JOURNAL
RAIC · L'IRAC

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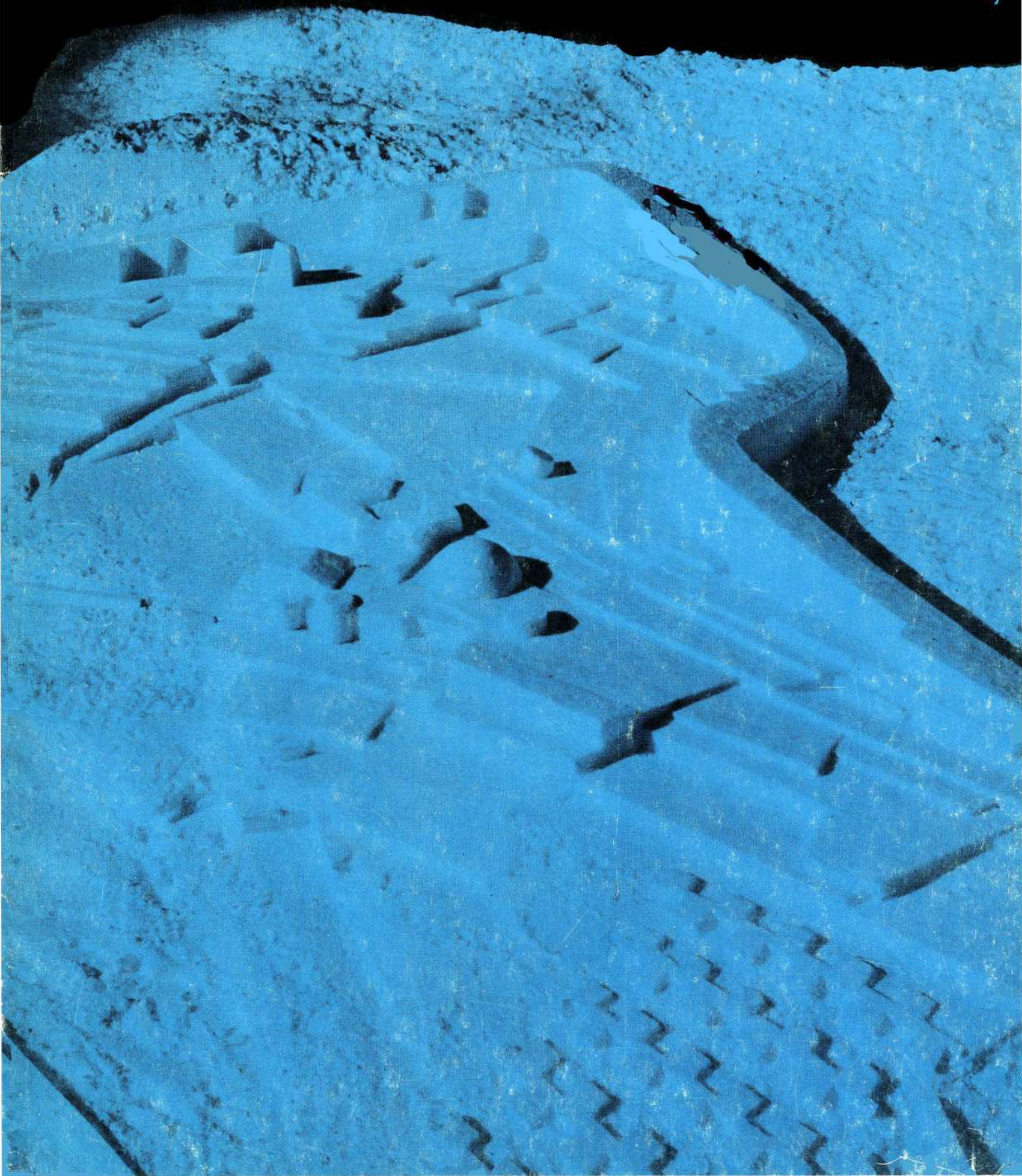

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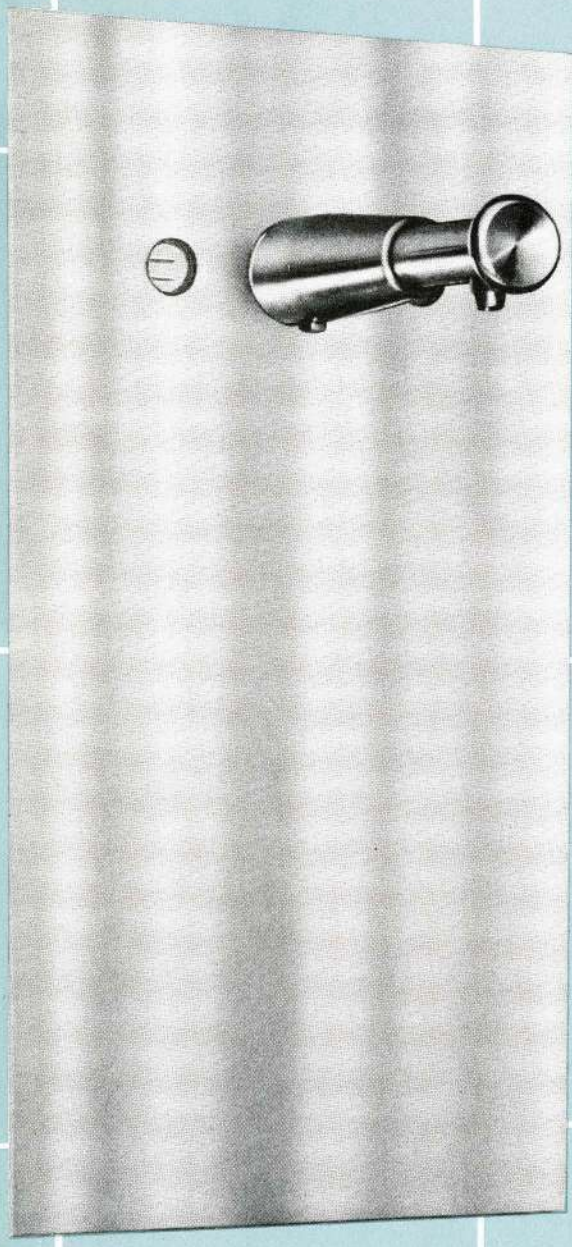

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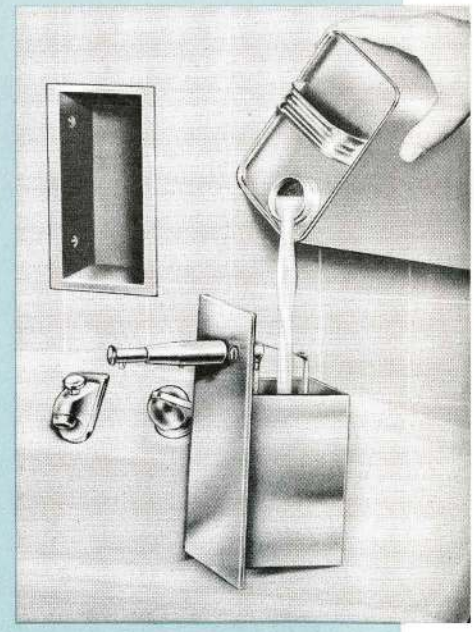

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Editorial

The advent of the New Year is an appropriate time to dwell on what has passed and what is in store for the future. Emerging from the previous twelve months one sees a great awareness of the need for a new attitude which many have associated with the survival of the profession. This is, of course, accompanied by both complacency and enthusiasm according to ones visions and beliefs. However it may be viewed, it can not be denied that the profession is on the threshold of a great change in both its personal and public image. Probably the greatest single factor responsible for this is the demand by both corporate and private enterprise for a more comprehensive service from the architect. Receiving, as we do, reports from meetings, discussions and conventions across the country, it is apparent that this new challenge has been accepted by many who are demanding new approaches in both our attitude and organization. The day when the architect could, at his leisure, refer matters to his sister professions, is rapidly disappearing. The very authority which he assumes over the various and complex problems inherent in contemporary architecture has been questioned. Many believe that his only chance of maintaining his position is through a broadening of knowledge, experience and ability out of which may come a tangible extension of his services.

The very nature of this predicted change, is both infectious and invigorating. It touches the great and the small. In its own sphere, the Journal has tried to accept this prognosis and to benefit from it. Within our limitations we are trying to fill a need which invariably goes hand in hand with a new philosophy. This has been reflected in the various specialized columns which we have initiated over the past year and also in the emphasis placed on a broader approach in our contents. This trend will continue in a manner which, we hope, will be both stimulating and informative. The New Year sees the start of a series of articles on professional practice and office management.

Another outcome of this new challenge was a very full and sincere appraisal of the Journal's appearance. This was carried out over a considerable period of time in consultation with designers in the graphics field. The new year also heralds the outcome of this study. New type faces have been adopted together with a fresh cover format and a new method of binding.

The Journal is forever aware that it is the official publication of the Royal Architectural Institute of Canada and the profession as a whole. As such it is endeavouring to represent all the Provinces and each and every architect in Canada. It can not achieve this without assistance and relies heavily upon those far distant from its point of publication. It would seem fitting, therefore, to conclude this Editorial with a sincere plea to all the profession for a greater concern and association with the Journal for 1964.

H. D. R. Buck, Chairman, Editorial Board

Au début du nouvel an, l'architecture se doit de réfléchir sur les évènements de l'an passé, et de se préparer à faire face aux problèmes qui le confrontent.

Au course de 1963, nous avons reconnu qu'il nous prendre une nouvelle attitude, créer une nouvelle image. Beaucoup des notres reconnaissent que notre survie peut en dépendre. Ce besoin est reconnu par certains avec complaisance, par d'autres avec enthousiasme. Quelque soit le degré d'interêt, il est incontestable que la profession va changer d'image, personnelle aussi bien que publique.

Un des facteurs qui influencent fortement ce changement, est les emergences des maisons d'affaires, aussi bien que des clients privés qui demandent de l'architecte un service plus complet, varié et flexible. Par tout le Canada, rapports, réunions, discussions assemblés confirment qu'un grand nombre d'architectes ont accepté ce nouveau défi, se reorganizent et prennent une nouvelle attitude.

Les jours ou l'architecte, ne s'interessait aux professions soeurs que l'orsque bon lui semblait, sont passés. On questionne même les directives qu'il donne aux problèmes complexes et divers qui font parti de l'architecture contemporaine. Dans certain milieux on prêche, que pour maintenir sa position, l'architecte doit améliorer sa technique, perfectionner son abilité, donner plus d'autorité à son expérience, afin de perfectionner ses services.

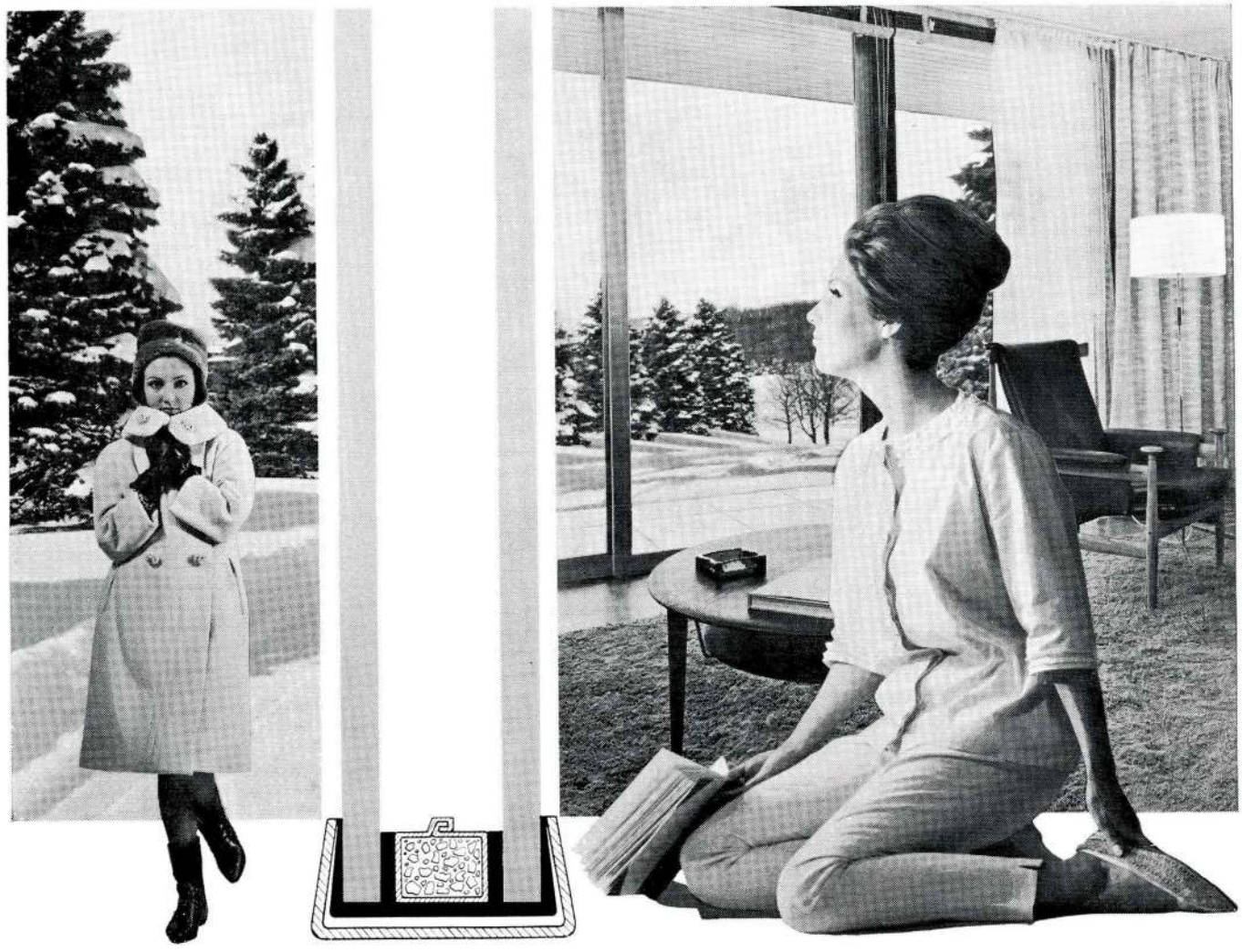
Ces changements, ce defi, sont un stimulant pour tous les membres de la profession. Votre Journal, dans sa spire, accepte ce défi et tente d'en profiter. Nous, du comité de redaction, bien que nous reconnaissons nos limitations, nous essayons de faciliter les problèmes qui se trouvent invariablement, lorsque l'on accepte une nouvelle philosophie. Nos efforts, se réfléchissent dans le differents éditoriaux spécialisés, réalisés l'an dernier, aussi bien que dans les approches plus genereuses données à tout sujet. Nous continuerons de cette façon avec l'espoir de vous donner autant d'information qu'il se peut tout en stimulant votre intérêt.

Un autre résultat de ce defi, est l'évaluation sincère et complete de la presentation de notre journal. Cette évaluation, commencée il y a déjà quelque temps, fut discutée principalement avec dessinateurs et spécialistes en matière graphique. Un nouveau format typographique a été conçu et nous avons changé de reliure aussi bien que de couverture.

Le Journal reconnait toujours qu'il est la publication officielle de l'institut Royal du Canada et de toute la profession. Pour cette raison, il essai de représenter les intérêts de tous, de chaque province aussi bien que de chacun d'entre vous. Ceci ne peut être réalisé sans assistance. Nous realisons que cette assistance nous est donné par des confrères qui sont bien éloignés du bureau de rédaction.

Parce que nous reconnaissons ce probleme, cette difficulté, nous croyons bien à point de terminer cet éditorial, en vous demandant à vous tous, les membres de la profession, de nous intéresser de plus en plus, aux affaires de votre Journal, en 1964. Afin de servir notre profession avec efficacité.

H. D. R. Buck, vice-président, comité de rédaction



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Institute News

MASSEY MEDALS COMPETITION

The brochure announcing the 1964 Massey Medals for Architecture Competition will be distributed to all members of the RAIC early this year.

The Massey Foundation and the executive of the RAIC have decided to discontinue the offer of a Gold Medal; twenty Silver Medals will be available for award.

The Competition will involve two judgements. At the preliminary one in June, 100 entries will be selected for inclusion in the 1964 Exhibition to be held at the National Gallery in Ottawa on November 5. At the final judgement in October the Medal winners will be selected.

Final date for receipts of entry forms and registration fees is May 15, 1964. The jury of selection will consist of Gordon S. Adamson, FRAIC, of the firm of Gordon S. Adamson and Associates, Toronto; Lawrence E. Anderson, AIA, head of the Department of Architecture, Massachusetts Institute of Technology, Boston; and Douglas Shadbolt, MRAIC, director of the School of Architecture, Nova Scotia Technical College, Halifax.

1964 HOUSING DESIGN AWARDS

Details of Housing Design Awards offered in 1964 by the Canadian Housing Design Council are available from the Council in Ottawa. Separate competitions are being held; one for detached single family houses, the other for all forms of multiple housing. Entries close September 12, 1964.

CCURR FELLOWSHIPS

The Canadian Council on Urban and Regional Research is offering three Fellowships to assist senior candidates who in 1964 are undertaking programs of studies related to urban and regional affairs. The value of each Fellowship will be $4,500 for a 12-month period of advanced work in this field, plus $1,500 to a candidate with children. Applications should be mailed before February 29, 1964 to: The Secretary, Canadian Council on Urban and Regional Research, Suite 308, 225 Metcalfe Street, Ottawa 4.

PLASTICS HORIZONS DESIGN COMPETITION

The Association of Canadian Industrial Designers, with the support of the National Design Council and the Society of the Plastics Industry (Canada) Incorporated has announced a professional design competition aimed at developing advanced product designs in plastics materials within six categories:

1. Camping and sporting equipment
2. Personal and public transportation
3. Business and professional furniture and equipment
4. Household and kitchen wares
5. Toys, games and Centennial souvenirs
6. Building components and systems

The competition is open to professional industrial designers, engineers, architects and technical personnel of the plastics industry. H. Gordon Hughes, Competitions Committee Chairman for the RAIC has ruled that architects are eligible to enter the contest without reference to RAIC competition regulations since it is regarded as scientific and artistic rather than architectural.

All contestants must signify their intention to enter the competition by Feb. 21, 1964. Closing date for entries is April 18. There will be a prize of $4,000 each for the first three best entries; $2,000 for second prize; and $1,000 for third prize. For entry forms and information write to: Plastics Horizons Competition, Association of Canadian Industrial Designers, Suite 1301, 55 York Street, Toronto 1.

POSITIONS WANTED

Graduate of Bombay School of Architecture (1958) recent Canadian immigrant, Associate Indian Institute of Architecture, five years experience in architectural offices in India and Sweden, seeks employment with Canadian office; preferably Toronto. K. D. Pendse, Box 117, Journal.

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NEW MEMBERS

The following were admitted as members of the Province of Quebec Association of Architects at a recent meeting of the registration board:

André Blais, architecte, 4752 ouest, boul. Gouin, Montréal; *Hubert Labelle,* architecte, 1805, rue Vanier, Duvernay, (Qué); *Michel Bigué,* architecte, 3630, rue Foucher, Trois-Rivières, (Qué); *Georges Lagacé,* architecte, 82, boul. Cartier, Rivière-du-Loup, (Qué); *Simon Cayouette,* architecte, 8305, rue Bernard, St-Hyacinthe, (Qué); *Claude Bisson,* architecte, 10,540, rue Laverdure, Montréal 12; *Germain Comeau,* architecte, 495b, rue Hériot, Drummondville, (Qué).

PUBLICATION SEEKS PROJECTS

The Latin American publication "Arquitectura Mexico" wishes to publish material on some of the better work of architects throughout the world. Wherever possible they would like to receive descriptions of the projects, plans and photos.

Anyone wishing to contribute to this publication should send material to: Arq. Enrique Langenscheidt O., Editorial Arquitectura, S.A., Rio Volga 77, Mexico 5, D.F.

COMING EVENTS

A three-day Building Science Seminar on Exterior Wall Design is to be held by the Division of Building Research, National Research Council, Ottawa, on February 12, 13 and 14, 1964. Advance registrations only will be accepted, and the fee is $10.00.

PRACTICE AVAILABLE

Architectural practice established in 1952 in growing central Ontario city is available for registered architect for moderate investment. Practice, which is well established with good contacts, currently has school, church and library projects. Anyone interested in details please write Box 116 for interview.

ANNOUNCEMENTS

The annual meetings of the AIBC, the PQAA and the AAA were held recently. The Institute was represented at all three by both the president and the executive director. Mr. Price attend the annual meeting of the MAA and subsequently visited the SAA in Saskatoon.

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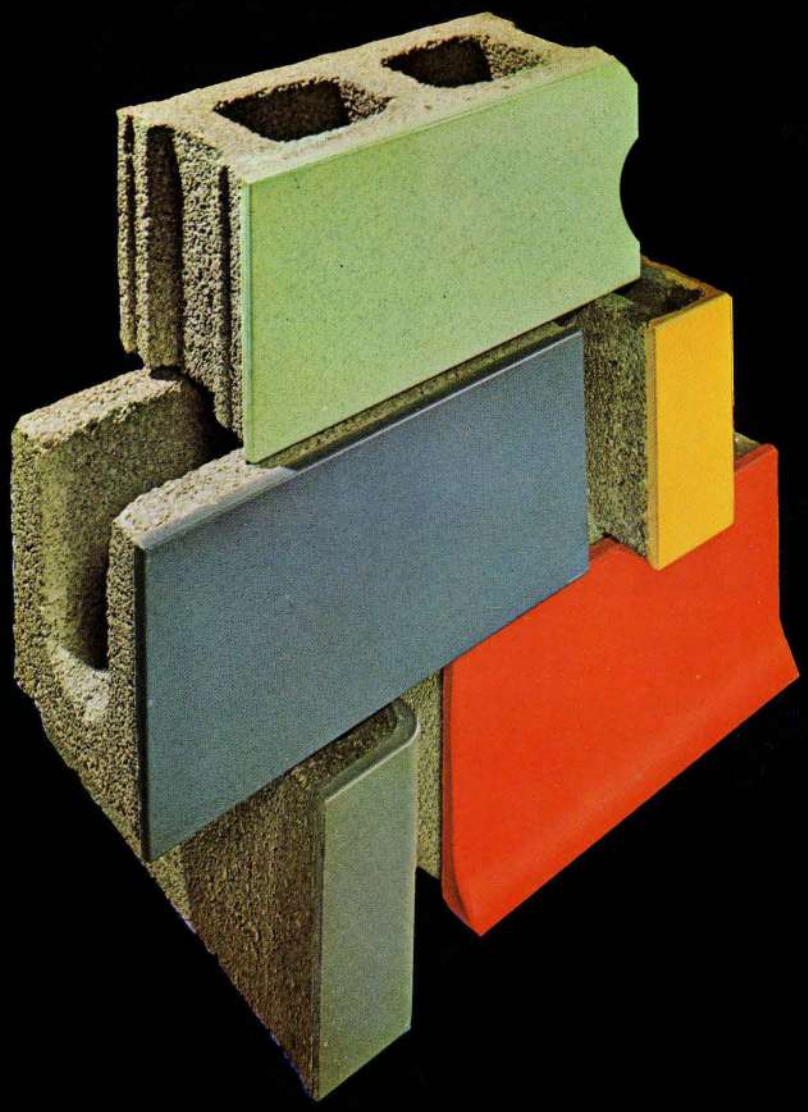

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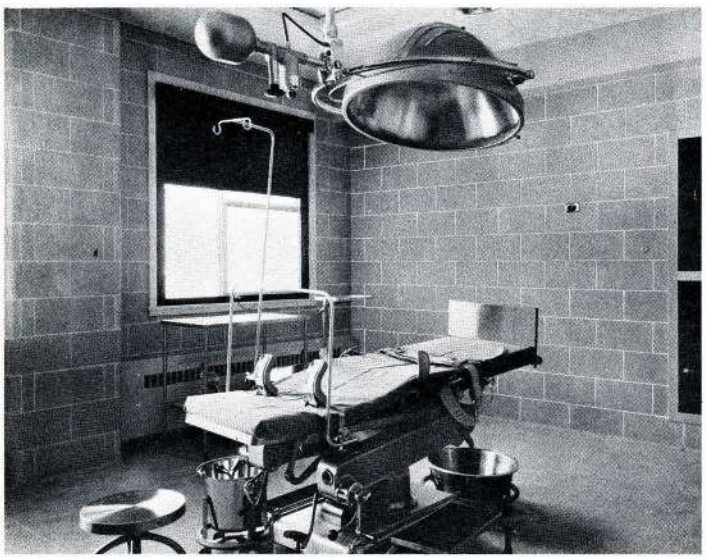

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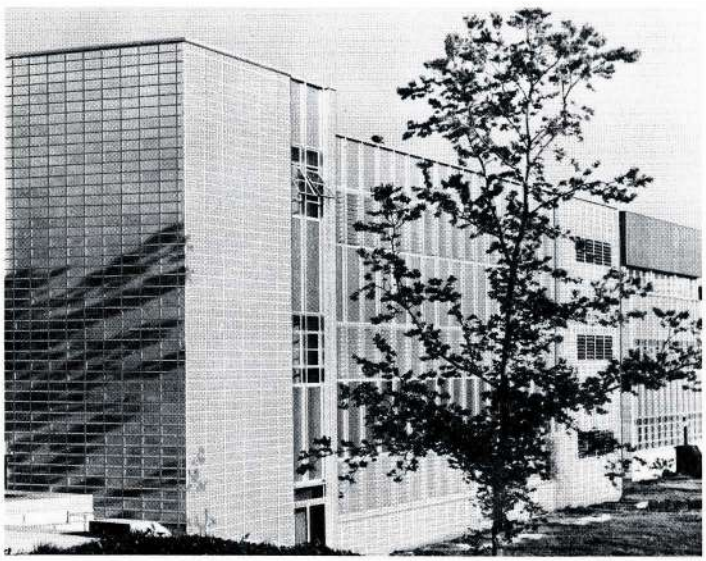

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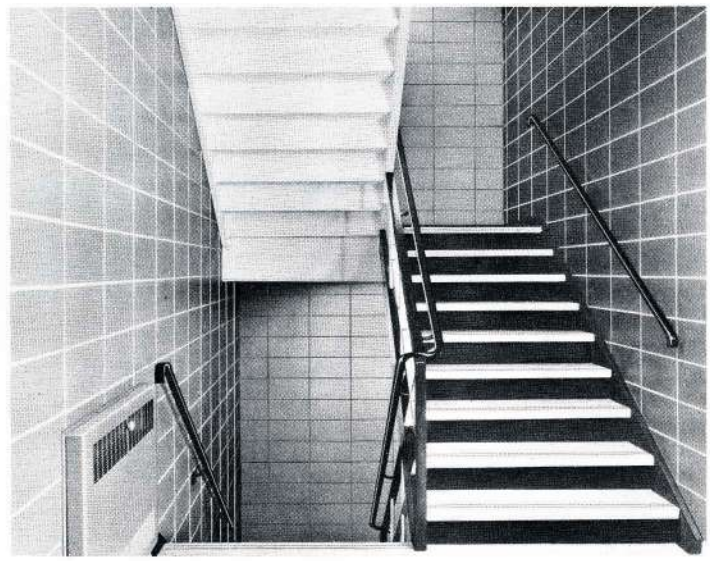

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The first Faculty of Architecture in Canada was established on Nov. 4 by the University of Manitoba with John A. Russell (*F*) as dean. The announcement was made by the board of governors of the university on the occasion of the 50th anniversary of the commencement of architectural education at the university.

Students who can qualify for the annual scholarships and maintenance grants offered by the Architects' Registration Council of the United Kingdom are reminded that the examinations will be held in England on April 1 and 2. Applications must be in by March 2. Details and application forms from RAIC headquarters.

NSAA ANNUAL MEETING

The Nova Scotia Association of Architects announces that it will hold its annual meeting on Friday, February 21, 1964 at the Lord Nelson Hotel, Halifax.

AIBC ANNUAL MEETING

The annual meeting of the Architectural Institute of British Columbia was held at the Empress Hotel, Dec. 6-7.

It is always difficult to report on the business of an annual meeting and to convey something of interest and importance in the affairs of our provincial association in a manner which will be meaningful to Journal readers across the country. If we were frank it must be admitted that much of the content of these meetings leaves one with a sense of frustration. Neither the substance of the meeting nor the attitude of most members toward it is very encouraging. And this apparent complacency is all the more bewildering when one contemplates the problems and challenges which confront the profession in a world that demonstrates every day a profound indifference toward the architect's services. Whatever the complexities of the matter — and they are numerous and perplexing — we are unlikely to be able to deal with them without the active concern and complete support of our entire membership.

R. W. Siddall, re-elected as President of the Architectural Institute of B.C. at this 44th annual general meeting, spoke of some of these problems and challenges in unmistakably convincing terms. The cynic among us may say he has heard it all before. Certainly many others in our profession, both in Canada and abroad, have sounded the same warnings and pointed to the same deficiencies. Elaborate investigations designed to uncover the flaws and prescribe the remedies have been conducted recently within the R.I.B.A. and the A.I.A. "Architecture in a Changing World" was the theme of Thomas Creighton's excellent address to the annual assembly of the R.A.I.C. in Hamilton last May. Most of us must be persuaded by now that the architectural profession must seek new patterns of organization, more efficient and effective

Council of the Architectural Institute of British Columbia. Front row, from left: Ron Nairne, Vancouver, vice-president; Bob Siddall, Victoria, president; Warnett Kennedy, Vancouver, executive director, Architectural Centre and AIBC. Councillors, back row, from left: Bob Harrison, Vancouver; Ray Toby, Vancouver; Professor Henry Elder, Vancouver, director of the UBC School of Architecture and provincial government appointee to the Council. Councillors not in picture are Bill Rhone, Vancouver and John Dayton, Vancouver.

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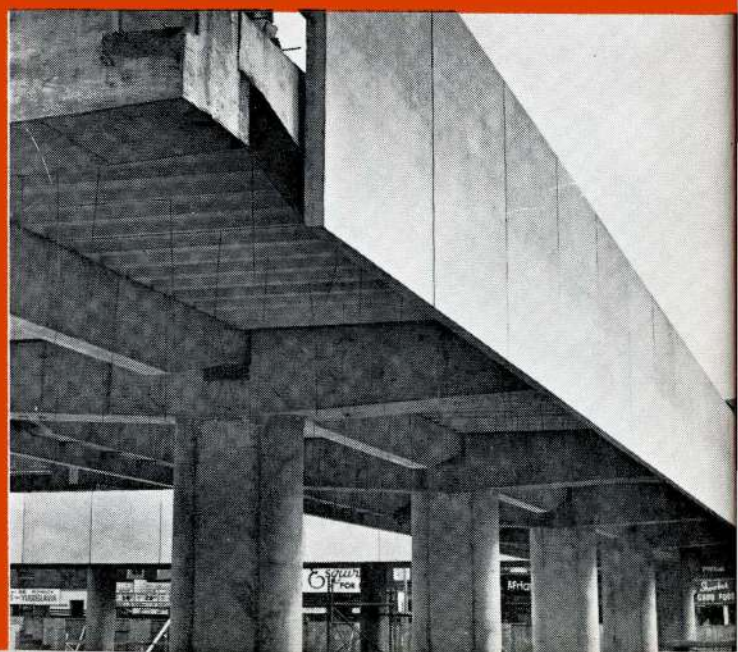

A. 11′ x 4′ MARBLE FACED PANELS

Split-faced marble pieces are set in rubber extrusion in form which holds marble in place during pour and prevents leakage of concrete between marble strips.

B. PANELS AS FORM

Panels being used as part of form for reinforced concrete bearing walls. Form ties bolted to rear of panel are encased in continuous vertical ribs of concrete. A slip-form between panel and poured concrete provides continuous vertical air-space. Temporary braces are used to hold panels during first stage of two stage pour.

C. PANEL ERECTION TECHNIQUE

Pre-aligned dowelling system enables precise placing of one panel on the one below, eliminates scaffolding, cuts costs and time, and increases safety factors.

D. NATHAN PHILLIPS SQUARE

Precast concrete capped stub columns carry 6′ 6″ square paving slabs on roof of existing and new parking garage. Open joints in paving permit drainage and access for maintenance and repairs.

E. ELEVATED WALKWAY

Walkway surrounding Nathan Phillips Square provides grandstand view for civic functions. Beams, deck and parapet panels are of precast concrete.

Architects: Viljo Revell—John B. Parkin Associates. General Contractor: Anglin-Norcross Ontario Limited

methods of operation if it is to continue to function in any significant way in the midst of vastly different demands of public and private enterprise.

The President's report was unquestionably the highlight of this recent general meeting of the A.I.B.C. It raised many of the old issues that have troubled us for a long time. Doubtless the same issues are debated wherever and whenever architects gather together. The new corporate client, the changing interests and objectives of clients, the competitiveness of the package dealer and other forms of integrated operation, the hazards of partial services, the inadequacies of a mandatory minimum fee schedule, the challenge of comprehensive architectural services (as advocated by Thomas Creighton), and the as yet unexploited opportunities of the low cost housing field, are a few of the circumstances which surround architectural practice today and which give rise to most of the soul-searching, the malpractices, and the public and private criticism which permeates the profession. In response to these issues Bob Siddall suggests: "We must drop the barriers which we have erected around our profession and and free ourselves to enter into adjacent and related activities without regard for he traditional professional independence which is becoming a restriction we cannot afford".

It seems increasingly evident that we cannot continue to cope with these difficulties on a piece-meal basis. In this same annual meeting the A.I.B.C. considered two proposed by-law changes (as it had done in two general meetings previous to this) both of which involve relaxation in the minimum fee schedule and both stem from the necessity of adjustment in the traditional mode of practice. Such changes generally reflect the realities of practice by simply legalizing the customary methods of practice of a large segment of our membership; hardly a satisfactory situation. Unfortunately, such adjustments are essentially short-term expediencies which are unlikely to provide a durable and satisfactory answer. What is clearly and urgently needed is a more searching examination of modes of practice to determine if present methods are in fact equal to the demands of today and of the foreseeable future. The fee schedule in any form must be only one of many factors in this situation.

The President's report further suggested "that we should eliminate virtually all our restrictions (including fee scales) and maintain our Institute for two prime purposes: (1) the absolute restriction of the use of the word architect and its derivations to registered members of the Institute, with abuse of this privilege in any form whatsoever energetically resisted, and, (2) the maintenance of the highest possible standards of competence including the dissemination of up-to-date technological data and educational program. Success in this phase must of course be accompanied by the rights of re-examination and expulsion from the Institute". These are far-reaching and challenging proposals and ought to stimulate much serious self-appraisal within the profession. The matter of competence itself raises a series of vital questions which must be answered if we are to preserve our leadership among those involved in the control of the physical environment; a position which is steadily being eroded by others more skilled and persuasive than the architect has been. We need to clearly define what we mean by competence and above all we must possess the authority to ensure a uniformly high standard within the profession.

There is much to think about and there are no easy answers. Neither abandonment of the laboriously achieved codes of conduct which we possess nor rigid adherence to outmoded practices will solve the problem. Circumstances will not allow continued delays and diversions. It is therefore hoped that the Council of the A.I.B.C., in response to the challenge so forcefully presented by our President, will immediately initiate whatever form of action seems appropriate toward determining the nature of the problems which confront us and to defining the lines of action which may be most effective in dealing with these problems. Since the annual meeting in 1964 represents the 50th anniversary of the A.I.B.C. there could be no more appropriate time for the full membership of this association to consider these issues and be prepared a year hence to ratify changes designed to rejuvenate our profession.

Hopefully also this search for a new definition of practice for the future will not end here but will inspire other members in other provinces who share the same dissatisfaction with the present state of the profession to inaugurate the same kind of enquiries. Clearly these ailments of the profession are not confined to only one association but are common to all. Inevitably the R.A.I.C. must be the focus and perhaps the prime-mover in any changes which will be permanently significant. *C. A. Tiers*

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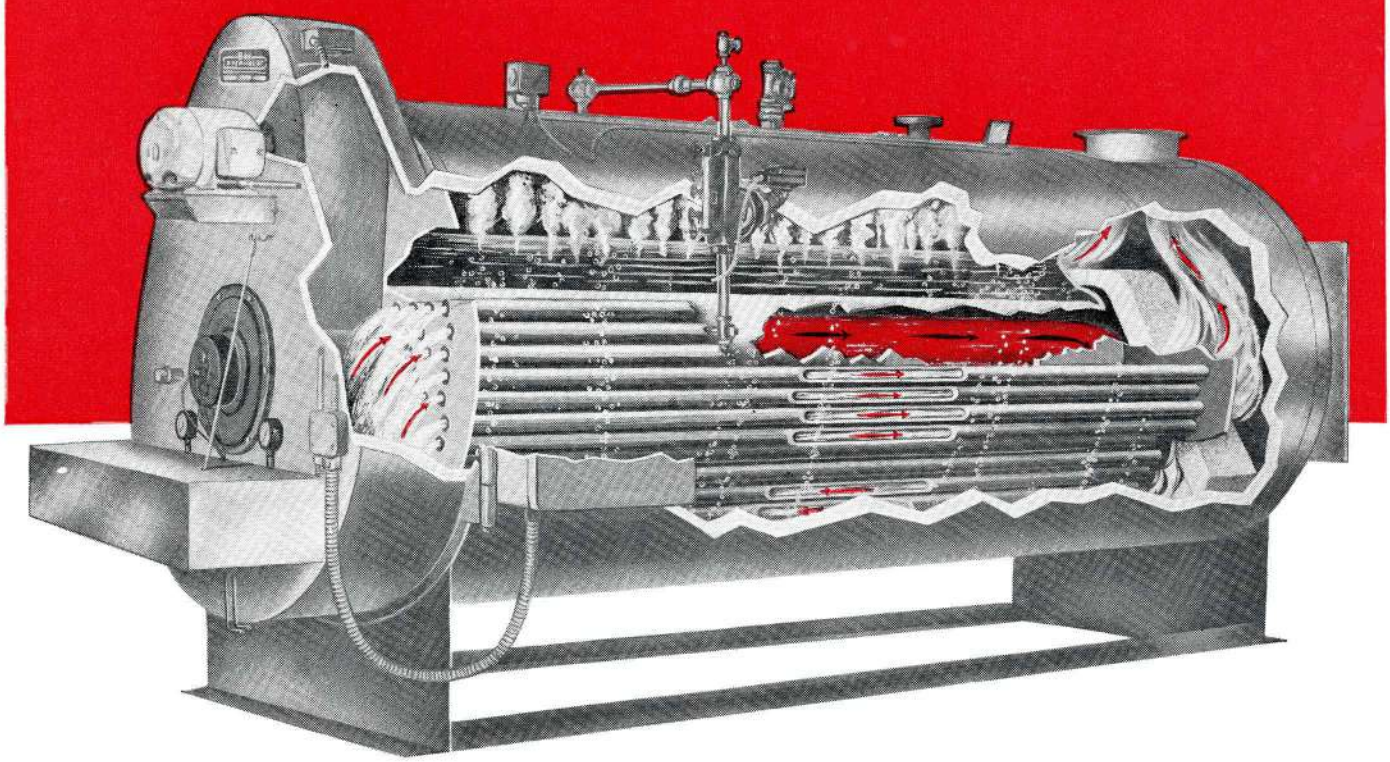

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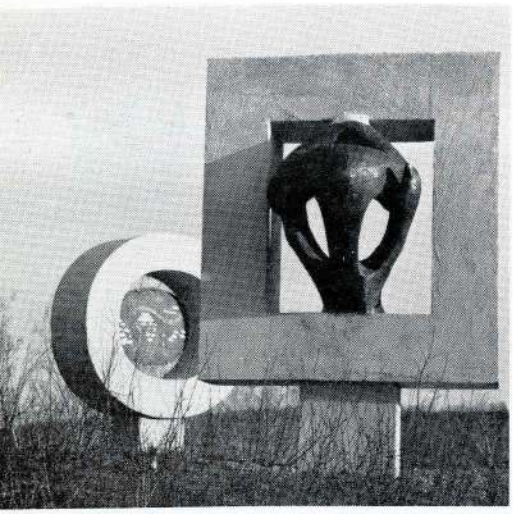
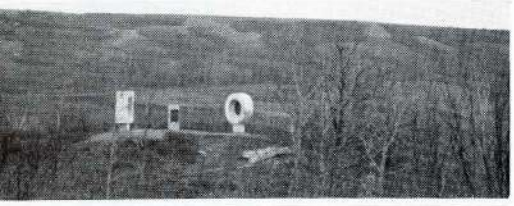
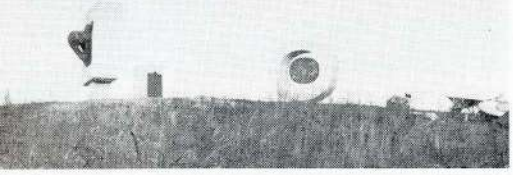
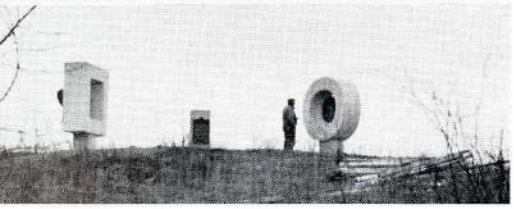
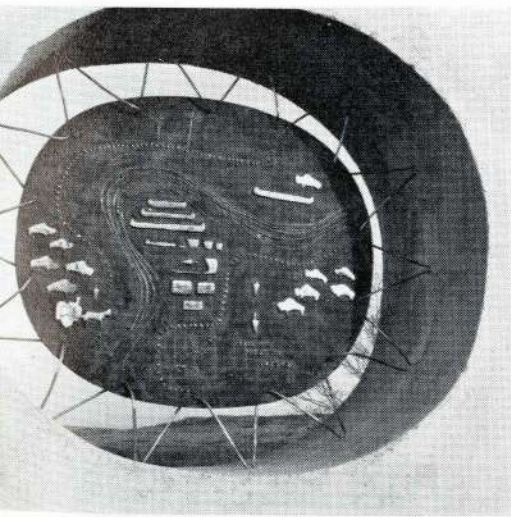






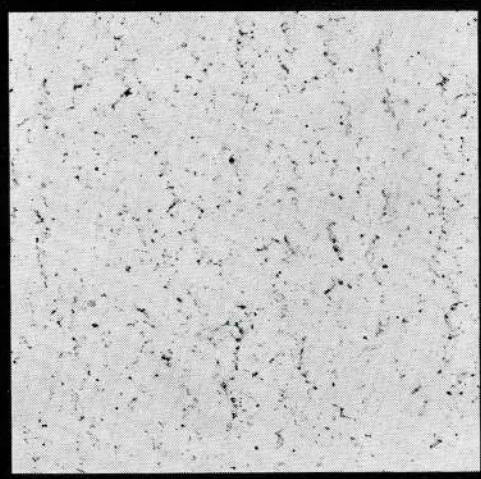




Features

FORT ESPERANCE MEMORIAL

The memorial is near Welby, Saskatchewan and commemorates an entrepôt of the North West Company built in 1785. There are many familiar manners of marking such sites; a pile of stones, a log cabin (usually imported), a standard plaque conveniently swinging by the closest highway. Here, a sculptor, John Nugent, was commissioned to create a commemorative work on the actual site. Not only have the requirements of the problem been satisfied, but Mr. Nugent has caught something of the essence of hope; his work sits on the landscape in nobility and repose with the ageless quality of a Henry Moore figure on a Scottish moor. With this feeling the sculpture was conceived; these forms amongst the wheat and scrub of the land, leaving those with an enquiring mind to beat a path through. And when enlightened minds can encourage work like this, surely it is not necessary to inflict the post with a standard plaque of precast ugliness. Perhaps the simplest solution is to take the money saved by omitting the usual asphalt footpaths, stone pad and parapet walls and to fix simple bronze lettering in a manner suitable to such a work of art. *NH*



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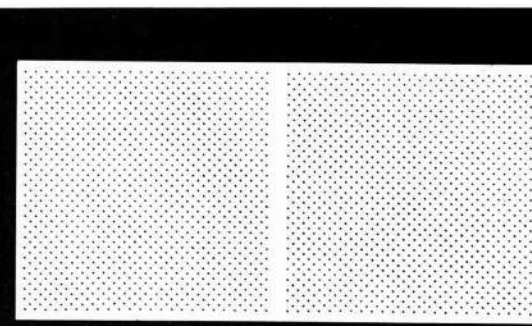
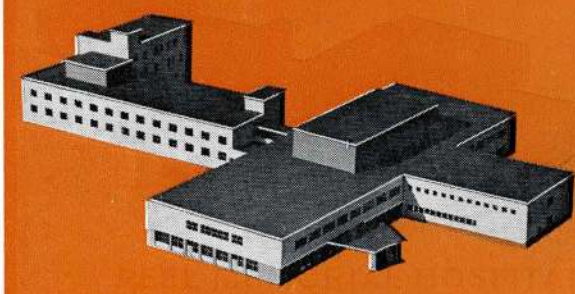
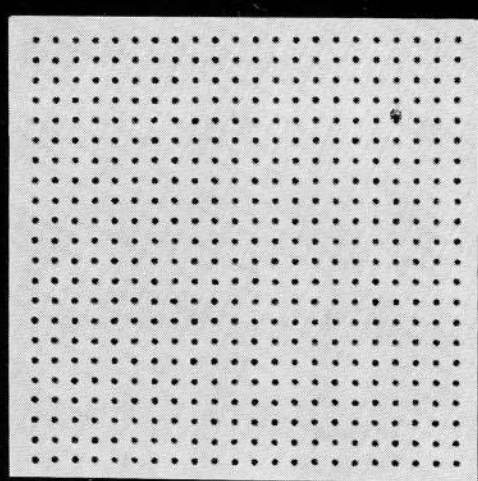




PEEL MEMORIAL HOSPITAL
BRAMPTON, ONTARIO

Architects:
Govan, Ferguson, Lindsay, Kaminker, Langley, Keenleyside.



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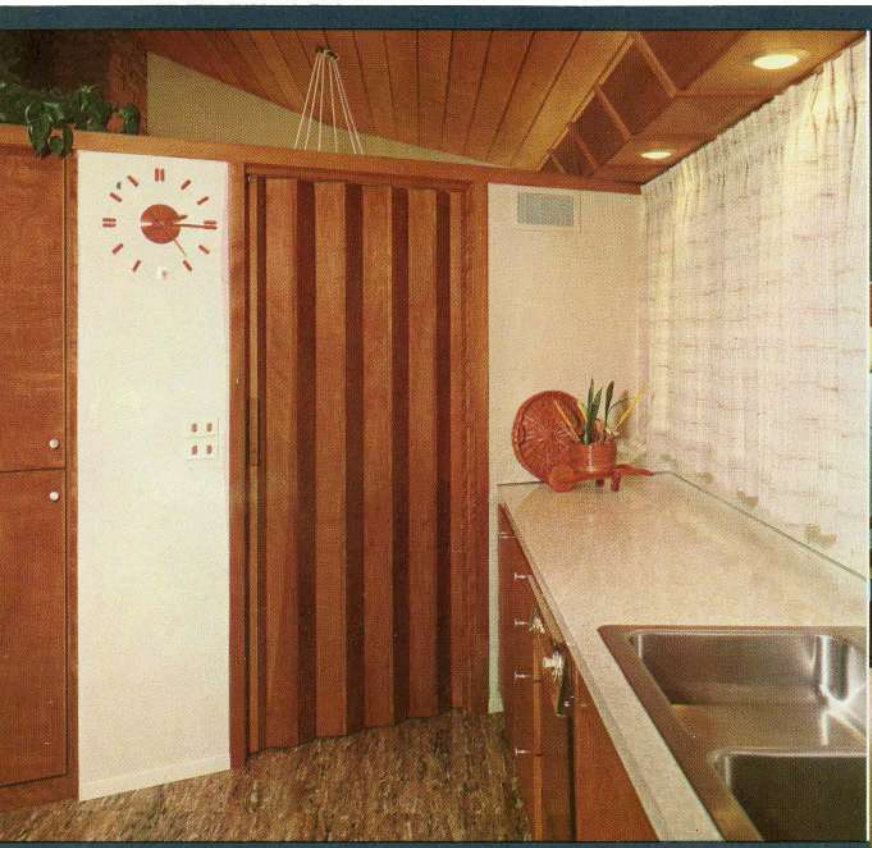
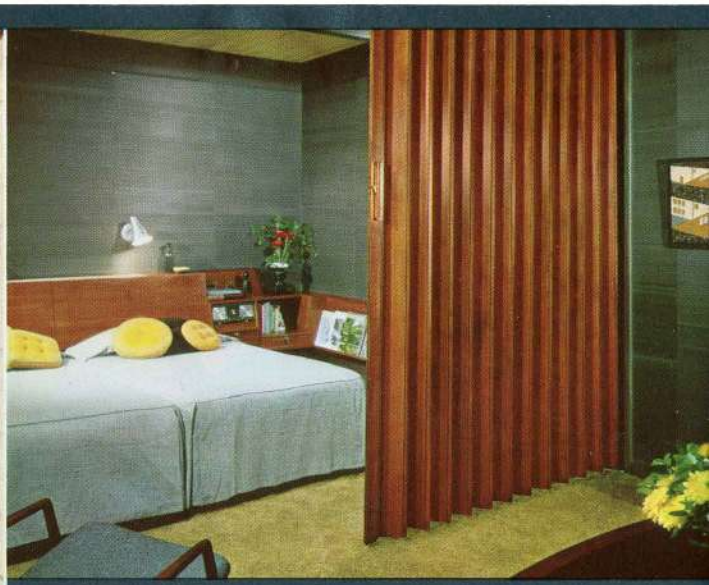
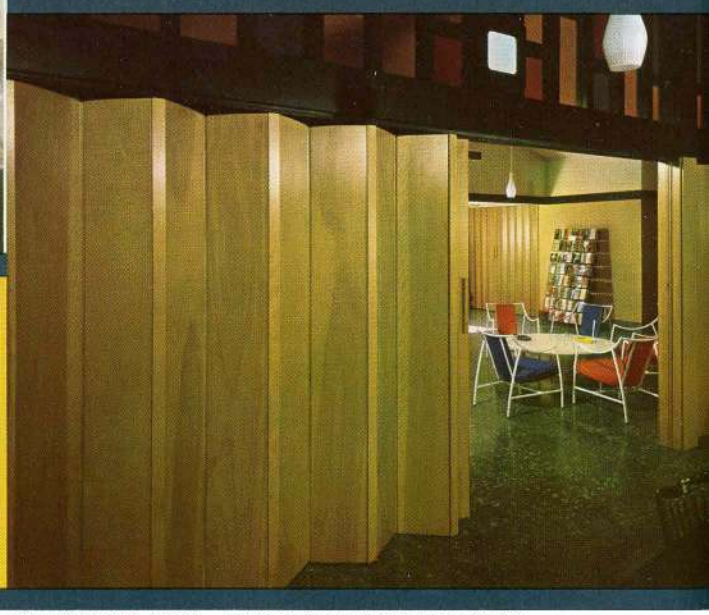


ARCHITECT: *MILTON SCHWARTZ* DECORATOR: *MARION HEUER*





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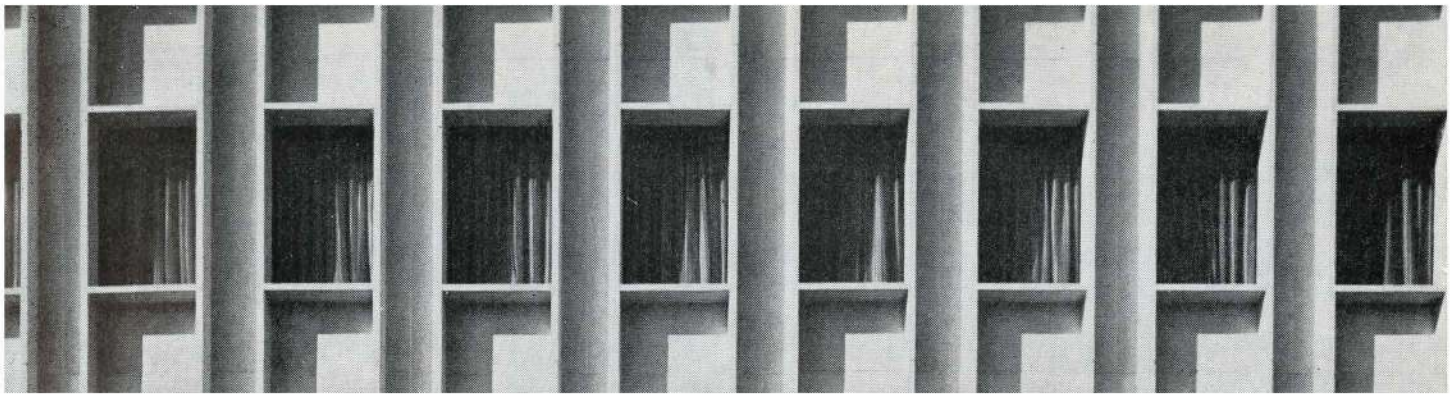

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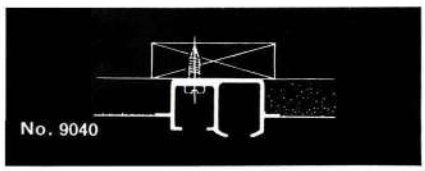
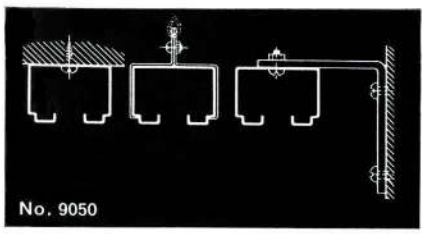
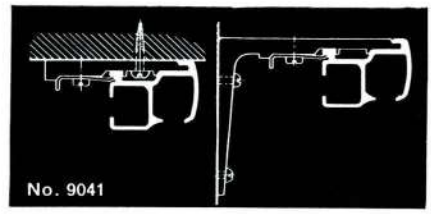


Recessed Plaster or Acoustical Tile Installation: No. 9040—A true recess track with its own plaster ground. Pre-drilled for direct mounting. Eliminates expensive sub-channels. Full ¼″ of track below head minimizes light leak.



Ceiling, Overhead or Wall Installation: No. 9050—For heavy draperies, tall or wide windows and medium-weight stage curtains, 9050 conceals moving parts and cord. Can be spliced to span 50-ft. openings, cord operated.



Ceiling or Wall Installation: No. 9041—Designed to present a handsome face, 9041 Architrac doesn't need recessing. Mounts directly to ceiling, or on wall, with concealed extruded aluminum brackets.

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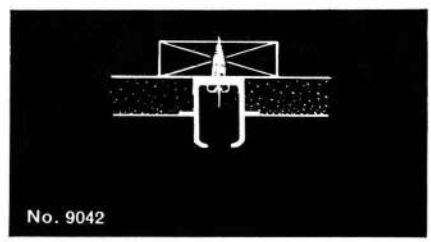
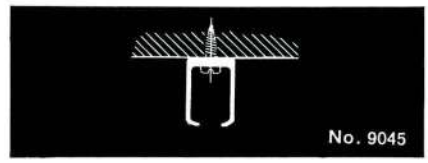
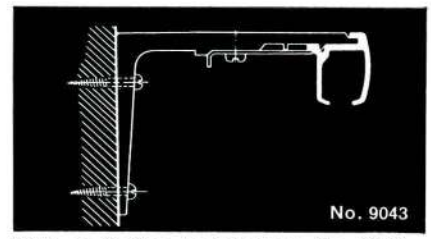


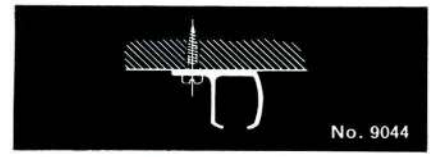
Recessed Plaster or Acoustical Tile Installation: No. 9042—A recess track with its own plaster ground 9042 needs no subchannel. Mounts directly through predrilled holes; can be curved.



Ceiling or Doorway Installation: No. 9045—Perforated 8″ O.C. for direct mounting, 9045 can be curved to a minimum radius of 12″.



Wall or Casing Installation: No. 9043—Aluminum bracketed, mounting on wall or mullion, 9043 Architrac presents a handsome fascia unbroken by supports; can be curved.



Ceiling Installation: No. 9044—With its pre-drilled flange at back, 9044 mounts to ceiling quickly, easily. Cannot be curved.

Ceiling Installation: No. 9046—Basically a hospital cubicle track, 9046 is pre-drilled for direct mounting; can be curved. Also used for windows in low budget institutional or commercial projects, with nylon slides.

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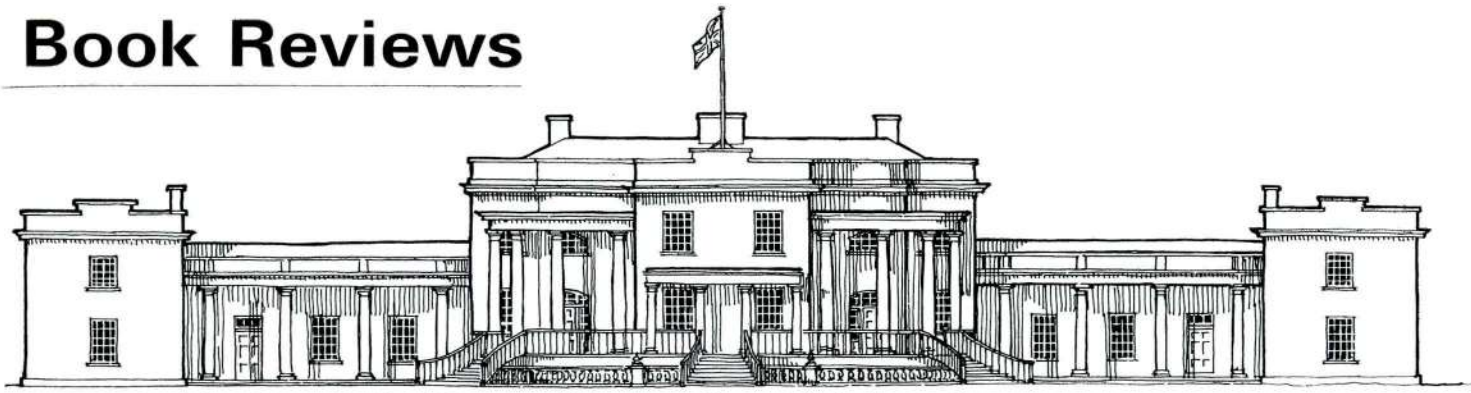
Book Reviews



One hundred and sixty-eight running feet of domestic ambition, Summerhill was built in Kingston in 1838 by Archdeacon George Okill Stuart, who lived in it for a year. The parliament of the United Canadas sat in it briefly, after which, shorn of its porticoes, it became a part of Queen's University.

THE ANCESTRAL ROOF by Marion Macrae and Anthony Adamson. Clarke Irwin & Co., Toronto, 1963. 258 pages. $10.00.

This is a book that we have long waited for, and, in the words of the song "I'm glad I waited . . .". It is a great book, and will, likely, never be done again. The houses are fast disappearing and no more intelligent team could be collected than Marion Macrae, Anthony Adamson and Page Toles. The imaginative reader will see more in the pages than painstaking research, the writing and rewriting, the culling of photographs and the painful rejection of many to meet the economic demands of the publisher. How many dusty miles were covered in pursuit of the buildings illustrated? It would probably run into thousands and would include more fruitless trips than profitable ones.

But still, it is a rewarding game as this book proves on every page, and the finding of some unlikely Holy Grail like the Ladies College at Whitby must more than make up for the disappointments. As an old hand at this sort of thing, I wonder how many rebuffs the team received; how often they were treated as tax collectors, or bailiffs or nosey untrustworthy reporters from the local newspapers? That had been my experience, but then, I did not come fortified by Marion Macrae's charm of manner and irresistible Glengarry accent, or Tony Adamson's merry wit and a black and shiny Lincoln car. Before this group, the most hardened occupant of the most vernacular Regency house would feel it an honour to have her home included in the collection, even if in the end, she was an also ran.

I am quite prepared to take the authors' word that Miss Macrae wrote the text except for the first and last chapters, but I know my Adamson, and I can see him looking over her shoulder and asking if he could not slip in a sentence here and there. Readers will ponder over the scene in which the Rev. Agar Adamson berates the dying Lord Sydenham with the reading of a psalm which left no doubt in the mind of the victim what he might suffer for "all the misdeeds" of which he was so "flagrantly guilty". It was not something we would like to have witnessed especially when one was aware that his Lordship was listening helplessly in the last stages of lockjaw. Miss Macrae describes it as a "touching scene"!

I had always considered a tendency to wild Irish exaggeration among Mr. Adamson's more lovable traits, but on page 75 I find he has infected his co-author. "The horizontal bulk of the Pinhey home partakes of the pre-Cambrian massiveness of the Gatineau hills in a manner to rejoice equally the spirits of the Regency Man of Taste, the builders of Ancient Egypt and the shade of Frank Lloyd Wright." Happily, Mr. Pinhey's house is not one with Ninevah and Tyre, and as one, hesitantly, turns the page, he finds a semi-detached two storey house sitting modestly on the banks of the Ottawa. The suspense was worth it.

The drawings in the back of the book are of immense value, and of infinite variety. Of one, I would write with less conviction than Mr. Adamson, and that is of the Barnum house at Grafton. I am sure that the room in the west wing was an office and not a bedroom, but it is the second floor that is more open to argument. When we furnished the house some years ago, we took the front room to be a bedroom and not as Mr. Adamson has it, a drawing room.

We did so with a four poster that could have side curtains, not only because there had to be a main bedroom somewhere, but we were influenced by Mr. Verschoyle Blake, if I remember, who referred us to Dr. Johnson's journey through the Highlands when he and Boswell were frequently entertained in living rooms that doubled as bedrooms.

The only possible explanation for the north bedroom is that it was occupied by one or two maids in whose care were the two children in cubicles described as bedrooms on the plan. They are about 50 sq. feet in area. Further proof of use is the former stair in one corner of the bedroom which led to the back door and safety in case of fire. It is not shown.

Mr. Adamson invites readers to "fill in the gaps and correct the errors". I take him at his word in a few that do nothing to detract from the book. The date of Maryville Lodge is 1794 and not 1802, nor was Chewett the architect. In the latter year, he signed some plans as Asst. Surveyor General for some reason connected with the sale of the house.

William Thomas did not design the Model School — the architects were Cumberland and Ridout, and it was William Langton, the architect who edited "Early Days in Upper Canada" — not John Langton. Castle Frank did not disappear in the "expansion of the city", but at the hands of salmon fishermen, who burned it, perhaps accidentally, in 1829.

It is quite true that "Whitehern" remains in the McQuesten family, but it cannot be too often repeated that the Rev. Calvin and his two sisters gave the property to the City of Hamilton — a truly magnificent gift which will be maintained forever by the Parks Department.

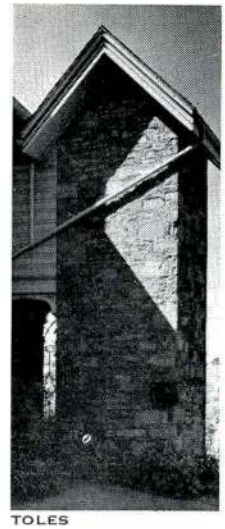
No one must regret more than the authors, the houses that do not appear in this book. The choice has, quite properly, been to include types, and I find only one omission and that would be the Haultain house at Peterborough. By far the best octagonal house in Ontario is the "Birdcage" built for a Mr. Bird near Brampton; a fascinating conceit that might have warranted a sketch. If it is true that the Beehive at Bobcaygeon "served its immemorial function of dining room", there are many readers who would have liked to look it up in the blue pages of plans

Those are only personal preferences about which neither the authors nor many readers would necessarily agree, but I am surprised at the absence of quite attractive houses that were built of 16" birch logs with their ends tarred — all laid in mortar. Delightful examples exist near Ottawa, and Penetanguishene had several including a superb barn, once measured by Mr. James Murray.

My only real criticism of this excellent book is for the attention of the publisher. I would criticize the length of the line which does not make for easy reading, and the extreme glossiness of the paper caused me to twice change my seat so great was the glare. Layouts like that on page 182 are quite unworthy of the book; and the trimming of the Cawthra mantel (page 133) and the window (page 83) are unforgiveable.

Apart from that, the general appearance of the book calls for the highest praise, and the separation of the text from Mr. Adamson's sketches on blue paper adds to the enjoyment of the reader. The jacket drawings by W. Roberts are superb. I recommend it, without reservation to all architects and their friends.

Eric Arthur



TOLES

The unique feature of Rock Castle, Hamilton, was its free-standing two-storey privy. An open bridge once connected it to the house at the second - storey level.

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ATLAS STEELS

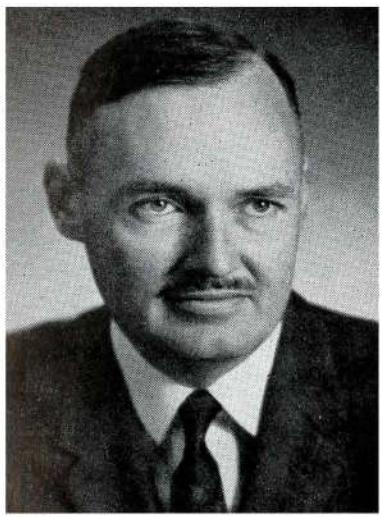
Stainless, Tool and Alloy Steelmakers

This is the first article in a new department of the Journal dealing with management practices in the architect's office. It is produced by James W. Vair in collaboration with John Spence and Ben Kaminker. Comments and suggestions for the column will be welcomed.

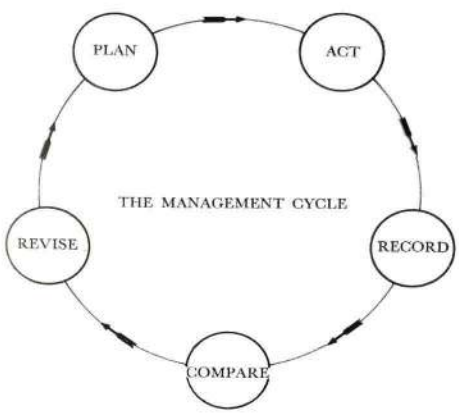
Management Practices

Records

by James Vair



James W. Vair is a vice-president of The Thorne Group Ltd, Management Consultants. His particular specialties are cost accounting, budgetary controls, and management information systems. Born in Galt, Ont., he served overseas with the RCAF in World War II. He later enrolled at the University of Toronto, graduating in Commerce in 1948. Mr. Vair is a member of the Institute of Chartered Accountants of Ontario, the Data Processing Management Association, and the Society of Industrial and Cost Accountants of Ontario, of which he is a director, Toronto Chapter. He is a frequent contributor to The Canadian Chartered Accountant and other journals.



Why does a professional firm need records?

Too often record keeping in general and accounting in particular are regarded as necessary evils (to satisfy the requirements of the income tax authorities or other governmental bodies) rather than as aids to the development of a successful and profitable practice. The fact is, good accounting helps in planning virtually every facet of a business, and this is the real justification for its existence: to help the partners or management of a firm to do a significantly better job than may be done without it.

Most of us encounter such a multitude of forms and records in our daily life that we frequently forget what a record is and what it is supposed to do. Any discussion of this important subject, then, must begin with some definitions.

In precise terms, a record is any paper, book, photograph, file, microfilm, map, drawing, chart, card or other document, including any copy thereof. It may be used as an order (to direct someone to do something), or as an advice (to inform someone about something), the latter being sometimes for immediate use and sometimes for future reference. In this and the next article in the series, however, we are concerned primarily with what are commonly termed "business papers" and "books of account". Business papers comprise invoices, cheques, deposit slips, bills (accounts rendered), time reports, etc., while books of account represent journals or listings of the financial transactions of a firm, including an important summary record, the General Ledger, which gathers together all such transactions in accordance with a plan or classification of accounts. One hesitates to use the term "books" any longer in connection with the accounting records of a business, for new data-processing methods and equipment have so altered our concepts of what constitutes a satisfactory record that the old expression is no longer an accurate description in many cases. But as we are interested mainly in the purpose and usefulness of accounting at this stage, the question of whether or not to employ mechanical bookkeeping or data-processing equipment may be left for later consideration.

As an introduction to the objectives of an accounting system for a firm of architects, it is helpful to review the function of accounting in general terms. This is perhaps best illustrated by the role it plays in the "Management Cycle". Briefly, the "Management Cycle" operates in this manner: management makes plans, acts upon these plans, and records the results of the action; comparisons of actual results are then made with the original plans, and if changes are clearly warranted, the plans are revised in the light of the knowledge gained from the "Compare" step. Or, as sometimes happens, actual results so closely approach the planned results that no action is necessary, and operations are said to be "under control". The significant point to note here is that accounting supplies the information on which policy and administrative decisions are based. Unless we record what has happened, we cannot make a logical comparison with previous plans, and evaluate the appropriate steps required to correct any undesirable deviations.

The role played by accounting in the "Management Cycle" is a relatively new concept. That is to say, accounting was often regarded in the past as some sort of esoteric ritual performed by shriveled old men with quill pens and green eyeshades — an unproductive activity most of the time, but faintly useful once a year when the annual Balance Sheet and Profit and Loss statements were prepared. Gradually, with the increase in government controls over business as a result of the imposition of corporation and individual income taxes, more stringent stock exchange listing requirements, and later, welfare measures such as unemployment insurance, medical and hospital insurance plans, and so forth, the accounting department assumed greater importance, although its main emphasis was still on the recording function. Finally, accounting began to play a more dynamic role, and today it is helping management plan and control operations in most businesses by participating in the "Plan", "Compare", and "Revise" steps, as well as the traditional "Record" step. In practical terms, this means that the accounting function participates in planning by furnishing standards, budgets, or forecasts which translate management plans into dollars and cents. It continues to record as in the past, but managers are now kept much better informed by means of timely and useful reports. The same reports, if they are designed to be of optimum value, will also contain comparisons with the original plans or forecasts, a summary of the deviations therefrom, and an explanation in simple terms of the direct causes of

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the deviations. The final step — "Revise" — is, of course, a matter for management decision but, here again, accounting no longer plays the passive role that was accepted as its proper function in the past. If the preceding steps have been accurately and skillfully performed, the quality of the information produced will make the subsequent decision almost completely automatic. This is simply another way of stating the maxim — when you have gathered all the relevant facts about a problem, the problem is 90% solved.

So much for the role of accounting in general, but how does this relate to an architectural firm? The answer is to be found in the objectives of the accounting or record-keeping system for the firm — namely, to provide:

(1) Accurate information with respect to the cost of a building or project for audit by the client (if required by the terms of the contract) and calculation of the architect's fee under the usual type of contract based on a percentage of the construction cost.

(2) A historical record of work performed; time and cost of the personnel involved; and other statistical data for use on similar projects that may arise in the future or for comparison with the estimated (budgeted) fees and cost on the project.

(3) Information necessary for control purposes when the cost of a project grows excessive in relation to the fee exigible.

(4) General financial data customarily required by any business for control and reporting purposes, and to permit the preparation of periodic and meaningful financial statements.

From the foregoing, it is evident that fairly detailed records are required with respect to each project undertaken. This involves keeping a Project or Job Cost Ledger, as it is commonly termed, and the operation of this important record will be the main topic of the second article in this series.

Another important subsidiary record, the accumulated total cost of each project from the standpoint of the owner or client (No. 1 above), usually takes the form of copies of the contractor's claims for payment, as verified by the architect, together with a copy or copies of the architect's certificates to the owner, rather than a formal book or ledger.

The accounts in the General Ledger provide control totals with respect to the direct costs chargeable to projects. The distinction between "direct expenses" and "general and administrative expenses" (the latter being more frequently described as "overhead") is best illustrated by an example of the financial statement form commonly used by architectural firms.

STATEMENT OF INCOME
Year Ended December 31, 19...

	ACTUAL	BUDGET
PROFESSIONAL FEES (gross)	$	$
DIRECT EXPENSES:		
Fees of engineers and consultants		
Salaries		
Other direct expenses (travelling, supplies, blueprints, etc.)	$	$
ADMINISTRATIVE and GENERAL EXPENSES:		
Office salaries		
Payroll burden (fringe benefits)		
Stationery and office supplies		
Postage		
Telephone and telegraph		
Exchange and bank charges		
Professional services (legal, audit or consultants' fees)		
Travelling (not chargeable to a project)		
Competition expenses		
Membership dues and subscriptions		
Donations		
Rent		
Insurance		
Local taxes		
Depreciation, furniture and equipment	$	$
NET INCOME FOR YEAR	$	$

If the firm operates specialized departments such as (for example) interior decorating, contract furniture and fittings, site selection, layout, and so forth, the fees and direct expenses in connection therewith should be provided for in the firm's plan of accounts so that departmental operating statements may be prepared showing the margin or profit contribution for each specialized service.

SUMMARY

The role of accounting in a professional firm is basically the same as in any other type of enterprise concerned with realizing a profit from its activities. Certain features of an architectural practice, however, make the problem of cost control more difficult than in other professions, and the demands for information unique in certain respects. Thus, the fact that the fee from a project is, in most cases, largely determined in advance often leads to a fatalistic attitude towards costs which is not conducive to efficiency. Again, the belief is widely held that as long as everybody is kept busy in the drafting room, there is no need to worry about profits. Where these attitudes exist, they indicate that a firm is not getting much "mileage" out of its accounting system, and the time has arrived for you — the partners and managers — to ask yourselves, 'what exactly are the information needs of the firm?' Knowing this, it becomes possible to tailor the records and reports to these specific needs; and further, to determine the most economical means of producing the desired information, whether by manual or machine methods.

For example, overhead can be tightly controlled by a budget in the same manner as is done in a commercial firm, while timely reports on the status of projects-in-process enable corrective action to be taken in most cases before an unfavourable trend becomes a large loss. Finally, it should be noted that even the firm's revenue from commissions secured does not 'just happen'; it must be planned for in the same manner as all other facets of the practice. In this area as well, then, the maintenance of satisfactory records often means the difference between the organized approach which brings success, and the haphazard effort that permits alert competitors to grow while your practice lags behind.

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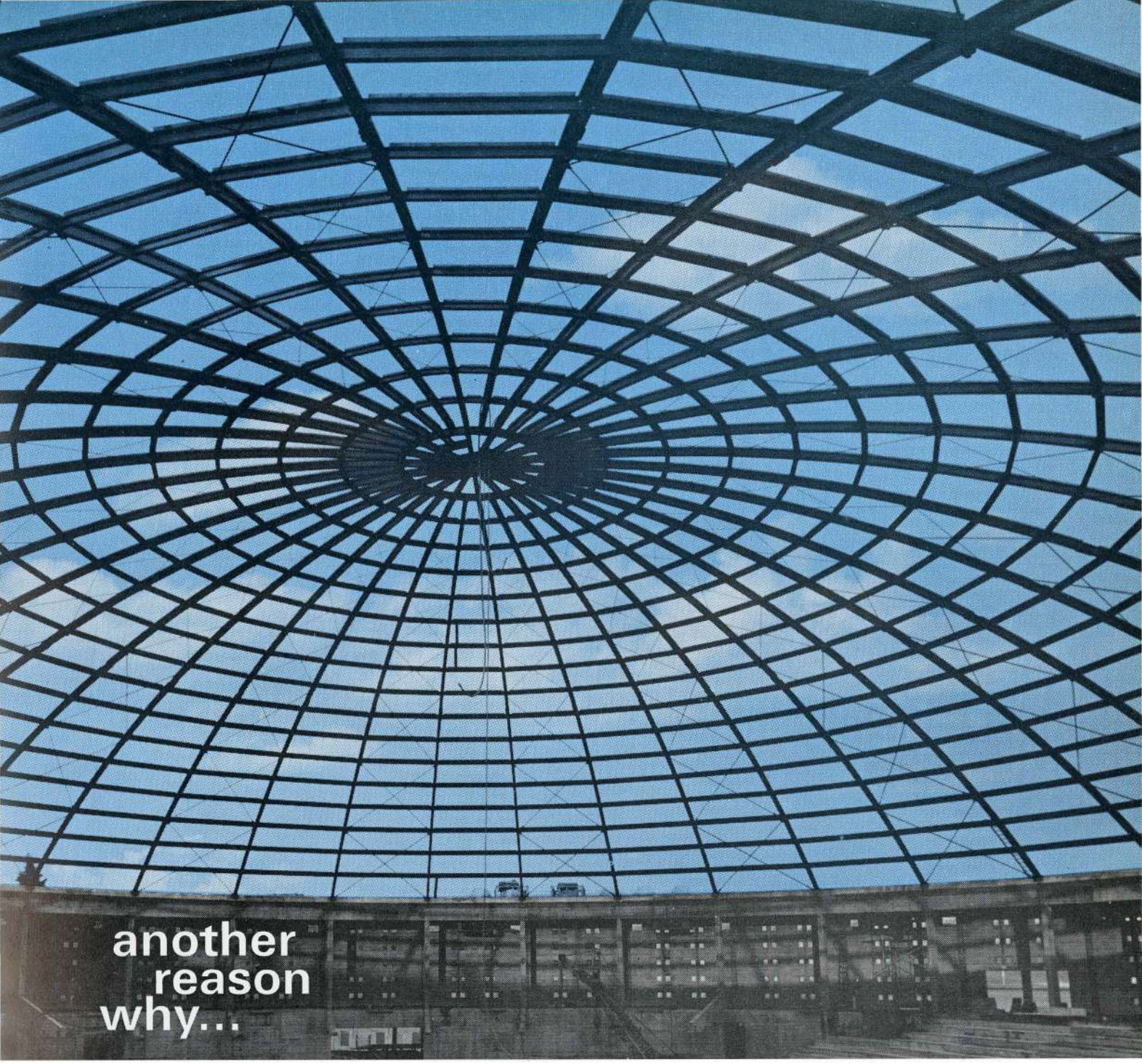

Structural steel designers and fabricators: Western Bridge Division of Canada Iron Foundries, Ltd./Architect: Wm. K. Noppe/Engineers: Phillips, Barratt & Partners

It always pays to THINK STEEL first

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Standard Canadian Bid Depository

by E. L. Mahoney

Mr. Mahoney is a member of the executive staff of the Canadian Construction Association.

In 1959 a group of enthusiasts, supporters of the bid depository movement, set out to establish a basic set of rules that would codify depository procedure. Although depositories had been in operation since 1954, these enthusiasts could not reconcile many diverse regional viewpoints and their attempt at standardization was abandoned for the time being.

In the meantime the number of bid depositories increased and so did the number of variations in the regulations. This situation caused a number of problems, especially for contractors bidding jobs in other centres under different bid depository rules to those they were accustomed to using. Needless to say the variety of existing regulations was also confusing to additional areas or trades who wished to set up a depository.

Very often these centres would review a score of existing regulations and in their attempt to choose the best possible rules, they would amalgamate several sets into one document which, more often than not, contained contradictory clauses.

The next move toward standardization was made in late 1960 with representatives of bid depositories from Dawson Creek to the Lakehead drawing up a codified system. Although never operative, this set of regulations was to form the basis of the Canadian Construction Association's work in standardizing bid depository regulations for use on federal government construction projects.

Although the use of bid depository on federal work was encouraged on a voluntary basis, a standardized system was laid down as the criterion necessary before formal specification of bid depository could be made by the contracting departments of the federal government.

A full-scale field survey was launched in July of 1962. Interviews with bid depository operating committees were conducted from coast to coast and their comments on the draft standard carefully noted. Local operating procedures were also studied with a view to eliminating possible weaknesses in the standard document. After many months of compromise and revision a document entitled, "Standard Canadian Bid Depository Principles and Procedures for Federal Projects" was agreed upon by all 36 CCA affiliates operating depositories in Canada for use on federal government work. In addition, over half of the depositories are adopting the "Standard" as their own regulations.

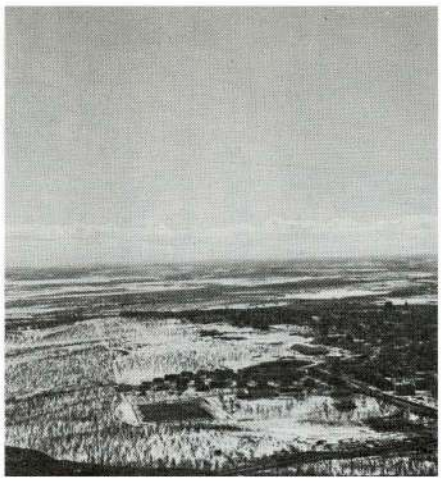
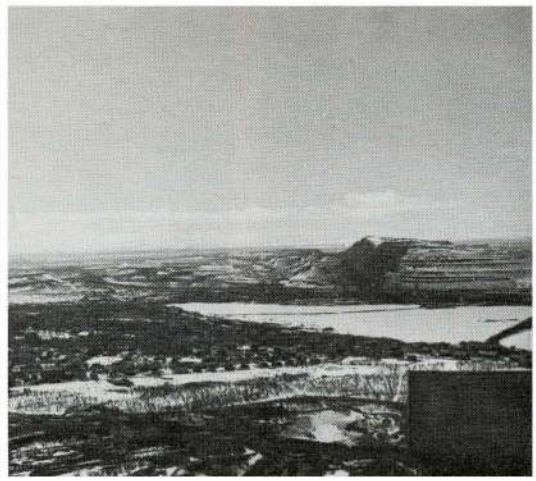
The "Standard" reflects the CCA philosophy that a bid depository should not be anything other than a mechanism whereby the timing of bids is regulated and a means is made available, if required, to establish after the event the nature of the tenders submitted. Therefore, to state it simply, the "Standard Canadian Bid Depository" is a mechanism rather than a judge and jury. Being national in scope, its clauses are simple and concise and without "judicial machinery" to hinder the free flow of tenders between trade and general contractors.

In fact, the CCA has seriously endeavoured to return bid depository to its originally intended purpose of providing sanctity of bidding to trade contractors, such as is enjoyed by general contractors through the medium of public tender openings or lists of tender amounts furnished on private works.

Beginning early in 1964 the construction industry can look forward to the Federal Department of Public Works formally specifying bid depository on its building construction projects valued in excess of $25,000. It is anticipated that once the Department has used the system satisfactorily other Federal contracting agencies will follow their lead after the Treasury Board's Advisory Contracts Committee establishes a national policy.

On other government levels, over half of the Provincial Departments of Public Works and most of the major municipalities and other public bodies specify the use of bid depositories for projects located in areas serviced by them. Such action on privately-financed projects is also very widespread.

Copies of the "Canadian Standard" may be obtained in English or French from the Canadian Construction Association, 151 O'Connor St., Ottawa 4.


Two Lectures by Ralph Erskine

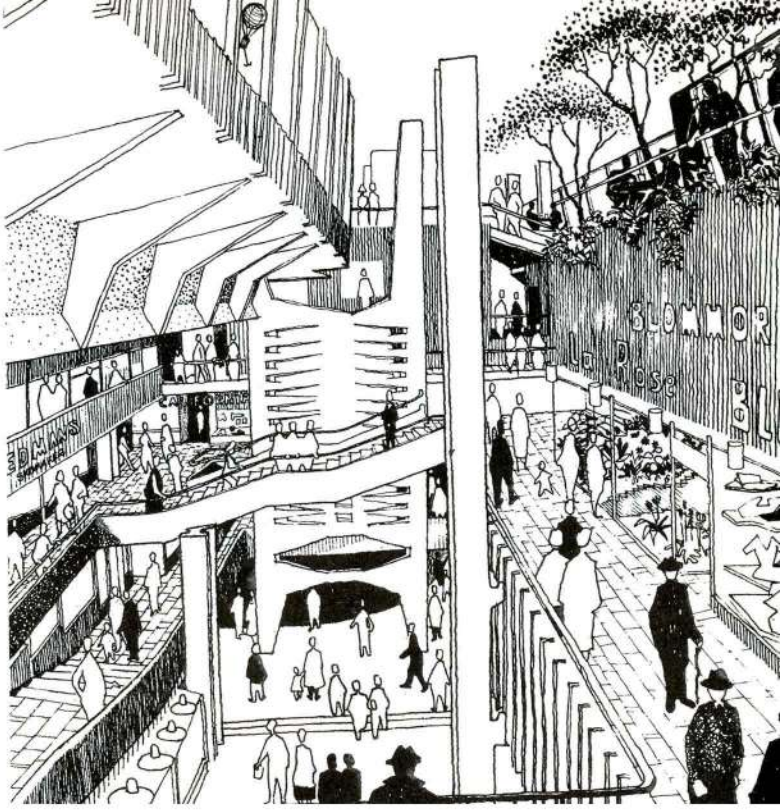
Ralph Erskine was born and educated in England. He is an Associate of the Royal Institute of British Architects and an Associate Member of the Town Planning Institute. He has worked in Sweden since 1939 and today has an established practice in Drottningholm. Mr. Erskine has done considerable research on the architectural problems associated with building in sub-arctic regions. In this connection he has lectured in Holland, Japan, the Scandinavian countries, Poland, Switzerland and Canada.

In February 1963 the Manitoba Association of Architects held a two day symposium at the University of Manitoba on "Architecture for the Canadian Prairies". The key speaker was Ralph Erskine, ARIBA, AMPTI, an architect noted for his outstanding architectural and planning work in Northern Sweden. The following are shortened versions of two major addresses delivered by Mr. Erskine during the symposium.
Considerable editing of the original lectures was necessary to make them suitable for publication. Dean J. A. Russell, profs. C. de Forest and R. Zuk all of the University of Manitoba were commissioned to do this work by the Central Mortgage and Housing Corporation.

The Challenge of the High Latitudes

I am not an expert on architecture for northern regions because I don't think there can be such a thing as an architect-expert at all. What I have to say therefore is based on experience accumulated in working in a northern situation over a relatively long period of time. The conclusions I have arrived at were mainly formulated as a guide for my own practice, and are therefore not necessarily the right ones for someone else to use. However, it is very important, I feel, that we in Scandinavia, you here in Canada, and the people who live in Alaska, Siberia and Russia get together and exchange research findings and experiences.

Architecture is whole and indivisible. The climate and technical aspects of the north must always be evaluated against the background of the human situation. The predominant interest can only be the people — in my particular case the people who live in the high latitudes: the arctic, the sub-arctic and the high and desolate mountain regions. This part of the world, although it has been inhabited since historical times, has hardly been studied at all.



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As an architect, one sooner or later realizes that all one has learned, all one has grown up with, and all one has seen in central and southern Europe somehow does not fit the northern situation. One may be tempted to ignore the specific characteristics of this region altogether, thereby avoiding a lot of problems, but in doing so one is not facing reality. The practice of true architecture — the architecture of reality — requires that we face the problems squarely.

The first impulse that led me to start thinking about climate was the fact that upon close analysis, many buildings did not seem to meet the requirements of the northern latitudes. When dealing with a specific situation, such as this one, part of one's interest becomes scientific in nature, namely to find the extreme situation, *i.e.* the test tube condition in which the stresses are so great that they become easily measurable, and apply the results to areas where conditions are not as severe. The achievements in Sweden are largely of a technical nature and have been made by technicians, real technicians, not amateur technicians such as we architects are. They have solved the heating and insulation problems. These however, are merely technical solutions.

In Sweden, primary industries which are expanding rapidly in the north have great difficulty in both attracting and retaining necessary personnel for a sufficiently long period to utilize fully their specialized knowledge, and to establish communities of a permanent and balanced character. In our expanding economy we can no longer rely solely on the arctic enthusiast or the native people. It is very difficult to run a modern industry efficiently with people who are constantly on the move. Stable communities are an absolute necessity.

While many men may, for a time, enjoy the high pay, quick advancement, extensive responsibilities and the open-air life which the north offers, and while children show no great difficulty in acclimatizing themselves to the snow and the cold, many other men and most women miss the contact with relatives and the amenities of more southern towns — the shops, entertainment, the well-developed school system, etc. The frontier offers few advantages for women, who are often as lonely as golf widows. Sooner or later these women reject the insufficiency and the claustrophobia of the frontier community and draw their husband and families out.

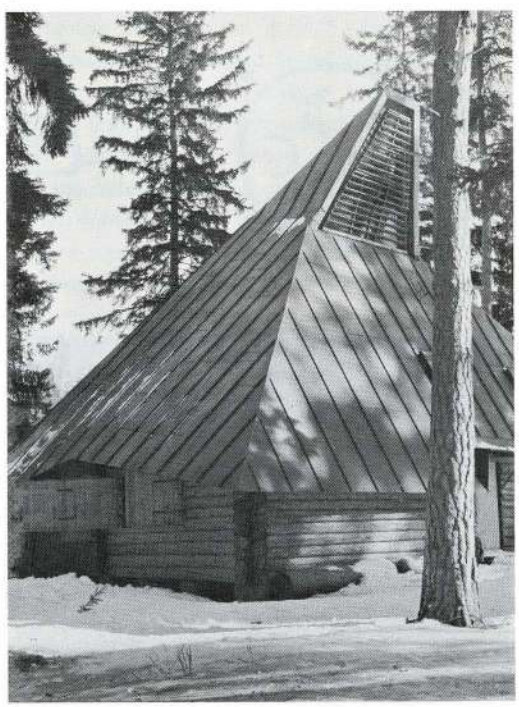
To find the melody of the sub-arctic life, which will provide the amenities as well as the emotional and spiritual satisfaction within the specific conditions of this region, is the only way to avoid the nostalgic longing which adds to the natural stresses created by the climate and the isolation. In Sweden this melancholy is known as Lapp-illness. It is not an illness which is felt by the Lapps, but a mental state, which, especially in the old days before radio and television, was very prevalent and led to alcoholism, insanity and suicide.

An international group of doctors engaged in a detailed study of the north found, among other things, that there is nothing unnatural or harmful about life in very cold regions. People can live well; they don't even require special food, other than heavy food if they are doing heavy work. What they need most of all is sufficient clothing. The doctors established (contrary to traditional belief) that viruses and bacteria are not killed by the cold. The northerner is therefore susceptible to all the diseases of the southerner, as illustrated by the Eskimo, who, when he came into contact with

2

1 Lulea shopping (community) centre, north Sweden (see pages 40-41).
2 **Potato hill** with cultivation on south slope (climate does not allow for cultivation in the valleys — people and potatoes thrive in similar situations).
3 Scout cabin near Stockholm.

3



the white man, contracted all his diseases. It was found too that the typical mental illnesses of the north, which lead to alcoholism, suicide and murder, are caused, to a large extent, by the environment. It is clear therefore, that this question of environment must concern not only the sociologists and the engineers, but the architect-planners as well.

I propose to start by defining the arctic, and especially the sub-arctic situation; then to show what the aim of the designer in the north should be, and finally to explain the synthesis resulting from the careful analysis of the sub-arctic problems with which I myself have been concerned over the past ten to fifteen years.

I think we all agree that, in architecture, our main interest must be the people, and since architecture can be said to be the art of forming a framework for human associations, we are especially interested in groups of people. These groups may range in size from a couple without children to very large communities.

The Lapp represents much of the wisdom which we must learn if we want to know what the north really is. He, or the Eskimo, know far more about it, or did know, until we broke down their culture. He is much better adapted to life in the northern regions than most Europeans can ever hope to be. The trappers and prospectors who penetrated the north in recent times assimilated certain habits of the native people but relied mainly on the traditions of their southern homelands. As a result they failed to create a truly indigenous culture.

In the landscape itself it is apparent that we are not dealing with a political or ethnic region, but with a region which is defined in terms of climate, terrain or vegetation. All too often we think of the northern regions as being the continually cold part of the world. This is only partially true, in fact there is tremendous contrast between the very cold, relatively dark winters, and the relatively warm, bright summers. This great difference between summer and winter is one of the most important characteristics of the north.

The climate is not as violent as people usually imagine. As soon as the Baltic Sea and the lakes freeze over, there is little daily variation in the overall seasonal temperature, except in certain coastal areas where the sea does not freeze up. At the arctic circle the temperature ranges from a summer high of 85°F to a winter low of about minus 60°F. There is little wind, and the precipitation is low. If the climate were warmer, and if the water could drain away, the tundra would be a desert. And of course, the further north you go above the arctic circle, the longer become the periods of total darkness and total sunshine.

The sub-arctic zone is part of the polar region and stretches from the polar sea southward, well past the tree line. It consists mainly of the flat, bleak, treeless tundra, held frozen during nine months of the year by ground frost. In the south it changes into the coniferous forest of the cold temperate zone. In May, the ground begins to thaw and plants start their short summer of flowering and growth. Clouds of insects fill the air and numberless birds move up from the south. The tundra becomes a landscape of lakes and ponds, each one formed by the snow water of many seasons, unable to drain away due to the frozen ground underneath. In the forest regions limited cultivation is possible. By September the days are shortening rapidly and the frost again takes control.

The snow does not always follow immediately and there may be a long and dark autumn before the sterile cold period sets in. These characteristics of the environment impart to the region an everchanging beauty and govern human life completely.

In winter, all human activities, except the most necessary, take place indoors. One leaves the shelter only for work or for outdoor recreation. In the spring one can move into outdoor areas, provided they are well protected from the wind. The sun can be relatively warm, but the air is cold and the slightest air movement causes discomfort. In the short summer, the people desert their winter dwellings and the towns and move out into the country to enjoy the beautiful landscape which surrounds them. In the fall one is again forced back into the protected outdoor spaces, and in winter into the interior of the shelter.

The Scandinavian people definitely change character between summer and winter. In Stockholm, on the first day of spring after the long, dark, cold winter, when the sun begins warming your skin, you can see hundreds of people sitting on the steps of the Stockholm Concert Hall, their faces turned toward the sun. This is true sun worship and is based on a very real experience.

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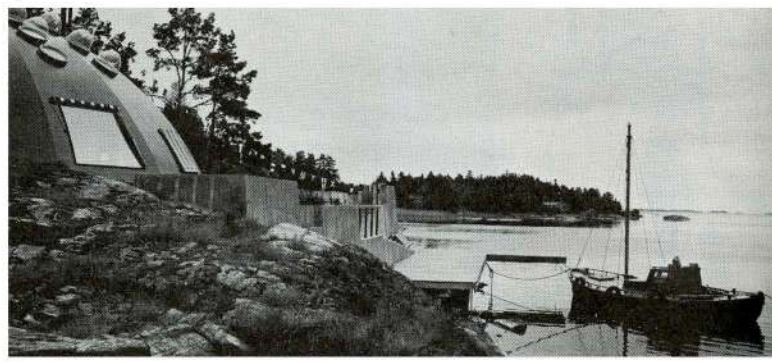

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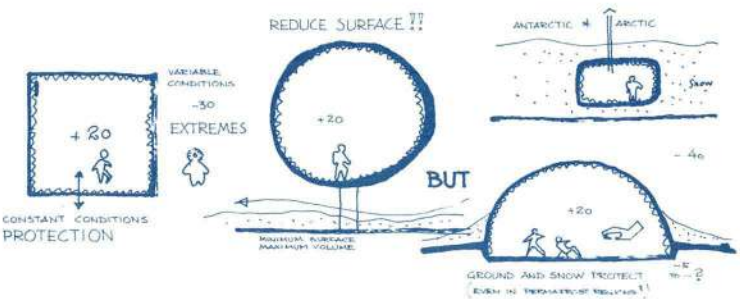

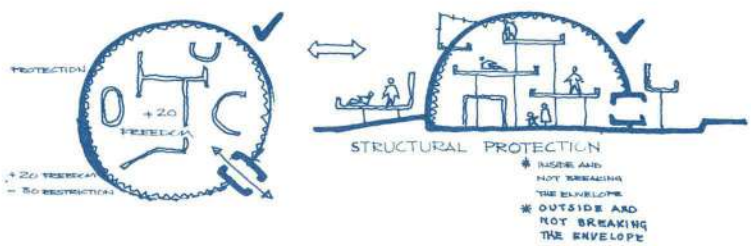

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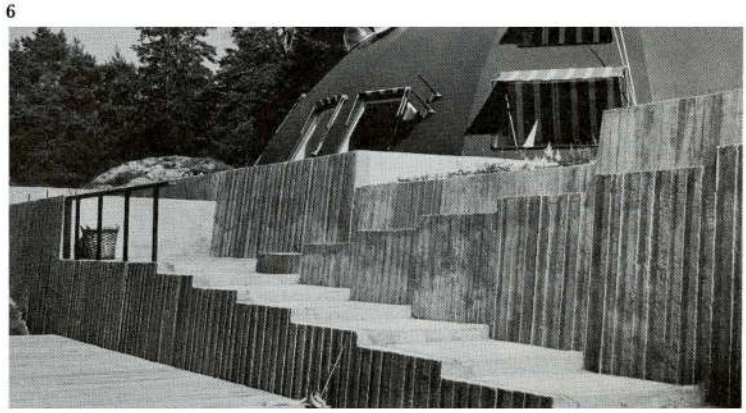

4-9 Villa Engström near Stockholm, a study in 'subarctic' architecture. The design is based on the seasonal 'rythmn' of life in the north — the completely protected winter cell, the surrounding semi-protected spaces for spring and fall and beyond this a free summer life with nature.

It becomes obvious that the different aspects of the situation which affect human beings will affect the buildings and the towns which we are called upon to design for them. The first and foremost of these factors is the temperature differential between the interior and exterior of a building. It may fluctuate as much as 100°F. This cannot be ignored or treated lightly. Any physicist will tell you that the most efficient shelter should have a central heating core and that a maximum volume should be enclosed by a minimum surface. The economist will tell you the same thing because, in our cold climate, the outer walls of a building are much more expensive than the inner partitions. The problems of the skin of the shelter therefore are of tremendous importance.

A sphere would obviously be the geometric form to enclose the maximum volume with the minimum surface; but it would be unreasonable to use it as a building form, since it has minimum contact with the ground warmth. Although the air temperature varies enormously between summer and winter the ground temperature in Sweden usually remains a constant 7° above freezing, except at the surface where frost occurs. With a snow cover however, the frost will not penetrate the ground very deeply. It seems logical, then, to use the ground as a means of insulation, unless you happen to live in Greenland or somewhere else where the ground is frozen solid to a greath depth.

A highly articulated building form is therefore much less appropriate than a compact one. The engineers, scientists and economists somehow knew this instinctively and told me so all along. I became quite frustrated by their statements until I finally began to understand the logic of physics.

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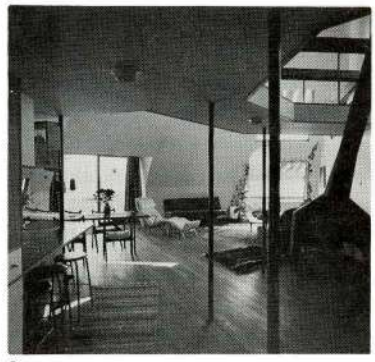

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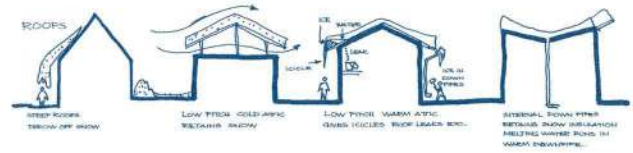
This house which we designed for an engineer who is intensely interested both in technology and in art, is an essay based on the scientific analysis of the climactic determinants. I was talking to this man one day about the matter of enclosure and he became extremely interested. As a result we built this very unusual shelter, a half dome sunk into the ground for protection. The windows have to be a certain distance above ground level so that the snow will not drift over them in the winter. In front of the house there is a protected terrace (which we call the spring and autumn room) where the sun comes in, but where you are protected from air movement. The real pleasure of spring and early summer is experienced when you can open the door and leave it open. You step outside and look at the water and the green slopes; you sit in this spring room or any other place where you can find protection from even the slightest wind. As the summer advances you move to the more and more exposed terraces until you finally leave in your boat for the islands. In winter you skate and ski on the slopes surrounding the house.

Inside the shell there is great freedom in the arrangement of spaces. The number and sizes of windows were restricted for technical, financial and aesthetic reasons. I believe that large window openings are not essential because during the winter the snow is an admirable reflector, and in the summer there is almost continuous sunlight. In locating the windows I tried to provide a maximum variety of views, since during the long winter, most of the time is spent indoors.

Insofar as the entrance to the house is concerned, I feel that in our motorized society the entrance for the car should perhaps be more important than that for the pedestrians. Logically you should be able to drive your car right into your building. You should not have to put on heavy clothes to get from your house to your car. (This I had to do everywhere in Winnipeg and when the wind blew I felt quite uncomfortable.)

Prefabrication is now generally accepted as the most appropriate construction technique in Sweden. Our client-engineer owned a factory that produced cranes and other structural steel equipment. The skin of the house was fabricated in his factory in flat sections. A small crane was mounted on the chimney core, and the panels were lifted into place, bent and then welded together to form this simple shelter. One of the important factors involved in the design of this house is the concept of the skin with relatively small openings. In a way it is a negation of everything that modern architecture stands for today. The tendency, in the western world has been to break down the traditional barriers between exterior and interior and create a continuity of space from the inside to the outside.

Snow has always been used for protection and insulation in northern countries. Vegetation seeks protection under the snow. The Russians, for instance, have developed apple trees which grow horizontally, close to the ground and are thus protected by the snow cover in winter. Some birds and mammals, such as bears, dig themselves into the snow.



This snow factor we consciously exploited in the design of a hotel for a small township in the north of Sweden. We had the choice of building a nice little glass tower, showing how clever we were (or rather how clever our heating engineers were in keeping us warm in spite of the most difficult conditions); or of building a structure that would live with the climate and the surroundings, take full advantage of the insulating qualities of snow, and be less dependent on mechanical services. I was very tempted at first to use the former approach, but then decided against it. For one thing, the client did not have much money, and though it might have been technically and economically feasible to build a glass tower, it would have been out of place. I felt it would be better to conform to the character of the region, to build into the ground and to let the snow help insulate the building.

The large roof has two functions: to protect the building and to act as a practice ski slope, which is something the client wanted us to provide near the hotel, since the good ski slopes are a little distance away. I also attempted to use snow sculpturally, by inducing it to drift at specific points. In certain places the snow will drift right onto the roof; elsewhere little slopes will form where children may play. I have to confess, however, that scientifically speaking, a few more centimeters of rockwool in the roof would have provided just as good, if not better, insulation than the snow cover.

The building is built of wood both because of its economy and its appropriateness in this climate. It is painted in extremely bright colors, with emphasis on the warm hues, to provide the desirable intense color experience in this

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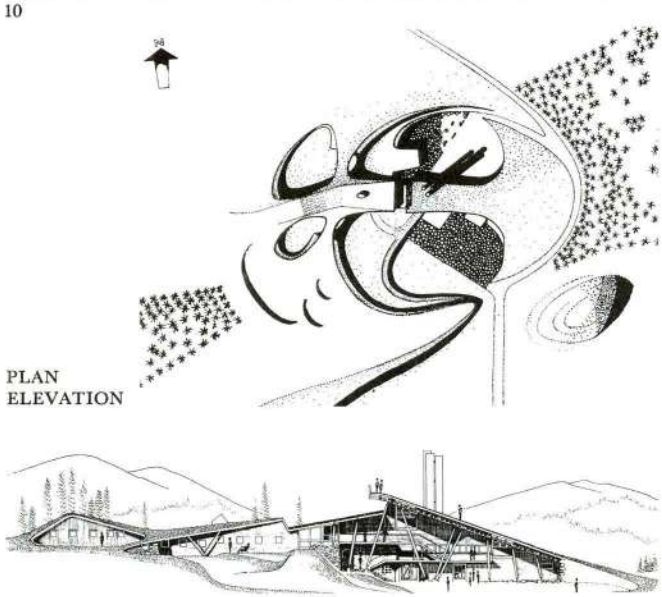


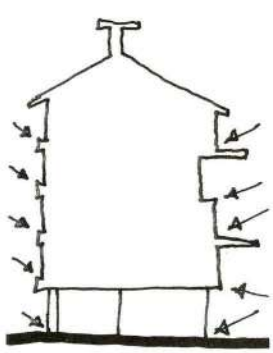
10 Ski and fishing hotel at Borgä, northern Sweden.
11 Co-operative flats at Växjö, south central Sweden (extreme climate).
12 Co-operative flats at Kiruna, north of Polar Circle — a multi-purpose block with shops, churches and garages.
13 Varying functions grouped together for mutual protection.

generally white and grey region. Also, we felt that this hotel was not a big and serious building; rather a wooden toy for the people from the city. Construction is simple; the whole of the building is built of sawn wood, chosen not primarily for aesthetic reasons, but for economic ones. With the logs right there on the site, and by using a circular saw (which meant that it could not be cut very precisely) we were able to build the hotel for about half the cost of another hotel of similar size, located not too far off, where stone, steel and the whole gamut of modern techniques were used.

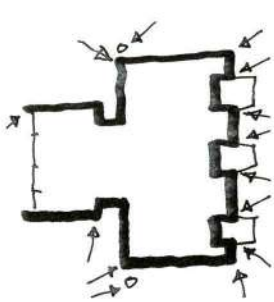
Another important consideration in cold climates is structural separation. It seems wrong to me to use structural or architectural elements on the exterior of a building which increase the passage of heat from the interior to the exterior. Take for example a balcony. The usual method is to extend the interior floor slab to the exterior. This creates a very complicated insulation problem at the point where the balcony pentrates the building. It is, of course, technically possible to cope with this problem but it seems to me to demand more effort than the situation warrants. I have wondered, therefore, if it would not be possible to separate the balcony completely so that the skin of the building and its insulation are unbroken. In one apartment house in Vaxjo we decided to hang the balconies from the roof and fasten them to the facade with small metal clips.

As you know, in winter most materials contract considerably and in summer the reverse. These stresses are transmitted from interior to exterior and vice versa. Cracks develop in the materials and along the joints, and, when water penetrates, frost damage results. It seems, therefore, advisable to separate the exterior from the interior elements as much as possible. Any unnecessary projections and corners on the external envelope should be avoided, as they are potential trouble spots. Following this line of reasoning you will arrive at a very simple building form that has no shadow lines.

In the design of another apartment block I started off by using that old cliche, the piloti, to articulate the building above a dramatic rock formation. Corbu says that to see the underside of a building is very important because this transforms the building from a wall into a volume. Fair enough, but you know beforehand that the engineer will tell you this piloti idea is nonsense; that not only will you have to insulate the underside of your building, but the roof of your basement as well. Since this was public housing, the authorities told me right away that the idea was ridiculous and that it would be much more economical and therefore better to eliminate those two layers of insulation and enclose the open ground floor, thus providing one full floor of enclosed space at practically no extra cost. This sort of situation is often very irritating and you immediately say that these people obviously do not have a clue about aesthetics. But when you think about it for a while you realize that it is *you* who did not understand the problem and that you over-



RISK POINTS
FOR FROST DAMAGE



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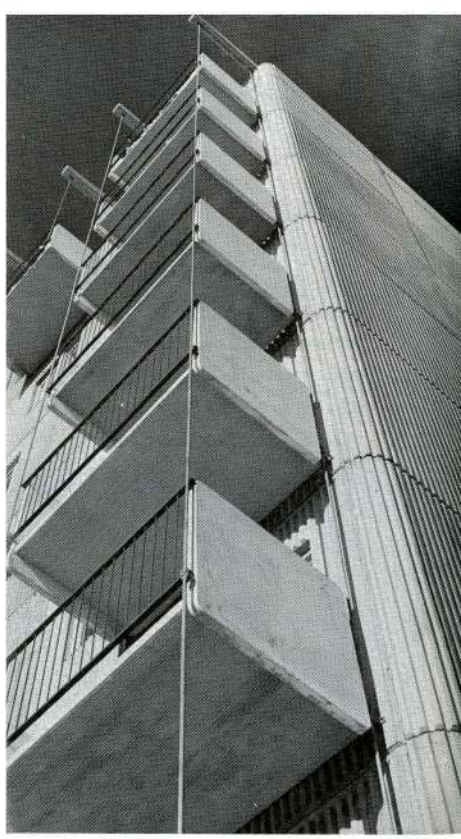

stressed aesthetics to the detriment of something more important. During the 1930's architects preached functionalism as the saving philosophy, and now they are getting it thrown back at them. Many architects today feel that functionalism has not really filled the need. I believe it has but that we have misinterpreted it.

Prefabrication is obviously very appropriate in the far north because of the long cold period. It is more logical and less expensive to make things indoors in a controlled atmosphere than outdoors. Having all the elements ready you can quickly assemble them on the site at any time. I visited a construction site in Winnipeg where they were excavating and building under a cover of vinyl plastic supported on a light wood frame. I have been preaching such a procedure in Sweden without getting anywhere, so I am going to take a few pictures to show the people back home how you do this sort of thing in Canada.

Coming back to this matter of heat transfer, you all know what an air cooled motor cycle engine looks like. To dissipate heat generated more quickly the surface of the engine is enlarged in the form of fins. It would be foolish to apply this same principle to buildings in an extremely cold climate. In winter you notice that every exterior corner in a building is a point of frost concentration. In old buildings which have plastered interiors, hoarfrost forms in every corner and around the windows. In order to overcome this problem I have gone so far as to use rounded corners in one of our projects.

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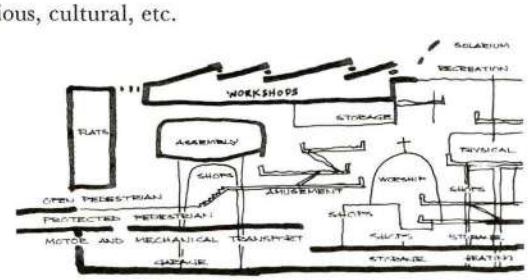
In the Canadian prairie climate I feel that the cold winters and hot summers demand exactly the same type of architecture: an architecture of well insulated, compact building forms, where the interiors are designed as efficiently as possible, since interior space is expensive. And since cooling is even more expensive than heating, the summer condition too seems to indicate that you should reduce window sizes and lower the ceiling heights. In other words, if you live in a cold climate, do not look to the temperate zones for inspiration. Look instead at the hot-dry regions where, just as in Sweden, thick, heavily insulated walls and relatively small window opening are used.

Let us now turn our attention to the problems of the community. I believe that we all agree that the structure of the community is more important than individual buildings and that we must concern ourselves with the way a building relates to other buildings, to the street and the landscape.

In our rigorous climate it seems logical that several community functions should be grouped together, sheltered under a common roof. Bees seem to know all about physics: they build maximum living space enveloped by a minimum amount of surface, within which they have intricate circulation and zoning systems. I wonder, therefore, if it would not be a good idea to take a lesson from the bees and to bring functions of similar nature into direct and intimate contact with one another. This is very possible, especially in the central part of a city. In fact, the whole town could become one single, complex building. Residential areas, schools, hospitals, ateliers, etc., could be related to each other on an upper level. At the street level, and continuing into the interior of this very large structure (where one would have a large amount of inexpensive, warm space) could be located all the other human activities: commercial, recreational, religious, cultural, etc.



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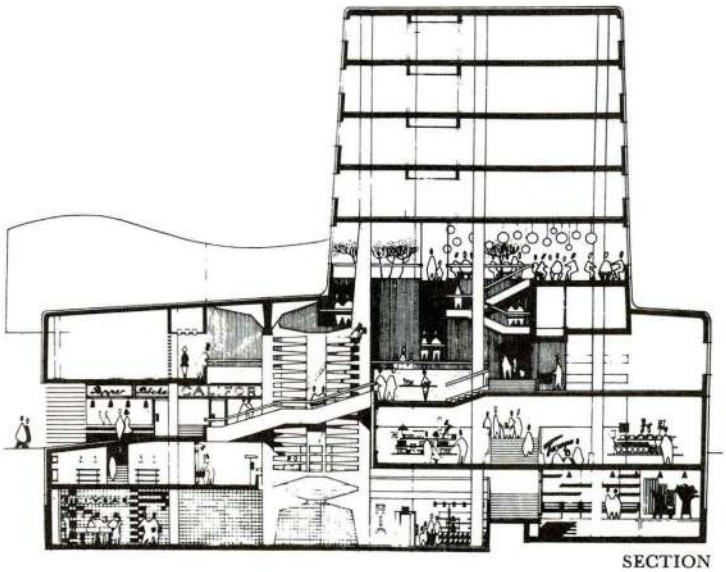
In the old towns, the market square was not only an architectural open space; it was the main shop, the department store. In the town centre of Lulea, we used the medieval concept of the market square, where all sorts of social, commercial and official functions can take place, not in the open, but under cover. Before this centre was built, the main shopping street of Lulea was cold, windy and bleak, with no sunlight during several weeks in winter.

In the very beginning, when I talked with the client about the possibility of creating a covered centre, where in a warm semi-tropical climate, people could move about freely in winter time, he said: "A wonderful idea: 'Honolulu of the North'!". I managed to get him to realize that this would only be a pale imitation of the real Honolulu, and asked if it would not be better to conceive of it as a warm northern centre and build it of concrete, use granite gravel from the river as the exposed aggregate and timber from the forest.



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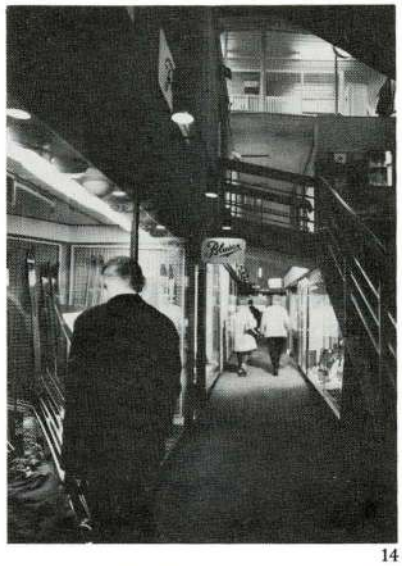

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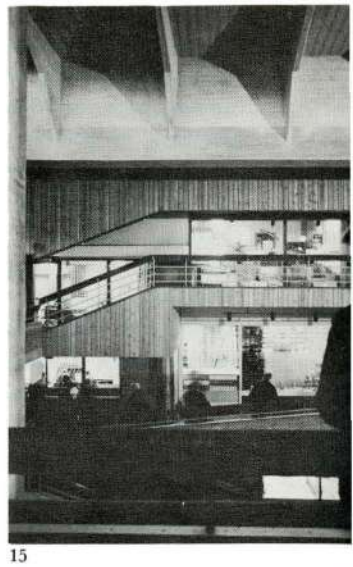

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In other words make it a fine native building so that one day in Honolulu they would want to build a "Lulea shopping centre of the South!" Well, the idea was accepted and the building was built.

In this centre we have grouped all the facilities under one roof — hotel, cinema, shops, clubrooms, administration offices, library, restaurants, service areas, public spaces, etc. The internal space is rather complicated, but in a small town where people return again and again to the same building, variety of visual experience is essential.

The enclosed town square is used for a great variety of public and social functions: dances on Saturday nights, Salvation Army religious services, art exhibitions and chamber music concerts. All these activities, and many more, take place here in a warm and protected atmosphere. Obviously in a building such as this, one would not, I imagine, use more glass than absolutely necessary to provide daylight and vistas, except in certain specific locations. We proposed large sliding windows, which would have permitted certain areas to be opened completely to the exterior. Unfortunately this suggestion was not accepted by the client.

Of course, the problem of enclosing these various functions under one envelope could have been solved, for instance, by putting a big plastic dome over the whole centre of the town. But this, to me, seems basically wrong, because it would not take into consideration the summer and spring-winter, the periods when it is nice to be outside. I have been told that this kind of hermetically sealed environment on the DEW line has not had very good results. The people there apparently have almost no contact with the exterior. All they do is read books and look at movies from the south, and this, eventually, will lead to melancholy. This type of totally enclosed environment is probably inevitable in the Antarctic, where there is no desire at all to move about outside.

But in our situation, I would at all times offer alternate external and internal paths of circulation, and would make the external paths at least as beautiful as the internal ones, and somewhat shorter, so as to encourage the people to move outdoors. The choice offered seems to me to be very important, because I am quite sure that architects and planners cannot, or should not, dictate the way of life. This is not their job. Their job is to form a framework within which many good ways of life may be possible.

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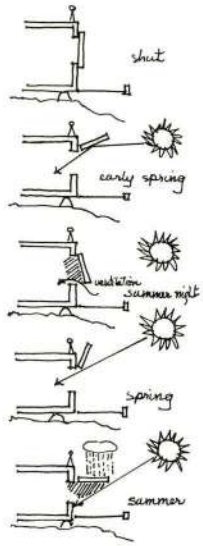

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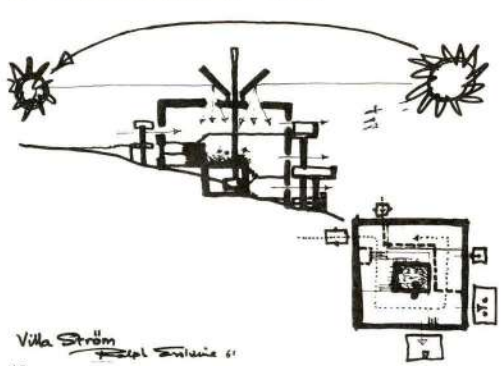
14-17 Lulea shopping (community) centre, north Sweden. An extensive speculation in the social, technical and aesthetic consequences of the subarctic situation. During a number of years of use it has shown itself to meet the human and social needs of the community.

18 Villa Ström. Stockholm — model.



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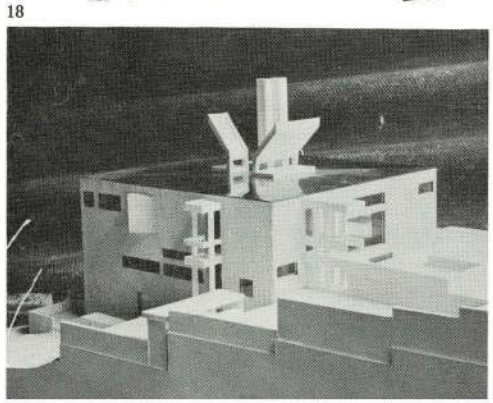

Sunlight in the north demands two things: in winter you do not want the low winter sun casting shadows on buildings. Low buildings therefore have to be placed in front of large ones. In summer, however, sun-protection from the midnight sun is desirable.

In the light of these specific winter and summer considerations, the problem of the window, as I mentioned earlier, is quite important. I have been working on the design of a variable window. In its present experimental form the window shutter can close any portion of the opening; it can be moved out of the way completely; it can be fixed in a horizontal position above the opening so as to form a shade (the underside would be painted white to increase the amount of reflected light into the interior), and when the house is not occupied, or during the light summer nights, it can close the opening completely.

In another house we designed, the sunlight is picked up from a different direction by reflectors located on the roof. In the north, where it is logical to build compact buildings which tend to become rather deep and thick, it becomes quite difficult to light the central area properly, but nowadays you can treat the roof like an elevation and put windows there. In other words, if I stretch my hand, I can grasp the horizontal rays of the sun and bend them down into the centre of the house. An ordinary window would only throw a little patch of light on an interior wall, whereas these reflectors on the roof flood the interior with warm, reflected light.

Some of the most fascinating experiences in the north are the wide views. These are very important to people and have to be considered very seriously, especially in mining towns, where men spend their working hours underground, or in towns within the arctic circle. It is a fantastically exhilarating experience, after having been cooped up inside your shelter during the long, dark winter, to open the door on the first day of spring and make contact with the surrounding landscape stretching into the far distance.

The psychological aspect of the northern region is rather complex. On the positive side are the seasonal contrasts, an invigorating climate, unspoiled nature, abundant space, scope for initiative and outdoor recreation. On the negative side are the long periods of darkness, winter storms, midnight sun, mosquitos, lack of amenities and isolation.

The northern communities must free themselves from the prevalent colonial attitude and develop their own culture, based on their way of life. They should, because of their isolation be made more attractive than their equivalents in the warmer and more densely populated regions.

To make these towns comfortable to live in, they would have to have well lighted and heated (or at least wind protected) paths of circulation; plazas and gardens which could be covered in winter and opened during the short warm summer. They should be planned in such a way as to encourage human contact, allowing at the same time personal freedom and privacy. Even more so than elsewhere, building design should be based on technical rationalisation and standardization, inasmuch as building costs will be very high. Yet any such standardization must offer a maximum of human choices, whether rational or irrational, and we should strive to de-emphasize the exceptional circumstances in order to lessen the feeling of isolation.

19

Community Design for Production, for Publication or for the People?

by Ralph Erskine

In order to understand the problems involved in the design of communities in the sub-arctic, it will be necessary for us to draw comparisons between the old and the new urban settlements. We will have to ask ourselves many important questions, such as: what are the differences between the old and the new; and why do they exist? What are the sócial forces that shape our communities, and how should technology be used to serve our needs? And finally, perhaps: where do we go from here? I would like to suggest that we look at these problems in the light of the present rapid changes, of which we are all becoming more and more conscious.

When I first turned my attention to the design of communities in an exposed northern situation, I started by analyzing the limitations imposed by the environment in order to find a form that would be most appropriate for an entire community. It seemed obvious to take full advantage of the micro-climate (wind protection, south orientation, etc.) and to group the buildings so that they would give maximum protection to each other. The resulting form would be very compact, protective and highly introspective with the character of a desert oasis.

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19 Svappavaara, north of Polar Circle. Competition project for new mining community of 1500 people. Construction now underway.
20-21 Subarctic town, theoretical study. 'S' plan offers choice of environment for gregarious people or for semi-recluses.

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But I soon began to have my doubts about this highly introspective quality, and felt that they could not be right in a democratic society. In our work we constantly have to make choices; yet we must realize that it is not up to the architect, nor the planner, to make these choices, but to the people who will live in the community. We know that a form which encloses to a considerable degree will likely give the best micro-climatic conditions; but at the same time it may have a very strong emotional impact, in the sense that it demands of everybody a very highly developed social awareness.

There are people who, although they appreciate the amenities of urban living, nearness to shops, schools, entertainment, etc., are suffocated by tight organization and object to the curtailment of their personal freedom. The existence of this minority of individualists and non-conformists in Sweden has become quite a problem, and there is a danger that it might disappear. This would be rather tragic. It would seem sensible therefore, that, rather than change the social order or eliminate these non-conformists, one should try to accommodate both.

It is our duty as architect-planners to provide living facilities for all members of society, including this minority. It seemed logical, therefore, and I have persuaded one local authority to accept the idea, to set aside an area within the community for those people who do not care to identify themselves with the general social organization. In such an area there would be no rules or regulations other than are necessary to protect those unable to protect themselves, namely the children, who must be able to live and play in healthy conditions. I feel that no architect and no civil servant, other than possibly a health officer, should have any jurisdiction at all. There would be no zoning. People could build what they liked and use the area as they pleased. People moving there would know this as a place where anything is liable to happen, and therefore would not react negatively if the man next door started a little factory, kept a couple of cows or built aeroplanes. Of course, we know right from the start that it will be very ugly. It will be a collection of buildings, designed not by architects, but by mail-order builders.

When it comes to housing and community planning, we might be tempted to ascribe the character of a typical well-organized but rather dull Swedish community to the dull character of the Swedes, or their "questionable" morals, or their political system. But when we look at the housing districts of France, Germany or Italy, or anywhere else, we will find most of them are rather dull too.

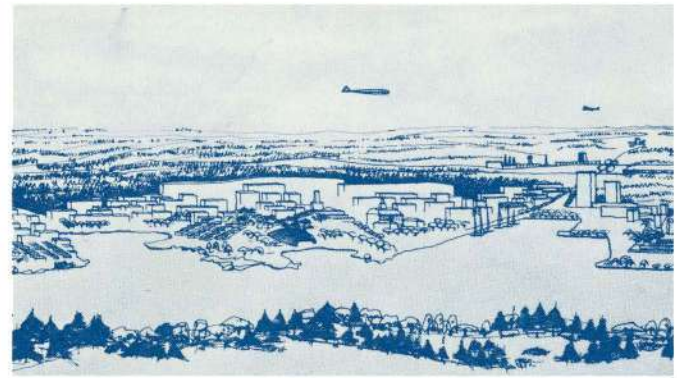
If you agree with me that the morals of people are generally the same and that social and political systems are different in various countries, then neither morals nor systems are factors contributing to the dullness of these residential areas. What then can be the conclusion? The only conclusion I can find, is that we don't know how to build communities.

At the C.I.A.M. Congress in Dubrovnic the participants, after discussing great projects for the future, went straight down to the old town to spend their entire free time in the narrow, crooked streets and intimate plazas and arcades. What is it that is so attractive about an old historic town? I am quite sure that it is neither sentiment, nor romance, but that perhaps it has something to do with long usage, which leaves a human imprint on material things.

But what do we have in our towns and cities of today? From downtown we arrive, by car or subway, at a large shopping centre, surrounded by a vast sea of parked cars and a number of large residential beehives. We enter at the bottom and rise by elevator to our apartment; our private garage, so to speak. In this very rational and efficient environment we don't really know who or where the individual is. We know that number 312 lives here and has his balcony, number 1237 lives there and has his balcony, and that both have their equal portion of air, view and sunlight.

Here we should ask ourselves: is it right, that we, as architects, make monuments of buildings in which people live? This is tantamount to demagogy. In these super-apartment blocks, a system of pigeon-holes is established in which people are filed from slot number one to slot number three thousand. Everything is very finely calculated, very economical, very scientific, and very inhuman. These vast, developments are all over the world, regardless of social or political systems. This is architecture for production.

In the old towns, materials and methods of construction were the same. Yet a great variety of individual expression was possible because the unit was small and easily appreciated by the human being; and also because the progression of time was slow and buildings were put up infrequently. But today, in our new towns, the buildings are all alike because of our efficient methods of standardized production, and because they are all built at the same time. However, it is not the production method, but our way of using it that is at fault. Too often the uncontrollable momentum of our enormous productive capacity produces superfluous, not expedient commodities.



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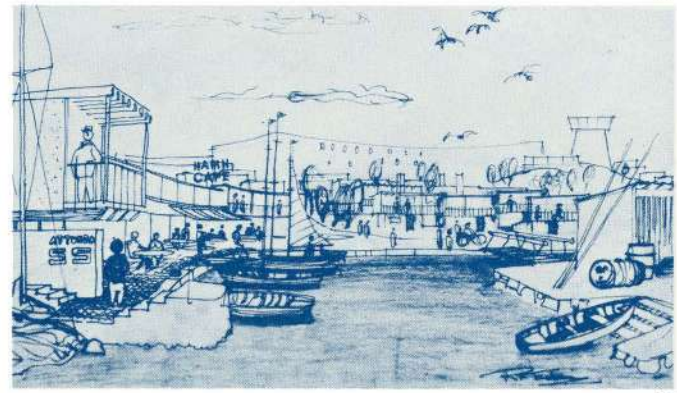

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In the fishing village, the place of work is adjacent to the dwelling, which itself is located in the immediate vicinity of the harbour. In our modern communities, the functions of living and working are generally segregated. Here, I believe, is one of the flaws in our mental process. It is quite obvious that big industry should not be located near residential areas; but why do we have to move all places of employment away from our living areas? It is imperative that technological science serves not the production methods, but the human beings who intend to use them.

Our job unquestionably is to use all the methods of standardization and mass production in order to reduce the cost of our material necessities: structure, plumbing, heating, transportation, etc. But let us be very careful in the choice of construction methods and building elements, so that despite technical standardization we can provide maximum variation.

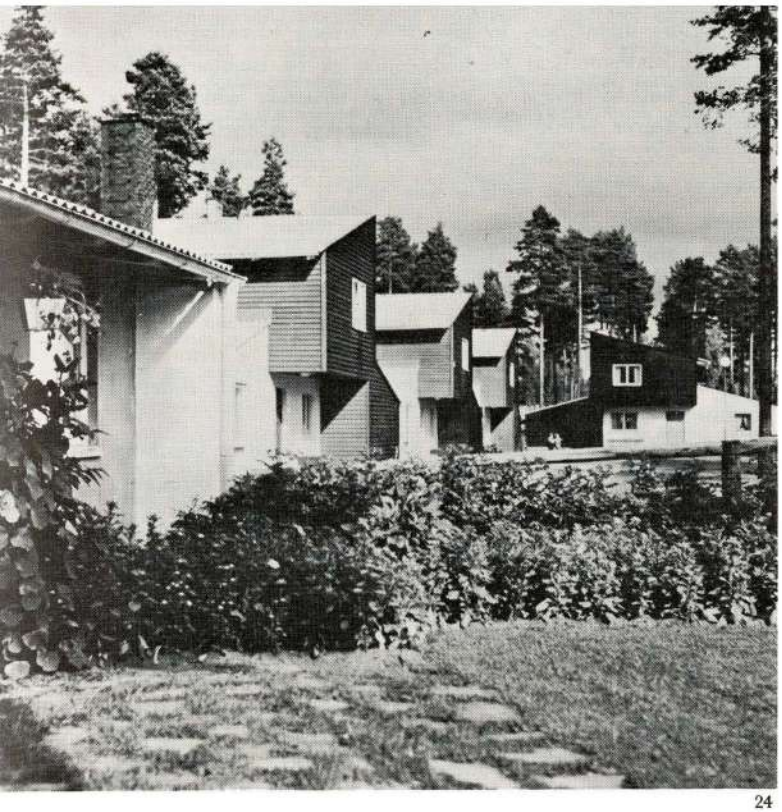
There is poetry in the making of things, and also poetry in the making of our times. But this poetry is not always fully exploited. Certain industries, for example, are housed in attractive buildings, where the atmosphere for work is pleasant; but there are many other industrial enterprises that are not really concerned with human environment. This to me, is rather extraordinary when you consider that the majority of grown-up people, especially men, spend at least a quarter, if not a third of their lives in industrial districts, in an environment which was not created for the workers, but for the machine. Then the question is raised: who is the real client; is it the director, or the workers?

When Vallingby was being built, most people, including myself, believed that a satellite town would prove a complete failure. Upon completion most people revised their opinions and, although it is not an architectural masterpiece, it is a good place in which to live and shop. Because the town center is rather well equipped and very readily accessible from down-town Stockholm, a large number of people go there every day.

In the Vallingby town center, aside from shops and offices, there are good restaurants, a good movie theatre and a community hall where many forms of entertainment take place: theatre, movies, lectures, etc. In Stevenage, on the other hand, many such facilities did not exist initially, with the result that after six p.m. the town center was dead. Now these facilities are being added, the character should change considerably.

The incorporation of residential buildings into the center of communities is of major importance. Centers without dwellings don't function properly because they are dead in the evening. Having observed this situation in such large urban centers as the City of London, for example, it was decided, prior to rebuilding a large portion of central Stockholm, that living facilities be integrated with shops and office buildings.

As with Vallingby, many people were skeptical of the project for "Stockholm City", as this large development was called. When it was opened, it was an immediate success. In a way it was like Tivoli with too much to show, too much



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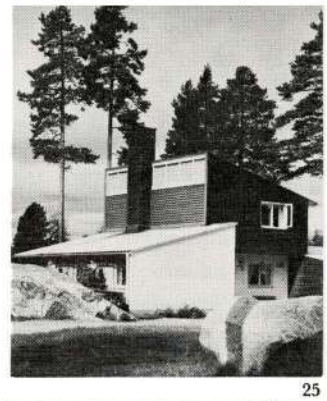

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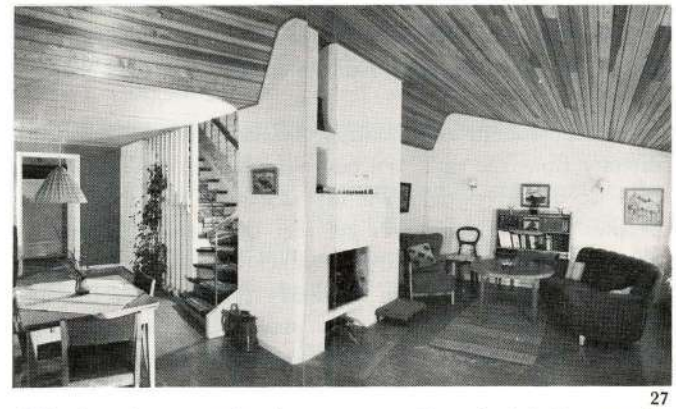

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22-23 Attunda — suggestions for a new township to be built in connection with the new Stockholm Airport.
24-27 Jädraas company village, northern middle Sweden. An attempt at modern housing giving identification with northern Swedish forest situation rather than city or suburban characteristics.

going on. But in spite of all this excitement, one suddenly realized that this was very worthwhile in the city.

The old environment, such as the fishing village, speaks to us with a language of function and of beauty. There is the harbour entrance, the protected inner harbour. Adjacent to the harbour, the dwellings surround the open place of work which is the town square, and then the main shop on this square where the fish and other goods are sold. Such a small fishing community lives with the rhythm of nature; the rise and fall of the tide. In its architecture there is a great variety of individual expression. It has been built, altered, added to, pulled down and built anew over a long period of time. It is something not to be imitated but studied for its important lessons.

Characteristic of these communities, both old and new, was that they were adapted to the production methods and the life of their time. The old ones seem to have been built for people, the new ones, built for production. Yet the older communities were more functional and able to absorb the changes in time better than the new ones. In some way they were very much identified with "place", a rather intangible aspect of the specific situation.

In several small communities which we designed, we tried to find something in the locale which is not readily definable.

The first is a rather small company village, located in an isolated forest region. The buildings were to express the simplicity of materials and native construction techniques as well as the nature of the trees. As the forest offers good wind protection, the houses could be grouped rather loosely and the trees around the dwellings thinned out, to let in the sun.

In another small company town we were commissioned to build, as no master plan existed for the community, we first had to analyze the town structure and prepare a development plan. We did this because we believe that our first responsibility is to the community, and not to the client of an individual building.

One of the things we attempted in the design of the dwelling units, was to lower the ceiling heights below the legal minimum. When we look at the older communities, we notice that the dwellings are rather small in scale and that they usually have low ceilings. This, I believe is one of the reasons why they seem to us so attractive and human. In the last century, in our concern for hygiene, ceiling heights were raised. This is not necessary now that we are able to provide good ventilation.

After lengthy discussions with the authorities, permission was finally granted to lower the ceiling heights below the legal minimum. And after further talks with the factory administrators it was decided that a small number of these houses be built. Although many of the workers had condemned the idea of low ceilings, once they walked into the

In another housing project we purposely reduced the lot sizes from a standard 40,000 sq. ft. to 3,000 sq. ft. At first people objected vehemently: they would not dream of living on such a tiny patch of land. A few dwellings were built on these comparatively small lots with small gardens which were easy to maintain. Once they had moved into these houses, the people found them very enjoyable. And when you ask them about the size they will reply: "Never again a large lot!"

The old community had two characteristics; it brought people together, and its structure was readily understood. The English village was built around the green with its pond, the place of entertainment, and facing this common space was the place of worship. Wherever you went, whether to the pump to fetch water or to the store to buy food, you met people.

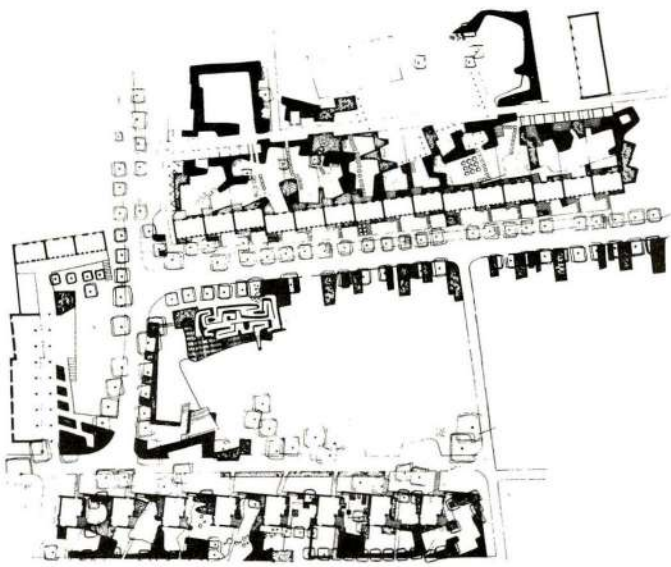
In our modern communities, however, we get our water directly from the tap. We buy our food in supermarkets or have it delivered, and we use machines to contact other people. Most of our needs are met by technical means. As a result we have lost direct contact with our fellow man. The architect should aim to satisfy the needs of the individual: to provide him with a place where he can isolate himself completely, and a place where he can socialize.

In the design of a new area for a community in the north, our prime intent was to give it a strong identity; not by abstract mathematical methods, such as by numbering the houses, but by giving it a kind of structure which, to a certain degree would be self explanatory. A further intent was to provide a large variety of accommodations and to arrange the plan in such a way that it could be built in stages. Small single family houses, terrace houses, row houses, and flats were intermingled to avoid the usual impression of one type being inhabited by green, the other by pink, and the third by yellow people. Instead we tried to arrange it so that it would be expressive of a democratic society, where people with different tastes and different ambitions could live side by side.

Entering the community you arrive in a kind of vestibule. To reach your dwelling you turn right and walk through a little alley to a little square with the trees; from there along another pedestrian walk which leads you into a large place off which is the lane where your house is located. In this way you would be able to identify yourself very naturally with the place where you live.

Traffic separation is a most important consideration in community design. In Sweden for example, pedestrian traffic safety overides any aesthetic consideration, and quite rightly so. Statistics prove that more children and adults are run

28-29 A company estate with 3,000 sq. ft. lots.
30-32 Brittgarden — an attempt for a strong identity.



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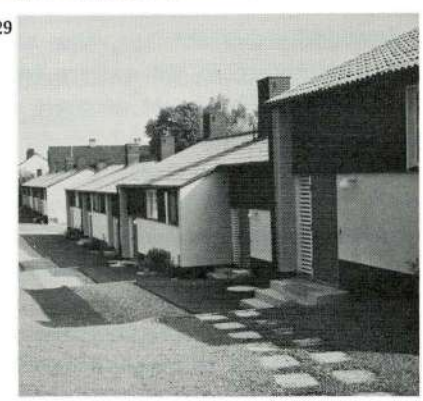

over by cars and trucks than are killed in wars. A most convincing argument. There is really no sense at all in talking about aesthetics if the pedestrian's safety is not assured.

Both vehicular and pedestrian traffic should function efficiently, and without crossing each other, if possible. Parking spaces and garages in northern regions should be located as close to the building units as possible. Both the car and the pedestrian have their rights. The pedestrian should be protected from the car, and the driver should behave in a civilized manner. The need to use traffic policemen or signs to prevent accidents indicates that the planner did not do his job well. Instead of posting warning signs about speed limits, the appropriate speed should be implied by the layout of the path of circulation. To slow the speed, we can, for instance, put bumps in the road. If we drive too fast our springs will break. Or else we can make narrow passages and tight corners. If we take a corner too quickly, we will scratch the side of the car. I am sure that under these circumstances we would instinctively slow down. At the same time we will have to arrange these barriers so as to prevent the automobile from penetrating certain areas, while permitting access to utility vehicles, such as snowplows, garbage trucks, fire engines and ambulances.

In this development there are many small play areas and places where the housewives can beat their carpets. There are shops, a small community centre and a school. Every dwelling unit will have a little place in the cheap underground area where people could perhaps start a little business, build boats or make furniture.

Inasmuch as the site was almost completely flat, and in order to provide natural and unobtrusive barriers against the automobile, we have terraced the whole site. By making the edges of these terraces vertical or nearly vertical, and by using steps, the character of the terrain is much better expressed than if we had kept a gradual slope. These terraces will also help to define each stage of development, creating a complete environment at all times.

In each stage of expansion there will be single family houses and apartments. The largest possible variety of living units, from very small flats to large houses is planned and each type will have a variety of interior layouts. Row houses can be use as two-storey maisonettes or as single family terrace houses. Some of these units are grouped around small commercial open spaces. In the garden walls of these units there will be openings which can be closed with shutters, so that you can either have privacy, or extend your view into the park or onto the street. I would like to point out that we were able to provide this variety without increasing the cost of the units. These dwellings are state financed and this means that we have to stay within a definite budget. In my opinion a prerequisite for good architecture is limited finances.

Let us look now at another example of a northern town: Svappavaara, located close to the mining center of Kiruna, which lies just within the arctic circle. The characteristics of the countryside, I should imagine are very much like parts of Labrador and northern Quebec; rock, lakes, marshy land, and occasionally a road wandering across it. It is, in essence, a vast landscape without people. But extraordinarily enough small settlements have existed there for more than 300 years; ever since the discovery of iron ore in the mountains.

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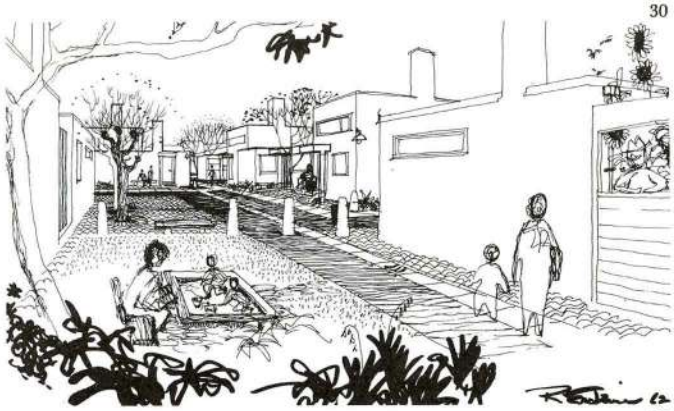

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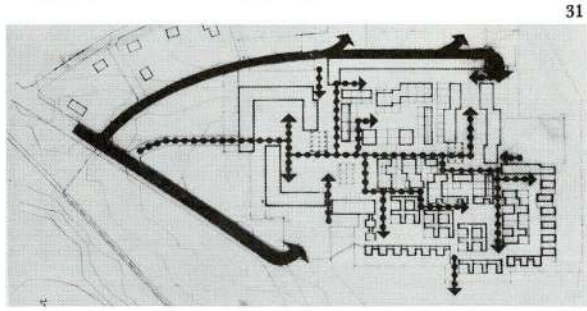

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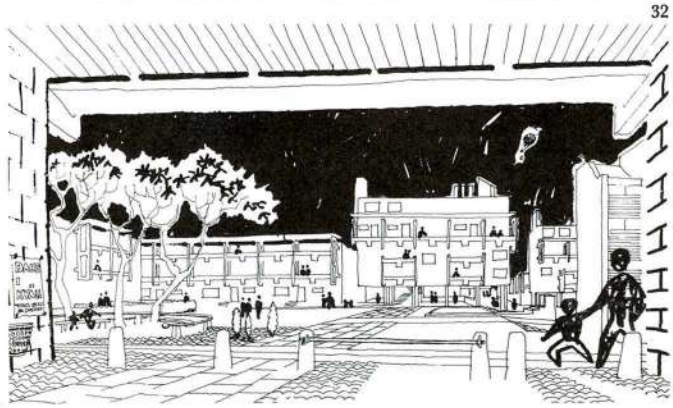


Recently it was decided to expand the small mining community of Svappavaara and an architectural competition was held. In our winning entry, we placed a long building along the ridge which runs through the site. This "wall" or "screen" faces the sun and turns its back to the wind, thus providing a good, micro-climate condition for the rest of the community. The individual dwelling units are located on the slopes and are grouped in such a way as to give additional protection to each other. In places where the slopes are very steep, the dwelling units had to be placed one above the other and internal communication paths provided because of the difficulty of plowing snow on steep grades with normal equipment.

About half of the units are single family dwellings in the form of row and terrace houses. The rest are flats, located in the long apartment building on the ridge. This building has to be long and continuous in order to give maximum wind protection to the community. Within it we plan to arrange a great variety of dwelling types to give the people a large choice. This will also result in a variety of character in the elevation. All communal functions, such as laundries, heated garages, storage spaces, air raid shelters and a pedestrian street will be located in the basement. As the ground level varies in elevation, this basement sometimes lies in the ground, sometimes above the ground. Where daylight can penetrate, internal play spaces can be located, perhaps connected to external ones which will be completely sheltered from the wind. The overall layout allows us to connect the wall with the rest of the housing area by enclosed, heated, and well lit communication paths. During good weather, circulation between all parts of the town takes place outdoors. Sewer, water and steam lines are placed in or under the interior streets where they will be readily accessible for repairs and maintenance.

The town center proper includes among other things, shops, a community centre and as assembly hall. The school is located there too, so that its library, gymnasium and cafeteria can be used by grownups as well as the children at any time of the day and week. In a small community it is ridiculous to duplicate such spaces. The center can be reached from all parts of the town along pedestrian streets which are protected from the wind. In the park, in front of the town center, which is turned toward the sun and a beautiful view, a great variety of outdoor activities are expected to take place.

The summer in Sweden is very short; some years we do not get more than a few days of real summer, but there are other years when we get a couple of months of it and that is a real joy. The best place to enjoy summer is not Stockholm, but the Skerries, the islands along the coast. It would therefore be ideal to have an office that you could move to the place where summer is nicest; and since you would have to take your staff along with you, you would also take their

wives and children. So a boat would be the ideal mode of transportation. Our boat is an old Thames barge. It sails quite well and its flat bottom permits it to slip into very shallow bays and canals. It is also very easily converted into an office. We bought it quite cheaply, insulated it, installed a very simple heating system, furnished it and sailed it across the North Sea to Sweden.

With our floating office then, we follow the short summer out to the islands, and in winter we move back to the city and enjoy life there. It fits the economy of the situation eminently well because I do not have to pay much rent. The money thus saved is used to study buildings and projects a little bit longer. It also finances our annual trips to the islands. It suits the wives, and the husbands even more, because they usually have to stay behind when their families move out to the country. The idea of travelling and living together furthermore tends to weld the office staff into a very good team. The whole thing, in my own opinion, quite neatly fits function, economy and climate.

When we are in Stockholm, we hook up with electricity and telephone. While we are moving, we have no contact with the world. When we arrive at the place we always visit in the Skerries, we again connect the telephone, but not the electricity because the sun is shining most of the night. We move our equipment out of the barge and establish our office in the boathouse. The boat then can be used for sailing on the weekends.

We start work about 7 o'clock, in the morning and finish late in the evening. In the middle of the day we have a 3½ hour period during which we sail, or repair boats, or lie down in the grass and read a book and have our meal together in the farm courtyard. One of the obvious advantages is that we are working near home. My children and those of the staff show great interest in our work. They see us draw and they sit down and draw too. They see us make models and they start doing the same.

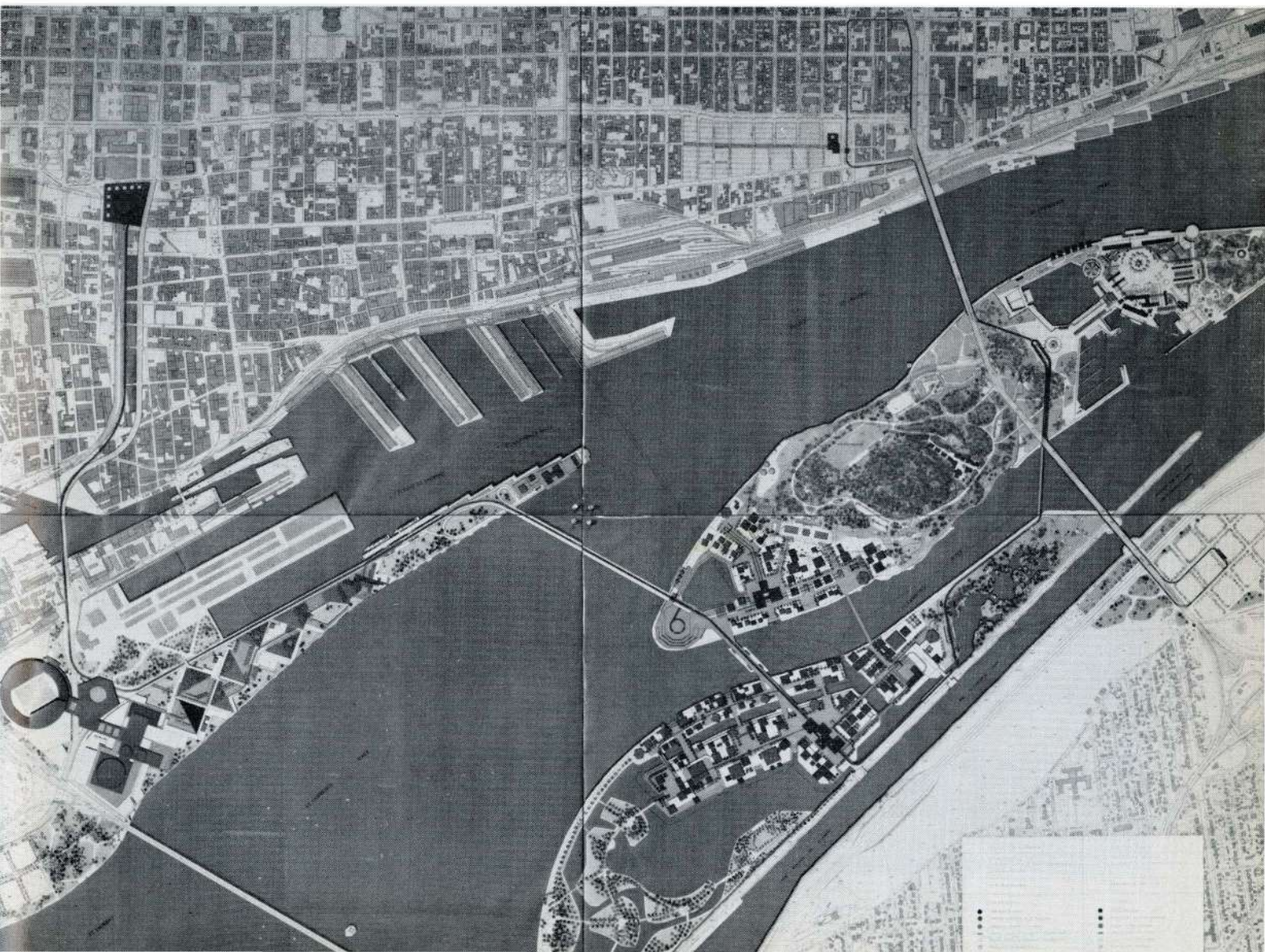
The Swedes are a very reserved people, and it took us quite a long time before we were able to really get to know the fisherman and his family at whose farm we spend our summer holiday. But now, each time we leave the island, the wife of the fisherman cries a little, for we have become very much part of the family. This is the kind of human relationship that you can get in Sweden, but it takes quite a long time to establish. And so, after a summer of intensive work, but also of relaxed and informal living out on the islands, we return home to Drottingholm where we tie up along the edge of our small canal. We step off the barge before the snow comes, we go home for lunch, the children come down, and later in winter we go skating on the frozen canal.

Projects

Expo 67

1 MacKay Pier (left and centre) will be the main gateway to the exhibition and will contain permanent structures such as an arena, stadium and convention centre along with an administration and press building for the fair. St. Helen's Island will contain Ile Verte, the original recreational area in the center with the Tivoli Gardens, a marina and entertainment located at the far east. Ile Notre Dame, below St. Helen's Island and forming the entrance to the St. Lawrence Seaway, will contain most of the national and thematic pavilions.

At the upstream end of MacKay Pier, a large parking area will accommodate cars arriving from the north and the west. The internal transportation system begins at MacKay Pier, crosses over to Ile Verte, on to St. Helen Island Park and then the Jacques Cartier Bridge, where it will provide a spectacular ride back to the City. Located close to the Jacques Cartier Bridge, the subway will provide a link to the exhibition grounds from the south shore parking area.



Le Plan Directeur

par Edouard Fiset (A)

2 The canal in Notre Dame Island with pavilions along the waterfront.

3 Mass transportation from MacKay pier to Ile Verte and around the exhibition site.

4 Notre Dame Island lagoon will contain ships that have helped form the history of Canada (**Bluenose**). From the lagoon, paths lead towards major pavilions such as that of the United States.

5 St. Helen's Island marina, gateway to the amusement section. The Tivoli and the ancient lighthouse will guide the pleasure boats to the centre of night-life.

6 Ile Verte, Terrace of the Nations, with amphitheatre for national entertainment such as folk dances and traditional games.

Perspectives drawn by Stanley King.
Photos by Arnott Rogers Batten Ltd.

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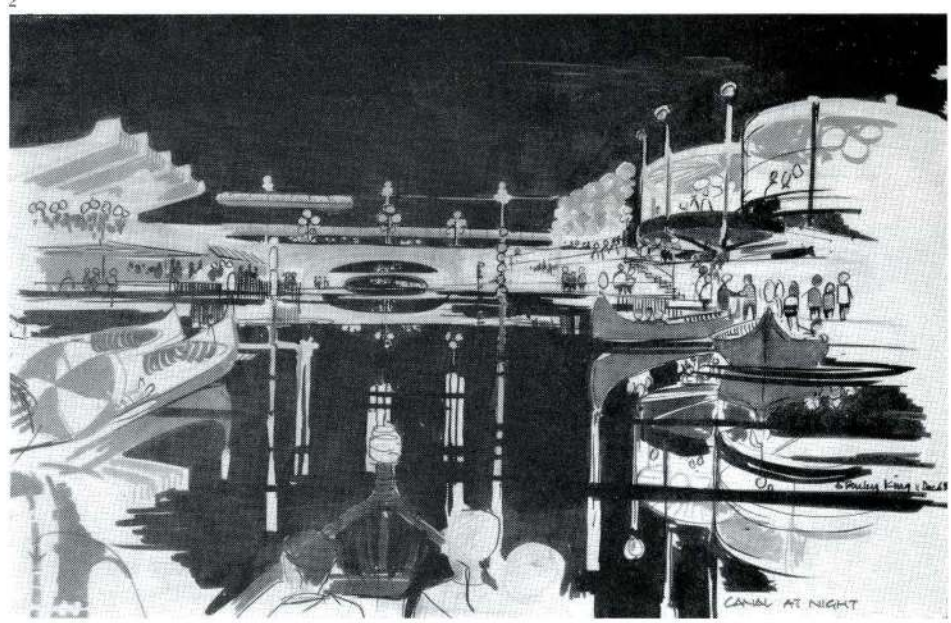

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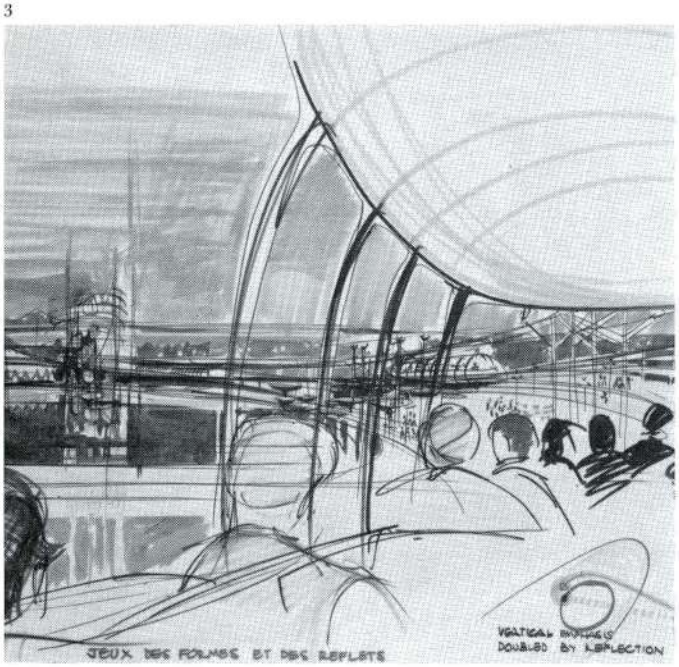

Jusqu'à ce jour les expositions universelles ont été conçues presque exclusivement en vue de mettre en valeur les réalisations des diverses nations, principalement dans les domaines scientifique, technique et artistique. Chaque nation élevait donc un pavillon dans lequel elle exposait, de la façon la plus convaincante possible, toutes les réalisations qui faisaient son orgueil. Ces pavillons faisaient l'objet d'une recherche architecturale toute particulière, mais malgré de nombreuses et indéniables réussites, ils s'assimilaient davantage à des prouesses où les diverses techniques jouaient un rôle de premier plan, qu'à des oeuvres d'art de caractère permanent.

La Compagnie canadienne de l'Exposition universelle de 1967, tout en reconnaissant l'intérêt d'attraction indéniable d'une telle formule, et tout en y ayant recours, croit toutefois qu'il y a lieu d'attacher une plus grande signification à l'homme, à ses aspirations, ses efforts et son oeuvre qu'à la nation et à ses produits. Elle présentera aux pavillons nationaux, des ensembles où les thèmes corollaires au thème principal, "Terre des hommes", seront illustrés et ce, avec la participation de divers pays aussi bien que des grands intérêts privés.

C'est ce concept élevé et plus profondément humain qui marquera le caractère de cette Exposition. C'est également ce concept qui en deviendra l'élément unificateur non seulement sur le plan des idées mais également sur le plan architectural. Seule une conception aussi hardie et se séparant à un tel point des conceptions traditionnelles, permettra à l'Exposition de laisser sa marque dans l'histoire des Expositions Universelles. Elle permettra également d'éviter que cette Exposition ne devienne qu'un pâle reflet de l'Exposition internationale de New York en 1964 et 1965, qui dispose de ressources plus considérables.

DESCRIPTION DU SITE DE L'EXPOSITION

L'Exposition occupe un site particulièrement dramatique le long de la voie maritime du St-Laurent d'un côté, et le port de Montréal de l'autre, au pied de la ville et de ses gratte-ciels dont le Mont Royal forme un arrière plan impressionnant.

Ce site est composé principalement de deux îles du St-Laurent qui ont été agrandies dans ce but: l'île Ste. Hélène d'une part, qui comportait à l'origine 135 acres, a été reliée à l'île Verte en

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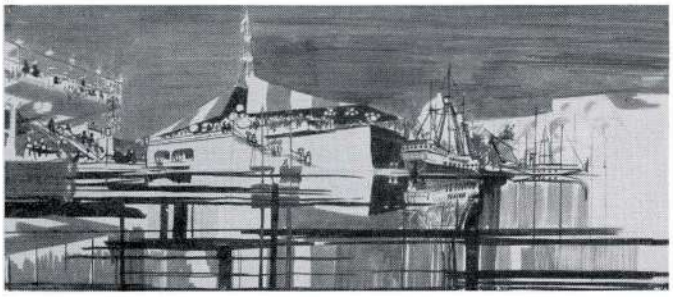

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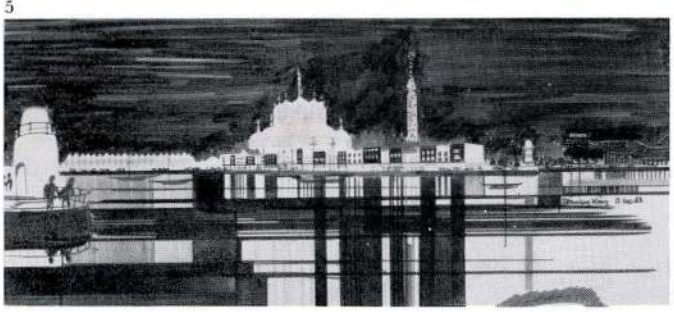

amont, et en aval à l'île Ronde, ajoutant ainsi respectivement 50 et 145 acres à l'île existante. Immédiatement à l'est, le long de la voie maritime du St-Laurent, la nouvelle île Notre-Dame viendra ajouter environ 310 acres au terrain reconquis au fleuve. Une partie de l'Exposition occupera également la Pointe St-Charles et ses 150 acres après redressement et alignement de ses rives. A ceci il faut ajouter les terrains réservés pour le stationnement, soit 70 acres à l'ouest de Pointe St-Charles, 27 acres sur le site de Radio-Canada et 70 acres sur la rive sud.

UTILISATION DU TERRITOIRE

L'ensemble du territoire réservé à l'Exposition étant constitué de quatre parties distinctes nettement séparées les unes des autres, le groupement des éléments de l'Exposition en acquiert une importance toute spéciale.

La Pointe St-Charles située sur l'île de Montréal même, est d'accès facile du centre de la ville, ce qui en fait l'emplacement tout indiqué pour des projets de caractère permanent et requérant soit des mouvements de masse, soit des échanges fréquents et continus avec le centre urbain. C'est donc l'emplacement tout indiqué pour y prévoir les constructions d'un stade olympique, d'une arène, d'un Palais des Congrès et d'un bâtiment d'expositions destinés à devenir permanents. C'est également l'endroit le plus favorable à la construction d'habitations qui répondent à des concepts modernes et qui s'intègrent dans le contexte urbain. C'est aussi l'endroit pour y prévoir le thème de "l'homme et la cité" qui sera présenté en étroite relation avec le centre d'habitation prévu ou "Habitat 67".

Le coeur de l'Exposition, cependant, doit se situer sur l'île Verte qui est le point d'arrivée en provenance de l'entrée principale de l'Exposition, ainsi que sur les terrains de l'île Notre-Dame qui n'en sont séparés que par un canal assez étroit pour permettre un raccord satisfaisant. C'est sur ces deux emplacements que viendront s'ériger les pavillons des thèmes, les pavillons nationaux et les principaux éléments de l'Exposition. Les thèmes de "l'homme et l'océan", "l'homme et les régions polaires" et "l'homme et l'espace" sont prévus sur l'île Verte, alors que les autres thèmes notamment "l'homme le découvreur et l'explorateur" seront prévus sur l'île Notre-Dame.

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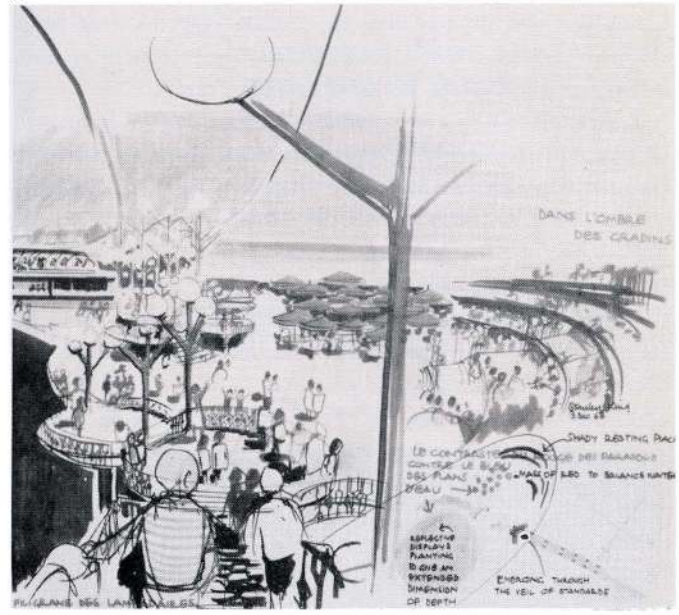


La répartition des pavillons nationaux et des pavillons privés sur ces deux îles sera fonction des facteurs suivants:

(a) relation géographique, politique ou économique
(b) groupement autour des thèmes
(c) exigences du plan directeur et caractéristiques du site.

A cause des conditions nouvelles qu'apporte l'adoption de thèmes, ainsi que certaines caractéristiques du site, il n'apparaît pas recommandable d'adopter la formule qui a prévalu généralement jusqu'à ce jour du groupement basé principalement sur la situation géographique, avec une continuité rappelant celle du groupement des continents et des nations. Sur ce plan géographique, on ne prévoit donc que des groupements assez limités permettant toutefois à certaines nations désireuses de retenir le facteur géographique comme élément déterminant dans le choix de leur site, de se grouper et contribuer ainsi à la création d'une atmosphère toute particulière et caractéristique de la région du globe qu'elles occupent.

Certaines nations par contre désireront marquer leurs liens politiques ou économiques étroits par la proximité de leurs pavillons respectifs sur les terrains de l'Exposition, alors que

d'autres seront peut-être plus particulièrement attirées par un des thèmes prévus et chercheront de préférence la proximité du pavillon qui le contiendra.

Enfin, le plan directeur lui-même et les caractéristiques du site sont tels qu'ils conditionnent l'emplacement de certains pavillons. C'est ainsi que l'île Verte, particulièrement après le morcellement qui lui est imposé par le tracé du pont et l'amputation qu'elle subit par la réserve d'un lac artificiel, est définitivement trop petite pour recevoir les pavillons les plus importants de l'Exposition. D'autre part, l'île Notre-Dame étant plus grande, mais moins favorablement située que l'île Verte du point de vue géographique parce que plus éloignée de l'arrivée principale, se prête beaucoup mieux à la construction de pavillons plus importants. Il est également normal que ces pavillons importants, qui sont d'ailleurs avec les édifices des thèmes les pôles d'attraction principaux de l'Exposition, soient situés plus profondément à l'intérieur afin d'attirer et retenir les visiteurs dans toutes les parties de l'Exposition. C'est en raison de ces considérations que le pavillon canadien est situé dans la partie ouest de l'île Notre-Dame sur un site par ailleurs admirable en lui-même puisqu'il embrasse la vue du fleuve et de la ville de Montréal. L'emplacement du pavillon du Canada entraîne avec lui le choix de l'emplacement des pavillons des provinces et peut-être ceux de la Grande Bretagne et de la France.

A l'extrémité est de cette même île, il faut également trouver un pôle d'attraction qui attire le visiteur et assure un va-et-vient constant entre les pavillons. Un tel pôle d'attraction peut être constitué par un ou plusieurs des pavillons suivants: Russie, Etats-Unis ou Allemagne de l'ouest.

Outre les pavillons des thèmes, les pavillons nationaux et les pavillons de caractère privés, le plan directeur prévoit des éléments d'une nature particulière tels que amphithéâtres, bassins et jeux d'eaux, débarcadères, etc.

C'est ainsi que s'élèvera sur l'île Verte une place de la Confédération où pourront être évoqués l'histoire du pays et l'union des provinces en un monument permanent qui par son échelle et sa nature, s'intègrera parfaitement au site de l'île Ste-Hélène et en constituera un élément d'intérêt, de beauté et de confort. La place des Peuples s'ouvrira sur un vaste amphithéâtre extérieur situé à l'extrémité ouest de l'île Verte et sera dominée par une vaste figure de proue représentant le Canada souhaitant la bienvenue aux nations. Cette place des Peuples sera le lieu de représentations diverses de toutes natures telles que choeurs, danses folkloriques, etc. . . . au milieu d'une foule bigarrée dans un décor multicolore de drapeaux et d'oriflammes.

Une ville sous-marine accessible au visiteur repose au fond du lac ménagé dans la carrière qui servit de remplissage à la digue. Sur la berge, côté nord de l'île Verte, une enceinte comportant des gradins ouverts permettra d'assister au spectacle "sons et lumières" qui embrassera toute la ville et sera accompagné de jeux d'eaux et de lumières en premier plan avec des effets musicaux les plus divers. La lisière de terrains qui s'étend au nord de l'île Ste-Hélène sera occupée par des débarcadères, des restaurants et des boutiques de toutes natures.

L'île Verte sera reliée à l'île Notre-Dame par un large pont agrémenté de terrasses, de portiques et de décorations florales qui en feront par excellence le lieu de rencontre des foules entre les deux emplacements principaux. Ce sera également l'endroit par excellence pour assister aux courses nautiques, aux défilés de voiliers et autres activités semblables.

Une des grandes attractions de l'île Notre-Dame sera, sans contredit, le canal qui la traverse entièrement d'est en ouest et qui sera enjambé par de légers et gracieux ponts et passerelles. Ce plan d'eau permettra les manifestations les plus rutilantes et les plus variées.

Sur le fleuve, un grand débarcadère recevra les visiteurs, et plus particulièrement les visiteurs de marque pour leur donner accès directement au pavillons du Canada et des provinces.

La partie nord de l'île Notre-Dame située en face de l'île Ste-Hélène se prête admirablement à l'établissement de jardins agrémentés d'étangs et de parcs boisés et sillonnés de sentiers, de passerelles et d'allées ombragés. Ces jardins, tout en étant un élément d'intérêt seront également un lieu de repos et de délassement et constitueront la transition entre la partie sud de l'île Notre-Dame, occupée d'une façon très dense par les divers pavillons, et l'île Donde qui est située à l'extrémité nord de l'île Ste-Hélène et qui constitue la quatrième partie de l'Exposition.

L'île Ronde étant l'emplacement le moins directement relié aux trois autres, se prête tout particulièrement à une utilisation distincte bien qu'entrant dans le cadre de l'Exposition, utilisation qui suppose un contrôle de nature différente. C'est pourquoi le plan directeur prévoit principalement le terrain des jeux et amusement, ou Tivoli, et un port pour bateaux de plaisance qui deviendra sur les îles un des grands éléments d'attraction. Les accès à ce "marina" ainsi qu'au Tivoli ne seront donc pas nécessairement conditionnés à l'accès de l'Exposition même et il sera possible que les activités nocturnes s'y prolongent même après la fermeture de l'Exposition sur les trois autres emplacements. C'est pourquoi en plus des activités diverses que peuvent comporter le Tivoli, on peut prévoir sur l'île Ronde la reproduction d'un petit port de mer qui sera le refuge des noctambules et reflètera la gaîté et la joie de vivre. Ce sera également l'emplacement de restaurants et boutiques divers.

L'île Ste-Hélène telle qu'elle est actuellement reste au coeur de l'Exposition un élément de verdure et de repos où se déversera le trop-plein de la foule. On y prévoit l'établissement à la faveur d'une éclaircie entre deux mamelons boisés, d'un village québécois, dont la reproduction fidèle deviendrait un élément d'attraction permanent et servirait d'illustration vivante aux artisanats et métiers qui fleurissaient au temps de "l'ancien canadien".

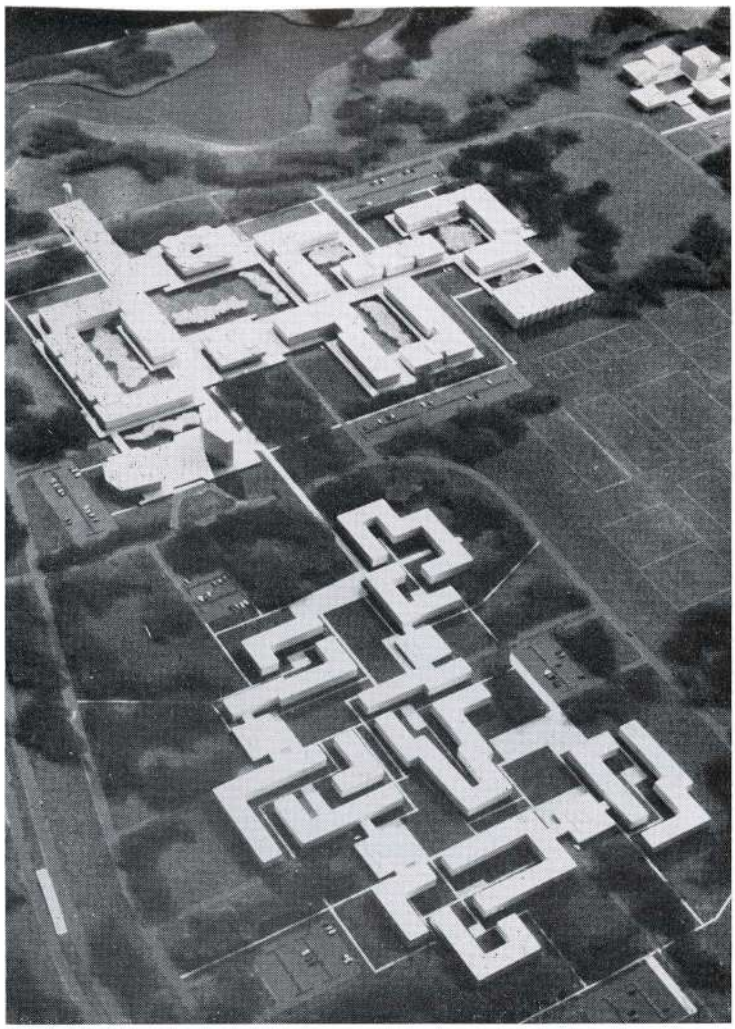
Cet exposé ne couvre qu'un aspect du plan directeur, et ne fait pas état d'autres éléments essentiels au fonctionnement de l'Exposition, notamment des modes de circulation qui prennent ici une importance considérable due aux distances relativement grandes qui séparent les divers secteurs de l'Exposition, non plus que des techniques de télécommunications et de contrôle les plus avancées qui seront mises au service des usagers, ou encore des multiples représentations qui ajouteront de la couleur et de l'atmosphère aux lieux. Chacun de ces éléments pourra faire l'objet d'un exposé particulier. Nous nous sommes restreints ici à la présentation des facteurs qui ont marqué la composition, ou le "parti" de l'ensemble.

M Fiset, MRAIC, DPLGF, MITP, est l'architecte en chef, Compagnie de l'Exposition Universelle de 1967.

Projects

Wascana Centre
University of Saskatchewan
Regina Campus
Architect/Minoru Yamasaki

7 Wascana Centre covers 1300 acres of land and includes a nucleus for the government, arts, education and for recreation.
Photo of model, looking north towards Wascana Lake. Upper left: academic buildings containing classrooms, laboratories, faculty offices, library and space for student activities; lower centre: student residences; upper right: research buildings.



7

Thorvaldson Building
University of Saskatchewan
Saskatoon
Architects and Engineers
John B. Parkin Associates

8 A 70,000 sq. ft. addition to the chemistry building containing research area, offices, laboratories and classrooms.

Landscape Plan
University of Manitoba
Winnipeg
Landscape Architect
Denis R. Wilkinson

9-10 The Buller Quadrangle landscape plan, part of a network of landscape areas and courts, creating protection and stimulation of outdoor spaces. Top centre: Buller Building; lower left: Book Store; lower centre: Administration; lower right: Library; upper right: Home Economics.

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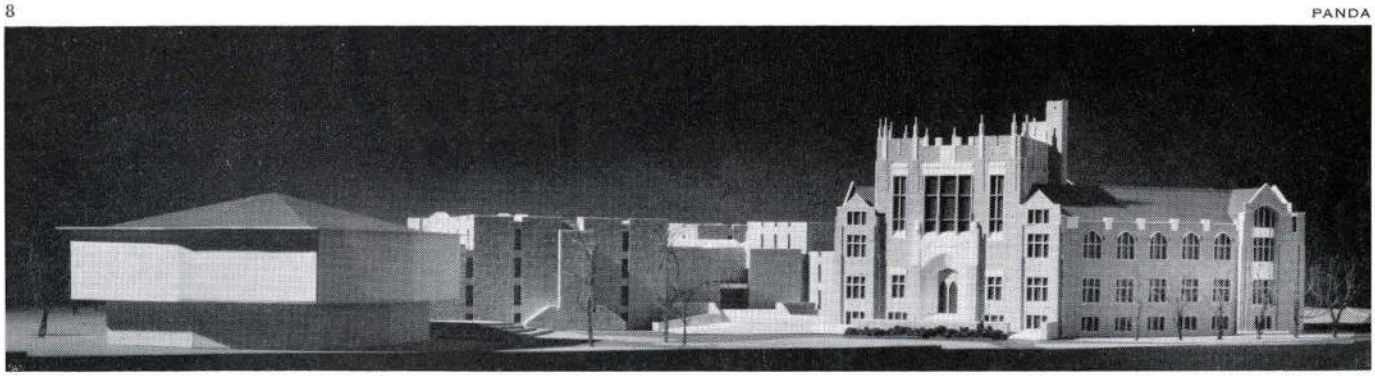

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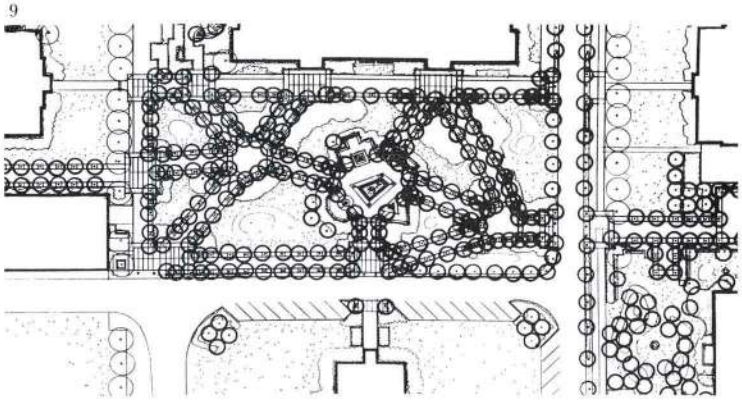

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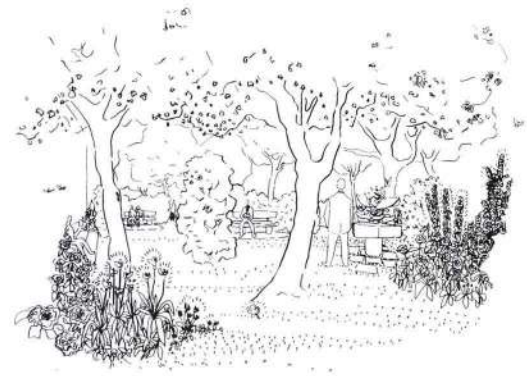

Projects

Bank of Canada Vancouver
Architects/Thompson, Berwick and Pratt

11-14 A 16 storey concrete structure (4-eight foot square columns set in the corners of a 65 ft. square with cantilevered segments) enclosed with heat absorbing glass in bronze sections. The interior perspective shows the banking area on the main floor.

Metropolitan Toronto Court House
Architects/Marani, Morris and Allan

15-16 The building will contain court rooms, witness and consulting rooms, judges' chambers, offices and jury rooms. A library, committee rooms and the York County Law Society are located adjacent to the Court House. An attempt has been made to relate the Court House complex to the City Hall and to integrate pedestrian circulation throughout the site.

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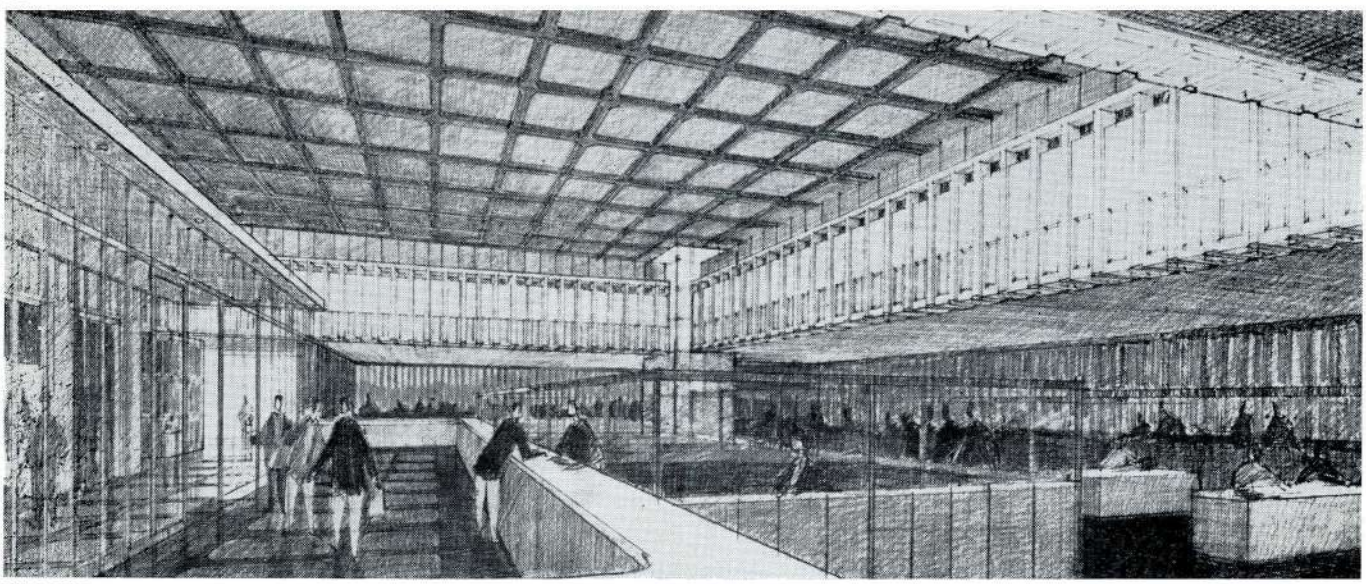

WILLIAMS

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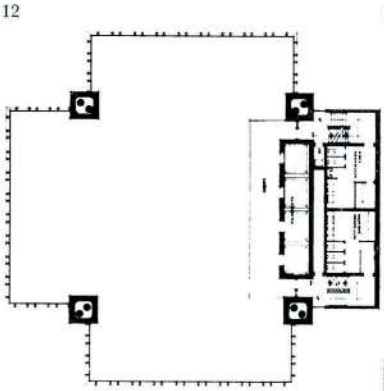

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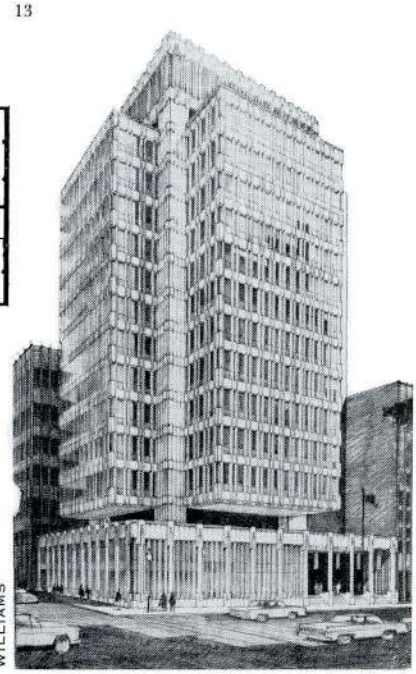

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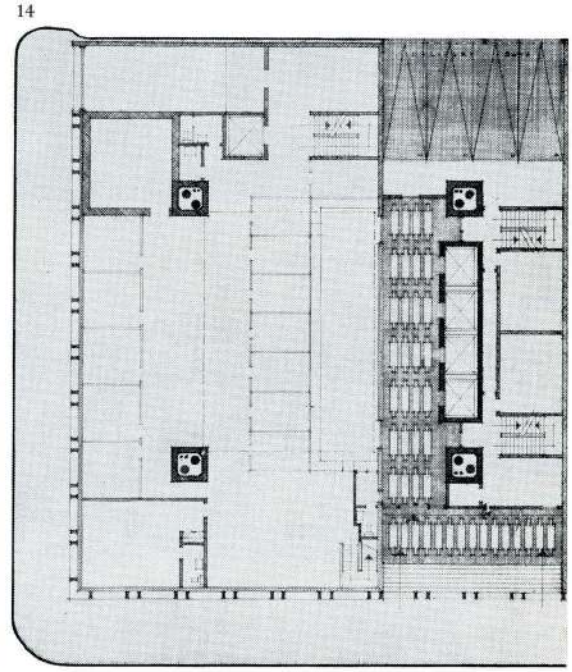

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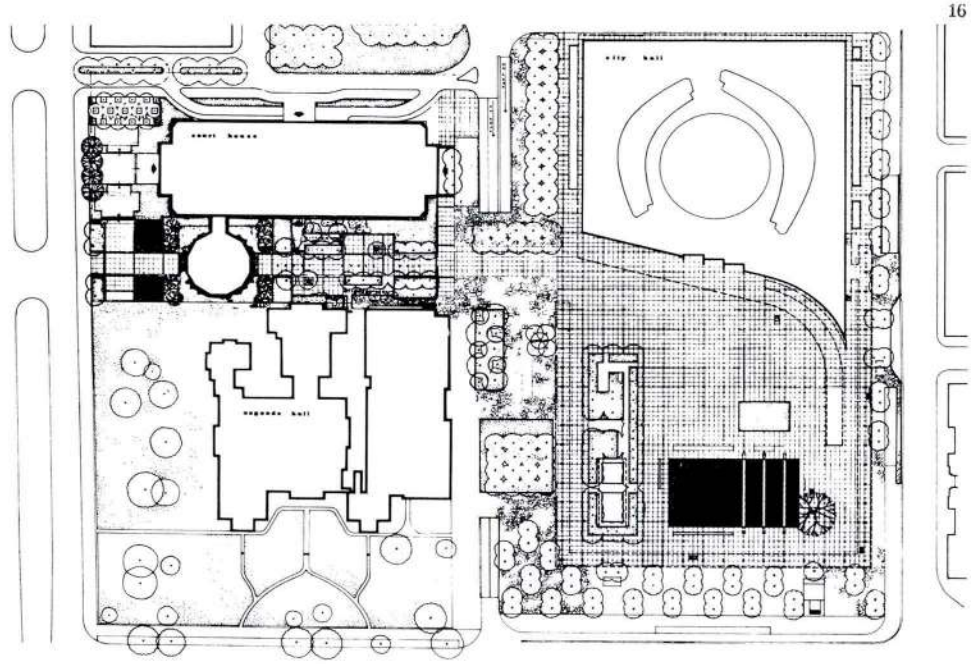

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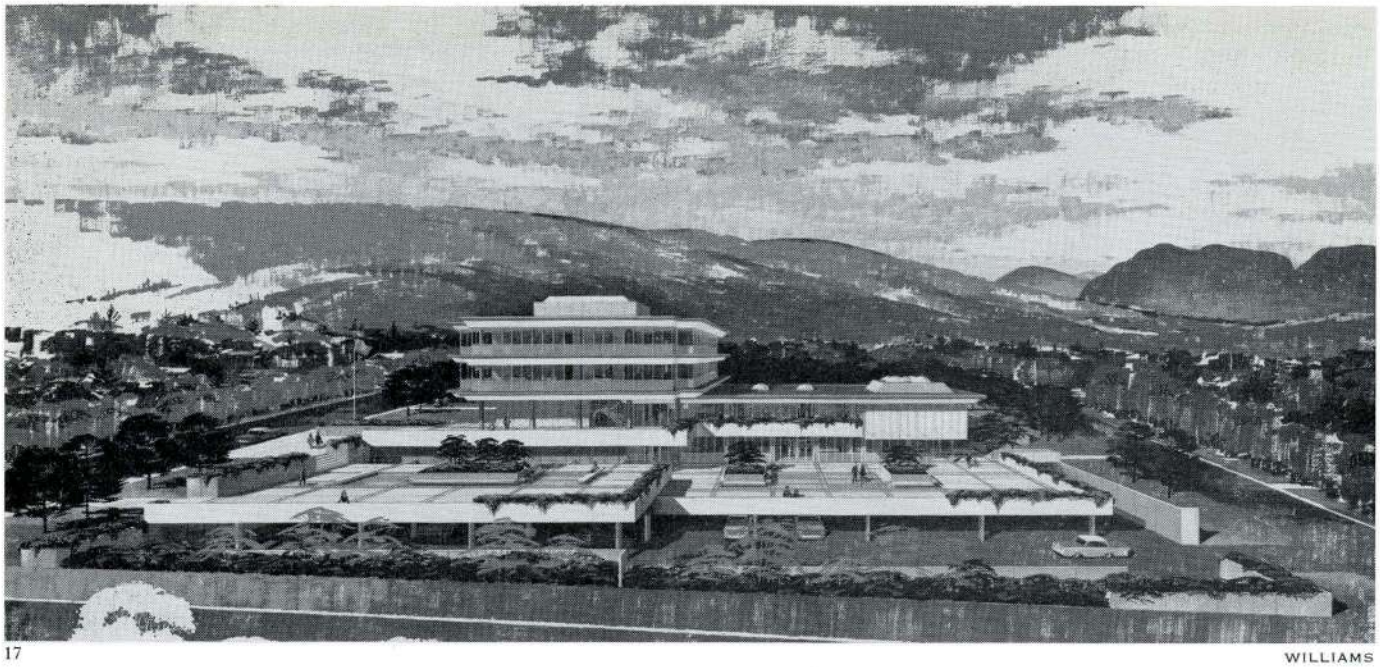

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WILLIAMS

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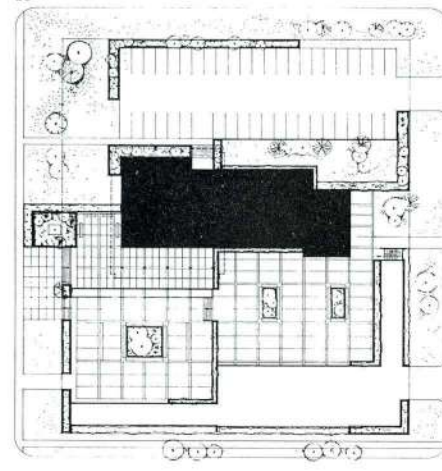

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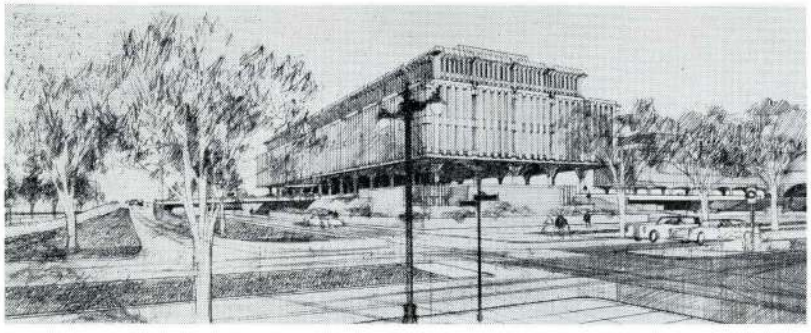

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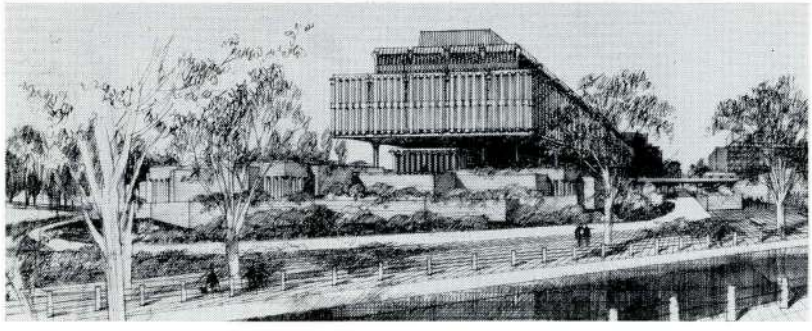

West Vancouver Municipal Hall

Architects/Toby, Russell and Buckwell

17-19 A four storey structure of reinforced concrete with basement and ground level parking. The site development will be executed simultaneously with the building.

National Museum Ottawa

Chief Architect/J. A. Langford

Department of Public Works of Canada

Associated Architects/Thompson, Berwick and Pratt, Vancouver and Crevier, Lemieux, Mercier, Caron, Montreal.

20-21 The National Museum building will be the first unit of a major redevelopment to be undertaken in the centre of the City of Ottawa in accordance with a plan prepared for the National Capital Commission by John B. Parkin Associates. It will form the visual wall at the south end of the redeveloped Confederation Square.

a new chair... "an architect's chair"

There's much about this armchair to appeal to architects . . . structure, design and, particularly, a back rest mechanism that's new and different. It features a rubber torsion spring that permits the back rest to conform to varying back postures. Be sure to see it at the Ontario Architects' Meeting at the "Royal York" in February . . . it's the forerunner of an impressive new line of office furniture...Eaton's "Canadiana."

- **TILTER** mechanism for seat and back features the "Doerner" torsion bar
- **BACK-REST** mechanism features a rubber torsion spring that permits 30 degrees of rotation
- **CASTERS** are "Shepherds" 'Meteor' castors
- **BASE** is made of solid ¾" chromium-plated steel bars
- **SUPPORTS** for arms and back are chromium-plated solid steel bars of ⅝" thickness
- **ARMRESTS** are solid extruded vinyl plastic
- **CUSHIONING** is 3-inch moulded foamed rubber with wider than usual 20-inch width seat and 2½" foamed rubber in its tilting back
- **DESIGNER:** "Jan Kuypers" of Dudas, Kuypers & Rowan and manufactured by Dominion Metalwares Industries Ltd. exclusively for Eaton's

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Industry

Kalwall, a translucent, light diffusing material for walls, roofs, and skylights. Suggested for schools, churches, and commercial buildings. *Kalwall (Canada) Limited, 1450 Queensway, Toronto.*

Aldac, a chromate for aluminum; can be applied by brush, spray, or dip to impart high salt spray resistance and paint bonding.

Nusat, a nickel plating process to produce satin or brush finished nickel plate. *Armalite Company Limited, 907 Oxford St., Toronto 18.*

New system for installing large expanses of glass; called Suspended Glazing. Information is available from the *American-Saint Gobain Corporation, 444 Madison Avenue, N.Y. 22, N.Y.*

Air-conditioning control centre; prewired package, system capacities to 60 h.p. *Electronic Watchmen Limited, 24 Ronson Drive, Rexdale, Ont.*

Adjustable floor box for poured concrete application; threaded for ½ in.-½ in., ¾ in.-¾ in., 1 in.-1 in. or ½ in. conduit. *Conduflor Canada Limited, 130 Queen's Quay, East, Toronto 2.*

Flexible electric heating cable; used for snow removal, warming basements, etc. *Elgee Products Limited, 410 Hopewell Avenue, Toronto 10.*

Glass pipeline from ⅝" to 24" diameter. Suitable for fractionating columns, absorption towers and heat exchangers. *QVF Glass (Canada) Ltd, 115 Howden Road, Scarborough, Ont.*

Chinook Series DD, oil fired forced air furnaces. *Canada Foundries & Forgings Limited, James Smart Plant, Brockville, Ont.*

Bathroom lighting fixtures with shaver outlets; CSA approved. *Columbia Electric, St. Isidore, LaPrairie County, P.Q.*

Luran Regency damage resistant floor covering for residential and light commercial applications on wood or concrete floors. *E. A. Wells Ltd., 1177 Caledonia Road, Toronto 19, Ont.*

Sealtight, a pre-moulded vapour seal membrane with a plasmatic core. *W. R. Meadows of Canada Limited, 130 Toryork Drive, Weston, Ont.*

The Anglyn, a corner type lavatory of enameled cast iron. *Plumbing and Heating Division of American-Standard, 40 W. 40th St., New York 18.*

Fiber glass reinforced translucent panels for commercial, office and domestic applications. *Pilkington Glass Ltd., 55 Eglinton Ave. E., Toronto 12, Ont.*

DuKane Hi-Power Intercom/Program Systems; for high noise level area operation. Request bulletin. *General Sound & Theatre Equipment Ltd., 861 Bay Street, Toronto.*

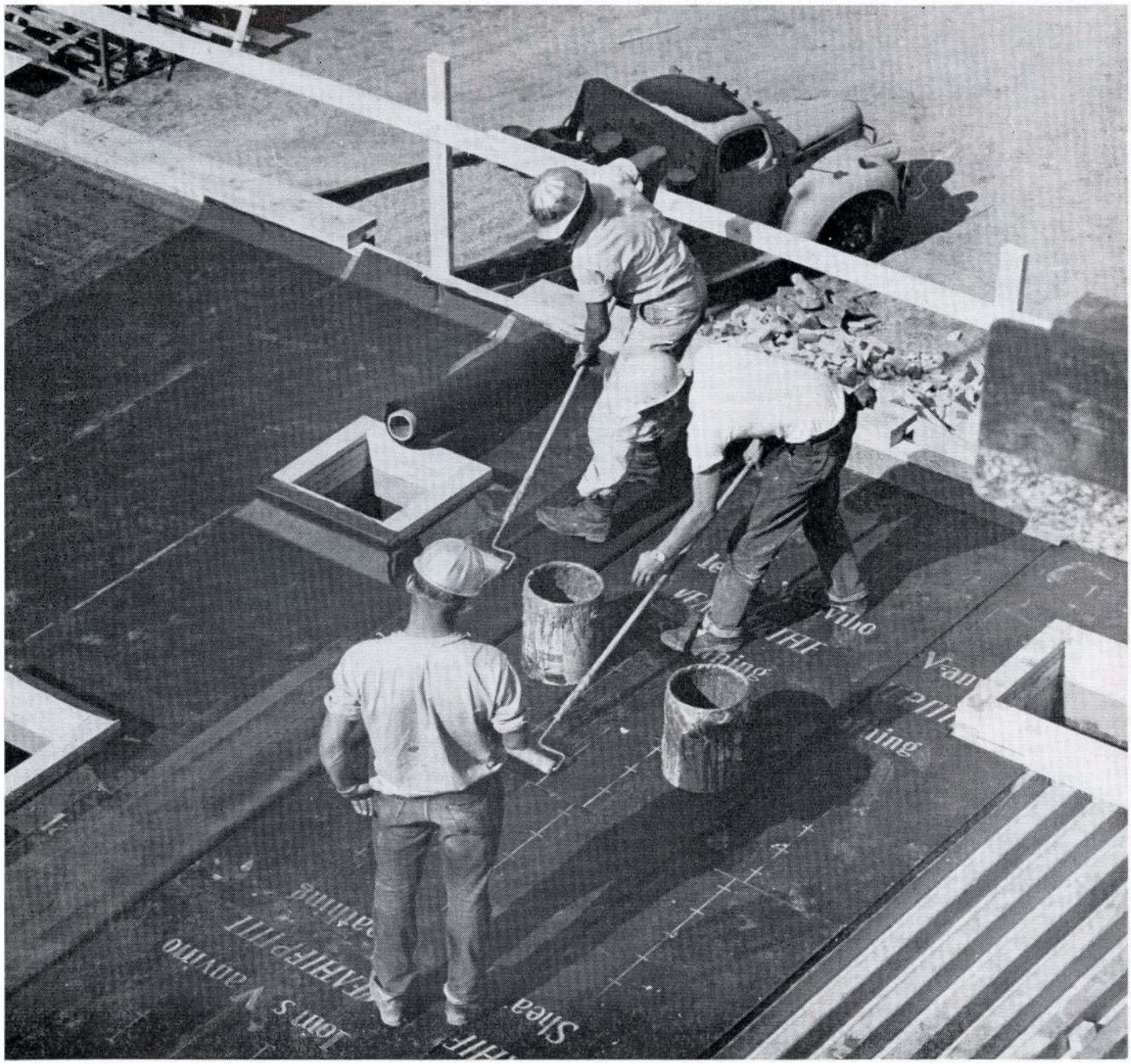
RI Lathurn, a recessed soap dispenser. *G. H. Wood & Company Limited, Toronto.*

LITERATURE

Bulletin P-49b outlining basic requirements for watertight concrete. Reduction of shrinkage, bleeding and segregation to produce strong, durable structural concrete that is highly water resistant. *Master Builders Company Ltd., Toronto 15, Ont.*

"Standard for the Installation of Sprinkler Systems", Canadian Underwriters' Association Standard No. 13, revised issue. Apply for free copies to: *Canadian Underwriters' Association Head Office, 460 St. John St., Montreal 1, P.Q.*

Monthly product information on glulam members and structures. *Amfab Products Ltd., Burnaby 1, B.C.*



Butyl membranes: the most important roofing advance since bitumen

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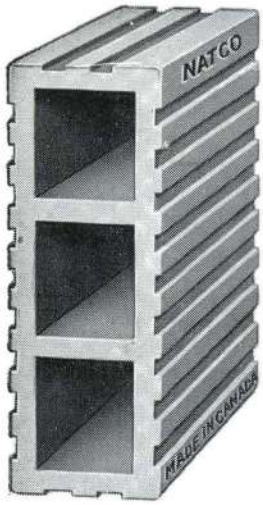

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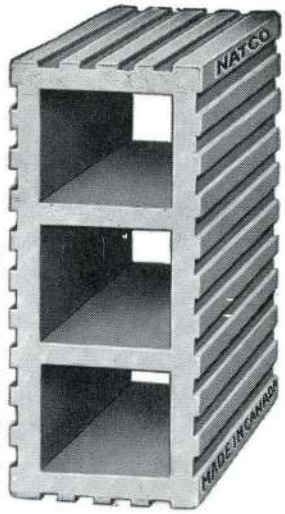
WT 16#



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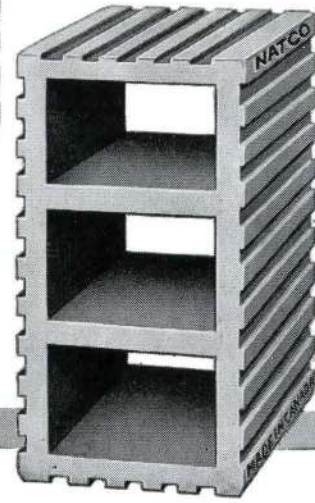

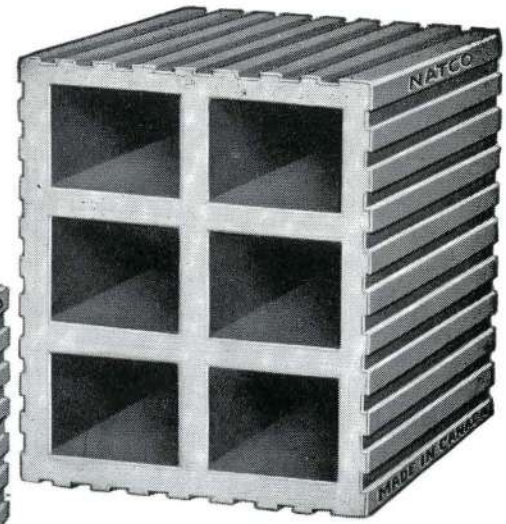

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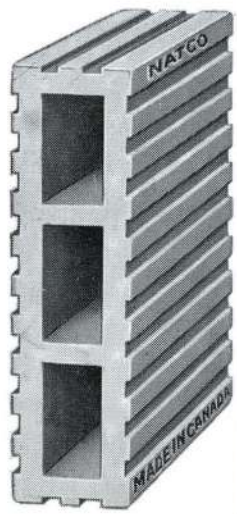

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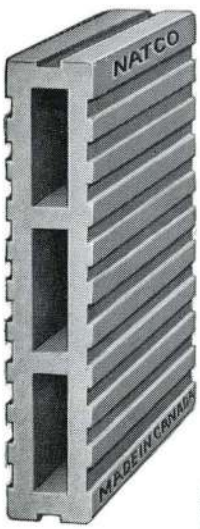

2″ x 12″ x 12″
Partition Tile
Code No.
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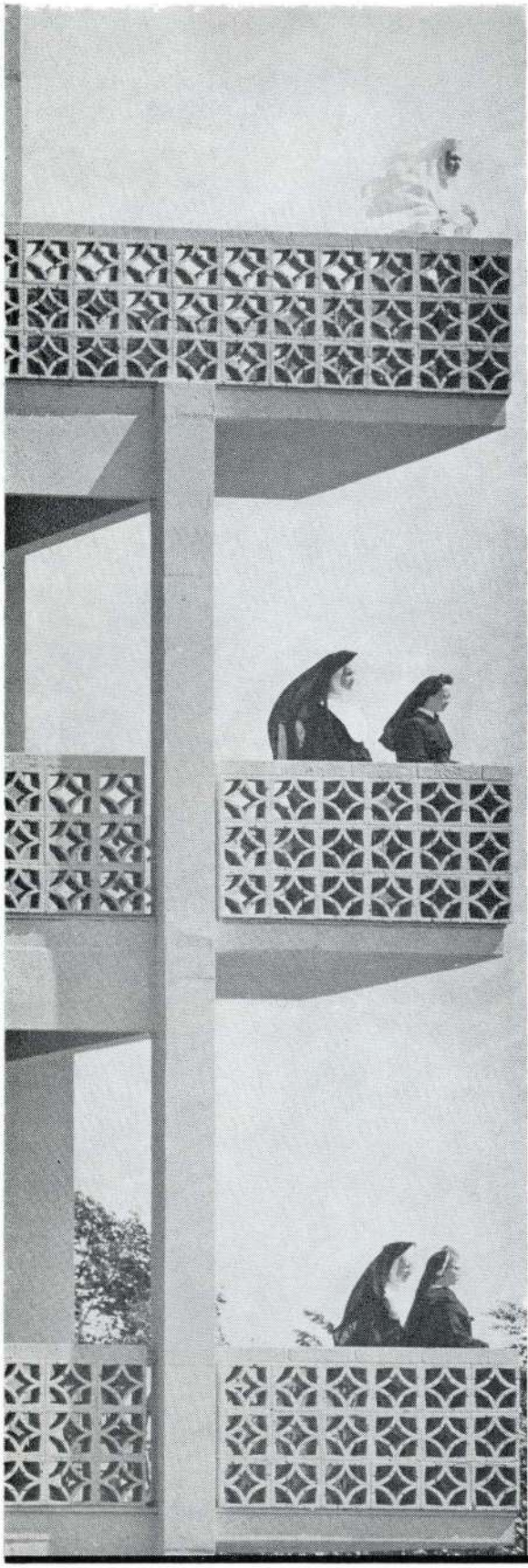

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STRESCOTE has high Weather Resistance and provides pleasing appearance. Easily applied and economical, it protects any masonry surface, interior or exterior, including poured concrete structures, concrete and cinder block buildings, stucco and plaster areas, cement or clay brick walls, cement asbestos siding and shingles.

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STRESCOTE conforms with C.G.S.E. Specification 1-GP-138P and appears on the Index of Accepted Materials published by Central Mortgage and Housing Corporation.

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Photo shows beautiful balconies of St. Joseph's Girls College on the shore of Lake Nipissing near North Bay.
Architect: Manfred J. May, North Bay.
General Contractor: Piggott Construction Co. Ltd., Hamilton, Ontario
Painting Contractor: Denis Biro, Sudbury, Ontario

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Architects: Affleck, Desbarats, Dimakopoulos, Lebensold, & Sise.
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steel speeded construction of Montreal's new concert hall

By using steel to support the roof of the stage house and the auditorium and to provide structural stability for the three balconies, the very best use was made of construction time. Steel is always shop fabricated and structural members can be delivered to the site and put into place at the most expedient time and with the minimum of hinderance to other trades. Small illustration shows Dominion Bridge riggers joining roof sections. Altogether 530 tons of structural steel went into this building.

steel speeds construction

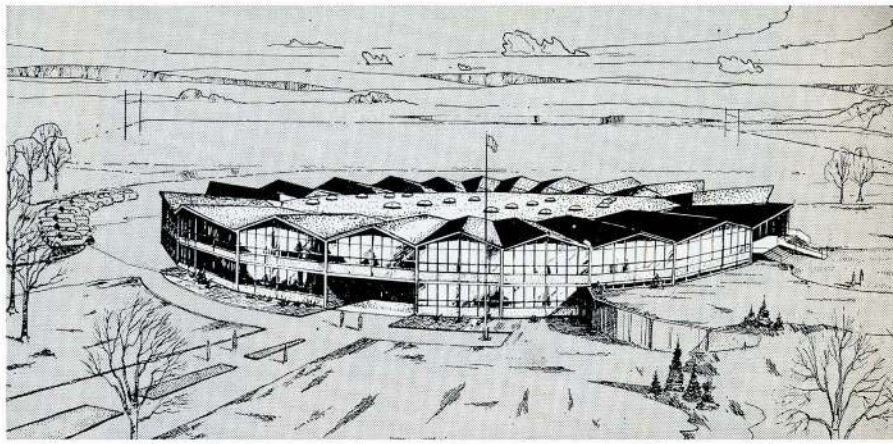
When evaluating framing materials bear in mind all the advantages of steel. Steel goes up fast, gives an early return on invested capital and reduces interest charges on construction loans. Lightweight steel framing keeps foundation costs down and the strength of the material permits large column-free areas for maximum usable floor space. These are some of the many advantages that steel construction practice offers the builder.

Dominion Bridge maintain design, fabrication and erection facilities in most of the major cities. Their Sales and Engineering Departments are always available for discussion, and to assist in any way they can.

166

STRUCTURAL DIVISION
DOMINION BRIDGE

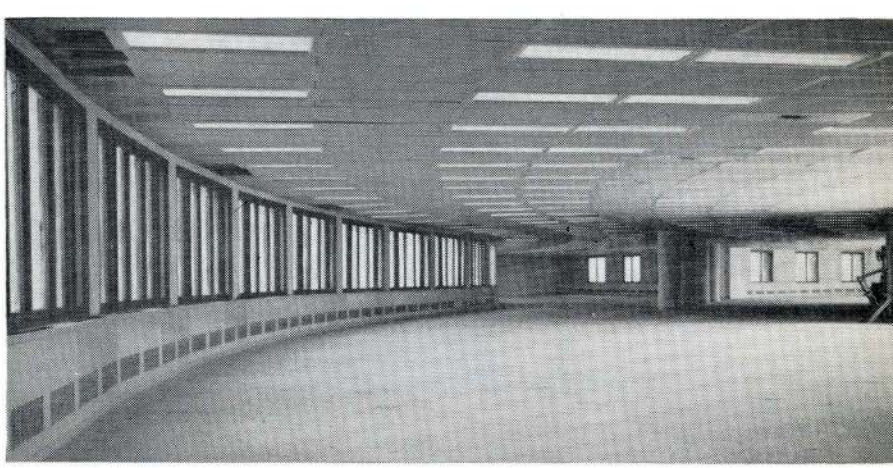
16 PLANTS COAST TO COAST

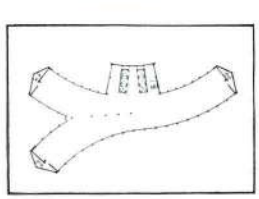


Brule Street School
Dartmouth School Commission, Nova Scotia
Architects: J. Philip Dumaresq & Associates
Contractors: Blunden Supplies Limited

school in the round

Not unique anymore but interesting and efficient. This school is a 20-sided structure, approximately 196 feet in diameter. A gymnasium occupies the core to the full height of the building, and two floors of classrooms are located on the perimeter. A 9-foot corridor on each floor provides access between the classrooms and the gymnasium.





Saskatchewan Power Corporation, Regina
Architect: Joseph Pettick
Consultants: C. C. Parker, Whittaker & Co. Ltd.

"Y" shaped with flowing curves

Structural steel was chosen to frame this unusual building in Regina. Thirteen floors each with column-free areas 270 ft. x 42 ft. provide wide open spaces for the efficient layout of offices. Twenty-three hundred (2300) tons were erected on schedule. A.36 is used for the beams and bracing and A.7 for the columns. Photograph shows one of the 13 floors. Note the flow of the wall line and the vast open area so easily obtained with steel construction.

The architect is a key man in the winter building business

Buyers of buildings, whether large or small, trust implicitly in the advice of their architect.

As an architect you can do your client and your country a service by suggesting that everyone benefits from winter-building.

Most experts in the building field claim that the advent of so many winter building techniques in combination with careful planning by the contractor and the ready availability of men and materials insures the buyer of a top quality winter building job.

In the home building field your client will receive a $500 cash incentive payment under the Federal Winter House Building Incentive Programme if he has his home built during the winter or purchases a Winter-Built home.

Pamphlets covering the details can be obtained from any local National Employment Service Office, from Central Mortgage and Housing Corporation or by writing to the Special Services Branch, Department of Labour, Ottawa 4, Ont.

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Issued by authority of
Hon. Allan J. MacEachen,
Minister of Labour, Ottawa.

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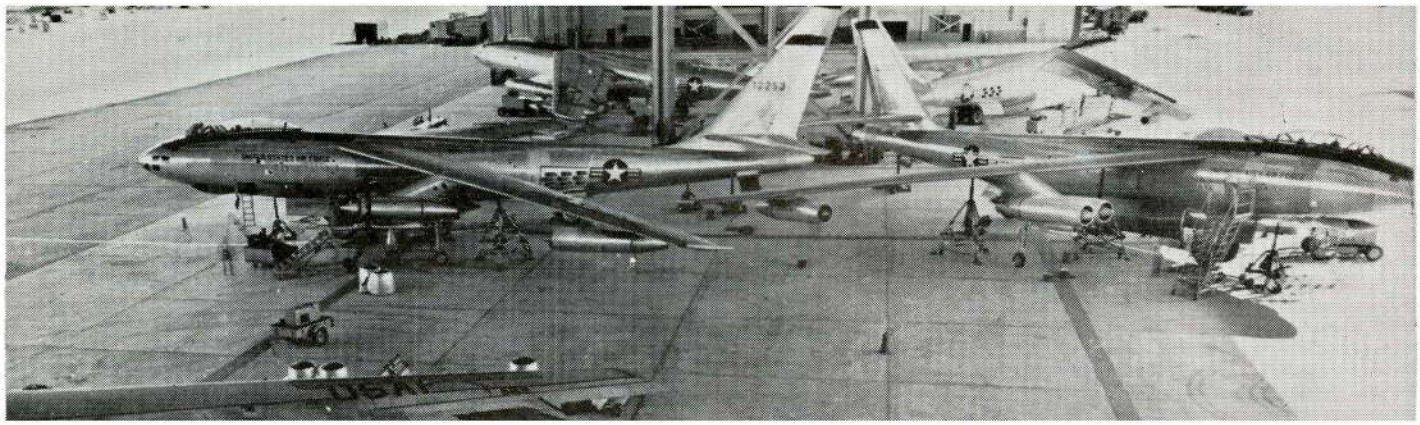

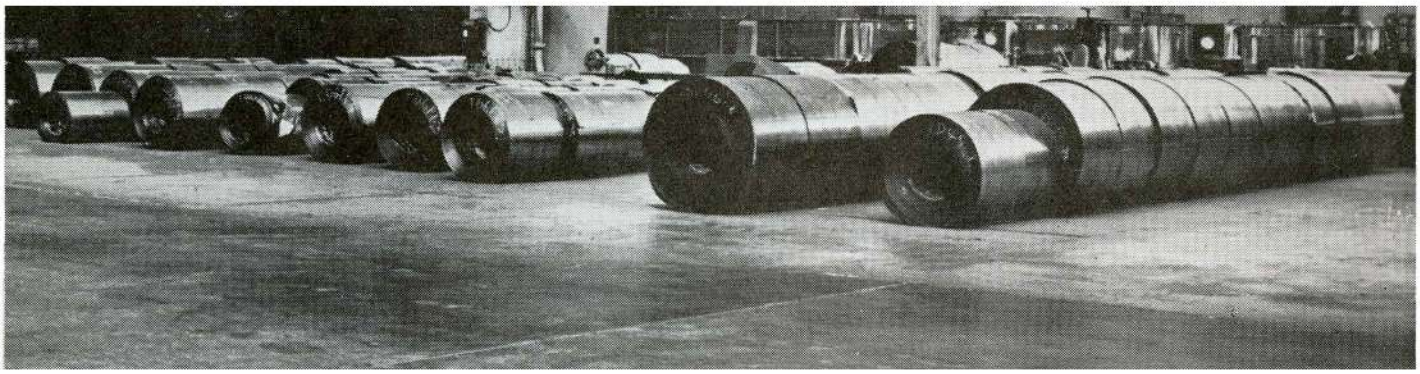

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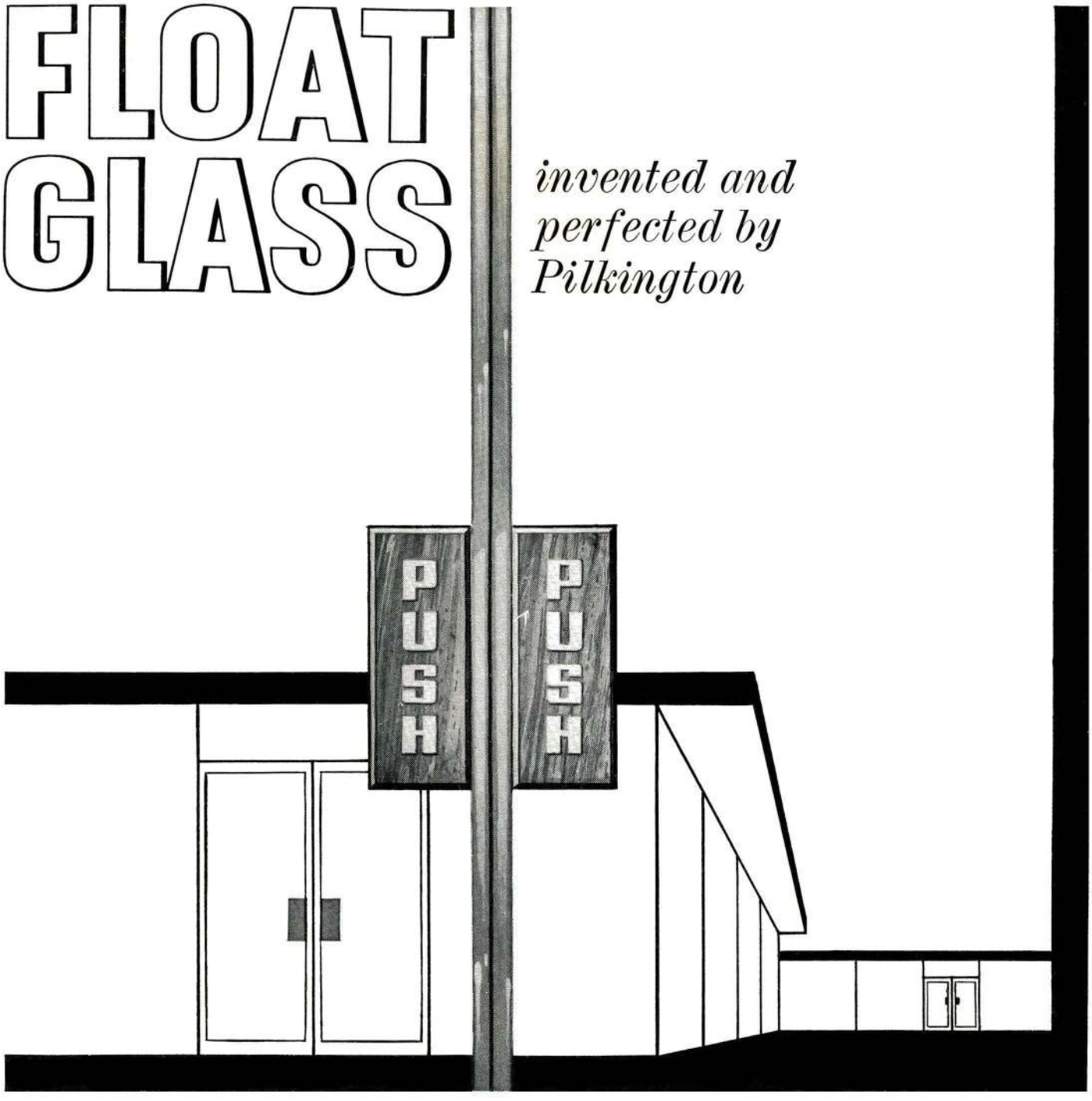
FLOAT GLASS

invented and perfected by Pilkington



It had long been the glassmakers' dream to produce a ribbon of glass with perfect flatness, a brilliant fire-polish on both sides and no distortion, but without the customary need to grind and polish the surface of the glass. In 1952, Pilkington's research team believed they had finally evolved a method for making this dream glass. Seven years later float glass had become a reality.

Pilkington had made the glassmakers' dream come true by casting a ribbon of glass on to a bath of molten metal which, while not marking the under surface of the glass, enables it to take on the perfect flatness of the molten metal. Controlled heating melts out all the irregularities, and the glass leaves the bath with both sides perfectly flat and parallel.

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