A LIBRARY BUILDING FOR JUNIOR COLLEGE

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Epsm 34

AMERICAN UNIVERSITY OF

BEIRUT.

Project of

" A Library Building For Junior College"

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as a Thesis in Architecture for the B.Sc. in C.E.

under the tutorship of Professor K.K.Yeramian.

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P R E F A C E.

Of the many definitions we have found for the word "Thesis" when we set to work on the present project, we have retained the following to define our work:
" A Thesis is a study of a specific theme or subject presented by a candidate for a diploma or a degree."

It had always seemed to us that the word "Thesis" induces the idea of research. But in this report we have not endeavoured to find out or discover something new.

Our work is a carefully studied project, a proposition. It is a proposition of plans of a building for the American Junior College in Beirut, best use having been made of the specifications given to us by Prof. Stoltzfus. We hope it will rally many suffrages.

P. A. Cherkezian

I- STATEMENT OF THE PROBLEM.

As we have mentioned it above, our problem is a building for the American Junior College in Beirut. We have called it rather inappropriately "A Library Building for the American Junior College" because this was the first idea of the building that was conveyed to us. Actually the general requirements of the building are as follows:-

1. Auditorium with a seating capacity of 600 persons.
2. Reception Hall.
3. Library with a main reading room providing space for 150 readers and a stack room to provide shelving for 10,000 books.
4. Music department.
5. Art Room.
6. Recreation Room.
7. Tea Room.
8. Cooperative Store.

II- CHOICE OF THE PROBLEM.

Practical considerations have mainly determined our choice.

A. Choice of type of problem.

1. Although stock companies and big enterprise

have greatly developed since the war, this country still remains one of small and individual enterprise and, of the many fields that are open to the civil engineer, the building industry is the most favourable for individual exploitation.

2. Architecture is an art that beautifies man's surroundings and expresses his needs. Unfortunately it has been very much neglected, its primordial importance not being realized. In this country even at the present time muallims or owners of property make their own plans and find some way to make them approved, one way being to secure the signature of an unable idle engineer for an insignificant sum of money.

This practice has had several regrettable effects. A great number of the buildings are ugly, and houses built only ten years ago lack the very elements of comfort. Architects are the ones to remedy this state of affairs; in this respect they will be helped by the growing call for beauty and comfort that civilization and fortune entail.

B. Choice of the problem proper.

It is always more stimulating for a working mind

to deal with something realizable than with an imaginary project. When the present problem was proposed to us we adopted it because it gave us a very good opportunity to train ourselves in meeting in a satisfactory manner the requirements of the multiple functions the Junior College building is to fulfill.

III- ANALYSIS OF THE PROBLEM.

The plan adopted for the study of the problem is as follows:-

1. The Site.
2. The Plan.
3. The Type of Construction and Architectural Style.

1. The Site.

As shown in the attached location plan, the building we are concerned with is located near the northern entrance to the Junior College Campus. It faces north and has a beautiful view on the town and sea.

Besides being the only suitable place on the campus for the erection of a building without hindering the two existing ones, the proximity of the auditorium to the main entrance of the campus has two good advantages; it gives the audience direct and easy access to the campus

and dissuades the public of loitering around it. The Library is slightly farther than it should be from the other two existing buildings but this disadvantage is largely compensated by the factors named above.

2. The Plan.

a) General Arrangement.

The physical characteristics of the requirements of the building determined its general shape.

The inner structure was to consist of two big units, an auditorium and a library. Of these units we made two wings of the building which we joined with a lobby, thus obtaining a U shaped plan. The auditorium, seating six hundred persons had to be of an appreciable height for good aeration. A smaller height was enough for the aeration of the main reading room of the library which was to seat only 150 persons. Therefore we included two stories in one of the wings, one being devoted to the library and the other to reception hall, music etc ... The other units we located in the basement which we extended to the flange of the U only so as to reduce excavation to a minimum because as can be seen from the attached contour map of the site the ground is sloping up towards the rear.

b) Auditorium.

The specifications and requirements of the auditorium are the following:-

1. Seating capacity of 500.
2. Stage.
3. Dressing Rooms.
4. Space for an average orchestra.
5. Office for Director.
6. Ticket Room.
7. Coat Room.
8. General Lavatories.

The number of seats required necessitate the building of a balcony as without it the hall would be either too long or too wide. A width of 14 m. has been selected (maximum economical length of beams) and seating arrangements made accordingly. These arrangements are shown on the attached plans and explained hereafter.

Width of Hall. Specifications require that a space of 50 to 55 cms wide and 82 to 87 cms long (distance between rows) be allocated to each chair. The values of 53.5 cms for width and 82 cms for length have been adopted. Three longitudinal aisles 90 cms wide and one transversal 120 cms wide have been provided giving ample space for easy circulation.

3 aisles x 0.9 =	2.7
21 Chairs x 0.535:	11.3
Total Width	14.0 meters

Length of Hall.

Average length of space for orchestra	4.5
Average length of stage	8.44
23 rows of chairs x 0.82	18.86
Aisle	1.20
Total Length	33.00 meters

Height of Hall. The steps are made 16 cms high and therefore the chosen height of each floor is a multiple of this number.

1rst floor	27 steps x 0.16	4.32
2nd floor	23 steps x 0.16	3.68
	Total Height	8.00 meters

Balcony. Consists of eight rows. Each row is 20 cms higher than the one in front. The difference in height between the highest row and the lower side of the lowest row is: 8 x 0.2 1.6 m.

and the lowest point of the balcony is at 4.32 - 1.6 2.72 m. from the lower floor.

Total Seating Capacity.

Ground Floor	23 rows x 21	483
Balcony	8 rows x 21	168
	Total	661

Stage. The dimensions of the stage are grossly 9x8.5 m. Aisles will cut down this area appreciably leaving enough space for good average performances.

Dressing rooms and lavatories have been placed on both sides of the stage. The space above these rooms can be used for storage if necessary. An easy access may be provided by placing steps in lieu of one of the W.C.s.

Space for Orchestra. A space 4.5 meters long has been allocated for orchestras of average size accompanying performances on the stage.

Miscellaneous. General lavatories have been shifted to the basement to have them out of sight and give them a more discrete position. Ticket and Coat rooms have been given prominent position on both sides of the lobby.

c) Library.

The planning of the modern library requires careful study. In his book "The College Library Building Its Planning and Equipment" which is a most complete treatise on modern library planning, James Thayer Gerould states that any satisfactory plan must be adequate in four particulars, in its provision of sufficient space for undergraduate study, for study of a more advanced type either by graduate students or members of the faculty, for the administrative work of the library staff, and for the shelving and storage of books. But each institution has its own individuality and its own needs, and the building should be so planned as to express them.

In the present case, we have confined the space for undergraduate study to a main reading room and a browsing room because we are dealing with a "Junior" College whose students are destined to make their more advanced studies in higher universities, that for the study of a more advanced type to a teachers'

study for the same reason. As for the facilities of administrative work and shelving and storage of books the requirements of general specifications have been fully met. The library will therefore consist of:-

1. Main Reading Room.
2. Browsing Room.
3. Stack Room.
4. Cataloguing Room.
5. Director's Room.
6. Circulation Desk, Public Catalogue and Reserve Shelf.
7. Teacher's Study
8. Receiving and Shipping Room.
9. Lavatories, both for Staff and Students.

1. Main Reading Room.

Recent specifications require that reading accommodation be provided for between 30 and 50% of the student body. If the average figure of 40% is used the provision of reading accommodation for 150 students foresees a total number of 370 students in the college which is quite a reasonable assumption not including the fact that another good number of students can find accommodation in the browsing room.

Specifcations require that a space 20 to 25 square feet be allowed for each reader or approximately 2 square meters. The total area required is therefore 300 square meters. The room has been made 14x21 m. giving an area of 294 square meters.

2. Browsing Room.

The necessity for recreation is now universally recognized. Recreation is not only necessary for the body but also for the mind. Reading, when it is a habit is the best type of recreation for the intellect. Unfortunately a great number of college graduates lack this habit. To encourage the students to acquire this habit, modern libraries are being equipped with browsing rooms. These are rooms of a comfortable homely atmosphere free from irritating regulations containing books that every cultured man or woman must have read.

In this case the browsing room has been located in the upper floor with a beautiful view on the town, this being an other attraction for the students.

3. Stack Room.

According to specifications the number of books per square foot should not exceed fifteen or about 140 books per square meter. Floor area in this computation including space occupied by aisles, staircases etc... The height of the floor on which the stack room is to be located is 432 cms. For adequate use of the available space the stack decks will be made 210 cms high and the stack room will be divided into two floors. The required area will be therefore:- $\frac{10,000}{140 \times 2}$ = 36 square meters

The space allowed is 8.5x5.5 = 46.5 square meters. Excess area has been allowed because prevision of the increase of the number of books is difficult and it is good to be on the safe side.

4. Cataloguing Room.

The Cataloguing Room has been placed in direct communication with the stack room and the director's room so that the administrative work may be done with the minimum expenditure of time and labor.

5. Director's Room.

The director's room is a part of the administrative section of the library but in the same time it must be given free and independant access to the students. The room has so been disposed that both these requirements are accomplished.

6. Circulation Desk, Public Catalogue and Reserve.

Circulation desk has been disposed in front of the entrance below secondary steps; it has also two direct communications with the stack room. The Public Catalogue is opposite the circulation desk and the reserve shelf has been so arranged that it is near the circulation desk and stacks and also looks right into the main reading room.

7. Teacher's Study.

This room has been separated from the students'

section and located near the stacks.

8. Miscellaneous.

The receiving and shipping room has been shifted to the basement to avoid carrying cases up and down the stairs and also to facilitate disposal of salvage in the storage rooms on the same floor. A lavatory for the staff has been disposed near the administrative section; books are dirty things and members of the staff should be able to wash their hands without losing much time. The Lavatories for the students have been placed in the basement where they have been combined with the showers which have to be near the games room.

d) Reception and Art.

These rooms have been given ample dimensions and placed near the extension room which can assist the functions of both rooms when partitioned by using it partly as a kitchenette for the reception room and additional space for art shows etc.

e) Music Department.

The following are the requirements of an adequate average music department:-

1. Piano teaching Room.
2. Instrument Teaching Room.
3. History and Harmony Room.
4. Director's Room and Library.

1. Piano Teaching Room.

The Piano Teaching Room is divided into compartments large enough to contain a piano and two chairs in which simultaneous studying can take place

2. Director's Room and Library.

These two units have been combined into one to avoid the necessity of a librarian; in this case the job is done by the director's assistant.

e) Recreation room.

Vastly aerated this room can be used for indoor games as well as a gymnasium. Showers and lavatories have been separated from it by a dressing room adjacent to a dressing room.

f) Cooperative Store.

The Store has been placed next to the entrance to the basement from the exterior and opposite the staircases that lead to the floors above. A storing space has been provided in the rear.

g) Tea Room.

Supplemented by a kitchenette and a pantry this room will answer one of the necessities lacking in the college at the present time.

h) Miscellaneous.

The various other units necessary to complete the building are the following:-

Storage Rooms The dark spaces in the basement have been used for storing.

Machine Room Another part of the dark space in the basement has been made a machine room to receive the equipment necessary for central heating.

Janitor's Room. A good place in hte basement has been selected for the janitor's room to give him the opportunity to "meditate on the state of the universe" during a considerable period of the day when there is little he can do.

Roof. A good portion of the roof has been covered to provide space for open air entertainment during the hot season.

3. The Type of Construction and Architectural Style.

The building will be a framed structure because with the drop in the price of steel and cement we think such a structure will be more economical than bearing walls. Outside walls will be 40 cms thick and will be built of unpolished "Furni" stone 25 cms thick behind which 15 cms of rubble masonry will be erected. Inside walls will be made of sandstone 25 cms thick. These dimensions have been selected for the walls to give the

building, which is a big one, a solid and heavy effect both structurally and in appearance.

The visible structure has been made as simple as possible. Large windows extend on both floors of the building; cornices are very simple. An effort has been made to give the building a modern classic style.

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