

NEUROTC:

MIND, BODY, SOUL, ARCHITECTURE

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DESIGN

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NEUROTIC:

MIND, BODY, SOUL, ARCHITECTURE

A Design Thesis Submitted to the
Department of Architecture and Landscape Architecture
of North Dakota State University

By

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[3]

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ABSTRACT

This project is meant to embrace and design for our different minds. The idea is to create a place where we can be ourselves and retreat to a state of mind that puts our emotions or neuroses at ease. People seek places where they feel comfortable, accepted, or “normal” in society. This therapeutic hybrid typology will be located on a scenic hill near the Missouri River in Bismarck, ND. It will be affiliated with the two colleges in the city, and used by students, faculty, therapists, and the community. The project scope is to relate therapy spaces with spa-like spaces, and incorporate an atmosphere that is reminiscent to a college student union building. It will total about 18,000 square feet. Through mixed method research this thesis project will reveal how we react to our surroundings, and how our surroundings affect us.

PROBLEM STATEMENT

How can different cycles or habits in life intertwine and affect the design and nature of a building?

And furthermore, how can that building facilitate our emotional and mental well-being?

Statement of Intent

STATEMENT OF INTENT

THE PROJECT TYPOLOGY

The vehicle for examining this thesis will be a building that serves as a retreat from everyday life. It will be a hybrid typology assisting in therapeutic services and stimulation with nature, promoting the visitor's physical, psychological and emotional well-being.

THE CLAIM

Individuals participate in different types of daily, yearly, and life-long cycles. We respond to these cycles or habits by performing certain actions or behaviors in relation to our built and natural environment. Outsiders want to make sense of these actions or behaviors that the individual may not be able to explain. Cycles or habits related to our behaviors and senses are the way we respond to our surroundings. Our mental processes can manifest into different neuroses that begin to dictate our behaviors.

PREMISES

We are creatures of habit to different degrees and no one can read our minds. We're expected to have explanations for why we do the things we do or think the way we think.

With every action there is a reaction, and to every cause there is an effect, creating a natural balance. In some ways we respond to our environment based on instinct. In other ways, our minds overpower our instincts, causing us to respond in an unlikely manner to our surroundings.

Sometimes we become our own worst enemy and need to be comforted by, or act out on our environment. Cycles or habits can calm us and keep our psychological or emotional self at ease.

We respond to our environment through actions that society considers to be normal or neurotic. These different actions settle our senses and may be done because we can't help ourselves.

THEORETICAL PREMISE / UNIFYING IDEA

Cycles that we are exposed to or engage in affect our mental and emotional well-being.

PROJECT JUSTIFICATION

In our world today, there are a large number of people who can function within our social norms, but still have a psychologically related disorder that affects their everyday life. Emotions and behaviors such as anxiety, stress, depression, phobias, and OCD are extremely common in our population. Cycles in our built environment may have a strong link to how we physically and mentally respond to our surroundings and behave in a habitual way.

NEUROTC:

MIND, BODY, SOUL, ARCHITECTURE

PROPOSAL

NARRATIVE

Proposal

Can our built environment positively affect our mental, physical, and emotional well-being? Can that environment allow for its visitors to feel safe and at ease in such a hectic world? I believe that our surroundings play a vital, therapeutic role in helping people to realize that everyday life does not have to be an uphill battle. Understanding our internal conflicts and why we perform in particular cycles or habits is helpful in creating an environment that promotes an individual's well-being.

Imagine... you are sitting in a room of people, keeping to yourself and your own thoughts. You start to feel your heart rate accelerate, your mouth goes dry and your palms begin a cold sweat. You feel uneasy, worried, and afraid of something but cannot pinpoint the cause of these feelings. You appear completely normal to those around you but they don't realize the mental battle that is about to ensue inside of you. How do you escape these thoughts and feelings? What are the necessary actions to take in order to calm yourself?

NARRATIVE

Perhaps you rearrange your surroundings, once, twice, thrice, and again to take your mind off of whatever it is consumed by. You are aware if something is out of place, out of order, missing, or new in the space. Soon you are mentally exhausted, which turns into a physical exhaustion. You perform a routine before going to sleep, but your thoughts don't end when you fall asleep. They continue, becoming more vivid, more stressful, more worrisome. This becomes a vicious cycle that only you can break.

“Conflicts play an infinitely greater role in neurosis than is commonly assumed. To detect them, however, is no easy matter - partly because they are essentially unconscious, but even more because the neurotic goes to any length to deny their existence. What then are the signals that would warrant us to suspect underlying conflicts?” (Horney, 1945). There are many people today that suffer from types of neuroses. Society is reaching out to try and help these people understand their thoughts and behaviors, as well as the social and economic catalysts that cause them. Architecture can be just as therapeutic as having a conversation with another person. I believe future design approaches will be an integral part in creating a happier and healthier society.

USER/CLIENT DESCRIPTION

owner/client

Proposal

Bismarck, ND is home to two colleges: Bismarck State College (BSC) and the University of Mary (U Mary). The site for this project will be an extension of BSC where there is land for future expansion of the college, therefore BSC will be the owner. However, they will work closely with allowing use of it by the University of Mary for academic purposes. Both colleges have programs related to psychology so this facility will be open to all students and faculty. The target user for this project is the college student who seeks mental, physical, and emotional well-being while dealing with the social and cultural pressures of today. The activities and therapies that take place in the building will have nothing to do with the prescribing of medication. Alternative methods, such as massage or aromatherapy, will be some of the services and therapeutic spaces that work hand-in-hand with counseling and therapy. The combination of these functions will help users to see the process of therapy in a more positive light and not be ashamed of what they are going through.

USER/CLIENT DESCRIPTION

user groups

COMMUNITY

The greater purpose of this building design will be for use by anyone living in the surrounding area near the ages of 18-25 who is looking for the counseling or therapeutic services that will be offered. This demographic age group deals with much anxiety due to the transition from high school to higher education to the real world. The goal of the project is to help young adults learn about and cope with their thoughts and behaviors. The design is to create a place where visitors will find comfort and will learn how to move forward in life with their neuroses in a positive way. Some additional parking will be added but there are existing parking lots that will tie into the facility. This building will be in full use during the day with night access to students, faculty, and therapists or counselors. People may also be arriving at evening appointment times set by the therapist.

THERAPISTS

Practicing and aspiring therapists will use this facility to provide their services and further their own research. They will use the building as their workplace and can access it at any time to work on research or patient documents. A secretary will be present during daytime office hours to direct visitors, and therapists will have the option of employing a personal secretary or assistant.

STUDENTS

Students who live in the area and are enrolled in any form of higher education will be allowed 24-hour access to the building with registration to an access card. They can use the resources for study material and the spaces for a quiet study place because the facility design will be sensitive to creating spaces that are soothing or stimulating. Psychology students may be assisting therapists as part of their course of study.

FACULTY

The therapists or counselors may also be part of the collegiate faculty. They may use meeting spaces in the building for presentations or class discussions. They also will have office space and have access to the building at all times.

MAJOR PROJECT ELEMENTS

EXTERIOR / INTERIOR GARDENS

Integrating the natural environment into the building is an important part of the design. It is also a tool in creating spaces that enlighten our spirits and promote healing.

OFFICES

Spaces will be designed for faculty and therapist offices. Therapist offices will be somewhat larger to facilitate the needs of patients and creating a safe and comfortable atmosphere. There will also be space for secretaries or assistants to therapists and faculty.

THERAPEUTIC SPACES

There will be a number of uniquely designed spaces to be used for mental, physical, and emotional well-being. They will be specific to the understanding of different neuroses and promoting health.

RECEPTION / RECORDS

A main reception area in the building will direct visitors and the receptionists will handle any records for the college or for patients.

LARGE MEETING ROOM / CLASSROOM

A large space will be designed to hold meetings, presentations, and classroom instruction. It may also be used by the public for awareness presentations or gatherings.

COMMUNAL AREAS

There will be nooks and small breakout spaces for people to gather for a casual meeting, to study, have a snack, or relax and experience the building.

LIBRARY / COMPUTER RESOURCES

Technology is important to the individual research that will take place in the facility. Computer and printing resources will be available to building users. There will also be a small branch library with documents and resources related to psychology.

MAJOR PROJECT ELEMENTS

The project will also hold these important spaces that are necessary for a building that will facilitate a large number of people throughout the day.

SNACK BAR
RESTROOMS
SURVEILLANCE
MAINTENANCE AREAS
MECHANICAL / ELECTRICAL SPACE
STORAGE
HORIZONTAL CIRCULATION
VERTICAL CIRCULATION

SITE INFORMATION

macro

North Dakota is located in the north central continental interior of the United States. Typically the winters are very cold and the summers are hot, with moderate to sparse rainfall and times of drought. Agriculture dominates the landscape of North Dakota, responsible for nearly 25% of the economy and 25% of jobs. About 90% of the state's land is used by farms and ranches (ND Department of Agriculture, 2009). The western part of the state consists of rolling hills that become the rugged Badlands. The eastern part of the state is the Red River Valley that is characterized by annual flooding and fertile farmland.

Bismarck is the capital city of North Dakota, located in the south central part of the state. It is a city rich in heritage and history, from the Native Americans that resided on the land to the travels of Lewis and Clark along the Missouri River. Bismarck was first named Edwinton for Edwin F. Johnson who was the first to suggest building a transcontinental railroad. Its location on the Missouri River and near a major railway brought people from all directions. Many of the landmarks and streets in the city are named for the water and rail travelers (Langemo, 2004).

Much of the state's population growth was between the 1880's and the 1910's. Immigrants joining the Native Americans were from England, Ireland, Scandinavia, Germany, and many other countries. The Germans from Russia later joined the new city.

ND

Population: 637,709

Urban: 56.3%

Rural: 43.7%

Land Area: 44.1 million acres

Counties: 53

Founded: November 2, 1889 (39th state)

State Beverage: Milk

State Bird: Western Meadowlark

State Flower: Wild Prairie Rose

State Grass: Western Wheat Grass

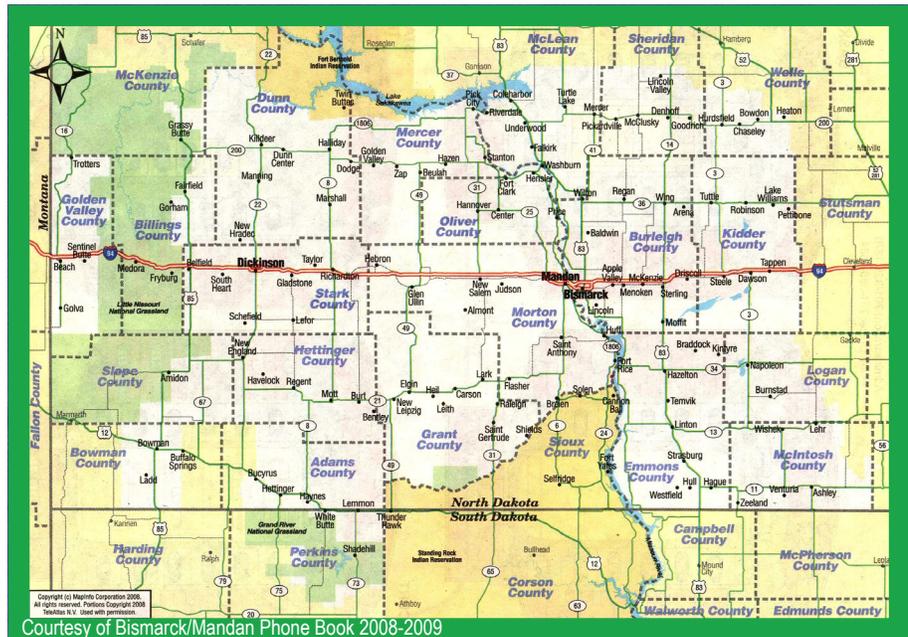
State Tree: American Elm

Highest Point: White Butte (3,506 ft)

Lowest Point: Red River (750 ft)

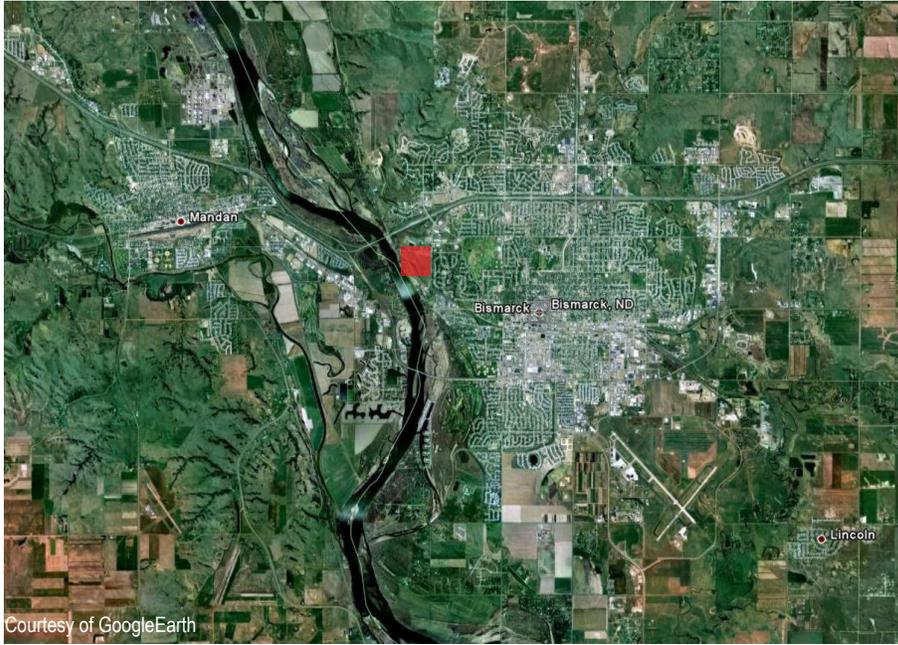
SITE INFORMATION

nd region

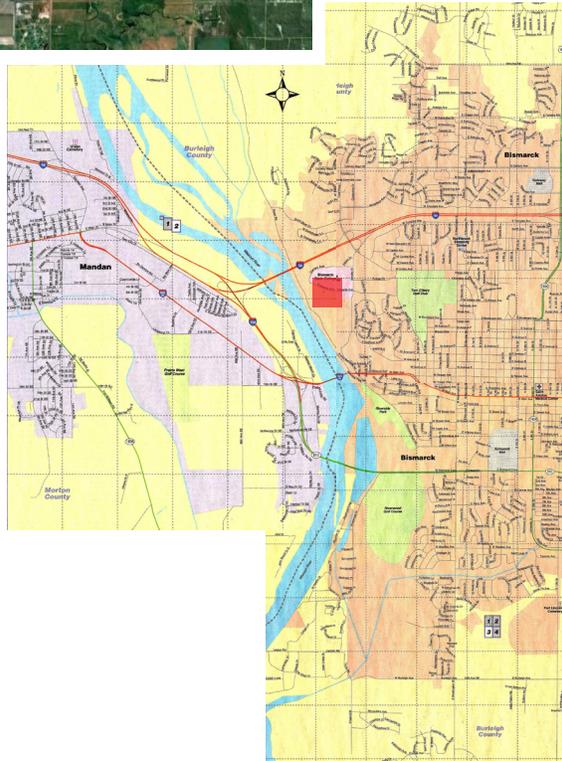


SITE INFORMATION bismarck, nd

Proposal



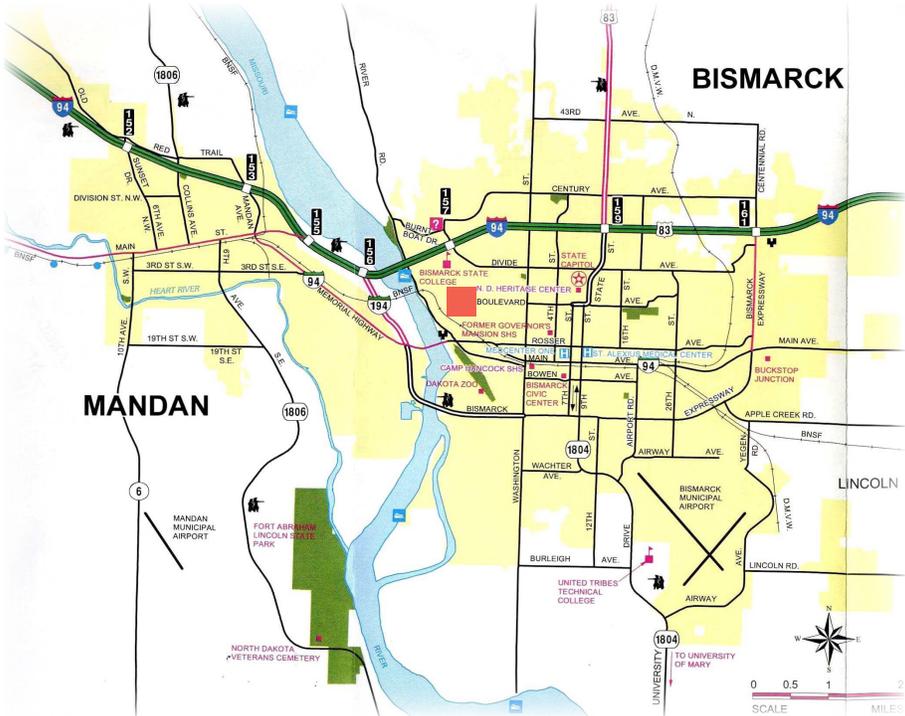
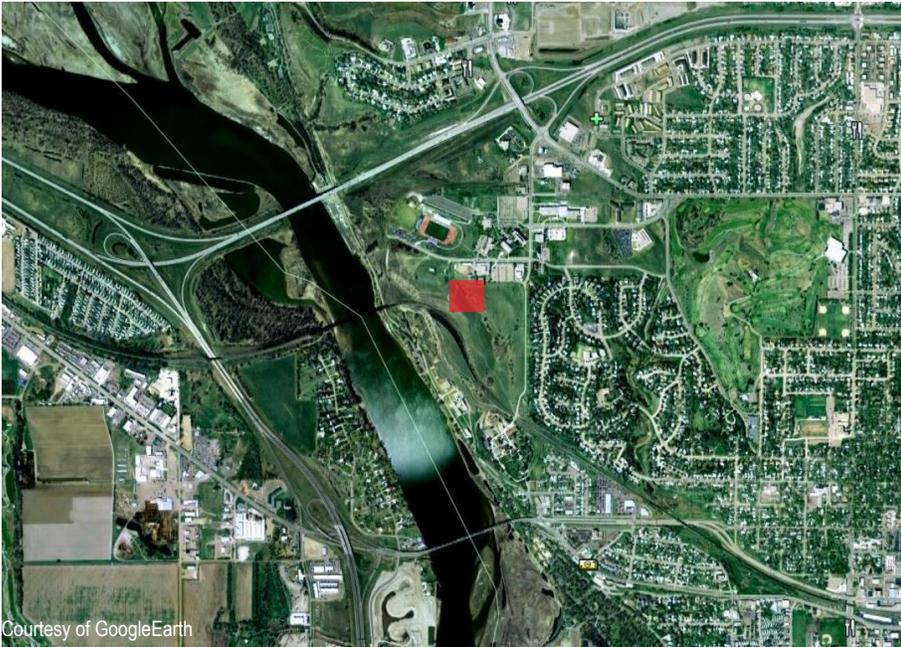
Courtesy of GoogleEarth



Courtesy of Bismarck/Mandan Phone Book 2008-2009

SITE INFORMATION

city



SITE INFORMATION

micro



View to the south from the site...



Site located to the left of existing building...



View of nearby building from the site...



View driving away from the site of capitol building and golf course

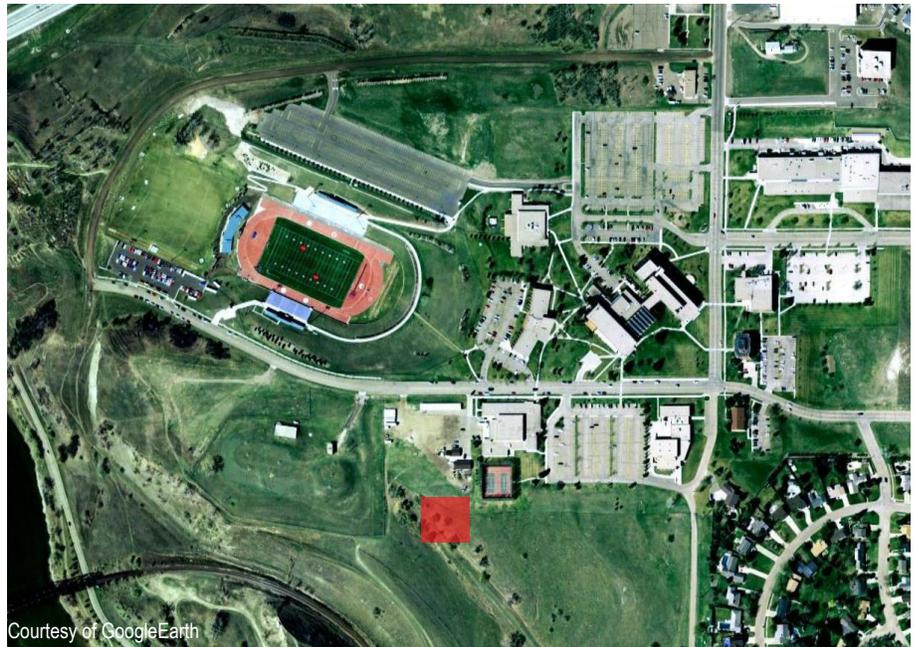
This site was chosen because of its proximity to the Missouri River and a local college. The views from this area are tranquil and powerful, with the winding river, the rolling hills, and the native vegetation. It is a peaceful site where nature can be embraced and it lends itself to a therapeutic function.

The area chosen for the project is just south of the Bismarck State College campus, with the Missouri River to the southwest and Mandan on the other side of the river. I-94 is just north of the campus with an off-ramp to the college. To the south is the BNSF railroad with a bridge crossing the river. There are also residential and recreational areas nearby.

North of the site are the tennis courts for BSC and the Bismarck Community Bowl for city sports events. To the east over the hill is a view of the state capitol building and the Tom O'Leary golf course. Down the hill to the southwest is Captain Meriwethers restaurant on River Road that runs along the shoreline. An informational bike path runs parallel to the road. The Lewis & Clark Riverboat is launched from Captain Meriwethers and visitors can launch their own boats into the river from a public boat ramp.

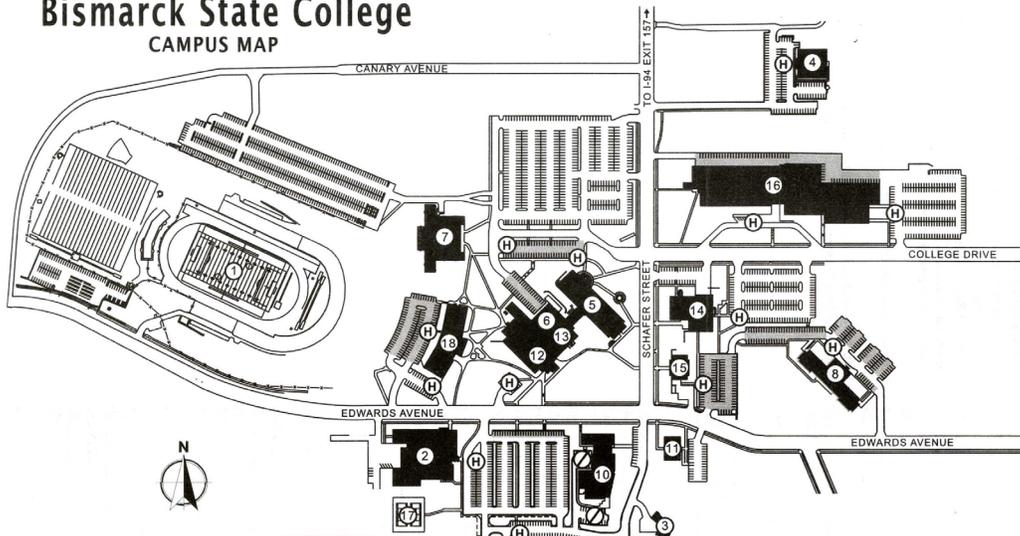
SITE INFORMATION

site



Courtesy of GoogleEarth

Bismarck State College CAMPUS MAP



- | | |
|--|-------------------------------|
| 1 - BISMARCK COMMUNITY BOWL | 11 - OFFICE ANNEX |
| 2 - BSC ARMORY | 12 - SCHAFFER HALL |
| 3 - FOUNDATION/ALUMNI HOUSE | 13 - SIDNEY J. LEE AUDITORIUM |
| 4 - HORIZON BUILDING | 14 - STUDENT UNION |
| 5 - JACK SCIENCE CENTER | 15 - SWENSEN HALL |
| 6 - LEACH MUSIC CENTER | 16 - TECHNICAL CENTER |
| 7 - LIBRARY | 17 - TENNIS COURTS |
| 8 - LIDSTROM HALL | 18 - WERNER HALL |
| 9 - NATIONAL ENERGY CENTER OF EXCELLENCE | Ⓜ - HANDICAP PARKING |
| 10 - ND LAW ENFORCEMENT TRAINING ACADEMY | Ⓜ - PERMIT-ONLY PARKING |
| | Ⓜ - NO BSC PARKING |

DIRECTIONS TO CAMPUS:

FROM THE WEST (I-94): Take Exit 157. At the stoplight, proceed straight on Schafer St. approximately 2 blocks.

FROM THE EAST (I-94): Take Exit 157. At the stoplight, turn left, proceed 2 blocks. Turn right on Schafer Street and continue approximately 2 blocks.

FROM THE NORTH (HWY 83): Turn right (west) on I-94 (Exit 159) and proceed to Exit 157. Take Exit 157. At the stoplight turn left, proceed 2 blocks. Turn right on Schafer Street and continue approximately 2 blocks.

FROM THE SOUTH (HWY 83): Turn left (west) on I-94 (Exit 182) proceed to Exit 157. Take Exit 157. At the stoplight turn left, proceed 2 blocks. Turn right on Schafer Street and continue approximately 2 blocks.

PROJECT EMPHASIS

Proposal

The main goal of this project is to understand how the built and natural environment affects the habits or cycles in our lives. At times we act out on our environments due to particular neuroses. Our surroundings can have a profound impact on our mental, physical, and emotional well-being. The focus will be on what elements of architecture contribute to this well-being. The research for the design will look towards sensitivity to the existing environment and provide insight on designing for disorders. The spaces will play with tectonics, textures, light, shadow, colors, and relationships to the outdoor environment.

There is a dynamic balance between how we react to our surroundings, and how our surroundings affect us. This project will explore the push and pull of built design and our state of mind. It will help people to realize the ways in which their mind can overpower their bodies and feel comfortable reaching out for a better understanding of themselves and their environment.

A PLAN FOR PROCEEDING

This thesis will utilize an in-depth, mixed method quantitative/qualitative research approach. Research will be done regarding the theoretical premise, project typology, historical context, site analysis, and programmatic requirements. Qualitative information will be gathered from experiencing the site and surrounding areas, visiting other therapeutic facilities, and exploring local and archival documents. Quantitative data will be collected from books, journals, archives, and government documents. The scientific and statistical information from these sources will be analyzed and presented graphically and through text in the thesis.

By following the Concurrent Transformative Strategy, qualitative and quantitative information will be gathered and interpreted simultaneously. The research direction will be dictated by the theoretical premise/unifying idea.

Documentation will be done in incremental phases throughout the research and design process. This includes, but not limited to, photography, scanned images, sketches, models, and digital drawings. All process work will inform the design and be filtered by relevance and how the project relates to the site.

Proposal

PREVIOUS STUDIO EXPERIENCE

SECOND YEAR FALL 2006: Stephen Wischer

Tea House - Fargo, ND

Rowing Club Boat House - Minneapolis, MN

House for Twins - Fargo, ND

SECOND YEAR SPRING 2007: Joan Vorderbruggen

Montessori School - Moorhead, MN

Prairie Dance Academy - Downtown Fargo, ND

THIRD YEAR FALL 2007: Ronald Ramsay

Agincourt Drive-In Theater - hypothetical Agincourt, IO

Shaker Great Stone Barn Restoration - Mt. Lebanon, NY

THIRD YEAR SPRING 2008: David Crutchfield

Structural System Design

Mixed Greens Mixed Use Facility - Downtown Fargo, ND

FOURTH YEAR FALL 2008: Bakr Aly Ahmed

High-Rise Design - San Francisco, CA

Cigar Box Project for KKE Competition

FOURTH YEAR SPRING 2009: Frank Kratky

Urban Slum Master Planning and Housing Design - Santo Domingo, Dominican Republic

Sustainable School for Marvin Doors & Windows Competition - Kigoma, Tanzania, Africa

FIFTH YEAR FALL 2009: Frank Kratky

River Keepers Facility on the Red - Fargo, ND

NEUROTIC:

MIND, BODY, SOUL, ARCHITECTURE

PROGRAM

Cycles that we are exposed to or engage in affect our mental and emotional well-being.

In researching the theoretical premise of this project, which is stated above, I had to take apart the pieces of the statement. **Cycles** are the patterns or systems that we create as a government and as a society regarding higher education and the chapters of life before and after that time period. These cycles affect our **mental and emotional well-being** and are explained through studying the causes, onset, and possible cures of neurosis. This research also includes the ways that higher education takes a toll on an individual, including the people around them. I look first through the perspective of the clinical lens, describing neurosis as we know them today. This leads to the psychological perspective and theories such as Maslow's Hierarchy of Needs which explains another way that neurosis can manifest itself. Finally this thesis topic is studied from an economic standpoint, describing how education, technology, and finances have placed a nearly unbearable load upon our country's young adults.

Graduation from high school can be the most exciting and the scariest experience of most young adults today. You feel free. You look forward to heading off in your own direction, whether it point you towards college or not, and making decisions on your own without parental authority. However, entering that next life chapter is not always a simple matter. According to Goldin and Katz (2008), there are two main factors today that hold this demographic age group back from attaining a **higher education**. The first is that many youth are unprepared for college after high school either because they dropped-out or remained academically unprepared before and after getting a diploma. The second factor is that it is harder to gain financial access to higher education due to the increasing tuition rates for those who are college ready. Add these factors to a number of other reasons why young adults fear the next step in life and you see the onset of many different forms of neurosis in our society.

Things seemed so much simpler in the past. Another issue that comes to light is that people today are more willing to talk about their problems and accept the need for help. Given time they will find ways to reach out and find the assistance they want and need.

Neurosis... “a term generally used to describe a nonpsychotic mental illness that triggers feelings of distress and anxiety and impairs functioning” (Ford-Martin, 2009). Disorders considered neurotic differ from psychotic in that psychotic people do not have a firm grip on reality, whereas neurotic people are still very in touch with reality. Neurosis translates to “nerve disorder” and covers the nervous symptoms and disorders that lack a clear organic cause. According to Mary C. Townsend, clinical and mental health nursing specialist (2005), neurotic behaviors are categorized into more specific types which are listed as the following:

Anxiety neurosis is a more generalized term for neurotic behaviors that deals with excessive chronic and unrealistic worry which can turn into panic attacks, nausea, tremors, sweating, chest pain, irritability, muscle tension, and restlessness.

Depressive neurosis is an overwhelming feeling of despair, disappointment, or sadness including a loss of interest in activities that were once enjoyable. Other feelings include irritability, hopelessness, guilt, worthlessness, helplessness, lack of energy, sleep and eating problems, and trouble concentrating or remembering.

Obsessive-compulsive neurosis (OCD) is where a person has persistent reoccurring images or thoughts, known as the obsessions, and acting out in ritualistic behaviors or mental acts, known as the compulsions. Issues with OCD are related to contamination, sanitization, checking, counting, cleaning, ordering, and reoccurring doubts.

Somatization is where physical symptoms of pain and discomfort are manifested from anxieties and the condition has no medical explanation. The anxiety becomes so overwhelming that it results in physical illness and bodily complaints, which are a dissociative response where consciousness is disrupted.

Post-traumatic stress disorder (PTSD) is characterized by severe stress and inability to fully function due to witnessing or being involved in a very traumatic event. Symptoms also include nightmares, flashbacks, memory repression, emotional withdrawal, irritability, anger, trouble concentrating, having distressing thoughts and avoiding activities that related to the event, and guilt.

Panic disorder reveals itself through periodic attacks of fear, anxiety, terror, and overwhelming physical discomfort. Signs include dizziness, sweating, shaking, trouble breathing, numbness, loss of body movement, fast heart rate, chills, hot flashes, and a fear of dying or going insane.

Phobias can occur when a stressful life event creates anxiety that is attributed to an external source, which becomes the object or idea that is feared, the phobia. It is the result of false cognitions or self-instructions that is a reaction to anxiety. Phobias cause the individual to engage in an avoidance behavior.

There are research and findings that relate neurosis to levels of brain neurotransmitters, transporter proteins, and even an identified “neurosis gene,” but this research focuses on the cognitive and behavioral causes of neurotic behavior more closely related to societal and cultural forces. There was a study conducted in the United Kingdom of over 9,500 residents in 1998 which found that “those with a lower standard of living had a higher prevalence of neurotic disorders” (Ford-Martin, 2009). This means that genetics may predispose individuals to the symptoms of neurosis, but **outside factors** can also trigger the onset, such as socioeconomic standing. This finding leads the theoretical premise research to psychology and Maslow’s Hierarchy of Needs.

THEORETICAL PREMISE RESEARCH

results: psychological view

As discussed by Jarret B. Wollstein (2001), Abraham Maslow was a humanistic psychologist who argued that the standard to measure acceptable human behavior against should not exist as a statistical average of how individuals typically behave. Instead, it should be measured against how the most productive, creative, fulfilled, and happiest people behave. These achievers are called “**self-actualizers**.” They are at the top of the hierarchy with the most basic human needs at the bottom.

Maslow realized that most neurotic behavior is triggered by frustrations dealing with those most basic needs. This direction of thought would ideally seek to remove institutional barriers of wealth and productivity so that life necessities are affordable and easy to acquire. Another barrier is the branding of people that can destroy opportunities, such as “untouchables” or “peasants.”

Maslow’s hierarchy includes five levels of human needs (Townsend, 2005).

Psychological needs – food, water, air, sleep, elimination

Safety and security – avoid harm and maintain comfort, protection, physical safety, order, structure, and freedom from fear

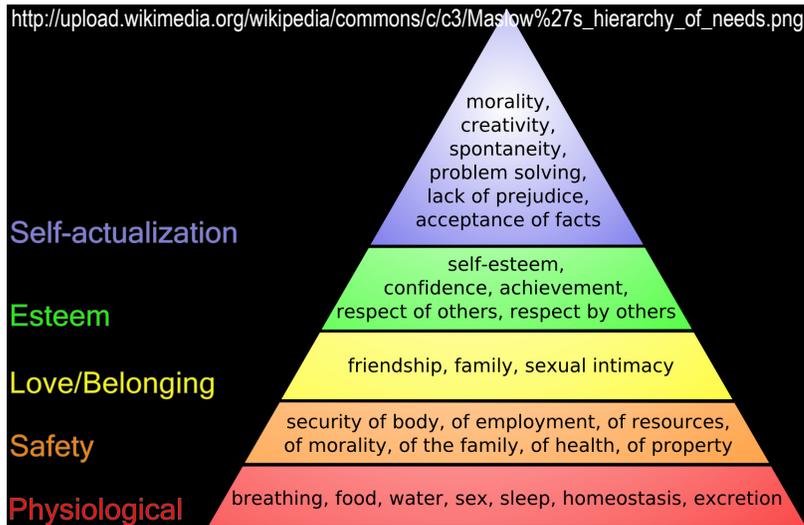
Love and belonging – need to give and receive affection, group identification, companionship, and satisfactory relationships

Self-esteem / esteem-of-others – seek to have self-respect and carry respect for others, achieve success and recognition, desire to make accomplishments and attain prestige

Self-actualization – possess a holistic feeling of self-fulfillment and realizing one’s highest potential

THEORETICAL PREMISE RESEARCH

results: psychological view



An example of how this hierarchy relates to **neurosis** is that in childhood, if the lower level of basic human needs is not fully satisfied, the individual as an adult may develop neurotic needs that are unsatisfiable (Weinberg, 2005). Not everyone will reach self-actualization in their lifetime. Higher level needs can endure their satisfaction being postponed, and gratification of those needs leads to longer periods of happiness and serenity. Lower level needs consist of lower-order abstractions (closer to physical objects), where higher level needs are higher-order abstractions that are more symbolic. At the top, self-actualizers take part in spontaneity, simplicity, naturalness, shamelessness, and acceptance of themselves and of others. Weinberg states, "They did not allow theories, fads, names, the unverified opinions of other people – all higher-order abstractions – to distort what they could taste, smell, feel." They also base predictions on "factual knowledge and observation than on the unverified inferences which form the higher-order components of neurotic anxieties, fears, wishes, and fancies."

THEORETICAL PREMISE RESEARCH

results: psychological view

An interesting study by Crumbaugh and Maholick (1964) argued that a new neurosis was becoming apparent in clinics. It was called “**noogenic**” neurosis and was derived as a response to individuals feeling a “complete emptiness of purpose in life.” The article presents an “existential frustration” due to personal existence having no perceived meaning, with boredom as a symptom. It states that “the essence of human motivation is the ‘will to meaning’; when meaning is not found, the individual becomes ‘existentially frustrated’”. The study was exploratory and needed more work, but it related to another published study about procrastination and a link to neurosis.

Procrastination is a behavior that plays heavily on one’s emotions and cognitive reasoning. It is a frequent delay by the individual to complete or begin a task with a deadline.

A more recent study done by Ferrari, O’Callghan, and Newbegin (2005) consisted of adults from the United States, the United Kingdom, and Australia who were observed and tested. The goal was to find if there exists a “pure” procrastinator type or if individuals remained classified into one of two other types. These other two types are arousal and avoidance procrastination. Actions are delayed in order to achieve a last-minute thrill with arousal procrastination, and actions are delayed because of a fear of success or failure in avoidance procrastination. About 70% of college students were estimated to procrastinate on academic tasks. Chronic procrastination is very complex and involves more than just a difficulty to manage time. “Empirical studies also report that chronic procrastination is related to a host of other traits, including low states of self-confidence and self-esteem and high states of depression, neurosis, public impulsiveness, behavioral rigidity, and lack of energy.”

These studies and theories that have been published or tested all contribute to how neurosis manifest in society. They provide different ways of looking at neurotic disorders and the next step in the research aims towards **college students** in particular.

The importance of a college education has increased dramatically in the United States over time. Today, in order to obtain a good job and make a decent living an individual needs to attend some form of higher education. This **pressure** has greatly affected the young adults in society during these transition years from high school to entering a desired career. This age group must deal with societal and parental pressure to achieve while finishing a degree, possibly working part-time or full-time, handling expenses and financial aid, as well as the possibility of moving away from home and leaving a solid support group. After time, these young people often begin to exhibit signs of **neurotic behavior**. It is difficult for some with these nagging mental thoughts to reach and find help because they either want to hide that they have any kind of problem, or they don't trust confiding in others because they don't feel that anyone truly understands what they are going through. The research to follow will discuss the mental health statistics and needs among students in higher education.

THEORETICAL PREMISE RESEARCH

results: economical view

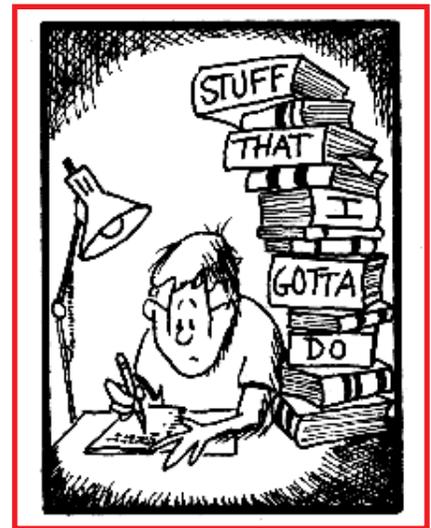
America strives to be on the cutting edge of **technology and education**. This is a fast-paced society and the demand for knowledge in this country has grown considerably since the 19th century. Informal apprentice programs for aspiring professionals used in the past have ended and the requirement for today is school-based learning that is formal and scientific (Goldin & Katz, 2008). Each successive generation had and continues to have a tendency to obtain an education at a level that was and is much greater than the generation before. From 1947 to 1973 this was a much different story. The economy grew rapidly but Americans “grew together” and experienced education in a similar way to the preceding generation. The education a parent received is no longer the same as what their child will receive. This gap creates another pressure between student and parent because parents don’t perceive how stressful and competitive it can be to earn a degree, as well as enter into a job market that requires that degree and aptitude.

As published by economists Claudia Goldin and Lawrence F. Katz (2008), drop-outs and high school graduates can easily be substituted for each other today. A college graduate or an individual with a post-graduate degree is considered to be highly educated, where in 1915 a person with a high school degree was considered highly educated. **“Science replaced art in production; the professional replaced the tinkerer as producer”** (Goldin & Katz, 2008). Prior to the 1950’s, high school graduates once had many future positions held for them because they had much more to offer than others without a diploma. Technological change has demanded a need for skill-based, highly-educated workers. This organizational trend greatly rewards top-paying college jobs that utilize strong problem-solving skills, and nearly eliminates the lower- and middle-paying college level jobs. There has also been a soaring demand for graduates with a post-bachelor’s degree and degrees from selective or more prestigious schools. What does this mean? It means that any student looking to land a good job and make a decent living must attend college.

THEORETICAL PREMISE RESEARCH

results: economical view

A poll was done on **college-bound anxiety** by Thomson Peterson's, a leading educational provider and part of the Thomson Corporation. They provide solutions for schools, students, and families with the use of live, online, and print materials on test preparation, school finances, admissions, and career guidance. This poll published in 2005 indicated that there is a significant number of prospective students that worry about finding the right school, financial aid, and doing well on tests. The respondents consisted of over 1,100 college-bound students and a large population of graduate school-bound students. The poll results are as follows (Thomson, 2005):



courtesy of <http://wso.williams.edu/orgs/peerh/stress/index.html>

THEORETICAL PREMISE RESEARCH

results: economical view

“What about college planning makes you the most anxious?”

College-bound students...

28.04% Doing well on admission tests
27.94% Finding the right school
32.40% Financing my education
11.62% Figuring out where to start

Graduate study-bound students...

35.03% Doing well on admissions tests
23.64% Finding the right school
26.62% Financing my education
14.71% Figuring out where to start

For those who were interested in attending continuing education programs, most anxiety came from worrying about doing well on tests in class, and second to that was figuring out where to start, followed by financing the program and lastly, finding the right program or school. Clearly, test-taking and finances take a great toll on the minds of students, but college finances and standardized testing was not always the way it is today.

According to Goldin and Katz once more (2008), “no nation in the world offers as much choice to potential undergraduates, graduates, researchers, and faculty as does the United States”. Higher education institutions flourished because they could offer an openness and variety in education, as well as geographic closeness and competition to **challenge** those willing to learn. The population was increasing, more women were attending college (especially during wartime), and foreign students and researchers believed that a great education would come from a superior American institution. In the academic ranking of world universities for 2005, the United States housed 17 of the top 20 universities, and 37 of the top 50 universities. These universities thrived because the country had such a large size and population, and incomes were quite homogenous and relatively high early in the country’s history. Once college attendance levels rose due to the changing economy and technology of our country, reputation and distinction became more important and **rising costs** followed, creating barriers to college entry.

In America, college and tuition expenses have always been a large burden on a family income. From the 1950’s to the 1970’s, attending a public university was roughly 4% of the median family income, with private universities closer to 20%. These numbers increased to 10% of the family income for public universities and 45% for private universities after 1980. Before the 1980’s the supply of educated individuals was just ahead of the demand for the workers and knowledge needed. After that time, the demand exceeded the supply, so with fewer people in college the premium to attend college increased. This creates a **vicious cycle**, where more people can’t afford schooling and therefore postpone attending, which raises the cost even more for later attendees.

These psychological and economic factors lead universities to address the mental health of college students in various ways. Counseling centers must **evolve** with the changes in social, political, and economic factors. Demographics are also a force in the college setting and there is a need for available counseling for differing ages, ethnicities, and backgrounds.

Martha Anne Kitzrow (2003) observed these shifts in her paper dealing with today's college student and their mental health. "During the last decade, university and college counseling centers have reported a shift in the needs of students seeking counseling services, from more benign developmental and informational needs, to more severe psychological problems". What is interesting is that this research relates to the economic factors presented by Goldin and Katz in that the level of severity in college counseling research has been a concern since the 1980's. Of these center directors, 85% have seen this "**severe**" increase over the recent decade. So not only are education requirements increasing in each generation, but students today in college are feeling "overwhelmed and more damaged than those of previous years". For most students, the peak of their anxiety is during the freshman year, but there is a sub-group that is manifesting chronic distress and neurosis that are not decreasing with time. The good news is that college and university counseling centers are seeing a greater demand in the need for counseling services, meaning more young adults are seeking help for what is plaguing them.

These mental problems affect a student's physical, mental, emotional, and interpersonal functioning. Counseling centers have been shifting towards a model that is more clinical and crisis-oriented, but this thesis does not concern itself with pharmacological solutions. Its focus is on the developmental, preventative, and **holistic** model of counseling and well-being. This model will employ the environment surrounding the neurotic individual, including aspects of design and architecture. Services can also include more of the student body that is not affected by neurosis. These students can provide phone consultations through the college or volunteer in group therapy discussions to help those with troubled minds to feel better at the time by relating to someone who has felt the same feelings. The faculty and therapists that are part of the college community will be attentive to how the students are handling this time in their lives. The ultimate vision for this thesis is to create a place where the negative stigma of counseling and therapy is taken away to allow students to feel comfortable talking about their issues and bring them into the **light**. It's a support group that extends all the way through the college community.



TYPOLICAL RESEARCH

case study 1:

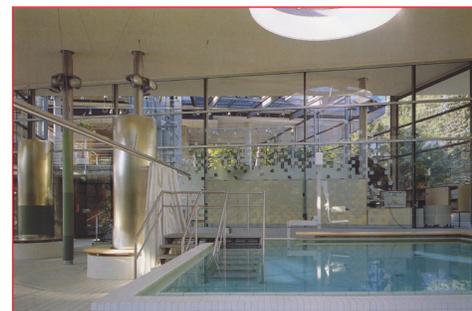
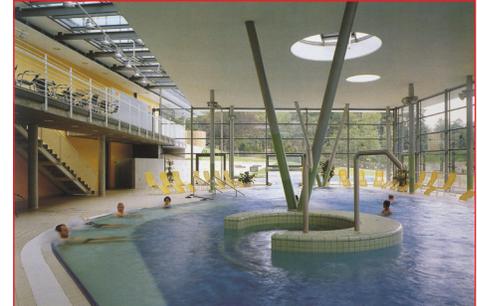
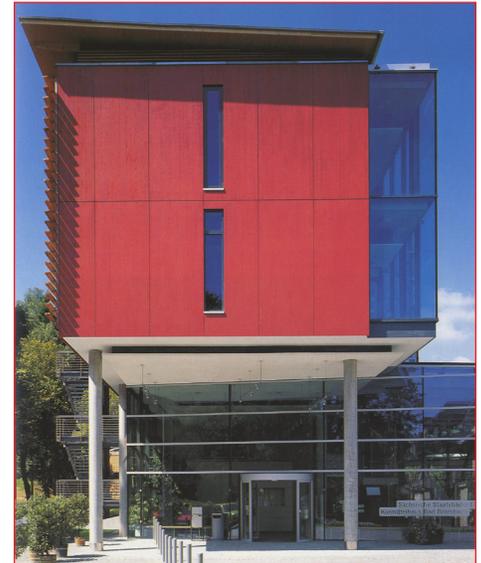
Auer + Weber + Partner / Peter Holzer

Kurmittelhaus **Bad Brambach, Germany**

Spa building : located in Brambach Health Park that includes medicinal therapy facilities of the state spas

This spa building is located in a region of traditional spas. The design is on a sloping topography and nearby is an expansive park. The focus of the spa is on bathing in the relaxing and therapeutic pools. The main covered pool is wrapped in glazing and connects to an outdoor pool creating an atmosphere of bathing outdoors with its visual connections. Stairs allow access to the center, providing views of the park. The facades facing the access road are of larch panels painted red, with narrow vertical windows and many thin horizontal shading devices that extend the length of the building.

This play on light, shadow, color, and pattern create a very warm and introverted atmosphere inside. The facade facing the bathing terraces and the park on the opposite site is almost completely glazed, bringing in more natural light and ventilation, furthering the connection of the building to nature. There is a duality of protection and openness in the design, which speaks to those receiving therapy, and the baths respond to a cultural norm. This design relates to following case studies in how there is attention paid to light, color, therapeutic services, and the incorporation of nature.





TYOLOGICAL RESEARCH

case study 1:

Space Placement

Stairs and an elevator flank the glazed facade with stairs also flanking the paneled facade.

Second and Third floor

Private and semi-private rooms for therapeutic treatments such as massage and mud bath, with some lounge and office space. Along the glazed longitudinal side is an interior corridor, and along the larch paneled longitudinal facade are enclosed private spaces, with a parallel corridor running through the middle of the building.

First floor

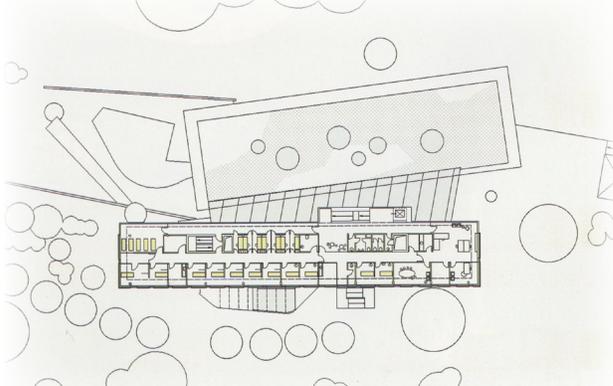
Lobby, restaurant with outdoor eating terrace, and sauna with dressing space that connects to the lower bathing level. Glazed facade towards the street side to welcome at what is the ground level for that side of the building due to the topography.

Ground floor

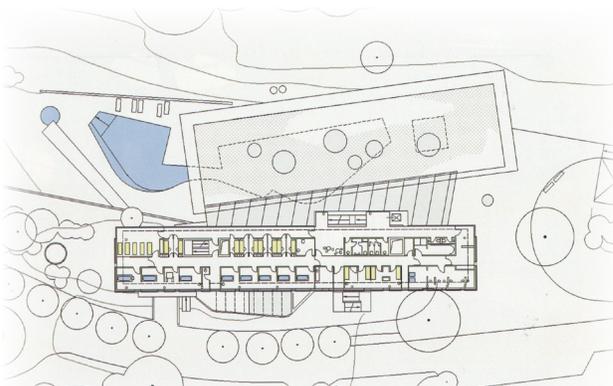
Considered ground level for the terrace of indoor and outdoor bathing due to the topography, with lockers, showers, dressing, and some mechanical.

Basement floor

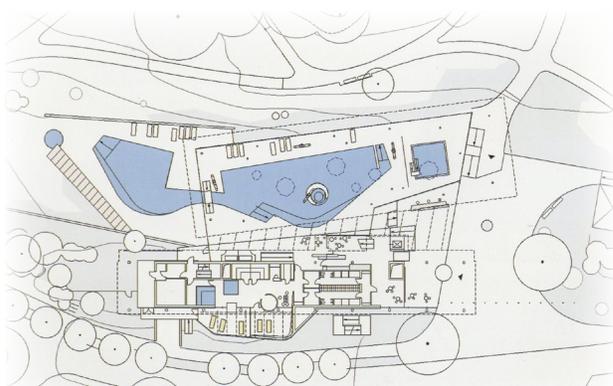
Steps down from the bathing terrace with a glazed facade facing the down the topography towards the park, housing exercise and dressing space, with mechanical beneath the rest of the building.



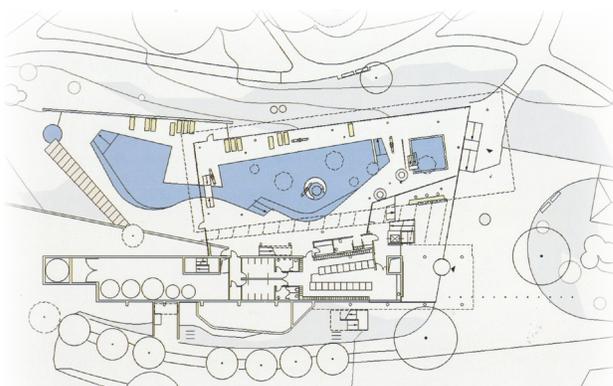
Third floor plan



Second floor plan



First floor plan



Ground floor plan

TYPOLICAL RESEARCH



case study 1:

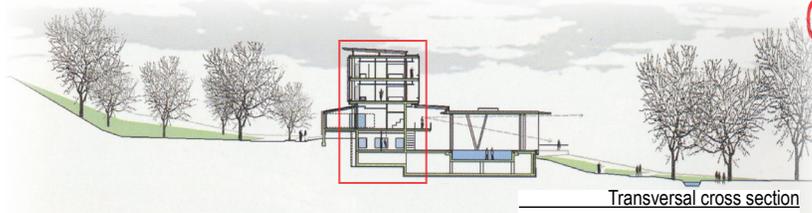
Analysis

Natural light pours into one side of the building and filters into the other side. Steel framing holds the larch panels and extensive glazing together. The covered rectangular terrace forms seen in site plan is rotated slightly and shifted from the other rectangular mass. Balance of the building masses is achieved by configuration and geometry, with a very rectilinear form placed adjacent to a more angled structure and free-form pool. Also, the mass of glazing is balanced by the larch panel facade.

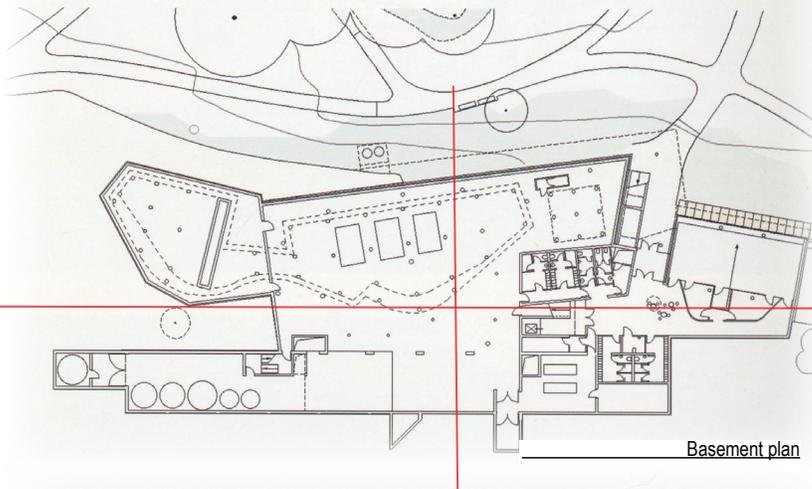
Upper levels have a more linear orientation, with the main levels more free-flowing. Therapeutic treatment rooms are gridded off, but the grid stops there. Hierarchy is achieved in the bathing area with a much larger ceiling height, as it should be because the bathing is the focus of the building.

The whole of this design is greater than the sum of its parts, with the terracing and topography of the site. The relationship of plan to longitudinal elevation is about a 1 to 1.5 ratio, but the plan to section relationship is inverse, where the more dominant vertical space in section is less dominant in plan to the very horizontal layout.

[49]



Transversal cross section



Basement plan



Longitudinal Elevations



Site plan

TYPOLICAL RESEARCH



case study 2:

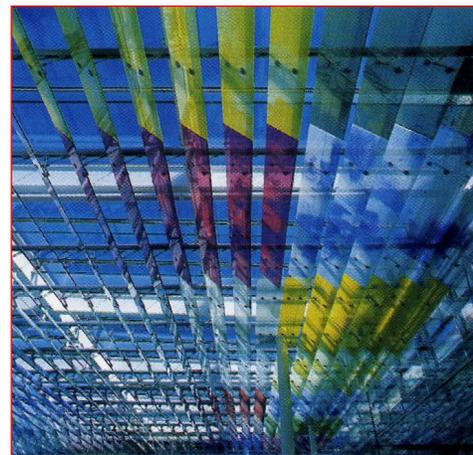
Behnisch & Partner

Health and Spa Facilities Bad Elster, Germany

Spa building : located in an extensive green area that is densely wooded with small lakes and promenades. It has undergone many restorations and is one of the oldest centers specializing in mud baths in Germany.

This facility is a combination of old and new, with a modern addition of glass and steel to an old masonry structure. This design also brought new life to the inner courtyard. The new bath hall has several indoor and outdoor pools, an information pavilion, sauna and sauna gardens, lounging area, and treatment pavilion. The baths were enclosed before the last renovation. They are now the focus of the complex and harness natural light. The play on colors also makes the spaces warm, exciting, and inviting.

There is an intention to connect the building to the green surroundings and a nearby lake with glass structures. For climatic reasons, different forms of insulated and louvers glazing are used for an enclosure. The roofs and facades consist of double leafed glazing with a 1 meter air space between to prevent condensation due to temperature changes. The brightly colored glass louvered ceiling responds to the yearly sun changes and gives a decorative and functional aspect to the spa facility.

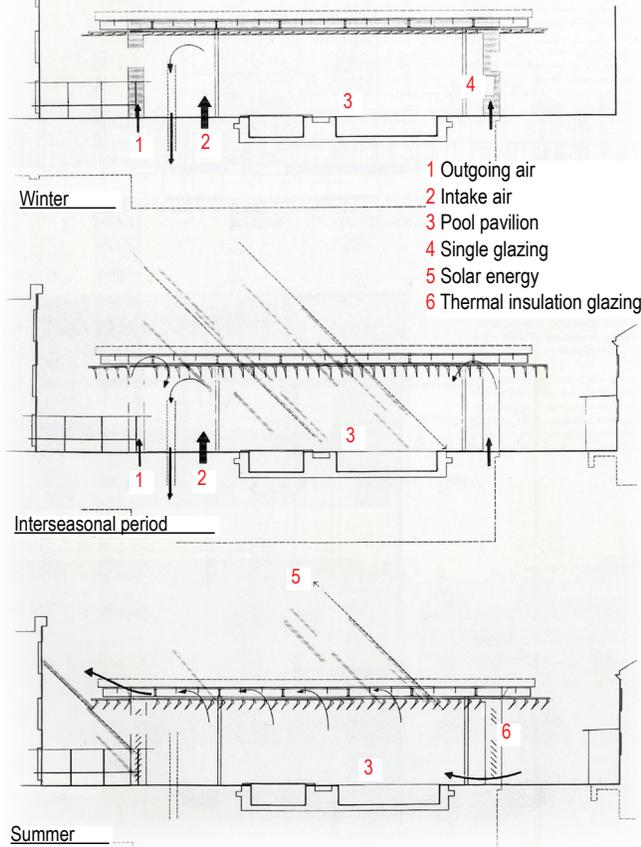




TYOLOGICAL RESEARCH

case study 2:

Energy concept



Space Placement

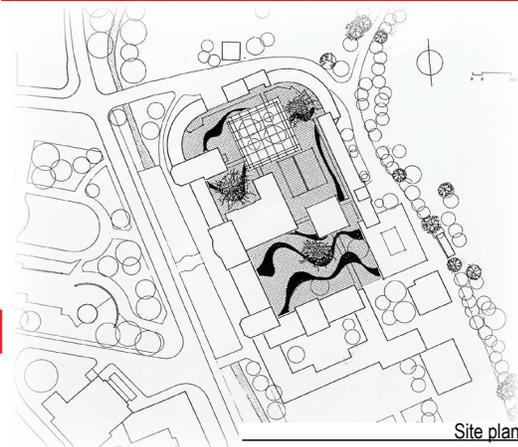
The inner courtyard spaces connect into the surrounding building form for dressing and showering spaces, as well as entering into main circulation areas such as near staircases or near entrances from the road into the surrounding structure.

Lower Level

The lower level circulation is through a main corridor that runs through the perimeter structure, alternating between having rooms on either side, or rooms on only one side of the corridor. This facility has many more entrance lobbies and interior private spaces for massage and mud baths than the first case study. These spaces run the length of the structure. The open circulation only happens in the courtyard.

Upper Level

This level is similar to the lower level in that the corridor alternates its location again, but the upper level only runs half of the perimeter structure. It contains more therapeutic spaces with lounge and meeting areas. Views to the inner courtyard are from the private rooms, not the circulation corridor.

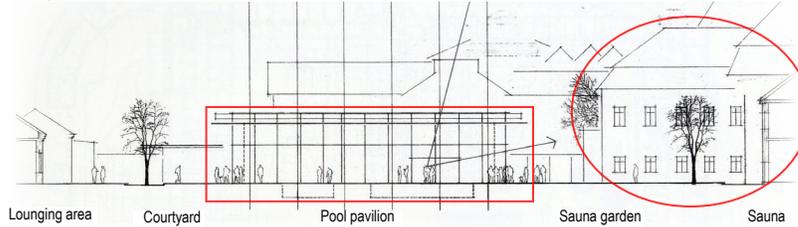




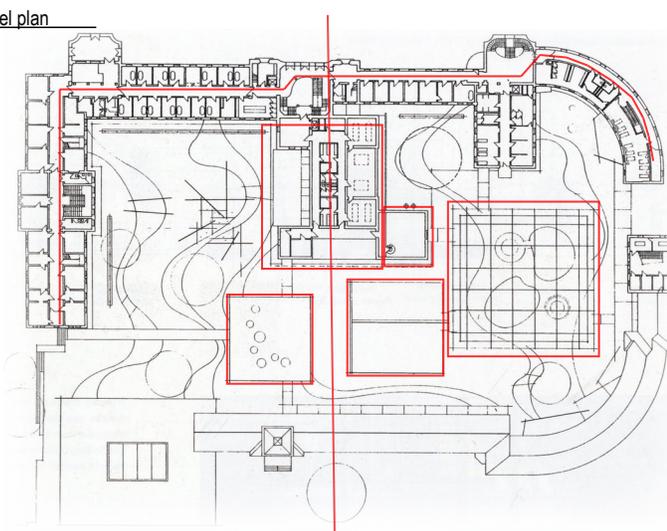
TYPOLICAL RESEARCH

case study 2:

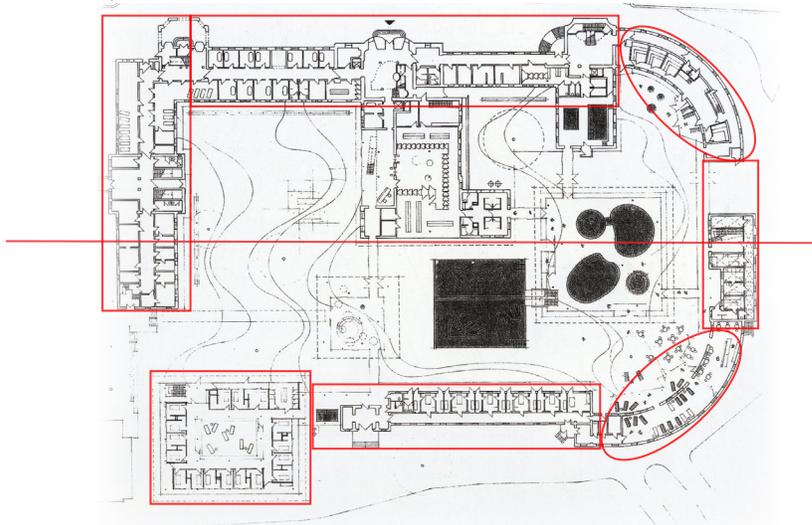
Pool pavillion exterior elevation



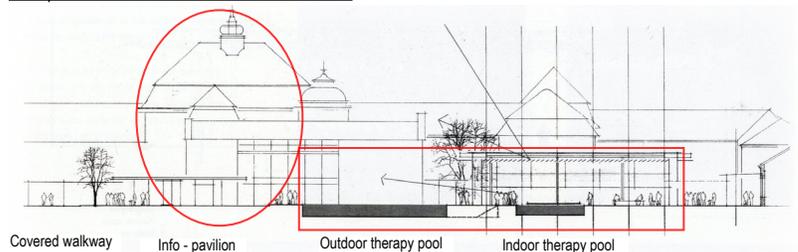
Upper level plan



Lower level plan



Pool pavillion section / interior elevation



Analysis

This facility has a balance of geometry in one direction with the curved corners on either half, and a balance of configuration in the other direction with a nearly equal amount of structure on either side. The geometric configuration consists of squares and rectangles that overlap and are adjacent to one another. Curved forms are integrated into the mass through the facade and in the courtyard pools and landscaping.

There is a hierarchy of square sizes, with the largest square being the most important pool pavilion with the glass louver ceiling. The perimeter layout is linear and the courtyard is nested within the structure with a clustered arrangement of covered and open spaces. This creates a progression from enclosed to open spaces.

A grid is slightly at work because structures remain parallel or perpendicular to the rest of the structure. Here, the units are contained in the whole, and the unique (courtyard) is surrounded by the repetitive (existing structure). The plan to section or elevation relationship is an inverse because in plan your focus is on the courtyard, and in section or elevation the visual focus is on the encompassing perimeter buildings.

TYPOLICAL RESEARCH



case study 3:

Avant Travaux

Centre de Restauration Colombes, France

Recovery and rehabilitation : this center is built as the first of two projects, the second being the psychiatric care units of the quick study case 2 in the following pages. This project sits on the grounds of an existing hospital.

This building design is compacted into basic volumetric forms to preserve as much existing vegetation as possible. A green roof is also incorporated that can be seen by the nearby hospital and helps to restore some of the natural order that is desired by the surrounding park landscape.

The ground level volume is more enclosed, with a volume sitting above it that is glazed. This glass envelope is screen printed with a vegetable pattern, relating the building to the surrounding vegetation, creating interesting light patterns, and speaking to the restaurant that is located on the upper level.

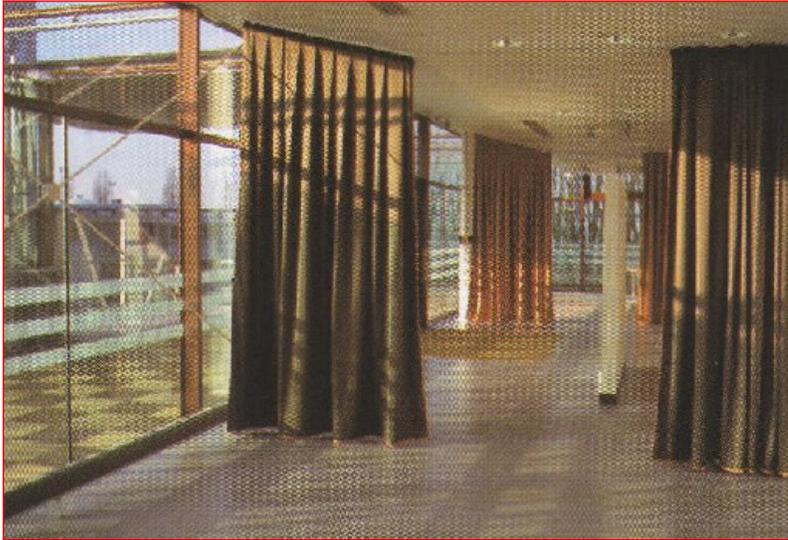
Restaurant access is completely separate from the center. Two galvanized steel staircases flank two adjacent sides of the building with a glazed external lift. These elements again bring forth the idea of having patients engage with the outdoors and allow themselves to be bathed in natural light to aid in their desire for healing and well-being.





TYOLOGICAL RESEARCH

case study 3:



Space Placement

Corridors branch off of each other and are located deeper within the building, allowing rooms to mostly run along the facades for patient care and activities. There is also an interior elevator and staircase in addition to the exterior vertical circulation.

Lower Level

Rehabilitation and recovery spaces with less light openings than the upper level. This also provides more protection to the inhabitants from the street level.



Upper Level

This level consists of a large terrace enveloped by the etched glass. Within the terrace that is uncovered around the perimeter is the restaurant and a large open space with movable partitions to be used for activities of different sizes.

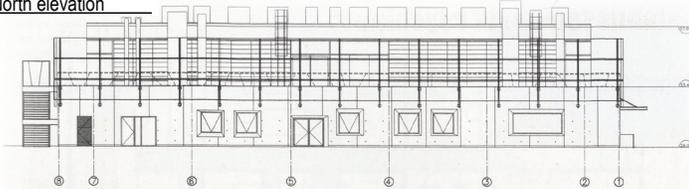


TYPOLICAL RESEARCH

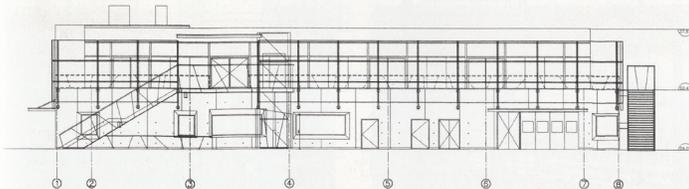


case study 3:

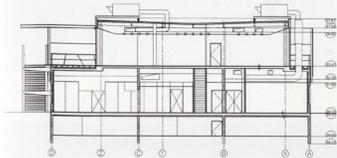
North elevation



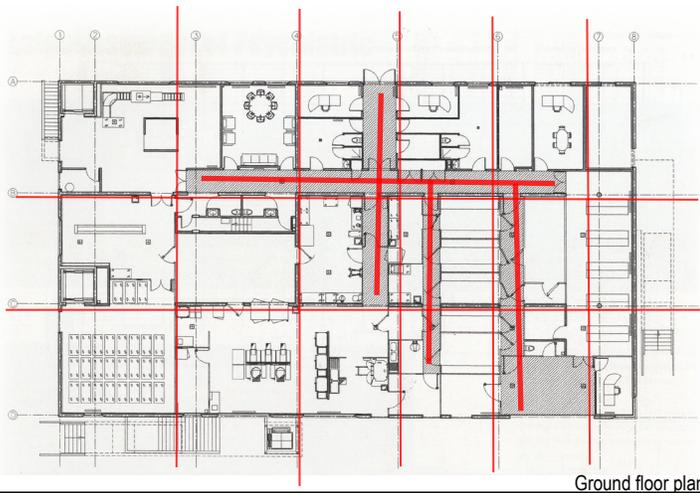
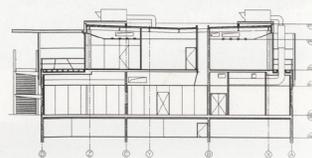
South elevation



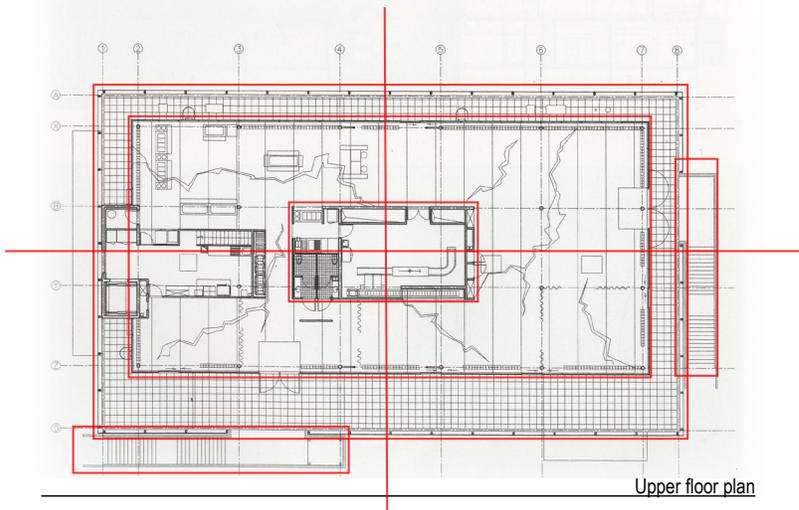
Cross Section (3)



Cross Section (4)



Ground floor plan



Upper floor plan

Analysis

This form is very balanced in that it is one basic volumetric shape. Total symmetry is broken by the placement of the exterior stairs and lifts. The spaces and forms are rectilinear, allowing some natural light into the lower level, and much more into the upper level. Hierarchy is given to the upper level with its openness to the outdoors and large multi-use space. There is a transition from enclosed to open space.

In this design the unit is the whole. The upper-level spaces are nested in the perimeter terrace and centrally and concentrically configured around the restaurant core. The lower-level spaces are clustered on a grid with linear circulation in more than one direction. Circulation also transitions on this level from being corridor based on one half to a more free-flow movement on the other half. Nesting, clustering, and linear movement seem to be common themes of the case studies.

The plan to elevation relationship exists as a 1 to 1.5 ratio, or a 1 to 2 ratio. They also appear to be proportional in that the sections are a smaller version of the plan shape. The sections and elevations also total the space of the plan. [57]

TYOLOGICAL RESEARCH

quick study 1:

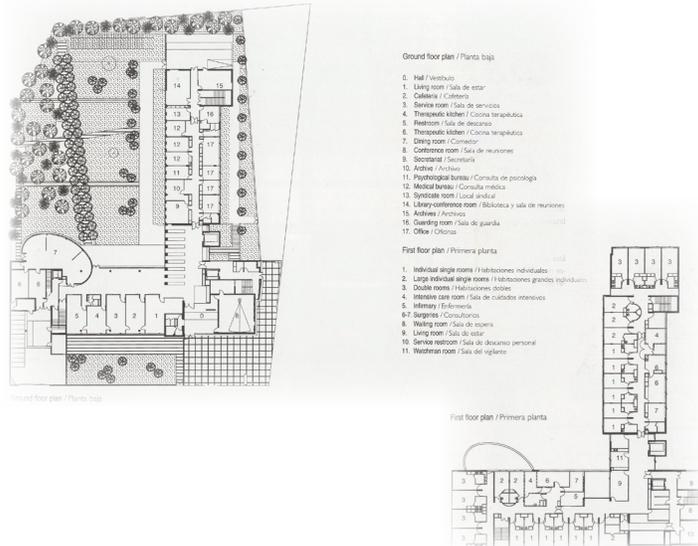
Brenac & Gonzalez

Hopital de Ville Evrard Saint-Denis, France

Psychiatric hospital : aiming to achieve an “open” relationship to the town and surrounding context, with and interplay of materials, pattern, and volumes.

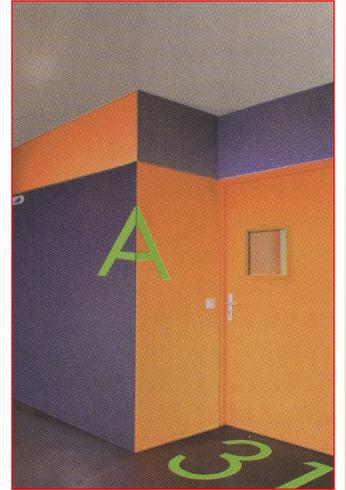
This building consists of two wings and a communication hall. One wing is clad with bricks with narrow horizontal glazing and spaces that use these walls to protect some of the more delicate areas and care units. The other wing uses larger glazed areas on the facade that is more distant, but leaves ward units more open onto the street. These wings and the connecting point plays with volume creating areas of interest, natural light and shadow patterns, and material changes.

This design is striving towards removing the negative connotations associated with a psychiatric hospital and opens up views to the street. These volumes also allow for a large landscaped garden space which can aid in healing. From the volumetric entrance extends a glazed gallery corridor with views of the garden, leading to an elliptical glazed dining room with its own views and creating its own pavilion atmosphere. The smaller building scale is of interest here, with the interesting tectonics and use of light.



TYOLOGICAL RESEARCH

quick study 1:



TYOLOGICAL RESEARCH

quick study 2:

Avant Travaux

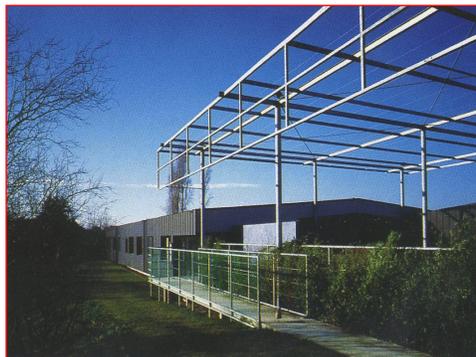
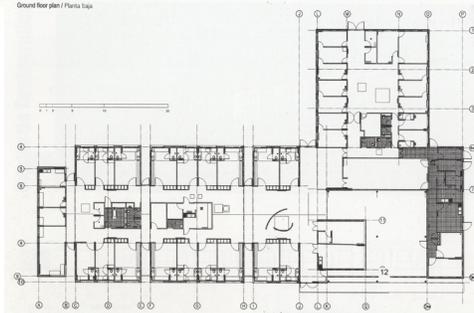
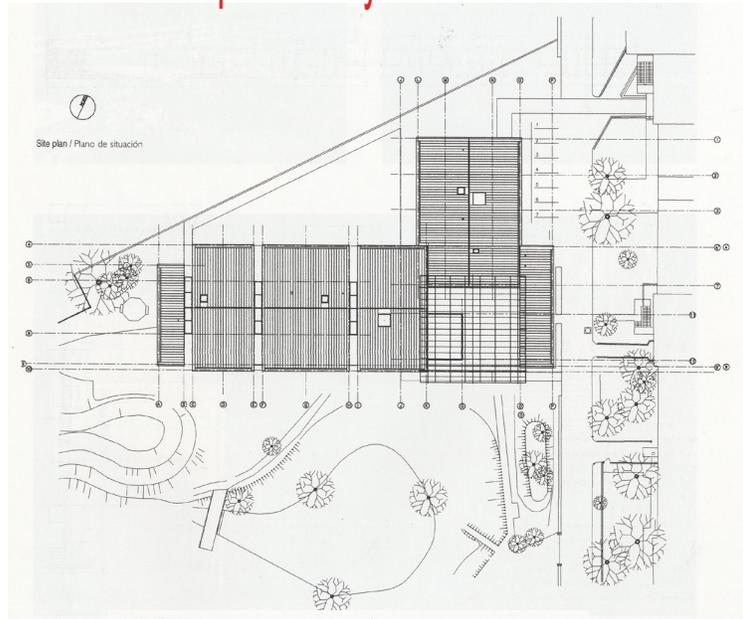
Unite de Soins Psychiatriques Nanterre, France

Psychiatric care unit : designed as the second project to case study 3, built in a peaceful manner on an extension of a hospital park.

The overlapping rectilinear volumes of this design is unified with facades of anthracite zinc, with all spaces on ground level. This building scale is of interest again, with its simplified use of space for a mental health facility.

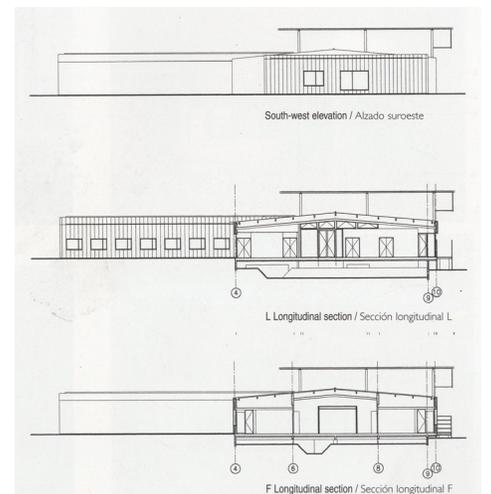
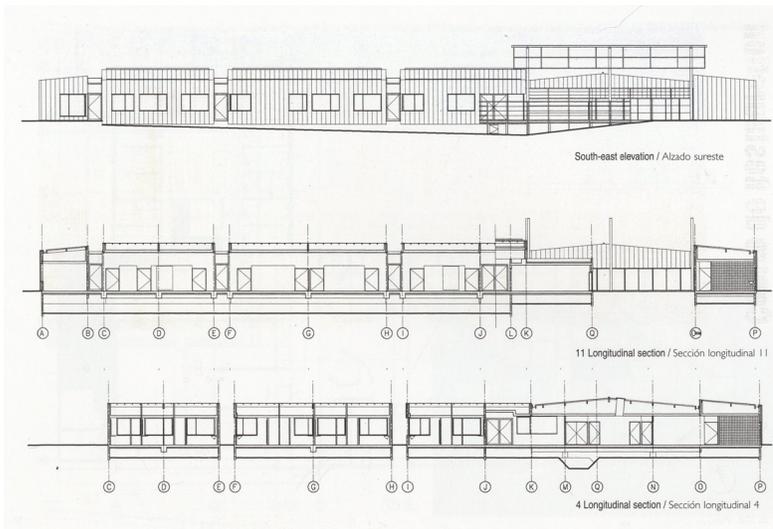
The building itself seems very static, but the dynamic portion is a high metal pergola structure that is designed at the intersection of the two wings. It is meant to be a facade of vegetation that will grow up on the structure, creating a dialogue with the landscape of the hospital park. This extroverted space places the hospital within nature and natural light and goes against the typical opacity of psychiatric care units.

The interior opens into color and light with wrapping skylights to break up the long circulation corridor. Volumes pulse out from these skylight bands to create activity spaces, with restrooms and patient rooms along the facades.



TYOLOGICAL RESEARCH

quick study 2:



TYOLOGICAL RESEARCH

quick study 3:

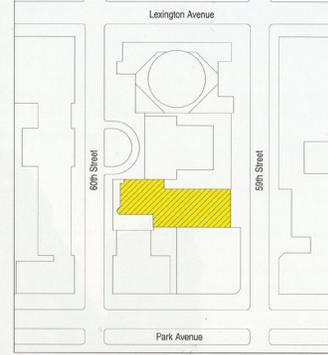
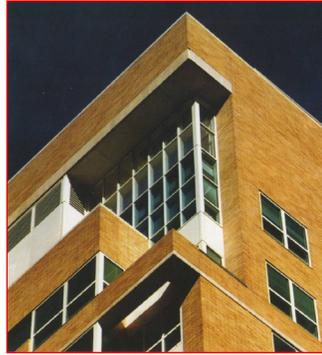
Mitchell & Giurgola

Lighthouse National Headquarters New York, USA

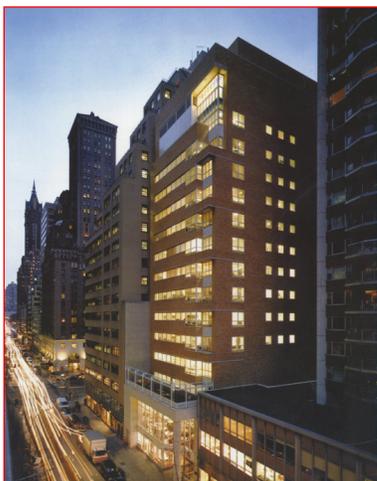
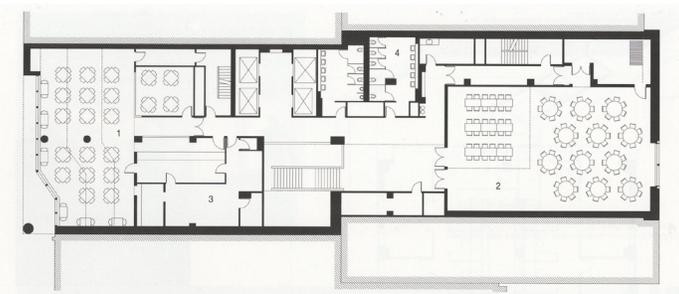
Visual rehab : this tall structure is for the leading world organization for visual rehabilitation programs. Its aesthetics are sensitive to the user's needs, playing with light, color, and patterns.

The visual elements and variety of spaces in this building are very unique and relate to spaces in the thesis such as larger meeting rooms, cafe space with kitchen, classrooms, and more open discussion or study spaces.

The interior consists of contrasting colors and floor textures to indicate corridors, stairs, or other areas of circulation. The way these elements are used to make its users more comfortable is the interest in this design. The same concepts of stimulation can be used in health facilities to grasp the user's attention and affect their movement or thoughts.

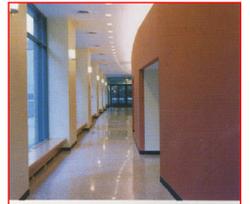
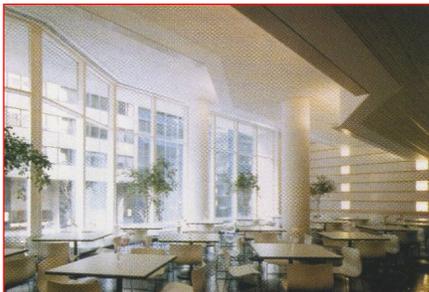
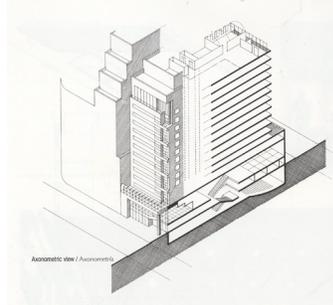


Site plan / Plano de situación



TYPOLICAL RESEARCH

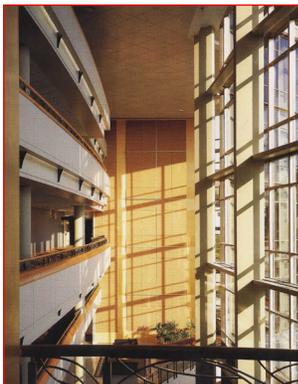
quick study 3:



TYPOLOGICAL RESEARCH

results:in summary

New hospital and health architecture in the 21st century is showing a more human side than in the past. Before, the use of artificial lighting, long corridors of stark aesthetic, and an over-sanitized atmosphere made visiting these facilities a less than pleasant experience. Today, projects are becoming more innovative and are aimed towards projecting the user into the world rather than hiding them within windowless walls.



The architecture of these mental and physical health facilities has become more of an art, and an experimentation of light, color, materials, textures, and patterns. All of these design considerations aim towards helping individuals to achieve their desired place of well-being. The psychology of how those sensory aspects affect building inhabitants will be explored for this thesis, as well as the importance of relating to the outdoors. Many of the case studies have a direct focus on healing gardens or courtyards. This relates to why spa facilities were also observed in the case studies.

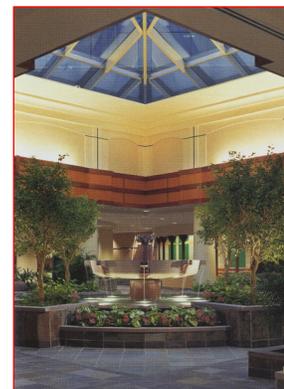
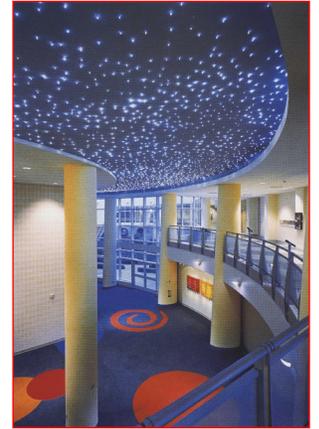
This thesis project will not fall into a typical typology category. Rather, it takes from parts of other typologies to make up the end result of a more holistic college well-being center. It's important to incorporate the relaxing nature of spas and therapeutic treatments to relieve stress with the more traditional therapy design of private discussion rooms. The third contributing typology is the academic factor with study, research, and common spaces.

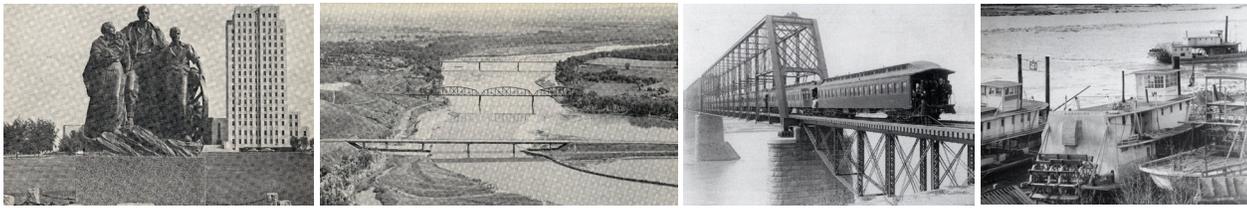
TYPOLGICAL RESEARCH

results:in summary

The case studies represent the way architecture plays with volumes, location, and overall size to fulfill the program and user needs. The desired size for my thesis is somewhere right in the middle of the sizes presented, and proportionally relate to the existing structures on the Bismarck State College campus. The site also has a sloping topography, and it references to the topography of the first case study. Some studies are very focused inward to a center of interest, and some focus away from the building to the surrounding landscape. Natural light was vital in every study and water played a major part in the design, whether in the creation of pools or by reflecting on nearby natural bodies of water. This ties to the site for this thesis because it is located off of the Missouri River and provides views, but not direct river access.

Circulation appears to be very linear in many of these typologies, but a free-flowing plan may be more suitable to promote group study, discussions, activities, and to avoid restricting corridors. People inhabiting these structures are put forth into the sun and open sky sooth their souls. The beginning design of this project will play extensively with volume, repetition, tectonics, textures, and many other psychological factors that contribute to a building's impact on the user.





HISTORICAL CONTEXT RESEARCH

results: Bismarck, ND

The context of this project begins with the history of Bismarck, ND. North Dakota became the 39th state to enter the Union in November of 1889. The Dakota Territory capitol had been Bismarck since 1883, so it was expected that it would become the capitol and government headquarters for the new state. Previous to North Dakota's statehood, the town site was planned by a Northern Pacific Railroad (NPRR) engineer named J.E. Turner. Bismarck was initially named Edwinton in February of 1873, after NPRR employee Edwin F. Johnson. The decision to name the town Bismarck happened in July of 1873 as a gesture to Otto Von Bismarck, Germany's "Iron Chancellor," in hope of receiving money for the westward expansion of the railroad. Before the railroad, Bismarck relied on the Missouri River for news, transportation, and supplies (Langemo, 2002).

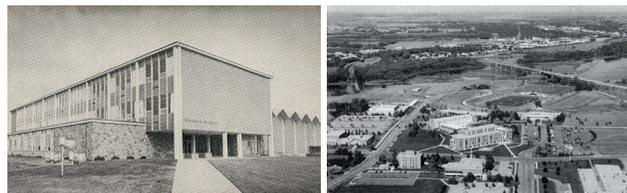
The Bismarck town site was known in the past by Plains tribes to be the best river crossing location because it was the narrowest and the least dangerous. The Plains tribes of the Mandan and the Hidatsa were not nomadic and they built their own town structures. They also cultivated crops and began a thriving trade system. Contact with white settlers was mostly friendly, but settlers nearly wiped out the native population due to diseases such as smallpox.

The growing town was an attractive hub of activity for the region, but life was rugged. River levels were too low for traffic in the winter and the railroad closed from Fargo to Bismarck until spring. Poorly made structures of wood frequently burned and floods would affect livestock, homes, wildlife, and food sources (Bismarck, 2009). Today Bismarck thrives in government, business, manufacturing, heritage, and culture. It is a notable point on the Lewis and Clark Trail through the plains on their journey to the west. Their adventure made outdoor activities and recreation a major part of the city and region.

By 1969 Bismarck had six colleges or vocational schools, one public high school, five parochial schools, one junior high school, and 12 elementary schools. The University of Mary, previously Mary College, began in 1947, transitioning to a junior college in 1955, and once more to a four-year college in 1959. Bismarck State College, formerly Bismarck Junior College, began in September of 1939 in the building that was housing Bismarck High School at the time. Classes ran everyday for 73 collegiate students. This institution moved to one other location in 1955 before residing in its current 100-acre location in 1961 (Langemo, 2002). This development grew from one building to more than 10 buildings today, with an outdoor athletic community bowl built into the topography towards the river.



[66] Images from Langemo (2002).



HISTORICAL CONTEXT RESEARCH

results:neuroses

“Neurosis” is a term that originated in 1769 by Scottish doctor, William Cullen. Its definition according to Cullen referred to “disorders of sense and motion caused by a general affection of the nervous system” (Mudie, 2006). The term can be viewed as a response to patients dealing with these issues in a post-Enlightenment period of Europe that was rapidly industrializing. Neurosis stood from problems in which the cause was not physiological. Sigmund Freud also adopted this term and began the psychoanalytic movement in the behavioral science of psychology. Carl Jung also developed analytical psychology during the Enlightenment that moved farther away from holistic approaches left from the Renaissance that incorporated astrology and the gods as part of their science. He studied the collective unconscious that is related to hysteria, madness, hypnosis, and spiritualism.

The psychiatric focus of the late 18th and entire 19th century was on “magnetic diseases” dealing with animal magnetism and an energetic fluid within living things. Jung did not support these theories on fluids, but looked more towards psychic energy and the power of suggestion. The idea of neurosis and psychiatric diagnosis has been so ambiguous in the past that the purpose of psychiatry had been questioned. Thomas Szasz notably questioned the practice, claiming it to be a “disguised form of social control and behavior modification, rather than a genuine branch of medicine with knowable diseases and cures” (Mudie, 2006). The term neurosis has consistently undergone challenging, in being removed from current diagnostic manuals that favor a biological approach rather than a more difficult psychological explanation that is less tangible. It risks having a human meaning for suffering along with accepting the accompanying psychotherapeutic work related to the problem.



HISTORICAL CONTEXT RESEARCH

results: healing gardens

The garden as a tool for healing and well-being is an ancient custom brought into the modern world. Far in the past, the places associated with healing were located in natural settings such as near springs, groves, caves, or rocks. In the world of healthcare today, the garden has been nearly lost along with the connection between nature and healing, due to the advances in technology. This separated the body and spirit, and specialized medicine separated the parts of the body and their afflictions. There was no longer a holistic healing of the mind and body as one. Green spaces were deemed as solely decorative and their power to restore health was ignored. However, a study revealed that 95% of the interviewees claimed a positive mood change after spending time outdoors with plant life. They felt more calmed after previously feeling anxious, stressed, or depressed (Marcus & Barnes, 1999).

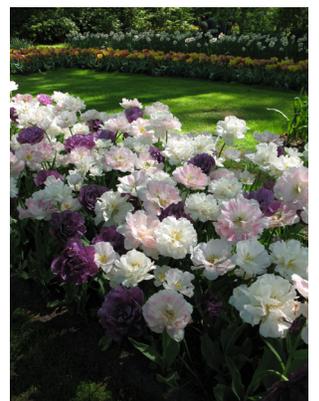
Courtyards and restorative gardens associated with hospitals and monasteries began in Europe. Cultural and religious attitudes affected the desire and design of these healing spaces. Patients were encouraged to spend time in the sun with fresh air, and asylums directed their approach towards a psychological nurturance rather than punishment and solidarity (Marcus & Barnes, 1999). The gardens can provide areas of privacy or socializing, movement for exercise, inspiring views and exciting colors, and a feeling of control for those users who are active in caring for the garden as part of therapy.



HISTORICAL CONTEXT RESEARCH

results:healing gardens

Doctor Roger Ulrich conducted scientific studies on the effects of the environment on healing. He revealed that patients with a view of nature had fewer complaints during recovery and their hospital stays were significantly shorter. By maintaining a connection with the natural or urban outside world, the patients felt more at ease during their stay in the hospital (Gerlach-Spriggs, Kaufman, & Warner, 1998). These findings cannot easily be argued, and the restorative effect of nature carries into spaces other than hospitals, such as work and learning places. A connection between the built and natural world as been seen throughout history, but at times has been neglected. This thesis will incorporate the healing aspects of restorative gardens into the final design.



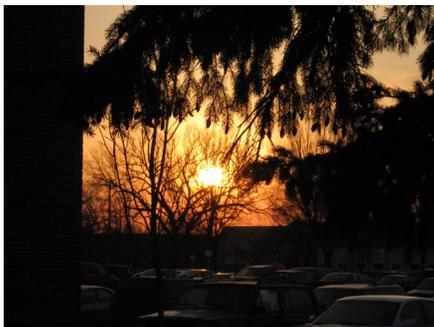
HISTORICAL CONTEXT RESEARCH

results:light

Light has been related to architecture since the beginning of time. Its function has varied over the years from its ties to metaphor, religion, health, way-finding, and the list goes on. Ancient Egyptian temple and sanctuary designs were inspired by light through their worship of the sun. Light oriented the structures and provided progressions from light to dark spaces. The Greek Parthenon is oriented to the east in order to capture the first rejuvenating rays of daylight. The details of the building façade were designed to create intriguing shadows in the strong Mediterranean sunlight. The Romans were the first to show a conscious design of interiors, and the Pantheon used light to articulate space with rays through its central oculus. In the Middle Ages and the Baroque period, light was used to highlight religious, poetic, symbolic, and harmonious imagery. This shifted during the Neoclassical period where light and shadow dynamically impacted geometric spaces and forms. These historic ways of design began to take a backseat when artificial light was invented and utilized in spaces. Light can now be infinitely manipulated. A shift in building construction from earthen, opaque materials to soaring expanses of glass and transparency has also created a multitude of design possibilities and intentions with light (Brogan, 1997).

Another view on light is its physiological effect on the body due to UV (ultraviolet) rays. Extensive clinical data has been compiled on ultraviolet radiation. Lack of sun exposure creates stress, fatigue, a weakening of the immune system, demineralization of the teeth and bones, and vitamin D deficiency. Evidence also shows that near-UV light in modest amounts increased muscle tone and strength (Mahnke & Mahnke, 1993). Window glazing is also found to absorb the UV rays that are biologically active. A healthy level of UV radiation is minimal for people who are indoors most of the day, or during winter seasons. This finding explains seasonal affective disorder, which is a feeling of fatigue, withdrawal, lack of energy, or depression that usually sets in during the winter season for some people. These relationships to sunlight further enhance the need for natural light in design and specifically in this thesis project.

[70]



Personally owned images.

HISTORICAL CONTEXT RESEARCH

results:color



Color can be a design medium that is very evocative. Individuals experience color differently, and although some generalizations can be made about color, the human response is not always successfully predicted. Practicing color in architecture can create a wide variety of responses and unpredictable outcomes depending on the design characteristics and situation. Hue lightness and darkness, along with the level of illumination, can alter the perception of space and volume. Studies have shown that the perception of time is also affected by color. Time is overestimated in spaces of warm color, and underestimated in environments with cool colors (Mahnke & Mahnke, 1993). Temperature is perceived differently between warm and cool hues as well, where people in a blue room will turn the thermostat up about four degrees higher than in a red room.

Colors in buildings must be varied. If a color is typically associated with being relaxing, that does not mean that it should be used throughout the building as the sole color, because this negates the effect of the color. Certain colors are better for particular environments. Libraries utilize pale or light green to create a passive effect and increase concentration. Salmon or light gold colors create a warm and pleasant environment in auditoriums, and corridors are very tolerant to color, with complementary colors typically appropriate. In classroom or study space for upper-grade individuals, softer passive colors such as beige, light green or light blue enhance concentration. Therapy rooms find aqua to be cool, clean, relaxing, flattering to skin tone, and it reduces muscular tension. Pale orange or yellow offers a cheerful therapy atmosphere. Colors to avoid with health centers are white, off-white, gray, yellow-green, red, blue (especially pale blue), and purple (Mahnke & Mahnke, 1993). Variations on these colors are a better substitute. Color choice is a delicate decision and an inventory of the quality of spaces existing and desired is necessary to design successfully with color.



GOALS FOR THE THESIS PROJECT

results:

- 1 Clearly explain the Theoretical Premise. This will inspire experimentation with the design possibilities and constraints. The Theoretical Premise will affect and be affected by the research and project revisions.
- 2 The typology will be defined to its greatest extent. It will incorporate spaces of typical typology designs with additional spaces that aren't particular to such a typology, resulting in a hybrid therapy center.
- 3 Research will lead to a better understanding of the economical, social, psychological, historical, and environmental factors associated with the direction of this project. It will provide the grounds for design experimentation and serve as a guideline to what the project wants to be.
- 4 In-depth analysis of light, shadow, color, texture, pattern, materials, volumes, spatial organization, and the natural surroundings will be done to get to the heart of the theoretical premise and create a design that is unique. The design will help users achieve a peaceful mindset and offer an experience unlike others of the same general typologies.

GOALS FOR THE THESIS PROJECT

results:

- 5 To stay on a timely schedule allowing the design to fully express itself, as well as gaining as much insight from advisors as possible during the design and final production process.
- 6 The design process will be well thought out before producing a well-organized and comprehensive program, presentation, and thesis book. The design development will utilize physical modeling, digital mediums, and hand sketching techniques. The final presentation will exhibit drawings, details, modeling, and concepts with great precision and to the greatest of my abilities.
- 7 Careful attention will be paid to the site characteristics to optimize the design. Views, microclimates, vegetation, and topography will be explored to enhance the design, leading to the product greater than the sum of its parts.
- 8 This thesis will stand as a complete representation of my skills as an architecture student. It will showcase a design that I stand behind and will put forth to market myself in a future career.

SITE ANALYSIS

qualitative:

The distinguishing feature of this site is its rolling topography. It provides views as far as the eye can see, and holds a prominent presence when viewed from the south down the river. It will capture the enlightening sunrises and the deep warm sunsets on a sun path that crosses the Missouri River with no interruption. The sloping green landscape is filled with natural grasses and trees that scatter themselves along the hillside.

Since this location is situated on a hill, it is susceptible to nearly all of the annual winds, and it will be up to the building design to create pleasant microclimates. Water was another deciding factor in the selection of a site. Views of the river are tranquilizing and lift the spirits in a way that only the poetics of water can accomplish.



SITE ANALYSIS

qualitative:



Bismarck is located in a region that is temperate with a continental climate, consisting of very cold winters and short summers. There are long hours of sunshine in the summer and a moderate amount of rainfall. These site characteristics will be observed more in-depth in the quantitative site analysis to follow. There is a great opportunity with this site to allow for a design that focuses on well-being and the cycles we encounter in our lives daily, yearly, or longer. It connects itself to the surrounding world, but can remove itself as well into a more secluded landscape.



SITE ANALYSIS

qualitative:

Trees on the site are mostly deciduous that will lose their leaves in the winter. They provide a slight visual buffer between the river and the hilltop site, but not too much that would inhibit pleasing views. Due to the slope of the site, no trees are tall enough to cast a shadow on the site, and there are no existing buildings anywhere between the southeast and the southwest to cast shadows or inhibit views either. However, the design will be careful not to detract the views or sunlight captured by an existing building directly to the northeast that is four stories in height.

The existing campus structures are mostly rectilinear, with a few curved facades. The forms are mostly at right angles to each other, with some of the newer facilities rotated at an angle in plan view. Textures and materials are mostly brick with a few interesting facades of glass, speaking to a traditional atmosphere of higher education.



SITE ANALYSIS

qualitative:

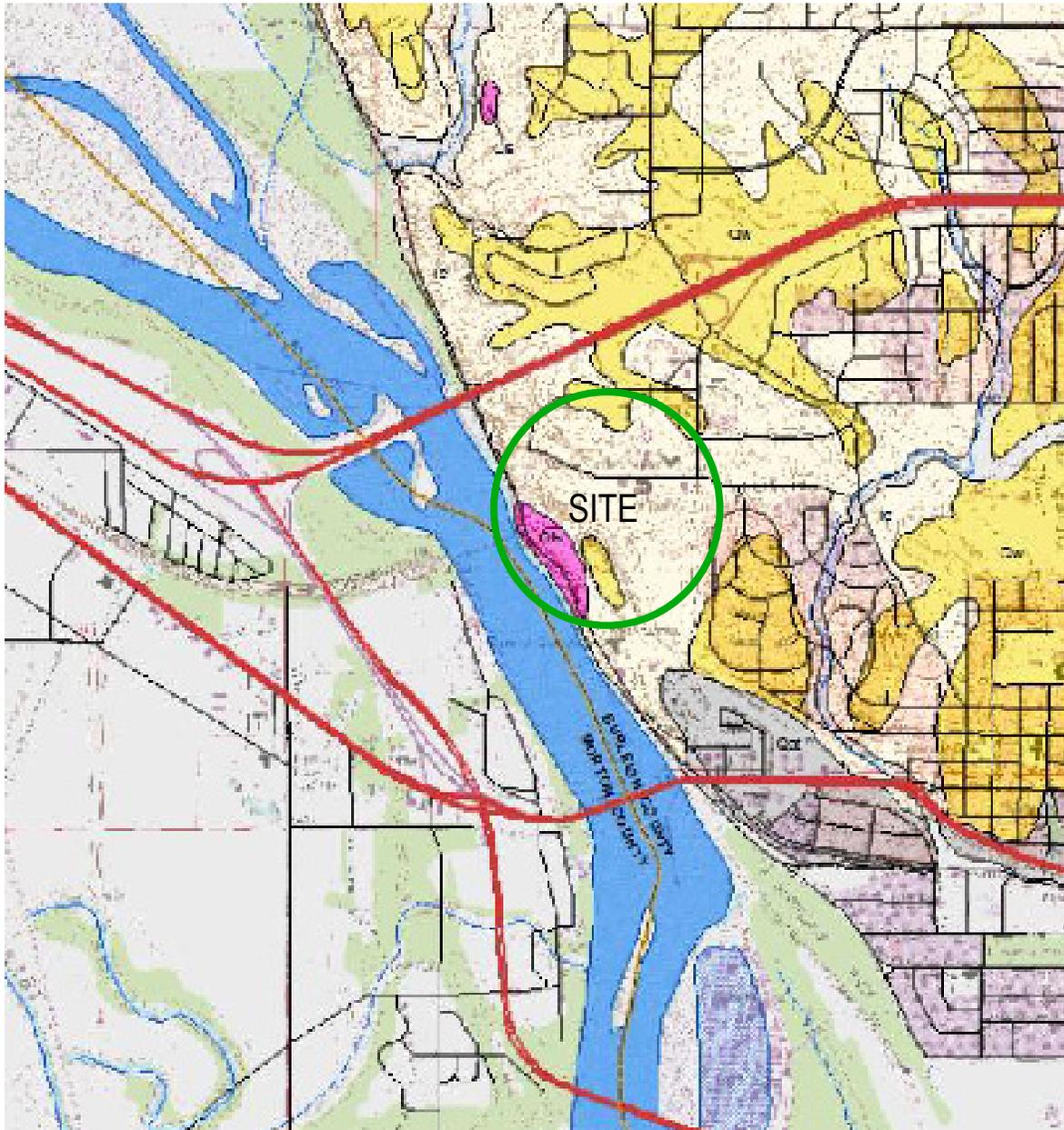
There may be some slight topsoil erosion down the slopes of the site during times of precipitation, but nothing that is a direct concern to the specific site. The slopes from the site vary between 5% and 32%. At 5%, the area is usable for most activity and is an easy grade for movement and informal activity. At 32%, pedestrians begin to hike the landscape and stairs would be necessary for pedestrian design. Vehicle traffic will cease once they reach the building and there is no intention for vehicles further down the slope of the site.

The ruggedness of the site is not to be confused with distress. Its natural character is inspiring for creating a design that can incorporate the landscape in a way that promotes well-being. It will provide the canvas for creating a healing garden specific to its site and building design.



SITE ANALYSIS

quantitative:soils



Map and direct information key (Murphy, 1997).

SITE ANALYSIS

quantitative:soils

QUATERNARY SYSTEM
(2.6 million years ago - present day)

Qw : Windblown Sediment

Moderately to well sorted, grayish brown to tan, sand and silt. These sediments are present in this area as a mantle, slightly modifying the underlying topography. These deposits are generally less than 10 feet thick in this area.

Qls : Landslide Deposits

A moderately to poorly sorted combination of soil, unconsolidated sediments, and sedimentary rocks that have slid down the local slope under their own weight. Most prevalent along valleys, ravines, and hillslopes.

Qat : Alluvial Terrace Deposits

Typically consist of gravel and medium- to coarse-grained sand. The gravel consists primarily of pebble- to cobble-sized igneous rock and locally derived rock fragments and is commonly iron-stained and occasionally iron-cemented. Overall, the unit is poorly sorted but it generally contains well-sorted sand lenses. These quartz sand lenses typically contain thin layers of lignite and clinker fragments. The sand and gravel lenses commonly range in thickness from 10 to 20 feet, and are typically overlain by three to 10 feet of windblown silt. Alluvial deposits are generally found on terraces 20 to 50 feet above the Missouri River, between elevations of 1,640 to 1,700 feet and between elevations of 1,700 and 1,800 feet adjacent to Hay Creek. Terrace deposits are easily identified in aerial photographs and on the ground by flat surface topography and the presence of steep cliffs or hillslopes on the river side of the deposit.

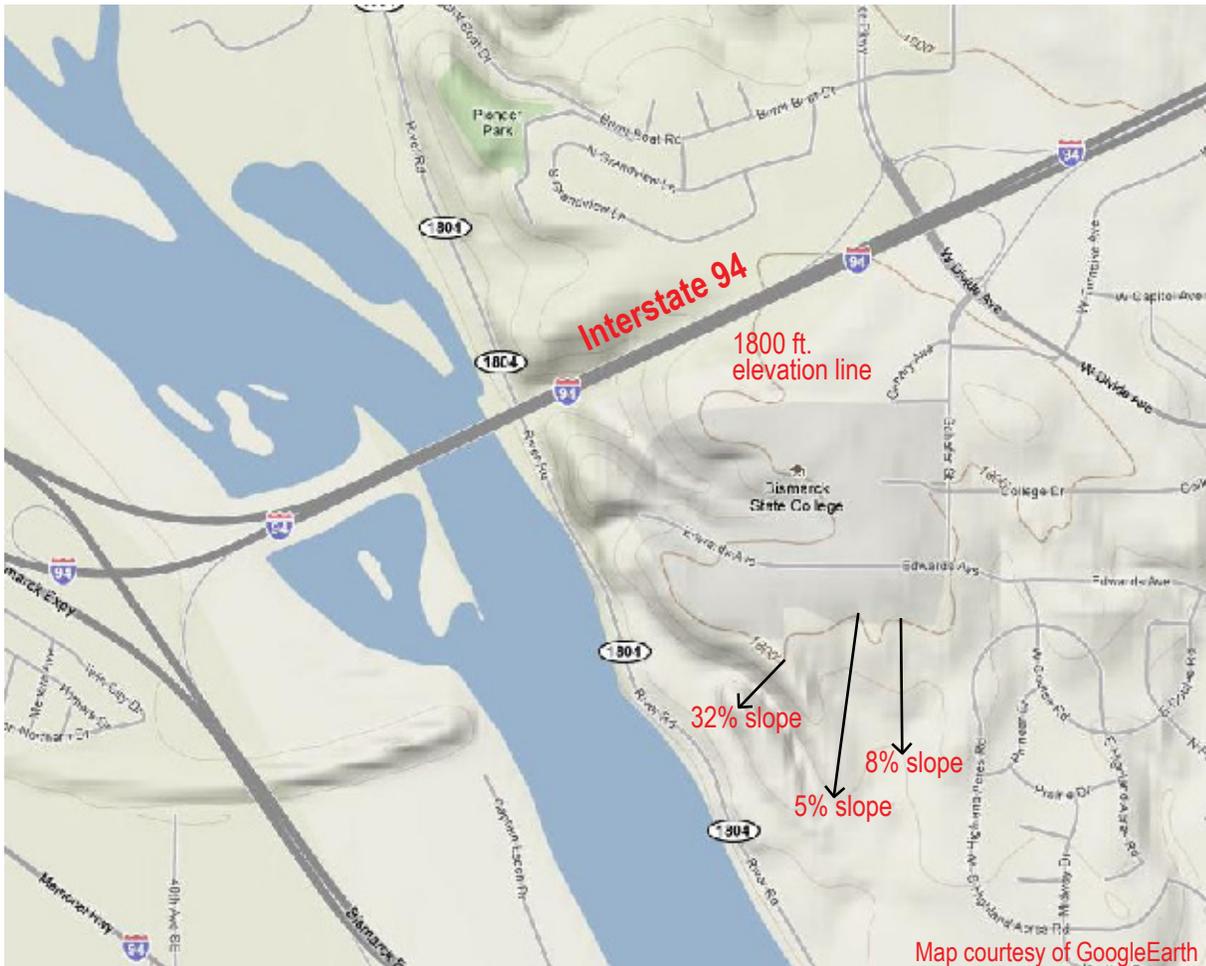
TERTIARY SYSTEM
(65.5 - 2.6 million years ago)

Tc : Cannonball Formation

Consists of alternating beds of marine sandstone and mudstone. The sandstone is grayish-green to yellowish-brown, medium to fine-grained, generally poorly cemented and burrowed, containing the trace fossil ophiomorpha. The poorly cemented sandstone is commonly capped by a two- to three-foot-thick, well cemented, lenticular sandstone. The mudstone is light to dark gray to black, blocky claystone and commonly is banded with lenses of white to yellowish brown silt and very fine sand. The mudstone forms smooth, rounded slopes. The maximum thickness of the Cannonball Formation in this area is approximately 300 feet.

SITE ANALYSIS

quantitative:topography

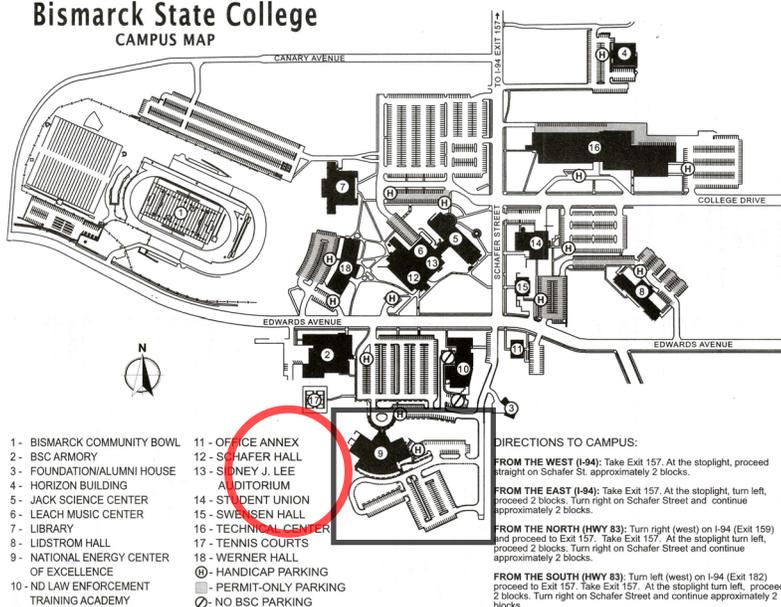


Topography lines at 40' intervals

City Average Elevation: 1700'
 Land Area: 26.9 sq. miles
 Population density: 2,246
 people per sq. mile
 Latitude: 46.81 N
 Longitude: 100.78 W

[80]

Bismarck State College CAMPUS MAP



Courtesy of Bismarck State College Catalog 2009-2011

SITE ANALYSIS

quantitative:transportation

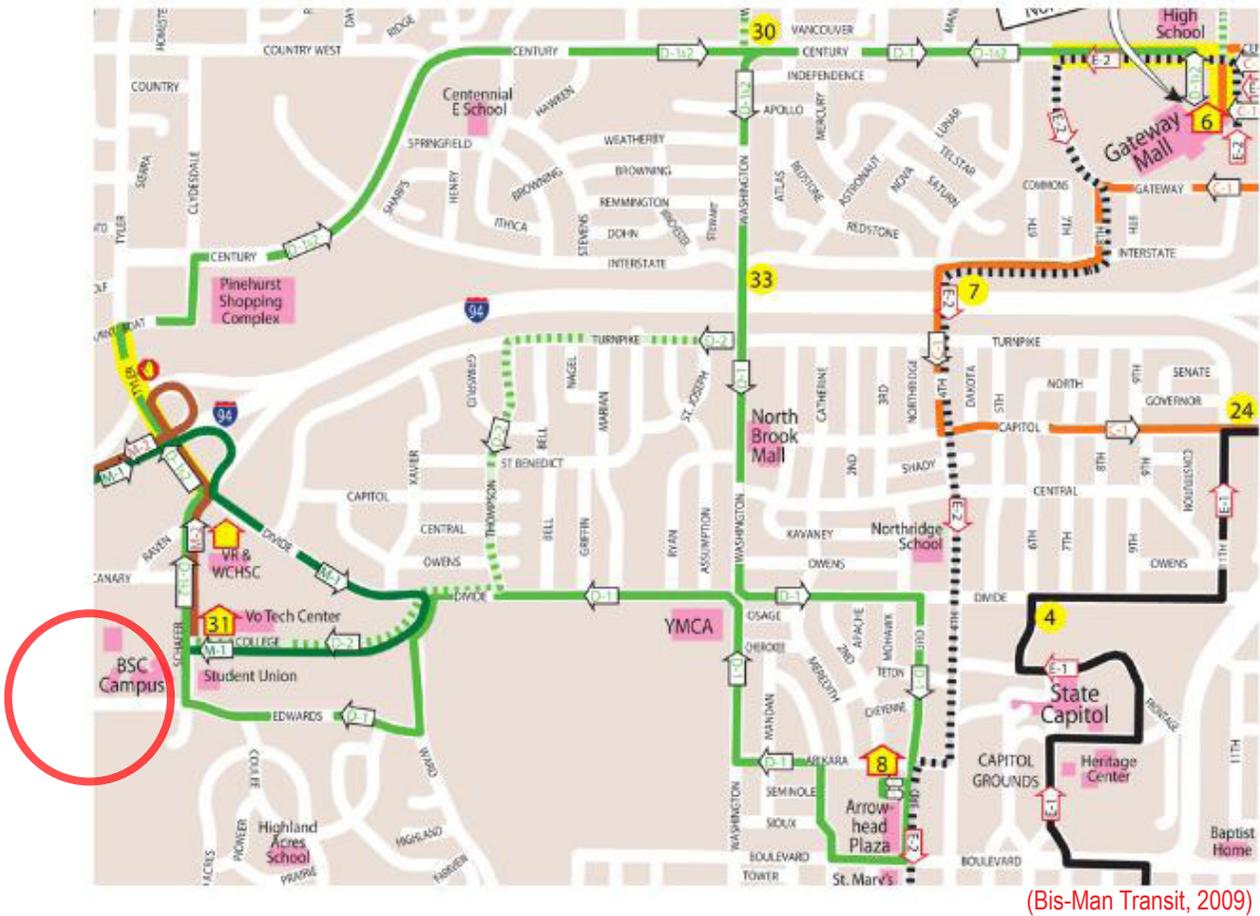


The BSC campus consists of pedestrian paths with a small amount of vehicular traffic and parking. Nearby roads are solely two-lane streets of traffic, but the street crossing I-94 increased to 4-lane traffic. Paths leaving the campus to the west or directly to the south lead to dead end roads that do not connect to River Road along the river. A Bismarck recreational bike path runs parallel to River Road along the Missouri river, connecting to other paths around Bismarck, but is not directly paved to the BSC campus. The path does encounter Meriwether's boat landing.



SITE ANALYSIS

quantitative: transportation

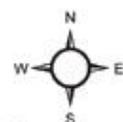


The Bismarck-Mandan public transportation has many routes around and between the two cities. Stops are included on the BSC campus for those who do not live on or near campus, or for those who do not wish to use a vehicle. The roads encircling the campus are single-lane passing streets, with busier traffic occurring slightly further from the campus.

Transportation noise does not become much of an issue on the campus, especially since there is a sloping landscape to the southwest that with no built structures. The interstate to the north is far enough away to not cause additional noise.

Bis-Man Fixed Bus Route

- NE Bismarck - Route C-1
- NE Bismarck - Route C-2
- NW Bismarck - Route D-1
- N Bismarck - Route D-2
- Express Kirkwood to Gateway E-1
- Express Gateway to Kirkwood E-2
- E Bismarck - Route A-1
- E Bismarck - Route A-2
- SW Bismarck - Route B-1
- SW Bismarck - Route B-2
- Bismarck & Mandan M-1
- Mandan & Bismarck M-2
- Indicates Stop #'s
- 🏠 Shelter
- 🚫 No Stop Zone
- 🚗 Indicates Stop Permitted



SITE ANALYSIS

quantitative: utilities & site character

Utilities

Electric lines, natural gas, water, and sewer are all available on the site. The services are existing to support the campus and nearby residential areas. These utilities will be adequate for the project design needs, and the site is on the edge of the built college landscape, avoiding too much difficulty with what may exist below the site.

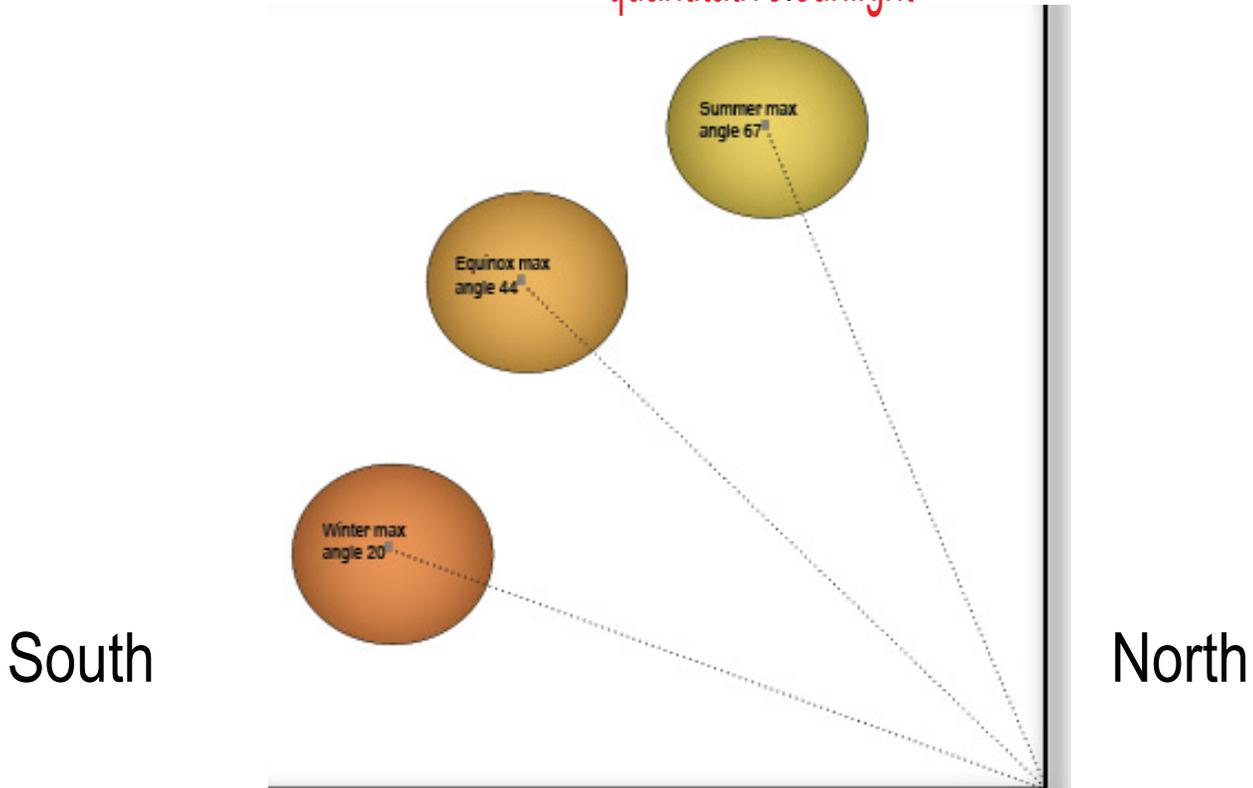
Site Character

The development in this area began for the intention of the college. Residential and commercial structures nearby followed, as well as the branching of smaller streets. The site is somewhat rugged still, in that much of the natural landscape is preserved near the river and people typically hike or mountain bike some of this terrain off the paved paths. Any development is relatively new, and there are no structures that are poorly-cared for nearby. Surrounding buildings may be dated, but they do not detract from the site. It all adds to the peaceful atmosphere that is essential to learning and looking towards a positive future.



SITE ANALYSIS

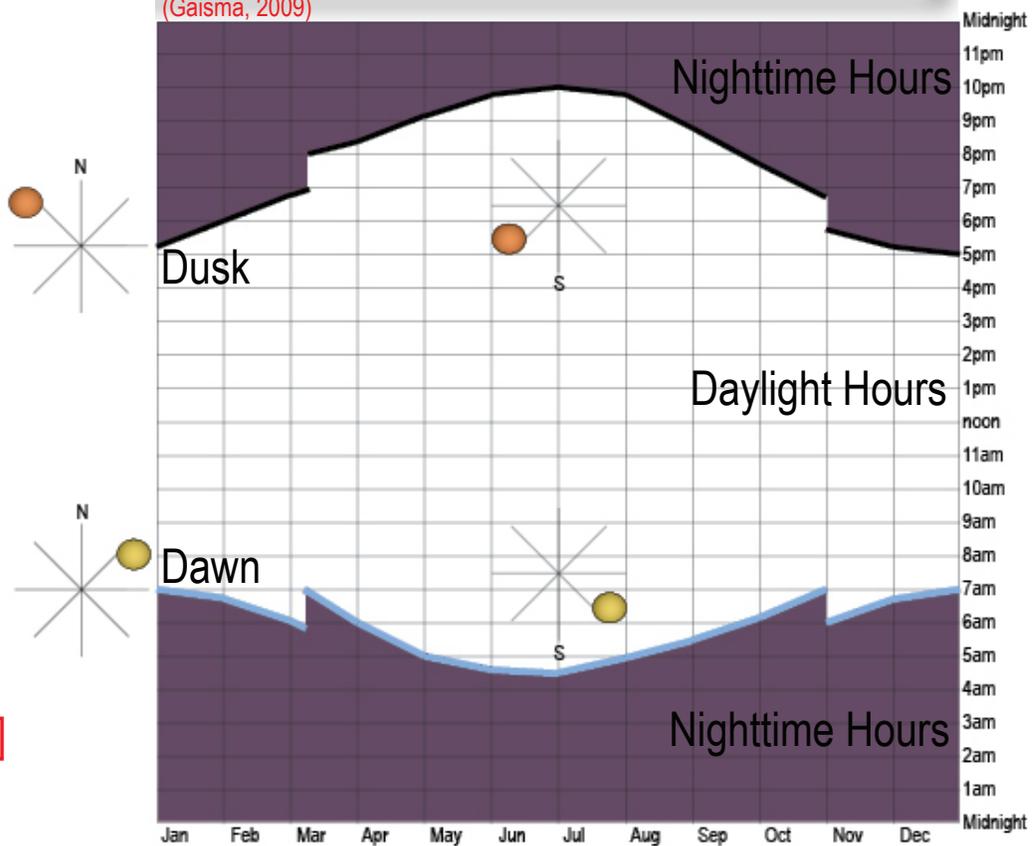
quantitative:sunlight



South

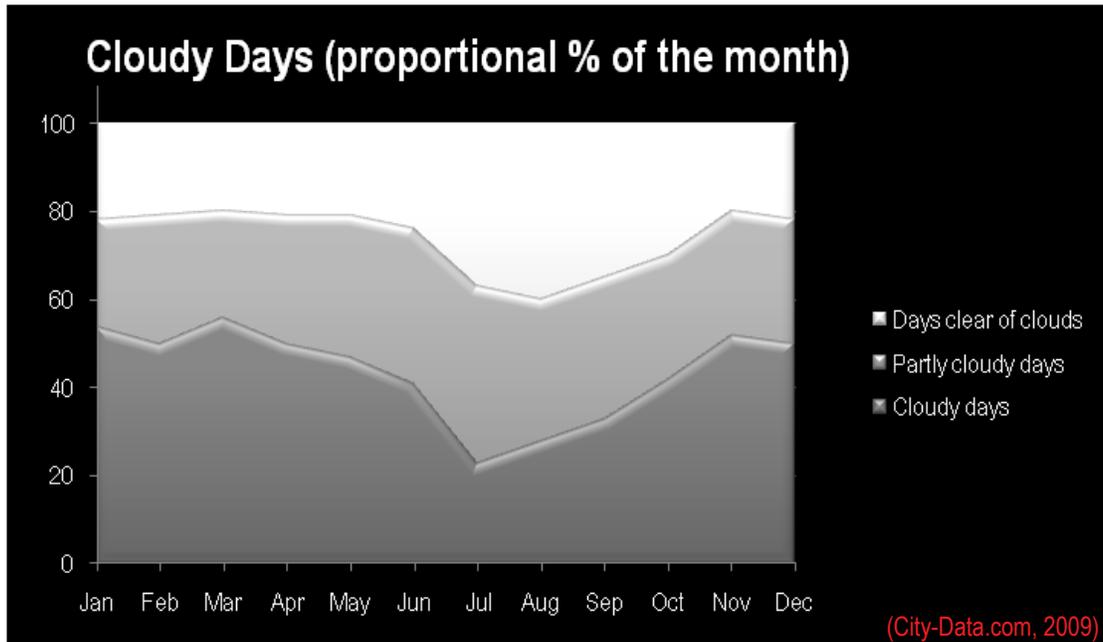
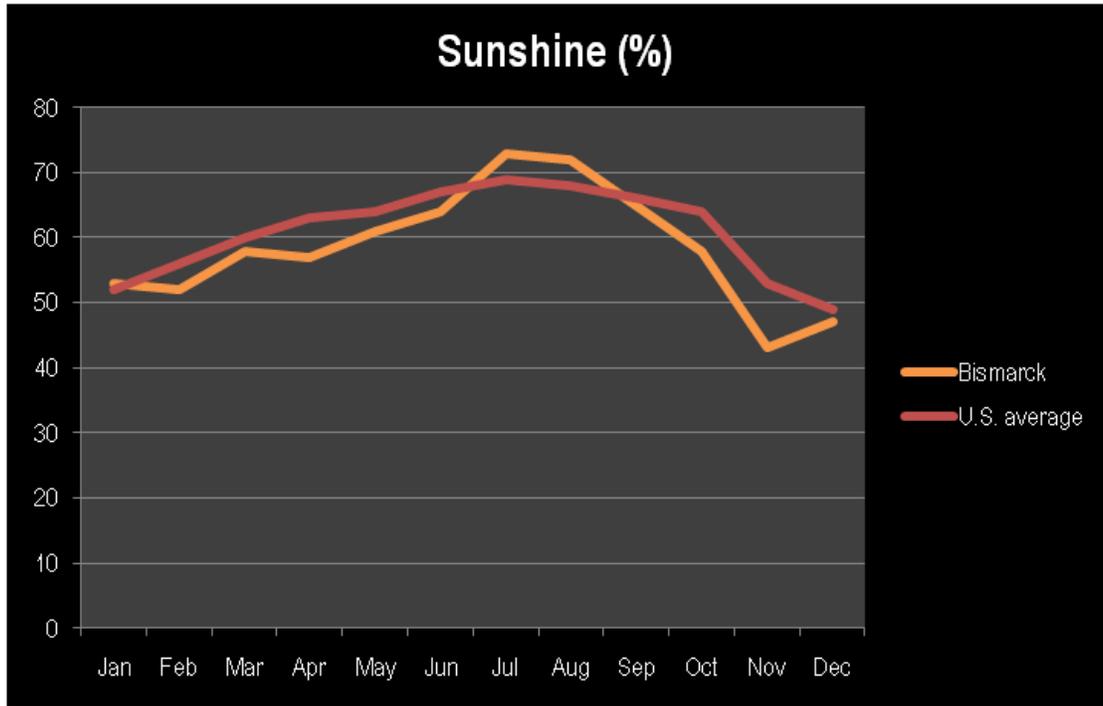
North

(Gaisma, 2009)



SITE ANALYSIS

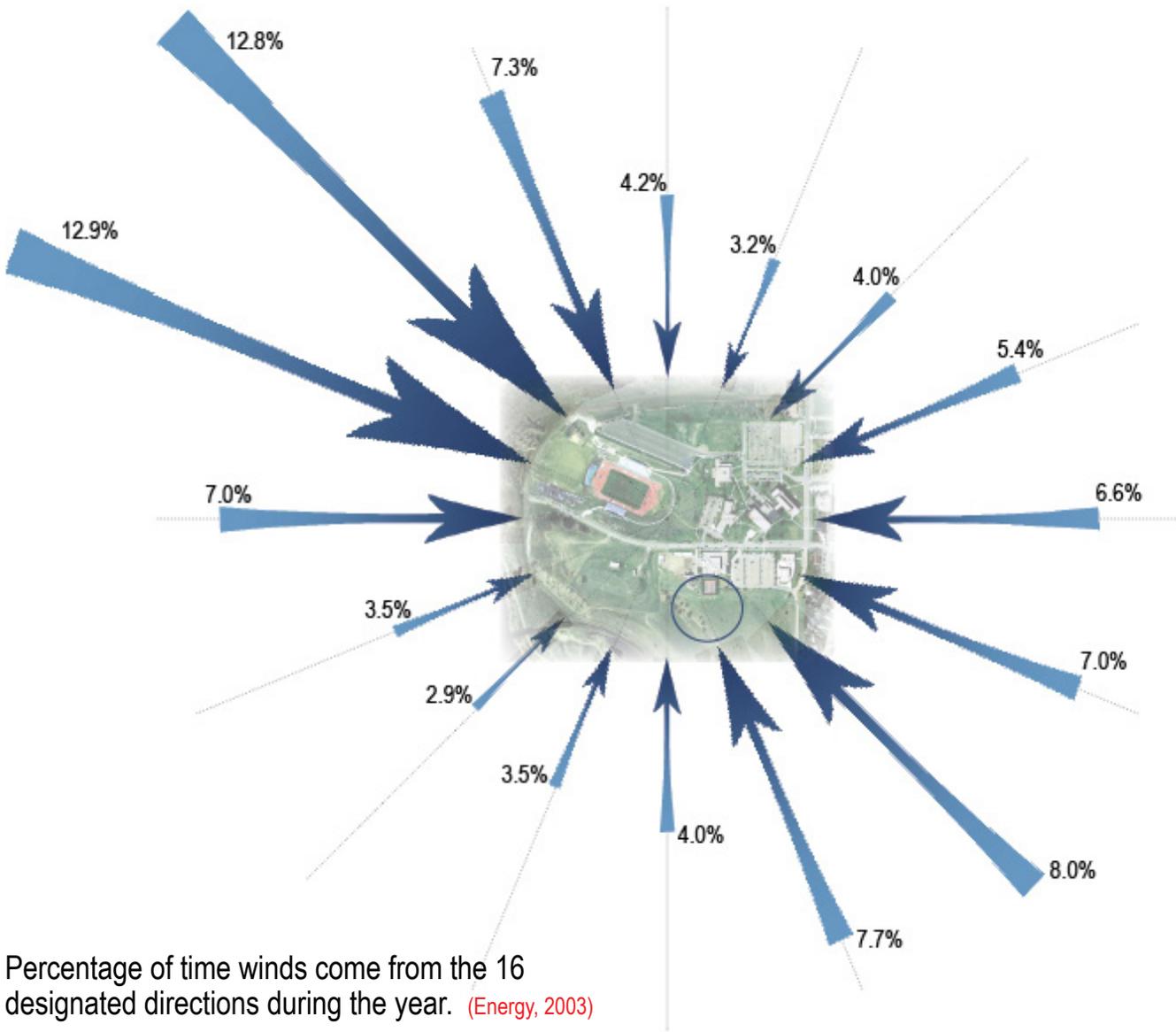
quantitative:sunshine



(City-Data.com, 2009)

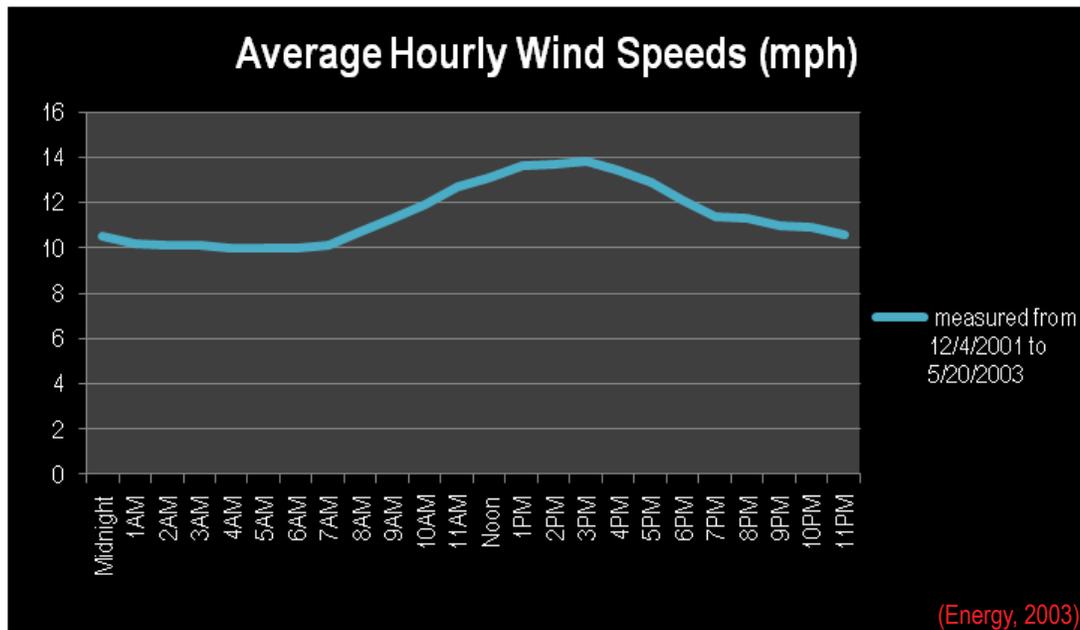
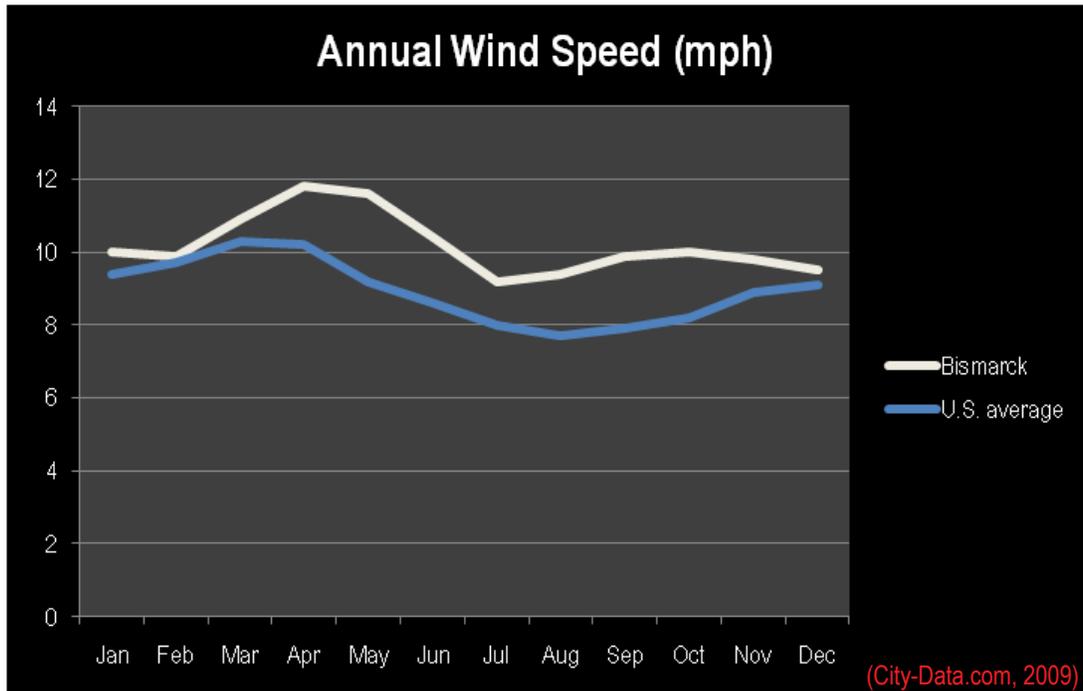
SITE ANALYSIS

quantitative:winds



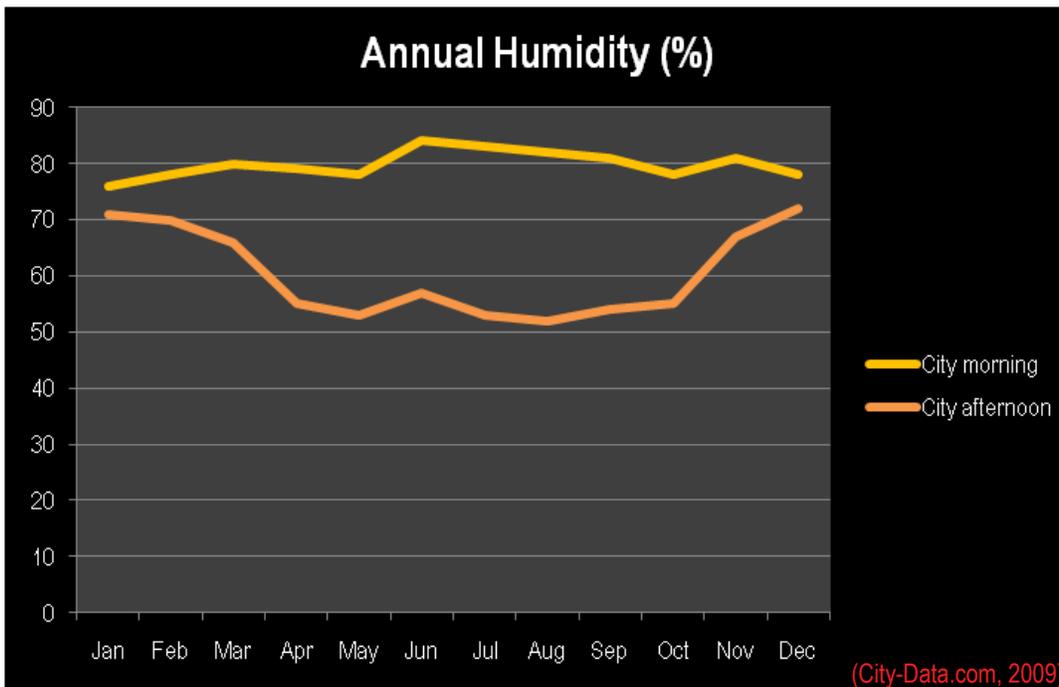
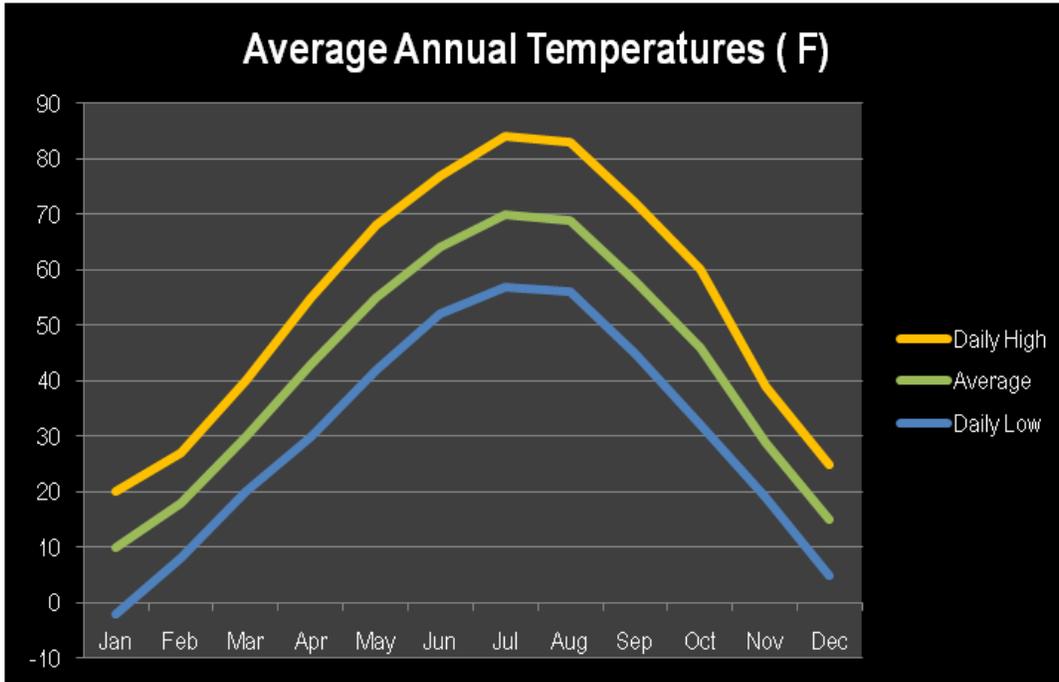
SITE ANALYSIS

quantitative:winds



SITE ANALYSIS

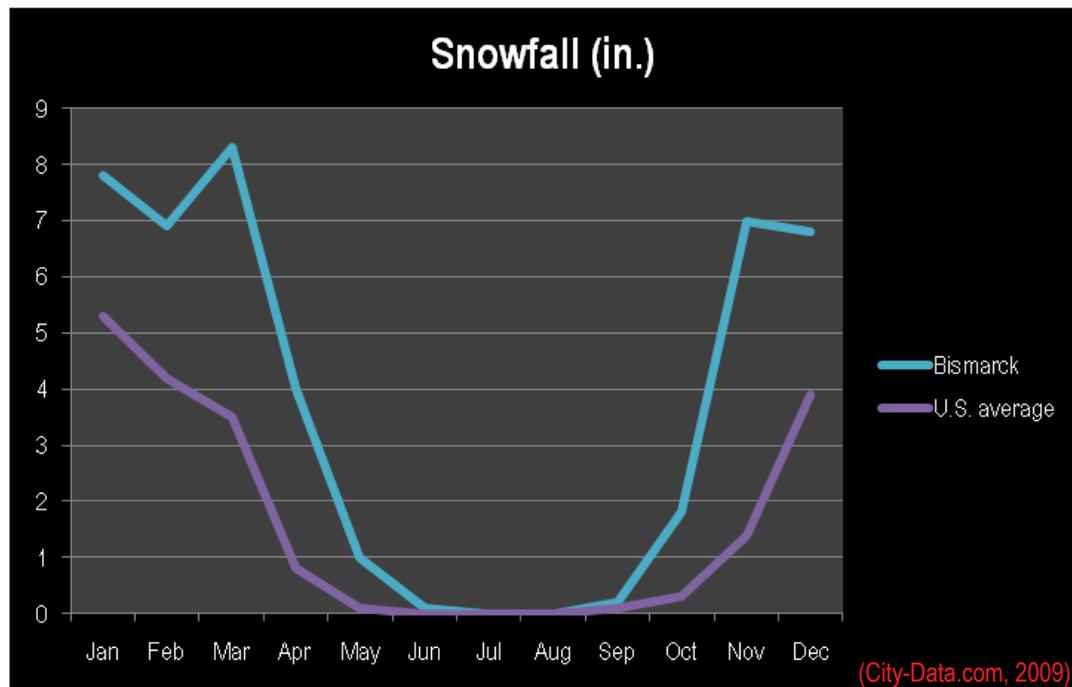
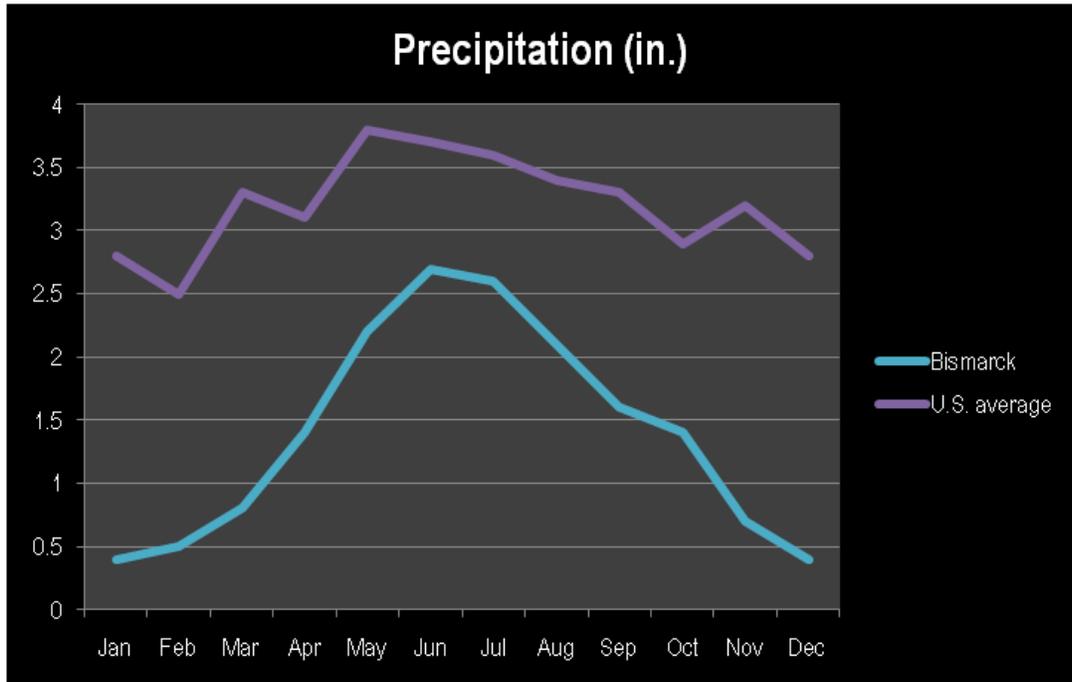
quantitative: temperature & humidity



(City-Data.com, 2009)

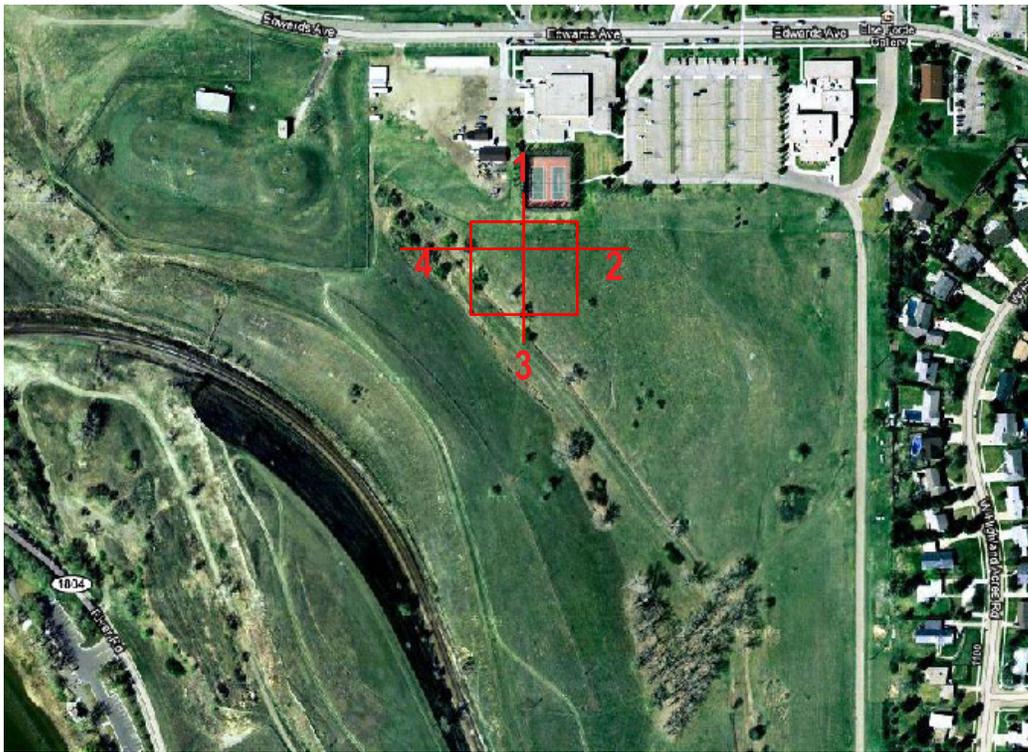
SITE ANALYSIS

quantitative: precipitation & snowfall



SITE ANALYSIS

quantitative: site photogrid



Map courtesy of GoogleEarth



[90]

1 View to the North
from the site grid

SITE ANALYSIS

quantitative:site photogrid

2 View to the East
from the site grid



3 View to the South
from the site grid



4 View to the West
from the site grid



PROGRAMMATIC REQUIREMENTS

spaces:

A brief program can be detailed after researching case studies and explaining the project goals.

Relaxation Pool / Spa Area

- Changing rooms
- Restrooms
- Sauna

Therapeutic Rooms

- Massage
- Mud bath
- Aromatherapy
- Acupuncture
- Etc.

Therapy Rooms

- Private discussion rooms
- Group discussion rooms

Offices

- Therapist offices
- College faculty offices

Classrooms

- Larger lecture space
- Smaller lecture spaces

Study Spaces

Library / Computer and Research Resource Space

PROGRAMMATIC REQUIREMENTS

spaces:

Reception / Records

Communal Lounge Spaces

Activity spaces

- Art therapy

- Music therapy

- Body motion

- Meditation

- Etc.

Exterior / Interior Healing Gardens

Restrooms

Snack Bar

Surveillance

Maintenance Areas

Storage

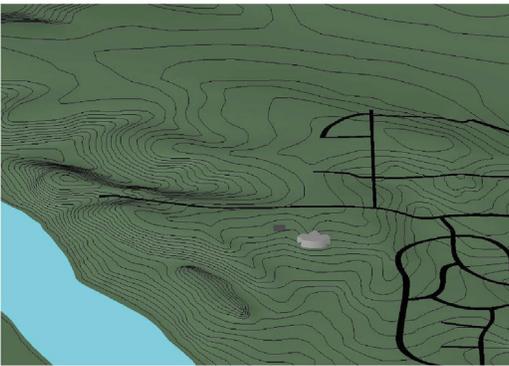
Mechanical / Electrical Space

Horizontal and Vertical Circulation

SITE INFORMATION

bismarck, nd landscape

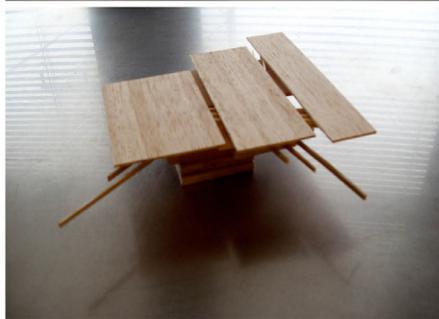
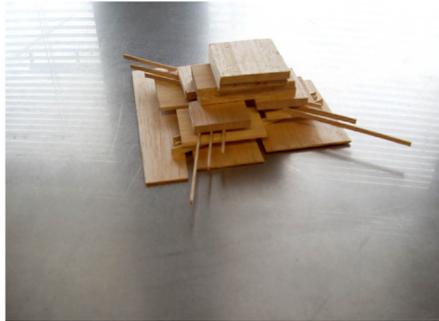
Process



PART I

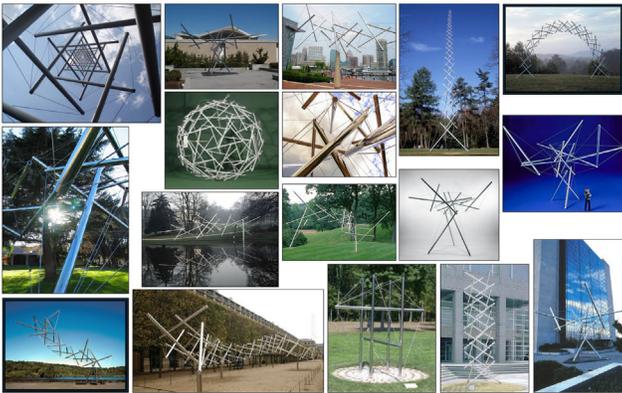
MODELS

INSPIRATION

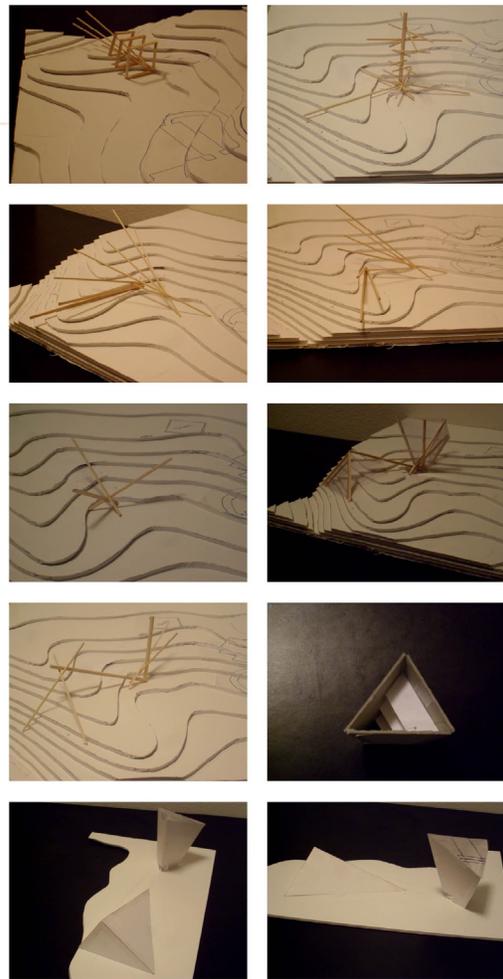


PROCESS

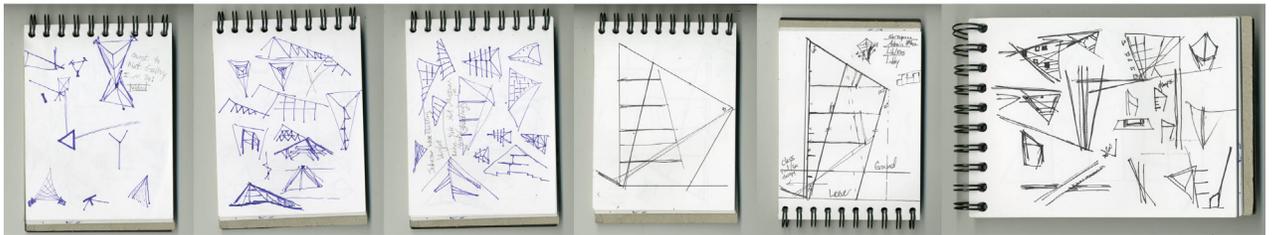
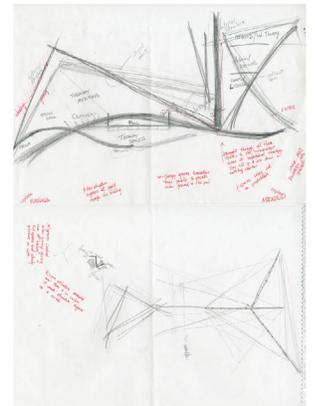
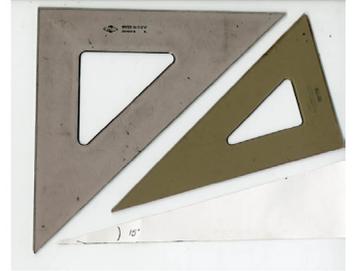
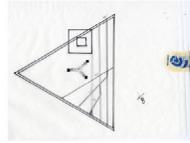
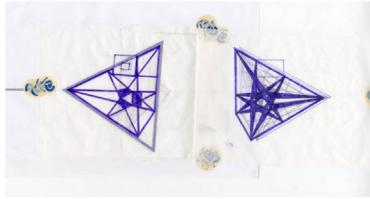
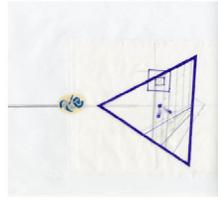
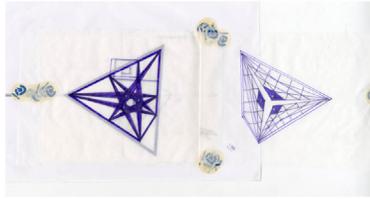
Mark Di Suvero



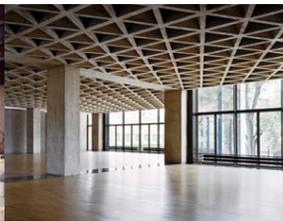
Kenneth Snelson



FORM SKETCHES INSPIRATION



Saulk Institute
La Jolla, California
Louis Kahn



Yale University Art Gallery
New Haven, Connecticut
Louis Kahn



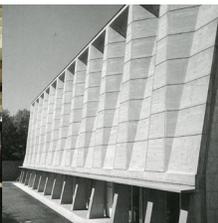
National Gallery of Art
Washington, D.C.
I.M. Pei



Johnson Wax Building
Racine, Wisconsin
Frank Lloyd Wright



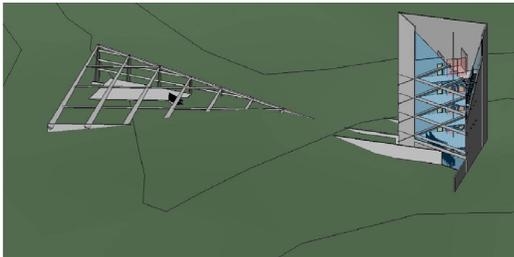
Marcel Breuer



USERS & SPACE PLANNING

private + public

PROCESS

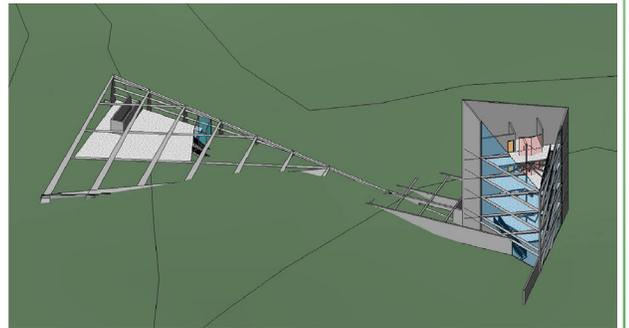
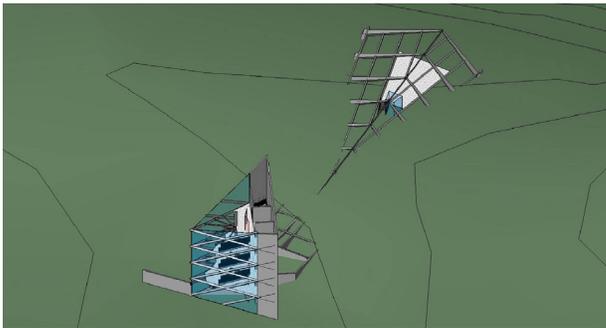
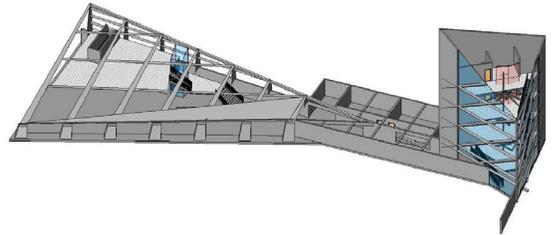
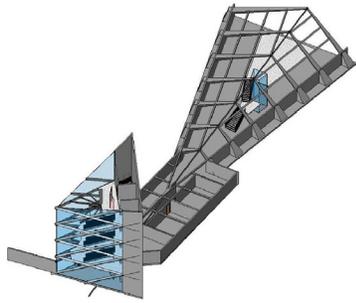


- Pool / Spa Area
 - Changing rooms
 - Restrooms
 - Sauna
- Therapeutic Rooms
 - Massage
 - Mud bath
 - Aromatherapy
 - Acupuncture
- Therapy Rooms
 - Private discussion rooms
 - Groups discussion rooms
- Offices
 - Therapist offices
 - College faculty offices
- Classrooms
 - Larger lecture space
 - Smaller lecture spaces
- Study Space
- Library / Computer and Research Resource Space
- Reception / Records Area
- Communal Lounge Spaces
- Activity spaces
 - Art therapy
 - Body motion
 - Meditation
- Exterior / Interior Healing Gardens
- Restrooms
- Cafe and Seating
- Surveillance
- Maintenance Areas
- Storage
- Mechanical / Electrical Space
- Horizontal and Vertical Circulation

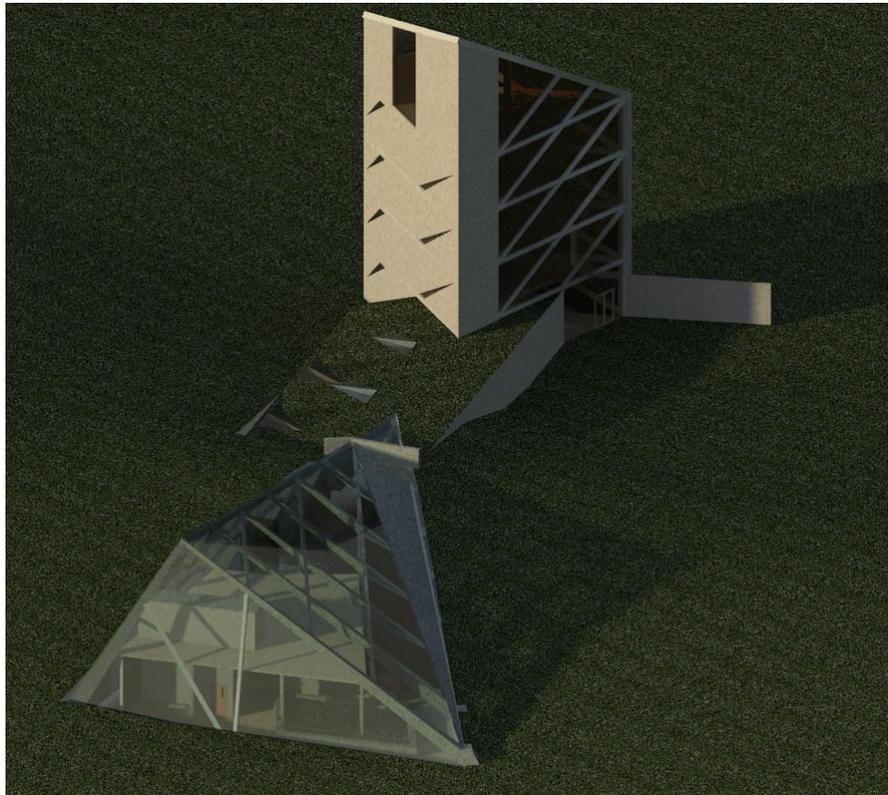
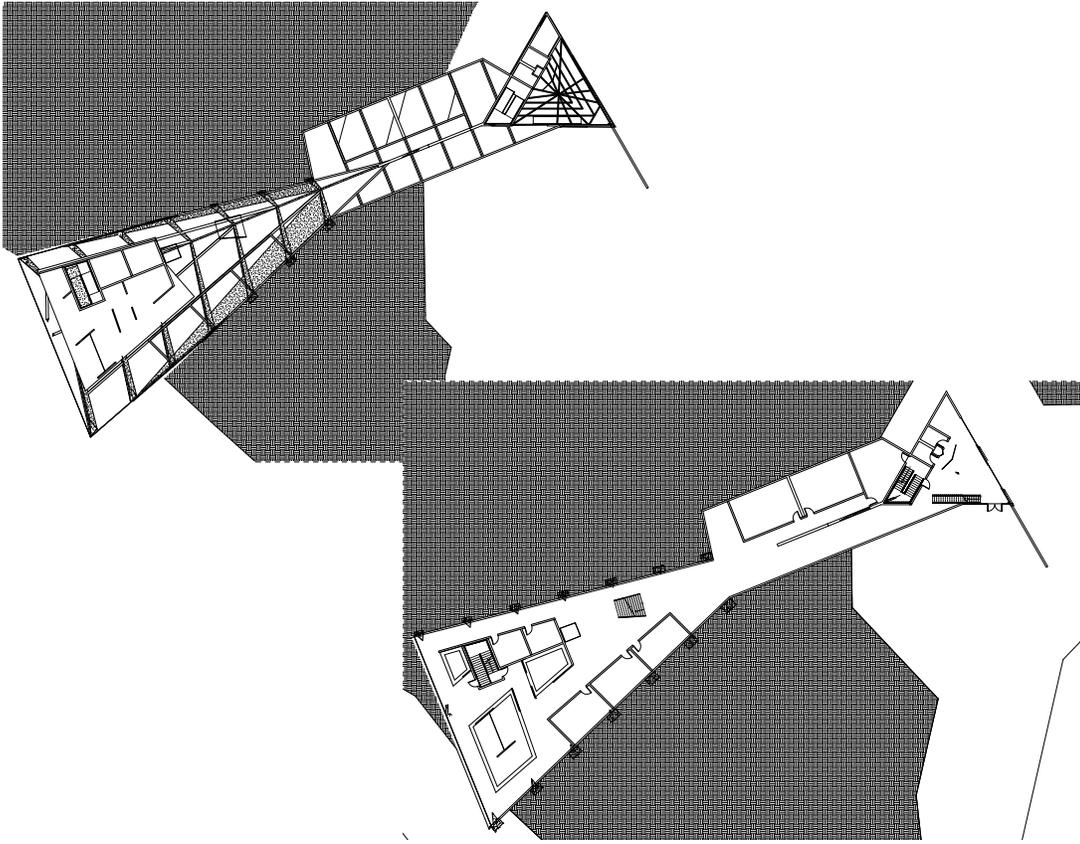


USERS & SPACE PLANNING

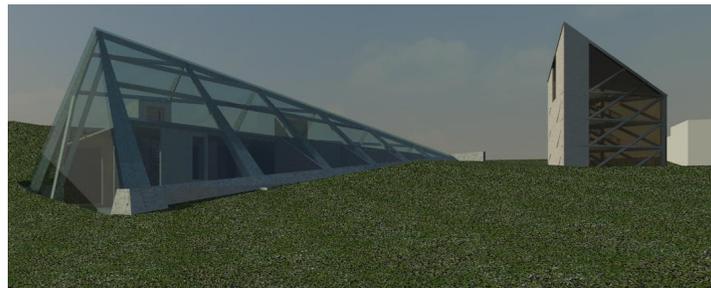
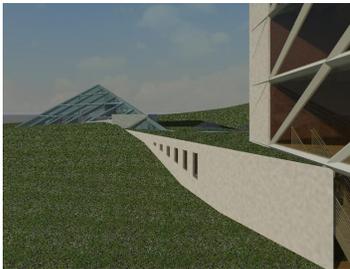
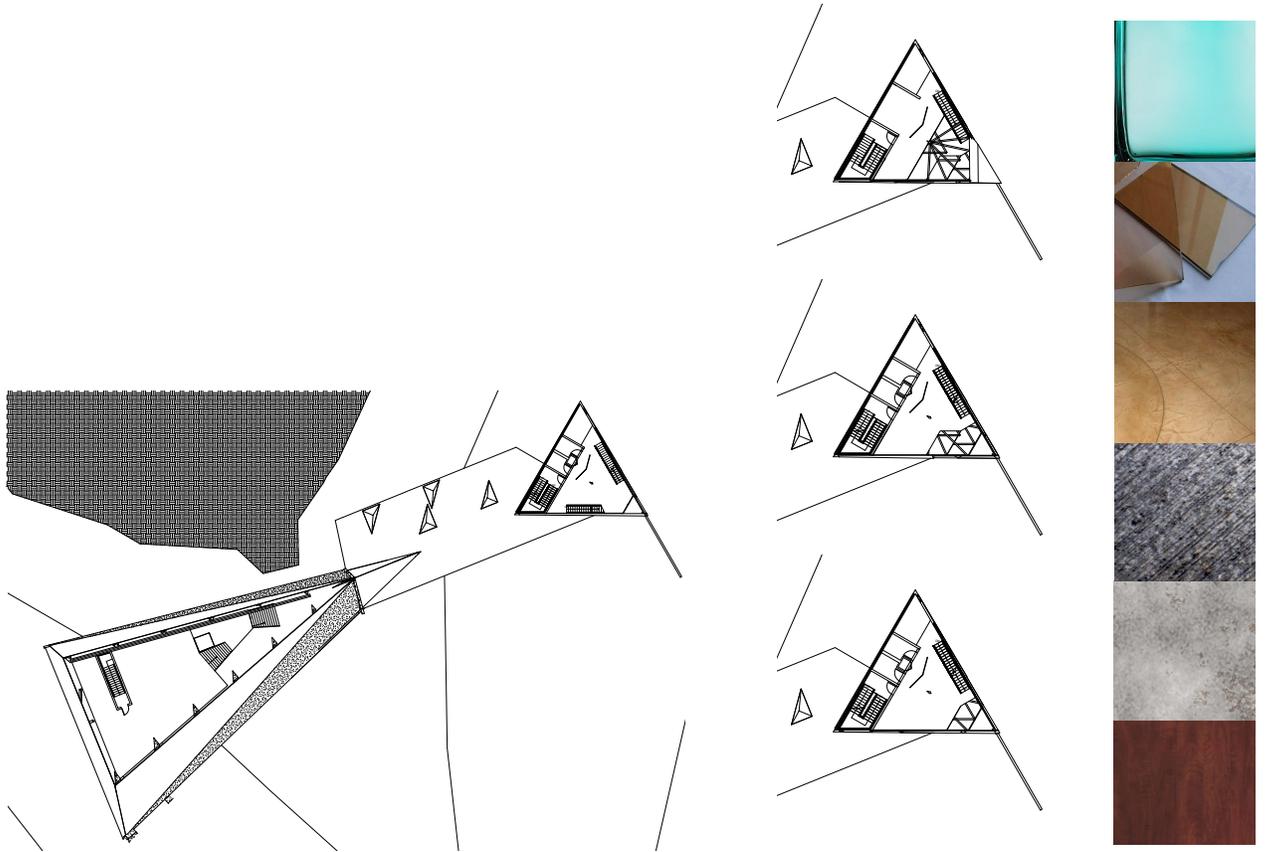
private + public

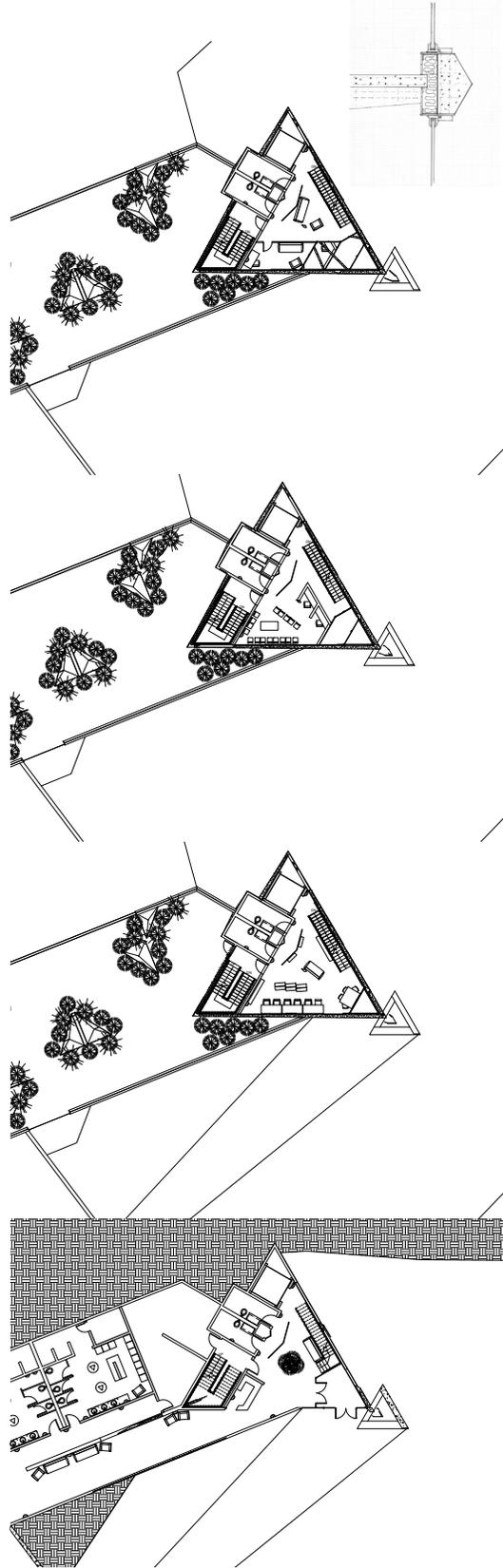
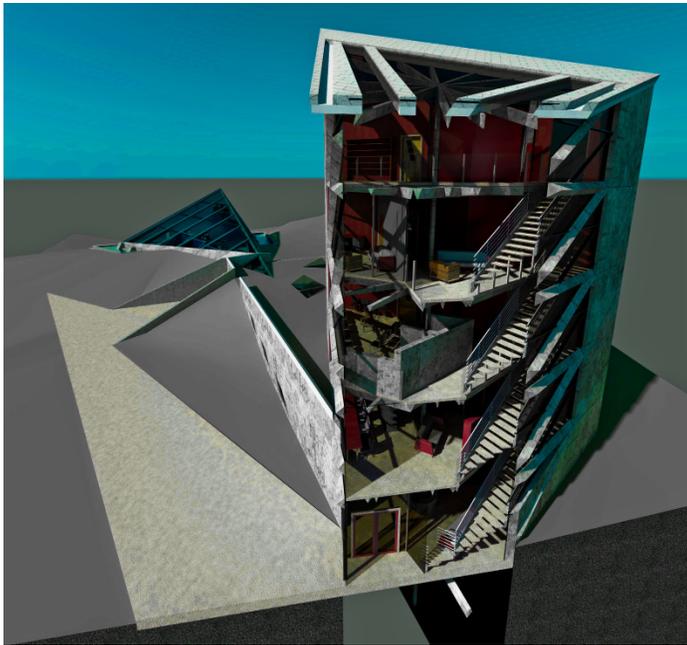


BEGINNING PLANS and perspectives



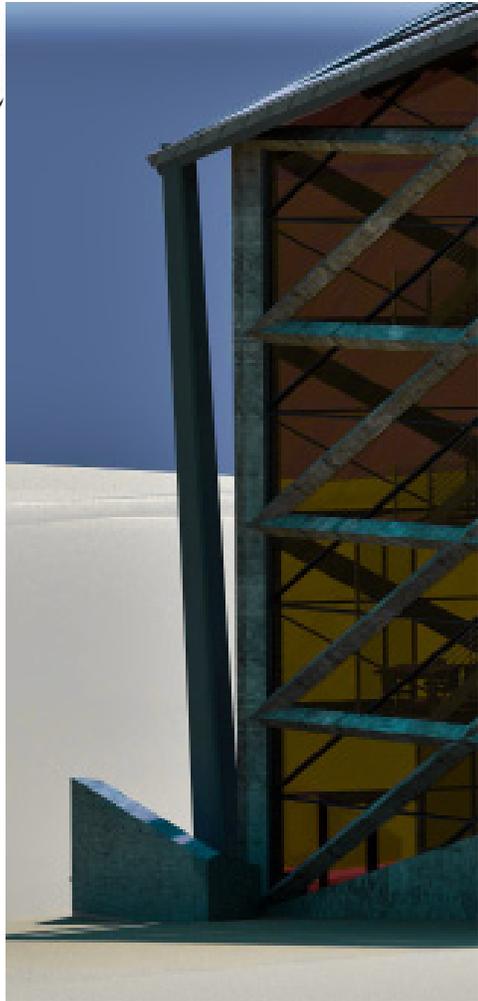
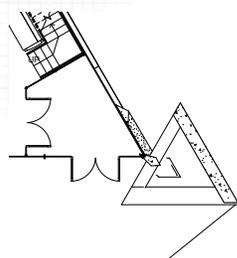
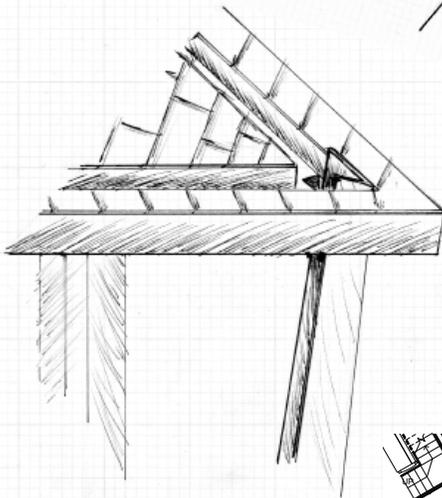
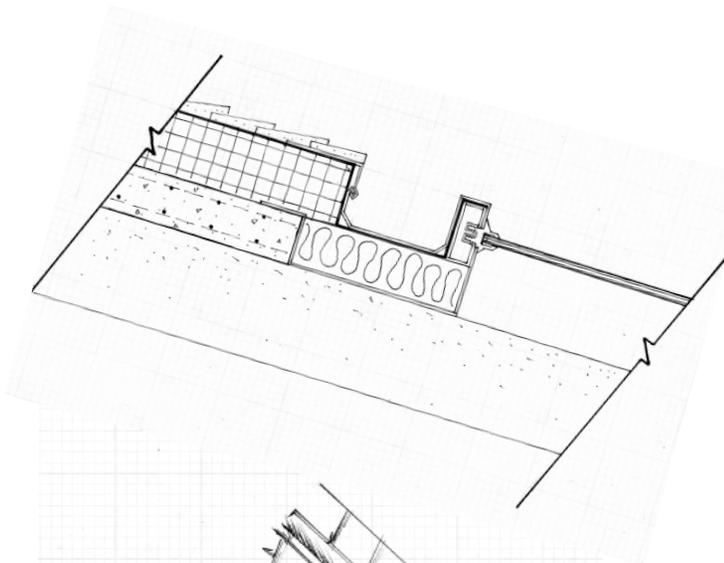
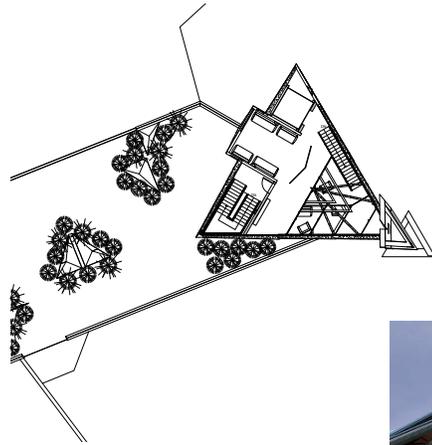
BEGINNING PLANS and materials





FINAL DESIGN

tower roof system



FINAL DESIGN

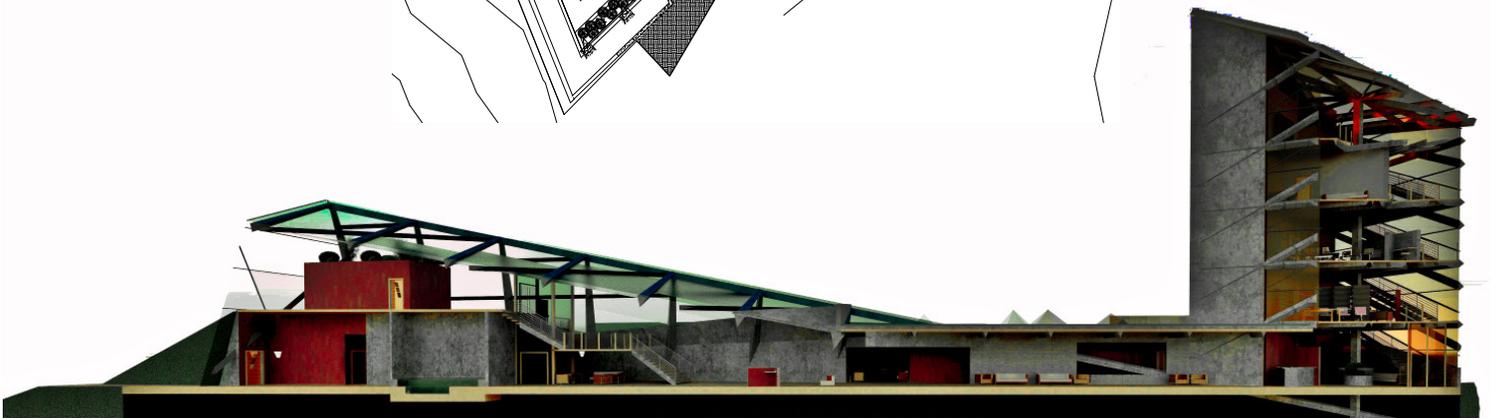
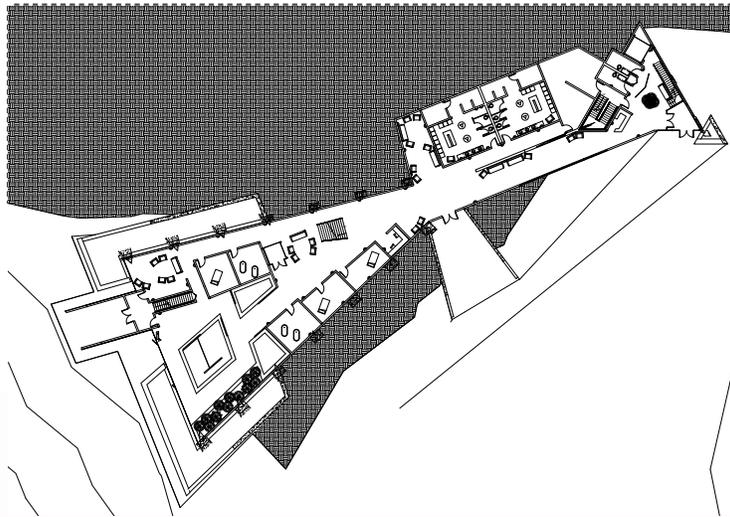
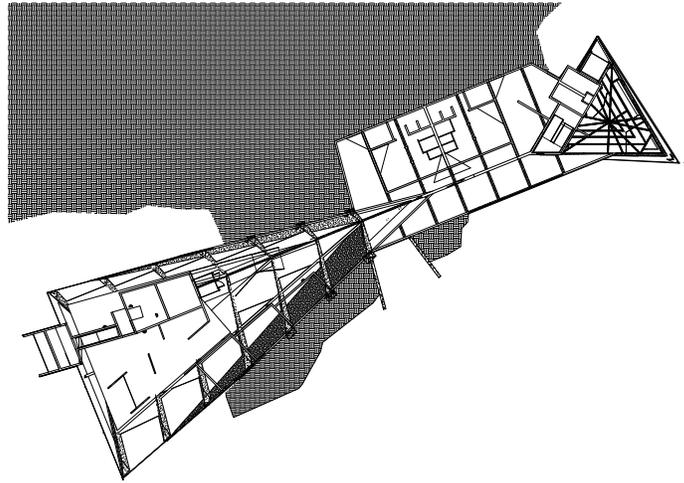
tower

Presentation



FINAL DESIGN

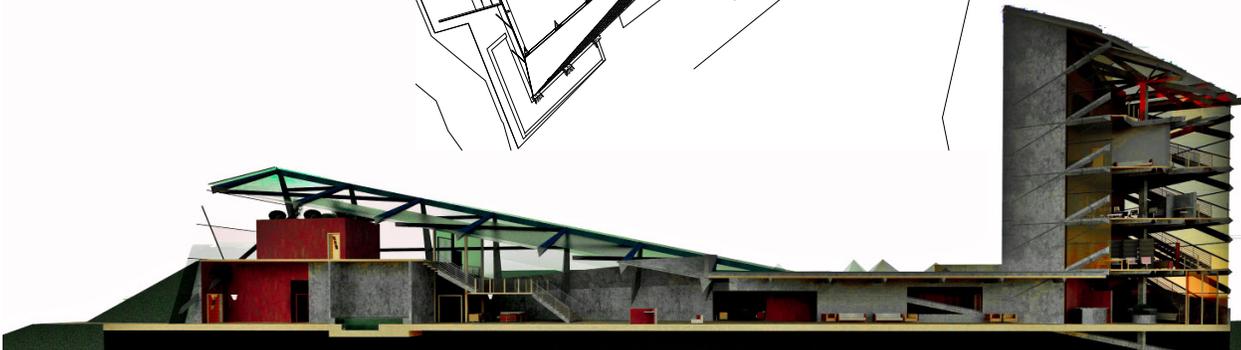
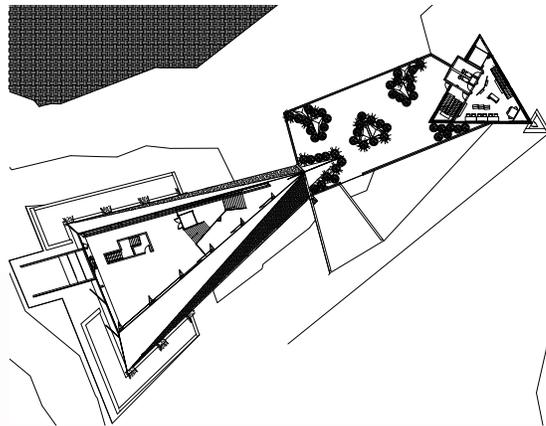
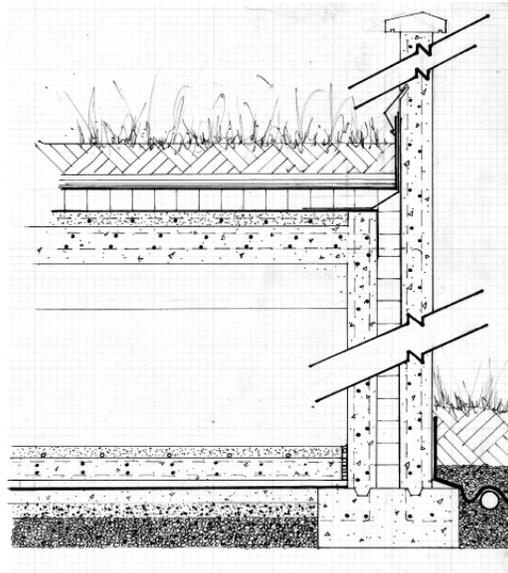
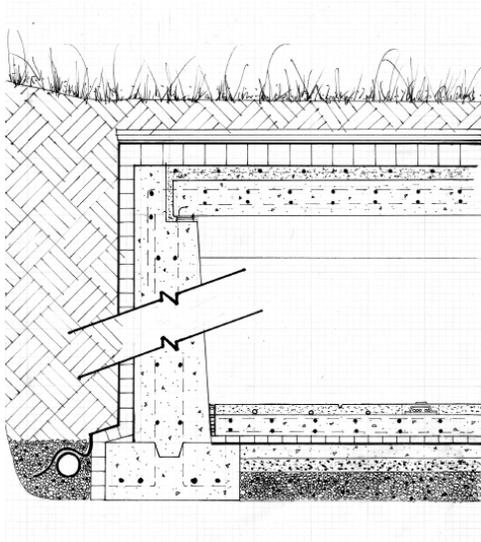
link & pyramid



FINAL DESIGN

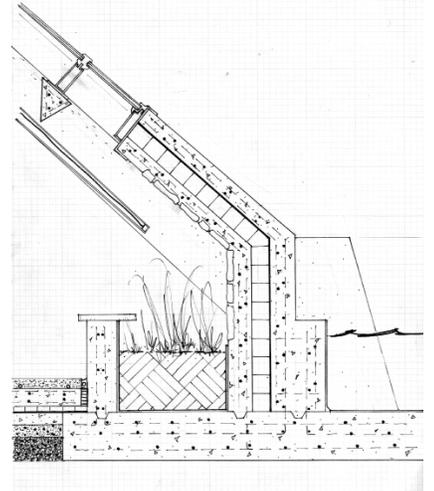
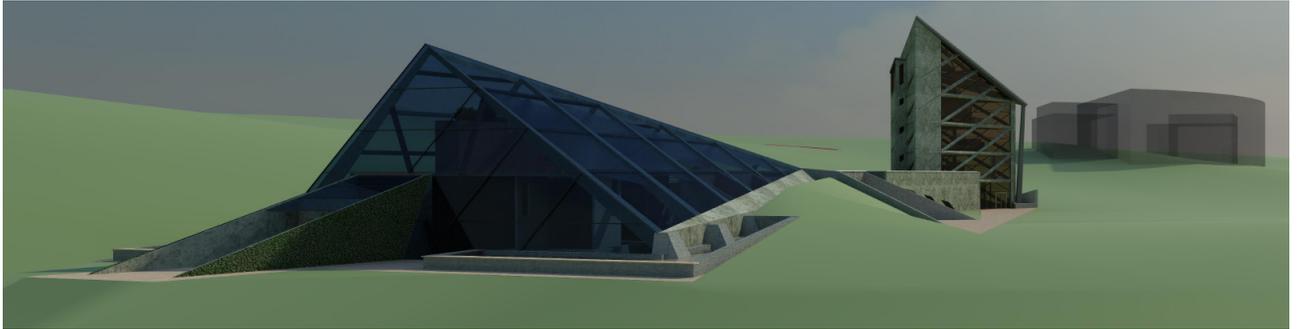
pyramid

Presentation



FINAL DESIGN

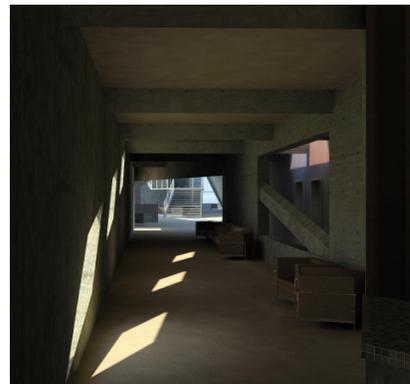
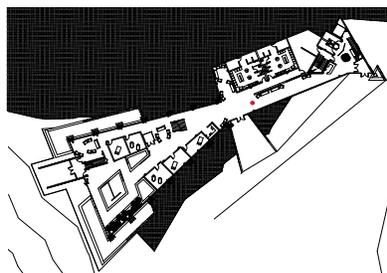
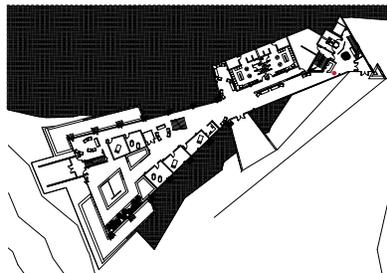
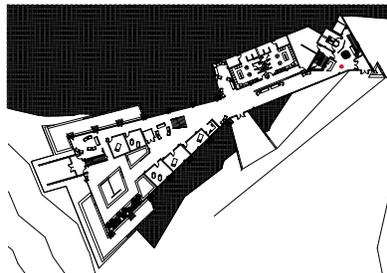
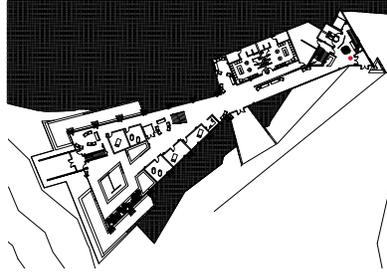
pyramid



FINAL DESIGN

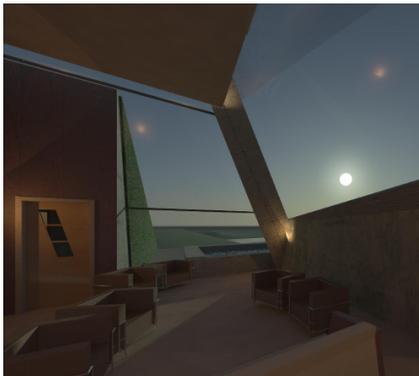
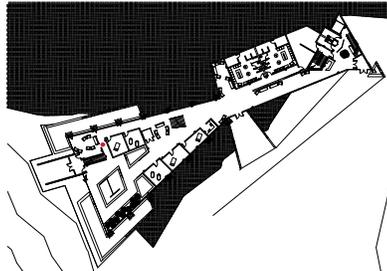
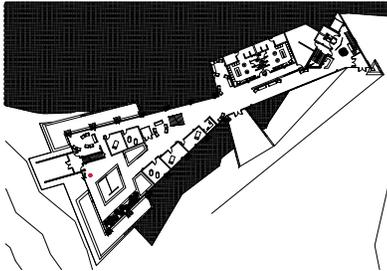
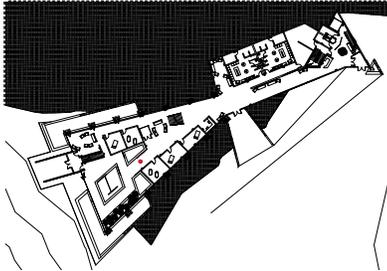
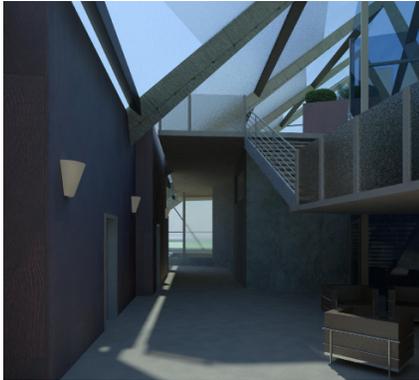
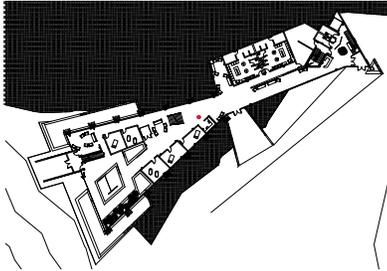
interior walk-through

Presentation



FINAL DESIGN

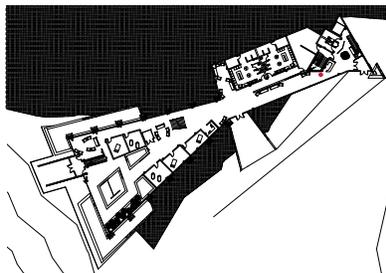
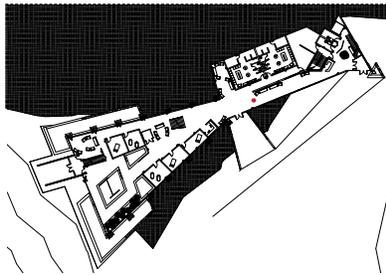
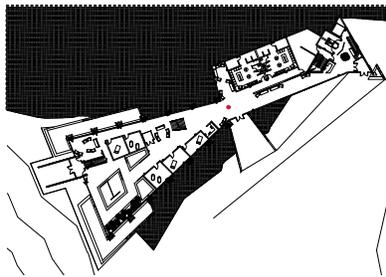
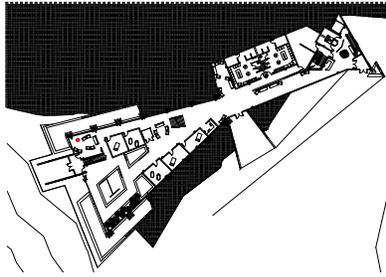
interior walk-through



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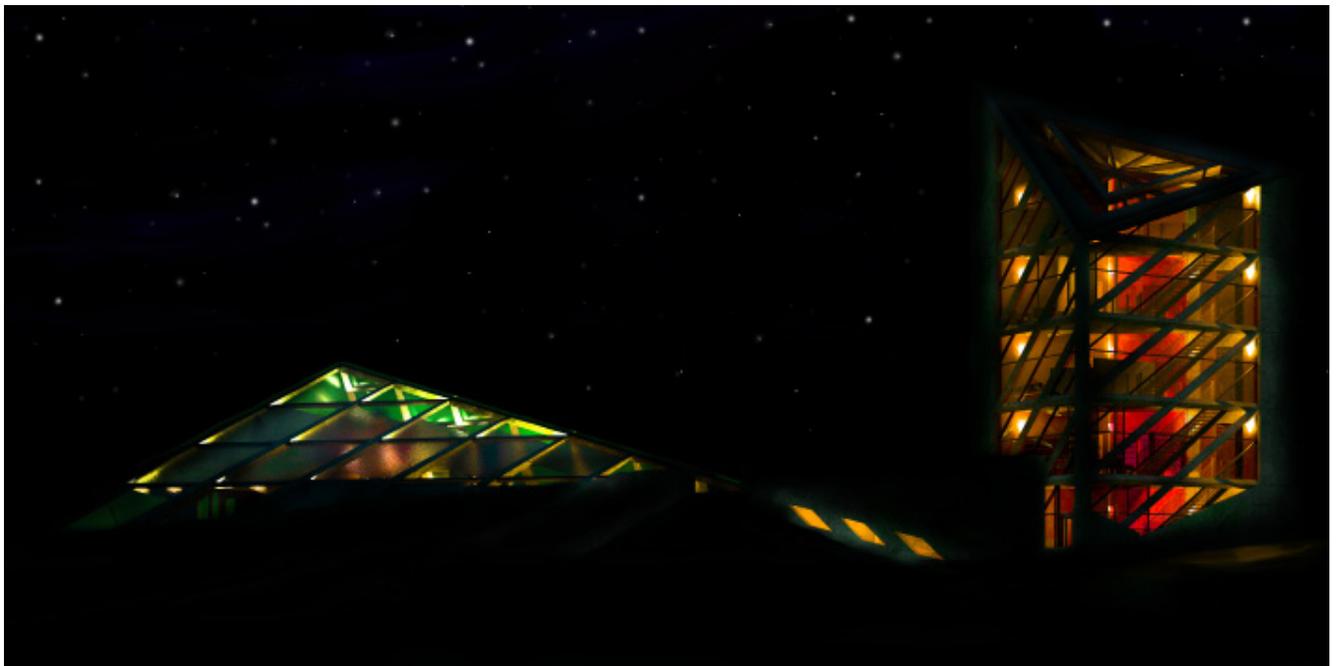
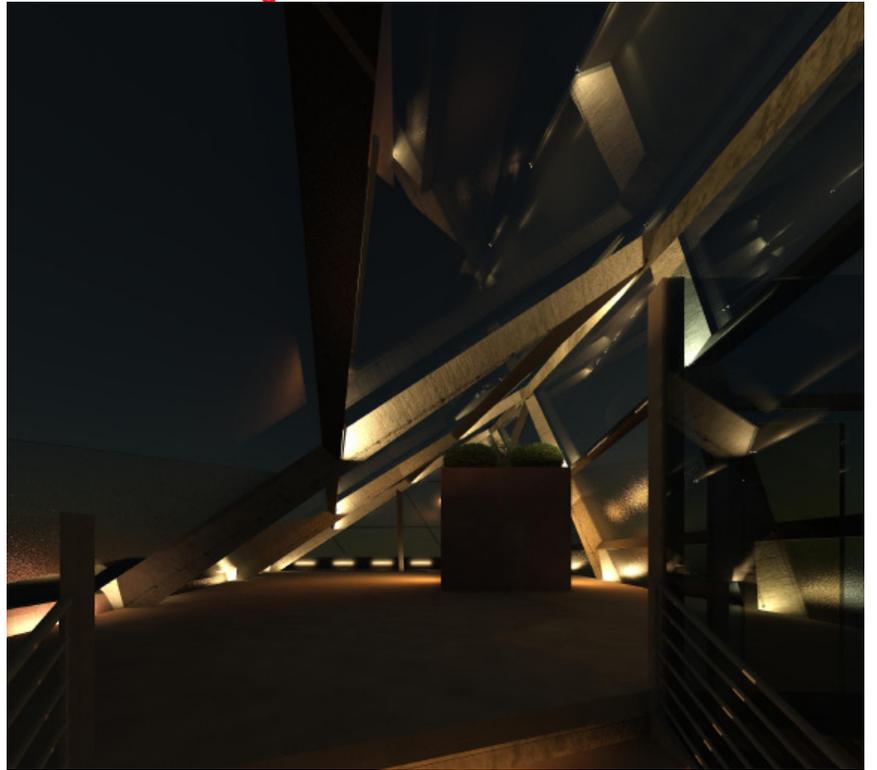
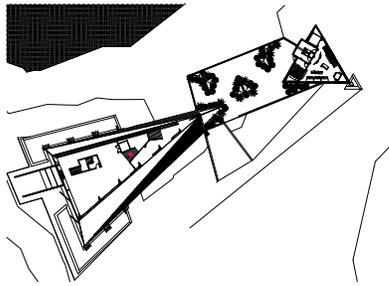
interior walk-through

Presentation



FINAL DESIGN

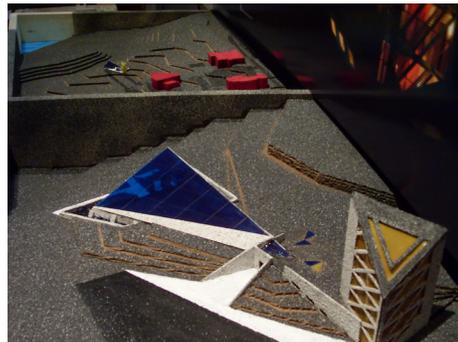
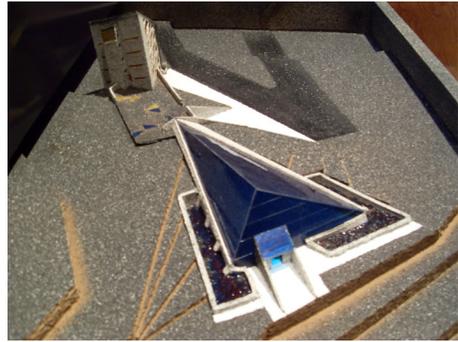
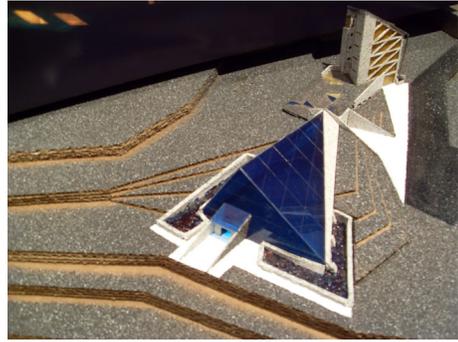
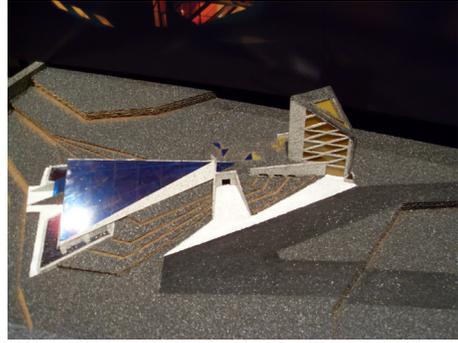
night



FINAL DESIGN

models

Presentation



REFERENCES

- Bis-Man Transit. (2009). NW Bismarck route D-1. Retrieved December 9, 2009, from Bis-Man Transit website: <http://www.bismantransit.com/?id=45>
- Brogan, J. (1997). Light in architecture: Introduction. *Architectural Design*, 67 (3/4), 6-7.
- City-Data.com. (2009). Bismarck, North Dakota. Retrieved December 8, 2009, from <http://www.city-data.com/city/Bismarck-North-Dakota.html>
- Crumbaugh, J., & Maholick, L. (1964). An experimental study in existentialism: The psychometric approach to Frankl's concept of noogenic neurosis. *Journal of Clinical Psychology*, 20(2), 200-207. Retrieved December 2, 2009, from Academic Search Premier database: <http://web.ebscohost.com.proxy.library.ndsu.edu/ehost/detail?vid=1&hid=103&sid=b7808e09-daca-4c3e-875b-f7d92fa172f6%40sessionmgr112&bdata=JnNpdGU9ZWhvc3QtbGl2ZSZzY29wZT1zaXRl#db=psyh&AN=1965-08454-001>
- Energy & Environmental Research Center. (2003). *Wind resource summary for ALP0108 (Bismarck, ND)*. Retrieved December 7, 2009, from http://docs.google.com/viewer?a=v&q=cache:jfAQmXFzk9sJ:www.undeerc.org/wind/states/ND/ALP/ALP0108_Summary.pdf+bismarck+nd+wind+directions&hl=en&gl=us&sig=AHIEtbRQr_ETmlkROdKSJLmPPuCngLQFXQ
- Ferrari, J. R., O'Callghan, J., & Newbegin, I. (2005, March 1). Prevalence of procrastination in the United States, United Kingdom, and Australia: arousal and avoidance delays among adults. *North American Journal of Psychology*. Retrieved December 2, 2009, from Accessmylibrary: <http://www.accessmylibrary.com/article-1G1-159922620/prevalence-procrastination-united-states.html>
- Ford-Martin, P. (2009). Neurosis - Origins, categories, causes, diagnosis, treatment. In *Psychology Encyclopedia*. Retrieved December 2, 2009, from <http://psychology.jrank.org/pages/450/Neurosis.html>
- Gaisma. (2009). *Bismarck, North Dakota*. Retrieved December 8, 2009, from Gaisma website: <http://www.gaisma.com/en/location/bismarck-north-dakota.html>
- Gerlach-Spriggs, N., Kaufman, R.E., & Warner, S.B. (1998). *Restorative gardens: The healing landscape*. New Haven: Yale University Press.
- Goldin, C., & Katz, L. F. (2008). *The race between education and technology*. Cambridge, MA: Harvard University Press.

- Google Earth. Retrieved October 9, 2009, from Google Earth website: <http://earth.google.com>.
- Horney, K. (1945). *Our inner conflicts: A constructive theory of neuroses*. New York: W.W. Norton & Company, Inc.
- Kitzrow, M. A. (2003). The mental health needs of today's college students: challenges and recommendations. *NASPA Journal*, 41(1), Art. 9. Retrieved December 2, 2009, from <http://publications.naspa.org/naspajournal/vol41/iss1/art9>
- Langemo, C. A. (2002). *Images of America: Bismarck North Dakota*. Chicago, IL: Arcadia Publishing.
- Mahnke, F., & Mahnke, R. (1993). *Color and light in man-made environments*. New York: John Wiley & Sons, Inc.
- Marcus, C.C., & Barnes, M. (1999). *Healing gardens: Therapeutic benefits and design recommendations*. New York: John Wiley & Sons, Inc.
- Mostaedi, A. (2001). *New health facilities*. Barcelona, Spain: Links.
- Mudie, L. (2006). *The history of neurosis (IGAP paper)*. Retrieved December 8, 2009, from Scribd website: <http://www.scribd.com/doc/21280332/The-History-of-Neurosis-and-the-Neurosis-of-History>
- Murphy, E. C. (1997). *Surface geology: Bismarck, North Dakota quadrangle [pdf]*. Retrieved December 6, 2009, from North Dakota State Library website: <http://www.library.nd.gov/statedocs/GeologicalSurvey/Bsmksg97map20070501.pdf>
- North Dakota Department of Agriculture. (2009). *North Dakota agriculture 2009*. Bismarck, ND: local publication.
- North Dakota Legendary [cartographic material]: Official highway map. (2009). North Dakota Department of Transportation. Bismarck, ND: local publication.
- Thomson Peterson's poll results reveal causes for college-bound anxiety. (2005). *PR Newswire*. Retrieved December 2, 2009, from Accessmylibrary: http://www.accessmylibrary.com/coms2/summary_0286-11616469_ITM

-
- Townsend, M.C. (2005). *Essentials of psychiatric mental health nursing (3rd ed.)*. Philadelphia: F. A. Davis Company.
- Weinberg, H. (2005, July1). The effective time-binder and Maslow's "self-actualizing person":(Calling out the symbol rulers). *ETC.: A Review of General Semantics*. Retrieved December 2, 2009, from Accessmylibrary: <http://www.accessmylibrary.com/article-1G1-134104494/effective-time-binder-and.html>
- Wollstein, J.B. (2001, June). *The causes of aggression* [online pamphlet]. International Society for Individual Liberty. Retrieved December 2, 2009, from ISIL Intellectual Resources website: <http://www.isil.org/resources/lit/causes-aggression.html>
- Yee, R. (2002). *Healthcare spaces, no. 1*. New York: Visual Reference Publications Inc.
- Yellow Book. (2008). *Bismarck/Mandan/Dickinson* [telephone directory]. Bismarck, ND: local publication.

PERSONAL IDENTIFICATION



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amy.chmielewski@hotmail.com
Hometown: Bismarck, ND

NDSU:

“College teaches you more about yourself than any other subject you would learn in a classroom. In this program, I’ve pushed myself to ridiculous limits, accomplished more than I could imagine, and realized all that I have to offer.”