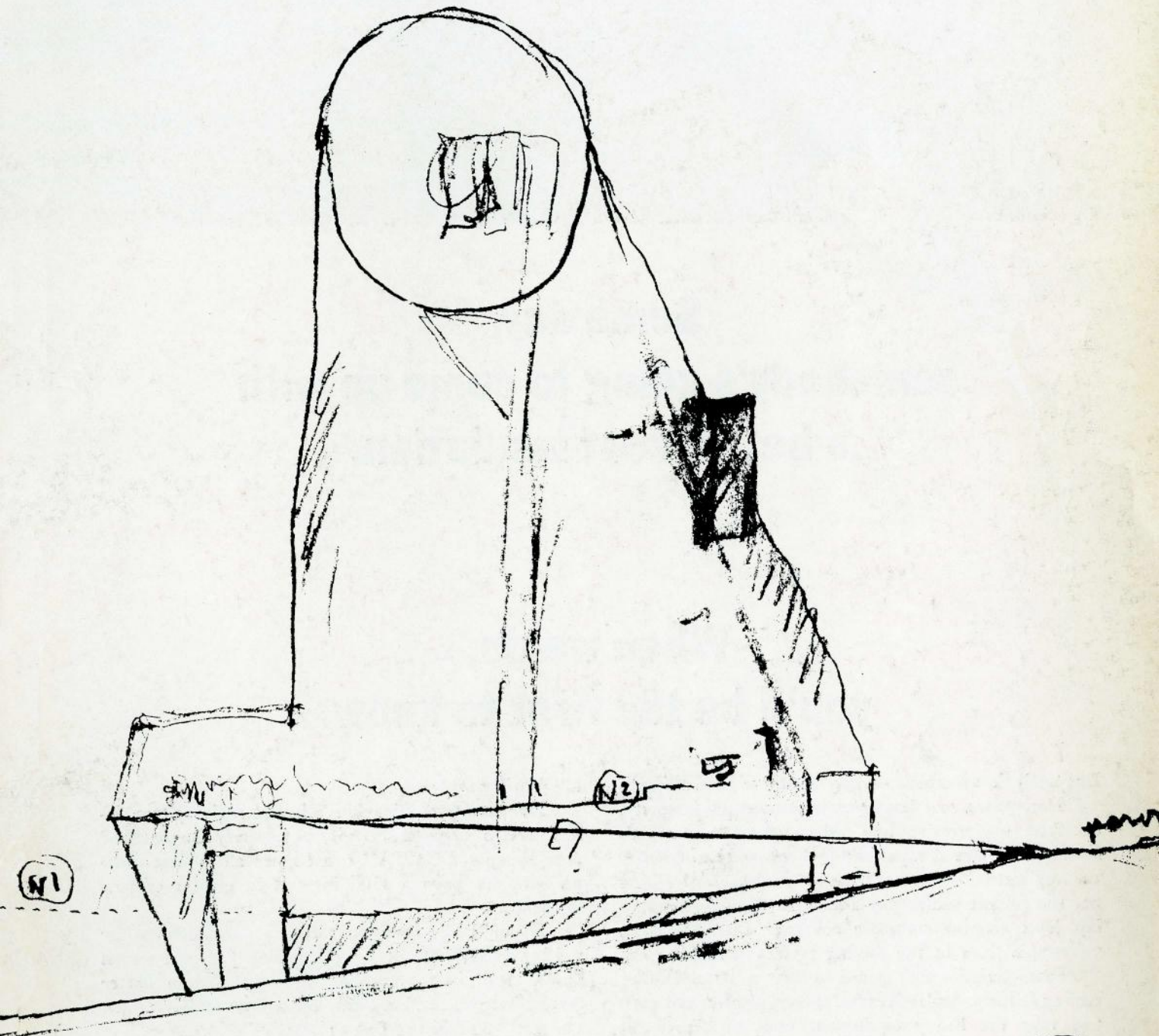


JOURNAL RAIC-L'IRAC

APRIL 1966 AVRIL



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OAA Convention 1966

A full-day seminar on fees at the 51st OAA Convention, February 17-19, Royal York Hotel revealed that architects' fees in Canada are lower than in many countries and hamper professional research.

In a program presided over by C. F. T. Rounthwaite (*F*), Chairman of the OAA Fees Committee, members discussed recommendations to introduce additional fees for optional extension of services. Changes would involve additional tariffs for dealing with government agencies, communities, municipalities and for services such as pre-design and post-design activities including the provision of cost control, budget control, pre-design work with programs, critical path studies, assessment and interior design. The committee hoped that these tariffs and an increase in the number of building categories would bring the OAA tariff schedule more in line with those of other countries.

The seminar was organized to assist the fees committee in its continuing study of the problem.

With 484 members out of 1156 registered this year's convention saw one of the largest attendances yet.

Support was given at the Annual Meeting to the interim report of the OAA Committee investigating official recognition of architectural assistants. The committee was set up as a result of the Council's and Registration Board's feelings that recognition would encourage young people to become trained technicians and technologists, and thereby release architects from duties these assistants could perform. The committee had been requested to make recommendations on procedures for establishing recognition for assistants; categories and qualifications for technical personnel; and to obtain legal opinion with respect to proposed certification, all with a view to preparing a bulletin outlining the proposal for the 1966 meeting.

The liveliest discussion of the entire convention was touched off by James



The 1966 Executive and Council of the OAA, standing left to right John B. Miller, Secretary; D'Arcy G. Helmer, Councillor; Robert G. Fairfield, Councillor; Norman W. Critchley, Treasurer; John G. Spence, Councillor; Ronald E. Murphy, Councillor; seated, Douglas C. Johnson, Past President; Warren M. Smale, President; Patrick M. Keenleyside, Vice-President.

Acland's resolution that the Old City Hall be restored and maintained for the use of Torontonians and visitors. In spite of J. A. Murray's amendment that the matter be deferred until after the presentation of the Eaton's plan, which required use of the site, OAA members finally adopted the motion. The Toronto Chapter of the OAA previously had voted in favor of preserving the old City Hall.

"The Architect - A Re-Assessment" was the subject of group discussions held Friday morning. Gerard Venne (*F*), RAIC President was present throughout the Convention and addressed the General Meeting on Friday.

The Manufacturers' Exhibition this year showed over 100 displays of new materials and techniques in the building construction industry. The School of Architecture and Ryerson Polytechnical Institute displayed student work.

Exhibitors held their usual reception and dinner on Thursday evening at which they presented awards for outstanding achievement to six architectural students from U of T and Ryerson.

Professors W. G. Raymore (*F*) and W. E. Carswell were honored at the Annual Dinner on Saturday evening. A presentation was

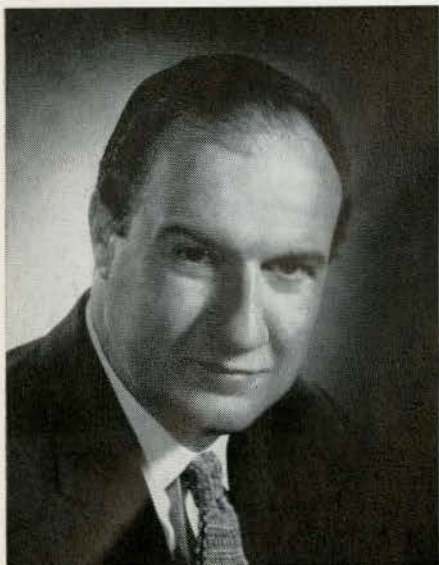
made to Professor Raymore for his work on the Registration Course. He has now been appointed to direct the program of professional studies. Professor Carswell, who has retired after 45 years of teaching at the School of Architecture, University of Toronto, where he conducted the drawing and sketching course, was given an Honorary OAA Membership in recognition of his contribution to the education of U of T students for many years.

OAA Awards of Merit were presented to five graduate students: Robert Robinson, Zygmunt Kapsa, Frank Carter, Michael Thom, all of School of Architecture, U of T; and Ralph Frid, Ryerson.

Robert L. Geddes, Dean of the Princeton School of Architecture, spoke on Friday evening on "Architecture for the Next Generation". Members and their wives were guests of the OAA at the Saturday luncheon when the speaker was Arnold Edinborough, President of Saturday Night Publications.

Warren M. Smale, Simcoe, succeeded Douglas C. Johnson, Windsor, as 1966 President. P. M. Keenleyside, Toronto, was elected Vice-President and Norman Critchley, North Bay, Treasurer. Elected councillors were Robert Fairfield (*F*), Toronto; D'Arcy Helmer, Ottawa; Ronald Murphy, London; and John G. Spence, Toronto.

The cover this month is one of the sketches by Le Corbusier, done October 1962, showing the development of the design of l'Eglise de Firmeny, France. It is published with the permission of Student Publications of the School of Design, University of North Carolina.



Henri-P. Labelle, Président de l'AAPO pour 1966

PQAA Assemblée Annuelle

L'Association des Architectes de la Province de Québec vient de terminer sa 75ème Assemblée Annuelle, les 11, 12 et 18 février 1966. L'Association a voulu marquer cet événement en rendant hommage aux premiers responsables de la formation des architectes dans notre province par l'admission, comme membres honoraires de l'Association, des recteurs des trois universités du Québec qui ont des écoles d'architecture, Roger Gaudry, recteur de l'Université de Montréal, Mgr Louis Albert Vachon, recteur de l'Université Laval et Dr H. Roche Robertson, Vice-Chancelier de l'Université McGill.

L'Association a de plus reconnu la grande importance d'études spécialisées pour les étudiants en architecture en augmentant considérablement la valeur des bourses qu'elle offre aux étudiants des écoles d'architecture du Québec.

A l'occasion de cette assemblée, l'exécutif suivant a été élu pour voir aux destinées de l'Association pendant l'année 1966 :
Président, Henri-P. Labelle ; Premier vice-

président, Guy R. Legault ; Deuxième vice-président, Joseph Baker ; Secrétaire, Michel Barcelo ; Trésorier, Denis Lamarre.

Cette assemblée fut surtout consacrée à l'étude de questions qui se rapportaient à la régie interne de l'Association. Le nombre sans cesse croissant de membres l'amènera à repenser ses structures au cours des prochaines années si elle veut demeurer à la hauteur de la lourde tâche qui lui revient, qui est l'administration de l'exercice de la profession d'architecte dans la province. Ses structures devront tenir compte et de l'évolution de la profession dans le monde et de l'organisation des autres professions dans le Québec.

Un premier pas dans cette réorganisation des structures a déjà été accompli lorsque les membres ont adopté à l'Assemblée Annuelle un nouveau système d'élection étudié par un comité spécial au cours de l'année 1965, système qui prévoit une représentation plus démocratique des membres au Conseil d'Administration.

Les membres ont voté une augmentation de la cotisation annuelle, qui est passée de \$100.00 à \$150.00 par année, pour permettre à

l'Association de leur offrir de meilleurs services. En effet, l'Association jusqu'à maintenant s'en est tenue presque exclusivement à se préoccuper des responsabilités qui découlent directement de sa raison d'existence, c'est à dire la protection du public. En effet, l'Association a surveillé étroitement l'éthique professionnelle de ses membres, a surveillé l'admission à la pratique afin de ne permettre qu'à des personnes hautement qualifiées le droit d'exercer la profession et de porter le nom d'architecte, s'est constamment efforcée d'empêcher la pratique illégale et a de plus constitué, à chaque fois qu'un client d'architecte le demandait, un comité-d'arbitrage bénévole, pour juger des différends entre clients et architectes.

Aujourd'hui, les membres exigent plus de leur Association. Ils veulent que l'Association se préoccupe plus directement d'eux en leur fournissant des services additionnels qui leur permettraient d'améliorer leur pratique, qui leur permettraient de se perfectionner par l'enseignement permanent, qui leur permettraient de se tenir au courant de l'évolution rapide des techniques de constructions, de la conduite des affaires et des besoins changeants du public. Ces

The Saskatchewan Association of Architects 1966 Council, seated left to right F. W. Price, Executive Director RAIC ; J. Preston, Past President ; A. Hermann, President ; M. D. Paine ; standing, Prof A. H. Douglas, G. R. Arnott, E. H. Grolle, D. McLelland.



demandes sont justifiées, car elles ne sont qu'une façon additionnelle, quoique indirecte, d'atteindre le but premier, qui est toujours la protection du public :

Une des premières tâches auxquelles on s'attaquera, sera la préparation de formules de contrats et autres documents légaux ainsi que l'étude de police d'assurance responsabilité professionnelle. Ces domaines avaient été laissés jusqu'ici entre les mains de l'Institut Royal d'Architecture du Canada et les solutions adoptées à l'ensemble du Canada ne conviennent pas complètement à la pratique de l'architecture dans le Québec, à cause du Code Civil et des responsabilités très particulières qui en découlent pour les architectes.

Ceci demande nécessairement dans ces domaines des études nouvelles qui tiennent compte dans l'exercice de notre profession, du contexte Québécois.

NAA Annual Meeting

The Newfoundland Association of Architects' Annual Meeting was held January 26, 1966, in the Science Building at Memorial University, St John's. Decisions were made to donate a \$100-scholarship to the most promising second-year student in the pre-architecture course at Memorial University, providing this student continues studies in Architecture at Nova Scotia Technical College; and, to donate the sum of \$200 annually to the Nova Scotia Technical College School of Architecture to be used at the discretion of the Director.

Frank Noseworthy was re-elected President. Vice-President is T. P. Bolton, Honorary Secretary-Treasurer, B. E. Murphy. Councillors are: P. Holtshousen, W. B. Guihan, C. J. Congdon.

SAA Annual Meeting

Alex Hermann, Regina, was elected President of the Saskatchewan Association of Architects, succeeding John Preston, Regina,



The Newfoundland Association of Architects 1966 Council, left to right, B. E. Murphy, Honorary Secretary Treasurer; W. B. Guihan, Frank Noseworthy, President; C. J. Congdon, P. Holtshousen.

at the two-day annual Assembly held in Regina on the 4th and 5th February 1966. Other officers elected were D. S. McLelland, Prince Albert; G. Arnott, Regina; D. Paine, Saskatoon; P. Scott, Saskatoon; and H. Grolle, Regina.

Committees were established to continue the work of arranging for the Royal Architectural Institute of Canada's Convention in Regina in June 1968.

The meeting noted with regret the imminent departure of its Past President, John Preston, for a new post as Deputy Planning Director, North York Township, effective 1st April.

RAIC Assembly

Honorary Fellowships will be presented at this year's Annual Assembly, June 1-4, Jasper, to Sir Tyrone Guthrie, this year's keynote speaker, and Morris Ketchum Jr., FAIA, President of the American Institute of Architects.

Events

The 8th Annual Convention of the Specification Writers Association of Canada will be held at the Inn on the Park, Toronto,

April 27-30. The Convention theme will be Testing of Building Materials.

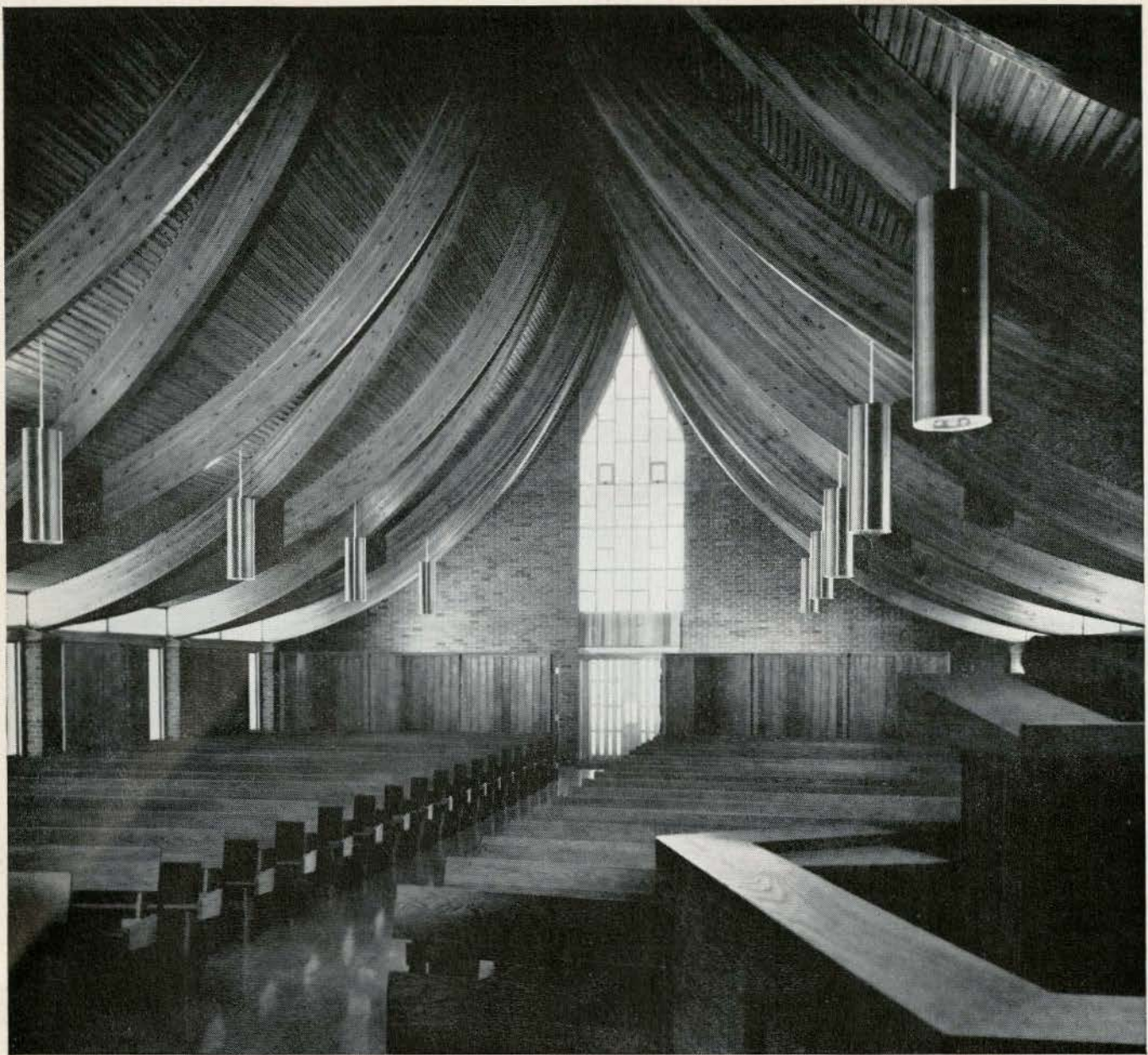
Consumers' Gas will hold their 1966 Architect-Engineer Assembly at the Inn on the Park, Toronto, Thursday, May 12.

The Schools of Architecture, McGill University and Université de Montréal, will give an audio-visual presentation on "Acoustics and Architecture", to be held at 3450 Saint-Urbain Street, Montreal, at 8.00 p.m., June 6.

Pilkington Scholarship

Pilkington Glass Limited announces that the value of their annual Travelling Scholarship in Architecture has been increased from \$2,500 to \$4,000.

We regret that Edilteco (Canada) Ltd was omitted from the list of credits for Place Victoria (October pages 60-73). Edilteco as Project Managers were in charge of co-ordination and supervision of all design and construction.



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From Institute Headquarters

The RAIC Council, as reconstituted by new by-laws in effect from January 1, 1966, met in Toronto on February 25 and 26; President Gérard Venne welcomed the full complement of 15 members in attendance.

Major item on the agenda was the survey report of the Committee on the Profession, submitted by H. H. G. Moody (F), chairman. It was agreed that this report is of such importance to the future of the profession as to warrant printing and distribution to all members prior to the Annual Assembly – and that a full session be devoted to it there. A special meeting of Council in April will consider implementation of the Committee's recommendations.

Council confirmed RAIC endorsement of the new *Building Construction Index*, which replaces the "Standard Filing System and Alphabetical Index". Progress report was submitted on proposed *Handbook of Architectural Practice*.

Hon Secretary James W. Strutt (F) stated that the three group insurance plans, sponsored by the Institute for the benefit of its members, are drawing good response. Over 100 firms have been enrolled in the professional liability plan to date, and twice as many applications are in process. It was agreed that requests to introduce group health and pension plans should be deferred until the present plans are thoroughly consolidated; and that a bulletin to members again make it clear that the contract in each case is between the individual member or firm and the insurance company; the Institute has participated only as agent for its members in negotiating a favourable rate.

Vice-President Charles A. E. Fowler (F) presented recommendation of the Journal Board that a new name be selected, with *Journal RAIC/IRAC* remaining as sub-title. In giving unanimous approval to this recommendation, Council also accepted the Board's suggestion for the new name. Council commended the Board and editors on the marked improvement in content and

appearance of the *Journal* in recent issues.

Robert F. Bouey reported on plans for the Annual Assembly on June 1 to 4 in Jasper, Alberta. Council approved recommendation by the President and the Chancellor of the College of Fellows that Honorary Fellowships be bestowed on Sir Tyrone Guthrie, our keynote speaker, and on Morris Ketchum, FAIA, President of the American Institute of Architects.

Council approved expense of joint meetings of the Architectural Education and Massey Medals committees on March 24 and 25, in Toronto. Also approved were the recommendations of the Scholarships and Awards committee concerning the RAIC Medal, the RAIC Centennial Scholarship, the RAIC Gold Medal, the Ernest Wilby Memorial Scholarship, and Awards for Architectural Distinction.

Support of the provincial associations will be sought for the Community Improvement Program initiated by the Centennial Commission. The Commission's grant of \$4,000 for a book of the photos in our exhibition, *Historic Architecture of Canada*, will go toward printing 6,000 copies to be offered for sale at a reduced price in schools and colleges.

Arthur W. Davison reported on conversations with officers of the Civil Service Commission, Ottawa, and the Professional Institute of the Public Service on behalf of architects in government employ. Council approved a statement supporting the PIPS architects' group in proposed collective bargaining procedures.

Hon Treasurer James E. Searle (F) presented the Institute financial statement for 1965 and the budget for 1966, both of which were approved.

Fred W. Price
Executive Director

Du siège social de l'Institut

Les 15 membres du Conseil, reconstitué selon le nouveau règlement entré en vigueur le 1er janvier 1966, se sont réunis à Toronto les 25 et 26 février. Ils ont été accueillis par le président Gérard Venne.

Le principal article à l'ordre du jour était l'examen du rapport du Comité sur la profession, présenté par son président, M. H. H. G. Moody (F). A cause de l'importance de ce rapport ou relevé pour l'avenir de la profession, il a été décidé de le faire imprimer et distribuer à tous les membres avant l'assemblée annuelle; en outre, au cours de l'assemblée, une séance complète y sera consacrée. Un comité spécial du Conseil se réunira en avril afin d'aviser aux moyens de donner suite aux recommandations du Comité.

Le Conseil a confirmé son approbation du nouveau *Building Construction Index*, qui sera substitué au "Standard Filing System and Alphabetical Index". Il a également reçu un rapport sur l'état des travaux de préparation du *Manuel sur la pratique de l'architecture*.

Le secrétaire honoraire James W. Strutt (F) a annoncé que les trois plans d'assurance collective organisés par l'Institut à l'avantage de ses membres ont été l'objet d'un bon accueil. Déjà plus de cent bureaux ont souscrit à l'assurance responsabilité professionnelle et deux fois autant de demandes sont actuellement à l'étude. Le Conseil a décidé d'attendre que ces plans soient fermement établis avant de songer à donner suite aux demandes de plans collectifs d'assurance-santé et de pension. Il a également demandé que l'on précise encore une fois, dans un bulletin adressé à tous les membres, que dans chaque cas le contrat est conclu directement entre l'assuré et la société d'assurance et que l'intervention de l'Institut s'est limité à la négociation, au nom des membres, de taux avantageux.

Le vice-président Charles A. E. Fowler (F) a présenté un message de la Commission du Journal demandant que l'on choisisse un nouveau nom en gardant *Journal RAIC/IRAC*

en sous-titre. Le Conseil a approuvé à l'unanimité cette proposition et accepté le nouveau titre proposé par la Commission. Il a aussi félicité la Commission et la rédaction de l'amélioration marquée du contenu et de l'apparence du *Journal* depuis quelque temps.

M. Robert F. Bouey a soumis un rapport au sujet des préparatifs en vue de la prochaine assemblée annuelle qui aura lieu à Jasper (Alberta) du 1er au 4 juin. A la recommandation du président et du chancelier du Collège des Agrégés, le Conseil a approuvé l'admission comme Agrégés honoraires de sir Tyrone Guthrie, principal orateur invité à l'assemblée, et de M. Morris Ketchum, FAIA, président de l'American Institute of Architects.

Le Conseil a également accepté d'assumer les frais de la tenue d'une réunion mixte des Comités sur la formation des architectes et des Médailles Massey qui aura lieu à Toronto les 24 et 25 mars. Il a aussi approuvé les recommandations du Comité des bourses d'études et des prix visant la Médaille de l'Institut, la Bourse d'études du Centenaire décernée par l'Institut, la Médaille d'or de l'Institut, la Ernest Wilby Memorial Scholarship et les prix pour services distingués en architecture.

On cherchera à obtenir l'appui des associations provinciales en faveur du Programme d'amélioration des collectivités lancé par la Commission du Centenaire. La somme de \$4,000, reçu de la Commission pour la préparation d'un volume de photographies tirées de notre exposition *L'Architecture historique au Canada*, sera employée à l'impression de 6,000 exemplaires de ce volume qui seront vendus à prix réduit dans les écoles et les collèges.

M. Arthur W. Davison a fait rapport de ses entretiens avec de hauts fonctionnaires de la Commission du service civil, à Ottawa, et avec des représentants de l'Institut professionnel du service public en faveur des architectes au service du gouvernement. Le Conseil a approuvé une déclaration appuyant le groupe des architectes de l'Institut professionnel dans les négociations collectives projetées.

Le trésorier honoraire James E. Searle (F) a soumis l'état financier de l'Institut pour 1965 et un projet de budget pour 1966, qui ont été approuvés.

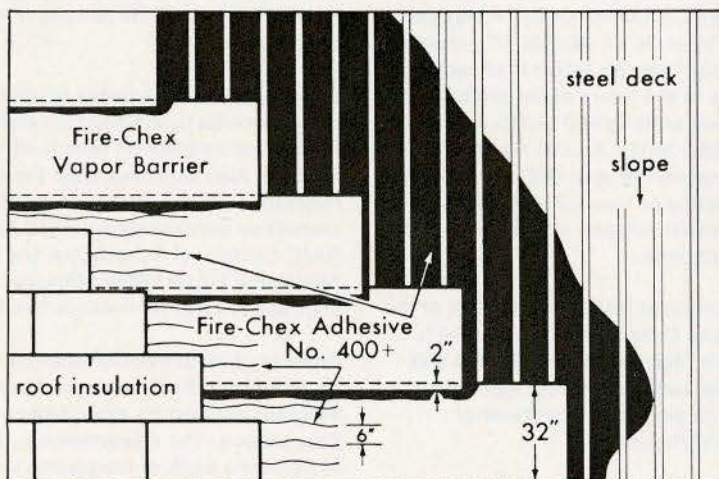
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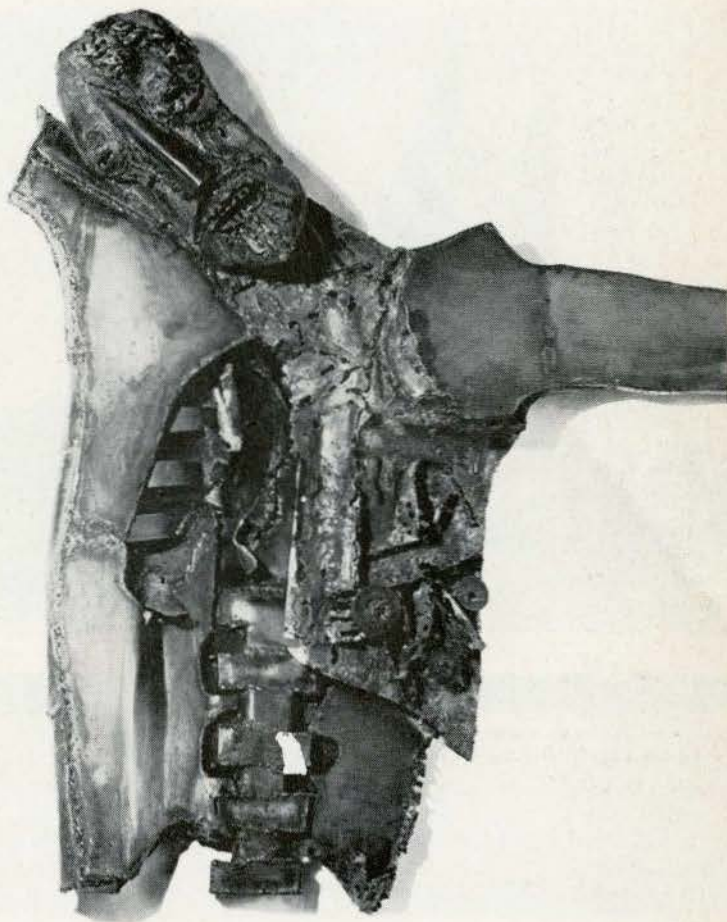
Three years ago I spent an engrossing evening looking at color slides taken by a Roman Catholic priest of church art and architecture. He had been given a Fulbright scholarship to make a world-wide survey of the subject and the task had taken him two years. Aesthetically pleasing and exciting though the collection was, I sensed what I can only describe as a lack of piety in the general approach to the examples of ecclesiastical art and architecture. It seemed that technological acrobatics, plus interior decorating par excellence, were used to produce excellent and exciting "theatres" for the congregations.

There were, of course, exceptions. Saarinen's Chapel at MIT was outstanding – an act of piety in itself.

This survey, with other provocative activities in the promotion of religious art, such as the Blake Prize in Australia and the Regis College Exhibition in Toronto, with, of course, my own extensive personal research into contemporary religious art in North America, set me to thinking about the place of the artist in church architecture today and in the future. Ronchamp, and later architectural excursions employing contemporary artists – whether agnostics, Jews or Gentiles – made me think. What does it all portend? Can an unbeliever create a genuine icon for a specific denomination? What is the purpose of art? What is the purpose of organized religion? What, indeed, is the purpose of architecture in housing these two compatible – or incompatible – spirits for community worship?

Art and Religion

Art is the most inexplicable and yet the most "religious" act that man performs. Even before and aside from the building of habitations, art and survival went hand in hand. Earliest religious practice was to invest with "magic" properties hunting places, sylvan groves, caves and weapons with the cabalistic forms of art. Throughout history (whatever the shifting sands of philosophy



1

shaping the image of the infinite) from the primitive "tribal chief" of the Greek man-god or the "god-made-man" of the renaissance, or the nameless introverted totems of the scientific age man, through his art, has persisted in investing inanimate materials with a metaphysic life and imagery of ambiguous and infinite purpose. This is *the* unique act of man. He is the finite filter of the infinite. His ability to invest inanimate materials with the power to invoke a symbol, and in its material image create a finite manifestation of an infinite conjecture, is the miracle that forever links him with the life force of creativity (whatever that is). The "act" of aspiration becomes tangible . . . the spirit of magic lives . . . *this* is religion,

this is art, the dedication to aspiration made manifest . . . the ability to conjecture and state beyond the limits of one's own existence. Animals leave their footprints in the sand of time. Man, through his art, leaves his soulprints.

Architecture and Religion

Architecture, in aspiring to being an art, can invest the building or habitat with a sense of purpose beyond the specific function of shelter. Art and architecture, in providing a physical refuge for the act of contemplation and dedication, were at some points in history, in sweet accord. An overall philosophy had made image certain

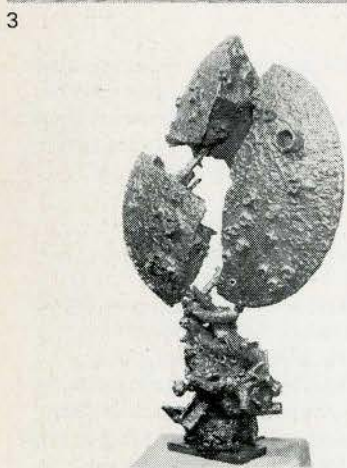
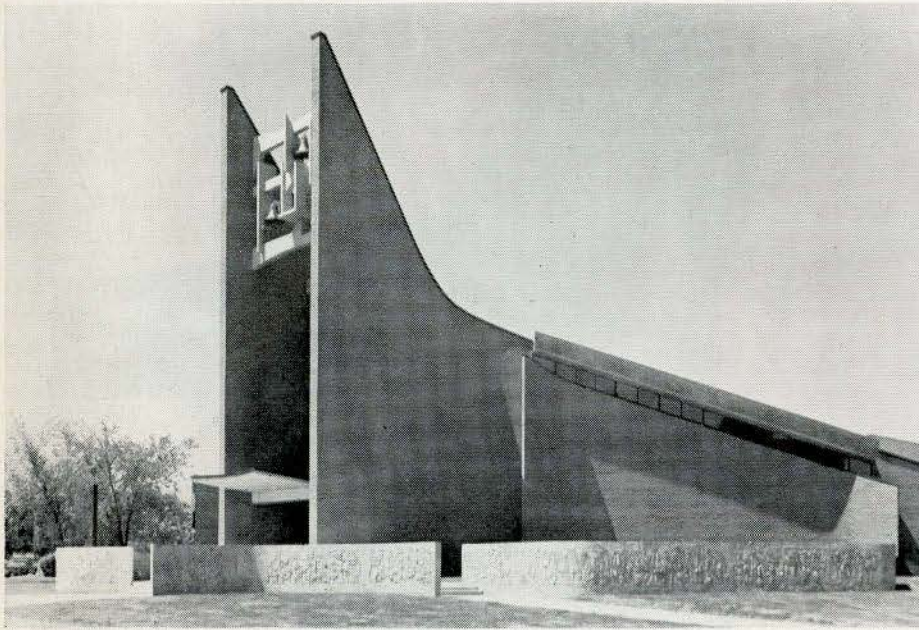
1
"Song of Burnt Cities" Krystyna Sadowska
Regis College Exhibition

2
 Concrete wall by Claude Théberge
 St. Jean Baptiste de la Salle, Montréal
 Mur parvis en béton par Claude Théberge

3
 Detail of wall
 Détail du mur

4
 "Genesis", Roy Leadbeater
 Regis College Exhibition

5
 "Composition", Joan Sarossy
 Regis College Exhibition



4



5

of identity. Art iconography and architectural form were compatible.

Not so today. The unromantic persuasion of architecture to asepticism and absorption in technological function has stripped from it any sense of mystery. Future ruins will reveal no more to the archeologist of man's philosophy than will an empty bird's nest — mere evidence of a departed occupant.

Religion, too, faces the agonizing dilemma of a growing apostasy. The assumption by the hierarchy of authority to impose moral law in dogmatic terms on the original framework of mysticism has confused the issue. Complex and varied purpose and the intellectual growth of man have clearly shown to the dedicated and contemplative spirit that morality (which is merely a survival kit invented by man) has no place in a devotional interest in art and religion.

Whether the "congregational" church rather than the "aspirational temple" will survive is a question only time will answer. In the melting pot of conflicting ideologies man preserves those things which give him the greatest spiritual comfort. He is not the materialist most would have us believe, otherwise compassion for the weak and the persistent production of art, by what is often a non-profit profession, would not survive.

Interim

In the meantime, if the "religious" servants of art and architecture can provide together a "sacred" place worthy of the name, all men will respond. Perhaps then the congregational atmosphere may change.

The point is that the church, or religious art and architecture, must cease to be a collection of buildings, nostalgic or *a la mode* in form, "interior decorated" with artifacts of jewelled glass or hewn stone, pepped up by a contemporary approach.

They should be more emphatically places of devotional aspiration, rich in a "spirit of mystery".

In the matter of Who is to Do, it appears that aspiration towards a metaphysic content is the only prerequisite needed to produce a worthy iconography. Denominational obligations which could, or should, aid the contemplative act because of the overtone of material dogma, would appear to be of little consequence. The church goer and the *religieux* are not necessarily synonymous. Indeed, it may well be that the last survivors with religious feeling are clinging to the raft of art with desperate fingers, hoping that this frail craft of genuine mysticism will survive the awful storm of turbulent unbelief, and that through the small items placed within the temple, the invocation to the indeterminate infinite may survive. The god-head is free to wander in spirit in the ecclesiastic atmosphere of mystery.

Regis College Exhibition

April 11th opens the doors to one of the important exhibitions of the year for the architects. Regis College in Toronto, (3425 Bayview Avenue) will display the "Second Exhibition of Canadian Religious Art Today". This art which is the result of an invitation to contemporary Canadian artists to create a piece of conceptual art or artifacts for use in Churches of any denomination must be new, and the theme selected by the artist.

The first exhibition, in 1963, was an experiment born out of a deep concern, by the promoters, for the deterioration in church art, and an equal concern that the best creative contemporary artists were no longer working for the churches. The successful exhibition included work for all denominations and favored, by invitation only, artists who were already acknowledged competent contemporary practitioners. The exhibition resulted in a few commissions, but not enough.

The state of church art in Canada is appalling. Too few leading Canadian artists are called upon to participate. Those supplying the apparently continuous need for art work (the church and public building are still the main commissioners), are in the main either incompetent or lacking true art imagery. Sheer versatility and competence with materials and "styles" is not really the true prerequisite for the religious artist. He must have deep conceptual feeling for iconography as well as skill. Redundant European graphic design translated into various media, or "modernistic" abstraction, to pep things up, are not the commodities to be sought. Most of the contemporary work is vapid, innocuous, lacking in vitality and smacks of an anxious commercialism and desire to please. It is no better than the sterile mass produced article which it was hoped the custom-made items would replace.

The architect may be well intentioned in his selection of artists to play it safe with clergy and congregation. Perhaps his fear to

enshrine a contemporary idiom is his own, or perhaps he does not really know where to find his man who will respond. At any rate, Regis College, hopes to correct some of the ills.

After the success of the last exhibition, the program has been extended with special guided tours, lectures for the laity and clergy and the publication of an illustrated catalog containing photographs and biographical details. The catalog will be a most useful document for the future builders of churches.

Although the exhibition was not assembled at the time of writing, a preview of photo-

graphs and some of the works holds promise of a show of equal merit to its predecessor. It is good to see the clergy taking positive action where any alienation from the best creative and metaphysic thinking occurs in society - fear and trepidation of censure from either laity or hierarchy has not prevented an enthusiastic body from enquiry and examination of a delicate problem. The planners and builders of new churches and synagogues must avail themselves of the opportunity to see the responses of serious contemporary Canadian artists to the problems of religious art at Regis College, 3425 Bayview Ave, April through May 2. *Anita Aarons*

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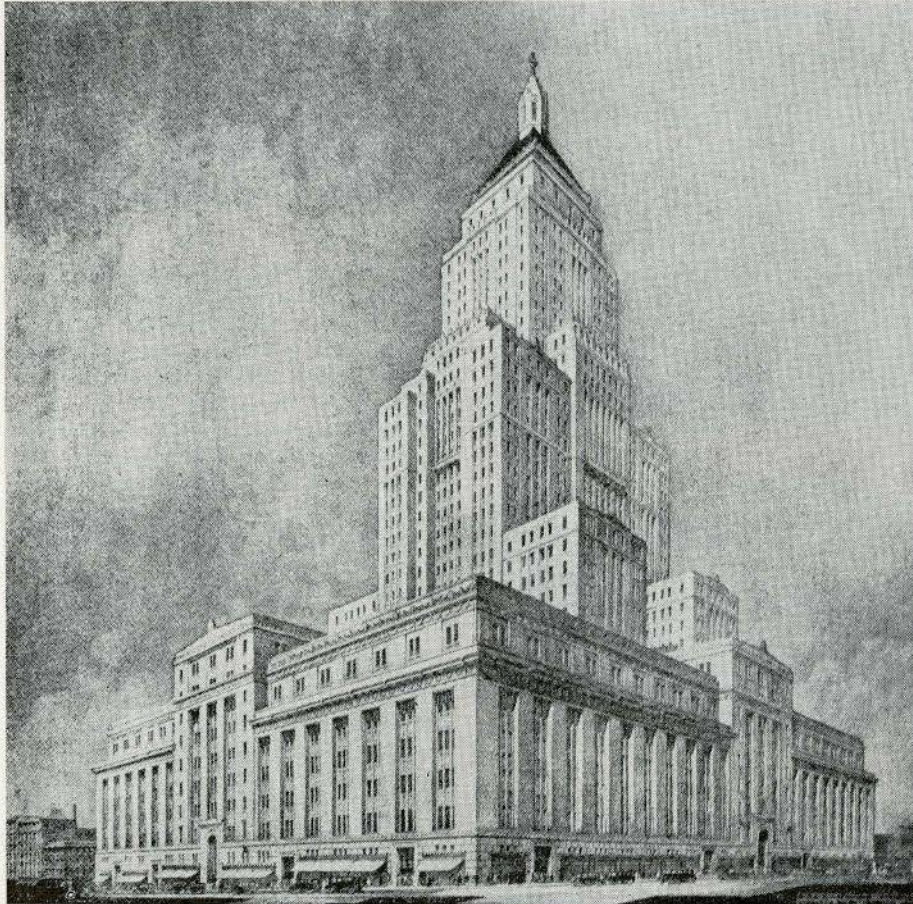
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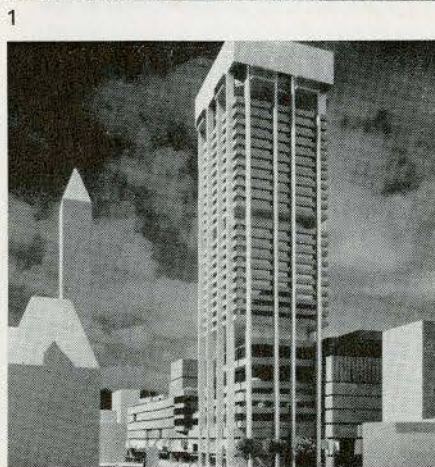


(Fig. 1) is a reproduction of Eaton's proposal of development, taken from the RAIC Journal December 1928.

On November 14, 1928, *The Globe* published descriptions of the intended development. Without too much difficulty they could be substituted for the present press releases currently being published. They include the "impressive arcade" and the benefits provided for the public, "access . . . will be afforded to the public both during and after business hours, adding materially to the attractiveness . . . from the citizens' viewpoint, as well as that of numerous visitors to the city . . ."

Like the present proposals, the following was pointed out: "The work of bringing this great plan to completion will, of course, cover a period of a number of years. The units at present under construction mark the beginning of a colossal task, and further units will be added as may be decided upon from year to year." – *Globe*, November 1928.

From (Fig. 1) it is clear that only the first unit was ever completed. What guarantees are there now that the present scheme will be built? And as an examination of the earlier proposal would indicate, this might be a blessing, if in the process the old city hall was not demolished.



2



3



4

The present scheme (Figs. 3, 4) depends to a large degree, for any architectural merit it may have, on composition of definite forms and elements. As the scheme will be built over a fifteen-year period, and will inevitably change according to demand or lack of demand, the very predicate of the success of the scheme is clearly not a viable one. The impressive model and presentation, that is for laymen, appear too much of a snow job. "It has been made attractive to the city fathers in the usual way development projects are made attractive to city fathers: 'Here is a quarter-billion dollar development and if you don't go along you won't get it.'" — Hans Blumenfeld.

It is also surprising that a firm with the reputation of Skidmore Owings & Merrill would have designed a scheme which apparently does not use the pedestrian systems as formative elements for the location of superstructures.

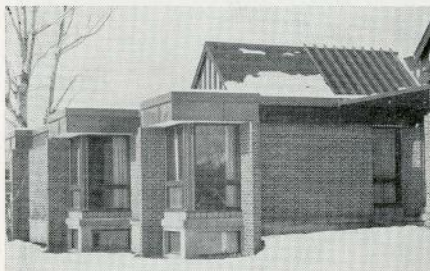
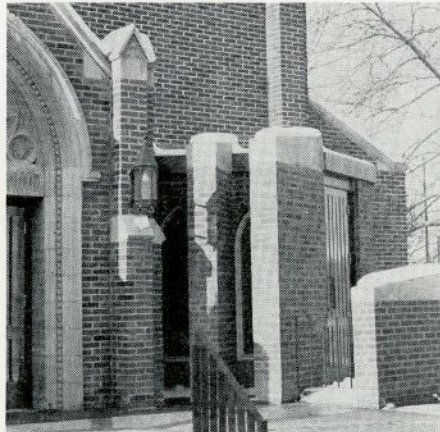
Nor does it appear that the formation of movement systems, both pedestrian and vehicular, are dependent on those on which the area depends.

The questions that have not yet been satisfactorily answered are:

Should a sacrifice *ie* the destruction of Lennox's building, be made to put Eaton's in a better competitive position? Eaton's have twenty acres of downtown property at their disposal at present.

Could not redevelopment, advantageous to the city and Eaton's be achieved without the demolition of the old city hall?

The southwest corner of Bay and Queen needs development. This too is opposite Simpson's (Fig. 2) (clearly an object of Eaton's proposal is to be in a position to benefit from the people visiting that store) a below-grade arcade could still link this element, and Simpson's traffic, to the Eaton's development adjacent to the old city hall. The basement of old city hall could, no doubt, be used in an impressive way. These proposals, which have been culled from a wide variety of sources, need exploring.

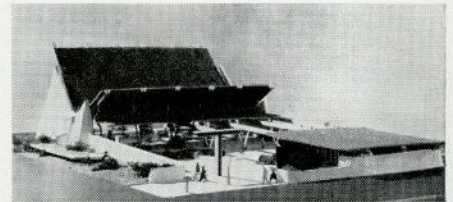


A very subtle and successful addition to an existing church (Figs. 5, 6), by Stevenson & Associates, Calgary, where neither the old structure nor the new have been compromised.

Christian Pavilion for Expo designed by D'Astous Pothier (Fig. 7)

The intention is to display a common unity of purpose between Roman Catholic, United, Anglican, Presbyterian, Unitarian, Baptist and Greek Orthodox churches. Perhaps a case of trying to please all and satisfying none. The verbal explanation is filled with devious rationalizations of obscure symbolism, none of which, except in a superficial way, is reflected in the building.

The March issue of the AIA Journal has published one of Paul Tillich's last statements "Honesty and Consecration". It is a moving



testimony to the man and his work, and has a profound message for architects. For Dr Tillich, the career he might have chosen, other than that of a philosophical theologian, was architecture. What he did as a theologian was not, in principle, different from great architecture. He built in concepts and propositions instead of in concrete, steel and glass. As the relation of medieval cathedrals to the contemporary scholastic systems shows, the two ways of building are not so far from each other. Both express an attitude to the meaning of life as a whole.

He describes in the article his appreciation of the expressive power of modern art, and also is a severe critic: he disliked the sentimentalization of the Christ, which is rampant. In this way he learned to reject the beautifying naturalism of the late 19th and early 20th centuries in religious art. He felt it was not honest.

Via the Bauhaus, he became aware of the falsity of revivalist buildings which led him to the general proposition about the failure inherent in imitation and ornamentation. He was aware that this could lead to an ascetic radicalism. But what worried him most in church architecture are the often arbitrary solutions to the problems of modern church building, and the craving for novelty. Dr Tillich fills his paper with observations on the modern condition, and proffers thoughts of great insight about the environment that church buildings might provide for this condition. We intend, because of the importance of this article, to reproduce it when space allows.

A.J.D.

Vatican II Liturgie et Architecture

Les articles par Anthony A. Kennedy et Denis Lamarre traitent tous deux des implications de la nouvelle liturgie sur l'architecture des églises. Ils représentent des points de vue parallèles et s'accordent dans une large proportion. Nous n'avons pas cru nécessaire d'en faire des résumés.

Both articles by Anthony A. Kennedy and Denis Lamarre deal with the influence of the new liturgy on church architecture. Basically, they expose the same points of view and are generally in accordance with one another. Therefore, we did not see the need for résumés.

Que Penser de Nouveau Style de Nos Eglises?

Nous avons cru qu'il serait intéressant pour les lecteurs de publier, dans ce numéro, un article du Révérend Père Marcel Dubois, liturgiste, membre de la Commission Diocésaine de liturgie du diocèse de Montréal. Cet article a déjà paru dans l'administration paroissiale en février 1966. Nous les remercions de nous avoir permis de le publier ici.

Une paroisse est une communauté d'hommes et de femmes qui croient en Dieu et qui considèrent comme nécessaire de se grouper pour le louer et le prier. Dieu est au centre de la vie d'une paroisse; il en est la raison d'être. Cette primauté du Seigneur doit s'inscrire dans la disposition et la construction de l'église paroissiale.

Or cette église paroissiale est destinée à des personnes qui se signalent ordinairement par un genre de vie particulier: bâtir une église de ville pose des problèmes fort différents de ceux qu'on rencontre quand on construit une église de village ou une basilique destinée à recevoir des pèlerins. De plus, l'édifice qui accueillera l'assemblée des fidèles devra tenir compte du style des édifices profanes environnants afin de s'incarner davantage dans le milieu socio-

logique et géographique. Enfin, le renouveau liturgique actuel dictera certains principes et imposera certaines exigences dont on ne se souciait guère autrefois.

Pour toutes ces raisons, l'architecte qui construit une église en 1966 se voit contraint de produire une oeuvre qui sera presque une création! Et cette oeuvre sera soumise au tribunal du jugement populaire: certains la trouveront originale, d'autres la jugeront terne et morne, quelques uns crieront au scandale parce qu'elle s'éloigne de la "vénérable tradition"! L'architecte d'église doit être prêt à tout, surtout à la critique. De nos jours plus que jamais, à cause de la rapidité de l'évolution, il faut accepter le malaise que comporte toujours l'apparition de la nouveauté. Cependant cette acceptation ne doit pas anéantir l'inspiration. Le formalisme des uns ne saurait nuire aux talents des autres.

L'Eglise et les églises

Certaines personnes croient que rien ne doit changer dans l'Eglise parce que l'Eglise est infaillible et divine dans son institution. Quand la loi du jeûne eucharistique a été modifiée, on a crié au scandale; quand la langue vivante a été introduite dans la liturgie, quand on a commencé à célébrer la messe face au peuple, certains catholiques ont failli perdre la foi! Pour plusieurs, la divinité et l'infaillibilité de l'Eglise sont synonymes d'immuabilité et d'immobilité.

L'Eglise est divine, et c'est pour cette raison qu'elle conserve une somme de vérités qui ne changeront jamais. Mais l'Eglise est humaine aussi; elle est composée d'hommes, elle forme une société soumise au rythme de la vie; et c'est pourquoi elle doit demeurer souple et s'adapter à toutes les conditions nouvelles créées par le progrès des sciences, les exigences des temps nouveaux, les situations politiques, économiques, culturelles, etc.

Pourquoi crier au scandale pour les moindres nouveautés qui ne touchent pas à l'essentiel de la foi? En fixant l'objectif du Concile Vatican II, le pape Jean XXIII n'a-t-il pas

demandé de rajeunir le visage de l'Eglise? Les adaptations de ces derniers temps touchant le jeûne eucharistique, l'abstinence du carême, la messe face au peuple, l'introduction des langues vivantes dans la liturgie, s'inscrivent toutes dans cette perspective. L'architecture des églises ne saurait échapper à ce rejeunissement du visage de l'Eglise: elle s'adapte aux temps nouveaux. Et la foi n'est pas mise en péril pour autant!

Un besoin de rajeunissement

Un rajeunissement dans l'architecture des églises ne comporte en soi rien de mal, bien au contraire! En effet, il faut avouer que c'était là un domaine où l'esprit créateur des architectes s'était assez peu exercé. Jusqu'à ces derniers temps, les quelques formes généralement admises dans la construction des églises nous venaient des pays d'Europe qui avaient connu, eux aussi, une longue période de pauvreté artistique dans le même domaine.

Rien d'étonnant dès lors si la majorité des fidèles, ici comme ailleurs, en était venue à croire que le style des églises ne pouvait pas changer et que l'originalité des architectes ne devait s'exercer que dans l'accessoire. Dans le passé, l'architecture traditionnelle a sûrement produit de belles églises, mais ce n'est pas une raison pour interdire les initiatives nouvelles par la mise en valeur des moyens nouveaux et des talents créateurs que nous possédons. L'architecture profane l'a fait et souvent avec succès.

L'esprit est créateur

Il faut reconnaître que l'esprit humain est essentiellement créateur. Fait à l'image de Dieu, l'homme peut, à partir des idées et des formes connues, faire surgir des pensées et des formes neuves. Tant qu'il y aura des hommes, subsistera ce désir de faire neuf, de dépasser les formes existantes, d'en créer de nouvelles, mieux adaptées aux goûts du temps et aux nécessités de la vie.

L'architecture des églises ne fait pas exception. L'artiste appelé à concevoir un nouveau

temple ne trouvera aucun attrait à reproduire des formes conventionnelles. Lui aussi voudra exprimer dans son oeuvre les aspirations et les goûts toujours renouvelés de l'époque à laquelle il appartient.

Mais toute création n'est pas parfaite

N'allez pas croire cependant qu'il faille pour autant canoniser toutes les réalisations de ces dernières années. L'architecture d'église est un art qui se cherche de nouveau : elle a si peu remué pendant des siècles qu'elle est encore quelque peu engourdie. Nos architectes se sont mis à l'oeuvre. Ils ont créé divers types et différents modèles : l'expérience dira ce qu'il faut retenir. Le chef-d'oeuvre n'est pas du pain quotidien !

Le peuple porte souvent des jugements catégoriques qui reflètent un esprit mal formé ou une culture embryonnaire. C'est ainsi qu'on a pu qualifier certaines églises d'"église-forum", d'"église-garage", d'"église-iglou" . . . Certes la recherche de l'originalité est une aventure périlleuse ; selon que la mesure reste contenue ou déborde, elle engendre la gloire ou le ridicule. Pourtant celui qui évite toute originalité pour n'être jamais ridicule risque aussi de ne jamais produire d'oeuvre qui demeure.

Nous n'insulterons personne en disant que certaines expériences ne seront pas retenues, soit parce qu'elles sont trop osées, soit parce qu'elles ne sont pas fonctionnelles. Nous constatons la même chose dans les modes vestimentaires. Il y a quelques années a paru la "robe-sac". Elle n'a pas survécu. Pourquoi ? Parce qu'elle était moins robe que sac ! Il en sera sans doute de même pour certains styles d'églises. S'il s'avère que certaines formes ou certaines lignes tiennent davantage de l'arène que de l'église, elles ne survivront pas non plus.

Il n'en est pas moins vrai que dans plusieurs paroisses, le premier moment de surprise passé, les fidèles qui avaient jugé leur église trop révolutionnaire, ont découvert avec le temps qu'elle était accueillante, claire, agréable à voir, inspiratrice de vraie piété. Et pour que les fidèles puissent apprécier et

goûter ces nouvelles formes d'église, nous pourrions souhaiter que les prêtres et les artistes unissent leurs efforts pour faire découvrir la beauté cachée que l'Eglise comporte réellement.

Maison de Dieu, Maison du culte

L'église est la maison de Dieu au milieu des hommes. Elle les rassemble pour l'exercice du culte public, notamment le culte par excellence : la messe. Cette idée-là, les bâtisseurs d'église ne doivent jamais la perdre de vue. Toutefois, elle ne commande pas non plus un style unique.

L'église est une présence. Il faut qu'elle tranche dans le paysage ! Il convient qu'elle domine de quelque façon les habitations environnantes. Ce qui ne veut pas dire qu'elle doit surplomber les plus hauts édifices. Le clocher ou le campanile, avec la croix qui les domine, suffisent ordinairement pour marquer cette présence. Une zone dégagée autour de l'église concourt à créer le même effet. Notre Directoire pour la construction des églises recommande l'un et l'autre.

L'église est la maison du culte public. Elle doit être pratique, fonctionnelle et accueillante. Si elle est trop vaste ou si elle épouse la forme corridor, la voix s'y perd, et la vue aussi. Les forêts de colonnes et les jubés sombres et profonds ne peuvent aucunement favoriser la participation active des fidèles à l'action liturgique. Une hauteur démesurée de la nef rend quasi impossible l'éclairage nécessaire.

L'architecture moderne possède les moyens d'éviter tous ces inconvénients. Il appartient aux intéressés de prendre les mesures nécessaires pour que nos églises soient des réussites à tout point de vue.

Conclusion

Toutes les églises qui se sont construites ces dernières années ne sont pas nécessairement belles et fonctionnelles. Par contre, on ne peut dire qu'il n'y a rien de valable dans les productions de nos architectes. Il faut savoir encourager ce qu'il y a de bon et

corriger ce qu'il y a de répréhensible. De toute façon, il ne faut pas bouder tout ce qui est neuf, tout ce qui bouleverse nos vieilles habitudes, sans avoir fait un effort sérieux et loyal de compréhension.

Or les "vieilles habitudes" ne se rencontrent pas seulement chez les personnes âgées. L'âge ne joue pas un rôle bien important dans cette affaire ! Il y a des vieillards qui se montrent plus jeunes que les jeunes eux-mêmes.

Dans chaque diocèse, il existe une commission de liturgie et d'art sacré. Même si les membres de ces commissions ne jouissent pas du privilège de l'infaillibilité, ils sont souvent mieux éclairés que tout autre pour donner certaines directives aux architectes et prendre la défense des réalisations artistiques et liturgiques. Faisons-leur confiance !

Il nous faut des églises belles et pieuses. Toutefois souvenons-nous que le local n'est pas l'essentiel de la piété, même s'il peut la favoriser. La piété vient de l'intérieur, elle origine de l'âme, et elle est souvent et avant tout l'oeuvre de la volonté. Se sentir incapable d'une prière fervente parce que l'église n'a pas les lignes traditionnelles prouve la nécessité d'un renouveau de la vraie dévotion.

Marcel Dubois

The role of the architect in the visual implementation of the Liturgical Constitution.

The Second Vatican Council has given to the Catholic Church a liturgical reformation with an essence so strong as to preclude approaching the post council Catholic Church in terms of a duplication of anything that has gone before.

The new liturgy demands that the whole concept of the church building be rethought to an unprecedented depth. The emphasis on the communal nature of the eucharistic sacrifice demands a new atmosphere that is psychologically conducive to community action and participation. An atmosphere that is lightsome, open, fresh and direct, that permits easy movement of large processions. An atmosphere that is extroverted rather than introverted. The emphasis on the word and on sacred music demands an attention to the science of acoustics that will most certainly affect the physical form of the church. The creative possibilities have barely been scratched — the unlimited scope is what excites me — freedom within the context of the liturgy.

In our increasingly specialized society we cannot make cumulative use of the high degree of expertise amassed by individuals in specific areas, unless we have a *dialogue* one with another — a personal commitment for fruitful collaboration. The architect, essentially visually oriented, must establish communication with the liturgist, priest and parishioner if he is to succeed in producing a meaningful church.

Obviously, patterns of worship have often determined architectural forms, and on the other hand, existing architectural forms have led to interesting and sometimes bizarre developments in the liturgy. The point here is the realization that the theology of the liturgy is the essence of the Catholic church building. Before a solution proposed to a problem by an architect or other artist involved with a church can be meaningful, he must have a solid grounding in the pertinent liturgical requirements.

Pope Paul VI has spoken strongly about the alienation of the arts and the artists from

the life of the Church. The freedom, the freshness, the profound seriousness of current liturgical reform are indicative not only of the need for creative genius, that can shape the ritual act of a worshipping assembly, but also of the promise that an atmosphere in which architects and all artists can profitably work is not far off.

The role of the architect in the implementation of the new liturgy is in a very real sense as an interpreter, in its transformation from a theological concept to a dynamic spatial reality. Because of the many visual manifestations of the liturgical renewal, we can make a case for the thesis that architecture is itself liturgy. In a real sense then, the architect can minister to the Christian community in its public worship and can find in this ministry a challenge, a scope and stimulus for imaginative creations, for a cultural contribution of light and spirit and hope to the whole of society.

Within the broad theological-philosophical considerations of what a Catholic church should be, there are the specific physical areas of prime concern in the new liturgy, in both renovations and new churches, in which creative decisions must be made. The Architect must be vitally involved in the decision-making process in these areas, and he must understand their essence fully:

The Altar — No longer the throne for the Blessed Sacrament reserved, the altar must make evident the meal structure of the eucharistic action. This, together with the emphasis on its "centrality", the provision for concelebration (more than one celebrant), and the simplified actions of the priest at the altar affects the physical form of the altar and the church around it. The altar in the new liturgy poses a design problem that is particularly acute when it must be solved within the context of renovations to an existing church.

The altar is the table of a banquet at which the people are the invited guests. Participation, not divine domination is the determining factor and this suggests that we have seen the last of the three or five step platform.

A one-step predella of generous width seems to be suggested.

The President's Chair — An unprecedented importance has been given to the seat of the celebrant. Formerly little more than a bench at one side, the chair must now symbolize the presidency of the celebrant. He must seem to preside over the entire service even if others are at any given time, alone performing the action proper to them.

The Ambo — The Instruction permits two ambos but clearly favors one. The renewed emphasis on the proclamation of the Word has given the ambo a significant spatial relationship within the sanctuary as a key focal point.

The Tabernacle — While the tabernacle is still permitted on the main altar it is now clearly preferable that it be located elsewhere. This poses perhaps the most difficult design problem as the tabernacle must have a visual and spatial relationship to the altar without being in visual competition with the three centres of action required by the action of the Mass, the altar, chair and ambo.

The Choir and Pipe Organ — There is a new emphasis on music in the Catholic church. Article 112 of the Constitution on the Sacred liturgy states: "The musical tradition of the universal church is a treasure of inestimable value, *greater even than that of any other art*. The main reason for this pre-eminence is that, as sacred song united to the words, it forms a necessary or integral part of the solemn ceremony." Liturgists are suggesting that the choir and organ should be near the ministers to facilitate the direction of communal singing and as a visible part of the ceremony.

The Baptistry — Articles 66 through 70 of the Constitution on the Sacred liturgy re-emphasize baptism and give clear indication of further emphasis to come. Baptism is one of two sacraments (apart from the eucharist) requiring its own space, as was stated in the Declaration to Article 128 of the Constitution, paragraph 10: "There

should be a special place of honor for the baptistry in both cathedral and parish churches". The physical and spatial aspects of the baptistry clearly become a problem requiring an artistic solution.

The Confessionals — The second sacrament requiring a particular space is the sacrament of penance. The confessionals should be designed and placed so as to indicate that confession is a renewal of baptism grace, that restoration to communion with the Church precedes and is a necessary condition for restoration to the Eucharist.

The Stations of the Cross — A permanent feature of almost all Catholic churches and oratories which must be given architectural consideration are the stations of the cross. They are frequently an area where the talents of an artist are employed and this in turn can result in solutions that demand visual attention perhaps out of proportion to function. Are the stations of the cross presently given too much importance? Do they at present pre-empt too much space in a communal area if they are, in fact, primarily a private devotion?

These elements — the altar, president's chair, ambo, tabernacle, choir and organ, baptistry, and confessionals are the physical essence within which the design of the Catholic Church must be established. To be meaningful in terms of the new liturgy, they must be handled in a highly creative synthesis. Because a new approach is demanded by the renewed essence of the church, the end result must be new and fresh.

The architect together with the enlightened priest, liturgist and parishioner, must become in effect part of a team of iconoclasts. Anything creative is, by its very nature, antagonistic to status quo, and therefore will disturb those who wish to remain unthinking and immobile.

Daniel Callahan, in his book "The Mind of the Catholic Layman", points out that "One good reason why the church (in North America) has been slow to encourage reforms is that they overthrow the individ-

ualistic, subjective and devotion-centered spirituality common to older generations of (North American) Catholics. For these Catholics, a religious life which lays strong emphasis on personal salvation, personal devotion, and personal morality, receives a rude shock when confronted with the objective, community-oriented, public character of the liturgical movement". These people will oppose change and creativity — we must accept the challenge. However, we must realize that the parishioners will need to feel at least some security and stability in what to them may seem a maelstrom of liturgical change. The dichotomy of how to provide change within an atmosphere of security and stability adds to the problems facing us. The fact that the chapter in the Constitution of the Sacred Liturgy dealing with sacred art and furnishings, in Article 123, points out strongly that there is no particular style of sacred art adopted by the Church, is an indication of freedom of artistic expression of the highest order. The new liturgy has no precedent in the Gothic cathedrals — indeed, it has no precedent at all.

The architect must be vitally involved with the selection of artists contributing to the church as it is he who establishes the frame of reference within which they must work. Within a musical composition there can be many variations on the theme — there must, however, only be one central theme to which the variations are related — the relation of artist and architect is similar. The architect commissioned to execute a church design becomes in effect a patron of artists for that commission.

What about the need for artists? The desire to involve them is plainly stated in Article 122 of the Constitution on the Sacred Liturgy — "Very rightly the fine arts are considered to rank among the noblest activities of man's genius, and this applies especially to religious art and to its highest achievement which is sacred art." I would like to add at this point, that it is important to realize within the context of the desire to encourage artists that (Article 124) one should "strive after noble beauty rather than

mere sumptuous display". It is not suggested that we should strive for the opulence of a baroque church. In fact, "The spirit of poverty is to inspire the building and the ornamentation of churches", and emphasis is given to poverty as one of the most important of Christian values. Of course, we should think of this poverty in terms of simplicity and humility — there is no suggestion that it is to be equated with meanness or destitution. St. Thomas Aquinas tells us that magnificence is one of the elements of poverty — the cathedral alone has the great right to be a symbol, the parish church must be modest.

Sculptors and painters can bring a great deal to the space that is the church. Trained in the use of materials, light, and color, they may collaborate with the architect in the design of the altar, the celebrant's chair, the baptismal font, the stations of the cross, the lighting, the credence table, and all articles that furnish the space. One area that cries for attention from artists is the consideration of textiles — the vestments, the altar cloths, the tabernacle veils, the use of hangings — textiles can provide an artistic medium that moves and changes with the particular mass and the particular season. The dignity of the books from which the word is read should be considered. These are areas just as vital in renovating as building a church.

Architecture that is deeply creative must spring from a creative program. The church as a building cannot be an architectural problem if it is not first of all a religious problem. The liturgy is the essence of the Catholic Church building and we must understand the vitality of this essence if we are to create with it. One of the most exciting things about liturgical renewal is that it is an open-ended thing that hopefully may never stop. As architects and artists we will not, in the next few years, do anything more than begin the search for meaningful solutions — but we must not do less. The answers are not clear and that is what makes the problem so vital.

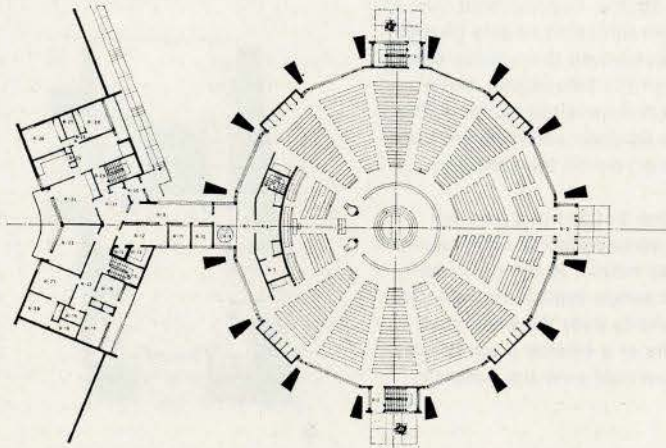
Anthony A. Kennedy

Projet d'Eglise pour Québec

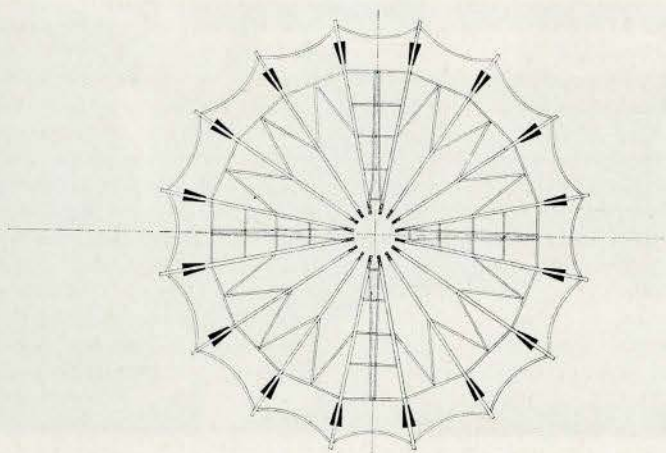
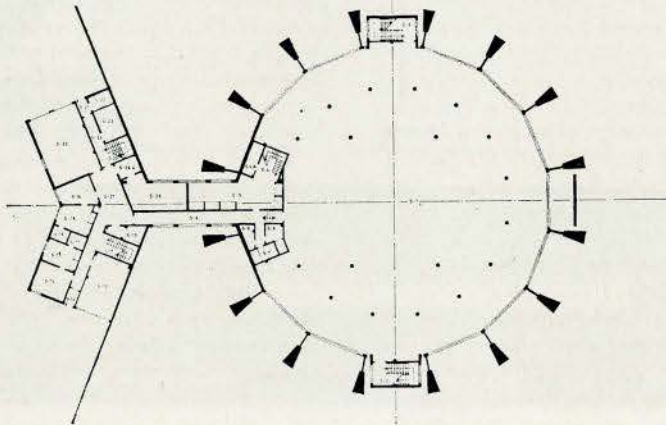
Gauthier et Guité Architectes

- 1
Plan du rez-de-chaussée
Ground Floor Plan
- 2
Plan du sous-sol
Second Floor Plan
- 3
Structure du toit
Roof Structure
- 4
Modèle
Model

1



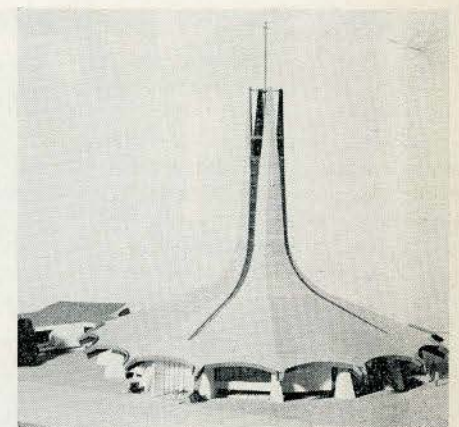
2



Il s'agissait de concevoir une église de douze cents places avec un presbytère, pour des paroissiens à revenus moyens. Les architectes se sont prononcés pour une forme polygonale à seize côtés, dont le centre est occupé par l'autel majeur. Chacun des côtés du polygone constitue en quelque sorte le module de l'architecture et de l'aménagement de la nef. Le sous-sol du presbytère est habitable; la dénivellation du terrain permet d'y circuler de plein pied; celui de l'église contient une salle paroissiale. L'église est recouverte d'une toiture en bois lamellé, qui repose sur seize pieux pyramidaux en béton. Suivant les seize côtés du polygone, la toiture comporte seize pans qui se réunissent au centre dans un mouvement vertical pour former le clocher. L'autel a été placé au centre et tout est axé pour que l'intérêt y soit centralisé; éclairage naturel, mouvement du toit.

La toiture déborde largement tout autour abritant ainsi les entrées et protégeant du soleil les baies vitrées. En plus de ces baies, la prise de jour est également assurée par quatre bandes de fenêtres qui percent la toiture à l'emplacement des axes transversaux.

L'espace intérieur de la nef où la voûte s'élève à cent trente-cinq pieds au-dessus de l'autel est exempt de piliers. Grâce au plan circulaire, les fidèles groupés autour de l'officiant n'en sont jamais éloignés de plus de soixante pieds.



4

St Maurice Roman Catholic Church Ottawa

Murray and Murray, Architects

St Maurice Church is a large parish church in a new suburb of Ottawa, consisting of 750 seats and a parish rectory, with plans for a parish hall to follow at a later date, all of which are grouped around a courtyard and essentially inward looking. The ultimate plan calls for an enclosed courtyard.

The recent liturgical directives have influenced the evolution of the plan insofar as the desire to establish complete rapport between people and priest and have produced an amphitheatre plan, a sloped floor and sloping balcony, with all other liturgical activities expressed in a subdued manner to the dominant notion of hearing mass. The

Baptistry, the Shrine, Confessional area and choir have been relegated to side chapel areas and expressed on the outside at a lower level than the Nave itself, *ie* the Nave is primarily dominated by the waffle roof and the subsidiary activities are dominated by a lower roof on the periphery.

The introduction of light in a positive manner attempts to emphasize the hierarchy of the activities within, *ie* the principal light shaft or cannon breaks through the waffle slab directly over the main altar, and light shafts of a smaller scale break through the low roof over the Baptistry and Shrine.

5

Plan

Plan

6

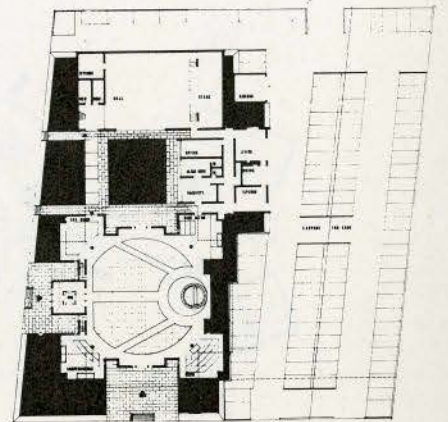
Exterior from entrance

Vue de l'extérieur et de l'entrée

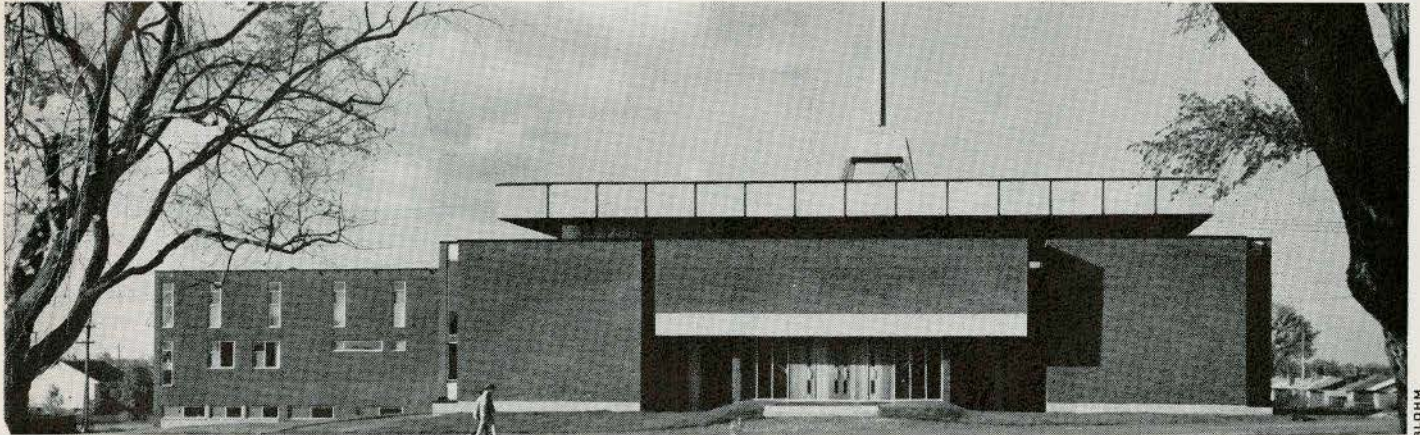
7

Interior from altar

L'intérieur vu de l'autel

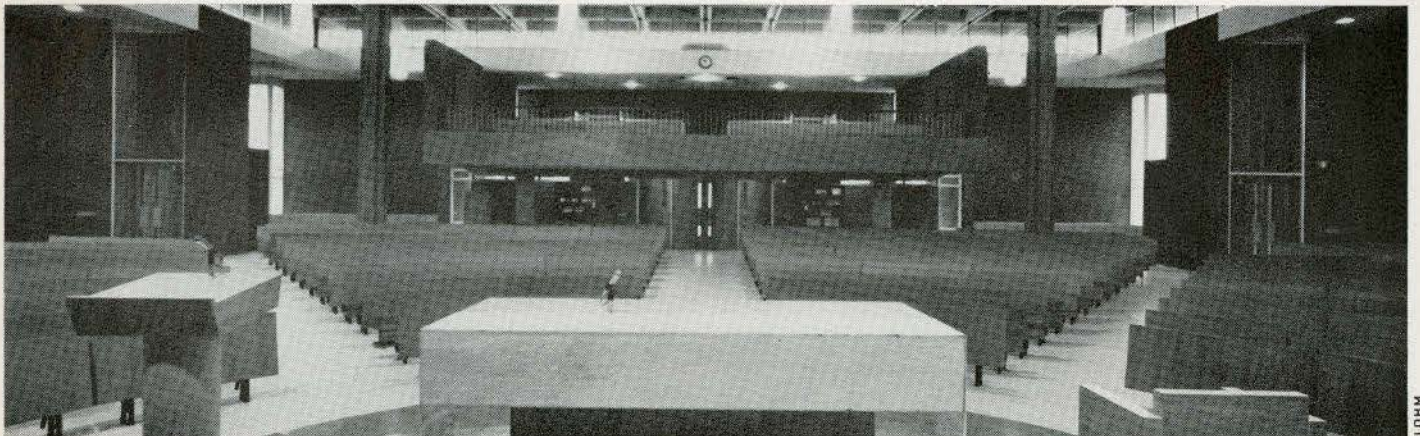


5



6

BLOHM



7

BLOHM

- A
le cercle
- B
le demi-cercle
- C
le segment de cercle
- D
le carré
- E
ou losange
- F

A mon avis, le cercle est éliminé à moins d'y déplacer le centre de l'action liturgique, car il est impossible d'y dire la messe face à tous les fidèles.

Depuis fort longtemps, la construction des églises a été basée sur une tradition inspirée par le symbolisme et maintenue par l'immobilisme de l'église.

Le renouveau liturgique apporté par Vatican II a permis de remettre en question cette tradition. Dans le décret de promulgation du Directoire Pastoral sur la construction des églises pour la province ecclésiastique de Montréal, il est rappelé "qu'une église doit d'abord se concevoir à partir des finalités de son espace intérieur" de même que l'église est "un édifice dont la forme, l'agencement, la décoration même sont en fonction de la liturgie qui se célèbre en ses murs".

L'église sera donc conçue à partir de sa fonction liturgique ; désormais, ses formes en découleront.

1 La fonction liturgique

L'église est le lieu où la paroisse se rassemble pour :

- écouter la Parole de Dieu
- participer à l'Eucharistie
- célébrer le baptême
- entendre les confessions
- prier, se recueillir, vénérer le Saint-Sacrement.

Le renouveau liturgique est axé principale-

ment sur la participation active des fidèles à chacune de ces fonctions et devra se refléter dans l'agencement général et l'architecture.

2 Forme et fonction

Disons d'abord que pour se rassembler et pour mieux participer, on ne doit pas être trop éloigné du centre de l'action. Les formes générales répondant à cette exigence seraient, par exemple :

La forme doit être divisée en deux parties — le chœur et la nef. Ces deux parties sont liées organiquement et leur arrangement doit faciliter la participation active des fidèles. En principe, toutes les formes indiquées répondent à ce besoin, mais il faut être prudent de se réserver, en plus de la surface nécessaire pour le chœur, de l'espace à proximité pour la chorale et l'orgue, le baptistère et l'autel de la Réserve, si celle-ci n'est pas gardée sur l'autel principal. On doit placer tous ces éléments dans leur hiérarchie, tout en gardant l'autel principal comme centre d'intérêt.

3 Le sanctuaire et le présanctuaire

C'est dans ces espaces que se déroule l'action liturgique. On y trouve l'autel, l'ambon et le siège du célébrant, pour la

partie sanctuaire, l'autel de la Réserve, le chœur de chant et possiblement le baptistère, pour la partie présanctuaire. Tous ces éléments doivent être disposés de façon à permettre un harmonieux développement de l'action liturgique.

a L'autel

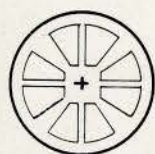
L'autel est le centre de l'église ; dans la hiérarchie des éléments à disposer, c'est le premier. Il importe avant tout de savoir si l'autel aura ou non un tabernacle. Si non, il doit y avoir un autel de la Réserve, avec toutes les difficultés que cela comporte.

b L'ambon

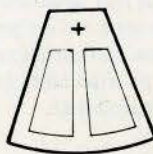
Le lieu de la Parole conserve toute son importance traditionnelle, mais il faut le disposer de façon à permettre un déroulement convenable de la liturgie. Il ne doit naturellement pas nuire à la visibilité de l'autel et du siège du célébrant.

c Le siège du célébrant

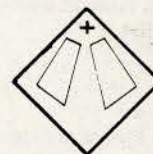
Ce siège est réservé au président de l'assemblée et doit être traité comme tel. Il est difficile de le placer dans l'axe de l'autel, même si on le surélève, car le prêtre ne peut alors être vu entièrement.



A



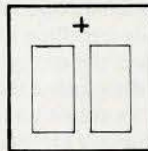
C



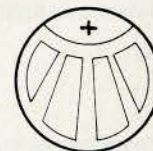
E



B



D



F

d L'autel de la Réserve

S'il y a un autel de la Réserve, il doit être près du chœur et avoir une certaine importance sans toutefois rivaliser avec l'autel majeur. De plus, il est recommandé qu'il soit placé de façon à pouvoir former chapelle pour les messes où l'assistance est peu nombreuse.

Il y a là une dualité dangereuse. L'autel principal peut difficilement avoir le caractère de centre d'intérêt et d'unicité, quand il y en a un second. De plus, il est pratiquement impossible de former chapelle et d'obtenir à la fois des places qui ont une bonne vue de l'autel principal.

e Le chœur de chant

Le chœur de chant, qui doit se placer près du sanctuaire pour pouvoir entraîner le chant des fidèles, présente une difficulté particulière. Les sommiers et les tuyaux de l'orgue ne doivent pas se trouver à plus d'une trentaine de pieds de la console. De plus, pour des raisons acoustiques, les tuyaux devraient se placer le plus près possible de l'axe de la forme créée par la masse des bancs. D'autre part, le buffet ne doit pas enlever d'importance à l'autel. Il y a là matière à conflit dans presque tous les cas. Une solution consisterait à placer le buffet au fond de l'abside, mais en le masquant d'une texture uniforme. On y perd, cependant, l'intérêt décoratif qu'on peut tirer du buffet.

f Le baptistère

Le baptistère se trouve maintenant dans l'église. C'est un nouvel élément à disposer et à intégrer. Il doit être vers l'avant et largement ouvert sur la nef. On doit bien le circonscrire et le mettre suffisamment en valeur sans qu'il vienne en conflit avec les autres éléments.

4 La nef

L'arrangement des bancs autour du sanctuaire est de première importance pour le renouveau liturgique. Les fidèles doivent

être assez près de l'autel pour se sentir partie de l'action liturgique. Par leurs arrangements respectifs, on doit sentir l'interdépendance de la nef et du chœur et on doit également marquer la primauté du chœur. On peut obtenir ces résultats par le volume, la structure et une certaine élévation du sanctuaire et du présanctuaire.

Chapelle des mariages

Par souci d'économie, on tente souvent d'intégrer cette chapelle dans le volume principal et de la vitrer sur l'autel. Les difficultés sont telles pour résoudre convenablement ce problème que je n'hésite pas à recommander fortement qu'elle soit omise ou bien qu'elle soit placée entre l'église et le presbytère et qu'elle ne soit pas vitrée sur l'église.

Le sous-sol

Le sous-sol est généralement aménagé pour qu'on puisse y dire la messe le dimanche. A mon avis, cette habitude est à réprover. Il faut construire l'église assez grande pour éviter qu'un bon tiers de la paroisse assiste à la messe dans le sous-sol. Je suis convaincu que l'économie réalisée par l'omission du sous-sol peut permettre d'ajouter trois ou quatre cents places dans l'église. Quant aux autres fonctions du sous-sol, oeuvres, groupes d'activités diverses, on peut leur aménager trois ou quatre salles au sous-sol du presbytère. Pour les réunions où l'assistance est nombreuse, on pourrait alors se servir de la salle de l'école paroissiale.

Accès

L'accès à l'église est généralement négligé. On se contente de paver une circulation qui mène du trottoir aux portes. On devrait créer une zone de transition entre la rue et l'église en passant, par exemple, dans un jardin ou, si les dimensions du terrain ne le permettent pas, en créant un parvis dont la forme et l'agencement préparent les fidèles au recueillement.

Conclusion

C'est un grand avantage pour les architectes de notre temps d'avoir à leur disposition un document comme ce Directoire Pastoral sur la construction des églises. Toutefois, l'application des normes qu'il contient devrait se faire dans son esprit et non à la lettre, si on ne veut pas retomber rapidement dans une tradition aussi rigide que celle dont nous sortons.

Une quantité de formes peuvent maintenant être utilisées et il est à espérer que plusieurs solutions émergeront de chacune.

Dans l'utilisation de ces nouvelles formes, il est sûrement souhaitable que des recherches soient faites afin de trouver des volumes, pas nécessairement symétriques, qui répondent mieux aux finalités intérieures et aux fonctions liturgiques de l'église.

Denis Lamarre

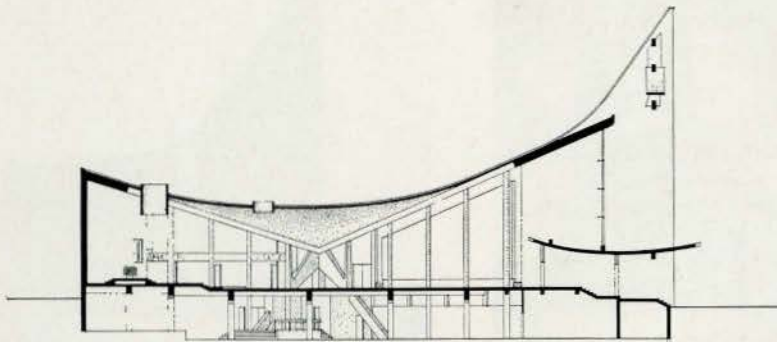
Eglise St-Jean-Baptiste de la Salle, Montréal

8
Élévation de l'ouest
West Elevation
9
Coupe en travers
Cross Section

Architectes Lemay et Leclerc



8



9

10

Plan

Plan

11

Élévation de l'est

South elevation

12

Détail de l'entrée

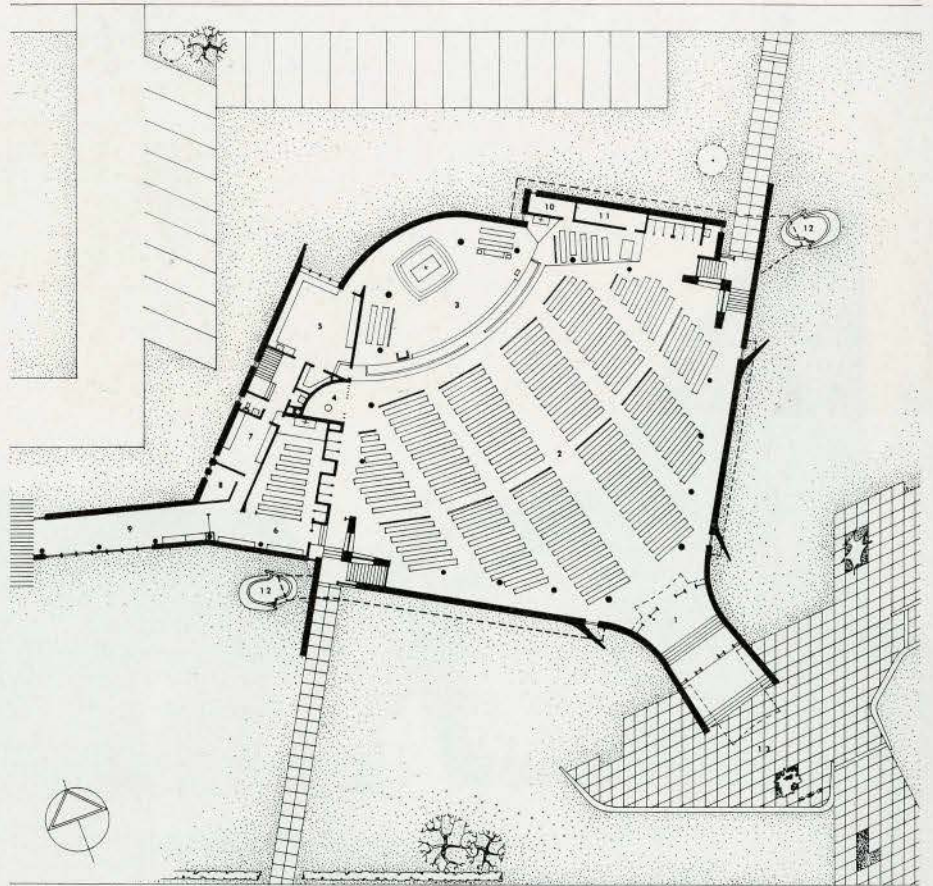
Entrance detail

L'église St-Jean-Baptiste de LaSalle à Montréal a été conçue en fonction de la nouvelle liturgie. Le plan est construit sur un carré. Les bancs sont disposés en éventail autour de l'autel placé dans l'un des angles. Cette disposition permet de loger neuf cents fidèles sans qu'aucun ne soit trop éloigné de l'autel. La forme de l'église découle de la fonction liturgique et de la recherche plastique ; le symbolisme y est exclus.

La structure de toit est faite de câbles de tension ancrés à des poutres latérales en béton armé. Des panneaux de béton préfabriqués sont déposés sur les câbles pour former le pont du toit.

L'éclairage est fait par des prises de jour indirectes et des puits de lumière dans la nef et par un grand vitrail au-dessus de l'entrée.

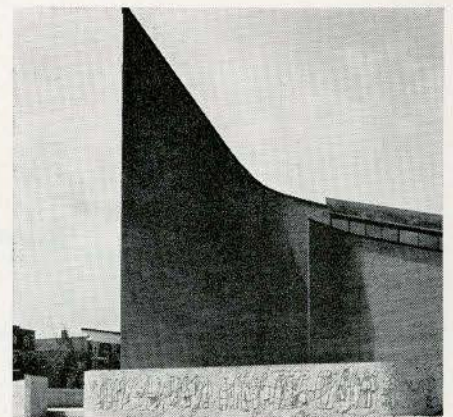
Le parvis est protégé de la rue par des murs courbes en béton comportant des bas-reliefs qui illustrent la vie du saint patron de la paroisse. Ces bas-reliefs, le chemin de la Croix, le statuaire et les vitraux sont l'oeuvre de l'artiste montréalais, Claude Théberge.



10



11

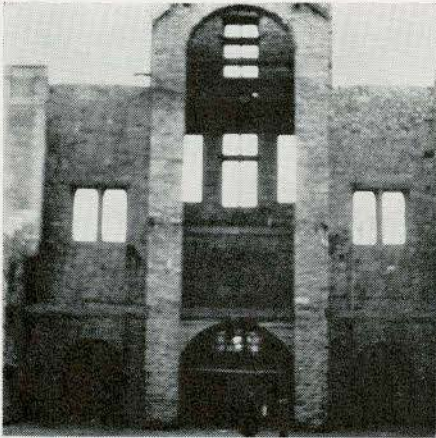


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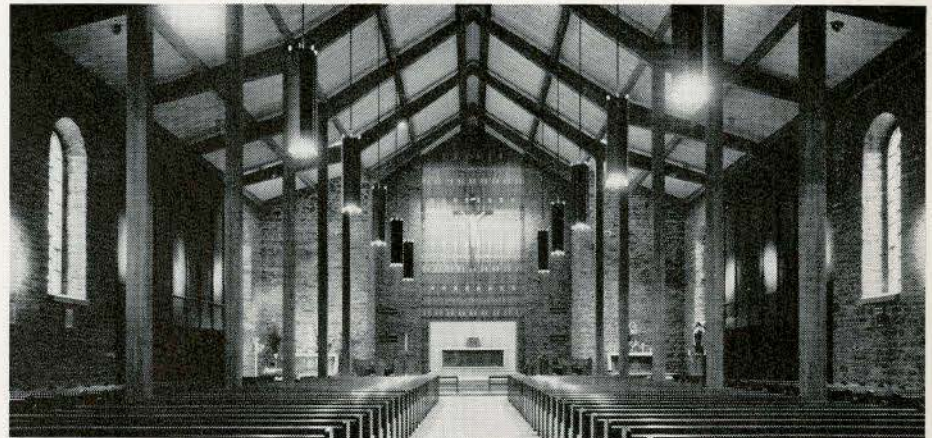
St Gabriel's Church (Renovated) Montreal

John Bird, Architect

- 13
Remains of burnt out shell
Débris de l'église détruite par le feu
- 14
Completed renovation
Rénovation complétée
- 15
Plan
- 16
Section
Coupe

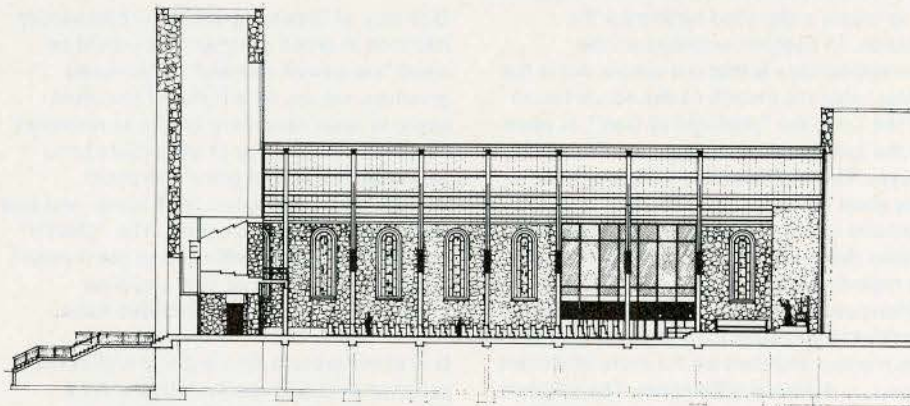


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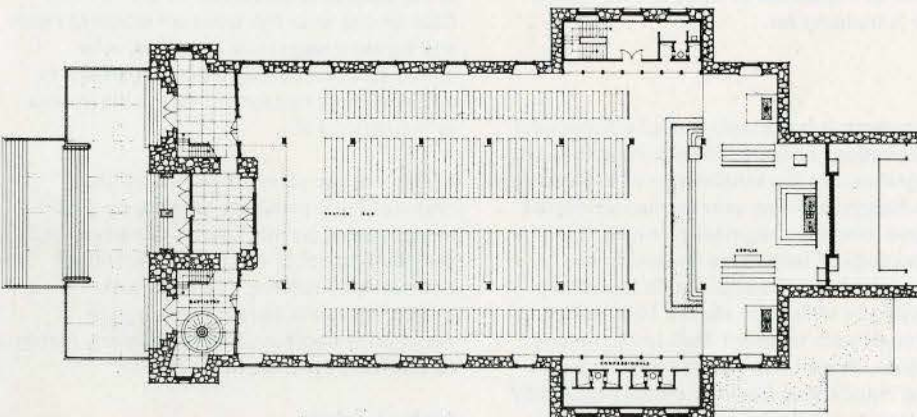


14

STUDIO ALAIN ENRG.



15



16

This church, built in 1890, was badly damaged by fire in 1957. The roof, its supporting structure and all interior finishes were completely destroyed. The masonry exterior walls, the church floor with supporting structure and the basement were relatively unaffected.

The decision to leave the rubble walls exposed was an important one in the design. Originally they had been furred and covered with ornate plaster surfaces. The old wood nailing pieces were removed, all joints raked out and re-pointed with cement mortar.

Although the walls were judged sound, it was decided to minimize the loads which they would carry. Accordingly, the laminated wood columns support cantilevered bents which bring no weight to the walls. The original basement columns support the new structure. A continuous concrete capping beam stabilizes the top of the walls. Except for new doors, windows and the roof, the building's exterior was untouched.

Originally seating 1,100 people, St Gabriel's Church now seats 660.

Renovation, within a somewhat limited budget, was completed in April 1960.

Church Architecture in Switzerland

Observations of a Swiss Architect on Trends in Swiss Church Architecture

I

The church of "Notre Dame de Raincy" designed by Auguste Perret and completed in 1922 marks indisputably a turning-point in ecclesiastical architecture. The influence of this building was enormous. There was erected in Basel a few years later the St Antonius Church designed by Prof Karl Moser, which inaugurated the renaissance in Catholic church architecture in Switzerland. Historical prototypes can be detected in the plans of both churches. In Switzerland too great difficulties had to be overcome in the evolution from the traditional design of the long nave to the freer designs obtaining in present-day church architecture. On the one hand, there was the struggle against the conservatives, on the other, paradoxically, that against the extreme proponents of the "New Architecture", the "Functionalists", a group which exerted a strong influence in the twenties and which sought to deny even to ecclesiastical architecture any claim to be transcendental.

We owe the authentic renewal of Swiss church architecture to far-seeing men like the painter Alexandre Cingria, the architects Hermann Baur and Fritz Metzger, for Catholic church architecture, and Werner M. Moser and Otto H. Senn, for the renaissance in Protestant church building.

To be sure, the endeavours on the part of the theologians to revitalize the liturgy also had a liberating influence on these trends. Of paramount importance, however, was the yearning of the architect, who wishes total freedom of expression and who concentrates on all-inclusive spatial conceptions. From this point of view K. Moser's Antonius Church and still other modern Swiss churches appear as noteworthy models. Whether these buildings be elongated in plan or be designed as churches in the round embodying progressive liturgical conceptions, what they have in common is the intention of making the transcendental atmosphere pervade the entire interior of the church and not merely the space around the altar and the communion table.

The ideal of the all-inclusive spatial conception will also have an increasing influence on painters and sculptors associated with church building in Switzerland. Painters and sculptors will have to contribute increasingly to an "iconology of the church interior". The problem here is not to revitalize the traditional iconography. The indirect approach by way of the ordinarily misunderstood symbol and allegory is no longer of interest. We can progress only through the iconology of the total interior volume, stemming directly from the over-all effect created by the formal articulation of the spatial volume and the handling of surfaces, materials and colors.

In Protestant church architecture the problem is to create a dignified setting for the sermon. In Catholic architecture the controlling idea is that the central act is the Mass; also the church as the actual house of the Lord, the "domicile of God", is open to the individual worshipper at all times for prayer. These differences no longer exert any great influence on Protestant and Catholic church architecture in a way that makes them sharply divergent, least of all as regards external appearances. The differences entailed by the extraordinarily manifold expressive idioms at the disposal of the modern architect are far more important than any doctrinal differences. The problem facing the architect is to invest his building with the meaning "church" in its worldly setting, regardless of what denomination he is building for.

II

However, it is not only formal architectural inspirations or liturgical influences that are significant in the renaissance of ecclesiastical architecture. To an ever increasing degree town-planning, regional-planning and sociological factors are becoming co-determinants. The situation is repeatedly arising in which the church building is not able as such to assert itself in its profane milieu. One of two things happen: Either the church was from the outset organically integrated in its milieu but later lost its significance in the community owing to

developments in building around it, or the church could no longer be organically integrated in the already existing architectural environment and was for this reason set up haphazardly on any site that happened to be available.

Attempts are being made here and there to establish closer contact between church and community by means of "community centres" (with assembly and recreation facilities). Other channels of contact in the cities, for example, parish halls in big housing developments and apartment houses, are becoming increasingly impracticable for overworked pastors. A truly effectual cure of souls can hardly be maintained in this way.

One way of improving church - community relations in urban communities would be small "centres of worship", small-scale premises, set up, on a rental or purchase basis, in large apartment blocks or residence towers. These centres or assembly rooms would be the sort of place one could wander into, by accident, as it were. And one might even feel at ease there. The "church" would then become adjusted to the human scale, and the Word of God could be preached with more concentrated force.

It is at the present time entirely within the realm of possibility in Switzerland for a Protestant and a Catholic parish to get together in one house. It is possible for them to install their centres side by side on one floor or one over the other on different floors and for their respective members, after divine services, to get together, perhaps in a "community restaurant" or in club-rooms or recreation halls.

This is not the place to discuss all the organizational problems entailed by such a re-structuring as that described above. And yet there probably will be organizational difficulties to resolve. The main task confronting us is to reinforce church-community contacts, indeed, in many places to establish them for the first time.

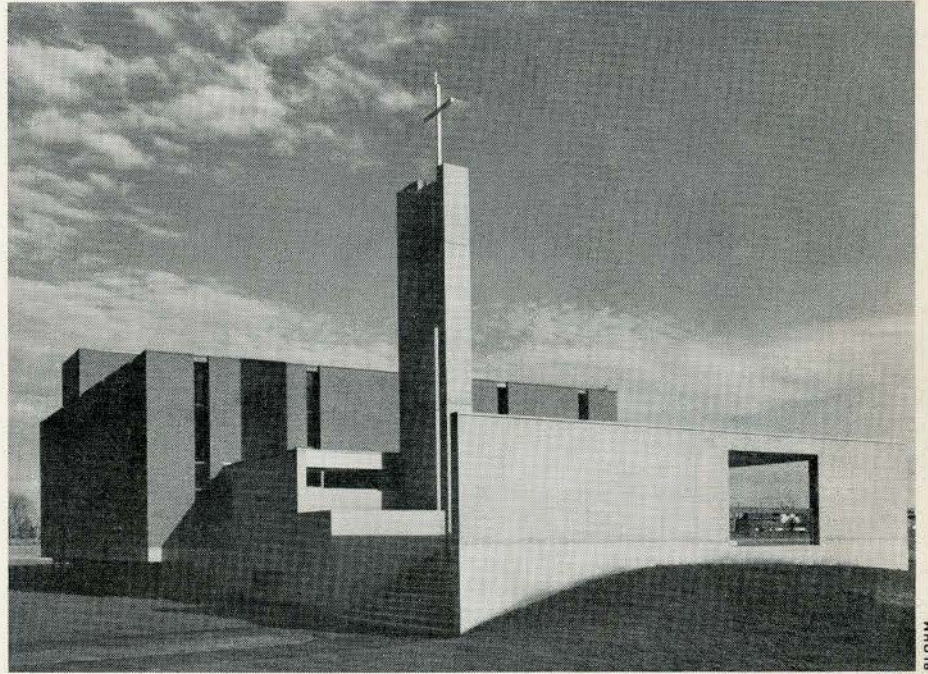
Walter Förderer

St Michael and All Angels Church Ottawa

Edward J. Cuhaci, Architect

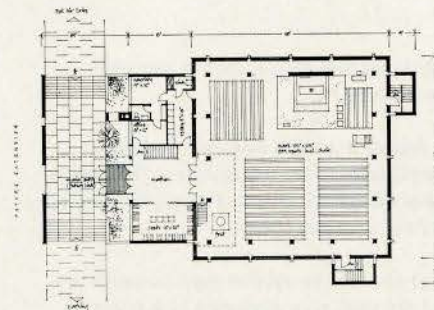
- 17
Entrance elevation
Élévation d'entrée
- 18
Plan
Plan
- 19
Section
Coupe

The design of the Church of St Michael and All Angels was kept as simple as possible and an attempt was made within the means of the budget to give it warmth by using natural materials such as brick, concrete and wood. Closer communion between the priest and the congregation was achieved by placing some of the pews on the west side of the nave beside the altar. The rest of the pews are facing the altar in the conventional manner.

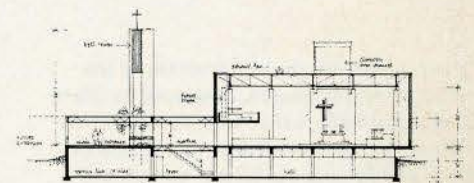


17

BLOHM



18



19

Church of St Nicolas Cté. Lévis, P.Q.

André Gilbert, Architecte

20

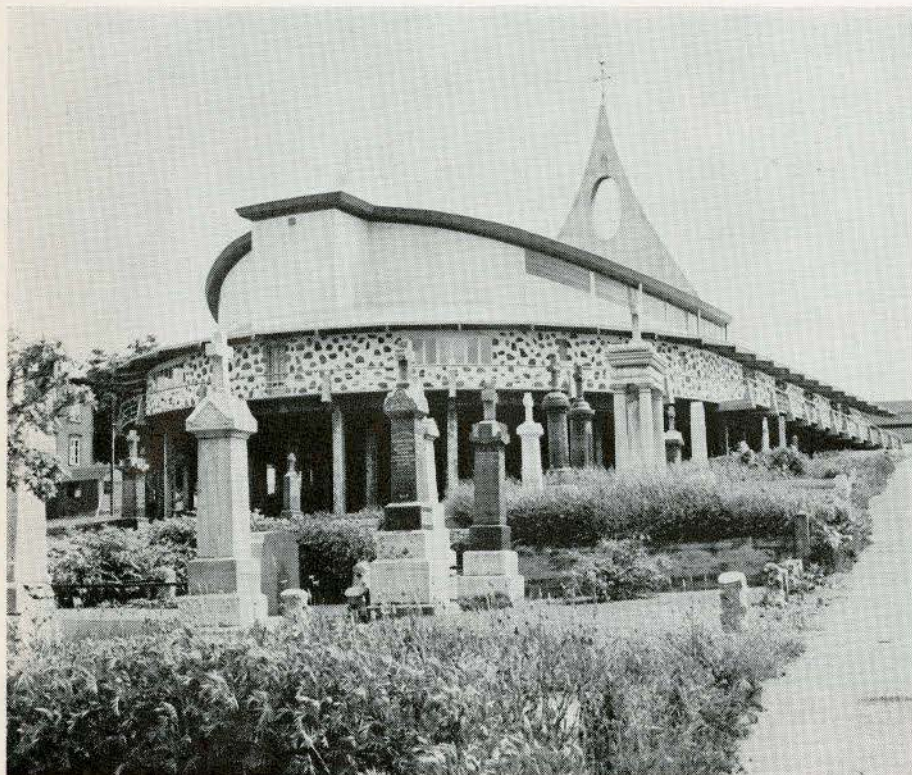
View from churchyard

Vue de la cimetièrre

21, 22, 23, 24

Progression from entrance to body of church

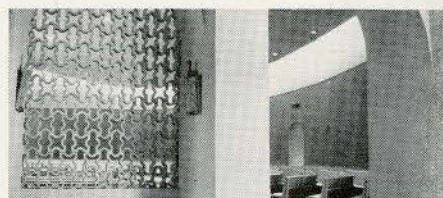
Progression de l'entrèe à la nef de l'église



20



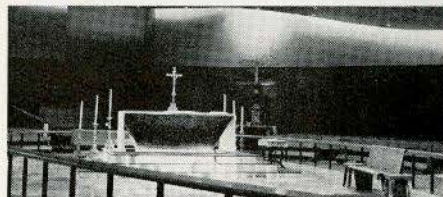
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22



23



24

PHOTOS BY PHOTO MODERNE

The program for the replacement of the original historic church, destroyed by fire in December 1961, called for a contemporary structure in the new liturgy that would be in character with the former church and the village.

The interior of the church was designed to the new liturgy with the altar as the focal point. To further emphasize the altar area glass, marble, vinyl and terrazzo were used as flooring.

Secondary features are located in the ambulatory, which in addition to providing

additional free space, also is used for processions.

All furnishing such as pews and rails were designed by the architect. The lamp of the sanctuary was designed and executed by Paul Lacroix, sculptor.

Field stone was used in wall construction and the roof was designed in a typically French style. An iron cross, from the original church built in 1720, was mounted on top of the sail-shaped spire. The exterior gallery allows efficient exit and offers a panoramic view of the St. Lawrence River.

Evangel Pentecostal Church Brantford, Ontario

Mark / Musselman / McIntyre / Combe,
Architects

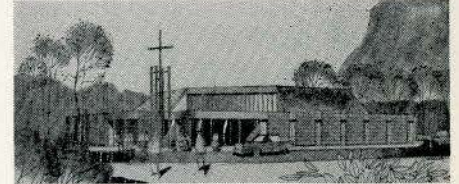
25
Plan
Plan
26
Perspective
Perspective
27
Elevation
Elevation
28
Section
Coupe

The design of this church attempts to reflect both the activities program of the local congregation and the character of the Pentecostal denomination.

The basic planning provides a central sanctuary surrounded by administrative and Christian education facilities. In character with the non-liturgical form of worship of the Pentecostal Church, with its emphasis on informal fellowship and lay involvement in the service, the sanctuary is designed with the floor sloping toward the front and the seats, accommodating 380 persons, encircling the central pulpit. A prayer rail with kneeling cushions reflects the evangelical form of service, and an adjacent chapel accommodates the practice of a service of prayer

following the worship service or, on occasions during the week, for smaller groups. Provision is made for a 35-seat choir, a piano and an organ, and a smaller orchestra which is set up for special services only. A control room accommodates broadcasting and projection equipment.

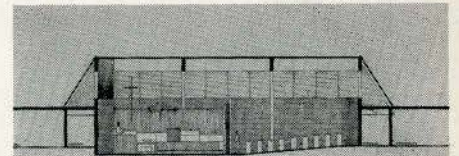
Particular attention was directed toward the architectural expression of the service of baptism, which is performed through immersion. The baptismal tank is located slightly above congregational floor level so that the candidate is not unduly separated from the worshippers, and the dignity of the service is preserved by controlled sight lines.



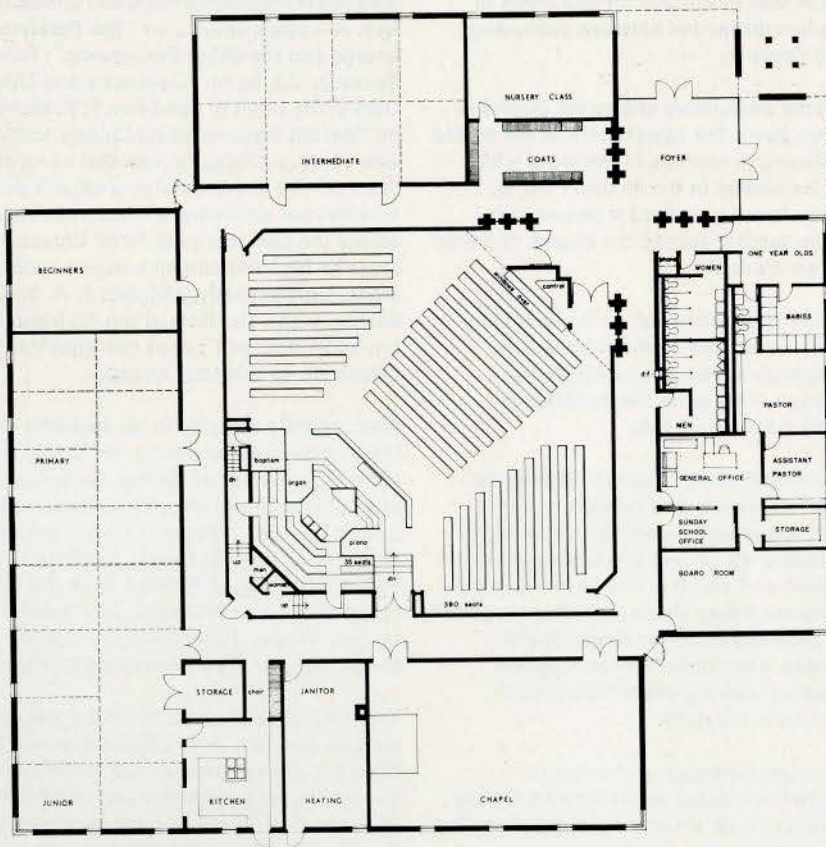
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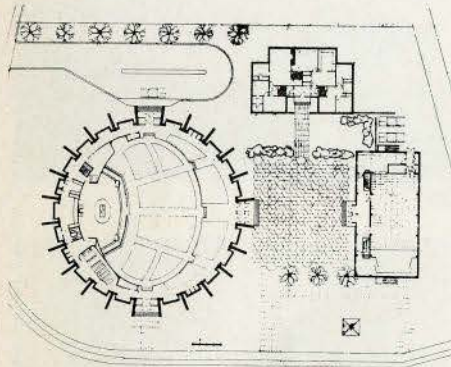
28



St John Brebeuf Parish LaSalle, P.Q.

John Bird, Architect

29
Plan
Plan
30
Section
Coupe
31
Interior
Intérieur



St John Brebeuf begun in January 1962 in Ville LaSalle, was the first English-speaking parish in the diocese to plan their church in the new liturgy. The program called for a church to seat 600-700 with provision for expansion.

The shape and location of the site had a great deal to do with the development of this scheme. To avoid the noise of a nearby large shopping center and adjacent thoroughfare the church rectory and social hall were placed around an entrance court and connected by an underground passage.

The social hall, although planned and detailed, is not yet built.

The plan was developed on two levels to strengthen distinction between public and private devotion.

The upper ambulatory allows the individual to move about the church behind the seated worshippers to stations of the cross which might be located in the niches. Further, the ambulatory provides for processions from the sacristy around the church and then to the sanctuary.

The choir is located close to the sanctuary but within the body of the worshippers. The baptistry is near the sanctuary but far enough away so as not to compete with the main focal point.

The structural system used to enclose the 130'-0" diameter space consists of 24 precast, hyperbolic paraboloid, thin-shell units resting on poured-in-place concrete buttresses and tied together at the apex by a ring beam. These shells are welded together along their edges and anchored to the buttresses. The remaining openings are filled either with the plastic skylights or precast concrete slabs.

The complete exterior of the super-structure is insulated with foamed urethane and covered with a neoprene hypalon roofing system. Exterior insulating minimizes movement of the structure due to extreme differences in temperature.

Church Architecture, The Shape of Reform – A Book Review

*The Liturgical Conference, 1965
Washington, D.C., 1965, 106 pages*

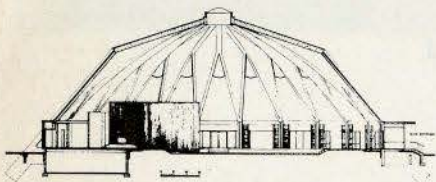
There is a very serious concern in the hierarchy with the architectural implications of the renewed Church. Series of conferences on this subject were held in the United States and the proceedings of one such recent meeting conducted by the Liturgical Conference in Cleveland on February 23-25, 1965. In language easily understandable by a layman, theology, liturgy and canon law specialists present their respective positions: Rev. B. Cooke, S.J., writes on the "Theology of the Liturgy"; Rev. G. S. Sloyan on "Distribution of Roles and a Renewed Christianity"; Rev. A. Tegels, O.S.B., on "The Reformed Liturgy and the Other Sacraments"; Rev. K. Seasoltz, O.S.B., on "Devotions and Other Uses of the Church"; and Rev. F. R. McManus on "Recent Documents on Church Architecture". It is gratifying to note that none of them tell the architect what a church should look like but only what a church should be. It befalls the architect to embody Church's ideas by his transformative artistic action alone. Unfortunately, architect E. A. Sovik, dealing with "The Role of the Architect in Liturgical Renewal", does not significantly contribute to this vital question.

Appropriately included in an appendix are three important documents which will in general govern future Roman Catholic church architecture. These are: "Constitution of the Sacred Liturgy"; chapter 7 on Sacred Art and Furnishings (passed by Vatican Council in 1963), Appendix to Article 128 of the Constitution on the Sacred Liturgy, and "Instruction for the Proper Implementation of the Constitution on the Sacred Liturgy"; chapter 5.

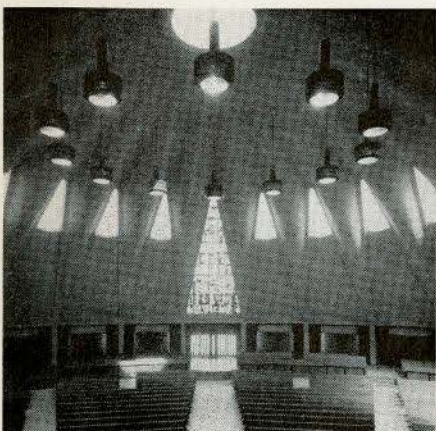
Technical execution aside, church design remains basically an artistic problem which, however, cannot be approached without a fundamental knowledge and understanding of theological-liturgical-legal principles of the Church. *Church Architecture / the Shape of Reform* will well introduce an architect to these.

Algimantas Banelis

29



30



STUDIO ALAIN

31

The scope of this aspect of building construction is so extensive and complex that only a few of its principles and details can be covered by this article. So far as actual types are concerned, only two will be covered; namely precast units and the metal/glass combination.

The last quarter century has seen a very rapid advance in the evolution and development of exterior cladding. In part, this can be contributed to the society for which we build today and to the economic demands of the building owner. But more influential, perhaps, are the materials that are now available and the construction techniques to which they can be subjected. The time honored materials such as clay and stone find themselves in direct competition with concrete, metal, glass and plastics, all of which share, to varying degrees an ability to be economically pre-formed and pre-shaped into large components prior to installation in their permanent locations.

Against the background of our severe Canadian climate and environment, doubt must exist about the permanency of many present day cladding systems. So many principles are involved in the optimum enclosure system and while many can be individually proven by accelerated tests, the ultimate conclusion for the complete assembly can only be assessed by usage.

Principles

The basic principles involved in the design of exterior cladding enable us to consider it from two major viewpoints. In the first instance, it must function as an architectural component of the complete building and secondly as an effective barrier between the interior and exterior environments.

As an architectural component, exterior cladding must be durable at least for the expected life of the building and as a complete assembly it must meet both the initial and maintenance costs applicable to the project. Invariably one finds that a low first cost results in higher operating and maintenance costs and vice versa. In addition,

the cladding systems must offer integral strength so that it works with and not in conflict with the structural frame and also has the ability to withstand and transmit the positive and negative wind pressures to which it will be subjected.

Under this heading one must also consider three other functions. Every designer is fundamentally involved in appearance since it is one of the major factors by which his building will be judged. Experience has shown that when conflict arises between performance and aesthetics, the former must take pride of place if the risk of cladding failure is to be avoided. Closely tied in with the above are the characteristics of the various materials used in exterior cladding and the structural systems to which they are attached. Materials will change their shape either permanently or temporarily due to permanent loading, internal stresses brought about by maturing, temperature variations and moisture changes. These dimensional changes must be most carefully considered and resolved if a durable enclosure is to be achieved.

Lastly, there is the aspect of tolerance. Invariably, the cladding system will be closely associated with the structural frame. The tolerance to which this frame can be erected must be the first consideration. The trend towards prefabrication in present day cladding systems has given rise to three further tolerance problems. The first is that to which the individual components can be manufactured. Then there is the tolerance required by their pre-assembly or prefabrication and lastly the erection tolerance dictated by the installation of component assemblies. These are very real problems that have to be resolved with the increasing use of concrete and metal frames systems.

As an effective barrier, cladding systems have to prohibit the flow of the interior environment to the exterior and vice versa. They must, for instance, prevent the penetration of rain to the interior of the building although they may absorb or accept it within their exterior faces. They must also control, to within acceptable limits, the rate of heat loss from the interior to the

exterior. Similarly, they must act as effective air and water vapor barriers. In most instances, they will be required to offer a degree of control against exterior noise, to possess fire penetration properties and to control the passage of sunlight into the building.

All these are very real and basic problems to which the cladding system must offer a solution if it is to realize its purpose.

Current Practices

a Precast Units

In the past fifteen to twenty years, precast concrete has experienced a very marked increase in its use as an exterior cladding element. As a plastic material, it offers to the architect great scope in design and, within reason, permits limitless exterior expression. It is also a material that has known reactions to our climatic conditions and offers attractive economies both in the manufacturing and erection phases.

In its early stages, it was used as a plain faced precast wall slab, with varying degrees of surface texture and color. From this developed the exposed aggregate finish where various combinations of granite, marble, rock, quartz and even glass chips were used on the exterior surface to give permanent texture, color and relief to the material.

From this, in turn, evolved the covering of the concrete with such materials as stainless steel, slate, granite and marble which were securely anchored into the back-up material. This type of fabrication offered nearly all the advantages of these quality materials but because they were applied as relatively thin veneers they resulted in great economies over the traditional methods of construction.

Along with the development of this type of cladding came very rigid quality control in the manufacturing plants. This was essential if deformation during the curing process was to be eliminated and a dense concrete, impervious to water, was to be achieved. The introduction of the Schokbeton process

was a great step forward in quality control. Using a minimum of excess water to achieve hydration, it has practically eliminated shrinkage and its associated problems and has allowed extremely large units to be precast using very dense concrete in the order of 10,000 p.s.i.

In its original form, precast concrete was conceived as a cladding that was bolted to the structural frame of the building. As such, it was invariably a weight burden to the structural frame and the potential strength of the members was never utilized. We find today that this is no longer the case and it is replacing the exterior structural frame and performing as a load bearer as well as an exterior fabric.

This material has now developed to a stage where window frames can be cast into it along with fixing members for perimeter heating units, exterior insulation and other finishes. In addition, its production does not rely upon weather conditions and its erection, as large components, can take place in all but the most severe weather conditions.

Although many of the aggregates and facing materials used in conjunction with precast concrete have no absorption factor, this does not hold good for the exposed concrete itself. Depending upon the mix, the color and its finish, it is susceptible to the polluted atmospheres of our larger cities and industrial areas and to the staining patterns left by rainwater combining with dirt on both vertical and horizontal surfaces. This requires careful attention during the design stage if early disfiguration of the facing is to be avoided.

b Metal and Glass

Metal and glass curtain walls have undergone extensive development in the past quarter century. The term has come to mean an exterior non-bearing cladding primarily designed to carry its own weight and the wind loads to which it will be subjected.

In its elementary form, it consisted of modified mild steel window units bolted together to form a very light weight and economical fabric for a building. All the window units were glazed and vertical restraint, in the form of applied structural members, was introduced on the interior to provide wind load resistance. Very few of the accepted principles for today's curtain walls were recognized.

The relatively light weight of this type of cladding, together with its use of materials which were readily cleaned, have done much to influence its extensive use and development. The introduction of extruded aluminum as a competitive material into the construction industry has also been a major contributing factor.

The contemporary metal curtain wall invariably takes the form of a vertical mullion

or fin, bridging between floors, and, together with the structure, forming the primary framework for the cladding. Into this framework are introduced the spandrel and window panels.

Metals in common use today include aluminum, stainless steel, bronze and mild steel all with their various and associated finishes and treatments. These are used in conjunction with transparent sheet, plate and heat absorbing glass, either as single or double glazed window units, and with structural glass or sheet metal in the spandrel panels.

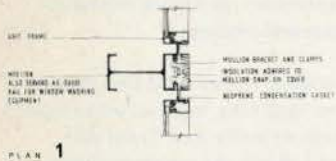
The combination of metal and glass, with their differing coefficients of expansion, has resulted in many problems due to thermal changes on the interior and exterior surfaces. This problem is further aggravated when different types of metal are also introduced. The magnitude of movement to be accommodated at each joint of a metal wall system is normally quite considerable due to the length of the individual components. Unlike a traditional masonry wall however movement is not cumulative and because the materials used are non-absorbent, movement is only due to temperature change.

This aspect of thermal movement creates one of the major construction problems for curtain wall designers. It necessitates the provision of a completely weather-tight joint which must also permit the expansion and contraction of individual components through a temperature range of 200°F. In present day cladding systems, these junctions are invariably achieved with a neoprene member to which the metal is pressure jointed. Joints are either of the integral type, such as mating or lap joints, or of the accessory type such as spline or batten, all of which are used in conjunction with a non-rigid mastic sealant.

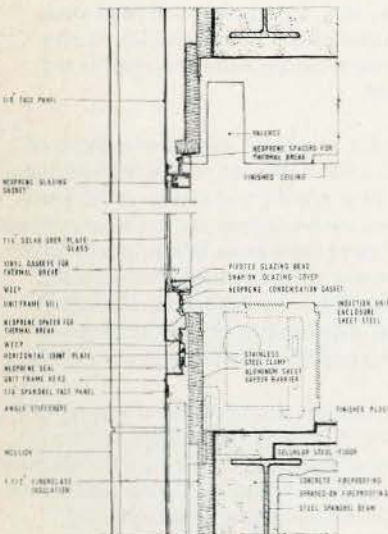
Derek Buck

Estimating

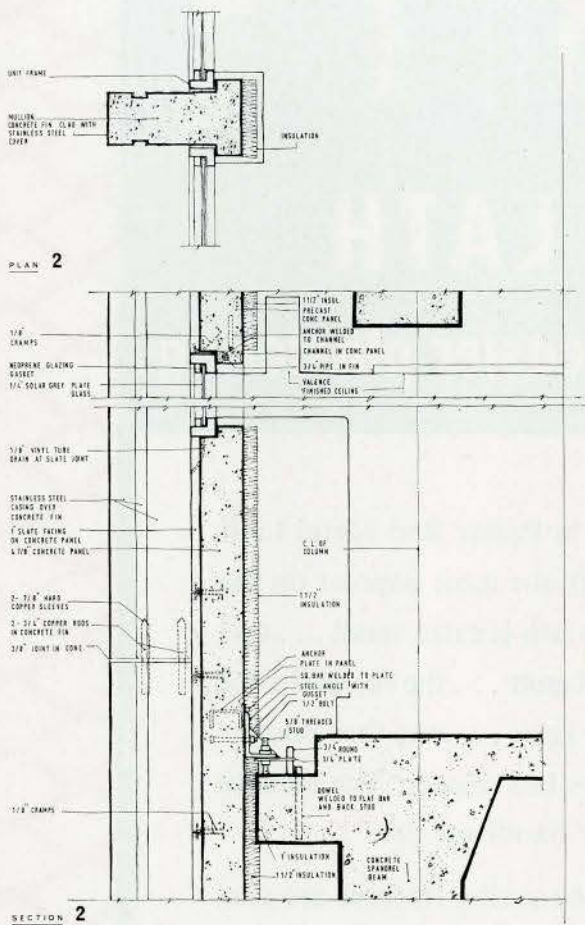
Exterior Cladding can be divided into six major sub-sections when preparing preliminary estimates. These are: (a) Roof



PLAN 1



SECTION 1



Finish, (b) Walls Below Ground, (c) Walls Above Ground, (d) Windows, (e) Exterior Doors, (f) Entrances and Screens.

The measurement of exterior cladding is comparatively simple, but as mentioned above, the scope of this aspect of building is so extensive and complex that it is difficult to give comprehensive unit prices to cover all circumstances. The architect may provide a combination of different materials in an exterior wall, which makes it difficult to determine a reasonable unit price without measuring and pricing the wall in detail. For example, false columns projecting 2'0" beyond the normal wall face, running the

full height of the building and set 5'0" apart, could well double or triple the cost of the wall, but this can only be established by detailed measuring and pricing.

In recent years, with the increasing use of precast concrete and metal and glass cladding, the costs of these materials have risen sharply, and with the number of different materials and finishes available, there is a vast range of unit prices which could be applied. A result of the increase in price has been a greater use of poured in place concrete as a cladding at a price roughly between the cost of masonry and precast concrete or metal and glass.

Bearing in mind the wide variation in design the following costs are given as a guide for preliminary estimates only:

- 1 Roof Finish
 - a Felt and gravel to flat roofs, including insulation and flashings \$.85-1.25 per SF
 - b Asphalt shingles to pitched roofs \$.20-.25 per SF
 - c Wood shingles to pitched roofs \$.60-.75 per SF
 - d Asbestos shingles to pitched roofs \$.40-.50 per SF
 - 2 Walls Below Ground
 - a Concrete \$2.25-2.75 per SF
 - b Block \$1.00-1.50 per SF
 - 3 Walls Above Ground
 - a Brick facing \$2.25-3.00 per SF
 - b Poured architectural concrete \$3.50-5.00 per SF
 - c Limestone facing \$9.00-10.00 per SF
 - d Granite facing \$16.00-18.00 per SF
 - e Precast units, exposed aggregate finish \$5.00-10.00 per SF
 - f Precast units, veneered finish \$8.00 and up
 - g Curtain wall, aluminum \$5.00 and up
 - h Curtain wall, steel \$3.00 and up
 - 4 Windows
 - a Single glazed, wood \$3.00-5.00 per SF
 - b Single glazed, steel \$2.50-6.00 per SF
 - c Single glazed, aluminum \$4.50-8.00 per SF
 - d Double glazed, wood Depending upon type of glazing add \$.75-3.00 per SF to single glazed prices
 - e Double glazed, steel Depending upon type of glazing add \$.75-3.00 per SF to single glazed prices
 - f Double glazed, aluminum Depending upon type of glazing add \$.75-3.00 per SF to single glazed prices
 - 5 Exterior Doors
 - a Wood \$3.50-5.00 per SF
 - b Hollow metal \$5.00-6.00 per SF
 - 6 Entrances and Screens
 - a Wood \$4.00-6.00 per SF
 - b Hollow metal \$4.50-7.00 per SF
 - c Aluminum \$6.00 and up
- F. W. Helyar



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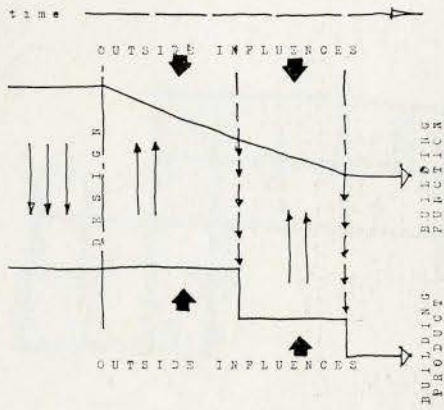
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This study was the first stage of a sixth year design project set by Professor Jonas Lehrman, and is the work of students Ralph Bergman, Ray Catchpole, Witold Rybczynski, and Andrejs Skaburskis under his guidance at the McGill School of Architecture.



Architecture can be thought of as a simultaneous relationship between function and product. Initially, during the design process, the functions, in terms of program data, influence the design. Once built, the building reciprocally influences the functions it contains. We make our buildings, and our buildings make us. However, during the life of the building, there may be many external variables which will alter the relationship between the function and product. Since there is no feedback mechanism, the product will not be changed until the misfit is so radical that matters become intolerable, and an 'alteration' is made. And so on.

This paper is concerned only with the left-hand side of the diagram; the Building and how it can *change*. It does not deal with aspects of financial investment, market preferences, or changes in function.

It is our view that eventually the discrepancy between function and building, within the dimension of time, could be lessened.

Changes in buildings may be:

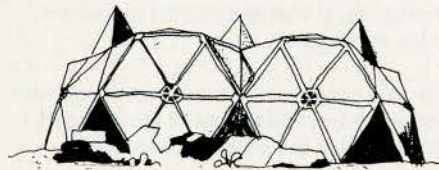
- 1 a replacement of the building
- 2 a change in its position
- 3 a change within the building – of its volume, of its internal arrangement, of its parts.

1 Replacement

Replacement is common in our *kleenex society*; cars, food containers, tired executives and second-hand wives are but a few examples.

Replacement of a building involves demolition (though the building may be replaced elsewhere); it may involve a different site; or a different function. And combinations of these three.

Hence Replacement is concerned with – demountability, the salvaging and re-use of parts, minimum use of skill in demolition.



Camp Arhziv, Israel (Hecker, Neumann, Sharon)

A tourist camp based on a hexagonal module, in which panels are of two shapes and made of pressed straw in a wood frame. Their shape permits easy stacking and demounting during the winter. All parts are replaceable.

Migrant Housing, Calif. (Hirshen, van der Ryn)

Housing for seasonal workers designed for easy replacement after two seasons, to avoid the sub-standard conditions that develop in old houses. The material is cardboard with a polyurethane core, designed to disintegrate after two seasons, even if the dwelling were not specifically removed.

Either functional obsolescence or physical degeneration may necessitate replacement. Generally today the former occurs some time before the latter. In this case replacement occurs when the disparity between building and function cannot be met by alteration or extension.

Replacement can be planned. As misfits occur they are amended and the building is entirely useful until the time that it is demolished. This requires a synchronization of materials, with respect to their obsolescence.

2 Change in position

If a building is not in the ground but off it, or even above it or in the water, it is fully mobile, and its position may be changed at will. This does not deny a tie-in with services when stationary, as with trailers and houseboats.

Even if not truly mobile, a complete building may yet change its position *en masse*, once all its connections with the ground have been severed. For example, wooden houses may be lifted and moved by trailer truck along highways, and put down onto new foundations.

Buildings may also be demounted or deflated to facilitate subsequent moving, as with exhibition and other temporary structures.

Finally a building may change in position with regard to a line or point. This is a very controlled change of position and is quite rare.

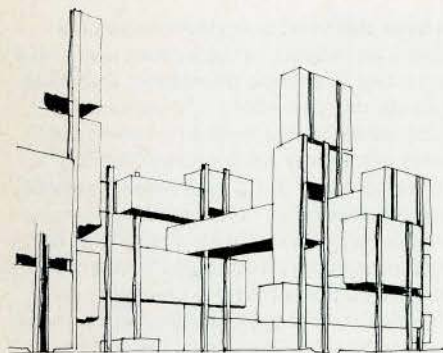
3 Change within the building itself

(a) *Volume*

A basic theorem: an increase in volume means an increase in the amount of material necessary to enclose the volume. Increased material can come from: (1) continual increasable flow of material – either ready-made (an energy field) or transformable (a biological cell), (2) superfluous material (*eg* the overdesign of columns to support later extra storeys), (3) later additions. In present building technology the latter is most feasible and only practical on a large scale. In future more instant flexible processes will have to be made available if the building is to be reasonably responsive to fluctuating volume requirements.

With a finite entity which is the traditional

building form no thought was given to future change and when addition became necessary the result was often visual chaos. Two design methods are presently used to hopefully facilitate and control future additions. The Grids – in various patterns, sizes, and degrees of complexity and components – and the Stems of circulation and services connecting units which can be added or extended in various directions and groupings and degrees of interdependency. The Grid is a diffuse environmental system whereas the Stem is a hierarchical directional system. The Grid might become limiting from the size of module chosen. The Stem might become obsolete with changes in transportation service patterns. The flexibility of both systems depends upon the degree of materiality of their design. The structural or material solution carries with it inherent inflexible rigidity. The demands of even the near future become increasingly more unpredictable; likewise the resources of a developing technology. The more completely designed a system the less adaptable it is to unpredictable change and remains appropriate for increasingly shorter periods of time. Any system for short term volume change must itself be part of an overall non-material system to allow for the unpredictable long term changes.



Tsukiji Redevelopment, Tokyo (Tange)

A combination of skeleton and grid systems.

The latter acts vertically as with most office buildings, and may also extend on many horizontal levels following a rectangular grid.

The first building is at present being constructed.

(b) Internal planning

Change in internal space requirements of a building may be due to changes in use, space requirements, economic aspects, communication patterns and aesthetic considerations.

These internal changes may be permanent, cyclic or temporary.

Internal change may occur by rearrangement, growth, or by replacement of the area of activity within the linkage framework.

Rearrangement may take place about either an existing or a new order.

Growth may require total change, or it may take place within a limited area.

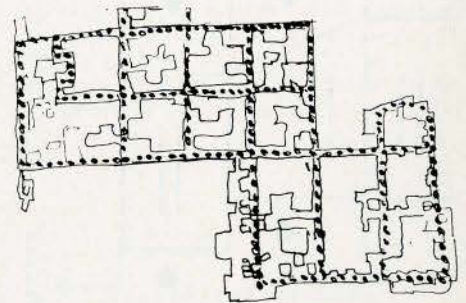
Activity within a building influences and is affected by both form and the linkage framework; linkage however does not necessarily influence form.

Standard office building

Within a closed plan, internal change is usually limited by fixed partitions. A variety of room sizes is provided and change achieved by the activity moving to another area.

The open plan permits internal change within the limits of the external wall.

Replacement of the area of activity within the linkage framework allows the various components to change at their own rate, and is valid as long as the overall framework is relevant to the various activities; otherwise its imposed order may become burdensome.



Frankfort Development (Candilis, Josic, Woods)

This is a system of multi-level distribution grids containing mechanical services and corresponding to a horizontal and inclined circulation net. The system serves as a basis for the determination of areas to be built up on a secondary structural grid. The system is built only where needed to serve those functions which are already in existence and itself exists only as a right of way when not serving specific areas. There is no area of maximum intensity which would imply a freezing of present and future activities and relationships. Instead, circulations and relationships are continuous and infinite. The system thus retains a potential for growth and change internally and externally, and in four dimensions.

The prize winning project for the free University of Berlin by these architects is on similar principles.

Accommodating change

Change may be accommodated either by moving to a different location within the one building or by allowing change within a given area. This may be achieved by the use of modular, movable, coordinated partitions, implying quick inexpensive changes, although with limited choice in material and design flexibility.

Fixed, non-structural partitions may also be used (*eg* easily replaceable concrete block), implying more cumbersome change, though closer tailoring to the enclosed activities.

Thirdly, a flexible structural system allows the position of the structural elements to change, if designed on the basis of redundant stress distribution. Larger scale changes are possible.

Factors limiting change

Change may be limited by specialized design requirements; a fixed structure, fixed and limited services, fixed circulation routes, and specific siting requirements (in addition of course to political, economic and legislative limits). Each fixed element limits the ease of change, although it may not limit change absolutely.

Structure, services, wall and entry may all separate and interfere with internal changes.

If these are grouped together, greater change is possible, although still within certain limits.

Grouped in a linear manner, change is only limited in one direction.

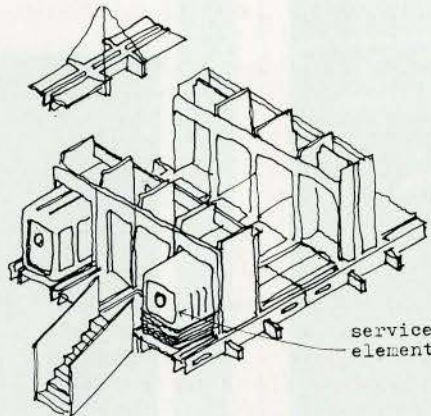
The fewer the limits, the greater degree of change possible.

(c) Change through parts

The parts of a building may here be taken as skin, structure and mechanical system. These may either allow for change in the overall system or the parts themselves may change, on the assumption that the overall system remains relatively static.

Concrete component housing (Kurokawa)

The main living areas of the unit are assumed to be relatively static, requiring only minor modification or increase at the expense of adjoining volumes.



Service and storage areas may be constantly changed as technology advances.

Structural components are concrete, storage units of plastic or timber.

Skin

The skin is an exterior-interior separation and may be either self-supporting or in the form of cladding.

In terms of change it may be related to volume expansion; within itself, the total skin may change or change may take place within the skin element. The less integral with the structure, the greater is the possibility for change.

Structure

In terms of change, structure has two aspects. (1) The capacity of a structure may be designed to permit eventual heavier loading with the extent of future growth pre-determined. (2) Change in position or addition of structural elements implying a statically indeterminate in which stresses are channeled in the direction of the supporting members, enabling changes in loading and space use.

Mechanical system

Mechanical systems control and service the interior environment, through feeders, distributors, and serviced elements.

If feeders are grouped together, services and service lines may be added and removed through easy access, and interior spaces are freed for greater flexibility. Concentration of feeders is better externally, since interior grouping requires extra space for the mechanical system which may never be used, or vice versa.

Serviced elements may also be concentrated or dispersed; the latter allows greater flexibility unless the concentrated elements are moveable. Concentrated elements may change within themselves; greater change requires replacement of the whole unit.

Interior space dividers

Principles similar to those regulating change of skin can be applied to interior space dividers, affecting aspects of transparency, strength and material character.

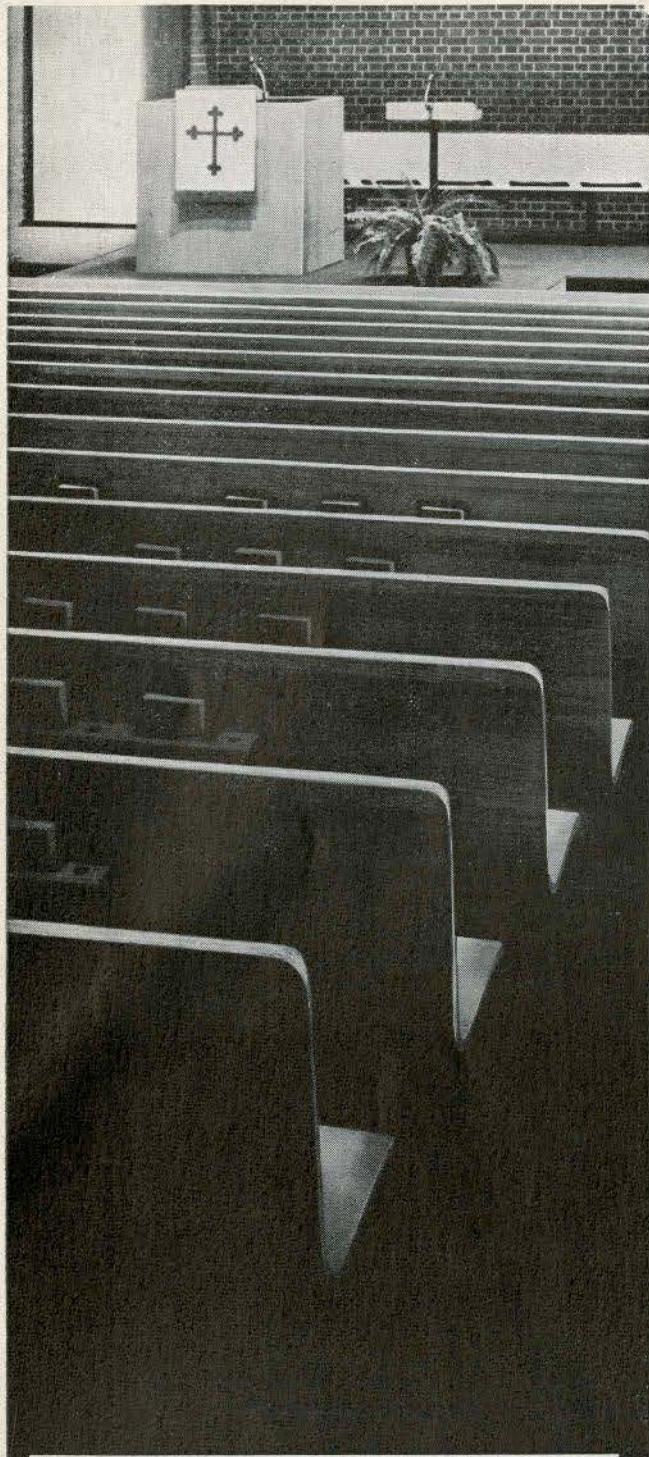
Changes in position may easily occur when space dividers are independent of building structure, designed as moveable elements fitting into a self-supporting component system.

Changes in time are involved through the material character of space dividers as for example folding partitions and curtain dividers, usually implying short term and recurring changes.

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A. J. Diamond



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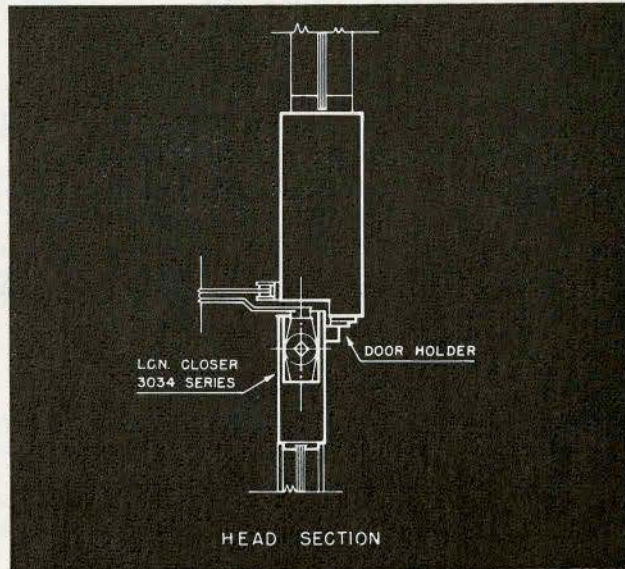
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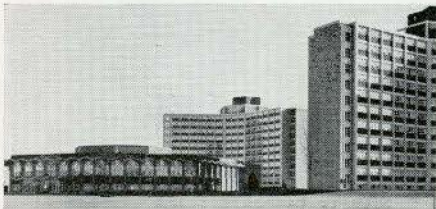
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Editor, Journal RAIC / L'IRAC

It is a pity that your somewhat "left-handed compliment" on the functional expression of the University of Alberta "dormitories" (Fig. 10 "Review" January) missed the mark — by a little over one-half a mile — unless perhaps you *intended* to imply that the Mathematics, Physics and Chemistry teaching staff and students spend more time asleep than at work? Here is a photograph of the real Residences which quite possibly still qualify for the criticism implied in the article. We would be interested in having your opinion.

G. D. Menzies, ARIBA, MRAIC
Assistant to the Deputy Minister
Department of Public Works, Alberta

While on the one hand we apologize for the mistaken identity of the science buildings, due to misinformation, we have to point out on the other hand that we have to withdraw our compliment — the science buildings appear to be more like dormitories than labs.

Insofar as the residences are concerned, it is clear the department has a very high regard for them, as they have, notwithstanding the different conditions and master plans (?) repeated them on the Calgary campus. Neither residences pay any attention to orientation or social groupings. A.J.D.

Editor, Journal RAIC / L'IRAC :

The rapid development of this city and of the urban communities across the country constantly raises problems which eventually bring with them the deepest involvement for the members of the profession. Looking through the issues of your magazine, I failed to see a single copy — with the possible exception of the one devoted to the

preparations for the Centennial celebrations — which tries to anticipate and discuss in advance great urban and architectural issues before they become realities.

It is easy to think of examples in this city where discussion of eminently architectural issues was left to the pages of the daily newspapers, if indeed there was any discussion at all, for example :

- The issue of the old City Hall and the shape of the Eaton's Centre.
- The location and proposed composition of the St Lawrence Centre for the Performing Arts.
- The development of the south side of Queen Street opposite the new City Hall.

Other, eminently practical problems easily come to mind, such as an examination of the various forms of the architect's office organization (vertical, *ie* one team carrying the work through vs horizontal, *ie* the work split into design, working drawings, and supervision), and the advantages and disadvantages of both.

A magazine, which is of such central importance to the profession as the RAIC Journal, could render a great service to both architects and the community were it to take the lead in discussing themes such as these, and by discussing them, point a way to their solution.
Ernest Annau, Dip. Ing., Toronto

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HWTA-8	8.0	34 1/2	16 1/2	10 1/2	20.0
HWTA-10W	10.0	34 1/2	16 1/2	10 1/2	22.0
HWTA-12	12.0	34 1/2	16 1/2	10 1/2	24.0
HWTA-15	15.0	34 1/2	16 1/2	10 1/2	28.0
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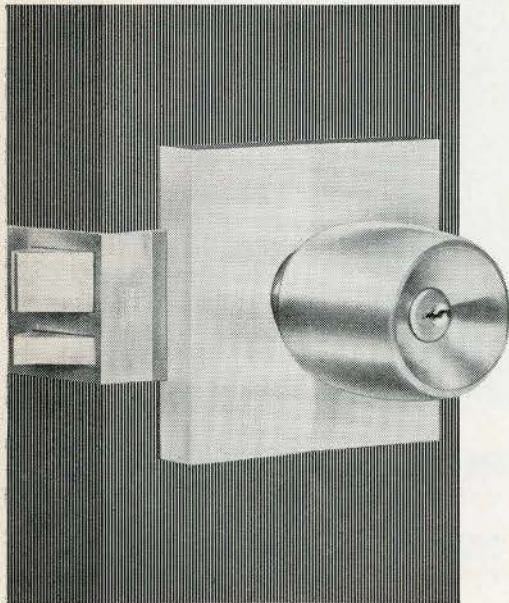
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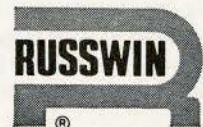
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Practice Notes

Mathers and Haldenby announce the appointment of J. Michael Barstow, MRAIC, as a partner in the firm. Mr Barstow has been associated with the firm for 13 years.

Burgess, McLean and MacPhadyen, Architects, 226 MacLaren Street, Ottawa, announce the opening of an architectural office at 5 Laval Street, Hull, Quebec, under the firm name of McLean and MacPhadyen. Trade catalogues and literature requested.

Giffels Associates Limited, consulting engineers, announce the appointment of Charles E. Meek, MRAIC, as Chief Architect. In this capacity, he will be responsible for the co-ordination of all aesthetic building design considerations related to projects undertaken by the firm. Mr. Meek previously served as Assistant Chief Architect for the City of Toronto and prior to that was associated with two architectural practices.

Mickelson-Fraser have announced that Robert J. Browne, MRAIC, has joined their partnership. The new firm name is Mickelson Fraser and Browne, Architects and Consulting Engineers, 506 - 16th Avenue, Port Arthur, Ontario.

Roy H. Beatty, MRAIC, formerly of London, Ontario, is now located c/o J. Fred Green, MRAIC, 544 Talbot Street, St. Thomas, Ontario.

Reich & Schertzer Architects have relocated their offices at 1478 St. Catherine St. West, Suite 104, Montreal 25. Their telephone number is 937-8991.

Positions Vacant

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A. W. Cluff & P. J. Cluff, Architects, require Architectural Assistants to work on a variety of projects including hospitals, schools and homes for the aged. 1 Design Architect to develop sketches and prepare detailed design drawings. 2 Senior Architectural Assistants for preparation of working drawings and details.

New offices provide excellent prospects for those with initiative, enthusiasm and ability. Please reply to: 191 Eglinton Avenue East, Toronto 12, Tel.: 487-4165.

Employment Wanted

Filipino architect, 23 years old, graduate from Mapua Institute of Technology (BS Arch), registered architect in the Philippines since 1964, 3 years experience, seeks position in Canada. Reply, Manuel Nicolas Elnar, 56 Pio Valenzuela St., Valenzuela, Bulacan, Philippines.

Graduate from Faculty of Fine Arts' Architectural Department, Alexandria, 23 years old, good knowledge of English, wishes employment with an architectural firm in Toronto. Write, Zaki Tharwat, Hilal, 3 Tiba Street, Camp Chesar, Alexandria, Egypt.

32-year-old Filipino architect, BS Arch. (Feati University), five years office experience, seeks position enabling immigration to Canada. Agripino P. Tancio, Youth Centre, YMCA of the Philippines, 350 Arroceros Street, Manila, R.P.

Experienced Specification Writer and Contract Manager professionally qualified as a Chartered Quantity Surveyor A.R.I.C.S. and an Arbitrator A.I.Arb., 34 years of age, 9 years construction experience in Canada, bi-lingual, seeks position in Toronto, Montreal or Ottawa, where initiative, drive and personality are required. Only a position of prime responsibility will be considered, in an Architectural private or public office. Write Box Number 129, *Journal RAIC/L'IRAC*.

Architect registered in the Philippines, B.Sc. in Architecture, eight years office experience, wishes employment in Canada with view to immigration. Write Perfecto A. Espirito, Meycawayan, Bulcan, Philippines.

32-year-old Filipino architect, at present commissioned officer in the Philippine Air Force, holding the position of a Maintenance and Construction Engineer, ten years experience in building construction, seeks position in Canada. Contact Pascual G. Kagaoan, Captain PAF, Headquarters 553D Civil Engineering Squadron, PAF, Fernando Air Base, Lipa City, Philippines.

Turkish architect, graduate from Art Academy, Architecture Section, Istanbul, 27 years old, experienced in architectural office design, wishes position in Canada, enabling immigration. Erkan Dokmeci, Eksercioglu Sok. Zumrut apt. 31-5, Sisli, Istanbul, Turkey.

A family of three Bulgarian architects, fluent in French and English, Ivan Tzetin, Angela Danadjieva and Fani Danadjieva, graduates of the Government University for Architecture and Building, Sofia, presently working in Paris, France, seek positions in Canada, preferably in Toronto. Ivan Tzetin and Angela Danadjieva received in 1965 the first prize in the competition for the Civic Centre Plaza in San Francisco and in 1963 the second prize in the competition for a monument, place and museum in Playa Giron, Cuba. Both competitions were organized by the International Union of Architects. Contact: Ivan Tzetin, 40 rue Paul Bert, Suresnes/Seine, Paris, France.

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30-year-old Filipino architect, graduate from Mapua Institute of Technology, Manila (B.Sc.), seven years office experience, seeks employment in Canada with view to immigration. Write Florencio S. Zabellero, 30 Cadig Street, La Loma, Quezon City, Philippines.

Filipino architect, 25 years old, graduate from Sto Thomas University, Manila, architectural and engineering office experience, wishes position in Canada. Contact Augusto C. Kilates, 2491-A Arellano Ave., Singalong, Manila, Philippines

Graduate from University of Baroda, India, (B.Arch.) two years experience as an assistant architect in India. Mr. Ekbote completed a full post-graduate course in tropical studies at the Architectural Association School of Architecture in London, England, and has worked four years in London in a chartered architect's office, holding a responsible position. S. V. Ekbote, c/o Architectural Association, 36 Bedford Square, London, W.C.1, England.

24-year-old Filipino architect, registered in his country, five years of diversified experience, wishes for himself and three colleagues, all architects with four or five years experience, positions in Canada enabling immigration. Write: Leon O. Lago Jr., 2540 Callejon 5, Del Pan Street, Sta. Ana, Manila, Philippines.

British third year architectural student (Oxford) wishes employment with a Canadian architectural firm after taking his Intermediate Exams this May. Please write B. Wilkins, 181 Iffley Road, Oxford, England.

25-year-old Filipino architect, graduate from Mapua Institute of Technology, Manila, registered in the Philippines, seeks position in Canada. Reply Antonio L. Sapinoso, P.O. Box 25, Dumaguete City, Neg.Or., Philippines.

Members of the Philippine League of Architects, B.Sc. in Architecture, University of Santo Tomas, wishes employment, enabling immigration to Canada. Contact Jaime F. Formento, 417 Bustillos St., Sampaloc, Manila, Philippines.

Filipino architect, 35 years old, graduate from National University, Manila (B.Sc.), 12 years office experience wishes employment in Canada. Rodolfo C. Calvero, 687-A Cavite Street, Gagalangin, Manila, Philippines.

Filipino architect, 35 years old, graduate of the National University, Manila, member of the League of Philippine Architects, nine years experience, wants employment in Canada. Please write Rodolfo C. Calvero, 687-A Cavite Street, Gagalangin, Manila, Philippines.

23-year-old Filipino architect, graduate from University of Santo Tomas in 1963, two years experience, seeks position in Canada. Graciano Tandingan, Jr., San Jacinto, Pangasinan, Philippines.

Indian architect, graduated with honors in 1965 from the Indian Institute of Technology, Kharagpur, seeks position in Canada. Please write D. Claudius, Suite 12, 25A Circus Avenue, Park Circus, Calcutta 17, India.

Associate of the RIBA, 41 years old, presently working in Rhodesia as a partner in a firm of consulting engineers, wishes to immigrate to Canada and seeks a position with an Ontario architectural firm. Write P. A. Naudé, P.O. Box 3184, Salisbury, Rhodesia.

Canadian third year student of the Politecnico di Milano, Faculty of Architecture, with studies in Paris at Ecole des Beaux Arts, excellent knowledge of English, French and Italian, wants to come back to Canada this summer and is looking for employment with an architectural firm in Toronto. Please write Andrew Michrowski, Casa dello Studente, Viale Romagna 62, Milan, Italy.

Filipino architect, 29 years old, four years office experience seeks position in Canada with view to immigration. Write Virgilio T. Panganiban, 338 Rizal St., San Juan, Rizal, Philippines.

Civil Engineer, graduate from La Salle College, Manila (B.Sc.) with studies at the Graduate School of Design, Harvard University, nine years experience in timber and reinforced concrete design and construction, wishes employment in Ontario. Reply Victorio Chaves Santos, c/o the Hon. Emmanuel Pelaez, 52 Eleventh Street, Broadway, Quezon City, Philippines.

Third year architectural student from Delft Technical University, 21 years old, seeks position in the French speaking part of Canada during his three months summer vacation. Mr Kroon has had some office experience in London, England, with an architectural firm. Write J. Kroon, Koningin Emmalaan 56, Delft, Netherlands.

Registered British Architect, ARIBA, 35 years old, graduate from the Northern Polytechnic Institute, fifteen years experience as an architect designer wishes employment in Canada, preferably in Montreal, Ottawa, Quebec, Toronto or Vancouver. Reply Donald A. Baily, Stack Rock, Upper Apartment, North Shore Road, Pembroke West, Bermuda.

Indian Architect, 28 years old, graduate from Sir J. J. College of Architecture, Associate members of the Indian Institute of Architects, four years office experience, wants position in Canada. N. N. Dastoor, 764 E Tilak Road, Dadar Bombay 14, India.