



Pelly Bay school under construction throughout the winter of 86/87. Utmost simplicity was the key as it all came in the belly of a Herc.

Northern Practices: Adventures in Architecture

by Stan Hodgson

Architects are essentially urbanites attracted to the heady swirl of high finance, mega projects and all that comes with the "good life." Those of us who have migrated North for whatever reason have suffered the cultural and environmental shock which is a reality of Northern Canada. It is no place for the faint of heart or those unwilling to learn the hard lessons of Arctic building techniques in the face of mind boggling distances between relatively primitive micro-communities, exceedingly harsh climate and the logistics of the annual sea lift. In all of this there is no tolerance for error.

Moving back in time, less than a decade actually, all projects in the North were serviced by southern consultants and contractors. Some of the results of these efforts were good but there were many unforgiveable results. At one point, panelization or modular preconstructed buildings appeared to be the answer. The idea still has merit, however, the permafrost active layer beat them and in a country where a man sized snow drift can build behind a keyhole, joint failures in a very short time turned these structures into truly air conditioned buildings.

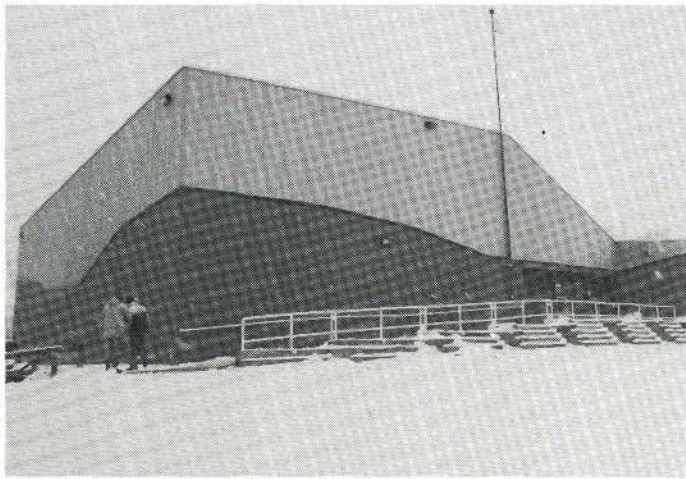
Very little thought was given to community infrastructure and town planning was nonexistent. Hamlets and villages grew helter-skelter along shores and the all important airstrip. No regard was given for the inherent danger of aircraft landing without precision approach aids.

One man's discard in the North is another man's treasure. As with the Baffin two dollar bill which goes around and around, battered, mutilated and patched until it is no longer recognizable, buildings fall into the same category. When the Government of Canada awoke to the fact that in the early 1950s entire settlements in the North were starving to death, the push was on for Band-aid solutions. Shelter was important. Witness the "Eskimo House," a one room rigid frame plywood shack by Indian Affairs. It is a temporary expediency, still around and

still in use in the Eastern Arctic. Nothing rots up here because it is too dry. Out of this has grown one of the most dreaded of Northern phenomena, the retrofit. Properly done, inside and out it can cost nearly as much as putting a new structure in its place. Why do they do this? Because it's there.

As government in the North matured and found more to say about its own affairs, it perceived the hiring of southern consultants and contractors as being funds bled from the North and of no advantage to Northerners. Builders found themselves facing a new economic border drawn along the 60th parallel. Northern content in all things became the buzzword and the stage was set for the emergence of the northern consultant.

The key to successful northern design for all systems in a typical community infrastructure is simplicity. In buildings, this is reflected in the design attitude of the architect. If his approach includes southern affectations, such as the bells and whistles of Post Modernism, he will soon be forgotten. Cost control, in a country where the unit cost of building can spiral beyond \$2,000 m², can only be achieved by a very careful and detailed weeding out of complications. This applies to all systems, and the architect's total involvement in these project systems and his desire to learn, do tend to place him in the historic "master builder" category. The situation can be contrasted to that of his home town contemporaries who may head up a design team of 65% which they know technically very little about. Total involvement of the architect also means community involvement. Local governments have a say as to what it is, where it goes and how it is built to assure maximum community participation. Both during and after construction building sites become training schools for budding trades journeymen. Buildings are invariably erected in stick built wood frame for primarily two reasons, one of which is its workability for locals and the other is the cost of sealift. Shipping costs are based on 2.5 m³ or 1000 kg., either by weight or volume



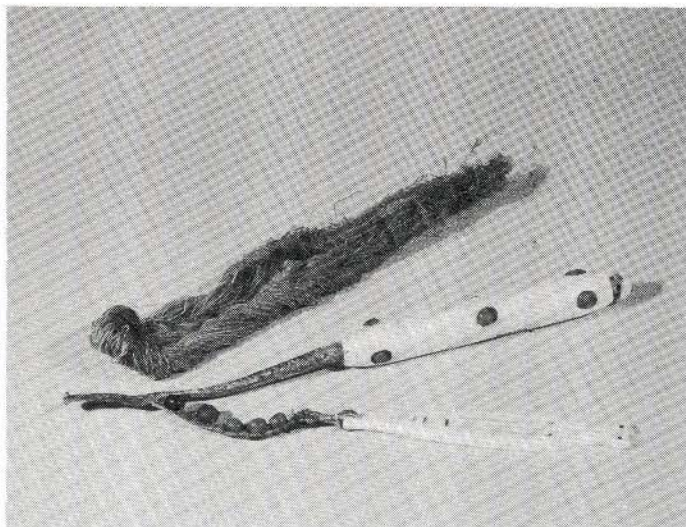
Fort Liard school showing an attempt to provide an additional layer of complexity to a relatively simple building. Break line reflects the rugged topography of this foothills' community.

whichever is to the best advantage of the shipper. Wood fills the bill nicely as its density achieves the best balance in weight versus volume ratio. The most unique delivery package this architect was involved in concerned the construction of the school in Pelly Bay, a community ice bound all year. The complete plant, equipment and materials were air lifted to Pelly in 25 Hercules C-140 loads for this 1200 m² educational unit.

By southern standards, projects in the North are relatively small, but the costs in the higher latitudes are two times, on the average, of those in major Canadian cities. Educational and recreational buildings, along with multi-purpose community centres and hamlet offices have been targeted by the GNWT over the past few years. With the relaxation of the Federal grasp over Territorial affairs and the handover of more responsibilities, such as health and airports, architectural firms anticipate exploring new avenues of design as the previous programs become satisfied.

By and large, the GNWT is the major client but private entrepreneurs are now becoming a major force in Northern development. Design/build and project management are those avenues in which some architectural firms are currently searching for survival.

All architects in the Northwest Territories have been educated and trained elsewhere. Some adapt and become totally involved in the culture of those they are hired to serve. Most do not and only await the opportunity to return to a more urban lifestyle. Northern practices are not easy. The costs are high, both personal and financial, but the obverse of the coin is being on the leading edge of an emerging social event; Architecture for the North. The search for form is not the adventure, as form follows function as does the search for excellence. The true adventure is in the conquest of space and time and like true protozoa learning to thrive on chaos. □



Bundle of sinew, caribou tendons, used as sewing thread. Mackenzie Delta Inuit ivory needle case with thimble guard and glass bead inlay. (Mid - 19th century.)

Exhibition

Ivalu: Traditions of Inuit Clothing

The McCord Museum of Canadian History, from April, 1988 until January 10, 1989, will present a major exhibition of international scope celebrating the 4,000 year traditions that produced the clothing needed for survival in the Canadian Arctic. *Ivalu: Traditions of Inuit Clothing* was officially inaugurated by the Right Honorable Jeanne Sauve, Governor General of Canada. *Ivalu*, in the Inuit language (Inuktitut), means sinew, Inuit use it to sew their clothing and to make cordage for drawstrings and tool lashings.

This exhibition which features over 200 artifacts which document the prehistoric evidence of tailored skin clothing in the Canadian Arctic, outlines its technical, artistic and social importance to Canadian historic Inuit, and indicates its continued relevancy in contemporary Canadian Inuit society. It is the first comprehensive exhibition which brings together clothing and tools of manufacture from prehistoric times to the present. Visitors will be introduced to the complete process of Inuit clothing construction, from the hunt through the use of ingenious tools and techniques, to the artistry and symbolism of the completed garment.

Mrs. Betty Isseman, guest curator, and Mrs. Catherine Rankin, associate curator for *Ivalu*, are experts in the area of Inuit clothing and artifacts. Their extensive knowledge of Inuit culture and many years of research in the preparation of this exhibition will contribute to a better understanding of the Inuit and their way of life. This knowledge will be documented in a fully illustrated 100 page catalogue of the exhibition which will be available at the Boutique McCord.

Contributors

- Robert R. Janes, the first executive director of the Science Institute of the N.W.T., is a northern archaeologist/anthropologist with a doctorate in subarctic archaeology from the University of Calgary. He was the founding director of the Prince of Wales Northern Heritage Centre in Yellowknife for ten years. In 1986, Dr. Janes became the first honorary life member of the Canadian Museums Association for exceptional contributions to Canada through museum activity. Dr. Janes serves as science advisor to the Government of the N.W.T. and as the vice-chairman of the Board of Directors of the Arctic Institute of North America.
- Karen LeGresley, after earning her degree in Landscape Architecture from the University of Toronto, designed landscapes in Ontario, Alberta, Germany and Venezuela before moving to Yellowknife in 1983. She worked with the Tourism and Parks division of the Government of the Northwest Territories until 1986, when she started a landscape architecture firm called Avens Associates Ltd. She is a member of the Alberta Association of Landscape Architects.
- Lieutenant-Colonel David V.B. Riddell, C.D., P.Eng. is the Commanding Officer of 1 Construction Engineering Unit located in Winnipeg, Manitoba.
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- Bruce Stebbing is an architectural graduate from the Technical University of Nova Scotia, who was working in Vancouver, B.C. before moving to Ft. Smith, N.W.T. in 1985, to work for the Department of Public Works, Government of the N.W.T. In 1987, he moved to Yellowknife and has continued with Public Works in Architectural Project Management. He has travelled extensively in the Territories.
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Figure 5. The same tipi as shown in Figure 4, on a windy day, with the covering up for protection.

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