TILLERY HILL
RESORT

AT

PATOKA
LAKE

AN ARCHITECTURAL THESIS
TILLERY HILL RESORT at PATOKA LAKE

AN ARCHITECTURAL THESIS
College of Architecture and Planning
Ball State University
Muncie, Indiana

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ACKNOWLEDGMENTS

To my Lord, who allowed me the opportunity to strive toward a life's dream. Who gave me the strength to overcome my handicap, the desire to do my best, the ability to behold the good, and the patience to cope with the bad.

Thank you Lord.

With Sincere gratitude and love:

To my mother, Jackie Kay Tobias, for having the patience to listen, the time for sharing, the love and encouragement that kept me going, for believing in me, and also for teaching me the importance of being myself.

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To my older brothers, Herb and Mark, for their support and guidance.

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To the Cooler Group, Inc., Indianapolis, Indiana. To Harry L. Cooler for his valuable time and advice throughout the entire project.

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And, finally, to my studio critics, Stan Mendelson, Ron Stiller, and Dan Woodfin for their input, counsel, and feedback through the entire design phase.
The Patoka Reservoir is located in the Hoosier National Forest but is owned by the State of Indiana and reserved for public use. While the reservoir is the second largest body of water in Indiana and has adequate areas for boating, swimming, fishing, and other water related sports; the surrounding land areas offer outdoor recreational opportunities such as camping, hiking, hunting, and an endless opportunity to experience nature. Because of the extensive use of the Patoka Lake and its properties, the Department of Natural Resources felt there was a need for additional recreational facilities.

At the present time, there are no onsite lodging facilities available. Coupling the extensive use with the adequate area and natural feasibility, the Indiana Department of Natural Resources felt a luxury resort lodge would benefit the Patoka Lake Project and the State of Indiana. A tract of land known as "Tillery Hill" has been allotted for the development of a resort. In June of 1983, a "Prospectus and Statement of Intent for the Development of Tillery Hill" was published. Its purpose was to attract developers interested in entering an agreement with the Indiana Department of Natural Resources for proposals of the planning, construction, operation, and maintenance of said luxury resort.

While attending Ball State University, I decided to undertake this project as my Architectural Thesis Design. The thesis entails a Master Planning Study and a developed design of what would be the Main Lodge Complex. My analysis, concepts, and proposals, as well as the final design solutions for both the Master Site Plan and the Lodge Complex are included within. This thesis book will carry you through somewhat of a condensed version of the design process, and also give you insight to some of the issues evaluated which to the best of my abilities as a designer, I used to create the most desirable architectural solution.
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INTRODUCTION

PURPOSE AND SCOPE:

The intent of this thesis book is to provide documentation of my Architectural Thesis. It is the final stage of a thirty week "design study" prepared for the architectural curriculum at Ball State University, Muncie, Indiana. The purpose of this design study was, for myself as an undergraduate student, to have an opportunity to do an indepth study of a self motivated design project. The student was to locate or create a project that would further his skills in research development; including evaluating, solving, and presenting any given architectural design project. The scope of the project could encompass any approved architectural research study proposal or a design of any building type of at least 40,000 square feet. The student was to carry the project from the programming and analysis stages through to the final solution(s).

PROJECT SELECTION:

In preparation for my Architectural Thesis, I had a personal goal to locate a project that was "real" as opposed to a project comprised of hypothetical criterion. I believe that in order for one to master the art of architecture, a person must first be able to analyze and organize all of the actual, live variables encountered in any architectural project. Through several phone conversations with John Miller of Jorell, Inc., Indianapolis, Indiana, a recreational hotel developer, I was able to locate such a project. The project is a proposed recreational resort to be built on the Patoka Lake property of southern Indiana. Considering myself a conscientious conservationist, the nature of this project, along with its wild environmental setting, has been very intriguing to me. Creating a complex where families, especially young people, can view, enjoy, and learn about nature and its elements has always been an interest of mine. Therefore, I believe this project will broaden my personal knowledge and ideas as a designer.
PROJECT STATEMENT:

Patoka Lake was developed in accordance with the Flood Control Act of October 27, 1972. The United States Army Corps of Engineers started construction in July of 1972, and completed it in January of 1979. Although the lake's primary service is to provide flood control for downstream stages of the Ohio River Basin, Patoka's reservoir lands, and its fish and wildlife resources provide a feasible opportunity for outdoor activities that are associated with large bodies of water and forest lands. The water and land comprise a total of 26,000 acres which is leased by the United States Army Corps of Engineers to the Department of Natural Resources for their management and operation. The total cost of the Patoka Lake Project to date exceeds seventy-five million dollars.

Existing on the south edge of Patoka Lake, the Indiana Department of Natural Resources operates a recreational facility. This facility provides a variety of activities such as camping, fishing, swimming, and boating to name a few. However, this facility has been extensively used; and with the need to expand the recreational capacity of the State of Indiana, a prospectus was made available to interested developers to construct a luxury resort complex on "Tillery Hill." The required components of the resort were as follows: A Marina Complex with four hundred boat slips, a dry dock boat house with supporting facilities, and a Lodge and Restaurant Complex. The prospectus also proposed some optional components including a cabin complex, golf course with club house, swimming pool, day use facilities (i.e. gazebo, picnic area, tennis courts, and so on) these could be finished as a phased project or all at once. My involvement with the Tillery Hill project will deal with all the required and optional components of the prospectus, as well as any additional components in a Master Site Plan design, and also a design of the main lodge and restaurant complex.
GOALS:

To develop a luxury resort that will expand the Indiana parks and recreation system.

To design a luxury resort on Tillery Hill that will provide additional recreational facilities for the Patoka Lake and its properties.

To provide the planning of a resort that will increase state revenues by attracting out of state patrons.

OBJECTIVES:

Create of Lodge Complex which will provide the needed facilities to fulfill the requirements of the luxury resort.

Program the needed types of activities and their spaces needed to expand the usage of the Patoka Lake properties and increase its revenues while not depleting clientele from existing Department of Natural Resources facilities.

Propose the requirements for a Marina Complex and its services that will broaden the use of the Patoka Lake.

Plan the necessary elements of a Golf Course that will aid the resort in attracting patrons.
CONCEPTS:

Develop the architecture and landscaping so that it is compatible, if not part of, the environment itself.

Create an experience of "Communication with nature."

Provide unique accommodations for each type of activity and its participants while, at the same time, providing spaces for the interaction (community) or separation (private) of these various participants.

Design all facilities to be accessible by handicapped patrons.

Plan activities (indoor and outdoor) that will aid the resort with year around usage.

Allow patrons a view from the architectural interior outward to the nature of the environment; furthermore, eliminate views of other buildings.
DESIGN PROCESS

INVENTORY STAGE:

The first and quite possibly the most important tool in developing an architectural solution is the collection of data. Information concerning users, site, and design must be studied and understood in order to create a viable solution. The valuable information I gathered was compiled on an eight and one half inch by eleven inch format. This created a notebook that not only served as an information source in the beginning, but also as a source of referral in the end to evaluate how well the project needs were being met.

ANALYSIS STAGE:

After the designer has collected all the available data, he must analyze it to find out how it may or may not influence his design. The data analysis will formulate criteria and/or parameters which will dictate the design developments. Likewise, this information was collected, studied, and stored in a notebook format. However, as the information and creative ideas developed into sketches, it became necessary to move to tracing paper, permitting the convenience of overlays.

DESIGN DEVELOPMENT STAGE:

Lastly, the designer must synthesize all the criteria in order to develop a design. The designer transfers written data and sketches into a workable design solution. The design ideas developed were first drawn on tracing paper in the form of bubble diagrams. Eventually, the bubble diagrams developed into two-dimensional plans. At the two-dimensional level, the site and buildings’ functional requirements were solved. After carrying the design to workable plans, sections, and elevations, three-dimensional models were then constructed. The models were very helpful in viewing human scale, studying space relationships, perfecting the building structural systems, and finalizing the buildings' exterior masses. These models were most valuable when presenting the project to other people. As the design developed to a conclusion, a reassessment of all the concepts, elements, and designs were considered and re-evaluated many times.
PROGRAM

My involvement with this project evolved from a series of meetings with Harry L. Cooler of the Cooler Group, an Architectural Firm in Indianapolis, and with Wayne Bevin, Director of the Patoka Lake Division of the Department of Natural Resources. Additional sources included numerous personnel from the Indiana Department of Natural Resources. The information acquired from these meetings gave a basic view of the programmatic requirements and scope of the project. Now having a feel for the project's requirements, a two-day trip was taken to experience the site first hand. This was the first step to what became my most enjoyable educational experience. While there, I walked the site, took photographs, and collected information from various local and county offices. The requirements set forth in the prospectus, the advice gained from meetings, and data collected during the site trip provided a start by which to begin analysis of the site, the users, and the project. Additional research of existing resort projects was conducted at the architectural library aiding in a further analysis of the design possibilities. The data collection from the analysis helped to formulate criteria that would, in the end, make "Tillery Hill Resort" a complete working success.
DATA COLLECTION

SITE LOCATION:

Patoka Lake is located within the Hoosier National Forest and is the second largest reservoir in Indiana. It is located in Crawford, Dubois, and Orange Counties of southcentral Indiana, and has easy access from State Road 145 from the east and State Road 164 to the south. A one-hour drive from Evansville, Indiana; Bloomington, Indiana; and Louisville, Kentucky makes this a convenient location for recreationist from these areas. One will also find the lake easily accessible by air via the French Lick Airport located six miles north of the lake.

Tillery Hill is located in Orange County on the east side of Patoka Lake, just off State Highway 145. The highway creates the sites' eastern border, while the north, south, and west edges are bordered by the Lake, creating a uniquely private and controlled area.

SITE DESCRIPTION:

The Indiana Department of Natural Resources in their prospectus, views Tillery Hill as "the prime location on Patoka Lake from a recreational, aesthetic, and physical control standpoint." After visiting the site, I would have to agree. Tillery Hill is basically a peninsula in the main body of Patoka Lake consisting of one thousand, seven hundred and seventy-nine acres of land. It consists of a north and south land mass ranging from elevation 548' (flood pool level) to elevation 770'. Within the peninsula is one large interior pond and eight smaller ponds. There are also numerous coves fingered inward from Patoka Lake. Located to the west off the southern land mass is a small island approximately nine hundred feet by three hundred feet.

Presently there are not any buildings, structures, or hardsurface roads on the site. Due to topography, the best location for entry onto the site from Highway 145 is within the central part of the southern land mass. Close to the eastern side of the site is an electrical power line which runs north-south.

ENVIRONMENT:

The site is enhanced with intense natural elements, and rolling topography with small ponds scattered throughout. Patoka Lake plays an important part in the site due to the fact it borders three sides of the land mass. The lake water level ranges from 506-536 foot elevation at the summer (normal) pool level and consists of 8,880 acres at the 536 foot
elevation. The Lake creates a body of water 11,300 acres when at the peak foot control level of 548 feet.

The majority of the forest lands on site have been reclaimed; however, they tend to be thick with a large amount of undergrowth. Approximately fifty percent of the site is covered with a variety of conifer and deciduous trees. About thirty-five percent of the land consists of cultivated and open meadow lands while the remaining fifteen percent is covered with scrub trees and briar patches.

Wildlife is abundant on the site due to the fact that the site lies within reserve lands. Although the entire site is available for the construction of the Tillery Hill Resort, the northern land mass has been reserved as a refuge for wildlife.

VIEWS:

Looking to the west from the site, a long distance view is provided over Patoka Lake. The southwestern and northwestern views are of land masses primarily covered with vegetation. To the north one views reserve lands on the other side of a tributary of Patoka Lake. Viewing south, one sees into another tributary at the Department of Natural Resources' Patoka Lake Marina and boat ramps. Off site to the northeast, east, and southeast, a basic view of Highway 145 and the forest lands beyond can be seen. The interior site views range in a variety of short and distant views of lakes, forests, meadows, and rolling topography. The most intriguing view is looking west-northwest over the small island just off the shoreline of the southern peninsula. Here one is provided with the long distance view overlooking the Lake. The sunsets are particularly captivating. Along the eastern side of the site, due to a steep incline, a view onto the site from the road is not available.

CLIMATE:

The site location is 39° North Latitude and 86° Longitude. This location experiences a typical four-season weather change each year with an average winter temperature of 29.6° and an average summer temperature of 76.3° F. There is an estimated average of two thousand, five hundred heating hours per year and one thousand, three hundred cooling hours per year. Wind direction and velocity, as with all sites, varies widely on a daily (night and day) monthly, and seasonal basis. However, predominate winter winds will be from the northwest and the summer breezes from the southwest. The sun angle at the winter solstice equals 28° at noon while the summer solstice is 74° at noon.

DOMESTIC WATER:

A review of well drillings in the Tillery Hill area includes individual wells generally yeild less than ten gallons per minute with large drawdowns common in the area.
commonly accruing at those rates. Well depths range from two hundred to three hundred feet, thus the cost of well drilling is high and yields are low. However, domestic water supply and sewage are provided to the site via pipe lines located under the lake which intersect the site at the southwest corner of the southern peninsula.

GEOLOGICAL:

A geological survey indicates that seventy-five percent of the soil structure is comprised of Wellston, Gilpin, and Ebal silt loams soils. The remaining twenty-five percent is comprised of Zainsville, Crider, and Burnside silt loams soils. These soils are moderately suitable for building structures, due to the slow percolation rate and the high bedrock tables. In this situation, depth to bedrock ranges from twenty to eighty inches throughout the site. Slopes range from six to fifty percent over the entire site. The majority of the southern peninsula's lake front has the twenty to fifty percent slope areas.

USERS:

The annual visitation to the lake was expected to reach six hundred thousand people within the first three years of operation. The Indiana Department of Natural Resources, however, found this projection to be extremely low since the lakes' revenues surpassed all other state reservoir properties in its first full year of operation. Obviously, the Lake and its properties are a working asset for the State of Indiana. To increase the resort revenues the site elements should be designed to accommodate large groups of people attending conferences. Some people will visit the site for just a night or day while traveling through the area, while others will come to spend their vacations. The site is remotely located; therefore, many patrons will have traveled hundreds of miles to experience the resort. In short, users will consist of all age groups, from all walks of life, and social classes, seeking a variety of recreational experiences.
DATA ANALYSIS / DESIGN INFLUENCES

SITE:

The rolling topography of the site will be very useful in the placement of buildings. Buildings requiring views can be put on high points and hill sides while less attractive buildings (dry dock boat house, maintenance) can be placed in a position where they are hidden from view. Due to the large amount of acreage, buildings can be placed so one building does not interfere with the views and functions of another building. The amount of lakefront is maximized because of the site's peninsula configuration. This will aid in providing each building and/or activity with a lake view. The southern peninsula becomes the most inexpensive area to develop. This is due to the location of the domestic water and sewage lines along with the topographic access to Highway 145. The coves off Patoka Lake as well as the small island will develop into unique and private picnic areas for boaters.

ENVIRONMENTAL:

Buildings and activity spaces are to be located in areas to keep the disturbance of wildlife and their nesting grounds to a minimum. Under-developed areas must be left untouched by the human hand so the fabric of the wildlife's environment is not destroyed. Having the wildlife on site after the construction work is finished will be a far greater asset to the resort than a cleared forest area. Because the forest lands are re-claimed, the golf course and all structures should be located in areas where the least amount of forest will need to be cut. The interior site lakes will be beneficial to the golf course as will the rolling topography. However, the topography will plan an important part in the location of the golf course, because many areas are too steep. All structures must be above the 548 foot elevation so as to be out of the flood control zone. Buildings could be designed in a cluster fashion as opposed to a massive whole to lessen their impact on the environment. Roof ridge heights should be at or below the level of the tree line in order for the building scale to remain low to the ground; thus, reducing its impact on the environment.

VIEWS:

Buildings will be designed with large amounts of glass to make use of all available views. Views out of the buildings will be enhanced by using the variety of views to their fullest potential (i.e. view of the forest, lake, golf course, and so on). The lack of a view from
Highway 145 will more than likely work to the advantage of the resort as it will give the site privacy. Likewise, the first view of the resort will, therefore, be the main entrance—that point to which the site opens to the public, the "gateway."

**CLIMATE:**

Given the location with its abundant overcast winter skies, the use of solar heat would be best utilized as a supplemental source. Likewise, the average wind is not strong enough to warrant the cost of a windmill system. Roof overhangs, and the use of vegetation will be designed to block the heat gain during the summer. Building fenestrations should be oriented to make use of the summer breeze and provide shelter from the winter wind at points of entry. Due to the possibility of rapid changes in weather, the buildings' connecting corridors will be designed so they can be easily enclosed if the need should arise.

**GEOLOGICAL:**

Due to the high bedrock table the maximum depth to which a building should extend below the surface would be one story. Earthberming will be a valuable tool to achieve below grade environments in this situation. The high bedrock table has caused rock outcroppings and surface rubble throughout the site. These areas will provide unique areas for hiking trails. There are a large amount of gradual sloped areas conducive to building structures. The steeply sloped areas will accommodate many of the structures requesting an overlook view. Although the well yield rates are low, small pump houses with a gradual draw could be used to supply remotely located facilities.

**USERS:**

Areas will be provided for the transient user (day) the short term user (weekend, week) and the long term user (month). Space and activities should accommodate the young person after excitement and adventures, the middle age person looking for outdoor and indoor recreation, and the person in his prime looking for a get-away or rest and relaxation. People will come to the resort looking for many different recreational experiences which include: the speed boater or canoer, the hunter or fisherman, the golfer or tennis player, the swimmer or water skier, the horseback rider or the hiker, and the birdwatcher or nature walker. These and other recreational opportunities must be available for the resort project to be a success.
SPACES:

Spaces will be adaptable to large groups of people or small groups of people. They should be comfortable for a patron in formal dress yet not offensive to a patron in sports attire. It is important for there to be individual private spaces as well as community social areas. Spaces will be designed to enhance their environment, not disrupt it.

CIRCULATION:

On site roads will be placed along contour elevations as much as possible so as to minimize the procedure of cut and fill. This will keep the cost of the access ways down. The roads should provide views of different activities to introduce the patrons to the resort. Parking areas will be broken down into small areas as opposed to large asphalt masses. This will lessen the impact of the parking areas on the site environment. Parking areas must be designed to accommodate not only the patrons staying at the resort, but also the transient patrons. For the convenience of the patrons and easy access to their vehicles, these parking areas should be as close to the buildings as possible. However, the patron should not view the parking area but rather the nature of the site. Activities and buildings should be in close proximity to minimize the use of vehicles. Service access areas need to be placed so they are not visible by the users of the resort. Pedestrian circulation will be the major access way between activities. It shall have a hierarchy over the vehicular circulation.
SITE ASSETS:

Access to Utilities
Fair Views to North and South
Forest Lands
Good Views to the West
Highest Elevation Point at Patoka
Inland Lakes
Island Off South Peninsula
Large Amount of Building Sites
Large Amount of Land
Large Amount of Water Front
Location
Natural Environment
Open Land
Wildlife in Abundance

SITE LIABILITIES:

Forests are Reclaimed
Long Drive From Major Cities
No View to the East
Utilities Only Available at One Point
No Large, Open, Flat Areas
Only One Access Point From Highway 145
SITE DESIGN ELEMENTS
AND USAGE/YEAR

--- MAIN GATE BUILDING --- Twelve Months ---
Control Point of Resort

--- LODGE COMPLEX --- Twelve Months ---
Lobby Area
Administration Offices
Restaurant with Lounge
Coffee Shop
Conference and Meeting Areas
Sundry Shops
Activity Areas with Indoor Swimming Pool
Two Hundred (plus or minus) Sleeping Rooms
Parking
Support Facilities

--- MARINA --- Eight Months ---
Restaurant/Snack Bar
Recreation/Meeting Area
Support Offices and Facilities
Boat Equipment Sales with Rentals
Locker Rooms, Showers, and Laundry
Dry Dock Boat Storage Building to accommodate boats up to 24 feet long
Four hundred (plus or minus) Boat Slips with One Third Covered
Fuel Services and Sewage Pump-Out Station
Parking with Boat Trailers

--- GOLF COURSE AND CLUB HOUSE --- Ten Months ---
Restaurant with Lounge
Social Room
Pro Shop with Cart Storage
Snack Bar
Locker Rooms and Showers
Parking
RENTABLE CABINS

Twelve Months

Fifty Cabins (Ten designed for handicapped)
Living/Dining Room
Kitchen
Master Bedroom with Bath
Bathroom
Bunkroom
Outdoor Deck (screened in)
Parking

GAZEBO AND CONCESSION BUILDING

Eight Months

Snack Bar
Community Room with Outdoor Deck
General Store
Toilets, Showers

BEACH HOUSE

Five Months

Snack Bar
Shower and Lockers
Social Room with Outdoor Deck

HORSE STABLES

Twelve Months

Stables
Storage
Offices
Rest Rooms
ELEMENTS LOCATIONS

MAIN GATE BUILDING:
Control Point of Resort

LODGE COMPLEX:
Site: Good vegetation cover; Aesthetic views; Good parking and access; View of lake.
Proximity: Marina, Golf Course, Beach, Gazebo.

MARINA:
Site: Access to main body of water; Good parking and access; Aesthetic view.
Proximity: Lodge, Gazebo.

GOLF COURSE AND CLUB HOUSE:
Site: Good Soil; Without large rocks; Rolling, gentle slopes; Use of water; Little tree coverage.
Proximity: Lodge.

RENTABLE CABINS:
Site: Rolling topography; View of the lake; Good drainage; Aesthetic views; Large amount of vegetation; Good accessibility.
Proximity: Beach, Bank Fishing, Trails, Gazebo.

SWIMMING:
Site: Sandy area; Two percent slope; South Orientation.
Proximity: Lodge, Cabins, Concessions.

TRAILS:
Site: Varies with area.
Proximity: Gazebo.
COURT GAMES:
Site: Level.
Proximity: Lodge, Golf Course, Gazebo.

HORSE STABLE:
Site: Grazing Land.
Proximity: Gazebo, Trails.

RELATIONSHIP DIAGRAM
SITE ACTIVITIES

:BEACH:

Badminton
Miniature Golf
Picnic Area
Sunbathing
Volleyball

:BOAT RENTALS:

Canoes
Fishing Boats
Sailboats

:COURT GAMES:

Badminton
Basketball
Tennis
Volleyball

:FISHING:

Bass
Bluegill
Catfish
Redear
Crappie
Walleye
Northern Pike

:GOLF:

Eighteen Hole Course
Practice Greens
Practice Range
Practice Sand Traps
PICNIC:

Tables
Grills
Shelters
Toilets

PLAYGROUND:

Swings
Slide
Teeter-Totter
Jungle Gym

TRAILS:

Bicycle
Bridle
Fitness
Walking/Hiking with Overlook Towers

WATER:

Skin Diving
Swimming
Water Skiing

WINTER ACTIVITIES:

Cross Country Skiing on Walking Trails
Ice Sailing
Ice Skating with Pavilion on Large Inland Lake

FUTURE DEVELOPMENTS:

Baseball and Softball Fields
Campgrounds (primitive and modern)
Court Games
Basketball, Racquetball, Tennis
Water Slide
TILLERY HILL
SITE PLAN

The first ten weeks of the "design study" were spent on planning the overall use of the 1,779 acre site. One may question the amount of time spent on the site; however, I felt it necessary to take such time in order to understand the complete makeup and capabilities of the site. A large amount of time was devoted to walking, photographing, and observing the site to acquire a sense of what the environment was really like. A detailed site topographic map was enlarged to a working scale on which a soils study, vegetation study, and site amenities study were performed. The research time spent on the site, and a series of sketches lead to three site proposals. Assets and liabilities were evaluated for each proposal and then a final site solution was developed.
SCHEME A

ASSETS:

Cabins are located in private areas.
Cabins have private swimming and boat docking areas.
Some Cabins are remotely located.
A variety of cabins are provided (some cabins accessible only by hiking, boating, or vehicle)
Major construction area confined to southern peninsula.
Southern peninsula is the least expensive area to develop.
Gazebo is located so it will be easily accessible by hikers, golfers, and horseback riders.
Peninsula not infringed upon.
Uses one main circulation road.
Golf Course Club House has a view over course.
Golf Course utilizes three interior lakes.
Golf Course in close proximity with Gazebo for golfers to stop.
Golf Course layed out in open land.
Golf Course Club House in close proximity with Lodge Complex.
Lodge Complex has good view to the west.
Lodge Complex has close proximity to Golf Course.
Lodge Complex has close proximity to Activity Area.
Lodge Complex has use of a private Marina.
Lodge Complex uses the most economical location to build.
The Marina's Dry Dock Boat House can be tucked into hillside, thus being unseen from site and Highway 145.
Transient boaters have easy access onto site without interfering with other activity areas.
Marina is provided with view to the south into a large tributary of the Department of Natural Resources' Marina.

LIABILITIES:

Cabins located a long distance from water lines.
Some cabins would require a large amount of access roads.
Some cabins infringe on northern peninsula wildlife reserve.
Golf Course layed out in steep topography areas.
Golf Course Club House not provided with a distant view.
Lodge Complex is located the furthest possible distance from the site entry point.
No wind break from northwest wind.
Marina divided into two docing spaces.
Marina is in view from Highway 145.
SCHEME B

ASSETS:

Cabin clusters are provided with private, individual spaces.
Cabin clusters have private swimming areas.
A large variety of cabin areas/types are provided.
Lodge Complex, Marina, and Golf Course are greatly separated, providing each with their own individual space.
Golf Course Club House is in good proximity to the front and back nine hole courses.
Golf Course's interaction with the Lake is maximized.
Lodge Complex has good view to west.
Lodge Complex in close proximity to Activity Areas.
Lodge Complex has a Lake view to the north, south, and west.
Lodge Complex is located on most dominate point on the Lake.
Boats have easy access to main body of Patoka Lake from Marina.
Marina has large amount of docking space.
Marina has a good view to west.

LIABILITIES:

Cabin clusters are widely separated.
Cabins will require numerous domestic water pumping stations.
Cabin clusters would require a large amount of access roads.
Major construction area infringes on the northern peninsulas' wildlife reserve area.
Sizeable distance between the Lodge Complex, the Marina, and the domestic water and sewage lines.
Golf course is laid out along steeply sloping topography.
Lodge Complex is located the furthest possible distance from the site entry point.
Lodge Complex is induced to a large amount of wind off the Lake.
Marina is located a large distance from main site entry.
Transient boaters have a long on-site distance to travel.
Dry Dock Boat House will be in plain view from site.
SCHEME C

ASSETS:
Cabin Clusters are provided with private, individual spaces.
Cabin Clusters are provided with private swimming areas.
Lodge Complex, Marina, and Golf Course are in close proximity of each other.
All construction concentrated in one location.
Golf Course Club House provided with nice Lake view.
Golf Course has close proximity for transient patrons.
Lodge Complex has good view of Marina.
Marina uses the natural harbor.
Marina has aesthetic view to west.

LIABILITIES:
Cabins require a large amount of domestic water pumping stations.
Cabins are widely scattered.
Large amount of roadways need to be produced.
Activity Area strongly separated from Lodge Complex and other facilities.
Lodge Complex, Marina, and Golf Course all share the same view.
Golf Course strongly infringes on northern peninsula wildlife reserve.
Lodge Complex is not provided with any distant views.
Lodge Complex is located on a steep slope.
Lodge Complex has no direct sunlight (blocked by forest).
Marina location not good for sail boating because of the lack of wind.
Marina is a difficult area to police speed of boaters.
North and south land masses create a cove which will have high noise reverberations from boats.
SITE SOLUTION AND LAND USE CONCEPTS

GENERAL:

The design of the Site Plan was developed from Scheme A and largely controlled by the site elements. When viewing the major site elements—the Lodge Complex, the Marina, and the Golf Course—the southern peninsula becomes, without question, the best development location. This was due to the intersecting location of the domestic water and sewage lines (southwestern corner of the southern peninsula) the easy accessibility to Highway 145 (because of the topography) and the northern peninsula had become a wildlife refuge area. The availability of views, the south orientation, and the position of existing vegetation created amenities that enhance the final site design.

LODGE COMPLEX:

On the southwest corner of the site, the Lodge Complex occupies the prime location on Tillery Hill. At this point, a view over the lake is provided to the west and the southeast. This is also the point where the water and sewage lines intersect, thus making this the most economical spot on which to build. The site is open to the south, which provides good sun orientation for the Lodge Complex building. Another benefit of this site is the open space available for the construction of the main complex building with the forest just beyond to provide a woodsly atmosphere. The forest is located to the north and east. It produces a quiet, peaceful, natural setting. This location facilitates the use of good short and distance views. Close, insight views are provided of the forest to the north and east. To the south are short views, and long distance views can be seen to the west. In addition, the Lodge has easy access to the Lodge Marina, Golf Course and Club House, and Activity Area. This supplies the patrons with good accessibility to these areas, with the Lodge Complex serving as a central focal point.

MARINA:

There are two coves on the southern peninsula quite suitable for a marina. They are just off the main body of Patoka and large enough to construct docking areas within their natural shoreline. The openness of the coves are such that the noise level will be kept to a minimum. Also, the coves are open to the south which will allow good intrusion of wind for sail boating. Neither cove is large enough to handle four hundred boat slips without extending into the main body of Patoka.
Therefore, both coves were utilized; one for a Lodge Marina and the other for the Main Marina. Designing the Marina docking areas in two locations worked to an advantage. The Main Marina would have control over all docking privileges while the Lodge Marina would simply be a docking area for the convenience of the Lodge patrons. This would lessen the interference between the Lodge patrons and the transient boaters, who would be using the lake on a day to day basis.

The Lodge Marina would be located in the southwestern cove and would be directly accessible by the Lodge patrons. It could handle up to two hundred boat slips with sixty-five (plus or minus) covered boat slips. Boats would be put in the water at the Main Marina location and driven to the Lodge Marina when someone is staying at the Lodge.

The Main Marina would be located in the southeast corner of the site. Here, the Marina has good orientation to Highway 145. Boaters have only a short distance to travel to dock (put in) their boats. This location is suitable for two hundred to three hundred boat slips and would have eighty (plus or minus) covered boat slips. The Marina Complex has boat ramps, all the boating support facilities, and the Dry-Dock Boat House would be located here. The Marina Complex would be provided with a view of the Department of Natural Resources' Patoka Lake Marina. The Dry-Dock Boat House could be neatly tucked into the hillside of the cove were it would be unseen from the road or the site.

A docking area would also be developed around the small island to the west at the southern peninsula. It would provide transient boaters an individual picnic area easily accessible from the water.

GOLF COURSE AND CLUB HOUSE:

The primary goal of the Golf Course was to develop a challenging course that would use the topography and lakes to the best of its advantage. The course layout is such that it does not use slopes that are too steep, but will provide the golfer a challenging, difficult course to master. Secondly, these fairway locations were chosen in order to allow the forest of young timber to remain in tack wherever possible.

The Golf Course Club House is located close to the Lodge Complex so patrons can walk to the course. It is designed as a separate entity within itself, catering to the needs of the golfer.

CABINS:

Cabins are developed in clusters of five in order for them to share areas for parking cars, picnic tables, swimming, and boat docking facilities. By sharing these areas, the construction costs are kept to a minimum, the patrons have a sense of community, and are provided with social interaction spaces. Each cabin would have its own private space
(i.e., a view of or through the forest with a view of the lake). These cabins provide a space for the patrons to "get back to nature," while at the same time still having the luxury of modern conveniences. The cabins are separated in proximity from the Lodge Complex building. Consequently, their privacy will not be infringed upon by those larger groups of patrons utilizing the Lodge and its Activity Areas. The cabin clusters will be located near areas that specialize in a particular activity. For example, if a person wishes to spend their time golfing, there will be a cluster of cabins available overlooking the Golf Course. Likewise, the same thing holds true for those patrons specifically interested in using the Marina or experiencing the forest areas. There will also be a cluster of cabins located in an area only accessible by water. These will, however, have an access road for use by the maintenance personnel only. The cabins are available for rent on a daily, weekly, or monthly basis, and can accommodate two to eight persons comfortably.

ROADS AND ACTIVITY AREAS:

On site roadways are located in a fashion which will keep the cost to a minimum. There is one major circulation road, another factor in cost minimizing, as opposed to having a fingered network of roads. All the facilities, in turn, are located off of this one major roadway. Due to this arrangement, as the patrons drive into the resort area, they get a sneak preview of the various activities that are offered. For example: As one approaches the Tillery Hill Lodge Complex site, the Golf Course can be seen from the roadway, which can aid in stimulating interest. Another added advantage of this roadway system is it provides the transient boaters and golfers easy access to the facilities without interfering with the long stay Lodge patrons.

The Activity Areas are located in accordance with their need of physical, environment, and social elements. For example: The beach is located in a cove, which has a south-facing slope for sun-bathing and with good orientation to the Lodge Complex and its social functions.

The Gazebo location was chosen because it provides easy accessibility for trail users, horseback riders, and golfers. The Gazebo provides a refuge in an uninhabitated area away from the other buildings (i.e., the Lodge Complex, Golf Course Club House, and Marina building). Thus, if a person wants to stop for refreshments or rest before continuing on trails or the Golf Course, they have a protected rest facility without having to go all the way back to the Lodge Complex. Also, the general store, located in the Gazebo, is convenient for those staying in the cabins who might need a few additional groceries.
These while
The
larger
cabin
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Course.
ately
There
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maintaining,
THE TILLERY HILL LODGE COMPLEX

After careful consideration of my academic schedule, a decision was made to spend the first quarter on site planning study and then, for the major emphases of this Architectural Thesis, I would focus the remainder of the "design study" time on the Main Lodge Complex design.
STATEMENT OF NEED:

In order for the Tillery Hill Resort to be an asset to Patoka Lake and its properties as well as the State of Indiana, it will need a Lodge facility to accommodate guests.

GOALS:

To design for the Tillery Hill Resort a lodge that will attract patrons and provide an environment that creates hospitality.

To create a lodge capable of supporting the needs of the Tillery Hill Resort and the Patoka Lake Project.

To provide Tillery Hill Resort with a lodge facility that will board guests in a comfortable and feasible manner.

OBJECTIVES:

Provide a lodge atmosphere and experience that will leave the patron with a desire to return.

Create a feeling of "Experience with Nature."

Promote and develop a Conference Center to attract large groups of clientele and provide them with the needed accommodations.

Develop a Restaurant and its associated facilities which will not only support the resort but also attract transient patrons.

Design indoor activity spaces which will meet the needs of recreation through the winter months and accent the outdoor recreational areas in the summer months.

Provide all the support facilities needed to manage and maintain a lodge.
CONCEPTS:

Allow patrons a view of nature throughout all points in the building.

Create a series of interaction spaces to enhance the social gatherings.

Provide individual spaces giving the patron privacy.

Develop a feeling whereas the patron views the space as his own.

Design the building to be part of the nature setting.

Use natural building materials for construction, interiors, and detailing.

Bring the natural environment inside of the building.

Permit the building to be opened up into the outdoor environment.

Provide a view of Activity Areas when possible.

Design buildings low to the ground to relate to the site.

Develop walkways to become a walk in the forest not through the forest.

Use vegetative visual screening instead of structural screening.

Discourage the use of automobiles by designing pedestrian accessways with a hierarchy over vehicular traffic ways.
THE LODGE
COMPLEX STUDY

In order to allow the natural setting to be as undisturbed as possible, the Lounge should be designed as a cluster of small units of architecture; instead of one massive, overbearing structure. The architecture should unite in harmony with the land, not raise in dominance over it (a village if you will). To accomplish this, the buildings must "read" as separate units, while actually being connected for the convenience of building operations. The users of the spaces will interact with the nature of the site at every possible opportunity. Each building will have its own separate entry for patrons attending one particular function (i.e. a conference or simply stopping for dinner). In addition, the patrons will be able to go from one building to the next without facing the climatic elements in bad weather. Large groups attending conferences and small families on vacation will be using the facilities simultaneously. As a result, space must be designed to accommodate both groups without one group's interference on the other. With these ideas in mind, a program was developed for the large complex. The complex consists of four main buildings interconnected on the lower level and has various "Room Cluster" Buildings located through the site. The Room Cluster Building houses the patrons' sleeping rooms.

A large amount of time was spent sketching ideas concerning the Lodge Complex design. The following are a series of various design sketches, ideas, and comments (some from jury time) that were essential in shaping the design into its final solution.
good view to west

WHAT HERE?

Forms fit topo...

No view

works well (changeable)

To much circulation!!!

Dead space

Lobby shape?
Lobby's view blocked be conference Bldg.

Needs to be openable!

Kitchen Service?

Restaurant seating area looks good.

Activity space shape

what are we looking at....

? Activity space shape
hard to make work view

at least timber in controlled environment while the others

SUN SCREENING IS NEEDED -- how... needs to be open

MAXIMIZE VIEW OUT OF RESTAURANT -- to the west.

meas.

Ways to break up the long corridor end corridor developing that was developing...
Looks like an industrial solar building.

A structural grid will give flexibility & form:

- 30' x 30'
- 25' x 50'
- 25' x 90'

- Ogelby Park, NV - take off storage under risers; = fast clean up.

Light admitted only at one point:

... Larger amount of area.

Need sun screening to darken space for movies.
Discuss space and nature relationships

Axis turns the corner of lodge complex

Not much office space

Develops an axis good entry

[Diagrams and sketches]
THE LODGE COMPLEX SOLUTION

THE SITE:

The gradual slope at this point of the site allowed the structure to have a single story on the inland (entry) side of the complex and a two story facade on the lake side. This permitted a maximum utilization of the lake view where necessary and kept the approach view of the complex at a single story scale. Buildings were placed around the ridge of the slope in a manner that furnished them with individual identities. The conference and restaurant buildings were situated with the western view and the activity building was oriented to the south. By placing the lobby building at the turning point of the complex, it had a dominate position for control and for the main entrance. The site provided open space to the south for the activity areas (tennis, swimming, picnicing, and so on). The site on the inland side of the complex allowed for the development of outdoor social spaces and parking areas diffused within the forest.

SCALE:

In the realm of scale three major factors are present. First, the building scale must be such that it stays in context with the site. Secondly, the architecture should relate to human scale in order to transmit the feeling of homeliness. And finally, the interior spaces which will accommodate large groups of people should be of a scale that will not cause the feeling of confinement or enclosure. With the application of low pitched roofs, changeable spaces, balconies, and glazed walls, to name a few, the scale has the liberty of meeting these requirements.

BUILDING MATERIALS:

In keeping with the concept of "harmony with the natural environment" I chose to use wood and stone as the main building materials. Careful use of these elements for structure, facade finishes, and detailing, will cause the architecture to appear as part of its setting. Glass was chosen as the third main building material. Exercising the use of large glazing areas granted the user an outward view at all points throughout the complex. This will maximize the interaction between the site activities, nature, and the patrons. Earth tones are used for the exterior finish color (i.e., brown asphalt shingles). Nature has been brought inside by using the technique of flowing the materials through and around the building envelope. Below grade areas will be constructed of block and cast-in-place concrete. The lower level floor surface is to be concrete. On the other hand, the main (upper) floor surface, if exposed, will be hardwood.

STRENGTHS:

space into a large flexible structure. The Central Pavilion has become a symbol of space and flexibility. In the same way it has been designed so that it is not monolithic, but rather the product of a series of givens.

HEAT:

and ventilating systems. The time and space parameters will be passed to an electronic control device, to a central location. The device will determine the necessary heating and cooling equipment to be used in the various areas of the lodge. For design, the heating and cooling systems will be used.

This will be achieved through the use of a combination of heating and cooling systems. The central air conditioning and heating system is part of the overall design and is located within the structure. The system is designed to control the indoor temperature and provide comfortable conditions.
STRUCTURE:

The building structure relates first to the use of the various spaces. Laminated wood structure has been used to allow for the flexibility and openness of the large spaces such as The Conference Center and Activity Buildings. Likewise, post and beam construction has been used in areas to achieve the personalized and smaller scale spaces, for example, the Restaurant Building and Room Cluster Buildings. In the majority of the public spaces, the wood timber structure has been left exposed to convey the "rustic" environment. Even though it is used in different fashions, the laminated structure, along with the stone building material, becomes the association factor which gives the buildings a feeling of kinship.

HEATING, VENTILATION, AND AIR CONDITIONING:

Considering the location, with its seasonal overcast skies, and the architectural aesthetic qualities desired in the design, the use of an active solar system has been virtually ruled out. At the same time, due to the extensive use of glass for the purpose of views, the passive solar gain has not been overlooked. Overhangs are designed to admit winter sun and not obstruct views, but are of a considerable distance to block heat gain of the summer sun. If blind systems are necessary, they are to be placed between glass panes. The buildings have been designed with energy conservation in mind. Almost the entire lower level is earthbermed, or has a basement type design to keep heat gain/loss to a minimum. The major control of H.V.A.C. will be handled by water source heat pumps utilizing the lake for their source. For air exchange, the extract air will be carried through underground cool tube systems to lessen the severity of heating and cooling. This same system will be used for: natural ventilation, to counteract heat gain in the summer, and for inexpensive cooling. The restaurant and lobby buildings will be handled by systems located in the main complex mechanical room, under the restaurant dining area. Space for ductwork is provided under the main (upper) floor and will supply both the upper and lower levels. The Activity Building and Conference Building will have their own mechanical rooms and system. Duckwork will be installed under the flooring in these cases. A mechanical space to house a water source heat pump is located in each room cluster building to control the H.V.A.C. in the public spaces. The individual rooms will be handled by separate room units.
# SPACE ALLOTMENTS AND SQUARE FOOTAGES

## LOBBY BUILDING

### UPPER LEVEL ENTRY:

<table>
<thead>
<tr>
<th>Space</th>
<th>SqFt</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entry</td>
<td>200</td>
</tr>
<tr>
<td>Fire Pit Social Space</td>
<td>500</td>
</tr>
<tr>
<td>Main Desk and Reception</td>
<td>1,000</td>
</tr>
<tr>
<td>Lobby</td>
<td>2,000</td>
</tr>
<tr>
<td>Sundry Shops</td>
<td>1,000</td>
</tr>
<tr>
<td>Restrooms</td>
<td>260</td>
</tr>
<tr>
<td>Circulation Areas</td>
<td>800</td>
</tr>
<tr>
<td><strong>Floor Total</strong></td>
<td><strong>5,760</strong></td>
</tr>
</tbody>
</table>

## LOWER LEVEL:

<table>
<thead>
<tr>
<th>Space</th>
<th>SqFt</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administrative Office</td>
<td>1,600</td>
</tr>
<tr>
<td>Social Gathering Space</td>
<td>500</td>
</tr>
<tr>
<td>Coffee Shop</td>
<td>2,000</td>
</tr>
<tr>
<td>Coffee Shop Kitchen</td>
<td>1,840</td>
</tr>
<tr>
<td>Restrooms</td>
<td>330</td>
</tr>
<tr>
<td>Circulation Areas</td>
<td>500</td>
</tr>
<tr>
<td><strong>Floor Total</strong></td>
<td><strong>6,770</strong></td>
</tr>
<tr>
<td><strong>Building Total</strong></td>
<td><strong>12,530</strong></td>
</tr>
</tbody>
</table>

## RESTAURANT BUILDING

### UPPER LEVEL ENTRY:

<table>
<thead>
<tr>
<th>Space</th>
<th>SqFt</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dining Room</td>
<td>5,500</td>
</tr>
<tr>
<td>Lounge/Bar</td>
<td>2,000</td>
</tr>
<tr>
<td>Kitchen</td>
<td>5,900</td>
</tr>
<tr>
<td>Restrooms</td>
<td>400</td>
</tr>
<tr>
<td>Circulation Areas</td>
<td>1,200</td>
</tr>
<tr>
<td><strong>Floor Total</strong></td>
<td><strong>15,000</strong></td>
</tr>
</tbody>
</table>

### LOWER LEVEL:

<table>
<thead>
<tr>
<th>Space</th>
<th>SqFt</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employee Lounge/locker/Shower</td>
<td>1,580</td>
</tr>
<tr>
<td>Mechanical</td>
<td>4,440</td>
</tr>
<tr>
<td>Kitchen Storage</td>
<td>2,200</td>
</tr>
<tr>
<td>Receiving and Loading Dock Areas</td>
<td>1,780</td>
</tr>
<tr>
<td>Circulation Areas</td>
<td>1,000</td>
</tr>
<tr>
<td><strong>Floor Total</strong></td>
<td><strong>9,940</strong></td>
</tr>
<tr>
<td><strong>Building Total</strong></td>
<td><strong>24,940</strong></td>
</tr>
</tbody>
</table>

## CONFERENCE BUILDING

### MAIN ENTRY LOBBY:

<table>
<thead>
<tr>
<th>Space</th>
<th>SqFt</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conference Areas</td>
<td>4,000</td>
</tr>
<tr>
<td>Meeting (breakout) Rooms</td>
<td>2,000</td>
</tr>
<tr>
<td>Lobby</td>
<td>1,400</td>
</tr>
</tbody>
</table>

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THE LOBBY BUILDING

The Lobby Building is the nucleus of the entire lodge complex. As patrons come through the main entry, they enter under a diagonal axis accented by two laminated arches and glass skylights. This causes them to focus through the lobby space to the lake and outdoor activities. Dividing the roof plane in half, this axis is the element which "turns the corner" of the main complex. The roof plane descends in two directions from the laminated arches directing the patron to the passage ways of the Restaurant and Activity Buildings.

The upper level houses the reception desk, the lobby/waiting space, sundry shops, and a fireplace pit for social gatherings. The sundry shops are intertwined throughout the lobby for the convenience of the leisure shopper. Since the lobby acts as the connecting link between the Activity Building and most of the other structures, this becomes a strategic location for the sundry shops from the retailers stand point. A balcony area is also provided where one can observe the coffee shop below or the activities areas outside (i.e., tennis, playground, swimming, and so on).

The coffee shop, serving quick-order meals, is located on the lower level. It has a direct connection to the Activity Building, has a view of the outdoor activity areas, and would be a comfortable place for a parent to watch their child in the playground area. On this level the Activity, Lobby, and Restaurant Buildings are physically connected. The connection link to the Restaurant Building is the headquarters for all the administrative offices. The offices open into an employee courtyard adjacent to the employee lounge. Access to the receiving area for supplies is also via this connection link to serve the Lobby and Activity Buildings on the lower level.
THE RESTAURANT BUILDING

Post and beam timber construction has been designated for the structure of the Restaurant Building to allow for more intimate dining spaces. The dining area is the major public space on the main level. Breaking it down by the use of structural support posts, vegetative screening, and changes in floor elevation, will provide for more personalized eating spaces. The floor plane is stepped downward towards the west to maximize the use of the western view. In essence, this provides more "window seats." Clerestory windows are located along the western roof plane of this building. Not only will they admit winter sun and block summer sun, but they will also provide a view of the stars for evening dinners.

On the eastern edge of the dining area, space is provided for access to the conference and lobby buildings. A simple railing divides the two spaces so the accessway has a sense of openness and not a feeling of enclosure. Likewise, the eastern wall is glazing to permit a view of the outdoor social spaces from the accessway and dining area. To break up its length, the accessway flows through the lounge which is also located on the main level. A physically enclosed connection is located between the restaurant and conference buildings to protect the patrons from the elements of bad weather. The connection between the lobby and restaurant buildings, on the other hand, is designed so it can be an open space in the summer (fair weather) or enclosed in the winter (bad weather). For those patrons who come to Tillery Hill just for an evening dinner a separate entry is provided.

The main kitchen is also located on the main (upper) level. It services the dining areas, the lounge and the conference building via a connecting bridge over the service entry.

The lower level of the restaurant building is the main mechanical and service area for the complex. A cold and dry storage area for the kitchen is directly connected to the loading dock and has a service elevator up to the kitchen. Docking spaces are provided for two semi-trucks and one van. These are connected to the receiving area which provides access to the lower level, and a service elevator to supply the upper level.
THE CONFERENCE CENTER

This building is The Tillery Hill Conference Center. Conference groups will be commissioned within a four hundred mile radius of the site. Flexible spaces will allow the conference building to handle groups ranging from ten to thirty people to groups up to five hundred to six hundred people. The large groups will be accommodated in six conference spaces that can be opened into one massive space. Four of these spaces are located on the main floor, west end of the conference center, and open out onto a large deck. The long distance western view over the lake is provided at this point. The remaining two conference rooms are located on the second level and open up to become balcony spaces for the center two spaces on the main level. A balcony space for the outer two conference spaces is provided by two smaller meeting rooms on the second level. By utilizing moveable walls, a conference space can be created by the use of any combination of these ten spaces.

There are eleven small breakout meeting rooms for the use of small groups (ten to thirty people). Again, these rooms utilize moveable walls to allow flexibility.

The entry foyer on the east end has a grand staircase leading to the second level. This staircase could also function as a stage for group photos or wedding reception pictures. On the main level, the entry foyer flows into two smaller foyer spaces serving the conference rooms. This has been done to give separation between particular groups of patrons. However, the two smaller foyers are somewhat connected to allow space for a buffet line which can serve all four conference spaces.

Kitchen services are provided from the main complex kitchen through a kitchen serving room located in the conference building. A service elevator serves the upper level serving kitchen. Also, both kitchens act as a bar.

The east (entry) and west (conference) end walls are glazing to maximize the views out. The structure is also provided with a clerestory. The clerestory admits natural light into the two central balcony spaces, while at the same time provides a high ceiling level in these spaces.
THE ACTIVITY BUILDING

The purpose of the Activity Building is to provide those indoor activities that will supply the Lodge Complex patrons' recreational needs in the winter, as well as throughout the year. The major space on the lower level houses a swimming pool, sunbathing areas, and game spaces. The building is oriented south with the south wall glassed. This gives a view of the outdoor swimming and activity areas. The wall can be opened in the summer to allow the swimming area to become an outdoor space. A sun deck is also located on the south side of the building. It is designed to be partially sheltered from the wind to allow space for sunbathing when the sun is hot, yet the breeze is too cool in the pre and post season months.

On the north side of the building, game rooms are provided on the lower level to furnish spaces for billiards, ping-pong, video games, and private group games. Shower/locker rooms also are available for transient activity building users. A balcony space provides access to the main entry level and the exterior, inland side of the complex. This entry allows for patron access from various Room Cluster Buildings without transferring them through other areas such as the conference and restaurant spaces. The balcony also serves as a viewing deck over the pool and allows for additional game room spaces.

Laminated arches furnish the structure with the building envelope suspended from the underside. This allows the wood structure to be viewed from the outside.
THE ROOM CLUSTER BUILDING

The structure is designed to be applicable to all types of terrains. This is done by using a combination of post and beam, and bearing wall construction. Heavy machinery would also not be needed since this type of construction allows for easy erection. The building is designed to promote the interaction of people while at the same time provides individualized private spaces. Twenty-three guest rooms per building are designed in two basic shapes. However, by the use of different window fenestrations, lofts, and door and bathroom arrangements, there are actually ten different room types. This will give the patron a sense of individuality. Each room has its own private outdoor deck and view. Decks are arranged so views are not permitted from one outdoor room space to another. These areas are the patrons "private" territory. They are provided with an outdoor "group" space by the entry to the central core.

Four groups of six rooms are clustered around an interior social space for group gatherings. To intensify interaction, nineteen rooms are equipped with interior window fenestrations viewing into the social spaces. The four social spaces flow into a central core social space; thus allowing the spaces to be conducive to large or small groups. For example: If the entire Room Cluster Building is rented by one conference client, all the social spaces will function as a whole. A fireplace pit and a kitchenette/bar is provided in the central core space to enhance social involvement of the whole and transmit the feeling of family room. The central core roof is designed as an atrium to admit natural light into all the social spaces.

There are nine Room Cluster Buildings strategically located throughout the site in order to provide many views. Two clusters have a view of and interact with the Activity Areas, two view the Marina and forest, two view the Golf Course and forest, and three view through the forest and the lake.
ARCHITECTURAL THESIS DESIGN

WE GILBERT TOBIAS

THE ROOM CLUSTER BUILDING

TILERY HILL RESORT AT PATOKA LAKE
CONCLUSION

The Site Plan, has been developed to facilitate Tillery Hill Resort with the needed activities to become a valuable asset to Indiana through the Patoka Lake and its properties. The components have been organized to accommodate patrons with all levels of interest. At the same time, the site has not been restricted in its abilities to meet future recreational needs.

Tillery Hill's Lodge Complex is designed with all the necessary space for people and activities which will create the main support facility of the Resort and become the overall attraction of Patoka Lake. Future buildings should be designed to match the Lodge Complex with its definite statement of not obstructing the natural environment.

Having learned a great deal from this architectural thesis, my one regret is not having sufficient time to develop, study, and design all the site facilities with the same complexity with which the Lodge Complex was designed.

Even as I write this conclusion, I find my mind evaluating criteria for future study. For example: Wildlife feeders could be placed in viewing areas for patrons to have a better opportunity to see the wildlife. In retrospect, I am proud to admit I have enjoyed the challenge of mastering this intensive and comprehensive design study.