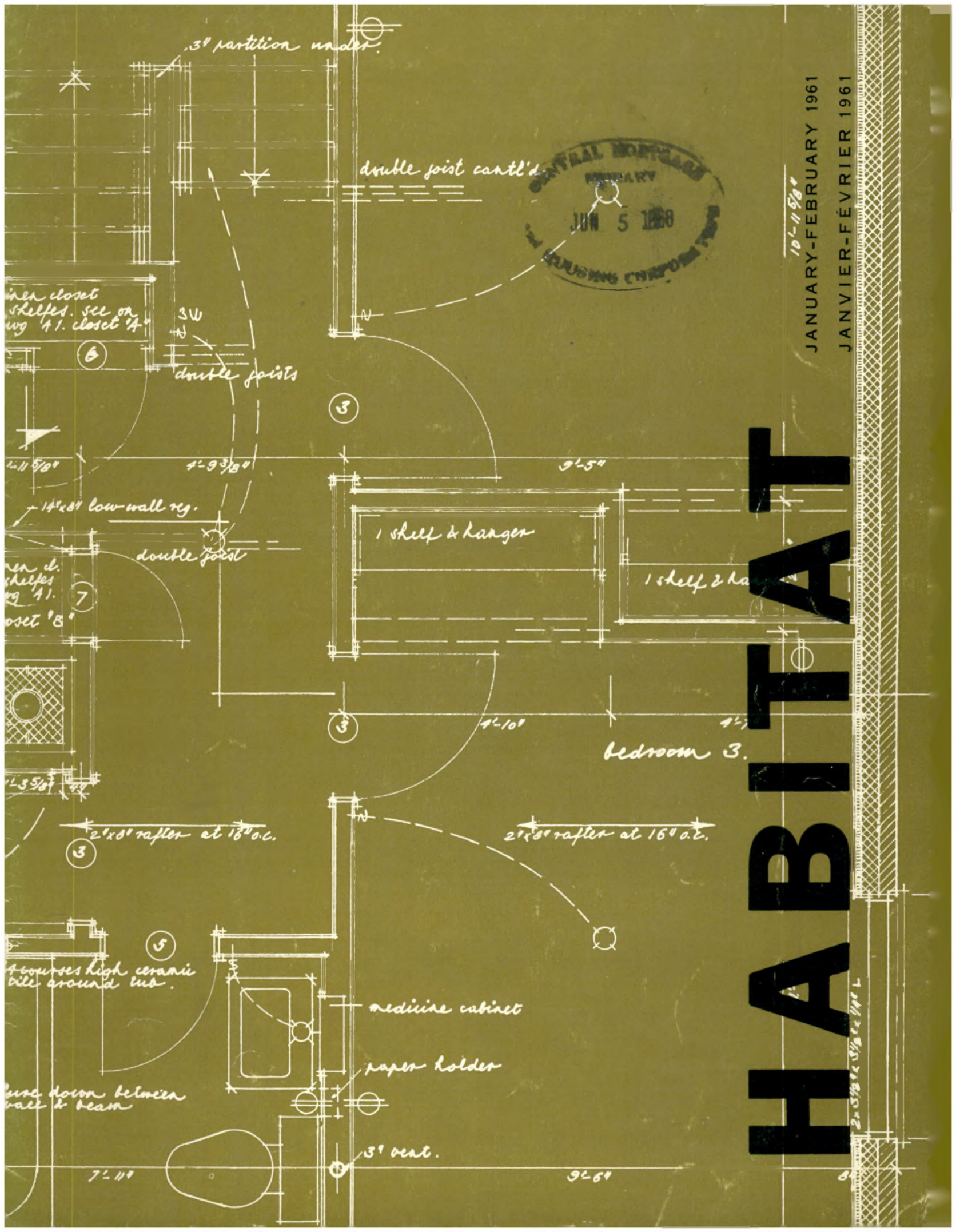

C.G.S. d'Iberville manoeuvers through heavy polar ice in Eureka Sound, N.W.T. NFB

HABITAT

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CONTENTS

Cover Design by Zolton Kiss

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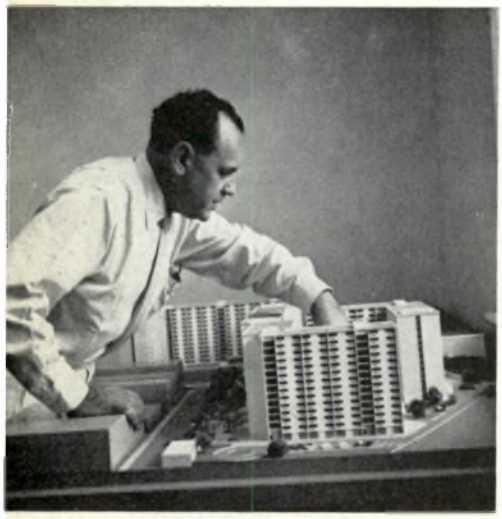
HOUSING IN HONG KONG



by James Ronald Firth

James Ronald Firth, A.R.I.B.A., F.R.S.A., is Acting Commissioner for Housing in Hong Kong. Mr. Firth worked on town planning and building projects in Persia and Iraq from 1945 to 1948. He was Chief Architect to the Government of Trinidad and Tobago at the time the Federation of the British West Indies came into being.

The Crown Colony of Hong Kong is a crowded, bustling territory in the throes of an industrial revolution. Originally a barren rock leased to Britain as a trading post by one of China's emperors, the Colony now has a population approaching 3,000,000 and, of these, some 2,950,000 Chinese, speaking every dialect of the mainland, dominate the scene set by a few thousand English-speaking officials and heads of business houses. The clatter of clogs on the pavements, the clack of mah-jong tiles, the babble of tongues and the brays of hawkers, the wail and clang of potted Chinese opera, all insist on its Chinese-ness, but the smart gesture of a traffic cop, a crisp white suit, and the tidy streets proclaim that here British law and order prevail.

The Colony consists of 398 square miles of land, 356 of these in the New Territories, leased from China until 1997; the rest on Hong Kong and other islands in the South China Sea. An overwhelming mass of the people live on Hong Kong Island, in its capital city, Victoria, and on the tip of the Kowloon Peninsula. In the harbour between, the trading junks pick their way among the cargo ships, ferries, yachts, naval vessels and water taxis, whilst the Peak, originally rising sheer from the water's edge, but now aproned by heavily developed reclamation, looks out over a prospect of probably the world's most beautiful and exciting seaport.

Below the Peak and on the Kowloon Penninsula stand some of the world's most crowded living areas, in Wanchai and Sai Ying Pun in Victoria, and in Yaumati in Kowloon. Here tenement floors of about 15′ x 30′ are divided into

The Hong Kong Housing Authority's first estate, constructed on reclaimed land at Java Road. It houses 12,400 people.

cubicles and bed-spaces of 40′ or 50′ square feet each, where families live without daylight, fresh air, cooking or sanitary facilities. On the roofs of the tenements and on the pavements below, squatters live in flimsy shacks of canvas and wood and rusty tin. On the poorer, barren rock-strewn slopes, more squatters live in barnacle-like growths of huts, mostly families who have rolled across the Chinese border in an unending stream since the Communist government began its rise to power.

Now, in Hong Kong, where the Communists are free to trade — and do so in banking, industry and commerce — and where China supplies much of the food and other commodities required by the swollen population, the Government has accepted the influx of the crowds that have nowhere else to go. And whilst the refugees themselves have developed work and production on such a scale that the Colony's economy has changed from entrepot to confident industry, the Government has been faced with a difficult and exceedingly complex housing problem.

The problem, however, as well as being difficult, is intensely interesting and has been accepted as a challenge by the people concerned. It is interesting architecturally, socially and as a philosophy; a philosophy of something is better than nothing, but it must be regarded in its proper setting.

Before the problem of refugees arose, housing conditions in Hong Kong for the majority of the population were poor, by Western standards. It was common to find Chinese families, with relatives and their children of all ages working, cooking, eating, sleeping in one room, especially during the Sino-Japanese war beginning in 1937.

Damage to domestic property during the Japanese occupation of Hong Kong was considerable, and some indication of living conditions was shown in the results of a Housing Survey conducted by the Hong Kong University in 1957 at the request of a Special Committee on Housing. This survey covered most of the regular housing of the urban

area, occupied by 1,265,000 persons in 267,000 households. The survey showed that 56% of the households had a family income below $300 a month, and 79% had an income below $600 a month. Nevertheless, 32.3% were paying from $40 to $50 a month for rent, rates and services. 79% of all families were sharing the accommodation they occupied. 95,000 families were living in cubicles, 43,000 in bedspaces, 8,000 in cocklofts and 4,000 on verandahs. Only 20,000 households had accommodation with a living room not used for sleeping.

The estimated total population at the end of 1959 was 2,919,000 persons, of whom approximately 80% were living in the urban areas of Hong Kong, Kowloon and New Kowloon. At the same date the regular domestic accommodation in these urban areas consisted of 1,148 houses, 19,049 large flats, 17,249 small flats, 93,726 tenement floors and 9,522 low-cost housing units. 54.6% of these units were of post-war construction, an increase of 8.26% over the previous year. 11,554 new domestic premises were erected during the year, but 1,506 old premises were demolished.

The housing problem is being tackled from a number of angles by Government and by private enterprise through voluntary non-profit making agencies. For the resettlement of squatters, taking up valuable Crown land required for development, seven-storey H-shaped blocks are being built as rapidly as possible. Each family occupies one room which is entered from a continuous external balcony. The balconies inevitably become Chinese laundries, cooking places, sit-outeries, and often a home craft is carried on by the tenant to supplement the family's earnings. The middle of the H is a communal sanitary block serving both residential wings. The blocks are placed close together and give an overall barrack-like impression which, because of the simple straight-forward design and in spite of ultra high densities, is nevertheless vigorous and impressive.

In addition to this minimum housing, blocks of flats providing accommodation of a better standard are being built under Government sponsorship by various agencies, the principal one being the Hong Kong Housing Authority, now in its sixth year of operation, and charged with the duty of providing accommodation for people living in overcrowded and unsatisfactory conditions. The Authority functions as a commercial enterprise and, although rents are kept as low as possible, they must be sufficient to cover expenditure. Crown land is allocated at one-third of the estimate market price and Government loans are granted at favourable interest rates with repayment over forty years. The administration and execution of the decisions of the Authority are carried out under the direction of the Commissioner for Housing, functioning as the Authority's principal executive officer.

The Authority's first estate, constructed on reclaimed land on the sea front at Java Road, North Point, was completed in November, 1957, with a total population of over 12,400. The estate occupies a fine site of about six and one-half acres, and contains 1,955 flats as well as an 18-classroom primary school for 800 pupils, two health clinics, a post office, an assembly hall to seat 500 people and 71 shops. A bus terminus has been incorporated within the concourse and plans for a passenger ferry terminal connecting with the mainland at Hung Hom are now under consideration. Although the gross density, including the adjoining concourse and half the width of the roads, is 1,550 per acre, each flat has through draught and uninterrupted access to light and air. In addition, ample provision has been made for open spaces and playgrounds within the estate. The flats are all self-contained and are of different sizes accommodating from three to eight persons. Rents vary from $75 to $169 a month, inclusive of rates, refuse collection, public lighting and lifts. The minimum accommodation consists of a living/dining room, lavatory, shower, balcony and facilities for drying clothes. An adequate lift service is provided and there are refuse chutes at central points in each block. The school, clinic, and post office were built at Government expense and are operated by Government departments. The estate, which cost nearly $33,000,000 was designed by

(above) Facade detail of the Java Road Estate.

(top right) A view of the Sai Wan Estate showing Cross-Contour development.

(bottom right) The Tai Hong Tung Estate, Kowloon, built on the side of a disastrous squatter fire. The white building in background is a school.

Photos courtesy of Hong Kong Information Services.

Eric Cumine, A.A. Dip.,F.R.I.B.A.

Overlooking the harbour near Green Island at Sai Wan Tsuen, Kennedy Town, the Authority's second estate was completed in February, 1959. The site, the highest point of which is 285 feet above street level, covers three and one-half acres, and is on a steep hillside which entailed very extensive cutting. The estate, planned as cross-contour development, consists of 638 flats, in five blocks, averaging ten storeys in height, and occupied by nearly 4,200 people. There is also a three-storey community centre, with Boys and Girls club and children's library, and a godown (store) which has been leased to the Urban Services Department; playgrounds and open spaces have been provided within the estate. The flats, which are of different sizes to accommodate from five to ten persons, are generally of a simpler type than at North Point, but are likewise self-contained and comprise balcony, kitchen, lavatory and ablution facilities. The type of plan adopted is the gallery approach system, with blocks only one flat deep; this ensures that all the flats are airy and well-ventilated. An interesting feature of the arrangement is that with very little structural alteration two

adjoining single-room flats can be converted into a large flat with a living-room and two bedrooms, should this prove practicable at some future date. Lifts and refuse chutes are installed. Rents vary from $99 to $169 a month inclusive. The total cost of this scheme, designed by T. S. C. Feltham, A.R.I.B.A., was just over $8,000,000.

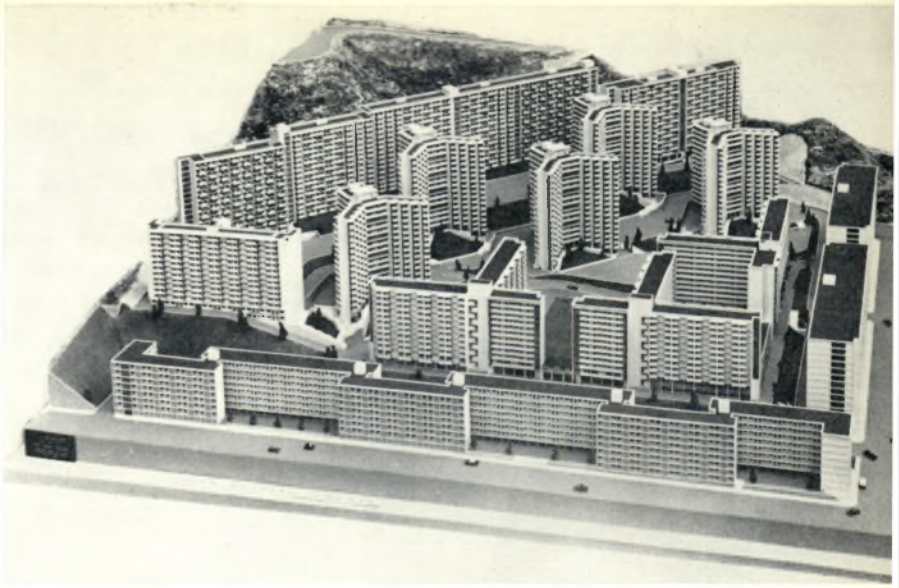
The Authority's third project is at So Uk, Kowloon. Four private architectural firms working as a consortium under the chairmanship of Eric Cumine, were appointed to design the buildings on the estate, to a master plan by Mr. Cumine. The whole estate, which will be completed towards the end of 1961, will eventually house over 32,800 people in about 5,300 flats at monthly rentals ranging from $37 to $112 exclusive of rates. The estate includes two 24-classroom schools, and the total capital cost of the scheme will be in the region of $50,000,000. The 19-acre site slopes from north to south and the blocks, most of which face south over the harbour, will be on different levels and enjoy adequate light and air. There will be covered play areas and open recreation space. Slab blocks and Y-shaped point blocks are being used, generally 13-16 storeys in height.

The Authority is building its fourth estate on a 27-acre site at Choi Hung, Kowloon, to the north of Kai Tak airport. The scheme will comprise eight slab blocks each of 20 storeys, with 40 flats on each floor, including the ground floor. Each block houses more than 4,000 people and is served by three lifts placed centrally in the block. The flats are arranged on either side of a central corridor, generally with six person flats on one side and four person flats on the other. A long low building of seven storeys, without lifts, meanders about the site, linking the slab blocks, and contains eight person flats on the six upper floors, with the ground floor left open as play space except for a parade of 50 shops adjoining a bus station on the southwest side of the site. The total population of this estate will exceed 43,700 persons, and community amenities will include three primary schools, two secondary schools, a post office and sports field. The density will be about 1,930 persons per acre and the Architects are Messrs. Palmer and Turner. The estate is being developed as a neighbourhood unit, as domestic in character as can be sustained with the ultra high density, and a sense of space has been maintained without waste of land. The total estimated cost of the scheme is about $52,500,000.

Also under construction at present is the Authority's fifth scheme, the Ma Tau Wai Estate in Kowloon. This is being built on a site of over seven acres, which slopes gently from southwest to northwest. It will accommodate about 12,600 persons at a density of 1,640 to the acre, in 2,114 flats. Planning limitations, together with considerations of economy brought about by the central corridor planning and a use of standardised units, led to the development of one long block running the length of the site and a shorter block on the other axis. This shorter block will have open play space on the ground floor to provide a sense of openness at ground level, whilst the ground floor of the longer block contains a parade of 21 shops. To the north and northwest of the site the Government has reserved land for a number of schools, a church and other community development. The total cost of the scheme is estimated at $17,000,000 and the design is being carried out by the Authority's own architectural staff.

The Authority's plans for the future include a scheme on six and one-half acres of land in the new industrial township of Kwun Tong on Kowloon Bay, to be developed at a density of about 1,200 persons per acre. At Tsuen Wan in the New Territories a site of about 10 acres has been reserved where a pilot scheme for about 500 flats will first be built on four acres of land reclaimed from the sea. Adjoining the present estate at Sai Wan on Hong Kong island the Authority has been allocated approximately four acres of land which, being very steep hillside, is presenting some interesting planning problems.

In common with most forms of building in Hong Kong the Housing Authority's estates use reinforced concrete multi-storey buildings, although an alternative scheme in pre-stressed pre-cast units



Model of the So Uk Estate, now being constructed, will house 32,800 people in 5,300 flats.

is being explored for the Ma Tau Wai project mentioned above. Piling is usually required for foundations, whilst at So Uk, for some point blocks, soil stabilization has been carried out. Finishings are kept extremely simple and considerations of overall proportion and site planning therefore become of tremendous importance.

Concurrently with planning and building, work proceeds on the selection of tenants for the Authority's flats, on the basis of a points scheme, in which the most important factor is the applicant's housing need, although other factors, such as tuberculosis in the family, are also taken into account. The points system has been devised to give a certain degree of priority to persons who have spent the larger part of their lives in Hong Kong.

Amongst the voluntary bodies the principal role has been played by the Hong Kong Housing Society, a non-profit making organization which grew out of the Hong Kong Council of Social Service and has been active for twelve years. In 1948 a group of public spirited men and women decided to try to do something to improve housing conditions and many of the original members still serve on the present Committee.

The Society has now built or is building some 10,000 housing units of types similar to those described above, but in smaller estates. It has experimented with dormitories for factory workers and with a pilot scheme for families earning less than $300 a month. This design consists of single rooms with communal kitchens and one water-closet with a tap between two families. This is intended to bridge the gap between resettlement accommodation and the self-contained type of flat with its own kitchen and water-closet.

The Government has recently decided to embark on a programme of very low cost housing for persons whose family income is less than $300 a month. The Resettlement Department will be expanded to undertake responsibility for this programme, and the buildings will be designed by the Public Works Department. They will be constructed on the principle of resettlement H-blocks but will be of improved quality and with better amenities.

A complete treatise on housing in Hong Kong would be very lengthy indeed to cover the farming and fishing communities and the multifarious types of urban dwellers. It would need to discuss the aggravation of the architects' problems by the steep contours and compact nature of the city where building sites are very difficult to find. It would have to consider the building regulations and the peculiar local conditions such as typhoons. But although life and work in Hong Kong are often difficult, it has its compensations.

The atmosphere is not for heroic, static or monumental architecture. Its domestic building begets hygienic monuments of benevolent government, most expeditiously contrived; a bowl of rice to the hungry but not an architectural gourmet's feast. Its scale is a scale of quantity. But out of it all there is life and vitality, something moving, colourful, intimate, exciting and interesting, a true reflection of Hong Kong's kaleidoscope on the move.✦✦✦

PROVINCE APPROVES REDEVELOPMENT AREA NO. 2

NEW CLEARY AUDITORIUM OPENS

14 NEW INDUSTRIES LOCATE IN WINDSOR DURING PAST YEAR

METROPOLITAN WINDSOR POPULATION INCREASES TO 193,512

THE CITY OF WINDSOR

by R. T. Ryan

Mr. R. T. Ryan is Manager of the Windsor Office,
Central Mortgage and Housing Corporation.

If you are like many Canadians who have never visited Windsor, never read much about it — except that you can recall that the city has had some labour turmoil, had some financial difficulties in the thirties and that Ford's moved their assembly plant to Oakville in 1953—you are probably one of many who have the impression that Windsor has had its day—its star that shone so brightly in the twenties has burned itself out and it is just another city going nowhere.

Windsor has had, and still has, problems like most cities. However, much good work has been done to solve these problems during the past few years. This article is an attempt to correct some of the wide-spread misconceptions about the city which still hamper its recovery.

Windsor is located in Essex County on the shore of the Detroit River, facing Metropolitan Detroit, with its close to four million inhabitants across the river to the north. This part of south-western Ontario because of its very mild climate (at least by Canadian standards) is often referred to as the Sun Parlour of Canada. Statistics show that the farmers in Essex and Kent Counties have the highest per capita farm production in the country and together the two counties produce farm products with an annual value in excess of $70 million.

The first recorded ventures of the white man into the Lake Erie-Detroit River region took place in the latter part of the seventeenth century. It was not until 1701 that a permanent settlement was established at Detroit under Cadillac. Settlement on the Canadian side of the river in what is now known as the Windsor district began about the middle of the eighteenth century.

Windsor's first hundred years of growth was not sensational and, in 1850, the population totalled only three hundred souls. With the coming of the Great Western Railway in 1854, the Windsor area was provided with its first railway connection to the east and the town's development seemed to leap forward. By the end of the nineteenth century, five railroads had lines running into the city.

Henry Ford set up shop in 1904 and the town's phenomenal industrial growth began. This growth saw the Windsor area population rise from about 15,000 at the turn of the twentieth century to 193,512 in 1959. This represents an increase of twelve hundred per cent in about sixty years, which is almost incredible when you consider that, in the same period, the rate of growth in Canada has been 225 per cent.

Between 1910 and 1930, the automobile industry grew tremendously, with General Motors and

Chrysler setting up operations. In addition, many feeder plants were established to supply the need for automotive parts.

In 1913, United States Steel announced that they had selected Ojibway (a Windsor suburban municipality) to be the site of their Canadian operations. The land had actually been acquired in 1907, but, although improvements were undertaken, their plans fell through and the plant never went into production.

This announcement created a tremendous land boom in the area. Lots and parcels of land were sold at inflated prices to people all over the continent. Much land throughout this area still is held by people living in remote corners of the world.

The advantages of Windsor as a site for a large steel plant did not vanish with United States Steel's decision not to proceed. It is still at the centre of the industrial hub of North America, has an abundant supply of water, has all forms of transportation available, would be ideally suited to receive iron ore from the mines in the Lake Superior region, could obtain coal from the U.S.A. via Toledo without difficulty and at favourable rates, and last, but not least, Windsor's automotive firms would provide a ready market (estimated at 350,000 net tons by 1980) for much of the steel produced. With these selling points, the Greater Windsor Industrial Commission is hopeful that they yet may be able to interest some steel manufacturing firm in locating here.

The economy and life of the area are closely tied to its American border city to the north, Detroit. The first tunnel to Detroit under the Detroit River was completed in 1910. This tunnel is used exclusively by the New York Central and C.P.R. railway systems to move freight across the border. The Ambassador Bridge was opened in 1929 and the second tunnel, to handle motor vehicles, was opened in 1930.

Windsor is Canada's major port of entry for Americans and approximately 2,000,000 cars and 6,000,000 persons enter here annually. In the past, American industry wishing to establish in Canada first looked at Windsor and, to-day, it still attracts a good many tourists from Detroit, because of its proximity to that city.

With the coming of the great depression in the early thirties, Windsor was doubly hit. In 1927, more than 15,000 area residents were employed in Detroit. The U.S. Government imposed restrictions on the employment of non-Americans in the U.S.A. and many Canadians took up residence on the American side to retain their jobs, while others looked for work elsewhere. During the period 1930-1933, 13,000 people left the city. In addition to the blow suffered by Canadians working in Detroit, of course, the Windsor area firms were affected, as were their American counterparts, from cut-backs in production and labour force.

It was during this period that the City of Windsor encountered financial difficulties. To accommodate the booming economy of the twenties, municipal facilities were substantially extended, requiring considerable borrowing, and when the recession set in it became impossible to meet some of the municipal obligations. The population decline was so severe that twelve per cent of the available dwelling units in Windsor became vacant during the depression years. Re-financing was arranged, and, while some of these debts have not yet been fully repaid, it is a reasonable assumption at this time, that not one cent of the principal will be left unpaid.

It should be pointed out that Windsor's financial position has improved considerably until today, at $93 per capita, it has one of the lowest debt figures of any city in the Province of Ontario.

During World War II, of course, Windsor boomed once again, with Canadians flocking here from all over the Dominion to seek employment. From 1939 to 1953, the number of industries in the Windsor area increased from 225 to 493, with the industrial work force rising from less than 20,000 to more than 43,000.

It is natural, considering Windsor's proximity to Detroit and its heavily industrialized economy, that the labour movement should have flourished here. It is a matter of history that, during the late forties and the early fifties, there was considerable labour strife in Windsor and strikes were fairly common, as was violence.

It should be pointed out, however, that, since 1956, there has been only one strike in Windsor's automobile industry. This is probably an indication that Windsor's labour-management relations are becoming more stable. Many other cities in Canada to which industry has been flocking in the past few years will still have to face a period of labour-management adjustment that has passed into Windsor's history.

In 1953, the city was shocked by the announcement that the Ford Motor Company of Canada was moving its assembly plant to Oakville. Several feeder plants and other related industries also moved, and, in one fell swoop, about 11,000 jobs, approximately twenty-five per cent of the industrial work force, were lost. However, few people realize that the Ford Motor Company still is the largest employer in Windsor, and actually has a considerably larger work force here than in Oakville. Ford still has a large investment in plant and equipment in Windsor and has spent over $70,000,000 for expansion and modernization of these facilities since the end of World War II.

There were dire predictions that the city would become a ghost town. Visions of the thirties loomed big again. However, the people of Windsor don't give up easily and immediately they embarked upon an aggressive program of industrial development. The results, to say the least, have been encouraging:

(1) In the past ten years, 114 new industries have been established.
(2) From 1951 to 1960, a total of $372,500,000 (an average of $37,000.000 per year) was spent for new plants and equipment.
(3) Industrial diversification has advanced so that, today, forty-eight per cent of the city's industry is non-automotive, compared to twenty-six per cent in 1942 and thirty-five per cent in 1952.
(4) The population of Metropolitan Windsor has increased in the last ten years from 157,651 in 1951 to 193,512 by the end of 1959.

How have these impressive accomplishments been achieved? The answer is to be found in the people of Windsor and in the city's physical assets.

The city has many assets on which it can draw for its comeback. It has available business sites of almost any size and circumstance. There is an abundance of good industrial water present and more potentially available. It has a wide variety of transportation media, being served by five railroads, numerous trucking firms and the Great Lakes-St. Lawrence Seaway route.

While Windsor is about 200 miles west of the bulk of Canada's largest market area, it is almost dead centre of the "core-area" of the United States and Canada. Its location just across the river from Detroit makes it a very convenient location for Detroit-based U.S. firms seeking to establish themselves in Canada. As one executive in a U.S. firm with a Canadian subsidiary says, "The benefit of being able to drive to the Detroit plant in twenty minutes to discuss production problems with officials of the parent company outweighs the advantage of being closer to the market, as the case in the Toronto area."

It is also a fact that the highly specialized consulting services for materials and components available in the Detroit area make Windsor a more attractive industrial location.

In any struggle, the strength and the skill of the people is of paramount importance. A large number of the industrial work force of the Windsor area is highly skilled, and this is attractive to any industry. While it is true that wage rates are high here and labour is highly organized, these factors are becoming less important as industrialization spreads across our country. It is interesting to note that, of over 450 industries located in Windsor, almost 400 employ less than 100 persons each.

Windsor's biggest booster is its four-term Mayor, Michael Patrick. "Mike", as he is known by all Windsorities, was elected Mayor first in 1954, after serving seven years on City Council. He, with support of the Council, has been able to introduce the Council-Manager form of civic government (which is proving very successful), and has produced a political climate which is reassuring to business and industry.

Cleary Auditorium, Windsor. Construction completed in 1960.

Part of Area No. 2—a proposed redevelopment area.

The Greater Windsor Industrial Commission, with Murray Elder as Commissioner, is playing a very important role in the fight back to the top. Set up in 1947 by the Windsor Chamber of Commerce as the Industrial Promotion Committee, by 1958 all of the municipalities in Metropolitan Windsor were financially supporting the group. It was then incorporated and has now become a completely autonomous body.

During the past year, the Commission has been particularly active, with briefs to the Royal Commission on Transportation to get a better freight deal and to the Royal Commission investigating the automotive industry, with suggestions to improve the position of Canadian automotive manufacturers and parts' suppliers.

Detroit, the fifth largest city in the United States, has had a considerable influence on Windsor and its people. The citizens of Windsor are continuously exposed to the "big city", "big business" outlook across the river and this has tended to make them think "bigger" than is usual in a city of this size. Detroit has provided Windsor with all of the advantages of a city bigger than any in Canada, with few of the disadvantages. It has provided job opportunities, culture, stage shows, sports, lectures and higher education facilities that don't exist as completely in any other Canadian city.

The face of downtown Windsor is changing rapidly these past few years, with a new City Hall, the Cleary Auditorium and Convention Hall, two slum clearance projects under way, a new waterfront park, several new office and bank buildings, a new Post Office annex, etc.

The City proper has now almost reached a standstill in its growth because of lack of land and is considering the advisability of making an application to the Province of Ontario to amalgamate with a number of the surrounding municipalities to form one larger city.

While much has been accomplished, Windsor's problems are not yet all solved. There is still a severe unemployment problem here and making headway is a painstaking task. Automation and imports, particularly in the automobile industry, make substantial gains in the employment figures very difficult to attain.

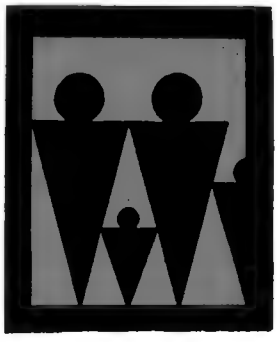
Nevertheless, there is now optimism where it was difficult to find a few years earlier, and there have been certain recent news announcements which sound very hopeful.

Some people contend that the move of Ford's assembly operation to Oakville was a blessing in disguise. It has forced Windsor to recognize the disadvantages of having all one's eggs in one basket, and in the long run a more stable economy will surely result from diversified industries.

Indeed, the comeback trail is a difficult one. We are happy, however, to say that at least the brush has been cleared from the trail, and the top of the hill, although not within immediate reach, is at least within sight.✦✦✦

C H D C

AWARD WINNERS FOR 1960



The Canadian Housing Design Council is a national body dedicated to the encouragement of the best design. The Council, formed in 1956, is representative of public-spirited people in all geographical regions of the country, particularly those associated with business, architecture, house building and consumer groups.

The Council's principal aim is to draw attention to excellent examples of housing as one means of raising the standard of design and of arousing public interest in house-building in Canada.

As a method of bringing examples of good design to the attention of the public, the Council gives National Awards to Canadian builders and designers for outstanding design of single-family houses and of house grouping.

The awards for house grouping were given last spring by a panel of judges consisting of:

Anthony Adamson,	Vice-Chairman, National Capital Commission, Professor of the Division of Town and Regional Planning, School of Architecture, University of Toronto.
A. B. Taylor,	Vice-President, A. B. Taylor Construction Co., Ltd., Ottawa.
D. E. Crinion,	Assistant Chief Architect, Central Mortgage and Housing Corporation, Ottawa.
Noel Dant,	Director of Town and Rural Planning, Department of Municipal Affairs, Province of Alberta.
Hazen Sise,	Partner in a firm of Montreal Architects.

The judges' comments and award winners may be found on pages 16, 17, 18 and 19.

The Honourable David J. Walker, Minister of Public Works, presented the Council's Certificate of Merit to nine award winners for the best design of single-family houses on November 28, 1960.

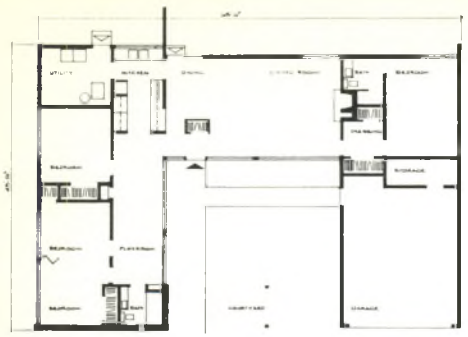
Professor Eric Arthur of Toronto, James W. Strutt, President of the Ontario Association of Architects, S. A. Gitterman, Ottawa architect, Campbell C. Holmes of Toronto, President of the National House Builders Association, Madame Jean Boucher and Mrs. A. Davidson Dunton of Ottawa, were on the panel which examined 34 entries, all of which had previously won Regional Awards.

The jury felt the quality of design was equal to that of previous years, but they observed a new trend in planning—a developed sense of privacy as opposed to the open planning and large glass areas seen in recent years. Interior walls also seemed to be more in evidence, providing for good furniture placement, the showing of pictures and other art forms, as well as adding to the sense of privacy.

In this year's entries, the winning designs indicated no evidence of a "regional" style, in fact, contrary to a few years ago, the use of natural wood in both exteriors and interiors seemed as common in Ontario as in B.C.

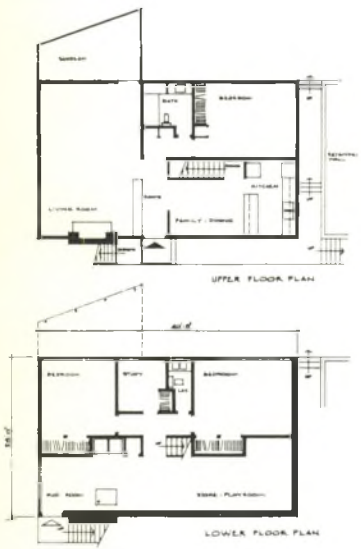
Although there had been an increase in the construction of two-storey houses in recent years, there was only one two-storey house among the Regional winners and this received a National Award. All other Regional and National winners were either bungalow or split-level design. Although generally considered more difficult to resolve, the jury found more evidence of ingenuity and taste in the designs of smaller houses than they did in the larger ones.

The entries showed that in most cases considerable care and attention had been given to topography. Natural growth had been preserved where possible and most houses had already developed a mature look about them because of their settings.



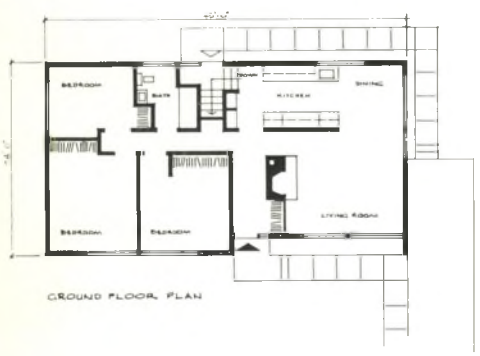
Builder: Woodview Development Ltd.,
38A Mattson Drive,
Downsview, Ont.
Designer: Jerome Markson, M.R.A.I.C.,
9 Elgin Ave.,
Toronto, Ont.
House Location: 2 Wigwoss Drive,
Seneca Heights,
Woodbridge, Ont.

This design is intended for a family with small children, but the house is zoned for the better enjoyment of both children and adults. The playroom is easily supervised from the kitchen and the segregation of areas is excellent. The use of natural materials in the finish is appropriate to the site.



Builder:
G. P. Johnson,
Winfield, B.C.
Designer:
John Woodworth,
M.R.A.I.C.,
513 Lawrence Ave.,
Kelowna, B.C.
House Location:
Poplar Point,
Kelowna, B.C.

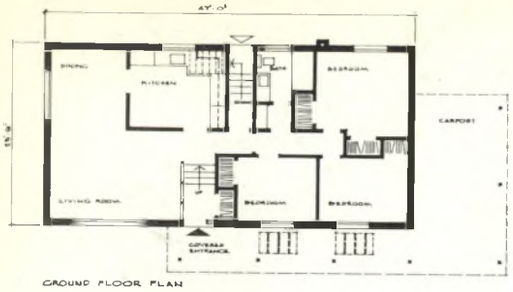
This house is notable for originality of design with great care given to detail. The jury liked the fine sense of space achieved by the exposed ceiling beams and by the windows being carried up to ceiling height. The exterior, using local material, was simply and carefully detailed and finished.



Builder: Homer Ouellette,
North Bay, Ont.
Designer: Critchley & Delean,
M.M.R.A.I.C.,
North Bay, Ont.
House Location: Ski Jump Road,
North Bay, Ont.

This house was found to be good in all respects. It is charming and unpretentious in its exterior with straightforward use of simple materials and carefully studied details. It is also thoughtfully planned to work well, with living-room space and furniture grouping.

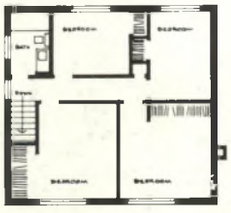
SINGLE-FAMILY HOUSES:



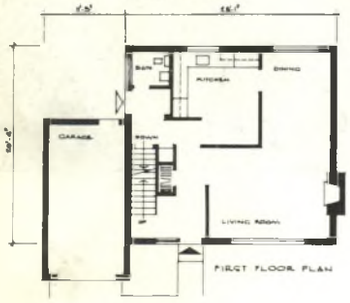
GROUND FLOOR PLAN

Builder: Cadillac Contracting (1959) Ltd., 99 Avenue Road, Toronto, Ont.
Designer: Lipson & Dashkin & Norman R. Stone, M.M.R.A.I.C., 170 Donway West, Don Mills, Ont.
House Location: 1 Lyncroft Drive, Lake Forest Subdivision, Scarborough, Ont.

To this standard plan have been added certain characteristics that have resulted in a distinguished and interesting house. By raising the floor level three steps above grade, good natural light is achieved in the basement and the service entrance is direct and allows access to the bathroom from the basement.

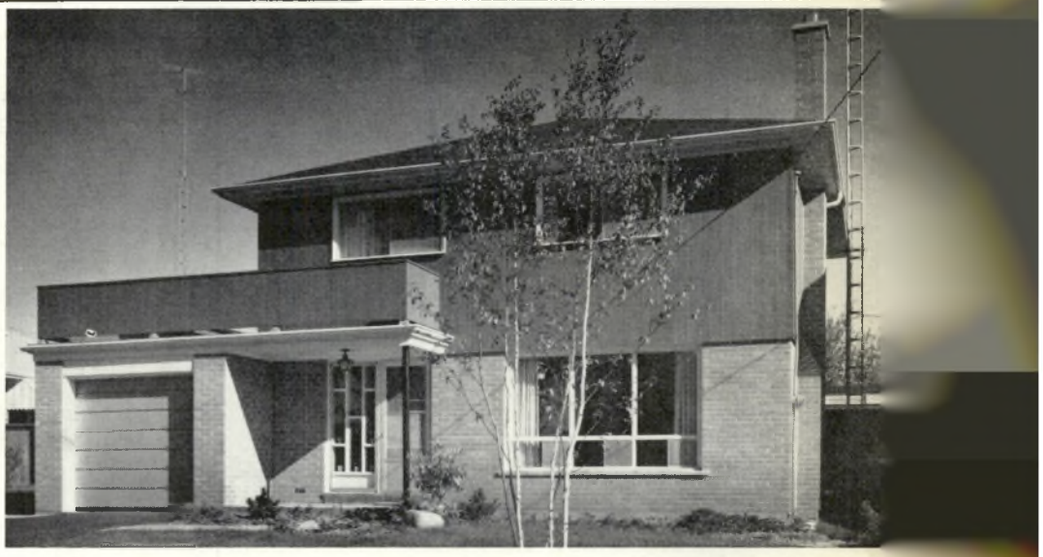


SECOND FLOOR PLAN

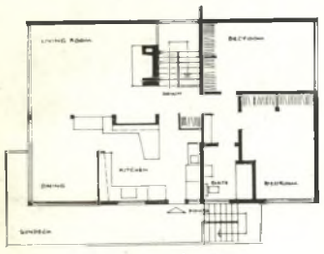


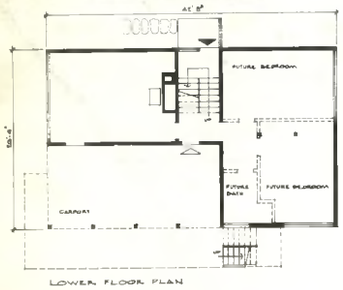
FIRST FLOOR PLAN

Builder: G. S. Shipp & Son Ltd., 23 Applewood Village, Port Credit, Ont.
Designer: Lipson & Dashkin, M.M.R.A.I.C., 170 Donway West, Don Mills, Ont.
House Location: 3226 Constitution Drive, Applewood Heights, Toronto Township, Ont.



By compact planning, this two-storey house provides four bedrooms and bathroom on the upper floor. The living-room itself is small in relation to bedroom accommodation, but this is balanced by a recreation room in the basement.

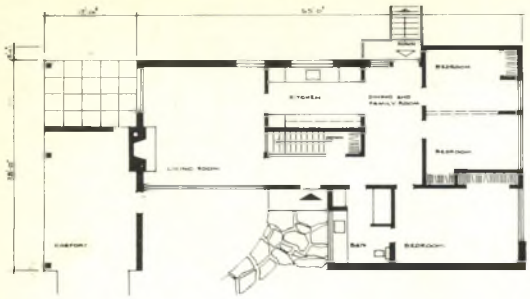




LOWER FLOOR PLAN

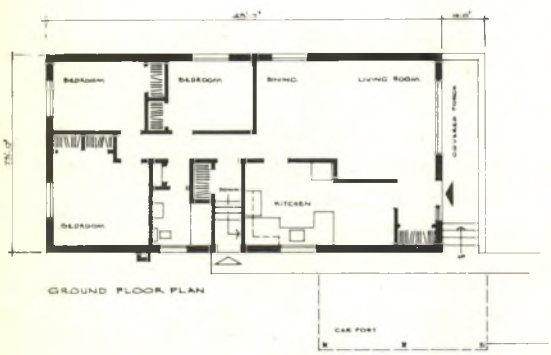
Builder: Taggart & Son Ltd., 995 Edmonds St., New Westminster, B.C.
Designer: D. Manning, M.R.A.I.C., 3647 Sunnycrest Drive, North Vancouver
House Location: 2957 Spuraway Drive, Port Coquitlam, B.C.

This house achieves a sense of internal space in spite of its limited size and all rooms are well related and generous, with adequate cupboard space. The site was a challenging one and well met.

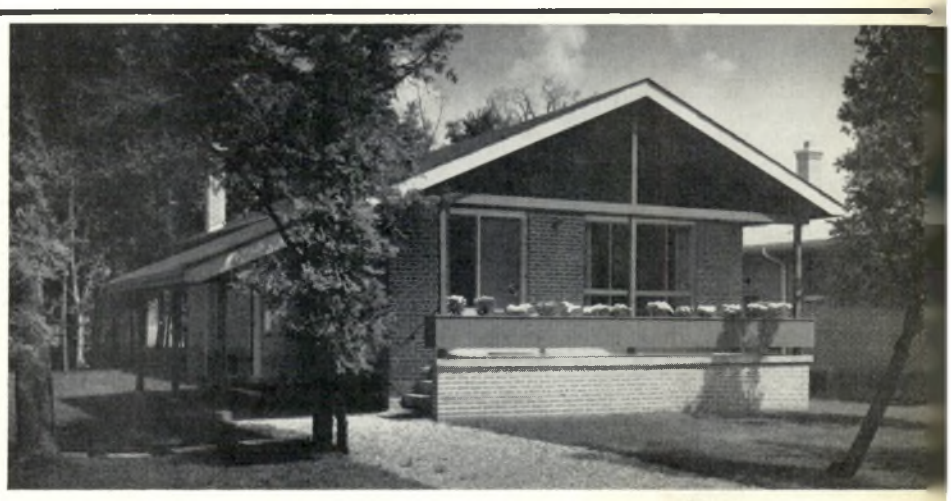


Builder: Teron Construction Ltd.,
227 Laurier Ave. W.,
Ottawa, Ont.
Designer: Teron Construction Ltd.,
227 Laurier Ave. W.,
Ottawa, Ont.
House Location: 2113 Rushton St.,
Ottawa, Ont.

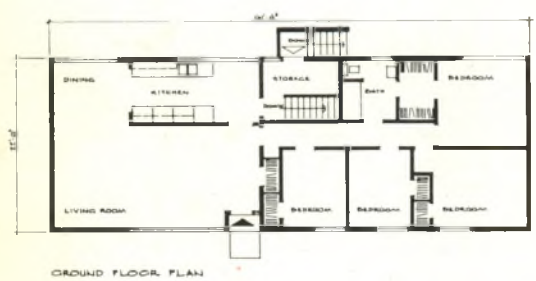
The consistent expression of framing gives this house a strong rhythmic quality. The interior gives a fine sense of space and livability with the judicious use of simple natural materials.



Builder: Cadillac Contracting (1959) Ltd.,
99 Avenue Road,
Toronto, Ont.
Designer: Lipson & Dashkin & Norman R. Stone, M.M.R.A.I.C.,
170 Donway West,
Don Mills, Ont.
House Location: 280 Guildwood Parkway,
Lake Forest Subdivision,
Scarborough, Ont.

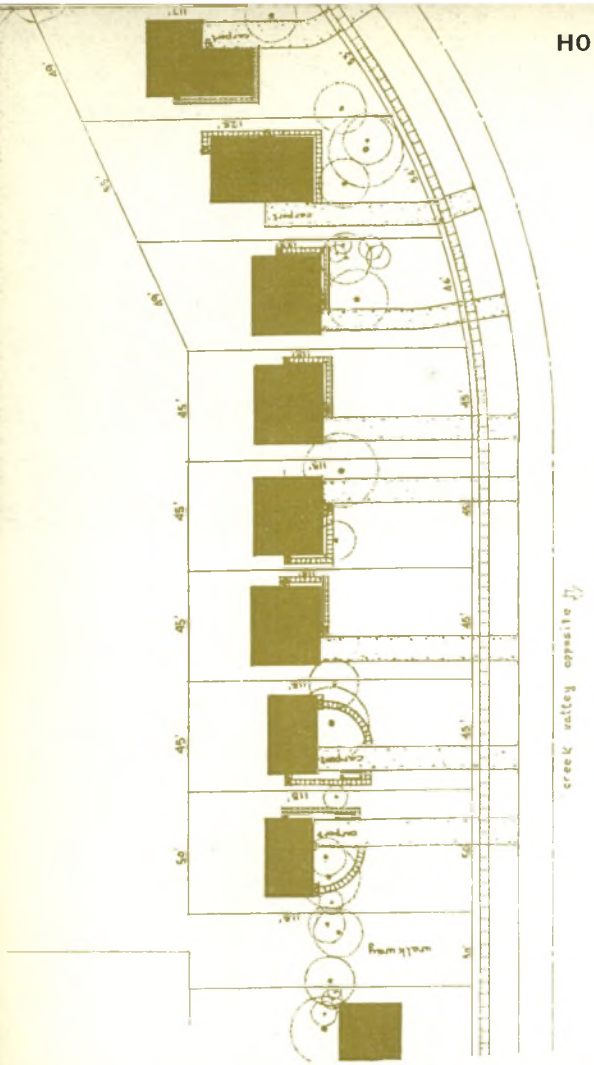


The raised porch of this house gives privacy to the living-room from the street while, at the same time, it provides the virtues of the old-fashioned verandah. The plan has an economical shape and the raised basement provides good lighting.



Builder: Woodview Development Ltd.,
38A Mattson Drive,
Downsview, Ont.
Designer: Jerome Markson, M.R.A.I.C.,
9 Elgin Ave.,
Toronto, Ont.
House Location: 34 Monsheen Drive,
Seneca Heights,
Woodbridge, Ont.

This design is distinguished by an economical plan and simple architectural form. The exterior is quite charming. Proportioning and window arrangement are particularly good, although the jury questioned the entrance directly into the living-room and regretted the absence of a fireplace in this particular case.



276-290 Birkdale Rd., Midland Pk., Scarborough, Ont.

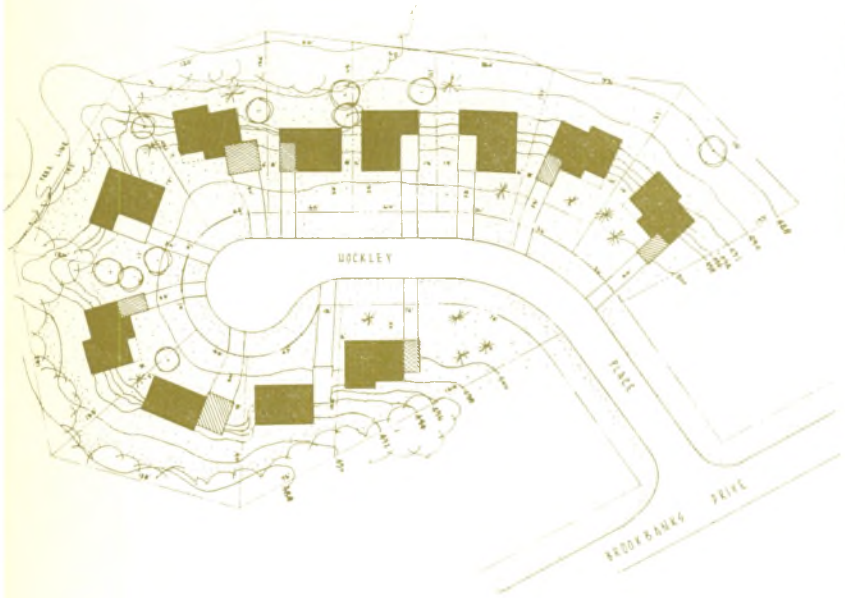
Builder: Curran Hall Ltd.,
1201 Bloor St. W.,
Toronto 4, Ont.
Designer: Edward Ross, M.R.A.I.C.,
7 Norma Crescent,
Toronto 9, Ont.

This group has a very pleasant character and demonstrates special care taken in retaining full-grown trees. The way in which each type of house is repeated several times in groups together gives strength to the whole composition. A group of this size showing repeated identical house design indicates that the usual restless search for variation has considerably less dignity and repose.

Housing for Trans-Canada Pipelines,
R.R. No. 2, North Bay, Ont.

Builder: Valentine Contracting Co. Ltd.,
131 Cartwright St.,
Toronto, Ont.
Designer: Peter Dickinson Associates, M.M.R.A.I.C.,
1910 Yonge St.,
Toronto, Ont.

This is a good example of modern housing designed to fit a particular landscape. Apparently built in a forest area, the houses have been arranged not in a straight line, city street fashion, but with a generous sweep of space which befits the expanse and grandeur of the setting. At the same time the houses seem to nestle within the scene with a sense of intimacy.



4-24 Hockley Place, Parkway Woods, Don Mills, Ont.

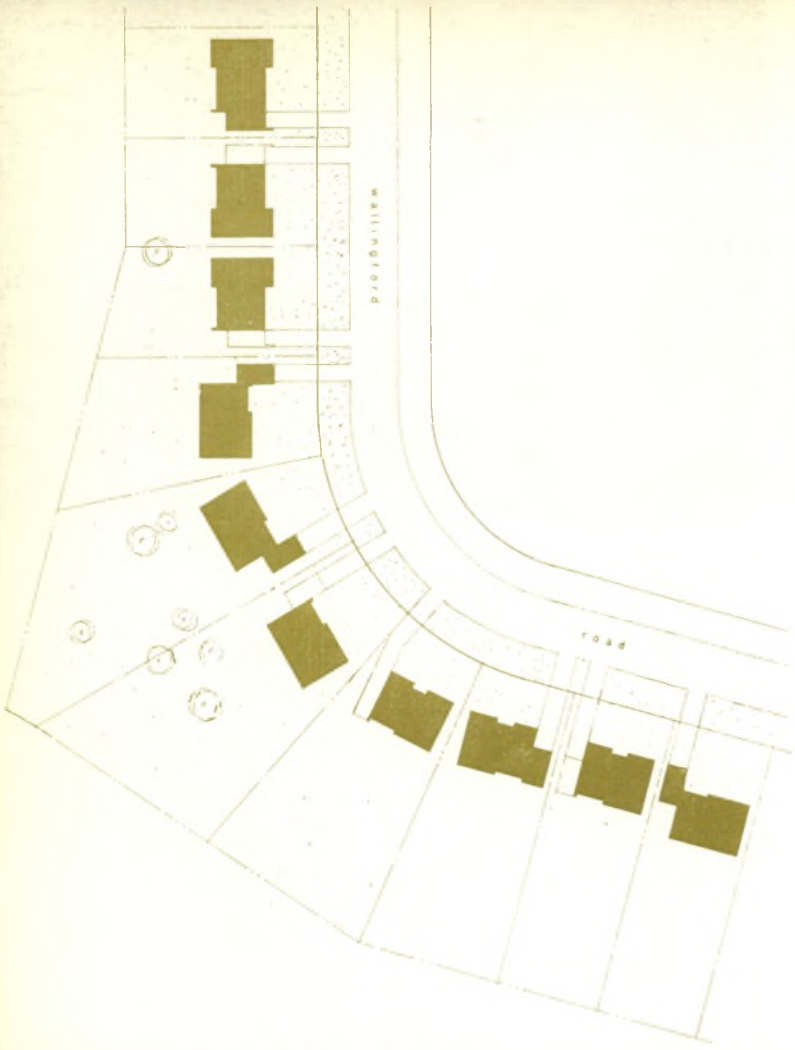
Builder: Godfrey & Cappe Developments,
1095 Don Mills Road,
Don Mills, Ont.
Designer: Don Mills Developments,
491 Lawrence Ave. W.,
Toronto, Ont.

An informally shaped cul-de-sac of houses that has made delightful use of a woodland background. It is this woodsy setting and the self-contained small scale of the group which gives coherence. The houses are mixed in a rather random way, yet they hang together as a group. In other words, the same set of house designs might not have been at all convincing if seen exposed on a grid plan in a treeless area.

Hillside Dr. & Hutchinson Ave., Elliott Lake, Ont.

Builder: Newman Bros.,
St. Catharines, Ont.
Designer: Murray & Fliess, M.M.R.A.I.C.,
440 Bayview Ave.,
Toronto, Ont.

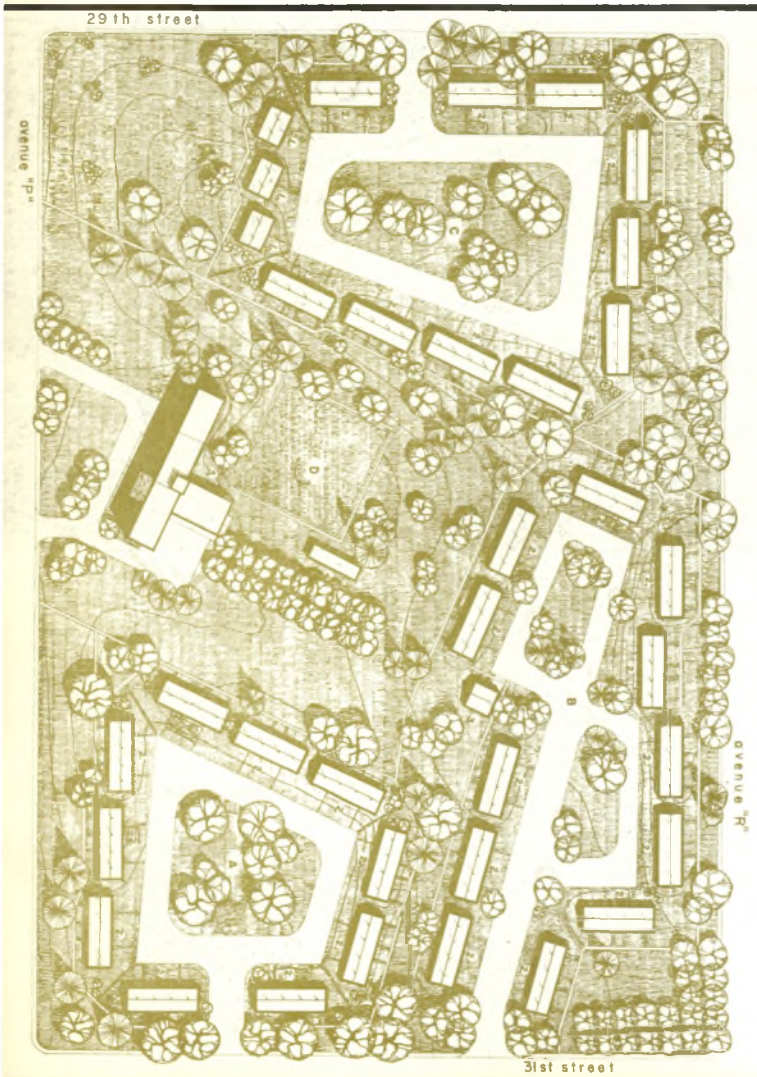
Very careful thought has been given to the use of the topography in the placing of buildings, in the provision of parking space and in getting views of the surrounding town and landscape. As a result of this careful planning, all the buildings seem to sit quite naturally into the ground and have made interesting varieties of grouping and orientation.

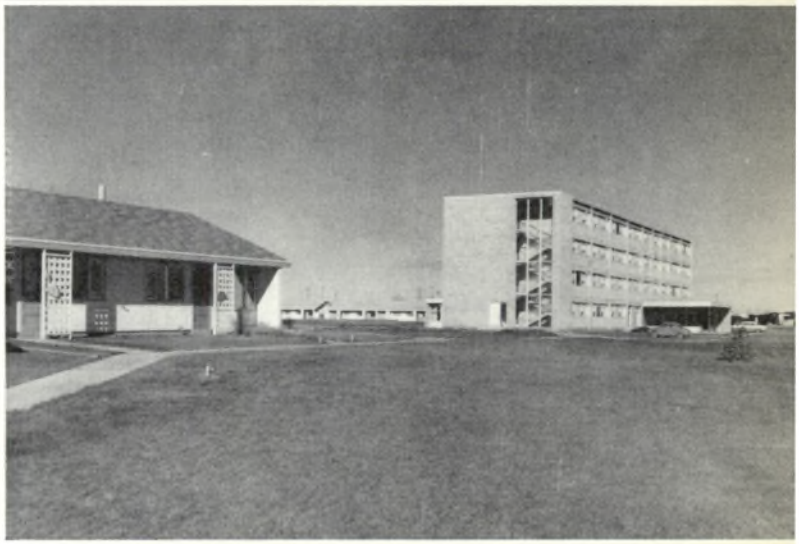


Wallingford Road, Don Mills, Ont.

Builder: Geo. Slightham Ltd.,
Willowdale, Ont.
Designer: J. A. Murray, M.R.A.I.C.,
440 Bayview Ave.,
Toronto, Ont.

This is not a self-contained group of houses but an example of compatible architecture along one side of a street—in this case a curved street. The land seems to have been well subdivided in that it slopes away and downwards from the curved street, giving to the houses a two-storey effect from the rear and taking full advantage of the fine views of a well-treed ravine.





Jubilee Heights, Saskatoon, Sask.

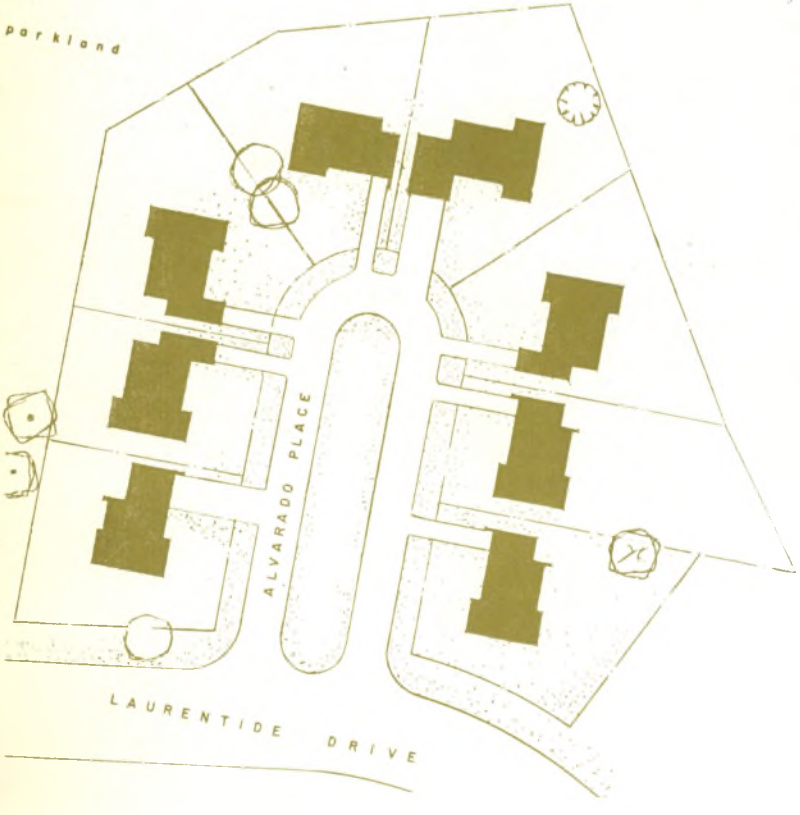
Builder: Smith Bros. & Wilson,
524–2nd Ave. North,
Saskatoon, Sask.
Designer: W. E. Graham, M.R.A.I.C.,
City Hall,
Saskatoon, Sask.

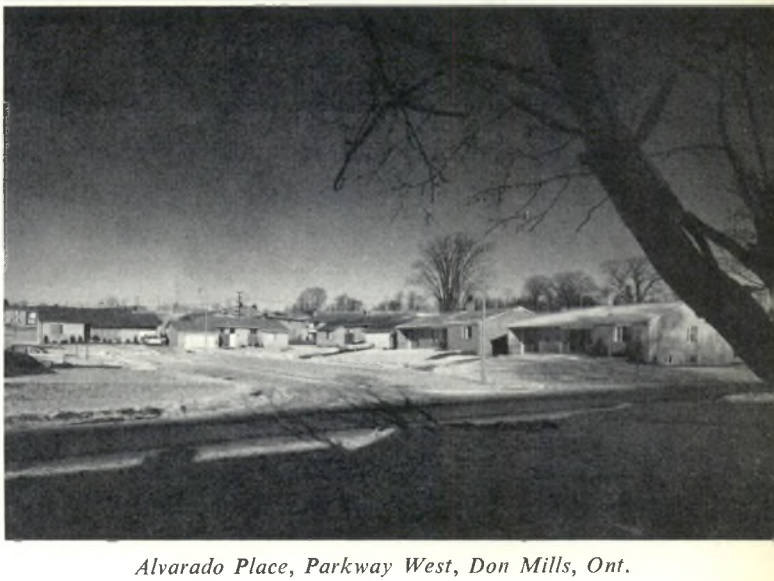
This is a large project of housing for elderly people and contains three distinct groups of one-storey row housing, an apartment block and a central park area. Some criticism was voiced amongst the jury of the severe style of the apartment block, but it was agreed that the project represents a serious attempt to put fresh character into city building by thoughtful site planning and architectural composition.

Stanrock Terrace, Elliott Lake, Ont.

Builder: Woodview Developments,
Downsview, Ont.
Designer: Jerome Markson, M.R.A.I.C.,
9 Elgin Ave.,
Toronto, Ont.

This submission showed a small group of "terrace housing" or row housing on an awkward-shaped site with irregular levels. The architects have made good use of both the shape and different levels of the site to get an unusual and intimate character with appreciation of the landscape and the views and pleasant outside sitting spaces. The rather ascetic style of the buildings seems to work well for a group of about this size, but if the same box-like forms were used on a much greater scale they would perhaps become tedious.





Alvarado Place, Parkway West, Don Mills, Ont.

Builder: Geo. Slightham Ltd.,
190 Valley Road,
Willowdale, Ont.
Designer: J. A. Murray, M.R.A.I.C.,
440 Bayview Ave.,
Toronto, Ont.

The arrangement of this group seems to invite symmetry yet in execution the houses at the end of the cul-de-sac are quite different. The present-day house is essentially informal in its arrangement of rooms into a plan and therefore cannot be forced into symmetry. Nevertheless, this submission was regarded as a good one because it made a very strong statement of the enclosed group of houses and seemed to have given prestige to them.✦✦✦

La fantaisie se retrouve dans les appareils.

DE L'URGENCE DE RÉSERVER ET D'AMÉNAGER DES ESPACES VERTS

par Jean Dupire

Dans un article publié dans cette revue, il y a un peu plus d'un an, le directeur des parcs de Montréal, M. Claude Robillard, insistait sur la nécessité de "redonner à la ville industrialisée "un supplément d'âme", une revalorisation humaine, de lui conserver et d'amplifier le peu de nature qu'elle recèle, de lui réapprendre sa fonction, son métier de vie communautaire pour des hommes de chair et de sang".

De notre côté, nous nous bornerons à traiter de l'aspect pratique du problème en traçant brièvement quelques grandes lignes sur la façon d'aménager parcs et terrains de jeux non sans avoir d'abord souligné cependant le marasme où nous conduisent les agglomérations métropolitaines.

Cri d'alarme

Il ne faut pas avoir longtemps étudié la poussée rapide des villes de banlieue pour constater le danger d'étranglement de la population des grandes agglomérations urbaines.

Toute heureuse de s'entourer encore de verdure naturelle, la petite ville de banlieue s'aménage au petit bonheur et ne prend pas conscience que bientôt, demain peut-être, ses constructions de bitume, d'asphalte et de brique ne formeront qu'un tout monstrueux avec les autres petites villes et la grande ville qui les a suscitées.

A chaque nouvelle envolée, le voyageur aérien constate ce phénomène d'étranglement et voit peu à peu les petites villes se rejoindre à travers la campagne, sans se réserver de coin de verdure, pour se cimenter bientôt en un gigantesque pâté de dizaines et de dizaines de milles de diamètre d'où les populations, devenues prisonnières, ne sauront plus s'évader.

Aussi, s'étonne-t-on à bon droit que les pouvoirs publics ne s'émeuvent à peu près pas devant ce phénomène et laissent, sans intervention, les agglomérations étouffer leurs populations et se transformer rapidement en de vastes nécropoles.

Faire vite

Demain il sera sûrement trop tard pour corriger la situation. Le coût prohibitif des expropriations excusera trop facilement le petite ville de ne pas agir.

Si la plupart des villes de banlieue ont oublié

Le bateau des corsaires où les jeunes donnent libre cours à leur imagination et partent pour de merveilleuses aventures.

Ici on a réussi à épargner tous les arbres malgré un réseau inextricable de canalisations, étangs, conduits électriques, drains, aqueduc, égouts.

de réserver à l'intérieur de leur territoire les espaces verts requis, elles peuvent encore se réserver de vastes espaces à leur périphérie.

Elles peuvent et doivent le faire. Elle n'ont pas le choix. Les gouvernements supérieurs cependant devront les y aider. On ne répétera jamais assez que le capital précieux entre tous est le capital humain et que l'absence de verdure diminue l'Homme.

Attendrons-nous que les peuples marxistes nous dament à nouveau le pion?

Si l'on ne réagit pas immédiatement, demain les villes de banlieue ne seront plus que les quartiers ternes d'une agglomération grise. L'observateur le moins perspicace découvre déjà la grisaille de ces villes-champignons où "les affaires" furent à peu près la seule inspiration.

Certes, c'est avec raison que l'on insiste sur la planification d'une maison et d'un jardin familiaux. Combien n'est-il pas plus important cependant de planifier à l'échelle du village, de la petite ville, de la grande ville, de l'agglomération métropolitaine et même de la province et du pays.

Le négoce ici nous fait la leçon car bien avant de posséder les parcs qui lui conviennent, la ville a déjà ses centres d'achats avec les terrains nécessaires de stationnement. Serait-ce que la négoce planifie mieux pour le commerce que les gouvernements pour les hommes?

Quoiqu'il en soit, l'urgence des centres d'achats ne diminue en rien la nécessité des parcs.

Reculons-nous?

La situation est d'autant plus tragique dans bien des agglomérations métropolitaines que nous sommes, semble-t-il, en régression sur les générations passées.

Je n'en veux pour preuve que deux exemples de la région montréalaise, illustrant combien plus que nous nos pères furent prévoyants.

Quand en 1872, Montréal réserva le Mont-Royal comme parc, cette magnifique montagne urbaine était à l'extérieur du territoire montréalais. Elle est pourtant aujourd'hui le deuxième parc en superficie du réseau d'espaces verts de Montréal.

Exemple plus frappant encore que celui du

parc Maisonneuve. En 1910, la petite ville du même nom réserve ce qui forme aujourd'hui le plus vaste parc de la Métropole. A cette époque cependant, Maisonneuve était tout au moins aussi éloigné de Montréal que ne le sont aujourd'hui les villes de Saint-Bruno ou de Saint-Martin!

Quelle superficie réserver?

Une ville quelle qu'elle soit, ne devrait pas réserver en parcs moins que le minimum requis par les experts, c'est-à-dire 10p.100 de sa superficie. C'est à peu près le pourcentage de Montréal. Washington, aménagé par l'Enfant, compte près de 15p.100 de sa superficie en espaces verts et Paris plus de 25p.100.

Nous donnons cette règle pour simplifier, car elle n'est pas la seule. Il est évident que la densité de population entre en ligne de compte, et d'autres facteurs également. Dix pour cent restera toujours un minimum à atteindre.

Nécessité du planning

Avant que d'entreprendre l'aménagement d'un espace vert, il faut étudier sérieusement la situation. Il faudra connaître le plus précisément possible les buts de l'aménagement. Le parc répondra-t-il à un besoin local ou régional? Quelle population compose l'aire qu'il desservira? On aura intérêt à connaître le mouvement de la population, ses origines ethniques, ses divers groupes d'âge. S'agit-il d'une population jeune ou âgée. Y trouve-t-on des jeunes ménages ou surtout des gens à leur retraite? On ne laissera rien au petit bonheur.

Avec en mains les conclusions d'une enquête sérieuse, on songera alors à aménager le terrain.

Par mesure d'économie et pour plus d'efficacité, on engagera un architecte paysagiste sérieux. Rien de plus onéreux que de commencer un terrain sans plan général et détaillé d'aménagement. Aucune municipalité n'a les moyens financiers de se priver des services d'un professionnel de l'architecture paysagiste. Il est de beaucoup plus aisé de déplacer un arbre, un élément ou une bâtisse sur un plan que sur le terrain même, et il est facile de comprendre l'économie réalisée par une étude poussée sur papier.

Le paysagiste saura utiliser largement les éléments existants et ne tracer son plan qu'après un relevé topographique précis.

Combien de propriétaires de nouvelles maisons ne reverront jamais plus l'arbre géant enjoliver sa propriété parce qu'en l'absence d'un plan défini l'entrepreneur à trouvé plus facile d'abattre les arbres pour construire la maison.

Le Jardin zoologique d'enfant du parc LaFontaine, le Jardin des Merveilles, qui ne couvre que 3.5 acres, a pu se constituer un réseau souterrain de canalisations sans sacrifier un arbre grâce à une étroite collaboration de l'entrepreneur et du paysagiste.

Une fois le plan du parc bien arrêté, on le gèlera et le suivra à la lettre.

Le plan définitif permet d'effectuer d'abord et une fois pour toutes les travaux souterrains: égouts, drainage, aqueduc, électricité.

Ces travaux finis, on n'aura plus à ouvrir le sol, économie substantielle pour la municipalité.

Dans tout projet de redéveloppement ou d'aménagement d'une collectivité, il est essentiel, au stade du dressage des plans, de prévoir l'espace voulu pour un parc ou un espace vert affecté tant au repos de l'homme qu'aux ébats des enfants. Même les plus petites municipalités ne doivent pas négliger cet aspect de la vie communale.

Saint-Exupéry dirait: "si les égouts et les routes sont urgents, ils ne sont pas pour cela plus nécessaires que les parcs."

Le parc, somme toute, apporte un peu de nature, d'humanisme et de saveur à ces villes malheureusement plus intéressées aux affaires qu'à la qualité des hommes.✦✦✦

Jean Dupire né à Montréal, le 14 mars 1922. Entré au service des parcs en 1954 à titre responsable des relations extérieures. Il s'est surtout occupé de la culture populaire. Il a participé de ce fait à la prodigieuse croissance du service des parcs que dirige Monsieur Claude Robillard.

PHOTOS DU SERVICE DES PARKS DE MONTREAL

View from the City Hall showing a typical older section of St. John's.

THE URBAN GROWTH IN NEWFOUNDLAND

by Sir Brian Dunfield

We sometimes find that the affairs and standing of our Island Province are not too familiar on the Mainland outside expert circles.

I suggest that from the point of view of years spent on the job, number of trained professional staff in relation to population, and the degree to which professional planning has been sold to the public and its various governments, Newfoundland stands with Alberta at the head of the Canadian planning field. Lots of people will want to argue that statement, which is all to the good, as every advertiser knows.

Planning, as a system, apart from sporadic ad hoc efforts creditable to our ancestors, such as a statutory provision for the width of the main streets of Harbour Grace and Carbonear passed seventy years ago, may be said to date, in Newfoundland, from about 1942; and so may modern mass housing. In that year, Mr. Eric Cook, Deputy Mayor of St. John's, now an eminent Q.C., moved the City Council to ask the Commission of Government to set up a Royal Commission to enquire into the state of housing and town planning in St. John's, both then deplorable. The Government acted. A commission of twelve was assembled by the simple process of asking churches, public bodies and service clubs to send up nominees, and a very good commission it was. This writer, theretofore uninterested in civic affairs, was asked to become chairman; it is an occupational hazard of judges.

So we set to work, and worked hard for about two years, during which there were five interim reports. Some dealt with miscellaneous subjects; but the principal ones aimed at the creation of a new suburb in a favourable valley covering the north side of the town; the idea being to square the town off, so to speak, since it had been running away onto more distant ground, up the valley of the harbour river and up onto the north-western heights. Our preferred valley was actually nearer the centre of the town, though it took the public some time to come to believe this. And in this valley we proposed to establish Newfoundland's first mass housing development, to be on a self-liquidating basis.

The road system in this valley was scanty, and lacked any lateral spine; and we had to put a tunnel through about nineteen hundred feet of rock to take the sewage by gravity to the City system; but of that anon. There were, in an area of about two and one-quarter miles by one-third of a mile, stretching across the whole north side of the town, perhaps 400 buildings of sorts, where there are now perhaps 4,000.

The first question was, how to get land, and control. We devised a system savouring somewhat of Uthwatt. We obtained legislation to expropriate everything in this area which was not actually a house or a garden. We had at that time a type of government which was equal to that sort of thing. A statutory Housing Corporation was formed, and the powers were conferred on that Corporation. This

writer became chairman of the Corporation willy nilly; the Government said, "It's your scheme, now you carry it out". It was a long sentence.

What we did was this. We had an independent Arbitration Board which valued all frontages on existing roads at current values, excepting in one small spot where fancy prices were being charged (and obtained). These valuations added up to a total. The statute classed interior lands, i.e., behind the 100-foot line, in five classes, from improved arable to rock and waste; and values per acre were assigned to these; and these values were added to the total. Allowances were made for farm buildings, disturbance and loss of business. We ascertained by a statistical study that at recent rates of growth the whole area might be expected to be filled up in a minimum of 30 years, or a maximum of much more. So we discounted the grand total of land, building and other values at 30 years at four per cent, and then distributed the fund so ascertained pro rata to the valuations; a sort of dividend. This seemed to us to give every owner a present share in the future of the area. It worked. There was some outcry, of course, as owners saw imaginary fortunes vanishing, but it soon died down. In fact, they did pretty well. For example, an estate which this writer could have acquired (as Hon. Secretary of an institution) in 1923 for $20,000 to $25,000 drew $61,000 out of the expropriation. No other course but general expropriation was possible. Many of the owners, with characteristic land-hunger, would have held off forever.

Of course the City, like Vancouver, lost some gardening land, but actually most of it was idle, just held for the rise. A lawyer, retained by adverse landowners, wrote to the papers citing the numbers of hens, eggs, cabbages, potatoes and gallons of milk which would be lost to the city. A friend of ours, disgustingly mathematically-minded, wrote to the papers saying he agreed with the lawyer. He pointed out that as these hens were clearly laying four eggs a day each, the area should be reserved from building and converted into a huge hennery from which we might supply the British Empire. He signed "Egg-lover". Despite his support, the protest failed.

Anyway, there is plenty more gardening land round the City, and most of it unused.

With this absolute power, it was easy to lay out the land and put in streets and utilities, thus developing a great deal of additional frontage. I sought to describe our system to a Housing Administrator in Washington once. He asked me to knock off, as I was breaking his heart.

At any rate, here there came to Newfoundland both town planning on modern lines and mass building. The long layout was designed as three "villages" strung on a central through highway, Elizabeth Avenue. We had excellent service from Mr. A. E. Searles, Engineer, once of San Antonio and now of Norfolk, Virginia and Mr. Paul Meschino, Architect, now of Toronto. They did fine jobs. Layout and design were good; one particularly admires Mr. Meschino's small (five apartment) rental buildings, which are very pretty, especially considering that economy had always to be borne in mind. There were two bigger apartment blocks, linked, each of 26 apartments. In all we built 330 units, 92 of them apartments, the rest mostly single houses. We built a few doubles, and two quadruples, but these were not popular. Everybody wanted a house he could walk round, with a fireplace in it.

The three "villages" have long since merged; and now we are right out of serviced land. At the turning of the first sod in 1944 by Deputy Mayor Cook this writer spoke and said that this area would be like a part of town in twenty-five years. He was quite wrong. It was like a part of town in eight years. After we joined the Confederation in 1949 Central Mortgage and Housing Corporation put in several projects on our ground; but the great and fast growth was brought about by the private owner and the speculative builder. The filling up of the area was phenomenal.

The total financing in "our time" (i.e. 1944 to 1950), was about $6,000,000 from Government and City. The land worked out at $1,040 an acre, including arbitration costs. And the whole enterprise is economic; it is not aided housing. (That, of course does not apply to the CMHC subsidized rental pro-

New development.

Neighborhood School.

Industrial Building.

Bus Terminal.

Federal-Provincial Housing Project.

jects but only to our over-all project). It will pay itself off in due course.

The twelve members of the Enquiry Commission worked assiduously for two years. And the nine members of the Housing Corporation met at least fifty times a year for six years; all leading citizens, merchants, lawyers, labour leaders, and all without pay. It was a fine citizen effort. After 1950, our construction money spent, our Committee resigned, and a Government Board has run the Housing Corporation since on lines of its own.

The main longitudinal street and the main sewer line linked the 12,000-foot suburb into one unit with three sub-centres. An excellent stock of shops, apartments other than those of the Corporation, garages, banks, churches, office buildings, supermarkets and motels, and so forth, has sprung up. Parking is easier than in town. Our Churchill Square has become an important shopping centre, largely, I think, because of the ample provision of parking space.

The sewage tunnel was one of our triumphs. We heard that someone had once tried to tap the waters of Quidi Vidi Lake for power, 71 feet above the harbour, and behind the town; but that was three generations ago, and no one knew officially where their tunnel was, nor indeed whether it existed. So the engineer and I wandered down into the traditional area and asked an old lady sitting on the doorstep of a substandard house if she knew of any tunnels thereabouts. "Oh yes," said she, "over behind that bush." So we found it. They were heroes in those days. They had gone in quite a way with the hand-drill and sledge; and it was iron-hard black basalt. Our modern air drills spent most of their time being sharpened. But the heroes of old were not so good at trigonometry. Going on as they went, they would have come out some day in the prison yard above the Lake. There might have been a mass escape. However, we cut down their floor and used their tunnel for the first bit of ours. Our cut was about five or six feet wide by seven or eight feet high, with a concrete trough in the bottom. Some of us Corporation members put on our rubber boots and

walked through it before it was closed up. We wrote our names in imperishable carbon from the flames of our acetylene miners' lamps on a flat slab away above water level. That will give the archaeologist of A.D. 3661 something to worry about.

Well, the citizenry referred to the Churchill Park development, as we named it, as the Chairman's "Folly" for the first couple of years. Chairmen always get the blame. Our people do not, or did not, take kindly to innovations. However, they have taken all that back handsomely since; they have seen the results, and we are all proud now of our new suburb. There are others; but this was the big one and the prototype. And it led to a lot of imitations; corner windows, pastel colours, "banjo" street layouts, all over the town. Architects may object; but they had not seen the old styles or the old colours.

And now our new and full-up suburb is getting a fine back-drop on the further slope. In the middle of the back line the Roman Catholic Church has erected a fine school and a large and handsome old people's home, (handsome insofar as concrete can be handsome) and we believe a church and a convent are projected. To the east of this property is the very large eight million dollar Confederation Building which houses the Legislature, the Government and about twelve hundred Provincial civil servants. It is built on the "never-never" system, but posterity can take care of that. To the west of St. Patrick's Home are rising the first five big brick buildings of the new University, on a 120-acre campus. And if a house can be bought on 25-year terms and used meanwhile, why not a public building? There are many more campus buildings to come, and much landscaping to be done. When the trees have had twenty years to grow, it can be a beautiful place if well handled at the outset.

The existence of planned and serviced land facilitated very much, of course, the earlier operations of Central Mortgage and Housing Corporation. The ground was ready for them.

In the course of these operations the City Planning Commission, dormant for a good many years, was revived, and we "sold" the Council in 1952 on getting a professional planner. All ignorant, we set about it. The Lord favours children, drunks, amateurs and the etc. etc., so, sight unseen, we hired our first planner, Mr. S. H. Pickett. I met him at the steamer from England on a pretty grim black morning about the beginning of May, with something like sleet falling; and one felt that but for a strong and hasty greeting and a firm hand on his arm he would have sneaked back on board. However, our sudden summer was about to break on us, so soon he liked us better, and we him. He was a great success in Newfoundland. When he left us after four years he had to pay a farewell visit to Corner Brook, which he had planned completely in book form, and we heard that flags were at halfmast! I say this about him even though on first getting into town he observed "I see you have trees!" I replied, "What the Hell did you expect?" but I wasn't surprised, because an eminent Canadian planner had said the same and received the same reply, when he came down to do some zoning and traffic work for us in 1946. Perhaps the third time will be lucky.

Among other services to St. John's, Mr. Pickett designed a slum clearance for our central hillside slum area, which is really not so very large (17 acres), the remnant of rush construction after the Great Fire of 1892. The first phase has been carried out, and looks well, and it is time we got on with the second phase. But great bodies move slowly, even if money moves fast.

At the moment we have Project Planning Associates Ltd., (Macklin Hancock, of Toronto, our C.P.A.C. Toronto-Metro Chairman incidentally), doing a general survey for the City. Our Commission in 1942 had done only a sampling of 60% or thereabouts of the houses; and times have indeed changed.

But this anticipates. To revert; in 1954 the Department of Municipal Affairs became envious, and the then Minister, Hon. S. J. Hefferton, (now our C.P.A.C. Vice-Chairman), wanted to set up a Planning Department for the Province. We suggested to him that we get more professional planners and set up a Joint Office. This was acceptable; so we sent Mr. Pickett to England to engage two more pro-

fessionals. The Joint Office worked very well for a year or two. That is how you find Mr. Pickett planning Corner Brook, now about the sixth city in the Maritimes. However, in the end the Department wanted more control; so in 1956 we split up, one man staying with the City, two going to the Province. Since that the City has got a second man, so our total is four as of now. But the Provincial side, swamped with demands for planning in the smaller places, (i.e. those other than St. John's, Grand Falls and Corner Brook), really needs at least four for itself, and is trying to get them. Up to last year, we were far ahead of the Mainland Maritimes. Now, with Halifax equipped with planning officers and our old friend Mr. Duek-Cohen (who did a job down here with Canadian British Engineering Consultants) added to the Saint John, N.B. staff, and another sought, so we hear, we have the pleasure of seeing our sisters coming up into line with us at last. This remark will not annoy them; I have said before at C.P.A.C. Conventions that we were trying to bring them up to Newfoundland standards! This was at banquets, where anything goes. They took it kindly, knowing that I felt myself a Maritimer and one with them. ("And eastward turn your hearts towards home". Why has that vanished from "Harmony Harbour"?)

To Halifax-Dartmouth-Armdale we must still accord the primacy; but I think we are ready to fight Saint John for the title of second city of the Maritimes.

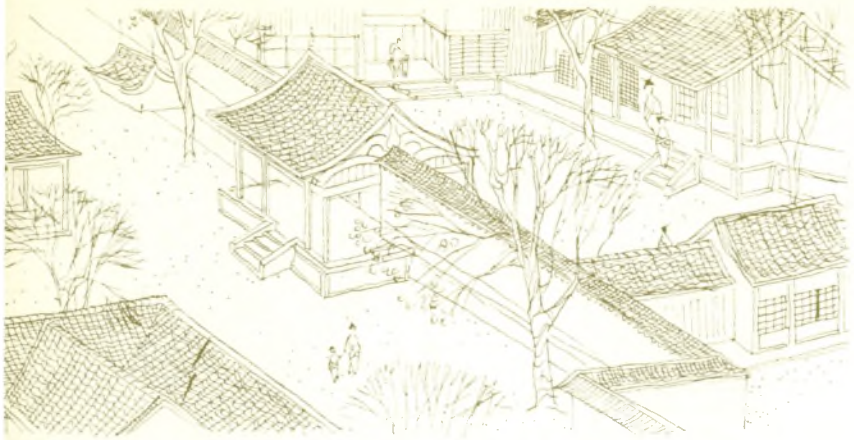
This is a sign of the times. In 1942 we had in St. John's no building regulations and no zoning regulations, only a few ad hoc orders. When these regulations were introduced, they were scandalous invasions of private rights. Now they are so much a part of the public thinking that the public has become a watchdog against breaches.

Old St. John's, which has gone through a revolution in the last fifteen years unsurpassed in Canada, which has grown from 7,000 habitations and 1,900 developed acres in 1942 to 12,500 habitations and 3,700 developed acres in 1960, and in quality and civic equipment has moved right into modernity, is not the only place in Newfoundland. I have referred to the complete early planning of Corner Brook. But every small town in the Island is demanding planning service, and the staff is swamped. Every meeting of the local Federation of Mayors and Municipalities is addressed by planners. This Island is totally sold on planning, and its stock of modern housing cannot have done less than double itself in fifteen years. Successive Ministers of Municipal Affairs, and the invaluable Deputy Minister, Mr. Clarence Powell, have really put a drive into these matters. I understand the hard-pressed planning staff have even a scheme for zoning the entire environs of the Trans-Canada Highway in this Island. These environs are already protected by temporary regulations controlling all building. This comprehensive zoning scheme awaits only adequate staff and time, and, given that time, may be another Newfoundland "first".

And just a very short plug for my own organization. C.P.A.C. has held a modest but steady position in the Province for ten years past, and is planning for a jump ahead, just as we are doing also at our Ottawa Headquarters and in our Central Council. And some of the leading members of C.P.A.C. in Newfoundland today joined the standard of better planning and housing eighteen years ago.

His Excellency the Governor-General, whom we welcomed here a few months ago, said he heard that we had the highest birth-rate and the lowest death-rate in Canada, and that this opened up possibilities for the long haul. Let it be a comfort, that those who may eventually absorb you will be far from uncivilized.✦✦✦

Sir Brian Dunfield was born in St. John's in 1888. He is a graduate of Newfoundland and London Universities and was admitted to the Newfoundland Bar in 1911. He was appointed a Justice of the Newfoundland Supreme Court in 1939. He has served on many Commissions for his province including those on Housing and Town Planning, St. John's 1942-44. He has been a member of the Executive of the Community Planning Association of Canada since 1952 and held the office of National President 1953-55.



Maison de la classe moyenne du 10e siècle A.D.

L'HABITATION ET LES CIVILISATIONS ANCIENNES

par Louis Dernoi

M. Dernoi est architecte à la succursale de Montreal de la Société centrale d'hypothèques et de logement.

Il est généralement admis que chacune des sphères de l'art a tendance à vouloir transmettre sa propre évolution. L'étude des débuts de la pratique d'un art quelconque présente toujours une énigme. En regard de l'habitation, les manifestations du début se retrouvent au niveau de l'application la plus rudimentaire alors que son histoire demeure encore ignorée et à l'état embryonnaire. Il faut donc avoir recours aux travaux de recherches sur les fouilles qui nous ont été transmis par les historiens.

Nous essaierons dans les lignes qui vont suivre d'offrir à nos lecteurs par le truchement de gravures et de croquis ce qu'a produit la très ancienne architecture. Il me semble que de nos jours nous n'ayons pas remonté jusqu'aux anciennes civilisations pour faire l'historique de l'habitation. Nous concentrerons donc notre attention dans le domaine de la construction résidentielle autour des activités sur les rivages des cinq Grandes Rivières de l'antiquité puisque c'est là que l'homme a commencé à prendre conscience de la vie en société et de l'urbanisation:

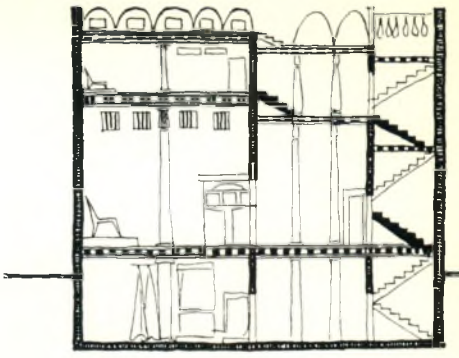
1. Le Nil — ancien empire égyptien.
2. Le Tigre et l'Euphrate, l'empire babylonien et la Mésopotamie.
3. L'indus — les civilisations de l'Inde.
4. Houang-Ho — Berceau de la civilisation chinoise sur le Fleuve Jaune.

L'Egypte ancienne

A l'époque du cinquième millénaire av. J.-C. des groupements de troupes nomades de l'Afrique du Nord s'installèrent le long des bords du Nil. La première installation permanente de ces nomades se fit sur le Delta de ce fleuve (approx. 4000 av. J.-C.)

Peu de temps après la période initiale d'unification en Egypte, la construction des pyramides a commencé et ces dernières devinrent le symbole d'un pouvoir centralisateur. La population de cette époque vivait déjà dans des villes protégées par des palissades et des murailles d'argile. Les maisons occupées par les prêtres et les fonctionnaires publics étaient très vastes et les méthodes de construction aussi bien que les matériaux devinrent plus tard les normes généralement acceptées. Les habitants moins fortunés se contentèrent de maisons plus petites consistant en une seule pièce avec cour emmurée.

Dans le cours des 1000 ans qui suivirent, la construction de larges temples fit son apparition. La découverte d'une ville enfouie (Hatep-Senousret — 2000 av. J.-C.) nous a fourni des renseignements utiles sur la construction d'habitations à cette époque. Cette petite ville type possédait son temple, son marché, des habitations pour toutes les classes de la société et une large superficie emmurée où logeaient les esclaves. Les artères résidentielles se prolongeaient dans la direction est-ouest en forme de quadrilatère. Les maisons elles-mêmes étaient orientées vers les pôles nord-sud et étaient construites en rangées contiguës: les dimensions des maisons des gens de la classe privilégiée pouvaient avoir 150 sur 200 pieds et les logements plus modestes 20 sur 30 pieds. Ces dernières semblent avoir été les premiers spécimens de maisons de rangée d'un style uniforme avec murs arrière contigus. Les habitations aux dimensions plus grandes contenaient plusieurs courettes avec des chambres groupées autour de ces espaces libres pour des fins différentes.



Maison égyptienne dans la ville de Thèbes.

D'après les études qui ont été faites et les reproductions qui nous ont été transmises, il semble que cet aménagement quadrilatère a prévalu dans les villes de Thèbes et Memphis. Ce n'est pas avant les conquêtes asiatiques que nous ayons pu constater en Egypte l'existence d'aménagements résidentiels plus réalistes.

A El Amarna (anciennement Akhet-Aton) une capitale du quatorzième siècle av. J.-C. on a tenu compte de la topographie dans l'élaboration de plans de maisons et la préparation d'aménagements résidentiels. La route principale suivit le cours sinueux du Nil. Les habitations, à l'exception du quartier réservé aux esclaves, furent groupées sans tenir compte du statut social ou économique de leur propriétaire. La maison du citadin fortuné (60 sur 60 pieds) fut située au centre d'un lot de dimensions respectables (200 sur 300 pieds) et elle était bien différente de l'uniformité du type des maisons de Kahun. La cuisine, les étables, le lieu d'entreposage, l'espace réservé aux domestiques, etc. étaient séparés de la bâtisse principale mais construits sur le même terrain. Les autres caractéristiques de ce type de maison comportaient: proximité des pièces du maître de la maison et de celle de son épouse, le nombre croissant de pièces réservées aux activités sociales, les installations élaborées des chambres de bain et des lieux de toilette, etc.

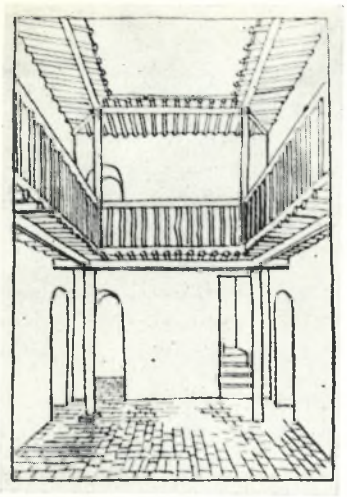
Les maisons aux proportions moins grandes et celles réservées aux esclaves (15 sur 30 pieds) contenaient aussi une pièce centrale avec un plafond élevé. Ce plafond plus élevé au-dessus de la pièce centrale protégeait les habitants de la maison contre le CHAMSIN. Le quartier des esclaves renferme des maisons de rangée du type de celles de Kahun, mais avec une uniformité encore plus frappante, le même plan de maison pour toutes les unités.

Les vieilles cités ne pouvaient pas accepter de nouvelles conceptions en urbanisme. Le territoire limité mis à leur disposition les en empêchait. Par conséquent la seule possibilité dont elles pouvaient disposer pour l'agrandissement des maisons se rencontrait dans l'adaptation de plans en hauteur. Le second étage qui pouvait devenir un espace gazonné et fleuri devait disparaître. Des peintures murales que l'on peut contempler aujourd'hui nous donnent une idée de l'emploi que l'on devait faire à cette époque des chambres du second étage; ces pièces devaient servir à des fonctions plus intimes: la chambre pour la maîtresse de la maison et pour les enfants en bas âge. (Cette disposition des pièces se rencontre encore dans certaines régions de l'Orient.) Le premier étage de la maison devenait rentable et l'on s'en servait couramment comme boutique pour les artisans ou pour des établissements commerciaux ayant un accès facile sur la rue.

Après 1000 av. J.-C. l'Egypte fut souvent soumise aux caprices et aux goûts des conquérants et l'architecture domiciliaire subit plusieurs transformations. Cependant, certaines particularités de la maison égyptienne demeurent: la cour intérieure, l'accès à la pièce principale de cette cour, le dédale des voies d'accès de la rue vers la cour intérieure, etc.

Babylone

Le territoire méridional situé entre le Tigre et l'Euphrate, la Mésopotamie, fut le lieu de naissance de la civilisation babylonienne. L'architecture locale prit un caractère urbain dans cette partie du monde plus tôt qu'en Egypte. L'arrivée des Sumériens dans l'extrême sud de la Mésopotamie (4^{e} millénaire av. J.-C.) amena des améliorations dans les criteria de l'habitation. De petites agglomérations furent érigées en villes, entre autres la ville d'Our qui fut la patrie d'Abraham, (3000 av. J.-C.) certaines pratiques de construction et formes nouvelles de logements furent implantées: le quartier pour un temple, l'orientation sud-est et nord-ouest, enfin le principe de la cour intérieure. Ces exigences fondamentales devaient servir de guide pour l'érection de tous les types de bâtiments. La ville de Babylone elle-même prit forme à peu près à cette époque lorsque certains groupes sémites conquirent Sumer et posèrent les bases de plusieurs nouvelles agglomérations. Les plans des habitations de cette

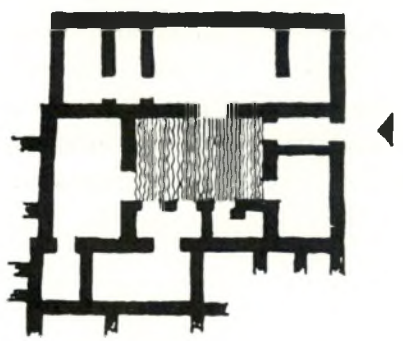


Maison de ville à Ur.

de cette période (circa de 2000 av. J.-C.) demeurèrent inchangés, ou presque, jusqu'à l'avènement de l'ère chrétienne. L'accès indirect vers la cour centrale, (pour fins d'intimité), la division entre les espaces de séjour et les chambres à coucher, les installations sanitaires, les escaliers et l'occupation du deuxième étage, devinrent en usage.

L'avènement de l'ère du nouvel empire babylonien dans le premier millénaire av. J.-C. apporta peu de changement. La disposition rectangulaire des villes fit des adeptes en même temps que l'introduction sur une grande échelle du système axial. A l'intérieur des agglomérations quadratiques déterminées par les artères principales de circulation, l'aménagement sémite indiscipliné a prévalu et les artères secondaires aussi bien que les culs-de-sac demeurèrent. Les maisons d'appartenances sociales différentes étaient entremêlées à l'intérieur du quadrangle, traduisant ainsi les vues plutôt libérales de l'ensemble de la communauté.

Les fonctions sociales et professionnelles pratiquées à la maison amenèrent l'aménagement d'une seconde cour intérieure réservée à la population du harem. Les dispositions intérieures d'une maison modeste n'étaient pas différentes de celles d'une maison plus grande, exception faite toutefois du nombre et de la grandeur des pièces. L'occupation de l'empire babylonien par les Perses, les Grecs, les Romains, etc. a laissé son empreinte seulement d'une façon superficielle. Les caractéristiques principales de l'habitation babylonienne n'avaient pas disparu en dépit de l'occupation étrangère.



Une maison de la classe moyenne à Dura Europos.

La Vallée de l'Indus et la civilisation des Indes

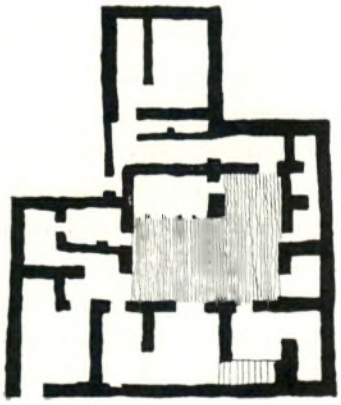
La culture urbaniste des Indes la plus lointaine prit forme sur les bords du fleuve Indus. Les fondateurs de cette civilisation atteignirent le grand fleuve en provenance de l'ouest (approx. 3000 av. J.-C.) et engloutirent les aménagements villageois primitifs qui existaient alors sur les rives de l'Indus et développèrent leur propre civilisation urbanisée. Autour de 2600 av. J.-C. et pour une période de plus de 1000 ans, un état unifié et homogène fit son apparition à cet endroit.

Le nouvel empire s'étendit sur un parcours de 500 milles le long du fleuve et de nombreuses agglomérations se constituèrent. Deux villes principales, une où s'élève aujourd'hui Mohenjo-Daro, et l'autre à Harappa, présentent des particularités identiques d'urbanisme. Ces villes (superficie approx. de 3,500 sur 4,000 pieds), furent divisées en un certain nombre de quadrilatères par des avenues à orientation nord-sud, est-ouest, chaque avenue conduisant à une entrée de la ville. La majorité des édifices publics comme la citadelle, les bains publics, etc. étaient toujours situés à l'extrémité ouest de la ville alors que le reste du territoire était réservé pour des quartiers résidentiels. Les groupements de maisons entre les avenues étaient eux-mêmes morcelés par des artères secondaires étroites et rectilignes. A l'intérieur de ces pâtés de maisons, il y avait une grande variété de maisons de dimensions différentes qui traduisaient bien les caractéristiques d'une société hautement civilisée.

Contrairement à ce que nous avons constaté en Egypte et en Mésopotamie, les plans de maisons ici n'offraient aucune particularité bien définie. La cour intérieure était le seul dénominateur commun et la superficie de cette cour était à l'échelle du statut social de son propriétaire. Les plus petits logements de deux ou trois pièces avaient une superficie de 2,000 à 2,500 pieds carrés et la cour intérieure occupait la majeure partie du territoire de cette propriété. Cette maison pouvait être la propriété d'un artisan ou d'un journalier.

Les habitations des gens de classe moyenne pou-

Maison de la classe moyenne à Mohenjo-Daro.



vaient contenir de dix à vingt pièces avec au moins deux cours intérieures et la propriété avait une superficie totale de 5,000 à 10,000 pieds carrés. Ces dernières maisons appartenaient à des marchands et elles contenaient de nombreux accessoires de luxe: les quartiers du concierge près de l'entrée, la cuisine, des puits privés, des installations sanitaires élaborées, un second étage pour se protéger contre les dangers d'inondation, etc. Les maisons contenant plus de cent pièces devaient sans doute appartenir aux classes dirigeantes, mais il est à remarquer que l'aménagement intérieur demeurait toujours le même.

Les ravages par les éléments ou plutôt les destructions par l'ennemi anéantirent cette civilisation au milieu du deuxième millénaire av. J.-C. et la destruction fut telle que plus tard (1400 av. J.-C.) lorsque les Indo-Aryens firent leur apparition aux Indes, ils ne retrouvèrent aucune trace de la civilisation qui les avait précédés. Vers 1000 av. J.-C. ces "nouveaux arrivés" avaient déjà réussi à promulguer les bases de leurs propres principes d'urbanisation. La valeur de ces principes, on peut la retrouver dans leur réglementation en matière d'architecture et d'urbanisme. Le quartier, la rue et la maison étaient tous soumis à une réglementation cléricale conforme au statut social des habitants. Les différents codes préparés par les Indo-Aryens touchaient à la dimension des maisons individuelles, le nombre de pièces, l'aménagement intérieur, l'usage de certains matériaux, etc.

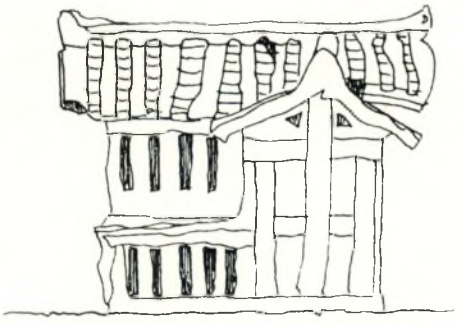
Houang-Ho, Berceau
de la civilisation chinoise

Les tribus nomades de l'intérieur de l'Asie découvrirent des terres vierges et inexploitées sur les rives du Fleuve Jaune au cinquième millénaire av. J.-C. Ayant apprécié les nombreux avantages de ces terres fertiles, elles s'appliquèrent d'abord à promouvoir l'élevage et plus tard elles s'adonnèrent à l'agriculture. La vie dans une société organisée semble avoir fait son apparition dans ces parages autour de 3000 av. J.-C.

Les premiers établissements connus de l'âge néolithique (2000 av. J.-C.) indiquent que des agglomérations de cette époque s'étaient constituées et vivaient à l'intérieur des limites de villages fortifiés. La période historique a débuté avec la dynastie Chang-Yin entre 1500 et 1000 av. J.-C. Les gens de cette époque vivaient dans des villes de forme circulaire ou ovale à l'intérieur de murailles de boue avec la résidence du monarque et le temple religieux situés au centre. Immédiatement autour de ce noyau central, on a retrouvé les ruines d'anciennes résidences de forme rectangulaire. A l'époque du règne de la dynastie Tchéou (1000 à 250 av. J.-C.) des agressions barbares de l'ouest amenèrent la construction de fortifications échelonnées qui devinrent par la suite les villes. Les centres administratifs importants se substituèrent aux villages moins considérables. La forme rectangulaire des centres de concentration de population fit son ap-

parition. Les centres les plus importants étaient entourés d'une double muraille, la citadelle et le prince règnant avec son entourage occupaient le centre intérieur alors qu'entre les deux murailles habitaient les gens du peuple. Dans ce dernier espace il y avait suffisamment de terres arables pour la culture à laquelle pouvait s'adonner la population, même lorsque la ville était en état de siège.

Les classes dirigeantes continuèrent à observer la tradition et vivaient dans la maison érigée au milieu d'une cour centrale. La construction de cette maison prévoit une grande salle ouverte et dégagée, supportée par des piliers de bois avec chambre à coucher à l'arrière de cette "vérandah". L'habitat du citoyen pauvre et sans influence consistait en une hutte de boue contenant une ou deux pièces.

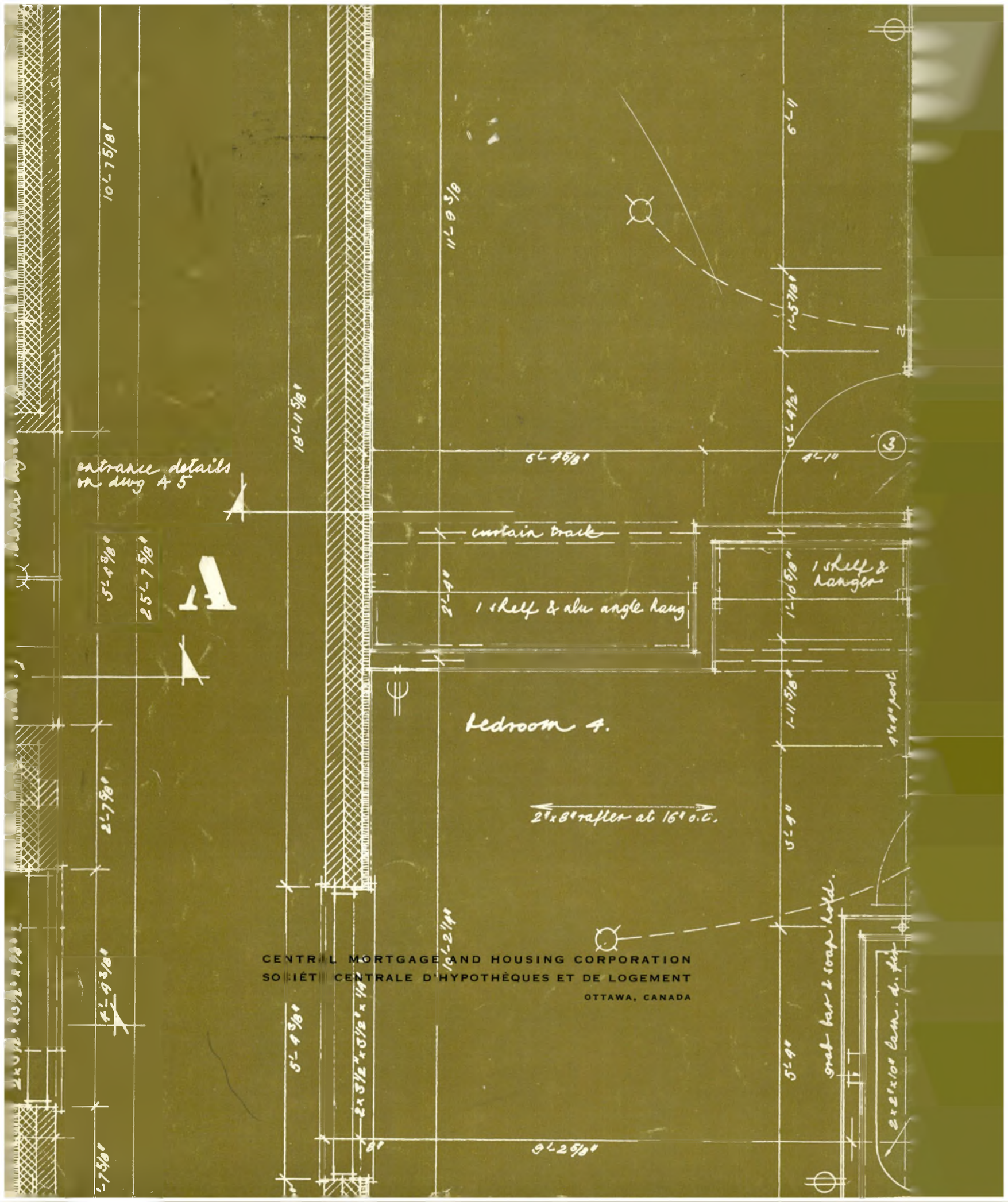


Vue latérale d'un petit bâtiment avec cour intérieure clôturée sous la dynastie Han.

Sous la dynastie Han, (206 av. J.-C. — 200 ap. J.-C.) avec l'apparition de nouvelles classes sociales, les bourgeois, les artisans et les marchands, des progrès énormes furent réalisés dans le domaine de la construction de l'habitation. Pour les trois nouvelles catégories de citoyens mentionnées plus haut, l'espace entre les deux murailles fut aménagé différemment, la tenure de la terre fut modifiée au bénéfice de la classe moyenne et l'urbanisation fit marche en avant. La construction résidentielle atteignit alors un stage où il fut possible de légiférer en matière de construction et ou les données expérimentées durant une période de 2,000 ans servirent de principes pour la construction des maisons chinoises. L'importance de la cour centrale fut admise et sa disposition par rapport aux pièces adjacentes fut confirmée. L'utilité et la valeur de la "vérandah" furent reconnues et sa construction fut acceptée dans la construction de maisons pour toutes les classes de la société. Le deuxième étage devint aussi populaire, même dans les petites maisons. L'entrée principale de la maison était plus prétentieuse pour les maisons des gens de la classe privilégiée alors que dans le cas des maisons plus simples, on se contentait d'une marquise au-dessus de la porte.

Les quatre principales civilisations de l'Ancien Orient présentent une forme assez identique dans le domaine de l'urbanisation. Les plaines et les rives fertiles des grands fleuves ont entraîné la migration et encouragé la prolification de groupements humains stables. Il restait à assurer la protection de ces agglomérations. L'apparition et le nivellement de nouvelles couches sociales ont eu lieu autour d'une élite qui devait assurer un fonctionnement ordonné des activités civiques et cléricales.

La construction des habitations subit aussi une évolution qui devait s'adapter aux nécessités de la société. Les huttes des nomades disparurent et furent remplacées par des espaces clôturés et plus tard la cour intérieure de la maison fit son apparition. Ces transformations furent dictées par les exigences du climat et les considérations technologiques. L'enclos qui fit son apparition en Egypte devait son existence à la nécessité impérieuse de se protéger contre le chamsin. La grande salle située dans la cour intérieure chez les babyloniens a probablement été conçue pour des motifs familiaux, le lieu du siège patriarcal de la famille. La grande cour intérieure aux Indes et en Chine devait sans doute son existence pour les fins de l'élevage et aussi à cause de considérations commerciales. Ceci explique pourquoi l'accès de l'artère de circulation vers la cour intérieure devait être facilement accessible. Fait à noter, les quatre civilisations décrites plus haut ont toutes eu recours à la construction des habitations à l'intérieur d'une cour centrale lorsque leurs besoins communs s'identifièrent, lorsque la topographie leur imposa ce mode de construction et lorsque la nécessité de se protéger contre les éléments devint plus impérieuse.✦



CENTRAL MORTGAGE AND HOUSING CORPORATION
SOCIÉTÉ CENTRALE D'HYPOTHÈQUES ET DE LOGEMENT
OTTAWA, CANADA

HABITAT

MARCH-APRIL 1961
MARS-AVRIL 1961

In the spring break-up, the drivers work
d the clock to keep the logs moving. NFB

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FEDERAL ASSISTANCE FOR POLLUTION CONTROL

by J. R. Menzies

To paraphrase a well-known television program — what kind of a day was December 2, 1960? A day like all days? Well, not quite, so far as Canada is concerned.

On that day, legislation was enacted which materially changed the role of the Federal Government in relation to water and soil pollution abatement. This was achieved through revisions to the National Housing Act. Specific reference is made here to Part VIB, Loans for Municipal Sewage Treatment Projects. This legislative action is directly related to an announcement in the Speech from the Throne at the opening of Parliament on November 17, 1960, quoted below:

"The pollution of Canada's water supplies is a serious problem confronting many communities; its correction or prevention involves substantial further investment in sound urban development. It will therefore be proposed to you that the Central Mortgage and Housing Corporation be authorized to make long term loans to local authorities for approved projects for sewage disposal and treatment, up to two-thirds of the costs of such projects, on terms similar to those of loans for limited-dividend housing projects. As a special incentive for prompt action on this urgent problem, Parliament will be asked to authorize the Crown to write off one-quarter of the amount of any such loan expended on work done before April, 1963."

To appreciate the significance of this development, it is necessary to have some knowledge of the roles played by governments, federal and provincial, in respect to water pollution. These were laid down in the British North America Act although there is no specific reference therein to the control of wastes. Section 92, which lists Exclusive Powers of Provincial Legislatures, states that "In each Province the Legislature may exclusively make Laws in relation to Matters coming within the Classes of Subjects next hereinafter enumerated; that is to say, — " and subsection 16 reads as follows: "Generally all Matters of a merely local or private nature in the Province". This has been interpreted to mean among other things, matters pertaining to health and the control

of wastes at their source.

On the other hand, the Federal Government was assigned responsibilities in relation to Navigation and Shipping, Section 91.10, Seacoast and Inland Fisheries, Section 91.12, and, later, migratory birds, (Migratory Birds Convention Act (1927), boundary waters (Boundary Waters Treaty, 1909), etc. The Federal Government can legislate with respect to the health of fish and fowl, but has limited authority in regard to the health of man himself.

Actually at the time the British North America Act was drafted, comparatively little was known about the cause and modes of transmission of disease. In respect to water-borne disease, every student of preventive medicine is probably familiar with the Asiatic cholera epidemic of 1854 which was traced to the polluted water of the Broad Street well, London, England. The evidence, good as it was, was only circumstantial since the causative organism had not yet been identified. The cholera outbreak in Hamburg in 1892 is another classic example of a water-borne epidemic, one which demonstrated the merits of sand filters in water treatment. Similarly epidemics of typhoid fever had been traced to contaminated water and milk in the late 1800's, many years after the British North America Act was drafted.

Scientific proof of the existence of disease-producing organisms and their modes of transmission is so recent and has developed so rapidly, in comparison to earlier times, that it is difficult to realize how little factual knowledge in the realm of health was available to the Fathers of Confederation. One can only speculate as to the effects this knowledge might have had on the roles of federal and provincial governments had it been known even a half century sooner.

Another factor that has tended to minimize the importance of pollution is the amazing progress which has been made in the control of water-borne disease or, more accurately, some water-borne diseases, particularly in countries such as our own where it is financially possible to utilize the knowledge which has been developed by scientists and engineers to assure safe water.

In some respects, we are not too far ahead of those who lived one hundred years ago, particularly in the control of disease-causing viruses. In this connection, reference might be made to the disease, infectious hepatitis, because records of the Bureau of Statistics indicate a fairly rapid increase in its incidence. The United States Department of National Defence was able to demonstrate several years ago that it could be caused by polluted water, although it seems likely that other modes of transmission are more commonly involved in its transfer from person to person. It is known that some viruses are not destroyed or eliminated by commonly practiced methods of water treatment. Filtration is ineffective because of their minute size and chlorination at normal dosage rates may fail to kill them.

It is apparent the purification of water is not the complete answer and that pollution control is still significant in respect to health, with new facets of the problem being noted with increasing frequency. One of these is the tremendous increase in the use of synthetic detergents with attendant problems not yet fully evaluated.

The adverse effects of synthetic detergents on waste treatment plants have been observed for a considerable time and methods of control have been devised. The most disturbing factor is their resistance to deterioration by natural and man-made processes. Thus, they pass from the kitchen or laundry to the sewer, river, water works and back to the home. It is thought that they have little if any health significance on a short-term basis, but it is recognized that no one has factual data on what the long-term effects may be. A possible solution to this problem has been sought and found in Great Britain where detergents have been developed which are more susceptible to destruction by nature and waste treatment processes.

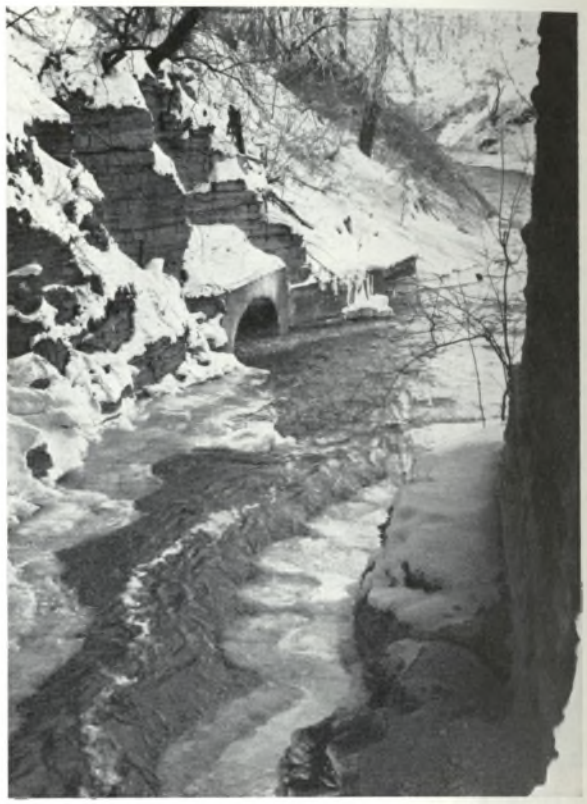
Another facet of the synthetic detergent problem is related to their effects, owing to the high phosphate content of various preparations, on the development of algal growths in the receiving waters. Complaints about excessive amounts of algae seem to be increasing in frequency. Given adequate food supplies and sunlight these small plants multiply at

a fantastic rate. Through photosynthesis they produce oxygen and this has an important place in the stabilization of wastes. Unfortunately adverse effects can destroy the algae which then become a waste material placing a heavy demand on dissolved oxygen. Moreover, decomposing algae frequently impart objectionable odour and taste to water supplies and may create shore line nuisances.

Another aspect of pollution which is causing growing concern among those who deal with water pollution problems is the potential hazards associated with the growing use of a large variety of herbicides, pesticides, agricultural chemicals and related materials. There is little opportunity for treatment since most of these find their way into surface and ground waters through run-off and percolation. Industrial wastes including, in some instances, toxic materials pose other problems.

In this discussion we have wandered rather far afield from the initial discussion concerning federal versus provincial control of water pollution. It will tend to indicate, however, the growing importance of and need for pollution control. The treatment of municipal wastes does not provide all the answers, but can make a worthwhile contribution toward the betterment of water quality. Such treatment will also take care of a substantial percentage of offending industrial wastes because so many manufacturing plants are located within city limits. By facilitating the financing of sewage treatment and related works (trunk collectors) and by offering an incentive to prompt action through rebates, the federal government has entered a field which was previously looked upon as largely provincial and municipal in character. Exceptions to this, of course, would be sources of pollution on federal property.

Part VI B of the National Housing Act deals almost exclusively with administration of the loans and with respect to payments which may be forgiven on work done prior to April, 1963. In its brochure, CMHC 1333, Central Mortgage and Housing Corporation has presented a review of many of the problems associated with the administration of this section of the Act.



In the Speech from the Throne, the Corporation is to be "authorized to make long term loans to local authorities for approved projects for sewage disposal and treatment". What constitutes an approved project? A great deal of thought has gone into the preparation of the CMHC 1333 brochure and anyone requiring details of the proposed procedures and requirements should make reference to it. At the risk of over-simplification, it might be said that approval of the project refers, primarily, to approval by the pollution control authority of the province. Moreover, the municipality must have provincial approval to incur the proposed debt. A sewage treatment project has been interpreted, in the brochure, as "a project consisting of a trunk sewage collector system, a central treatment plant or both—". Again these terms require definition or, at the very least, interpretation which will be widely accepted as reasonable. These and related problems have been the subject of searching discussion within the Corporation and together with government agencies such as the Ontario Water Resources Commission,

Far left, a trunk collector pours untreated sewage into a tributary of the Ottawa.

Chlorination has helped, but further relief from pollution at this beach, in Vancouver, may be expected from the new Iona Treatment Plant.

This waterway will soon be returned to its former beauty. It is part of the Van Wagner Beach Redevelopment Project, Hamilton.

the Public Health Engineering Division of the Department of National Health and Welfare, and many other interested parties.

The need for a high degree of uniformity in the administration of the Act hardly needs emphasis. On the other hand, it is unlikely that any two projects will be dealt with which are exactly similar in all respects. Primary treatment may be all that is required in some instances, secondary treatment could be essential at another point, while there may be no urgent need for sewage treatment in other circumstances, but a definite need to reduce soil pollution. The serious adverse effects of soil pollution are most readily recognized in suburban areas where houses are served by individual waste disposal units, such as septic tanks and private wells. Soil and subsoil conditions may be such that these installations cause a real health hazard. Indeed, if any one reason is needed for the proposal "to assist in the elimination or prevention of water and soil pollution", Part VI B, Section 36F, National Housing Act, it will be found in the rapid development of suburban areas

which have not been provided with central sewerage and water supply systems. Because of its role in the administration of the National Housing Act, Central Mortgage and Housing Corporation has been faced for many years with this baffling problem of waste disposal in unsewered areas. So many difficulties were experienced that a committee of provincial and federal pollution control officials, who were associated with revisions to the National Building Code, developed a statement intended to discourage, to the greatest possible extent, the use of septic tanks to serve private homes.

A second basic reason for this undertaking on the part of the Federal Government is the realization that water pollution has become so serious, in some areas, that development is being retarded.

Although no reference is made either in the Act or the Speech from the Throne to the part this proposal can play in decreasing unemployment, the deadline imposed for rebates on expenditures —April 1963 — bears some relationship to that problem.

Who, then, can gain the maximum benefits by taking advantage of the federal loans? The quick response by municipalities to the government's proposal and the urgent requests for prompt action associated therewith, make it abundantly clear that many municipalities are eager to obtain the greatest possible benefits from this legislation. Very obviously, they realize that construction costs which are incurred during the rebate period are most desirable in respect to financial benefits. It may be difficult for some of the larger cities and metropolitan areas to take full advantage in this respect because of the rather lengthy period required for preliminary planning, designing the treatment plant and interceptor sewers, letting of contracts and construction. This, of course, would not apply to municipalities which can begin construction at an early date.

A great deal of speculation will be engendered, concerning the probable effects of the legislation in respect to water pollution. To do so in any detail would involve assumptions which might easily be incorrect. It seems obvious, however, that the enthusiasm displayed so far by municipalities is most encouraging. If it continues and grows in magnitude and scope it can only have beneficial results.

Some of these, of special interest to many, would be a better quality and safer water supply which is less frequently affected by objectionable tastes and odours, safer bathing beaches and probably the reopening of beaches nearer to centres of population and more jobs through expansion of industrial development based on suitable water sources. There are other benefits of course, some less tangible, one of which might be increased self respect. Not too many have been conscience stricken by past abuses, but all can take some measure of pride in the restoration of our rivers and lakes to a condition approaching their original quality.

Perhaps the most reasonable basis for evaluating the probable effects of this legislation is to be found by reviewing the program in the United States whereby financial assistance has been provided by the Federal Government to municipalities for the construction of approved sewage treatment plants. The program has been underway for about twelve years. At first it was greeted with considerable opposition by control authorities in some states, but is now recognized as having been responsible for accelerating, to a considerable degree, waste treatment programs in that country.

A conclusion may be drawn that the action taken by the Parliament of Canada to speed up waste treatment will produce eminently worthwhile benefits, a result which will be welcomed by all who have an interest in water use — everyone.✦✦✦

J. R. Menzies, a native of Ontario, is a Civil Engineer who received his training at the University of Toronto. Following graduation, he was engaged for three years in surveying and municipal work with a firm of consulting engineers. He joined the National Health Department in 1929 and is now Chief of the Public Health Engineering Division, Department of National Health and Welfare. He obtained his certificate as Ontario Land Surveyor in 1929 and the postgraduate degree of C.E. from Toronto in 1948.

The Extra Slice of Life

Some speculations upon the new dimension of life and its effect on housing. Mr. Carver is Chairman of the Advisory Group, Central Mortgage and Housing Corporation.

by Humphrey Carver

Is there going to be an historic shift of emphasis from Youth to Age? During the last half-century North America has been dedicated to the glorification of young people; their interests have been pre-eminent in our minds and we have taken it for granted that youth is more important than age. Now there are subterranean rumblings which suggest that there may be an important shift in our stratification of social attitudes and assumptions, one of those deep bedrock disturbances that must re-shape civilizations from time to time. What are the explanations of this change that might affect the whole mood and tone of life in North America?

The attention lately given to Youth can perhaps be regarded as part of the whole social and economic revolution that has turned the world upside-down in the last fifty years. Mass-production industry, the migration of people from farms to cities and the evolution of the political proletariat — all these changes undoubtedly played into the hands of young people. In previous generations everyone had to defer to the old man who owned the farm and the workshop, the fixed property on which work and livelihood depended. "Papa" was a patriarch who governed the daily lives of his dependents. But, come the revolution, "dear old Dad" became a rather pathetic figure; his children inherited the earth before he was dead, he didn't entirely understand the technology on which our lives now depend and he has been gently encouraged to retire early and become a refugee across the mountains in Vancouver or vanish into the futility of Florida. Meanwhile, young people have been wooed by employers, by merchants and by politicians. Employers want young people because they are not set in their ways and can be trained to accept the new techniques of business and production. The market favors young people because the affluent society of cities has been kept busy accumulating merchandise, largely through trading upon the restless appetites of young people, their enjoyment of all the material symbols of sex and success. What would our economy be without this fickle, insatiable, frivolous appetite of the young?

Is there now to be a new Act in the drama? While youth and beauty have had the world at their feet, the old people have been getting ready for a strong come-back. Medical science has made us all the gift of extended life and good health. The present generation of older people, born before 1900, could expect that less than a fifth of their lifetime would occur after the dissolution of the family; but for the oncoming generations of older people, "in addition to an extended life expectancy, there looms the probability of 30 years of life for women, and 21

years of life for men, after the last child has married and left home. Thus one-third of married life will be lived after the years of child-rearing".* So an entirely new element of the population begins to take shape and make its demands upon the state. It is, quite literally, a new element in society because never before has there been a generation of people not connected with either of the two functions that have traditionally justified one's existence on earth — either the function of family-raising or the function of productive work. Here is a new slice of life in which people are cut loose to have an independent existence, separated both from families and from working organizations. This is a new situation and the effort to make this new slice of life really worthwhile is a new challenge to society. In the past, social and economic benefits have been bestowed upon the first two phases of life — upon the education and upbringing of children and upon the working period of life. Now attention turns to this third phase, the final fifteen or twenty years that are the destination of what has gone before.

It's not much use prolonging the inevitability of death unless the time so gained is to some extent comparable with the previous span, in enjoyment and in purpose. Simply to prolong the slow and lingering process of departure can have little attraction to any of us. "I resent the stupid wastefulness of a system" says Leonard Woolf in his recent autobiography† "which requires that human beings with great labor and pain should spend years in acquiring knowledge, experience, and skill, and then just when at last they might use all this in the service of mankind and for their own happiness, they lose their teeth and their hair and their wits, and are hurriedly bundled, together with all that they have learnt, into the grave and nothingness".

These speculations have been prompted by the opportunity to be present as one of twenty Canadian observers at the "White House Conference on Aging" which took place in Washington in January, 1961. Any observations on the proceedings of the Conference would be very misleading if they failed to convey the sense of drama with which the whole thing was carried out. Americans are good at conceiving their public events on a heroic scale and at conducting their affairs with an emotion that fits their unique sense of history and destiny.

"Conference" is hardly the right term for a formidable gathering of 2800 delegates, appointed by the Governors of States, holding its plenary sessions in the vast spaces of Constitution Hall. The opening meeting was heralded by the martial music of the U.S. Marine Band, loud and brassy. In patriotic mood there was a presentation of colors by a posse of the Armed Forces, in historic costumes. The President of the United States strode on the platform to open the proceedings. There were solemn religious invocations and dedications to the high purpose of the gathering. (In dealing with the subject of old age, it was suggested, we touched upon that part of life that is nearest to the hereafter).

The sun shone in Washington during the week before the Inauguration and, while the Conference was in session, the incoming President's "working party" announced its proposals for a new social security program. This confirmed the Conference's recommendations on the most controversial issue, that the costs of maintaining the health of older people should be part of the social security system, a point of view which was carried over the dead bodies, as it were, of the American Medical Association. The familiar questions of public-versus-private responsibility were debated in every sector of the Conference's deliberations. It became clear that the extra slice of life is the consequence of such an interwoven complex of public and private efforts that the responsibilities could never be unscrambled.

The White House Conference on Aging was a remarkable exercise in the promotion of public discussion and was the climax of more than two years' intense activity throughout the country. The date had been set in the special Act of Congress passed in September, 1958. The Department of Health, Education and Welfare was directed to prepare the ground, particularly by assisting each of the States in conducting a preliminary conference. Two million dollars was appropriated, grants were made to

*Background Paper on Housing prepared for the White House Conference on Aging, January, 1961.
†Leonard Woolf. SOWING, an Autobiography of the years 1880 to 1904, The Hogarth Press, 1960.

the States, a central staff of more than 40 was built up, surveys and research were stimulated, technical experts were brought together and, in every direction, the frontier of knowledge was rapidly extended into this new territory of public concern. Sceptics may say that talk is cheap and all it might accomplish would happen anyway in the course of time. This is probably true. But it is also probably true that the intensive brainstorming process brought about by the Act of Congress, the money voted and the marshalling of the intellectual forces has cut, perhaps, a decade off the time that would otherwise have been taken. This technique for supercharging the public response to a major social issue is therefore of considerable interest and might be useful in all countries and in many different circumstances when it is advisable to deal with the immense inertia of democracy.

Housing was one of the twenty main subjects with which the conference was concerned. (Amongst others were medical care, income maintenance, family life, religion, education together with all the administrative, research and economic aspects of gerontology.) "Our failure to provide adequate housing for elderly persons at costs which can be met by them", states the Act, "is perpetuating slum conditions in many of our cities and smaller communities and is forcing many older persons to live under conditions in which they cannot maintain decency and health, or continue to participate in the organized life of the community." *For purposes of discussion, the whole subject of Housing was divided into five main topics: First, Housing for older people ought to be considered in the general plan for the whole community. They have special need to be near public transportation, medical services and all the community institutions like churches and libraries and stores that keep them in active contact with the world. Second, attention has to be given to the design of houses and apartments for different income groups, the selection of sites and the source of funds. Third, there are many different kinds of "congregate" accommodation that come outside the orthodox field of housing. There are boarding houses and clubs, residential hotels and nursing homes and other varieties of shelter where old people become part of a larger household; these tend to be the concern of separated public and private jurisdictions and are not usually seen as parts of a comprehensive housing program. Fourth, there are the special problems of those who have not got enough income to pay for their own housing requirements. Apart from any other difficulties in accumulating capital or pension funds, it is normal experience that anyone who retires on $100 a month discovers that inflation has reduced this to $75 a month a decade later. Are we to adopt moral views about shortages of income or do we deal with the needs in a straightforward practical manner?

Finally, there is the important objective of helping older people to stay as long as possible in the familiar surroundings of their own homes. There are many ways in which the services they require can be brought out to them, instead of uprooting old people and gathering them in institutions: meals-on-wheels, transportation assistance, house-keeping services and, simply, useful friendly visits. The community has many resources it can extend to people living independently and must always resist the severance of ties with familiar associations.

This is not the place to evaluate the U.S. success in housing elderly people. In September, 1959 the Federal Housing Administration set up a special "Division of Housing for the Elderly" with a fund of $20 million for direct loans to finance non-profit rental accommodation. At the same time, the U.S. National Housing Act was extended to provide mortgage insurance for Nursing Homes, either new buildings or the conversion of existing buildings. And special provision was made for home-ownership loans to the elderly. (Meanwhile in Canada our system of direct loans to non-profit sponsors of rental housing for older people, under Section 16 of our National Housing Act, has been producing quite a quantity of new accommodation. In the five year period 1956-60 about $25.2 million has been loaned through Central Mortage and Housing Corporation for building 4,700 units for elderly persons.)

A recurrent theme in the White House Confer-

*For two days the 2800 delegates were separated into twenty "Sections" each assigned to discuss one of the twenty main subjects. Each Section was further divided into "work-groups" of not more than thirty people, so that every delegate had an opportunity to take part in discussion. Each Section finally approved a statement of views to be presented to the concluding session of the whole conference.

ence discussions on Housing was the great diversity of requirements. The extra slice of life contains the greatest possible variety of situations. We all start much the same at birth, we go through the same educational system and then we branch off into different occupations and interests. By the time we reach the last phase, our paths have diverged, our fortunes and misfortunes have separated us and our individual tastes and temperaments have reached their maximum differentiation. No wonder it is necessary to summon all the resources of public and private effort to keep us operating within the same social and economic system of urban life.

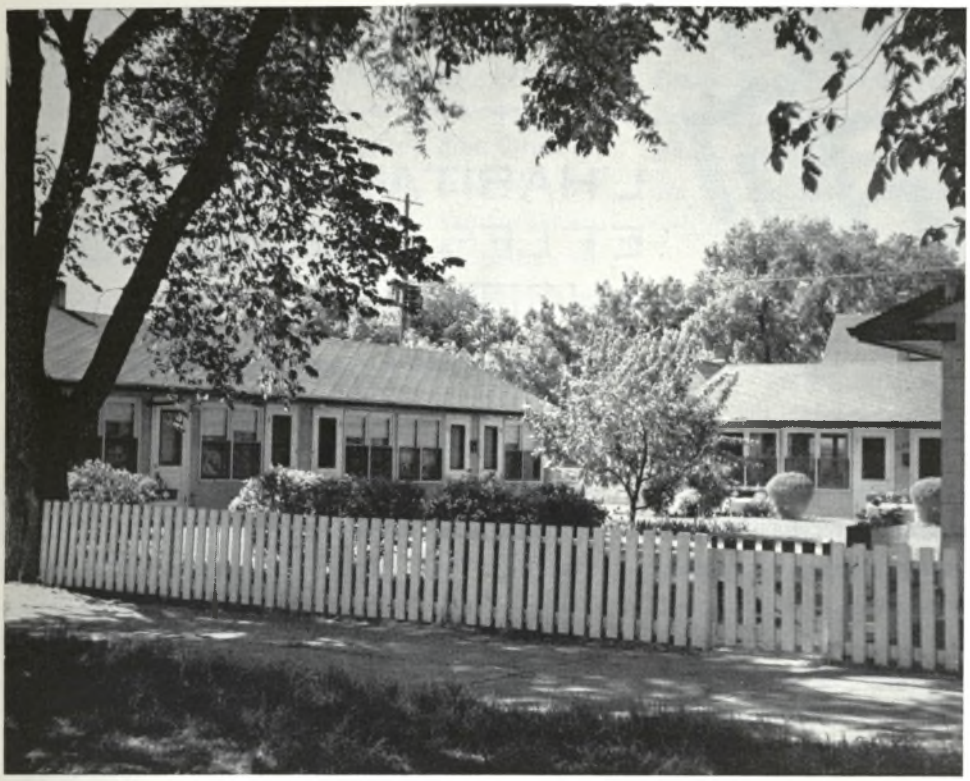
It is an unfortunate characteristic of mass-production industry (and mass-production bureaucracy) that, when it gets hold of a good thing, the consequences can be overwhelming. Our cities have been submerged by the tide of uniform standardized family housing; we must try to be less wholesale in dealing with the needs of old people. We cannot expect to draw a sharp line between "self-contained" housing for independent living and the various forms of accommodation where services are available to sustain health and social relationships. The transition from complete independence through successive degrees of dependence is inherent in the whole process of aging and we should not have to uproot people and move them, every time their needs for support increase and fluctuate.

One of the most perplexing problems is the discovery of suitable sites for housing old people: to find land at reasonable costs where people will not be separated from essential community services, from shops, churches, medical centres, public transportation and all the interesting features of cities that make life worth living. It is axiomatic, on one hand, that land in proximity to focal centres has the highest market value and it is also axiomatic that old people are the least able to meet the high costs. Hence old people have tended to gravitate to the backwaters of the central city and sponsors of old people's housing have been compelled to buy marginal land in the suburbs.

This is essentially a problem in community planning. The exploding metropolis, with its sprawling suburbs scattered at random across the landscape, has failed to gather together its new community features into coherent new focal centres. Shopping centres are separated from churches, medical care is not near the library, there isn't a shady flowery park near any of these and public transportation does not tie them together. So there are at present no satisfactory suburban sites for old people. In the new suburbs there is no organized community foci to which they can become attached. We have allowed the automobile to annihilate the city by exploding it into the suburbs; we have not yet begun seriously to put the pieces together again. We ourselves, when we get older, will be the principal victims of this nihilistic period.

Finally let us observe that there are economic difficulties in the extra slice of life, affecting a very large number of people; these are not just people who are the customary objects of charity and welfare programs. This is not just a problem of paupers. Most of us are going to get caught in the squeeze, simply because our personal economic paths will run across the grain of economic progress. Our personal incomes for the period of old age are determined some time in advance, at the height of earning power, and are likely to decrease rather than increase. At the same time the cost of all consumer goods is continually rising and the civilized style of living is continually being elevated. So, even though our housing space requirements will be reduced when children leave home, yet we will all find that we have to run pretty fast to keep in the same position. The problems of housing older people are everybody's problems.✦

Victo



Winnipeg, Man.

These projects for elderly persons were constructed under the limited-dividend section of the National Housing Act with loans from Central Mortgage and Housing Corporation to interested citizen groups.

Montreal, P.Q.

Burnaby, B.C.

Croquis de la "Maison Rouge"
dans la capitale assyrienne,
Assur, autour de 600 av.J.C.

L'HABITATION ET LES CIVILISATIONS ANCIENNES

par Louis Dernois

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de la Société centrale d'hypothèques et de logement.

L'article paru précédemment dans le numéro 1 du volume 4 de HABITAT, a tracé la marche de l'évolution du logement chez les civilisations qui occupaient les rivages des cinq grandes rivières de l'antiquité. D'autres groupements humains de l'antiquité ont aussi contribué au développement de la civilisation de l'habitation, bien que plus tard eux-mêmes furent engloutis par des centres urbanisés qui évoluèrent sur les rivages des cinq grandes rivières. Il s'agit de civilisations qui se développèrent dans les régions montagneuses de l'ancien Orient.

L'habitation des populations montagnardes (entre 3000 et 500 Av.J.C.)

Dans la présente étude, nous nous occuperons de la civilisation des plus anciennes populations des montagnes, et plus particulièrement de leur évolution dans le domaine de l'habitation. Nous suivrons un ordre chronologique de ces cultures anciennes jusqu'à ce qu'elles fusionnent avec les grandes civilisations de l'Orient:

a) L'Empire assyrien dans la région montagneuse du nord de la Mésopotamie
b) L'Empire hittite habitant les plateaux de l'Asie Mineure
c) La Terre Sainte dans les montagnes de la Palestine
d) La Perse sur les plateaux élevés de l'Iran

L'Empire assyrien

Le secteur nord-est de la Mésopotamie fut le berceau des Assyriens où leur puissant empire prit son origine. Cependant, avant que les Assyriens occupent cette région, une civilisation florissante avait déjà pris forme à cet endroit. Le groupe civilisé le plus ancien que nous connaissions dans le Proche-Orient est celui des Subariens qui occupaient la région et vivaient sous le régime de petites monarchies indépendantes les unes des autres.

Les débuts d'une vie urbaine firent leur apparition au cinquième millénaire avant J.C., lors de la formation des premiers villages. Les habitations étaient construites en boue séchée et s'ajoutaient aux huttes circulaires. Dès l'an 3000 av. J.C., nous voyons de petites villes qui présentent des caractères d'une vie communautaire bien organisée. A la suite de fouilles entreprises, une cité assez populeuse de ce type a été découverte près de Tepe Gawra, non loin de la capitale assyrienne de Ninive, sur la rive gauche du fleuve Tigre.

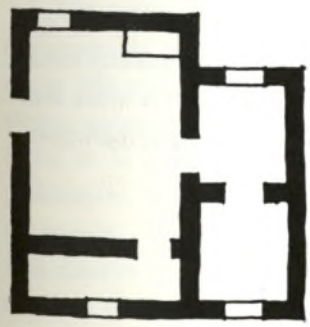
Dans cette très ancienne cité, nous trouvons un centre civique contenant des sanctuaires et des palais, ainsi que la demeure d'une partie de la population moins fortunée. La maison à pièce unique devient une habitation à deux ou trois pièces, avec une cour à l'avant pour les familles de classe moyenne et l'on voit apparaître aussi des logements de cinq ou six pièces, nommés "bit-hilanies" pour les familles plus favorisées. Les cours intérieures de ces habitations présentent un phénomène accidentel plutôt qu'un objectif pré-déterminé. De plus, le climat plus rigoureux des régions nordiques semble avoir favorise la construction de logements sans cour intérieure.

En l'an 2000 av. J.C., un changement radical dans la conception du logement se produit en Assyrie. Les tribus s'organisent et au cours du même millénaire, la population entière de cette région forme un tout connu sous le nom de peuple assyrien. Les villes, en général, prennent la forme du quadrilatère, avec une ou deux rues principales et plusieurs rues secondaires, sinueuses, finissant en impasse; les maisons en bordure de ces chaussées forment une agglomération urbaine sans distinction de classe.

La maison présente des caractéristiques sémitiques avec cour intérieure et une pièce principale très vaste; elle a des sorties très compliquées vers la rue. Des escaliers prouvent qu'il y avait dans ces maisons un étage supérieur (Ville d'Assur, 2000 av. J.C.).

A mesure que l'Empire assyrien prend de l'expansion au cours du dernier millénaire avant J.C., la maison se développe pour refléter ultimement les caractéristiques d'une habitation méridionale fortifiée de grande classe. La "Maison Rouge" dans la ville d'Assur (600 av.J.C.) constitue l'exemple type de cet accomplissement: cour intérieure autour de laquelle se groupent les pièces réservées au maître, les pièces réservées au harem et le quartier des serviteurs qui se trouve sur le passage entre la rue et la cour intérieure. Les installations sanitaires de la période précédente sont améliorées.

Après la conquête de l'Assyrie par les Babyloniens (605 av.J.C.), le régime de vie dans la maison assyrienne disparaît graduellement et seule l'habitation babylonienne subsiste.



Aménagement intérieur d'un type de maison de Hattouchach, deuxième millénaire av.J.C.

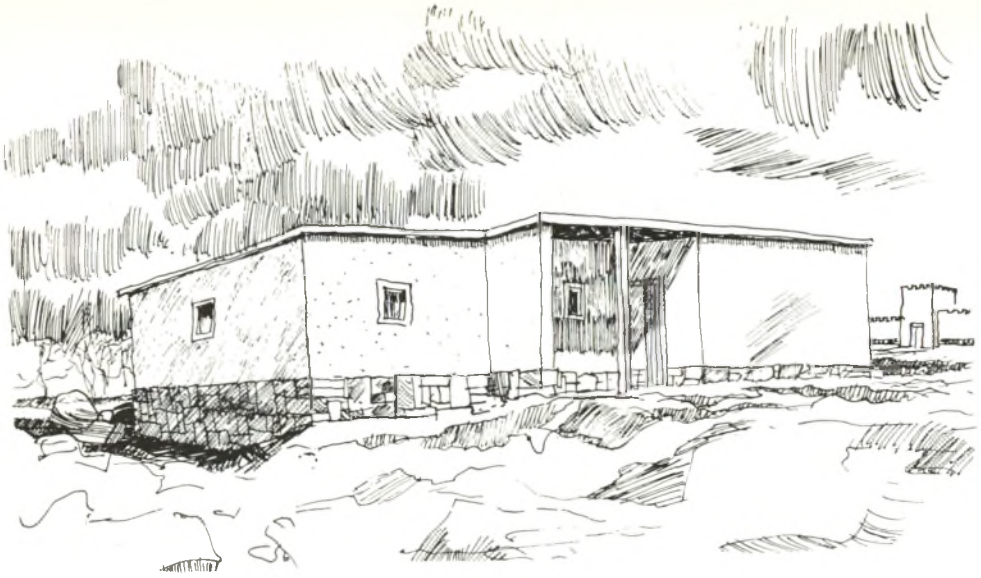
L'Empire hittite

L'Asie Mineure (aujourd'hui la Turquie) constituait un des territoires de l'ancien Subartou. Plusieurs petites monarchies avaient été fondées au quatrième millénaire avant J.C. et jouissaient d'une vie communautaire prospère durant le troisième millénaire. Cependant, c'est seulement sous le régime des Hittites que l'Asie Mineure centrale devient un territoire vraiment organisé.

La civilisation hittite, qui fonda un empire puissant, est aussi remarquable parce qu'elle produit les premiers spécimens de la race blanche occidentale, les Indo-européens. Originaires de l'Asie, la mère patrie de tous les Ariens, les Indo-européens occupent ensuite l'Asie Mineure centrale vers l'an 2000 av.J.C. et fondent un état militaire puissant et homogène.

Hattouchach, la plus remarquable des villes hittites, fut la capitale de l'Asie Mineure centrale; cette ville fut bâtie sur le sommet d'une montagne, solidement emmurée et protégée par de très hautes falaises. Le temple et le palais formaient le point central de cette agglomération à la périphérie de laquelle se trouvaient les maisons plus spacieuses des prêtres et des membres de la classe dirigeante. Les habitants moins fortunés vivaient en dehors des murs de la ville. Exception faite de cet aménagement plutôt rudimentaire, il n'existait aucune autre forme d'urbanisme. Ceci constitue évidemment la preuve d'une vie urbaine moins intense et moins bien organisée que celle des agglomérations de l'Orient aux abords des différents cours d'eau.

Les fouilles entreprises pour découvrir la forme de l'habitation hittite, révèlent une caractéristique particulière à la maison de cette époque. A l'intérieur de la maison, les Hittites ne se servent jamais d'une seule pièce comme lieu d'habitation de la famille. Phénomène assez particulier: les pièces sont toujours construites par paires. La plus ancienne maison (2000 av.J.C.) comprend deux pièces, une petite et une plus grande. Lorsqu'un besoin d'espace additionnel est nécessaire, on ajoute deux autres pièces de dimensions variables. Le principe de pièces construites par paires, s'applique toujours. Il n'y a aucune trace de cour intérieure dans les maisons hittites; leur absence pourrait être due au climat rigoureux des montagnes. Lorsque des lieux d'entreposage deviennent nécessaires et que le besoin



Vue d'une maison reconstruite de style hittite à Hattouchach vers le 14è siècle.

d'un petit atelier se fait sentir, deux nouvelles pièces, partiellement fermées, sont ajoutées à la maison.

La classe dirigeante habite aussi dans des maisons sans cour intérieure. Seul le monarque est enclin à faire construire une cour intérieure, sans doute après l'avoir découverte chez ses voisins à qui il avait fait la guerre en Mésopotamie.

La Palestine

Un secteur plutôt restreint de l'Asie Antérieure, situé entre la Méditerranée et le désert Syro-Mésopotamien peut être identifié comme étant la Palestine. Toutefois, ce territoire a été occupé depuis les âges les plus reculés et a été témoin des évènements les plus importants de l'histoire humaine; il mérite donc que nous nous occupions de sa population du point de vue de l'habitat humain. La Palestine se trouve sur les grandes routes de communication entre l'est et l'ouest, le nord et le sud, et cette situation particulière est certainement responsable du caractère et du type de ses diverses habitations.

L'homme des cavernes témoigne essentiellement du caractère primitif de l'habitat humain (5000 av.J.C.). Plus tard, au quatrième millénaire avant J.C., les maisons de boue séchée font leur apparition et se trouvent groupées en agglomérations que nous reconnaissons comme des villages. Vers l'an 3000 av.J.C., nous retrouvons des centres résidentiels emmurés par le truchement d'excavations, et ce sont là les premiers signes d'une civilisation urbaine dans de petites villes. L'agglomération fortifiée se trouve généralement sur une colline et cette petite communauté est gouvernée par un monarque. Les maisons disséminées dans la ville permettent difficilement la construction de voies de communication bien ordonnées. Les maisons consistent en une ou deux grandes pièces, et dans la plupart des cas, elles possèdent leur propre cour intérieure.

Les sémites cananéens occupent ce territoire autour du deuxième millénaire avant J.C. et contribuent à l'éclosion de mouvements culturels à travers ce pays. Chacun de ces centres civilisés a son administration communautaire autonome. Jéricho était un des plus vieux centres du genre. Des murailles jumelées protègent la ville contre les agressions. Des allées étroites et sinueuses conduisent les habitants aux maisons individuelles, qui sont construites en brique sur fondation de pierre. Il a été impossible de retrouver aucune trace de l'urbanisme qui aurait pu être appliqué dans les communautés cananéennes. La forme irrégulière des petites villes doit sans doute son origine aux accidents topographiques.

Aménagement intérieur d'une maison de Jéricho durant la période cananéenne (deuxième millénaire av.

A l'intérieur de ces villes, les allées servent à la communication entre les maisons individuelles, et des maisons aux portes de la ville. A l'exception de l'espace réservé aux fins mercantiles aux portes de la ville, il n'existe aucune place publique.

La classe d'habitation peut varier avec le statut social de son propriétaire ou occupant. Toutes les habitations ont une cour intérieure autour de laquelle sont groupées les diverses pièces. Il peut y avoir jusqu'à quatre pièces, mais le souci d'aménagement intérieur n'est pas apparent. Selon les archéologues, les maisons avaient toutes un étage supérieur de construction solide, réservé aux membres de la famille. Une échelle installée dans la cour intérieure, donnait accès à l'étage supérieur.

Les Hébreux, arrivés en Terre promise vers l'an 1500 av. J.C., s'établissent dans les centres déjà existants, mais ils ne font pas un usage aussi efficace que leurs prédécesseurs des facilités établies. (e.g., les Hébreux s'abstiennent d'occuper l'étage supérieur et logent uniquement au rez-de-chaussée, comme à l'époque des tribus nomades). Des villes construites sur le sommet des montagnes suivent fidèlement l'aménagement qui a prévalu durant les périodes précédentes. Toutefois, la Bible nous révèle que certaines de ces villes offraient une orientation définie, indiquant par là qu'il y avait une diversité d'aménagements urbains en Palestine.

Les goûts et les aspirations des membres de la communauté se raffinent et c'est le commencement d'une très grande variété de maisons et de constructions; cependant, l'habitation conserve la particularité de la cour intérieure. Le nombre des pièces principales, ainsi que celui des pièces secondaires, augmente. Les pièces bordant le passage de la rue à la maison changent de destination. Dans la construction des maisons sémitiques, plus que dans les maisons cananéennes, les portes sont localisées sur le pan de mur le plus long — ce qui d'ailleurs caractérise les maisons sémitiques. Une autre innovation est notée: un portique recouvert à l'intérieur de la cour incite à croire que ce lieu protégé des rayons de soleil devait servir l'été à la récréation et à d'autres activités familiales.

Aménagement intérieur d'une maison hébraique de Tell-Beit-Mirsim (600 av.J.C.)

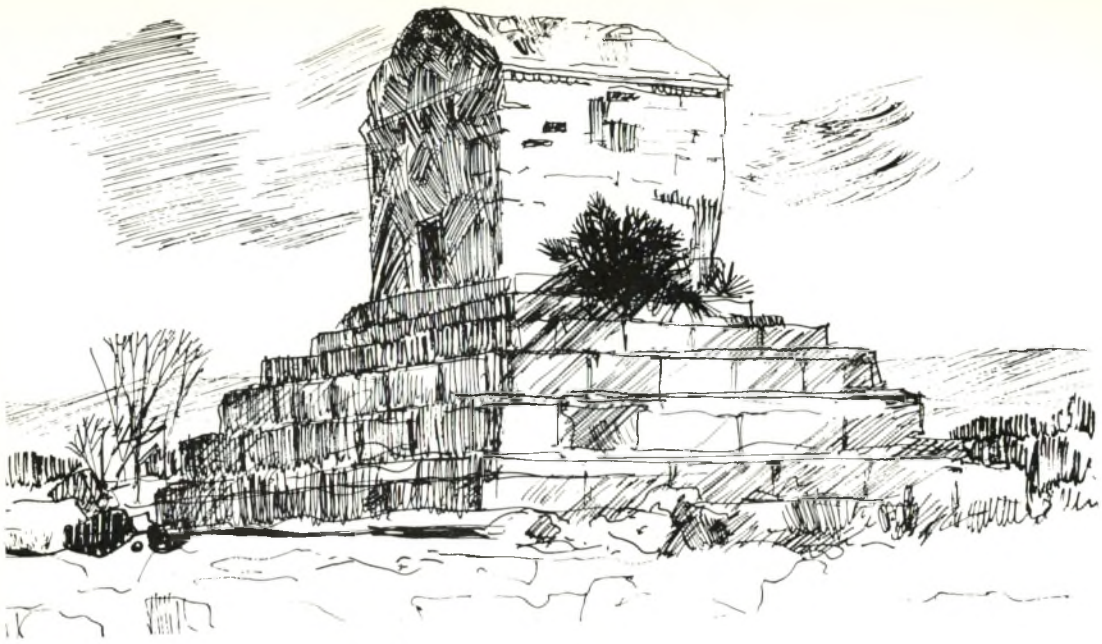
La maison-type des Hébreux n'a pas d'étage supérieur et le toit devient un endroit pour le jeu et même pour le sommeil durant la saison chaude. Seules les familles fortunées construisent et aménagent l'étage supérieur de leur habitation.

Durant les occupations grecque et romaine (à partir de l'an 300 av. J.C.), plusieurs cités se forment et leur aménagement se fait selon la formule classique du quadrillé. Quelques-unes des caractéristiques hellénistiques sont transplantées dans les aménagements résidentiels juifs et se fusionnent pour aboutir à ce que nous voyons encore aujourd'hui dans les habitations du Moyen-Orient: le logement proprement dit donnant sur une cour intérieure qui est agréablement rehaussée et embellie par des portiques.

La Perse

Sur les terres élevées, situées entre la Mésopotamie et l'Inde, l'état de Perse se constitue, encerclé de très hautes montagnes. Vers l'an 4000 av. J.C., il y a de nombreuses petites agglomérations sous forme de village, à la partie occidentale de ce territoire. Le premier habitat, sous forme de hutte en jonc, devait se transformer plus tard en habitation grâce à l'emploi de la boue séchée, comme matériau de construction. Les cimetières de cette époque sont la seule indication qu'il a pu y avoir une tendance d'évolution au sein de la communauté. Bien que l'organisation urbaine se développe au niveau local, le statut de pays établi n'est pas atteint. Les agglomérations urbaines demeurent disséminées et il n'y a aucun lien entre elles.

Au deuxième millénaire avant J.C., les Ariens entrent en scène. Ils mettent près de mille ans à établir l'urbanisation et à rejoindre le niveau déjà



Le tombeau de Kyros représentant la forme achaïque d'une maison de Pasagardes, la capitale perse (530 av.J.C.)

atteint dans ce domaine vers l'an 3000 av. J.C.

Les résidences fortifiées des dirigeants sont d'abord construites sur le sommet des montagnes et elles doivent aussi servir de refuge à la classe agricole qui s'est groupée autour des dirigeants. Une de ces forteresses devient par la suite Ecbatane, capitale des Mèdes (précurseurs des Perses); cette ville est entourée de sept murailles (selon Hérodote) et est orientée nord-sud.

Nous ne possédons que des données très incomplètes sur la maison du prolétaire vers l'an 650 av. J.C. Voici ce que nous avons découvert sur la maison proto-arienne: cette demeure appelée "tarma" et reconstruite selon les plans de l'habitat des générations passées, a un portique à l'entrée et une pièce complètement fermée à l'arrière de celui-ci. Les familles plus fortunées ont construit un portique supplémentaire précédant le premier. Avec son toit sur pignon, cette maison représente le type original de la maison de bois des habitants des régions nordiques.

Après les Mèdes, les Perses conquièrent l'Iran (559 av.J.C.) et deviennent plus tard les maîtres de tout le Moyen-Orient. Je crois que la Perse est la première nation qui englobe les peuples d'origines différentes et les fusionne en un vaste empire. Il est naturel donc que cette agglomération internationale se manifeste dans la forme de construction des habitations. Pasargades, la plus vieille capitale perse, contenait derrière ses murs, jusqu'à 522 av.J.C., certaines maisons du type nordique en pierre. A cette époque, nous retrouvions encore certaines maisons sans cour intérieure, ainsi que des vestiges de la vieille construction de bois. Persépolis, la deuxième capitale perse, construite en quadrilatère, présente certaines influences de Mésopotamie dans la construction de la maison. La cour intérieure semble être d'un usage courant bien qu'elle ne présente pas toutes les caractéristiques de l'architecture sémitique. La pierre est remplacée par la brique et le toit plat du type de maison méridionale est présent.

La maison construite pour un fonctionnaire perse en Palestine au cinquième siècle avant J.C., présente un mélange de plusieurs formules de l'architecture domestique perse. La "tarma" est encore la pièce principale dans l'habitat de l'Iranien. Toutefois, nous y constatons un grand nombre de caractéristiques étrangères: la cour intérieure centrale avec des voies sinueuses, l'emploi du harem, plusieurs pièces réservées aux fonctions domestiques, un toit aménagé pour la récréation, etc.

Cette maison perse perfectionnée devient plus tard le modèle employé pour la construction des palais de la Mésopotamie, et sera le précurseur de l'habitat méditerranéen.

Après avoir étudié les différents types de maison de l'Ancien-Orient, une conclusion se présente à notre esprit: l'influence variée de toutes les civilisations qui se sont coudoyées et succédées et qui toutes ont contribué au développement et au perfectionnement d'habitations attrayantes et fonctionnelles.✦✦

LINDENLEA, Ottawa

by Stanley H. Pickett

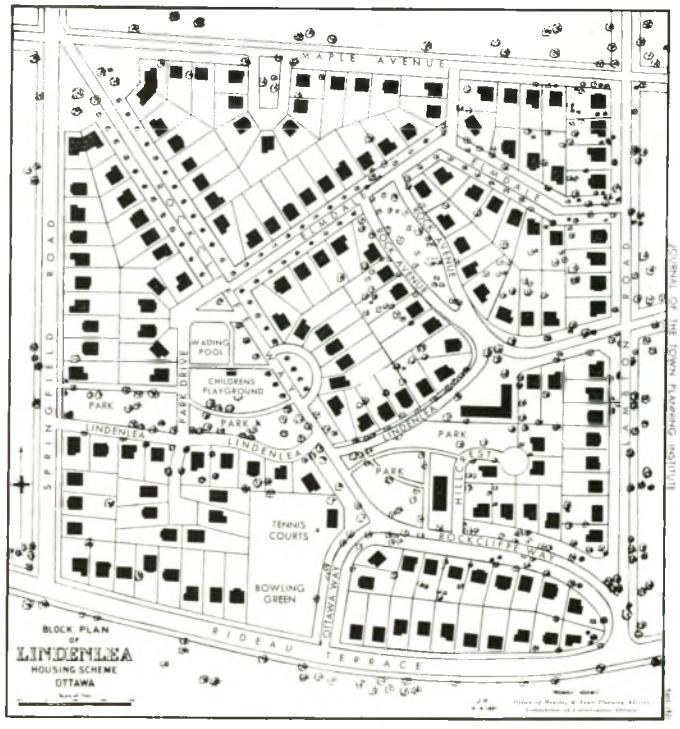
Lindenlea was developed in the years immediately following the Great War. The Ottawa Housing Commission bought the 22-acre site for about $66,000, in order to build small houses suitable for returned veterans and others of modest means. The development plan was prepared by Thomas Adams, then engaged as Town Planning Adviser to the Federal Commission of Conservation, and constitutes one of the earliest examples of planned residential development in Canada.

The site was situated on high, undulating land at the eastern edge of the city's built-up area. It was bounded by existing streets, two of which, Rideau Terrace and Maple Avenue, gave easy access to the city. The distinctive feature of the land was that a large part of it was covered with unusually fine trees.

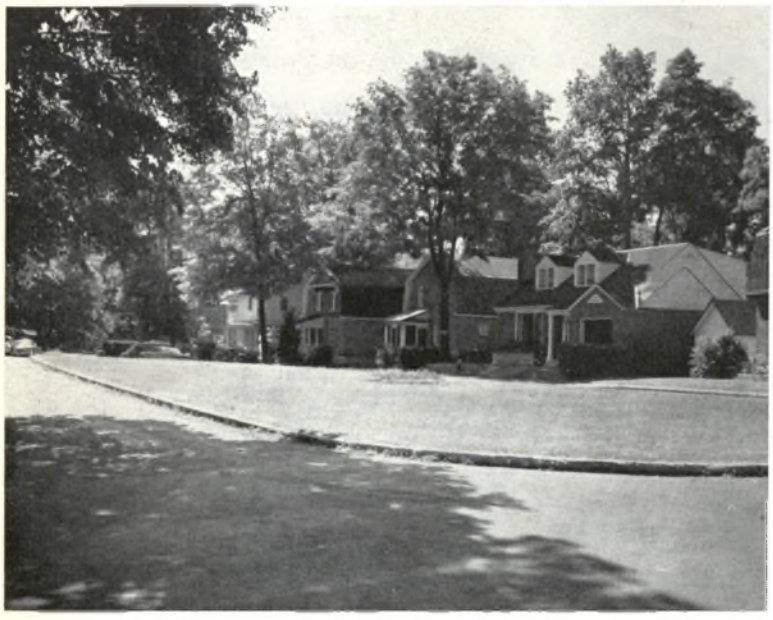
Adams opened up the site by running a boulevard, 66 feet wide, diagonally across it. From an article he contributed to the Journal of the Town Planning Institute of Canada in April, 1921, it is learned that there was some possibility of this street forming part of the Driveway system of the National Capital and that this consideration determined its width. Upon Rockcliffe Way, as the Boulevard was named, was based the residential street pattern. Street widths were held to a minimum to free as much land as possible for open space. Apart from Rockcliffe Way, the original street widths did not exceed 20 feet. Two short dead-end streets were planned, although one, Hillcrest Street, was never built. The street pattern makes intelligent use of the natural advantages of the site — Ottawa Way, for example, was aligned so as to reveal a view of the Parliament Buildings from its highest point — but does not follow any doctrinaire course. It is of neither the "grid" nor "can of worms" schools of subdivision design.

In determining lot sizes, the over-riding consideration was that prices were not to exceed $600. Frontages were made as wide as possible but the depth of most of the lots was kept to a minimum. There are 168 lots in Lindenlea and the average price paid in 1920 was $457, calculated at 12.8 cents

Mr. Pickett is Adviser on Urban Renewal and Assistant Director of the Urban Renewal and Public Housing Division of Central Mortgage and Housing Corporation.



Elmdale Avenue.



Rock Avenue.

per square foot. The average lot area of 3,570 square feet may be compared with today's small lot of 5,000 square feet, or the wider lots demanded by "ranch style" houses, which may be twice the area of those in Lindenlea. This photograph of the south side of Elmdale Avenue shows a number of houses of a design which occurs frequently in the area, although not always in such successful grouping. The mature and well-maintained landscaping, together with well proportioned houses in good relationship to each other and to the spaces around them, make a unified and neighborly street.

Lindenlea contains almost five acres of open space. Tennis courts and bowling greens were provided for clubs of the residents as well as a children's playground and park. There are in addition a number of small open spaces which play an important role in house grouping and give the area much of its charm. The open space illustrated is a good example of Adam's skill in turning apparent difficulties into assets. This small piece of land is, although it is hard to realize today, a major rock outcrop. The street, Rock Avenue, divides into two 20 foot pavements forming, with a short length of Elmdale Avenue, a narrow triangular green around which the houses are grouped. The fall of the street and the carefully maintained trees, enhance the sense of enclosure. Lindenlea has a strong unity owing to its rapid development with houses of similar sizes and characters. Within that unity however, every opportunity has been taken to create small groupings and to maintain human scale. The resident need never feel that his immediate environment is just another repetitive fragment of endless suburbia.

In his article in the Journal of the Town Planning Institute of Canada, Thomas Adams not only gave an account of the development of Lindenlea, but also criticized some aspects of the work. He complained of the absence of control over the design of buildings, "particularly in the design of those occupying strategic points and vistas at the ends of streets" and went on to suggest that the development of comprehensive residential areas should be

under the supervision of "one directing head". Adams deplored the construction of a large number of "the least attractive types of houses" in Lindenlea. He emphasized the importance of landscaping and concluded that "the ultimate success of the scheme will depend on the enterprise shown in improving the surroundings of the buildings".

With the advantage of hindsight we know that Lindenlea has been successful for forty years. It is still an attractive and sought-after residential environment, in spite of the limitations on space in and around the houses available. Why is this so? The subdivision plan would meet with the disapproval of many contemporary town planners. The lots are small and their arrangement is sometimes awkward. The space around the houses is inadequate. The streets permit too many uncertainties of mind for their layout to be satisfactory for modern traffic.

It may well be that the success of Lindenlea casts some doubt on the validity of a number of contemporary attitudes and suggests the following propositions:

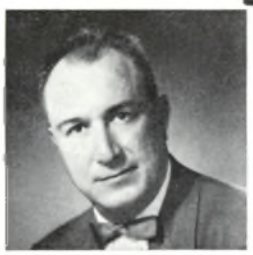
1. That respect for the site is implicit in all good subdivisions and that the bulldozer should be guided with a light hand. The requirements imposed by the site override those of any particular subdivision theory, no matter how widespread its popularity may be.
2. That the quality of a space, be it private or public, is of greater importance than its quantity.
3. That in the choice of residential buildings to be erected on a site, and in the inter-relationship of those buildings, good proportion is the paramount criterion.
4. That a commonplace or even a poor subdivision may be redeemed by first-class landscaping preferably allied with good finishes to such public investments as streets, sidewalks and the street furniture of all kinds.
5. That landscaping should be regarded as an integral part of subdivision design and not as a hastily considered afterthought.

Attention has been focused on the quality of our residential environment by the recently published report of the R.A.I.C. Committee of Inquiry. It may be that study of the successful developments of the past will be of immediate value to all concerned in fashioning that environment.✦✦✦

Although the lots were sold without difficulty as soon as they went on sale, a small number were not immediately developed. Here, on Lambton Avenue, well-mannered houses of 1920, the late 1930's and 1950 may be seen in good harmonious relationship.

The main park space between Rockcliffe Way and Park Drive, contains the children's playground in summer and the neighborhood rink in winter. Both seasons see full use made of these facilities as well as those of the nearby Community Centre.

Voici une vue qu'illustre l'évolution urbaine depuis le début du siècle.



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CERTAINS CRITÈRES DU PHENOMÈNE URBAIN

Romeo Mondello

IL y a beaucoup de choses à dire en effet sur l'Urbanisme, qui est à la fois un art et une science relativement nouveaux, mais je me bornerai ici à vous exposer quelques critères qui ont marqué le "phénomène urbain", phénomène ou mieux encore réalité qui conditionne tellement notre vie de citoyen, que nous n'avons qu'à nous transporter dans une municipalité rurale éloignée, pour voir la différence dans son mode d'existence avec celui de Montréal, Toronto, Boston ou New York.

Je ne veux pas, croyez-moi, donner à l'Urbanisme une importance plus grande qu'il ne faut; par contre, il faut reconnaître que l'Urbanisme ne tient pas la place qu'il devrait normalement tenir dans la culture, l'intérêt du public et la spécialisation professionnelle. Bien qu'explicable historiquement, cette indifférence n'a plus sa raison d'être. A mon avis, il faut rétablir les faits et nous hâter.

Nous devons au grand mathématicien hongrois Von Newman, cette remarque où il disait que le planning est au XXe siècle ce que la science a été au XIXe. Par conséquent, notre époque en serait une d'application pratique. Présentement, nous avons atteint un palier où nous trouvons à notre disposition un grand nombre de moyens dont la perfection, dans certains cas, dépasse nos besoins actuels.

Par contre, lorsque l'on essaie d'appliquer ces moyens à ce que nous poursuivons, l'on donne en pleine confusion, justement parce que nous ne savons pas exactement où nous allons. Cela s'applique d'ailleurs à la presque totalité des activités humaines, et l'Urbanisme n'échappe pas à cette règle.

Historique du phénomène

D'abord, il faut bien reconnaître que le phénomène des villes, telles que nous les connaissons aujourd'hui, c'est-à-dire de la ville en soi, la ville industrielle et commerciale, remonte à 200 ans à peine.

Depuis cette époque, toute l'aventure de l'humanité a changé de cours. Avec l'inertie habituelle de la culture vis-à-vis les phénomènes nouveaux, ce n'est qu'aujourd'hui où l'on peut vraiment, avec assez de recul, commencer à réévaluer. C'est ce que je me propose de faire en votre compagnie.

D'abord, nous sommes obligés d'admettre que la culture populaire est prévenue contre la ville.

Depuis bientôt un demi-siècle, un certain nombre, je dirais plutôt un grand nombre de penseurs et d'auteurs ont mis le public en garde contre le chaos toujours grandissant des villes. Cette attitude, justifiable à l'origine, est devenue une habitude de critiquer et dévaloriser tout ce qui est propre à la ville, tout ce qui en est issu ou s'y adapte, sans que l'on s'arrête jamais ou presque, pour justifier le pourquoi, la raison, ou la valeur de cette critique.

Le point de référence étant l'enracinement à la terre, "*EMPARONS-NOUS DU SOL*", on a négligé jusqu'à présent, en certains milieux, de considérer la ville comme une entité ou réalité nouvelle qui est là, et dont il faut tenir compte, soit un nouveau et immense moyen de culture.

La Ville, entité nouvelle

Il y a des changements profonds, que vous connaissez d'ailleurs, qui ont marqué l'évolution urbaine depuis le début du siècle, des choses inusitées il y a 60 ans, mais d'usage courant aujourd'hui, et qui ont inversé les tendances et les faits.

Mais voilà que tour à tour, *l'AUTOMOBILE, le TÉLÉPHONE, le TRANSPORT en COMMUN, la RADIO, la TÉLÉVISION, les SIGNAUX LUMINEUX, les ANTENNES, les AVIONS et les HÉLICOPTÈRES* ont pris place dans la cité, et comme on n'a pas su préparer de contrôle précis dans leur utilisation, c'est plutôt en accord avec les lois du hasard, que les éléments nouveaux de la ville se sont juxtaposés les uns aux autres: le long des rues, dans les maisons ou dans les places publiques.

La ville passe présentement par une période d'épreuve; d'un coup d'oeil observateur on s'en aperçoit. Le désordre apparent met en péril les avantages que la ville devrait normalement apporter. C'est d'ailleurs pour cette raison que l'on a confondu la mission de la ville avec des phénomènes méprisables, issus de l'égoïsme et de l'ignorance.

Égoïsme ou ignorance

On songe présentement à remplacer les images nouvelles mais assez erratiques des structures urbaines, par les images plus rassurantes et tellement mieux connues des souvenirs champêtres. Voilà une erreur grossière, qui met en doute toute l'aventure de l'humanité, puisque les hommes du monde tendent à vivre de plus en plus dans les villes qui deviennent de plus en plus grandes.

Il est curieux de constater et même de ressentir soi-même, n'est-ce-pas, que dans sa propriété en ville, le Montréalais en général, vous, moi ou tel autre, voudrait retrouver les avantages de la campagne, soit un peu plus de verdure, d'espace libre, de soleil; et que ce même Montréalais qui se construit ou loue une maison d'été, ou toute-saison, à la campagne, cherche à s'assurer que tous ou presque tous les avantages de la ville sont là également, dans ce beau décor champêtre qu'il aime bien. N'est-ce-pas là quelque chose d'un peu paradoxal?

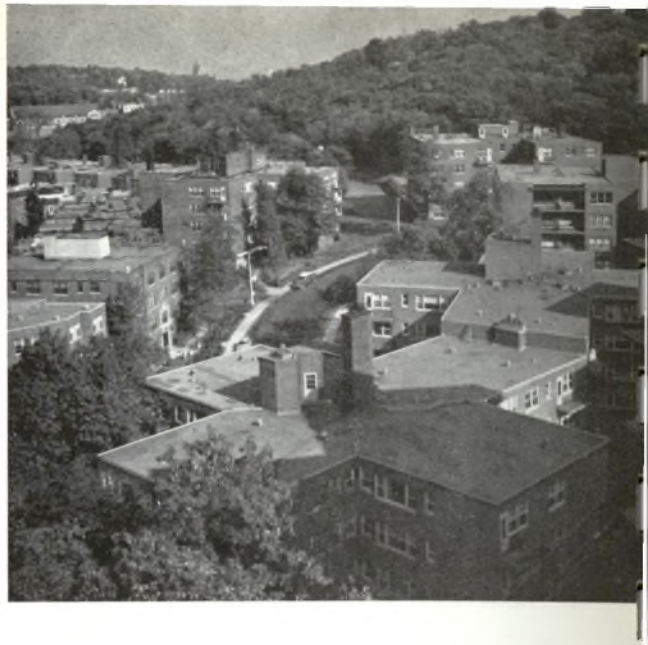
Et pourtant, voici que la ville a fabriqué des produits qui lui sont propres, dont la valeur doit d'abord être mesurée en fonction de la réalité urbaine.

On a contracté l'habitude de nier l'intérêt véritable de certains objets artificiels, et nombreuses sont les occasions d'apprécier dans un sens négatif les choses urbaines, à cause de toute une gamme de critères qui seraient à reviser.

Stationnement

Par exemple, il est acquis que l'automobiliste doit se faire véhiculer jusqu'à la porte de sa maison, et qu'il est idéal de pouvoir entrer dans le garage attenant lorsque c'est possible.

C'est bien cela, n'est-ce-pas, on essaie par tous les moyens d'arriver en voiture à la porte de sa



maison, de son bureau, à la porte du magasin grand ou petit, du théâtre, du Forum ou du Stadium.

Sur le plan individuel, dans un cadre spacieux, il n'y a aucune objection à ce désir qu'on veut satisfaire. Mais sur le plan collectif, cette manière de voir a déjà imposé aux développements urbains et suburbains, une rigidité devenue proverbiale. Incidemment, on compte qu'il faut de 300 à 400 pieds carrés de plancher par personne dans une famille.

L'automobile d'aujourd'hui, elle seule, requiert cette superficie: non seulement à la maison mais également au travail où le travailleur lui-même ne requiert guère plus de 100 à 150 pieds carrés d'espace pour accomplir sa besogne.

Voilà donc, et vous êtes sûrement d'accord, l'institution de l'automobile et son critère de la proximité, qui font que chaque automobile devrait avoir disons 350 pieds carrés pour stationner à la maison et 350 pieds carrés pour stationner au travail, soit un total de 700 pieds carrés.

Si l'on évalue à $10 le pied carré le coût de la construction pour fins de stationnement chauffé, chaque automobile se trouve grevée d'une hypothèque de $7,000, soit deux fois sa valeur moyenne.

Et cependant, tout en tenant compte de ce fardeau considérable, qui de nous va s'aviser de mettre en doute cette nécessité ou ce désir réel de descendre à la porte de partout où il veut aller.

La Fuite en banlieue

A la suite des échecs resplendissants des structures urbaines, pour rencontrer ou satisfaire le nouveau programme d'habitation, on en est venu à la conclusion fort "glamoresque", que le seul moyen de régler l'imbroglio, est de partir gaiement vers la banlieue poétique où, dit-on, enfin les voisins ne me piocherons plus sur la tête, où j'aurai mon arbre et mon gazon, où je pourrai installer ma machine à laver automatique, "loger au chaud mon automobile", et puis, regarder paisiblement la télévision.

De cet idéal d'abord, de cette poursuite du bien-être qui est au fond bien légitime en soi, est apparu un nouveau réflexe dans lequel toute structure résidentielle devient défavorable dans la mesure où elle s'éloigne du concept de la maison unifamiliale.

En bref, on veut avoir en ville une maison typiquement unifamiliale comme à la campagne avec tous les avantages de la ville et de la campagne, et en payant le moins de taxes possible.

Et d'autre part, on aimerait bien avoir aussi, à la campagne, et selon l'expression "beau, bon, pas cher", une belle maison unifamiliale, avec tous les accessoires des maisons de ville, à l'intérieur et à l'extérieur, dans le beau décor champêtre, toutes les facilités d'environnement que la vie donne.

Indifférence

Par la suite, cet idéal nous a conduits vers une indifférence déconcertante, et je dis nous, pour dire le grand public ou la population en général, indifférence alarmante en ce qui regarde l'évolution de l'habitation collective, indifférence tellement marquée que l'habitation collective n'a guère évolué depuis les quarante dernières années.

Voici des preuves: le problème de l'insonorisation n'a pas été réglé, celui de l'environnement naturel non plus, "celui du stationnement encore moins"; de son côté, la promiscuité des dégagements extérieurs est restée la même, ainsi que les problèmes de chauffage, des portes et des fenêtres.

Pourtant, la technologie moderne est en mesure d'apporter une solution à tous ces problèmes. Il est arrivé, contrairement à ce qui aurait été souhaitable, qu'on a préféré l'exode vers la banlieue, qu'on a

A l'extrême gauche, un ensemble de maisons d'appartements confortables mais moins populaires aujourd'hui parce qu'elles s'éloignent du concept de la maison unifamiliale.

A gauche, une vue à vol d'oiseau d'un secteur dans l'Ouest de Montreal, où par comparaison à d'autres métropoles, tout ou presque tout est encore à construire ou à reconstruire.

préféré laisser sans solution le problème urbain et celui du défrichement ou développement des terres arables, plutôt que d'appliquer simplement des techniques toutes trouvées.

Combien d'autres exemples pourrait-on encore citer pour expliquer ce comportement paradoxal à l'endroit de la ville, à cause de critères désuets qui n'ont pas été revisés, depuis hélas trop longtemps.

Il faut réaliser, et le plus vite possible, que la ville est un phénomène universel, phénomène qui a surgi et s'est implanté d'une manière définitive sur notre planète, phénomène auquel plusieurs centaines de millions d'hommes sont mêlés.

Maîtriser la ville avant qu'elle ne nous détruise

La ville correspond en fait à un palier du développement de l'humanité. Nous avons de moins en moins, et même pas du tout dans la majorité des cas, l'alternative de choisir entre la ville ou autre chose. Si l'on ne parvient pas, au moyen de nos techniciens, à maîtriser la ville, c'est par elle qu'on périra.

Hier encore, l'homme était aux prises avec des éléments naturels; il les a graduellement vaincus. Aujourd'hui, l'homme est aux prises avec des éléments artificiels. La ville, l'automobile et les élections sont des problèmes analogues à ceux du déluge, de la pierre à feu, et du couronnement d'antan.

D'après ce qui précède il est évident, n'est-ce-pas, qu'il faut faire une revision de nos critères, pour pouvoir évaluer la culture urbaine à sa juste valeur.

Le cinéma, le théâtre, les grands hôpitaux, les universités, les laboratoires de recherches atomiques et cosmiques, correspondent tous au phénomène de spécialisation et d'engagement social, dont la ville est le principal cadre.

Les grandes découvertes du siècle ont été rendues possibles, grâce à la culture urbaine, et nous avons maintenant le devoir de relever ce défi que pose la ville à ses habitants.

J'insiste ainsi sur le fait de la culture urbaine, sur la revision de nos critères de base, parce que c'est là vraiment que repose l'avenir de la cité. Rien ne servirait de faire, avec la garantie du succès, des campagnes dans l'intérêt du public, si le tout ne repose pas sur une base de réflexion bien éclairée.

Et il ne faudrait pas croire qu'il est trop tard pour organiser une ville comme Montréal. Comparativement à des métropoles comme New York, Londres, Paris, Tokio ou Moscou, tout ou presque tout est encore à construire ou à reconstruire. Nous en sommes actuellement, de fait, à l'état embryonnaire, voire même à l'état d'embryon très peu avancé.

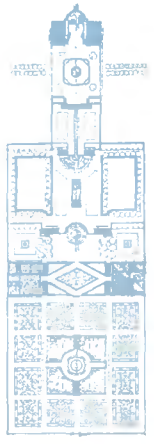
Dans les cinquante prochaines années, si l'on réussit vraiment à orienter nos énergies dans la bonne direction, notre métropole pourra se reconstruire de belle façon, croyez-moi.

Les efforts et l'énergie qui sont actuellement utilisés à quitter ou à fuir la ville devraient être, et seront plutôt, sûrement employés à la reconstruire et à la mettre en bon ordre.

LANDSCAPE ARCHITECTURE

The Art of Designing Land for Human Use and Enjoyment

by Donald W. Graham



What is landscape architecture today? Who is a landscape architect? How does he practice? These questions have been asked so many times by architects, engineers and others related to the field that I feel some comments are in order. The answers represent the whims, convictions and opinion of one who calls himself a landscape architect. If some professional toes are stepped on, it is because they are standing close to the same problem.

Whenever man has consciously designed the out-of-doors, by building structures or moving landscape materials, he has created examples of landscape architecture, some good, some bad. From a small court-yard to the vast spread of a valley, human beings shape open space for living.

"Man obtains from his environment two things which he desires, usefulness and beauty, and all material progress in civilization has consisted of his modification of his surroundings to serve these two needs."[1]

Comprehensive Design

Today, one of the most actively discussed problems of our environment is city growth, with all its problems and interests. The preparation of a comprehensive plan, which will function efficiently and recognize land uses, must examine the scale of man in open space and relate him to his surroundings.

This overall aspect of designing land has been much neglected. In recent history, landscape design has been a sort of part-time job or extra-curricular activity. Very few have devoted their talents exclusively to this task. A change in this situation is most evident, in large scale "Planning", for designers are now viewing the landscape with renewed interest and respect. Owing to the increased volume of land development, many are working less often with the single building and more with the total site. The pencil is being sharpened to ensure utility, economies of operation and visual satisfaction. A framework has been growing to accommodate a professional practice dealing wholly with this phase of the design process, a practice based on the traditions of landscape architecture.

"Landscape design, as the art which gives direct physical expression to the relation between man, as an individual and society, and the landscape of the world he lives on, has no boundaries save those where man leaves off changing the landscape."[2]

History

In evaluating the work of the landscape architect in today's society, a brief backward glance to some works of history may be wise. The landscape architect did not land with the Pilgrim Fathers, practice in California, nor sell nursery stock to frontier developers. Although, among the builders of historic open space in older countries, he has had a very active existence, leaving a heritage of works which express fully the cultures of the day. Historic

[1] *An Introduction to the Study of Landscape Design (Hubbard and Kimball)*

[2] *Landscape for Living (Eckbo)*

works of landscape architecture must be viewed within the context of their time. They are too often looked upon as things of beauty alone, obscuring the fundamental utilitarian purposes by which they served man.

In the pre-Renaissance cultures, a consistent rectangularity expressed human organization within the fixed boundaries of buildings and walls. The Moslems enclosed their space from the dry or humid effects of the landscape at large. The plans were well disciplined with simple clarity of purpose. Exuberance was restrained, in favor of expressing more primary elements. Cool water, foliage, textures and plants producing flower and fruit created an environment of rest and safety.

Possibly, the highest development of the art of landscape architecture, in the sense of contemporary use, was in Renaissance Italy. The wealth of techniques for adapting axial planning to a hilly countryside indicated rich imagination. The use of architectural elements, walls, steps, paving and pools dominated the plant materials. It is only today, after years of unrestrained growth, that the oaks and cyprus have given new spatial meaning to the original intent. The use of terraced paving and steps related man to this sloping terrain. It provided him with surprises, views and enclosures in which sculpture freely occupied a strong position. In the hot dry climate the pools, falls and jets fulfilled a basic need, and water was used with a richness and scale hitherto unequalled.

From the Renaissance works of Italy, to the Baroque of France and Austria, a significant development of the formal tradition took place. Here was a physical expression of authority and central command. It moulded the landscape into the limitless progressions of space and detail which we find at Versailles. In its application to specific sites and attention to detail, the Baroque landscape space developed concepts which are of great value today.

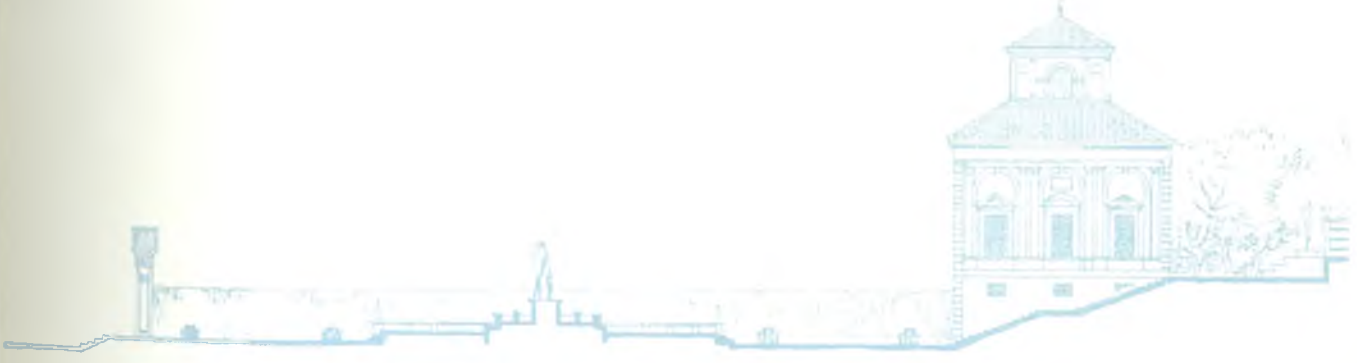
Some of the mergings of Renaissance and Baroque are expressed in rich Spanish examples. Throughout the Moslem Alhambra and Generalife near Granada, to the Alcazar in Seville, there are enclosed spaces with Renaissance detail of integrity.

In the 17th and 18th centuries, the American settlers from England and Western Europe developed open space around their dwellings, with simple elements. With geometric purpose and axial line as a base, hedges, drives and paths appeared quite functional. Primary concern applied to fruit, vegetables and flowers. These were allowed to develop a natural character. Much of this crumbled under later dictates of taste and the horticulturist, and in many ways represented a somewhat lost beginning.

China and Japan contributed a symbolic landscape tradition. Within a society which regarded man and nature as companions, the natural landscape elements took on added meaning. The Japanese, proceeding from imitation, translated the meanings into their own terms and produced what we know as the Japanese garden; in itself a neat package of philosophical outlook and practice.

The 18th century focused in a revolt from formality. Prompted by the writings of Addison and Pope the "picturesque" approach reorganized the natural sweep of the English landscape in great swaths. From this, men like Repton and Von Puckler Muskau evolved concepts which produced a naturalistic development and put aside the excesses and shallow meaning of their predecessors.

Landscape architecture as a distinct profession



Axial planning adapted to a hilly countryside.

began in North America over 100 years ago. Frederick Law Olmstead viewed his work as the architecture of environmental open space, and so defined the field. He laid many of the original ideals and drafted standards which set his practice apart from the earlier "landscape gardeners". Building on the concepts of his predecessors in England and the Continent, he applied ideas with skill and imagination. His work encompassed projects of varying scale, from the vast conservation areas of Yosemite Valley to Central Park in New York, and Mount Royal Park in Montreal. Many colleges in North America owe their lasting charm to his careful designs. He planned the public park as an integral part of city life, and fought strongly against encroachment on public open space.

Followers carried the ideals of landscape architecture still further. Charles Eliot designed plans for the metropolitan park system of reservations in Boston. His genius in the development of parkways, townsites and waterfronts marks a career which contributed richly to the development of the profession.

The growing responsibilities, touched upon by the work of Eliot and the Olmsteads, led to the birth of modern city planning as an offshoot of landscape architecture. At this time, there was a certain lack of acceptance by the profession of landscape architecture as defined by these leaders. Many preferred to continue in the practice of designing estates and decorating grounds. The work of building parks did not gain impetus until conservation work of the depression brought many acres of land under the park development program.

With the rapid growth following World War II pressure on open land brought new problems to the landscape architect and designer of land. Aggravated by the traffic of a mobile population, open space took on new meaning. The land had never taken such a beating and "developers" rushed from all sides to fulfill the needs. Some of their motives may have been questionable in the light of public good, but this was not always evident or controllable. The landscape architect at this time was at a fork in the road. He must rise and meet the situation or pass on the responsibility to others. Fortunately, many of his traditional theories and concepts applied. The background of history held a rich fund of values, and the landscape architect found himself rising to a new challenge.

Education

Glancing about our cities, upon suburbia, rural countryside and highways, ugliness is found in abundance. Well-planned open spaces, as occasional exceptions, only accentuate general lack of imagination and crude practicality. This should inspire action. In itself, it is a challenge to designers of open space. The landscape, townscape, countryside, roadside, backyard and court could well occupy the full time creative talents of many more students and practitioners. Recent findings of the R.A.I.C. committee's inquiry into the residential environment have underscored the landscape design problem. The implications for landscape architecture are clear and momentous. Training of landscape architects is a problem currently facing several Canadian universities, for with many young people seeking admission, a Canadian School of Landscape Architecture is long overdue. Students choose paths which have attracted their interest, and will provide a challenge to talent. At present, young Canadians attend colleges of Landscape Architecture in the United States, not always returning to practice in Canada.

Techniques and Scale

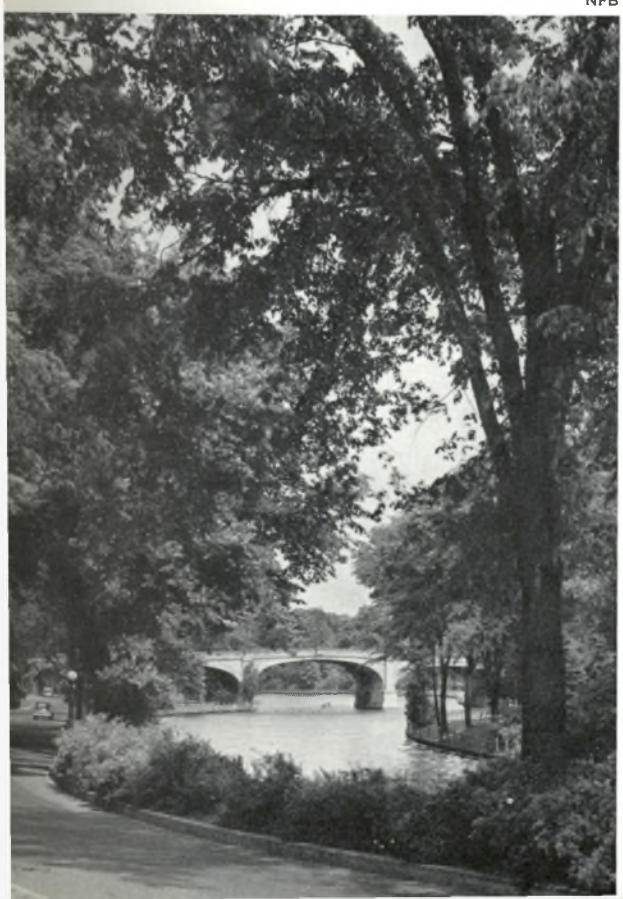
The landscape architect is involved with relationship of buildings to each other and the landscape; rainfall on turf and pavement; a growing tree, its branches, roots and patterns of shade, — things to be studied, not superficially, but deeply, if you are to design man's outdoor space. Some of the architectural techniques, old stand-bys in building construction, may have to be shelved when taken outside the "thermopane". Pet feelings concerning spatial relationships, almost second nature after years of designing shelter, need drastic revision. It just isn't the same outside. In the transition, from designing hardwood floors and polished terrazzo, to asphalt, growing plants and acres of lawn, the landscape fails

Humans appreciate moving leaf shadows, falling water and watching the passerby.

Below, the works of man incorporated in the design of outdoor space.

TED GRANT

NFB



to include man. It is this elusive element, backed by techniques, imagination and development of practice which defines the art of landscape architecture.

The City

An approach to landscape design within the fabric of a city should be clearly stated. The arrangement of street patterns, building walls and natural materials to harmonize and contrast with the changing patterns of open space, require a sympathetic hand. The livable city, like the livable house, accommodates occupants with a variety of outlets for activity. Movement through its spaces with ease and a flexible use of facilities are the stamp of a good design. Open-space articulates activities and the relationship to the whole may be expressed by the careful landscape development of its parts.

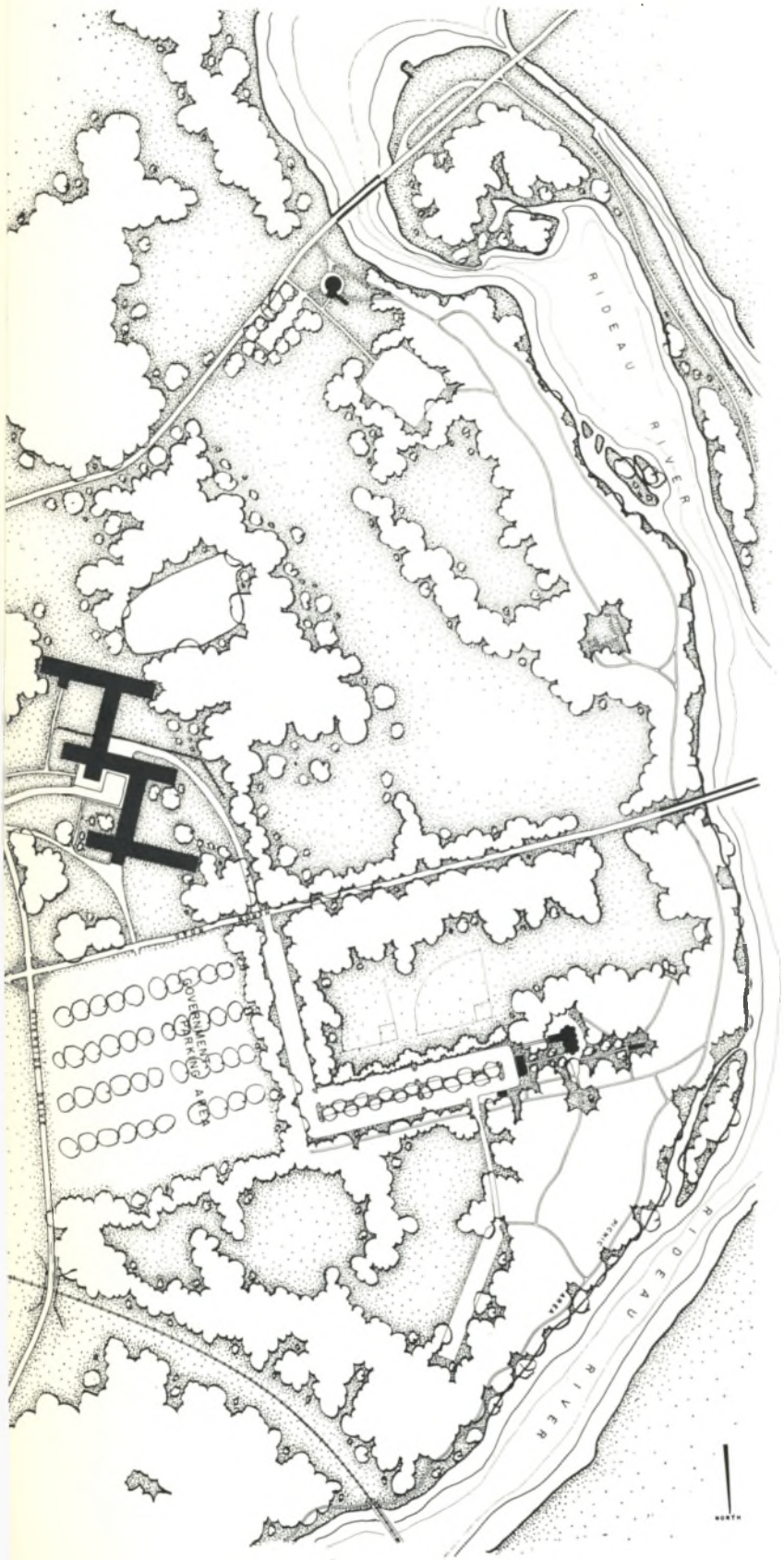
Certainly not a new approach; the planners and architects have been "articulating", "relating" and "harmonizing" for many years. On paper and occasionally on the ground it succeeds, but more often than not, while sitting on the newly designed park bench, you wonder what is missing, — the human in his landscape — the human and his love of moving leaf shadows, seclusion, falling water and watching the passerby. This culmination or drawing together of all the factors, the façades, textures, trees, benches, lamps, manhole covers and meters can be done in a satisfying manner. The landscape architect can coordinate skills and with many others create this environment for man.

"The city . . . a visually satisfying expression, which in some respect is the measure of cultural achievement of a civilization".[1]

Collaboration

In a recent seminar at McGill's 1960 reunion, Professor Paul Rudolph, head of Yale's Architectural Department, had this to say to the architects; "foremost is our lack of a coherent theory with regard to how to relate one building to another, and to give meaning to the spaces between. We need desperately to relearn that art of disposing our buildings to create different kinds of space: . . ." He described the types of open-space. "The quiet, enclosed, isolated, shaded

[1] *The American Society of Landscape Architects' Quarterly (Sasaki)*



Vincent Massey Park, Ottawa, is sensitive to topography.

space; the hustling, bustling space . . . sequences of space . . . which beckon . . ." and the new scale brought about by moving vehicles in the landscape.

It was my feeling that he eloquently described, in part, the art of landscape architecture and I trust his closing admonition to the Canadian architects of "abdication to every new specialist" did not include specialists in this art.

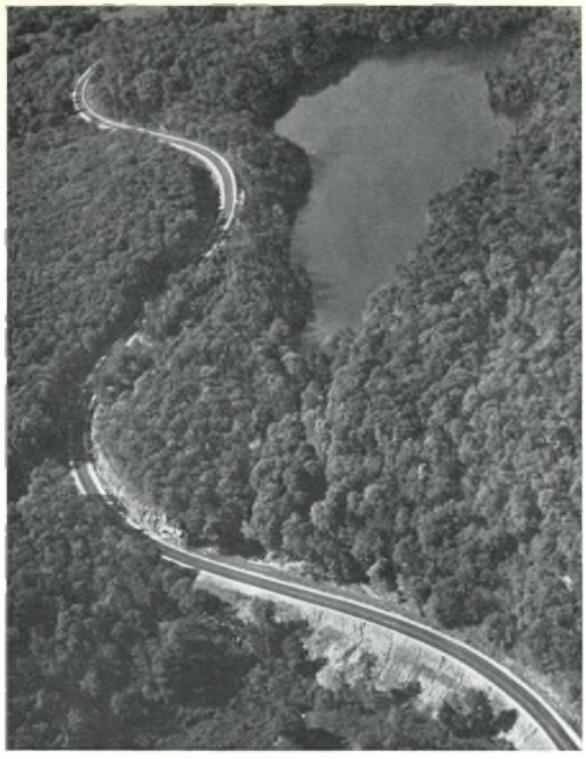
Practice

Enough about the landscape architect and his objectives; what kinds of work does he do? Listing a few of the general categories will outline the character and scope of work today — parks and playgrounds, highways, parkways, institutions, public buildings, housing, commercial and industrial sites, city planning and national parks. These works and all their components, are co-ordinated with the work of architects, engineers, city planners, realtors and officials of the various levels of government. He plans and designs these land areas for human use, adapting the physical conditions of the site to meet practical demands of intended use and appearance. Both economics and aesthetics play an important role in efficient layout.

He places structures and buildings, in collaboration with other designers, with regard to, and respect for, the existing landscape. Vehicular and pedestrian circulation receive careful study, along with problems of drainage and irrigation. The arrangement of trees and shrubs, flowers and turf, is planned as an integral part of the total design. The differing geography and climate of various sites require a knowledge of local conditions which may drastically affect the composition. Many of the subtleties of nature can be interwoven through the fabric of design by a landscape architect with understanding of these materials.

Materials of landscape architecture are mostly natural. Earth, in its many forms; water, with a variety of uses; living plants in profusion of shapes, requirements and growth habits; these are perhaps the most complex design material to employ. A completed project in landscape architecture is rarely

The Gatineau Parkway, Quebec, blends with the landscape.



e open spaces cry for attention.

finished when the work has been done. The maturation of years develops the final character. It has been said that "Landscape architecture differs from all the other arts, for its works — unlike those based on processed materials — do not begin their decline upon completion".

To accompany plans of the layout, grading, planting, structures and detail, the landscape architect draws up specifications and contracts for development. He provides professional supervision of the work as it is carried out and approves the quality of various materials and workmanship. It is "service" only that is being sold. As a client's agent, he does not accept commission or discounts from contractors or suppliers of stock. Upon completion of the project, the landscape architect is retained to advise on maintenance. A design can be drastically altered, or massacred, by lack of sensitive direction.

An Approach

In the larger works of landscape architecture where mountains, fields and highways form the picture, the designer is largely at the mercy of his materials. Man blends with, rather than imposes upon, the landscape in this case. With smaller enclosures, and limited areas, the designer may exert an influence through individual form and pattern. The landscape architect is sensitive to topography and large scale spatial relationships, and most important of all, possesses an "imaginative approach" to development of land uses.

Looking to the future, landscape architects must take a more active part in the building program of the country. There are open spaces crying for attention, and many more appear as the population spreads. The role in urban renewal is a significant one, with Downtown and its festoons of cable and dying spaces. Housing demands greater consideration. In the residential environment we see a limitless spread of subdivision tracts. Thousands of units within these areas, while largely fulfilling needs within, turn their backs on a desert of backyard and street. There is a broad range of opportunity in land design, from the great open spaces of rural country, to individual buildings in an urban setting. Faced with this unparalleled opportunity, the landscape architect and his associates must work towards a greater understanding of each other's techniques, philosophy and aims.✦✦✦

Mr. Graham graduated in Landscape Architecture from the Harvard School of Design. He is Assistant Landscape Architect for the National Capital Commission in Ottawa.

This house at 75 Charlotte Street, Sydney, was constructed in 1786 by the Reverend Ranna Cossitt.

Old Houses and TALL TALES

by Owen Carrigan

Number 90 Charlotte Street, Sydney was used as the Governor's residence between the years 1807 and 1813.

In the summer of 1960, the City of Sydney, capital of the Cape Breton Scots, celebrated its one hundred and seventy-fifth anniversary. Because of its very tangible, though fading link with the past, the North Charlotte Street area was the centre of much of the historical interest associated with the celebration. On this street, situated in a beautiful location atop a prominent rise overlooking the harbor, stand many houses built by the original settlers.

In bygone days when the people of Sydney looked to the sea for a livelihood, householders on North Charlotte Street gazed down on a beehive of activity. Trading ships from every port of the globe — with a good representation of British Men-of-War — mingled with smaller coastal vessels. A familiar scene was the entrance of a stately West Indian Merchantman, bearing its cargo of sugar, molasses and rum.

On the other side of the harbor, the wilderness, extending to the water's edge, was still roamed by the Indians who, no doubt, stood peering in awe at the activities of the white intruder.

Today the panorama is not so picturesque but still presents an interesting scene. On the far side is the Point Edward Naval Base with its modern warships riding at anchor, while the dwellers of a modern suburbia along the harbor's edge can gaze back at the smoking chimneys of plant and factory.

Number 75 Charlotte Street is the patriarch of the old dwellings lining the street. The house was constructed in 1786 by the Reverend Ranna Cossitt, a Loyalist, who fled from the revolutionary fervour of the Americans. The Reverend Cossitt was the first pastor of St. George's Church, another historic landmark, to the south on the same street. Lumber used in the house, to the last red cedar shingle, was brought by sea from Virginia — not because there was any scarcity of timber in the area, but because of the lack of mills to turn trees into boards and shingles.

A few minor changes have taken place over the years, but Ranna Cossitt's original design still predominates. Around the turn of the century, gables were added to the front and, through the passing of time, the proverbial "garden path" has disappeared, owing to the installation of modern conveniences. The front entrance opens into a long hallway with a broad stairway ascending to spacious bedrooms. At the rear of the hall is a typically large kitchen — the family room of yesteryear, and adjoining this is a long, narrow pantry, once a serving room in an era when bound servants were common. The present dining room was, in the deeply religious days of the Reverend Cossitt, the chapel. Until a few years ago, when the present occupants laid a new floor in this room, the marks of the old pews were plainly discernible. The enormous living room, graced by a homely log fireplace, still plays host to family gatherings on festive occasions, as it has for the past one hundred and seventy-five years.

Until 1944, another ancient house stood proudly on the property adjoining 75 Charlotte Street but it succumbed to progress and was replaced by a small bungalow, built further back on the lot. The property, though no longer the site of an old dwelling, holds a great deal more intrigue for the visitor than is evident — that is, provided the visitor considers the equivalent of a king's ransom enough to arouse his curiosity. The grandfather of the present owner is reputed to have been a very successful but cantankerous old businessman and, as the story goes, had accumulated a great amount of money through operations in the shipping business. Joe Leonard, the grandson of this provocative old gentleman, recalls his mother telling of her father's great wealth and how she could remember seeing him amidst the shining hoard that he kept stored in pressed paper buckets. She described it as being "so much gold and silver that it frightened me". When he passed away, it appeared that all his fortune went with him, for the only trace of wealth was a pitiful one hundred dollars in gold. Apparently sensing that the end was near, he left this on the mantel of the great fireplace, along with firm instructions that it be used for his burial expenses.

Treasure hunters from near and far have, over the years, searched in vain for the booty believed to

have been hidden somewhere on the property. One group, in their lust for gold, went so far as to excavate under one end of the present house under cover of night, only to be chased away empty-handed by the occupants. Among those who had searched for the money were professional treasure seekers, equipped with detailed information, no doubt in the form of maps and charts on virtually every conceivable location of buried or sunken treasure in the area. Others came with mineral rods, hoping that this method might uncover the treasure's mysterious hiding place. But to this date, the very carefully chosen sanctuary has refused to give up its charge. The owners still cling to a faint hope that somewhere on their property the money may yet be found and have even extended an invitation to this writer to try his luck.

Still another interesting old house, numbered 90 Charlotte Street, is owned and occupied by Mrs. S. H. Stevenson whose husband purchased it in 1905. Between the years of 1807 and 1813, and probably prior to that time, it was used as the Governor's residence. Huge wooden beams, held together in part by wooden pegs, support this massive structure and one of the original chimneys, of enormous stones, still forms an integral part of the building. The remarkable condition of the house can be attributed to the excellent quality of the materials and the high calibre of workmanship, and Mrs. Stevenson maintains that even today it is very comfortable. A government school dating back to 1800 and attached to the southern part of the house is now used as an office for an insurance business operated by Mrs. Stevenson's son.

The tale of the fairy child is a sidelight to 90 Charlotte Street. The story goes that one day, years ago, a number of children were happily playing in one of the upstairs rooms when suddenly, from out of nowhere, a beautiful child appeared before them. After recovering from their initial shock, the children found their tongues and immediately began to query her as to her name and from whence she came. But the child remained silent and when they invited her to join them at play, there was still no response. Finally, when they tried to surround her, she skipped lightly out of the room, leaped over the bannister into the stair-well at the end away from the top steps and vanished just as mysteriously and suddenly as she had appeared, never to be seen again. The strange tale has been handed down from generation to generation and is accepted as being true by successive owners of the property.

Many more of the old houses in this part of the city are associated with stories of intrigue and romance. In the olden days there was a gallows erected in the centre of the city on which many a criminal paid his debt to society while hundreds of eyes looked on. To this day, there still stands a house partially constructed from materials that were used in the gallows. There is a house connected to the site of the old English garrison by a tunnel that no doubt rang, in the early days, with shouted commands, hurried footsteps and exploding cannons. A graveyard of convicted criminals is the site of another old house that offers many hair-raising tales.

Anyone with an interest in old houses with secret passages and tunnels, in folktales that have lived through the ages or in buried fortunes, is certain to find an abundance of treasures, be they in the antiquity of North Charlotte Street with its air of mystery, or in the shining silver and gold buried in the earth.✦✦✦

Mr. Carrigan was born in New Glasgow, N.S. and graduated with a Major in History from St. Xavier University in 1954. He received his Master of Arts degree in History from Boston University. He is now Assistant Professor of History at Xavier Junior College in Sydney, N.S.

CENTRAL MORTGAGE AND HOUSING CORPORATION
SOCIÉTÉ CENTRALE D'HYPOTHÈQUES ET DE LOGEMENT
OTTAWA, CANADA

Habitat

MAY-JUNE 1961
MAI-JUIN 1961

The 90 year old "Clergy House", Minden, Ontario, was the site of an early Indian camping ground, at the time, the Gull River watershed was the hunting territory of bands living around Lake Simcoe who came by way of the Balsam Lake, Portage and Gull River waters.

PHOTO BY MALAK COURTESY WHITE PINE BUREAU

HABITAT

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The sketch on the cover is by Harry Mayerovitch who describes his drawing as "A sort of cultural market-place". Mr. Mayerovitch's article on the Block Plan appears on page 21.

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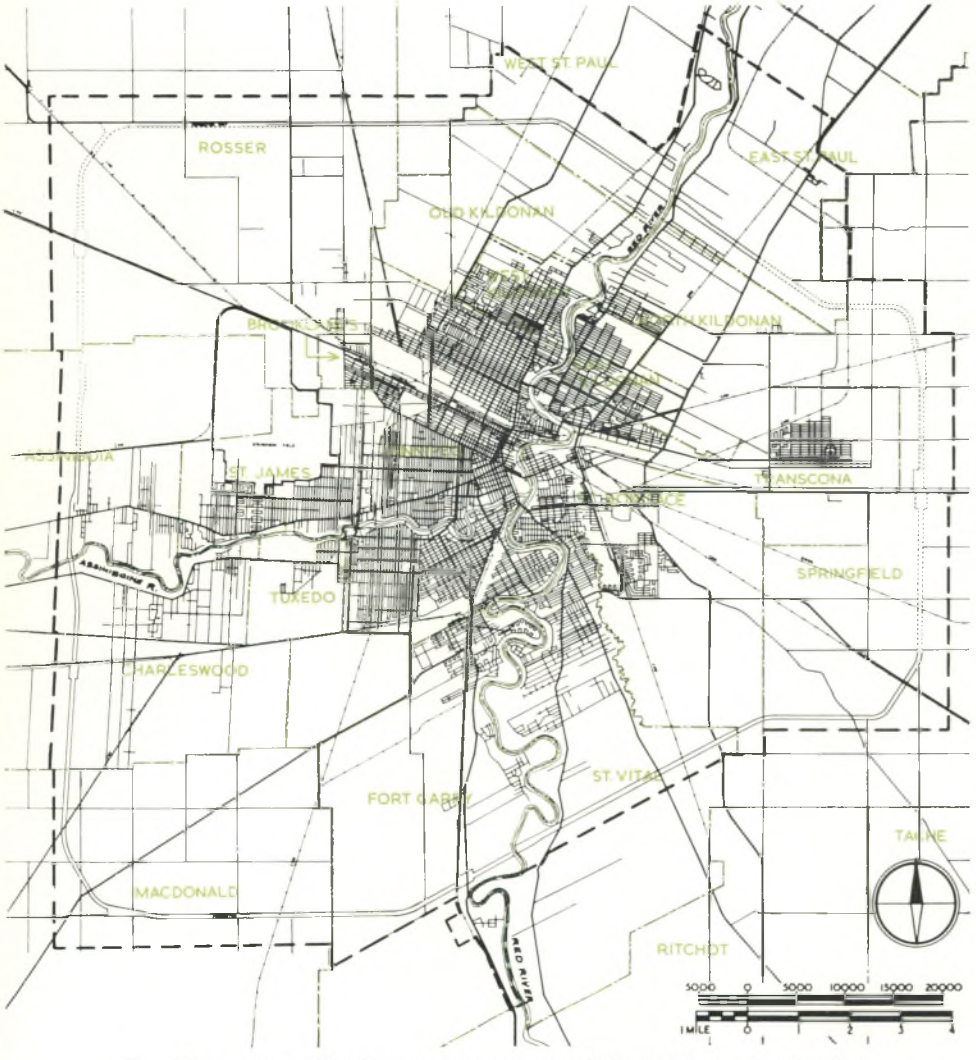
METRO COMES



The Metropolitan Winnipeg area boundary is indicated by the broken line.

Richard Henry Gardyne Bonnycastle, was appointed last July by Premier Duff Roblin to be the first chairman of the Metropolitan Council of Greater Winnipeg.

The new chairman's maternal grandfather, Colonel, and later Senator D. A. Boulton, commanded the Boulton Scouts in the Northwest Rebellion. Fifteen years before that rebellion, Colonel Boulton was captured by Louis Riel and, along with Thomas Scott, was to be executed. Scott was put to death, but Colonel Boulton was freed after the intervention of friends. Today, in the metropolitan government headquarters, Colonel Boulton's grandson presides over the Metro Council which works only a few hundred feet from the site of historic Fort Garry where the Colonel awaited execution. Mr. Bonnycastle brings a wealth of business experience to his present position. He was first chairman of the Manitoba Business Advisory Council, is a past-president of the Winnipeg Chamber of Commerce, and is currently chairman of the Manitoba Development Fund.

Premier Duff Roblin of Manitoba addresses the newly-elected members of the Metropolitan Council of Greater Winnipeg; immediately to his left is Honorable Errick Willis, the Lieutenant-Governor. At the table directly in front of the Premier and proceeding clockwise are Councillors L. E. Ostrander, Robert Moffat, Jack Blumberg, A. E. Bennett, Metro-Chairman R. H. G. Bonnycastle, Councillors Paul Cherniack, Arthur Coulter, A. H. Fisher and B. R. Wolfe. Councillor Jack Willis is not in the picture.

TO WINNIPEG

R. H. G Bonnycastle

The spread of urban areas in post-war years has brought problems that are familiar to every major city in Canada and as the Royal Commission on Canada's Economic Prospects has so soundly stated: "One can see many ways in which the post-war expansion of the metropolis could have been better managed."

Our urban areas have been a hodge-podge of political individualism. We have made plans, but we have been unable to carry them out. We have known what to do, but not how to accomplish it.

Plainly, our urban areas have needed, first and foremost, more rational and realistic control; in short, the big problems, the *area* problems, needed to be dealt with on an area basis.

That, essentially, was the objective when — on November 1st, 1960 — the metropolis of Greater Winnipeg embarked on a metropolitan government covering an urban area of 460,000 people.

Metro in Greater Winnipeg was not a hasty act. It followed seven years of intensive investigation, serious thought and provocative debate.

It was first proposed in 1953 by a Provincial-Municipal Committee which had been established by the Provincial Government to study the fiscal and political problems of the municipalities.

The Committee's recommendation was followed, in 1955, by the appointment of the Greater Winnipeg Investigating Commission, which spent four years studying inter-municipal government in Canada, the United States and Europe. In 1959, the Commission submitted a report to the Provincial Government of Manitoba recommending the establishment of a strong and extensive form of metropolitan government. (Among its many points, the Commission urged amalgamations of 16 local municipalities to establish eight cities of fairly uniform size and economic strength.)

The Provincial Government, after further public hearings, adopted the principle of metropolitan government (although it rejected the "eight-city" plan) and a Government Bill was introduced in the Provincial Legislature during the 1960 Spring session. This Bill was approved almost unanimously by the members of the Legislature, and received assent from the Lieutenant-Governor in March of 1960.

A small interim staff was appointed in mid-Summer and the first Metro elections were held on October 26th, 1960. The Metro Councillors took their oaths of office on November 1st, and began immediately to establish the political and administrative functions of the new government.

The Metropolitan Winnipeg Act gives the Metropolitan Council the authority to operate the following services: Assessment, Planning, Water Supply, Sewage and Garbage Disposal, Public Transporta-

tion, Principal Streets, Bridges and Subways, Major Parks, Flood Control, Civil Defence, Weed and Mosquito Abatement. The planning services include responsibility for all zoning, building permits and building inspections in Greater Winnipeg.

Historically Metro may be considered as a partial return to the larger units of local government which prevailed 100 years ago in the Red River Settlement. Then, the area known today as Greater Winnipeg was governed by four municipalities.

These municipalities began to break up when small segments of their population sought services which the remainder of the municipalities did not want or need. Over a period of 80 years, the municipalities divided and re-divided until the present fragmented structure of local government was established — with 19 municipalities in place of the original four. At one time, the central City of Winnipeg carried out some annexation of adjacent territory, but this ceased when the process presumably became too expensive a burden on city taxpayers.

For many years, the disintegration of the larger municipalities did not create undue problems. In time, however, the urban municipalities grew into one homogeneous community — a single metropolis in work and play, but sharply divided in its political organization. The City of Winnipeg, for several years, had been (and continues to be) the exponent of total amalgamation, of the "one big city" system. As is the case elsewhere, the suburban municipalities have resisted every effort to "swallow" them up. Metro, in effect, is a compromise which avoids the One Big City, while providing a central authority for services which the local municipalities could not continue to operate separately and individually.

Unlike many urban areas on the continent, Greater Winnipeg municipalities have long recognized the basic principle of metropolitan action. The local municipalities, indeed, had been more or less compelled over the years to create a number of inter-municipal boards and commissions to carry out functions and services that were metropolitan in character. Such *ad hoc* agencies, each working separately, took on responsibility for such things as

CGBT

the supply of water, disposal of sewage, public transportation, planning, dyking and mosquito control.

When Metro took over these services, the Boards and Commissions went out of existence, their responsibilities were transferred to the Metro Council, and their administrative staffs became Metro employees.

It has been argued in some quarters that Metro's purpose has been to draw all of these diverse Boards and Commissions under one administrative and political control. This is true, to an extent. But the Metropolitan Winnipeg Act is a much more all-embracing piece of legislation than the Statutes which previously regulated the operation of the Boards and Commissions. The Act has been constructed, in fact, to overcome many of the difficulties and legislative deficiencies which handicapped the inter-municipal agencies in the past.

For example, the Metro Act establishes a division of Streets and Transit, combining under one authority (responsible to Council) all aspects of traffic control: Arterial Streets, Bridges, Subways, Public Transportation, Parking, Lights and Signal Control. We are told that this is the first urban area in North America, dealing with inter-municipal governments, to put all of the problems of transportation under one authority. Metro may designate the streets which are to be a part of the metropolitan streets system.

Another fact illustrates the greater efficiency possible under metropolitan authority.

Metro is responsible for the distribution of water to all municipalities and it has sole authority

NFB

Far left, a traffic jam about to happen.

Cars parked at the Winnipeg Stadium.

Left, Assiniboine Park, Winnipeg.

Below, part of Winnipeg's industrial area.

CGTB

for the production, treatment and storage of water, including control of distribution systems, pumping stations and reservoirs. Metro will also control the standards of local mains. (Retail sale of water remains the responsibility of the local municipalities).

Before the advent of Metro, water supply was handled by the Greater Winnipeg Water District, a wholesale co-operative of nine municipalities. The Water District had little or no control over distribution systems, reservoirs or the pressure supplied to water. There was no legislation to permit outside municipalities to become members of the District, and they, therefore, were simply customers of the Water District, with no say in how water should be delivered, or in the rates charged for it.

The most significant change, however, is in the planning legislation. The Metro Council will have sole responsibility for all planning in the Greater Winnipeg area, and in the "additional zone" five miles beyond the Metro boundaries. The Planning Division includes zoning, building permit and inspection branches. Previously, all zoning and permits were a local responsibility, and the former Metropolitan Planning Commission was just an advisory body for 14 of the Greater Winnipeg municipalities. It has been said, with great truth, that there was no lack of planning in Greater Winnipeg in the post-war years, but a *decided* lack of implementation. And, even when the Planning Commission's advice *was* followed, the Commission lacked the authority to control and to protect its plan by proper use of sub-division regulations, building codes and zoning by-laws.

An important amenity in the development of an urban area is the provision made for parks, recreation sites and other forms of open space. In the past, the major parks have been almost entirely a responsibility of the central City of Winnipeg. The city owned, operated, enlarged and maintained these major parks at the expense only of Winnipeg taxpayers — even though its three large parks are outside city boundaries, and have been available without charge to all citizens of the Metro area.

It is predicted that Greater Winnipeg may have as many as 800,000 citizens by 1980, and it seems evident that growth of this nature should be accompanied by more park space. Winnipeg had made it abundantly clear, however, that it would no longer take sole responsibility for the development of new parks. On the other hand, the suburban municipalities did not have the resources, individually, to provide for them.

Under Metro, the Council may designate as a metropolitan responsibility all parks and recreation

areas of 15 acres or more and may acquire new land for the development of future major parks.

The Metropolitan Corporation has authority to issue debentures for its own purposes without reference to ratepayers, but any debt exceeding $500,000 is subject to approval by the Municipal Board, appointed by the Provincial Government. The Corporation's net financial requirements (less revenues, grants and reserves) are levied against the area municipalities on the basis of their relative assessments, and may include collection of a portion of business and personal property taxes of the municipalities. Each municipality is responsible for collecting its share of the Metro levy.

The Council may vary the proportion of business taxation collected from the municipalities in order to achieve a more equitable sharing of costs, based on services received and on each municipality's ability to pay.

A further result of such equalization may be to rationalize the location of industry. Since the revenue gained from business and personal property taxation would be used to pay for metropolitan services throughout Greater Winnipeg, municipalities with little or no industrial taxation should not feel the same compulsion and economic pressure to compete for new industry. As a result, industry should tend to settle in the areas most suitable to it, rather than in municipalities whose highest and best use is residential.

Metro Winnipeg covers the entire area of ten municipalities, most of six others, and small portions of another three: a total of 19 local government units, and 256 square miles of territory. Metro also has control over planning and river pollution in an "additional zone" which makes a total area for Metro jurisdiction of some 600 square miles.

The Metro boundaries are determined, in general, by a line drawn one-half mile beyond a Provincial Perimeter Highway which now is being built as a by-pass route around Greater Winnipeg. This Highway may be considered as a sort of artificial barrier to limit urban sprawl. It accounts for the fact that several municipalities lie partly inside and partly outside the Metro area proper — because the Highway splits their territory. For the most part, however, the Highway encloses the built-up or urban portion of Greater Winnipeg.

Metropolitan government in Greater Winnipeg is similar to that operating in Greater Toronto. There are significant differences, of course; the principal one being the form of representation on Council. Toronto uses the federated system: the Metro Councillors come from, and are representatives of, local Councils. They are the Mayors and Reeves of the 12 suburban townships, and 12 members of Toronto City Council, along with the Chairman of the Council.

In Greater Winnipeg, on the other hand, the Metro Councillors are elected directly by the people in ten electoral divisions which cut across municipal boundaries. Each Councillor represents portions of at least two municipalities, and each division has roughly the same proportion of voters.

The first Metro Council, elected October 26th, 1960, will serve for the next four years. After that, the Councillors will be elected for two-year terms. The first Chairman was appointed by the Provincial Government and also serves four years. After that, the Council will elect the Chairman, and may choose either a former Chairman, or one of its own members. If it chooses a Councillor, the strength of the Council is reduced from eleven to ten.

Any Canadian citizen, 21 years or over, can be nominated for election provided he is a resident of the metropolitan area, and has property in his own name assessed at not less than $500. The candidate can stand for election in any one of the ten Metro divisions; he is not restricted to the division in which he resides, or in which he owns property. Every citizen eligible to vote in his local municipal election is eligible to vote for a Metro Councillor in one division. Preferential balloting, using numbers 1, 2, 3 and so on, is employed in the Metro voting.

Metro operates under the Council-Committee system, and has six standing committees: Finance, Planning, Streets and Transit, Water and Waste Disposal, Parks and Protection, and Assessment.

NFB

Aerial view shows the meandering Red River entering Winnipeg from the north on its way to the American Border. It separates St. Boniface on the right from the city.

Each Committee has a parallel administrative division presided over by a senior Director who is responsible to a chief administrative officer called the Executive Director. The Corporation uses a centralized system for accounting, purchasing and employment of personnel.

What is the future of Metro in Greater Winnipeg? Will Metro take over additional services, swallowing up more local functions? Will it create a demand for total amalgamation?

At the moment, no one has the answer to these questions. It is noteworthy that the Winnipeg Free Press sees Metro as a stepping-stone to amalgamation; it suggests that the Metro Act is framed with this intent. The Winnipeg Tribune, on the other hand, has suggested that Metro is a reasonable alternative to amalgamation and makes amalgamation unnecessary.

The Provincial Government presumably will await the judgment of time. It has provided for the appointment of a Board of Review to study metropolitan government after it has been in operation for five years. The Government may take the stand that there should be no major alteration in the Metro Act until this review has been completed.

There need be no speculation, however, about the role which Metro can play in its present form. The Metropolitan Winnipeg Act has provided for a strong, central Council, elected directly by the people, and for an efficient, functional administration to serve it.

Several years ago, a Winnipeg newspaper commented that, in the spread of urban areas, narrow views have been allowed too often to stand in the way of sound, efficient and economic administration. It said: "We should be big enough and self-respecting enough to start acting like a metropolis; instead we have acted like a conglomeration of petty townships."

Today, Greater Winnipeg has a government for the metropolis. Its purpose is two-fold: to provide urban services which the municipalities could not continue to provide individually and independently of one another, and to spread the cost of these services as equitably as possible over the entire urban area.

Metro has not been in operation long enough for anyone in Greater Winnipeg to predict how successful it will be in this purpose. Many obstacles remain to be overcome; and not the least of these is the resentment of some municipal councils because they have lost exclusive control over their political affairs, and because they believe they should have direct representation on the Metropolitan Council. This resentment is understandable, and Metro in Greater Winnipeg went to considerable effort to improve its relationship with the local Councils by consulting with them at every possible turn.

The public, however, appears to have a reservoir of goodwill toward Metro. With minor exceptions, the citizens have accepted Metro's current decisions, and presumably are waiting to be shown its assets. The consensus at the moment is Metro has an unprecedented opportunity to improve the development of the urban area and that if it is given time and continued public support, it will prove itself one of the most significant steps ever taken in municipal government anywhere in Canada.✦✦✦

THE SECONDARY MORTGAGE MARKET - A BEGINNING

Mr. Woodard is the Financial Adviser of Central Mortgage and Housing Corporation
and is the author of the book, "Canadian Mortgages".

H. Woodard

Long before the Fathers of Confederation sat in solemn conclave in Charlottetown, Arthur Hugh Clough had penned the thought that *Grace is given by God, but knowledge is bought in the market.* Now, over a hundred years later, the latter phrase might be regarded as the inspirational note of the recent announcement by the Hon. David J. Walker. The Minister of Public Works expressed the Federal Government's intention of disseminating wider knowledge of the investment potential of NHA insured mortgages through the encouragement of an active secondary market for such mortgages.

What then is a secondary mortgage market? A market in any commodity is established when it is freely sold by willing sellers to willing buyers at a mutually acceptable price. The price is governed by many things, such as the quantity of goods available, their comparative quality etc. Thus, when mortgages become readily available for sale and buyers are anxious to acquire them, it can be said that an active secondary market exists.

Such a market will never reach the frenzied proportions of the stock exchange with its mystic bidding symbols and frequent hysteria. However, in a more quiet, but equally effective way, a secondary mortgage market could have far-reaching effects on the Canadian investment scene and on the house-building industry so closely allied with it.

The word "secondary" in its market context has no connection with the oft-maligned second mortgage. In itself, the latter is a perfectly legal, and oft-times necessary adjunct to real estate transactions. Of recent years, however, its reputation has been bespoiled by the usurer.

When one speaks of a "secondary market", the adjective is descriptive only of the ownership sequence of the mortgage and not to its nature or legal priority. When any mortgage is first made, the transaction is a *primary* one, for a new mortgage has come into being. When that mortgage is sold and changes hands, the transaction, in sequence, is a *secondary* one. No matter how many times the mortgage is re-sold, each successive transaction is regarded as a secondary mortgage transaction as contrasted with the primary business of originating and making the new mortgage.

During the period 1935-54, NHA mortgages could be owned only by approved lenders, and sales of mortgages among such lenders were a rarity. Under the 1954 Act however, it was provided that insured mortgage loans could be held by persons other than approved lenders, and the mortgage insurance would continue to be in effect provided that the mortgage was serviced on a continuing basis by an approved lender (but not necessarily by the originating lender).

By the close of 1960, some $240.0 million of mortgages had been sold, of which some 65% were bought by pension funds. It might be supposed therefore that there was an active secondary market in operation. An analysis of the sales would, I think, impair the validity of this supposition, for a high percentage might well be classified as *inter se*. For example, some knowledgeable investors, who were not approved lenders and could not originate insured mortgage loans, supplied funds to an approved lender with which to make insured mortgage loans on their behalf. On completion of the mortgage transactions the loans were assigned to the investor. For statistical and statutory reasons, the transactions had to be reported as sales of mortgages. Some lenders, including CMHC, sold mortgages either to their own employee pension funds or to other pension funds or to investors with whom the lenders had close business relationship. Such transactions do not represent active and open market

transactions.

There are many reasons why an active secondary market has not developed through approved lender promotion. One large group of lenders, the life insurance companies, makes mortgage investments with a view to a long-term holding. It would be a radical, but perhaps some-time advisable, departure for them to become active sellers and servicers of mortgage loans. However, at present, there is some legal doubt as to their power to act as servicing agents for others. The chartered banks, for a period, were selling and servicing mortgage loans which they had originated. But adverse conditions such as rising interest rates, coupled with the 6% interest rate restriction in the Bank Act, made further selling progress of doubtful value as the Banks could not make replacement mortgage investments at the going interest rate which, by then, had climbed beyond their statutory limit.

Over the last few years, the insured mortgage portfolio of CMHC has become a very substantial one. Owing to the shortage of available funds from approved lender sources, and in order to meet the continuing demands for housing, the Corporation was temporarily placed in the position of being a major lender as contrasted with its intended role of a residual lender of last resort. As the direct result, CMHC today has a portfolio of saleable mortgages rapidly nearing the $1.0 billion mark. It is part of these holdings which the government has directed be made available for sale in order to lead the way in the development of an active secondary market.

How then will this market develop? To some extent it will be necessary for CMHC to reverse the order of events expressed in the words of A. H. Clough quoted at the beginning of this article. Instead of knowledge being bought in the market, CMHC will endeavour to build a pathway of knowledge which will guide investors to the market and to the opportunities to be found there. It is somewhat of a paradox to find that the investment value of NHA insured mortgage loans is but little known to the many non-institutional investors such as pension funds, estates, trusts, etc. Knowledge of their value and their relatively high earning potential must be carried to the persons responsible for the investment of such funds.

Experimental programmes may be necessary to show that these are not mortgages in the ordinary sense, fraught with the danger of shrinking property values and risk of loss from many causes, but rather that NHA insured mortgages are, in reality, a sort of mortgage bond supported by what amounts to almost a 100% government guarantee. Simple servicing procedures must be established so that the buyer receives his remittances in a manner comparable to that attendant to ordinary bond investments.

Apart from sales of blocks of mortgages to holding investors, the secondary market should develop in another direction where already private enterprise has made a beginning. There are many investors, both small and large, to whom mortgages have no investment appeal but who would welcome partial participation in such by way of debentures, guaranteed certificates or other "paper" backed by insured mortgages. An indicated development therefore is the growth of companies which will buy mortgages in the secondary market and issue to the investing public, debentures or certificates of a collateral trust nature supported by the insured mortgages held by the issuing company. Already some ingenuity has been shown by companies in this field, more will follow.

With a supply of available mortgages on one side and an educated school of investors on the other, there is no reason why an active secondary market should not become a reality on the Canadian investment scene. In closing, it should be stressed that it cannot, and should not, in the future depend on a regular stream of available mortgages solely from CMHC. The prime sellers in the course of time must be the approved lenders.

CMHC's initial priming endeavour may be likened to the carrying of gasoline to a stalled engine. Once the engine is started and the car starts moving it should find appropriate and willing filling stations in the financial roadway of the future.✦✦✦

le coeur de Montréal

André Blouin

Analyser le coeur de Montréal, c'est le soumettre à un cardiogramme sévère, car la Ville comme beaucoup d'autres est une grande cardiaque avancée. Cardiaque qui veut s'ignorer, comme la plupart des malades qui ont préféré fermer les yeux jusqu'ici, mais qui subitement s'affolent parce que les symptômes et les malaises deviennent de plus en plus douloureux et de plus en plus rapprochés. Après un diagnostic du Cher Confrère Hazen Size sur l'état du mamelon gauche de Madame Montréal, nous parlerons plutôt de ce coeur situé, dit-on, à juste titre, sous le sein gauche.

La naissance de Montréal s'opéra sur le bord du fleuve; les quartiers de luxe entouraient à l'époque la base de la rue St-Denis et le square Viger, devenu le square "des robineux". N'y a-t-il pas matière à réflexion sur l'évolution indéniable du secteur? Evolution du port, rapide et indispensable, avec poussée vers ce que l'on appelle le Nord de l'économie et de la finance. Mais la montagne est là, ce qui bloque l'évolution et telle une onde réfléchie revient vers la base, tout se stabilisera à mi-côte, s'amalgamera, se cristallisera, s'embouteillera.

Les grands magasins remontent mais ne prévoient pas le développement fantastique de la Métropole et les voici de nouveau devant les mêmes problèmes de manque de terrain. Après deux déménagements, les magasins Morgan sur leur troisième emplacement trop à l'étroit se voient obligés à grands frais, de regrouper leurs propriétés disséminées pour une meilleure gestion de leur entreprise

De l'ancienne cité des affaires on remonte actuellement, rénovant des terrains moins construits et d'ici 15 ans cette partie délaissée ou dépréciée de par l'ancienneté et le manque de confort des immeubles, aura à son tour son remodelage, soit les rues St-Jacques, Notre-Dame, etc.

Définition du centre

Montréal est une métropole et un centre régional. Le centre de Montréal est limité par les rues Atwater à l'ouest, Amherst à l'est, des Pins,

A gauche, vue d'ensemble
des gratte-ciel
au centre de la Cité.

En bas, rue commerciale,
aux heures de pointe.

Cherrier au nord et Notre-Dame au sud.

Le plateau s'infléchit de la montagne vers le sud (réel) jusqu'à une ligne limitée à la rue Dorchester venant de l'ouest jusqu'à Bleury, remontant pour se retrouver parallèle, longeant Sherbrooke; vers l'est de cette ligne une pente plus forte redescend vers le port. Un bourrelet de terrain vient au bas de la ville limiter les perspectives sur le port au sud de Craig entre Université et Amherst. Puis c'est la barrière artificielle des chemins de fer et ensuite les installations portuaires.

Il est à remarquer que dans toutes les villes portuaires existe ce barrage du fer nécessité par le port et par le transport en commun. Ce barrage est particulièrement visible ici.

Limites à l'expansion du centre

Les limites à l'expansion sont le port, les voies de chemin de fer, la montagne et le tracé des voies majeures limitant le nouveau tracé à envisager.

Dans une étude très intéressante de M. John Bland et du Professeur Harold Spence-Sales, intitulée "The Heart of Montreal", en 1956, les limites données étaient un peu différentes à l'est, soit Bleury; nous avons choisi Amherst et il faudra dans le futur penser jusqu'à De Lorimier.

La jonction possible du Boulevard Métropolitain par Amherst, en longeant le parc Lafontaine, Christophe-Colomb et le Domaine St-Sulpice, l'aboutissement à l'important projet de Radio-Canada, sur Dorchester, Atwater et De Lorimier, en drainant l'accès de la rive sud, deviendront les deux limites de circulation du grand centre de la rive sud.

A l'intérieur de cette zone centrale se trouve le coeur proprement dit de la ville, soit: ouest–rue Guy, nord–rue Sherbrooke, est–rue St-Laurent et sud–rue Notre-Dame.

La présence de l'habitat à haute densité au nord de Sherbrooke et celui qui va s'affirmant au pourtour de ce coeur suivant l'arc déjà cité, limite définitivement le centre économique de la Métropole.

Occupation et densité du centre

a) *Le commerce sur la rue Ste-Catherine et une partie de Sherbrooke,*
b) *Les services administratifs et les bureaux dans la basse-ville, avec poussée sur Dorchester et Sherbrooke.*

Il eût été souhaitable que l'ensemble de l'administration civile puisse être déplacé et retrouver une situation plus centrale tel l'axe Cherrier et la rue Esplanade, au bas des pentes est du Mont-Royal; mais le regain de vitalité du centre, la tendance à la construction d'un habitat de haute densité, l'autoroute est-ouest et sa jonction avec le nord, la rénovation de l'est de la rue Dorchester avec comme foyer Radio-Canada, la possibilité d'un grand ensemble au sud de la salle de Concert, la construction d'un nouveau Palais de Justice; tout cela paraît justifier le maintien et la consolidation du site existant.

Après étude faite du secteur limité par Guy, Sherbrooke, St-Laurent et St-Antoine-Craig, nous considérons un rectangle de 6500 pieds sur 3200 pieds, donnant environ 21 millions de pieds carrés. L'occupation maximum pourrait atteindre suivant les règlements actuels, 160 millions de pieds carrés.

Si un employé de bureau occupe 100 pieds carrés auxquels 25 p. 100 doivent être ajoutés pour la circulation verticale et les services, un million deux cent soixante mille personnes pourraient travailler dans le centre de la ville.

Dans le centre considéré nous trouvons donc dans le secteur:

21,000,000 pieds carrés dont
7,700,000 pour les voies et
13,300,000 pour les îlots

Vitalité du centre

Depuis cinq ans le centre de la ville est en pleine évolution et qu'il s'agisse de projets sur le point d'être exécutés ou de projets en cours d'exécution, 10 p. 100 de la surface actuelle du centre de Montréal est en plein remaniement.

Si nous considérons une évaluation des surfaces actuellement en rénovation ou à l'étude ou des immeubles récents venant d'être parachevés, nous arrivons à un total approximatif de 1,327,000 pieds carrés, soit plus de 10 p. 100 de la superficie hors rue. Ceci comprend les éléments suivants: Banque Mercantile, Banque de la Nouvelle-Ecosse, le journal Le Star, L'Hydro-Québec, la Place des Arts, Morgan, CIL, Place Ville-Marie, Windsor Plaza, Banque de Montréal, l'Air Liquide, Immeuble Sherbrooke-Bishop, le journal La Presse.

Il est à remarquer et heureux que les hasards du site, de même que ceux de la spéculation aient permis de situer ces différents édifices dans un éparpillement non concerté et qu'il n'y ait pratiquement pas de groupement compact. Cela nous permet de dire qu'il n'est pas trop tard pour sauver le centre et que par une étude judicieuse de chaque nouveau projet il sera possible d'établir un équilibre satisfaisant. Il aurait pu, au hasard de la spéculation, se former des bouchons; cela n'a pas eu lieu. Dix fleurs dans un grand vase, séparées par de la verdure, c'est relativement aisé à composer, mais à partir du moment où 90 autres s'y ajoutent, il n'y a plus de place pour le hasard. L'art du bouquet est indispensable.

Un édifice culturel, la Place des Arts, bien à sa place d'ailleurs (admettons-le puisque le sort en est jeté,—les discussions de ce qui aurait pu être étant définitivement négatives) vient s'incorporer dans ce grand ensemble vers lequel convergeraient toutes les circulations. Il vivra à chaque instant d'une vie intense et devra être entouré d'hôtels, cinémas, etc.

Nous pourrions aussi parler de ce grand complément de la Place des Arts que j'ai préconisé: "La Place de la Confédération", laquelle avec ses hôtels, éventuellement son Conservatoire et au sud, la Place des gouvernements, deviendrait le pôle d'attraction de la vie publique de Montréal. Une parenthèse sur ce projet pour faire remarquer que par une étude plus approfondie, nous avons pensé que le stade pourrait être déplacé et que cette place basse serait encore ennoblie si elle était réservée à l'usage des gouvernements, des grandes administrations publiques, des consulats, musées, etc.

Pénétration du centre

Actuellement 300,000 personnes circulent dans

le centre de la Ville:

70 p. 100 empruntent les transports en commun, soit 210,000

30 p. 100 des voitures privées, soit 90,000

Si nous considérons la base reconnue de 1½ personne par voiture, c'est actuellement 60,000 voitures au minimum qui sillonnent le coeur de la ville.

Nous connaissons les points de pénétration et la proportion du volume de circulation.

Dans l'ordre de grandeur, en partant de la plus importante:

a) *Carrefour de Pine et Parc, avec répartition sur Sherbrooke.*
b) *St-Denis avec répartition sur Sherbrooke et St-Laurent.*
c) *Carrefour Guy et Sherbrooke.*
d) *Université et Sherbrooke.*
e) *Dorchester.*
f) *Bleury.*
g) *Craig.*
h) *Pénétration par l'avenue Wellington de Verdun.*
i) *Sherbrooke-St-Laurent.*
j) *St-Antoine.*
k) *Notre-Dame.*
l) *Ste-Catherine.*
m) *St-Jacques, etc.*

Accès futurs

Les accès ne peuvent guère varier si nous considérons la trame et la grille des rues. Les entrées principales resteront approximativement les mêmes: Guy-Sherbrooke, Pine et Parc, St-Laurent, Sherbrooke par l'est, Dorchester, et la future voie à grande circulation du bas de la ville.

Plusieurs solutions sont possibles quant à l'emplacement de cette dernière, mais il est une chose certaine, c'est qu'il est indispensable qu'une voie à grande circulation dégageant le bas de la ville soit construite.

Nous pouvons considérer les voies d'accès futures comme étant les suivantes:

a) *Express-way est-ouest se raccordant à Bleury et Université.*
b) *Ste-Catherine devrait être réservée uniquement au transport en commun avec élargissement des trottoirs et des stations-abris pour piétons.*
c) *Aménagement du carrefour de Côte des Neiges et de Sherbrooke.*
d) *Passage souterrain Amherst et Sherbrooke pour dégagement vers le Boulevard Métropolitain.*
e) *Jonctions à deux niveaux entre Sherbrooke, Hutchison, Durocher et City Councillors (jonction de l'avenue du Parc et du square Victoria, via Morgan).*
f) *Dorchester raccordée à l'est au pont Jacques-Cartier et à Atwater.*
g) *Rue des Cyprès reliant le carré Philips à Guy.*
h) *La rue Osborne raccordant le quadrilatère à Guy.*

Ces suggestions de base devraient être complétées par d'autres qui ont besoin, malgré leur logique, de recevoir une prise en considération plus attentive de la part des autorités publiques.

Boulevard Métropolitain, près du bureau de Montréal de la SCHL.

A gauche, à proximité
de l'Université McGill.

Rue Ste-Catherine, à l'ouest,
aux heures de pointe.

Réorganisation du centre

1) *Rue Sherbrooke:* Le commerce de luxe se maintiendra et cette rue gardera son caractère de noblesse, de haute classe. Une extension de cette rue est à prévoir par son raccordement avec Place Ville-Marie, par le réaménagement de la rue McGill College.

   Certaines compagnies garderont leur édifice principal sur Sherbrooke, telles Holt Renfrew, l'administration des grandes distilleries, agences de voyage, etc., ce qui ne les empêchera pas de posséder de petites succursales dans les centres importants de passage, tels la nouvelle rue McGill College, certains grands hôtels et la Place de la Confédération où devraient être réunies toutes les activités représentatives de la vitalité de la Métropole.

   La rue Sherbrooke verra ainsi se construire de nombreux édifices mixtes (habitations et bureaux) des succursales de banques, des hôtels, etc.

2) *Rue McGill College:* Création d'une artère de commerce de luxe (une rue de la Paix à Paris).

3) *Rue Ste-Catherine:* Cette rue restera la rue des magasins, mais il sera indispensable d'y maintenir une limite de hauteur dans la construction des bâtiments (particulièrement au sud). Cette rue devrait devenir plus verte et restera ensoleillée.

4) *Rue Dorchester:* Elle maintiendra sa place de grande artère des affaires et verra son développement prendre de l'ampleur sur toute sa longueur entre Guy et De Lorimier, lorsque Radio-Canada commencera la construction de ses studios.

   Toutefois, il faudra que d'une manière définitive et efficace, les règlements de zonage et de construction fixent la densité de construction, les reculs, limites latérales, hauteurs, etc., pour ainsi

empêcher la mise en oeuvre d'une nouvelle *ville-canyon.*

5) *Radio-Canada:* Son installation dans l'est de la rue Dorchester créera une zone de redéveloppement d'au moins 2,000 pieds de rayon. Sa situation rend encore plus efficace la construction de l'express-way est-ouest.

6) *Place des Arts:* Son développement par le projet Place de la Confédération permettra de créer dans Montréal un élément de grande classe avec une place des fastes et des manifestations populaires, ce qui n'existe pas à Montréal.
Ce grand ensemble serait le poumon de Montréal. Au sud de cette place il serait nécessaire d'enjamber la rue Craig, ce qui serait facile puisque le niveau de la place se trouverait à 45 pieds au-dessus de cette grande artère. Ce serait ainsi créer une jonction horizontale de Ste-Catherine à St-Jacques et Notre-Dame, liant par un joint libre de circulation automobile ces deux éléments de la Ville, qui ont toujours été séparés par cette vallée, lit d'une ancienne rivière.

7) *Les voies de chemin de fer* devraient partout où cela est possible être recouvertes afin de supprimer cette barrière artificielle du fer et redonner ainsi à Montréal une surface considérable de terrains vierges (les nouvelles locomotives permettent aisément ce changement). Je pense tout particulièrement à cette partie de la basse-ville occupée par les voies du CNR aboutissant à l'ancienne gare Bonaventure.

8) *Sud du square Dominion:* Cette partie de la ville peut être le sujet d'une très belle étude, le site est encore dans l'attente d'une rénovation heureuse ou d'une catastrophe. Il faudrait que la Cathédrale puisse être incorporée dans l'étude en tant qu'élément à ménager et non à enfouir comme St. Patrick, à New York. Il est à remarquer qu'elle est située exactement dans l'axe de l'avenue de Verdun, et que sur toute sa longueur lorsqu'on revient sur Montréal, la Cathédrale en est le fond de perspective parfaitement axé.

9) Veiller à ce que le *square Victoria* soit étudié dans son ensemble, au sens large du mot. Cet emplacement deviendra certainement l'une des plus belles places de la Métropole. De plus, c'est l'élément qui joindra le centre actif St-Jacques Notre-Dame à la Place Ville-Marie.

10) *Remaniement du quadrillage urbain*—Et ceci n'est pas l'une des moindres des améliorations à apporter à Montréal.
Théoriquement il serait nécessaire de supprimer dans toute la longueur du secteur considéré, une rue nord-sud sur deux. Ceci afin de recréer des blocs viables et ainsi réduire de 25 p. 100 les difficultés de circulation.

11) Il faudrait faire de l'urbanisme en créant des fonds de perspective au lieu de ne voir qu'un tracé d'assemblages linéaires; faire réellement de l'urbanisme et non permettre le parachutage de gratte-ciel, vrais stalagmites de la spéculation.
Il ne s'agit pas seulement de faire des blocs rationnels, mais bien de créer des perspectives, des ensembles. Ce n'est pas en acceptant des éléments viables individuellement que l'on va créer des ensembles organisés.
La rue n'est pas une fuyante sans fond de perspective; il faut dans les centres des fonds, des limites, ne serait-ce que pour redonner des dimensions. C'est le système des écrans, des changements, de l'humain. Laissons au métro la monotonie des galeries de jonction, ne le répétons pas en surface où l'air, le soleil, la verdure et l'homme doivent se côtoyer dans une condition plus digne et moins mécanisée.✦

Né en France et diplômé de l'Ecole des Beaux-Arts de Paris, monsieur André Blouin exécuta de nombreux travaux au Havre avant de venir s'installer au Canada en 1952, à la demande du Secrétariat de la province de Québec. Il est présentement professeur de Composition architecturale à l'Ecole d'Architecture de Montréal et on doit lui attribuer de nombreux travaux d'architecture et d'urbanisme au Canada.

Service on the railway line to Wawota will soon be discontinued.
Photo by National Grain Company Ltd.

The Vanishing Prairie Village

T. B. Pickersgill

Mr. Pickersgill is the Prairie Regional Supervisor of Central Mortgage and Housing Corporation.

The Prairie village grouped around its grain elevators, railway station and main street has been an integral part of the prairie landscape since the railroads opened the land to agriculture. For over half a century, village life has served as the focal point in the economy of the farming communities, but its role, in recent years, has been steadily diminishing. As a matter of fact, there is even some concern about its continued existence. Is there a future for these hundreds of small rural centres in Manitoba, Saskatchewan and Alberta?

NFB

The heart of a prairie village—the grain elevators. Davidson, Saskatchewan.

The picturesque town of Elbow on the South Saskatchewan near the new damsite.

SASK PHOTO

The next twenty years may well witness a more pronounced change in the pattern of rural living than will occur in our Canadian cities. Metropolitan areas will undoubtedly continue to grow, but the nature of the urban style of living may not be appreciably altered. However, in the typically rural areas a profound and perhaps irreversible change is taking place. In the wheat growing regions of the Prairie Provinces, the changes have already radically modified the rural mode of living and will see a gradual decline in the importance of the small towns or villages.

To explain the fundamental changes taking place today, it is necessary to examine the development of rural life on the Canadian Prairies. Why, at the turn of the century, did hundreds of villages spring up across the western plains? What was the reason for their location and spacing?

Accessibility has always been the essential factor in the location of a new community. When settlements first began multiplying over the prairies, horse drawn vehicles, whether farm wagon, buggy or democrat, determined that shipping points should not be more than eight or ten miles apart, because a five to six-mile radius was about the practical distance for a farmer to get his produce to market. This was the most time that could be spared from the farm between sunup and sundown.

The spacing of the villages accounts for the network of railway branch lines which thread their way through the farmlands of western Canada. Every shipping point is the site of one or more grain elevators and a little white stockyard. It is here the farmer's grain or livestock is held pending loading into box cars on the railway sidings. The railways provide the essential link between these hundreds of villages and hamlets and the larger marketing centres with the communities varying in size according to the degree of service supplied to the surrounding countryside.

The first settlers in the villages were the retail merchants, implement and oil dealers, grain and livestock buyers and rail agents; then followed the banker, the school teacher and the clergyman. To the more populous settlements came the doctor, the lawyer and others with specialized skills. The needs of the local farming community plus the interchange of services to fulfil these needs provided the opportunity to establish a business or professional practice or to minister to the educational, municipal and spiritual needs of the people living in the area. Horsepowered transportation completed the link between the farm population and the railway — the gate to the outside world.

How this has changed in the past 20 to 30 years! With the acceleration of technical improvements, especially in the field of transportation, a new marketing pattern has evolved with still greater

changes coming in the future. It was only a few years ago when the only paved rural road in Saskatchewan was the stretch between Regina and Moose Jaw. Today the motorist can drive hundreds of miles in that province without leaving the paved highway. All-weather market roads have greatly facilitated and speeded up automobile travel and truck transport. In the prosperous twenties the farmer still rode to the village at the leisurely pace of a team of horses. Today he can speed off to a town twenty miles away to buy a part for his tractor and be back in the field with only a slight interruption to his farm work.

Faster and more comfortable motor transport on improved highways, first replacing the horse and now to some extent the railway, is having a decided impact on the role of the village in the rural community. Country salesmen and others who formerly patronized the railways have stopped using them altogether. Operating passenger trains without passengers is a poor way to run a railway, so the branch lines have been abandoned one by one.

NFB

A Saskatchewan prairie village starkly outlined by the rising winter sun.

However, there has been one mitigating factor, if a temporary one, in the decline of the village brought about by these dramatic changes in transportation. The exodus has been slowed down to some extent by the migration of many farm families to the nearest established community. But the same reasons that lead the farming family to the village are inviting them to abandon their village moorings to move on to the nearest town. Improved country roads from farm to town enable the farmer to commute daily and operate his farm with no reduction in efficiency. Just as residing in the village offers certain advantages over life on the farm, so does the town with its additional facilities attract people from the village. Living in the nearest town offers the farm family certain educational advantages and other amenities that do not exist in the village. The larger town provides better equipped schools, more modern municipal services and medical attention and improved recreational facilities; in short, a higher standard of living for the family than was possible in the village.

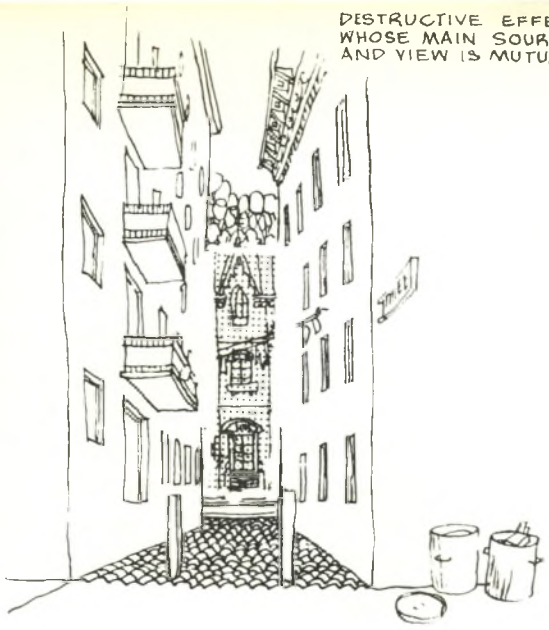
Continued improvement of highways with year-round access and the opening up of new highways will make practical longer daily commuting distances from the home in town to the farm. It will be easier — and undoubtedly more pleasant — for a farmer living in Swift Current, let us say, to travel daily to his farm near Herbert 30 miles away, than for the office worker living in Oakville, Ontario, to go to work in downtown Toronto.

This complex and rapidly changing pattern of rural living in the small towns and on farms has been the subject of several years' study by the Royal Commission on Agriculture and Rural Life in Saskatchewan. The Commission was appointed by the Government of the Province in 1952. The report of the Commission presented to the government in 1957 is published in fourteen revealing volumes. One of these deals almost exclusively with the problem of service centres, their number, size and location. The Commission foresees far-reaching changes in the years ahead.

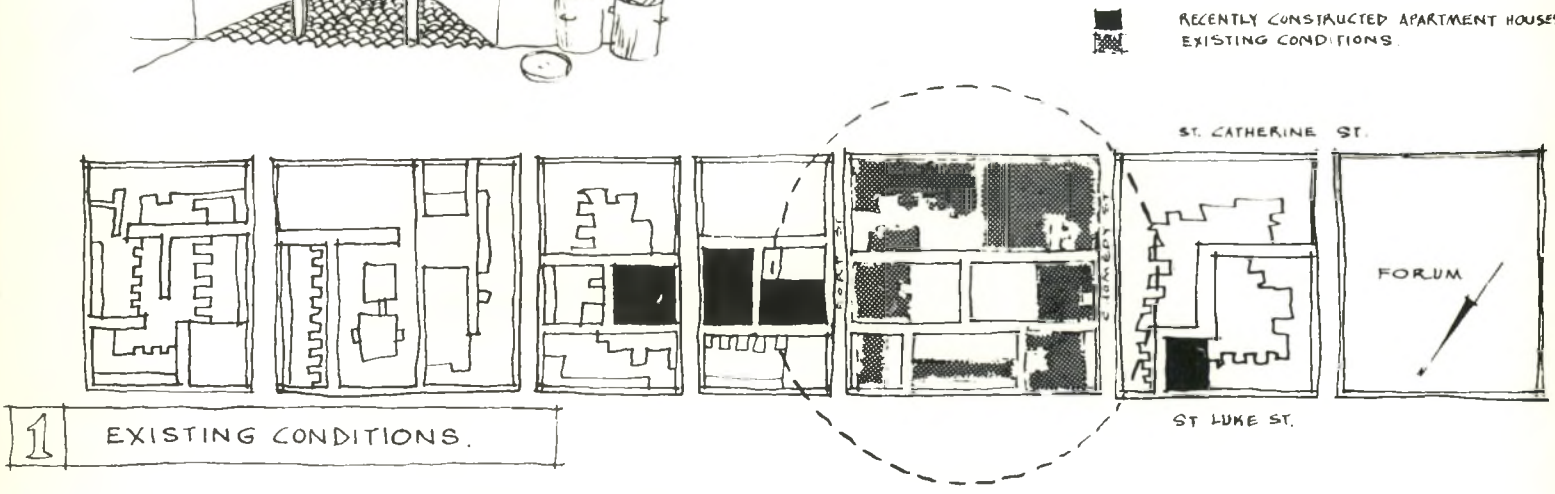
Arising from certain recommendations in the report of this Commission, has been the establishment of a committee which is reviewing the entire system of municipal government in Saskatchewan. Instead of some 400 rural municipalities in that province consideration is being given to setting up fewer and larger local government unit areas. The same reasons contributing to the diminishing need for the many small shipping points, make superfluous many small local municipal administrations. A similar study is being made by the Rural Municipalities Association of Manitoba.

The far-reaching changes taking place in the rural life of our prairie communities is of more than academic interest to Central Mortgage and Housing Corporation. The direct lending authority contained in the National Housing Act and government policy on this question have resulted in many long-term housing loans being made in little towns. It needs nothing more than a casual visit to one of these towns where advantage of National Housing Act facilities has been taken, to see the improved standard of housing. This has been one of the many satisfying results of the Corporation's activities. It will become increasingly necessary, however, to assess the economic prospects of the village and the factors affecting these when considering the extent to which long-term mortgage loans should be committed. A housing loan with many years to run in a village where the railway has just been abandoned could be a dubious security.

To thousands of Canadians who have lived all or part of their lives in a small prairie community or on a farm close by, it is sad indeed to contemplate the future for many of these villages. The very character of rural life in the West has been built around these "whistle stops". The covered wagon was replaced by the iron horse, which in turn is being superseded by faster and more practical means of transport. Every age brings its own contribution to the perpetual evolution of mankind. The rural community, like the big city, cannot escape the march of progress, even if this means the sacrifice of some happy memories.✦✦✦



THE BLOCK PLAN

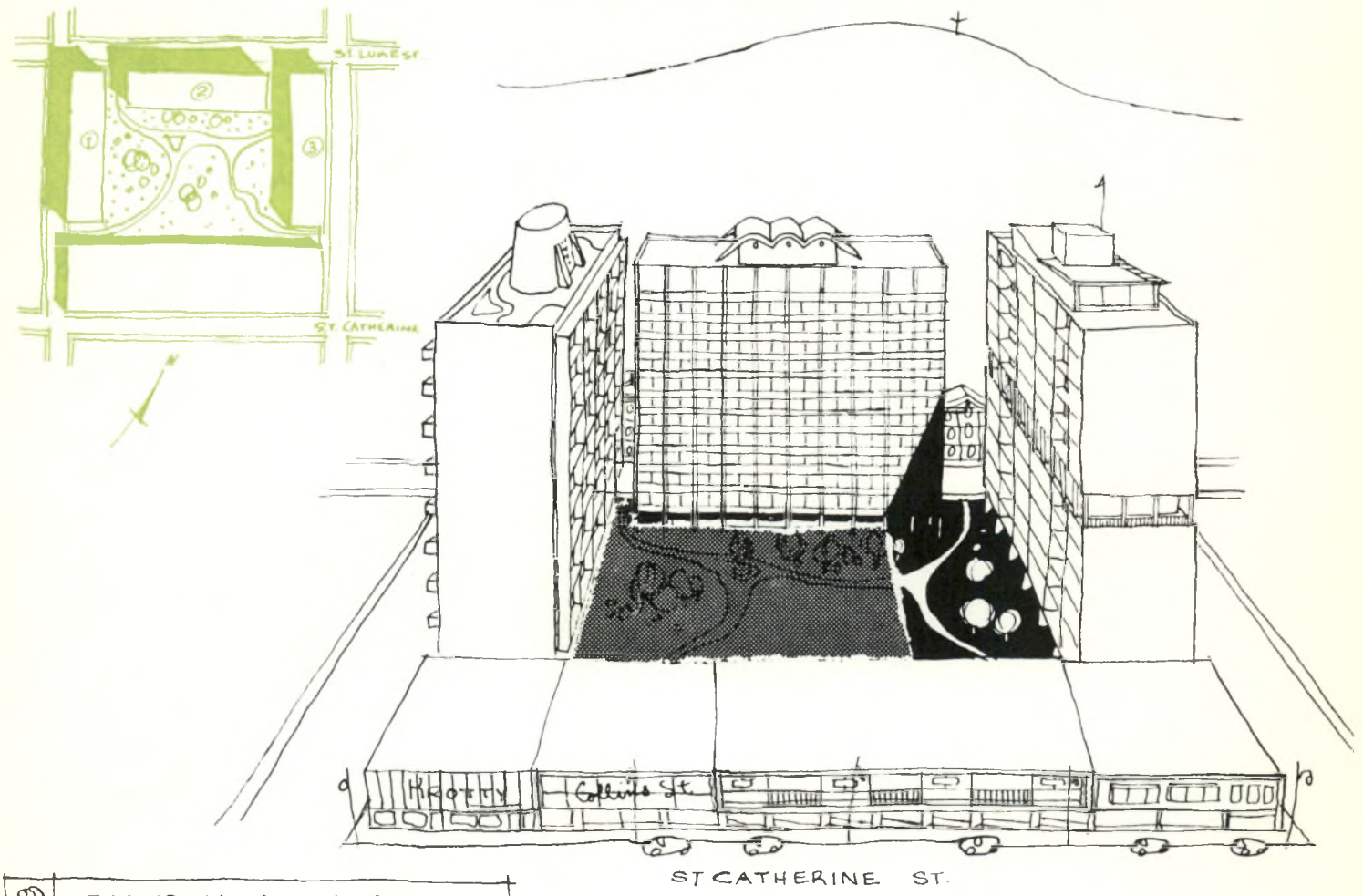


1 EXISTING CONDITIONS.

H. Mayerovitch

Why do so many of us choose to live at the centre of cities? The disadvantages of urban living seem so clearly to outweigh the advantages. Yet in spite of traffic noise, smoke and dust, lack of privacy, limited access to sunshine and fresh air, lack of greenery in the immediate surroundings, impersonality of existence in a dwelling unit — the appeal seems to remain irresistible. Obviously there is the convenience of being near one's place of work. But there are other reasons too. The city centre is and has always been regarded as the fountainhead of civilized life. Here it should be possible to be refreshed and stimulated through recreational activities. Here one should be able to sense the power and order of our guiding beliefs, to exult in the color and exotic atmosphere of a sort of cultural

Mr. Mayerovitch graduated in Architecture from McGill with the McLennan Scholarship for travel abroad. He is now a member of the firm of Mayerovitch and Bernstein. He has a varied practice with some emphasis on apartment house development. Long interested in housing and planning problems, he has written frequently on these subjects and has actively participated in the work of such organizations as the Community Planning Association of Canada, the Montreal Architectural Research Group, etc.



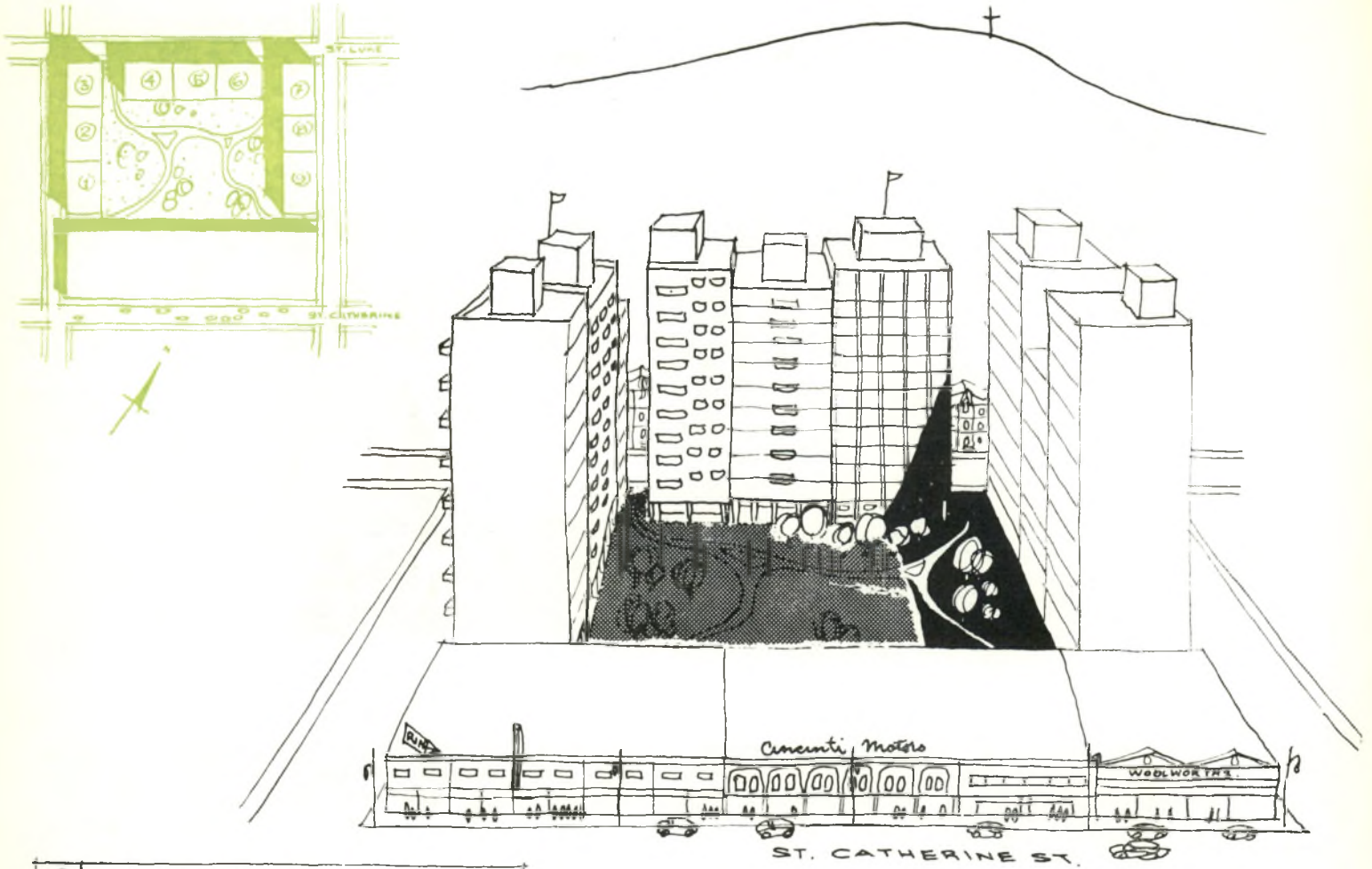
2 THE IDEAL DEVELOPMENT

market place. But more often than not we find instead an anarchic and dismal expression of cross-purposes, greed, disregard for others, short sightedness — and lack of understanding of our true capacities. And yet as the city grows, the centre seems to beckon with an ever-increasing insistence.

This fatal attraction has been recognized and acted upon by the building fraternity in characteristic manner. They have built more apartment houses, and because of the high cost of land, taller apartment houses, as close as possible to the centre of the city.

In these ever more congested areas more and more people live and hope. But is it really the kind of living worthy of our creative abilities? The city heart, which should represent the high point of civilized effort, instead of offering us the finest living conditions, provides too often some of the worst.

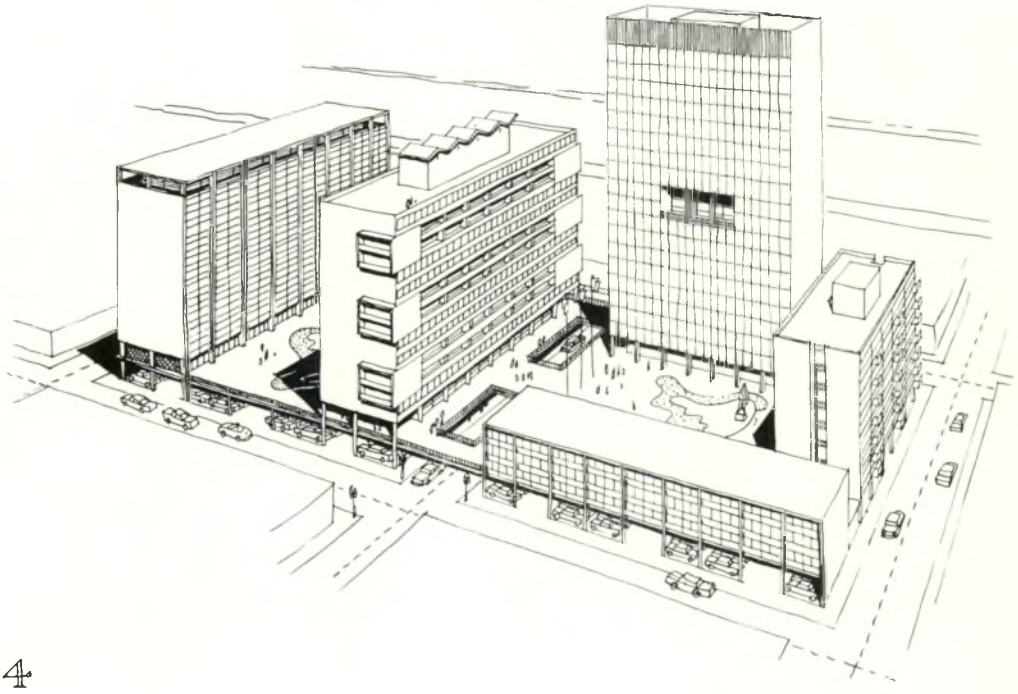
This is a dark thought and one which has troubled me a great deal as a result of extensive personal association with apartment house design in downtown Montreal. Springing up here and there, are 10 to 15-storey buildings replacing the two or three-storey houses which, up to the present, had made up the bulk of residential accommodation. In one area in which I am interested, bounded by Guy,



3 A REALISTIC COMPROMISE.

Atwater, St. Catherine and Sherbrooke Streets, this development was especially rapid, so that a trend could easily be detected (*see sketch 1*). It is obvious that these new buildings haphazardly dropped into place without regard to each other's presence must eventually destroy each other. In one case, in fact, a developer had erected two buildings, back to back, in such a way as to destroy his own values. It seems hard to believe that blindness could be so complete. Here were being erected perhaps the most expensive slums in the city's history — fully equipped with doormen, air-conditioning and wall-to-wall carpeting. Was there nothing to prevent this becoming a permanent trend? No preventative legislation, no awareness on the part of public officials, or perhaps even a whimper from the public? It is true that tenants were becoming more selective for the first time since the post-war building boom began.

At least one lending institution was beginning to be wary of investments exposed to outflanking. Yet, consciously worked out alternatives were not being offered. The time has certainly arrived when a reappraisal of the downtown housing situation is urgently needed. I think it may still be possible to prevent the present building cycle being written off as a disaster.



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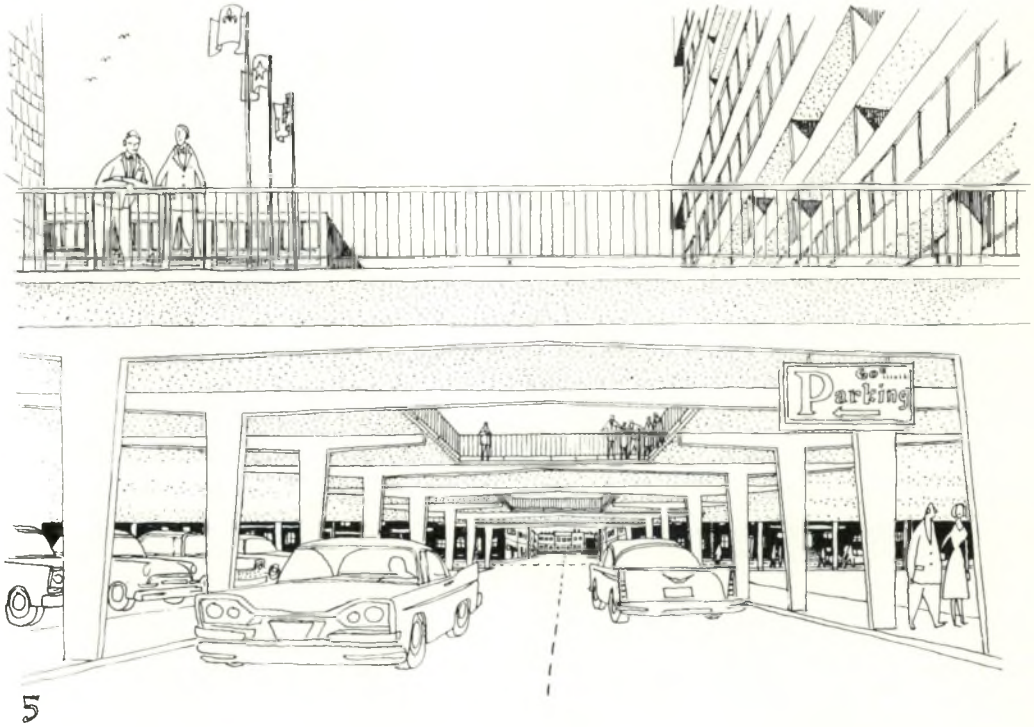

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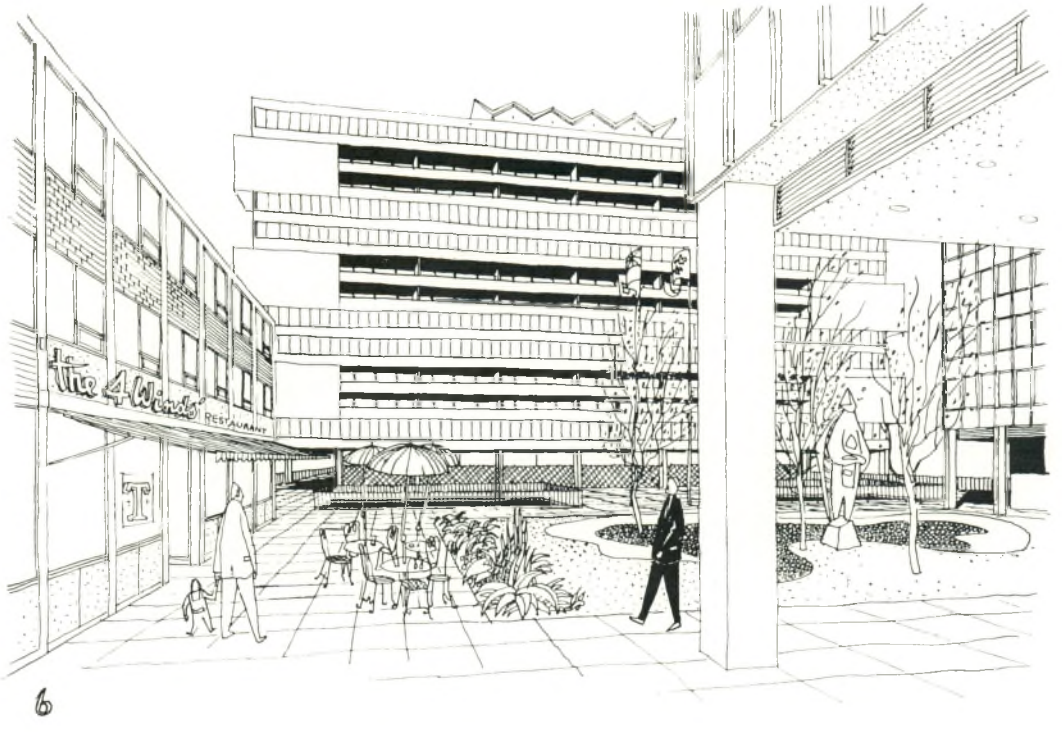


6

What alternatives are there? Alternatives do not exist in the abstract. They must be related to clearly understood purposes. Solutions are difficult to find before deciding what it is we want to solve. This seems absurdly simple — but it is as absurdly true that we seldom have a clearly defined purpose in planning or even improving a city or neighborhood. "Planning" is usually done in a panic because one or another desperately pressing problem requires immediate action. In such an atmosphere no overall rational study is possible.

Let us then begin at the beginning. What is a city? The city is a focal point of a region where many purposes, interests, functions — both social and individual —are concentrated, and which work themselves out sometimes in a relatively harmonious manner, more frequently in a maelstrom of clashing forces. The more complex our civilization and technical powers, the more complicated do these problems of adjustment become, and the more flexible are the arrangements required. We may well ask whether, in such changeable and disturbing circumstances it is possible to provide an urban setting where the human mind and body may develop to the utmost.

I think much can be done in this direction even in already built-up cities. The basic physical conditions can, of course, be altered only a little at a time and within circumscribed limits. It is almost impossible in our age to redesign a city like Montreal, in the manner of, say, ancient Peking where an absolutist ideal could impose a rigid theme — and enforce it to the last roof tile.

No, it seems that, because our society is a democratic one and because the motivation and impetus for building lie largely in the hands of the individual our concept of cities must be more flexible. Instead of one theme, our cities are more likely to consist of

many themes, each as unified and harmonious within itself as we can make it, and related to other themes in as orderly and imaginative a way as conditions may permit. It is in this light that I began to think of possibilities for the "problem" district I have described. *Sketch 2* represents a possible "ideal" solution. Living quarters start at the third floor and are thus protected against street noise and dust; auto access and parking are at street level and immediately above are to be found protected play areas for children, quiet secluded cafes and recreational facilities set in a sort of oasis completely isolated from the hurly-burly of the city. I have presupposed that any unit *smaller* than a city block would offer little opportunity to create such a living atmosphere.

Obviously such a development would involve acquiring large parcels of expensive land which would have to be held for some time, pending full realization. Large institutions with vision might reasonably be attracted to such ideas — but it may be necessary in some cases for the city itself to be the sponsor, (possibly with assistance from senior governments). In such cases a municipality might have to be granted powers to purchase and hold such land. The land could in most cases be held by virtue of the revenue from existing buildings upon it. In the heart of the city this would usually be possible. The eventual development could be undertaken by the prime movers — or the land could be sold or leased piecemeal to individual developers, subject to regulations governing the entire development (*see sketch 3*). For the developer this would have a double attraction:—

1. He could participate in a large development which can offer greater amenities and can compete more successfully, particularly in a tight market.
2. He would have guarantees that the values created would be protected and maintained.

The holders of the land would stand to gain through the enhanced value of the land which would result from intelligent and large scale development.

The city would of course, benefit through additional tax revenues from a type of development which would enjoy few vacancies and higher rentals. And finally the eventual consumer, the city dweller, would at last come into his own and reap the benefit of a proper urban setting in which to enact with greater dignity the drama of his life.

This method of development would have an interesting and important architectural result. It would create an effect of diversity within a unified whole.

In my opinion this last point has particular significance. Should it not be possible in our cities to effect a marriage of social purpose based on harmony and order, with the variety and diversity expressive of our individuality? How many huge housing developments have we not seen which, ostensibly erected from the loftiest social motives, have in fact produced a monstrously inhuman atmosphere due to the failure to recognize basic human needs. City housing has amongst other things a romantic function which is not easily fulfilled by the usual large scale development. I am convinced that in this field the romantic urge, so strong in people subject to the tensions of city life, must be provided healthy outlets. Large scale urban housing developments of a special kind must now be devised to this end. This may well become recognized as a prime architectural problem of our time and one which reflects the dilemma of current life — the need to combine the rational with the romantic.✦✦✦

Maquette de la basse-ville de Priène (350 av. J.C.)

L'HABITATION ET LES CIVILISATIONS ANCIENNES

par Louis A. Dernoi

Monsieur Dernoi est un architecte-urbaniste, employé au bureau de Montréal de la Société centrale d'hypothèques et de logement.

La civilisation grecque, première manifestation de l'antiquité classique, se présente comme une transition bien nette entre l'Orient et l'Occident. Quoiqu'elle fût le point de départ des coutumes de l'Occident, ceci devint possible grâce à l'adaptation et à l'assimilation de la vieille culture de plusieurs millénaires de l'ancien Proche-Orient à une société nouvelle et plus dégagée d'Indo-européens.

L'habitation classique grecque aux différents stades de son évolution fut, elle aussi, le produit d'un mélange où nous retrouvons des éléments de l'ancien Orient, de la culture énigmatique crétoise et de la préhistoire continentale. Cette composition produisit quelque chose de neuf et de différent que nous n'avons rencontré dans aucune des trois manifestations énumérées plus haut. Examinons maintenant, chacune de ces trois civilisations, en étudiant leurs caractéristiques et en cherchant à retrouver dans chacune, certaines particularités qui contribuèrent à l'éclosion de l'habitat grec.

A. *L'habitation dans l'ancien Proche-Orient*

L'étude que nous avons faite dans les deux articles qui ont précédé celui-ci, ne pourrait pas faire paraître le sous-titre plus haut très savant ou érudit, puisque toute la gamme des variations dans l'habitat des différents peuples qui ont habité le Proche-Orient, pourrait y apporter certaines contradictions. Cependant, il y a plusieurs points de similitude que j'énumérerai plus bas:

1. Le caractère renfermé de la maison.
2. L'existence et l'emploi intensif de la cour intérieure et sa protection contre la circulation sur les voies publiques grâce à l'emploi de passages brisés.

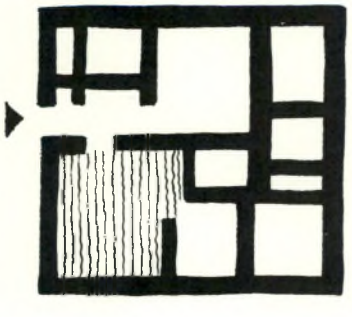
3. La présence d'une salle de séjour imposante avec orientation spéciale et ségrégation des suites réservées à l'homme et à la femme.
4. L'usage généralisé du toit-terrasse.
5. Un élargissement de la maturité de la culture domestique, etc.

Il est curieux de constater que la maison grecque incorporait chacune des caractéristiques orientales communes, quoique dans leur application pratique, des modifications aient été apportées, nous permettant seulement de reconnaître les principes d'application plutôt que les manifestations physiques.

B. *L'architecture domestique à Crète*

La civilisation assez particulière de cette île méditerranéenne, a laissé les plus vieilles traces de l'existence humaine dans le bassin de la Méditerranée. L'habitat original était la caverne. Les premières démarches entreprises dans la construction de maison a été la division intérieure de la caverne. Plus tard, la maison en pierre de forme circulaire a fait son apparition, suivi de près par la maison rectangulaire plus facile à diviser. Ce n'est que vers 2000 avant J.C. que la culture urbaine a commencé à évoluer. Alors, en même temps que la vie économique et politique, les premiers groupements humains se formèrent sur des points où l'activité commerciale et industrielle était concentrée, ou encore autour du lieu de résidence des souverains.

Apparence extérieure
de deux maisons
d'une ville de Crète
(autour de 1300 av. J.C.)



Aménagement intérieur
d'une maison de Crète
(environ 1700 ans av. J.C.)

Les villes de Crète ne présentent aucun signe de planification: l'épanouissement naturel adapté aux conditions physiques. Des rues tortueuses et étroites traversent la ville avec des maisons des deux côtés de la voie, à proximité les unes des autres, sans aucun espace entre elles.

La maison crétoise est différente de celle des autres civilisations de la Méditerranée orientale. Aucune formule spéciale a été adoptée dans la préparation du plan de la maison. La seule marque distinctive se manifeste dans l'orientation est-ouest des maisons. L'habitation est devenue une adoption de la maison primitive d'une pièce, en y ajoutant des cellules additionnelles qui devenaient accessibles en traversant une pièce pour se rendre à l'autre. Ce

genre d'habitation fut le lot de la classe pauvre pendant des siècles, alors que la classe moyenne aisée avait adopté d'autres aménagements. L'espace restreint à l'intérieur des villes, et peut-être aussi à cause de certaines préférences, a permis une expansion en hauteur et ce développement a subsisté durant toute l'époque de la culture minoenne. Contrastant avec les habitudes égyptiennes et romaines, les riches habitants de Crète préféraient vivre dans des maisons de plusieurs étages qui ont toujours été l'apanage de la famille du propriétaire seulement.

Plusieurs émaux retrouvés dans les ruines des villes de Crète témoignent bien de la popularité des maisons à plusieurs étages. La chose la plus frappante que nous ayons pu constater dans la construction de ces maisons, est l'usage remarquable des fenêtres et les dimensions de celles-ci, (c'est la première manifestation d'un tel usage dans la séquence des anciennes cultures urbaines). N'allez pas croire que les fenêtres constituaient les seules issues à travers lesquelles pouvaient pénétrer l'air et la lumière vers l'intérieur des pièces. Dans le cas des maisons d'un ou de plusieurs étages, des cours intérieures avaient été aménagées; cependant, leur utilisation n'a jamais atteint un formalisme que l'on a pu rencontrer dans d'autres civilisations.

De façon générale le vie urbaine à Crète, malgré une très grande concentration, était empreinte de fortes tendances libérales et individualistes, tant au point de vue physique qu'au point de vue moral.

Pour résumer, nous pouvons affirmer que l'habitation de Crète offrait les caractéristiques suivantes:

1. Un plan de maison n'offrant aucune caractéristique spéciale.
2. Une maison et des pièces de forme carrée plutôt que rectangulaire.
3. Préférence pour un grand nombre de petites pièces au lieu de pièces plus grandes et moins nombreuses.
4. Usage libéral de la cour intérieure.
5. Conformité du niveau des habitations au contour du terrain et une préférence pour les édifices à plusieurs étages.
6. Orientation de la maison pour que les pièces principales soient du côté du soleil levant.
7. Une attirance vers la vue extérieure grâce à l'aménagement de grandes fenêtres donnant sur la rue.

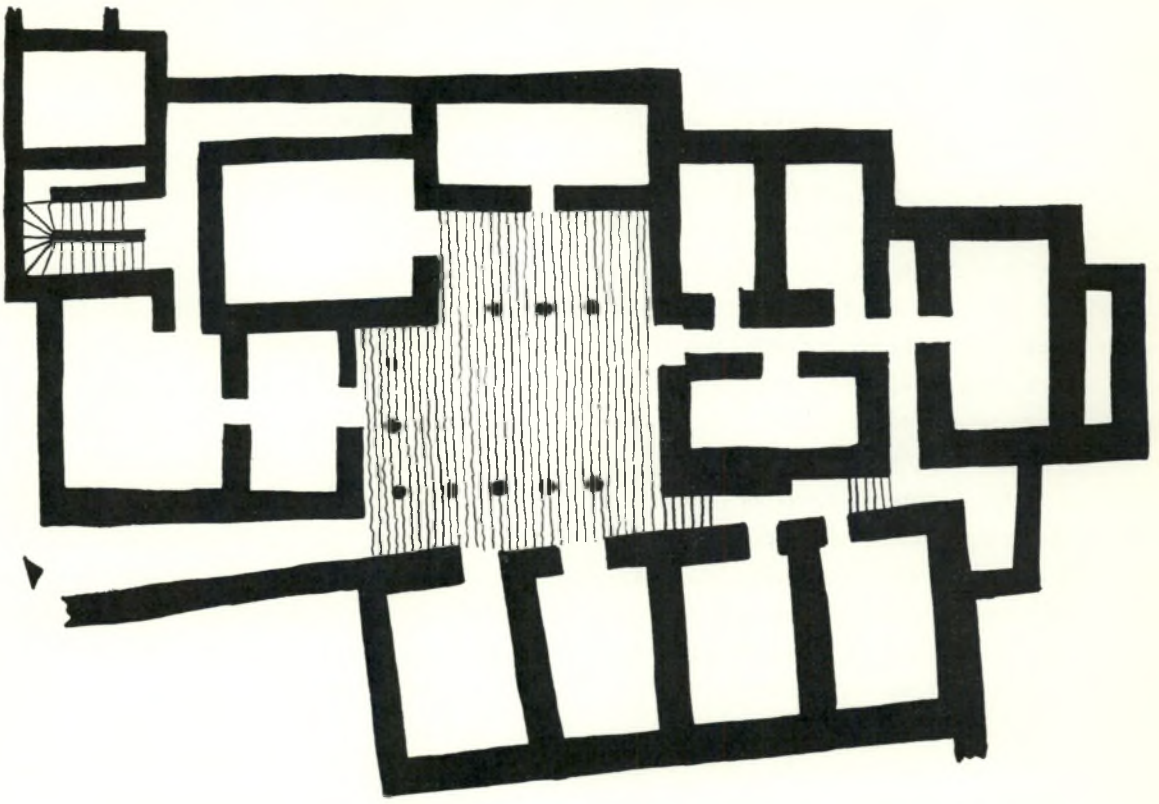
Parmi ces particularités différentes, la civilisation continentale grecque s'était contentée d'en adopter que deux ou trois dans le cours de la période archaïque de son évolution. Toutefois, lorsque les normes de l'urbanisation furent plus avancées (autour de 400 av. J.C.) l'hellénisme adopta plusieurs de ces raffinements que les Crètes avaient déjà mis en pratique dans leur activité urbaine.

C. *Evolution de l'habitation sur le continent grec*

Il existait sur ce territoire une civilisation urbaine longtemps avant que les tribus indo-germaniques de l'Achaïe venant du Nord n'envahissent la péninsule balkanique; cette civilisation était déjà répandue de la Macédoine jusqu'au Péloponnèse: cette prétendue culture néolithique qui avait produit un certain nombre de petites agglomérations sur toute cette superficie (autour de 3500-3000 av. J.C.). Dès les débuts de cette ère, les cavernes qui avaient servi jusque là d'habitation furent abandonnées pour des constructions circulaires en pierre. Plus tard à l'époque énéolithique, les besoins d'espace intérieur s'accrurent et c'est ainsi que vers 2500 av. J.C., apparurent plusieurs transitions, depuis la forme ovale jusqu'à la forme oblongue du style mégarique.

Il est probable que l'influence crétoise de même que certaines préférences naturelles contribuèrent à la disparition des demeures aux formes curvilignes. Ainsi, lorsque les premières vagues de l'invasion aryenne atteignirent cette région (vers 2000 av. J.C.) les nouveaux venus acceptèrent les maisons aux formes rectangulaires qu'ils trouvèrent là et qui se comparaient avantageusement avec leurs habitations traditionnelles du Nord. La forme définitive du style *mégarique* classique fut perfectionnée par eux et devint un trait caractéristique de la maison grecque pour une période d'environ 2000 ans.

Le style *mégarique* offrait un contraste avec la



Aménagement intérieur de la maison d'un dirigeant de Mycènes (autour de 1200 av. J.C.)

forme carrée de la maison crétoise et la chambre principale des maisons de l'Orient. C'était une exigence imposée par le climat nordique. Les longues pièces orientées vers le sud, pour la chaleur des rayons du soleil, et le foyer situé au milieu de la maison, étaient les caractéristiques principales. Les "antae" servaient à la récréation à l'extérieur et procuraient de l'espace additionnel à l'avant de la maison, tout comme dans le cas d'une véranda. Les Achéens occupèrent les établissements qui avaient abrité les populations précédentes. Des points stratégiques furent construits sur le haut des collines, telles Mycènes, Tirynthe, Malthi, etc.

Malthi est un très bon exemple du stade primitif de l'urbanisation achéenne. Tout en tenant compte de la topographie, le groupement communautaire pouvait comprendre cent maisons. Les mesures défensives avaient été les seules prises en considération lorsque fut conçu l'aménagement urbain de cette ville. Les maisons présentaient alors les premiers vestiges d'une architecture domestique: ces maisons comprenaient toutes une ou deux pièces de style mégarique avec une vue sur la rue des deux ou même trois côtés de la maison.

La capitale Mycènes d'où partirent les troupes achéennes en direction de Troie (1200 ans av. J.C.) présentait des caractères d'une certaine évolution en matière d'habitation. Quoique les fouilles nous aient permis de retracer seulement le palais du monarque régnant et les maisons des chefs de file, les chercheurs ont pu quand même se faire une idée des caractéristiques de l'organisation communautaire. L'artère principale de circulation présentait les vestiges de l'influence orientale alors que l'habitat était un mélange de style crétois et continental. Tout en ayant conservé le style mégarique pour l'emplacement de la pièce principale de la maison, les pièces additionnelles qui furent ajoutées à la maison étaient de forme irrégulière et de localisation différente. La résidence à deux étages devint plus acceptable et la cour intérieure péristyle fit son apparition (cette dernière particularité est un phénomène que l'on retrouve dans l'architecture de Crète).

En ce qui concerne la construction elle-même,

la pierre était employée seulement comme empattement, alors que les murs étaient construits avec de la brique séchée au soleil. La forme originale du toit à pignon des régions du nord fit place au toit plat grâce à l'influence du style sud-oriental.

Autour de 1200 ans av. J.C. les tribus grecques descendirent du Nord vers la péninsule balkanique. Les emplacements de l'empire achéen tombèrent en ruines. Ce n'est que vers 1000 ans av. J.C. que les nouveaux venus s'établirent d'une façon permanente. Toutefois, la plupart des cités grecques classiques ne prirent forme que vers 800 av. J.C. Ces établissements permanents furent érigés presque exclusivement sur les territoires antérieurement occupés par les anciennes communautés urbaines. En ce qui concerne leur tracé, les villes de la période pré-classique de l'urbanisation hellénique adoptèrent les formules des Achéens. Leur emplacement était encore plus éloigné de la mer afin de procurer des moyens plus faciles de défense. Aucune autre formule de planification eut une influence sur l'aménagement des agglomérations. Les murailles ainsi que les rues et les squares furent construits en tenant compte des contours naturels du terrain.

Les seuls renseignements que nous ayons pu recueillir sur les modèles de maisons de cette époque nous ont été transmis par les écrits du poète grec, Homère. De la rue on pouvait avoir accès à une grande cour intérieure autour de laquelle des chambres avaient été construites pour tous les membres de la famille, à l'exception de la chambre réservée au maître. Celle-ci était de style mégarique, habituellement située face à l'entrée principale, qui en réalité était une grande pièce principale avec vestibule à l'entrée. Les autres commodités, tels le harem oriental, la salle de bain et un second étage, ne se trouvaient que dans les habitations de la classe aisée.

A partir du cinquième siècle av. J.C. les grecs demeurèrent sous l'influence orientale surtout à cause de l'expansion perse. Les moeurs de l'ancien Orient avaient fortement impressionné les agglomérations helléniques relativement récentes. Le nouveau style (neoteros tropos) s'était infiltré dans les nouvelles communautés urbaines. *L'architecte Hippodamos* de Milet, passé maître dans la planification des nouvelles villes, avait établi des règles qui furent suivies dans l'aménagement des agglomérations urbaines grecques, durant une période d'au moins 500 ans.

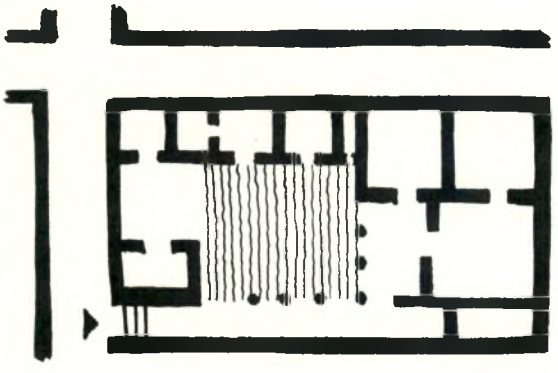
Les cités nouvelles furent conçues en fonction de leur commerce maritime et cette conception a joué un rôle très important dans la localisation des ports de mer. Cette dernière préoccupation fut tout de même assez souple pour que l'on s'adapte à d'autres considérations d'ordre physique; contrairement aux autres civilisations anciennes établies sur les rives des cours d'eau, il semble que la ville grecque n'a jamais voulu se dissocier complètement des avantages que pouvait lui offrir la nature.

L'innovation la plus apparente fut l'aménagement en forme de damier qui donna aux villes grecques et helléniques l'apparence d'avoir été aménagées selon des données scientifiques de planification. On fit une distinction marquée entre la largeur des ruelles où se trouvaient des résidences et celle des artères dites de circulation. Les pâtés de nouvelles maisons permirent aux constructeurs de faire un meilleur usage du terrain et aux populations urbaines d'organiser leurs districts.

L'identification des différentes classes sociales produisit une très grande variété de types de maisons. Des maisons du vieux style mégarique devaient se retrouver dans les campagnes et dans les villes; les maisons des familles à l'aise continuèrent à suivre les vieilles traditions. A Athènes au quatrième siècle av. J.C. la densité de la population était très grande et on peut même dire qu'il y existait un état de congestion. Même les maisons des familles riches commencèrent à être érigées en hauteur afin de procurer plus d'espace au second étage pour les pièces réservées aux femmes. Les chambres du premier ou du second plancher étaient groupées autour de deux cours intérieures entourées de colonnes isolées: un signe de la conquête définitive des habitudes orientales.

Les familles de classe moyenne devaient se contenter d'une cour intérieure avec huit ou dix pièces

Aménagement intérieur d'une maison de famille de classe moyenne à Priène (350 av. J.C.)



érigées autour de celle-ci. Nous rencontrons encore ici quelquefois le style mégarique primitif avec vestibule. Les familles qui appartenaient à la classe moyenne inférieure, possédaient quelquefois leur propre maison: trois ou quatre chambres groupées autour d'une cour intérieure, mais aucun signe de l'habitation de style mégarique n'était présent.

L'ère chrétienne apporta une concentration urbaine encore plus prononcée. Le nombre des prolétaires habitant les villes augmentait considérablement; ce phénomène a suscité la production en masse de nouvelles maisons qui, à cause du coût élevé des terrains, ne pouvaient être construites qu'en hauteur. Les bâtisses à logements multiples de quatre et cinq étages firent alors leur apparition. A l'origine, chaque plancher était occupé par un seul locataire. Toutefois, il est probable que plus tard chaque plancher fut divisé en plusieurs unités de logement tout comme les bâtisses à logements multiples des romains. Malheureusement, nous ne possédons aucune donnée sur l'aménagement de chacune de ces unités. Nous savons qu'il y avait des escaliers à l'intérieur de ces bâtisses et que ces logements possédaient de grandes fenêtres donnant sur la rue. Les bâtisses les plus élevées de ce type furent construites aux troisième et quatrième siècles A.D. à Byzance (Constantinople), et elles atteignaient une hauteur de 100 pieds.

D'autres descriptions sur l'habitation grecque sont données dans des traités d'histoire hellénique. Alexandre le Grand a propagé ses vues sur la civilisation, sur l'ensemble du monde connu à cette époque (334 à 323 av. J.C.). Alexandre et ses successeurs fondèrent un grand nombre de cités cosmopolites. Contrairement à l'indépendance partielle des plus vieilles cités, ces centres cosmopolites représentaient des liens culturels et militaires dans le chaînon de l'hellénisme, et leur emplacement en Europe ou en Asie était à l'intérieur des terres plutôt que le long des cours d'eau. Les villes helléniques groupaient à l'intérieur de leurs frontières, certaines populations locales qui avaient conservé leurs propres caractéristiques plutôt que d'avoir adopté celles des habitants d'origine exclusivement grecque. La forme de ces villes était strictement quadratique et présentait l'aspect d'un camp militaire. Les rapports sociaux et culturels dans ces villes étaient habituellement supérieurs à ce que l'on pouvait trouver dans les villes grecques plus anciennes. Ces centres urbains avaient été habituellement fondés par un monarque quelconque et l'attachement qu'on lui témoignait, permettait à ces villes fastueuses et riches d'atteindre une grande renommée.

L'aménagement intérieur de ces centres cosmopolites avait été réalisé selon le style d'Hippodamos, mais sur une plus grande échelle, avec plus de voies centrales de circulation et plus d'édifices publics. Les maisons dans ce cadre offraient un exemple d'adaptation aux traditions locales. Quoique les immigrants grecs se soient logés selon les données et les coutumes d'une ville grecque, les maisons particulières pour la plupart, furent construites d'après des plans adaptés aux usages locaux. Seule la grande qualité de l'artisanat et les éléments d'art décoratif hellénique donnèrent à l'habitation sa couleur et sa conception occidentale.

Le phénomène constaté plus haut démontre qu'une théorie qui est applicable dans un certain milieu peut difficilement être transplantée dans un autre milieu, où les circonstances sont différentes. Toutefois, cette transplantation dans un voisinage semblable, comme par exemple la civilisation romaine en a été le cas, a des chances de succès et peut s'épanouir davantage.✦✦✦

CENTRAL MORTGAGE AND HOUSING CORPORATION
SOCIÉTÉ CENTRALE D'HYPOTHÈQUES ET DE LOGEMENT
OTTAWA, CANADA

HABITAT

JULY-AUGUST 1961
JUILLET-AOÛT 1961

THE BACKUS MILL, PORT ROWAN, ONT.—John Backus was one of Ontario's earliest industrialists and completed the construction of this mill in 1798. The mill was one of two or three on the North shore of Lake Erie that escaped destruction during the invasion of American forces in November, 1814. Its survival was a great blessing to the settlers of Norfolk County, who depended on it to supply them with flour the ensuing year. The mill was in continuous operation longer than any other in the province and it is interesting to note that all moving parts, with the exception of the mill stones, were made of wood—shafts, gears and bearings.

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HABITAT

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Cover design by Phyllis Lee

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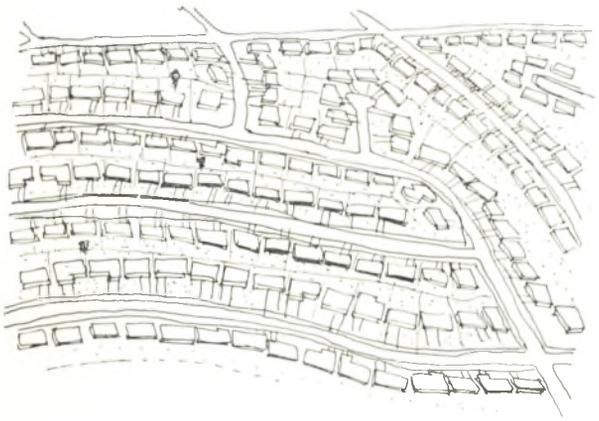
FALLACIES, NOSTALGIA AND REALITY

Moshe Safdie

The Residence of General Lee, Virginia.



A suburban subdivision.

The residence of General Lee of the Confederate armies of the South is a single-family house that stands on its one thousand-acre lot in Virginia overlooking Washington, D.C. The home was built in times of slavery, of uneven distribution of wealth and a social setup which today has disappeared. But for most North Americans, this house is still the image of the ideal dwelling; this is what is aspired to and desired. The image may vary — a Spanish villa in California, a Victorian mansion in Ontario, and for those who are up-to-date, Falling Waters or a Neutra villa; but all are essentially the same—they are forms of housing based on the factors and values of a bygone age. The so called "House of Tomorrow" is the house of yesterday.

Nevertheless, most North Americans do get a single-family house, with few variations; the lot size is 60 feet by 100 feet, the site is rather less spectacular, and the floor area of the dwelling slightly more than one thousand square feet. Everything is done to preserve the "Casa Loma" image. A space of ten to twelve feet is left between houses so that they are free-standing on their estates. Superficial ornament is applied so that each house is "different" and has a "custom-built" look. All this at the expense of privacy both indoors and outdoors — a complete waste of the land, resulting in an environment which the builders themselves now call "a bag of worms".

Even above-average developments display these weaknesses. For example, a Design Council award-winning project in Toronto has dwellings sited ten feet apart under the pretext of privacy, while in fact the kitchen of one dwelling overlooks the dining-room of the adjacent one.

It is natural in times of transition that public demands and tastes deviate from the reasonable or logical. It is natural for all periods of transition to result in obsolescence. But it is unfortunate that the legislation in the form of zoning pertaining to buildings and building bylaws, has been designed to support and enforce this unreasonable development. Furthermore, it is unfortunate that the economy in general, and building finance and mortgage regulations in particular have been so designed as to prevent almost any other kind of development, so that there are, in fact, Government subsidies supporting wholesale, planned obsolescence.

Building bylaws, especially on the municipal, country and township levels, make demands unrelated to any physical study or other concrete considerations. As an example, there is the fanatic insistence on the 66-foot street, even when its use is wasteful and hampering and also the insistence on set-backs from the street, which results in useless

Award-winning design, Toronto.

land in front of the house, a garden too small at the back. Side yard demands, height restrictions and even stylistic prescriptions are only few of a long list of requirements. Many examples illustrating the effect of such legislation can be given, as in the case of the Massey Silver Medal-winning design of South Hill Village in Don Mills by Murray and Fliess, where after a long battle the project, as constructed, still contravenes several bylaws; or the case of Eiccler Construction, where the architects, Aushen and Allen have developed an inward-looking house and have for five years been unable to reduce the distance of dwellings from the prescribed 116 feet (66 feet plus 25-foot setbacks).

In the long run, any housing form is an aspect of the economy as a whole; it is here that the single-family detached suburban house — as we know it — must be evaluated. Post-war advocates of this form of housing often suggested that home ownership was a stimulant to economic growth. But in recent years economists have shown that there is little difference between ownership based on little or no down payment followed by a series of monthly payments and the conventional rental system. Further, European practice has shown that possibility of ownership is not restricted to the detached house. It has also been shown that the actual cost of the single-family detached house is greater than is apparent, both to the consumer and the economy and that this form of housing is indirectly subsidized and supported in favour of other forms.

These factors stem from the high cost of servicing and maintaining the land, sewer, water, road construction, snow clearance and the vast transportation network linking many square miles of suburban sprawl.

Taxation policy has favoured the single-family house. Higher taxes on industry and commerce have in effect subsidized the unreasonable costs of servicing. Furthermore, higher taxes are imposed on rental accommodations in other housing forms (66 per cent more tax for equal accommodation — U.S.A. average) so that persons purchasing a single-family house are being subsidized by those who rent their dwellings. Other taxes are used to construct the vast network of super highways, bridges, etc., necessitated by low densities. As R. F. Legget, Director of the National Research Council's Division of

South Hill Village, Don Mills
Architects: Murray & Fliess

Chatham Village, Pittsburgh
Planner: Clarence Stein

Building Research, pointed out in his article, "The Real Cost of Housing", the only way to calculate the cost of housing accommodation is by the actual cost method which considers amortization, interest on the capital, maintenance, taxation, insurance and transportation. This approach illustrates that a daily transportation expense of twenty-five cents is equivalent, when capitalized at 6 per cent on a twenty-year basis, to two thousand dollars at purchase.

It would be ridiculous to imply that the single-family dwelling and other forms of lower density housing are obsolete. But it must be made clear that this is only one of several forms of urban pattern and that successful developments can only be achieved by a critical analysis of the governing factors — size of lot and the optimum utilization of the land, provision of pedestrian and vehicular circulation which is suitable and economical, an analysis of the way of life of the inhabitants, and provision of basic needs such as privacy, etc., and the establishment of a communal structure. Perhaps the best example of the results of such an analysis is Clarence Stein's Chatham Village — which is a reminder that we are not practising in the 'sixties the achievement of the 'thirties. It is doubtful if one could, today, finance a new Chatham Village; and there are very few, if any, places in North America where existing zoning would permit a Chatham Village to be built.

Following a decade of suburban monopoly, a renewed interest in urban housing is apparent. This has brought about the redevelopment of old dilapidated areas within city cores, such as Georgetown, D.C. and similar areas in Philadelphia. The appeal of these areas, once rejuvenated, precipitated re-examination of the existing practice and values concerning the siting of buildings and resulting spaces. It has shown the fallacy of the theory which suggests that the lower the density, the better the living environment; that proximity and compactness cause slums and dilapidation; that higher densities were synonymous with overcrowding.

Indeed it is now apparent that our legislative system concerning this aspect of housing was evolved as a reaction to ugly technology at the beginning of the century and is thus essentially anti-urban.

Georgetown proves that small but private gardens serve their owners well and that an enclosed and well-defined street is pleasant. It also illustrates that both unity, through uniformity of materials and detail, and on the other hand identity, through subtle variations, are possible.

The Georgetown street was evolved to serve the pedestrian. It pleases us because it is in scale with a human being moving at four miles per hour. Our present bylaw streets are inadequate for both the car and the pedestrian — for they are a compromise. This suggests that we must make an effort to separate these functions and provide for each separately and adequately.

Renewed interest in the city also brought about

Georgetown, Washington, D.C.

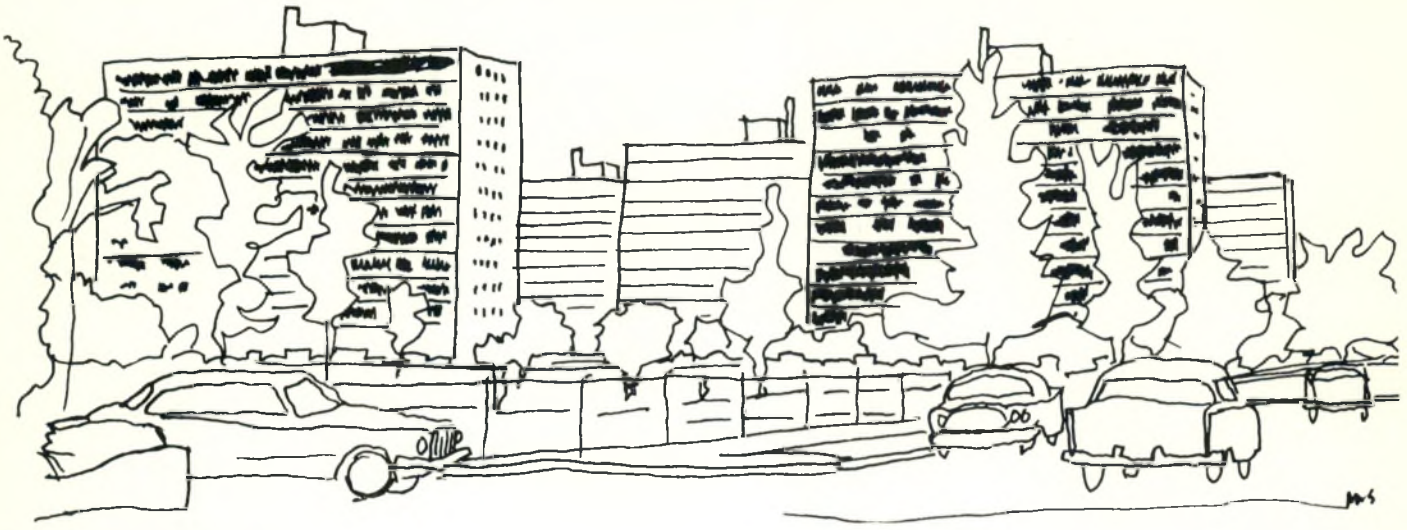
large scale urban redevelopment — a great deal of which was housing, both private and public. Common to most new projects was the necessity of relatively high densities to compensate for the expensive land and to rehouse the thousands displaced.

With this large scale building program, the third fallacy was born: "It is impossible to house families in high-rise buildings". This conclusion is based on observations of existing structures, and in that case may indeed be justified.

The same aspects of housing are overlooked in multi-storey projects as in other forms. In the case of multi-storey buildings, they are more critical because of the large concentration of people, making the projects unmanageable.

Of the various approaches to multi-storey housing the "Miesian" one — at its best in Mies van der Rohe's Lakeshore Apartments in Chicago — has been popularized. The nature of such a building, made up of a skeleton frame glazed on all sides, is in conflict with the essential requirements of dwellings. The obvious ones — such as orientation, climate control, views, varying room fenestration needs — and the more subtle ones — such as expression of the individual dwelling both internally and externally, identity, circulation — are all sacrificed for the fulfilment of a vague, aesthetic goal. The so-called "Universal Space" has become a universal exhibition space — exhibitions and housing do not go hand in hand.

Washington Square, Philadelphia.



Lake Meadows, Chicago
Architects: Skidmore Owings & Merril

Far right, Staleway-Gardens, Chicago

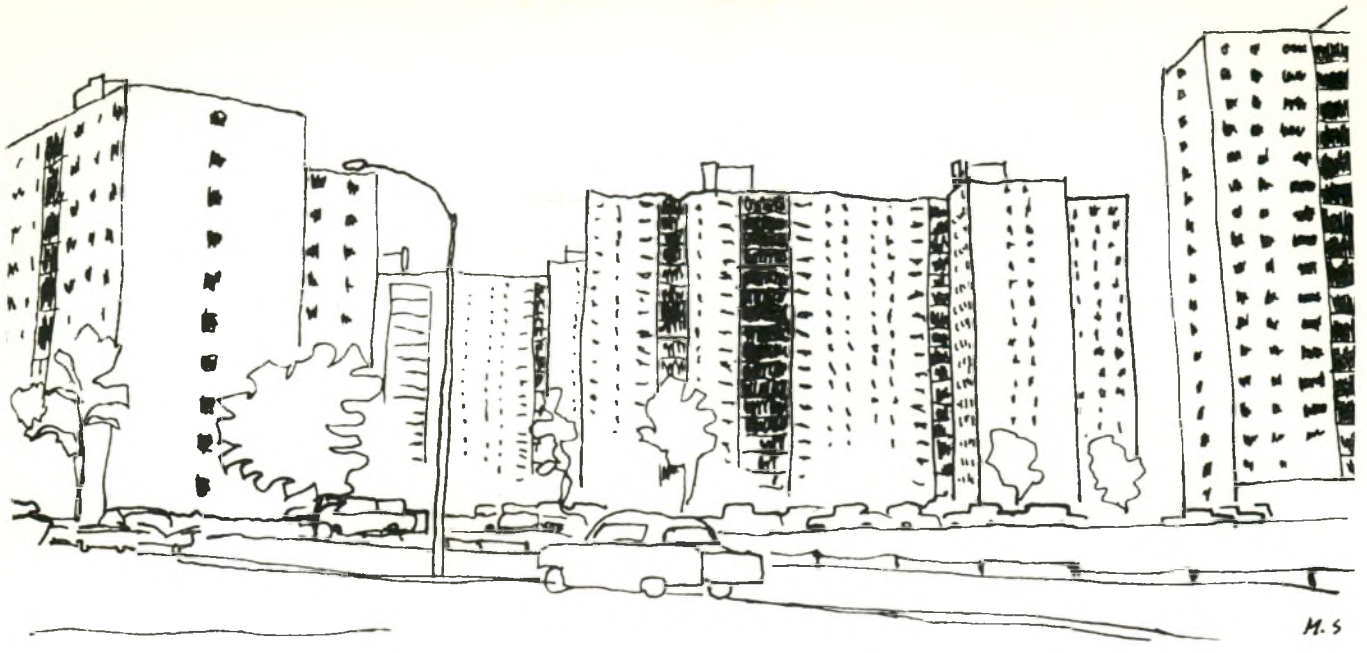
Lake Shore Apartments, Chicago
Architects: Mies van der Rohe.

Variations of this approach have been the "hotel plan" buildings, where dwellings are crowded along a double-loaded corridor which leads in a long journey to the ground via the elevators. Superficial façade variations may make these buildings seem different. We may have precast concrete frames, or grill screens, welded I-sections, or brick panels, projecting balconies or recessed ones; but this is all disguise — as housing forms, they are identical. What is common to them all is that the dwellings are inadequate; that the circulation within the buildings and to the ground is impossible; that unnatural separation of the activities of the family is forced upon it — sleeping and eating in a cell on the thirtieth floor, and children playing and walking in the street.

Ironically, it is in public housing, limited by the strictest economic restrictions, that fresh ideas appear — a new form of access balcony or combining circulation with the family's outdoor space; but these cannot be fully explored because of lack of funds.

All this does not prove that multi-storey housing cannot be used for families but rather that we must evolve new forms which answer the needs — and indeed we must do this in the shortest possible time. The growth of population in our urban areas (the equivalent of one city of 80,000 per month for fifty years, in Canada alone) and the unprecedented rate of rebuilding of our urban cores suggest that even today may be too late.

In searching for solutions for multi-storey hous-



ing we are forced to recognize and analyze the factors that are actually the essence of any dwelling. Such a study will result in clarification of the programmatic essentials of all housing forms.

In the past, man has always organized into social groups within a communal structure. This can no longer be disregarded as it was in recent years, when one is dealing with a large concentration of people sharing many facilities. Groups must be formed — the family; a group of families forms a working unit; several units form a community; communities form urban clusters. Every level of social organization must be a physical phenomenon; it must have identity.

Identity is not limited to these groups — the family must be identifiable. The subtlety varies from culture to culture and in different times, but as long as the family exists it is the basic, recognizable, repetitive unit.

Repetition brings us to technology and the accepted fact that any industrial architecture is essentially dependent on the repetitive use of standard elements. The ultimate test in housing is whether it is possible to achieve unity — yet variety — and a large number of variable dwelling types through the use of few elements.

The dwelling is evolved around the family. Indoor and outdoor private spaces are essential — privacy of sight and sound. From the dwelling we have movement — within the structure and to the ground. Circulation must be analyzed and handled in the most efficient manner.

Finally, we have the relation of the entire complex to the city; the implications of its form and density on that of the city; the movement from the city into the complex, and the development of a sense of location.

These are real problems of architecture, more important than fashionable gimmicks and stylistic masks which preoccupy too many architects. It is unfortunate that professional periodicals are involved in illustrating embassies and art galleries, while housing (not houses) is neglected as being 'dull'. Dull or not, there are a handful of embassies in each country; but more than half of all building construction is devoted to habitat.✦✦✦

Mr. Safdie, born in Israel, is a graduate in architecture of McGill University. He was awarded nine prizes and scholarships including the Lieutenant-Governor's Gold Medal and the Hugh McLennan Memorial Travelling Scholarship. Last year he travelled on a Central Mortgage and Housing Scholarship, inspecting housing in Europe, United States and Canada. Reference sources are in his report to CMHC. This is the first of three articles on high density dwellings by Mr. Safdie.

ALBERTA HOUSES ITS SENIOR CITIZENS

J. K. G. Austin

In the summer of 1958, the Government of Alberta announced an extensive program of benefits to be carried out for the citizens of that Province. The comprehensive plan allocated, among other items, sixteen millions of dollars to build housing accommodation for elderly persons. The units were to be located strategically throughout the Province. Two years later, thirty-one homes, consisting of fifteen hundred and fifty units, were completed.

Like any other ambitious project, this one was fraught with problems not the least of which was the quantity and the location of the housing. One common definition of a senior citizen is a person aged sixty-five or over, but for the purpose of this program it was decided to use age seventy and over group. The 1960 census determined the number of people in this category and where they were living. Roughly, there were fifty thousand people in the age group, with ten thousand each located in Calgary and Edmonton, the balance scattered throughout the Province. Further study revealed that forty per cent of the fifty thousand had no other income than pensions, allowances or benefits. A survey of this 40 per cent in their present accommodation showed that approximately 10 per cent, or two thousand, were not housed satisfactorily and would like to move. A decision was then made to construct eight hundred units in both Calgary and Edmonton with an additional twenty-five hundred units throughout the Province.

An occupancy figure of fifty persons for each home was decided upon because this is the optimum number that can be housed in one building without creating an atmosphere where the close contact between the administrative staff is lost and where the harmonious relationship between the individuals is endangered. Construction and administrative costs for a home of this size are relatively the same as costs for a home of lesser size, but a home for fewer than fifty persons could not operate without a deficit because of the smaller revenue.

To create a geographic pattern for the fifty homes, it was necessary to designate the areas to be created for administrative purposes and also establish the exact location of the home which would best serve an area in relation to the other homes in the province-wide plan. Of course the nostalgic desire of older people to live close to their homesite and to be as close as possible to their families was also taken into consideration.

As soon as legislation was passed and contracts were let for the projects, Master Agreements were completed in thirty-one areas. The remaining homes will be constructed following completion of preliminary work.

The Master Agreement negotiated with any municipality is a simple, flexible document which sets up the operational procedures of the plan and outlines the commitments and responsibilities of the municipality involved and the government. The Homes for the Aged Act, 1959, is mainly enabling legislation authorizing the Master Agreement under which action can be taken by a municipality and the government to carry out the intent of the Act.

Under the agreement, a municipality is required to provide an area of land not less than five acres

— which is subject to approval by the Provincial Government — and to transfer title to the Province. Utilities and services must be extended to the boundaries of the site nearest to the location of the home by the municipality in which the home is situated. A municipality appoints members of its council to serve as directors of the Foundation and any costs involved in acquiring a site and providing utilities or any deficits resulting from the operation of a home are to be shared by the participating municipality in proportion to its respective assessment. The Provincial Government then undertakes to construct a building on the site in accordance with the agreed plans and specifications and to furnish and equip the home. The agreement calls for the Provincial Government to bear the cost of extending all utilities and services on the site. Following the establishment of a Foundation, the Provincial Government then agrees to transfer title of the site to the Foundation.

Some municipalities choose to remain non-contracting municipalities and therefore do not subscribe to the Master Agreement. However, a citizen of any such municipality cannot be discriminated against and charged a greater rate than a resident of a contracting municipality. A contracting municipality is required to contribute only to the maintenance of the home in that particular municipality if a deficit should occur in its operation. A non-contracting municipality is required to contribute on a per capita basis to any home in which a resident of that non-contracting municipality may have resided, should a deficit occur during the year.

The furniture in the homes is of the highest quality and was custom-built to specifications.

PHOTOS COURTESY OF
THE ALBERTA GOVERNMENT.

Although areas were set up for administrative purposes, the boundaries do not preclude the admittance of a resident from outside the area if a vacancy exists.

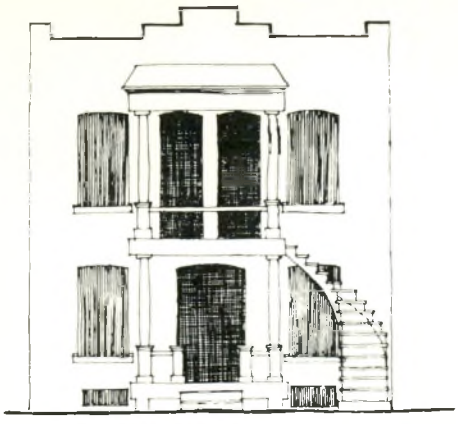
To minimize the charitable aspects, it is important that an individual be able to pay his own way from the resources available to him without having to seek assistance elsewhere. A person whose only income is in the form of a pension or a supplementary allowance, receives $70.00 per month in Alberta. After retaining the permissible comfort allowance, such persons can properly pay $60.00 per month for maintenance in the lodge-type building where all his needs are supplied.

An Order-in-Council was passed setting the rates to be charged residents in a home. The maintenance rate for a person occupying a bedroom for double occupancy is $60.00 per month. Residence in a single bedroom costs $65.00 per month, if the occupant has an income of his own. A person whose only income is derived from Old Age Pension and Supplementary Allowance will not be charged a maintenance rate exceeding $60.00 per month. Those who have not established residence in Alberta for welfare purposes, may be charged rates of $65.00 and $70.00 per month. Applicants are not subject to a means test; however the accommodation is restricted to elderly persons who are not suffering from a disease which incapacitates them.

Approximately one million dollars has been spent on furnishing and equipping these thirty-one homes. Items were bought by bulk purchase tender which resulted in large savings. The furniture is of the highest quality and has been built to specifications. Furnishing is complete to the last detail, including coffee tables, end tables, step tables and all the amenities which promote gracious living. Because of keen competition among contractors, good prices were obtained and as a consequence, the average cost of these homes, fully equipped, is approximately two hundred thousand dollars.

Less than three years from the date of the announcement of this program in the Legislative Assembly, thirty-one homes, or 1,550 units have been erected, furnished, and are now largely occupied. Provincial authorities are presently calling tenders for the beginning of 800-unit projects in both Edmonton and Calgary. Albertans can understandably be proud of these accomplishments for their senior citizens in so short a period of time.

Mr. Austin, a native Albertan, is Director of the Homes for the Aged in that Province. He received his formal education in Edmonton and served with the Royal Canadian Mounted Police from 1934 to 1956. After being pensioned from the Force, he joined the Department of Welfare as a Public Relations Officer. Mr. Austin is very active in both community affairs and sports.



RÉFLEXIONS SUR L'HABITATION URBAINE DU CANADIEN FRANÇAIS

Michel Barcelo

C'est, en quelque sorte, devenu un lieu commun que de parler des transformations sociales rapides qu'a connues le Canada français en moins d'un demi-siècle. Constatées et enregistrées, elles ont été peu analysées et nous en connaissons peu les conséquences pour l'avenir. Alors que le type de vie particulier aux "Anciens Canadiens", leur organisation sociale, la forme et l'architecture particulière de leur habitat sont connus et expliqués, peu ou pas d'études existent du comportement du Canadien français en milieu urbain et jamais on n'en a tiré de conclusions précises sur l'orientation qu'on devrait donner à son habitat, à son environnement urbain pensé intégralement, et non seulement en fonction de l'abri d'une cellule unique. Au risque de n'être pas complète ni tout à fait objective, cette étude tente d'analyser et de prévoir les critères et la philosophie particulière selon laquelle on devrait envisager l'habitat urbain du Canadien français.

Nous oublions trop facilement que le Canadien français est définitivement un type urbain. Si la géographie sociale nous dit que Montréal et Québec sont des "cas spéciaux", ces deux milieux urbains forment pourtant à eux seuls la moitié du peuple canadien-français. Perpétuer l'illusion de l'habitat canadien-français rural et régionaliste, c'est, sur le plan de l'architecture, préférer *Maria Chapdelaine* aux *Plouffe* comme description de notre type particulier de civilisation. Notre culture rurale fut équilibrée, charmante, et produisit, dans le domaine de l'architecture domestique, des oeuvres valables et authentiques; mais la considération de ces valeurs ne peut nous faire oublier que nous sommes à nous créer, en quelques décennies, une civilisation urbaine propre, peut-être moins équilibrée et moins charmante, mais tout aussi digne de nos efforts à nous affirmer comme une communauté humaine à saveur particulière et à objectifs propres. La passivité générale du Canada français face à son urbanisation massive est sans doute explicable par l'absence de contrôles que la communauté a pu exercer sur sa prolétarisation au début du siècle. Si, pourtant, une prise de conscience se manifeste, il faudrait définir les cadres dans lesquels nous pourrons poursuivre un effort de réflexion sur nos façons de vivre et d'habiter.

Le phénomène est digne d'attention: d'ici 25 ans, il faudra doubler le stock de logements à Montréal, qui comptera alors une population de 3,500,000 habitants. En stricts termes mathématiques, quelle est l'implication de ces prévisions? Un économiste de Chicago[1] a calculé que pour loger décemment 1,000,000 de familles avec chacune sa maison unifamiliale, il faudrait une agglomération urbaine couvrant l'immense superficie de 1000 miles carrés. Par ailleurs, nous savons pertinemment que notre peuple est pauvre et que la maison unifamiliale telle que nous la propose actuellement l'industrie du bâtiment dépasse de beaucoup les moyens financiers du Canadien français moyen.

Nous sommes donc en face d'une situation complexe. D'un côté, "il subsiste l'illusion . . . que l'âme, l'essence de la vie canadienne habite toujours la campagne et la petite ville".[2] De l'autre, l'impossibilité économique, démographique et géographique d'entretenir cette illusion.

Vouloir faire d'une grande agglomération urbaine une série de petites villas, c'est à la fois détruire les avantages de la vie urbaine et du milieu rural. Tourné vers le passé, le Canada français n'a pas vu venir son urbanisation massive; la Révolution industrielle qu'il a subie, une des plus

[1] *William K. Wittausch, First Federal Savings and Loan Association of Chicago.*

[2] *Yves Dubé, J. E. Howes, D. L. McQueen, L'Habitation et le Capital Social, Ottawa, 1957, p. 48.*

tardives du monde occidental, a complètement changé son mode de vie, qui commence à se stabiliser; vouloir à nouveau le transplanter d'un cadre urbain à un cadre mi-urbain mi-rural, c'est aller contre la logique des choses et empêcher une quelconque culture canadienne-française de se stabiliser et de s'épanouir.

Nous tenterons donc ici d'esquisser une description du mode de vie urbain particulier aux quartiers canadiens-français de Montréal. La nécessité d'une telle analyse est indiscutable: l'habitat circonscrit une série d'habitudes acquises de l'habitant, acceptées et ré-orientées à un meilleur vivre plus pleinement humain; toute autre façon d'aborder l'habitat (architecturale, économique ou politique) ne peut être poursuivie sans d'abord tenir compte des habitudes de vie crées en d'autres lieux que ceux qui sont à construire.

UN PEUPLE DE LOCATAIRES

Alors que la majorité des Nord-Américains sont propriétaires de leur logement, il est surprenant de constater que les Canadiens français sont en majorité locataires. A Montréal, par exemple, 7 logements sur 10 sont à loyer, proportion exactement inverse de celle de Toronto. Comment expliquer cette situation? Impossibilité d'accéder à la propriété privée? ou mode de vie différent qui n'accorde pas à la *possession* d'un logement la même importance, dans l'échelle des valeurs du reste du continent?

Lacoste[3] constate, à partir des données du recensement, que le revenu ne peut expliquer, à lui seul, cette différence: "A salaire égal, les habitants de la province de Québec sont moins nombreux à acquérir leur logement que ceux des autres régions du pays." Et encore: "La propriété n'est pas non plus liée à la profession, puisque presque toutes les professions dans la province de Québec comptent une majorité de locataires."

Si, par ailleurs, l'on exclut les classes privilégiées, il semble que le seul lien direct qu'il y ait avec la propriété privée, soit la dimension de la famille: "A Montréal, la proportion des propriétaires augmente avec les dimensions de la famille." Et si l'on veut une explication, on peut la trouver dans le fait que "Montréal possède à la fois des familles nombreuses et de petits logements." Le paterfamilias à progéniture nombreuse se tourne naturellement vers la propriété privée quand le marché des logis à loyer ne peut plus satisfaire ses besoins.

On ne peut donc expliquer cette prédominance de locataires au Québec par l'impossibilité d'accéder à la propriété privée: elle est plus explicable par un choix collectif, une échelle de valeurs particulière. Le logis apparaît à son habitant comme un service et à son propriétaire comme un investissement. Il n'est pas encore ici nécessaire d'être propriétaire de son chez-soi pour se conformer, se croire socialement accepté. (L'automobile, d'ailleurs, joue beaucoup mieux ce rôle de "prestige": elle a l'avantage d'être mobile et de suivre la mode.)

Le "duplex" est caractéristique de cette mentalité: ayant économisé quelques sous, on veut bien se construire un chez-soi, mais à condition qu'il rapporte. La solution? Un deuxième logement incorporé au bâtiment et qui "rapporte".

Que dire de cette mentalité collective? Certains, dont Lacoste, la qualifient de "retard culturel". Pourtant, elle est saine et logique. Inconsciemment, le Canadien français admet avec Le Corbusier que le logement est une "machine à habiter". Puisqu'est finie l'époque où l'on se transmettait la terre ancestrale de père en fils, puisqu'enfin "on est rendu en ville", il est normal de considérer le logement comme une donnée variable qui est fonction des revenus et de la dimension de la famille. Cela vient du même bon sens normand qui ne permettait jamais, autrefois, de diviser la terre, "machine à cultiver", en parcelles de plus en plus minuscules, mais exigeait plutôt que les fils quittent la ferme paternelle et s'installent ailleurs.

Qualifier la situation de "retard culturel", c'est, en un sens, tomber dans le panneau des propagandistes de Madison Avenue qui voudraient voir tous les Nord-Américains installés en banlieue, à jardiner ou à accueillir les amis à un "barbecue party". Jusqu'à l'abbé Groulx[4] qui souhaite la désurbanisa-

[3] *Lacoste, abbé Norbert, Les Caractéristiques Sociales de la Population du Grand Montréal, Université de Montréal, 1958, p. 93 & ssq.*
[4] *Le Devoir, samedi, 27 mai 1961.*

tion en faveur des "petites villes où il y a de l'air et de l'espace" . . . et de nombreuses familles, condition habituelle de notre survie. Mais, le Canadien français ne veut plus survivre, il veut vivre pleinement et sa projection dans un milieu urbain vigoureux ne peut avoir que d'heureux effets en lui apportant les ressources économiques et culturelles caractéristiques aux vastes agglomérations.

UN HABITAT URBAIN

"De toutes les régions du Canada, c'est au Québec que l'on trouve en proportion le moins de maisons seules et inversement le plus d'appartements et de plain-pied, soit 55.9 p. 100. Ce mode de construction caractérise le Canada français urbain."

Cette constatation de Lacoste confirme ce qui précède. Pourtant, Montréal est bien loin d'être une ville à la verticale. Les quartiers canadiens-français ne comportent ni phalanstères ni tours d'habitation. Ce sont des unités de voisinage créées de maisons en bande continue, à deux ou trois étages, à l'horizontale, où vit 30 à 40 p. 100 de la population métropolitaine, le reste étant partagé entre les maisons seules et les appartements des immeubles de rapport conventionnels.

Leur caractéristique majeure est l'escalier extérieur qui les identifie inmanquablement comme montréalaises et canadiennes-françaises. Mais nous devrons cette fois dépasser nos critères esthétiques, et analyser au lieu de regarder.

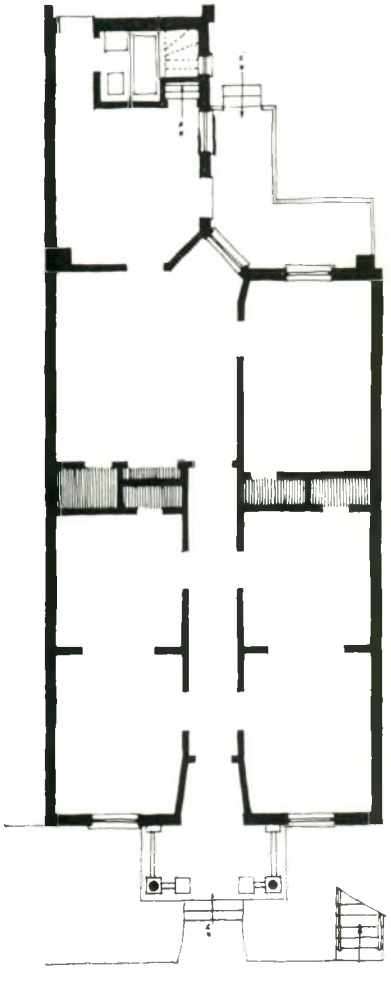
Ces maisons en bande continue diffèrent beaucoup des "Row Houses" tel qu'on les connaît ailleurs, ou encore de ce que nos voisins du sud appellent, avec une certaine sophistication, des "Town Houses". La bande continue n'est pas seulement divisée verticalement, mais aussi horizontalement, en une série de logements individuels. Chaque plain-pied a son accès directement de l'extérieur, mais là encore diffère de l'appartement avec balcon d'accès, puisqu'ici, fort souvent, le balcon est individuel et a un usage plus extensif que le simple accès. C'est dû, en grande partie, à l'invention de l'escalier extérieur.

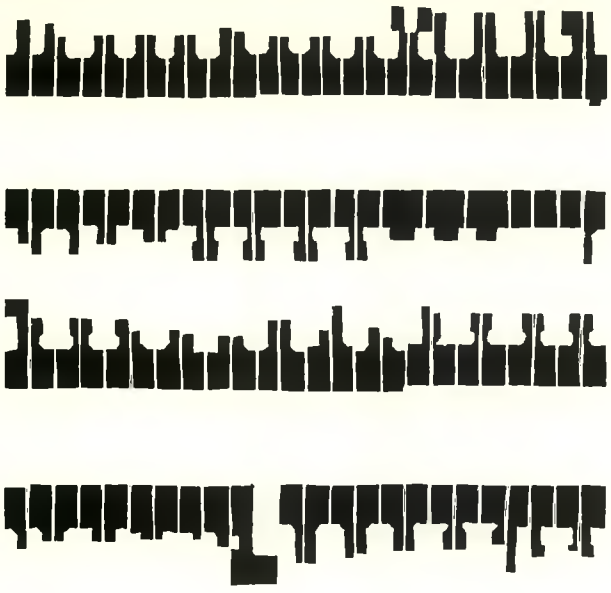
Tout cela a permis de loger, avec à peine vingt-cinq ou trente pieds de façade sur rue, trois à cinq familles, dans une forme de logement communautaire où aucun espace n'est communautaire, si ce n'est le trottoir, les bandes de verdure, la rue et la ruelle, toutes choses entretenues par la collectivité. On arrive ainsi à d'assez hautes densités, sans conciergeries et sans les "frictions de palier" habituelles aux maisons de rapport conventionnelles.

De plus, du fait que souvent deux plain-pied occupent à l'étage la superficie d'un seul au rez-de-chaussée, on arrive à une variété assez grande de types et de dimensions de logements au sein d'un même quartier. Une nouvelle naissance, une légère augmentation de revenus n'obligent pas à quitter le voisinage, ne brisent pas nécessairement les liens qu'une famille s'est formé avec son entourage.

A Montréal, les densités de population les plus fortes ne se retrouvent pas dans les quartiers où sont situées les tours d'habitation, mais bien dans ceux

Plan type d'un logis canadien-français construit entre les deux grandes guerres. L'immeuble compte en tout, dans ce cas particulier, trois logements sur deux étages et vingt-cinq pieds de façade sur rue.





Plan partiel d'un quartier résidentiel formé à partir du plan type de logement de l'illustration précédente. Les rues et ruelles parallèles témoignent d'un manque d'imagination, qui est plus flagrant que dans la planification du logis même.

qui sont constitués du genre de logis que nous venons de décrire. On retrouvera donc, à moins de cinq minutes de marche, une série de petits commerces prospères, des salles de loisirs, l'église, quelquefois un cinéma de quartier, une librairie, voire une bibliothèque. Une vie active, grouillante et compacte, où l'on se coudoie fréquemment, avec une familiarité déconcertante. Un milieu urbain.

Quant aux défauts de cet environnement résidentiel, ils sont nombreux, mais ne dépendent pas nécessairement de la formule adoptée. Ils sont tributaires d'une absence d'imagination dans les façades, d'une planification rapide de rues-corridors par des arpenteurs géomètres promus au rang d'urbanistes, et des mesquineries d'un Code de construction qui se complait pendant des pages à définir la forme et les dimensions des "cours et courettes".

DÉTRUIRE OU CONSERVER UN DÉBUT DE TRADITION

"Après tout, me disait un ami, ils sont logés au chaud, bien nourris. Leur concentration relative, si elle est accompagnée d'une plus grande maîtrise économique, leur permettra d'accéder rapidement à une culture urbaine propre." Cet accès à la "culture des villes" est certain; l'expliquer par le logement seul serait vouloir oublier bien d'autres facteurs. Mais les quartiers d'habitation que nous venons de décrire sont certainement caractérisés par une animation et une bousculade proprement urbaines: ce ne sont pas des quartiers ennuyants.

Le niveau de vie des Canadiens aura tendance encore à s'améliorer; chez les Canadiens français, on accèdera de plus en plus aux stades plus élevés de l'emploi. Le temps des "escaliers extérieurs" est terminé; on réclamera des logis plus humains, non pas nécessairement plus vastes, mais où l'utilisation de l'espace et la qualité même des espaces tiendront meilleur compte de la dignité retrouvée après les difficultés premières inhérentes à la Révolution industrielle.

Les logements ci-haut décrits ont été construits avant la seconde guerre mondiale; depuis, nous nous sommes lancés dans une aventure assez différente, que nous décrirons dans un prochain article, et qui ne sait trop si elle doit détruire ou conserver le début un peu mesquin de tradition urbaine manifesté auparavant. Hésitation compréhensible, mais qui devrait poser de nombreuses questions à ceux qui veulent faire de notre habitat une expression de notre culture. Plus particulièrement, les architectes de la jeune génération verront, avant leur retraite, Montréal doubler en population et en logements.

Pour résumer: un problème qui est nôtre, mais que nous n'avons pas étudié: que tout soit à faire devrait suffire à attirer notre attention.✦✦✦

Monsieur Michel Barcelo fit ses études classiques au collège Jean-de-Brébeuf et y obtint son baccalauréat ès arts en 1956. Il reçut son diplôme de l'Ecole d'Architecture de Montréal en avril 1961, et en 1960, il fut l'un des gagnants d'une bourse de voyage offerte par la Société centrale d'hypothèques et de logement aux étudiants en architecture.

LEHUKUVA OY.

Modern apartments in the Tapiola Garden City bordering Helsinki.
In the foreground the apartment blocks were planned by Viljo Rewell.

RECONSTRUCTION IN FINLAND

Mr. Mikkanen, is employed in the Prairie Regional Office of CMHC.

R. A. Mikkanen

Shortly after the termination of World War II, the northern portion of Finland was described by UNRA observers as the most completely devastated area in Europe. The task of rebuilding from such ruins appeared hopeless — hopeless to everyone but the Finnish people. In the span of five short years, reconstruction of the major buildings was completed and a perhaps even more remarkable accomplishment was performed at the same time. Finland by 1952 had paid every last cent of the exorbitant war reparations demanded by Russia. This in itself has been described as an economic miracle.

While the construction of the public buildings and the payment of war reparations was in progress, one of the most needed areas of rebuilding was not overlooked — private housing to replace the many thousands of homes destroyed by the war. The housing shortage was compounded by refugees from the areas annexed by the USSR. Since 1952, 20 to 30 per cent of the gross total of domestic investments in Finland has been employed annually for the provision of new dwellings. In proportion to the national income, this amounts to about six to seven per cent which is a very high ratio in comparison to other European countries.

The National Finnish Housing Commission — called ARAVA — was established in the post-war years to cope with the housing problem. By special

legislation in 1949, ARAVA financing for housing was commenced. ARAVA loans are second mortgage loans. The necessary first mortgages are supplied by banks, insurance companies, postal savings banks and other institutions. The second mortgage loans may be granted in amounts up to 40 per cent of the total land and construction cost for one or two-family dwellings and co-operative housing. The amount for rental multi-storey housing is generally 50 per cent, but can go as high as 60 per cent. The total amount of the combined first and second mortgage may not exceed 90 per cent, but as a general rule is for a lesser amount.

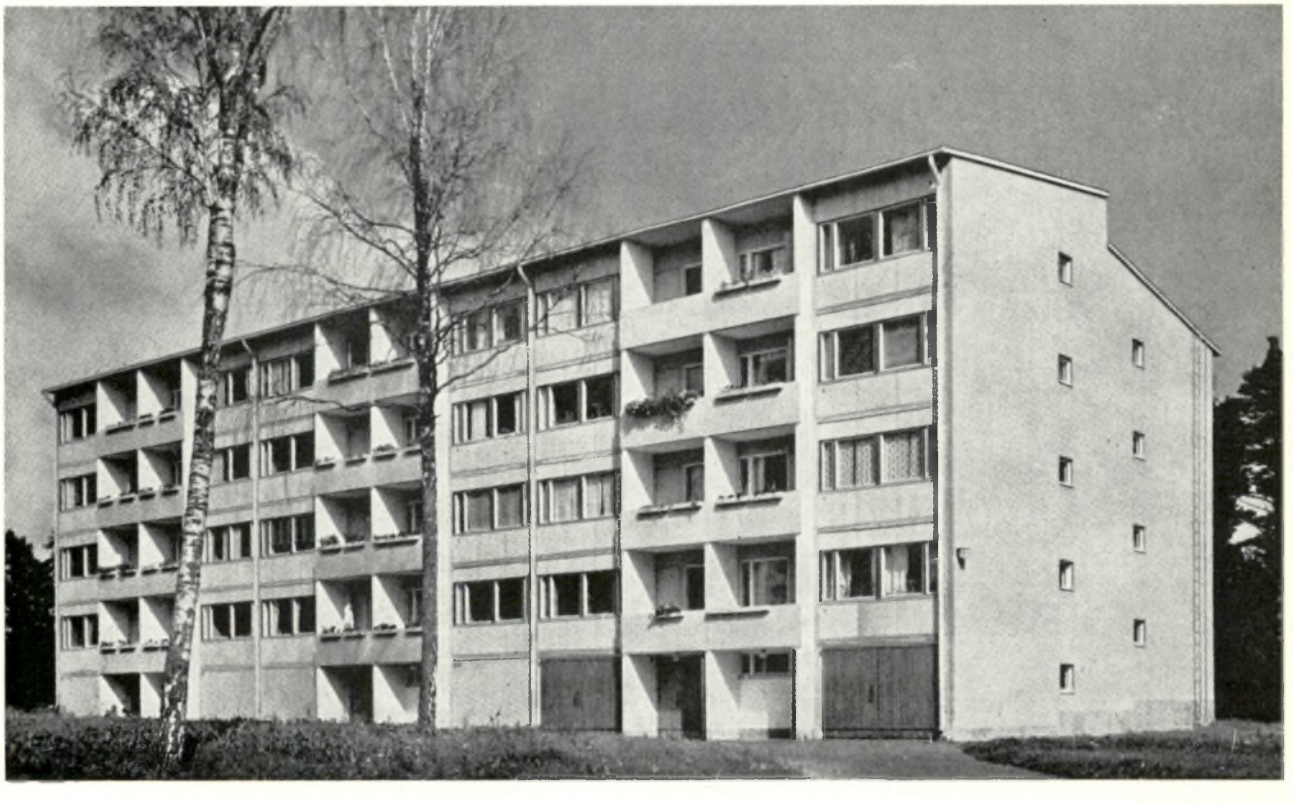
In order to lessen the burden of the interest rate on the conventional primary mortgage, the State in the last few years has only been charging 1 per cent interest on a second mortgage. This is not fixed by statute, however, and may be raised as high as the conventional loans by government decision.

The amortization period for brick houses is 45 years — wooden houses, 33 years.

The share of the builder's or owner's own capital required for the construction of detached housing or owner-occupied flats is generally over 20 per cent of the cost of the project. This is a high figure and unless it can be covered by the builder's own work, as is often the case in the construction of small houses, part of the required capital must be obtained by borrowing from private individuals or from banks.

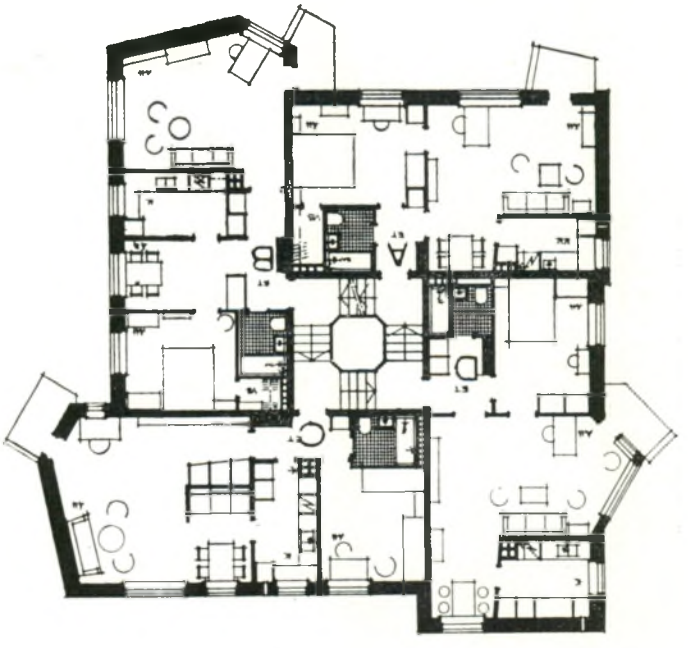
One form of building enterprise that has become wide-spread is the co-operative which lends to persons in straitened circumstances the capital necessary for the construction of houses over a five or ten-year amortization period. These are multiple dwellings with occupant-owned units collectively administered.

Apart from extending loans for housing, the government has also granted tax exemptions in the drive to increase production. Since the year 1948, no taxes are charged, either state, local or church, on dwelling houses and land for ten years after the date of construction. The mortgages and interest charges on houses are also tax-free. These general

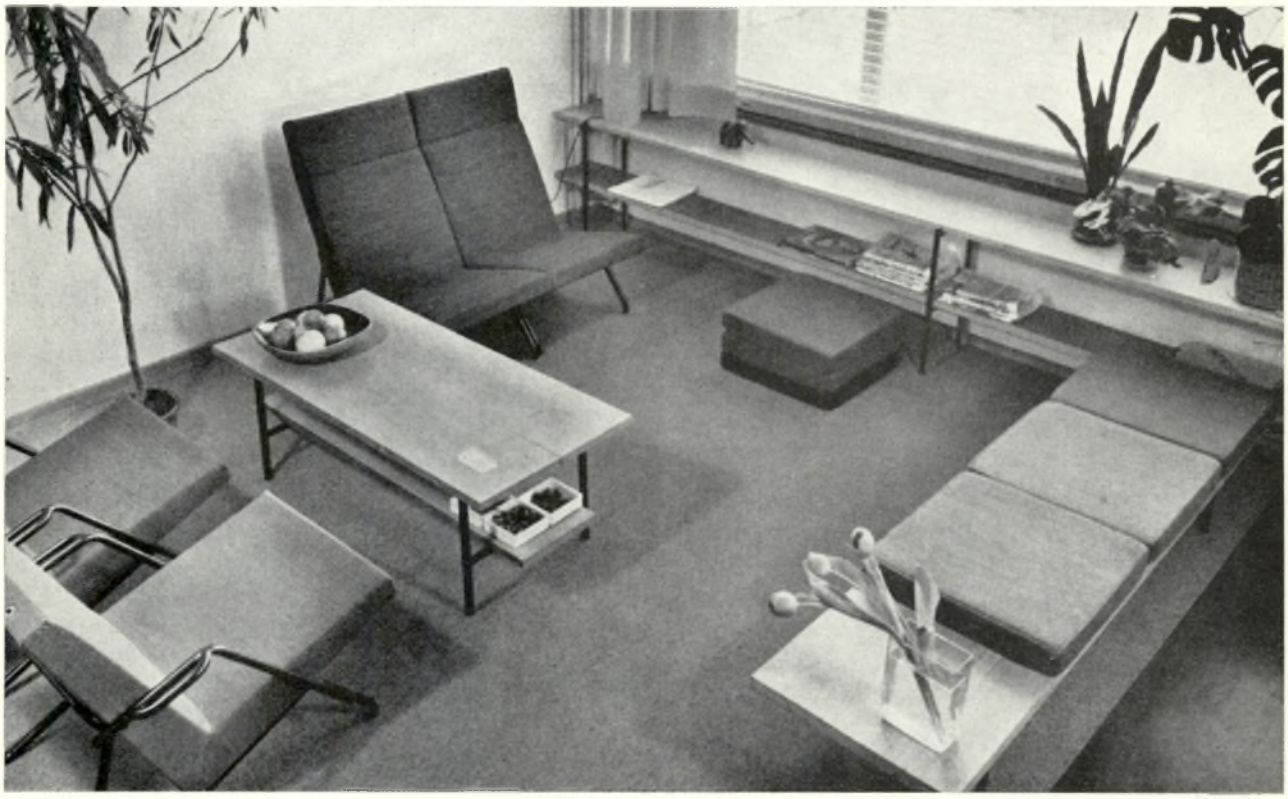


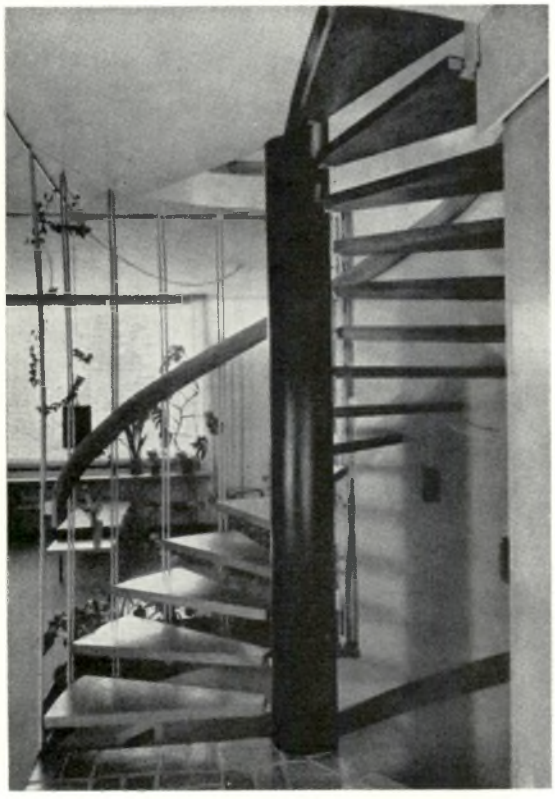
Dwelling row, Tapiola.
Architect: Arne Ervi.

Left, dwelling row, Hyvinkää.
Architects: Märta Blomstedt and Matti Lampén.



Standard floor of point houses.
Architect: Arne Ervi.





Living room and stairs to bed
room floor.
Row house, Helsinki-Lauttasaari.
Architects: Pertti Luostarinen, Jaakko Kaikkonen,
Sulo Kalliokoski and Olli Kivinen.

This pleasant scene shows a view from the south-east of an apartment house in Tapiola, designed by Arne Ervi.

measures of relief from taxation, under the Finnish system of government, have been of great importance in that they have brought down rents and freed more money for the financing of housing.

In 1955 the government adopted a refund system for the sales tax on building materials. The amount of the refund is equal to one-half the original sales tax fee. The tax refund is applicable only to that part of the house under 1,075 sq. ft. The amount of refund amounts to from 2.5 per cent to 3.5 per cent of the total building cost, for a smaller house.

Although under the terms of regulations now in force, there are family housing allowances for families of lower income, in actual practice there is very little of this form of assistance. The Finnish economy has been at a very high level since the war and very little poverty is evident in the country.

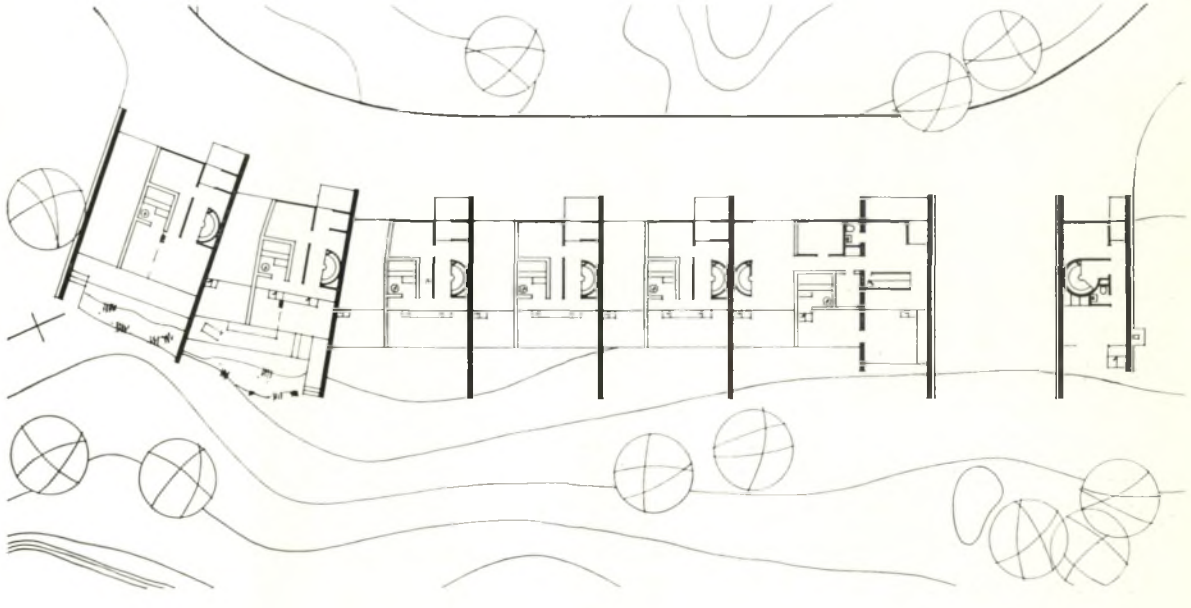
Separate dwellings for the elderly are rare in Finland, because unlike North American families, they tend to remain a group. The few that are in operation have been done under the initiative of local authorities or social organizations with the aid of ARAVA loans.

There are no slum clearance provisions under the federal housing legislation in Finland because there are hardly any actual slums. The dwelling houses in cities were built of timber and the ravages of time and fire have destroyed the oldest of them. The cost of land and the growth of business districts have effectively promoted the modernization of brick buildings in the centres of the cities.

Housing co-operatives are a very popular manner of constructing homes. A typical one would consist of a housing society which is organized as a joint stock company. In these stock companies the individual may buy shares which entitle him to live in a flat in the company-owned house. The purchase of a given number of shares entitles him to claim ownership of the flat.

Over a ten-year period the average number of dwellings constructed per year was 30,500 units with 1955 as the banner year when 33,200 dwellings were built. That figure amounts to 7.8 dwellings per thousand persons. In Canada during the same period the comparative figure was nine per thousand.

Ground floor layout of row housing, Helsinki-Jollas.



View from the east.

Nearly 50 per cent of the houses constructed in 1955 were financed with government loans. The annual production figure of 30,500 dwellings just about meets the demand and it is hoped that rate will at least be maintained for the next few years.

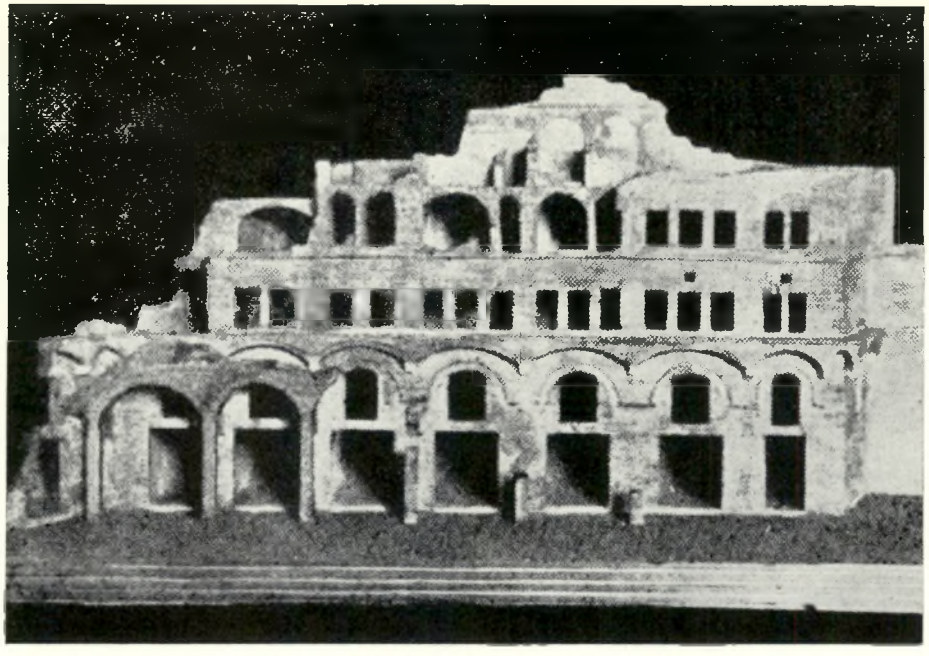
There are general government regulations dealing with the technical details of construction and ARAVA has published a manual which sets out the minimum and maximum standards of quality for houses built with government loans and the highest standards permitted for amenities, equipment, materials and finishing and also the minimum space requirements. ARAVA does not grant loans for luxuries, but neither does it give loans for temporary housing or emergency dwellings.

There is a Regional Plan consisting of an outline scheme for the development of areas in two or more municipalities. The term "region" applies to regional planning as an economic unity. The master plans for areas in cities and provincial towns outline the principal features of future development.

New trends in town planning are evident throughout the country and it would seem the Finns have a wonderful ability to retain the beauty of the natural surroundings — the trees and the original topography. They create an excellent impression by simplicity of design and the practical use of space in both site planning and housing.✦✦

Northern exposure.

THE PRECEDING PHOTOS ARE OF HOUSES FINANCED UNDER ARAVA AND ARE FROM THE BOOK "NEUER WOHNBAUN IN FINNLAND" BY H. J. BECKER AND W. SCHLOTE.



Modèle des ruines d'une maison d'appartements à Rome *(au troisième siècle)*.

L'HABITATION ET LES CIVILISATIONS ANCIENNES

Monsieur Dernoi est un architecte-urbaniste, employé au bureau de Montréal de la Société centrale d'hypothèques et de logement.

Louis A. Dernoi

Afin d'avoir une image complète de l'habitation romaine, il faut considérer l'évolution de l'architecture domestique en Italie en plus des chapitres précédents traitant de l'Antiquité. Deux époques importantes précédèrent la civilisation romaine dans ce pays, l'époque des cultures préhistoriques et celle des Etrusques. Etant donné que chacune d'elles a influencé l'habitat romain dans une certaine mesure, nous aimerions à retracer leur histoire.

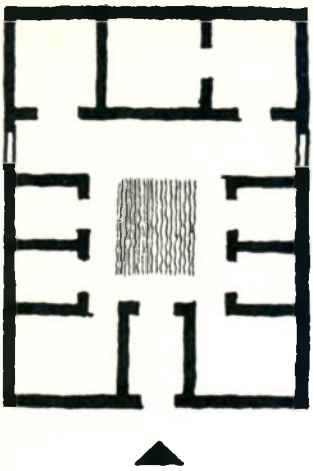
CULTURES PRÉHISTORIQUES SUR LA PÉNINSULE ITALIENNE

La vieille population de l'Age de pierre en Italie vivait dans des cavernes et nous en trouvons des traces dans tout le pays. Les immigrants de la période néolithique qu'on appelait les Liguriens eurent une coexistence paisible avec eux; il y eut même intégration des deux races. Ce fait est clairement indiqué dans leur habitat. Des habitations du genre caverne furent acceptées par plusieurs groupes de Liguriens quoique le plus grand nombre d'entre eux continuèrent à habiter des huttes selon la coutume africaine.

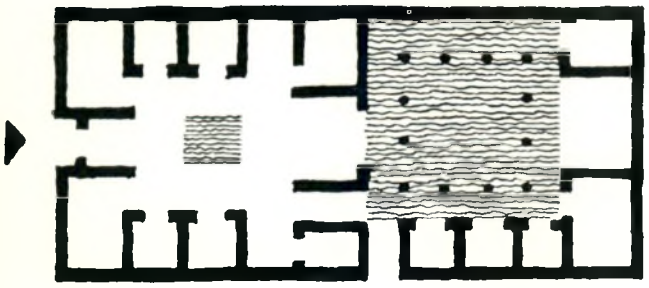
Avec le progrès en agriculture, des groupes se formèrent et une culture de village en résulta. La vallée Vibrata sur l'Adriatique est riche en habitations préhistoriques. Une quinzaine de villages étaient établis ici consistant de plus de 300 huttes circulaires construites partiellement sous terre.

L'Age de bronze fut anticipé par l'arrivée de nouveaux immigrants venant du Nord (environ 1700 avant J.C.). Ils construisirent un nouveau genre d'habitation bâtie sur pilotis dans les lacs (un ensemble de pilots étaient enfoncés dans le lac pour asseoir les fondements des huttes qui étaient construites au-dessus du niveau de l'eau, individuellement ou en commun, sur une seule grande plateforme) vraisemblablement avec l'espoir d'obtenir une certaine sécurité contre des attaques surprises.

Nous avons l'impression que l'existence de la construction du type "pilotis" ou si l'on aime mieux de la culture *terramare* en Italie, remonte à peu près à 1600 avant J. C. dans la vallée du Pô. Ce peuple fut réellement le premier groupe organisé des en-



Croquis schématique de la maison étrusque (environ 500 avant J.C.).



Genre de maison pompéienne à l'époque la naissance du Christ.

virons qui se distingua par ses accomplissements urbains. Leur situation économique dépendait de l'agriculture, l'agronomie et la métallurgie, et de ce fait un nombre de professions variées et bien définies se manifestèrent, ce qui indubitablement créa un niveau plus élevé d'évolution sociale.

Les colonies *terramare* construisirent une quantité de maisons en un centre semi-urbain. Les étendues fluviales et les terres marécageuses étaient les sites préférés. Des balustrades de terre élevées entouraient un morceau de terrain en forme de trapèze en dedans desquelles étaient construites des habitations lacustres, strictement en forme de treillis. A cette époque où la construction en bois était typique, il est probable qu'ils étaient forcés de prendre des dispositions aussi rigides. Les rues à l'intérieur de la colonie étaient réellement des canaux durant la période primitive et rectangulaire plus tard.

Nous n'avons aucun renseignement précis sur le développement des *terramare* en une civilisation du calibre plus élevé de l'Age de fer de la culture *villanova* (1100 avant J.C.). Ce fut probablement sous l'influence des Indo-Ariens, étant donné que les colonies *villanova* s'adaptaient strictement à la topographie. Ce fait nous porte à croire qu'à cette époque les Indo-Ariens (y compris les Latins) étaient déjà installés dans la péninsule.

Les habitations *villanova* avaient deux caractéristiques, si nous pouvons en croire les reliques tombales, qui témoignent d'une forme circulaire durant la période primitive et rectangulaire plus tard.

CIVILISATION ÉTRUSQUE

Le peuple de la civilisation *villanova* n'avait peut-être pas d'affinité raciale avec les Etrusques quoique les accomplissements de ces derniers semblent être la conséquence naturelle de ce que firent les premiers, du moins du point de vue de l'urbanisme. L'origine et la classification des Etrusques représentent encore une énigme aux archéologues.

Les centres urbains formés par les Etrusques en Italie présentent une image semblable à ceux des Achéens de Grèce. Les villes de Pérouse, Velletri, Tarquinia, etc. étaient situées sur des étendues montueuses, protégées par des murs qui suivaient de près leurs lignes de contour, créant ainsi une colonie de forme irrégulière. Aucune idée concrète d'urbanisme fut exprimée à part les besoins militaires de défense. Cependant, le rituel cérémonial observé à l'occasion de la fondation d'une nouvelle ville démontre que l'on était conscient de l'importance de l'urbanisation.

L'influence des colonies grecques en Italie était clairement visible dans leur civilisation aussi bien que dans leur architecture domestique. Tandis que les temples s'apparentent fortement à la forme grecque avec la rangée de colonnes sur le devant et le tympan, les maisons aussi perdent leur rigidité originale de caractère mégarique et se confondent plus ou moins avec la maison grecque.

La maison étrusque est donc en même temps une continuation de l'ère mégarique aussi bien qu'un mélange de celle-ci et de la maison grecque avec cour intérieure. La pièce principale était assez grande et avait un foyer, comme à l'époque primitive, sans

cheminée mais avec une ouverture au plafond pour rejeter la fumée. A une époque ultérieure de développement, il fut nécessaire d'ajouter une série de petites pièces autour de la pièce principale, lesquelles ouvraient sur celle-ci. Le trou de cheminée au plafond devint une ouverture carrée permettant la lumière du jour d'entrer dans la maison, et la pièce principale devint une sorte de cour intérieure (atrium) avec un puits au centre pour capter la pluie. Cette forme sophistique convenait au climat plus doux de l'Italie par opposition au climat rigoureux de la patrie d'origine des Etrusques.

L'HABITAT ROMAIN

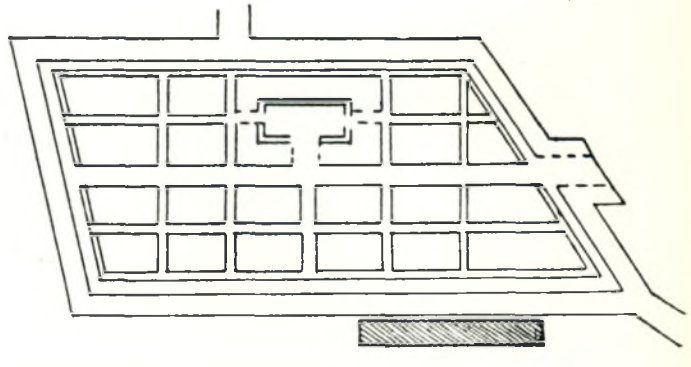
D'après la légende, l'origine de la civilisation romaine remonte à l'an 753 avant J.C. et débuta avec la fondation de la ville de Rome. Le peuple latin descendait de plusieurs tribus italiques subjuguées par les Etrusques pendant nombre de siècles. Ce fut vers l'an 500 que la ville de Rome réussit à expulser les étrusques et fut capable de maintenir sa liberté républicaine récemment acquise.

C'est de ce fait que la république romaine fut fondée sur une base de civilisation étrusque. Ce n'était pas peu dire, car l'urbanisme chez les Etrusques à cette époque était déjà à un niveau assez avancé. Une longue tradition de culture urbaine se trouve concrétisée dans la cérémonie rituelle de fondation au cours de laquelle les limites, l'orientation et la consécration de la ville ont été déterminées. Plus tard les murs de la ville furent élevés, des égouts souterrains et un pont traversant le Tibre construits, et le Forum commença à prendre forme.

L'image des villes romaines est basée sur des considérations militaires, comme chez les Etrusques. Il y a, cependant, une différence fondamentale entre les deux constructions. Les Romains suivirent un modèle strictement rectangulaire dans l'aménagement de leurs villes, probablement à cause d'une forte influence hellénique. Cela leur était plus facile sur le terrain plat qu'ils préféraient pour un établissement urbain, contrairement aux Etrusques. Le camp militaire de forme oblongue tint lieu de première colonie avec deux routes majeures s'arrêtant au centre où les bâtisses principales furent construites plus tard. L'issue de ces routes conduisait vers les portes de la ville.

A son origine, la ville romaine s'est développée en fonction d'un camp militaire. L'aménagement intérieur était soumis toutefois à certaines données quant à l'usage fonctionnel du terrain. Les règlements relatifs à la fixation des lignes de rue et à la dimension des cours latérales avaient déjà été prévus dans les premiers textes de loi. Plus tard la pratique de l'émission des permis de construire et les ordonnances de démolition firent leur apparition et devinrent de pratique courante dans l'exécution des plans d'urbanisme et d'aménagement. Le traité de loi *Lex Julia Municipalis* codifié par Jules César (45 avant J.C.) contenait certains textes d'une portée plus libérale que celle des édits antérieurs.

Cependant, à l'époque de la ville impériale de Rome, pas même des règlements aussi sévères purent contrôler la détérioration et le délabrement. La ville de Rome attirait une foule d'artisans et de gens à la recherche d'emplois, et ce fait contribua en grande partie à la création d'un prolétariat urbain. Sous l'empire de Néron la ville devint un amas de taudis, sauf quelques îlots d'habitations et d'édifices publics. Sa façon assez radicale de se débarrasser des taudis (la destruction de Rome par le feu) prépara le terrain à un nouvel aménagement. Selon Tacite, une nouvelle cité fut édifiée dès lors, suivant une réglementation strictement contrôlée du gabarit des rues et de la construction. Les



Plan d'un développement terramare en Italie.
(vers l'an 1300 avant J.C.).

habitations primitives à multiples étages furent remplacées par des développements bien organisés d'îlots d'habitations de qualité supérieure.

Cette ébauche de l'histoire romaine nous amène au sujet de cette étude qui se rapporte au développement des habitations de l'ancienne Rome. Chez les Romains, l'habitation de même que leur civilisation, avait un certain élément provenant du facteur humain apporté par leur double héritage étrusque et helléniste. Pendant des siècles, les maisons romaines ne devraient pas être très différentes du style atrium typique chez les Etrusques. L'influence hellénistique sur l'habitat romain ne fit son apparition que peu de temps après l'expansion de leur territoire jusqu'aux colonies grecques de la péninsule.

La construction de la maison était partagée entre un style clairement étrusque et un élément grec. La partie frontale, face à la rue, était aménagée d'après le style atrium tandis que l'arrière était construit à la façon grecque avec péristyle, c'est-à-dire ayant un jardin entouré de colonnes.

Ces maisons possédaient les deux traits caractéristiques qui orientèrent le développement d'une agglomération urbaine de la maison romaine. Ces caractéristiques étaient: l'emploi d'un étage supérieur et la réservation d'un espace à l'intérieur même du pâté de maisons particulières, pour des magasins et des boutiques donnant directement sur la rue. Quoique ce genre d'habitation existait déjà chez les peuples civilisés plus anciens, surtout chez les Hellènes, ceux-ci ne parvinrent jamais à atteindre le degré de développement qui existait à Rome. Aucun autre empire n'avait concentré ses efforts avec autant d'ardeur sur une même ville que le firent les Romains pour Rome.

L'évolution active de la maison romaine décrite plus haut débuta donc dans des circonstances très favorables. Les magasins et les boutiques se multiplièrent graduellement et se doublèrent horizontalement et verticalement. De nouveaux magasins furent construits au deuxième étage et d'autres à l'arrière de ceux qui faisaient face à la rue; ceux-ci ouvraient sur la cour intérieure tandis que ceux du deuxième étage avaient un accès séparé s'ouvrant sur la rue. Comme il était à prévoir, cet état de choses avait rompu l'intimité et l'exclusivité du type original de la maison romaine. L'atrium et le péristyle se confondirent en une cour commune donnant sur la rue. Les étages superposés augmentèrent le nombre de magasins et de logements.

Ostie, port de la Rome antique, nous présente une image exacte de ces nouveaux développements. Des rues entières bordées de maisons d'appartements à multiples étages exhortent les touristes visitant cette vieille ville fantôme de plus de deux mille ans à y rester quelque temps. Ici nous retrouvons les plus hauts bâtiments réalisés chez les Romains, par exemple des immeubles d'appartements construits dos à dos du type "quadrex" à plusieurs étages, etc.

A l'époque de l'Empire romain, l'unité type du logement usuel dans la maison d'appartements prit alors forme et on l'identifiait alors comme *cœnaculum*. Elle consistait d'un vivoir, chambre à coucher, cuisine, vestibule et salle de toilette; il n'y avait des fenêtres que dans le vivoir et dans le vestibule, ce dernier servant indirectement aux deux autres pièces. Un hall commun servant aux locataires du même plancher complétait le tableau.

L'aire totale de chaque unité, qui variait de 500 à 1000 pieds carrés, avait été réduite à ce point à cause du prix élevé des terrains et de la cupidité des propriétaires. Cette situation, en plus d'un besoin pressant de logements, sont des phénomènes extraordinaires qui se répètent aujourd'hui, 2000 ans plus tard. La lettre suivante que nous trouvons parmi les reliques antiques pourrait être écrite aujourd'hui dans les mêmes termes: "Il y a enfin une annonce offrant un appartement à louer, mon cher Nerva. Il sera libre en juillet; c'est un *cœnaculum* ordinaire de deux chambres avec cuisine et salle de toilette. Malheureusement, comme il arrive trop souvent, le prix du loyer n'est pas mentionné malgré les règlements prétoriens. Cependant, il vaudrait la peine de tenter la chance et, suivant les instructions, de demander à l'esclave Primus qui est le concierge de la bâtisse, de vous faire visiter l'appartement et de vous dire le prix du loyer".✦✦

"There is no guano comparable in fertility to the detritus of a capital, and a large city is the strongest of stercoraries. To employ the town in manuring the plain would be certain success; for if gold be dung, on the other hand our dung is gold."

"LES MISERABLES", Book II, Chap. I, Jean Valjean

SEWAGE LAGOONS

C. E. Locke

To most people the word lagoon conjures up romantic images of a Polynesian paradise. However, to the Western Canadian engineer and the dollar-conscious civic administrator the same words are more likely to convey images of pleasant prairie pasture lands adapted and utilized for the more practical purpose of treating sewage. Sewage laloons, stabilization ponds, or the more elegant sounding term oxidation ponds, all mean roughly the same thing.

Basically a lagoon is simply a reservoir constructed by excavation of the ground, enclosed by dykes built up with the excavated material. The bottom of the reservoir is levelled and liquid (sewage) let in and controlled to a depth of five feet or less. Excavations are not always necessary. Locations exist on the Prairies where small gullies have been dammed up at one end and sewage flows into this depression by gravity rather than being pumped as is usually the case.

In lagoons, as in other means of sewage treatment, much information is yet to be known about the decomposition of the material. In general, two types of decomposition are distinguished, anaerobic decomposition, and aerobic decomposition or oxidation. The aerobic method of sewage treatment became prominent in North Dakota about 1947 and has since been used successfully by a large number of Western Canadian communities as well as a number in the United States. In recent years, in Alberta particularly, considerable study has been given to anaerobic lagoons. The main difference between these two types is the retention time of the sewage in the lagoon. In the case of an aerobic lagoon the retention period of the sewage usually ranges from three to six months. After this period the sewage is sufficiently stable so that it can be discharged from the lagoons into nearby streams or even ditches without harm. In the anaerobic lagoons a different set of 'bugs' work on the sewage, the sewage is ponded to depths up to ten feet, and the retention period is considerably less — from three to six days in each of possibly four compartments for a total retention time ranging from 12 to 24 days. Because of the increased depth, the space required for anaerobic lagoons is considerably less than that required for the aerobic type.

In considering the effectiveness of sewage treatment there are probably two main tests that must be considered — the bio-chemical oxygen demand and the coliform content. The coliform content is an indication of dangerous bacterial contamination while the avidity of sewage for oxygen reflects both the nature and quantity of the organic matter it contains. For effective sewage treatment a substantial reduction in both bio-chemical oxygen demand and coliform count must be met. In actual tests taken in several Manitoba towns the efficiency of aerobic lagoons ranged as high as 90% for reduction in bio-chemical oxygen demand and there were similar marked reductions in coliform content.

To all of this the fastidious mind will no doubt recoil at the thought of having a lake full of sewage (design requirements range from one acre per 100 persons to one acre per 250 persons) within a thousand feet of one's doorway. However, domestic sewage by nature is in appearance not unlike bath water, and experience has shown that properly acting lagoons are usually neither offensive to the nose or the eye. In the interval between winter and summer

as the ice cover melts, the lagoon action changes from anaerobic to aerobic and in this transition period some odors will result. These odors may be minimized — some claim eliminated — by the addition of chemicals. Despite this it is important that such lagoons be located on the 'right side' of the community — down-wind if possible.

When sewage is discharged into one of these sewage lagoons nature's method of purification consists, under aerobic conditions, of furnishing oxygen by solution from the air at the surface and the utilization of the oxygen by plant-like microscopic organisms to oxidize or burn the organic matter and thereby reduce it to inoffensive and relatively stable products. Bacteria break down the organic compounds found in all sewage to provide the 'food' material for the growth of algae. Algae and bacteria multiply by fission (geometric progression) and oxygen is provided by the algae through the process of photosynthesis. It may be deduced that an environment conducive to the growth of algae can be the 'factory' for the treatment of domestic sewage. Low temperatures are not helpful in this regard and for this reason holding ponds are designed simply to 'store' the community sewage until such time as the warm weather returns and with it the increased production of the algae factory. Sewage is literally retained in this factory until the product is acceptable to the public.

Lagoons may be connected up in series, in parallel, and in some cases with two or three anaerobic (deep lagoons) and two or three aerobic connected in various ways. In most cases when the effluent is stable it is discharged into nearby streams or ditches. It is interesting to note that in early lagoon design it was thought that the treated sewage could be discharged into adjacent fields or ditches. No doubt in many cases from a health standpoint it is quite feasible and practical. However, it has been no easy matter to convince the local farmer that the lush growth of green grass considerably stimulated by the effluent would be beneficial as far as his prize cattle are concerned. For the same reason, it is no easy matter to convince the lay person that such effluent is harmless — it is all sewage, he claims, treated or untreated. Because of this lack of knowledge, many communities have within the past two or three years been forced to remove the treated sewage from lagoons by piped means and discharge it into some nearby stream at appropriate and intermittent intervals.

While certain ground rules have been fairly well established, the design of lagoons is not based on any precise mathematical formula. But then this is not surprising. The content of sewage itself varies appreciably and about the only thing one can be sure of is that in almost every city in North America, sewage, the liquid waste of the community, usually contains less than .1% of solid matter. This is one reason why the maintenance and operation of lagoons is relatively simple and cheap. It is true that sedimentation of waste products begins immediately after sewage enters the ponds. The obvious question is, do these wastes build up? The answer is yes, at a slow rate. For example, a column of domestic sewage 265 feet high evaporated to dryness will produce only one-tenth of a foot of solid dry matter. In terms of economy the facts are these — in one city of 40,000 people on the Prairies, it has been estimated that the capital cost of a sewage lagoon system would be $1,034,000, as opposed to the estimated cost of a conventional mechanical equipment plant of $1,023,000, admittedly very little difference. It is estimated, however, that the total annual operating cost of the lagoon will be $50,000 less than the operating cost of the mechanical plant. This is the kind of economy many municipalities are achieving and expecting.

Lagoons are not new. Evidence exists to show that the Egyptians used a type of lagoon while Chinese mandarins maintained private lagoons or oxidation ponds where presumably the Oriental equivalent of the Canadian privy was built over the water. Sewage ponds have been known in Central Europe for years where settled sewage has been discharged into shallow artificial ponds stocked with fish. The sewage ponds of Paris and Berlin have long been famous and a small part of the cost of

operation of these systems has been recovered from the sale of fish which live in the ponds. In North Dakota trout are living in one lagoon.

While the monetary advantages of stocking the lagoons with fish are dubious, there is little doubt that within the foreseeable future at least 90% of all new sewage projects in Western Canada will be of the lagoon type. More research is needed regarding specific loading limits, operating depth, etc. Industrial wastes have in some cases been treated by lagoons, but it is evident that such wastes are likely to upset the balance of domestic lagoons and more research is needed.

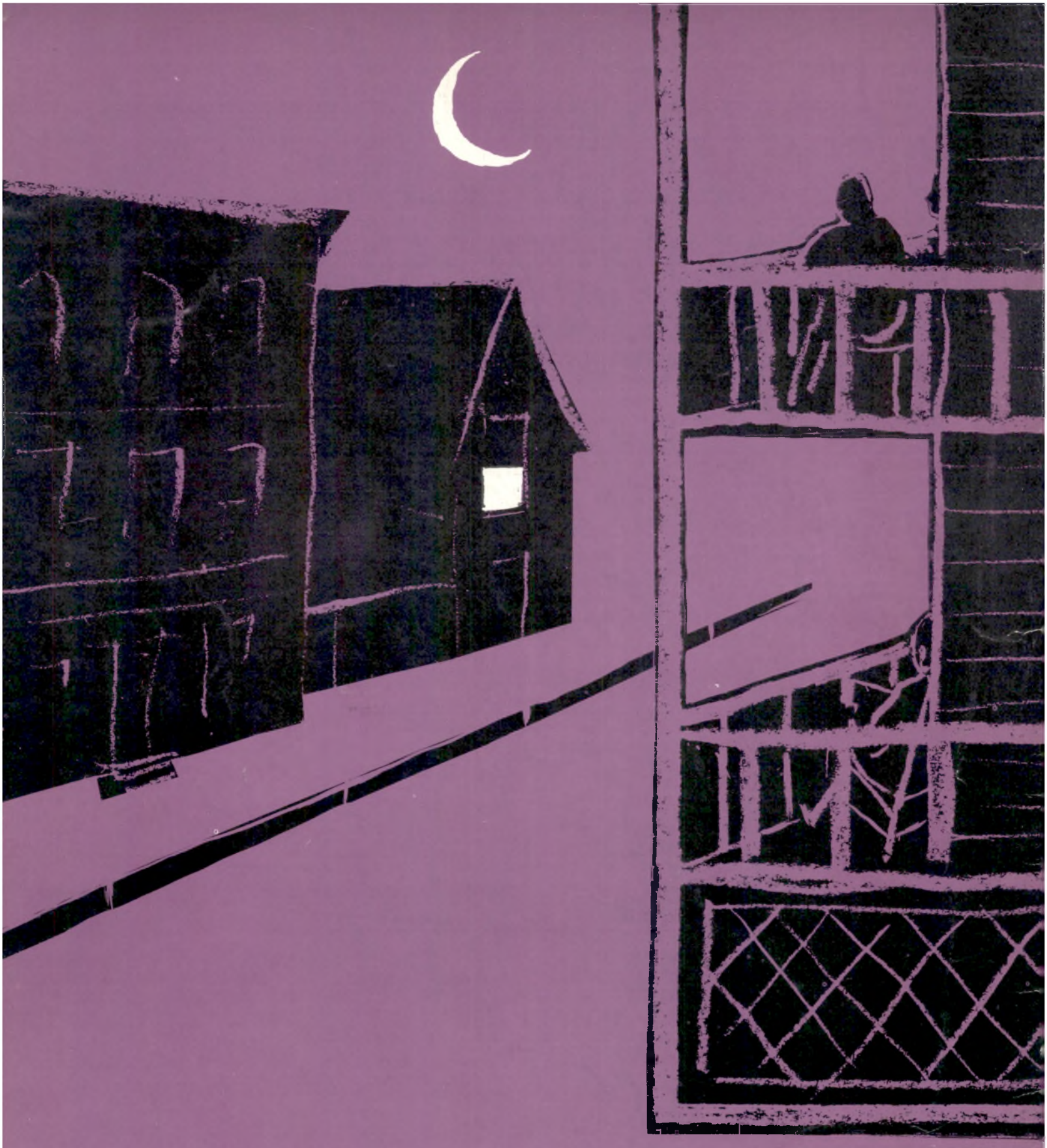
Interspersed with slight skepticism about the long-term benefit of lagoons, comment coming from those people who design them, and equally or more important from those who use them, has been favourable. For example, five prominent consulting engineering firms who amongst them handle an estimated 75% of the municipal engineering in the Prairie Provinces, have had this to say in five reports submitted to five communities ranging in population from 300 persons to 40,000:

> "It (the sewage lagoon) is the most economical means of sewage treatment for use today provided the purchase price of the land required is at a reasonable figure."
>
> "Lagoons have proven to be effective and economical in many communities, which is evinced by the increasing number, now in excess of 140, on the Canadian Prairies alone."
>
> "The most economical method of treating sewage from this system is a lagoon process."
>
> "This type of treatment (lagoon) is very common in Western Canada and has proven most economical and relatively fool-proof."
>
> "The lagoon system is quite flexible and can stand loadings ranging from design load to at least two times the initial loading and still provide a satisfactory effluent."

By virtue of recent amendments to the National Housing Act, the Government, through the Central Mortgage and Housing Corporation, may make loans to municipalities and municipal sewage corporations for projects which will assist in the elimination of soil and water pollution. It is important then, that something be known of this method of treating sewage which has been described in such complimentary terms. According to one Provincial official the acceptance of sewage lagoons as a satisfactory method of treating sewage in his Province has been the most important single development in sewage disposal in the postwar years.✦✦✦

Mr. Locke is the Construction-Engineer for the Prairie Regional Office of Central Mortgage and Housing Corporation.

EDITOR'S NOTE: *On page seven of the May-June issue of HABITAT we solved Winnipeg's flood problem by reversing the flow of the Red River — a very costly procedure. Mr. Carson Templeton, senior partner in the Templeton Engineering Company, who performed the engineering studies for the Royal Commission on Flood Cost Benefit for Winnipeg, has a much better solution. He will describe it in the next — September-October — issue of HABITAT.*



CENTRAL MORTGAGE AND HOUSING CORPORATION
SOCIÉTÉ CENTRALE D'HYPOTHÈQUES ET DE LOGEMENT
OTTAWA, CANADA

HABITAT

SEPTEMBER-OCTOBER 1961
SEPTEMBRE-OCTOBRE 1961

The Maxwell MacOdrum Library, Carleton University, Ottawa. Three of the 114,000 students who will be attending Canadian Universities begin another academic year. Carleton University, one of Canada's most modern schools, is being constructed along the picturesque Rideau River on Ottawa's outskirts. It envisages a tremendous development program over the next years. Four buildings are in use, five under construction and by 1980 more than 35 buildings will complete this beautiful University.

HABITAT

VOLUME IV
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CONTENTS

The cover is an axonometric projection of the high rise buildings submitted in the Smyth Road Competition by the winner, Architect Fraser Watts.

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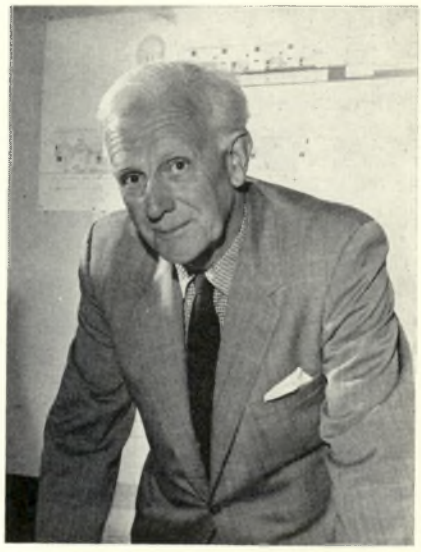


Dr. Eric R. Arthur right, Professional Adviser of the School of Architecture, University of Toronto was the chairman of the jury which comprised Louis Kahn, internationally known Philadelphia architect; Professor John Bland, Director of the School of Architecture, McGill University; Professor Anthony Adamson, Vice-Chairman of the National Capital Commission; Frank Ayers, Director of Planning and Works, City of Ottawa; James Lowden of Montreal, past president of the Canadian Association of Real Estate Boards; E. R. Collins, Chief Appraiser for CMHC and Ian Maclennan, Chief Architect and Planner, CMHC.

THE SMYTH ROAD COMPETITION

by Dr. Eric R. Arthur

It would be an understatement to say that the Smyth Road Competition, sponsored by the Central Mortgage and Housing Corporation in Ottawa, was one of the most important competitions ever held in Canada. More complex than the requirements for the Toronto City Hall, and equally demanding in the drawings necessary for the Jury of Award, Smyth Road takes precedence over all Canadian competitions in the number of persons who will ultimately enjoy the fruits of the competition.

The land comprising more than seventy acres was bought by the Corporation a decade ago with no immediate plans for its development, but as it became more and more accessible and its value increased the present proposals for its use became known through the national competition. We are all familiar with two types of residential development — the land offered for sale by the owner to the subdivider who is then responsible for roads, services and buildings; and the property with roads and services which is then offered to builders with or without supervision and control by the entrepreneur. This is, of course, a simplification of the many responsible and irresponsible methods of land development in North America, but all differ substantially from the CMHC proposals for Smyth Road. The Corporation has now in its possession a scheme for a residential neighborhood in which the design of roads, and eventually services, single and row houses, apartments and stores are all visible and available before the developers are invited to bid. Nothing is piecemeal here, nothing left to chance, no possibility of an irresponsible builder spoiling a sector by a design out of spirit with the whole — it is an integral scheme for middle-income housing.

Such a proposal is an experiment on what one might well call a noble scale that involved the best brains of the architectural and allied professions and a jury that was expert in a wide variety of fields. A glance at the Jury of Award will indicate what a fund of knowledge and experience they brought to their task and how wise was the choice of the Corporation. Too often in competitions, architects are chosen solely for professional prejudice and the

sponsor's representatives often 'represent' without making any real contribution to the deliberations of the group. I should like to say here that I have never been a member of a jury that worked so hard to find the best solution or one where every voice was listened to with equal respect. It was far from being an harmonious jury, if by that is meant that meetings were free from argument or that voting was always, if ever, unanimous.

An examination of the plans and a reading of the jury report will indicate how very necessary was the composition of the Smyth Road Jury. No group of architects alone could represent the skills that the jury individually brought to the problem — Mr. Ayers' familiarity with local conditions and by-laws, Mr. Collins' life-time concern with mortgage investments and appraising, Mr. Lowden's vast experience with real estate and mortgaging coupled with Mr. Adamson's interest in the beautification and long range planning of Ottawa were all complementary to the aesthetic and practical points of view brought forward by the architects and planners.

It would take at least a day to enter into the real spirit of the competition and come to grips with the essential factors. Always in the jury's mind were those visual, functional and economic factors that would distinguish Smyth Road from other subdivisions, but equally, and implicit in all considerations how would it be enjoyed by tenants and home owners. Not secondary, by any means, was how it would be received by builders without whose interest the scheme would fail. In their line of thinking were many factors such as the saleability and rentability of houses or apartments according to the attractiveness of their design, and the divisibility of the total plan into areas that offered functional, economic and practical possibilities for the entrepreneur.

These factors clearly called for solution in the Conditions of Competition or the questions and answers to competitors. They were all basic and implicit in the program for a residential development for middle-income housing. They were not seen in so very clear a light by many competitors for whom this kind of planning was a new, fascinating and rather expensive exercise. As a result, some produced the kind of solution we once associated with the Ecole de Beaux Arts in Paris and New York that presented a pleasant pattern of housing on grassy swards unrelated to the exigencies of parking or road allowances and a cost out of range of those whom the Corporation sought to attract. Idealism of a kind there often was, but of a kind too, that would have to be most cruelly dealt with before the scheme as a whole could be thought 'marketable'. At that point, the designers and the sponsors would likely agree that the residue was safe but dull; not the spirited forerunner of things to come, but the last of a line of undistinguished ancestors in the housing field. The repeated statement that it was the Corporation's intention to offer the property for sale as soon as was practicable was not taken seriously by a number of competitors. Even to the finalists, it was necessary to say "The Corporation, through the Jury, is not looking for an academic study or a grand imposing solution, but to a housing solution that combines a high degree of imagination in the over-all concept with —

a) Well planned buildings, with good, workable, but sensitive site arrangement.

b) An evident appreciation of the unavoidable and, frequently desirable, restrictions of municipal zoning and other legal requirements. (The all too general disregard of these restrictions was responsible for jury adjectives like "academic" and "beaux arts", from which the competitor should draw his own conclusions.)

Not applying to all, or a majority of competitors, was the evident divorce between those engaged on the "plan", and those on house types in plans, elevation and section. In some cases, the former was of a quality not to be found in the house types and in others the house types were so designed as to shake the faith of the jury in the competitor as an architect. This matter is referred to in the jury report, and is repeated here as a warning to competitors in future competitions. Those who are not regularly in the housing field will require collaborators, either as

experienced architects or town planners, but their efforts should be a fundamental understanding of the "partnership".

The Jury Report was as follows:

1st. Prize Scheme 'A'

Mr. Fraser Watts, Toronto.

2nd. Prize Scheme 'E'

Messrs. W. M. Schacter and N. H. Schoenauer, Montreal.

3rd. Prize Scheme 'D'

Mr. H. A. Swanson, Toronto.

The Jury was all but unanimous in its decision to place 'A' first. The Competition was a difficult one to judge in view of the many skills which the design demanded. Sometimes, the overall plan had distinct merit, but the quality of the architecture which complemented it was such as to rule out the competitor as a possible choice. Alternatively, quite striking buildings in some cases were let down by an indifferent planning concept. It is possible that some competitors divided their responsibilities and that the planner was not always in touch with his colleague designing the housing.

'A' gave no such impression. His plan and his houses of all types were a complete whole and complementary. Particularly, the jury was captivated by his obvious qualities of sensitivity and conviction. His architecture is marked by a certain anonymity free from the clichés of modern house design and by a quite charming modesty that should make his dwellings in all categories attractive to a wide and diversified section of the general public. Coupled with the skill he shows in individual design is his ability to vary his buildings in position and in relation to one another.

In keeping with the desire of the Corporation that the Competition should produce a scheme that showed imagination and not a little courage on the part of the designer, the scheme 'A' has several features that will attract architects in the housing field from many places when it finally achieves realization on the Smyth Road site.

Not the least of these is the underground parking, which is a feature of the project. The practical advantages of having a car convenient to the dwelling and protected from the weather are obvious, but the aesthetic and sociological effects are more profound and, perhaps, more subtle. The result over many acres of a housing estate will, in the opinion of the jury, create an atmosphere of urbanity, rare in such projects. They observed, too, that while A's scheme gives more than usual recognition of the place of the motor car in modern life, it provides areas of safety of pedestrian precincts where the family can find security and dignity that the motor car has done much to destroy.

Parallel with A's concern for the family and children in particular, in their external activities, is his generally sympathetic understanding of the living requirements of the people who will occupy the houses. However, three and one-half storey houses were criticized along with an excessive number of houses with interior entrance steps. The Jury felt, as well, that the high apartments would benefit by some further study.

On the other hand, both the location and axis of these apartments at the south end of the project, were thought to be admirable. It is also to A's credit that, unlike many other schemes in the Competition, his high-rise buildings did not overpower or overshadow the single and row houses in the vicinity, either by height or proximity.

Shopping was considered well located both for the people in the housing estate and for those on the other side of Smyth Road. While not concealed from the road, it is pleasantly screened by trees.

We have become accustomed to the housing of elderly people in projects devoted entirely to their requirements or in "compounds" in housing schemes for mixed age groups. The jury welcomed the idea in 'A' of the integration of the elderly with the younger groups on the estate. At the same time, they recommended that a change in their location to a southerly section would bring them closer to shopping and the local bus.

Some criticism was levelled at the shape of the school site and the closeness of the school building to the adjacent single family houses to the north

was considered undesirable. It was also noted that certain road loops and culs de sac would require some modification.

If, in the overall design, this competitor would seem, at times, to have given precedence to the quality of the housing content of his scheme at the expense of needed relief in the disposition of open space in his over-all pattern of land use, it must be remembered that the competitor has worked at a disadvantage without collaboration with the client so necessary for a mutually satisfactory solution.

The jury has every confidence that A's proposal has in it the material for a first class housing scheme and one that will contribute significantly to progress in the housing field in Canada.

The experiment which the Corporation undertook through the Smyth Road Housing Competition would seem to have been more than justified.

Judges' remarks for 2nd and 3rd prize-winners are to be found on pages 10 and 13.

Under the pressures that always exist at the conclusion of a jury meeting, mention was not made of the two firms of architects who reached the finals but were not placed. I must apologize for the omission in the press release, but it is with pleasure that they are included here.

SCHEME 'B'

Messrs. Fairfield, Dubois, Cheney and Strong, Toronto.

The general opinion was that this scheme was somewhat Utopian and, to that extent unreal, both in planning and general design. The single family housing and the multiple family housing is one, all intimately together, in a social mix expressing perhaps a democratic ideal. Little buildings brood about the feet of big buildings and high buildings spring out of lower, linear buildings all leading up to a kind of architectural climax.

Public open space is scattered and hard to define — many awkward pieces are left over and ownership and maintenance would be a problem. This derives from the fact that he has taken one basic idea and used it four times, leaving interstices between orientation changes each time and many rooms (high rise as well as other buildings) will never get sun. In spite of the above, the general plan had merits or it would not have been selected for the final five. While the plan did not change radically between stages, the design of housing types did not improve, and weighed against the competitor — not so much in detailed planning as in façades where, what appeared to be, corbelled brickwork in long or short stretches detracted greatly from any inner quality that the dwelling might have.

SCHEME 'C'

Smith Carter Searle Associates, Winnipeg.

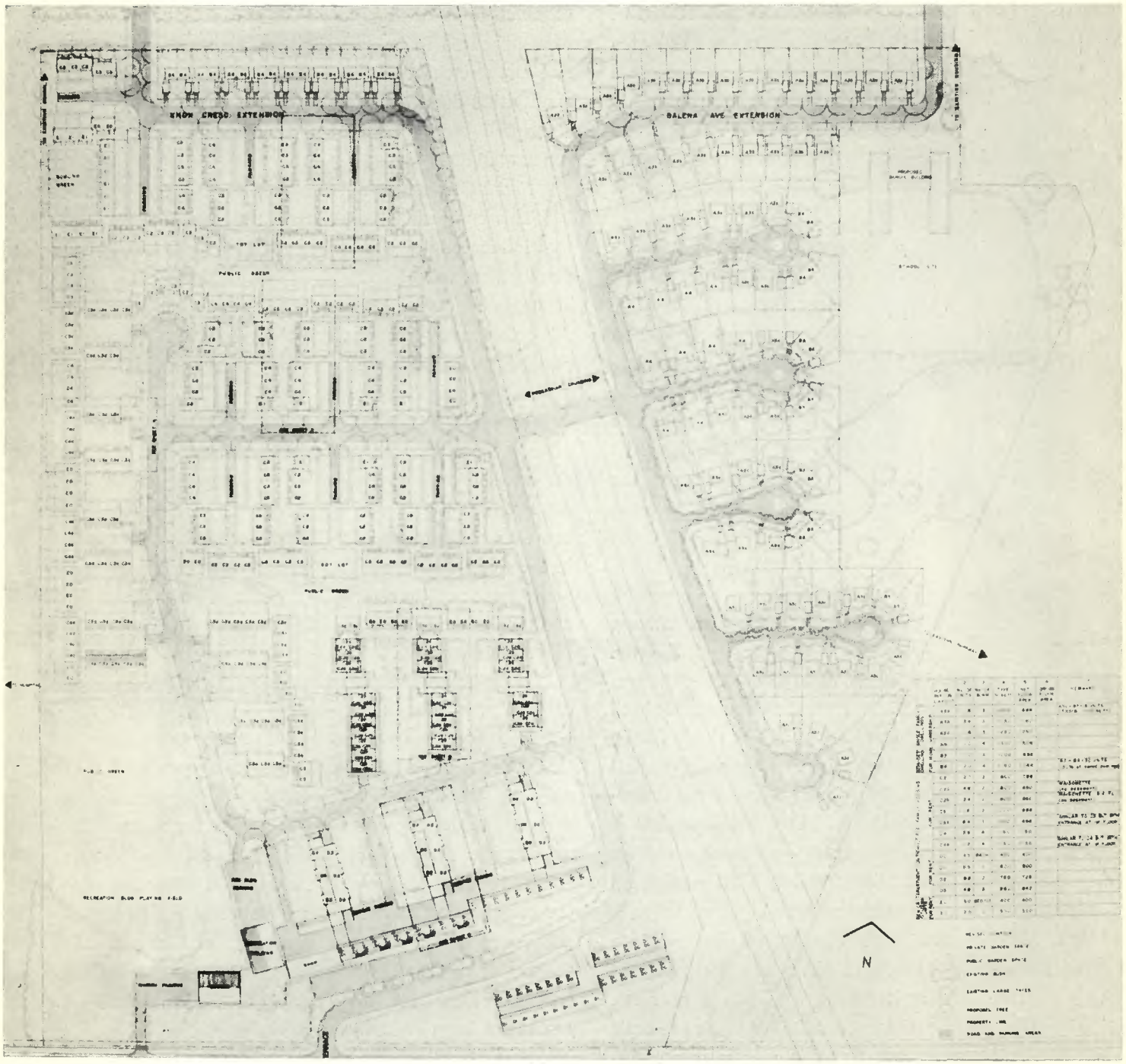
This competitor states in his program that he was influenced by a requirement that "the total development must be capable of being accomplished in stages". He has achieved this as well as something frequently mentioned in jury sessions, the possibility of adult or child quickly identifying himself with a "neighborhood".

The jury felt, however, that the scheme was expensive and "forced" in its actual application to the site. 'C' may have been bewitched by the grand concept, but it seems more and more 'abstract' as one tries to relate adults and children to it — except in the single-family houses. The plazas themselves are so large as to be dull and hot in the summer time and the view of them from different floors would not be very pleasant.

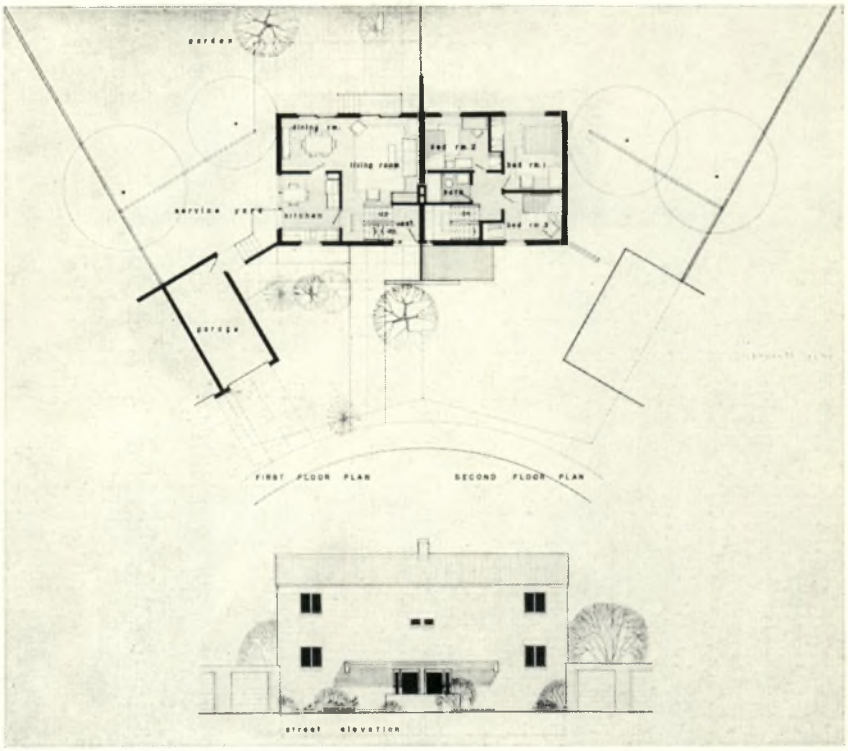
If the Smyth Road Competition drawings go on exhibition, as I hope they will, it would obviously be wise for competitors and the profession in Canada to get a broader picture than they would if only the five finalists were shown. In a national competition dealing with so large a property and so many units, schemes were bound to appear that were safe and pedestrian along with others that quite took the breath away at first sight for sheer originality and courage. It would be interesting to hear the authors of some of these explain and defend their schemes before their local chapters. I should be one of the first to take advantage of such a privilege if it were offered.✦✦✦

FIRST PRIZE—Scheme 'A'. Mr. Fraser Watts, Toronto.

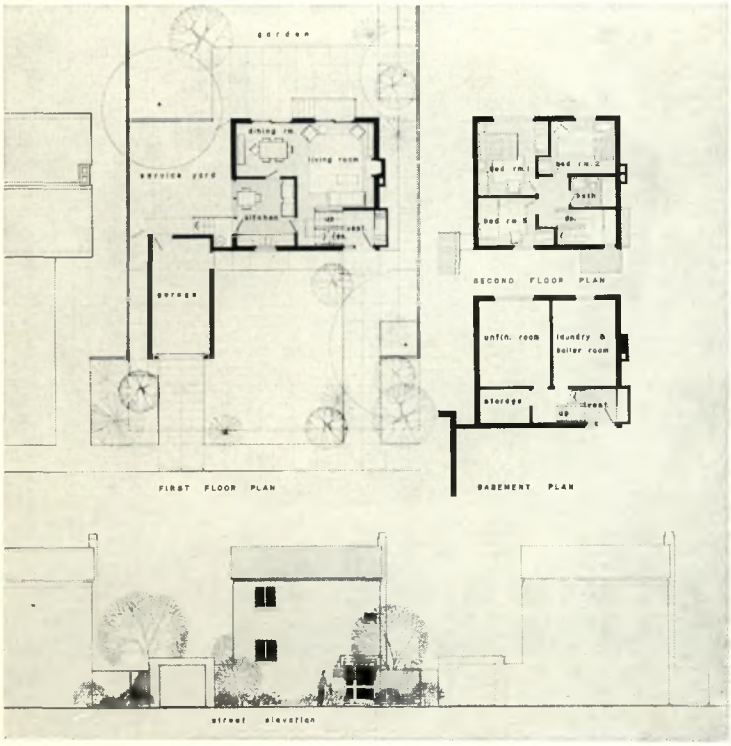
Site Plan.



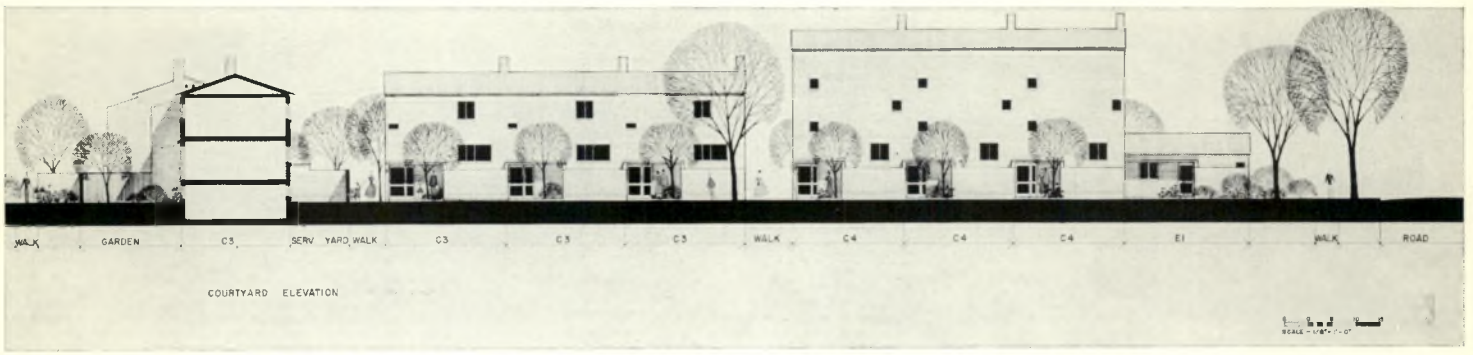
B3. Semi-detached Units — 3 Bedrooms.



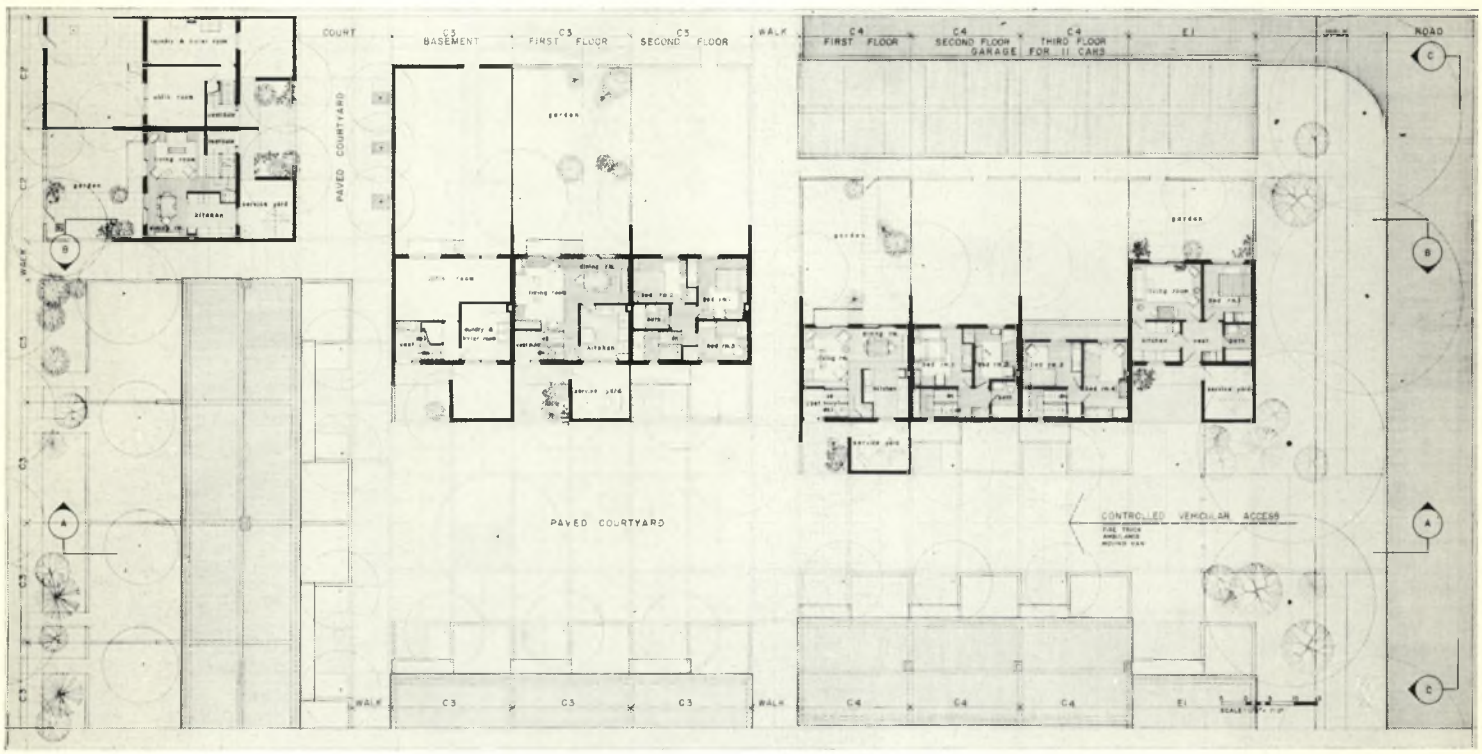
A3a. Single-Family Units — 3 Bedrooms.

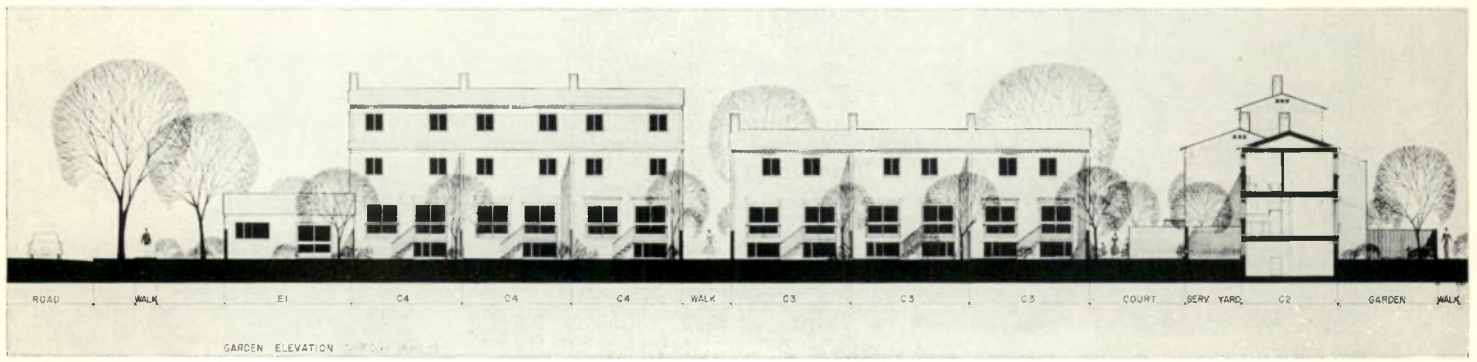


C2, C3, C4, E1. Multiple-Family and Old Age Units.



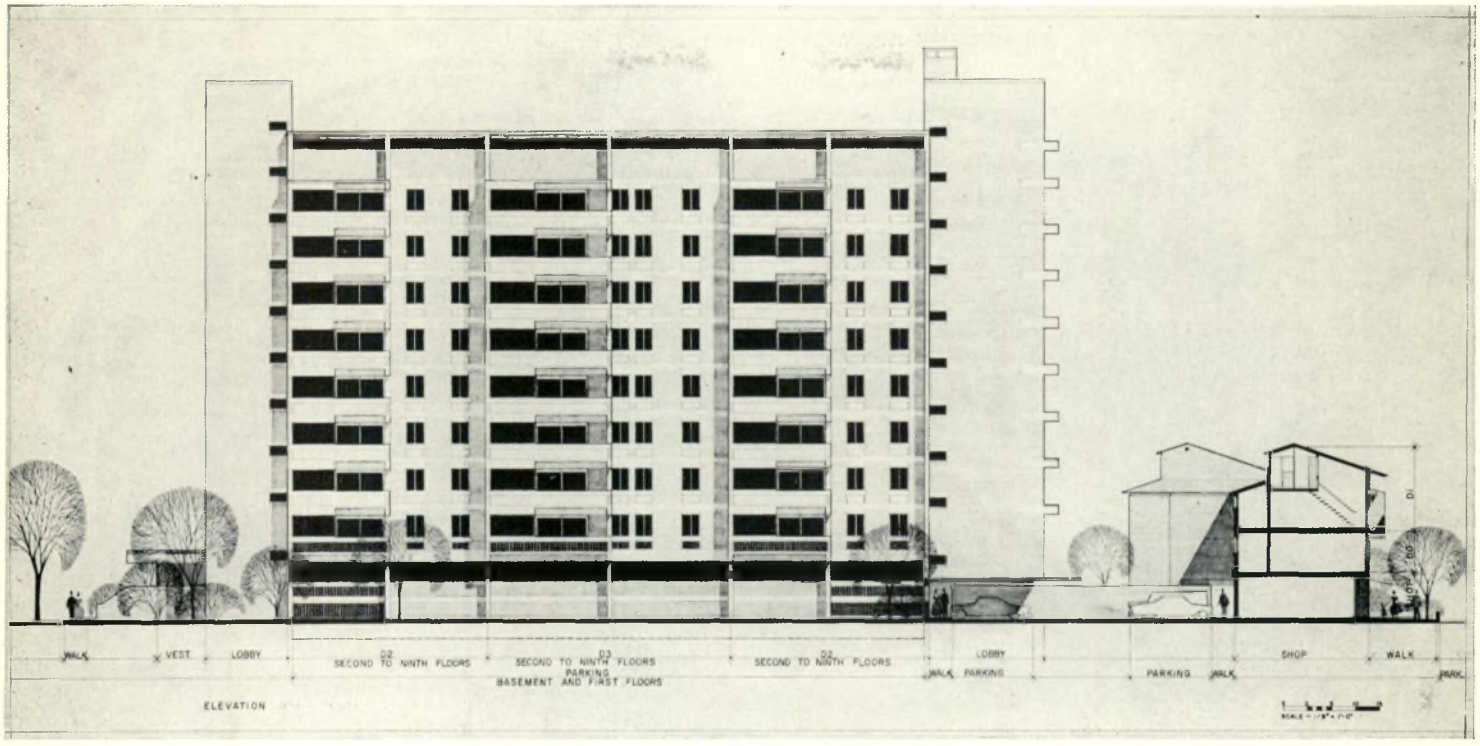
Section A—A.



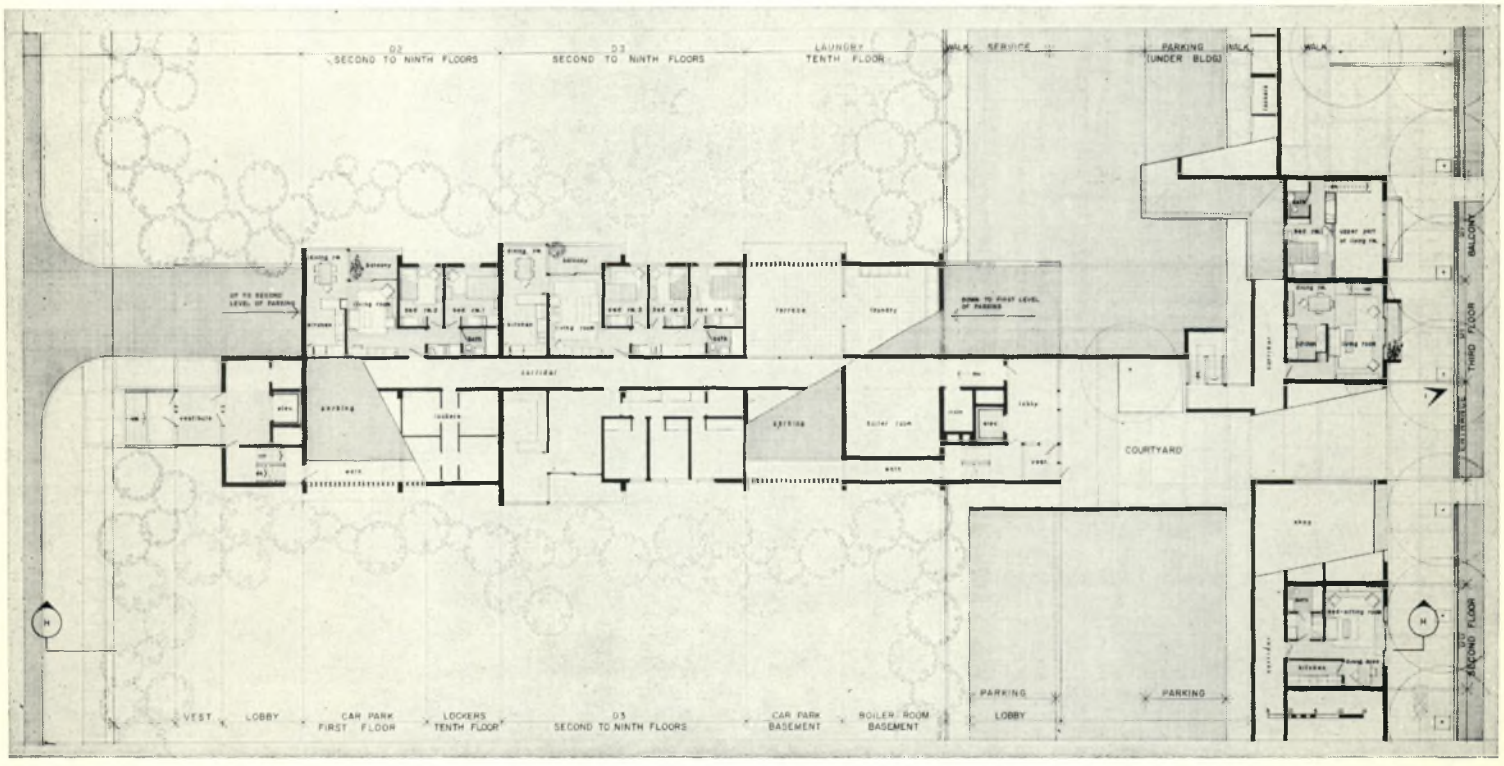


Section B—B.

D0, D1, D2, D3. High Rise and Bachelor Apartments.



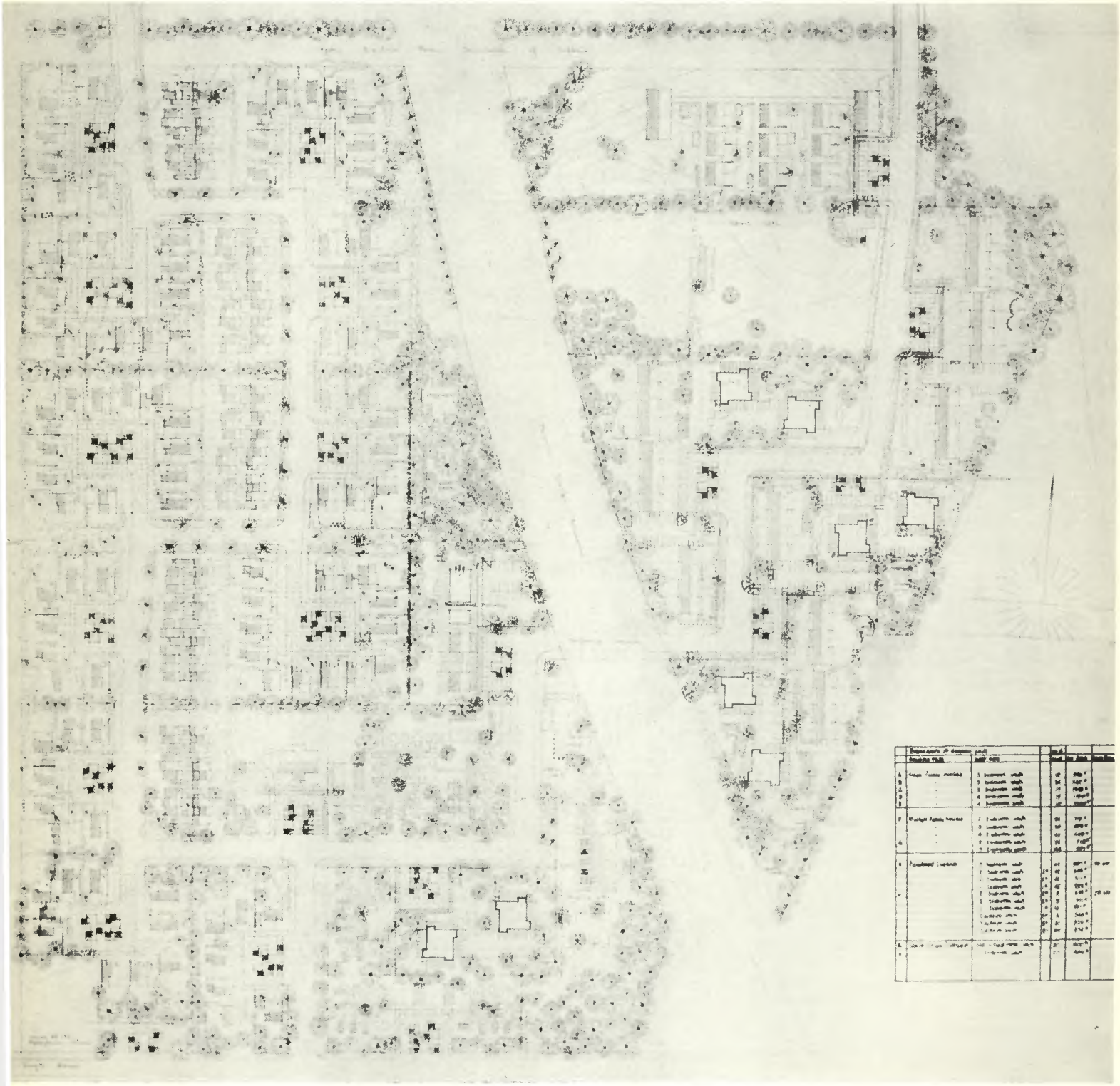
Section H — H.



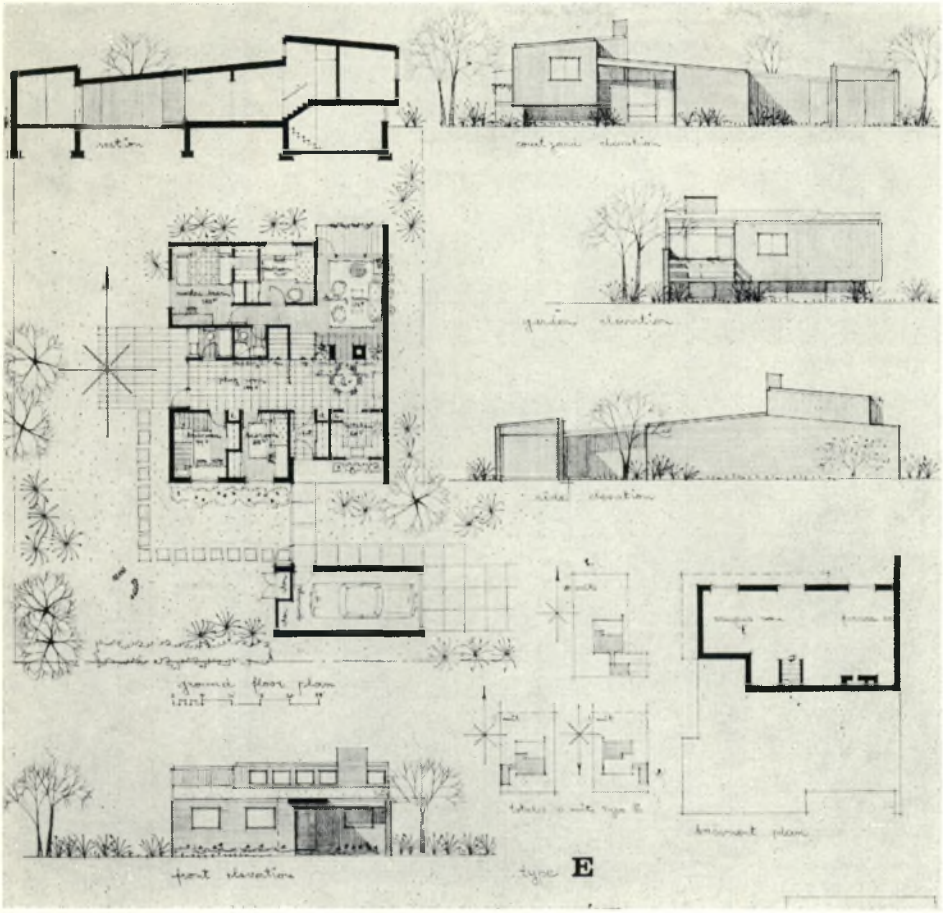
SECOND PRIZE—Scheme 'E'. Messrs. W. M. Schacter and N. H. Schoenauer, Montreal.

'E's' proposals are particularly noteworthy for the way in which he integrated housing types of all categories throughout his scheme. His buildings are modest in scale and nowhere was there evidence of straining at dramatic architectural effect. If his scheme failed to demonstrate the "high degree of imagination" expected of the Competition, it was, nevertheless, a straightforward and not uninteresting solution to the housing problem.

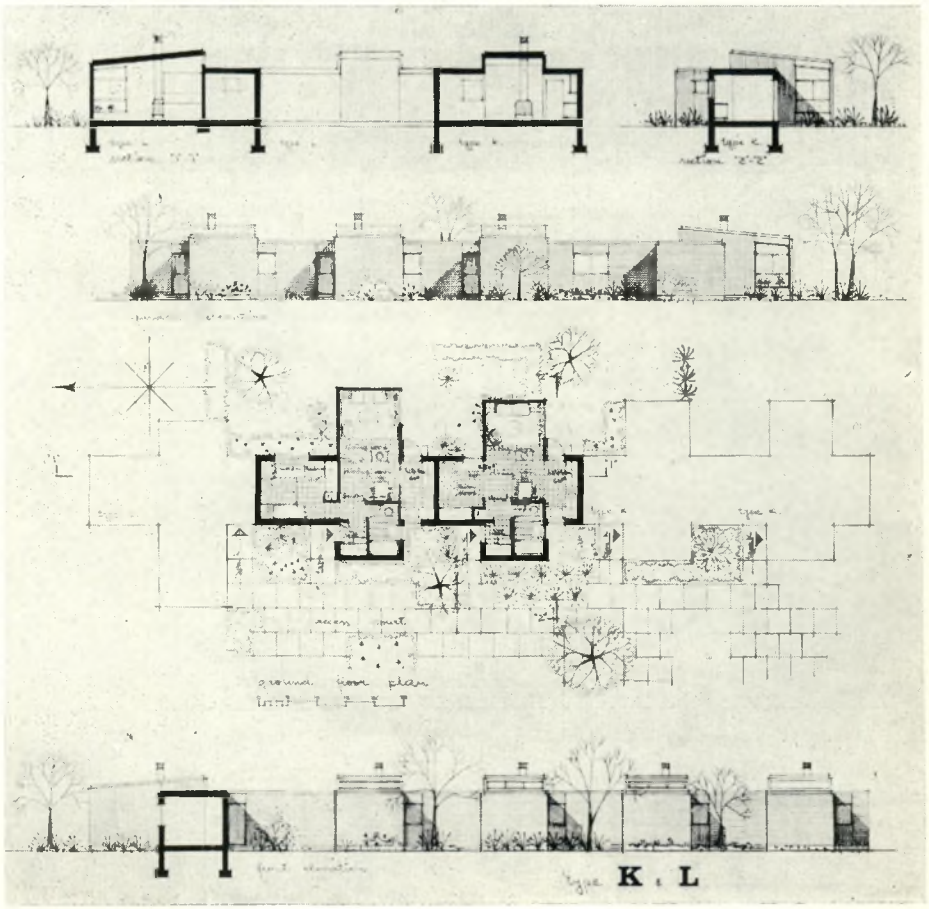
Site Plan.



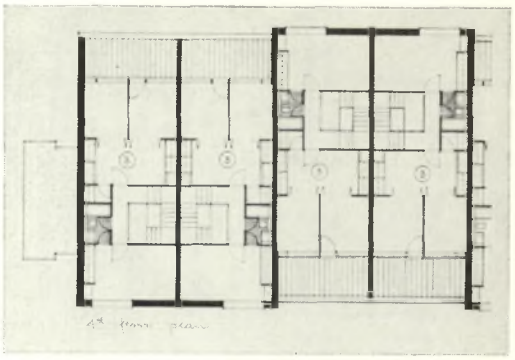
Type E. Single-Family Units.

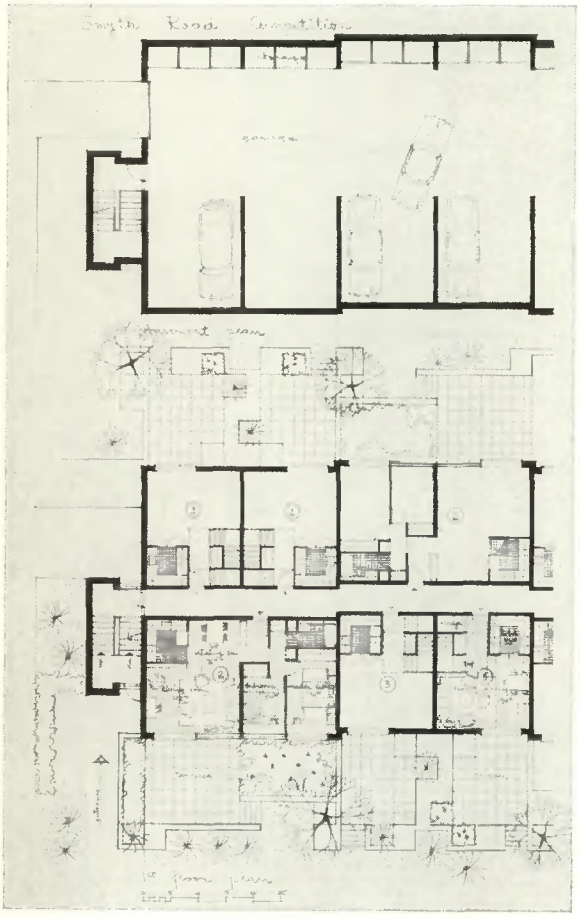


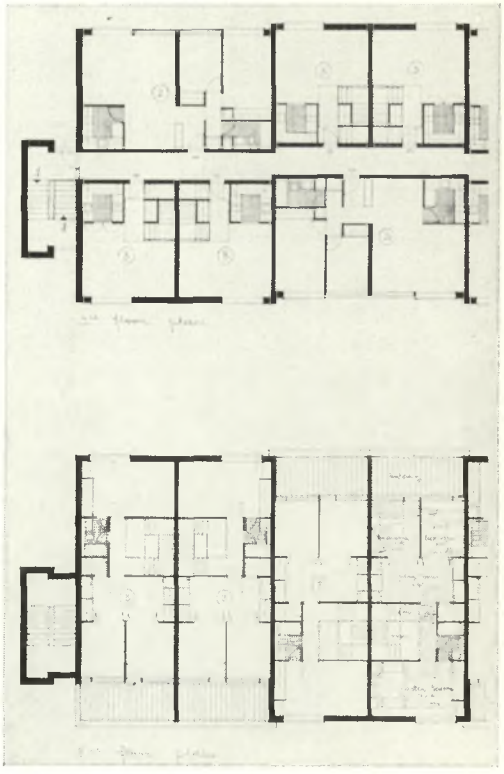
Type K & L.
Row Housing Units.

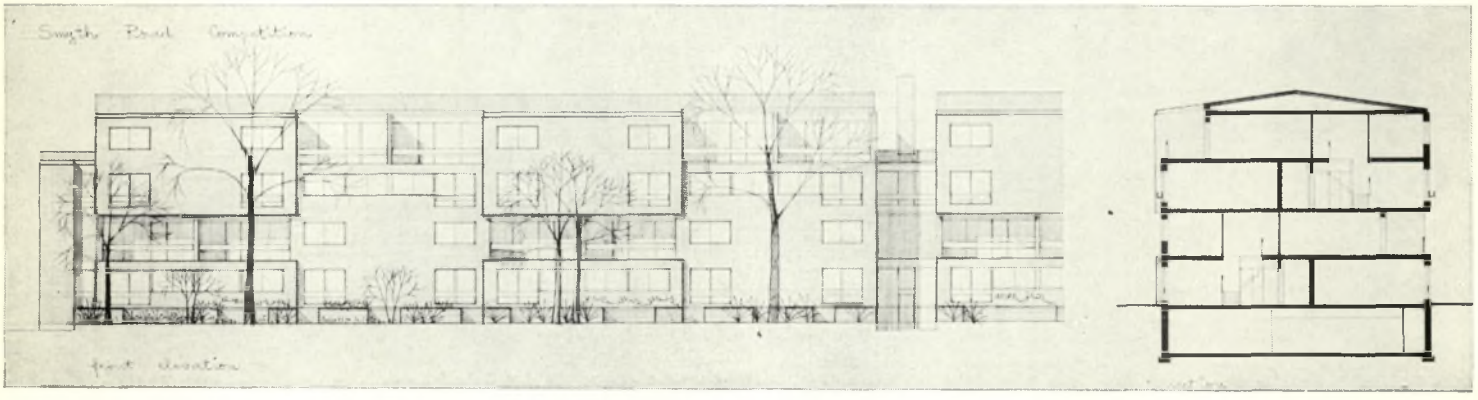


Type G. Multiple-Family Units.



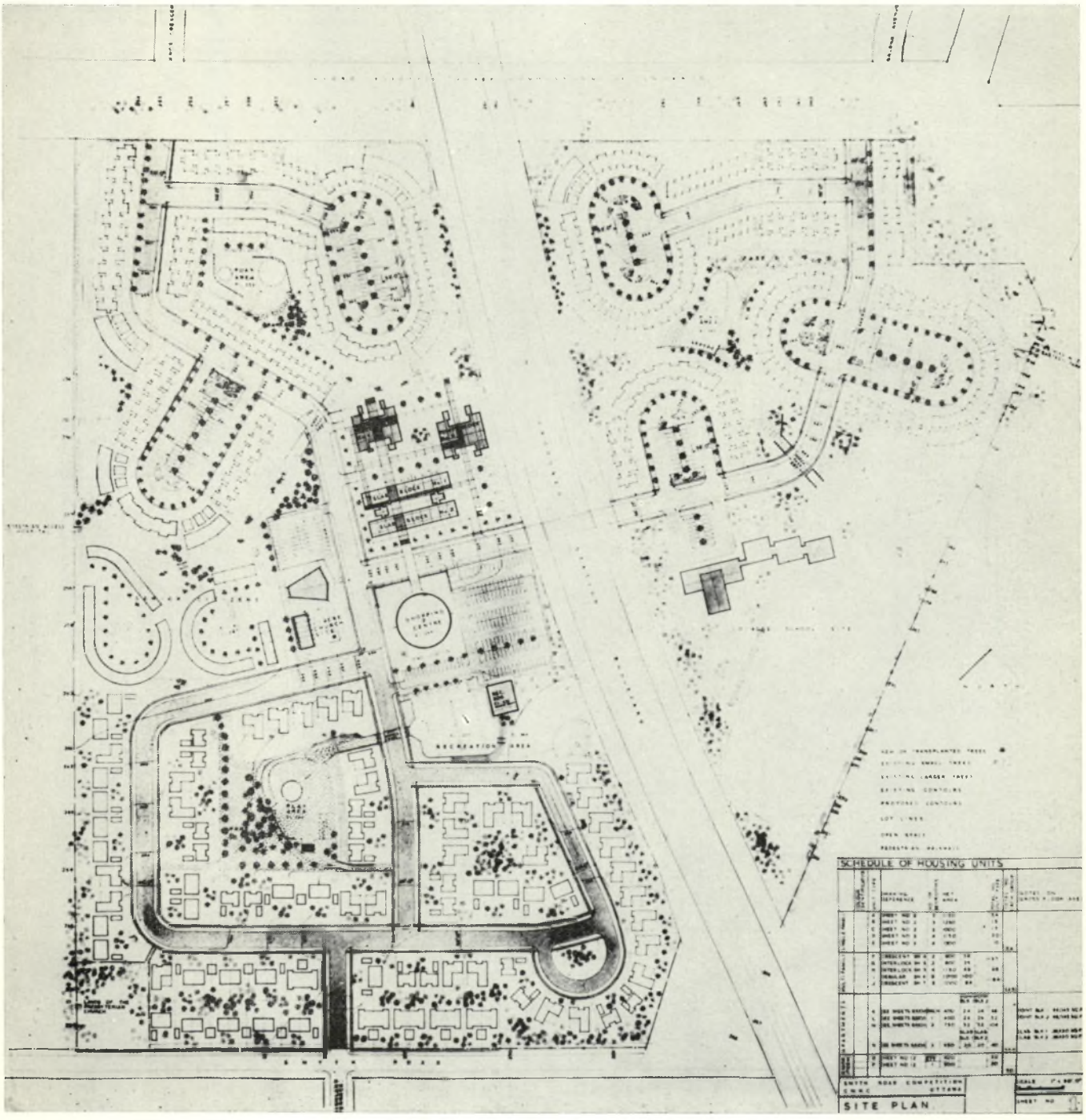






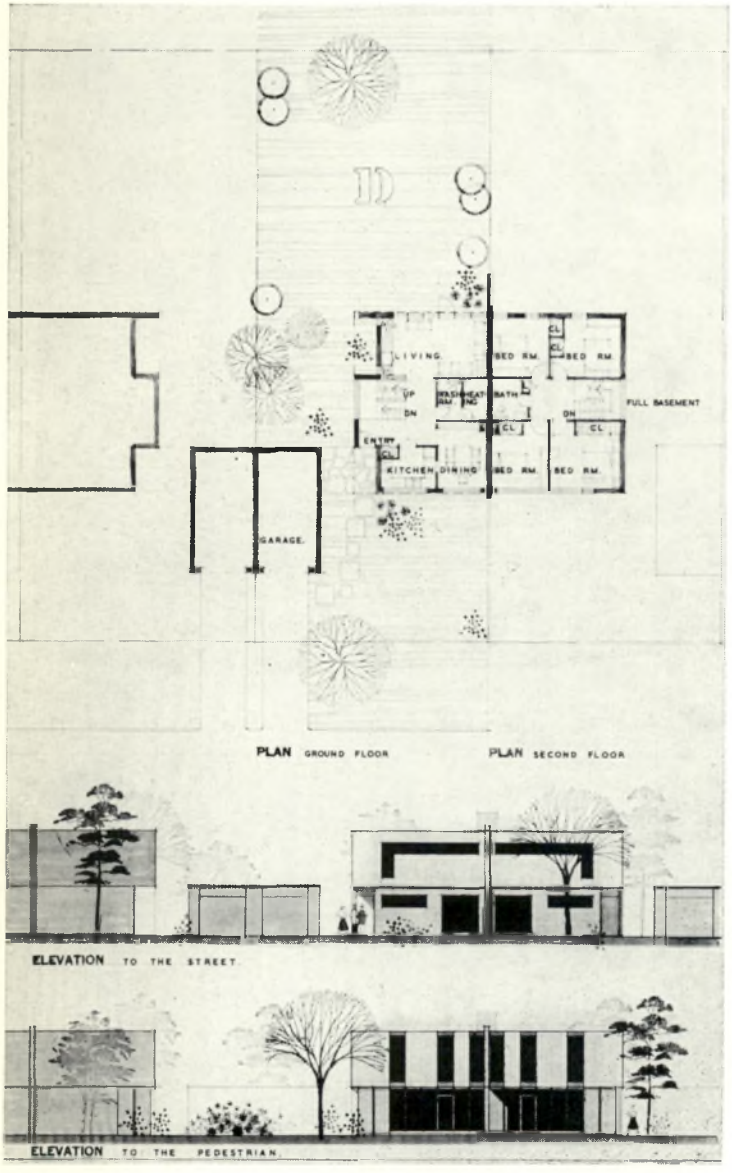
THIRD PRIZE—Scheme 'D'. Mr. H. A. Swanson, Toronto.

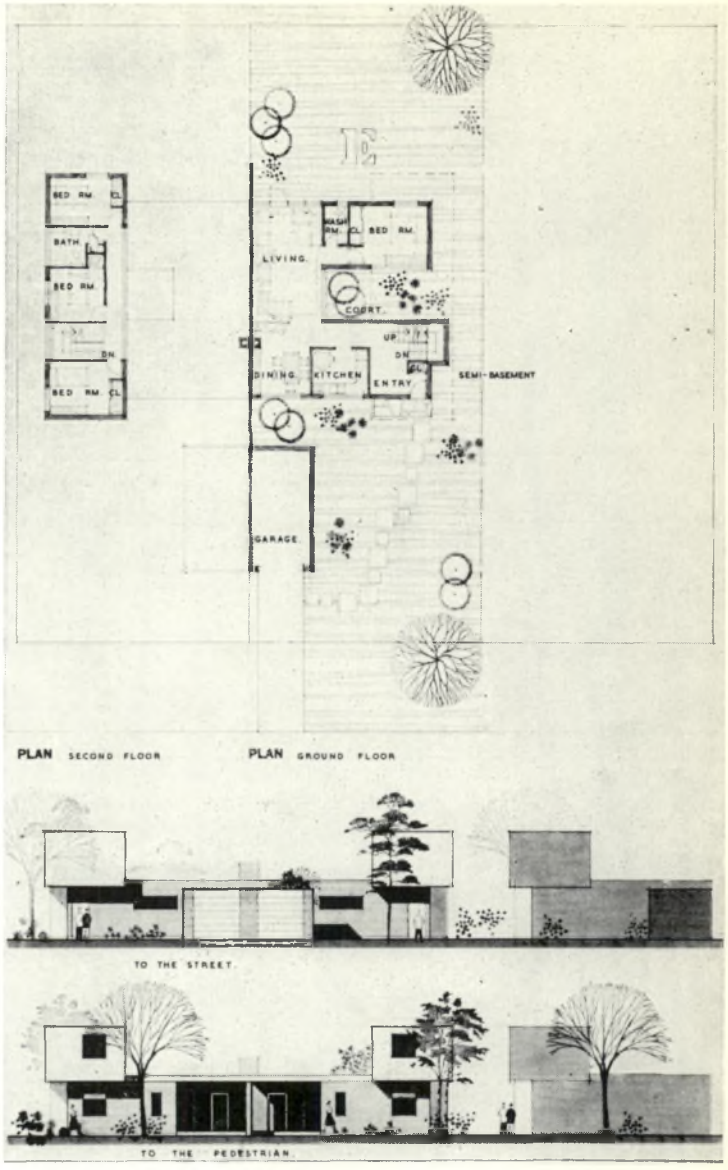
'D' presented a well defined street pattern to which all houses have immediate access. His is a romantic solution with many fine qualities offset somewhat by extensive areas of asphalt. These dominate and affect adversely the sensitive and poetic effect which is so marked a characteristic of his highly personalized architectural design. The jury felt the scheme, as a whole, lacked the conviction and authority necessary for the development of such a large scale undertaking.



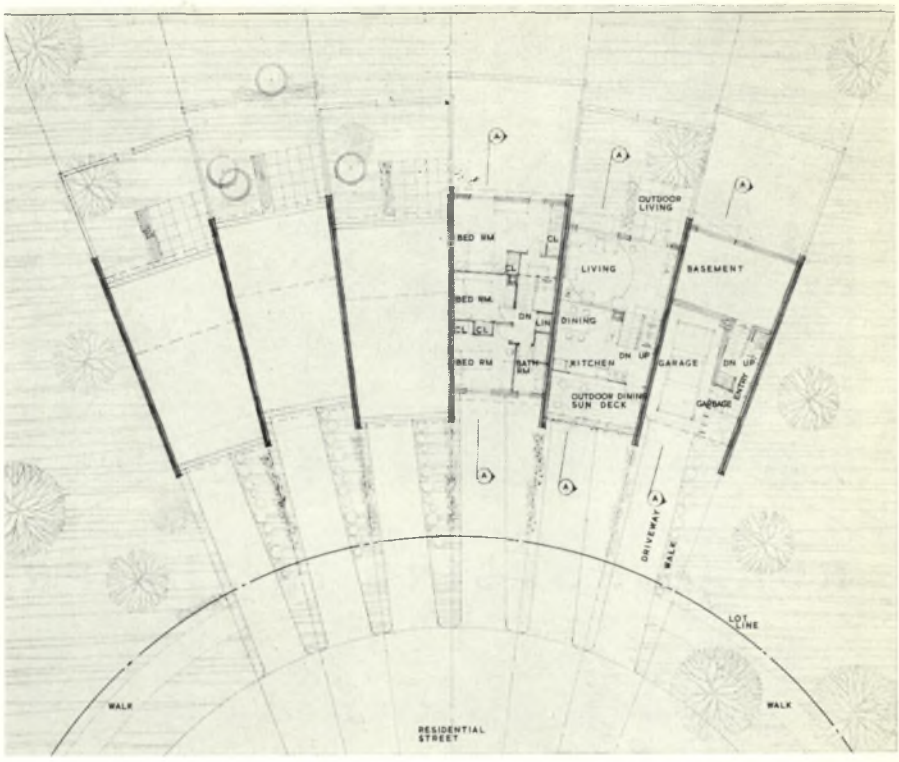
Site Plan.

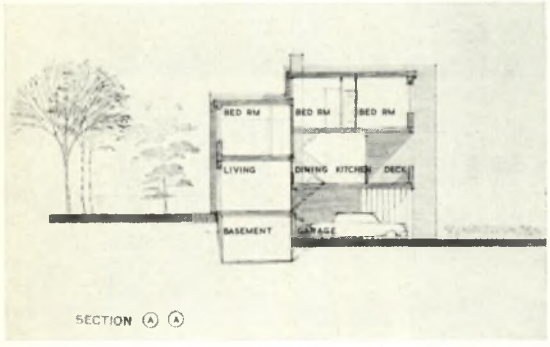
Type D & E. Single-Family Units.



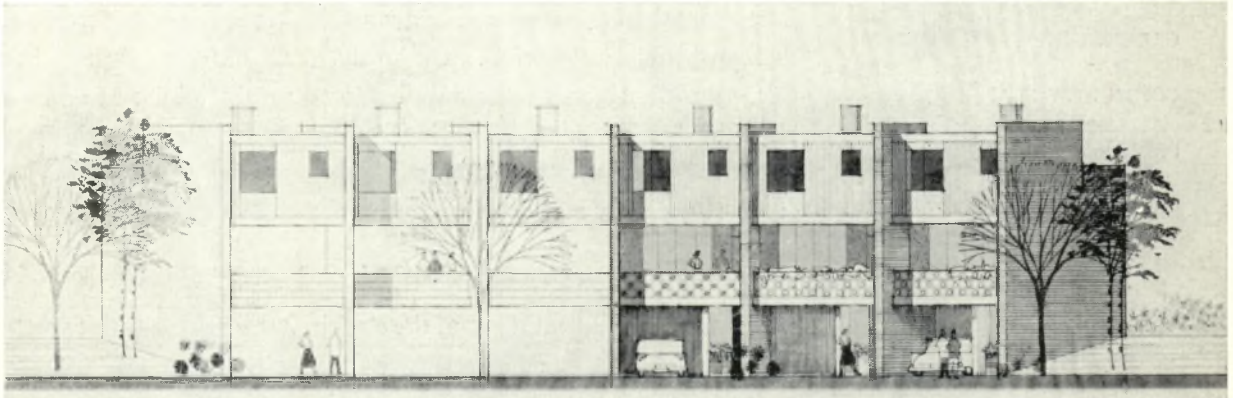


Type J. Multiple-Family Units.

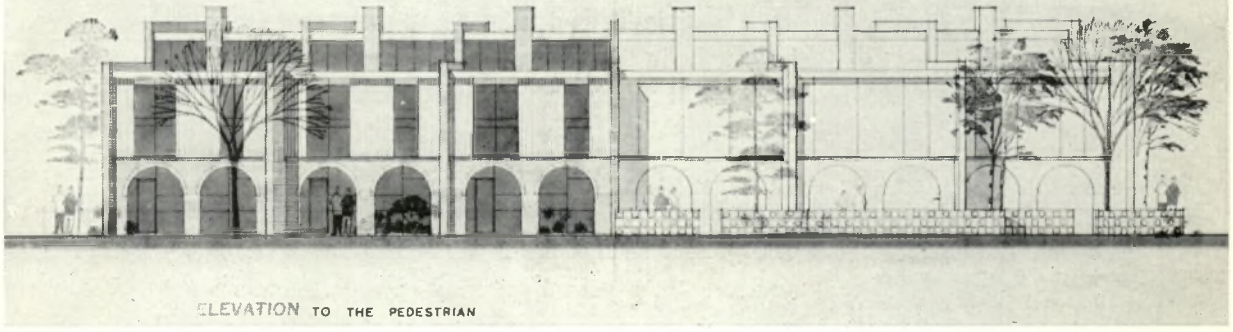




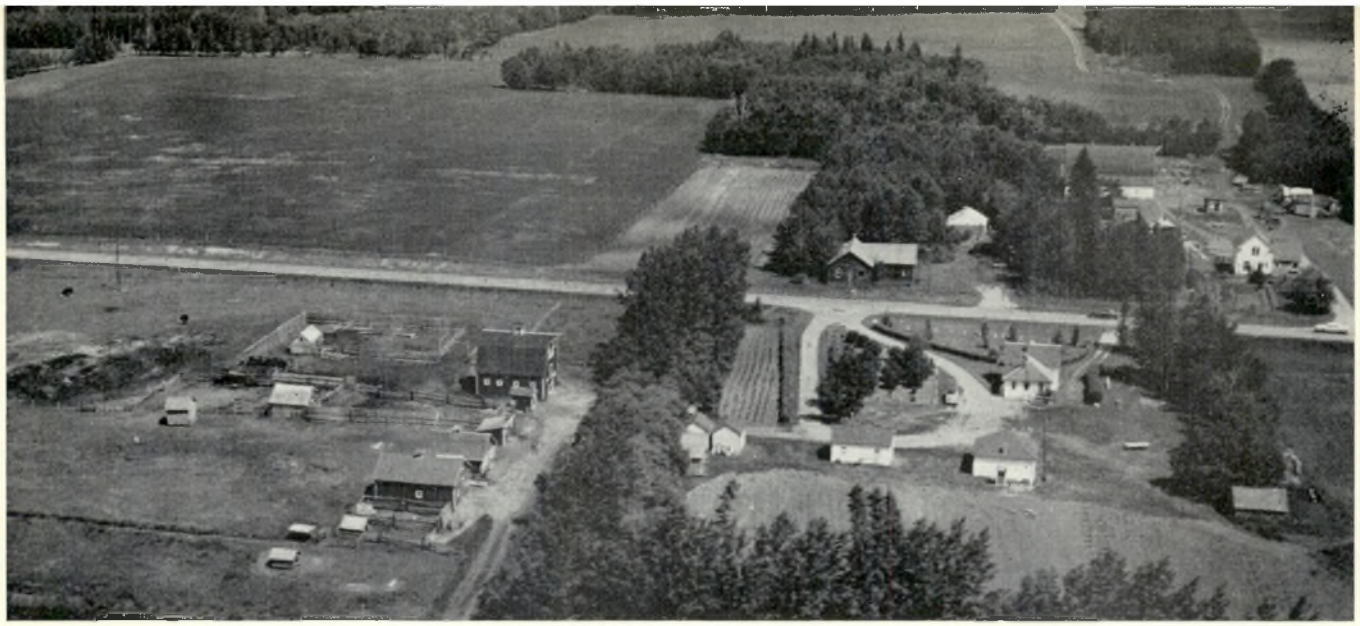
SECTION Ⓐ Ⓐ



ELEVATION TO THE STREET



ELEVATION TO THE PEDESTRIAN



RURAL HOUSING IN THE PRAIRIE PROVINCES

by William B. Baker

MECHANIZATION IS CREATING NEW COMMUNITY PLANNING PROBLEMS ON THE CANADIAN PRAIRIES.

The drama of urban residential growth has been in the public eye. Urban renewal, low-cost public housing, residential design and other innovations are lively issues in metropolitan communities. Meanwhile, rural communities are passing through their own quiet revolution. Curiously, there has been little public awareness of this. No Canadian studies have explored rural land-use in terms of an emerging potential for imaginative housing developments. The Prairie Provinces are well in the vanguard of modern agricultural innovation so they provide a useful arena for housing study and development informed by current realities and trends.

THE PRAIRIE REGION IN TRANSITION

Hardly a half-century ago, the Prairies were settled with expectations of dense populations living on small farms and in small villages but the last several decades have proved this unrealistic. Instead of high density there is extremely low density, reflecting extensive substitution of larger commercial farms and "farmer cities" with their satellite towns. The stage is being set for the emergence of rural "metropolitan" areas and if this occurs within some framework of effective local government, new opportunities will exist for land-use planning and housing developments.

Rural citizens have been making adaptations through largely random and undirected individual decisions. Between 1936 and 1956, the total number of farm units in the Prairie Region dropped from 288,100 to 232,626 and the 1961 Census will certainly show a further substantial decline. In large part, this reveals absorption of farms under 320 acres by units of 640 acres and larger. Vertical integration and specialized production are receiving greater attention — a process by no means complete. Now there is substantial evidence of a persistent residue of depressed smaller farms which may include from 40 to 60 percent of the existing number. In a period of rising chronic unemployment, these farm families may wisely choose to remain secure in their insecurity. Most of them possess less

The farmstead provides many opportunities for creative planning and designing.

than a grade eight education and would be the first to experience unemployment in an age of increasing technical job qualifications.

While this change in production units has been under way, trade centres have been going through a far more subtle adjustment. The Prairies contain 783 incorporated villages and towns. There are also an estimated 1,000 unincorporated hamlets with a population of more than 50 and Saskatchewan data at hand illustrates the trade-centre transformation. One-third of the 500 incorporated places had populations of over 400 in 1956 with 75 percent of the incorporated places doubling in population between 1931 and 1956 in that size category. On the other hand, 95 percent of the centres losing population had fewer than 400 residents. So, it would seem the larger centres are growing at the expense of the smaller places. As many as two-thirds of the latter may well disappear *for economic purposes* within the experience of the present generation. Decisions to abandon railroad branch-lines will likely cut the final cord of economic optimism for several hundred such communities.

This trend is directly related to changes in farm units and a gradual increase in rural levels of living. Along with this, there is a substantial increase in both the physical and mental mobility of the resident population. Automobiles, improved all-weather road networks and the mass media combine to urbanize rural families and the emergence of modern merchandizing facilitates the trend. Although new merchandizing technologies are too expensive for most small-town (under 400 population) merchants, many are too close to the families being served to permit the more impersonal methods of modern business management.

Centralization of commercial recreation and professional services supplements the basic trend of trade centres oriented toward an enlarged community. Thus, specialization with the required larger trading area tends to take precedence over the general "cracker barrel" services of an earlier day. Doctors may prefer practices with ready access to the specialized services of the modern hospital. Teachers seek more preferred positions in central schools. Clergymen follow the call of the single urban parish where auxiliary facilities are often available.

In the public sector, these changes have been extended by a major regrouping of facilities. The one-roomed, multiple-class country school is becoming a thing of the past and larger administrative units which incorporate a network of central schools have taken their place. Hospital locations are now rationed to bring better balance between an expensive medical technology and a scattered population. The planning and construction of modern all-weather road systems has made obsolete the original municipal systems. In Alberta, the county system has been established; where this has not happened, coterminous larger municipal and school districts exist. Saskatchewan is now considering similar proposals and Manitoba is moving toward major adaptations.

The Prairie Region is in a period of non-agricultural industrial expansion. All provinces now have active policies for the promotion of small industries adapted to the smaller urban communities and as this develops, a new element of stability is injected into the Prairie economy. From a rural housing viewpoint, agricultural income remains a major item, but, many of the violent instabilities of farm markets and climate have been substantially cushioned. But this year's drought provides a grim reminder of an obstinate Mother Nature.

The initial industrial expansion is confined to the larger urban centres, but as smaller areas seek industrial facilities they are made aware of the necessity for modern conveniences. Hundreds of towns are now actively campaigning for sewage and water, paved streets, improved lighting and general improvement through planning and this trend is to be encouraged to counter tendencies of industrial centralization. Unfortunately, the combined threat of economic decline and the luring of industry may also cause premature and unrealistic investment. The acquisition of expensive public facilities, aided by provincial and federal finance, will not offset the

basic economic trend for many small communities. Then, too, most towns and villages have a traditional low-tax ideology inconsistent with industrial expansion. They encounter painful tensions as they seek to convert the local economy.

RURAL HOUSING IMPLICATIONS

With such extensive adaptations in both the public and private aspects of the Prairie community, there is a shocking absence of information on housing conditions. Significant changes must be occurring in a whole series of elements in farm and small urban residential patterns, but what those changes might be can only be speculative.

Primary importance must be given to the existence of two basically different but related dynamic problems:

1. The problem of the *unadaptive* household represented by the farm family on an uneconomic farm unit and by the small-town resident in an increasingly uneconomic service unit. For this group, housing aspirations are not likely to be realized.

2. The problem of the *adaptive* household represented by the farm family on an economic production unit and by the large-town family in an expanding or stable service unit. This group cannot only aspire to improved housing and amenities; they actively seek the resources for making aspirations effective.

Rural and village housing is complicated compared to the better-known urban situation. Except for poor farming areas and declining rural villages, there are no equivalents to the urban slums. Unadaptive and adaptive households are more often mixed in the same area. Then again, the spatial difference between rural and urban residential patterns is more likely to isolate the visual impression of slum conditions. In some small rural towns there are concentrations of low-income households "across the tracks", often representing ethnic minorities, retired farm families, the widowed and the bachelor. Quite frequently, they reside on acreages for the advantages of a garden and perhaps some livestock. Their numbers may be small, but, when concentrations occur, they can have a strong conservative influence on the town council.

It seems unlikely that the difficulties of the unadaptive household, whether farm or town, will be resolved without recourse to rural redevelopment policies and programs. In purpose, at least, this is equivalent to urban renewal. In some instances, the normal processes of migration, relocation or death will resolve the difficulty. Meanwhile, progressive policies and programs may be needed to reduce the proportion of unadaptive households.

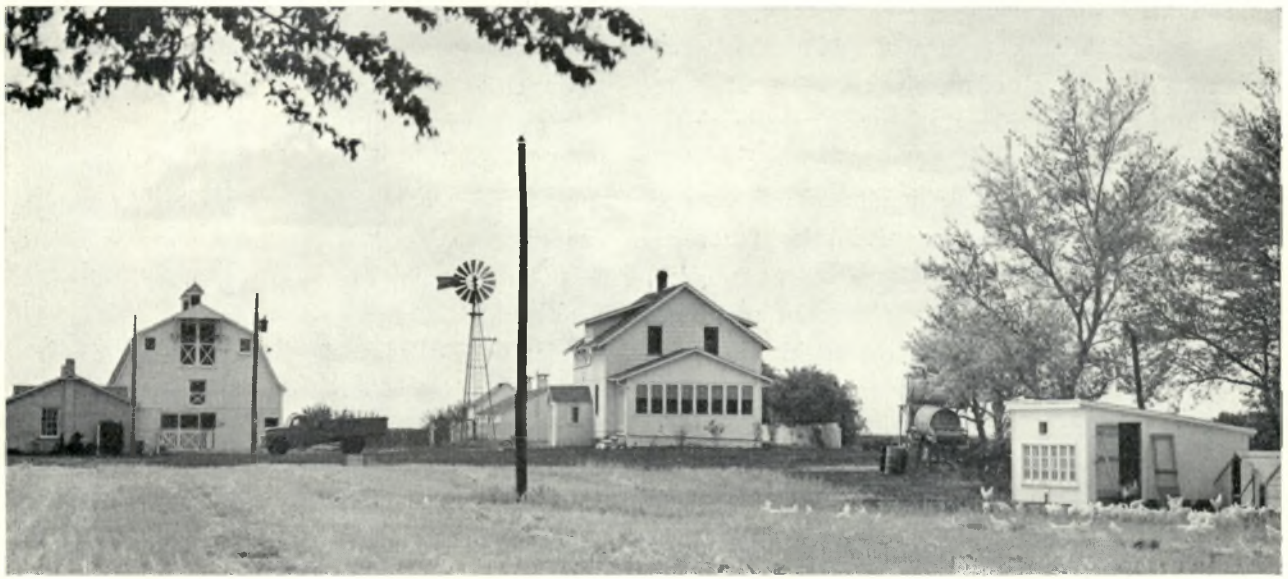
The extension of electrification into rural areas has been completed on all but the most widely dispersed and impoverished farmsteads. Rural farm and rural non-farm sewage and water installations are proceeding rapidly in Saskatchewan. The Prairies are noted for concentrations of the aged in the smaller centres and these communities of declining population and trade are seeking public housing for the retired and widowed. As all-weather roads are established to interconnecting trade centres, the more difficult problem of roads feeding into main networks looms larger. Cutting across all of this are the higher per capita costs associated with residential dispersion and the end result is a tax burden which the unadaptive household cannot afford.

The situation of the adaptive households seems to provide greater scope. The adaptive households have opportunities for rural housing programs as challenging as any found in metropolitan areas. Here is an active seeking for opportunities equivalent to those of the urban household. The attitudes of these families are necessarily influenced by long-run expectations of the level and stability of income and assurances of a reasonable return on investment in improved housing.

While farm income, even for families on successful commercial farms, continues to reflect market and climatic instabilities, various measures have been undertaken to alleviate the limitations. The influence of climatic variability has been offset by scientific advances in plant breeding and soil management except in extreme situations. Adaptive households have achieved closer to optimum com-

Left, a problem for the planner,
an old prairie farmhouse
typical of the
unadaptive household.

Below, in comparison, a modern farmstead
which contains an adaptive household.



The changing pattern of
the prairies is seen
in this new modern farm,
Floral, Saskatchewan.

PHOTOS COURTESY OF THE SASKATCHEWAN GOVERNMENT.

binations of land, labor and capital in the production unit. Urban-industrial expansion has stimulated greater demand for farm products, although this has not been enough to offset phenomenal gains in productivity and the outlook for world markets is not promising. Despite these income uncertainties, modern agriculture will reflect a more insistent demand for rural housing.

Circumstances affecting adaptive households in small urban centres are closely related to prevailing farm income levels. Two exceptions occur — expanding trading areas compensate for farm-income fluctuations and an expansion in households further increases the local income base following household transfers from smaller centres, the addition of specialized service outlets, the relocation of public institutions, relocating farm families and possible industrial development. Not all larger centres experience all of these gains. But, where it does apply, there exists a substantial challenge to land-use planning and development. More and more trade centres are seeking to establish local planning commissions under existing legislation.

Security for investment in farm housing requires a complex form of analysis. With few exceptions, urban houses are marketable commodities in their own right. The exceptions are found in declining small urban places but capital is not inclined to flow into such centres. A Saskatchewan survey in one such area found an estimated one-half of the employed desiring to leave the community, but when asked why they did not leave, inability to dispose of property was the major consideration.

Farm houses are not separately marketable commodities unless located for successful conversion to non-farm usage. The ribbon development out of large cities illustrates this. For resale and taxation purposes, the farm house is not a primary consideration. Similarly, it does not provide a marketable security in event of default in mortgage payments, thus the adaptive farm household is faced with a unique set of investment decisions.

Current trends in rural technology may provide new alternatives. The adaptive household with its larger working capital is becoming more mobile and there has been a substantial trend toward relocation of farm homes in towns and cities in the Prairies. In 1951, 16 percent of Saskatchewan farm operators were full-time town residents and by 1956, this had increased to just under one-quarter of all farm operators, while in the straight grain-growing areas, as high as one-third of farm operators may have relocated.

Interviews with 79 "town farmers" by the Royal Commission on Agriculture and Rural Life demonstrate an immediate improvement in household amenities following relocation. Concrete evidence is lacking, but this may be one method whereby adaptive households "buy out" of expensive farm residential patterns and lagging public services. While this brings satisfaction to the farm family able to move, it may further increase public service costs for those remaining.

Investment security for farm households is also affected by rising costs associated with physical distance between homes and between homes and service centres. No known studies have calculated the point of diminishing returns between rising farm incomes and rising per-capita service costs. The Prairies have always had an extremely expensive dispersed residential pattern and declining densities create public service costs which may soon become exorbitant. An aggressive policy of relocation into Quebec's line village or the more common world pattern of village settlements may become a practical necessity.

When farm units are sold, they are frequently absorbed into an existing unit with the house on the absorbed unit becoming superfluous. With modern equipment, however, such houses can be transported over great distances for resale purposes. An unknown number of farmers have brought their homes with them when relocating in towns and cities.

There is no way of knowing whether this new mobility is permanent. With declining farm incomes in recent years, there has been some reversal of the trend. Livestock farmers, in particular, face special difficulties in residential relocation.

Some of them have banded together to explore the utility of co-operative feed lots located at convenient distances from the residential core. Other practical problems discourage bold experimentation.

Whatever the meaning of the above changes, there is need for better information on adaptations in housing structures and on rural house financing and building organization. A trip through any prosperous farming community suggests farmers are adopting urban housing design and the old-style farm mansion is not attractive or practical. Many farm housewives are now employed as teachers, nurses and store clerks, making space considerations and time-saving conveniences important.

How has interior design been influenced by trends already described? Capital management and production planning have a new place in the ways of the farm household. Gas and oil are replacing wood and coal for heating purposes, while modern refrigeration has removed the drudgery of the ice house and cellar storage of garden produce. Television has created new family habits. These and other innovations cause striking contrasts to space utilization in the rural homes of the pioneer era. The house design now desired by the farm housewife is a fruitful area for research.

The building combinations which make up the modern farmstead provide a further area for planning and development. Grain and farm-equipment storage facilities have replaced the gable barn on mechanized wheat farms. On the livestock farm, there is need for well-conceived mechanical and labor-saving arrangements for barn and feed-lot. Rural people are at a disadvantage in securing professional assistance on these matters because qualified assistance on architectural problems remains a largely urban phenomenon. As rural living standards continue to increase, the services of architects, contractors and utility specialists will find this a field for exploration. Agricultural extension and home demonstration agents will offer a larger measure of assistance in housing design, remodelling and finance. The members of adaptive households will expect such professional assistance.

Finally, the urban opportunities for land assembly and multiple-unit construction do not apply to rural situations. As a result, construction firms have not found it profitable to exploit the rural situation. Perhaps the farmer still prefers to rely on his own skills for housing construction. In some communities the traditional "house-raising bee" still prevails and there are isolated instances of co-operative housing construction in connection with joint farming operations. The growing number of father-son partnerships presents opportunities for duplex housing. There has been little exploration of the utilization of inter-community and inter-government arrangements for the organization of house-construction resources.

A STUDY OF RURAL HOUSING

The Centre for Community Studies at the University of Saskatchewan is undertaking a two-and-one-half to three-year study of rural housing in the Prairie Region. It will be assisted by a $75,000 grant from Central Mortgage and Housing Corporation. In securing its data, the Centre plans on interviewing a sample estimated at 1,500 households. An advisory committee will be set up to guide the studies. The report of the studies is expected to have a decided impact on public policies and programs for rural housing in the future. At least, it will provide some answers to the dynamic creation evolving in the midst of the Prairies' current transition.✦✦

Mr. Baker, Director, Centre for Community Studies, University of Saskatchewan, holds a B.S.A. with distinction from the College of Agriculture of that University. He has also taken post-graduate studies in Rural Sociology at the Universities of Manitoba, Kentucky and Michigan. He was Director of the School of Agriculture at his alma mater and from 1952 to 1956 was Chairman, Saskatchewan Royal Commission on Agriculture and Rural Life. He was responsible for directing the preparation of a 14-volume report for the Commission.

L'HOMME DANS SON MILIEU

Monsieur Carmel est l'officier d'information de la Société centrale d'hypothèques et de logement pour la région de Québec.

Jean-L. Carmel

L'être humain dont toutes les activités se confineraient entièrement et continuellement à l'intérieur des frontières d'une même région, d'une cité particulière, d'une paroisse ou dans les murs d'une bâtisse unique serait une exception très rare et cet individu devrait être normalement soumis à des attentions ou à des considérations particulières; j'ai nommé les vieillards, les malades, les handicappés et les enfants en bas âge. L'homme normal, entouré d'autres être normaux, cherchant à nourrir des ambitions justes et légitimes doit, de toute nécessité, et à des périodes différentes de plus ou moins longue durée, maintenir des rapports avec certaines institutions, faire usage de facilités communes, fréquenter des groupements ou des personnes vivant soit dans la région, dans la cité, dans la paroisse ou même dans la maison. Ainsi le "banlieusard" peut avoir sa place d'affaires ou son emploi ailleurs qu'à proximité de chez lui, mais il doit revenir quotidiennement ou presque, à son dortoir habituel et là, exécuter certaines fonctions domestiques, remplir ses devoirs religieux, se mêler à des activités sociales et participer à des entreprises communautaires. Les déplacements quotidiens, hebdomadaires ou mensuels ne sont pas les caractéristiques des citoyens d'une région particulière et les problèmes qu'ils engendrent sont universels quoique leur intensité et leur cadence puissent varier avec les localités et les circonstances particulières.

Incontestablement, le plaisir de vivre, les joies du coeur et la tranquillité d'esprit sont conditionnés au climat qui règne dans la maison, dans la paroisse, dans la cité, dans la région. L'homme dort, il mange, il se récrée, il orne son intelligence, il ambitionne de poser certains gestes dans la vie, mais si l'équilibre est rompu dans la somme proportionnée des efforts qu'il doit faire pour poursuivre ces activités et arriver à ses fins, il devient frustré, mécontent, irritable et démoralisé. Quand je dis l'homme, je parle dans le sens large (générique) du mot et j'inclus l'épouse et les enfants, c'est-à-dire tous ceux qui font partie de la composition normale d'une famille. Un déséquilibre physique et des heurts psychologiques sont inévitables lorsque le chef de famille doit vaquer à ses affaires et aux activités qui s'y rattachent, depuis les premières heures du jour jusqu'aux premières heures de la nuit; aussi lorsque la mère de famille s'étiole et s'épuise pour les siens dans des conditions insupportables et encore lorsque les enfants pour des motifs avouables ou non, sont constamment soustraits à la surveillance des parents.

DANS LA MAISON

L'homme dans sa maison est relativement bien partagé au Canada où des efforts nombreux ont été accomplis et des entreprises louables ont été réalisées depuis quelques années par tous ceux qui s'intéressent au confort matériel et à l'exécution bien ordonnée de toutes les tâches domestiques et familiales à l'intérieur du foyer. Différents groupements professionnels, des sociologues et les pouvoirs publics ont tous mis la main à la pâte, et si les résultats des années passées sont garants de l'avenir, nous pouvons espérer que la courbe ascendante de l'amélioration du logement va se continuer. Il ne faut toutefois pas céder le pas à l'inertie. Dans le but de permettre à ceux qui ont un revenu limité d'accéder à la propriété, différentes formules financières ont été conçues par les autorités gouvernementales à tous les échelons et la réponse des producteurs et des consommateurs de l'habitation a été fort encourageante. Qu'il s'agisse de maisons individuelles destinées à des propriétaires-occupants ou de logements en location, la qualité du produit s'est beaucoup améliorée grâce à la confection et à l'application de normes dictées par des considérations d'ordre moral, technique et sanitaire. Le côté esthétique n'a pas été non plus négligé et depuis quelques années des concours locaux et nationaux de l'habitation-type ont stimulé la

production d'habitations plus attrayantes, aux couleurs gaies et aux lignes harmonieuses, dans des aménagements communautaires plus fonctionnels.

DANS LA PAROISSE

L'homme dans la paroisse peut maintenant bénéficier d'opportunités toujours croissantes pour la pratique d'oeuvres méritoires de dévouement, de charité et de philanthropie grâce à la multiplicité des oeuvres paroissiales destinées à procurer le bien-être et la distraction à ceux qui en ont le plus besoin. L'homme dans la paroisse peut aujourd'hui donner libre cours à ses élans de générosité et à son abnégation à l'endroit des jeunes, des déshérités et des vieillards. Les centres de loisirs pour les jeunes, les cours de préparation au mariage pour les moins jeunes et les mieux intentionnés, les campagnes de souscription en faveur des oeuvres de charité pour les moins fortunés, sont des oeuvres éminemment paroissiales ou interparoissiales, et je crois qu'il est juste ici de rendre hommage à tous ceux qui ont assuré depuis quelques années, le succès de ces initiatives. Espérons que l'exemple de certaines paroisses puisse servir de stimulant à celles qui n'ont pas encore bougé et à celles qui sont, malgré des débuts encourageants, restées sur le bord de la route. Quoique beaucoup de travail ait été placé sur le métier par nos sociétés de bienfaisance et nos communautés religieuses pour le soulagement des besoins de nos personnes âgées, dans les hospices, les refuges, les foyers et les maisons de santé, il me semble que les plus de 60 ans, mariés ou célibataires, qui sont aptes et qualifiés à maintenir leur propre foyer, n'aient pas encore reçu toute la considération à

Baie-Comeau, maisons unifamiliales.

Centre commercial
Rockland, Montréal, P.Q.

laquelle ils ont droit. A mon sens, le problème du logement des vieillards est un problème à caractère local, et il peut naturellement varier en intensité avec le lieu, mais il reste indéniable que le besoin existe et qu'il devrait être satisfait tout en se conformant à certaines normes au sujet du nombre et du genre d'unités de logement, du montant du loyer, aussi bien que de l'emplacement des habitations et de l'aménagement intérieur.

L'homme comme membre d'une communauté paroissiale devrait pouvoir évoluer à l'intérieur de ce milieu qu'il préfère sans doute, aussi bien avant qu'après l'âge de 60 ans. Selon moi, la pénurie de logements pour vieillards est une lacune dans le cadre des institutions paroissiales. Quand je parle de logements pour vieillards, je ne pense pas ici aux chambres dans les foyers, aux salles des hospices, pas plus qu'aux lits dans les hôpitaux où les pensionnaires exigent certains soins médicaux et d'entretien.

DANS LA CITÉ

L'homme dans la ville n'est pas une figure autre que celle que l'on a vue dans la maison et dans la paroisse, mais ses rapports avec les autres citadins et les institutions qu'il fréquente sont différents, et les frontières à l'intérieur desquelles il peut et doit évoluer, sont plus éloignées.

Normalement, les joies du coeur se retrouvent au sein de la famille à la maison et elles deviennent encore plus profondes et plus réconfortantes lorsque l'on a satisfait à ses préceptes religieux dans la paroisse. Cependant, la vie heureuse à mon sens est vraiment celle où l'on peut fournir aussi à l'esprit, la nourriture et le contentement qu'il doit trouver dans la poursuite d'activités culturelles ou artistiques. Habituellement ces activités sont déployées à l'échelle de la cité. Les maisons d'éducation à tous les niveaux, les salles de concerts et de conférence, les bibliothèques, l'organisation des loisirs et la pratique des sports existent dans presque toutes nos villes canadiennes, mais il serait à souhaiter que l'on facilite encore davantage leur accessibilité à un plus grand nombre des habitants de la ville; à l'intérieur des frontières de nos villes, ne devrions-nous pas voir des espaces réservés aux familles qui aimeraient à jardiner et cultiver certaines denrées pour leur propre consommation, des lieux de rencontre et des petits ateliers pour le bricolage, et un plus grand nombre de bibliothèques et salles de lecture pour les personnes de tous les âges? Nous devons admettre qu'un grand pas a déjà été fait en vue de procurer à nos populations des distractions plus saines et des centres de culture, mais est-ce assez? Chacun de nous dans sa petite sphère d'influence devrait se demander si

tous nos concitoyens sont vraiment heureux et s'il n'aurait pas lieu de leur procurer davantage, c'est-à-dire ce qu'ils recherchent vraiment?

C'est à l'intérieur des limites de la ville que les assignations officielles de territoire pour fins industrielles, commerciales et résidentielles font leur première apparition, mais l'équilibre des différents usages ne doit pas être rompu toutefois par leur démarcation inconsidérée et par le tracé de voies d'accès et d'intercommunication qui compromettent et gènent les activités du travail et des loisirs.

Au niveau municipal on constate depuis quelques années une préoccupation croissante dans la préparation de plans directeurs et la réglementation pour le zonage. Dans certaines municipalités, des études de rénovation urbaine et des codes d'entretien et d'occupation des logements ont été préconisés. Toutes ces mesures et préoccupations tendent vers le même but, créer des villes plus attrayantes, rendre les populations plus heureuses. A l'heure actuelle, la vie des villes n'est pas à dédaigner, surtout lorsque les administrateurs ont conscience du rôle de premier plan que doivent jouer les agglomérations urbaines dans le futur.

DANS LA RÉGION

Sans prétendre être un adhérent du malthusianisme, il faut tout de même reconnaître que depuis l'époque où vivait l'économiste anglais, fin du 18e et début du 19e siècle, nous avons assisté à un éclatement des limites de nos centres urbains et à une infiltration correspondante par les nervures urbaines, des terres en culture, ou susceptibles de l'être. Même en ne partageant pas le pessimisme de Malthus et en ne souscrivant pas à la théorie qu'il préconisait, l'abstention du mariage, on se doit de réfléchir sur les conséquences et sur toutes les implications que peut avoir un accroissement des agglomérations urbaines aux dépens des terres arables. Lorsqu'un assemblage hétéroclite et désordonné de structures et d'exploitations diverses a été toléré sur la surface d'un territoire qui dépasse considérablement les limites géographiques et administratives d'une ou de plusieurs villes, nous assistons au spectacle d'une région compromise en sustentation. Les facilités pour une saine et profitable culture maraîchère sont détruites. Je crois que de tous les champs d'activité de l'homme, auxquels j'ai fait allusion, i.e. la maison, la paroisse, la cité et la région, c'est cette dernière qui a été la moins comprise, la moins appréciée et partant, la moins planifiée en prévision des besoins actuels et des possibilités en puissance.

On fait grand état des réseaux rapides de circulation pour l'avenir, de leur tracé à la périphérie des centres domiciliaires, de l'élimination des causes d'accidents, de l'élargissement de certaines artères régionales, etc. le tout conçu en fonction de la rapidité et de la sécurité. Ces considérations possèdent une valeur incontestable et doivent définitivement entrer en ligne de compte dans l'économie de l'aménagement régional, provincial, même national. A-t-on apprécié comme ils le méritent tout le prix et la qualité de la texture régionale et y a-t-on suffisamment accordé d'attention, lorsque l'on ajoute aux voies de communication rapides et commodes, les facilités propres à promouvoir et encourager l'épanouissement des populations d'une région déterminée, i.e. les collèges classiques, les écoles d'entraînement spécialisé, comme les écoles techniques et d'arts et métiers, les centres récréatifs, les lieux de promenades et de camping dans le cadre de l'aménagement semi-rural, les courses de ski, les terrains de golf, l'aménagement de parcs verts, les plages, etc. Les unités de voisinage auxquelles on réfère habituellement en parlant de chapelets d'agglomérations urbaines peuvent satisfaire les aspirations immédiates et de première nécessité autour de la maison, dans la paroisse et dans la ville, pour le plein épanouissement de la vie de famille, pour l'éducation des enfants, pour la pratique des vertus humaines. Cependant, comme complément de l'unité de voisinage, il faut un agencement de la région ou de comté qui puisse procurer à l'individu un supplément d'opportunités qui pourront faire de lui un homme plus sain, plus heureux et plus complet. — L'homme dans son milieu, qu'il soit durable ou provisoire, immédiat ou éloigné, devrait le concevoir et l'ordonner de façon à "Faire de la vie quotidienne quelque chose de plus digne d'être vécu" *Frank Lloyd Wright.*✦✦

THE COURT-GARDEN HOUSE CONCEPT

Above, Norbert Schoenauer, Hungarian born, studied architecture in Europe and took post-graduate studies at McGill, where he is now an Assistant Professor. Stan Seeman, born in Winnipeg, is graduated in architecture from McGill. A two-year working tour took him through England, France and Israel. His principal interest has been the planning of new towns and house construction. Messrs. Schoenauer and Seeman have made an extensive study of the Court-Garden House, with the aid of a grant from Central Mortgage and Housing Corporation, and have compiled a book on the subject which is now under consideration for publication by the McGill University Press.

In man's constant struggle for survival, shelter is of supreme importance. In his efforts to protect himself against extremes of weather and climate he has, through the ages, evolved many types of dwellings, one of which is the court house.

The rapid growth of cities in recent years has created new housing problems which have yet to be solved. One of these, a completely new requirement, is to provide an economic single-family housing unit which will accommodate urban densities and still retain the salient advantages of the suburban home. The court house development, with good land planning, can be the answer to the problem.

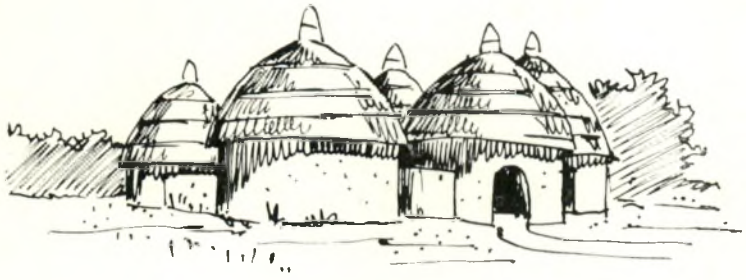
In this article, the name "court house" refers to a single family accommodation consisting of one or more interior courts partially or completely surrounded by living areas. This unit is conceived as an inward-directed house with no exterior wall openings on two or more sides, making possible its use in terrace developments.

The precise form and appearance of prehistoric court houses remain undetermined. Their prototypes may have been the encampments of nomadic tribes or the fenced-in living areas of the first tillers, both of them dwelling forms defensive in nature. Indeed, it is very likely that prehistoric man lived in a way that was similar to that of the primitive man in our day. Tent encampments still give shelter to many nomadic tribes in Moslem countries, and accommodations enclosing a central courtyard are numerous in West and South African villages as well as in other parts of the world, where indigenous building traditions are deep-rooted.

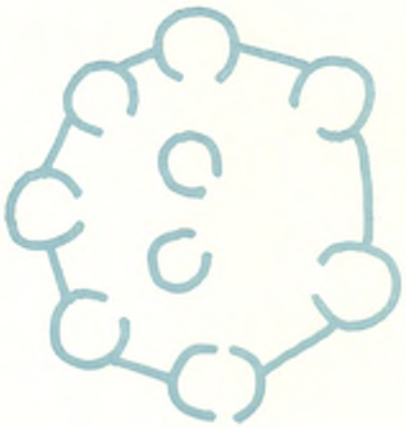
Historically, the urban court house developed concurrently with the emergence of the first cities. The adoption of the familiar rural prototypes in urban areas must have been brought about by factors other than that of defence, the latter losing its validity once the court house became only a small unit within the city protected by other defensive measures.

Three basic factors contributed to the popularity of court houses. First there was a great religious impetus; the open interior court was congruous with man's mental image of heaven, the image of a haven in the wilderness. Secondly, there was an economic factor; since the size of the cities was necessarily restricted, a house requiring small building plots had to be developed, and because the limited technological knowledge of the time restricted building height, the court house dwelling permitted the greatest densities. The third and final consideration was that of climate so the court house came to be known and used as an efficient means by which to escape from extremes of weather.

Numerous excavations have revealed that the predominant dwelling types in the earliest cities of



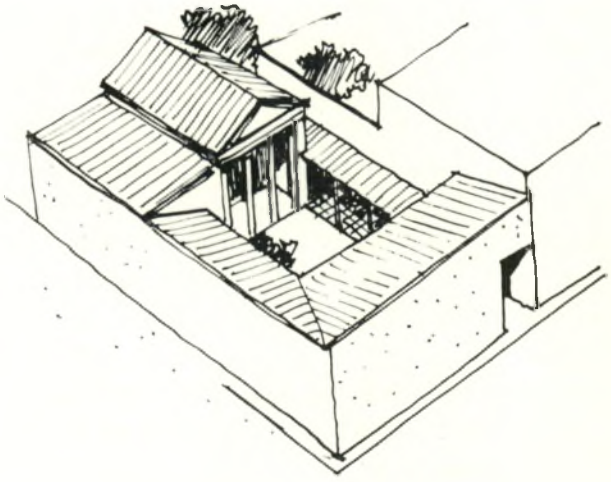
West African compound.



by Norbert Schoenauer and Stan Seeman

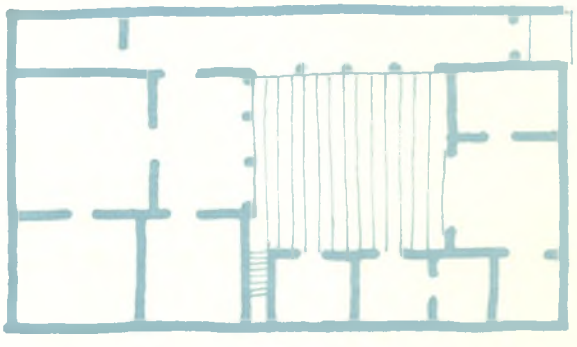
our civilization have been court houses. Centuries later, during the classical epoch of Greece, the court house was still the typical housing form in the urban community. It underwent in the meantime a sophistication only surpassed by the later Roman atrium house, familiar in all its variants from the writing of Vitruvius and the excavations at Pompeii.

With the fall of Rome, the frequency of the atrium house as a dwelling type diminished with other forms becoming dominant on the European continent. During the Middle Ages and the Renaissance the character of accommodation changed to such an extent that even in Italy the "cortille" with its open arcade became a rarity, a lingering trace of the ancient house.



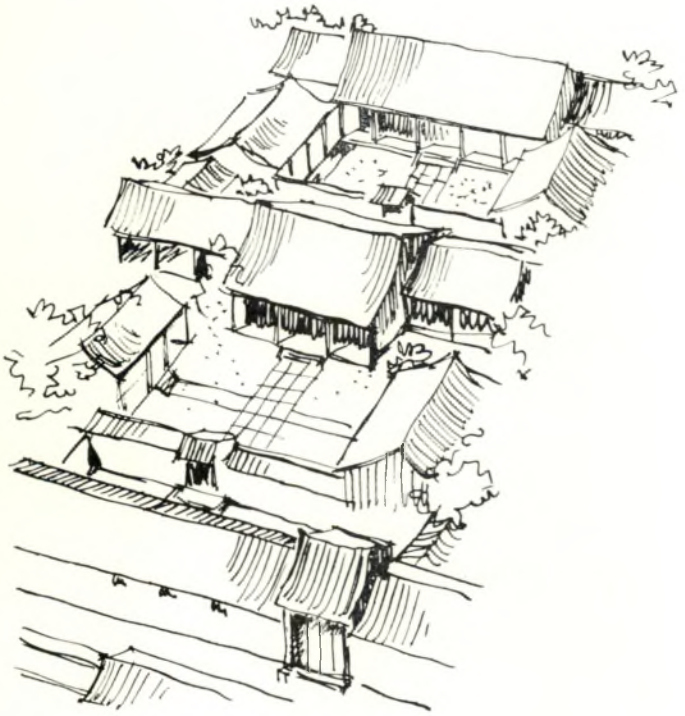
Greek court house.

Court houses survived, however, as a more humble habitation in other regions bordering on the Mediterranean, namely in the domain of the North African Mussulman. Court houses are, to this day, the vernacular form of Moslem building tradition. The basic principle of the Moslem house, namely that of privacy and seclusion with a minimal display of the occupant's social status to the outside world, is adhered to with the greatest of uniformity in all regions inhabited by the Moslems.



Moorish conquerors reintroduced the court house concept with their invasion of the Iberian Peninsula. Whether the Roman atrium house also

Mexican patio.



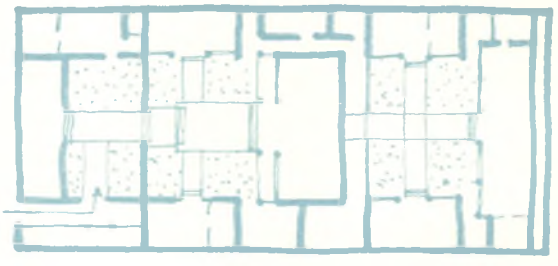
The Chinese court house.

played a part in the evolution of the Spanish "patio house" has not been clarified, since there is a notable lack of study of Spanish domestic architecture. From Spain the court house was brought to Latin America by colonists, and survives to this day as a dwelling type native to those countries.

Court houses are not only found in the Mediterranean area or in Latin America, but they are also numerous in Asia, reaching their highest development in the Far East, China and Japan. It is interesting to note that a closer examination reveals many similarities between the different stages in the evolution of the court house concept, as manifested in the two main regions of its origin — the Mediterranean and the Far East. This fascinating similarity cannot be accidental; its explanation must lie in human ecology. The need for privacy, the adaptation to climatic conditions and the requirements for adjustment to limitations of available land, all find their expression in a general and widespread housing form — the court-garden house.

The court house concept in contemporary architecture is only now coming into general acceptance. In those countries where the court house was an indigenous form of housing, its acceptance was much more rapid. In contrast, countries with no court house traditions are now slowly, but increasingly adopting this concept.

An early introduction of the court house principle to a country with no such heritage was made in Germany in the early 1930's by Mies van der Rohe, with a design for a row house development consisting of a series of L-shaped court houses. Somewhat later, L. Hilberseimer applied a similar



principle for an urban residential design. Neither of these were carried out, yet their significance and importance in the evolution of the court house concept was far-reaching and has exerted a marked influence on later developments of it.

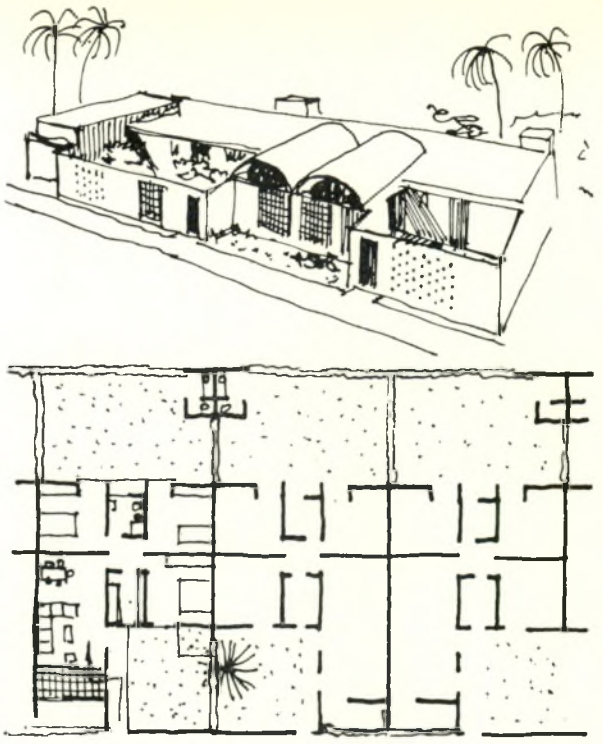
In 1940, almost a decade after Mies van der Rohe's first court house project, a study was published by the Italian architects, Pagano, Diotallevi and Marescotti, outlining the advantages of the court house development on the European continent, in Libera's Tuscolano project, outside of Rome.

The immediate post-war period saw only sporadic use of court houses. Individual examples were built in the United States, Brazil and a few other countries, but only two housing developments employing the court house unit were constructed. The first housing project was designed by the architects Zehrfuss, Drieu and Kyriakopoulos, and the second by Glorieux and Glorieux-Monfred. Both developments are located in Tunis, a region already accustomed to a privacy-oriented mode of life.

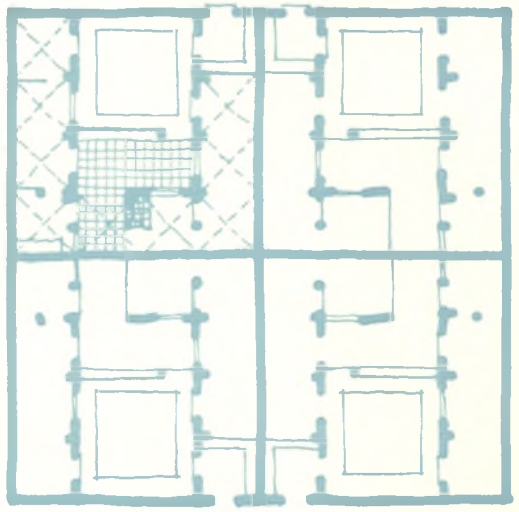
With the arrival of the 1950's the court house concept suddenly found a wide acceptance in a number of countries in Europe and the Americas. Their use now was not limited to those regions which had a warm climate, free from snow and freezing temperatures, but was successfully introduced to northern countries like Denmark and Sweden and most recently to England and Canada.

The northern European examples of court house development are of great importance with respect to the adaptability of this concept to Canadian housing. The climate of these countries resembles Canada's and their slightly milder weather may be offset by their shorter daylight periods in the winter season. It is evident that the court houses here are not merely replicas of the Mediterranean patio houses, but are true adaptations to their new environments and only retain the basic principle; the desire for privacy and efficiency of land use, allowing greater densities without having to resort to multiple-storey accommodation and without sacrifice of public open space.

This rediscovered dwelling type is only at the



Housing development, Cuba.



Court development in Tunis.

threshold of its evolution. An indication of this is its increasing popularity as a design problem in the leading architectural schools of many countries and its inclusion in numerous housing competition designs. The role of the court house in the residential scene is expanding rapidly, but to assure its success at the start it is imperative to study the existing examples with reference to their workability and their adaptability to their respective environments.

The physical and conceptual advantages of court houses are numerous. To make an analysis, it is necessary to examine the three main areas of importance individually. These would be the building site, the court-house and the court-garden.

There is a fourth area of importance that ties the first three together, and that is the actual use of the court-garden house, the manner in which people bring it to life.

There can be little contention with the fact that court houses lay a minimal claim upon the area of the building site proper. When residential land becomes scarce and remote from urban centres, this aspect becomes very important. Efficiency of land use is followed by savings in municipal servicing costs, and also justifies the employment of the court house in central urban renewal areas in conjunction with high-rise multiple housing developments. These two types of structure complement each other, provided the low and high building masses are sensibly proportioned.

The second area of importance in the court house is its inward-directed characteristic enabling optimum privacy, since most habitable rooms receive their view from the interior court-garden rather than being dependent upon the streetscape. Moreover, court houses are ideally adaptable to the desired orientation and are congenial to open planning and the creation of zoned living areas within the house.

Court houses, by their very nature, can be adapted to horizontal or vertical deviations dictated by the existing topography. This flexibility often permits a more varied street scene while retaining the original character of the land.

Street noises, the major noise source from without the house, can be reduced by placing the utility rooms between the street and the living quarters. The utility rooms thereby take a logical position adjacent to municipal service lines imbedded in the public right of way.

Finally, construction costs of the court house compare well with those of the conventional house, and since most of its fenestration occurs in the sheltered court area, its fuel economy is favorable in spite of the eventual increase of peripheral walls.

The third aspect is that of the court-garden itself, essentially an outdoor room, serving many outdoor living functions: dining, entertaining, outdoor recreation, gardening, children's play and so on. Its use is not limited to only one of these functions, but may include a number of activities during the course of the day.

Less evident is the court-garden's potential in providing a controlled microclimate. The luminosity of the sun's visible rays can be increased or decreased by use of light or dark colors and smooth or rough-textured surfaces on the court floor and its surrounding walls. Conversely, heat rays may be controlled by reversal of the coloring and texturing used in the control of luminosity.

A house with an enclosed court-garden has distinct advantages over the single family detached house with respect to the reduction of noise originating in the neighboring outdoor spaces. Again, through surface treatment of the court-garden floor, the circulation of dust within the enclosure can be checked, and the dust entry into the house kept to a minimum.

The court-garden offers its occupants, in addition to the foregoing, many advantages with respect to gardening. Microclimatic features may make possible the cultivation of plants which depend upon protection from cold winds and the retention of more moisture.

Another advantage of the court house development is that it will, upon completion, be integrated with its surroundings. Normally, the appearance of new homes and housing developments suffers for years from the lack of mature trees and landscaping.

However, in a wall-enclosed space a young tree or a clump of trees is in scale with its surroundings relatively soon after planting.

The human aspects of the court-garden house is the most difficult to analyse. The human mind frequently rejects logic, especially when it involves changes in deeprooted traditions and living habits. However, there are sufficient physical, psychological and sociological benefits to be derived from living in court house developments to warrant the propulsion of this dwelling type. Some time ago, our main concern was the provision of sufficient light, air and sanitation in our dwellings. Now that this has been broadly accomplished, it is in order to turn to the fulfilment of the other important human needs.

In conventional housing on the community level, the matter of conformity to generally accepted notions of landscaping, washdays, fences versus hedges, and so on, is extremely important, and robs the individual of much of his freedom of self-expression. The court-house returns this freedom to the home owner.

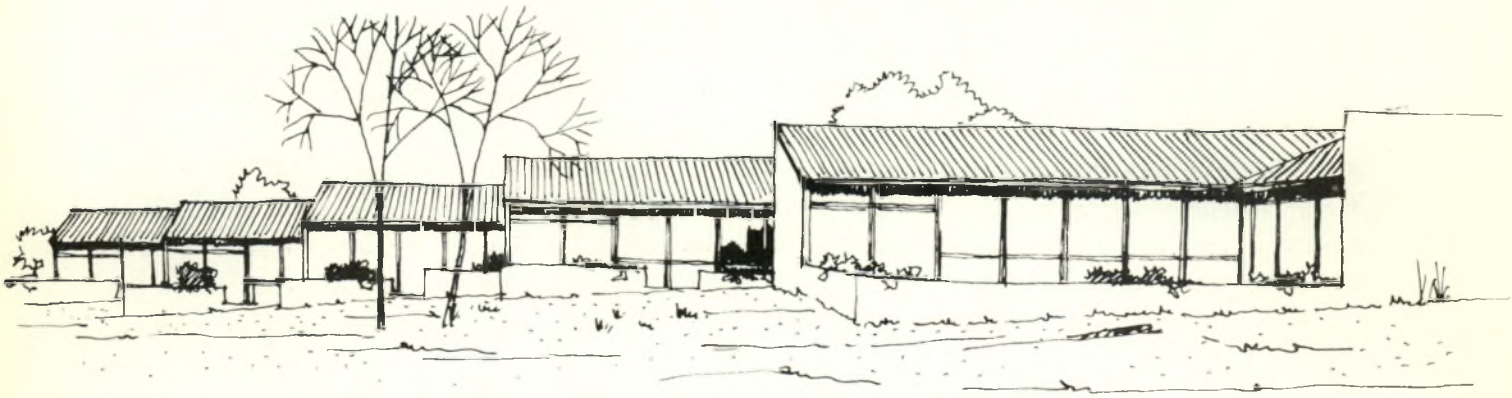
There exists a strong human need to be in contact with the earth and its growth, a need which cannot always be satisfied by the potted plant on the balcony or window sill of the multi-storey housing unit. The court house, while economical in its use of land, retains a small private garden which is, however, still sufficient for the fulfilment of this need.

The sociological implications of court housing are not unimportant because they may prove helpful in diminishing the segregational tendencies in our existing neighborhoods. Since provision is made for more privacy between neighbors living in court houses, it is conceivable that people of different age groups, social standing and varied ethnic or religious backgrounds may find it easier to live side by side. In fact, we already know that the court house, in countries where it is inherent, does not reflect any evidence of social stratification or grouping.

In brief, the court house is historically an ancient form of housing that has existed for more than four thousand years. Geographically, it is indigenous to many regions. It is equally at home in Eurasia, Africa and Latin America. Its usefulness is not limited climatically, however, to the regions of its origin. This is proved by the success of the increasingly numerous developments being built in northern climates.

The court-garden house is intrinsically urban in character. Advantages such as privacy and the economic use of land make it ideal for housing developments in large centres of population where such advantages are very difficult to obtain by any other dwelling forms. The homogeneous appearance of the style and its adaptability to natural surroundings allows for the planning of pleasant streetscapes with distinct local character. It fulfills all the requirements of the contemporary living patterns. Open-planning, zoned living areas, family privacy in combination with contiguity with nature, all integral elements of this dwelling type, provide answers to the problems of present urban living.

The court house is a dwelling that satisfies the need for individual self-expression without impingement upon the peace and personal privacy of neighbors, assuring its adaptability within complex social structures. Finally, its acceptance and success is assured through its potential for controlling the microclimate of the "court-garden".✦✦✦



Extended visual limits of the court-house development in Elsinore, Denmark.

An abandoned vehicle at MacAdam & St. Cross in North End Winnipeg.

THE RED RIVER
A Friendly Enemy

by Carson Templeton

During the drought of 1930, a local wit was heard to remark that if you fell into the Red River you would get dusty. But this capricious stream, which winds through Manitoba's capital can and, at times has, become a boisterous, obstreperous, damaging torrent.

The Red River is one of the few on the North American Continent that flows north and fortunately it takes a combination of circumstances, which have only occurred at long intervals, to send it on a rampage. A wet fall, early freeze-up, heavy snow-fall and late spring combine to form a "Straight Flush".

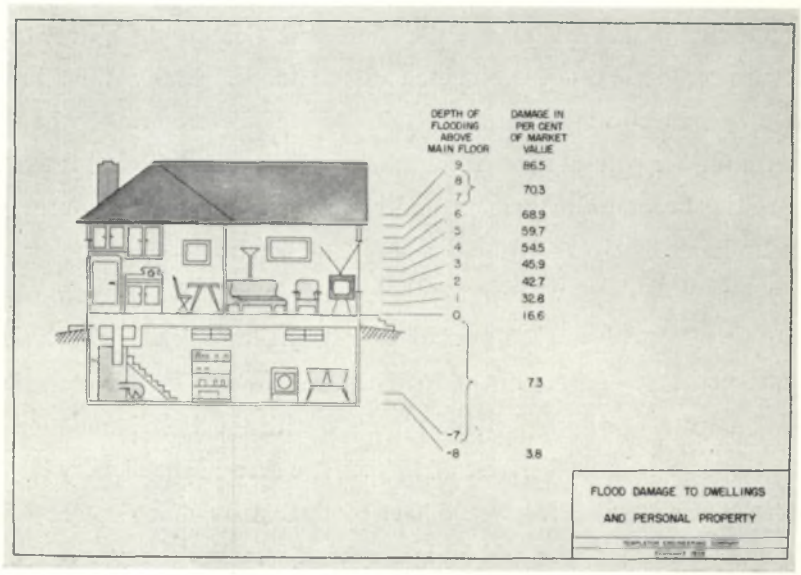
These conditions all existed in 1950 when the latest, and what Winnipegers fervently hope is the last great flood, descended upon the city. After this inundation had subsided, local historians began to dig in the archives to ascertain if this had been a one in a million situation or if the city was actually flood prone. They found that in the early part of the Nineteenth Century the history of the struggling settlement in Manitoba was written around floods. Many of the chronicles referred to events which were a certain number of years before or after the "Great Flood", but a further perusal showed that there were several "Great Floods".

The Federal Government under the Department of Resources and Development immediately undertook a study to determine the number and extent of previous floods and what preventive measures could be taken to control the river.

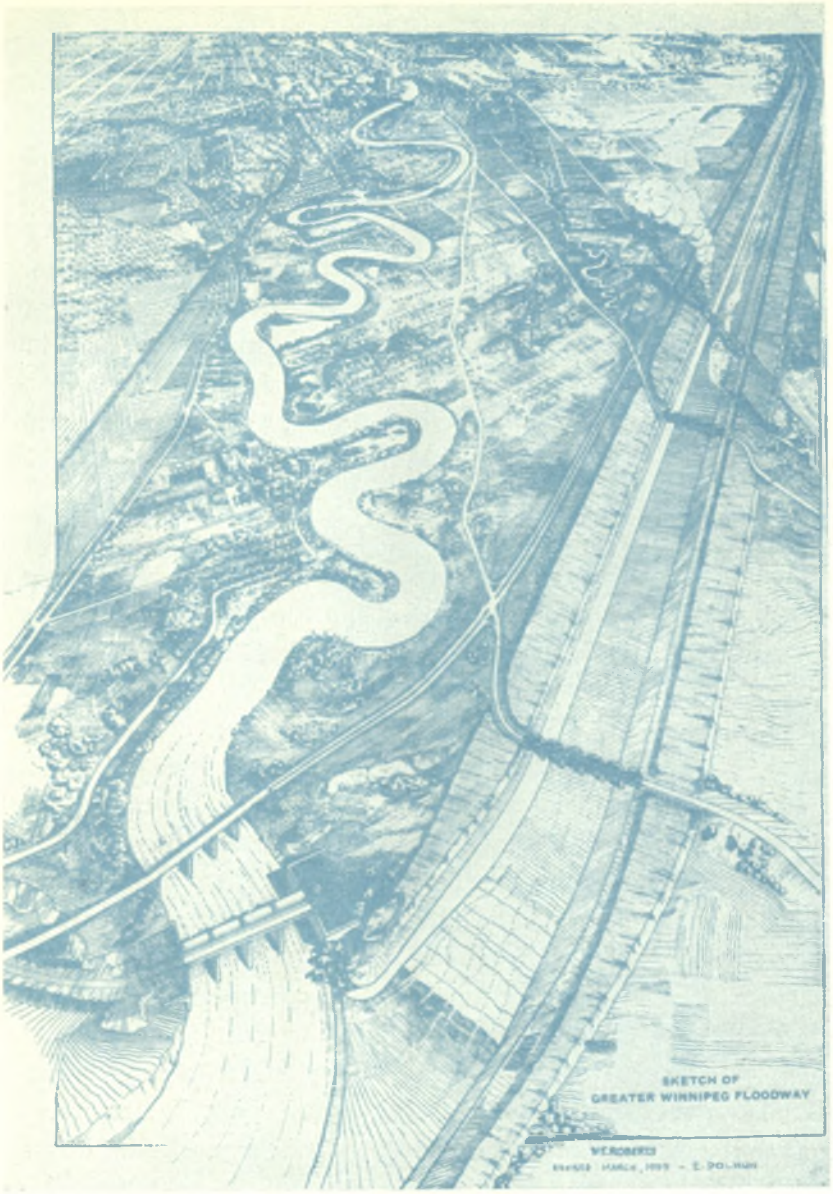
The report brought down by the study showed fairly conclusively that there had been many larger floods in the past. Floods in the years 1826, 1852 and 1861 were definitely higher than in 1950 with the 1826 inundation being at least six feet higher than the crest of 1950. The area in the vicinity of Winnipeg is so flat that the extra six feet would have covered many, many square miles of land and thousands more homes and businesses than were under water in the latest flood.

PLANS ARE NOW UNDERWAY TO ENSURE THE RED NEVER AGAIN CAUSES THE FLOOD DEVASTATION EXPERIENCED IN 1950.

One of the newer areas
hard hit by the flood —
Kingston Crescent in St. Vital.



From this diagram
the house in the
left foreground above
would have about 90% damage
in relation to
its market value.



The Greater Winnipeg Floodway will be one of the largest of the remedial measures to control flooding.

The Hudson's Bay Co. archives produced a report dated June 4, 1826, from Governor George Simpson to the Governor and Committee at the Hudson's Bay Company's Head Office as follows: "Upon my arrival at Red River on the 1st of June everything connected with the honourable company's affairs afforded me great satisfaction, but here I am deeply concerned to say a calamity of the most unforeseen nature presented itself, one which I conceive to be a deathblow to the colony, immediate distress occasioned thereby is beyond description and the consequences threatening the lives of its wretched inhabitants. There is no comparison between this evil and all the others which have visited this unfortunate colony. It was occasioned by the overflowing of the Red and the Assiniboine Rivers on the breaking up of the ice to such an extent as to give the whole country, as far as the eye could carry, the appearance of a lake with the exception of a few elevated spots at a distance of several miles from each other, where the settlers retreated to save their lives and such of their property as could be transported thither . . . " He then went on to describe in detail the flood of 1826.

Despite Governor Simpson's pessimism at that time, the settlement did get on its feet again and finally flourished. In 1880 Sir Sanford Fleming tried very hard to have the C.P.R. crossing on the Red River placed some 20 miles down stream from the City of Winnipeg because of the danger of flood-

ing. However, he was unsuccessful and the city continued to flourish at an increasing rate after the railway was constructed.

While the study was underway the rehabilitation of the city was not neglected. Winnipeg is an important distribution centre — the gateway both east and west — and as both major rail lines run directly through the heart of the city, one of the first jobs was to get them operating with the least possible delay. Before the waters had receded, Federal and Provincial Governments formed the Winnipeg Dyking Board to utilize emergency measures to bring the city back to normal. Although the task of digging out from the havoc wrought by flood was the most pressing problem, the morale of the people themselves had to be restored and they had to be given renewed confidence in their city.

Some of the new areas of the city were particularly hard hit. Here morale was at its lowest. New homeowners who had not as yet built up a large equity in their homes found that the flood damage exceeded the money they had already invested. Fears were expressed that a great many of these people would abandon their homes and begin anew in another locality.

Fortunately, the prompt action taken in the rebuilding of the dykes and donations from the senior governments to help in the reconstruction of the homes and businesses, changed the mood of the people and they quickly commenced the task of restoring their city.

The Manitoba Relief Fund was a great success and money poured in from all over Canada and indeed from many parts of the world. In six months there were few physical evidences of the flood left. All of the wet siding from the homes had been removed and the insulation dried out and inside walls were replastered and hardwood floors replaced. Although the marks of the flood soon disappeared, it was an expensive catastrophe and will be remembered for a long time by Winnipegers.

Greater Winnipeg now has a population in excess of 350,000 people and is growing steadily. As has been mentioned previously, it is the hub of the distribution system both for rail and transport, so it is imperative that the threat of flooding be removed. The Royal Commission on Flood Cost Benefit estimated that the combination of a floodway area around the east side of Winnipeg, a diversion of the flood waters of the Assiniboine River into Lake Manitoba and the Dam on the Assiniboine River at Russell, Manitoba, would produce benefits to the point eight times the cost of the floods which can be expected.

The Manitoba Government and the Federal Government have agreed that the floodway is necessary and have in fact appropriated considerable sums of money in the 1961 budgets to commence work this year.

What does the sixty million dollar floodway mean to the people of Winnipeg? It means that they will have good flood protection to what the engineers call a flood frequency of 163 years. Certainly it will mean some financial sacrifices, but the long term benefits should outweigh these considerations.

It is all very well to ponder the question that Winnipeg should not have been built in its present location when there is high flood-free land on the river only 20 miles away. Once a city becomes established, it is then virtually impossible to move it. Winnipegers must then face the problem as it exists and take preventive measures to ensure that never again will a disastrous flood like 1950 descend upon their city.✦✦✦

Mr. Carson Templeton is the Senior partner in the Templeton Engineering Company. This firm performed the engineering studies for the Royal Commission on Flood Cost Benefit. Mr. Templeton was the former Chief Engineer of the Greater Winnipeg Dyking Board and also former Assistant Chief Engineer of the Fraser Valley Dyking Board.

RÉFLEXIONS SUR L'HABITATION URBAINE DU CANADIEN FRANÇAIS II

Ceci est le deuxième de trois articles sur le logement canadien-français.
Le dernier paraîtra dans le numéro de novembre-décembre d'Habitat.

par Michel Barcelo

Dans un précédent article, nous avons essayé de dégager quelques caractéristiques particulières de l'habitat urbain du Canadien français moyen. Non pas en termes de styles, de régionalismes dépassés, mais plutôt en termes de mode de vie urbain, d'attitude vis-à-vis la propriété et le logement, d'intégration d'habitudes rurales normandes dans un contexte urbain nord-américain.

Il ne s'agit plus alors de savoir si nous utiliserons le toit en pente, la pierre des champs ou quelque autre particularité stylistique que, de toute façon, nous avions empruntée à d'autres héritages culturels, mais à nous demander si notre mode de vie est assez original pour nous mériter un habitat particulier. Nous posons donc la question de l'habitat urbain du Canadien français du milieu du XX^{e} siècle beaucoup plus en termes de *programme* que de formes et de styles qui ne peuvent que découler du premier. Une architecture résidentielle propre ne sera possible que si nous découvrons et poussons de l'avant les exigences particulières de notre vie communautaire, familiale, individuelle, et sachons par la suite avoir le génie de leur trouver une expression architecturale logique et valable: une imagination créatrice propre ne peut nous échoir qu'au jour où nous renoncerons à être des Nord-Américains de seconde zone, et où nous déciderons d'apporter une contribution originale, un mode de vie unique qui se reflétera dans une architecture nouvelle.

Le problème posé dépasse donc les strictes limites de l'architecture; une ré-évaluation et une ré-orientation de notre mode de vie urbain sont en cause. C'est d'ailleurs de cette façon que, de plus en plus, les architectes du monde entier voient les implications de leur travail: le problème de l'architecture résidentielle devient un problème de programme à implications tri-dimensionnelles. C'est le grand mérite des études et des réalisations de Le Corbusier dans le domaine de l'habitat; non plus une variation stylistique et formelle sur un thème fondamentalement le même, mais la *création* d'un programme en même temps que des formes qui en découlent. Quels que soient leurs titres officiels, il est absolument nécessaire que ceux qui dictent les programmes en sachent les implications physiques: une dissociation des deux actes créateurs nous a trop conduits jusqu'ici à des compromis inavouables, et à de petites fantaisies architecturales qui tâchent de dissimuler sous une enveloppe agréable les erreurs fondamentales d'une société qui dicte sans savoir où elle va.

"The institution must have in its mind, must have in its sense, the realm of spaces which are good . . . and no programme which says you must have so many of this or so many of that, but a realm of spaces which you feel is sympathetic . . . So therefore you may go into a space which may be but a space, you see, and may call it absolutely nothing, it is just a good place to arrive in . . . from which may come other spaces, small or large, those with light above and some with light below. Some deep spaces meant for many people, or some small

spaces for a few people. Some small spaces for many people and some big spaces for only a few people."[1]

La formulation d'un programme de cette nature pour un habitat qui respecte à la fois la personne et la structure communautaire requiert de la part de l'architecte une réflexion philosophique d'un certain degré ou de la part du philosophe une connaissance poussée des implications spatiales de sa pensée. Dans l'histoire, cette rencontre des "utopies verbales" et des "utopies visuelles" est assez rare: "The verbal or social utopias, if they have dealt at all with elements of physical environment, have done so but superficially: the forms and interrelation of housing, workshops, facilities for education and recreation, and the distribution of open land have followed, as afterthoughts, alterations in property, in family, in political and other institutions. Conversely, the utopias of visual design have ignored class structure, the economic base, and the process of government in the desirable future they present."[2]

C'est sans doute ce qui fait que des projets architecturaux aussi valables que la Cité Industrielle de Garnier, la Cité Radieuse de Le Corbusier ou Broadacre City de Frank Lloyd Wright, ont comme fondement une philosophie sociale aussi simpliste et que, d'autre part, nous n'ayons pu jamais savoir la forme physique précise que prendraient les petits mondes par ailleurs si bien régimentés de Thomas Moore ou de Aldous Huxley.

Nous ne sommes pas, pour notre part, tout à fait à la recherche d'une utopie; après avoir analysé et tenté de comprendre ce qu'était le Canada français urbain d'hier (non pas celui du passé colonial, mais celui de la première Révolution Industrielle), sachant, par ailleurs, que celui d'aujourd'hui est dans un pire marasme et qu'il a détruit un début de tradition urbaine, nous recherchons quelques principes d'orientation pour demain: une philosophie qui puisse se traduire par un environnement physique valable.

Si nous posons au départ que la société canadienne-française devrait (même si elle ne l'est pas tout à fait) être fondamentalement chrétienne et occidentale, il semble valable de chercher ce fondement philosophique chez un grand penseur contemporain qui a plongé à la fois dans les racines gréco-latines et chrétiennes de notre culture avec une rare originalité: je veux parler ici de Simone Weil et utiliser un de ses textes capitaux: "La Personne et le Sacré."

"Les rapports entre la collectivité et la personne doivent être établis avec l'unique objet d'écarter ce qui est susceptible d'empêcher la croissance et la germination mystérieuse de la partie impersonnelle de l'âme.

Pour cela, il faut *d'un côté* qu'il y ait, autour de chaque personne:

de l'espace
un degré de libre disposition du temps
des possibilités pour le passage à
des degrés d'attention
de plus en plus élevés
de la solitude
du silence

Il faut, *en même temps*, qu'elle soit dans la *chaleur*, pour que la détresse ne la contraigne pas à se noyer dans le collectif.

Si tel est le bien, il semble difficile d'aller beaucoup plus loin dans le sens du mal que la société moderne."[3]

Si tel est le bien, il semble aussi difficile d'aller beaucoup plus loin dans le sens du mal que l'architecture résidentielle que nous connaissons et expérimentons quotidiennement.

Ce texte original, alors qu'il établit certaines conditions importantes à la création d'un habitat

[1] *Louis Kahn, Congrès CIAM, Ottrello.*

[2] *Martin Meyerson, Utopian Traditions and the Planning of Cities, in The Future Metropolis. George Braziller, New York 1961, pp. 233-234.*

[3] *Simone Weil, Ecrits de Londres et Dernières Lettres, Gallimard, Paris, 1957, pp. 21 et ssq.*

adéquat, met en lumière la question primordiale: l'équilibre entre la communauté et la personne, caricaturées de nos jours par la collectivité et l'individu.

De façon encore plus surprenante, ce texte, conçu de façon abstraite dans un cerveau philosophique, a des implications physiques et spatiales étonnantes, s'il est appliqué au domaine particulier de l'habitation dans la Cité.

Devant un tel énoncé de principes, les questions que l'on se pose en face du problème de l'habitation ne sont plus accessoires (i.e.: "la propriété privée du logement est-elle nécessaire comme stimulant économique?" ou encore "de combien de pieds et de pouces doit-on espacer les maisons individuelles des banlieues?") mais fondamentales, ayant pour but unique le respect de la "germination mystérieuse de la partie impersonnelle de l'âme".

Qu'est-ce au juste dans la pensée de Simone Weil? La partie impersonnelle de l'âme n'est pas celle dont les revendications sont protégées par les Déclarations des Droits de l'Homme ou encore par les Conventions Collectives. C'est plutôt cette partie, commune à tout homme, qui souffre et demande "Pourquoi me fait-on du *mal*?" quand on lui en fait, "cette partie profonde, enfantine du coeur qui s'attend toujours à du bien".

Un habitat idéal ne cherchera pas à calmer des revendications appuyées sur les Droits de la personne, i.e. Droit d'avoir une salle de séjour de 300 pieds carrés; ce ne serait qu'un palliatif temporaire: une salle de séjour de 400 pieds carrés peut avoir moins de respect pour ce qu'il y a de sacré dans l'homme que, par exemple, un espace de 100 pieds carrés. Mais si l'homme vit dans un milieu urbain conçu en fonction de sa dignité, et qu'il le sache, s'il sent respecté son désir enfantin du bien et du beau, il pourra peut-être, sur le plan des *revendications*, continuer à réclamer le respect de "ses" droits, il n'en restera pas moins que le Sacré en lui, sera respecté.

Cet équilibre entre *l'espace*, *la solitude*, *le silence*, d'un côté, et, de l'autre, *la chaleur* qui empêche la personne de se perdre, en détresse, dans le collectif, est au centre du problème de l'habitat urbain. D'autant plus que la famille, avec ses cadres bien définis en milieu rural, n'apparaît plus du tout, dans la Cité, comme un impératif primordial ni suffisant à créer un milieu qui vive selon le principe d'autosatisfaction. Dans la hiérarchie des communautés urbaines, à différentes échelles, la famille peut, à un moment donné, se présenter à notre esprit comme une personne morale autour de laquelle nous devons nous efforcer de mettre *l'espace*, le *temps*, la *solitude* et la *chaleur* nécessaires à son épanouissement, mais ce grand attachement qu'ont les Nord-Américains pour l'institution familiale nous a peut-être fait oublier que chaque membre de la famille, comme personne *réelle*, a droit au même équilibre, au même dosage entre le personnel et le communautaire, qui, dans la Cité, n'est plus nécessairement familial.

Cet espace dont chaque personne a besoin pour la germination mystérieuse de la partie impersonnelle de son âme n'est pas nécessairement une chambre à coucher, n'est pas une chambre à coucher; nous devrions peut-être même oublier définitivement qu'il existe une telle chose qu'une chambre à coucher, car autrement, nous nous retrouverions bientôt avec une proposition de ce genre: "Chaque personne, membre d'une famille, aura droit, au sein du logement familial, à une chambre de 125 pieds carrés", bafouant ainsi ce qu'il y a de plus sacré dans l'Homme.

Il en est de même pour chaque personne morale qui, dans la hiérarchie communautaire, nous conduit jusqu'à la Cité; il ne peut y avoir de "minimums" exprimés en volume ou en surface. C'est toujours au maximum de bien et de beau que s'attend la

partie impersonnelle de l'âme. Pour l'architecte, non pas le maximum d'espace, mais l'espace de qualité maximum. Que celle-ci soit ou ne soit pas réclamée, revendiquée par le futur locataire ou le futur propriétaire n'a rien à voir avec le respect du Sacré en eux, malgré eux et malgré leurs déclarations de droits.

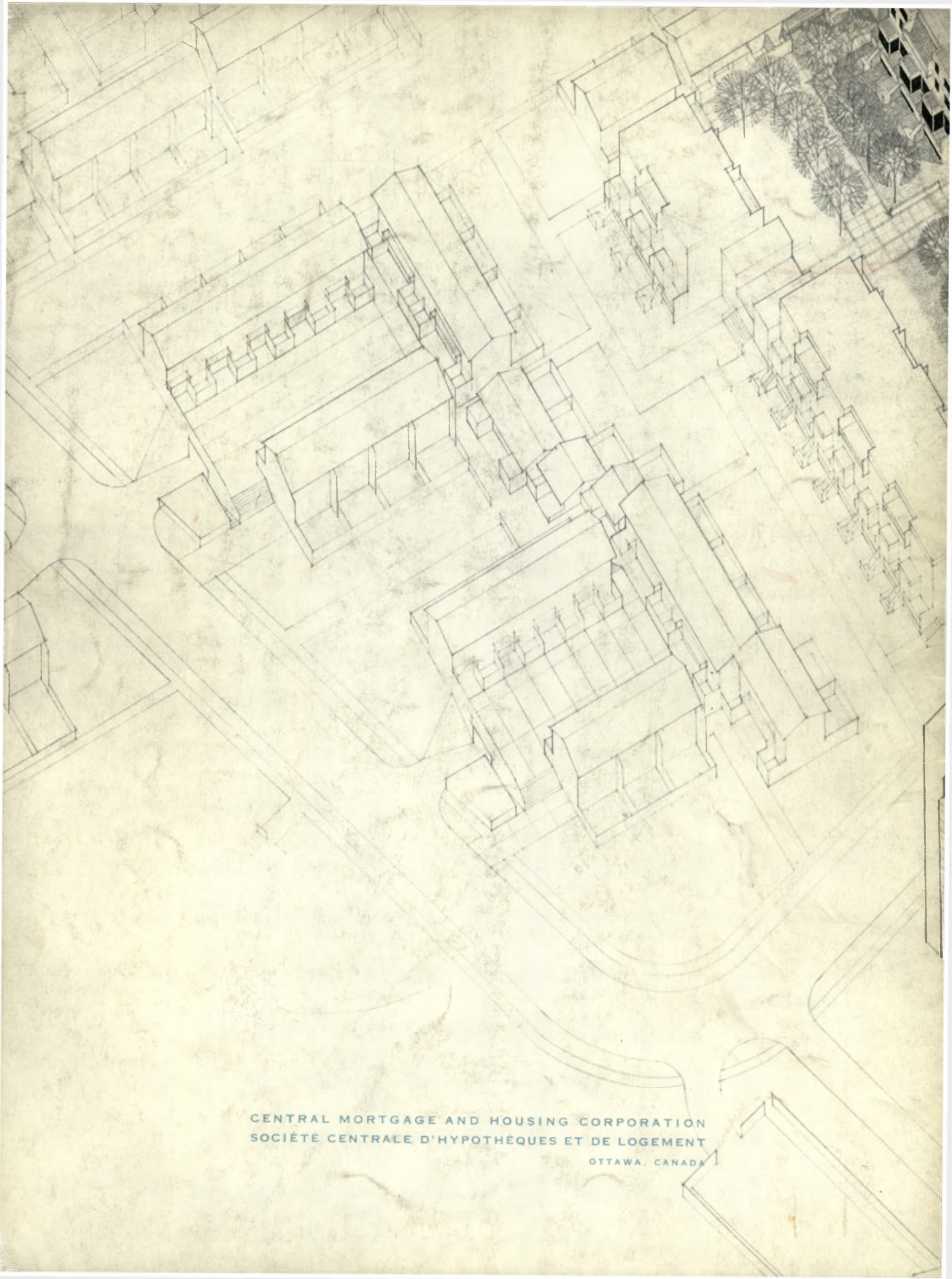
Evidemment, nous compliquons ainsi le problème: nous rejetons toutes "Normes d'habitation", toute règle facile sur laquelle nous appuyer; nous réclamons de nouvelles institutions et de nouvelles façons de les faire fonctionner, sans jamais pouvoir nous appuyer sur des principes aussi rassurants que les "Droits de l'Homme".

Mais, comme conclut Simone Weil: "Au-dessus des institutions destinées à protéger les droits, les personnes, les libertés démocratiques, il faut en inventer d'autres destinées à discerner et à abolir tout ce qui, dans la vie contemporaine, écrase les âmes sous l'injustice, le mensonge et la laideur.

Il faut les inventer, parce qu'elles sont inconnues, et il est impossible de douter qu'elles soient indispensables."✦✦✦

Monsieur Michel Barcelo fit ses études classiques au collège Jean-de-Brébeuf et y obtint son baccalauréat ès arts en 1956. Il reçut son diplôme de l'Ecole d'Architecture de Montréal en avril 1961, et en 1960, il fut l'un des gagnants d'une bourse de voyage offerte par la Société centrale d'hypothèques et de logement aux étudiants en architecture.

EDITOR'S NOTE: *The November-December issue of HABITAT will contain the second of a three part series on high density dwellings by Moshe Safdie. It will deal with his approach to high-rise apartments.*



CENTRAL MORTGAGE AND HOUSING CORPORATION
SOCIÉTÉ CENTRALE D'HYPOTHÈQUES ET DE LOGEMENT
OTTAWA, CANADA

NOVEMBER-DECEMBER 1961

HABITAT

NOVEMBRE-DÉCEMBRE 1961

"The Welcoming Birds", a group of bronze and aluminum figures decorate the Overseas waiting room in the air terminal at Gander, symbolize the welcome accorded by Canada to incoming passengers from Europe. It is the work of Ottawa artist Arthur Price. The 72 ft. mural in the upper background "Flight and Its Allegories", was painted by Kenneth Lockhead of Regina.

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The cover shows a Sleigh Scene on Toronto Bay, 1853 — courtesy of the Public Archives.

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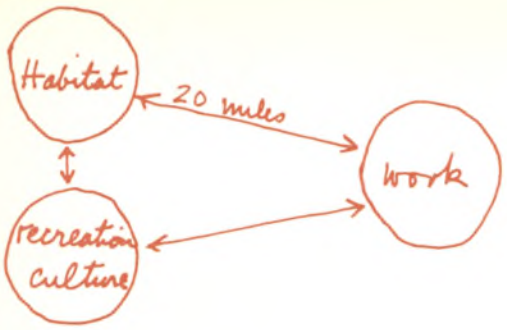


The community cannot be isolated from the productive work of society. Making a system of freeways and cloverleaves which occupy 40% of the real estate, moving the previous occupants to distant places is no solution. The situation demands reorganization: the integration of work, love and knowledge.

A CASE FOR CITY LIVING

by Moshe Safdie

As our civilization becomes more urban, one of the pressing requirements is for high density habitat, but for those of us who continuously and stubbornly avoid the issue, certain facts must be restated.

The population of this continent is expected to be more than doubled by the year 2,000. In Canada this rate will be exceeded and through natural increase and immigration, the population in the same period should rise to 40,000,000.

Almost all of the increase will take place in existing and new urban centres; we must provide the equivalent of a city of 50,000 inhabitants each and every month for the next 40 years. This suggests a rate of housing construction unparalleled in history. Because this development will take place in urbanized areas it will prove that present forms are inadequate, that we must learn to house people better, on less land, more economically.

Even today, open land resources in the urban belts of the U.S.A. and Canada are fast becoming exhausted. Urban sprawl has consumed choice agricultural land and has eliminated open space in easy reach of the population. Strange as it may seem, after ten years of suburban boom only a small segment of the urban population has exiled itself to suburbia. In many instances, there is no land available to exile the rest of the urban population from the city. The case of Chicago is typical of the present state of affairs. Chicago today: (one million families — 3,700,000 inhabitants).

Percent population living in —

	Elevator	*Walk Up*	*Town Houses*	*Detached Single Family*	*Total Residential*
%.....	25	50	5	20	
Acres...	4,167	16,666	4,167	40,000	65,000

Twenty percent suburbanites occupy almost sixty percent of the land. Should the entire population be housed in this manner, the area needed will be 200,000 acres of residential land, which is 67,000 acres more land than is available for all uses. In comparison, only 16,667 acres are needed if all are housed in elevator accommodation.

This has led The First National Bank of Chicago, a house mortgage and lending institution, to make the following forecast.

Chicago 1980:

	Elevator	*Walk Up*	*Town Houses*	*Detached Single Family*	*Total Residential*
%.....	40	35	20	5	
Acres...	6,667	11,667	16,666	10,000	45,000

Seventy-five percent or more of the entire population will be housed in high density developments. Single family detached accommodation will be greatly reduced in favor of denser town, row and court houses.

To these physical limitations we must add economic and socio-cultural considerations. Low density sprawl has been a burden on the economy. High rate consumption of all natural resources, a direct result of increased distance between various activities in the city, can be no longer afforded. To this we must add the sociological effect of separation of the dwelling, work, recreation and culture. The city centre — the nucleus of our cultural activities — is in the process of disintegration. It depends on inhabitants — not visitors — for its existence. As D. Riesman puts it: "Will our cities be able to continue cultural and educational activity at a level appropriate to our abundant economy?" Similar symptoms of degeneration are showing up on the

other end in the residential dormitory. He continues: "A recklessness on the part of the whole society not much different from the way millions of individuals have decided to live now pay later". We must conclude that the only acceptable solution to habitat is one in which the dwelling, work, recreation and culture are fused into one physical entity.

TOWARDS A SOLUTION

With this goal in mind we must examine the various proposals which have been made. One pet solution often mentioned recently is that centre city housing can be solved by fixing up old row-house type dwellings, as has been demonstrated in several U.S.A. cities. While such developments have been successful and must be commended, limitations must be recognized. Second-hand bricks and moss-eaten plaster are charming, but there are not enough to go around. Fixing up old dwellings in the city centre at best results in postponement of the eventual rebuilding that must take place. In most cases it is economically a burden and a luxury and can only take place where such appeal encourages the wealthy to spend huge sums of money for reconstruction.

Propositions by the distinguished planner, L. Hilberseimer, and others, also depend on traditional forms to solve a non-traditional problem. His endless acres of L-shaped single-family dwellings do not achieve a density comparable to present needs. Realistic densities must be in the vicinity of two hundred persons per acre or more.

We must then turn to non-traditional form. Early projects by Le Corbusier are perhaps the most imaginative and significant. Here we see a new form evolving — the unit dwelling and its auxiliary elements. In Le Corbusier's later work, as realized in the Unité d'Habitation, we find many of the early ideas either abandoned or sacrificed. In criticism of Unité it must be said that the dwellings tend to be tubes, that identity is sacrificed, and that the "rue interieure" is not a "rue" but a glorified corridor.

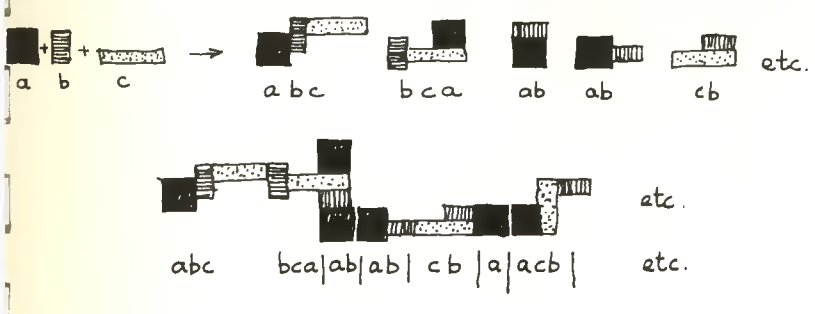
We must add those who have made proposals, such as the Smithsons, Tange, Atbat, Friedman. The later studies "L'Architecture Spatiale" are marked by a penetrating analysis of the issues, the design and fabrication of the unit dwelling, its relation to an overall structure which, in turn, relates to its magnitude and the provisions of servicing and circulation — each project with its merits, offering its contribution towards the evolution of a new form.

A new form of habitat is as successful as we are able to deprejudice our minds and clearly analyze the programmatic essentials of the problem. In high density housing this analysis must be the design of the unit dwelling and its relation to others, the over-all structure, and finally, circulation within and out of the complex.

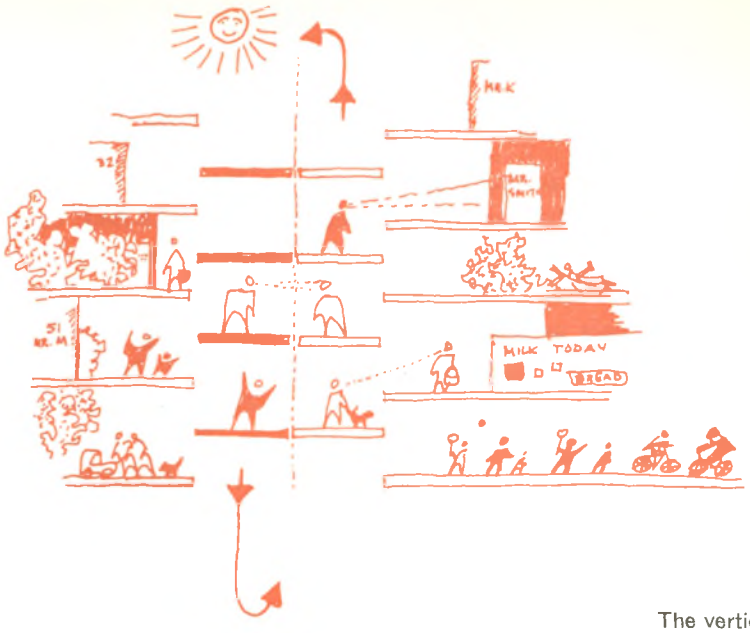
Families have been moving to suburbia because there they found essentials to daily life which the city did not offer. In addition to the obvious factors of fresh air and cleanliness, which are now corrected in the city, their bungalows offer them relative privacy, gardens, and a confused sense of identity.

Any form of urban housing must provide a private outdoor space adjacent to the dwelling. Complete visual and acoustical privacy must be achieved. Identity is essential; the subtlety may vary, but one must be able to comprehend the physical limits of one's dwelling.

The growth and development of the family must be provided for — dwellings of various sizes to answer all needs. Because life patterns vary, the largest possible number of dwelling types is desirable



The economy of construction of a single unit is secondary, because it does not condition our general solution. What we must seek is the economy of the total synthesis, by which we mean the economy achieved by a single form repeated indefinitely. In doing so we must not sacrifice the prerequisite of selection.



The vertical street.

so that a family may choose one most suitable to its needs. Even then certain sections of the dwelling must be flexible and adjustable, as in the case of children's quarters, owing to the fact that age and sex distribution vary.

Dwellings must be grouped so as to form a communal cluster and encourage *voluntary* social intercourse. A hierarchy of groups must be formed. In the past this evolved with time. Today, when a large number of people are concentrated and forced to share facilities, social structure cannot be left to evolution.

All of the above apply to all forms of housing. What distinguishes high density housing from other forms is its circulation and over-all structure.

Concerning the latter, it must be said that in considering large structures of twenty, thirty or fifty storeys we must stop thinking of it as a single storey building extended. Rather, certain stresses (wind) become primary, resulting in forms and structures which are unique.

Circulation consists in movement of people within the complex and also out of it to the ground, horizontally and vertically. Moving people from the ground to a height of two hundred to five hundred feet above has resulted, up to now, in aggravation, since much time is wasted in waiting and the elevator mechanism is a costly one. If we continue to use elevators we must manipulate them in such a way as to reduce the number of stops to a minimum. This can be done by having a "skip-stop" system, as has already been used. It can also be done by developing a system of one way up and one way down elevators, minimizing the waiting period.

But there is no reason that we should continue to use elevators. The ideal vertical circulation is one which is continuous — one that requires no waiting. Moving belts or platforms (such as the "patternoste" used in European shops) can be developed for this purpose. The vertical circulation (or incline) then becomes a spatial experience — with all the qualities of the conventional street. Thus we have a vertical street.

Finally, a brief word about industrialized construction methods. The only way to reduce construction costs and provide more unit space per labor and material is to transform construction to a systematic, mass-production, assembly-line process. This poses one contradiction; mass production demands the repetitive use of few elements — successful housing depends on variety and selection. The problem is to establish a repetitive modular element which when combined results in several combinations and permutations of dwelling types.

The project illustrated below grew out of these considerations. It attempts to answer the needs, while taking advantage of the work done by others in this field. The interest shown in this project by entrepreneurs and financiers proves that it is within reality, in this generation.

SYSTEM A Three separate urban systems were evolved, each with its distinct formal, social and structural qualities applicable to sites of varying topography and size. They are systems since they cease to be buildings. The study has shown that we cannot continue to think in terms of buildings, rather in terms of large scale three-dimensional "subdivision" of urban space. This approach will eventually change land ownership patterns, by introducing "air rights".

System A consists of a skeleton frame rising ten to thirty storeys with prefabricated "box" elements set in it. These boxes, 8 x 16 x 32 feet are prefabricated on the ground (poured in metal forms and completely finished). The elements are then wheeled on the original dolly and then lifted into position hydraulically in a manner similar to "lift slab" technique. The boxes are arranged in a spiral grouping. In the centre of each spiral is a shaft containing all services — plumbing, heating, electrical, etc., which supplies all dwellings within the spiral.

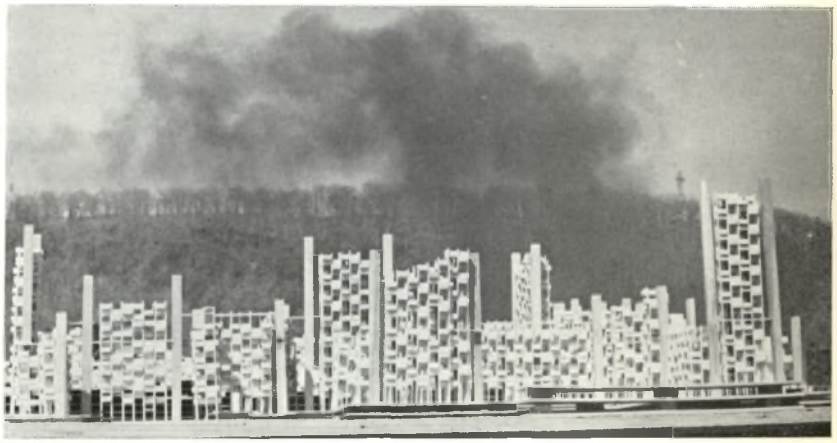
Dwellings consist of one, two, three or four box elements, resulting in various sizes. By several combinations of boxes eighteen different dwelling types are available. Thus one standard repetitive mass-produced element is combined to result in great variety. Because each box element is structurally self-contained and does not touch the ones under or over it, the dwelling is perfectly acoustically insulated. Each dwelling has its own private outdoor garden, which is two storeys high and opens through to the air and sun.

In addition, there is a network of public gardens which also serve as access to the dwellings, communal space, and a continuous pedestrian circulation. At any level in the complex, one can move horizontally or incline up or down without using the mechanical circulation.

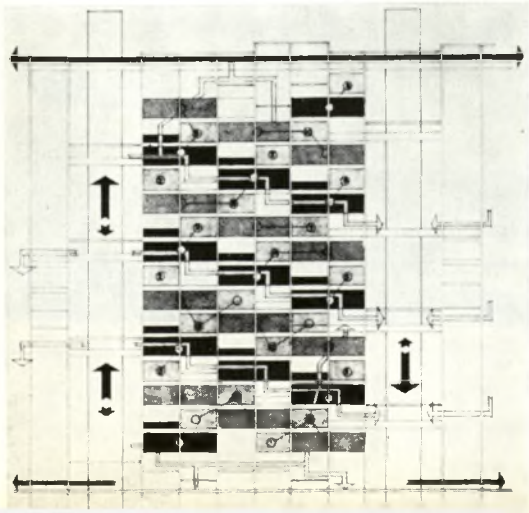
Vehicular traffic and parking are on the ground under a large platform. Over the platform are shops, schools, and other common facilities. Rising above are the vertical streets. They are spaced closer as they rise higher, in a rhythm which results in a sense of location. If elevators are used, these vertical streets are one way up or down.

Occurring one hundred feet above ground is an additional pedestrian street leading to all parts of the complex as well as to schools, parks and the down-town core.

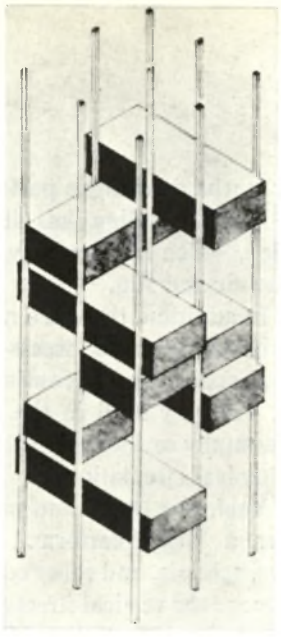
One aspect of the system is that sun penetrates through the structure to dwellings on the north side, eliminating the orientation problems of conventional elevator housing. Furthermore, the shadow cast by the structure is not solid — but rather a mixed pattern of light and shade, minimizing the usual problem caused by tall structures.



General view showing the varying rhythm of the vertical streets: We can no longer think in terms of free standing isolated buildings. The fourth dimension of time — growth — change must be added to habitat, which now becomes a subdivision of urban space.

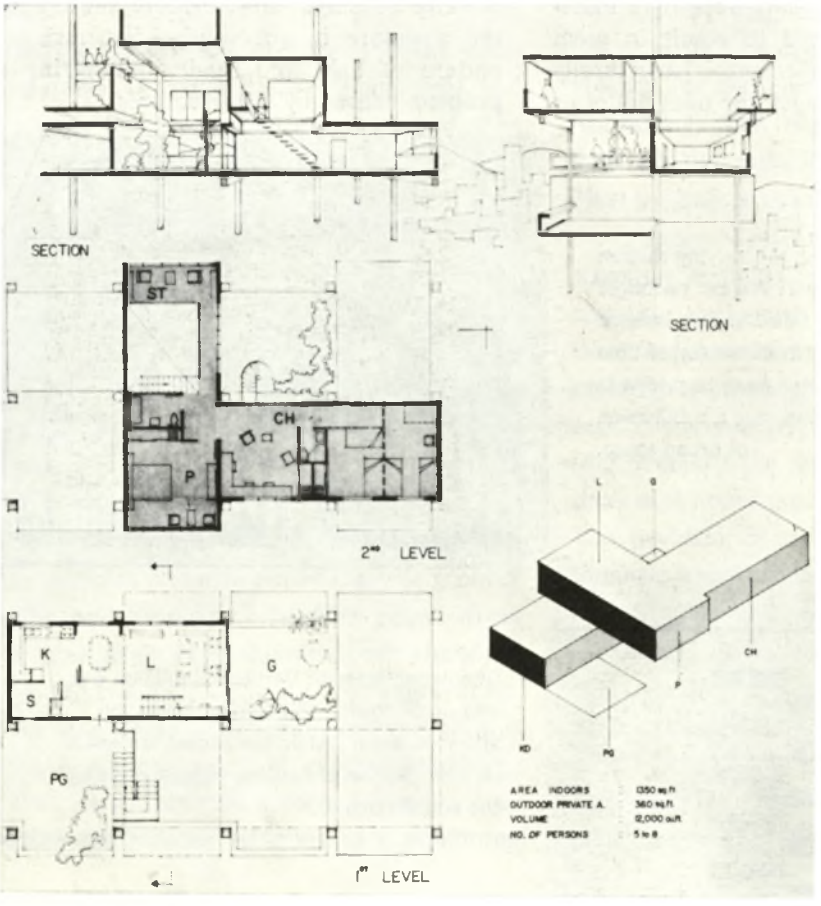


Circulation pattern: Vertical circulation one way up or down. Pedestrian circulation above platform and on the pedestrian street on top. Access circulation interpenetrating the entire complex.

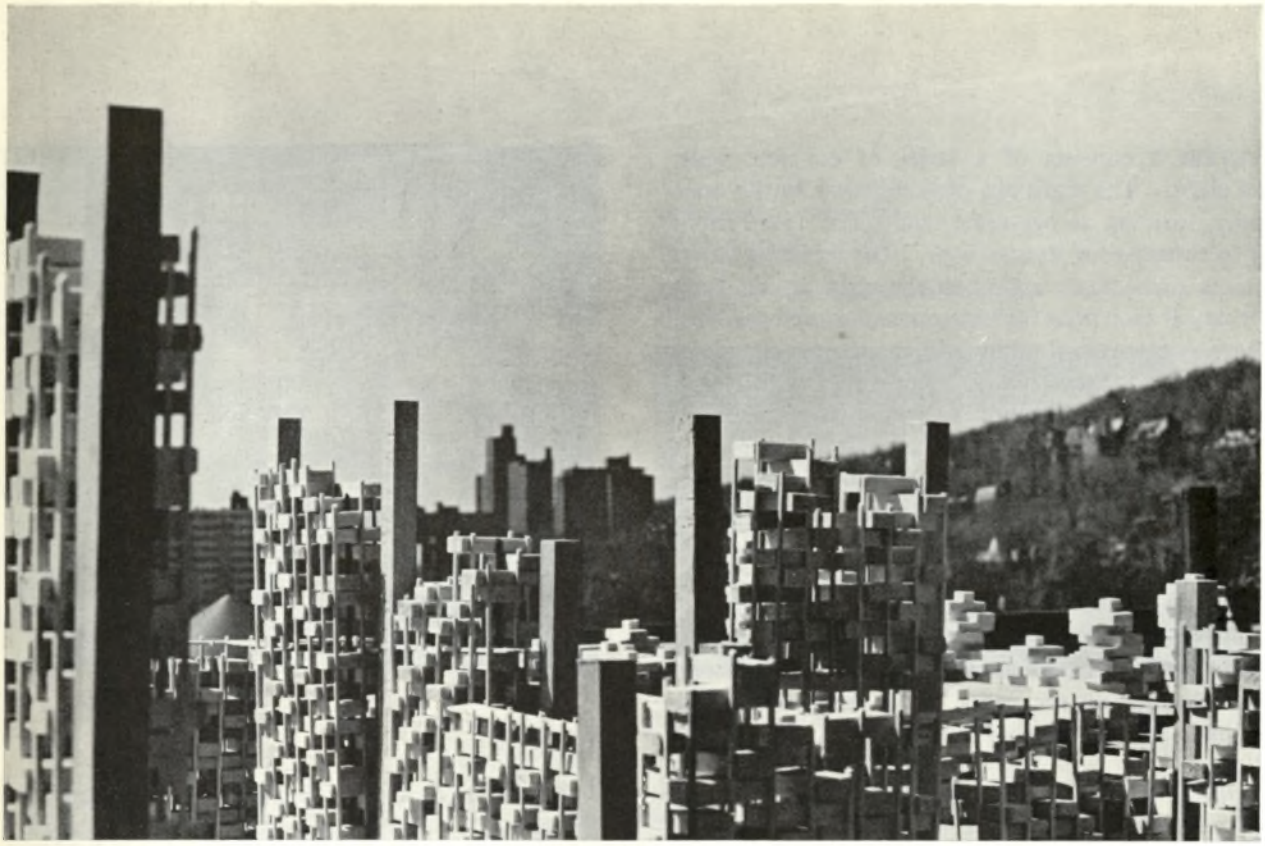


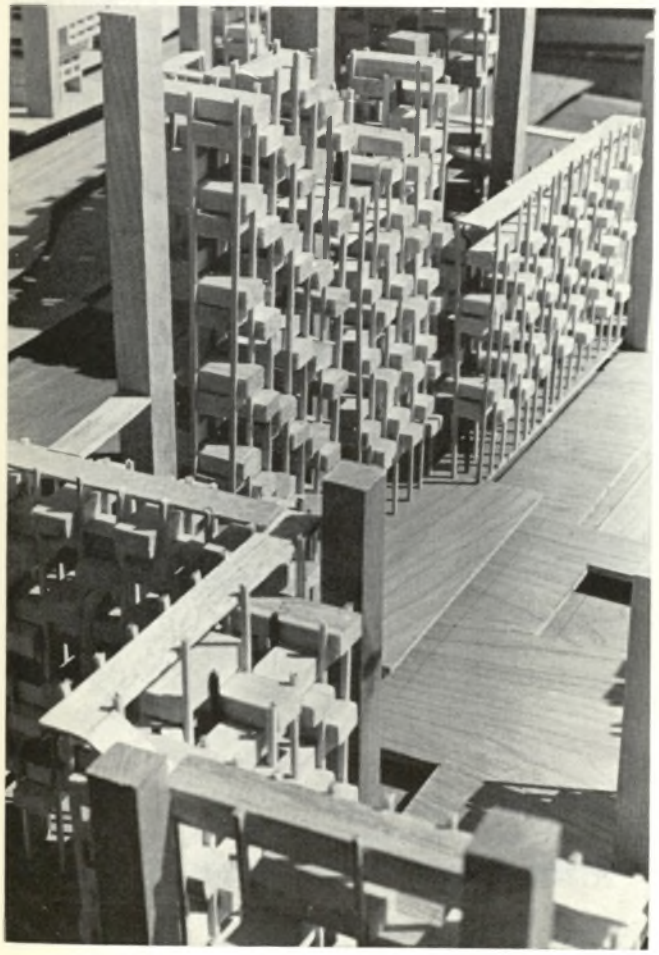
The repetitive spiral stack: box elements span 32 feet and the services are located in the central shaft. The stacks can be grouped in several ways.

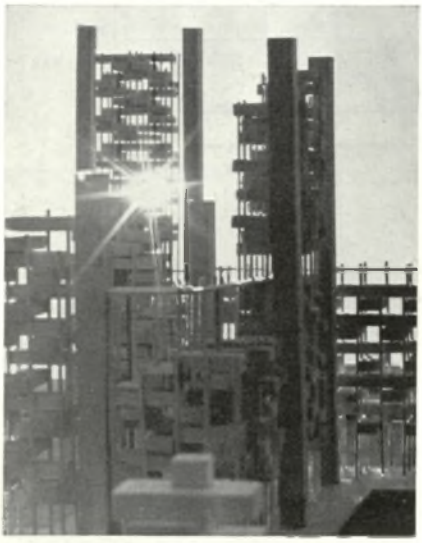
Right, detail model showing a typical group of three stacks.



One plan of eighteen available types.





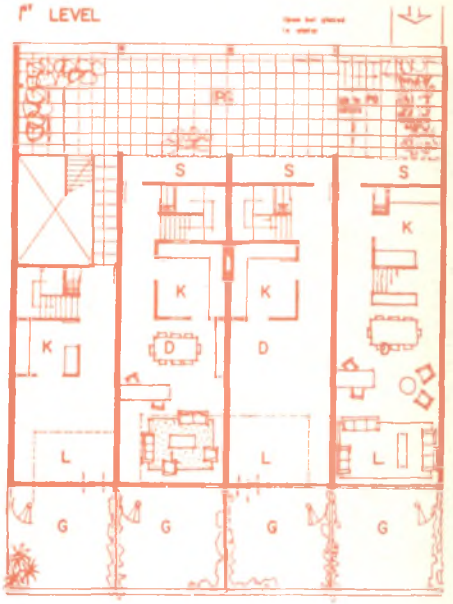


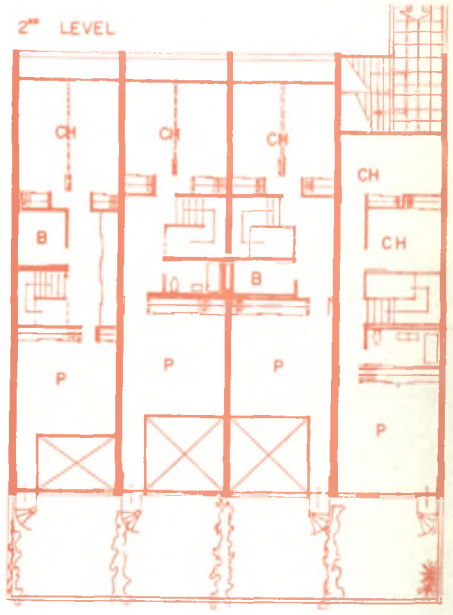
At the top, a general view — Montreal background.

Above, light penetration through the building.

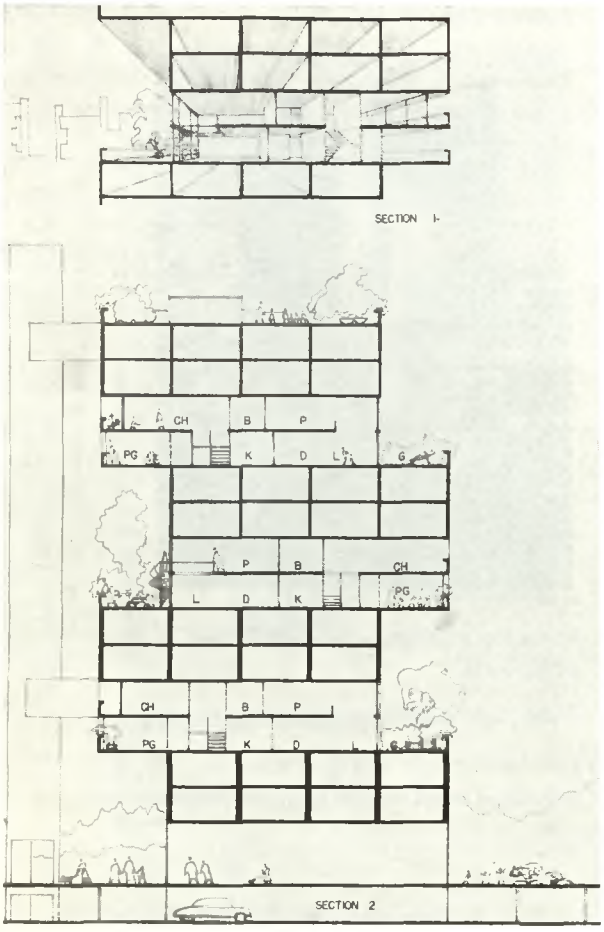
Left, looking from 20th level down to pedestrian street on 10th level and platform.

SYSTEM B consists of a series of concrete walls and slabs. The walls are perpendicular to the ones under, forming an egg-crate type space frame rising up to twenty-four storeys high. The resulting structure is exceedingly rigid and the walls are set back one bay at each floor forming open unroofed gardens. There are seven dwelling types of varying sizes, mostly two storeys high. Four dwellings on each level share one communal roofed garden (in addition and separate from the private ones) which serves as access, off the vertical streets. These communal gardens interpenetrate each other so that there is continuous pedestrian circulation at every level within the complex and to adjacent ones. These communal spaces are designed so that they can be easily enclosed in winter with glass or plastic panels. Thus we have a "convertible" space. Schools and nurseries are on the roofs, while shops and other facilities are over the base platform.

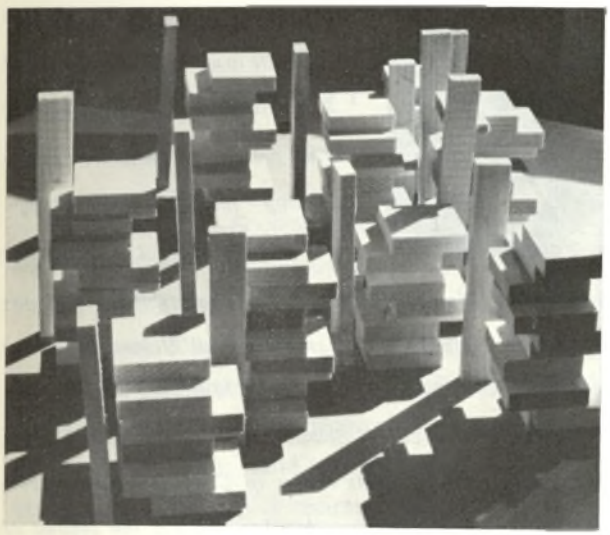




Plan of dwelling types.

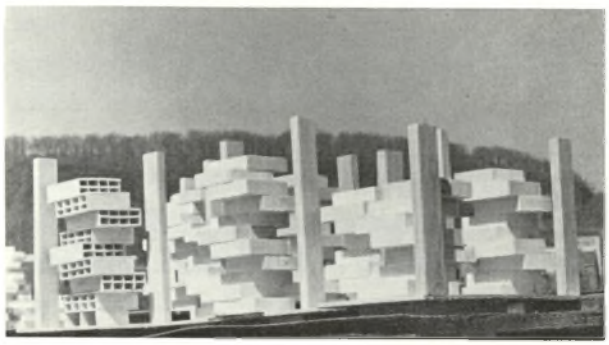


Section through the complex: walls taper with light forming an eggcrate space frame.



View showing penetration
of light through complex.

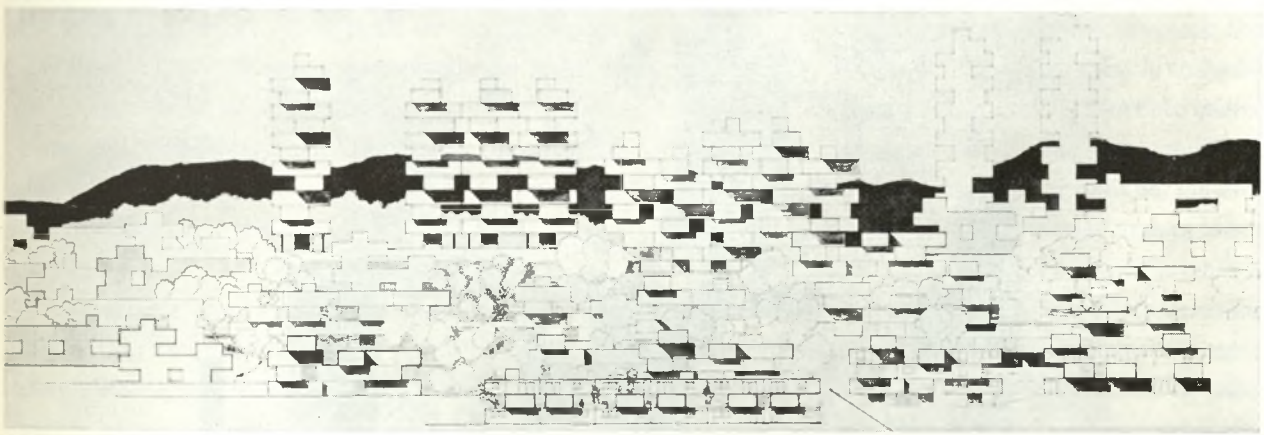
Below, a cluster of 3,000 inhabitants.



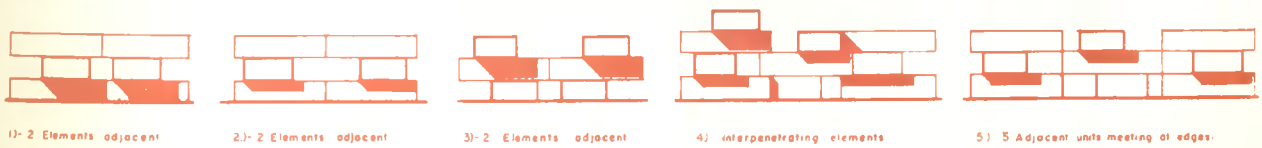
SYSTEM C Unlike systems A and B, system C is primarily "walk-up" accommodations, although the system also uses up to twelve storeys in height. Individual central cores lead to the dwellings.

The structural system consists of poured in place or precast box elements which are grouped one on top of the other so that the resultant force is within the middle-third and hence in equilibrium. The central shaft, which also contains services, is post-tensioned so as to support differential live loads and wind loads.

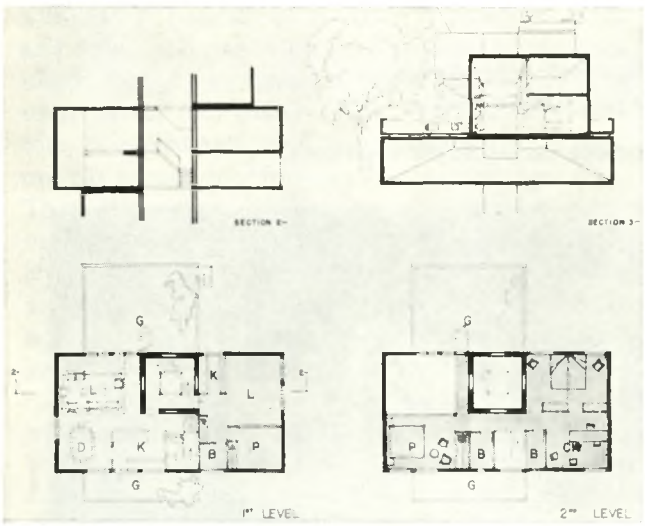
One basic cluster is combined with others in a variety of ways forming linear or space enclosing groups.



Elevation of a group on a hillside.

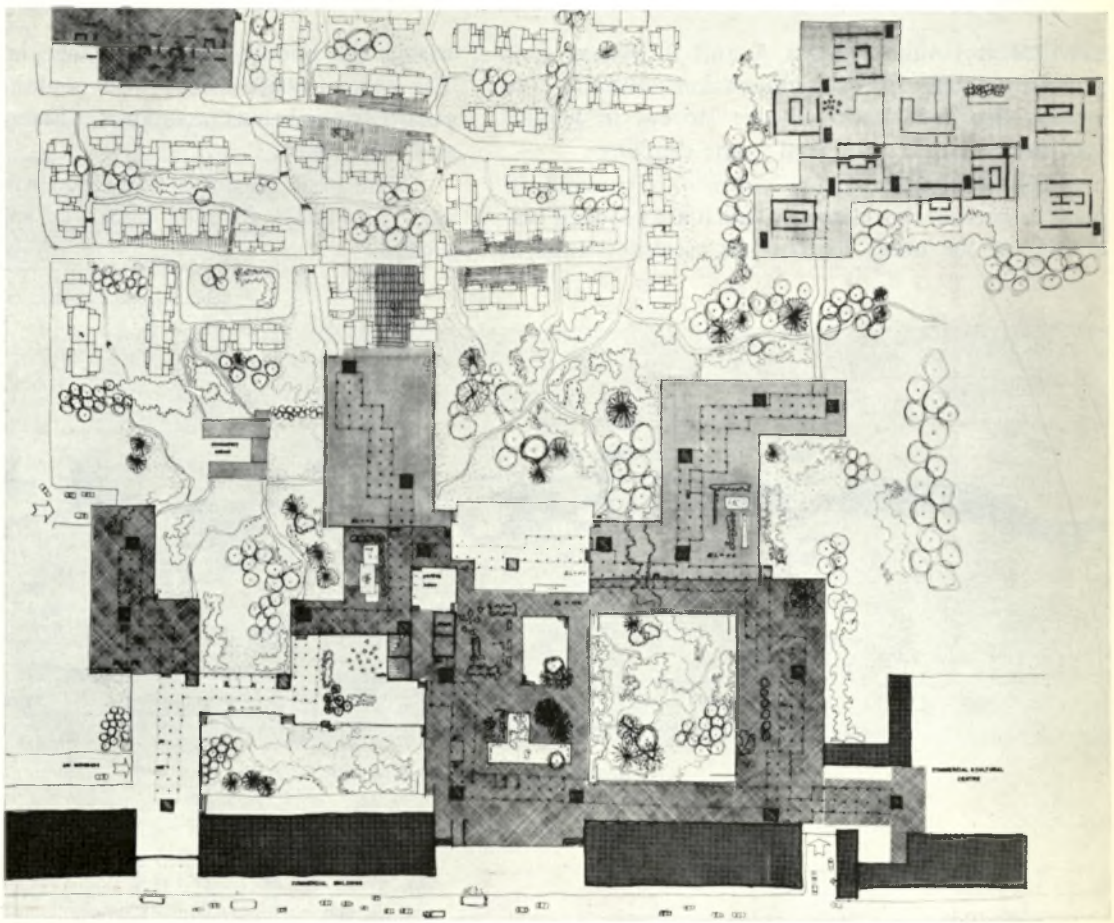


The basic repetitive grouping can be combined in five different ways resulting in 40 arrangements.



Plans and sections of unit types — system C.

Mr. Safdie, born in Israel, is a graduate in architecture of McGill University. He was awarded nine prizes and scholarships including the Lieutenant-Governor's Gold Medal, The Hugh McLennan Memorial Travelling Scholarship, the Louis Robertson Prize for Design, the Turnbull Elevator Prize for a Technical Paper and the Central Mortgage and Housing Corporation Travelling Scholarship. Reference sources for this article are in his report to CMHC. He has also made a study of European housing. This is the second of three articles on high density dwellings by Mr. Safdie.



Application of the three systems to a site (¼ shown here) 30,000 inhabitants are housed on 150 acres, including large parks, schools, shopping and community buildings. Gross density — 200 persons per acre, 10 times greater than average Montreal or Toronto densities.

RECHERCHES SUR UN SYSTÈME D'ÉGOUT INDÉPENDANT POUR UN LOGEMENT UNIFAMILIAL

Il y a trois ans, la Société centrale d'hypothèques et de logement entreprenait un projet de recherches en vue de perfectionner un petit appareil pour épurer les eaux-vannes d'une maison particulière. L'Ontario Research Foundation a été chargée de faire les recherches et les études nécessaires à la réalisation de ce programme; deux systèmes possibles furent étudiés, les systèmes à recirculation et à déversoir.

Dans un appareil à recirculation il n'y a pas d'évacuation. Les eaux usées sont purifiées dans l'eau qui sert de véhicule aux bactéries et cette eau est pompée à nouveau afin de servir à la chasse. C'est ce genre d'appareil particulier qui est installé dans la maison expérimentale construite par l'ANCH à Rockcliffe.

L'appareil à déversoir fonctionne d'après les mêmes principes que l'appareil à recirculation, sauf qu'on y déverse toutes les ordures ménagères et l'appareil doit encore avoir une certaine forme de décharge. Cette décharge ou cet effluent peut se faire dans un lit de déperdition en tuiles de dimensions très réduites ou dans un égout pluvial. Le but de ce système serait de réaliser une immense amélioration par rapport aux systèmes de fosses septiques.

Il semble que nous ayons maintenant atteint le point où un appareil de purification par recirculation a été développé au point où il est fort possible qu'on puisse l'employer dans le Nord du pays et particulièrement dans les régions de pergélisol et où les conditions de terrain sont difficiles. Le perfectionnement de l'appareil à déversoir a aussi atteint un point où le moment est venu de l'éprouver et d'en faire une évaluation soignée par rapport au comportement des autres appareils disponibles. Des études plus poussées et d'autres épreuves seront sans doute nécessaires avant qu'il soit possible d'évaluer ou de déterminer exactement l'usage que l'on pourra faire de ces appareils.

L'installation de Rockcliffe, qui consiste en un appareil à recirculation pour un logement unifamilial a été faite en vue de faciliter l'étude de son fonctionnement, dans des conditions de vie normales; il est très heureux que nous ayons pu associer ce projet à l'entreprise de l'Association nationale des constructeurs d'habitations vu que cela aide beaucoup à la fois l'Ontario Research Foundation et le Conseil national de recherches à observer cet appareil. Un appareil multiple du même genre a été expédié à Cape Dorset à Frobisher Bay, en étroite collaboration avec le ministère des Affaires du Nord et des Ressources nationales, afin d'être mis à l'épreuve dans les conditions réelles de fonctionnement qui existent dans le Grand Nord.

Deux des appareils particuliers à déversoir font présentement l'objet de recherches dans le township de North York dans les limites du Toronto métropolitain. L'expérience limitée que nous possédons de cet appareil, jusqu'à ce jour, indique toutefois que l'effluent de l'appareil ne dégage aucune odeur désagréable, contient très peu de matières en suspension et a certaines caractéristiques très désirables du point de vue de l'évacuation dans un égout pluvial ou dans un petit lit de déperdition en tuiles. Son potentiel réel sous ce rapport n'a pas été évalué.

L'appareil à recirculation sous sa forme actuelle n'est pas considéré comme un appareil destiné à remplacer les égouts municipaux classiques ni les stations d'épuration des eaux-vannes, dans les régions à population dense où les conditions climatiques sont normales. Toutefois, il est fort possible qu'on découvre à cet appareil un potentiel considé-

rable dans les conditions de terrain difficiles. En ce qui concerne le système à déversoir, il est bien possible qu'on lui trouve une application beaucoup plus vaste dans un certain nombre de situations et de cas où les fosses septiques s'avèrent un problème.

L'INSTALLATION DE ROCKCLIFFE

Cette installation peut être considérée comme une station à petite échelle de boues activées, modifiée de façon qu'il n'y ait aucun gaspillage de ces boues et que l'effluent retourne à l'arrivée. Seules les eaux usées de la toilette y sont déversées. Il est possible de concevoir un système où toutes les matières liquides d'une maison seront déversées dans un système à recirculation; toutefois, la complexité nécessaire d'un tel appareil n'a pas été considérée comme justifiée. Si ces appareils sont destinés à bien fonctionner et à rendre service dans des régions éloignées, l'entretien du mécanisme doit être réduit au minimum.

La toilette elle-même est du type console employé par les chemins de fer, qui ne requiert qu'environ 0.75 gallon à 25-40 livres de pression pour la chasse. La chasse est actionnée par une soupape solénoïde dans un tuyau d'un pouce et par un interrupteur électronique. Lorsque le bouton installé sur le mur de la salle de bain est pressé, l'interrupteur ouvre la soupape pendant environ 0.8 seconde.

Lorsque les eaux usées quittent la toilette, elles sont dirigées directement vers le réservoir d'aération qui consiste en un réservoir d'huile domestique placé selon la verticale et contenant environ 200 gallons de liquide. Ce réservoir est constamment aéré au moyen d'un petit compresseur de ¼ H.P. qui diffuse de l'air à travers un lit de pierres de dissémination à la partie inférieure du réservoir. Ce courant de bulles d'air est placé de façon à causer une circulation lente du contenu du réservoir. Les déchets sont oxydés dans ce réservoir par l'action de la boue biologique qui s'accumule au cours des deux premières semaines de fonctionnement.

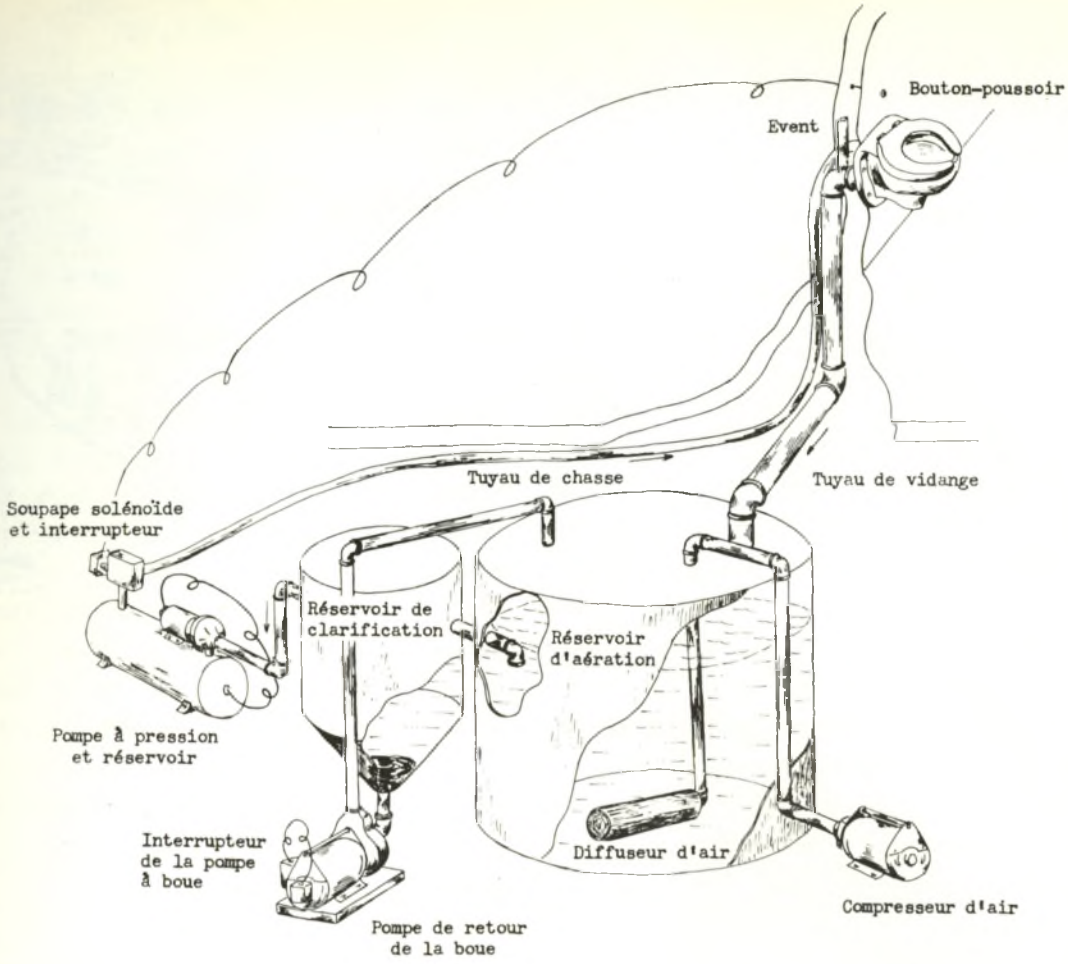
Au niveau liquide du réservoir d'aération, il y a un tuyau de deux pouces qui conduit à un réservoir de clarification. Ce réservoir a une contenance d'environ 30 gallons, est décalé à l'arrivée et a un fond de forme conique. Le fond est raccordé directement à une pompe centrifuge de 500 g.p.h. dont la sortie conduit au réservoir d'aération. Cette pompe est réglée par un interrupteur qui la met en marche à toutes les vingt-quatre heures, pendant environ trois minutes—ce qui est suffisant pour retourner complètement le contenu du réservoir de clarification au réservoir d'aération. De cette façon, ni la fraction de la boue qui se clarifie ni la portion qui flotte n'a le temps d'être infectée.

Le tuyau de sortie du réservoir de clarification par lequel s'écoule le liquide clarifié, est tourné vers le bas de sorte qu'aucune boue flottante ne puisse être transportée plus loin.

Le liquide clarifié est dirigé vers l'arrivée d'une petite pompe à eau d'un genre communément employé dans les chalets d'été. La sortie de cette pompe conduit à la toilette à travers la soupape solénoïde. La pression dans la pompe est maintenue à environ 40 livres, par un interrupteur à pression qui règle une pompe à embrayage.

Il est important que le liquide ne repose pas en contact direct avec le cuivre. C'est pourquoi on emploie une tuyauterie de plastique. Il est aussi désirable que le fer brut n'entre pas en contact avec le liquide; c'est pourquoi les réservoirs sont doublés de "bitumastic" ou "d'epoxy". Le réservoir à pression est galvanisé.

Bien que l'installation de Rockcliffe n'existe pas depuis assez longtemps pour qu'on puisse la juger suffisamment, un appareil semblable a fonctionné pendant onze mois en laboratoire à l'Ontario Research Foundation. A la fin de cette période de temps, il fonctionnait encore d'une façon satisfaisante et il s'en est jamais dégagé d'odeur désagréable. Le liquide qui sert à la chasse est trouble et devient graduellement brunâtre. On a découvert



que cette couleur est causée par le fer qui se trouve dans les déchets et non par des matières organiques non oxydées.

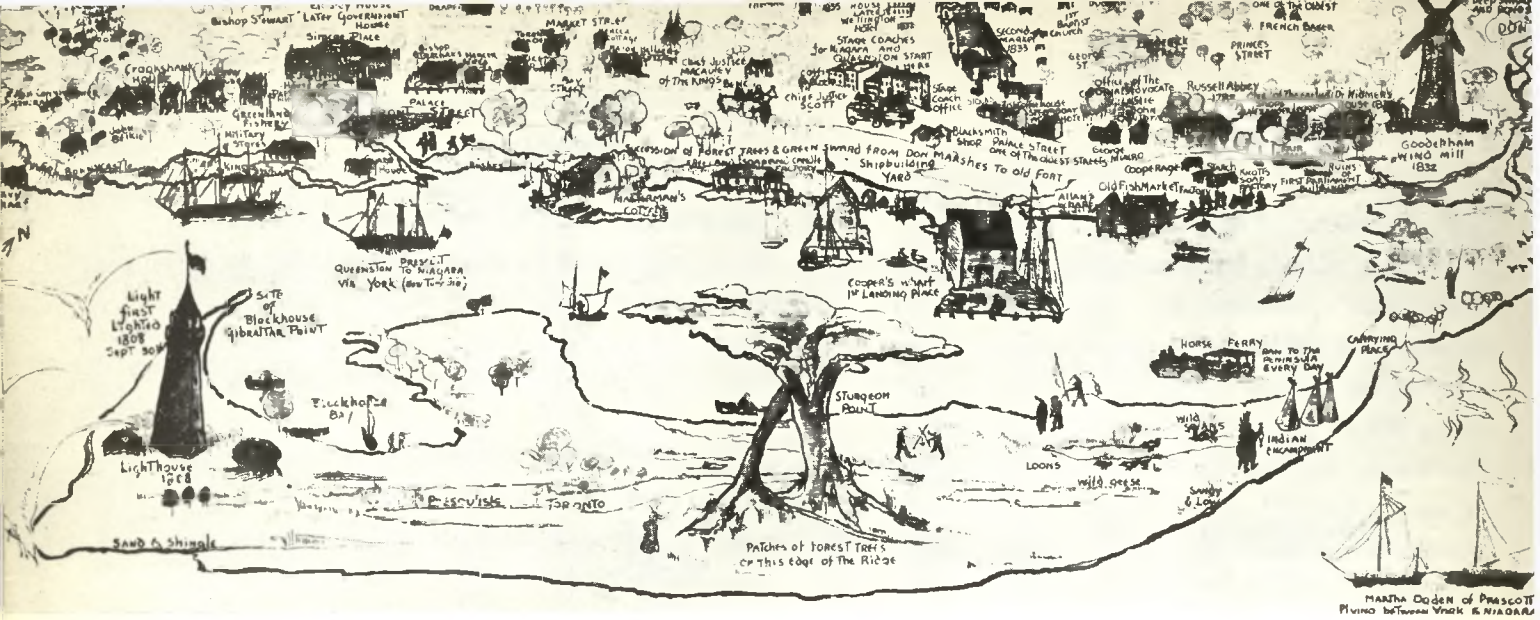
INSTALLATIONS DE NORTH YORK

Il y a deux de ces installations à North York, toutes deux du type à déversoir. L'une d'elles, qui sert à une famille de trois personnes, fonctionne très bien depuis plus d'un an. L'autre, d'une conception mécanique un peu plus compliquée, sert à une famille de quatre personnes et n'a été mise en marche que récemment.

Le même principe s'applique à l'appareil à déversoir et à l'appareil à recirculation, sauf les trois modifications suivantes: la toilette est du type ordinaire de quatre gallons; le compartiment d'aération consiste en deux réservoirs de 200 gallons chacun; l'effluent est recueilli dans un récipient collecteur prévu à cette fin et déversé ensuite dans le lit de tuiles par portions d'environ 150 gallons à la fois.

La raison qui motive l'emploi de deux compartiments de 200 gallons chacun au lieu d'un seul réservoir de 400 gallons est de tirer profit des dilutions en séries et de minimiser ainsi le danger que des charges soudaines échappent à la purification.

L'effluent ainsi recueilli est pompé vers le lit de déperdition par une pompe centrifuge de 500 g.p.h. Cet effluent est réglé par un interrupteur qui établit le niveau du liquide. Dans notre appareil expérimental, l'effluent a un "B.O.D." de moins de 40 p.p.m., mais le liquide contient beaucoup plus d'oxygène en dissolution qu'il en faut pour neutraliser cette situation. Le "B.O.D." est considéré comme la respiration endogène des organismes en suspension. La quantité de colibacilles E. est d'environ 1.5×10^5 par 100 ml. L'effluent est légèrement trouble mais ne dégage aucune odeur désagréable et s'imbibe dans la paroi d'une tuile agricole.✦✦✦



THE TORONTO ISLAND
A TECHNICOLOR DREAM

by C. Ross Anderson

In the Toronto Globe and Mail, November 26, 1957, a plan was published describing the potential redevelopment of a community. The recommendations contained in this plan must have appeared radical in a notoriously straight-laced and tight-lipped city, for other periodicals immediately launched a series of vituperations and the banner headline became the Metropolitan Chairman's curt dismissal of the study as a "technicolor dream".

The title of the plan as presented in the Globe was "The Toronto Islands, A Plan for Community Expansion and Recreational Redevelopment". It was based on an independent study of one of Toronto's touchiest problems and the reaction of the press, although possibly sparked by the normal give and take between rival newspapers, was grounded on a failure to appreciate the implications of the plan as a whole. The comments of the Metropolitan Chairman to the press were precipitated by the fact that the plan opposed, or rather modified the official plan to eliminate the Island community and convert the land to park.

Study of the plan to include the community in future development continued after 1957, but except for occasional brief flurries of publicity, very little more was heard of the matter as a curtain of official silence descended. However, the basic recommendations for a balanced redevelopment of community and park land, published at that date, remain valid and practicable. The principal obstacle in the way of realization is lack of public understanding and the need for positive action to revise municipal policies and multi-lateral agreements between the Metropolitan authority and local administrations.

It is the purpose of this article to make the study of community development as a whole available and to point out the possibility which still remains for gradual realization. To place the study in proper perspective, I wish to present it here as a chronicle with a background of historical development, leaving references and most technical considerations to the care of footnotes and drawings.

The Toronto Island is a slim sickle of land formed of drifting sand which completely

map of the City of Toronto as it was in 1834, E. G. A. Foster, shows the Island with the magnificent stone light-house which still stands on Gibraltar Point, a few strollers and an Indian encampment.

encloses Toronto harbor on the south and west and protects it from the heavy winds and waves of Lake Ontario. It has a total length of about four miles and is terminated at each end by "gaps" which permit the entry of ships drawing up to 28′ of water; its total width, excluding the small islands contained on the bay side, seldom exceeds two hundred yards.

A map of the City of Toronto, as it was in 1834, by E.G.A. Foster, shows the Island with the magnificent stone light-house which still stands on Gibraltar Point, a few strollers and an Indian encampment. In the bay can be seen the horse-ferry which served commuters until mid-century, when it was replaced by a steam-driven paddle-wheeler which began a daily service continued ever since.

The Island remained the property of the Crown until 1867, when the land was granted to the City of Toronto with the exception of certain areas reserved for navigational purposes along the gaps and around the light-house. Following the transfer of ownership, the city stabilized many of the Island shores in conjunction with a program of fill from harbor dredging which eventually led to the creation of an archipelago of smaller islands on the bay side of the original spit. Among these islands a system of parks was laced, covering about half of the total land area of between 700 and 800 acres. The other half of the land was left partly wild and partly leased in lots of assorted sizes for residential use.

This occurred in varying stages after 1873 and by the turn of the century, the Island had become an extremely popular summer resort with a variety of accommodation ranging from tents to substantial summer houses and hotels. The quality and character of the Island after the turn of the century is described perfectly in John Richmond's "A Tearful Tour of Toronto's Riviera of Yesteryear", which includes photographs of the day with a good spicing of modern comment. With a certain ebb and flow of popularity the Island remained a sort of urban shangri-la for well over half a century.

There were many remarkable things about the Island which deserve comment. Principal among these, and most obvious, were its proximity to downtown Toronto, its excellent bathing beaches, and its atmosphere of entire removal from city life while

Toronto Island at the turn of the century. A photograph from the James Collection illustrated in John Richmond's "A Tearful Tour of Toronto's Riviera of Yesteryear".

within sight of the city itself. But there were also some Island characteristics which have not been sufficiently appreciated and which have considerable significance for the planner. Since my own recommendations are based on a profound and intimate knowledge of these factors, I will mention them before going on to discuss present Island conditions.

The original plan for the Island included some provision for a great variety of activities. A basic element was the park system which separated and surrounded all the others. Second to that were the residential districts which followed the lake-shore and supplementing these were a scattering of commercial areas well situated to serve both permanent and itinerant visitors. A large amusement area, separated from other activities by open land, was established at Hanlan's Point, the extreme western end of the island group, and a large area of land near the light-house was reserved for the intake facilities of Toronto's water system. In this same area land was also reserved for large summer rest-homes attached to two Toronto hospitals.

There are several other interesting characteristics of this original plan as well which, although less obvious, deserve close examination. First, in view of the strategic position of the Island, with regard to the city, none of the land was sold outright, but was leased to individuals who then built on it. The foresight of this restriction is worth comment in a country where private ownership of land is the rule. The success of the lease-hold system for nearly 100 years proves the feasibility of such an arrangement. In effect the city retained the long-term control of the land in the only manner which permits redevelopment without condemnation.

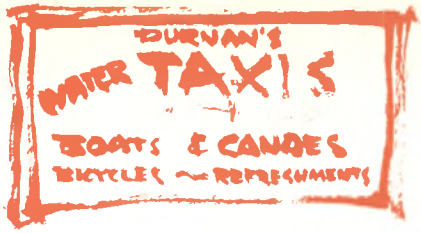
Second, the specific components of the Island plan were grouped in a manner which might be considered a prototype in the field of community planning. Consistent with the shape of the land, three residential groups emerged corresponding approximately to the designation of Hanlan's Point, Centre Island, and Ward's Island. These groups which contained between 150 and 250 lots were served by commercial establishments at each end and in the centre. Each group was bordered by park land to which community facilities such as clubs and churches were adjacent.

The amusement area, the filtration plant and the hospitals were well separated from all other activities and again surrounded by parks in a similar way so that independence was achieved by each component of the group and a physical as well as social balance was achieved by the total complex worthy of the ideal community so often praised in theory, but rarely realized.

The third, and possibly the most unique characteristic of the original Island plan was the actual layout of the lots themselves. These were planned contiguous to one another in small groups, bordered on all sides by public land so that all beaches and

SHAWCROFT.

Left, Winter transportation, an ice-breaking tug.



Old houses on Ward's Island menaced with destruction.

shores remained accessible to the public and public circulation was possible between and around all sectors of land held in private lease.

It would be impossible to over-emphasize the importance and significance of these reservations and the additional fact that vehicular access was prohibited, with the exception of hand-drawn carts and bicycles. It thus preserved the pedestrian scale of this relatively small area of land and has made of the Toronto Island a unique urban establishment of particular interest to planners and possibly without counterpart in the entire world.

During the better part of half a century the Island retained its character as a summer haven and recreational retreat for a wide range of visitors and inhabitants. Its quality and popularity ebbed and flowed with the changes of time and fortune, but its character of quiet contrast to the heat and frustration of the nearby city remained the same.

In 1936, however, a change was introduced which had its most severe effect on the Island amusement centre which had attracted visitors to such things as pony rides, professional baseball and sideshows. About half of these installations disappeared with the construction of the Toronto Island Airport and a serum of slow paralysis was injected into the remaining activities through their effective removal from the lakeshore until at present the only element remaining is Durnan's Boathouse where canoes and boats may be rented and refreshments are served.

At the same time, a portion of the community was moved to make way for runways. The houses it contained were re-situated on a previously undeveloped island and what had been known as the "Sand-bar" on the west then became Algonquin Island, a new residential nucleus to the east.

Following the first years of the airport came the war, which induced other significant changes on the Island as it did almost everywhere. "Little Norway", was moved into the site of the Island Home for Crippled Children, where it served as the base for the Free Norwegian Air Force in conjunction with the airport. At the same time the shortage of housing accommodation encouraged a conversion of many of the light summer dwellings for year-round occupancy, and in a few short seasons, the handful of winter residents had been swelled to a permanent community of several thousands.

By the post-war era the attraction of the Island for year-round living had been firmly established and, as winter transportation and services improved, the permanent community grew. The change was encouraged by the city because of the continued shortage of housing, but the policy brought with it problems which eventually led to strife. Expensive equipment was needed to ferry passengers through the winter ice and, since the city approached the situation on a rather catch-as-catch-can basis, complaints appeared on both sides of the water. The Toronto Transportation Commission complained of

the cost and the Islanders complained of the service.

Other problems began to appear as well and as these grew in seriousness and the end to the majority of long leases came into sight discussion on the prospects for the future of the Island became a popular sport for politicians and women's clubs. Nearly everything which could not be blamed on the city was blamed on the Islanders, and eventually the city managed to transfer most of its burden as well.

The need for redevelopment on the Island was affirmed by everyone. By 1945 more than 100 years had passed since the building of the first house and most of the original structures, suffering from age, were still in use. Nature had not been kind either, and a phenomenal rise in lake level, preceding stabilization through the St. Lawrence Seaway by several years, had flooded many areas making them unhealthy and unpleasant for visitors and residents alike. Added to these problems were the transportation deficit and the claims of the new Metropolitan Administration for additional parks.

As simple unassociated facts these points are all valid. However, the conclusions drawn and acted upon by municipal authorities do not follow. At the time when the question was brought up for action, many plans had been prepared. These were mostly academic essays prepared by persons completely unfamiliar with the Island, to support one or another partisan camp. They varied so remarkably and so effectively muddied the political waters, that the conservative recommendations of the Island residents for rehabilitation of the community in conjunction with the restoration of the parks and commercial establishments were ignored. The expedient solution of eliminating the community in favor of an expansion of park land was adopted.

This plan was supported by many politicians and offered, among some rather doubtful advantages, the unquestionable merit of simplicity. The title to the Island was transferred from the City of Toronto to Metropolitan Toronto with the stipulation that no use other than park should be permitted and a fifteen-year plan was announced with a proposed budget of nearly a million dollars a year.

The purpose of this plan was to make the Island accessible to more people and in this respect it received general support. Basically, however, this plan contained nothing that the Island did not already provide and it ignored some fundamental considerations and left out some important elements.

First, it ignored the role of the community which had wisely been installed in the original plan and which it now presumed to eliminate. It assumed that the problems involved in the maintenance of the Island residential districts (which were magnified out of proportion by extravagent critics) would disappear with the residents and that a great influx of visitors would surge forth as soon as more land became available for use. A little study will show that neither is likely to be the case and, since a great proportion of the demolition and clearing is now complete, available statistics on attendance and the cost of services are beginning to bear this out.

Second, it ignored the role that the Island played in the balance of human activity within the urban core. In spite of a vastly increased population in the metropolitan area as a whole, the population of Toronto City has declined steadily and between 1941 and 1956 (the years when the Island community was at the height of popularity) the number of persons living within 30 minutes walk of the Union Station dropped 17,000, more than 15%. The urban population is decreasing and to reduce it still more by eliminating the most homogeneous and lively of its component communities is inviting calamity.

Furthermore, investigation suggests that visitors to the Island are drawn mostly from this central area of the city. Visits from more remote areas are not likely to increase substantially and as a result, in spite of larger numbers of people in the metropolitan area, the number of those tempted to visit the Island will increase little if at all. In fact, with the visitors to the community itself eliminated, the total number will probably decline rapidly since in 1949, as a typical year, more than half the total fares to the Island were paid by Island residents or their guests.

Third, this plan rationalizes the climate of the

An interesting building in a bad location. As part of the ten-million dollar redevelopment program the Metropolitan Toronto Parks Commission built this restaurant, obstructing the extension of the Island Regatta Course. In the past more Olympic paddlers came from this stretch of water alone than from any metropolitan area in Canada.

Island. According to recorded statistics 48.8% of the short term visits to the Island occur during only 15 days out of the entire year. These fifteen days are on the pleasant week-ends of the summer and during most of the rest of the year the Island remains almost unused. With a swimming season in Lake Ontario of at best two months and a navigation season of eight months, this pattern is not likely to change. Promises of rapid year-round ferry access have been offered as a panacea, but without the patronage of a local community, the success of such a project is doubtful. Previously, the Island residents have in a sense subsidized public transportation, since their movement was heaviest in "off" hours and in "off" seasons. With this "subsidy" removed, the cost of ferry service must either be assumed as a public liability ("asset" if one prefers) or else fares must be set prohibitively high.

These first three criticisms of present official plans for the Toronto Island deal with the general assumptions upon which policies for redevelopment were based; however, with redevelopment now under way, a fourth and equally serious misjudgment has been the actual physical planning of the land.

For years, although Canadians have done well in aquatic sports, there has never existed a fully adequate and accessible regatta course. Long Pond on Centre Island was one Canada's best, but it was short even for the Canadian mile fixtures and certainly not long enough for the Olympic races of two kilometers. If nothing else had been achieved by the clearing of buildings from the Island at least it should have been possible to plan for an extension of the Long Pond regatta course. Yet in spite of the fact that this recommendation had been in the hands of the Parks Commission for two years, the first building of any substance constructed under this authority, in 1960, was located in such a way that future enlargement of the existing regatta course became impossible.

This failure on the part of the municipality to recognize even the obvious physical advantages of the Island is critical. However, it is the basic inconsistency of attempting to attract more visitors by eliminating the community which deserves most attention. It seemed as early as 1957, and after some actual demolition had occurred, that three alternatives for Island redevelopment existed with certain inevitable results.

First, the Island could be cleared and linked to the city by a tunnel or a bridge which would introduce the automobile to foreign soil and eliminate its unique character as an island. I mention this first because it was one of the first plans to appear (under several different guises) and in the minds of many persons the idea dies hard in spite of the fact that vehicular access across or under the gaps would be considerably more expensive in yearly costs and distinctly less efficient than the existing passenger ferries. Fortunately, Detroit's Belle Isle, which was effectively destroyed by this means will probably continue to deter such a plan.

Second, the entire area could be developed as a park which involves a totally dead season of about 8 months and a rather limited patronage of picnickers and fun-lovers (God bless them) during the other

four. This is the present official plan and it also involves the assumption that ferry transportation costs must be absorbed as a public charge. This is consistent with the desire to make the Island accessible, at reasonable cost, but if the predictions of the city's own statisticians hold true, the total number of visitors will actually decline, which scarcely seems compatible with the purpose of making the Island more accessible to more people.

Both of these preceding alternatives involve the elimination of the Island community, with its vitality and color. As soon as this fixation is removed from view, a third alternative appears. It is possible to plan a new community based on the precepts established by the old one, but allowing also for the expansion of parks. By increasing local density it is possible to reduce considerably the amount of land covered by residences and, by increasing the total number of inhabitants, it is possible to encourage a self-supporting and economical system of year-round water transportation. The purpose of such a plan would be to bring the volume of use up to a level compatible with an urban situation and to retain the variety and interest which the community has lent to the Island scene during the past 100 years.

It was the investigation of this third possibility which led to the Globe and Mail publication and the plan for balanced redevelopment. Studies were begun in 1956 and although the possibility may seem obvious at present the plan still remains entirely without official recognition. However, in proving that community expansion and recreational redevelopment are mutually compatible and beneficial, rather than mutually exclusive as previously assumed, one purpose of the study has been achieved and, if much remains to be done in making the plan a reality, it is on the administrative level rather that of basic architectural research. A review of the plan after a period of

TORONTO ISLANDS

A PLAN FOR COMMUNITY EXPANSION AND RECREATI REDEVELOPMENT

SHEET TWO THE ISLAN

SYNOPSIS

The Islands will be shared by the public ar the community. These functions complement each other, lead to a new concept: the park-city, not the city park.

RECREATION AND PARKS

Open Space: 75% of the free land of Islands is retained for public use. In the existing community all paths, shores, beaches and services are directly accessible to the public.

Regatta Course: A regatta course of dimensions with natural shores is secur a limited extension of existing lagoons

Natural Islands: Two existing natura are retained, a third is created by cutting a new lagoon north of the Filtration Plant.

THE COMMUNITY

Four homogeneous neighborhoods accom to 10,000 persons, reserve about 80 acr land.

TRANSPORTATION

Ferry access will be retained. Ferry capacity (7000 persons/hour) is roughly equal to that of an unbroken four-lane highway.

Passenger launches will supplement s ferries by service through the lagoons.

Winter Access: An "open-water" ... ferry will operate at the Eastern Gap during the season of closed navigation.

Services and internal transportation will be handled by ... buses and bus

Parking: ... are accessibl city docks.

PROJECT STATISTICS

	EXISTING	PROPOSED
Population	4000 to 5000	8000 to 1000
Residential land.....	189 acres	80 acres
Community land.....	10 acres	20 a
Commerce & Utilities	47 acres	57 a
Institutions.....	3 acres	18 a
Airport.....	180 acres	180 a
Open space.....	377 acres	451 acres
Total area.....	806 acres	806 acres

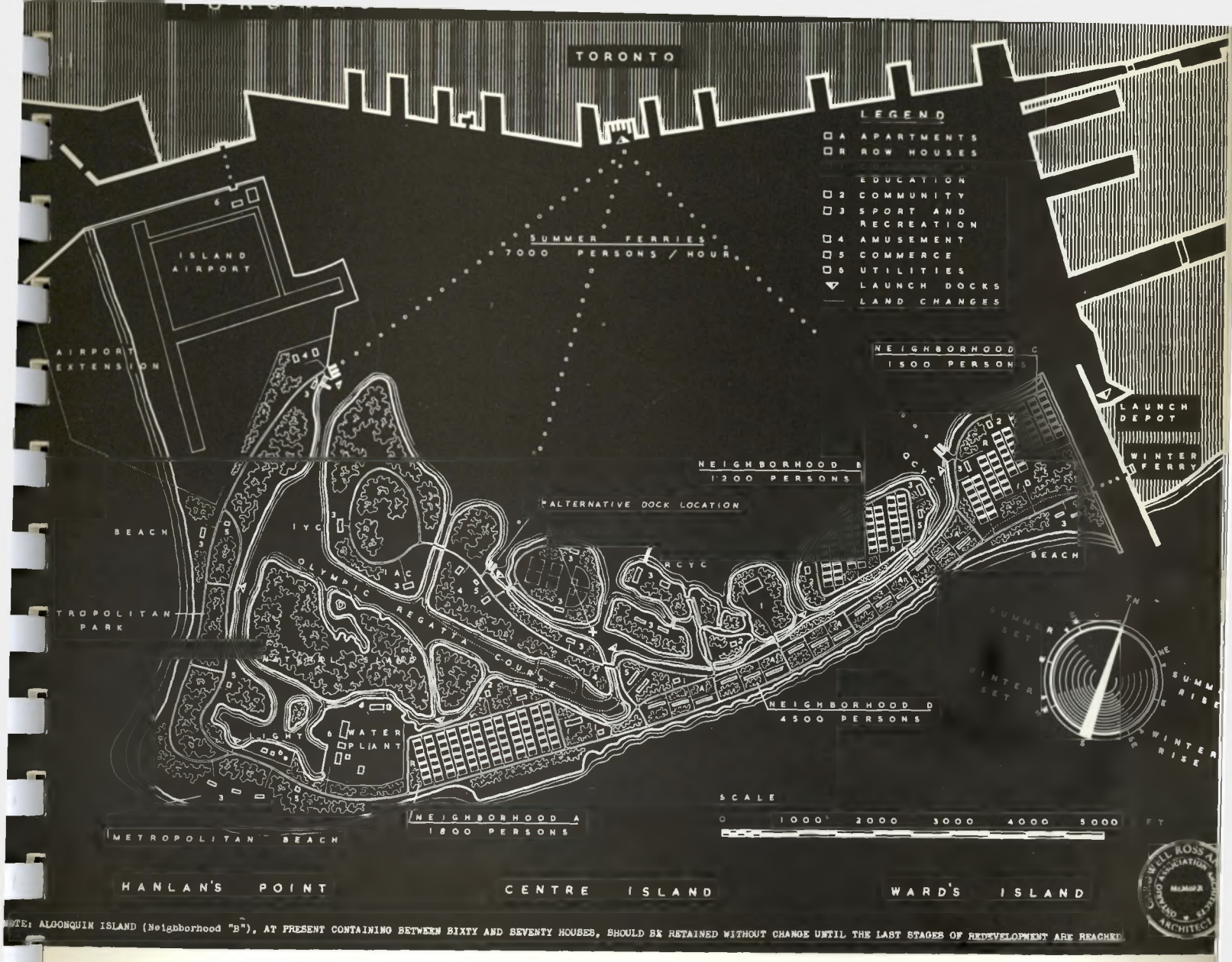
DESIGN AND DEVELOPMENT

ROSS ANDERSON M.ARCH M...

APARTMENT HOUSING

D.G. ARMSTRONG B. ARCH M...

Plans show a few of the variants proposed for Island housing. 50 per cent of the accommodation is reserved for families with children. The other half of this urban community would live in apartments. Apartment design: Geoffrey Armstrong, MRAIC.



This plan, developed in 1956, proves the feasibility of balanced redevelopment of the Toronto Island to include both parks and a permanent community.

five years, remains much as it might have been in 1956.

Since the old community has been almost completely destroyed, certain basic directives for balanced rehabilitation of the Island become categorical. The physical characteristics of the island system must be carefully respected and natural islands preserved. The public park system must be expanded and consolidated and the community must be redeveloped in a manner that will serve and encourage residents and visitors alike. Because of its size, an essential element to be located is the Olympic Regatta Course; other elements must be grouped around it.

A total population of from 8,000 to 10,000 plus both guest and transient visitors would be required to support economical transportation facilities. This population would also support a high-school and two elementary schools, a convenient coincidence from a planner's point of view. In arranging the residential accommodation, the principle of neighborhood grouping should be followed, allowing sufficient capacities to support some local services. Four groups could be provided, three of terrace houses with individual gardens, large enough to support a club, a church, and a store, and a

fourth of apartments with sufficient inhabitants to support a shopping centre with fully related facilities.

These groups should be planned to permit public access to all walks, shores and beaches – a most important lesson to be learned from the original layout of Island properties – and as before, land should be lease-held and revertible to the municipality.

The mechanism for the finance and jurisdiction of such a development already exists. The housing project could be promoted by a limited dividend corporation, established under Section 16 of the National Housing Act. Housing could be self-liquidating over a period of 100 years, and replaceable at the end of that time without loss. Park areas on the Island should remain entirely under the jurisdiction of the Metropolitan Toronto Parks Department.

Following this plan for balanced rehabilitation of both parks and community, it is possible, in comparison with the existing situation in 1956, by developing a highly urban pattern of living to reduce the total area of residential land, together with related facilities, by almost one-third. This gain in open space is allocated to parks and, with the addition of judicious land filling to extend desirable beaches and shores, this area can be increased by about 25%.

The following table shows the relationship of various components as they existed in 1956 and as they might exist within this plan:

	Existing 1956	*Proposed*
Population	4,000 to 5,000	8,000 to 10,000
Residential land	189 acres	80 acres
Community land	10 acres	20 acres
Commerce and utilities	47 acres	57 acres
Institutions	3 acres	19 acres
Open space	377 acres	450 acres
Airport	180 acres	180 acres
New filled land (est.)	—	10 acres
Total area	806 acres	816 acres

In conclusion, one point remains which favors a plan for balanced rehabilitation of both park land and community facilities on the Toronto Island above all others. The creation of a large community on the Island presents an opportunity for the redevelopment of the downtown section of Toronto as a whole. Not only does it represent a considerable increase in the volume of business transacted (probably exceeding one million dollars in retail sales) but it would provide a stimulus for progressive rehabilitation.

With an adequate supply of housing available, further areas could be cleared and rebuilt to the advantage of the entire metropolis. Included in this rebuilding could be a pedestrian park-link system opening the arteries of the city to people on foot and connecting them directly to the parks on the Island. This aspect of the project would compensate completely for the land invested in the Island community.

It should be clear that a balanced redevelopment of the Toronto Island and the Island community is more than a "technicolor dream". It is a potential reality as dynamic in conception as the country to which it belongs. Its realization could put Toronto at the forefront of the planning world.

In the past we have fought with the problem in metropolitan areas of multitudes of people with no parks. The pendulum has now swung the other way and in the Toronto Island we are faced with the prospect of a park without people. A choice of colors allowing only black or white is no choice at all. It is time we realized that the distribution of parks is equally as important as size and that balance in local activities, not specialization of large areas, is the pressing need in relieving the fragmented character of North American cities.✦✦✦

C. Ross Anderson, a member of the firm of Fleury, Arthur & Barclay, Toronto, is a graduate Master of Architecture, University of Toronto. Mr. Anderson, an avid sportsman, has travelled extensively in Asia, Europe and Australia. He has been a guest lecturer on architecture at universities in Canada and United States and has manypublications on the subject to his credit.

MASSEY MEDAL AWARDS 1961

Thea Koerner House, University of British Columbia.

In 1950, the Massey Foundation instituted the award of Massey Medals for Architecture. Architects from across the country are invited to submit plans and photographs of the buildings they feel to be their best work. The Royal Architectural Institute of Canada administers the competition on behalf of the Foundation.

For the 1961 award, 100 of the 325 entries submitted, were selected by jury to comprise the exhibition Massey Medals for Architecture 1961, and one gold and 19 silver medals were awarded for special merit.

The jury consisted of John Bland, F.R.A.I.C., Director, School of Architecture, McGill University; Peitro Belluschi, F.A.I.A., Dean of the School of Architecture and Planning, Massachusetts Institute of Technology; and Peter M. Thornton, F.R.A.I.C. of the architectural firm of Gardiner, Thornton, Gathe, Vancouver. Dean Belluschi, who also served on the jury of the 1952 competition, felt that this year's exhibition showed new Canadian architecture was equal to the best in the world.

The gold medal winner was the architectural firm of Thompson, Berwick and Pratt in association with Peter Kaffka for the Thea Koerner House at the University of British Columbia.

The jury's comments on this particular project were:

"This building was considered excellent in plan and section, and in its exterior and interior expression. Full advantage of its superb site was taken and the sculpture and landscaping enhance the whole. In this building there is evidence of the flowering of modern architecture."

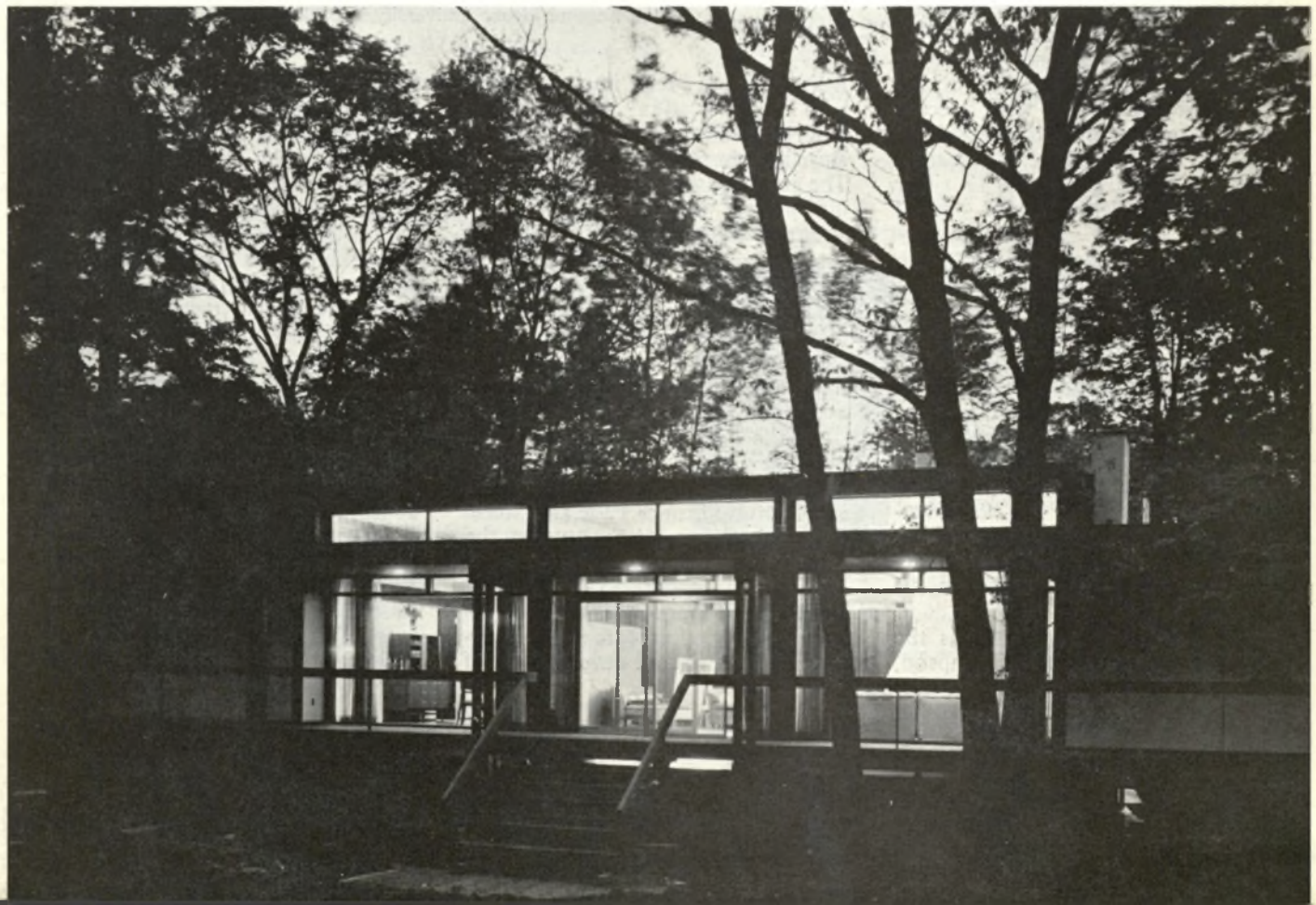
Of the 19 silver medals awarded one was given for the highrise apartments at Regent Park South. The architectural firm of Page and Steele designed the buildings under the direction of Central Mortgage and Housing Corporation's technical staff. The Corporation was responsible for all aspects of site planning and the overall development of the project under the Chief Architect and Planner, Mr. Ian Maclennan.

Regent Park South consisting of 24 acres in the heart of downtown Toronto was the first large redevelopment scheme utilizing Section 23 of the National Housing Act. The architecture has been described as a noteworthy advance in the standards of apartment-house planning and siting and was a bold beginning to the huge tasks of urban renewal that face Canadian cities.

Three other winners received silver medals for housing and illustrations of their work are shown on the following pages; Lapierre Residences, St. Catharines, Ont., James E. Secord and Saul Herzog, architects; Executive House apartments, Winnipeg, Libling, Michener & Associates, architects; and Parkwood Terrace, South Burnaby, B.C., Hale, Harrison, Buzzelle, architects.

High-Rise Apartments, Regent Park South, Toronto.

Lapierre Residence, St. Catharines, Ont.



Executive House Apartments, Wellington Crescent, Winnipeg.

Parkwood Terrace, South Burnaby, B.C.

Maison construite en rondins de cèdre et recouverte d'un autre parement.

LA VALLÉE DE L'OUTAOUAIS ET SES MAISONS EN RONDINS DE CÈDRE

Par R. G. Couillard préposé à l'Information au bureau-chef de la SCHL à Ottawa.

Le visiteur qui traverse la vallée de l'Outaouais ne manquera pas d'être impressionné par le pittoresque du milieu. Il sera peut-être moins impressionné qu'embarrassé pour expliquer le goût, ou le manque de goût, selon le cas, de certaines gens de la région qui se sont fait bâtir des maisons dont les murs de béton sont parsemés de taches circulaires. En examinant de plus près, le visiteur s'apercevra que ces taches sont en effet des bouts de rondins de cèdre, scellés dans le béton. Et, en se renseignant auprès du propriétaire pour connaître la source de l'inspiration qui a permis de construire une maison de cette façon, on lui répondra tout probablement que c'est un mode de construction légué par les ancêtres de la région, et récemment remis en oeuvre par monsieur Calvin Stanley de Greedy, Ontario.

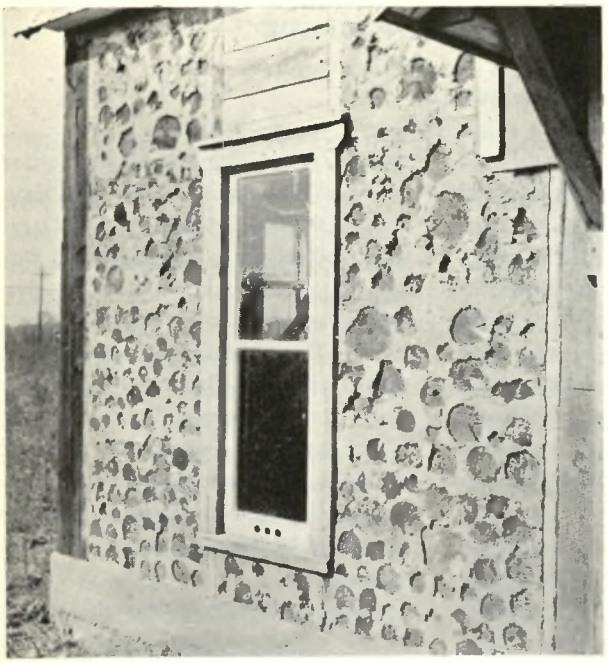
Monsieur Stanley, qui est âgé de 62 ans, est un constructeur de maisons et un petit cultivateur de la vallée de l'Outaouais, où il est né. A plusieurs reprises, en voyageant à travers la vallée, il avait remarqué que la fondation des anciennes granges avait été construite suivant la méthode des rondins de cèdre et que même de nombreuses maisons avaient été entièrement construites d'après ce procédé. Lorsqu'en 1951, il se lança dans la construction de maisons, il décida d'utiliser le même procédé employé pour les vieilles granges, tant pour la construction de la fondation que pour les murs, comme les anciens colons de la région l'avaient fait.

Le procédé en question consiste simplement en rondins de cèdre, de huit à neuf pouces de longueur, de deux à cinq pouces de diamètre, empilés dans du béton, jusqu'à la hauteur désirée. "Il en résulte", déclare monsieur Stanley, "une fondation et des murs extrêmement robustes, que ni le froid ni la chaleur ne peuvent pénétrer".

Les rondins utilisés dans la construction de la fondation et des murs doivent être secs, afin de faciliter l'enlèvement de l'écorce. Une maison ordinaire peut comprendre jusqu'à 27 cordes de billes de cèdre.

Monsieur Stanley est d'avis qu'en utilisant ce procédé on peut réaliser des économies, puisque la simplicité du travail requis réduit le coût de la main-d'oeuvre. "Mais", dit-il, "les avantages principaux sont la durabilité, l'économie de chauffage pendant l'hiver et la fraîcheur de l'atmosphère dans la maison pendant les chaleurs de l'été".

Ce mode de construction, conçu depuis déjà plusieurs dizaines d'années, pouvait particulièrement bien s'employer dans la région d'Ottawa. La vallée est bien boisée en cèdre. De plus, la région comprend de vastes gisements de pierre à chaux, où les colons pouvaient trouver la chaux nécessaire à la



Bouts de rondins de cèdre scellés dans le béton.

La maison de monsieur Stanley, à Greedy, Ontario.

Grange construite d'après le procédé des rondins de cèdre.

préparation du mortier. Aujourd'hui, on emploie un béton conventionnel.

"Ce mode de construction peut être utilisé pour les modèles de maisons les plus modernes", d'après monsieur Stanley. "Si les propriétaires éventuels trouvent peu attrayants les bouts de cèdre qui sortent des murs, ils ont le choix de les couvrir en stuc, de les parer de bois ou de tout autre matériau qui leur plaît. A l'intérieur, certains propriétaires ont recouvert les murs de panneaux muraux au plâtre ou d'un enduit au plâtre".

Les murs peuvent atteindre une épaisseur totale d'une douzaine de pouces depuis le bas de la fondation jusqu'à la partie supérieure des murs.

L'application pratique de ce procédé de construction réside dans sa simplicité d'exécution. D'après monsieur Stanley, "toute personne qui peut mélanger du mortier ou couper des rondins peut facilement se construire une maison, un garage ou un entrepôt".

De nombreux visiteurs dans la région ont interrogé monsieur Stanley sur sa méthode de bâtir des maisons et plusieurs l'ont invité à diriger la construction de maisons semblables sur leurs propriétés. Parmi ces derniers, des Américains se sont montrés particulièrement intéressés et l'ont questionné longuement sur une foule de détails.

Il est difficile de calculer le nombre de maisons en rondins de cèdre qui existent actuellement dans la vallée de l'Outaouais. Cette tâche devient plus compliquée du fait qu'un bon nombre des plus anciens bâtiments de la région, construits d'après cette méthode, ont été rénovés par leurs plus récents propriétaires qui en ont recouvert la façade d'un autre parement.

Ce rappel d'une ancienne idée donne lieu de croire que nous n'avons pas encore fini de découvrir de bons points dans les méthodes employées par nos ancêtres.✦✦✦

THE ANCIENT HISTORY OF DOMESTIC ARCHITECTURE

In response to many requests this is a translation from the French of four articles by Louis A. Dernoi which appeared in previous issues.

It is a general rule that every branch of the arts aims to reveal the development of its own evolution. The primary and early period of a craft always presents an interesting enigma. It is most unlikely that domestic architecture would be an exception to this rule, and yet – judging from the bibliography of housing history – it can be said the available information is but a shallow presentation of a very interesting and scantily explored field.

This essay covers the ancient era of domestic architecture. Housing developments since the beginning of the Middle Ages have been fairly well brought to light through town planning studies. The presentation, therefore, will include only information on the domestic architecture of the leading civilizations in the Antiquity.

GREAT RIVER CIVILIZATIONS OF THE EAST

(Between 4,000 B.C. and 500 A.D.)

With our present knowledge, the beginning of all civilizations would seem to lie in the East. It is not known exactly where in the East, but the new methods and means of scientific identification (radiation computer, etc.) are promising factors in the revelation of ancient habitation.

The homes were built in the more natural form of a circle or oval but soon were induced to the rectangular shape when inner space separation or the need for room addition emerged. Also, the use of brick-shaped mud blocks instead of bulks, forced the builders to abandon curved forms for angular construction.

There were two types of house of the primary civilizations, and a definite basic distinction still prevails among the diverging species – namely those with an inner court and the block-type house. Both types appear to have good reasons for their existence, motivated by the geographic-climate conditions and the stage of civilization and private life.

The origins of the courtyard-house date back to the stage of settled animal husbandry and for that reason, traces of its existence are found in fertile areas. The rich pastures of riverside land induced the fishing and hunting nomadic tribes to permanent settlement. This necessitated some kind of enclosure for the animals, so the first stage towards this house type was reached when the family built its homestead within the enclosure. When the need for more rooms and separation grew, rooms were constructed along the inside fenceline, thus creating an inner courtyard from where all the surrounding rooms received light and ventilation.

The existence and origin of the block-type house can be attributed to the Nordic mountain dwellers. With a more severe climate, and not tending to live in groups, their contribution to the advancement of civilization was less than that of the nomadic tribes.

The shores of 5 great rivers saw the dawn of mankind's self-conscious activity, the birth of organized society and of urbanization. The pattern of study we will take is a geographical one and is as follows:

The Nile – Ancient Egyptian Empire
The Tigris and Euphrates – Babylonian Empire in Mesopotamia
Indus Valley – The Indus and Vedic civilizations
The Hwang-ho–birthplace of Chinese civilization on the Yellow River

ANCIENT EGYPT

In the 5th millennium B.C., large groups of nomadic tribes in North Africa began to gather along the Nile and the first permanent settlement was on the Delta of this famous river. An early organized village culture in the form of a street alignment has been discovered in the Fayoum Oasis. This consisted of clay huts on an oval plan with reed and wooden overstructure.

Shortly after the unification period in Egypt, pyramid construction began, partially as a symbol of centralized power. The population at this time, about 3,000 B.C., already lived in large towns protected by palisades and clay walling. No concrete trace of civic design can be discovered in those early cities. The houses of the priests and government functionaries were large scale constructions built of sun-dried bricks that later became the accepted standards. The poor lived in small one-roomed houses with a courtyard and an uncovered corridor that served as access to the room.

The next 1,000 years brought the first period of large temple construction. The discovery of a buried city, Hatep Senusret of 2,000 B.C., now called Kahun, provides information on housing. It was a typical small town with temple, market, high, medium and low class residences and a large walled area within the oblong-shaped enclosure which was the slave district. Major residential streets ran east and west in a grid pattern and houses were built in a contiguous row. The upper class houses were 150 ft. x 200 ft. while the small units were only 20 ft. x 30 ft. This is the first known example of back to back row housing of uniform design.

According to reconstructions, the same grid pattern prevailed in great cities such as Thebes and Memphis. Not until the period of Asiatic conquest did some liberalization creep into Egypt, promoting a more naturalistic layout in the settlement.

Akhet-Aton, now called El Amarna, the capital during the short-lived naturalistic period in the 14th century B.C., adapted to local conditions of topography and its main road followed the winding course of the Nile. A remarkable feature was that the plotting of buildings – except for the eastern slave district – appeared freely chosen and not rigidly contiguous along the narrow, broken lanes.

The rich man's house, 60 ft. x 60 ft.,

enjoyed a detached character in the middle of a large lot, 200 ft. x 300 ft., and was far from the uniformity of the Kahun type. The kitchen, stables, storage, servants' quarters, etc., were grouped around the main building but still within the walls, as was the chapel, a new religious feature.

The old cities could not adopt new ideas in town planning due to area limitations. Therefore, the only possibility of extension proved to be upward. Second, and in some instances, third – storeys were used for the most private functions; the suite of the lady of the house and for the smaller children. This arrangement still prevails.

After 1,000 B.C., Egypt frequently succumbed to foreign conquerors and thus absorbed several strange building habits. However, even during the Roman rule in Egypt, about 100 A.D., we still discover the basic features of the Egyptian house; the inner courtyard, its immediate connection with the main room and tortuous indirect access to the court from the street.

BABYLON

The southern area between the Tigris and Euphrates, called Mesopotamia, was the birthplace of Babylonian civilization. Commencing with the primitive circular reed hut, circa 5,000 B.C., the domestic architecture reached urban character earlier than that of Egypt. This was brought about by the Sumerians who settled in the southern extremes of Mesopotamia. Several small settlements became towns under their influence – among them the City of Ur, Abraham's birthplace. By 3,000 B.C., there was already an established town building practice and housing form in that country.

The City of Babylon itself came into being in the next period when the semitic Accadians conquered Sumer and laid down the foundations of several new settlements. The houses of this period, 2,000 B.C., remained practically unchanged for the next 2,000 years. Indirect access to the central courtyard for the sake of privacy, separation of living and sleeping functions, the use of sanitary installations, staircases and built-up upper floor were features.

The era of the New Babylonian Empire in the first millennium B.C., offered little improvement in the principle. The rectangular outline of cities gained ground together with the introduction of large scale axial system. The houses of different social strata were intermixed within the quadrats, as proof of a liberal community.

Materials and construction methods remained unchanged during this period – sun-dried bricks for general use and baked bricks in locations exposed to water. Timber was generally used in the construction of ceilings although the use of brick arches was sometimes employed. Their sanitary installations seemed superior to those of Egypt.

The foreign occupations in the later period in the Babylonian area (Persian, Greek, Parthan, Roman, etc.), left their marks only on the surface. The way of life was cherished and accepted by native and newcomer alike. For example, the Hellenistic city of Dura-Europos, 300 B.C. – 200 A.D., at the Euphrates River, fully digested the original homes of Greek settlers and built Babylonian style houses exclusively. Western classical elements gained ground in interior decoration only, such as sculpture and painting. As far as domestic architecture was concerned – the conquerors were conquered.

THE INDUS AND VEDIC CIVILIZATIONS

India's most remote urban cultures had their birthplace along the Indus River. When the founders of this civilization reached the great river from the West, about 3,000 B.C., there was only a primitive village culture on its shores. They engulfed this culture and developed their own highly urbanized civilization. A unified and uniform state became established around 2,600 B.C., which lasted for more than 1,000 years.

Their empire extended approximately 500 miles along the Indus River, creating similar civilized settlements. The house plans had no definite scheme unlike those in Egypt and Mesopotamia. The only common feature was the number of inner courtyards, which was an indication of the owner's social status. The dwellings of craftsmen or manual workers were small two or three-roomed units. The homes of the merchant middle class consisted of 10 to 20 rooms and had several luxury elements; janitor room at entrance, kitchen, private well, sophisticated sanitary installation, etc. Houses with more than 100 rooms were probably the residences of leaders of the society, however their internal arrangements were similar.

Either natural catastrophe or enemy's ravage destroyed this civilization in the middle of the 2nd millennium B.C. so completely that when the Indo-Aryans appeared in India some hundred years later, 1,400 B.C., they apparently did not discover any surviving feature.

The Aryans were a nomadic migratory people and had not developed an urban culture, but, what they had learned from the existing but less advanced town culture of the Middle and Eastern Indian peoples, together with what they possibly found in the ruins of the Indus Valley civilization, they absorbed. By 1,000 B.C., the "newcomers" had already a progressed urbanization of their own. According to descriptions of Chinese pilgrims some hundred years later, the present shape of Indian town and house was already established. They retained the irregular broken narrow streets and the houses with inner courts, however, the buildings also became furnished with outside terraces and balconies – a sign of more security and an interest in the everyday activity in the street. Other evidence of growing interest in out-of-house happenings was the appearance of parks, gardens, ponds and fountains, which lent an air of sophistication to the cities.

HWANG-HO

This was the birthplace of Chinese civilization. Nomadic tribes from inner Asia found unexploited and fertile lowland at the Yellow River's shores in the 5th millennium B.C. Discovering that such land could be put to advantage, they soon settled down to animal husbandry and later, agriculture. China's organized life must have presumably begun about 3,000 B.C.

The first known cultures were Yang-Shao and Lung-Shan, 2,300 – 1,600 B.C., of the Neolithic age and already had settlements of as much as 20 to 30 acres in the form of fortified villages. The housing at this time consisted of pit dwellings. In some types of dwellings the employment of wooden posts as supports for the roof evolved a prototype for Chinese habitation which spread to Korea, Japan and Indo-China.

The first historical period was that of the Shang Yin dynasty, between 1,600 and 1,000 B.C. People of this era lived in towns surrounded by circular or oval mud walling. The monarch's residence and the temple were in the centre, which gives a sign of organized administration. Immediately around the central core were dwellings rectangular in shape.

During the reign of the Chou dynasty, 1,000 – 250 B.C., further important advances in Chinese urbanization occurred. Barbarian aggressions from the West brought about the establishment of chain-fortifications that subsequently became towns. Former small towns grew into major centres of administration. The upper classes, descendants of the original animal-husbandry families, inherited the tradition of living in a large house with fenced court. The poor man's living quarters was a simple one or two-room hut without any sign of a courtyard.

Major progress became obvious on buildings under the Han dynasty, 206 B.C. to 220 A.D. The traditional house building methods reached the stage where the basic features of the Chinese home were laid down for approximately 2,000 years. The definite formation and role of the central courtyard had been established and co-ordinated with the surrounding rooms in both small and large houses. The "veranda" as a permanent feature was welcomed by every class. The second storey appeared as a regular feature even on small dwellings. The entrance was usually accentuated by rooms forming a gateway of the upper class house; on smaller houses there was a canopy above the entrance door.

The four leading civilizations of the Ancient East show a fairly identical picture in their history of urbanization. It was the plains and the fertile shores of great rivers which attracted settlers and encouraged stabilized development. The next step was defensive; the fortification of settlements for security from marauders. Social stratification on an ever widening scale followed, with the formation of the central core of the civic and clerical ruling class.

Dwellings adopted the same pattern. The individual nomadic huts in the settlement period, were transformed into housing units with courtyards and later were enlarged with rooms backing onto the original fencing. The enclosed character of Egyptian central space was due to frequent sandstorms. The large sized main room off the inner court in Babylon, most probably was influenced by strong patriarchal family structure. The central courtyard in India and China served very practical purposes for animal husbandry, workshop and commerce, hence the relatively easy accessibility of these from the street, unlike Egyptian and Babylonian houses.

The second-storey soon appeared in each of the four civilizations when the enwalled towns began to grow short of space, but not before the wide spread of Hellenistic, and later Roman civilizations, did the construction of several storey buildings begin – and simultaneously, a new era of housing.

MOUNTAIN PEOPLES OF THE ANCIENT EAST

(Between 3,000 B.C. and 500 B.C.)

Further contributions to the general development of civilized habitation were made by another group of people. They settled in the mountains and hillsides of the Ancient East, although later they became part of the river cultures. The housing of these ancient mountain cultures is presented chronologically from 3,000 B.C. to 500 B.C. until they were submerged in the great Eastern civilizations, thereby enriching them.

ASSYRIA

The north-eastern part of Mesopotamia was the homeland of Assyrians where their powerful empire had its origin and was the oldest known civilization of the Near East. The Subaryans populated this area, living in small detached monarchies.

The beginning of urban life was during the 5th millennium B.C. when circular reed huts formed the first village. Mud constructions came later which added oblong-shaped extensions. By 3,000 B.C., we find developed towns, indicating signs of well-organized communities. Not far from Ninive, the Assyrian capital on the Tigris, a large city of this type was unearthed near modern Gawra.

In this ancient city we find a well-established civic centre with sanctuaries and palaces and the habitat of other strata of the society. The single one-room house changed into a two or three-roomed foreyard house for the middle classes and into a five or six-roomed house – so-called "bit-hilanies" (oblong-shaped building with projecting low towers at each end) for the upper classes. The courtyards seem to be accidental rather than planned phenomena in these settlements and in any event, because of the severe northern climate, the block-type buildings only utilized enclosed courtyards.

During the 3rd millennium, a heavy political and cultural pressure was exert-

ed on Subartu from the southern Sumero-Accadian monarchy. The new influence is clearly evident in the houses of the southern Subaryan town of Nuzi. Then about 2,000 B.C. this southern influence introduced a form of inner courtyard which later grew into importance under the semitic Assyrians.

The year 2,000 B.C. brought a serious change into the urban evolution of the area. The Assyrian tribes ceased their nomadic existence during the 2nd millennium B.C. and the entire population blended into what was known later as the Assyrian people. The towns, generally, assumed a quadrangular shape with one or two major streets and several winding, broken lanes and "culs-de-sac"; houses bordering them were integrated without social distinction. The rigid outline of Babylonian towns is not perceptible here so clearly, since the mountainous Assyrian landscape often dictated otherwise.

Houses show explicit semitic character with definite central courtyard and staircases testify to the existence of a second storey, City of Assur, 2,000 B.C.

With the full development of the Assyrian Empire, in the 1st millennium B.C., the house assumed all the features of a refined southern mansion. The so-called "Red House" in the city of Assur, 600 B.C., presents a perfect example of this achievement; formal central courtyard, well defined harem and master-suites around it and servant quarters with the refined sanitary installations inherited from the Subaryan period.

Thus at the demise of Assyria, 605 B.C., the housing habits were absorbed by the Babylonian trend and only some details unconsciously survived.

THE HITTITE EMPIRE

Asia Minor (modern Turkey) also was one of the territories of the ancient Subaryan group. Several small city-monarchies were founded here in the 4th millennium B.C. and had a flourishing townlife during the 3rd millennium. It was only under the Hittites that Central Asia Minor became really organized as a powerful empire.

The Hittite civilization is also very important because it was the cradle of the Western white races - the Indo-Europeans. They emerged from Asia, the homeland of all Aryans -- 2,000 B.C.

The small town-monarchies were organized both individually and in relation with other centres. Most typical of Hittite cities was Hattushash in Central Asia Minor, situated on the peak of a mountain, heavily walled and protected by steep cliffs. The focal point was the temple and palace, immediately surrounded by the larger houses of the priests and the ruling class. Commoners generally lived outside the fortified town. With these exceptions, there is no emphasized pattern of town planning which would show less intensive urban life than that in the riverside countries of the East.

The oldest form of Hittite house revealed a basic scheme. Single rooms were never used but rather rooms in pairs, 2,000 B.C. When further space was needed, two more rooms were added to the original couple but the double-room character was distinctively preserved. Probably because of the mountain climate, no trace of a courtyard can be discovered in the Hittite houses. The house at the so-called Lion Gate of Hattushash is a good example of a developed Hittite house and the paired character of the rooms and lack of a courtyard is obvious. When outside storage space and workshop were needed, once again, two semi-enclosed rooms were added to the house, following the traditional pattern.

The governing class apparently also lived in courtless houses, which, however, had not been erected upon the old familiar plan. They adopted the "bit-hilani" building type. Only the monarch favored the courtyard house.

PALESTINEAN HOUSING

A relatively small area between the Mediterranean Sea and the Syro-Mesopotamian Desert is called Palestine. It always served as a bridge between East and West, North and South, therefore this fact is responsible for the mixed character and varying types of houses.

In the 4th millennium B.C., primitive man began to leave cave dwellings and mud houses appeared in village form. About 3,500 B.C., walled sites were discovered in the excavations of an urban civilization. The houses lay scattered in the town, showing only scant signs of continuous streets and they consisted of one or two fairly large rooms with, in most cases, a fenced-in courtyard.

In the 2nd millennium B.C., the semite Canaanites settled in the area, creating a series of flourishing town cultures. Jericho was one of the oldest of their centres with double walling protecting the town. Narrow winding lanes gave access to the individual houses built of stone and clay bricks and no evidence has been found of any town planning idea in the Canaanite settlements. The irregular shape of the town followed the natural contours of the site. All the houses had inner courtyards, but varied in size with the social status of the owner. The dwellings consisted, generally, of one to four rooms which were grouped around the courtyard but lacked, however, any system of arrangement. The intimate use of the court gained by the access hall from the street, is one of the few common features.

The Hebrews reached the Promised Land about 1,500 B.C. and settled in existing centres which they did not use as efficiently as the conquered population. (e.g. they lived on ground floors only as in the nomadic period). Hilltop towns inherited their shapes from the terrain although the Bible does mention some towns with definite orientation to the scale and diversity of the Palestine building habits.

The refinement in society brought a large scale contrast in size and quality of houses. The habitat remained the courtyard type, but major and minor

rooms increased and access became more elaborate. The common semitic character of doors on the long side of rooms grew more conspicuous.

A new feature was a porch with columns joining a wall of the courtyard but independent from the rest of the rooms – a further intimacy with the courtyard.

The average Hebrew home had no second floor and its roof was used only for sleeping and recreation. Only the rich built permanent dwelling quarters on the upper floors.

During the Greek and Roman occupation, 300 B.C., new cities were founded with the classical checkerboard pattern. Hellenistic features were also transplanted into the Jewish environment to form the modern Near East housing style: the regular inner-courtyard dwelling with a porch.

PERSIA

The Persian state was formed on a highland between Mesopotamia and India and was surrounded by high mountains. In 4,000 B.C. several village settlements in the west of this land had reed huts, to become mud constructions later on. Cemeteries as community features paralleled the development.

Though town formations advanced, urban development remained scattered and no large conglomerations had been attained. The Aryans arrived in the 2nd millennium B.C. and it took them 1,000 years to achieve the same level of urbanization as had existed since 3,000 B.C.

At first, the fortified hilltop residence was in vogue to serve also as protection for the agriculture-animal breeding population around it. One of these was Ekbatana, later a Medic capital, surrounded by seven walls (as Herodot termed it) with a definite north-south orientation – 650 B.C. Current reconstruction has produced an image of a proto-Aryan home – a porch in front with enclosed room behind; wealthier families built a second porch in front of the first one. With the gable roof, this is still a Nordic type of wooden house – the "megaron" (oblong-shaped building with access on the shorter side.

After the Medes, the Persians conquered the whole of the Near East, 559 B.C., to become the first world-power to blend a series of different peoples. Naturally the housing was affected as well. Pasagarde, the old Persian capital, until 522 B.C., preserved in stone some Nordic characteristics and traces of block houses without courtyard and ancient wood construction. Persepolis, the second capital in a quadratic form, indicated a Mesopotamian influence; a central courtyard as a regular feature; brick instead of stone and a prevalence of flat-roofed southern houses. Besides semitic features, the Subaryan-Hittite seems to add to old Aryan dwellings (in palace construction).

The house built in Palestine in the 5th millennium B.C., shows a fixed pattern of late Persian domestic architecture. The basic Iranian "tarma" is still the main room, with a large number of mostly semitic features; a central courtyard with access from the street, a harem, service rooms and roof-terrace.

The Persian house advanced into the Mesopotamian mansion and, at the same time, was the forerunner of the refined Mediterranian habitat.

THE HELLENISTIC CIVILIZATION

Greek civilization, the first expression of classical Antique, was a clear transition between East and West and the breaking ground for our modern ways. This became possible, however, only through the proper adoption and assimilation of the age-old culture of the Ancient Near East into a new society of the Indo-Europeans.

The Greek dwelling habits followed the main trends of Hellenic civilization and in their developed stage were naturally a product or melting pot of three cultural elements: (a) The Ancient East; (b) Cretan Culture and (c) Continental Prehistory. The following is an examination of these characteristics and the special features which contributed to the formation of the Greek habitat.

HOUSING IN THE ANCIENT NEAR EAST

In spite of large variations in the habitat of different Near Eastern peoples, there are still common features that actually survived the extinction of individual nations, such as:

- the introverted character of the house
- the existence and extensive use of a central courtyard
- its protection from the public by interjecting halls
- a major living room with special orientation
- the distinction between male and female suites
- the general use of a roof terrace
- the mature stage of domestic culture.

It must be noted that the Greeks incorporated each of these features which were common oriental characteristics.

DOMESTIC ARCHITECTURE IN CRETE

It has been said that the peculiar civilization of this well-dimensioned Mediterranean island dates back to Atlantis, the sunken continent. Crete has the oldest trace of human existence in the Mediterranean basin with its cave-dwelling habitat of between 10,000 and 5,000 B.C. The first step towards housing as such, was a partition of the cave itself, followed by a stone house. A circular plan gave way to a rectangular layout. The ambitious Cretans also attempted to utilize a curved line, and finally chose an elliptical plan, i.e. The House of Chamaiz.

It was about 2,000 B.C. when an urban culture developed on this island which paralleled the growth of organized commercial and political settlements. These were monarchies under whose protection flourishing fishing and harbor areas often developed.

The towns do not show any sign of pre-planned features and followed the natural contours of the land itself. Urban environment was concentrated; narrow, winding streets across cities with houses on both sides but without yards or gardens. Some of the towns

have not yet been fully revealed and the excavations have cleared only the palaces as in Mallia and Paistos. In others, such as Knossos, the capital city, Pseira, Vasiliki, Hagia-Triada and Gurnia, entire settlements can be seen.

The Cretan house itself is basically different from other Mediterranean civilizations. It possesses no definite plan or idea and is conspicuous only in its orientation. The hot climate of Egypt and Mesopotamia induced a northern orientation while the severe climate of Asia Minor and Greece made the house face south. Since the island lay between two extremes, houses followed an east-west pattern.

The poor man's house was enlarged from a primitive one-room habitat by the addition of cell-like rooms, while the rich, on the other hand, preferred multi-storey houses in contrast to Egyptian and Roman habits, and which contained the landlord's family only.

Several enamel tableaux have been found in Cretan ruins presenting popular multi-storey houses. Most surprising in these houses is the emphasized employment and dimension of windows – the first in the sequence of ancient urban cultures where this occurs. The Cretans also used lightshafts (another first in history) or a vertical extension of the court space employed in both one and multi-storey buildings.

Society had several strata in Crete according to high specialization in urban life, although no separation of classes was made. Palaces and mansions were surrounded by the simple houses of artisans and fishermen. In spite of its high concentration, urban life had a character of liberal and individualistic tendencies in both the physical and moral senses.

HOUSING EVOLUTION ON
THE GREEK MAINLAND

Long before the Indo-Germanic Archaians invaded the Balkan peninsula, the so-called neolithic Sesklo-culture had produced a series of towns and villages from Macedonia to the Peloponese. Orchomenos is a rich source of this form of archaic housing. From the original circular dwelling of stone (three feet thick), evolved an oval plan for enlargement as well as a connecting series of circular buildings. The latter attempt, however, led to a deadlock because of its primitive nature.

The Bronze Age, 2,500 B.C., induced a further need for inner space and produced a transition from the oval to the megaron-oblong shape. By this time, the husbandry population switched to agriculture and specialization in the professions. The result was an organized town protected by heavy walling.

Probably both Cretan influence and natural development, according to actual needs, finally helped to eliminate the curved line in home building. Thus by 2,000 B.C., the first Aryan invaders (Archaians) from the north accepted the rectangular oblong houses which actually paralleled their own. The final form of classical megaron was developed by the invaders and became a traditional feature of Greek houses for two centuries. The basic features were the long rectangular room facing south for warmth, a fireplace and "antae" or veranda on the front, used for outdoor recreation and added space.

Archaians generally occupied existing settlements and constructed military strongholds on hill-tops such as Mycene, Tiryns and Malthi. Malthi is a good example of the primitive stage of Archaian urbanization. Defence was paramount as in medieval cities of Europe. Following the contours of the peak, some 100 houses formed the community, all having one or two-room megarons uneconomically exposed to the street on two sides – sometimes on three. Mycene, the capital and from which Achaian troops marched against Troy in 1,200 B.C., revealed a more advanced stage. Although it is only the upper town that was unearthed, we still have an idea of the community features. There is a main procession street connecting the famous Lion Gate with the palace, bypassing an impressive tomb and bordered by mansions of the nobility. This illustrates the oriental influence, whereas the habitat reminds one of the Cretan cell-house.

It is remarkable that keeping the megaron as the main room, the need for further rooms had not produced the same traditional archaic solution as it did in Troy, Tiryns or other Archaian towns. There, one extra megaron was added to serve new needs. In the case of modern Mycenean houses, the enlargement was reached similarly as in Crete by adding rooms of undetermined shape and location to the original megaron. Also, the two-storey character gained recognition with the peristyle courtyard – the latter a feature of Cretan palace-architecture.

Constructionally, the stone was kept only as footing and walls were built of sun-dried brick. The original northern pitched roof gave way to the southern oriental flat terraced roof.

About 1,200 B.C., the latest wave of Indo-Aryan migration arrived in the Balkan peninsula, the real Greek tribes. The Archaian Empire fell into ashes and ruins and it took 200 years for the newcomers to settle down. However, most of the Greek cities did not have their origin until 800 B.C. on almost the same sites as previous urban settlements. The layout of the pre-classical period (*archaioteros tropos – 758 to 494 B.C.*) of Hellenic urbanization followed the Archaians. Its location was defensive, still further from the water with the walls following the natural contours as did the streets and squares.

This must have been the period of general transition from the old megaron habitat to the courtyard house. The main item in the new habitat is still the megaron with several other rooms located around the foreyard, thus forming an enclosed court. This information is given us by the poet Homer, our

only source of detail for this kind of habitat. Entering from the street we find a large courtyard (*aule*) with a centrally-located Zeus altar. Around this, additional rooms were built for family members other than the lord himself (*thalamoi*). His room was a large megaron usually across the entrance and consisted of a large room with a porch in front. The oriental harem (*gynaikonitis*), bathroom and second storey (*hyperon*) are represented only in the rich man's habitat.

From the 5th century B.C. onwards, the Greeks were under constant oriental influence largely through Persian expansion. The so-called new style (*neoteros tropos*) crept into freshly urbanized settlements, and Milet's Hippodamos became master of new town design, prescribing the layout and scheme of Greek urban areas for a half century.

New cities thrived on sea commerce so that a harbor was a determining factor. The selection of town sites represented a serious branch of the arts and sciences, yet the free outline was the only feature preserved from earlier times. Outlines still adapted themselves to physical conditions as if the Greek towns were never aimed to be detached from nature itself.

Numerous social changes and the refinement of class stratification produced a large scale of variations. The clear old megaron type could only be found in the country while in towns only the rich could afford this luxury. In Athens of the 4th century B.C. there was a dense population living in real congestion, and even the rich were induced to build vertical extensions to utilize a second storey for women's quarters and personal use. The rooms on either floor were grouped around two peristyle courtyards, the sign of final conquest of oriental habits.

The middle class had to rely on an inner courtyard surrounded by eight to 10 rooms. The original megaron with porch is still to be seen. Artisans and others of the lower middle class sometimes enjoyed a small house of their own, three to four rooms grouped about an inner court but without megaron or other grouping system.

The Christian era brought an even stronger urban concentration. The city-proletariat - freed slaves, penurious wage-earners, - expanded in number and produced mass housing in four to five storey tenements (*synoikie*). Originally, each floor was a different rental subject, and most probably as in Roman apartment houses, it was later subdivided into smaller units. We know that staircases were built, and the flats possessed large windows overlooking the street. The highest buildings of this type are seen in the late Antic period, 3rd and 4th century B.C., in Bysantium often reaching 100 ft. in height.

Further illustrations of the Greek habitat can be appreciated historically through Alexander the Great who carried his civilized idea all over the known world, 334 to 323 B.C. Series of cosmopolitan cities were founded by him and his successors from which the activity of Hellenistic urbanization lasted the longest, though differing basically from classical Greek cities. In contrast to the semi-independent older cities they were links of the cultural and military chain of Hellenism. Therefore their location either in Europe or in Asia was the inland rather than harbor type, not exclusively Greek, but incorporating the local population and features.

Their shape tended to be quadratic as a military camp, and their cultural and social facilities overruled the old Greek towns. They possessed a democratic flavor and were usually founded by or dedicated to a monarch who saw to it that "pomp and circumstance" raised his own fame.

The inner arrangement was generally in line with the Hippodamos style but richer by having more roads and public buildings. The houses presented a beautiful example of the adaptation to local traditions and design in spite of the accustomed Greek city framework. Only a higher standard of workmanship and Hellenistic decor brought western flavor into the house.

This phenomenon proves that a transplanted theory could not live under completely different circumstances, whereas the same transplantation in a similar environment, as the Roman civilization was, will succeed and is capable of further development.

THE ROMAN EMPIRE

To complete a picture of Roman housing, we have to look at the background of domestic architecture on the Italian peninsula. Two major periods preceded Roman civilization in that area - the prehistoric and the Etruscan. Each, at least indirectly, influenced the Roman's domestic architecture.

PREHISTORIC CULTURES ON THE ITALIAN PENINSULA

The Old Stone Age populace of Italy was of undetermined origin. It lived in caves, traces of which can be found across the whole country. The immigrants of the Neolithic Period, the so-called Ligurians, are supposed to have originated in the eastern part of the African continent, with a civilization superior to the Stone Age in Europe.

There seemed to be a peaceful coexistence, even some integration between the two races. This is clearly indicated in their habitat.

With progress in agriculture, communities were formed and a village culture developed. The Vibrata Valley on the Adriatic coast presents a rich source of prehistoric housing. Some 15 villages existed here, of over 300 circular huts built as partial pit dwellings.

The Bronze Age was advanced by a new wave of immigrants from the north - 1,700 B.C. They brought the new habitat of lake-dwellings with them. Posts were driven into the bottom of a lake and huts were raised on them above water level, individually or commonly, on a large single platform. Probably

the purpose of this type of construction was to obtain security against surprise attack, although it is possible it was for hygienic reasons.

From approximately 1,600 B.C., we can calculate the existence of the so-called Terramare culture in Italy, in the Po Valley. These people represented the first really organized group in the area, evinced in their urbanistic achievements. Their economic life depended on agriculture, animal husbandry and metallurgy, thus there must have been well-defined professional differentiation, that undoubtedly goes with a higher standard of social evolution.

The Terramare settlements developed pile-construction into a semi-urban concentration. Flood areas, and swamp land were the preferred sites. High earth ramps surrounded a trapezoid-shaped parcel of land within which pile-dwellings were built in a strict grid-pattern, an extremely rigid layout for these times and probably forced on them by the standard wood construction. The streets within the settlement were channels, the two main ones intersecting at the centre in a cross form. For some social or religious distinction there usually was a separate section in the eastern portion of the settlement.

We have no definite information how the Terramare developed into the higher level early Iron Age civilization of the Villanova culture (1,100 B.C.) and because of the large number of civilizations that have settled upon Terramare and Villanova sites, we know very little concerning the individual houses of these people. The rigid rectangular town plan of the Terramare indicates progression towards a square house form, although there were cases where circular huts were erected.

ETRUSCAN CIVILIZATION

The origin and classification of the Etruscans still represents an enigma for the archeologists. Their architecture and some of their habits certainly reveal a people from northern and/or mountainous country. The Etruscan settlements in Italy present a similar picture to those of the Archaians of Greece and seem to be a natural sequence to the Villanova towns. Perusia, Velathri, Tarquinii, etc. were all located in hilly areas, protected by walls that closely followed the contour lines, creating an irregularly-shaped settlement. No concrete planning idea was expressed except the military needs of defence. However, the ritual town foundation ceremony testifies to a highly developed urban self-consciousness.

At the time of its greatest expansion, about 600 B.C., the Etruscan Empire controlled most of the Italian Peninsula, by force of 36 stronghold cities in three groups of 12. By then, the influence of the Greek colonies in Italy was plainly visible. While temples assumed an intensively Greek shape with the front colonnade and the tympanon, the houses too, gave up their original rigid block-megaron character and blended somewhat with the Greek courtyard house.

So the Etruscan house presents a further stage of the megaron as well as a mixture of this and the courtyard house. In the main room was the original megaron in which was located the fireplace, as in earlier times, without chimney but with an opening in the ceiling, for the smoke. At a later stage of development the need for further rooms created a series of small enclosures around the megaron, all communicating with the latter. The small smoke hole grew into a formal square opening allowing plenty of daylight into the house. The megaron became a sort of inner courtyard with a pool in the middle for the inpouring rain. This sophisticated form corresponded with the milder climate of Italy, in contrast with the severe temperature of the Etruscans' original fatherland. It is believed that this housetype was adopted by the Romans and carried to further stages of development, and can be seen in the evolution of the Roman city.

THE ROMAN HABITAT

The Roman civilization of which the legendary beginnings go back to 753 B.C., took its origin from the foundation of Rome. It is not coincidence that urbanization is an earmark of the Latin culture. The power of the empire was based upon the city culture which, however, also carried in itself the seeds of disintegration and collapse.

The Latin people were one of several Italic tribes subjugated by the Etruscans for centuries. Allegedly, about 500 B.C., the Romans succeeded in expelling the Etruscan rulers after which they maintained their republican liberty.

The Republic of Rome thus was founded on an overwhelmingly Etruscan civilization. This was significant since Etruscan urbanization, by then, was of a fairly high standard. A long tradition of urban culture was crystallized in the ritual foundation ceremony where city limits, orientation and consecration were determined. Later city walls, underground sewers and a bridge across the Tiber were built and the Forum began to take shape.

The idea of Roman town building, like the Etruscan, was based on military considerations. However, there is a basic difference between the two. The Romans followed a strict rectangular pattern. This was easier for them on the plains they preferred for urban settlement. The oblong military camp served as a primary settlement and two major roads crossed in the middle where the main buildings were later situated. The outlets of these roads determined the location of city gates.

Formally, the Roman town developed on the military camp. As for its content, there were several laws controlling land usage. Streetline and yard regulations had already been written into the first law collections the Romans produced. Also, the permit system of building and tearing down was an important feature for community planning. Julius Caesar's *Lex Julia Municipalis*,

45 B.C., was a significant extension of the older laws.

However, at the time of the Roman Empire, not even such strict regulations could control deterioration and blight. The City of Rome attracted a great number of up-rooted people seeking employment which largely contributed to the creation of an urban proletariat. By Nero's time the City became an enormous slum with only some islands of decent housing and public buildings. His setting Rome afire was a drastic approach to slum clearance but it prepared the land for a new start. According to Tacitus, a new city was built up then, following a strictly controlled street pattern and building regulations. The earlier haphazard multi-storey houses were replaced by organized "insula" developments of tall apartment blocks.

And so we are led to the actual subject of this study – the development of habitations in ancient Rome. In its final stage, even more than in other cities, a new type of housing shaped the character of the City by which it became so different from other contemporary urban conglomerations. No other city of the Empire reached this particular stage, because no other city exerted such an attraction in the world as did Rome.

The Roman house, the same as their civilization, was based upon the two birth-giving factors, the Etruscan and the Hellenistic heritage. For centuries, the dwelling in Rome could not have been much different from the developed Etruscan atrium-house. Only when their expansion brought them into contact with the Greek colonies on the peninsula, does a direct Hellenistic influence mark the originally puritan Roman way of life.

Pompeii was a typical town to embrace and blend the two traditions, since this had been one of the former Greek colonies, preserved for us by the fatal Vesuvius outbreak in 79 A.D. The City, laid out in a grid pattern, had its houses grouped into building blocks, each of them containing some 10 houses. These show clearly the shape of the Roman house in its flourishing period.

The house itself consisted of the clearly defined Etruscan and the Greek portion. The front part, towards the street was occupied by the atrium-house, the rear was built in Greek peristyle manner; a garden surrounded by rooms behind a colonnade. A more evident blend of two civilizations is hardly to be found at anytime in history.

These houses had already the two features out of which blossomed the highly developed urban mass-housing, the Roman *insula*. These features were; employment of an upper storey and allowance for shops *tabernae* within the private house block, in direct connection with the street. Although these ideas have been represented in some form in the older civilizations, especially in the Hellenistic one, they did not reach the degree of development that was achieved in Rome. Other empires never focused so intensively on one particular city as the Romans (who even gained their name from the city). A high concentration drove people together in the City – people with the character of Indo-Europeans and the blended knowledge of previous millennia.

Under such favorable circumstances, the Roman house began to develop its own characteristics. The number of stores and workshops had an even growth. A second layer of stores appeared on the upper floor and a second row in the rear of the ones fronting on the street. The latter opened onto the original inner courtyard, the former had a separate access from the street. These, naturally, disrupted the privacy and seclusiveness of the old house type. The atrium and peristyle blended into a common courtyard, that communicated with the street. The original upper floor moved up, multiplying the number of stores to meet the needs of the growing population.

Ostia, Rome's harbor town, presents us with a reliable picture of the insula-development. Unearthed only some 30 years ago, there is as yet no full report published on the findings. However, entire streets bordered by multi-storey insulae invite the visitor of this 2,000 year old ghost town to stay and admire. Here are the final achievements of Roman multi-storey construction. Back-to-back apartment blocks withdrawn from the building line, quadrex-type apartment houses with several storeys, one-building insula treatment, etc., still await a detailed report and explanation.

During the period of the Imperium, the typical apartment unit took shape – the so-called coenaculum. This consisted of living-room, bedroom, kitchen, vestibule and a washroom. Of these, only the living-room and the vestibule had windows, the latter serving indirectly the two others. A common hall used by the tenants of the same floor completed the picture. The coenacula were approached by a corridor running along the courtyard side, joining the staircase with the units.

The size of a coenaculum varied between 500 and 1,000 sq. ft. It had to be reduced to suit the high price of the plot and the greed of the landlord. This, together with the ever-growing housing need, was one of the problems common to Roman times and our own. The following letter relic could have been written from any of our present-day metropolises: . . . "There is, at last, an advertisement, about an apartment for rent, my dear Nerva. It will be vacated in July; it is an ordinary coenaculum with two rooms, kitchen and toilette. Unfortunately, as is usually the case, in spite of the praetorian regulation, the rent is not indicated. However, it's worth while to take a chance, and – following the directions of the rental sign – ask the slave, Primus, who is the superintendent of the building, to show you the apartment and tell you the rent."

45 B.C., was a significant extension of the older laws.

However, at the time of the Roman Empire, not even such strict regulations could control deterioration and blight. The City of Rome attracted a great number of up-rooted people seeking employment which largely contributed to the creation of an urban proletariat. By Nero's time the City became an enormous slum with only some islands of decent housing and public buildings. His setting Rome afire was a drastic approach to slum clearance but it prepared the land for a new start. According to Tacitus, a new city was built up then, following a strictly controlled street pattern and building regulations. The earlier haphazard multi-storey houses were replaced by organized "insula" developments of tall apartment blocks.

And so we are led to the actual subject of this study – the development of habitations in ancient Rome. In its final stage, even more than in other cities, a new type of housing shaped the character of the City by which it became so different from other contemporary urban conglomerations. No other city of the Empire reached this particular stage, because no other city exerted such an attraction in the world as did Rome.

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