

# JOURNAL

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# JOURNAL

## R. A. I. C.

DECEMBER 1950

**C**USTOM has decreed that each December, it is the inescapable duty of the Chairman of the Editorial Board to occupy this space. Perhaps we might be forgiven if we wander wearily from these turbulent days of escalator clauses, steel shortages and the scarcity of bricklayers, into the Archives of the *Journal*, where we have just read in the first published issue, that the concrete frame of an irregularly shaped, six story building 100 feet by 138 feet, containing 2,911 yards of concrete, 154,477 square feet of forming and 225 tons of steel reinforcing was entirely erected in the City of Hamilton in a matter of 37.5 working days. This, in itself, is justification for turning to the early twenties, troublesome as they might then have appeared, with the hope of reviving memories to the hoary and producing interest to the newly initiated.

**M**AY we remind you that the *Journal* was born in 1924, the much desired progeny of the Institute and was reared during its early infancy by Mr. J. P. Hynes, ably assisted by Mr. Jules F. Wegman and Ralph K. Shepard. Armed with an inspiring foreword by the President, Mr. Lewis H. Jordan of Winnipeg, and clothed in excellent material, the *Journal* ventured forth to fulfil its prime mission of cementing together the thoughts and purpose of some 600 members of the Institute scattered across Canada.

**B**UILDINGS of great Public importance were chosen as subject matter for the four quarterly issues of Volume One. The Parliament Buildings in Ottawa, the Legislative Buildings in Regina, the Legislative Buildings in Winnipeg and the University of Saskatchewan, each dominated one of the issues. In the presentation of large buildings, the inclusion of sections and elevations in addition to plans appeared to have good value in the interpretation of the photographs. The excellent drawings published in these issues sentimentally reminded us that in these present days of the increasing use of models, pressure of time and the absence of exhibition drawings, there is a tendency towards a diminishing interest in excellent draughtsmanship and presentation.

**A**RCHITECTURAL Competitions appeared to be a popular issue of discussion in these early *Journals*. Mr. Stanley T. J. Fryer's views on the subject were ably recorded. It was generally agreed that competitions were a boon to younger architects, but beyond that point, there existed doubts with regard to their fair value. We noted that the R.A.I.C. had successfully prevailed upon the Government to include an architect in the panel of assessors in the Competition for the Laurier Monument on Parliament Hill. In another instance we found the P.Q.A.A. sternly warning its members against two certain competitions. Perhaps the most cheering note was contained in the announcement that William Lyon Somerville had been awarded first prize in the competition for a National Theatre, London, England.

**T**URNING to the personal side, we noted that Mr. Cecil S. Burgess was then, as now, a faithful contributor to the Provincial Page. That Mr. Leslie A. Perry had won the first Royal Canadian Academy Scholarship in Architecture. That, six students in Architecture had graduated from the University of Manitoba in 1924. That Mr. E. R. Arthur, recently appointed to Toronto University, had given an address on "Lutyens and his Work", and likewise Mr. John M. Lyle had addressed the Hamilton Architects on "English Interior Architecture from the Adams to the Tudor Period". We noted also that Mr. Forsey Page, was as far back as 1924, a representative to Council (we now know he attained the Presidency in 1944). It is also worthy of note that two promising young Architects, Mr. Gordon Pitts and Mr. Murray Brown had been elected respectively to the P.Q.A.A. and the O.A.A.

**O**NE of the outstanding features of Volume One was the Structural Service Department conducted by Mr. Frank P. Martin of Regina, which provided four complete pages in each issue of detailed information regarding such subjects as Sound Proof Partitions, Concrete in Freezing Weather, Private Electric Plants and the Stability of Thin Walls. We noted discussions with the Master Plasterers Association with regard to the "patching" clause in specifications and an appeal from the Retail Coal Dealers Association for greater consideration in the location of coal bins. To the credit of the *Journal* and the Publisher, most of the advertisers of 1924 still occupy the "fore and aft" pages. We do, however, miss such items as exterior terra-cotta wall facing, but we note that steel bar joists, temperature controls, rubber floors, etc., were even then very much in evidence.

**P**OSSIBLY this condensed review would be incomplete without the mention of numerous articles which appeared in these early *Journals*, such as a treatise on the "Limitation of the Height of Buildings" by Mr. Walter N. Moorhouse. The report of an address to the R.I.B.A. on Canadian Architecture by Mr. Percy E. Nobbs, and a series entitled "Some Impressions of Canadian Towns" by Professor C. H. Reilly of Liverpool University.

**T**HERE is evidence to substantiate the fact that the Publicity Committee of that day, forerunner of The Editorial Board, also had its problems. We noted an appeal for text material, which strange as it might seem, ended as follows, and we quote —

"We might make the appeal even more definitely to Toronto:—

"Where scholars in their Stetson hats  
Are plentiful as tabby cats  
And some say far too many."

"Where art professors you may meet  
In two's and three's in every street  
Maintaining with no little heat  
Their various opinions."

Arthur H. Eadie,  
Chairman, Editorial Board

# THE MODERN HOUSE

## A BRIEF CRITICAL ANALYSIS

By HENRY FLIESS

**B**ASICALLY architecture serves to provide shelter for human needs with the most advanced techniques available, and tries to express the highest aspirations of human purpose.

Once this definition is accepted, it becomes obvious that basic changes must take place in architecture to meet changing needs, to make use of new techniques, and to express different human aspirations. It cannot be denied that the last century has brought with it far-reaching changes in all these spheres. Clearly, it is then impossible that an architecture which has as its source the architecture of a century or even centuries ago can satisfy present conditions, and a new architecture must evolve. The "new" architecture, in fact, is the only architecture of our age and the only way "modern" man can build. The only question in our minds is the form that the new architecture will take, and architects are for ever searching to find a valid expression for the new architecture. Our changing requirements are quite obvious: The place of work has been shifted from the house and workshop to the factory and office — two completely new building types. Recreation has moved largely from the house and pub to some place of mass entertainment: the arena, the movie-theatre, and the community centre (radio and television tend to reverse this trend). In housing the emphasis has shifted from the palace and villa to the small house and mass-housing. Completely new building types have emerged from completely new needs: the dam, the powerhouse, the railway station, the airport, the air-raid-shelter. The house, the church and various public buildings are in fact the only buildings, which some architects still feel should be given a traditional character. The modern factory, the modern school, the modern hospital, and the modern store are by now almost universally accepted. By what process of split personality can we justify one approach to architecture for certain classes of building and another completely different approach for certain other types. Surely there can be no justification for anything other than a fundamental unity of approach.

The new materials and construction methods need only be mentioned here: In addition to stone, brick, wood, glass and wrought iron, we have now cast iron, steel, various new metals and metal alloys, reinforced concrete and plastics. Wood has been used to new advantage in the form of plywood, laminated wood, and in other combinations with plastics. Glass can now be produced in much larger sheets.

The new techniques are standardization and mass production.

The philosophy of our time which should find expression in our buildings is more difficult to define. Should it be the materialistic or mechanistic philosophy which has dominated human actions in this century or should it be a life-centred philosophy, as expressed in our ideal of democracy and the value placed upon the individual. In the early phase of the new architecture, stress was laid on the mechanistic and material philosophy, but a noticeable evolution towards the expression of a philosophy which lays more stress upon social and personal criteria is taking place. A more humanistic approach towards architecture is being expounded by most architectural critics of whom Mumford, Giedion and Hitchcock are perhaps the most prominent. There are still many architects who maintain that a functional plan and an honest expression of structure are in themselves adequate to produce great architecture. This is merely an illustration of the materialistic and mechanistic philosophy, which has shown itself to be so inadequate for providing a sound working basis for everyday life and is largely responsible for the shortcomings of our age. It is the new social philosophy of our age which places the emphasis on the individual and the living organism, and which considers the mechanical and the materialistic merely as a means to an end, which will be the salvation of civilization. The architect then should through his buildings lead us back to this basic philosophy of life and perhaps through his buildings show our generation the way.

"Modern" residential architecture as any architecture, must be based on our present day needs, on the techniques available and on the human aspirations of today.

The "modern" house must first of all solve the requirements at hand in the best possible way, it must meet the needs of a specific family, its way of living, its real individual and personal preferences — it must be developed to take the greatest advantage of any natural features of the site, it must be judiciously placed in relation to the sun and the prevailing winds. The traditional centre hall plan will not generally satisfy all these requirements and new plan forms have been developed during the first half of this century, new plan forms which have demanded, of necessity, a new external expression. Canadians have become more and more extroverted, and this is a trend which is forever being continued by modern methods of child education. The open plan is a symbol of this outward-turning life, it is the expression of a freer and less formal social existence. How confining is the traditional centre hall plan with rooms on either side of the hall forming more or less self contained

spaces, when compared with the spacious modern living area, which more likely than not opens out into the garden, extending the exterior out to take in the whole visible landscape.

Economics, which seems to be reducing the house to a smaller package every day, has been furthering the new planning and spatial concept. The more it becomes necessary to reduce the size of the house, the greater becomes the necessity for combining uses of rooms and opening up spaces which in themselves would be far too small.

The servantless house has become the rule rather than the exception, and the housewife now has to do all the cooking and most of the cleaning. This has brought about two changes. Firstly, the mother wants to remain part of the family circle while doing her chores — with the resultant relocation of the kitchen in relation to the living areas of the house, of which the living-kitchen is the extreme development. Secondly the avoidance of unnecessary steps and chores has become essential and a functional plan which places all elements in the most convenient way is the logical outcome. The one storey house has therefore become the ideal for most family requirements. Obviously the one storey plan does not always make sense, and space limitations or economy may still turn the scales in favour of the two storey plan. The split-level house has resulted from an endeavour to provide as many of the advantages of the one storey plan on a relatively restricted site and with a limited budget, and other plan types, which bear no definition have been developed to meet specific needs and specific site conditions.

With the stress that is now placed on the relationship of living areas of the house to the outdoors, much greater attention must be paid to site planning.

More importance is now placed on the orientation of rooms, the relation of the rooms to the various natural features of the site — the trees, views, slopes. The various functions of the site: approach, service, outdoor dining, active and passive recreation, flower and vegetable garden are now carefully studied.

The new construction techniques have been previously mentioned. Steel and reinforced concrete skeleton construction in the first place provided the necessary technical innovations which made possible the open planning and the new spatial developments. In turn structure was developed to serve the new concept, a new system of timber construction was developed (or should I say an old system was revived) to make possible the use of wood and glass panels at the will of the designer, and to allow the opening up of space where desired. In Canada the most daring house designs have generally been in timber construction, because of its economy, and this has been developed to perfection in British Columbia. The opening up of the house to the garden and the large glass areas found in the contemporary house would clearly be impossible without modern heating systems and more efficient methods of insulation.

In the modern House the plan, the method of construction, and the spatial expression go hand in hand, internal space and external form are considered as one and inseparable. The interior spaces provide ever new

vistas — raised and sloping ceilings, changing levels, and views opening from one living area to another and opening out into the garden provide an ever changing variety of visual expressions. This revitalised interior finds a new external expression which, once traditional forms have been discarded, permits the creation of new and daring forms and of interesting combinations of old shapes. The flat roof, the large glass areas and the interpenetration of space are all elements of the new vocabulary, but in themselves do not produce a good modern house. As a matter of fact those who consider them as the only elements of modern design are themselves guilty of sterility of thought and expression. Good modern design accepts all forms where they are valid, and provides the natural solution of the problem at hand. The basic elements of design — proportion, rhythm, scale, line, area, volume, colour and texture remain the ever constant factors of design.

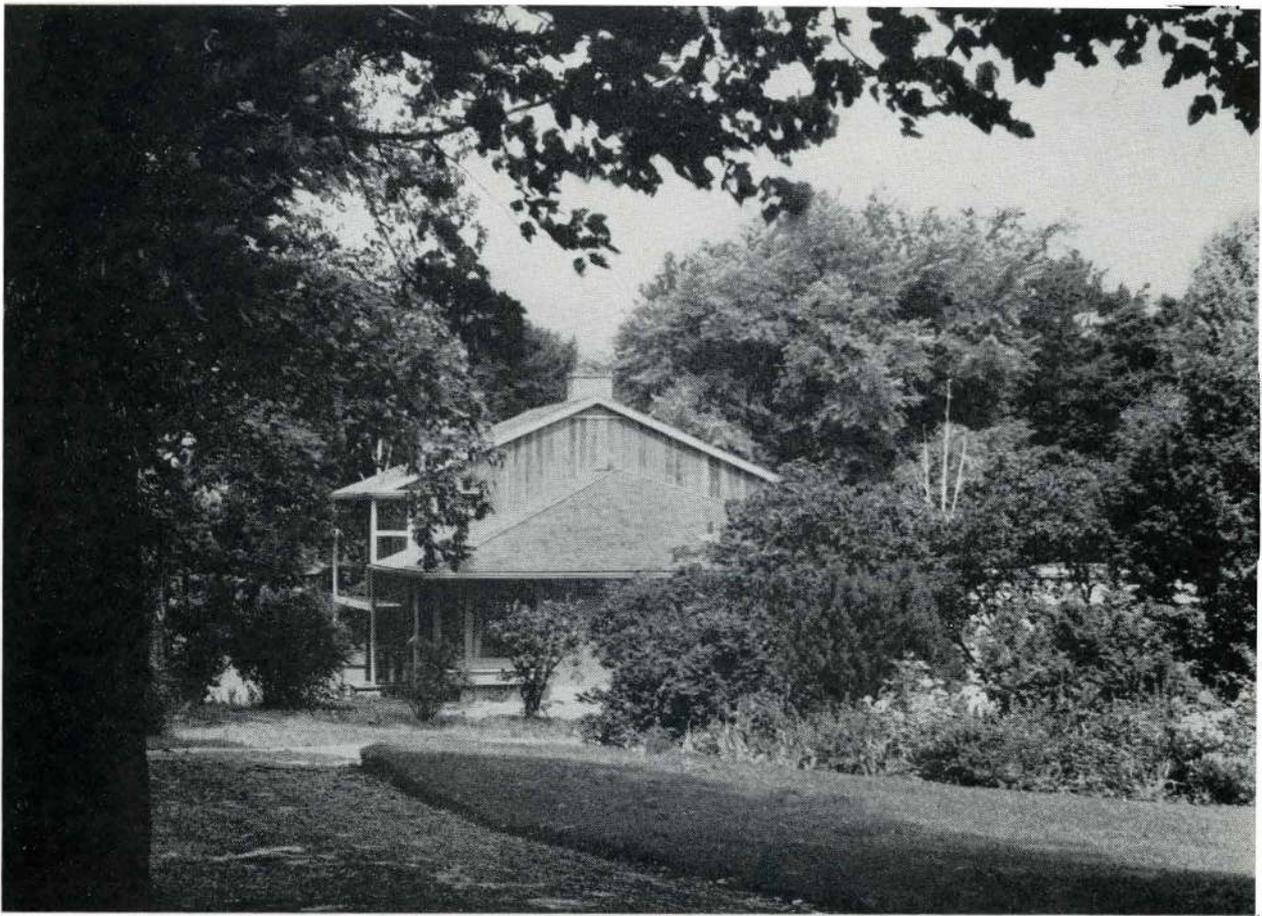
This number on the Canadian house shows that a modern idiom of fairly high quality is being developed by Canadian architects. It is now true to say that the contemporary house has gained a strong, though still diminutive, foothold which can never be abrogated and will form the basis for a wider development in the field of residential architecture in Canada. This change in residential design is long overdue when one considers that the pioneers in this field were working over thirty years ago and that in many European countries all reminiscence of traditional architecture has completely vanished.

At this time it may be well to look back and survey briefly the development of the modern house.

The original statements of the new architecture were of necessity a bold expression of the new principles and a strong reaction to the academic approach of the past. The function of the plan, the logic of the new structure and the purity of the new form were emphasised, and what we now call the "International Style" was given birth. The international style favoured two-dimensional facades, cantilevered walls, flat roofs, smooth surfaces, large glass areas, and compositions which were derived from cubist painting. Negatively, it proscribed arbitrary decoration. The aesthetics of the "International Style", as it spread and was diluted in character, became rather sterile, and gradually the limitations of the International style were discarded for a more open-minded and human approach. The flat roof ceased to be compulsory, and the pitched and shed roofs were again used, though sometimes in new and interesting variations. In other words a general re-evaluation has taken place, traditional elements which were once discarded have been reintroduced where they provide a valid solution, and a humanisation of the original restricted cubistic and mechanistic approach in becoming a conscious aim. There has been a general feeling that the house must be something more than a functional and technical answer in space time, it must provide comfort and warmth, it must give us a feeling of shelter and security as well as openness and flexibility.

The element of time has also shown up some other weaknesses in the early works. The clean mechanical lines of the early buildings had lost all their force after

*(Continued on page 416)*



HOUSE OF MR. W. P. SCHUTTE, PORT CREDIT, ONTARIO

JAMES A. MURRAY, ARCHITECT

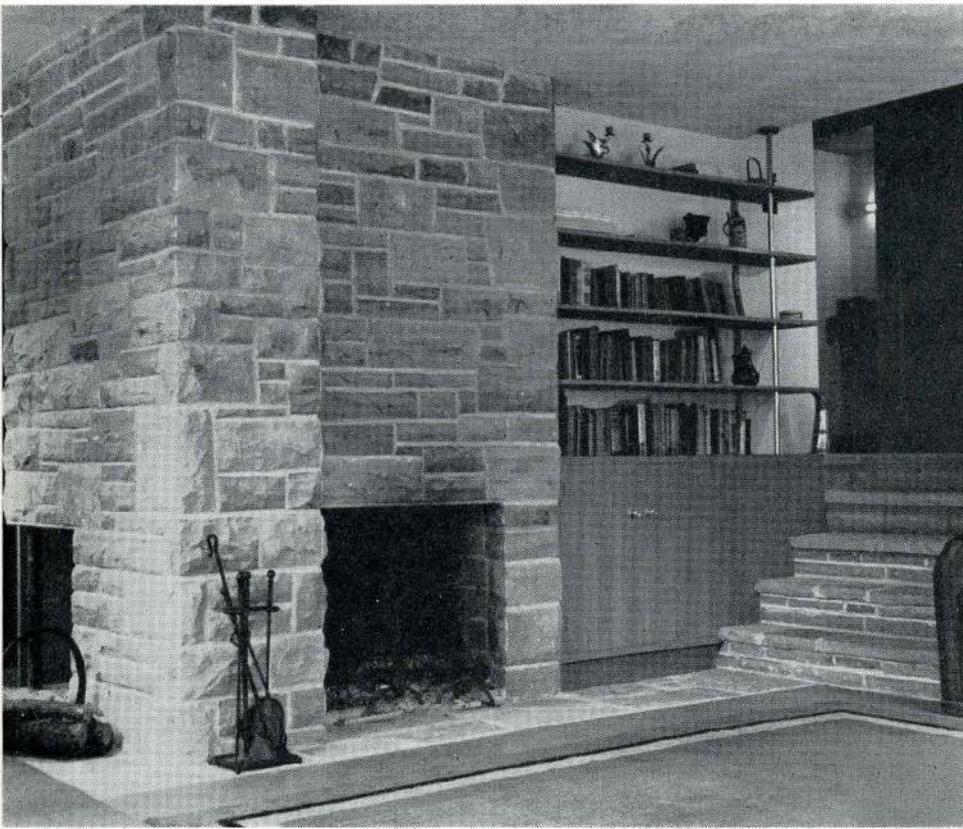
The Schutte residence was designed to accommodate two people with minimum maintenance an important consideration. The beautiful existing planting of the site (a former estate), a splendid view of Lake Ontario lying to the south combined with a natural grade of several feet to a large extent determined the solution.

A split level house with its major glass areas south to the lake, its service elements east to the drive, pleasant views over a tennis lawn to the west and an entrance court framed by building and planting to the north seemed best to meet requirements posed by client and site. Entrance facilities, two-car garage, kitchen and dining are placed on the middle level. On the lower level is the living room, study, heater room and storage. Bedrooms are placed on the top level.

Both the main entrance and service entrance provide covered access to the garage; dining, living and study have direct connections to corresponding areas of the site. At the service entrance a small hall is equipped with a bench seat for removing overshoes and the milk box is under this seat. The breakfast furniture is located for view and morning sun, and the hall telephone booth provides hatch access to the kitchen area. Dining room and living room are a continuous space on two levels. The flagged top of the low wall between them carries down the steps to the hearth and masonry of the two fireplaces serving study and living room and is also related to the flagged plant box and outdoor steps between living and dining terraces. It was planned to separate the living room from the study by a flexible partition so that the study can function as a guest room with washroom and front entrance related to it. The house is panel heated.

Sun control for the broad south windows is accomplished by overhangs and louvres. The diagram illustrates how the lower levels follow the topography of the site. The lower walls outside are a warm gray stucco, the upper walls cedar boarding with clear finish and cedar shingles on the roof. These natural materials and finishes are accented by the paintwork of soffit frames and solar canopy ladder.

In this house a conscious endeavour has been made to express the qualities of integration with the site, open planning, unaffected use of natural materials and in elevation a simplicity of composition and expression of interior requirements which together form the rational basis of the contemporary approach. If this house derives much from the traditional domestic idiom it perhaps indicates that the empirical method of design is quite valid as a basis for the contemporary Canadian house.

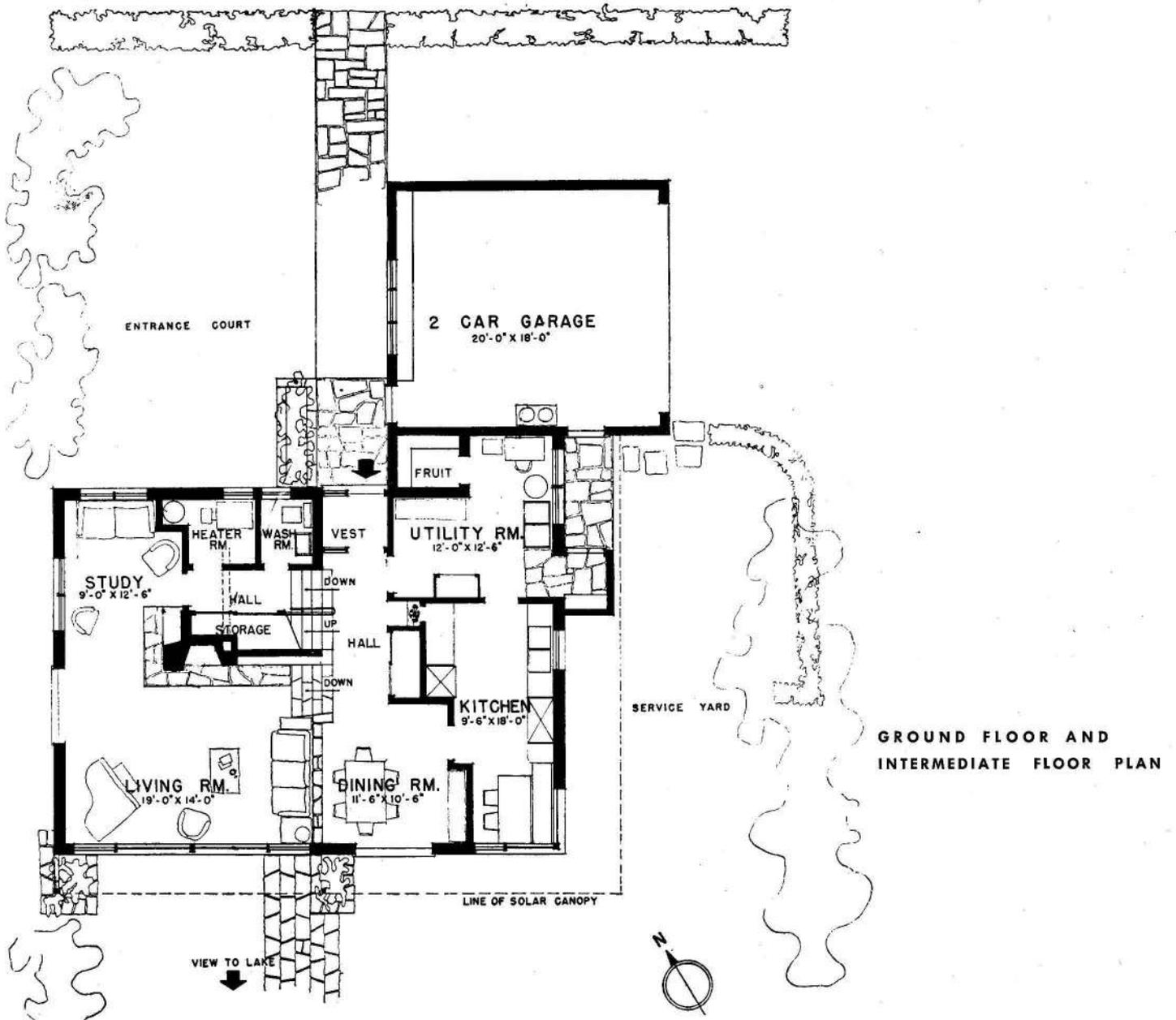
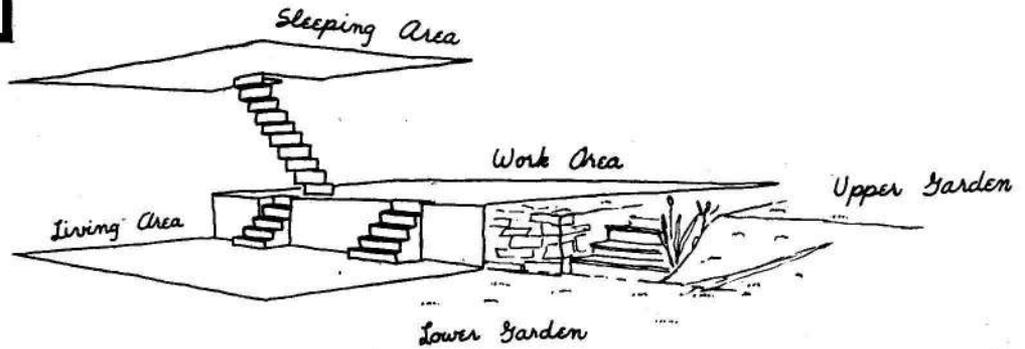
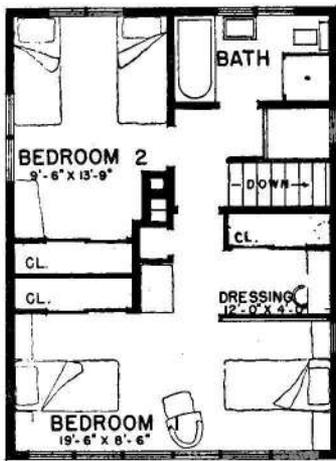


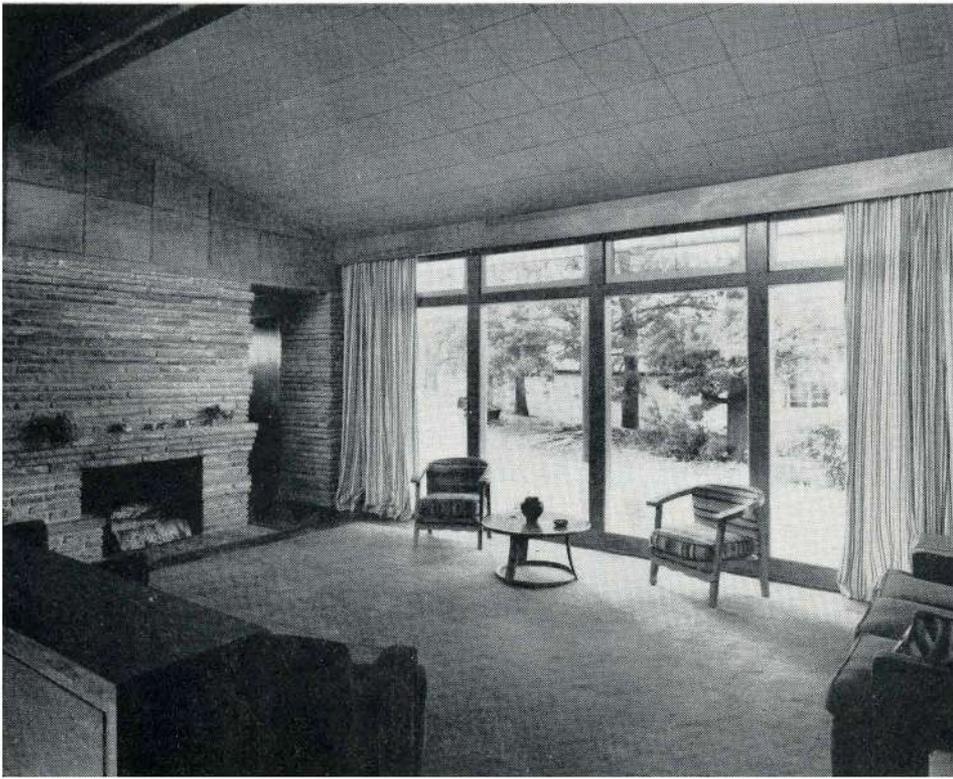
LIVING ROOM LOOKING TOWARDS FIREPLACE

Photographs by Mac-Gill

VIEW FROM SOUTH





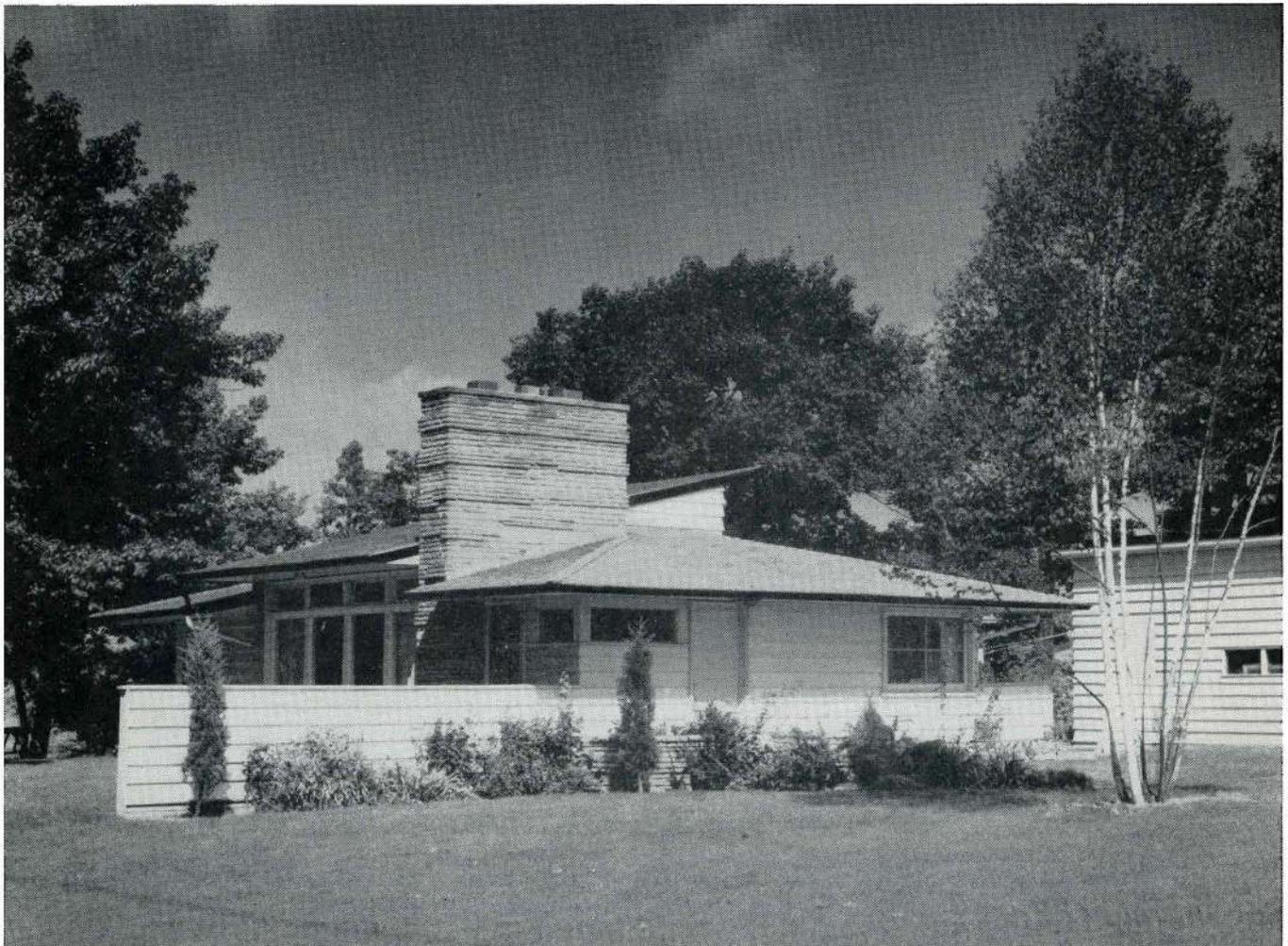


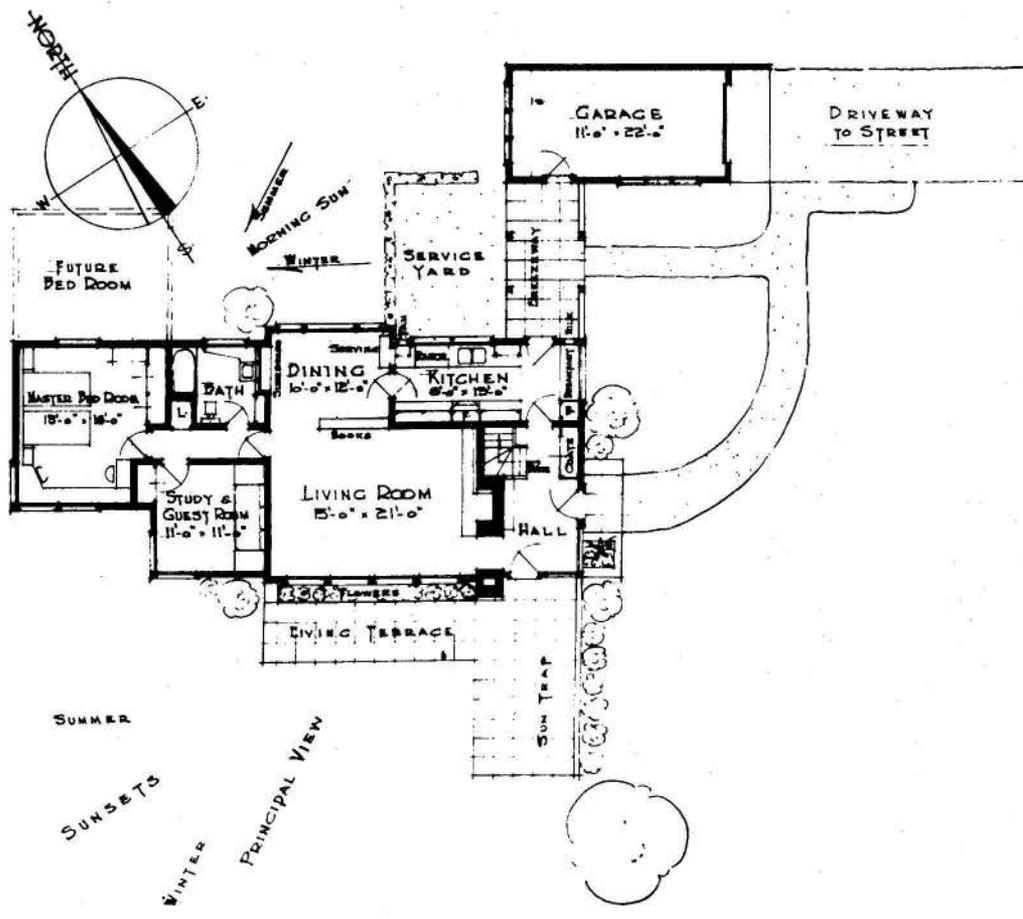
LIVING ROOM

Photographs by Panda

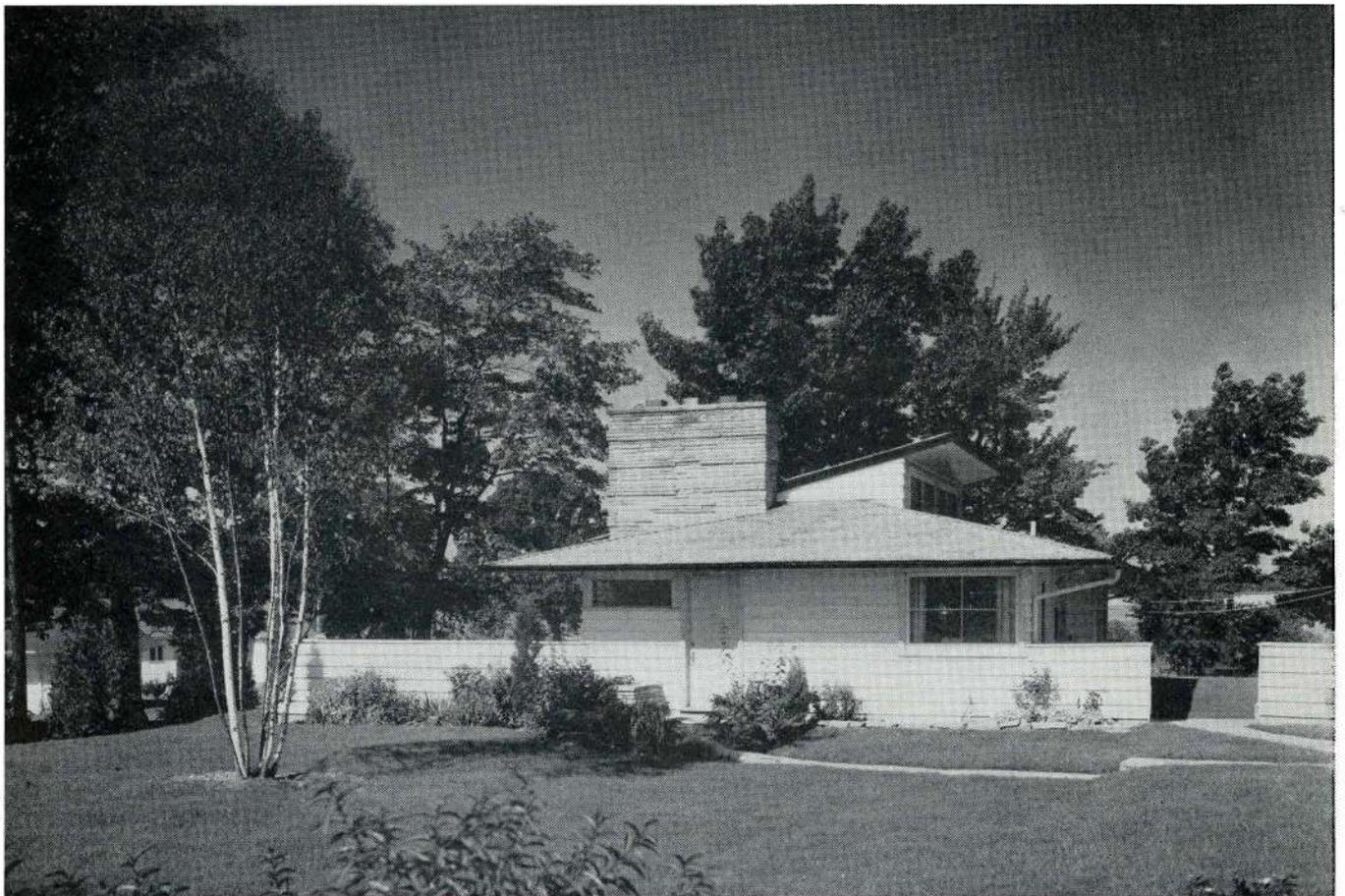
HOUSE OF MR. GEORGE BURNS SMITH, THORNCREST VILLAGE, ISLINGTON, ONTARIO

E. C. S. COX, ARCHITECT





VIEW FROM STREET



# FITTING THE HOUSE TO ITS SITE

By E. C. S. COX

THE most important factor in house design, second only to the provision and disposition of the spaces required for living by the owner, is its relation to the property on which it will be sited. To produce a livable house, its view, orientation and position in relation to its neighbours must be carefully and adequately studied by one who is proficient in the art of exploiting the most desirable features of the site. Such a study and the resultant advice is most ably provided by the Architect, who is especially trained and experienced for such work.

In the first place, it is not necessary or even sensible automatically to locate a house parallel to its lot lines or the street it faces. These are man-made restrictive lines, placed for convenience or profit by those who have divided large tracts of land into smaller individual house sites. In opposition to these restrictions, usually, we have the sun's travel through the sky, the natural views, prevailing winds, vegetation, the slopes of the land — all vitally important points to consider in planning the house and finally in placing it on its site.

Knowing the number of rooms and their approximate relation to each other, it is still impossible to obtain the best solution in plan without studying the site. Standing on the property, we can at once locate the best position, for view and sun, of the living room, the most important room in the house. Following this decision the other rooms and spaces group themselves automatically about the living area, and planning then becomes a matter of detailed arrangement of incidentals.

In our local climate, from the sun and wind point of view, the optimum exposure for the living area is between due South and Southwest, always providing that the view and the neighbouring buildings do not inhibit such an orientation. Perfect sun control is thus obtained with a moderately overhanging roof, giving shade in summer and sunshine in winter inside the house. Facing more towards west, the low sun of hot summer afternoons can only be excluded by vertical shade devices such as trees, shrubs, fences or structural devices on the windows themselves. However, many a pleasant room can face directly North, as it is often very agreeable to look out with the sun rather than into it. In such a case, however, there should be other windows towards the South to let in some sunlight, for health and comfort. In fact, any living room should have at least two and preferably three exposures for maximum livability. It is easy to produce many workable plans with one exposure only for the living room. It requires more skill and more study to provide two or three exposures and still arrange the other areas of the plan in proper relationship.

Morning light is attractive in a dining area or kitchen, but the latter should avoid exposure to hot afternoon sun. Morning sun is not good for children's rooms, as it is apt to wake them too early. In order to obtain a desirable orientation for optimum sun and air, it is therefore permissible and desirable to turn the house at an angle to street and lot lines, providing space permits. This is, of course, difficult to do on narrow city lots, but on wider suburban properties it actually adds to the attractiveness of the whole community to break up the traditional straight line siting of the conventional street plan.

Exploiting the views from the site seems to be a natural thing to do and yet this factor is too often overlooked, by giving too much consideration to street and lot lines. Views can be maintained by again turning the house on its site, but the arrangement of rooms is of even more importance in this respect.

Having chosen the desired view, the rooms from which it is to be enjoyed must be suitably placed. The same principle applies to avoiding poor outlooks, such as the side of the neighbour's garage. This is hardly the outlook to be accepted for one's living room. If the neighbour's house is not yet in existence it is extremely important to study the possibilities and probabilities of neighbouring properties and to try to avoid the heart-break of having some future builder place his laundry yard in full view of your picture windows.

The basic type of plan for the house can be at once controlled and dictated by the contours, or slopes, of the site. A steep slope in a suitable direction may at once indicate a split-level design. A slope towards the back might require that the usual ground floor rooms — living, dining, kitchen — be at the high entrance level and the bedrooms downstairs, opening onto the rear lower level. In even the most ordinary topography the grading of the site, both natural and man-made, must be carefully considered for proper drainage. Thus again it is apparent that the best plan, exploiting natural advantages, cannot be produced without a careful and expert study of the site.

It is possible to decide on a plan and then find a site to fit it approximately, but this is surely "putting the cart before the horse". This is the great danger inherent in the use of stock plans. If such ready-made plans must be used, the best procedure is to obtain the site and give its features careful study, then choose from a large selection of plans *the one that will orient itself the best*, while still providing the desired room arrangements.

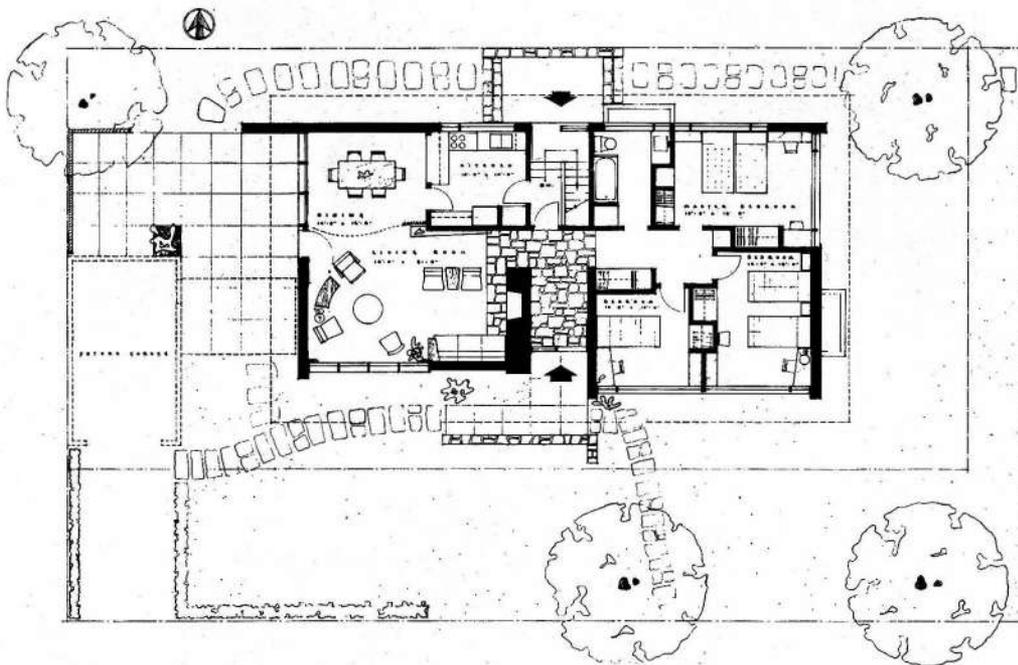
The purchase of a piece of property represents a large proportion of the cost of a house. It is therefore obvious that the best possible use should be made of the land and its advantages exploited to the full.

HOUSE OF MR. K. B. CORNFOOT, TORONTO, ONTARIO

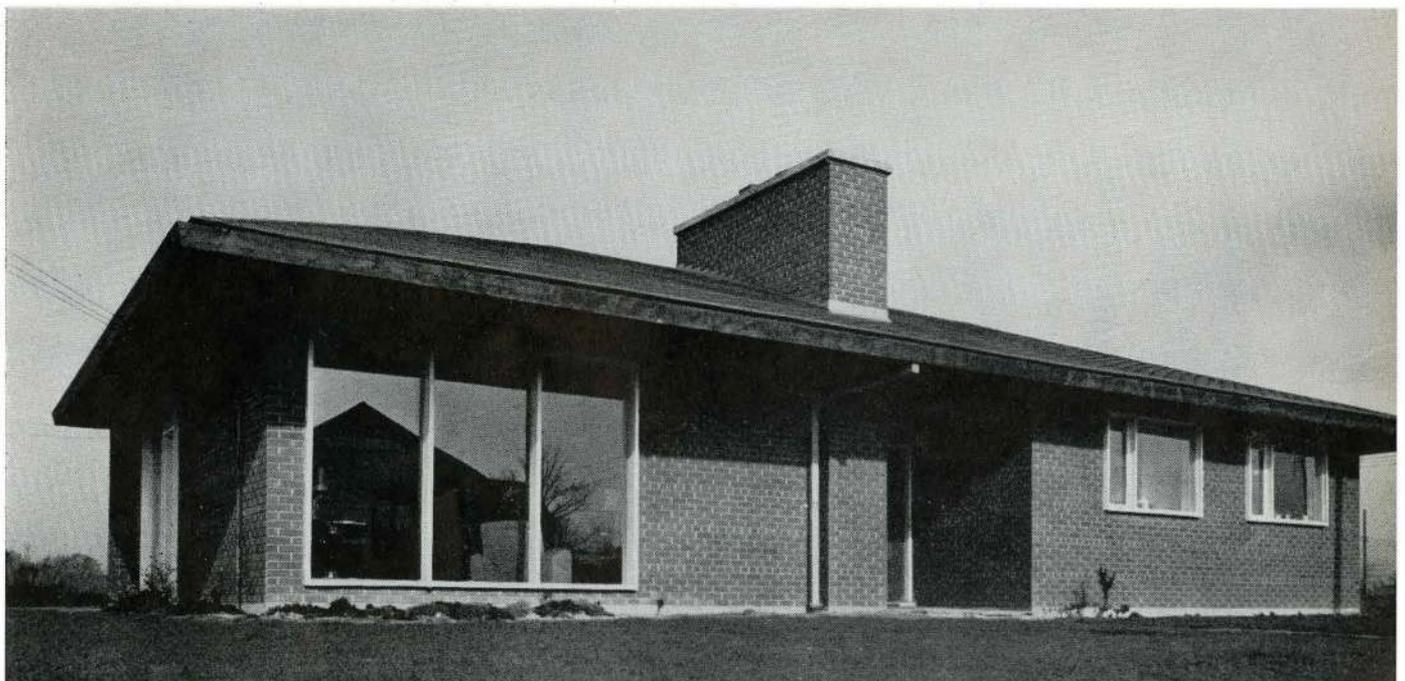
W. J. McBAIN AND G. A. ROBB, ASSOCIATE ARCHITECTS

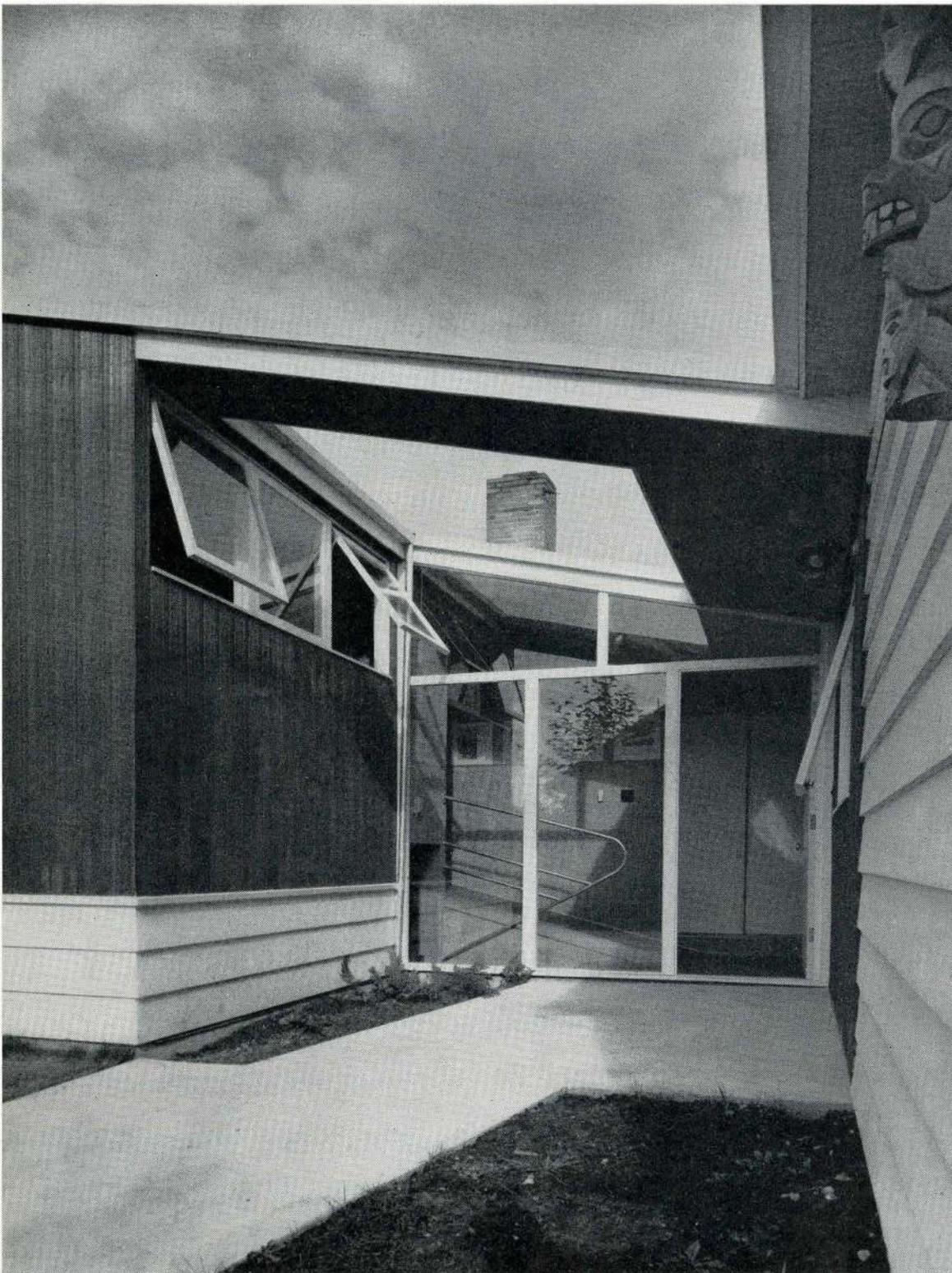


SOUTH WEST CORNER



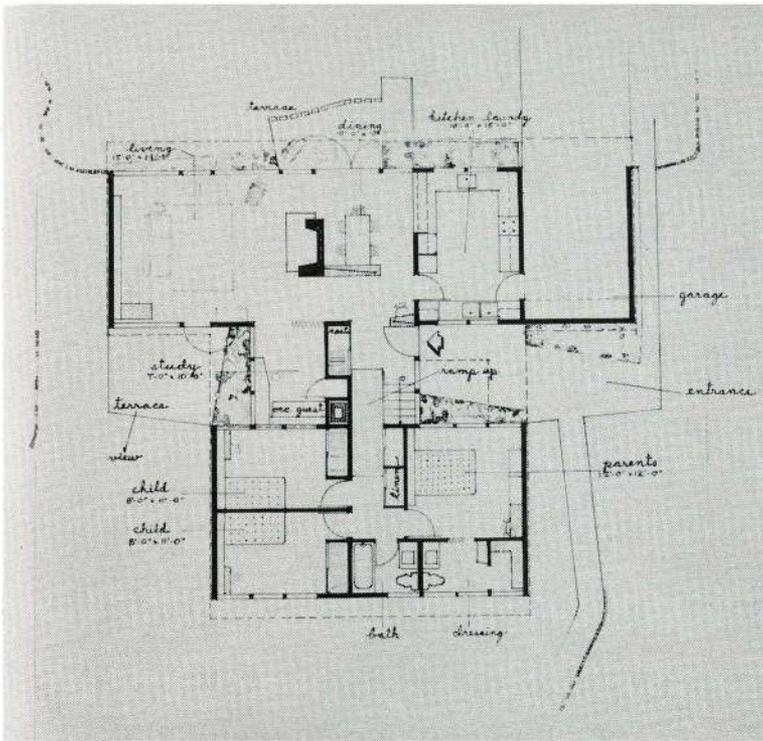
Photographs by Max Fleet



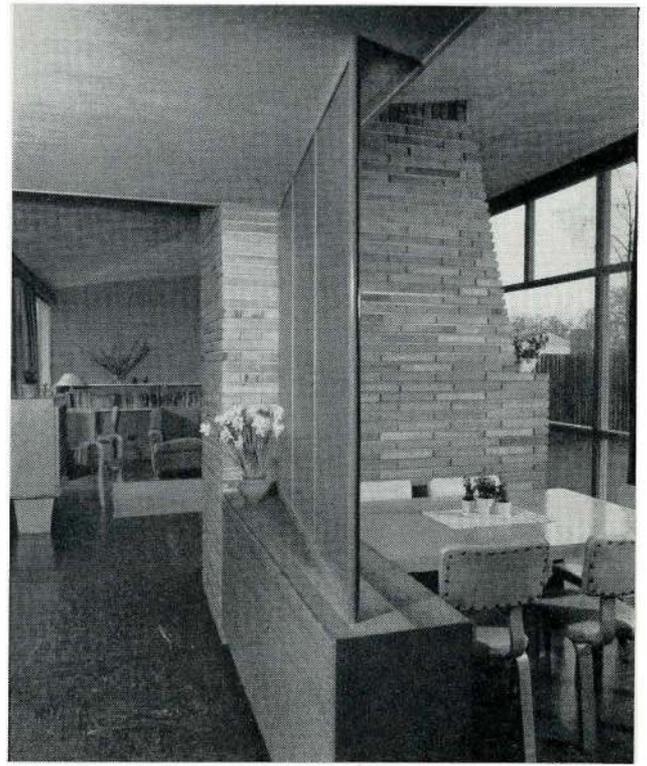


HOUSE OF MR. D. C. SIMPSON, VANCOUVER, BRITISH COLUMBIA

D. C. SIMPSON, ARCHITECT



PLAN

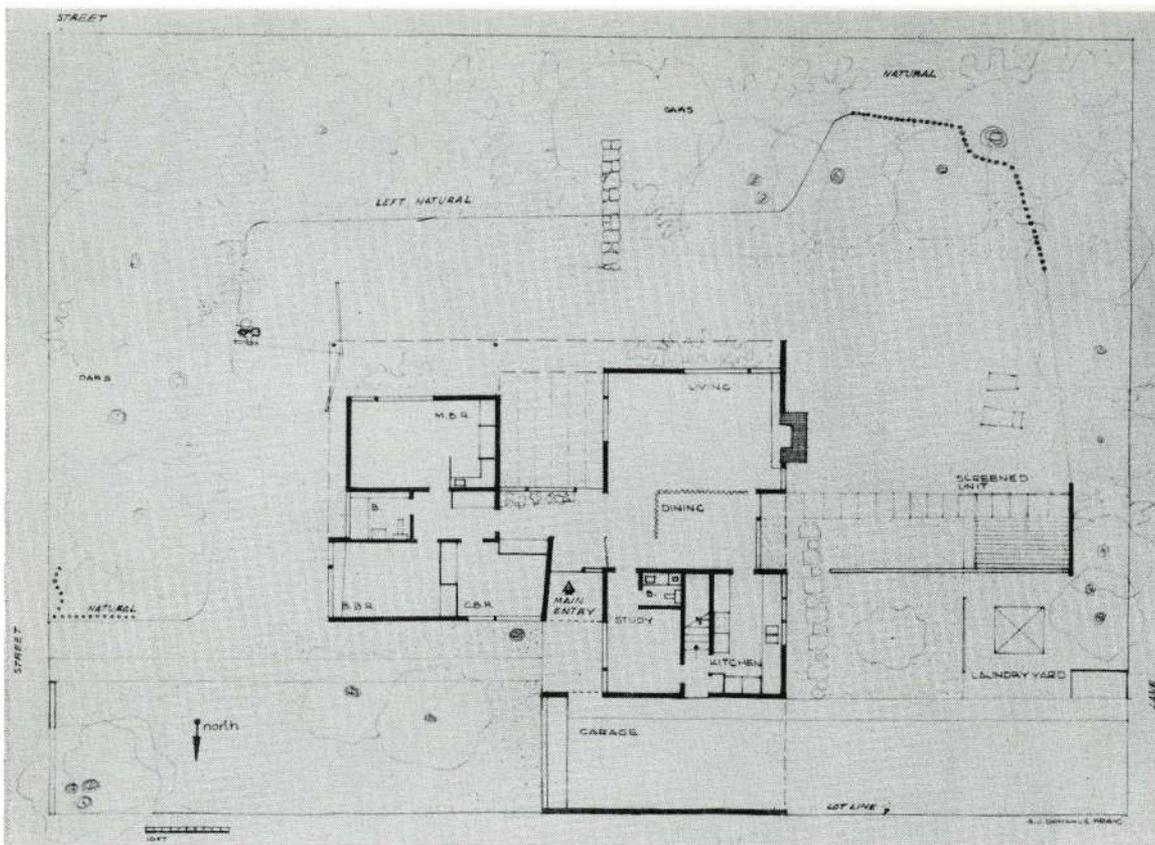


INTERIOR

VIEW FROM GARDEN

Photographs by Graham Warrington

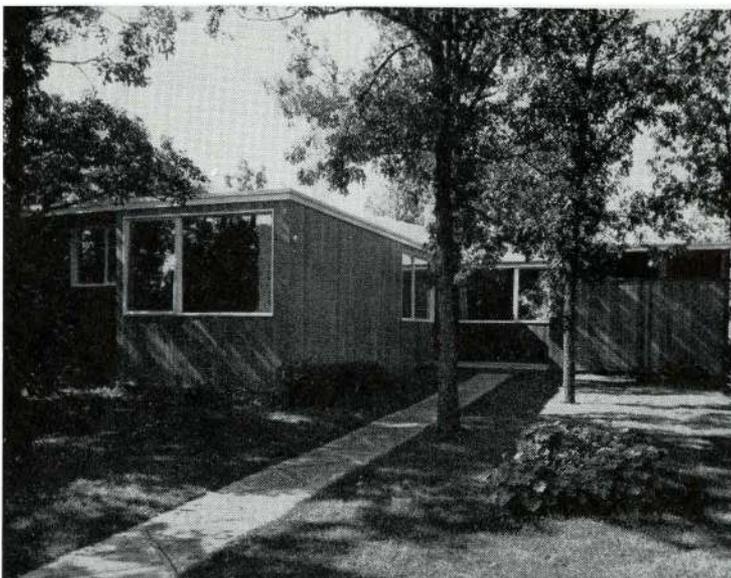




**HOUSE OF MR. A. J. DONAHUE, WINNIPEG, MANITOBA; A. J. DONAHUE, ARCHITECT**

The house could not be considered a radical departure in design. It has part of the roof area pitched, part flat. The pitched area is expressed inside giving greater volume to the living dining space. The location of the house on the lot was limited by setback laws. What appeared to be a relatively large city lot soon became extremely limited. It was possible however, to face most rooms south turning our backs to the prevailing north winds.

Added spaces, fences, screened areas were considered in the basic plan. The plan is essentially divided into sleeping and living wings. The house itself to be practical for resale took into consideration the amount of sleeping accommodation. Consequently bedroom areas are small. The study is self contained with bath giving multiple use of this room. To counteract this limitation it was felt that living dining area should be as open and flexible as possible. Living room ceiling is sloped and serves to break the monotony of a flat one storey scheme. The terrace between the wings is a much argued point in this area. It obviously fills up with snow. Nevertheless the warmth of the sun and extremely pleasant experience of passing this area far outweighs the snow collected. Liberal use was made of natural woods both inside and out. Strangely enough with the cold white winters so little color has been used in this part of Canada. White siding, plaster walls, hardwood floors have been the cold solution to housing.



The Architect I believe has of late been pushed out of one important field, namely, housing. Very few large homes in the city of Winnipeg have the benefit of architectural services. The resulting designs in most cases need no comment here. This situation can be defended by the Architect but nevertheless it poses a challenge. From my personal experience the Architect in the layman eye is mainly connected with the designing of the house. Today the house is considered a non-paying project done as a lead or favour to larger commitments.

The great sensitivity, maturity and care demanded of a successful home cannot be overemphasized. The house is a non-paying project mainly because we have gotten so far away from doing them. We have few men specializing in this field. The reorientation of thinking from banks, theatres and the like to house design is a step most people find too much too easy. It demands much more human and individual analysis, more than most of us care to be responsible for, as a result the house plan is often done by the junior draftsman. The least capable person to handle this problem. The compensation I presume comes from the fact that at least this is a solution to the overhead problem.

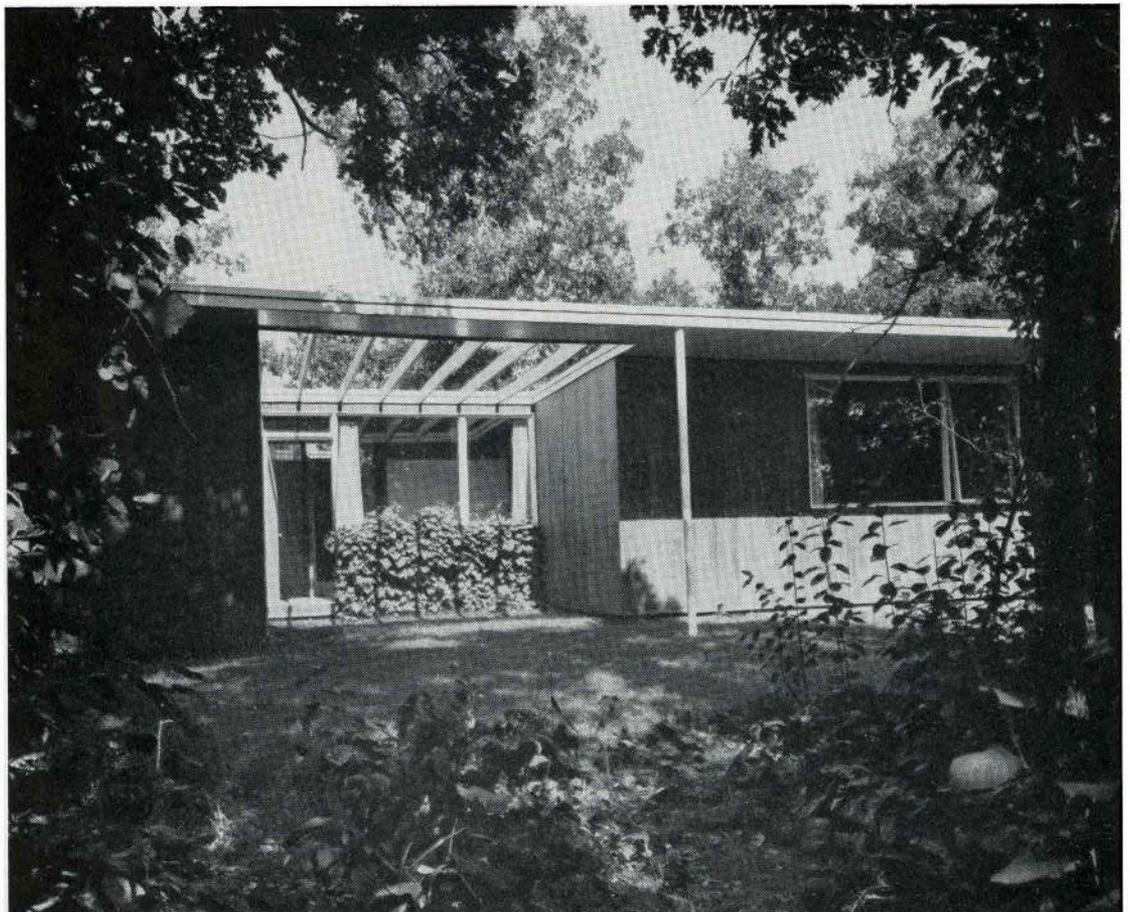
It would seem that mutual effort on the part of Architects in various regions could be made. Groups specializing in this aspect of our profession and aided by reference of other architects. Higher fees could be charged and the standard and efficiency of such offices could make house design pay. It is my belief that this important part of architecture has been forgotten for too great a length of time.



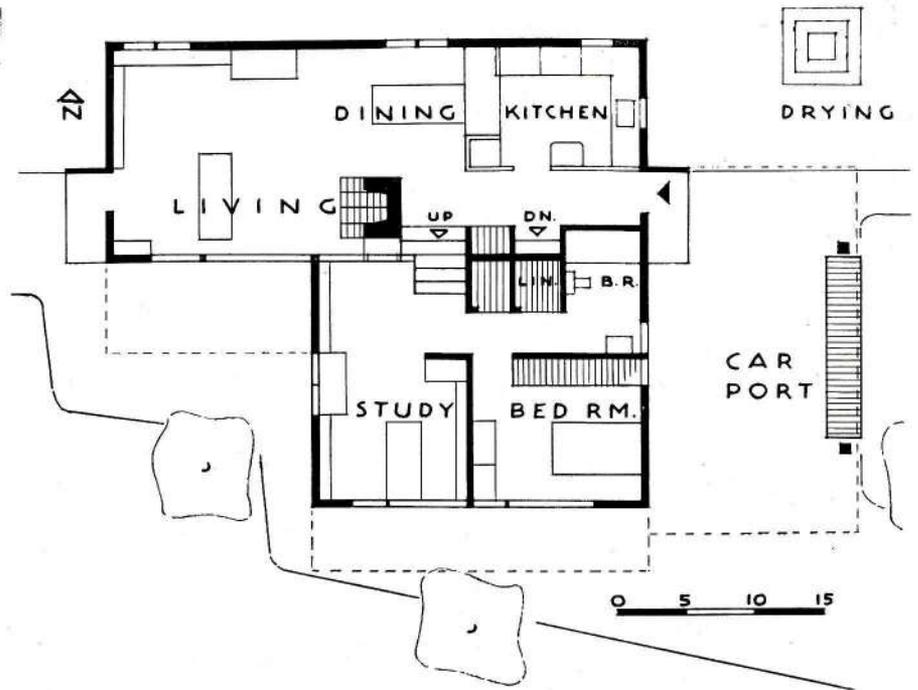
LIVING ROOM

Photographs by M. J. Sym

VIEW FROM GARDEN



HOUSE OF MR. H. A. ELARTH,  
 FORT GARRY, MANITOBA  
 H. A. ELARTH, ARCHITECT



Photograph by M. J. Sym



A first objective was to design a house fitted to the climatic conditions of Manitoba. After studying conditions of the site, a tri-level plan permitting an opening up of the house areas to the south was evolved.

The main level contains a comparatively open relationship of living, dining, and kitchen activities, which in turn open to study, bedroom and bath on the upper level and to guest room and lavatory on the lower level.

In defining this relationship a continuous roof plane rising from the low north side to a high point on the south was found to be satisfactory. Roof overhangs permit entry of solar heat through Thermopane glass areas during the winter season and shade during the summer. A central fireplace stack, connecting to the furnace area on the lower level, serves as a visual focal point as well as an additional source of heat. Leading into the house from the carport on the east is a dual-purpose entry serving as both main and delivery access and thereby fitting into the Wildwood Community plan with its loop road system.

Flexibility in planning for changing needs permits the conversion of main area of the study to serve as a bedroom and a portion of the living area to serve for study purposes.

*Summary of Areas*

Living-Dining	-	-	-	-	-	-	-	-	390 sq. ft.
Kitchen	-	-	-	-	-	-	-	-	115 sq. ft.
Study	-	-	-	-	-	-	-	-	180 sq. ft.
Bedroom	-	-	-	-	-	-	-	-	120 sq. ft.
Baths	-	-	-	-	-	-	-	-	85 sq. ft.
Guest Room	-	-	-	-	-	-	-	-	120 sq. ft.
Laundry-furnace	-	-	-	-	-	-	-	-	200 sq. ft.
Service-storage	-	-	-	-	-	-	-	-	230 sq. ft.
Total	-	-	-	-	-	-	-	-	1440 sq. ft.





HOUSE OF MR. BEN SADOWSKI, BAYVIEW, TORONTO, ONTARIO

GORDON S. ADAMSON, ARCHITECT

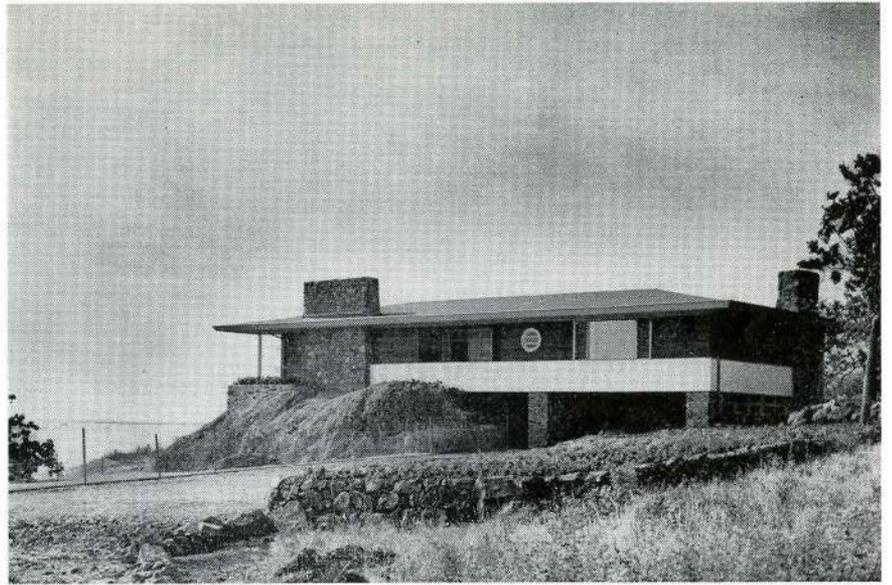
HOUSE OF MR. K. W. PEACOCK, TORONTO, ONTARIO

GORDON S. ADAMSON, ARCHITECT

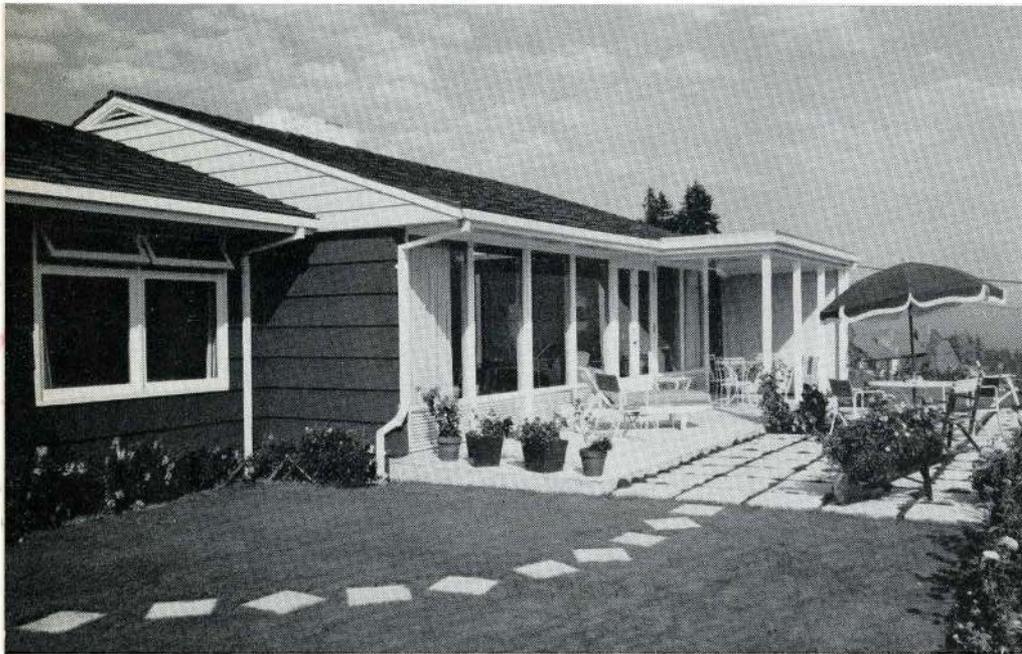


HOUSE OF MR. F. B. McLEOD,  
VICTORIA, BRITISH COLUMBIA

F. W. NICOLLS, ARCHITECT



Photograph by Robert Fort-Duncan MacPhail



Photograph by Graham Warrington

Photograph by Hugh J. G. Allan

HOUSE OF MR. F. KIRKLAND,  
WEST VANCOUVER, BRITISH COLUMBIA

C. B. K. VAN NORMAN, ARCHITECT



HOUSE OF MRS. JOHN B. FISHER,  
WINNIPEG, MANITOBA

PHILIP M. CASEY, ARCHITECT

# LARGE SCALE HOUSING DEVELOPMENT

## PROBLEMS AND PROSPECTS FOR ARCHITECTURAL SERVICE IN CANADA

**A**LMOST any new suburb shows the marks of changing methods of house building. The builder of the 1920's did not often erect as many as a dozen houses in a year. Many operative house builders in 1950 are doing 50, 100, 200 or even 500 "units" in each operation. The federal and provincial Housing Acts, passed in the last twelve months, will speed this trend to bigger projects. Canadian architects may have had less to do with these large operations than some members would wish. The recent discussions of the Community Planning Association of Canada will therefore be of interest.

The National Planning Conference was held in Ottawa on October 6th and 7th. The theme of the C.P.A.C. Conference this year was "Making Good Use of Our New Housing Laws". President Harold Clark of the Association, in his opening address, indicated that the Canadian housing problem has attracted much attention as a financial and production problem; it is time to turn more light upon the design quality of the product — which with today's methods is not the single structure but the whole residential community. This problem was uppermost throughout the meeting, and the following short quotations may provide a rough sketch of the ground covered.

### Frederick Gutheim:

*Assistant to Director, American Institute of Architects, Washington*

Let us not think that our present regulations controlling subdivision, zoning and so forth, or our present building codes, are adequate or desirable from the standpoint of the builder, the buyer or the planner. . . . We should be thinking about positive measures of land assembly and development, ways of promoting larger and more responsible organizations in the building business. . . . Our public housing is just as fundamentally monotonous and mechanical and inhuman as the little boxes that you see on the main road. . . . Perhaps you may escape all these things in Canada. Perhaps it is possible for you to profit by our experience.

After discussing the personal and institutional decisions that have led to the building of conventional cities with conspicuous flaws, the Conference turned on the second day to the methods of securing wider co-ordination and closer linkage among those who will contribute to the flood of building just ahead. Architects were again prominent in the discussions and were joined by that expert on the behaviour of the collective client, the social scientist.

### Nathan Keyfitz:

*Sociologist, Dominion Bureau of Statistics, Ottawa*

It is the construction portion of the investment program that physically and immovably alters the landscape. . . . The area fixed in a year by construction of new dwelling units in Canada is of the order of fifty square miles, which is approximately equal to that occupied by the city of Montreal. . . . A recent survey showed a total of almost two and one half billion dollars worth of construction for 1950. . . . This is of the same order of magnitude as the total net value in dollars of assets in all manufacturing industry, including plants and equipment, that had been reported as existing at the start of World War I. One third of all intended construction investment is in housing. The relative bulk of housing built in 1949 is two and one half times that of 1939. . . .

We are interested equally in the sources of funds and their use. . . . The people who save are not always the ones who make decisions on investment. . . . The lender will naturally be intolerant of anything that smacks of eccentricity; he will consider that the money of which he has custody is safest when he supports the building of houses that he sees owners as wanting. . . . The builder's conception of the buyer's taste actually plays a part in forming that taste. . . .

Development involves day to day decisions which will affect somebody's living arrangements for at least the next forty years. In the consciousness of those making them, the decisions may affect only the houses themselves; but their unintended results include the relations of buildings to one another and to service centres. . . . A safe course is to assume that unintended consequences are likely to be bad consequences. We may think of lender, builder and owner as characters in a play; a play in which all the characters have the very best of intentions. Though the play in which they perform has no villain, yet its outcome is not a happy one. . . .

### G. A. Golden:

*Supervisor, Mortgage Appraisals, Sun Life Assurance Company, Montreal*

In the main, the lending institutions have confined their investments in real estate to the mortgage field. . . . A fairly substantial percentage of the mortgages on new residential properties are made under the provisions of the National Housing Act, with the lending institutions and Central Mortgage and Housing Corporation making

the loans jointly. The building standards established under this Act have had a very material effect in raising the standards of construction and house planning. If there has not been an equally evident improvement in community planning, it has possibly been due to the necessity to produce quickly large quantities of new housing. . . . The indirect control exercised by the lending institutions has perhaps not been as stringent as it might have been. . . .

The capacity of the lending institutions to absorb new mortgages is now being tested for the first time in many years. This means the lending institutions will become more selective, thus they may have more influence in shaping the standards to which future housing will conform.

You will not find their ideas very radical. The submissions are examined by experienced mortgage appraisers, who try to keep abreast of the best that is being built, and what prospective purchasers seem to want.

We recognize, even though we do not always put it into practice, the added value and stability of real estate that arises out of good planning; this is ultimately reflected in the amount of mortgage loan that will be approved. . . . We are equally interested in the larger aspects of community planning. We are concerned by the fact that the street patterns of our cities were largely established before the automobile. . . . and we are encouraging mortgage loans in outlying areas that will be served by improved arteries. . . . Where a regional shopping centre is being created, this will produce an even more satisfactory place in which to live. It will then be a more satisfactory field for mortgage lending. . . . We have watched whole new areas develop with modern factories which are creating entirely new employment centres. We are especially interested in low or moderate cost housing developments in reasonable proximity to these factory areas.

The mortgage staffs of life insurance companies are not authorities on town planning. We need education along these lines just as much as do any other group who are interested in new residential development. Perhaps no group of financial institutions has so much interest in the moral and physical health of the nation as have the insurance companies. Right across the nation we can see the existing stock of improved land being exhausted. As we open up new clean areas for development, we have an opportunity such as we have not had for many years.

**David B. Mansur:**

*President, Central Mortgage and Housing Corporation, Ottawa*

Let us say that housing construction is kept up at about the same rate as in 1949. Then we can anticipate residential growth on a national basis of about three per cent, or something of the order of 100,000 starts per annum. Over the next five years one might expect an increase of approximately sixteen per cent in housing stock, or some four thousand units in a city of one hundred thousand people. . . . There will be one acre of residential development for every one hundred persons

of current population. . . . The only way a community will properly absorb a residential development of one acre per hundred population over the next five years, is for that population as a whole to believe that the job should be done properly. . . . We must do a good job over the next few years.

Now let me carry my arithmetic a little further, to deal with the money which will be spent in such developments.

Residential development involves municipal and allied expenditure of approximately \$8,000 per acre; this is aside from the cost of lands, buildings and any connections which are borne by the owners. One might anticipate an expenditure for residential development from municipal account of approximately \$80 per capita of present population. In Canadian municipalities of five thousand people and over, there is a population of some 7,000,000 people. An expenditure of some \$560,000,000 is in prospect. . . .

I do not know what is expected from Central Mortgage and Housing Corporation. . . . We have a direct or indirect interest in five-sevenths of the housing program in Canada, and I may say this is an embarrassingly large interest. . . . We find good residential development in many places: in St. John's, Newfoundland and New Westmount in Halifax, Hampstead and Mount Royal in Montreal, Yorkminster and Bathurst-Lawrence in Toronto, Wildwood and Tuxedo in Winnipeg, Fraserview in Vancouver. These constitute a representative group having one thing in common: *the land in large quantity was under a single ownership during the whole development.* These developments owe their present shape and form to that fact. . . .

The terms of the new housing legislation provide that the Dominion and the provinces shall join together in housing projects. . . . Progress may have appeared slow, but I think it has been sound. Both in Newfoundland and British Columbia agreements exist between the provinces and the Dominion with respect to what are commonly known as public housing projects. It is not going to be long before we are actually under way in Vancouver on a public housing project to look after some of the needs of the people of that city. As far as this country is concerned, this is a voyage of discovery to produce out of this legislation public housing which will be considerably better than that found in the United States, Great Britain, Australia or New Zealand. . . . I think the provinces are quite right in taking a good look at everything before they decide that it is satisfactory to them.

**Eric W. Thrift, M.R.A.I.C.:**

*Director, Metropolitan Planning Commission, Greater Winnipeg*

We have a great deal of work to do in studying actual need before we proceed. We have the means and the legislation, and when we work out some idea of the size and scope and range of the housing we need, we should seriously consider what the end product is going to be like.

**Clarence S. Stein, F.A.I.A.:**

*Consultant Architect on Housing, Community and Regional Planning*

A few of the things we have learned are of the utmost importance and perhaps you can try to apply them in your own way to the problems you have here in Canada. Perhaps this would help you to save a lot of time and energy.

One of the things is this: the number of houses or the housing units which you build is not the essential thing. The important thing is the relation of those houses to the community and to the needs of the present and the future. You can put a great many houses down as just pure waste of money: houses that are misplaced, badly related to each other, inconvenient to working places, not in easy contact with places where everybody can play, houses where there are no good schools and community facilities, and where there is no plan to have these facilities for a long time to come. . . .

Housing is not a separate function . . . . Housing must be conceived as city-building and neighbourhood building . . . We have either to build in completely new areas outside the city limits and work out a pattern related to today's requirements, or within the city we have got to clear off a section large enough to start over again. New development or redevelopment better related to the requirements to living today has *got to be done in large spaces*. The usual streets laid out in rows suggest to me a picture of prison bars; they cannot give you any freedom in living the kind of life we do . . .

What are its elements? The shorter working day, daylight saving, week-ends with the automobile. . . . About ten per cent of the income of the United States goes to travel, transportation, movement — going places instead of enjoying places. . . .

These changes have developed in the last twenty-five years. In response, three broad basic planning ideas have developed. The first is the Garden City — planned with a definite relationship of industry and living, limited in size, surrounded by a green belt, a city intended for human beings and filled with their activity. One spends one's time doing the things one wants to do.

The second idea which is being generally accepted is that of the neighbourhood community, in scale with the activities of a group of people and having its focal point a community centre. The group of people have common interests in which they participate, and the job of the planners is to find out what size of group participates in what, how to bring them easily together and make it convenient and enjoyable for them to take part in their particular activities. This is the neighbourhood which we see being developed in Sweden, England, the United States and practically everywhere nowadays.

The third idea is the Radburn idea to make an environment that will serve the purposes of which I speak.

Safety is provided by completely separating highway and footways. There are special roads for different purposes. There are large open spaces close to the houses. There are safe separate entrances to playgrounds. The typical house is turned around so that the main front faces toward the quiet garden where children can play, and where everyone can enjoy the sight of nature. I would like you to study the plans and photographs of Radburn New Jersey, Greenbelt Maryland, and Baldwin Hills Village; these are a few of the places that demonstrate new forms for the nearby environment. . . .

I think these places are excellent investments, but *the whole thing has to be built as a community* and when so built as a safe community it is a splendid investment.

You cannot afford to build a community or a new town and do it slowly. . . . The overhead is too much. It takes top architects, engineers and builders to put up a hundred houses or so. You have to have some industry to feed the community, and then you have to keep it going. You cannot stop, because under normal conditions you would have a big investment in land and you cannot carry it. You lose until you begin to get returns on it. A colossal insurance company can do it because it has enough money for the purpose, but apart from that there must necessarily be government assistance in dealing with land. I think you have that provision here. Even more essential than the financing of the houses is the financing of the highways and various public utilities that have to be built up. The new community will need temporary assistance over the first period at least, and this is the period which kills private initiative in the building of new communities no matter what the size of them is. In other words, *you need continuous action on a large scale*. I do not like numbers, but roughly speaking I think you have to build 1,000 units a year and you have to keep on going because of the overhead.

*Architects will notice that in the National Conference on Planning, the majority of the speakers were looking forward to large-scale semi-public residential development on open land. Social scientists are exploring the techniques for interviewing the unseen clients who will live in these new areas. The chief officer of the federal housing agency stresses that large tracts of land must be brought into single ownership for successful residential development, and that Canadian legislation provides for this. A staff member of our largest insurance company looks forward to such developments in the next few years as affording better mortgage security for his principals than the conventional city does. The universities are being encouraged to train technicians and to develop procedures to meet the problems. It is in the best traditions of the architectural profession to prepare for service in this re-organizing process of city-building.*

**Alan H. Armstrong**



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# NEWS FROM THE INSTITUTE

## 44th ANNUAL ASSEMBLY OF THE R.A.I.C.

Plans are progressing for the 1951 Annual Assembly of the Institute, which is to take place in Quebec City on March 1st, 2nd and 3rd, 1951, at the Chateau Frontenac, and it is hoped that many of the R.A.I.C. members will find it possible to attend.

A circular, conveying details of the Assembly arrangements is in course of distribution to all members, but in the meantime members will likely be interested to note that Prime Minister Louis S. St. Laurent has accepted the invitation of the President and Council to be guest speaker at the Annual Dinner.

Another special feature of the programme is a cultural seminar, dealing with the future development of the City of Quebec in relation to its past, to be conducted by Mr. Edouard Fiset of the National Capital Planning Service, and supplemented by a tour of the city itself.

Requests for the display at the Assembly of the designs submitted in connection with the 1950 Award of the Massey Medals for Architecture have been noted by Council, and the possibility of making suitable arrangements to show this exhibition at the Assembly is being investigated.

As a result of experience gained at the 43rd Annual Assembly, it was decided that transportation arrangements would not involve dealing with the Canadian Passenger Association this year, or in the future, until travel by rail to an R.A.I.C. Assembly exceeds the required number of 75 people. However, the T.C.A. offer a reduced rate where ten people at least are travelling to a convention, which will be worth consideration by those who are intending to travel by air to the Assembly, and further information regarding this will be supplied by circular letter.

## ALBERTA

At the beginning of November last a plebiscite was held in the city of Edmonton on the question of accepting a scheme that was presented to the council for the development of a large area in the heart of the city by a syndicate formed for the purpose and known as the First New Amsterdam Corporation of New York. The scheme is popularly known as the "Detwiler Plan" after Mr. L. E. Detwiler the managing consultant of the Corporation who personally presented the plans to the city. On the plebiscite the plan failed to secure the two-thirds majority required for its acceptance, but it received a substantial actual majority.

It is beyond the scope of this communication to discuss the details of the plan and the conditions attached which were of some complexity. The plan itself is the boldest architectural project ever laid before any Canadian city. It involved an area of about thirteen acres and an outlay of twenty-eight million dollars. It is an interesting story how this city comes to be possessed of such an area rightly described in the proposals as a unique oppor-

tunity. It probably owes its genesis to the late Lionel Gibbs, an architect and member of the city council who suggested that a future city hall should occupy a central position in a park in this area, a proposal which at that time involved purchasing a number of private properties. About 1912 the firm of Morell and Nicholls of Minneapolis was called on to prepare a layout for a larger scheme. They prepared a scholarly scheme which, however, was never attempted and, the war of 1914 breaking out, it was laid aside and never resumed. Many similar schemes for city planning in other places shared the same fate at that time.

In 1929 the recently superseded Town Planning Commission of Edmonton was instituted. This commission's efforts in regard to the area took the form of urging the gradual further purchase of private properties in the neighbourhood and of reserving the whole area by zoning it as Public Park. They also made special regulations governing buildings upon surrounding streets. This definite zoning of the area as "Public Park" is the reason why a unique opportunity now exists. The original idea was that this should remain as an open "square", there being no other opportunity within the city for such a square. It was hoped that this would prove such a desirable location that in the ordinary course of purchase and development it would gather around itself important buildings in the manner in which most of the world's cities have developed their famous squares — Dominion Square, Montreal, being an outstanding example.

But when it was realized that this large area actually had become city property, civic officials began to cast loving eyes upon it as something out of which the city purse might be replenished. These then alleged that it was reserved as "Public Park" not in order to be kept open but in order that it might be built upon! This view is the basis of the "Detwiler Plan", in which the idea of an open square is submerged and a strip of grass and trees along each side is substituted.

The plan itself is worthy of study as regards both its architectural and its town planning aspects. The architect chiefly responsible is Mr. Gordon Lorimer of New York who has developed it in association with other consultants. It is a bold and skilfully designed project. From a town planning point of view it is a self-contained unit. Although providing parking space for 1800 cars this would probably be sufficient only for the business to be carried on within the area itself. The buildings include a million feet of rentable floor space in tall office blocks, an auditorium for 2,500 persons, stores, banks, restaurants and many other well considered requirements.

What appeared to many as a fatal flaw in the financial proposition was that the corporation was to occupy the area on a ground rental basis and to be exempt from taxes. Many business concerns thought it unfair that a syndicate should be permitted to make its profits under exemption from those expenses which they must pay

in full before they could count upon any profits themselves. The general interest aroused has been so great that it will bring nearer some worthwhile development.

*Cecil S. Burgess*

## ONTARIO

The 61st Annual Convention of the O.A.A. will be held at the Royal York Hotel, Toronto, Friday and Saturday, January 19 and 20, 1951. Mr. Frank Newton is Chairman of the Committee on Arrangements.

Some programme highlights follow (\*Tentative):

### Exhibitions:

Exhibition of New Building Materials and Techniques. Forty-five firms will participate. This is a somewhat larger Exhibition than in previous years.

Architectural Photography.

\*Industrial Design Exhibit – by the National Industrial Design Committee, National Gallery of Canada.

\*Students' work, School of Architecture, University of Toronto.

### Seminars:

Public Relations in Professional Practice – Thomas Creighton.

\*The Architect and Industrial Design – Donald Deskey.

\*Architectural Design – Edward D. Stone.

### Business Session and General Discussion:

This will be divided into two periods this year, thus allowing more time for discussion by the Members at large of the many important matters being dealt with by the Council and Committees of the Association.

### Tours:

\*Conducted tour through the Hospital for Sick Children, Toronto.

### The Ladies:

A special programme of entertainment is being arranged for the ladies.

In addition to the special programme, ladies are invited to the Toronto Chapter Luncheon, Friday, January 19th, and to the President's Reception and Annual Dinner, Saturday evening, January 20th.

### Other Features:

Luncheon on Friday, January 19th, at which the Members and their wives will be guests of the Toronto Chapter.

Cocktail Party, Buffet Supper and Entertainment on Friday evening, January 19th.

President's Reception – Saturday, January 20th.

Annual Dinner – Saturday, January 20th – Black tie.

Speaker: Hon. Harold Caldwell Kessinger, Ridgewood New Jersey.

Judge Kessinger who has been hailed as one of the greatest after-dinner speakers of the day, has taken for his subject "Architects of a Better World".

## THE MODERN HOUSE

*(Continued from page 396)*

the white stucco forms had been subjected to the assaults of the climate and had turned patchy and grey. As the modern idiom developed these short-comings were realised and the old materials, brick and stone, which become more beautiful with age and added warmth to the building, were reintroduced; large overhanging eaves began to replace the thin coping to shed the rain and throw deep shadows.

As the modern house became accepted in different countries local variations developed which added new life and vigour to what had become a rather stylised expression.

It is at this stage in the development of the modern house that the Canadian scene begins to shape itself.

It is at the moment rather difficult to discern a distinctly Canadian character in residential design. For one thing the regional differences are so great that it is doubtful that a unified character will ever be developed, and regional rather than national characteristics will manifest themselves in time. British Columbia is at present the only province which seems to have come close to the development of a regional idiom.

The influence of the United States is strongly discernable in Canadian Architecture because our problem here is so very similar – the social, technical and economic problems are very much the same, and the standard of art education and appreciation is unfortunately comparable.

The modern Canadian houses, as illustrated in this issue try to solve the problems of to-day's living habits in the most direct and imaginative way, and there is no doubt in my mind that the development is in the right direction. It is however, quite clear that the modern Canadian house is far from a mature stage of development, it still lacks, in many cases, a refinement both in general conception and detail, which will no doubt come with time.

We still have no reason for self-satisfaction and must bend all our efforts toward developing a modern architecture which is simple and human, and reaches a height of expression so far not yet achieved.

## ACKNOWLEDGMENT

The Editorial Board is greatly obliged to **Mr. Henry Fliess** for the time and energy, which he has put into the House issue. Mr. Fliess is one of that growing body of young architects, who are striving to keep the standards of domestic architecture, in Canada, as high as the best in other countries.

*Editor*

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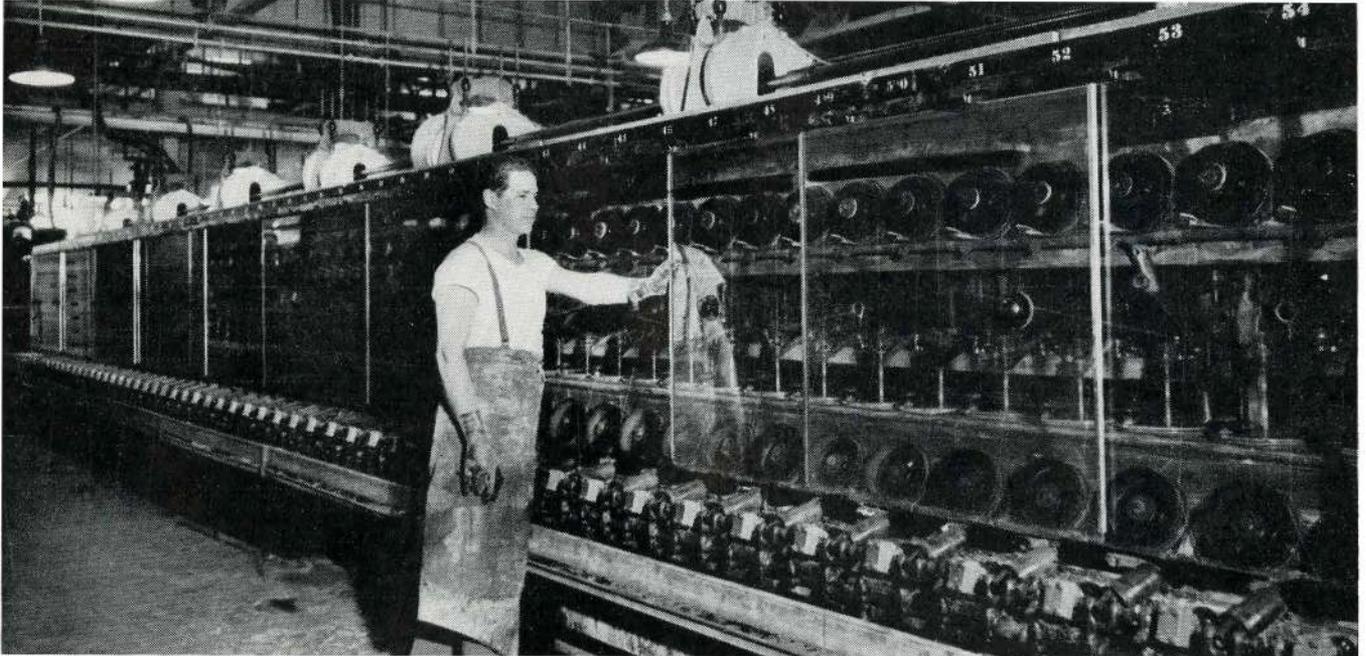
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NO. **48** INSTALLATIONS  
"ARMOURPLATE"

## AN EXAMPLE OF "ARMOURPLATE" IN CANADIAN INDUSTRY



*Photograph by courtesy of Courtaulds (Canada) Limited, Cornwall, Ontario, showing installation of "Armourplate" Toughened Plate Glass*

Officials at this modern rayon manufacturing plant solved a major production problem by the use of Glass. One stage in the processing of rayon yarns calls for the use of certain acids, and it was found that acid fumes were being dispersed throughout the plant. Since this caused discomfort for the employees, the Management decided that the acid fumes must be sealed in. At the same time this particular machinery must be under constant observation, so it was decided to build a Glass screen around the entire assembly.

Thirty thousand feet of Pilkington polished plate glass was cut and processed to exacting specifications. It must be remembered that "Armourplate" cannot be cut or drilled or in any way further shaped after

the toughening process. The result, for Courtaulds (Canada) Limited, is complete protection for their employees, full visibility and ease of access for inspection and maintenance. The photograph shows how this has been achieved.

"Armourplate" is toughened plate glass. In the toughening process, the plate is suspended vertically in a high temperature electric furnace until the softening point is reached. Cold air is then directed onto both surfaces which become solid, while the core is still hot and soft. As the core cools it contracts, the outer surfaces being in compression, the inner one in tension — to give a glass five to seven times as tough as ordinary glass.

*For further technical details on "Armourplate" please refer to page 9 of this series or write to our nearest branch.*



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