Living a Healthier Life:

A connection between mind, body and spirit

Moorhead, MN

Prepared by Amanda Urban

Senior Thesis
2004-2005

Living a Healthier Life:
A Connection Between Mind, Body and Spirit

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

By

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In Partial Fulfilment of the Requirements
for the Degree of
Bachelor of Architecture

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May 2005
Fargo, North Dakota

Abstract

This thesis project is a wellness center for the city of Moorhead, MN. The site is located on Main Avenue next to the Red River. The site features easy access to both Fargo and Moorhead's downtown areas and the bike path system. Patrons will use this facility to become one with their mind, body and spirit. The techniques of Feng Shui, which have been practiced for ages and are shown to have positive effects on a person, have driven the design.

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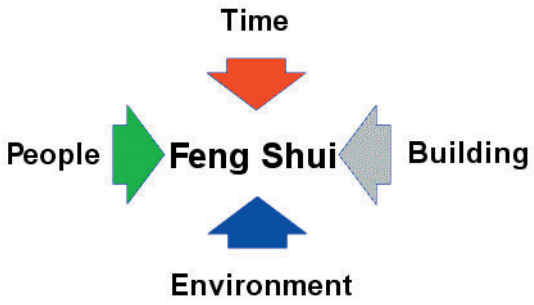


Fig. 1: Feng Shui Diagram

Results from Theoretical Premise Research

Feng Shui - Feng Shui literally means wind and water. It is the ancient Chinese art and science of arranging elements in the environment for the purpose of improving health, wealth and happiness. There are four elements that make up feng shui. These elements are building, environment, people, and timing. The building element deals with the shape and floor plan of the building. The environment is broken down into the internal environment and the external environment. The internal environment includes temperature, scent and lightness or darkness of a room. The external environment includes landscaping and surrounding features. The people aspect includes how people can best prosper within the building. Timing says that the location of energies will change over time.

Basic principles of feng shui

Chi – Chi stands for "life energy". Chi is the summation of the energies that bring life.

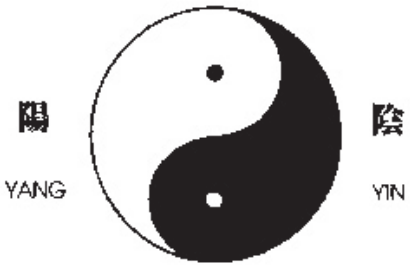


Fig. 2: Yin and Yang

Yin and Yang – Yin and Yang are the positive and negative aspects of chi. A balance should be found between yin and yang.

Research Results and Goals

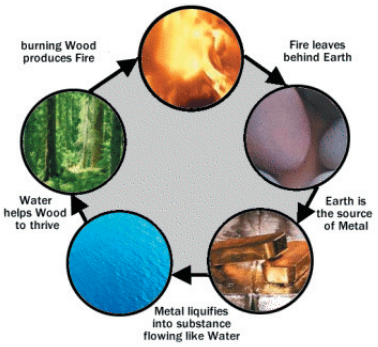


Fig. 3: The five elements

SE Sun WOOD 4	S Li FIRE 9	SW Kun EARTH 2
E Chen WOOD 3	Center EARTH 5	W Tui METAL 7
NE Ken EARTH 8	N Kan WATER 1	NW Chien METAL 6

Fig. 4: The Eight Trigrams

Five Elements – The five natural elements are wood, fire, earth, metal, and water. These elements should be utilized in their natural cycle.

The Eight Trigrams – From the eight trigram chart you can find both a person's trigram and the trigram of the building. From that information you can determine how the building interacts with the person.

The East/West Theory (Eight House Theory) – This principle deals with the trigram chart. Each of the trigrams fall into two distinct categories this is either the east group or west group. The idea is to match a west group building type with a west group person or visa versa.

Effects of the Solar System (Xuan Kong) – This technique uses the eight trigrams with particular calculations to derive the specific nature of the building and create its energy blueprint.

The Environment – This includes not having sharp corners pointing at a person or having a bed under exposed ceiling beams. Some external aspect include, not having the building under high tension power lines, near a cemetery, construction site or dump site, or near a hospital, police station, or fire station.

I will be incorporating many of the aspects of feng shui into my design, especially yin and yang and the five elements.

Research Results and Goals

"I must be right. Never an aspirin. Never injured a day in my life. The whole country, the whole world, should be doing my exercises. They'd be happier."
-Joseph Hubertus Pilates, in 1965, age 86

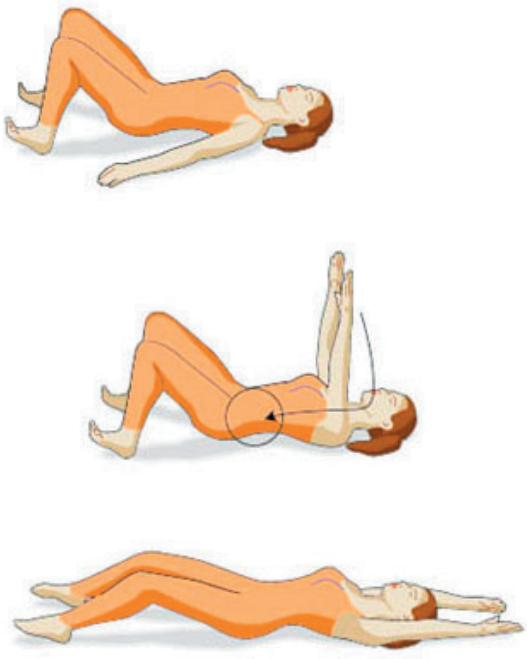


Fig. 5: Pilates movement

Pilates

Pilates combines ancient wisdom with a contemporary knowledge. It was developed in the 20th century. Pilates is a method of exercise and physical movements designed to stretch, strengthen, and balance the body. Exercises are gentle and designed to put as little strain on the body as possible. People of any age or level of fitness can do it. There are many benefits to practicing Pilates. These include an increase in strength, flexibility, and coordination of the body and mind. Because deep breathing is a focus, lung capacity and blood circulation is increased. Also because Pilates teaches balance and control of the body, it can help individuals to improve other areas of their lives.

The working area should be comfortable and safe. The floor should protect the spine, for example a thick carpet, rug or sports mat should be used. Sunny spaces and those close to artificial heat should be avoided. A good air supply is needed and the space should be free of clutter and other obstructions.

Research Results and Goals

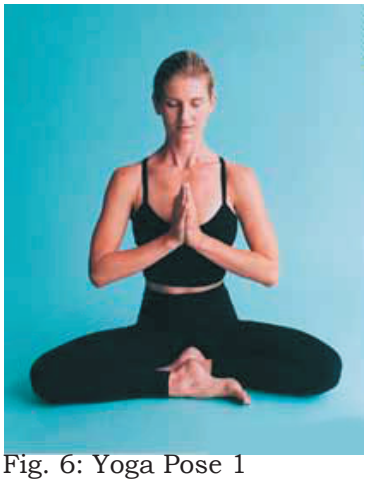


Fig. 6: Yoga Pose 1

Fig. 7: Yoga Pose 2

Yoga

Yoga helps one gain a sense of physical and mental well-being. It can be done by people of any age or fitness level. "Yoga" means "union": union of mind, body and spirit. It is the union between us and the intelligent cosmic spirit of creation, or "the oneness of all things".

There are many different kinds of yoga. The type that is generally practiced in the west is Hatha. This type is designed to align your skin, muscles, and bones. Hatha generally concentrates on the physical body as the way toward self-realization.

The yoga area should be quiet and peaceful and should not have clocks. Yoga should be done on a non-slip mat.

"Health is Wealth. Peace of Mind is Happiness. Yoga shows the way."
–Swami Vishnu-devananda

Research Results and Goals

Fig. 8: Meditation Pose 1

Meditation

Meditation is a way to relax your mind by focusing your attention on only one thing. It is a way to discover yourself and know exactly who you are. There are different ways of meditating which include the sitting method, sit-stand method, and the recliner method. Once you find the right method for you, you basically relax, let go, and do nothing. Concentrating on your breathing is a good way to slow down your thinking and help you to relax.

Meditation should be done in a quiet peaceful space. Tranquil sounds could be playing in the background. Other options are candles, pictures or aromatherapy burners.

Fig. 9: Meditation Pose 2

Research Results and Goals

Fig. 10: Tai Chi 1

Fig. 11: Tai Chi 2

Tai Chi

Tai Chi is an exercise that is taken from Chinese martial arts. It is used by many as a means for dealing with tension and stress. There are two basic types of martial arts: the hard martial arts and the soft martial arts. Tai chi is an example of the soft martial arts because it involves soft, slow, flowing movements that emphasize control, rather than the fast movements that emphasize brute strength. Tai chi is essentially a form of meditation and has been referred to as "meditation in motion." By doing these exercises you can help free the flow of energy and become healthier. Because tai chi is a form of meditation, it is said that it will help you to understand yourself better and help you deal with the other aspects of life more easily. Tai chi will help to bring the principles of yin and yang back into your life and help maintain balance between your physical and spiritual well-being.

The space to practice tai chi should be comfortable and safe. It should be a peaceful room with minimal distractions.

Research Results and Goals

Results from Typology Research

When designing the wellness center I will try to make a comforting space where the users will feel welcome. I am going to design a building with a lot of natural lighting. It is going to have many sustainable aspects so as to have a minimal impact on the earth.

Research Results and Goals

Historical Context of the Thesis

The population of the United States has a high percent of obese people and the numbers are increasing everyday. People are avoiding things like stairs and walking to places and turning to elevators and cars to get to places. In Moorhead more places are needed where people can go to work out and get out of the harsh weather elements. There are a lot of eastern practices of exercise that have been proven to be easy to do and beneficial to the users. I plan to incorporate a lot of these ideas into my design. Since feng shui is an practice that has been proven to be successful to the occupants I plan on incorporating theses ideas into this design my building. I feel this will help it to be a place that will be very comfortable and enjoyable to be in which should help people to stay with a work out program.

Research Results and Goals

Goals for the Thesis Project

I plan on designing a wellness center that has an eastern influence. It will be a place where the users can become one in body, mind and spirit.
My goals for this project are:
-Design an easy to use wellness facility
-Incorporate feng shui into the design
-Put emphasis on eastern practices such as yoga, tai chi, pilates, and meditation
-Make the facility a total body wellness center that helps mind, body and spirit.
-Incorporate many of the ideas of sustainable design into the project.
-Make the building have as little impact on the earth as possible.

Site Analysis

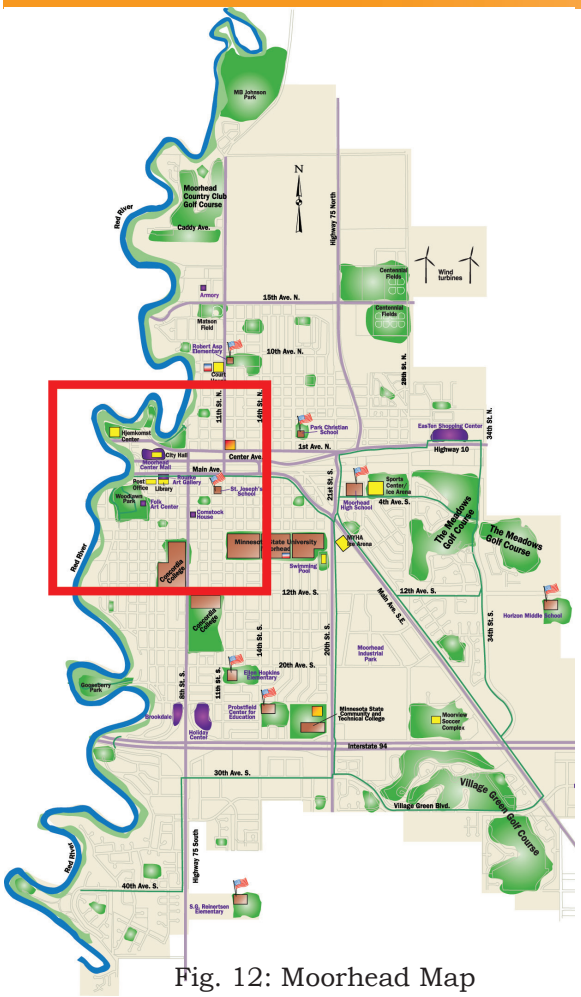


Fig. 12: Moorhead Map

The site is located in Moorhead, MN. Moorhead currently has a population of 32,177 and with Fargo the population jumps up to 174,367. The median age is 29 and the ratio of females to males is 53:47.
The site is located off of Main Ave. right east of the bridge. The address is 217 Main Ave. The site was chosen because it has views of the river and easy access to the bike path. The area is currently under construction. The Main Ave bridge was just completed which has a pedestrian viewing area. To the north of the site a new public space is being constructed called Bridgehead Plaza. The city is redesigning the downtown area and is tearing down almost all of the existing buildings.

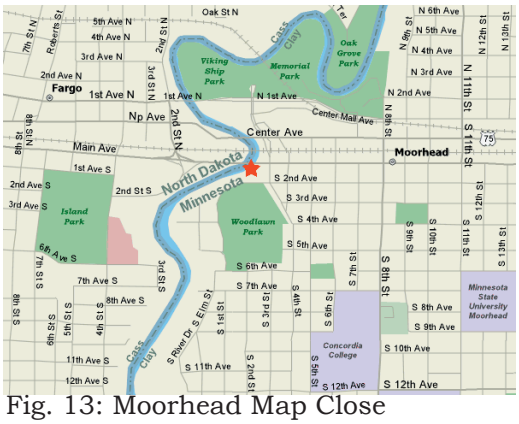


Fig. 13: Moorhead Map Close

Fig. 14: Site Map

Site Analysis

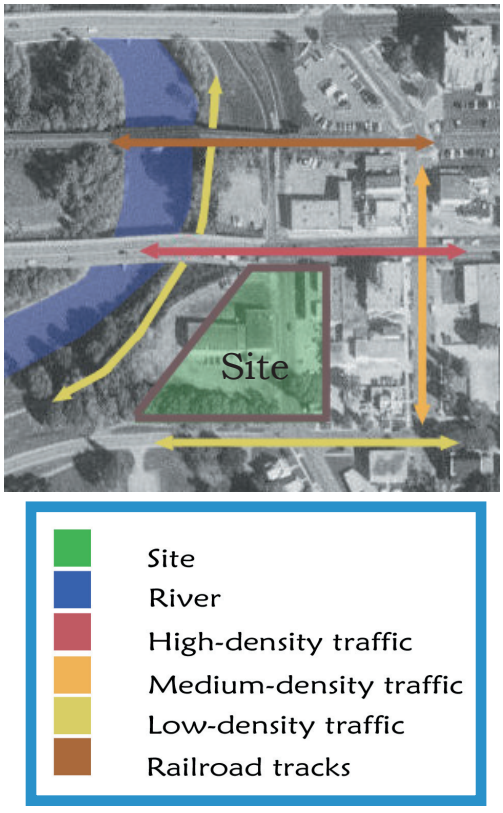


Fig. 15: Site Traffic

Boundaries:

North: Main Ave.
East: 4th St. S.
South: 2nd Ave. S.
West: 3rd St.

Existing Site:

The west side of the sight will eventually contain a retaining wall which has a street and a bike path to the west of it. The dimensions of the site are 429' x 300'. The west side of the sight is cut off by a 45 angle. The approximate area of the site is 83,700 square feet.

Noise:

The sight borders Main Ave. which has a heavy traffic flow so noise will be a problem. There is also a railroad line to the north with trains going through many times a day. The street to the east might also be somewhat of a noise problem that I will have to deal with. The streets to the south and west are low in traffic and shouldn't be much of a problem when it comes to noise.

Pedestrian Circulation:

There is a bike path that curves along the river and borders the west side of the sight. The sight will have a sidewalk to the north immediately adjacent to the sight and also to the south. The street to the east has sidewalks along both sides of the street.

Land Use

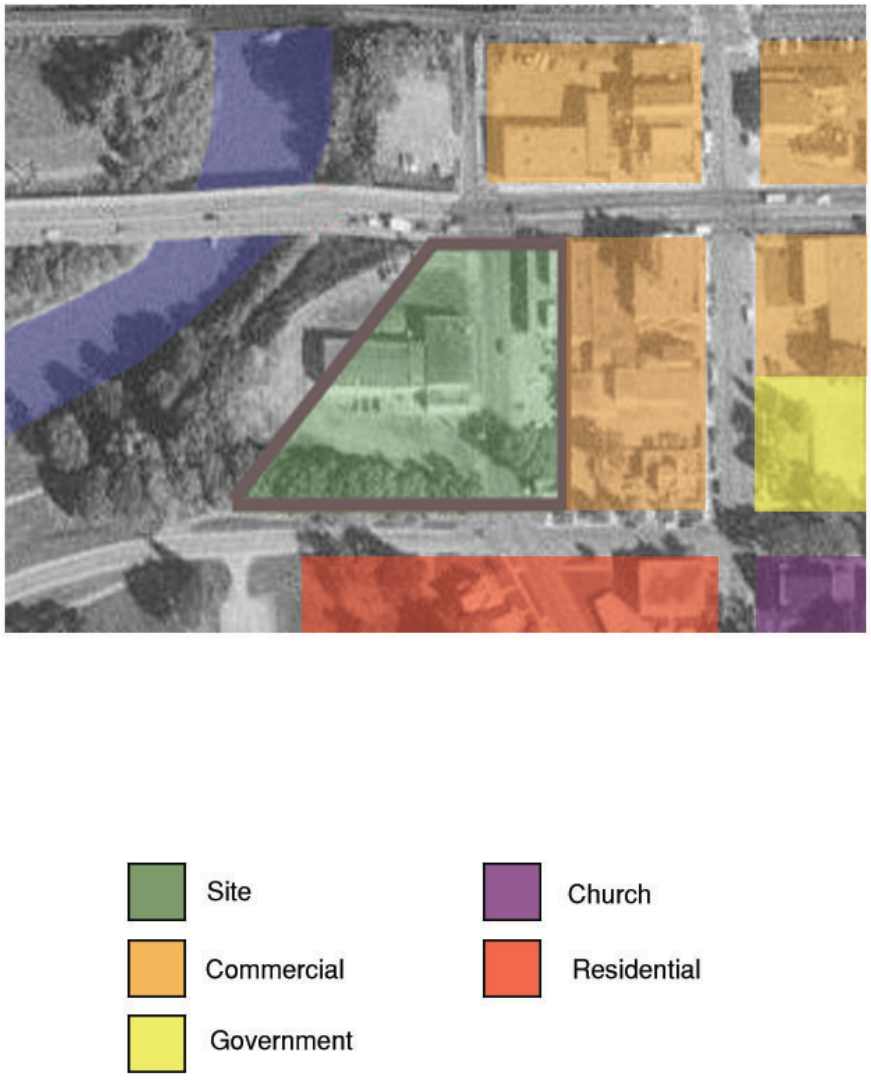


Fig. 16: Land Use

Site Analysis

Fig. 17: Douglas House

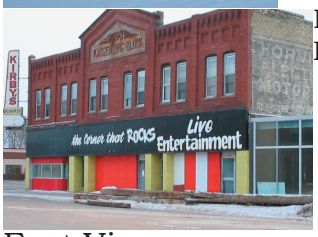


Fig. 18: Kassenborg Building

East View

Fig. 19: Pizza Patrol

Fig. 20: Post Office

Southeast View

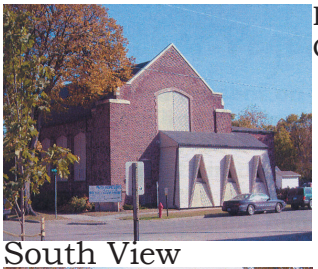


Fig. 21: Lutheran Church

South View

Fig. 22: Apartment Building

West View

Fig. 23: Fargo

Views:

There are some views from the site that I plan on taking advantage of in my design. To the west is the Red River which provides a calming view. To the North will be Bridgehead Plaza. There is a view to the southwest of Woodlawn Park.

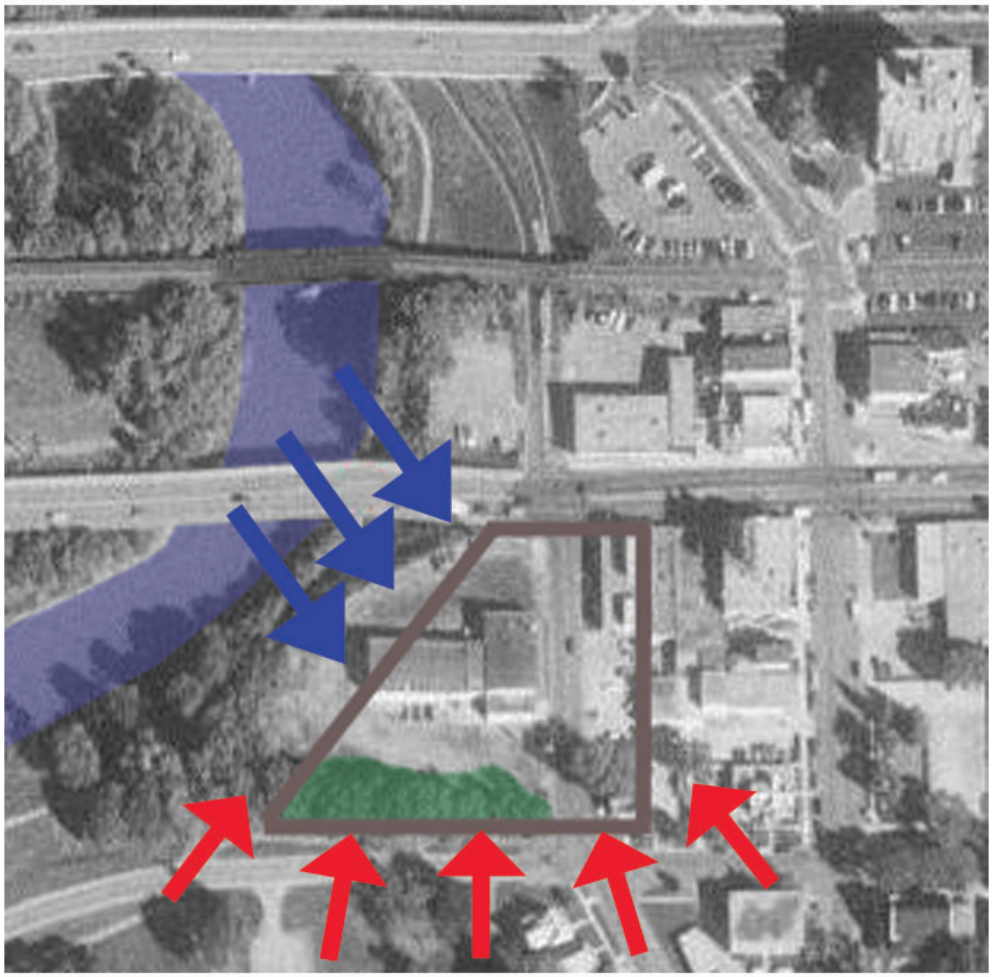
Materiality:

The material of the surrounding single family housing is painted wood siding. There is a brick building directly east and to the southeast. The rest of the buildings are under construction and will be mainly brick and EIFS.

Man-Made Elements:

To the north of the site will be the and Kirby's. To the southeast of the property is the Post Office. To the south is Grace Methodist Church and single family houses.

Vegetation Sun & Wind



Indicate winter winds from unprotected northwest side of site

Indicate sun path. There are no tall buildings surrounding the site that obstruct the sun

Shows the current vegetation on the site

Fig. 24: Vegetation, Sun and Wind

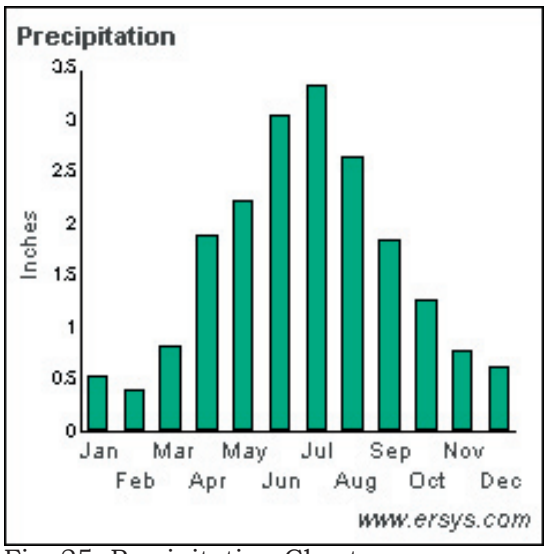


Fig. 25: Precipitation Chart

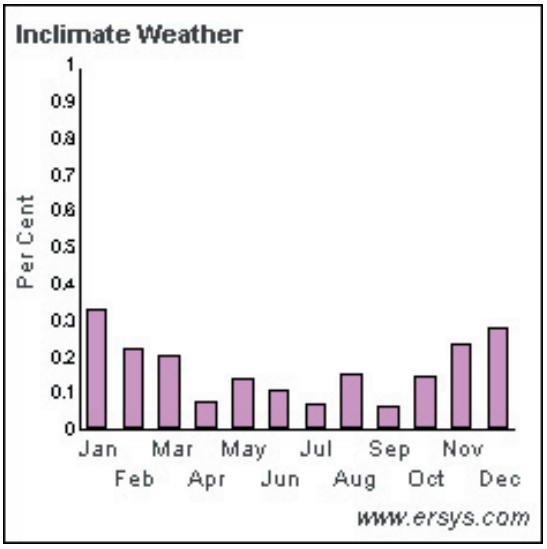


Fig. 26: Inclimate Weather Chart

Climate:

Moorhead has a temperate climate with warm, sunny summers and cold winters. The average high in summer is 82° and the average winter high is 17°.

In summer the average rainfall is 16 inches and the winter snowfall of 36 inches.

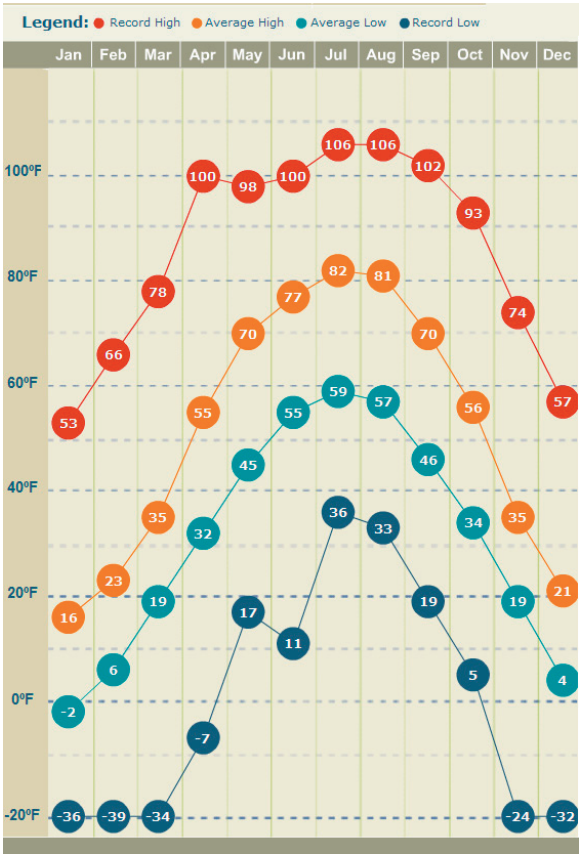


Fig. 27: Monthly Temperatures

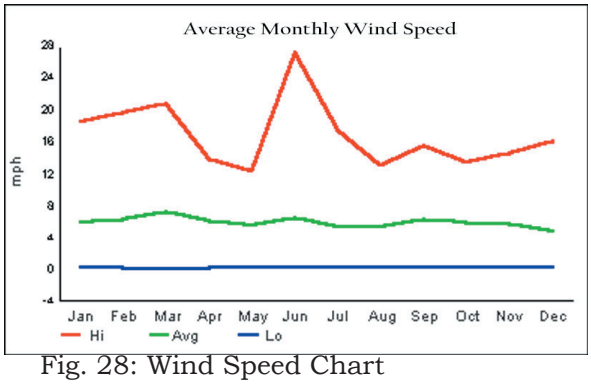


Fig. 28: Wind Speed Chart

Wind:

The Red River Valley is generally a windy area. During the winter, the wind is mainly from the north, northwest, and the south. During the summer, the wind is primarily from the south/southeast. This area still contains some grown trees to block the wind but there still is a concern for wind. There is some potential for the wind to come in from the west off the river.

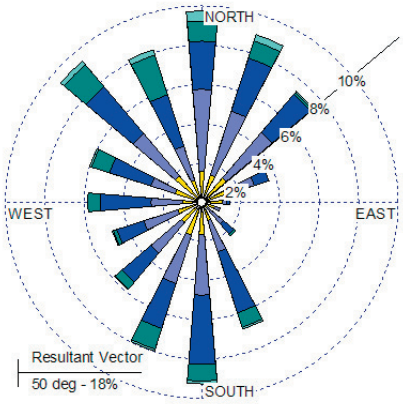


Fig. 29: Winter Windspeed

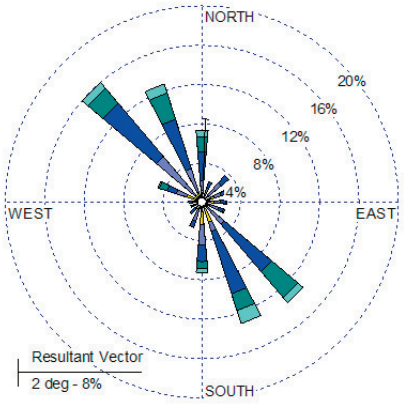


Fig. 30: Spring Windspeed

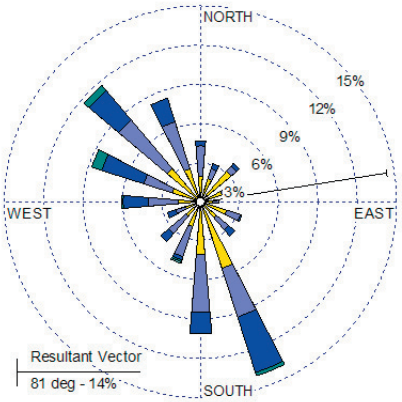
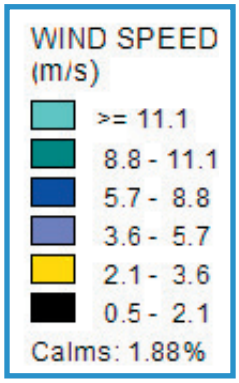


Fig. 31: Summer Windspeed



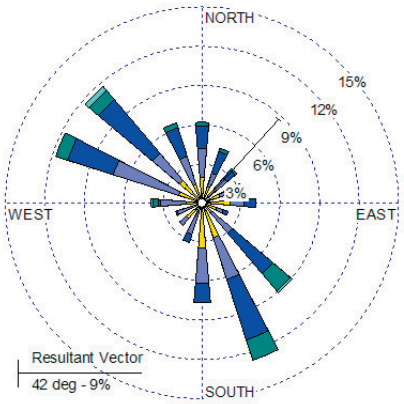


Fig. 32: Fall Windspeed

Site Analysis

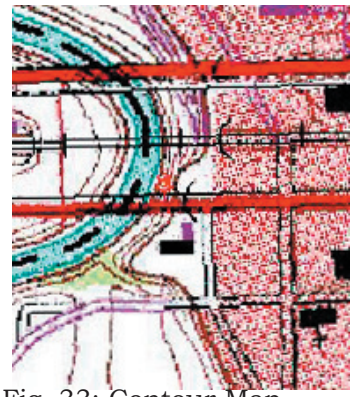


Fig. 33: Contour Map

Contours and Drainage:

The site itself is up high has been built on at one time so it is flat. To the west side of the site you hit a retaining wall. At the bottom of the wall is a street and after that the land sloped down to the river.

Fig. 34: 40' Flood Stage

Flooding:

The bottom map shows the 40' flood stage. These floods rarely happen and as you can see by the picture it would only affect the south-west side of the site.

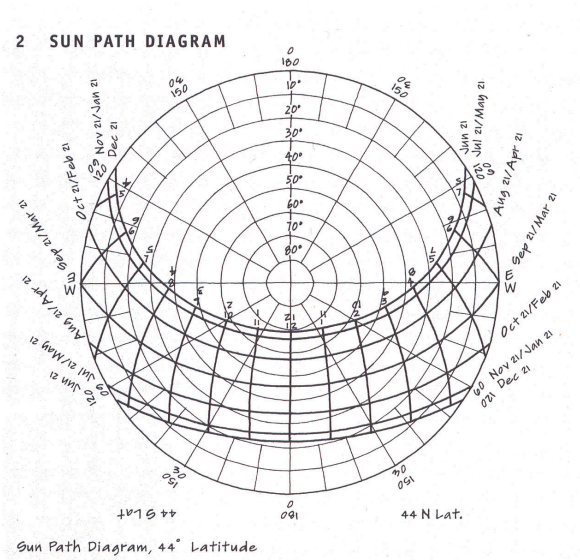


Fig. 35: Sun Path

Sun Path and Shadows:

The winter sunrise for this area is 7:40 am and sunset is 4:20pm. The summer sunrise is 4:20am and sets at 7:40pm. This area has extreme changes in sun angle which needs to be taken into consideration in the design.

Design Precedents


Fig. 36: Wellspring Spa

Wellspring Spa and Fitness Center

3310 County Rd. 101 S.
Minnetonka, MN
Architect: R S P Architects Ltd.
Size: 22,000 sf

Description:

The Wellspring spa is a women's only fitness center. The main elements of this facility are a cardiovascular area, a weight machine area, 2 aerobic rooms, a cycle room, 2 lap pools which are 75' long, an aerobic pool, a locker room that includes a vanity area, a lounge where they can view the child care area through a TV and showers with private dressing rooms, a conference room, a child care room, and a deli.

Normal business hours are Mon-Fri 6am-9pm, Sat 7am-7pm and Sun 8am-6pm. Their peak useage hours are 9-11 am.
The have about twelve – fifteen employees on at a time which will include a physical therapist and a massage therapist.

Positive Aspects:

This has a peaceful environment with nice facilities. Water fountain in lobby adds a nice touch and helps to make people feel welcome. The building has many of the same amenities I want to include into my design.

Negative Aspects:

The only outdoor space this facility has is the parking lot which comes off the entrance. None of the areas have operable to let in the natural air when the weather is nice. The building could have made more use natural lighting.

Lessons:

It is a good idea to have natural lighting and opportunities for the user to go outside. There are many things that can be done outside to help the users be healthier.

Design Precedents

Fig. 37: NDSU Wellness Center

NDSU Wellness Center

Fargo, MN

Architect: R S P Architects Ltd.
Size: 22,000 sf

Description: The Wellness Center consists of a running track, free weight area, weight machine area, 2 exercise machine areas, a fitness studio and a couple classrooms.

Positive Aspects: The facility has a lot of natural lighting inside. It has a two story lobby with a sunlight.

Negative Aspects: The spaces are too small for the number of users. Rooms are split up for example the exercise machine area has two spaces, one on the first floor and one on the second.

Lessons: Like activities should be grouped together so confusion isn't caused. Spacious spaces with plenty of natural lighting make users feel better.

Fig. 38: Three Rivers Exterior

Fig. 39: Three Rivers Interior Pool

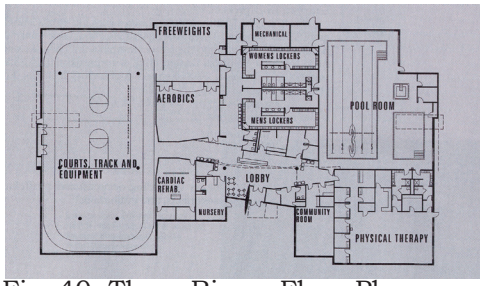


Fig. 40: Three Rivers Floor Plan

Three Rivers Area Hospital Fitness and Wellness Center

Three Rivers, Michigan

Architect:	Philips Swager Associates
Size:	33,800sf
Cost:	$3.9 million

Description: Three Rivers Area Hospital is a one-level facility. It contains a gymnasium area with a basketball and volleyball court. It also has a three-lane running track, a work out area with 70 pieces of equipment, free weight area, aerobics room, and area for cardiac rehabilitation, physical therapy, five-lane lap pool, therapy pool, and whirlpool. This area of the building is used for patients who need physical therapy, cardiac rehabilitation and occupational therapy.

Positive Aspects: Like my design, this facility has a workout area with weight machines and a free weight area. It attempts to let in a lot of natural light especially with the clerestory windows.

Negative Aspects: This facility is more of a hospital fitness center which is a different idea than my project. I do not plan on having courts like the basketball and volleyball ones in this building.

Lessons: This facility has some of the same rooms as my building will have and it is somewhat the same overall size. Letting in natural light is a good way to help the residents be active.

Design Precedents

Fig. 41: Pitt County Exterior

Fig. 42: Pitt County Interior

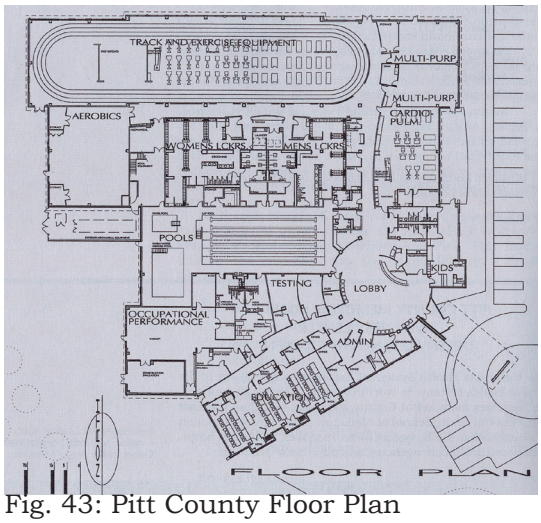


Fig. 43: Pitt County Floor Plan

Pitt County Memorial Hospital Wellness Center

Greenville, North Carolina

Architect: Philips Swager Ass.

Size: 54,000 sf

Cost: $6.4 million

Description: This facility features a jogging/walking track, exercise equipment, cardiovascular strength training, lap swimming and therapy pools, outpatient occupational therapy, cardiac rehabilitation clinic, locker rooms, community education rooms, day care and children's exercise and aerobics. It is a one-story facility.

Positive Aspects: The lobby to the wellness center is a two-story space with a lot of natural lighting. This facility has a lot of the same rooms that I want in my building.

Lessons: A spacious lobby is a good way to make the users feel welcome to a space.

Design Precedents

Fig. 44: Meditation Space 1

Fig. 45: Meditation Space 2

Fig. 46: Meditation Space 3

Meditation Rooms

Designer: StoneCircle Int. Designers
Description: Meditation rooms can be a great addition to help the users combat a busy or stressful day. It's a place that nurtures all the senses and provides a supportive environment for the rejuvenation of body, mind and spirit. The healing power of nature was the inspiration for these non-denominational meditation chapels. The chapels were transformed into peaceful oases within large institutional facilities. Nature was brought indoors where it can be experienced through images, colors, sounds and materials. Lightweight furnishings allow for flexibility when group gatherings are desired.

In the top picture the arrangement of seating around a central altar provides a sense of privacy in a small space. The sound of water, from a fountain in the corner, is a soothing presence.

In the middle picture it shows they painted murals on the walls much in the same way the Egyptians used to do. The Egyptians painted scenes of nature in their temples of healing to promote vitality and help sustain their patients' interest in life.

The bottom picture is of the Quiet Room at Mt. Diablo Medical Center in Concord, California. A metal and glass screen is the focal point of the place. It creates a feeling of openness while maintaining privacy in this small space.

Labyrinth Walks


Fig. 47: Labyrinth 1

Designer: StoneCircle Int. Designers
Description: Labyrinth walks have been used as a spiritual tool dating back to the 13th century. It is used to support the inner healing journey.
This labyrinth was installed in 1997 at the entrance to California Pacific Medical Center in San Francisco. There has been a positive response from the people who have used it. It is used as a holistic healing tool, a mind, body, prayer path.

Lessons: A labyrinth would be a great addition to my design to be used as a way to connect the mind, body and spirit.


Fig. 48: Labyrinth 2

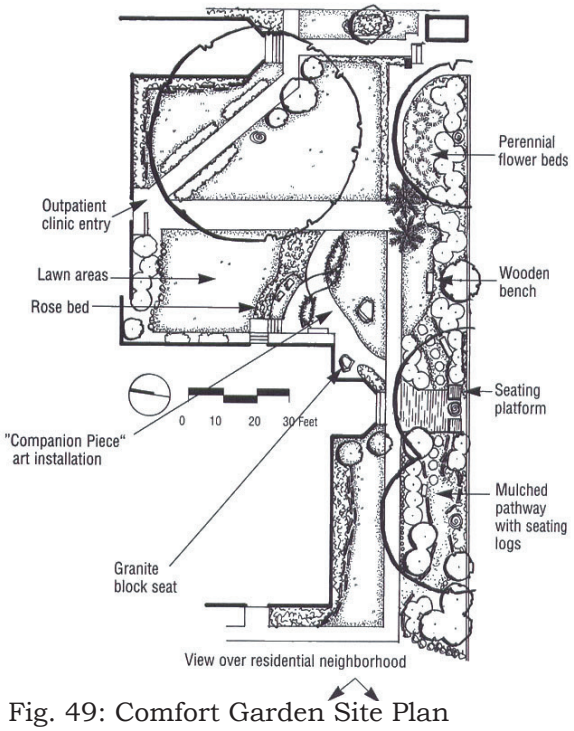


Fig. 49: Comfort Garden Site Plan

Fig. 50: Comfort Garden 1

Fig. 51: Comfort Garden 2

The Comfort Garden
San Francisco General Hospital

San Francisco, CA

Size: 16,000sf

Description: The comfort garden is meant to be a place of solace where nature's beauty can bring you comfort. It is adjacent to the hospital on one side, a low hedge on the eastern edge and a vine covered fence on another side. The garden has 3 large trees, one cedar and two Monterey pines. It has several paths that is surrounded by colorful flowers.

Positive Aspects: The garden is colorful and the plants change through the seasons. The park is at a smaller scale so it contributes to a grater comfort for the users. Most people left the garden feeling less stressed, refreshed and more content. Families from the surrounding area use it as a public park.

Negative Aspects: The park is too close to a street so the traffic is noisy. Their is a limited amount of seating in the park that fills up over lunch. The chairs weren't movable to allows for flexibility. Their was no seating for groups larger than three.

Lessons: A garden would be a great thing in my design. If you have a place that is quiet with colorful plants and places to sit it can be used as a place to relax and think.

Fig. 52: HomeFree Interior

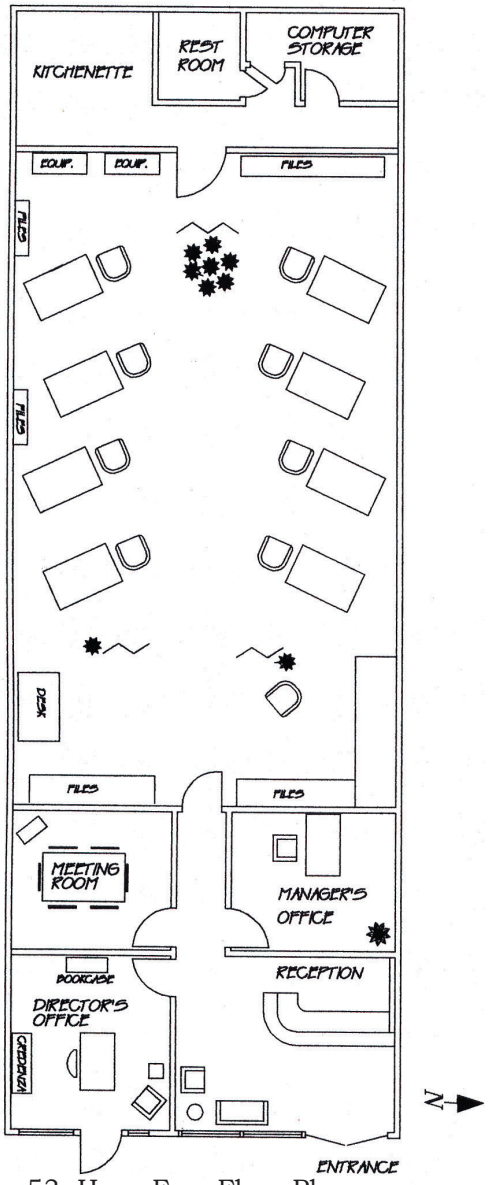


Fig. 53: HomeFree Floor Plan

HomeFree Funding

An Office using feng shui concepts
Washington, D.C.

Architect: R S P Architects
Size: 16.000 sf

Description: HomeFree Funding moved their headquarters into a new office space and shortly after began to experience problems. After a feng shui consultant was brought in and changes were made the employees began to feel better and business improved.

Positive Aspects: Color and light at the entrance is a good way to attract customers. The curved reception desk balances the flow of line and energy. Since the office is so long groups of potted plants and screens were introduced to break up the area as shown in the top picture.

Lessons: When dealing with feng shui it is best have curved forms to help the chi flow. When large areas are a must they can be broken up with different objects such as plants etc.

Fig. 54: NREL Exterior

Fig. 55: NREL Interior

NREL Solar Energy Research Facility

Golden, Colorado

Architect: Anderson DeBartolo Pan

Size: 15,00 sf

Cost: 12 million pounds

Description: This bioclimatic design building is a smaller scaled project that has been successful at cutting down on energy wasted. The estimated savings per year is $200,000.

Positive Aspects: Each office has its own view to outside and has stepped clerestory windows which allows light to penetrate 90 ft. Each area has its own adjustable environmental controls. The building has a trombe wall to radiate heat into the building, photo-sensitive window shades that automatically raise and lower according to the intensity of

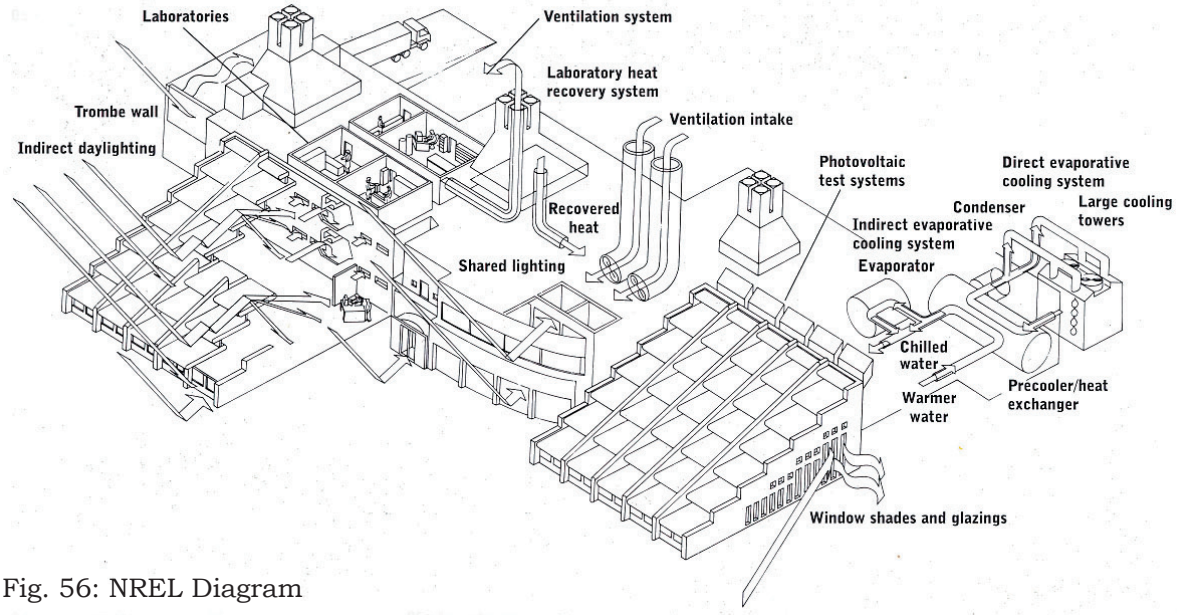


Fig. 56: NREL Diagram

the sun. This building also has an exhaust heat recovery system that extracts heat from outgoing air and used it to preheat incoming air.

Lessons learned: Stepped clerestory windows are a good way to let in lots of natural lighting. A good idea is for each area to have its own adjustable controls since the sun might be heating one area and not another.

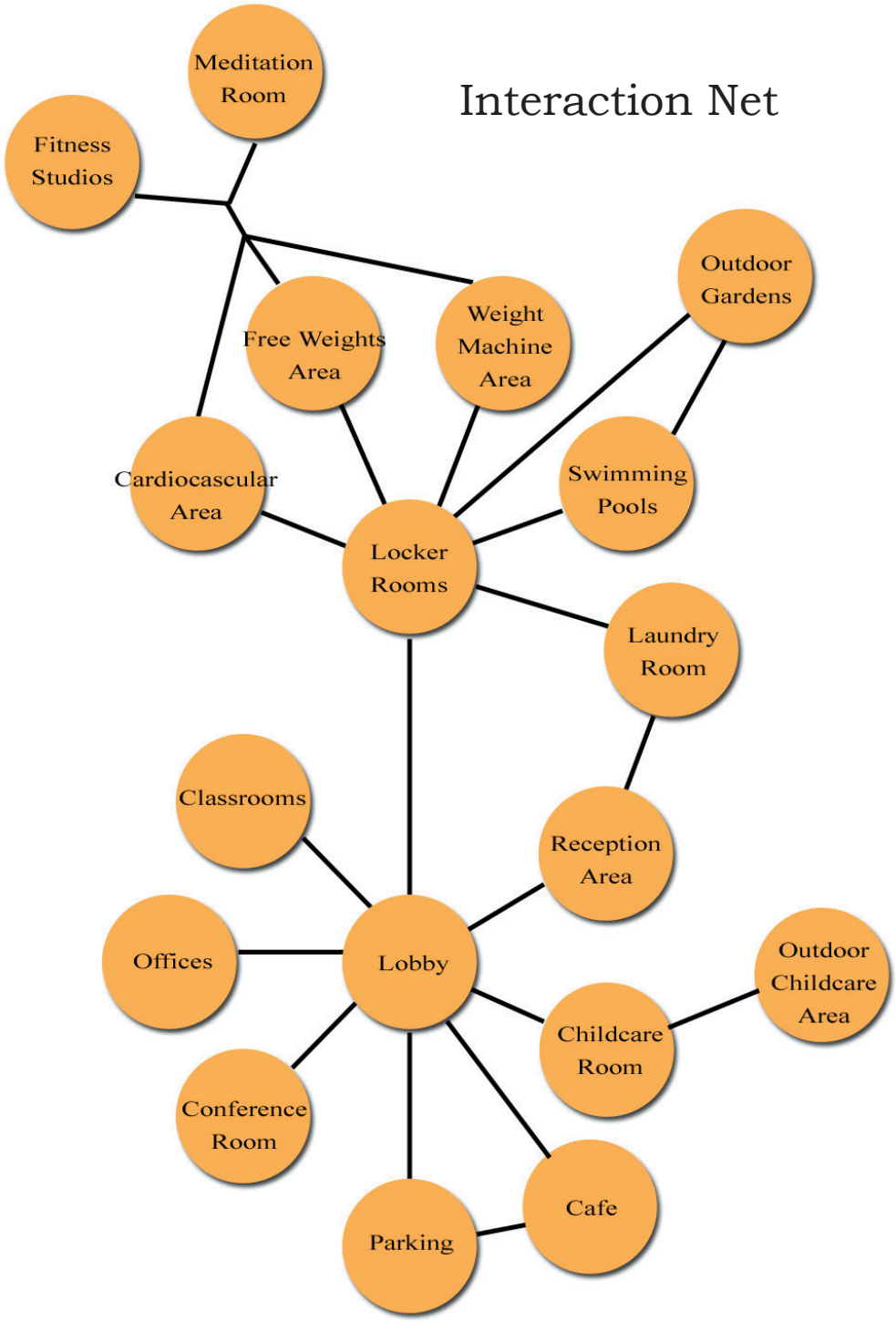


Fig. 57: Interaction Net

Programmatic Requirements

Quantitative

Space — Lobby

Occupancy — 15 people

Area — 2000 sf

Activities — This will be the entrance to the wellness center. It will provide access to the many parts of the facility.

Technical

This area should have comfortable chairs for the guests to relax in situated around a table with fitness magazines for them to read while they are waiting.

Qualitative

The lobby will be a welcoming environment that will make the users want to come back. It should be a spacious room with plenty of natural light.

Programmatic Requirements

Quantitative

Space — Reception Area

Occupancy — 3 people

Area — 300 sf

Activities — This will be where the staff checks in the members and can create new accounts.

Technical

This area will need two computers to keep track of customer information. It will need to have internet access and a phone with multiple lines. There will be a long desk that has drawers for storage and counter space.

Qualitative

This area should have a simple relaxed atmosphere to help invite people to the receptionist. It should be brightly lit with natural lighting.

Programmatic Requirements

Quantitative

Space: Cafe

Occupancy: 58 people

Area: 3500 sf

Activities: This will be where anyone can grab a healthy bite to eat.

Technical

This area should have comfortable chairs situated around tables. There will need to be a stove, oven, microwave, sink, and dishwasher in the kitchen.

Qualitative

This should be an area with a lot of natural lighting. It should be a welcoming environment.

Programmatic Requirements

Quantitative

Space — Classrooms

Occupancy — 15 people

Area — 2 @ 250 sf = 500 sf

Activities — This will be where informational health lectures can take place to let the members know about their health and well being.

Technical

This area will need a projector, projector screen and a computer. It will need to have lighting that can be dimmed when presentations are taking place.

Qualitative

This should be an environment condusive to learning. It should not have distractions so the users can stay focused on the presentations. It should have natural lighting with accessible shades.

Programmatic Requirements

Quantitative

Space — Conference Room

Occupancy — 15 people

Area — 800 sf

Activities — This will be where large meeting within the facility will take place. It can also be rented by the members to hold gatherings.

Technical

This area will need a projector with a screen. There should be a large table with seating for twenty people.

Qualitative

This will be an inviting environment that should encourage people to interact.

Programmatic Requirements

Quantitative

Space — Offices

Occupancy — 5 people

Area — 1800 sf

Activities — This will be where the organization of the facility takes place and any one on one meeting with the staff and manager.

Technical

The offices will need one computer in each office and a central printer, scanner and photo copier. They should each have internet access and a phone. They will each have a desk with a chair for the user and two more chairs for the visitors.

Qualitative

This will be an open room that should be simple in design and have an inviting atmosphere.

Programmatic Requirements

Quantitative

Space — Child care Room

Occupancy — 10 people

Area — 600 sf

Activities — This will be the area where the children who are too young to watch themselves can be supervised by a member of the staff. It will consist of a play area and sleeping area for the children.

Technical

This area will need a camcorder to let the parents view their child. It will need plumbing for the childs restroom and the sink where the child care attendant can have water to clean up any messes that occur.

Qualitative

This should be a child friendly environment with soft lighting for when they want to sleep and bright natural lighting for when they want to play.

Programmatic Requirements

Quantitative

Space — Outdoor Childcare Area

Occupancy — 10 people

Area — 1500 sf

Activities — This will be the outdoor area where the children can play outside while being supervised by a member of the staff.

Technical

This area will need a camcorder to let the parents view their child. It will need access to water so the plants can be watered when needed. It will have child friendly play equipment like a slide and swings.

Qualitative

This should be a child friendly environment.

Programmatic Requirements

Quantitative

Space — Laundry Room

Occupancy — 1 person

Area — 180 sf

Activities — This is where the towels are washed and dried.

Technical

This area will need two washers, two dryers and a utility sink.

Qualitative

This area can be without windows and will be a simple room.

Programmatic Requirements

Quantitative

Space — Locker Rooms

Occupancy — 15 people

Area — 2 @ 4000 sf = 8000 sf
2 @ 2000 sf = 4000 sf

Activities — This will be where the members change clothes to use the facility or to shower and get ready when they are done using the facility.

Technical

This area will consist of lockers, restrooms, showers with attached dressing rooms, a mirrored counter with seats for getting hair and makeup ready. It will also need a hottub and sauna and also a room with couches and a tv where the members can view their children in the child care area. This area will need plumbing for the showers, restrooms and hot tub.

Qualitative

This area show be a comforting environment since this will be where the members change before a workout and shower afterwards.

Programmatic Requirements

Quantitative

Space — Fitness Studios

Occupancy — 20 people

Area — 2 @ 1000 sf = 2000 sf

Activities — This will be where yoga, tai chi, Pilates etc. will be practiced.

Technical

These rooms will have a sound system to play music and a nice floor that will help to alleviate joint pressure. Most of the walls will be mirrored so the users can observe their body form.

Qualitative

These areas will be simple in design to help the occupants concentrate on their exercises.

Programmatic Requirements

Quantitative

Space — Cardiovascular Area

Occupancy — 30 people

Area — 1000 sf

Activities — This will be where members can boost their heart rate by using a treadmill, EFX machine, stair climber, or a stationary bicycle.

Technical

This area will need many electrical plugins for all the exercise machines. It will have about 6 treadmills, 6 EFX machines, 4 stair climbers, and 5 stationary bicycles. There should be speakers to play music and 6 televisions hooked up to a box on each machine so they users can plug their headphones in and listen.

Qualitative

This area should be spacious and have plenty of natural lighting. It should be an inviting atmosphere that is conductive to working out.

Programmatic Requirements

Quantitative

Space — Weight Machine Area

Occupancy — 30 people

Area — 1000 sf

Activities — This will be where members can tone their muscles by using weight machines.

Technical

This area will consist of an assortment of weight machines that are user friendly.

Qualitative

This area should have plenty of natural lighting.

Programmatic Requirements

Quantitative

Space — Free Weights Area

Occupancy — 30 people

Area — 1000 sf

Activities — This will be where members can tone their muscles by using free weights.

Technical

This area will have an assortment of free weights.

Qualitative

This area should have plenty of natural lighting.

Programmatic Requirements

Quantitative

Space — Meditation Room

Occupancy — 15 people

Area — 2 @ 1000 sf = 2000 sf

Activities — These will be simple rooms where members can practice meditation. It will not be accessible at all times so the users will not be disturbed.

Technical

This room will need plumbing for a water fall or fountain that will help to soothe the occupants. It will have moveable chairs and tables so the space can be rearranged to fit the user.

Qualitative

This room will be relaxing. It should be a simple room that is condusive to meditation.

Programmatic Requirements

Quantitative

Space — Swimming Pool Area

Occupancy — 28 people

Area — 6500 sf

Activities — This area will consist of an aerobic pool and lap pools.

Technical

This area will need plumbing for the pools.

Qualitative

This area should have a lot of natural light and large windows so when the weather is nice out is can be opened up to let in natural air.

Programmatic Requirements

Quantitative

Space — Outdoor Gardens

Occupancy — 20 people

Area — 20,000 sf

Activities — This area will be a place where the members can come to be with nature.

Technical

This area will need plumbing to water the plants. It will have a labyrinth. It will have many different trees and plants and places to sit so members can have a place to relax within nature.

Qualitative

This will be a peaceful area.

Programmatic Requirements

Total square footage of building = 35,000sf

I estimate the total cost of the building to be at $4 million.

Sustainability Essay

What does it mean for a building to be sustainable? Sustainability is a hard word to define. It seems that in every region of the world there is a different definition offered. According to the World Commission on Environment and Development, sustainability is commonly interpreted to mean "meeting the needs of the present without compromising the ability of future generations to meet their own needs." William McDonough says that this statement should be expanded to include "all parts of nature to meet their own needs now and in the future". Sustainability is using natural materials and building systems that won't harm the users or the environment.

Sustainability should always be incorporated in architecture. Every architectural firm should have sustainability as one of their top priorities in designing and building. It seems to be very unethical if a firm does not think about sustainability at all. If we as architects are not incorporating sustainability into our designs then how can we expect anyone else to? In the past we have not thought through the effects of our actions on the planet. We've thoughtlessly harvested old growth trees, drilled for oil and mined coal. We've put thousands of harmful chemicals into the air from car exhaust and from manufacturing luxuries. The effects of our actions are showing up in many places like the green house effect and the widening of the ozone hole to an ever increasing shortage of old growth trees and oil. In order to keep our planet from deteriorating even further it is very important that we treat it with as much care as possible. Everything that we take from the environment should be replenished in some way. Anything being built should put as little impact on the environment as possible.

A huge problem in our world is population growth. Because of this we continue to use more resources then the planet can produce. It is said that one-fourth of the world's population lives in industrial countries and consumes eighty percent of the world's goods. The remaining three fourths, many whom live at or below minimal subsistence levels, consume only twenty percent of the world's goods. (DesJardins, p. 394). Those living in the USA, Europe and Japan consume three-fourths of the world's energy production. If present world energy production were to be shared

equally, Americans would have to get by on only one-fifth of the per capita amount they presently consume. We cannot keep living the way we are living today. We will soon be out of resources and then what will we do? Right now there seems to be two options to manage this. One is to control either the type or rate of economic growth and the second is to control population growth. It is probably a combination of the two that is needed. But how would we do either of these two? What is the right rate for economic growth? There is a limit to growth and it seems to be in the near future. Economic development though, can continue indefinitely. Some things that can be done to control economic development could be to heavily tax those that use energy and for those that use little energy to reduce their income taxes. For sustainable development to succeed, the harvesting rates of renewable resources should not exceed the regeneration rates and waste emissions should not exceed the renewable assimilative capacity of the local environment. And how would we control population growth? A conservative estimate says that the population will double over the next fifty years. If the population continues to grow, drastic measures need to take place that will ensure we have the resources to continue to live.

One thing to think about when designing sustainably is how important it is to keep in touch with nature. "Nature" has come to be a word that is interchangeable with sustainability. Nature must be brought into consideration when anything is built. The architect and builder should do their best to not disturb nature. The building should flow with the natural world and not seem out of place next to it and work with nature as much as possible. This means using passive heating and cooling and natural ventilation whenever possible. If we use nature we can reduce the dependency of using artificial light and mechanical systems and avoid systems that are expensive and noisy to operate. According to Benyus (1997), "most of the environmental damage is done before materials ever reach the consumer." This is something that most of us don't give much thought to. By studying nature we can find out how to avoid this problem. Nature has a series of tricks she uses so that she doesn't destroy her surroundings. We have also found that animals are making materials that are stronger then anything humans have created. It is to our benefit to study these animals and find ways to mimic the materials they make. The book Biomimicy explains how by studying nature we can learn better ways to harness energy.

Sustainability Essay

Plants use photosynthesis to gain energy from the sun and we have mimicked this behavior in photovoltaic panels. But we still have a way to go before these photovoltaic panels are as efficient as plants. Scientists are studying how plants gain, store and then use energy and are trying to find a better way to use this and help us conserve energy. This is interesting because plants are so small and use minimal space to store energy while we use huge photovoltaic panels to help cut energy consumption in our homes. Through more studies, we are finding ways to make the panels smaller and ultimately better at storing and using energy

We can study nature and apply our findings to design. According to Green Architecture, nature should be our guide for building (Edwards, 2001, pp. 24-25). There are five things that should be taken into consideration when building. The first is to learn from nature. Nature uses a minimum of resources to create maximum richness and beauty. When we learn from nature we take into consideration how things interact with each other. We realize that the things we are putting into a building will eventually come out in a different form, usually one of waste. The second point is to use nature's models to inform. Since nature has been put to the test and survived it is smart for us to use these shapes in our own architecture to provide a responsive environment. The third is to make nature explicit. Nature should be brought into the built environment. It is known to purify the air, uplift the spirit and make a building a more enjoyable place to be. Whenever possible, flowing water, lush vegetation, and plenty of natural light should be used within the building as well as outside it. The fourth consideration is to use nature for ecological accounting. Programs like Leadership in Energy and Environmental Design (LEED) help people to identify what their building needs are. They are guidelines for those that want to do something right but don't always know what would be best. It is important for programs like this to continue to help find what is needed in certain situations to take some burden off the designer. The final thing to remember is that every species is a designer. Every species is involved in designing and contributing to our ecosystem as a whole. We can examine the homes that animals create and take design cues from them.

It is important to take into consideration what will happen to the building when it is not needed for what it was originally planned for. Build

ings today are not built to last. It seems they end up staying for twenty years or so and then are torn down. The materials that go into buildings are usually quite durable and last longer than the building will be needed. What happens when the life of a building is up? The building is torn down and the pieces are brought to sit in a dump. Since our dumps are already on the verge of full this is not a practical solution today. This means that the buildings should be designed with much thought and consideration and be able to last for many years to come or that the materials will start to decompose when the building is not needed anymore. It is a good idea to have buildings that are adaptable so if the use of the building changes it is easy to rearrange the spaces. Waste is a huge problem in our society today. According to Green Architecture (Edwards ed., 2001, p. 13), "architecture accounts for roughly half of all resource consumption in the world (materials, energy, water, and the loss of fertile agricultural land)". The United States has the most waste in the world. Spiegel and Meadows (1999, p.2) say that, "each day we produce enough garbage to fill 63,000 garbage trucks, which "lined up....would stretch from San Francisco to Los Angeles (about 400 miles)"." These wasteful habits are destroying the health of the population. Many things sent to the landfill could be easily used by someone else. Programs need to be put into play that helps to reuse materials not wanted by one person. There is a reclamation center called Urban Ore in California that collects used items like toilets and sinks and even doors and windows and allows others use take them for a fraction of the price. If more programs like this were put into play we could help to control the waste problems that we are having today.

When building new structures, sustainable materials should always be used. The architects and builders should use as much care as possible in determining which materials to use. Materials that are easy to replenish include stone, clay, lime and timber. These materials are also easy to recycle and produce little or no pollution. Finding materials that are truly sustainable can sometimes be a challenge. How do you know if the material is truly sustainable? It is important to look out for any old statement that the product is good for the environment. Companies have been using eco-friendly words to their advantage in order to get more people to buy them. These materials sometimes are not any better than the next. When searching for materials, research should be done to verify the eco-friendli

ness of them. There are many resources put out that are trust worthy and name companies that offer environmentally friendly materials. There is a non-profit organization in the United States called Green Seal that has a system of labeling products. They will put the "Green Seal of Approval" on any products they come by that are environmentally friendly. The materials you choose should not be hazardous or energy-intensive to make. They should be obtained locally, made from recycled products, and be reusable.

Materials should be used that are of little risk to the users. Sick Building Syndrome is a huge concern in our society today. According to the World Health Organization, "as many as 30 percent of buildings experience some kind of sick building syndrome problems" (Spiegal & Meadows, 1999, p. 11). Breathing indoor air can be worse than breathing outdoor air. Poor indoor air quality can be very expensive for employers since employees will end up being sick more than usual. People can suffer from headaches, nausea, rashes and asthmatic attacks. It all has to do with materials we build with. It has been found that nearly 800 commonly used building materials are toxic and over fifty of these are carcinogenic (Fox, pg. 48). It is important to research products and use those that have little or no toxic components. Using things like natural light and plant life indoors is also known to have positive effects on the user.

Materials should be chosen that are low in embodied energy. Embodied energy is the energy used to process and transport materials. We should be using materials that keep this to a minimum. In order to have a sustainable building local materials and crafts should be used. It does not make sense to bring materials in for a building from half way across the planet. That would be a huge drain on resources and does not help to make a sustainable building. Materials should be local so that they are easy to transport and do not require much extra energy.

Another thing to remember in sustainable design is how to save energy. Energy usage is extremely hazardous to the environment. "Energy use in buildings accounts for fifty-percent of CO2 emissions" (Fox, 2000, p. 49). Americans tend to waste a lot of energy. According to Spiegel and Meadows (1999, p.2), "the Department of Energy has estimated that improve

ments in energy efficiency of buildings, utilizing existing and readily available technologies, could save $20 billion annually in the United States, and create 100,000 new jobs." There are numerous things that can be done to save energy in buildings. Natural things like allowing plenty of natural light into a building is a great way to cut energy costs. Installing solar panels and wind turbines is a clean way to bring power to a building. Also little things like using energy saving light bulbs will help to save energy.

Another factor that contributes to the waste of energy is urban sprawl. Urban sprawl is a huge problem right now. Cities are spreading out for miles. People are using up more fuel than ever because they have a longer distance to travel between home and work. Things can be done to combat this problem. Existing buildings can be remodeled to fit the needs of another company. Many buildings lie deserted because businesses are being moved outside the city. Urban sprawl began about the time the automobile came out, more than fifty years ago. Before the First World War, neighborhoods were made up of free-standing houses within walking distance of the shopping street. The overall density was about fifteen people to an acre. After the Second World War, houses were built farther away from each other and roads were built between them. Overall density dropped to two people per acre. Between 1982 and 1997 29.9 million acres of land was developed. Most of this land was valuable forests, farmland and pastureland. Studies have shown that while the developed area has significantly increased, population in these areas has barely increased. For example: between 1979 and 1990, the developed area of Los Angeles has grown by 300 percent while the population has increased by only forty-five percent and in St. Louis the developed area has increased by 355 five percent while the population has only increased by thirty-five percent. An article put online by the Sierra Club gave the top ten reasons why sprawl is hazardous to your health. Some of the reasons that made the list are, "*It empties your wallet.* Families in sprawling neighborhoods spend $1,300 more each year on transportation than those in denser areas. Wouldn't you feel sick if you squandered your kid's college tuition hauling them to kindergarten?" A second example was, "*It can kill you.* The more you have to drive the more likely you'll be one of the 43,000 annual traffic fatalities." A third example was, "*It scars your lungs.* All that driving

pollutes the air, causing respiratory illnesses. When traffic was restricted in Atlanta during the 1996 Olympics, asthma-related emergencies dropped 42 percent." The Sierra Club presents these reasons in somewhat of a humorous way but they are all true facts and ones that our hurting our lives. It is facts like these that we need to take into consideration when we are designing. We need to avoid contributing to sprawl as much as we can. The effects of urban sprawl are numerous. It makes more people dependent on cars which in turn pollute our air and water. It increases traffic on our neighborhood streets and highways. Currently every year the average American spends the equivalent of fifty-five eight-hour workdays behind the wheel.

There are some cities that have tried to prevent urban sprawl. London realized long ago that their city couldn't continue to expand and they drew up a policy in 1945 to stop urban sprawl. This policy called for a clearly defined green belt which cannot be built upon. It helped to stop expansion of the city and preserve the rural surroundings. Portland, Oregon also has started a similar policy. Increasing urban density by deliberate land use policies is a key for reducing urban sprawl. To persuade people to give up suburbs they have to be offered the special urban qualities that are absent in sprawling cities: vitality, diversity, mixed activities, social amenities, and cultural facilities.

There are many things we can do to help prevent this deterioration of our planet. Plan pedestrian-friendly developments where people have trains and bus services accessible, build more affordable housing next to transit and jobs, and support greater public involvement in the transportation and land-use planning process.

It is important to think about sustainable design. For the health of the users and the planet it is important to incorporate environmentally friendly materials in everything we build. If we keep designing the way we have we will soon run out of resources and continue to fill our landfills full of waste. If we look to nature as a design example we will develop a world that will make us happier and put little strain on the environment so we can continue to live on this planet for many years to come.

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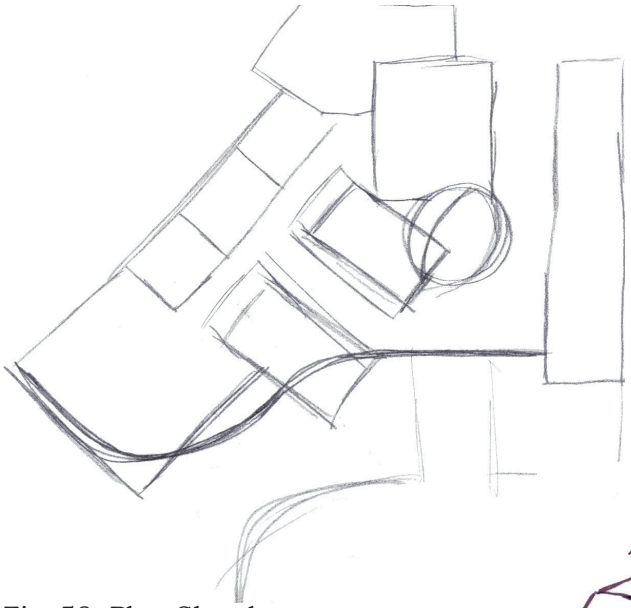


Fig. 58: Plan Sketch

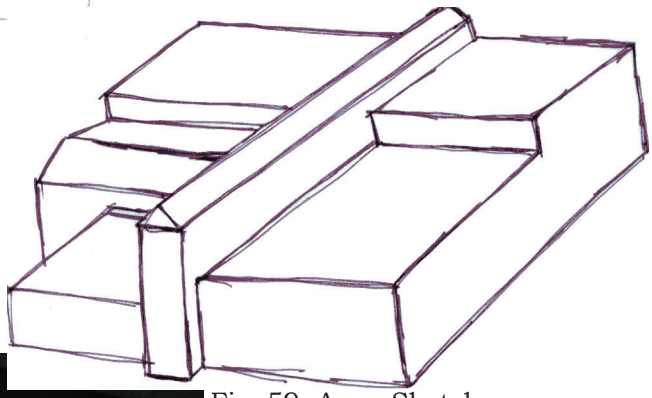


Fig. 59: Axon Sketch

Fig. 60: Clay Model 1

Fig. 61: Space Planning 1

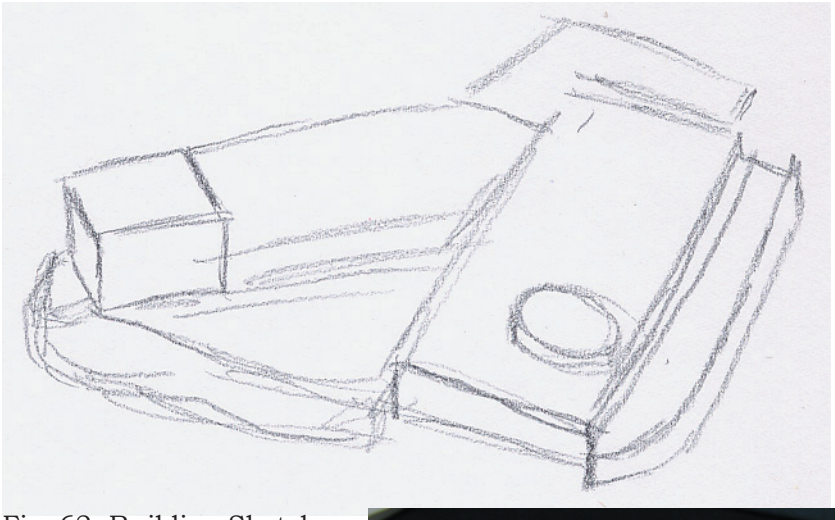


Fig. 62: Building Sketch

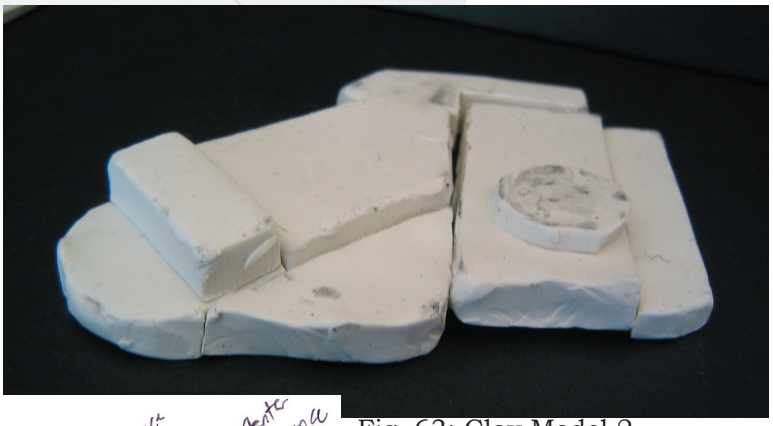


Fig. 63: Clay Model 2

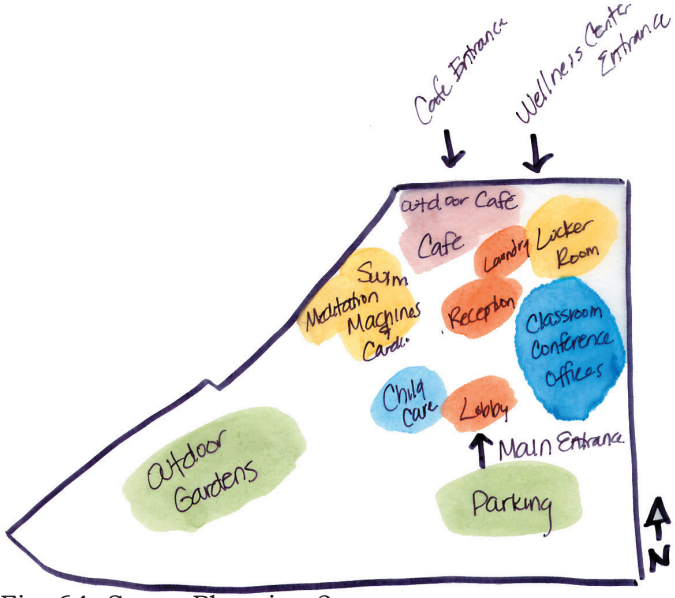


Fig. 64: Space Planning 2

Fig. 65: Clay Model 3

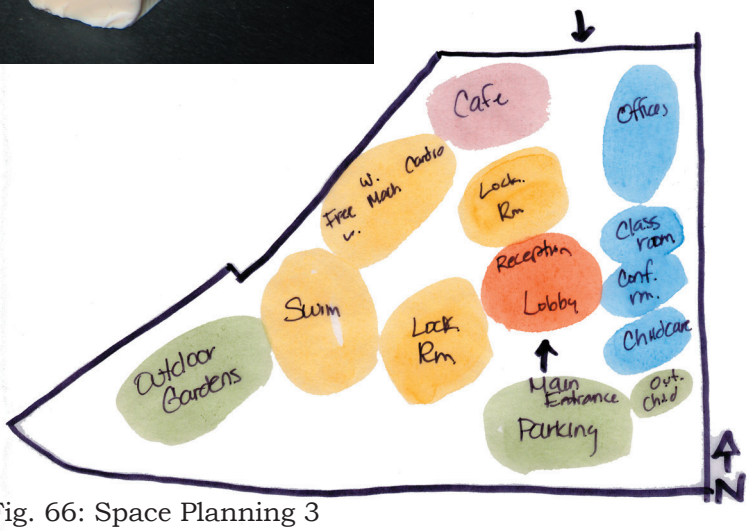


Fig. 66: Space Planning 3

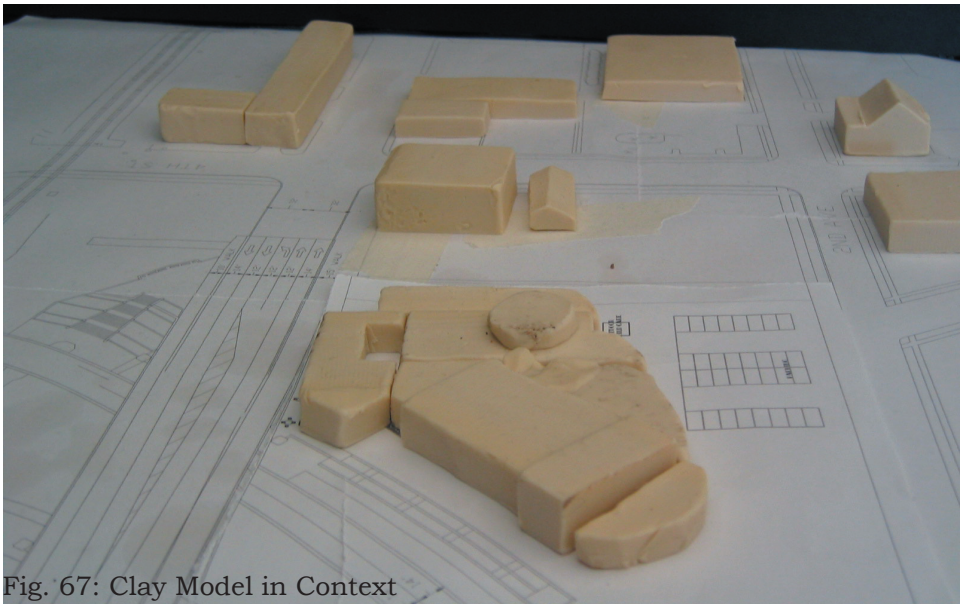


Fig. 67: Clay Model in Context

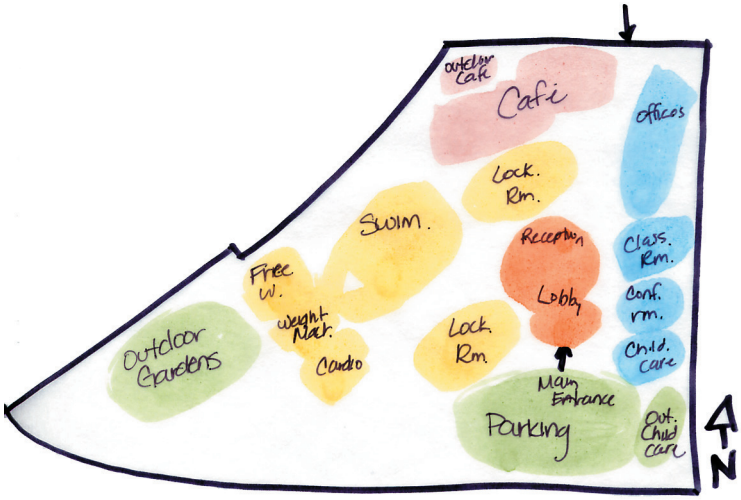


Fig. 68: Space Planning 4

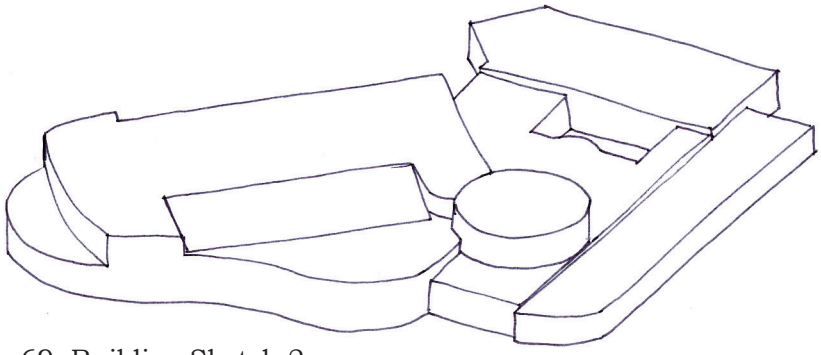


Fig. 69: Building Sketch 2

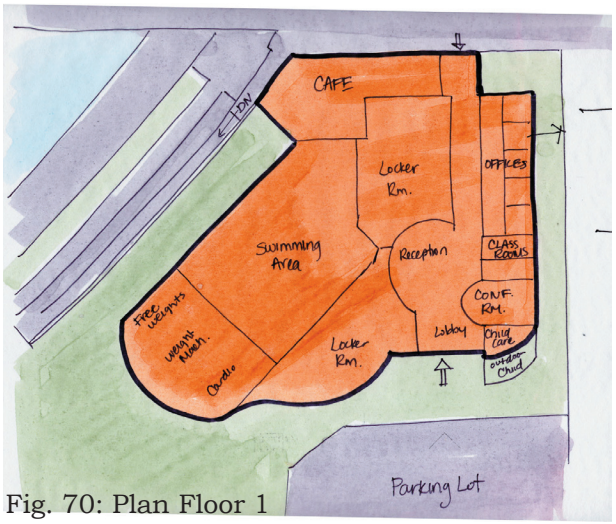


Fig. 70: Plan Floor 1

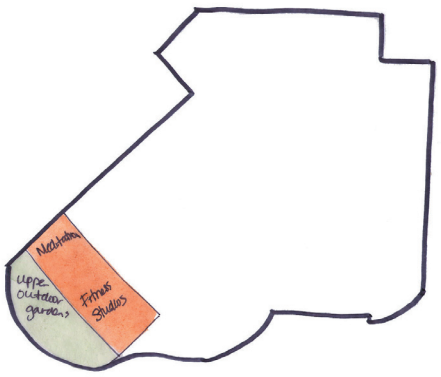


Fig. 71: Plan Floor 2

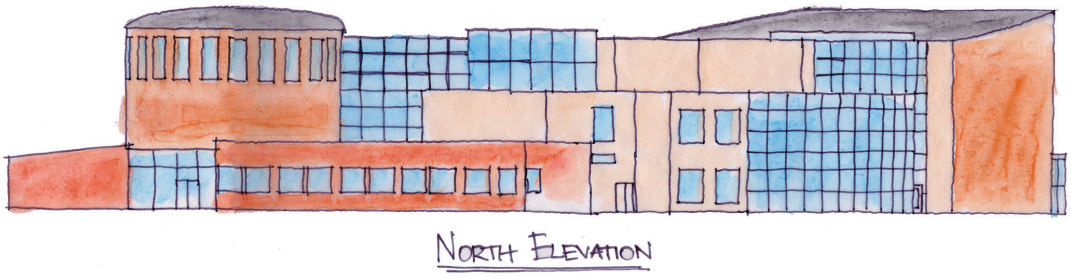


Fig. 72: North Elevation

Fig. 73: East Elevation

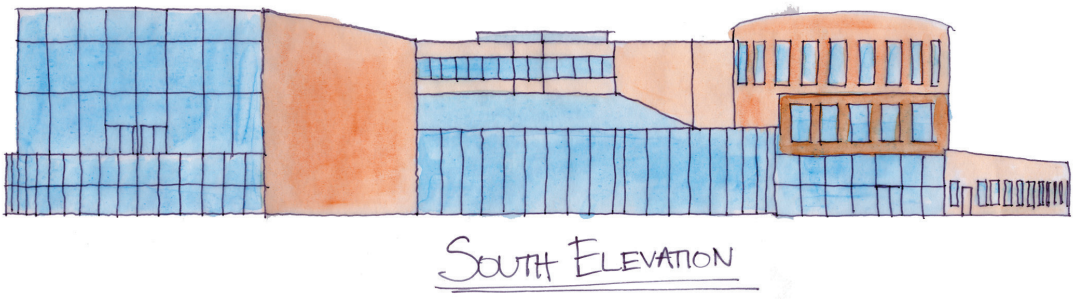


Fig. 74: South Elevation

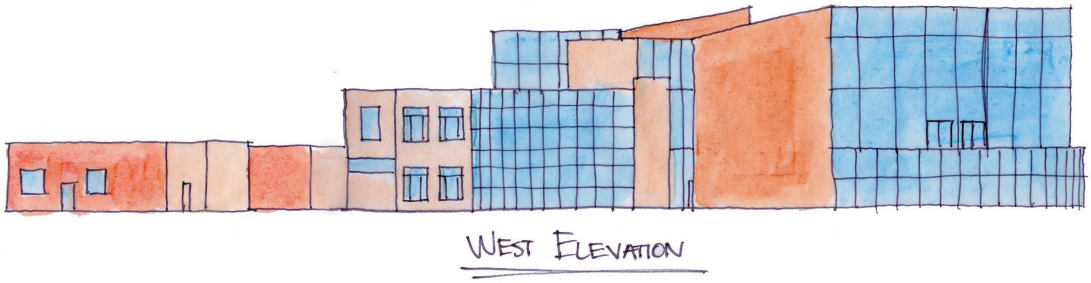


Fig. 75: West Elevation

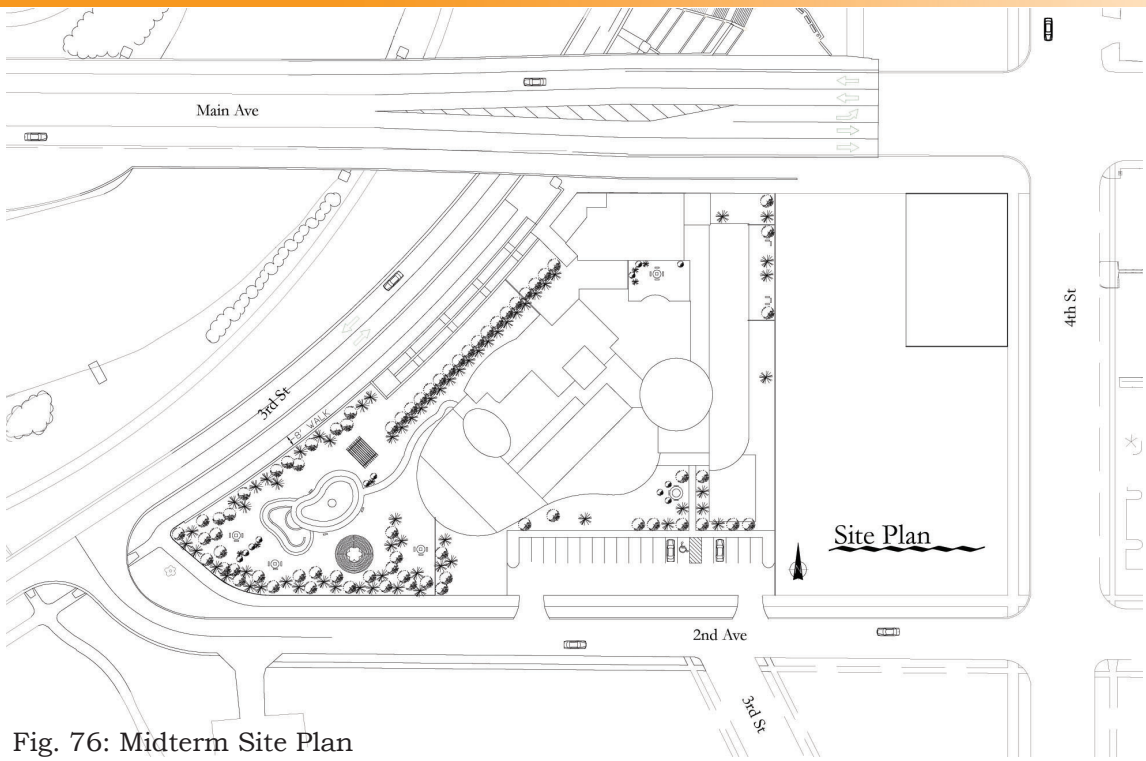


Fig. 76: Midterm Site Plan

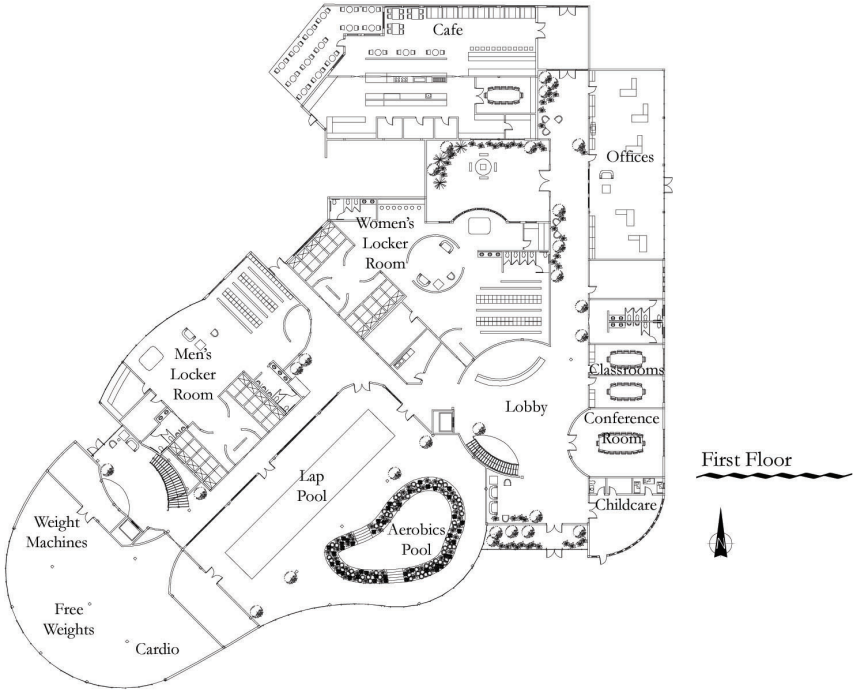


Fig. 77: Midterm First Floor Plan

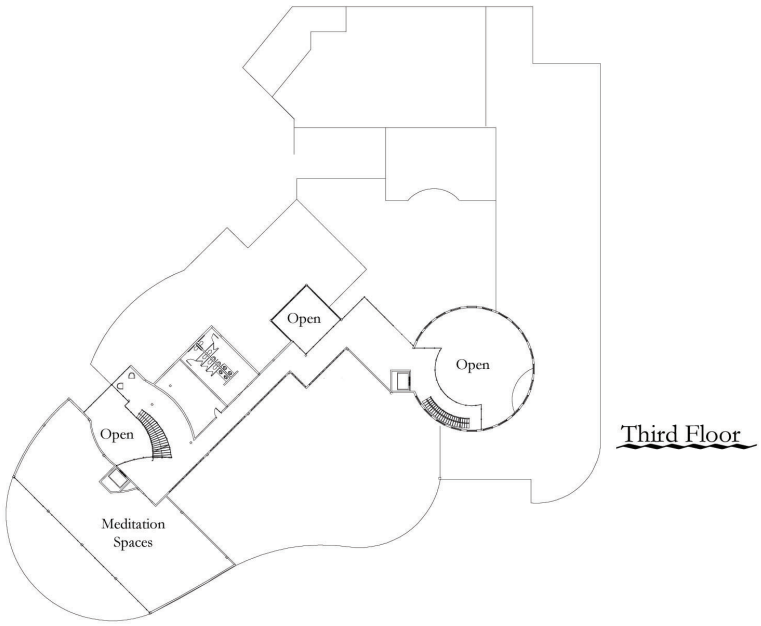


Fig. 78: Midterm Third Floor Plan

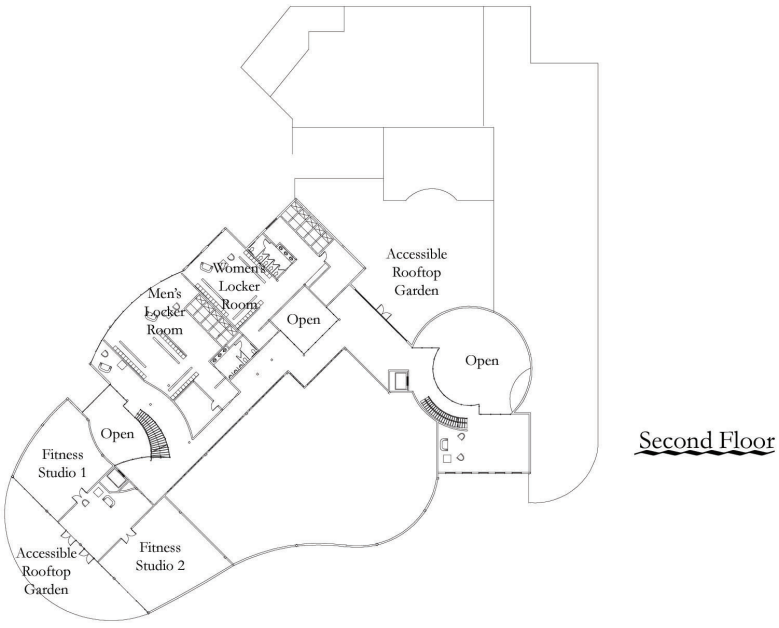


Fig. 79: Midterm Second Floor Plan

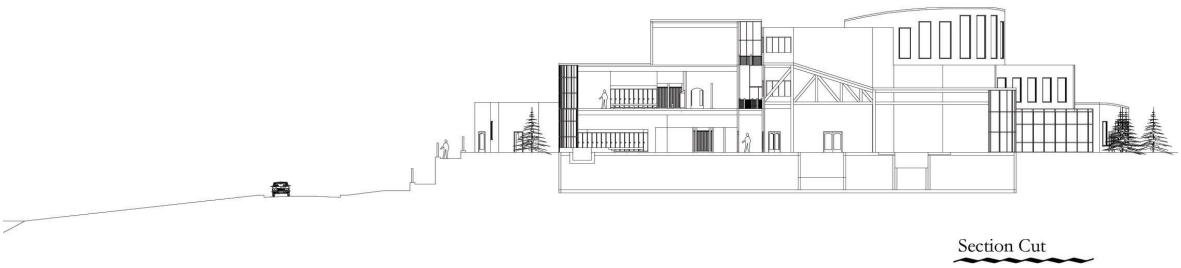


Fig. 80: Midterm Section Cut

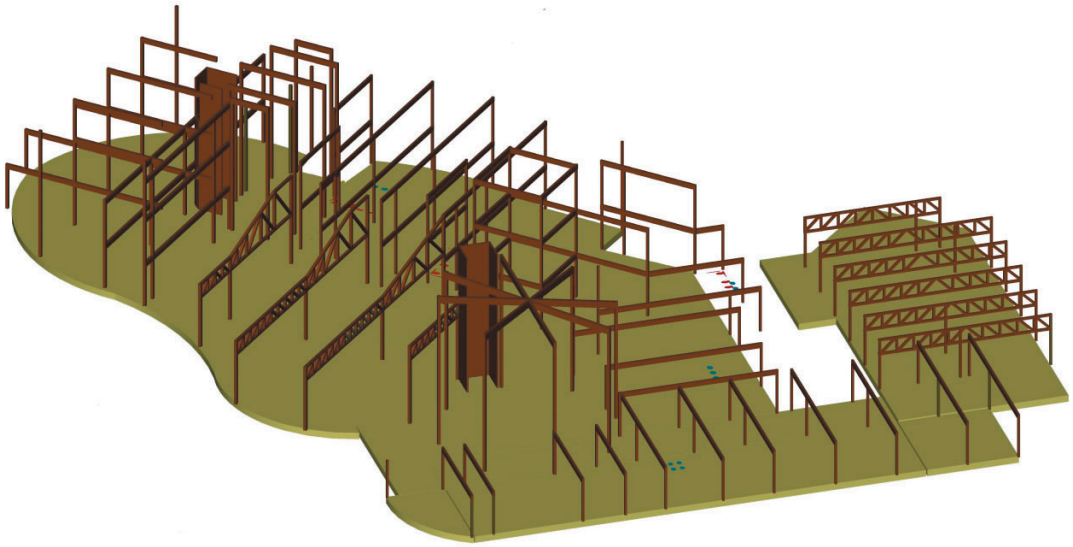


Fig. 81: Midterm 3D Structural Model

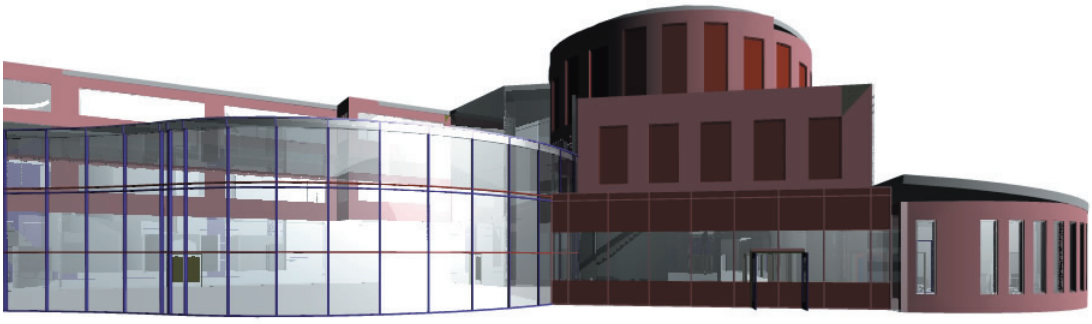


Fig. 82: Midterm South Entry Perspective

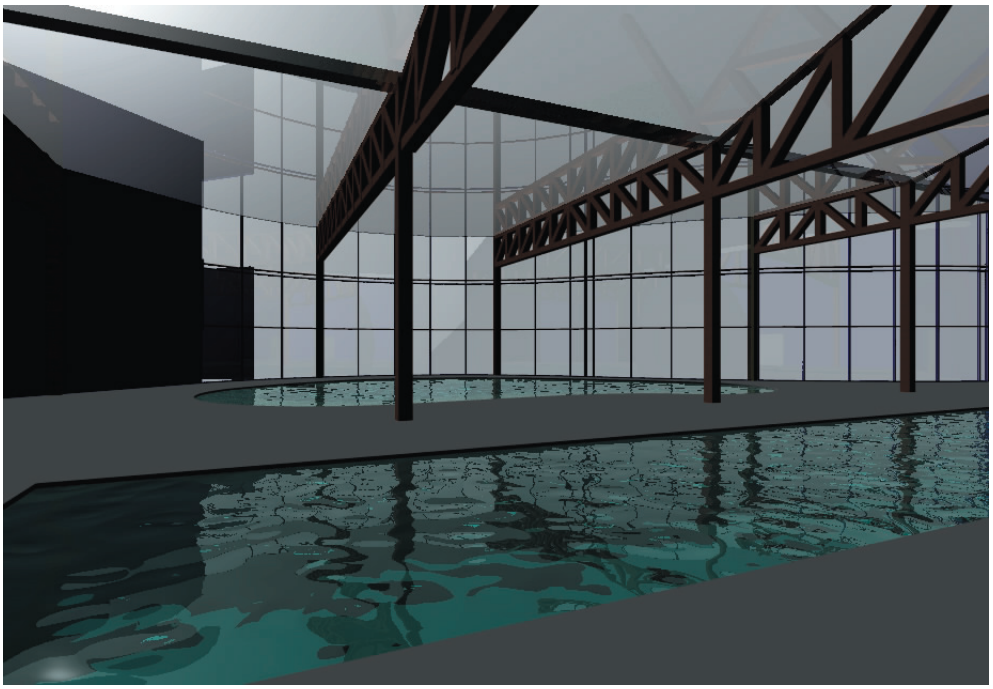


Fig. 83: Midterm Pool Perspective

Final Design

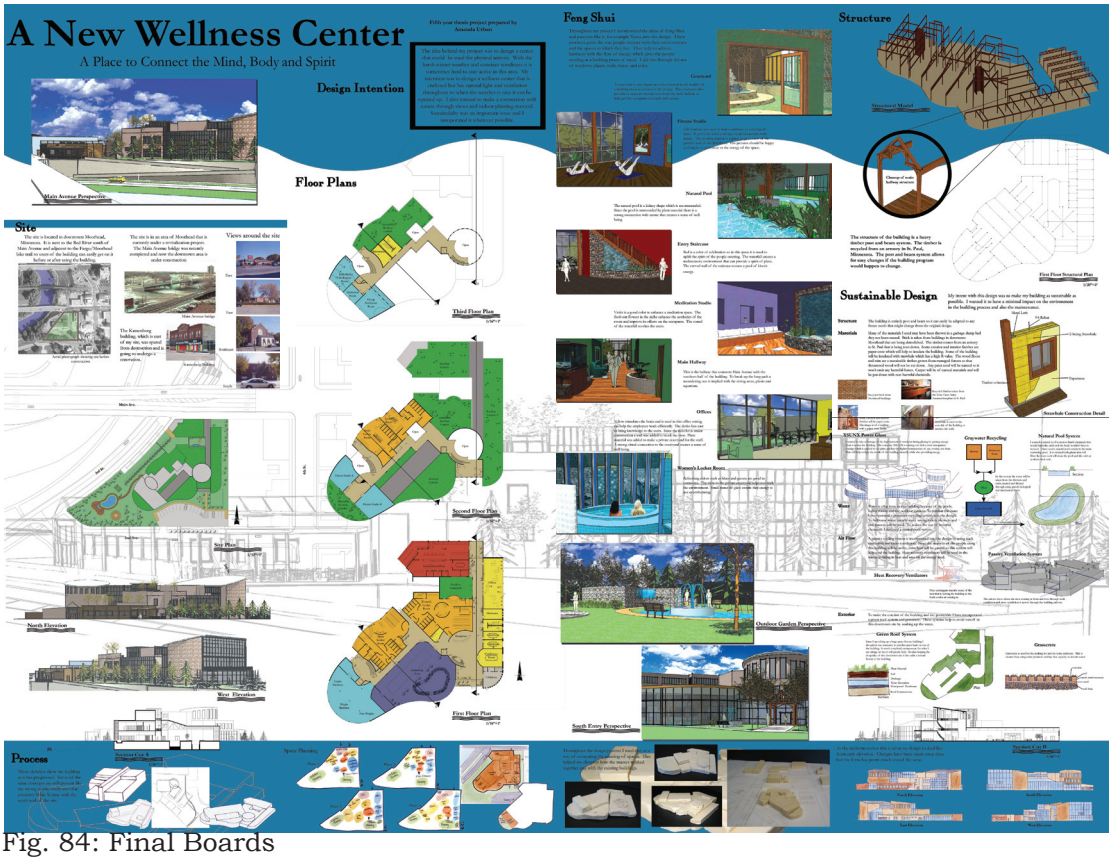


Fig. 84: Final Boards

Fig. 85: Final Board 1

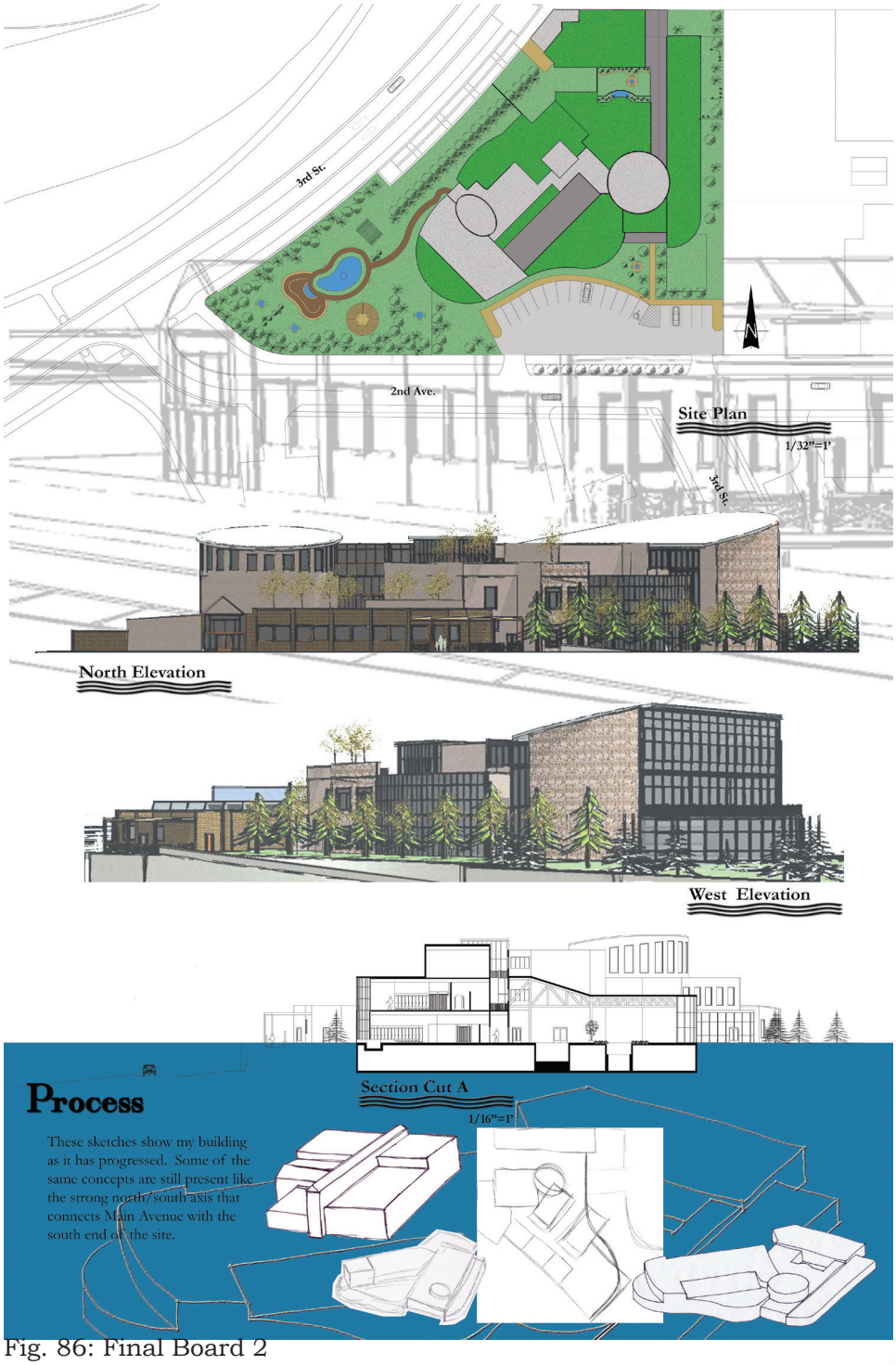


Fig. 86: Final Board 2

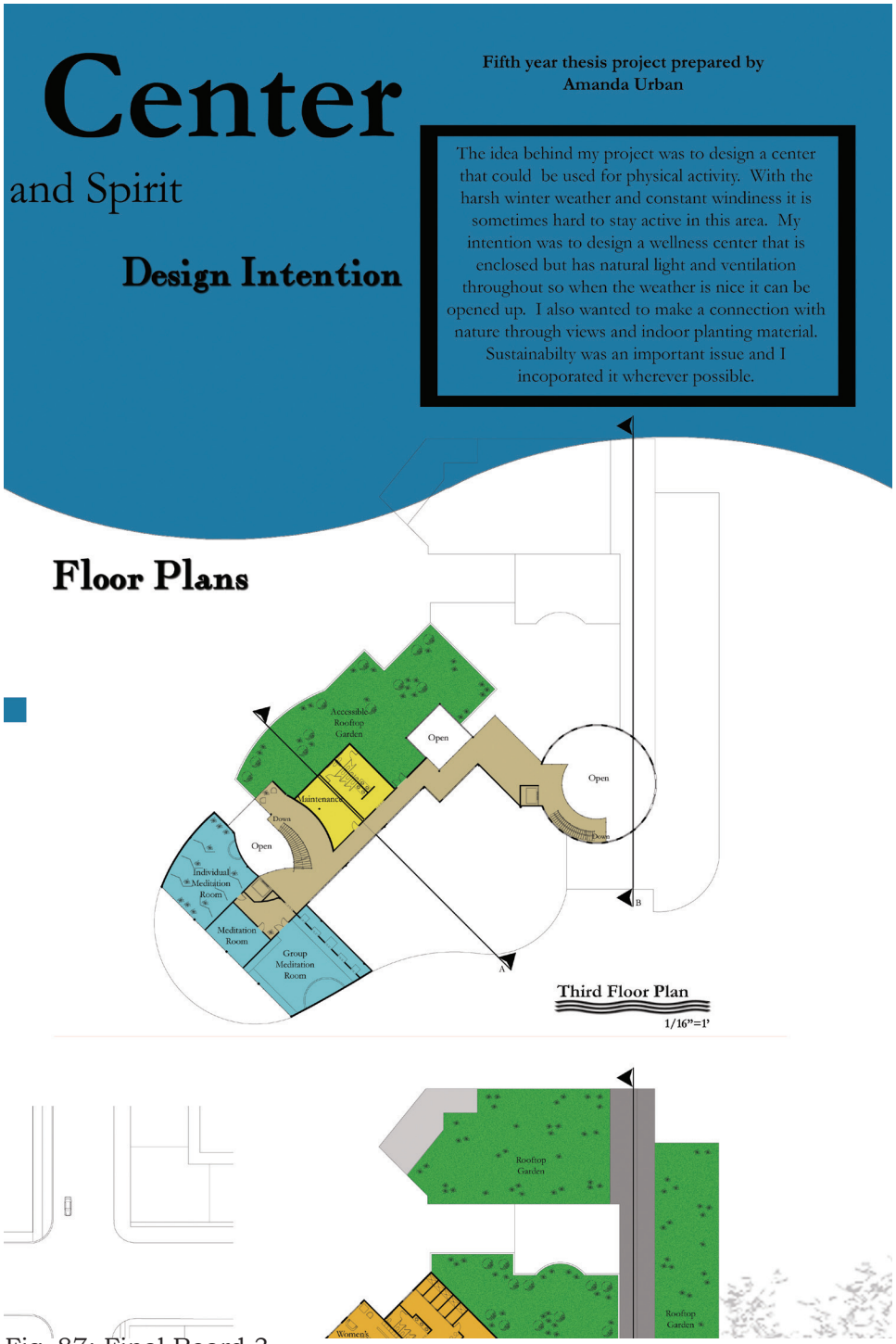
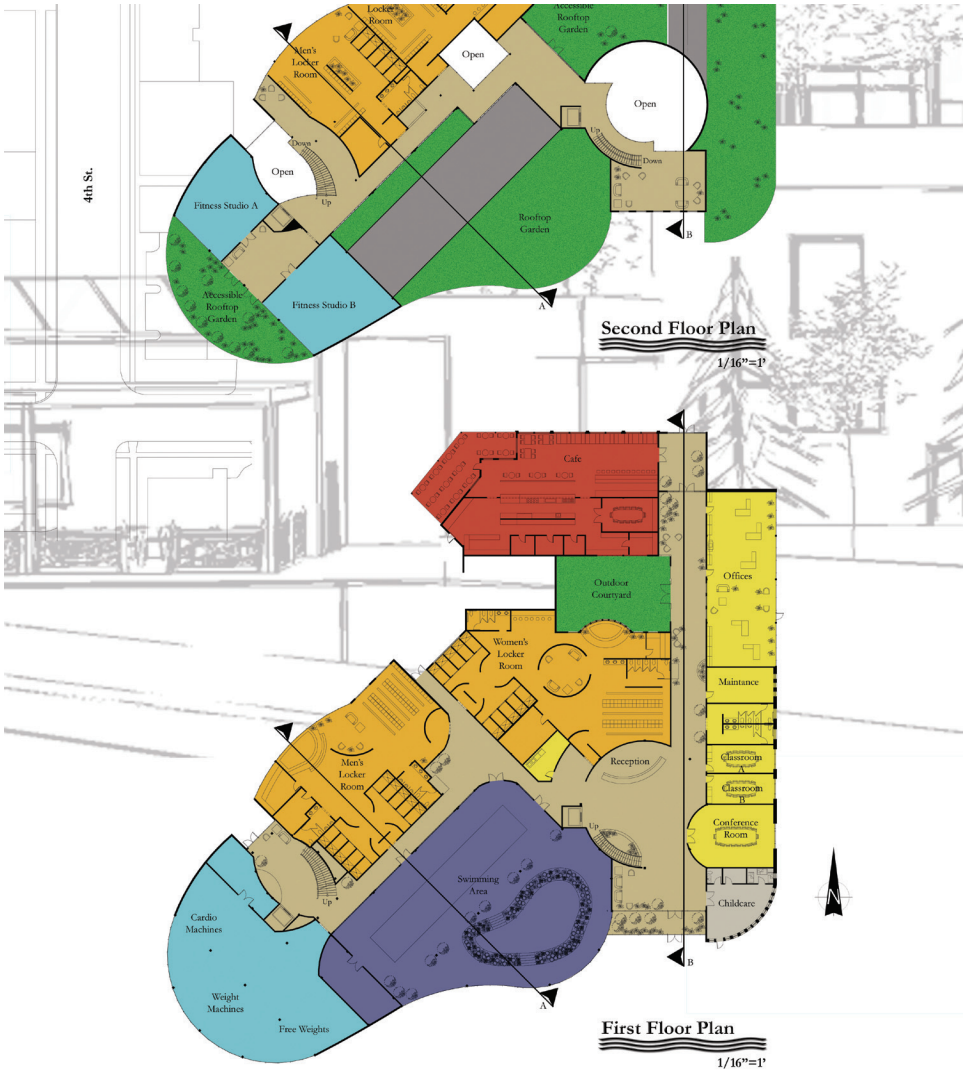


Fig. 87: Final Board 3



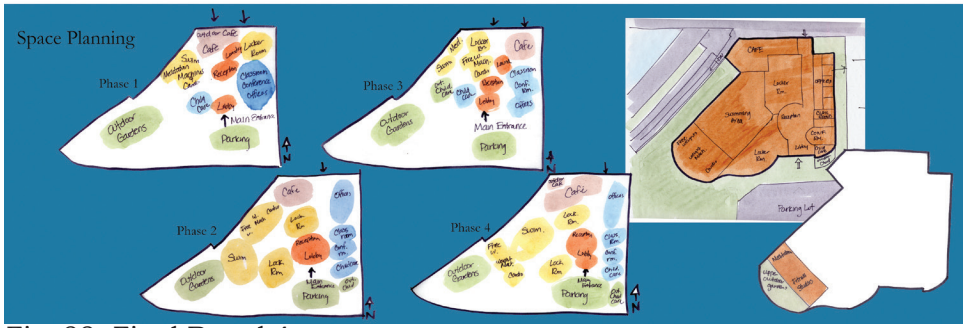


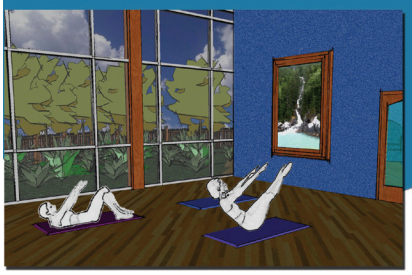
Fig. 88: Final Board 4

Feng Shui

Throughout my project I incorporated the ideas of Feng Shui and practices like it, for example Vastu, into the design. These practices guide the way people interact with their environments and the spaces in which they live. They help to achieve harmony with the flow of energy which gives the people residing in a building peace of mind. I did this through the use of windows, plants, walls, water, and color.

Courtyard

A courtyard is very important when located in the middle of a building because it focuses the energy. The courtyard also provides a space to wander into from the main hallway to help get the occupants in touch with nature.

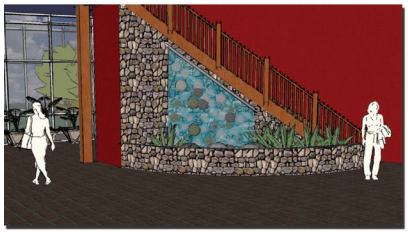


Fitness Studio

Tall windows are used to help contribute to a feeling of space. It gives the users a strong visual connection with nature. The rooftop garden is a place to get a view of the gardens and of the Red River. The pictures should be happy and bright to contribute to the energy of the space.

Natural Pool

The natural pool is a kidney shape which is recommended. Since the pool is surrounded by plant material there is a strong connection with nature that creates a sense of well being.



Entry Staircase

Red is a color of celebration so in this space it is used to uplift the spirit of the people entering. The waterfall creates a multisensory environment that can provide a spirit of place. The curved wall of the staircase creates a pool of kinetic energy.

Meditation Studio

Violet is a good color to enhance a meditation space. The fresh cut flowers in the niche enhance the aesthetics of the room and improve its effects on the occupants. The sound of the waterfall soothes the users.

Main Hallway

This is the hallway that connects Main Avenue with the southern half of the building. To break up the long path a meandering one is implied with the sitting areas, plants and aquarium.

Offices

Fig. 89: Final Board 5

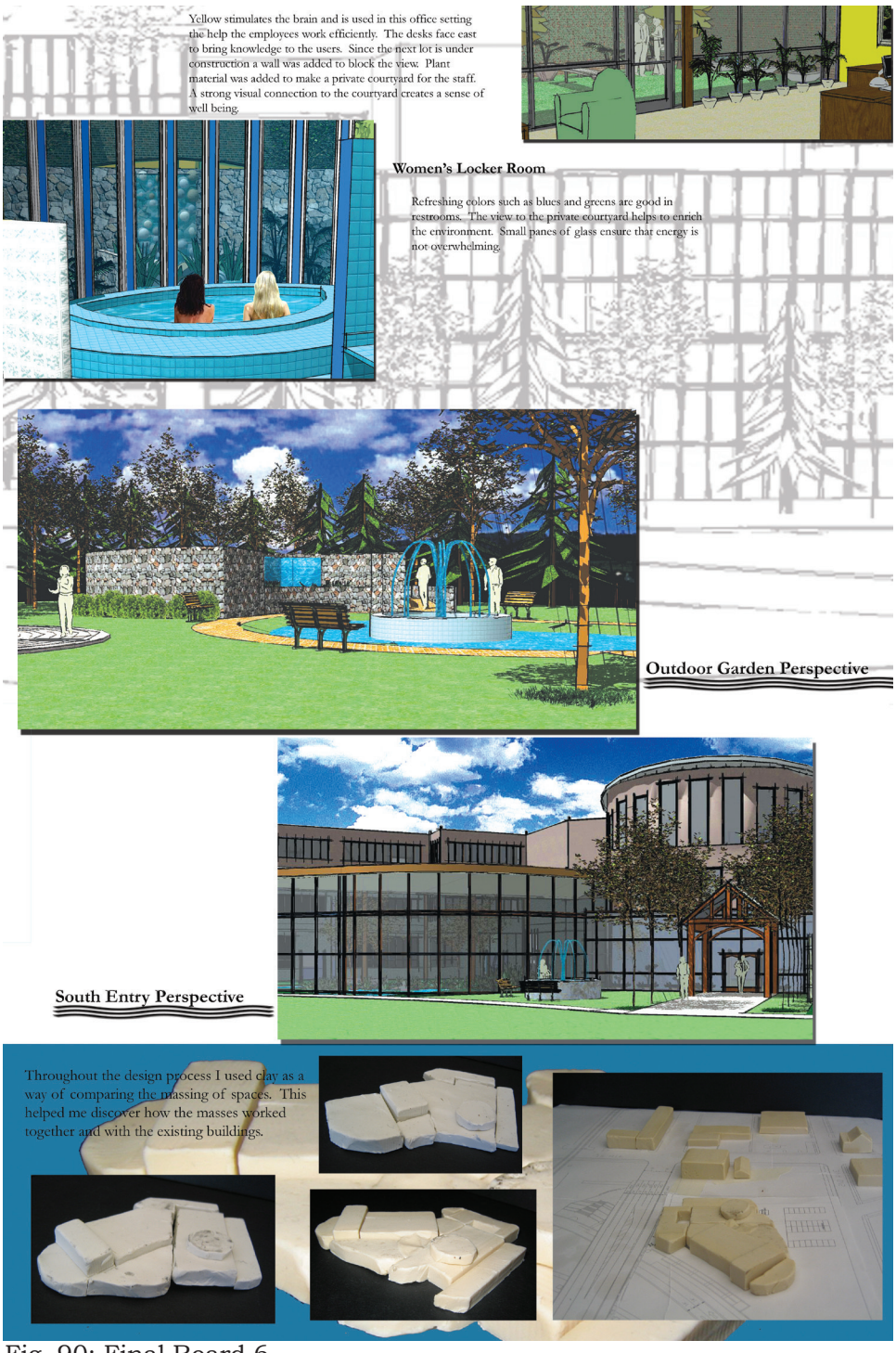


Fig. 90: Final Board 6

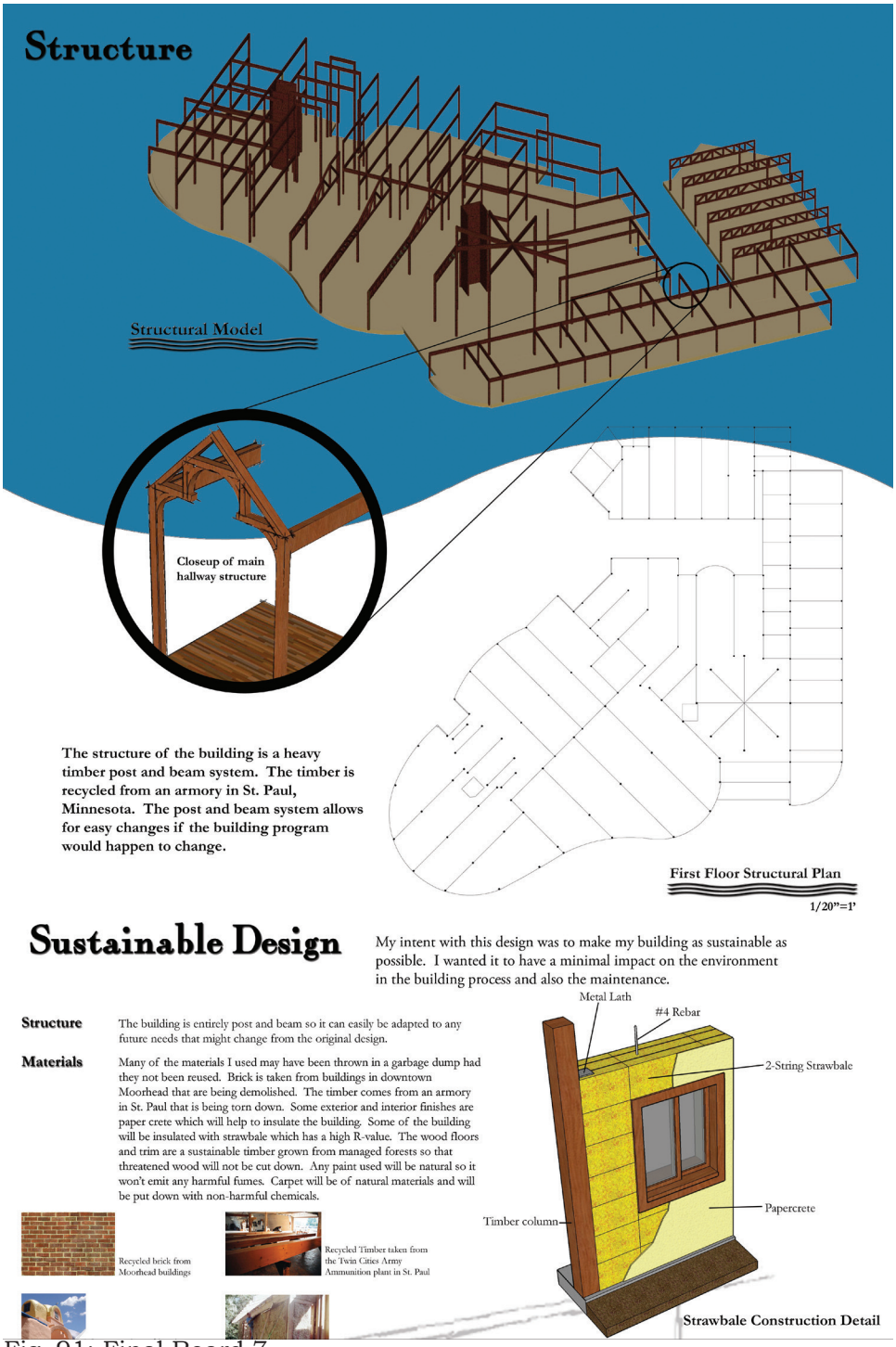


Fig. 91: Final Board 7

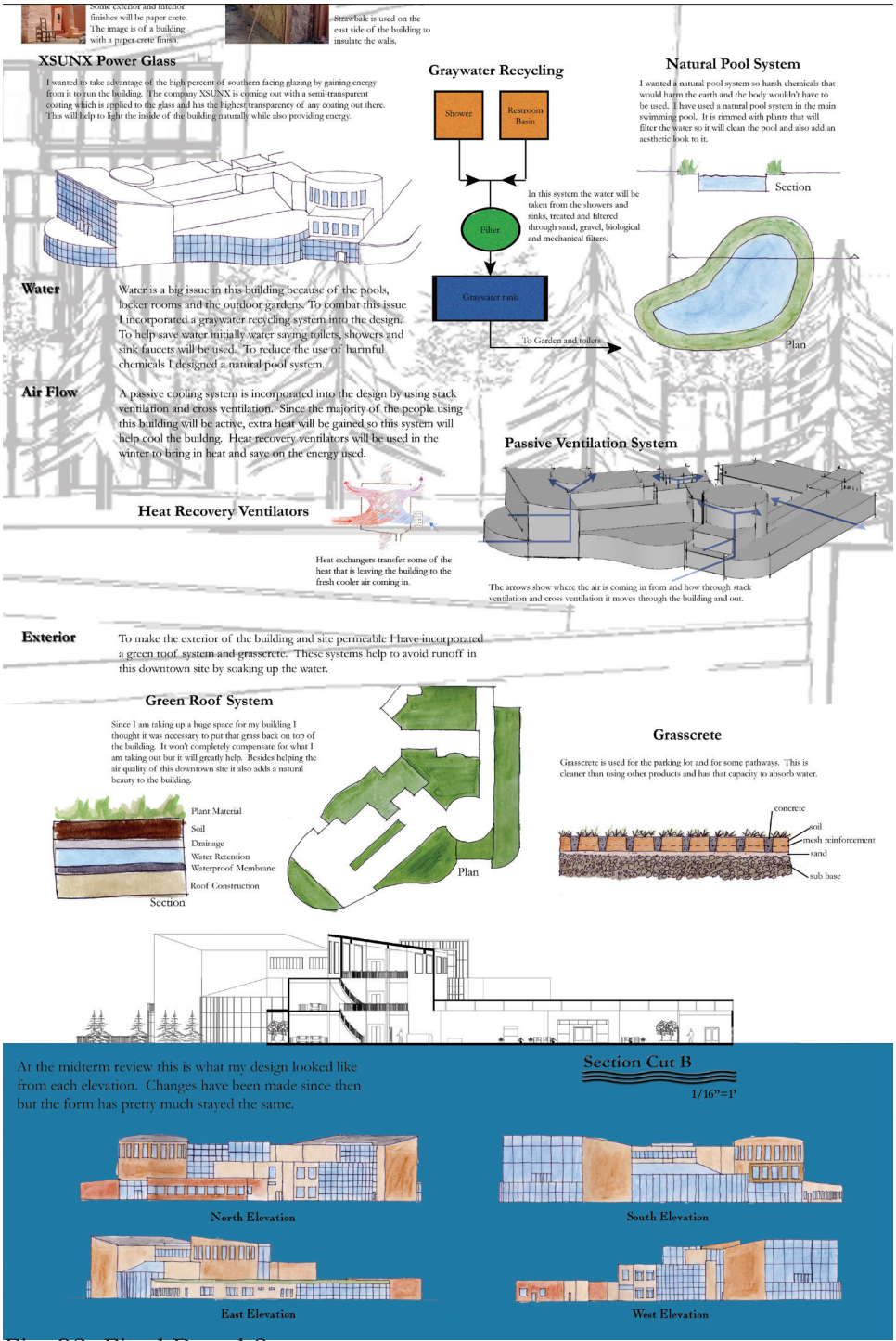


Fig. 92: Final Board 8

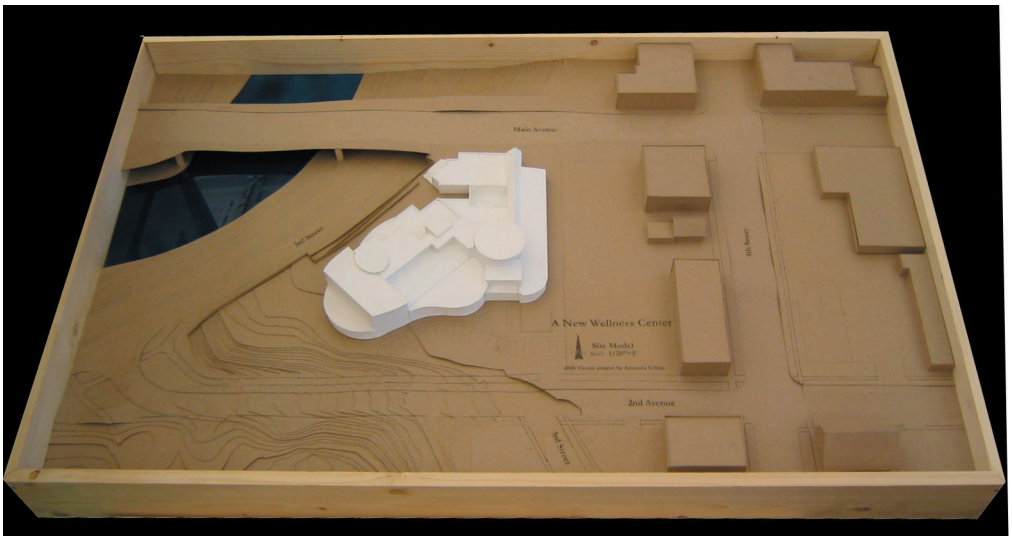


Fig. 93: Final Site Model

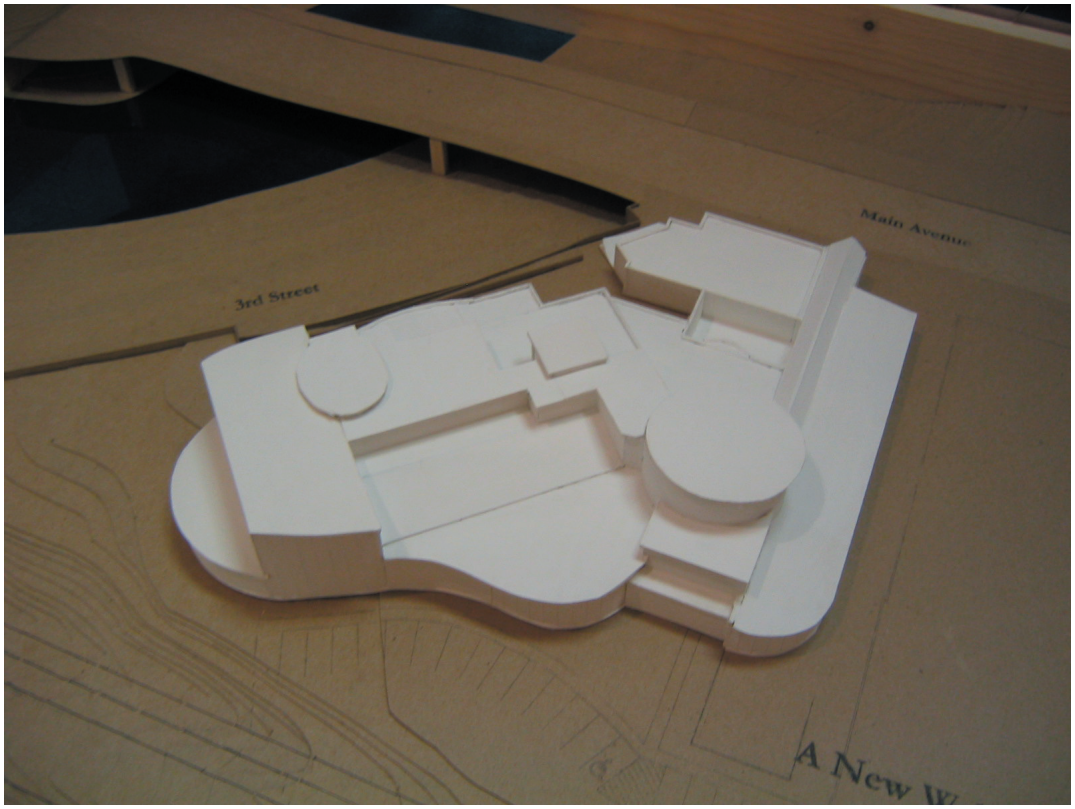


Fig. 94: Final Building Model

Fig. 95: Presentation

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Appendix

Figures

Appendix

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Appendix

Statement of Intent

There is a lack of physical activity in the lives of Americans. This decrease in physical activity is leading to an increase in obesity rates. We need to find ways to get people to incorporate more physical activity in their lives.

I propose that the Fargo/Moorhead area needs another place for people to do physical activity. For my thesis project I will be designing a center that could be used for physical activity and meditation. I feel that this area needs more places for people to become and stay physically fit. Since the weather is cold for the majority of the year, the people of this area need more sheltered areas to carry out physical activity. There is no set place to do meditation activities and deal with the stress of work and daily life. We need a place where people can relax and become one with themselves. My client would be the city of Moorhead. The site I have chosen is alongside Elm St in Moorhead. There is currently an abandoned power plant on the lot and I propose that Moorhead decides to tear it down. This is a great site because it is close to the Fargo and Moorhead downtown areas and adjacent to the bike path that connects to Lindenwood Park. It is also a secluded and peaceful site that would serve my program well.

The underlying premise of this design will be based on the thought of flowing movement as in the way that a body would move during a physical activity like Yoga.

Appendix

Proposal

Title

Living a Healthier Life: A connection between mind and body

Building Typology

My thesis project will be a wellness center for the Fargo/Moorhead area. The building will help people to become one with their mind and body by using Eastern practices like yoga, tai chi and meditation. It will also be a learning center for a healthy well being and a gathering space for those who care about health.

Theoretical Basis or Unifying Idea

In designing the fitness center I plan on making a place that is comfortable for the occupants and will make them want to become healthier. I plan on incorporating nature into the building to help the users find peace and harmony.
One of the concepts that I plan on using is the idea of Feng Shui, a popular eastern practice that has been used for ages. Used to bring balance and harmony to a space, it is the practice of balancing the 5 elements which include water, earth, wood, fire, and metal. I will find how spaces and circulation relate to this idea and use the concepts of Feng Shui in the design.

Project Justification

In the United States, approximately 127 million or 64% of adults are overweight (American Obesity Association). These numbers are increasing every day. People avoid stairs and walking and turn to elevators and cars to get to places. Since most of the time the weather in this area is not ideal for exercising outside, we are in need of more indoor spaces. Right now there is not a center devoted to eastern practices of wellness.

Appendix

Proposal

User/Client Description

This building will be a public facility for the residents of Fargo/Moorhead and surrounding areas. The fitness center will be owned and operated by the city of Moorhead.

The different user groups will be men, women, the elderly, and children under eight. For the children under eight a child care room will be available for the parents to leave their children. There will be some different programs for women and men since their bodies require different things. There will also be different activities for the elderly that are slower paced and suited more for their bodies needs.

The on-duty staff will consist of two receptionists, five fitness instructors, one masseuse, two child care attendants, and two maintenance people. The average number of users will be twenty and for peak hours which include 5-8 am, 11am-2pm, and 5-10 pm number of users will be forty. There will be fifteen employee parking spaces and forty guest parking spaces.

Major Project Elements

- Lobby
- Reception Area
- Offices
- Laundry room
- Bathrooms
- Locker rooms
- Childcare room
- Fitness studios
- Classrooms
- Conference rooms
- Meditation room
- Swimming Pool
- Circulation
- Storage
- Mechanical/Electrical
- Parking

Appendix

Proposal

Site Information

Moorhead, MN currently has a population of 32,177 and with Fargo the population jumps up to 174,367. The median age is 29 and the ratio of females to males is 53:47. The climate of Moorhead is temperate with warm, sunny summers and cold winters. The average high in summer is 82° with average rainfall of 16 inches and the average winter high is 17° with the average snowfall of 36 inches.
The site is located on the corner of 6th Ave. E. and S. River Dr. There is currently a non-functioning power plant on the site and I intend to incorporate at least some of that existing building into my design. It is located at latitude 46° and longitude -97°.
The site was chosen because it is a peaceful place that will emphasize the Feng Shui concept. It is situated right by the Red River and Woodlawn Park. The site also has immediate access to the current Fargo / Moorhead bike path.

Project Emphasis

I plan on using adaptive re-use by incorporating parts of the existing power plant into my design.
I will make an environment that is comfortable and relaxing for the users. It will be a place where they can become one with their mind and body.

Feng Shui will be incorporated in the design creating an environment that is peaceful and beneficial to the wellbeing of the occupants.

Definition of a Research Direction

Before I can solve the design problem I plan on doing more site work including finding detailed maps and soil and plant information. I will do more research of fitness/wellness facilities. To do this I will find case studies of buildings that relate in some way to my project. I plan on researching the different eastern practiced activities for improving the body, for example, meditation, tai chi, and yoga. I also plan on researching Feng Shui and how to design with it.

Appendix

Proposal

Design Methodology

The concept of Feng Shui will be used to organize the building and spaces within. I plan on using the concepts to come up with exterior and interior materials and other elements that will make up the building.

Documentation of the Design Process

The research that I do will either be recorded in a journal or put into a binder. Any information from the internet will be saved into a thesis file on my desktop as well as printed and put into the binder. Any sketching that I do will be put into the journal.

Work Plan

Fall Semester 2004

Week #1	Oct 4-10		
	R	7 Oct	Thesis Proposal Due Student critic preference slips & faculty preference slips available Research
Week #2	Oct 11-17		
	R	14 Oct	Students & faculty preference slips due Research feng shui, yoga, tai chi, & meditation
Week #3	Oct 18-24		
	R	21 Oct	Primary & secondary critics announced Site Research
Week #4	Oct 25-31		
	R	28 Oct	Last day of AR/LA 561 class Case study research

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Proposal

Week #5	Nov 1-7	
	R 4 Nov	Ethics paper due for Practice Work on program
Week #6	Nov 8-14	
	R 11 Nov	Veterans' Day Holiday Work on program
Week #7	Nov 15-21	
	M-F 15-19 Nov	Final week of AR 571 Design Studio Finish up work on program
Week #8	Nov 22-28	
	W 24 Nov	Draft Thesis Program due to Primary Critic
	R-F 25-26 Nov	Thanksgiving Holiday
Week #9	Nov 29-Dec 5	
		Review program with critics to determine areas of re finement Work on final draft of program
Week #10	Dec 6-12	
	R 9 Dec	Final Thesis Program due to Primary Critic
	F 10 Dec	Last day of classes
Week #11	Dec 13-19	
	M-F 13-17 Dec	Finals Work on site model
Week #12	Dec 20-26	
		Work on site model
Week #13	Dec 27-Jan 2	
		Work on site model

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Proposal

Week #14	Jan 3-9	
		Finish site model
Spring Semester 2005		
Week #15	Jan 10-16	
	T 11 Jan	Classes begin Identify potential form-givers from program
Week #16	Jan 17-23	
	M 17 Jan	Martin Luther King, Jr. Holiday Study site relationships & functional arrangements
Week #17	Jan 24-30	
		Finish site design & master planning Graphic expression of at least 2 design concept / con cept alternatives
Week #18	Jan 31-Feb 6	
		Arrangement; space planning relationships fully re solved & organizational patterns clarified; patterns of "spatial structure"
Week #19	Feb 7-13	
		Studies of form, volumetric, massing (study models to explore the structural patterns)
Week #20	Feb 14-20	
		Relationships in vertical section; structural and system c oncepts established. Movement / circulation systems resolved; interior / exterior character sketches started

Appendix

Proposal

Week #21	Feb 21-27	
	M 21 Feb	President's Day Holiday Material studies & initial exterior elevation studies; type-study material palettes Elevation studies & perspective sections
Week #22	Feb 28- March 6	
		Expressive character & technology of assembly Wall sections resolved & detailed material studies com plete
Week #23	March 7-13	
	M-F 7-11 Mar	Mid-semester Thesis Reviews All key design decisions have been made
Week #24	March 14-20	
	M-F 14-18 Mar	Spring Break Take a break from studio
Week #25	March 21-27	
	F 25 Mar	Easter Holiday Revisit all design issues addressed above, especially site / context; structural / HVAC layouts
Week #26	March 28-April 3	
	M 28 Mar	Easter Holiday Interior space studies & character sketches finalized
Week #27	Apr 4-10	
		Storyboard design Decide on materials for presentation and buy

Appendix

Proposal

Week #28	Apr 11-17		
			Work on final presentation boards & models
Week #29	Apr 18-24		
			Finish up final presentation boards & models
Week #30	Apr 25-May 1		
	M	26 Apr	Thesis Projects due at 4:30 in Memorial Union Ballroom
	T-W	26-27 Apr	Annual Thesis Exhibits in the Memorial Union Ballroom
	R-F	28-29 Apr	Final Thesis Reviews
	F	29 Apr	Draft of Thesis document due to Primary Critic
Week #31	May 2-8		
	M-R	2-5 May	Final Thesis Reviews
	F	6 May	Last day of classes
Week #32	May 9-15		
	M-F	9-13 May	Finals
	F	13 May	Final Thesis Document due at 4:30 in Department Office
	F	13 May	Commencement at 4:00 Fargodome

Appendix

Proposal

Previous Studio Experience

2nd Year

Fall: Phillip D'anjou

- Display for Lucy's skull
- Mountain retreat
- School of Architecture

Spring: Vince Hatlen

- Atomic Coffee Shop
- Prairie Green House
- Lachine Canal, Canada Footbridge

3rd Year

Fall: Carol Prafcke

- Ronald McDonald House
- Bayliner Boats Showroom

Spring: Mohamed Elnahas

- Performing Arts Center
- West Acres Bank

4th Year

Fall: Mark Barnhouse, Cindy Urness and Josh Walter

- Downtown Fargo Urban design

Spring: Darryl Booker

- Multi-Use Building
- Bioclimatic skyscraper

5th Year

Fall: Steve Martens

- Valley City Revitalization

Appendix

Proposal

Reference List / Resources

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Appendix

Acknowledgements

I would like to thank Darryl Booker and Ganaptathy Mahalingam for the guidance they have provided me through this thesis project. You both opened my mind to new possibilites and I thank you for that.
I would also like to thank my friends and family for the constant encouragement and for putting up with my many hours at studio.

Amanda Mae Urban

Live neither in the past nor in the future, but let each day's work absorb your entire energies, and satisfy your widest ambition.

-Sir William Osler