Lafayette Art Center
lafayette, indiana

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Thesis 75
Ball State University College of Architecture and Planning
Abstract

The following book is submitted as required for completion of work in the undergraduate thesis program.

The work began with selecting a project that would make for an interesting and worthwhile product. Because of my interest in the City of Lafayette, I chose a project with a cultural group in that city, the Lafayette Art Association. The Art Association was chosen because of their present attempts to expand or relocate their facility, and because of the encouragement and positive attitude of the Association.

This work though does not deal with only a product. It is also a process integral with the product. The first steps were to meet with representatives of the Art Association to formulate a program. Once this was completed a process of analyzing and re-evaluating was conducted. From this precept, concepts were developed which led to the final design.
Project Statement

The Lafayette Art Association has started to take the first steps in order to cope with existing space problems. Lack of space has plagued the existing art center for quite some time, but lack of funds has prevented any major attempts to solve the problem. At this point in time though, the association realizes that unless some effort is made to find a solution, the art center will not be a viable cultural element of the community.

In order to determine what alternatives are available, the association must first come to terms with their goals in relationship to the community. The purpose of this project is to assist the association in realizing their potential by analyzing the art association, the community, and museology in general.

After the analyzing has been completed the design of a new facility will be developed. It should be noted though that a new facility is not the only option available. Other possibilities are to expand the existing facility or to purchase and renovate another existing structure. Also it should be noted that the scope of this problem does not deal with possible sharing of space by other cultural groups in the city. I suggest though that a master plan for the arts in Lafayette be developed before there is any real commitment on the Art Association to expand.

At any rate this project will offer the Art Association a unique opportunity to have a product before further steps are taken to solve their problems.
The Lafayette Art Association

The Lafayette Art Association is a non-profit organization whose aim is to serve the community by maintaining and operating the Lafayette Art Center. Through the Art Center the Association maintains a permanent collection of art, sponsors exhibits, and aids local artists.

The permanent collection consists of nearly 200 works in a variety of media. The collection will continue to grow through donations and acquisition. The galleries are devoted to a variety of exhibits. The exhibits change monthly and consist of traveling shows as well as shows of local artists. With each new exhibit there is an informal opening which draws approximately 300 people. There are also regular festivals for special exhibits which can attract as many as 5000 people.

The educational program is operated year round with three class terms. It is for all age groups as well as all levels of competence. Staffed by local professionals the program offers the basic courses in painting, drawing and pottery plus other courses on demand.

An integral part of the gallery experience is the retail shop. It sells the art work of the students as well as imported items.
The present staff of the center consists of the full time services of a director, a receptionist/secretary and a custodian. Also an additional source of energy is through the Art League. The Art League consists of concerned members who volunteer their time to staff the shop and participate in organizational activities.

Despite the quality of the services being offered the community, they are being hampered by a severe space problem.

For the most part the educational facilities are the root of the problem. To increase classroom space an annex has been in operation for the past two years. Before the annex was founded, the member lounge was converted to a classroom. Both solutions have been inadequate due to the strain on other support facilities.

Another problem has been lack of storage space and preparation area. All available space has been converted to storage, thus many ancillary functions now occur in public areas.

Although support functions suffer the most from space problems, the gallery and the shop are also overcrowded. Many exhibits have to be rejected or inadequately displayed due to lack of wall space. The shop was not an original function of the existing building thus it suffers also.

A more serious problem than space though, is the art center’s lack of identity in the community. A small percentage of the population actually use or visit the center. As can be expected the people who do use the facility represent the vested interests of the art community rather than the layman. Thus as a community facility, its educational potential is not realized.
Museology

In the past thirty years museums have experienced a great growth period in attendance records, facilities built, and financial outlays. Within the past decade though museologists have been questioning these figures.

While we bask in the glory of staggering attendance records we actually know very little of what the figures really mean. For instance, how many individuals are involved? It seems clear that art museums, on the average, receive more visits from the same persons over a given length of time, than do the museums of natural history. . . .

The grossness of a purely quantitative self-esteem may also backfire in the end. It should not be forgotten that the Roman circuses likewise enjoyed excellent attendance records. The question is not how many arrive, but how well are they served by what they find when they get there. Of this we know very little indeed. . . .

A. E. Parr

To determine what is involved in defining museums in qualitative terms one must first ask the question "What is a museum?" As simple as this question may seem, museologists are finding that it is not that simple to answer.

In spite of the obvious ambiguities, a museum's primary function is that of a learning/recreation/research facility in which visual sensitivity is the primary means of communication. The uniqueness of this experience is the authenticity of the subject matter communicated. It
become the role of architecture and display to reinforce and participate in the learning experience; for unless these goals are met, the museum fails its potential.

Museologists along with other educators are realizing that exposure is not all that there is to the learning experience. Before planning a facility of this type, one should at least be aware of the research available in learning facilities. Although the amount of knowledge is limited on what conditions make for a successful learning experience, there are two areas of concern. They are 1) Visual psychology, and 2) motivational psychology.

In the area of visual psychology there are two factors that deal with learning -- sensory deprivation and perceptual overload. Both areas deal with the limitations and capacity of the eye, brain, and nervous system to deal with the environment.

... It is known that in terms of bodily comfort, for example, the continually and slightly fluctuating conditions of a spring day are those which are at the same time the most stimulating and comfortable. Much the same appears true of vision. Physiological research on the detailed mechanics and chemistry of the eye has shown that there is a continuous photochemical reaction going on in the receptor rods of the retina and that the retina itself is in constant vibration shifting the image across the receptors. The eye relies, in fact, for effective sight on alternate moments of action and inaction, the most apparent symptom of which is blinking. It is in this instant of darkness that the photochemical process is reversed and regenerated. It would seem from experience that very similar conditions are needed on the larger scale of vision as well,
that action and inaction and regeneration are equally vital and that change with its demand for new adaptation provides the necessary stimuli. It may well be that in many cases museum fatigue is thus not only due to the inevitable mental and emotional concentration combined with the physical effort of standing and walking, but also, perhaps, to the tiring effects of excessively static illumination. The museum visitor may often, though probably less consciously, be as eye tired as foot sore, particularly since seeing is such a dominant part of the whole activity. Visual alertness and the capacity to appreciate will both diminish with tiredness; communications will become inefficient. Michael Brawne

Although complexity is necessary in the gallery experience to prevent museum fatigue an over complex environment will cause a visual overload and also negate the educational experience.

Another behavioral aspect of the design is that of motivational psychology. Since the visiting of an art center is voluntary it becomes important to understand what will motivate a person, especially the layman, to want to visit the center. In this way the design can play an important role in the success of the facility.

A major issue in motivating people is the accessibility of the facility and its sense of place. Accessibility of course is the ease in which a person can visit the facility either in car, bus, or foot. Sense of place is somewhat more complex. A recent concept
in design, place is a setting that appeals and attracts a variety of individuals. It can be created but generally exists as tradition. Location is generally an insignificant factor.

The preceding behavioral criteria is only a guide line for the designer. There are no rules of thumb or easy formulas that will insure the success of a building. Human response criteria though can be a useful tool in formulation a design. Possibly in the future it will become an even more important element in developing and judging a design.
Context and Analysis

The Lafayette Art Center serves the Greater Lafayette Region which includes Tippecanoe County, West Lafayette and Lafayette. The total population is 109,000 with 60,000 residents within the two cities. Also Purdue University adds approximately 20,000 more residents during the school year.

The primary cultural center for the region is Purdue University. Although they offer a variety of excellent services, the community does not share facilities with Purdue, thus any locally sponsored cultural activities must rely on their own resources.

In keeping with the concept of place a site was chosen in the center of town adjacent to the courthouse square. The site also has a relationship to the Wabash River and recreational activities that are being developed along the river.

A major contextual element is that the site should allow for future development of another building function. This will be in keeping with the city's urban design.
Study Model
Summer Shadows

- 1 pm 11 am
- 8 am 4 pm
- Noon Modified
Major Shadows
Spring/Fall
Winter Shadows.
In the hygrometric diagram relates the limits of comfort conditions recommended for different types of collections. In the diagram defining atmospheric conditions, an attempt has been made to correlate the limits which are unacceptable as zones of comfort with those considered as satisfactory for museums. There are numerous points in common, but it should be noted in the table (in foot part of the diagram), that the limits of comfort are lower for hygrometric regions that are much too low for many kinds of objects, the relative humidity being about 40%. All small museums ought to be immediately informed of the situation relative to the collections rather than in terms of the second plane, archives etc. can be stored conditions for removed from the limits of comfort of other collections. Above it is well known that human comfort is to perform sedentary work at temperatures above 90°C. It would be in this case be necessary to provide sedentary staff with suitable local heating. (Originally published in Museums.)

1 Winter comfort zone / Behaglichkeitszone im Winter
2 Summer comfort zone / Behaglichkeitszone im Summer
3 Safety zone of paintings / Sicherheitszone für Gemälde
4 Safety zone of archives / Sicherheitszone für Archiven
5 Safety zone of diverse collections / Sicherheitszone für verschiedene Sammlungen
<table>
<thead>
<tr>
<th>Not more than 50 lux (usual)</th>
<th>About 150 lux (for details of installation)</th>
<th>About 500 lux (lighting of the main activities)</th>
<th>Suitable for office, study, kitchen, bathroom, living room, etc.</th>
</tr>
</thead>
</table>

Not more than

**Table 1**

<table>
<thead>
<tr>
<th><strong>Office or Study</strong></th>
<th><strong>Kitchen</strong></th>
<th><strong>Bathroom</strong></th>
<th><strong>Living Room</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>About 150 lux</td>
<td>About 500 lux</td>
<td>About 50 lux</td>
<td>About 500 lux</td>
</tr>
</tbody>
</table>

**Table 2**

<table>
<thead>
<tr>
<th><strong>Condition</strong></th>
<th><strong>Light Source</strong></th>
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</thead>
<tbody>
<tr>
<td>Poor lighting</td>
<td>500 lux</td>
</tr>
<tr>
<td>Good lighting</td>
<td>300 lux</td>
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</tbody>
</table>

**Table 3**

<table>
<thead>
<tr>
<th><strong>Light Source</strong></th>
<th><strong>Type</strong></th>
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<tbody>
<tr>
<td>Incandescent</td>
<td>Warm</td>
</tr>
<tr>
<td>Fluorescent</td>
<td>Cool</td>
</tr>
<tr>
<td>Halogen</td>
<td>Neutral</td>
</tr>
</tbody>
</table>

**Table 4**

<table>
<thead>
<tr>
<th><strong>Color Temperature</strong></th>
<th><strong>K</strong></th>
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</thead>
<tbody>
<tr>
<td>Cool</td>
<td>4000</td>
</tr>
<tr>
<td>Neutral</td>
<td>6000</td>
</tr>
<tr>
<td>Warm</td>
<td>3000</td>
</tr>
<tr>
<td>Space Requirements</td>
<td>Square Feet</td>
</tr>
<tr>
<td>---------------------------</td>
<td>-------------</td>
</tr>
<tr>
<td>LOBBY</td>
<td>900</td>
</tr>
<tr>
<td>COAT ROOM</td>
<td>250</td>
</tr>
<tr>
<td>RETAIL SHOP</td>
<td>500</td>
</tr>
<tr>
<td>DIRECTORS OFFICE</td>
<td>250</td>
</tr>
<tr>
<td>ASSISTANT DIRECTOR</td>
<td>150</td>
</tr>
<tr>
<td>SECRETARIES</td>
<td>150</td>
</tr>
<tr>
<td>MEMBERS LOUNGE</td>
<td>450</td>
</tr>
<tr>
<td>CONFERENCE</td>
<td>300</td>
</tr>
<tr>
<td>DINING ROOM</td>
<td>600</td>
</tr>
<tr>
<td>KITCHEN</td>
<td>150</td>
</tr>
<tr>
<td>AUDITORIUM</td>
<td>1600</td>
</tr>
<tr>
<td>Space</td>
<td>Square Feet</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-------------</td>
</tr>
<tr>
<td>Galleries</td>
<td>10,000</td>
</tr>
<tr>
<td>Photography:</td>
<td></td>
</tr>
<tr>
<td>Darkroom</td>
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</tr>
<tr>
<td>Lightroom</td>
<td>350</td>
</tr>
<tr>
<td>Filmroom</td>
<td>100</td>
</tr>
<tr>
<td>Pottery:</td>
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<tr>
<td>Kiln</td>
<td>200</td>
</tr>
<tr>
<td>Damp Room</td>
<td>200</td>
</tr>
<tr>
<td>Throwing</td>
<td>600</td>
</tr>
<tr>
<td>Glazing</td>
<td>200</td>
</tr>
<tr>
<td>Children's Studio</td>
<td>500</td>
</tr>
<tr>
<td>Sculpture/Jewelry</td>
<td>1600</td>
</tr>
<tr>
<td>Life Study/Painting/</td>
<td></td>
</tr>
<tr>
<td>Drawing</td>
<td>900</td>
</tr>
<tr>
<td>Weaving/Macrame/Batik</td>
<td>1200</td>
</tr>
</tbody>
</table>
CLASS 200 square feet

GALLERY WORK ROOM 400 square feet

MAINTENANCE FACILITIES 150 square feet

SERVICE ENTRY 250 square feet

STORAGE 3000 square feet

TOILETS 360 square feet

CIRCULATION 5186 square feet

MECHANICAL 3111 square feet

subtotal 25,930 square feet

subtotal 31,116 square feet

TOTAL 34,227 square feet
Addendum

In order to conserve space certain spaces which house functions that do not occur on a daily basis have been combined. The conference room, dining room, and auditorium shall be combined into a multi use room.

The members lounge has been eliminated and replaced by a public lounge and reading room. The reason being that the educational experience of the library should be experienced by all who wish to visit.
Space Relationships

primary
secondary

MECHANICAL
STORAGE
BOILERS
WORKSHOP (GALLERY)
MAINTENANCE
GLASS LOUNGE
CARVING
DRAWING
SCULPTURE / JEWELRY
CHILDREN
POTTERY
PHOTOGRAPHY
GALLERIES
A DIGITAI
CATERING KITCHEN
CONFERENCE
LIBRARY
RETAIL SHOP
ASSISTANT DIRECTOR
DIRECTOR
RECEPTIONIST
LOBBY

SERVICE ENTRY
Design Development

The design of the Lafayette Art Center began with site selection. The site was chosen in order to emphasize the need for a sense of place.

The site satisfies that need by its relationship to the Wabash River and related cultural/recreational activities, and to the symbolic center of the city, the courthouse square.

Since the site must allow for future development of another building function, the art center's design can be used as a tool to order a future design. In dealing with this context, it became obvious that the site should be developed as a pedestrian gateway between the courthouse square and the riverfront park. The art center was then developed as an element whose gallery spaces stepped up from the gateway.

The building mass has been situated in a way to create a sculpture court that extends the open space of the courthouse, but with a landscaped edge to isolate it from traffic. The angles of the exterior walls on the courtyard elevations reinforce the movement systems toward the pedestrian underpass of Ferry to the River, and toward the open space of the bank building.

In order to act as a transition between the river and the town, the opaque walls of the galleries are adjacent to the vehicular barrier with informal planting between the building and the road. The service entry acts as the transition point from the informal planting to the formal urban space. Also the walls become transparent so that the interior
of the building becomes a part of the sculpture court and is experienced by pedestrians moving through the site.

It should be noted at this time that the galleries have been designed as a community space with natural light and open to pedestrian rather than traditional gallery based upon lighting in section. In this way people may be motivated to visit the center that otherwise would not.

The major design consideration of the interior spaces was based on the development of a fine line between museum fatigue and visual overload. To prevent museum fatigue programmed gallery space was divided into four separate galleries all different in size and form. To prevent visual overload the gallery spaces adhere to a rigid structural bay and are void of any embellishment on the opaque walls.

A major element of the design is the educational facilities. Because of the limited space the classrooms have been located one level underground with a relationship to the exterior sculpture court and gateway by means of a courtyard. Educational functions that demand enclosure have been developed along the opaque walls while the remaining functions have been developed along the transparent side.
It should be noted that even though each workspace is called out as a specific function on the plan, each space should be thought of as a work node which can change as demand for specific courses change.
BIBLIOGRAPHY


4. Meyer, B. F., "HUMAN RESPONSE AND ENVIRONMENTAL DESIGN.

