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JOURNAL R. A. I. C.

M A Y 1 9 4 8

AMONG the gigantic engineering visions of our age are the tunnel under the English Channel and the St. Lawrence Waterway. Each has, at one time or another, been at the point of official approval, and then, for various reasons, been allowed to drop into obscurity for long periods of years. The arguments against the Tunnel have been of a military nature. Cost was never a factor because we remember, in the depression, it was revived as a worth-while employment measure. The British people naturally hesitate to turn their island stronghold into an attenuated peninsula without weighing with great care the advantages with the disadvantages and, even, dangers involved.

THE St. Lawrence Waterway, so far as we know, never presented a military problem, and its greatest opponents have never suggested anything so improbable as a future Graf Spee circling the Toronto Island and taking shots at the Royal York. The main objections have been political, and the possibilities of new ports challenging the supremacy of Montreal and Boston have not been lost sight of by interested newspapers. Incredible as it may seem, an argument against the Waterway from a Canadian viewpoint is a sentimental one that is bound to affect the judgment of politicians, and influence, if taken seriously by governments, the decisions of engineers. It is an old cry that we heard this week, as we heard it on every other occasion when the Waterway seemed a practical and imminent possibility—can we allow our graveyards to be flooded, and, if we do, what shall we do with (a) the remains of the deceased of the last 150 years or/and (b) their tombstones? We have not heard the last of this matter by any means, but we trust a solution will be reached in which the flooding of burial grounds, as opposed to the advantages of the Waterway, will be seen in proper perspective. Obviously it is impractical and unseemly to disturb bodies and transplant them, however regrettable we may view their apparent abandonment beneath the mighty St. Lawrence. We take the view that it is equally impractical to move tombstones. Some are flat, some damaged beyond repair, some up to 1835 are fine and simple in their design—the rest, generally, in granite or marble are Victorian or later examples of the decay in taste following the colonial period. A mass graveyard on the highway would be meaningless because of the heterogeneous design of the stones, and without historical or other significance. There is an air of unreality, indeed of hypocrisy, in this hysterical defense of graveyards, many of which, we feel certain, bear every evidence of neglect and disuse. We have for many years been an ardent student of the Canadian burial stone in old Ontario. We have photographs of "stones" in cast iron, in oak, in marble and in stone; our office is cluttered with rubbings done on tracing paper with cobblers wax, and we may claim, after twenty years of study, to a fair knowledge of the subject. We do not know of any country so careless of its historic graveyards as Canada. Some excuses may be made. The family graveyard of 1800-1850 is something one would find only in a new sparsely populated country and its fate was sealed when the farm was sold. Small community graveyards gave place to commercial graveyards as population increased or the community found itself within driving distance of a municipality. There is little excuse for neglected churchyards, and those with family graveyards and even larger plots do nothing to improve the beauty of many provincial highways in Ontario. We are quite prepared to believe that, within the flooded areas, there are graveyards that have been well tended, but we are equally certain that there are many that are not. Even if they are all well preserved, the case for the removal of the stones is unsound.

WE would suggest that the only civilized solution to the problem of the inundated graveyards would be a low dignified masonry wall with well kept lawn and hedges somewhere off the highway but easily accessible from it. On it would be carved the historic fact of the building of the St. Lawrence Waterway and the flooding of the graveyards that go back to the early settlement of the Province; and below, the names with dates of birth and death of those whose graves were abandoned. Such a monument could be a thing of lasting beauty and remembrance; it would have the merit of dignity and simplicity and could be worthy of the great and beneficial project which brought it into being. It would have about it an atmosphere of reverence, and its maintenance would be assumed as a Federal responsibility. Any other solution, it seems to us, would be messy and hotchpotch, and by its very nature would lack all the qualities that would be so easily attainable in the other.

Editor

VOCATIONAL OPPORTUNITIES FOR THE ARCHITECTURAL GRADUATE

Due to the unusually large number of students studying architecture the question of employment opportunities after graduation is a matter of great concern both to the students, and to the profession. It is hoped that the following articles will clarify the picture and will be of help in preparing the students for the problems he will have to face sooner or later. Opinions from Manitoba, Quebec, and Ontario are represented.

M A N I T O B A

From some points of view the future of the architectural graduate of the next few years seems rather uncertain when one considers the tremendous number who will be receiving their Bachelor of Architecture degrees during the next three years. Much has already been written in an attempt to correlate these increasing numbers with the opportunities made possible through expanding building programs and through the retirement of older members of the profession.

Recent trends in the curricula of the schools of architecture have emphasized architecture as design and construction, as well as its sociological aspect. In addition they have attempted to survey and to correlate various allied creative design functions— notably city planning, housing, industrial design and the various other phases of visual design. Therefore we are confident that today's graduates from the schools of architecture are even better qualified than their predecessors of fifteen years ago to adapt themselves to a great variety of openings in all the fields allied to architecture and design.

During the next few years the graduates in architecture should expect to take their places not only in architects' offices but in various planning offices, in the varied departments of Central Mortgage and Housing Corporation, in the Building Research Division of the National Research Council, in the building materials field as salesmen and designers, in various manufacturing companies as industrial designers. These and a host of other opportunities present themselves and, although it may seem that this is a program of the survival of the fittest, it would appear that the graduate from an architectural school has a sufficiently broad training to enable him to adjust himself to any creative public service job.

Here in western Canada the situation with respect to employment of graduates is, no doubt, similar to that in the eastern metropolitan areas. The offices have many jobs on the boards waiting for the release of necessary building materials and many jobs waiting to be designed. Most offices have already crowded as many

drafting tables as possible into their restricted areas and are finding this restriction of space one of the greatest limitations to expanding their staffs. No doubt the offices in the eastern metropolitan areas have a greater number of big jobs and therefore, will need a larger personnel to handle them, but the limitations of space are relatively the same. We find many of our graduates turning to such offices for experience and opportunities which they feel will be far ahead of those offered by offices in smaller centres. In many instances this may be the case of distant fields looking greener.

At the recent meeting of the Architectural Training Committee of the R.A.I.C. one of the keynotes fundamental to sound architectural practice was reaffirmed in the statement that we cannot overstress the importance of the humble approach on the part of the architect as he fills his role in the community. It seems particularly important during the next few years that we should instil this spirit into the graduates, to encourage them to seek jobs which will afford them the opportunity of real creative service to the community, whether it be rural or urban.

Unfortunately, the present aim of many of the students and younger graduates in architecture is to find the job which will yield the greatest monetary return as well as provide them with varied and stimulating building projects to design. Such young practitioners have yet to learn the all-important fact that an architect's role is primarily one of service to mankind. Those who are willing to accept the challenge will find that less glamorous beginnings in smaller centres will lead to very solid positions of true responsibility in the community of tomorrow. We trust that many graduates in the next few years will catch the spark and spirit of the pioneer and be willing to spend sufficient time and effort to become firmly rooted in the community for it is only in this way that they will be able to understand and meet the building needs of both community and individual.

John A. Russell

O N T A R I O

The time has come to look squarely at the problem of professional employment for graduates of the Canadian Schools of Architecture. The graduates of 1948, 1949 and 1950 will possibly experience little difficulty in being absorbed into the profession as draftsmen and assistants in the existing offices. As the subsequent years now in university graduate the absorption into the profession is not going to occur so readily.

In Canada at present there are 1,078 architects of whom over 60 per cent are in private practice. The balance are employed with the universities, the provincial governments, the federal government and large corporations of various types including construction companies, merchandising companies and large industrial concerns.

The various age groups of the architects in Canada as prepared by the Dominion Bureau of Technical Personnel are as follows:

57 years and up.....	540
47 years to 56 years.....	269
37 years to 46 years.....	288
27 years to 36 years.....	236
26 years and under.....	21
Total.....	1,354 *

The preponderance of numbers in the oldest age group to some extent has been caused by the small number of graduates during the late thirties due to disinclination of students entering university during the depression years to embark in a profession which was then suffering from one of the severest depressions it had ever experienced; by graduates taking up other professions and businesses during the depression and not returning to architecture when building conditions improved; by the war draining off all the young men over a period of six years; and by the fact that experience in the building industry is acquired only by long study and over many years so that the older architects are too valuable to the profession, the building industry and to themselves to relinquish their field of action until nature forces them to the sidelines.

The most important single item to be considered is the number of architectural students now attending the various schools and can best be shown by the following figures:

	Beaux Arts	B.C.	Man.	McGill	Toronto	Total	Grad. Year
Preparatory Class	11	—	—	—	—	11	—
1st year	15	57	22	47	94	235	1952
2nd year	14	23	88	45	76	246	1951
3rd year	10	7	96	26	83	222	1950
4th year	7	—	61	5	17	90	1949
5th year	11	—	20	12	9	52	1948
	68	87	287	135	279	856	

Of this impressive total there will be those who will switch to other courses before graduation, some will drop out, some of the girls will decide that married life provides more for the future than does the writing of specifications, and others will fail in their examinations. This may reduce the total graduates in the next five years to somewhere between five and six hundred, but which still represents in the short period of five years a number equal to 50 per cent of the total number of architects in Canada. This is the fact that is causing concern.

It is true that in most provinces the graduate must serve an additional period in an office before he is entitled to practice and this may soften the blow slightly but there still must be enough work for them to be employed on, otherwise there will be a considerable surplus of junior architects or there will be an emigration principally to the United States of America.

The positions in architectural offices at present are not, by any means, all filled by university graduates as a considerable number have arrived by the apprenticeship route and some few are continuing to become architects through that channel. The technical, vocational and rehabilitation schools are continuing to produce men who have taken courses in architectural drafting. In addition to this 155 inquiries concerning architectural opportunities in Canada have been received by the secretary of the R.A.I.C. from other countries during the last year.

The situation therefore is alarming because not only must we consider the graduates of the next five years but also those of subsequent years. These classes, even though they most certainly will be smaller than the graduating class of 1950, 1951 or 1952, will likely be considerably larger than pre-war years.

To get some idea of the problem facing us let us try to reduce it to figures. Let us assume that the active professional life of an architect ends at age 70. Also for purposes of computation let us say that the total graduation output of all the Schools of Architecture for each of the next 13 years is 100 students. All of the oldest age group now numbering 540 will have been retired during this 13 year period by 1961 making room for an equivalent number of younger architects. During this period however 1,300 men will have been graduated of whom 760 will be surplus to present employment levels. Vacancies in the other age groups will also have occurred caused by death, accident, sickness, early retirement and lapsed membership, which let us place at an incidence of 30 per 100† over this period of 13 years, which would mean a total occupational mortality of about 325. This therefore leaves us a total 13 year surplus of about 435 architects over present day levels. These levels of course may vary considerably and will be affected primarily by the total population of the country and the activities of the construction industry.

Now let us see what opportunities are available for the young graduate.

The oldest age group is large and vacancies here are bound to occur continually at a faster rate than in any of the age groups. The filling of these vacancies will provide a considerable number of opportunities for other younger architects to take on the duties which these older men will be laying down.

Canada is a growing and virile nation, growing not only because it is young, has vast natural resources and huge areas only sparsely settled but also because of a stream of immigration of people and industries which has now only just started. It is not improbable that Canada may become a nation of seventeen million people by 1970 when graduates of 1950 will be just in their prime. It is also true that in Canada there has been built during the last three years an unprecedented amount of construction necessitated to some extent by the accumulated backlog from the war years. During this period many other necessary projects were deferred which no doubt will proceed as conditions continue to stabilize. In addition there are millions of dollars of public works projects which are still on the shelf ready to be released when the pace of construction appears to be falling off. This is an encouraging picture.

The young architect has only to analyse the R.A.I.C. list of members to see that about seventy-four per cent of the total membership of 1,078 is located in the provincial capitals and four other cities. These twelve cities are Victoria, Vancouver, Edmonton, Regina, Winnipeg, Toronto, Hamilton, Ottawa, Quebec, Montreal, St. John and Halifax. It is quite evident that the remaining twenty-six per cent must be thinly spread over the rest of Canada. It is a fact that some of the smaller cities and larger towns do not have an architect as one of their citizens. The northern part of most of the provinces with their present day development has not as yet drawn many architects. It appears that these two fields could absorb a considerable number of graduates if they were willing to grow up with a particular district as many doctors have done for years.

Town, country and community planning, a closely allied field to architecture, is now here to stay, and will fill a long-felt need. Architects with their knowledge and skill in planning make excellent town planners, therefore, this field could absorb a number of architects as chief town planners and as assistants or as consultants to municipal works commissioners. In view of the recent wide spread public interest and actual activity in town planning it may prove advisable for some of the Schools of Architecture to extend their town planning lectures even to the extent of providing a post graduate architectural course leading to a master's degree in town planning. This would provide specialists more highly trained for this expanding field.

A few architects with a bent for analysis and investigation will be needed for building research by large corporations and governmental agencies. There are other fields where a few architects can be absorbed, such as building appraisers for fire insurance companies and as consultants for mortgage and insurance companies in their building loan departments. Some of the larger municipalities, such as counties and the larger towns could, with great advantage, employ architects as their building inspectors and who could also be in charge of their building maintenance department. The fields of industrial design and furniture design also offer limited opportunities. Doubtless there are other ways in which architects can be employed in jobs where excellent use can be made of their university training for technical positions.

It is also inevitable that there will be strenuous competition for positions and commissions during certain periods. This will most certainly mean that the best trained men will have a considerable advantage in acquiring and holding positions and it conversely means a weeding out of those at the present time who have not made full use of their opportunities or who are not producing at a rate which is profitable.

Since well-trained, willing and capable men are those who will most readily find their niche in the profession, it might be advisable if all the schools adopted the screening process before admitting a student to the first year. This would likely reduce somewhat the total enrolment. It would also assure a class of students more likely to make a contribution to the profession and to be a personal success in his chosen work.

Canada has a substantial financial stake in the education of every architectural graduate, and consequently does not wish to see them emigrate to other countries where the dividends on Canada's investment would be realized. A policy of immigration is much sounder than one of emigration.

It does not seem possible that all the graduates will find employment in Canada. It would therefore seem most necessary that all the interested parties composed of the Schools of Architecture, the R.A.I.C., the provincial architectural associations and the student bodies themselves should immediately mutually study the problem of providing in Canada gainful occupation for these younger architects who some day will be the pillars of the profession.

Leonard E. Shore

*The figures compiled by the Dominion Bureau of Technical Personnel includes men who are qualified as architects but who are not registered and possibly includes those who incorrectly term themselves as architects but are doing architectural work. This accounts for the difference between the R.A.I.C. total of 1,078 and the Bureau's figure of 1,354.

†R.A.I.C. figures for the 13 year period from 1935 to 1947 are not available but this occupational mortality figure of 30 per 100 is based on Ontario figures of 188 during this time. Past performance figures are used to indicate the possible future trend.

The problem of how our undergraduate architects will be absorbed into the profession within the next six years concerns us greatly. The number studying architecture is nearly three-quarters the number of practising architects in our country today. Some say an increased population by migration will increase the need for building, but among the new Canadians there will be qualified architects. Hence in the next six years there will be a struggle for employment, and I believe the young architect must prepare himself very specially for it, if he is to survive. Consequently, I feel if I suggest a number of ways whereby an undergraduate could particularly qualify himself I may lessen the bitterness and disappointment of the scramble for jobs.

Men with architectural training fall into two categories a few years after graduation—those who practise as professional architects, members of the associations, and those who are in related activities, who may not be members of the associations. In the first category there are the practising architects and architectural employees, the specialists, the research men and the teachers. In the second there are the designers of furniture, fittings and equipment, builders, film producers, decorators, salesmen of building products, superintendents of institutional buildings and so on. A survey of the activities of graduate architects would show that this field is large, varied and socially useful. The courses in the schools are primarily arranged for architectural practice, but students should be made aware of all the opportunities that there are, particularly at this time.

The majority of graduates will naturally choose architectural practice, in which contacts made through summer employment will be the best way into permanent employment or partnership with practising architects. These men should select an architect who they admire and are willing to work with. The chance for private practice may come to some, but this depends upon individual circumstances. In this respect it is necessary for the young architect to participate in affairs and to expand his contacts with all kinds of people. The timid man or the fierce recluse, either of whom may be the most gifted and sensitive architect, has little chance in the world of bartering services.

A successful private practice requires initiative and willingness to seek jobs and to make jobs, as well as some security to tide over periods of inactivity to start with. Private practice may be attempted by individuals who combine in themselves all the necessary talents or by a partnership in which each contributes a part suited to his personality. Working in teams has been successful abroad; it should be tried here too. Ten young architects in Colombia have formed such a team and have obtained commissions of a greater magnitude than they could have expected as individuals. In such a team men may concentrate upon design, construction, preparing the program of work with clients, publicity and so on.

General practice in the small towns has been a nearly vacant field in the past, and those architects who have gone to the northern towns in Quebec and Ontario have had lots to do. Small town practice will absorb a few; it is worth investigating.

If a man has an interest in a particular branch of architecture, for example hospitals, schools, industrial or residential work, he should train himself to be a specialist in it; by working with men who have a reputation, possibly moving about from office to office where work of his interest is taking place. In a short time he would become a valuable and sought-for man by virtue of his experience; such specialization would eventually grow into an independent specialist practice. In the meantime, he would have a distinction which would give him an advantage in offering his services.

The various departments of government and the great industrial corporations will provide jobs for some. The tendency seems to be for more work of this sort to be done without recourse to the practising architect and consequently these offices are large and their work is interesting. Research into methods and materials of buildings has only commenced in this country. The National Research Council can be expected to use a few trained architects. Following this lead, more will be used by industry in research and development of products. It is interesting to recall that two men who are prominent in building research in Britain are both architectural graduates of Canadian schools.

Teaching is a field which I should like to encourage some men to try. The satisfactions are of somewhat different order and less measurable than those of practice. Nevertheless there is a need in the five schools of architecture and in the numerous technical schools in Canada for qualified men.

Housing is an activity which has employed architects in other countries when the stage of coaxing houses by attractive financial arrangements is succeeded by positive construction of low-rental dwellings. Local government housing boards can be expected soon and these will employ architects. For a few there will be opportunities in town-planning, site development, subdivision layouts or landscape gardening. Preparation for these branches of architecture is offered at universities, but it is possible that some men, matured by the war, may have had enough academic work and would prefer to go directly into the office of a practising town-planner or landscape gardener.

Outside of the profession, architectural graduates are employed in the design and manufacture of furniture and equipment of buildings. All kinds of fine ornamental joinery, metal-work, stained glass and so on, require in their designers the kind of training that an architect has. Perhaps buildings have not been so splendidly furnished in the last few years as formerly and this branch of architectural work has not absorbed many

men, but when we realize that the centre of wealth and power has moved to our neighbour, the United States, we can expect to participate in a period of luxurious architecture, in which the details of buildings will be given careful attention. Evidence of this awakening interest in materials, rich and finely-made furnishings requiring expert design and manufacture, is appearing in the magazines. The new designs are subtle, not clumsily ornamented, but delicate, almost fragile; form, texture, color, structure and neatness of detail are the characteristics. The architect is trained in these things.

Industrial design presents problems which are identical with the problems of architecture. Solutions in this field require an understanding of mechanical function, an appreciation of the limitations and potentialities of materials and of the techniques of production. Design in industry is a new thing in Canada; already a number of architects are employed upon it. Also there is word of government scholarships to induce others to train themselves for this work.

Some architects will be employed as design-builders. One that I know of has been successful in this business. He has made more money than most architects and has

constructed a number of useful buildings. In Europe and South America, the architect-builder is more common than here but when we contemplate the amount of our construction that is designed by builders we cannot but hope that more trained architects will find their way into this activity.

Estimators, valuers, building managers, promoters of building enterprises, salesmen of building products, are other occupations in which architects have found useful employment. Design for the theatre and the films, advertising, commercial art, photography, all have taken some architects in the past; the fine arts, archaeology are others. Architects are in these fields and there are opportunities for more.

I have learned that the association plans a survey of the present occupation of architectural graduates. This will be useful, as it is sure to suggest many opportunities for men who are now only thinking of the normal practice and it is obvious that the normal practice will not absorb so many. The young architect who is willing to approach practice with some thought and a plan of how he is going to fit in will be better off than the man who leaves this to chance.

J o h n B l a n d

The following designs, presented as representative of student work at The University of Manitoba, were selected from the first term of the current school session. In each year of architectural design, an attempt is made to establish a firm foundation for the STUDY of architectural design, to divide that study into a series of progressive stages and to co-ordinate these in a logical development from stage to stage within a year as well as from year to year.

D E S I G N 1

Following preliminary investigation through studies of scale and proportion, the students were given the problem of The Design of A Living Space. The client was portrayed as a bachelor with desires for freedom and enjoyment and a lust for living. The site was an isolated section of woodland overlooking the Pacific in southwestern British Columbia. The client already owned furniture of "modern design" around which he wished to incorporate the living space. It is important to note that in Stage 1 the design is space.

Stage 2 of this problem was posed as An Integration of The Design of a Living Space with the Other Facilities for Convenient Living. Our bachelor friend had, unwittingly, got married and now approached the designer, as yet possessed of a certain amount of freedom, with the necessity of expanding his space facilities to include the conventional necessities of normal living,—namely eating and sleeping. He expressed the same general demand for spaciousness and flexibility along with a request for appropriate consideration of problems of orientation and air circulation.

Stage 3 gave students the opportunity to develop interior and exterior spaces of this Complete Summer Home in model form.

Stage 1.

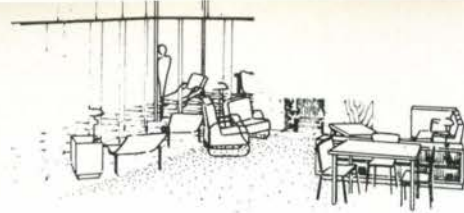
The Design of a Living Space . . . by H. F. Robbins 12 days.

Stage 2.

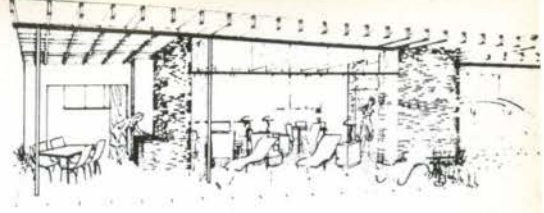
A complete Summer Home. Integration of the design of the living space with the other facilities for convenient living. C. MacIver, 4 weeks.

Stage 3.

A complete Summer Home, Model by H. F. Robbins, 5 days.

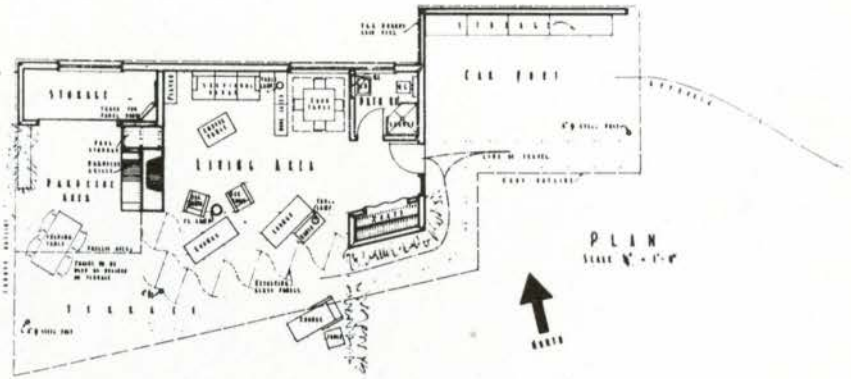


INTERIOR PERSPECTIVE

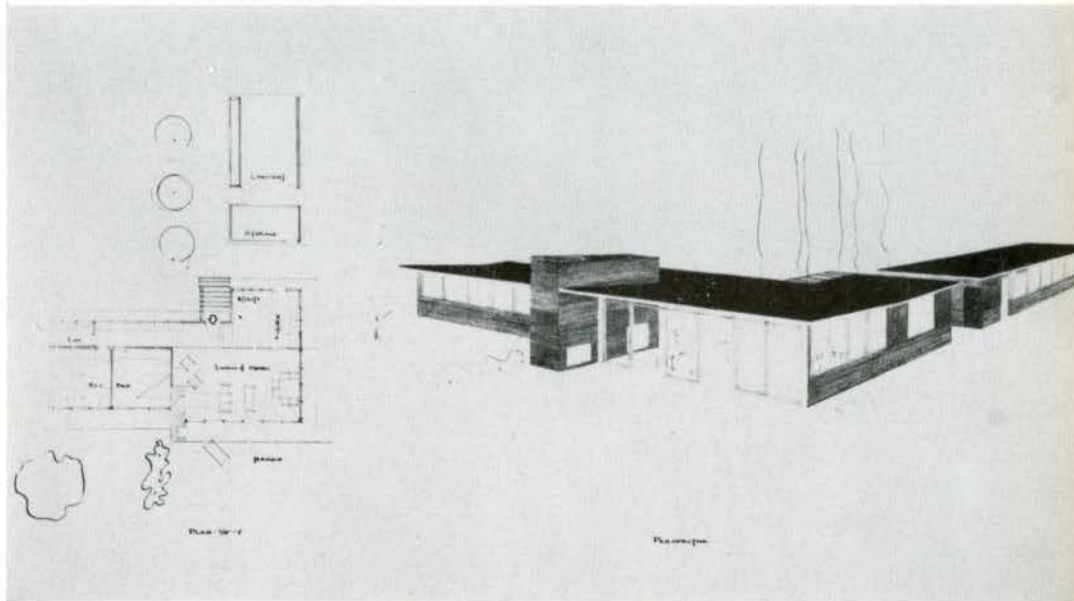


EXTERIOR PERSPECTIVE

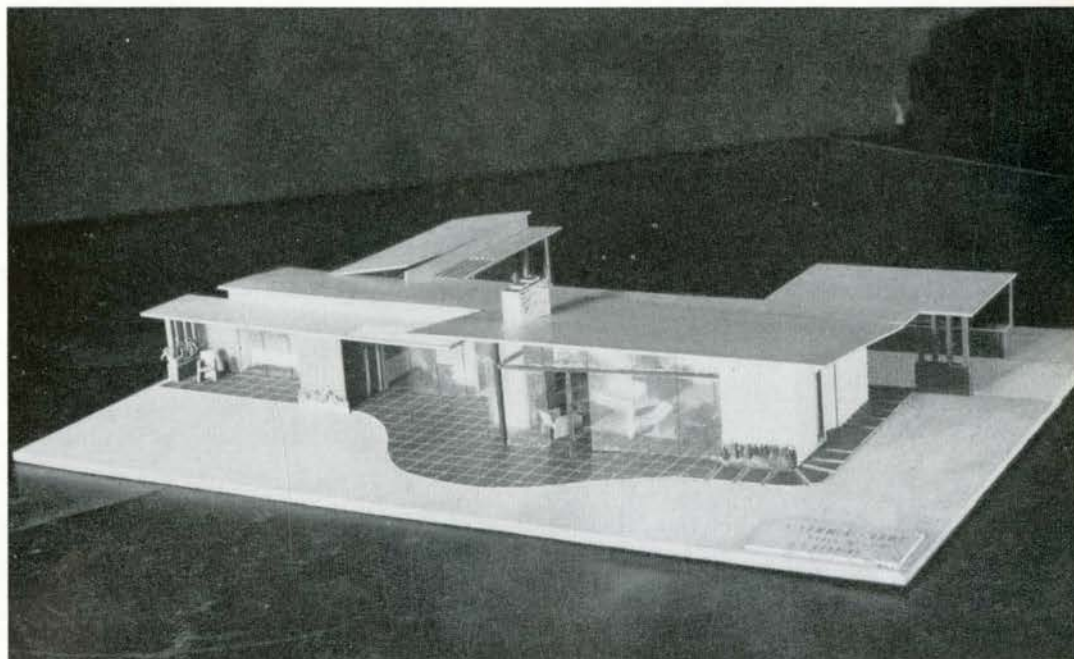
A BACHELOR'S RETREAT



STAGE 1

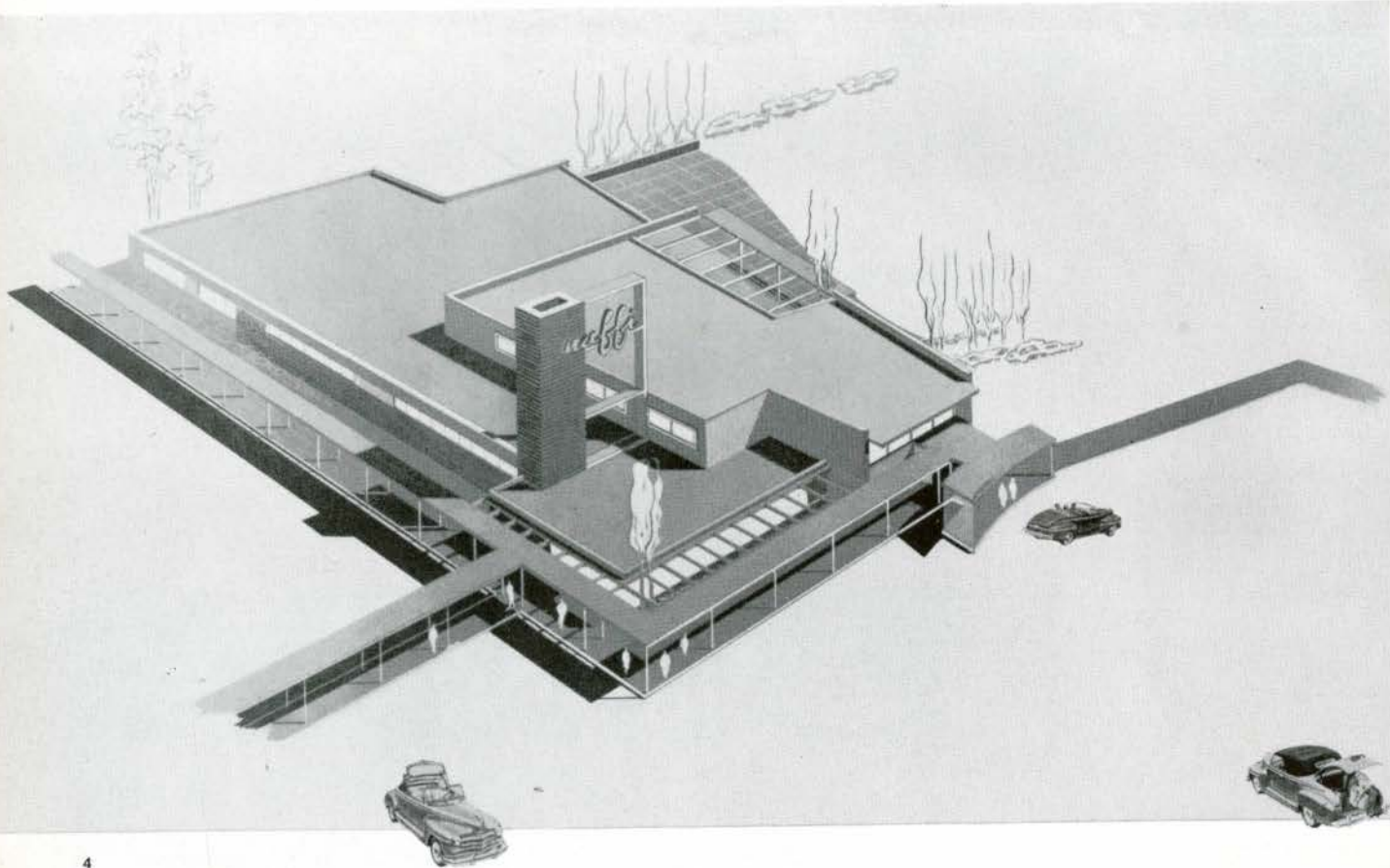


STAGE 2



STAGE 3

M A N I T O B A



4

5



D E S I G N 2

4 . A H I G H W A Y R E S T A U R A N T By M. Starkman. 5 Weeks.

A large national restaurant group, having purchased a sizeable piece of property on a busy highway in Eastern Canada, planned to erect a restaurant catering to the automobile trade. The property was situated on the highway between two fair sized cities on a curve in the road at a high point with a fine view to the south and west. Facilities were required for the casual motorist stopping for a snack as well as for those desiring full, leisurely meals.

5 . A . H A B E R D A S H E R Y By H. W. Seton. 3 Weeks.

An exclusive Haberdashery and Custom Tailoring Shop on the north side of Portage Avenue in downtown Winnipeg, on an interior lot 35' x 115' with party walls both sides.

DESIGN 3

6. 7. A SERVICE STATION AND RESTAURANT By J. B. Mar

Location was to be outside Winnipeg on a highway leading to a summer resort. Choice of site depended upon architect's advice. Stage 1 (one week) required notebook of studies of unit layouts, sizes, equipment lists and investigation of special problems. Stage 2 (two weeks) resulted in the development of the whole scheme. Stage 3 (one week) provided for structural investigation and for a color study.



6

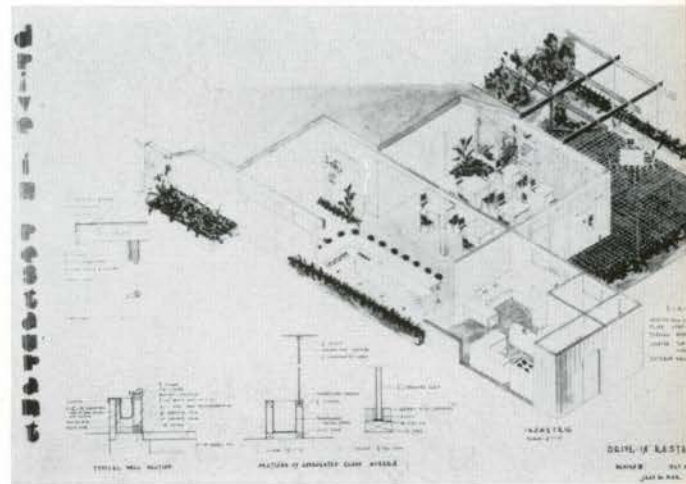
STAGE 2

8. A SUBURBAN HOUSE IN DIFFERENT CLIMATES

The design of three houses for the typical middle class client. In each case, the client was the same type of man with the same size of family. The first client lived in Winnipeg, the second in San Antonio, Texas, and the third in San Francisco, California. Interior lots, with streets on the north side and no back lanes, were specified in each case. The lot in San Francisco sloped toward the south; the other two were level.

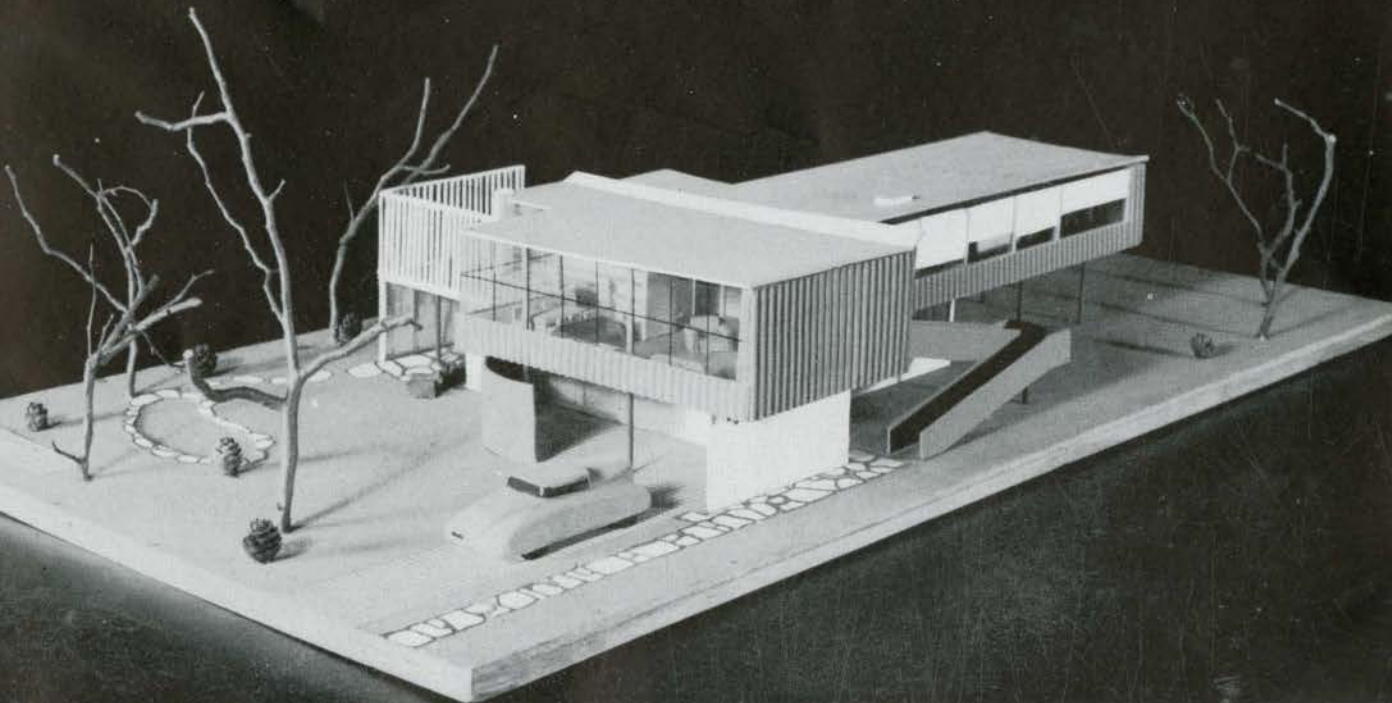
Apart from being a normal type of design problem, this was particularly a study in climatic conditions, — such as sun, winds, snow, insect protection, etc.

Model of House in San Antonio, Texas, by S. H. Williams. 5 Weeks.



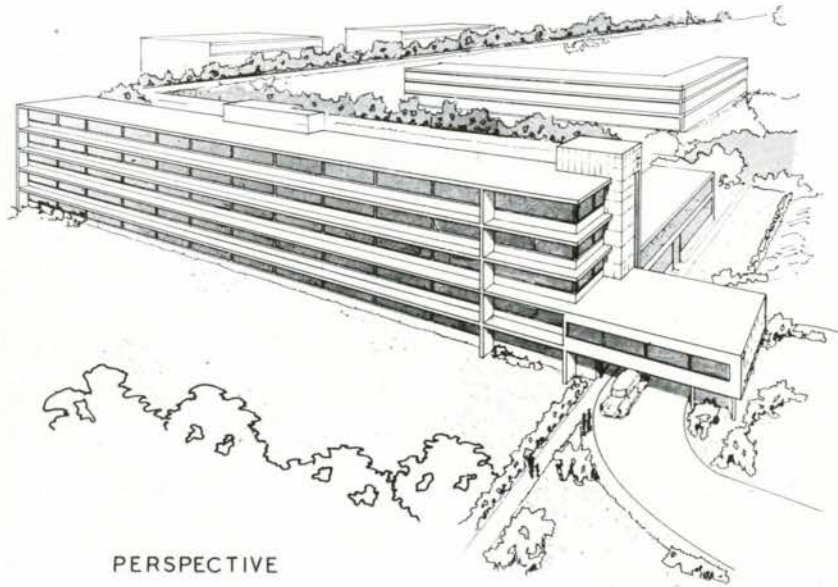
7

STAGE 3



8

M A N I T O B A



PERSPECTIVE

D E S I G N I V

A Children's Hospital

By I. M. Brown. 6 Weeks.

This problem formed one of a series designed to give the student practise in designing buildings with extensive technical requirements. This 150 bed hospital was to form part of a medical centre developed around the Winnipeg General Hospital. Site planning, approaches and parking were prime considerations. Requirements included nursing units, operating, X-ray, therapies, laboratories, emergency suite, administration, services, interns' quarters, and an out-patient and health department.

P L A N N I N G A T M A N I T O B A

G. Arnott
K. Izumi
G. Stewart

FOR THE CLASS OF 1948

Lectures in city planning for the students in Architecture at The University of Manitoba are given in two series: City Planning I, the historical aspect, is given as a lecture course in Third Year; City Planning II, the practical aspect, is given in Fourth Year, both as lectures and as a problem assignment. These lectures are given by the Director of Metropolitan Plan, Greater Winnipeg. As a Fourth Year Class, we are in the fortunate position of being able to study at first hand the drawings and reports prepared by the Metropolitan Planning Office. The lectures are given in the Planning Office where constant reference can be made to maps and charts relating to the Greater Winnipeg Plan. This has served to bring us into close touch with all the problems pertinent to Town Planning which we would not have encountered under ordinary classroom conditions.

The political and economic factors which must be considered in any realistic approach to a replanning project were stressed. Fortunately (or unfortunately) the class was made acutely aware of the difficulties encountered by the planners in the implementation of any program. We as a class consider it an unparalleled opportunity to have been in such close contact with the actual workings of a planning staff. We cannot overemphasize the value of insistence on the recognition of local conditions,—conditions created by human apathy as well as physical and geographical limitations. The need of such recognition was all too apparent in the review of the problems confronting the Greater Winnipeg Planning Organization.

The Problem

The practical assignment given to our class was The Replanning of the Town of Transcona, Manitoba,—a town with a population of approximately five thousand, located on the outskirts of the Winnipeg area.

When the Metropolitan Planning Committee of Greater Winnipeg was formed, it consisted of twelve municipalities, one of which was Transcona. Thus the project was related to our study course in a very real way.

Organization

It has been the custom in previous City Planning projects to split the class up into small groups of four or five. Each group then carried out its own program, which usually consisted of some phase of town planning such as a civic centre or a neighborhood development.

This year, however, the problem was considerably different in that the class as a whole, nineteen members, collaborated on it together.

The initial program, prepared jointly by the faculty of the School and the planning director, formed the basis for the organization and direction of the work. The class was, thereafter, permitted a fairly free hand in organizing its work and developing its proposals under the general supervision of the senior design critics rather than under the supervision of a member of the Metropolitan Planning staff. At the first class meeting, three "associate planners" were elected, whose main duties were to be coordination and supervision.

From the preliminary program, revisions and elaborations were made and a program of work set up so that each member of the class would come in touch with all phases of the work at some time or other. Discussions on all major points were held and sometimes became rather heated, but in every case were quite enlightening. Hence, while decisions were sometimes arrived at laboriously, due to the size of the group, actual planning problems were simulated and many people had a voice in the final result.

Program:

Throughout the project methods of an actual town planning committee were followed. Starting with the preparation of field maps and an actual field check and continuing through the preparation of base maps, the project was divided into various stages as outlined in the following paragraphs.

Stage One:

This stage consisted of gathering information, the preparation of the base maps and acquainting the group with the various jobs to be done.

The field check was made on ozalid maps of the existing survey of Transcona. This map was pasted on cardboard and cut into several sections which were distributed to members of the group. Out in the field these maps were filled in with such information as was required for land use, building conditions, road conditions, and any other pertinent details that the individual members felt would be useful in planning. This "hoofing-it" took up the better part of two days.

Two base maps were prepared, one at a scale of 200' to 1" which covered the central portion of the town, the other at a scale of 500' to 1" which covered the entire Transcona area. The scale map was later used as a basis for the model which was 7' by 8' in area.

Stage Two: Recording Information.

This stage consisted of transferring all information gathered on the field check to an ozalid print of the 200 scale base map. Color was used to differentiate between the various land uses and other data. The following maps were prepared:

1. *Land use map* which also included sewage lines, water supply lines, paving, railways, highways and building conditions or blighted areas.
2. *Tax Title Map* prepared from information taken from the records of the Town of Transcona showing land owned by or controlled by the town.

A separate map showing highways and highway connections was not prepared since these were all included as existing conditions on the base map. This was possible because of the large scale of this map.

Stage Three: Research.

Under this heading the group was concerned with setting up standards and doing research studies on the following topics; with particular regard to their application to Transcona:

1. Historical Background and Population Trend
2. Zoning Regulations
3. Transportation and Transit
4. Local Shopping Centre Design
5. Central Commercial Districts
6. Site Planning and Layout for Industrial Areas
7. School Sites, School Design, and Relationship to Neighborhoods
8. Playgrounds, Layouts and Equipment
9. Community Centre Design and Requirements
10. Administrative Centre (Local Town Hall)
11. Parks, Golf Courses, Cemeteries, etc.
12. Thoroughfare Intersection Design
13. Grade Separation Design

These research topics were assigned to various members of the group who recorded their findings in the form of sketches and written material. All these reports were then bound in folders and filled for reference during the ensuing planning processes.

Some of the more detailed aspects of the problem were not discussed by the group as a whole but were left to certain individuals, or a small group, for study and analysis. In this connection, some members of the class asked for and were given research problems related to their Graduation Theses; for example, one student did extensive work on the requirements for a Community Centre which coincided with his individual thesis topic.

Stage Four: Planning.

Then came the most interesting and most important phase of the work, that of planning. At the beginning some preliminary decisions had to be made. Three possible types of development for Transcona were discussed; a rural town, a suburb of Winnipeg, or a satellite town. The latter would be not unlike the relationship between New Westminster and Vancouver. On the basis of our everyday familiarity with Transcona and our research, it was felt that the satellite town development would be the most suitable for Transcona, since it seemed to carry on to some extent at least, the tradition of the town. Transcona was and is largely dependent economically and otherwise on the Canadian National Railway yards and is not a suburb of Winnipeg like other municipalities such as Tuxedo, Fort Garry, St. Vital and others. Although Transcona is no further away, in actual miles, from central Winnipeg than some of those mentioned, the fact that there is a large stretch of undeveloped land between it and Winnipeg, causes a definite division. This land is in an area of poor drainage and is unsuitable for any dense development which would tie Transcona to Winnipeg.

Existing transit facilities must span this gap since Transcona residents are at present dependent upon Winnipeg for shopping, recreation, some employment and other facilities which could be well included in their own community. Thus it was felt that the marked independence of Transcona residents warranted the development of these facilities within the town, hence . . . a satellite town.

Population:

Based on the satellite type of development a probable future population was calculated, based on the fluctuations of the population in the last three decades. In 1941 the population was 5,495 and in 1921 the population was 4,185 making an increase in this twenty year period of 1,310 which represents an increase of 31%. A percentage increase of 25% was assumed for twenty year periods in the future, or a 12½% increase per decade for the purpose of determining future population figures. Because of the comparatively recent development of the community any estimate of increase made on a long term basis was impracticable at this time.

Therefore, the first projection, based on the 1941 census figure, would give a population of 6,800 in 1961. In 1991 the population on this same basis would be 9,600. These estimates are of course theoretical and cannot be accounted for in terms of changing birth rates or changing economic conditions.

Major Thoroughfares:

Since the proposed Major Street Plan for Greater Winnipeg was related to the Regional Highway System it was decided to accept and use this system up to the boundaries of Transcona. Certain Streets and connections within the Town of Transcona were also accepted.

The class felt that Oxford Street, a main north-south street bisecting the town, should be developed as a main street with a centre boulevard. In other words, it would be a north-south cross-town thoroughfare and at the same time would be a promenade type of main street, considered essential in view of typical small town life. Thus Oxford Street would not be required to serve as a main or through highway but rather as a secondary type of highway which would allow direct access to the centre of the town. In addition to this north-south street, perimeter roads were planned to take traffic, not bound for the centre of Transcona, through to Winnipeg and other areas on a more direct route.

M A N I T O B A

Neighborhood Development:

The proposed neighborhood development resulted from an attempt to create a more desirable street system than the existing grid and to preserve most of the existing buildings. The predicted future population of approximately 10,000 required two neighborhood units and it was felt that Oxford Street could be used as a common boundary. Each neighborhood has one elementary school and a common senior-junior high school located in the community centre area. The existing land-use lent itself quite favorably to this plan.

Though the class was quite favorably disposed to the general scheme as proposed above, there was much disagreement regarding the course of Oxford Street. One half the group felt that a community centre, the administrative centre and the shopping centre should be tied together by swinging Oxford Street around the west side of the proposed commercial area. The other half of the group agreed that such a tie was very advantageous but argued that all the facilities would then be in one neighborhood; that in addition, it would create a large centre area which would be a hindrance to easy access to facilities on the opposite side: that the change in the course of Oxford Street would be baffling to the motorist; and finally, that, as Oxford Street would be developed as a main street of small town character, it would form a good tie between the community centre and the commercial and shopping areas.

Since traffic would not be heavy enough to make a street of this nature a dangerous one, the argument was that it would serve as an access which would be easy and free to both sides, with the community centre on one side and the shopping centre on the other. Therefore Oxford Street was left in its present location.

According to the neighborhood standards proposed by the Metropolitan Plan for the Greater Winnipeg area, the entire predicted population could be housed in a very small area. But, the size of the neighborhood units was influenced by the desire to provide larger lots for the individual homes, where the workers would have an opportunity to get outdoors after working hours for gardening and other activities. In other words, a larger lot area per family was used in calculating the overall area requirements of the neighborhood units. In addition, it was deemed wise to include acreage lots on the outer fringes of the neighborhood area to act as buffer units between the residential area and the larger farming units on the outskirts of the town. This also would provide for future expansion of the neighborhood residential section.

Minor Street Pattern:

The minor street pattern resulted from the above considerations and was laid out with regard to the existing built-up area, existing sewer and water main routes. An attempt was made to have all access from the neighborhood units to the communal areas as direct as possible yet in a manner that would discourage use of these routes for through traffic. This was done by employing various street patterns, including loops and culs-de-sac. Also long straightaways were avoided to discourage fast traffic.

Commercial District:

The commercial district was designed to accommodate business blocks, retail stores, theatres, commercial recreation etc. Adequate parking spaces were provided not only for the people of Transcona but also people from Bird's Hill, Springfield and other outlying districts. These people at the present time go to Winnipeg and it was thought that they could be encouraged to do business in Transcona. A small area was devoted to warehouses, garages, etc., facilities which are semi-industrial but yet closely linked with the everyday requirements of the people. This area was placed near the highway where it would also be close to the commercial district. Ribbon type of development was dispensed with and the block type of commercial area adopted.

Community Centre:

The community centre area was designed to accommodate the senior-junior high school and to provide for recreational needs of the entire population. This area is centrally located and takes into con-

sideration the existing park, the existing school and the land owned by the municipality i.e. the unsold lots in this area. As can be seen on the model this area is within easy reach of all the people and is adjacent to other community service areas.

Administration Centre:

This is made up of the town hall, the fire station, the police station and the jail. It was felt that these facilities would be better in the commercial area and so the buildings were located in the commercial section adjacent to the community centre.

Other Community Facilities:

The library-museum was located between the shopping area and the community centre. It was regarded as the relating unit between the community and administration centres. Provision for church sites was also made.

Industrial:

Since the only area, which is close to town and also close enough to the railway to be suitable for development as an industrial section, belongs to the railway, the rather ideal assumption was made that this property could be obtained for industrial development. This area is large enough to accommodate sufficient "employing-industry" to support the town when the population rises to the predicted level. This area is located south of the town so that the prevailing north-west winds will carry smoke, noise and other obnoxious byproducts away from the residential and commercial areas.

Parks, Playgrounds, Cemeteries, Golf Courses:

Green strips were provided throughout the residential area for use as play space and quiet rest areas. Playgrounds were incorporated into the elementary school areas. One large park space was provided in the north west section of the town. This provided picnic grounds and other park amenities, at the same time serving as a wind break. The cemetery was located on the northern extremity of Transcona. The golf course was moved from the south west part of the town to the northern location shown on the model to give it a better relationship to the town and at the same time to be more easily accessible from Winnipeg.

Zoning:

Zoning regulations were written to conform with new plan. A thorough study of the proposed zoning regulations of the Metropolitan Plan for Greater Winnipeg was made and necessary changes were made to make them suitable for Transcona in accord with the proposed replanning.

The Model:

Construction of the model was started after the neighborhood layout had been established under the direction of the associate planners. The base for the model was made in two halves, each consisting of a 4' by 7' sheet of 1/4" plywood on a 1" by 2" braced frame which could be easily fastened together. This facilitated the model-making itself as well as transportation and handling later.

Built to the scale of 200' to 1", one eighth inch balsa wood strips painted yellow were sufficiently large to use for the houses and large buildings were carved out of balsa blocks. For the farm lands on the outskirts of the town, to avoid the flat color of poster paint, patches of land were sprayed with tones of brown and yellow over green; these served to simulate farm topography very well. Further use of the spray gun was made to darken the outer areas of the model leaving the town portion light in color.

Criticism:

Criticism of this plan for Transcona may be summarized as follows: The neighborhood development on the west side was considered superior to that on the east as it provided better access to and from

the residential loops. Rather than having one major thoroughfare, from which all residential loops branched, the west side neighborhood provided several major streets with secondary streets leading to the residential driveways,—all in all providing better traffic articulation.

In the commercial area the shops and buildings lacked grouping. It was felt that the layout of this district did not measure up to the standard of the neighborhood development. There was also some criticism of the variegated colors placed on the buildings in this district, since they were not well related to the building-use legend. Other points of criticism were raised which space does not permit recording in detail here.

Conclusions:

We think that our experiment in group planning was a success from two points of view. Academically the project was one to be proud of, in spite of our mistakes. We all learned in a very real way the steps

involved in the preparation of a master plan for a town. And, from the human aspect of planning, each of the nineteen class members gained valuable experience in group planning and discussion. This was especially brought out in our class discussions on the neighborhood plan. It was apparent that to achieve a solution agreeable to nineteen people, some compromise was necessary. Several students were delegated to each of the two neighborhoods to present a number of solutions. Of the several, one scheme was selected and given general approval by the whole class. The group working on this phase then developed in detail the neighborhood scheme. Thus the neighborhood plans, which were the most successful parts of the whole scheme benefited most from full discussion. The Business District in turn, was developed by one or two people but unfortunately, due to the pressure of time, did not undergo a thorough class discussion and suffered accordingly.

From this we conclude that, although the democratic planning process often seems slow, it must of necessity be completely objective and consider all points of view.



U N I V E R S I T Y O F T O R O N T O

E x h i b i t i o n

A r c h i t e c t u r e a n d Y o u

By S. J. White

Rather than the usual showing of student drawings, the School of Architecture, this year presented "Architecture and You," an exhibition with a message. The principal object of the School's missionary zeal was an unduly listless university population whose callous indifference to the logic and beauty of modern architecture has long been a source of serious frustration.

Using a minimum of text and a maximum of illustration, the exhibition tried, in five hundred and twenty feet of frank propaganda, to explain the modern conception of architectural excellence. "THERE IS A NEW ARCHITECTURE," it said, and then went on with the historic, technical, social and aesthetic reasons for it. To illustrate in some detail the principles of modern design, one panel considered the house, assuming that the majority of visitors had lived in houses and would therefore be more familiar with the problems of domestic planning. Another panel levelled its sights at university architecture. It fired several volleys at the architectural anachronisms of this campus, then showed a variety of students' proposals for improvement. Its parting shot was a series of modern university buildings in Europe and America

It was a policy of the exhibition to contrast modern architecture, not with the worst of the Victorian era, but with more contemporary relics, and to compare student drawings with significant modern buildings of Canadian origin to prove the practicability of modern architecture for this Dominion. In the organization of the show the staff acted in an advisory capacity. Early in the argumentative stage a difference developed over the writing of the epilogue, the staff favouring an authoritative quote from Lewis Mumford, the students an original blurb written by themselves and placing the responsibility for architectural advance squarely on the shoulders of the public. The students' screed won out, happily or not, and read "ARCHITECTURE, MOST SOCIAL OF THE ARTS, FRAMES OUR WHOLE ENVIRONMENT." "MODERN ARCHITECTURE OFFERS AN ENVIRONMENT HEALTHY, BEAUTIFUL, AND STIMULATING." "ITS PROGRESS AND ACCEPTANCE DEPENDS ON YOU."

The Chancellor of the University, the Right Honourable Vincent Massey, C.H., opened "Architecture and You" on Friday evening, January 23 to the students, their friends, and members of the O.A.A., whose annual convention in Toronto coincided with the opening date. The subsequent popularity of the show made it necessary to extend the scheduled week's run to include the following week-end. The School has plans to increase the scope of its future exhibitions to spread the gospel to a more comprehensive group. The *Toronto Globe and Mail* with eyes only for the sensational, misinterpreted "Architecture and You" as an exhibit of mobile sculpture, thus the show made the front page on sheer spectacle. Other reviews were more satisfactory, and one is quoted below.

From *The Varsity*
January 28, 1948
By John Beckwith

The newcomer to Toronto is struck by the paucity of imagination and of real invention which has been shown in the planning of the city and in the evolution of its architecture. The truth, as revealed in the sparkling exhibit "Architecture and You" currently on view in the School of Architecture's spacious new drafting room, is that Toronto has no architecture, and that the only distinctive aspect of her public buildings is their incomparably hybrid style. If the School's display did nothing else but give Toronto's beauty spots an unceremonious boot, it would be serving a purpose both practical and aesthetic.

Its methods are pungent and always artistic, venting scorn on the landmarks—eyesores, rather—of our great University Avenue and always backing its vitriol with sound comparison to the best in the architecture of all ages. So persuasive is the argument, as presented in a series of colorful wall-displays, that by the time I reached a photo of Victoria College it needed no caption to make me guffaw openly that such a monstrosity should be thought worthy of preservation in any era.

The exhibit carries on in a more hopeful vein by showing architecture as the most social of the arts, and by producing eminently convincing reasons for a new architecture in models and sketches. Particularly interesting are the plans relating to new university buildings, in which the students have let their minds range over a wide field of speculation having as its aim the beautification and the harnessing-to-function of a basically useful campus. Another revealing display shows how the student's time is spent in the five years of the architecture course.

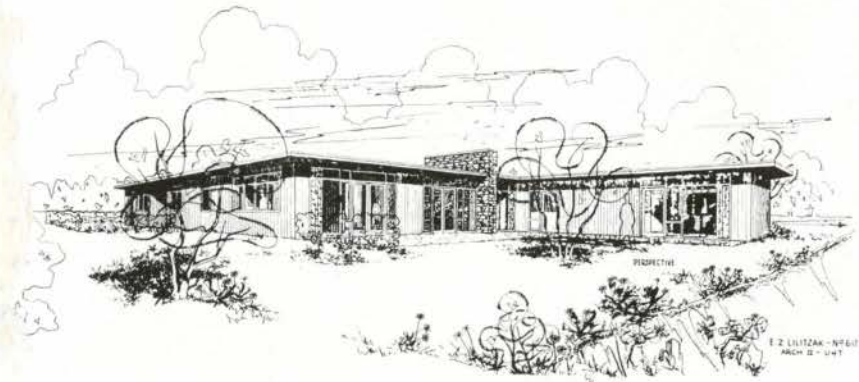
Be prepared for a real eye-opener when you visit the exhibit: it will give you a more heartening, if oversimplified, glimpse into the world of contemporary architecture than all the copies of *Fortune* and *Better Homes and Gardens* you have ever seen.

SECOND YEAR

1, 2 — A Country House for an Author by E. Z. Lilitzak.



1



2



3

THIRD YEAR

3. Wood Sculpture

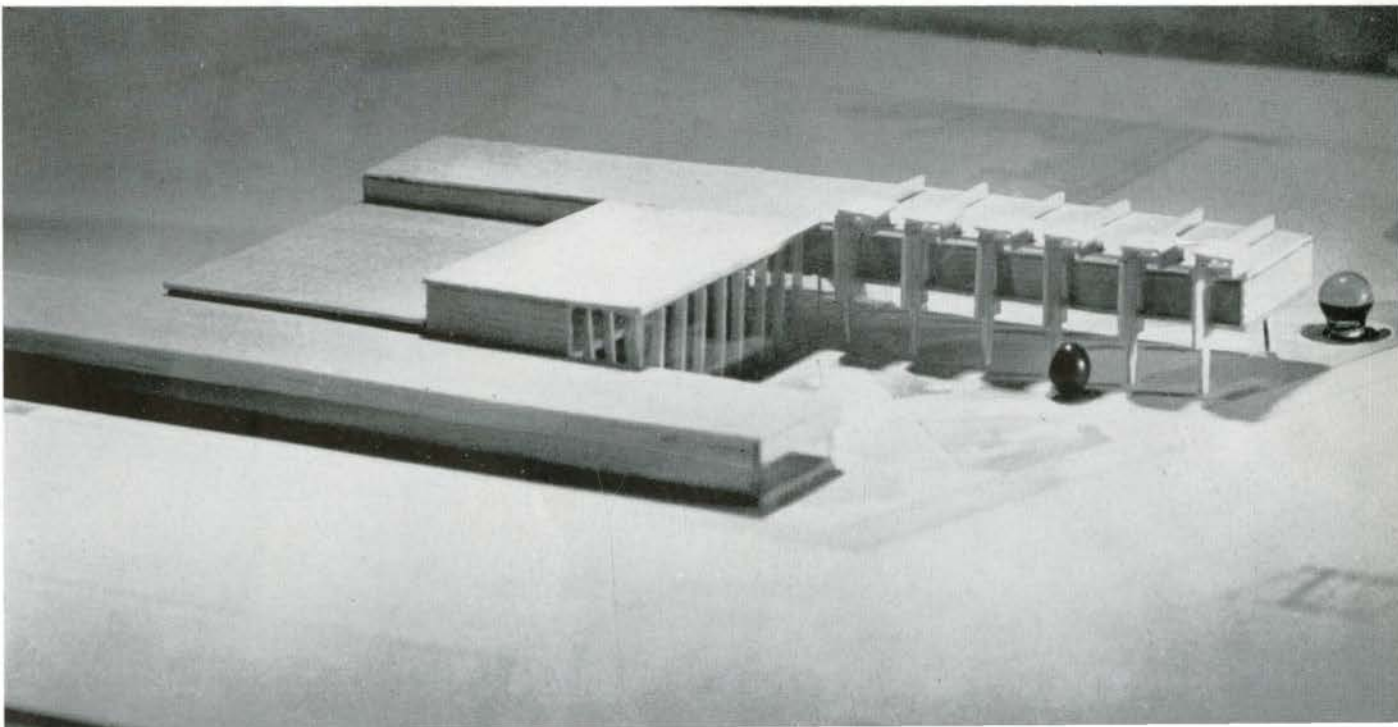
By G. E. Boake, M. L. Mendelow,
A. G. Barnes.

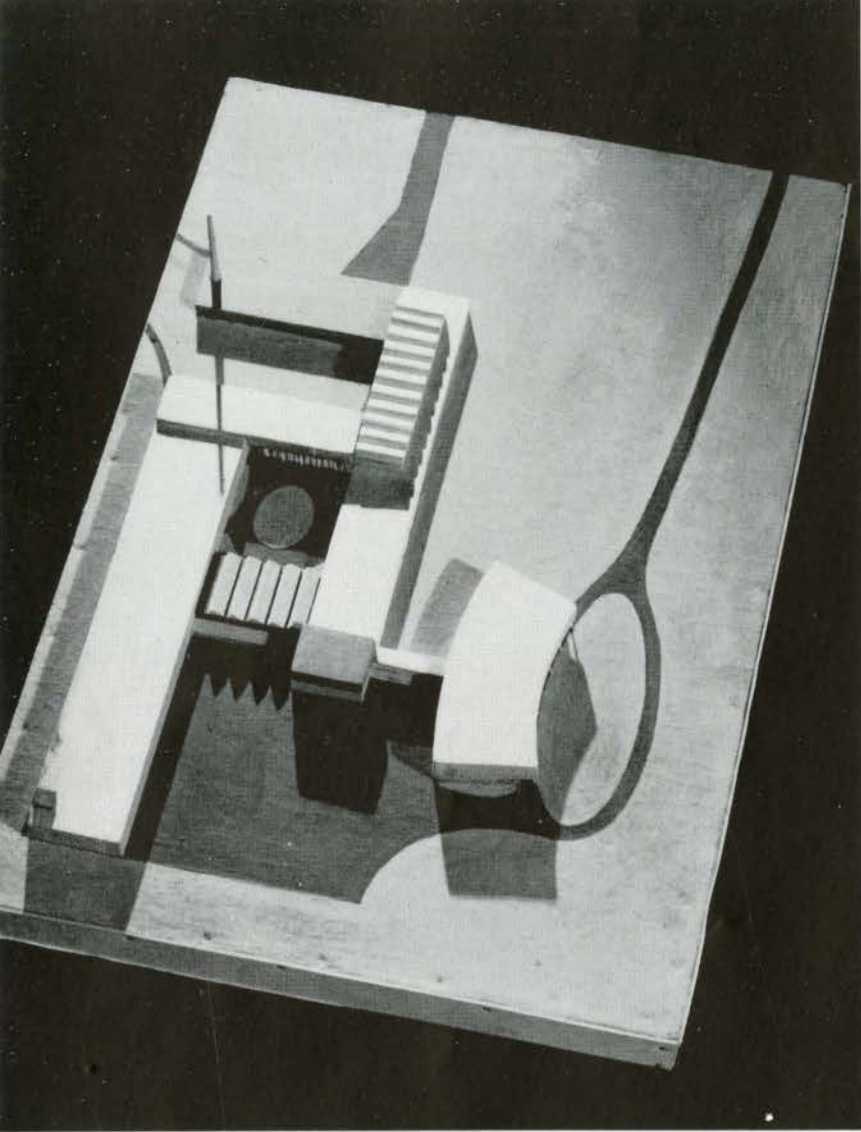
This serves as an introduction to sculpture and develops the student's sensibility to the visual, textural, and tactile qualities of three dimensional design.

4. A Branch Department Store

By J. A. MacDonald

4





T H I R D Y E A R

5. Proposed Moffat Stove
Factory by I. Grossman.

6. Vegetable Unit.

5

A C o - o p e r a t i v e P r o b l e m i n I n d u s t r i a l D e s i g n

By J. B. Craig, F. Dawes, J. C. Rankin

TODAY, Industrial Design has claimed for itself a very important place in the field of the creative arts. Industrial Design, like architectural design, requires an understanding of basic design principles. With this in mind, the third year students were given an industrial design problem and it was hoped that this would lead to a clearer understanding of the principles involved in all creative design and architectural design in particular. The project had further interest because of its organization on a co-operative basis. This was implementing the theory that students can learn from each other as well as from the staff.

The students were assigned the problem of designing five new gas ranges and a mass produced kitchen in five units. The five units were based on the time and motion study findings of Purdue University. These have shown that the average housewife takes a great many unnecessary steps and wastes much time in the preparation of a meal and established that to save as many steps as possible, there should be five completely self-contained units, each to facilitate the preparation of one part of a meal. These were a Vegetable Unit, Meat Unit, Baking Unit, Breakfast Unit and a Table or Serving Unit, each of which contained its own individual heating, refrigeration and water supply. This kitchen was christened "Eleanor."

As an example, we shall consider the Baking Unit. This was to be an appliance that contained all the ingredients, utensils and mechanical and electrical equipment necessary to do any type of baking. It included an oven of double pyrex, a cooking element with a removable cover, hot and cold running water with a grill covered drain, an electric mixer, a refrigerated drawer with its own cooling unit, bins for flour and sugar, storage for other dry ingredients, pots, pans, trays, utensils, bowls, plates, etc. It had a wooden counter top to be used for rolling (dice, pastry or what have you). These elements were arranged to facilitate maximum efficiency in production and in operation.

The complete co-operation of the Frigidaire Products of Canada and Moffats Ltd., made it possible to study the methods, techniques and capabilities of modern production. Conducted tours of the factories were arranged in groups, and the students carefully inquired not only how, but also why things were done in a certain manner. The companies supplied cut-away models and excellent illustrations of present products for student use in the draughting room. Equally vital help came from the Faculty of Household Science and the Time and Motion Study Division of the Faculty of Engineering.

For this problem, the class was divided into two parts, one half working with the Moffats Ltd., of Weston, Ontario, and the other half with Frigidaire Ltd., of Leaside, Ontario. A staff member acted as chief engineer for each division. The class was further subdivided into groups of eight, student members being allocated to each group as Time and Motion Study Engineer, Cooking Advisor (a female student if possible, since their opinions on the subject were regarded as having great authority), Production Engineer, Design Engineer and Scheduling Engineer who were to co-operate with similar members in the plant and to co-ordinate the work of various groups. The various members of the groups each submitted their own rough designs. Each team then decided which designs were most suitable and which features from the others should be incorporated in the

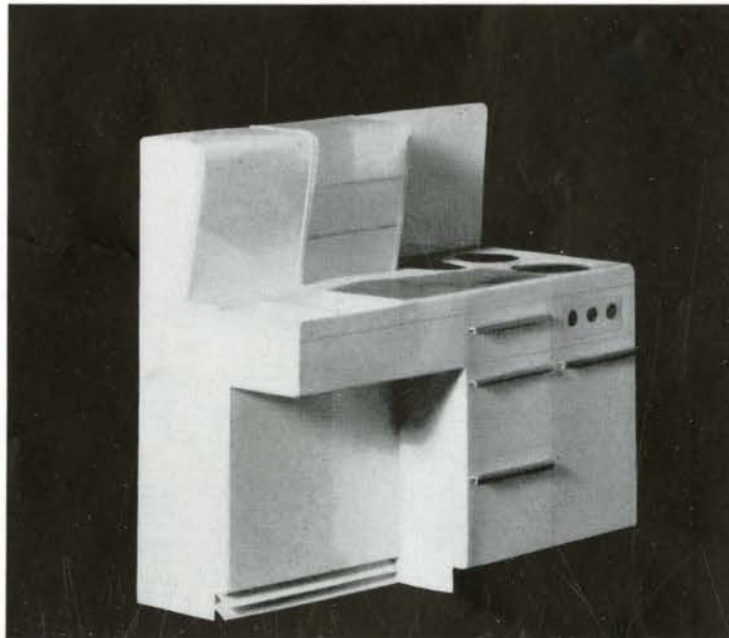
final product. Each member was assigned to prepare a portion of the presentation drawings and when the original difficulty of co-ordinating the drawings was overcome, work progressed rapidly.

The quality of the final designs clearly indicated the success of the co-operation approach.

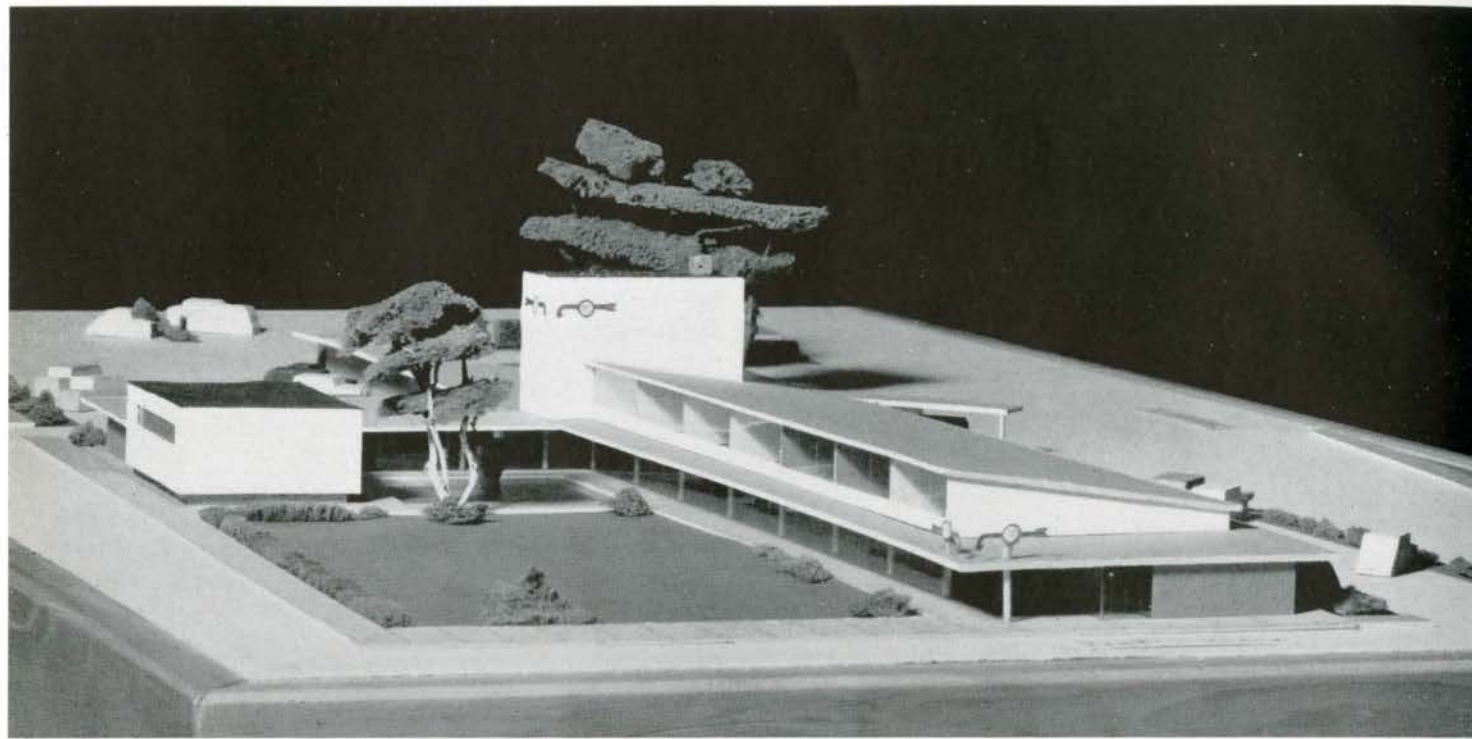
At the termination of the Industrial Design project, a new problem was introduced. Each student with the knowledge he had gained from the preceding weeks proceeded to design a gas range factory. The Moffat factory in Weston was again visited, this time with the purpose of studying the relationships of departments and the flow of parts to the assembly lines. They noted where the flow was orderly and steady and where breakdowns occurred. They discussed with the employees improvements and changes that were desirable. From these studies many good designs evolved.

This method of teaching proved to be very successful, for it showed the student that good architectural and industrial design embraces more than mere reading and pencil pushing and that close contact with materials, techniques, and the men employing them plays a necessary and important part in creative design.

6



T O R O N T O



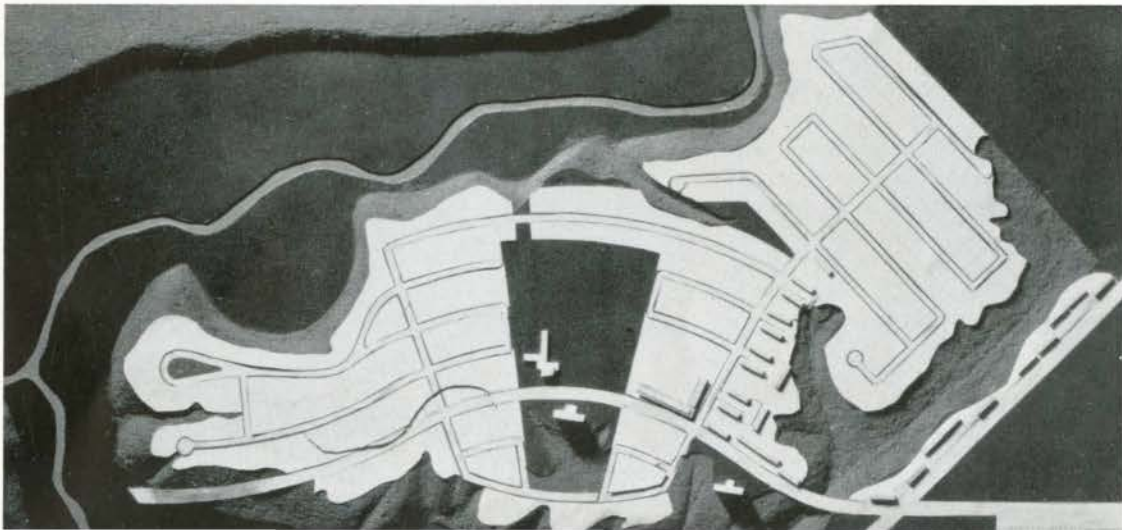
7

F O U R T H Y E A R

7. A Rapid Transit Terminal and Shopping Centre by R. G. Calvert.

8. A Planned Residential Community by D. K. Jackson, D. R. King,
J. W. Weir.

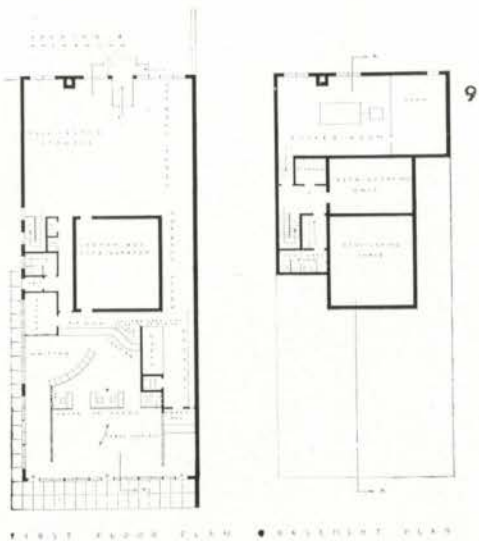
ON COVER: Hotel for Toronto Island by H. L. Hicks.



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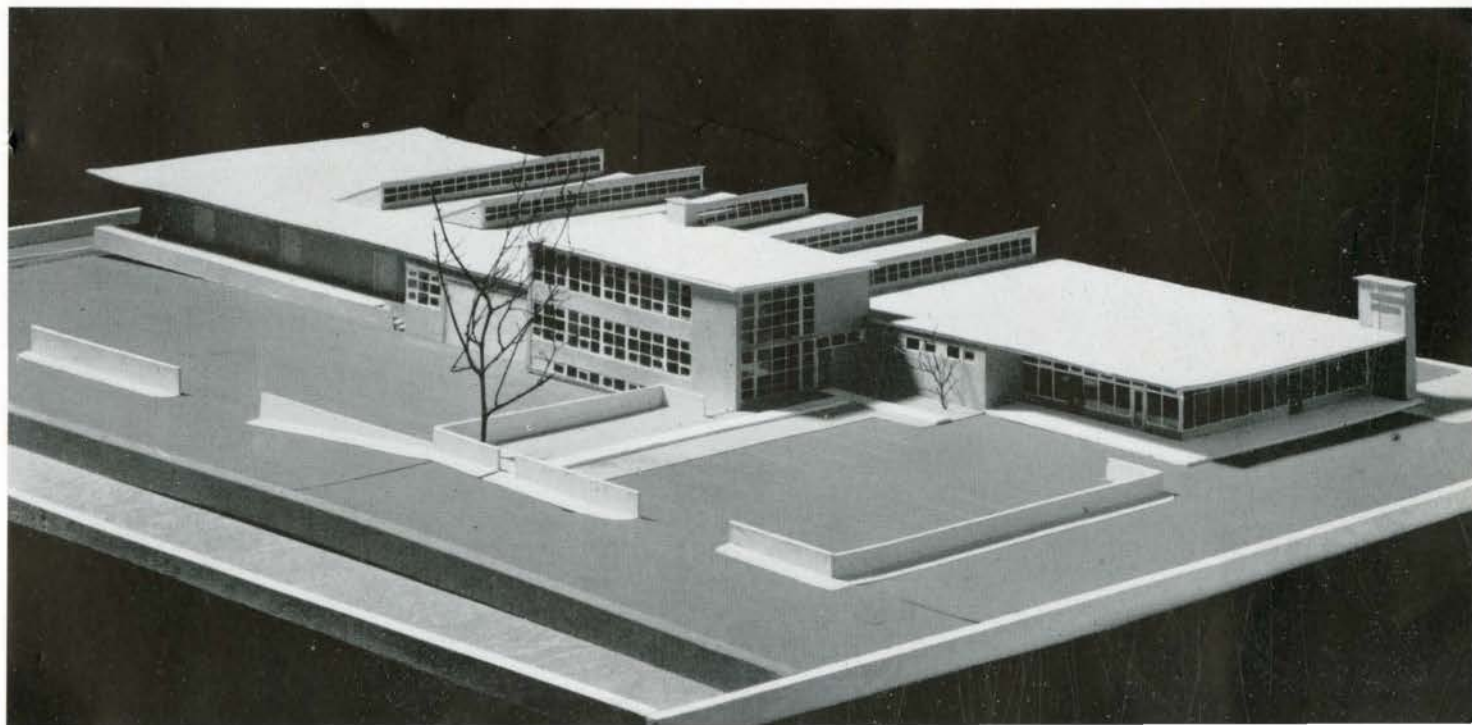
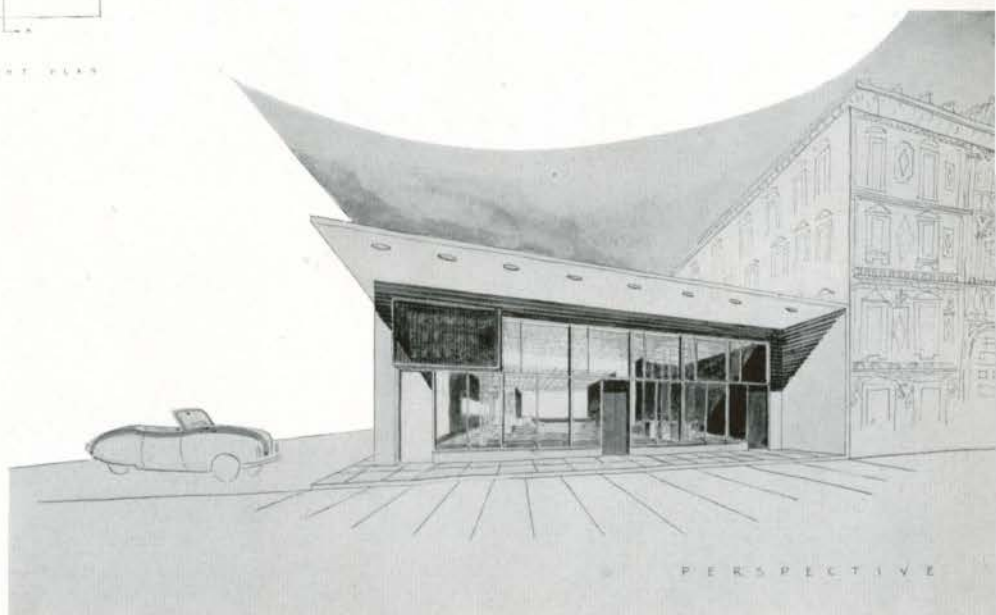
F I F T H Y E A R

Brewers Retail Store and Warehouse. This problem involved the locating and design of retail and distributing centres for the Brewers Warehouse Company.

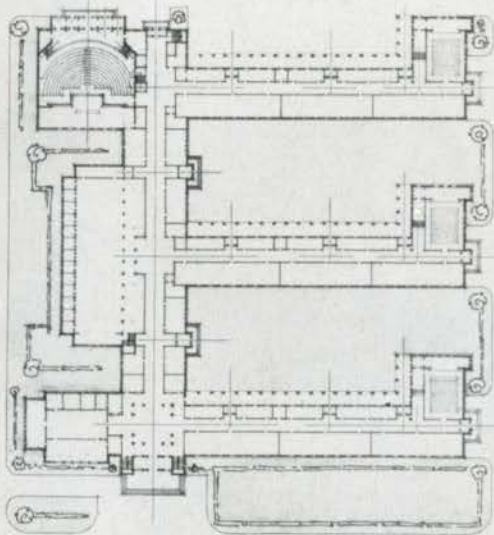
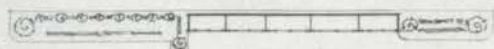


9, 10. Retail Store by F. E. Fletcher.

11. Retail Store and Warehouse by Miss J. G. Robinson.



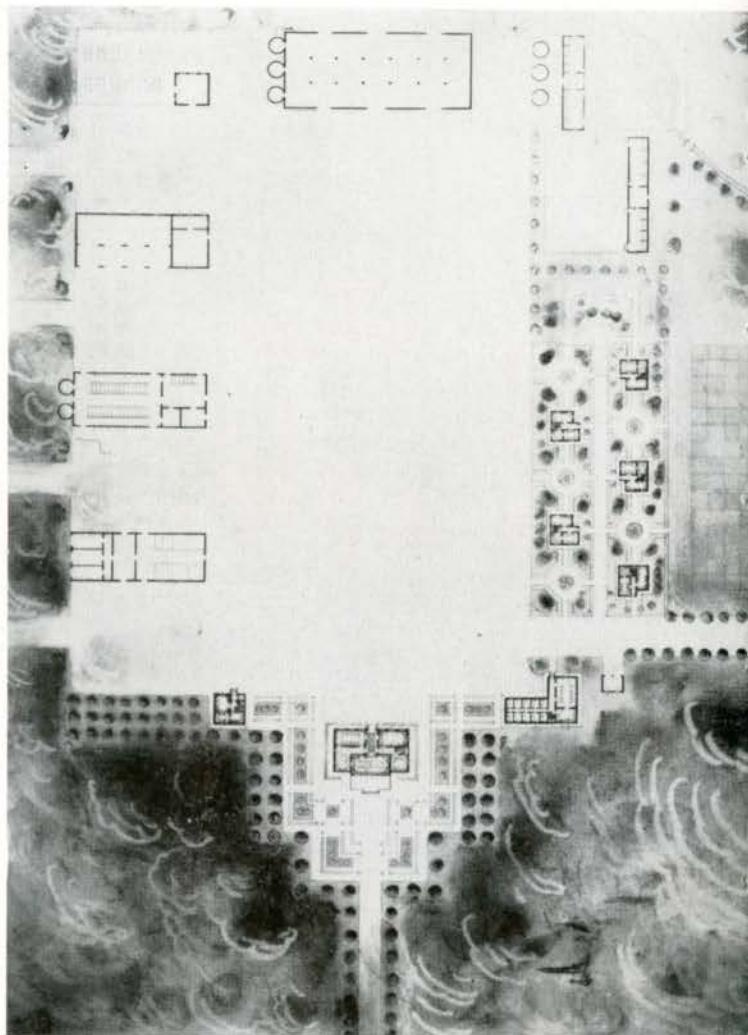
ÉCOLE DES BEAUX-ARTS DE MONTRÉAL



PROJET E/QUISSE — NOVEMBRE 47.—

UN INSTITUT DE CHIMIE
APPLIQUÉE

ECHELLE: PLAN 1/6" = 0'-0" — FAÇADE: 1/6" = 0'-0" — ANDRÉ L'HÉROULT. '49.

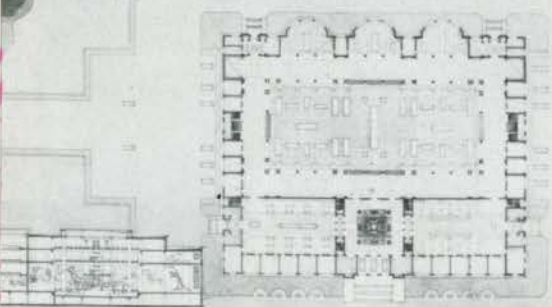


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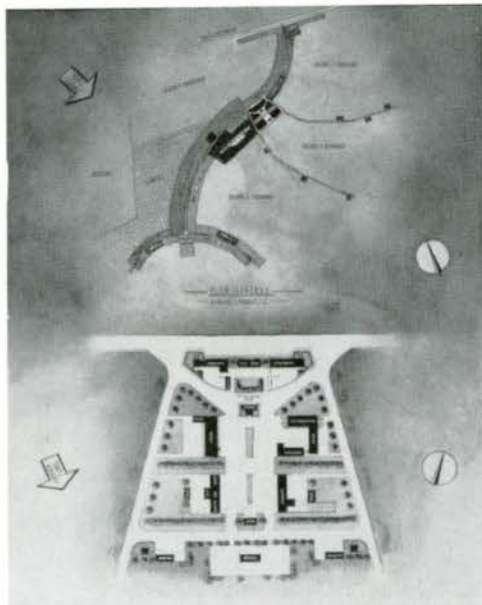
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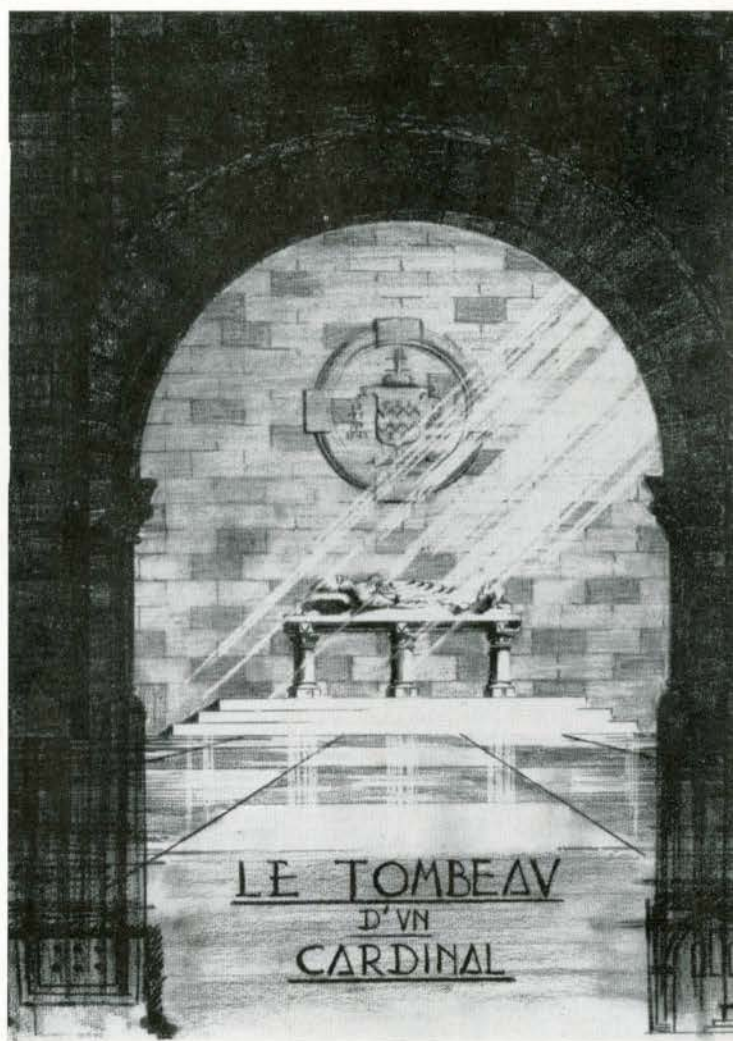


UN MUSÉE
ZOOLOGIQUE





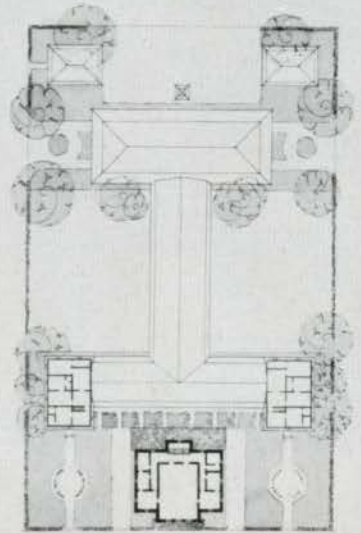
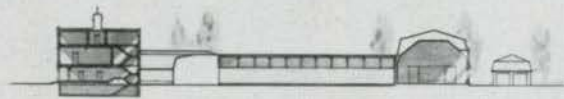
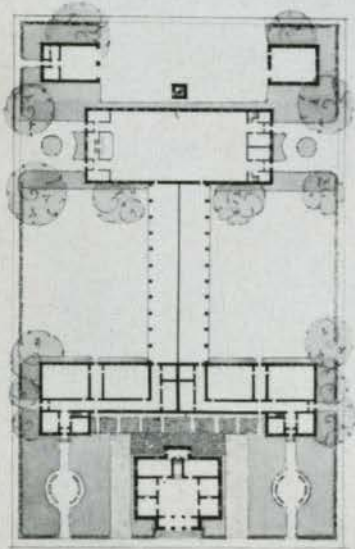
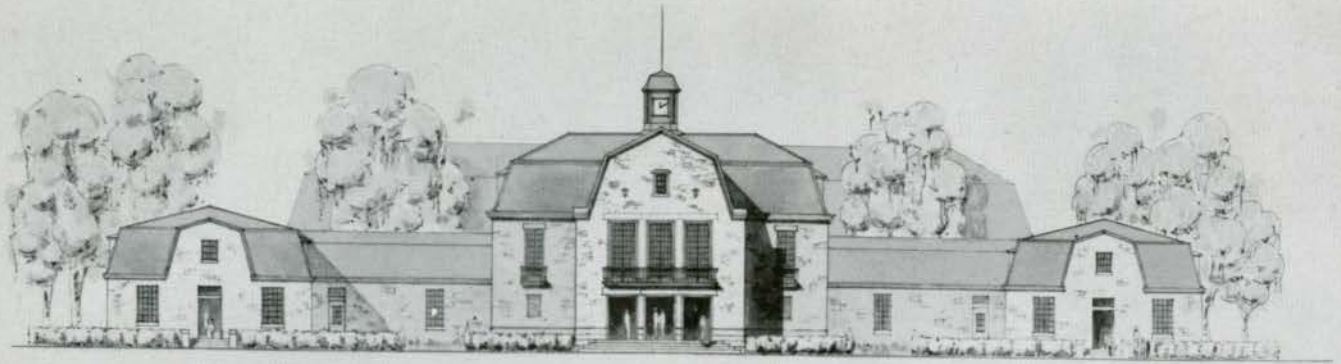
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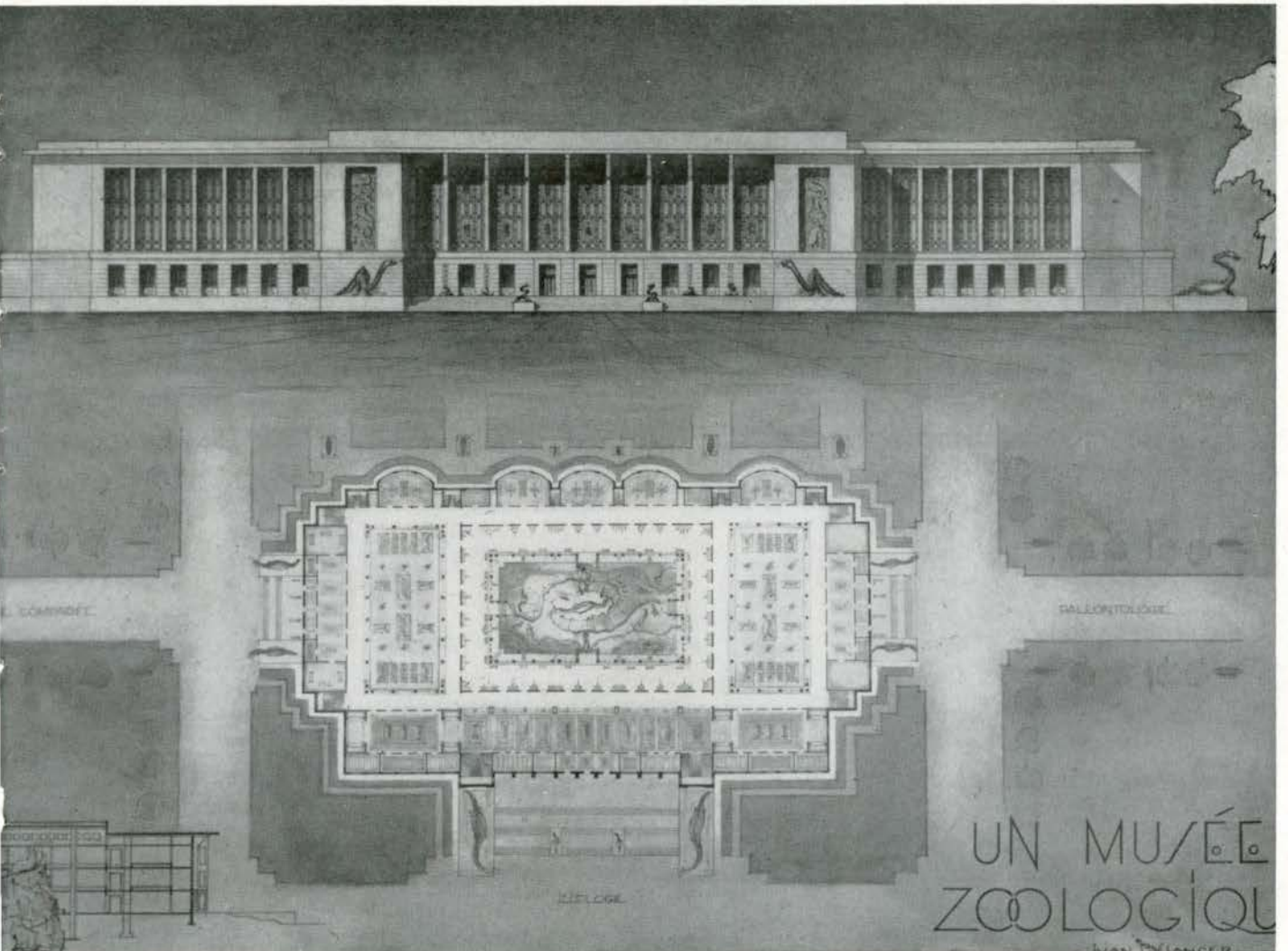
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1. Un Institut de Chimie Appliquée — André L'Hérault
2. Un Manoir Ferme — J. Matarozzi
3. Un Musée Zoologique — Pierre Roux
4. Un Centre Economique — Victor Laliberté
5. Esquisse-Esquisse, la Chapelle d'une Colonie de Vacances — J. Y. Langlois
6. Esquisse-Esquisse, le Tombeau d'un Cardinal — P. Roux

ÉCOLE DES BEAUX-ARTS



LES BATIMENTS COMMUNAUX
D'UNE PETITE VILLE

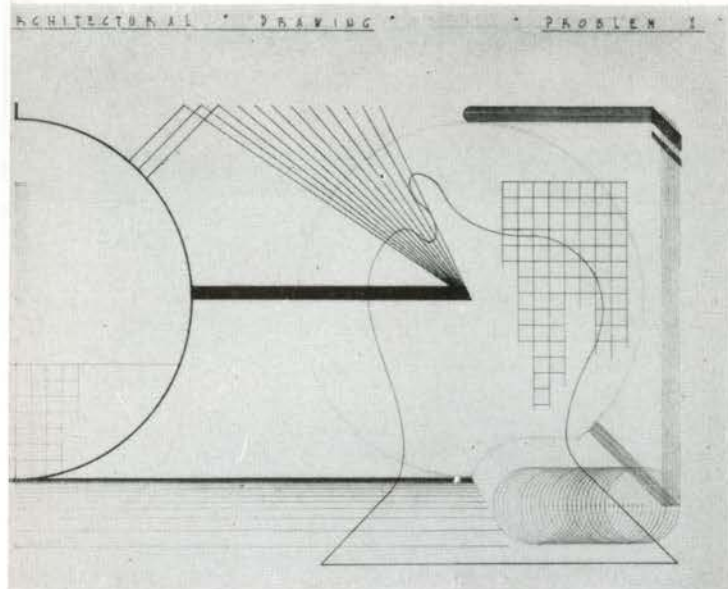


8

7. Les Batiments Communaux d'une Petite Ville, Cyrille Roy, 4th Year

8. Un Musée Zoologique, Ivan Bélanger, 4th Year

UNIVERSITY OF BRITISH COLUMBIA



1. *Architectural Drafting:* Principles of architectural drafting are taught through a series of problems covering elementary experiments in drawing and lettering, orthographic projections, descriptive geometry and measured drawings. In this course the student is trained in the use of the architects' tools and in the graphic techniques employed to study and explain architectural solutions. In conjunction with Visual Design the student is taught to think in terms of design and through Descriptive Geometry, three dimensionally.

The example shown is typical of the first experiments in drawing, First Year, in which the student employs different grades of pencils, and produces various lines of different complexities. At the same time he has an opportunity for an initial contact with creative design.

Drawn by C. A. Tiers.

DESIGN DISSECTED IN VISUAL COURSE

By C. Christopherson

1 Unique in all western Canada is the instruction in visual design given U.B.C. student architects by Prof. David Shapiro.

His students experiment with line, form, space, light, shade, color and texture. They literally dissect and variously synthesize all the elements of design.

As a result, visitors to the design workshop see exciting sculptures and curious structures vaguely resembling miniature houses.

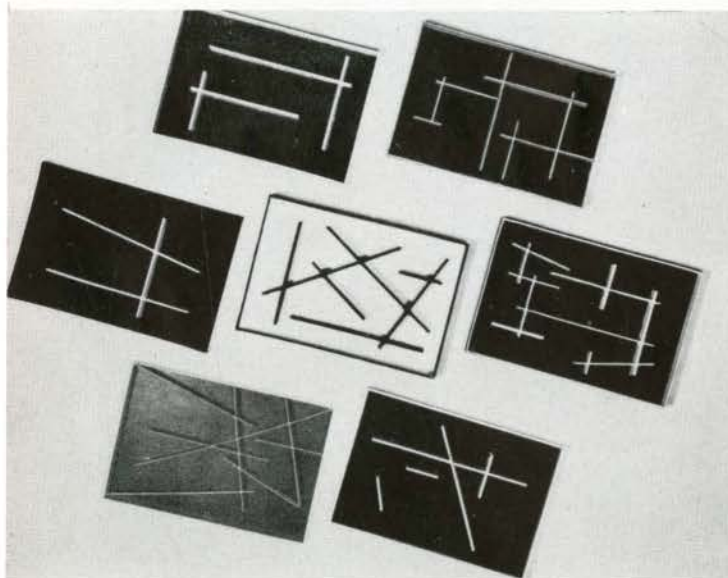
Although most visitors express delighted approval, some cannot hide the horrified suspicion that these miniatures presage a bitter future of arty but comfortless houses. Thus the inevitable, anxious question arises: "What do these represent?"

These structures do not necessarily represent familiar things. They are "space modulators," in which students enclose space in various ways and attempt to achieve flow, movement, and balance,—a sort of dynamic equilibrium. They appear strange because the problem precludes copying existing objects and avoids tradition "rules."

2 Such experiments in abstract design are important because they revive lost qualities of childhood, simplicity, keenness of perception and an honest delight in color, feel and form of materials and objects. They are important because they encourage freedom of thought and imagination and stimulate the innate fantasy and creativeness which exists in all people.

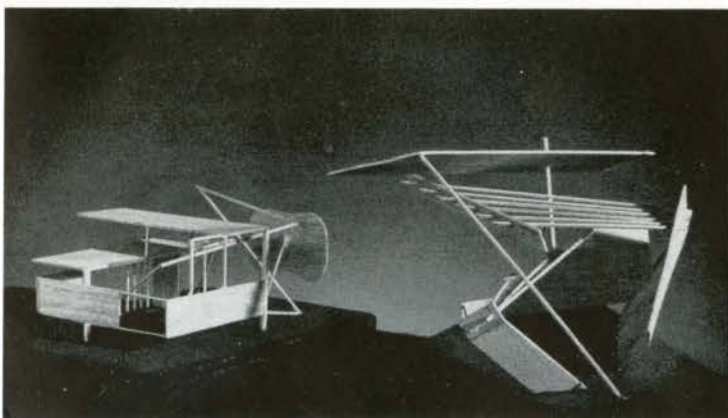
Visual design exposes ostentatious ornament as being meaningless and ugly. It teaches that good design in industry and architecture follows utility and a discriminating use of materials. It promises that sterile thinking will no longer contort modern living to fit houses designed for archaic living.

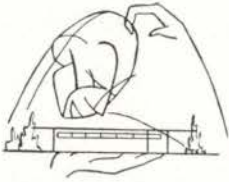
Visual design avers that the problems of today generate their own distinctive solutions and that the living and thinking habits of today generate their own authentic contemporary designs.



2. Group of three dimensional studies of the break up of the spatial field based on studies of the break up of two dimensional space, to emphasize the difference between two and three dimensional space.

3. Space Modulators by W. J. Tassie and G. D. Wylie. These follow the study of more elementary three dimensional visual factors and form an introduction to more complex and disciplined studies of space approaching the qualities of a shelter combined with textures and color. First Year.





By Trevor Glucksman

You'll know us by the wise, tired eyes, the look of having seen life. Young men grown old, because Architectural Design II has demanded of us the acute understanding that ages a man.

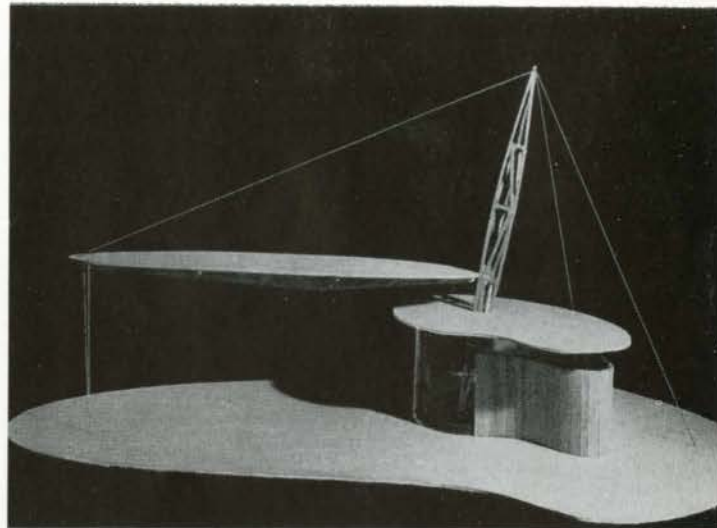
I give as an example the bus shelter which we recently designed for the site at Blanca and University Boulevard. When this edifice finally stands, and you are waiting for a bus on a rainy day, you'll sigh thanks to the man who designed a canopy-less shelter. He remembered how refreshing is a cool wind whipping moist spray into a worried face. In your casual search for the ladies' lavatory, you'll give consideration to the designer who gave intrigue to your life by hiding the powder room.

Passing someone in a tight doorway may mean inching sideways so that you can look long and searchingly into the eyes of the stranger sharing the passage. Squeezing through in this manner may require enough time to make your companion more than a nodding acquaintance. The designer of this portal was of keen social consciousness and through his efforts you now have another close friend.

Of course, other less mundane considerations, principally the "aesthetic," are very important. Injecting beauty and poetic grace into others' lives in the form of serene structures with a monumental repose, makes us feel proud and noble. Scale models of our efforts are on display. If you should see them, there is, of course, no insurance that you will be gripped by the same feeling of nobility, and the possibility that you will feel nothing at all, to the point of being numb, is not too remote. Illustrative of the aesthetic approach are the space modulators we contrived. To modulate space successfully means, essentially, to break down the basic elements of a structure's design, and recombine them into an abstract, pleasing facsimile of the original. This doesn't necessarily imply that the modulator's success increases with its disparity from the original, but as I have indicated, modulating space is tricky, and one is never sure.

We also had our fling with a store front—a children's toy and clothes mart. This was a refreshing experience. It demanded a thorough knowledge of the child mind and its lack of sales resistance, as opposed to the parent mind, which has tons of resistance in reverse proportion to the cash on hand.

If you should perchance visit our campus and see the thoughtful youths who trudge from our Hut to the Totem Bar (hopeless coffee-drinkers), salute them, or offer to pay for their coffee, or in some quiet way acknowledge their unselfish crusade to beautify the world.



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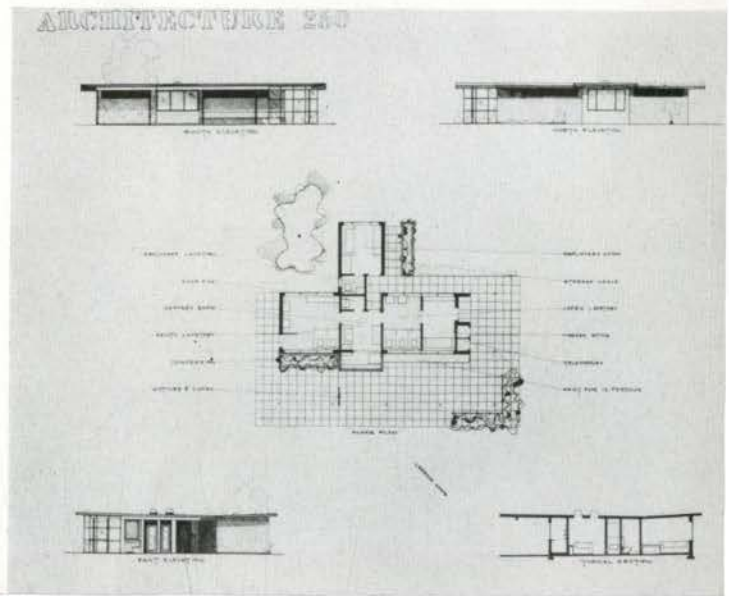
4. Entrance and Gate Lodge to fashionable Golf Course near Victoria, B.C. Presentation and full working drawings were required. Rex Raymer, II Year.

5. 6. Bus Shelter for West Point Grey. Besides presentation drawings and a model a full set of working drawings and details were required all based on the use of modular co-ordination. C. W. Wright, II Year.



5

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BRITISH COLUMBIA

INDUSTRIAL DESIGN AND PREFABRICATION

By Don Jackson



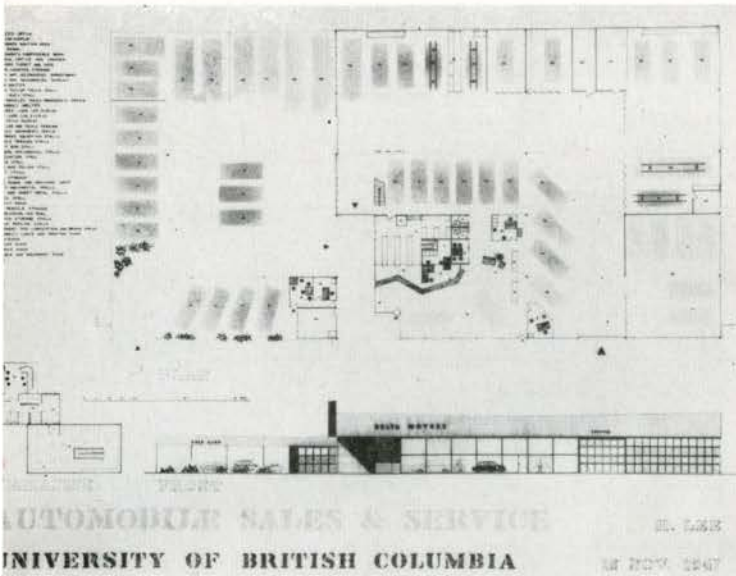
7. Chairs designed for stacking and to be mass produced. Problem included shop drawings and manufacturing schedule. Jim Cochrane, Harry Lee and Ray Toby, III Year Industrial Design.

Industrial Design and Prefabrication, strangers on the curricula of most Canadian Architectural Schools until recently, have been introduced at U.B.C. for the first time this year. The course is given to third year students by Mr. Paul Wisnicki, aeronautical engineer with wide experience in industrial work.

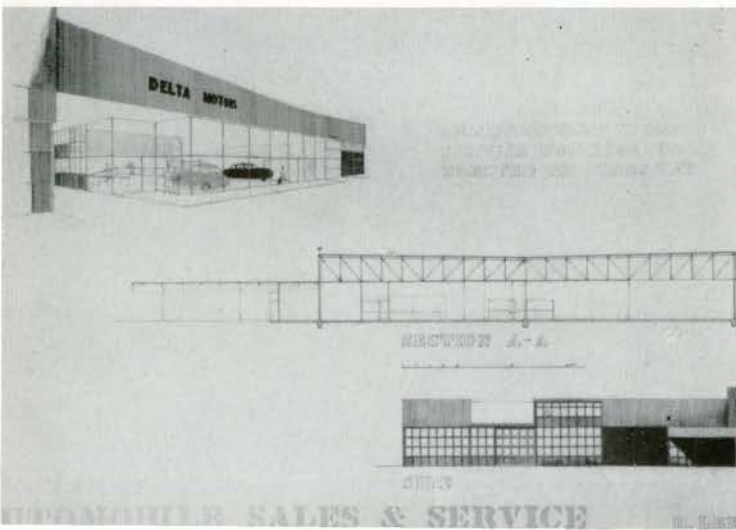
The course has covered wood, plywoods and veneers, glues, plastics and metals as well as the machines and manufacturing procedures necessary to produce, process and finish these materials. The course gives the student an understanding of the manufactured materials with which he will have to deal during his architectural career, how these materials are produced, the tools, machines and skill behind the finished product.

Classroom instruction has been correlated with laboratory problems in the design, thus far, of such household objects as chairs, tables, and lamps; requiring manufacturing and presentation drawings, scale models, research on materials and methods of manufacture, and a suggested plan and schedule of production. A concluding problem will deal with prefabrication and the manufacture of building components.

The students have the impression that the course has given them a thorough general knowledge of materials and of overall industrial production methods which will prove of value in the development of an analytical approach to designing through a knowledge of the limitations and potentialities of manufactured building components, and as to whether materials, equipment and components used serve their purpose well and as to whether they can be produced efficiently and within a reasonable cost.



8



8. 9. Automobile Sales and Service Building. The design was used for Architectural Engineering calculations as well as for Heating and Ventilation computations and choice of equipment. Harry Lee III Year—Architectural Design.

9

DESIGN

By Fred Lasserre

The curriculum of the Department of Architecture at U.B.C. includes three subjects titled "Design":

- Visual Design
- Industrial Design
- Architectural Design

The last springs out of the merging of Visual Design with an understanding of materials and methods of construction. Architectural Design cannot be developed ahead of a knowledge of construction and materials necessary for the execution of the Design. Architectural Design problems for that reason are set in relation to the students' knowledge of construction. Until the student is capable to interpret his design in actual construction drawings his creative and aesthetic sensitivity is cultivated and developed in the course on Visual Design. During the same period he receives instructions on Building Materials, Elements of Construction and Strength of Materials and Structures.

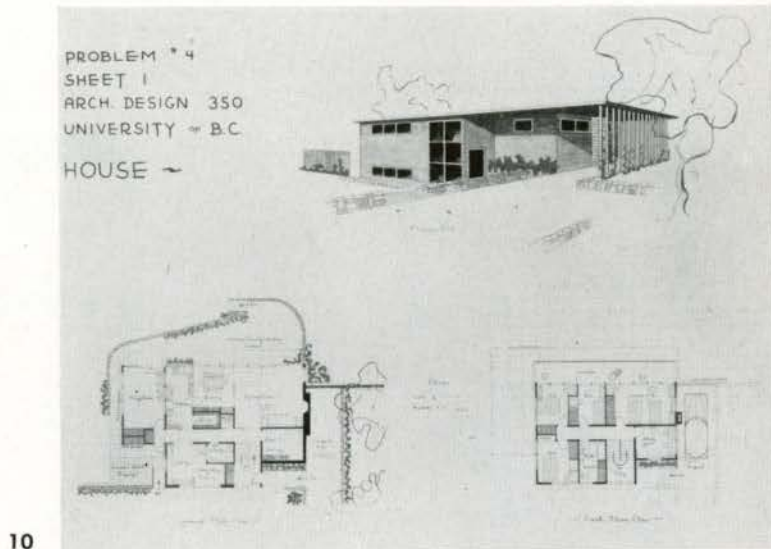
Planning is essentially an analysis of human requirements and it is taken for granted that the plan of the structures must function. To assist the students in the planning process a course in the Elements of Architecture is given in the First Year and in the Theory of Planning in the Second Year.

By the Third Year the student is ready to design his structure, about the necessary planning requirements, in such a way that he can understand the basic construction needs and aesthetic needs which that structure will require. From now on his studies are primarily directed towards organization, integration and refinement.

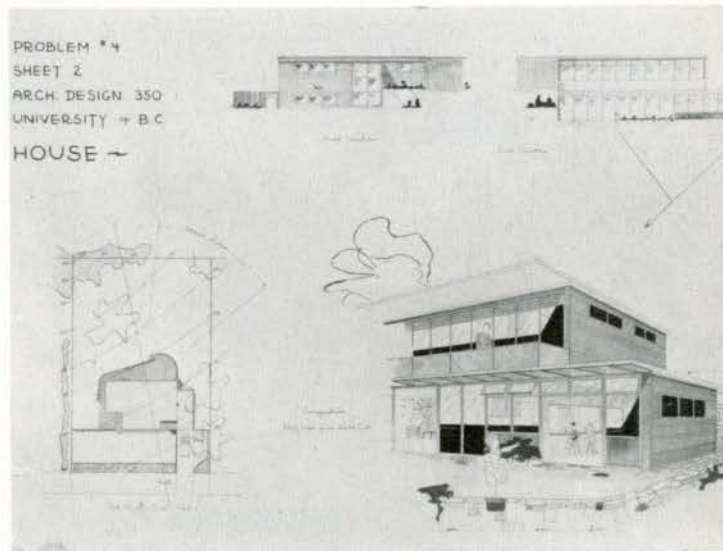
One of the most important aspects of this further development is the work in industrial design which leads the study of construction into the contemporary field of industry and mass production.

It is important to remember that our Third Year is only in its Second Year of Architecture and that the Department of Architecture at U.B.C. is not yet two years old. We are working without precedents or tradition and the student's lack examples of other students' work to which they can relate their sphere of knowledge and observation. For these reasons the staff is well pleased with the work accomplished.

All photographs by Tony Archer.

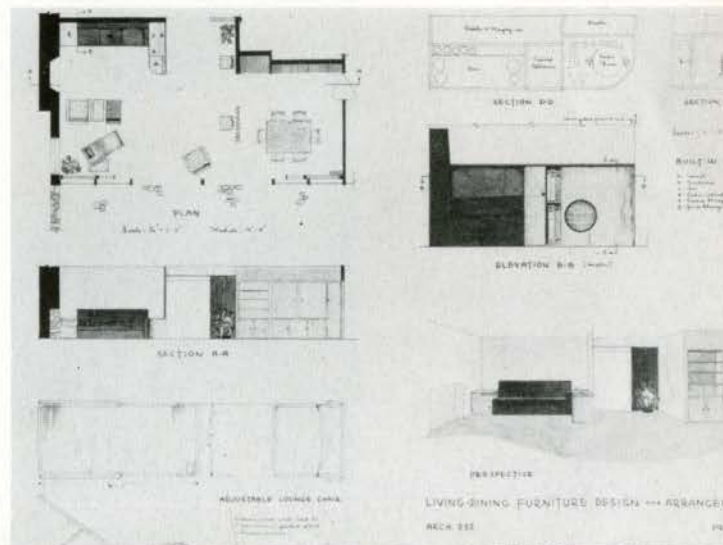


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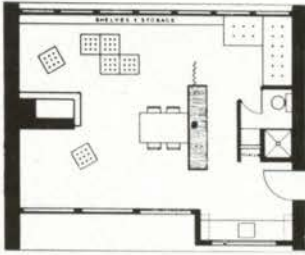
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10, 11, 12. Upper Middle class house on a steeply sloped site, this design has been studied in working drawings and details, in Landscape Development, in Interior Design, and for Mechanical Services. A model is being made incorporating the changes resulting from these studies. Don Jackson III Year.

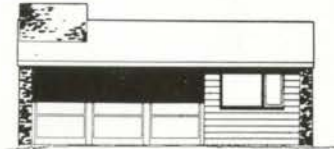


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M c G I L L U N I V E R S I T Y



SCALE 1/4" = 1'-0"



SOUTH EAST ELEVATION



NORTH WEST ELEVATION



END ELEVATION



J.D. 2ND YR ARCH 21 NOV 47

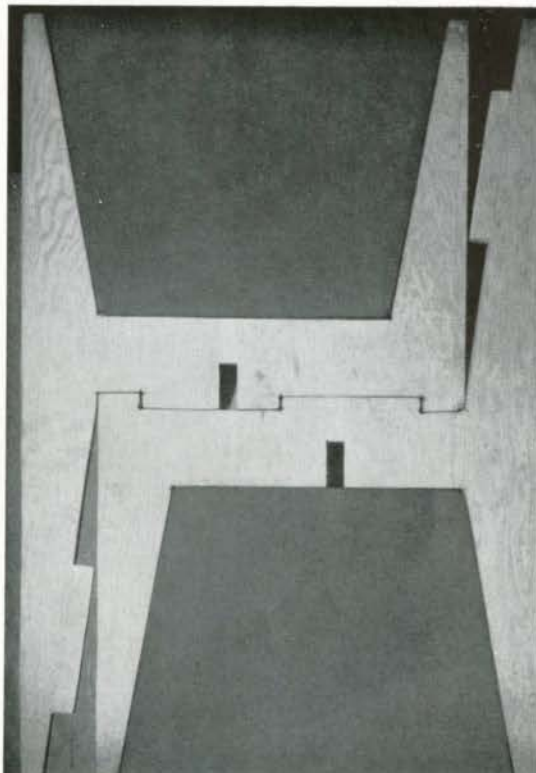
Weekend House

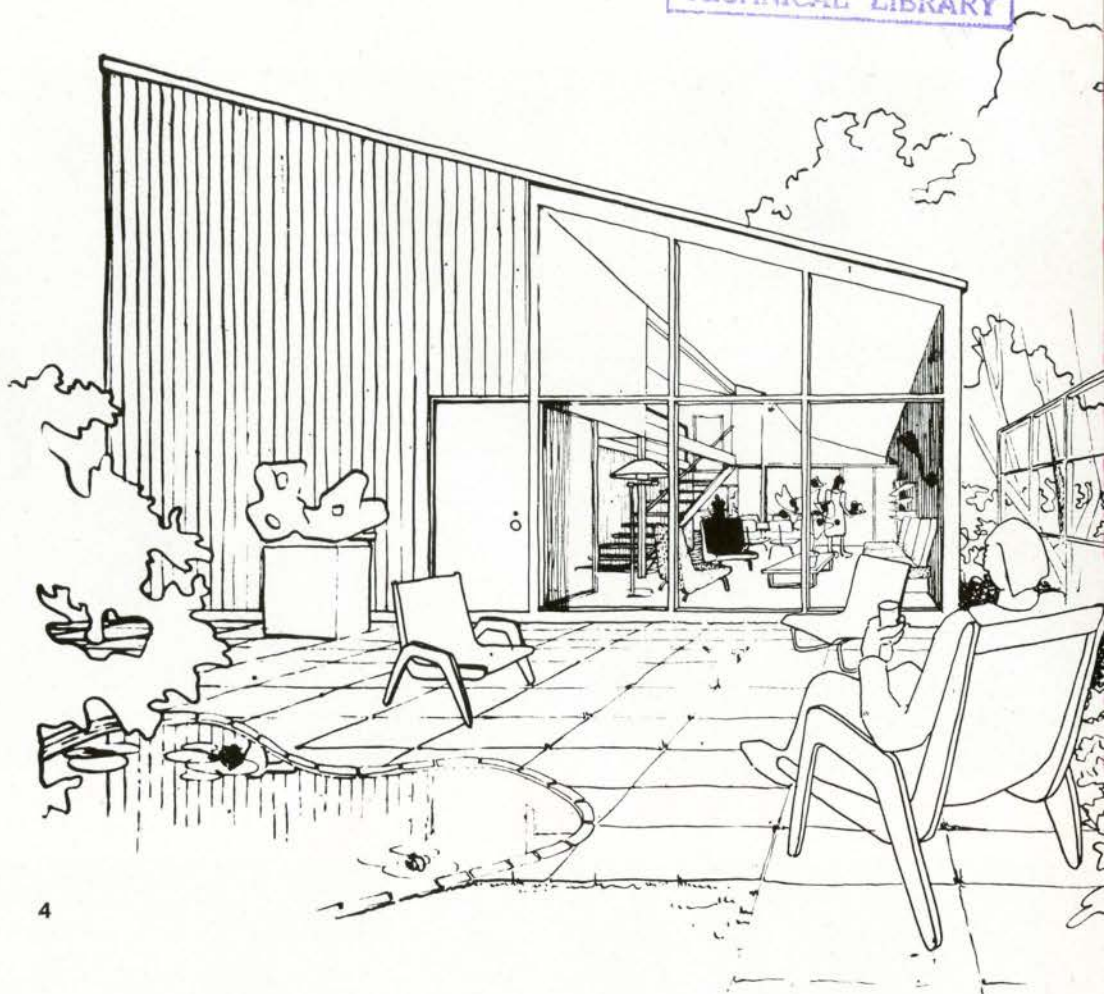
2nd Year Problem 1947 — 1948
by Joseph Hugh Donahue

Plywood Chair

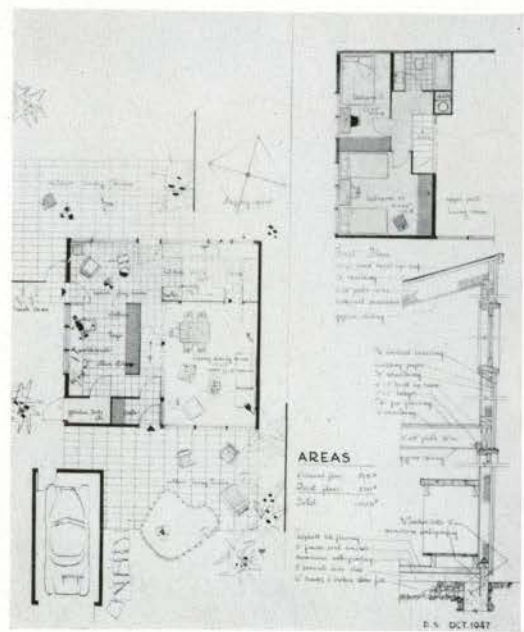
Design Work Shop
Problem 1947 — 1948

G. Desbarats, 5th Year

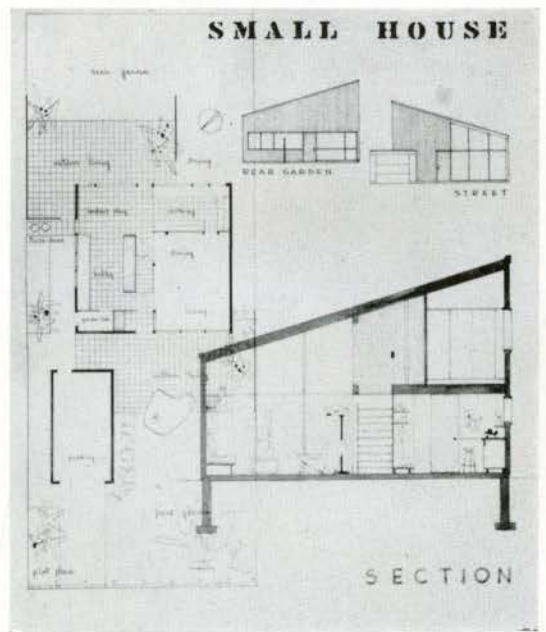




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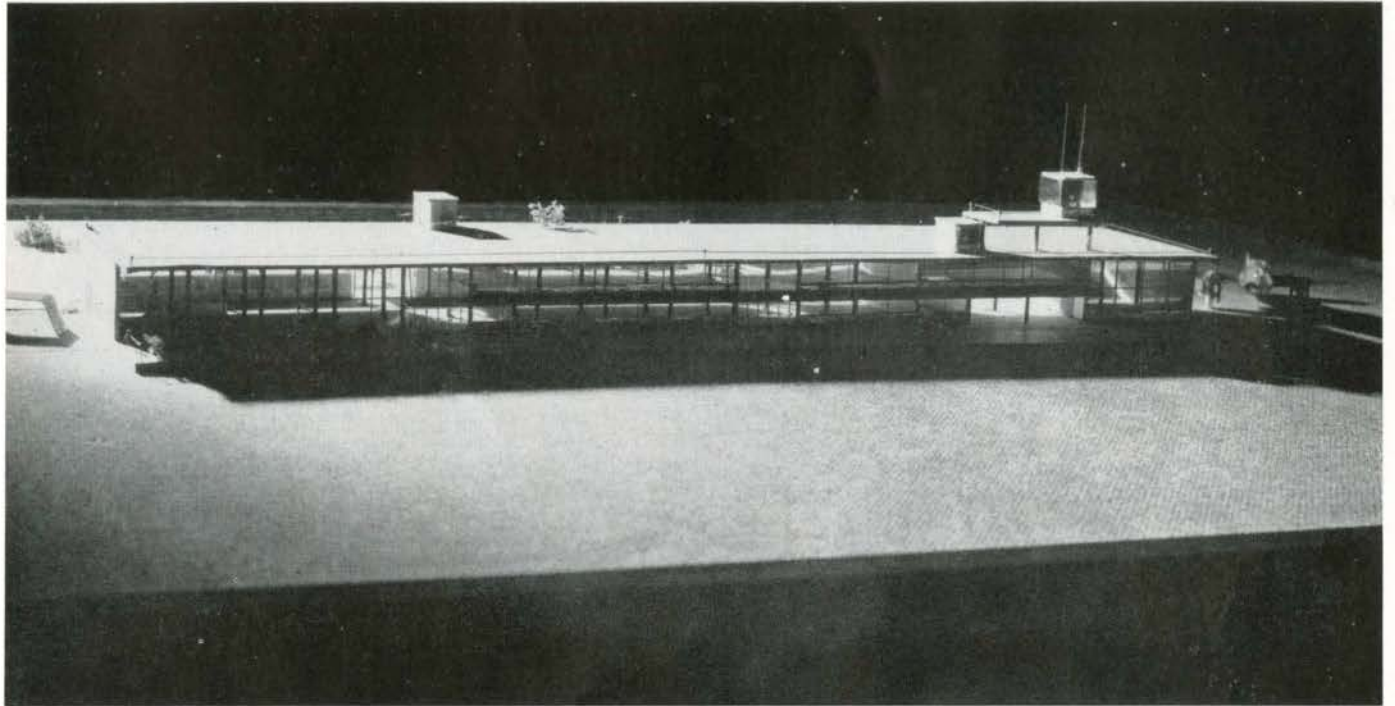


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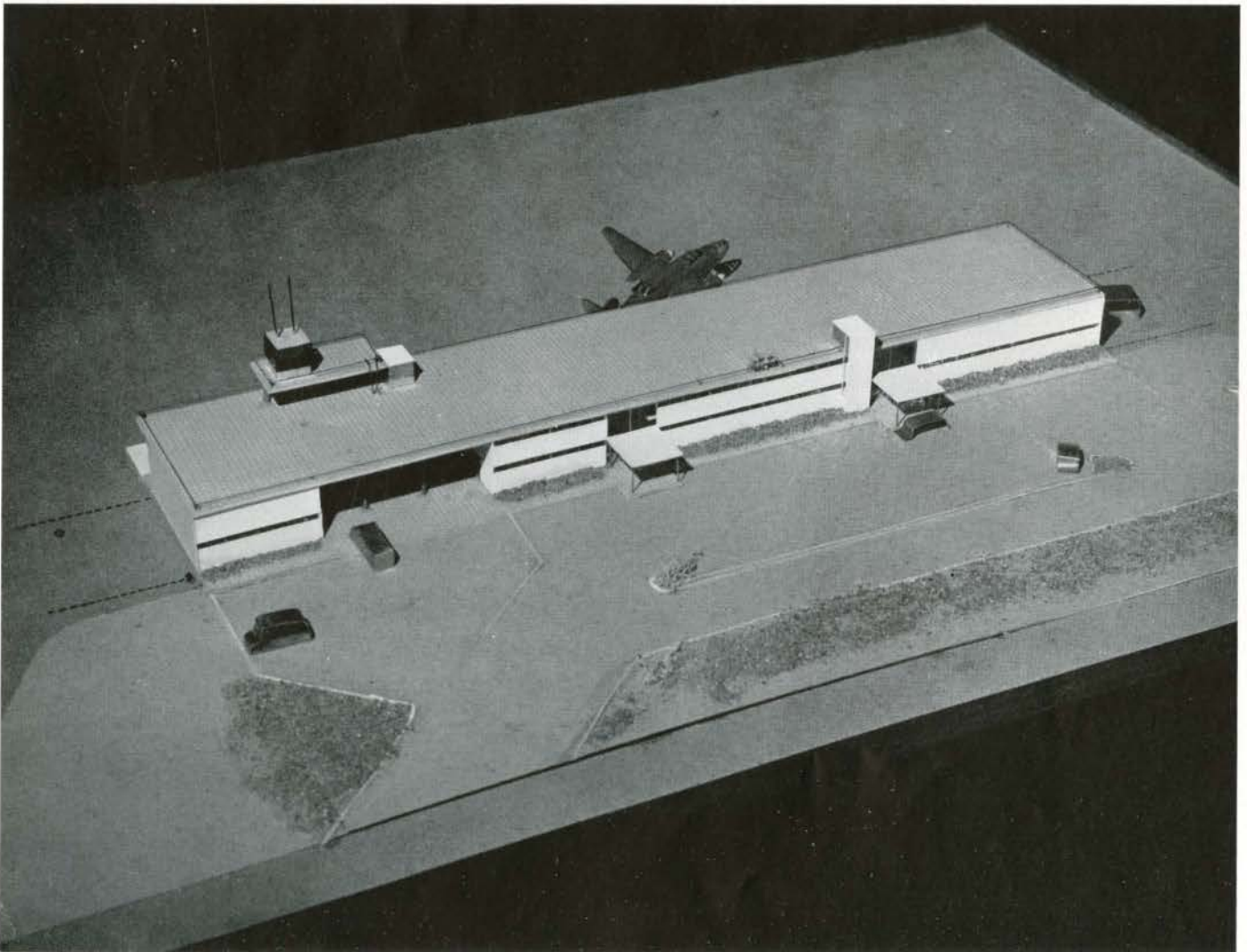


4, 5, 6, Small House
3rd Year 1947 — 1948
by Douglas Shadbolt

M c G I L L



7



8

7, 8, An Air Terminal Building

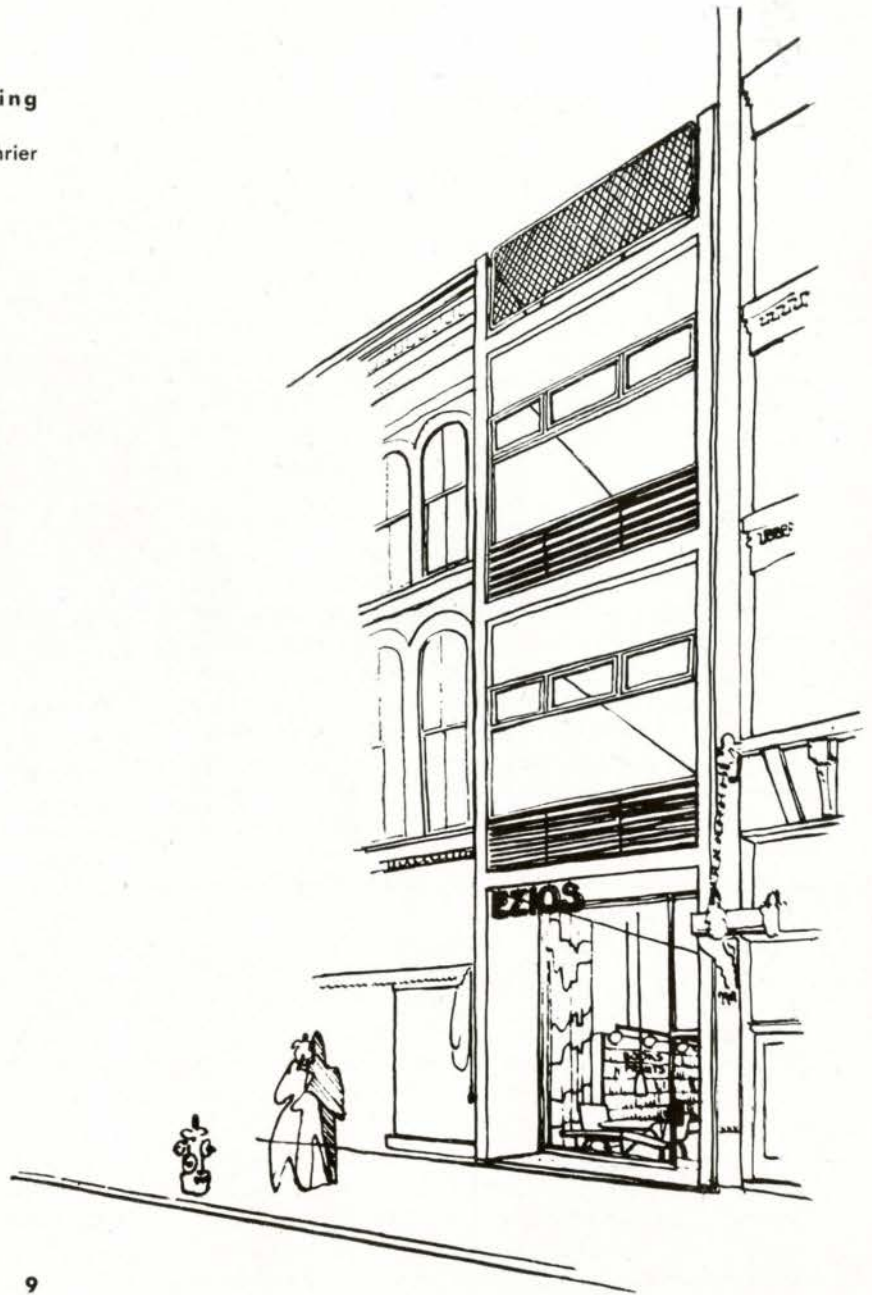
4th Year 1947 — 1948 by Arnold Schrier

9, 10, Bookshop

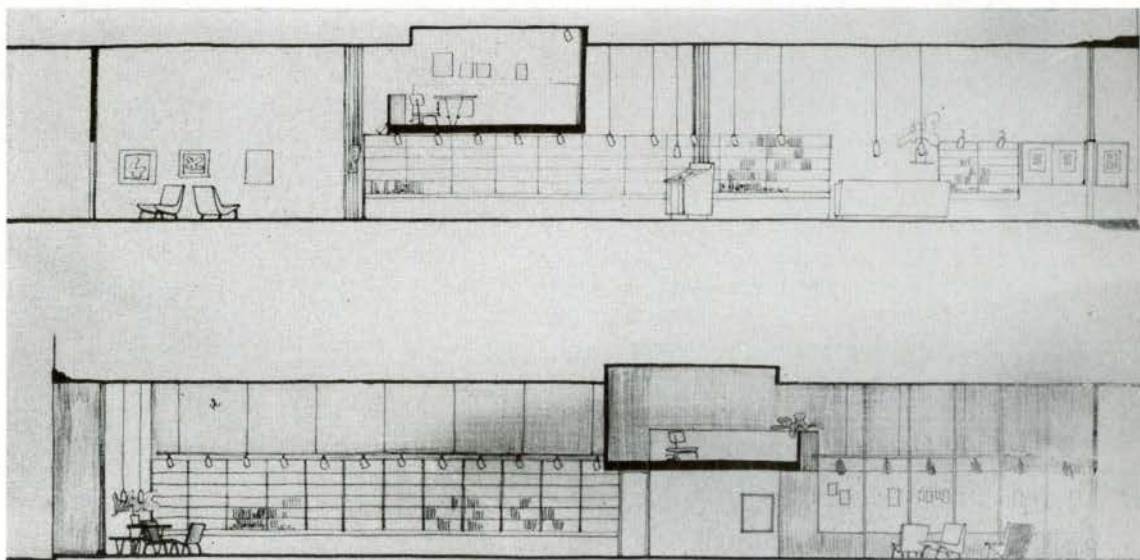
Sparke Street, Ottawa.

3rd Year 1947 — 1948

by Douglas Shadbolt



9



THE PHAROS OF ALEXANDRIA by Michael Ellwood

The following article is based upon a second-year term paper which was an investigation of an ancient building. Term papers of this sort are intended to get the student into the library, to encourage him to dig for information, and to find his way around in books.

The Lighthouse

When Alexander viewed the flat rocky western coast of Africa, he saw the possibility of a great city which would become the hub of trade between Greece and Egypt. It had two harbours which were protected by outer reefs, and running parallel with the coast, about three-quarters of a mile long and over six hundred feet wide, joined to the mainland by a narrow causeway, was the island of Pharos. The island and reefs offered protection from the sea, but some sort of guide or beacon was needed to guide the ships into the harbour. The eastern promontory of the island of Pharos was the obvious site for a lighthouse and was so picked because it was more prominent for the larger and more important harbour on the eastern side — the Royal.

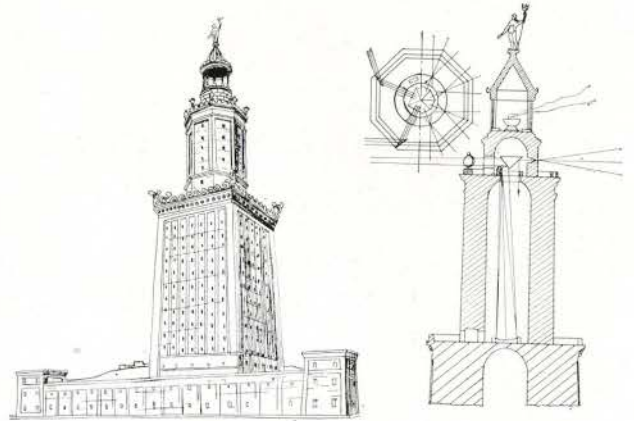
When Menelaus the Greek landed on Pharos (it was really called Pharaoh's or Prouti's island), it was a desert island made of limestone. It was close to the African coast and to the estuary though not the exit to the Nile. It was protected from the sea by reefs. There was nothing to be seen on the island, and its shores were inhabited by seals.

Even before Menelaus some civilization had made a harbour on the western side but this, with its quays and jetties, had been lost when the island sank, as it had been doing slowly over the ages. The island, in Alexander's estimate, was too narrow for the great city he had planned and thus Alexandria was founded opposite the island on the mainland.

The island was subject to earthquakes; one in the twelfth century destroyed part of the lighthouse, and one in the fourteenth century completely destroyed it.

Pharos was originally a small island which became joined to the mainland by a mole a mile long called the Heptastadium. This mole ended up at the head of the present Grand Square. Silt has now widened and built up the mole to about twice its original size. Most of the island of Pharos has been weathered away by the sea, and a great portion of it has sunk into the sea.

On the east of the mole was the great harbour, now an open bay, and on the west the port of Eunostos, which is the modern harbour.



In the preface of "The Seven Wonders of the Ancient World" E. J. Banks says:

"The editor of a monthly periodical once desired a short article on the Seven Wonders of the Ancient World. To write it seemed an easy task, for long wandering in the Orient had led me to sites of several of these ancient marvels, yet when I attempted to name them, I could not. Dismayed at my ignorance, I asked my learned friends to name them; they succeeded no better. I consulted the encyclopedias, only to find that some of the ancient wonders were not considered worthy of a brief descriptive paragraph; the information given of others was meagre and antiquated. Confident that scores of authors must have been inspired to write books about them, I searched through the largest of libraries. The discovery of two books was the reward. One was a dissertation in Latin by a student in his quest for a university degree; the other, a generation old, related the familiar facts surviving from ancient times; it ignored the valuable results of modern research."

It seems amazing that so little was recorded by the ancients of a building such as the Pharos of Alexandria, which they considered one of the outstanding marvels of their time. Of its existence there can be no doubt for many saw it and have mentioned it in their writings, but no one ever gave a full, clear description of it. We would not attempt to build such a structure nowadays without the use of structural steel and a very exacting technique of construction must have been used by the ancients in building it. Certainly it must have required great skill, for it is recorded that the Arabs, after they had torn down the upper portions of the lighthouse, were unable to rebuild it.

The builders chose a very poor site, inasmuch as the eastern end of the island of Pharos was constantly

sinking, until now the original site is under water. Perhaps they did not realize this, but if they did it seems they did not expect the lighthouse to stand forever, or were very short-sighted as to the future of the lighthouse in their choice of site. However, perhaps the strategic position was the ruling factor in choosing the site.

They made use of local materials for its construction and used slaves for the labour. It would have been a marvelous job for an unemployment plan, but it seems to have been an unnecessarily large building and rather a waste of manpower. The bulk of the expenditure probably went to feed the slaves.

Why such a huge building was made poses a question. It does not seem to have been a monument but was constructed for a functional use, that of guiding ships into the harbour. Modern lighthouses, which are on the average about 130 feet high, have a lighting range up to 24-30 miles out to sea; even if they were higher their range would still be from 24-30 miles. The intensity of the light falls off very rapidly and is the determining factor in the range of the lighthouse. The means of illumination at Pharos was by lanterns and a beacon bonfire approximately five hundred feet up, but the intensity of light was relatively small and it seems the great height of the structure was unwarranted for the range of its illumination.

Our largest lighthouses of today are kept by five men at the most. The Pharos had three hundred rooms, indicating a terrific staff for its upkeep. Naturally they would need more men to handle their primitive fuel situation, but the great number of men needed for its upkeep seems out of proportion today.

It is a pity that the secret of the wonderful mirror was lost with the lighthouse, as it was probably the principle of the telescope, which was not to be rediscovered for another seventeen hundred years. The people who built it were great astronomers and it is quite likely that they did have a type of telescope to study the stars. Herman Thiersch in his book on Pharos offers some diagrams showing how the mirror probably worked.

Great credit must be given to the ancient builders who built this immense building with very few tools. It was a building feat which required precise knowledge and workmanship.

E. J. Banks says that the lighthouse of Pharos was begun in the reign of Ptolemy I by the architect Sostrates of Cnidos. Other books say it was begun in Ptolemy II's reign, during the years 285-247 B.C.

The lighthouse was erected on the eastern end of the island of Pharos and was made of local limestone, of marble, and of reddish-purple granite from Assouan. It

stood in a colonnaded court that covered most of the promontory. Strabo, who saw it, says it was a "many-roofed" design, by which he probably means many-storeyed, each diminishing in size. Actually it consisted of four storeys. The bottom storey was square, pierced by many windows and over two hundred feet high. The Arabs like to weave Alexander's name into their legends and say that he cast all types of material, including stone, brick, granite, gold, silver, copper, lead, iron, glass, etc., into the sea to test them and found glass to be the only one unimpaired. The glass was shaped in the form of crabs and upon them the lighthouse was built. Perhaps the Arabs were correct in saying that the tower was built of the hardest Tiburite white stone, bedded in molten lead and so firmly set that the joints could not be loosened.

In the bottom storey there were rooms (estimated at over 300) where the mechanics and keepers were housed, and its mass was threaded by a spiral ascent, probably by a double spiral. There may have been hydraulic machinery although most likely donkeys climbed up the low grade spirals with fuel for the beacon on their backs. The storey ended in a cornice and in statues of Tritons; here too, in letters of lead, was the inscription of the architect: "Sostrates of Cnidos, son of OEniphanes, to the saviour gods: for sailors." Other accounts say that this inscription was carved in the granite and that the original inscription was in the name of the king, engraved in cement, which later fell away leaving Sostrates underneath. However, this seems to be legend and it is thought the king actually allowed Sostrates to be the dedicator.

The Arab Makrizi in his description says that the inscription faced north, i.e. seaward, and consisted of letters of lead let into stone, each letter being a cubit high and a span wide.

Another account of the first storey states that the Arabs who saw the lighthouse described it as being 121 cubits (about 180 feet) high, and on the summit was a broad terrace commanding a wide view of the sea. It was decorated with columns and balustrades and ornaments of marble. A shaft reached from the foundation through the centre to the very top, up which the fuel and other necessaries were raised by a windlass. A spiral stairway, encased with marble slabs, encircled the central shaft. Above the second stage the stairway occupied the entire structure. The third storey, which was circular, was probably not far from twenty feet in diameter. This is also held in another account, by Forster. Instead of a stairway in the first two stages, an inclined plane of a very gentle slope led upwards, upon

which a loaded horse might be driven to the uppermost chambers.

Banks says that the first two storeys contained over three hundred rooms and a guide was needed in order not to get lost. The second storey was octagonal and, according to Forster, entirely filled by the ascending spirals. The third storey was circular and on top was the lantern tower. The lantern itself is a puzzle, because a bonfire and delicate scientific instruments appear to have shared its narrow area. The greatest of the marvels of the Pharos was the mirror on the summit. It was thought to be a polished metal material or polished glass. It was very big and heavy, because it is said once the Arabs moved it and were unable to get it back up in its place. It seems it had magnifying power, for the storey goes that ships far out to sea could be seen, and even foreign lands. This was probably the forerunner of the telescope. Also, it has been said that it could burn ships up that were invading the port. The mirror probably reflected the sun's rays far out to sea, further than the eye could see, acting as a beacon, and if the sun was obscured smoke from the tower guided the sailors in. At night lanterns sent out their less powerful rays.

Forster says that "standing on the lantern, at the height of five hundred feet above the ground, a statue of Poseidon struck the pious note, and gave a Greek air to Africa seen from the sea." There were other works of art; three statues, one of which pointed to the diurnal course of the sun, a second which sent out varying melodious voices during the day, and a third which shouted an alarm as soon as a hostile flotilla set sail from any foreign port. It was a key to Alexandrian defences and the pivot of a signalling system that stretched along the coast.

Banks relates that there were only two bronze statues on the summit, one of which raised its right hand with the rising of the sun and pointed to it all day, and the other raised its arms and pointed to an invading fleet. If this warning went unheeded it would cry out in a thunderous voice which could be heard for miles around. Varying estimations of the height are given, from 400 to 700 cubits in height, which is from 300 to 500 feet. It compares with many of our tall buildings and was

probably three times as high as any modern lighthouse. The cost of the construction was said to be 800 talents, an equivalent of \$825,000, and this was very trifling for such an immense structure. Probably labour was forced and the greater part of the expense was for food for the workmen.

The wonderful mirror which had aided the Greeks was finally turned against them when the Arabs captured Alexandria in 640 A.D. The sun's rays reflected from the mirror are said to have burned all of the Greek ships. In despair that the mirror and statue were against them, and as there was no hope to recapture the city, they decided to destroy the lighthouse by a ruse. The Greeks invented a story that great treasures were hidden in the structure, and the Arabs, believing the story, started pulling the lighthouse down. In doing so, the mirror fell to the floor below and was smashed. About half the lighthouse was torn down before the ruse was discovered, and then too late, for the Arabs were poor builders and were unable to restore it. Fires were no longer kept burning on the stump for the Arabs, being a non-seafaring people, found it only aided their enemies.

In 875 a wooden cupola was constructed on the summit and to it the muezzin climbed to call the people to prayer. So the Pharos, or the Aminara as the Arabs called it, became a minaret. Even now the Moslem mosque has a tower or minaret suggestive of the Pharos of Alexandria. Some time in the tenth century the wind blew the cupola away, and in 955 an earthquake destroyed 30 cubits of the summit. In 1182 on the still remaining hundred and fifty cubits a domed mosque was built, where the faithful could climb up and pray in the cooled air from the sea breezes. In 1375 another earthquake left only the lower stage, which soon fell to ruins through neglect. The ruins gradually disappeared; probably the building materials were used for other new buildings; and the site where the lighthouse had stood was forgotten. The site has now been weathered away and most of the island has sunk into the sea. All that remains of the Famous Pharos is the legend.

Refs: "The Seven Wonders of the Ancient World"—E. J. Banks.
 "Pharos and Pharillon"—E. M. Forster.
 "A History of Egypt" (the ptolemaic dynasty)—J. P. Mahaffy.
 "A History of Egypt"—E. A. W. Budge.

ARCHITECTURAL EDUCATION IN SWEDEN

By Nils Ahrbom

Head of the Architectural School at the Royal Institute of Technology Stockholm

There are in general three different types of schools for architectural training.

First the type most common in England, architectural schools whose only function is to teach architecture. This is of course the best type as the whole system of instruction is drawn up for the sole purpose of giving the best possible architectural training. Other groups of students do not have to be considered, and not least important, there is complete freedom to change methods of instruction if such should be considered desirable. As a rule this type of school also has complete freedom in the choice of teachers for long or short periods and can take on special lecturers. The disadvantage of this type is that economic resources do not always make it possible to call in the best teachers.

The second type is the art academy with the Ecole des Beaux Arts as the original model, where architects are trained in a special architectural school together with painters and sculptors and where architecture, at least in the old days, was regarded as the primary art. This is the classical architect's training. It is practised with success in Denmark and both there and in Sweden—where there is also a similar school—contact with artists is insignificant. In Denmark at present comprehensive investigations into the organisation of architectural training are being carried out. The difficulties, however, of getting good results from this work inside the framework of the academy seems to be rather great.

The third type of architectural school is that which is attached to a University or Institute of Technology. In Sweden there are two Institutes of Technology, one in Gothenburg and one in Stockholm, each with a special faculty for architecture. Both of these Institutes are organised on similar lines, with certain differences however. The following statement applies to the Royal Institute of Technology in Stockholm.

The student usually starts between the ages of 19 and 22 and should have 12 years' general schooling behind him, in addition to at least 1 year's practical training either on a building site or in an architect's office and generally after having completed military

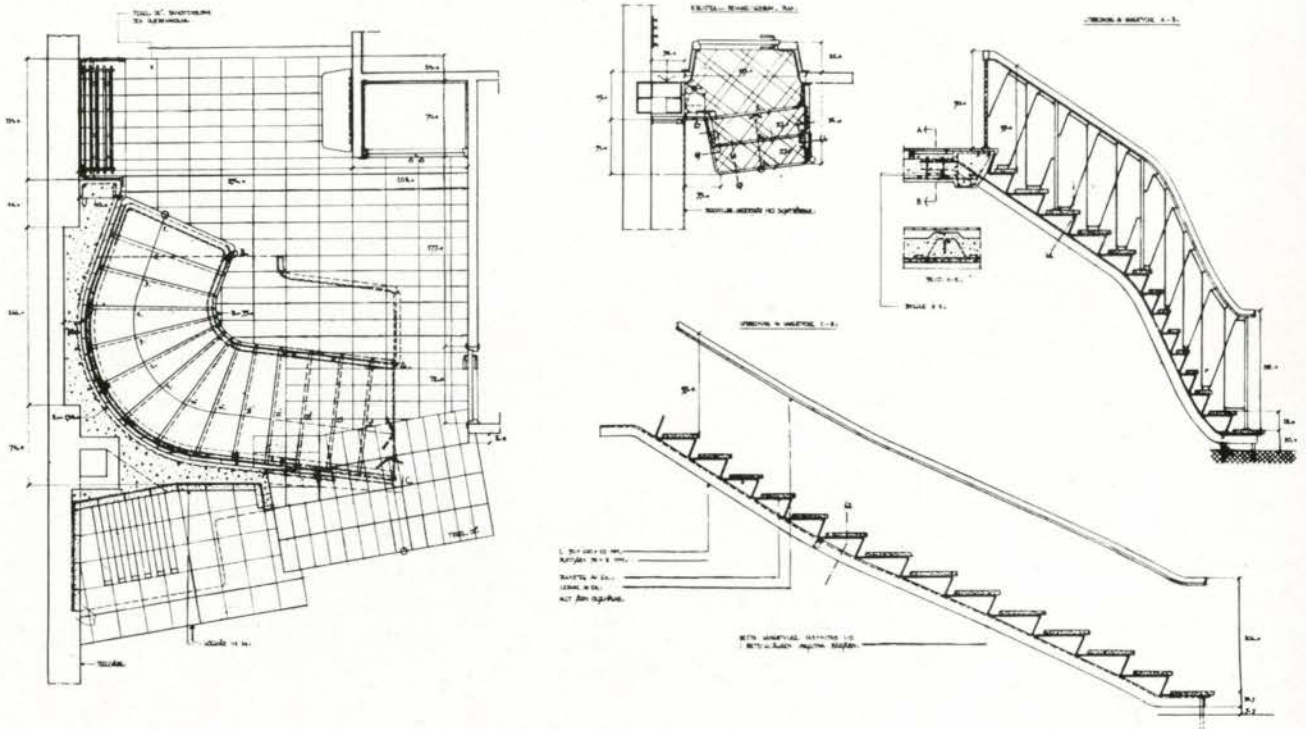


Design of a block of flats by a third year Student

service. From about 100 applicants about 30 are taken on each year. Because of the very great shortage of architects the number of students will be increased during the coming 3 year period. Choice is made by selection from examination certificates from high schools and similarly controlled examining bodies. But methods are being tried out for carrying out tests to improve methods of selection and gauge the student's capacity for taking up architecture. In future, students without the above mentioned schooling can be taken on provided they have good references resulting from practical work which shows their propensity for becoming architects. These pupils do not receive proper examination certificates.

The course lasts four years and each year is divided into two terms. During the first two years instruction in the basic technical subjects is taken together with civil engineers, and this is also the case with some of the more important practical studies such as building technics and town planning. This of course makes for contact with engineers during training which is useful for that cooperation which should always exist between the architect as the leader of any building scheme on the one hand, and specialised technicians on the other.

S W E D E N



Detail of Stair for a Dentist's House by a Second Year Student

However, it also has certain disadvantages. Instruction is not arranged exclusively for the fulfilment of the architect's requirements. It is also my personal opinion that courses in mathematics, mechanics, building statics and similar subjects are unnecessarily comprehensive and overemphasized for the needs of architectural students. The technical side is a tool which the architect has to understand in order to carry out his work—and technical subjects must therefore take an important place in his education, but the architect should, under no circumstances become a specialist as is now the case in most branches of the engineering profession. This is where the difficulties occur in arranging an architect's studies in the best possible way within the framework of a Technical College.

To enable the student to carry on his studies for the third year he must have good certificates in all subjects taken during the first two years. During those two years, as in the last two, the student is to some extent free to arrange his studies as he wants, but the possibilities of disposing of his time are very largely restricted by the large number of subjects to be covered. The number of hours of compulsory work at the College averages 32 a week. To this must be added a considerable amount of homework.

The first year is very much taken up with basic mathematical and technical subjects. But the study of architecture starts already in the 1st term. It begins with the study of the general building problems of a house. The different methods of construction and studies of detail are linked to a project which the student sketches and works out. It is the aim at this stage of the instruction to give the student a feeling for the inseparable connection between design and construction. The first term is confined to lectures. During the remaining three terms in which this subject is studied, three large programmes are carried out, the first a simple detached timber house ("solid timber-work"), the second a timber frame construction, and the third a brick building. The programmes are worked out from design sketches to fully detailed working drawings. The programmes vary from year to year and are in general connected to a particular plot of land where actual conditions can be studied. Parallel with these large programmes a number of sketch designs are given, to be completed in two weeks. These are later criticised by the professors and form the subject of debates and discussions. In this way the student gets his first contact with the social and economic problems connected with housing.

Architectural instruction during the third year is arranged on lines similar to the first two years, but the

programmes are larger and more complicated and more importance is attached to architectural design. Housing in all its forms is dealt with in the third year and a programme dealing with a block of flats or some large dwelling is included each year. The first programme during the third year is usually a building including rooms of different sizes and functions, or it consists of a group of buildings on an estate. In the fourth and last year the subject is in general a public building of some type, school, town hall, airport building, etc. For the examinations which take place during the last term, the student is allowed to choose his subject in conjunction with his professor. There are more sketch designs than during the first two years and these must be considered as a very important part of the instruction. They are very often carried out in groups of two, three or four students and are criticised and discussed. There is a greater attempt than previously to introduce debates and discussions and these are an important supplement to lectures. During the fourth year there is usually one sketch design which has to be worked out by groups consisting of one architectural and one or two pure technical students. During the second and fourth years a course is given in treatment of materials and study of form, in this subject materials are discussed from the point of view of function, technical usage, and aesthetics. Lectures and sketches deal with composition, problems of colour and form for different materials and purposes, furniture and fittings etc. The subject is an important complement to instruction in architecture and has developed into a special subject, once called "ornamentation." In this connection it can be mentioned that the study of historical styles is only introduced in connection with history and only through lectures.

Town planning is studied by architects, civil engineers and land surveyors together. The subject is therefore of necessity superficial in spite of the fact that during the fourth year it is specially arranged for the architect's requirements. The time of instruction at the College is too short for the size of the subject to allow of sufficient depth and it has therefore been suggested that a professorship should be established in town planning at the Academy of Arts and organised as a post graduate course.

Instruction in architectural subjects, building technique and town planning is given by professors, who have to have special experience in order to be appointed. The retiring age is 65. Other teachers are part time special lecturers. In each subject there are also assistants for supervision and research. The College is governed by the State.

As previously mentioned there is in Stockholm an architectural school attached to the Academy of Arts.

This gives an advanced course after the four years at the college, but this course is not part of the compulsory training for those entitled to use the term "Architect." The more demands there are on an architect's knowledge and skill and the more burdened the programme of instruction at the college the more necessary is it for this architectural school to be developed into a more or less compulsory finishing course. Particularly for the training of highly qualified town planners a further course of one or two years is desirable. But a more thorough training in town planning has to be founded on a thorough architectonic training of the kind now given at the college. It is therefore not possible to give instruction in town planning independent of the architectural training. A town planner should have an understanding of form in general and house building in particular to be able to plan for the requirements of the community. An architect who can design a chair successfully is more likely to be able to design a good town plan than one who cannot design a chair.

Nils Ahrbom

Head of the Architectural School
at the Royal Institute of
Technology, Stockholm.

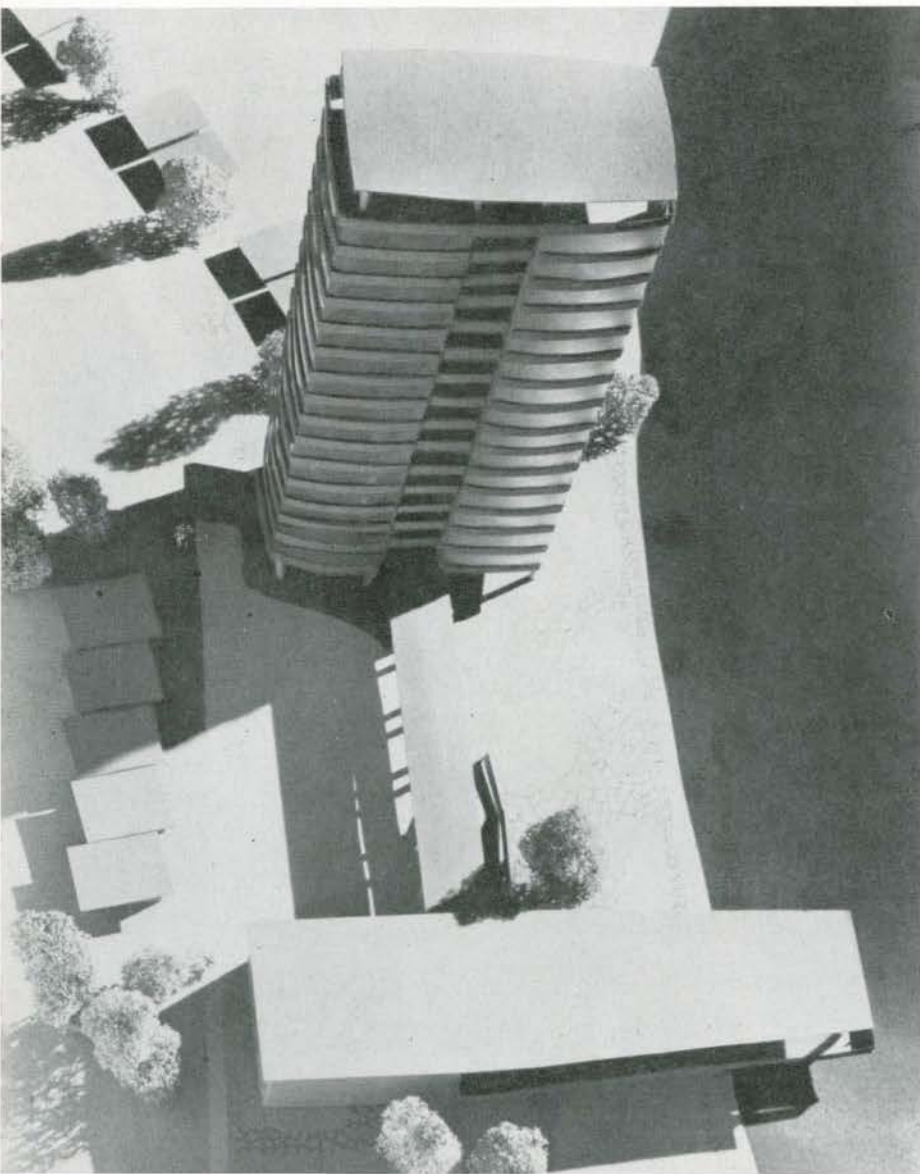
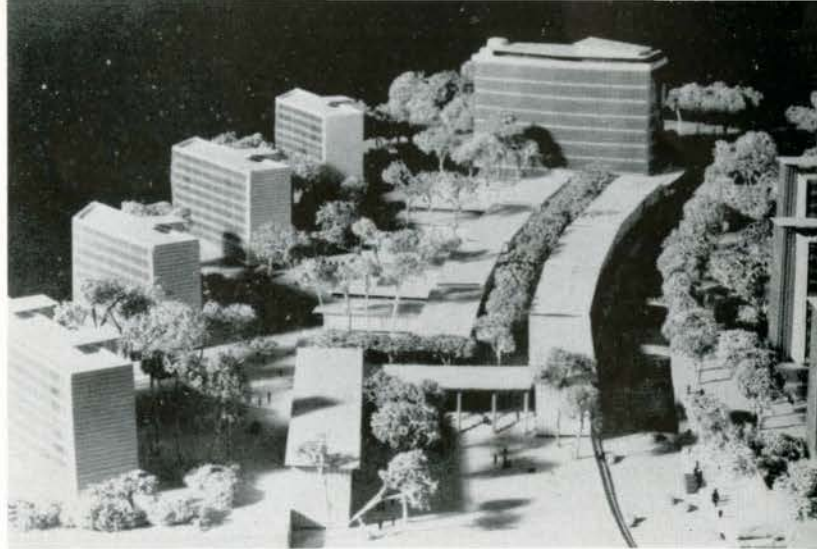
Stockholm, 1st April, 1947.



Flats in an old part of a little town by a third year student

SWITZERLAND

Eidg. Technische Hochschule, Zürich



1. Town Planning Scheme
Separation of car and pedestrian traffic.
By Christoph Bon

2. Hotel on a lake
By Alois Egger

Work done in 7th Semester under
Prof. H. Hofmann



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INCORPORATED BY THE DOMINION PARLIAMENT 16th JUNE, 1908, 1st APRIL, 1912, AND 14th JUNE, 1929

NEWS FROM THE INSTITUTE

Two meetings of the Executive Council have been held since the Annual Assembly and it is of interest to mention a few of the many matters which have been under consideration.

The following items are indicative of the manifold nature of Institute activities.

APPLICATION FROM FOREIGN ARCHITECTS

Many letters have been received from Architects in Continental Europe, appealing for aid in obtaining employment and sponsorship which will permit them to make application in compliance with immigration regulations.

Nationalities represented in these often pathetic appeals include The Netherlands, Latvia, Poland and Switzerland.

In addition there is a large volume of correspondence developing from Architects in Great Britain wishing to come to Canada. Details as to the qualifications of these men will be sent any member of the Institute on request.

1949 ANNUAL ASSEMBLY

It is never too early to make arrangements for an Annual Meeting, and plans are already being laid for the Forty-second Annual Assembly of the Institute. Reservations have been made at the General Brock Hotel, Niagara Falls, Ontario, for Thursday, Friday and Saturday, February 24th, 25th and 26th, 1949, and the last meeting of the Executive Committee heard the details of arrangements completed to date from Mr. W. B. Riddell (F) who has been handling this matter for the Executive. The Hamilton Chapter of the Ontario Association of Architects will be acting as hosts at the Andrew Cobb Memorial Dinner this year, and it is hoped that the attendance will surpass even this year's record-breaking number.

COLLECTIVE BARGAINING

As a result of representations made by the Executive Council of last year, it is noted that members of the Architectural Profession are excluded from the operation of Bill 195, "An Act to provide for the Investigation, Conciliation and Settlement of Industrial Disputes." Popularly known as the Collective Bargaining Act, the draft of this new Labour Bill has received first and second readings in the House and has been referred to the Standing Committee on Industrial Relations.

IMPORT CIRCULARS

The Institute has received several inquiries from members concerning the scope of the import restrictions outlined in the circular letter sent to all members on April 14th, 1948. It should be noted that these materials are prohibited and that in order to import them *from any*

country in the world, it is necessary to obtain a permit from the Minister of Finance.

STANDING COMMITTEES

Each year, one of the main tasks of the Incoming Executive Committee is the selection of the Standing Committees of the Institute. From time to time Special Committees are appointed to study matters of current and immediate importance, but the majority of the questions studied and handled by the R.A.I.C. fall within the scope of one or other of the Standing Committees, and upon them falls the responsibility of dealing with the matters referred to them by the Executive. At their first meeting, the Executive Committee appointed the following members as Chairmen of the Standing Committees.

Architectural Training	- -	Mr. Murray Brown (F)
Art, Science and Research	-	Mr. P. C. Amos (F)
Duty on Plans	- - - -	Mr. Eugene Larose (F)
Exhibitions and Awards	- -	Mr. W. Bruce Riddell (F)
Editorial Board	- - - -	Mr. F. Bruce Brown
Planning	- - - - -	Mr. P. Alan Deacon
Public Information	- - -	Mr. James H. Craig (F)
Professional Practice and Usages	- - - - -	Mr. Gordon McL. Pitts (F)
Public Relations	- - - -	The President, Mr. A. J. Hazelgrove (F)

In addition to these Chairmen, the Committee appointed several representatives who would act as liaison officers between the Institute and the Allied Societies whose work is so closely connected to the Institute and the profession as a whole:

Canadian Standards Association	- - - - -	Mr. P. C. Amos (F)
Canadian Arts Council	- -	Mr. J. Roxburgh Smith (F)
Canadian Council of Professional Engineers and Scientists	-	
Representative	- - -	Mr. Eric Temple (F)
Alternate	- - - - -	Mr. Wm. H. Gilleland
National Construction Council	- - - - -	Mr. James H. Craig (F)
Civil Service Commission	-	Mr. Forsey Page (F)

NEW HOME FOR THE INSTITUTE

The by no means palatial office of the Institute will soon have to be vacated as the building will be required by the owners. The Executive Council in conjunction with the Ontario Association of Architects has had to deal with the difficult problem of finding suitable accommodation. The space has now been found, and on May 31st the Institute will move into a suite of offices, with the Ontario Association of Architects. The new office is

located at 1323 Bay Street, Toronto, and a notice covering this change of address appears elsewhere.

LADY DAVIS FELLOWSHIPS

The attention of the Universities or individuals is directed to the Lady Davis Fellowships.

Information as to these Fellowships came too late to be dealt with at the last meeting of the Council, but as applications must be received not later than May 31st, 1948, those interested are invited to write for particulars to the Secretary, Lady Davis Foundation, P.O. Box 983, Place D'Armes, Montreal 1, Quebec.

These Fellowships are designed to facilitate the entry into academic life in Canada of outstanding European Scholars and Scientists who desire to domicile themselves in this Dominion.

NOTICE: Effective June 1st, 1948, the address of the Royal Architectural Institute of Canada will be 1323 Bay Street, Toronto.

ALBERTA

The question of provision of auto camps or "motels" is one that is looming largely in several Canadian cities. It is stated, I suppose with a considerable degree of truth, that at present prices it does not pay to build a hotel. There are certainly few being built at this time in this province. In Edmonton they are in very short supply. Calgary is better supplied but with probably no surplus.

From coast to coast Canadians are anxious to entertain tourists especially those who come into the country by motor car. This surge of hospitality is not altogether a disinterested spirit of hospitality. It is also business. Edmonton flaunts the slogan "the friendly city" but finds itself somewhat embarrassed as to how and where to entertain the hoped for visitors. From these conditions has arisen a demand for tourist auto camps. A number of applications is being made to the city. In each case a somewhat greater number of protests are made against permitting them in the locations asked for. The protests of course come from neighbouring property owners. These people want the tourists, but not camping beside them.

The auto camp or motel is much favoured by the motoring tourist. It seems to be their natural stopping place. The objections against them are frequently bogies of the imagination which is inclined to figure them at their worst. Carelessly handled they may be more than mere bogies. The antidote to these objections is the imposition of proper controls. Accommodation for the motoring tourist is a relatively new subject requiring broad and also intimate study as regards locations, numbers, sizes, costs to owner and to user and most of all as to attractiveness of appearance in which both owner and customer are equally interested. There is not much difficulty in stating in theory what is right in each of these aspects. But very real difficulties arise when it comes to fitting these to existing conditions.

There are many types of tourists with as many different preferences. There are the richer and the poorer, some demanding a certain degree of luxury beyond mere comfort, others content to put up with the simple life. There are those who prefer to be in the midst of the city and those who want to be in open country. Some wish to stay a day or two or longer in order to investigate the city and its resources. Others of a more restless nature or bent on more ultimate objectives seek only a night's accommodation. All, however, must be provided with certain basic needs such as water, sewer, electric light, phones etc. To get all these combined in a suitable place where neighbouring owners will not raise an outcry without knowing what is actually proposed constitutes quite a problem of city planning.

Cecil S. Burgess

MANITOBA

When ideas and enthusiasm are put together, much can be accomplished. This is very evident in the display of work of the School of Architecture and Fine Arts of the University of Manitoba at the Winnipeg Art Gallery which opened on April 18th, and will stay on view until the end of the month.

It is true not only of the work itself, but also in the design and layout of the movable screens on which the displays are fastened, and the bold and effective colouring of the backgrounds. The displays include students' work in architectural design, interior decoration, and town planning, and a very effective and interesting display called "Designs for Everyday Use."

The architectural design includes renderings, photographs, working drawings and models. Water colours of interior design and arrangement of furniture, the use of different textures and fabrics and the unhesitating use of colour were shown in the display by students of interior decoration.

The display called "Designs for Everyday Use" showed objects of industrial design such as egg beaters, golf clubs, furniture of Swedish and Finnish design, and everyday objects that we take so much for granted, such as axe handles, baseballs etc.

In the writer's opinion, displays such as this will do much to open the mind of the public in this part of the country to possibilities of design, and to break down the reticence they appear to have to ideas which the architect is trained to give them. After all, the public has to be shown, and it is up to us to educate them intelligently.

Much credit is due to Professor John A. Russell, Director of the School of Architecture, and to his staff and the students for the work and enthusiasm they have put behind this exhibition. It is to be hoped that we will have more of them.

Incidentally, a little more free use of colour in our homes might well help us to get through the long winter

months in this country. The climatic conditions of Manitoba play a very important and limiting factor in architectural design. Each year we have two months of excessive heat in the summer, and then what sometimes seems about sixteen months of steady cold, but there is something here that gets you, and some day the Prairie Provinces will be expressed through their architecture. The pioneering stage is still ahead of us in this part of the country.

The Metropolitan Planning committee and the Winnipeg Town Planning Commission have just published their fifth report in a series of reports embodying recommendations for future development of the Greater Winnipeg area. Among previous reports that have been published are "Background for Planning," "Major Thoroughfares" and "Transportation and Transit." The fifth report covers, to quote from the foreword, "neighborhood standards, based upon recommendations of leading authorities on schools and recreation, and upon experience both locally and elsewhere." They were approved in principle by representatives of the School Board, Parks Board, Recreation Committee and Community Clubs of Greater Winnipeg.

It now appears that there are those with some authority with the City who feel that now that the commission has completed many of its ideas on paper, in the form of drawings and written reports, that it has now served its function and should possibly be terminated. It is to be hoped that they will realize that the most important work of the commission has not even started—that of transferring the plan from paper into action. Too often such ideas are stopped at the paper stage, filed and conveniently forgotten. The Manitoba chapter recently expressed their opinion of this in a petition to the City which was also signed by other professional and business bodies. It is to be hoped it will help to bring about the desired result.

As a change in the weather has shown a possibility that summer will soon be upon us, architects are looking forward to seeing some of their ideas take on a more concrete form. It is well to remember, however, that while we are anxious about high prices and their effect upon building, our problems are as nothing compared to the problems and the tragedy in the lives of the people in those countries over which war ran its course. We are all a part of that problem, and that problem must be tackled at its source.

John Chivers

ONTARIO

" 'twas my fate, Apollo said,
To wed my mother, to produce a race
Accursed and abhorred; "

OEDIPUS (Sophocles)

Excepting for the decree nisi, the Mistress Art is once again a lady — in Ontario! Divorce obtained this April has henceforth severed the engineer Oedipus from his

unnatural relationship. No longer will his all too fond embrace prevail; and perchance the abhorred race will not be born.

The School of Architecture (since 1895 a mere rib in the side of S.P.S.) has at long last blossomed forth into a new Eve — albeit a trifle shy, and still dependent for shelter in these days of housing shortage, on her former landlord. (A curious, but I trust, consistent metaphor.)

The teaching of Architecture has altered greatly from accepted practice at the beginning of the century, and particularly in the last decade. We have seen the passing of the influence of the Ecole des Beaux-Arts, and the rise and wane in the latter twenties and early thirties of the so-called 'International' Style.

Present methods of architectural education, evolving in latter years, are based on an endeavour to establish a proper balance between 'Structural' courses and 'Design' courses—between the 'Practical' and the 'Aesthetic.' The Architect must not become a mere technician, and the curriculum must include both academic and professional subjects, the 'humanities' as well as the 'technicalities'!

Training in contemporary architectural design, concerned as it should be in working out our needs in terms of social environment, materials and processes at hand, needs a clear atmosphere in which to develop. In its newly acquired autonomy, the School of Architecture will have freedom for the first time to do just this.

When we consider the vast amount of future building and planning that will be done by students of the School — the great changes they will make in our surroundings; and when we realize that the quality of this work originates from the School, the importance of this new milestone becomes apparent.

Architects throughout Canada are all concerned in this new phase of the School; all will watch with interest her progress.

W. E. Fleury

Editor's Note:

In case the pertinent facts do not reveal themselves in the classical fog with which our valued contributor introduced his admirable news letter, I feel obliged to state them in basic English. The School of Architecture of the University of Toronto has been given separate status as a School within the academic framework of the University. The traditional link with engineering has not been severed — rather we hope it will be reforged in a collaboration, so far as the teaching of engineering subjects is concerned, between two groups on the campus, now enjoying the status of equals.

QUEBEC

L'intérêt que l'on porte au réaménagement des grandes villes doit retenir l'attention de l'architecte, d'autant plus que c'est à lui que l'on confie la direction de ces vastes entreprises. Chacun a pu lire récemment

de nombreuses études sur ce sujet qui concluent pour la plupart à la nécessité de sauver la grande ville, puisqu'ils se trouveront en même temps, à élever le niveau de santé d'une grande partie de la population et à améliorer les conditions de production. Ce sont les tâches les plus urgentes du moment.

La grande ville exerce un attrait irrésistible sur tous les habitants de la vaste région qu'elle commande, non pas surtout par les divertissements qu'elle promet et ne donne pas toujours, car elle a trop souvent déçu ceux qu'elle a éblouis un moment. Si on ne peut s'en détourner, c'est qu'elle est le lieu de tous les échanges et de toutes les transformations et qu'elle est seule à disposer d'une organisation économique à peu près complète.

C'est là le secret de sa puissance, mais, aussi de sa faiblesse, car l'attrait qu'elle exerce provoque périodiquement un encombrement fatal qui est l'une des causes des crises économiques. La grande ville est un géant qui n'a pas appris à modérer ses appétits et elle absorbe plus qu'elle ne peut digérer. Le mal est connu et l'on cherche à le combattre. On a trouvé des remèdes qui paraissent excellents, mais s'ils peuvent satisfaire aux exigences essentielles d'une communauté, ils ne sont pas toujours conformes à une législation que l'on dira désuète, mais qu'il est bien difficile de corriger.

La création de villes satellites semble l'une de ces mesures excellentes en elles-mêmes, mais difficiles d'application. C'est là la mesure principale du projet d'aménagement de la région de Londres dont tous les urbanistes ont fait les plus grands éloges. Sir Patrick Abercrombie, qui en est l'auteur, n'a pas voulu dégager le centre de la capitale en augmentant la densité de la population des autres quartiers. Il a tout de suite proposé qu'on réduise progressivement la population de la ville, prévoyant même le déplacement de plus d'un millions de personnes.

Il entend aussi procéder à la redistribution de l'industrie et son attention se porte sur des municipalités qui sont à 35 milles de Londres. Le célèbre urbaniste veille également à ne pas grandir les 143 autres municipalités de cette région, et pour ne pas provoquer une concentration excessive sur certains points, il prévoit l'érection de dix villes satellites d'au plus 60,000 habitants qui seront des centres complets, tant au point de vue commercial que résidentiel et culturel. Ils seront reliés à Londres par des routes à circulation rapide et un réseau ferroviaire perfectionné. Plus tard, de nombreux aérodromes viendront compléter ce système de communication.

En ce qui concerne les grandes villes canadiennes on constate qu'il serait possible d'y améliorer les conditions de vie en répartissant une partie de leur population et de leur industrie sur d'autres points de la région. Certes, de tels déplacements se font sans qu'il soit nécessaire d'intervenir, mais, sans un plan directeur, ils n'apportent pas d'améliorations réelles parce qu'on n'aura tenu compte que d'un fait sur mille. Qu'une usine s'éloigne du centre et réussisse à loger ailleurs tous ses

ateliers et tous ses ouvriers, elle ne se trouvera pas à constituer ainsi une unité complète et elle devra, comme ses ouvriers, compter encore sur la grande ville pour la satisfaction de la plupart de ses besoins.

On trouvera aux environs de Montréal et de Toronto de petites localités qui pourraient jouer le rôle de ville satellite mais toutes ces municipalités indépendantes consentiront-elles à se soumettre à un plan d'ensemble, à accepter les limites qu'il leur imposerait? Et la grande ville se départira-t-elle de bon gré de ce qui l'encombre et se résignera-t-elle à jouer avec une quarantaine de millions quand elle espère peut-être porter ses dépenses et ses recettes à cent millions? Enfin, les gouvernements sont jaloux de leurs pouvoirs et ils ont tendance à considérer toute limitation comme une atteinte à leur indépendance quand, souvent, c'est une sauvegarde. En Angleterre, où la centralisation politique est très poussée, un Abercrombie ne se heurte pas à de tels conflits de juridiction. Ce n'est pas que cette centralisation nous paraisse désirable au Canada, mais nous souhaiterions que les divers gouvernements collaborent plus étroitement et se plient même à certaines contraintes dans l'intérêt commun. En ce qui concerne la région de Montréal, nous aimerions que toutes les municipalités collaborent activement à l'exécution d'un plan directeur, car le problème de la grande ville ne peut se résoudre qu'à l'échelle régionale.

Paul H. Lapointe



The Editorial Board is greatly obliged to **Mr. Henry Fliess (M)** for the trouble he has taken in collecting and preparing the material for this Issue. **Mr. Fliess** is known as a contributor to the Journal — he is a graduate of the School of Architecture of the University of Toronto, and is now a member of the staff of the same school. It is our editorial opinion that the selection of material and format of the *May Journal* will set a standard for future issues on the same subject.

BOOK REVIEWS

ARCHITECTURAL PRACTICE

Clinton H. Cowgill, A.I.A. and Ben John Small, A.I.A.
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The practice of architecture is a personal service and, while the architect may be selected primarily on his ability as a designer, his position is one of great responsibility bordering on trusteeship. His success in conducting his practice efficiently and with satisfaction to his client may largely depend on his understanding of the professional, business and legal aspects of his profession.

In "Architectural Practice" the architect will find a valuable guide in this connection. It discusses step by step the procedures to be followed in the handling of a project through the various stages from the selection of the site to the completion of the work. It even includes a section on the essential topic of developing a clientele. A simple system of bookkeeping is detailed which will

show, not only the profit or loss on the year's operations, but also the architect's cost of each project as the work goes along. The importance of this information will be recognized by every architect but I am certain that many do not have it available to them. An appendix to this section shows how the journal and ledger entries are made for typical transactions.

While this book is written for practice in the United States and must be read in the light of Canadian Law, it will be found that our procedures are very similar to those in the United States. The section on the certification of architects in each of the States will be of only passing interest in Canada where the registration of architects is under provincial legislation. The remainder of the book, however, contains so much valuable information, simply stated, that it should be a reference book in the library of every office and should be carefully read by every student of the profession.

H. H. Madill

HISTORY OF ARCHITECTURE ON THE COMPARATIVE METHOD

By Sir Banister Fletcher

Published by B. T. Batsford Ltd., 15 North Audley St., London, W. 1, England.

Distributed in Canada by Clarke, Irwin & Co. Ltd., 480 University Ave., Toronto. Price \$12.50.

Architectural education is rapidly changing in a system in which all aspects of history, construction and design are integrated. However that may be so and however integration may be attained, there is still a place for Banister Fletcher. Since I was a student in the 20's, and, presumably long before that, the book was known by its author's name—and even by his Christian name alone.

It is, of course, a compendium of architectural historical facts, and, as such, one does not criticize it for not being on the literary level of Sir Kenneth Clark's Gothic Revival or Mr. Geoffrey Scott's Architecture of Humanism. Nor can one criticize it for being at complete variance with modern methods of teaching history. I confess not to have compared the new edition chapter by chapter with the 12th edition so that I am unable to say to what extent it is an improvement. For many schools with large numbers of students, it will be enough that it is available as a reference book and a crammer.

I did, however, turn to the page on the architecture of the British Empire, and there I got some surprises. Architecture in Canada is noteworthy, I learned, for a "modified Renaissance style for civic and secular buildings, and Gothic for ecclesiastical buildings." However true, I felt that that was a remark that was better unsaid; especially to the youth of this country who will read it. For them, it is rather like rubbing salt in a wound to see what they know so well on the printed page of so authoritative a tome.

And then again, Toronto "has recently received an interesting Gothic extension known as Hart House." It is true that when one, like Sir Banister, has spent his life in the ruins of Karnak; when he has seen the glories

that once were Greece, he must find the year 1912 as but of yesterday if not this very morning. It may be that with the hundredth edition, 1912 will be seen in a new perspective and "recently" will be revised to "early in the 20th century." One forgets, perhaps, that by the comparative method all things are recent.

Australia and New Zealand are lumped together, and we were delighted to know that, as of the 13th edition, they were enjoying "much building activity." New Zealand is not mentioned as having any worthy monuments, but in Melbourne the Parliament buildings are renaissance and "Melbourne Cathedral and other buildings are Gothic." That is a depressing thought. Somehow we had never pictured a Carcassonne or a Lisieux as the capital city of a young and virile state in the Australian Commonwealth. Altogether I would think the publishers wise to eliminate this page from future editions. It can only be there to please the "colonies," and its effect is entirely the opposite. Indeed Sir Banister's ignorance of places and buildings familiar to his student readers must inevitably raise the question "What does he know of Rome or Timgad, when he so obviously was misinformed on Toronto or Melbourne?"

However in spite of superficialities and stupidities of the section on the British Empire, Messrs. Batsford are to be commended for bringing out a new edition, which will be available to many schools still interested in the comparative method, where copies of the old editions are lost or are in rags.

E. R. Arthur

HOSPITAL PLANNING

By Charles Butler F.A.I.A. & Addison Erdman A.I.A.
F. W. Dodge Corporation, New York. 236 pp. Illustrated. 9" x 11¼" \$10

In the introduction the Authors state that "The book is written primarily for the use of architects who are called on to plan hospitals, not alone for the man who has never planned one, but also for the architect with experience in the hospital field, for he will realize that something can always be learned from the experience of others. "It is written also for the doctor, the hospital administrator, and the lay members of hospital building committees.

As a production the book is a fine job, well set up, with good paper and type; and profusely illustrated throughout with plans and photographs.

There are seventeen chapters, the first of which touches on many points of prime interest to the layman. The remaining chapters deal with the various departments and units of the hospital; with the final two chapters devoted to construction, interior finishes and details of service rooms.

It is unfortunate, in a book of this calibre, that no reference is made to European developments. However, by means of both the descriptive matter, and the carefully selected plans, the Authors have compiled an excellent book, which, supplemented by complete and useful indexes both of text and illustrations, cannot fail to be of great value to all those concerned in the field of hospital construction.

W. E. Fleury