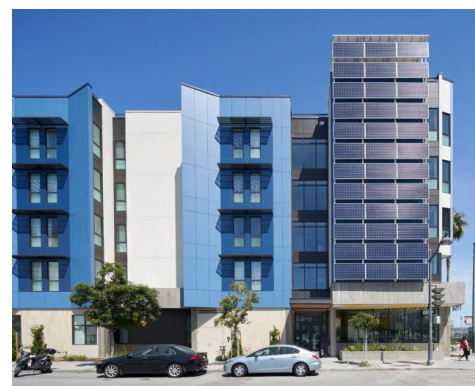


Figure 2.11 - E.M.L Solar Panels



Figure 2.12 - E.M.L Central Courtyard

- 119 Total Apartments
- 57 Apartments for low Income
- 62 Apartments for Homeless Veterans
- Communal Spaces
- Central Landscaped Plaza
- Warm Welcoming Materials
- 90% Self Sufficient
- Biophilic Design
- Public Transportation



Figure 2.13 - E.M.L Communal Dining



Figure 2.14 - E.M.L Covered Communal Walkway



Figure 2.15 - E.M.L Sloped Accessible Walkway



DESIGN FOR SUSTAINABLE COMMUNITIES	DESIGN FOR WELLNESS	DESIGN FOR ENERGY	DESIGN FOR RESOURCES	DESIGN FOR WATER
<ul style="list-style-type: none"> 001. Provide a high-quality, safe, and secure environment for all residents and visitors. 002. Provide a high-quality, safe, and secure environment for all residents and visitors. 003. Provide a high-quality, safe, and secure environment for all residents and visitors. 004. Provide a high-quality, safe, and secure environment for all residents and visitors. 005. Provide a high-quality, safe, and secure environment for all residents and visitors. 	<ul style="list-style-type: none"> 006. Provide a high-quality, safe, and secure environment for all residents and visitors. 007. Provide a high-quality, safe, and secure environment for all residents and visitors. 008. Provide a high-quality, safe, and secure environment for all residents and visitors. 009. Provide a high-quality, safe, and secure environment for all residents and visitors. 010. Provide a high-quality, safe, and secure environment for all residents and visitors. 	<ul style="list-style-type: none"> 011. Provide a high-quality, safe, and secure environment for all residents and visitors. 012. Provide a high-quality, safe, and secure environment for all residents and visitors. 013. Provide a high-quality, safe, and secure environment for all residents and visitors. 014. Provide a high-quality, safe, and secure environment for all residents and visitors. 015. Provide a high-quality, safe, and secure environment for all residents and visitors. 	<ul style="list-style-type: none"> 016. Provide a high-quality, safe, and secure environment for all residents and visitors. 017. Provide a high-quality, safe, and secure environment for all residents and visitors. 018. Provide a high-quality, safe, and secure environment for all residents and visitors. 019. Provide a high-quality, safe, and secure environment for all residents and visitors. 020. Provide a high-quality, safe, and secure environment for all residents and visitors. 	<ul style="list-style-type: none"> 021. Provide a high-quality, safe, and secure environment for all residents and visitors. 022. Provide a high-quality, safe, and secure environment for all residents and visitors. 023. Provide a high-quality, safe, and secure environment for all residents and visitors. 024. Provide a high-quality, safe, and secure environment for all residents and visitors. 025. Provide a high-quality, safe, and secure environment for all residents and visitors.

Figure 2.16 - E.M.L Section Cut Description



Figure 2.17 - E.M.L Site and Floor Plans

Project Takeaways:
 Edwin M. Lee Apartments is an affordable housing development for formerly homeless veterans and low-income families. The design understands balancing a civic scale with a feeling of home. They showcase their alternative energy generation and the connections to nearby public transit. The project frames a generous 80% of the site for an internal garden courtyard that balances a multi-use range of areas for retrospection, interaction, and play. Even though it's built on an incline, this plaza is still fully ADA accessible to all. Incorporating biophilic design elements into the interior and exterior is essential to help with sustainability. Tenants have a direct exterior view from the interior 90% of the time.

8 House / BIG House



Figure 2.18 - BIG's 8 House Courtyard

Location: Copenhagen, Denmark
 Year Completed: 2012
 Architects: Bjarke Ingels Group
 General Contractor: Per Høpfner

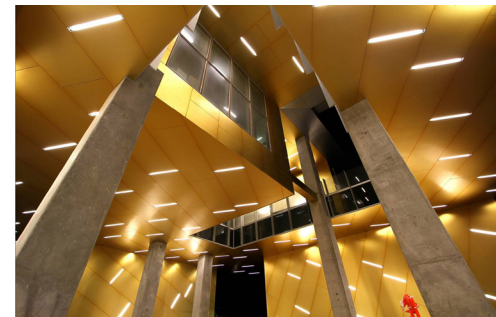


Figure 2.19 - BIG Warm Materials

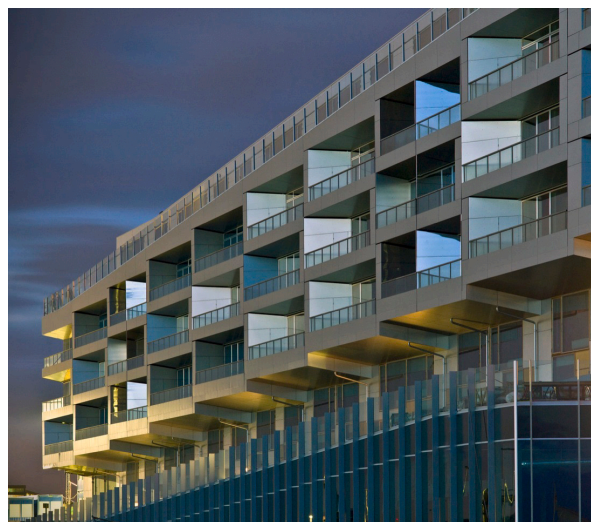


Figure 2.20 - B.I.G. Private Balconies

- 467 Apartments
- 669 Car Parking Garage
- 10,000 sq m of Retail Space
- Public Path from Ground to Roof
- Gardens and Pathways
- Community Spaces
- Two Intimate Interior Courtyards
- Canal - Attached Row House
- Green Roofs

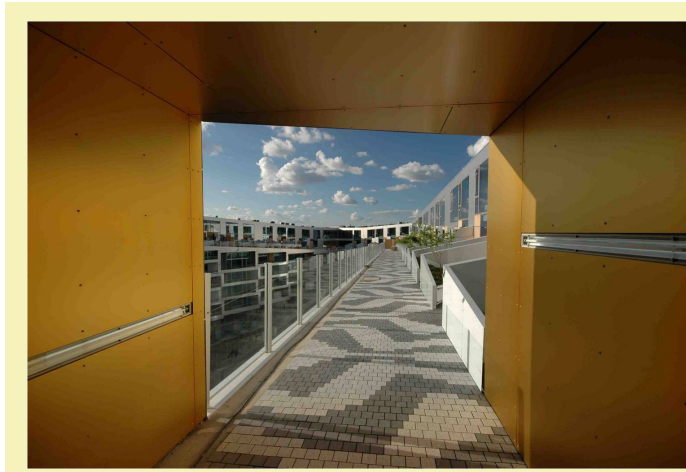


Figure 2.21 - B.I.G. Sloped Path (Ground to Roof)



Figure 2.22 - B.I.G. Water Connection Rowing



Figure 2.23 - B.I.G. Landscaped Intimate Plaza

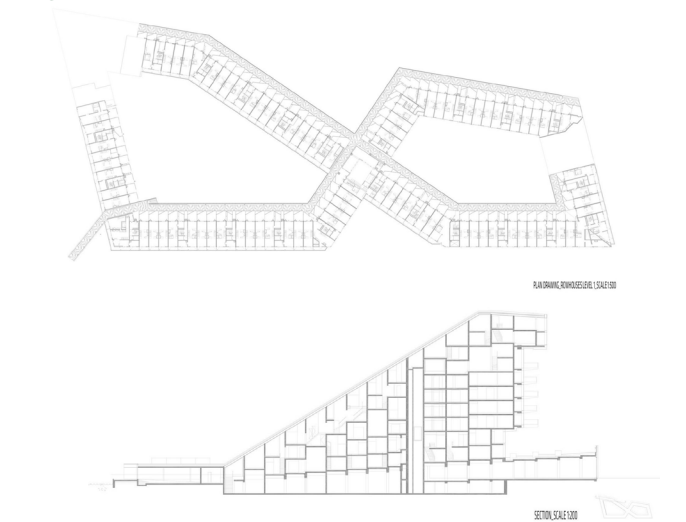


Figure 2.24 - B.I.G. Floor Plan and Section

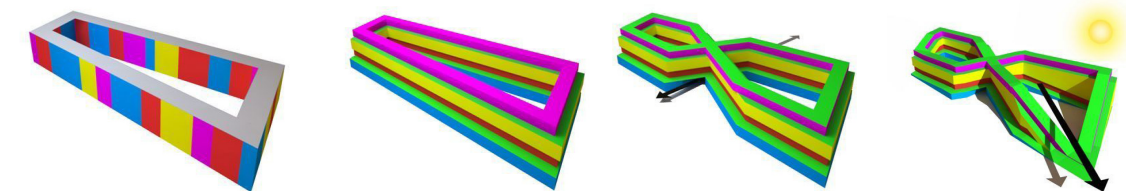


Figure 2.25 - B.I.G. Mass Initial Design

Project Takeaways:
 BIG's 8 House "masterfully recreates the horizontal social connectivity and interaction of the streets of a village neighborhood through a series of delightfully accessible ramps in a mixed-use, multifamily housing project." It's a great example of bringing community directly into the design by creating a beautiful form with an essential purpose. Creating a ramped pedestrian street system where you can walk and bike from the ground to the roof makes the whole site active. This project is an exemplary example of a "new" typology. They took the idea of a perimeter city block but brought it in the middle to make two distinct forms and uses.

OVERALL TAKEAWAYS FROM CASE STUDIES

The three case studies that have been outlined previously, as well as some broader idea case studies that have been examined, have similarities and differences. Each has featured different living unit options to support integrating diverse groups into their respective living community. The size of these spaces varied based on the group of individuals the project was geared towards, from large communal areas to more intimate spaces. However, each case study that was looked at featured a balance between living, working, and socializing. Even though some of the projects were larger, they didn't lack in design or communal spaces.

A significant element of each project was the community spaces integrated inside and outside. These spaces contribute the most to a thriving living community because this is where many interpersonal connections are first established. It is essential that these spaces are accessible to everyone and can be of benefit to everyone, both residents and visitors. A communal area in each case study was a central plaza and green space. With this thesis situated in a colder climate, the exterior communal spaces must be carefully planned out.

Since the exterior communal spaces for this thesis project may only be able to be used year-round if designed explicitly with their uses in mind, the interior communal areas will need to be able to supplement the exterior spaces during the colder months. The three previous case studies provide different interior communal spaces based on their project typologies. These spaces included a communal kitchen, recreation room, cafe, and ground-floor retail space. Each one of these has the potential to be implemented into this thesis project. Some other necessary areas can be designed to encourage resident connections, like the entry spaces, shared laundry spaces, fitness spaces, and mail rooms.

Not all of the case studies included different housing types, but a few did. For example, Edwin M. Lee Apartments contains units geared specifically for homeless veterans and other units designed as affordable housing. These different types of accommodation give an excellent variety of people that accommodate and diversify the living community by providing more opportunities for residents to interact with the site and one another.

PROJECT JUSTIFICATION

My project is primarily geared toward creating a successful mixed-use building that puts the surrounding community at the forefront of design within a downtown setting. This will help increase the area's density, help slow urban sprawl, and drive economic activity. In addition, I hope to bring new life to this area just outside the downtown design district; this will make the site more economically influential for the region than it is. By placing this project on this proposed site, the area's value on the edge of downtown will increase, draw more people to the site and region, and improve the site's safety for all individuals.

When looking at the logistics of this project, the return on investment can be seen as both monetary and intangible. These financial returns come from the taxes, rental and sale of retail space, rental and sale of living spaces, tickets and rental of event spaces throughout the building and site. As for the intangible aspects, they can be seen to outweigh the money in different ways; these can include creating a more connected downtown area, increasing pedestrian activity within the site, and even fewer vehicles being used to help combat the carbon footprint of our generations.

My thesis project on community-forward Urban Renewal is important because I have always thought about why cities continue to expand outward and don't always look to redevelop the worn-down sites near the heart of the urban fabric. More often than not, in cities across the country, the building is designed without considering how to integrate into the surrounding community and instead focus on how to make money. The community gets left on the back burner. Since I've lived in the target city of this project for 18 years of my life, I would love to see this area of Mankato get a jump start on creating a new community out of nothing, all within the confines of an urban downtown with potential. My project will also allow me to understand better the effects a building has on its surroundings and what you can do in the design process to help integrate a building into the already built environment, along with the ability to demonstrate my understanding of design and architecture. I know this project will not be perfect, but the architecture itself is not a well-oiled machine; it is ever-changing and evolving with the hopes of finding the next best design response.

The site is developed with some warehouses next to the main freight railroad. Secondary rail line runs through residential.



1938

Residential northeast of site along river is removed for more industrial and commercial zoning.



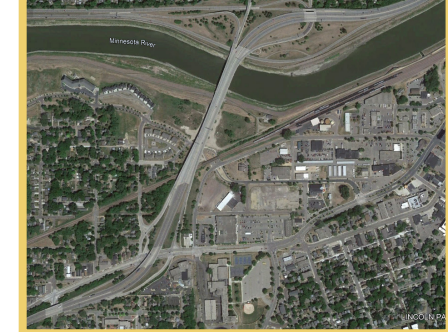
1950

Land northeast of site get developed and new main road is constructed heading south. Secondary rail line is demolished



1991

More residential developments are built northwest of site along river. Children's museum is build just east of site.



2021

HISTORY OF SITE

HISTORY OF SITE

1949



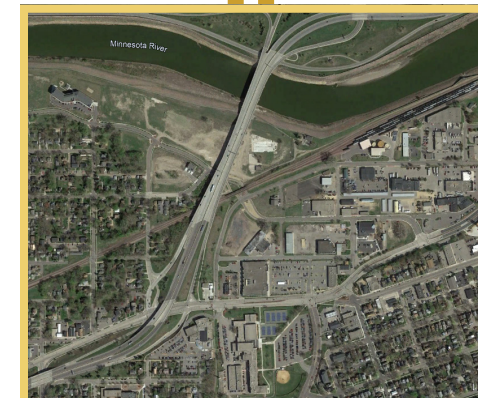
Baseball diamond southwest of site are removed in preparation for construction of High School.

1964



River shoreline manipulated along with construction of U.S. Route 169 over the MN River and through Mankato.

2015



Residential developments start to be built northwest of site along the river. Site becomes vacant with only one building in use.

Figure 2.26 - Timeline of Site History

INTRO TO THE SITE



Figure 2.27 - Selected Site Border

After deciding on the general idea for my thesis, it was time for me to choose the site location that would best suit the project and the place that needed a project on this topic. I looked for cities with space within or near a downtown district that had been abandoned and needed a face lift. I also looked into sites with ample connections to public transit and proximity to water or large amounts of green space. I found a large number of cities all across the US that met this criterion, but something about the nature of this project felt personal. I then thought about a spot in Mankato with this same criteria just on the edge of the downtown design district, next to a river and a large city park just a short walk away.

The site for this project is located in Mankato, Minnesota, between Poplar Street and Linder Avenue, Just south of the Minnesota River. The site was developed from the early start of Mankato till about 20 years ago. The site became vacant except for the two odd businesses that call it home. Otherwise, it consists of empty lots in need of development.



Figure 2.28 - Baseline Analysis Map

VIEWS OF SITE



Figure 2.29 - Analysis of Views on Site

This thesis project is located on the southeast side of Downtown Mankato, Minnesota, just south of the bend in the Minnesota River. The site sits just outside the downtown design district and has great potential but needs a community draw. The site comprises abandoned warehouses and empty paved lots, leaving very little green space and minimal vegetation. However, life can be restored in this downtown area with the right design solution and improvements. The views from the site are fascinating once you get up three or four stories, and then you can see out over the river and onto the downtown area.



Figure 2.30 - Site View 1 North West

View from the passing highway connection looking past the railroad down onto the site. You can see the only current green space and one of the abandoned warehouses.

View from the road north of the site looking at one of the fenced in paved lots being used to store junk cars. Having no street lights this road isn't very safe at night.



Figure 2.31 - Site View 2 North



Figure 2.32 - Site View 3 South

View from the road south of the site looking at another paved lot being used for nothing but junk storage of some old busses owned by the city.

LIGHT QUALITY ON SITE

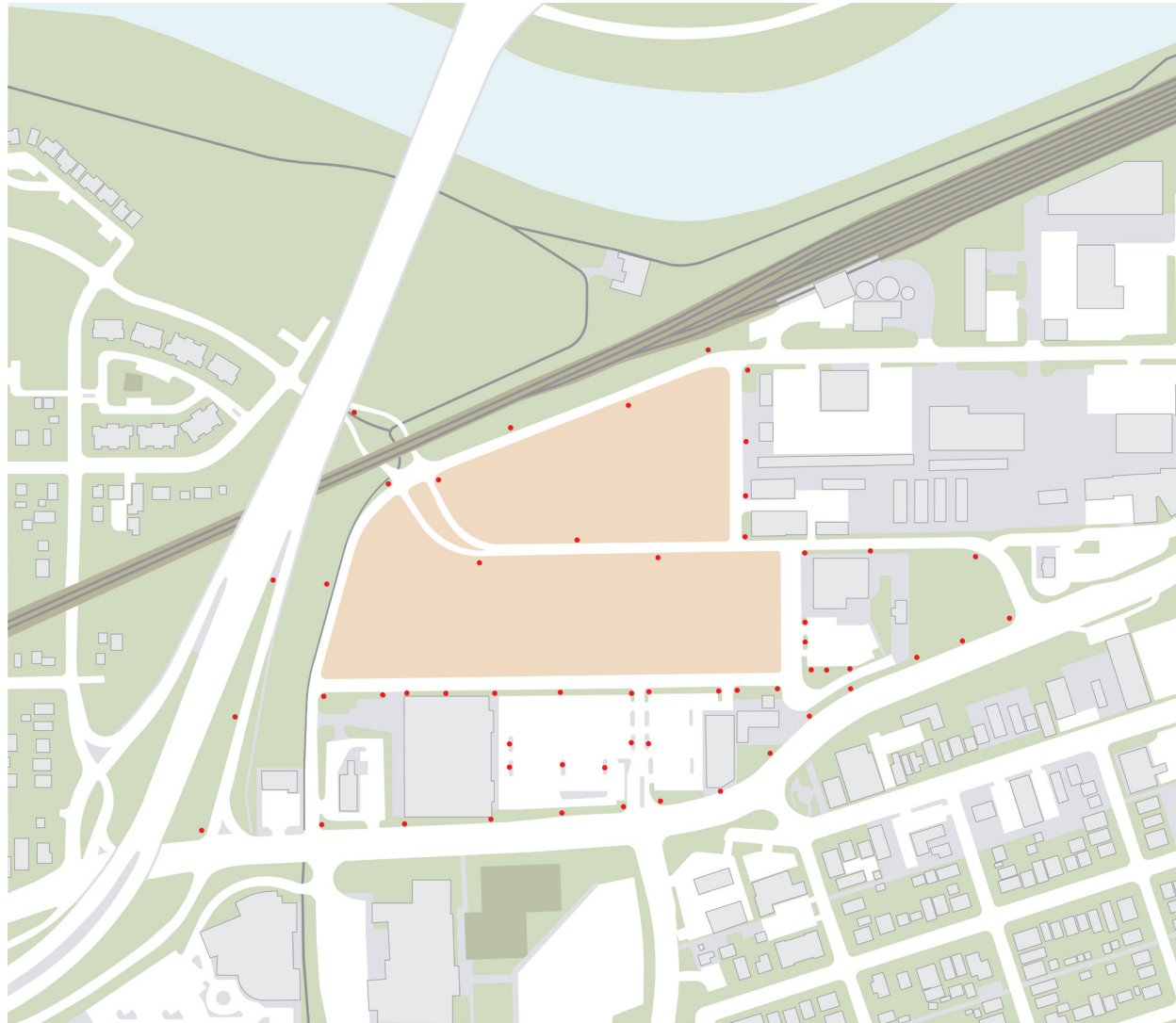


Figure 2.33 - Analysis of Light Quality on Site

The site currently has lighting elements along the roads surrounding the area. The parking lot and buildings that are in use surrounding the site do have ample lighting. As for the northern road and the road that passes through the site, there are very minimal lamp posts. Therefore, at night, it can get a little too dark in some stretches of the road, making it an unsafe area to walk through, especially at night.

The sun provides unobstructed natural light in the morning and throughout the day. As there are no taller buildings, there isn't much shade produced except by the few sparse trees planted on the boulevard.



Figure 2.34 - Street Lamp 1



Figure 2.35 - Street Lamp 2

The four different lamp posts used in the immediate surrounding block to the site.



Figure 2.36 - Street Lamp 3



Figure 2.37 - Street Lamp 4

SURROUNDING NOTABLE BUILDINGS



Figure 2.38 - Analysis of Notable Building Surrounding Site

1. Cub Foods - Grocery Store
2. Mankato West High School - One of Two High School in Mankato
3. YMCA - Pool, Gym, Meeting Center
4. Burger King, Little Caesars - Fast Food
5. Kwik Trip - Gas Station
6. Children's Museum of Southern Minnesota
7. Rail Depot

With the addition of this large mixed-use building it will bring more life to the area give these buildings more visitors and boost the economy of the local region.



Figure 2.38 - Analysis of Notable Building Surrounding Site



Figure 2.40 - Nearby Children's Museum



Figure 2.41 - Nearby High School



Figure 2.42 - Nearby Gas Station



Figure 2.43 - Nearby YMCA

VEGETATION ON SITE



Figure 2.44 - Analysis of Vegetation on Site

The current vegetation on the site is mainly planted trees and grass. Larger trees are spread around the edges of the abandoned building, with a few small new trees planted off the roads. The areas of the site that aren't built on, paved, or graveled are covered with grass and weeds. A few places around the site have been purposely landscaped near the occupied buildings with different vegetation that provide some color. Overall, the site vegetation has some soft and maintained areas, but a large majority of the site is covered in rough natural vegetation. The site is filled with shades of green, brown, and grey.



Figure 2.45 - Vegetation Examples

CLIMATOLOGY

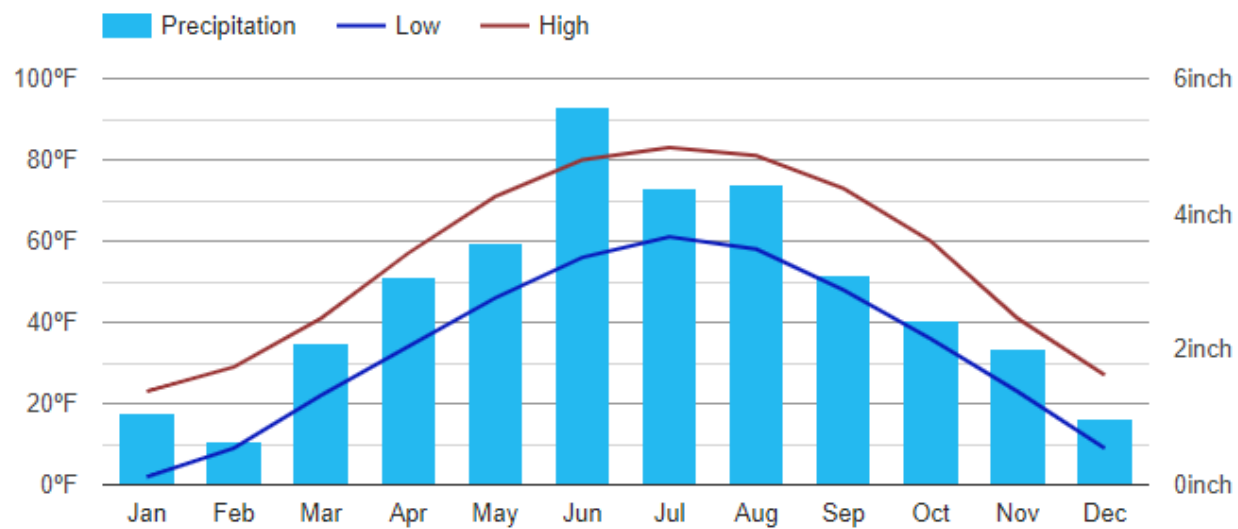


Figure 2.46 - Mankato Climate Chart

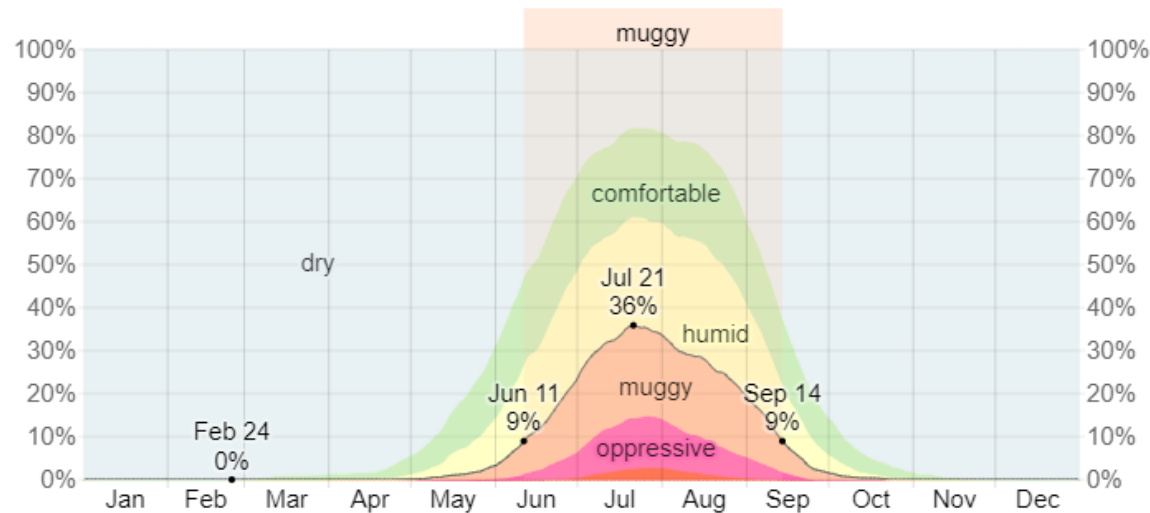


Figure 2.47 - Mankato Humidity Chart

The city of Mankato is located in an area that experiences all four seasons and the temperature changes that come with them. On average, Mankato experiences its coldest weather in January and its warmest weather in July. The humidity is the worst in mid July and very dry in the winter months.



Windrose Plot for [MKT] MANKATO
Obs Between: 31 Dec 1972 06:00 PM - 21 Mar 2023 01:56 AM America/Chicago

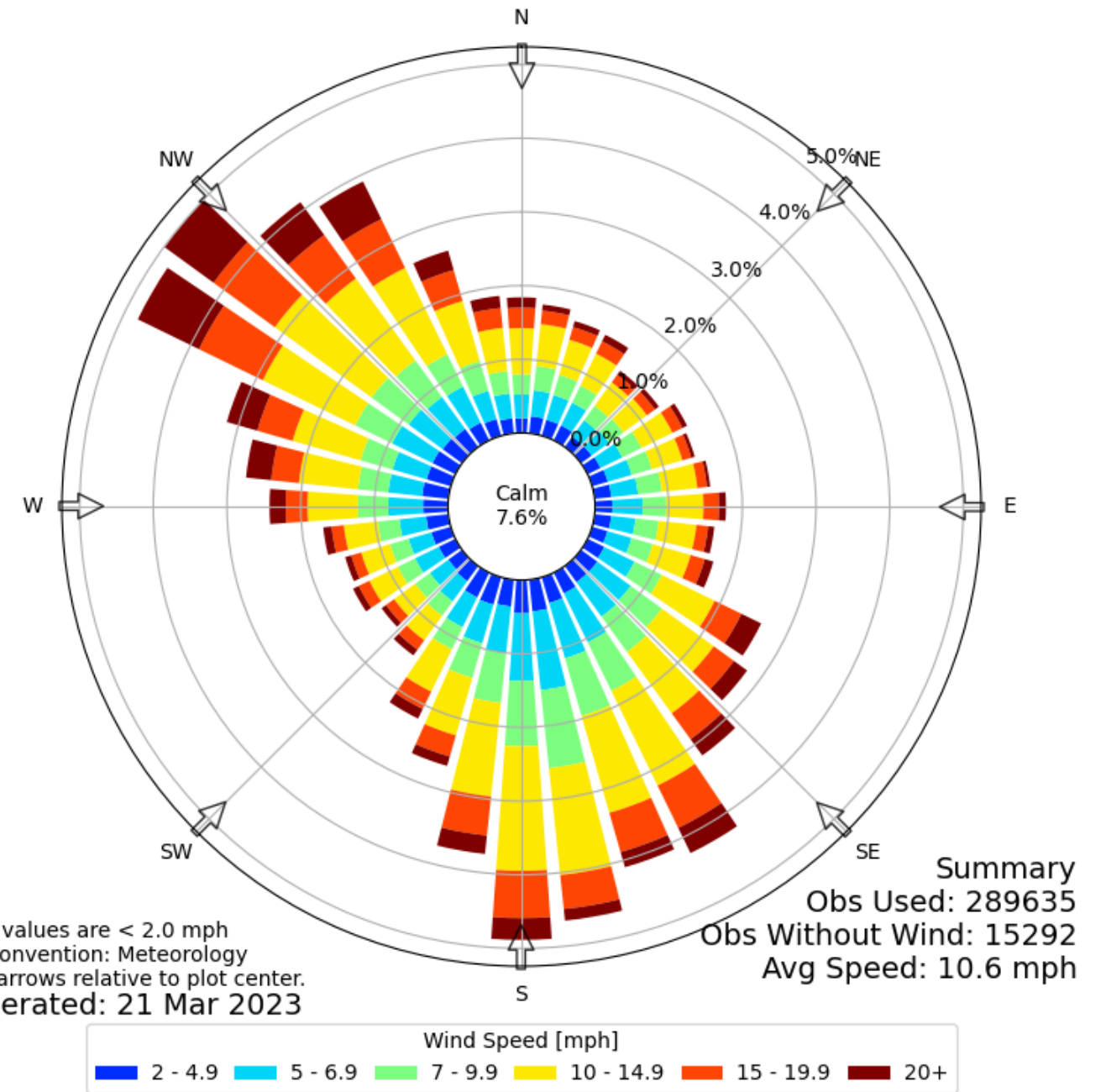


Figure 2.48 - Mankato Annual Windrose Chart

SOIL TYPE

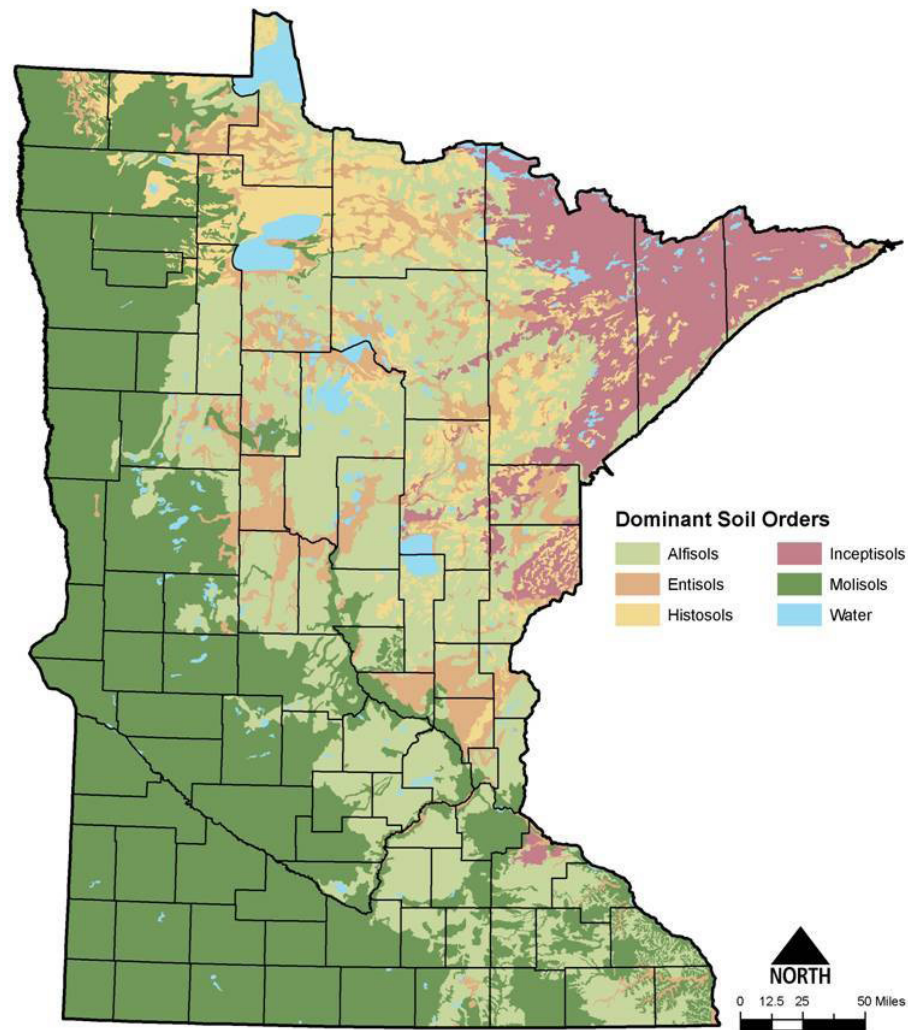


Figure 2.49 - Minnesota Soil Orders

The site of this thesis is in Blue Earth County; Mankato mainly has a soil makeup consisting of the soil Mollisols order which is a USDA soil taxonomy. This soil type has a dark-colored surface horizon and is base-rich. It is clay-rich soil the deeper you go, making it an admirable earth to build on. Mollisols are used mainly as cropland. Generally, grains and sorghum are grown in the drier regions, and maize (corn) and soybeans in the warmer, humid areas.

DEMOGRAPHICS

Mankato, Minnesota

- **Population:** 45,158 people
(37% increase since 2000)
- **Land Area:** 19.77 square miles
- **Population/Square Mile:** 2,284 people/sq mile
- **Poverty Rate:** 24.42%

Households

- 16,828 Households
- **Persons per household:** 2.33 people
- **Language other than English:** 10.59%
- **Income per household:** \$52,411

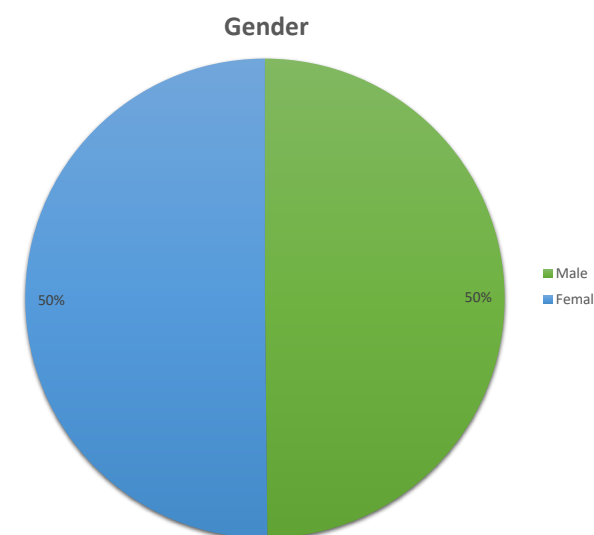


Figure 2.50 - Mankato Gender Chart

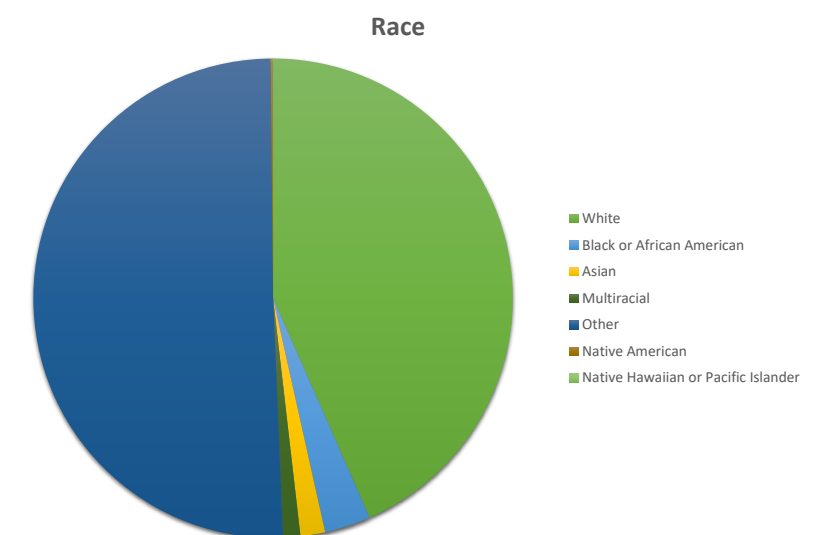


Figure 2.51 - Mankato Race Chart

ADJACENCY INTERACTION MATRIX

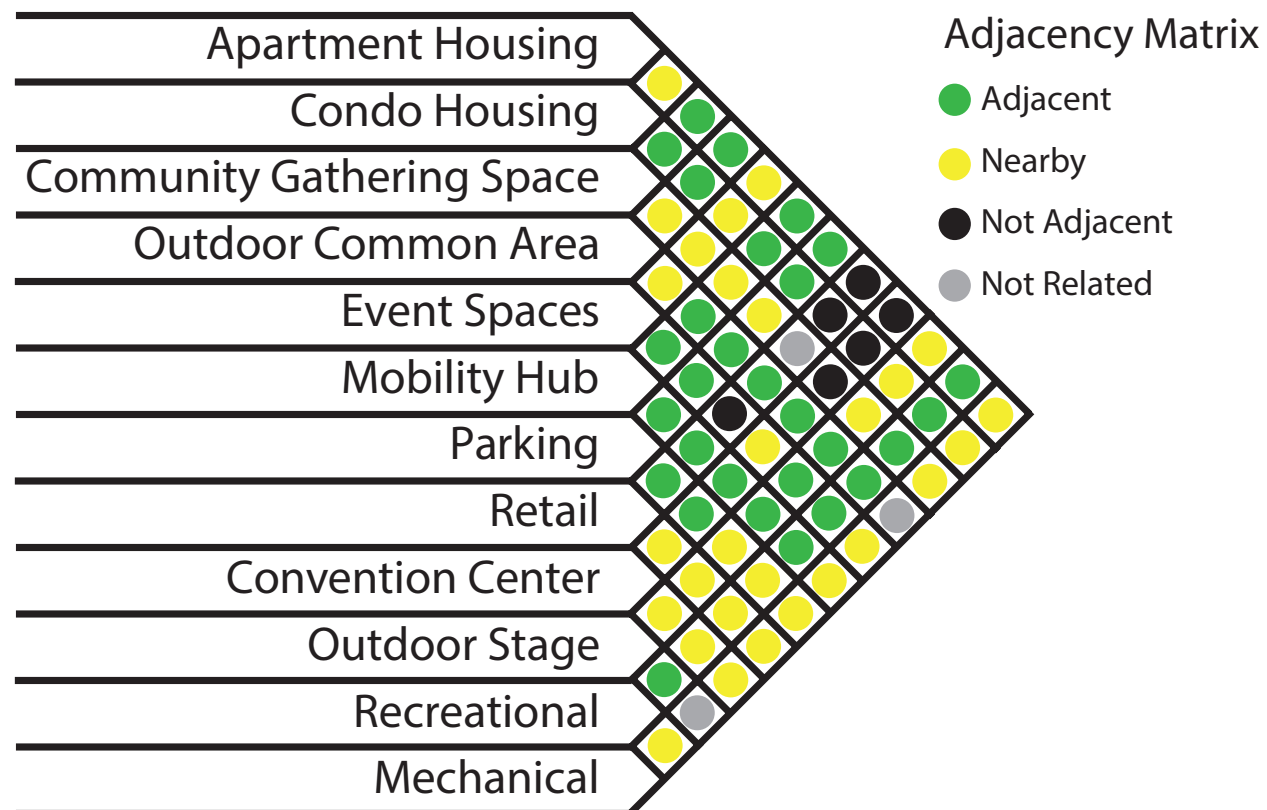


Figure 2.52 - Adjacency Interaction Matrix

The adjacency interaction matrix above shows the locational relationships between the different typologies that make up the project program. Although this project will prioritize connectivity, the matrix shows that a separation between private and public spaces. Depending on additional spatial needs and site setbacks, some of these relationships may need to be adjusted as the project proceeds to better suit the occupants and uses of the site

SPACIAL INTERACTION NET

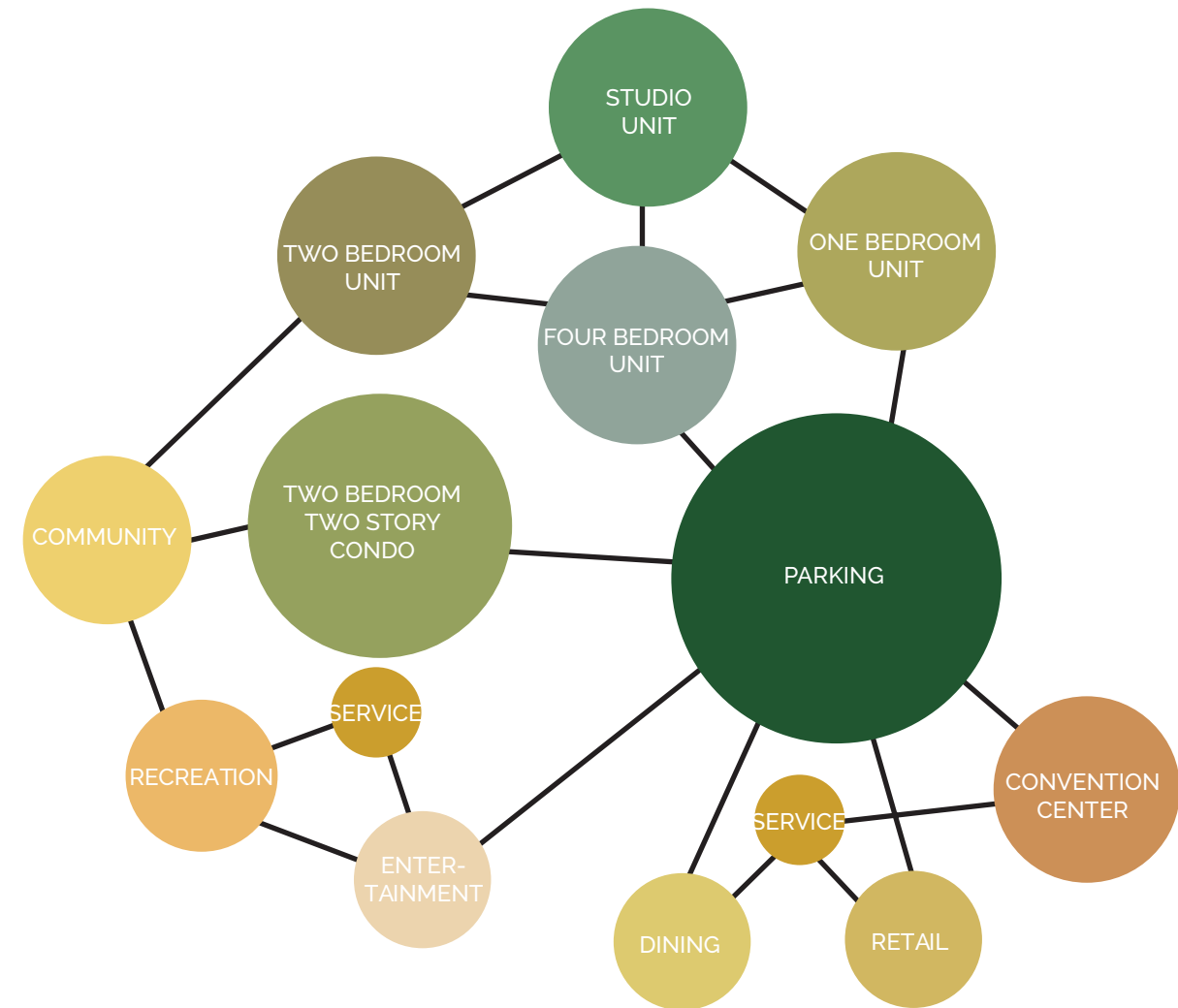


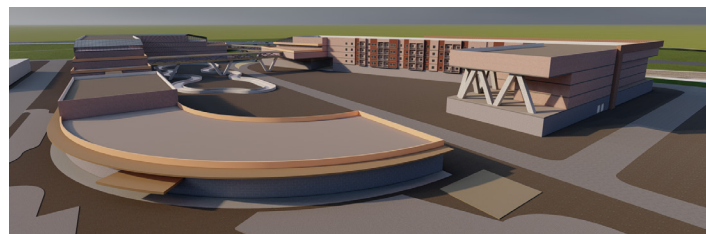
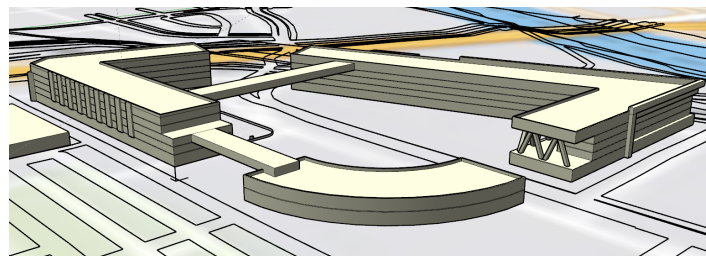
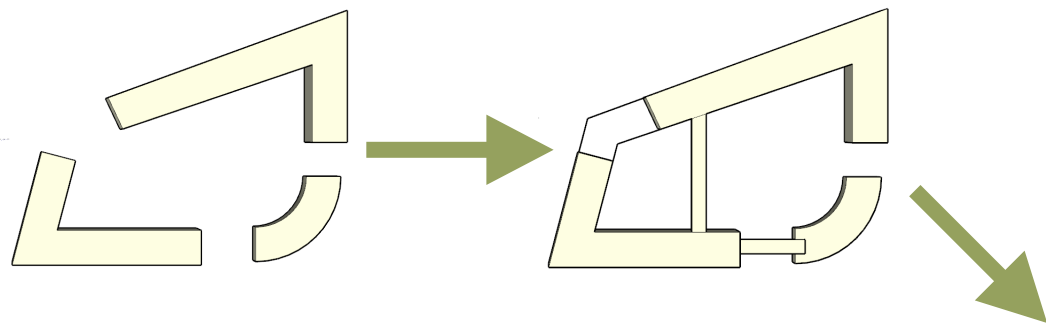
Figure 2.53 - Spatial Interaction Net

The spatial interaction net above illustrates the programmatic spaces that make up this Mixed-Use community and the relationships between the total building square footage and layout. The net also represents the separation that will be made between the private living spaces, public spaces, and shared spaces within the community. These three areas within the project will be carefully placed to suit each of their own functions while maintaining connections to the surrounding areas that are a part of the project.



**DESIGN
SOLUTION**

PROCESS



Starting by mapping out the building shape along the border of site to leave room for the large multi-use plaza in the center. Then adding the connection of sky walks, and some basic form developments. Then looking into materials and finally laying out the function within this form and how that looks on a site map.

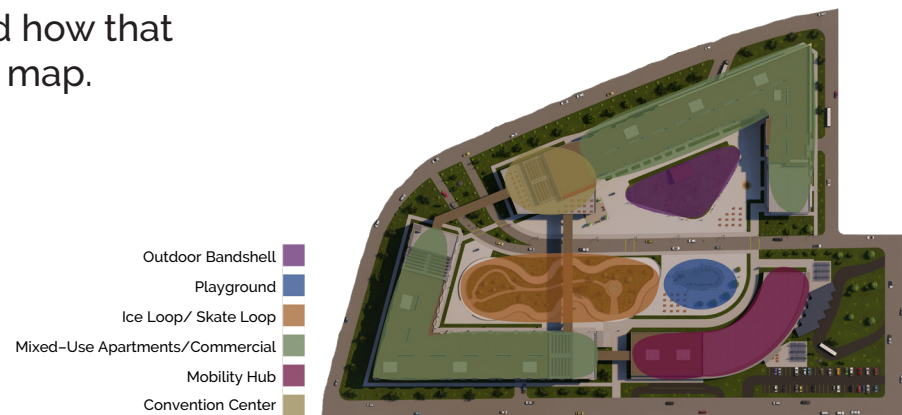


Figure 3.1 - Digital Model Progression

SOLUTION



Cities across the nation continue to develop and grow, but in many, rundown industrially zoned lots tend to be left alone and become an eyesore. Additionally, these sites negatively affect the local economy, environment, equity, and the general public's safety. It is essential to continue developing and redeveloping areas within a city to help provide a rich future for the communities within.

This thesis seeks to find an architectural solution to how an urban redevelopment project can renew an area of a downtown district by creating an integrative living system into an existing built community. This architectural framework hopes to reconnect new integrative communities into their existing urban fabric while starting and integrating into their own.

Mobility Hub
Importance of connection between new buildings and the existing community

Ice Loop
Creating a landscape with different purposes year-round

Connections **Play** **Spatial Organization**

Try Something New **Level 1**

Spatial Organization

- Studio Apartment
- One Bedroom Apartment
- Two Bedroom Apartment
- Four Bedroom Apartment
- Two Story Two Bedroom Condo
- Mobility Hub
- Apartment Amenities
- Underground Parking
- Commercial Space
- Convention Center
- Egress
- Mech. & Storage

Explore **Level 2** **Level 4**

Live **Level 3** **Level 5**

Convention Center
Bringing new persons to the area with different events to be held

Building Connections
Skywalks help to provide connections year-round to promote activity

Figure 3.2 - Complete Board Design

RESPONSE TO THE SITE

Currently, the site is degraded and repels people away from a location with excellent relation to many key community factors. The empty warehouses and lots make it unsafe to be in the area, especially after dark. My response was to level these buildings and start with a blank canvas.

The new design for the site is comprised of a mixed-use building that will bring people back to the area and boost the local economy. Additionally, a central community mixed-use plaza was created to draw even more people from the surrounding community to the site.

The new building on my site was designed to take advantage of the views of downtown and over the river. The shape of the building helps to bring more safety to the site by creating an intimate space where you are among the buildings, all connected with sky walks.



Figure 3.3 - Existing Site Map



Figure 3.4 - Proposed Site Map



Figure 3.5 - Rendering View From Highway



Figure 3.6 - Rendering Isometric View

RESPONSE TO THE TYPOLOGICAL RESEARCH

After conducting my research on integrated community living in an urban setting through looking at case studies I was better able to shape my design for its users. The biggest part of this was looking at what space a community needs to successfully flourish. These spaces include all of the spaces that are typically in a mixed-use project with the addition of a mobility hub, and large central connecting plaza. Some of these major elements that I have utilized from my case studies are the connectivity of everything to one another, connection to public transportation, and a central plaza.

As cities continue to devolve and take on a new shape it will be important for us as designers to recognize this and design places that still attract people. In addition, the United States is currently one of the countries in the world that have relied on expansion and urban sprawl for new living. This has been a problem for years and it is about time that we start to bring it back towards renewing the sites that are currently unused.



Figure 3.8 - Rendering of Mobility Hub



Figure 3.9 - Rendering of MM Brewery



Figure 3.7 - Rendering Connection Sky Walk



Figure 3.10 - Rendering of Ice Loop Entrance

Community Focused Urban Renewal

Reimagining the urban fabric through a community-based approach

Cody Verschelde



Introduction

Cities across the nation continue to develop and grow, but in many, rundown industrially zoned lots tend to be left alone and become an eyesore. These sites need to be better utilized by the community living around them. There needs to be a way to develop and design a living community system integrated into the surrounding city and local community with the bonus of being semi-self-sufficient. Combining these new buildings into the existing context of the urban fabric is essential to any growing city. Urban redevelopment of a large site within an already growing city can help to influence further community growth if done with specific methods.

This thesis seeks to find an architectural solution to how an urban redevelopment project can renew an area of a downtown district by creating an integrative living system into an existing built community. This urban renewal project consists of utilizing and reusing vacant industrial land. This architectural framework hopes to reconnect new integrative communities into their existing urban fabric while starting and integrating into their own.

2023

Community Focused Urban Renewal

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Agenda

Introduction

Background

Project Goals

The Design

Solution

Questions & Comments



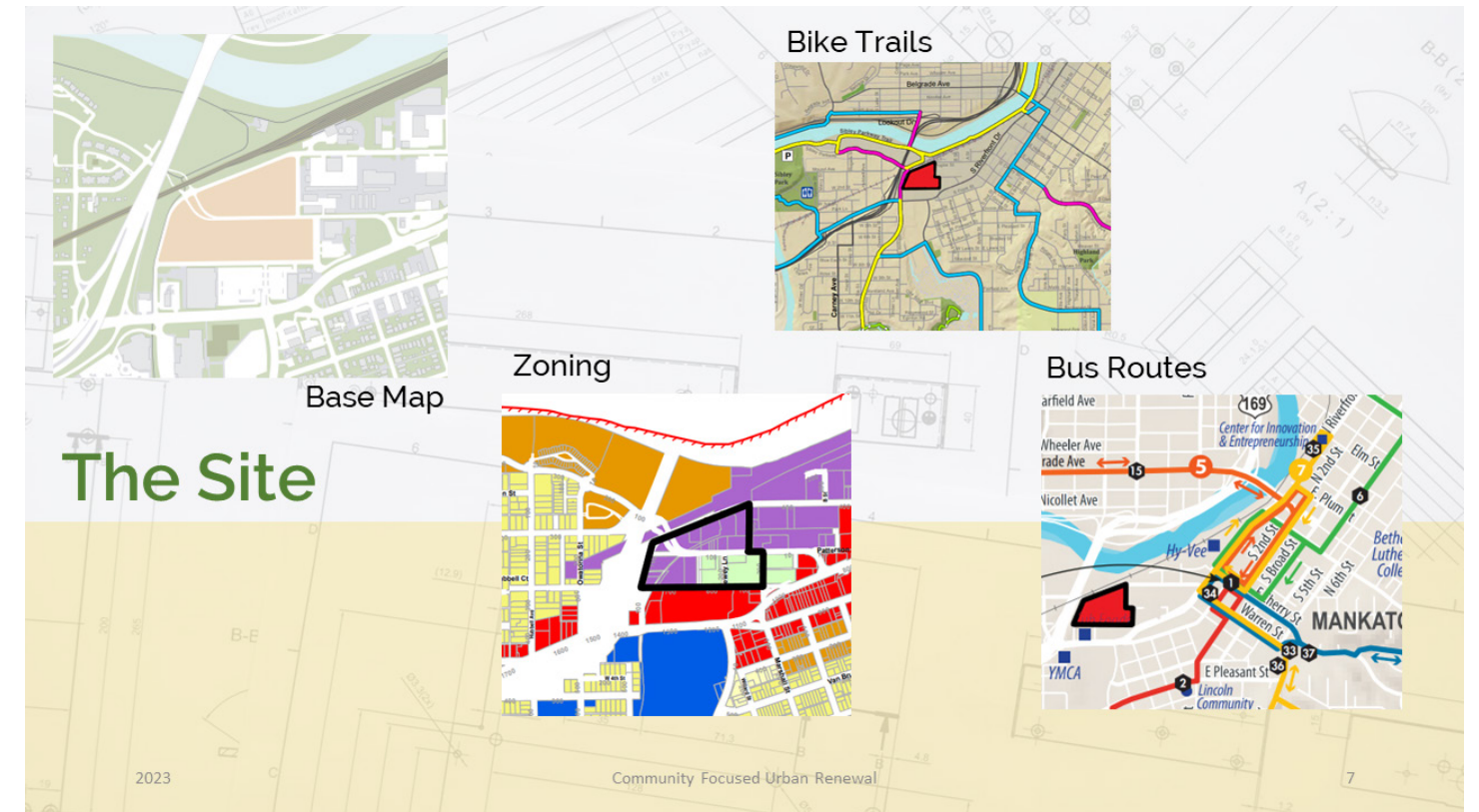
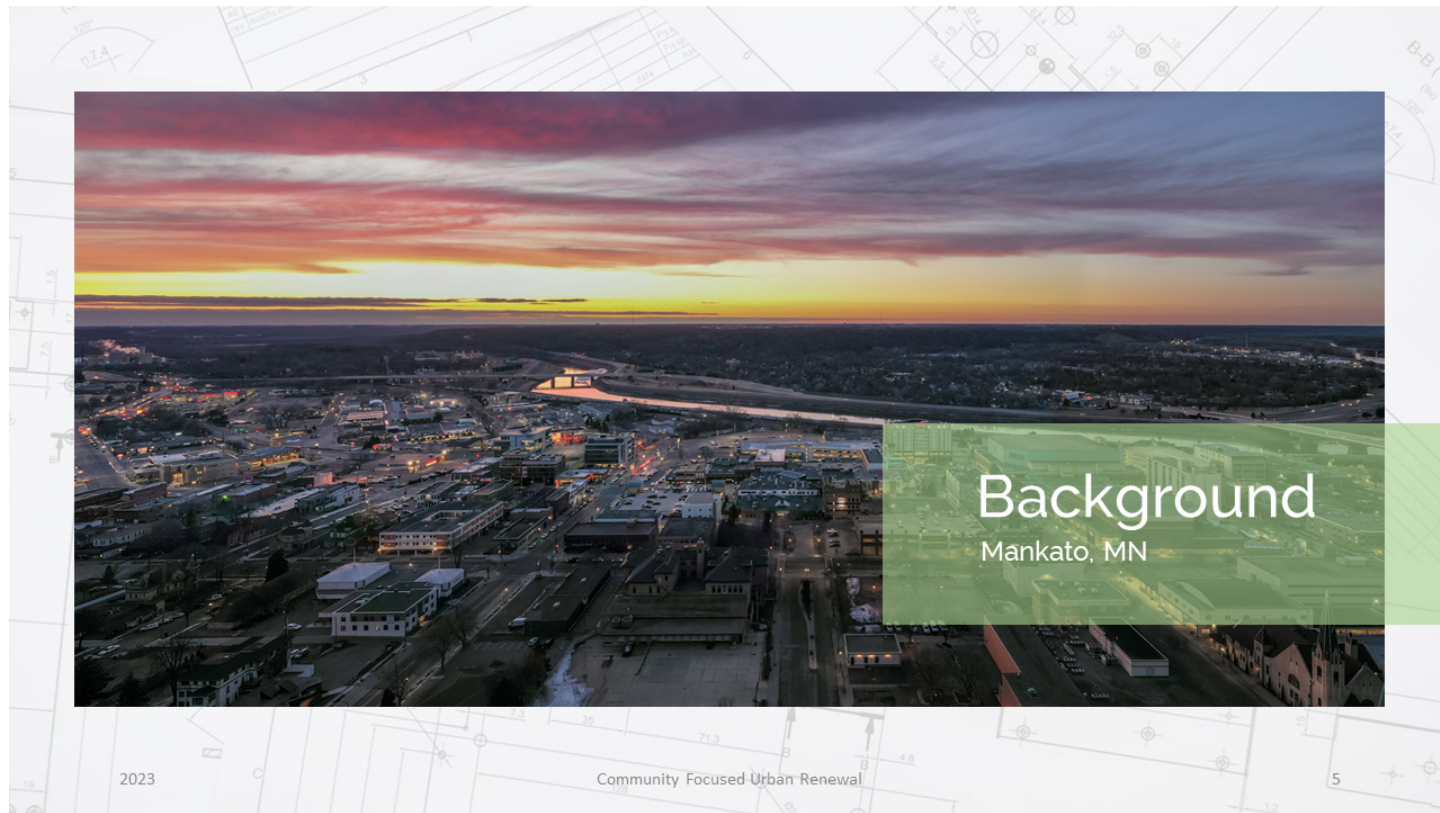
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Community Focused Urban Renewal

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Research Question

How can architecture be used to help renew areas within cities by creating new integrated communities that seamlessly fit into their existing urban context?



City Overview

Location	Demographics	Problem
<ul style="list-style-type: none"> ❖ South Central Minnesota ❖ Sits along the southern side of the bend in the Minnesota river ❖ 80 miles south of Minneapolis 	<ul style="list-style-type: none"> ❖ 19.77 Square Miles ❖ 2023 Mankato Population - 45,158 <ul style="list-style-type: none"> ❖ North Mankato - additional 14,448 ❖ Total metro population - 59,606 ❖ Primarily White Population - 86.8% 	<ul style="list-style-type: none"> ❖ Grown 37.1% since 2000 ❖ Industrial buildings relocated out of the downtown area ❖ Urban sprawl left these central lots ill-used and vacant

2023 Community Focused Urban Renewal 6



PRESENTATION

PRESENTATION

Project Goals

1 Renewal

Bring new life to an otherwise dull and ill-used heavy industrial site just outside of the downtown design district

2 Connection

Create a connection point or mobility hub that helps people navigate the city through public transport

3 Community

Start a community focused build where the residents are directly integrated into the existing community of the downtown area

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Site Planning



- Outdoor Bandshell
- Playground
- Ice Loop/ Skate Loop
- Mixed-Use Apartments/Commercial
- Mobility Hub
- Convention Center

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The Design



2023

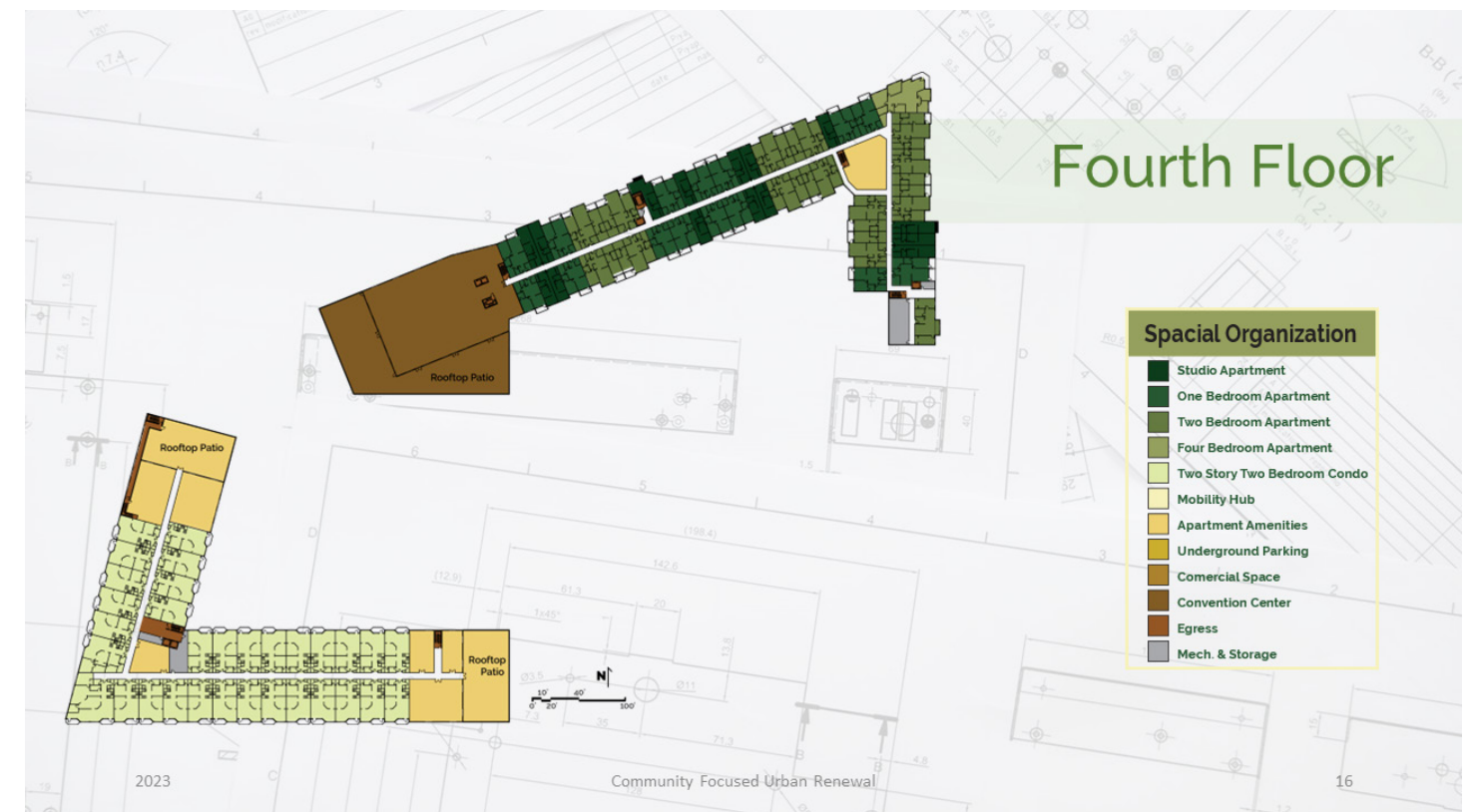
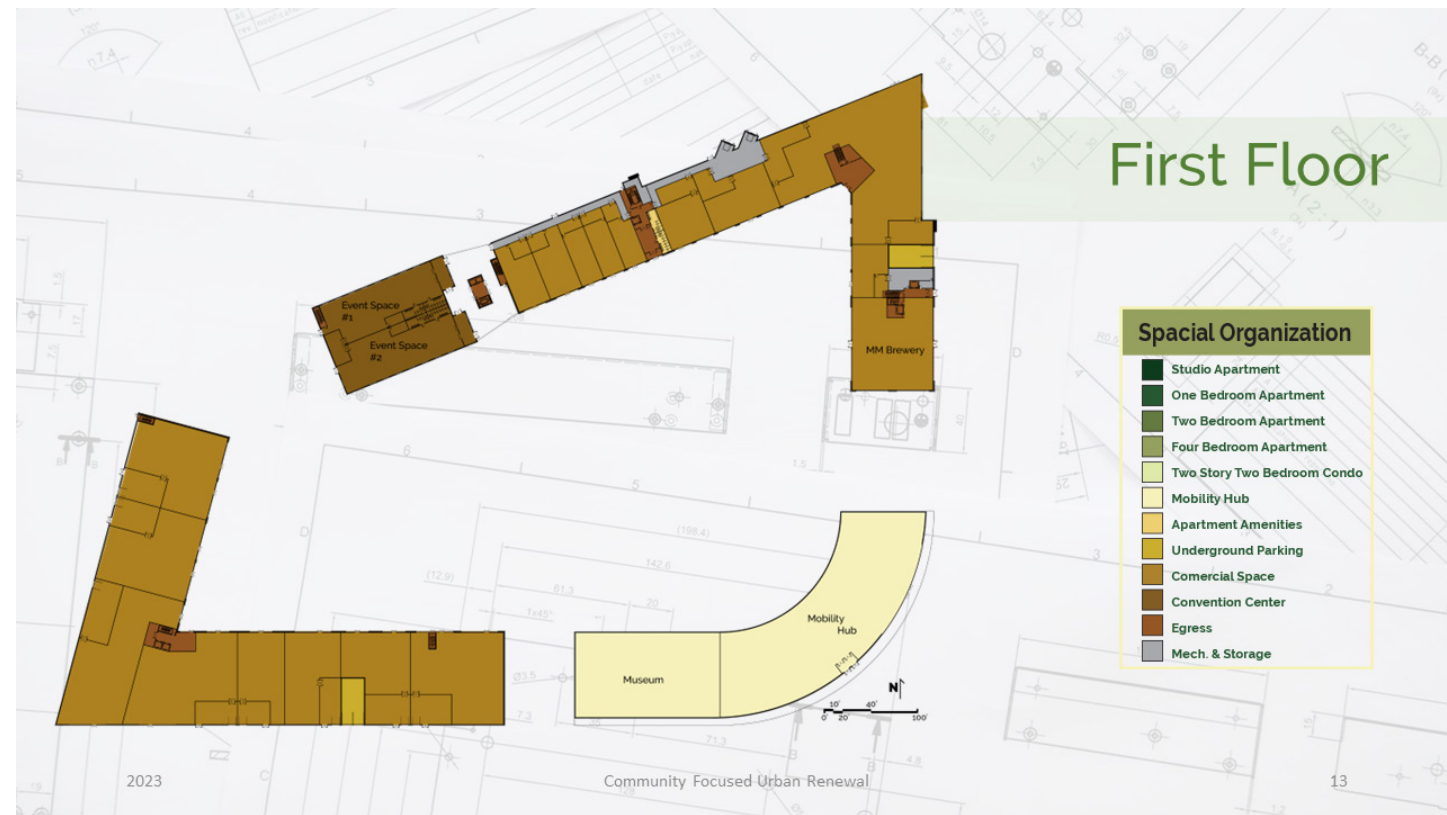
Community Focused Urban Renewal

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Full Site

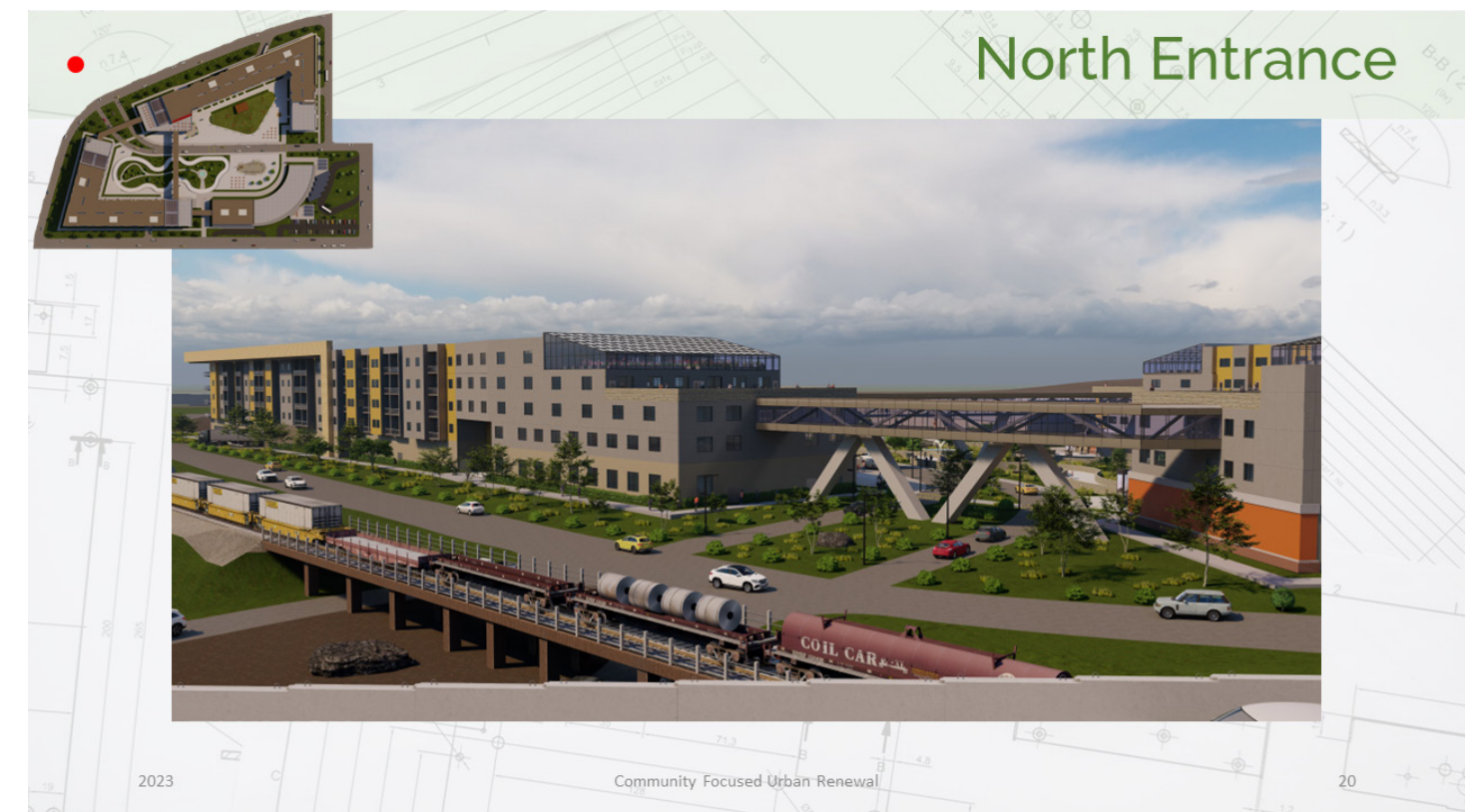
PRESENTATION



PRESENTATION



PRESENTATION



PRESENTATION



PRESENTATION



PUBLIC EXHIBITION



Figure 3.11 - Project Installation for Public Exhibition on Renaissance Hall 5th Floor

PRESENTING PROJECT



Figure 3.12 - Presentation Setup in Renaissance Hall Rm. 216



Figure 3.13 - Me Standing Next to Project Installation



THESIS APPENDIX

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2nd Year 2019-2020

Fall 2019

Instructor: Emily Guo

Project: Water Nest Studio, Residential
 Project: Riverside Rowing, Boathouse

Spring 2020

Instructor: Milton Yergens

Project: Carson Residence, Residential
 Project: Breezy Point Apartments, Mixed-Use

3rd Year 2020-2021

Fall 2020

Instructor: Niloufar Alenjery

Project: History Through Performance, Library/Auditorium
 Project: Sinai Refugee Camp, Spiritual/Apartment

Spring 2021

Instructor: Cindy Urness

Project: Sanford Same-Day Surgery Center, Healthcare
 Project: Dennis Lanz Group Competition, Pavilion

4th Year 2021-2022

Fall 2021

Instructor: Mark Barnhouse

Project: Clear View Tower, Miami Highrise Capstone Project

Spring 2022

Instructor: Kristi Hanson

Project: Hanson and Bresciani Lake Home, Residential
 Project: Lofts in the Valley, Flats on Fourth, Multi-Family

5th Year 2022-2023

Fall 2022

Instructor: Cindy Urness

Project: NDSU Wetland Research Center, Education/Lab

Spring 2023

Instructor: Cindy Urness

Project: Community Focused Urban Renewal, Mixed-Use
Masters Thesis

SPECIAL THANKS

“My time at NDSU has been a great experience and one that I’ll never forget. There were definitely some bumps along the way but after pushing through, it was all worth it.”



A special thank you to all the people that have helped make this project and journey possible and for getting me to this point in my life. Thank you to my family, professors, and friends. A special thank you to Zach Nelson, Jessica Grones, Hailey O'Connor, Sophie Hollander, and Alyssa Svidersky for being there for me.