



# Winter Cities

VOLUME 19 • NUMBER 1 • WINTER 2000



Photo courtesy of Lulea, Sweden

*Famous ice sculpture in Lulea, Sweden*

## *Message from the president*

Embracing winter! This simple phrase captures the essence of winter city thinking. By embracing the winter season, we do more than accept winter as an inevitable part of life in the north. Communities that embrace winter respond to it in a positive manner. These cities consider winter impacts and opportunities in all services, projects, recreation areas, the central business district, and other commercial developments. Winter is viewed as an economic development asset to develop industry, business, and tourism uniquely suited for the northern climate.

Winter cities embrace the winter season by paying attention to the details that improve citizens' quality of life. Pedestrians and autos alike share the benefits of good snow management. Recreational and cultural activities are provided both indoors and outside with equal priority. A central gathering place, town square, or park is used as a venue for winter activities. Outdoor lighting displays lift community spirits. Public transit schedules respond to the weather. Social programs provide unique services to the disadvantaged. Winter cities share a concern for the urban, built environment as well as the natural environment both within and outside the city.

This issue of *Winter Cities* offers insights into the development of a good winter city. We have reprinted several of our favorite contributions from the archives. One of these articles, by the famed Quebec geographer Louis-Edmond Hamelin, introduces the concept of "nordicity," setting the stage for the Winter Cities 2001 conference to be held in Quebec City in February 2001. More information on charming Quebec City and Winter Cities 2001 will be forthcoming.

The cover photo for this magazine, provided by the organizers of the Winter Cities 2000 conference in Lulea/Kiruna, Sweden, is of a famous ice-sculpture in Lulea. The people and communities of northern Scandinavia live the idea of the good winter city. Winter is an important part of their culture.

Winter Cities 2000 participants, especially those from North America, will learn much about appropriate development of the northern city, including design, the environment, economic and social development, and tourism. We congratulate the organizers of Winter Cities 2000 for the development of an exciting and informative conference! We intend to share as much information as possible from this conference in future issues of *Winter Cities*.



Pat Coleman  
Winter Cities Association President



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Winter Cities Association is dedicated to realizing the unique potentials of all northern communities. Through publishing, networking, organizing conferences, facilitating research and other means, the Association seeks to make available solutions and to promote awareness of opportunities associated with the winter season.

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# Winter Cities

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# ICICLES

*What's Up in the Winter Cities*



Photo courtesy of Michael Broadway

City of Prince George Civic Centre.

## *City of Prince George Promotes Climate Sensitive Design Principles*

In spring 1999, the City of Prince George Winter City Committee recommended to City Council that a resolution regarding climate sensitive design principles be endorsed by them and forwarded to the Federation of Canadian Municipalities (F.C.M.) for consideration. The resolution was endorsed in turn by the Board of the F.C.M. in September and forwarded to the Minister of the Environment, Hon. David Anderson for comment. In his reply, the Minister noted that

by making climate-sensitive design principles a central part of the planning process for future investments in community infrastructure, municipalities would contribute to the national effort to reduce greenhouse gas and contribute to the National Implementation Strategy on Climate Change.

The resolution reads as follows:

WHEREAS the Federation of Canadian Municipalities endorses sustainable development principles in municipal government policies and urban design initiatives in order to contribute to the quality of life in Canadian communities;

WHEREAS the majority of Canadian communities experience a variety of climatic conditions but are often not

designed to exploit the positive elements and minimize the negative elements of these conditions; and

WHEREAS the application of climate-sensitive design principles can reduce energy consumption and maintenance costs, minimize social and physical isolation caused by climatic conditions, and promote a positive perspective about local climate and quality of life;

BE IT RESOLVED that the Federation of Canadian Municipalities encourages its members to recognize their unique climatic conditions and incorporate appropriate climate sensitive design principles and policies in their Official Community Plans.

A similar resolution has been forwarded to the Union of British Columbia Municipalities (U.B.C.M) and is still under consideration. It requests U.B.C.M. to petition the Provincial Government to amend the Municipal Act so that the establishment of objectives and the provision of guidelines for the form and character of commercial, industrial, or multifamily residential development take into account local geography and climate as part of the required content of an Official Community Plan.



## *U.S. Federal Highway Administration Offers Local Technical Assistance*

The Federal Highway Administration's Office of Professional Development has established a local technical assistance program (LTAP.org) to provide transportation professionals, students, and the public with access to transportation related technology, products, and information. The LTAP mission is to stimulate active, progressive, and cost effective transfer of bridge/highway technology and to provide technical assistance to local and urban governments.

A network of LTAP centers (one in each state, one in Puerto Rico, and seven that serve Native American Tribal

Governments) brings technology transfer services, products, and educational resources to the local level. Of particular interest to Winter Cities Association members is the organization's extensive video collection that deals with snow and ice removal, snowplows, and springtime conditions.

In Michigan, if you wish to receive a copy of the LTAP video catalog call (906) 487-2102. For further information about the LTAP and a complete list of local contacts go to the LTAP web site at [www.ltap2.org](http://www.ltap2.org).

## *Winter Cities Association is on the Web*

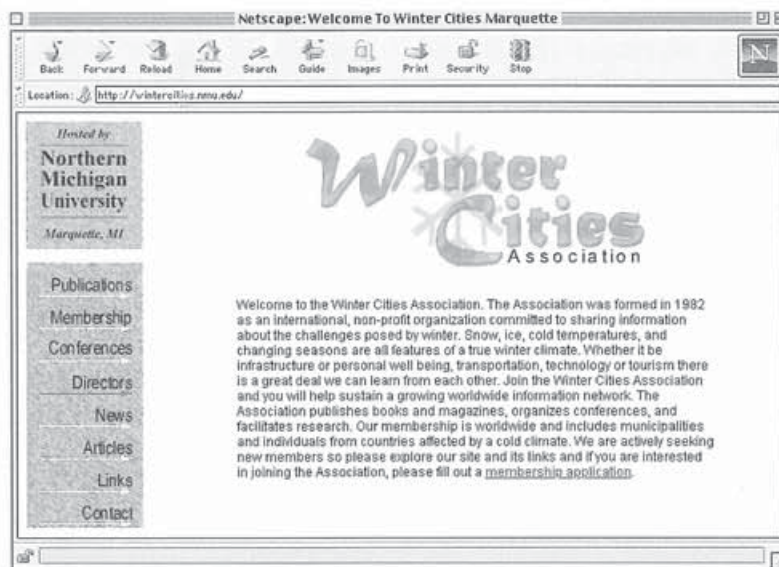
In December 1999 the Winter Cities Association established a web site at Northern Michigan University. Its address is [wintercities.nmu.edu](http://wintercities.nmu.edu). The site is in

its infancy and contains preliminary information about the next Winter Cities Association meeting in Quebec City in 2001, a number of articles and links to other winter city organizations, and related planning sites. Please check the site out, and if you have a link you wish to add or any other suggestions please e-mail them to [mbroadwa@nmu.edu](mailto:mbroadwa@nmu.edu).

## *Quebec City to Host Winter Cities Association Biannual Meeting*

The Winter Cities Association will hold its biannual meeting in Quebec City in February 2001. The meeting will be held in conjunction with the World Summit on Nordicity. Quebec City is renowned for its Winter Carnival, which is now recognized as the third largest in the world after Mardi Gras festivities in Rio de Janeiro and New Orleans. Conference participants will have the opportunity to learn first hand how the city plans its Carnival and winter tourism events. Other possible sessions include Global Climate Change and Implications for Northern Communities, Livable Winter Cities, Managing Snow, Economic Development, and Northern Resource Communities.

For further information on the conference visit the Winter Cities Association web site at: [wintercities.nmu.edu](http://wintercities.nmu.edu). ❄



The new Winter Cities Association web site features links to other winter city organizations, articles, and related planning sites. The site can be found at [wintercities.nmu.edu](http://wintercities.nmu.edu).



# *Canadian Winters and International Nordicity*

By LOUIS-EDMOND HAMELIN, O.C.

**E**ven in scientific literature, the natural connection between the notions of winter and the north has hardly been considered. The non-liaison seemed logical; while the word winter refers to the concept of "season," which is of a relatively short duration, the word north applies to a "territory," a permanent space. Nonetheless, winter constitutes a major climatic characteristic of every Arctic and Subarctic area, and should be closely interwoven.

It has been written that winter resides less in the cold, the snow, and the ice than in the head, in the imaginary world, and in ideology. The "dead season" is found more in us than around us. Consequently, there should exist the notion of a total winter composed of the physical element represented by the freeze-up of materials and the human element that may be assessed by evaluating citizens' attitudes.

The study of weather is not the exclusive domain of specialists in the atmospheric sciences; it is equally interesting to social scientists, technologists, writers and artists. Winter, an eminently multidisciplinary subject, might therefore be defined: The cold period of the air-land-sea interface, variable according to lati-

tudes and the perceptions of individuals.

Our global approach to the conception of the winter season leads us to consider the areas concerned as being socioclimatic.

In regard to the number of inhabitants, a distinction must be made between the zone in which winter lasts at least three months (the Nordic World) and the densely populated peripheral fringe of this zone (the Temperate World). The Nordic World stretches from the pole to latitudes as far south as 50 degrees, and the Temperate World stretches up to a maximum of 60 degrees and down to 30 degrees.

## *The Nordic World*

Most people do not recognize the importance of this zone. This immense circular network involves in part three continents and three oceans. The whole network covers about 15 percent of the Earth's area. It is important to note that, although it is called Nordic, this zone is not restricted merely to the Finno-Scandinavian peninsulas in Europe. Within this vast world, the different types of winter weather, not all of which are well known, are harsh and stretch out over an irregular latitudinal scale.

The zone numbers fewer

than 13,000,000 permanent residents. The Inuit seem to be best adapted to the "Far North," as demonstrated by their igloo. However, important urban concentrations are found in Northern Russia. Northern Europe has the greatest rural densities. In comparison, Nornam (North North America) remains sparsely populated.

Like other zones, this Nordic zone has both advantages and disadvantages. These traits become apparent in the realms of indigenous peoples' cultures, development, wildlife sanctuaries, freshwater reservoirs, jurisdiction over ice-covered seas, scientific laboratories, military shields (radar; training flights), human adaptation to ecological conditions, and adventure tourism.

## *The Temperate Zone*

South of the zone of intense winter is located a fringe that also circles the world where the duration of the cold season is not greater than three months. In this band, nearly as wide as the Nordic zone, almost two billion people see snow fall. Among them, several hundred million experience more than thirty days (not necessarily in a row) of subzero temperatures, yet the seasonal variations have





Photo courtesy of Michael Broadway

Downtown Calgary and the frozen Bow River, January 1998.

not hindered their technological discoveries. Indeed, the countries in the middle latitudes represent the principal developed area of the world; they are designated the North in the North-South biotope of humankind.

In the whole of the Nordic World and its peripheral fringe, the season becomes less intense as we move away from the pole. Lasting more than eleven months in the Central Arctic Ocean, winter takes up three or four months in the Moscow Plain, but only a few weeks in some very densely populated countries. Continuing towards the nonmountainous south, cold conditions may last only a few days per year. Nevertheless, in regions with a Mediterranean climate, fruit trees may freeze. Still farther south, around the latitude of 30 degrees, we leave the continuous "winterlands" for good.

In Canada, winter territories may be divided into two large groups: that of Northern Canada in the strict sense of the term and that of Base Canada. Northern Canada stretches from the Arctic Ocean to 50 degrees latitude east of Saskatchewan, and to 55 degrees to the west. Base Canada lays between the limits previously mentioned and the frontier of the United States. From one stage to another, the severeness of the climate and the agricultural potential assume a very different appearance. In the North, the number of months with an average temperature of 14 degrees C oscillates around 0, 1, or 2, a thermal threshold that precludes outdoor agriculture; in Base Canada, there are three or four such months, affording a good period for cultivation as well as a very acceptable environment in the eyes of the great

majority of the population.

Winter is one of Canada's faithfully recurring features, like icebergs in offshore Newfoundland. It presents a certain unity: 50 degrees below zero in Winnipeg and 50 degrees below zero in Denendeh are after all 50 degrees below zero; a blizzard in Regina resembles a blizzard in Iqaluit, but patterns are not uniform with respect to space and intensity.

Many types of regional winters may be discerned: fierce, humid winters in Southeastern Canada; briefer and less oppressive winters in Southern Ontario; rainy winters in Southwestern British Columbia, cold dry winters in Alsama (Alberta-Saskatchewan-Manitoba); Middle North regimes showing transitions between the monoseasonal winter in the Temperate Zone and the triseasonal winter in the



Arctic Zone; a few months of darkness in the Northern Cone (Queen Elizabeth Islands). On a local or regional level, physical changes are brought about by urban warming, the snow-eating Chinook in Alberta, vast water bodies (Great Lakes, the Gulf of St. Lawrence, Hudson Bay), winds, and continentality. It seems that the many cultures that comprise the Canadian mosaic do not respond in the same way when confronted with the snow.

On a human level, within this obligatory interface between nature and people, a good part of what constitutes "winter" comes from the attitudes of men and women. It seems that the many cultures that comprise the Canadian mosaic do not respond in the same way when confronted with snow, sports, heating, clothing, and the depression of winter life. The same is true of age categories and social groups.

The Laurentian winter lasts three to four months and consists of three mechanisms: a series of nonconsecutive snowfalls over about 10 to 20 percent of the days; cold fronts for 20 to 35 percent of the days; and spring-like days in between that would take up about 50 percent of the days. These three mechanisms, however, appear irregularly.

A blizzard that reduces visibility to a dangerous level occurs only two hours per winter in Quebec City in comparison with 103 in Iqaluit.

A snowfall is calculated on an hourly scale, and it rarely lasts more than half a day. Most snowfalls would be classified as

medium or thin as opposed to thick or very thick; that is, in most cases it would take no more than a quarter of an hour to shovel an automobile out of the snow. According to Environment Canada, a blizzard that reduces visibility to a dangerous level occurs only two hours per winter in Quebec City, in comparison with 24 in St. John's, 31 in Regina and 103 in Iqaluit.

It is fundamental to forecast trouble the moment a storm

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begins. The worst situation occurs when a "very thick" blast, closely following a previous blast, is accompanied by a fierce wind about eight o'clock in the evening. Yet the worst inconvenience results not from the quantity of snow fallen but from snow banks accumulated downwind against obstacles. The next morning, plants, offices and school are closed. To have a good winter, one must learn many things. The

best wintering is a matter of practical intelligence.

Harsh anticyclonic weather consists of either "moderate cold" without any major inconveniences or "severe cold" (from -20 to -30 degrees), which occurs in several interludes lasting a few days. The wind factor, in addition to increasing the local snow cover, makes temperatures lower; it also increases human heat loss and transforms tolerable temperature conditions into conditions demanding more clothing. In Quebec City, the "windchill factor" brings the temperature down to -50 degrees for a few hours per winter.

Besides the irregular recurrence of these three types of weather -- snow, cold and pseudo-spring -- Laurentian winter is divided into three phases called prewinter, hardwinter, and winter's end. In Base Quebec (the more heavily populated South), from the second half of November to early April, the season is not a homogeneous period.

The beginning of winter is characterized by little snow, little sunlight, moderate cold, the freezing of humid materials, and the formation of ice cover on the shores of water bodies. This nonlinear progress of phenomena takes up almost the entire second half of autumn. The three mechanisms (storm, cold, pseudo-spring) and three phases (prewinter, hardwinter, winter's end) combine to produce almost daily dynamic atmospheric conditions.

Hardwinter centers especially on the storm-cold pairing and usually begins during the last



week of December. In clear weather, the landscape takes on a pastel or golden hue.

Toward the last week of February, winter's end hesitantly sets in the lengthy sunlight, milder air, floating-ice system serving as a dam for the abundant meltwater, rising of maple sap, and potholes.

The three mechanisms (storm, cold, pseudo-spring) and three phases (prewinter, hard-winter, winter's end) combine to produce almost daily dynamic atmospheric conditions. These frequent recurrences influence attitudes and choices in dress habits, travel planning, achieving work objectives, health protection, and sports. The chronological mobility of winter conditions leads many people to become constantly involved in choosing the best responses to changes that occur at short intervals. Wishing to remain ignorant or adopting a policy of "inaction" exposes us to many little irritants, unless we wish to accumulate them in order to justify rejecting winter!

Not seeing things as they are or borrowing ideas from elsewhere affects Laurentian wording. First, some speak of the "winter of 1992" as if it will not begin until January. It would be closer to reality to continue to use the old designation that included the previous autumn; this realistic view would be expressed by the "winter of 1991-1992." The period begins before December 31. In fact, in Quebec City, there is a 100 percent chance of having a "white Christmas" and an 84 percent chance in Ottawa. Without any

doubt, December should be included in the season. Therefore, one must know how to identify the beginning of each type of winter: the psychological winter of hibernophobes (after July), climatic winter (second half of November), astronomical winter (December 21) and winter as indicated in the Linguistic abbreviation (January 1).

Over the last thousand years, natural winter has changed. Better solutions to different problems (heating, lighting, housing, transportation, food conservation, and urban snow removal) have gradually alleviated a part of the winter mortgage of yesteryear. Today, in downtown areas, if one forgets the noise of snow removal at night, the repulsive slush along the sides of streets and the short bouts of "severe cold," the rigors of the season have been reduced. Within the vast dome that envelopes large cities, urban warming reduces the local effects of winter. This warming turns a part of the precipitation that would otherwise be snow into rainfall (sometimes turning it into freezing rain), and shortens the duration of snow cover on the ground and ice on sidewalks by a few weeks. At the local level, urbanism works against winteriness. Therefore, it becomes almost incomprehensible that this dewatering has not resulted in less grumbling by winterers! Thus we see that nature, technology and attitude evolve neither in the same direction nor at the same rhythm.

In Canada, winter's mental and material significance is prov-

ing to be fundamental. No doubt we first notice additional costs imposed on heating, clothing, road maintenance, enterprises, construction and health.

Estimates vary widely but appraisers think that the annual winter expenditures of a family equal annual residential mortgage payments. The financial assessment must also take into account industries and services which, operating during this time of the year, stimulate economic life. In many fields, the main season for work and artistic activities occurs between autumn and spring.

This concentration of activities presents different problems that, in fact, confront the whole society. Would it suffice to make better mental, linguistic and technical adjustments to the real dimensions of winter? Should we not take the opportunity to assess our personal relationship with the environment pertaining to the resources used and the optimum art of living? Neither nature nor the city dweller would gain from improved snow removal in the city if polluted snow were going to degrade rivers farther away. Consequently, normative winterism goes beyond natural rigors of winter and voluntarily entertained fears. A people whose mythology of winter would be derived from a new formula incorporating science, conscience and emotion would know how to take on intelligent, fruitful commitments. Could we not, therefore, expect that such a people may even include winter in its nationalistic boasting? \*



# *Cold Climate Neo-Traditionalism*

By HAROLD HANEN and GREG LIBURD

**E**xperienced mountaineers look at the big picture first and foremost. Prior to attempting any climb, they seriously examine the long view well before they even consider the specifics of a certain route. They know that once on the mountain the nooks and crannies that seemed too minuscule from a distance will engulf them. Without having perspective and knowing how the mountain relates to its surroundings they will be lost. The point is that before plunging into the infinite details of urban planning it is prudent to deal with the generalities first and that, in turn, leads to one question: What is a good community?

A good community is organic. It is based upon its physical surroundings and the people who occupy them. This foundation creates a dynamic and responsive relationship. The community nurtures and encourages by recognizing the specific needs and character of both the populace and the environment. This situation

regards all people as equal and ensures that every person has access to the same quality of existence. In much the same manner, the true nature of the habitat is integrated into the fabric of the community. These basic characteristics must be considered in order to keep perspective on the true purpose of planning.

If the good community model contains the aspects fundamental to all planning, why

variables involved in creating a good community. Whereas other regions are essentially static in the stresses, multi-season realms each take on their own kinetic, demanding personality.

Essentially the solution to circumpolar community planning lies in flexibility and treating each situation as unique.

Effective and economical resolutions can be created for all seasons. The answers come by pay-

ing strict attention to natural context. For example, through developing an initial understanding of indigenous energy and water flows, the planner can avoid traditional pitfalls and make the community at harmony with the environment. On a strictly human level, this is illustrated by balancing the transi-

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tion between the outside and inside. In either case, an adaptable approach allows for the full incorporation of seasonality into the identity and function of the community.

then must multi-seasonal regions receive further regard? Winter communities are unique. Their extremes of climate require solutions since they place additional burdens on the already monumental task of effective planning. A wide range of environmental conditions effectively adds another dimension to the

Neo-Traditional Community Design (NTCD) "encourages the creation of a pedestrian-friendly center, establishing a sense of





Photo courtesy of Michael Broadway

Vancouver's False Creek development is an early example of Neo-Traditional urban design.

place and community in addition to complex, geometric street layouts, slower speed street design, and mixed land use." It was developed in the early 1980s as a response to communities spawned by post-war zoning regulations which, because of their total separation of land uses, created dependence on the automobile. This new approach to community planning was structured to alleviate the wasteful, environmentally detrimental, and socially destructive effects of the previous model.

Does NTCD meet the requirements for a good community? Currently it is all the rage and fits in conveniently with the prevailing fronts of the New Conservatism. It is touted as a return to small town living and values. However, behind the marketing noise and professional jargon lie principles that are quite

sound. NTCD promotes a greater compaction of activities, a balance between different modes of transport, mixed land use and an emphasis on communal socialization. In effect, the NTCD attempts to directly address the needs of the people and provide balance with the environment. That, in effect, is how one plans a good community.

NTCD certainly is an effective means of creating a community that serves its inhabitants rather than enslaving them. However, certain factors must be considered before this concept can be effectively applied to multi-seasonal regions. Severe climatic conditions have an immense impact and each season has its own unique requirements; thus, sensitivity is required. Building a Neo-Traditional community in Tromso, Norway, based upon a neighborhood in

Florida (where NTCD originated) would eventually create a situation akin to the one that NTCD was developed to rectify. The successful NTCD based cold climate community would take into account factors such as protection from the elements, snow and management, optimization of solar energy, and protecting continuity of access.

There are overlays between NTCD and appropriate circumpolar design. However, if a blueprint is created based upon a situation that does not exist, then it will ultimately fail. It takes introspection to arrive at an identity and strength to chart out a unique future. By denying regional realities the cycle of mindless appropriate southern 'solutions' is perpetuated. Only by being true to both self and place can any community plan be ultimately valid. ❄



# *A Good City All Seasons*

By JAN GEHL

**I**t is my assessment that most northern cities do not work poorly in the winter; rather they work poorly in all four seasons. Based on this conclusion, it makes no sense to discuss winter problems and "winter cities" in isolation of the other seasons. We must discuss city quality in general and in relation to all four seasons. My vision is always for a good "around-the-year" city.

Cities have functioned traditionally as meeting and market places. The city's public spaces have served these two city functions, plus providing access and connection with the space allocated to access seen as "traffic places." When one examines a traditional city, these three functions are often found in good balance.

In the traffic and market city models, it is evident that the third traditional city function of the city as a meeting place suffers badly or is in the process of being entirely phased out. In winter cities this is unacceptable.

A good meeting place is one that allows a wide range of optional social and recreational activities. In addition, a good meeting place must be democratic and allow citizens of different groups to meet and enjoy their city. The diverse activities of an Italian piazza, of Jackson Square

in New Orleans, and of Gransville Island in Vancouver can serve to describe the character, purpose, and joy of a meeting place.

It is important therefore that a good winter city (like the city in any season) provide a good balance between meeting, market and traffic places. The need for the city to function as a meeting place is gaining new importance in present-day society, given a large number of social, cultural, and economic changes. Smaller families, single-person households, and increased leisure time place new demands on cities to respond to the need for social interaction and a sharing of cultural and social experiences.

The city of Copenhagen has put a high priority on creating a good balance between meeting, market, and traffic functions. It has worked very hard at maintaining and improving its meeting place function. Given these efforts, the use of public spaces for social and recreational activities has tripled over the past 20 years. As part of its "good balance" policies, Copenhagen has also managed to keep automobile traffic at 1972 levels!

We have learned in Copenhagen and other northern cities where good public spaces have been provided that citizens will use the city as a meeting place.

The northern city as a meeting place is very closely related to the quality of that city in the good weather seasons. When discussing the northern city as a meeting place, it is important to note that while market and traffic functions are year-round functions, the meeting place function changes with the seasons. The city as a meeting place is very much a spring and summer activity. It is very much an outdoor phenomenon, where the northern citizens rejoice over the new season and the city simultaneously. The hectic, wonderful outdoor summer life in the city - the streets, squares, and parks filled with people enjoying the good season (after a long, grey, and dark winter) - is actually the highlight of any northern city. And this two-seasonal rhythm is one of the major characteristics and qualities of northern culture.

In my view, a northern city must be a very good summer place. Summer is the all important season in the north, where people can participate in highly specialized patterns of outdoor activities. Most notable are the spontaneous and more lighthearted contacts that are especially related to the summer. In Danish residential areas, friendships and neighborhood networks are invariably formed during the sum-



mer period. That is when people meet. Let me quote a well-known Scandinavian proverb: "If the city works well in the summer, we can form the networks that will take us through the winter."

Having emphasized the importance of the meeting place functions and their special ties to the good season and the outdoors, some of the major problems of so-called "winter cities" become evident.

Most northern cities work very poorly in the good seasons, given traffic congestion, shade and wind caused by high buildings, narrow sidewalks and few or any high-quality urban spaces - problems that are only exacerbated in the winter season.

### *A Vision for a Winter Friendly City*

There are two well-known city types: the traditional outdoor city with the attitude of "let us pretend that winter does not exist;" and the new indoor cities with the feeling of "let us pretend that the good weather days are not important." It ought to be possible to develop a third solution, the "winter friendly outdoor city." If I were a mayor of a northern city, I would use the following criteria to guide the development of a winter friendly city:

- ◆ A good summer city with a high priority placed on providing meeting place functions.

- ◆ For the winter season I would introduce a number of "friendly gestures" to brighten and warm up the winter setting; I would make winter a special event in the city.

### *My Action Plan for a Good Season City Could Look Like This:*

- ◆ A reduction in the volume of car traffic and an improvement in walking conditions. Most cities will work well with less traffic, if the reduction is made gradually. (Copenhagen has taken three percent of the downtown parking away each year for the past 25 years).

- ◆ A prevention of further deterioration of the various micro climates in the city by outlawing buildings that take away sunshine and create turbulent winds in the important areas of the downtown.

- ◆ The provision of high-quality streets, squares and parks in the heart of the city. Traffic-reduction policies can reclaim space to create wide, high-quality sidewalks and a generally excellent walking environment under a gradual improvement plan.

- ◆ Preventing the development of alternative indoor networks that take people, energy and investment away from the four-season city.

### *I Would Improve Winter Conditions by:*

- ◆ celebrating winter as a particular season with character and virtues by using such initiatives as winter festivals and sports;

- ◆ providing wide sidewalks that will allow space for trees, awnings or covered porticos (in some instances, it may even be possible to develop a special "winter coat" of glass for parts of the sidewalks);

- ◆ linking all indoor spaces directly to public spaces so that life can flow in and out throughout the year;

- ◆ looking at indoor meeting places, such as winter gardens linked to outdoor summer places, as places where new winter types of activities could develop. Architecturally they should be perceived as part of the public space where shopping is welcomed as a part of an integrated meeting/market place concept;

- ◆ using darkness and light to celebrate the city and winter by carefully worked out public lighting schemes that include special light decorations; light events and light shows that will brighten the winter environment; and

- ◆ including a number of tiny friendly gestures for the winter season in "my" city. In the summer we have ice cream vendors, but in the winter we would have special dark blue "winter kiosks" selling soup, pancakes and Scandinavian Glogg (which would bring the rosiness back to most cheeks!). Also we would manage to have a natural gas company sponsor a system of gas stoves that would be "hot points" on many street corners; not to be outdone, the electric company would donate semi-circular insulated and heated "warm-city-sofas" for some sixteen persons. You would find these used all over my city.

Finally, this program for a four-season city is basically inexpensive and can be implemented gradually over a period of time. What more can one possibly expect from a caring city government. ❖



# *Downtowns and Winter Cities: More than Urban Design*

By DR. MICHAEL BROADWAY

This article is the first of two parts dealing with this topic; the second part, to be published in the next issue, will deal with downtown winter city design in a medium-sized Canadian city.

In North America much of the effort to make winter cities livable has focused upon central business districts. Underground shopping malls, upper-level pedestrian walkways, integrated office-retail and apartment complexes have been incorporated into the downtowns of many large northern cities over the past thirty years. But despite their widespread adoption, little consideration has been given to assessing the degree to which such designs have been adopted in smaller urban centers or their effectiveness in contributing to a vital and vibrant downtown. This article reports on a study that analyses the level of adoption of downtown winter city urban designs in Duluth, Minnesota, and assesses the effectiveness of the designs in contributing to the downtown's economic health.

## *Downtown Winter City Design*

Two major design strategies have been used by cities as a means of sustaining core areas, improving the visual environment, and providing people with greater protection from severe winter conditions. Efforts at

improving the visual environment are designed to disrupt the visual monotony of a winter landscape by adding color. This may take the form of using warm colors in decorating such streetscape elements as banners, litter bins, planters, and newspaper vending machines. Other strategies include improved street lighting, constructing ice sculptures, and planting coniferous vegetation. The latter can also serve the function of a windscreen in protecting public urban places. Small lights on trees or outlining buildings help transform the night environment and add to the appeal of a downtown.

Urban designs that focus upon improving human comfort deal with developing buildings that do not exacerbate winter's most severe features by increasing wind speed in the downtown area and establishing climate-controlled environments. Generally, the taller the building the greater the wind effect at its base that translates into increased wind chills for pedestrians. Balconies can ameliorate this condition by diffusing descending winds and lowering their speed. In an effort to protect residents from severe winter conditions, some cities have construct-

ed extensive aboveground pedestrian walkway systems linking offices, shopping malls, parking garages, hotels, and entertainment complexes within their downtown areas; while others have established extensive underground pedestrian malls.

## *Duluth as a Winter City*

Duluth is located at the southwestern tip of Lake Superior. It has a continental climate; winters are long and cold with average monthly temperatures falling below freezing from November to March. Measurable snowfall occurs from October to the end of April and amounts to approximately 78 inches. The city's early wealth was based upon shipping grain, lumber, and iron ore. In 1918 a steel industry was established based upon locally available sources of iron ore; this in turn attracted other manufacturing industries. But in 1973 the steel plant was shut down with the loss of over 2,000 jobs. This plant closure and others resulted in the city's population declining by over 14,000 between 1960 and 1980. In response, the city council formed an Economic Development Committee. The Committee



proposed diversifying the city's economy by building upon its existing status as a tourist and service center. To that end, the city, with the assistance of federal, state, and private funding, embarked upon a downtown revitalization program, the cornerstones of which would be a new hotel and retail complex and a skywalk system.

### *Downtown Duluth's Winter City Design*

The core of downtown Duluth is the six-block area of Superior Street between 6th Avenue West and Lake Avenue. Efforts at enhancing the visual environment in this area consist primarily of seasonal banners hung from street lamps. The streetscape is largely devoid of color; street lamps and parking meters are black in order to conform to the historic storefronts along the street. Planters and telephone stations are constructed out of concrete, while individual newspaper vending machines are padlocked to parking meters in a haphazard pattern along the street. At nighttime, the street is well lit, buildings are outlined and some trees are decorated with small lights.

Winter city designs aimed at improving human comfort are readily apparent in the form the skywalk system and the Holiday Center, a hotel/retail complex. Holiday Center has all the hallmarks of winter city urban design - an enclosed two-story retail area linked to a hotel, parking garage, public transit network, and offices. The skywalk system initially covered a



Photo courtesy of Michael Broadway

Superior Street; Duluth, Minnesota.

seven-block area; by 1998 it had been expanded to cover more than twenty blocks.

A 1998 survey of the skywalk system and Holiday Center complex found that the retail area was largely empty except for a few locally owned restaurants, fast-food outlets, and a drug store. These businesses remain in operation due to the large downtown office workforce that supports other services such as dry cleaners, florists, and travel agents that are found along the skywalk system. The demise of downtown Duluth as

a major retail center is explained by the continued growth of population and retail activity in the suburbs and the redevelopment of the city's waterfront (Canal Park), which is located south of downtown. The waterfront's revitalization began in the late 1980s; a decade later the area contains art galleries, gift shops, restaurants, hotels, museums, an Omnimax theatre, and specialized apparel shops. Unlike downtown there is little evidence of any winter city design in the Canal Park area. Indeed the original plans for the area



proposed linking Canal Park to the downtown by extending the skywalk system, but fourteen years later this structure has yet to be built.

The revitalized waterfront has enhanced Duluth's status as a tourist destination, but it has reduced the level of retail activity in the downtown. The waterfront's economic success is in marked contrast to the conditions in the Holiday Center complex and attests to the drawing power of a well-designed waterfront. More significantly, from an urban design perspective Canal Park's current success appears to indicate that a vibrant downtown area can exist within a winter city without incorporating designs to improve human comfort.

### *Conclusions*

Downtown Duluth provides plenty of evidence of winter city design in the form of visual enhancements to the streetscape, a climate-controlled shopping center, and pedestrian walkway system. But despite their implementation, they have failed to revitalize or even sustain the downtown retail function. Other cities have recognized the limitations of traditional retailing as a means of attracting people downtown and have instead attempted to transform their core areas into entertainment and tourist centers. Duluth has followed a similar strategy, albeit on a smaller scale, with the restoration of its waterfront area. However, Canal Park lies outside the old downtown area and its transformation has been accomplished without the incorpora-

tion of any major winter city designs. This apparent success of a "summer" landscape in a winter city has been accomplished by providing businesses with a large customer base in the form of tourists. If the old downtown area is to be revived, it will require the presence of a residential population that will provide an additional demand for goods and services beyond that provided by the downtown

workforce. However, attracting residents to the area will require the cooperation of the city and surrounding suburban communities in constraining new development in the suburbs and developing a more sustainable urban form; but whether such a strategy is feasible in a region that continues to lose population and has communities competing against each to sustain their local tax base is doubtful. ❖

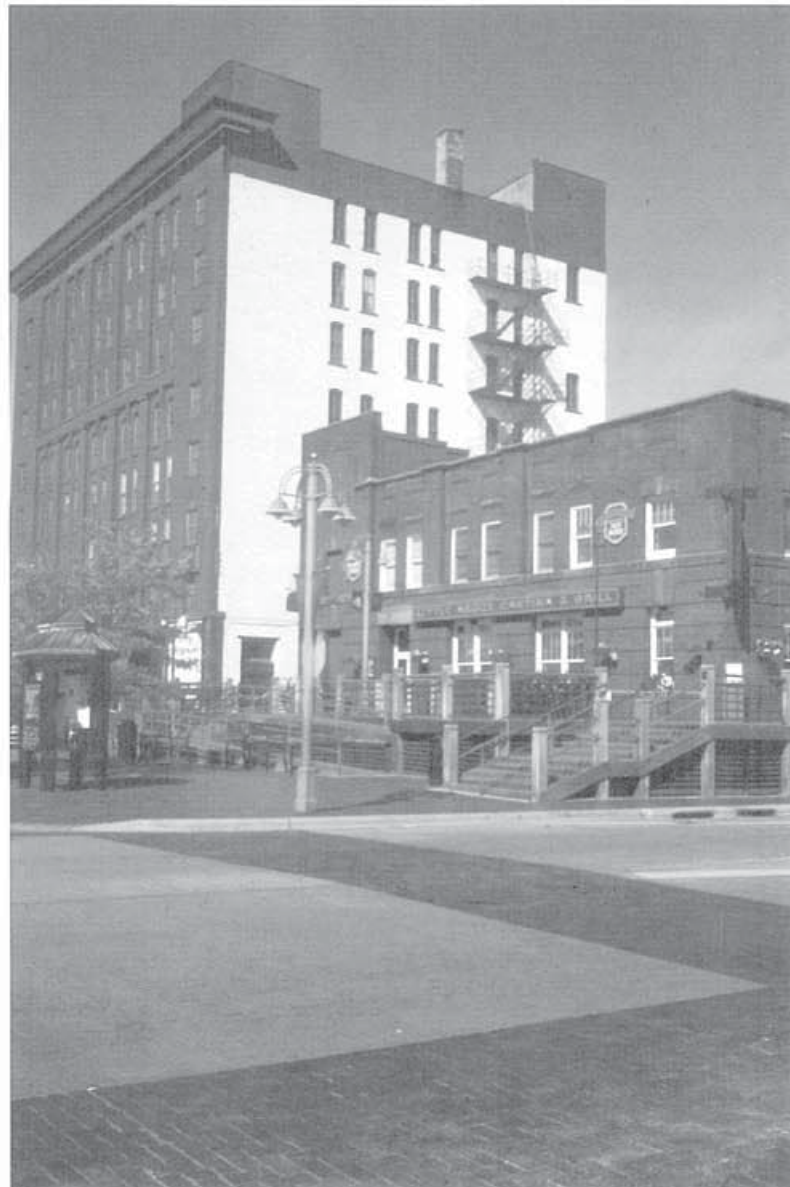


Photo courtesy of Michael Broadway

Duluth's Canal Park area.



# *Comfortable Multi-Seasonal Communities: Current Practices*

By DR. NORMAN PRESSMAN

**C**reating comfort has been, and must continue to remain, a way of life, especially in northern regions of the world, where daylight tends to be in short supply and the use of public urban space is dramatically reduced during the winter season. Professionals working in towns, villages and larger urban agglomerations must address many layers of comfort. These embrace, among others: indoor vs. outdoor comfort, public vs. private comfort, physical vs. psychological comfort. While "winter" comfort implies protection from the season's hostile elements (wind, ice, snow, rain, and prolonged cold temperatures), 'summer' comfort is suggestive of exposure to the positive aspects of outdoor living, with some occasional soft-protection from extremes of heat or sunlight.

The various dimensions to which comfort extends - particularly within the urban framework - include the dwelling and neighborhood environments, mobility, safety and security, and the urban aesthetic. Issues such as care for the elderly, economic volatility, the workplace, education, the environment, health, food supply, and public participation are all legitimate links in the chain of feeling 'comfortable' as it

applies to the basic institutions of society. Even symbolism has a powerful role to play where the public realm is involved.

Every comfortable or livable city has its unique character, often expressed in its architecture and organization of streets, avenues, squares, and open spaces. Since cities are essentially organic entities, it seems appropriate to suggest the metaphor that comfortable cities - like most living things - possess a genetic code (or DNA structure). Northern cities, given their special locations and harsh climatic conditions, should have quite unique genetic codes that are visible, palpable, and expressive of the forces to which they must respond. This DNA seeks expression in the architecture of public (for symbolic purposes) and private buildings, and in the characteristics that reflect the cities' identities - such as scale, materials, color, urban form, detailing, and the events that occur in their public and semi-public spaces. Such elements impact urban identity and help the inhabitants to intuitively recognize appropriate types of development and design.

Powerful forms in building and space create a communal memory. These, in turn, impact upon community identity and well-being. When personal and shared levels of comfort exist

and can be sensed, strong civic loyalty and pride are engendered and residents feel a degree of empowerment, particularly when they are seriously involved in decision-making processes. If residents and visitors alike can understand the genetic code, the importance of the common good is validated, giving rise to greater possibilities for the physical framework to support a healthy evolving citizenry. Through a strong identity, urban meaning gradually emerges from a realistic and symbolic perspective.

What can winter communities do if they wish to make their environment more attractive and comfortable during the entire year? Clearly, a holistic perspective is necessary encompassing the entire field of settlement patterns including the social, political, cultural, and economic structures at regional, urban, neighborhood, and site levels of intervention. A "winter cities" approach, first and foremost, must acknowledge winter as a basic fact of life - and northern lifestyles, in general - and vigorously promote innovative ways of dealing with the elements that comprise "nordicity." It attempts to generate new attitudes toward northern living, planning, and design and to discourage idealized imagery from



warmer places in the development of plans and projects since these create a dream-like disconnection from the realities of northern existence. Some recent examples undertaken and currently being implemented can provide evidence of the desire to create genuine solutions that promote multi-seasonal life.

Prince George's Winter City Committee has recently produced a booklet, "Climate Sensitive Design for the City of Prince George B.C." The document, handsomely illustrated, includes sections on general planning principles, site design, building design, construction considerations, landscaping, and aesthetics (plants, trees, color, lighting, urban furniture, etc.) for its climatic zone characteristics. These guidelines provide developers, architects, engineers, planners, and others an easy-to-understand resource of information involved in determining the type of development deemed desirable and ways to achieve it. Some objectives deal with how to deal with snow clearance and accumulation, minimize wind chill, maximize solar access, and manage snow storage. It also addresses streetscape elements such as corner-bulbing, mid-block connectors, street lighting, tree guards, grates, and sidewalk details. It is an excellent "early attempt" at acknowledging northern solutions and design approaches.

During 1997/1998, the Planning Department of what was still (prior to the Toronto amalgamation and reorganization) North York, engaged consultants in Guelph, Ontario, to prepare a study dealing with

Sun/Shade Guidelines and Principles. The objective was to evolve criteria for the provision of appropriate levels of sunlight amenity within areas experiencing intensive development and assure stable communities that existing sunlight would not be adversely affected - especially on yards, parks, and public space due to high-rise development. Different building configurations were tested using computer models to tabulate the duration of sun exposure and observe which areas around a building were sunlit. Examples of built form modification that reduced shadow impacts were provided to illustrate how a building's shape can be modified to enhance access to direct sunlight in surrounding areas. The recommendations suggested that builders and developers be required to submit drawings showing a development's impacts (sun and shadow) for various times of the day and year on adjacent space. The criteria were especially pertinent for space used by pedestrians - namely parks, boulevards, and residences. Although the recommendations were never fully approved (due to the amalgamation and reorganization of the Toronto Metro area), they were nevertheless tested for workability within North York to ascertain whether or not they would prove to be a significant impediment to future development. These "draft" guidelines - currently without official status - constitute an important planning document that could be easily applied to proposed plans.

An exemplary instrument relevant to northern urban design is

Chapter 12 of the City of Ottawa Official Plan. Developed in the mid-1990s, the highly detailed section dealing with virtually every aspect of urban design singled out a unique sub-section (12.9) on "Microclimatic Conditions." This dealt with the combined effects of various climatic factors, such as wind, sun exposure, precipitation (and shelter therefrom), and air temperature through the composition of landscaping and built form. It is profusely illustrated and provides a comprehensive set of policies for the necessary urban design plans and studies at the city, district, neighborhood, block, and individual site levels.

In a similar vein, since the late 1980s the Regional Municipality of Sudbury, Ontario, in its Amendment 26 to its Official Plan (pertaining to its secondary plan), adopted a Winter Livability Policy fostering creative approaches to improving thermal comfort and aesthetic sensibility particularly during the winter season. Among its various objectives are those that devote a significant proportion of the recreation budget toward winter activities (unlike most municipalities that devote much of their budgets to summer events). An innovative feature of the policy encourages the use of an increased range of colors in the built environment, particularly warm colors, earth colors, and pastels (this is a very common practice throughout most of Scandinavia). Sudbury's secondary plan amendment is arguably the best policy for creating winter livability in medium-sized communities in Canada.



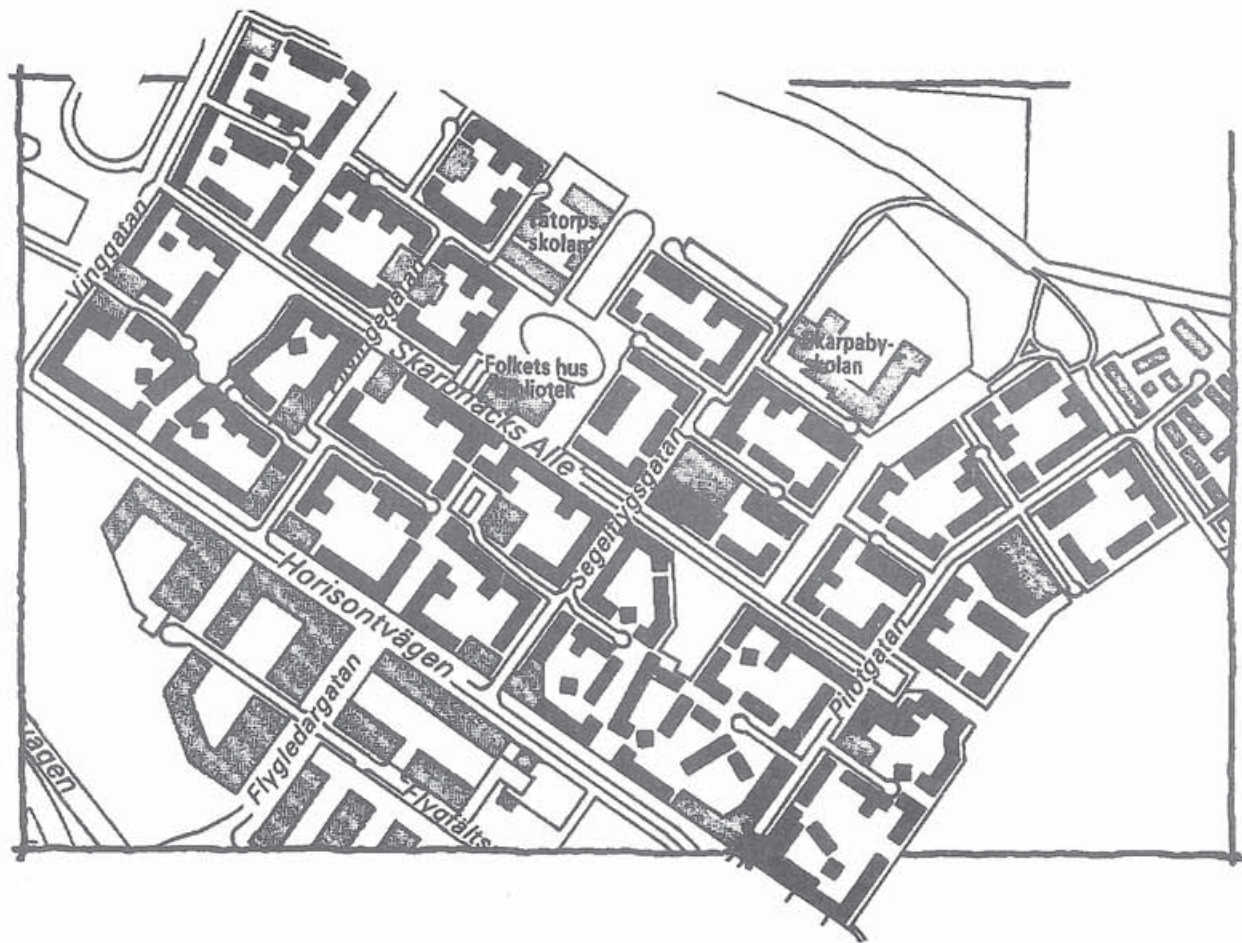
Many large Canadian cities have discretionary review powers to insist on wind and sunlight access studies with respect to site planning and impacts on buildings adjacent to intensively used pedestrian areas. But despite the presence of structures designed to protect urban dwellers from climatically induced discomforts (e.g. skywalks, +15, arcades, underground concourses), few, if any, official policies or plans, zoning by-laws, or rigorous design guidelines have been adopted by municipalities or regional governments. These are the tools and instruments that have the ultimate power to fashion comfortable environments that embrace multi-seasonal livability.

Scandinavian cities, such as Oslo, Stockholm and Copenhagen keep climate in mind even if their winters are less severe than Canadian cities. With ecological goals and sustainable development in mind, these cities have recently completed rapid-rail connections from their international airports to their city centers, unlike their respective counterparts of Vancouver, Toronto, and Montreal, whose populations are roughly double the size. Copenhagen, located in a windy region with low sun angles, handles these conditions well. Relatively low building heights (with active policy that discourages high-rise buildings) provide good solar access to streets and public squares while minimizing turbulence at the base of buildings and plazas with intensive pedestrian activity. Stockholm, whose city center was redeveloped in the 1950s and 1960s

(Hotorget) with numerous high-rise office blocks and wider streets for traffic, is windier and less sunny (as a result of shadows cast by the office blocks) than other areas of the town. Consequently, fewer tall buildings have been constructed in recent years. Smaller communities in Sweden are actively combating air pollution and working toward a healthier modal split, emphasizing transit, walking, and cycling. Kiruna, north of the Arctic Circle, has just redesigned its circulation system. Given the fact that the topography is rather hilly, a reorganized pattern of one-way streets with stop signs and traffic lights placed at locations pointed "downhill" has reduced air pollution levels by up to 30 percent while making it easier for cars and buses to get started again. Many cities are also requiring that engines be "shut off" at traffic lights to further improve air quality. Careful testing and analysis have demonstrated that air quality improves when engines are shut off and then restarted rather than having them idle. These regulations are particularly enforced in the Alemannic regions of Switzerland and are becoming more commonplace all over northern Europe. Unlike their North American counterparts, Scandinavians (from surveys) tend to favor environmental improvements such as fewer cars and trucks, cleaner air, more trees and vegetation in the city, better quality buildings, more pedestrian areas, and more attractive paving over extensions to shopping and entertainment facilities. For many Scandinavians, basic comforts, sustainability, and quality of life come first.

Enlivening housing estates built in the 1960s and 1970s with vibrant colors applied to facades is becoming a common practice in Scandinavian communities. New techniques of visual analysis have been developed to understand the consequences of introducing new color systems. A fundamental principle is using colors to create more expressive townscapes with clearer identities. Color scheme planning in difficult-to-identify urban locations is now being applied in the Municipality of Malmö, Sweden. Simulation studies are carried out to determine which colors are perceived to be suitable for different kinds of building groups emphasizing the relationship between the colored buildings and their surroundings as well as the type of building. With this practice, older housing estates that have a drab feeling can be "refreshed" while injecting bright and interesting elements that work well in every season. In fact, a color master plan was implemented for the entire Norwegian town of Longyearbyen (Svalbard). At 78 degrees North, snow remains on the ground for much of the year in a harsh landscape. So, in 1981, a plan for the coloration of all the buildings was commissioned with the objective of enriching the environment, identifying individual buildings of significance as well as districts of the town, and expressing the profound importance of aesthetic values through color identity. The color scheme's goals were to balance chaos against monotony, to arrive at a sufficiently stimulating but not over complex color environment and to create meaningful visual experiences.





Plan of Skarpnäck (satellite community), Greater Stockholm Region. Source: Building Stockholm, Swedish Council for Building Research, Stockholm, 1986, p.63. (Architects: Leif Blomquist and Eva Henström/Stockholm City Planning Office).

In terms of large, planned housing developments, city blocks arranged around inner courtyards are common design features. A four-five-story block is ideal for the purposes of improving the microclimate in Scandinavian conditions. The block's "cold" sides, facing north and east, are accordingly closed (defining the courtyard space) while the southwestern side is either opened or partially enclosed with lower buildings to allow for solar penetration. Swedish building regulations contain stipulations on lighting angles and distances as well as window sizes to prevent totally unacceptable conditions regarding thermal comfort. They

require each dwelling to have an outdoor area or terrace that must face a "warm" direction. Since the 1950s, the Swedish building Code has required that at least half of the windows of residential dwellings face south, with a recommended "solar value" of five hours of sunshine to enter the courtyard between 9 a.m. and 5 p.m. on a clear day at fall and spring equinox, with an equal number of hours for the kitchen and living rooms. Solar access and wind mitigation are two unwavering principles applied almost everywhere. Reykjavik, Iceland, is in the midst of formulating studies and policies to mitigate the negative effects of wind from the

exposed inner city harbor on major pedestrian spaces, transit areas/nodes, and meeting places.

In northern Norway, subdivisions are laid out with special consideration given to wind speed and direction. Snow drifting and deposit studies are commonplace and snow fences are frequently used to deflect snow away from roads and residential driveways and main entrances to buildings. Places to leave or check skis are found everywhere in city centers; buses carry skis (so people can ski home from work, if they desire); cross-country ski trails are an integral part of almost every community's urban fabric, and snow sculpting is a subject in most "art education" classes in schools. The



destructive forces of wind are softened by using vegetation and protective walls with meticulous attention paid to orientation, built volumes, and roof types of buildings resulting in more aerodynamic shapes that redirect wind achieving better conditions. Finally climatic criteria are becoming part and parcel of design competitions – providing higher priority for creating climatically responsive built form within the complex range of factors that must be considered in the planning process.

The underlying message that Nordic design emits suggests that every aspect of design and planning embody, evoke, and transmit meaning in the attempt to relate function to form, form to function, and both of these to deeper human needs. We should not perceive the built environment as a collection of individual objects (which tends to be the case in most contemporary development) no matter how well designed they may be. The world around us should be conceived in a seamless manner in which interior design exists in relation to buildings, buildings in relation to cities, cities in relation to landscape, and all of these combining the highest regard for humankind with the “voice” and personality of the site orchestrating a sense of place. Of particular note, when speaking of Nordic countries (Iceland, Denmark, Sweden, Norway, and Finland) is the exceptional quality-of-design that can be witnessed in their public buildings. Almost every public building is commissioned on the basis of meticulously organized open competition. When one adds the

design flare and skills of professionals in this part of the world to a competition format, it is no wonder that the public realm overflows with quality.

Good design is a way of life and an integral part of Nordic culture. If the built world has any significant influence in shaping a more compassionate society – and, to a great extent, there is agreement on this hypothesis – and if design excellence plays a seminal role, then Nordic experience is one that is essential to understand. Scandinavians know instinctively that northern living is related to seasonal variation. They possess a deeply rooted attachment to nature in all its manifest forms and their high degree of social caring and sensitivity appears virtually unmatched. There is much to learn from “looking east” instead of “looking south” as much of Canada has done, especially when seeking planning and design inspiration. We can create climate-sensitive environments at all scales for dwelling, work, and recreation. However, if this is our goal, we shall have to try harder than we have been willing to do, based on past performance.

The need to generate a climate-sensitive northern urban form is more crucial than ever. The range of existing winter-induced discomforts must be acknowledged both in city planning theory and practice, so that the negative aspects of winter can be reduced, while its positive characteristics are enhanced and celebrated. Unfortunately, globalization and standardization in building construction and urban design have speeded up the pro-

liferation of anti-climatic built form – one that tends to eliminate climate (by building big-box warehousing, entertainment centers, shopping malls, and plazas that interiorize large-scale activities year-round, thus depleting life from streets and public space) and spawn, what has been termed by critics, a sterile (and sometimes unsafe) environment. Although frequently accommodating functional requirements, cities are often bereft of meaning and alienated from their geographic and cultural settings. Using a climate-sensitive “winter-cities” approach in development policy can extend the outdoor season (especially in early spring and late autumn when life outdoors seems to disappear) by improving micro-climatic conditions, helping to create a dynamic city form expressive of the landscape and embodying a sense of place. This is an essential ingredient if the northern city is to be characterized by its singularity and memorability; by its ability to be sustainable and ecologically sound; and by its desire to resonate with civility and full cultural richness. The elements of “nordicity” should be palpable in every season. ❄

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# Millenium Thoughts for Northerners

By MICHAEL BARTON

**A**lthough newspapers and the airwaves have been full of information concerning the imminent arrival of the new millennium, there is a great deal of confusion as to when it actually begins.

Some observers quite correctly point out that the beginning of the next century (and also in this case, the next millennium) will not begin until January 1, 2001. This is based on the simple observation that if we are counting batches of 100, we don't have one batch until we have 100 units, and so on. Clearly, this was the case at the end of the nineteenth century, as people celebrated the beginning of the twentieth century at the end of the year 1900!

So why have we got it wrong? I think it is because of computers and their all-encompassing incursion into our world. Our world has become digital!

The next thing to note is that just 30 percent of the world's population is Christian. In the Muslim calendar, the year is 1420 and 5760 in the Jewish one.

Then there is the whole business of the change to the Gregorian calendar from the Julian model. This didn't change until around 1712, and until this date, the New Year started at, or

just after, the Spring Equinox.

As if all of this was not complicated enough, according to many cultural anthropologists, it appears now that Jesus Christ was born in May of the year 5 B.C.

So when I started to look into all of this, I began to feel much better about not being aboard the *Concorde* for the millennium flight around the world or on Chatham Island to see the first "new millennium sunrise." As far as I can determine, we are either already well into the new millennium, or will be during the next year or so!

When I am out in the hereabouts, walking, running, or skiing on one of the many trails around Whitehorse, it really doesn't seem to matter whether it is the beginning or the end of anything. It looks remarkably similar to how it looked at this time last year. It is a bit warmer on average this year, whereas it was a bit cooler last year. There is not a hint of the Y2K bug in the landscape, or any other kind of bug for that matter. Things are so very simple as soon as one is away from all the things that have been invented to "simplify" our lives! (The ultimate paradox.)

So things continue to continue. I mentioned in another letter, that we always have traditional Christmases here, in the environ-

mental sense. The smoke curling out of a wooden Yukon home's chimney stack against the winter hues is like an old fashioned Christmas card. All you need to complete the picture is a stagecoach and someone alighting with a parcel.

Yes, we do notice the changing seasons here in the north, perhaps more than southerners do. The equinoxes and the solstices are noted and observed, and the subtle nuances of change in between. In this respect, we are more in tune with the ancients and we can see, quite clearly, the cyclical nature of our lives. It is also easy to see that there is a certain connectedness with all people that live above a certain latitude, or otherwise experience and live through real winter seasons. This identifiable set of conditions has been acknowledged and documented by the Winter Cities Association, and if anyone out there is interested enough in this, WCA can tell them what this criteria is. At 49 degrees of latitude, Victoria, B.C., is not a winter city; but Minneapolis, USA, at 43 degrees of latitude, is a winter city.

I will close this by saying, that whatever persuasion you happen to be, have a good season and a great start to the new era! ❄

Michael L. Barton, Vice President,  
WCA North America.