FAMILY RECREATION CENTER
LUBBOCK, TEXAS

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A FAMILY RECREATION CENTER
AT
LUBBOCK, TEXAS
by
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CONCEPTUAL ANALYSIS

THESIS STATEMENT
Architecture is the expression of technology and tradition which result in the building that is both universal and place specific in its expression.
CONCEPTUAL ANALYSIS

GOALS

As discussed previously, architecture is heteromorphous because of its double-culture characteristics. The two cultures make architecture evolves. "When cold, then it must be like a block of ice; when hot, like a wing of flame" (PA: 10/90, 100). The heteromorphic character is derived from the evolving technology and tradition.

As technology belongs to the community of the world; thus, the goal is to strive for architecture that is technological "international style" with particular response to the site specific.

Technology brings prosperity towards humanity, so any kind of boundaries should not be imposed since it only hampers technology from becoming universal. The double-culture identity of architecture allows space for the expression of tradition, may be through the use of materials etc. The case studies to be presented throughout the text will reveal some of the ways this conflict is resolved.
CONCEPTUAL ANALYSIS

THESIS VEHICLE
Recreational facilities, is one of the countless number of the new building types that were invented during the modern time. Even though sports have existed for a long period of time, the involvement of the people were limited to the talented and wealthy minority. In the past, most people spent majority of the time working with their physical strength in order to sustain their lives. However, in the present time, some types of jobs require the capability of minds only. Lack of physical activities, as widely known has degraded the quality of human health. Realizing the danger, recreational activities evolves in an effort to return physical fitness to the favorable standard. With or without conscious physical activities have changed their function from necessity to recreation. As common as it might sound today, running for fun was a silly idea yesterday. Another intriguing factor about sports is that it is widely accepted and enjoyed by people all around the world. It has become the international culture and understandable universally. The needs for a large space to accommodate the activities opened an opportunity towards the use of the contemporary impressive structures.
"A NEW ARCHITECTURAL PARADIGM".

"Architecture needs to be informed by a greater number of forces. It must be more ambitious and communicative if it is properly contain and shape the activities of the new diverse populations. And there should be no doubt that architecture has the power to affect the course of human life, and the duty to do so positively. For the architect to be effective, he or she must have a comprehensive understanding of the international cultures and science, in addition to issues of building technology." (PA 10:90, 100)

Clearly architecture is inseparable from social life. It definitely changes its course due to changes in social life and in some degrees architecture is able to influence social life.

Hassan Fathy viewed "architecture as a natural extension of culture". Culture in the way people responds to architecture and the way architecture responds to users needs.

Being consciously responsive to culture, it is in fact obvious that architecture should not ignore history. However, two questions remain. How much should history follow through into architecture? How should architecture incorporate modernity into the building? Fortunately, architecture is a double-culture entity made up of technology and tradition.
CONCEPTUAL ANALYSIS

In discussing the double-culture characteristics of architecture it should be realized that in both cultures; technology and tradition, there are so many other aspects that contribute to the formation of the two cultures.

Technology - in case of construction methods; the technology used is closely related to the availability of material which is the direct impact of context. eg: The Greeks were great masons because they grew in the arid land which allow for the formation of different kinds of rocks.

Tradition - social analogy of personal habit (Steeel,III), the way people behave and respond to things. Certainly, it is the direct product of culture, religion, climate, context etc.

Architecture is involved with creativity where originality comes about. Being culturally sensitive does not mean that the creative act that led to originality cannot take place. Referring to the "new traditionalist", Hassan Fathy this matter should be clarified. "He has not sought to mummify architecture but has only asked that the cultural validity be tested" (Steel, IV).
"Architecture needs to distill forms that will speak directly to the racially and culturally diverse masses - a new, heteromorphous, technological 'international style' - not a bland Esperanto, but a rich, composite dialect." (Rosas, 101)

Architecture promotes conversation between tradition and modernity in a way that it compromises the two cultures; tradition and technology. Being able to interact, provide the opportunity for architecture to be heteromorphous. The reason is that both technology and tradition keep evolving even though not necessarily at the same pace.

After the Industrial Revolution technology has evolved so rapidly that many people have failed to find the point of compromise between the measurable quality of technology and the immeasurable value of tradition. As a result, a decision was made to separate the two; where technology was adopted as a new icon for human life and tradition was rejected as a useless history. Modern movement point of view reflects this idea. On the other hand, the change in tradition is so gradual that it is almost unnoticeable. Without doubt changes do occur due to the technological advancement in transportation and communication which allow for ideas to be exchanged easily. However, as widely known persuasion hardly ever takes place even during argument. It is because of the fact that each individual has his or her own guidelines. So, it takes time for new ideas to be accepted and sometimes the task are made easier
CONCEPTUAL ANALYSIS

if the benefits came to reality but still with some modifications involved.

As shown above there is no contradiction between the two; technology and tradition. Tradition itself in some respect is inseparable from technology. Also the past history shows that the two entities coexist in order for architecture to become reality. This is what contemporary movement in architecture seeks to resolve.

Therefore, architecture that is technologically "international style" with the essence of tradition is a culture. "The result is the building that is both universal and place specific in its expression." (Steel, IV)
MODERN ARCHITECTURE AND CULTURAL IDENTITY

"The phenomenon of universalization, while being an advancement of mankind, at the same time constitutes a sort of subtle destruction, not only of traditional cultures, which might not be an irreparable wrong, but also of what I shall call for the time being the creative nucleus of great civilizations and great cultures..."

"Everywhere throughout the world one finds the same bad movie, the same slot machines, the same plastic or aluminum atrocities, the twisting of language by propaganda, etc. It seems as if mankind, by approaching en masse a basic consumer culture, were also stopped en masse at subcultural level. Thus, we come to the crucial problem confronting nations just rising from underdevelopment."

Paul Ricoeur. 'Universal Civilization and National Cultures. 1961 (Frampton, 313)

In response to modernization of the societies who still holds strongly to regional cultures "critical regionalism" has emerged. Universalization in other words, brings both the advantage and disadvantage which needed to be taken into consideration through critical judgement. Reflecting this situation in society, "critical regionalism" is the continuation of modern movement, which accepted the technology, however, with careful accentuation of cultural identity (Frampton, 313).
CONCEPTUAL ANALYSIS

Instead, it is not intended to denote the vernacular as this was once spontaneously produced by the combined interaction of climate, culture, myth and craft but rather to identify those regional 'schools' whose primary aim has been to reflect and serve the limited constituencies in which they are grounded" (Frampton, 313). It is not the vernacular "in which modern forms are subordinated to traditional modes" (Sorkin, 18). Such a process of assimilation and reinterpretation is evident in the work of John Utzon, where pre-cast concrete was used in juxtaposition to pour in situ concrete. Clearly, the prefabricated modular represents the universalization of civilization and the pour in site concrete is the response toward the unique site (Frampton, 314).

Such a practice of critical regionalism allows the designer to explore the contemporary "fascination with the eternal verities of geometry, pure form and heroic space, with volumes, and with the iconographic possibilities of "high tech" (Sorkin, 19). Yet the cultural and historical past considerations are not intended to embrace classical architecture as an "official style" (Sorkin, 76).

In short "critical regionalism" is not "Regionalism of Restriction" but rather a "Regionalism of Liberation" that is the expression of the region which is in tuned to the emerging contemporary thoughts (Frampton, 320).
CONCEPTUAL ANALYSIS

ATTITUDES OF CRITICAL REGIONALISM
(Frampton, 327).
1) "Refuses to abandon the emancipatory and progressive aspects of the modern architectural legacy".
2) "Favours the architecture as a tectonic fact rather than "treating architecture as "scenographic episodes". In short, it stresses the expression of form rather than metaphor.
3) "Regional" because of its manifestation of concern towards "certain site specific factors," such as topography, climate and natural lighting.
4) Oppose the "sentimental simulation of local vernacular", but interested in reinterpretation of vernacular elements "towards the paradoxical creation of regionally based 'world culture'".
CONCEPTUAL ANALYSIS

CASE STUDIES (Traditionalists)
Excerpts from
Project 1
The Corniche Mosque in Jeddah is by Abdul Wahed El Wakil.

The Corniche Mosque is only one of a series of mosques requested by King Fahd Ibn Abdul Aziz, and supervised by the Ministry of Haj and Awkaf as part of the National Programme to develop a contemporary mosque in Saudi Arabia based on more traditional models. The Ministry, in collaboration with the Municipality of Jeddah and Mohammed Said Al-Farsi, who was the mayor when the project was begun, several high visibility sites around the city were chosen for new models of traditional mosque architecture. In addition to providing places for worship, all of these models were intended to exhibit methods of traditional construction, and to show that buildings using these methods, were achievable on a limited budget. To do so, conventional ideas of glazing, as well as strict air conditioning requirements also had to be changed, which was far from easy in this hot, humid region that has converted so completely to western standards of mechanized environmental comfort.

SYNTHESIS
The issue of tradition and modernization is very important in the building. It is implemented through the use of traditional technology in a modern building stressing that the old methods are still applicable in contemporary world.
CONCEPTUAL ANALYSIS

Photo: JEAN NOUVEL, INSTITUT DE MONDE ARABE

Photo: LOUIS KAHN, NATIONAL ASSEMBLY BUILDING
CONCEPTUAL ANALYSIS

Project 2

National Assembly Building in Dhaka, Bangladesh by Louis Kahn,

Light, of course, also had mystical qualities for architect Louis Kahn, and was also one of the most important considerations in his design of the National Assembly Building in Dhaka, Bangladesh, which was honored with the tenth Aga Khan Award. Kahn recognized the need to control the full glare of the sun in a region in which direct exposure to its full force can be fatal. This building is monumental, and transcends merely functional requirements in order to institutionalized democracy in the nation that has had its fill of strife. Kahn did not copy elements of regional architecture but has submitted to the specific local conditions and construction patterns of Dhaka.

SYNTHESIS

The immediate major issues in this project is not the conflict between tradition and modernization but rather solving the issues of responding to the built and natural context. As a result, the building also become a reflection of tradition since the existing built environment is the product of tradition.
Project 3

The Institut du Monde Arabe in Paris by Jean Nouvel.

This building, which is precisely fitted to the curve of the left bank of the river Siene, near the opening of the Boulevard St. Germain, is divided into two sections that are separated by a square central court. The curved, scimitarlike section facing the quay contains exhibition halls and a museum of Arab art and civilization, while the second, rectilinear block; which makes the transition to the orthogonal city grid behind it; houses the library. As a co-operative effort between France and twenty Arab countries, the building really does represent what architect Jean Nouvel has called 'a dialog between cultures.' In its precise and polished modernity, the institute is an appropriately urbane Parisien building, constantly offering a reflected commentary on its surroundings; and yet also presents many tantalizing reminders of a more obscure sensibility. In addition to the pristine calm of the open central court, the cross reference between the spiraling 'Tower of Books,' and the minaret of Samarra, the most perceptive of these is the contemporary and technologically brilliant rendition of the traditional wooden mushrabeyya screen used throughout the Middle East as a device for controlling sunlight and privacy in the past. The southern facade of the Institut is clad with over a hundred photo-sensitive panels, containing nearly 16,000 moving parts that act like the diaphragm of a camera in controlling the amount of sunlight coming into the interior of the building. Photo-voltaic sensors electronically adjust all of the moving parts of the panels, which are made up of a polygonal openings that echo Islamic geometric forms.
SYNTHESIS

This building deals with modernization and tradition directly. However, the approach is somewhat different from the previous project. The traditional elements are brought into the new building to serve the function it was traditionally meant to, but with the use of new technology to help enhance the performance.
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BRIEF HISTORY OF LUBBOCK

Starting from the end of Civil War many people from across the country migrated to West Texas because of the hardship across the country (Perkins, 1). "The greatness of this area and the lure of cheap land" is one factor that contributed towards the settlements into this area (Perkins, 2). Another factor is the expansion of the cattle industry in the late 1860's which brought the first settlement which was dated as early as 1873 (Perkins, 2).

However, this area had been explored long before this period beginning with the Spanish exploration of Captain Francis Vasquez de Coronado in 1540 search for gold (Graves, 22). As a result, from the period of 1540 - 1685 every place of interest in west Texas had been given names by the Spaniards.

The next generation of explorers were the buffalo hunters (Graves, 34). Constant encounters with the native Indians took place during the period of 1873 - 1878 because of the fact that the hunters, originally from Dodge City, Kansas, broke the treaty that they should not be hunting in this area (Graves, 34).
Therefore:
It can be concluded that there are three major cultures that involved in the evolution of the area which has the strong influenced over the architectural style. However, the evidence of these cultures are not obvious in the architecture across the area except in some public buildings where the motives of the cultures are used in conjunction with the style of architecture that is associated with particular group. So, the past cultures can be used in this facility if not ignored totally in a subdued manner.
THE FOUNDING OF LUBBOCK

Two major settlements evolved through the time known as Lubbock and Monterey. "On December 19, 1890, the two factions mutually bound each other with bonds of $5000 each to an agreement to establish a new town on a section acceptable to each party and move both of their towns to it on a share and share alike basis (Graves, 77).

Since then Lubbock has developed so successfully economically, socially and physically. Construction of Santa Fe railroad which was extended from Plainview began in May 1909 (Abbe, Carlson and Murrah, 49). Many opportunities emerged and attracted a lot of workers to Lubbock. As a result, the population during 1920 doubled that of the 1910 (Abbe, 50). Having a secure railroad the ever expanding population started looking forward to attracting college as many other surrounding cities had done; Abilene, Lockney and Plainview.

Through the legislative process Texas Technological College was founded on September 30, 1925. "Placing Texas Technological College produced an economic boom", making it twice as large as Plainview; the rival neighbor (Abbe, 54). This evolvement of educational facilities continued with the establishment of Lubbock Army Airfield which was later renamed as Reese Airforce Base in 1944. Lubbock Christian University emerged in 1950 (Abbe, 61).
CONTEXTUAL ANALYSIS

Precipitation

Source: Lubbock Community Data

Average Temperature 1986

Source: Lubbock Community Data
CONTEXTUAL ANALYSIS

CLIMATE

Lubbock County has a dry steppe climate. The weather is both mild and semi-arid. Warm days and cool are normal pattern with low relative humidity. Receives about 275 days of clear sunny days per year. Annual average precipitation is 18.41 inches with the concentration during the months of May, June and July. The annual average temperature is 59.7 degrees Farenheit.

SYNTHESIS:

Analyzing the pattern of the temperature it can be said that the opportunities for outdoor activities are available especially during the summer months. The condition is more desirable considering the little amount of precipitation. Combined with the American cultures which concerned with getting their skin tanned this is such a great opportunity. However, the intense heat combined with the blowing dust make the indoor activities more preferable. Thus, both indoor and outdoor activities should be provided so that the users' preferences will be accommodated.

Therefore:

The abundance of natural sunlight offer an opportunity for the use of natural daylighting in the building especially for offices. The temperate weather condition suggest that the flexible building which is going to be able to be opened and closed during the summer and winter accordingly.
CONTEXTUAL ANALYSIS

POPULATION BY SECTOR
1980 - 2005

1980 Total - 173,879
2005 Total - 240,286

Source: 1980 Population - Economic Base Study & 1986 Planning Department Estimates

POPULATION BY DECADE
CITY OF LUBBOCK

Source: 1980 Population - Economic Base Study & 1986 Planning Department Estimates
CONTEXTUAL ANALYSIS

POPULATION

The Lubbock Population will increase steadily until 2005, growing at annual rate of 1.2 percent. According to the census data the current population is approaching 190,000 people. The steady growth means Lubbock is projected to add 50,000 residents over the next 20 years. The northwestern, western and southwestern sectors will have the greatest increases in population.

Lubbock will follow the national aging trend because of Reese Airforce Base, Texas Tech University, and Lubbock Christian University are expected to be stabilized; the post-World War II baby boom generation is now moving into middle age; and the number of childless married couples continues to increase. Both the percentage of people over 65 and over 75 are projected to increase to 9.9 percent and 5 percent respectively by the year 2005.

Mirroring national trends, the Hispanic population in Lubbock will be the fastest growing minority group. By the year 2000, Hispanic are projected to comprise 25.4 percent of the Lubbock Population, an increase of 35 percent over the 1980 population figures.

Source: Environmental Scan

SYNTHESIS:

Considering the economic base of the city is depended primarily on the big educational institutions through out the city it is fair to say that Lubbock is the city for family lifestyle. The
CONTEXTUAL ANALYSIS

suburban nature of the city under the current condition is the proof. Analyzing the pattern of the population it can be said that Lubbock mainly dominated by the age group between 15-30. However, the existence of the other age groups is not denied. Therefore:

Establishing a family recreation center or community center for this part of the city seems appropriate in accommodating the increasing number of population which is concentrated towards this area. As the name implies, this facility will serve the needs of all age groups that can make use of recreational activities.

RECREATION

Recreational opportunities are high priority in the community. Public, private and nonprofit programs provide recreational opportunities for all age groups. Participation in both public and nonprofit recreational programming has remained fairly consistent since 1980.

Roughly 6.7 percent of personal consumption expenditures went to recreation. The city of Lubbock places a strong emphasis on recreation and culture because the average proposed expenditure from the General Fund for fiscal years 1980-1981 through 1987-1988 is 17.8 percent. This far exceeds the average expenditure of 3.6 percent by municipalities across the country from 1980 through 1984.
Public and private recreation facilities are distributed so they are reasonably accessible to all parts of the city. Although public recreation programs are typically designed for the low income population, the increasing number of single parent households throughout the city suggests recreational activities are needed for this segment of the community. It is difficult, however, to assess recreational opportunities because of lack of coordination between public and nonprofit programs, particularly in low income areas.

Source: Environmental Scan Lubbock Human Needs Assessment 1988. Volume II

Therefore:

Every community base recreational activities which has become parts of contemporary American culture, should be utilized. Special kind of activities that are less physical in nature should also be included as one of the alternatives especially for the elderly. Nursery is also needed as a part of the facility since to fulfill the needs of the single parents whose children need to be taken care of.
MAP OF RECREATIONAL FACILITIES

A. COMMUNITY CENTERS
B. POOLS
C. SENIOR CITIZEN CENTERS OR NUTRITION SITES
D. CULTURAL ARTS CENTERS
E. NEIGHBORHOOD CENTERS
F. NEIGHBORHOOD HOUSE
G. BOY'S CLUBS
H. YOUNG WOMEN'S CHRISTIAN ASSOCIATION
I. CAMPFIRE COUNCIL
J. GIRL SCOUT CAPROCK COUNCIL
K. MUNICIPAL TENNIS CENTER
L. OUTDOOR RECREATION CENTER
M. MAHON LIBRARY
N. GODDEKE LIBRARY

1. A SH & 78TH
2. AZTLAN
3. BENAY
4. BURNS
5. BUTLER
6. CANYON AVE
7. CARLISLE
8. CARTER
9. CASEY
10. CHATMAN
11. CIVIC CENTER
12. CLAPP
13. CROW
14. ERSKINE & ZENITH
15. DAVIES
16. DAVIES
17. DUNNIE
18. F. MORE
19. GUADALUPE
20. GUADALUPE STRIP
21. HAMPTON
22. HIGGINBOTHAM
23. HODGES
24. NOEL
25. ROLLINS
26. NOO
27. HORIZON WEST
28. HUFFMAN COMPLEX
29. JENNINGS
30. KASTMAN
31. LEFTWICH
32. LEWIS
33. LONG
34. LOWERY FIELD
35. LUSK
36. MACKENZIE
37. MAEDEN
38. MAHON
39. MAFFY
40. MALISTER
41. MCCRUNKEN
42. MCCULLOUGH
43. MELIER
44. UVERTON
45. PIONEER
46. RADIO AIRPORT
47. RATLIFF
48. RAWLINGS
49. RICK
50. RODGERS
51. SCOBERRY
52. SIMMONS
53. SMITH
54. STEVENS
55. STUBBS
56. TECH TERRACE
57. TENNIS CENTER
58. TOWER
59. WASHINGTON
60. WESTWIND
61. WHEELOCK
62. WHISPERWOOD
63. WOODS
64. YELLOWHOUSE CANYON LAKES
65. YELLOWHOUSE CANYON PARK
66. INTERSTATE-27 DEVELOPMENT
67. LUBBOCK INTERNATIONAL AIRPORT
68. MUNICIPAL SQUARE
69. MUNICIPAL BUILDING
70. HEALTH DEPARTMENT
71. WATER RESERVOIR
72. MULEE
73. KINGSFORD
COMPREHENSIVE LAND USE PLAN

As many other cities, Lubbock has its own Comprehensive Land use Plan as a help in planning the development of the city. Because of the continuous nature and the long process of planning, change is inevitable.

Policies for use of Lubbock Comprehensive Plan
1) The Land Use Plan will be the official plan for future land use development or redevelopment.
2) The Land Use Plan will be the official plan to guide zoning decisions.
3) All elements of the Land Use Plan shall be updated and reapproved at least every five years.
4) No major deviation from the Land Use Plan or Land Use Policies for public or private uses should be approved unless the change can be shown to be in harmony with existing or proposed uses of adjacent land. Before recommending a major change, the Planning and Zoning Commission should consider it.
   a) The change will benefit or complement existing and proposed land use patterns.
   b) The change is generally acceptable to adjacent land owners who have made investments in their property.
   c) Conditions have changed which make the use proposed in the Land Use Plan impractical or unlikely.
   d) The change will require major public expenditures which are not planned, compensated by the proponent of such change,
or are not within the city's financial capabilities in terms of established priorities.

Source: Lubbock Comprehensive Land Use Plan 1986

PUBLIC FACILITIES

A population ratio of 8,000 - 10,000 people per square mile is desired for the optimum traffic handling capability of adjacent streets and the service capability of utilities. Generally, each square mile of residential development should include one elementary school site and one neighborhood park site. Playas, or dry lakes, should be viewed as a source of aesthetic amenity, whether privately or publically maintained.

Therefore:

The expected catchment population should be at the least 10,000 people.

COMMUNITY SERVICES

Community services and public facilities will be maintained at a constant level of service to the community and expanded by demand as growth and new development occur in Lubbock. Continuous planning and active attention to citizen needs will ensure that facilities and programs will be added as needed and desired by the community.

GOALS

- Create community and public service activities that foster civic pride in local citizens and create interest and respect of visitors.
CONTEXTUAL ANALYSIS

- Develop a comprehensive system for planning, managing, funding, publicizing, and delivering recreational and cultural services.
- Develop a comprehensive system for planning, acquiring, managing, funding, and publicizing recreational and cultural properties which enhance the aesthetic quality of life in Lubbock.

STRATEGIES
- Pursue the acquisition of land, buildings, and endowments to enhance the quality of existing and proposed parks and recreation facilities.
- Continue the policy of utilizing natural drainage areas as park sites.

Source: Lubbock Comprehensive Land Use Plan. 1986

Therefore:

To support the established principles of Comprehensive Land Use Plan, this facility will be located at the already established park which was developed because of the natural drainage pattern of the site.
CONTEXTUAL ANALYSIS

POTENTIAL RESPONSES
1) Responding to growth of population the residential development also increases. For such a reason a proposal for another Community Center for the city of Lubbock seems to be reasonable in addition to the six existing facilities. The reason is to increase more communal activities.

2) The pattern of development which concentrate mostly to the southwest areas and the absence of community centers on the southern part (refer to map) offer the opportunity for such a facility to be developed.

3) Even though the communities of these area are not of the low income families, the increase of single parent family opens the opportunity for this facility. If they are reluctant to use such a public amenities it could be made private.
CONTEXTUAL ANALYSIS

LOCATION
West of University Avenue
South of 82nd Street
North of 91st Street
East of Elkridge Avenue

DESCRIPTION

Bordered by two major streets, 82nd and University. There is an already established park on the south site of the site. Located adjacent to the middle income neighborhood of 3,360 people, according to census’s sector which is bordered by 82nd and 98th street from north to south and University and Indiana Avenue (east to west). There are several commercial buildings nearby, along the two major roads but their existence are not physically dominating.

As the Proposed Land Use Plan indicates, the site is intended for commercial use.

Therefore:

Considering the proposed land use, the privatization is the most appropriate. As a result, there will be no conflict of interest between the developer and the local authority. Thus, the users are expected to pay their dues. This is a more appropriate way to attract the upper class income group since their tendencies lean towards having to pay an appropriate amount of dues rather than using the facility for free. The issue of accessibility is not of a critical challenge since it is located at the intersection of two major roads. In other words, the site is readily accessible.
CONTEXTUAL ANALYSIS

SOIL CONDITION

This site has three major soil types that are Randall Clay, Amarillo-Urban land complex (0-2 % slope) and Acuff-Urban land complex (0-2 % slope). The soil map explain the distribution of the soil.

Randall clay.

This deep, nearly level soil is at the bottom of the playas or in shallow depressions. Slope are 0-1 percent. The surrounding plains range from 2 to 20 feet higher in elevation than the playas bottoms.

This soil is somewhat poorly drained. Surface runoff is ponded. After rains, runoff from surrounding soil covers this soil. Water a few inches to several feet deep stands for periods of a few days to several weeks. The potential is low for recreational use, mainly because of flooding and the clay surface layer.

Therefore:

Since this area is on the south side of the side and very close to the residential area and has already been developed as a park, it will provide some means of exploring water element for this project. However, since the water element formed due to natural condition, site development of this facility should aim towards preserving the natural landscapes. Therefore, outdoor recreational activities that require large and flat surface will not be developed since it will involve the
CONTEXTUAL ANALYSIS

destruction of the natural topographic pattern.

Amarillo-Urban land complex

The surface layer of the Amarillo soil is friable, mildly alkaline, reddish brown fine sandy loam about 14 inches thick. From 14 to 46 inches is friable, reddish brown sandy clay loam that is mildly alkaline in the upper 10 inches and moderately alkaline in the lower 20 inches.

Urban land consist of works and structures, most of which are residential and commercial buildings, driveways, sidewalks, and parking lots.

The potential is high for most urban use. Low strength for streets and roads and seepage from sewage lagoons are the most restrictive features. The potential is high for recreational use.

Therefore:

The area made up of this soil will be the site where the building is going to be located. The moderately alkaline soil will require the use of appropriate techniques in construction so that the structure, especially steel, could be prevented from being damaged by corrosion. The current technology; thus, allow the building to go blow grade level even in this type of soil.
CONTEXTUAL ANALYSIS

Acuff-Urban land complex

Acuff soils are deep. The surface layer is friable, neutral, brown loam about 12 inches thick. From 12 to 28 inches is friable, mildly alkaline, reddish brown sandy clay loam. From 28 to 38 inches is friable, moderately alkaline, yellowish red sandy clay loam. From 38 to 58 is friable, moderately alkaline, pink sandy clay loam. From 58 to 80 inches is friable, moderately alkaline, light reddish brown sandy clay loam.

The potential is high for most urban and residential use. Acuff soil is corrosive to uncoated steel and have low strength, but these limitation can be easily overcome by good design and careful installation. The potential is high for recreational use.

Therefore:

Since the area covered with this type of soil is adjacent to both busy streets, University and 82nd Street, it might be used as a buffer zone and treating it as grade level parking lot.

Source: Soil Survey of Lubbock County, Texas.
CONTEXTUAL ANALYSIS

STIRLING STAATSGALERIE

ELEVATION AND CROSS SECTION
CASE STUDY

Excerpts from: Jencks, Charles. "Architecture Today".

Project 1
Staatsgalerie New Building by James Stirling.

His Staatsgalerie New Building and Chamber Theater in Stuttgart is, like his other German projects, an essay in urban contextualism. The scheme picks up formal cues from the surrounding environment in this case the height and grain of adjacent buildings, and the basic axial relationships to the main street. From an entrance axis a sequence of space is layered frontally and at right angles to movement; as in Rationalist building the grid is felt conceptually throughout, although one is forced to move around it in circles and diagonals. Thus, a basic dualism is set up between rectilinear and rotational elements. One moves under an entrance arch, both primitive hut and Shinkelesque gateway....

It is an unusual heart, at once familiar like a circular neoclassical museum, and strange as a dome without a top. Basically, the language is Shinkelesque and as eclectic was that architect’s style, although it is a subdued eclecticism. Barely recognizable Romanesque arches open onto the sculpture court while slightly Egyptian cornices edge the painting galleries. The references signifies museum and art in a stereotypical way- Shinkelesque neoclassicism signifies culture for
many Germans— but with a generality and distortion that avoid cliche.

The handling of this language is at once dramatic and easy going. Several courses of stone are dropped out of the facade to end up on the ground as architectural jokes, seats and to reveal views; at certain key entrances a Constructivist canopy painted in strong primaries provides striking contrast to the white and pink masonry background: *machine age versus classicism, progress versus stasis*...

...Likewise there is a continuous flow between new and old buildings, those Stirling has designed completely and those he has attached onto. In opposition to this ordinaries are the ramps, curves, views across layered space, and the paradox of *domeless dome, the inside-out space*, the room toward which one moves to find oneself outside, cut off from urban noise and in touch with sculpture or the sky.

**SYNTHESIS**

First of all this building deals with the context in the area of physical connection since this project is the annexation to the old gallery. Then the project also responds to both built and natural context with the introduction of the inside-out concept. Proper articulation of form and space make possible to have acoustical privacy even from the uncontrollable urban noise, without sacrificing the beautiful natural environment. On another level the building uses the elements which has become parts of the regional culture; thus, make it possible in a
CONTEXTUAL ANALYSIS

degree if not totally, for visitors to appreciate and understand. On the conceptual level, Stirling was able to establish the different context within the building itself, in this case the modernization versus tradition.
# BACKGROUND ANALYSIS

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BACKGROUND ANALYSIS

ORIGINATION OF RECREATION

Recreation emerged out of the revolutionized modern time where people find leisure, a condition that we in America are now approaching, is a new thing under the sun - the most revolutionary that ever happened. It means the coming of something unheard of in all history - the opportunity for all men to live" (Neumeyer, 1).

Life known as men "go to the ends of the earth to see canyons, climb mountains, chase the caribou, catch sailfish" and etc. for the love of fulfilling the time known as leisure (Nash, 14). This is because of the fact that such activities in America have been viewed as the difficult task of conquering the harsh wilderness (Nash, 15). On the other hand, leisure existed in the Greek Civilization but with the violation of human rights in which slavery was justifiable considering the leisure given to the citizens (Nash, 15).

Fortunately, we have the advantage in contemporary world because of the fact that the technology that we have today constitutes human slaves with machines in fulfilling the leisure (Nash, 24).
BACKGROUND ANALYSIS

Science, it seems, is now well on the way,
   To achieve its considerate aims for us:
First machine to provide us with leisure to play,
   Then machines to play various games for us
When machines do our work and machines do our play
   We'll rejoice, for we'll then be in clover.
We'll have nothing to do all lifelong day-
   Till machines that do nothing take over!


Therefore:
It is clear that even though today's world is inundated with technology that make it easier for us to manipulate the world, it certainly cannot replace human activities and interaction. So, this facility is purposed to provide the space for those activities to happen.
SOCIOLOGY OF RECREATION

"Sociology is a study of human associative life. It considers the fundamental social processes that operate in group life, the products of these processes, and the principles of collective behavior. Thus, the data of sociology consists of human personalities interacting in group life, including drives, social processes, communal organization and institutions, human culture, social values and human progress" (Neumeyer, 4). Playing, recreation and amusement involve associative life and social processes that are "conditioned by culture and social organization of the group" (Neumeyer, 4).

Therefore:

In addition to conditioning the health of the users, this facility should provide space, time and activities that allow for communal interaction to take place.
Exploring the origination of recreation, it is however, still unclear what is the purpose of play and recreation. Following the general cause and effect rule of the world, it is certainly not impossible to explain the purpose of play philosophically and scientifically. These excerpts from Community Recreation by Meyer, reveal several theories presented by philosophers, sociologists, biologists and psychologists.

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<th>Proponent(s)</th>
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<tr>
<td>Surplus energy</td>
<td>Schiller, Spencer</td>
<td>That energy not needed by the playing animal to stay alive and perpetuate the species (or in other words, excess energy) find its outlet in play.</td>
</tr>
<tr>
<td>Preparation for life</td>
<td>Groos, et al.</td>
<td>That play is instinctive and is a part of the animal's educational experience. Through play the animal practices those things which he must follow later in life. It is, in a sense, preparation for living and hereditary trait.</td>
</tr>
<tr>
<td>Recapitulation</td>
<td>Hall</td>
<td>That the animal repeat through play the activities his ancestors experienced (running, jumping, throwing, and the like); heredity is a large factor.</td>
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<tr>
<td><strong>Relaxation</strong></td>
<td>Patrick</td>
<td></td>
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<tr>
<td>That play is pleasurable and sought for its own sake; that is a release from work, compulsion, and the struggle to live; that play results in its own satisfactions; play relieves stress and strain of individual.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Recreation</strong></td>
<td>Kames, Muths</td>
<td></td>
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<tr>
<td>That is the natural change-over from work and refreshes, replenishes, and restores energy. In this respect it is quite as essential as rest.</td>
<td></td>
<td></td>
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<tr>
<td><strong>Catharsis</strong></td>
<td>Aristotle</td>
<td></td>
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<tr>
<td>That play is an outlet for confined emotions, as release for feelings which might otherwise remain suppressed and harmful.</td>
<td></td>
<td></td>
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<tr>
<td><strong>Self-Expression</strong></td>
<td>Mitchell, Mason</td>
<td></td>
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<tr>
<td>That play is the natural urge for action. Recognizes the nature and capacity of man, his anatomical and physiological structure, his psychological inclinations, and his desire for self-expression. Sees self-expression as man's supreme need.</td>
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SYNTHESIS.
There are different purposes of recreation which are closely related to generation gap, context and outside pressure.

For example, the idea of recapitulation explains why certain kinds of recreation are closely associated with certain cultures.

Self-expression theory shows how different age groups perform different kinds of activities due to physiological factors.

Then the catharsis theory by Aristotle explains that people get involved in recreation for the sake of unwinding.

Therefore:
Programming for recreation needs to consider human psychology, culture and physiology.
BACKGROUND ANALYSIS

RECREATION IN UNITED STATES

Considering the theories presented previously, it is significantly crucial to understand the evolution of recreation in the United States in order to meet the needs of this community which is a part of the American culture.

According to Neumeyer (251) there are "at least four antecedent and parallel movements which had a direct bearing on the development of organized community recreation". They are;

1) the park movement which was intended to create places of beauty and attractiveness providing spaces for rest and enjoyment. Recreation fields for tennis courts, baseball diamonds, and football fields were provided but with the absence of instructions and leadership (Neumeyer, 251).

2) the rise of physical education, athletics and games which started in Salem, Massachusetts in 1821. This type of program was the impact of German gymnastics and physical education leadership. The influence was so strong that gradually Americans began to accept the sports which were brought by the German immigrants, Who practically participated in every known sports (Neumeyer, 252).

3) the kindergarten movement and the provision of games for the nursery and small children, vocation school and school-centered recreation programs (Neumeyer, 253).

4) the social center movement, especially the development of social settlements, young men's
BACKGROUND ANALYSIS

and women's association which have provided social-recreation programs (Neumeyer, 253).

SYNTHESIS

It is clear that the concept of recapitulation exists in American culture where certain types of sports were inherited from the past. In the mean time, the new inventions also have a place in the American society as long as they fit their taste and lifestyles while maintaining the already established sports. Thus, the next segment seeks to explain the trend of the past, present and future in recreation.

Past, Present, and Future.

"The decade of the 80's continues to reveal that recreational sport is a major component of American lifestyles" (Bayless, 40).

So, not only has recreation been influenced by lifestyles but indeed it has become part of the lifestyle. Bayless (41) and her co-authors point out several "major trends expected to endure through the decade".

1. Participant interest has increased in martial arts; high-risk, adventure sports such as hand gliding, wind surfing, sky diving, mountain climbing, whiter water rafting, orienteering and outdoor recreational sports such as canoeing, snow skiing, sailing, and bicycling.

Therefore:

The nature of the built environment of the site will not be able to accommodate these activities known as resource base recreation, except martial arts; which require natural resources only available in the countryside.
2. There has been a growing interest in non-traditional sports activities which emphasize self-testing and cooperative behaviors such as the "new games" approach and "stress-challenge" activities.

3. Physical fitness programs continue to gain in popularity among all age groups. The most popular fitness-related activities include jogging, swimming, bicycling, racquetball, aerobic dancing, and "jazzercise". Closely associated with physical fitness craze is the interest in wellness which emphasizes prevention of illness. More Americans have become interested in stress testing and activity programs tailor-made for their own level of fitness and wellness.

4. The 70's gave birth to an electronic sports age reflecting the proliferation of computer, arcade, and home video sports games that have stormed the market.

Therefore:

The collective items 2-4, which are known as community base recreation, are compulsory in this facility since they are considered part of the American lifestyles. However, certain activities due to certain constraints, which might occur in the design process, will need to be replaced with another or to the extreme, aborted.
BACKGROUND ANALYSIS

5. A tremendous influx of women into sport at all levels has been accepted as a pattern for the 80's. Therefore:
The issues of gender differences are critical in certain private activities such as showering, which therefore require appropriate separation.

6. Concern for energy shortages and environmental protection are curbing long distance travel and tourism. Therefore:
Environmental concern of the society should be reflected in architecture. Among the potential responses include the use of optimum natural daylighting in reaction to energy crisis. The use of the natural features with minimal modification involve, would be another way to use the natural resources appropriately. This will include the preservation of the site to its original character.

CONCLUSION
The Study of recreation and its background has established the immediate cultural context that shows the evolution of recreational from an extracurricular activity of the gifted few to be part of the general population lifestyles.
BACKGROUND ANALYSIS

NORTH TORONTO COMMUNITY CENTRE
CASE STUDIES

Project 1
Community Center, North Toronto by Olsen Worland Architects.

The multipurpose seniors and community/recreation center is located on the site of an existing outdoor pool at the southern end of an existing outdoor pool at the southern end of a 9-ha public park on Eglinton Avenue.

A primary intention was to develop a building form that would seem to emerge from the park itself. The facility mediates between grades in section, and in plan mediates between outdoor sports and recreation areas and the urban streetscape to the south, giving order to the existing landscape.

The new building gives the park a dramatic public face, but being permeable it also encourages access to those passing through the park. Establishing the building face in two directions, the wedge-shaped pergola serves as the major circulation element, while reconciling the alignment between the street and the existing arena to the north. Constant relation of the internal spaces to grade along a bi-level route of travel effectively removes any hierarchy of floors, leaving only a topographical sense of upper and lower.

The scheme was unanimously chosen in a single stage, limited competition.
SYNTHESIS

First the spaces provided are basically universal as any other facility of this type. Relationships between the spaces influenced the spaces that have direct relationships to be put on one levels. Thus, separation of floors by no means is intended to establish a hierarchy of importance. Two different kinds of construction methods are established. One is long span structure for sports activities for gymnasium and pool and on the other hand is office type construction for spaces to accommodate administrative activities and such.

Concern was also put towards responding to the site, carefully not to overpower the site. The elevations show how the building was subtly flowing into the site. However, the building still maintains its ability to attract people.
ACTIVITY ANALYSIS

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ACTIVITY ANALYSIS

After analyzing the conceptual, contextual, and background issues 2 basic participants groups can be established. They are;

1) Administration Personnels
2) Users (Active Participants in Activities)

However by categorizing them does not necessarily mean that one individual belongs only to one specific group. Instead, it is possible for one individual to be categorized as all groups. For example, an administrator can also be considered as the active participant in the activities.

Out of these two groups there are two common activities in which both of them participate.

ACCESS/EGRESS

Objective: To enter and exit the facility
Issues: Need to be visually perceptible from parking. The activities should not result in excessive penetration by the outside elements such as cold temperature. Therefore, a transitional space is needed in solving the problem.

Requirement: Openings which allow movement from the outside to the inside and vice versa. Vestibule as a transitional space (100 sf).

Adjacencies: Lobby/lounge, offices, parking, and public restrooms.
ACTIVITY ANALYSIS

HYGIENE
Objective: To carry out personal hygiene in fulfilling the need of biological function, in order to keep good health.

Issues: Separation of the activity in respect to gender differences. Separation of the activity between the employees and the general public.

Requirement: Bathrooms.
Adjacencies: Lobby/lounge, offices, service areas.

MEETING
Objective: To gather in one place and discuss certain issues towards achieving an agreement.

Issues: Two kinds of meeting
1) between management personnels
2) between management personnels and the users.
3) Need to be accessible from public circulation and from the management area.

Adjacencies: Offices, public circulation.
ACTIVITY ANALYSIS

The following activities are performed specifically by group 1 (administrative personnel).

MANAGEMENT

Objective: Manage and establish policies and regulations. Program the activities, hire the personnel, process application, handle bookkeeping and accounting.

Issues: Need certain degree of privacy in achieving the objectives listed. Need proper communication system so that the flow of information is smooth between all parties listed.

Requirement: Offices for the executive personnel and their support staffs. Need equipment such as tables, chairs, desks, and copy machines.

ACTIVITY ANALYSIS

INFORMATION/RECEPTION/CONTROL
Objective: Provide information to users upon arrivals. Provide control over those who enter the building preventing unwanted visitors.

Issues: Need to be visible upon entering. Methods of screening for security should be established but should not suggest hostility. Separation between public and employee need to be done carefully so that direct contact are not hindered.

Requirement: Front desk counter which will employ 1-2 staffs.


ISSUING EQUIPMENT/RESERVATION
Objective: Provide sports equipment to the users as effectively as possible. To take reservation. Have control over the issuing and returning process of equipment.

Issues: Need adequate space tools to store those equipment. Provide separation between the employees and the users while maintaining direct contact.

Requirement: Storage area or room with appropriate compartment for the equipment. Front desk type counter for the issuing activity.
ACTIVITY ANALYSIS

BABY SITTING

Objectives: To take care of the children while their parents involved in the organized activities. Provide an environment that is comfortable for the children.

Issues: The children age might vary from newborn to 5 years old since this is the age where recreation is not intended for them. Their recreation is takes place at home. -A lot of acoustical privacy is needed since this is the age where sleep is a very important activity for their development. -Control over the children so that they are kept from wandering by themselves in the facility.

Requirement: An enclosed space which will help solve all the issues presented above. Babysitters to take care of the child.

Adjacencies: Lobby
ACTIVITY ANALYSIS

The following activities are performed specifically by group 2 (Users).

WEIGHT LIFTING / TRAINING
Objectives: To condition body muscles through resisting the force exerted by the equipment or machines in the process of increasing strength.

Issues: Need appropriate privacy between different genders and also between the serious body builders and casual body conditioners.

Requirement: space or room to accommodate all the weight training machines, and free weights. Rack for the dumbells.

Adjacencies: lockers, showers, water fountains.

RUNNING / JOGGING
Objective: Burn the body fat in the process of losing weight. Tone and increase physical fitness, wellness and endurance.

Issues: Assuring no traffic collision is important. Provide enough space for the faster runners to pass by without interference.

Requirement: Track, path ways on the exterior in park will help solve circulation problem.

Adjacencies: Preferably nothing in the basinity because of the danger of collision.
ACTIVITY ANALYSIS

BASKETBALL
Objective: to throw the ball through a hoop resulting in physical endurance and fitness.

Issues: Provide the opportunity for spectator to watch. Need large volume for the activity.

Requirement: The court, gymnasium type space combined with other courts activities such as volleyball.

Adjacencies: Lockers, showers, observation, water fountains.

RACQUETBALL
Objective: To strike a ball using an appropriate racquet against the wall, while trying to make it hard for the opponent to strike back as well as increasing endurance and burning the body fat.

Issues: The court need to be enclosed on all sides but still provide visual access to spectators.

Requirement: Indoor court separated from the other sports.

Adjacencies: Observation, lockers, issue room, showers.
VOLLEYBALL COURT

- 10'0" SERVICE AREA
- 2' SPIKING LINE
- 4' CENTER LINE
- 2' SPIKING LINE
- END LINE
- 80'0"
- 50'0"
- 10'0"
- 30'0"
- 10'0"
- 3'0" MIN.
- POST

COURT LAYOUT

ISOMETRIC SHOWING NET
ACTIVITY ANALYSIS

TENNIS
Objective: To strike a ball to the opponent on the opposite side across the net, which divided the court into two, with an appropriate racket.

Issues: Control the stray balls because of the ball. Require a large volume for the movement of the ball.

Requirement: Outdoor space which can help resolve the issues.

Adjacencies: Observation, water fountain.

VOLLEYBALL
Objectives: To strike a ball using either one or both arms and hands to the opponent across the net.

Issues: Need a smooth surface for injuries might occur due to diving.

Requirement: Indoor court since smooth surface can be instored.

Adjacencies: Lockers, showers, water fountain, issue room.
ACTIVITY ANALYSIS

JAZZERCISE/AEROBICS
Objective: To achieve and maintain a level of physical fitness and wellness by body movement which is tuned to the music.

Issues: The activity need to be performed with instruction from a qualified individual. Characteristically it is a group activity. Privacy from the other activities are needed because of the music and most people are not comfortable with being spectated.

Requirement: A large room enclosed from audio and visual penetration.

Adjacencies: lockers, showers, water fountains.

MARTIAL ARTS
Objectives: Overpower the opponent physically and mentally using special techniques of self-defense.

Issues: Need control and supervision because of the nature of activity contribute towards hostile action. Barrier from other part of facility is needed because this activity require a great deal of concentration.

Requirement: enclosed space and storage for the equipment and weapons.

Adjacencies: Showers, lockers.
ACTIVITY ANALYSIS

TABLE TENNIS
Objectives: To strike a ball on a table with a bat over the net to the opponent on the opposite side.
Issues: Need control over the stray ball.
Requirement: A space/room to accommodate the table and a few feet of clearance around the table for the movement.
Adjacencies: Lockers, showers, issue room.

SWIMMING
Objectives: To move across the water while floating using the movement of hands and feet.
Issues: Security need to be very tight since fatal accidents can happen spontaneously. The control over water temperature is critical.
Requirement: A swimming pool, lifeguards on duty whenever the pool is open.
Adjacencies: Lockers, showers, issue room.
ACTIVITY ANALYSIS

ARTS AND CRAFTS
Objectives: To involve in the acts of creativity while striving for excellence in design. Target group may include prospective personalities in the area and senior citizens who have some spare time to kill.

Issues: Need appropriate instructions from a qualified personnel. Most likely to involve in group activity.

Requirement: A room that could be used for different activities.

Adjacencies: Lounge/lobby, access to outdoor.

WAITING
Objectives: To relax, socialize before involving in the next activity while sitting and having conversation.

Issues: Visible upon arriving. Provide a sense of welcoming and business like environment.

Requirement: Space which accommodate large circulation and furniture.

Adjacencies: Offices, entrance, restrooms.

OBSERVATION
Objectives: To provide visual and/or audio access to activities. To be one way of relaxation.

Issues: Good sight line and audio.

Requirement: Space for seating area.

Adjacencies: All activities that are for public observation.
ACTIVITY ANALYSIS

EATING AND DRINKING

Objectives: To replenish body of fluids and nutrients lost through exercise and to involve in socializing.

Issues: Need place to sit and eat. Need nice atmosphere that increase appetite and stimulate environment for socializing. Food to be served will not require elaborate preparation.

Requirement: Space to purchase and eat a small snack. Snack bar with small preparation area.

Adjacencies: Lobby, observation, storage.
# SPACE ANALYSIS

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SPACE ANALYSIS

ADMINISTRATIVE OFFICES
Description: Space in which administrative functions are performed. Private offices for different executive members.
Quantity: Four offices and a work area.
Occupants: Manager, Assistant Manager, Treasurer, Secretary.
Requirement: min 300sf
max 300 sf
Area: Office 150 x 4 = 600
2 Work Area @ 300 each = 600
TOTAL 1200
(Time Saver Standard, 856)

RECEPTION/VISITOR CONTROL
Description: Must be attractive and business like
Quantity: 1
Occupants: 2 staffs
0 - 12 visitors at time
Requirement: 10 sf for each person.
Area: 14 x 10 = 140 sf
(Time Saver Standard, 856)

LOBBY/LOUNGE
Description: Space where comfortable grouping takes place either for relaxing or socializing.
Quantity: 1
Occupants: 10 - 20 people.
Requirement: 10 feet diameter circle for five people with furniture (314 sf).
Area: 5/20 x 314 = 1256
(Time Saver Standard, 6)
SPACE ANALYSIS

CONFERENCE ROOM
Description: Space where group gathering takes place with the intention of achieving general agreement. Refreshment may be served.
Quantity: 1
Occupants: 25 max
Requirement: Table 20 x 5
Circulation 5 feet on each side
Area: 30 x 15 = 450
(Architectural Graphic Standards, 582)

NURSERY
Description: Space for supervision of children whose parents are attending the sports activities.
Quantity: 1
Occupants: 2 baby-sitters
15 - 20 children
Requirement: Optimum 1000 sf
Area: 1000 sf
(Time Saver Standard, 203)

RESTROOMS
Description: space in which users use to carry out their personal hygiene.
Quantity: 2
Occupants: 0 - 6 people in each
Requirement: 25 sf per person.
Area: 150 each
150 x 2 = 300 sf.
SPACE ANALYSIS

ISSUE ROOM
Description: Space to store and lend equipment to the users.
Quantity: 1
Occupants: 3 staffs
Requirement: Provide enough space for equipment rack and movement for the staff members in between.
Area: 400 sf.

SNACK BAR AND CAFE
Description: A space serving snacks and soft drinks to the users. Easily accessible especially from sports related spaces. In addition to acting as an eating place, it also provide opportunity for socializing and observing.
Quantity: 1
Occupants: 40
Requirement: 16 sf per seat
Food preparation = 160
Area: 16 sf per seat x 40 = 640
food preparation = 160
TOTAL 800

(Time Saver Standards, 826)
SPACE ANALYSIS

RACQUETBALL COURT
Description: Indoor court with three walls surfaces.
Quantity: 6 @ 2 players in each
Total = 12 players
Requirement: 20 feet w x 40 feet l x 20 feet h
each 40 x 20 = 800 sf
Area: 6 x 800 = 4800 sf

MULTIPURPOSE ROOM
Description: A room with flat floor surface.
Primary functions are for jazzercise, aerobics and martial arts. The common issues presented in activity analysis allow these activities to take place in the same place.
Quantity: 2
Occupants: 30 users in each unit.
Requirement: 36 sf for each person.
Area: 36 x 30 x 2 = 2160
2 storage @ 300 sf = 600
TOTAL = 2760

SWIMMING POOL
Description: An artificially constructed body of water use as a medium for exercise.
Quantity: 1
Occupants: 3 lifeguards
50 bathers
Requirement: 15 sf water surface for each swimmer.
Area: 15 x 50 = 750
(Time Saver Standards, 1274)
SPACE ANALYSIS

MULTIPURPOSE GYMNASIUM

Description: To accommodate most of the court type sports; basketball, volleyball by means of overlapping. The use of different types of courts can be arranged with scheduling.

Quantity: 1 (3 basketball courts, 2 volleyball courts).

Requirement: Basketball
Each; min 5600 sf  
max 7980 sf  
Volleyball 4000 sf each

Area: 7980 x 3 = 23,940  
The 8000 sf area for volleyball is overlapped over this area. Thus, no additional space needed to the arena.

SPACE ANALYSIS

WEIGHT LIFTING ROOM

Description: Space for weight lifting activities for both free weight, barbell lifting, and machines weight such as incline benches for stretching and sit-ups. Full length mirrors on the walls for convenient observation. Some kind of partition necessary in dealing with the issue of privacy.

Quantity: 1
Occupants: weight room supervisor, 50 users.
Requirement: 50 sf for each person
15 feet acoustical ceiling for noise control.

Area: 50 x 50 = 2500

LOCKER/DRESSING ROOM

Description: A space for storing equipment, preparing for activities and showering

Quantity: 2
Occupants: maximum 20 in each

Requirement: locker 16 sf / person
towelling 35% of locker
shower 35% of locker

Area:
lockers 16 x 20 x 2 = 640
towelling 35% = 224
showers 35% = 224
TOTAL = 1088

(Time Saver Standards, 1273)
SPACE ANALYSIS

SPACE RELATIONSHIPS CHART

- DIRECT RELATIONSHIP
- INDIRECT RELATIONSHIP
## Space Analysis

### Community and Privacy

<table>
<thead>
<tr>
<th>Community Characteristics</th>
<th>Privacy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reception</td>
<td>Restrooms</td>
</tr>
<tr>
<td>Lobby/Lounge</td>
<td>Offices</td>
</tr>
<tr>
<td>Multipurpose Gym</td>
<td>Conference</td>
</tr>
<tr>
<td>Snack</td>
<td></td>
</tr>
<tr>
<td>Racquetball</td>
<td></td>
</tr>
<tr>
<td>Pool</td>
<td></td>
</tr>
<tr>
<td>Weight Room</td>
<td></td>
</tr>
<tr>
<td>Multipurpose Room</td>
<td></td>
</tr>
</tbody>
</table>

#### Relation to Public Circulation
- **Immediate**
  - Reception
  - Lobby/Lounge
  - Multipurpose Gym
  - Snack
  - Racquetball
  - Pool
- **Remote**
  - Nursery
  - Restrooms
  - Offices
  - Conference
  - Lockers
  - Work Area
  - Mechanical
# SPACE SUMMARY

<table>
<thead>
<tr>
<th>SPACE (UNIT)</th>
<th>OCCUPANCY</th>
<th>AREA (SF)</th>
<th>REF (pp)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>OFFICE TYPE SPACES</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Office (4)</td>
<td>4</td>
<td>600</td>
<td>73</td>
</tr>
<tr>
<td>Work Area (2)</td>
<td>6</td>
<td>600</td>
<td>73</td>
</tr>
<tr>
<td>Reception (1)</td>
<td>14</td>
<td>140</td>
<td>73</td>
</tr>
<tr>
<td>Snack</td>
<td>40</td>
<td>800</td>
<td>75</td>
</tr>
<tr>
<td>Nursery (1)</td>
<td>22</td>
<td>1000</td>
<td>74</td>
</tr>
<tr>
<td>Conference (1)</td>
<td>25</td>
<td>450</td>
<td>74</td>
</tr>
<tr>
<td>Restrooms (2)</td>
<td>12</td>
<td>300</td>
<td>74</td>
</tr>
<tr>
<td><strong>TOTAL (11)</strong></td>
<td><strong>115</strong></td>
<td><strong>5146</strong></td>
<td></td>
</tr>
</tbody>
</table>

**NET USABLE AREA:**
- Mechanical 4% of net: 205.84
- Circulation 5% of net: 257.30
**TOTAL NET USABLE**: 5609.14

**GROSS AREA:**
- Net Usable x 1.2: 6730.56

<table>
<thead>
<tr>
<th><strong>GYMNASIUM TYPE SPACES</strong></th>
<th>OCCUPANCY</th>
<th>AREA (SF)</th>
<th>REF (pp)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Issue Room (1)</td>
<td>3</td>
<td>400</td>
<td>75</td>
</tr>
<tr>
<td>Multipur. Gym (1)</td>
<td>50</td>
<td>23,940</td>
<td>77</td>
</tr>
<tr>
<td>Weight Room (1)</td>
<td>50</td>
<td>2,500</td>
<td>78</td>
</tr>
<tr>
<td>Multipur. Room (2)</td>
<td>60</td>
<td>2,760</td>
<td>76</td>
</tr>
<tr>
<td>Racquetball Courts (6)</td>
<td>12</td>
<td>4,800</td>
<td>76</td>
</tr>
<tr>
<td>Swimming Pool (1)</td>
<td>50</td>
<td>750</td>
<td>76</td>
</tr>
<tr>
<td>Lockers (2)</td>
<td>20</td>
<td>1,088</td>
<td>78</td>
</tr>
<tr>
<td><strong>TOTAL (14)</strong></td>
<td><strong>245</strong></td>
<td><strong>36,238</strong></td>
<td></td>
</tr>
</tbody>
</table>

**NET USABLE AREA:**
- Mechanical 4% of net: 1,449.52
- Circulation 5% of net: 1,811.90
**TOTAL NET USABLE**: 39,499.42

**GROSS AREA**
- Net Usable X 1.2: 47,399.30

**TOTAL GROSS AREA** (rounded): 54,130
ECONOMIC ANALYSIS

CONTENTS
COST ANALYSIS ................. 83
ECONOMIC JUSTIFICATION ....... 84
ECONOMIC ANALYSIS

AVERAGE BUILDING COST
OFFICE BUILDING 68.65/SF
HEALTH CLUB 54.00/SF

CONSTRUCTION COST
GROSS AREA x COST / SF

BUILDING COST
Office Type Spaces
6730.56 x 68.65 = 462,052.94
Gymnasium Type Spaces
39,499 x 54.00 = 2,559,562.20
TOTAL BUILDING COST 3,021,615.14

LAND VALUE
16 % of Building Cost = 483,458.42

SITE DEVELOPMENT
25% of Building Cost 755,403.79

TOTAL CONSTRUCTION COST 4,260,477.35

EXPENDITURES:
Professional fees
16 % of Construction Cost = 255,628.64
Administrative Cost
1% of Construction Cost = 42,604.77
TOTAL 298,233.41

TOTAL BUDGET
CONSTRUCTION COST 4,260,477.35
EXPENDITURES 298,233.41
TOTAL 4,558,710.76
ECONOMIC ANALYSIS

PAYBACK = \frac{\text{PROJECT COST}}{\text{PROJECT INCOME}}

PROJECT INCOME:
Leasable Area x Rent / sf / year

LEASABLE AREA
Net Usable (except restrooms) 39,828 sf

RENT
The amount of money the renter of the net usable area needs to pay the owner. Rest rooms, mechanical and circulation are under the owner's expense.
Rent = $12/sf/year.

PROJECT INCOME
39,828 sf x 12.00/sf/yr = $477,936

\begin{align*}
\text{PAYBACK} &= \frac{4,558,710.76}{477,936.00} \\
&= 9.5 \\
&= 10 \text{ years.}
\end{align*}


Lubbock Comprehensive Land Use Plan, Planning Department, City of Lubbock: Lubbock, 1986.


Soil Survey of Lubbock County Texas, United States Department of Agriculture, Soil Conservation Service, Texas Agricultural Experiment Station: Lubbock, 1979.


FAMILY RECREATION CENTER
LUBBOCK, TEXAS
AHMAD MUSTAFA HUSSEIN
THESIS SPRING 1992

TECHNOLOGY & TRADITION

SITE SECTION
SCALE 1/30" = 1'-0"