battleground
conference
center

JANE SUDDARTh
THESIS 1980-81
COLLEGE OF ARCHITECTURE
AND PLANNING
BALL STATE UNIVERSITY

PROFESSOR A.E. PALMER
ACKNOWLEDGEMENTS

I would like to thank God for the talents and skills He has given me. He has made this project possible and my architectural education.

I would like to thank my parents for all of their support - emotionally and financially.

I would like to thank Prof. A.E. Palmer for his guidance and instruction on this project and all the insight and growth he has given me toward my architectural career.
This thesis book is a documentation of the final year of design study. This involves a comprehensive design development of a single project over an entire school year. My book is to illustrate this process of design involvement and evolution.

"It could be wished that architecture were more studied in relation to life, rather than to historical and archaeological detail. Then it would be realized that the better a building suits its purpose, as the shell suits its snail, the better and more beautiful its construction will be; for the climate and requirements of the people who use the building are the governing factors of fine architecture."\(^1\)

\(^1\)C.M. Villers-Stuart, *Spanish Gardens*, p.17.
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INTRODUCTION

Summary
The proposed project is a conference center within the community of Battle- ground, near West Lafayette-Lafayette Indiana. The building attempts to eff- ect both Battleground and Lafayette at several scales and in many different ways. A conference facility is needed in the Lafayette area for corporations, other businesses, and organizations. Purdue University has a wide range of capabilities, yet is limited by the re- quirement of sponsor ship of one of its educational departments. Battleground is a rich historic area that has rapidly declined in cultural character over the years. It is hoped that this conference facility will meet both the needs of busi- nesses in the midwest and act as a eco- nomic and cultural catalyst for the his- toric Battleground community. The Batt- eground Conference Center is comprised of dining and bar facility, large confer- ence rooms, presentation room, library- think tank, small conference rooms, ex- hibition space, communication/computer center, overnight rooms, and a spa fac- ility. The image of the center is a str- ong statement of high technology geom- etric forms while utilizing solar ener- gy, relating to the topography and veiw of the site, and producing a variety of scale changes and movement experiences throughout.

History of Battleground
The town of Battleground, Indiana is rich with historic events. Its written history began in 1811 when Tecumseh, Chief of the Shawanoe Indians, allied with the British Armies against the United States Army headed by General William Henry Harrison. Tecumseh’s de- feat became a decisive factor in the ultimate victory of the United States in obtaining their freedom from England and securing Indiana from the Indians. The battlefield from this point in time became a state historical site. In 1840 the battlefield area hosted a presiden- tial rally for William Henry Harrison. Approximately 40,000 people attended
this festive affair. The New Albany & Salem Railroad was completed in 1853. With a station at Batteground, many political rallies were held on the battlefield for many years.

In 1857, M.E. Church founded the town of Batteground and an institution of learning. The village of Harrisonville had already existed to the west of the battlefield for many years. By 1875, the school building of M.E. Church's educational institution had fallen to neglect and disrepair. In that same year the Methodist Camp Meeting Association purchased the school and converted it into a hotel. They then built a large frame tabernacle and many cottages on adjacent lots. For about 40 years, Batteground was a Methodist Camp retreat for the midwest.

The present town of Batteground, has a population of 806 and is considered the "bedroom of Lafayette", yet still maintains being historic site. The Methodist Camp is now the site of a state historical museum and community building.

Yearly activities at this site include a fiddler's convention, a 1840 rally re-enactment, and a turquoise & jewelry show. In the early years of these events the turn-out was fair. But in the past years, their popularity has declined. The historical integrity of the town is unstable.

Types of Conferences

* EDUCA TIONAL: Seminars; short courses educational intensive
* POLICY-MAKING/MANAGERIAL: Decision-making and strategy function
* SALES AND PROMOTIONAL: For the selling and buying of products
* SYMPOSI UM: Science based- to explore * types of conferences for this center

Definition of Users
- small to medium groups (10 to 100)
- mainly local: instate and midwest
- corporation administration: managerial strategies
- corporation short courses: job training
- labor unions
- religious groups
- any group that is from the business sector (does not meet requirement for university policies for conferences)
- any group that demands an efficient conference work space of high quality of services and comfort.
goals
GOALS

* The conference center should meet all the needs and requirements of the attendee; therefore, the design should provide various types of environments for a conference — i.e. informal, formal, presentation, brainstorming, etc.

* The design solution should provide the user with visual and physical access to the surrounding environment — mainly the battlefield.

* Even though the spaces within the center interact as a whole, there needs to be a clear and distinctive sequence of movement and experiences through the spaces, both interior and exterior.

* Since a conference deals with people's imagination and contemplation, the design solution needs to create a stimulating and exciting environment.

* The design solution should be a positive image and economic force in order to create a catalytic effect on the uplifting of the cultural integrity of the Battleground community.
space requirements
Supplies:
* speakers, demonstrators, etc.
* select location
* overall plan of conference program

Supplies:
* materials
* conference rooms
* meals and accommodations
* transportation

* entertainment
* recreation
* fees (billing)
* total cost assessment
ORGANIZATIONAL DATA: CENTER STAFF

- Center Manager
  - Spa Director
  - Food Prep Personnel
  - Overnight Room Prep Personnel
- Secretary
  - Coordinator of Conference
  - Maid Service

- Maintenance & Janitorial
<table>
<thead>
<tr>
<th><strong>SPACE SUMMARY</strong></th>
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<td><strong>Lobby Area</strong></td>
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<td>Registration</td>
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<tr>
<td>Manager Office</td>
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<td>Manager's Secretary</td>
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<td>30% of net S.F.</td>
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<td><strong>TOTAL</strong></td>
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<td>* max. capacity 165 persons/overnight</td>
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BUILDING TYPE ANALYSIS

Introduction
Building type analysis studies are undertaken for the purpose of examining similar buildings to see how their design solution was approached and accomplished. The elements of design that were analyzed within a building study are: correlation diagram, graphic composition, zoning and circulation patterns, entry and enclosure statements, three-dimensional patterns and rhythms, unique features, image, siting, scale and proportion. By examining the success and failure of existing buildings, the designer can better understand the problems and appropriate decisions inherent in developing a successful design solution.

Analysis
See appendix for building type analysis.
Conclusion

After analyzing buildings designed by other people, I realized several areas my building needed to approach. First, my design solution must heavily concentrate on the effectiveness, efficiency, and comfort for the process of a conference - which these did not adequately achieve. Secondly, I saw the importance of exciting and stimulating public spaces, which in the existing buildings was strong in some areas and weak in others. Lastly, the siting of the building is very important, which I feel all of these buildings did well.
SITE ANALYSIS

Introduction
The site was chosen for many reasons due to the impact it would make on the surrounding communities. The site, therefore, was studied at several relationships.

* Battleground in relation to the region
* Battleground in relation to Lafayette
* the site in relation to Battleground
* the site and its immediate surroundings

The various scales were examined due to the fact that the users will be coming from outside the community and this amount in-coming activity will effect the community it lies in.
Regional Context
Battleground is located between Indianapolis and Chicago. Interstate 65 lies in between Lafayette and the Battleground community. Interstate 65 is the most efficient auto access to the site. There are many other state highways that connect into the Lafayette area. There is an airport in West Lafayette, which would make this site easily accessible for far-reaching clients. The site is rural in nature, yet it is nearby a fairly large community (pop. 80,000) that can provide amenities, services, and transportation access.
Locality and Community

Battleground is approximately twelve miles north-east of West Lafayette and Lafayette. The site was selected in Battleground across from the battlefield in order to help restore the historical-cultural integrity of the area. Battleground could become a historical and recreational (crafts and arts festivals) area with speciality shops, like crafts and antiques. This could be supported by the conference center, the Lafayette community, and the surrounding communities. The center was placed in this historical-rural area to achieve this catalytic effect. The site was placed in a rural environment in order for the center to become a type of retreat without losing total contact with surrounding amenities. It is hoped that its placement would produce a relaxing, yet mentally stimulating environment for conferences.
Site

Topography and Utilities
The site slopes down at a steep rate at the north-west edge. This area lends a great view of the battlefield and the creek. Since the ground drops up to forty feet rather rapidly, it is advantageous to use this slope to step down the building. The utilities, both water and power run through the north-west end of the site.

Orientation and Winds
The sun orientation easily lends itself to the use of solar energy systems, since the building can be stepped down that direction due to the topography. The summer winds are also very advantageous for open exposure of the building to the south. The north-west edge needs to be protected somewhat from the winter winds. There is a hill and heavy vegetation to the north-west of the site, which will help block the winter winds.

Vegetation
The vegetation on the site is low lying shrubs and sparse cherry trees ranging from 15 to 25 feet in height. The site was an orchard at one point in time. The north-west (across the road) is heavily wooded. The north edge of the site is also heavily wooded with a wide range of tree heights. This works as a good buffer from the water treatment plant on the other side. There are a few large trees on the south edge of the site bordering the creek. Across the creek and up the battlefield hill are very large trees with very sparse underbrush. The trees range from 40 to 100 feet in height. All the trees are deciduous.

Potentials
There is a excellent view of the battlefield from the north-west edge (hill top of site). This angle is also advantageous for solar use and for picking up summer winds. To the south-west, there is a large open space of approximately half a mile. The trees on the north edge work as a good visual barrier to the water treatment plant and help focus the view from the building toward the battle-
field. There is a bridge across Burnett's Creek that connects the site to the battlefield.

Limitations
The most efficient access to the site is the north-west edge. The building must be placed on the higher point of the site (north-west) due to the fact that the south-east edge is a flood plain. The water treatment plant to the north is a bad view, therefore the views from the building must not look above or through the trees.
Conclusion
The findings of the site analysis support my selection of a site for this design project. Many constraints were discovered, both positive and negative. These constraints will have a great impact on the formulation of my design concept.
design issues and directions
DESIGN ISSUES AND DIRECTIONS

Program:
The program starts out as a series of linear spaces upon entry. Then the lounge acts as a hub to all the other spaces. The other spaces are all connected and related through this hub.

Site:
Due to one bad view along one side and access along another and a neutral view along the other - the building is oriented toward the good view of the battlefield and park area.
Building Type Study:
All three buildings studied separated the sleeping area from the main conference area. All three used the lobby/lounge as an activity hub for the rest of the center.
CONCEPT

Sequence of Views on Entry:
The concept of entry is a sequence of different spaces with a focus of a view of the battlefield. When entering, one penetrates a massive wall into a small closed space, yet not the center of the building. From this point, one moves to the lobby area - a small area to register into the building. From this point the space and view explodes - the lounge is a large area with a glass wall overlooking a large central court yard and straight beyond is the battlefield monument.
Relationship of Zones:
After arriving at the lounge, around the court yard is a view of overnight rooms and the spa. The lounge and court yard act as a hub for the rest of the facility. Dining and conference areas are adjacent to the lounge directly while the overnight rooms and the spa are indirectly linked by colonnades around the court yard. This colonnade forces movement through the court yard from the rooms to the main activity portion of the building.
Conference Area:
The concept for the conference area is a court yard/exhibition space in the center with the meeting rooms wrapped around. The lounge connects into the court yard but not directly - rather there is a element of discovery and surprise.

Overnight Rooms/Spa Veiw:
Since the topography is stepping down toward the creek, the overnight rooms and spa are staggered down the hillside. This lends a veiw from all the rooms toward the battlefield and the creek.
Courtyards/Total Concept:
With all of those previous concepts in mind, a total building concept was achieved. There is a central court yard with overnight rooms around it. The overnight rooms and the spa have smaller court yards within them. The main portion of the building sets at the north of the central court yard and on the top of the crest of the site. The conference area also has its own court yard which makes it a private area, yet still a part of the entire complex.
Schematic Design

The proceeding drawings were done in one week's time, following the evolution of a building concept. It was to take the concept produced and put it into building form. By doing this immediately following abstract thought, many design issues were realized. I feel that this approach was extremely helpful to arriving to my final design solution.
DESIGN DEVELOPMENT

There were three presentations during design development. Proceeding the presentation drawings are some new conceptual ideas adding to the progression toward a final design solution. The conceptual sketches are to help illustrate the design process through the course of refinement.
No. 1

Overnight rooms/Spa Separation:
The overnight rooms were moved to one side in order to become linear fingers reaching out on the site. The spa was placed in the south-east corner of the central court yard in order to contain the outdoor space into a court and to differentiate it from the overnight rooms.

Courtyards:
Courtyards or pockets of green space were placed into the overnight room fingers; a central court yard was placed into the dining area; the atrium was replaced with an exterior court yard at the entry; and the conference area court yard remains.
No. 2
Overnight Rooms- Green Knuckles/
Inside to Outside Relationship:
The overnight rooms moved along
the topography lines - therefore,
the linear fingers bent in two
places. At these corners an in-
side/outside relationship was
set up. These worked as nodes at
the beginning, corner no.1, cor-
ner no.2, and the end of the cor-
ridors.

Solar Greenhouse:
A passive solar greenhouse was
selected for the overnight rooms.
They lent themselves readily to
this system due to the sun expo-
sure, wind exposure, and the ex-
istence of corridors to the rooms.
A solar chimney was used to draw
warm air out of the space (cor-
ridors and rooms) or to draw warm
air into the rooms and circulate
air through the corridors.
No. 3

Building/Wall Relationship:
The building moves completely into the wall making them one total unit. The north-west wall still operates as a formidable structure that gives very little clue (if any) of what is happening behind it.

Spa Image:
The spa facility is now more of a building with a stronger image. A glass cylinder/silo is separate from the spa building for an image of the midwest and to denote circulation (hydraulic elevator). The spa design has similar forms as the rest of the center, yet is somewhat distinct. This is because it is for relaxation and recreation, not work.
DESIGN SOLUTION

The following pages, proceeding the final drawings are sketches that illustrate further the conceptual refinement that produced this solution. These sketches are to explain the final design in more depth and detail. The drawings are: grid, graphic composition, positive/negative space, circulation, structure, mechanical, and solar greenhouse sections.
grid and courtyards
UNICOI LODGE
Blue Ridge Mountains, Georgia
Continuing Education Facility of
the Unicoi Outdoor Recreation Ex-
periment Station for study of en-
vironmental problems; develop plans
for use; and enjoyment of state's
natural areas.

Correlation Diagram:

Composition:
*Main conference room accom.180
*Lounge
*Library
*Lobby
*Amplitheatre
*Dining/Terrace
*Common area @ of 3 lodges
*10 rooms per lodge
Graphic Composition of Plan:
* Lodge
* Conference Center

Zoning and Circulation Patterns:
* Lodge
* Conference Center

- Public
- Private
- Conference
- Support
Entry and Enclosure Statements:
*Lodge
*Conference Center

Structure:
Four steel columns support vaulted timber roof structure of lobby court. Ten wood columns define circulation of open space between conference area and library/lounge area. The rest of the structure is wood frame stud construction.
3-Dimensional Patterns and Rhythms:
*Conference Center

Siting:
- building
- courtyard
- outdr. amphitheatre
Scale and Proportion:

exterior:
The entire complex is broken into parts for smaller scale - 3 lodges and main center. The buildings are broken into geometric components both vertically and horizontally. Three stories is the maximum height in keeping with the surrounding rustic, mountainous area. All the buildings of the complex are very unimposing.

interior:
The height and area of the various spaces changes with the functions for distinction and variety. i.e. the lobby is a three story vault.

Unique Features:
*Entry Articulation - projection of building shell and punch back of doors.

entry
bldg. shell
*Lobby clestry and structure change for circulation (along circulation- clestry lighting). The conference area has large windows, very unusual.

Image:
The image is rustic and fragmented with sloped roofs - the image of many mining buildings in the Blueridge mountain area.
SCANTICON CONFERENCE CENTER
Jutland, Denmark
A mid-career educational center
for hire by any organization:
Danish or foreign. Academic and
business oriented.

Correlation Diagram:
Graphic Composition of Plan:
Zoning Patterns:
- public
- conference
- support
- private

Circulation Patterns:
Entry and Enclosure Statements:

Structure:
3-Dimensional Patterns and Rhythms:

Siting:
The Scanticon Center is situated out in a wilderness area on top of a hill - the building descends down the slope of the hill.
Scale and Proportion:
The building is quite large, but because of the change in levels and the introduction of rhythmic fenestration, the scale of the entire complex is not overpowering. Another factor in the smaller scale vs. actual square foot area is due to the bending of the building around the hill. The proportions are in keeping with the contours of the hill where the building is situated.

Unique Features:
* Roofs of all three levels are covered with sod.
* Complex internal telecommunications network can relay to auditorium, seminar rooms and bedrooms. Can even link with outside places i.e. a local hospital.
* Communication center offers photographic, drafting and reprographic services.
* Entry and lobby spine has heavy timbered exposed structure.
KAH-NEE-TA LODGE
Warm Springs, Oregon
Development of the Confederated
Tribes of Warm Springs Indians
for the use of vacation and small
conferences and conventions.

Correlation Diagram:
Graphic Composition of Plan:

Zoning and Circulation Patterns:
- public
- conference
- support
- private
Entry and Enclosure Statements:

Structure:
Siting:
The building sits on top of a bluff that looks out over a river. The surrounding area is desert and can experience very high winds. The pool courtyard is created in order to protect from this wind.

Scale and Proportion:
The building is not one complete mass - the main part of the building is composed of fragmented cubes and the scale of the sleeping area is broken down by the indented fenestration.
Unique Features:
There are three unique features to this complex.
* 2-story fireplace lounge that acts as important circulation node for the rest of the building.
* Entire building wraps around the pool courtyard - central focus.
* Every overnight room looks out over the bluff to the river and country-side.

Image:
The image of this resort is one of bold forms like the desert bluffs that it is situated in.
COSTS

Building Cost $6,898,750
(137,975 s.f. @ $50/s.f.)

Fixed Equipment 344,940
(5% of Building Cost)

Site Development 1,034,810
(15% of Building Cost)

TOTAL CONSTRUCTION COST... $8,278,500

Site Acquisition/Demolition $ 50,000

Movable Equipment 1,379,750
(20% of Building Cost)

Professional Fees 579,495
(7% of Construction Cost)

Contingencies 827,850
(10% of Construction Cost)

Administrative Cost 165,570
(2% of Construction Cost)

TOTAL BUDGET.............. $11,281,165
PARTICIPANTS

Division of Conferences and Continuation Services - Purdue University

Frank K. Burrin
Director of the Division of Conferences and Continuing Education

John M. Almon
Section Chairman Conference Coordinator

College of Architecture and Planning
Ball State University

A.E. Palmer
Professor of Architecture

SOURCES

Time Savers Standards for Building Types
McGraw-Hill Publishers

Architectural Graphic Standards
McGraw-Hill Publishers

Annual Report Continuing Education Administration
Purdue University 1978-79