CITY AND NATURE : SENSORY EXPERIENCES

by

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Dallas Huard April, 2007

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"When an architectural design draws solely from tradition and only repeats the dictates of its site, I sense a lack of genuine concern with the world and the emanations of contemporary life. If a work of architecture speaks only of contemporary trends and sophisticated visions without triggering vibrations in its place, this work is not anchored in its site, and I miss the specific gravity of the ground it stands on."[1]

Peter Zumthor

abstract

Images come to mind when I take the time to think about what architecture means to me. These images, from my childhood, from exposure to my surroundings, from my experiences and training, even though this part of my life is still limited show me how simple arechitecture can be. I am always surprised that since I began studying the many aspects of architecture it has become so much more important to me. There are moments that I am able to recall the way the wind surged through a space or the way clouds would come alive and dance in a store window. It is these aspects of architecture that have began to shape and influence my life on an emotional and sensory level.

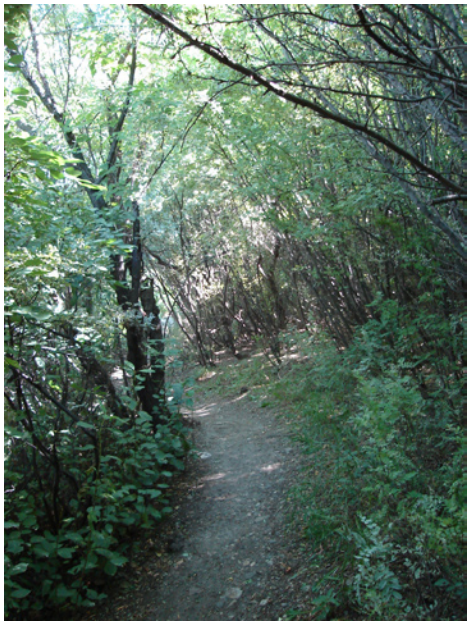
I appreciate the simplicity of architecture when I think about summer visits to my grandparents farm. I am reminded of the sound of straw and leaves breaking under my feet, the creaking of a rusty hinge on the pasture gate, and the chill of the cold breeze from windows that were years beyond repair. These experiences are much more important to me than the visual images that come to mind because it takes more personal emotion for me to recall them; this makes for a much more powerful memory, one that last much longer than when I rely on the image alone. I remember a time when life was so much simpler and architecture was something to experience, not simply view. It is these simple experiences that hold the most personal meaning for me in my life.

As I reflect upon my childhood, I realize that I rarely desire simplicity in my life as I once did years ago. Even when I go for a walk there is a certain amount of excitement or emotion that I need to experience to fully enjoy life. The simplicity of the Saskatchewan prairies has ceased to be forever changing to me, which leads me to the design of an urban space. This space needs to have the ability to be an ever changing sensory experience that can create an environment influenced by both nature and city life.

Saskatoon is home to dozens of spaces available to the public that are modeled after the Saskatchewan Prairies. Each space that resembles the vast open prairies is a naturalistic way of designing a park and only demands that a visitor observes the space they inhabit; design that is focused on respecting nature. A variety of purpose and activities is what our culture has come to desire in our lives so we no longer desire the naturalistic park as we once did. Instead we are looking for a place that has the ability to interact with our senses on many levels.

As cities get more desnse, public space becomes increasingly important because of its ability to give relief to the increasing pace of urban life. The ability for open space to impact many different parts of the urban landscape, that it supports, stimulates emotions that can affect any person. Encounters can summarize what an urban park should offer an individual through the interaction between old and new, architecture and our senses, the immense and the intimate, and the city and nature.

This thesis will explore, through encounters, how the modern city must respond to the natural environment in order to enhance our sensory experiences through the design of an urban park.



f1 . . . Saskatoon River bank - natures space . . .



f2 . . . New Orleans - a cities space . . .

architecture and our senses

The true dimension of any design does not rely solely on the physical or mental, but also on the conscious of the individual experiencing it. In order to create unique, personal experiences in the urban environment, all five of our senses must be touched in new ways. Every architect, young and old, needs to consider how the space feels to our sense of touch as we walk along a textured path or grassy plain, the warmth of the sun on our face or the chill of a cold winter day, the sound of the surrounding environment or the smells in the air. Given this, a space should be influenced at every level of detail, in the path of travel, to create a vivid and memorable experience. Our feelings, preferences and desires demand that form must be controlled by our own reasoning. It is our own personal feelings that tell us whether or not the physical forms that surround us will become a reality to our emotions. Our natural environment has the ability to influence our senses throuh the use of architecture.

By neglecting our senses when designing, especially in the modern era, a dull experience between nature and architecture has been created.[2] In addition to visual stimulation, much of the architecture in our modern worlds fails to encounter nature in ways that can enhance our sensory experience.

"The fact that the modernist idiom has not generally been able to penetrate the surface of popular taste and values seems to be due to its one-sided intellectual and visual emphasis; modernist design at large has housed the intellect and the eye, but it has left the body and the other senses, as well as our memories, imagination and dreams, homeless."[3]

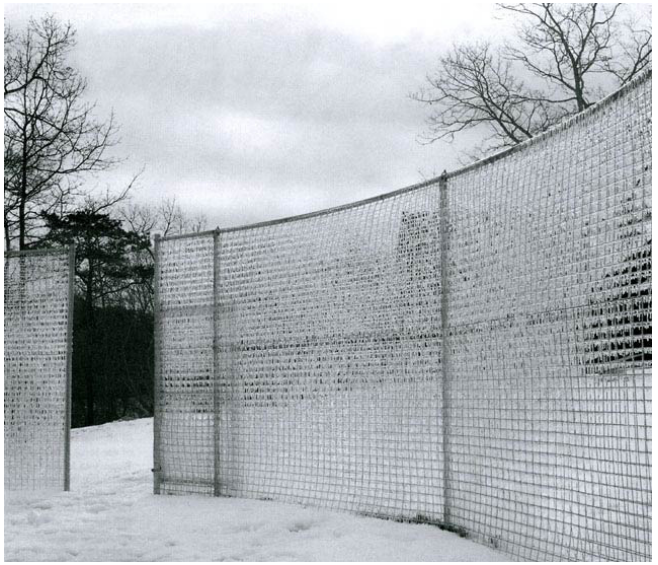
As stated in the above quote by Juhanni Pallasmaa, through technological advances on many different levels we have focused our attention on easily attainable sensory experiences, primarily vision. Around every corner visual stimuli are forced upon us from posters to digital media which results in our vision, being the most easily attainable sense, to be relied upon to heavily.[4] Since our vision is the least effective when recalling memories a shift in sensory stimulation is needed to created a more dynamic, memorable experience.[5] When we rely primarily on our vision we loose our attachment to nature; our other senses and memories are forgotten and are, infact, left 'homeless'. We have turned off our other senses while ignoring the more complex encounters in our lives that offer us memories that can be kept with us forever. We must create tension between our conscious and unconscious in order to "open up the emotional participation of the observer."[6] The tension can be created through encounters that seem out of the ordinary, but at the same time respect the natural and artificial world.

"Our body is in the world as the heart is in the organism; it keeps the visible spectacle constantly alive, it breathes life into it and sustains it inwardly, and with it forms a system...sensory experience is unstable and alien to natural perception, which we

achieve with our whole body all at once, and which opens on a world of interacting senses."[7]

The importance of the human body as the center of our experiences in the world is explored by Richard Kearney. Our ability to move throughout space and interact or encounter with new experiences opens us up to a new realm of our senses. Through this movement in space, architecture has the ability to guide us and not simply be a visual stimulant. Every space has the ability to be remembered, but it is the spaces that affect our senses on an emotional level that will have an everlasting effect on us.

For these reasons it is important to create experiences that stimulate our senses in a unique way each time we visit the same place. Steven Holl focus' on architecture that, through our senses, stimulates change in our day to day lives, "Architecture holds the power to inspire and transform our day-to-day existence. The everyday act of pressing a door handle and opening into a light-washed room can become profound when experienced through sensitized consciousness. To see, to feel these physicalities is to become the subject of senses."[8] By using architecture to revive our senses we can renew encounters that have otherwise been "conditioned by prior knowledge or a source."[9] Joy Malnar believes that as humans change, our physical surroundings need to have that same ability; architecture that has the ability to evolve. A way that architecture can achieve this affect in nature is represented by Michael Van Valkenburgh at the Krakow Ice Garden at Martha's Vinyard, Massachusetts. Here the design further enhances its surroundings by changing with the seasons. This is achieved through the use of climbing plants that include: purple clematus in the spring, blue morning glories in the summer, and red ivy in the fall.[10] In the winter the wall turns to into a solid panel of ice with the help of ice drips. This is a simple way to show the passing of time, but a wonderful way for design to encounter nature.



f3 . . . Krakow Ice Gardens - changes with time . . .



f4 . . . Kirin Plaza, Osaka - technology/visual overload . . .

old and new

Urban park design in North America was derived from an "anti urban ideal"[11] that was created as an escape from the negative aspects of the modern city.[12] Parks took on the shape of the rural context around the city; a way of creating what was feared to have been lost by the construction of cities.[13] These urban parks were focused around the desire for leisure that was meant to be an escape from the increasing amount of technology in growing cities; the increasing technology furthered the detachment from nature in urban parks. The parks took on the shape of a barrier between what was desired by the culture, nature, and the city which was considered to be obtrusive and undesired.[14] The parks need to be an extension of city life, a new way to experience nature.

The common design approach to historic or naturalistic urban parks was to focus on nature while turning a blind eye toward the city; a way to break free of city life. As parks were a popular destination long before technological advancements, they were originally seen as a place where social reform could take place and not as a place of leisure.[15] It was believed that the park could be a place where people of all races and backgrounds would go to socialize, however, most of these parks were located in areas that middle and lower class citizens could not easily access because of limited public transit or private vehicles. The culture of this time was separated by class and race and only the wealthy were able to afford to take the time to visit parks.

In the 1930's park officials realized that the urban park was not capable of creating social reform and the idea was abandoned.[16] At this time technological advances were beginning to play a major role in a persons lifestyle. Leisure was beginning to be viewed "as a way to fill the consumers empty time"[17] because of the increase of technology decreasing the amount of physical labor done in the work force. People were relying on the park as a place for exercise since the work place offered very little physical activity. More and more people relied upon parks to provide sports and physical activities to compensate for what was lost with increasing technology.

"Sports have replaced the exercise we used to get from work. The 'desk' job has replaced most of the physical labor that we do."[18]

This change in our day to day lives resulted in leisure spaces adapting a recreational focus.[19] The turn of the twentieth century brought on the idea that we should move away from the naturalistic park and shift towards parks that consist of playgrounds and recreational areas. There was a switch from "artistry to a utility priority."[20]

This transition from 'artistry to utility' resulted in what many believe to be a misuse of the park environment. This theory, that a park should be merely for the scenery, has been both accepted and rejected throughout our past. It is important, through encounters, to respect all aspects of what has made the park important to us.

It is important to understand that ideas which were successful for our cultural period may not be appropriate for another and for this reason history must be recognized as an important component in urban park design.

"Every new work of architecture intervenes in a specific historical situation. It is essential to the quality of the intervention that the new building should embrace qualities which can enter into a meaningful dialogue with the existing situation. For if the intervention is to find its place, it must make us see what already exists in a new light. We throw a stone into the water. Sand swirls up and settles again. The stir was necessary. The stone has found its place. But the pond is no longer the same."[21]

Any new architecture in a period of time needs to respond to the culture of that time as Peter Zumthor describes in the above quote. Creating new architecture must take what we 'see' as normal and reveal it to us in a new way. The culture of present time is in need of a new way to experience nature and in order to understand this new experience in nature one must simply look as the computer and its technology. "The observer becomes detached from an incarnate relation with the environment through the suppression of the other senses, in particular by means of technological extensions of the eye...the human vision is itself an artifact, produced by other artifacts, namely pictures."[22] The computer has the ability to create so many experiences without any dependance on the natural environment through its ability to offer visuals at any given moment. With technology playing such an integral role in our lives it needs to have an active, although altered, role in the revitalization of our appreciation of nature. Through the use of architecture, nature, and technology, in conjuntion with one another, there is an opportunity to open our minds to new sensory experiences.

The naturalistic ideals of park design still hold meaning in our present culture through nature's continuing ability to calm our senses and emotions, but "what we see now is the loss of stimulation from the open space concept that is faced with the reality of how our culture affects these spaces."[23] This does not mean returning to the way parks were designed in our past, but using past ideas to create new experiences.

"Such a departure from primary forms as generators does not mean a return to historicism...Instead, it attempts to play with the fragments of a given reality at the same time as the rational structure of abstract concepts, while constantly questioning the nature of architectural signs. Those fragments of reality unavoidably introduce ideological and cultural concerns...these fragments are not to be seen merely as part of the material of architecture - as neutral, objective, indifferent."[24]

Through this unique way of looking at encounters, Tschumi also has a unique way of looking at the integration of context and history into design. At the Parc de la Villette, Tschumi creates a unique experience where the use of sight creates a new dimension of experience, not dependent on aesthetics in architecture, but on the sights created through movement and interaction of elements both old and new. Tschumi does not rely heavily on technology in these experiences, but rather on how the use of architectural elements can can enhance the natural spaces that surround us. Tschumi also relies on naturalistic ideas such as large open plains to play and relax in while placing what at first seem to be random objects throughout the landscape to create interest and dynamic spaces. He uses these objects to capture the simplicity of nature in new ways that have the ability to frame experiences as you move throughout the spaces. By using modern tools in architecture we can create spaces that will allow us to experience nature in new ways.

immense and intimate

When considering design, with the intention of celebrating nature, it is important to use architecture to enhance our emotional experiences through changing scales. The intention is to create space that allows for new experiences while not focusing simply on spaces the are only for occupancy. The space of nature can often be viewed as a blank canvas, a void waiting to be turned into a work of art, waiting for a design to influence it while not dominating it. By looking at the space in this vacant form we are free to create a new world to be viewed from the 'inside out'[25] that will be free of unnecessary details.

The user of a space decides what a space should be through his/her personal interaction with immense or intimate spaces. Architecture, in its purest sense of the definition, is meant to be an extension of nature for the viewer to further enhance what already exists. This approach allows the built environment to belong to the user to interpret freely without influence; to experience space through architectures ability to enhance our surroundings through subtle gestures and guidance.[26] We do not want to influence the senses, but enhance them through guiding the user to different places where they can interact with the environment in a new way. The intentions of this type of architecture are to allow the design, through encounters, to become a part of our life and not just an object in the landscape.

This is best expressed by the approach that architect Bernard Tschumi uses when designing urban spaces, especially parks. Tschumi's approach to creating interest in urban spaces relies on his ability to create an unique setting that challenges the viewers ability to define the space they inhabit.[27] As Bernard Tschumi analyzes a specific space he creates a mood that can only be described as awkward. Tschumi creates this awkward sensation by using architectural elements to guide the viewer through a space that would have otherwise gone un-noticed. While guiding the viewer through this space he exposes them to a series of occurences that seem to have no purpose. It is not until he allows all the objects to unify that the experience becomes whole. This experience is created through the ability for mateials that affect touch and sight and natural elements such as the sun and wind. Through the encounters he creates, our perception tells us what we should be viewing, but it is not complete; therefore, we question reality. This questioning of reality is what makes this sensory experience so powerful to the viewer.

"Thus space can follow space, not necessarily in the order normally expected, but in a series of dramatic revelations that can announce a new special structure. Devices such as the insertion of any additional space within a spatial sequence can change the meaning of the sequence as well as its impact on the experiencing subject."[28]

Through his ability to take the conventional parts of our lives and reorganize them, in new unusual ways, Tschumi is able to recreate the way we view the world. The awkward becomes comfortable and desirable. Spaces are created that encourage

us to view the world in a different context. This way of viewing the world will spread out into our everyday lives and force each of us to look at the world we live in with new appreciation. We will now notice what went unnoticed before. The creation of new encounters in what we have come to see as normal will create a series of new experiences, an urban space that has never been experienced before.

"In any building – house, office, public building, summer cottage – people need a gradient of settings, which have different degrees of intimacy."[29]

This shows that architectural creation does not merely lie in the world that it encompasses, but in the spirit of the people as a result of our cultural experiences. Therefore, architecture cannot define a culture; the culture must define the architecture and the spaces we create. Our modern culture allows us to create spaces that affect our senses in many ways through the use of advancing technologies. Technology can enhance the experience of vision, sound, smell and touch.

The use of light can be used to create encounters between the immense and intimate. The shadows created by the presence or absence of glazing can change the feel of a space through a shadow's ability to create visual space. A single strip of light or shadow on a floor can have the same dominant effect on space as a physical wall. Juhanni Pallasmaa considers shadows to be a gate to another level of emotion and sensory perception. "The shadow gives shape and life to the object in light. It also provided the realm from which fantasies and dreams arise."[30] Digital technology can create unlimited types of visual stimulation using light that can range greatly in intensity, color, and patterns. Technology can now allow us to capture light and let us experience it in different ways although relying purely on nature will give us the same effects so technology is used as a method of experiencing daylight at times when the sun does not shine.

Sound has the ability to create intimate and immense space on another sensory level that can link our environment with architecture. Pallasmaa sees architecture as a medium that, through its ability to direct sound, can make a small space feel larger than it actually is or smaller than it might feel. "Buildings do not react to our gaze, but they do return sounds back to our ears."[31] When a surface encounters sound, it has the ability to make a space feel larger and more immense than it would in an untreated situation. The same can be said if a space blocks sound or prevents the encounter on other sensory levels. If only the sounds of the wind and the rustling of leaves is permitted, a space will feel much more intimate. The methods used to maximize how we use sound can be used with smell also.

Smell can be enhanced or reduced by physical barriers created through design. Architecture can use fenestrations to block or permit smells to enter a space. When a smell is allowed to overwhelm a space it can reduce the scale of the room emo-



f5 . . . Steven Holl - Chapel of St. Ignatius . . .



f6 . . . Le Corbusier - Ronchamp . . .



f7 . . . intimate and immense - illusion of space . . .

tionally while is a smell is subtle it can have the opposite affect. Even by allowing the scents from flowers outside a window or door into a space can give the illusion, much like a window, of a larger space. Smell, like touch is overlooked often when creating different sensory experiences.

Touch is one of the most powerful senses we have to use. Through experiencing the texture of a surface we can interpret the same space in many ways. "Our skin traces temperature spaces with unerring precision; the cool and invigorating shadow under a tree, or the caressing sphere of warmth in a spot of sun, turn into experiences of space and place."[32] A rough texture has the ability to make a space feel smaller while a smooth surface can make a space feel larger. Touch is also important when experiencing natural elements in a space such as the wind or sun. By allowing the wind into a space it can make a space seem large, but if the wind is overpowering the space might feel small. The control of sound, light, smell and touch in conjunction with manmade elements are very powerful when controlling immense and intimate spaces. The encounters created between each of these senses, nature, architecture, and technology are very powerful while experiencing the world. These senes make people feel any sense, from scared to alone or gloomy, to energized and so many more; anything but indifferent when their senses are engaged.



f8 . . . surfaces deflect light and sound. . .



f9 . . . opacity and translucency . . .



f10 . . . Tadao Ando - Church of the Light. . .

city and nature

”The old categories are no longer viable frames for organizing social practice. For example, in our free time we are acutely aware of a sense of confinement and lack of choice; while in our work we feel that we soar and can do anything.”[33]

It is important for architects to understand that the answer to the problem of encounters between city and nature depends upon the ‘real’ problems of the city. These encounters cannot be resolved by a specific set of rules as each city, each environment, demands its own ideas and approaches. This is the idea behind the flow of the city to the park. Tschumi stated that, “during the 20th century we have witnessed a shift in the concept of the park, which can no longer be separated from the concept of the city”[34] which shows that he believes in the importance of relating the city to nature. This encounter must be blurred and invisible, but that of course depends on the unique situation of each city and the nature that influences it. Frederick Olmstead utilizes certain principles at Central Park in New York to separate the urban and rural fabric. Shrubs and trees are used primarily to form and modulate space, in essence to create a boundary between activities.[35] This approach not only created boundaries, but also was used as a visual rejection to the strict city grids of rectangular houses and streets. Olmsteads approach to park design was to create the opposite of the city.[36]

Even though there is a certain degree of serenity provided by nature to our senses and spirit, in the contemporary world technology has become a large part of our lives. Olmstead believed that “no shop was as important to our physical and mental health as nature could be, but he would be very pressed to convince people of this today.”[37] The once idealistic belief that only nature could cure our sorrows and provide relief is behind us. Now only through the interaction and encounters of city and nature can we find a balance between the two. The focus of urban park design needs to be holistic; a focus on both city and nature to achieve the full range of sensory experiences that an urban park can offer.

“Great cities are based on great, clear, well-ordered concepts, I thought. The rectangular pattern of the streets, the diagonal line of Broadway, the coastal lines of the peninsula. The buildings, packed densely in their right angled grid, looming in the sky, individualistic, in love with themselves, anonymous, reckless, tamed by the straitjacket of the grid.”[38]

Zumthor’s idea of the perfect city defines the city as an independent element. This rigid form of perfection has traditionally been integrated into urban space. The opposite should be the idea of perfection. The public space or nature has to flow into the elements of the city. Through this encounter a transition is created that engages the city and nature at the same time while allowing nature to infiltrate the rigid city grid giving it new life and a new sensory experience. Michael Benedikt explains this very clearly when he says, “We become engaged with the intervals and

open ends."[39] The encounters between the city and nature will become more subtle and inviting making the transition from one to the other a natural occurrence.

"The truest value of public pleasure grounds for large cities is in the rest they give to eyes and mind, to heart and soul, through the soothing charm, the fresh and inspiring influence, the impersonal, unexciting pleasure which nothing but the works of nature can offer to man."[40]

Considering this statement made by Galen Cranz, we must respect that nature is one of the greatest escapes from our lives, it is important to also realize that even nature in an urban park is fictional. Frederick Olmstead, the designer of Central Park in New York, understood that although we continually attempt to bring the rural environment into the urban fabric of a city it is rarely successful and continually feels forced and artificial.[41] When Olmstead designs a park he creates a series of encounters between nature and man made through the understanding that a park should be designed, in part, to the image of nature. To create the most dramatic encounter the artificial landscape should be recognized as something different from the obvious designed environment. The goal for 'pleasure ground' is to suggest forms based on natural occurrences, but not to rely on what nature represents.[42] The encounter needs to be a reinterpretation of nature, rather than the duplication of it. The greatest respect we can have for nature is to not attempt to duplicate it, nature cannot be improved upon.

This is the most interesting aspect of Olmstead's work. His design of an urban park came at a time in our history when everyone wanted a naturalistic experience. His understanding, that any attempt to improve nature would not be successful, was a brave and noble realization.[43] Through his unique approach to design he set a foundation that allows us to now concentrate on the interactions or encounters between nature and human. To create a new architecture that compliments what we see as natural, not to replicate and butcher it. Although Olmstead was a landscape architect his theories are important to translate the man made world of architecture.

The built environment should allow the building to become part of the landscape, to integrate with nature in ways that will create interesting or unique encounters, but not in a way that will seem uninviting. The site and the building need to be able to become one in the landscape with a focus on the interaction between the two; specifically the interaction between our body and the surfaces that create encounters. Our sense of touch is extremely important and must be focused on in order to fully appreciate the subtle transition between city and nature. The architecture we seek can be drawn from our skin, as a receptor, that can allow us to remember any level of sensory experience from texture and temperature to density.[44]

Our ability to feel textures can give us a link to our past.[45] It can also allow us to dis-



f11 . . . sense of touch and time . . .



f12 . . . park freedom lost in city grid . . .

tinguish what is man made, part of the city or a natural element. A simple object, such as a handrail, can tell the story or a particular space. You can feel the change of the surface and know how often people use it or notice the temperature as the railing goes from sunlight to shade. As we move across the same path our feet also tell a story about the changing surfaces, such as the transition across a gravel walkway or grass covered field to the creations given to us by the city in the form of concrete or metal. Even though our eyes tell us there is a change in material under our feet, it is our sense of touch that confirms it.[46] It is these encounters between the city and nature that give an everlasting memory of a spacial experience.



f13 . . . Central Park - nature for viewing . . .



f14 . . . city meets nature . . .

conclusion

Michael Benedikt, like Tschumi, believe that interest in design occurs at the moments we least expect; at the encounters between space and events. The interest is not only in the physical encounter, but also through using our senses to view nature. This creates a way to see nature while experiencing what is at first not there; this is a more effective and memorable experience. Technological advances are important when creating memorable sensory experiences between nature and city as technology has become a key aspect in our day to day lives. We have developed a respect and dependence for technology and when creating encounters it plays an important role in capturing our attention and responding to our desire for change. As time passes even the most spectacular of views can become mundane, but our senses and feelings can always be touched by exploring encounters in our world.

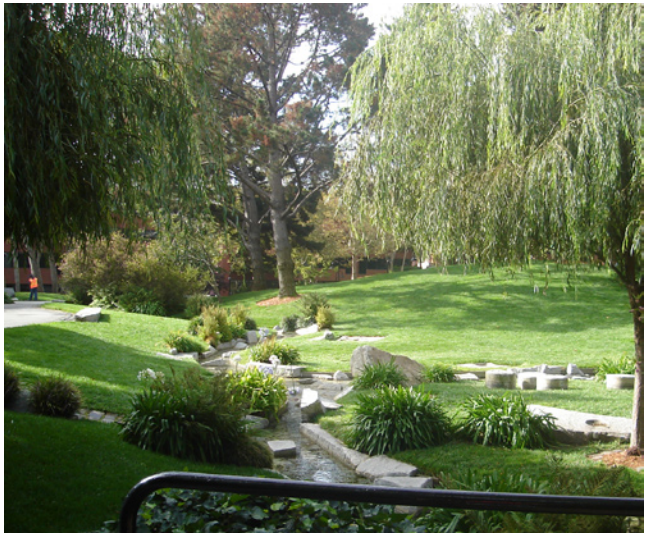
Through the exploration of sensory experiences we can use the built environment to create memorable emotional experiences while we interact with both the built, man made environment and nature. Encounters between architecture and our senses: architecture has the ability to take the passive observer and transform them into an active participant through encounters on a level beyond our vision. It is important to realize that our memories will be the most powerful when we design a space that will encounter many different things that affect our senses beyond vision. The interaction between old and new: this idea relies on a respect for what has passed and a focus on where our culture is going in the future. Through our evolution it will be important to keep an attachment to our history as is will shape who we become through who we once were. The encounter between the immense and intimate: this encounter explores the ability for space to change in ways other than physical. This is one of the most powerful experiences in our sensory world through its ability to transform a space in ways other than physical change. Encounters between the city and nature: architecture is influenced by respecting our past on different levels of human experience and the our evolution. The line between city and nature can be enhanced to celebrate the transition while making the two become one through physical changes in materiality.

Through the analysis of these four methodologies we see the affect that the human experience has on the design of urban spaces. We consider the building as a medium to stimulate and improve the human experience and as architects we are always searching to sustain emotional impact over a long period of time through encounters. With the extensive amount of detail that is apparent in a series of encounters this project centers on an interest in “the encounter of the object and the body of the user than in mere visual aesthetics.”[47] Architecture is the medium that can enhance the human experience by touching the deepest depths of our senses and appealing to our desires and dreams.

precedents



f15



f16

Parc De La Villette

Paris, France

designed by Bernard Tschumi

Parc de la Villette, a design by Bernard Tschumi, studies the art of deconstruction in architecture. A series of 'follies', walkways and surfaces make up this space to create a unique experience. It evokes wonder through the disjunction created at encounters in space and nature.

Parc de la Villette is loacted in Paris, France where it supports a population of approximately 2,100,000 people. The Parc was placed on an old brownfield site that used to be the home to a meat packing facility and slaughter house. The site was deemed unusuable by the city and a competition was held to redevelop the site and bring new life to it. Parc de la Villette covers an area of approximately 25,000 square meters (6 arcres).[48]

The series of walkways forms a 'system of lines' that allow access across the park. The path acts as a tour guide that leads the observer from place to place, from point to point like a well scripted movie. As a person is lead across the park there is a series of uncomfortable encounters between different materials and spaces. It is not until a person reaches this point that they experience the relief and wonder that has been created.

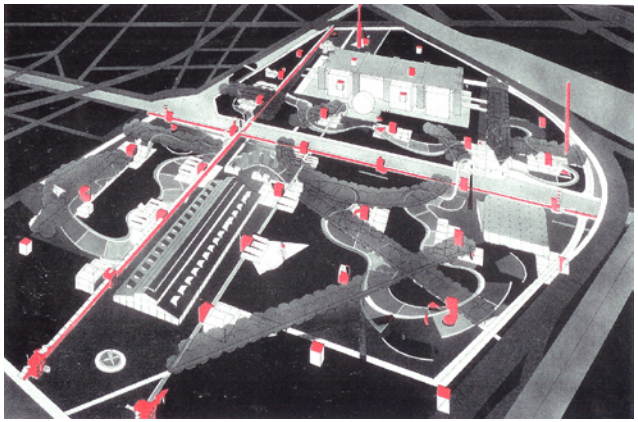
A 'system of surfaces', that are referred to as the prairies, create wide spaces that offer views of the horizon which give the park a sense of relief. These prairie spaces allow everyone to stop being an observer and enjoy the grass for relaxation and games. The park does not rely on technological advances to achieve the enhancement in nature that it creates, rather the park not only relies on the surfaces created, but on the park's ability to create awkward occurrences through incomplete experiences that come together at a single moment to reveal the purpose.



f17 . . . system of surfaces, both artificial and natural . . .



f18 . . . system of lines, both artificial and natural . . .



f19 . . . stie plan . . .

Levi's Plaza Park

San Francisco, California

This urban space is a well kept addition to the historic warehouse district along the Embarcadero in San Francisco. The open spaces ties the entire community of surrounding complexes together to create a unification of both residential and commercial buildings. The variety and simplicity of surfaces allows for a diverse amount of experiences for such an intimate space. The casual atmosphere makes a visitor feel so relaxed that there is no hesitation to take a nap under a tree or sit on the steps of the elegant waterfall at the southern corner. The grassy knoll in the center of the area cuts it in half which creates two distinct feelings as you move across the lawn. The space is policed by Levi Strauss company so any visitor feels safe at all times of the day. The park/plaza was created in a response the redevelopment of the old warehouse district in San Francisco.

Levi's Plaza is designed on the principals of classical park design. It enhances nature through the careful control of natural elements and offers a calming experience to visitors. This park is successful because of its limited use in the urban environment. Levi's Plaza is primarily used by employees in the surrounding complex during their breaks as a temporary escape from the work place.



f20 . . . relaxation by simplicity . . .



f21 . . . simple lines to separate space . . .



f22 . . . classical design - visual stimulation . . .

Tivoli Gardens

Copenhagen, Denmark
designed by Georg Carstensen

Georg Carstensen is credited with the design of Tivoli Gardens in Copenhagen, in 1853. The Garden consists of a minimum of 75% green space which makes it feel like a garden although the other 25% of the park consists of carnival rides, restaurants, a beer garden, scenic boats traveled by motorboat, and concert stages.[49] It is this mixture of water, vegetation and man-made elements that makes the park so successful through the way it enhances the technological world that we have come to trust and rely upon for excitement while still relying on nature to create a visual balance. The park is visited by many people that stop in for a five star meal or the couple that sits on a bench to gaze over the open green spaces that are lit by over a hundred thousand light bulbs.

The gardens, located in the center of Copenhagen, are surrounded by busy streets that support a heavy amount of traffic. Also adjacent to Tivoli is city hall and a major transit center that are important features as each of them have the potential to bring people to the park. Tivoli Gardens covers approximately 15,000 square meters (4 acres) and supports a poplulation of about 1,200,000 people. The scale of the park is driven by population while the location is driven by accessibility as it was originally located along the perimeter of the city. The previous location was unsuccessful which prompted the move to a central location in Copenhagen.[50]



f23 . . . city life in the park . . .



f24 . . . nature turned to man made . . .



f25 . . . nature and man made in harmony . . .

Zumthor Baths at Vals

Thermal Baths in Vals, Switzerland
designed by Peter Zumthor

Stimulation of the senses through materiality is the focus of the design of the Zumthor Baths at Vals, but through the use of these materials an encounter between natural elements and man made is created. The quartzite used in the construction of the exterior shell reflects a huge rock in the hillside.[51] At first glance the baths look almost static until one moves throughout the space and realized the dynamic integration between the structure and its natural surroundings. The interaction between the static and kinetic in the building stimulates the senses on many different levels at one time. The rigid formed walls that show the stability of the surrounding landscape meet the natrual springs that are harnessed in the interior spaces to create dynamic, ever changing encounters.



f26 . . . architecture frames nature . . .



f27 . . . nature is part of architecture . . .



f28 . . . architecture and nature compliment the other . . .

site selection

"Buildings must always be built on those parts of the land which are in the worst condition, not the best."[42]

When selecting the site, it was important to understand that the area selected must be in need of change or development. The original site that I selected is very important to me and as the project progressed this site showed itself to be a place that did not demand change. The selected site has been chosen on the idea of reviving an urban space for future generations.

The site that I have chosen is located along the west shore of the South Saskatchewan River in Saskatoon, Canada. It is bordered by a hospital (both mental and physical health), a YWCA, apartments, single family housing, an art museum, and an outdoor performance stage. It is important to note that within a ten minute walk of this existing park is the main business district, as well as five hotels.

This site interests me because of the lack of activity that takes place here. Even on sunny days the park is normally vacant. This area has the potential to serve a significant number of people, not only locals, but tourists as well. The park was originally designed to be simple; a large grassy plain filled with large trees where people go to sit, visit, and relax. A place to escape their fast paced urban lifestyles and in order to create this the space will essentially turn inside out and offer what has not been experienced before.

Saskatoon is developing quickly and is starting to become a destination for technical research related to many different fields. These areas range from genetics to biotechnology. The intention is to create a destination that will create a transition between the encounters in our 'natural' environment and the urban environment that will touch our senses. This park has the ability to affect the lives of many people of all cultures and economic status.





looking at the south end of the site



looking at the west end of the site







looking at the north end of the site



looking at the east end of the site



site analysis - macro

about saskatoon

Saskatoon, whose name is derived from the Cree word “misaskwatomina”, is located in central Saskatchewan and has been the main hub to the western provinces of Canada since its settlement. One of the most interesting parts of Saskatoon was developed out of this; the bridges. Saskatoon is home to seven bridges which support both pedestrian and vehicular traffic, as well as the Canadian National/Pacific railways. It has been dubbed ‘the city of bridges’.

Saskatoon was settled over 100 years ago by a group of people seeking separation from the rapid increase in population occurring in the eastern provinces of Ontario and Quebec. The main premise of the settlement was to establish a city with a focus on prohibition. The thought was to withdraw themselves from the negative effects of alcohol through the creation of a new settlement.

location

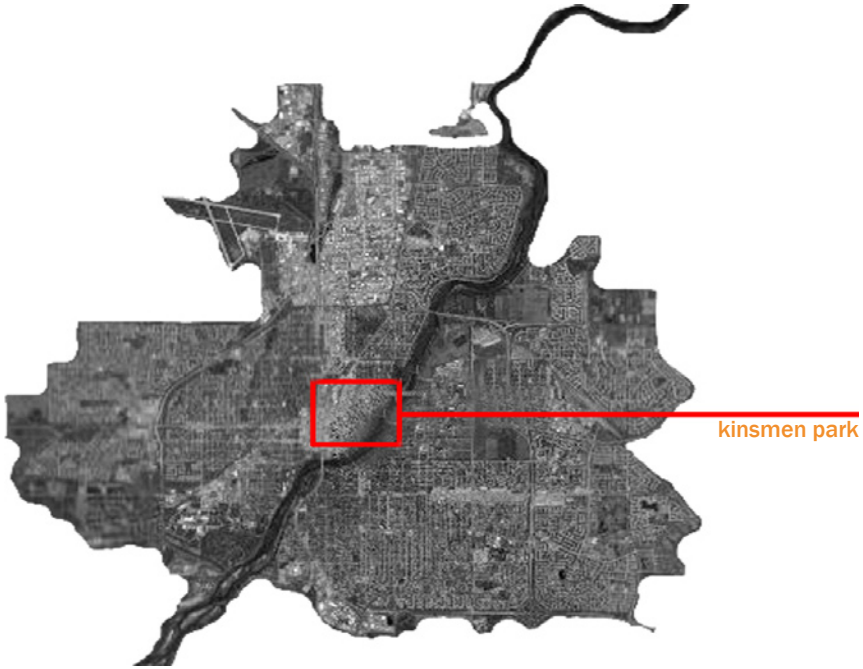
Kinsmen Park, the current name of the area, is located in the City Park district of Saskatoon, Saskatchewan. CIty Park is one of the oldest and most densely populated areas in Saskatoon and has the ability to sustain a large urban space during all 12 months of the year. The east side of the park runs along the South Saskatchewan River which is the primary connection to nature in the city as the river bank is the only untouched area in Saskatoon. This is because the city has passed several bylaws that prevent the destruction or development of the river and river bank. This preservation of nature allows residents of Saskatoon to experience nature without leaving the city. It will be important to strengthen the connection to the riverbank inorder to effectively enhance the sensory relations to nature. The province of Saskatchewan is located to the west of Manitoba and east of Alberta, Canada. This is an imporant part of the park as it exists today because it allows for a large number of tourists to visit the city and still has an effect on why people settle here.

population / demographics

Saskatoon is the most populated city in Saskatchewan at 246,500 people. The city claimed this tile in 1980 when it surpassed Regina, the provinces capital. Saskatoon makes up 25 per cent of Saskatchewan’s population which is 978,934. ‘Toontown’, as it has been called, continues to grow at a rate of 0.62 per cent each year.

Ethno-Cultural Groups

- white: 190,120 or 85%
- aboriginal: 19,900 or 9%
- chinese: 3,725 or 2%
- asian: 1,730 or 1%



other: 2,600 or 2%

This continuous growth relects the change from a rural dependance, as it was in our past, to urban desire, but with a change such as this there is still the need to remain connected to nature. This connection will only be brief compared to how it used to be experienced so each visit to a new urban space will have to be more powerful and memorable than ever before.

weather

Saskatoon is located in the savanna biome or dry-prairie with very cold winters that are balanced by warm summers. The average rain fall for Saskatoon is relatively low at 347.2mm (13.7in). The city is home to four distinct seasons which typically range in temperature from -40°C to 40°C (-40°F to 104°F). On occasion, including the wind chill factor, the temperature has dropped as low as -72°C (-98°F). The wind direction, which is the most prevalent in the winter as that is when it affects the temperature the most, is from the west at an average wind speed of 16 kmph (10 mph) and can gust up to 90 kmphr (55 mph) in December and January. Although Saskatoon is known to reach extreme low temperatures, it is also one of the sunniest cities in Canada with an average of 2,381 hours of bright sunshine each year. The extreme temperatures that Saskatoon has been known to reach results in not only design challenges, but also opportunities. These opportunities will include ways to capture these changes and celebrate them or rechannel the extreme weather to reduce its effect so it can now be experienced unlike has ever been.

geography

The area surrounding Saskatoon is relatively flat with very few valleys or hills. The lowest point in Saskatoon is the river bed and the highest point is located just east of the riverbank in the area called Sutherland. The city is surrounded by patches of Aspen trees and Wheat fields. Saskatoon occupies approximately 176 square kilometers (68 square miles) of land.

economics

Saskatchewan, traditionally recognized for its farming, has during the past decade taken on a new identity. The province is now being recognized as a world leader in the area of Agricultural Biotechnology, with most of the research taking place at the University of Saskatchewan in Saskatoon. In addition to this type of research, Saskatoon is home to the Canadian Light Source which studies synchrotron radiation that is the key to many types of scientific research. The synchrotron is one of 15 facilities found around the world. These types of facilities have brought a new type of residents to Saskatoon that desire a new urban experience. This is especially

true when discussing the agriculture profession in Saskatchewan. Each year more and more small farms are being over taken by larger companies. This is affecting how many people pursue a farming career which in turn results in a greater number of people attending university and pursuing a profession in the technical field. The increase in technology based employment in Saskatoon has only increased the dependance we have on technology which further alienates the relation that architecture has with nature and our senses.



. . . site location . . .



f29 . . . biotechnology facility . . .



f30 . . . Canadian Light Source . . .

site analysis - micro

characteristics

The reason this site needs attention is because it was designed for only one purpose based on the period of time it was created. The central part of Saskatoon does not have a dedicated area that will encompass the many dimensions that make an urban park successful. All of the areas available to the public in Saskatoon consist of paved pathways and large open areas that don't serve any real purpose besides the preservation of natural features. When a person visits this area the visits are generally short because only nature is offered to the viewer. The space continues to be unused because no new function can be associated with the area. Each area has been developed with the belief that all Saskatoon residents and visitors desire rural open space that is reminiscent of the flat land of the Saskatchewan prairies.

The site fits into this generic park style that has become synonymous with Saskatoon. The physical characteristics of the site consist of dense clusters of trees and shrubs, native to the Saskatoon area. The types of foliage that exist in Saskatoon include prairie sage, yellow columbine, and Saskatoon berry. There is also a deep drainage bed that runs down the northern portion of the site. This area has been dry for several years and has been converted to a path that links the park to the river. The path leads to a traffic bridge that allows pedestrians to pass under the roadway and avoid traffic. This is one of the many appealing features of the site that go unnoticed by most people that visit the park.

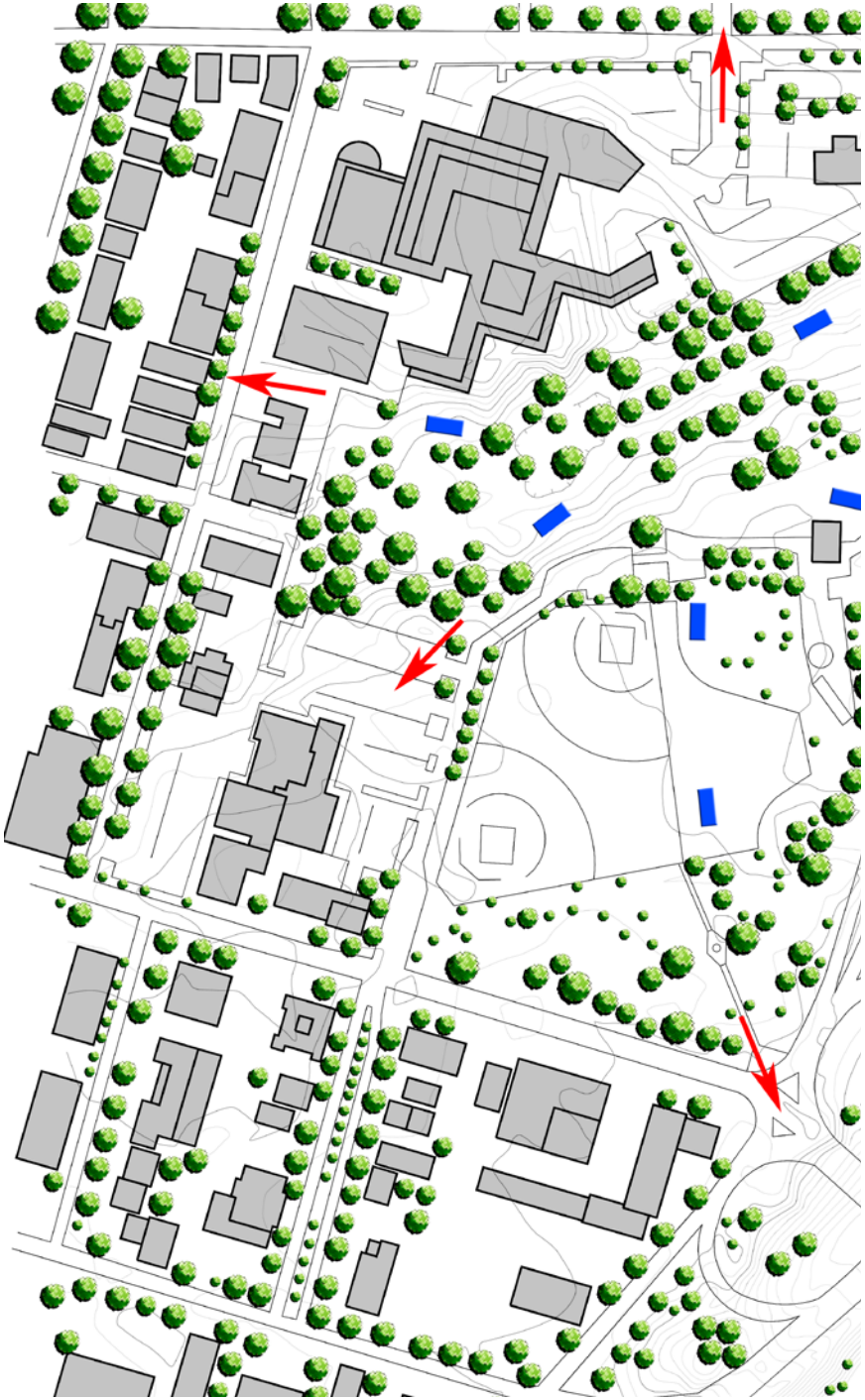
site access

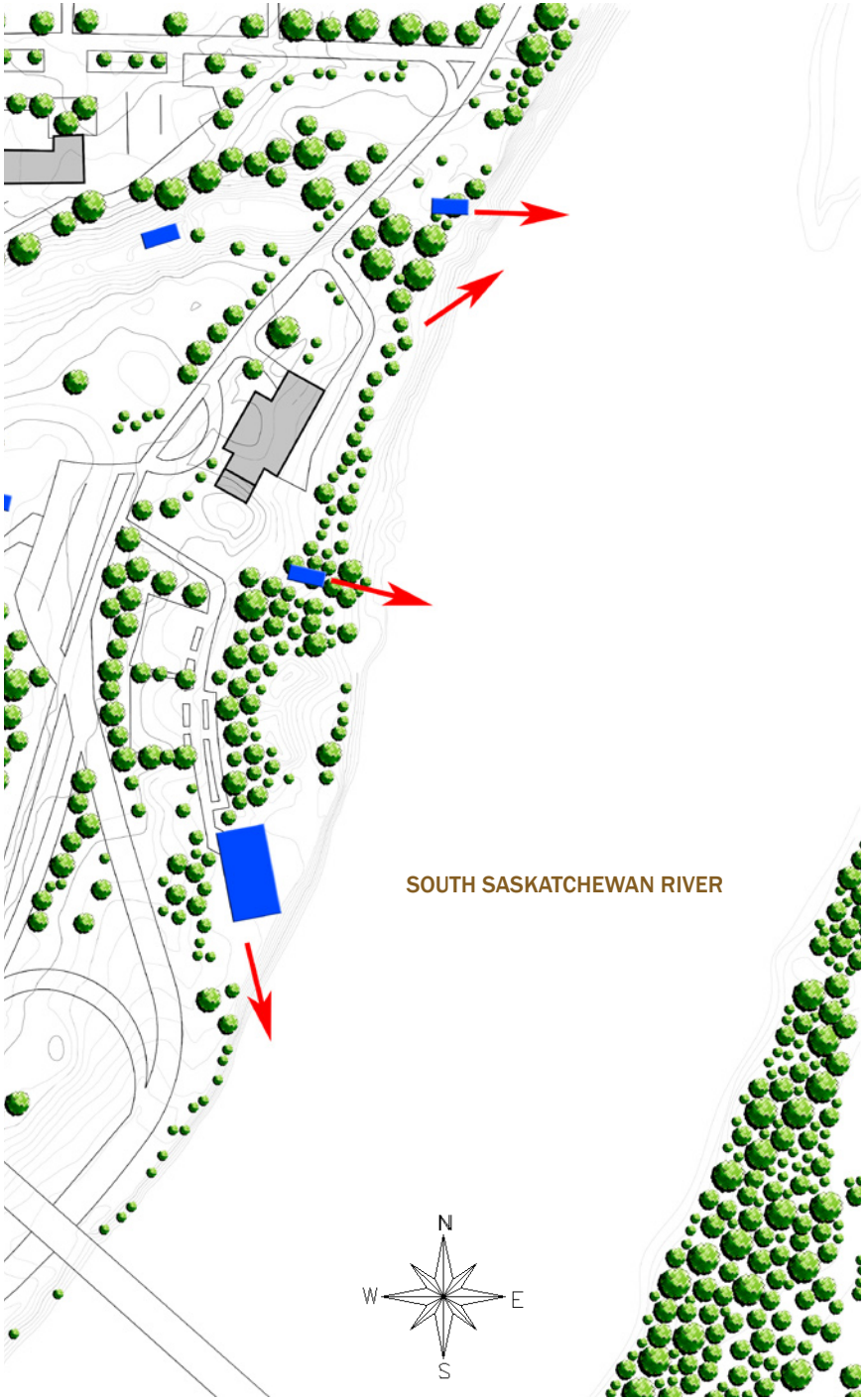
Kinsmen park is centrally located in the heart of Saskatoon. It is easily accessible by car, pedestrian, and public transportation. Located within a 10 minute walk from the park is the central bus hub of in Saskatoon. This station serves 500 to 1000 buses each day that pick up and drop off thousands of people. The transit system makes regular stops at four locations that are under a one minute walk from the site.

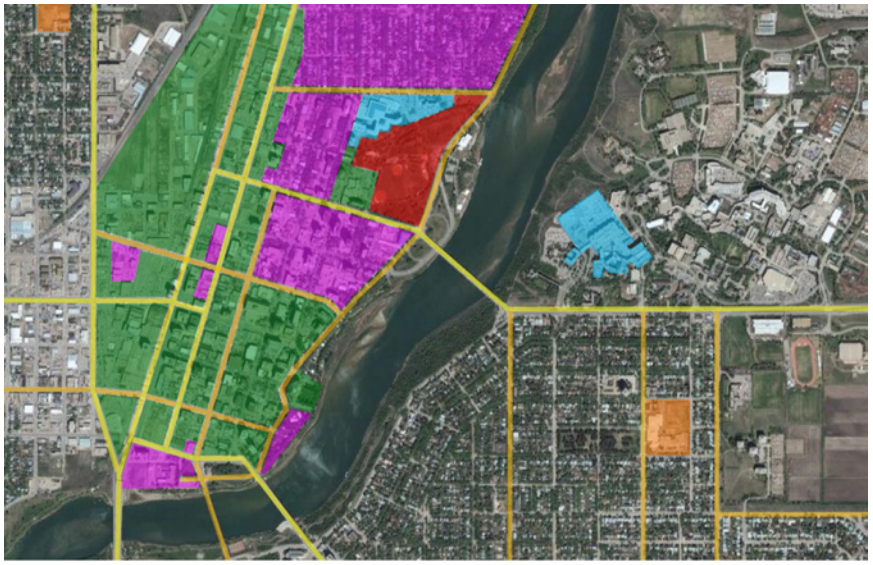
density

Downtown Saskatoon is densely populated and encompasses various types of housing from single family, low rise apartments, loft housing and high rise apartments in addition to numerous retirement homes. On average there are 25 single family homes on a typical residential block. This number increase dramatically when apartments of various sizes are included. With a population density of approximately 2100 per square kilometer, in the downtown area, the park has the ability to serve many thousand people.

legal address: 945 Spadina Crescent East, Saskatoon, Saskatchewan, Canada
total site area: 160,000 square meters (39 acres)







site

hospitals

main traffic lines

public schools

secondary traffic lines

commercial

residential



blue dots denote a bus stop



1 Site: The site is the exisiting Kinsmen Park and has been home to several baseball tournaments (men's and women's adult leagues), Shakespeare on the Saskatchewan (outdoor plays), and some private functions.

2 College Drive: This is the main traffic connection between the east and west of the city and in order to access the University of Saskatchewan all vehicular traffic must use this street.

3 25th Street: This street is the transitional street from College Drive to downtown Saskatoon and borders the southern edge of the proposed site.

4 South Saskatchewan River: The river is the location of the first settlers in Saskatoon and continues to be one of the most desired places to visit and live in Saskatoon. It is the only natural area left in Saskatoon and borders the east of the proposed site.

5 Spadina Crescent: This is the most scenic street in Saskatoon and the most expensive area to live in the city. This street borders the South Saskatchewan River on the western shore.

6 University Bridge: This bridge connects College Drive and 25th Street at the river. It is the second busiest bridge in the city aside from the Idywyld Drive Bridge.

7 University Hospital: A gerneral health care facility as well as the only hospital in Saskatoon that houses a cancer ward. The hospital does all major surgical procedures in Saskatchewan and is the largest health care facility in the province.

8 Idywyld Drive: The street is the only continuous connection through the entire city as it connects the northern and southern borders. It is also the major truch route in Saskatoon since it includes the major industrial grid on its nothern edges.

9 1st Avenue: This street houses the majority of downtown shopping that includes the major banks and shopping centers. This street also includes most of the specialty and private owned shops in Saskatoon.

10 St.Pauls Hospital: This hospital serves a diverse group of patients on a smaller scale than the University Hospital. It includes rehab patients for drup addictions, intensive care patients (on a very small scale), a geriatrics ward, and general emergencies although the emergency access is only open part time. The patients in this hospital are gernerally mobile and will have access to the adjacent outdoor spaces.

11 YWCA: This is a women's safe house and public health care facility that includes overnight accomodations as well as a full gym and aquatic facility.

12 Delta Besborough Hotel: This is the oldest hotel in Saskatchewan and is the most popular venue for weddings, conventions and awards ceremonies. It sits on the shore of the South Saskatchewan River and has spectacular views all year.

13 University of Saskatchewan Campus: The university is home to almost 30,000 students during full time studies and exceeds 10,000 students during summer sessions. The student poplulation is from around the world and is a leader in argriculture studies.



context images location



f29 1. St. Pauls Hospital



f30 2. YWCA Community Center



f31 3. Mendel Art Gallery



f32 4. South Saskatchewan River



f33 5. apartments



f34 6. retail shops



f35 . . . storm water drainage bed . . .



f36 . . . classical park design of controlled nature . . .



f37 . . . views of Saskatchewan River . . .

qualitative program

"As buildings lost their plasticity, and their connection with the language and wisdom of the body, they become isolated in the cool and distant realm of vision."[53]

The program for this project is created from the need to connect to our natural surroundings in new ways through technology. With a primary focus on leisure activity and the constant dependance on digital information and technology the site will be the home to new structures that reach into the environment virtually while providing resting and work spaces.

The use of micro technology will allow each structure to react to environmental issues ranging from the sun, sound, temperature and physical touch. Our appreciation of the artificial urban park is fading and through the integration of technology with nature a new life line will be offered to partrons of the space.

In addition to the technology pavillions an internet station will be provided to offer the patrons of the space the opportunity to check their email or watch the local news. With the work place becoming more demanding employees have been overworked. Since this is a fact of life the internet station will allow workers to bring their work with them to the park. A wireless signal will offer information and audio signals to each user. The love of the arts in Saskatoon will make the park the ideal place for an outdoor theater. The theater will encompass several of the technologies that make the park special.

Support spaces such as a coffee shop and restrooms will also be included as other attraction to the park. With the purpose of a park being nature sustainability is also an important factor to design for. A photovoltaic panel array will be placed over the exisint parking lot to power the park and keep it off the grid. The park will also include a series of new bus stops to allow for easy access from anywhere in the city.

Through the focus on technology the park will become a vibrant destination in the future.



f38 . . . Climate Chamber (storm) by Mats Bigert . . .



f39 . . . Climate Chamber (steam) by Mats Bigert . . .

quantitative program

program A

touch pavillion - sensory experience - 120 sq. ft.

sound pavillion - sensory experience - 120 sq. ft.

temperature pavillion - sensory experience - 120 sq. ft.

solar pavillion - internet cafe - 120 sq. ft.

internet/multi-media station - reading area - 120 sq. ft.

cafe (3) - 1200 sq. ft.

public toilets (3) - 1200 sq.ft. - three spaces throughout the park including one uni-sex facility in addition to one male and one female.

access bridge - linking the city to the river front

bus stop/shelter (5) - spaced throughout the edges of the park and residential neighborhood.

mechanical rooms - as required based on individual design

circulation - exterior space

program B

stage - 600 sq. ft.
staging area - 1200 sq. ft.
dressing rooms - 1500 sq. ft. total between mens and womens
janitor room - 300 sq. ft.

seating - 450 seats (including seating on grade with 150 seats fixed) - 5000 sq. ft.

cafe - 1000 sq. ft.

total indoor space - 23,300 sq. ft.

code review

all code review and information taken from the 1995 National Building Code of Canada handbook

Table 3.1.2.1 Major Occupancy Classification - Occupancy A-1
Assembly occupancy intended for the production and viewing of performance arts.

Table 3.1.2.1 Major Occupancy Classification - Occupancy D
Business and personal services occupancies.

Section 3.2.2.20 Group A, Division 1, Any Height, Any Area, Sprinklered
The building shall be sprinklered throughout, floor assemblies shall be fire serparations with a fire resistance rating not less than 2h, loadbearing walls, columns and arches shall have a fire resistance rating not less than that required for the supported assembly. (This is the most extreme scenario, see section 3.2.2.21 and 3.2.2.22 depending on final design criteria.)

Section 3.2.2.20 Group D, Any Height, Any Area, Sprinklered
The building shall be of noncombustible construction, and shall be sprinklered throughout, floor assemblies shall be fire separations with a fire-resistance rating not less than 2h, loadbearing walls, columns and arches shall have a fire resistance rating not less than that required for the supported assembly. (This is the most extreme scenario, see section 3.2.2.49 to 3.2.2.56 depending on final design criteria.)

Section 3.1.16.1 Occupant Load
Assembly uses space with fixed seats - 1 person per seat provided, space with non-fixed seats - 0.75 sq.m. per person, stages for theatrical performances - 0.75 sq.m. per person, standing space - 0.40 sq.m. per person, dining, beverage and cafeteria space - 1.20 sq.m. per person, kitchens - 9.30 sq.m. per person, storage - 46.00 sq.m. per person, public corridors intended for occupancies in addition to pedestrian travel - 3.70 sq.m. per person.

Table 3.3.1.5.A Egress in Floor Area Sprinklered Throughout
Group A - 200 sq.m.

Section 3.4.2.1 Number and Location of Exits from Floor Areas
Every floor area intended for occupancy shall be served by at least 2 exits, the travel distance is not more than 25m.

Section 3.4.3.1 Exit Width
The required width of an exit shall be not less than 1100mm for corridors and passageways, 900mm for stairs and ramps. 6.1mm per person for ramps with a slope not more than 1 in 8, doorways, corridors and passageways, or 8mm per person for a stair consisting of steps whose rise is not more than 180mm and whose run is not

less than 280mm.

Section 3.7.4 Plumbing Facilities

Water closets for an assembly occupancy shall conform to the number of persons for each sex as prescribed in Table 3.7.4.2.A. Lavatories - at least one lavatory shall be provided in a room containing one or 2 water closets or urinals, and at least one additional lavatory shall be provided for each additional 2 water closets or urinals. Urinals are permitted to be substituted for two thirds of the number of water closets required.

Section 3.8.1 Barrier-Free Design

Accessible areas shall be described in sections 3.8.1.2 Entrances, 3.8.1.3 Barrier-Free Path of Travel, 3.8.2.1 Areas Requiring a Barrier-Free Path of Travel, 3.8.2.3 Washrooms Required to be Barrier-Free.

Section 3.3.1.24 Janitors' Rooms

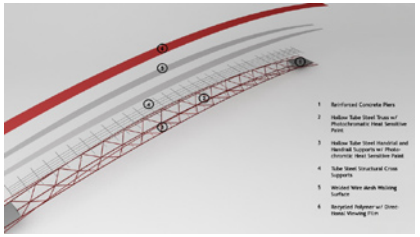
A room or space within a floor area for the storage of janitorial supplies shall be separated from the remainder of the building by a fire separation having a fire-resistance rating not less than 1h unless the fire-resistance rating prescribed by 3.2.2.20 is less than 1h, but not less than 45min.

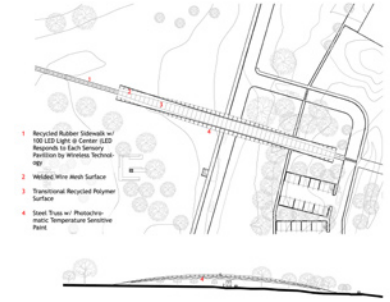
project design

The final design of the project took on a highly technological approach that celebrates, rather than ignores, our dependance and desire for technology as seen in the ten pavillions and auxillary service designs below; result is a redefinition of leisure in the moden city.

Pedestrian Bridge





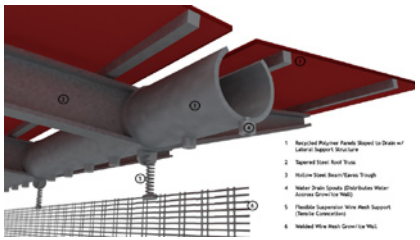


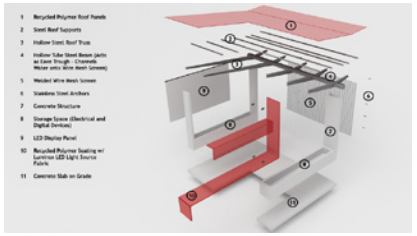


Thermochromatic Paint

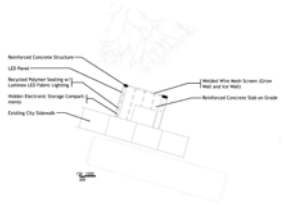
Bus Stop/Shelter











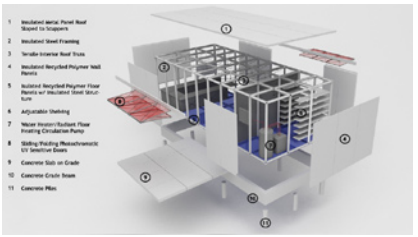


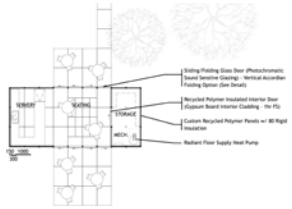
Cafe

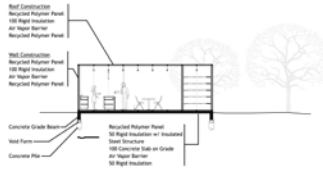






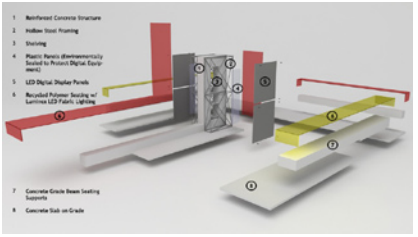






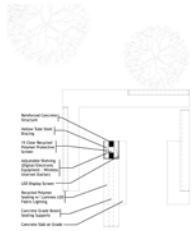
Internet Pavillion

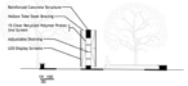






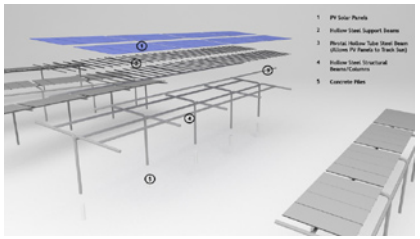






Photovoltaic Array



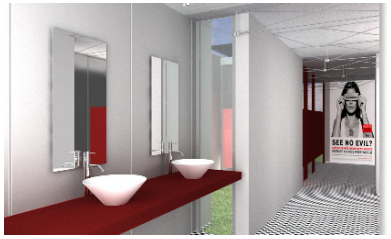


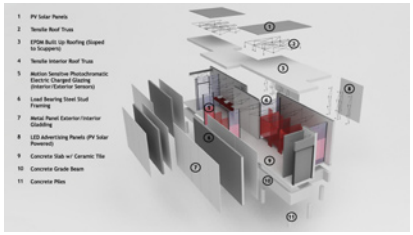




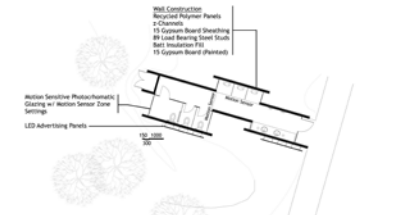
Restroom

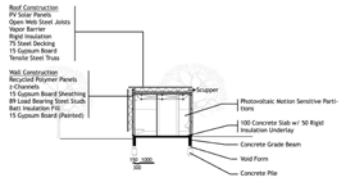








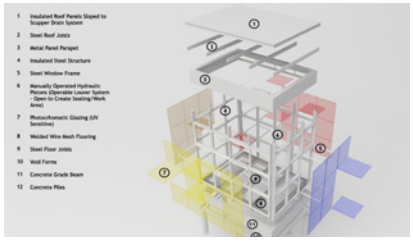


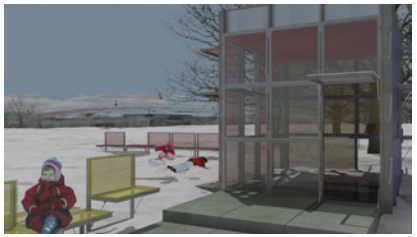


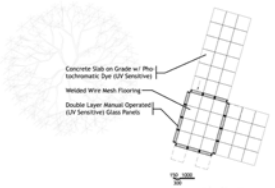
Solar Pavillion

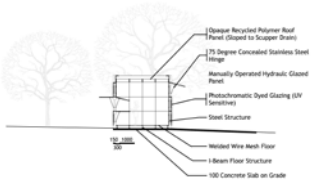






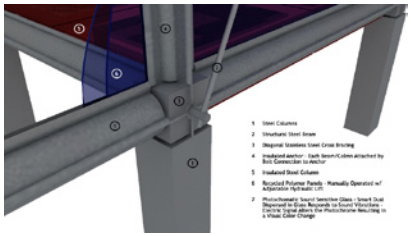


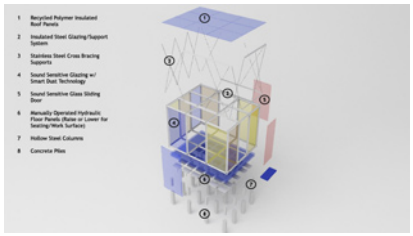




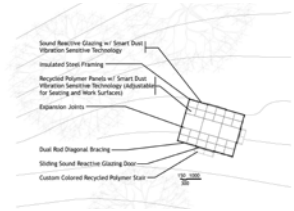
Sound Pavillion





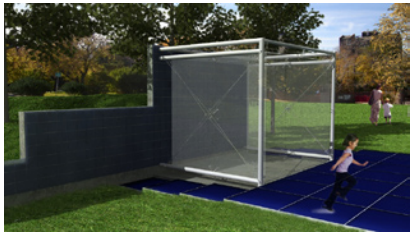


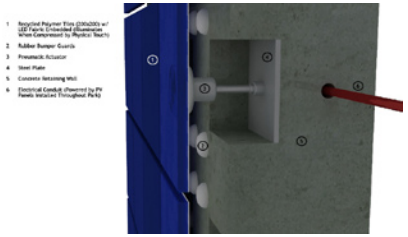


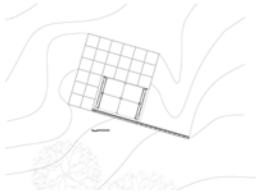




Touch Pavillion





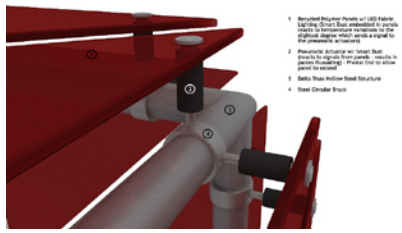


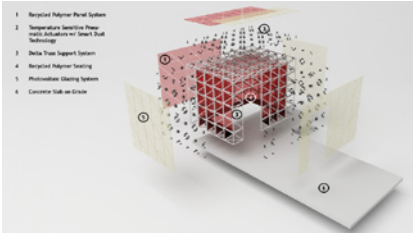


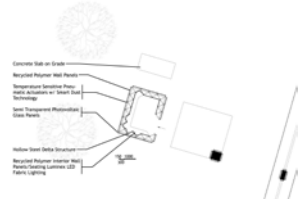
Temperature Pavillion

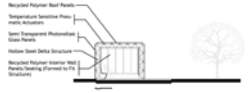




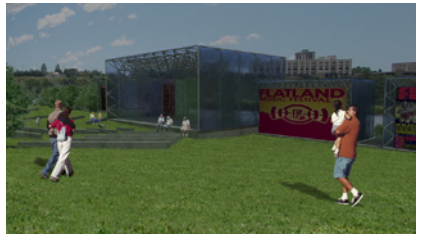


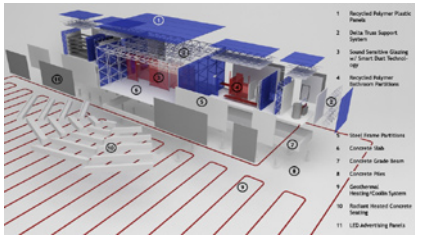


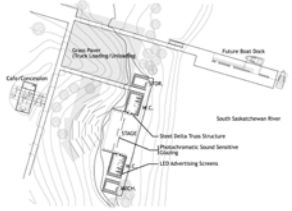


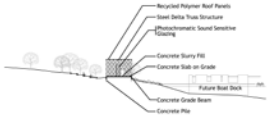


Theater

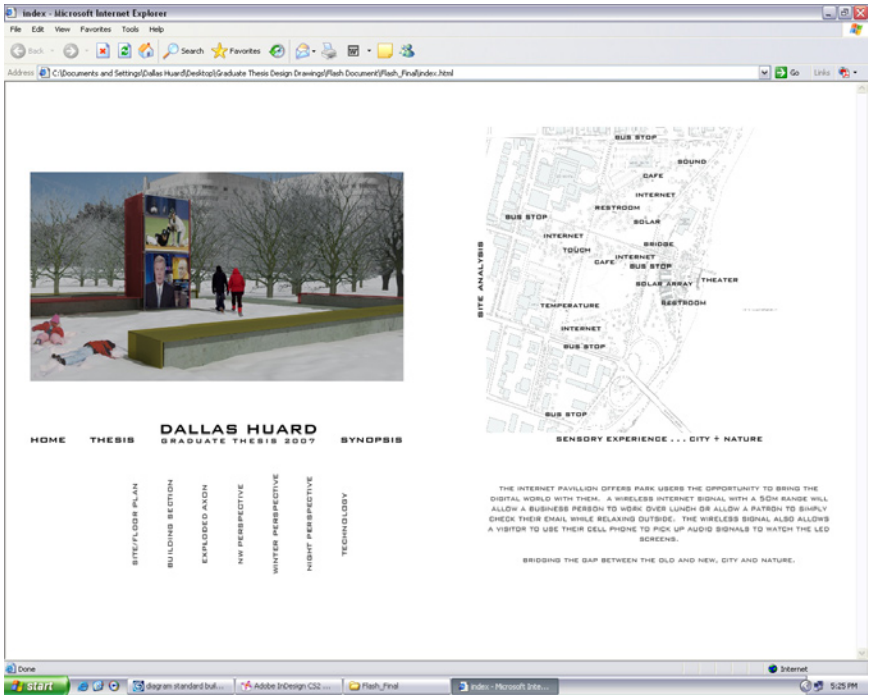


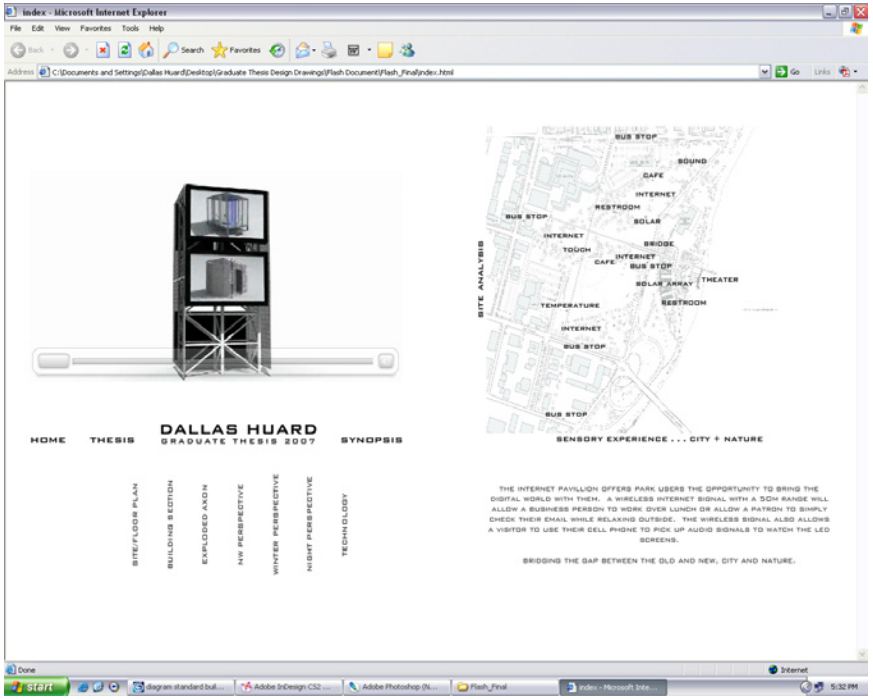






The final presentation of the project consists of two videos that unify all of the above designs into a single media as well as a website/flash document that give viewers the chance to view the entire project in an order they prefer.





reflection

The idea of leisure became extremely imporatant to the overall design of this project. Specifically our changing needs and desires as technology begins or continues to play a significant role in our day to day lives. In the comtemporary world our leisure time consists more and more of visual stimuli, primary focused around digital and technologically based media. This idea has played a significant role in the development of this project through the focus on how technology can influence our lives while maintaining a connection to our natural surroundings.

The primary challenged that was presented during this project was in the creation of an urban park without sacrificing the naturalistic landscape through overdeveloping the planned spaces. One of the primary focus' became designing a space that would simply enhance the day by day occurences of the site as well as offering the patrons a unique experience while visiting the park. This view on the design became the focus on how to create or redefine leisure in a modern city.

The design of this project presented many unique problems primarily related to scale and place making. It has become apparent, through my thesis defence, that defining a more specific program for the sensory pavillions would have increased the effectiveness of the overall design. This could be solved by taking the presentation to the next level; the creation of a blog site in addition to the website would allow the residents of Saskatoon to comment on the sensory pavillions and offer solutions to what they would prefer programatically. Overall the design of the space is very functional and appropriate for the city of Saskatoon. This design would be a logical solution to the idea of leisure for the contemporary Saskatchewan prairie city.

My design also directly affected my presentation as I decided to present the project completely digital. This provided unique challenges for the project as I was forced to consider presentation at a very early stage in the design process. I feel that this was a very efficient and successful way to present the project and it was accepted by all who viewed the final project. The challenge of learning new programs on top of the design challenge was often overwhelming, but very rewarding.

This design challenge has become the culmination of the education at MSU. I feel this approach to the proposed project is the perfect challenge for me considering my past technical education in drafting. Two years ago I could not imagine mysef taking on a projcet of this magnitude and detail, let alone this theoretical. Upon its completion there are many things that I am happy with; from the level of detail I achieved to the effectiveness of the design and presentation.

I would also like to thank each of my advisors, Ralph Johnson, Chris Livingston, and Maire O'neil, for their support and encouragement throughout the past year. Thankyou.

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1 Photo by Dallas Huard.

2 Photo by Dallas Huard

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16 Photo by Dallas Huard

17 http://www.pwpeics.se/images/pw%20cs/france%20p-z/Paris_La_Villette2.JPG.

18 http://en.wikipedia.org/wiki/Image:ViletteRad.jpg.

19 http://en.wikipedia.org/wiki/Image:Paris_parc_de_la_villette01.jpg.

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