

JOURNAL

ROYAL ARCHITECTURAL
INSTITUTE OF CANADA



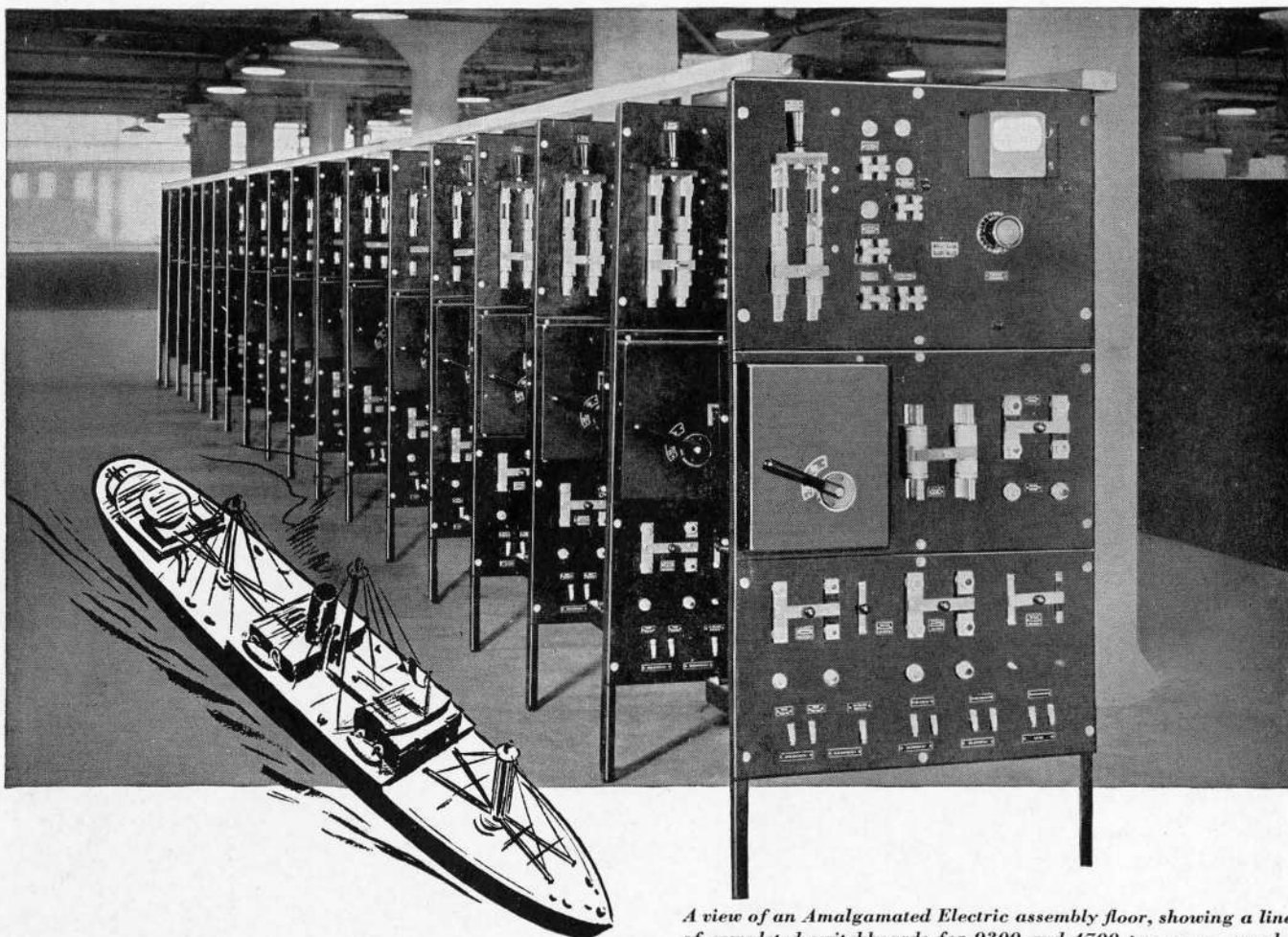
VOL. 20

TORONTO, MAY, 1943

NO. 5

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JOURNAL

ROYAL ARCHITECTURAL INSTITUTE OF CANADA

Serial No. 213

TORONTO, MAY, 1943

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ON the radio the other night, the B. B. C. Broadcaster announced that Great Britain had prepared a programme for taking care of the youth of the country whose academic studies had been interrupted by the war. Arrangements also had been made for bright young people of both sexes whose financial circumstances had been such that the Universities were closed to them before enlistment. While this fell under the Government's post-war activities, plans were in the making for rehabilitation of troops invalided from the army during the war years. Architecture was mentioned specifically as a profession which would attract many men and women who would wish to play their part in a great scheme of reconstruction. The broadcaster gave us this information with obvious and justifiable pride.

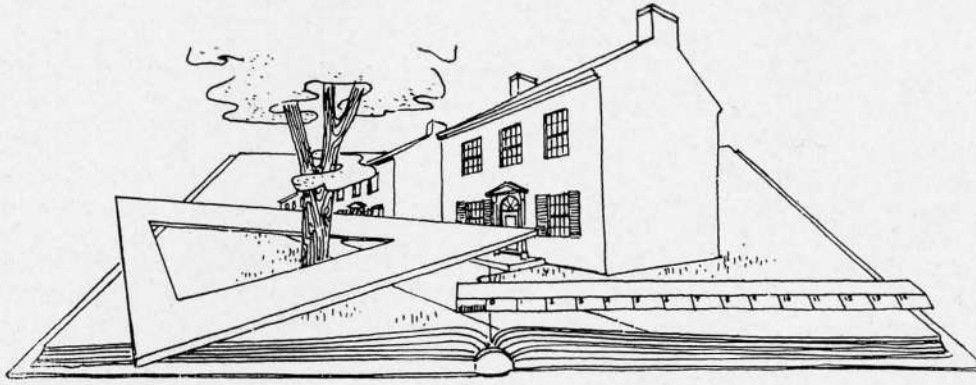
We remembered that a similar scheme of equal merit and of an equally far-reaching nature was adopted by the Canadian Government last year. It was described by Brigadier-General McDonald in the September, 1942, issue of this *Journal*. We have not seen in the Press or heard on the radio any adequate description of the Canadian Government's plans for reconstruction nor even a catalogue of the committees seriously engaged thereon. It seems to us that the Department of Information is thereby losing a great opportunity for raising the morale of both civilians and members of the armed forces. It is doubtless true that most of these reconstruction committees have proposals of a confidential nature that have not yet received the blessing or even the consideration of the Cabinet and many are wrestling with complicated problems that it would be premature to disclose. We have however the general impression that the Canadian Government's plans for reconstruction cover every field that can be explored in the interests of the Dominion as a whole, and that in their scope and in the intelligence which is being brought to bear on them, federal plans for the post-war period take second place to none of the Allied nations. This is the more remarkable when one remembers that in nearly every field we lagged behind Great Britain and the United States whose experience in many fields of reconstruction goes back at least to the last war. Particularly is this true in Public Housing and Town Planning in which our experience was negligible. Great Britain especially has had experience in Town Planning, and it was natural that, with such a background, reports like the Barlow, Scott and Uthwatt should have reached the stage of publication and government study before anything comparable has appeared in Canada or the United States. We have to bear in mind as well that the British problem is simpler in two ways. The territory covered by the British Isles is smaller and the line of communication between Parliament at Westminster is a direct one. On this continent we have a vastly greater area to deal with and the wishes of provinces and states have to be studied in every federal proposal.

A question very frequently asked is "What Government Committees are working on Reconstruction in Canada?" There are five main committees and six sub-committees. The committees report directly to the Cabinet and are the following: 1. Cabinet Committee on Demobilization and Re-establishment (Hon. Ian McKenzie, Convener), 2. Advisory Committee on Demobilization and Rehabilitation (Brig.-Gen. H. F. McDonald, Chairman), 3. Advisory Committee on Reconstruction (Dr. F. Cyril James, Chairman), 4. Advisory Committee on Economic Policy (Mr. W. C. Clark, Deputy Minister of Finance, Chairman), 5. Canadian Section Joint Economic Committees (Dr. W. A. Macintosh, Chairman).

The Sub-committees reporting to the Advisory Committee on Reconstruction are these: 1. Agricultural Policy (Hon. D. G. McKenzie, Chairman), 2. Conservation and Development of Resources (Dr. R. C. Wallace, Chairman), 3. Post-War Construction Projects (Mr. K. M. Cameron, Chairman), 4. Housing and Community Planning (Prof. C. A. Curtis, Chairman), 5. Employment Opportunities (Mr. P. R. Bengough, Chairman), 6. Post-War Problems of Women (Mrs. R. F. McWilliams, Chairman).

We realize that this is no reply to a soldier who wrote asking us if there were a "conspiracy of silence" in regard to Reconstruction in Canada and what, if anything, was being done. It is high time the Government of Canada replied to him, and thousands of other soldiers and civilians who, like him, have much faith, but would welcome some suggestion of works to come.

Gladstone Evans is one of those people who can be relied on to do a job, pleasant or distasteful, to the very best of their abilities. We think Mr. Evans enjoyed writing for the Provincial Page, in which he never missed an issue, as much as we enjoyed reading him. At his own request, we have allowed him out to contemplate for a year the sins of the world and its redemption. In the meantime the pages of the *Journal* are always open to him on any subject.



THE ART IN HOUSING

By JOSEPH HUDNUT

Sketches by WILLO VON MOLTKE

Several years ago I asked an architect who had just completed a housing project to tell me the principle upon which he had designed his facades.

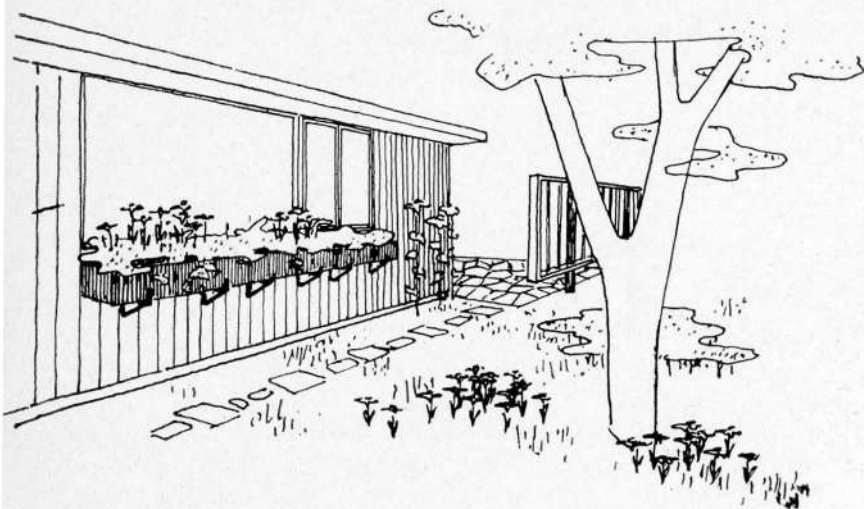
"I got them," he said, "from the plates in Ramsay's 'Late Georgian Houses.'"

For some reason the remark seems less preposterous after the passing of years than at the time it was made. Not that the XVIII century flavour he gave his designs has grown more congruous to the busy life which they disclose, but rather because these facades, whatever may be their absurdities, reveal at least the consciousness of an *art in housing*: of a need for feeling and for expression, as well as for science, which is too often unacknowledged in our more recent projects. Strange as it may seem, these Georgian exteriors were added on with love; a love which was illusioned no doubt and misdirected but which was nevertheless real. The architect, I think, built with his heart, and the structures he has erected tell us so. We perceive beneath the veneer of his scholarship an intention to convey a mood, a thought; and that perception seems to lift his work above the arid materialism which clothes so often the more advanced science of our own day.

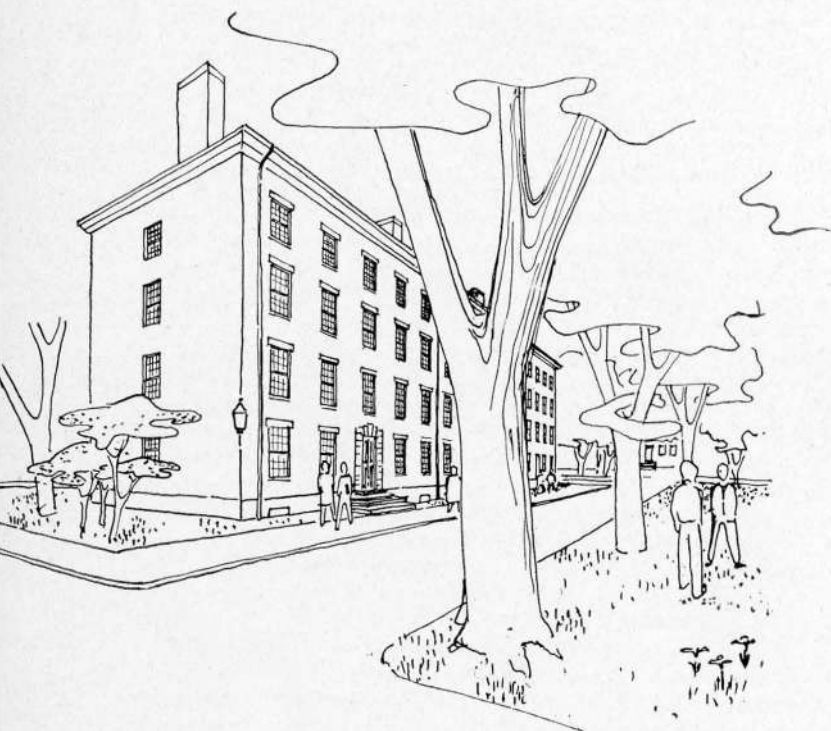
Not less of your ingenuity, gentlemen: not less of your admirable common sense and practical genius, your commendable solicitude for the public purse. More of these, not less; but could you not, without abridgment of your zeal for firmness and commodity, include also that sympathy for the human no less than the technical objectives of your programme which, fused into your buildings, might illumine their dismal efficiency? I do not suggest that this light should be made to shine from Georgian or Tudor adulteries or from trimmings and furbelows of any other style or from anything added on, whether in the name of taste or of scholarship; still less from the application of principles and rules of form gathered from the text-books of aesthetes. I suggest, rather, that the architect should discover and guard some deeper purpose in his work than that of mere shelter and sanitation—and that he should find the means as an essential part of those practical processes by which materials are assembled and shaped for use to make this purpose evident. I mean, in short, that the housing project should be not an agency for social reconstruction merely but also a theme for art.

It should be understood that I am not speaking of an abstraction. I do not use the word art in the drawing-room sense of something to talk about. The art I have in mind is essentially a process of giving emotional content to things made by man. That is, in a housing project, something real and very much to the point. I shall go so far as to say that without such art (which I will call *architecture*) the housing project will fail as an agency for social reconstruction. Those wise and compassionate persons who in their zeal for cleanliness and fresh air, for decent sanitation and comfort, for economy and sound construction, have ignored the arts of expression little know the subtle force of idea and emotion in human affairs. They would persuade us with argument when the way to our hearts lies open before them. It has yet to be proved that mechanical refrigerators have power to promote the good life; but the power of window-boxes has been proved a hundred thousand times.

At this point someone will ask if I expect to win the war with window-boxes. To be scornful of the utility of the arts (especially when these are warmed by sentiment) and to be by that means dressed in a reputation of militancy and stern realism is the fashion since Pearl Harbour; as if an interest in civilized living were inconsistent with the objectives of war. We flatter our enemies too highly by so gratuitous an imitation. I am not for frills in defense housing; and yet, even in the most temporary of "living units," I would admit some considerations other than the possibility of erecting these in nine and a half hours. The workers in our war industries will not be made more resolute by a too Spartan economy practiced upon their wives and children; and, while we assure these workers in speeches and in print, in radio, poster, and cinema, of our intention to defend their way of life, our promise might well be made express and persuasive in the forms of their dwellings, in the shapes and disposition of the planted areas which environ these, and in the character of those institutions, however temporary, which sustain the life of the spirit. "The Japanese, said Ch'iu Tsai, "are a naïve people; they think that wars are won by armies."



Heaven knows that I would not shelter war workers or the "low income group," or any other group for that matter, in ornamental buildings, and yet I think we have been somewhat too resolute at times to be simple, functional, and modern. A balcony or two should not disturb our conscience, a canopy over a doorway here and there, a curved line, a panel, a spot of colour. Spring-courses are not so expensive as to tax the resources of a government truly intent on human happiness; and although I am not a lover of cornices I see no reason why we should not cap our walls with some material which would contrast with their texture and colour. We should consider more curiously the nature and use of materials, and especially of the materials of walls. Red brick is practical and wholly respectable, but it is not the only material available to the architect; and even if red brick were the only material it would yet be susceptible to a hundred variations in texture, colouring and pattern—few of which our architects have even hinted at. There should be broad planes differing in materials, colours, and textures; and these should answer each other in considered sequences. There should be

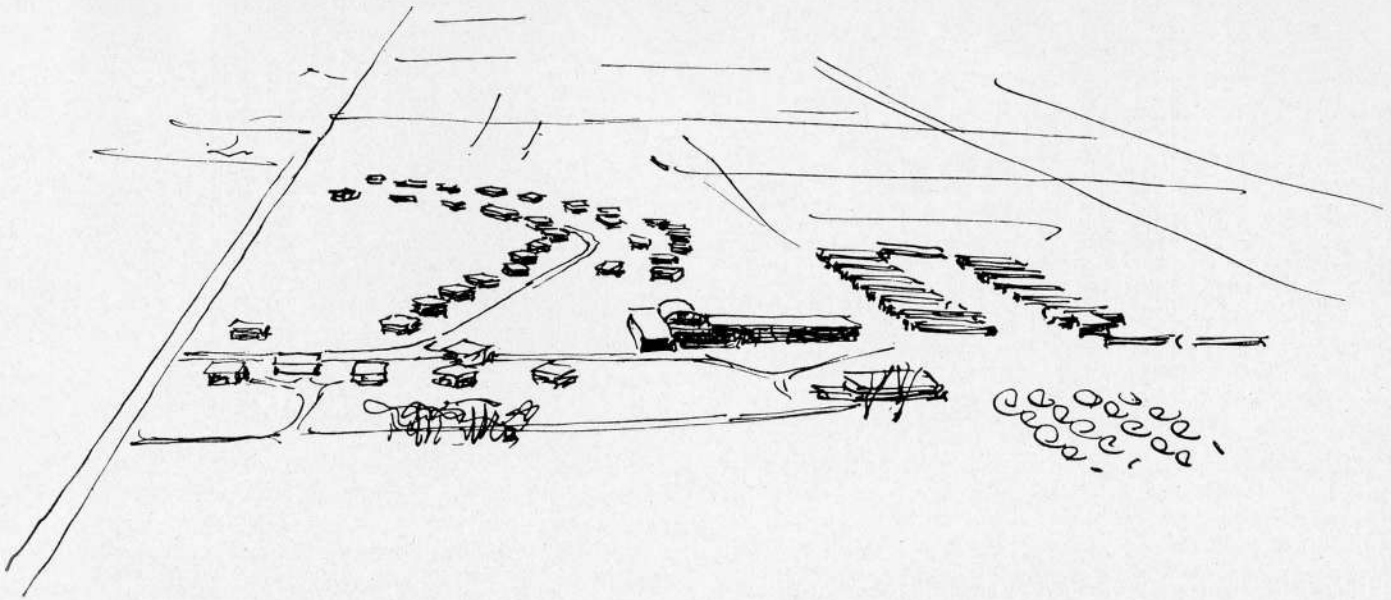


also a liberal use of white wherever that is possible: of a white which captures and holds the changing tones and radiances of the sky. Doorways, even in the plainest buildings, ought to have some emphasis; doorways of stone or wood can give life to the brick walls upon which they are placed. These, as well as the other details I have mentioned, could be made less costly by a reasonable degree of standardization and they could, as Mr. Albert Mayer has suggested, develop in the course of time their own idiom, not a "watered-down version of the middle class"—a sentiment in which I heartily concur.

We could do much more with windows than as yet has been attempted. I am not for variations made to avoid monotony—these only make the monotony more evident—but rather for a more sympathetic consideration of proportion, spacing, and treatment. Those antique buildings in the Harvard Yard—Holworthy, Stoughton, Hollis—owe their serene dignity almost entirely to their windows. It is surprising that we have learned that lesson so haltingly here in Cambridge. This corner of the Harvard Yard is very like a housing development: built for the use of men who certainly had as little money as we have to spend on architectural fripperies. The priceless ingredient in these houses is a nice sense of spacing and of relationships, of scale and rhythm. There is no plan or structure of so intransigent a nature as to prohibit in some measure such feeling and care; nor should such feeling and care be confined to matters of form merely or of appearances. We should depend upon windows more than on any other element in our design for that residential (I almost said home-like) quality which the facades of a housing project ought to have. People live behind these windows, and the sense of that life should and can be made to shine through them.

The character of buildings depends, more than most of us realise, upon such details as window treatment and the materials of surfaces; but I do not need to remind architects that these are after all only minor media in expression. That architecture is an art of three dimensions is a truth never more evident than in the designs of housing projects. The elements of those designs, the expressive elements no less than the useful, are solid objects (buildings) set in space. It is with these that the architect builds his patterns and the character of these patterns is chiefly determined not by materials or details but by arrangements: that is to say, by the shapes, proportions and relationships of buildings, and by the shapes, proportions and relationships of the spaces between and around buildings.

Now the most usual and most obvious fault with housing projects, considered as patterns, is their extreme monotony. The buildings are too much alike, too equally spaced. Their dreary repetitions seem to go on endlessly. I am persuaded that this monotony is as unnecessary as it is fatal to good design. I cannot believe that there is any science so tyrannous as to impose so iron a discipline; nor can it be excused entirely by considerations of economy. In an enterprise made up of so many human factors, of so many and so nice questions of economic balance, there can be, I think, no formulation of physical requirements so definite as to prohibit all variations in the forms of buildings. Our faith in "expert opinion" is much too naïve. Expert can be balanced against expert, as every lawyer knows, on any topic under the sun and if it be heresy I will yet declare my suspicion of a code of procedure so precise in every part as that of the housers. Never, never—try as they may—will they devise that four-family apartment suitable for every family of four, Irish or Polish, Yankee or Middle-West, Catholic or Puritan, tradesman or industrial worker, nor will they ever suppress (I hope) the influence of individual taste and irrational preference in the design of homes.



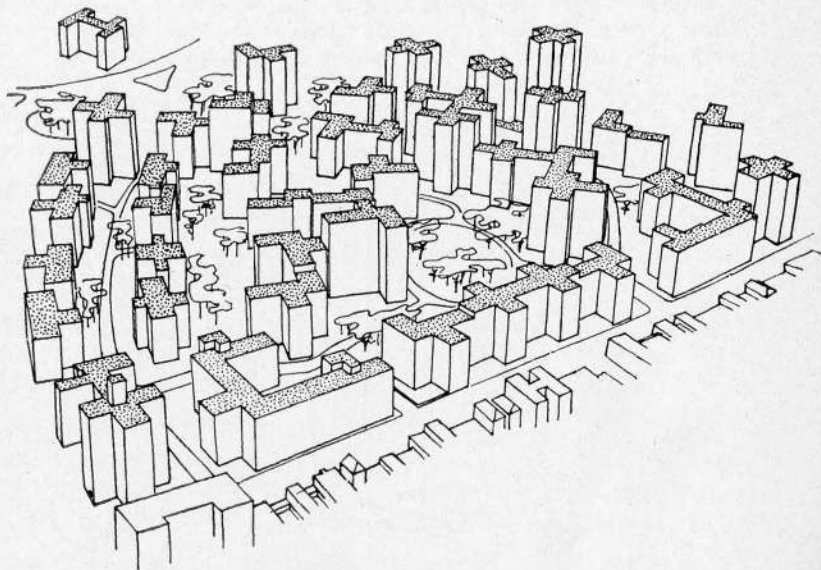
I remember an argument, fought out to an extreme of bitterness, over the height of buildings in a certain housing project; and no one knows to this day, and no one will ever know, whether these should have been three or four stories in height. Why not, then, have some of three stories and some of four? With the variations in heights, variations in positions would follow (they should follow anyway) and these could be so managed as to afford not only sequences of crystallizations and groupings but also new contrasts and new harmonies in the shape, scale, and character of enclosed spaces. A quality of suspense or surprise is essential to all vitality in form, and this is never more true than in the forms of spaces. These spaces, it must be remembered, are as important elements in pattern as are the buildings: their forms and relationships must be subject to our control. Our housing projects are too often like hospitals blown up to insane proportions, with ward after ward following in an endless march; and they lack even those central elements of administration and common services which in hospitals sometimes pull these wards into a tenuous unity.

It isn't their monotony merely, the tedious multiplication of standard units, which gives housing projects so inhuman, so antiseptic an aspect: it is even more their amorphousness, their indeterminate shape as a whole. They begin in the most casual way, zigzag endlessly over open spaces nervously dotted with trees, and end nowhere. You could double their size or reduce them by a third, and still they would be the same. Nothing is there other than the deadly concord of colour and shape and the fact that they have foliage and grass about them to give them totality and coherence, to make of them a distinct and definite identity such as could be grasped and appreciated as a whole. Without such identity there could not, of course, be any satisfactory pattern.

I think of housing projects as inward-looking groups. By this I mean, not only that they should have some appreciable boundaries such as would set them apart from the city as a whole but that they should have at their centre some interests which are shared in common by all and which are expressed in structures or open spaces shared by all, so that the life of the project would be focused towards the centre and away from the boundaries. The residents should of course share the life of the greater city of which they are a part; and the life should flow in and out of the area at many points about its perimeter; but, beyond this, they should feel themselves also a part of a smaller community, of a neighbourhood.

This dual rhythm, like that of a great heart, should be expressed in the pattern of the whole. It is all very well to "discourage" outside traffic through residential areas, but one should not carry the principle so far as to create labyrinths. I have seen housing projects which resemble nothing so much as rabbit warrens, so confused and intricate are the spaces; and I wonder that any one who gets into them ever finds his way out. Something other than traffic, I think, was discouraged.

I am equally depressed by those designs which go to the opposite extreme and provide a single wide avenue or vista, open at one end and leading straight into the centre. The unity here achieved is that of an institution, not that of a neighbourhood. No scheme is more likely to invite an outward, rather than an inward movement; and this is made more rather than less obvious when, as sometimes happens, the vista is ended by some imposing dome or portico or commemorative monument. What is wanted is a heart which belongs to the neighbourhood alone. Your heart is no longer yours if every Tom, Dick and Harry can look into it.



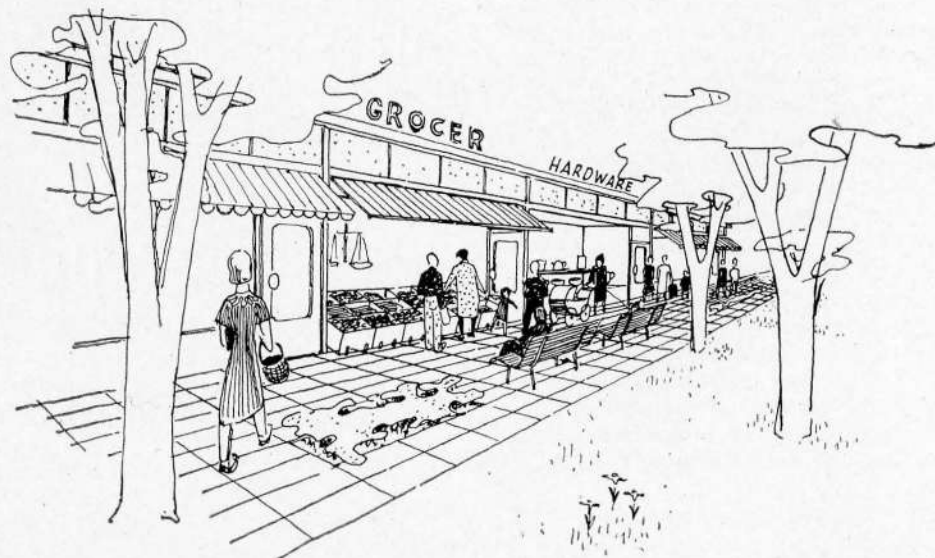


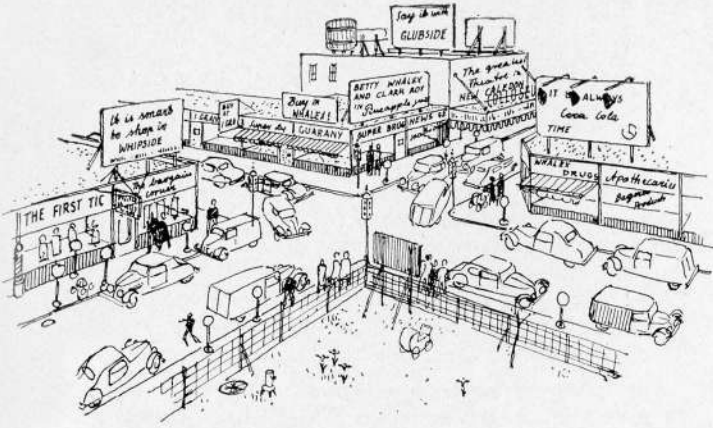
I think that there should be streets and that these, with the exception of a few circumferentials, should lead from the perimeter towards an open space at the centre and, whenever such an arrangement is practicable, the walls of buildings should follow the lines of streets. I would restore the street as the basic element in my pattern. The street—a term which implies a public thoroughfare lined with buildings—is a theatre for a habit of life invented near the beginnings of social growth, and perhaps we should think at least twice before we decide that zigzags in a park are truly more appropriate to a habit of life thus embedded in history. And how, without history, shall we hope for expression in architecture? Every one will agree, I think, that the most beautiful part of Boston is that part lying on the western slope of Beacon Hill; and yet it will be thought strange that I should find in this area a lesson useful for architects of housing projects. Heaven forbid that they should copy for the unsuitable pleasure of a "low income group" the elegant complacencies of Bulfinch, and yet they might, I think, observe that unmistakable quality of neighbourliness, of people aware of each other and of a common sentiment, which is in part at least the consequence of a pattern shared by house and street. The houses are designed for the streets, the streets for the houses. Certainly I would copy neither the streets nor the houses of Beacon Hill; but I would have our buildings grasp the pattern of our streets in a similar manner and so attain a similar unity, a similar clarity and definition, a similar humanity. I would have that sense of scale and articulation; and, yes, there should be backyards "decently confined" and recreational areas clearly set apart from those spaces meant for circulation and service. I should like those persons who determine the orientation of our new houses to consider if that might not be

worth some abatement of their strict regulations. For my part, I am not so avid of the sun as to wish its rays to fall on every inch of my facades.

I think it most unfortunate that housing projects have so little relationship in their outward aspects with the patterns of their environments. If you fly over them they look like bright new patches on the worn fabric of the city. They will never become integral with the city, so opposed are they to its prevailing lines and scale. And yet they are parts of the city and not institutions set into it. I would restore the street if only to recapture in part the unity of neighbourhood and surroundings; and for the same reason I should establish definite boundaries for my play areas and see to it that play did not overflow these boundaries. I have seen more than one housing project in which boys of the noisy age flow in from all the adjacent areas and fill the area with the clamour of their games so that the people who live there are, in effect, living in a playground: a very moth-eaten playground cut into little pieces, like a jig-saw puzzle, by squirming lines of concrete walks. The street is among the most pleasant and beautiful inventions of man.

It has occurred to me in connection with the use of streets that housing developments might be improved (and made more practicable of achievement) if they were less compact. A few sites assigned here and there for the little-higher-than-lowest income group might be left for development by "private enterprise", so that our design is spread out a little and seasoned by variants which would be congenial also to our social objectives. I should invite a few accidents in my design; all the more so if these served to fuse my project into the wider design of the city.

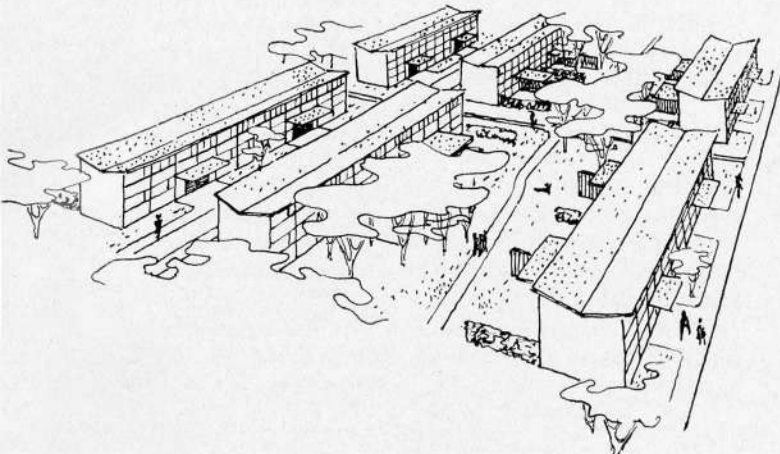




New England villages, in the days when New England possessed a unique and eloquent culture, had at their centres a common. I would have a common at the heart of every housing project; but let me hasten to add, before some draughtsman draws a picture of my "suggestion" as elm-dotted field and picket fence and white spired church, that it is the idea, not the form, that I have in mind. At one side of my common would be the shopping centre; at the other, the neighbourhood institutions. The Housing Authorities, if I had my way, should assign sites for these, to be sold at reasonable prices and controlled by reasonable regulations. You have a city now without a city's amenities; a place to live in without that which makes life tolerable; technique without end, and no soul whatever.

I would not place the shopping centre outside the housing project at "traffic junctions", as so many experts have suggested. I need no expert to show me what havoc automobile traffic plays with a shopping centre. Shops are unifying factors; yes, and civilizing factors, too. There are few activities more pleasant than spending money and when you spend money in the company of your neighbours—to buy food and other things for your husband and children or, for that matter, to give a party—that is a social activity even though it has not yet been identified as such in the quaint vocabularies of sociologists. These, and some housing authorities, are much too snooty about shops and markets. Shops and markets, with their coloured letterings, bright windows, neon lights and the murmur of crowds, disturb their antiseptic calm — and that is precisely what is needed.

My institutions should include a school, and I am inclined to like the idea of a school district whose boundaries are co-terminus with that of a housing project. I should suppose that, with a little good will on the part of boards of education, that should not be impossible of realization. I do not like the



idea of a club for grown-ups in the school but perhaps that is only my prejudice. I go to my club to escape, not to find restraint and guidance and I imagine that low-income folk feel much the same way. I should have a public library and a gymnasium and, above all, a church—if not one church for all, then several churches and a synagogue. I don't see how we can expect to create any social cohesion or any community spirit, still less an affection or loyalty of residents for their neighbourhood, if people must go outside its limits to meet together in prayer or to attend a wedding, a funeral, or a chistening. These things of the spirit can be made to illumine our new social fabric even though this is patently an artificial and in some ways an unnatural grouping of human beings; and, while they give internal strength and direction to the common life within its boundaries, they should provide also that symbol and focus which will pull into unity all the diverse elements of our design.

In and near the buildings which house the neighbourhood institutions I would have sculptures and paintings—and the art of the landscape gardener should find an opportunity in the open spaces. Anyone who has seen the sculptures and fountain at the Harlem project (the one at 155th Street) will agree with me that the money which paid for these "artistic frills" was wisely spent. I know, of course, that these can't be paid for by housing authorities; but it would seem that the wise policy of the Treasury in respect to post offices might be extended to embrace other buildings built by the Government. I am for restraint and measure in these things, and I take it that restraint and measure are not terms which define starvation. Our arts of sculpture and painting need precisely this kind of patronage.

The trouble with most of our housing projects lies in the idea which the architect sought to express. Architects have been with notable exceptions too concerned with techniques, too intent on economy, lighting and sanitation, to give much thought to the human significance of their undertaking. Their science has been competent and active, but their insight and understanding has been neither deep nor sure. This is the true reason for that quality of unreality, of deadness, of alien manufacture which most housing projects seem to possess. Because the idea which is the spring and life of every work of art was too little understood to admit a deep expression, the search for form, which was genuine so far as it went, did not carry the architect beyond an intellectual satisfaction in distribution and arrangement. You can make any number of entertaining patterns out of the buildings of a housing project without endowing these with the faintest breath of life. You can play with these buildings in the way a child plays with blocks—or, what is quite the same thing, in the way an academic architect plays with peristyles and domes—and you delight the aesthetes with no end of balance symmetry, rhythm, coherence, and every other quality admired of schoolmasters, and yet achieve not the slightest imaginative command. For that command you have to look far beyond the immediate practical exigencies of your problem; you must discover, far below surfaces and appearances, the true intent and significance of that which you are doing; and then you must be resolute to bring that to the surface, to make it express and visible. Your form must grow directly out of that discovery: out of the totality of the thing to be done.

I do not wish to end this essay without an affirmation of my faith in public housing. There is no more promising manifestation of that new will to use our collective strength to promote our collective happiness: of our determination to reshape our world to a form fit for human living. We did not expect to create that world without initial failures and disappointments: to overcome with a single blow that terrible genie which has been released from the stacks of our factories. We see now that our science alone will not be adequate to that task. We must put more art into our housing.

A MEETING OF THE EXECUTIVE COMMITTEE

A meeting of the Executive Committee of the Council, Royal Architectural Institute of Canada, was held in the offices of the Institute, 620 Cathcart Street, Montreal, on Friday, May 7th, 1943, at 10.00 a.m.

Present: President, Gordon McL. Pitts (F) in the Chair; Charles David (F), Honorary Secretary; Forsey Page (F), Honorary Treasurer; W. J. Abra (F), O. Beale, A. J. Hazelgrove (F), Eugene Larose, Harold Lawson (F), Maurice Payette, J. Roxburgh Smith (F), Miss Constance Griffith, Miss Mary Elmslie, Secretary.

It was reported that a meeting of local representatives of organizations interested in the recent submission of the Dominion Council of Professional Engineers on the co-ordination of the engineering and allied groups, was held in Toronto on April 28th and Mr. Gordon M. West attended on behalf of the R.A.I.C. Mr. West's report, presented at this Executive Meeting, revealed that although all those present agreed that some form of co-ordination is advisable, there was some hesitancy to arrive at a definite administration of such an organization and Mr. West took occasion to outline the splendid type of administration to be found in the architectural profession and the National Construction Council's constitution. Mr. West recommended to the Executive Committee that the Institute continue to "show interest in any general agreement," but "it should not take any definite position in the matter at this time." A broader suggestion originating with Mr. West, for organization of not only allied technical groups but all professional groups interested in community planning as well, viz., doctors, chartered accountants, social services, etc., is being discussed informally among interested members of these professions.

Mr. Page reported on a recent meeting of the O.A.A. Housing and Town-planning Committee, of which he is a member, at which were also present three members of the one-time Town-planning Institute of Canada, called together to discuss the possibility of reviving the powers and charter of the Institute. This report was received with great interest in view of the efforts now underway to institute extra-mural courses in town-planning at McGill and other Canadian Universities. The programme of the course proposed at McGill will be published as soon as definite arrangements have been completed.

It was reported to the Executive by the Chairman of the Committee on Architectural Training, Mr. Murray Brown (F), that, in accordance with the instructions of the special meeting of that Committee held at the time of the Annual Meeting, the Heads of the Schools of Architecture had been requested to forward progress reports on their consideration of and action on the suggestions for revising courses in architecture set forth in the Report presented to the Architectural Training Committee by Professor R. F. Legget. A most interesting and encouraging reply has been received from the Director of the McGill University School of Architecture, announcing complete revision of the McGill course, which will be published in detail in the "Journal" in a later issue.

A recommendation, made by Mr. Leslie R. Fairn and passed in the form of a resolution at the Annual Meeting, for establishment of a trades school system in each Province for the training of skilled construction tradesmen, was referred to the National Construction Council which is at present engaged in studying the apprenticeship problem. The R.A.I.C. went on record as favouring immediate action to relieve the present lack of skilled tradesmen, also looking forward to the training of the returned soldier, and the N.C.C. is to be requested to advise the Executive Committee of its progress in formulating a plan.

The Chairman, Mr. Page, reported on action taken at the first meeting of the 1943 Editorial Board, in arranging to hold regular meetings on the third Thursday of each month, in suggesting several improvements in the set-up of the "Journal", and in preparing for publication of special numbers such as a Housing Number, and an Armed Services Number, the latter to include photographs of interesting Navy, Army and Air Force construction.

The following were appointed to act as the nucleus of a committee of Ontario members to discuss revisions to the programme of future Annual Meetings in preparation for the Annual Meeting to be held in Toronto in February, 1944: Messrs. Forsey Page, W. J. Abra, A. J. Hazelgrove, E. R. Arthur, R. S. Morris. Copies of a suggested programme compiled by this committee will be forwarded to the Provincial Associations for further suggestions or additions.

A letter received from the recently organized Architectural Research Group in Ottawa was read to the Executive, in which were outlined the principal objects of the group, namely, stimulation of public interest in and discussion of post-war regional planning, city planning and housing for Canada. The Ottawa A.R.G., which is composed of members from different parts of Canada, England and the U.S.A. engaged in various phases of the war effort, has now in hand the production of a city planning and housing exhibition to have its initial showing in Ottawa next fall. This Group strongly recommends that the R.A.I.C. "take steps at once to demonstrate to the public and to the authorities that it considers these matters—to be within the rightful realm of the architect", by which it refers, of course, to "town and regional planning, housing and building technique", and further, proposes that the Institute sponsor the A.R.G. exhibition "in the name of the architectural profession, and through the various provincial associations contribute some part of the initial, maintenance and circulating cost of the exhibition and also undertake the sponsoring and circulating of it throughout the towns of the respective provinces." The President was asked to reply, assuring the Ottawa A.R.G. of the Executive's interest in its undertaking and inquiring into the possibility of having their representative attend the next meeting of the Executive Committee to give further consideration to the proposal.

Considerable discussion and suggestions for further revision followed the reading of the recently revised and condensed recommendation presented by the Housing Committee, Mr. Harold Lawson, for establishment by the Federal Government of a Central Building and Planning Authority, which resulted in the following resolutions:

MOVED that the Report of the Housing Committee recommending establishment of a Central Building Authority be considered and finally completed and approved at this meeting;

— and further —

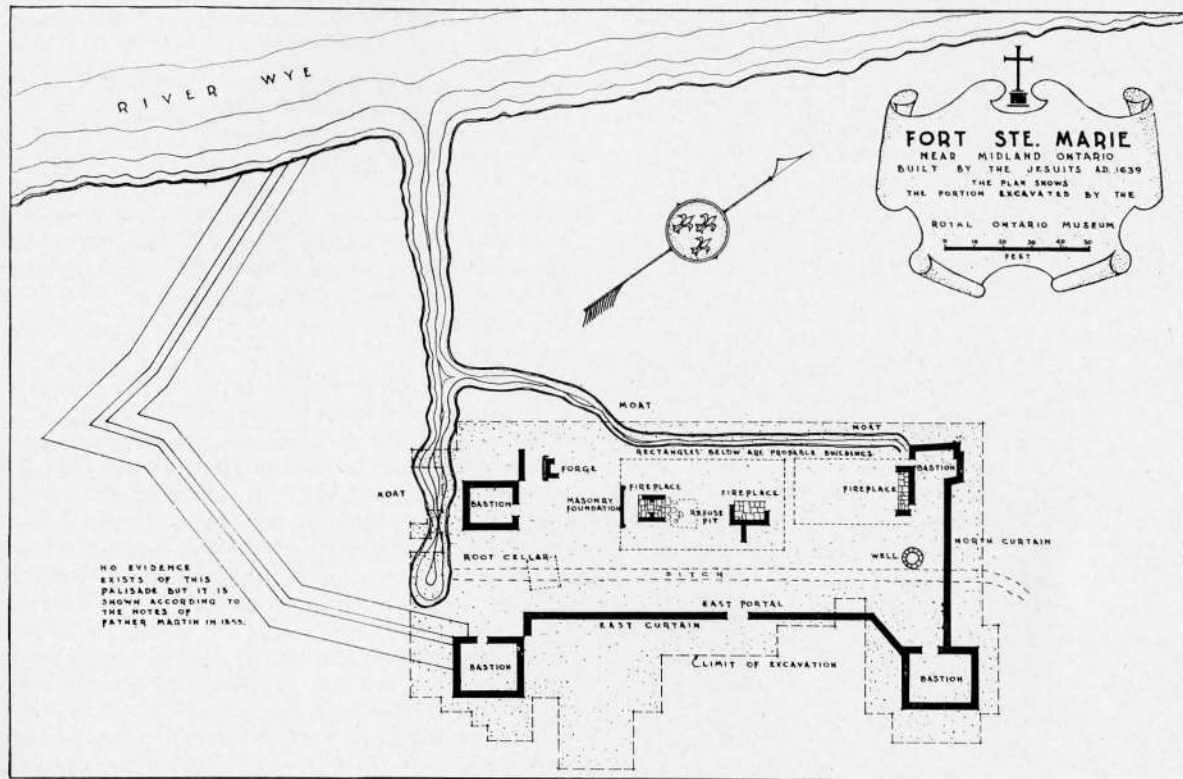
MOVED that, after due consideration of the circumstances and the times, and in view of the fact that the memorandum has been sent to the Council of every component association for an expression of their opinion, and in view of the fact that these expressions of opinion have been received and insofar as practicable have been harmonized and incorporated in the report now before the Executive, the Executive now decides that it is unnecessary and impracticable at this advanced stage to send this memorandum to every member of the Institute;

(Continued on page 79)

THE ARCHITECTURE OF SAINTE MARIE

By KENNETH E. KIDD

Assistant Keeper of the Ethnological Collection of The Royal Ontario Museum of Archaeology



It is ironical that the residence, or place of retreat, which the Jesuit missionaries to the Hurons built for themselves on the bank of the Wye river in 1639 should come to be known as a "fort". Yet such is the case. Apparently the Jesuits themselves used the word only once in referring to it. Originally called Ste. Marie, it was later designated Ste. Marie I, to distinguish it from a second establishment of the same name on Christian Island; in modern times it has been known almost solely by the name of Fort Ste. Marie.

The reasons for this modern usage are not hard to find. Anyone looking at the ruins, either before or after excavation, would be impressed primarily by the masonry and its obviously military purpose. The civil structures, being principally of wood, have long since disappeared. Yet it is necessary to describe Ste. Marie both as a civilian—or religious settlement—and as a piece of military fortification. The latter aspect will be considered first.

The enclosure outlined by masonry walls and towers—the "fort"—is a rectangular structure, having its long axis running north-south, parallel to the river's bank. Its over-all length is approximately 179 feet by 93 feet. There are remains of four bastions, one of which is in a very bad state of preservation. Masonry "curtains" protect the north and east sides. A break in the latter indicates the position of the postern gate. These two curtains afforded some protection against land attacks from the east and north, the only directions from which they could reasonably be expected. The north-east and south-east bastions were obviously the most important in the entire Fort. They are the largest; and are set well out from the corners so that cross-fire from them would protect not only the east curtain—the longest, and most exposed—but the postern as well. The south-west is well-built, too, and like those just described, rectangular. It differs from them, however, in that it was not at a corner, but

part way along the south side. The fourth bastion is at the north-west corner. It is of very inferior masonry, is not complete in itself, being more in the nature of a room, and is not rectangular, but trapezoidal. No stone walls could be found on the south or west sides of the Fort. Perhaps the Jesuits felt that on the west the river was sufficient protection, and that the compound for friendly Indians, which was contiguous with the Fort on the south, was a guarantee of safety in that quarter. Also, moats running along the south and west sides may have had some protective quality.

In assessing the military value of Ste. Marie we should always remember that until 1644 at least, the Jesuits felt themselves in no danger from hostile Indians. They came as men of peace, and they did not know that the presence of Frenchmen initiated a struggle of extermination between the Hurons and the Iroquois. The fact began to dawn on them in 1644. A sense of increasing danger seems to have accelerated their work on the fortifications from that time on, but even at that, they probably did not have the time and resources to perfect them; hence the apparent incompleteness that we can see to-day.

The Jesuit Relations make occasional reference to the residence, the chapel and church and to the hostel. In the Indian compound to the south were other buildings, but since this area has not been excavated we are not concerned with them. The three above mentioned were for the use of the Jesuit Fathers themselves, and would almost certainly be within the fortified enclosure. The outlines of two large wooden structures have been uncovered, presumably the remains of the residence and the church. The hostel may well have been a corner of the residence set aside for that purpose. Two or three smaller structures were seemingly isolated affairs, used for specialised purposes, like the root cellar and the forge.

The two principal buildings were so placed within the fortifications that their long axes ran parallel to one another. The outer walls formed a straight line on the west, continuous except for two feet between buildings. In the absence of any other wall in this quarter, and because of certain peculiarities of construction, it appears that these two walls taken together form the only protection against attack from the river side; the line of these walls begins at the west side of the door from the north-west bastion and runs southward; the angle between it and the bastion being 90 degrees.

The northern building being smaller, has been called the church. It is a rectangle 40 feet long north and south, and 20 feet east and west. The east and south sides are clearly defined by little circles of dark earth, indicating stakes which long since have rotted away, but which at one time supported the sills and kept them off the ground. There are in reality two rows of these stake-moulds about nine inches apart, with the stakes placed in staggered fashion. On the west side either a much heavier sill was used, or it was for some reason or another not entirely consumed. The stake moulds existed beneath it also, and went down to a depth of 2.4 feet. The north end of this building was nearly all taken up by the fireplace and the door to the west of it into the bastion interior. No floor was to be seen, but fragments of roof timbers lay strewn about.

The south building was 57 feet long and between 30 and 35 feet wide; the eastern limits were extremely difficult to define. Between two measurable points it worked out to 30.7 feet, but farther south became indefinable. There are good reasons for thinking the building was wider at the north than at the south end. In general the area is defined by the heavy sill along the west, by charred floor boards, and in one place by the presence of joists. The floor boards were mostly seven inches wide, laid east and west. They rested on joists, which seemed to be merely roughly shaped sticks laid about five feet apart. Only a few of the interior arrangements of this building, as described below, could be ascertained.

Along the south wall was a 15-foot masonry foundation, very well built of limestone slabs laid in lime mortar. Five feet north of it were the lower portions of the double fireplace, or more accurately, the fireplace with a hearth on the north and another on the south sides. The bases of the walls were intact enough to give an accurate idea of their thickness, the outer walls being one foot and the centre wall 1.5 foot thick. The hearths are paved with rectangular flags of limestone laid in mortar. Why the fireplace should have been built so close to the south wall is hard to understand. There is no indication of its original height. The flagging of the north side extends beyond the hearth to cover part of the floor. This brings us to another interesting point. The floor here had collapsed downward into a pit taking the flagging with it. Investigation showed that this pit was originally ten feet square and six feet deep. The walls were made of stout cedar posts driven into the blue clay. The material filling this place appeared to be chiefly vegetal matter alternating with strata of humus, suggesting that it may have been used as a refuse dump. 39 feet north of the south wall, near the east side of the building, was a very large fireplace originally with a chimney 25 feet, and probably 30 feet high. The construction is cut limestone and mortar, with an arch at the bottom of the flue, presumably to spread the weight. The hearth is here likewise of limestone flags; its width 9.6 feet, and the breadth five feet. A short piece of masonry abutted on the back of the chimney, for which no other explanation is offered than that it was a support.

Sills under the west wall of both buildings were very heavy—ten inches across, and as near as could be determined from the charred remains, eight inches thick. The interesting thing about them is that the upper side was hollowed out into a deep, U-shaped channel. Apparently this side of the building was a sort of palisade, with heavy upright stakes set into the groove. Such a construction could be loop-holed for defense—a distinct

advantage. In any event it is a most unusual type of structure, probably unique on this side of the Atlantic. Whether such a building could carry two storeys is another question; the requirements of the personnel at Ste. Marie in the later years of its existence would indicate that living quarters with a ground plan 57 feet by 30 feet must necessarily have had two floors. If the chimney was 30 feet high, as seems to be the case, it is additional evidence that the residence was nearly that height, too.

Accessory structures inside the fortifications included the forge, the root cellar and the well. The latter was situated near the north curtain about half way between the two bastions. Apparently there had been a rectangular cribbing some four feet deep around the upper portion; beyond that the bore was circular, about five feet in diameter, and at least ten feet deep. The remains of the forge consisted in the stone foundation of the flue, rectangular in outline; the masonry constituted but three sides, the fourth being left open. It was situated about 20 feet south of the residence, and slightly to the west of the south-east bastion.

The "root cellar" referred to above lay between the forge and the east curtain, near the south end of the enclosure. One of the most fascinating features of the architecture of Ste. Marie I, it exemplified perfectly the "en pile" construction. The builders had dug into the blue clay a pit 9.5 feet square, with a flat floor. They laid four stout sills of cedar, one along each side, and wedged them at the corners into heavy posts. The sills were hollowed out on their upper surface into a U-shape; into this channel the builders drove heavy, blunt stakes so as to form walls. It was impossible to determine how high these stakes had originally been because the upper portions had all rotted away, nor can we ever know what kind of roof was used, but it is quite probable that the structure may have protruded above ground. On the floor of the little cell was a rather thick layer of decayed vegetal matter, which upon analysis yielded seeds of wild grapes, strawberries, raspberries and hawthorns, and great quantities of squash seeds. Such evidence indicates the place was used as a storage pit or root cellar, but other things like fragments of a Venetian glass decanter and the leg bones of roosters suggest that refuse may now and then have been thrown into it also.

The Jesuit Order hopes to reconstruct Ste. Marie I when the war is over, just as it was in the days of 1639. Such a project would restore Ontario's first European-type of structure, and preserve for all time one of the most important links in the history of Canada and, indeed, of North America.

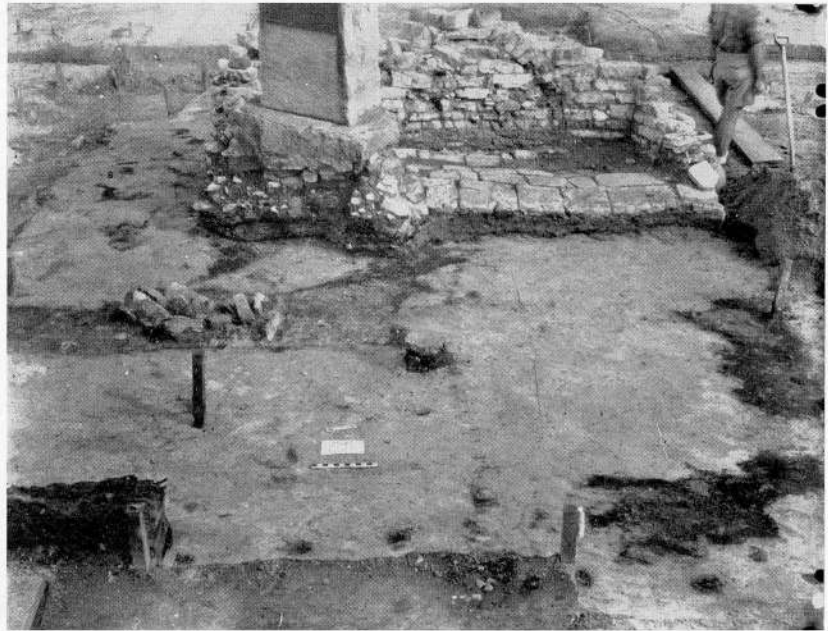


An exterior wall of the south west bastion, still standing to a height of four feet. Large and frequently uncut granite and limestone boulders are laid in lime mortar, without binder, and probably plastered on the inside surface. There is a rubble core, since the inside and outside stones do not overlap.

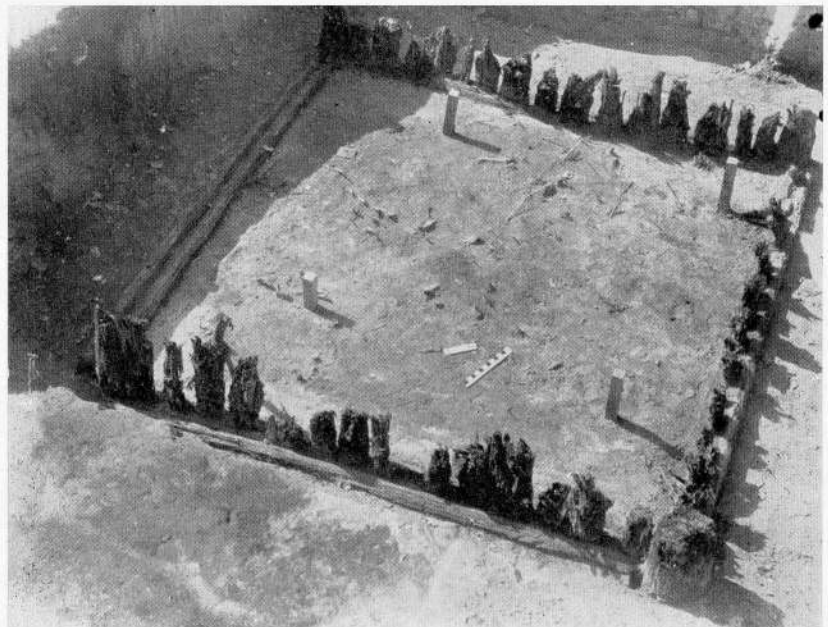
Looking toward north end of enclosure, with the north-west bastion in the upper left corner. In the foreground may be seen the west sill, and fallen timbers; beyond this again is the north fireplace, and a doorway leading into the bastion.



The great fireplace, situated at the north end of the residence, and facing west. The largest of all three fireplaces at Ste. Marie (9.5' x 5'), it bore evidence of much use. The stone chimney, arched at the base, originally stood about 30 feet high.



Remains of "root cellar", containing vegetable matter and a few chicken bones. The hollowed log and upright stake construction may clearly be seen, as well as the large corner posts, all of cedar. No stakes were found in the log along the south side. The cell is approximately 9.5 feet square.



PERSONAL SERVICE FACILITIES FOR INDUSTRIAL EMPLOYEES

By C. GRANT GIBSON, B.A.Sc.

Examiner of Reports and Designs, Factory Inspection Branch, Ontario Department of Labour, Toronto

Personal service facilities essentially consist of rooms, personnel and equipment which materially assist in protecting the health and welfare of industrial employees through the promotion of good personal hygiene.

The suggestions and recommendations that have been here compiled will be found to be practical in application and productive of harmonious industrial relations. They are based, not only on minimum legislative requirements, but also on the listed reliable references, the wide experience of factory inspectors, consulting engineers, architects and industrial managers. As such, they should be of material assistance to factory designers and operating officials who wish to improve their existing facilities or who may be faced with the problem of competing in the labour market with firms who have newer and better equipped buildings for personal service facilities.

In this paper, the word "shall" has been used as indicating a requirement under the code or regulation referred to and the word "should" to indicate a recommendation or that which is advised but not required by the authorities having jurisdiction.

As the labour laws and regulations vary in each province, it is essential that those of the province in which the industry is located be studied and the facilities provided in accordance with them. For example, the recommendations made in this paper are not necessarily requirements under existing Ontario labour laws but are considered good practice and should be followed if possible.

The facilities will be discussed in turn under the following headings:

- I—Drinking Water.
- II—Washing and Locker Rooms,
 - (a) Location
 - (b) Design
 - (c) Washbasins
 - (d) Shower Baths
 - (e) Toilets and Urinals
 - (f) Dressing and Locker Rooms
- III—Rest Rooms for Females.
- IV—Matrons.
- V—Dining and Lunch Rooms.
- VI—General.

I—DRINKING WATER

There should be a readily accessible supply of drinking water from a source approved as being pure and safe by a Provincial or Municipal Department of Health (ref. 1). A detailed report on drinking water standards will be found in reference 2.

No supply of drinking water shall be located within 8 feet of a toilet or urinal (ref. 3) and one drinking fountain or other source of water should be supplied for every 50 persons (ref. 10).

Where the supply of drinking water is not directly drawn from a watermain, the drinking water should be contained in a suitable covered vessel, having a drain faucet, with the water being renewed at least daily.

A supply of individual drinking cups should be located near water containers or faucets. The use of a common drinking cup is prohibited.

Water for drinking purposes should not have a temperature lower than 45 degrees F., nor greater than 65 degrees F. (preferably a temperature of 55 degrees) and if cooled by ice, the ice should not come in direct contact with the water (ref. 10).

Every drinking fountain shall be of a form that can be cleaned easily. The water orifice shall be of the shielded type and be above the extreme overflow level of the bowl. The orifice shall direct the water stream at an angle of approximately 45 degrees with the horizontal. Means of regulating the flow shall be provided (ref. 6).

In general, all plumbing fixtures shall be of non-absorbent materials, impermeable to water, and shall be finished with a smooth surface free from flaws or blemishes that would tend to prevent ready cleaning. No sink, tub, water-closet, bowl, or other fixtures shall be encased in wood or other absorbent material. All water-closets and urinals shall be of vitrified earthenware, glazed porcelain, or vitreous china; other fixtures (e.g. drinking fountains) shall be of these materials or of porcelain-enamelled cast iron, or stainless alloys, provided that for special industrial purposes, other materials may be used if approved by the authority having jurisdiction (ref. 6).

There shall be no connection, open or potentially so, between a system supplying water for drinking purposes and a system furnishing water for industrial processes or fire protection, unless the latter sources have been approved (ref. 1) as being safe for drinking water. Where unsafe water is present, sufficient and easily legible notices shall be posted stating that fact and every reasonable effort shall be exerted to prevent its being used for drinking or washing.

For employees engaged on operations where high temperatures prevail, an adequate supply of sodium chloride tablets (preferably the 15-grain size) in a suitable dispenser should be provided near the supply of drinking water subject to the recommendations of the plant physician (ref. 7).

Sanitary cuspidors, preferably of the disposable type, should be provided at all drinking fountains in which can be placed chewing gum, tobacco, etc., to discourage the use of the drinking fountain bowls for such purposes.

II—WASHING AND LOCKER ROOMS

(a) **Location**—Most industrial establishments are designed to have the main washing and locker facilities located near the employees' regular entrances in order that street-clothes can be disposed of before the employees reach their work-places.

In plants employing up to 500 persons, one set of washing and locker rooms for each sex may be sufficient. However, much depends on the terrain covered by the plant, whether there are departments where the kind and degree of dirt vary (e.g., iron foundries and wood pattern shops). Also there exists the necessity of protecting the health of those employees who work in abnormal conditions of air temperature or humidity, by locating the change-rooms where they will not have to go outdoors to reach them. In all these cases, more than one set of wash and locker rooms would be advisable and even necessary. Employees should never be exposed to inclement weather or to accident hazards such as crossing streets, railroad tracks,

etc., in order to reach wash, locker and other personal service rooms.

Toilet rooms shall be readily accessible to persons using them and should be located either on the same floor or not more than one floor above or below their regular working place except in cold storage plants, grain elevators or similar types of buildings. If sufficient passenger elevators are available for use by employees at all times, the above rules for location of facilities need not apply. While it is difficult to set a definite rule, it is suggested that 300 feet should be the maximum distance that employees should be required to travel to reach a toilet-room as there is always a tendency to talk to acquaintances en route. Toilet-rooms should be preferably located adjacent to wash and locker rooms.

(b) Design—All wash and locker rooms should be provided with one or more exterior windows opening on a street, yard, court or air well or with one or more skylights opening directly to the sky (not to the bottom of an air well), or have artificial lighting and a system of mechanical ventilation (ref. 8). Where glass having a light transmission value of not less than 88 per cent. is used, its area shall not be less than one-tenth of the floor area with a minimum unobstructed area of four square feet. Windows or skylights shall have a minimum openable area of one-twentieth of the floor area, or movable sashes, louvers or equivalent means of natural ventilation may be substituted. All windows and skylights shall be equipped with suitable fly screens (14 mesh wire) and translucent but not transparent (i.e., obscure) glass shall be installed wherever necessary to ensure privacy for users of the wash and locker rooms.

Where no exterior windows or skylights are provided, there shall be a mechanical ventilating system which will supply clean fresh air as follows: for wash and toilet-rooms—two c.f. and for other accessory rooms one c.f. per minute per square foot of floor area. These amounts of air should be exhausted direct to the outdoors and in the case of toilet rooms, shall not be re-circulated.

There shall be a sufficient electrical lighting installation so as to be capable of supplying—for wash and toilet rooms, one watt and for other accessory rooms, one-half watt per square foot of floor area (ref. 8). Other codes specify illumination in terms of foot candles with 5 being recommended as the minimum for personal service rooms (ref. 9). Switches and fixtures shall not be located near water-pipes or other grounded conductors.

All wash and locker rooms shall be heated to a minimum of 68 degrees (ref. 3) and should preferably be kept at 70-72 degrees. All heating pipes, radiators, etc., should be installed so as to allow ample space for cleaning and be guarded to prevent employees accidentally contacting them (ref. 10).

The minimum ceiling height shall be eight feet with the enclosing walls extended to the ceiling and constructed of material impervious to water to a height of at least four feet. The walls should form a tight joint at the floor level or the floor and wall should be continuous to a height of six inches or more and be well coved to facilitate easy cleaning. Above the level of six feet, the wall may be provided with glass that is translucent but not transparent.

The walls, ceilings and partitions should be preferably light in colour to give a clean appearance and increase illumination.

The floors should be of vitrified tile, terrazzo concrete one inch in thickness, asphalt mastic one inch in thickness or other equally non-absorbent, smooth, easily cleaned material. One or more floor drains should be installed so that the rooms can be scrubbed and flushed.

A slop sink with a supply of hot and cold water should be installed in or near every wash or toilet room. A hose connection on a hot water line will be of assistance in cleaning operations.

(c) Wash Basins—The importance of providing adequate and well maintained washing facilities for employees cannot be too highly emphasized, not only for personal hygiene considerations, but also for the prevention of dermatitis.

The supply of water for washing purposes shall be from a source approved by the Provincial or Municipal Department of Health as being safe for that purpose.

Separate washrooms shall be provided for each sex with at least one lavatory (wash basin) for every ten employees or portion thereof, up to 100 persons, and one lavatory for each additional 15 employees or portion thereof (ref. 4). Twenty-four inches of sink of the straight type, and slightly less of the circular type, may be considered equal to one wash basin provided that each such unit has its own supply of water.

At least one wash basin shall be provided in each toilet room or an adjacent room thereto unless general washing facilities are nearby on the same floor.

Where the health of employees is likely to be endangered by the presence of poisonous, irritating or infectious materials, there should be one wash basin for every five employees. Every such wash basin shall be supplied with hot and cold water from one outlet, preferably of the spray or shower head type and with a positive means of regulating the water temperature and flow.

The maximum temperature of the hot water should not exceed 140°F., and open-line steam should not be mixed with water to secure high temperatures (ref. 10).

The hot water valve should always be on the left and the cold water valve on the right-hand side. Valve handles should not be made of material which might break easily, such as porcelain, but be of metal.

A proper arrangement of check valves and relief valves will prevent scalding persons using lavatories and showers when a sudden heavy demand at some other outlet decreases the supply of cold water.

Wash basins should conform to the general design requirements of plumbing fixtures as outlined under "drinking fountains" (ref. 6).

Soap of a good quality, either liquid or powder, in a suitable dispenser, shall be provided at each wash place.

The common towel should not be allowed. Individual towels of cloth or paper and proper receptacles for disposing of used towels should be provided.

One or more good mirrors should be provided in every wash-room and also in other service rooms particularly those used by women.

(d) Shower Baths — Shower baths should be installed wherever employees are exposed to poisonous, infectious or irritating materials or to abnormal air temperatures or humidities, in the ratio of at least one, and preferably three, showers for every fifteen employees. Even in comparatively clean operations such as machine or wood-working shops, the installation of a small number of showers is desirable.

Hot and cold water should be supplied to each shower following the recommendations regarding temperatures and valves for wash basins as outlined above.

Floors of shower rooms and stalls shall be made of non-slip materials such as concrete finished with a suitable surface. The stalls should be at least 3 feet by 3 feet and the floor should have a slope of one-half inch per foot, toward the drain opening or trough near the rear. A four-inch curb at open sides will prevent water leaving the stall and by painting the curb a light colour, the possibility of any person tripping over it will be reasonably eliminated.

Any ceiling below a shower bath which does not discharge into a tub or other fixture, shall be protected from leakage by an apron or tray of lead or other equally corrosion-resistant metal draining into the shower drain (ref. 8).

Stall partitions of easily cleaned and moisture resistant materials, should be at least six feet high and start about twelve inches above the floor to further facilitate cleaning.

Removable wooden shower mats are not desirable due to the difficulty of maintaining them in a sanitary condition. If used, they should be provided in duplicate to permit sterilizing and air drying. They should be constructed of non-splintering wood such as maple and be fastened together, without nails, by using hardwood dowels set with resin glue (ref. 10).

The natural reticence of women to disrobe must be respected and can be overcome by providing 3 feet by 3 feet dressing cubicles on one or both sides of each shower stall and separated from the latter and the locker-room passageways by suitable draw curtains on rods.

Where the nature of plant operations requires the compulsory use of showers at the end of every shift, the shower rooms should be located between the locker-rooms for work and street clothes. Suitable floor space for drying (towelling) should be provided near the showers.

To control foot infections, it is desirable that footbaths, about 4 inches deep by 2 feet square, be located where their use will be obligatory before and after using the showers. The footbath solutions usually consist of 1 or 2 per cent. solutions of sodium hypochlorite or 10 per cent. solutions of sodium thio-sulphate or 10 to 20 per cent. solutions of sodium chloride (common salt) and must be renewed, after a thorough cleaning of the footbath, at least daily.

Slippers, either of the disposable paper type or the employee's own property, have considerable value in controlling foot infections.

(e) Toilets and Urinals — Water-closet and urinals shall fulfil the general requirements of plumbing fixtures described in the section dealing with drinking fountains. Water-closet bowls and traps shall be made in one piece and the bowls of such design as to prevent fouling of surfaces and be provided with integral flushing rims, constructed to flush the entire interior of the bowl. Every water-closet and urinal shall be flushed by means of an approved tank or an approved flush valve, adjusted to prevent waste of water. Each water-closet shall receive not less than four gallons of water and each urinal not less than two gallons at each flushing (ref. 6).

Every closet seat shall be of the open-front type and made of non-heat-absorbing and easily cleaned material. If wood or other absorbent material is used, the seat shall be finished with varnish or other substances to make it impervious to moisture, and shall be preferably light in colour.

Chemical closets and sanitary privies should not be permitted except where there is no sewer accessible or where fewer than 25 persons are employed (ref. 4 and 11). Privies and chemical closets shall not be located within a habitable room, nor where it is impossible to construct and maintain them without danger of contaminating any source of drinking water. Neither should they be within 100 feet of any room or place where foodstuffs are stored or handled. Chemical closets and privies shall be of a type approved by the provincial or municipal Department of Health (ref. 12). The containers shall be changed frequently enough that they will not be allowed to become more than two-thirds full and the contents disposed of in accordance with the requirements of local health authorities.

Toilet facilities shall be provided for the maximum number of employees and other persons who will be on the premises at any one time. There shall be one or more toilet rooms for each sex with well separated entrances on each of which there shall be a clearly painted sign indicating for which sex the room is provided.

The number of toilet and urinal fixtures shall be in accordance with provincial requirements. *The Factory, Shop and Office Building Act of Ontario* prescribes that there shall be

one closet and one urinal for every 25 males and one closet for every 15 females (ref. 3). Some codes (ref. 4 and 11) prescribe a lower number of facilities (1 for each 30) when the number of persons exceeds 100 but it is questionable whether the need for facilities decreases as the total number of persons likely to use them increases.

However, it will be found that the accommodations will be satisfactory if the total number of toilet facilities fulfills provincial requirements and if there be at least one urinal for every two closets. Where trough urinals are already installed, each two feet of length may be considered as equivalent to one urinal.

Toilet rooms shall have partitions reaching to the ceiling and self-closing doors. The entrances shall be so arranged that persons outside will not be able to have a view of the toilet-room. Vestibules with two doors, hung to not obstruct passageways, furnish the most satisfactory entrances. If a screen is used, it should be seven feet high and be within twelve inches of the floor.

The floor to a distance of not less than twenty-four inches in front of all urinals should be constructed of water-proof materials and should slope toward the urinal drain for all "floor-level" or stall urinals and the balance of the floor slope toward the central floor drain. If trough or basin urinals are used, drains should be placed below the urinals and the floor sloped toward these drains.

Each closet for men shall occupy a separate compartment or the fixtures may be separated by simple partitions extending at least 15 inches in front of the fixture but in this case, fixtures shall not face one another (ref. 4).

Each closet for women must occupy an individual compartment and have a door equipped with a latch.

Compartment walls or partitions between fixtures may be less than the height of the room but the top shall not be less than six feet and the bottom not more than one foot from the floor. Each compartment shall be supplied with a clothes-hook. The minimum inside width shall be 32 inches and the minimum length shall be four feet six inches for men and five feet for women.

Covered receptacles of metal or other non-absorbent material shall be provided in all toilet rooms used by females or better still, there should be one receptacle in each closet compartment.

An adequate supply of toilet paper in a proper holder, shall be conveniently provided for each closet.

Persons suffering from any disease or vermin, which could be spread by the common use of toilets, shall not be employed until the period of danger or contagion has passed.

As a service for their female employees, some firms have installed dispensers of sanitary pads in their toilet rooms.

(f) Dressing and Locker Rooms—Dressing rooms shall be provided wherever it is necessary for male employees to take showers or change their working clothes and also wherever any females are employed. The dressing rooms shall be separate for each sex and be adjoining or close to the washing facilities.

The best practice involves the use of two locker or dressing rooms, one for working clothes, the other for street clothes, and separated from each other by the shower-room. If the working clothes are damp or wet, many employers provide means of drying them by installing clothes hooks suspended from the ceiling by chains and pulleys and keeping the room very warm and well ventilated. There should be a means of locking the chains at bench level or by passing them through the top of the street-clothes lockers so that the clothes cannot be lowered unless the locker door is opened. The lockers and clothes hooks should be supplied with locks, preferably of the combination or keyless type, so that workers will not have to carry keys.

Where ten or more women are employed at any one time,

at least one dressing room should be provided for their exclusive use. Where less than ten are employed, there should be a suitable space which can be properly screened for dressing purposes.

The minimum space of a dressing room for five to ten women shall be sixty square feet. For each additional woman employee, the floor space shall be increased by not less than two square feet (ref. 11). The required floor area largely depends upon the type of individual lockers or clothes hangers, benches, aisles, etc., provided.

It is advisable that arrangements for laundering of work clothes should be made in or near to the dressing rooms. Commercial laundry services are satisfactory for most types of dirt removal and repair of work clothes. However, in plants where dangerous dusts or other harmful materials must be removed regularly from work clothes under close supervision, a laundry on the factory premises is the only satisfactory solution.

III—REST ROOMS FOR FEMALES

At least one couch or bed should be provided in every place where ten or more females are employed. The number of such couches or beds required shall be as follows: Ten to 100 women, one bed; 101 to 250, two beds; and one additional bed for each additional 250 women employed (ref. 4).

Unless a separate hospital or emergency room is provided for the use of females, the dressing room area shall be increased to permit a portion of it being screened off and the couch or couches placed therein (ref. 11). A matron should be in charge of all rest rooms.

IV—MATRONS

Where thirty-five or more women are employed, a suitable matron shall be placed in charge of their dressing, retiring and eating rooms (ref. 3).

Matrons should be carefully selected and must not be confused with cleaning attendants. They should have a mature personality and be able to win the full respect and confidence of the female employees. They should be given the responsibility of detecting and rectifying all lapses of personal hygiene of their charges, of discouraging improper conduct by male employees whether fellow workers or of the supervisory staff, and they should not be shouldered with other responsibilities which might interfere with the efficient carrying out of their matron duties.

For the smaller plants, the matron with a good knowledge of first aid can render an additional valuable service.

V—DINING AND LUNCH ROOMS

In every industrial or commercial establishment where females are employed and wherever male employees are exposed to deleterious fumes, dusts or gases or to any poisonous substances such as lead, benzol, etc., a suitable room shall be provided for eating purposes. The size of such rooms shall be adequate for the maximum number of employees who choose to eat on the premises at any one time. The taking of food into toilet rooms for storage or eating shall not be permitted.

Some codes (ref. 4) give a sliding scale of floor area necessary for lunch rooms as shown in the following table:—

Persons	Sq. ft. per Person
Less than 25	8
25 to 74	7
75 to 149	6
150 to 499	5
500 or more	4

However, such factors as seating arrangement (benches or chairs), type of tables, width of aisles, etc., all set limitations on minimum possible floor space, and it has been found that 8 to 10 sq. ft. per person for seating purposes plus 3 to 5 sq. ft. per person for food preparation, will be the most satisfactory.

The serving of complete hot meals may not be always possible for smaller firms, but some means of heating water for the serving of hot beverages, a sink, a waste disposal receptacle, suitable seats and tables in a bright cheerful room must be considered the desirable minimum. Where hot meals are served, the price should be kept to the lowest possible figure consistent with good quality of foodstuffs to encourage the employees to avail themselves of the service offered.

VI—GENERAL

It is important that these rooms be designed to convey an impression of cleanliness and to be easily cleaned by one or more attendants charged with that specific responsibility.

Unless women janitors are available, arrangements should be made for the women's personal service rooms to be cleaned at night or at other times when they are not being used. However, as women's toilet rooms tend to become untidy more quickly than do men's, it is likely that they would require more than the usual daily cleaning.

The wide-spread use of tobacco by both sexes must be considered if the type of operations or building design make smoking unsafe in the work-rooms. The difficulty can probably be best overcome by designing the lunch rooms and possibly other service rooms to be as fire-resistive as possible and permit smoking in these designated areas during off-duty periods.

Personal service areas, like every place of employment, shall be constructed and maintained so as to prevent the entrance or harbouring of rats, insects and vermin of any kind.

Many of the design recommendations made for one type of room are equally applicable for other types and for that reason have not been repeated.

Medical services, including first aid in accidents and sickness, do not strictly come under the heading of personal service facilities but must be considered an important part of the service to be provided for employees. The necessity of reserving suitable and adequate areas and personnel should, therefore, not be overlooked. Industrial medical services have been the subject of a special study by the Industrial Hygiene Division of the Ontario Department of Health and others and, therefore, have not been discussed in detail in this paper.

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PROVINCIAL PAGE

ALBERTA

In these days much is being discussed and said about the shape of things to come in our cities, but probably too little is being done. Yet there is much preparatory work which can and ought to be done now. How many cities are there in Canada which have not even got the length of laying down a definite district or zoning map?

Some compulsion might be advantageously brought to bear on every city to make a survey of its existing conditions in such a way as to make the defects of these conditions quite clear and definite. Every city should institute a commission for this purpose. The work is laborious and takes considerable time, but it must be done before projects for improvement can even be devised to say nothing of such projects being realised. There are many men in the country too old for strenuous physical exertion and yet well fitted to conduct such surveys. The time is peculiarly favourable, for the comprehensive census of 1941 now being sorted out is an invaluable aid in such work.

The sort of work that must be done is well shown in the plans prepared for Chicago illustrated in the March number of *New Pencil Points*. In that case the amount of work may at first appall one. But probably no city in Canada would require so great a volume of work. In any case the smallest beginning now would be a valuable time saver. Better start at once than have to scramble through it in haste later.

Certain surveys are quite inevitable, such as maps showing population distribution, zoning plans, even if only tentative, plans showing principal traffic ways with widths and traffic counts, street car and bus service lines with counts of cars on each, the definite location of bottlenecks and danger points, a parks map to show availability to the public of parks for various sorts of recreation, vacant lots available for housing, parks, etc. These and many other such surveys are the necessary basis for city planning.

The housing question needs special attention and here the 1941 census with its intimate enquiry into housing conditions furnishes data which should be charted with a view to its being systematically dealt with.

There can be no excuse for not setting about such preparatory work at once. It is true that our aims are at present somewhat vague and indefinite. The only way to arrive at clearness is to survey the situation by maps, charts and diagrams. We are untrained in the art of town planning and these are the necessary first steps in training ourselves. In this work the interest of the youth of the country must be enlisted. Boys, and girls too, can make traffic counts better than their elders. Young people may well be employed in placing a great deal of information upon plans and charts. The fact of numbers of young people being so employed would, through their friends and parents, prove the best sort of publicity than which nothing is more necessary. This work should be nation wide for it is necessary that we should become nationally town planning minded in the most liberal sense.

Many of the older architects are at present kicking their heels anxious to do something that will be of service to their country in its hour of trial. Here is a sphere where they could direct something of incalculable service.

Cecil S. Burgess.

MANITOBA

Spring has arrived with all its attendant blessings, besides which the outlook is brightening on the war fronts. But in spite of all this uplift it is my duty this month to let our members know what their Council is doing or has done.

In spite of the difficult times professionally, the attend-

ance has been good and we have been meeting on schedule on the first Monday of the month. Some of us think it would, however, be an advantage to meet on the last Monday of the month as thereby the report of the meeting would be in the *Journal* a month earlier, providing whoever was responsible for it did not delay.

Among matters discussed was the request from the Student Society of the University evincing the desire for co-operation with the Manitoba Association of Architects. Our Council felt that it would be of advantage to the Student Body to have their president sit in at our Council meetings, or possibly see about the formation of a student membership in our association. Our president and Professor Russell were asked to discuss this matter with them and report back to the Council.

There was an interesting exhibit of student drawings that had been exhibited in the eastern cities on view at the Architectural Department at the University of Fort Garry. In spite of the difficulty of transportation many of our members took advantage of the opportunity to view them.

It appears it is not fully understood which members of the armed services are exempted from payment of fees to the association. To make it clear our secretary was instructed to notify members that all members who are liable for income tax will pay dues. Or in other words only those serving overseas in the armed services are exempt. After all, practically all our members are employed and during the stress of this war as in the last all of us in Canada should gladly help along the institute and provincial association so that we may keep alive our organization.

As is usual the discussions then gravitated to post-war problems, a subject that always leaves the writer cold. With the uncertainties facing us, with unknown factors to work on, it seems foolish to plan for the millenium. Perhaps it would be better for those of us who are not fully employed to retire to some quiet spot and emulate Rip Van Winkle to wake up like a giant refreshed with wine in a future age when materials necessary for construction are no longer rationed, cigars are again five cents and one can stimulate inspiration with a drink beside him.

C. W. U. Chivers.

ONTARIO

In case it may not have passed entirely unnoticed, the absence of Ontario from the Provincial Page in the last issue calls for a word of explanation. Far from being due to any weakening on our part, it was merely "the pause that refreshes". From now on we expect to scale dizzy heights than any previously attempted, and to give our readers the benefit of a more sweeping panorama. Of necessity, the picture will have to be a composite one, taken from a number of viewpoints to make it as complete as possible. In the more restrained language of the Chairman of the Editorial Board, it has been decided "to invite twelve architects from various parts of the province to contribute news of their respective localities which will be interesting to the profession at large".

If I may write personally for once, before "signing off", I should like to say first of all that this seems to be an excellent idea, particularly if the word "news" is not interpreted too narrowly. It is not likely that many members expect the Provincial Page to be a mere catalogue of architectural commissions. (Just now it would make a sorry showing on that basis, anyhow). We are all pleased, of course, to learn that Messrs. Black and White are preparing plans of a community hall for Birdseye Centre, provided we had not entertained hopes of landing that job for ourselves; but we are even more interested in any unusual problems of planning or construction with which the architects may have to deal. Then again, architects do not as a rule spend all

their time and energies in the office; and I believe most of us would like to know that Mr. Black had addressed the local Drones Club on the Origin and Nature of Gremlins, or that his partner had captured the Canada Dry Trophy with a score 2 under par. And if either of them managed to get himself elected to Parliament (on a Reconstruction ticket, of course) toasts would be drunk—if the ingredients could be obtained—all over the province. After all, these are the details which link us with the world around. They are worthwhile, even if only as seasoning to an otherwise rather stodgy dish; and our local commentators will be in a position to dig them up and present them in three dimensions. Looked at in this light, it would not appear to be out of order if the Ottawa scribe—under the influence of a laggard Spring—should wax rhapsodical over the view from Parliament Hill, with a conveniently blind eye on the immediate foreground. It would not have much to do with architecture, but it would enable us to share an experience which helped a fellow-sufferer to forget his worries for a moment or two.

For me, the *Journal* will now have an added attraction month by month. In turning the column over to our new contributors I hope that, whatever else they may do, they will at least get their copy in on time, and so make amends to a long-suffering publisher for what he has endured at my hands.

—Gladstone Evans.

The next Ontario Provincial Letter will be written by Mr. Herbert E. Murton of Hamilton.

QUEBEC

One day in April all the Montreal newspapers carried an item to the effect that a Greater Montreal Economic Council had been newly formed for a broad study of conditions affecting Montreal Island's forty-two autonomous municipalities, and for post-war reconstruction planning for the whole metropolitan area. The list of prominent names, institutions and organizations a half column long implied important sponsorship and serious purpose. It had its origin, we were informed, by joint action of the Board of Trade and *Chambre de Commerce*. Sprung so suddenly it created a mild sensation in many quarters, and especially among the local architects who wondered where they got in on it. President Bostrom interviewed the joint chairmen of the executive committee ("joint chairmen" is a custom we have in Montreal and was told the organization was still being developed, and that in due course architects would have ample scope for service, etc., etc., but not to expect jobs. So there we are—or are we?

We have seen many citizens' committees come and go, some of them dedicated to high purpose, but those which interested us most have perished. The sacred flame never burned long. There was not enough fuel. It may be different this time. But after almost a quarter century of blasted hopes we have become slightly pessimistic. However, there are good men on the executive, a good line-up of committees with personnel yet to be named, and ample technical talent in the city. If the executive have the sense to raise ample funds, encourage the passing of an Enabling Act and the establishment of a master plan for the greater Montreal district as a part of their programme, we architects will be behind them with all we have got. In any case we wish them every success in their ambitious plans.

A committee of our Association has been appointed for the purpose of approaching the Quebec Government with reference to the establishment of an Enabling Act for regional and local planning. We are hoping that in spite of lack of success in the past in getting such an Act that during the passing years public understanding has improved. We have good reason to believe the Premier and several of the Ministers are favourable, and we entertain high hopes of getting their support and the passing of the Enabling Act in the not too distant future.

—Harold Lawson.

ANNUAL MEETING OF THE TORONTO CHAPTER

The 1943 Annual Meeting of the Toronto Chapter, O.A.A., was held in the Library of the Royal York Hotel on Wednesday, May 12th, with thirty members present for the business session.

After the reports of Executive officers were read, Mr. H. L. Allward and Mr. J. A. Robertson were elected to the Executive in place of Mr. Gladstone Evans and Major R. A. Fisher, whose terms of office expired at this meeting. Mr. E. C. Morgan was re-elected Honorary Secretary and the new Executive elected Mr. Harland Steele, Vice-Chairman in 1942, Chairman for the coming year. The meeting paid tribute to the Executive and the retiring Chairman, Mr. Gladstone Evans.

The members expressed opinions for the guidance of the new Executive in dealing with the policy for members' fees in arrears, fees of out-of-town and military members and also instructed the Executive to organize immediate action to prevent competition of government and civic architects with those in private practice. A letter from Mr. A. S. Mathers regarding Regional Committees for the National Construction Council, the establishment of a Housing Committee and the question of a change in name for the Toronto Chapter, was read at this meeting. These matters are to be dealt with by the new Executive.

At the Dinner the new Chairman took office and Mr. Parkin introduced the guest speaker, Dr. E. T. Salmon, Professor of History at McMaster University and well-known radio commentator over station CKOC. Dr. Salmon's talk was extremely interesting and instructive, bringing a fresh viewpoint on the sequence of events in the war years and showing the timing and planning for the important phases of the conflict.

—E. C. Morgan.

It is perhaps news to many architects that the Secretary of the R.A.I.C., Miss Mary Elmslie, married last year Pilot Officer K. A. McKay, who is now on active service. Pilot Officer McKay's gain is the Institute's loss as Mrs. McKay leaves us this month. She has not been with us long, though actually it is nearly four years, but long enough for us to recognize in her a loyal, conscientious and highly competent servant of the Institute.

We knew Mrs. McKay best as the keeper of the minutes of the Editorial Board and as the editor's official and patient "reminder" of things to be done. Others may carry out these tasks with equal skill but none, we feel sure, with the same sensibility and quiet dignity.

—E. R. A.

A MEETING OF THE EXECUTIVE COMMITTEE

(Continued from page 70)

—and further—

MOVED that a copy of the recommendation as approved by the Executive Committee; be forwarded to the members of the R.A.I.C. on the National Construction Council with the statement that it forms the official recommendation of the R.A.I.C. which it desires to have transmitted to the Government through the N.C.C. in accordance with the resolution of the last annual meeting of the Institute;

—and further—

MOVED that the Executive Committee hereby approves the recommendations as amended and now authorizes Mr. Harold Lawson, Chairman of the Housing Committee, to appear at the annual meeting of the National Construction Council, which will be held on May 27th, for the explanation and support, in co-operation with the other members of the R.A.I.C. on that Council, of the recommendation on a Central Building Authority.

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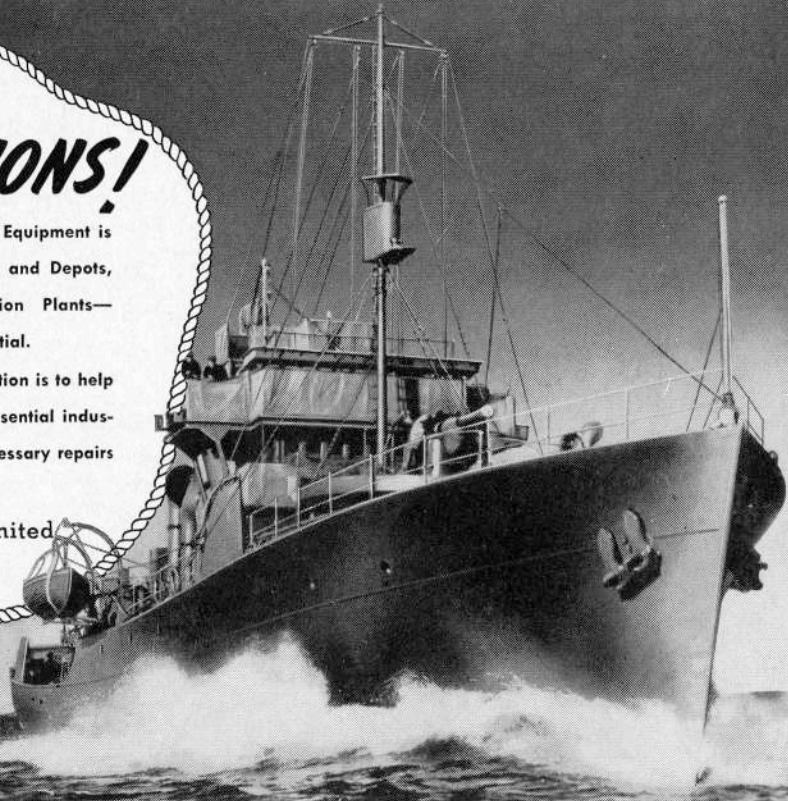


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