

Design Excellence  
A National Objective

National Design  
Council

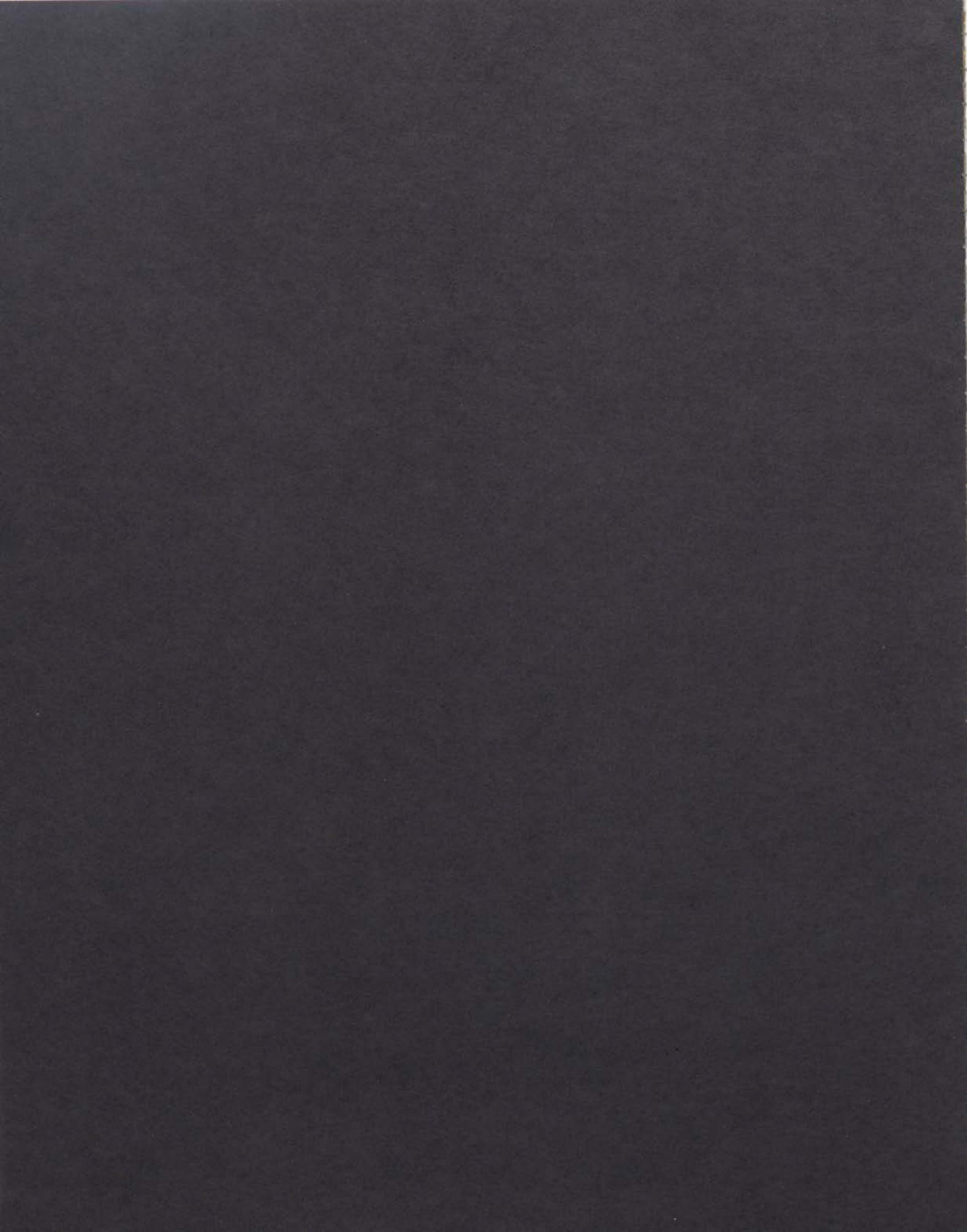
Assembly Report  
Summary



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PRIME MINISTER · PREMIER MINISTRE

Although I am unable to be in attendance, I am very pleased to extend my support to the Assembly: Design Excellence - A National Objective.

As we come to understand ourselves and one another, the complexities and paradoxes of our existence, we recognize the vital necessity of creating human conditions that enable us to live in harmony with each other and with our physical environment.

Since design is basic to such a creative process, any proposals generated by the Assembly which lead to the more effective application of design in Canada, in both the public and private sectors, would be a valuable contribution towards the attainment of our national goal for a higher quality of life.

J'espère que vos délibérations et discussions seront fructueuses et instructives.

Pierre Elliott Trudeau

O t t a w a  
1 9 7 5.



Mrs. Sonja Bata, Chairman, National Design Council.  
Mr. E.P. Weiss, Secretary General, National Design  
Council. Mr. B.G. Barrow, Senior Assistant Deputy  
Minister of Industry, Department of Industry, Trade and  
Commerce



## Chairman's Statement

"There must be a better way". Whenever people raise the possibility that there can be a better way of doing things, of making things, and of using things, they are automatically taking the first step towards progress.

The Assembly: "Design Excellence — A National Objective" which was held in Ottawa on February 24-25, 1975, explored how design can contribute to better ways of making and using products, structures and systems that enter into the way that we do things in our society.

In response to the Prime Minister's challenge, the Assembly brought forth a set of recommendations which, if adopted and implemented by the Government of Canada and supported by other levels of government as well as non-governmental interests in our society and economy, will lead to the more effective application of design in Canada and contribute significantly towards the attainment of a higher quality of life for our people.

Today we accept as basic common sense that education and health care should not be the privilege of the few but the right of all citizens. Equally, excellence of design of

our man-made environment should become an important common right and a common concern — it should not be left to chance — it is common sense and a necessity that excellence of design becomes a national priority.

The National Design Council would like to thank all those who participated in the preparatory phase and the Assembly proper for their outstanding effort in making this event both a stimulating and productive experience.

*Sonja Bata*

Mrs. Sonja Bata  
Chairman  
National Design Council



Registration



## Assembly Objectives and Organization

The main purpose of the Assembly was to establish design excellence as a national objective. For this purpose the following definition of design was adopted:

"Design is the creative process of planning the forms, functions and means of producing all the products, structures and systems we need or want regardless of scale, be they a simple item of daily use or a complex human settlement.

*Good design culminates in the creation of total physical environments and their components which contribute to the enhancement of the quality of life in terms of social, environmental and economic well being.*

Simply stated good design results in physical solutions which are:

- Effective    best fulfill their intended function
- Efficient    are economical to produce or to use
- Enhancing   bring esthetic satisfaction and other forms of desirable gratification"

The specific objectives of the Assembly were as follows:

*"Through the leadership of the Government of Canada to create awareness and understanding of design's fundamental role in shaping a better human environment.*

*To recommend policy and program options which will permit the design process to evolve to a standard of excellence.*

*To examine government policy — administrative and operating frameworks to identify existing constraints which impede the emergence and development of effective design."*

The Assembly was organized around these three objectives. Eight months prior to the date of the Assembly, the heads of selected federal government departments, agencies, councils and crown corporations, with a direct or indirect interest in the field of design, were invited to participate in the Assembly and in its development. Similar invitations were sent

to the heads of national associations representing the design and related professions, industry, business, labour, consumers, the communication media and to a number of academics and other selected people with a specialized interest in aspects of design. Representatives from design bodies supported by the provincial governments also were invited. Each governmental and national body was asked to appoint a representative to participate in the preparatory phase of the Assembly.

In order to achieve the Assembly objectives two studies were initiated. The first study was to determine how, currently, design was being applied by the Federal Government in its specific areas of concern and by various interests in the private sector. For this purpose, participants were asked to submit case histories including information on audio visual material available in the form of slide presentations, films and displays which could be used to show the state of design in Canada.

The second study was to identify prevailing impediments to the effective application of design. For this purpose, it was decided to focus on the challenge of designing a "frontier community". This choice was made for several reasons. In human settlements of this type the necessity for reconciling social, environmental and economic factors is accentuated and can be viewed at a scale which is more comprehensible than in the case of larger urban settlements. It, also, afforded the opportunity of approaching the task of applying design from the beginning with a minimum concern for dealing with

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problems which may have resulted from past design decisions.

To carry out this study, four committees were formed to explore the design requirements of a frontier community in terms of human needs and aspirations, environmental concerns, human settlement patterns, and elements of home, work and leisure. These committees were chaired by and comprised of leading Canadians, with professional and practical experience in the fields being considered. Each committee was supported by task forces of personnel drawn from various federal government bodies and non-governmental sources.

The lead Federal Government bodies involved were the Privy Council Office and the Department of Industry, Trade and Commerce and Environment Canada with substantive involvement by the Departments of Health and Welfare, Consumer and Corporate Affairs, Public Works, Supply and Services, Communications Canada, Information Canada, National Defence; and Science Council of Canada, National Research Council, Economic Council of Canada, National Museums of Canada and the Emergency Measures Organization.

The results of the two studies were collated, parts of which were distributed in advance of the Assembly as briefing material while other parts were used as the basis for the presentations and the exhibits, and other audio visuals shown at the Assembly.

The agenda of the Assembly was structured to highlight the key topics and issues revealed in the two studies and to bring forward conclusions and recommendations which would lead to the more effective application of design in Canada.

## Assembly Topics and Issues

The Government of Canada has established objectives in areas of social, environmental and economic concern directed towards the attainment of a higher quality of life. In pursuit of this national goal, as expressed by the Prime Minister in his statement to the Assembly, *"we recognize the vital necessity of creating human conditions that enable us to live in harmony with each other and with our physical environment"*.

What is not presently fully recognized in Canada is that, *"design is basic to such a creative process"*.

Based on this premise, the Assembly addressed itself to the state of design in Canada, which it judged to be inadequately applied across a broad spectrum of activities in both the public and private sectors and lacking in inter and multi-disciplinary involvement.

By examining specific case histories and participating in a project directed to establishing some guidelines for the design of a 'Frontier Community', many issues emerged which focussed attention on some of the constraints, limitations and shortfalls in the present process of design.

The Assembly took note of rapidly shifting social values and resource implications, as they interact on the design process. It identified a number of the key issues and made several general and some specific recommendations which are directed first and foremost to the Government of Canada, because of its leadership role, but also very importantly to other levels of government as well as to business and industry.

The main conclusion reached by the Assembly was, that, since design is basic to the preservation and enhancement of our quality of life, "Design Excellence" should be one of our stated national objectives. All levels of government and the private sector should direct their efforts to the advancement of this objective. The Government of Canada should initiate and carry out policies and action programs in support of such efforts in its own

sphere of activities and those of other governmental and non-governmental interests in our society and economy.

The following are the key topics discussed at the Assembly including some extracts of the main issues raised in various papers presented to the Assembly.

### **Human needs and aspirations should be the focal point of all design decisions**

- *"Design attempts to respond to human needs and aspirations. Good design is based on intimate knowledge of these needs and aspirations and of the way in which human beings act to translate them into reality. But human requirements are realized in the context of our environment and mainly through group activities of an economic, social and political nature.*

*In earlier times, the translation of needs and aspirations into reality was much simpler. We expected less, and society was able to do less. Institutions were less complex and the pace of change was less rapid. We were far less aware of, or concerned about, our impact on the environment.*

*Today, these conditions have changed. The pace of development, particularly as regards technology, is rapid — some say, too rapid. We have gone from simple needs to quite complex aspirations."*

- *"Inadequate design practices leading to unhealthy social and physical environments not only give rise to many social costs, for which society and the taxpayer have to assume the corrective burdens, but make it difficult for people to determine their own life styles, satisfy their needs, improve their quality of life, create a fulfilling social environment and achieve their several aspirations."*

- *"There are signs of erosion of personal sovereignty in contemporary society. More and more, our daily lives are dominated by*

experts and specialists. We feel cramped by our inability to fully participate in and significantly influence many decisions that affect our lives and futures."

- "The current design of neighborhood influences the social environment. Individual houses are set apart from each other and fenced off. The division of the neighborhoods by roads and speeding cars increases hazards and isolation. The division of houses into a formal living room/dining room and three or four bedrooms does not often allow for privacy of any member of the family. Neighborhoods without facilities for social contact (special playgrounds for children, special areas and activities where teenagers can meet and develop their own social contact in a reasonable environment without adults present, neighborhoods with no facilities for special clubs or interest groups or activities) further isolate the individual in front of his television set or increase dependence on the motor car. Kitchen design has become an isolating, one person work place for the stay-at-home spouse, and housing and apartment design often preclude a home environment for the extended family."

- "We must consider whether our present systems give us the best social return from human resources. Only recently have we begun to design highways to minimize accidental death and injury. Only now are health care systems beginning to emphasize preventing illness. Inadequate educational and recreational structures and poorly designed systems of work lead to monotony, boredom and the stifling of initiative. Many of our existing systems give human beings much less in psychological terms than they are entitled to. Our human casualties and waste of human potential are the heaviest penalties

that society has to pay for its failure to design systems around human beings."

**There should be harmonious and effective relationships between individual and group needs and aspirations, technology, products, structures, systems and the environments**

- "In physical and spatial terms, the total set of milieu for home life, work and leisure come together in the form of neighborhoods and communities. "The view from the heights" — the overview by community planners, engineers, economists, governmental and private decision-makers — is one which emphasizes process. Communities are the sum total of interacting factors that reflect technological capabilities and economic dynamism. From our own doorsteps, and in our daily routines, we each view the community at ground level. We see it as a mass of specific events that take place in a variety of social and physical settings — the last cup of breakfast coffee with our families, the traffic jam on the way to work, the staff meeting in the new conference room, the physical relationship between ourselves and the machines we operate, the strain we sometimes feel, the relief that comes when we can exchange a bit of pleasant conversation in the middle of a shared task. For each of us, perception of the community, most of the time, is not a "view from the heights" but rather a view of ourselves as we relate to our surroundings.

Design is a mediating factor in all of these aspects of our daily round; but at present, design is not being used in the most effective way to aid the individual in relating to the world around him."

- "One of the problems and challenges of designing a settlement to satisfy both an immediate analytical reaction to the environment and a longer-term holistic perception, is that the activity of design forces concentration on details, one at a time: - street layout, foundations, insulation, playground site,

*lighting, - and these can only be dealt with technically by considering separate components of the environment - temperature, length of day, prevailing wind, etc. Yet, there is ample evidence to show that success in coping with each separate characteristic of the environment does not necessarily lead to a successful settlement, and that concentration on the details often leads to a quite unsatisfactory final result. The environment, like the community, is a whole which is much greater than the sum of its parts."*

- *"What is necessary, above all, is an integrated and systematized total design system, drawing upon knowledge, skills and technologies from a variety of sources, and applied in a way that not only meets specialized requirements but also pays due regard to the integration of functions in society."*

- *"We can identify some impediments that are internal to the design-oriented professions. There is no unified "design professions". Rather, we have a congeries of specialists, each of which places emphasis on particular compartments of attention. At first glance, such specialization seems to be in accord with the basic principle for organizing professional activity. In practice, however, this approach often fosters blinkered vision and constrains the ability to see a design problem in its broader context."*

- *"We are not in need of new information or further research . . . ". What is needed, rather, is the integration of available information, research and technology into a unified approach that can be analyzed and evaluated from a variety of "hard" and "soft" disciplinary perspectives. Such appraisal is "Janus-headed" in one direction, it poses the question whether undue emphasis has been given to a particular disciplinary orientation with a resultant distortion leading to excellence in one area at the cost of undesirable spillovers in other dimen-*

*sions of settlement life: on the other hand, it asks whether anything has been left out, or*

*Part of the vulnerability of this system is that it has not linked the talents of designers directly to the needs and aspirations of human beings as users of products, structures, processes and systems. Rather the linkage of designer to user is mediated by structures and processes which have a logic of their own based on costs of production and markets. Longer-range social and environmental costs are, in many cases, ignored in design decisions that follow from this narrower logic."*

- *"Costing formulas used today tend to be too narrow. Inadequate consideration is given to total life-cycle costs of products, structures and systems. Total life-cycle costs include the cost, not only of production and distribution (including return on capital), but also the cost of operation, maintenance and in some cases disposal. Moreover, social and environmental costs that do not fall directly underplayed, that is necessary to the furthering of design excellence, as measured by the degree to which the total design is in harmony with the environment and fully meets reasonable human needs and aspirations."*

**Operating and maintenance costs and benefits, net energy and material consumption, and direct and indirect cost to society and to the environment, should be adequately taken into account in design solutions**

- *"In Canada, as in other developed countries, we are both beneficiaries and the victims of mass production and of the industrial system. Our wealth and well-being presently depend on the functioning of an impersonal complex system of interdependence. Many of its subsystems have evolved to*

a high level of efficiency — but, often for very limited and strictly defined purposes. People's behavior styles, and their choices are conditioned by a high technology industrial system that directs human endeavors to the promotion of quantitative growth.

upon either the producer or the user, or that are difficult to quantify in dollar terms, are often ignored. The contention that "good design costs too much" is based on the fallacy of ignoring both the total life-cycle of a product and the way that the costs of its production and use impact on our society and the environment. If we embrace this wider perspective, the real cost to society of excellence in design may turn out to be trivial."

- "All around us, we can identify costs of deficient design. Products, structures and systems that make heavy use of scarce resources, that require large continuing flows of energy to operate, or that impact heavily on the environment at the disposal stage, all add to the burden that is placed on the biosphere. By using our environmental capital as heavily as we do, we mortgage the future and restrict the options that should be kept open for future generations. We even limit our own choices. Similarly, we must consider whether our present systems give us the best possible social return from human resources."

- "Human beings, their needs and aspirations, must be central to the design process. But it is not enough simply to state this proposition. Inadequacies in the present design system are not simply the result of indifference to human beings. Rather, a major shortcoming — which can be remedied — is a lack of a suitable "design mechanism" to identify and assess the social and environmental consequences of design and development of products and systems, at all levels from single units to total communities. Such a mechanism would help us to move in the direction of a "true costs" evaluation of designs and thus, transcend our overdependence on a narrow and distorting conventional cost-

ing system. A broader approach to design, which uses a design-assessment mechanism as its central tool, can help us eliminate many unnecessary costs to society and help create a more healthy and viable environment for Canadians."

**Constraints which limit the opportunities for innovation and flexibility in the design solutions to products, structures and communities, should be minimized**

- "The present jumble of government rules, regulations and legislation affecting design in its various manifestations is widely seen as one of the most formidable barriers to change. Therefore, public authorities have a primary responsibility to recognize the need for excellence in design, and to facilitate this by well-defined programs of action aimed at a systematic removal of public sector impediments, and their replacement by more flexible, performance-oriented regulatory frameworks. Such action requires creation of an integrated design policy and promotion of operational design systems."

- "The public policy process may also offer impediments. Legal and political wisdom tend to have a built-in bias against innovation. Constraints arise when we try to apply legal and political approaches designed for an earlier, simpler period. Controls and regulations often stand in the way of applying the most appropriate technologies."

- "Between the desire to carefully plan and innovate appropriate design for home, work and leisure and the necessity of meeting time deadlines and logistical requirements in a setting where costs mount because of delay and logistical failures hence, there is pressure to seek out design solutions that can be accomplished through the use of available, standardized components and systems."

- "A review of current practices also suggests that our industrialized nations are further characterized by an increased proliferation of explicit and implicit rules and regulations that are supposedly designed to make our systems more efficient. We design systems for hiring and firing; we design health care systems; we design 50-foot serviced lots; 66 2/3



*feet road widths; we design common work days that begin at 8:00 a.m. and end at 4:30 p.m., Monday through Friday. In the design of our work systems we create "rush hour" problems and then design wider roads and more buses that are in use for maybe 20 hours a week. We design rules and regulations to govern this behavior."*

- *"As individuals, we allowed more and more aspects of our daily lives to be decided and regulated for us by specialists with narrow views of "reality". Our ability to participate in and influence these decisions in a meaningful way, and to arrange our own life styles without infringing some rule or regulation or without lengthy procedural wrangling has become more difficult."*

- *"We perceive that our institutional prescriptions are often in conflict with reality. Planning ahead, which is the rationale for institutional development of community, is often weighted down by an overburden of rules, regulations, solutions to previous situations, and institutional precedents. Function becomes lost in institutional formalism."*

**To attain "Design Excellence", greater involvement and commitment on a national basis must be obtained**

- *"Critiques of poor design, and exhortations about raising the quality of our environment through improved design, will not, in themselves, solve the problems of our built environment. Critical analysis and exhortation to do better merely establish a base for what is required: the use of design skills in the overall attack of key social environmental problems. How to translate our aspirations into a realistic program of action — this is the challenge that now confront us."*

- *We cannot expect the designer to be the precipitator of these changes — for designers are themselves constrained by systematic limitations which permit only a partial and narrowly focussed application of their talents.*

*Nor can we expect either public or private institutions to plunge headlong into a "design revolution". A transformation in design has to be seen as part of the shift to new life styles that our society now appears to require."*

- *There are already some signs (for example, in the automobile industry) that private enterprise, confronted by inflation, problems of availability costs of resources and change in market demands, could be ready to shift from the design paradigms of the 1950's and 1960's to new approaches in tune with present realities. However, governments will have to take the lead in coordinating the transition to new design systems which will be sensitive to the full spectrum of economic, social, environmental and — above all — humanistic concerns."*

- *Are our public and private institutions capable of effecting this transition? In its broadest dimensions, the challenge to design excellence is nothing less than the challenge to societal excellence. Society, as a network of institutions, established values, systems and incentives to provide benchmarks for individual and organizational conduct and aspirations."*

Plenary Session



## Synopsis of Assembly Recommendations

In support of its stated objectives, it is recommended that the Government of Canada:

1. Declare "Design Excellence" an ongoing national objective vital to the preservation and enhancement of our quality of life in terms of social, environmental and economic well-being.
2. Sensitize all levels of government to formulate and implement policies and programs to overcome prevailing impediments and to create greater opportunities for the attainment of "Design Excellence".
3. Strengthen federal government capabilities and advance federal-provincial relations in areas affecting design activity in Canada.
4. Encourage and support institutions and the private sector to pursue the attainment of "Design Excellence" through promotion, incentives and other forms of assistance.
5. Create a greater awareness, interest and application of good design through promotion, public education and demonstrations.
6. Ensure the proper allocation of resources for the development of design methods, skills and other capabilities, including pure and applied research and development, in support of Canadian design activities.
7. Adopt the following goals and implement the related actions towards the attainment of "Design Excellence".

7.1 To ensure that human needs and aspirations are the focal point of all design decisions:

- a. *facilitate, through policies and programs, a greater degree of public participation and promote more direct involvement of individuals and public interests in the planning, design and production of products, structures and systems for home, work, leisure and the community;*
- b. *support research in the fields of human engineering and human behaviour to provide a sounder basis;*
- c. *for design decisions affecting people; give priority support to design solutions that deal with the preventive aspects of health, safety and general well-being of people at home, work and in the community;*

7.2 To achieve harmonious and effective relationships between individual and group needs and aspirations, technology, products, structures, systems and the environment:

- a. *develop and encourage the application of integrated design systems and processes;*
- b. *establish means to avoid fragmentation and compartmentalization of design decisions in both the government and private sectors;*
- c. *support inter and multi-disciplinary approaches to design, including a study to determine the feasibility and value of creating a multi-disciplinary design society;*

7.3 To ensure that operating and maintenance costs and benefits, net energy and material consumption, and direct and indirect costs to society and to the environment are taken into account in design solutions:

- a. *develop and encourage the implementation of comprehensive policies and methods for assessing longer term impact of design decisions on individuals, the society, the economy and the environment;*
- b. *establish procedures so that overall resource and environmental management, including climate, is an integral part of the design process;*
- c. *actively support the innovative design and commercial development of new generations of capital and consumer goods, services, living, working and other necessary forms of accommodation based on total life cycle costs and benefits;*

7.4 To provide greater opportunities for innovation and flexibility in the design solutions to products, structures, systems and communities:

- a. *initiate an urgent systematic ongoing evaluation and revision of*

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*current standards and specifications to ensure they are performance oriented and do not inhibit innovative and flexible design solutions;*

*b. institute a systematic review and adjustment of laws, rules, regulations, codes and related legal and administrative procedures to eliminate restrictions and encourage innovative and flexible design solutions;*

7.5 To obtain greater involvement and commitment on a national basis for the attainment of "Design Excellence":

*a. establish formal follow-up mechanisms and detailed action programs based on the results of the Assembly;*

*b. the National Design Council interact more actively with the provincial governments on the basis of the Assembly proceedings;*

*c. the National Design Council implement a program of public education to create awareness, interest and application of good design;*

*d. the promotion of "Design Excellence" be directed to correcting past planning and design errors as well as for new products, structures and systems;*

*e. sponsor and support demonstrations to focus attention on and to test innovative design concepts directed to the attainment of the goals set out for "Design Excellence", specifically, develop a demonstration project in connection with the U.N. Conference on Human Settlements (Vancouver '76) and/or the Canadian Urban Demonstration Program based on the Assembly's conclusions relating to the design of a "Frontier Community".*

## Summary of Assembly Proceedings

The Assembly: "Design Excellence — A National Objective" was held in Ottawa at the Canadian Government Conference Centre on February 24-25, 1975. The participants included representatives from: 40 Federal Government departments, agencies, councils, and crown corporations; 20 national associations; 7 provincial government supported design organizations; and a selected number of people with a specialized interest in design. The total attendance at the Assembly exceeded 170 participants.



The Honourable A. Gillespie, Minister, Industry, Trade and Commerce.

## Opening Session

Mrs. Sonja Bata, Chairman of the National Design Council and Assembly Chairman, welcomed the participants and introduced the Honourable Alastair Gillespie, Minister of Industry Trade and Commerce.

Mr. Gillespie officially opened the Assembly by expressing his interest in good design which was obviously shared by many others as reflected by the high attendance at the opening session. He assured those present that his interest was shared by the Prime Minister and Government at large by reading a statement to the Assembly signed by the Right Honourable Pierre Elliott Trudeau. He referred to the program being implemented by his department in support of design activity as it relates to industrial and trade development. The Minister concluded his remarks by wishing the participants success in their deliberations to bring forward proposals for achieving design excellence in Canada.

Mrs. Bata thanked the Minister for his personal interest and for the efforts of his department in support of design and assured him that the Assembly would do its best to generate proposals in response to the Prime Minister's challenge which "would be a valuable contribution towards the attainment of our national goal for a higher quality of life."

The general guidelines for the Assembly were set out in the following address by Mrs. Bata titled: **"The Challenge of Design in the Total Human Environment"**

"There must be a better way." Whenever people raise the possibility that there can be a better way of doing things, of making things, of using things, they are automatically taking the first step toward progress. This is what we have come together to explore: how design can contribute to better ways of making and using the products, structures and systems that enter into the way that we do things in our society. We seek design excellence in order to contribute to the improvement of our environment and enhance our quality of life.

Le Conseil national de l'esthétique industrielle a été créé en 1961 par une loi du



Parlement. Son principal objectif était de "promouvoir et d'accélérer l'amélioration du design dans l'industrie canadienne". Cette orientation vers le produit constitue encore le centre de nos activités. L'amélioration du design peut nous aider à produire les biens que les canadiens desirent, dont ils ont besoin, et qui, dans une certaine mesure, ne tarissent pas inconsidérément nos richesses naturelles et énergétiques. Ce genre de politique contribue aussi à améliorer notre position concurrentielle sur les marchés internationaux.

In fulfillment of its product design mandate, the Design Council, over the last few years, has pursued these objectives through conferences, seminars, grants and awards, scholarships, exhibits, and initiation of incentive programs. Primary responsibility for following through and implementing many of these initiatives lies with the Department of Industry, Trade and Commerce, but other governmental and private groups cooperate closely in this work. While stimulation of better product design remains central, other areas of design have come to engage our attention. This is because we realize that complex systems for living are made up of aggregates of products, artifacts and services, which come together in larger and more complex wholes. Throughout its life cycle, from design, to production, to purchase, to consumption or use and to disposal, the product has an impact on a variety of systems. For example, I think most people would now agree that to design a product in isolation and not to think of how it can impact on environmental systems would be less than fully responsible.

The experience of the Design Council over the last few years reflects the evolving role of the designer in our society, and the shifts that are taking place in the functions of design. Design has always been reflected in the products we use, the structures we live in, and even in some of our larger systems. We all recognize that design principles were reflected in the artifacts and buildings of very

ancient civilizations. But for most of our history, the designer and the craftsman were one. When societies were stable for long periods of time, when the basic methods of production did not change significantly from one century to the next, there was a shared sense of order which served as a link between the artisan and his public. Almost instinctively, good design, based on real human needs, was reflected in the man-made environment. We realize this when we wander in the streets of the charming old towns of Europe.

All of this was changed by rapid technological development and industrial production. We had to learn to mass produce goods and this entailed the divorce of the artisan from the production process. But even in the Nineteenth Century the entrepreneurs took on the role of designer to put design back into the process so as to achieve what the craftsman had done almost instinctively. Not until the Twentieth Century, however, did the designer begin to emerge as a valued member of the industrial team.

In this century, the role of the designer and the function of design have evolved through a number of stages. The Bauhaus approach, which reached its peak in the early 1930's, has probably had the greatest importance. It was based on recognition that traditional forms were no longer functionally or esthetically appropriate. Thus it became necessary to reexamine functions of individuals and of society, and to design form to follow function.

As modern design became increasingly accepted in our economic system, further changes emerged. In our free market system, production has to be responsive to demand. To harmonize production and demand required the evolution of the marketing approach. What do people want and need? How shall these goods be designed? How shall

they be produced? How shall they be packaged? How shall they be sold? At each stage of the marketing approach, the designer has increasingly become part of the decision-making team.

During the last twenty years the pace of change has accelerated. Growth and more growth has brought an improved standard of living, but at the same time it has created a myriad of environmental problems.

We have seen the evolution of a high consumption society which had, as its key factors, growth and the use of the market system to allocate resources. This growth-oriented economy rested on the assumption "the more we produce the more we lower the cost". But we now question this assumption, as we find that all sorts of costs are increasing. Today we are aware of the finite nature of the planet. We have become aware of the fact that highest economic return does not give us the qualitative values we seek.

We realize that we need new patterns of consumption — a new lifestyle oriented more to quality and new material satisfaction. A new twist has been given to marketing by the emergence of consumerism and by the demand that we look at the total life of a product, beyond the point at which it has been sold to the consumer. Increasingly, goods must be serviceable, appropriate to their function, must make efficient use of resources, and must be linked to ultimate disposal or re-use. The most recent approach now involves designing products for ultimate recycling and demanufacture.

With the emergence of the total life cycle concept for products, we are really getting back to where design started. Today, we cannot regard the product itself as the end point for the designer. Rather, we must ask how the product fits into wider economic, social, and environmental systems. Increasingly, the designer, as planner, is involved in inter-disciplinary activity aimed at producing better total systems. We are no longer concerned simply with the automobile, but with the urban transport system, and with community as a whole. We are no longer concerned

simply with the plastic bottle that contains our detergent, but with the total disposal and environmental system which will have to accommodate the detergent and its package. To harmonize product and system, we have to approach the problem at both ends; to design products for best fit into the system; and to design systems that are viable, flexible and are able to evolve in a way that truly reflects human needs and aspirations.

Ultimately design of these products, structures and systems, at the macro-level, entails design of whole communities. As Barbara Ward has stated, our communities can no longer be regarded as residuals; that is, they can no longer be left to be the outcome of separate decisions at the level of products and structure. There has to be some kind of over-riding design for the whole. And this design must provide people with a setting and a civilization with which they can identify.

Une sensibilisation accrue à l'égard du design de qualité, de la part de nos dirigeants fédéraux, peut entraîner des améliorations qui toucheront en fait tous les citoyens canadiens. Comme le gouvernement est le plus important planificateur, constructeur, acheteur, imprimeur et propriétaire au Canada, il a de lourdes responsabilités vis-à-vis du design. Si le gouvernement fédéral agit en consommateur éclairé, la nation toute entière ne s'en trouvera qu'enrichie.

Though it is the responsibility of government at all levels to create an environment for Design Excellence, the goal cannot be achieved without the full cooperation of all sectors of society.

We have the capability and the know-how in Canada. We need commitment to action.

Let this Assembly bring forward a new vision — a new thought process which will enhance our total physical environment and our quality of life through Design Excellence. Let us embark on our work so as to provide direction and inspiration for achieving these ends.



Plenary Session



## Session I Case Histories

## Sessions II & III The Frontier Community

Mr. C.R. Sharpe, the chairman of this session, explained its purpose. During the preparatory phase of the Assembly, numerous case histories were submitted describing how design was currently being applied in both the governmental and non-governmental sectors. Since the Assembly was particularly concerned about the application of design by the Federal Government, the case history presentations were selected to illustrate examples of recent efforts by Federal Government departments and agencies to achieve design excellence in diverse fields of activity on six important aspects of design as follows:

Design Policy    *Supply and Services Canada*  
 Design Process    *Public Works Canada*  
 Design Management    *Information Canada*  
 Environmental Design    *Environment Canada*  
 Design Integration    *Transport Canada*  
 Technological Design    *Communications Canada*

In his summary of the presentations, Mr. Sharpe expressed the view that it was evident that good design was one of the objectives of the departments that presented the case histories and that such examples could lead the way to further advancements in both the public and private sectors.

Note: Details of this session will be recorded in a later publication.

Mr. Gordon Arnott, the chairman of these sessions, explained their purpose. The presentations in these sessions were based on the analysis of the factors and issues which require consideration in the design of a frontier community identified by the four preparatory phase committees dealing with human needs and aspirations, environmental concerns, human settlement patterns and elements of home, work and leisure.

The intent of the presentations was to highlight the key factors, issues and conclusions as a basis for the workshop discussions which followed the presentations.\*

The conclusions reached in the workshop discussions on the frontier community are as follows:

### Human Needs and Aspirations

1.
  - a. human, social and cultural values become higher order objectives which must be considered in the design process in addition to financial, economic and technical objectives;
  - b. that the design process be recognized as the basis of harmonious relations between human needs and aspirations, technology, built form systems and the environment;
  - c. the Federal Government endeavours to have the excellence of design accepted as an objective, by itself, and by other levels of government, institutions and the private sector;
  - d. the Federal Government encourage institutions and authorities to initiate procedures for continuous review and adjustment of laws, rules, regulations, standards, codes and procedures to encourage the innovation, development and utilization of improved designs;
  - e. one recognition be given in design to differences in culture and value systems.

\* Note: Details of these sessions will be recorded in other publications.

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2. As means to these ends
- a. in order to facilitate the promotion of design excellence and thus lower operation and maintenance costs and unnecessary use of scarce resources including energy
    - *present financial and fiscal incentives that encourage inadequate design practices be identified;*
    - *incentives both to encourage the practice of design excellence and to reduce the initial competitive burden of design and research costs be introduced;*
    - *performance standards for design excellence that include total life-cycle costs be established;*
    - *alternative techniques and perspectives such as human resource accounting to measure social and environmental casualties and tradeoffs be developed and applied;*
  - b. the Federal Government, through its policies and programs, would facilitate and promote public participation and understanding to achieve more effective representation of the human and public interests in the process of design;
  - c. the Federal Government give additional priority to the preventive aspects of health care, including human biology, environment and lifestyle fields, as set out in the working document "A New Perspective on the Health of Canadians";
  - d. in design of new communities, and wherever possible in existing communities, the Federal Government encourage use of urban forms that will channel industrial traffic in ways that do not adversely affect other activities;
  - e. in order to achieve environments at home, at work and in the community for human activities in which social, psychological, as well as physical, hazards and stresses are minimized, mechanisms be established to facilitate cooperation between users, social and behavioural sciences and health professions on the one hand, and architects, designers and physical planners on the other;
  - f. that the Federal Government assumes responsibility for developing a framework of laws, policies, programs, and services to ensure orderly and well-planned development of the Canadian North;
  - g. that research and education programs be undertaken to develop better understanding of the Canadian North at the scientific and popular levels.
3. In the creation of design systems for communities in depriving environments, the following practices be adopted:
- a. the principal employer submit detailed skill requirements and build-up of the expected labour force to community maturity at the same time as the financial and other statements are prepared, in order to allow manpower planning, health systems, housing design and other community amenities and arrangements to be tailored to the expected population;
  - b. that in the hiring of people, equal weightage be given to both men and women and that employment opportunities for spouses be designed ab initio into the frontier community;
  - c. a coherent set of performance criteria for the design of built form should be developed that is specific to the environment and lifestyles and that these performance criteria be reviewed at technology, lifestyles and expectations;
  - d. these performance criteria replace regulations and building standards that have been developed in different climatic conditions;

- e. in the event of limited life-times of the community at start up, no permanent community be envisaged and that specific built form, communication and transportation arrangements be developed for temporary communities;
- f. portable social benefits and other innovative financial arrangements be made in the light of the increased element of risk in a frontier community;
- g. designers recognize diversity and changing cultural values and behavioural patterns and develop design systems and products that reinforce rather than detract from cultural identities;
- h. that initiatives be taken by all partners to eliminate boredom and monotony from the work environment;
- i. that factual family and work orientation courses for those moving North be undertaken both prior to hiring and subsequent to moving into the community;
- j. that the surrounds of the community be equipped with emergency shelters, communication and rescue facilities including survival training and equipment;
- k. that specific arrangements be worked out so that the indigenous population may assist those unfamiliar with the northern environment to adopt appropriate habits and practices;
- l. centres of design be located more closely to the site of indigenous people and the local environment to be dealt with.

4. Qualitative aspects of growth be favoured over simple quantitative increases and new measurement techniques and perspectives be developed for assessing direct and indirect costs to society of alternate courses of action and design decisions. "*Prevention*" should take preference over "*cure*".

#### **Environmental Concerns**

- 1. That the mining settlement enterprise be shown to be totally viable economically, environmentally, socially and psychologically before any development decision is taken;
- 2. that development of the resource and the establishment and occupation of the settlement be carried out without sustained adverse effect on the regional environment, including long-distance downwind and downstream effects;
- 3. that because industrial and community activities produce pollutants and effluents, those dispersion and effects cannot be controlled if they are released to the environment, they must be designed to the maximum extent possible to operate on a closed cycle or containerized principle: i.e. recycling or waste utilizing technology. In all these considerations energy/material input-output analysis must apply;
- 4. that development be planned and carried out, with rehabilitation of the disturbed site, to fully restored and enhanced environmental quality and productivity as an integral part of the operation;
- 5. that coincident with disturbance of the natural environment, forest nurseries, fish hatcheries, etc. be established, of both native and non-native species, to serve as a nucleus and supply for rehabilitation and enhancement of the local environment;
- 6. that a conscious effort be made to train and educate the incoming and resident population in the characteristics of the Northern environment, its limitations, areas of fragility and resilience and its opportunities for use and enjoyment. This should include modifications to the schools curricula and schedules

and development of unique, environmentally compatible leisure activities and work habits;

7. that fullest use be made of renewable sources of energy and locally produced food and other resources, compatible with sustained environmental quality;

8. that encouragement and support (economic, regulatory, managerial) be given to development of new technology to enable Northern communities to be more compatible with the Northern environment, more efficient in use of energy and materials under Northern conditions, more adequate on meeting people's needs and more satisfying to their aspirations;

9. that environmental choice and freedom be provided within the settlement to meet the working and living activities of people; e.g. the option of outdoor and indoor pedestrian routes, external and internal recreation facilities etc.;

10. that innovative design be developed for the interface between the outside (natural) environment and the interior environment of home, work and leisure. This should apply particularly to institutions and facilities (school grounds, parking areas etc.);

11. that an overall regional land use plan be developed. Specific land use types need to be protected and included in the settlement development.

#### **Human Settlement Patterns**

1. Better methods of evaluation are required;

2. the working arrangement of multi-discipline groups should be improved;

3. there is need to overcome the existing fragmented approach to design;

4. existing weak technical areas in the design process should be identified;

5. there is need to identify constraints to design;

6. there is need to create design awareness in the public at large;

7. there is need to systemize, where possible, standardized procedures especially in regard to information base development;

8. fundamental in the proposed design system would be the protection of the individual against adverse situations;

9. the use of a system would enable us to give proper attention to *linkages* and *spin-offs*. The importance of giving attention to these is basically to ascertain their consequences whether good or bad. In fact, they provide a tremendous opportunity for achieving objectives. If properly used they can strengthen the implementation of projects. The degree of attention to linkages should be one criterion for evaluating whether or not a system is a good one;

10. there is need for a new calculus which is not cost-based and does not limit decision-making to the use of economic criteria. The new calculus should permit social, political, physical, environmental and cultural criteria to be used; possibly a resource/energy index could be the basis of such a new calculus;

11. the system be adopted and must provide:

a. *information in total with emphasis on ready access to it;*

b. *an ability to interpret its information into the language of the user (language here means the specialism);*

c. *information which should be appropriate for the user and not too general or too specific;*

d. *use of the system should also be cross-checked by the system and thereby any "suspect" assumptions could be readily identified. This could be done by a "safety-check" system; e.g. misuse of weighting system;*

e. *it should enable broad scale consideration of a subject rather than narrowly focussed consideration;*

f. *constraints of manpower skills, finance and time, should be recognized factors in the operational system so that it functions in harmony with the situation. Thus, the user can use it as a valuable tool and not leave it alone as a museum piece;*

g. *it should enable more rigorous examination of subjects but also reduce when possible the "manual" operation by designers;*

12. there should be the possibility to undertake experiments within the settlement or system and to evaluate the results;
13. in such a system such items as community well-being, costs of the project, need for changes in the settlement, should be readily and continually monitored;
14. there should be closer inter-disciplinary cooperation on solving design problems.

#### Elements of Home, Work and Leisure

1. Human being should be the focal point of design;
2. the design of houses, community and social environments should enhance the desired (based on informed opinion) style and quality of life;
3. the design at home, in the community, and at work should recognize the medium and the long-term effects and benefits to individuals and to society as an important factor in the choice of the design solutions;
4. in cooperation with appropriate industries and organizations, a systematic process of review of standards and development of performance standards and evaluations affecting designs at home, work and in the community should be instituted at all levels of government and in the appropriate institutions;
5. the Federal Government should develop and make available to designers of human settlements and to related professions, mechanisms for integrative and rapid evaluation of design factors, solutions and decisions;
6. fragmentation and compartmentalization of the design processes and decisions in the governments, private sector and institutions should be eliminated and mechanisms should be developed for integrated evaluation of standards, criteria, methodologies and practices;
7. the quality of design should be measured by the degree of success, in human terms, of harmonization and reconciliation of

diverse factors such as economics, time, technology, human and social concerns, aesthetics and natural environment;

8. design should provide for diversity in the community to facilitate self-expression of tastes and styles of life of various groups of people;
9. design process should encourage and facilitate public participation;
10. action in real terms be undertaken to support and give the necessary real meaning to the excellence of design;
11. a process to identify and deal with factors which impede good design be established with special reference to laws, regulations, codes and standards;
12. a comprehensive system be developed for demonstration at the U.N. Conference on Human Settlement (Vancouver '76) to enable designers and related professions to create high publicity design of human settlements in frontiers and other settings in Canada and abroad;
13. N.D.C. should undertake practical action to coordinate efforts:
  - a. on research and problem of providing service to designers;
  - b. to help to incorporate human, social and environmental concerns into the design decision process;
  - c. to help to improve, through quality of design, publicity of life in frontier and other communities.

Plenary Session





## Session IV

### Development of recommendations

Mrs. Bata explained the purpose of this session emphasizing its importance in the Assembly. She reminded the participants that one of the major objectives of the Assembly was to come up with concrete recommendations on how to foster design excellence in Canada. She then asked the participants to go through all their previous thinking and to come up with overall recommendations that can be presented to the Government of Canada and form the basis for establishing its leadership position as far as design excellence is concerned.

Mr. C. Simmonds, the co-ordinator of this session, briefed the Assembly with the following statement:

"We are asking you this afternoon, at very short notice indeed, to go back and re-digest everything that has happened and try and get a look at the overall picture which is emerging.

In fact, the easiest way to put it is that if you were the Prime Minister, a Minister of the Crown, a Deputy Minister or President of a Corporation or institution, what would you like to receive from a conference such as this?

Now, the best way is to review in your mind the opening remarks — what was said at the beginning, the case histories which we have seen, the four workshops which we have participated in and the subsequent presentations and then come down to the recommendations which you would like to put forward. Clearly, we have got two kinds. The more general one, which refer to the governmental area, if you like it "the top down type of approach", but we also have some very specific recommendations on which several people feel quite strongly; and that might be "the bottom up type of approach".

We have the case of the government side, design excellence in relation to the government, and we also have the example of the frontier community. So it will be very helpful if we can introduce some order into the recommendations and analyze them and synthesize them; in other words, take them apart, then go through the difficult business of bringing them back together, which is easy

to say, not always quite so easy to do, so that in the end we can come up with a group of recommendations which are effective and, I am sure, in this room there is a great deal more experience in these matters that I have, but generally speaking, the smaller the number of recommendations, probably, the more likely they are to go over. If you want to split them into two parts, fine. I would like to make one or two remarks about this.

When Dr. Abbatt mentioned the figure of 2% suicide and 20% - 30% self-inflicted injuries, I have a little mental mechanism I use on these occasions. I always ask myself, what are the factors which are controlling the size of those numbers? Why is it 2% and not 1% or 4%? Why is it 20-25% approximately, not 12 or 13%? If I know what controls the magnitude of the numbers, I have a great deal more information and power in that situation. This is an extremely useful tool. So, one can sort of backcheck recommendations in this kind of way.

Another method is to say, well what is the driving force? This is a dynamic system, it is not a static one. Who wants this thing to change and who will oppose it? Recommendations have ultimately to be realistic in the political system; that leads to the next obvious comment.

John Coe very kindly drew our attention to the systems aspect, but if a recommendation is to slop into a system, which after all is a better system in government terms, really it must have some relationship to what already exists around it and which will be affected by it. So, an isolated recommendation that clearly does not fit is not a very powerful one when it comes through. If you feel something else should change, give the alternative; you can get around it that way.

Then, there is what some people call, the behavioural approach. Things are more likely to happen if reward is enforced. In other

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words, if your recommendation is actually applied, who is going to gain from it? Who will be reinforced, and is it possible to get this by removing rewards or reinforcement from some other activity?

In other words, I am asking for realistic recommendations. This is extremely difficult to do in this time period, as you all know very well. But to the extent that you can do it, it will be extraordinarily helpful and it will strengthen the hand of the National Design Council and particularly the delightful and charming Chairman as she goes through the next steps of presenting something to the government in due course."

## Closing Session

Mr. R.F. Shaw, Chairman of the Assembly Steering Committee, introduced this session with the following statement:

"We have reached the conclusion of two days of discussion on design excellence. What happened during the whole process, I would like to refresh your memories.

We began with preparatory committees, made up of many of you, and these preparatory committees prepared the statements which you have been working from. As the Assembly went along, the Steering Committee took the reactions of the various groups and tried to re-write. At the Assembly itself, because we were directing ourselves to government, we started by letting the government do a little boasting about how good they were so that you would have an idea of what progress had been made. And then we threw the ball back to you again. I hope that you have found the process stimulating and interesting and that you are now convinced that design is of vital importance and that you have reached your own conclusions on the ways that design excellence can really enhance our quality of life.

I suppose that my background as an engineer, followed by a background as an environmentalist, has swung me to the opinion that what we have really been talking about for the last two days and the preparatory months was the human environment and how to improve it through design.

To me the results of this Assembly have been gratifying and even exciting. They form an excellent basis for the development of proposals for government action. Some of these may lead to programs and policies; others will stimulate further studies that will influence the context within which policy is made.

At the Assembly, it became clear to me that many of the old principles of the designer are no longer valid; that we require new revisions and new approaches to achieve design excellence; that we need to apply design to a higher order problems and that we need more awareness of the role of design if

it is truly centered on human needs and proper aspirations.

Now what happens? Well, I have a dream about the future. I hope that the National Design Council will take our frantic efforts of the last two days; the Steering Committee's frantic efforts to keep on top of your recommendations. I hope that they will take all of your detailed recommendations in all of the sessions and screen them against the final results and include them in the consideration of their final report and I am sure that this will be done. I hope that they will check priorities, because I have heard it said that I agree that sometimes things fell out of order in the process of trying to crowd so much into two days' work. I hope that we will be invited by provincial governments to do similar things with them. We did consider it in the first place and decided that the Assembly would be so huge that it would be unmanageable, so that we hope that we can continue to maintain interest in this developing thought through contacts with other levels of government.

What will we produce? Well, I hope that we will produce a Cabinet Document. This will suffer the inevitable problems in the preparation of a Cabinet Document and, as it is processed through the Cabinet, it will be changed. Believe me, if we produce a Cabinet Document, you can be sure that you wrote all of it, and that any changes that appear were necessary in order to fit into the problems of government and you have seen how big those problems must be. Here we are, 170, and they try to do the same thing with 22 million. It is my dream that the government will be sufficiently inspired that they may say to us that we hire someone and prepare a demonstration for Vancouver in 1976. I say there is time.

Thank you for your participation and for your outstanding contribution. The type

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of interaction we experienced is essential for future activities in the field of design.

This meeting has been the most interdisciplinary design meeting that I have ever attended. We hope that even before the Council makes its recommendations to the government, that you, as individuals, will start the action and preach the gospel to improve the use of design in the areas which fall in your particular interests. I pray for your cooperation with the National Design Council and its magnificent Chairman. I hope that our cause has become your cause. Please continue the relationships that you have established here. In the final analysis, it is only through such continuing relationships, cooperation and coordination that we can achieve the objectives of a higher design quality."

Mr. Simmonds read a draft of the recommendations of the workshops. The Assembly agreed, in principle, to all of the recommendations but expressed the view that they required refinement.

Mrs. Bata ended the business portion of the Assembly by thanking the participants for their outstanding effort both in the preparatory phase and in the Assembly proper.

A banquet was held at the Chateau Laurier for the participants, and was attended by several Cabinet Ministers and special guests. The following are Mrs. Bata's closing remarks which were supported by an audio visual presentation.

## Design Excellence — A National Objective — A Basic Human Right

"People may not be able to theorize about design. But they know how and when poor designs affect them. Design is important: it affects the way we live, the things we do, the satisfaction we get out of life — in short, it influences our quality of life.

The total physical environment is made up of the products, systems and structures we designed.

What kind of world are we living in? Our standard of living has never been higher. Education and health care are better than in the past; technology and science have reached new peaks.

Our world is more integrated and inter-dependent. This makes for difficulties in the short run, but is a positive factor as we look toward the future. At this moment in time, we are aware of the problems that confront us: *over population; resource depletion; urban growth (air, water, visual and noise) and, above all, the stresses and strains of living in an era of rapid material, social and value transformations.*

Action is being taken in many of these areas by the public and private sectors. But most of the action is orientated towards solutions of population growth and environmental issues.

As far as the sociological and the cultural problems resulting from the design of our total physical environment are concerned, the awareness exists; but little has been done. There is no doubt that the design of our physical environment — its products, buildings, structures, systems affect our quality of life.

Frivolous, unnecessary and shoddy products, that sometimes appear to dominate our throw-away society, create irritation and dissatisfaction. Poorly designed buildings, unimaginative apartment houses, ugly shopping strips can lead to boredom, monotony, stifling of initiative and stagnation of individualism. Dying city centres and uncontrolled urban sprawl frequently become the cause of

delinquency, drug use, etc., partly because of the lack of other stimulation.

Our objective at the Assembly was to recognize the important role design can play as part of our inventory of tools and techniques and of creative endeavors to surmount these problems. We did not expect instant answers. I am reminded of the remarks of Mr. Drury at the Technology Assessment meeting earlier this month. He asked the participants to seek preliminary answers and approaches to problem-solving, — however imperfect these might be — as a basis for immediate action. We have followed these same principles.

Let's first analyse the importance of good product design. When the National Design Council was established in 1961, its main objective was to promote and expedite improvement of the design in products of Canadian industry.

Product orientation is still central to our activity. Constant improvement in this area, and the design of products based on real human needs, would bring us close to the point where we could really speak of Canadian design excellence. Products, making good use of materials and highly functional to the needs of society, are a recognized necessity.

Good product design is vital to our economy, both in relation to domestic needs and as a means of strengthening our position in an increasingly competitive world trade. The development of indigenous design and production capabilities is crucial to establishing a strong national identity and a pride in what Canadians can do. But products cannot be designed and produced in isolation.

They must be seen as part of the total system in which they exist. In designing kitchens, we cannot design electrical appliances, the range, or the sink, without considering how it fits into the kitchen — in other words, as part of the food-preparing area of the home. We should not design transportation vehicles without considering their function in total traffic systems and their impact on the overall urban milieu. We cannot afford to design packaging without considering its impact on waste-disposal systems and on the environment.

Let me give you a few other examples of what I mean. We are concerned with resource depletion. Are we really doing enough to explore processes, materials use and energy systems that can cut down such waste? Products will have to be redesigned if we are really serious in our concern to save material and energy resources. If we want to recycle materials, we must accelerate work on the design of recycling processes. Well-designed products will have to reflect the total product life cycle, including disposal and possible re-use.

Waste is, of course, cost — a type of cost that most people have only recently begun to consider. What about costs to the pocketbook in every day concerns — in business, as consumers, as taxpayers? I would like to ask, even if I cannot answer — how much of the long-term inflationary spiral could be attributed to inadequacies in design? There are more obvious contributing factors, and I do not discount them. But how much unnecessary cost aggravates inflation because production processes have not been designed for maximum efficiency? Or because the design of a workplace contributes to boredom, apathy, and lowered productivity? Or because some of the packaging we use may be wasteful? Or because we have to pay higher taxes to tackle problems of waste and pollution which, due to inadequate attention to design, are bumped off into our social and environmental system.

Our economic system is certainly the best that has so far been devised for providing us with physical goods and services. But design has not been applied as well as it might to help keep dollar outlay and social-environmental costs within acceptable limits.

What about the waste of human beings in systems that do not use design to the maximum to promote safety and health, or facilitate educational, cultural and recreational development? In a recent working paper, the Department of National Health and Welfare noted that Workmen's Compensation Benefits alone cost us \$400 million yearly. How much of this could have been saved and — more importantly — how much tragedy and misery could have been avoided if all work-places were designed, as some of them are, with due attention to human factors — not only from the physical but also the psychological point of view?

Of over-riding importance from a long range point of view is the fact that we are changing from a high consumption society — from a purely quantitative industrial economy — to a new, qualitatively-oriented society that is merging the best of the industrial heritage with fresh approaches to total social and environmental well-being. It will require new visions, new tools, and new inter-disciplinary sciences, including a new science of design. It can be done.

In the final analysis, all products, structures and systems must be designed to interact harmoniously with each other. This need is particularly significant when we look at our human settlements. Urban areas in all countries have been growing, in demographic terms, twice as fast as total population.

In Canada, over seventy-five percent of our population is now urbanized.

Yet, though we are aware of these problems, our urban form and most of the related design are extensions of the approaches

of the first half of this century. Our standards, regulations and precedents are derived from this earlier experience. Our transportation system is based overwhelmingly on the automobile. We have simply poured more and more concrete and added more and more thoroughways, rather than rethinking the problem in the light of new conditions.

With a dynamic dominated by the automobile, and the daily oscillation between the two poles of suburbia and the urban core, cities have simply "grown life Topsy". "Urban sprawl" have become a by-word. The city is like a pyramid whose base constantly grows and whose apex is never completed. It eats up land and defies efforts at achieving cohesion. Valuable agricultural land is paved over or used for new subdivision — this when the world has vastly increasing needs for food. Here, design fails at two levels: at the larger level of overall urban design — or, rather, lack of design; and at the micro level, where structures, systems and products could be designed for better service, but with a more compact use of available land and resources.

I have identified a few of the challenges, and shown how design relates to them. I hope I have dispelled any lingering misconceptions that design is just some sort of addendum to more necessary activities, or that it can be limited to a few things here and there. Design is, and should be, pervasive in our society. We who are concerned about design, are not trying to intrude on other people's areas of competence and concern. What we are trying to do is indicate that there is a widespread need to bring design-oriented people onto problem-solving teams. They must be encouraged to use their tools and creative approaches in tackling major problems. We need to develop new visions, as well as new techniques, to transform these concepts into reality.

This is part of what we tried to accomplish at our Design Assembly.

The work of the Preparatory Committees and our discussions here at the Assembly provide a good base for developing an action

program for the design of communities, products, structures, and sub-systems that interact with human beings and with the natural environment which make up a community.

There is need to use design as an instrument which relates the man-made physical milieu to fundamental human needs and aspirations. We need to be concerned about the impact of design on our homes, workplaces and leisure facilities. And we must design all of these structures and facilities in a way that will have a positive impact on our neighbourhoods and communities. Design systems and procedures must be developed which will enable us to do these things. They should reflect not only our principles and aspirations, but bring to their realization the highest standards of performance and technical detail. We need to be responsive and responsible in relating design of the man-made environment to the preservation and enhancement of our natural milieu — the biosphere on which all living beings depend for survival.

Much has been learned from this Assembly and the work that was carried out in its preparatory phase. The task now is to put this intelligence to use. To do so, the following action is recommended.



Workshop



## Preamble to the Recommendations

The underlying purpose of the Assembly was to draw attention to the state of design in Canada, which is judged to be inadequately applied across a broad spectrum of business, industry, government, organizations, manufacturers, etc. and inadequately involved with other disciplines.

By examining specific case histories and participating in a project to establish some guidelines for a frontier community, many factors emerged which focussed our attention on some of the constraints, limitations and shortfalls in the present process of design.

The Assembly took note of rapidly shifting social values and resource implications, as they interact on the design process, and is prepared to make several general recommendations which are directed first and foremost to the Government of Canada, because of its leadership role, and also, very importantly, to other levels of government as well as business and industry.

## Recommendations

In order to attain "Design Excellence", it is recommended that the Government of Canada

- declare "Design Excellence" as an ongoing national objective vital to the preservation and enhancement of our quality of life in terms of social, environmental and economic well-being;
- ensure human needs and aspirations become the focal point of all design decisions;
- sensitize all governments' capabilities to encourage formulation and implementation of policies and programs to overcome prevailing impediments and create greater opportunities for the attainment of "Design Excellence";
- improve existing federal-provincial relations further in the area of "Design Excellence";
- encourage and support, including incentives, institutions and the private sector to pursue the attainment of "Design Excellence";
- ensure the proper allocation of resources to develop design methods, skills, pure research, applied research and development and other capabilities in Canada;
- designs must take into account operating and maintenance costs and benefits, net energy and material consumption, and direct and indirect costs to society and to the environment. Actively support the innovative design and commercial development in Canada of new generations of capital and consumer goods, services, equipment and housing;
- give priority in the design process at home, at work and in the community to preventive aspects of health and well-being;

- ensure that overall resource and environmental management and climate be considered an integral focus of "Design Excellence";
- develop integrated design systems and processes to achieve harmony between individual and group needs and aspirations, technology, built form systems and the environment;
- facilitate, in the development of policies and programs, a greater degree of public participation, and promote more direct involvement of individuals and public interests in the planning, design and construction process in respect to work, leisure, and the community;
- establish mechanisms to avoid fragmentation and compartmentalization of design decisions and provide support for inter and multi-disciplinary approaches;
- develop and encourage implementation of comprehensive policies, procedures and methodologies for evaluating longer term impact of design decisions on individuals, the society and the environment;
- initiate an urgent systematic ongoing evaluation and revision of current standards and specifications to ensure they are performance-related and provide greater opportunities for innovative and flexible design solutions;
- institute procedures for systematic review and adjustment of laws, rules, regulations, standards, codes and procedures to encourage the development and utilization of improved designs;
- develop, for demonstration at the U.N. Conference on Human Settlements (Vancouver '76), a comprehensive system to create high quality

*design of autonomous human settlements in both Canada and abroad;*

- correct past planning and design errors as well as promote "Design Excellence" for new systems and structures;
- establish formal follow-up mechanisms and detailed action programs;
- recommend that the National Design Council interact more actively with the provincial governments and that the proceedings of the Assembly be transmitted to them;
- propose that the National Design Council implement a program of public education to create awareness, interest and application of good design.
- Whereas the Government of Canada has stated that excellence of design is a national objective, the National Design Council should provide funds for a study into the feasibility and value of creating a multi-disciplinary Design Society whose aims would be consistent with those of the National Design Council. The society would be broadly based, comprising all those individuals concerned with design in both urban and non-urban areas. The study is to be completed and submitted to the National Design Council one year from approval for its commencement.

These are our key recommendations for meeting the design challenge. That challenge is addressed to all of us; but government has a particular responsibility. It must provide leadership and set an example which will motivate all sections of industry and trade. Government can re-assess its approach to standards and regulations. It can review current provisions for specific incentives and programs for design excellence, as well as the general impact of its fiscal and monetary policies for encouraging or discouraging the development and use of good design in our society. Every physical design decision has social implications that lead, ultimately, to some sort of impact on our man-made environment. Government can incorporate scrutiny of design as it relates to housing and community development, public buildings and land use of design as it interfaces with our programs of overseas aid. Above all, governments can recognize that, as the major purchaser of goods and services, and as the direct sponsor or indirect financier or guarantor of most of the housing, it has a very powerful lever with which to influence the design and quality of life in Canada for decades to come. Much has already been done in these areas, and much is being done to concert the efforts of public authorities to maximize the design potential — but much more remains to be done.

I specifically would like to mention the recent policy on design in government procurement, which was approved by the Cabinet. Though the Council initiated the concept, full credit is due to the Departments of Supply and Services and Industry, Trade and Commerce for their part in its development.

Underlying my views on these recommendations are a series of more basic beliefs and aspirations about what Canada can and should do, in future, to use design in helping to meet its own challenges as well as aiding solutions to global problems.

Man cannot continue to act as if he, and he alone, counted; as if the will of human

beings was dominant over the regularities and interactions of nature. We urgently need to promote means of reconciling man with the natural environment on which he depends for his very survival — Design can contribute to such a reconciliation.

Beyond survival, design is one of the areas where we can explore the development of an enhanced man-made environment, in fact of a new civilization and a new national and global identity. Canada may be in a unique position. Industrialization is relatively recent; our society is still quite malleable. The fragmentation and pluralism that may have been seen as a weakness may, instead, have been a source of strength. It gave us a variety of cultures and values, and perhaps prevented us from going whole hog along one particular route. For whatever reasons, we are not as fully locked into the modes of behaviour and organization of the industrial society as some other countries. We can plan and move ahead in all sectors. We can give international leadership in the light of warnings we get from the experience of others, and from the insights that are now emerging with reference to our social and natural milieux. We still have some cushions, particularly if we use our natural resources wisely which could help ease the transition to new forms of society, of civilization, of identity. The design process, if widely understood and systematically developed and applied, can help us explore these future potentials.

A century ago, indeed little more than fifty years ago in the case of women, we viewed the vote as a privilege restricted to a segment of the society: now we see the vote as a basic political right. Education was once a privilege of the few: now it is the right of the vast majority. Health care has become a right of every citizen in our society, and is broadly

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funded through the public sector. Increasingly, industrial and consumer safety, and environmental protection, are being recognized for what they are — a right and a necessity in our society, rather than an addendum to more conventional concerns.

I believe that quality in the built environment can no longer be seen as an afterthought. It must not be regarded as something we may or may not achieve, something that can be approached in a hit or miss basis. I believe that people are beginning to demand quality in their man-made environment as an aspect of their very basic human needs and aspirations.

I believe that it is necessary to recognize that design excellence in the man-made environment is, and should be, a basic human right.

Let's use our knowledge and our capabilities to move towards this goal.

*Design Excellence*  
*A national objective*  
*A basic human right*







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Design Excellence — A National  
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February 24-25, 1975

Excellence du design — Objectif  
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# Notes and reports submitted to the human needs and aspirations committee

# Notes et rapports soumis au comité sur le design et les aspirations et les besoins humains

Human Aspirations and Design Excellence	The Research Unit, School of Social Welfare University of Calgary
The Nature of Human Needs and Aspirations	R. Franken, Ph.D. University of Calgary
Problems of Canada's Northern Communities	J. Frideres, Ph.D. University of Calgary
The Design of Work	S. Kalef, M.A. University of Calgary
Community Political Decision-Making Structures: Alternate Modes of Political Organization	J. Prager, Ph.D. University of Calgary
Public Decision-Making A Theoretical Reformulation	K.R. Persson, B.Sc. University of Calgary
Environmental Competence and The Co-operative as Social and Economic Form in Isolated Settlements of the Canadian North	F.J. Tester, B.Sc. University of Calgary
Environmental Perception and Cultural Conflict	J. Frideres
Social and Behavioural Contrasts: A New Perspective on Community and Individual involvement	J. Birdwell, Ph.D. University of Calgary
Communal Systems	J. Prager
Values and Lifestyle Choices	S. Macleod, M.S.W. University of Calgary
An Outline For The Design and Management of New Northern Communities	K.R. Persson
Estimating Human Costs and Benefits	F.J. Hawkes, Ph.D. University of Calgary
The Incorporation of Social Criteria in New Community Development	W. Shera, M.A. University of Calgary
An Approach to Social Reporting in the Canadian North: Summary and Comments	F.J. Hawkes
Social Costs: History and Definition A Brief Synopsis	J. Prager

## Notes and reports submitted to the Design and the Environment Committee

## Notes et rapports soumis au comité sur le design dans l'environnement naturel

Solid Waste Management and Re-use	Mr. John Stewart Association of Consulting Engineers of Canada
Waste Water Treatment Including Water Re-use	Mr. John Stewart
The Design Process	Ms. E.A. Balfour and Mr. D.R. MacKay Environment Canada
Problems and Opportunities of Rehabilitation of Disturbed or Defaced Northern Landscapes	Mr. John Ritchie Canadian Society of Landscape Architects
Environmental Considerations of the Design and use of the Transportation Corridors between the Frontier Community and a Southern Metropolis	Mr. Ted Davy Canadian Manufacturers Association
Design Considerations of Regional Management	Mr. H. Mohammed and David Low Ministry of Science and Technology
Settlement Design and Environmental Harmony	Mr. Dixon Thompson University of Calgary
Environmental Considerations with Respect to Social Problems in Northern Canada	Mr. Dixon Thompson
Interactions between the Northern Environment and Human Aspirations, Perception, Needs, and its role in Settlement Design	Mr. Dixon Thompson
Human Perceptions of the Environment by those who live in it	Mr. Dixon Thompson
Environmental Aspects of Subsidiary Resource Activities as Related to the Design, Pattern and Timing of Development of Settlements	Mr. Dixon Thompson
The Effect of the Northern Environment in the Work and Activities of Man and the Effects of the Work and Activities of Man in the Northern Environment	Mr. Dixon Thompson
Design of the Environmental Interface in Design Excellence — A National Objective	Mr. Gordon Hodgson University of Calgary
Physical and Biological Elements of Environment to be considered in the Design Process	Ms. E.A. Balfour Mr. J. Stewart Mr. J. Ritchie Mr. D. Thompson



Notes and reports submitted  
to the design and human  
settlements committee

Notes et rapports soumis au  
comité sur le design dans les  
établissements humains

Activities in the Metro Centre	Mr. John Coe Cdn Institute of Planners and Mr. John Stewart Association of Consulting Engineers of Canada
Metro Centre Elements	Mr. John Coe
Pedestrian Movements within the Settlement	Mr. John Coe
Process in Design	Mr. John Coe
Urban Character and Aesthetics	Mr. John Coe
Designing with the People	Mr. J.W. Francis Dept. of Indian & Northern Affairs
Planning for the Indian Community	Mr. J.W. Francis
A New Concept for the Indian Community and its Housing Patterns	Mr. J.W. Francis
Notes on the Provision of a Communications Complex for a Frontier Community	M. G. Holbrook Communications Canada
A Decision Making Process for Human Settlement Design and Development	Mr. Frank Low
Federal Government Objectives and Settlement Patterns — A Proposal for Change	Mr. Frank Low
Interior Design (paper #1) People Places	Mr. M.A. McLenaghan External Affairs
Interior Design (paper #2) Peoples Places	Mr. W.C. Jaquith External Affairs
Notes on Contractual Methods involved in Designing a Frontier Community	Mr. E.C. Prince Environment Canada
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People Places and People Movement Systems	Mr. Lloyd Phillips
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Development Concept The Design of the Landscape	Mr. John Ritchie Canadian Society of Landscape Architects
Design in Settlements The Importance of Graphic Design	Mr. Hugh Stewart Information Canada
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Waste Water Treatment Including Water Re-use	Mr. John Stewart

## Notes and reports submitted to the design at home, work and leisure committee

## Notes et rapports soumis au comité sur le design au foyer, au travail et dans les loisirs

Notes on a Design Process	Ms. E.A. Balfour and D.R. MacKay Environment Canada
Notes on Government Labour Liaison	Mr. T. Duncan Industry, Trade & Commerce
Notes on Regional Planning in a Dynamic Planing Process	Mr. T. Duncan Industry, Trade & Commerce
People Politics and People Policies in Revolutionary Times	Mr. Wm. Dyson The Vancouver Institute for the Family
Personal Responsibility in an Irresponsible Society	Mr. Wm. Dyson The Vancouver Institute for the Family
Design for Leisure (a Task Force report)	Ms. M. Filshie Industry, Trade and Commerce
Social Structure and Design in Frontier Communities	Dr. Edward Harvey University of Toronto
Stimulation of Good Design through Government Procurement	Mr. R. Laughton Supply and Services Canada
Design Criteria for a Northern Development in Canada	Brigadier-General J.P. Leclerc Dept. of National Defence
Notes on a Methodology for Development of the Design of an Urban Project	Mr. H.L. Macklin Association of Consulting Engineers of Canada
Available Technologies and Forms for the Canadian Frontier Community (A report prepared for the Office of Design, Dept. of IT&C)	Scanada Consultants Ltd.
Home Environment in a Frontier Community (A report prepared for the Office of Design, Dept. of IT&C)	John Andrew's International Roger du Toit Architects and Planners — David Parry, writer
Design Criteria for a Frontier Community	Mr. W.H.C. Simmonds National Research Council
A Fundamental Error in Urban Design	Mr. Burke Stannard Emergency Measures Organization

# List of Exhibits and Films

# Liste des expositions et films

Title /titre Exhibits	Source Expositions
Anywhere to Everywhere	Canada Post
Space Connection	Communications Canada
Operation Breakthrough All Stakes Down; No More Bets	Department of Housing and Urban Development — U.S.A. National Film Board
The Long View	Energy, Mines and Resources
By Design	Industry, Trade and Commerce
Petroleum Born Towns	USSR
Salmon Portfolio	National Film Board, Environment Canada
Chairs for Lovers	National Film Board
City Limits	National Film Board
The Greenlanders	Indian Affairs
From the Middle of Nowhere	Regional Economic Expansion
Family House	Canadian Housing Design Council
Bommsville	National Film Board
Mirabel	Transport Canada
Don't Let the Delta Die	Environment Canada
First Canada Place	Olympia and York Developments
Water	National Film Board & Environment Canada
Title /titre Films	Source Films
The Experimental Urban Module	The Earth City Foundation: Borealis
The Living University of the North	The Earth City Foundation: Borealis
The Salmon	The Fisheries and Marine Secretariat of Environment, Canada
Housing Awards	The Canadian Housing Design Council
Design Publications	The Office of Design, Industry, Trade and Commerce
The Communications Technology Satellite a Model	Communications Canada
The Cancer Therapy Unit	Atomic Energy of Canada Ltd.
A Model of the Mirabel Airport	Transport Canada
The Massett Base, British Columbia	National Defence Canada
The Federal Identity Program	Information Canada

