



CIRCULATION
~~You Must Wand Two (2) Barcodes~~
~~Disc, Disk, or CD-ROM in book~~

Lowell Park

Reconnecting a City to its Waterfront



Stein, Robert L.
Lowell Park

Arch.
Thesis
2005
Stein

By
Robert L. Stein

Thesis Document
2005

NDSU LIBRARIES

Lowell Park
Reconnecting a City to its Waterfront

An undergraduate thesis submitted to the
Department of Architecture and Landscape Architecture
North Dakota State University

By

Robert L. Stein

Tim Kennedy, Primary Critic
Asst. Professor Landscape Architecture

Paul Gleye, Secondary Critic
Department Chair

Catherine Wiley, Blind Critic
Asst. Professor Landscape Arch

Don Faulkner
Thesis Commity Chair

Ganapathy Mahalingam
Program Director

Paul Gleye
Department Chair

Table of Contents

Signature Page_____	1
Table of Contents_____	2-3
Forward_____	4
Preface	
Project Introduction	
Site Location_____	5
State	
Regional	
City	
Theoretical Basis and Project Justification_____	6
Stillwater History_____	7-9
Lowell Park History_____	10
Conceptual Underpinnings_____	11
User Client Description_____	12-13
Tourists	
Neighboring Businesses	
Community	
River Traffic/ Marina	
Major Project Elements_____	14-15
Circulation/ Crowd Control	
Passive Areas	
Major Gathering Area	
Major Design Feature	
Case Studies_____	16-19
Boston Waterfront Park	
Charleston Waterfront Park	
Battery Park	
Forest Park	

Program Goals	20-21
Creating Sense of Space	
Expanding on Existing Strengths	
Protect and Improve Heritage Resources	
Promote Public Safety	
Site Analysis	22-24
Climate	
Soils	
Physiography and Drainage	
Reference Page	25-26
Appendixes	27-32

Preface

In my travels, there have been many memorable sights and moments that I have experienced. My interests have taken me primarily to two different categories of places, cities and the wilderness. Whether in the city or in the country, waterfronts stand out as places of significance. The presence of water has always attracted people for a variety of reasons. In many cities, including Stillwater, rivers have served as the life force that spawned and has kept cities breathing. Throughout history, urban waterfronts have been taken advantage of and misused. As of late, a trend in urban development has been placed of the rehabilitation of urban waterfront to bring life back to forgotten areas.

Specifically, urban water fronts in downtowns have interested me in the way that they develop and evolve. For my capstone, I wanted to choose a site that had the context of my many cities around the world, an urban waterfront. I choose Stillwater for its uniqueness in the landscape, and the issues that it is dealing with presently and ones to come in the future. I wanted to choose a site that relatable to me, but one that I didn't know too much about so that I didn't have preconceptions about issues. Many urban waterfronts have been the focus of revitalization, and renewal for entire cities.

Project Introduction

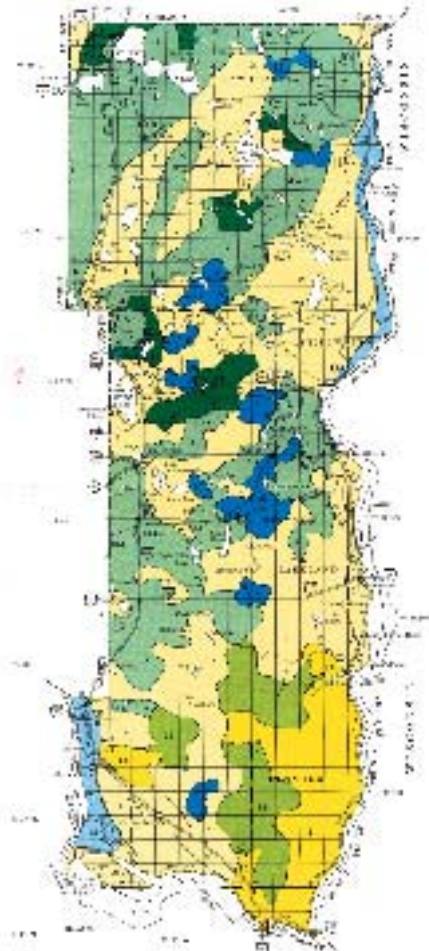
The focus of this project is the creation of a waterfront adjacent to an urban center that reclaims its importance to the city of Stillwater Minnesota. Historic Lowell Park will become a destination for the local community, visiting tourists and other user groups. Elements within the design will spark interest for users as well as provide functional active and passive spaces. Although the site has specific boundaries, connections to the rest of the city will be retained as well as enhanced.

The re-design of Stillwater's urban waterfront is a project that I chose because of its context, and the issues facing the town's growth and future. Being a "hot spot", for the neighboring Twin Cities, Stillwater down town is facing issues of over-crowding, and the integrity of the city and it's history could be in jeopardy within all of this change. The conscientious planning of the waterfront in regards to the adjacent downtown and community aims to provide a sustainable environment that harbors the towns character and history.

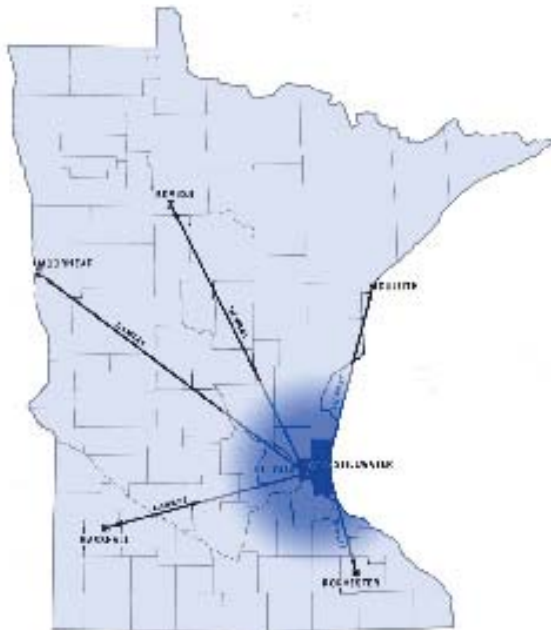
Site Location

Stillwater lies on the East-Central border of Minnesota and Wisconsin as the county seat of Washington County. Dubbed the birth place of Minnesota, Stillwater has a rich and proud history. Founded on the banks of the St. Croix River, Stillwater is nestled in heart of the stunning river bluffs. Eight-teen miles from downtown St. Paul, Stillwater is short drive to many attractions.

Lowell Park runs 5-6 blocks along the St. Croix River and parallel to downtown's Water Street (Main Street). Located in the heart of the downtown, it lies in close proximity to many points of interest, historically and touristy.



Washington County



Minnesota



Downtown Stillwater

Theoretical Basis and Project Justification

The downtown is the heart and life of a city, it is its signature. Great cities are known not for their strip malls and chain franchises, but for the character and appearance of their city centers. Stillwater is known for its downtown, and draws people to its center because of this. In the last thirty years or so, a trend of waterfront cities has been reclaiming their edges. Although there are some design elements on the waterfront, they are weak and don't strike interest and appeal. The transformation of urban waterfronts over the years has contributed to an often played a major role in ongoing efforts to restore the centers of our cities and towns, which is what I intend to do through this project.

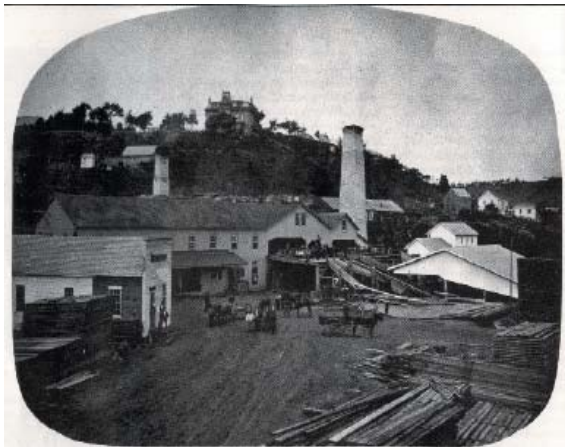
“Water is a defining force that fundamentally shapes the character of each place it touches. The role of water in transport, industry, sanitation and nourishment made it the *raison d'être* of human settlement. It is a feature to be honored and celebrated — not to be treated merely as cosmetic or as just a commodity.

Waterfronts, the unique places where land and water meet, are a finite resource embodying the special history and character of each community. Urban waterfronts, like the cities they help define, are dynamic places. The last three decades have witnessed profound changes along abandoned or underused waterfronts. The trend is accelerating in cities around the globe. It applies to canals, lakes and rivers as well as coasts.

With this growing popularity comes a tendency by some to look for the quick solution, to adopt a formula that may have worked somewhere else. In the 1980's it was the “festival marketplace” fad. In the 1990's, it is the “urban entertainment district” and/or stadiums. In a time of pervading sameness and homogenization worldwide this is particularly dismaying because waterfronts above all factors give each community a chance to express its individuality and help distinguish it from others.”

“The Waterfront Center”

The delicacy of this project lies in the issues about tourism, and how much is too much. Lowell Park is an untapped asset of the community, in that it is neglected for most of the year. To create balance between community character and tourist appeal in context to the urban core is the underpinning of this project.



St. Croix Saw Mill
1870

Stillwater History

The heart and sole of young Stillwater was the lumber and logging industry. Because of the prosperous lumber business, it set the cards in place for other businesses to become established. Inns, motel, and boarding houses soon started popping up in the area. As the logging golden years began to fade in the early 1900's, Stillwater promoted itself as being a prime place to start new business. Along with the lumber business came many saloons and tavern for the rugged lumber workers to wet their whistles. Because the supply became so great, breweries eventually started up. With all of the commerce taking place in Stillwater, it wasn't long before the railroad showed up. When it did show up, it came in force! By 1882, there were three different rail lines that entered Stillwater, all with their own depot. In 1887, after much protest by the citizens of Stillwater, a central train depot with passenger service was built. Union Depot began construction in 1887 and opened in 1888 and stayed in operation until 1954.

As the town continued to grow and prosper, focuses could be put on amenities and activities for the town. The development of parks in the community was one of the main public recreation efforts put forth by the town. Many of Stillwater's parks today were founded in the early 20th century. One of the oldest public parks in Stillwater is Lowell Park, named after Elmore Lowell. Construction of Lowell Park began in 1911, but expansions and revised plans have been implemented up to today. Elmore Lowell was born on January 20, 1851 in Concord, Maine. He came to Stillwater when he was three years old and received his education through the public schools of Stillwater. He followed his father in the hotel business, taking over the Sawyer House after his father's death. The Sawyer House became very popular under Elmore's direction, and it was during this time that the Civil War veterans formed the Last Man's Club at the Sawyer House. He brought dignity not only to the hotel, but also to the city of Stillwater. Elmore Lowell retired from the hotel business in 1902, and began his travels to many parts of the world. In 1910, when the city was raising funds to develop the river front, Elmore Lowell made the largest contribution to the project, hence the name Lowell Park. He also served several years as one of the park commissioners of Stillwater and as chairman of that board. For his kindness and contributions to the city of Stillwater, Elmore Lowell was the first inductee into Stillwater's Hall of Fame established in 1931. By 1935, Lowell had moved to Los Angeles, California to live with his brother Charles A. Lowell. On a short walk, Elmore fell and broke his hip which landed him in the hospital. Elmore Lowell died several days later at the age of 83.

Stillwater History

Stillwater was founded in 1854 as an official city in Minnesota. It was first settled by a man named Maj. Joseph R. Brown (1805 – 1870) in the early 1840's. With him, Joseph eventually brought his sister Lydia A. Carli and brother-in-law Dr. Christopher Carli. The town started with the Tamarack house which served as part home for Brown and the Carlis', part lodge, part courthouse, and part jail. Early in the settlement of Stillwater four men: Brown, Carli, Greeley and Mckusick founded the Stillwater Lumber Company. The lumber company was eventually taken over completely by John McKusick in the following years. The erection of the lumber mill created an influx of settlers to the Stillwater area. Quickly the town stood many structures such as general store, church, hotels, and a dining hall which brought more people to Stillwater. During the 1840's 50's, the rapid growth of Stillwater threatened St. Paul as becoming the largest city in the region.



Maj. Joseph R. Brown
(1805-1870)



John McKusick

The town's growth had many people migrating to the area. Before long, saw mills started mushrooming up and down the St. Croix valley. By the 1850's, there were many commercial developments, as well as housing projects. In May of 1852, severe rains in the area caused Lake McKusick's, the lake that fed the stream that powered the first mill to overflow triggering a tremendous mudslide that affected five to eight acres of downtown Stillwater. What seemed to be huge tragedy ended up being a blessing in disguise. What was once considered worthless land next to the river all of a sudden became valuable commercial property after the mudslide filled in the swamps and bogs on the riverfront. The price went from \$1.25/acre to almost \$500/acre!



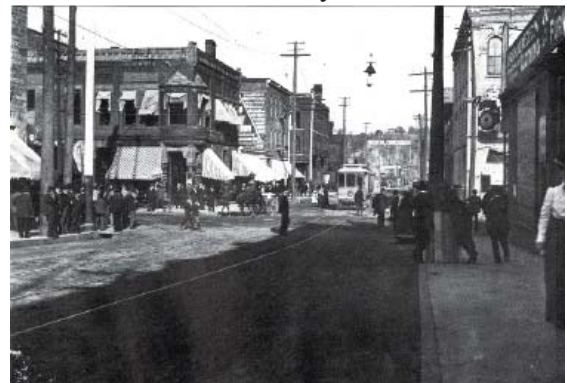
Union Depot
Water and Myrtle Street 1926



Landslide on Myrtle Street

Stillwater History

Along with the prosperity that Stillwater experienced in its existence, the town was also riddled with a number of fires, floods, and other disasters. Substantial flooding occurred in 1885, 1894, 1952, and 1965. Significant fire related disasters include: the fire of 1866, Prison fires of 1884, Bridge fire of 1904, Brine's fire of January 1982, Stillwater High School fire of 1957, and the Grand Opera House fire of 1902. For instance, the fire of 1866 claimed twelve buildings in downtown Stillwater, and damaging others.



Water Street - Early 1900's



Log Rolling at Town Festival



Flood of 1965



Lowell Inn

Lowell Park History

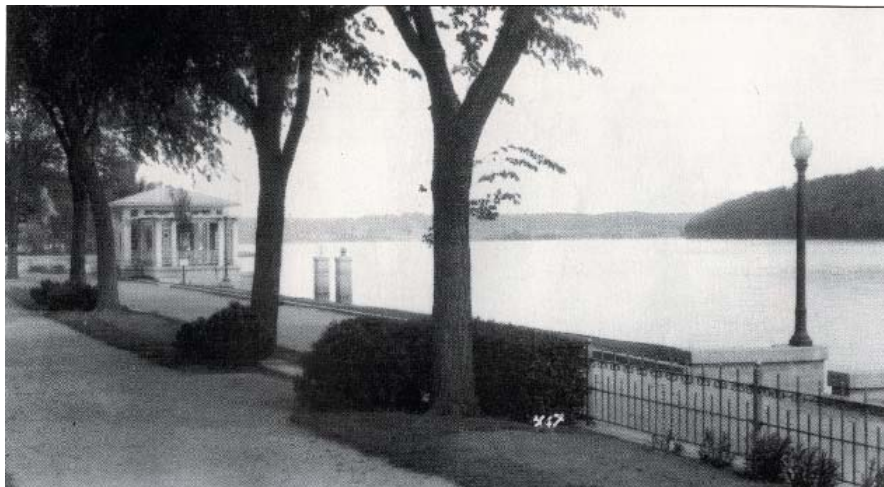
Mr. Elmore Lowell was the famous host of the Sawyer House Hotel. Long after Mr. Lowell sold the hotel, the structure was demolished and a new hotel was built which would bear his name, "The Lowell Inn". Elmore Lowell traveled around the world after his retirement, returning to Stillwater between trips. During these visits to Stillwater, he volunteered his efforts to create a park out of the less-than attractive downtown waterfront. In 1908, the park which was then known as Levee Park, was renamed Lowell Park in honor of Mr. Lowell's energies during the parks early development. In 1909, Lowell donated a gift of \$5000 for the park improvements.

The Stillwater Park Board was formed under the City Charter in 1916. Mr. Lowell was a member of the original board and held the office of president from 1916-1935. Mr. Lowell recognized the uniqueness of the Stillwater riverfront.

Elmore Lowell had a vision to make the waterfront of Stillwater an attractive place for all its citizens, and a place which recalled the formal parks he saw in Europe.

Eventually Elmore Lowell abandoned his travels and settled down in Stillwater. Mr. Lowell then employed the firm of Morrell and Nichols to carry out his dream of creating a Stillwater riverfront park.

Between the years of 1916 to 1935 under Mr. Lowell's direction, the park became the most beautiful park in the St. Croix Valley.



Conceptual Underpinnings

Through the evolution of the design, underlying elements will be brought forth by incorporating or referring to the existing culture and history. Also, the design will take on characteristics based on the natural world from where it was created.

- The History on the waterfront and the logging industry is an important element in the town's founding, and should be retained in some fashion.
- Dubbed "The Birth Place of Minnesota", design element will reference the origin on the state name. The word Minnesota comes from the Dakota tribe of Indians and means, "Sky Tinted Waters".
- The framework of the design will also place importance on the issues of growth in the downtown and controlling tourist impact.



User/Client Description

For this project, there will be a variety of different user groups. The chief general user group will be the general public. The client for this project would be the city of Stillwater. The city will be responsible for maintenance and for the majority of the promotion of the site.

Lowell Park is in a prime location to take advantage of many different subgroups of users. One of the main users for this space will be the many tourists that come to enjoy the beautiful scenery and meander through the downtown area visiting the many antique shops, pubs, books stores and retail shops. The community of Stillwater will be another obvious user group for this site. With many local businesses located adjacent to the site, store owners and business people can walk out their back doors to utilize the site.

•Tourists

Stillwater has a large tourist market, especially in the downtown area. In the summer months, droves of people migrate to Stillwater on the weekends to enjoy the many amenities that this district has to offer. In the design, facilities will be offered to encourage tourist to explore the waterfront and utilize it for picnic areas, family gatherings, or for just relaxing and enjoying the view of the majestic St. Croix River.



•Neighboring Business

The redesign of Lowell Park will give neighboring businesses a major opportunity to feed off the beauty of the park and the waterfront. Having Lowell Park as a neighboring open space, it provides businesses with the encouragement to utilize and capitalize on the river-facing sides of their buildings. In the design, connections between the adjacent buildings and businesses and the waterfront will be a focus to linked the two and create a symbiotic relationship of space.



•**Stillwater Community**

For a citizen of Stillwater, this park will become a destination all, for different reasons. The involvement with festivals and events, relaxing, picnicking, or passing through (i.e. jogging, rollerblading), will all be potential user needs.



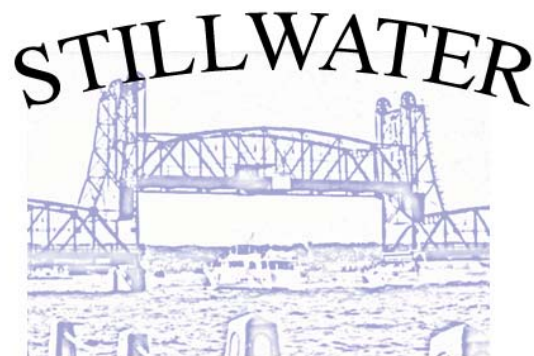
•**River Traffic/Marina**

In the summer months boating on the St. Croix River is an activity enjoyed by many. Each year, the St. Croix River is a destination for a plethora of watercrafts, be it for fishing, water sports or recreational cruising. Providing access to the site for this user group will have to be accomplished in a way that comfortably allows boats to access, but not take away from the environment. The Stillwater Marina borders the north end of the site, and a ferry boat dock is located just south of the site.



Client

The City of Stillwater is the client for this project, in cooperation with the downtown business district. Lowell Park lies on city property and will be direct by the parks department. The City will be responsible for maintenances and additions to the site.





Major Project Elements

Circulation and Crowd Control

One of the issues facing the development of my project is dealing with crowds and pedestrian circulation in the Lowell Park and greater Downtown area. The major event that draws the largest crowd is the annual celebration of “Lumberjack Days”. This event brings visitors by the thousands to partake in the activities and enjoy the big name performers that show every year (i.e. Blues Traveler, Lynard Skinard, and The Big River Band). The Park quickly becomes flooded with people and movement is slowed considerably. Calculated design based on available research will direct the design to provide best possible and enjoyable circulation.



Major Project Elements

Passive Areas

Although Lowell Park is in a high profile area, the need for passive areas needs to exist. With adjacent bustling downtown the contrast of a “relaxation area” would provide a relief from the grind of the city. One of the main reasons for open spaces in cities is to do just that, get away from it all. Maintaining a balance of active and passive spaces will be an element that will have to be done carefully to make sure transitions between these areas flow together and maintain certain continuity. In the original design by Elmore Lowell he tried to mimic the English style formal gardens, so trying to retain some of that history of the site is important.

Major Gathering Area

Lumberjack Days, Art Fairs, and other festivals take place annually at Lowell Park and the downtown. Currently, there is no designed space to accommodate these events and accommodate these events in an orderly controlled fashion. The issue of scale becomes important when figuring the “want and need” of the Downtown Stillwater area.

Major Design Feature

Placing a signature on the site of Lowell Park is a major element that is needed on this site to pronounce the area as one of significance and importance. When looking the different case studies in this program many if not all of the cases have a major element that applies a signature to the site.



Case Study 1:

Christopher Columbus Waterfront Park and Long Warf, Boston, Massachusetts.
Designer: Sasaki & Associates

Boston's historic Waterfront Park is located in an area formerly devoted to mercantile and shipping activities. The site was cleared to complete the open space and pedestrian link from Boston's Government Center complex via the historic Quincy Market area to the waterfront.

Sasaki's program for the park recognizes both regional and national visitation and the local recreational needs of the North End and waterfront communities. The design accommodates the passive recreational needs of adults and children in a series of small pedestrian-scale spaces. The major focal point of the design is the plaza surrounded by terraced lawn areas oriented to the harbor. The park is designed to accommodate spontaneous festival and vendor-related activities.

The premise of the case study is useful to me because it aims to accomplish many of the same goals that I am facing in my own design. Although scale of the surrounding environment is vastly different, the local in context to the city is very similar. Waterfront Park is adjacent to an urban center with the opportunity to capitalize on the neighboring features. Also, Lowell Park like Waterfront Park is both in locations to take advantage of the views that the waterfront provides.



Case Study 2:

Charleston Waterfront Park, Charleston, South Carolina.

Designer: Sasaki & Associates

The plan for the Charleston Waterfront Park was geared towards public and private use with aims to bring new life to the waterfront and providing safe, attractive environment that would invite residents, visitors, shoppers, and business people to the historic downtown. Sasaki's subsequent design for the seven-acre Waterfront Park transformed the underutilized Cooper riverfront into a lone curving expanse of green that includes a 1200 foot promenade along the water's edge, recreational piers, shade structures, participatory fountains, lawns and seating walls, and quiet gardens under a grove of live oaks. Restoring native vegetation and featuring the "country" way of life contributes to the popularity of the waterfront areas. Within the park, existing marsh grasses along the promenade have been restored and supplemented to protect the river's marine ecology.

The pineapple fountain stands as a traditional symbol of hospitality in the south, while offering a cooling effect and interactive play for people of all ages. A 365-foot long pier reaches out to the deepest waters of the harbor offering choice fishing spots as well as colonnaded structures with traditional porch swings and benches.

Immediately to its opening, the new waterfront edge successfully withstood the full force of Hurricane Hugo and has continued to stand the test of time serving as a popular promenade with sweeping views of the Cooper River.



Case Study 3:

Battery Park City, Battery Park City, Manhattan, New York, New York.

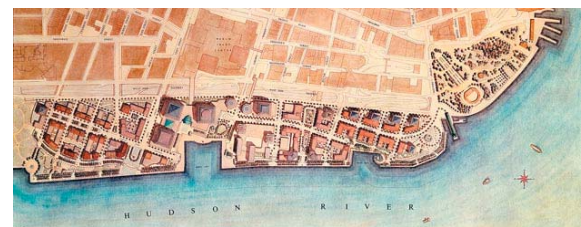
Designer: Cooper Robertson & Partners

Battery Park City like Stillwater's Waterfront began as a landfill, in part for debris from the World Trade Center towers. The idea of the master plan is simple: In the center is a commercial sector, to the north and south ends are residential areas. Linking the whole is a magnificent, 70-foot-wide waterfront esplanade along the Hudson River.

The total space in the plan is broken down as 42 percent residential, ultimately for 14000 units; 30 percent open space of parks, plazas, and esplanade; 19 percent streets, and 9 percent commercial, largely office. Battery Park City gradually filled out during the 1980s. It is now enormously popular on weekends.

Cooper and Eckstut have written about the site, "The premise of the Battery Park City Master Plan is that new urban developments need not be able extensions of the city." Their design principles employed in the master plan were to think small, use what exists, integrate, use streets to create place, and use design guidelines to control bulk, scale and materials.

The waterfront esplanade and the three major park spaces it links are magical open spaces. Eye-catching Hudson River views are the bate that lures visitors, and now that shops have taken root, providing snacks, and groceries, there's little question that this space is already being enjoyed by many New Yorkers.



Case Study 4:

Forest Park, St. Louis, Missouri
Designer: Oehme, van Sweden & Assoc.

Forest Park, a 1,300-acre nineteenth century park west of downtown St. Louis, was the site of the 1904 World's Fair. In preparation for the Worlds Fair, the river was buried. Because of the destruction of the natural system, the park soon became stagnant and unpleasing.

The landscape plan reestablishes the original riparian environment as a major visual and horticultural feature by reintroducing wet savannas, meadows, wooded slopes, aquatic vegetation, and nodes of ornamental planting. Pagoda Circle is being constructed first. Sweeps of perennials and ornamental grasses soften the hard edges and add year-round interest to the river as it flows through an area known locally as "the heart of the park." (Oehme, van Sweden)

This particular project has precedent to my design even though it is in a different context than my other case studies, and in a different environment. The idea behind the redesign of Forest Park was to bring back historical landscape with adaptability to the 21st Century. Like Lowell Park, Forest Park is blessed to have attractions near or on the site to compliment the site and draw attention. In the limits of Forest Park there is an Free Art Museum, Zoo and adjacent to the Park on the North side is a row of Architecturally significant houses built for the Worlds Fair. The location of Lowell Park has the Historic Lift Bridge, and Stillwater is the home of the Old State Penitentiary which is very popular for tourist.



Creating Sense of Place

The character of the St. Croix River is one of beauty, history, and culture. Likewise the community of Stillwater is one defined by its rich history, natural beauty, significant architecture and full culture. Nestled in the river bluffs of the St. Croix, Stillwater is a small but growing community in Eastern Minnesota. The key of this project is to create a stronger connection to the river that compliments the beautiful downtown and adjacent urban structure.

- \o By identifying chief characteristics of the natural surroundings that contribute to the character of Stillwater I will be able to incorporate them in new development opportunities. Focusing on elements such as the bluffs, St. Croix River, wave like topography.
- o Creating a unique urban setting on the St. Croix River by investing in the redevelopment of Lowell Park and connection of the downtown with the riverfront are pivotal goals to be achieved through this project.

Build on Existing Strengths

The positive impact of Downtown success stories – buildings, streets, events – can be improved by incorporating a stronger waterfront connection and feeding off an adjacent accomplishment. Key efforts can be made in areas where efforts have already been made to improve the waterfront area. To foster and expand on the already present successes and efforts of the downtown and waterfront area of Stillwater is the focus.

- o The efforts made on the waterfront edge by the Stillwater Minnesota Shoreline Erosion Protection Project have set a foundation from which to work on to improve the edge further and take it to the next level.
- o One of the signatures of this city is the Stillwater-Houlton Interstate Lift Bridge. It one of the elements that marks Stillwater, and has been placed on the National Register of Historic Places. Opportunities like this one exist on the site of Lowell Park and should be taken advantage of and capitalized on.

Protect and Improve Heritage Resources

Being the birth place of present day Minnesota, Stillwater has rich history that is rooted deep in the land and the community that sprung from the St. Croix River bluffs. These many historical resources all bound together form a unique sense of space that is enforced by the history of the land, the buildings and people. The aim is to preserve the significance of the history, while also pressing forward to accommodate change and improvement.

- o Creating a point of interest, at locations such as the Historic Lift Bridge that marks the site with significance will ultimately add to the quality of the waterfront as well as the whole downtown.

Promote Public Safety

The presence of people provides in most cases a sense of security to others, especially in downtown areas. The conscious feeling that there are others to see and hear provides a sense of collectiveness in an urban setting. Continued vitality and activity in an urban setting discourages many unwanted or unsafe situations to arise.

Attracting more people to the site for everyday use provides an informal form of surveillance. Also creating greater connections to the adjacent downtown improve visibility to the site.

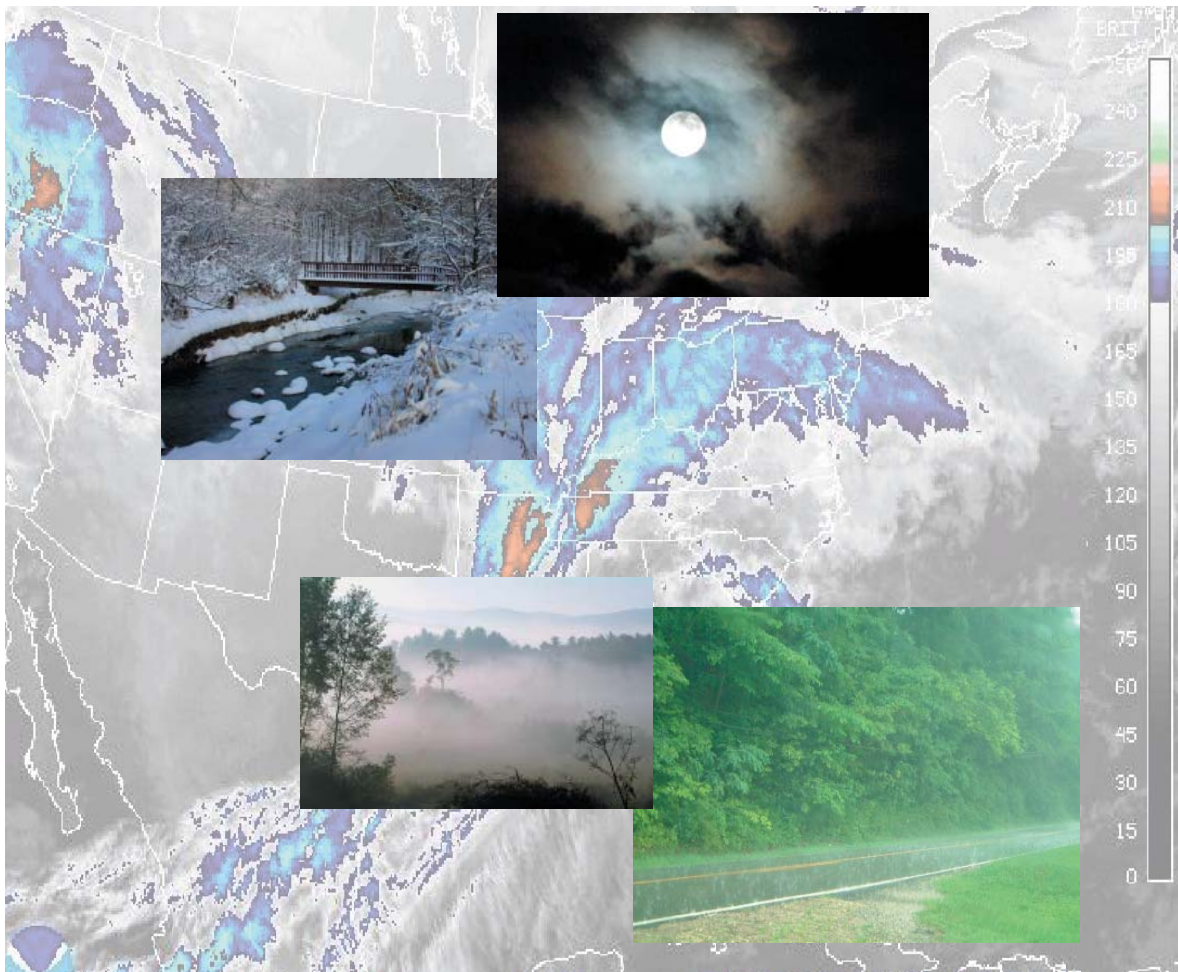
- o Encouraging site activities and events to draw in users and promote community involvement
- o Make accessibility and site use safe in regards to water interaction and river issues.

Climate

In Washington County, winters are very cold and the summers are short and fairly warm. The short freeze-free period during the summer limits cropping mainly to forage, small grains, and adapted vegetables. Precipitation is fairly well distributed throughout the year, reaching a slight peak in summer. Snow covers the ground much of the time from late fall through early spring.

In winter the average temperature is 17 degrees F, and the average daily minimum is 8 degrees F. The lowest temperature on record, -29 degrees occurred on January 29 1966. In summer the average temperature is 70 degrees, and the average daily maximum is 80 degrees. The highest temperature, 97 degrees, was recorded on July 8, 1974.

Of the total annual precipitation, 20 inches, or 71%, usually falls during the period April through September, which includes the growing season for most crops. Two years in 10, the April-September rainfall is less than 17 inches. The heaviest 1-day rainfall during the period of record was 4.97 inches on June 1, 1965. Thunderstorms number about 36 each year, 22 of which occur in summer.



Soils

Soils in Washington County were formed predominantly in outwash. These soils are underlain by fine sand to gravelly coarse sand and are on outwash plains and stream terraces. They range from excessively drained, somewhat excessively drained, and well drained to somewhat poorly drained and very poorly drained. Slopes are level to steep. These soils formed under deciduous hardwood forest or prairie.

The most predominant soil type found on the Lowell Park site is Chetek. The Chetek soils are somewhat excessively drained and are nearly level to steep. They are on convex knolls and crests and side slopes of hills. The surface layer is dark grayish brown sandy loam, and the subsurface layer is brown loam. The upper part of the subsoil is dark reddish brown gravelly sandy loam, and the lower part is brown gravelly coarse sand. The underlying material is brown and light brown gravelly sand and gravelly coarse sand. A seasonal high water table is below a depth of 6 feet.

These soils are well suited as building sites. There is a hazard of ground water pollution if sanitary facilities are placed on these soils.



Physiography and Drainage

Washington County is dominated by the Eastern St. Croix Moraine. This glacial end and terminal moraine is characterized by steep hills interspersed with deep depressions. The depressions are occupied by small lakes or are filled with peat. Along the northwestern part of Washington County, islands of glacial till protrude through the sandy deposits of the Anoka Sand Plain. This is a gently undulating outwash plain made up principally of fine sand. Depressions are commonly filled by peat deposits, marshes, or lakes.

The drainage of Washington County is unusual. In spite of the proximity of the deep-cut valleys of the St. Croix and Mississippi Rivers, only two short perennial streams, Rice Creek and Battle Creek, flow from the uplands into these drainage ways. Elsewhere the drainage is downward into underlying sand and gravel or bedrock, or it travels short distances through swales and shallow, indefinite nalleys and empties into tlakes and depressions.

The highest elevation in Washington County is about 1,104 feet above sea level, within the dominated by the Eastern St. Croix Moraine, in section 17 of Woodbury Township. The lowest elevation, about 675 feet above sea level, is at the extreme southern tip of Washington County where the St. Croix River flows into the Mississippi.



Websites

- <http://www.sasaki.com/what.cgi> , Sasaki & Associates. Nov 15, 2004.
- <http://www.ci.stillwater.mn.us/> , City of Stillwater site. September-December, 2004.
- <http://www.usgennet.org/usa/mo/county/stlouis/postcards/1904minesmetals.jpg> , Image. November 20, 2004.
- <http://www.ilovestillwater.com/> , Chamber of Commerce site. October-December, 2004 .
- <http://www.lumberjackdays.com/> , Lumberjack Days site. November 15, 2004.
- <http://www.stillwatertraveler.com/> , Stillwater Tourism site. November 18, 2004.
- <http://ellisor.home.texas.net/MNVac-45.JPG> , Bridge Image. December 1, 2004.
- http://www.terrasprings.com/news_construction_012804.htm , Frauenshuh Sweeney Development. December 2, 2004.
- <http://www.chipshot.ws/user/The%20Stillwater%20MN%20Lift%20Bridge.jpg> , Bridge Image. November 23, 2004.
- <http://www.ovsla.com/index.htm> , Oehme, van Sweden & Associates. November 16, 2004.

Books

- Breen, Ann and Rigby Dick. *Waterfronts, Cities Reclaim Their Edge*. McGraw-Hill, Inc., 1994.
- United States Department of Agriculture Soil Conservation Service. *Soil Survey of Washington and Ramsey Counties Minnesota*. April 1980.

Periodicals

- Urban, James. "Battery Park City's Invisible Landscape." *Landscape Architecture* February 2004: 36-42.
- Hazelrigg, George. "A River Runs Through It...Again." *Landscape Architecture* February 2004: 108-117.
- Hammatt, Heather. "In Living Memory." *Landscape Architecture* August 2001: 20.

Periodicals

Lockwood, Charles. "Battery Park City: Act II." *Urban Land* October 1997: 97-98, 122.

Kay, Jane Holtz. "Watery Dreams Under Repair." *Landscape Architecture* January 2002: 42-45.

Williamson, Chris. "Exploring The No Growth Option." *Planning* November 2004: 34-36.

A. Title:

Lowell Park Waterfront Re-design

B. Typology:

The intention of this thesis project is to implement a re-design for Lowell Park in downtown Stillwater MN. Lowell Park is directly adjacent to the St. Croix River and historic downtown Stillwater. This design will aim to unify and connect the thriving downtown with the underutilized waterfront. Lowell Park will become a destination for the local community, visiting tourists. Elements within the design will spark interest for users as well as provide function and passive spaces.

C. Theoretical Basis:

Stillwater lies in one of the most beautiful locations in Minnesota. It harbors a rich history linked to the river and was one of the first settlements in Minnesota. As of late Stillwater's downtown has been a hot spot for tourists and travelers. Located only 18 miles from the Twin Cities it attracts many people to this beautiful location. By creating an adjacent waterfront that compliments the already beautiful and successful downtown it will encourage more use and user circulation throughout more of the city.

The focus of this design will essentially be to complete Stillwater's overall downtown by re-designing and connecting it to its waterfront. Stillwater's downtown currently seems unfinished because the potential of the urban waterfront is untapped. This design will create another focal point for the city center, and utilize the huge potential of its urban waterfront.

D. Project Justification:

The downtown is the heart and life of a city, it is its signature. Great cities are known not for there strip malls and chain franchises, but for the character and appearance of there city centers. Stillwater is known for its downtown, and draws people to its center because of this. But should they stop there? In the last twenty years or so, a trend of waterfront cities have been reclaiming there edges. Although there is some design elements on the waterfront, they are weak and don't strike interest and appeal. The transformation of urban waterfronts over the years has contributed to and often played a major role in ongoing efforts to restore the centers of our cities and towns, which is what I intend to do through this project.

E. Emphasis:

Areas of emphasis of this project cover a couple of major design issues related to the site, as well as design characteristics. I will look at waterfront design, waterfront development, and sustainable waterfront development. Creating an urban waterfront has to deal with public accessibility, functionality and well as user safety. Through research, and looking a number of case studies, will hammer out the problems that will arise.

F. Site Information:

Located on the waterfront and adjacent to downtown at the intersection of Hwy 36 and Walter Street, Lowell Park is in prime location for accessibility and aesthetic potential. The park runs parallel to Broadway which is ½ block west, and continues for roughly 5 blocks. Crossing the site there is a beautiful historic draw bridge that is still used today. Bordering the north end of the site is a marina which will be another source of user groups to the site. The backsides of many buildings on Broadway which face the site are well treated and are not displeasing to the eye. Also there are restaurants on some of the buildings as well as one on either end of the site.

Location of this site is ideal for re-development because it has all the existing and surrounding elements needed for a successful public open space. The site's proximity too many businesses and eateries increases potential for high number of users. Being that this site seems to have been overlooked for so long, redesign will opens doors to public curiosity and possible media attention.

G. Major Elements:

- Signage (Historical, Interpretive, Orientation)
- Seating
- Lighting Standards
- Major Gathering Area
- Parking treatments
- Circulation (Pedestrian, Vehicles)
- Connection to Broadway
- Connection to River
- Restroom Facilities
- Landscape Plantings
- Sculptural Elements
- Accessibility

H. User / Client Description:

For this project, there will be a variety of different user groups, but the main users can be generally classified as the public. The client for this thesis project would be the city of Stillwater. The city will be responsible for the maintenance and for most of the promotion of the site, but also this project will give the community pride which will in turn give citizens reason to promote the site.

Lowell Park is in a prime location to take advantage of many different user groups. One of the main users for this space will be the many tourists that come to enjoy the beautiful scenery and meander through the downtown area. The community of Stillwater will be another obvious user group for this site. With many local businesses located adjacent to the site store owners and business people can walk out there back doors to utilize the site.

I. Design Methodology:

Research for this design will be taken from a few different areas. I will examine relationships between downtowns and waterfronts and how they relate. I will explore the history and trends of waterfronts design in urban areas over time. With use of a number of case studies, I will see how other urban waterfront have been treated. Through this research I will gain knowledge about what and what not to do in my design.

J. Plan For Proceeding:

Week 1:		
	October 7	Thesis proposal due Research
Week 2:		
	October 14	Student critic preference slips/ faculty preference slips due Student return preference slips to main office by 4:30 p.m. Research
Week 3:		
	October 21	Primary and secondary critics announced Research/ Contact city planners
Week 4:		
	October 28	Last day of Arch/ LA 561 class Research and Analysis
Week 5:		
	Nov. 4	Begin program and continue research
Week 6:		
	Nov. 11	Veterans' Day holiday

Week 7:		
	Nov. 15-19	Final week of Arch/ LA 571 design studio / presentations Arrange site information Work on Program
Week 8:		
	Nov. 22-26	Draft thesis program due to primary critic (1 copy) Work on program Research Thanksgiving Holiday
Week 9:		
	Nov. 9-Dec. 3	Research Draft Program
Week 10:		
	Dec. 6-10	Final thesis program due to primary critic (1 copy) Last day of classes Review Program with primary critic Make revisions on program
Week 11:		
	Dec.13-17	Final examinations
Week 12:		
	Dec.20-24	Research
Week 13:		
	Dec.27-31	Research
Week 14:		
	Jan. 3-7	Research Work on site schematics
Week 15:		
	Jan. 10-14	Classes Begin Work on concept design and preliminary work
Week 16:		
	Jan. 17-21	Martin Luther King, Jr. Holiday President's Day Holiday Work on concept design and preliminary work
Week 17:		
	Jan. 24-28	Work on concept design and preliminary work
Week 18:		
	Jan.31-Feb.4	Design development
Week 19:		
	Feb. 7-11	Design development
Week 20:		
	Feb. 14-18	Design development
Week 21:		
	Feb. 21-25	Presidents Day holiday Design development

- Week 22:
Feb.28-Mar. 3 Design development
- Week 23:
March 7-11 Mid-semester thesis reviews
Design development
- Week 24:
March 14-18 Spring Break
Presentation drawings
- Week 25:
March 21-25 Easter Holiday
Presentation drawings
- Week 26:
Mar28-April1 Presentation drawings
- Week 27:
April 4-8 Presentation drawings
- Week 28:
April 11-15 Presentation drawings
- Week 29:
April 18-22 Presentation drawings
- Week 30:
April 25-29 Thesis projects due at 4:30pm in the Memorial Union Ball room
Annual thesis exhibit in the Memorial Union Ballroom
- Week 31:
May 2-6 Final thesis review
Draft of thesis document due to primary critics
Last day of classes
- Week 32:
May 9-13 Final examinations
Final thesis document due at 4:30pm in the department office
Commencement at 4:00pm Fargo dome

Fall – Josh Walter, Mark Barnhouse, Cindy Urness

- Fargo Urban Design

Spring – Angela Hansen

- Broadway Square Design Competition
- Edgely North Dakota Park Design
- Fort Totten Historic Design
- Mine Reclamation Competition

K. Previous Studio Experience:

Second Year

Fall – Tim Kennedy

- Ideal Landscape
- Planting Design Studies
- 5 Conceptual Designs
- Plains Art Museum Terrace

Spring – Dennis Colliton

- NDSU Fountain Plaza
- Devils Lake Park Design
- Boy Scout Amphitheater
- All School Foot Bridge Competition

Third Year

Fall – Josh Walter

- Car Park Design
- Cheyenne Grasslands Campground
- Winnipeg Tour

Spring – Tim Kennedy

- Perspective Study
- YMCA Camp Cormorant Design
- Masonry Competition

Fourth Year

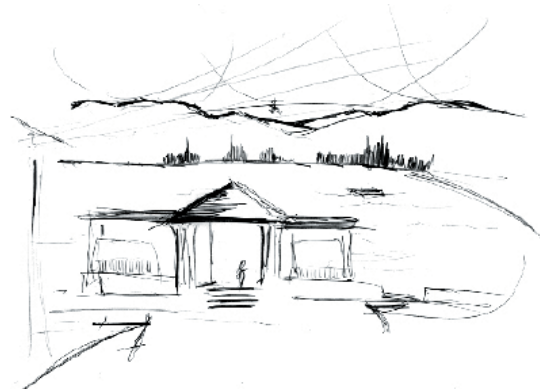
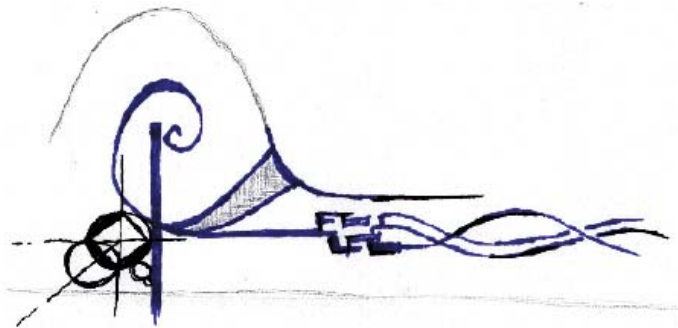
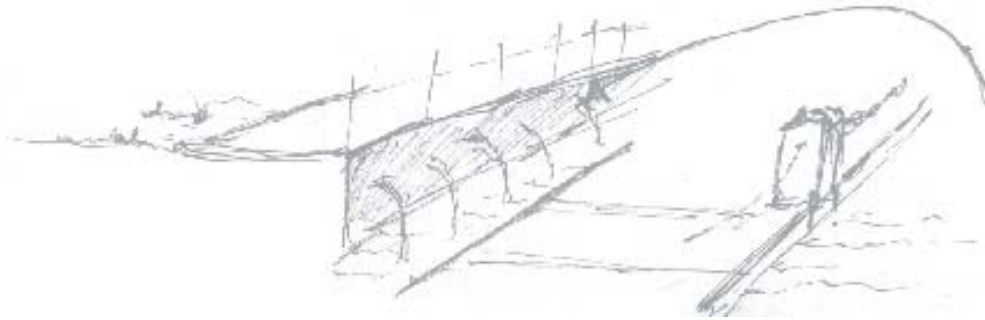
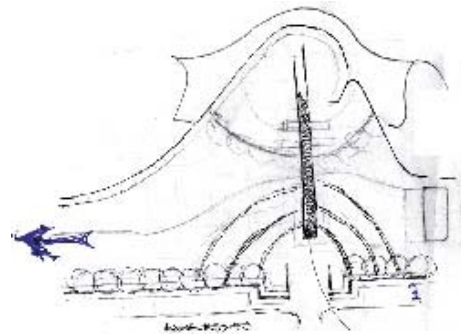
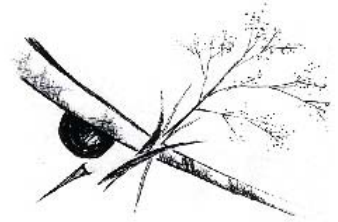
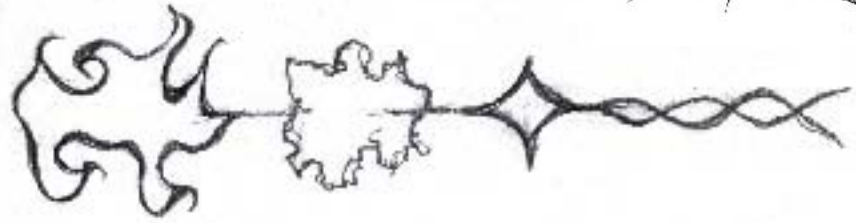
Design Concept

The concept of the design for this project was derived from the name of the city as well as the environment. The Birth Place of Minnesota, is Stillwater's nickname, and I used that in the development of my design. In a sense, The St. Croix River gave birth to the city and is the reason for its existence.

LOWELL PARK

RECLAIMING THE EDGE

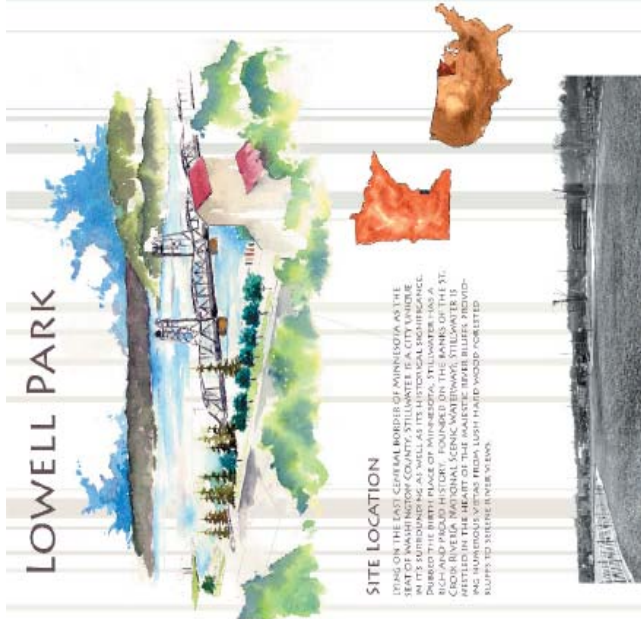
Conceptual sketches



LOWELL PARK

RECLAIMING THE EDGE

LOWELL PARK



SITE LOCATION

LOCATED ON THE EAST CENTRAL BORDER OF MINNESOTA AND THE WESTERN EDGE OF THE METROPOLITAN AREA, LOWELL PARK IS A HISTORICALLY SIGNIFICANT SITE. THE PARK'S LOCATION IS STRATEGICALLY PLACED IN ITS SURROUNDINGS, AS WELL AS ITS HISTORICAL SIGNIFICANCE. THE PARK'S LOCATION IS STRATEGICALLY PLACED IN ITS SURROUNDINGS, AS WELL AS ITS HISTORICAL SIGNIFICANCE. THE PARK'S LOCATION IS STRATEGICALLY PLACED IN ITS SURROUNDINGS, AS WELL AS ITS HISTORICAL SIGNIFICANCE.



SITE HISTORY

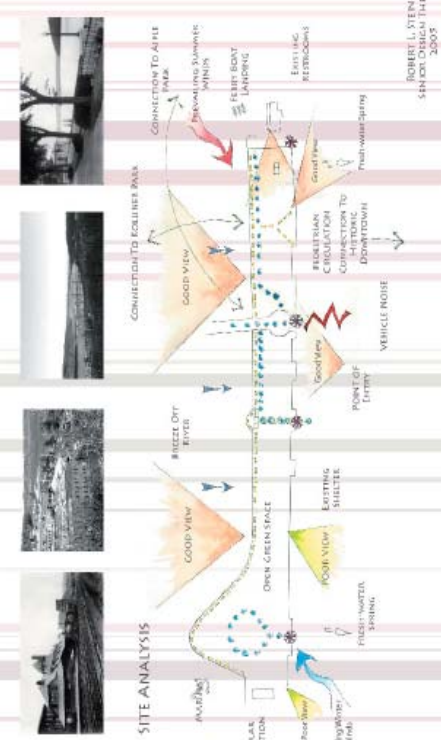
THE SITE HAS A RICH HISTORY OF DEVELOPMENT. THE PARK'S HISTORY IS TIED TO THE HISTORY OF THE METROPOLITAN AREA. THE PARK'S HISTORY IS TIED TO THE HISTORY OF THE METROPOLITAN AREA. THE PARK'S HISTORY IS TIED TO THE HISTORY OF THE METROPOLITAN AREA.

THE PARK'S HISTORY IS TIED TO THE HISTORY OF THE METROPOLITAN AREA. THE PARK'S HISTORY IS TIED TO THE HISTORY OF THE METROPOLITAN AREA. THE PARK'S HISTORY IS TIED TO THE HISTORY OF THE METROPOLITAN AREA.



THE PARK'S HISTORY IS TIED TO THE HISTORY OF THE METROPOLITAN AREA. THE PARK'S HISTORY IS TIED TO THE HISTORY OF THE METROPOLITAN AREA. THE PARK'S HISTORY IS TIED TO THE HISTORY OF THE METROPOLITAN AREA.

SITE ANALYSIS



ROBERT L. STEIN
SENIOR DESIGN THEORIST
2005

LOWELL PARK

RECLAIMING THE EDGE

LOWELL PARK



HISTORIC PAVILION

ONE OF THE FEW EXISTING ELEMENTS FROM PAST DESIGN IS A PAVILION THAT SITS ALONG THE WATERFRONT. BUILT IN THE LATE 1900S AND REFURBISHED IN THE 1980S, THE PAVILION IS IN GREAT CONDITION AND IS OFTEN USED BY LOCALS AND TOURISTS Alike. USING THE FRONT OF THE PAVILION AS AN AXIS FOR WAYFINDER PATHS, I CREATED A CROSSING OVER THE BROAD STEELAM WITH THE WATER WALK AT THAT INTERSECTION.

CHIHLIY SCULPTURES

DALE CHIHLIY IS OFTEN LAIDED WITH REVOLUTIONIZING THE STUDIO GLASS MOVEMENT. HE EXPANDED THE IDEA OF CREATING SOLID GLASS WORKS INTO CREATIVE PROJECTIONS THAT INVOLVE AND WORK WITH MULTIPLE ELEMENTS WITH CASES OF PEOPLE. CHIHLIY IS KNOWN FOR CREATING COMPLEX, MULTIPART SCULPTURES. HE IS ALSO CREDITED WITH TRANSFORMING THE ART OF GLASS BLOWING FROM BEING FRAGILE INTERIOR WORKS INTO BEING INSTALLATIONS IN ENVIRONMENTAL ART. HIS WORK THROUGH HIS CAREER HAS CHANGED AND TAKEN DIFFERENT PATHS TO ACHIEVE A MEANS, BUT ALMOST ALWAYS HAS HIS UNDERLYING INSPIRATION BEEN THE NATURAL WORLD.

THE TYPES OF SCULPTURES THAT HAVE BEEN CHOSEN TO USE ARE TOWERS OF VIBRANT COLORS THAT RESEMBLE PLANT LIFE. THE INTRIGUING SHAPE, COLOR, AND VERTICAL FORM HELP TO DRAW ATTENTION TO THE SITE, BUT WERE ALSO CHOSEN TO REPRESENT THE LIFE OF A RIVER AND A CITY. THE LIFE OF A CITY IS ITS PEOPLE, AND THIS INSTALLATION WOULD PAY TRIBUTE TO THEM.



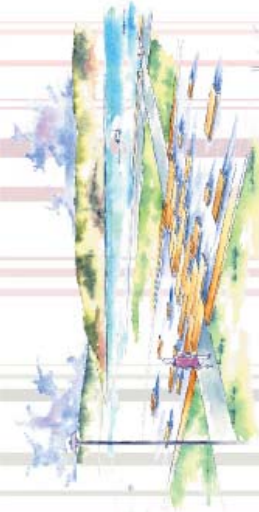
WATER WALL AT TERMINUS OF TALL GRASS

CONTINUING THE FORM OF THE NAUTILUS SPIRAL, THE TALL GRASS COMPLETES THE SHAPE ON THE LANDSCAPE, ULTIMATELY INTERSECTING WITH THE RIVER WALK. AT THIS LOCATION, USES ARE STRUCK WITH THE SOUNDS OF A CASCADING FALL AND RUSHING SOUNDS OF WATER BENEATH THEIR FEET. THE WATER WALL CONTINUES THE WIDTH OF THE TALL-GRASS SPIRAL, SIMULATING THE TERMINUS OF THE STREAM. METAL GRATES ALLOW USERS TO WALK OVER THE WATER AS IT RUSHES INTO THE RIVER. USERS SENSES WILL BE ALIVE HERE WITH SOUNDS, TEXTURES, SMELLS, AND CAPTIVATING VISUALS OF THE WATER THAT SURROUNDS THEM.

LOWELL PARK

RECLAIMING THE EDGE

LOWELL PARK



SPIRAL STREAM

BEGINNING A JOURNEY OF WATER EVENTS THAT CONTINUE THROUGH THE SITE, A LINEAR STREAM AT THE MARKET STREET EXTENSIVE FLOWS EAST THROUGH THE SITE. THE WATER TRAVELS THROUGH A SERIES OF TANKS, THE WATER THAT DRENDS MOST OF THE SITE HAS ITS BEGINNING. THE WATER RUNS TO THE MIDDLE OF A NAUTICAL SPIRAL THAT THE WATER FLOWING THROUGH IT. THIS BEGINS ON THE LARGEST SCALE, PRESENTS THE BIRTH OF A RIVER, A TOWN, A COMMUNITY AND THE BIRTH OF LIFE AS A WHOLE. THE WATER TRAVELS THROUGH THE SPIRAL STREAM, DOWN TO AND ULTIMATELY FLOWS SOUTH THROUGH THE SITE. AS THE FLOWS, THE STREAM BEGINS TO TAKE ON A MORE LINEAR FORM. A CONTINUATION OF THE SPIRAL, IT IS MADE BY A TALL GRASS PLANTING.



RECONSTRUCTING THE SPIRAL AS A VERTICAL ELEMENT TO DRAW ATTENTION TO THE TANGING PLACE AT THE MARKET STREET AREA. THE BENT TOWER BY THE MARKET STREET AND THEIR VARIOUS COLUMNS OF COLORED GLASS PANELS.



CLAYTON MULLA, MULLA, AND A HISTORIC BUCKINGHAM DOWN IN THE MIDDLE OF THE MARKET STREET BY THE BOSTON MARKET STREET. THE BENT TOWER BY THE MARKET STREET CAN ACCOMMODATE MANY INTERESTING USES. THE BENT TOWER CAN ACCOMMODATE MANY INTERESTING USES. THE BENT TOWER CAN ACCOMMODATE MANY INTERESTING USES.



MOVING SOUTH THE WATER FLOWS FROM THE MARKET STREET DEEP TOWARDS THE MIDDLE OF THE MARKET STREET. THE TRANSITION FROM THE MARKET STREET TO THE MIDDLE OF THE MARKET STREET IS ASSOCIATED WITH THE MARKET STREET. THE MARKET STREET IS ASSOCIATED WITH THE MARKET STREET. THE MARKET STREET IS ASSOCIATED WITH THE MARKET STREET.



CLAYTON MULLA, MULLA, AND A HISTORIC BUCKINGHAM DOWN IN THE MIDDLE OF THE MARKET STREET BY THE BOSTON MARKET STREET. THE BENT TOWER BY THE MARKET STREET CAN ACCOMMODATE MANY INTERESTING USES. THE BENT TOWER CAN ACCOMMODATE MANY INTERESTING USES. THE BENT TOWER CAN ACCOMMODATE MANY INTERESTING USES.

SCALE: 1" = 20'

NORTH SECTION

LOWELL PARK



BRAIDED STREAMS
WITH
CHIHUAHUI SCULPTURES

ONE OF THE MAIN WATER FEATURES IN THE DESIGN IS THE BRAIDED STREAMS THAT COLLECTED AS THEY TRAVEL DOWN THE HILLSIDE. THE STREAMS ARE DESIGNED TO BE A MIX OF NATURAL AND MAN-MADE. THE NATURAL ORGANIC FORMS THAT EXIST IN THE ADJACENT RIVER ARE EXPLORED INTO A MORE CONTROLLED FORM THAT WILL BEHOLD NATURAL CURVES. TO CREATE EVEN MORE INTEREST IN THE SITE, LANDMARK ELEMENTS THAT WILL BEHOLD NATURAL CURVES. TO CREATE EVEN MORE INTEREST IN THE SITE, LANDMARK ELEMENTS THAT WILL BEHOLD NATURAL CURVES. TO CREATE EVEN MORE INTEREST IN THE SITE, LANDMARK ELEMENTS THAT WILL BEHOLD NATURAL CURVES.



HISTORIC LIFT
BRIDGE

THE HISTORIC LIFT BRIDGE THAT IS LOCATED SOUTH OF THE PARK FROM THE PAST TO THE FUTURE WILL BE REBUILT AND MODERNIZED. A NEW BRIDGE IS PLANNED TO BE BUILT TO THE WEST OF THE PARK AREA AND THE CHIHUAHUI SCULPTURES WILL BE PLACED IN THE AREA. FROM THE ANGLE YOU GET A TASTE OF THE SITE, BUT THE MODERNITY COMES TO LIFE TO ENHANCE IT BEST HAND.



BRIDGE PASSAGE

DIRECTING THE FLOW THROUGH THE BRIDGE IS THE HISTORIC LIFT BRIDGE. PEDESTRIAN TRAFFIC LEAD UNDER THE BRIDGE ON TWO DIFFERENT LEVELS. THE STRIP LANE OF SCULPTURES THAT WILL BEHOLD NATURAL CURVES. TO CREATE EVEN MORE INTEREST IN THE SITE, LANDMARK ELEMENTS THAT WILL BEHOLD NATURAL CURVES. TO CREATE EVEN MORE INTEREST IN THE SITE, LANDMARK ELEMENTS THAT WILL BEHOLD NATURAL CURVES.







Robert L. Stein

“Lifes a garden.....dig it.”