

Conceptual Master Plan for the Future Urban Area

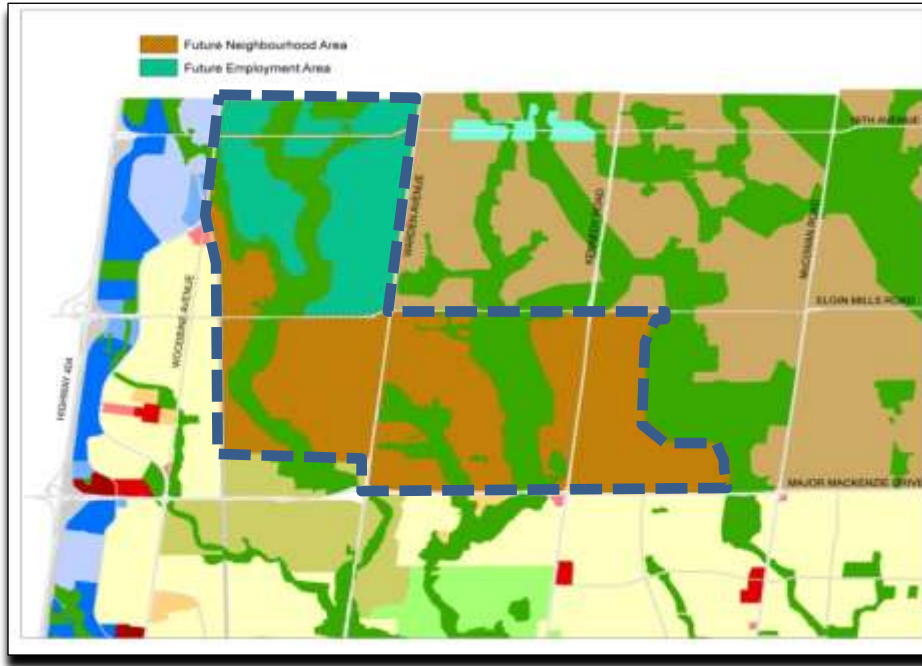
Interim Report and Preliminary Community Structure Plan

Development Services Committee
October 3, 2016

Purpose of Report:

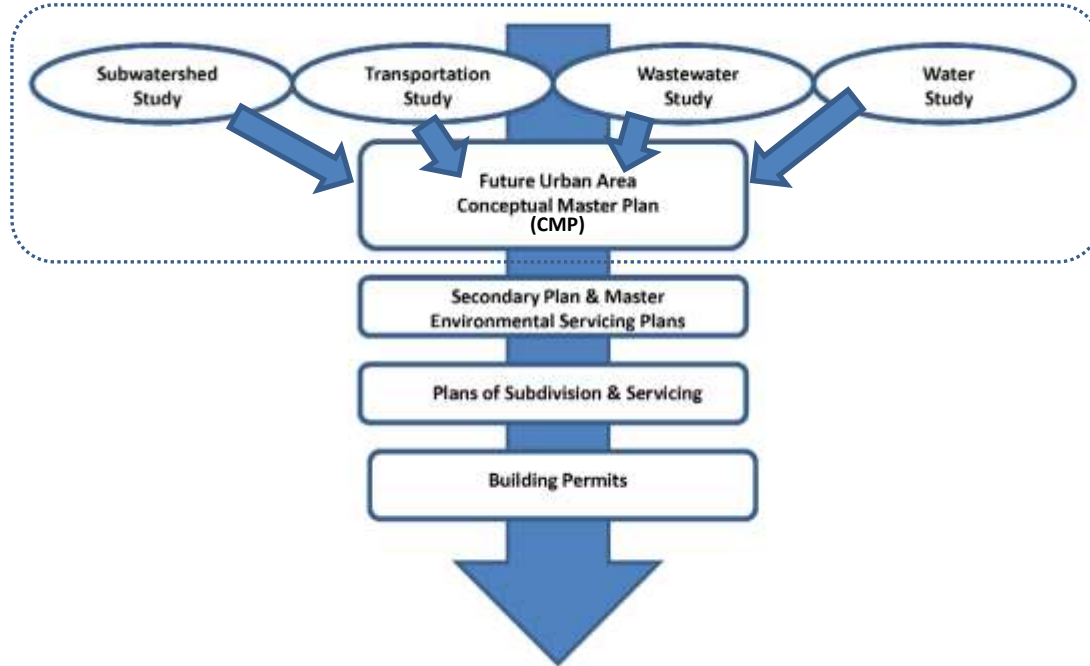
- 1) To provide an update on work completed to date on the Future Urban Area Conceptual Master Plan
- 2) To release the report and hold a Public Open House to obtain public input on a Preliminary Community Structure Plan

Future Urban Area - Background



- Located north of Major Mackenzie Drive, east of Woodbine Avenue
- New neighbourhood lands (brown) – 675 ha (1,700 ac)
- New employment lands (teal) – 300 ha (750 ac)
- Greenway System (green) – protected natural heritage system
- FUA to accommodate:
 - 40,000 population (12,000-13,000 units)
 - 16,000-19,000 jobs

Future Urban Area - Planning Process



CMP studies: each 3-phases (to align with subwatershed study):

Phase 1 - background, characterization, model development

Phase 2 - impact assessment (impact of land use concepts)

Phase 3 - development of recommendations/implementation strategy

Currently mid-way through Phase 2.

Conceptual Master Plan will satisfy Master Plans component of Municipal Class Environmental Assessment (EA) process

Consultation



Healthy Communities Preliminary Community Structure Plan

*Dan Leeming, The Planning Partnership
Marisa Creatore, PhD, St. Michael's Hospital*

Vision

"New neighbourhood and employment lands in the north Markham Future Urban Area will be designed as healthy, compact and complete communities.

These communities will reflect the City's leadership in sustainable development with resilience and innovation being cornerstones of community design."



The Built Environment and Health: The role of Urban design in public health

Marisa Creatore, PhD

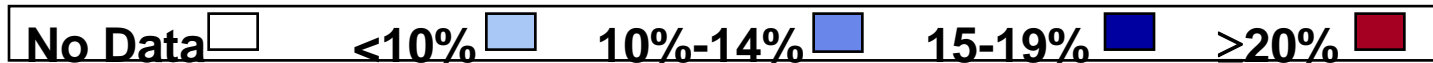
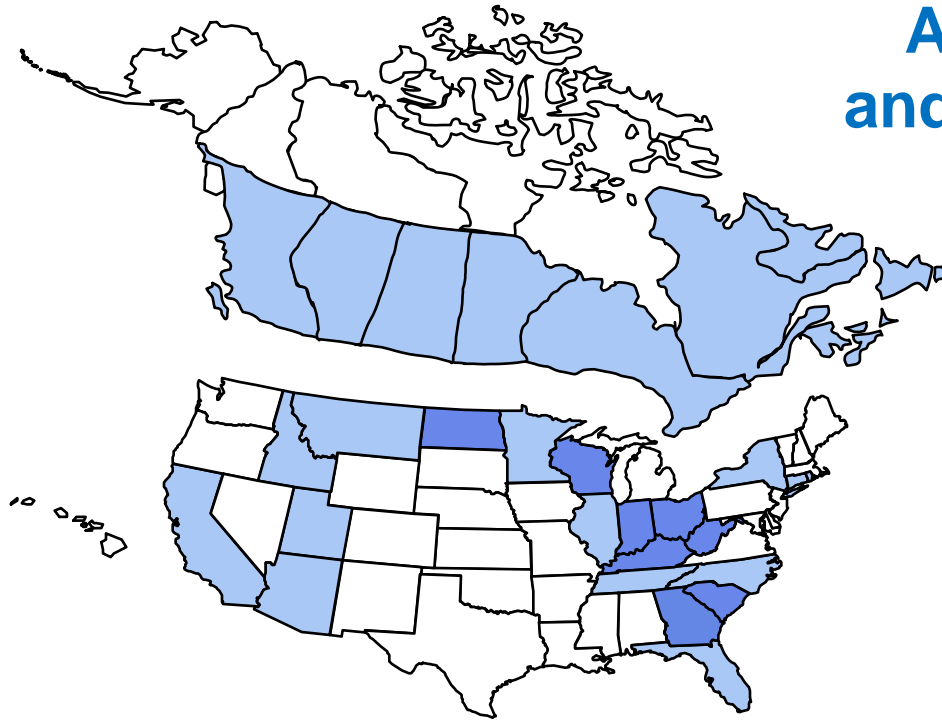
**Centre for Research on Inner City Health,
Li Ka Shing Knowledge Institute,
St. Michael's Hospital;**

**Dalla Lana School of Public Health,
University of Toronto**

The Public Health Problem

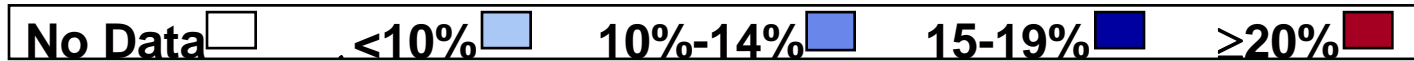
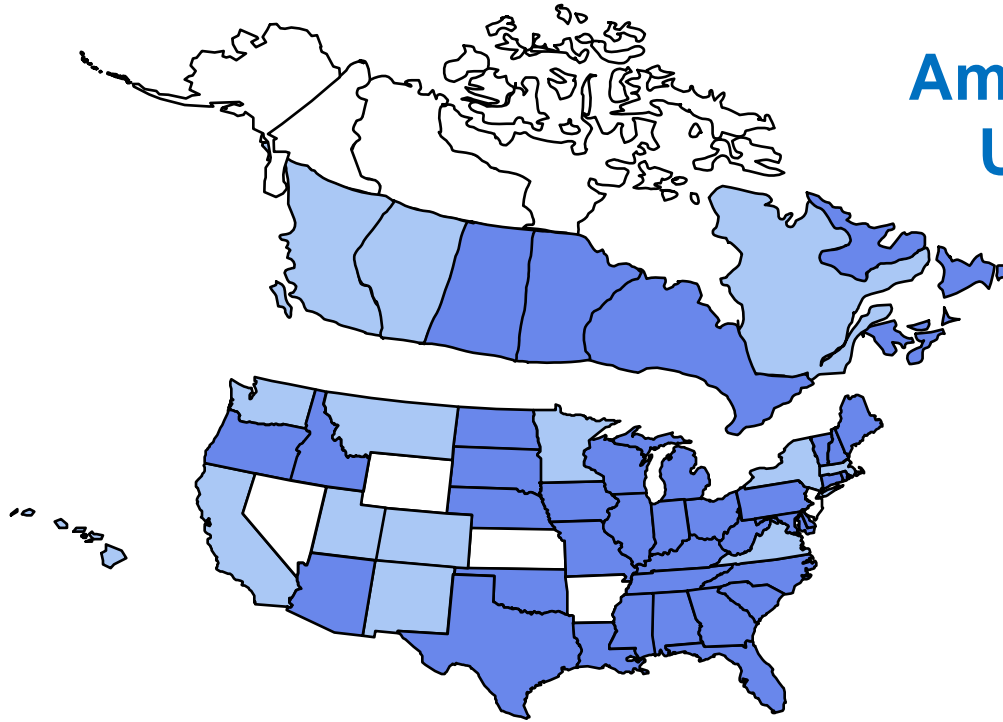
- Only 15% of adults get the recommended amount of physical activity (to stay healthy)
- Only 9% of Canadian kids aged 5 to 17 get the recommended amount of activity they need each day
- In Canada 60% of adults are overweight or obese (Statistics Canada, 2012).

Obesity Trends Among Canadian and U.S. Adults, 1985



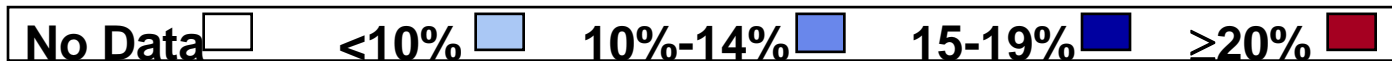
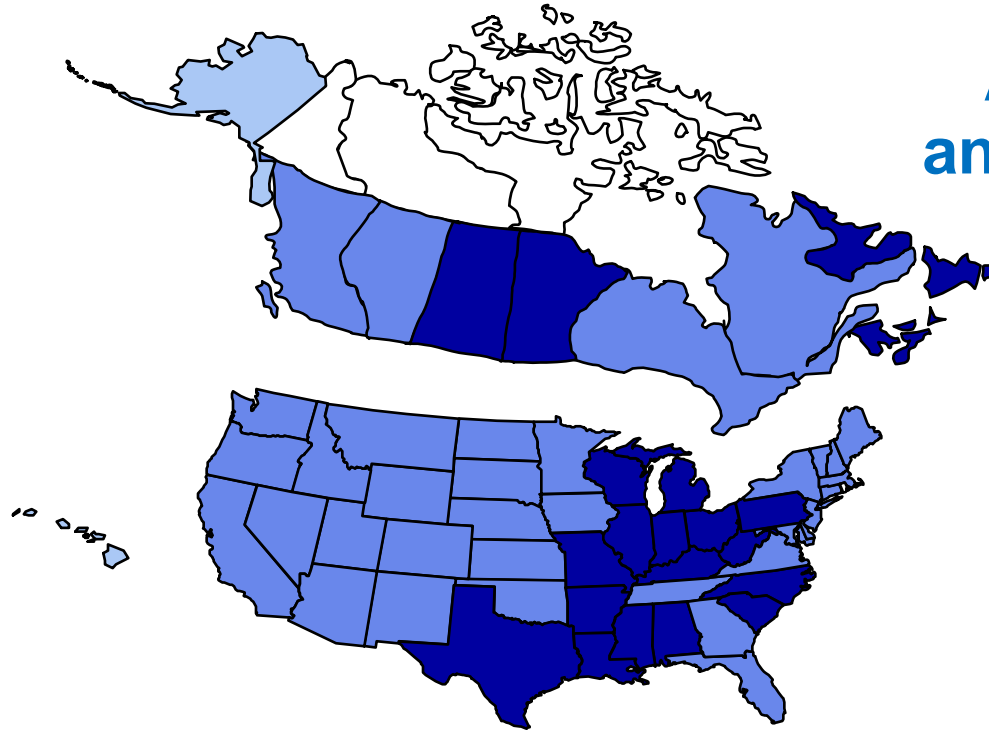
Mokdad AH. *Unpublished Data.*
Katzmarzyk PT. *Can Med Assoc J* 2002;166:1039-1040.

Obesity Trends Among Canadian and U.S. Adults, 1990



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Katzmarzyk PT. *Can Med Assoc J* 2002;166:1039-1040.

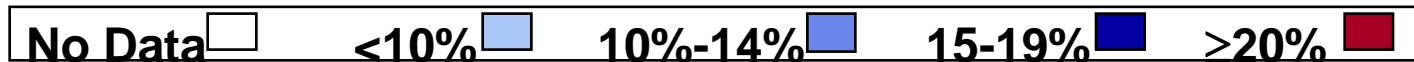
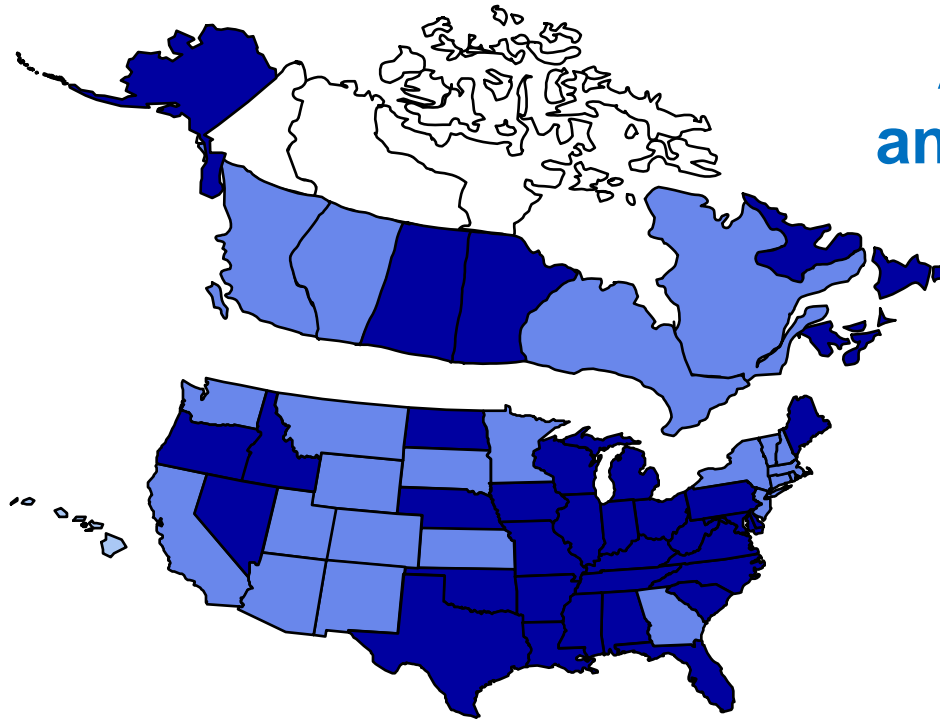
Obesity Trends Among Canadian and U.S. Adults, 1994



Mokdad AH, et al. *J Am Med Assoc* 1999;282:16.

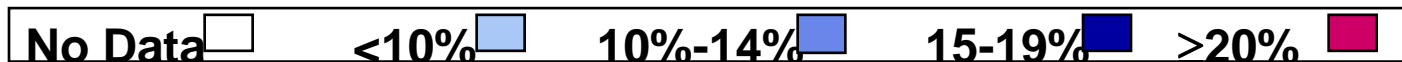
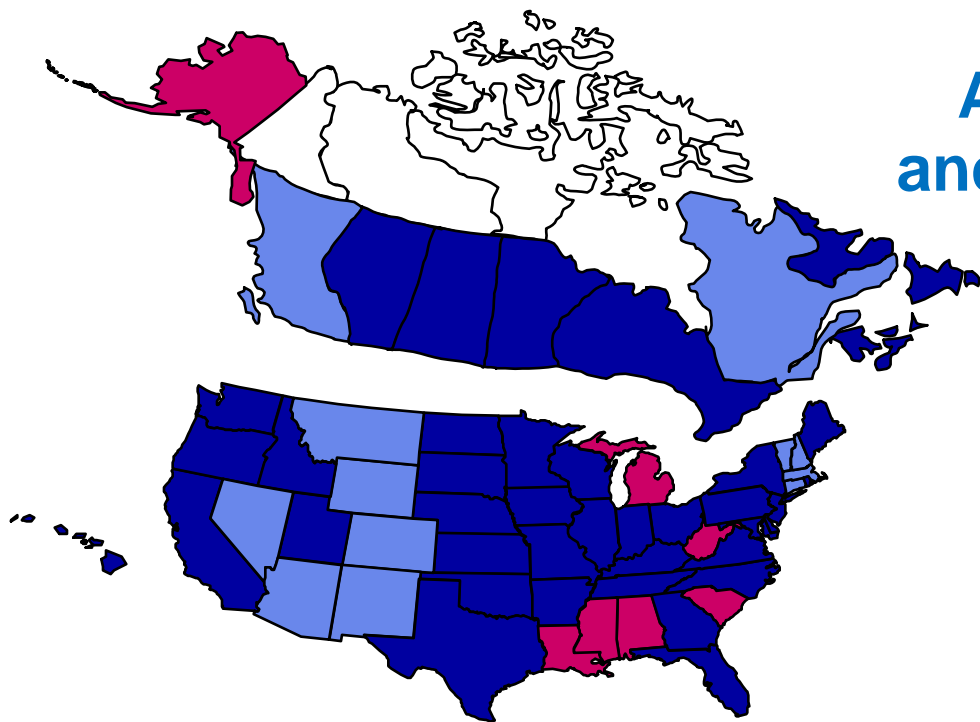
Katzmarzyk PT. *Can Med Assoc J* 2002;166:1039-1040.

Obesity Trends Among Canadian and U.S. Adults, 1996



Mokdad AH, et al. *J Am Med Assoc* 1999;282:16.
Katzmarzyk PT. *Can Med Assoc J* 2002;166:1039-1040.

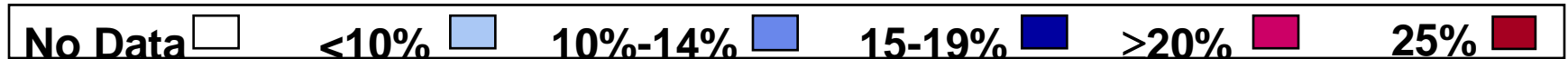
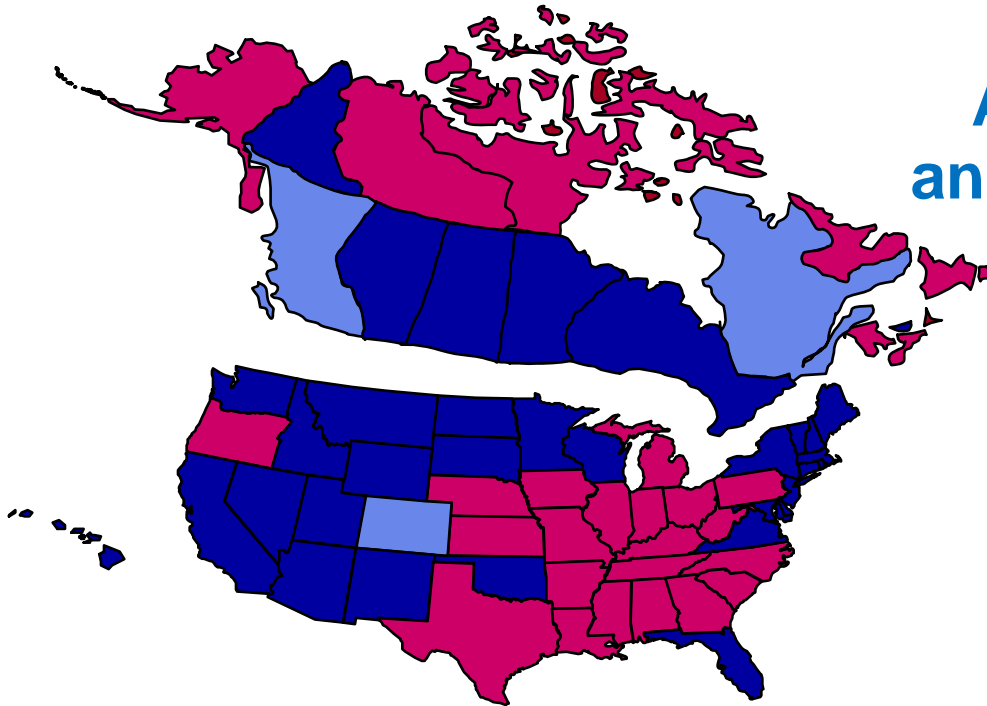
Obesity Trends Among Canadian and U.S. Adults, 1998



Mokdad AH, et al. *J Am Med Assoc* 1999;282:16.

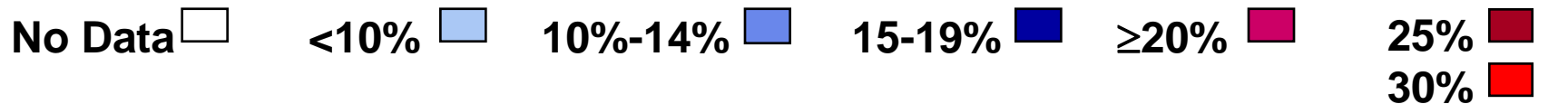
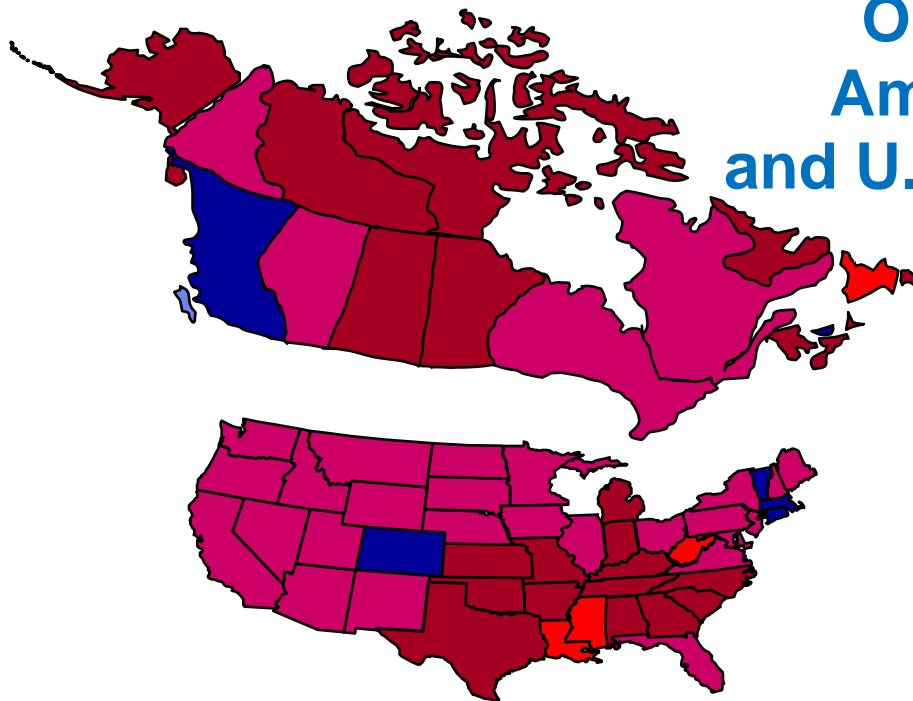
Katzmarzyk PT. *Can Med Assoc J* 2002;166:1039-1040.

Obesity Trends Among Canadian and U.S. Adults, 2000



Mokdad AH, et al. *J Am Med Assoc* 2000;284:13.
Statistics Canada. *Health Indicators*, May, 2002.

Obesity Trends Among Canadian and U.S. Adults, 2004/05



Provinces (measured) CCHS, 2004 Territories (self-report) CCHS, 2002

Obesity increases the risk for:

- Heart disease
- Stroke
- High blood pressure
- Diabetes
- Cancers (endometrial, breast, colon)
- Mental health conditions
- Disability
- Liver & gallbladder disease
- Asthma, sleep apnea & other respiratory problems
- Arthritis and osteoarthritis
- Infertility and reproductive complications

What are the human/societal costs?

- Obesity has roughly the same association with chronic health conditions as 20 years of aging
- Health care costs for overweight and obese individuals are 37% higher than for people of normal weight¹

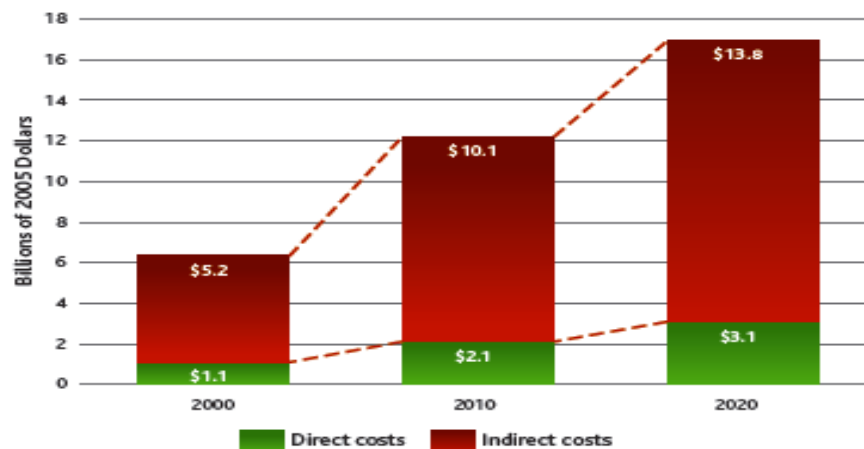
An economic tsunami *the cost of diabetes in Canada*

December 2009

Canadian
Diabetes
Association



Cost of Diabetes in Canada: 2000 to 2020



Source: Canadian Diabetes Cost Model

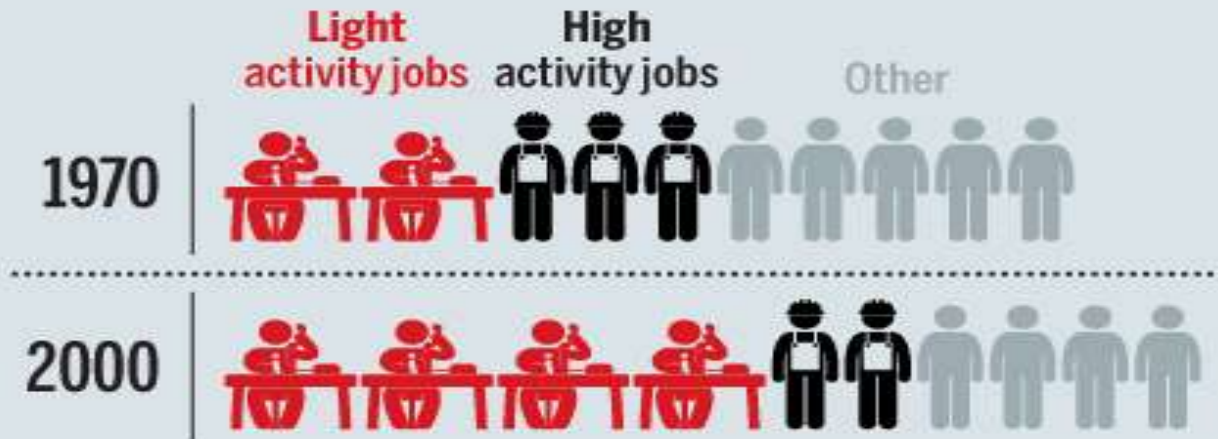


How did we get here?



The world we sit in

As a society we spend more time sitting than we perhaps ever have, a fact revealed by a comparison of labour-market trends in 1970 and 2000





More time spent in cars → higher rates of obesity

Frank LD et al Am J Prev Med 2004



**The built environment as a
potential target for intervention**

Built Environment shown to be associated with:

- Physical activity
 - Healthy food choices/Diet
 - Safety & Crime
 - Social cohesion
 - Air Quality
- 
- Obesity
 - Child obesity
 - Chronic Disease
 - Mental health
 - Healthy aging

Research Has identified Built Environment elements associated with active living:

Density

- (residential, non-residential)

Service Proximity

- (to a variety of services, to transit, to employment)

Land Use Mix

- (mixed land use, mixed building use, mixed housing types)

Street Connectivity

- (intersection density or block size)

Road Network & Sidewalk Characteristics

- (complete streets, traffic calming, traffic speed & pedestrian-priority, footpaths, sidewalks & buffer strips, cycle-friendly design, lighting)

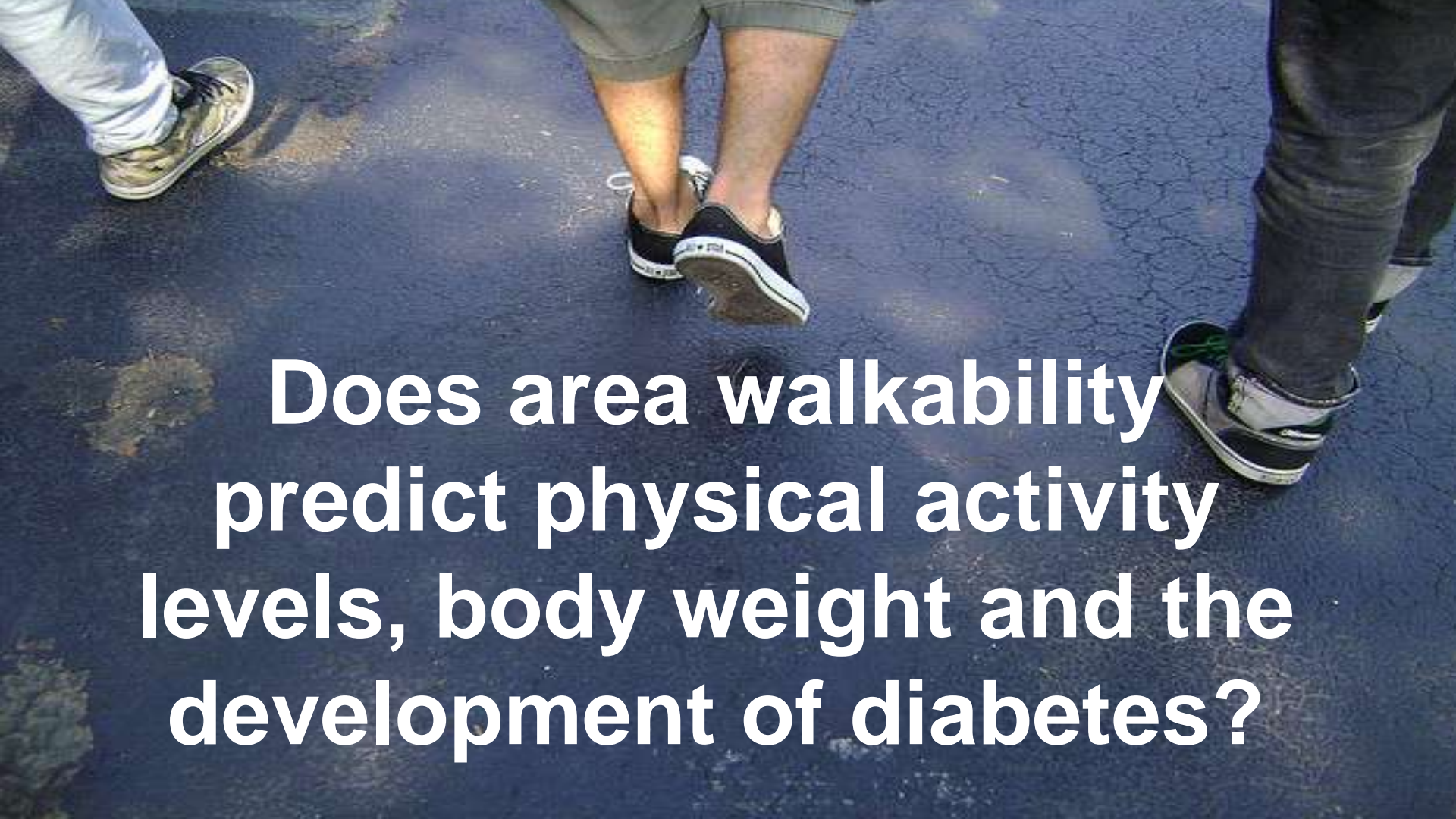
Aesthetics & Human Scale*

- (setbacks & streetwalls, height to width ratio, tree placement/characteristics)



Not just about individual characteristics, but about how we put them together

- Research shows that density, mixed use and micro-design elements in combination are most likely to result in higher levels of physical activity



**Does area walkability
predict physical activity
levels, body weight and the
development of diabetes?**

Transportation behaviours and obesity rates by walkability quintile

Characteristic (%)	Q5:Q1 ratio (highest to lowest walkability score)
Walk or bicycle to work	3.09
Public transit to work	1.72
Drive to work	0.57
Obesity*	0.75

*CCHS population, age 30-64 yrs;
Transportation Tomorrow Survey

$p < .001$ for all

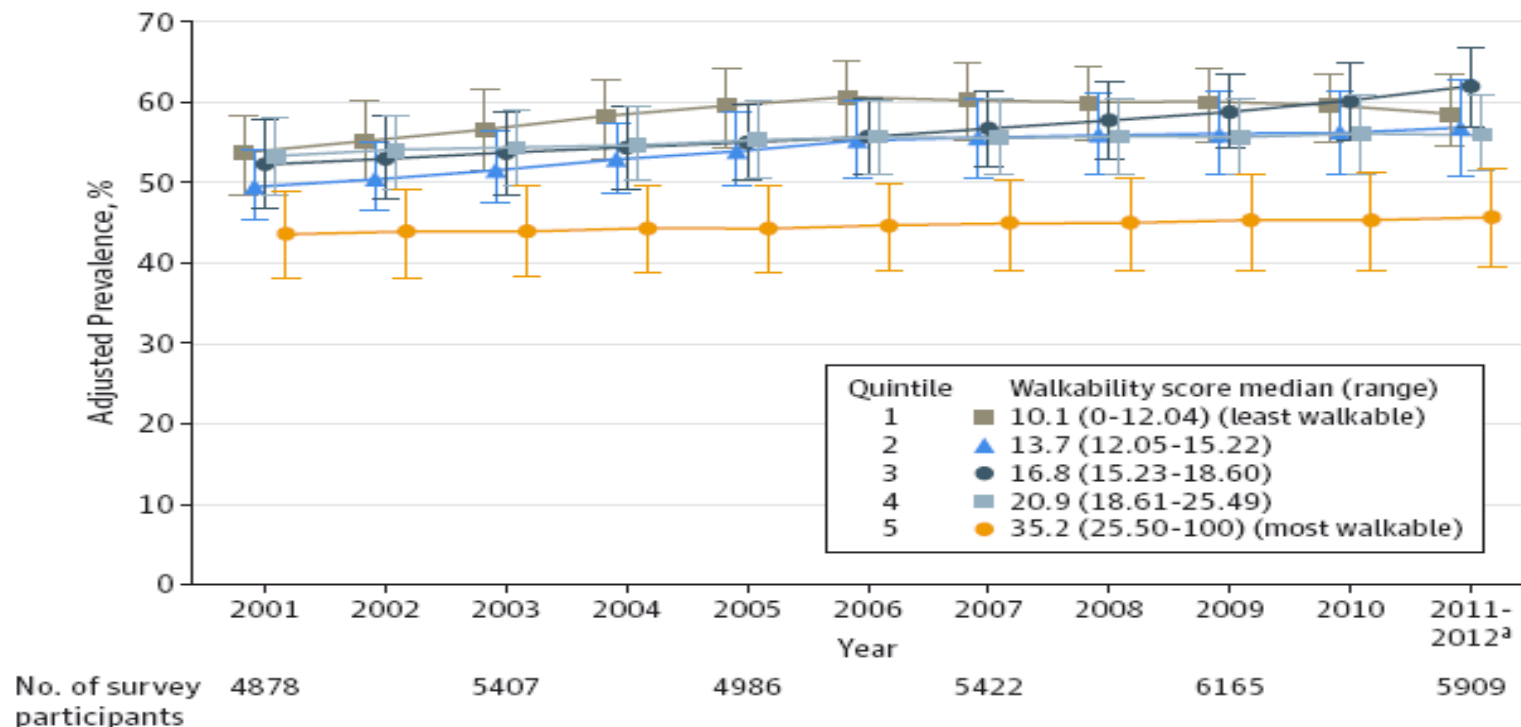
Original Investigation

Association of Neighborhood Walkability With Change in Overweight, Obesity, and Diabetes

Maria I. Creatore, PhD; Richard H. Glazier, MD; Rahim Moineddin, PhD; Ghazal S. Fazli, MPH; Ashley Johns, MSc;
Peter Gozdyra, MA; Flora I. Matheson, PhD; Vered Kaufman-Shriqui, PhD; Laura C. Rosella, PhD;
Doug G. Manuel, MD, PhD; Gillian L. Booth, MD

JAMA. 2016;315(20):2211-2220. doi:[10.1001/jama.2016.5898](https://doi.org/10.1001/jama.2016.5898)

Figure 1. Adjusted Prevalence of Overweight and Obesity Among Adults Aged 30 to 64 Years and Living in Urban Areas, by Walkability Quintile, 2001-2012



Q1 shows an increase by 13% in overweight
Q5 shows a decrease by 6% in overweight

Diabetes lurks in urban sprawl

Neighbourhood study finds disease prevalent in low-income areas away from city core

LAURIE MONSEBRAATEN
AND RITA DALY
STAFF REPORTERS

Toronto's inner suburbs are the urban epicentre of an obesity and diabetes epidemic that is shortening lives and threatening to overwhelm our health-care system, says a groundbreaking study to be released today.

The report's most startling finding is that urban sprawl — not just poverty and an immigrant population at greater risk — is contributing to diabetes rates in the city's

WAR ON POVERTY

SOCIAL COST OF DIABETES

PART ONE IN A SERIES

poorest neighbourhoods that are almost triple those in more densely populated areas downtown.

"This is a story about social disadvantage," said Dr. Rick Glazier, co-author of the report by the Institute for Clinical Evaluative Sciences (ICES), which for the first time maps diabetes rates in Toronto's

Ailing Toronto neighbourhoods

The highest rates of diabetes lie in the most heavily shaded areas on this map. The 10 most afflicted neighbourhoods are numbered in order of prevalence.



How the 10 neighbourhoods

Neighbourhoods with the

Diabetes

Overall found
~30% decrease
in diabetes in
most walkable
neighbourhoods

Atlantic
CITIES
PLACE MATTERS

VIDEO AT THE ATLANTIC.
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RICHARD FLORIDA
Where High-Growth Company Founders Start Out and Where They End Up
BY HEAVY ET
COMMENTS

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An Alarming Strong Link Between Lack of Walkability and Diabetes
New research from Toronto finds that immigrants living in that city's least walkable neighborhoods were more than 50 percent more likely to develop diabetes.
EMILY BADGER | COMMENT

Relevant at all Ages

- Obesity-prevention effect of BE seems strongest in young/middle-aged adults
- The benefits of physical activity for older adults are wide ranging and include the following:
 - preserving muscle and bone mass
 - reducing rates of functional decline (both physical and cognitive)
 - improving glucose control &, cardiovascular health
 - Improving balance and stability (Sattelmair, Pertman, & Forman, 2009).

BE and Aging population

- Older adults (60+) are the fastest growing, yet least active, segment of the population with <3% meeting PA recommendations (Troiano et al., 2008)
- One aspect of successful aging is aging in place (Yen & Anderson, 2012) – which requires supportive built environment.



Non-Health Benefits of Walkable Communities

Social benefits include:

- Community connection
- Safety - reduction of traffic related injuries to pedestrians ³

1 Leinberger, C. B. and Alfonzo, M. (2012, May). Walk this way: The economic promise of walkable places in metropolitan Washington, D. C. Retrieved from <http://www.brookings.edu/~media/Research/Files/Papers/2012/5/25%20walkable%20places%20leinberger/25%20walkable%20places%20leinberger.pdf>

2 Tolley, Rodney. (n.d.). Walking around the world: Innovation and inspiration for planning practitioners. Metropolitan Policy Program at Brookings. Retrieved from http://www1.toronto.ca/City%20Of%20Toronto/Transportation%20Services/Walking/Files/pdf/rodney_tolley-walking_around_the_world.pdf

3 The Heart Foundation (SA). (2011, November 22). Discussion paper: Good for Busine\$\$: The benefits of making streets more walking and cycling friendly. Retrieved from <http://www.heartfoundation.org.au/active-living/Documents/Good-for-business.pdf>

Non-Health Benefits of Walkable Communities

- Increased Store rents.
- Increased Property value – each point increase in WalkScore, increase home values by \$700 - \$3,000 ¹
- Business and the local economy – the slower we travel the more we spend ²
- Space for people is valued more than car parking making the street more attractive for people to spend time and therefore money.

What do walkable, 'activity-friendly' communities look like?





Cornell, Markham



Markham – York Region

Mt. Pleasant Village, Brampton



Why Think about it Now?

- Traditional suburban communities are less walkable – opportunity to be progressive and head off health problems before they start
- Region of Peel have implemented the HIA to give as much weight to health as to environment, sustainability, etc

Peel Region Healthy Development Evaluation Tool

AIM:

- Tool to rate development submissions
- To encourage future development to proceed in a form more conducive to healthy living with a focus on physical activity



The Healthy Development Index

Peel Region Healthy Development Evaluation Tool

Policy Impacts:

Amendments to Regional and Municipal Official Plans requiring health impact indicators and assessments as well as encouraging public awareness

Amendments to engineering standards to increase walkability and active transportation, and proposed changes to provincial policy statements

Integration of health background studies at the earliest stage of planning as part of a complete development application



THANK
YOU

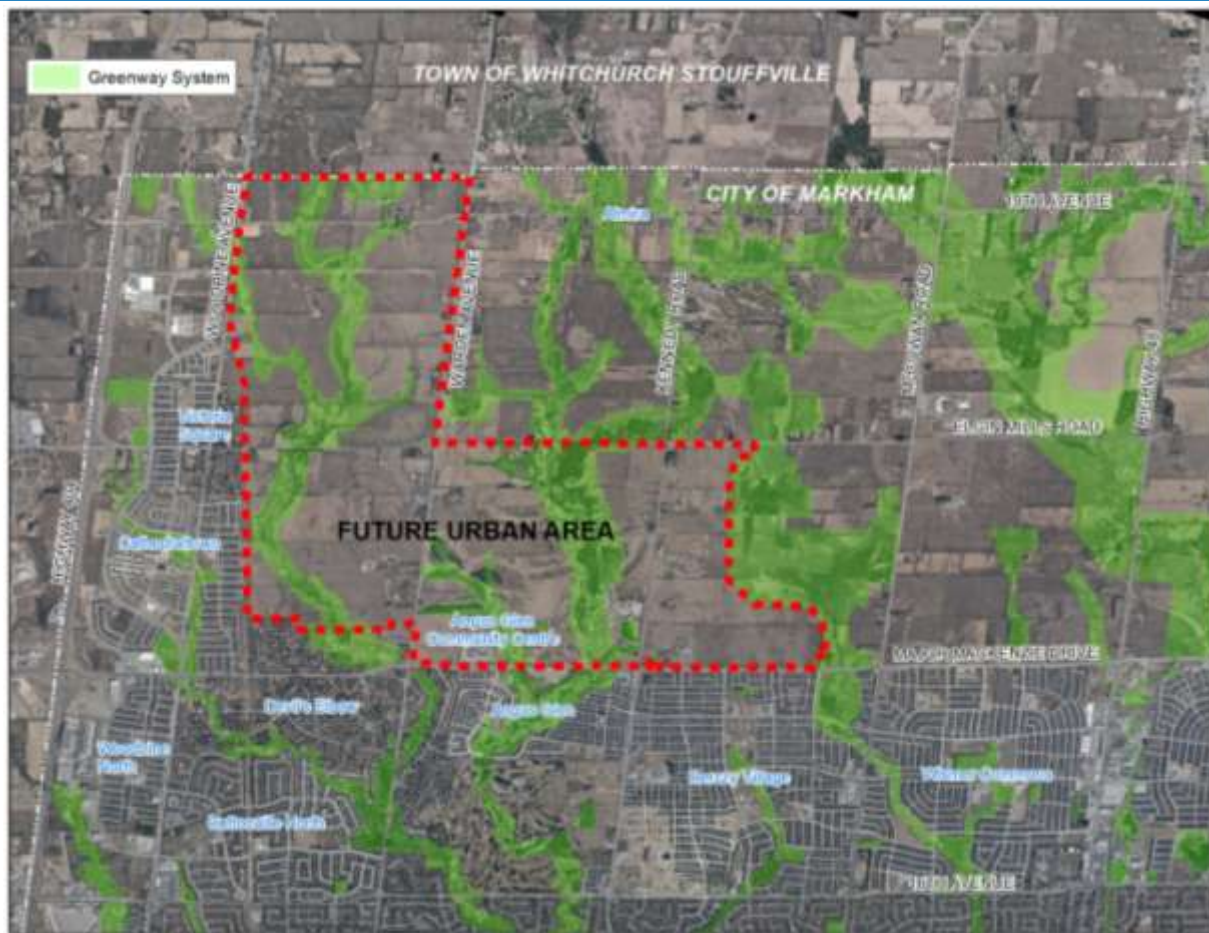


Preliminary Community Structure Plan

Principles/Parameters

- Protecting and enhancing the natural environment
- Building compact, complete communities
- Maintaining a vibrant and competitive economy
- Increasing travel options
- Adopting 'green' infrastructure and development standards

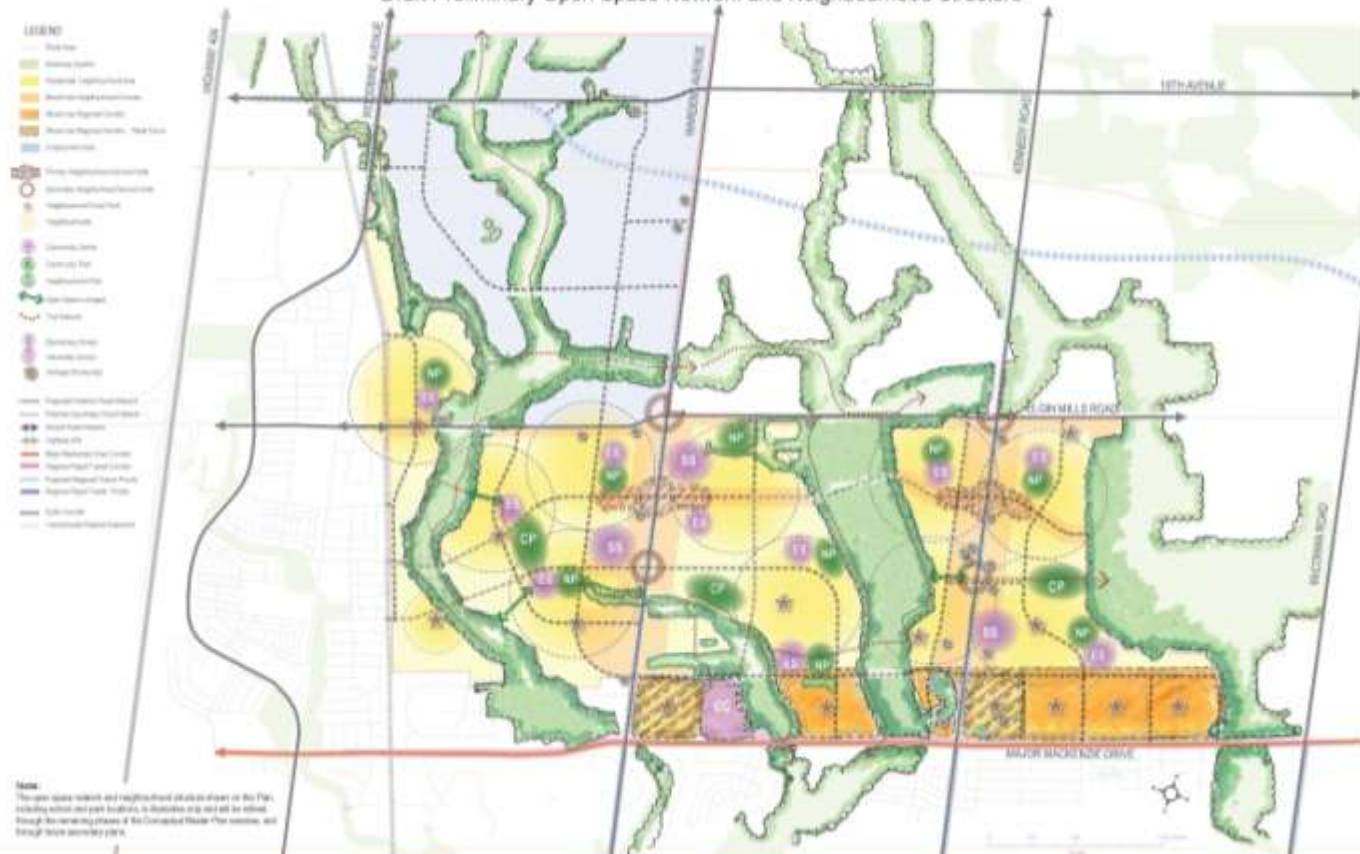




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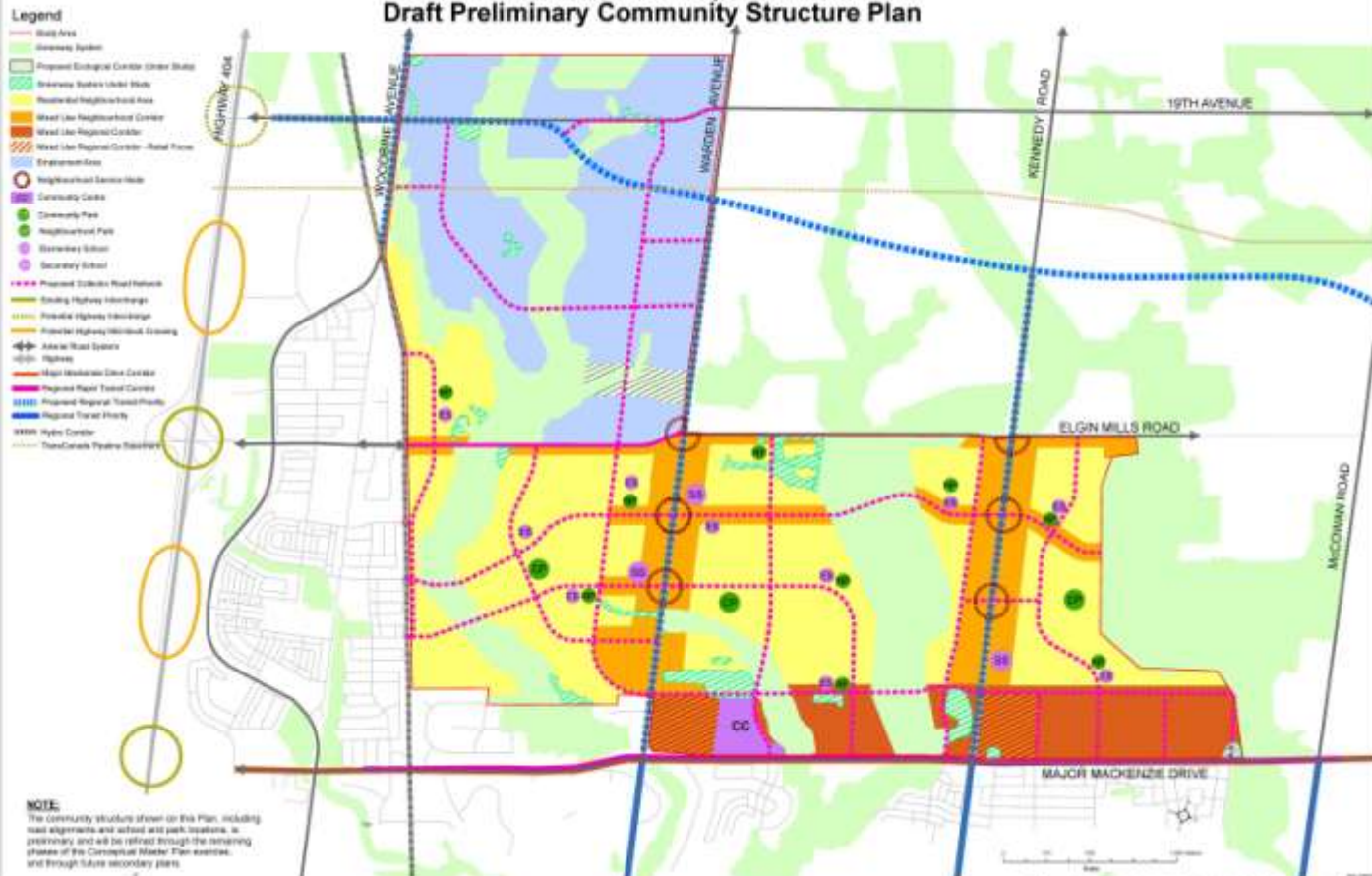


Future Urban Area Conceptual Master Plan
Draft Preliminary Open Space Network and Neighbourhood Structure





Future Urban Area Conceptual Master Plan Draft Preliminary Community Structure Plan





Key Directions document will also address 'green' practices at the community, infrastructure, and building levels, such as:

- Managing use of potable water
- Conserving energy and use of green energy
- Sustainable stormwater management practices
- Community energy systems
- Waste diversion and reduction
- Enhanced interior air quality
- Improving public health through design of buildings and sites
- Planning infrastructure systems to increase resilience, affordability and adaptability.

Next Steps

- Public Open House to be held (early November) – public input to be considered in remaining phases of studies
- Second part of Phase 2 impact assessment to be completed, followed by development of implementation recommendations
- At end of Phase 3, a draft Conceptual Master Plan consisting of a Preferred Community Structure and Key Directions for the development of statutory secondary plans will be presented to Council for endorsement.

Recommendation:

- The report be released for public input, including Public Open House; and
- This report be forwarded to the Province to support Council's request that planning in the Future Urban Area continue on the basis of the current York Region Official Plan 2010 (at 70 residents and jobs per hectare) notwithstanding proposed amendments to the Growth Plan which may result in higher Designated Greenfield Area density requirements.

Discussion