



COMMUNITY IDENTITY
RE-CONNECTING THE CITY + RIVER
SHANE NIES

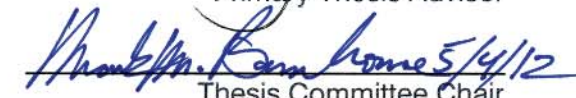
COMMUNITY IDENTITY

A design Thesis Submitted to the Department of
Architecture and Landscape Architecture of North Dakota
State University by **Shane Thomas Nies**

In Partial Fulfillment of the Requirements for the degree of
Master of Architecture



Primary Thesis Advisor



Thesis Committee Chair

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“There’s no telling what the power of the *people* and *river* can do”

-Peter Seeger, 1982
(quoted in Breen & Rigby, 3)

thesis abstract

This project will examine a growing city's historical origin that has been lost. The typology will be community center and library accompanied by a bridge/site renovation. The guiding idea is that the design will be re-discovering the city's historical influence to aid in restoring a sense of community identity. The relationship between the paper mill and the Mississippi river has historical value and is a framework for the re-vitalization of the city's origin. The project is located in Sartell, MN along the west bank of the Mississippi river, near the paper mill, where the city founded its historical roots. My typology is a community center and library accompanied by a bridge/site renovation in Sartell, MN. The square footage of the community center is 15721 sf and the library is 7642 sf.

keywords:

growing city
historical origin
community
mixed-use
re-discovering
historical influence
restoring
community identity
historical value
re-vitalization
origin

thesis problem statement

How can a growing first-ring suburban city restore a community identity?

statement of intent

statement of intent

PROJECT TYPOLOGY

A community center and library accompanied by a bridge/site renovation in Sartell, MN.

CLAIM

A growing city can restore a community identity by rediscovering its historical influence.

PREMISES

The city has experienced a great amount of growth in the last decade and has lost a sense of community identity.

The city's community needs to be restored through its lost historical influence.

"They must feel that it is, at gut level, theirs; that they are willing to fight over it and for it. They must see it as having an importance relative to their personal interests. They must see it, at some level, as a community" (Garreau, 269).

By restoring the city's historical sense, its community identity can be re-discovered.

THEORETICAL PREMISE/UNIFYING IDEA

The design will be re-discovering the city's historical influence to aid in restoring a sense of community identity.

PROJECT JUSTIFICATION

The city of Sartell has experienced a loss of community identity. The relationship between the paper mill and the Mississippi River has historic value and is a framework for the re-vitalization of the city's origin.

proposal

How can a growing first-ring suburban city restore a community identity? This project will examine a growing city's historical origin that has been lost. The typology will be a community center and library accompanied by a bridge/site renovation. The guiding idea is that the design will be re-discovering the city's historical influence to aid in restoring a sense of community identity. The relationship between the paper mill and the Mississippi River has historical value and is a framework for the revitalization of the city's origin. The project is located in Sartell, MN along the west bank of the Mississippi River, near the paper mill, where the city founded its historical roots.

The city has experienced a great amount of growth in the last decade and has lost a sense of community identity. I have lived in Sartell for the last 15 years and have experienced the fast growing sense of the city. The population of Sartell has doubled in the last ten years. The origin of the city began with the Sartell Mill, and Dezurik water controls as the second leading industry. This laid a framework for where the city would begin to develop. As the population began to increase the city began to spread northwest, and, then eventually, southwest reaching closer towards the larger city of St. Cloud. All of this new development has been pushed further away from the river. The beautiful riverfront of the Mississippi River and the historical origins of the city have been ignored leaving a loss of community, with all the scattered development.

The city's community needs to be restored through its lost historical influence. My action or call to this thesis is to bring new life to this historical riverfront of Sartell, MN. Instead of continuing to develop further away from the city's origin, I will be re-vitalizing the riverfront. Most cities originated and expanded from a downtown central core. This thesis is trying to demonstrate how to create a downtown that has never existed within a city. How des one reverse from a traditional city's origin development? My typological influence will be the start of this redevelopment and be a change to the way one can experience the city.

By restoring the city's history, its community identity can be re-discovered. This will be a space emphasized for the people of Sartell, a place where people will be able to engage with one another, experience the historical origins of the city and views of the beautiful riverfront of the Mississippi River. The design will be re-discovering the city's historical influence to aid in restoring a sense of community identity.

major project elements

user/client description

OWNER

This community mixed-use development is designed to serve the city of Sartell, MN. The development will be owned by the city, used by the public, and certain elements can be leased through the city.

USERS

The main users of this development and building will be the residents of Sartell. Because this is a public building, it will also be used by visitors of Sartell. The development will need to be easily accessible and usable for anyone with a disability. There will be spaces with opportunities for businesses to rent from the city, and also multi-purpose areas that can be rented for a period of time by the public. Certain areas of the building will require city employees to coordinate the functions. This area will experience steady usage during working hours. Peak usage will be on weekends and after working hours during the week. There will be very minimal parking because walking, biking, and public transportation will be highly encouraged. This space is open to the public, so there will be many different social, cultural, ethnic, and economic backgrounds of pedestrians experiencing the area.

All of my elements will not exist within the same one building program, but rather with multiple programs. I foresee separate entities serving different functions of elements. These will all interact together in the larger downtown riverfront scheme.

MARKET

The market area will be indoors and outdoors. It will give local farmers and growers an opportunity to sell locally grown foods to the public.

TRANSPORTATION AREA

The transportation area will provide an area to wait for the city bus system, park bicycles, and attain maps about the city bus system and bike/walking path system around the entire city.

LIBRARY

The library will be a traditional library in its spatial functions but will also have an area about the history of Sartell so that local residents and visitors can be informed.

TRANSITION

Transition is relating to the spaces between physical building developments. This is very important in the experience of the river front, and how the urban design and landscaping function with the physical built environment.

HISTORIC VIEWING AREA

This will be an elevated area for viewing purposes, but also a part of site design on ground level, providing wonderful a view to the Mississippi River and Saw Mill.

MULTI-USE SPACES

These are spaces that may be used for studying, meetings, family events, etc. There will be different sizes and design features in each of the rooms to allow for these different functions. These will be available to be rented out from the city

TRAINING STUDIO

Classes or programs that are held through the city would be held here. It is a space that allows creativity and opportunity for furthering one's education.

BUSINESS

The business area will not be located on one certain site but rather strategically placed along the river front and throughout the downtown planning. These spaces would start as city owned and could be leased out to businesses that are starting or looking to move locations. They can eventually purchase the property from the city. This will help increase property value and start the trend for a development of the downtown.

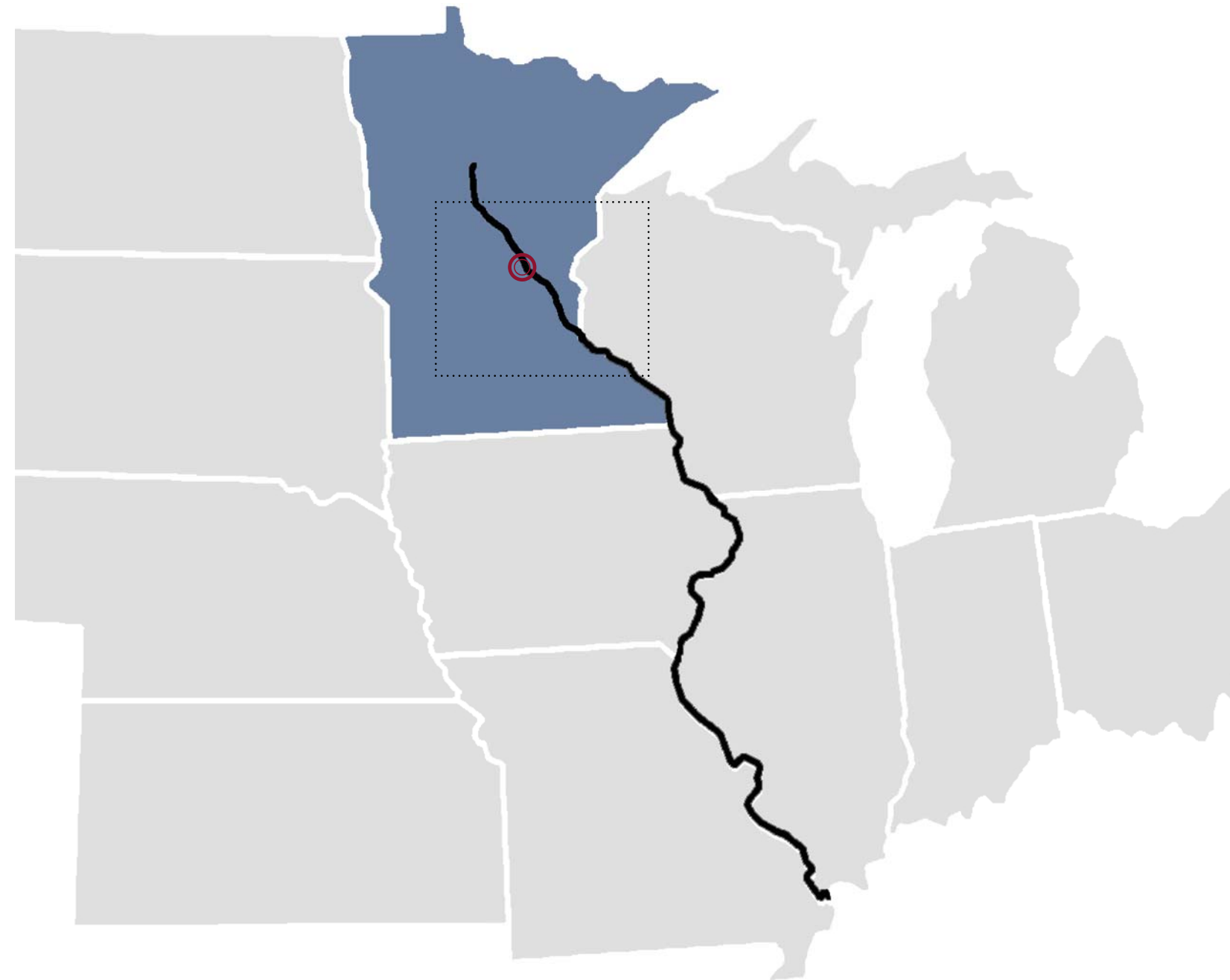
site info

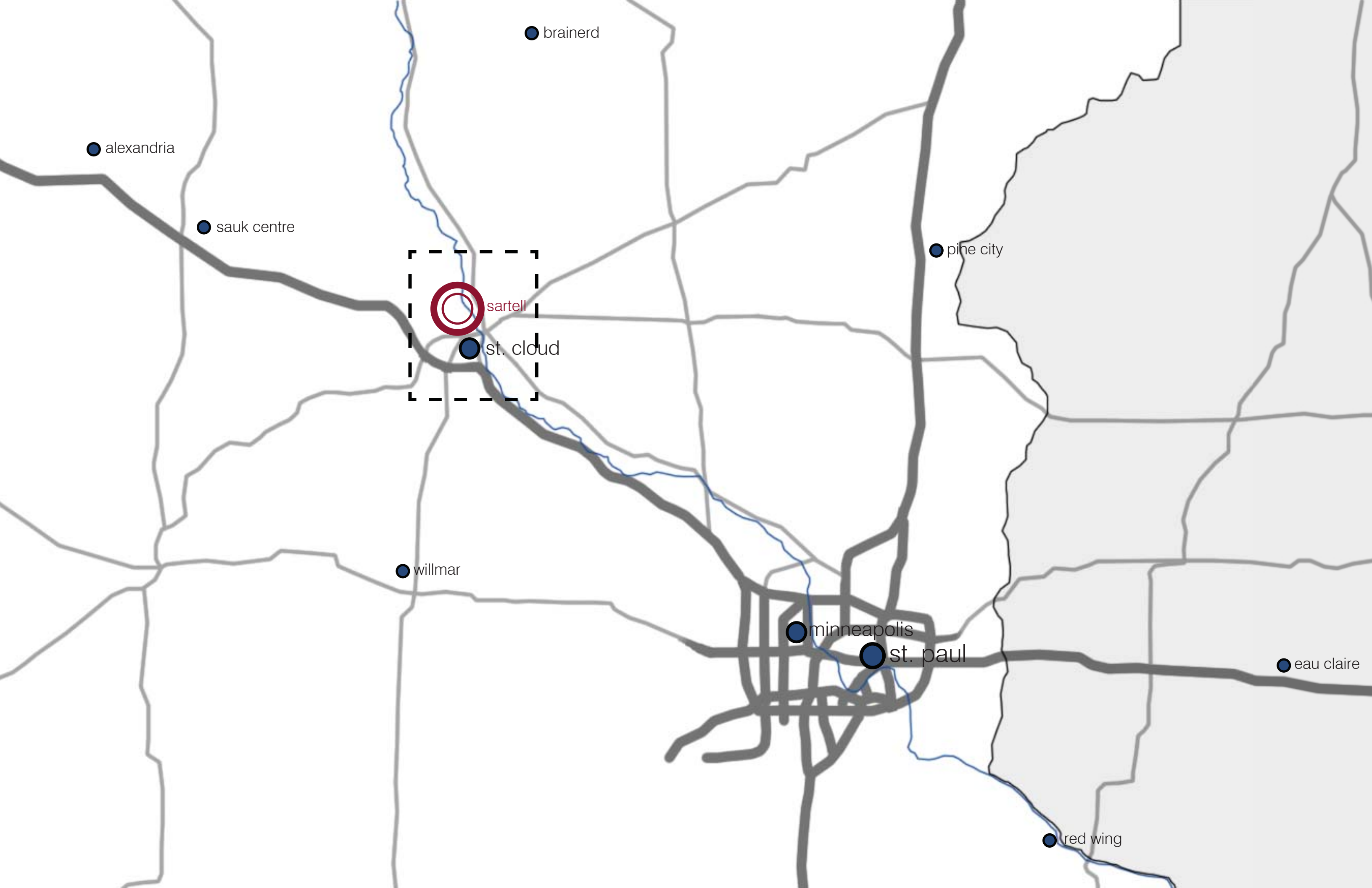
REGION

Sartell, Minnesota is located in the central region of Minnesota. The city is located on the western side of the great Mississippi River.

CITY

Sartell is considered to be a suburb of St. Cloud and is located just north of this major city. Sauk Rapids, Rice, St. Stephen, St. Joseph, and Waite Park are also smaller cities considered to be suburbs. Sartell is located in the center of all these other cities. The mighty Mississippi River flows through the eastern edge of the city, next to the historic Sartell Mill, which the city was founded upon.

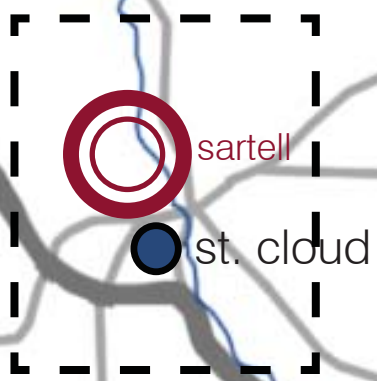




● alexandria

● sauk centre

● brainerd



sartell

● st. cloud

● willmar

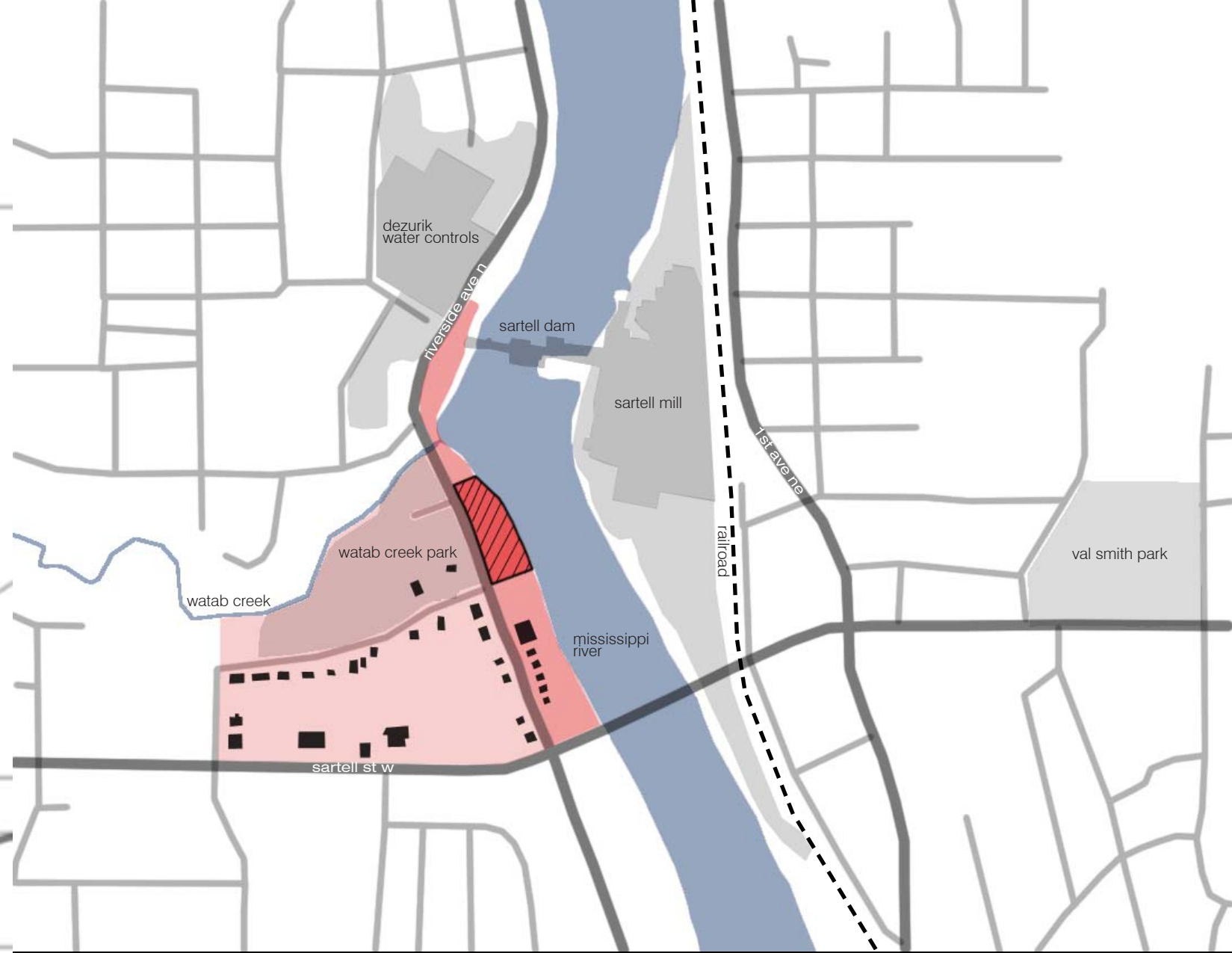
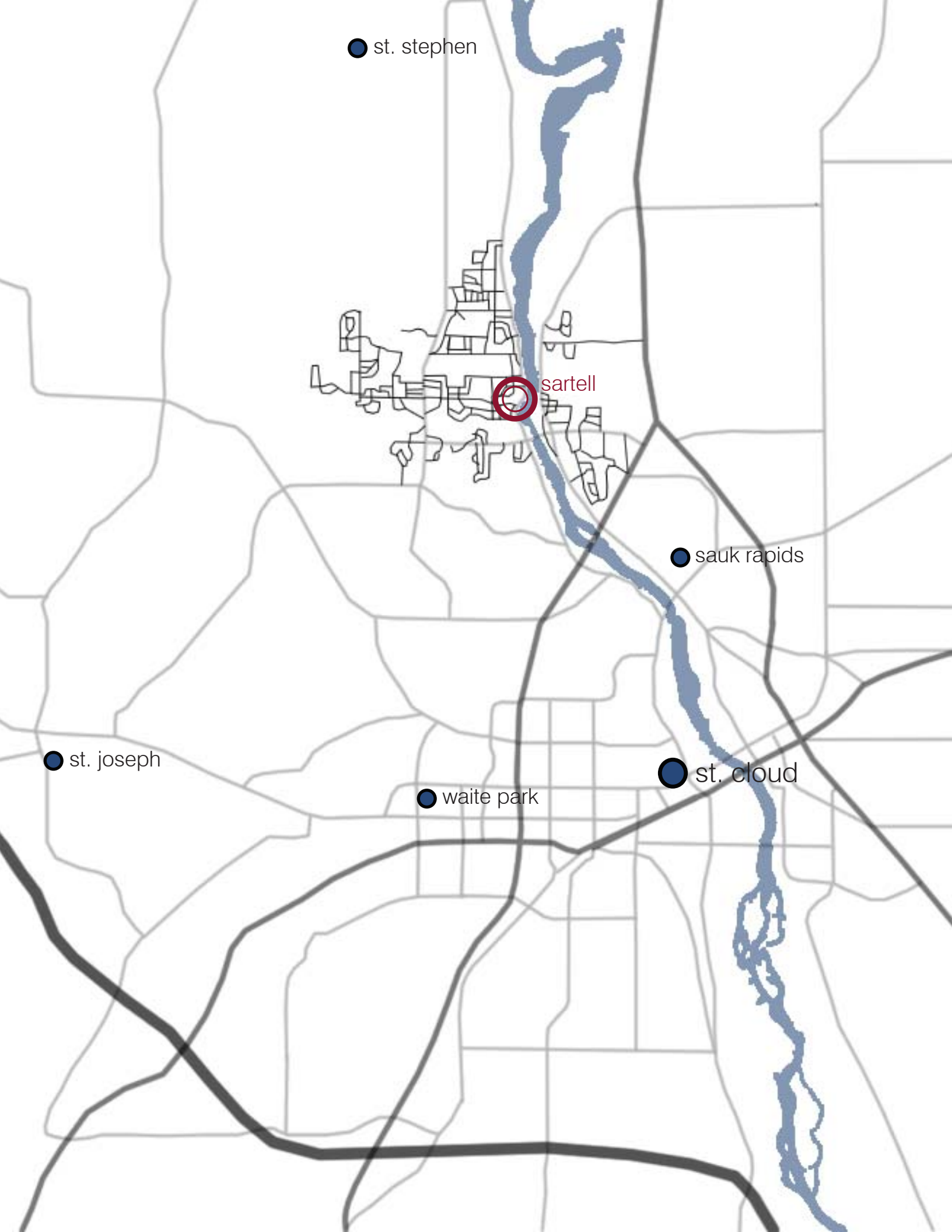
● minneapolis

● st. paul

● pine city

● eau claire

● red wing



SITE

Riverside Ave N the main street that runs along the west side of the river, is an existing product for my main focus of redevelopment. The Sartell Mill is located on the east bank of the Mississippi River, and the second main industry Dezurik is located on the west side. I have broken my site into three different catalysts from lighter to darker opacity: downtown development, riverfront development, and detailed site respectively. These three catalysts will be cross-referenced and cooperate together in the overall project.



project emphasis

Most cities originated and expanded from a downtown central core. This thesis is trying to demonstrate and understand how does one creates a downtown that has never existed within a city? How does one reverse from a traditional city's development. This design will be re-discovering the city's historical influence to aid in restoring a sense of community identity. The typology is a community center and library accompanied by a bridge/site renovation will provide a re-vitalization of Sartell's Mississippi river waterfront. This will be a space emphasized for the people of Sartell; a place where people will be able to engage with one another experience the historical origins of the city, and views of the beautiful riverfront of the Mississippi River.

plan for proceeding

RESEARCH DIRECTION

Research areas will include the Theoretical Premise, Historical Origins of Sartell, Community Design, Urban Design, Downtown Master Planning, Site and Typology History, and Programming.

DESIGN METHODOLOGY

I will be following a mixed method model throughout my research and design of this project. Qualitative and Quantitative data will gathered concurrently. This data will be analyzed, interpreted, and reported through text and graphics throughout the entire research and design process. Quantitative statistical ,and scientific data will be gathered and analyzed through local site visits, experimentation, and archival searches. Qualitative data will be collected from direct observation, local surveys, direct interviews, and archival searches.

DESIGN DOCUMENTATION

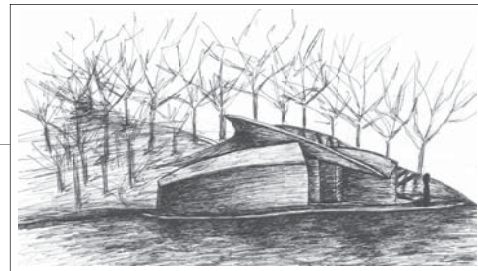
Documentation will be compiled digitally through scans, writing, and photographs. Also, there will be a physical form of documentation for drawings and models. Drawings will be recorded in a sketchbook. Other types of sketches will be compiled in a three ring binder, and models will be displayed on a shelf in my studio space. This organizing and compiling of process will occur weekly, and digital files will be backed up on an external hard drive. My thesis will be compiled onto a DVD for a final submittal. Certain design processes will be documented in a section of my thesis book. As a final means of documentation, all of the entities of my thesis will be uploaded into the NDSU Library Digital Repository, which will be available to other scholars.

1-10-12	context analysis
1-12-12	conceptual analysis
1-18-12	spatial analysis
1-20-12	ecs passive analysis
1-22-12	ecs active analysis
1-24-12	floor plan development
1-30-12	section development
1-31-12	structural redevelopment
2-13-12	envelope development
2-27-12	context redevelopment
3-05-12	midterm reviews
3-12-12	project revisions
3-19-12	structural redevelopment
3-21-12	materials development
4-04-12	presentation layout
4-10-12	plotting and model building
4-23-12	exhibits installed on the 5th floor
4-23-12	thesis exhibit
4-23-12	preparation for presentations
4-26-12	final thesis reviews
4-26-12	project documentation
5-07-12	cd due to thesis advisors
5-10-12	final thesis document due
5-11-12	commencement

previous studio experience

2008-09

Fall Semester
 professor Darryl Booker
tea house
boat house



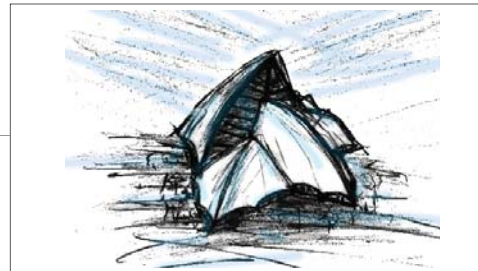
Spring Semester

professor Joan Vorderbruggen
dance academy
sustainable dwelling



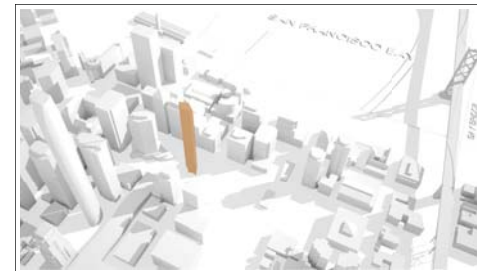
2009-10

Fall Semester
 professor Steve Martens
nunavik school
veledrome



Spring Semester

professor Cindy Urness
aquatic center
transportation hub



2010-11

Fall Semester
 professor Don Faulkner
highrise



Spring Semester
 professor Malini Srivastava
design build studio-passive house



2011-12

Fall Semester
 professor Cindy Urness
mxn-nature center



Spring Semester
 professor Cindy Urness
thesis-community identity

program

theoretical research

Establishing a Sense of Identity

Minnesotans are very proud and passionate about where they live. Being a Minnesotan for almost all of my life, I share this passion and can relate to this sense of pride. A recent issue of Architecture MN features a section reflecting on AIA's 10 Principles for Livable Communities. Carl (2007); tells us about this love:

"If you ask Minnesotans what it is they love about where they live, you are likely to hear a wide range of answers: the system of parks, the schools, the neighborhoods, the arts, and, yes, even the weather. In reality, all of these things and so much more must come together in just the right formula to make our cities the unique and vibrant places they are. In Minnesota, we don't leave this mix to chance; we have a long history of communities and visionaries working together to create the best social, cultural, and physical context for people to thrive in" (Carl, 2007).

Minnesota has received many accolades for its quality of life in the past few years, including its recognition into top rankings on lists of most livable states. A majority of these awards are based in the

Minneapolis and St. Paul metropolitan area. Both of these major cities are great examples of how the AIA's 10 Principles for Livable Communities are utilized. In my thesis, I will be referencing six of the then principles to influence my design solution. The six principles are: design on a human scale, provide choices, encourage mixed-use development, build vibrant public spaces, create a neighborhood identity, and design matters.

My theoretical premise clearly states: The design will be re-discovering the city's historical influence to aid in restoring a sense of community identity. The seventh principle create a neighborhood identity will be closely related to the main emphasis of what my thesis is trying to establish for the city of Sartell, MN.

When referring to Minneapolis and its care for public space and downtown development, most people think of the Mill District and Riverfront Development. The planning and design gives one an impression that resonates in one's mind and creates an identity for Minneapolis. The AIA states in principle number seven: Create a Neighborhood Identity, "A 'sense of place' gives neighborhoods a unique character, enhances the walking environment, and creates pride in the community" (AIA, 2005). The Mill City Farmers Market in Minneapolis is a good example of an event that brings people in the community together. It is an event and location that has created an *identity* for the city and encourages wonderful interaction between a diverse group of people. "Citizens need welcoming, well-defined public spaces to stimulate face-to-face interaction, collectively celebrate and mourn, encourage civic participation, admire public art, and gather for public events" states the AIA in its 10 Principles for Livable Communities (AIA 2005). I will be focusing on establishing an *identity* in Sartell that has been lost through its growth and development of the city. The AIA Principle for Livable Communities will be a strong reference in guiding me towards my design and decision making. Here is a detailed description that the AIA had published in it's Livability 101 document:

AIA's 10 Principles for Livable Communities

1 **Design on a Human Scale**
Compact, pedestrian-friendly communities allow residents to walk to shops, services, cultural resources, and jobs and can reduce traffic congestion and benefit people's health.

2 **Provide Choices**
People want variety in housing, shopping, recreation, transportation, and employment. Variety creates lively neighborhoods and accommodates residents in different stages of their lives.

3 **Encourage Mixed-Use Development**
Integrating different land uses and varied building types creates vibrant, pedestrian-friendly, and diverse communities.

4 **Preserve Urban Centers**
Restoring, revitalizing, and infilling urban centers takes advantage of existing streets, services, and buildings and avoids the need for new infrastructure. This helps to curb sprawl and promote stability for city neighborhoods.

5 **Vary Transportation Options**
Giving people the option of walking, biking and using public transit, in addition to driving, reduces traffic congestion, protects the environment, and encourages physical activity.

6 **Build Vibrant Public Spaces**
Citizens need welcoming, well-defined public spaces to stimulate face-to-face interaction, collectively celebrate and mourn, encourage civic participation, admire public art, and gather for public events.

7 **Create a Neighborhood Identity**
A "sense of place" gives neighborhoods a unique character, enhances the walking environment, and creates pride in the community.

8 **Protect Environmental Resources**
A well-designed balance of nature and development preserves natural systems, protects waterways from pollution, reduces air pollution, and protects property values.

9 **Conserve Landscapes**
Open space, farms, and wildlife habitat are essential for environmental, recreational, and cultural reasons.

10 **Design Matters**
Design Excellence is the foundation of successful and healthy communities.

Mixed-Use Development

The primary challenge of today's world is dealing with the large increase in population and controlling density of cities. These issues are not necessarily negative situations, but rather opportunities for designers and planners to create a better *identity* within cities and mesh functions together, rather than scattering and isolating typologies. This strategy can be very successful in establishing a sense of place and providing a diverse community as stated in the AIA 10 Principles for Livable Communities, "Integrating different land uses and varied building types creates vibrant, pedestrian friendly, and diverse communities" (AIA, 2005).

David Graham; AIA; is a principal with Elness Swenson Graham Architects and has designed mixed-use projects in the Minneapolis and St. Paul area. A project that he was a part of is the Excelsior & Grand in St. Louis Park, MN. He states in a recent article of *Architecture MN*:

"Mixed-Use designs helped shape the vibrant neighborhoods of pre-World War II America. In Minnesota, architects and developers are using those proven planning principles and reinterpreting them in a contemporary way, often with architectural designs that blend the historic character of the neighborhood with a modernist sensibility" (Graham, 2007).

What should we be expecting for the world's population increase in the future? What percentage of people live in a urban setting compared to a rural setting? David Graham states, "A century ago, 10 percent of the world's population lived in cities. Today, 50 percent of the world's population lives in cities, and by 2050 the percentage will rise to 75" (Graham, 2007).

In ancient cities, the activities that took place were established around a center or city square. These developments were the icon and identity of the city. These centers provided everything a city needed to survive. This was the first design concept that started

to introduce the idea of mixed-use development. Tibbalds states in his publication *Making People-Friendly Towns: Improving the Public Environment in Towns and Cities*, "Their centres are more than just collections of shops. They provide for culture, entertainment, leisure, recreation, civic life and the exchange of community views, ideas, and opinions. It is no accident that ancient cities were built around a major open space-the Greek agora and the Roman forum" (Tibbalds, 2001). We have more recently started to assess the design solution of multi-use development. It has become a calling or answer to providing a sense of community into very dense cities. There are places where we feel entirely comfortable where we can wander around without fear but it is rarely a dense urban area but rather rural. Multi-use development starts to assess the idea of providing choices, opportunities, and feeling of a smaller community, where people can engage at a human scale.

When relating back to ancient cities, I have previously stated that they were developed around a city center or square. I believe architecture and buildings are important in establishing mixed-use, but its not always the buildings that influence a sense of community. Francis Tibbalds states, "Uses and activities are more important than buildings to the life of a town or city" (Tibbalds, 2001). Architecture can provide a space for people to gather, but it is more about what activities are happening among the people that creates a human scale. Harris provides her insight and questioning on human-scale in a recent publication of *Architecture MN* magazine:

"Human-scale design is less about architecture and more about use. How do people interact with their city? Why do people engage in their city? How does the city meet the needs and desires of its citizenry? If done well, a city's scale is human and approachable. In late, 2006 a group of active community members created the Walking Minneapolis Foundation to focus on making Minneapolis a world-class, walkable vibrant

downtown. We've spent time thinking about the great cities of the world and what makes them great. our conclusions can be organized into three equally important areas: Physical, Operational, and Magical" (Harris, 2007).

Waterfront Development

Throughout history urban waterfronts have played a key role within cities. The effective reuse of waterfront sites, and buildings for economic development, recreational, and cultural activities has helped revitalize many cities, such as: Chicago, Tacoma, Greenwich, Portland, and several others. Water was the first form of transportation which has led the growth of most communities at the mouth of rivers, bays, and key portage points along all different types of waterways. In transition, waterfronts began to be abandoned when the highway was developed. Urban areas began to abandon their historical waterfronts, and centrally located cities diminished along with them.

"Urban waterfronts are special cultural resources. They are unique in their potential to provide diversified opportunities for economic development, public enjoyment, and civic identity. Until recently, however urban waterfronts were one of North America's most neglected resources. As patterns of commerce have changed, the nature and use of urban waterfronts have changed. Technological innovations affecting air, land, and water transportation made the port facilities of many cities obsolete. Urban waterfronts were allowed to deteriorate as the result of old age, underutilization, and lack of investment" (Wrenn, 1983).

Waterfronts serve as a focal point of activity. They were used as a transfer of supplies, and the core for exchange of ideas and information. Overall, waterfronts set the stage for social interaction. They can bring together very diverse communities and provide the opportunity to establish a sense of community strength and identity within a city. Waterfront cities served as an important meeting place and a symbol or gateway to cities. These are all

concepts and intentions for how waterfronts should be used.

“Urban waterfronts in North America have historically suffered from a lack of vision and management in their adaptations to successive demands for new functions. Traditionally, waterfront development and growth has been disjointed and incremental, characterized by a web of loosely related decisions and actions by dozens of political jurisdictions and hundreds of entrepreneurs” (Wrenn, 1983). Many waterfronts have been very successful in saving cities because entrepreneurs have established a vision for revitalization. This can provide opportunities for more public use and a mix of commercial, residential, and recreational.

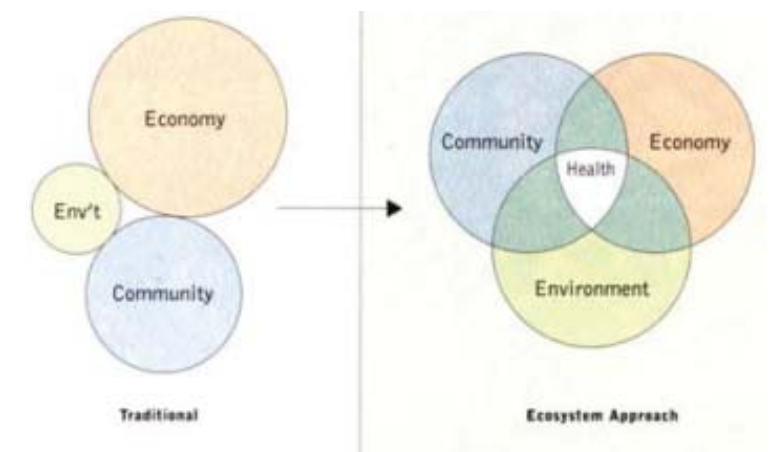
Reconnecting City and River

Saint Paul, Minnesota has a corporation named Saint Paul Riverfront Corporation. In June of 1997, this corporation introduced the *Saint Paul on the Mississippi Development Framework* document. This document had a great impact and helped shift the way Saint Paul viewed its relationship with the mighty Mississippi River. There are seven chapters in this document titled: Preface-Reconnecting the City and the River, Environmental Context, Urban Structure, Movement Networks, Public Realm, The Capitol-Mississippi Crescent, and The Principles of City Building. *St. Paul on the Mississippi Development Framework* was authored in collaboration by the Saint Paul Riverfront Corporation, Capital City Partnership, City of St. Paul, Saint Paul Port Authority and the West Side Citizens Organization.

This document is based on the understanding that the river would be used to restore the vitality of downtown Saint Paul. “The Framework does not advocate restoring the vitality of the downtown at the expense of Saint Paul’s neighborhoods. The strength of the Capital City has in the health of its neighborhoods. An unhealthy urban core drains the city and creates a significant property tax burdens for individual home owners. With this Framework comes opportunity for

the City to reposition itself in a way that will pump new wealth and strength into the community by engaging the private and public sectors in the revitalization of the downtown waterfront core” (Greenberg & Limited, 1997). Relinking a downtown waterfront core can help strengthen neighborhoods, as well as the downtown as a separate entity. To create a vibrant healthy waterfront it is suggested that one should integrate rather than segregate. The river, downtown, and neighborhoods should reconnect as a whole so that a healthy community identity can be achieved. “An important body of evidence suggests that the health of the local economy is intricately linked to the health and attractiveness of the natural and built environment, and the social fabric... As the urban core becomes revitalized, it will reconnect to the adjacent neighborhoods from which it has been separated ” (Greenberg & Limited, 1997).

The *St. Paul on the Mississippi Development Framework* discusses two different strategies to create a healthy community Traditional and Ecosystem Approach. The Traditional approach consists mainly of the economy and community along with the environment. The Ecosystem Approach consists of the community, economy, and environment with health as the central core. The figure below is a diagram that visually represents these ideas. On the following page is a figure from chapter one; Environmental Context; of the *Saint Paul on the Mississippi Development Framework* representing ten principles that underpin the framework of revitalizing a riverfront.



10 principles that underpin the framework

Promoting a more holistic approach to city building, the Development Framework reflects a fundamental shift in thinking, represented in the Ten Principles summarized below

- 1 Evoke a Sense of Place
- 2 Restore and Establish the Unique Urban Ecology
- 3 Invest in the Public Realm
- 4 Broaden the Mix of Uses
- 5 Improve Connectivity
- 6 Ensure that Buildings Support Broader City-Building Goals
- 7 Build on Existing Strengths
- 8 Preserve and Enhance Heritage Resources
- 9 Provide a Balanced Network for Movement
- 10 Foster Public Safety

Minneapolis in 1996 one year prior to St. Paul's riverfront development, developed a plan of action for revitalizing the downtown riverfront. Much like St. Paul it was a call that needed to reflect the needs and interests of the community. The Cunningham Group published a book titled *The Minneapolis Riverfront Vision and Implementation*. President of Cunningham Group John Cunningham (1996) FAIA states in the beginning of the book "In early times the river was revered, but as nature gave way to industry, and industry gave way to industry, Minneapolis life moved away from the river, leaving it neglected and abandoned. What never changed is the majesty and allure of this, one of the world's major rivers... This book represents a synthesis of the process required to bring together parties from diverse backgrounds in search of common ground. Our intent is to begin a process which will result in an integrated vision about the Mississippi riverfront" (Cunningham, 1996).

The purpose of this design and publication process was to "revitalize the riverfront and create a new 'front door' for the city" (Cunningham Group, 1996). The city was preparing a new masterplan at the time, and downtown residents were seeking a type of mixed-use and living community. This design project used a park named Central Riverfront Regional Park as the focus of the site. It has been suggested through numerous sources of research that focusing on major historical asset's establishes deep roots and meaning into a riverfront development. It establishes a core for design concepts, and helps suggest and influence design decisions.

The Cunningham Group stated in its document that the design proposals should suggest paths to extend and transform what exists, thereby creating new values and opportunities. "Areas along the Mississippi River between embankments can also be understood as a rich and varied natural resource, ready to be programmed for public use and made more accessible" (Cunningham Group, 1996).

theoretical research summary

Throughout my theoretical research I investigated strategies and studies that will assist me in taking action on my theoretical premise of the design will be re-discovering the city's historical influence to aid in restoring a sense of community identity. The areas I researched were: establishing a sense of identity, mixed use development, waterfront development, and reconnecting city and river. There are two documents that I also analyzed which were the AIA's "10 Principles for Livable Communities", and *St. Paul's Riverfront Corporation 10 Principles that Underpin the Framework of Revitalizing a Waterfront*.

From the AIA's "10 Principles for Livable Communities" the strategies that related most to the scale of my thesis were: designing on a human scale, provide choices, encourage mixed-use development, build vibrant public spaces, create a neighborhood identity, and design matters. Principle number seven create a neighborhood identity is described as "A 'sense of place' gives neighborhoods a unique character, enhances the walking environment, and creates pride in the community" (AIA, 2005). My thesis relates the most to this concept. It is one of the main principles for my entire thesis problem statement and concept. My problem statement is described as: How can a growing first-ring suburban city restore a community identity?

The strategies that Minneapolis and St. Paul used for their riverfront developments will become very crucial in the design and planning of my thesis. They both had ideas about revitalizing their downtown, by using the historic river as a main concept to the development. I will be using the same river the Mississippi: 90 miles upstream, but for Sartell, MN. It is not as large as these two cities but is a first-ring suburb of St. Cloud and is dealing with the same issues of abandonment of

the river and downtown core. Sartell is a special case because a downtown has never truly been established. Based on my theoretical research I have learned I will need to search the deep historical roots of the city to help influence the core concepts of my design. History will help carve a way for questioning and suggesting how to solve my thesis.

Establishing a *community identity* is the main goal of my thesis. This research has proven that mixed-use development along the river will help encourage activity and establish an identity for Sartell. A relationship to this concept was stated earlier in my research by the AIA 10 Principles for Livable Communities, "Citizens need welcoming, well-defined public spaces to stimulate face-to-face interaction, collectively celebrate and mourn, encourage civic participation, admire public art, and gather for public events" (AIA 2005). Sartell has nearly doubled in population over the last ten years, and I see this as an opportunity for designers and planners. Relating back to the concept of ancient cities, the idea of a town square" or "own center will be established in a new, creative and more modern way. These early designs were very successful in bringing a community together and establishing an identity that the city was known for. Using these as design tools will be a great source for me when continuing to work on the urban design part of my thesis, my programming, and intimate design at a building scale.

Overall, I hope use all of these to their fullest potential in trying to understand my thesis. I will be using them as a resource for writing, discussion, and design of my thesis. I will be continually relating back to the Minneapolis and St. Paul river-fronts as studies to help me understand how to use the Mississippi River as a core part of design 90 miles upstream. Creating an identity, using mixed-use development, relating the river to the city, and understanding water front design will be of uppermost importance throughout this thesis. And, most importantly, I must stay true to and remember what is stated last in AIA's 10 Principles for Livable Communities, "Design Matters".

case study 1

Surry Hills Library & Community Centre

typology: Library & Community Center
location: Surry Hills, New South Wales, Australia
architect: Francis-Jones Morehen Thorp
date: 2009
size: 8192 sf + 2526 sf landscaping (10,718sf)
client: City of Sydney
address: 405 Crown Street, Surry Hills NSW 2010, Australia
elements: Library, Function Hall, Long Day Childcare,
Meeting Rooms, Neighborhood Centre
Admin Office & Ammenities, Outdoor Play Space

The Surry Hills is a very socially and ethnically diverse community. The citizens of the city were very hesitant to have a building with such beautiful and high-quality finishes in fear of them becoming damaged. The building has responded well to the community. The users of the building have become more aware of the environmental impact of a building and have learned to treat it with a level of care and consideration. The project was developed and discussed very closely with the local active community. "The key approach that emerged from these discussions was that the community wanted a facility that everyone could share. Rather than only a library or a community centre or childcare centre, it became clear that it was important to have all of these facilities together in one building, in one place. In this way the building became a truly shared place where the whole community could meet and use in different ways. Important, too, was for the building to represent and reflect the community's values." (Saieh, 2010).

The Surry Hills Library and Community Centre's footprint fills up almost its entire 593 square meter site. FJMT uses architectural design strategies to expand its visual scale to help create this iconic, Australian building. It is located on Crown Street opposite of Shannon Reserve where all the weekly markets are established which, is one of Sydney's most key urban streets. The buildings eastern

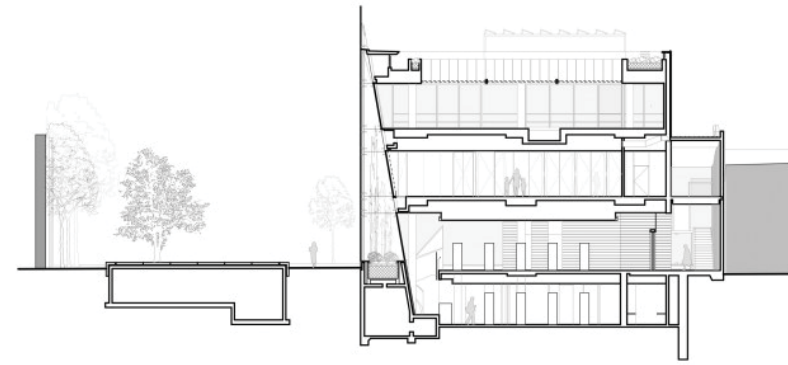
elevation has operable timber-faced panels that shift throughout the day responding to the pattern of the sun. The other key façade is on the south side of the building. "To the south, facing a road closure that operates as a small pocket park, the centre's diverse program is dramatically revealed. Its sleek glass skin is supported by a pyramidal glass structure that forms a delicate, transparent stopper. Its triangulated chimneys draw air through various bio filtering and passive conditioning mechanisms but also reveal the building's stratified section" (Harding, 2010).

The ground and basement levels have the library collections of books and media, and also breakout spaces available for reading and studying. The second floor is a series of community rooms and kitchens available for the public. Local businesses often rent rooms for meetings, and other computer classes are held in this area. The kitchens available are used for cooking classes that can be streamed via video link to other centers. The upper levels main function is for a childcare center. Half of the floor is closed spaced, and then the remaining is open-air play space.



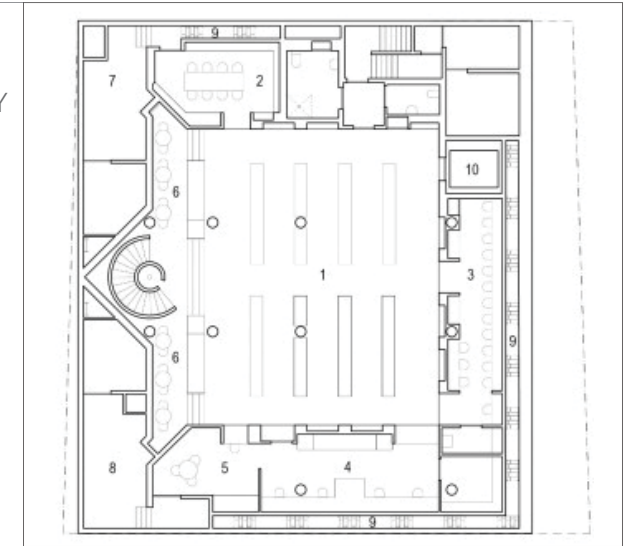
Ground Floor + Site

- 1 SHARED ENTRY LOBBY
- 2 LIBRARY COLLECTION
- 3 LOANS DESK
- 4 CATALOGUE COUNTER
- 5 LIBRARY ADMINISTRATION
- 6 LIBRARY READING ROOM AND CAFE
- 7 CHILDRENS SPACE
- 8 VOID
- 9 ENVIRONMENTAL ATRIUM
- 10 WATER STORAGE TANK
- 11 COLLINS RESERVE
- 12 LIFT



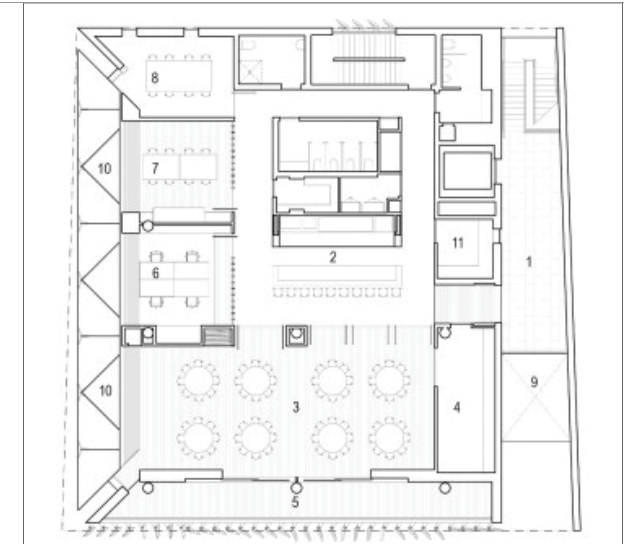
Lower Ground

- 1 LIBRARY COLLECTION
- 2 LOCAL HISTORY STUDY ROOM
- 3 IT AND INTERNET ACCESS PUBLIC COMPUTER LABORATORY
- 4 LIBRARY ADMINISTRATION
- 5 MEETING ROOM
- 6 MAGAZINE AND NEWSPAPER READING
- 7 WATER RECYCLING PLANT
- 8 GEOTHERMAL BORE PLANT
- 9 THERMAL LABYRINTH
- 10 LIFT



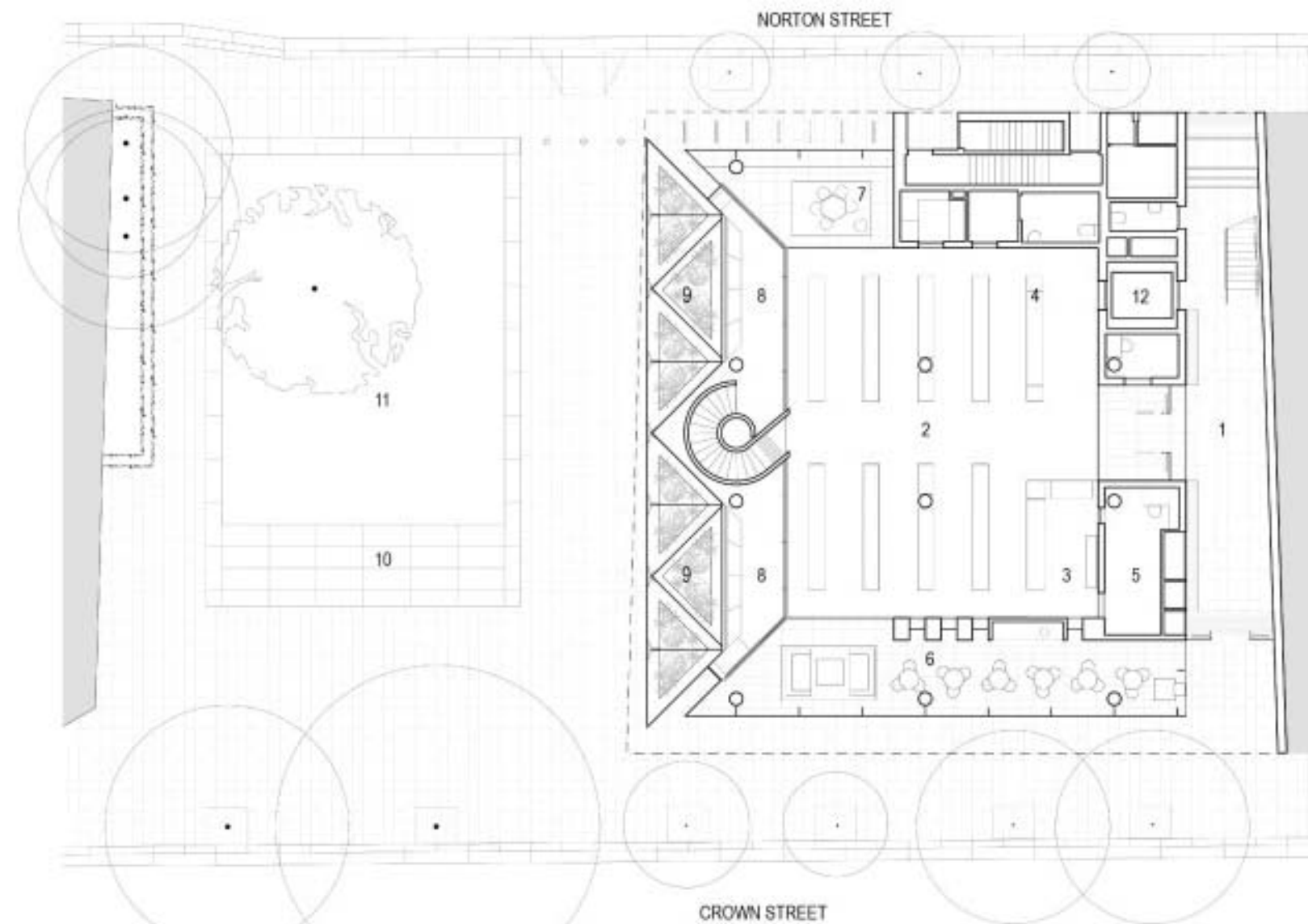
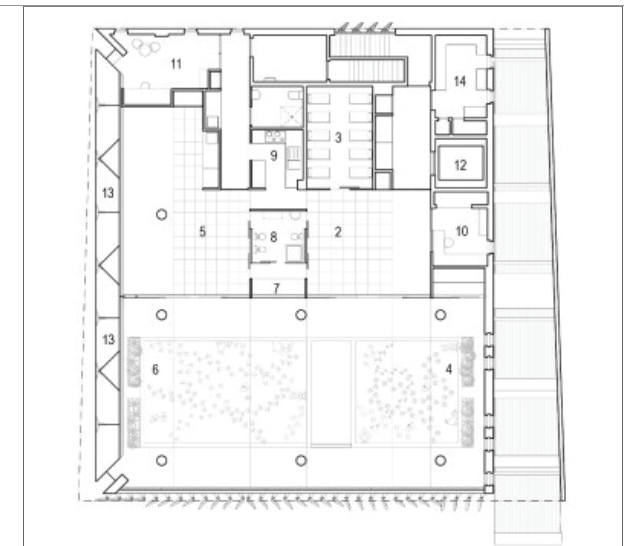
Level One

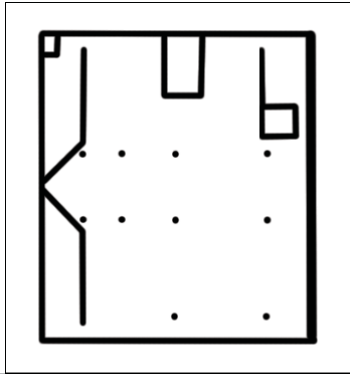
- 1 LOBBY
- 2 TEACHING KITCHEN
- 3 FUNCTION ROOM
- 4 STOREROOM
- 5 BALCONY
- 6 SURRY HILLS NEIGHBOURHOOD CENTRE
- 7 MEETING ROOM
- 8 LANGUAGE LABORATORY
- 9 VOID
- 10 ENVIRONMENTAL ATRIUM
- 11 ADMINISTRATION



Level Two

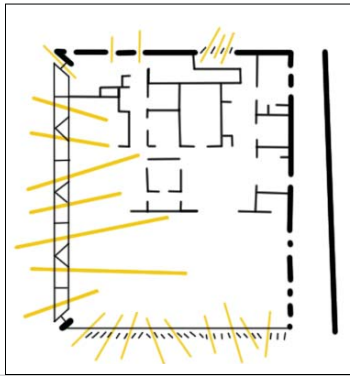
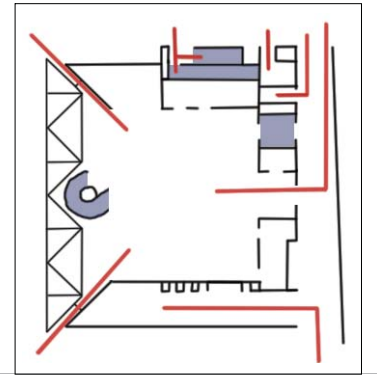
- 1 SECURE LOBBY
- 2 U2 CHILDRENS PLAY SPACE
- 3 U2 COT ROOM
- 4 U2 OUTDOOR PLAY SPACE
- 5 2-5 PLAY SPACE
- 6 2-5 OUTDOOR PLAY SPACE
- 7 NAPPY CHANGE ROOM
- 8 COMMUNAL CHILDRENS BATHROOM
- 9 HEAT AND RESERVE KITCHEN
- 10 CHILDCARE ADMINISTRATION
- 11 STAFF ROOM
- 12 LIFT
- 13 ENVIRONMENTAL ATRIUM
- 14 STORE ROOM





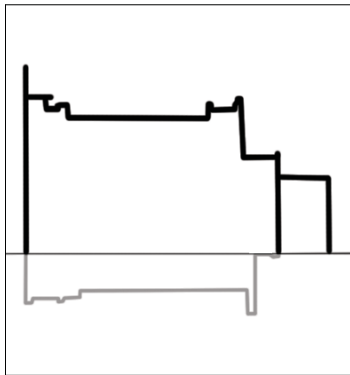
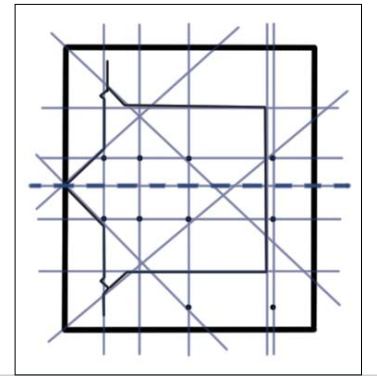
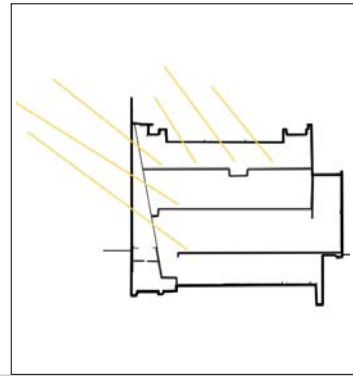
Structure

Circulation



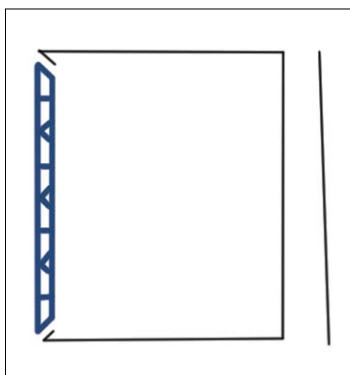
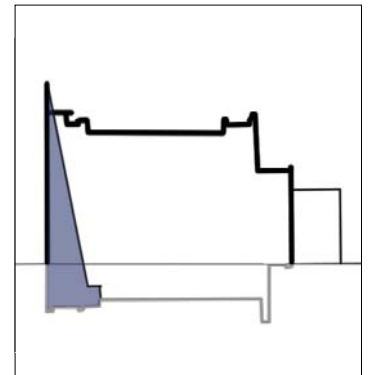
Natural Light

Geometry

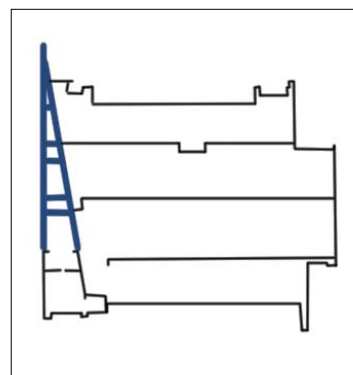


Massing

Hierarchy

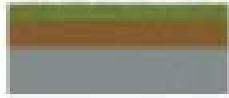


Plan to Section/Elevation



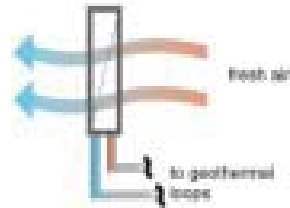
GREEN ROOF

Provides increased thermal mass and reduces heat gains to the building.



OUTSIDE AIR INTAKE

Clean air source located away from Crown street to improve air quality. First stage cooling provided by geothermal coils to temper incoming fresh air.



Double skin facade cavity or "lungs" of the building cocoons internal spaces and provides transparent arteries to move through the building.

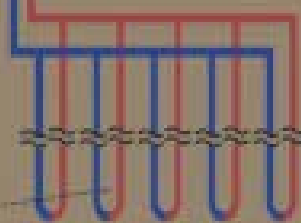


BIO-FILTER

Plants and biomass absorb CO₂ and release O₂. Passive filtration and removal of air contaminants.

GEOTHERMAL HEAT EXCHANGER

For passive tempering of incoming outside air to "BIO-FILTER" by transferring energy from the earth to the building.



PHOTOVOLTAIC PANELS

Offset grid power demands. Panels also shade roof.

FAN COIL UNITS

Trims fresh air to satisfy heating & cooling needs of the building.

RELIEF AIR

Natural relief to outside.

MATERIALS

Low VOC finishes
Low formaldehyde furniture

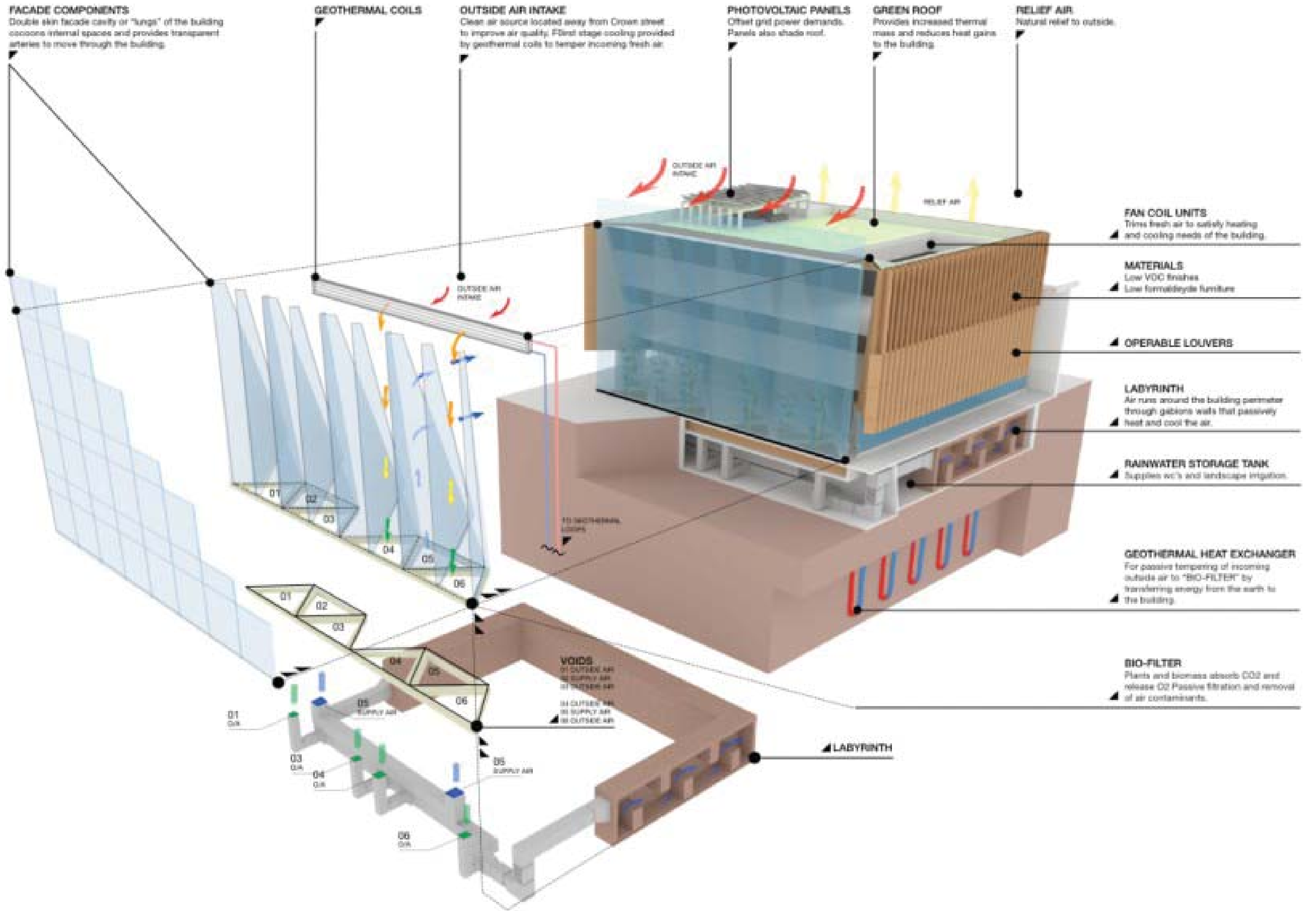
LABYRINTH

Air runs around the building perimeter through gabions walls that passively heat and cool the air.

RAINWATER STORAGE TANK

Supplies wc's and landscape irrigation.







case study 2

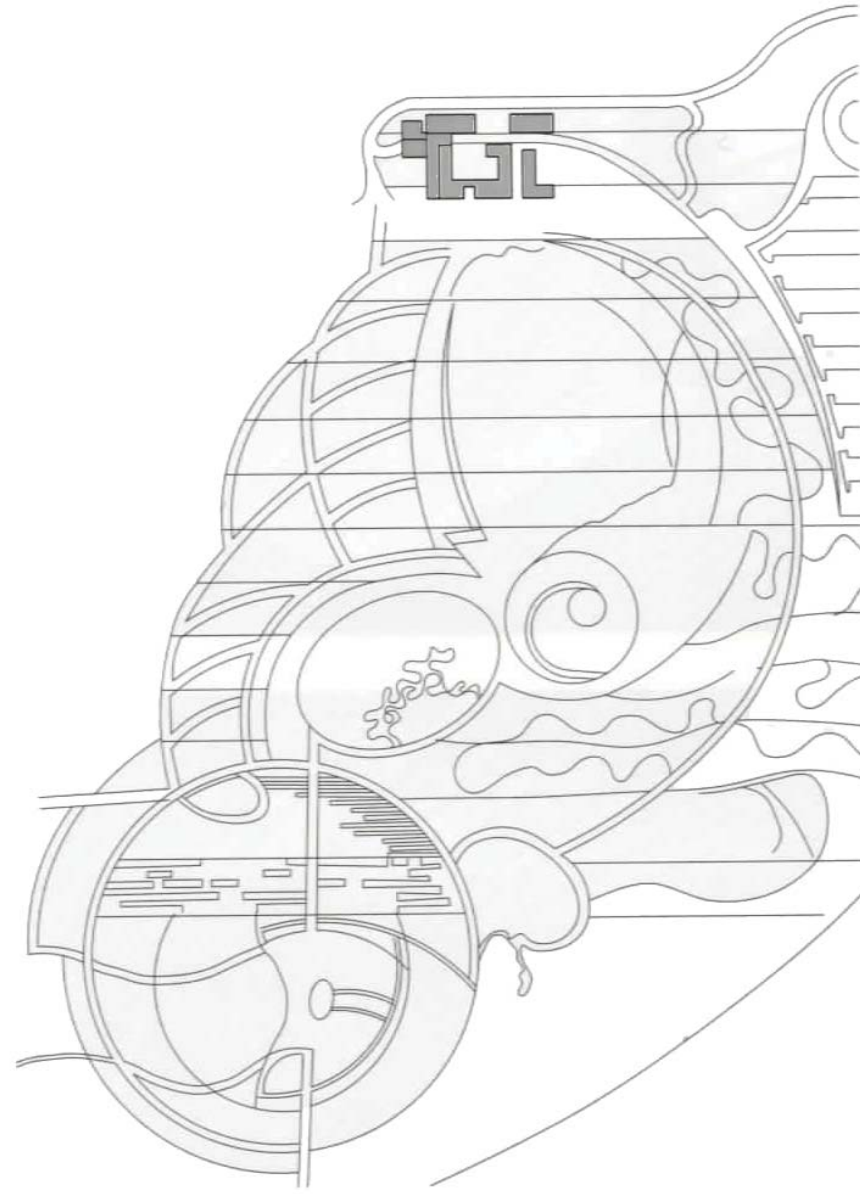
Australian Garden at Cranbourne Visitors Centre

typology: Visitors Center
location: Cranbourne, Victoria, Australia
architect: Kersin Thompson Architects
date: 2006
size: 10,742 sq ft
client: Royal Botanic Gardens Cranbourne
address: 1000 Ballarto Road, Cranbourne South Victoria
3977, Australia
elements: Outdoor/Indoor Reception Area, Outdoor/Indoor
Group Area, Cafe, Office, Retail

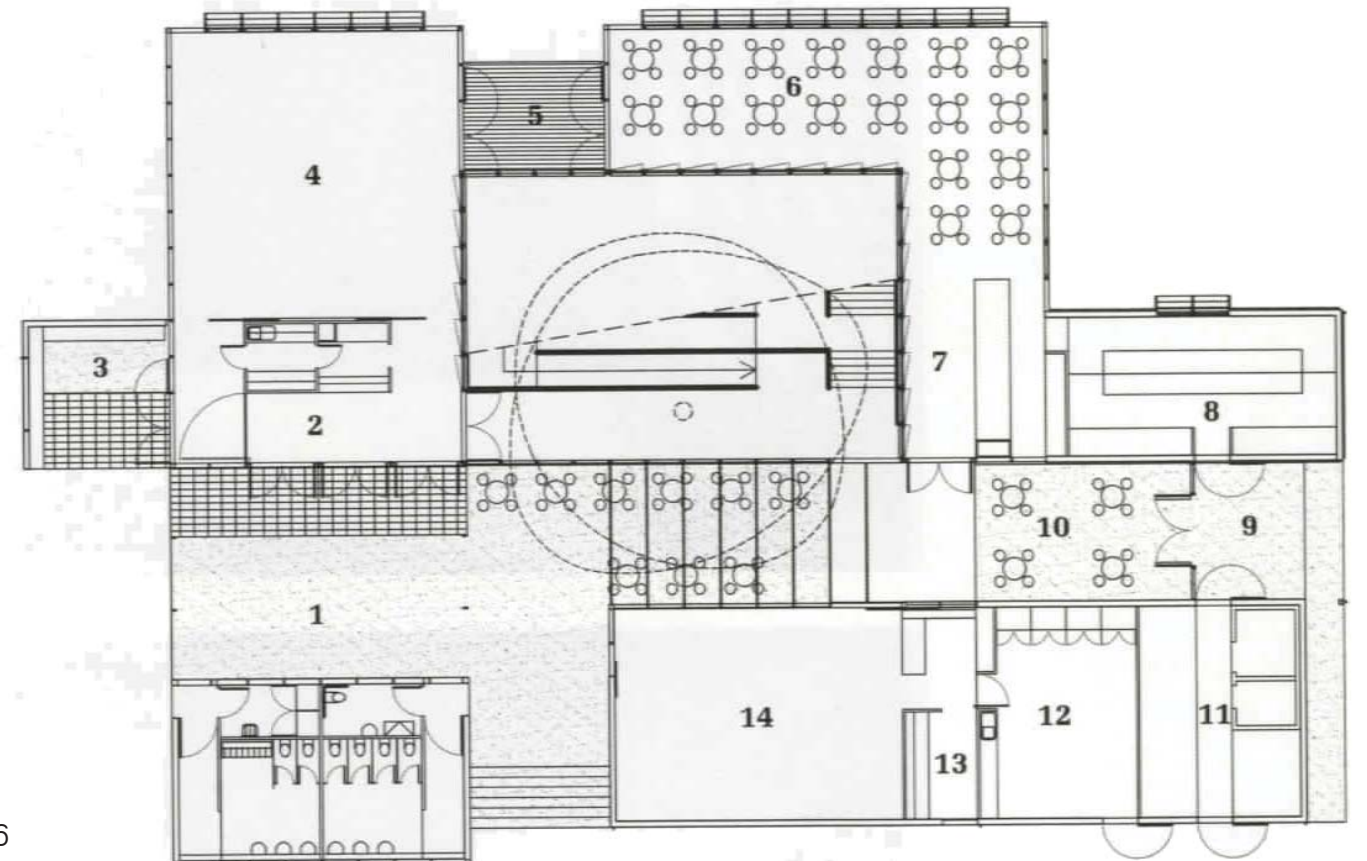
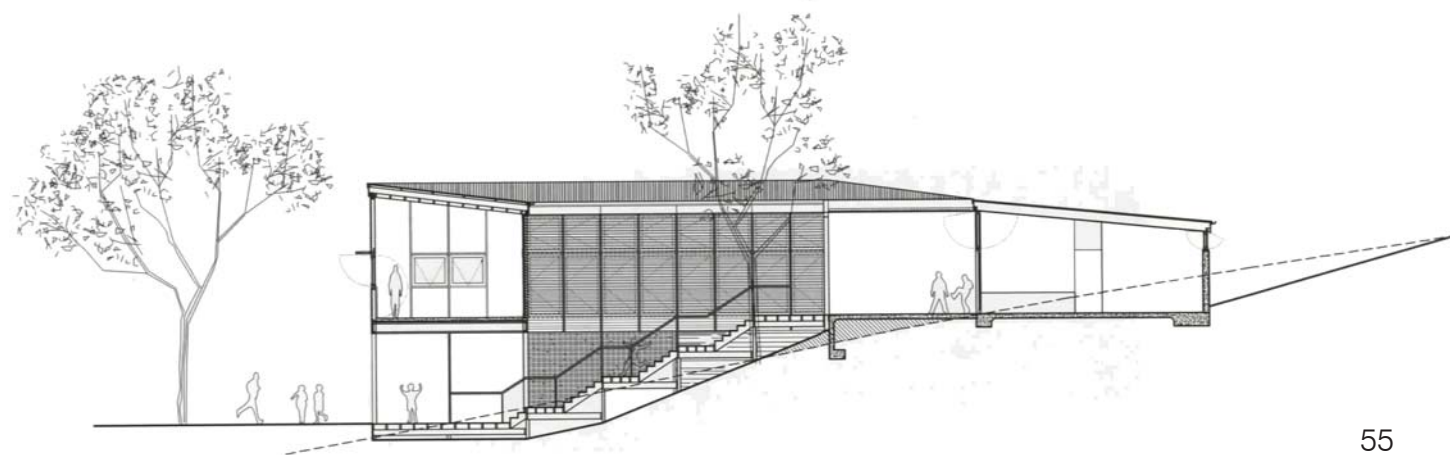
Thompson's building is key to this suspension phenomenon. Situated up a long curving earth ramp from the carpark, it is poised above the disk of the red centre, which can be glimpsed only through a dense screen of native conifers as the visitor arrives. When the ramp levels off, a trellis roof covers it, and low-key timber pavilions bracket it on each side. The ramp's gravel surface continues as if it is a roadway to the forest beyond which indeed it could become (Schaik, 2007). The entire visitor's center is surrounded by the Australian Garden at Cranbourne. The context is very focused on the Australian landscape. The landscape is an abandoned sand quarry a circular disk of red desert. There is also an old dried up riverbed and a cluster of rainforest trees. The building has

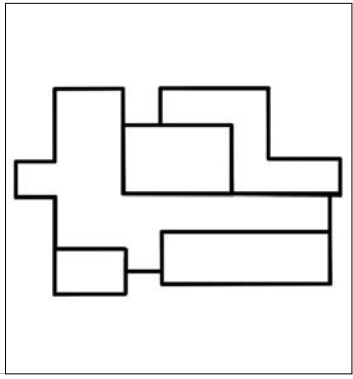
a play between itself and the surrounding natural environment. This is done by the relationships between indoor and outdoor spaces and the points of entry. Many windows start at ground level, allowing views and a sense of the outdoor scenery. The visitor's center has a very open floor plan with many indoor and outdoor transitions. The main spaces are multi-purpose group areas, balanced with some retail and office space. The interaction between the built and natural environment creates very interesting transitions throughout the site and levels of engagement. Shading is used in a very careful, functional, and beautiful way. It creates interesting paths and a journey throughout the buildings spaces.



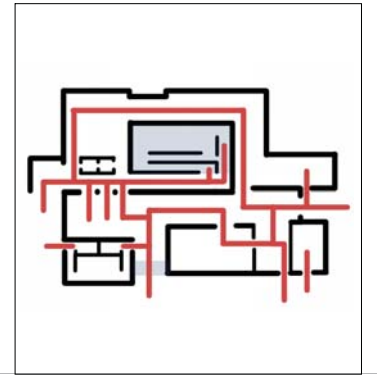


- 1 UNDERCOVER OUTDOOR RECEPTION AREA
- 2 INDOOR RECEPTION AREA
- 3 OUTDOOR GROUP RECEPTION AREA
- 4 INDOOR GROUP RECEPTION AREA
- 5 LINK
- 6 INDOOR CAFE
- 7 SERVERY
- 8 KITCHEN
- 9 SERVICE AREA
- 10 OUTDOOR CAFE
- 11 KITCHEN STORAGE
- 12 STORAGE
- 13 OFFICE
- 14 RETAIL

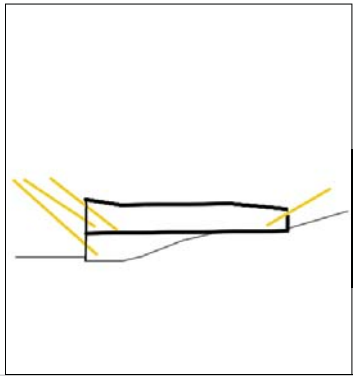




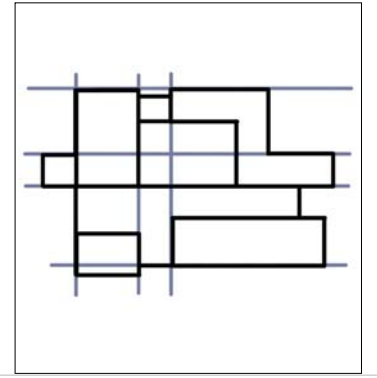
Structure



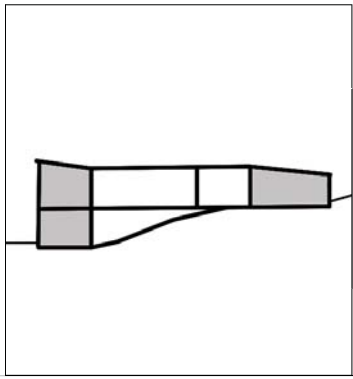
Circulation



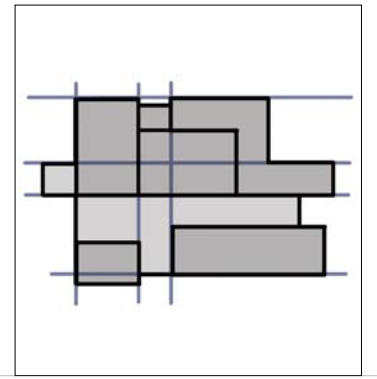
Natural Light



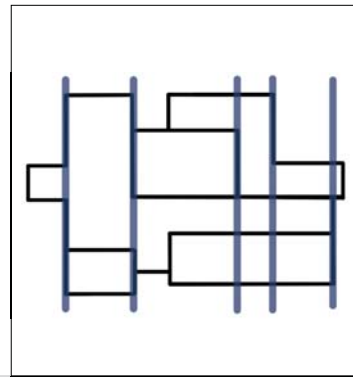
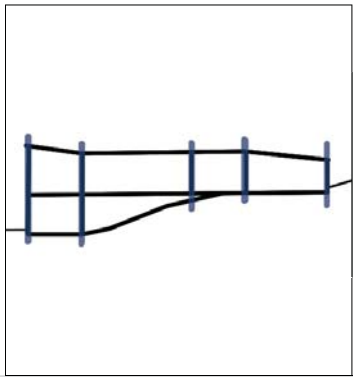
Geometry



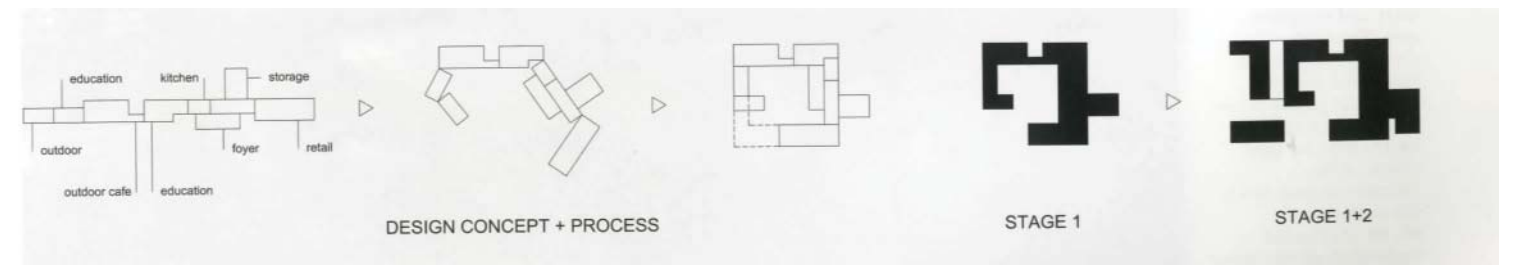
Massing

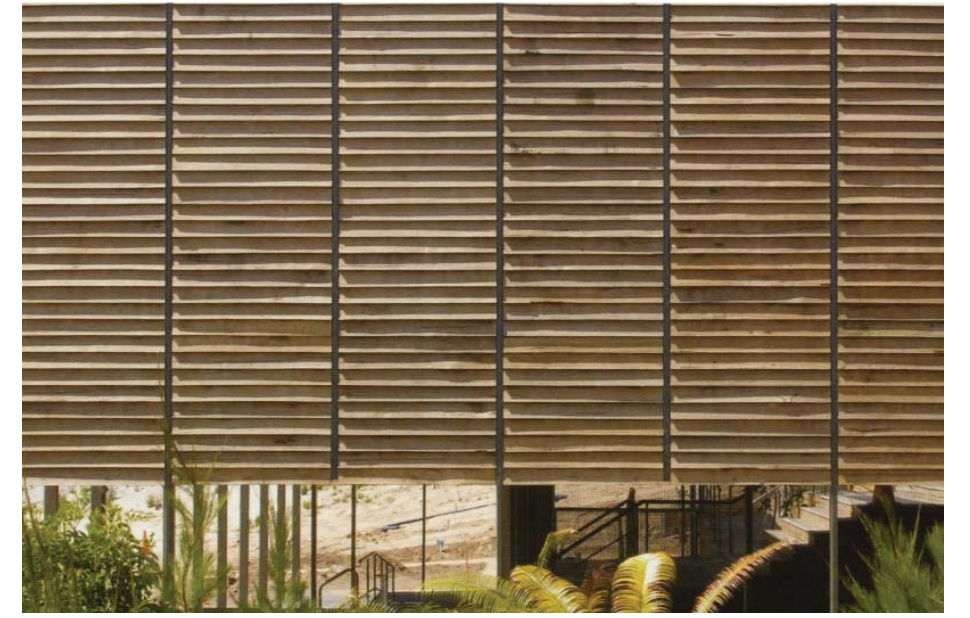


Hierarchy



Plan to Section/Elevation





case study 3

Newlands Community Centre

typology: Community Center
location: Newlands, Wellington, New Zealand
architect: CCM Architects
date: 2008
size: 2132 sf
client: Wellington City Council
address: 9 Batchelor street, Newlands, Wellington 6037, New Zealand
elements: Youth Area, Edlerly Area, Child Area, Meeting Room, Performance Space, Office, Toy Library, Cyber Library, Half Court

This project is a community center for the people in the outer ring residential suburb of Wellington. The site is at the back of a small suburban shopping center that was not chosen by architects, but rather the Wellington City Council. They felt that this particular site would help proclaim a sense of community identity within suburb of Wellington. "Guy Cleverly, the CCM partner in charge of the project, says that the building was intended to meet not only the requirements of local for a multi-purpose community centre; but also to express something more intangible: a sense of identity. In other words, the building would be a signifier and a means to convey a sense of place in a suburb..." (Walsh, 2009).

The building is two levels and is a fairly inexpensive structure because of the costs of the materials specified for construction. "A steel roof is pulled down over walls in

concrete block and board. Inside, the walls are clad in ply and plasterboard" (Walsh, 2009). The materials all have a playful sense with their textures, colors, and uses throughout the spaces of the community center. The program allows for a very interesting interaction between all ages of people. There are areas for older citizens, the youth, and a mesh of both stages of life. The two larger square footage parts of the program are the performance space with a small stage, and the half-court for outdoor activities. The most iconic part of the community center is the cantilever on the west side. It is a deep recessed rectangle painted pink gathering light from the west, and a beautiful glow at night.

Carried out over a period of two years, the issues were many and varied. The design solutions needed to address the following issues:

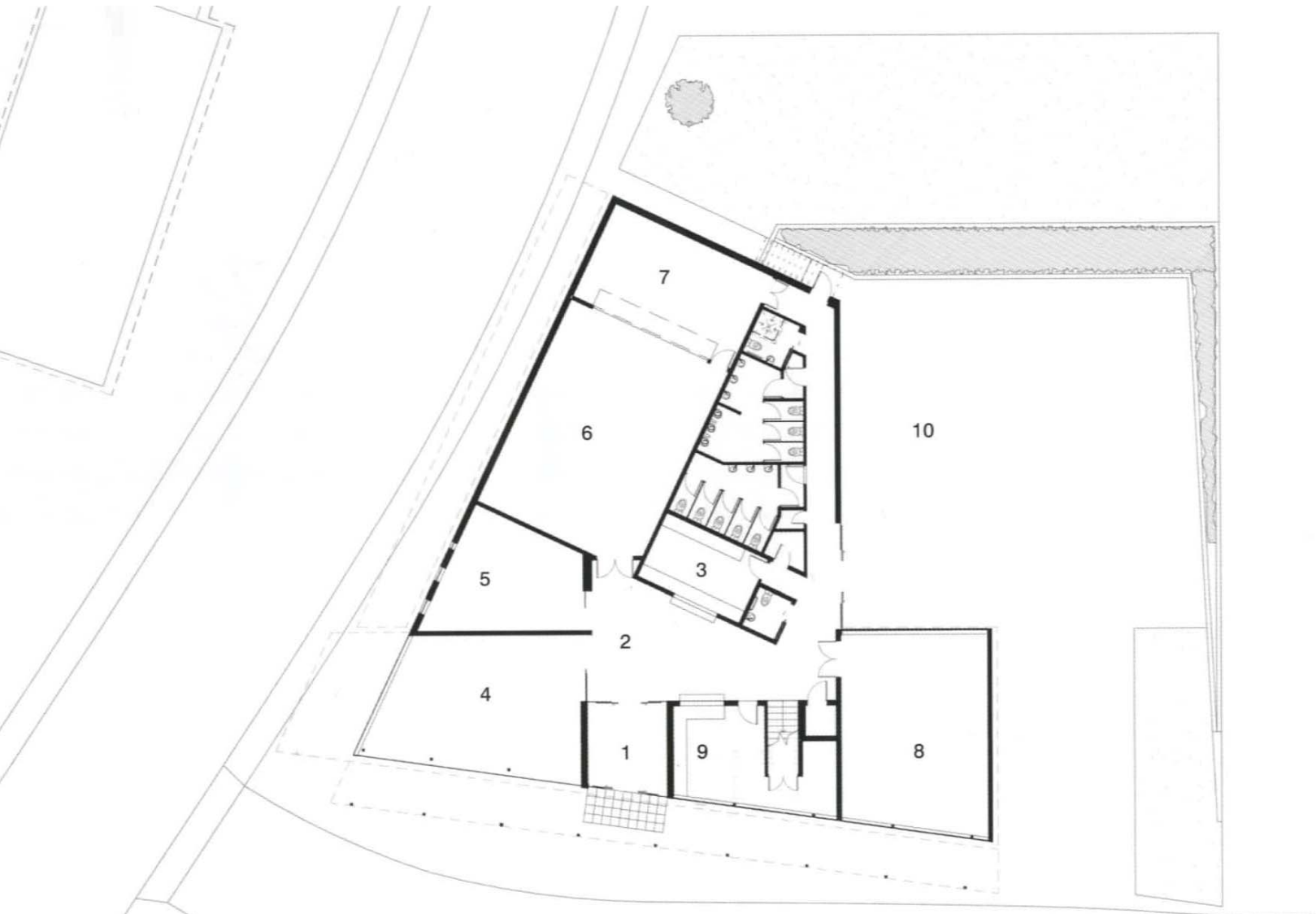
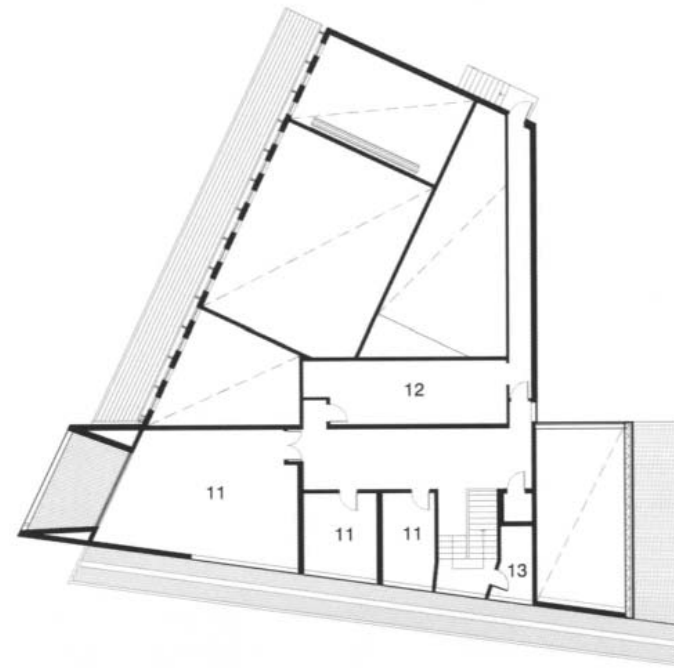
- 1: Identity; This is a strong community who wanted to have pride in their community centre.
- 2: Urban Design; The site is at the back of an older suburban shopping area and the urban form needed transform and reinforce a street presence from what was essentially a sea of asphalt.
- 3: Identity; This is a strong community who wanted to have pride in their community centre.
- 4: Urban Design; The site is at the back of an older suburban shopping area and the urban form needed transform and reinforce a street presence from what was essentially a sea of asphalt.
- 5: Site Contour and Orientation; The site had a cross fall of three metres. This needed to accommodate level access for people with disabilities.

- 6: Street Presence; The site is situated on a back street. It was critical that the building be easily identified from a distance. The 3 metre cross fall dictated the entry location to the southern side of the building in the right of way adjacent the tavern. So it was a critical issue to ensure the entrance although around a corner, was signalled from the street and easy to locate for visitors.
 - 7: Community; With many varied and competing interests the design had to provide a functionality that accommodated the communities outline brief.
 - 8: Cost; Being publicly funded the project required transparent processes that were cost effective.
 - 9: Ongoing Maintenance; The project needed to be easily maintained over the long term.
- The building has been open since last year and is proving destination and popular venue for the community. (Saieh, 2009)

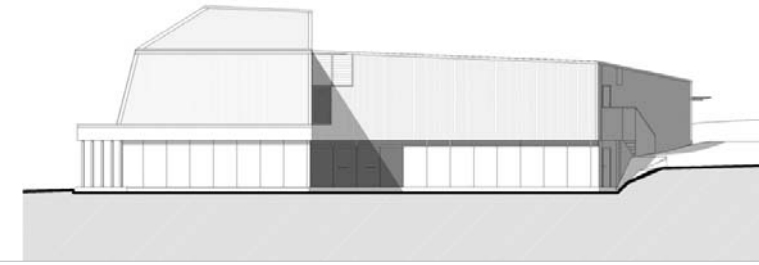


Floor + Site

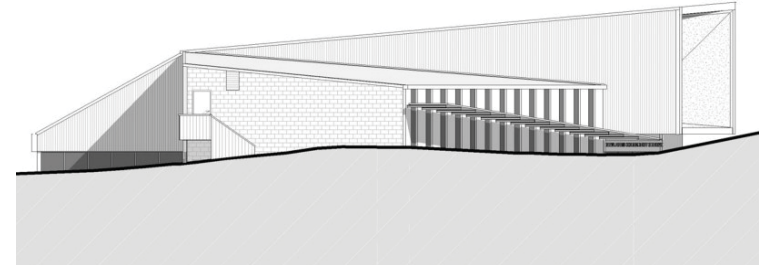
- 1 ENTRY
- 2 FOYER
- 3 RECEPTION
- 4 CYBER LIBRARY
- 5 TOY LIBRARY
- 6 PERFORMANCE SPACE
- 7 STAGE
- 8 YOUTH AREA
- 9 KITCHEN
- 10 HALF COURT
- 11 MEETING
- 12 PLANT ROOM
- 13 OFFICE



North



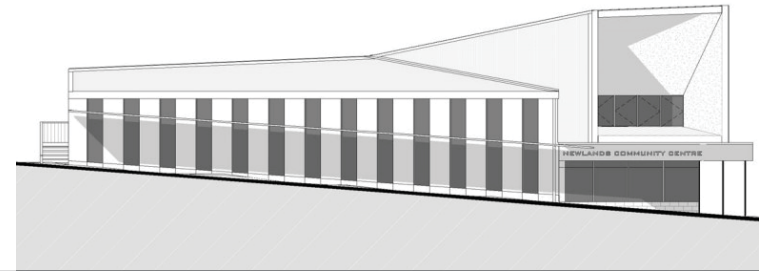
East

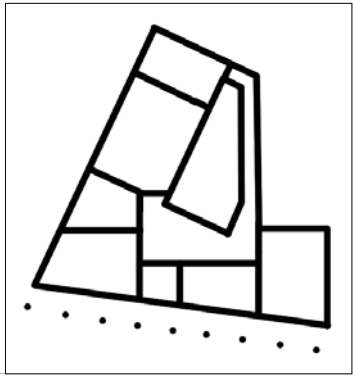


South

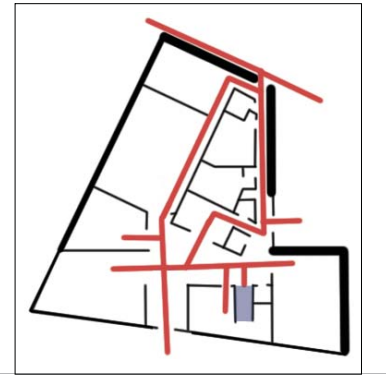


West

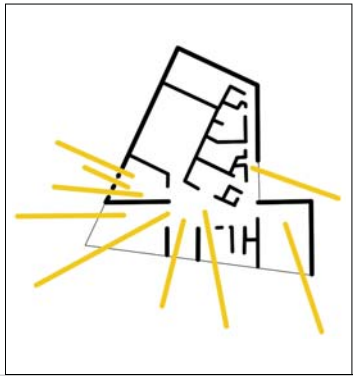




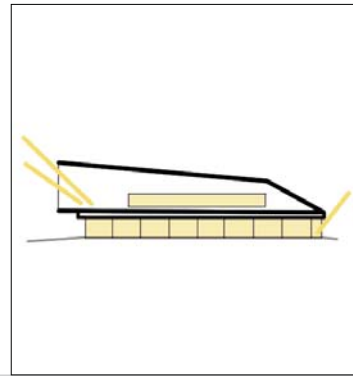
Structure



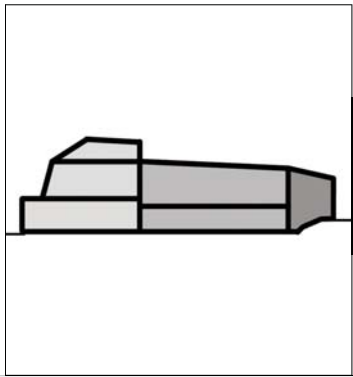
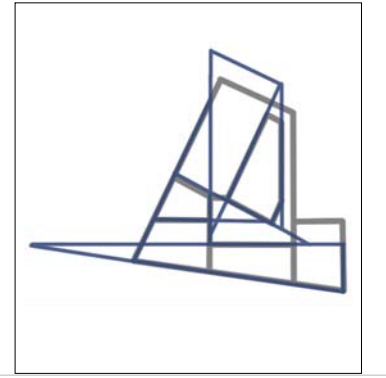
Circulation



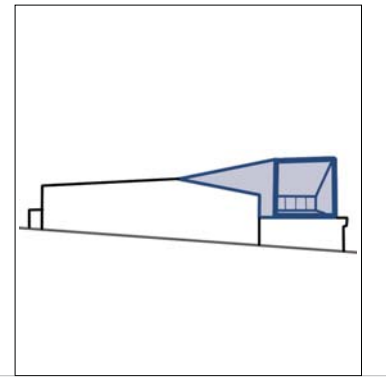
Natural Light



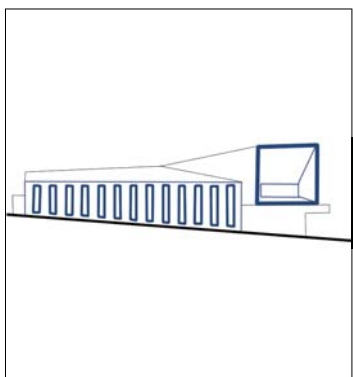
Geometry



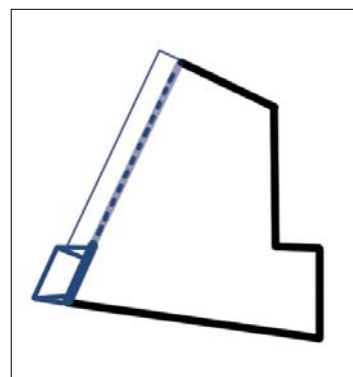
Massing

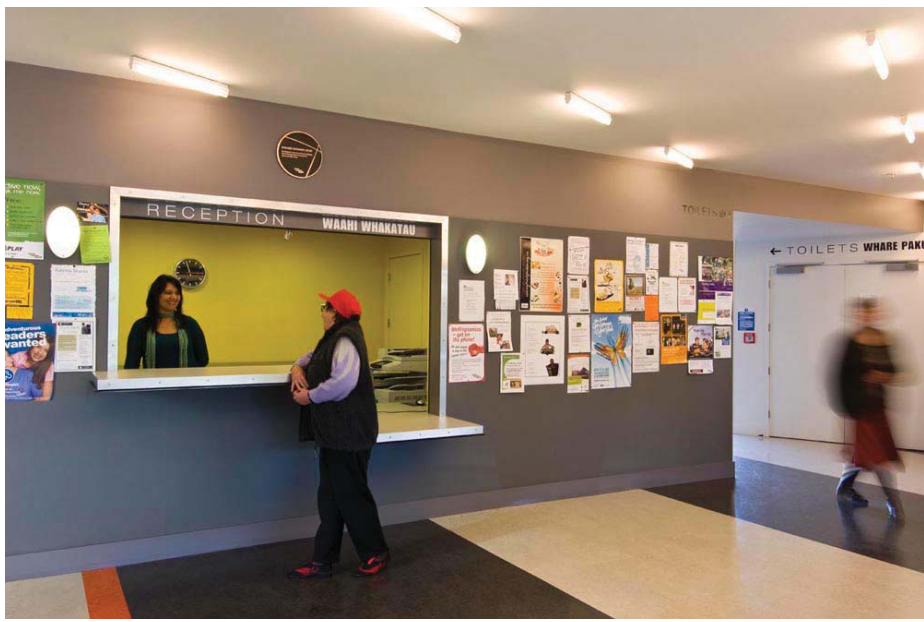
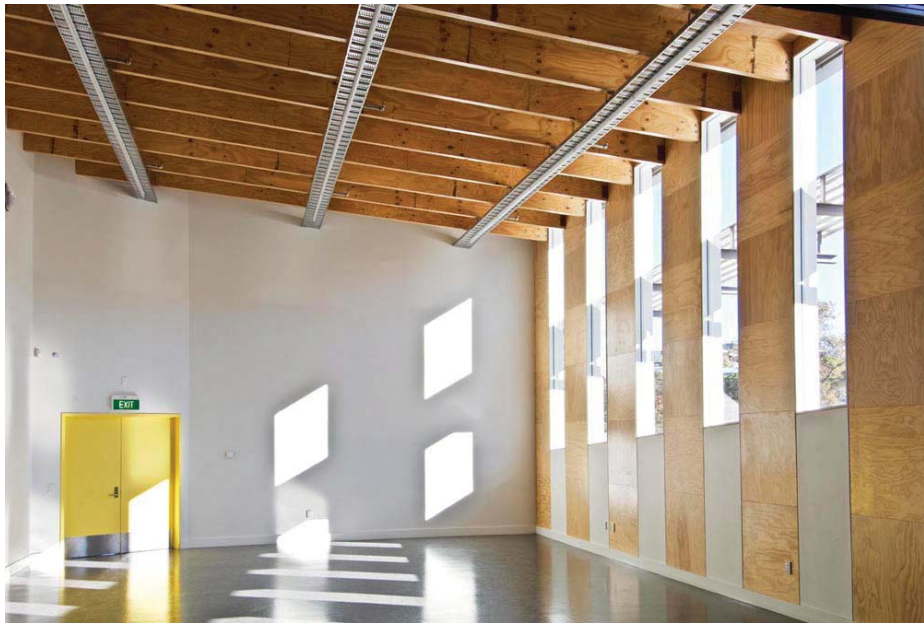


Hierarchy



Plan to Section/Elevation





case study +

Te Matariki Clendon Community Center & Library

typology: Community Center & Library
 location: Manukua, Auckland, New Zealand
 architect: JASMAX
 date: 2005
 elements: Sports/Recreation, Health/Fitness, Social Clubs
 Youth Center/Activities, Social Clubs, Library



Urban Farm Project & Community Food Center

typology: Farming & Community Food Center
 location: Lincoln, NE
 architect: Min Day
 date: 2008-In Progress
 elements: Retail, Farmers Market, Greenhouse, Offices,
 Outdoor Education, Growing Roof



Lavezzorio Community Center

typology: Community Center
 location: Chicago, IL
 architect: Studio Gang Architects
 date: 2007
 elements: Infant Day Care, Office, Community Room,
 Game Room, Counseling Rooms



Faneuil Hall Marketplace

typology: Urban Marketplace
 location: Boston, Massachusetts
 architect: BTA
 date: 1973
 elements: Civic Meeting, Exhibition Hall, Central Public
 Market, Outdoor Gathering Space



The Minneapolis Riverfront

typology: Riverfront Development
 location: Minneapolis, MN
 architect: Cuningham Group
 date: 1996
 elements: Housing, Retail, Transportation, River Front
 Design



The St. Paul Riverfront

typology: Riverfront Development
 location: St. Paul, MN
 architect: St. Paul Riverfront Corporation
 date: 1997
 elements: Housing, Retail, Transportation, River Front
 Design, Landscape Design



case study summary

This series of case studies represents a great variety of mixed-use building typologies. The buildings that were analyzed are Surry Hills Library & Community Centre, Australian Garden at Cranbourne Visitors Centre, and Newlands Community Centre. Each of these buildings uniquely responds to the cultural and historical context in which it was built. These case studies help define a scale and scope of design work. Each building was specifically analyzed through the following diagrams: structure, natural light, massing, plan to section/elevation, circulation, geometry, and hierarchy.

When relating to my theoretical premise, “The design will be re-discovering the city’s historical influence to aid in restoring a sense of community identity” I find that every case study explores and shows examples of how to achieve this statement. Every building relates to this subject in a different way, but ultimately each case study attempts to restore or establish an *identity* within their community. The Surry Hills Library and Community Centre was located in a socially and ethnically diverse community. The city and community did not want just a library or community center, or childcare center, but rather a diverse building to hold all these functions at a smaller scale. In this way the building became a place for the people of the community to meet and use in different ways. The Australian Garden at Cranbourne Visitors Centre is surrounded by the Australian Garden at Cranbourne. The context is very focused on the Australian landscape which in this area is an abandoned sand quarry. This visitor’s center has a play between itself and the surrounding natural environment. The Newlands Community Centre is a project for the people in the outer ring residential suburb of Wellington, New Zealand. The Wellington City Council chose the particular site for the building

because they felt it would help proclaim a sense of community identity with a suburb of Wellington. The site was at the back of a small suburban shopping center that brought in groups of people to the area.

All of the projects had very open floor plans in relationship to their functions. I think that this was a direct response to the idea of a community center and the mixed-use typology. The programs of each building allowed for an open relationship between spaces and created an ease of circulation. These case studies are in a different climate than my thesis site, but I believe it proposes a challenge to link my indoor and outdoor challenges as these buildings have done so successfully. The Surry Hills Library & Community Centre and the Newlands Community Centre deal with entry along the street in an urban setting, but the Australian Garden at Cranbourne Visitors Centre is in a more natural, rural setting. Cranbourne’s visitor’s center is effective in creating interesting points of entry with many indoor and outdoor transitions. I will be using this as a study model, as well as the community centers, to understand how to move people effectively through my building, and how to address entry at the street level.

Overall, these case studies were successful in addressing the most important issue of a mixed-use community center- how to encourage community interaction throughout a building program and establish a sense of community identity. I will be continually searching these case studies as a framework for how to engage these functions. There are six other case studies that I will be using parts of each project to help in my analysis and development: Te Matariki Clendon Community Center & Library, Urban Farm Project & Community Food Center, Lavezzorio Community Center, Faneuil Hall Marketplace, the Minneapolis Riverfront, and the St. Paul Riverfront. In particular, the Minneapolis and St. Paul Riverfronts will help with the urban design part of my thesis and encourage how historical context can influence change within a city in restoring the city’s *identity*.

historical context

Early Stages

Sartell was established as a city in 1907 relying on lumber and a paper company. This small river town was first known as “The Third Rapids” which was named by the French fur traders, because it was the third rapids they experienced as they migrated north from St. Anthony Falls on the Mississippi. Joseph B. Sartell arrived to this area in 1854 and was one of the first settlers. He worked as a millwright at a local sawmill in the community. By 1870 Joseph had acquired the property where he could begin a business. Watab River is a small outlet off of the Mississippi River in Sartell near Watab Creek Park, and in 1877 Joseph opened a flour mill on this river. He had seven sons, and in 1884 they started the Sartell Brother Lumber Company. The occupation of logging, saw milling, lumber finishing, marketing and sales lasted over 75 years. “...the area became a viable settlement, then a village and prosperous manufacturing community and then a growing city with bright plans for the future.”. This point in Sartell's history initiated the framework of its historical context.

On the borders of my thesis site is where the first dam across the Mississippi in Sartell was built from 1905 to 1907. Along with the construction of the first dam, construction began on the Water Pulp and Paper Company, which was the first paper mill establishment in the city. The paper mill company has gone through many changes since it was first established. As stated in the 2006 book *History of Sartell: Lumber, Paper, Valves, and Progress*, “The paper mill was completed and began making paper in 1907. This was to become the St. Regis Paper Company in 1946 and finally Champion International in 1984, and in 2006 it was sold once again and renamed VERSO Sartell Paper Mill. The Paper Mill has always been the city's largest employer” (Historical Publications, 2006). I had the privilege of interviewing Jeff Kantor a Paper Mill employee for the past 31 years and asked him, “What are some pros and cons about the way you feel the Paper Mill has impacted the community of Sartell?” He replied, “The mill has definitely added to the tax base of Sartell, and the growth of the community. Many employees have made a good living and started their lives all the way to retirement working here” (Kantor, 2011).

Along with the paper mill, DeZurik Valve Company is one of Sartell's largest employers. The company was founded in 1925 by Matt Dezurik, who originally started as an employee of the Watab Paper Company. These two industries are located across the Mississippi River from each other, with the river acting as a parallel. The paper mill is located on the east bank, and DeZuriks on the west. During World War II the DeZurik Company manufactured castings for tank tracks and valves for ships. In current times, DeZurik manufactures industrial valves for large plants, municipal applications, and valves for the paper industry. There is a great relationship between these two original industries that created the roots for Sartell's existence. The interaction between these two companies is strong, and remains in existence today.

Growth and Development

After the two main industries of valves and paper established themselves, a city started to develop and grow. Sartell's history book states, "The town continued to grow slowly and developed a number of businesses on the east side of the Mississippi along US Highway #10. In the early 1970's US Highway #10 was re-routed and greatly contributed to the demise of the Sartell East Side Business area. Then the construction of the new bridge over the Mississippi in the early 1980's replaced the remaining businesses. This and Sartell's nearby location to St. Clouds major retail center account for Sartell not having a traditional 'downtown' " (Historical Publications, 2006).

Despite the fact that a downtown had never been developed, the city continued to grow. From 1970 to 2006, the city's population grew from 700 to over 13,000. In Sartell's 2010 census, the total population reached 15,876 with a population density of 2,690.8 per square mile. My family and I moved to Sartell in 1997 and have experienced the city's rapid growth. Since we first moved there, the population has nearly doubled from 1997 to now in 2011.

The riverfront has always been used as an industrial source of development, accompanied by some single family housing. As the city keeps growing, the planning and development has continued westward, ignoring the riverfront and the east bank of the Mississippi. Citizens of Sartell refer to the riverfront as the older part of town and ignore its existence because it has nothing interesting to offer the public. All of the businesses, night life, and places of activity occur near the newest housing development area. Pine Cone Road is the main road that runs through the middle of the city and that is where all of the newer development and businesses are taking place. I often wonder if there was ever a time when the riverfront was the place to be in the early development of the city of Sartell. I asked Jeff Kantor about the riverfront area, and if it was ever utilized by the public and not just industry. He replied, "I think the river is used more by the public than it was 30 years ago. I think that

the vision of the city of Sartell is to keep this portion of the river frontage in its natural state and not have it developed for commercial use. Most land in this area is already developed for single-family housing and I don't think the city wants to redevelop it for commercial. With all the other land already slated for this kind of use (Pine Cone Road area), is feasible for the city itself" (Kantor, 2011). I also asked him about the recent layoff of mill employees and if it has affected the community of Sartell in any way. He answered, "The mill has recently reduced its work force by 175 employees, mostly from the turn of the century machines. This was done because it was getting too expensive to try making paper with outdated machinery. The impact on the community of Sartell is yet to be determined, but I think that in the long run this will not only effect Sartell, but also the surrounding cities" (Kantor, 2011).

The River

In the early days of the river, it was occupied by logging and wanigan boats. Booms of logs would be waiting to be worked and tended for the Sartell Brothers sawmill, and on the far side of the river for the Watab Pulp and Paper Company. The first Sartell dam was constructed in 1906; which was a wooden dam made of cribs filled with rock and covered with wooden planks. It took on numerous amounts of renovations towards the 1960s. The paper mill at first was not very restrictive with the access to the dam, so it became some of the best fishing from the downstream. People still gather and fish today on a small bridge that covers where the river drains into Watab Creek. That span became a common gathering place for local fishermen which helped to balance the industrial use of the river. As logging processes changed, the river's use for traveling timbers changed, "As logging along the upper reaches of the Mississippi River wound down in the decade before the first world war and shortly thereafter, sources of sawable timbers changes. And the Sartell Brothers methods of operation also changed. There was one short 'log drive', about 1928 but that was only a two-mile event when Pine Point was selectively cut, the

logs hauled to the river and then boomed and towed the short distance to the sawmill” (Historical Publications, 2006).

Once this logging came to an end, companies became ready to harvest dead heads which were logs that took on too much water to float and eventually sank to the bottom of the river. Some of these were even driven into the mud because of the water pressure of other timbers in log jams. These were mostly pine and rested in the muddy rest until maybe later recovered.

Thomas Sartell reflects on some thoughts about the river has been viewed in *History of Sartell Minnesota: Lumber, Paper, Valves, and Progress* states, “We took the Mississippi River for granted. It was just always there, in every season and in many guises, always in sight, always appealing, always beckoning and always fulfilling in many ways. It provided us with scenery, it gave us fishing and all that implies and presented us with numerous spots for swimming. It developed into an almost endless sheet of ice in the winter for skating and ice boating and, when it was covered with snow, a still endless expanse of surface for skiing, in either the cross-country manner or by being towed at the ends of long ropes behind cars. Of course, that was before the dam. There was more, though. The beginning of my life saw the beginning of the end to the river being used for logging” (Sartell, 2006).

To transport supplies across the Mississippi, the Sartell brothers ran a ferry because across the water transportation was a must. The ferry also served cross-river traffic for people, vehicles, and animals. In 1914 a girdered steel truss bridge was built by the Northwestern Bridge Company. This bridge became a concern later because of its structural integrity, and was abandoned (not demolished) and a new concrete bridge was constructed further downstream. The old girdered steel truss bridge was a means of transportation across the river but was not very wide, so only one vehicle could cross at a time. It connected the communities on each side of the river and was much more efficient than crossing on a ferry. This

bridge is still in existence today, but its entry on the west side remains hidden behind vegetation and has no physical purpose to this day. The only reason it is still standing today is because it runs utilities across the river. The east bank is now taken over completely by the mill, which was once residential property before the mill expanded and took over the east banks of the Mississippi. The old bridge tells a story about its previous activity and the first man-made connection that was made between banks.

Community Attractions

In very close proximity to the Mississippi River and dam on the west bank was a place called “Winter Haven”. A 120-foot long and 40-foot wide building named Sunset Lodge was constructed in 1950 on a hill adjacent to the Watab River. The building included a roller skating floor and also had a stage, concessions, and roller skate exchange. The center eventually grew to incorporate toboggan rides down slides built into the slope of the Watab River.

On the bottom of the hill, an ice skating rink was built, and even ice skating contests were held. Parades were celebrated which included marching bands, drum corps, dignitaries, and snow queens. Each year a Winter Haven queen was chosen, and the winner received an all-inclusive week long vacation at the famous Sun Valley Resort in Idaho. Over the years of Winter Haven’s existence, many musicians, dignitaries, and movie stars joined in the fun activities. Joyce Gelle, a Sartell resident, states, “In 1953, the program even included a variety show at the St. Cloud Tech Auditorium in St. Cloud. A popular play entitled, ‘MINNESOTA’ was sponsored by the Winter Haven at the Paramount Theater in St. Cloud as a money raising event to support Winter Haven events in Sartell. Winter Haven events continued to successfully grow over the years until the 1960’s, when the events no longer took place” (Gelle, 2006). During the winter months, on Sundays, Snow Trains would come from the Twin Cities area. The trains would bring 900 to even sometimes 1000 young people wanting to join in this popular Winter Haven event. This event and

area was heavily targeted towards the younger citizens. Father Ramacher priest of St. Francis Xavier Church in Sartell at the time, stated his philosophy, “It is important to provide good, inexpensive recreation facilities for the community especially for the children and young folks” (Ramacher, 2006).

In the summer months, the main event for the community was the two-day Sartell SummerFest, which still takes place today. This event featured a parade along Riverside Avenue North (along the Mississippi River), a street dance, a water ski show on the river, a softball tournament, a 10-k run, fireworks, and some other events. The event not only excited the residents of Sartell, but also brought in people from neighboring communities. Throughout the years various organizations and clubs hosted the event, and it was well received by the community. It is now a one-day event and is made up of people from across the community who are interested in planning and working Sartell’s largest celebration.

Scattered Commerce

Sartell has never had a central downtown that it developed from. The industrial business took over the banks of the river and made it difficult for business esor homes to develop. The building of the dam and bridges added to the difficulty of local community development. I believe some of this planning was not pushed because of its close proximity to Sauk Rapids and St. Cloud that already had shopping districts. Thomas Sartell states, “We had a strange existence regarding small-town living in that we had no compact business district. Sure, the Sartell’s generated a lot of activity around the river road and Sartell Street but, because of their ownership of all the property, others who wanted to do business could not get a foot-hold thereabouts and had to try their hand in other parts of town – if at all. We saw other towns, even smaller than ours, which seemed to have some central organization for trading. But we didn’t until after World War II and the advent of the shopping mall. Perhaps the facts that we were near to Sauk Rapids and St. Cloud shopping negated

or greatly lessened the need for a variety of retail outlets. From the beginning, our village was dominated by one or two industries and all labor was applied to those activites” (Sartell, 2006).

As I have stated previously, the river has become ignored for development and Sartell is expanding southwest into the borders of St. Cloud. I feel that this historical part of Sartell, where the city planted its roots, needs to be celebrated. Sartell experienced its centennial celebration in 2007 and has had some monuments created on the west bank of the Mississippi, honoring the founders of Sartell accompanied with some historical markers with views towards the original mill and dam area. I will conclude with a statement from Thomas Sartell about the riverfront of Sartell. He states:

“How quickly and completely the face of a town land changes. To some of us, areas of the community are like foreign lands compared with the same locations, a half a century ago. To younger people, though, there is no remembrance of these “long ago” vistas---and probably even less interest. So why bother to recall, preserve write about the memory of scenes from the early decades of the century? On reason, of course, is to satisfy the curiosity of both old and young. Another is to remind new generations that 50 years hence the landscape may also have no resemblance to its appearance today, and some descriptions, if not actual parts of it, should be preserved. Many people are intrigued by the inevitable transformation.

project goals

Academic

This thesis will allow me to explore an interest that I have developed throughout my life particularly in college. I have lived, worked, and attended school in downtown Fargo for the last four years. This has given me exposure to the idea of the walkable city and the excitement of a downtown lifestyle. Throughout an architectural thesis, students should analyze and question their education, and how it relates to society and its changing variables. The case studies I have analyzed helped me become focused in on certain functions of my building and how it can relate to its built environment.

Throughout all my projects in architecture school, I have never had the opportunity to renovate or revitalize a subject of design. Being exposed to the river and downtown every day in Fargo, I have developed ideas and schematic reasonings about their relationship. Also, being exposed to the St. Paul and Minneapolis Riverfront from frequent trips throughout my collegiate career, I have been very interested in the idea of this type of urban design riverfront development.

I hope to gain an understanding of the design strategy of urban design. I barely scratched the surface of this discipline in my educational career here at North Dakota State University. Becoming comfortable with the design strategies and concepts of this discipline will help me market myself for a career upon graduation. Urban design is a large concept that is being done all around the world and could be a very powerful tool to gain through my remaining thesis education.

Professional

This thesis is a final project in the Masters of Architectural education and serves as a transition from education to professional practice. I hope to showcase and demonstrate my skills in a successful,

detailed, completed, and convincing architectural design thesis. The final result should demonstrate and answer my thesis problem statement, "How can a growing first-ring suburban city restore a community identity?"

As an emerging professional in architecture, this thesis needs to be professional in its practicality and show moral responsibility in its design solution. I hope to influence change at a professional level for the City of Sartell. I plan on presenting my initial ideas and research to the proper City of Sartell professionals to help initiate change and propose solutions for the growth of the city. When the thesis is completed I will try to initiate my ideas into the future development and growth of Sartell in hopes that my design strategies will open the public and city officials to a designer's perspective, help Sartell revitalize its riverfront, and restore a sense of *community identity*.

Personal

I grew up in the City of Sartell near the Mississippi River. I have lived in the original developmental area where the city was founded and have witnessed the river being abandoned. Rapid growth has occurred far away from the water, and I feel it is my personal duty to use my education and passion for design to revitalize my roots. Architecture School has opened my eyes to what has been happening to the historical origin of the City of Sartell, and I want to initiate a change. I want to present ideas and design strategies to the people of Sartell so that they can also share the same passion of revitalizing the city that I have grown to love and call home.

My final goal is to produce a project that demonstrates my level and skills of design and educational experience. This is my final project as an NDSU architecture student, and I will be using this thesis as my gateway into the professional design field of Architecture.

site analysis

qualitative + quantitative



views and vistas

plan

Existing Grids

Existing grids consist of roads, sidewalks, recreational path, river, creek, train tracks and their relationships to the building context and natural elements

Existing Textures

Existing textures consist of tar roads, tar paths, concrete paths, paved parking lots, grass, gravel, heavy tree vegetation, water, residential buildings, industrial buildings, commercial buildings, dirt, sand and local granite near the banks of the river.

Material Textures

Material textures around my site are brick, local granite, metal, steel, concrete and wood.

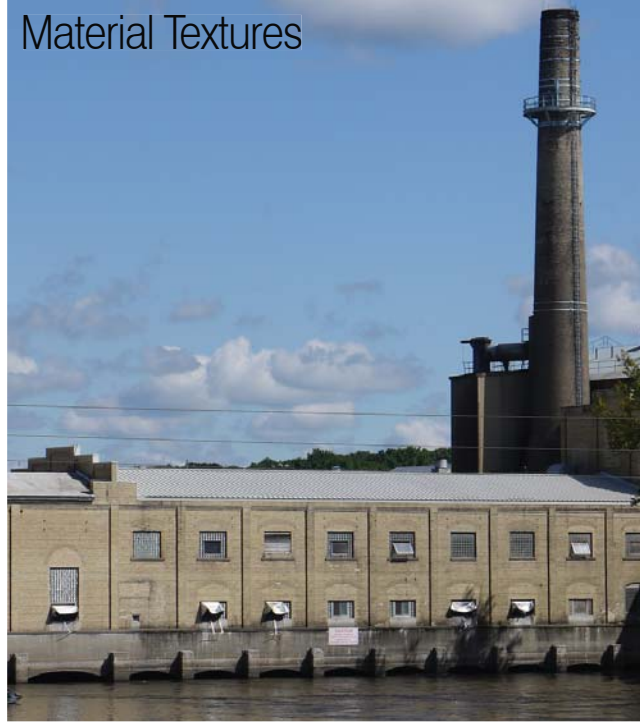
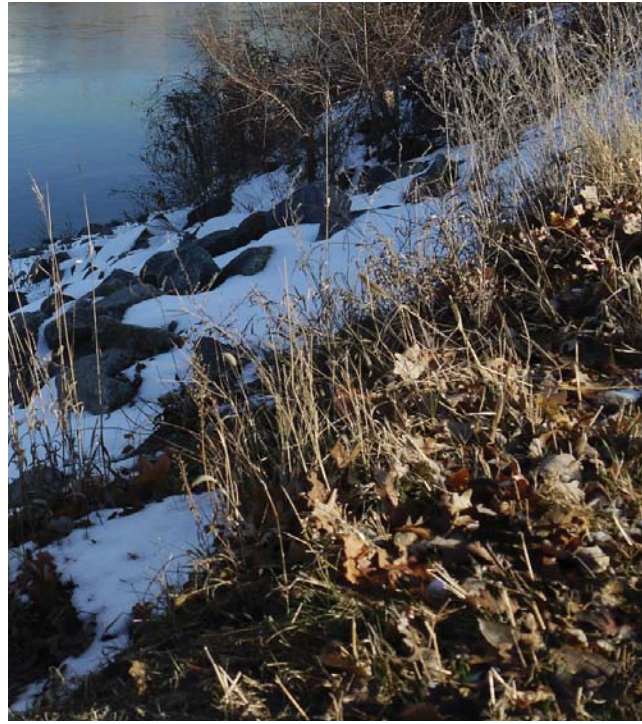
Geometric Relationships

Geometric relationships are visible in the building massing of the figure ground study to the left. It shows the relationship between buildings, roads, and nature.

Shade and Shadow

Shade and shadow on my site has no impact of surrounding buildings. However, there is very heavy vegetation around the banks of the river that protrude into the east edges of my site. The site is very open to the west, north, and south, with no infrastructure impacting with shade and shadow.





Material Textures



views and vistas

section

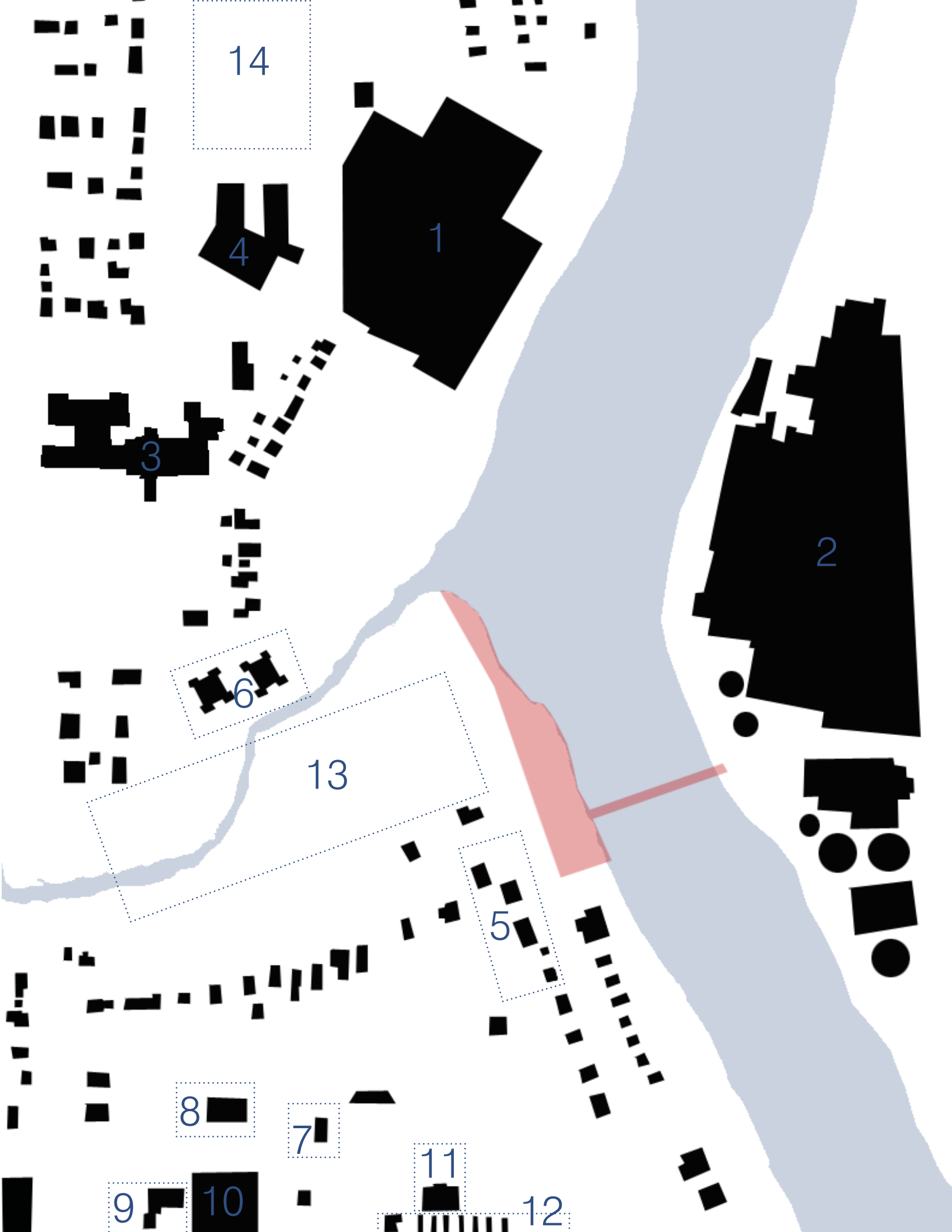
site



correspondences

Built Features and Locations

The figure ground study to the left shows the existing density of the area around my site. My building site does not have any building density, just vegetation that borders the east side of my site next to the Mississippi.



- 1 De-Zurik Valve Company
- 2 Saretell VERSO Papermill
- 3 St. Francis Xavier Catholic Church
- 4 Sartell-St. Stephen School District Offices
- 5 Marnantelis Pizza, Sartell Auto Repair, Floral Shop
- 6 Townhomes
- 7 Post Office
- 8 Daycare Center
- 9 Sartell Police Department and Fire Department
- 10 Sartell Bowling Alley
- 11 Chiropractor Clinic
- 12 Trailer Park Complex
- 13 Watab Park
- 14 Park and Baseball Field

* The remaining masses are RESIDENTIAL



Light Quality

The light quality of my site is very intense from the north, west and south because there are no masses blocking the natural light. The east side light quality is not as strong because of the heavy vegetation. Based on seasons, the light quality from the east changes because of the change in vegetation.

Wind

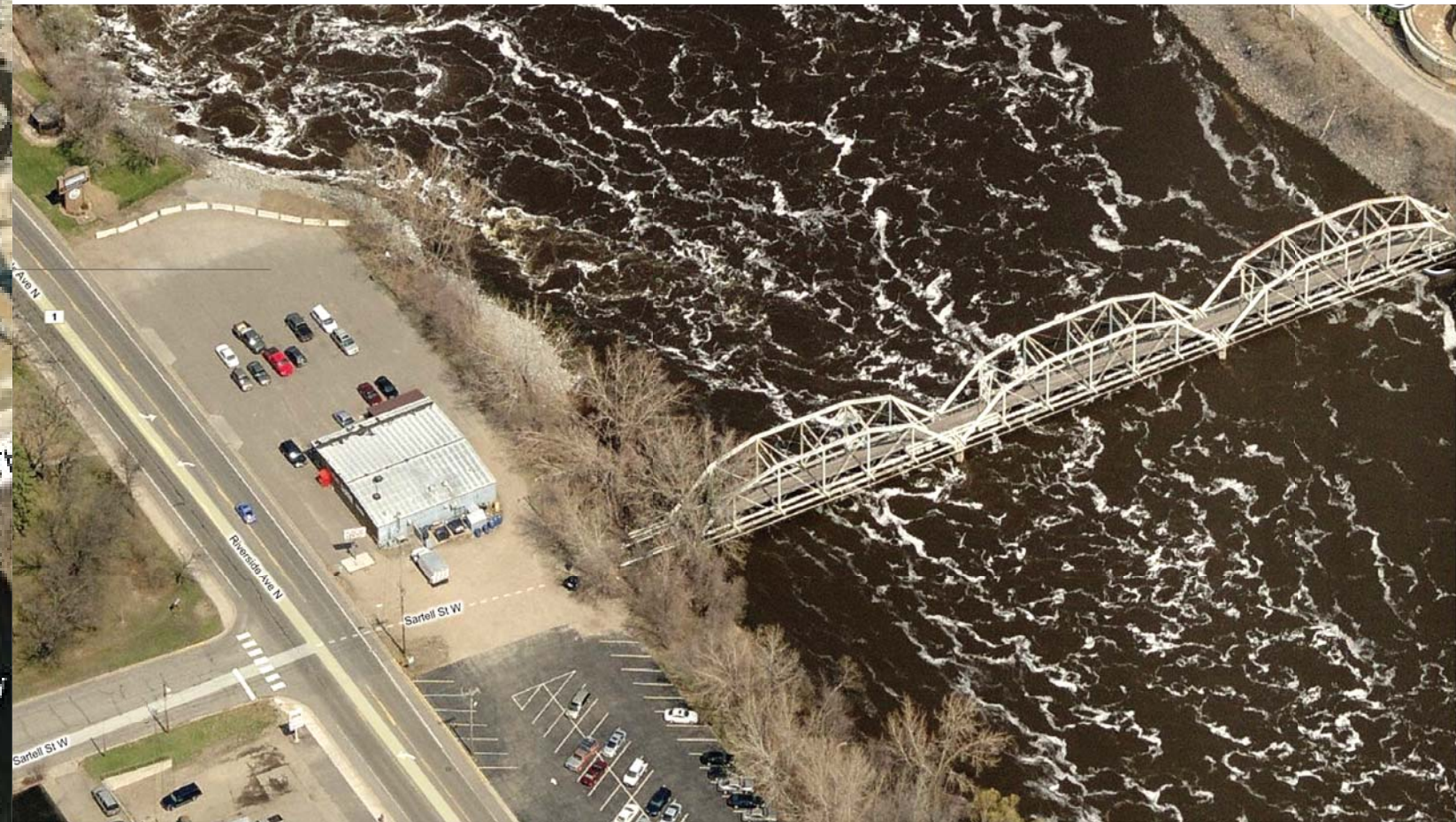
The wind in Sartell is in the lower part of the United States average. The winds from the south are not hindered, but the other cardinal directions are buffered by vegetation. Most of the winds transporting around the river are also buffered because of vegetation and because the river elevation is below my site.

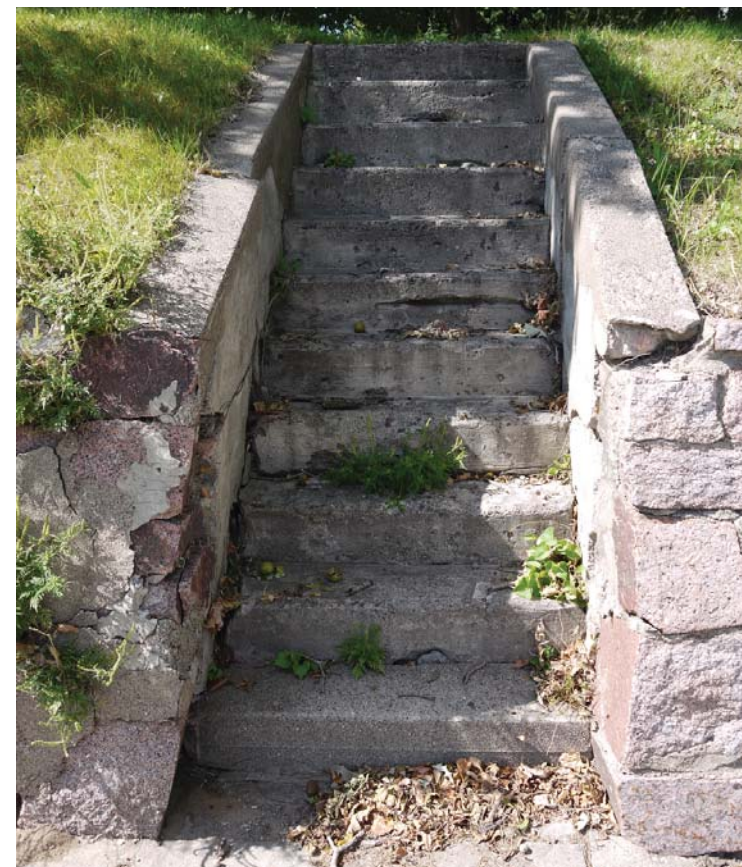
Human Characteristics

The human impact on my site is very minimal. As it exists now, it is all paved, but the edges against the river are in their natural state and heavily vegetated. The road is heavily used by vehicles, and the sidewalks by pedestrians for running or walking are much more minimal.

Site Character - Distress

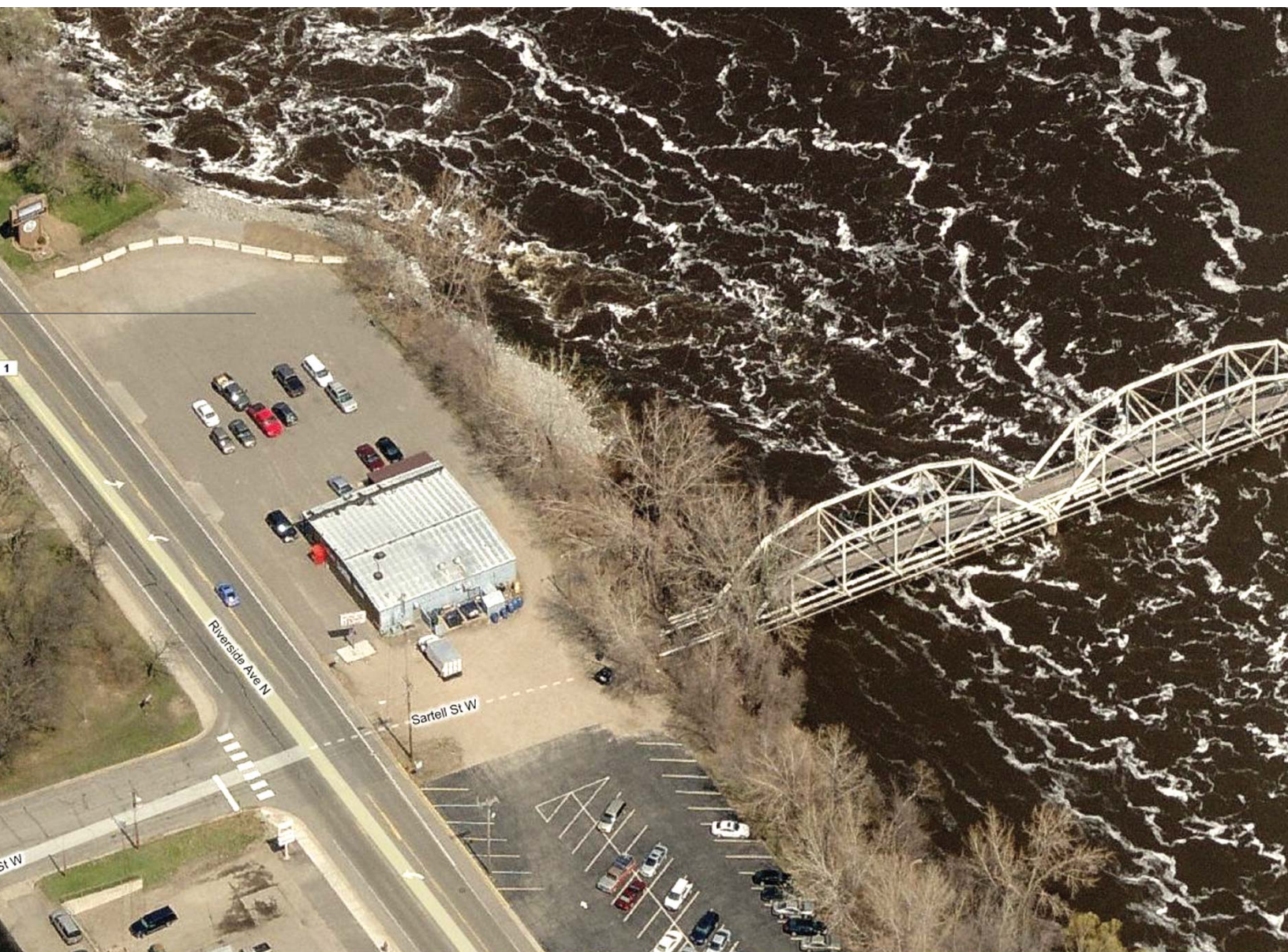
Along the edges of the river there is a lot of impact from the water. Previous floods and rising of the river throughout the year have carved the landscape of the riverfront. Almost all of the trees are in a healthy state, even down on the riverbanks. The bridge highlighted as part of my site is still standing but has no structural integrity. It has been abandoned for a long period of time but remains in existence. All of the buildings along Riverside Ave North are very outdated and show signs of distress in construction and aged materiality.





Vegetation

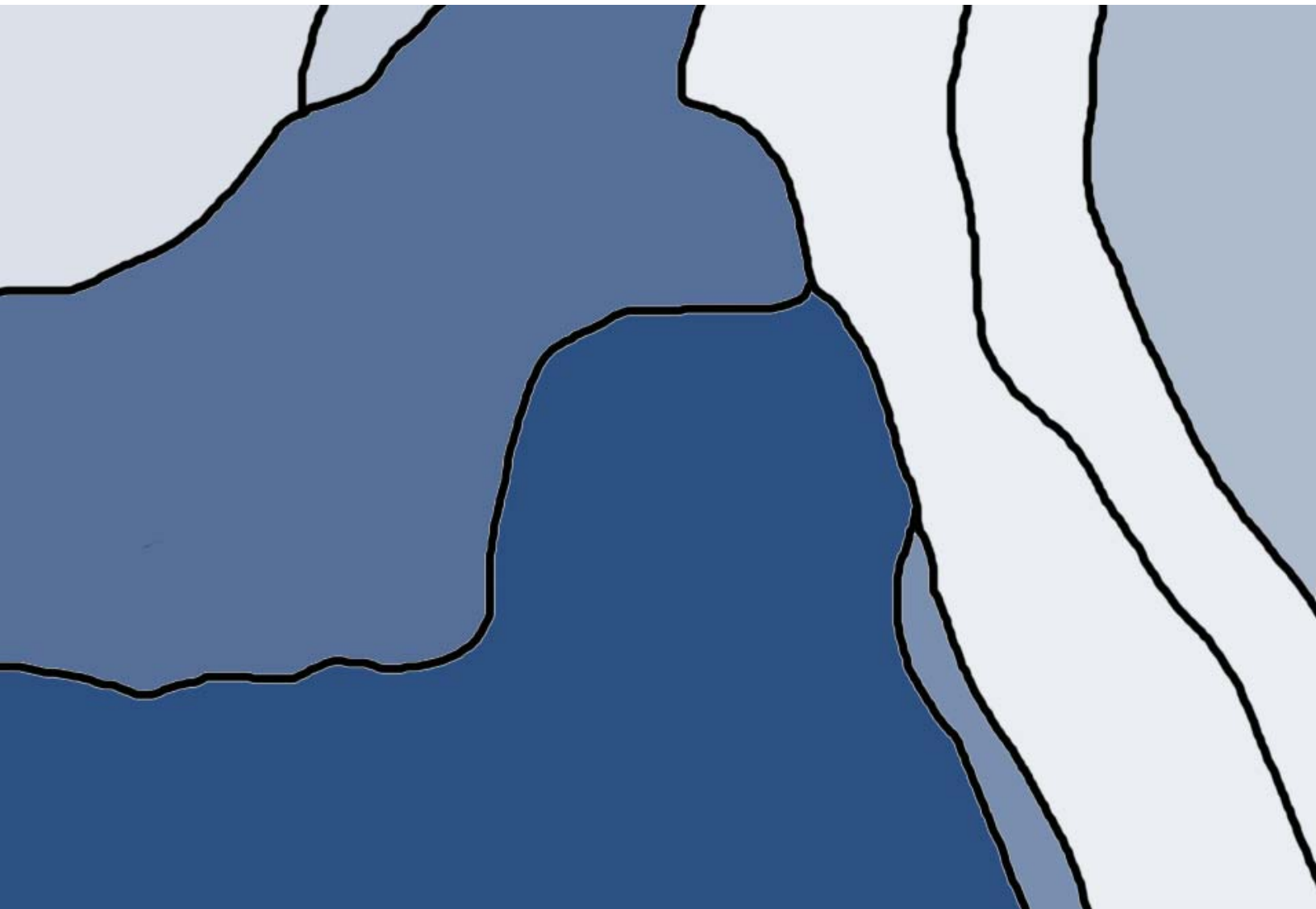
The two photos below display two different times of the year, showing the change in the vegetation. The west bank of the Mississippi River which is the east side of my site, is heavily vegetated with deciduous trees and brush. No vegetation exists on the majority of my building area, but its balanced with the vegetation on its east border. The vegetation on my site serves as a transition between manmade and the natural river.





- mississippi river
- 100 year flood
- 500 year flood
- floodway line

water



119B	Pomroy fine sand, 1 to 6% slopes
1018	Udifluents, frequently flooded
D55C	Zimmerman fine sand, banded substratum, 6-12% slopes
D7A	Hubbard loamy sand, 0-2% slopes
7B	Hubbard loamy sand, 2-6% slopes
7A	Hubbard loamy sand, 0-2% slopes
W	Water



traffic

- vehicular traffic
- train traffic
- pedestrian traffic

Vehicular Traffic

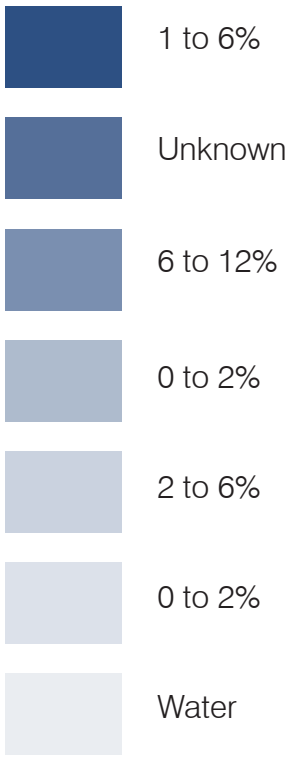
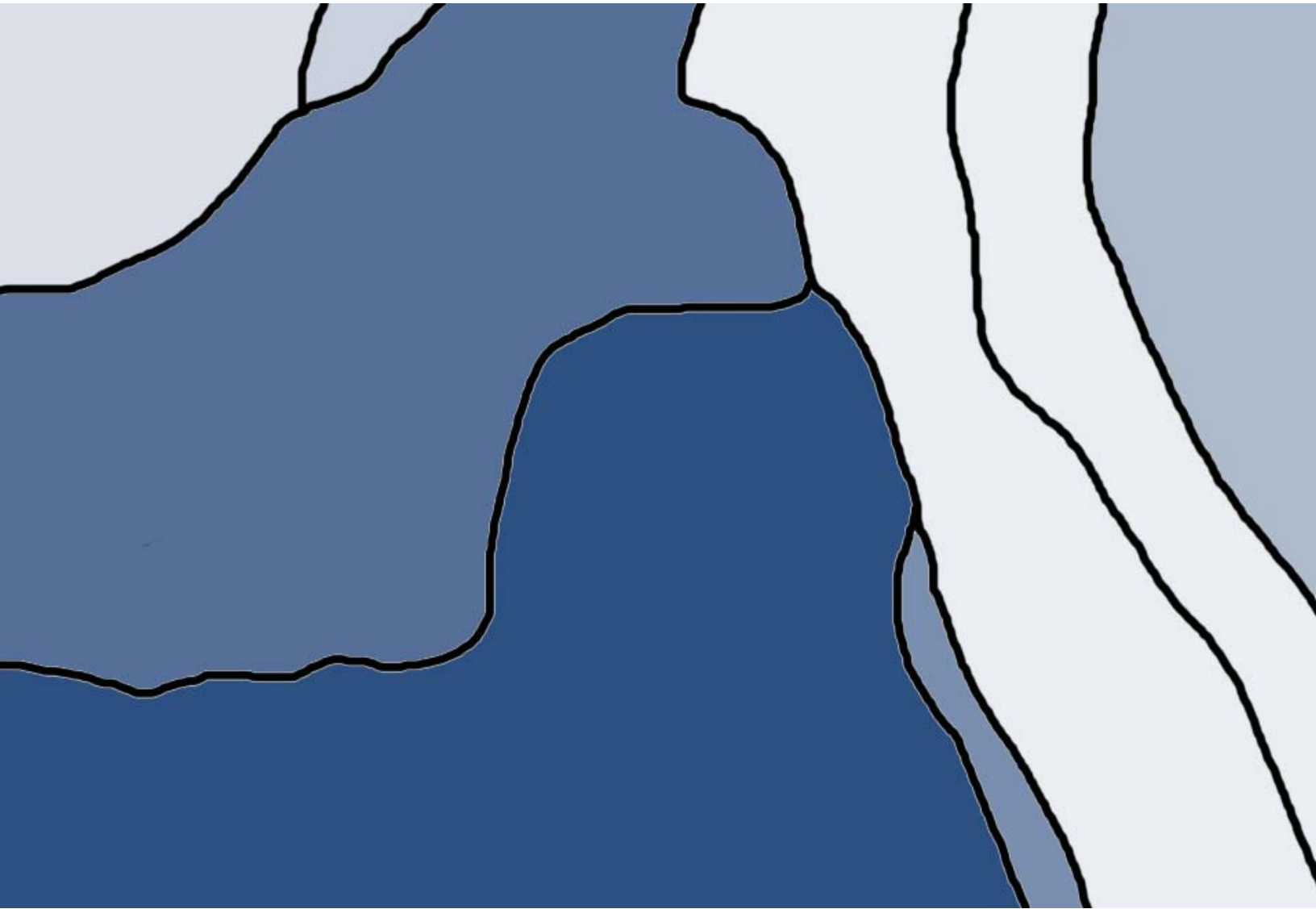
Riverside Avenue North, along the west side of the Mississippi River, is heavily traveled by vehicles throughout the day, mainly during opening and closing business hours. The road serves as the second main road into the city from St. Cloud and the other neighboring cities.

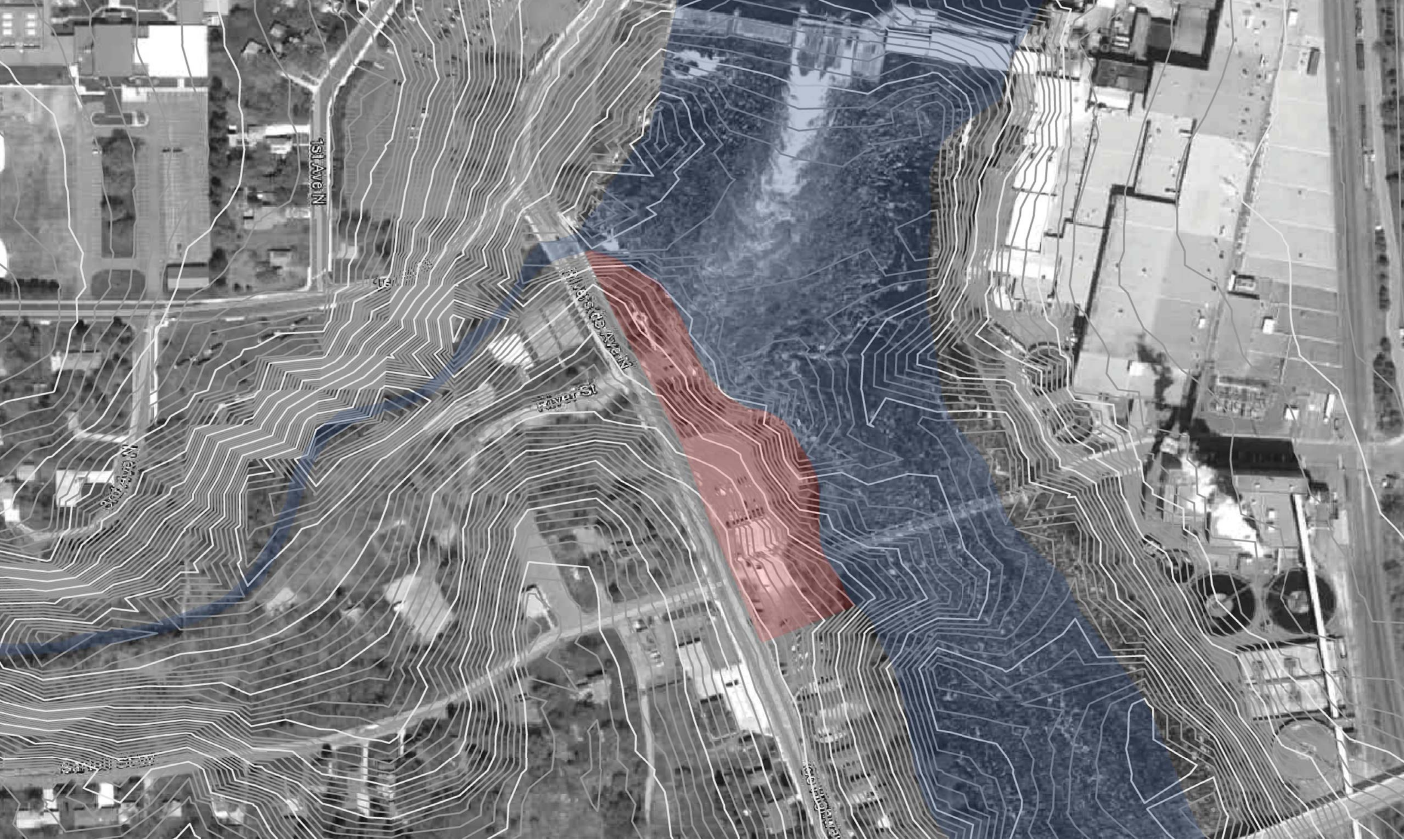
Train Traffic

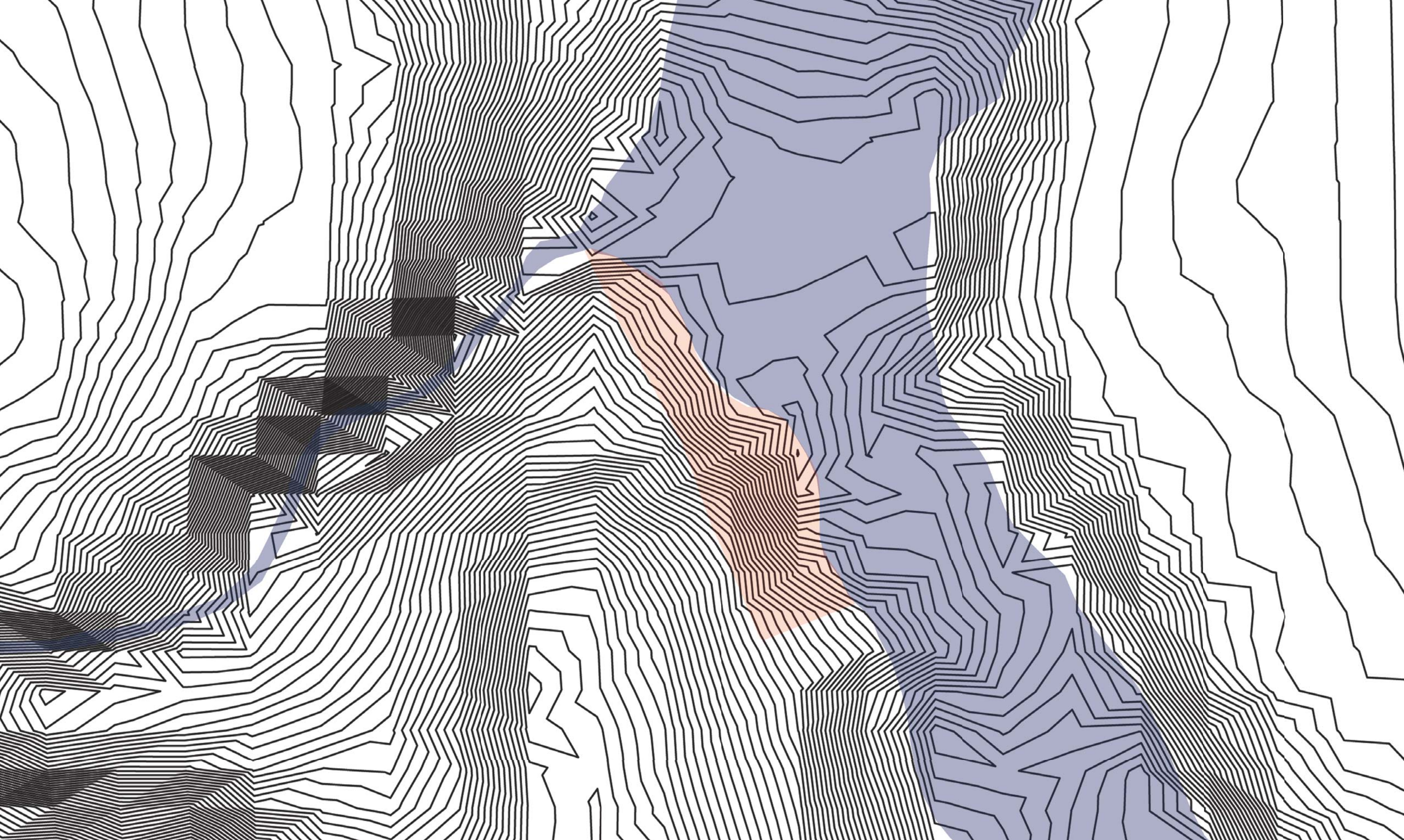
The train traffic is on the east bank of the Mississippi River. The railroad is strictly used for hauling supplies and lumber to the papermill.

Pedestrian Traffic

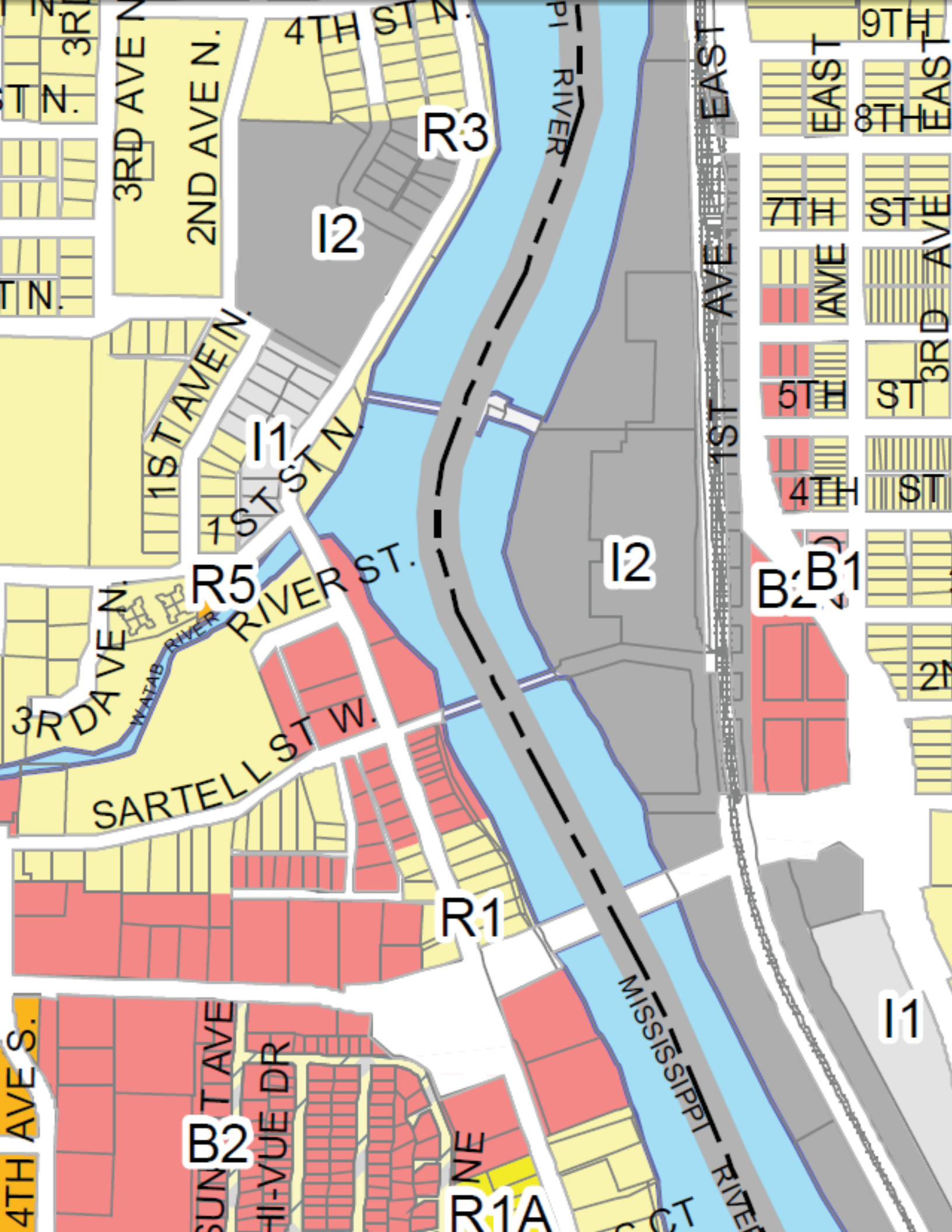
Pedestrian traffic is not as common as the vehicular traffic. The Watab Park attracts pedestrians during the summer months. Most of the residential development is more west of this area, but there still is many people that use the paved paths for biking, running, walking, etc.



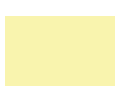


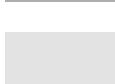







zoning



-  B1 - neighborhood business
-  B2 - general business
-  R1 - single family residence
-  R1A - townhome district
-  I1 - light industrial
-  I2 - heavy industrial
-  R5 - planned unit development

site reconnaissance





1



2



3



2+3



4



5



6

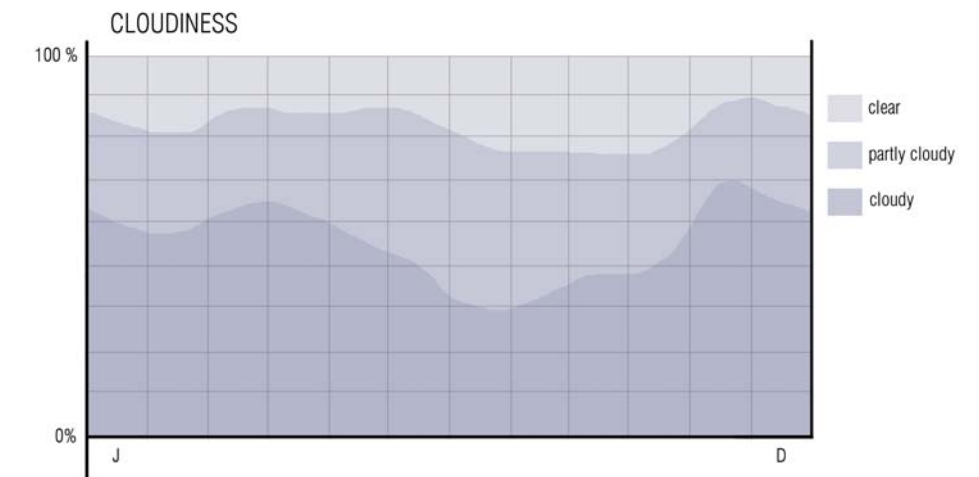
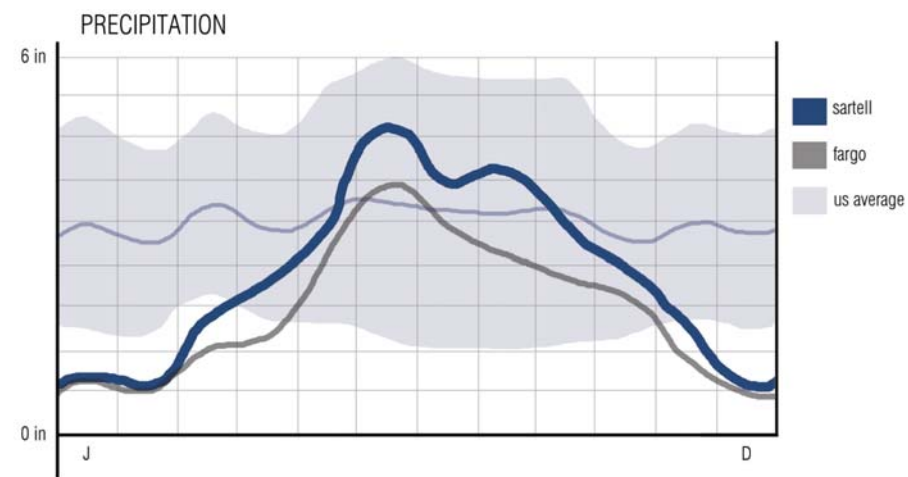
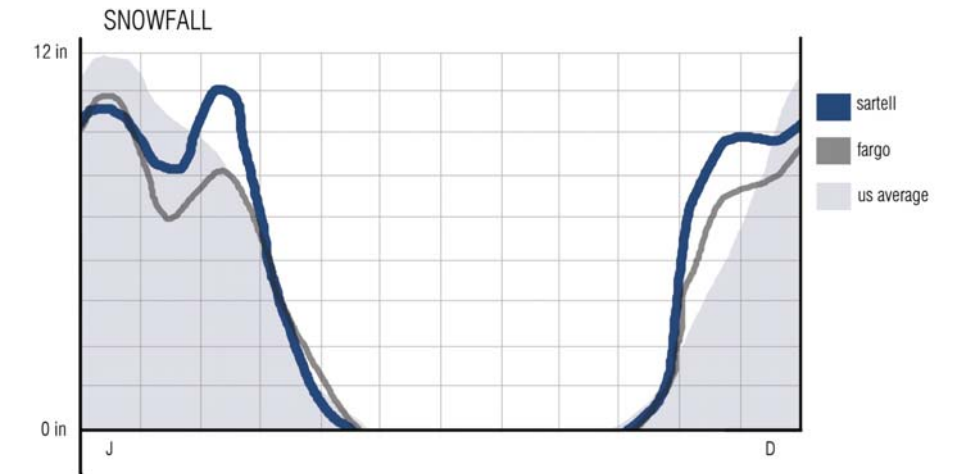
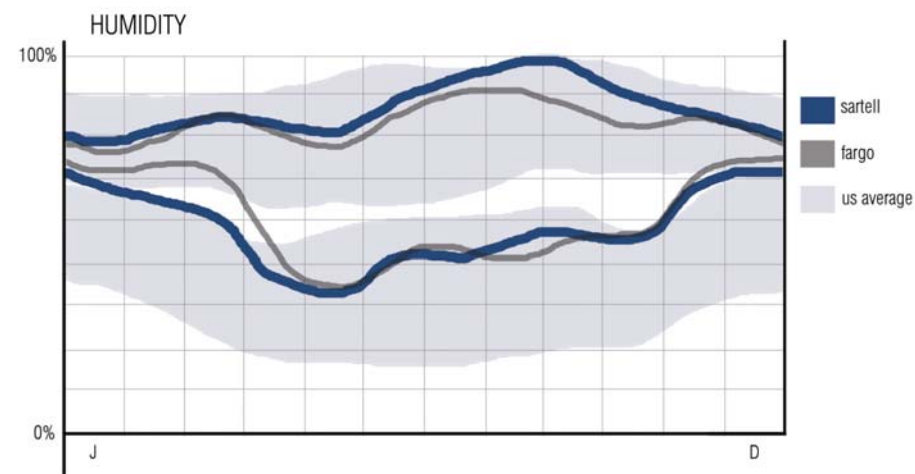
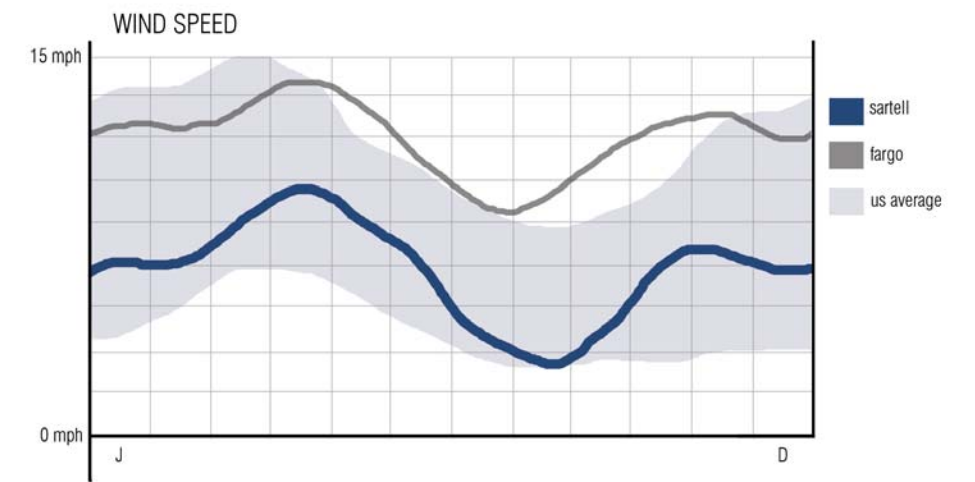
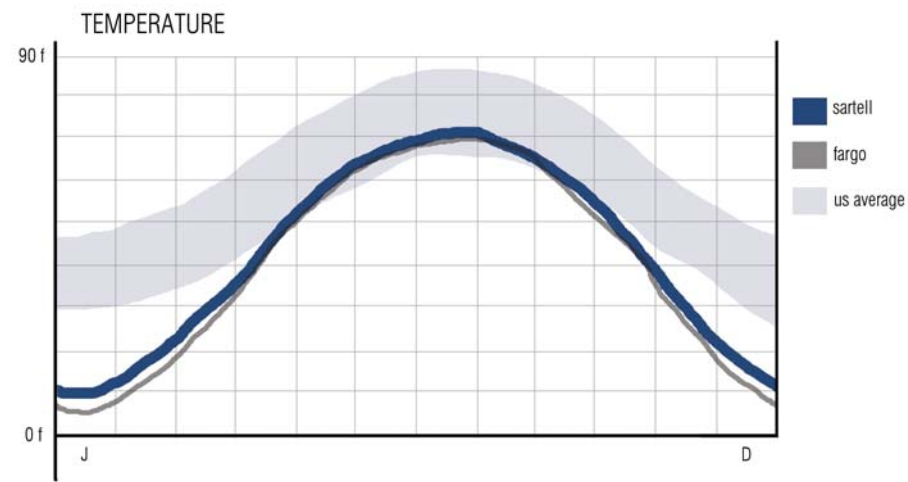


7



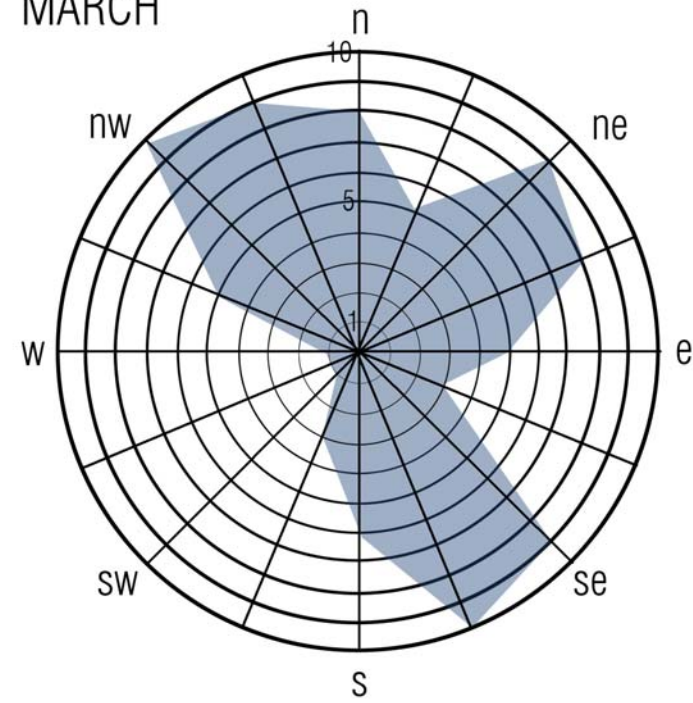
7+1

climate data

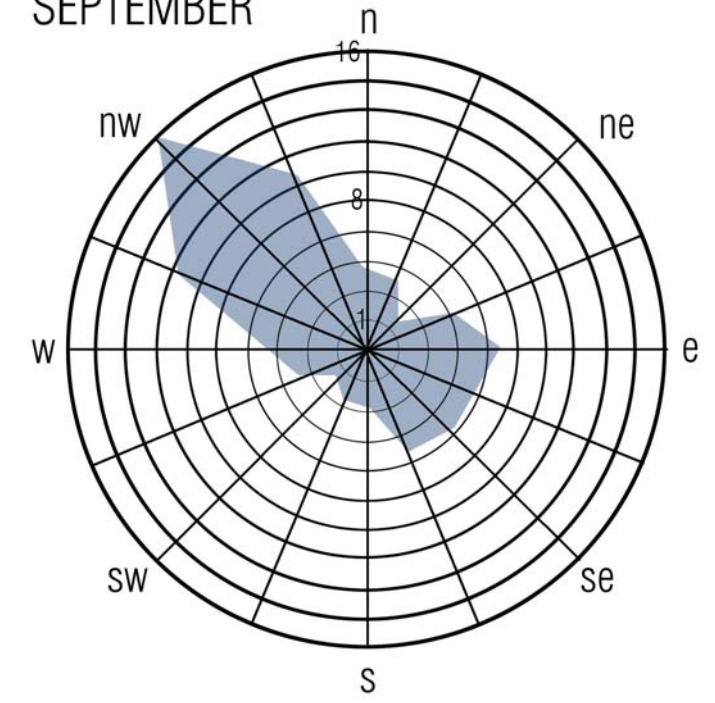


wind diagrams

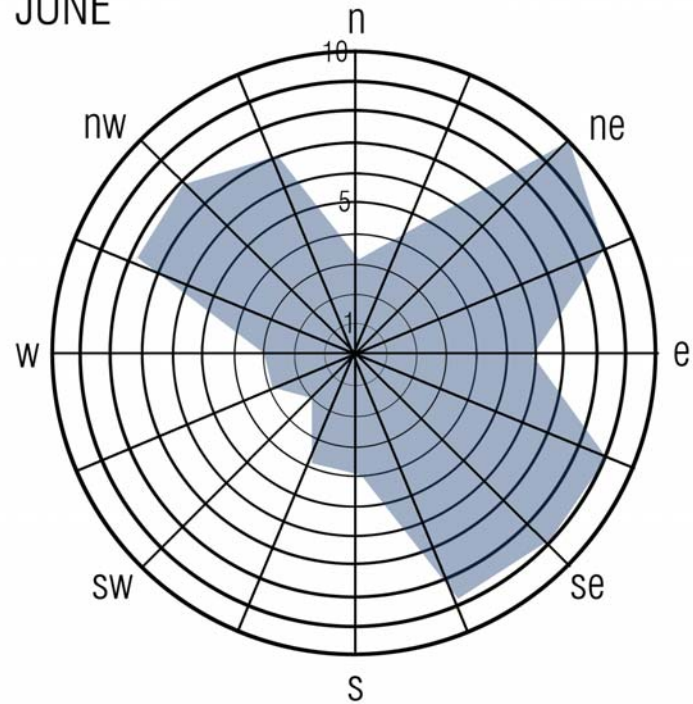
MARCH



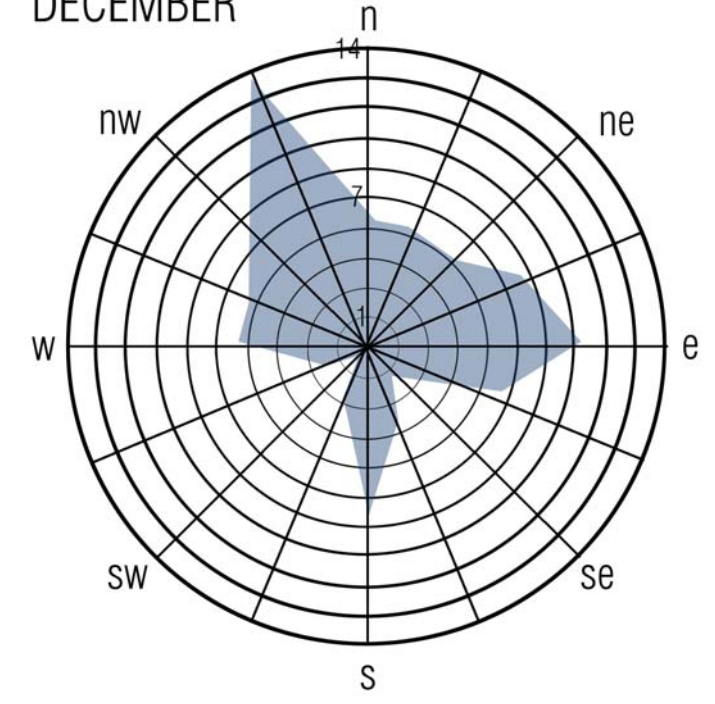
SEPTEMBER



JUNE



DECEMBER





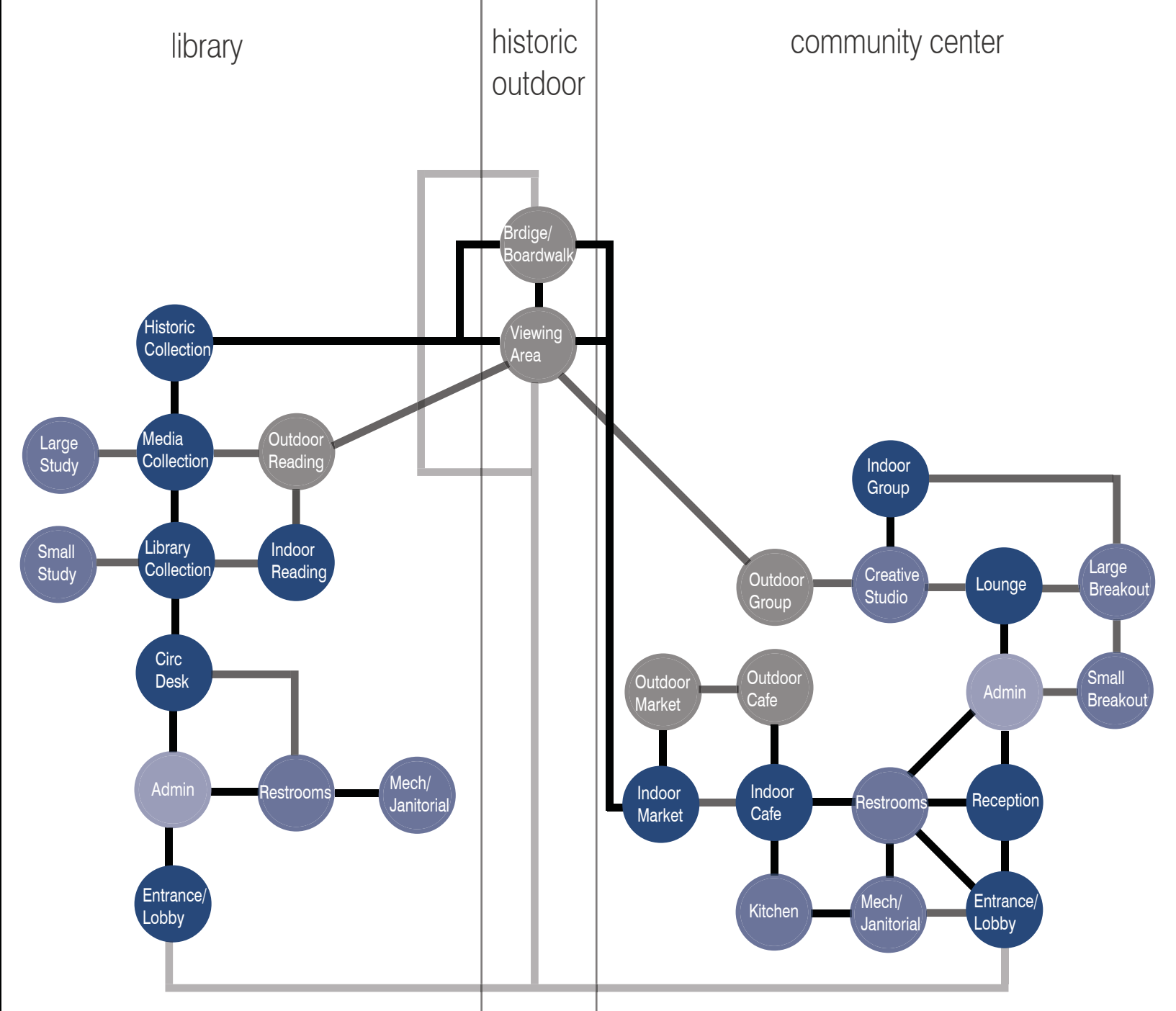
noise

Most of the noise that occurs near my site is from vehicular traffic. There are trains on the east side of the river, next to the paper mill, that generate noise. The train's noise can be heard from several blocks away. Although the papermill is industrial, it creates very minimal noise because of the separation of banks from the river. De Zuriks the industrial building on the west bank creates very minimal noise as well because all of the machinery is enclosed inside the warehouse. When the dam is open, the water flowing through generates noise as it passes through.

	Entrance/Lobby	Library Administration	Library Collection	Large Study Room	Small Study Rooms	Digital Resources	Historic Collection	Circulation Desk	Restrooms	Mechanical/Janitorial	Indoor Reading Area	Outdoor Reading Area	Mechanical/Janitorial	Restrooms	Indoor Market	Outdoor Market	Large Breakout Space	Small Breakout Spaces	Kitchen	Entrance/Lobby	Administration	Indoor Cafe	Outdoor Cafe	Receptionist	Indoor Group Area	Outdoor Group Area	Creative Studios	Lounge	Boardwalk/Bridge	Historic Viewing Area
Entrance/Lobby		●						●	●	●																			●	●
Library Administration	●		●	●				●	●	●																				
Library Collection		●		●	●	●	●	●			●	●																		
Large Study Room		●	●																											
Small Study Rooms			●	●		●																								
Digital Resources			●	●	●																									
Historic Collection			●																										●	●
Circulation Desk	●	●	●						●	●																				
Restrooms	●	●						●		●																				
Mechanical/Janitorial	●	●						●	●																					
Indoor Reading Area			●									●																		
Outdoor Reading Area			●									●																		
Mechanical/Janitorial													●						●											
Restrooms												●		●						●		●	●	●		●			●	
Indoor Market														●		●														
Outdoor Market															●									●					●	●
Large Breakout Space																		●							●				●	
Small Breakout Spaces																		●							●			●	●	
Kitchen												●	●	●										●						
Entrance/Lobby												●											●		●				●	●
Administration																														
Indoor Cafe													●	●	●									●					●	
Outdoor Cafe																														
Receptionist																														
Indoor Group Area																														
Outdoor Group Area																														
Creative Studios																														
Lounge																														
Boardwalk/Bridge																														
Historic Viewing Area																														

library
 community center
 historic outdoor

ESSENTIAL ● DESIRABLE ● NOT NEEDED ●

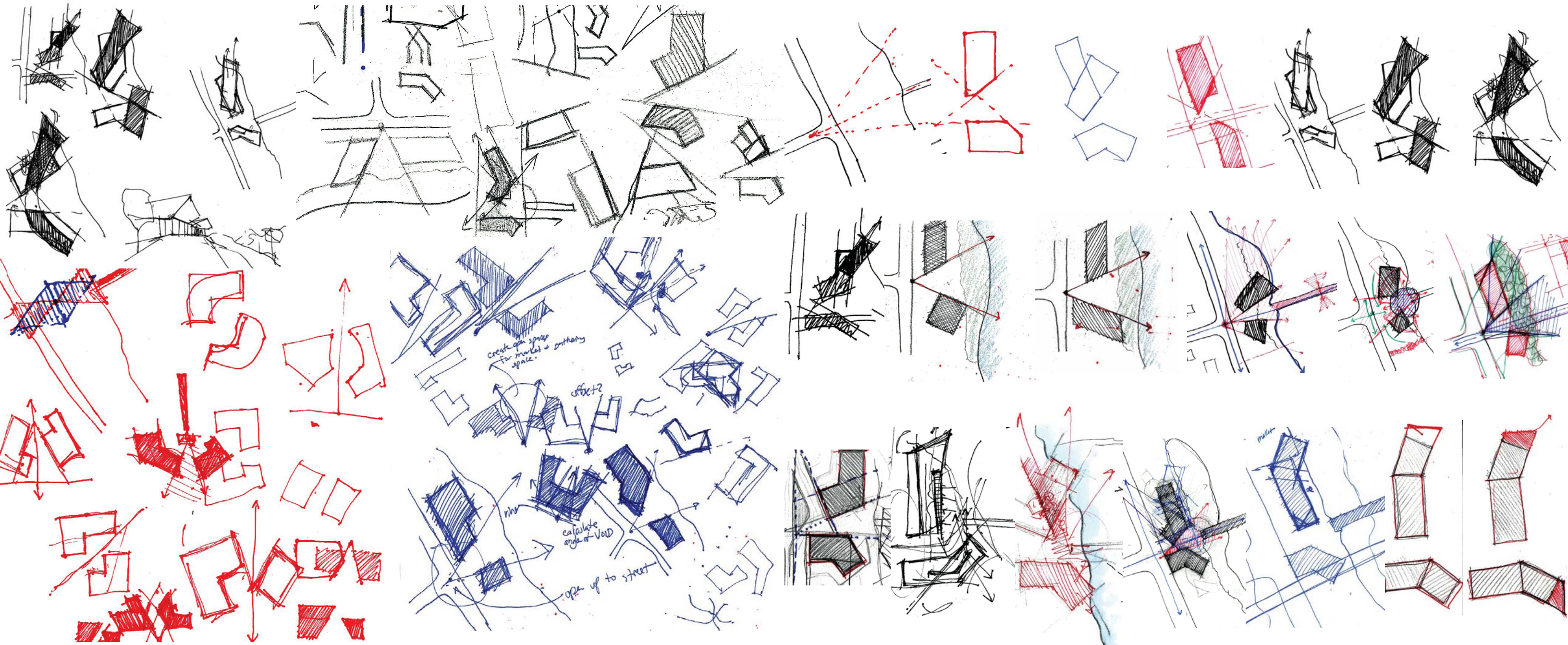


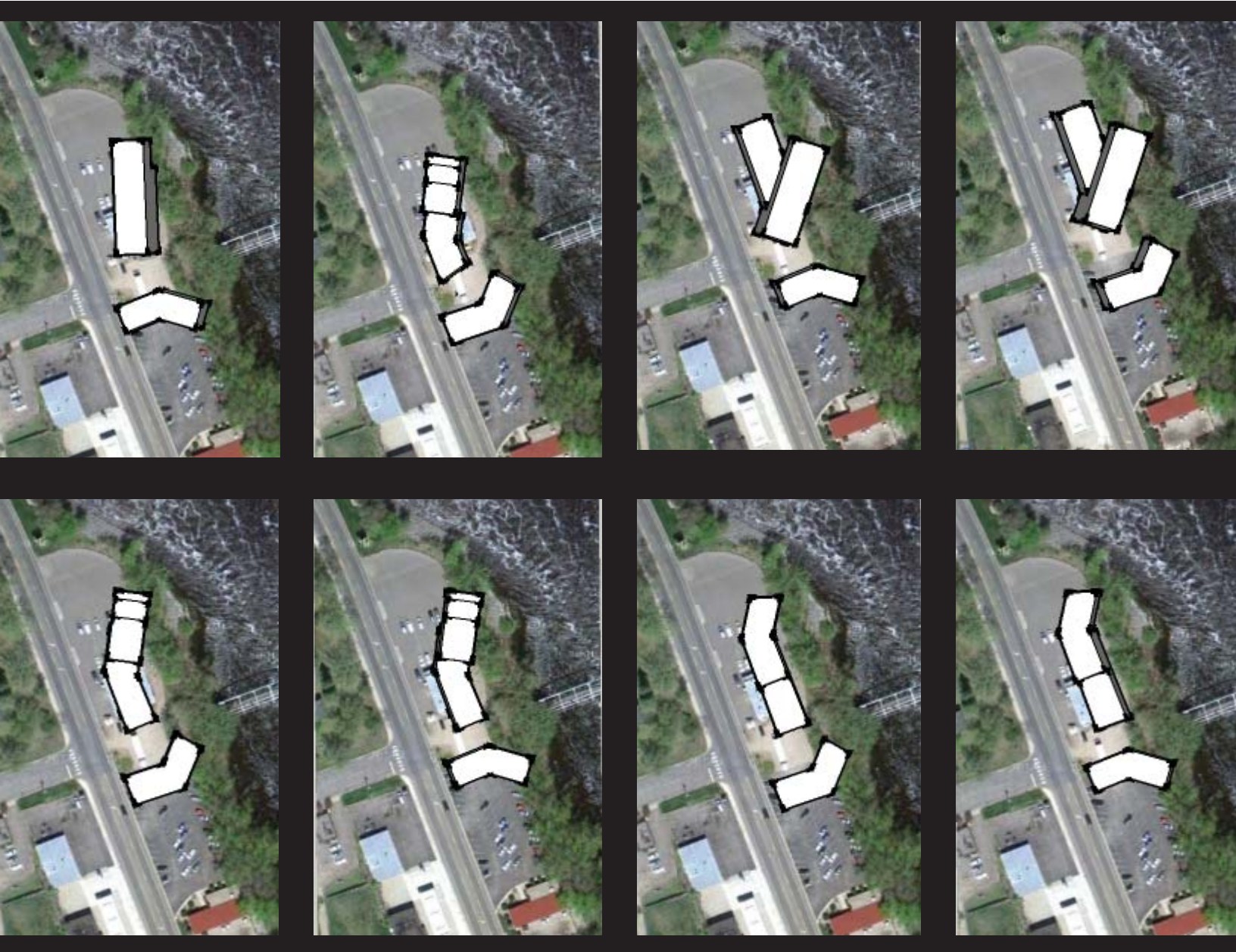
● OPEN SPACES
 ● CLOSED SPACES
 ● PRIVATE SPACES
 ● OUTDOOR SPACES

FORMAL CONNECTION ———
 INFORMAL CONNECTION ———
 CASUAL CONNECTION ———

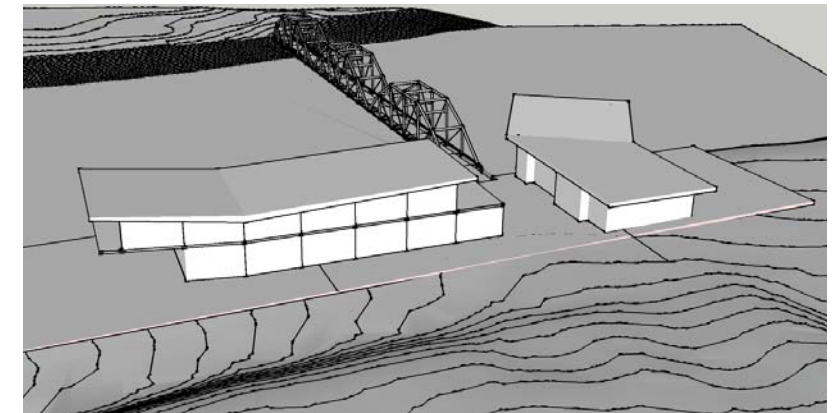
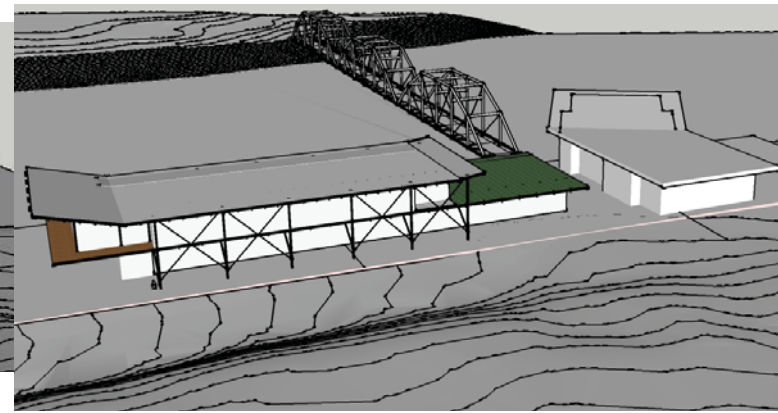
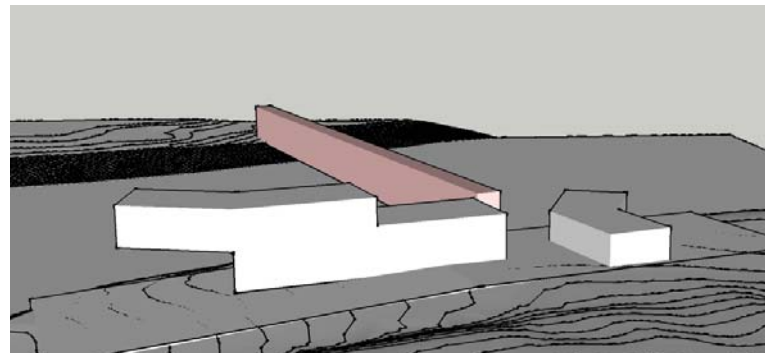
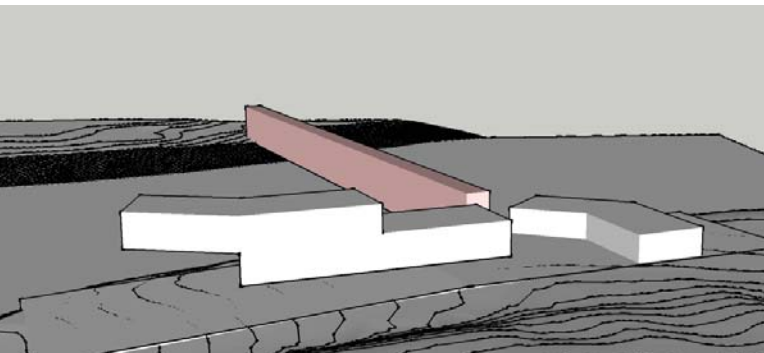
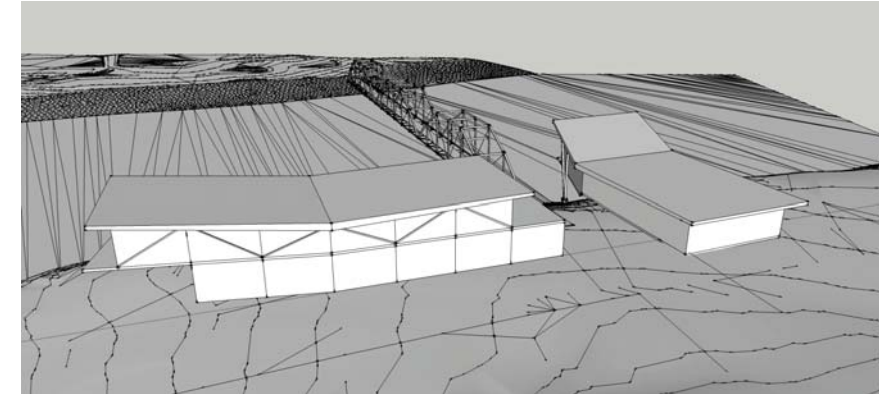
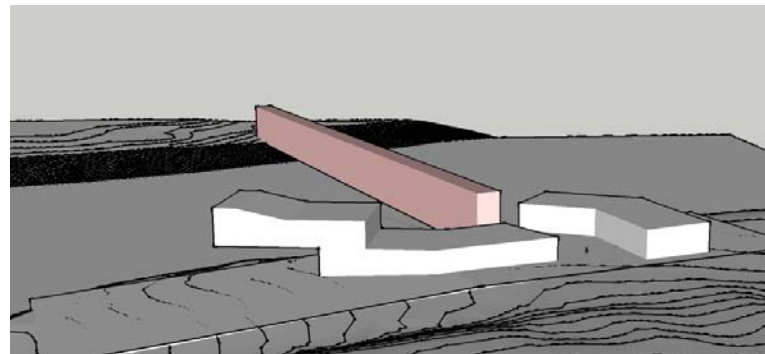
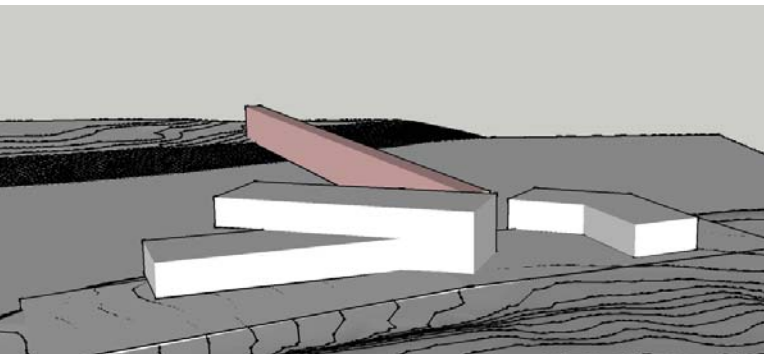
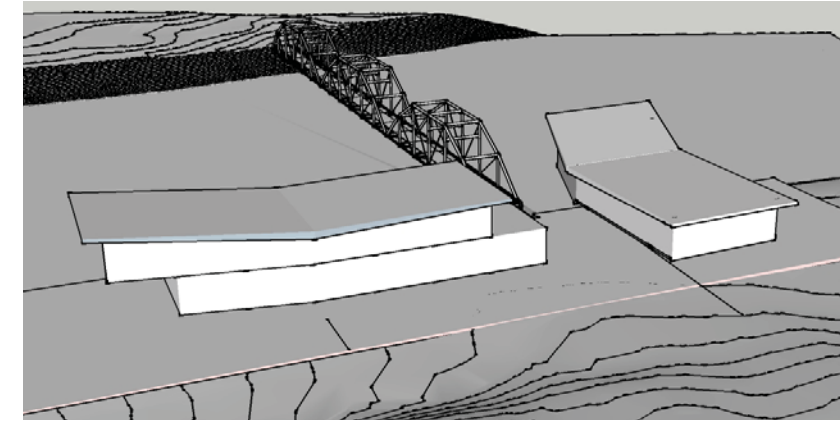
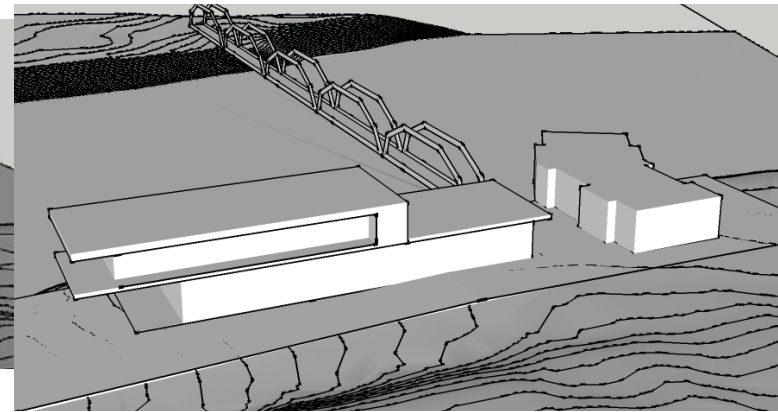
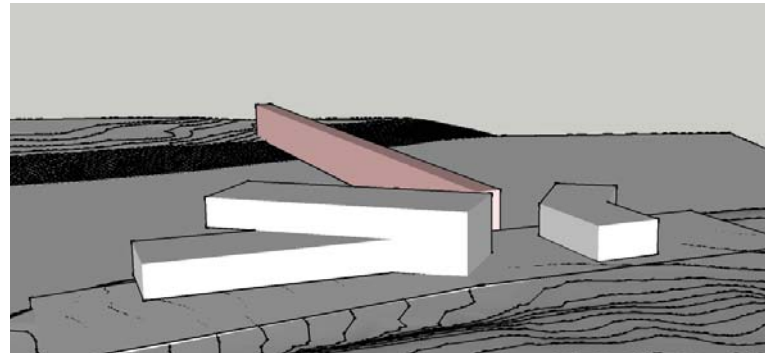
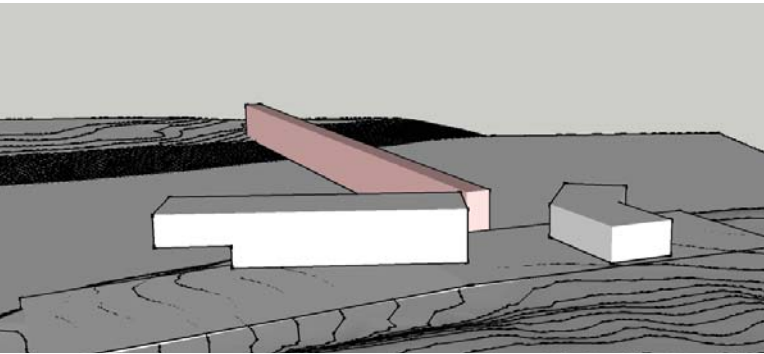
process

footprint + viewsheds

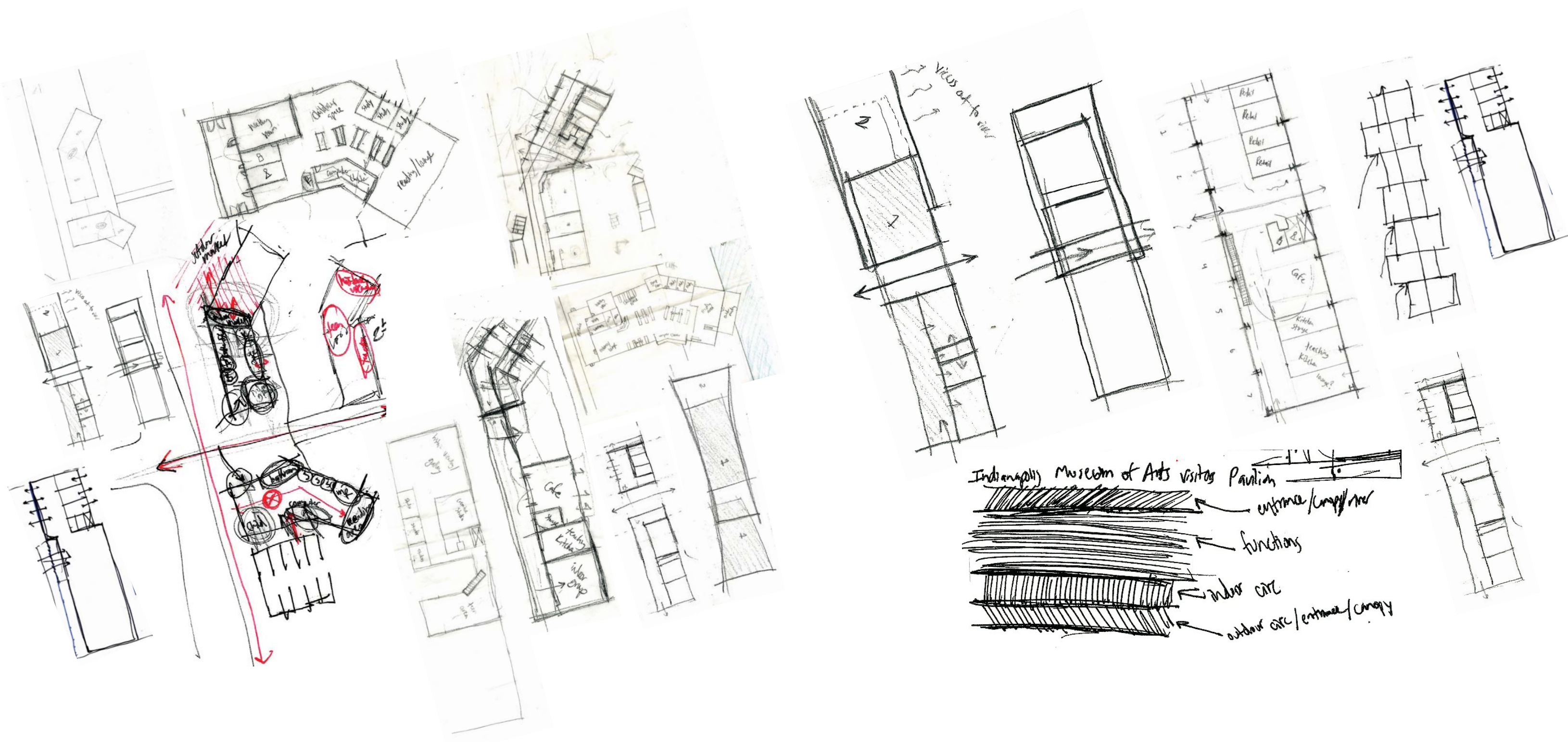


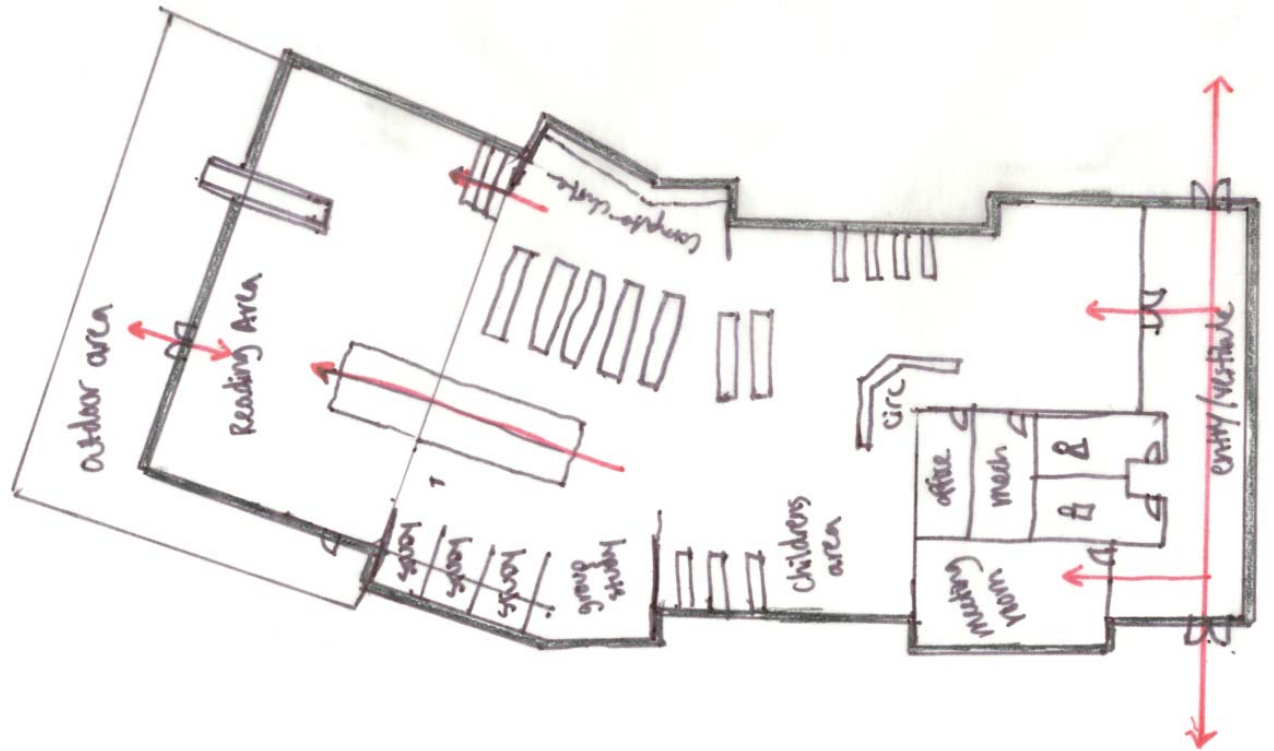
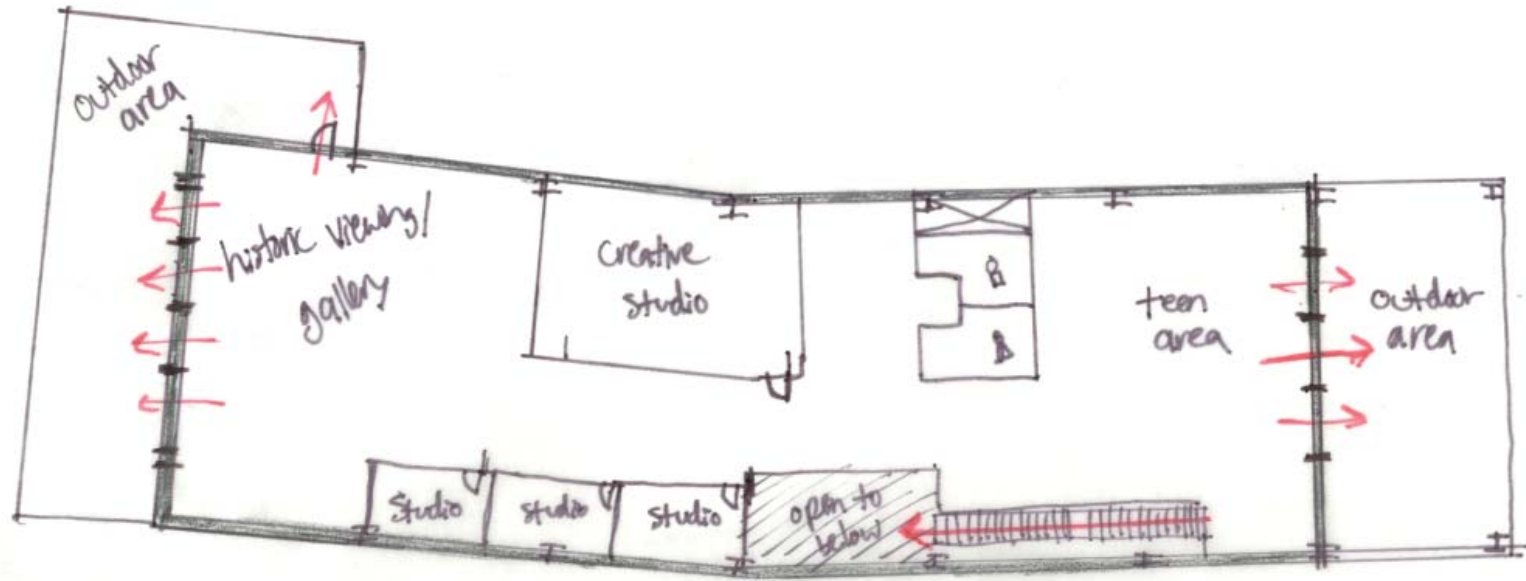
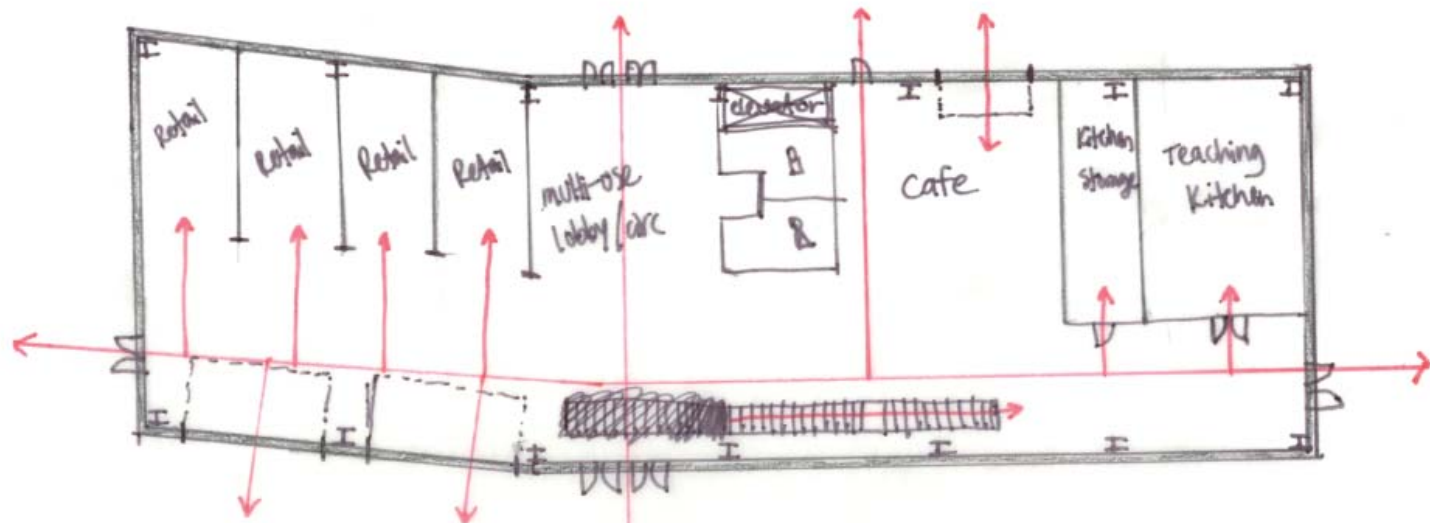


massing + form



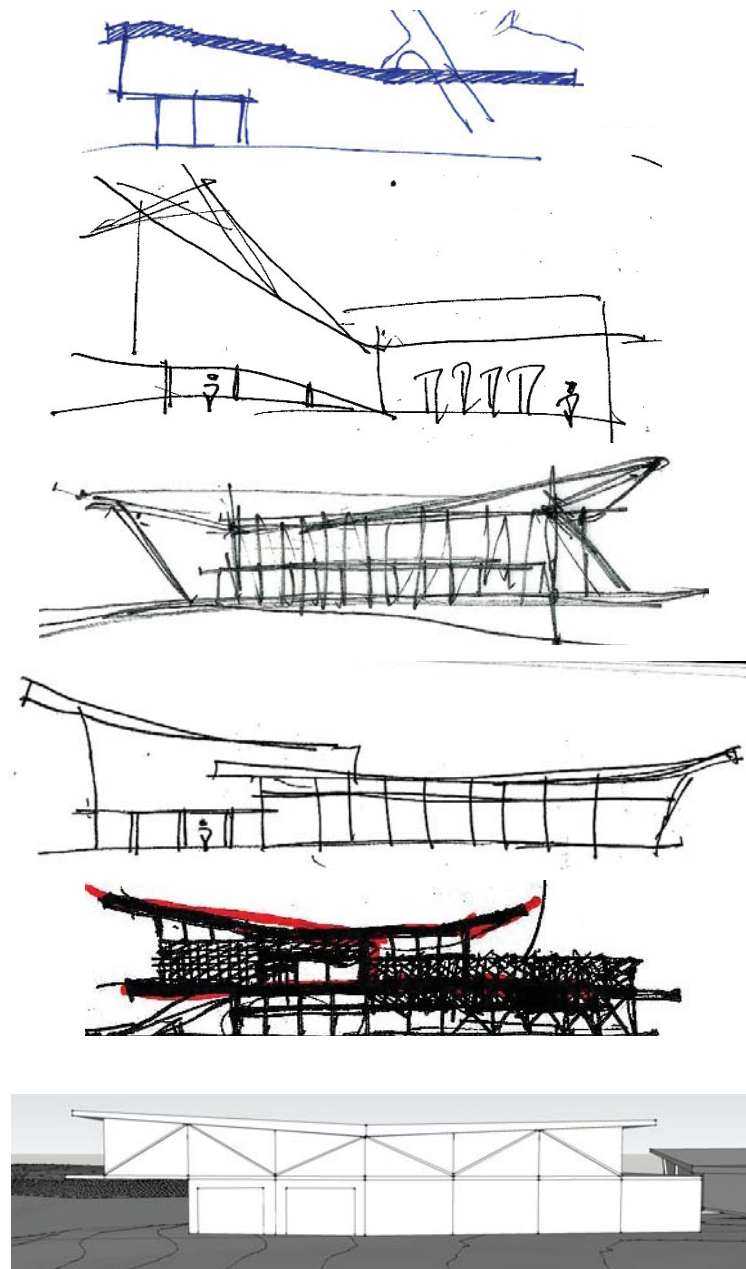
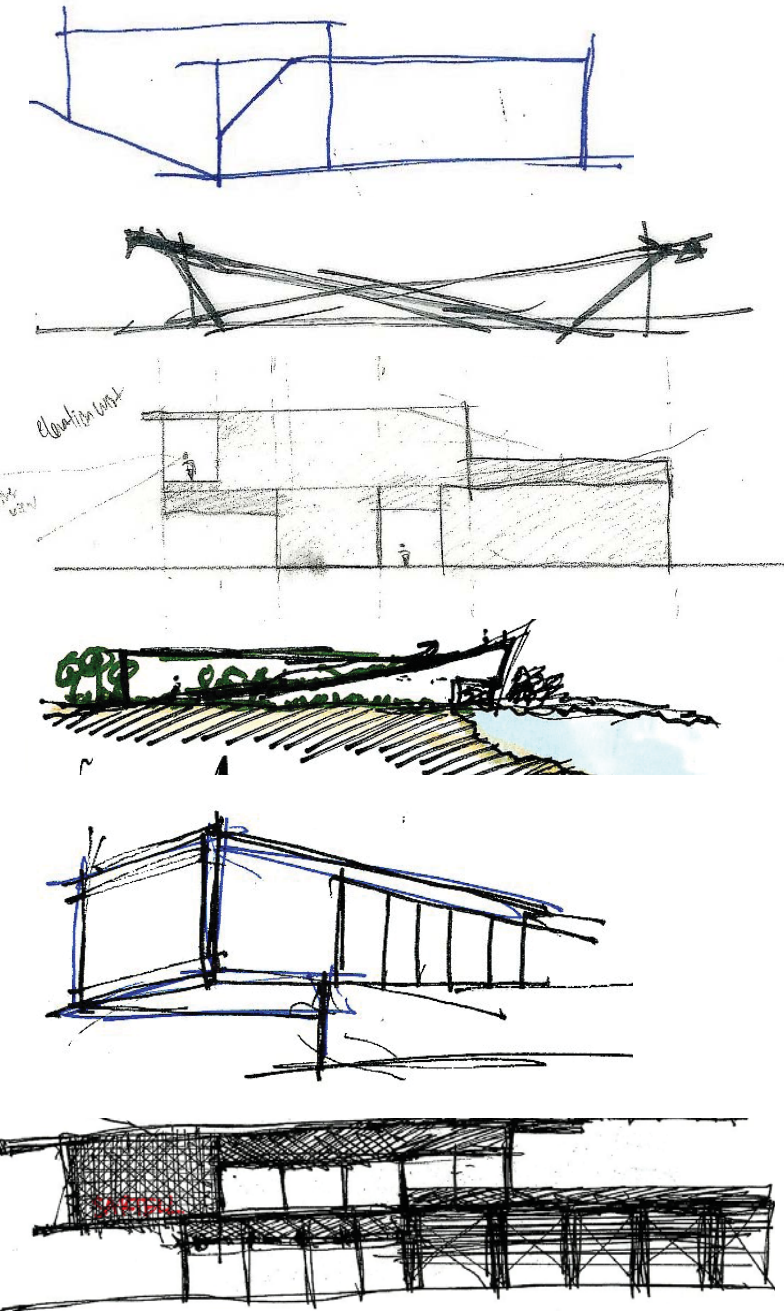
spatial organization





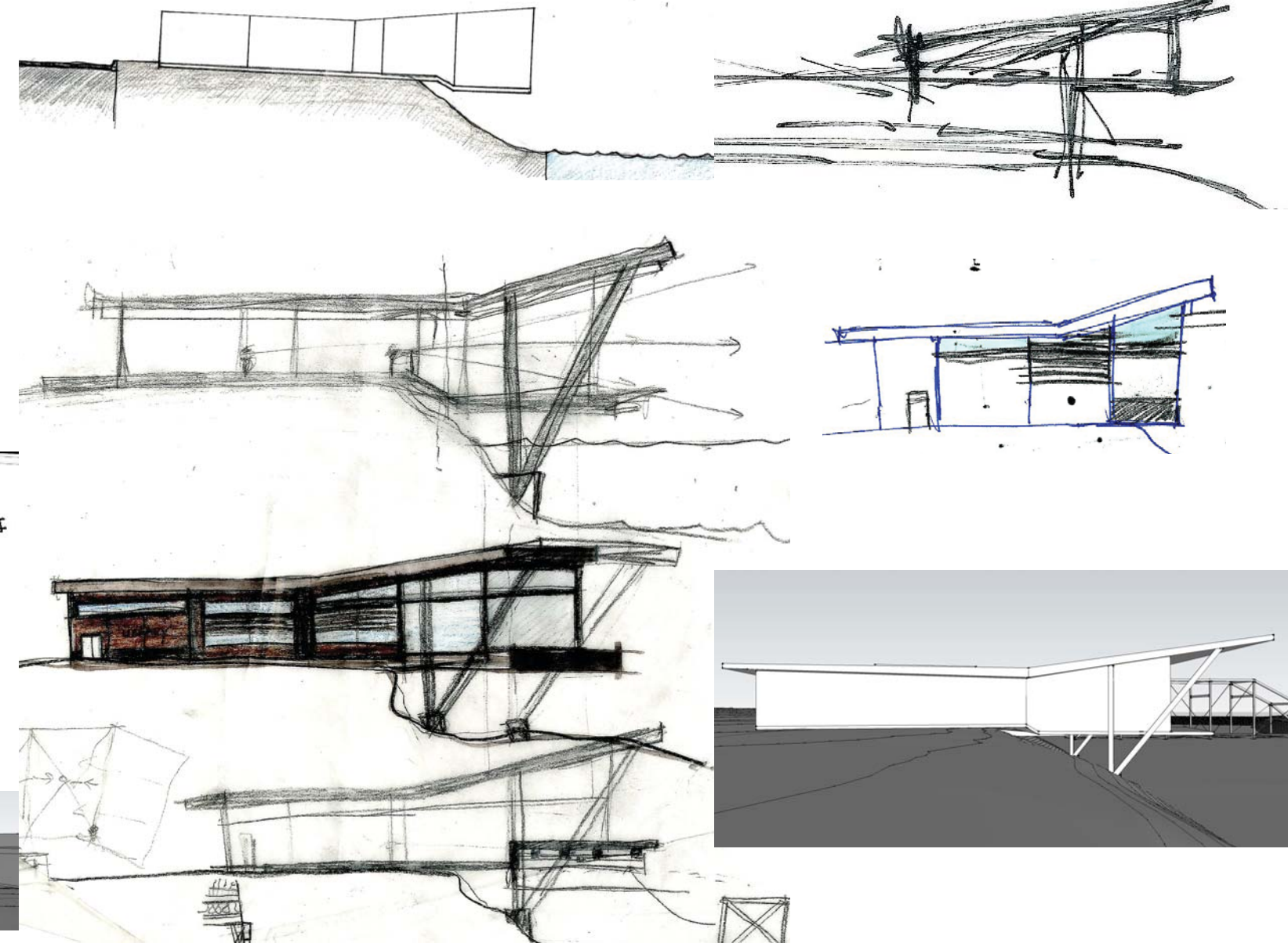
elevations

community center

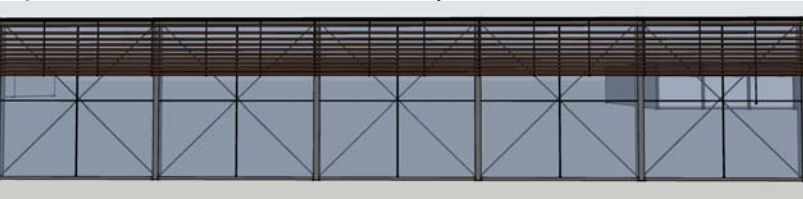
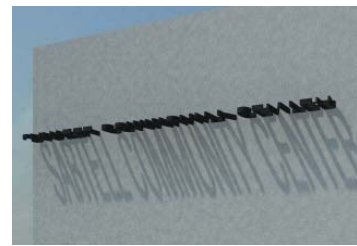
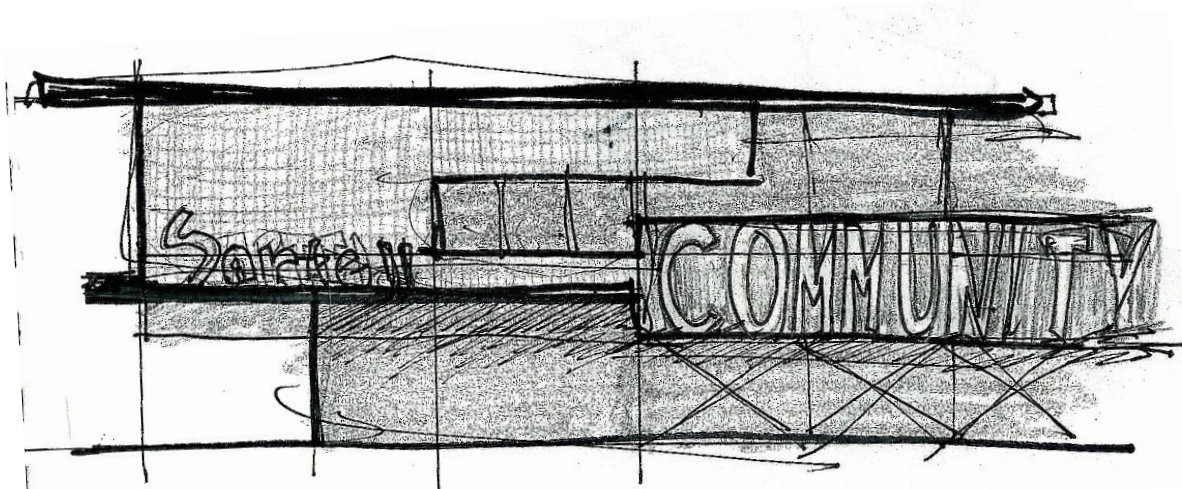
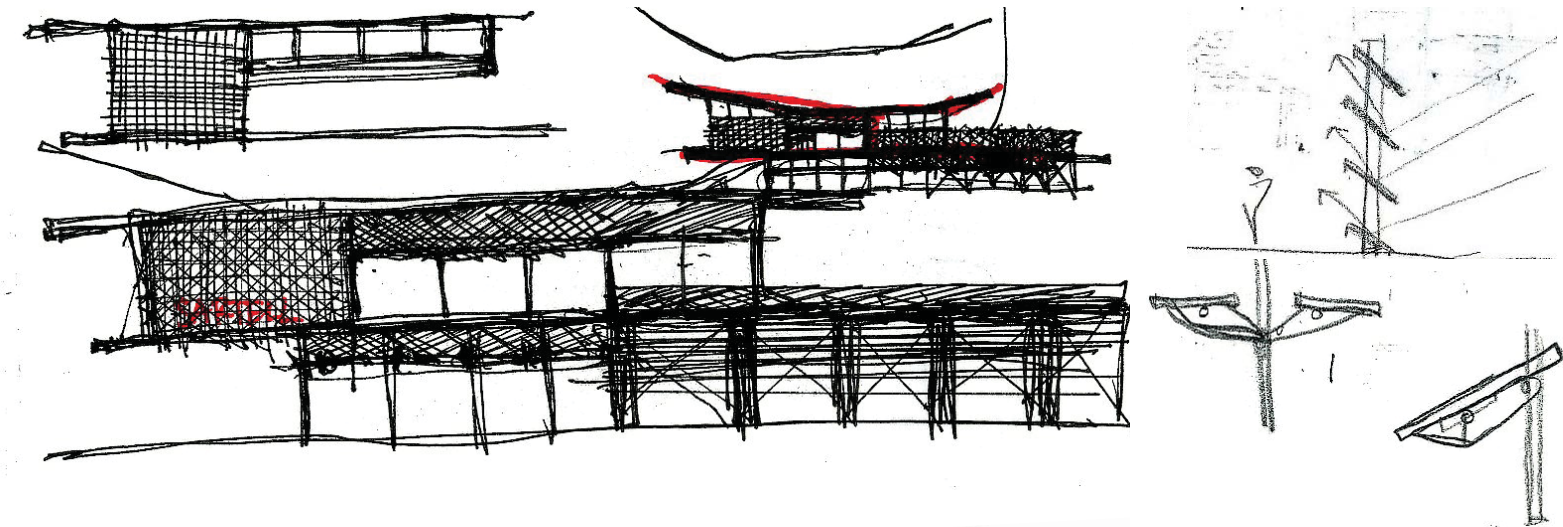


elevations

library

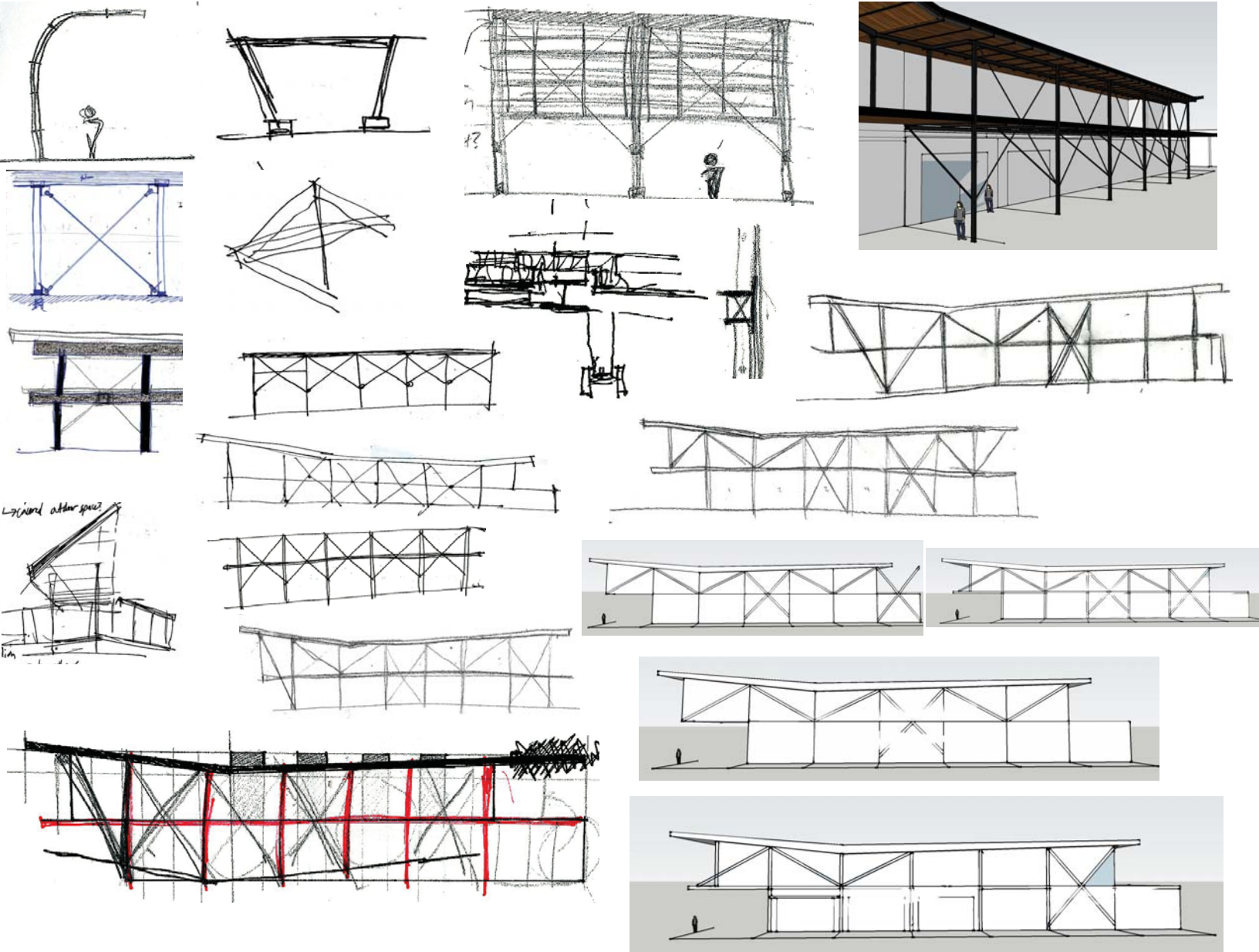


shading + signage



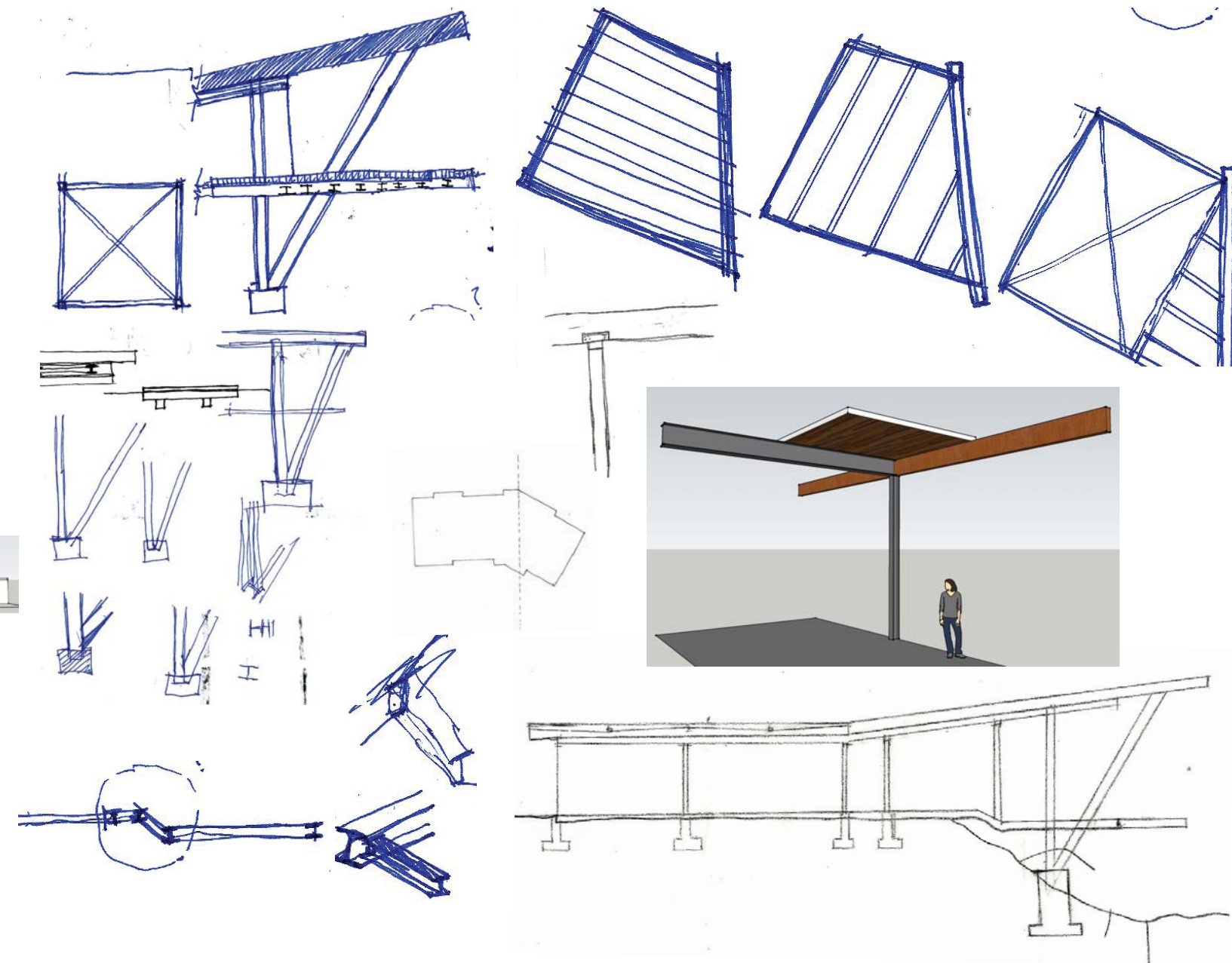
structure

community center

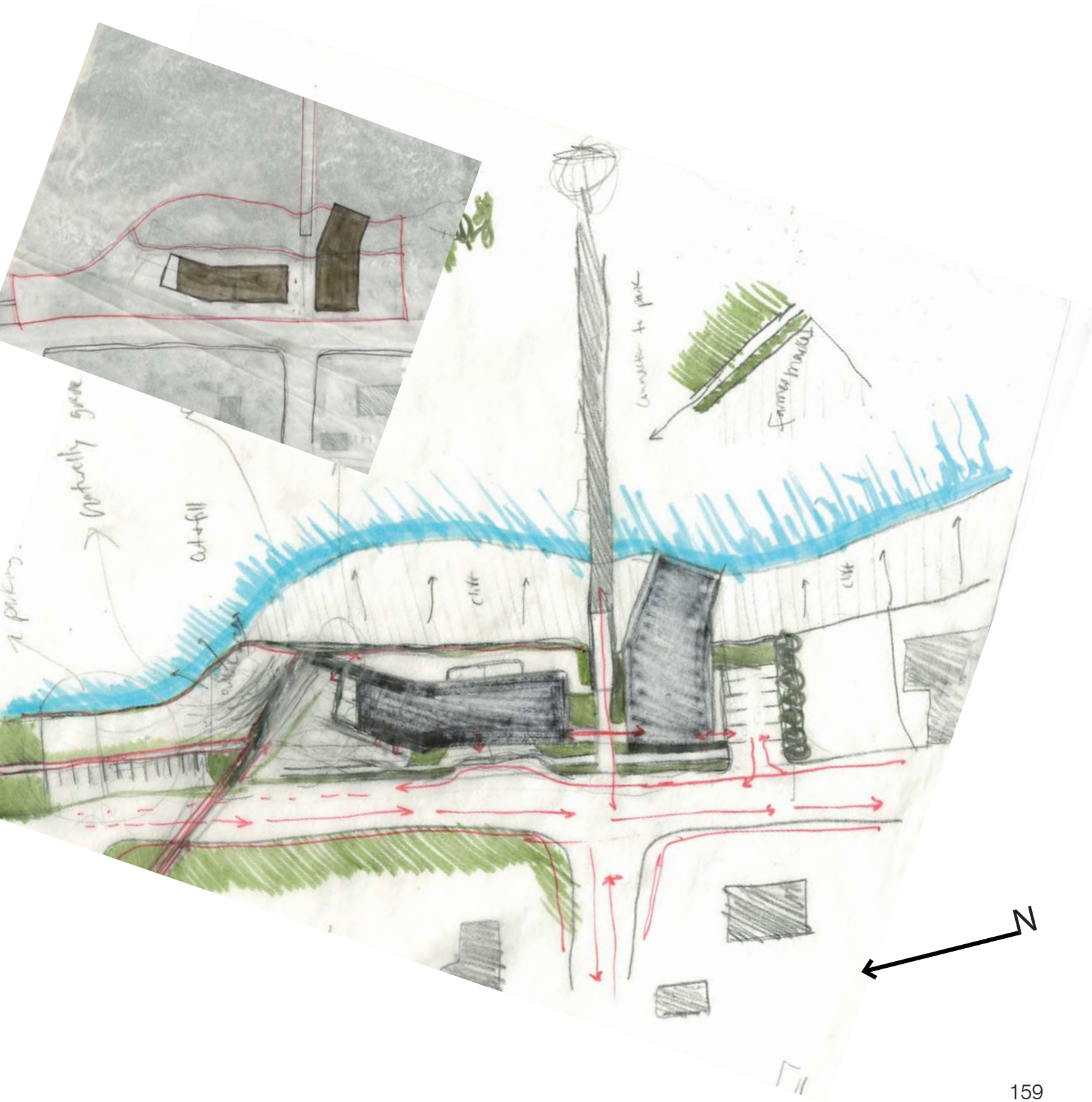


structure

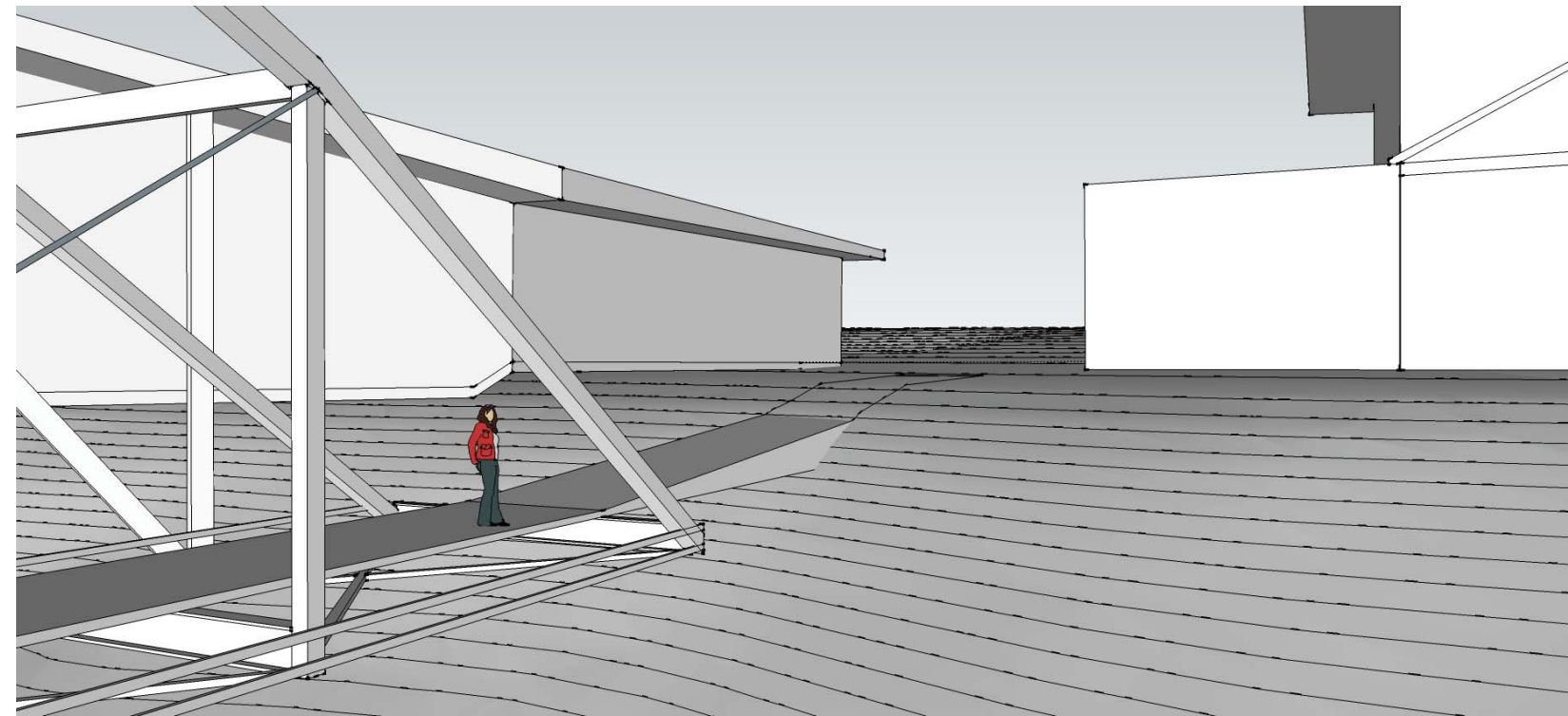
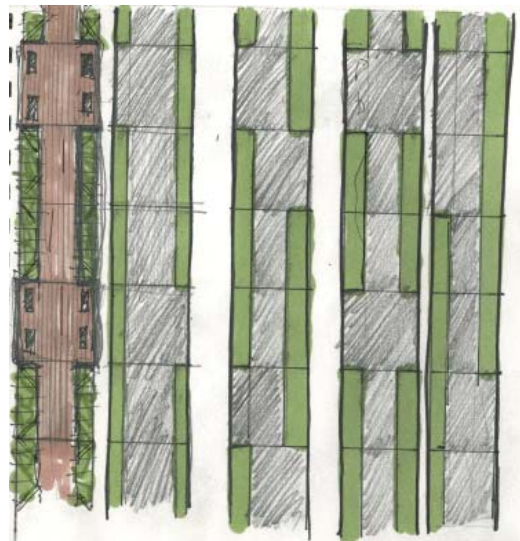
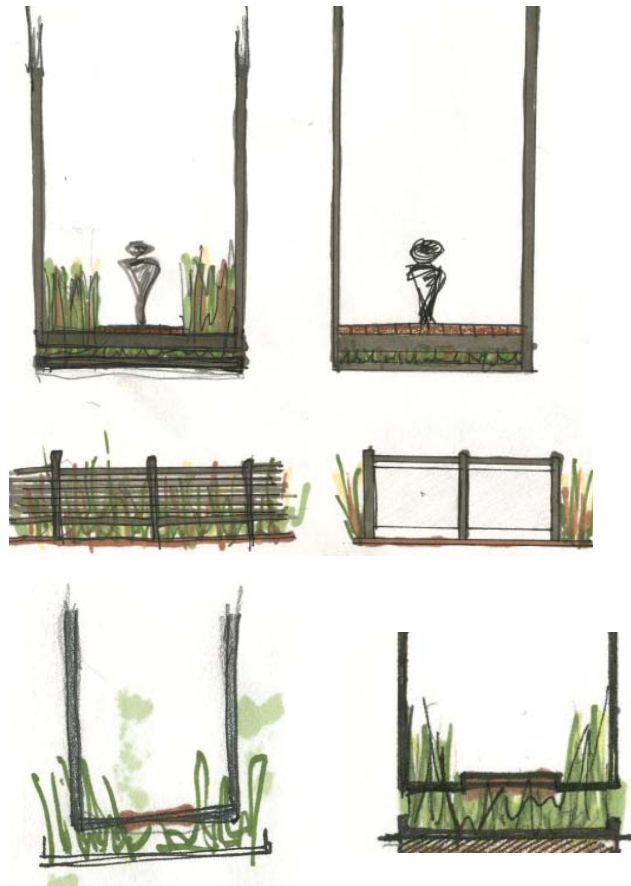
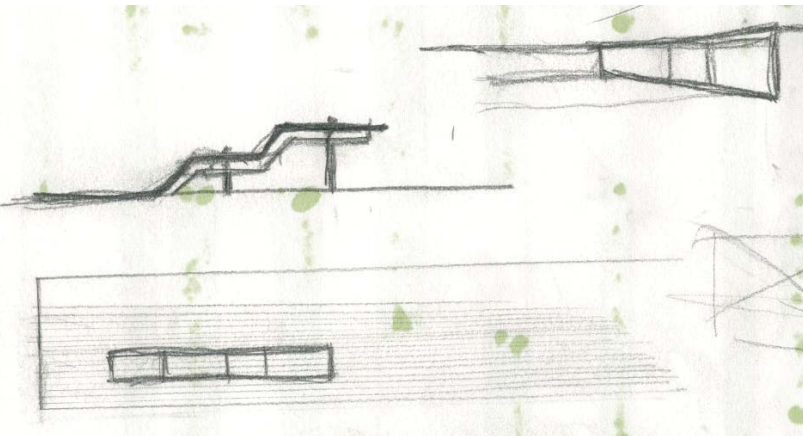
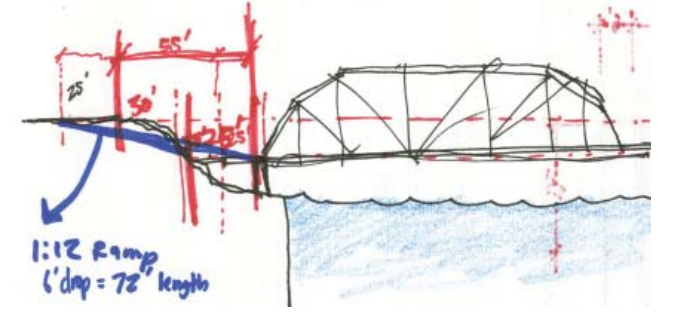
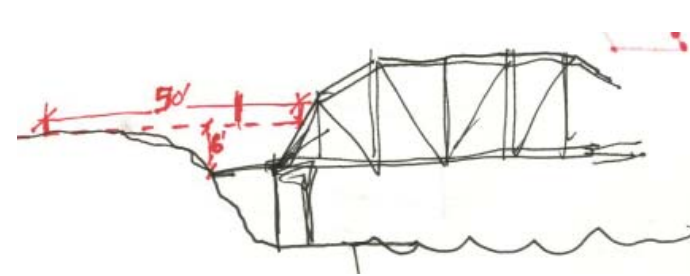
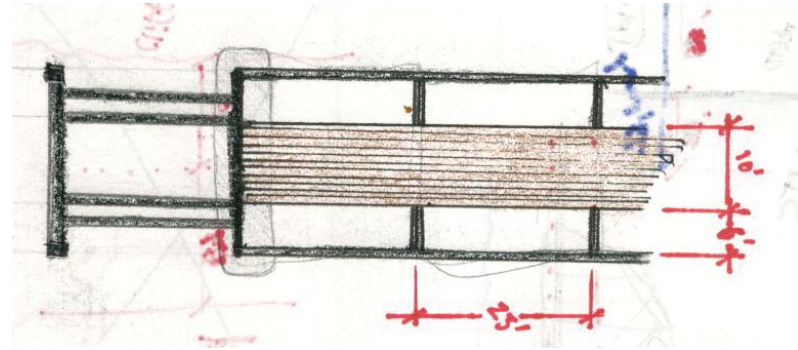
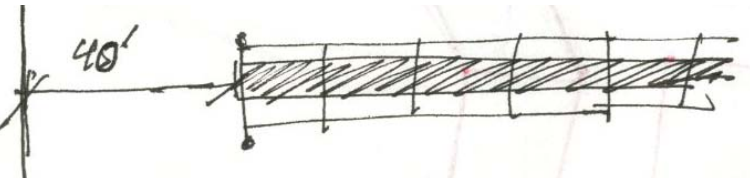
library



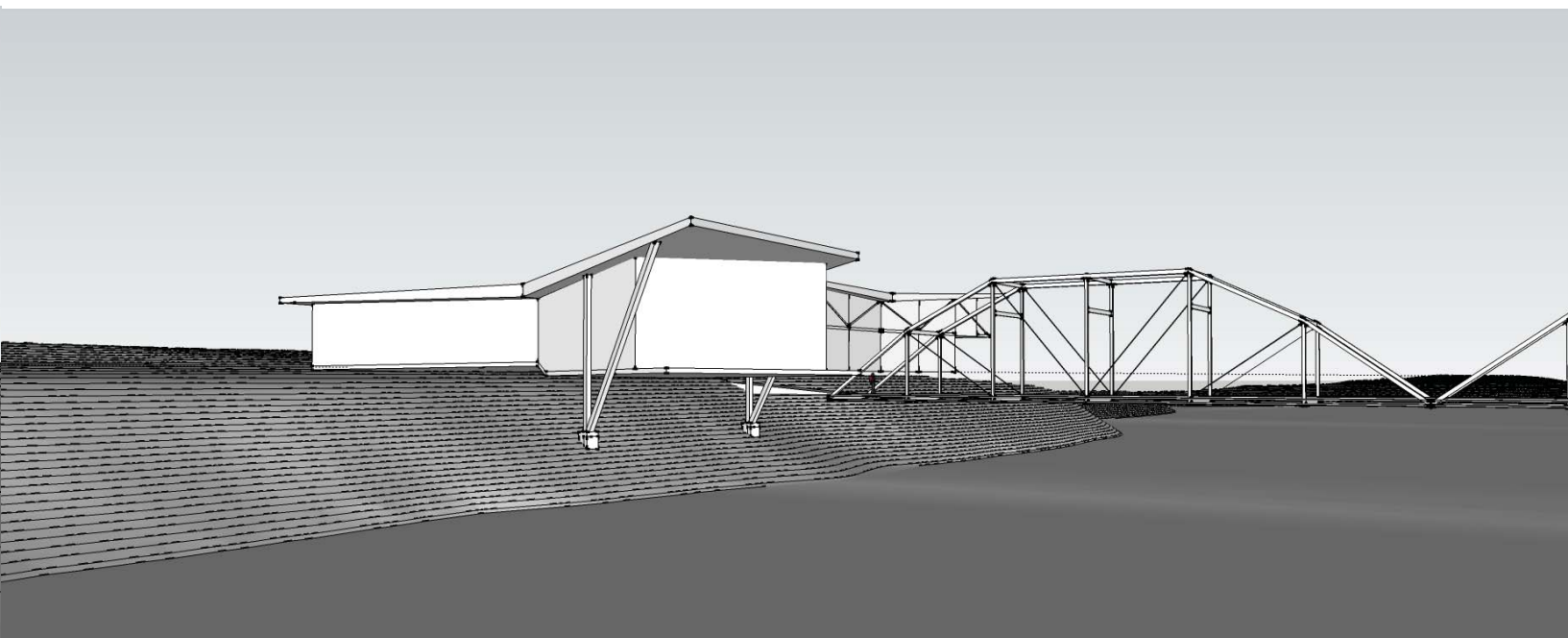
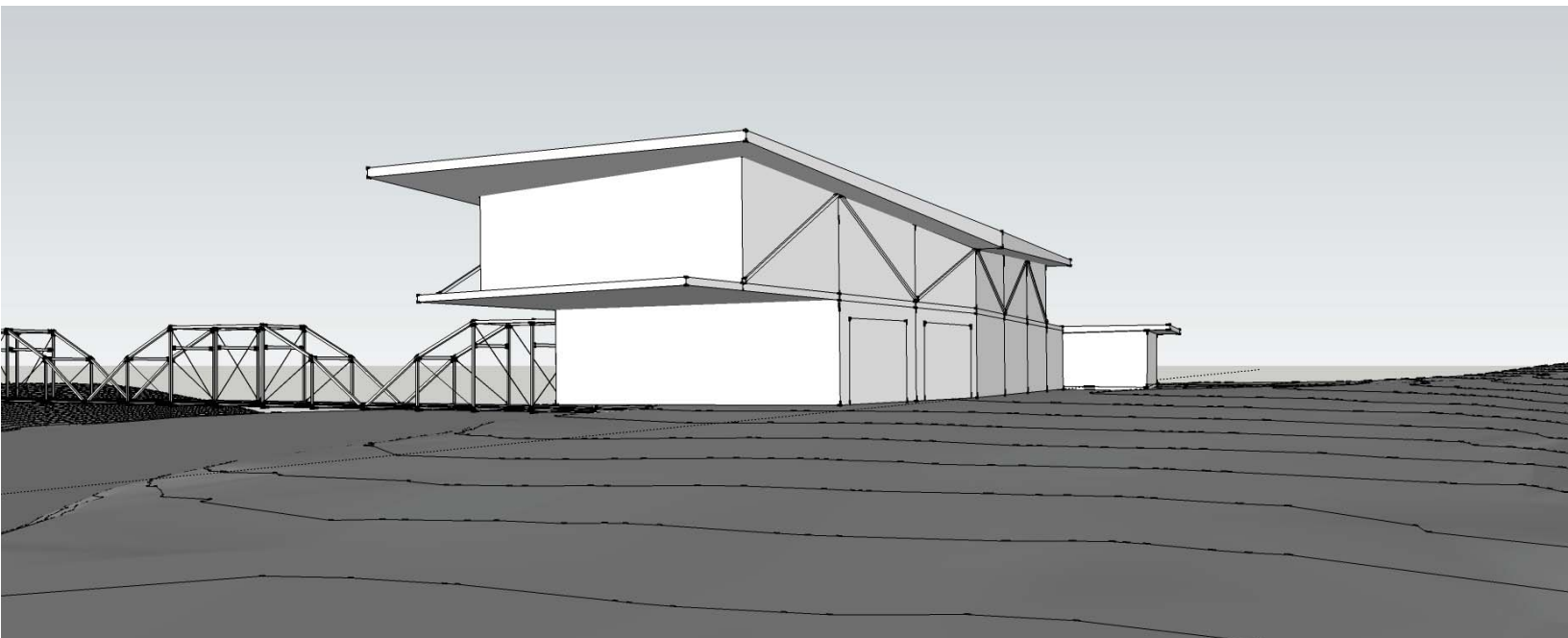
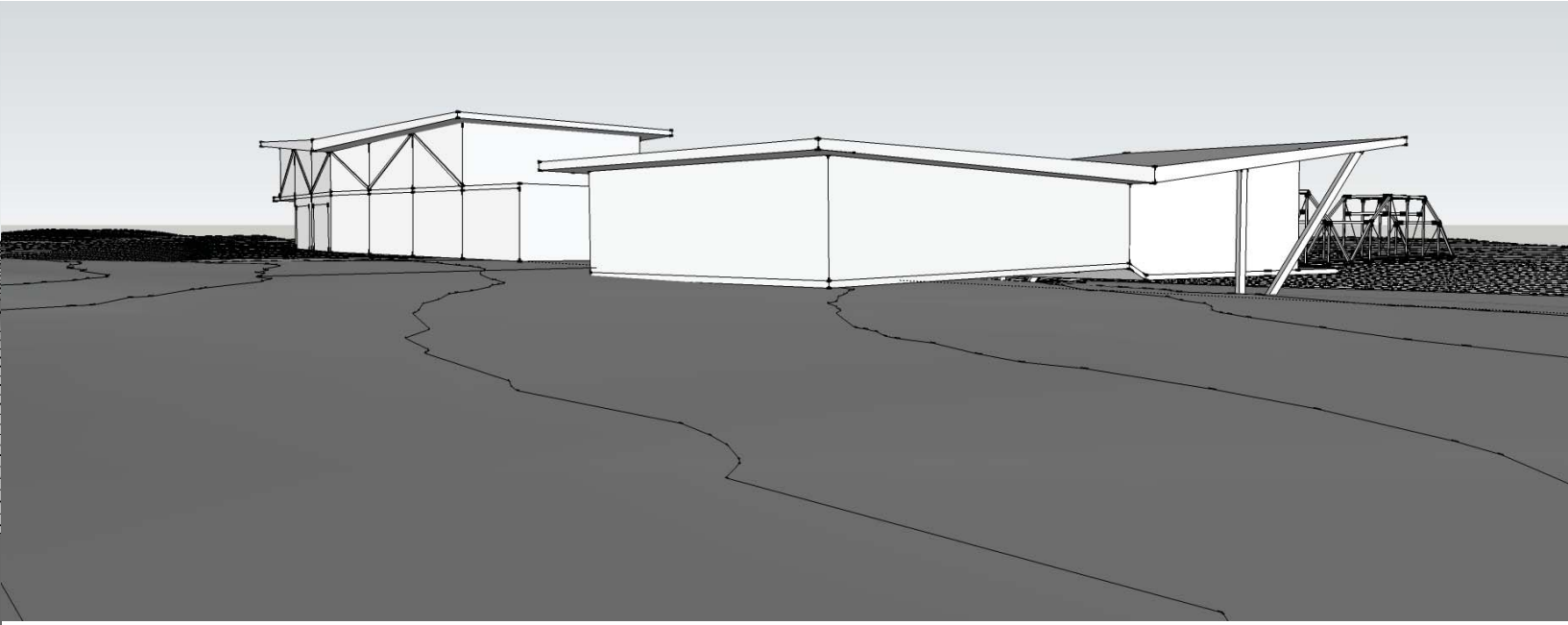
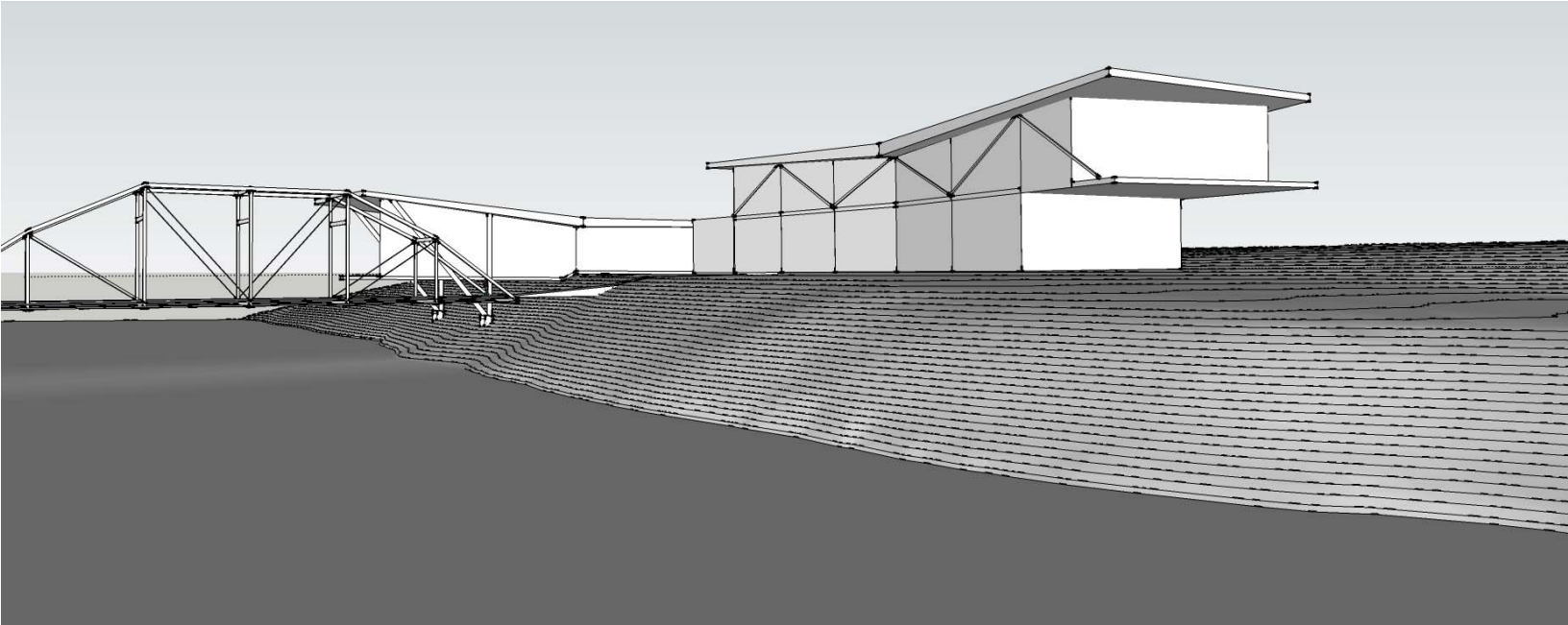
site + bridge

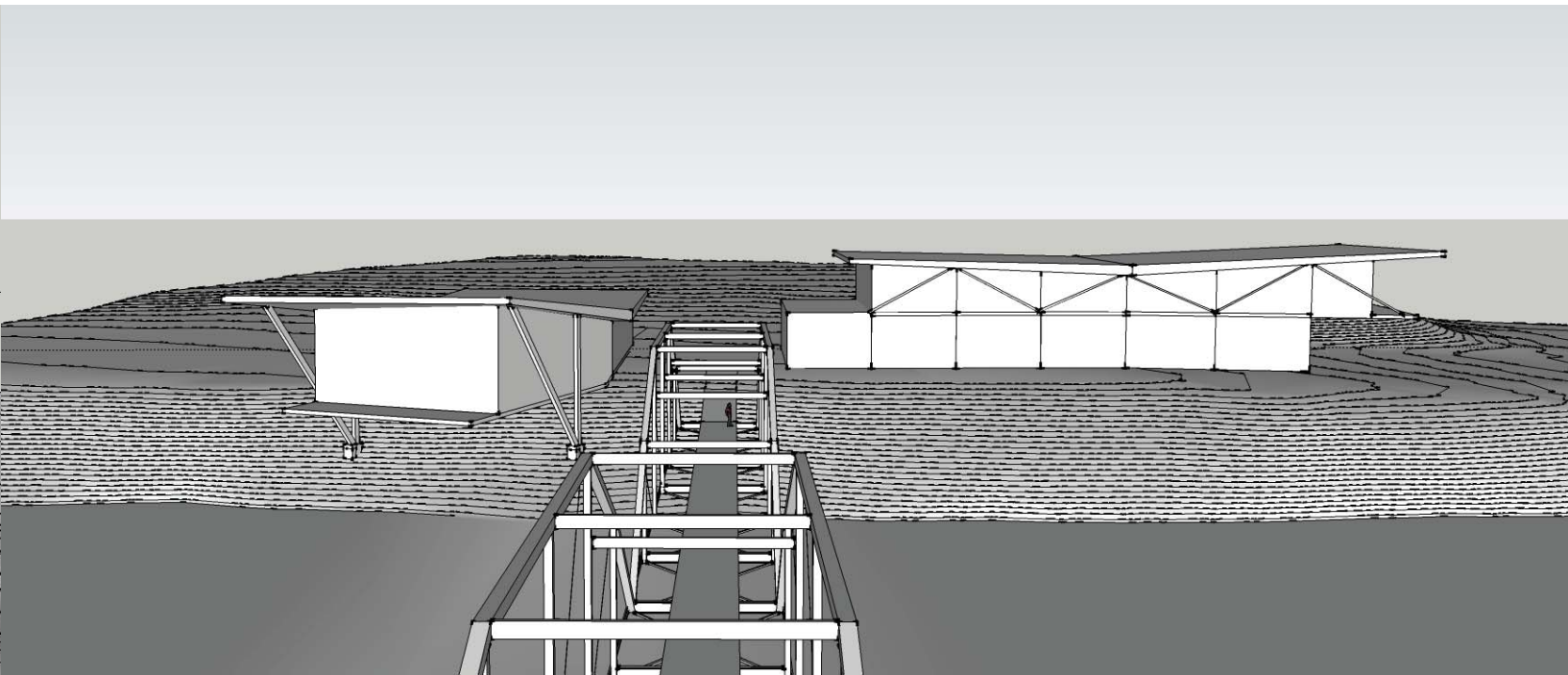
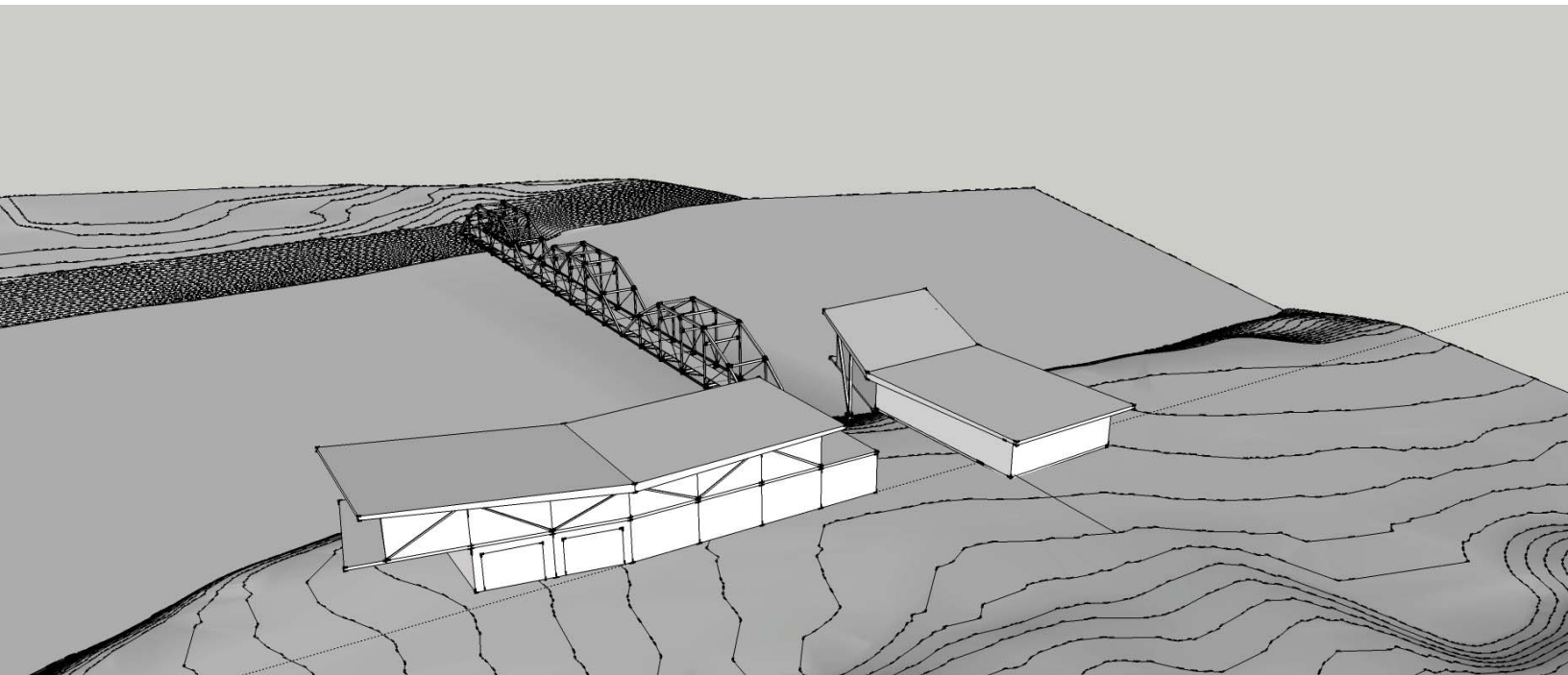
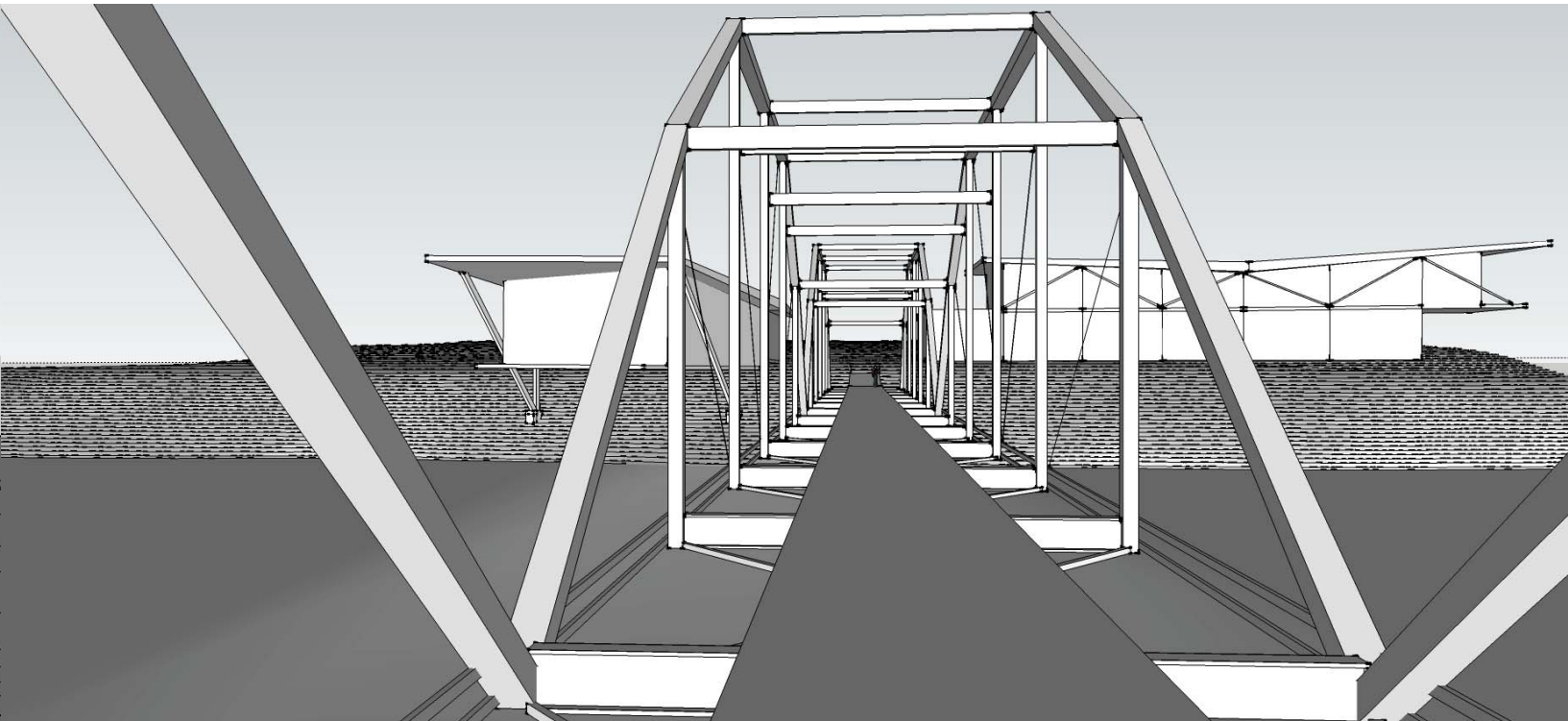
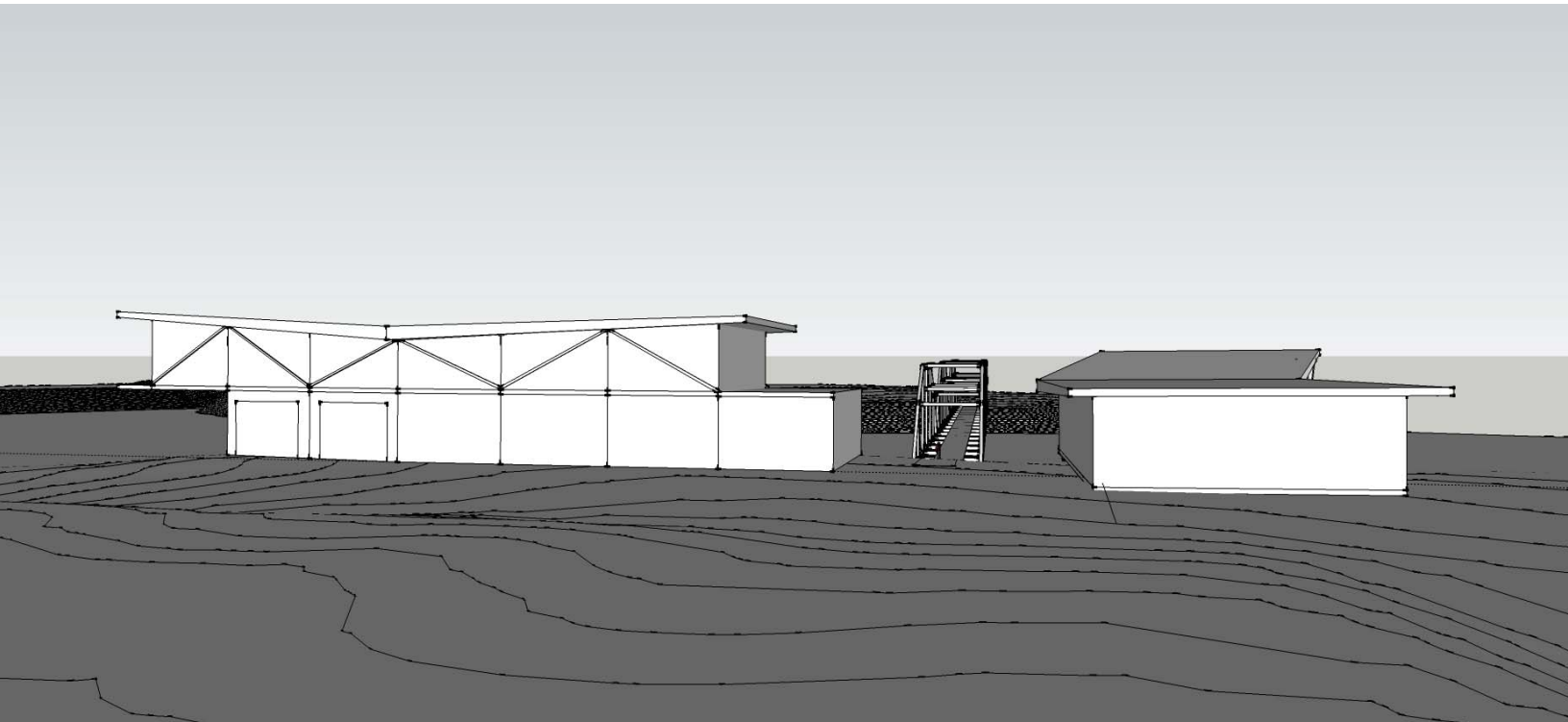






midterm perspectives





final design

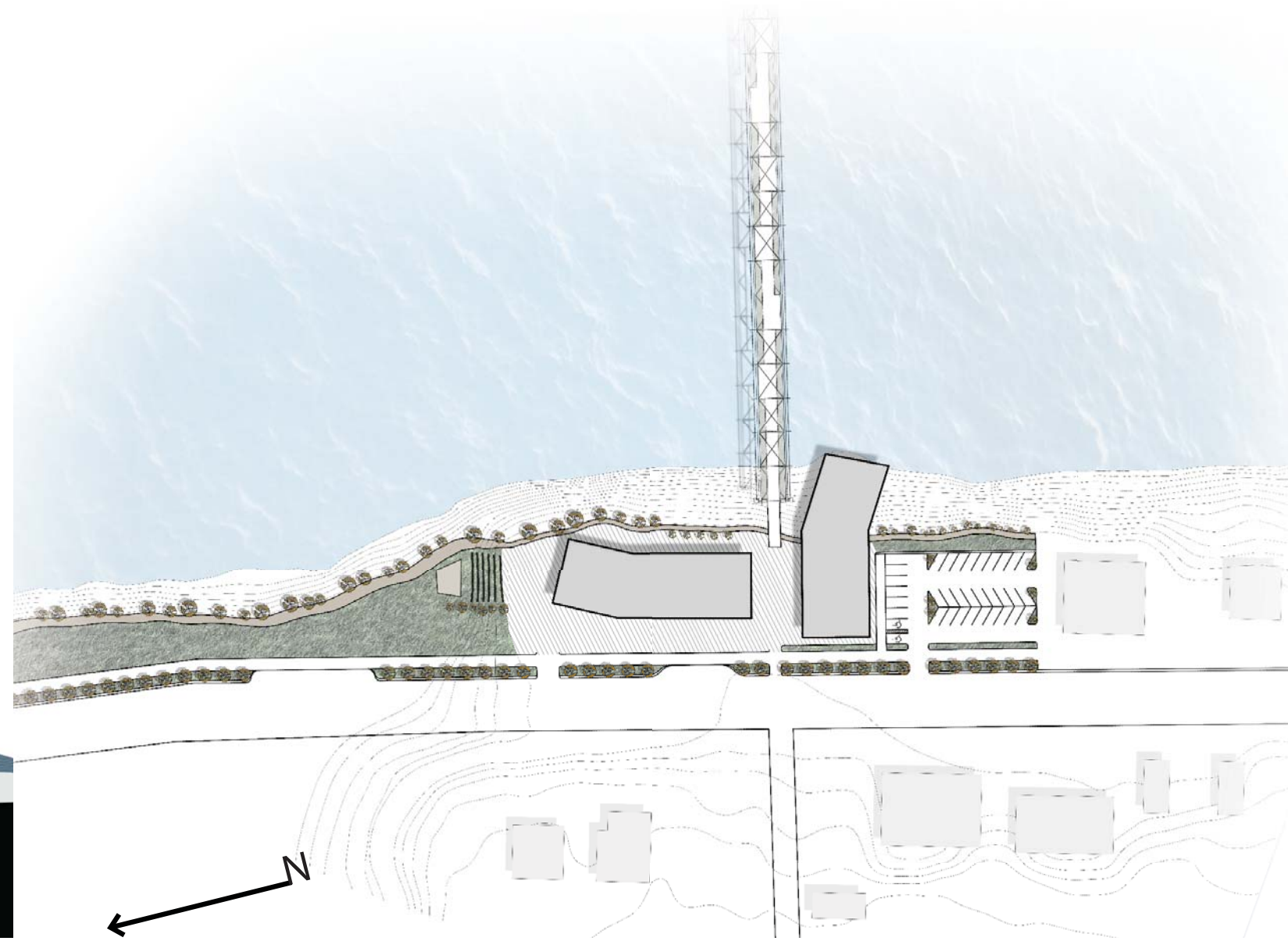
COMMUNITY CENTER

retail shops	216 sf (4)
restrooms	126 sf (4)
kitchen storage	448 sf
cafe	806 sf
teaching kitchen	620 sf
studios	140 sf (3)
indoor group area	912 sf
gallery/historic viewing area	2150 sf
river outlook patio	650 sf
lounge	220 sf
teen area	1125 sf
green roof patio	1700 sf
indoor market flex space	1000 sf
mechanical	1375 sf
circulation	2837 sf
TOTAL	15721 sf

LIBRARY

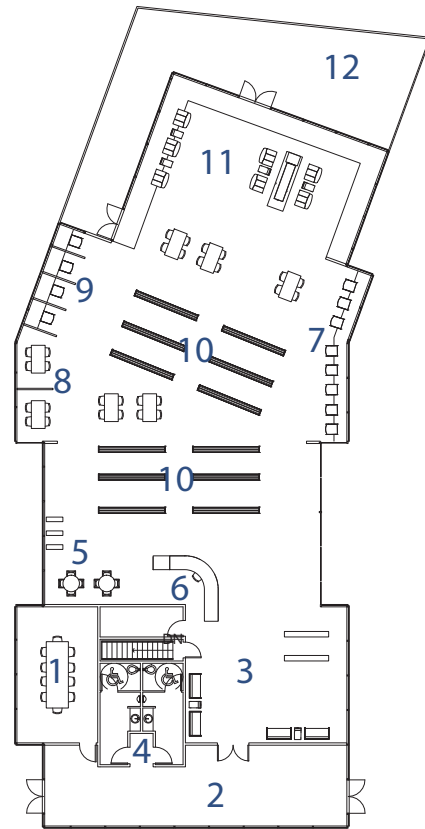
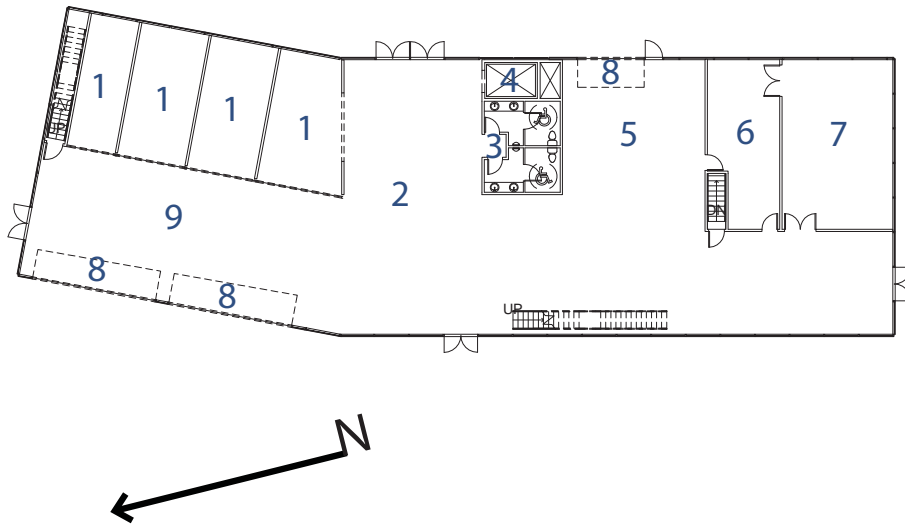
conference room	375 sf
restrooms	152 sf (2)
office	160 sf
entry/lobby	825 sf
large study	70 sf (2)
small study	35 sf (4)
outdoor patio	1176 sf
reading area	1320 sf
circulation desk	135 sf
childrens area	252 sf
lounge	420 sf
book stacks	1350 sf
computer cluster	256 sf
mechanical	650 sf
circulation	1315 sf
TOTAL	7642 sf



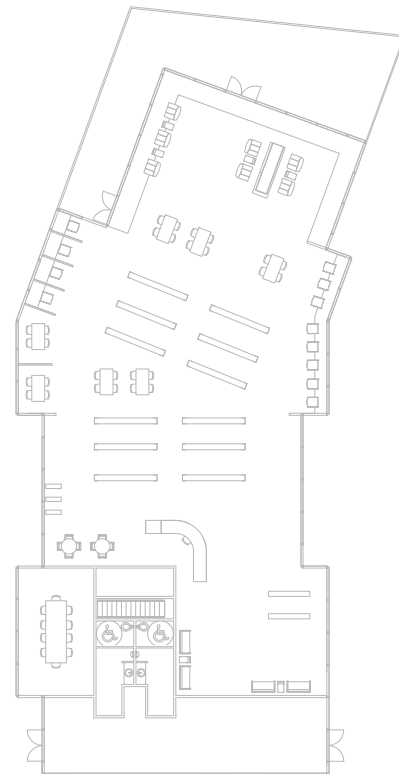
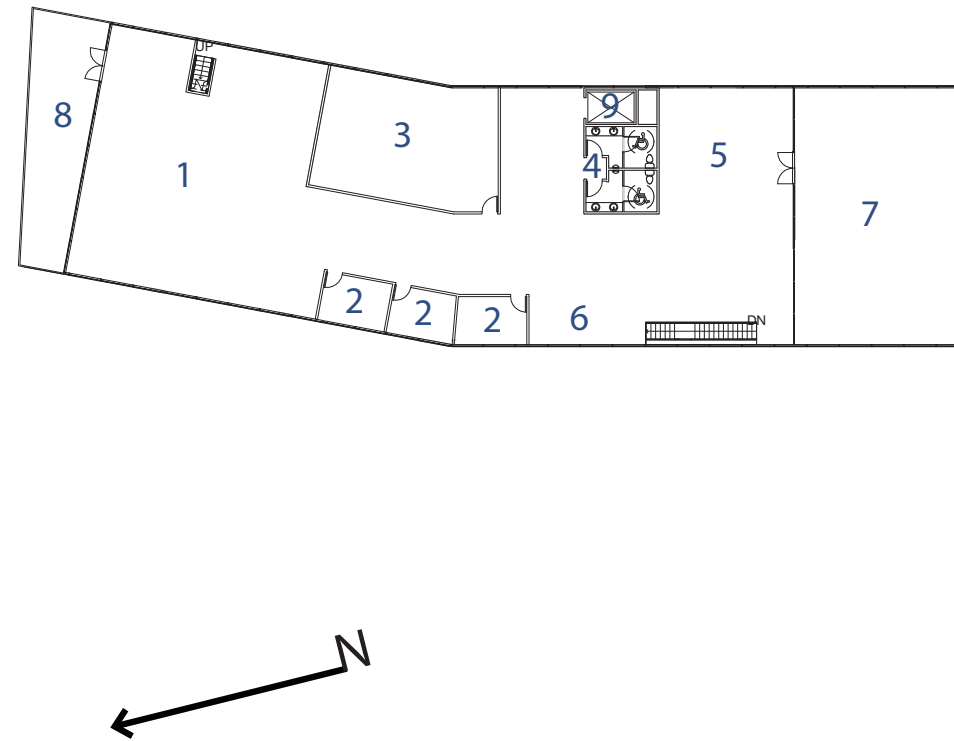


- 1 retail space
- 2 lobby/circulation
- 3 rest rooms
- 4 elevator
- 5 cafe
- 6 kitchen storage
- 7 teaching kitchen
- 8 bifold garage doors
- 9 indoor market flex space

- 1 meeting room
- 2 vestibule
- 3 lobby
- 4 rest rooms
- 5 children area
- 6 circulation desk
- 7 computer cluster
- 8 large study
- 9 small study
- 10 stacks
- 11 reading area
- 12 outdoor patio

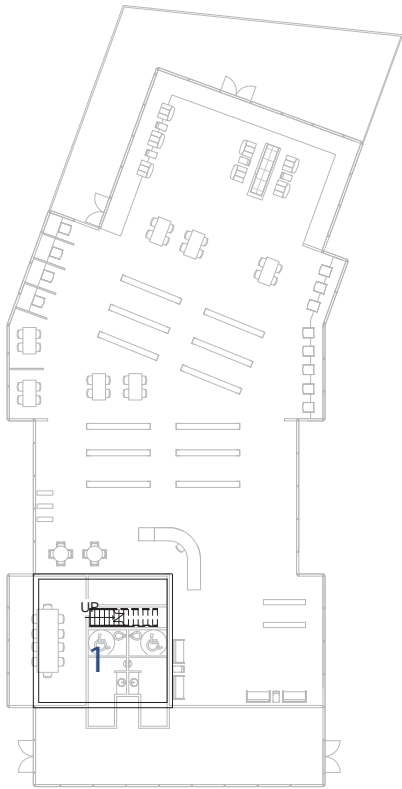
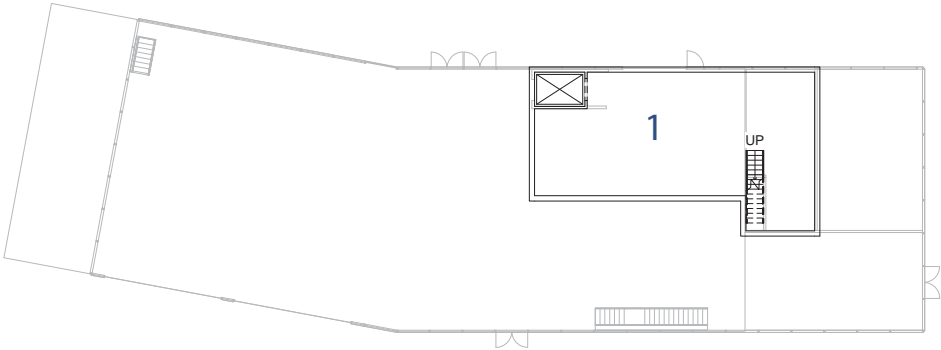


- 1 gallery/historic viewing area
- 2 studio
- 3 indoor group area
- 4 rest rooms
- 5 teen area
- 6 lounge
- 7 green roof patio
- 8 river outlook patio
- 9 elevator



1 community center mechanical

1 library mechanical



south elevation



bridge perspective viewing west





- steel tube
- steel wide flange girder
- steel wide flange column
- steel I-beam column
- core 10 steel
- glass bifold door
- wood composite panel
- glass curtain panel
- steel mullion assembly
- cast in place concrete floor



shading louvers



mesh shading device



operable windows



green roof



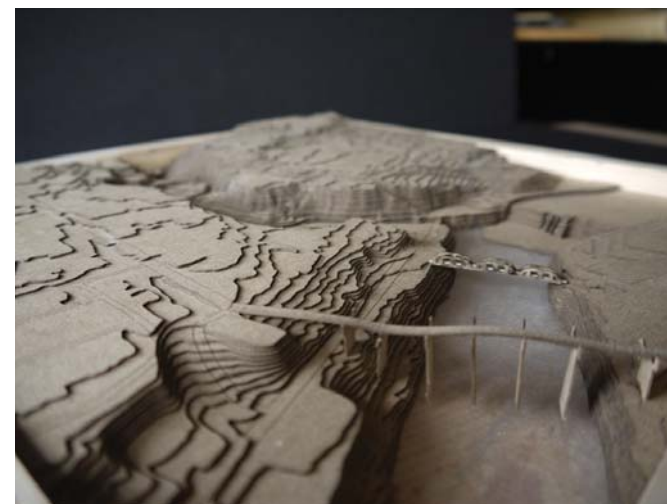
boardwalk perspective viewing southeast



final model - 1"=275'



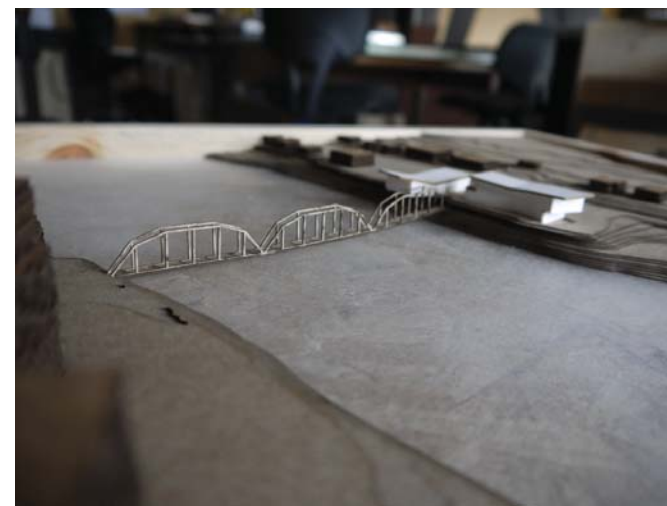
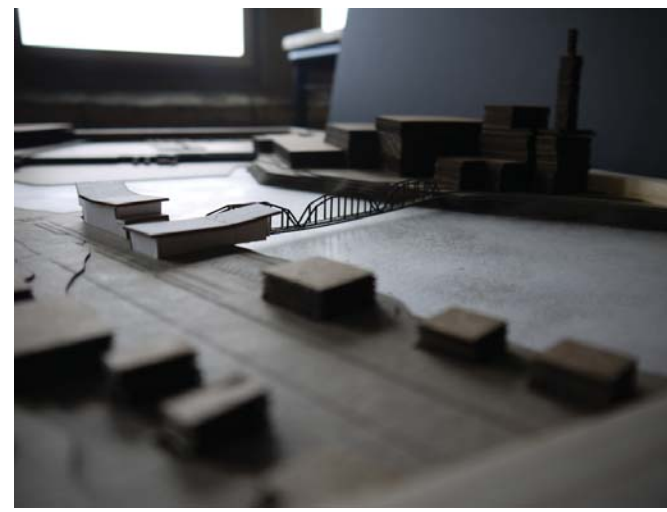
final model - 1"=275'



final model - 1"=65'



final model - 1"=65'



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"Architecture cannot be described through words, it is best experienced through emotions."
-Ricardo Legorreta