

The Land Economist

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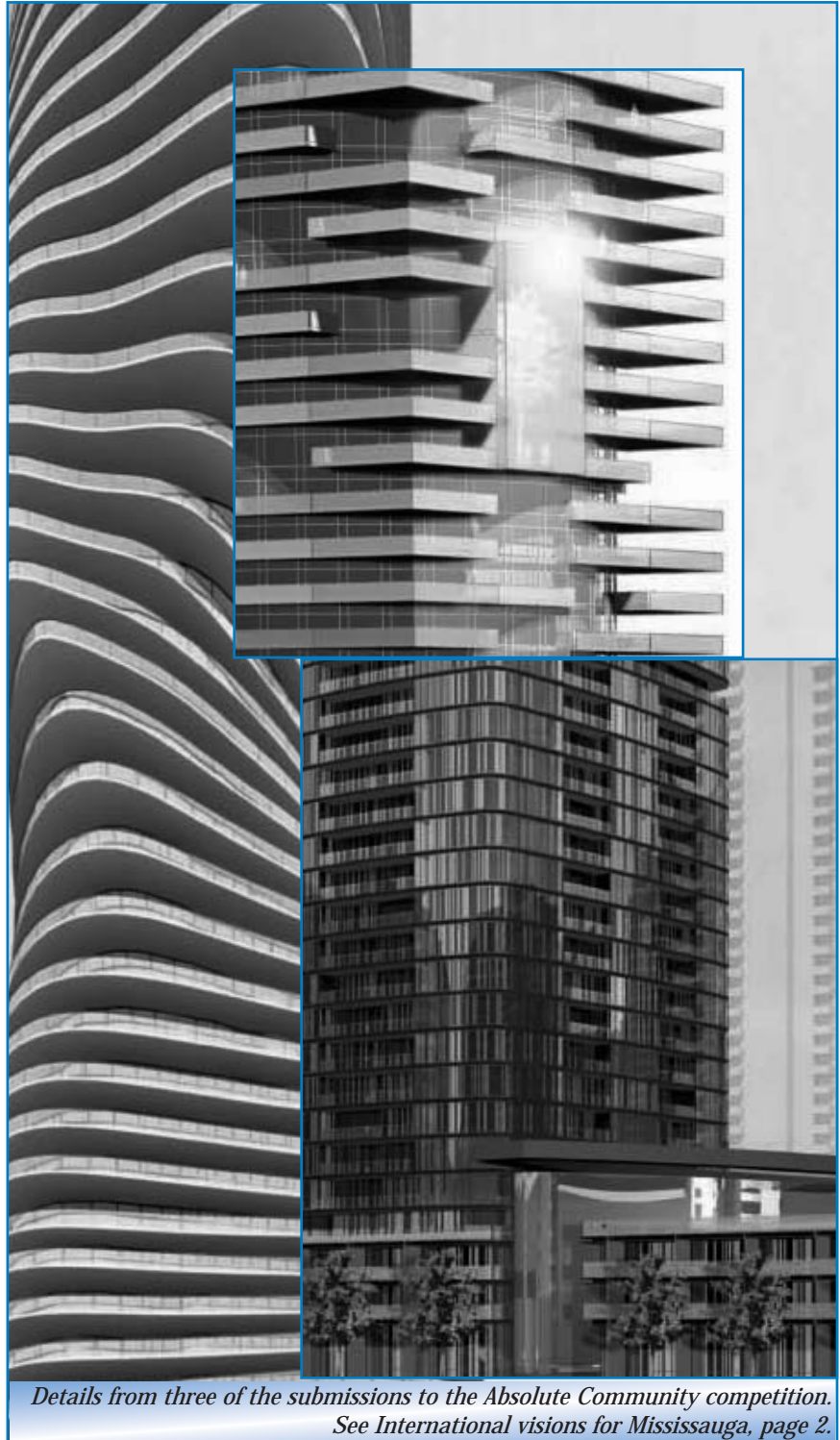
1235 Bay Street, Suite 400
Toronto, Ontario M5R 3K4

Tel: (416) 934-5166

Fax: (416) 969-8916

Website: www.aole.org

Journal editor: rmoyes@idirect.ca



*Details from three of the submissions to the Absolute Community competition.
See International visions for Mississauga, page 2.*

RENDERINGS COURTESY CITYZEN/FERNBROOK

A Swedish twist on architecture

This distinctive commercial/residential building became an icon for the Swedish city of Malmo long before its completion this year.

Born of one housing executive's fascination with a sculpture by Spanish architect Santiago Calatrava, the Turning Torso building has put Malmo onto the architectural map.

Swedish housing association HSB hired Calatrava to translate his sculpture into built form. The resulting 54-storey building features nine five-storey cubes, each one offset 10 degrees from the one below. Overall, the building twists 90 degrees around its central elevator/service core. Fabrication requirements were unusual, and exacting.

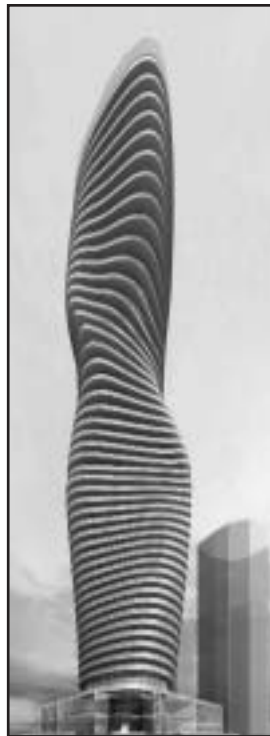
The building towers over its redeveloping industrial neighbourhood at the new bridge link to Copenhagen. Its impact spreads much further.



PHOTO: VASK, WIKIPEDIA



Quadrangle Architects Limited, Canada



MAD office, United States



Zeidler Partnership Architects, Canada

RENDERINGS COURTESY CITYZEN/FERNBROOK

International visions for Mississauga

One of this winter's fun sports was what might be called the 'Mississauga Visioning Competitions'.

We have the folks at Cityzen Development Group and Fernbrook Homes to thank for this one. By holding an open international architectural competition for the fourth tower at their Absolute Community near Square One, they gave people a chance to imagine a different kind of city.

In the months since the 92 contest entries from around the world were revealed, it has been fun trying to gauge their chances – and their possible effect on the site and the city.

There were suggestions from nearly every continent. They ranged from post-industrial offset block constructions to embracing organic forms.

Six finalists were chosen to draw up more complete schemes: Nicholas Boyarsky, Boyarsky Murphy Architects, United

Kingdom; Michel Rojkind, rojkind arquitectos, Mexico; Roland Rom Colthoff, Quadrangle Architects Limited, Canada; Sebastian Messer, Studio MWM, United Kingdom; Yansong Ma, MAD office, USA; and Tarek El-Khatib, Zeidler Partnership Architects, Canada. Winner will be announced at the end of March.

Many of the entries were on display – first at Mississauga's City Hall and then in the Absolute Community sales office. See www.yourabsolute.com: finalists, runners-up and entries.

The competition was welcomed by architectural commentators. "If the developers maintain their nerve and choose a daring scheme from the six finalists," said Ian Chodikoff, editor, in the Feb 2006 Canadian Architect magazine, "Mississauga ... will prove to Canadians that the suburbs can no longer be avoided by critics, theorists and practice – the suburbs are a harbinger for an emerging Canadian urbanity."

Are GGH projections too high?

By Will Dunning

Forecasts of population growth are important inputs into growth plans that are being developed throughout Ontario. Developing the projections involves some science and some art. At the end of the process there is a lot of uncertainty about all of the components of the projections, including migration (movements of people into and out of the study area), birth rates, and death rates.

Population projections cover very long time periods (typically 30 years), but even in the short term there is a lot of uncertainty and volatility. The chart to the right illustrates the point. It looks at population growth in the Greater Golden Horseshoe (16 regions and counties in south-central Ontario) as a percentage of population growth in Canada as a whole. During the past 19 years there has been a cycle, with the GGH growth share ranging from a low of 24.3 per cent in 1991 to a high of 53.8 per cent in 2001. Since that peak in 2001 the share of growth has fallen quite quickly, to 42.2 per cent in 2005. The average share over the 19 years is 40.9 per cent.

Projections currently in play for the GGH take data from the 2001 Census as a base – the peak year in the growth cycle. Those projections indicate that for a 30-year period the GGH growth share will remain close to the peak level seen in 2001. A key issue is - when we are projecting at the peak of a growth cycle, should we assume that the peak conditions will continue or should we try to adjust for economic conditions?

In a recent report for the Neptis Foundation (*Economic Influences on Population Growth and Housing Demand in the Greater Golden Horseshoe*), I explored the relationship between migration and economic conditions. It is clear that there is a strong relationship: when the economy is strong (and employment oppor-

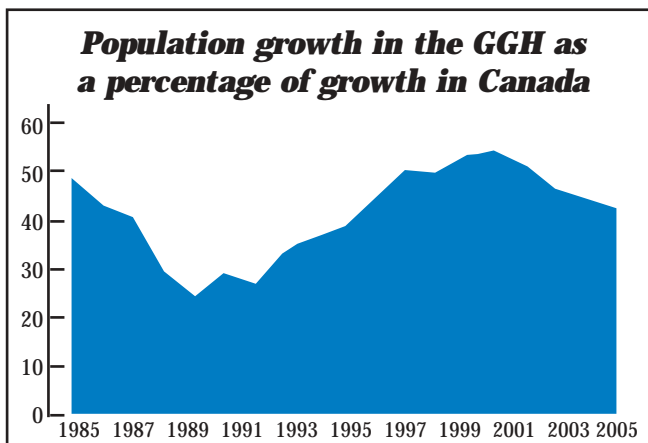
tunities are ample), migration to the GGH increases; on the other hand, high house prices discourage migration.

The report developed projections that assume 'normal' economic conditions over a 30-year period: an employment rate close to the average of the last economic cycle. I assumed that house prices (in inflation-adjusted dollars) would be below current high levels, but higher than the long-term average.

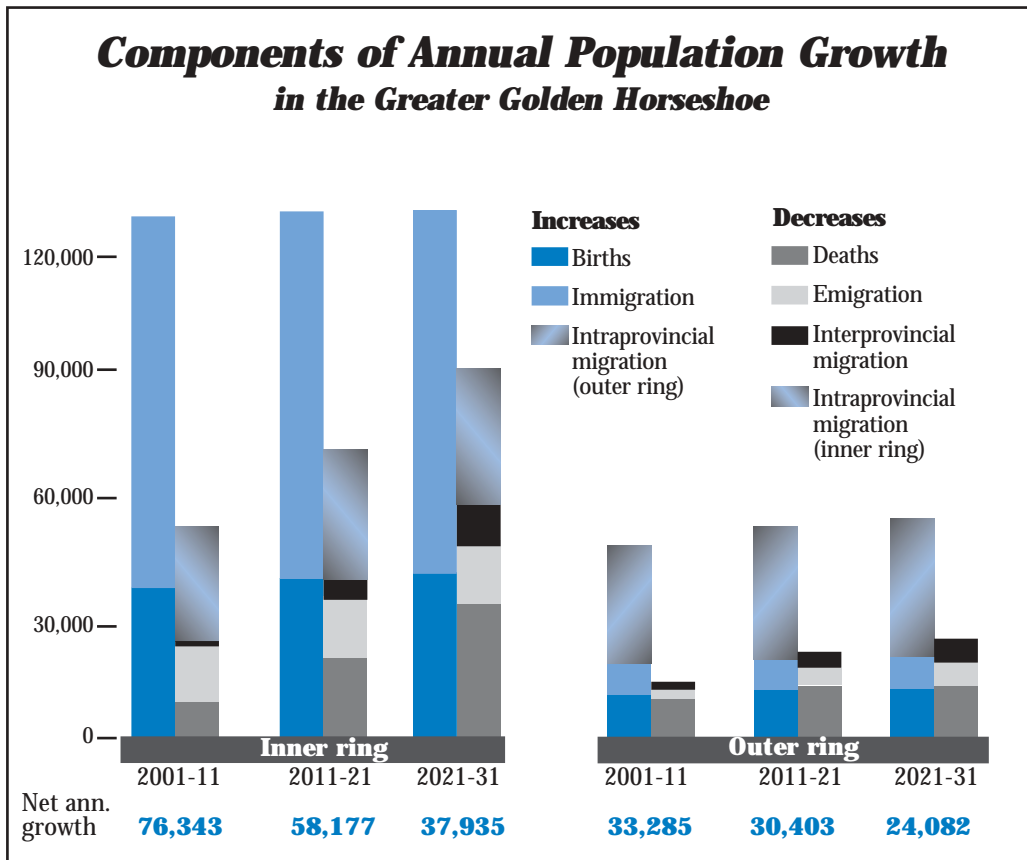
In these scenarios, population growth in the GGH would be a lot lower than most other projections indicate — by as much as 30 per cent. The implication is that growth pressures could be a lot less than expected.

Are my projections the final word? I don't pretend that they are, but they raise an important issue that should be given a lot more consideration.

Will Dunning is an economic consultant who specializes in housing market analysis. See www.wdunning.com.



SOURCE: STATISTICS CANADA, CALCULATIONS BY WILL DUNNING INC.



The report projects significantly lower net migration to the Inner Ring of the GGH (from Hamilton to Durham regions) than other forecasters, because of lower employment prospects and retirees moving away. As a result, the anticipated increase in mortality has more impact.

PROJECTIONS BY WILL DUNNING INC., GRAPHED BY R. MOYES/H. WARE

If it works — build more

By Bonnie Bowerman and Gary Poyntz

Ten years ago Guelph Hydro Electric Systems (GHES) built its new 67,000 square foot headquarters using an exciting new heating and cooling system – geothermal energy. It was so successful that the utility has just completed a 36,425 square foot building addition using the same technology.

Gas bill gone

Leslie Thomas, manager of energy services at the GHES division Selectpower Inc. which designed and installed the system, says it “completely eliminates the natural gas bill. That will save about \$50,000 annually. The building will be comfortable and use about 500,000 kilowatt hours less energy each year than a building with a traditional natural gas heating and electric air conditioning system.”

Geothermal energy (also called earth energy or ground-source energy) refers to heat naturally stored in the earth.

By circulating an antifreeze solution (completely nontoxic drinkable grade alcohol) inside closed horizontal and vertical underground loops, the system takes advantage of the earth’s constant temperature.

In the winter, it absorbs heat from the earth and carries it to the geothermal unit. Here the heat is absorbed by the compressor refrigerate carried to an air coil where the return air is heated and carried throughout the building via the indoor duct system.

In the summer, the system reverses and expels heat from the building into the cooler earth via the loop system. At the same time, using very little electricity, it dehumidifies, offers free domestic hot water, and is 100 per cent quiet, unlike many noisy air conditioning systems. There is no peak energy demand, The heat island effect is also reduced since waste heat is returned to the ground, not the outside air.

Five-year payback

The initial cost of the new geothermal system is higher than traditional systems, but it is estimated that the energy savings will pay back the higher cost in just five years in the GHES project. Annual operating costs will also be substantially lower than those of a traditional system, and GHES won’t have to worry about future natural gas rates. Electricity consumption is also lower than that of a traditional system, which contributes to the provincial government’s mandate to alleviate the province’s electricity supply constraint.

Thomas says phase 1 was built with ‘geothermal vision’, allowing for easy tie-in of a phase 2 geothermal vertical and horizontal closed loop system in the future.

There have been important changes in technology since the original system was installed, which offer greater efficiencies. The phase 2 system uses environmentally friendly R410A refrigeration and hydronic

heating, ultra high efficiency equipment, multi speed DC fan motors, self diagnostics with microprocessor based controls, dual capacity geothermal heat pumps, variable speed circulatory pumps, unitary flow control to minimize pumping, and increased air filtration and air quality with electrostatic air cleaners.

There are several types of loop configurations utilized by this type of technology. They can be vertical, horizontal or submerged in a nearby pond or lake — as the Enwave project utilized Lake Ontario for its downtown Toronto deep water cooling loop. Selectpower’s geothermal system for GHES uses a combination of vertical and horizontal loops on the site.

Reduced emissions

“Using geothermal energy instead of natural gas heating and elec-



PHOTOS COURTESY SELECTPOWER INC.

A geothermal system provides 100 per cent of the heating and cooling at Guelph Hydro Electric Systems Inc.’s newly expanded headquarters on Southgate Drive. Phase 2 of the system uses new, more efficient technology and controls.

ore!



Workers install loop beds for GHES' phase 2 expansion. Geothermal systems absorb or expel heat in these loop beds.

trical air conditioning reduces the greenhouse gas emissions that would be produced by the building by over 168 tonnes of carbon dioxide per year" adds Thomas. "So, the ecological impact or 'footprint' of the building is also reduced."

In fact, the GHES is seeking LEED certification for the expansion through the Canadian Green Building Council.

Today's high energy costs make geothermal very economic for long term property holders who are concerned about capping their operating costs over the average life span of these systems which runs in excess of 25 years.

"Geothermal offers 50 to 60 per cent cost savings (heating, cooling and hot water) over conventional natural gas systems," Thomas concludes. "Installing one of these systems allows you to convert your building operating costs into a renewable, geothermal energy investment."

These systems can be used to heat and cool almost any building structure - office buildings, retirement homes, townhouse complexes, single family homes, apartment complexes, horse barns, industrial buildings and shopping centres. Wal-Mart has several locations in the U.S. which have geothermal systems that not only heat and cool the building but provide the cooling required for large banks of refrigerators. The loops are buried under their parking lots.

Selectpower is an affiliate of GHES offering Energy-Smart Solutions including: energy advice and assessments, draft proofing and insulation, Energy-STAR rated heating and air conditioning, windows and doors, wind, solar and geothermal solutions, water heaters and softeners, water saving toilets and fixtures, energy-saving lighting and more.

Bonnie Bowerman and Gary Poyntz are Directors of Loops Unlimited, the company responsible for the loop portion of Selectpower Inc.'s system at GHES. Bonnie is also President of AOLE.

Follow the TiO₂ brick road

As a stretch of road in central London (England) is fitted out with new pavers, it is becoming an unexpected soldier in the battle against pollution.

Those typical-looking grey pavers on Southampton Row have a special titanium dioxide coating. Working with sunlight and water, it neutralizes some of the key elements of car exhaust fumes - nitrogen oxides (NOx). The concrete itself is an important part of the process: locking the pollutant in a new inert element - calcium nitrate.

Titanium dioxide uses similar photocatalytic processes to break down other organic compounds - meaning they do a form of 'self cleaning'.

And the process isn't limited to roads. It can also be used for architectural and decorative concrete, coatings, plasters and paints.

Fights pollution

Imagine a world where the buildings themselves, the roads, plazas, transit stations and even garbage containers, all help to neutralize car pollution - and clean themselves into the bargain.

Concretes and paving incorporating this process are already used in Japan. Mitsubishi Materials Group has been a leader.

In Europe the products are coming into full market development. Italcementi Group of Italy has just announced industrial scale production of photocatalytic products using what it calls the TX Active principle. The company's road tests in Milan showed NOx reductions of 60 per cent.

This is a good thing, because member states of the European Union have set themselves ambitious reduction targets for NOx levels by 2010. They could be hard for urban/ industrialized areas to meet.

The products are just being introduced in North America. See www.essroc.com > innovation.

Meanwhile, the local Council expects to test the stretch of Southampton Row through a full year. "If the scheme is successful we'll install the paving stones in other areas," said Councillor John Thane. Search 'titanium' at www.camden.gov.uk.

New EE standards?

Ontario is considering Building Code changes aimed at increasing energy efficiency (EE). Options were circulated for public comment Feb. 24 to Mar. 27. Key proposals are:

Mandatory EE labeling for houses

Five levels: 1 – meets code; 2 – code plus high efficiency furnace *or* 'near full-height' basement insulation; 3 – code plus both of above; 4 – level 3 plus higher envelope standards; 5 – level 4 plus HRV and 30 per cent more efficient than code. Code appendix would recognize existing voluntary labeling programs.

Increased EE requirements: houses

There are four proposals which all include increased glazing requirements, plus increases in insulation ranging from negligible to 'aggressive' – a term questioned by energy advocates.

Increased EE requirements: commercial and large residential

Option 1 would retain ASHRAE 90.1 1989, but upgrade lighting and equipment standards to the 2004 version, and codify current supplementary guidelines for building envelope. Highest case would remove ASHRAE 90.1 1989.

Other changes would recognize some 'green' technologies: solar, wind, etc. If adopted, the changes will take effect at the end of the year.

Welcome New Members

Jeffrey Wood PLE

The Corporate Research Group
Ottawa
613-596-2910 Ext 331
jeffw@thecrg.com

Peter Thoma MCIP, RPP, PLE

UrbanMetrics Inc.
Toronto
416.351.8585 Ext 226
pthoma@urbanMetrics.ca

Charles Mady PLE

Mady Development Corp
Toronto
416 920 0907 Ext 125
cnm@madycorp.com



PHOTO BY HERB WARE

Property rights pose threats

by Dianne Saxe D. Jur.

The new Conservative government has promised to add property rights to the Canadian Charter of Rights and Freedoms. While property rights are mentioned in Canada's little-used Bill of Rights, US experience suggests that adding them to the Charter could imperil environmental and zoning laws.

The Fifth Amendment to the US Constitution states that "private property shall not be taken without just compensation". This has been a major obstacle to environmental regulation. While there is an acrimonious dispute about when environmental restrictions on land-use constitute "takings", even the risk of having to pay huge sums in compensation can discourage governments from regulating.

The US Supreme Court, which includes two newly appointed conservative judges, is about to consider this issue.

Wetlands

In two landmark cases (*Rapanos v. U.S.*, and *Carabell v. US Army Corps of Engineers*), developers were denied federal Clean Water Act permits to fill in wetlands on their property. *Rapanos* is defended by the Pacific Legal Foundation, a property rights advocacy group.

The Act prohibits the discharge of pollutants into "navigable waters" without a permit. Because of the way all waters are connected in the hydrological cycle, federal regulators (supported by

environmentalists) define 'navigable waters' to include tributaries and wetlands that drain into lakes and rivers, whether or not you can actually travel there in a boat.

Compensation

Property rights advocates say owners should be compensated whenever they are deprived of their "reasonable expectation of profit" by government regulations, and this argument is greatly strengthened by its constitutional underpinning. They also argue that statutes, such as the Clean Water Act, should be interpreted so as to infringe as little as possible on private property rights. In particular, they argue that the Act should not apply to tributaries and wetlands: more than half of the area now protected by federal pollution controls. Environmentalists fear that many of these wetlands and waterways would quickly be lost, although some states might step in to fill the gap (if they don't have to pay compensation).

Current Canadian proposals that could be blocked by constitutionally protected property rights include wellhead protection zones in the proposed Ontario Clean Water Act, and new Conservation Authority regulations requiring permits for some farm activities within 120 metres of a wetland.

Dianne Saxe, team leader at the Saxe Law Office, is a respected environmental law specialist and author of Ontario's standard environmental law reference.

Inside info on commercial markets

The commercial market in the Greater Toronto Area has changed dramatically in the last 25 years, says Iain Dobson, co-founder of Real Estate Search Corporation (RESC). And that is posing some difficult questions for both inner and edge cities.



Boom mentality

During the 1980s' boom, developers added about 40 million square feet of commercial space in the Greater Toronto Area without even worrying about who was going to lease it, Dobson told OLE members at their February gathering.

"Tenants were viewed as a commodity – you build it and they will come." That wasn't just in downtown Toronto, he added. "In Scarborough, 325 Milner was put up on a bet."

Changes in industry

The first major shift came with the 1990s market crash. The terrorist attacks of 9/11 also affected the characteristics of today's real estate industry, he said.

"No-one's taking any risk. Investors want much more security than in the past, and the banks are totally gone – some are even out of their own buildings. And tenants are far more in control of this market than they've ever been in my history. No-one is going to build a building unless they sign on."

Impact on Inner Cities

Commercial growth in the GTA since 2000 has been very different. "There has been virtually no new construction in the traditional market – the downtowns of Toronto, Mississauga, North York and Scarborough," Dobson said. Activity in those areas has been limited to some conversions and internal growth.

This poses the first tough question: how to counteract risk aversion in the inner cities. "If this continues, we are going to find that the cores of our inner cities dry up and get less useful," Dobson said.

"Instead of a subway to Mississauga, why not build office buildings and infrastructure?"

Impact on the Edges

Dobson also pointed to the growing number of single-tenant, stand-alone buildings located where land is cheap. "What happened to the idea that you put the growth where the services are?"

These single purpose buildings pose the second tough question. "Will they put so much pressure on the infrastructure that they will create wastelands around them?"

Information

Better market information may help with both issues. Traditional research that relied simply on measuring availability and absorption of space could be extremely misleading, Dobson said.

"Availability is what people want to get rid of," he said. Absorption can overstate cases where tenants are just moving within the same buildings. Both can miss changes in density of use (e.g., electronic filing frees up space for more people), non-commercial use (e.g., significant areas going through asbestos remediation), and trends amongst different tenant groups. "If you track who is growing and why, you get a completely different picture."

RM

The Legislative Beat *continued from page 8*

mortgage legislation in 30 years. During that time the mortgage industry in Ontario has grown enormously in size and sophistication. Today, over \$300 billion in mortgage credit is outstanding in Ontario with the market projected to grow by a further 10 per cent in 2006.

Significantly, between one-quarter and one-third of all mortgages in Ontario are placed by mortgage brokers.

The new Act provides for a tiered registration system for mortgage brokers and agents, and ends the current deeming provision that allowed real estate brokers to carry on mortgage activity.

Several important issues such as education requirements and disclosure will be addressed by regulation in order to increase professionalism and consumer protection. An Accredited Mortgage

Professional (AMP) designation has been created by the Canadian Institute of Mortgage Brokers and Lenders.

Regulating Paralegals and Others?

One section of the omnibus Bill 14, the Access to Justice Act, would require anyone who provides 'legal services' in Ontario to be licensed by the Law Society of Upper Canada, for a fee.

The definition broadly covers giving a person advice "with respect to (their) legal interests, rights or responsibilities." It includes anyone who "selects, drafts, completes or revises ... a document that affects a person's interests or rights to or in real or personal property" or a document to be used in front of an adjudicative body, or represents someone in front of such a body (Ontario Rental Housing Tribunal, Assessment Review Board, etc.) The bill was introduced for second

reading in mid-February. Realtors and title insurance companies have expressed serious concern. Will this affect appraisers who represent clients before a tribunal or board?

Ending Mandatory Retirement

Minister of Labour Steve Peters has shepherded changes to the Human Rights Code which will eliminate mandatory retirement at age 65. The new legislation will take effect Dec. 12, 2006. Employers and unions may still negotiate voluntary retirement incentives such as early retirement packages.

Andy Manahan is Development Promotion Representative, Universal Workers Union, Local 183, and is Past President of the Association of Ontario Land Economists.



Clean Water Act – Bill 43

Introduced on Dec. 5, 2005, Bill 43's main purpose is to protect existing and future sources of drinking water in Ontario. Source Protection Plans (SPPs), drafted with input from municipalities and conservation authorities, will provide assessments of drinking water threats, and contain maps of wellhead protection areas, surface water intake protection zones, groundwater recharge areas and highly vulnerable aquifers. Annual implementation reports will have to be submitted to the province.

All decisions under the Planning and Condominium legislation will have to conform to the SPP. In cases of conflict between a SPP and an Official Plan or zoning bylaw, the SPP will prevail.

Furthermore, the OP and bylaws must be brought into conformity by a prescribed date if there is a conflict. Most municipalities will have enforcement responsibility, with the power to issue compliance orders.

MOE will consult with other ministries to ensure that regulations mesh with provincial policies such as Growth Plans. Bill 43 includes enabling amendments to numerous other pieces of legislation, including the Building Code Act and the Conservation Authorities Act.

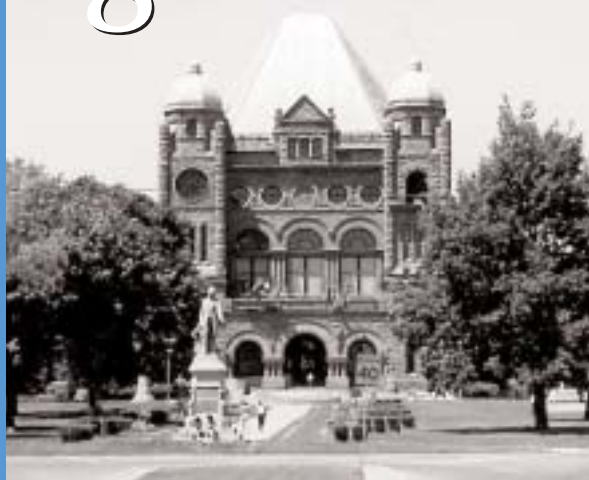
Planning/OMB Reform

Bill 51, the Planning and Conservation Land Statute Law Amendment Act received first reading on Dec. 12, 2005. A major thrust of the proposed legislation is to "support intensification, sustainable development and greenspace protection" using enhanced planning and financial tools. For example, municipalities would be able to regulate new developments by imposing minimum and maximum densities and heights; set conditions for energy efficiency on zoning applications; or apply a new development permit system.

Municipalities could also register grant or loan agreements on the title of land. Such a measure could be used to encourage brownfield redevelopment and would assist developers in securing upfront financing.

Policies allowing accessory apartments (e.g., basement suites) would be permitted, if these policies are contained in a munic-

The Legislative Beat



by Andy Manahan PLE

ipal Official Plan. Areas designated for these units would not be subject to appeal to the OMB unless the appeal is initiated during the five-year review of the O.P.

The Attorney General's office is undertaking a separate review of appointments to the OMB. Matters under review include tenure, compensation and qualifications of board members.

City of Toronto Act – Bill 53

The proposed City of Toronto Act (COTA) was introduced for first reading in December. Bill 53 has the potential to dramatically alter the way business is conducted in the city – from the imposition of new taxes and regulations, to the protection of rental apartment and heritage buildings, to the way development future applications are processed.

Toronto could choose to apply a sales tax on alcohol, tobacco or sporting events; or apply a surcharge to the land transfer tax. Local Council will no longer have to get permission from the Province to deal with seemingly local issues such as traffic calming.

It is expected that COTA will come into force on Jan. 1, 2007 meaning that new taxing powers will not be implemented prior to this November's municipal election.

The City continues to agitate for the province to take responsibility for costs

that were 'downloaded' in the 1990s, such as public housing, welfare and transit. At the same time, other municipalities have pointed out that preferential treatment for one jurisdiction is unacceptable, and the province should grant them parallel powers.

Tenant Protection Reform

Municipal Affairs and Housing Minister John Gerretsen plans to introduce new legislation this spring, updating the 1998 Tenant Protection Act. Pressure has been mounting from the Federation of Metro Tenants' Associations (FMTA), who report that Ontario landlords filed almost 65,000 eviction applications in 2005 (more than 29,000 in Toronto alone).

The Federation of Rental Housing Providers of Ontario (FRPO)

states that these statistics are misleading because the majority of applications for non-payment of rent do not result in an eviction. "A recent City of Toronto study found that over two thirds of L1 orders do not result in the Tenant being evicted – because the tenant finally pays up," FRPO said. As well, when units become vacant rents are going down more often than up. "Tenants are experiencing the best rental market conditions in Toronto and Ontario since rent controls were first introduced in 1975."

Boyd Park, Vaughan

Environment Minister Laurel Broten announced in February that the Boyd Conservation Area will be excluded as a possible road alignment connecting the Pine Valley Road with Highway 407 in Vaughan. The City has been directed to find another route for the road or widen an existing corridor as part of the Environmental Assessment process. Environmentalists have applauded this decision as confirmation that the province is committed to preserving the greenbelt and applying the new Provincial Policy Statement.

Bill 65 (Mortgage Brokerages etc.)

Finance Minister Dwight Duncan introduced the new Mortgage Brokerages, Lenders and Administrators Act on Feb. 20. It is the first major rewrite of

See Legislative Beat page 7