

AN UNDERGRADUATE DESIGN THESIS

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May of 2005

# The Bay Course at Superior Shores

THE BAY COURSE AT SUPERIOR SHORES RESORT:  
A MIXED-USE COMMERCIAL AND RESIDENTIAL DEVELOPMENT

An undergraduate thesis submitted in partial  
fulfillment of the requirements for the degree of  
Bachelor of Architecture

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# Table of Contents

<b>PROJECT INTRODUCTION .....</b>	<b>1</b>
<b>PROJECT DESCRIPTION .....</b>	<b>4</b>
<b>SITE ANALYSIS .....</b>	<b>11</b>
<b>CASE STUDIES .....</b>	<b>15</b>
<b>SPATIAL REQUIREMENTS .....</b>	<b>24</b>
<b>PROCESS .....</b>	<b>43</b>
<b>SOLUTION .....</b>	<b>66</b>
<b>APPENDIX</b>	
<b>REFERENCES .....</b>	<b>78</b>
<b>STATEMENT OF INTENT .....</b>	<b>80</b>
<b>WORK SCHEDULE .....</b>	<b>81</b>
<b>STUDIO EXPERIENCE .....</b>	<b>85</b>

# Project introduction

## General Information

This design thesis project is a mixed use commercial and residential development on the North Shore of Lake Superior. The project typology falls into both the hospitality and recreation industries. There has been a recent boom in both Minnesota's golf industry and the North Shore's tourism industry. It has been estimated that currently 700,000 Minnesotans play golf. There are another 700,000 visitors who play golf on Minnesota's golf courses. There is an average of 14 golf courses that either open or expand each year. According to the Minnesota Golf Association, direct golf sales generate more than \$456 million per year for the state's economy and provide the equivalent of 13,900 full-time jobs. The North Shore region is currently experiencing a significant increase in visitors. Over two million visitors come to the North Shore each year. This has a tremendous impact on the economy. Related employment and gross receipts due to travel and tourism has increased 15%.

This project is intended to fulfill an existing need for tourist accommodations and recreational activity in the North Shore region. The client for this project is Superior Shores Resort and Conference Center, located in Two Harbors, Minnesota. The resort will own and manage the properties of the proposed development. The development will take place on an existing golf course, presently known as Lakeview National. The golf course is

currently owned by the city of Two Harbors. The design will take into account the possibility of future expansion of the golf course.

The purpose of this project is to provide a resort and recreational facility within the City of Two Harbors. The project will provide Superior Shores with new recreational and lodging options to offer their guests. The project will provide local benefits to the economy and tax revenue base. The project will also provide employment opportunities for the area of Two Harbors.

## Location

The jewel of Minnesota's ten thousand lakes may very well be the North Shore of Lake Superior. Located in the northeastern part of the state, this region is a charming composition of water and wilderness. The shoreline extends 206 miles from the St. Louis River on the south to the Pigeon River on the Canadian border. Cook, Lake and St. Louis counties border Lake Superior on the Minnesota side. On the west side of Lake County, the city of Two Harbors is situated on the shore of two bays which serve as natural harbors. Hence the name of the city, Two Harbors. The commercial development of Two Harbors is on Agate Bay to the south,



whereas Burlington Bay to the north remains undeveloped.

The actual site, Lakeview National Golf Course, is located on the northeast side of the city of Two Harbors. As illustrated on the project site map, the site is located to the north of both Burlington Bay and Highway 61. In addition to Highway 61 bordering the site to the southeast, County Road 2 borders the site to the west and the Fairgrounds Road borders the site to the north. The site is positioned approximately on latitude 47 and longitude 91.

### **Unifying Idea**

The unifying idea for this design thesis project is the golf swing. The golf swing is a sequence of actions much like a chain of actions in physics. Each action is the direct result of preceding actions in the chain-action sequence of the swing. This chain of actions generates the necessary power to strike a golf ball crisply and purely. The first thing that comes to my mind when I think of describing the golf swing is a poem from the movie *Tin Cup*. The following is an excerpt from the movie explaining what the golf swing means to Kevin Costner's character Roy McAvoy.

“The critical opening phase will always be the grip. As the hands unite to form a single unit by the simple overlap of the little finger, lowly and slowly, the club head is led back, pulled into position, not by the hands, but by the body, which turns away from the target, shifting weight to the right side and without shifting balance. Tempo is everything, perfection unattainable, as the body coils now to the top of the

swing, there is a slight hesitation, a nod to the Gods, and now the weight begins shifting back to the left, pulled by the powers inside the earth, its alive, this swing, a living sculpture, and down through contact, always down, striking the ball crisply and with character. A tuning fork goes off in your heart, such a pure feeling as a well struck golf shot. And then the follow through to the finish, always on line.”

Since I will be developing this project on a golf course, I feel that the golf swing is an appropriate unifying idea. There are a variety of aspects of the golf swing that I will consider throughout the design of this project. I will study the individual components of the swing that make up the fundamentals. I will examine the aesthetic aspects of the swing such as the swing plane and swing arc which create the fluid motion of the swing. I will also study the characteristics of a good swing such as the importance of repetition, power and supination.

The golf swing is a result of a combination of basic fundamentals. These fundamentals include the grip, stance and posture, the first part of the swing and the second part of the swing. The swing begins with the grip. A good grip is essential to making a good swing because the only direct physical contact with the club is the hands. The most important thing to know about the grip is that both hands must act as one unit. Stance and posture is what allows a golfer to be perfectly balanced and poised throughout the swing. The first part of the swing is when the motion begins. This is called the backswing. The order of movement in the backswing



begins with the hands and then the arms, the shoulders and finally the hips. The second part of the swing is where the golfer actually hits the ball. This part of the swing, called the downswing, starts by turning the hips and then the shoulders, arms and hands. The swing is finished with the follow through.

The unifying idea of the golf swing will be used to develop analogies and concepts to assist the design of this project. These analogies and concepts will be discussed in greater detail under the conceptual underpinnings section of this program document.

### General History

The North Shore region was originally the home to the Chippewa Indian Tribe. French fur traders landed in this region in 1660 marking the first white inhabitants to arrive in this area. From then until the mid-1850s, the voyageurs and fur traders were virtually the only white people in the area. It wasn't until the Treaty of 1854 with the Ojibwa Tribe that this region opened up to white settlement. Two Harbors began in 1856 as a logging village called Burlington. The name was later changed to Agate Bay, and then in 1907 the village became the city of Two Harbors. When the railroad was completed in 1884, Two Harbors became Minnesota's first iron ore port.

The historic waterfront still reflects the days of past. The gigantic ore docks that dominate Agate Bay were constructed of steel in 1911 to replace the original wood docks. Docked in the harbor is the Edna G., one of the



last steam-powered tugboats in the United States. On the edge of the shore sits the oldest operating light house on the North Shore. In 1892 the Two Harbors Light Station was built to provide ships with safety and is now on the National Register of Historic Places.

The history of the golf course dates back to the 1920's. The course originally consisted of only four holes. Then two more holes were built a few years later and finally it became a 9-hole course in the 1950's. In 1996 Lakeview National became a complete 18-hole golf course with the addition of another nine holes. The new nine was designed by Gill Williams & Associates.

*These photos of an ore carrier, the 3-spot locomotive and the Two Harbors Lighthouse illustrate the importance of Two Harbors as an iron ore port.*



## Project description

### Conceptual Underpinnings

The conceptual underpinnings for this project are derived primarily from the unifying idea of this project, the golf swing. The concepts include what I like to call The Experiential Journey, Cognitive Orientation, The View, Universal Design and Form as Functional Aesthetics. These concepts are what I will base my design decisions on throughout the design process. All of these different concepts will combine to create one distinct design style not unlike how the different components of the golf swing come together to create a certain swing style.

The Experiential Journey... There is a direct comparison to be made about how a person experiences a resort and the golf swing. They are both comprised of a sequence of events. The aforementioned sequence of events of the golf swing combines to form one fluid motion. Patronizing a resort is ideally a sequence of events combined to unite into one fluid experience. The sequential journey starts with the arrival and is then followed by the front desk check in, room check in, exploring and experiencing the resorts amenities, room check out and the experience is completed upon departure. This experiential journey should intensify, focus and abstract aspects unique to the North Shore region, the resort and the site.

Cognitive Orientation... Knowing where you are at in the golf swing and being able to analyze the different



*The view of an ore carrier in Burlington Bay*

components of the swing greatly increases the skill level of the golfer. Consequently the golfer has a more enjoyable experience while playing the game. This same notion of cognitive orientation is also an important concept to consider when designing buildings for a resort. There is a certain degree of comfort found in knowing where one is at in relation to the site and its components. The site components include the buildings, the golf course, vehicular circulation paths and pedestrian circulation paths. The relationship and orientation between the people and these site components is critical to developing a pleasurable vacation experience.

The View... One of the main reasons tourists are attracted to the



North Shore region is Lake Superior. Many people come simply to see and experience the largest fresh water lake in the world. Since this project consists of providing accommodations for these people the view becomes an important concept. The scene from this site has aesthetic and dramatic connotations with reference to the view out to Lake Superior. These connotations include serenity, calmness and tranquility. This design will capture these connotations through the use of wide unblocked views of Lake Superior and the surrounding landscape, including the golf course. To accomplish this, careful consideration and attention will be given to the use of fenestration, especially window treatments and framed views. Belvederes may be incorporated into the design for the specific function of giving a view out to the scenery.

Universal Design... Universal design means simply designing for everyone. When considering universal design issues one can create an analogy between resort design and the golf swing. The golf swing is universal, as should be the design of a resort. The golf swing can be used by anyone including seniors, children and handicapped persons. The golf swing also accommodates a variety of body types from short and stocky to tall and slender. A resort must be like the golf swing and demonstrate a certain level of accommodation for all types of people. Throughout the design of this project considerations will be made for a variety of user types including adults, children, seniors, and the handicapped. The design will consider not only tourists, but local citizens as well.

Form as Functional Aesthetics... When determining the form of the buildings I will study the golf swing for design inspiration. Repetition, fluid movement and power are all aspects found in every good golf swing. These golf swing characteristics will be studied and applied when determining the desired forms of the buildings. The aesthetics of the golf swing are a direct result of the functional components of the swing. The form of the swing is developed by the swing arc and swing plane. These aesthetic components of the golf swing will also play a role in determining the form of the buildings. Ultimately the buildings should form a composition that harmonizes with each other as well as the existing landscape.

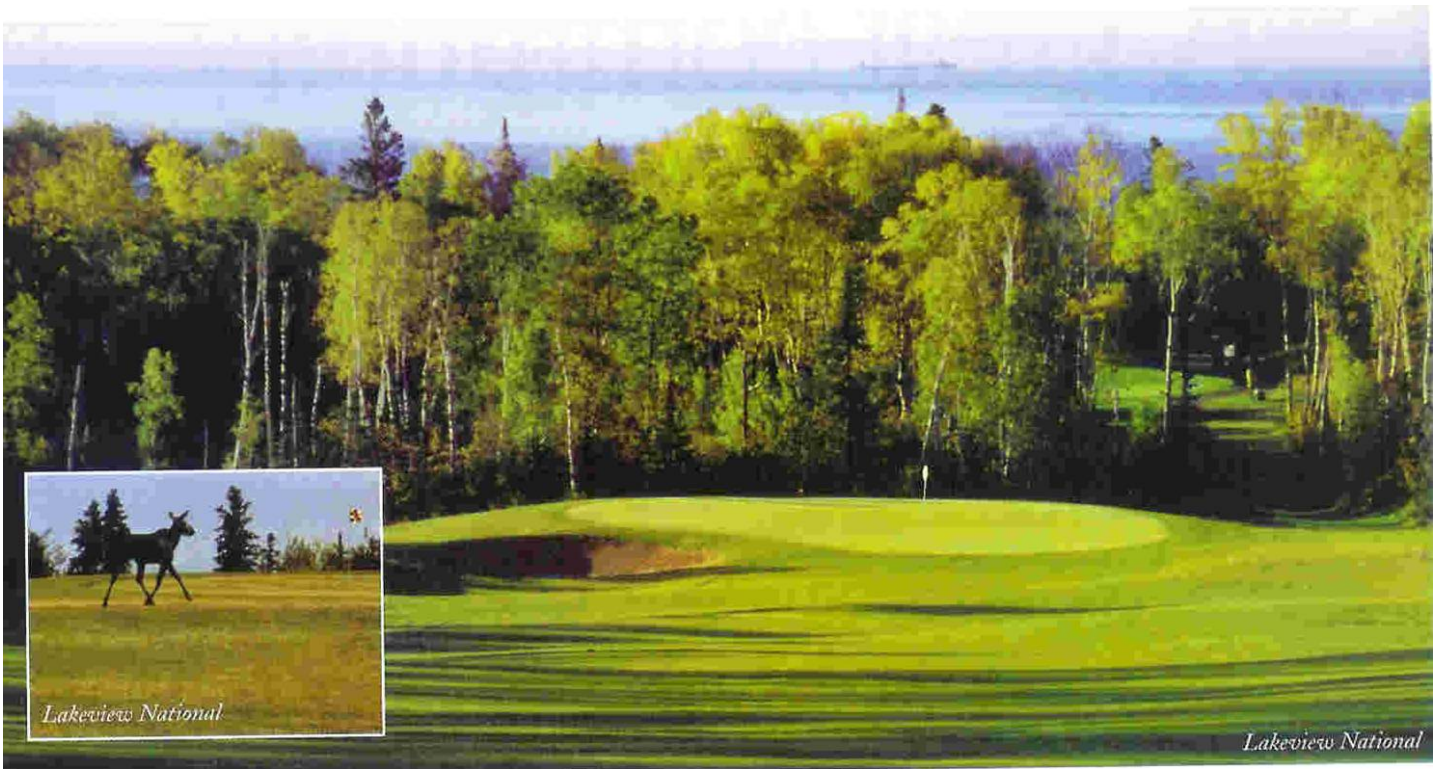
### **Major Project Elements**

This design thesis project consists of three main elements. These elements include a commercial golf course element, a mixed-use residential element and a commercial resort element. These three elements will be collectively owned, financed and managed by Superior Shores Resort. The diversity of these project elements is intended to provide the resort with a variety of marketing options.

The golf course element consists of the design of a new clubhouse building. The interior of the clubhouse building will be divided into three functionally distinct spaces; golf services, food and beverage services and conference services. The golf services component will require offices for the head golf professional/director of golf; a golf shop for checking in golfers and for selling golf merchandise/equipment;







a cart barn to house and maintain the golf carts; a bag room for club repair and storage; locker rooms for members and guests to change and shower; and a laundry room for cleaning towels. The food and beverage component will require a full dining room and bar with indoor and outdoor seating areas as well as a waitress station, hostess station, and a commercial kitchen. The kitchen will include dish washing space, dry food storage, freezer space, refrigerator space, and space for food preparation and cooking. The conference services component will be designed to accommodate everything from business meetings to weddings. It will consist of an open pavilion space which can be divided into three smaller meeting/conference rooms. It will require a storage area and a prep area for food and beverage services. The

The mixed-use residential element includes both single family homes and townhomes. The single family homes will not be designed for this project. The design will, however, include a variety of site planning issues. These issues consist of identifying all potential conservation areas, locating house sites, designing streets and trails and drawing lot lines. The conservation areas identified on the site are the golf course, steep slopes, existing trails, a stream which serves as a wildlife corridor and also a stand of spruce trees. Smallish house lots will be utilized to maximize potential green space. The lots will be designed to maximize the views to Lake Superior, the golf course and other green space. The townhomes will be seasonal residences which will be built in a

*The view from the sixth hole on Lakeview National Golf Course.*



small group located on the site adjacent to the golf course. They will be designed as shared units with two units in each building. The shared walls will help reduce heating costs during the winter months. Each building will have a garage with one stall per unit. Every building will have a private deck with possible views of the golf course. Each building will have direct access to the recreational trail system on the site. The townhomes will be marketed towards the 'snowbirds', older people who winter in the south and spend the summer season up north. As a result the design will be open and easily accessible to accommodate the elderly clientele. The maintenance for the group of townhomes will be taken care of by the maintenance staff at Superior Shores.

The commercial resort element will consist of the Bay View Cabins. The cabins will provide Superior Shores with another alternative for the type of

lodging that they can offer their guests. The cabins will contain the basic spaces for accommodating a full vacation experience. The design will be an open plan with private spaces for sleeping and bathing. Each cabin will include a full kitchen, living area, screened in porch, dining area, laundry room, snow/mud room, 4-6 bedrooms and a game room. They will be marketed toward the vacationer who prefers to stay directly on the golf course as opposed to the typical resort setting. They will be marketed towards golfers during the summer season while during the winter season they will be marketed towards snowmobilers and cross country skiers. Each cabin will have direct access to both the on site recreation trail system and the State Snowmobile Trail. The cabins will be located on a part of the site that overlooks both Lake Superior and the golf course.



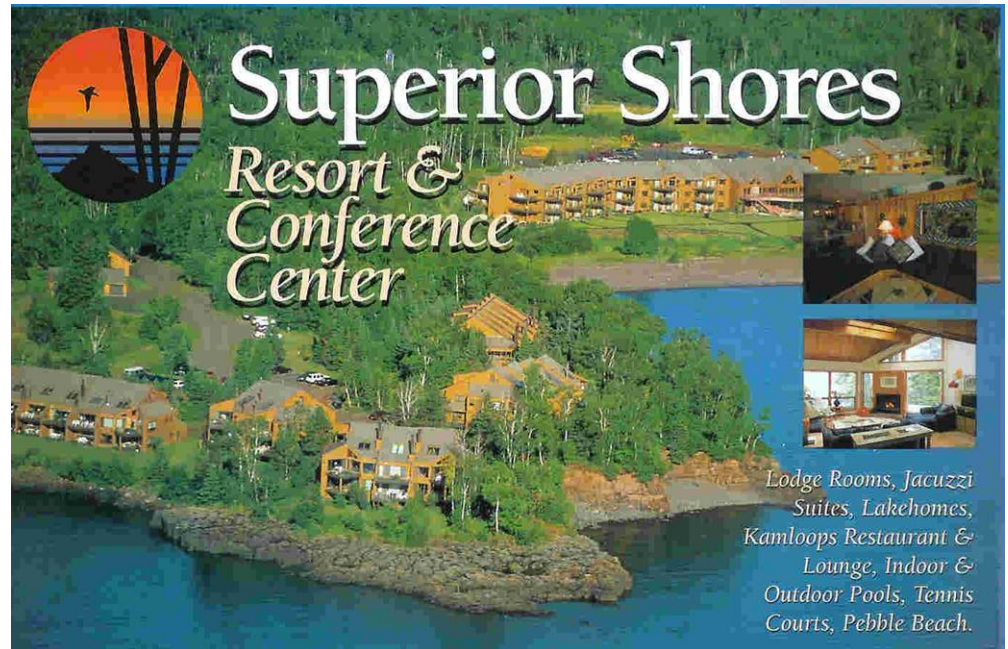
*A scenic view overlooking Agate Bay*



## User & Client Description

The client for this project is Superior Shores Resort and Conference Center in Two Harbors, Minnesota. The resort is nestled on a 60 acre wooded site and features over one mile of Lake Superior shoreline. There are a variety of lodging options available at the resort. These include Lodge Rooms, Jacuzzi Suites and Lakehomes. The amenities of the resort include a restaurant, lounge, indoor and outdoor pools, five conference rooms and a pebble beach. The resort is currently in the process of building a mixed-use commercial and residential development. The development includes five 14-unit condominiums and one 4-unit condominium as well as a multi-use recreational center for conference space, retail shops, theatre, cinema and indoor water park. Joseph Re and Darrin Young will be representing the resort throughout this design thesis project. Joe is one of the resorts owners and also serves as the Director of Resort Operations. Darrin is the resorts Sales and Marketing Director.

As a result of the various elements of this design project there will be a variety of users. These different users include golfers, vacationers, local citizens and employees. Golfers are those who play at least one round of golf each year. Vacationers are those who spend a period of time away from home either in recreation or for business. Local citizens are those who live in and around the



Lodge Rooms, Jacuzzi Suites, Lakehomes, Kamloops Restaurant & Lounge, Indoor & Outdoor Pools, Tennis Courts, Pebble Beach.

Two Harbors area. Employees include anyone who is currently working for Superior Shores Resort.

The users of the golf course element will include golfers and local citizens who play golf. The average golfer is a married male. He is 39 years old and has an average income of over \$66,000. He plays over 20 rounds of golf each year. In the United States there are over 27 million golfers who spend more than \$17 billion dollars every year on golf equipment, merchandise and playing. The requirements of these users includes a golf shop to purchase equipment and merchandise, a golf course to play on, a restaurant to get a bite to eat and a locker room to change and shower.

The users of the Bay View Cabins will vary depending on the season. During the golf season the cabins will be





*Lighthouse Point in  
Two Harbors*

marketed towards the golfer. During the winter season the cabins will be marketed towards people who snowmobile and cross country ski. These users will require a place for storing and drying winter clothes such as boots, snow pants and helmets. They will also require a safe place to store their recreational equipment such as skis and snowmobiles. Another requirement will be vehicular circulation that will accommodate vehicles with trailers.

The users of the mixed-use housing element vary depending on the type of housing. The single family homes will be marketed towards wealthier families who are looking for a year around residence. Since these homes will be located on the golf course, golfers will again be the primary target market. Most golfers own real estate. 80% of golfers own at least one property, while 20% own two or more. The townhomes will be marketed towards the snowbirds, older people who spend the winters in the southern states. They will require

open and easily accessible floor plans. They will require maintenance and lawn services for the buildings. An attached garage which can be used for storing personal golf carts and/or cars is also a requirement.

The final user category includes the resort and golf course staff. The employees of this project vary with the different project elements. The clubhouse staff will include the golf shop, food and beverage and outside services. The golf shop staff will consist of head golf professional, golf shop assistants, a merchandise manager and a golf package coordinator. The food and beverage staff will include a wait staff, cooks, dishwashers, table bussing staff, hosts, bartenders, beverage cart attendants (who drive around the course and serve beverages to players) and a food and beverage manager. The outside service staff will consist of high school to college aged individuals. Their responsibilities include customer



services (loading player's golf bags onto carts and cleaning their golf clubs after they play); setting up and picking balls on the practice range; and staging, cleaning and parking golf carts. The maintenance staff will include a superintendent, assistant superintendent, a mechanic and general laborers. There will also be a housekeeping staff to clean and maintain the clubhouse and the Bay View Cabins.

### Design Methodology

I will use a variety of design methods to facilitate a unique and appropriate design solution for this project. Due to the various elements of this project, interaction matrixes, interaction nets and Venn diagrams will be used to realize the relationships between the different project elements as well as the spaces within those elements. I will develop design ideas and solutions by conducting a variety of concept related sketch studies. I will also use my sketchbook to record processes and ideas as well as to generate questions concerning the design process. Finally, I will measure the progress of the design process by creating a guide that compares my goals to the actual outcomes.

### Project Emphasis

'Lake Superiors Future' was the title of a forum sponsored by Minnesota Sea Grant back in the mid nineties. At the meetings there was a goal established concerning the future of the North Shore. This goal is what this design thesis project will focus on. The goal is "to maintain or restore the beauty and health of the environment, the health of the economy, and the stability of

communities in the Lake Superior Region." This project will seek economic growth through the emphasis of a new clubhouse and resort accommodations. The emphasis will be placed on these two parts of the design project because they will promote additional tourism and recreational activity to the area. All of the elements of this project will emphasize the importance of sustainable issues such as maintaining current water quality and increasing erosion control.

*The ore docks in Two Harbors as viewed from Lighthouse Point*



*An ore carrier coming in to dock*



# Site analysis

## General Site Information

The total area of this site is 430 acres. The golf course on this site consists of an area that is approximately 130 acres. The rest of the site is forested land that is currently undeveloped.

This site offers breathtaking views of Lake Superior. All of the good views from this site are of the lake and the surrounding forest. Other views from the site include views of Highway 61, County Road 2 and of the buildings that are located on these two roads.

This entire site slopes to the southeast towards Lake Superior. To the north at Fairgrounds Road the site is 794 feet above sea level. The site then gradually slopes down to 650 feet above sea level to the south part of the site at Highway 61.

## Land Use

On site land uses are undeveloped forested uplands with shrub dominated and forested wetlands. Forested uplands are dominated with second growth stands of quaking aspen and balsam poplar, and lesser amounts of mixed pine and spruce. There are 130 acres on the site that are cleared and landscaped for an 18-hole golf course. Golf course acres are dominated by lawns consisting mostly of Bluegrass with Bentgrass tee off areas and greens. The golf course also has 7 ponds and 23 sand bunkers.



*Clubhouse building at Superior National*

Currently there are five existing structures on the site. They are the clubhouse, two maintenance buildings and two pump house buildings. The clubhouse is a typical wood light frame building. The maintenance buildings are basically pole barns. The pump houses are small wood frame buildings.

The City Ski & Recreation Trail weaves its way for ten kilometers through the north half of the site. In the northwestern part of the site there is a small parking area that services the trail. The Lake County Fairgrounds are located across Fairgrounds Road to the north of the site. The corridor to the state snowmobile trail snakes its way around the perimeter of the site, but doesn't actually go through the golf course. Burlington Bay Campground and the public access boat launch are located across highway 61 to the south of the site. Located adjacent to the southwest of the site are the Lakeview Memorial Hospital, Superior Health Medical Group & Pharmacy, Lake County Arena and the curling club.



**Site Hydrology**

This site is located in the Lake Superior (south) watershed. The hydrological processes of this site involve precipitation, stream runoff, and subsurface infiltration as ground water. The average annual precipitation is 28 inches. The average snowfall is 70 inches, which is the highest in the state of Minnesota. The snow is over 12 inches deep for an average of 65 days each year. The average date of the last frost is May 22 whereas the first frost happens September 21. The average annual runoff is between 12 and 15

inches. All of this water eventually gravitates downhill towards Lake Superior.

**Climate**

Lake Superior greatly influences the North Shore giving it a maritime climate. The lake has a moderating effect on the weather and climate of this site. As a result the summers are cooler and the winters are warmer than inland areas. When the western part of the lake freezes the winter warming effect is decreased.

Average Climate in Two Harbors, MN

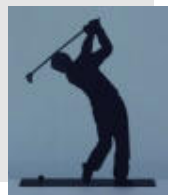
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Days with precipitation	12	9	11	11	12	13	12	11	12	10	11	11
Wind speed (mph)	11.6	11.3	11.8	12.3	11.6	10.4	9.4	9.4	10.3	11.2	11.6	11.2
Morning humidity (%)	78	77	78	76	76	82	85	88	88	82	81	80
Afternoon humidity (%)	72	68	66	59	56	63	63	66	67	65	72	75
Sunshine (%)	48	53	55	56	57	58	65	61	52	46	35	39
Days clear of clouds	7	7	7	6	6	5	7	7	6	7	5	6
Partly cloudy days	7	6	7	8	10	11	13	12	9	8	6	6
Cloudy days	17	15	17	16	15	14	11	11	15	17	20	19
Snowfall (in)	17.6	11.9	13.7	6.8	0.7	0.0	0.0	0.0	0.1	1.6	12.9	15.1

*Based on data reported by main weather stations*

Average Weather in Two Harbors, MN

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Average temp. (°F)	13.7	18.8	28.5	39.4	48.4	55.9	63.5	64.3	56.2	45.4	31.9	19.2
High temperature (°F)	22.4	27.7	36.3	48.0	58.1	66.6	73.5	72.9	64.7	53.3	38.4	26.8
Low temperature (°F)	4.9	10.0	20.6	30.7	38.8	45.3	53.4	55.6	47.6	37.4	25.5	11.5
Precipitation (in)	1.0	0.7	1.6	2.1	2.9	4.1	4.3	4.0	4.1	2.5	2.1	1.1

*Based on data reported by over 4,000 weather stations*



### Prevailing Winds

Prevailing winds are from the northeast during June and August and come from the west-northwest in July. During these months the air is usually calm in the early morning and just after sunset. Then in the afternoon when the air is cooled by the lake, the breezes begin to blow onto shore. At night, the breezes switch direction and blow towards the lake. The average wind speed is 11.008 miles per hour. In the early fall the winds are similar to those in summer. In late fall heavy northeast winds are prevalent during low pressure systems. As these systems move north the winds shift and come out of the northwest. During the winter the prevailing winds are from the east or northeast.

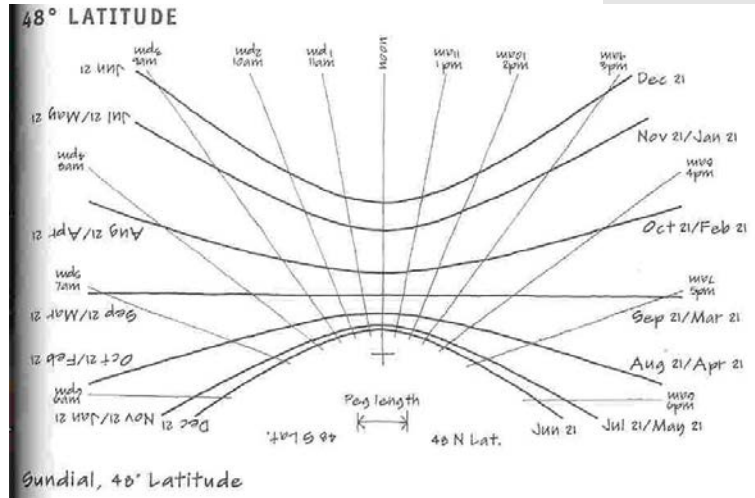
### Acoustic Environment

The auditory sounds of this site consist primarily of the lake winds blowing through the tree tops. Most of the site is part of a forest and consequently the sounds of the forest prevail throughout the site. There are only a few parts of this site in which the noise from the city becomes audible. This is primarily the southwest corner of the site. Most of this noise is from vehicle traffic on highway 61 to the south. The other noise comes from lighter traffic on County Road 2 to the west.

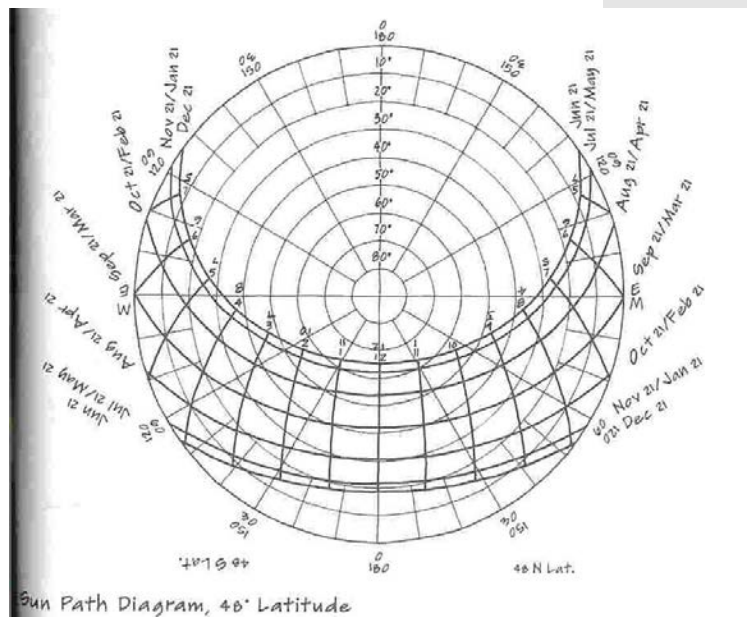
### Solar Orientation

The following sun path diagram and sundial demonstrate the solar orientation for this site's location of 48 degrees latitude. The sun path diagram determines when during the day and year the sun shines on the site. The

sundial determines the position of sun and shade on this site during the day and year.



Sundial



Sun path diagram

### Vehicular Linkages

Minnesota Highway 61 is the major vehicle thoroughfare that connects Two Harbors and this site to Interstate 35 located 23 miles to the southwest. County road 2 is the alternate vehicle route into Two Harbors connecting the





city with Highway 1 to the north. The clubhouse building will be accessed from Fairgrounds Road. The Golf Course Condominiums will be accessed from a newly constructed road off of Highway 61 adjacent Burlington Road. Traffic levels at this intersection will be monitored through the use of turn lanes, and if needed, a traffic signal at the intersection.

**Geology and Soils**

The average depth of bedrock is approximately 25 feet with the uppermost bedrock on the site being basalt of the North Shore Volcanic Group. Lake clays overlie the bedrock. Karst issues are considered to not exist in this area due to the uppermost bedrock consisting of basalt. The average depth to ground water is 28 feet. Topsoil is generally about three inches thick underlain by clays entirely down to the basalt. The clay is a reddish brown, fat to lean clay with traces of gravel and has a medium to stiff consistency. An official U.S.D.A. Natural Resources Conservation Service soil survey has not been completed for Lake County, however the City of Two Harbors, Minnesota Comprehensive Plan (City of Two Harbors, 1999) describes soils within the city as course textured forest soils within the Ontonagon-Rock outcrop soil association.

**Social Issues**

This site has long served the recreational needs of Two Harbor’s residents. The golf course has 270 members and offers league play on Tuesday, Wednesday and Thursday nights. Golf fundraiser events are held on Mondays and Fridays. The City Ski and Recreation Trail does not get very much use during the summer season, however it is a popular place to cross county ski during the winter season. Also during the winter season, the golf clubhouse serves a double function as it becomes the clubhouse for the adjacent curling club. The clubhouse serves as a year around location for a group of elderly citizens to meet for morning coffee and conversation.

**Legal Issues**

The City of Two Harbors has a Planned Unit Development (PUD) ordinance that will apply to this project. The purpose of the PUD is to implement the goals and policies of the Two Harbors Comprehensive Plan by providing comprehensive procedures and standards intended to allow flexibility in the development of residential, commercial, and mixed residential/commercial development through the incorporation of design modifications and/or mixed uses.

Soil classification system

Symbol	Soil Classification	Symbol	Soil Classification
GW	Well Graded Gravels, Gravel-Sand Mixtures	SC	Clayey Sands, Sand-Clay Mixtures
GP	Poorly Graded Gravels	ML	Silts, Very Fine Sands, Sandy or Clayey Silts
GM	Silty Gravels, Gravel-Sand-Silt Mixtures	CL	Clays, Low to Medium Plasticity, Silty Sandy or Gravely Clays
GC	Clayey Gravels, Gravel-Sand-Clay Mixtures	CH	Inorganic Clays, High Plasticity, Fat Clays
SW	Well Graded Sands, Sand-Gravel Mixtures	MH	Inorganic Silts, Elastic Silts
SP	Poorly Graded Sands	OL	Organic Silts and Organic Silty Clays of Low Plasticity
SM	Silty Clay	OH	Organic Clays, Medium to High Plasticity



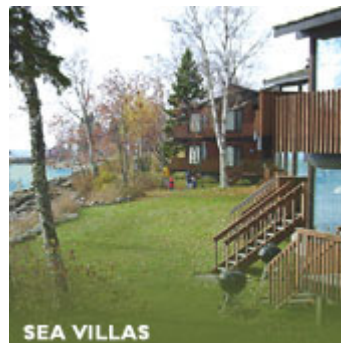
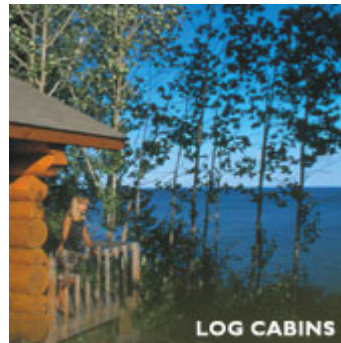
## Case studies

### Lutsen Resort & Sea Villas

Lutsen Resort began as a single family homestead in 1885 offering North Shore travelers a place to rest and have a hot meal. It is thus considered to be Minnesota's oldest resort. Since then the original homestead buildings have been replaced by the main lodge building. Edwin Lunde received an architectural award for his design of the Swedish style hewn pine timber lodge. During the last decade traditional style log homes and condominiums have been added to the resort. The resort now offers a variety of lodging options for their guests including the main lodge, log cabins, The Poplar River Condominiums and The Sea Villa Townhomes. The log cabins at Lutsen were designed by architect Michael J. Eckardt. The resort amenities include a lakeside dining room, pool, game room, downhill skiing, a pebble beach and a 27-hole golf course.

This case study relates to my project in a number of ways. It is the only resort that is located on the North Shore of Lake Superior and is similar to my projects functional and spatial requirements. Lutsen has a long tradition of Scandinavian hospitality and architecture. The program of the 3,248 sq. ft. cabins includes a family room, utility/storage room and bathroom in the basement level. On the main floor there is a front entry screened porch, covered side entry porch, mud room, bathroom, living room, two bedrooms,

kitchen, dining room and an exterior deck off of the kitchen and dining room. The upper floor has one bedroom and a master bedroom with a master bathroom.

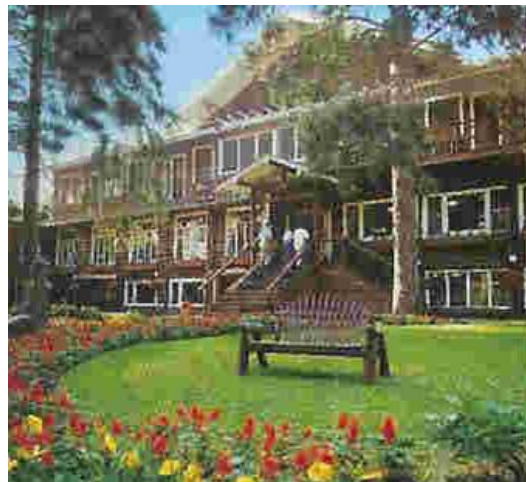


## Grand View Lodge

Grand View Lodge was built in 1919 on Gull Lake in Nisswa Minnesota. The resort is open all four seasons and offers three championship golf courses, six dining locations, Glacial Waters Aveda Resort Spa and a wide variety of lodging options. The lodging options include The Cabins at Grand View Lodge, The Main Lodge, The Clubhouse Suites, The 8<sup>th</sup> Fairway Townhomes, Roy Lodge Resort, The Roy Lodge Golf Villas, Interlachen on Gull, Gull Haven and The Cabins at Deacon's Lodge. The Pines Golf Course was designed by Joel Goldstrand and offers 27 holes which form 3 different 18-hole combinations. The 18-hole Preserve Golf Course was designed by Mike Marley and was built amongst 40 acres of wetlands. The 18-hole Deacon's Lodge Course was designed by Arnold Palmer and was completed in 1998.

This case study relates to my project for functional and spatial reasons. The types of spaces in the clubhouses are similar to what I am proposing for this thesis project. The program for the Pines clubhouse includes a golf shop,

administrative offices, restaurant, bar, commercial kitchen, public locker rooms, staff break room, bag room, laundry room and a cart barn. The program for the Preserves clubhouse includes a golf shop, administrative offices, restaurant and bar, commercial kitchen, bag room and a cart barn. The program for Deacon's Lodge's clubhouse includes a golf shop, administrative offices, restaurant and bar, commercial kitchen, bag room, laundry room and a cart barn. I have also spoken with a number of employees to gain an understanding of the daily functions and operations of the clubhouses.



*The main lodge at Grand View*





*The resort and hotel buildings at Cragun's*



*The clubhouse at the Legacy Courses at Cragun's*

### **Cragun's Resort & Hotel**

Cragun's is located on Gull Lake in Brainerd Minnesota. The resort is open all four seasons and offers two championship golf courses, two restaurants, an indoor pool, an all weather sports center and a variety of lodging options. The lodging options include Lakeview Hotel Rooms, Shoreline Suites, Apartments & Oak Reunion House and a variety of cabins. Robert Trent Jones, Jr. designed The Legacy Courses at Cragun's. This golf complex is the second resort course in the world to become an Audubon International Signature Sanctuary. The clubhouse was designed by Kueper's Construction and Architects.

This case study relates to my project for functional and spatial reasons. The types of spaces in the clubhouse are similar to what I am proposing for this thesis project. The program of the 35,000 sq. ft. clubhouse building includes a golf shop, administrative office space, an entry lounge, restaurant, bar, commercial kitchen, pavilion, public locker rooms, member locker rooms, a meeting room, fireplace lounge, staff break room, bag room and a cart barn. The bar seats 85 people and offers great views of the golf course. The restaurant seats 120 people. The pavilion seats up to 250 people for golf events, tournaments and wedding receptions.



## Giant's Ridge Resort

Giant's Ridge is a four seasons resort located in Biwabik Minnesota on Wynne Lake. The resort is surrounded by the Superior National Forest. The resort offers a variety of accommodations including The Lodge, The Villas and the Sports Dorm. The Lodge has 93 suites, a pool and spa, and a dining room. The Villas are luxury condominiums and cabin style villas all of which overlook Wynne Lake. The Sports Dorm can accommodate up to 96 people. The resort also has two 18-hole championship golf courses. The Legend was designed by Lanny Wadkins and Jeffrey Brauer. The Quarry was designed by Jeffrey Brauer and opened in 2003.

This case study corresponds to my projects functional and spatial requirements. The program for the sports dorm is similar to the employee housing portion of me design. The sports dorm has 24 units that are 13'x11' each. Each unit sleeps up to four people. The dorm lobby and meeting room is 28'x32'. It also has a fully equipped kitchen.

## Kapalua Villas

Kapalua is located on the northwestern part of the Hawaiian island of Maui. The 1,650 acre resort sits on three miles of ocean shoreline. The resort has over 280 condominiums with three different options of accommodation; The Bay Villas, The Ridge Villas and The Golf Villas. Kapalua has three championship golf courses. The Bay Course was designed by Arnold Palmer in 1975. He also designed the Village Golf Course in



*Aerial view of The Villas at Giant's Ridge*



*Cabin style villa*

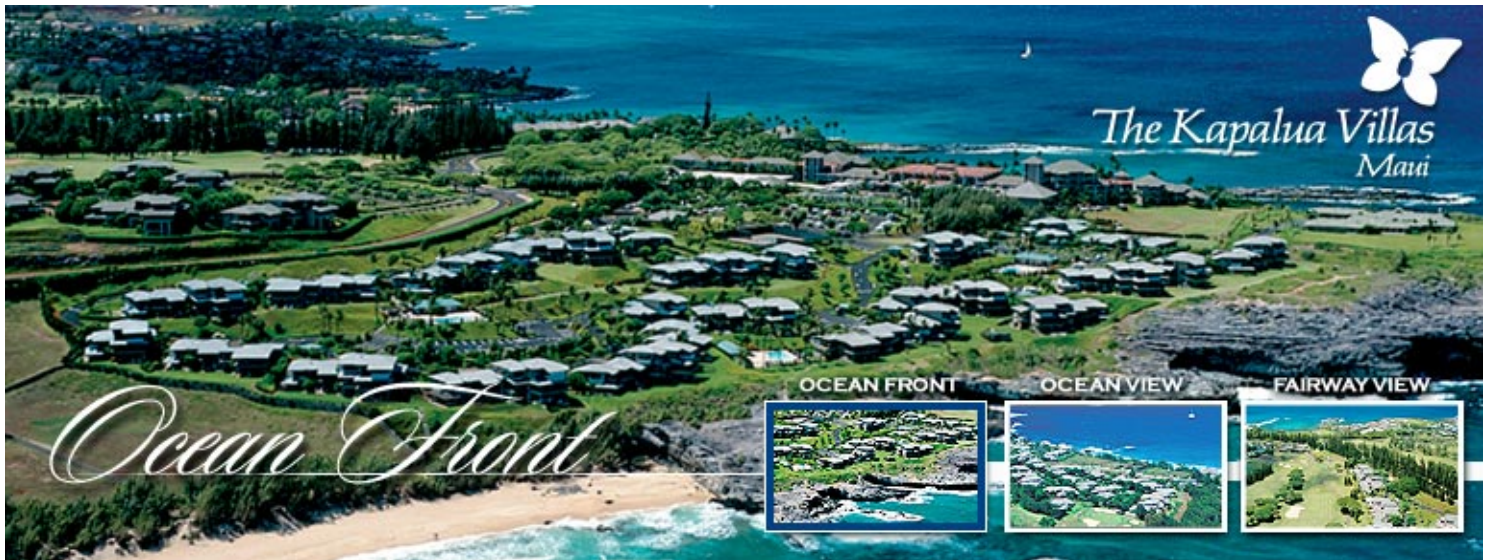


*The Main Lodge at Giant's Ridge*

1980. The Plantation Course opened in 1989 and was designed by Ben Crenshaw and Bill Coore. Some of the other recreational facilities include swimming pools, tennis courts and private gardens.

This project has site conditions similar to my project. The project is located overlooking a body of water as well as a golf course. I was interested in how the design of the resort components took advantage of the view.





### Sea Ranch Condominiums

This multifamily housing project was designed by Moore, Lyndon, Turnbull and Whitaker in 1964. The project is located in Sea Ranch, California about 100 miles north of San Francisco. The vast rural site is on thousands of acres of meadows and wooded glens overlooking the Pacific Ocean. The planned community project consists of individual condominium units clustered together to form an aesthetically pleasing composition on this rugged and open site. Wood timber frame construction was used for the units. The style of architecture is considered Bay Area Modern.

This project has site conditions that are similar. The site is located on a hill overlooking the ocean. It is a good example of architectural form and function harmonizing with the natural landscape. The design takes advantage of the site by offering uninterrupted panoramic views of the ocean.



## NCAR's Mesa Lab

This national center for atmospheric research is located high above Boulder, Colorado in the foothills of the Rocky Mountains. The building was designed by I.M. Pei in 1961. The building's primary function is to examine world weather patterns and climate. It also doubles as an educational center for both adults and children. The design of the building is very abstracted with blocky forms. The design was influenced by the ancient Indian cliff dwellings at Mesa Verde National Park in Colorado. Pei designed the building to harmonize with the rock formations around this rugged site.



*The forms of the Mesa Lab*

I chose this project to study the forms of the building. This is an example of abstract forms coming together with the natural landscape to create a fine composition.

## Bay of Fire Lodge

This project is located in the northeastern coastal region of Tasmania, Australia. The site is on a hilltop 40 meters above the ocean. The building was designed by Ken Latona in 1998. It was built to provide accommodations for tourists exploring Mount William National Park. This sustainable project was designed and built with environmental aspirations. All of the building materials were delivered by helicopter or on foot. The building materials used were Tasmanian hardwood and plantation pine. Solar panels are used to power lights and the fans used to ventilate the composting toilets. Solar power is also used to drive gas-fired convection heaters. Large areas of louvered glass are used to improve



day lighting and ventilation. Water is provided through a hand pumped system which is fully treated. The water is then recycled through a graywater/blackwater treatment system.

*The Bay of Fire Lodge*

This project has site conditions similar to my project. The building sits on a hill overlooking the ocean. The view is an important aspect of the project. I also was interested in the material choices of this project. Local materials were used throughout the design which is something I will consider for the design of my project.





### Nordic Watercolor Museum

This project is located in Skarhamm, Sweden and was designed by Nivels Bruun & Henrik Corfitsen in 2000. The site is a rocky outcropping adjacent to the water. Pylons support a concrete slab upon which the building sits. This treatment gives the effect that the building is overhanging the sea. A lot of glass is used to day light the building and allow the water to reflect on the ceilings. The structure consists of concrete and steel. Concrete and timber panel wall finishes are done in the color of red used in traditional Swedish rural architecture.

### An Turas

This project is located on the island of Tiree off of Scotland's west coast. The project was designed by Sutherland Hussey Architects. The structure is located near the pier and serves as a shelter for people waiting for the ferry. The design is a direct response to the site as well as the project typology. An Turas in Gaelic means 'A Journey'. The building is experienced through a sequence of three distinct parts. The entry consists of two whitewashed walls which form a wind protecting corridor while remaining open to the sky above. The next part is an enclosed dark timber bridge which has a slatted floor exposing the beach below. The final part consists of a glass box belvedere which offers panoramic views out. The materials,

This project I chose as a case study because of its form and materiality. The buildings harmonize with each other as well as the landscape. The material choices reflect the culture of the region in which it was built.



*The watercolor museum*

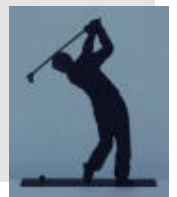


whitewashed walls and black felt roof, reflect the vernacular architecture found on the island. This project won the 2003 Best Building in Scotland Award.



*The An Turas experience*

The concept of this project is similar to one of the concepts of my project. This building is enjoyed through a sequence of experiences, or a journey. This is similar to my concept of the experiential journey.

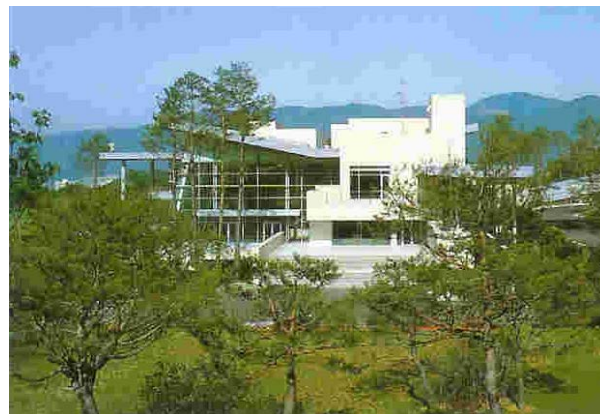




## Adonis Golf Clubhouse

This project is located in Yangsan, South Korea and was designed by John Friedman and Alice Kimm in 1999. The site is on a golf course set in the midst of a rugged mountainous landscape. The building is a limestone, glass and lead-coated, copper-clad structure. The large expanses of glass are used to make a connection between the interior spaces and the landscape.

This project corresponds to my projects programmatic requirements. I also chose it to study the material choices used to express the buildings form and surrounding landscape. The program of this project includes a public lounge, dining facilities, a VIP suite, private dining and conference rooms, a commercial kitchen, a golf shop, administration facilities and locker and changing rooms with private gardens.



*The clubhouse at Adonis Golf Club*



## Musholm Bay and Recreation Center

This project is located on Korsor Island in Sealand, Denmark. It was designed by ARKOS Architecture in 2001. The windswept open site is situated on a hill 100 meters from the ocean. The project was designed for people with muscular dystrophy. As a result wheelchair accessibility drove much of the design. The composition consists of a series of housing units separated by slanted walls. These walls were constructed with thuja-wood and were inspired by the breakwaters found along the Danish coastline. The cone shaped bathroom units rise slightly higher than the rest of the building. A turf roof system was used to link together clusters of units.

This project I chose because of its unique forms and material choices. The design is a wonderful composition consisting of a variety of shapes and materials. It is a fine example of applying inspiration from the body of water which it overlooks.



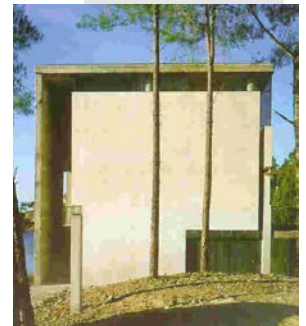
*Musholm Bay & Recreation Center*



## Camping La Torerera

This project is located in Calanas, Spain and was designed by Ubaldo Garcia Torrente in 2001. The rural site is on the north bank of the Risco Swamp, a mining reservoir which is now used for water sports. The project consists of a series of cabins which sit on wooden jetties overhanging the water. The aluminum cabins have metal sheet roofs and particle board interiors. The durable materials used were chosen to reduce maintenance. The other buildings include a restaurant and bar, convenience store, laundry and bathrooms. The restaurant and bar is a concrete, brick and lime mortar building with an inverted roof. The other buildings are concrete with corrugated galvanized metal sheet roofs.

I chose this project as a case study because of the building materials and the buildings relationship with the water. The materials were chosen specifically for their durability. The site is a destination for water sport enthusiasts. The design takes this into account and makes a connection with the guest cabins and the water.



*The cabins at Camping La Torerera*



# Spatial requirements

## Cabin:

- Entry vestibule ..... 150 s.f.
- Bedroom (x2) each ..... 270 s.f.
- Bathroom (x2) each ..... 55 s.f.
- Storage closet ..... 55 s.f.
- Kitchen ..... 280 s.f.
- Dining area ..... 455 s.f.
- Living area ..... 400 s.f.
- ½ bathroom ..... 35 s.f.
- Mechanical room ..... 35 s.f.
- Lockout entry vestibule ..... 80 s.f.
- Lockout bedroom (x2) each ... 280 s.f.
- Lockout bathroom (x2) each ... 50 s.f.
- Lockout storage closet ..... 40 s.f.

## Cabin exterior space:

- Screened porch ..... 410 s.f.
- Entry patio ..... 530 s.f.
- Sun deck ..... 890 s.f.

Total program square footage ..... 4,670 s.f.

Total building square footage ..... 3,550 s.f.

## Townhouse:

- Entry vestibule ..... 65 s.f.
- Coat closet ..... 20 s.f.
- Living area ..... 300 s.f.
- Dining area ..... 155 s.f.
- Kitchen ..... 125 s.f.
- Master bedroom ..... 165 s.f.
- Walk in closet ..... 30 s.f.
- Master bathroom ..... 45 s.f.
- Bedroom/study ..... 105 s.f.
- Closet ..... 70 s.f.
- Bathroom ..... 40 s.f.

## Townhouse exterior space:

- Entry porch ..... 50 s.f.
- Sun deck ..... 445 s.f.
- Garage ..... 550 s.f.

Total program square footage ..... 2115 s.f.

Total building square footage ..... 1250 s.f.

(Includes 115 s.f. of circulation)

## Clubhouse ground level:

- Entry lobby ..... 1,170 s.f.
- Men's restroom ..... 285 s.f.
- Women's restroom ..... 285 s.f.
- Men's locker room ..... 505 s.f.
- Women's locker room ..... 505 s.f.
- Golf shop ..... 1,570 s.f.
- Office ..... 130 s.f.  
(Head golf pro)
- Merchandise storage room ... 295 s.f.
- Kitchen ..... 1150 s.f.
- Cold storage ..... 165 s.f.
- Bar ..... 330 s.f.
- Restaurant ..... 1690 s.f.
- Office ..... 115 s.f.  
(Food & beverage manager)

## Clubhouse basement level:

- Cart barn ..... 7,470 s.f.
- Bag room ..... 570 s.f.
- Mechanical/storage room ..... 1,190 s.f.
- Conference/banquet room ... 5,250 s.f.
- Employee break room ..... 270 s.f.  
(Including restroom)
- Men's restroom ..... 155 s.f.
- Women's restroom ..... 155 s.f.

## Clubhouse exterior space:

- Carport ..... 1,420 s.f.
- Golf shop patio ..... 1,360 s.f.
- Bar patio ..... 1,360 s.f.
- Dining patio ..... 2,635 s.f.
- Parking lot ..... 59,850 s.f.
- Golf cart staging area ..... 1,120 s.f.

Total program square footage ..... 91,000 s.f.

Total building square footage ..... 25,685 s.f.

(Includes 1400 s.f. of circulation)



## Entry Lobby

### AREA:

- 1,170 square feet

### OCCUPANCY:

- Varies due to spatial function
- Lounge style seating for 10 people

### FUNCTION/ACTIVITY:

- Main entrance to the building
- Primarily a circulation space
- Lounge area

### ENVIRONMENT:

- Wall: gypsum board with paint finish
- Ceiling: acoustical tile suspended ceiling, high central part lowers towards the perimeter to allow for clerestory windows
- Floor: oak wood flooring
- Egress: clear visible exit to the carport.
- Add vestibule at front entry to avoid drafts

### HVAC:

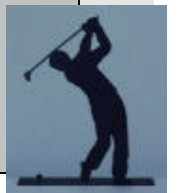
- Supply air high through linear supply diffuser
- Return air low through floor register
- Natural stack ventilation during the summer season through operable clerestory windows

### FURNISHING/EQUIPMENT:

- Brown Leather couch (x2)
- Brown Leather lounge chair (x4)
- Wall hung art work
- Golf artifacts

### CRITICAL FACTORS/CODES:

- Egress must be obvious
- Clear visual access to both the golf shop and restaurant entrances
- Clear visual access to the restrooms
- Clear visual access to vertical circulation (elevator and stair case)
- Elevator must be handicap accessible



## Men's Restroom

### AREA:

- 285 square feet

### OCCUPANCY:

- Five people

### FUNCTION/ACTIVITY:

- Typical Restroom Function

### ENVIRONMENT:

- Wall: lower portion glazed wall tile, upper portion gypsum board with paint finish
- Ceiling: acoustical tile suspended ceiling
- Clerestory windows provide daylight and privacy
- Floor: quarry tile
- Egress: clear visible exit to the entry lobby
- Electrical: recessed incandescent ceiling lights and wall mounted task lighting over the mirror
- Plumbing: shared plumbing wall with women's restroom

### HVAC:

- Supply air high through linear supply diffuser
- Return air low through wall register
- Natural stack ventilation during the summer season through operable clerestory windows
- Exhaust ventilation to rid the space of odors

### FURNISHING/EQUIPMENT:

- Wall mounted urinal (x3)
- Urinal partition (x2)
- Wall mounted tank toilet (x2)
- Toilet partition (x2)
- Grab bar (x2)
- Built in lavatory (x4)
- Cabinet base for lavatories
- Wall mounted mirror
- Hands free paper towel dispenser
- Trash receptacle built in to cabinet base
- Wall hung art work

### CRITICAL FACTORS/CODES:

- Egress must be obvious
- At least one toilet and lavatory must be handicap accessible



## Women's Restroom

### AREA:

- 285 square feet

### OCCUPANCY:

- Five people

### FUNCTION/ACTIVITY:

- Typical Restroom Function

### ENVIRONMENT:

- Wall: lower portion glazed wall tile, upper portion gypsum board with paint finish
- Ceiling: acoustical tile suspended ceiling
- Clerestory windows provide daylight and privacy
- Floor: quarry tile
- Egress: clear visible exit to the entry lobby
- Electrical: recessed incandescent ceiling lights and wall mounted task lighting over the mirror
- Plumbing: shared plumbing wall with men's restroom

### HVAC:

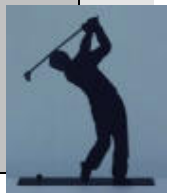
- Supply air high through linear supply diffuser
- Return air low through wall register
- Natural stack ventilation during the summer season through operable clerestory windows
- Exhaust ventilation to rid the space of odors

### FURNISHING/EQUIPMENT:

- Wall mounted tank toilet (x5)
- Toilet partition (x4)
- Grab bar (x2)
- Built in lavatory (x4)
- Cabinet base for lavatories
- Wall mounted mirror
- Hands free paper towel dispenser
- Trash receptacle built in to cabinet base
- Wall hung art work

### CRITICAL FACTORS/CODES:

- Egress must be obvious
- At least one toilet and lavatory must be handicap accessible



## Men's Locker Room

### AREA:

- 505 square feet

### OCCUPANCY:

- Twenty five people

### FUNCTION/ACTIVITY:

- Changing & storing clothes
- showering

### ENVIRONMENT:

- Wall: gypsum board with paint finish
- Ceiling: acoustical tile suspended ceiling
- Clerestory windows provide daylight and privacy
- Floor: quarry tile around the shower area and oak wood flooring around the locker area
- Electrical: recessed incandescent ceiling lights and lowered ceiling task lights over the showers
- Plumbing: shared plumbing wall with women's locker room

### HVAC:

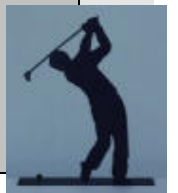
- Supply air high through linear supply diffuser
- Return air low through floor register
- Natural stack ventilation during the summer season through operable clerestory windows

### FURNISHING/EQUIPMENT:

- 24"x60" wood locker (x25)
- Floor mounted wood bench (x2)
- Built in wood cabinet for towel storage, dirty towel receptacle and trash receptacle
- Full length wall mounted mirror
- Wall mounted hair dryer
- Wall hung art work
- Built in square shower stall (x2)

### CRITICAL FACTORS/CODES:

- At least one shower stall must be handicap accessible



## Women's Locker Room

### AREA:

- 505 square feet

### OCCUPANCY:

- Twenty five people

### FUNCTION/ACTIVITY:

- Changing & storing clothes
- showering

### ENVIRONMENT:

- Wall: gypsum board with paint finish
- Ceiling: acoustical tile suspended ceiling
- Clerestory windows provide daylight and privacy
- Floor: quarry tile around the shower area and oak wood flooring around the locker area
- Electrical: recessed incandescent ceiling lights and lowered ceiling task lights over the showers
- Plumbing: shared plumbing wall with men's locker room

### HVAC:

- Supply air high through linear supply diffuser
- Return air low through floor register
- Natural stack ventilation during the summer season through operable clerestory windows

### FURNISHING/EQUIPMENT:

- 24"x60" wood locker (x25)
- Floor mounted wood bench (x2)
- Built in wood cabinet for towel storage, dirty towel receptacle and trash receptacle
- Full length wall mounted mirror
- Wall mounted hair dryer
- Wall hung art work
- Built in square shower stall (x2)

### CRITICAL FACTORS/CODES:

- At least one shower stall must be handicap accessible





## Golf Shop

### AREA:

- 1,570 square feet

### OCCUPANCY:

- 1-2 employees
- up to 40 people

### FUNCTION/ACTIVITY:

- Servicing the needs of golfers
- Cash register location
- Making tee times
- Displaying and selling merchandise

### ENVIRONMENT:

- Wall: gypsum board with paint finish
- Ceiling: acoustical tile suspended ceiling
- Floor: oak wood flooring
- Electrical: recessed incandescent ceiling lights are automatically controlled by photosensitive cells

### HVAC:

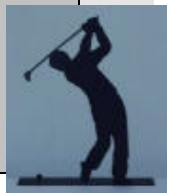
- Supply air high through linear supply diffuser
- Return air low through floor register
- Natural stack ventilation during the summer season through operable clerestory windows

### FURNISHING/EQUIPMENT:

- Wood built in front desk with electrical conduits for computer hook up
- Built in wall shelves for displaying merchandise and golf artifacts
- Flexible clothes racks and shelves for merchandise displays
- Wall hung art work
- Television with wall mounting hardware
- Stereo sound system

### CRITICAL FACTORS/CODES:

- Egress must be obvious
- Must have a separate lockable entry than the restaurant due to differing operational hours
- Must include both flexible and fixed merchandise displays



## Office for Golf Professional

### AREA:

- 130 square feet

### OCCUPANCY:

- 1 employee
- 1 or 2 other people

### FUNCTION/ACTIVITY:

- Servicing the needs of golfers
- Paper work
- Making tee times
- Computer work

### ENVIRONMENT:

- Wall: gypsum board with paint finish
- Ceiling: acoustical tile suspended ceiling
- Floor: oak wood flooring

### HVAC:

- Supply air high through linear supply diffuser
- Return air low through floor register

### FURNISHING/EQUIPMENT:

- Wood desk
- High back leather office chair
- Built in wall shelves for storage or displays
- Lounge chair (x2)
- File cabinet
- Wall hung art work

### CRITICAL FACTORS/CODES:



## Merchandise Storage Room

### AREA:

- 295 square feet

### OCCUPANCY:

- 1-2 employees

### FUNCTION/ACTIVITY:

- Storing overstocked merchandise
- Copy machine location

### ENVIRONMENT:

- Wall: gypsum board with paint finish
- Ceiling: acoustical tile suspended ceiling
- Floor: oak wood flooring

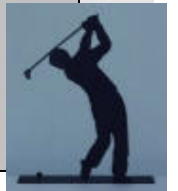
### HVAC:

- Supply air high through linear supply diffuser
- Return air low through wall register

### FURNISHING/EQUIPMENT:

- Shelving units for storing merchandise

### CRITICAL FACTORS/CODES:



## Kitchen

### AREA:

- 1,150 square feet

### OCCUPANCY:

- 5-6 employees

### FUNCTION/ACTIVITY:

- Food preparation
- Food storage
- Banquet style food preparation

### ENVIRONMENT:

- Wall: gypsum board with paint finish
- Ceiling: acoustical tile suspended ceiling
- Clerestory windows provide daylight
- Floor: quarry tile
- Electrical: hook ups for commercial appliances
- Suitable plumbing for a functional commercial kitchen

### HVAC:

- Supply air high through linear supply diffuser
- Return air low through floor register
- Natural stack ventilation during the summer season through operable clerestory windows
- Extra cooling may be needed during the summer season
- Exhaust ventilation will be needed for cooking appliances

### FURNISHING/EQUIPMENT:

- Walk in storage refrigerator
- Walk in storage freezer
- Built in shelves for dry food and paper storage
- Commercial stove, grill, deep fryer and oven
- Commercial dishwasher
- Stainless steel countertops
- Waitress station with beverage dispenser
- Stainless steel double bowl sink
- Heat lamp for food warming
- Under counter storage cabinets for cooking utensils
- Stainless steel shelves for dishware and glassware storage

### CRITICAL FACTORS/CODES:

- Access to delivery entrance
- Access to exterior dumpsters
- Separate 'in' and 'out' full swing doors with vision glass panels to connect the kitchen with the restaurant seating area
- Access to the conference/banquet room via service elevator



## Bar

### AREA:

- 330 square feet

### OCCUPANCY:

- 2-3 employees
- seating for 15 people maximum

### FUNCTION/ACTIVITY:

- Drink preparation
- Cash register location

### ENVIRONMENT:

- Bar top: oak wood slab with glass top, a variety of golf scorecards will be displayed under the glass
- Bar base: 2x6 stud wall with gypsum board covering
- Floor: quarry tile
- Suitable plumbing for a sink

### HVAC:

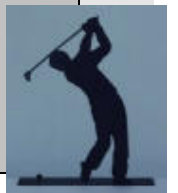
- Supply air high through linear supply diffuser
- Return air low through floor register
- Exhaust ventilation will be needed to clear the area of smoke

### FURNISHING/EQUIPMENT:

- Stainless steel sink
- Refrigerator units
- Built in shelves for glassware storage
- dishwasher
- television (x2) with wall mounting hardware
- Under counter storage cabinets

### CRITICAL FACTORS/CODES:

- Egress must be obvious



## Restaurant

### AREA:

- 1,690 square feet

### OCCUPANCY:

- 4-5 employees
- 50-100 people

### FUNCTION/ACTIVITY:

- Dining/food service
- Open space for accommodating flexible seating arrangements

### ENVIRONMENT:

- Wall: gypsum board with paint finish
- Ceiling: acoustical tile suspended ceiling
- Floor: oak wood flooring
- Electrical: recessed incandescent ceiling lights are automatically controlled by photosensitive cells
- Clear visible exits to both the patio and lobby

### HVAC:

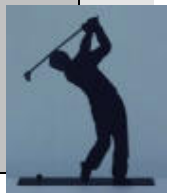
- Supply air high through linear supply diffuser
- Return air low through floor register
- Exhaust ventilation will be needed to clear the area of smoke

### FURNISHING/EQUIPMENT:

- Wood tables
- Upholstered chairs
- Stereo sound system
- television (x2) with wall mounting hardware
- wall hung art work

### CRITICAL FACTORS/CODES:

- Egress must be obvious
- Must have a separate lockable entry than the golf shop due to differing operational hours
- Bar employee must have clear view of seating area



## Office for Food & Beverage

### AREA:

- 130 square feet

### OCCUPANCY:

- 1 employee
- 1 or 2 other people

### FUNCTION/ACTIVITY:

- Servicing the needs of restaurant and bar patrons
- Paper work
- Computer work

### ENVIRONMENT:

- Wall: gypsum board with paint finish
- Ceiling: acoustical tile suspended ceiling
- Floor: oak wood flooring

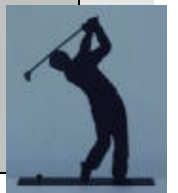
### HVAC:

- Supply air high through linear supply diffuser
- Return air low through floor register

### FURNISHING/EQUIPMENT:

- Wood desk
- High back leather office chair
- Built in wall shelves for storage or displays
- Lounge chair (x2)
- File cabinet
- Wall hung art work

### CRITICAL FACTORS/CODES:



## Cart Barn

### AREA:

- 7,470 square feet

### OCCUPANCY:

- 3-4 employees

### FUNCTION/ACTIVITY:

- House and store 94 electric golf carts and their chargers

### ENVIRONMENT:

- Wall: exposed CMU wall
- Ceiling: exposed structure and mechanical systems
- Floor: finished concrete
- Grated drain in the cart cleaning area

### HVAC:

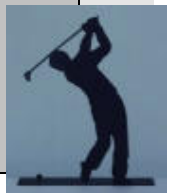
- Supply air high through linear supply diffuser
- Return air high through ceiling register

### FURNISHING/EQUIPMENT:

- 2x12 mounting boards for cart chargers
- electric pressure washer with wall mounting hardware

### CRITICAL FACTORS/CODES:

- Egress must be obvious
- Cart traffic flow must be one way and obvious
- Must be an area to clean and restock the golf carts





## Bag Room

### AREA:

- 570 square feet

### OCCUPANCY:

- 1-2 employees

### FUNCTION/ACTIVITY:

- Storage area for golf bags (both rental bags and resort guests who choose to store their bag overnight)
- Space to repair golf clubs

### ENVIRONMENT:

- Wall: exposed CMU wall
- Ceiling: exposed structure and mechanical systems
- Floor: finished concrete

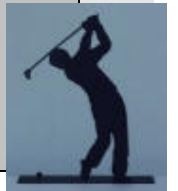
### HVAC:

- Supply air high through linear supply diffuser
- Return air high through ceiling register
- Must be well ventilated to rid the area of fumes from various solvents used in club repair

### FURNISHING/EQUIPMENT:

- Built in wood work bench with shelves
- Metal bag racks

### CRITICAL FACTORS/CODES:



## Conference/Banquet Room

### AREA:

- 5,250 square feet

### OCCUPANCY:

- Up to 240 people

### FUNCTION/ACTIVITY:

- Large pavilion type space to accommodate functions such as awards banquets, business meetings and wedding receptions

### ENVIRONMENT:

- Wall: gypsum board with paint finish
- Ceiling: acoustical tile suspended ceiling
- Floor: oak wood flooring
- Egress: clear visible exits to directly outside as well as the stairs

### HVAC:

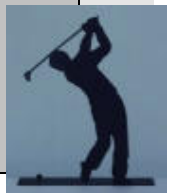
- Supply air high through linear supply diffuser
- Return air high through ceiling register

### FURNISHING/EQUIPMENT:

- Wood tables
- Upholstered chairs
- Stereo sound system
- Wall hung art work
- Golf artifacts

### CRITICAL FACTORS/CODES:

- Egress must be obvious
- Must be direct connection with the kitchen via service elevator
- Must have direct connection with a large storage area
- Clear visual access to vertical circulation (elevator and stair case)
- Elevator must be handicap accessible



## Employee Break Room

### AREA:

- 270 square feet

### OCCUPANCY:

- Up to 8 employees

### FUNCTION/ACTIVITY:

- Space for employees to spend their break and eat
- Includes separate restroom facility

### ENVIRONMENT:

- Wall: gypsum board with paint finish
- Ceiling: acoustical tile suspended ceiling, high central part lowers towards the perimeter to allow for clerestory windows
- Floor: oak wood flooring
- Suitable plumbing for restroom

### HVAC:

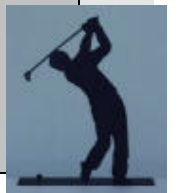
- Supply air high through linear supply diffuser
- Return air high through ceiling register

### FURNISHING/EQUIPMENT:

- Wood tables
- Upholstered chairs
- Soda machine
- Wall mounted tank toilet
- Built in lavatory

### CRITICAL FACTORS/CODES:

- Egress must be obvious



## Men's Restroom

### AREA:

- 155 square feet

### OCCUPANCY:

- 4 people

### FUNCTION/ACTIVITY:

- Typical restroom function

### ENVIRONMENT:

- Wall: lower portion glazed wall tile, upper portion gypsum board with paint finish
- Ceiling: acoustical tile suspended ceiling
- Floor: quarry tile
- Egress: clear visible exit to the conference room lobby
- Electrical: recessed incandescent ceiling lights and wall mounted task lighting over the mirror
- Plumbing: shared plumbing wall with women's restroom

### HVAC:

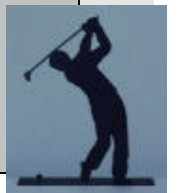
- Supply air high through linear supply diffuser
- Return air high through ceiling register
- Exhaust ventilation to rid the space of odors

### FURNISHING/EQUIPMENT:

- Wall mounted urinal (x2)
- Urinal partition (x2)
- Wall mounted tank toilet (x2)
- Toilet partition (x2)
- Grab bar (x2)
- Built in lavatory (x2)
- Cabinet base for lavatories
- Wall mounted mirror
- Hands free paper towel dispenser
- Trash receptacle built in to cabinet base
- Wall hung art work

### CRITICAL FACTORS/CODES:

- Egress must be obvious
- At least one toilet and lavatory must be handicap accessible



## Women's Restroom

### AREA:

- 155 square feet

### OCCUPANCY:

- 4 people

### FUNCTION/ACTIVITY:

- Typical restroom function

### ENVIRONMENT:

- Wall: lower portion glazed wall tile, upper portion gypsum board with paint finish
- Ceiling: acoustical tile suspended ceiling
- Floor: quarry tile
- Egress: clear visible exit to the conference room lobby
- Electrical: recessed incandescent ceiling lights and wall mounted task lighting over the mirror
- Plumbing: shared plumbing wall with men's restroom

### HVAC:

- Supply air high through linear supply diffuser
- Return air high through ceiling register
- Exhaust ventilation to rid the space of odors

### FURNISHING/EQUIPMENT:

- Wall mounted tank toilet (x4)
- Toilet partition (x4)
- Grab bar (x2)
- Built in lavatory (x2)
- Cabinet base for lavatories
- Wall mounted mirror
- Hands free paper towel dispenser
- Trash receptacle built in to cabinet base
- Wall hung art work

### CRITICAL FACTORS/CODES:

- Egress must be obvious
- At least one toilet and lavatory must be handicap accessible



# Process

HOUSING DEVELOPMENT: 10.1.04  
 MIXED USE → SINGLE FAMILY 2,000-3,000 FT<sup>2</sup> ↑ \$300K  
 YEAR AROUND, STORAGE SPACE FOR  
 CARS & TOYS, EXTRAORDINARY  
 TOWNHOMES 1,000-2,000 FT<sup>2</sup> \$150K  
 SNOWBIRDS, SHARED PARKING,  
 SMALL CLUSTERS OF ASSOCIATIONS  
 CONDOS - RENTAL UNITS - CABINS

18  
4.5  
22.5

**SITE AREA**

18,703,518 FT<sup>2</sup> = 430 ACRES  
 43,560 FT<sup>2</sup> = 1 ACRE

Other Creek Clubhouse  
 Harry Weese 1964  
 R.T.J.

UP NOTCH 10% !!  
 OXIDIZES TO A GREY

Thursdays w/ Baker  
 2:30 - 3:00

WED @ 1:15, 1:30, 2

COMBINATION OF  
 GEOMETRIC &  
 CURVILINEAR  
 FORMS

- # SUSTAINABLE ISSUES
- # CORRUGATED METAL (ZINC COATING)
- # STAY LOOSE
- # DEVELOP FROM SITE PLAN TO CABIN (SHOULD BE ABLE TO SEE CONCEPTS CLEARLY)
- # CONCEPTUAL DESIGN & REDESIGN

- Where should I build & why?
- Linking my proposed development w/ the existing resort as well as the new resort development  
 how will people move back & forth? H&G?  
 vehicle pedestrian golf carts
- Tourism
  - \* Supply ⇒ Attractions, why people come, should be well developed
  - Demand ⇒ Physical & Financial Ability of people to come
- Connections
  - with the lake: visually, physically
  - with the resort: overhead or underground link
  - with the golf course: views
- Sketch Site Issues & Relationships

\* Foster: Clark Center...  
 @ Stanford U.

Study course contours  
 the juxtaposition of the rectilinear land plot and the metamorphic forms of the course

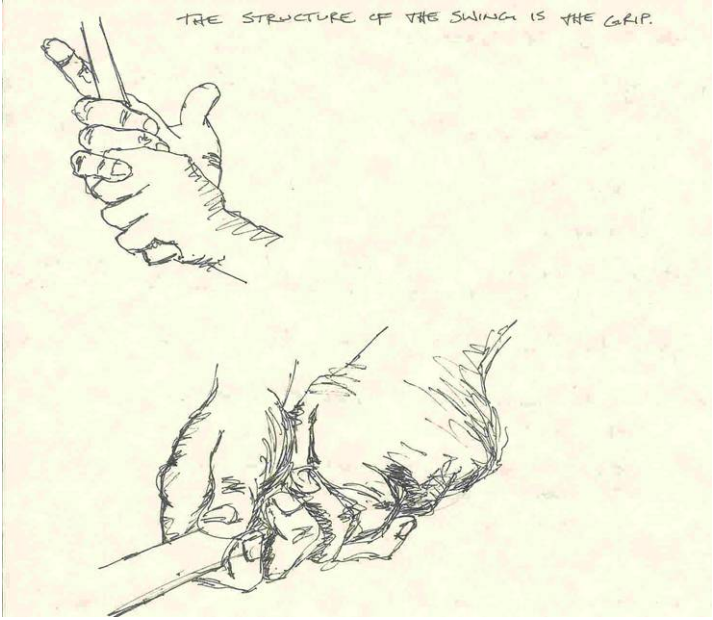
\* Curvilinear Site

Access Ramp (Metamorphic Form)

Access Road (Metamorphic Form)

Access Hill (Metamorphic Form)

Access Road (Metamorphic Form)



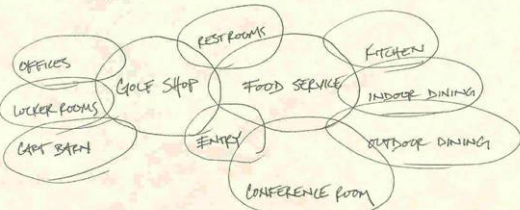
THE BAY COURSE AT SUPERIOR SHORES

QUESTIONS FOR DARRIN:

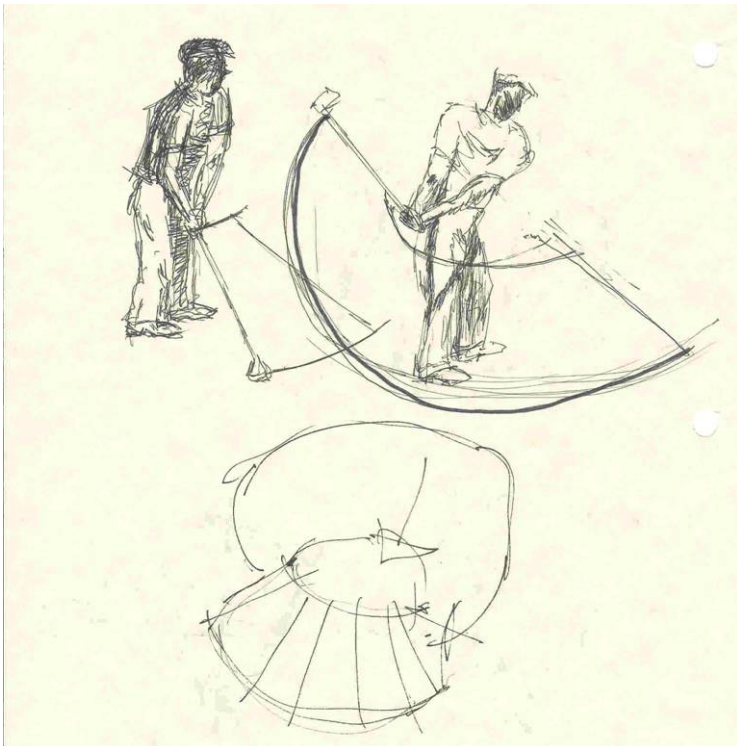
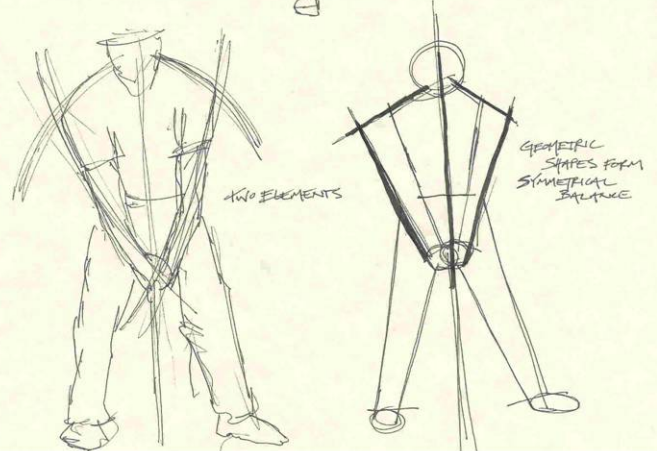
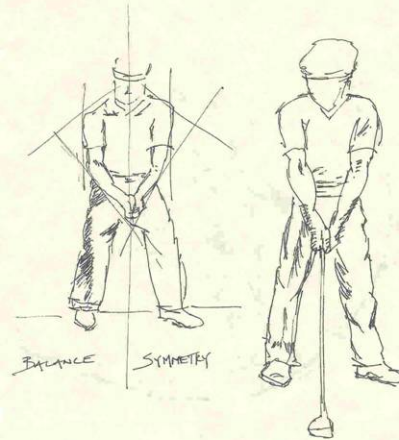
- What types of buildings should I design? (condos? cabins? etc) hotel?
- How many employees will this project need? housing for them?  
Pro Shop -  
Restaurant -  
Maintenance -  
Housekeeping -
- What is the current demand for rental units? MKT analysis's current resort capacity? Is there a need for more units?
- Programmatic Requirements; square footage of spaces
- Go over the major project elements & users.  
Target MKT:  
Clubhouse - local residents & tourists  
Townhomes - seniors  
Single Family Homes

◦ Who are the users? Where are they primarily from?

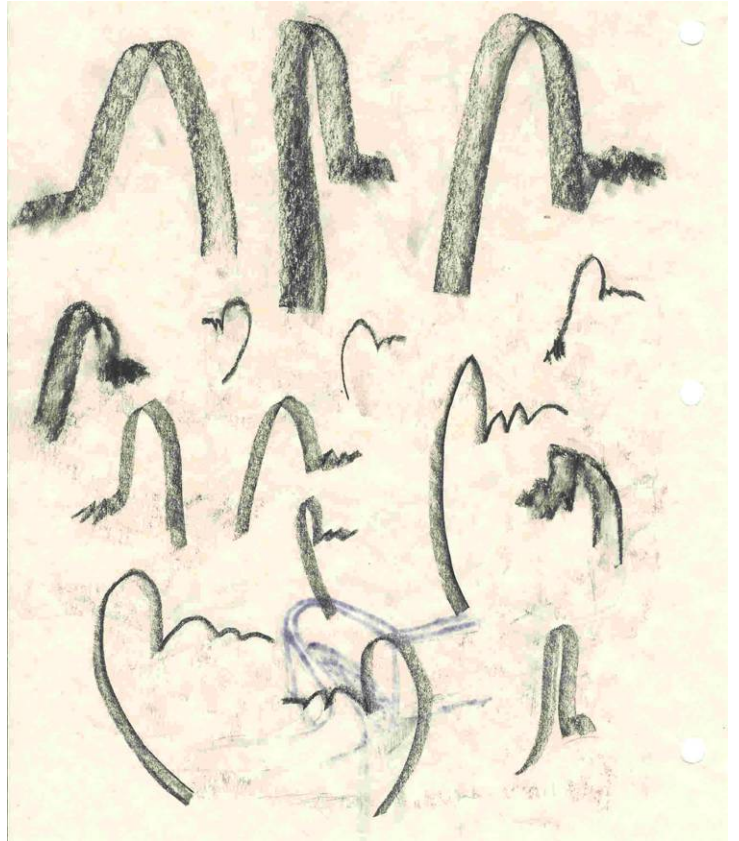
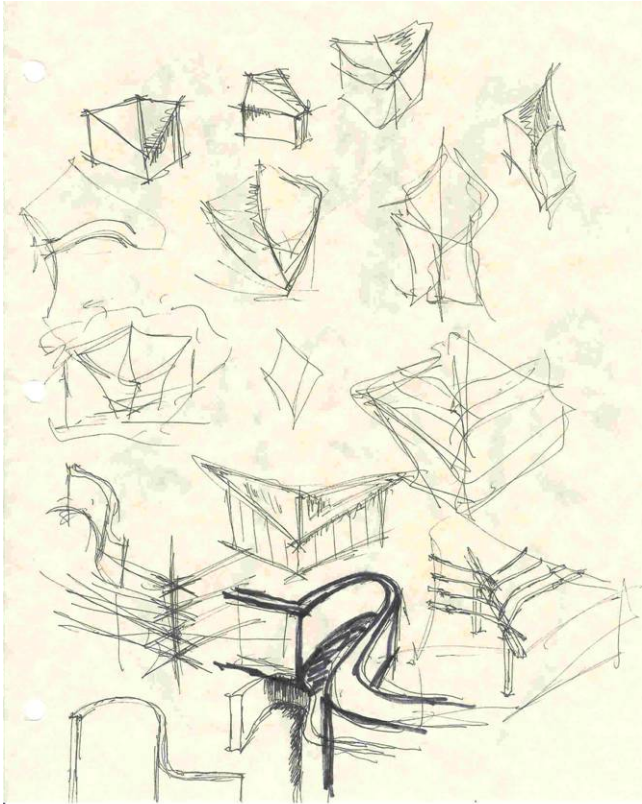
CLUBHOUSE SPACE:



THE FOUNDATION OF THE SWING IS STANCE & POSTURE.

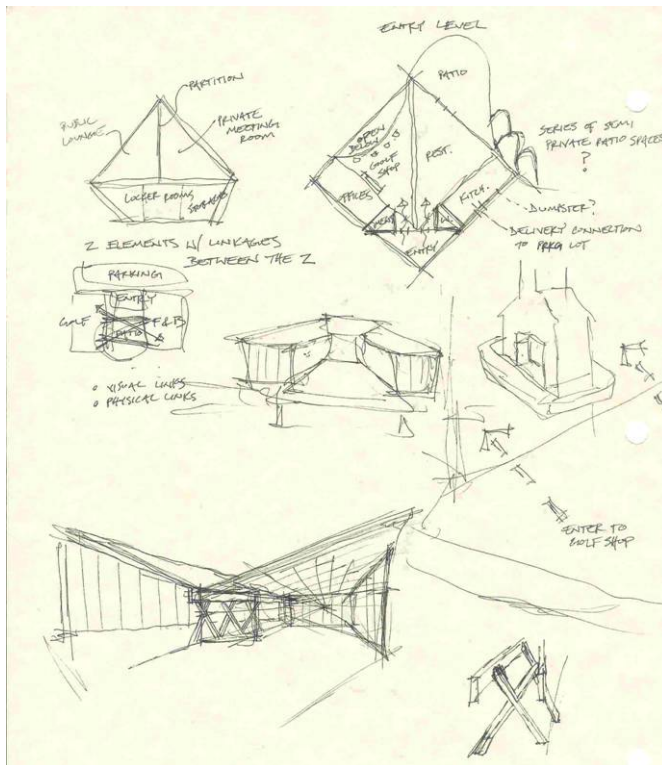
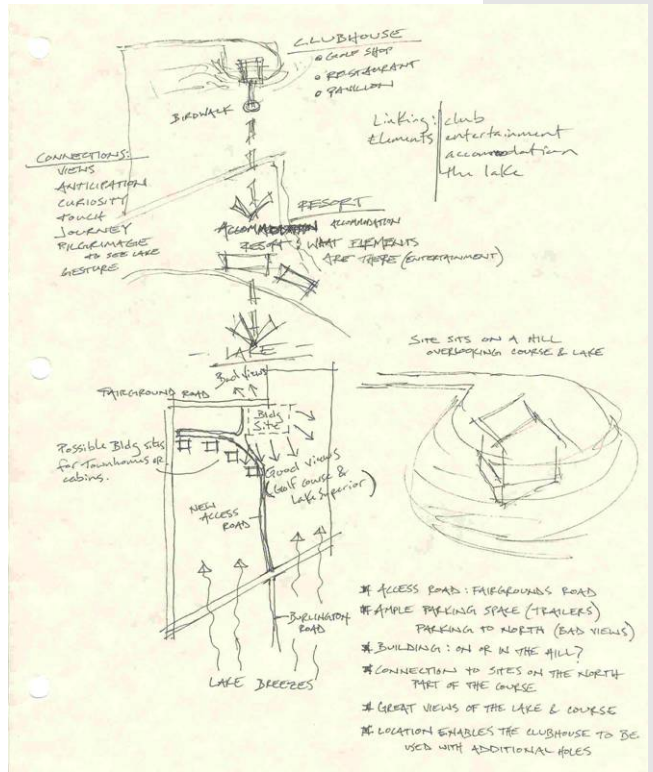


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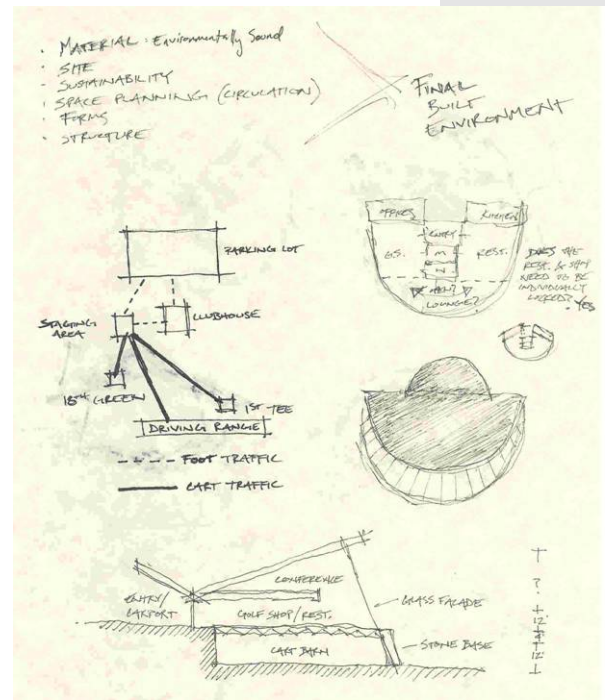
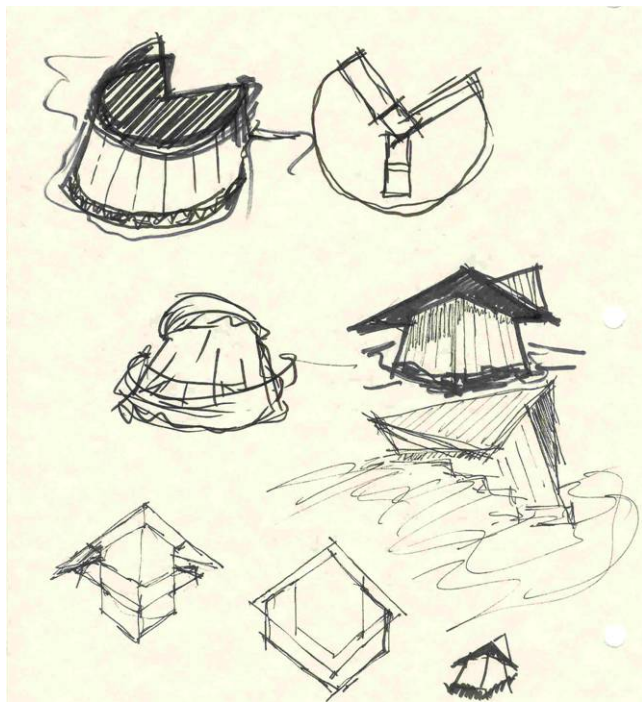
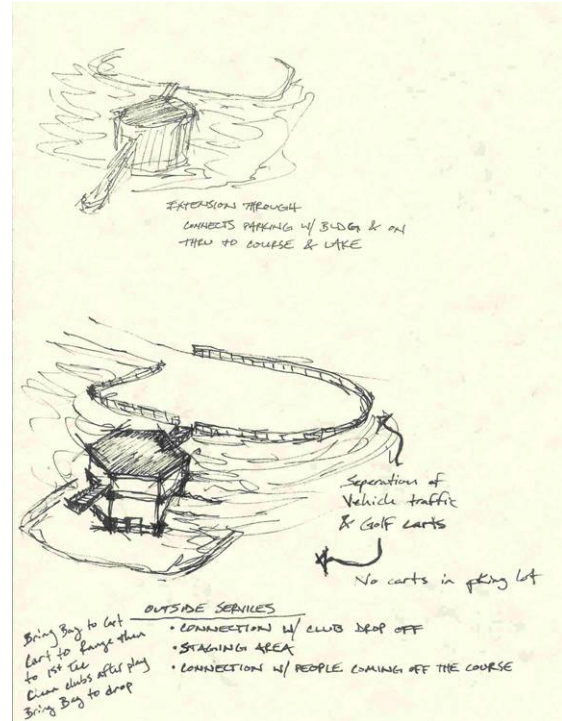
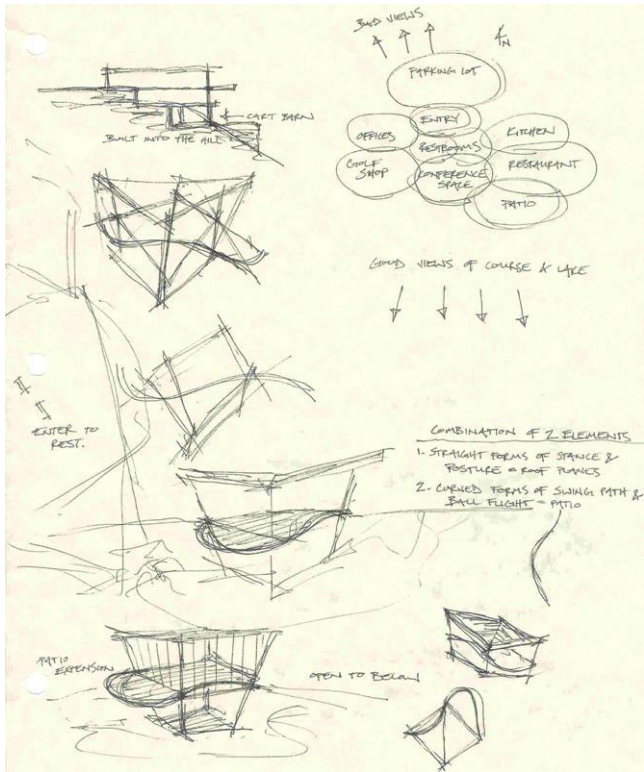




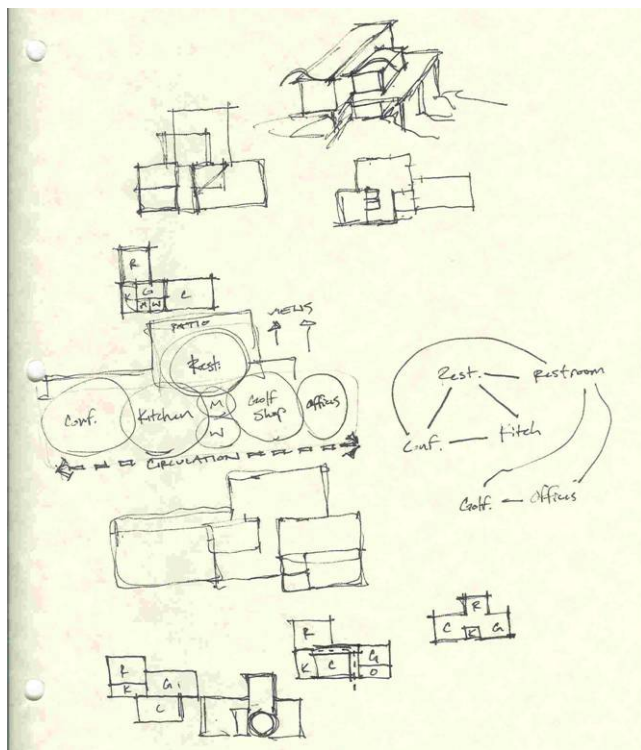
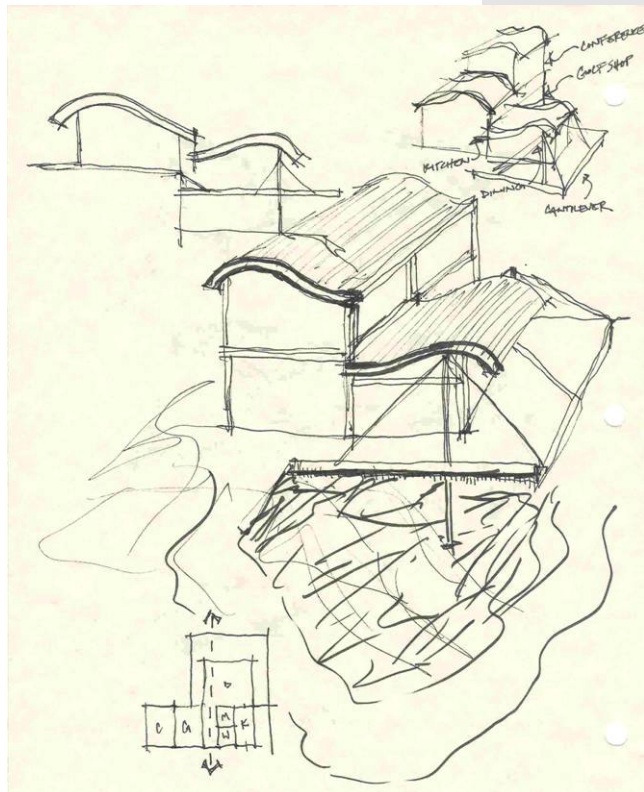
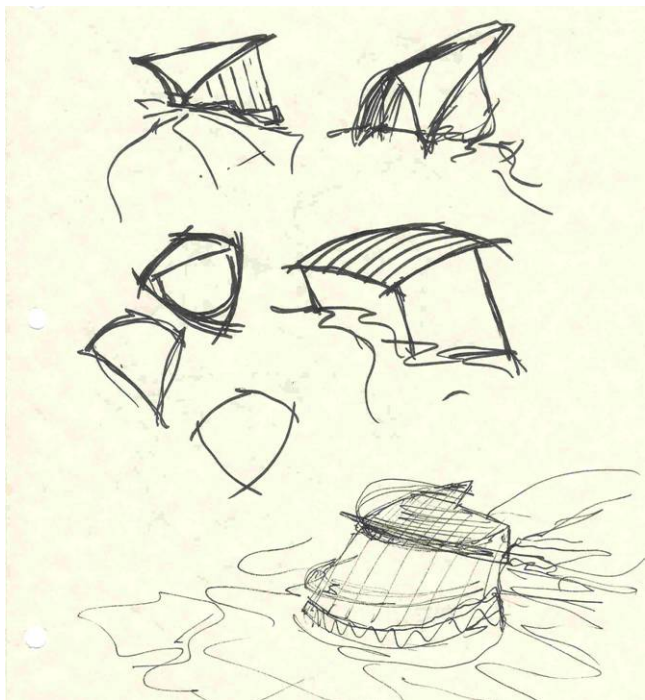
THE BAY COURSE AT SUPERIOR SHORES



THE BAY COURSE AT SUPERIOR SHORES

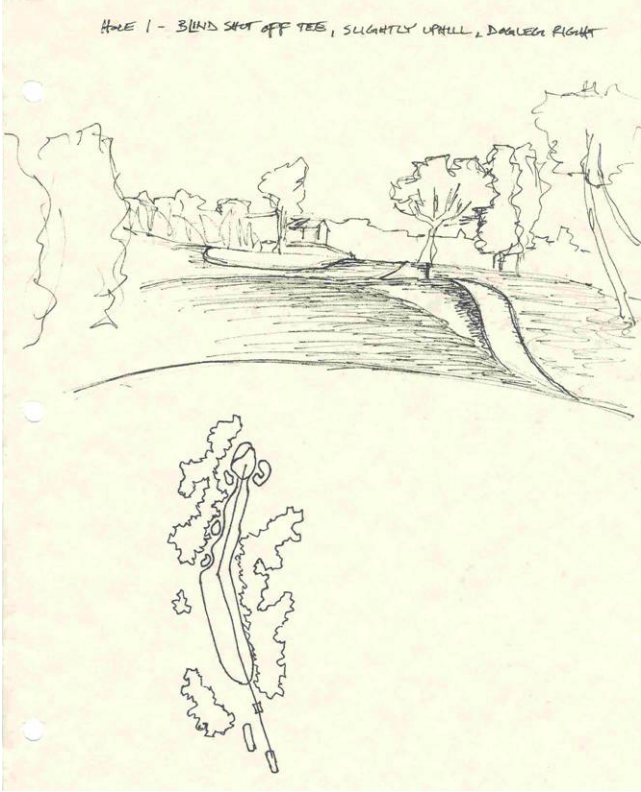


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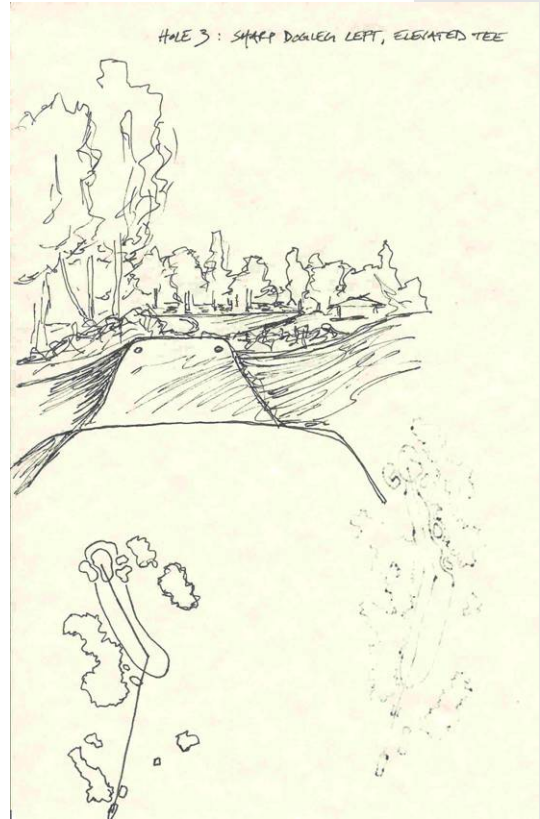


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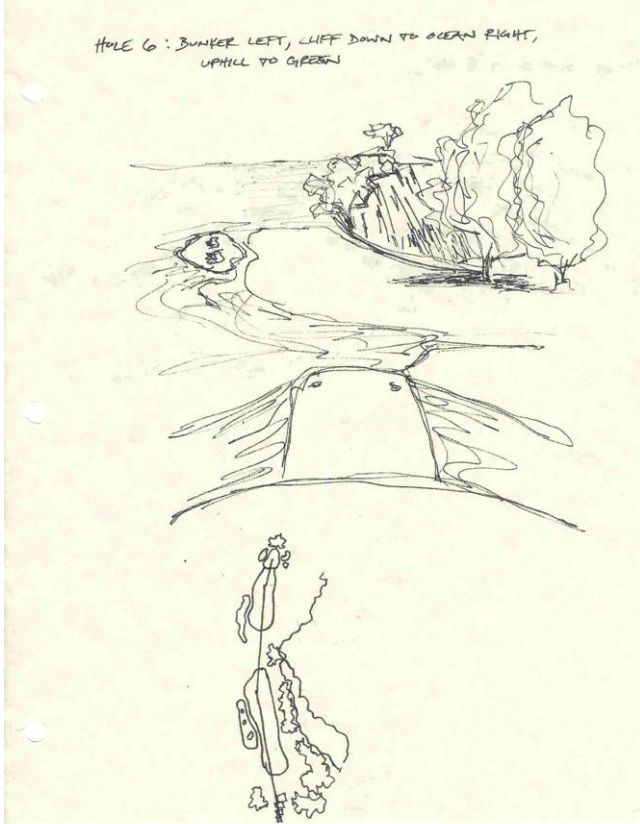
HOLE 1 - BLIND SHOT OFF TEES, SLIGHTLY UPHILL, DOWNEN RIGHT



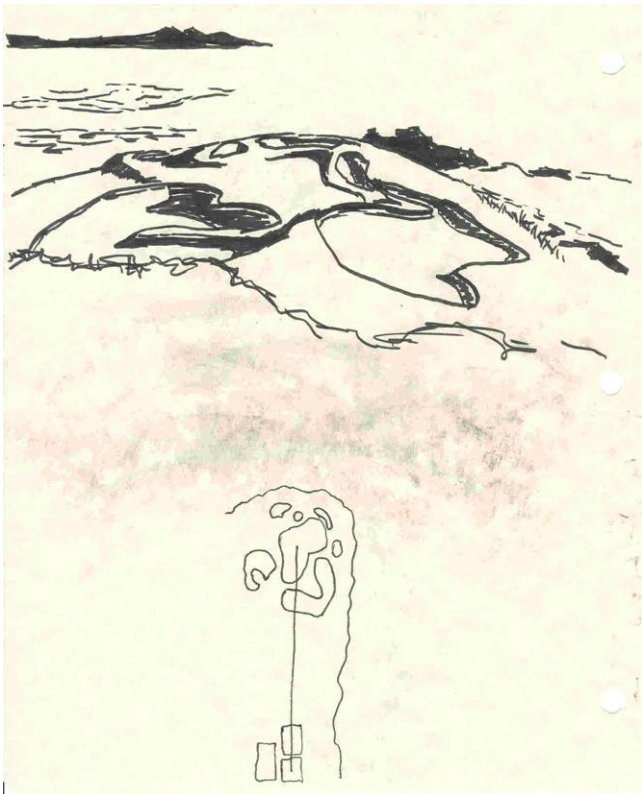
HOLE 3 - SHARP DOWNEN LEFT, ELEVATED TEE



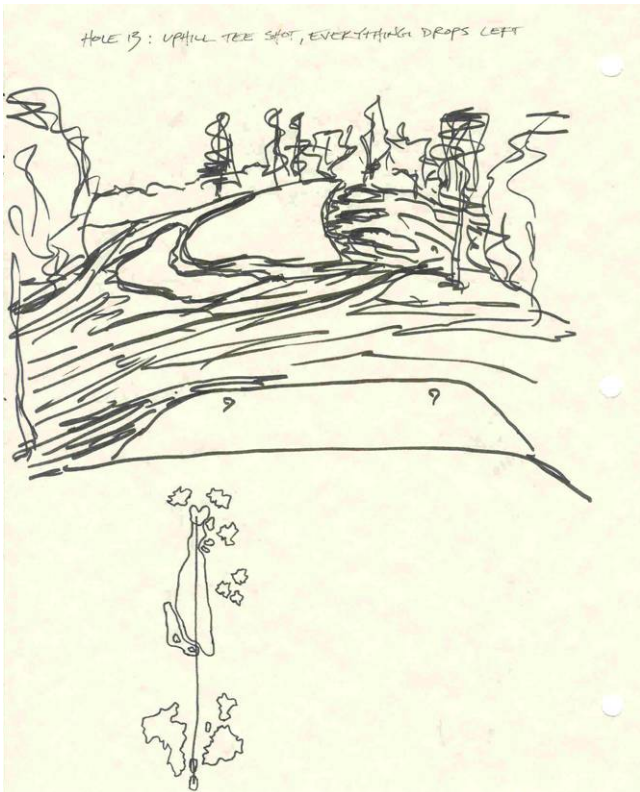
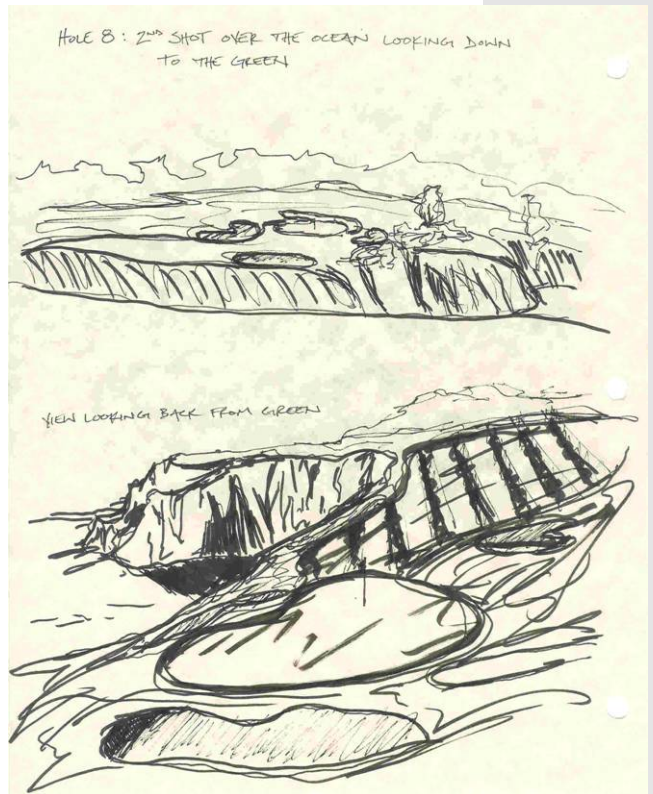
HOLE 6 - BUNKER LEFT, CLIFF DOWN TO OCEAN RIGHT, UPHILL TO GREEN



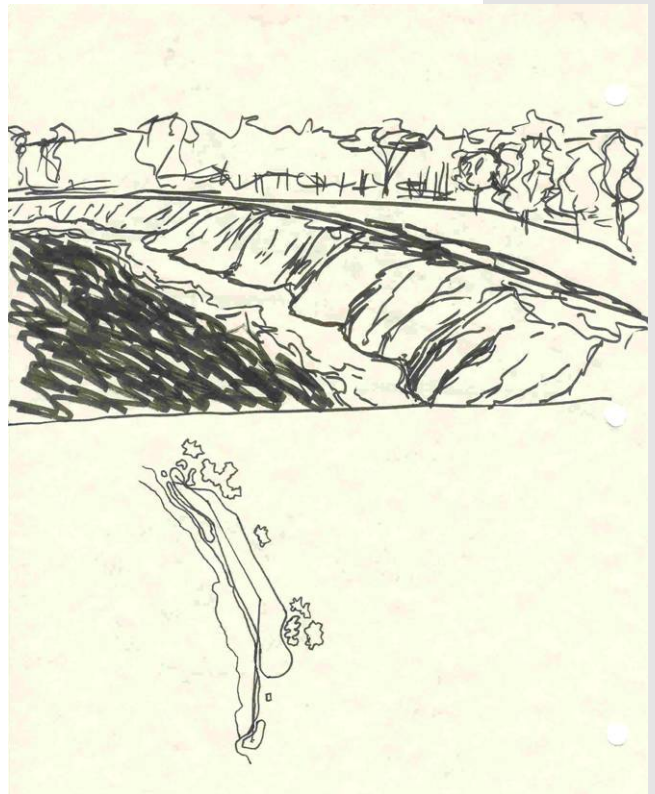
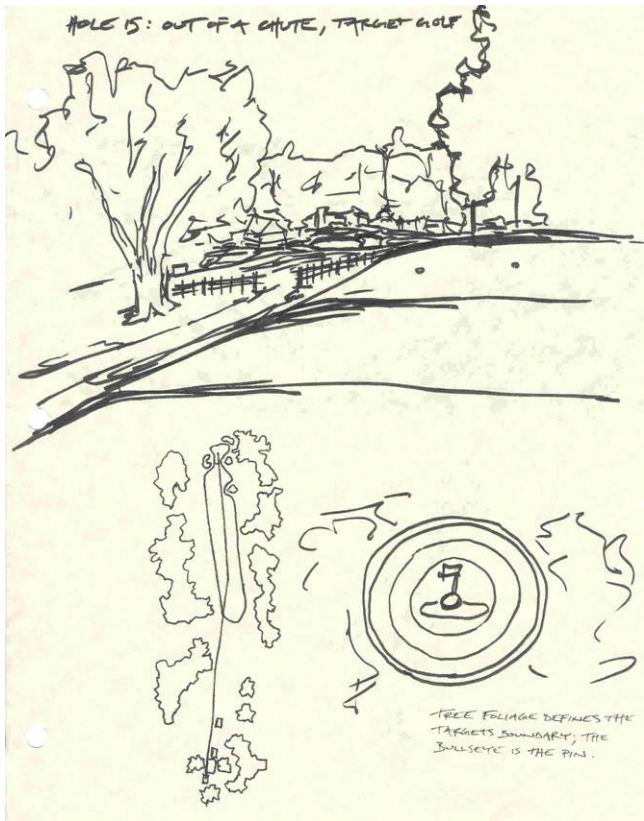
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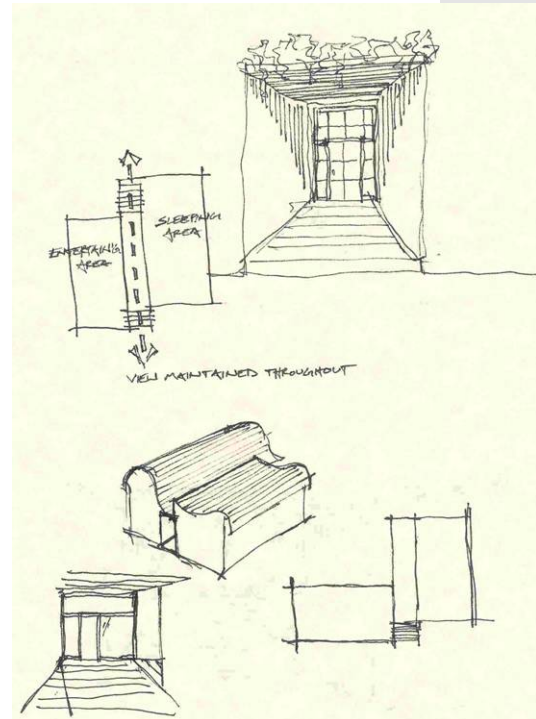
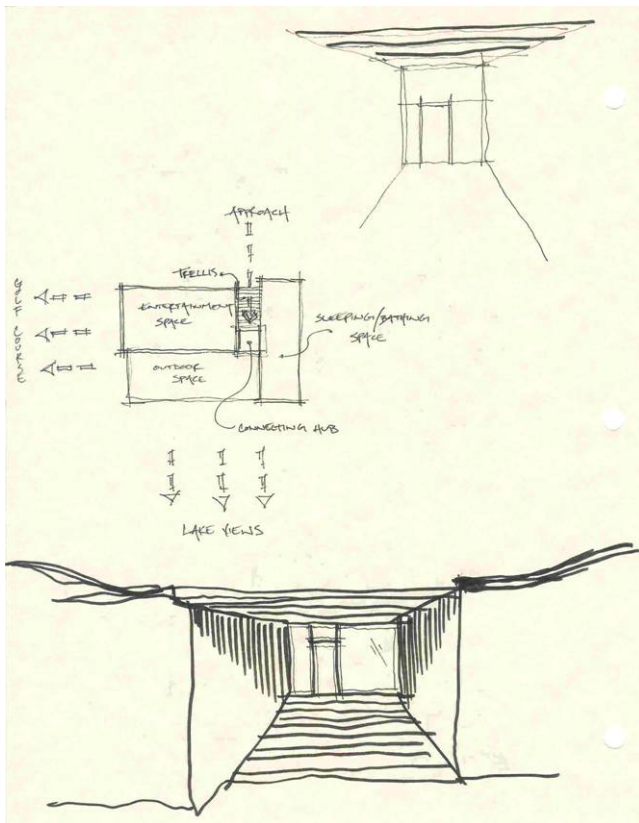
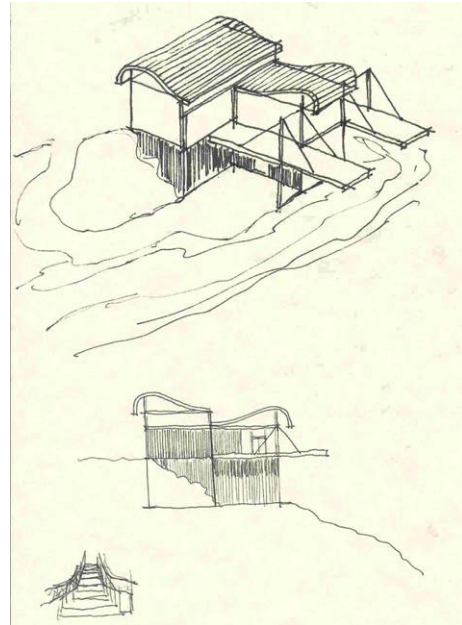
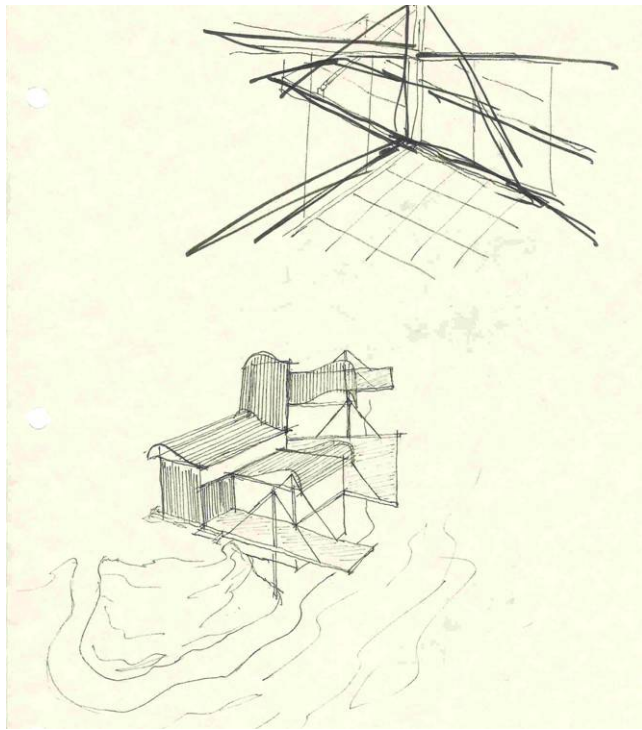
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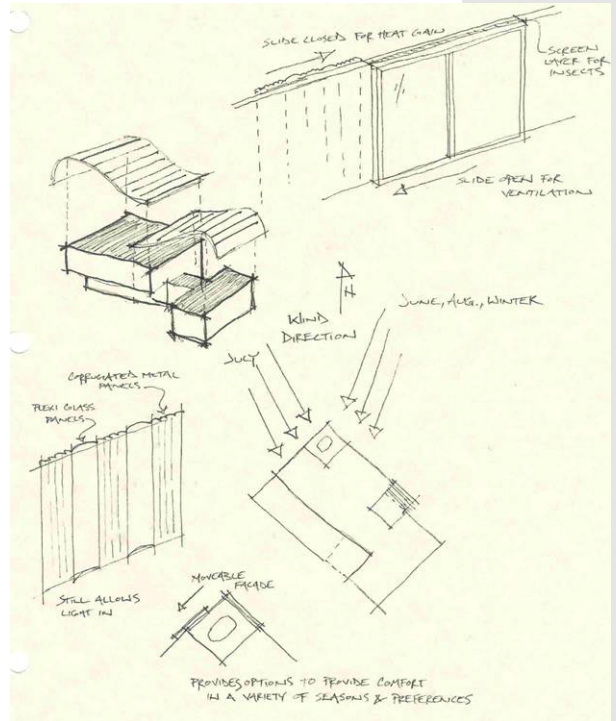
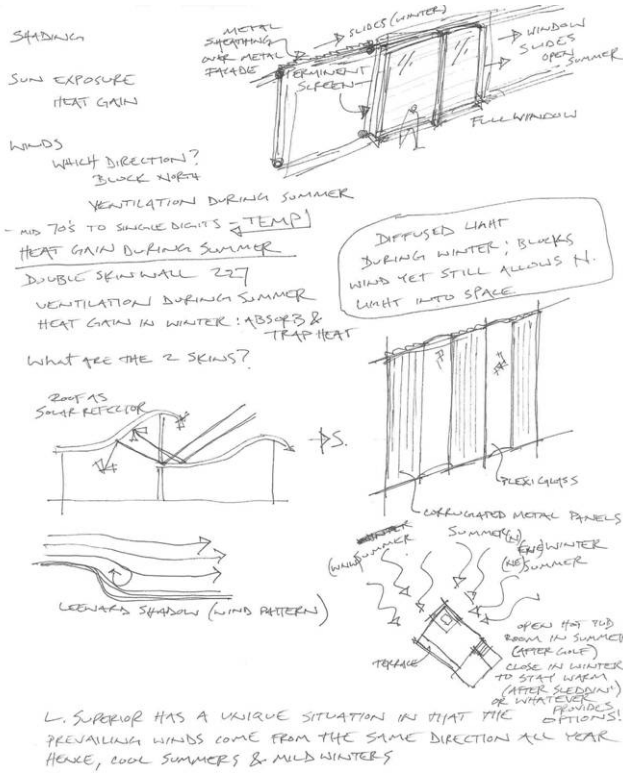
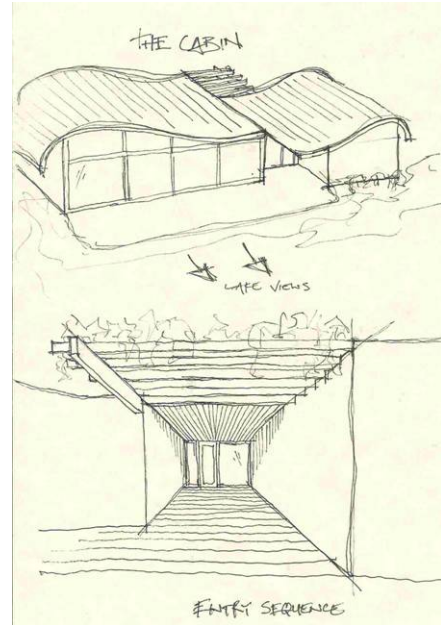
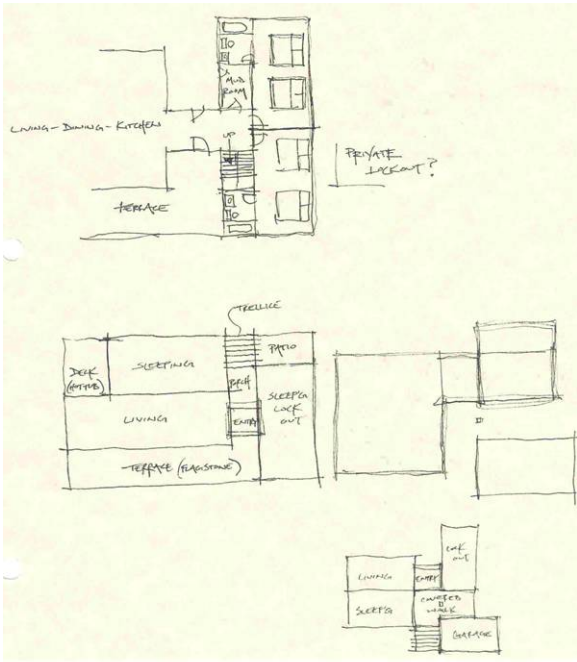


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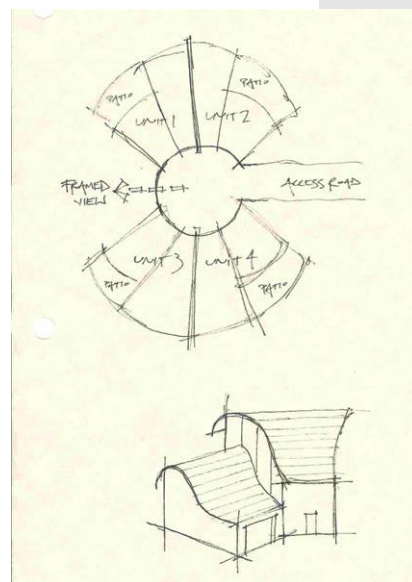
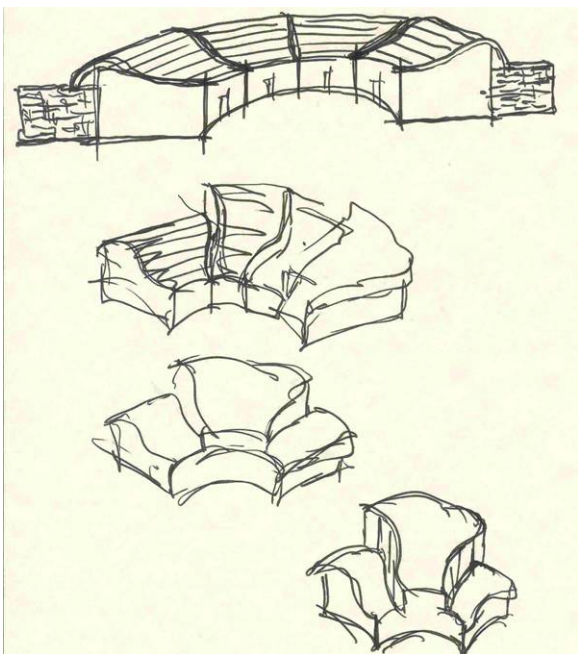
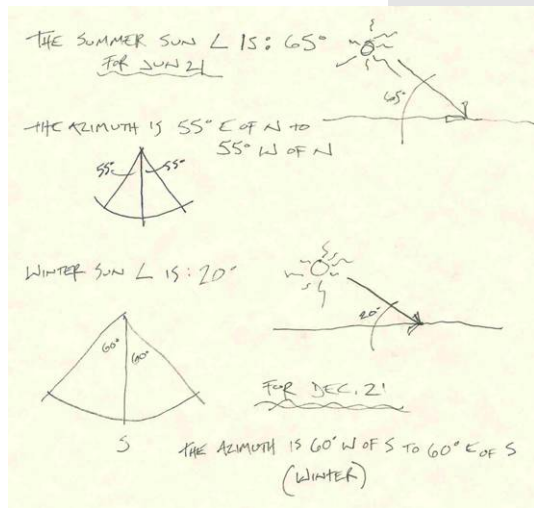
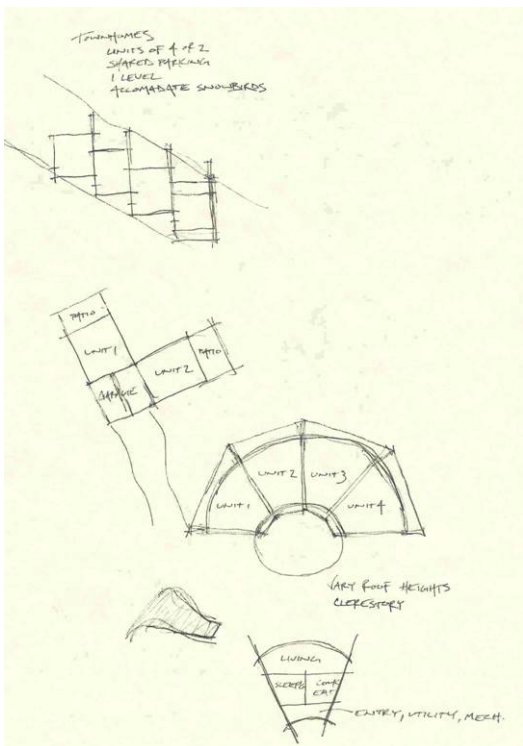




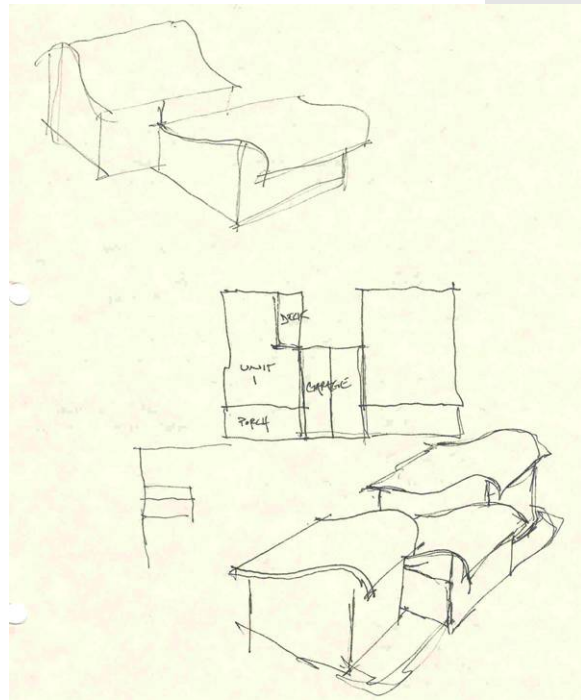
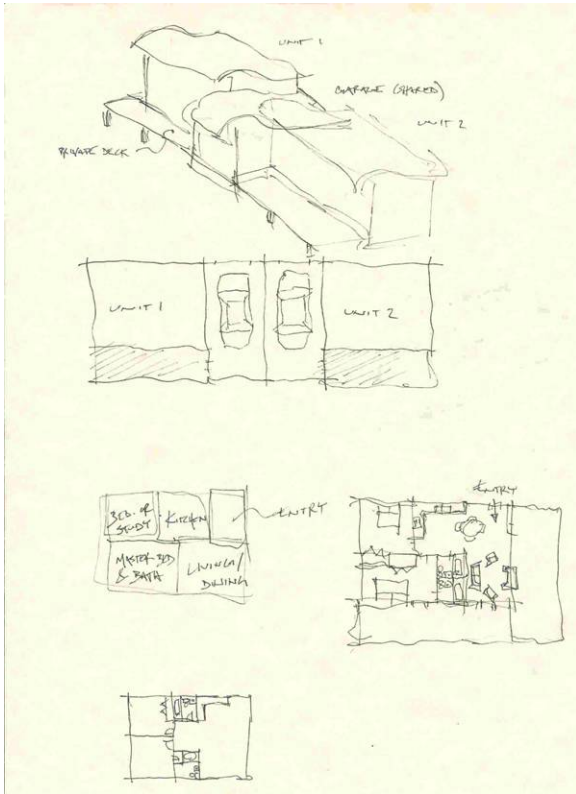
THE BAY COURSE AT SUPERIOR SHORES



THE BAY COURSE AT SUPERIOR SHORES



THE BAY COURSE AT SUPERIOR SHORES



SITE PLANNING

1) IDENTIFY ALL POTENTIAL CONSERVATION AREAS

- STEEP SLOPES
- GOLF COURSE (BOTH BUILT & PLANNED)
- STREAM & SURROUNDING STREAM BED
- WILDLIFE CORRIDOR
- EXISTING TRAILS
- OLD LANDFILL (NOT BUILDABLE)

2) LOCATING HOUSE SITES

- MAXIMIZE VIEW LOTS (GOLF COURSE OPEN SPACE)
- NORMAL VIEW LOTS SHOULD BE LOCATED SHORT WALKING DISTANCE FROM OPEN GREEN SPACE & WOODLAND TRAILS
- MINIMIZE LOT WIDTH & MAXIMIZE THE LIVABILITY OF BUILT HOMES
- PRIVATE BACKYARDS (NO VIEWS FROM PUBLIC ROADS)

3) DESIGNING STREETS & TRAILS

- o NO DEAD END STREETS (EASIER & SAFER ACCESS FOR SERVICE VEHICLES)
- o SINGLE LOADED STREETS (HOUSES FACE OPEN SPACE) - INCREASES LOT VALUE & DIVERSIFIES STREET SCAPE
- o TERMINAL VISTAS (GIVE DRIVERS A GLIMPSE OF OPEN SPACE)
- o CURVED ROADS (GRACE, BEAUTY, CONTROLS SPEED)
  - Y INTERSECTIONS (COMPLEX: DRIVER HAS TO DECIDE WHAT WAY TO TURN, THUS SLOWING SPEED)
- o SIDEWALKS, FOOTPATHS & TRAILS SHOULD BE INCLUDED
- o DESIGN STREETS THAT CAN CONNECT W/ ADJOINING PROPERTIES THAT COULD BE DEVELOPED IN THE FUTURE

4) DRAWING LOT LINES

- SMALLER LOT SIZES TO MAXIMIZE GREEN SPACE
- LARGE LOTS

NOTES

CHA JOURNAL  
 UNDERGROUND OPTIONS  
 STREAM LOTS & STRUCTURE  
 VISUAL OUTLOOKS  
 LINKS TO CHAMPIONSHIP

ACCESS

SITE PLAN DEVELOPMENTAL STAGES

- II STAGE 1: BUILD SALEABLE LOTS, TOWNHOMES & CABINS  
 BUILD STREETS, SIDEWALKS, TRAILS & INFRASTRUCTURE  
 - USE REVENUE FROM STAGE 1 TO BUILD STAGE 2 -
- II STAGE 2: BUILD CLUBHOUSE & 9 HOLES OF CHAMPIONSHIP GOLF  
 IMPROVE EXISTING 9 HOLES TO MAKE 18 HOLES  
 - USE REVENUE FROM STAGE 1 & 2 TO BUILD STAGE 3 -
- II STAGE 3: DEVELOP THE 9 HOLES ON THE SW PART OF THE SITE INTO SALEABLE LOTS & GREENSPACE (CONSERVATION DESIGNATED SUBDIVISION W/ PARK)

- Juxtaposition of CURVILINEAR & GEOMETRIC FORMS -

FLIP UP PAGES ILLUSTRATING THE STAGES:

1. SHOW WHAT CURRENTLY EXISTS
2. SHOW THE SUBDIVISION DESIGN (STAGE 1)
3. SHOW THE CLUBHOUSE & NEW GOLF HOLES (STAGE 2)
4. SHOW THE SW SUBDIVISION (STAGE 3)

LOCAL MATERIALS:

- STONE & WOODS &
- GLASS TO PROVIDE CONNECTION W/ NATURE

STRUCTURE:  
 STEEL

LIGHTNESS OF THE STRUCTURE CONTRASTING W/ THE SOLID BASE & RUGGED LANDSCAPE

- DOUBLE CURVED STEEL BEAMS
- SUSPENDED STEEL STRUCTURE
- CONCRETE FLOORS



THE BAY COURSE AT SUPERIOR SHORES

**PRESENTATION DRAWINGS**

2' | 3' | 2'

TITLE & INTRO (NEED FOR PROJECT)  
LOCATION

LEFT BAND

RIGHT BAND

CENTRE BAND

**SITE PLANS**

EXISTING

PHASE 1  
HOUSING SUBDIVISION TRAILS

PHASE 2  
CLUBHOUSE DRAWING RANGE VIEW 9 TRAILS

PHASE 3  
SUI CRUISE CONVERSIONS SUBDIVISIONS CARPORT SPACE TENNIS & BASEBALL TRAILS

**CABIN & TOWNHOMES**

- FLOOR PLANS
- ELEVATIONS (2)
- SECTION
- PHYSICAL MODELS

E	E
F	S

E	E
F	S

**CLUBHOUSE**

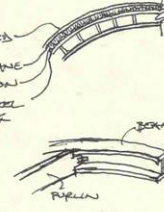
- FLOOR PLANS
- 2 ELEVATIONS
- SECTION
- HVAC LAYOUT
- STRUCTURAL GRID
- MATERIAL CALL OUTS
- CONSTRUCTION DETAIL
- SITE MODEL & PHYSICAL MODEL

A STUDY OF GOLF AS IT RELATES TO DESIGN  
BAY VIEWS GOLF COURSE HOUSING DEVELOPMENT  
SUSPENDED ISOLATION IN A STATE OF BLISS  
Juxtaposition of CURVILINEAR & GEOMETRICAL FORMS

**CABIN STRUCTURE:**

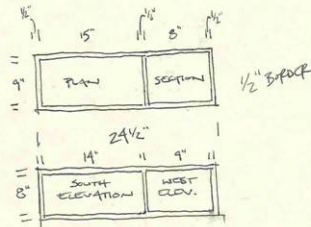
2'0" SPACING FOR COLUMNS ALLOWS FOR:  
12" DEEP CURVED STEEL BEAMS  
PURLINS SPACED AT 2'0"

ALUMINIUM COATED STEEL ROOF  
WATERPROOF MEMBRANE  
FLUID INSULATION  
CORRUGATED STEEL ROOF DECK



DELL STEEL ROOF DIRECTLY TO PURLINS  
SPRAY FOAM INS. INTO IT & CAP THE INTERIOR W/ CEDAR

**CABIN LAYOUT**



LOCATION PLANS STATE → LOCAL → SITE

SITE PLAN

CABIN

TOWNHOME

CLUBHOUSE

TITLE

TITLE

TITLE

↑

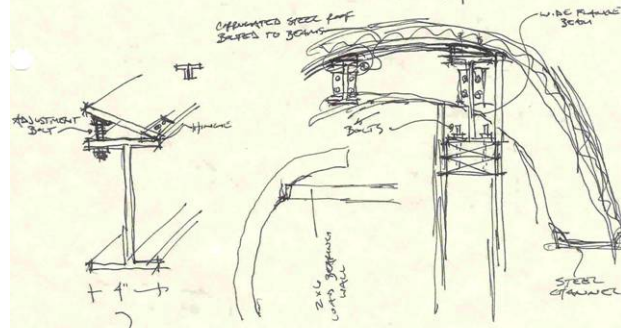
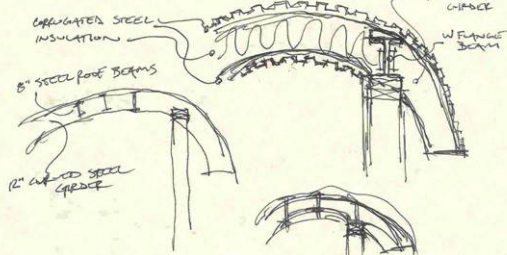
FLOOR PLANS  
ELEVATIONS  
SECTION

II SECTION PERSPECTIVE  
II INTERIOR ELEVATION  
II WALL SECTION  
INTERIOR AXON  
INTERIOR PERSPECTIVE  
II WALL SECTION AXON

SECTION AXON (INTERIOR SPACE)  
AXON EXTERIOR

MODEL

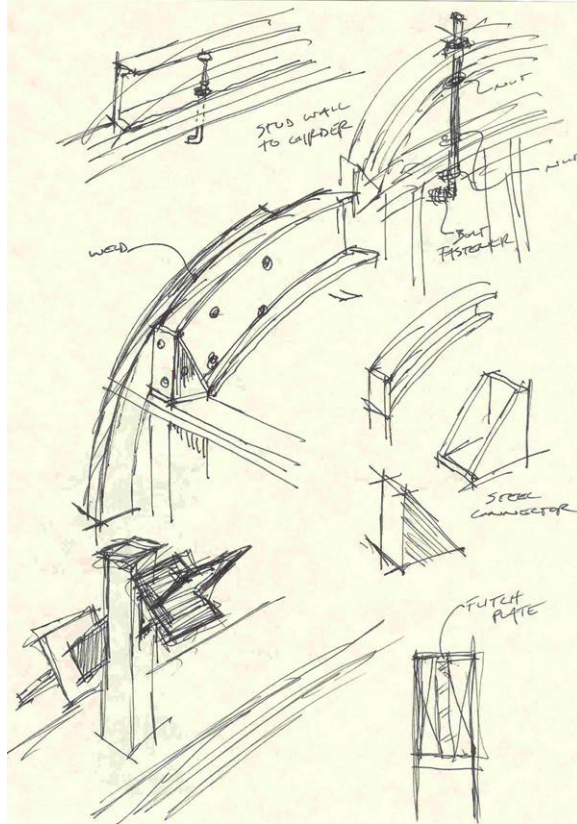
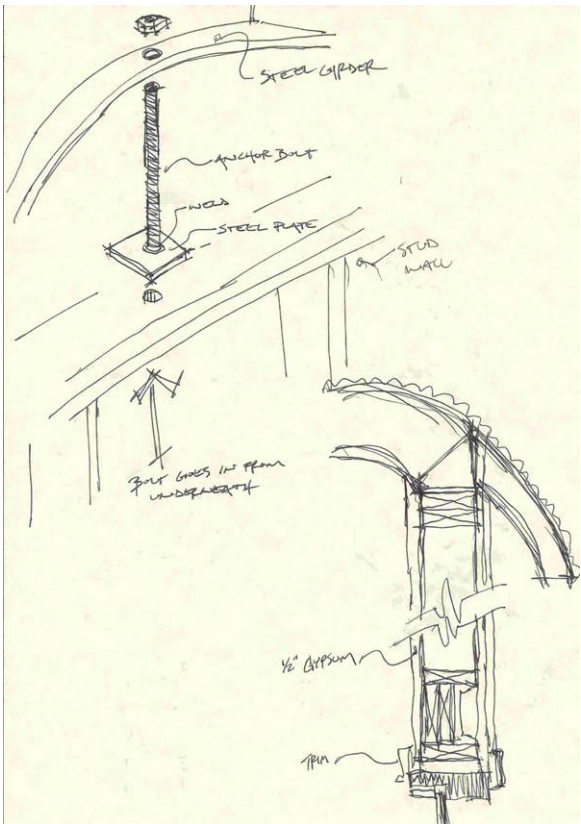
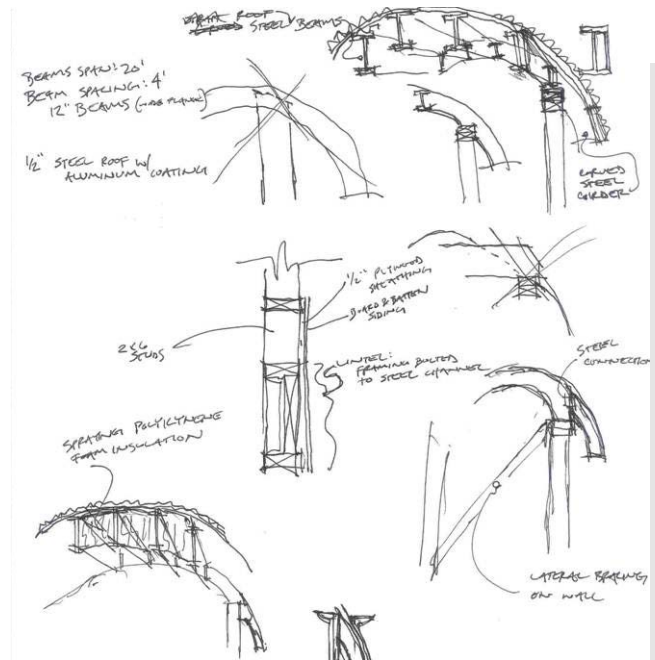
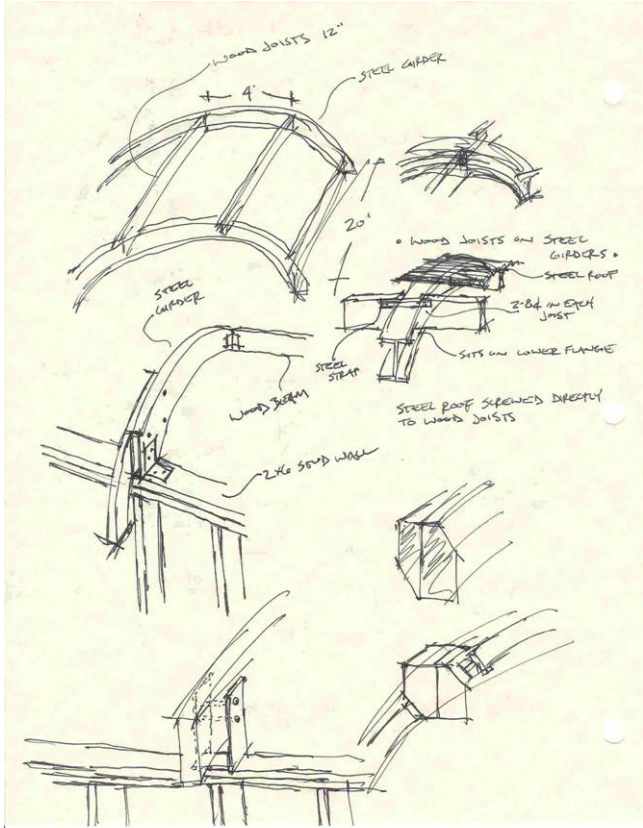
**ROOF CONNECTION**



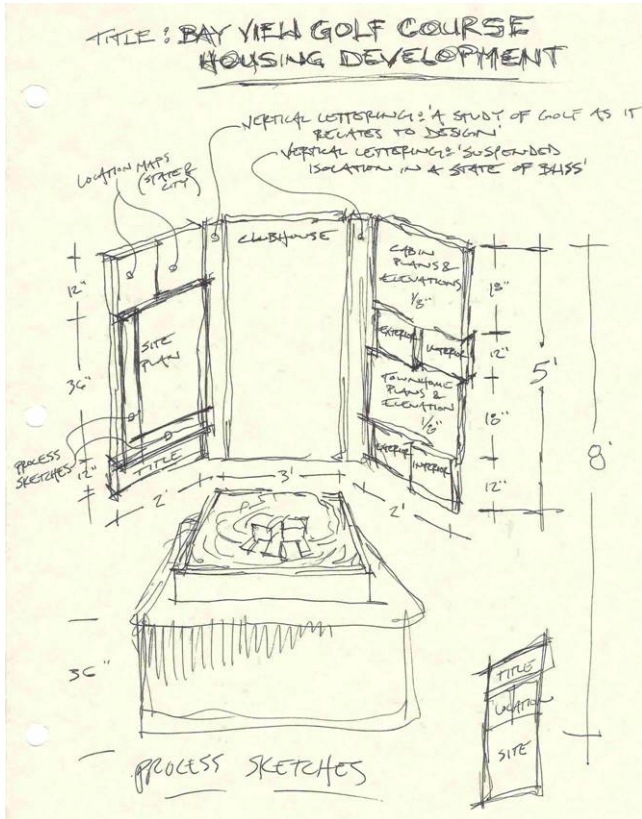
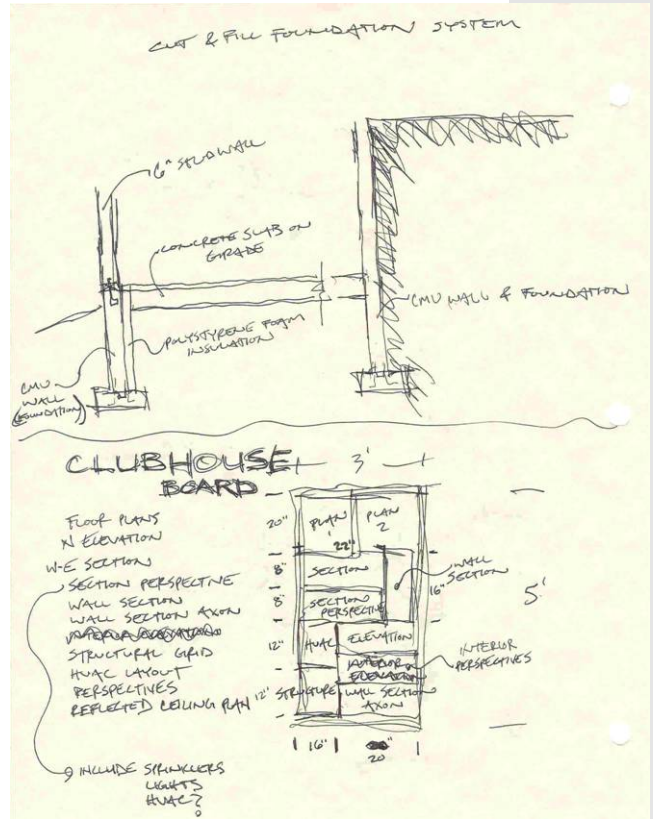
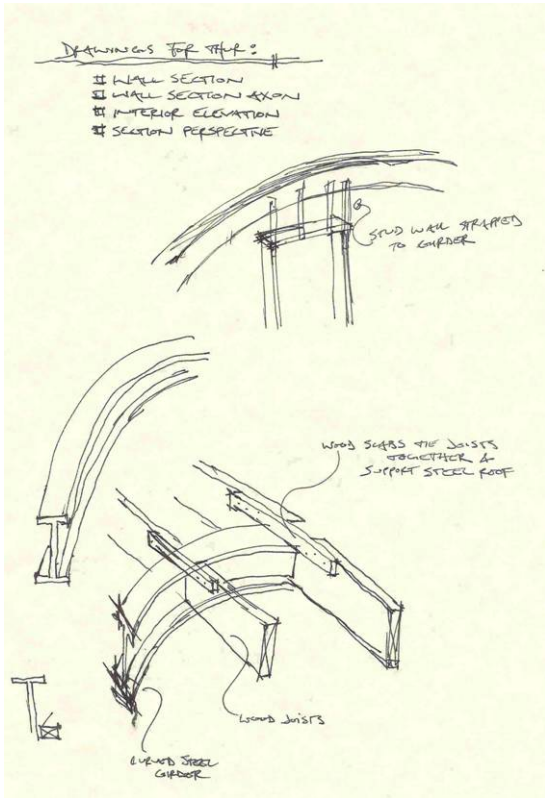
IF ONLY 4" DON'T NEED ADJUSTMENT BOLT DIRECTLY TO BEAM



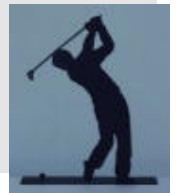
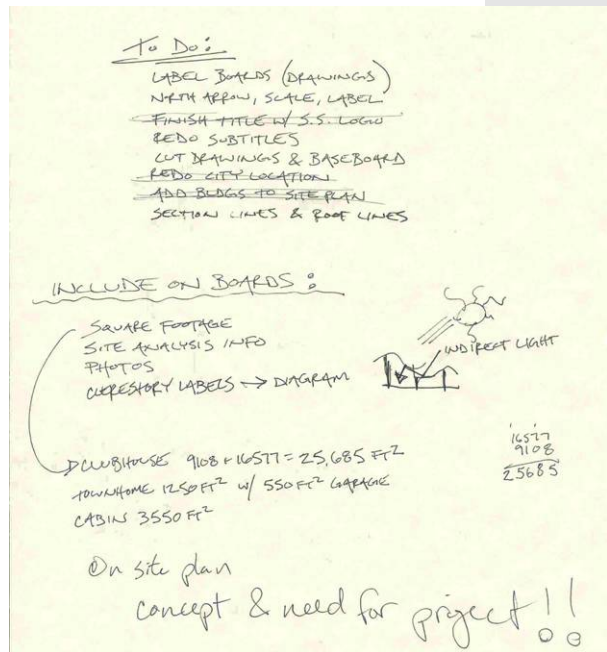
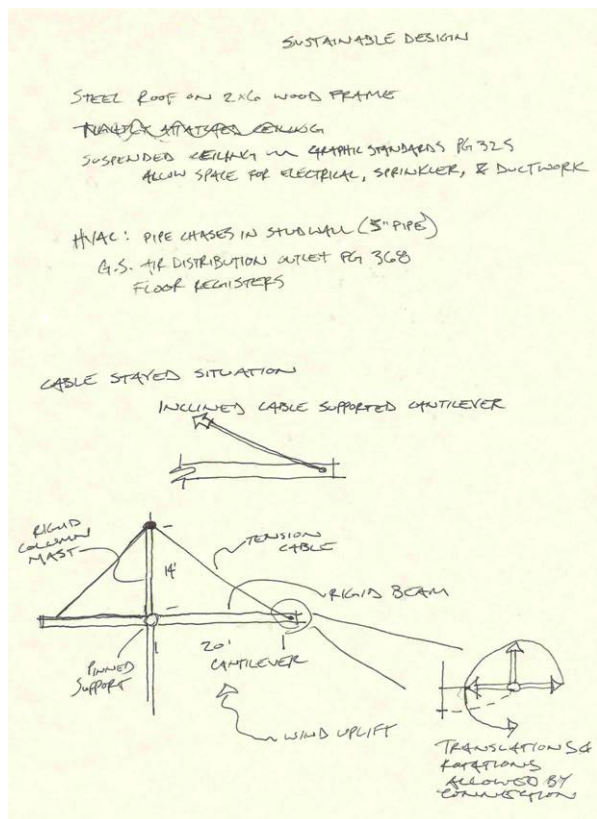
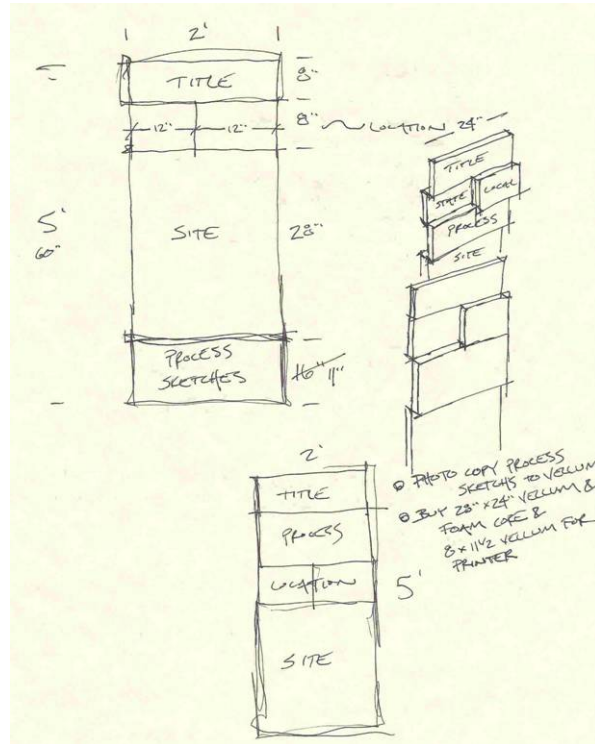
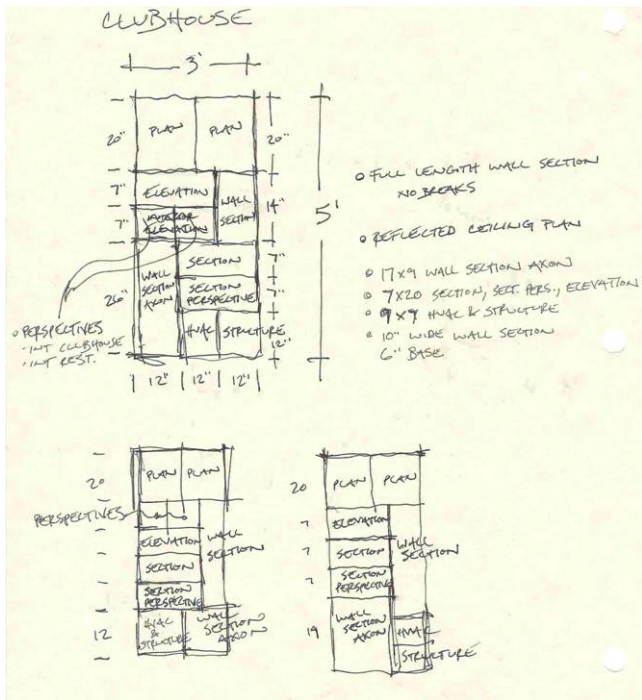
THE BAY COURSE AT SUPERIOR SHORES



THE BAY COURSE AT SUPERIOR SHORES



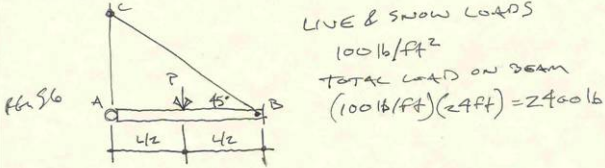
THE BAY COURSE AT SUPERIOR SHORES



THE BAY COURSE AT SUPERIOR SHORES

DETERMINE REACTIONS TO CABLE SUPPORTED STRUCTURE

EQUILIBRIUM DIAGRAM



LINE & SNOW LOADS  
 $100 \text{ lb}/\text{ft}^2$   
 TOTAL LOAD ON BEAM  
 $(100 \text{ lb}/\text{ft}^2)(24\text{ft}) = 2400 \text{ lb}$

$L/2 = 12'$   
 INTERNAL FORCE IN CABLE:  $T_{BC}$

$L \sin 45^\circ = .71$

$\sum M_A = 0$   
 $T_{BC}(.71L) - P(.71L) = 0$   
 $T_{BC} = P (\text{TENSION})$

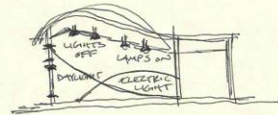
$M_0 = wL^2/2 = (100 \text{ lb}/\text{ft})(24\text{ft})^2/2 = 28800 \text{ ft}\cdot\text{lb}$

RECESSED INCANDESCENT DOWNLIGHT

LIGHTS ARE ARRANGED IN ZONES THAT ARE LINED PARALLEL TO THE WINDOW PLANE SO THAT INDIVIDUAL LIGHT RAWS CAN BE TURNED ON AS NEEDED. LIGHT LEVELS ARE AUTOMATICALLY CONTROLLED BY A PHOTOSENSITIVE CELL.

OPERATION HOURS ARE PRIMARILY DURING THE DAY. THIS SYSTEM CAN SAVE 30-50% OF ELECTRIC LIGHTING ENERGY. (THIS WILL ALSO REDUCE INTERNAL HEAT GAINS CURTAILING COSTS OF AIR CONDITIONING.)

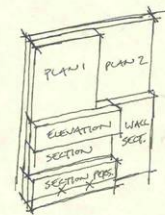
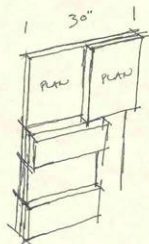
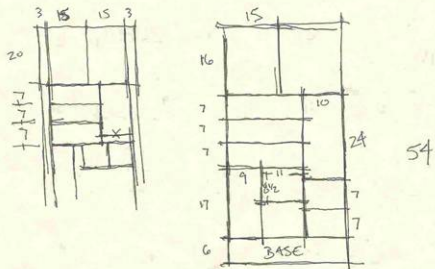
MAINTAIN THE MINIMUM DESIRABLE AMBIENT LIGHT LEVEL OF 30 FOOT CANDLES.



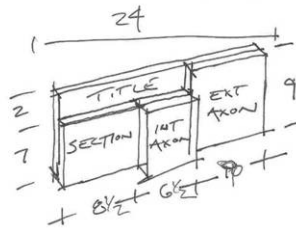
SYMBOL LEGEND

HVAC SUPPLY REGISTER  
 LINEAR SUPPLY DIFFUSER

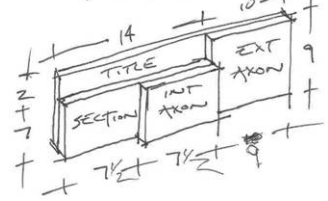
- SPRINKLER HEAD
- RECESSED LIGHT
- EXIT LIGHT
- EXHAUST FAN (KITCHEN, RESTROOMS)



CABIN:  
 BOTH EXT. AXONS:  $10" \times 9"$   
 CABIN SECTION:  $8 \times 7$   
 CABIN INT. AXON:  $6 \times 7$   
 BOTH T. HOUSE SECTION:  $7 \times 7$   
 T. HOUSE INT. AXON:  $7 \times 7$



TOWNHOUSE:





THE BAY COURSE AT SUPERIOR SHORES

3 BOARDS PUT TOGETHER

- 20 x 36
- 34 x 16
- 34 x 20

FORM CORE

26 10

TITLE

LABEL: TRAILS, HOLES, PONDS, DRIVING RANGE, CLUBHOUSE, MAINTENANCE SHOP, BALL FIELD, MEADOWS, PONDS, SWIMMABLE TRAIL

SCALE 1"=250'

PK BY HOLE CONCEPTS

FORM CORE

3/16"

36 x 24

PROJECT CLIENT: SUPERIOR SHORES RESORT

DESIGNER: KRIS PEDERSON

PACK

PRINT OFFS

- 14" x 11" AXONS
- SUPERIOR SHORES LOGO
- 1/16" CABINS AXON
- 1"=250' CABINS & TOWNSHIPS

CURT CHECKS

FORM CORE

- 24" x 60" BASE OR BACKING
- 24" x 8" TITLE BOARD
- 12" x 8" (2) CITY LOCATION
- 24" x 11" PROCESS SKETCHES
- 24" x 5" BASE BOARD

SPRAY ADHESIVE

CREDIT CARDS

ANY COLOR BOOKS

PRINT CLUBHOUSE @ 1"=250'

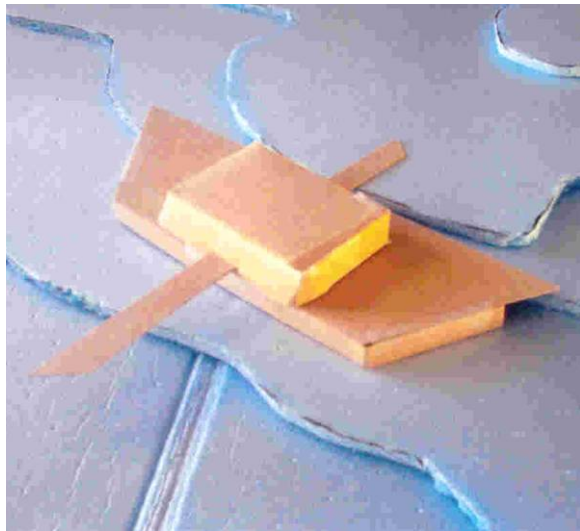
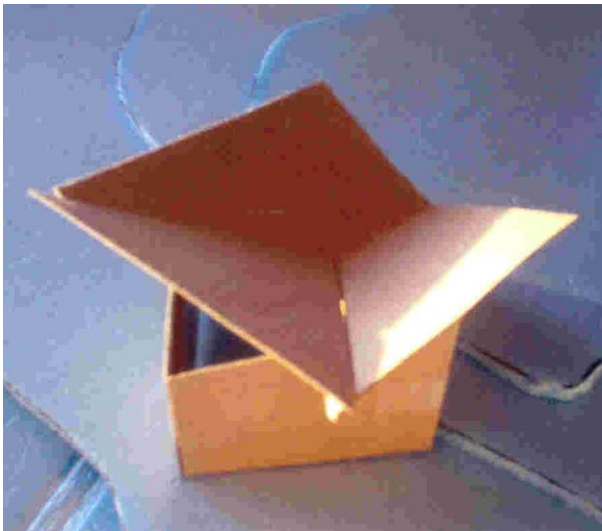
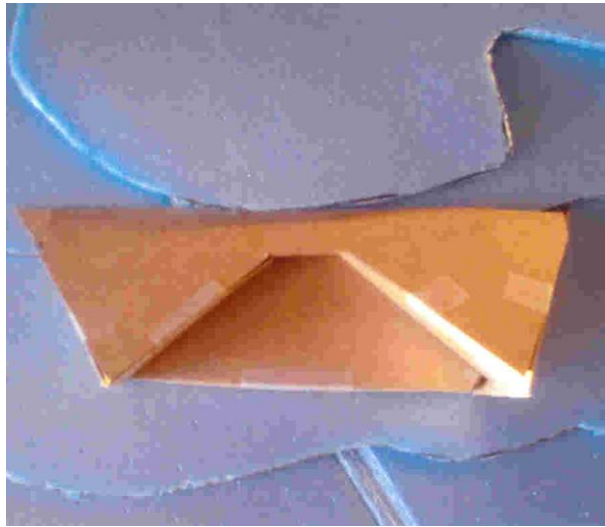
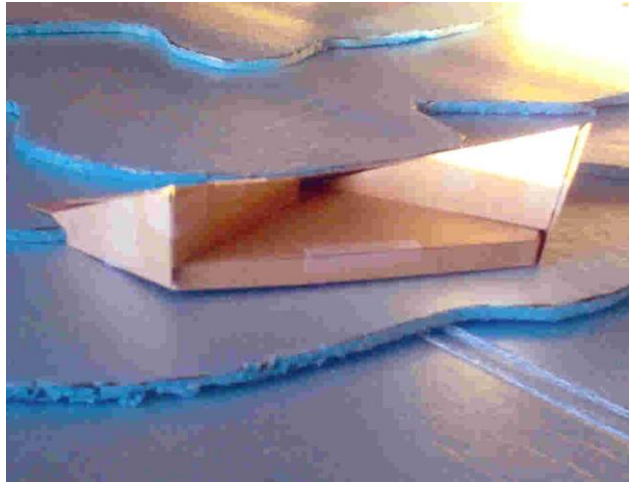
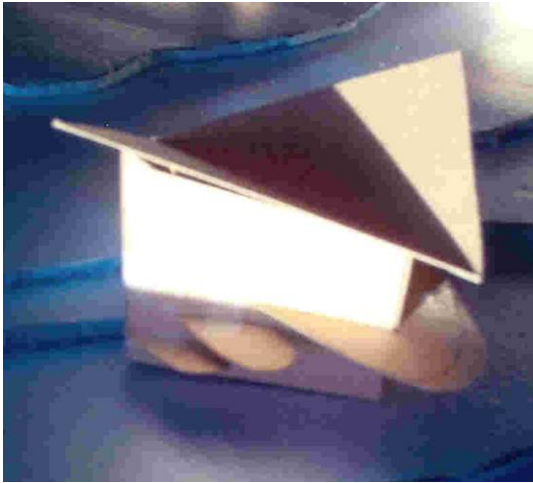
PROCESS SKETCHES (3)

- GRIP & STAPLES
- SLIP PLANE & SHOT PINS
- COURSE STUDY & SKETCHES

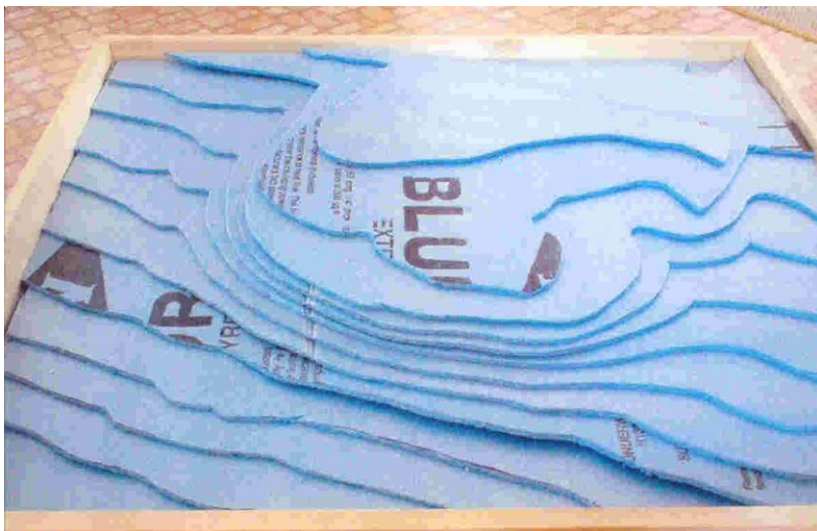
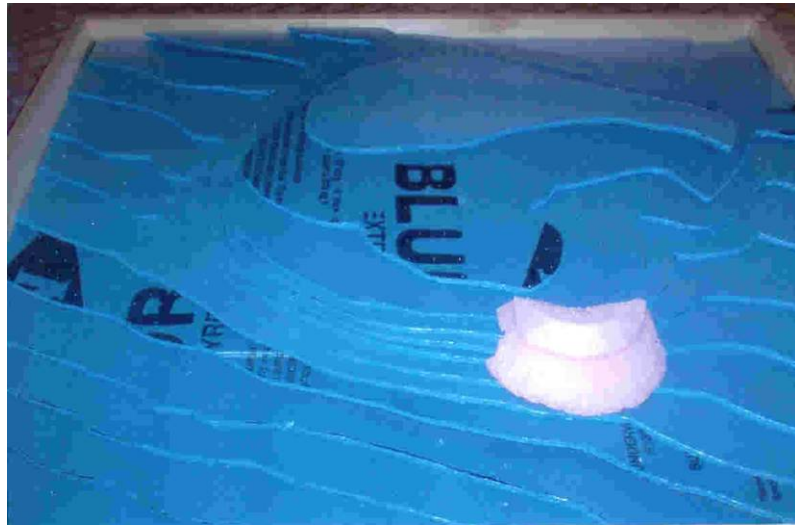
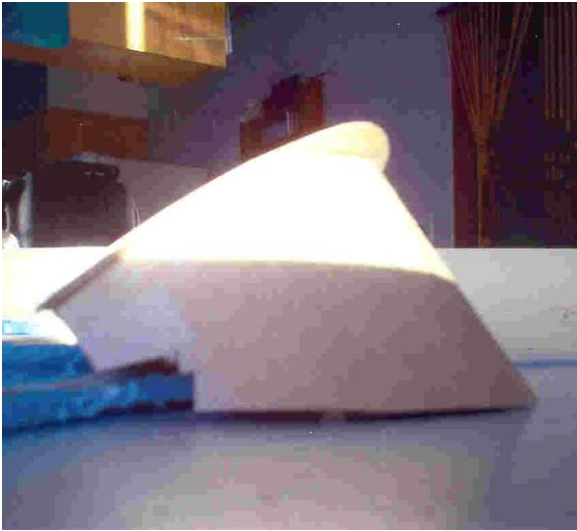
SUPERIOR SHORES RESORT HOUSING DEVELOPMENT ON BAY VIEW GOLF COURSE



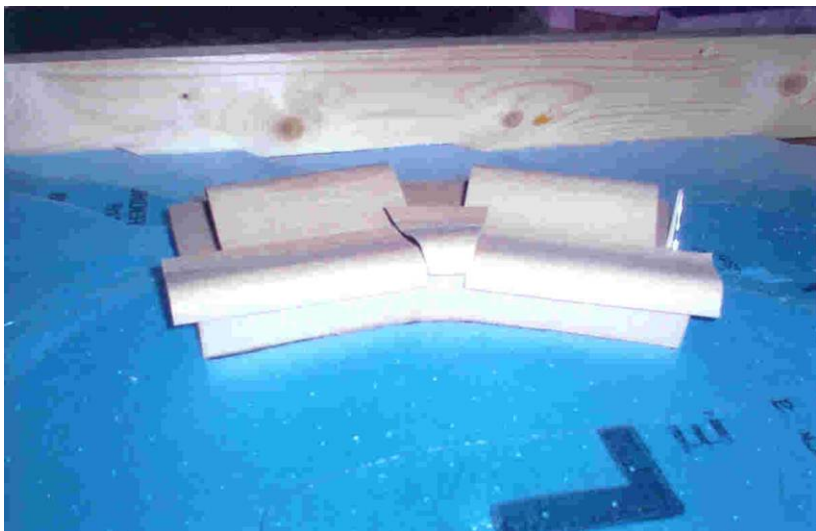
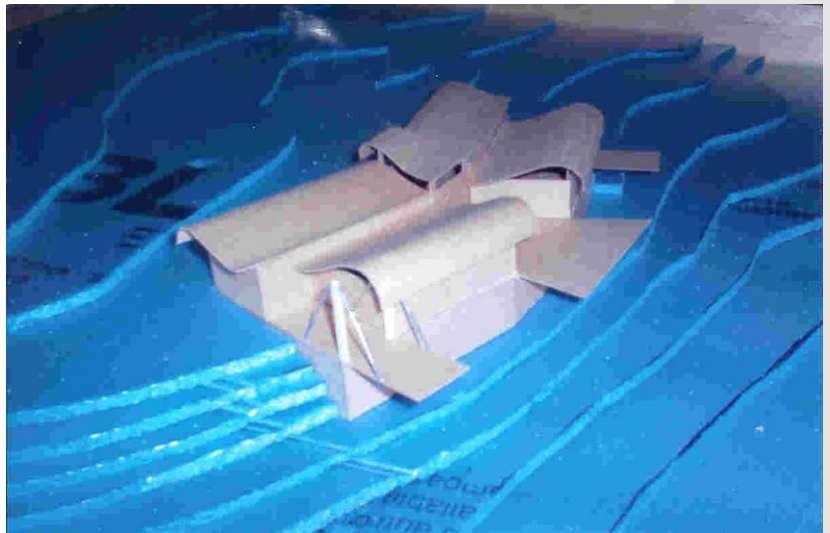
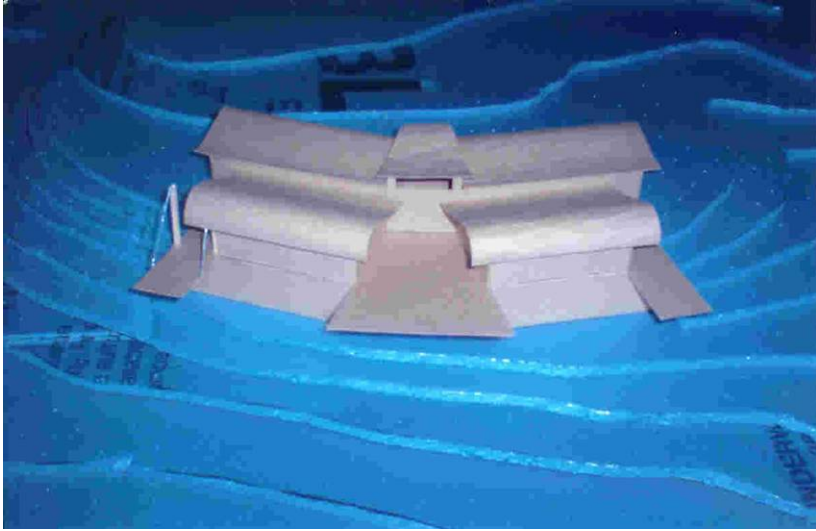
THE BAY COURSE AT SUPERIOR SHORES



THE BAY COURSE AT SUPERIOR SHORES



THE BAY COURSE AT SUPERIOR SHORES



# Solution

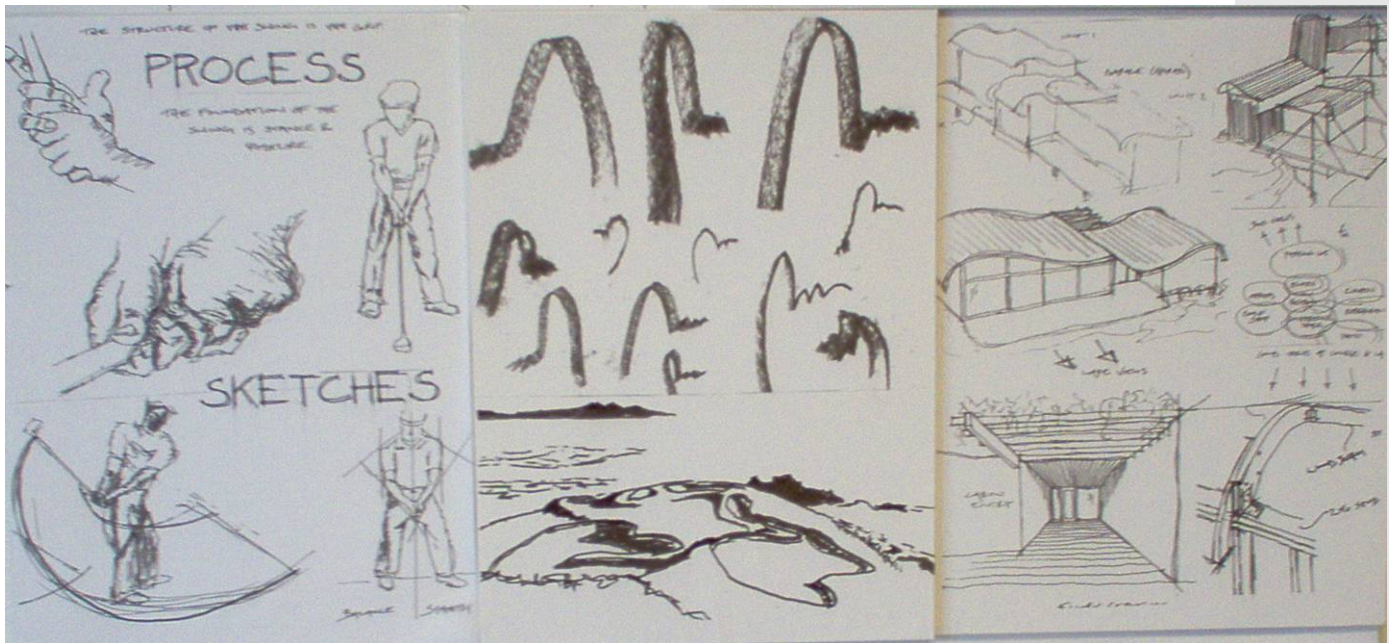
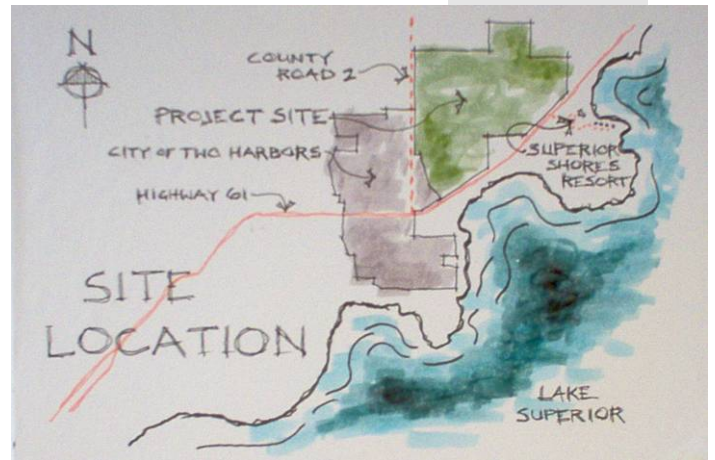


*Display of boards and model in student union*



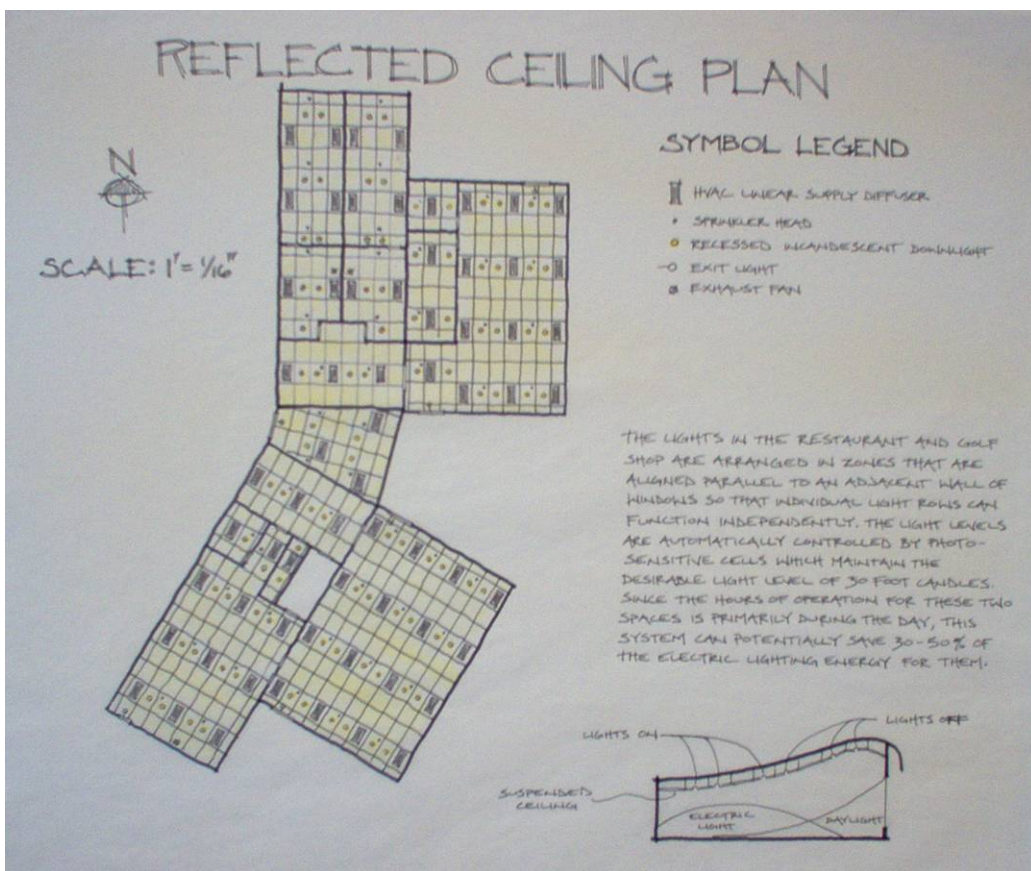
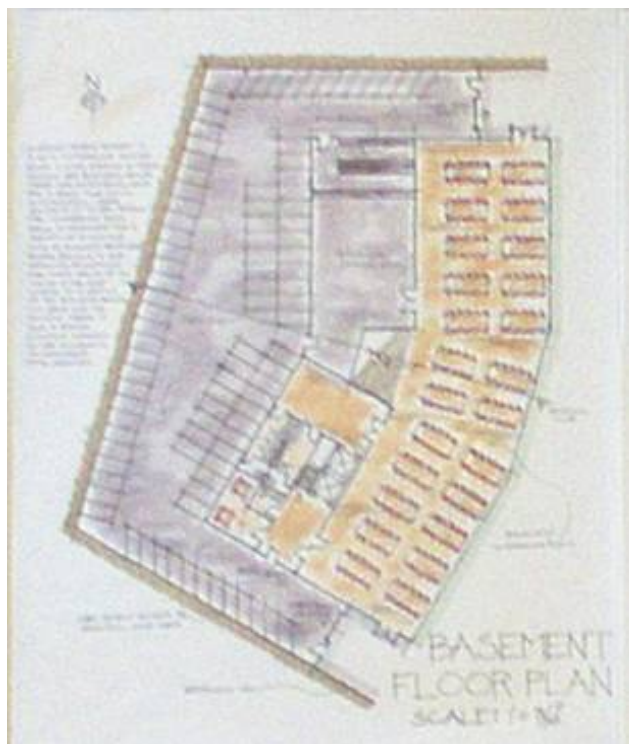
THE BAY COURSE AT SUPERIOR SHORES

Location plans and process sketches





THE BAY COURSE AT SUPERIOR SHORES

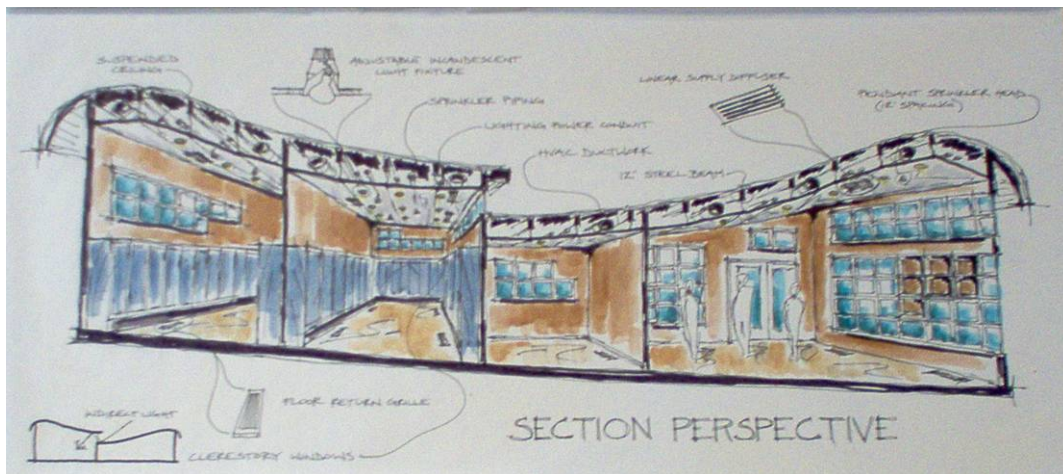


Clubhouse floor plans and reflected ceiling plan

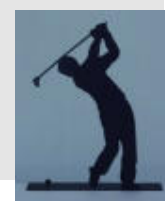




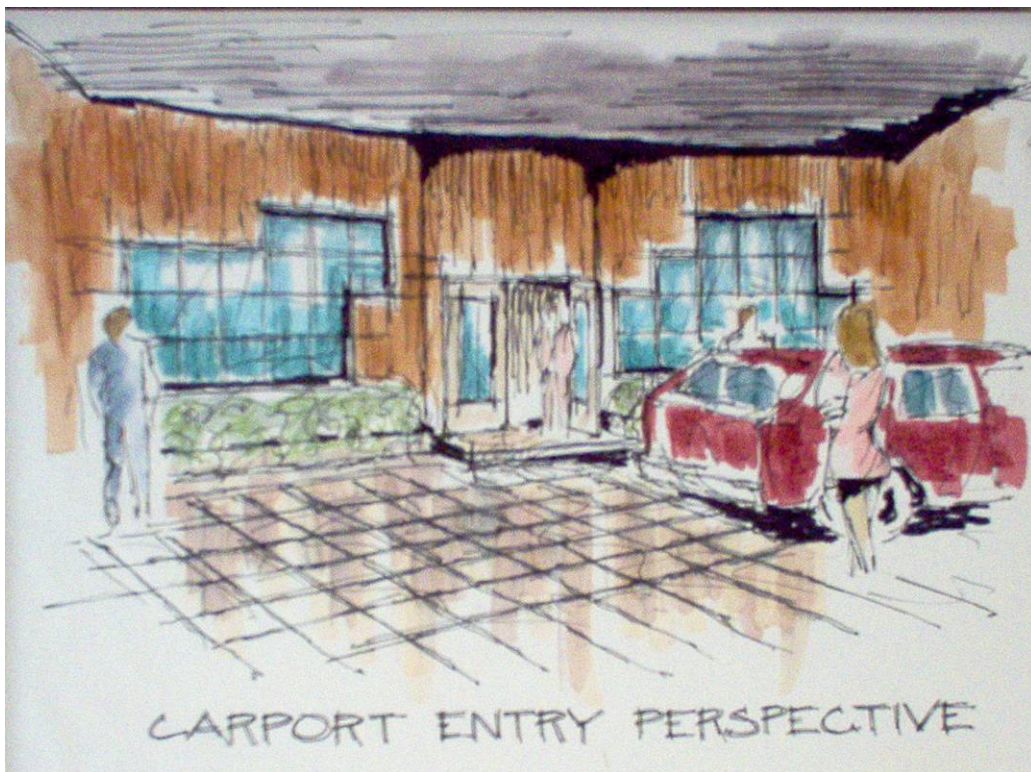
THE BAY COURSE AT SUPERIOR SHORES



Section, elevation and section perspective

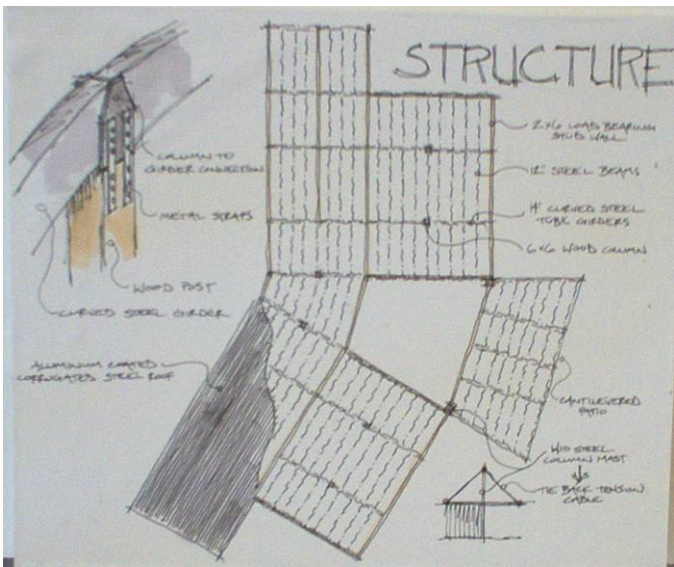
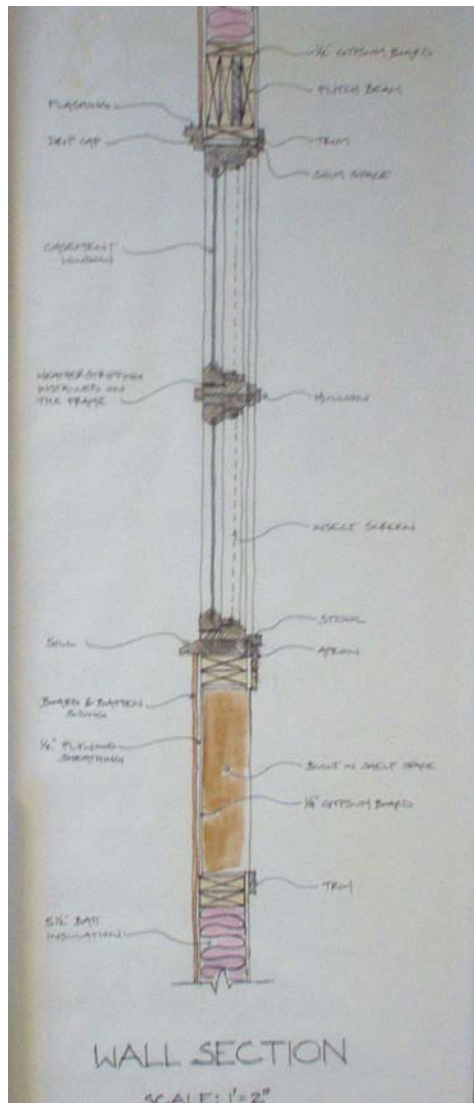
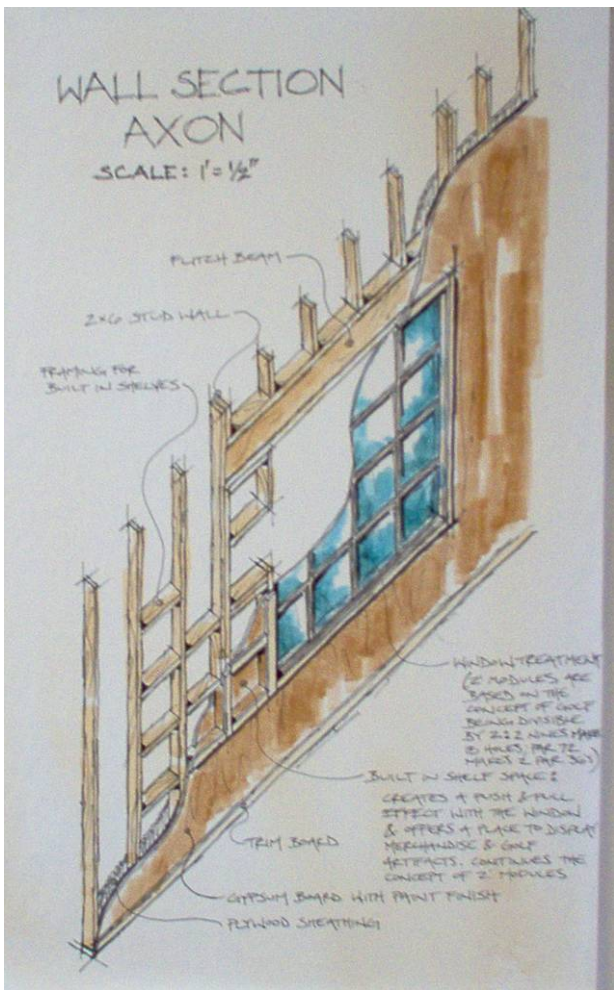


THE BAY COURSE AT SUPERIOR SHORES



Perspectives

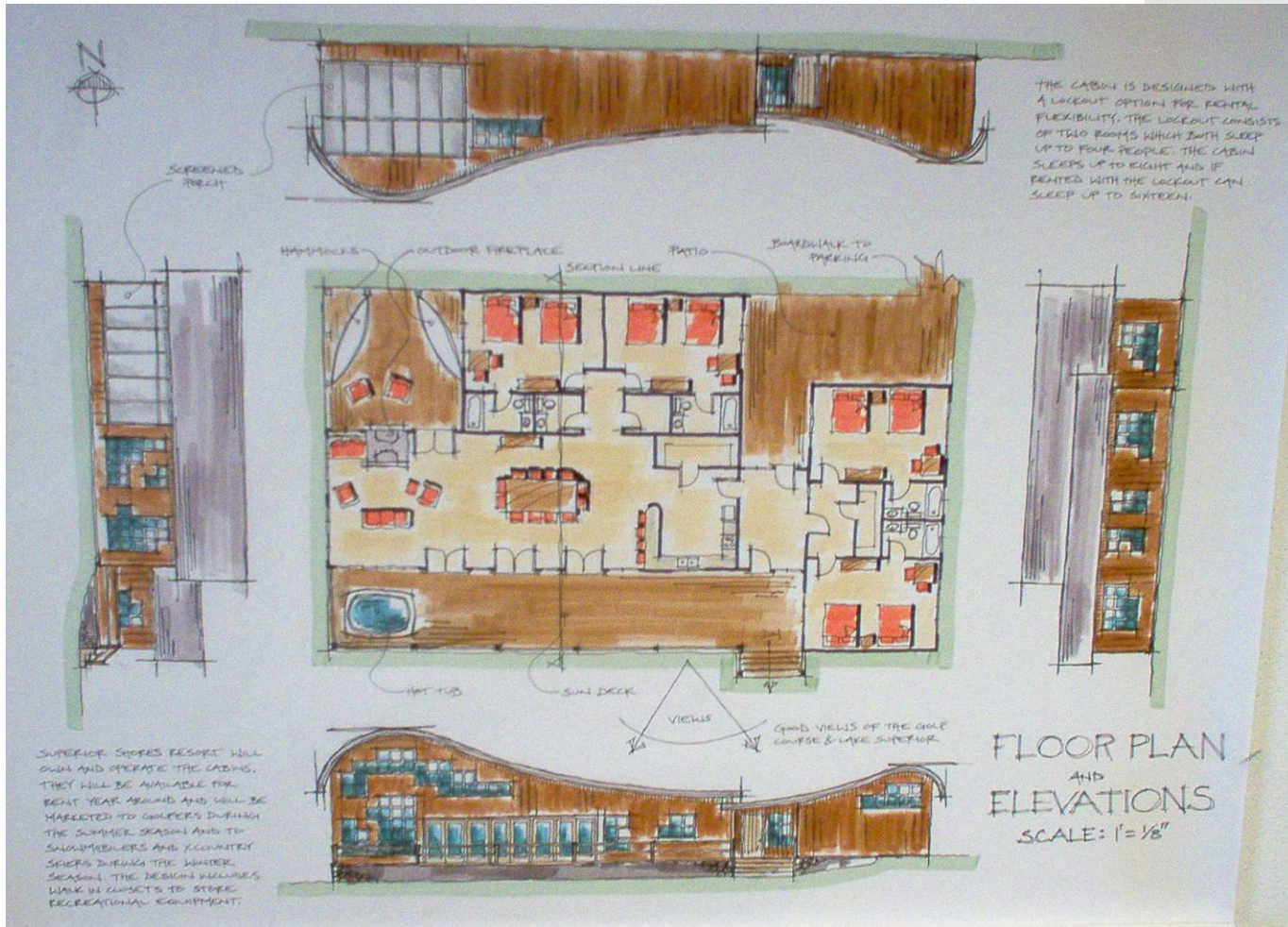




Wall sections and structural grid



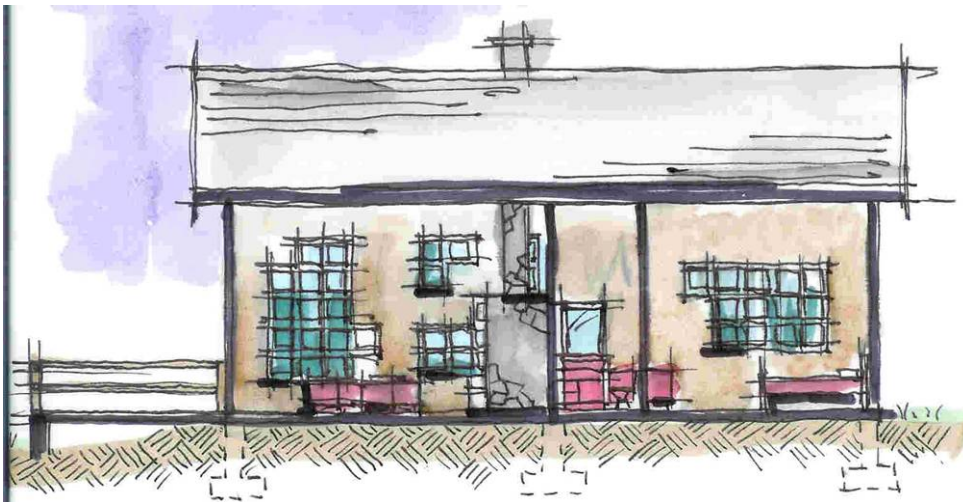
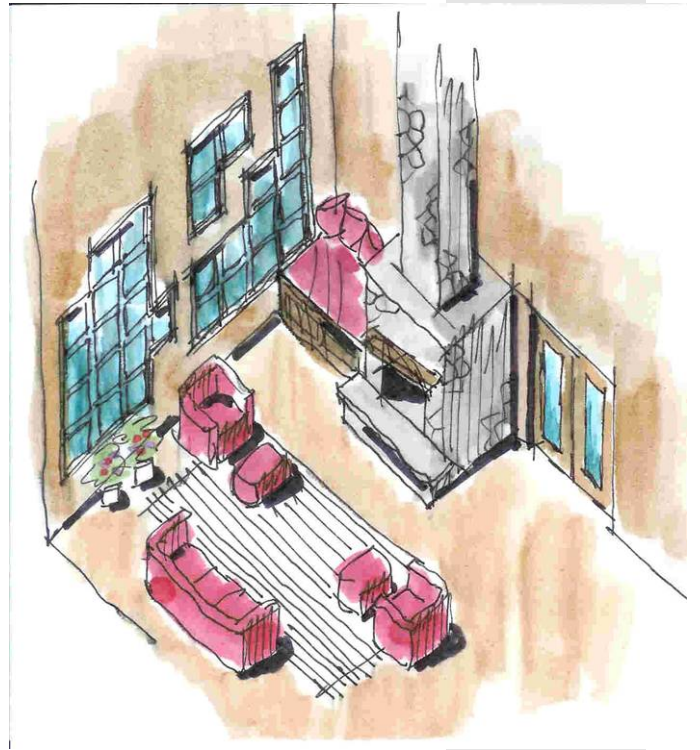
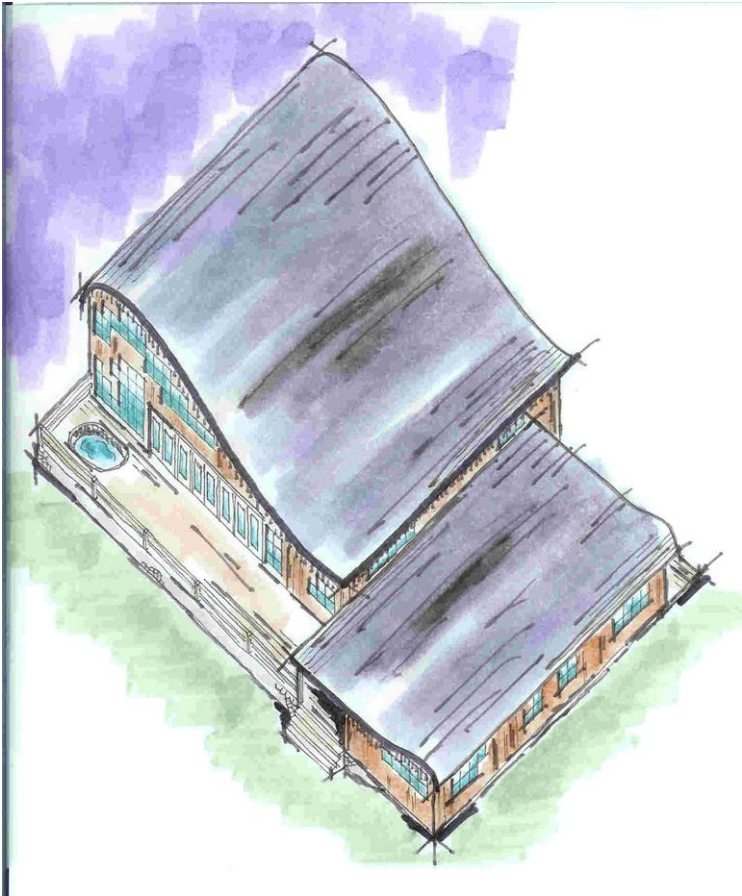
THE BAY COURSE AT SUPERIOR SHORES



Cabin floor plan and elevations



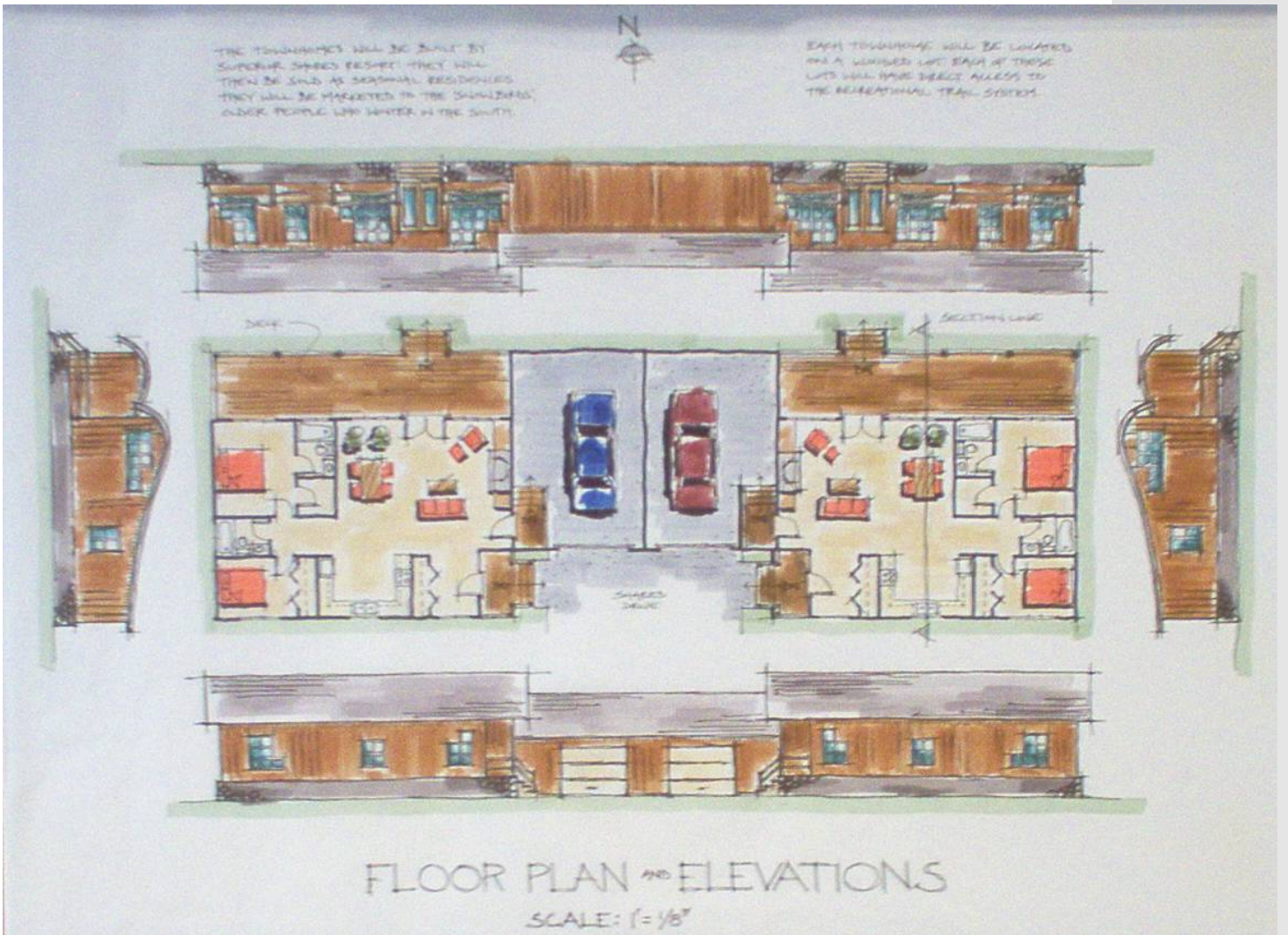
THE BAY COURSE AT SUPERIOR SHORES



*Exterior and interior axonometric and building section of the cabin*



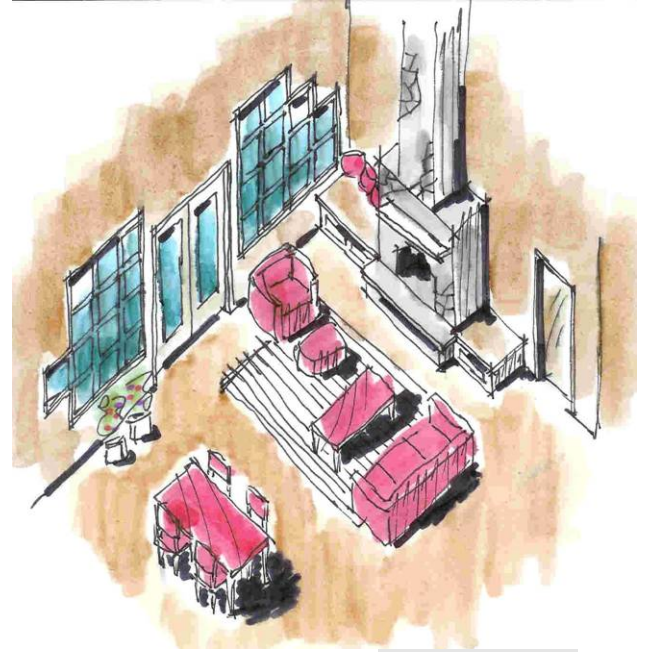
THE BAY COURSE AT SUPERIOR SHORES



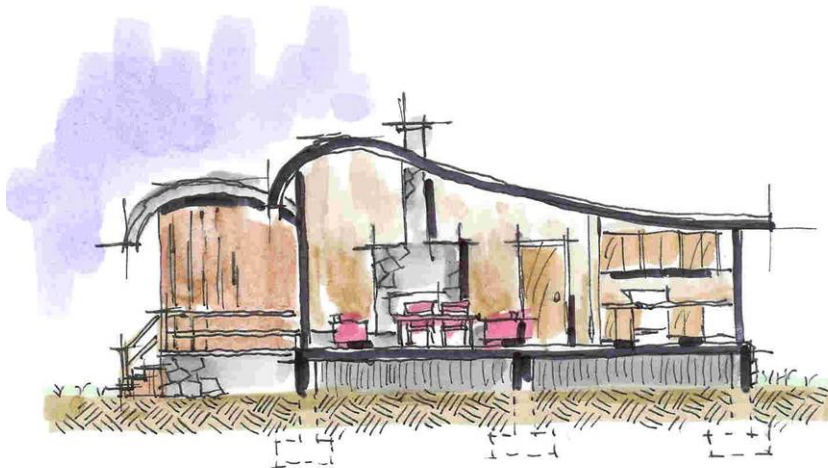
Townhouse floor plan and elevations



THE BAY COURSE AT SUPERIOR SHORES



BUILDING SECTION SCALE: 1"=1/8"



*Exterior and interior axonometric and building section of the townhouse*



THE BAY COURSE AT SUPERIOR SHORES



Display of boards and model for presentation in the link





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# S tatement of intent



## The Bay Course at Superior Shores

The serene north shore of Lake Superior has unparalleled wilderness beauty. The soothing atmosphere of this great lake provides the perfect setting for enjoying outdoor activities. Attracting more players than any other outdoor sport, golf is what I will focus my thesis project on. The idea for my thesis design is to reconstruct an existing golf course into a resort golf complex. My interest in this type of project is a result of my experiences as a player.

The site I have chosen is Lakeview National Golf Course in Two Harbors, MN. The course is located just off highway 61 on the north shore of Lake Superior overlooking Burlington Bay. I am proposing that superior shores resort will own and operate the new golf course facility. The resort is one half mile north of the course on highway 61.

In Scotland, where the game was invented, the individual features of golf courses were given names because of their unique characteristics. When thinking about golf courses in this personified way, one can begin to imagine a golf course as having a personality. The underlying premise of my project is to explore the unique characteristics of the game of golf and the golf swing. This will then determine the personality of the new clubhouse, restaurant, conference center, guest units (either lodge suites or individual cabins), employee lodging and maintenance building.

There are two things that will drive this project to a successful conclusion. One is to understand and appreciate the needs of those associated with this project such as the resort owners, guests and employees as well as the citizens of Two Harbors. The other is to learn through research about resort golf courses and how they operate, golf course design, the history of the north shore, and the natural and built environment of the region.



# Work schedule

## Fall Semester 2004:

WEEK # 1  
OCTOBER 4 - 10

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*7 October Thesis proposal due; Student critic preference slips available*  
Research, site analysis and programming

WEEK # 2  
OCTOBER 11 - 17

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*14 October Student critic preference slips due in main office*  
Research, site analysis and programming

WEEK # 3  
OCTOBER 18 - 24

---

*21 October Primary and secondary critics announced; my birthday*  
Research, site analysis and programming

WEEK # 4  
OCTOBER 25 - 31

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Research and programming

WEEK # 5  
NOVEMBER 1 - 7

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Research and programming

WEEK # 6  
NOVEMBER 8 - 14

---

*11 November Holiday-Veterans Day*  
Research and programming

WEEK # 7  
NOVEMBER 15 - 21

---

*15-19 November Final week of 571 design studio*  
Research and programming

WEEK # 8  
NOVEMBER 22 - 28

---

*24 November Draft thesis program due to primary critic*  
*25-26 November Holiday-Thanksgiving*  
Research and programming



THE BAY COURSE AT SUPERIOR SHORES

WEEK # 9  
NOVEMBER 29 - DECEMBER 5

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Research and programming

WEEK # 10  
DECEMBER 6 - 12

---

9 December *Final thesis program due to primary critic*  
10 December *Last day of classes*  
Research

WEEK # 11  
DECEMBER 13 - 19

---

16 December *Program grade due to 561 course instructor*  
13-17 December *Finals week*

WEEK # 12  
DECEMBER 20 - 26

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Research

WEEK # 13  
DECEMBER 27 - JANUARY 2

---

Research

WEEK # 14  
JANUARY 3 - 9

---

Research

### Spring Semester 2005:

WEEK # 15  
JANUARY 10 - 16

---

10 January *Classes begin at 4pm*  
Schematic design begins with weekly reviews

WEEK # 16  
JANUARY 17 - 23

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17 January *Holiday-Martin Luther King, Jr. Day*  
Schematic design

WEEK # 17  
JANUARY 24 - 30

---

Schematic design

WEEK # 18  
JANUARY 30 - FEBRUARY 6

---

Schematic design



THE BAY COURSE AT SUPERIOR SHORES

WEEK # 19  
FEBRUARY 7 - 13

---

Schematic design

WEEK # 20  
FEBRUARY 14 - 20

---

Design development begins with weekly reviews

WEEK # 21  
FEBRUARY 21 - 27

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*21 February*     *Holiday-Presidents Day*  
Design development

WEEK # 22  
FEBRUARY 28 - MARCH 6

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*7 October*     *Thesis proposal due*  
Design development

WEEK # 23  
MARCH 7 - 13

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*7-11 March*     *Mid-semester thesis reviews*  
Design development

WEEK # 24  
MARCH 14 - 20

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*14-18 March*     *Spring break*  
Design development

WEEK # 25  
MARCH 21 - 27

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*25 March*     *Holiday-Good Friday*  
Design development

WEEK # 26  
MARCH 28 - APRIL 3

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*28 March*     *Holiday-Easter Monday*  
Design development and work on final presentation

WEEK # 27  
APRIL 4 - 10

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Design development and work on final presentation

WEEK # 28  
APRIL 11 - 17

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Arrange final presentation



THE BAY COURSE AT SUPERIOR SHORES

WEEK # 29  
APRIL 18 - 24

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Arrange final presentation

WEEK # 30  
APRIL 25 - MAY 1

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25 April *Thesis project due at 4:30pm in the Memorial Union Ballroom*  
26-27 April *Annual thesis exhibit in the Memorial Union Ballroom*  
29 April *Draft of thesis document due to primary critics*  
28 April-5 May *Final thesis reviews*

WEEK # 31  
MAY 2 - 8

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28 April-5 May *Final thesis reviews*  
6 May *Last day of classes*

WEEK # 32  
MAY 9 - 15

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12 May *Final thesis document due at 4:30pm in main office*  
13 May *Commencement at Fargodome, 4pm*



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## revious studio experience

Semester	Professor	Design Projects
2 <sup>nd</sup> year, fall	Philippe D'Anjou	Skull of Lucy Exhibit, Mountain Retreat, School of Architecture
2 <sup>nd</sup> year, spring	Vince Hatlen	Prairie Retreat, Coffee Shop, NDSU C.B.A., Pedestrian Bridge
3 <sup>rd</sup> year, fall	Steve Martins	Fort Abercrombie Museum, Fergus Falls Municipal Airport
3 <sup>rd</sup> year, spring	Carol Prafcke	Southern Baptist Church, Children's Center For The Arts
4 <sup>th</sup> year, fall	Mark Barnhouse, Cindy Urness, Josh Walters	Downtown Fargo Urban Design Project
4 <sup>th</sup> year, spring	Darryl Booker, Frank Kratky	Moorhead Housing Project, San Francisco High Rise Project
5 <sup>th</sup> year, fall	Jay Waronker	Olympics Gallery, United States Supreme Court







**Don't look back, visualize, and above the rest you will rise.**

